SUBDIVISION APPLICATION

FOR

Carlisle Brook Estates

Walker and Carlisle Brook Road
Lyman, Maine

Assessor's Map 4, Lot 22

March 19, 2025

Prepared For:

Carlisle Brook Estates, LLC
1000 U.S. Route 1, Suite 102
York, ME 03909

Prepared By:

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

ALTUS ENGINEERING

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Engineering

133 Court Street
Portsmouth, NH
03801-4413

March 19, 2025

Planning Board
Town of Lyman
11 South Waterboro Road
Lyman, Maine 04002

Re: Preliminary Plan Consultation
Residential Subdivision
Assessor's Map 4, Lot 22
Walker Road
Lyman, Maine
Altus Project No. 5590

Dear Members of the Board,

On behalf of the Applicant, Carlisle Brook Estates, LLC, Altus Engineering respectfully submits a request for a preliminary plan consultation with the Planning Board on the above referenced project. Located at the corner of Walker and Carlisle Brook Roads, the 45-acre site is characterized by a mix of forest with some areas of wetland tributary to Carlisle Brook. The plan contemplates a residential subdivision with six new lots accessed from Walker and Carlisle Brook Roads, three of which are back lots which enter from Walker Road over a private right of way.

We hope to entertain the Board's input on the project at the next available hearing. Please call me if you have any questions or need any additional information.

Sincerely,

ALTUS ENGINEERING

Erik B. Saari
Vice President

pmj/5590.01-APP-Preliminary-CovLtr-031925

Enclosures

Town of Lyman
Subdivision Application

Subdivision Name Carlisle Brook Estates
Date of Application 03/19/2025

APPLICANT INFORMATION

Name of Property Owner: Carlisle Brook Estates, LLC
Address: 1000 U.S. Route 1, Suite 102
York, Maine 03909
Telephone: (207) 351 - 8818

Name of Applicant: Same as owner
Address:

Telephone: ( ) -

If applicant is a corporation, check if licensed in Maine [X] Yes [ ] No and attach a copy of State's Registration.

Name of applicant's authorized agent: Altus Engineering
Address: 133 Court Street
Portsmouth, NH 03801
Telephone: (603) 433 - 2335
(Include notarized letter from property owner verifying authorization)

Name of Land Surveyor, Engineer, Architect or others preparing plan:
Same as Agent

Address:

Telephone: ( ) - Registration # 6658

Person and Address to which all correspondence regarding this application should be sent:
Troy Williams
1000 U.S. Route 1, Suite 102
York, Maine 03909

What legal interest does the applicant have in the property to be developed (ownership, option, purchase and sales contract, etc.)? Ownership

What interest does the applicant have in any abutting property? None

LAND INFORMATION

Location of Property (Street Location) Walker Road
(from County Registry of Deeds): Book 19429 Page 773
(from Tax Maps): Map 4 Lot(s) 22

Current zoning of property: General Purpose

Is any portion of the property within 250 feet of the high water mark of a pond, river or salt water body?
[ ] Yes [X] No

Total Acreage of Parcel: 45.77

Acreage to be developed: TBD by individual lots owners

Indicate the nature of any restrictive covenants to be placed in the deeds:

None at this time

Has this land been part of a prior approved subdivision? ☐ Yes ☒ No

Or other divisions within the past 5 years? ☒ Yes ☐ No

Identify existing use(s) of land (farmland, woodlot, etc.) Woodland

Does the parcel include any waterbodies? ☐ Yes ☒ No

Does the parcel include any wetlands? ☒ Yes ☐ No

Is any portion of the property within a special flood hazard area as identified by the Federal Emergency Management Agency? ☒ Yes ☐ No

List below the names and mailing addresses of abutting property owners. *(All property within 500' of all boundary lines)*

Name	Address
Sarah L. Curley	386 Walker Road, Lyman Maine 04002
J. Michael Crimmins IV & Lindsay Saxon	374 Walker Road, Lyman Maine 04002
David A. Susan Gluck	377 Walker Road, Lyman Maine 04002
Roderick Tetu	357 Walker Road, Lyman Maine 04002
David A. & Claudette A. Gray	290 Walker Road, Lyman Maine 04002
Sarah C. and Nicholas Armentrout	73 Drown Lane, Lyman Maine 04001
John D. & Susan A. Green	86 Carlisle Brook Road, Lyman Maine 04002
Dennis S. Boucher	8 Village Circle, Lyman, Maine 04002

GENERAL INFORMATION

Proposed name of development: Carlisle Brook Estates

Number of lots or units: 6

Anticipated date for construction: TBD by individual lot owners

Anticipated date of completion: TBD by individual lot owners

Does this development require extension of public infrastructure? ☐ Yes ☒ No

___ roads ___ storm drainage ___ other

___ sidewalks ___ water lines

___ sewer lines ___ fire protection equipment

Estimated cost for infrastructure improvements $ 0

Identify method of water supply to the proposed development:

0 individual wells

_____ central well with distribution lines

_____ connection to public water system

_____ other, please state alternative

Identify method of sewage disposal to the proposed development:

0 individual septic tanks

_____ central on site disposal with distribution lines

_____ connection to public sewer system

_____ other, please state alternative

Identify method of fire protection for the proposed development:

_____ hydrants connected to the public water system

_____ dry hydrants located on an existing pond or water body

X existing fire pond

_____ other, please state alternative.

Does the applicant propose to dedicate to the public any streets, recreation or common lands?

street(s)	☐ Yes	☒ No	Estimated Length _____
recreation area(s)	☐ Yes	☒ No	Estimated Acreage _____
common land(s)	☐ Yes	☒ No	Estimated Acreage _____

Does the applicant intend to request waivers of any of the subdivision submission requirements?

If yes, list them and state reasons for the request.

None at this time.

To the best of my knowledge, all the above stated information submitted in this application is true and correct.

_____ 03/19/25

Erik Saari, Altus Engineering (Agent) (date)

Fees: (see Article I Section 1.10 of the Lyman Zoning Ordinance, for explanation of ALL fees, including planning board legal fees and SMRPC fees.) Make check payable to the TOWN OF LYMAN. SUBDIVISION FEE: $500.00. Fee must be paid when application submitted.

NOTE: EACH APPLICATION MUST BE SUBMITTED WITH A TOTAL OF NINE COPIES. THIS INCLUDES ALL SUBMITTALS ATTACHED TO THE APPLICATION. (see attached checklist for required submittals)

SUBDIVISION REGULATIONS		Submitted By Applicant	Received by Planning Board	Applicant Request to be Waived	Waived by Planning Board	Approved by Planning Board
SECTION 6	**PRELIMINARY PLAN**					
6.1	Nine copies of all maps and/or drawings or prints reproduced on paper, drawn to scale 1" = not more than 100'	X				
6.2	Location Map - scale not more than 400' =1"	X				
6.2(1)	All existing subdivision and approx. tract lines of acreage with adjacent parcels owners names.	X				
6.2(2)	Location of all existing & proposed streets, street names, easements, building lines etc.	X				
6.2(3)	Boundaries of zoning & school districts, parks and public spaces	X				
6.2(4)	Outline of proposed subdivsion with street system	X				
6.3	Name of subdivision, deed reference and engineer(s) and surveyor(s)	X				
6.4	Graphic scale 1"=100', date and north point	X				
6.5	Boundaries of tract.	X				
6.6	Ownership and location of abutting properties	X				
6.7	Name, location & width of all streets.	X				
6.7.1	Acceptable cross section layout of proposed roads	X				
6.7.2	Profile of proposed streets	X				
6.8	Drainage Plan, existing & proposed; and preliminary design of any bridges or culverts required,	X				
6.9	Location of all existing utilities.	X				
6..10	Test pits for Subsurface waste water disposal systems on each proposed lot shall be excavated in the presence of the Plumbing Inspector	X				
6.11	Topography at 2' intervals.	X				
6.12	Lot lines and approximate dimensions.	X				
6.13	Proposed uses of property.	X				
6.14	Proposed public areas to be dedicated.	X				
6.15	Provisions of Zoning Ordinance Applicable to the area					
6.16	Soils report	X				
6.17	Centerline of proposed streets staked and marked	X				
6.18	Soil erosion & sediment control plan containing endorsements from York County Soil and Water Conservation District and Maine Soil & Water Conservation Commission	X X				
SECTION 7	**FINAL PLAN - vote to approve preliminary plan**					
7.1.1	Requires DEP approval.					
7.1.2	Water System Approval					
7.1.3	Subsurface wastewater disposal system approval					
7.2	Performance Guaranty					
7.3	Inspection of Required improvements (informational and not a submission requirement)					
7.4	Final Plan Submissions					
7.4.1	All information required for Preliminary Plan					
7.4.2	Existing and final lines of streets, utilities and lot lines.					
7.4.3	Road Profile, cross-section radius of curves					
7.4.3	Location of all permanent monuments existing & proposed					
7.4.5	Lot number & letters of lots acceptable to the Tax Assessor					
7.4.6	Name, registration number & seal of person who prepared the plan.					
7.5.1	Written offers of all open space shown on plan and documentation of title of how maintained					

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7.5.2	Written evidence that Municipal Officials are satisfied with legal sufficiency of documents.					
N 8 - STANDARDS						
8.1.1	Subdivision must be above floodplain level per current FEMA regulations.	X				
8.1.2	Plan must show each lot has a building envelope that is adequate and can have an adequate sewage system	X				
8.1.3	When available, public water & sewage is to be available					
8.1.4	Storm sewers, either closed or open must be shown on the plan, adequate to carry the normal runoff and generated by a 50 year rainfall event.	X				
8.1.5	Public access roads included must be built by applicant prior to the issuance of occupancy permits. Road meets minimum specfications.	X				
8.1.6	All lots in accordance to Article 6.2 of the LZO and Shoreland zoning ordinance section 15.	X				
8.1.7	Lots in GP Zone require 375 feet road frontage and have access at grades not exceeding 10% to the road.	X*				
8.1.7	Lots in the R Zone require 300 feet road frontage and have access at grades not exceeding 3% to road.	X				
	Section 15 of the Shoreland ZO	X				
8.2	**Monuments**					
8.2.1	Monuments set at all corners and angle points	X				
8.2.2	Monuments defining roads & boundary of subdivision must be 5"x5"x4' long and set at least 6" above ground	X				
8.2.3	Monuments at lot corners & angle points may be number five rebar at least 4' long & capped to identify surveyor	X				
8.3	**Street signs**					
8.3.1	Street names must be approved by the E911 officer	X				
8.3.2	Street signs and traffic signs must be furnished by the subdivider & approved by the road commissioner	X				
8.4	**ROADS**					
8.4.1	Classification = Major or Minor Road	Private				
8.4.2 8.4.3	**Road specifications** Clearing	X				
8.4.4	Road Layout	X				
8.4.4.1	Reserve strips controlling access prohibited except as approved by the Planning Board	N/A				
8.4.4.2	Pavement width for commercially zoned property to have pavement width deemed necessary by the Board to assure free flow of traffic.	N/A				
8.4.4.3	Adequate off street loading space for lots designed for commercial use.	N/A				
8.4.4.4	Where a subdivision borders an existing narrow road or when the Comprehensive Plan indicates plans for realighnment or widening of a road, the subdivider will be required to show this reservation of land on the plan.	N/A				
8.4.4.5	Where a subdivision abuts an existing or proposed arterial street the Board may require marginal access streets.	N/A				
8.4.4.6	Subdivisions containing 15 or more lots shall have a least two street connections with with existing public streets or streets on Official map or streets in an approved subdivision plan.	N/A				
8.4.4.7	Entrances onto existing or proposed collector streets shall not exceed one per 400 feet of street frontage. Entrances onto existing or proposed arterial streets shall not exceed one per 1000 feet of street frontage.	N/A				

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8.4.4.8	Minor roads shall be laid out to discourage through traffic.	X				
8.4.4.9	Grades of all street shall conform to the terrain.	X				
8.4.4.10	Street intersections designed to permit adequate visibility to pedestrian and vehicular traffic.	X				
8.4.4.11	Dead end streets shall not exceed 1600 feet in length and shall be provided with a suitable cul-de-sac. Turning circle shall have a minimum outside radius of 65 feet.	X				
8.4.4.12	All streets shall be provided with adequate drainage facilities to prevent flooding of the pavement and erosion of adjacent surfaces.	X				
8.4.4.13	Side slopes shall not be steeper than 3 foot horizontal to 1 foot vertical. Request for waivers from this can be reviewed using standards in this section.	X				
8.4.4.14	Streets shall be rough-graded to the full width of the right of way.	X				
8.4.4.15	Street curbs and gutters shall be required on all streets within Maine State highway commission defined as urban areas and shall be required at the discretion of the planning board in rural areas.	N/A				
8.4.4.16	Where curb and gutter are not required, stablized shoulders and proper drainage shall be the responsibility of the subdivider.	X				
8.4.4.17	All roadways within the subdivision shall be contructed according to the road specifications herein as overseen by a licensed civil engineer.	X				
8.4.4.18	Occupancy permits my only be issued upon completion of the base coat of pavement of all subdivision roads.	X				
	8.4.5 Planting					
8.4.5.1	Esplanade or planting strip areas at sides of streets shall receive at least 6" of compacted screened loam. Base materials shall be removed prior to placement of topsoil.	N/A				
8.4.5.2	Planting strips to be limed at the rate specified in this section.	N/A				
8.4.5.3	When required by the Board, street trees shall be planted in the espanade areas of all new streets.	N/A				
8.4.5.4	Trees of the 1st magnitude (see ordinance) shall be planted at 40-60 foot intervals.	N/A				
8.4.5.5.	Trees of the 3nd magnitude (see ordinance) may be planted at intervals of less than 40 feet.	N/A				
	8.5 SIDE WALKS					
8.5.1	If required, sidewalks shall be installed at the expense of the subdivider.	N/A				
8.5.2	Sidewalks when installed shall meet minimum requirements of this section as outlined.	N/A				
	8.6 WATER SUPPLY					
8.6.1	Public water supply system with fire hydrants, or a system of fire protection acceptable in writing by the Fire Dept. or if not feasable the board may allow individual wells to be used.	N/A				
8.6.2	Demonstrate that the water meets public health standards can be supplied at a rate of least 350 gallons per day per dwelling unit and at an adequate pressure for fire fighting purposes.	N/A				
8.6.3	Water storage provided as necessary to meet peak domestic demands and for fire protection needs as specified by the Fire Dept.	N/A				
8.6.4	Demonstrate that the subdivision will not result in an udue burden on the source, treatment facilities or distribution system involved or provide assurance that the system will be modified to meet the expanded needs.	N/A				
8.6.5	Minimum water main shall be 6".	N/A				

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8.6.6	Water supply system designed and installed in accordance with Maine Dept. of Health & Engineering.	N/A				
8.6.7	All subdivisions are required to provide drilled wells.	X				
8.6.8	If central water supply system is provided, all aspects of the treatment facility per this section shall conform to recommendations of the Manual for Evalution Public Drinking Water Supply or revisions	N/A				
8.6.9	Maintenance of central water distribution system, storage and underground facilities for fire protection shall be the responsibility of the Homeowners Association.	N/A				
	8.7 SEWAGE DISPOSAL					
8.7.1	Sanitary sewage system shall be installed. If the Board determines this is not feasible it may allow individual septic tanks to be used. Not allowed in poorly drained soils.	X				
8.7.2	Plans for sewage disposal designed by an engineer in compliance with requirements of State of Maine.	N/A				
8.7.3	Where a public sewer line is located within 1500 feet of a proposed subdivision at its nearest point the subdivider shall connect with the sewer line with a main not less than 8".	N/A				
8.7.4	Maintenance of a subdivision sewer system shall be the responsibility of the homeowners association.	N/A				
	8.8 SURFACE DRAINAGE					
8.8.1	Drainage easement required when the subdivision is traversed by a watercourse, drainage way or storm drain pipe.	X				
8.8.2	Statement from registered engineer if subdivision will not create erosion, drainage or run off problems to either the subdivision or the abutters.	X				
8.8.3	Topsoil shall be considered part of subdivision; except for roads, parking & building, it is not to be removed from site.	X				
8.8.4	Vegetation to be left intact except for normal thinning and land scaping	X				
8.8.5	The Shoreland zoning ordinance applies in all land areas within 250 feet of a pond, river or upland edge of a wetland and 75 feet of a stream.					
	8.9 STORM DRAINAGE DESIGN STANDARDS					
8.9.1	Adequate provisions for disposal of all storm water.	X				
8.9.2	All storm water management systems shall be designed by a professional engineer.	X				
8.9.3	An underdrain system shall be installed to drain all springs or areas where ground water would cause a hazard to the stability of the road base.	X				
8.9.4	Demonstrate that the storm drainage from upstream areas and the proposed subdivision will not create overload on existing downstream drainage systems.	X				
8.9.5	A professional engineer registered in the state of Maine shall attest by signature and stamp that all provisions of this section have been met.	X				
	8.10 STORM DRAINAGE CONSTRUCTION STANDARDS					
8.10.1	Materials used shall conform with Maine specifications for highway and bridges.	X				
8.10.2	Cross culverts shall be installed per the specifications of this section.	X				
8.10.3	Drainage shall be straight in both vertical and horizontal alignment.	X				
8.10.4	Catch basins installed per this section.	N/A				
	8.11 HOMEOWNERS ASSOCIATION					
8.11.1-6	Homeowners association shall comply with this section.	X				
	GENERAL REQUIREMENTS					

SUBDIVISION REGULATIONS		Submitted By Applicant	Received by Planning Board	Applicant Request to be Waived	Waived by Planning Board	Approved by Planning Board
9.1	In reviewing applications the Board shall consider the following requirements. In all instances the burden of proof shall be upon the applicant.	X				
9.2	Plan shall conform to comprehensive plan	X				
9.3.1	Relationship of subdivision to community service: schools, roads, police, fire etc.	X				
9.3.2	The developer shall provide accurate cost estimates to the town for the above services and the expected tax revenue of the subdivision.	X				
	9.4 RETENTION OF PROPOSED PUBLIC SITES AND OPEN SPACES	N/A				
9.4.1	The Board may require the developer to provide 10% of the total area for recreation. It is desirable that areas reserved be at least 5 acres.	N/A				
9.4.2	Land reserved for park or recreation shall be of a character and configuration suitable for the particular use intended as further outlined in this section.	N/A				
9.4.3	Where the subdivision is located on a lake, pond or stream, a portion of the waterfront area (when feasible) shall be included in the reserve land and shall be a minimum of 200 feet wide.	N/A				
9.4.4	If the Board determines the reservation of land is inappropriate the Board may waive the requirement on the condition that the subdivider deposits a cash payment in lieu of land reservation.	N/A				
9.4.5	The Board may further require that the developer provide space for future municipal uses in accordance with the Comprehensive plan with a finite term option.	N/A				
9.5	Preservation of Natural & Historic Features - The Board may require a landscaping plan to show preservation or replacement of existing trees or scenic or historic or environmentally desirable areas.	N/A				
9.6	Land not suitable for development - The Board shall not approve portion of the subdivision that are below sea level, on land that must be filled or on poorly drained soils.	X				
9.7	Whenever situated in the shoreland zone the subdivision shall conform to the requirements of the town shoreland zoning ordinance.	X				
	9.8 LOTS					
9.8.1	The lot size, width, depth, shape and orientation and minimum setback lines shall be appropriate for the location, type of development and use comtemplated as regulated by local ordinance.	X				
9.8.2	Depth and width of properties shall be adequate to provide for off street parking and service facilities for vehicles.	X				
9.8.3	All lots shall have the minimum lot size as required by the zoning district requirements.	X				
9.8.4	Doube frontage lots and reverse frontage lots shall be avoided except where essential and will be planned per this section.	X				
9.8.5	Side lot lines shall be substantially at right angles or radial to street lines.	X				
9.8.6	Where a tract is subdivided into lots substantially larger than the minimum size required, the Board may require streets and lots be laid out so as to permit future re-subdivision.	N/A				
9.8.7	All sections of 9.8 must conform to local ordinances.	X				
	9.9 UTILITIES					
9.9.1	The size type and location of public utilities shall be approved by the Board and installed in accordance with codes and regulations.	X				

SUBDIVISION REGULATIONS		Submitted By Applicant	Received by Planning Board	Applicant Request to be Waived	Waived by Planning Board	Approved by Planning Board
9.9.2	Utilities shall be installed underground except as otherwise approved by the Board.	X				
	9.10 ADDITIONAL REQUIREMENTS					
9.10.1	Street trees and esplanades and open green spaces may be required at the discretion of the Board. When required they shall be included in the final plan and made part of the construction process	N/A				
9.10.2	The subdivision design shall minimize the possibility of noise pollution from within or without the development (from highway or industrial sources) by providing and maintaining a green strip at least 20 feet wide between abutting properties that are so endangered.	X				
	ARTICLE 10 CLUSTER DEVELOPMENT STANDARDS					
10.3.1	In order to qualify for consideration under this article, two plans must be submitted. One showing a standard subdivision and the second as a cluster subdivision.	N/A				
10.3.2	The net residential acreage is calculated by taking the total area of the lot and subtracting portions covered by surface water, portions shown to be in the floodway as designated by FEMA maps, portions of the lot subject to a right of way, portions of the lot to be used for roads and parking.	N/A				
10.3.3.A	Must meet all requirements for a subdivision other than those that may be modified under this article and all other applicable ordinances.	N/A				
10.3.3.B	The developer must specify the building envelopes and the treatment of open spaces, paths, roads, utility service and parking on the plan.	N/A				
10.3.3.C	A high intensity soil survey must be submitted. No building may be constructed on soil classified as very poorly drained.	N/A				
10.3.3.D	No building shall be located within 100 feet of a waterbody or wetlands.	N/A				
10.3.3.E	No house lot for a single family dwelling shall be smaller than 43,560 square feet or larger than 55,000 square feet in the Residential and Commercial/Residential districts with the rest of the 3 acres set aside as common and further spelled out in this section.	N/A				
10.3.3.F	No house lot for a single family dwelling shall be smaller than 43,560 square feet or larger than 55,000 square feet in the General purpose district with the rest of the 5 acres set aside as common and further spelled out in this section.	N/A				
10.3.3.G	All open space shall be considered common land and the interest divided equally among land owners.	N/A				
10.3.3.H	Road frontage shall not be less than 150 feet or more than 200 feet for each house lot.	N/A				
10.3.3.I	No individual lot or dwelling unit may have direct vehicular access onto a public road existing at the time of development.	N/A				
10.3.3.J	The developer shall provide for the construction of underground storage facilities for fire protection. Size and number of facilities required shall be determined by the Board based on the Fire Dept. recommendations. Maintenance of this facility is the responsibility of the homeowners association.	N/A				
10.3.3.K	Utilities must be installed underground.	N/A				
10.3.3.L	Location of all SSWD systems and an equivalent reserve area for replacement systems must be shown on the plan. The reserved areas must be deed restricted with language not allowing construction of structures within the replacement area. SSWD systems shall not be located in the required open space area.	N/A				

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10.3.3.M	The report of a licensed site evaluator must accompany the plan. If the subsurface disposal system is an engineered system approval from the State Dept. of Health Engineering must be obtained prior to Board approval.	N/A				
10.3.3.N	In order to meet state requirements for separation distances between drinking water wells and septic systems, private drinking water wells may be located in areas designated as open space.	N/A				
	10.4 CREATION AND MAINT. OF OPEN SPACE/COMMON AREAS	N/A				
10.4.1	There shall be no further subdivision of the open space. The open space may be used only for agriculture, forestry conservation, or non-commercial recreation. Easements for public utilities or structures accessory to non-commercial recreation may be approved by the Board after review.	N/A				
10.4.2	Upland areas of open space may be used as storage or stock pile areas during construction of the development and must meet further conditions of this section.	N/A				
	10.5 RESTORATION					
10.5.1	The applicant shall delineate the limits of stockpile and storage areas on the plan.	N/A				
10.5.2	The applicant shall take photos of the area to be used for storage and stockpiling and submit them to the Board with the preliminary plan.	N/A				
10.5.3	The applicant shall provide a restoration plan of storage and stockpile areas specifying grading, topsoil specs, and plantings.	N/A				
	10.6 DEVELOPMENT OF FIELDS FOR ACTIVE RECREATION	N/A				
10.6.1	The applicant shall delineate the limits of stockpile and storage areas on the plan.	N/A				
10.6.2	Provide a plan of storage and stockpile areas to be developed as play-fields specifying grading, topsoil specs, grass seed mix with application rate. The fields shall be graded to drain and the cross slope shall not exceed 2%.	N/A				
10.6.3	Specify a maintenance schedule and responsibilities that shall be included in the homeowners association documents.	N/A				
10.6.4	There shall be a separate item in the schedule of values provided with the performance guarantee outlined in section 7.2 of this ordinance for the restoration or development as play fields in the open space.	N/A				
10.6.5	Open space shall be shown on the plan.	N/A				
10.6.6	The plan shall indicate by notation that the open space shall not be subdivided or used for future buildings development.	N/A				
10.6.7	The plan shall indicate by notation that the homeowners association shall own and maintain the open space.	N/A				
	10.7 HOMEOWNERS ASSOCIATION					
	Refer to Article 8.11 Homeowners Association	N/A				
	10.8 BUFFERING					
10.8.1	The portion of the development which abuts a street or road no in the cluster development and areas along the exterior boundaries must be designed as a continuous landscaped buffer area of not less than 75 feet in width. Structures or streets are prohibited in the buffer area other than a street providing access to the development. The first 50 feet of the buffer strip as measured from the exterior boundaries of the development must contain vegetation.	N/A				
10.8.2	No structure may be built within 75 feet of the internal road or street right of way boundary.	N/A				

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10.8.3	No structure may be built within 40 feet of an internal side or rear property line.	N/A				
	All other standards within the Town subdivision standards shall apply to Cluster Housing Development Standards.					
	30-A MRSA 4404 section 187 / Article 3	X				
1	Pollution	X				
2	Sufficient water	X				
3	Water supply	X				
4	Erosion	X				
5	Traffic	X				
6	Sewage disposal	X				
7	Municipal solid waste	X				
8	Municipal or Governmental Service	X				
9	Aesthetic, Cultural and Natural Values	X				
10	Conformity with local ordinances and plans	X				
11	Financial and technical capacity	X				
12	Surface waters	X				
13	Ground water	X				
14	Flood areas - has been identified	X				
15	Freshwater wetlands/ vernal pools - has been identified	X				
16	Farmland	X				
17	River, stream or brook - has been identified	X				
18	Storm water - will provide for adequate storm water management	X				
19	Spaghetti lots prohibited	X				
20	Lake phosphorus concentration	N/A				

David A & Claudette A. Gray
290 Walker Road
Lyman, ME 04002

Sarah C. & Nicholas Armentrout
73 Drown Lane
Lyman, ME 04001

John D. & Susan A. Green
86 Carlisle Brook Road
Lyman, ME 04002

Sarah L. Curley
386 Walker Road
Lyman, ME 04002

J. Michael Crimmins IV & Lindsay Saxon
374 Walker Road
Lyman, ME 04002

David A. & Susan Gluck
377 Walker Road
Lyman, ME 04002

Roderick Tetu
357 Walker Road
Lyman, ME 04002

Dennis S. Boucher
8 Village Circle
Lyman, ME 04002

Section 2

Letter of Authorization

ALTUS
ENGINEERING

Letter of Authorization

I, Troy Williams, authorized representative for Carlisle Brook Estates, LLC, hereby authorize Altus Engineering to represent the LLC, as the Owner/Applicant in all matters concerning engineering and related permitting for Tax Map 4, Lot 22 located on Walker Road in Lyman, Maine. This authorization shall include representation at public hearings and other project-related meetings in addition to any signatures required for Federal, State and Municipal permit applications.

Signature	Print Name	Date
Witness	Print Name	Date

Troy Williams 8/27/24

Briana Fecteau 8/27/2024

Section 3

Property Deed

ALTUS
ENGINEERING

NANCY E HAMMOND, REGISTER OF DEEDS
E-RECORDED **Bk 19429 PG 773**
Instr # 2024012837
05/07/2024 02:29:41 PM
Pages 3 YORK CO

RECORD AND RETURN TO:
Carlisle Brook Estates, LLC
1000 US Route One, Suite 102
York, ME 03909
File No. FP-002629
Parcel No. 04-022
DLN: 1002440271816

Maine R.E. Transfer Tax Paid

DEED OF TRUST

KNOW ALL MEN BY THESE PRESENTS that we,

Fern A. Wirth, Trustee of The Fern A. Wirth 2001 Revocable Trust udt dated September 25, 2001 of 21 Skyline Drive, Wellesley, MA 02482 **and Morris A. Wirth** of 2 Sugarloaf Court, Apt 101, Baltimore, Maryland, 21209,

for consideration paid, grant to

Carlisle Brook Estates, LLC, a Maine Limited Liability Company with a mailing address of 1000 US Route One, Suite 102, York, ME 03909, **with WARRANTY COVENANTS, the following:**

A certain lot or parcel of land situated in Town of Lyman, County of York, State of Maine and bounded and described as follows:

The land formerly occupied by Isaac C. Emmons, as a homestead, bounded Northwesterly by the road; Northeasterly by land of heirs of Richard Simpson; Southeasterly by land of John Emmons; Southwesterly by land of Nancy Garland, the Branch, so-called, and land occupied by J. G. Carlisle.

Also the small wood lot near said homestead, bounded and described as follows: Beginning at the corner of said wood lot at a stone post by land of Soloman Drown and John G. Emmons; thence Southeasterly by said Emmons land, to land of Charles E. Taylor; thence Southwesterly by said Taylor and to land of said Soloman Drown; thence Northwesterly and Northeasterly by said Drown land, to the point of beginning.

Also another lot or parcel of land situated in said Lyman and lying on the Southerly side of Evans Road, so-called, bounded and described as follows: Easterly by land formerly of Preston E. Evans; Southerly by Branch Brook; Westerly by the Carlyle Road, so-called, and Northerly by the Evans Road.

TAX PARCEL #04-022

Premises being known as: Walker Road (Map 4 Lot 22), Lyman

Meaning and intending to describe the same property as conveyed to Fern A. Wirth, Trustee of the Fern A. Wirth 2001 Revocable Trust u/t/d September 25, 2001 from Fern Ann Wirth, by Release Deed dated December 18, 2001, and recorded on December 2, 2001, in Book 11249, Page 253, as Instrument No. 071588, York County Registry of Deeds (as to a one-half interest).

And meaning and intending to describe the same property conveyed to Fern Ann Wirth and Morris A. Wirth, from Fern Ann Wirth and Morris A. Wirth, Trustees of the Ethel D. Wirth Revocable Trust dated September 16, 1994, by Trustee's Deed dated March 8, 1995, and recorded March 27, 1995, in Book 7340, Page 004, as Instrument No. 010773, York County Registry of Deeds.

TRUSTEE'S CERTIFICATE

The undersigned Trustees is the sole Successor Trustee under The Fern A. Wirth 2001 Revocable Trust, created under a certain Declaration of Trust dated September 25, 2001 and thereto has full and absolute power in said Trust Agreement to convey any interest in real estate and improvements thereon, and pledge said property as security, held in said Trust and no purchaser or third party shall be bound to inquire whether the Trustee has said power or is properly exercising said power or to see to the application of any Trust asset paid to the Trustee as a conveyance thereof.

Dated this 30 day of April, 2024.

THE FERN A. WIRTH 2001 REVOCABLE TRUST UDT DATED SEPTEMBER 25, 2001

By: _____ Trustee {SEAL}
Fern A. Wirth, Trustee

STATE OF MASSACHUSETTS
COUNTY OF NORFOLK

On this the 30TH day of April, 2024 personally appeared **Fern A. Wirth, Trustee of The Fern A. Wirth 2001 Revocable Trust udt dated September 25, 2001**, known to me, or satisfactorily proven, to be the person whose name is subscribed to the foregoing instrument and acknowledged that she executed the same for the purpose therein contained.

KATIE BECKLES
NOTARY PUBLIC
Commonwealth of Massachusetts
My Commission Expires on
February 19, 2027

Before me, _____
Notary Public

Dated this 30 day of April, 2024.

Morris A. Wirth {SEAL}
Morris A. Wirth

STATE OF Maryland
COUNTY OF Baltimore

On this the 30th day of April, 2024 personally appeared **Morris A. Wirth**, known to me, or satisfactorily proven, to be the person whose name is subscribed to the foregoing instrument and acknowledged that he executed the same for the purpose therein contained.

LAURA RIEDER BESER
Notary Public - State of Maryland
Baltimore County
My Commission Expires Nov 30, 2027

Before me, Laura Rieder Beser
Notary Public

Section 4

Corporate Standing

ALTUS ENGINEERING

MAINE
Department of the Secretary of State
Bureau of Corporations, Elections and Commissions

Corporate Name Search

Information Summary

Subscriber activity report

This record contains information from the CEC database and is accurate as of: Tue Aug 27 2024 16:50:22. Please print or save for your records.

Legal Name	Charter Number	Filing Type	Status
CARLISLE BROOK ESTATES LLC	202405026DC	LIMITED LIABILITY COMPANY	GOOD STANDING

Filing Date	Expiration Date	Jurisdiction
04/25/2024	N/A	MAINE

Other Names	(A=Assumed ; F=Former)
NONE	

Principal Home Office Address

Physical	Mailing

Clerk/Registered Agent

Physical	Mailing
JOSEPH V LENKOWSKI 1038 MAIN STREET SANFORD, ME 04073	JOSEPH V LENKOWSKI P.O. BOX 1139 SANFORD, ME 04073

New Search

Click on a link to obtain additional information.

List of Filings	View list of filings	
Obtain additional information:		
Certificate of Existence (Good Standing) (more info)	Short Form without amendments ($30.00)	Long Form with amendments ($30.00)
Certificate of Legal Existence (more info)	Short Form without amendments ($30.00)	Long Form with amendments ($30.00)

You will need Adobe Acrobat version 3.0 or higher in order to view PDF files.
If you encounter problems, visit the troubleshooting page.

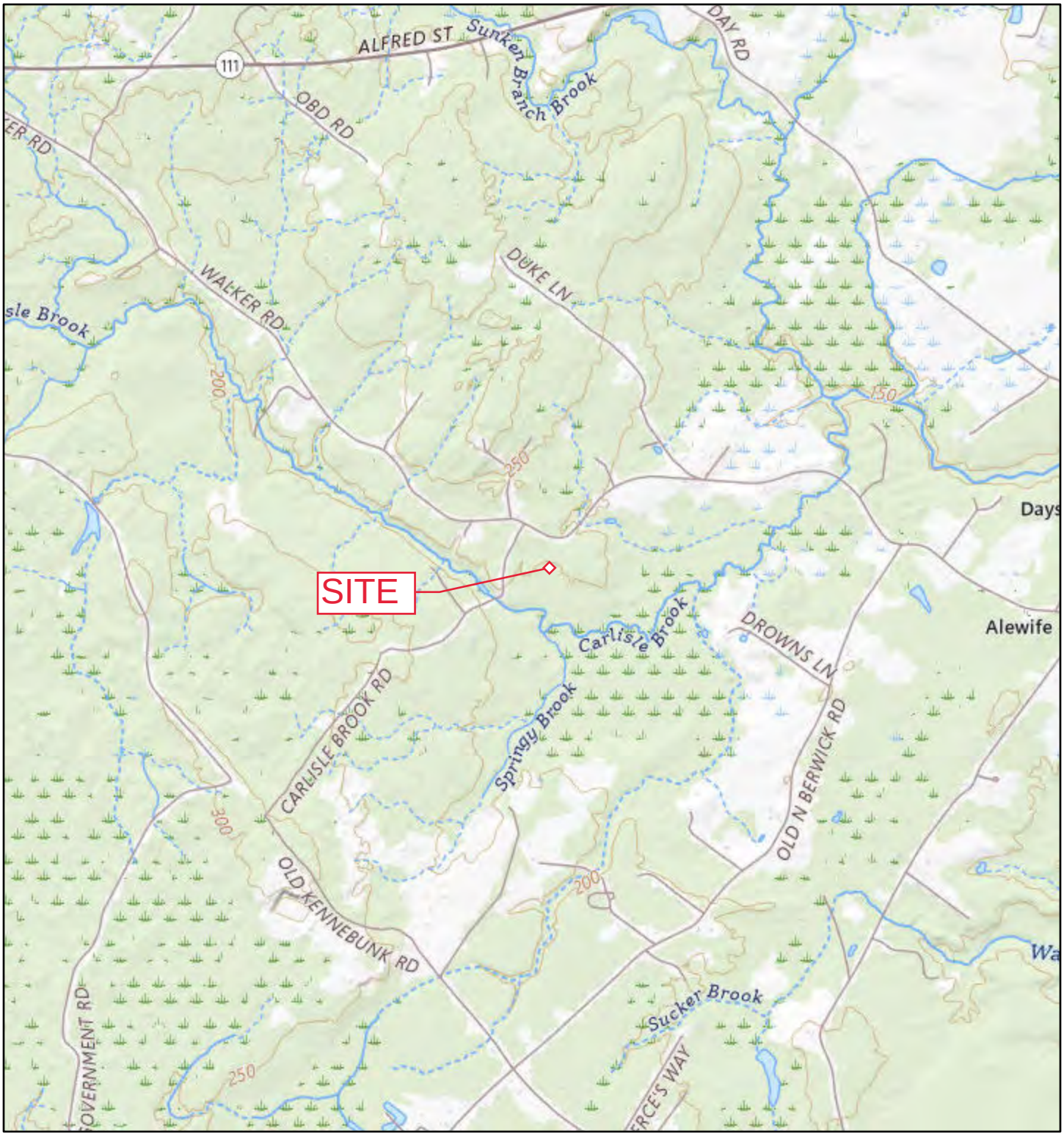
If you encounter technical difficulties while using these services, please contact the Webmaster. If you are unable to find the information you need through the resources provided on this web site, please contact the Division of Corporations, UCC & Commissions Reporting and Information Section at 207-624-7752 or e-mail.

Section 5

USGS Map
Aerial Photo
Tax Map

ALTUS
ENGINEERING

USGS Map



8/29/2024, 10:11:03 AM

1:36,112

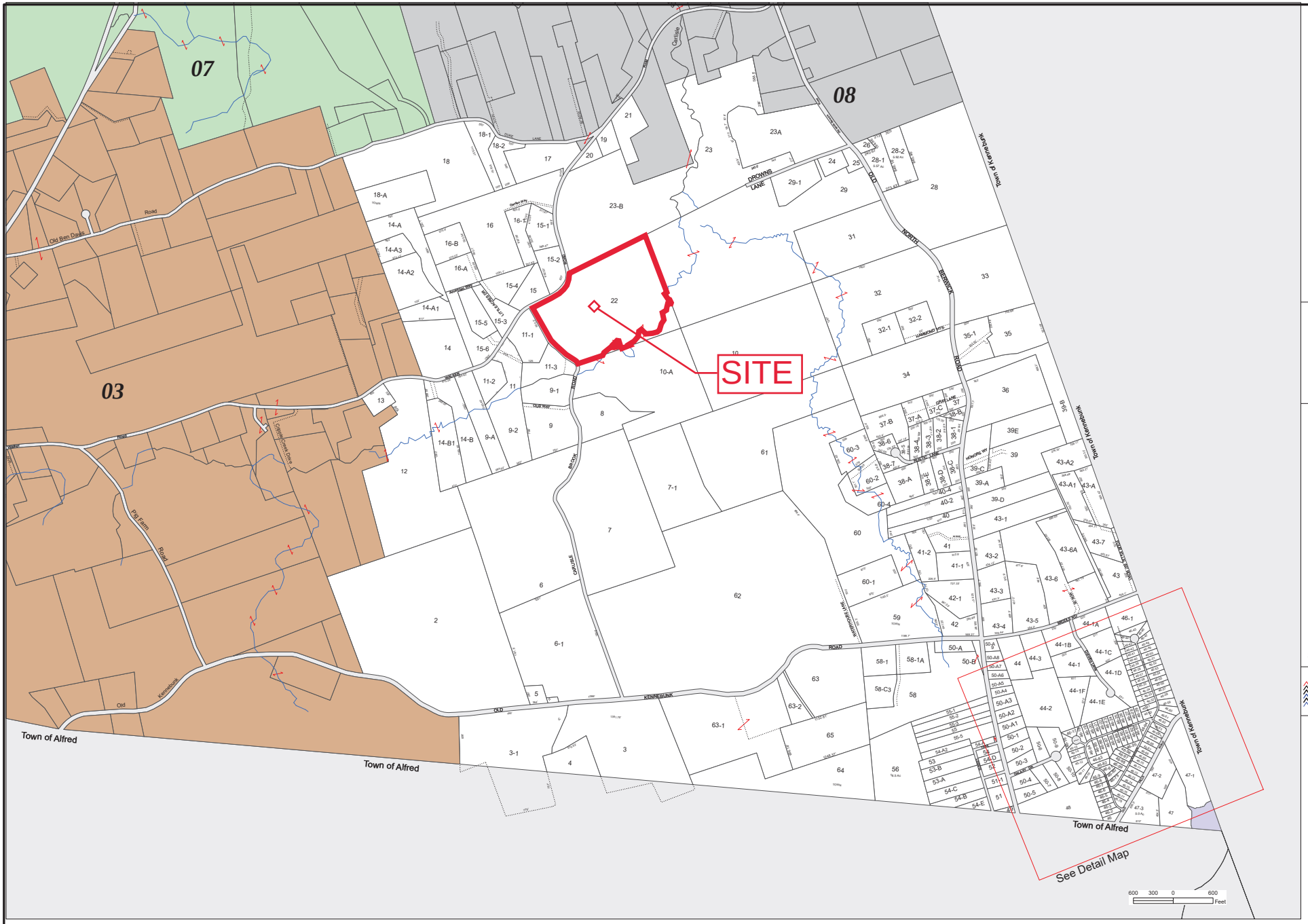
0 0.23 0.45 0.9 mi

0 0.35 0.7 1.4 km

USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road data; Natural Earth Data; U.S.

Maine Geolibrary


Walker Rd
Walker Rd
Walker Rd
Walker Rd
Little Acres Dr
Carlisle Brook Rd
SITE
Carlisle Brook
Springy Brook



PROPERTY MAPS
TOWN OF LYMAN, MAINE

James H. Thomas
gisSolutions of Maine
Cumberland, Maine
jht@maine.rr.com

These maps are intended to be used for the purpose of Property Tax Assessments and should not be used for conveyances.

Revised to April 1st

Scale: 1 Inch = 600

Hooks
Headline
Hydro
Streams
TownBounds
Shore

Subject Map
Bordering Map
Bordering Map
Bordering Map
Bordering Map

2023

MAP: 04

Section 6

Drainage Analysis

(under separate cover in hard copy)

ALTUS ENGINEERING

DRAINAGE ANALYSIS

FOR

Carlisle Brook Estates

Walker Road
Lyman, ME

Assessor's Map 4, Lot 22

March 19, 2025

Prepared For:

Carlisle Brook Estates, LLC

1000 U.S. Route 1, Suite 102

York, ME 03909

Prepared By:

Altus Engineering

133 Court Street

Portsmouth, NH 03801

Phone: (603) 433-2335

ALTUS ENGINEERING

Altus Project 5590

Table of Contents

ALTUS ENGINEERING

Section 1

Narrative

ALTUS ENGINEERING

PROJECT DESCRIPTION

The applicant is proposing "Carlisle Brook Estates," a six-lot residential subdivision on a +/- 45.77-acre lot located at the intersection of Walker Road and Carlisle Brook Road in Lyman, ME. The property is identified as Tax Map 4, Lot 22 and is located in the Town's General Purpose District. The lot is primarily wooded with some sections of wetland scattered around the site and features approximately 1,800 LF of frontage along Carlisle Brook.

The proposed project contemplates a 660' private way with a hammerhead turnaround that will connect to Walker Road together with common utilities and stormwater management facilities. These measures will include an open drainage system comprised of vegetated and riprap swales, cross culverts, drip strips at all housing units and a stormwater basin. The proposed stormwater management system will reduce peak flows of runoff from the site's impervious areas.

Site Soils

Joseph W. Noel completed a high-intensity soil survey (HISS) for this site. This survey indicates that the subject property can be broken into hydrologic soils groups A, B and D.

Pre-Development (Existing Conditions)

The pre-development drainage model reflects the existing conditions of the site. The north-eastern portion of the parcel drains to an abutting property identified as Point of Analysis #1 (POA 1). The remainder of the parcel drains to Carlisle Brook which is identified as Point of Analysis #2 (POA 2). The site hydrology is characterized by two sub-catchments as delineated on the accompanying "Pre-Development Watershed Plan."

Post-Development (Proposed Conditions)

The post-development conditions were analyzed at the same discharge points as the pre-development conditions. The post-development watersheds are delineated on the accompanying "Post-Development Watershed 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 Plan, the site was divided into three post-development subcatchment areas tributary to the two points of analysis in the Pre-Development model.

The Post-Development Watershed Plan illustrates the proposed stormwater management system. Site topography, existing features, proposed site improvements, proposed grading, drainage and erosion control measures are shown on the accompanying plans. Recommended erosion control measures are based upon the May 2016 edition of the "*Maine Stormwater Best Management*

Practices Manual Volume III" prepared by Maine Department of Environmental Protection as amended.

Stormwater treatment will be provided by grassed swales and forested buffers. A stormwater basin will be constructed to control the flow rate leaving the parcel. In addition, all proposed houses are to be equipped with stone drip edges that will allow for the infiltration of runoff and the minimization of erosion.

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 and 25 year - 24-hour storm events using rainfall data provided by the Maine Department of Environmental Protection.

Disclaimer

Altus Engineering, Inc. 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. The following table compares pre- and post-development peak rates at the Point of Analyses identified on the plans for the 2, 10, and 25-year storm events:

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

	2-Year Storm (3.30-inch)	10-Year Storm 4.90-inch)	25-Year Storm (6.20-inch)
POA 1			
PRE	7.05	16.54	25.20
POST	6.60	14.03	21.91
CHANGE	-0.45	-2.51	-3.29
POA 2			
PRE	24.79	54.76	81.72
POST	24.30	53.67	80.09
CHANGE	-0.49	-1.09	-1.63

As the above table demonstrates, the proposed peak rates of runoff at the points of analyses will be reduced from the existing conditions for all analyzed storm events.

CONCLUSION

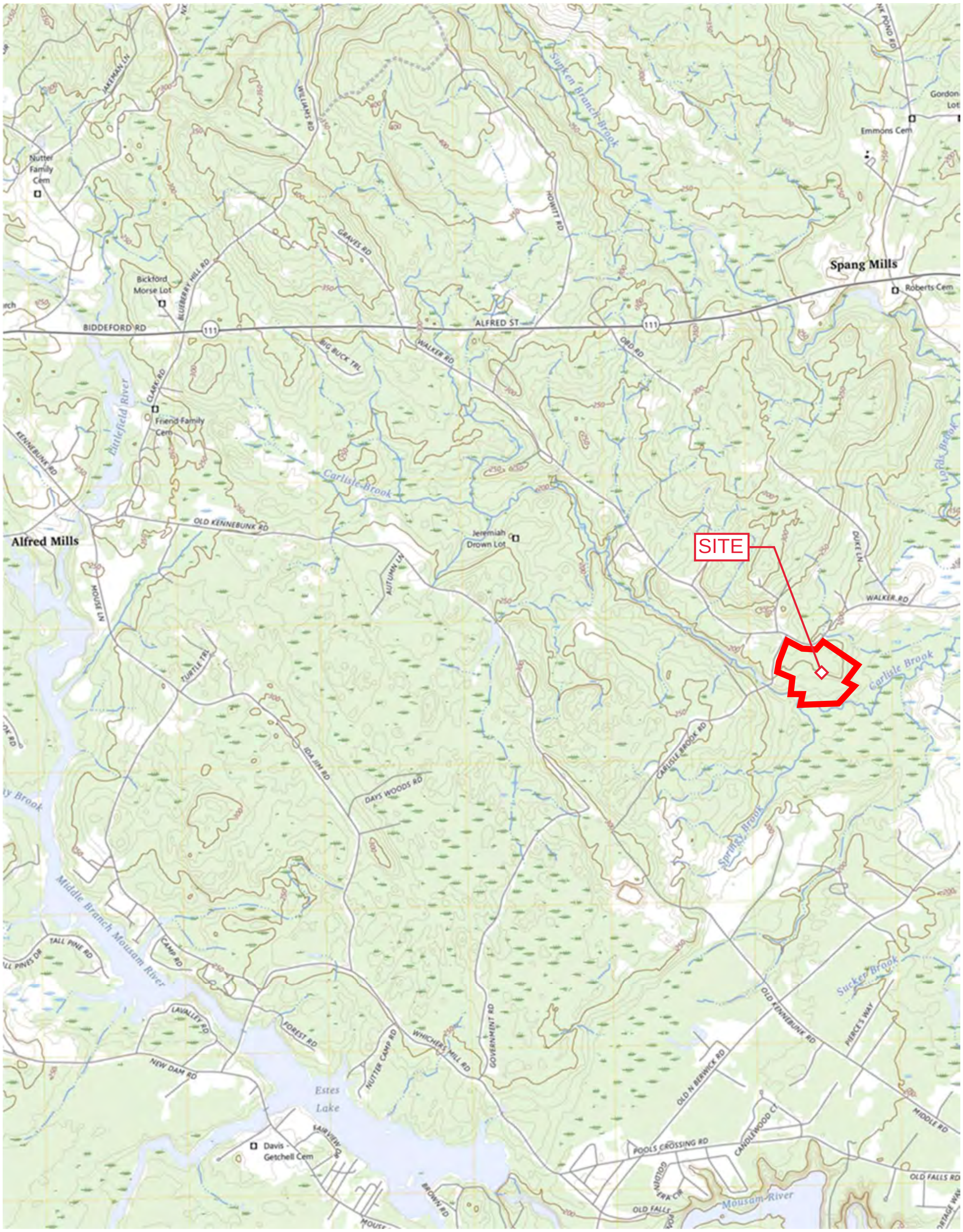
This proposed site development of property located at Assessors Map 4, Lot 22 in Lyman, Maine will have minimal adverse effect on abutting properties and infrastructure as a result of stormwater runoff or siltation. Post-construction peak rates of runoff from the site will be less than the existing conditions for all analyzed storm events. 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 in accordance with Maine DEP stormwater standards and standard engineering practice.

Section 2

Aerial Photo and USGS Map

ALTUS ENGINEERING


Walker Rd
Walker Rd
Walker Rd
Walker Rd
Little Acres Dr
Carlisle Brook Rd
SITE
Carlisle Brook
Springy Brook

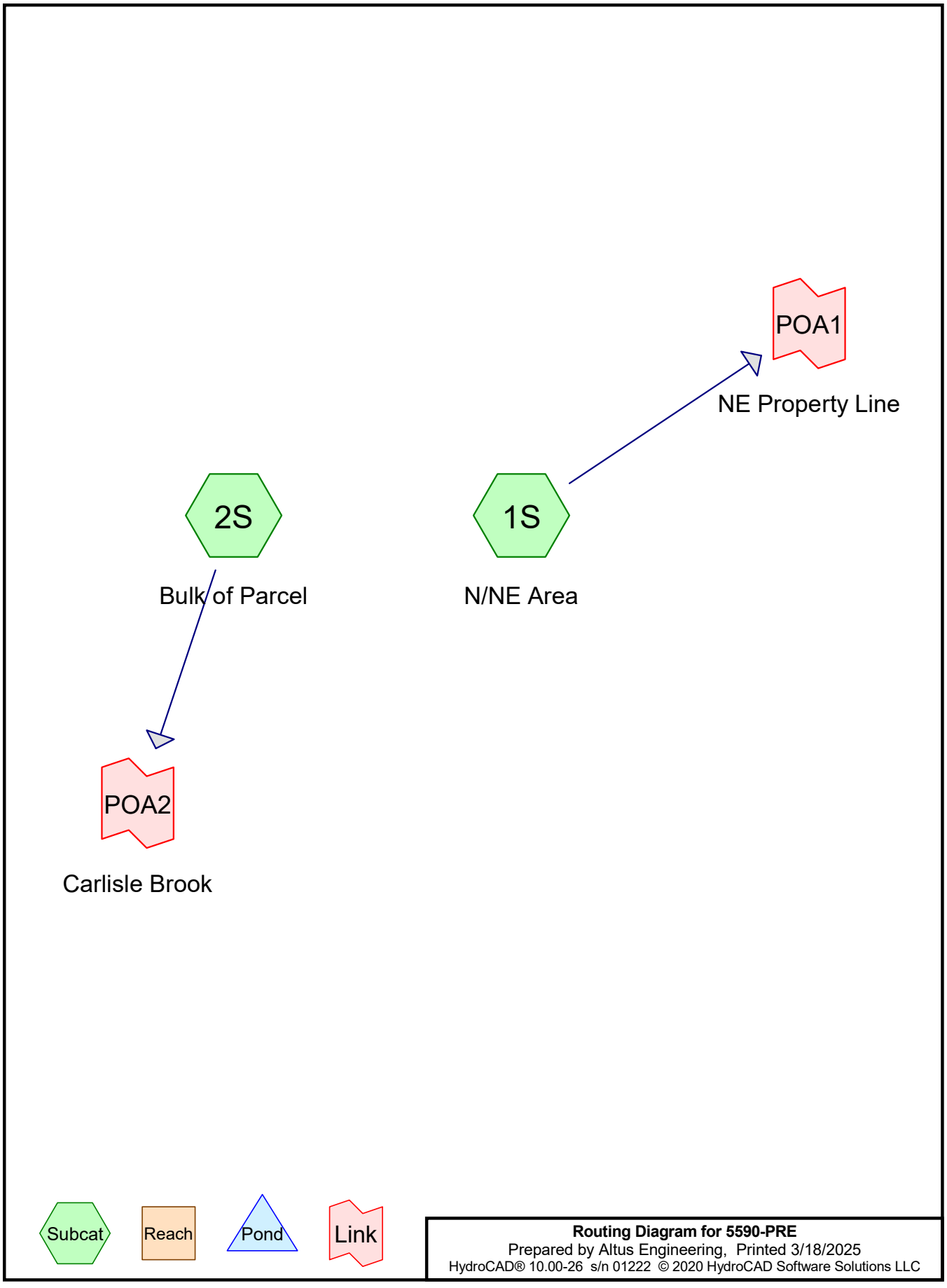

SITE
Spang Mills
Alfred Mills
Nutter Family Cem
Bickford Morse Lot
Friend Family Cem
Jeremiah Drown Lot
Emmons Cem
Roberts Cem
Davis Getchell Cem
BIDDEFORD RD
ALFRED ST
111
WALKER RD
OLD KENNEBUNK RD
Carlisle Brook
Sunken Branch Brook
Littlefield River
Middle Branch Mousam River
Estes Lake
Mousam River
Sucker Brook
Spring Brook
CARLISLE BROOK RD
GOVERNMENT RD
WHICHERS MILL RD
NUTTER CAMP RD
FOREST RD
NEW DAM RD
LAVALLEY RD
CAMP RD
TALL PINE RD
IDA JIM RD
DAYS WOODS RD
TURTLE TRL
MOUSE LN
AUTUMN LN
KENNEBUNK RD
CLARK RD
BLUEBERRY HILL RD
GRAVES RD
WILLIAMS RD
HOWITT RD
BIG BUCK TRL
JAKEMAN LN
DUKE LN
OLD N BERWICK RD
POOLS CROSSING RD
CANDLEWOOD CT
PIERCE'S WAY
MIDDLE RD
OLD FALLS RD
BROWN RD
FAIRVIEW DR

Section 3

Drainage Calculations

Pre-Development
2-Year, 24-Hour Summary
10-Year, 24-Hour Complete
25-Year, 24-Hour Summary

ALTUS
ENGINEERING



Routing Diagram for 5590-PRE
Prepared by Altus Engineering, Printed 3/18/2025

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 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

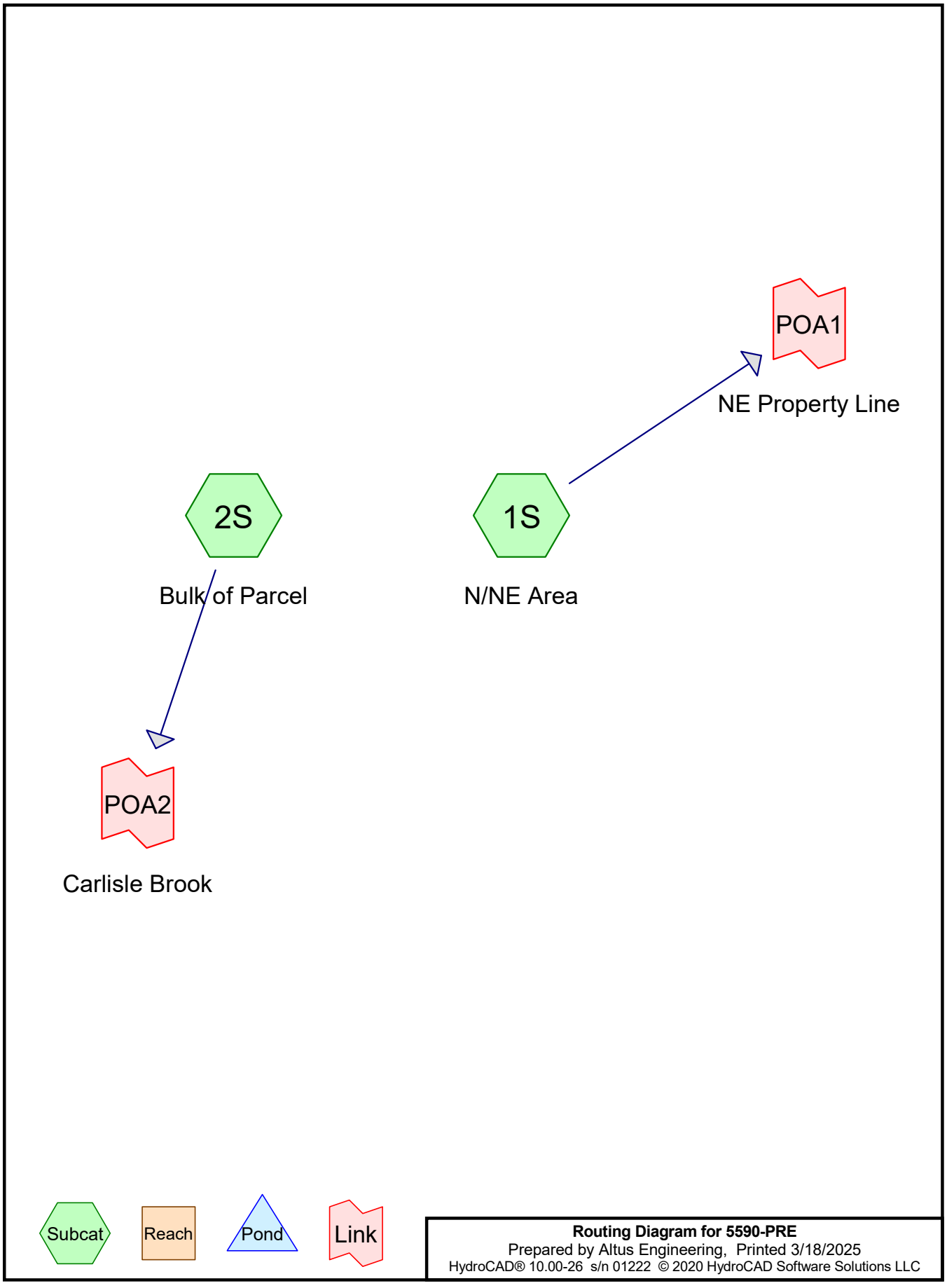
Subcatchment 1S: N/NE Area Runoff Area=419,932 sf 0.00% Impervious Runoff Depth=0.94"
Flow Length=625' Tc=16.4 min CN=71 Runoff=7.05 cfs 0.754 af

Subcatchment 2S: Bulk of Parcel Runoff Area=1,599,653 sf 0.64% Impervious Runoff Depth=1.05"
Flow Length=1,639' Tc=27.9 min CN=73 Runoff=24.79 cfs 3.205 af

Link POA1: NE Property Line Inflow=7.05 cfs 0.754 af
Primary=7.05 cfs 0.754 af

Link POA2: Carlisle Brook Inflow=24.79 cfs 3.205 af
Primary=24.79 cfs 3.205 af

Total Runoff Area = 46.363 ac Runoff Volume = 3.959 af Average Runoff Depth = 1.02"
99.49% Pervious = 46.127 ac 0.51% Impervious = 0.237 ac



Routing Diagram for 5590-PRE
Prepared by Altus Engineering, Printed 3/18/2025

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.006	98	Paved parking, HSG A (2S)
0.012	98	Paved parking, HSG B (2S)
0.218	98	Paved parking, HSG D (2S)
0.252	30	Woods, Good, HSG A (2S)
8.808	55	Woods, Good, HSG B (1S, 2S)
37.067	77	Woods, Good, HSG D (1S, 2S)
46.363	**73**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.259	HSG A	2S
8.820	HSG B	1S, 2S
0.000	HSG C	
37.285	HSG D	1S, 2S
0.000	Other	
46.363		**TOTAL AREA**

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 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: N/NE Area Runoff Area=419,932 sf 0.00% Impervious Runoff Depth=2.04"
Flow Length=625' Tc=16.4 min CN=71 Runoff=16.54 cfs 1.640 af

Subcatchment 2S: Bulk of Parcel Runoff Area=1,599,653 sf 0.64% Impervious Runoff Depth=2.20"
Flow Length=1,639' Tc=27.9 min CN=73 Runoff=54.76 cfs 6.740 af

Link POA1: NE Property Line Inflow=16.54 cfs 1.640 af
Primary=16.54 cfs 1.640 af

Link POA2: Carlisle Brook Inflow=54.76 cfs 6.740 af
Primary=54.76 cfs 6.740 af

Total Runoff Area = 46.363 ac Runoff Volume = 8.379 af Average Runoff Depth = 2.17"
99.49% Pervious = 46.127 ac 0.51% Impervious = 0.237 ac

Summary for Subcatchment 1S: N/NE Area

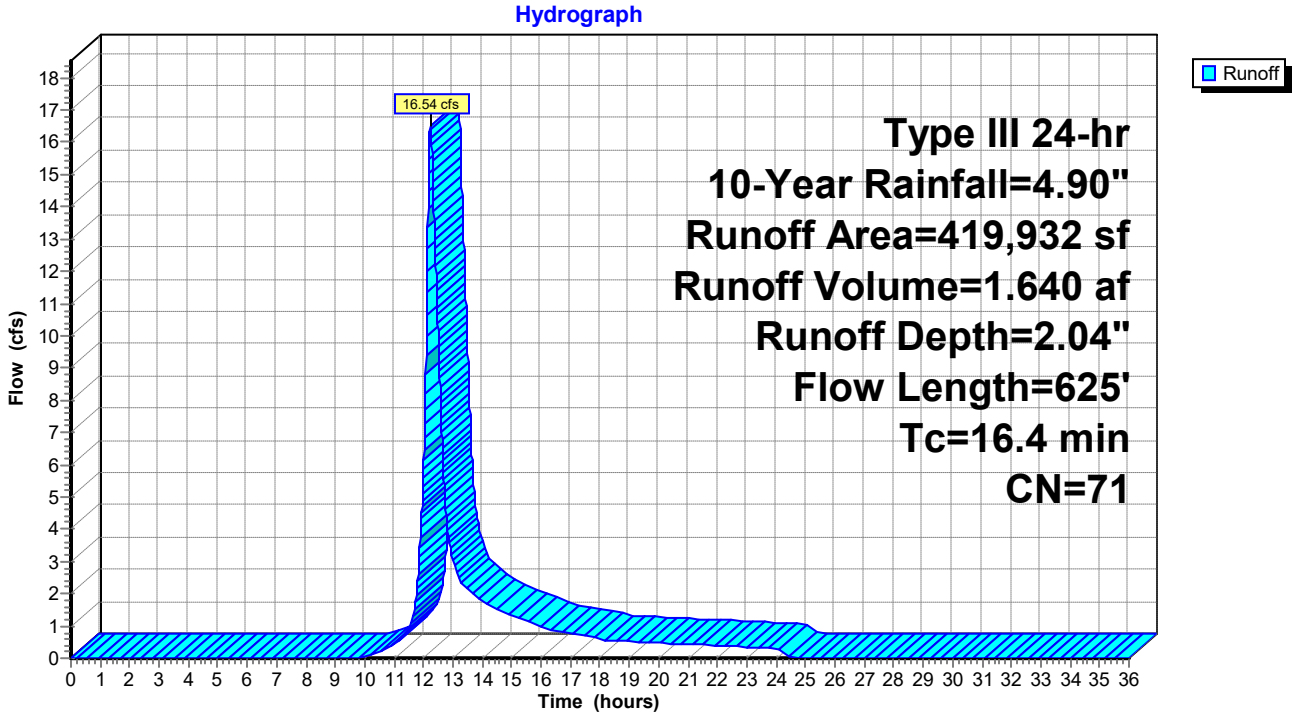
Runoff = 16.54 cfs @ 12.23 hrs, Volume= 1.640 af, Depth= 2.04"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.90"

Area (sf)	CN	Description
108,062	55	Woods, Good, HSG B
311,870	77	Woods, Good, HSG D
419,932	71	Weighted Average
419,932		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.5	76	0.0530	0.11		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.30"
1.9	187	0.1070	1.64		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
2.7	278	0.1150	1.70		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.3	84	1.0000	5.00		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
16.4	625	Total			

Subcatchment 1S: N/NE Area



Summary for Subcatchment 2S: Bulk of Parcel

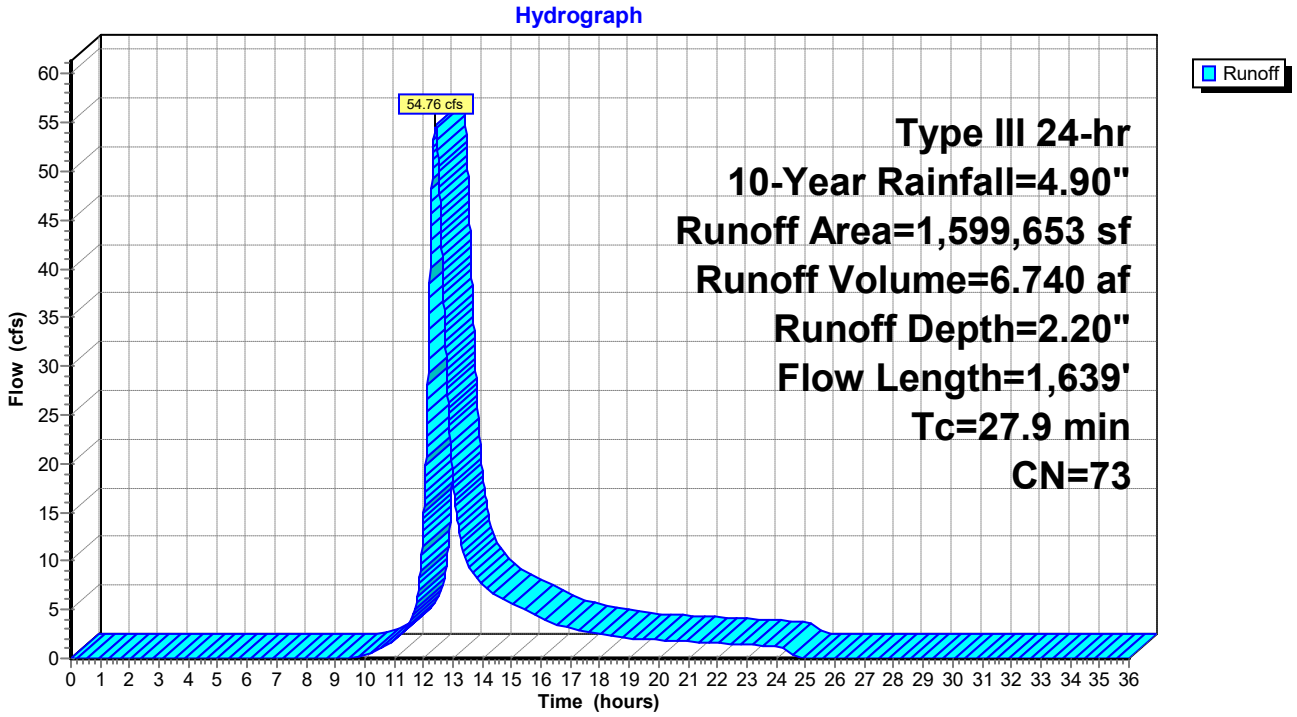
Runoff = 54.76 cfs @ 12.40 hrs, Volume= 6.740 af, Depth= 2.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.90"

Area (sf)	CN	Description
282	98	Paved parking, HSG A
521	98	Paved parking, HSG B
9,503	98	Paved parking, HSG D
10,990	30	Woods, Good, HSG A
275,608	55	Woods, Good, HSG B
1,302,749	77	Woods, Good, HSG D
1,599,653	73	Weighted Average
1,589,347		99.36% Pervious Area
10,306		0.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	22	0.0910	1.89		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.30"
7.2	472	0.0480	1.10		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
13.6	317	0.0060	0.39		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
5.0	282	0.0350	0.94		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.9	546	0.0510	4.68	16.98	**Trap/Vee/Rect Channel Flow,** Bot.W=6.00' D=0.50' Z= 2.5 '/' Top.W=8.50' n= 0.040 Winding stream, pools & shoals
27.9	1,639	Total			

Subcatchment 2S: Bulk of Parcel

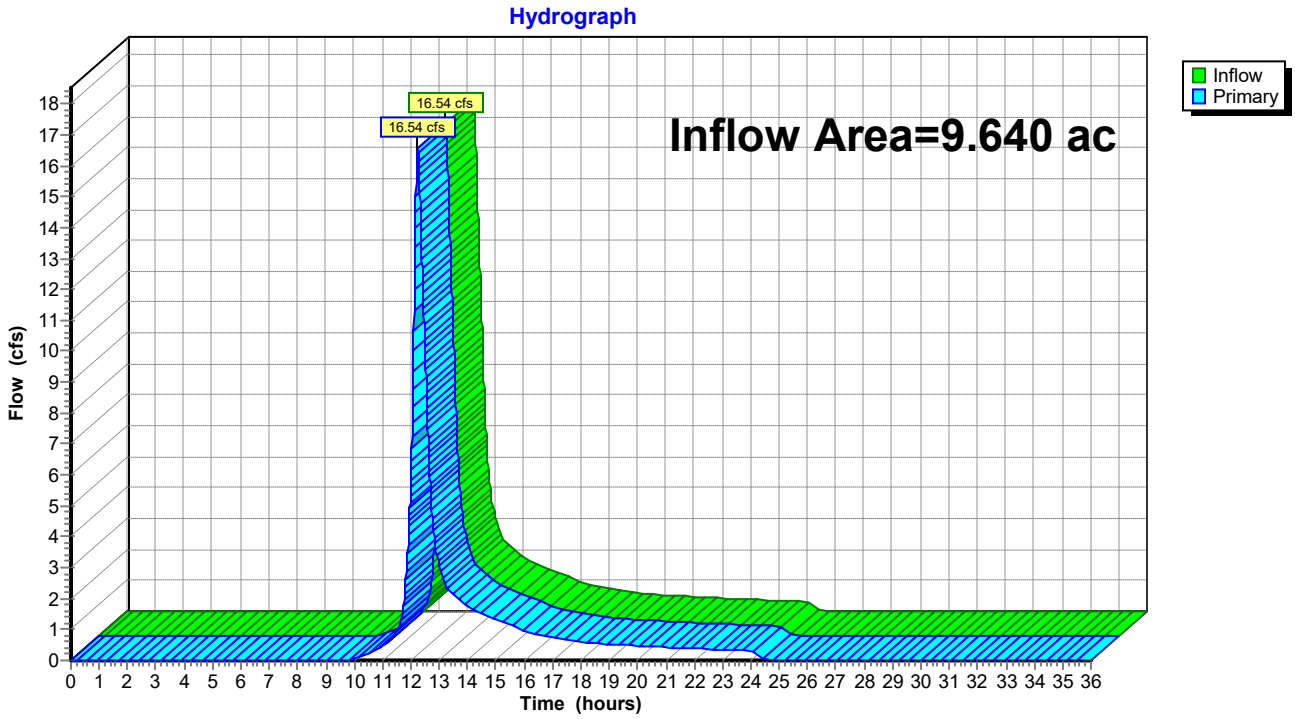


Summary for Link POA1: NE Property Line

Inflow Area = 9.640 ac, 0.00% Impervious, Inflow Depth = 2.04" for 10-Year event
Inflow = 16.54 cfs @ 12.23 hrs, Volume= 1.640 af
Primary = 16.54 cfs @ 12.23 hrs, Volume= 1.640 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Link POA1: NE Property Line

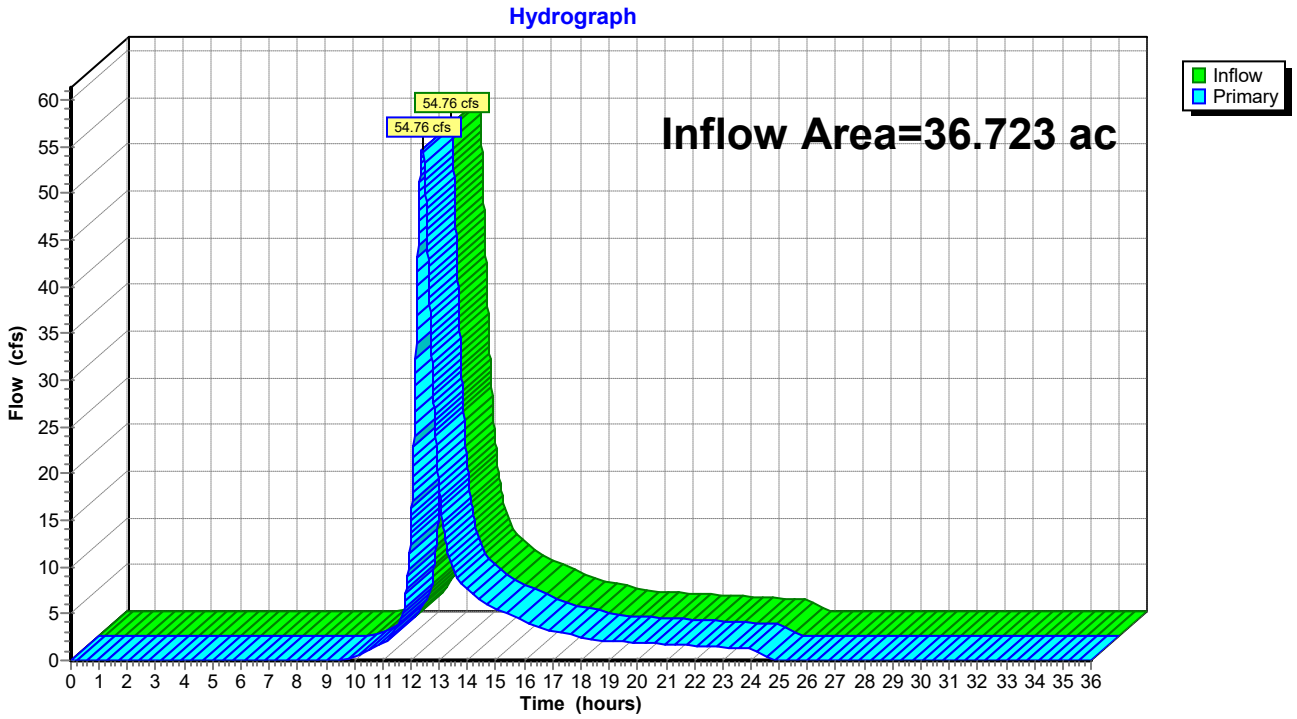


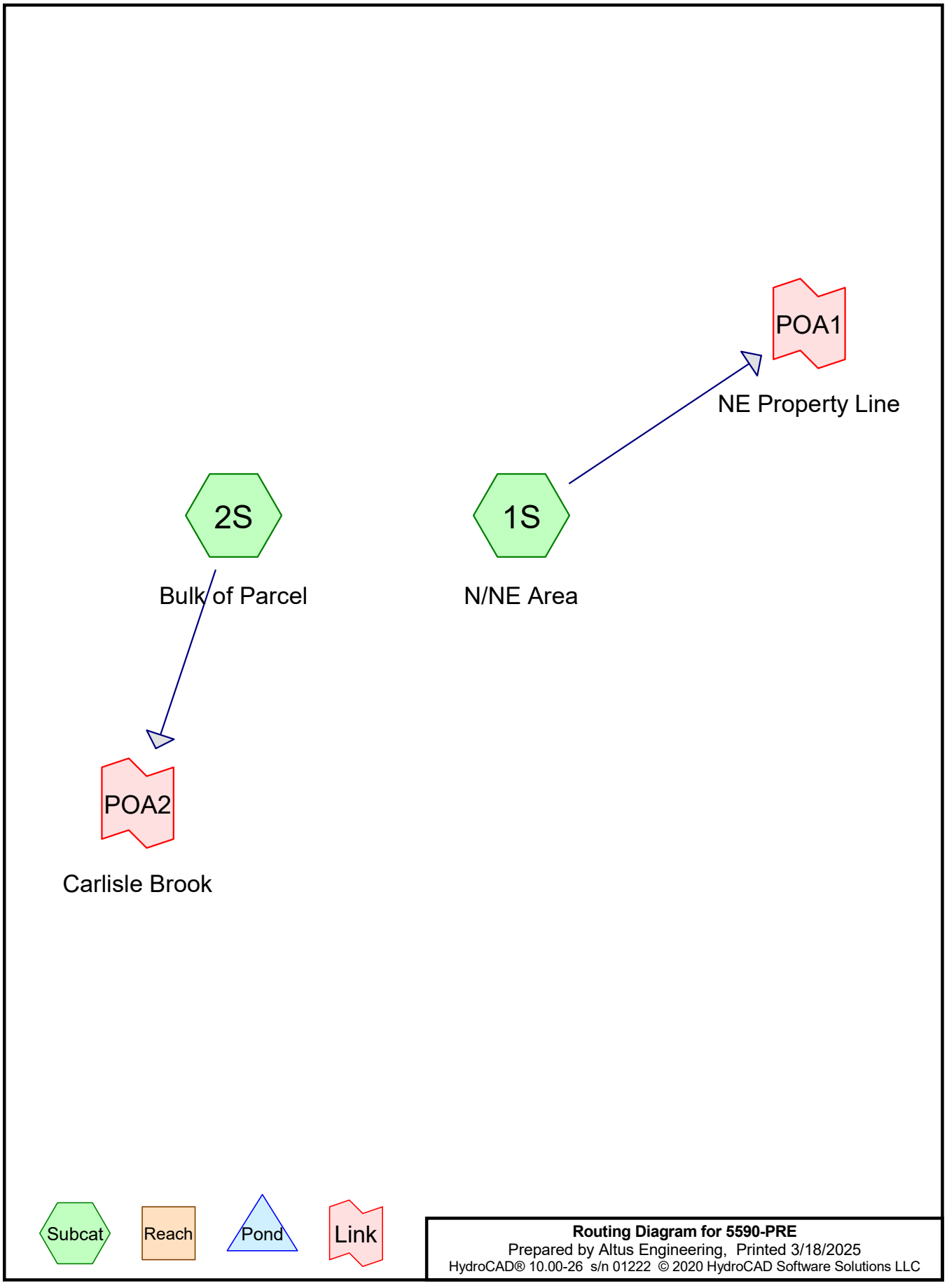
Summary for Link POA2: Carlisle Brook

Inflow Area = 36.723 ac, 0.64% Impervious, Inflow Depth = 2.20" for 10-Year event
Inflow = 54.76 cfs @ 12.40 hrs, Volume= 6.740 af
Primary = 54.76 cfs @ 12.40 hrs, Volume= 6.740 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Link POA2: Carlisle Brook





Routing Diagram for 5590-PRE
Prepared by Altus Engineering, Printed 3/18/2025

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 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: N/NE Area Runoff Area=419,932 sf 0.00% Impervious Runoff Depth=3.06"
Flow Length=625' Tc=16.4 min CN=71 Runoff=25.20 cfs 2.459 af

Subcatchment 2S: Bulk of Parcel Runoff Area=1,599,653 sf 0.64% Impervious Runoff Depth=3.26"
Flow Length=1,639' Tc=27.9 min CN=73 Runoff=81.72 cfs 9.962 af

Link POA1: NE Property Line Inflow=25.20 cfs 2.459 af
Primary=25.20 cfs 2.459 af

Link POA2: Carlisle Brook Inflow=81.72 cfs 9.962 af
Primary=81.72 cfs 9.962 af

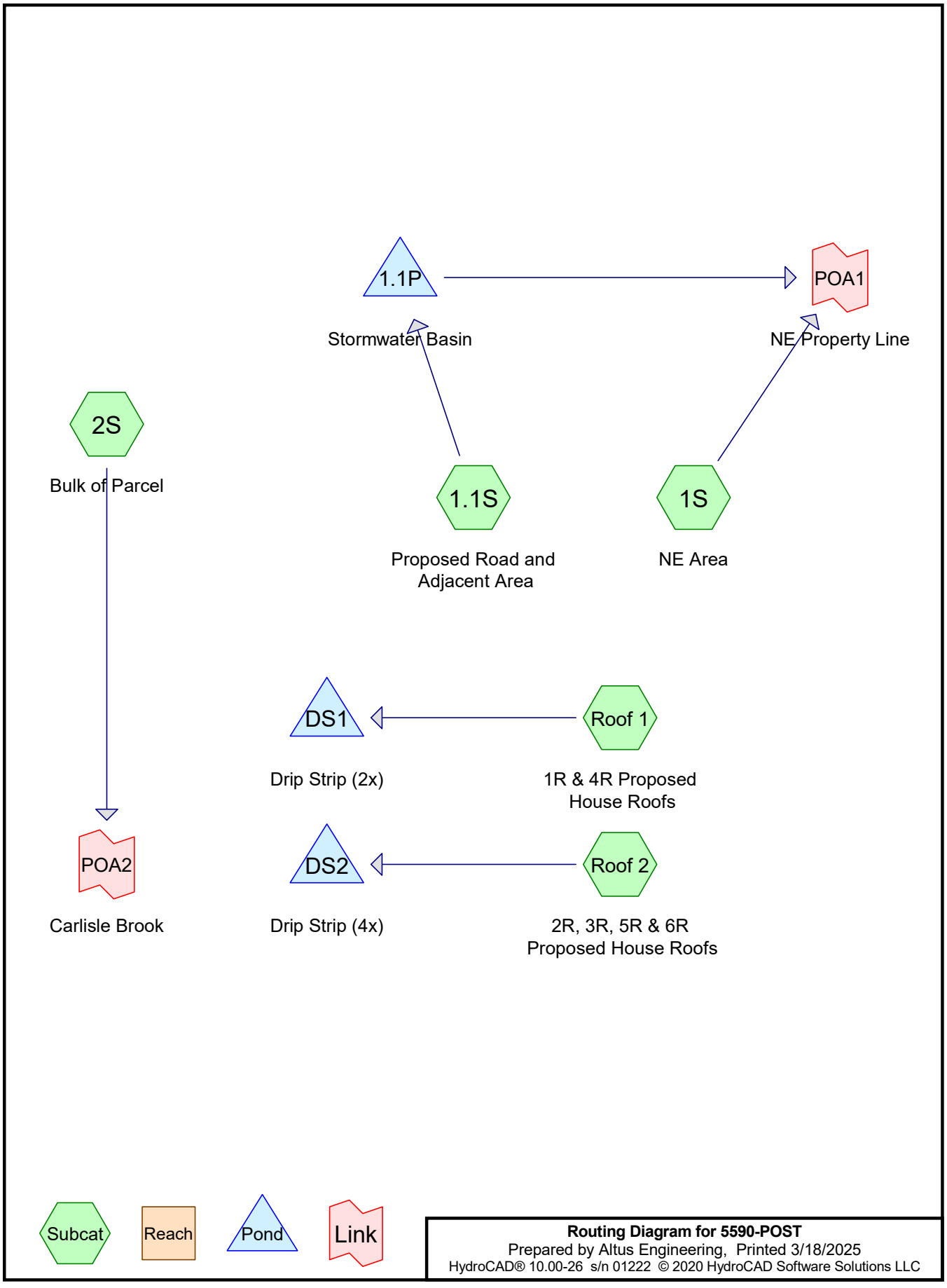
Total Runoff Area = 46.363 ac Runoff Volume = 12.421 af Average Runoff Depth = 3.21"
99.49% Pervious = 46.127 ac 0.51% Impervious = 0.237 ac

Section 4

Drainage Calculations

Post-Development
2-Year, 24-Hour Summary
10-Year, 24-Hour Complete
25-Year, 24-Hour Summary

ALTUS
ENGINEERING



Routing Diagram for 5590-POST
Prepared by Altus Engineering, Printed 3/18/2025

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 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 1.1S: Proposed Road and Runoff Area=141,275 sf 15.10% Impervious Runoff Depth=1.55"
Flow Length=617' Tc=17.1 min CN=81 Runoff=4.19 cfs 0.418 af

Subcatchment 1S: NE Area Runoff Area=294,133 sf 0.96% Impervious Runoff Depth=0.89"
Flow Length=625' Tc=16.4 min CN=70 Runoff=4.59 cfs 0.499 af

Subcatchment 2S: Bulk of Parcel Runoff Area=1,567,665 sf 1.20% Impervious Runoff Depth=1.05"
Flow Length=1,639' Tc=27.9 min CN=73 Runoff=24.30 cfs 3.141 af

Subcatchment Roof 1: 1R & 4R Proposed Runoff Area=5,456 sf 87.98% Impervious Runoff Depth=2.85"
Tc=6.0 min CN=96 Runoff=0.39 cfs 0.030 af

Subcatchment Roof 2: 2R, 3R, 5R & 6R Runoff Area=11,056 sf 86.83% Impervious Runoff Depth=2.85"
Tc=6.0 min CN=96 Runoff=0.79 cfs 0.060 af

Pond 1.1P: Stormwater Basin Peak Elev=204.27' Storage=3,792 cf Inflow=4.19 cfs 0.418 af
Outflow=2.43 cfs 0.417 af

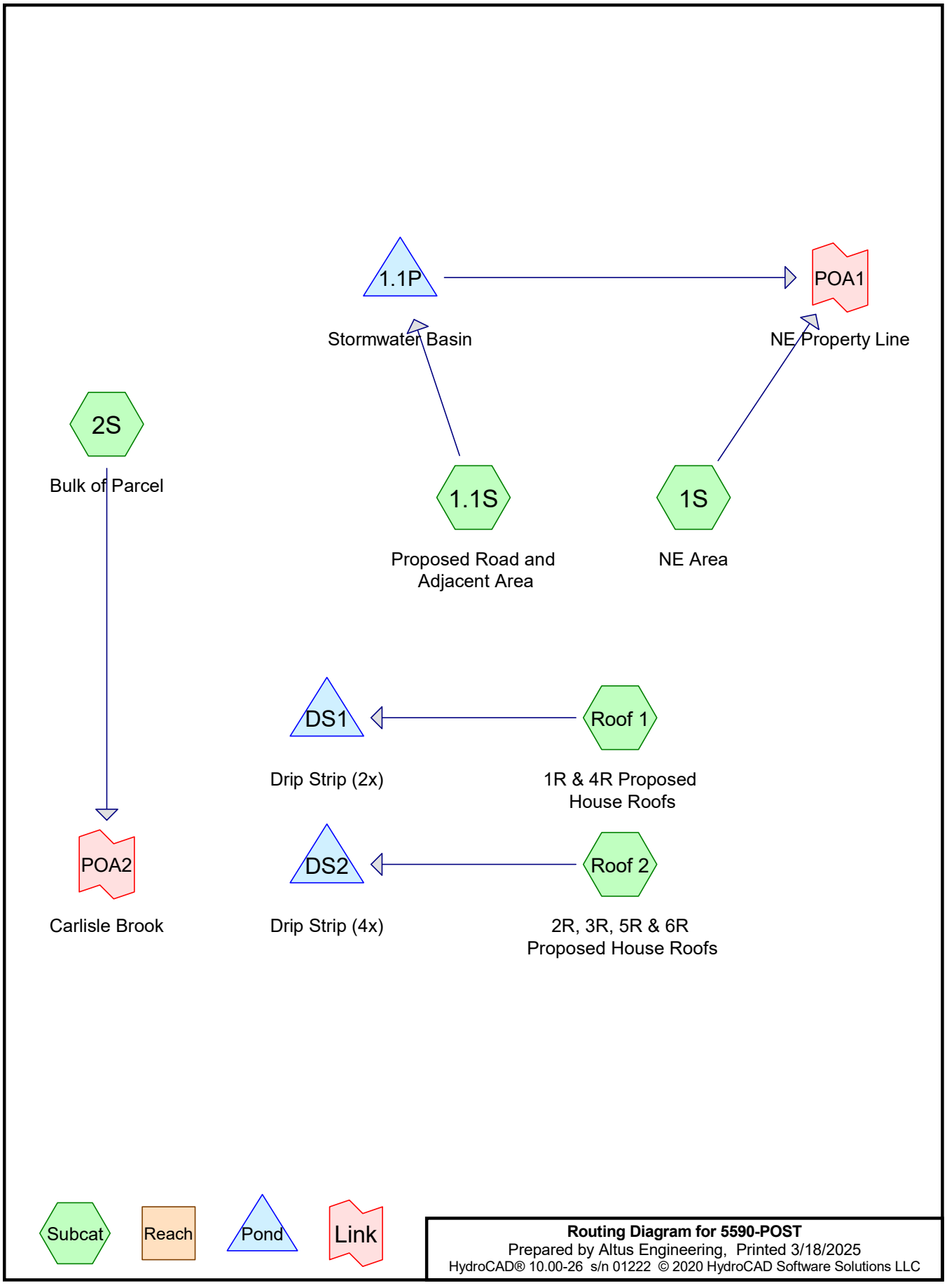
Pond DS1: Drip Strip (2x) Peak Elev=5.07' Storage=166 cf Inflow=0.39 cfs 0.030 af
Outflow=0.18 cfs 0.030 af

Pond DS2: Drip Strip (4x) Peak Elev=4.42' Storage=322 cf Inflow=0.79 cfs 0.060 af
Outflow=0.37 cfs 0.060 af

Link POA1: NE Property Line Inflow=6.60 cfs 0.916 af
Primary=6.60 cfs 0.916 af

Link POA2: Carlisle Brook Inflow=24.30 cfs 3.141 af
Primary=24.30 cfs 3.141 af

Total Runoff Area = 46.363 ac Runoff Volume = 4.148 af Average Runoff Depth = 1.07"
97.16% Pervious = 45.045 ac 2.84% Impervious = 1.318 ac



Routing Diagram for 5590-POST
Prepared by Altus Engineering, Printed 3/18/2025

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.213	61	>75% Grass cover, Good, HSG B (1.1S, 1S, 2S)
3.695	80	>75% Grass cover, Good, HSG D (1.1S, 1S, 2S, Roof 1, Roof 2)
0.006	98	Paved parking, HSG A (2S)
0.151	98	Paved parking, HSG B (1.1S, 1S, 2S)
0.830	98	Paved parking, HSG D (1.1S, 1S, 2S)
0.331	98	Roofs, HSG D (Roof 1, Roof 2)
0.252	30	Woods, Good, HSG A (2S)
8.456	55	Woods, Good, HSG B (1.1S, 1S, 2S)
32.429	77	Woods, Good, HSG D (1.1S, 1S, 2S)
46.363	**73**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.259	HSG A	2S
8.820	HSG B	1.1S, 1S, 2S
0.000	HSG C	
37.285	HSG D	1.1S, 1S, 2S, Roof 1, Roof 2
0.000	Other	
46.363		**TOTAL AREA**

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 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 1.1S: Proposed Road and Runoff Area=141,275 sf 15.10% Impervious Runoff Depth=2.90"
Flow Length=617' Tc=17.1 min CN=81 Runoff=7.91 cfs 0.783 af

Subcatchment 1S: NE Area Runoff Area=294,133 sf 0.96% Impervious Runoff Depth=1.96"
Flow Length=625' Tc=16.4 min CN=70 Runoff=11.08 cfs 1.104 af

Subcatchment 2S: Bulk of Parcel Runoff Area=1,567,665 sf 1.20% Impervious Runoff Depth=2.20"
Flow Length=1,639' Tc=27.9 min CN=73 Runoff=53.67 cfs 6.605 af

Subcatchment Roof 1: 1R & 4R Proposed Runoff Area=5,456 sf 87.98% Impervious Runoff Depth=4.43"
Tc=6.0 min CN=96 Runoff=0.59 cfs 0.046 af

Subcatchment Roof 2: 2R, 3R, 5R & 6R Runoff Area=11,056 sf 86.83% Impervious Runoff Depth=4.43"
Tc=6.0 min CN=96 Runoff=1.20 cfs 0.094 af

Pond 1.1P: Stormwater Basin Peak Elev=205.39' Storage=8,107 cf Inflow=7.91 cfs 0.783 af
Outflow=3.69 cfs 0.782 af

Pond DS1: Drip Strip (2x) Peak Elev=6.16' Storage=353 cf Inflow=0.59 cfs 0.046 af
Outflow=0.20 cfs 0.046 af

Pond DS2: Drip Strip (4x) Peak Elev=5.98' Storage=680 cf Inflow=1.20 cfs 0.094 af
Outflow=0.43 cfs 0.094 af

Link POA1: NE Property Line Inflow=14.03 cfs 1.886 af
Primary=14.03 cfs 1.886 af

Link POA2: Carlisle Brook Inflow=53.67 cfs 6.605 af
Primary=53.67 cfs 6.605 af

Total Runoff Area = 46.363 ac Runoff Volume = 8.632 af Average Runoff Depth = 2.23"
97.16% Pervious = 45.045 ac 2.84% Impervious = 1.318 ac

Summary for Subcatchment 1.1S: Proposed Road and Adjacent Area

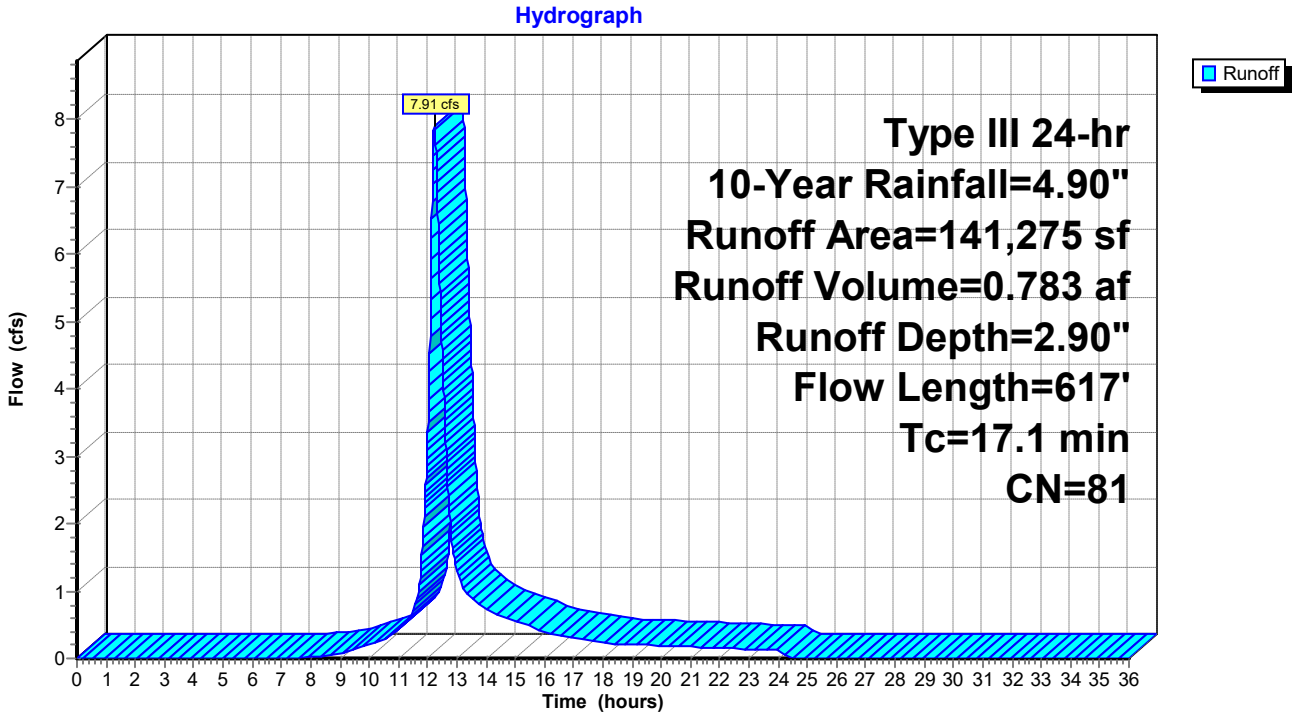
Runoff = 7.91 cfs @ 12.23 hrs, Volume= 0.783 af, Depth= 2.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.90"

Area (sf)	CN	Description
4,597	98	Paved parking, HSG B
16,737	98	Paved parking, HSG D
1,675	55	Woods, Good, HSG B
61,234	77	Woods, Good, HSG D
2,408	61	>75% Grass cover, Good, HSG B
54,624	80	>75% Grass cover, Good, HSG D
141,275	81	Weighted Average
119,941		84.90% Pervious Area
21,334		15.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.8	83	0.0480	0.11		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.30"
2.5	141	0.0350	0.94		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.7	370	0.0150	3.70	18.51	**Trap/Vee/Rect Channel Flow,** Bot.W=2.00' D=1.00' Z= 3.0 '/' Top.W=8.00' n= 0.035 Earth, dense weeds
0.1	23	0.1300	5.53	27.64	**Trap/Vee/Rect Channel Flow,** Bot.W=2.00' D=1.00' Z= 3.0 '/' Top.W=8.00' n= 0.069 Riprap, 6-inch
17.1	617	Total			

Subcatchment 1.1S: Proposed Road and Adjacent Area



Summary for Subcatchment 1S: NE Area

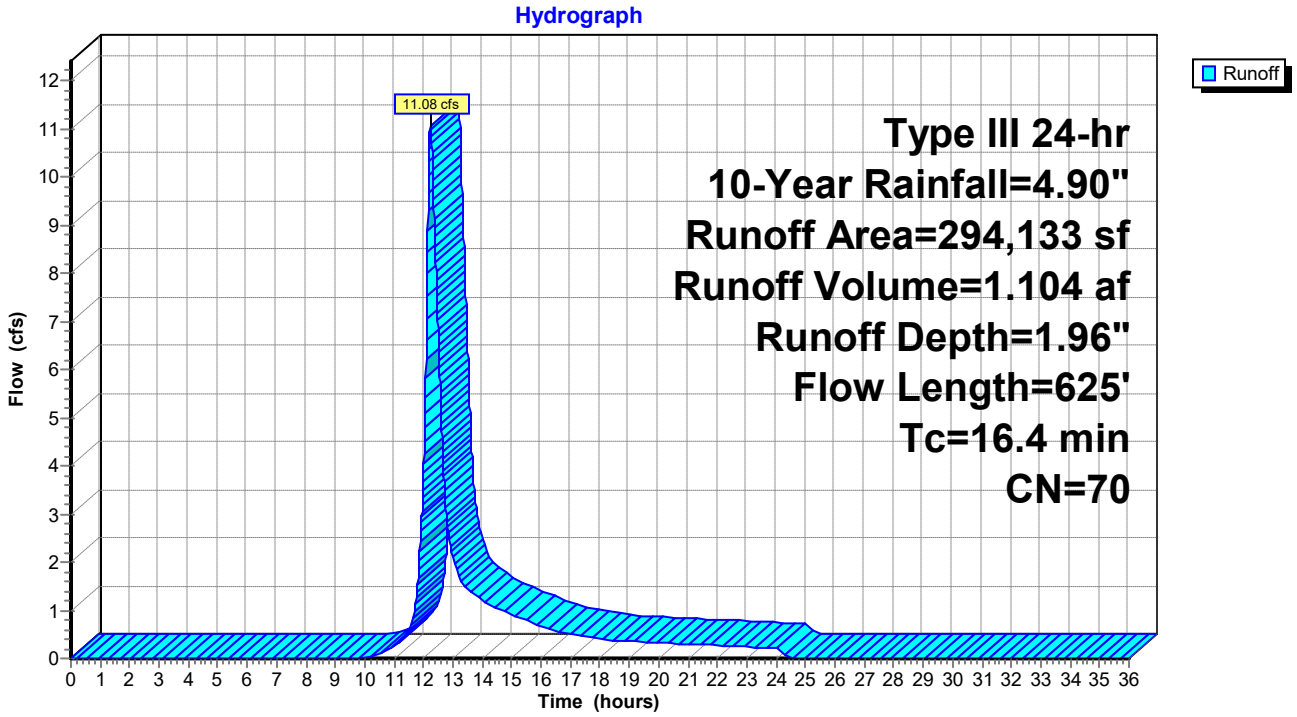
Runoff = 11.08 cfs @ 12.23 hrs, Volume= 1.104 af, Depth= 1.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.90"

Area (sf)	CN	Description
1,039	98	Paved parking, HSG B
1,787	98	Paved parking, HSG D
93,049	55	Woods, Good, HSG B
169,998	77	Woods, Good, HSG D
5,294	61	>75% Grass cover, Good, HSG B
22,966	80	>75% Grass cover, Good, HSG D
294,133	70	Weighted Average
291,307		99.04% Pervious Area
2,826		0.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.5	76	0.0530	0.11		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.30"
1.9	187	0.1070	1.64		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
2.7	278	0.1150	1.70		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.3	84	1.0000	5.00		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
16.4	625	Total			

Subcatchment 1S: NE Area



Summary for Subcatchment 2S: Bulk of Parcel

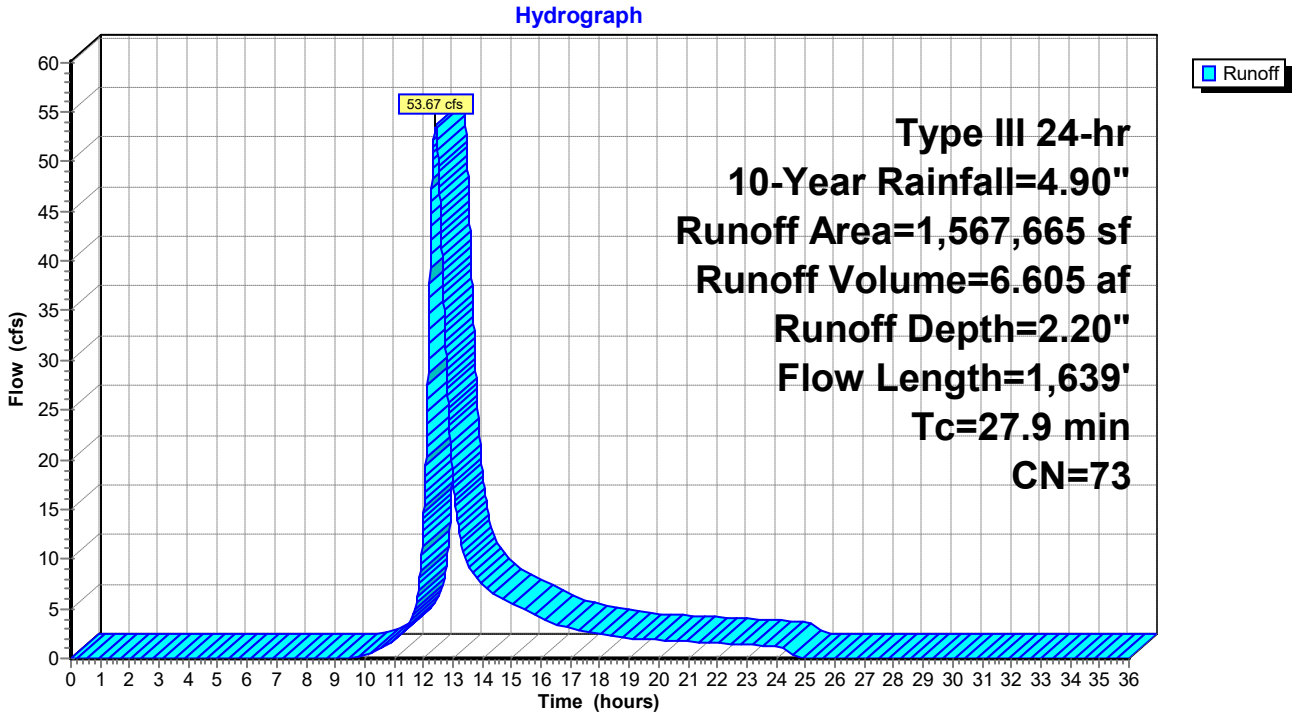
Runoff = 53.67 cfs @ 12.40 hrs, Volume= 6.605 af, Depth= 2.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.90"

Area (sf)	CN	Description
282	98	Paved parking, HSG A
926	98	Paved parking, HSG B
17,641	98	Paved parking, HSG D
10,990	30	Woods, Good, HSG A
273,610	55	Woods, Good, HSG B
1,181,374	77	Woods, Good, HSG D
1,593	61	>75% Grass cover, Good, HSG B
81,249	80	>75% Grass cover, Good, HSG D
1,567,665	73	Weighted Average
1,548,816		98.80% Pervious Area
18,849		1.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	22	0.0910	1.89		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.30"
7.2	472	0.0480	1.10		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
13.6	317	0.0060	0.39		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
5.0	282	0.0350	0.94		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.9	546	0.0510	4.68	16.98	**Trap/Vee/Rect Channel Flow,** Bot.W=6.00' D=0.50' Z= 2.5 '/' Top.W=8.50' n= 0.040 Winding stream, pools & shoals
27.9	1,639	Total			

Subcatchment 2S: Bulk of Parcel



Summary for Subcatchment Roof 1: 1R & 4R Proposed House Roofs

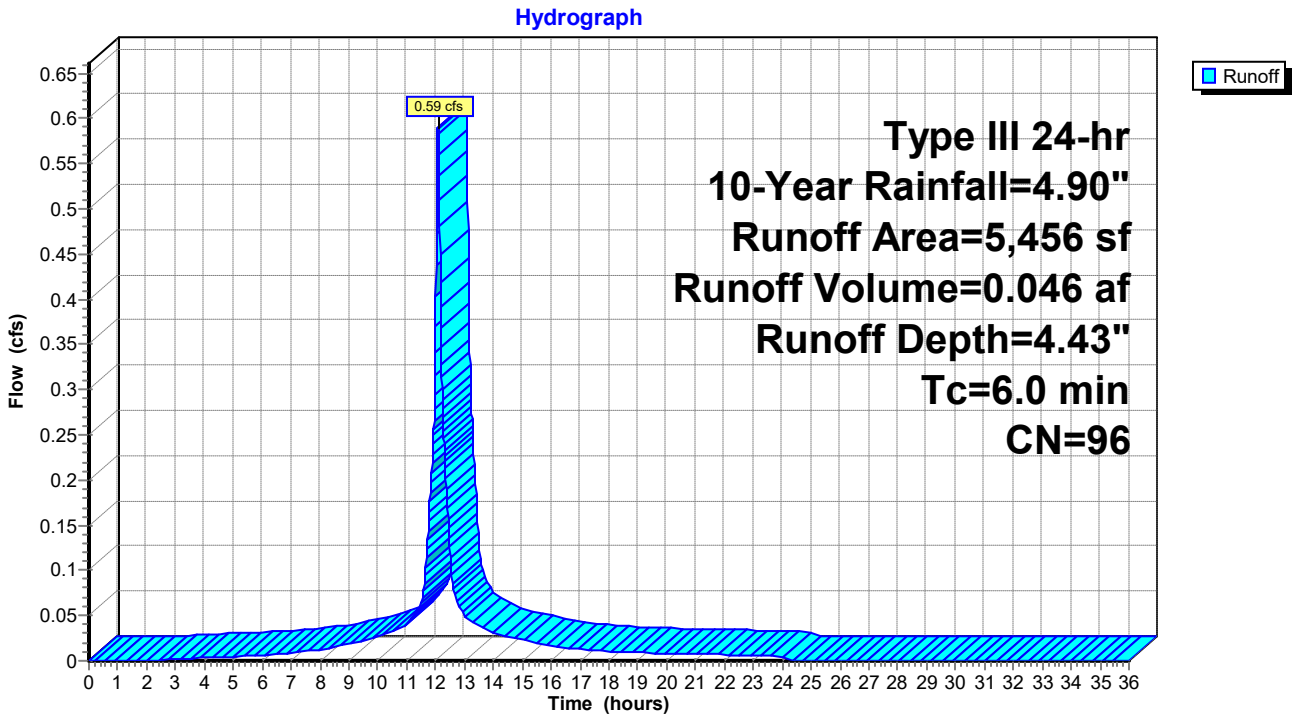
Runoff = 0.59 cfs @ 12.08 hrs, Volume= 0.046 af, Depth= 4.43"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.90"

Area (sf)	CN	Description
2,400	98	Roofs, HSG D
2,400	98	Roofs, HSG D
328	80	>75% Grass cover, Good, HSG D
328	80	>75% Grass cover, Good, HSG D
5,456	96	Weighted Average
656		12.02% Pervious Area
4,800		87.98% Impervious Area

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

Subcatchment Roof 1: 1R & 4R Proposed House Roofs



Summary for Subcatchment Roof 2: 2R, 3R, 5R & 6R Proposed House Roofs

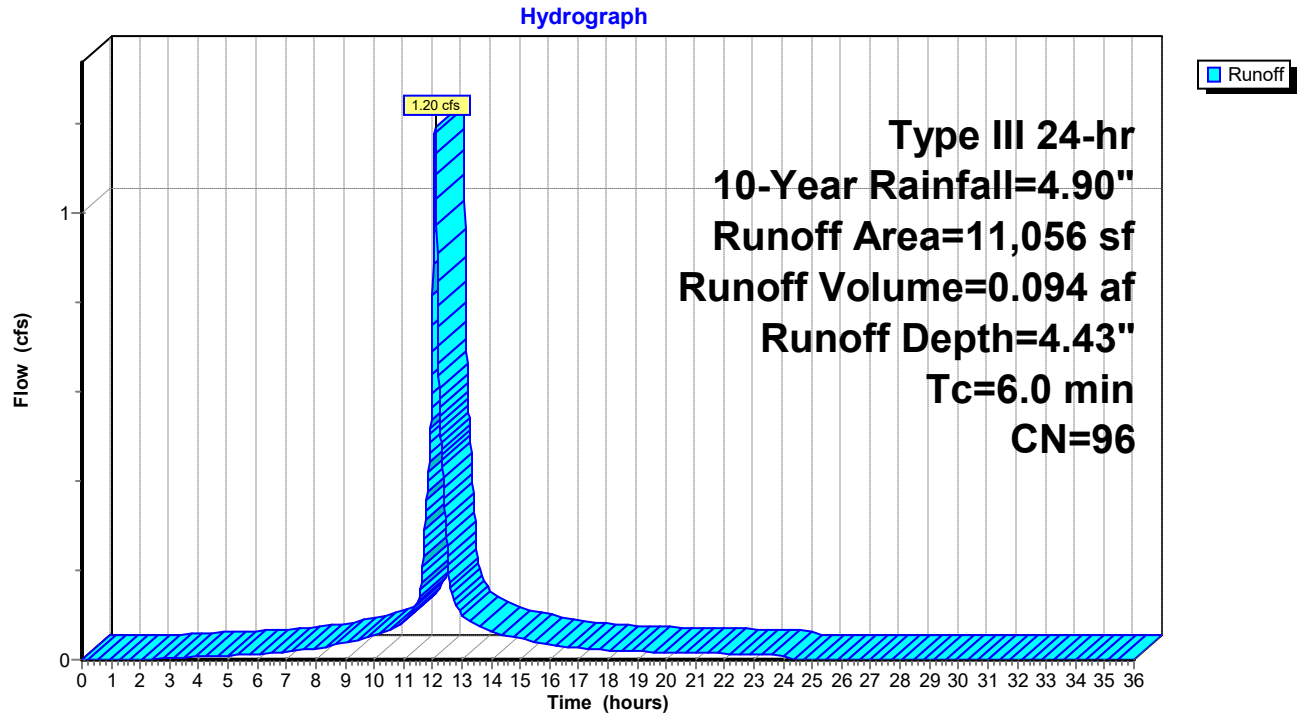
Runoff = 1.20 cfs @ 12.08 hrs, Volume= 0.094 af, Depth= 4.43"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.90"

Area (sf)	CN	Description
2,400	98	Roofs, HSG D
2,400	98	Roofs, HSG D
2,400	98	Roofs, HSG D
2,400	98	Roofs, HSG D
364	80	>75% Grass cover, Good, HSG D
364	80	>75% Grass cover, Good, HSG D
364	80	>75% Grass cover, Good, HSG D
364	80	>75% Grass cover, Good, HSG D
11,056	96	Weighted Average
1,456		13.17% Pervious Area
9,600		86.83% Impervious Area

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

Subcatchment Roof 2: 2R, 3R, 5R & 6R Proposed House Roofs



Summary for Pond 1.1P: Stormwater Basin

Inflow Area = 3.243 ac, 15.10% Impervious, Inflow Depth = 2.90" for 10-Year event
Inflow = 7.91 cfs @ 12.23 hrs, Volume= 0.783 af
Outflow = 3.69 cfs @ 12.58 hrs, Volume= 0.782 af, Atten= 53%, Lag= 20.7 min
Primary = 3.69 cfs @ 12.58 hrs, Volume= 0.782 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 205.39' @ 12.58 hrs Surf.Area= 4,368 sf Storage= 8,107 cf
Flood Elev= 206.50' Surf.Area= 5,666 sf Storage= 13,630 cf

Plug-Flow detention time= 35.7 min calculated for 0.782 af (100% of inflow)
Center-of-Mass det. time= 34.9 min (865.1 - 830.2)

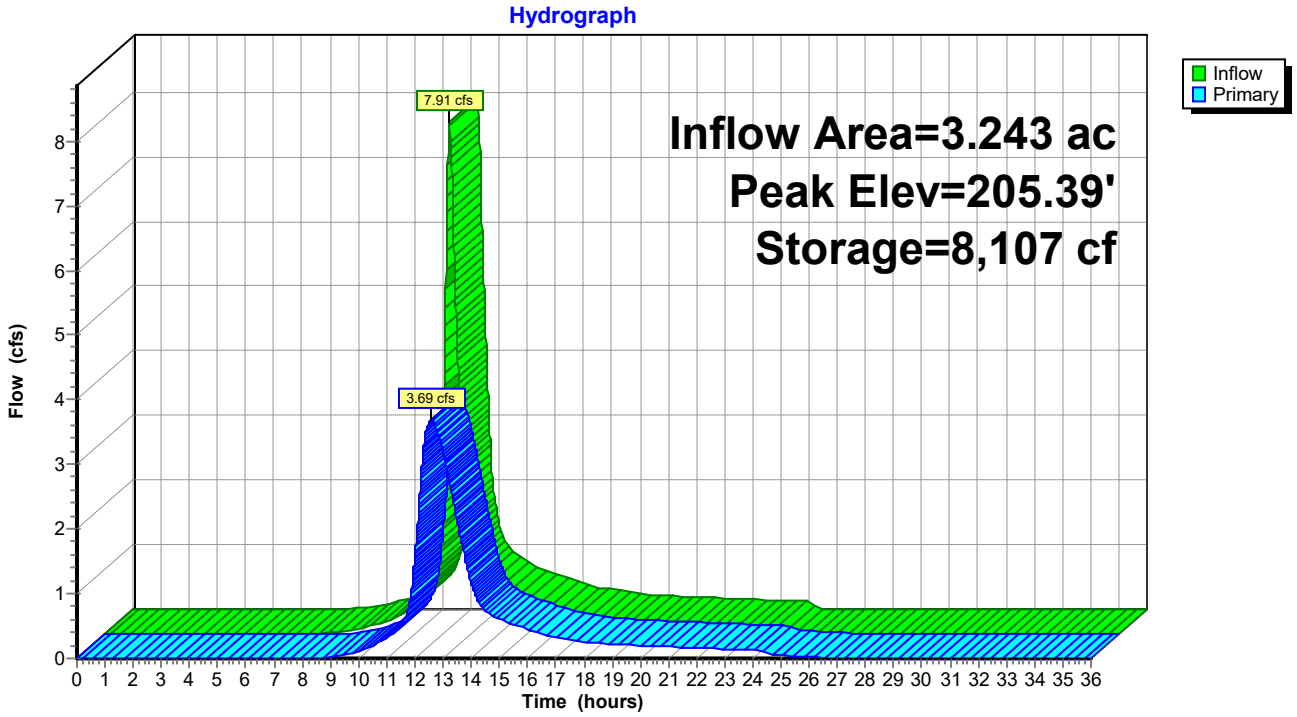
Volume	Invert	Avail.Storage	Storage Description
#1	203.00'	13,630 cf	**Custom Stage Data (Conic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
203.00	2,538	0.0	0	0	2,538
204.00	3,231	100.0	2,878	2,878	3,257
205.00	4,002	100.0	3,610	6,487	4,056
206.00	4,981	100.0	4,483	10,970	5,064
206.50	5,666	100.0	2,660	13,630	5,761

Device	Routing	Invert	Outlet Devices
#1	Primary	203.00'	**15.0" Round Culvert (Outlet)** L= 40.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 203.00' / 202.80' S= 0.0050 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.23 sf
#2	Device 1	203.00'	**10.0" Vert. Orifice/Grate (Lowest Inlet)** C= 0.600
#3	Device 1	205.50'	**30.0" x 30.0" Horiz. Orifice/Grate (YD Rim)** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=3.69 cfs @ 12.58 hrs HW=205.39' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert (Outlet)** (Passes 3.69 cfs of 7.52 cfs potential flow)
  ├─**2=Orifice/Grate (Lowest Inlet)** (Orifice Controls 3.69 cfs @ 6.76 fps)
  └─**3=Orifice/Grate (YD Rim)** (Controls 0.00 cfs)

Pond 1.1P: Stormwater Basin



Summary for Pond DS1: Drip Strip (2x)

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=3)

Inflow Area = 0.125 ac, 87.98% Impervious, Inflow Depth = 4.43" for 10-Year event
Inflow = 0.59 cfs @ 12.08 hrs, Volume= 0.046 af
Outflow = 0.20 cfs @ 12.36 hrs, Volume= 0.046 af, Atten= 66%, Lag= 16.3 min
Discarded = 0.20 cfs @ 12.36 hrs, Volume= 0.046 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 6.16' @ 12.36 hrs Surf.Area= 656 sf Storage= 353 cf
Flood Elev= 7.00' Surf.Area= 656 sf Storage= 574 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 8.9 min (771.8 - 762.9)

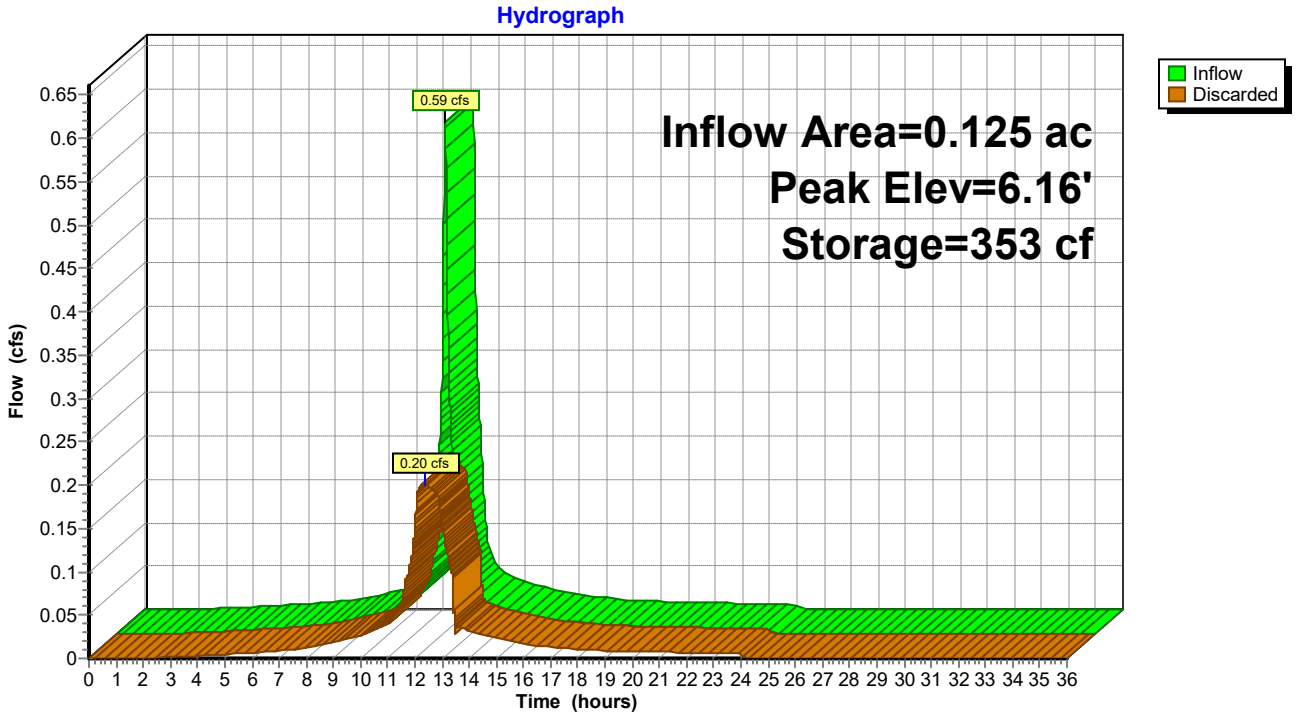
Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	574 cf	**Custom Stage Data (Conic)** Listed below (Recalc) x 2

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
0.00	328	0.0	0	0	328
5.50	328	5.0	90	90	681
7.00	328	40.0	197	287	777

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	**6.000 in/hr Exfiltration over Wetted area** Phase-In= 0.01'

Discarded OutFlow Max=0.20 cfs @ 12.36 hrs HW=6.16' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.20 cfs)

Pond DS1: Drip Strip (2x)



Summary for Pond DS2: Drip Strip (4x)

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=3)

Inflow Area = 0.254 ac, 86.83% Impervious, Inflow Depth = 4.43" for 10-Year event
Inflow = 1.20 cfs @ 12.08 hrs, Volume= 0.094 af
Outflow = 0.43 cfs @ 12.34 hrs, Volume= 0.094 af, Atten= 64%, Lag= 15.3 min
Discarded = 0.43 cfs @ 12.34 hrs, Volume= 0.094 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 5.98' @ 12.34 hrs Surf.Area= 1,456 sf Storage= 680 cf
Flood Elev= 7.00' Surf.Area= 1,456 sf Storage= 1,274 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 8.0 min (770.9 - 762.9)

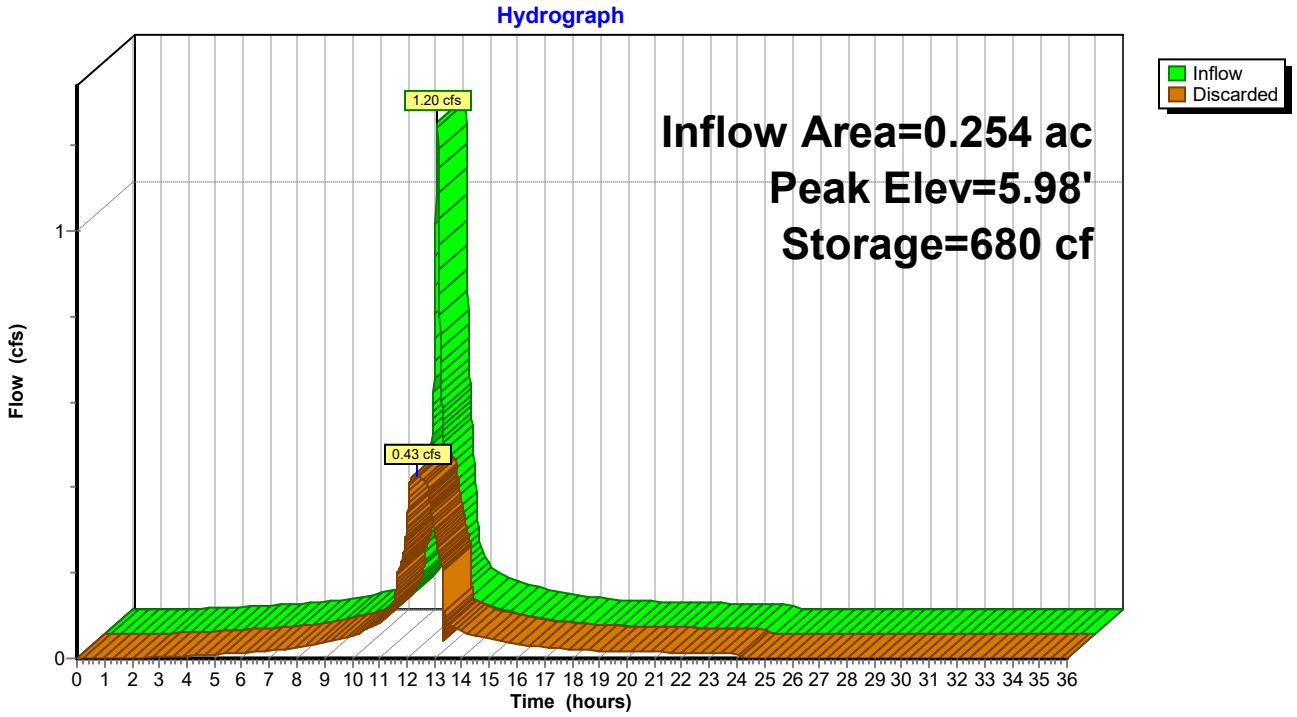
Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	1,274 cf	**Custom Stage Data (Conic)** Listed below (Recalc) x 4

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
0.00	364	0.0	0	0	364
5.50	364	5.0	100	100	736
7.00	364	40.0	218	319	837

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	**6.000 in/hr Exfiltration over Wetted area** Phase-In= 0.01'

Discarded OutFlow Max=0.43 cfs @ 12.34 hrs HW=5.98' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.43 cfs)

Pond DS2: Drip Strip (4x)

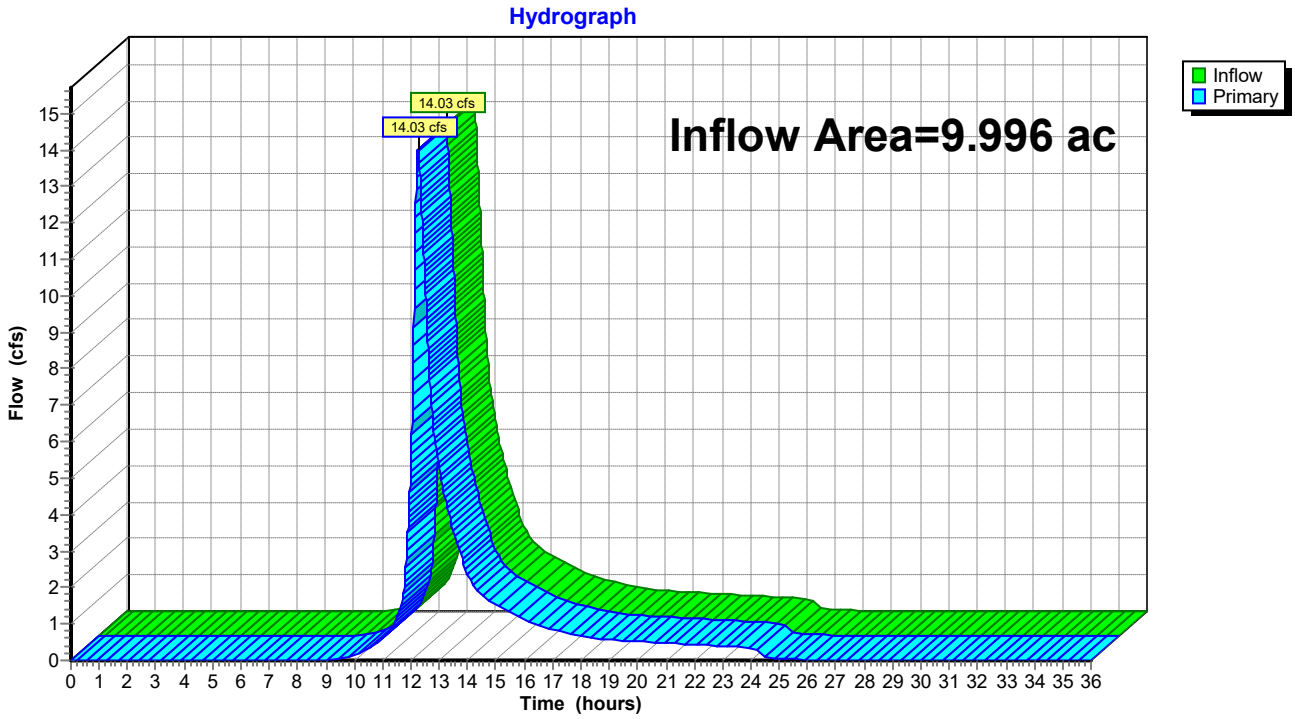


Summary for Link POA1: NE Property Line

Inflow Area = 9.996 ac, 5.55% Impervious, Inflow Depth = 2.26" for 10-Year event
Inflow = 14.03 cfs @ 12.25 hrs, Volume= 1.886 af
Primary = 14.03 cfs @ 12.25 hrs, Volume= 1.886 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Link POA1: NE Property Line

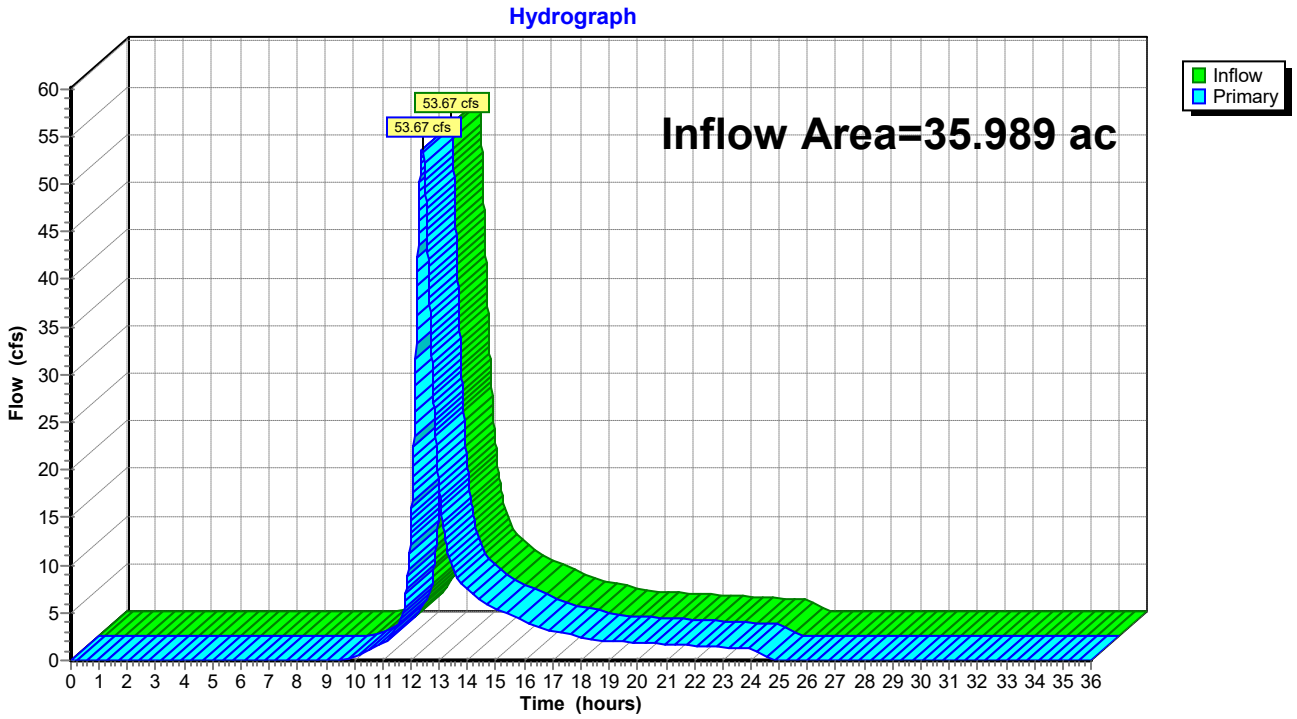


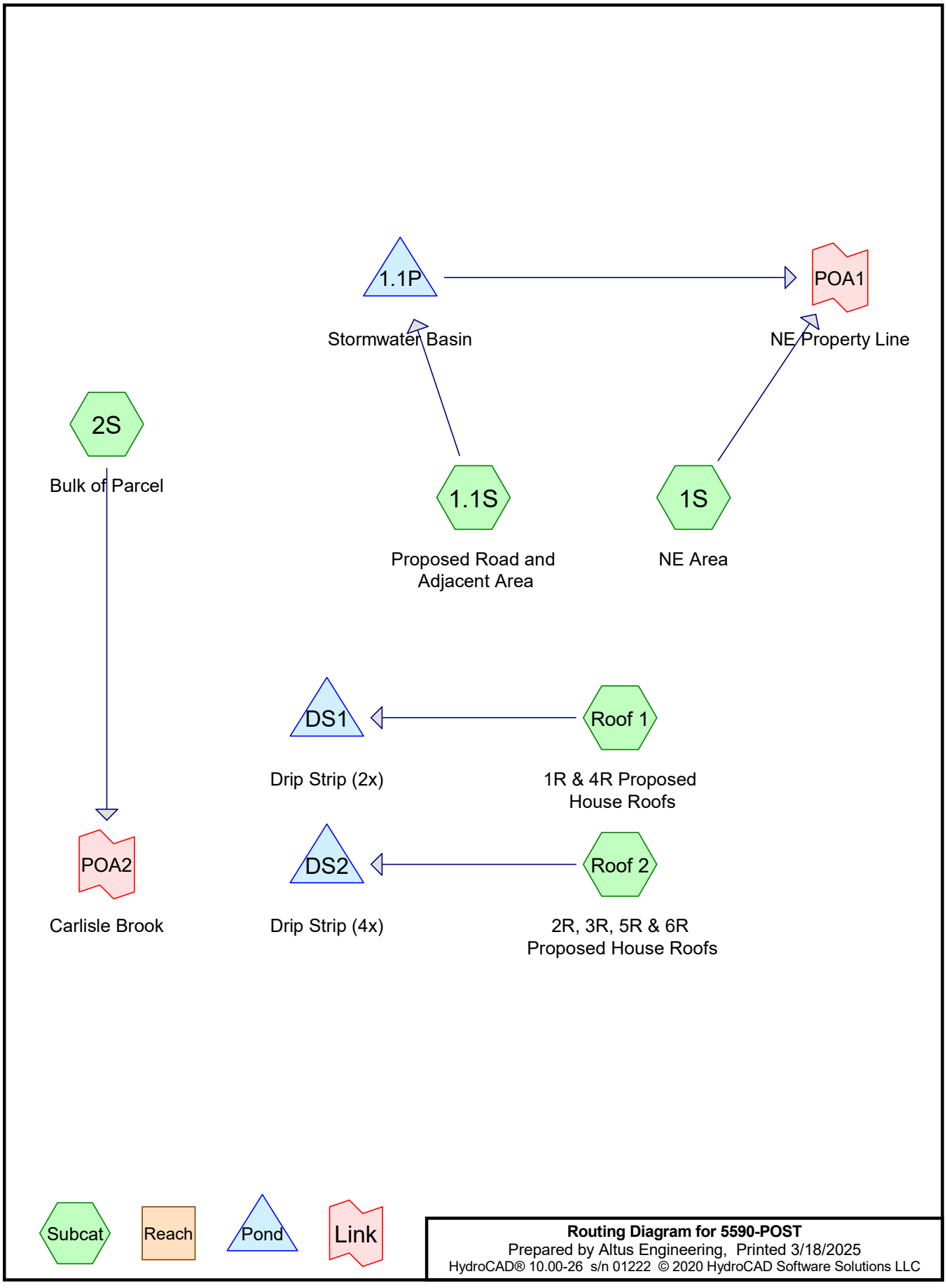
Summary for Link POA2: Carlisle Brook

Inflow Area = 35.989 ac, 1.20% Impervious, Inflow Depth = 2.20" for 10-Year event
Inflow = 53.67 cfs @ 12.40 hrs, Volume= 6.605 af
Primary = 53.67 cfs @ 12.40 hrs, Volume= 6.605 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Link POA2: Carlisle Brook





Routing Diagram for 5590-POST
Prepared by Altus Engineering, Printed 3/18/2025

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 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 1.1S: Proposed Road and Runoff Area=141,275 sf 15.10% Impervious Runoff Depth=4.07"
Flow Length=617' Tc=17.1 min CN=81 Runoff=11.06 cfs 1.099 af

Subcatchment 1S: NE Area Runoff Area=294,133 sf 0.96% Impervious Runoff Depth=2.96"
Flow Length=625' Tc=16.4 min CN=70 Runoff=17.06 cfs 1.668 af

Subcatchment 2S: Bulk of Parcel Runoff Area=1,567,665 sf 1.20% Impervious Runoff Depth=3.26"
Flow Length=1,639' Tc=27.9 min CN=73 Runoff=80.09 cfs 9.763 af

Subcatchment Roof 1: 1R & 4R Proposed Runoff Area=5,456 sf 87.98% Impervious Runoff Depth=5.73"
Tc=6.0 min CN=96 Runoff=0.75 cfs 0.060 af

Subcatchment Roof 2: 2R, 3R, 5R & 6R Runoff Area=11,056 sf 86.83% Impervious Runoff Depth=5.73"
Tc=6.0 min CN=96 Runoff=1.53 cfs 0.121 af

Pond 1.1P: Stormwater Basin Peak Elev=205.76' Storage=9,783 cf Inflow=11.06 cfs 1.099 af
Outflow=8.24 cfs 1.098 af

Pond DS1: Drip Strip (2x) Peak Elev=6.84' Storage=533 cf Inflow=0.75 cfs 0.060 af
Outflow=0.21 cfs 0.060 af

Pond DS2: Drip Strip (4x) Peak Elev=6.60' Storage=1,038 cf Inflow=1.53 cfs 0.121 af
Outflow=0.45 cfs 0.121 af

Link POA1: NE Property Line Inflow=21.91 cfs 2.766 af
Primary=21.91 cfs 2.766 af

Link POA2: Carlisle Brook Inflow=80.09 cfs 9.763 af
Primary=80.09 cfs 9.763 af

Total Runoff Area = 46.363 ac Runoff Volume = 12.711 af Average Runoff Depth = 3.29"
97.16% Pervious = 45.045 ac 2.84% Impervious = 1.318 ac

Section 5

Precipitation Table

ALTUS ENGINEERING

APPENDIX H. 24-hour duration rainfalls for various return periods

COUNTY	Storm Type	1-YR	2-YR	5-YR	10-YR	25-YR	50-YR	100-YR	500-YR
ANDROSCOGGIN	III	2.5	3.0	3.7	4.3	5.4	6.4	7.6	11.1
AROOSTOOK C (Presque Isle Area)	II	1.9	2.3	2.8	3.2	3.9	4.6	5.3	7.6
AROOSTOOK N (Fort Kent Area)	II	1.9	2.2	2.7	3.1	3.7	4.3	5.0	7.0
AROOSTOOK S (Houlton Area)	II	2.1	2.5	3.0	3.4	4.1	4.7	5.4	7.5
CUMBERLAND NW (Bridgton Area)	III	2.5	3.0	3.7	4.3	5.4	6.3	7.5	10.9
CUMBERLAND SE (N Windham Area)	III	2.6	3.1	3.9	4.6	5.8	6.9	8.1	12.1
FRANKLIN	II	2.0	2.4	2.9	3.4	4.2	4.9	5.7	8.2
HANCOCK	III	2.5	2.9	3.6	4.2	5.2	6.1	7.2	10.5
KENNEBEC	III	2.4	2.8	3.5	4.2	5.2	6.1	7.2	10.6
KNOX	III	2.6	3.2	3.9	4.6	5.7	6.7	7.9	11.5
LINCOLN	III	2.5	3.1	3.8	4.5	5.5	6.5	7.6	11.1
OXFORD E (Rumford Area)	II[1]	2.3	2.7	3.3	3.9	4.8	5.7	6.7	9.7
OXFORD W (Gilead Area)	II	2.2	2.7	3.4	4.0	4.9	5.8	6.9	10.1
PENOBSCOT N (Millinocket Area)	II	2.2	2.6	3.2	3.8	4.7	5.6	6.5	9.5
PENOBSCOT S (Hudson Area)	II	2.3	2.7	3.4	3.9	4.9	5.7	6.7	9.7
PISCATAQUIS N (Chesuncook Area)	II	2.0	2.4	2.9	3.4	4.2	5.0	5.8	8.5
PISCATAQUIS S (Monson Area)	II	2.2	2.7	3.3	3.9	4.8	5.7	6.8	10.0
SAGADAHOC	III	2.6	3.2	3.9	4.6	5.7	6.7	7.8	11.4
SOMERSET N (Pittston Farm Area)	II	2.0	2.3	2.8	3.3	4.0	4.7	5.4	7.8
SOMERSET S (Solon Area)	II	2.3	2.7	3.4	3.9	4.9	5.7	6.7	9.8
WALDO	III	2.4	2.9	3.6	4.2	5.2	6.1	7.2	10.5
WASHINGTON	III	2.5	2.8	3.4	3.9	4.8	5.5	6.4	9.0
YORK	III	2.6	3.3	4.1	4.9	6.2	7.3	8.7	13.2

1 Use Type III rainfall for the towns of Brownfield, Buckfield, Denmark, Hartford, Hebron, Hiram, Oxford, and Porter.

Source: Data extracted by the Maine Department of Environmental Protection from the Northeast Regional Climate Center website (http://precip.eas.cornell.edu), Extreme Precipitation Tables. Data from this website was obtained from the National Oceanic and Atmospheric Administration's Regional Climate Center Program.
June 2014

Section 6

High Intensity Soil Survey

ALTUS ENGINEERING

CLASS A HIGH INTENSITY SOIL SURVEY REPORT

FOR

TAX MAP 4, LOT 22
WALKER ROAD
LYMAN, MAINE

PREPARED FOR:

KIMBALL SURVEY & DESIGN, INC.
30 FROST HILL ROAD
YORK, MAINE 03909

PREPARED BY:

JOSEPH W. NOEL
P.O. BOX 174
SOUTH BERWICK, MAINE

January 8, 2025
JWN #24-159

JOSEPH W. NOEL
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SOUTH BERWICK, MAINE 03908
(207) 384-5587

*CERTIFIED SOIL SCIENTIST * WETLAND SCIENTIST * LICENSED SITE EVALUATOR*

INTRODUCTION

PURPOSE

This report and the attached high intensity soil survey map were prepared to aid in planning for a residential subdivision. The property is approximately 46 acres and located off of Walker Road and Carlisle Brook Road in Lyman, Maine. The southern boundary of the parcel follows the edge of Carlisle Brook. Wetland delineation services and test pits (1 thru 7) for wastewater disposal were conducted by Mainely Soils, LLC in April and July of 2024.

The land is currently forested with shallow to bedrock knolls cut by wooded wetlands that contribute to Carlisle Brook. Besides glacial till bedrock areas there are soils derived from sandy outwash parent material and soils derived from fine-textured glaciolacustrine/marine parent material. The soils adjacent to Carlisle Brook formed in more recent fine-textured alluvial deposits. A wooded road from Walker Road meanders through the site past an old stone foundation and leads to a gently sloping wet area that was likely used as an agricultural area in the distant past. The subtle swales within this area help drain the water toward Carlisle Brook.

SOIL SURVEY METHODS

Fieldwork was conducted in December of 2024 and January of 2025. Soil mapping procedures followed Maine Association of Professional Soil Scientists (MAPSS) guidelines (revised, March 2009). Twenty-one test pits (backhoe and hand excavated) were conducted on December 9, 2024, December 15, 2024 and January 7, 2025 (refer to attached test pit logs for details). The test pit information was used for generating the high intensity soil survey. Test pits JN1 thru JN18 were survey located by Kimball Survey & Design, Inc. Test pits JN19 thru JN21 approximate locations are designated on the test pit logs (i.e., not placed on the project plans) as these are not within the areas to be developed and were solely for soil mapping purposes. Additional soil observations were conducted to verify the soil map units (test pit information was not completed). If additional test pits are conducted, the soil survey may be fine-tuned/updated, if necessary. The hydrologic soil groups for the soil map were taken from the NRCS Web Soil Survey.

SOIL SURVEY CLASS

Soil surveys are divided into four levels or classes. For this project, a Class A (high intensity) level map was created. Characteristics of Class A maps include the following:

1. Map units will not contain dissimilar limiting individual inclusions larger than one-eighth acre. Dissimilar limiting inclusions may total more than one-eighth acre per map unit delineation, in the aggregate, if not continuous.

2. Scale of 1 inch equals 100 feet or larger (e.g., 1" = 50').
3. Ground control – base line and test pits for which detailed data is recorded are accurately located under the direction of a registered land surveyor or qualified professional engineer.
4. Base map with 2-foot contour lines with ground survey, or aerial survey with ground control.

SOIL MAP UNIT DESCRIPTIONS

Below are descriptions for each of the soil map units found on the site. Each of the soil map units includes: physical characteristics of the soil, hydrologic soil group, slopes, soil inclusions, soil limitations, etc.

1) Map Symbol: Ch
Soil Series: Charles

The poorly drained Charles soils are formed in alluvial deposits on a floodplain associated with Carlisle Brook. These soils are low on the landscape and are limited to one extensive map unit along the southern property line where no development is proposed. The surface and subsoil horizons vary from 10 to 12 inches thick and consists of dark olive gray to olive gray very fine sandy loam to silt loam. The substratum consists of gray silt loam that is restrictive in nature. The seasonal high watertable is at the surface. Refer to Test Pit JN21 for details. These soils are typically deep to bedrock, the hydrologic soil group is D, the slopes range from 3-8%. Frost action for the Charles soils is high and flooding can also occur in these soils. Expected in this map unit are the Roundabout and Swanville soils comprising around 10%.

Soil Limitations

These poorly drained soils have severe limitations to site development, primarily due to wetness, frost action and some flooding. These soils meet the criteria of a hydric soil and are indicative of wetland conditions. The use of those areas designated as wetland are governed by local, state and federal regulations. These soils are being avoided by the proposed project.

2) Map Symbol: Cr
Soil Series: Croghan

The moderately well drained Croghan soils formed in glacio-fluvial deposits. These soils are in an intermediate position on the landscape and are limited to one map unit along the easterly side of the property (refer to Test Pit JN16 for details). Typically, the surface horizon is a very dark brown loamy sand about 10 inches thick. The subsoil is a dark yellowish brown sand with redox features around 21 to 25 inches. The substratum is a mottled light olive to yellowish brown fine sand to sand. There may be a restrictive feature in upper portion of the substratum (a variant to the typical pedon). These soils are deep to bedrock, the hydrologic soil group is an A but there are inclusions that have a hydrologic soil group of D due to the watertable being less than 24 inches. The slopes range from 3-8%, and the flood hazard is none. Inclusions in this map unit are the somewhat poorly

drained Moosilauke and well drained Adams soils (refer to Mainely Soils, LLC TP 2) that comprise about 10% of this map unit.

Soil Limitations

These soils have limitations for road and building construction due to seasonal wetness and some frost action that can be overcome by intercepting and diverting water upslope of the project areas, using coarse fill to raise septic systems, foundation floors, and roads and by placing footing drained around buildings. These soils are suitable for wastewater disposal with a seasonal high watertable or restrictive feature greater than 9 inches outside shoreland and 15 inches within shoreland and that meet all relevant setbacks.

3) Map Symbol: Em
Soil Series: Elmwood

The moderately well drained Elmwood soils formed in fine textured lacustrine/marine deposits. These soils are in an intermediate position on the landscape and are limited to a few map units. Typically, the surface horizon is a dark brown very fine sandy loam about 14 inches thick. The subsoil is a yellowish brown very fine sandy loam. The substratum is a mottled olive to olive gray very fine sandy loam to silt loam with a restrictive feature. These soils are deep to bedrock, the hydrologic soil group is B but it has inclusions that are hydrologic soil group D due the watertable being less than 24 inches (i.e., Test Pit JN11). The slopes range from 3-25%, and the flood hazard is none. Twenty-five percent inclusions of the Boothby soils which are very similar to the Elmwood soils (i.e., fine textured moderately well drained) are common in these map units. In addition, the Pushaw (somewhat poorly drained) and Skerry soils are also expected.

Soil Limitations

Elmwood soils have limitations for road and building construction due to seasonal wetness and frost action that can be overcome by intercepting and diverting water upslope of the project areas, using coarse fill to raise septic systems, foundation floors, and driveways and by placing footing drained around buildings. These soils are suitable for wastewater disposal with a seasonal high watertable or restrictive feature greater than 9 inches outside shoreland and 15 inches within shoreland that meet all relevant setbacks.

4) Map Symbol: Lt
Soils Series: Lyman-Tunbridge-Rock Outcrop Complex

This mapping unit represents a complex where two soils series (Lyman and Tunbridge) and a miscellaneous component (Rock Outcrop) could not be mapped separately. The Lyman soils are somewhat excessively drained and formed in a thin mantle of glacial till overlying bedrock (10 to 20 inches to bedrock). The Tunbridge soils formed in moderately deep sandy loam till and are well drained (20 to 40 inches to bedrock). The third component is Rock Outcrop which is exposed bedrock at the surface. This soil complex occurs in the locally higher topographic settings and is found throughout the property. Typically, the surface layer is a very dark brown to dark brown stony sandy loam to stony fine sandy loam about 6 to 8 inches thick. The subsoil is a strong brown or dark yellowish brown with

textures similar to the surface horizons. Bedrock ranges from at the surface to shallow to deep. Refer to Test Pits JN8 and JN12 for examples of these soils. The hydrologic soil group is D due to Lyman being the higher soil component percentage in the complex, the slopes range from 8-25%, and the flood hazard is none. Inclusions in this map unit comprising about 15% are the Abram soils (<10 inches to bedrock), Madawaska, Moosilauke, Skerry and Pushaw soils. Refer to Test Pit Logs JN3 and JN5 for soil information on the Abram soils.

Soil Limitations

The shallow to bedrock feature of the Lyman soils presents limitations to all aspects of development. The moderately deep bedrock feature of the Tunbridge soils represents limitations to site development as well. Moderate frost action also occurs on these soils. Where a certain depth of soil is required over bedrock for an activity such has pouring a foundation, a shallow excavation, or siting a road, bedrock may be ripped or blasted out as necessary and replaced with fill. Fill may also be placed over the bedrock to attain the desired depth without blasting or ripping. Proper design and construction of road subgrade will mitigate the bedrock limitations and the moderate frost action. These soils are suitable for wastewater disposal with a bedrock greater than 9 inches outside shoreland and 15 inches within shoreland that meet all relevant setbacks.

5) Map Symbol: Ma
Soil Series: Madawaska

The Madawaska soils are moderately well drained on this site and formed in glaciofluvial deposits on outwash landforms. It is scattered throughout the mapping area in several mapping units. It occurs on high to intermediate landscape positions on this site. The surface horizon is dark brown sandy loam about 10 inches thick. The subsoil is a dark yellowish brown gravelly loamy sand while the substratum is a yellowish brown loamy sand to sandy loam with a restrictive feature (atypical feature in this pedon). The seasonal high watertable occurs around 30 to 35 inches. These soils are deep to bedrock, the hydrologic soil group is B, the slopes range from 3->25%, and the flood hazard is none. Refer to Test Pit JN6 for an example of the Madawaska soils on this site. Inclusions in this map unit are the Croghan, Lyman, Moosilauke, Pushaw, and Tunbridge soils comprising approximately 15% of these map units.

Soil Limitations

These soils have limitations for site development due to wetness and frost action. These limitations can be overcome by intercepting and diverting water upslope of the construction area, by using coarse fill to raise foundation floors and roads and by using footing drained around buildings. Proper design and construction of road subgrade will help mitigate these limitations. These soils are suitable for wastewater disposal with a seasonal high watertable or restrictive feature greater than 9 inches outside shoreland and 15 inches within shoreland that meet all relevant setbacks.

6) Map Symbol: Mo
Soil Series: Moosilauke

The Moosilauke soils are somewhat poorly drained on this site and formed in coarse textured glacial till. It occurs in two mapping units within the mapping area and has an intermediate to low position on the landscape. Typically bedrock is greater than 40 inches. The surface horizon is black to strong brown loamy sand (about 10 inches thick). The subsoil is dark yellowish brown loamy sand with redoximorphic features. On this site, the upper limits of the substratum can have a dense olive very fine sandy loam (restrictive) underlain by brown gravelly sand (not restrictive). The seasonal high watertable occurs around 10 inches. The hydrologic soil group is D, the slopes range from 3-8%, and the flood hazard is none. Inclusions in this map unit are the Naskeag, Naumburg, Pushaw, and Roundabout soils comprising up to 15% of this map unit.

Soil Limitations

Limitations to development are wetness due to perched water on the restrictive subsoil/substratum (if present) and frost action. These limitations can be overcome by intercepting and diverting water upslope of the construction area, by using coarse fill to raise septic systems, foundation floors, and roads and by using footing drains around buildings as well as proper design and construction of road subgrade will mitigate these limitations. Portions of these soils are suitable for wastewater disposal with a seasonal high watertable or restrictive feature greater than 9 inches outside shoreland zone that meet all relevant setbacks.

7) Map Symbol: Na
Soil Series: Naumburg

The Naumburg soils on this site are poorly drained and formed in sandy glaciofluvial sediments. These soils are low on the landscape and are found in three map units within the mapping area. Typically, on this site, the surface horizon is a black loamy sand that varies from 8 to 10 inches thick. The substratum is an olive loamy sand to sand. Refer to Test Pit JN18 for additional soil information. These soils are deep to bedrock but the small map unit on the eastern property line may be moderately deep to bedrock (i.e., bedrock occurring between 20 to 40 inches). The hydrologic soil group is D, the slopes range from 0-3%, and the flood hazard is none. Inclusions in this map unit are the poorly drained Roundabout and the poorly drained Swanton soils, comprising up to 15% of this map unit.

Soil Limitations

These poorly drained soils have severe limitations to site development, primarily due to wetness and frost action. These soils meet the criteria of a hydric soil and are indicative of wetland conditions. The use of those areas designated as wetland are governed by local, state and federal regulations. These soils are being avoided by the proposed project.

8) Map Symbol: Pu
Soil Series; Pushaw

The Pushaw soils consists of somewhat poorly drained soils that formed in lacustrine and marine deposits. It is found throughout the mapping area and is typically deep to bedrock. On this site, Pushaw soils adjacent to the Lt map units may be moderately deep to bedrock (i.e., bedrock occurring between 20 to 40 inches). The surface horizon is a very dark brown very fine sandy loam about 8 inches thick. The subsoil is a light olive brown very fine sandy loam with redoximorphic features. The substratum is olive silt loam with common prominent redoximorphic features and restrictive. The hydrologic soil group is D, the slopes range from 3-25 %, and the flood hazard is none. Inclusions in this map unit are the Elmwood, Lyman, Madawaska, Moosilauke, and Skerry soils comprising up to 10% of the mapping unit.

Soil Limitations

These somewhat poorly drained soils have limitations to site development, primarily due to wetness and frost action. The limitations for the seasonal highwater table and frost action can be overcome by intercepting and diverting water upslope from the construction area, by using coarse fill to raised foundations floors, driveways and by placing footing drains around foundations. Frost heaves can be prevented by proper design and construction of the road subgrade. A small portion of these soils are suitable for wastewater disposal with a seasonal high watertable or restrictive feature greater than 9 inches outside shoreland zone that meet all relevant setbacks.

9) Map Symbol: Ro
Soil Series: Roundabout

The Roundabout soils on this site are poorly drained and formed in marine/lacustrine sediments. These soils are found in three map units within the mapping area. These soils are low on the landscape and have three swales/drainages that flow down to Carlisle Brook. Stream determinations on these drainages have not been conducted by the undersigned. Typically, on this site, the surface horizon is a very dark grayish brown to black very fine sandy loam about 4 inches thick. Beneath the surface horizon is an olive gray very fine sandy loam to loamy very fine sand that contains a restrictive horizon. The seasonal high watertable is at the soil surface. Refer to Test Pit JN20 for additional soil information. These soils are deep to bedrock, the hydrologic soil group is D, the slopes range from 0-8%, and the flood hazard is none. Inclusions in this map unit are the somewhat poorly drained Pushaw and the poorly drained Swanton soils, comprising up to 15% of this map unit.

Soil Limitations

These poorly drained soils have severe limitations to site development, primarily due to wetness and frost action. These soils meet the criteria of a hydric soil and are indicative of wetland conditions. The use of those areas designated as wetland are governed by local, state and federal regulations. These soils should be avoided to the greatest extent possible. Lot 6 on the sketch map of the subdivision may require wetland impacts to access the lot.

10) Map Symbol: Sk
Soil Series: Skerry

The Skerry soils are moderately well drained and formed in glacial till. These soils are high to intermediate on the landscape and are scattered throughout the mapping area and are of limited extent. Refer to Test Pit JN1 for an example of the Skerry soils. The surface horizon is a dark brown fine sandy loam about 10 inches thick. The subsoil is a dark yellowish brown sandy loam and the substratum is a light olive brown to pale olive fine sandy loam with a seasonal highwater table around 27 inches and a restrictive horizon around 38 inches. On this site, the dense substratum has a glacial outwash influence (refer to Test Pit JN2). These soils are deep to bedrock, the hydrologic soil group is D, the slopes range from 3-15%, and the flood hazard is none. Inclusions in the Skerry soils are Pushaw, Elmwood, and Madawaska soils comprising up to 15% of the mapping unit.

Soil Limitations

Limitations to site development include wetness due to perched water on the restrictive subsoil/substratum and moderate frost action. These limitations can be overcome by intercepting and diverting water upslope of the construction area, by using coarse fill to raise septic systems, foundation floors, and roads and by using footing drains around buildings. Frost heaves can be prevented by proper design and construction of the road subgrade. These soils are suitable for wastewater disposal with a seasonal high watertable or restrictive feature greater than 9 inches outside shoreland and 15 inches within shoreland that meet all relevant setbacks.

11) Map Symbol: Sw
Soil Series: Swanville

The Swanville soils are poorly drained soils and formed in marine/lacustrine sediments. It is found in one map unit at the southeast corner of the property. Refer to JN19 for an example of the Swanville soils. Typically, the surface horizon is a dark olive brown silt loam underlain by an olive gray silt loam. The seasonal highwater table is at the soil surface. This soil classifies as a hydric soil and represents wetland conditions. This map unit is low on the landscape, the hydrologic group is D, the slopes are 0-8% and the flood hazard is none. Inclusions of the poorly drained Roundabout soils make up approximately 5% of the map unit.

Soil Limitations

These poorly drained soils have severe limitations to site development, primarily due to wetness and frost action. These soils meet the criteria of a hydric soil and are indicative of wetland conditions. The use of those areas designated as wetland are governed by local, state and federal regulations. These soils are being avoided by the proposed project.

SOIL MAP LIMITATIONS

The quality of the soil map produced is affected by the accuracy of the topographic information, and location of the wetland flagging along with the quality of the ground control provided for the fieldwork. Inaccuracies or deficiencies in the base map may be unknowingly reflected in the soil survey, particularly in the boundary line placement between soil map units.

Each map unit contains inclusions. Inclusions are soil series within a map unit that are different from the named soil series. In general, the total amount of dissimilar soils is less than twenty-five percent of the named map unit.

It is important to realize that this map was designed for the use in planning for a residential subdivision and that it may not be adequate for other uses.

Joseph W. Noel
Maine Licensed Soil Scientist #209
Wetland Scientist

SOIL PROFILE/CLASSIFICATION INFORMATION

Project Name:

Applicant Name: *CARLISLE BROOK ESTATES, LLC*

Project Location (municipality): *TAX MAP 4 - LOT 22 - WALKER ROAD - LYMAN, MAINE*

Observation Hole *JN1* ■ Test Pit ☐ Boring

1 " Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)

	Texture	Consistency	Color	Mottling
0	FINE SANDY LOAM		DARK BROWN	
10	SANDY LOAM	FRIABLE	DARK YELLOWISH BROWN	NONE
30	FINE SANDY LOAM		LIGHT OLIVE BROWN	COMMON DISTINCT
40		FIRM	PALE OLIVE	
50				

Soil Classification		Slope	Limiting Factor	
3 Profile	C Condition	%	27 "	■ Ground Water ☐ Restrictive Layer ☐ Bedrock ☐ Pit Depth

SKERRY SERIES - HYD GRP D - NON-HYDRIC

Observation Hole *JN2* ■ Test Pit ☐ Boring

1 " Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)

	Texture	Consistency	Color	Mottling
0	SANDY LOAM		DARK BROWN	
10		FRIABLE	DARK YELLOWISH BROWN	NONE
30				COMMON DISTINCT
40	LOAMY FINE SAND TO FINE SAND (OUTWASH)	FIRM	LIGHT OLIVE BROWN	
50				

Soil Classification		Slope	Limiting Factor	
3 Profile	C Condition	%	28 "	☐ Ground Water ☐ Restrictive Layer ☐ Bedrock ☐ Pit Depth

SKERRY SERIES - HYD GRP D - NON-HYDRIC

BACKHOE EXCAVATED TEST PITS WERE CONDUCTED ON DECEMBER 9, 2024 FOR SOIL MAPPING PURPOSES. REFER TO PLAN FOR SLOPE INFORMATION.

Observation Hole *JN3* ■ Test Pit ☐ Boring

2 " Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)

	Texture	Consistency	Color	Mottling
0	SANDY LOAM	FRIABLE	VERY DARK GRAYISH BROWN	NONE
10	BEDROCK @ 6"			
20				
30				
40				
50				

Soil Classification		Slope	Limiting Factor	
2 Profile	AI Condition	%	6 "	☐ Ground Water ☐ Restrictive Layer ■ Bedrock ☐ Pit Depth

ABRAM SERIES - HYD GRP D - NON-HYDRIC

Observation Hole *JN4* ■ Test Pit ☐ Boring

2 " Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)

	Texture	Consistency	Color	Mottling
0	COBBLY SANDY LOAM		VERY DARK GRAYISH BROWN	
10		FRIABLE	DARK YELLOWISH BROWN	NONE
20	BEDROCK @ 14"			
30				
40				
50				

Soil Classification		Slope	Limiting Factor	
2 Profile	AII Condition	%	14 "	☐ Ground Water ☐ Restrictive Layer ■ Bedrock ☐ Pit Depth

LYMAN SERIES - HYD GRP D - NON-HYDRIC

Signature

221 209
SE # SS#

1/5/25
Date

SOIL PROFILE/CLASSIFICATION INFORMATION

Project Name:

Applicant Name: *CARLISLE BROOK ESTATES, LLC*

Project Location (municipality) *TAX MAP 4 - LOT 22 - WALKER ROAD - LYMAN, MAINE*

Observation Hole *JN5* ■ Test Pit ☐ Boring

2 " Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)

	Texture	Consistency	Color	Mottling
0	SANDY LOAM	FRIABLE	BLACK	NONE
		BEDROCK @ 2"		
10				
20				
30				
40				
50				

Soil Classification		Slope	Limiting Factor	
2 Profile	AI Condition	%	2 "	☐ Ground Water ☐ Restrictive Layer ■ Bedrock ☐ Pit Depth

ABRAM SERIES - HYD GRP D - NON-HYDRIC

Observation Hole *JN6* ■ Test Pit ☐ Boring

2 " Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)

	Texture	Consistency	Color	Mottling
0	SANDY LOAM		DARK BROWN	
10	GRAVELLY LOAMY SAND	FRIABLE	DARK YELLOWISH BROWN	NONE
20				
30				
40	LOAMY SAND TO SANDY LOAM	FRIABLE WITH FEW FIRM POCKETS	YELLOWISH BROWN	COMMON DISTINCT
50				

Soil Classification		Slope	Limiting Factor	
5 Profile	C Condition	%	35 "	■ Ground Water ■ Restrictive Layer ☐ Bedrock ☐ Pit Depth

MADAWASKA SERIES - HYD GRP B - NON-HYDRIC

BACKHOE EXCAVATED TEST PITS WERE CONDUCTED ON DECEMBER 9, 2024 FOR SOIL MAPPING PURPOSES. REFER TO PLAN FOR SLOPE INFORMATION.

Observation Hole *JN7* ■ Test Pit ☐ Boring

2 " Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)

	Texture	Consistency	Color	Mottling
0	GRAVELLY SANDY LOAM		DARK BROWN	
10	GRAVELLY LOAMY SAND	FRIABLE	DARK YELLOWISH BROWN	NONE
20				
30				COMMON DISTINCT
40	FINE SAND	FIRM (IN PLACE)	OLIVE	COMMON PROMINENT
50				

Soil Classification		Slope	Limiting Factor	
5 Profile	C Condition	%	30 "	■ Ground Water ☐ Restrictive Layer ☐ Bedrock ☐ Pit Depth

MADAWASKA SERIES - HYD GRP B - NON-HYDRIC

Observation Hole *JN8* ■ Test Pit ☐ Boring

2 " Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)

	Texture	Consistency	Color	Mottling
0	STONY FINE SANDY LOAM	FRIABLE	DARK BROWN	
10			DARK YELLOWISH BROWN	NONE
20				
30		BEDROCK @ 25"		
40				
50				

Soil Classification		Slope	Limiting Factor	
2 Profile	AIII Condition	%	25 "	☐ Ground Water ☐ Restrictive Layer ■ Bedrock ☐ Pit Depth

TUNBRIDGE SERIES - HYD GRP C - NON-HYDRIC

Jack W. Kiel
Signature

221 209
SE # SS#

1/5/25
Date

SOIL PROFILE/CLASSIFICATION INFORMATION

Project Name:

Applicant Name: *CARLISLE BROOK ESTATES, LLC*

Project Location (municipality): *TAX MAP 4 - LOT 22 - WALKER ROAD - LYMAN, MAINE*

Observation Hole *JN9* ■ Test Pit ☐ Boring

2 " Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)

	Texture	Consistency	Color	Mottling
0–10	SANDY LOAM	FRIABLE	DARK BROWN	NONE
10–20	GRAVELLY SANDY LOAM TO LOAMY SAND		DARK YELLOWISH BROWN	
20–30				
30–40			YELLOWISH BROWN	COMMON DISTINCT
40–50	LOAMY FINE SAND (TILL)	FIRM	LIGHT OLIVE BROWN	

Soil Classification		Slope	Limiting Factor	
7 Profile	*C* Condition	____ %	*28* "	■ Ground Water ☐ Restrictive Layer ☐ Bedrock ☐ Pit Depth

MADAWASKA-LIKE SERIES - HYD GRP B - NON-HYDRIC

Observation Hole *JN10* ■ Test Pit ☐ Boring

2 " Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)

	Texture	Consistency	Color	Mottling
0–10	VERY FINE SANDY LOAM	FRIABLE	VERY DARK BROWN	NONE
10–20			LIGHT OLIVE BROWN	COMMON DISTINCT
20–30	SILT LOAM	FIRM	OLIVE	COMMON PROMINENT
30–40	L.O.E. @ 30"			
40–50				

Soil Classification		Slope	Limiting Factor	
8 Profile	*E* Condition	____ %	*8* "	■ Ground Water ☐ Restrictive Layer ☐ Bedrock ☐ Pit Depth

PUSHAW SERIES - HYD GRP D - NON-HYDRIC (BORDERLINE)

BACKHOE EXCAVATED TEST PITS WERE CONDUCTED ON DECEMBER 9, 2024 FOR SOIL MAPPING PURPOSES. REFER TO PLAN FOR SLOPE INFORMATION.

Observation Hole *JN11* ■ Test Pit ☐ Boring

2 " Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)

	Texture	Consistency	Color	Mottling
0–10	VERY FINE SANDY LOAM	FRIABLE	DARK BROWN	NONE
10–20			YELLOWISH BRN	
20–30	SILT LOAM	VERY FIRM	OLIVE TO OLIVE GRAY	COMMON DISTINCT
30–40	L.O.E. @ 36"			
40–50	ALSO SIMILAR TO THE BOOTHBAY SERIES			

Soil Classification		Slope	Limiting Factor	
8 Profile	*C* Condition	____ %	*17* "	■ Ground Water ☐ Restrictive Layer ☐ Bedrock ☐ Pit Depth

ELMWOOD SERIES - HYD GRP D (WATER TABLE <24") - NON-HYDRIC

Observation Hole *JN12* ■ Test Pit ☐ Boring

3 " Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)

	Texture	Consistency	Color	Mottling
0–10	GRAVELLY LOAMY SAND	FRIABLE	VERY DARK BROWN STRONG BROWN	NONE
10–20	BEDROCK @ 14"			
20–30				
30–40				
40–50				

Soil Classification		Slope	Limiting Factor	
2 Profile	*AII* Condition	____ %	*14* "	☐ Ground Water ☐ Restrictive Layer ■ Bedrock ☐ Pit Depth

LYMAN SERIES - HYD GRP D - NON-HYDRIC

Josh W. Wood

Signature

221 209

SE # SS#

1/5/25

Date

SOIL PROFILE/CLASSIFICATION INFORMATION

Project Name:

Applicant Name: *CARLISLE BROOK ESTATES, LLC*

Project Location (municipality) *TAX MAP 4 - LOT 22 - WALKER ROAD - LYMAN, MAINE*

Observation Hole *JN13* ■ Test Pit ☐ Boring

2 " Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)

	Texture	Consistency	Color	Mottling
0–10	GRAVELLY SANDY LOAM	FRIABLE	DARK BROWN	NONE
10–20	GRAVELLY LOAMY SAND	FIRM (IN PLACE)	DARK YELLOWISH BROWN	COMMON FAINT
20–40	BEDROCK @ 40"			

Soil Classification		Slope	Limiting Factor	
3 Profile	C/AIII Condition	%	17	"

■ Ground Water ■ Restrictive Layer ☐ Bedrock ☐ Pit Depth

SKERRY-LIKE SERIES - HYD GRP D - NON-HYDRIC

Observation Hole *JN14* ■ Test Pit ☐ Boring

2 " Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)

	Texture	Consistency	Color	Mottling
0–10	SANDY LOAM	FRIABLE	DARK BROWN	NONE
10–20	SANDY LOAM TO LOAMY SAND		DARK YELLOWISH BROWN	
20–30	GRAVELLY LOAMY SAND	FIRM (IN PLACE)	LIGHT OLIVE BROWN	COMMON DISTINCT
30–44	BEDROCK @ 44"			

Soil Classification		Slope	Limiting Factor	
5 Profile	C/AIII Condition	%	29	"

■ Ground Water ■ Restrictive Layer ☐ Bedrock ☐ Pit Depth

MADAWASKA-LIKE SERIES - HYD GRP B - NON-HYDRIC

BACKHOE EXCAVATED TEST PITS WERE CONDUCTED ON DECEMBER 9, 2024 FOR SOIL MAPPING PURPOSES. REFER TO PLAN FOR SLOPE INFORMATION.

Observation Hole *JN15* ■ Test Pit ☐ Boring

2 " Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)

	Texture	Consistency	Color	Mottling
0–10	SANDY LOAM	FRIABLE	DARK BROWN	NONE
10–20	LOAMY SAND TO SAND		STRONG BROWN DARK YELLOWISH BROWN	COMMON DISTINCT
20–30	SANDY LOAM	VERY FIRM	OLIVE	
30–40	L.O.E. @ 40"			

Soil Classification		Slope	Limiting Factor	
3 Profile	C Condition	%	18	"

■ Ground Water ☐ Restrictive Layer ☐ Bedrock ☐ Pit Depth

SKERRY-LIKE SERIES - HYD GRP D - NON-HYDRIC

Observation Hole *JN16* ■ Test Pit ☐ Boring

2 " Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)

	Texture	Consistency	Color	Mottling
0–10	LOAMY SAND	VERY FRIABLE	VERY DARK BROWN DARK	NONE
10–20	SAND		YELLOWISH BROWN	COMMON DISTINCT
20–40	SILT SAND	FIRM FRIABLE	OLIVE YELLOWISH BROWN	

Soil Classification		Slope	Limiting Factor	
7 Profile	C Condition	%	21	"

■ Ground Water ☐ Restrictive Layer ☐ Bedrock ☐ Pit Depth

CROGHAN-LIKE SERIES - HYD GRP D ((WATER TABLE <24") - NON-HYDRIC

Josh W. Nick
Signature

221 209
SE # SS#

1/5/25
Date

SOIL PROFILE/CLASSIFICATION INFORMATION

Project Name:

Applicant Name: *CARLISLE BROOK ESTATES, LLC*

Project Location (municipality) *TAX MAP 4 - LOT 22 - WALKER ROAD - LYMAN, MAINE*

Observation Hole *JN17* ■ Test Pit ☐ Boring

3 " Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)

Texture	Consistency	Color	Mottling
LOAMY SAND	FRIABLE	BLACK	NONE
		STRONG BROWN	
		DARK YELLOWISH BROWN	COMMON DISTINCT
VERY FINE SANDY LOAM	FIRM	OLIVE	
GRAVELLY SAND	VERY FRIABLE TO LOOSE	BROWN	

Soil Classification		Slope	Limiting Factor	
7 Profile	D Condition	%	10 "	■ Ground Water ☐ Restrictive Layer ☐ Bedrock ☐ Pit Depth

MOOSILAUKE SERIES - HYD GRP D - NON-HYDRIC

Observation Hole *JN18* ■ Test Pit ☐ Boring

3 " Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)

Texture	Consistency	Color	Mottling
LOAMY SAND	FRIABLE	BLACK	COMMON DISTINCT
SAND		OLIVE	
	L.O.E. @ 26"		

Soil Classification		Slope	Limiting Factor	
5 Profile	E Condition	%	0 "	■ Ground Water ☐ Restrictive Layer ☐ Bedrock ☐ Pit Depth

NAUMBERG SERIES - HYD GRP D - HYDRIC

BACKHOE EXCAVATED TEST PITS JN17 & JN18 WERE CONDUCTED ON DECEMBER 9, 2024. HAND EXCAVATED TEST PITS JN19 & JN20 WERE CONDUCTED ON DECEMBER 15, 2024. TEST PITS WERE FOR SOIL MAPPING PURPOSES. REFER TO PLAN FOR SLOPE INFORMATION.

Observation Hole *JN19* ■ Test Pit ☐ Boring

4 " Depth of Organic Horizon Above Mineral Soil NORTHEAST CORNER OF PARCEL IN SOUTHWEST MAP UNIT

DEPTH BELOW MINERAL SOIL SURFACE (inches)

Texture	Consistency	Color	Mottling
SILT LOAM	FRIABLE FIRM	DARK OLIVE GRAY OLIVE GRAY	COMMON PROMINENT
	L.O.E. @ 22"		

Soil Classification		Slope	Limiting Factor	
9 Profile	E Condition	%	0 "	■ Ground Water ☐ Restrictive Layer ☐ Bedrock ☐ Pit Depth

SWANVILLE SERIES - HYD GRP D - HYDRIC

Observation Hole *JN20* ■ Test Pit ☐ Boring

3 " Depth of Organic Horizon Above Mineral Soil SOUTHEAST OF JN17 IN RD MAP UNIT

DEPTH BELOW MINERAL SOIL SURFACE (inches)

Texture	Consistency	Color	Mottling
VERY FINE SANDY LOAM TO LOAMY VERY FINE SAND	FRIABLE FIRM	BLACK OLIVE GRAY	COMMON DISTINCT
	L.O.E. @ 22"		

Soil Classification		Slope	Limiting Factor	
8 Profile	E Condition	%	0 "	■ Ground Water ☐ Restrictive Layer ☐ Bedrock ☐ Pit Depth

ROUNDABOUT SERIES - HYD GRP D - HYDRIC

Signature

221 209
SE # SS#

1/5/25
Date

SOIL PROFILE/CLASSIFICATION INFORMATION

Project Name:

Applicant Name: *CARLISLE BROOK ESTATES, LLC*

Project Location (municipality): *TAX MAP 4 - LOT 22 - WALKER ROAD - LYMAN, MAINE*

Observation Hole *JN21* ■ Test Pit ☐ Boring

2 " Depth of Organic Horizon Above Mineral Soil — SOUTHERN SIDE OF THE SITE AT THE BASE OF A DRAINAGE CHANNEL IN THE CHARLES MAP UNIT

DEPTH BELOW MINERAL SOIL SURFACE (inches)

Texture	Consistency	Color	Mottling
VERY FINE SANDY LOAM	FRIABLE	DARK OLIVE GRAY	COMMON PROMINENT
SILT LOAM	FIRM	GRAY	
L.O.E. @ 34"			

Soil Classification		Slope	Limiting Factor	
8 Profile	E Condition	%	0 "	■ Ground Water ☐ Restrictive Layer ☐ Bedrock ☐ Pit Depth

Observation Hole _____ ☐ Test Pit ☐ Boring

_____ " Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)

Texture	Consistency	Color	Mottling

Soil Classification		Slope	Limiting Factor	
Profile	Condition	%	"	☐ Ground Water ☐ Restrictive Layer ☐ Bedrock ☐ Pit Depth

CHARLES SERIES - HYD GRP D - HYDRIC

HAND EXCAVATED TEST PIT WAS CONDUCTED ON JANUARY 7, 2025 FOR SOIL MAPPING PURPOSES. REFER TO PLAN FOR SLOPE INFORMATION.

Observation Hole _____ ☐ Test Pit ☐ Boring

_____ " Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)

Texture	Consistency	Color	Mottling

Soil Classification		Slope	Limiting Factor	
Profile	Condition	%	"	☐ Ground Water ☐ Restrictive Layer ☐ Bedrock ☐ Pit Depth

Observation Hole _____ ☐ Test Pit ☐ Boring

_____ " Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)

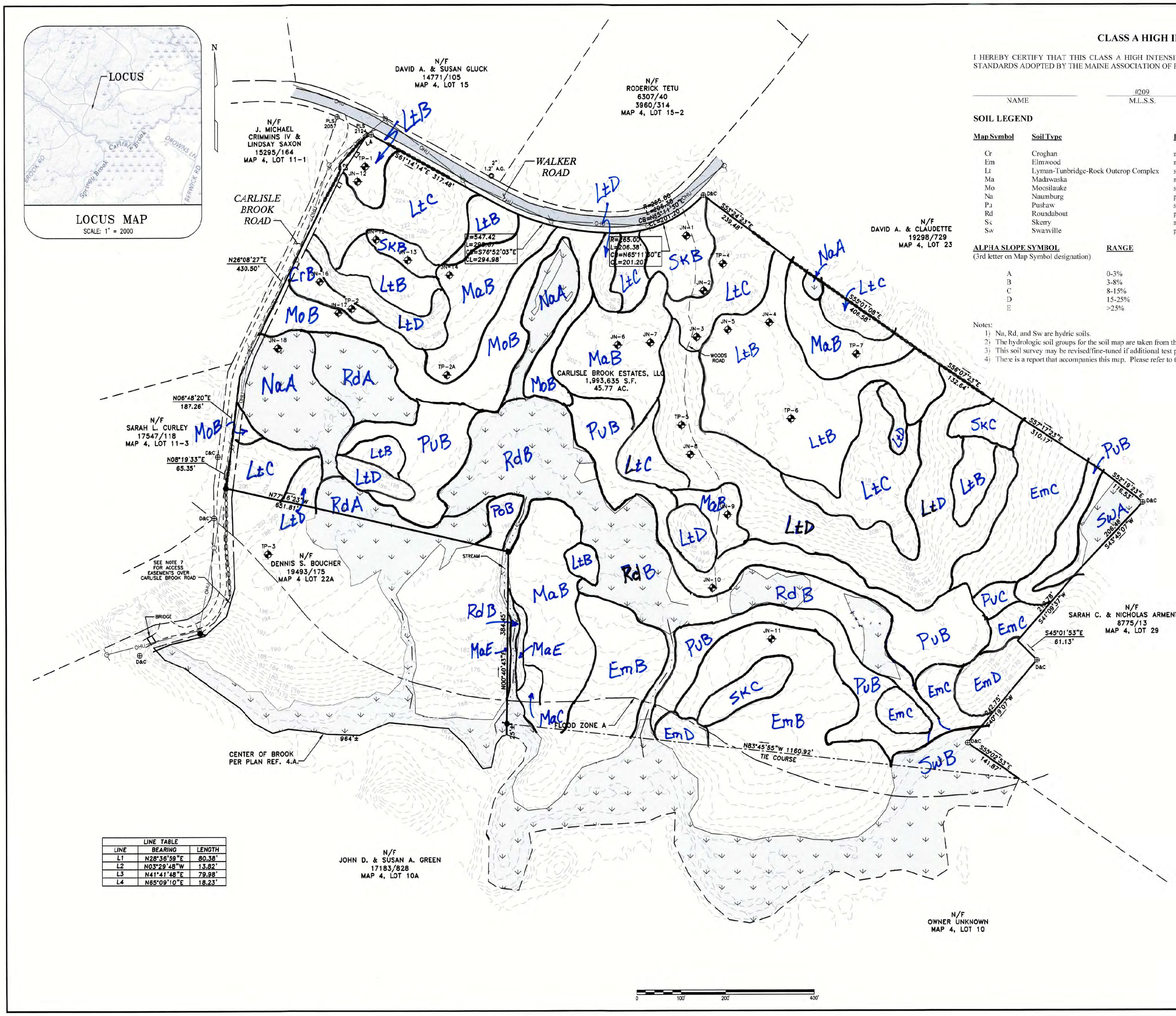
Texture	Consistency	Color	Mottling

Soil Classification		Slope	Limiting Factor	
Profile	Condition	%	"	☐ Ground Water ☐ Restrictive Layer ☐ Bedrock ☐ Pit Depth

Signature

221 209
SE # SS#

1/8/25
Date



LINE TABLE		
LINE	BEARING	LENGTH
L1	N28°36'59"E	80.38'
L2	N03°29'48"W	13.82'
L3	N41°41'48"E	79.98'
L4	N65°09'10"E	18.23'

CLASS A HIGH INTENSITY SOIL SURVEY

I HEREBY CERTIFY THAT THIS CLASS A HIGH INTENSITY SOIL SURVEY WAS CONDUCTED IN CONFORMANCE WITH THE STANDARDS ADOPTED BY THE MAINE ASSOCIATION OF PROFESSIONAL SOIL SCIENTISTS.

NAME ______ M.L.S.S. #209 ______ DATE ______

SOIL LEGEND

Map Symbol	Soil Type	Drainage Class	Hydrologic Soil Group
Cr	Croghan	moderately well drained	A
Em	Elmwood	moderately well drained	B
Lt	Lyman-Tunbridge-Rock Outcrop Complex	somewhat excessively drained to well drained	D
Ma	Madawaska	moderately well drained	B
Mo	Moosilauke	somewhat poorly drained	D
Na	Naumburg	poorly drained	D
Pu	Pushaw	somewhat poorly drained	D
Rd	Roundabout	poorly drained	D
Sk	Skerry	moderately well drained	D
Sw	Swanville	poorly drained	D

ALPHA SLOPE SYMBOL (3rd letter on Map Symbol designation)	RANGE
A	0-3%
B	3-8%
C	8-15%
D	15-25%
E	>25%

Notes:
1) Na, Rd, and Sw are hydric soils.
2) The hydrologic soil groups for the soil map are taken from the NRCS Web Soil Survey.
3) This soil survey may be revised/fine-tuned if additional test pits are conducted.
4) There is a report that accompanies this map. Please refer to the report for additional soil information and test pit logs.

5. THE PARCEL SURVEYED IS IDENTIFIED ON THE TOWN OF LYMAN ASSESSOR'S MAP 4, LOT 22.

6. THE SUBJECT PARCEL IS LOCATED IN THE GENERAL PURPOSE DISTRICT, STREAM PROTECTION DISTRICT:
MIN. LOT SIZE = 217,800 S.F.
MIN. STREET FRONTAGE = 375 FEET
MIN. FRONT SETBACK = 75 FEET
MIN. SIDE & REAR SETBACK = 40 FEET
MIN. SETBACK FROM STREAM = 75 FEET
MAX. LOT COVERAGE = 20%

THE DIMENSIONAL REQUIREMENTS SHOWN HEREON ARE TO BE VERIFIED WITH THE CODE OFFICE PRIOR TO DESIGN AND CONSTRUCTION. ADDITIONAL RESTRICTIONS MAY APPLY.

7. REFERENCE S MADE TO THE FOLLOWING EASEMENTS OF RECORD:
A. THE LOCUS PARCEL IS BENEFITED BY A 15 FOOT WIDE RIGHT-OF-WAY AS STATED IN DEED BOOK 8378, PAGE 287.
B. THE LOCUS PARCEL IS BENEFITED BY A 15 FOOT WIDE RIGHT-OF-WAY AS STATED IN DEED BOOK 8378, PAGE 285.
C. THE LOCUS PARCEL IS SUBJECT TO A 25 FOOT WIDE RIGHT OF-WAY AS STATED IN DEED BOOK 8378, PAGE 282.

8. WETLAND DELINEATION BY MAINELY SOILS, LLC APRIL 2024.

9. EASEMENTS OR OTHER UNWRITTEN RIGHTS MAY EXIST THAT ENCUMBER OR BENEFIT THE PROPERTY NOT SHOWN HEREON.

10. THE EXTERIOR BOUNDARY SHOW HEREON WAS TAKEN FROM THE PLAN REFERENCED IN NOTE 4.A. ABOVE. THE STAMP HEREON IS FOR INTERIOR LOT LINES ONLY. EXCEPTIONS TO THE BOARD OF LICENSURE FOR PROFESSIONAL LAND SURVEYORS STANDARDS ARE AS FOLLOWS:
A. NO SURVEY REPORT WAS PREPARED.
B. NO REVISED LEGAL DESCRIPTION PREPARED
C. MONUMENTS WERE NOT SET AT ALL ANGLE POINTS

YORK ss REGISTRY OF DEEDS
RECEIVED ______ 20 ___
AT ___ H ___ M ___ M., AND
RECORDED IN BOOK ______ PAGE ____
ATTEST:
______ REGISTER

REVISION			
NO.	DATE	BY:	DESCRIPTION

STATE OF MAINE — ISAIAH E. PLANTE — PLS 1334 — PROFESSIONAL LAND SURVEYOR

KIMBALL SURVEY & DESIGN, INC.
30 FROST HILL ROAD
YORK, MAINE 03909
207-351-0226
ISAIAH@KIMBALLLANDSURVEYING.COM
WWW.KIMBALLLANDSURVEYING.COM
PROFESSIONAL LAND SURVEYING

Owner of Record:
Carlisle Brook Estates, LLC
1000 U.S. Route 1, Suite 102
York, ME 03909

Existing Conditions Plan
Map 4, Lot 22
Walker Road
Lyman, Maine

DATE: DECEMBER 11, 2024
PROJECT NO. 2534
SCALE: 1" = 100'
CAD FILE: 2534.dwg

SHEET 1 OF 1

Section 7

Stormwater Operations & Maintenance Plan Inspection Form
Stormwater Management Plan

ALTUS ENGINEERING

STORMWATER INSPECTION AND MAINTENANCE MANUAL

"Carlisle Brook Estates"
Walker Road
Lyman, Maine
Assessor's Map 4, Lot 22

OWNER AT TIME OF SUBDIVISION APPROVAL:
Carlisle Brook Estates, LLC
1000 U.S. Route 1, Suite 102
York, Maine 03909

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:	*Carlisle Brook Estates, LLC*		*(207) 351-8188*
	Name	*Company*	*Phone*
Inspection:	*Carlisle Brook Estates, LLC*		*(207) 351-8188*
	Name	*Company*	*Phone*
Maintenance:	*Carlisle Brook Estates, LLC*		*(207) 351-8188*
	Name	*Company*	*Phone*

NOTES:

Inspection and maintenance responsibilities shall transfer to any future property owner(s) and/or Homeowners Association (HOA).

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.

STORMWATER BASIN

Function – Stormwater basins allow for the retention of stormwater and decreases the peak rate of discharge.

Maintenance

- Inspect annually and after significant rainfall events.
- Remove any obstructions, litter and accumulated sediment or debris as warranted but no less than once a year.
- Mowing of any grassed area in or adjacent to a basin, including its berm, shall be performed at least twice per year (when areas are not inundated) to keep the vegetation in vigorous condition. The cut grass shall be removed to prevent the decaying organic litter from clogging the filter media or choking other vegetation.
- Select vegetation should be maintained in healthy condition. This may include pruning, removal and replacement of dead or diseased vegetation.
- Remove any hard wood growth from pond areas, including side slopes and berms.

CULVERTS AND DRAINAGE PIPES

Function – Culverts and drainage pipes convey stormwater away from buildings, walkways, and parking areas and to surface waters or closed drainage systems.

Maintenance

- Culverts and 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.
- Riprap Areas - Culvert outlets and inlets shall be inspected during annual maintenance and operations for erosion and scour. If scour or creek erosion is identified, the outlet owner shall take appropriate means to prevent further erosion. Increased lengths of riprap in wetland areas may require a NRPA Permit and/or local permit.

RIP RAP OUTLETS, PLUNGE POOLS AND SWALES

Function – Rip rap outlets, plunge pools and swales slow the velocity of runoff, minimizing erosion and maximizing the treatment capabilities of associated buffers.

Maintenance

- Inspect riprap at least annually for signs of erosion, sediment buildup, or vegetation loss.
- Remove debris and accumulated sediment and dispose of properly.

VEGETATIVE SWALES

Function – Vegetative swales filter sediment from stormwater, promote infiltration, and the uptake of contaminates. They are designed to treat runoff and dispose of it safely into the natural drainage system.

Maintenance

- Timely maintenance is important to keep a swale in good working condition. Mowing of grassed swales shall be monthly to keep the vegetation in vigorous condition. The cut vegetation shall be removed to prevent the decaying organic litter from adding pollutants to the discharge from the swale.
- Fertilizing shall be bi-annual or as recommended from soil testing.
- Inspect swales following significant rainfall events.
- Woody vegetation shall not be allowed to become established in the swales or rock riprap outlet protection and if present shall be removed.
- Accumulated debris disrupts flow and leads to clogging and erosion. Remove debris and litter as necessary.
- Inspect for eroded areas. Determine cause of erosion and correct deficiency as required. Monitor repaired areas.

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 contaminates 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 wastes, 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 “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 drain pipes 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.

APPPENDIX

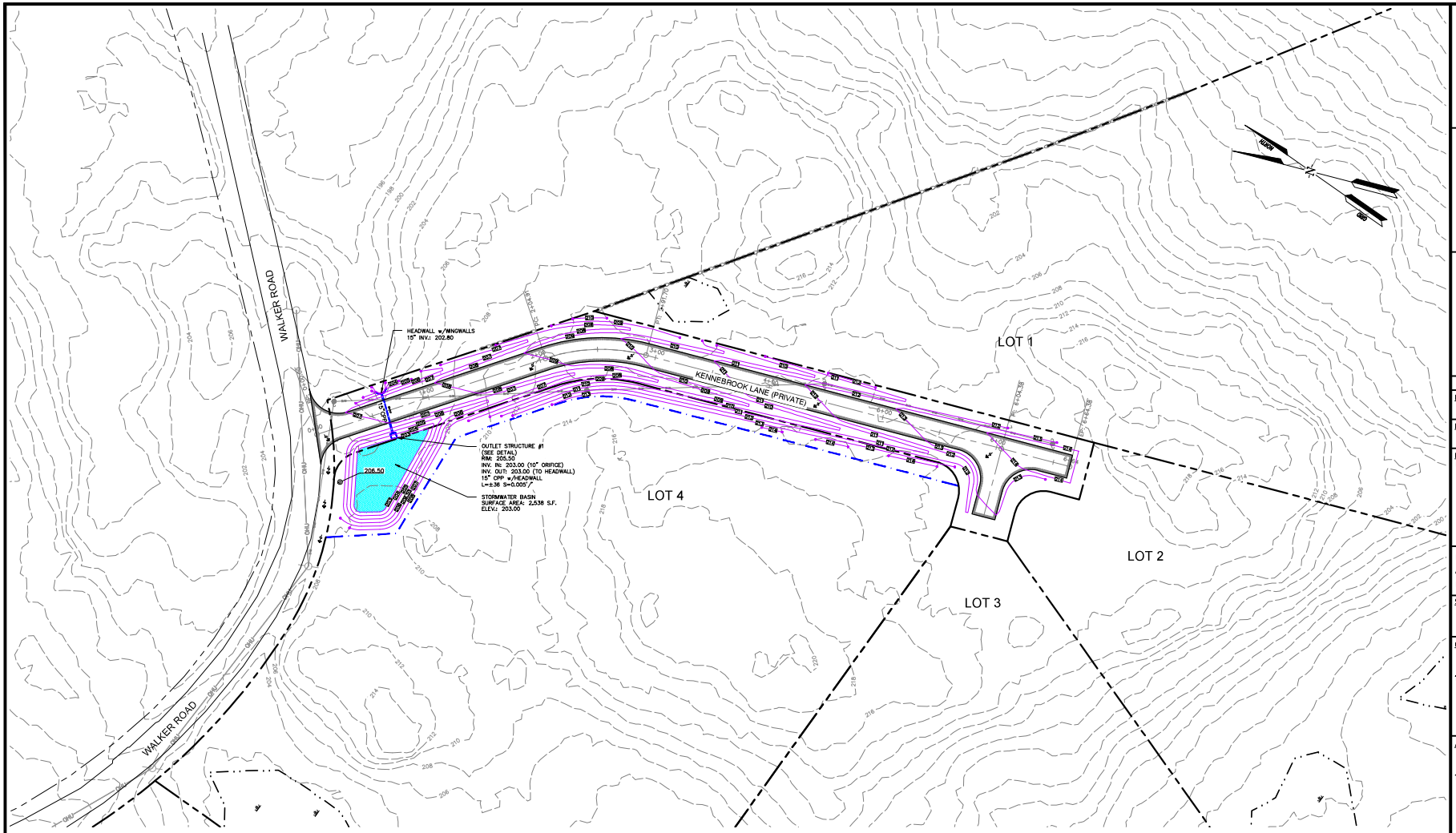
A. Stormwater System Operations and Maintenance Report
B. Site Grading and Drainage Plan

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: ☐ Annual Report ☐ Post-storm event ☐ Due to a discharge of significant amounts of sediment		
Notes:		

General Site Questions and Discharges of Significant Amounts of Sediment			
Subject		**Status**	**Notes**
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:			*Notes/ Action taken:*
1	Do the current site conditions reflect the attached site plan?	❑Yes ❑No	
2	Is the site permanently stabilized, temporary erosion and sediment controls are removed, and stormwater discharges from construction activity are eliminated?	❑Yes ❑No	
3	Is there evidence of the discharge of significant amounts of sediment to surface waters, or conveyance systems leading to surface waters?	❑Yes ❑No	

Permit Coverage and Plans				
#	**BMP/Facility**	**Inspected**	**Corrective Action Needed and Notes**	**Date Corrected**
	Stormwater Basin	❑Yes ❑No		
	Culverts/Drainage Pipes	❑Yes ❑No		
	Riprap Aprons and Plunge Pools	❑Yes ❑No		
	Riprap Swales	❑Yes ❑No		
	Vegetative Swales	❑Yes ❑No		
	Site Vegetation	❑Yes ❑No		



STORMWATER MANAGEMENT NOTES

1. DO NOT BEGIN CONSTRUCTION UNTIL ALL STATE AND LOCAL PERMITS HAVE BEEN APPLIED FOR AND RECEIVED.
2. CONTRACTOR SHALL READ AND FOLLOW ALL CONDITIONS OF APPROVAL IN THE SITE'S LOCAL, STATE AND FEDERAL PERMITS.
3. ALL BONDS AND FEES SHALL BE PAID/POSTED PRIOR TO INITIATING CONSTRUCTION.
4. CONTRACTOR SHALL OBTAIN A "DIGSAFE" NUMBER AT LEAST 72 HOURS PRIOR TO COMMENCING CONSTRUCTION.
5. ALL BENCHMARKS AND TOPOGRAPHY SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO INITIATING CONSTRUCTION.
6. UNLESS OTHERWISE AGREED IN WRITING, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING TEMPORARY BENCHMARKS (TBMS) AND PERFORMING ALL CONSTRUCTION SURVEY LAYOUT.
7. PRIOR TO CONSTRUCTION, FIELD VERIFY JUNCTIONS, LOCATIONS AND ELEVATIONS/INVERTS OF ALL EXISTING STORMWATER AND UTILITY LINES. PRESERVE AND PROTECT LINES TO BE RETAINED.
8. ALL CONSTRUCTION SHALL MEET THE TOWN OF LYMAN & MAINEDOT MINIMUM STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION, LATEST EDITIONS. THE MORE STRINGENT SPECIFICATION SHALL GOVERN,
9. AREA OF DISTURBANCE FOR ROADWAY CONSTRUCTION: ±45,812 S.F. (1.05 AC.).
10. PROPOSED IMPERVIOUS AREA FOR ROADWAY CONSTRUCTION: ±14,843 S.F. (0.34 AC.).
11. ROCK AND LEDGE SHALL BE REMOVED FROM THE ROADWAY TO AT LEAST 2' BELOW FINISH GRADE.
12. IN ORDER TO PROVIDE VISUAL CLARITY ON THE PLANS, DRAINAGE AND OTHER UTILITY STRUCTURES MAY NOT BE DRAWN TO SCALE. SYMBOLS MAY NOT BE INDICATIVE OF THE CENTER OF A STRUCTURE, PARTICULARLY WHEN SHOWN ADJACENT TO A CURB LINE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER SIZING AND LOCATION OF ALL STRUCTURES AND IS DIRECTED TO RESOLVE ANY POTENTIAL DISCREPANCY WITH THE ENGINEER PRIOR TO CONSTRUCTION.
13. IF SUITABLE, EXCAVATED MATERIALS SHALL BE PLACED AS FILL WITHIN UPLAND AREAS ONLY AND SHALL NOT BE PLACED WITHIN WETLANDS. PLACEMENT OF BORROW MATERIALS SHALL BE IN A MANNER THAT PREVENTS LONG TERM DIFFERENTIAL SETTLEMENT. EXCESSIVELY WET MATERIALS SHALL BE STOCKPILED AND ALLOWED TO DRAIN BEFORE PLACEMENT. FROZEN MATERIAL SHALL NOT BE USED FOR CONSTRUCTION.
14. PROTECTION OF SUBGRADE: THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN STABLE, DEWATERED SUBGRADES FOR FOUNDATIONS, PAVEMENT AREAS, UTILITY TRENCHES, AND OTHER AREAS DURING CONSTRUCTION. SUBGRADE DISTURBANCE MAY BE INFLUENCED BY EXCAVATION METHODS, MOISTURE, PRECIPITATION, GROUNDWATER CONTROL, AND CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO PREVENT SUBGRADE DISTURBANCE. SUCH PRECAUTIONS MAY INCLUDE DIVERTING STORMWATER RUNOFF AWAY FROM CONSTRUCTION AREAS, REDUCING TRAFFIC IN SENSITIVE AREAS, AND MAINTAINING AN EFFECTIVE DEWATERING PROGRAM. SOILS EXHIBITING HEAVING OR INSTABILITY SHALL BE OVER-EXCAVATED TO MORE COMPETENT BEARING SOIL AND REPLACED WITH FREE DRAINING STRUCTURAL FILL. IF THE EARTHWORK IS PERFORMED DURING FREEZING WEATHER, EXPOSED SUBGRADES ARE SUSCEPTIBLE TO FROST. NO FILL OR UTILITIES SHALL BE PLACED ON FROZEN GROUND. THIS WILL LIKELY REQUIRE REMOVAL OF A FROZEN SOIL CRUST AT THE COMMENCEMENT OF EACH DAY'S OPERATIONS. THE FINAL SUBGRADE ELEVATION WOULD ALSO REQUIRE AN APPROPRIATE DEGREE OF INSULATION AGAINST FREEZING.
15. ALL DRAINAGE PIPE SHALL BE CORRUGATED POLYETHYLENE PIPE ("CPP", TYPE ADS N-12, HANCOR H1-Q OR APPROVED EQUAL).
16. 12" CPP CULVERTS SHALL BE INSTALLED AT ALL DRIVEWAY ENTRANCES WHERE CROSSING A SWALE.
17. ALL FLARED END SECTION (FES) SHALL BE METAL OR CONCRETE. HDPE END SECTIONS SHALL NOT BE ACCEPTED.
18. ALL DRIVEWAYS SHALL BE CONSTRUCTED SO AS TO SLOPE AWAY FROM THE PUBLIC WAY AT 2% FOR A MINIMUM OF 10' OR TO THE LIMITS OF THE RIGHT OF WAY, WHICHEVER IS GREATER.
19. ALL HOUSES CONSTRUCTED IN THE DEVELOPMENT SHALL BE EQUIPPED WITH STONE DRIP STRIPS WHERE APPROPRIATE. ALL GUTTER DOWNSPOUTS SHALL BE DIRECTED TO THE NEAREST DRIP STRIP.
20. IN THE EVENT THAT BLASTING IS REQUIRED FOR ROAD, DRAINAGE OR UTILITY CONSTRUCTION, A BLASTING PLAN AND PRE-BLAST SURVEY SHALL BE PREPARED BY A PROFESSIONAL BLASTING COMPANY AND SUBMITTED TO THE LYMAN CODE ENFORCEMENT OFFICER AT LEAST TWO WEEKS PRIOR TO ANY BLASTING ACTIVITIES.
21. SEE DETAIL SHEETS FOR EROSION AND SEDIMENT CONTROL MEASURES.
22. SEE DETAIL SHEETS FOR LEGEND.

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)

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

ERIC D. WEINRIEB No. 9535 LICENSED PROFESSIONAL ENGINEER STATE OF MAINE
3/19/25

NOT FOR CONSTRUCTION

ISSUED FOR: PRELIMINARY REVIEW

ISSUE DATE: MARCH 19, 2025

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	PRELIMINARY	PMJ	03/19/25

DRAWN BY: PMJ
APPROVED BY: EBS
DRAWING FILE: 5590-SITE.dwg

SCALE:
24" x 36" - 1" = 40'
11" x 17" - 1" = NTS

OWNER:
CARLISLE BROOK ESTATES, LLC
1000 U.S. ROUTE 1, SUITE 102
YORK, MAINE 03909

APPLICANT:
CARLISLE BROOK ESTATES, LLC
1000 U.S. ROUTE 1, SUITE 102
YORK, MAINE 03909

PROJECT:
CARLISLE BROOK ESTATES
ASSESSOR'S MAP 4, LOT 22
WALKER ROAD
LYMAN, MAINE

TITLE:
STORMWATER MANAGEMENT PLAN

SHEET NUMBER:
C-4

P5590

Section 8

Watershed Plans

Pre-Development Watershed Plan
Pre-Development Soils Plan
Post-Development Watershed Plan
Post-Development Soils Plan

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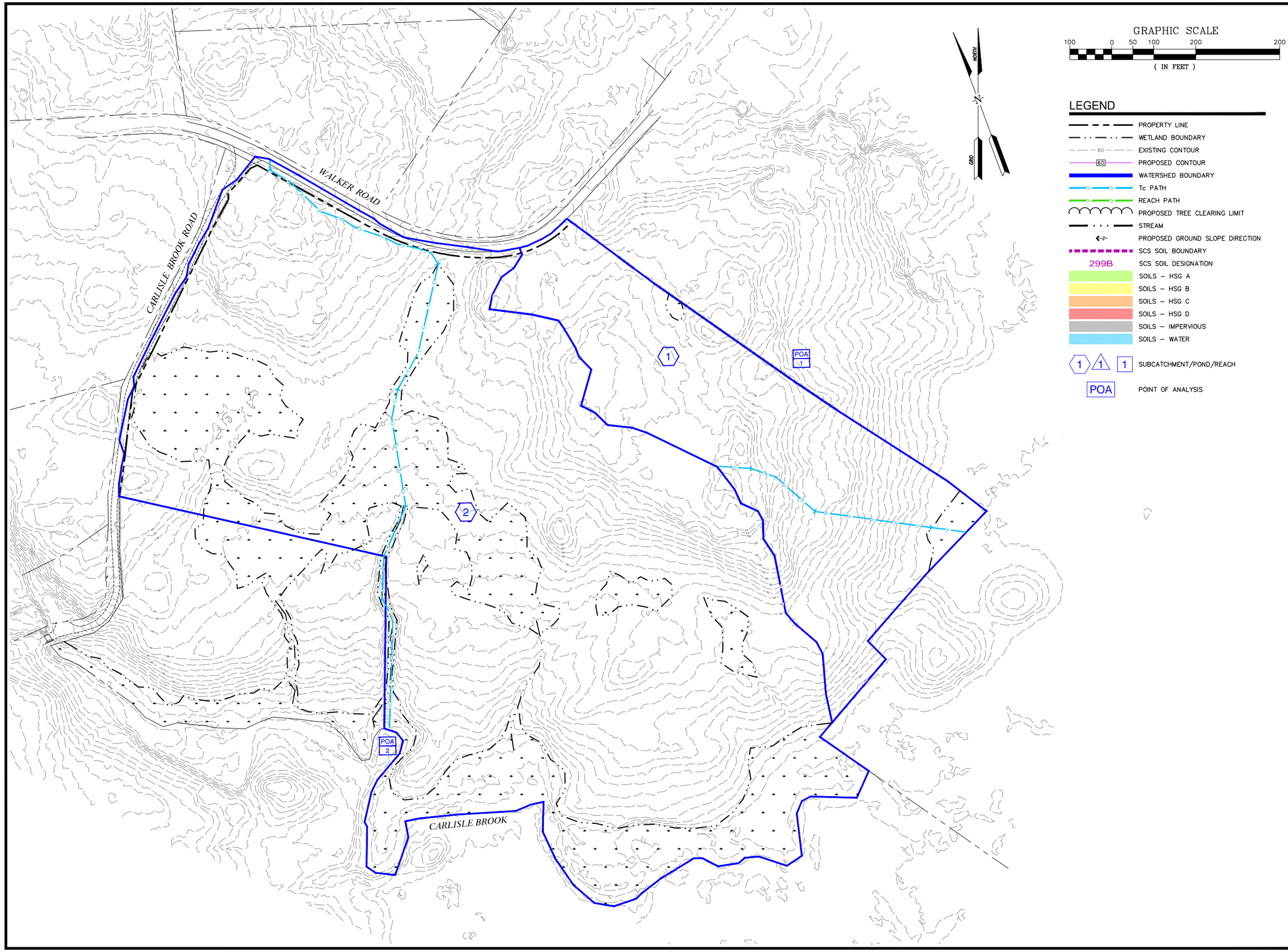
ENGINEERING



GRAPHIC SCALE

100 0 50 100 200

(IN FEET)

LEGEND

- PROPERTY LINE
- WETLAND BOUNDARY
- 60 EXISTING CONTOUR
- 60 PROPOSED CONTOUR
- WATERSHED BOUNDARY
- Tc PATH
- REACH PATH
- PROPOSED TREE CLEARING LIMIT
- STREAM
- PROPOSED GROUND SLOPE DIRECTION
- SCS SOIL BOUNDARY
- 299B 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

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STATE OF MAINE
ERIC D. WENRICH
No. 6658
LICENSED
PROFESSIONAL ENGINEER
3/19/25

NOT FOR CONSTRUCTION

ISSUED FOR:
PRELIMINARY REVIEW

ISSUE DATE:
MARCH 19, 2025

REVISIONS

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YORK, MAINE 03909

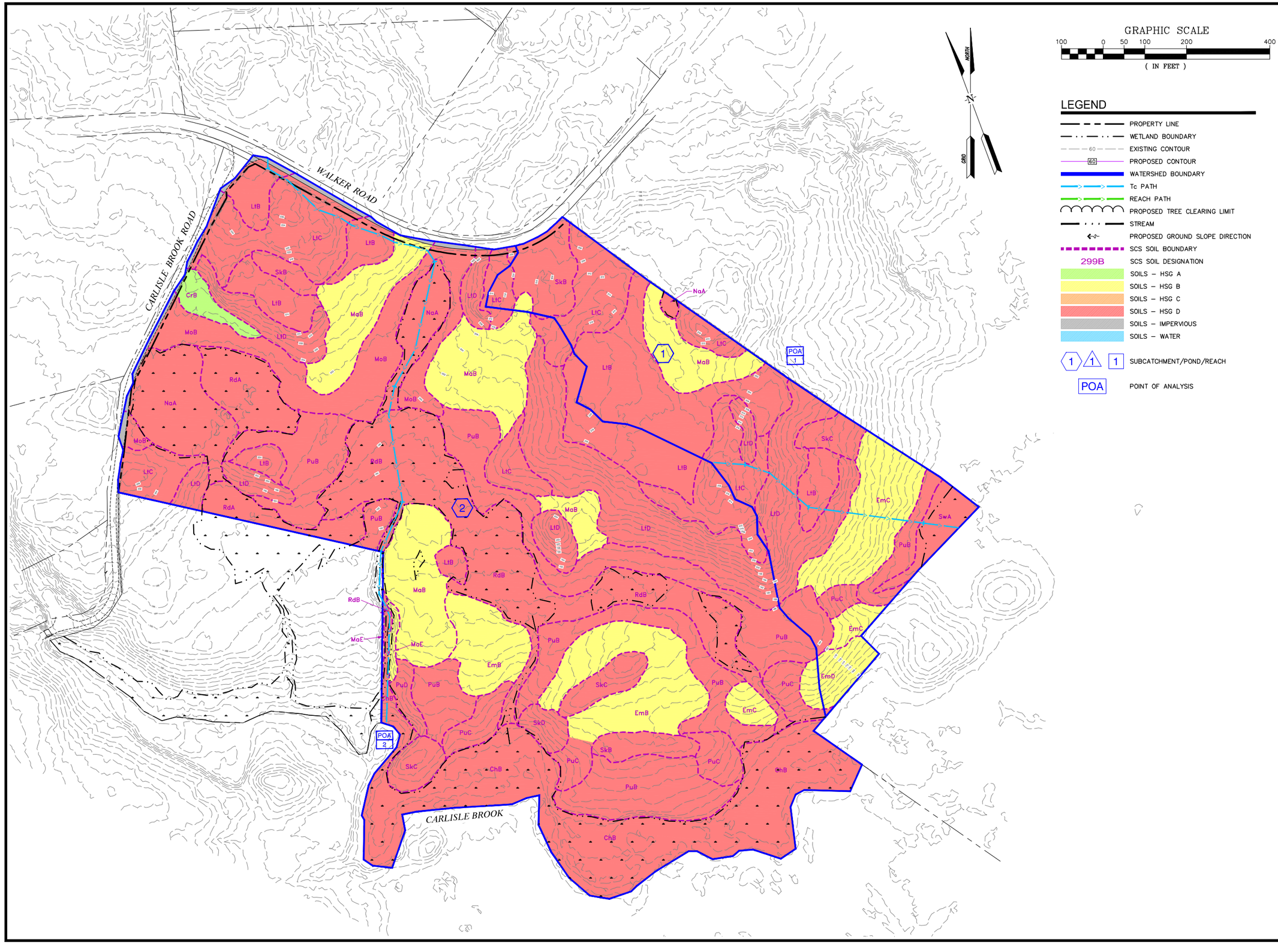
APPLICANT:
CARLISLE BROOK ESTATES, LLC
1000 U.S. ROUTE 1, SUITE 102
YORK, MAINE 03909

PROJECT:
CARLISLE BROOK ESTATES
ASSESSOR'S MAP 4, LOT 22
WALKER ROAD
LYMAN, MAINE

TITLE:
PRE-DEVELOPMENT WATERSHED PLAN

SHEET NUMBER:
WS-1

P5590



GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)

LEGEND

- PROPERTY LINE
- WETLAND BOUNDARY
- 60 EXISTING CONTOUR
- 60 PROPOSED CONTOUR
- WATERSHED BOUNDARY
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- REACH PATH
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- 1 1 1 SUBCATCHMENT/POND/REACH
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(603) 433-2335 www.altus-eng.com

STATE OF MAINE ERIC D. WENRIEB No. 6658 LICENSED PROFESSIONAL ENGINEER
3/19/25

NOT FOR CONSTRUCTION

ISSUED FOR: PRELIMINARY REVIEW

ISSUE DATE: MARCH 19, 2025

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1000 U.S. ROUTE 1, SUITE 102
YORK, MAINE 03909

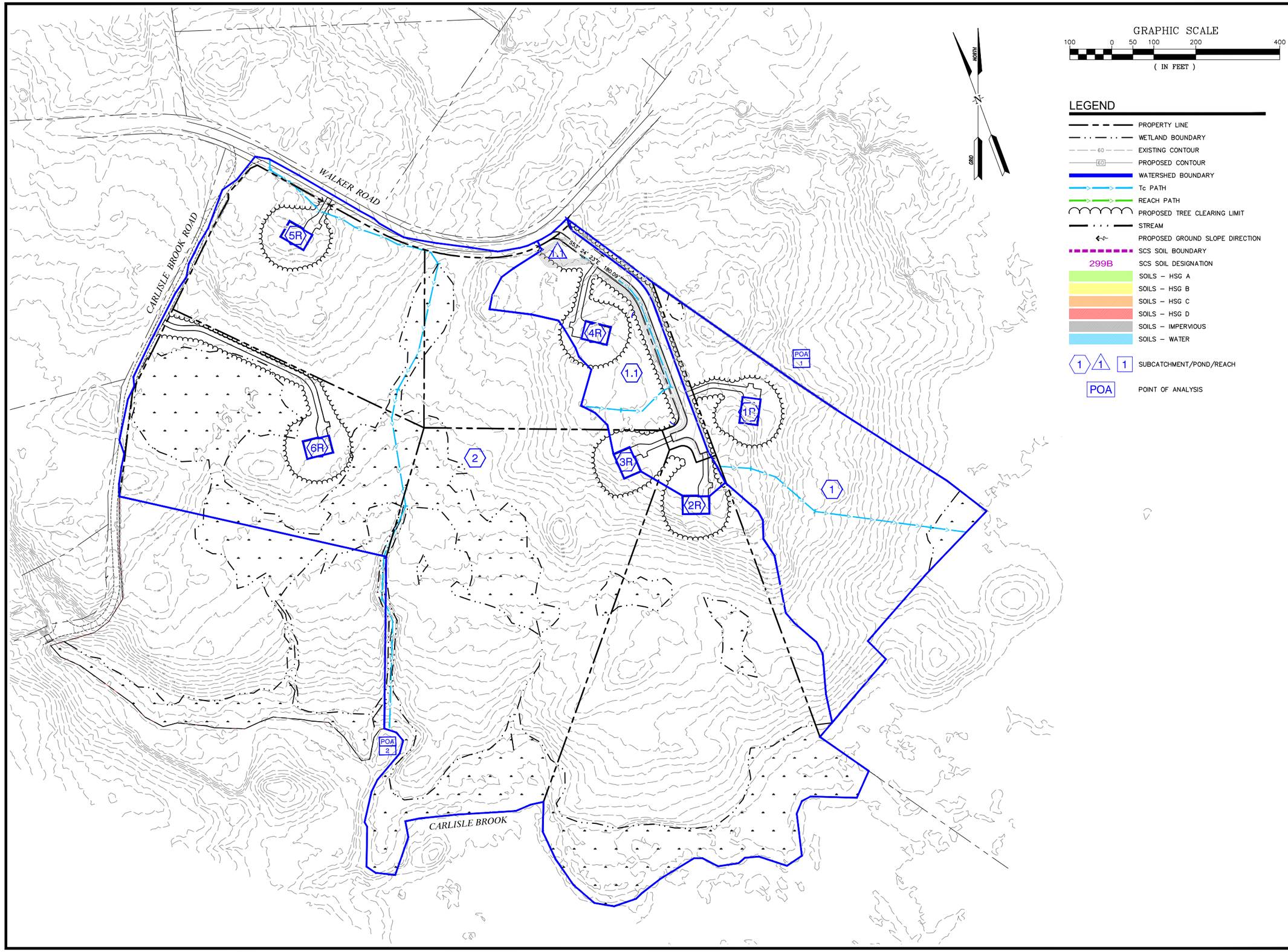
APPLICANT:
CARLISLE BROOK ESTATES, LLC
1000 U.S. ROUTE 1, SUITE 102
YORK, MAINE 03909

PROJECT:
CARLISLE BROOK ESTATES
ASSESSOR'S MAP 4, LOT 22
WALKER ROAD
LYMAN, MAINE

TITLE:
PRE-DEVELOPMENT SOILS PLAN

SHEET NUMBER:
WS-2

P5590



GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)

LEGEND

- PROPERTY LINE
- WETLAND BOUNDARY
- 60 EXISTING CONTOUR
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3/19/25

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YORK, MAINE 03909

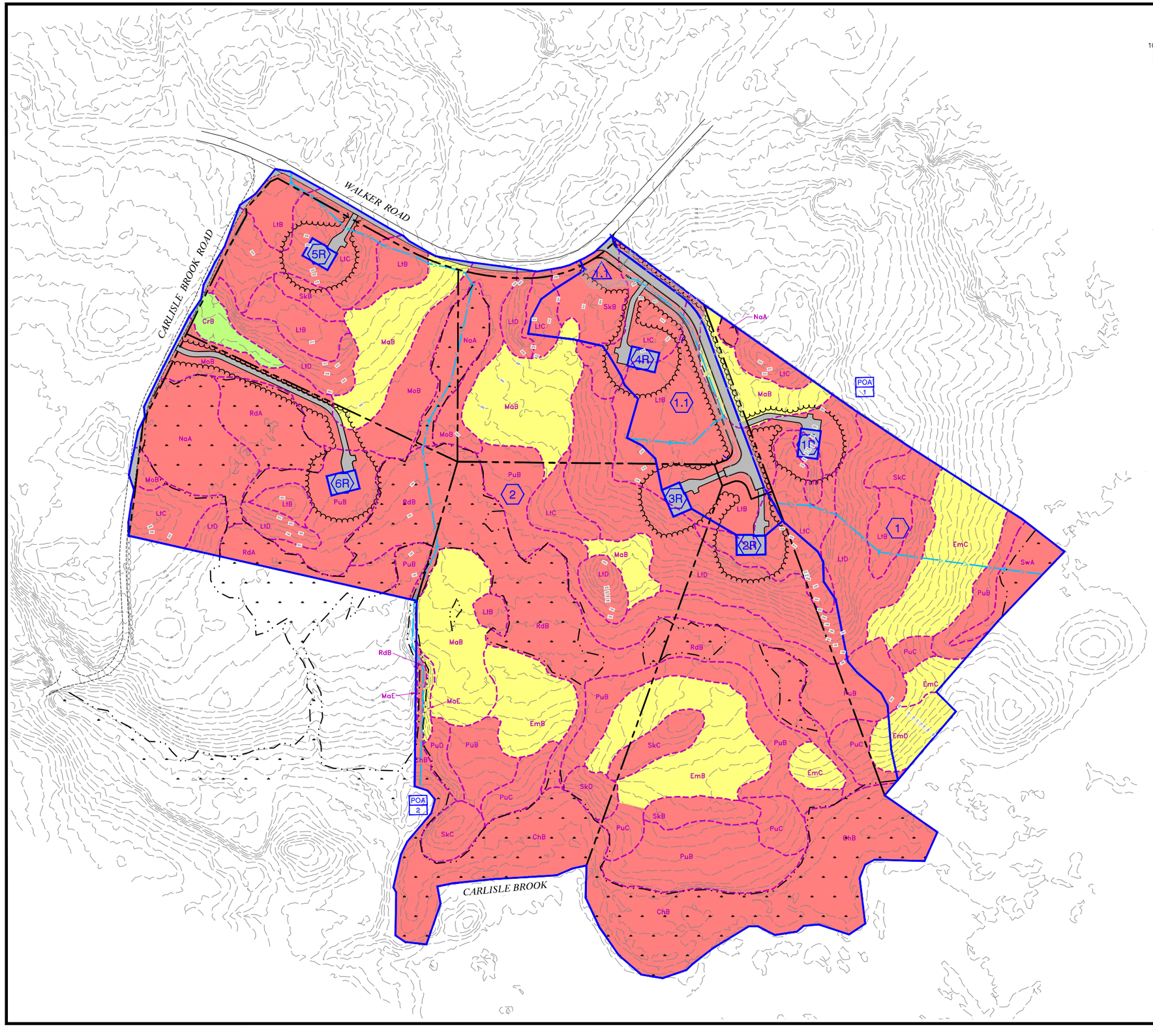
APPLICANT:
CARLISLE BROOK ESTATES, LLC
1000 U.S. ROUTE 1, SUITE 102
YORK, MAINE 03909

PROJECT:
CARLISLE BROOK ESTATES
ASSESSOR'S MAP 4, LOT 22
WALKER ROAD
LYMAN, MAINE

TITLE:
POST-DEVELOPMENT WATERSHED PLAN

SHEET NUMBER:
WS-3

P5590



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LEGEND

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STATE OF MAINE ERIC D. WENRICH No. 6658 LICENSED PROFESSIONAL ENGINEER

3/19/25

NOT FOR CONSTRUCTION

ISSUED FOR: PRELIMINARY REVIEW

ISSUE DATE: MARCH 19, 2025

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	PRELIMINARY	PMJ	03/19/25

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APPROVED BY: EBS
DRAWING FILE: 5590-SITE.dwg

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OWNER:
CARLISLE BROOK ESTATES, LLC
1000 U.S. ROUTE 1, SUITE 102
YORK, MAINE 03909

APPLICANT:
CARLISLE BROOK ESTATES, LLC
1000 U.S. ROUTE 1, SUITE 102
YORK, MAINE 03909

PROJECT:
CARLISLE BROOK ESTATES
ASSESSOR'S MAP 4, LOT 22
WALKER ROAD
LYMAN, MAINE

TITLE:
POST-DEVELOPMENT SOILS PLAN

SHEET NUMBER:
WS-4

P5590

Section 7

Project Plans

(under separate cover in hard copy)

ALTUS ENGINEERING

THIS DRAWING SET HAS NOT BEEN
RELEASED FOR CONSTRUCTION

CARLISLE BROOK ESTATES

WALKER AND CARLISLE BROOK ROAD
LYMAN, MAINE

Assessor's Map 4, Lot 22

ISSUED FOR PRELIMINARY REVIEW

Plan Issue Date:

MARCH 19, 2025

Owner/Applicant:

CARLISLE BROOK ESTATES, LLC
1000 U.S. ROUTE 1, SUITE 102
YORK, MAINE 03909

Civil Engineer:

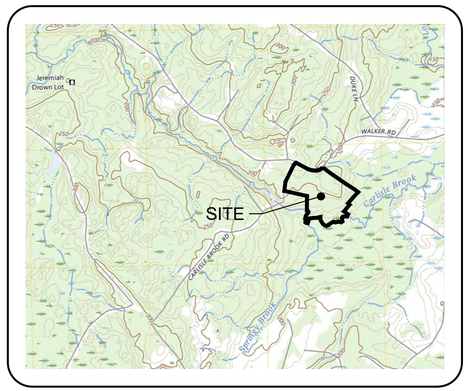
ALTUS ENGINEERING
133 Court Street Portsmouth, NH 03801
(603) 433-2335 www.altus-eng.com

Surveyor:

KIMBALL SURVEY & DESIGN, INC.
30 Frost Hill Road
York, Maine 03909
207-351-0226
Isaiah@Kimballlandsurveying.com
www.Kimballlandsurveying.com
Professional Land Surveying

Soil Scientist:

Mainely Soils, LLC
440 Swamp Road
Durham, Maine 04222
(207) 650-4313

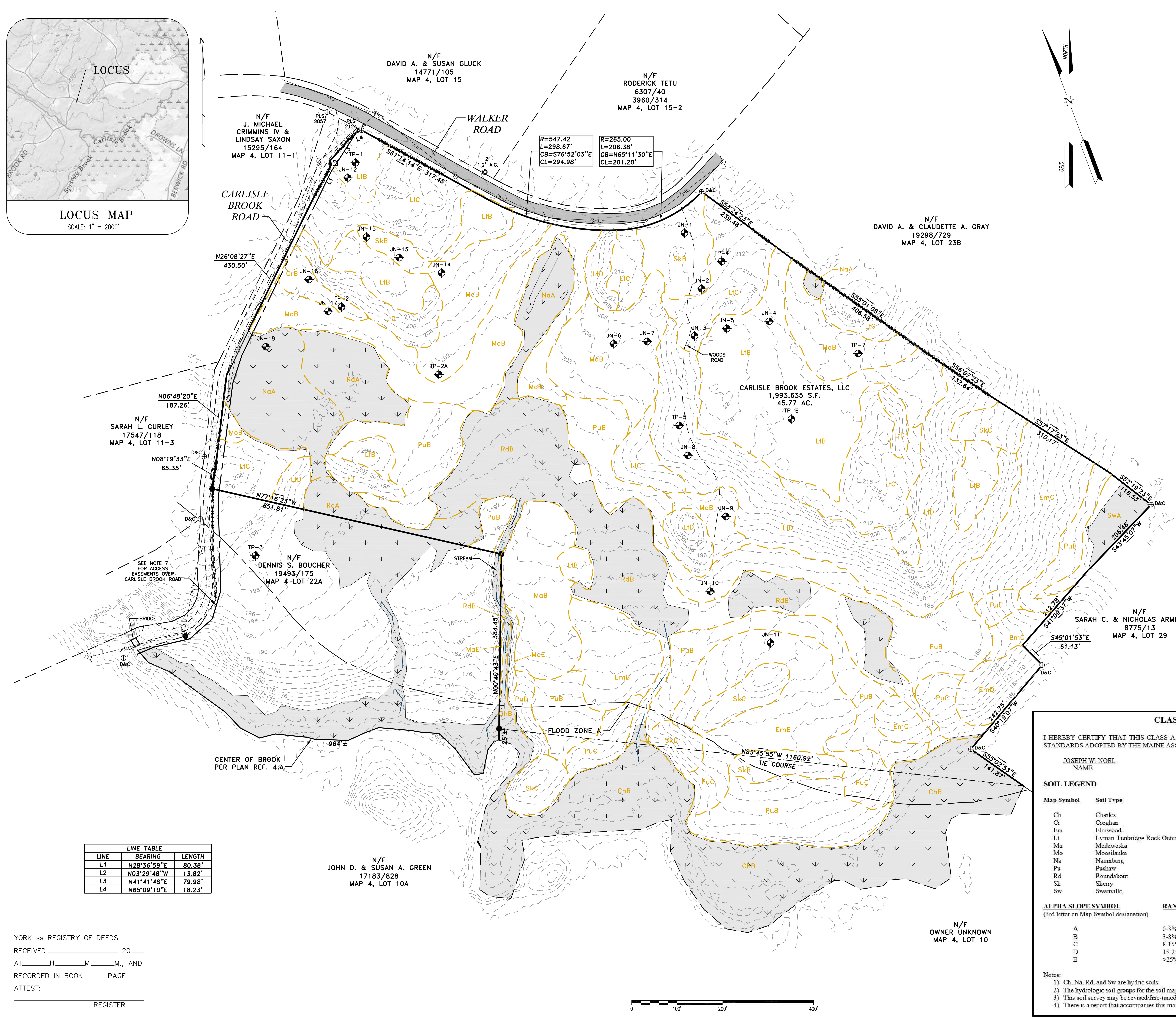


LOCUS 1" = 2,000'

Sheet Index

Permit Summary	Submitted	Received
Lyman Subdivision Approval	03/19/25	–
Maine DEP Notice of Intent	By Contractor 14 days prior to construction	

P5590



LEGEND

- REBAR W/ CAP TO BE SET
- IRON PIPE FOUND (SIZE AS NOTED)
- UTILITY POLE (NUMBER AS NOTED)
- BOUNDARY LINE
- ABUTTER OR RIGHT-OF-WAY LINE
- STREAM
- STONE WALL
- WETLAND
- OHU — OVERHEAD UTILITIES
- 123 — EXISTING LIDAR CONTOUR
- SOIL BOUNDARY
- MaB — SOIL DESIGNATION
- N/F — NOW OR FORMERLY
- 1234/567 — DEED BOOK & PAGE
- A.G. — ABOVE GROUND
- B.G. — BELOW GROUND
- TP-1 — SEPTIC TEST PIT

NOTES

1. THE BASIS OF BEARING FOR THIS SURVEY IS NAD83 MAINE STATE PLANE COORDINATE SYSTEM–WEST ZONE, U.S. SURVEY FEET. VERTICAL DATUM IS NAVD88.
2. DEED AND PLAN BOOK REFERENCES ARE TO THE YORK COUNTY REGISTRY OF DEEDS (YCRD).
3. REFERENCE IS MADE TO THE FOLLOWING DEEDS:
   A. A DEED FROM FERN A. WIRTH, TRUSTEE OF THE FERN A WIRTH 2001 REVOCABLE TRUST AND MORRIS A WIRTH TO CARLISLE BROOK ESTATES, LLC DEEDED APRIL 30, 2024 AND RECORDED IN DEED BOOK 19429, PAGE 773.
4. REFERENCE IS MADE TO THE FOLLOWING PLANS:
   A. "PLAN DEPICTING THE RESULTS OF A BOUNDARY SURVEY MADE FOR MORRIS A WIRTH & FERN ANN WIRTH CARLISLE BROOK ROAD & WALKER ROAD LYMAN, MAINE" BY JAMES D. NADEAU, LLC DATED 08/29/2012 NOT RECORDED.
5. THE PARCEL SURVEYED IS IDENTIFIED ON THE TOWN OF LYMAN ASSESSOR'S MAP 4, LOT 22.
6. THE SUBJECT PARCEL IS LOCATED IN THE GENERAL PURPOSE DISTRICT, STREAM PROTECTION DISTRICT:
   MIN. LOT SIZE = 217,800 S.F.
   MIN. STREET FRONTAGE = 375 FEET
   MIN. FRONT SETBACK = 75 FEET
   MIN. SIDE & REAR SETBACK = 40 FEET
   MIN. SETBACK FROM STREAM = 75 FEET
   MAX. LOT COVERAGE = 20%

   THE DIMENSIONAL REQUIREMENTS SHOWN HEREON ARE TO BE VERIFIED WITH THE CODE OFFICE PRIOR TO DESIGN AND CONSTRUCTION. ADDITIONAL RESTRICTIONS MAY APPLY.
7. REFERENCE IS MADE TO THE FOLLOWING EASEMENTS OF RECORD:
   A. THE LOCUS PARCEL IS BENEFITED BY A 15 FOOT WIDE RIGHT–OF–WAY AS STATED IN DEED BOOK 8378, PAGE 287.
   B. THE LOCUS PARCEL IS BENEFITED BY A 15 FOOT WIDE RIGHT–OF–WAY AS STATED IN DEED BOOK 8378, PAGE 285.
   C. THE LOCUS PARCEL IS SUBJECT TO A 25 FOOT WIDE RIGHT OF–WAY AS STATED IN DEED BOOK 8378, PAGE 282.
8. WETLAND DELINEATION BY MAINELY SOILS, LLC APRIL 2024.
9. EASEMENTS OR OTHER UNWRITTEN RIGHTS MAY EXIST THAT ENCUMBER OR BENEFIT THE PROPERTY NOT SHOWN HEREON.
10. THE EXTERIOR BOUNDARY SHOW HEREON WAS TAKEN FROM THE PLAN REFERENCED IN NOTE 4.A. ABOVE. THE STAMP HEREON IS FOR INTERIOR LOT LINES ONLY. EXCEPTIONS TO THE BOARD OF LICENSURE FOR PROFESSIONAL LAND SURVEYORS STANDARDS ARE AS FOLLOWS:
   A. NO SURVEY REPORT WAS PREPARED.
   B. NO REVISED LEGAL DESCRIPTION PREPARED
   C. MONUMENTS WERE NOT SET AT ALL ANGLE POINTS

LINE TABLE

LINE	BEARING	LENGTH
L1	N28°36'59"E	80.38'
L2	N03°29'48"W	13.82'
L3	N41°41'48"E	79.98'
L4	N65°09'10"E	18.23'

YORK ss REGISTRY OF DEEDS
RECEIVED ______________ 20 ___
AT ______H ______M ______M., AND
RECORDED IN BOOK ______ PAGE ______
ATTEST:
____
REGISTER

CLASS A HIGH INTENSITY SOIL SURVEY

I HEREBY CERTIFY THAT THIS CLASS A HIGH INTENSITY SOIL SURVEY WAS CONDUCTED IN CONFORMANCE WITH THE STANDARDS ADOPTED BY THE MAINE ASSOCIATION OF PROFESSIONAL SOIL SCIENTISTS.

NAME	M.L.S.S.	DATE
JOSEPH W. NOEL	#209	JANUARY 15, 2025

SOIL LEGEND

Map Symbol	Soil Type	Drainage Class	Hydrologic Soil Group
Ch	Charles	poorly drained	D
Cr	Croghan	moderately well drained	A
Em	Elmwood	moderately well drained	B
Lt	Lyman-Tunbridge-Rock Outcrop Complex	somewhat excessively drained to well drained	D
Ma	Madawaska	moderately well drained	B
Mo	Moosilauke	somewhat poorly drained	D
Na	Naumburg	poorly drained	D
Pu	Pushaw	somewhat poorly drained	D
Rd	Roundabout	poorly drained	D
Sk	Skerry	moderately well drained	D
Sw	Swanville	poorly drained	D

ALPHA SLOPE SYMBOL (3rd letter on Map Symbol designation)	RANGE
A	0-3%
B	3-8%
C	8-15%
D	15-25%
E	>25%

Notes:
1) Ch, Na, Rd, and Sw are hydric soils.
2) The hydrologic soil groups for the soil map are taken from the NRCS Web Soil Survey.
3) This soil survey may be revised/fine-tuned if additional test pits are conducted.
4) There is a report that accompanies this map. Please refer to the report for additional soil information and test pit logs.

NO.	DATE	BY:	DESCRIPTION

REVISION

STATE OF MAINE — ISAIAH F. PLANTE — PROFESSIONAL LAND SURVEYOR

STATE OF MAINE — JOSEPH W. NOEL #209 — LICENSED SOIL SCIENTIST

KIMBALL SURVEY & DESIGN, INC.
30 Frost Hill Road
York, Maine 03909
207-351-0226
isaiah@kimballsurveying.com
www.kimballlandsurveying.com
Professional Land Surveying

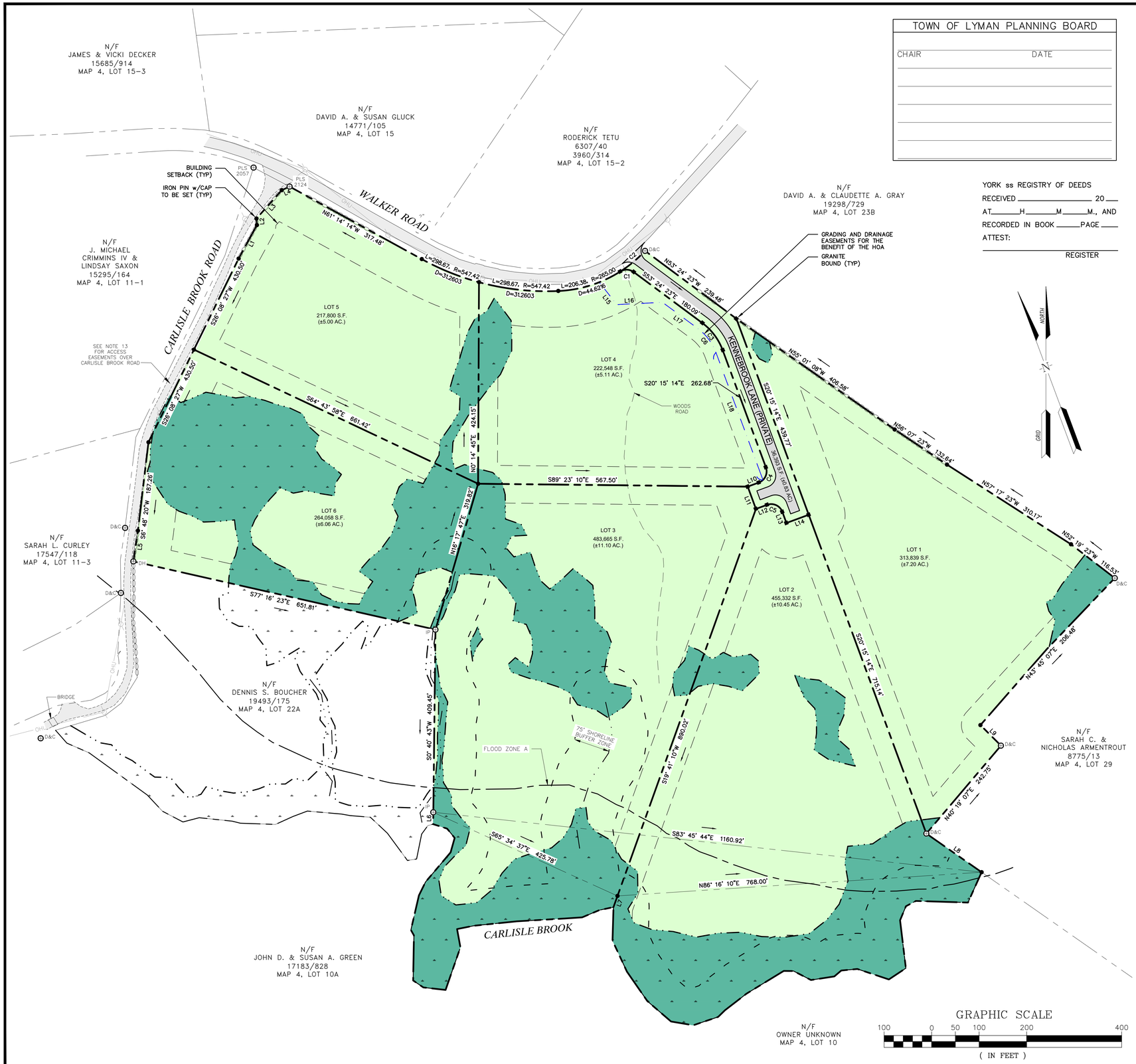
Owner of Record:
Carlisle Brook Estates, LLC
1000 U.S. Route 1, Suite 102
York, ME 03909

Existing Conditions Plan & High Intensity Soil Survey

Map 4, Lot 22
Walker Road
Lyman, Maine

DATE: JANUARY 15, 2025
PROJECT NO. 2534
SCALE: 1" = 100'
CAD FILE: 2534.dwg

SHEET 1 OF 1



TOWN OF LYMAN PLANNING BOARD

CHAIR DATE

YORK ss REGISTRY OF DEEDS

RECEIVED _____ 20___

AT_____H_____M_____M., AND

RECORDED IN BOOK _____PAGE ____

ATTEST:

_____

REGISTER

SUBDIVISION NOTES

1. DESIGN INTENT – THIS PLAN SET IS INTENDED TO DEPICT THE SUBDIVISION OF THE SITE INTO RESIDENTIAL LOTS.
2. THE PARCEL IS IDENTIFIED ON THE ON THE TOWN OF LYMAN ASSESSOR'S MAP 4, LOT 22.
3. LOT AREA: 1,993,635 S.F. (±45.77 AC.)
4. DEED REFERENCE: YCRD BOOK 19429 PAGE 773
5. ZONE: GENERAL PURPOSE (GP)
6. DIMENSIONAL REQUIREMENTS:

MIN. LOT AREA:	217,800 S.F. (5 ACRES)
MIN. STREET FRONTAGE:	375'
FRONT SETBACK:	75'
SIDE SETBACK:	40'
REAR SETBACK:	40'
MAX. BUILDING HEIGHT:	35'
MAX. LOT COVERAGE:	20%

7. BACK LOTS MUST MEET THE DIMENSIONAL REQUIREMENTS ABOVE WITH EXCEPTION TO STREET FRONTAGE.
8. THE BASIS OF BEARING FOR THIS SURVEY IS NAD83 MAINE STATE PLANE COORDINATE SYSTEM–WEST ZONE, U.S. SURVEY FEET.
9. ELEVATION AND CONTOURS ARE BASED ON NAVD88 DATUM.
10. DEED AND PLAN BOOK REFERENCES ARE TO THE YORK COUNTY OF DEEDS (YCRD).
11. DEED REFERENCE: A DEED FROM FERN A. WIRTH, TRUSTEE OF THE FERN A WIRTH 2001 REVOCABLE TRUST AND MORRIS A. WIRTH TO CARLISLE BROOK ESTATES, LLC DEEDED APRIL 30, 2024 AND RECORDED IN DEED BOOK 19429, PAGE 773.
12. PLAN REFERENCE: "PLAN DEPICTING THE RESULTS OF A BOUNDARY SURVEY MADE FOR MORRIS A. WIRTH & FERN ANN WIRTH CARLISLE BROOK ROAD & WALKER ROAD LYMAN, MAINE" BY JAMES D. NADEAU LLC DATED 08/29/2012 NOT RECORDED.
13. EASEMENTS OF RECORD REFERENCES:
    A. THE LOCUS PARCEL IS BENEFITTED BY A 15 FOOT WIDE RIGHT–OF–WAY AS STATED IN THE DEED BOOK 8378, PAGE 287.
    B. THE LOCUS PARCEL IS BENEFITTED BY A 15 FOOT WIDE RIGHT–OF–WAY AS STATED IN DEED BOOK 8378, PAGE 285.
    C. THE LOCUS PARCEL IS SUBJECT TO A 25 FOOT WIDE RIGHT–OF–WAY AS STATED IN DEED BOOK 8378, PAGE 282.
14. EASEMENTS OR OTHER UNWRITTEN RIGHTS MAY EXIST THAT ENCUMBER OR BENEFIT THE PROPERTY NOT SHOWN HEREON.
15. THE BOUNDARY SHOWN HEREON IS THE OPINION OF THIS SURVEYOR BASED ON THE INFORMATION DISCOVERED DURING THE PERIOD OF WORK AND MAY BE SUBJECT TO CHANGE IF ADDITIONAL INFORMATION BECOMES AVAILABLE.
16. EXISTING CONDITIONS SURVEY DATA SHOWN HERE WAS OBTAINED FROM "EXISTING CONDITIONS PLAN" SHEET 1 OF 1 DATED AUGUST 28, 2024 AS PREPARED BY KIMBALL SURVEY AND DESIGN, INC.
17. EXCEPTIONS TO THE BOARD OF LICENSURE FOR PROFESSIONAL LAND SURVEYORS ARE AS FOLLOWS:
    A. NO SURVEY REPORT WAS PREPARED.
    B. NO REVISED LEGAL DESCRIPTION PREPARED.
    C. MONUMENTS WERE NOT SET AT ALL ANGLE POINTS.
18. WETLANDS WERE DELINEATED BY MAINELY SOILS, LLC IN APRIL AND JULY. HIGH INTENSITY SOIL SURVEY (HISS) COMPLETED IN DECEMBER 2024 AND JANUARY 2025.
19. WETLANDS WERE DELINEATED BY MAINELY SOILS, LLC IN APRIL AND JULY. HIGH INTENSITY SOIL SURVEY (HISS) COMPLETED IN DECEMBER 2024 AND JANUARY 2025.
20. THE CONTRACTOR SHALL VERIFY ALL BENCHMARKS AND TOPOGRAPHY IN THE FIELD PRIOR TO CONSTRUCTION.
21. AREA OF DISTURBANCE OVER 43,560 SF, COVERAGE UNDER MAINE DEP NPDES PHASE II CONSTRUCTION GENERAL PERMIT REQUIRED (NOI TO BE PREPARED AND SUBMITTED BY CONTRACTOR, SWPPP AND INSPECTIONS TO BE PREPARED AND PERFORMED BY CONTRACTOR).
22. ALL CONSTRUCTION SHALL MEET THE MINIMUM STANDARDS OF THE TOWN OF LYMAN & MDOT'S STANDARD SPECIFICATION FOR ROAD & BRIDGE CONSTRUCTION, LATEST EDITIONS. THE MORE STRINGENT SPECIFICATION SHALL GOVERN.
23. ALL BONDS AND FEES SHALL BE PAID/POSTED PRIOR TO INITIATING CONSTRUCTION.
24. ALL ROADS IN THIS SUBDIVISION SHALL REMAIN PRIVATE ROADS TO BE MAINTAINED BY THE DEVELOPER OR THE LOT OWNERS AND SHALL NOT BE ACCEPTED OR MAINTAINED BY THE TOWN.
25. THE TOWN OF LYMAN SHALL NOT BE RESPONSIBLE FOR THE CONSTRUCTION, PLOWING, MAINTENANCE, OR REPAIR OF THIS PRIVATE WAY.

LINE TABLE

LINE	BEARING	LENGTH
L1	S28°36'59"W	80.38'
L2	S03°29'48"E	13.82'
L3	S41°41'48"W	79.98'
L4	S65°09'10"W	18.23'
L5	S08°19'33"W	65.35'
L6	N00°40'43"E	25.06'
L7	S19°41'10"W	25.00'
L8	N55°02'53"W	141.87'
L9	N45°01'53"W	61.13'
L10	S69°44'46"W	25.00'
L11	S20°15'14"E	50.00'
L12	N69°44'46"E	25.00'
L13	S20°15'14"E	25.00'
L14	N69°44'46"E	50.00'
L15	S38°07'22"E	59.81'
L16	N87°08'40"E	96.33'
L17	S53°24'23"E	93.38'
L18	S20°15'14"E	285.59'

CURVE TABLE

CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD LENGTH
C1	25.00'	30.10'	N87°53'47"W	28.31'
C2	265.00'	68.11'	S50°14'50"W	67.95'
C3	125.00'	72.33'	N36°49'49"W	71.32'
C4	25.00'	39.27'	S24°44'46"W	35.36'
C5	25.00'	39.27'	S65°15'14"E	35.36'
C6	110.00'	63.65'	S36°49'49"E	62.76'

LEGEND

- PROPERTY LINE
- BUILDING SETBACK
- EASEMENT
- WETLAND
- STREAM
- OPEN WATER
- MONUMENT AS DESCRIBED

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

STATE OF MAINE
ERIC D. WEINRIEB
No. 8656
LICENSED
PROFESSIONAL ENGINEER
3/18/25

NOT FOR CONSTRUCTION

ISSUED FOR:
PRELIMINARY REVIEW

ISSUE DATE:
MARCH 19, 2025

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	SKETCH	EBS	09/05/24
1	PRELIMINARY	PMJ	03/19/25

DRAWN BY: EBS
APPROVED BY: EBS
DRAWING FILE: 5590-SITE.dwg

SCALE:
24" x 36" - 1" = 100'
11" x 17" - 1" = NTS

OWNER:
CARLISLE BROOK ESTATES, LLC
1000 U.S. ROUTE 1, SUITE 102
YORK, MAINE 03909

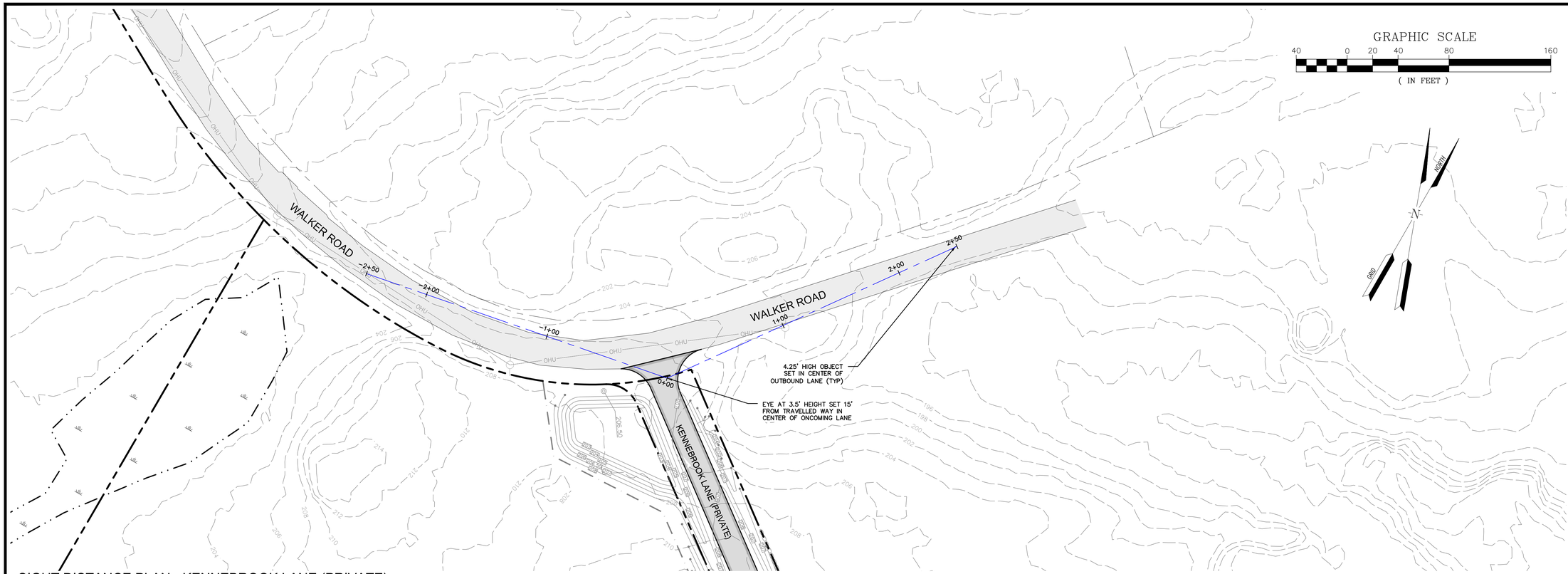
APPLICANT:
CARLISLE BROOK ESTATES, LLC
1000 U.S. ROUTE 1, SUITE 102
YORK, MAINE 03909

PROJECT:
CARLISLE BROOK ESTATES
ASSESSOR'S MAP 4, LOT 22
WALKER ROAD
LYMAN, MAINE

TITLE:
SUBDIVISION PLAN

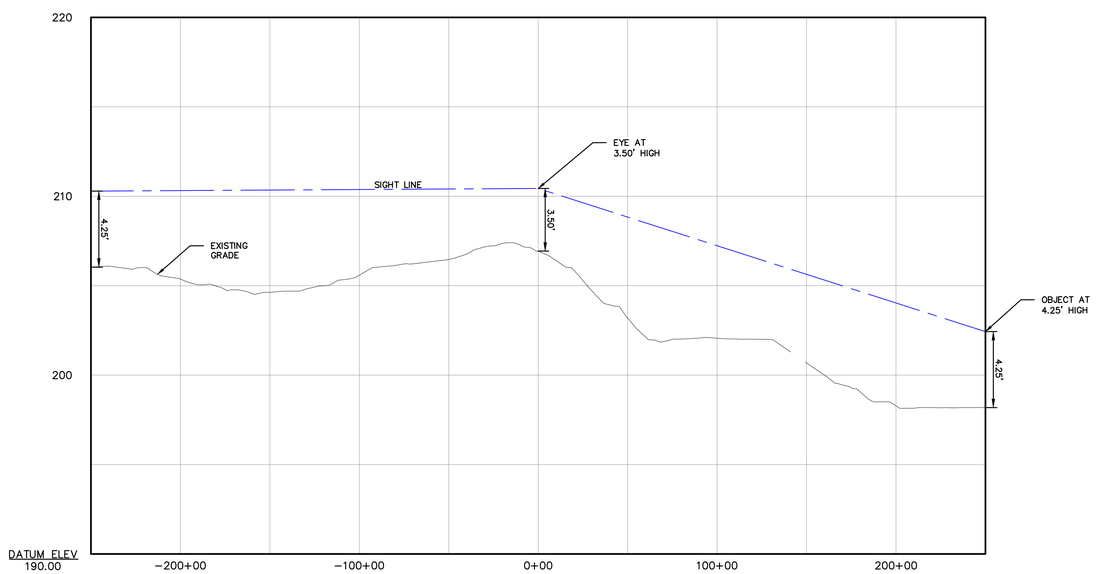
SHEET NUMBER:
C-1

P5590



SIGHT DISTANCE PLAN - KENNEBROOK LANE (PRIVATE)

SCALE: 1"=40'



SIGHT LINE PROFILE LOOKING LEFT SIGHT LINE PROFILE LOOKING RIGHT

GRAPHIC SCALE
(IN FEET)
1 inch = 40 feet Horiz.
1 inch = 4 feet Vert.
0 40 80
8 4 0

SIGHT DISTANCE PROFILE - KENNEBROOK LANE (PRIVATE)

SCALE: 1"=40' H, 1"=4' V

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STATE OF MAINE
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OWNER:
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1000 U.S. ROUTE 1, SUITE 102
YORK, MAINE 03909

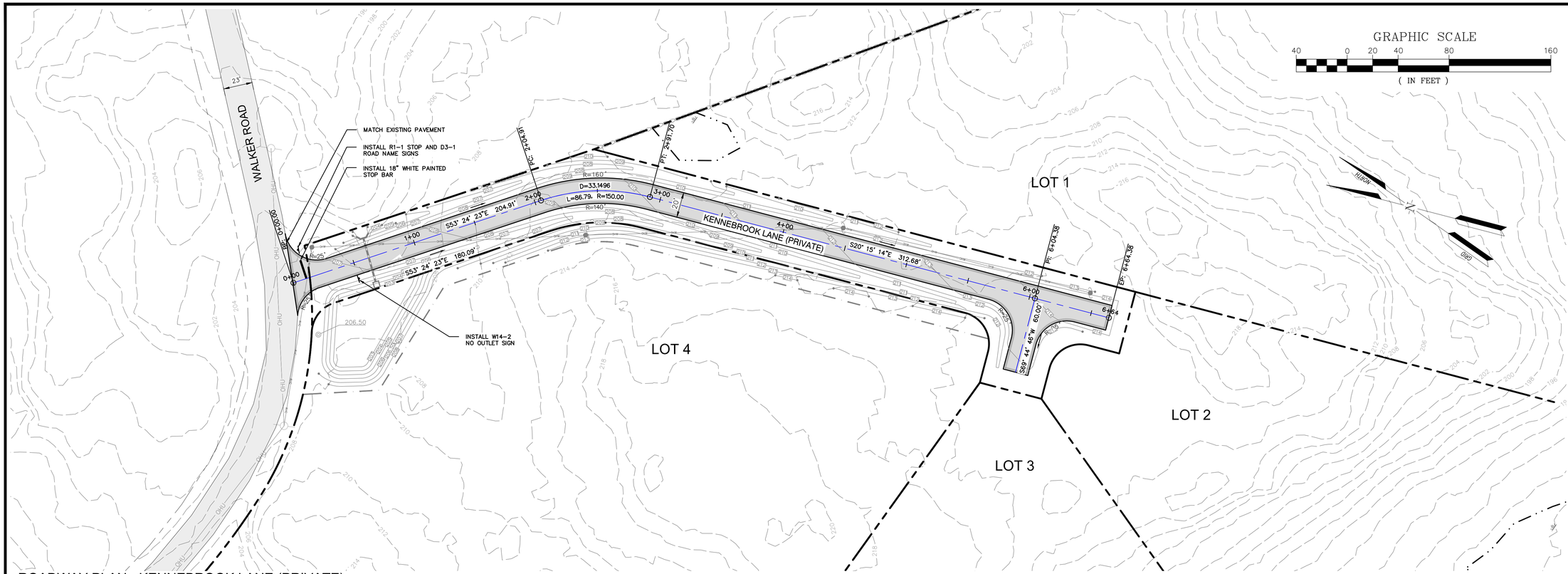
APPLICANT:
CARLISLE BROOK ESTATES, LLC
1000 U.S. ROUTE 1, SUITE 102
YORK, MAINE 03909

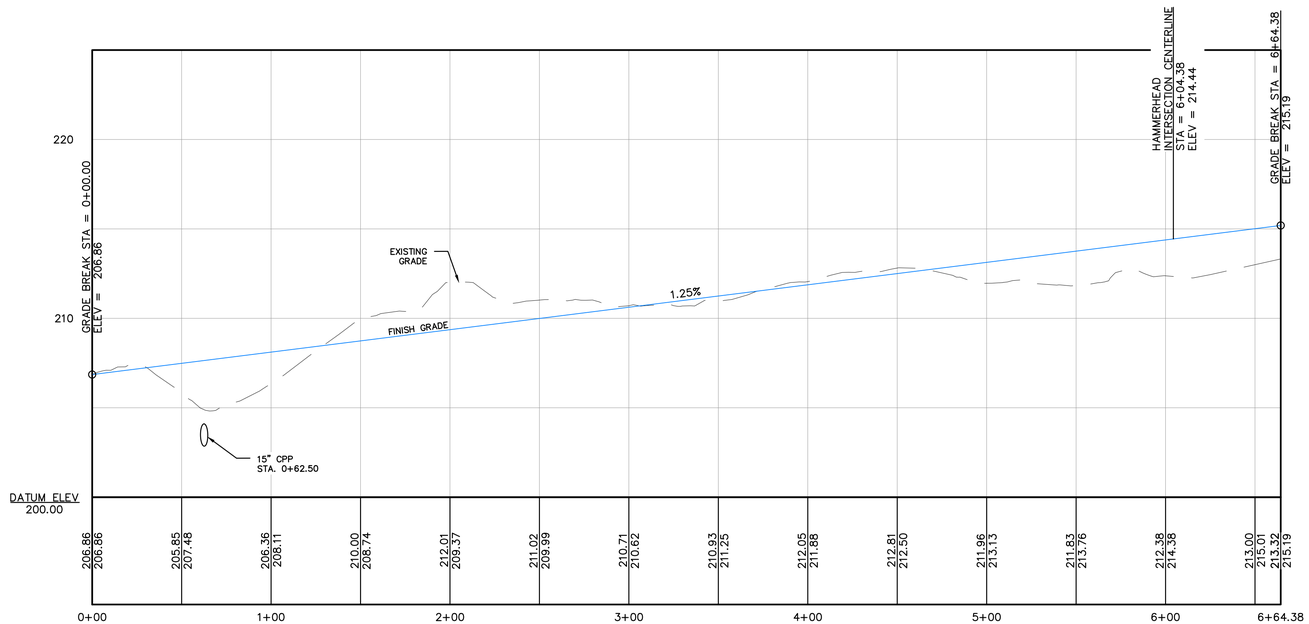
PROJECT:
CARLISLE BROOK ESTATES
ASSESSOR'S MAP 4, LOT 22
WALKER ROAD
LYMAN, MAINE

TITLE:
ROADWAY ACCESS PLAN

SHEET NUMBER:
C-2

P5590





ROADWAY PROFILE - KENNEBROOK LANE (PRIVATE)

SCALE: 1"=40' H, 1"=4' V

GRAPHIC SCALE
(IN FEET)
1 inch = 40 feet Horiz.
1 inch = 4 feet Vert.
0 40 80
8 4 0

TOWN OF LYMAN PLANNING BOARD

CHAIR DATE

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

STATE OF MAINE
ERIC D. WEINRIEB
No. 8858
LICENSED
PROFESSIONAL ENGINEER
3/18/25

NOT FOR CONSTRUCTION

ISSUED FOR:
PRELIMINARY REVIEW

ISSUE DATE:
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OWNER:
CARLISLE BROOK ESTATES, LLC
1000 U.S. ROUTE 1, SUITE 102
YORK, MAINE 03909

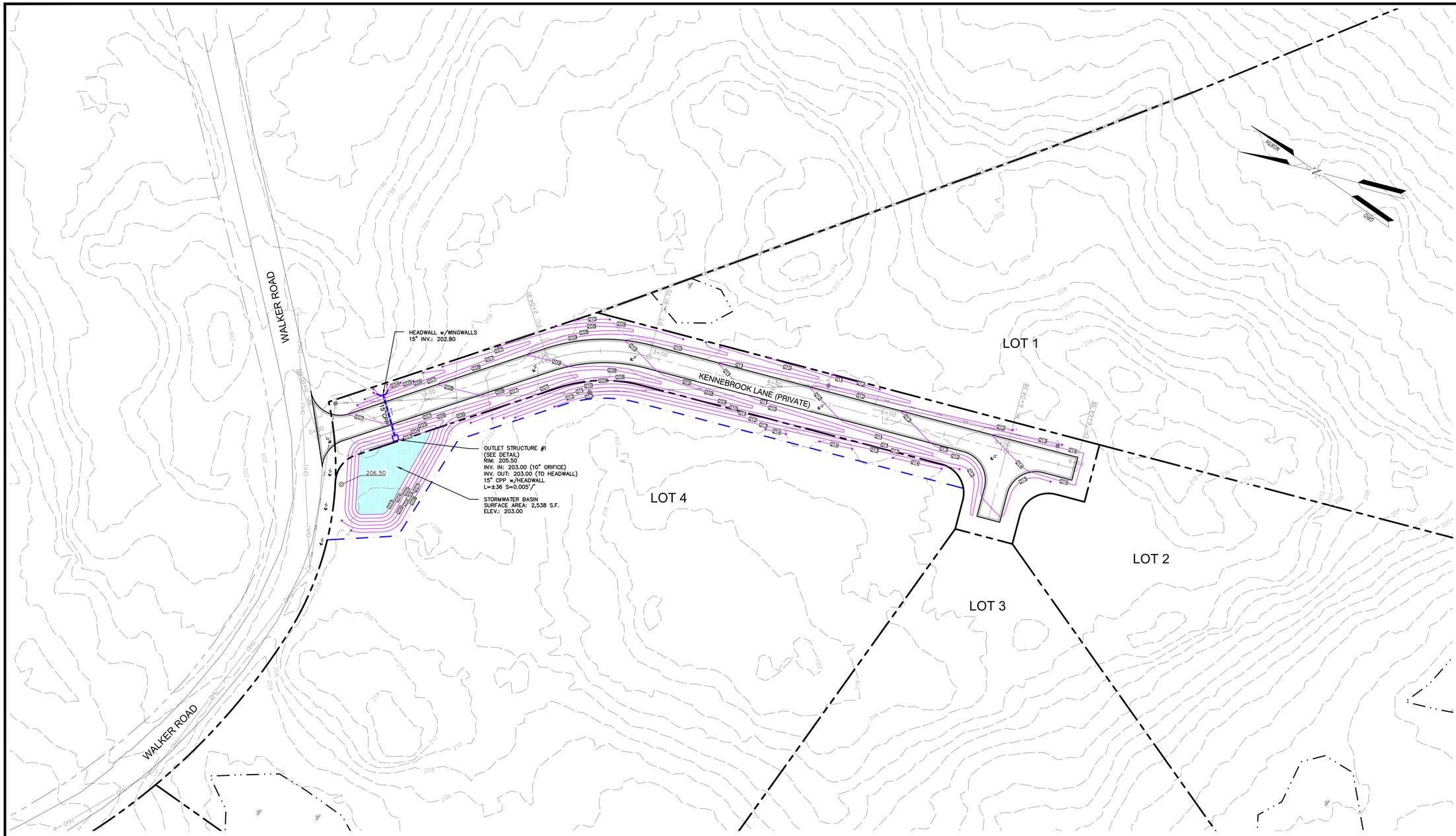
APPLICANT:
CARLISLE BROOK ESTATES, LLC
1000 U.S. ROUTE 1, SUITE 102
YORK, MAINE 03909

PROJECT:
CARLISLE BROOK ESTATES
ASSESSOR'S MAP 4, LOT 22
WALKER ROAD
LYMAN, MAINE

TITLE:
ROADWAY PLAN AND PROFILE

SHEET NUMBER:
C-3

P5590



STORMWATER MANAGEMENT NOTES

1. DO NOT BEGIN CONSTRUCTION UNTIL ALL STATE AND LOCAL PERMITS HAVE BEEN APPLIED FOR AND RECEIVED.
2. CONTRACTOR SHALL READ AND FOLLOW ALL CONDITIONS OF APPROVAL IN THE SITE'S LOCAL, STATE AND FEDERAL PERMITS.
3. ALL BONDS AND FEES SHALL BE PAID/POSTED PRIOR TO INITIATING CONSTRUCTION.
4. CONTRACTOR SHALL OBTAIN A "DIGSAFE" NUMBER AT LEAST 72 HOURS PRIOR TO COMMENCING CONSTRUCTION.
5. ALL BENCHMARKS AND TOPOGRAPHY SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO INITIATING CONSTRUCTION.
6. UNLESS OTHERWISE AGREED IN WRITING, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING TEMPORARY BENCHMARKS (TBMS) AND PERFORMING ALL CONSTRUCTION SURVEY LAYOUT.
7. PRIOR TO CONSTRUCTION, FIELD VERIFY JUNCTIONS, LOCATIONS AND ELEVATIONS/INVERTS OF ALL EXISTING STORMWATER AND UTILITY LINES. PRESERVE AND PROTECT LINES TO BE RETAINED.
8. ALL CONSTRUCTION SHALL MEET THE TOWN OF LYMAN & MAINEDOT MINIMUM STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION, LATEST EDITIONS. THE MORE STRINGENT SPECIFICATION SHALL GOVERN,
9. AREA OF DISTURBANCE FOR ROADWAY CONSTRUCTION: ±45,812 S.F. (1.05 AC.).
10. PROPOSED IMPERVIOUS AREA FOR ROADWAY CONSTRUCTION: ±14,843 S.F. (0.34 AC.).
11. ROCK AND LEDGE SHALL BE REMOVED FROM THE ROADWAY TO AT LEAST 2' BELOW FINISH GRADE.
12. IN ORDER TO PROVIDE VISUAL CLARITY ON THE PLANS, DRAINAGE AND OTHER UTILITY STRUCTURES MAY NOT BE DRAWN TO SCALE. SYMBOLS MAY NOT BE INDICATIVE OF THE CENTER OF A STRUCTURE, PARTICULARLY WHEN SHOWN ADJACENT TO A CURB LINE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER SIZING AND LOCATION OF ALL STRUCTURES AND IS DIRECTED TO RESOLVE ANY POTENTIAL DISCREPANCY WITH THE ENGINEER PRIOR TO CONSTRUCTION.
13. IF SUITABLE, EXCAVATED MATERIALS SHALL BE PLACED AS FILL WITHIN UPLAND AREAS ONLY AND SHALL NOT BE PLACED WITHIN WETLANDS. PLACEMENT OF BORROW MATERIALS SHALL BE IN A MANNER THAT PREVENTS LONG TERM DIFFERENTIAL SETTLEMENT. EXCESSIVELY WET MATERIALS SHALL BE STOCKPILED AND ALLOWED TO DRAIN BEFORE PLACEMENT. FROZEN MATERIAL SHALL NOT BE USED FOR CONSTRUCTION.
14. PROTECTION OF SUBGRADE: THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN STABLE, DEWATERED SUBGRADES FOR FOUNDATIONS, PAVEMENT AREAS, UTILITY TRENCHES, AND OTHER AREAS DURING CONSTRUCTION. SUBGRADE DISTURBANCE MAY BE INFLUENCED BY EXCAVATION METHODS, MOISTURE, PRECIPITATION, GROUNDWATER CONTROL, AND CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO PREVENT SUBGRADE DISTURBANCE. SUCH PRECAUTIONS MAY INCLUDE DIVERTING STORMWATER RUNOFF AWAY FROM CONSTRUCTION AREAS, REDUCING TRAFFIC IN SENSITIVE AREAS, AND MAINTAINING AN EFFECTIVE DEWATERING PROGRAM. SOILS EXHIBITING HEAVING OR INSTABILITY SHALL BE OVER EXCAVATED TO MORE COMPETENT BEARING SOIL AND REPLACED WITH FREE DRAINING STRUCTURAL FILL. IF THE EARTHWORK IS PERFORMED DURING FREEZING WEATHER, EXPOSED SUBGRADES ARE SUSCEPTIBLE TO FROST. NO FILL OR UTILITIES SHALL BE PLACED ON FROZEN GROUND. THIS WILL LIKELY REQUIRE REMOVAL OF A FROZEN SOIL CRUST AT THE COMMENCEMENT OF EACH DAY'S OPERATIONS. THE FINAL SUBGRADE ELEVATION WOULD ALSO REQUIRE AN APPROPRIATE DEGREE OF INSULATION AGAINST FREEZING.
15. ALL DRAINAGE PIPE SHALL BE CORRUGATED POLYETHYLENE PIPE ("CPP", TYPE ADS N-12, HANCOR H1-Q OR APPROVED EQUAL).
16. 12" CPP CULVERTS SHALL BE INSTALLED AT ALL DRIVEWAY ENTRANCES WHERE CROSSING A SWALE.
17. ALL FLARED END SECTION (FES) SHALL BE METAL OR CONCRETE. HDPE END SECTIONS SHALL NOT BE ACCEPTED.
18. ALL DRIVEWAYS SHALL BE CONSTRUCTED SO AS TO SLOPE AWAY FROM THE PUBLIC WAY AT 2% FOR A MINIMUM OF 10' OR TO THE LIMITS OF THE RIGHT OF WAY, WHICHEVER IS GREATER.
19. ALL HOUSES CONSTRUCTED IN THE DEVELOPMENT SHALL BE EQUIPPED WITH STONE DRIP STRIPS WHERE APPROPRIATE. ALL GUTTER DOWNSPOUTS SHALL BE DIRECTED TO THE NEAREST DRIP STRIP.
20. IN THE EVENT THAT BLASTING IS REQUIRED FOR ROAD, DRAINAGE OR UTILITY CONSTRUCTION, A BLASTING PLAN AND PRE-BLAST SURVEY SHALL BE PREPARED BY A PROFESSIONAL BLASTING COMPANY AND SUBMITTED TO THE LYMAN CODE ENFORCEMENT OFFICER AT LEAST TWO WEEKS PRIOR TO ANY BLASTING ACTIVITIES.
21. SEE DETAIL SHEETS FOR EROSION AND SEDIMENT CONTROL MEASURES.
22. SEE DETAIL SHEETS FOR LEGEND.

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)

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

STATE OF MAINE
ERIC D. WEINREB
No. 8656
LICENSED
PROFESSIONAL ENGINEER
3/18/25

NOT FOR CONSTRUCTION

ISSUED FOR:
PRELIMINARY REVIEW

ISSUE DATE:
MARCH 19, 2025

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	PRELIMINARY	PMJ	03/19/25

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APPROVED BY: EBS
DRAWING FILE: 5590-SITE.dwg

SCALE:
24" x 36" - 1" = 40'
11" x 17" - 1" = NTS

OWNER:
CARLISLE BROOK ESTATES, LLC
1000 U.S. ROUTE 1, SUITE 102
YORK, MAINE 03909

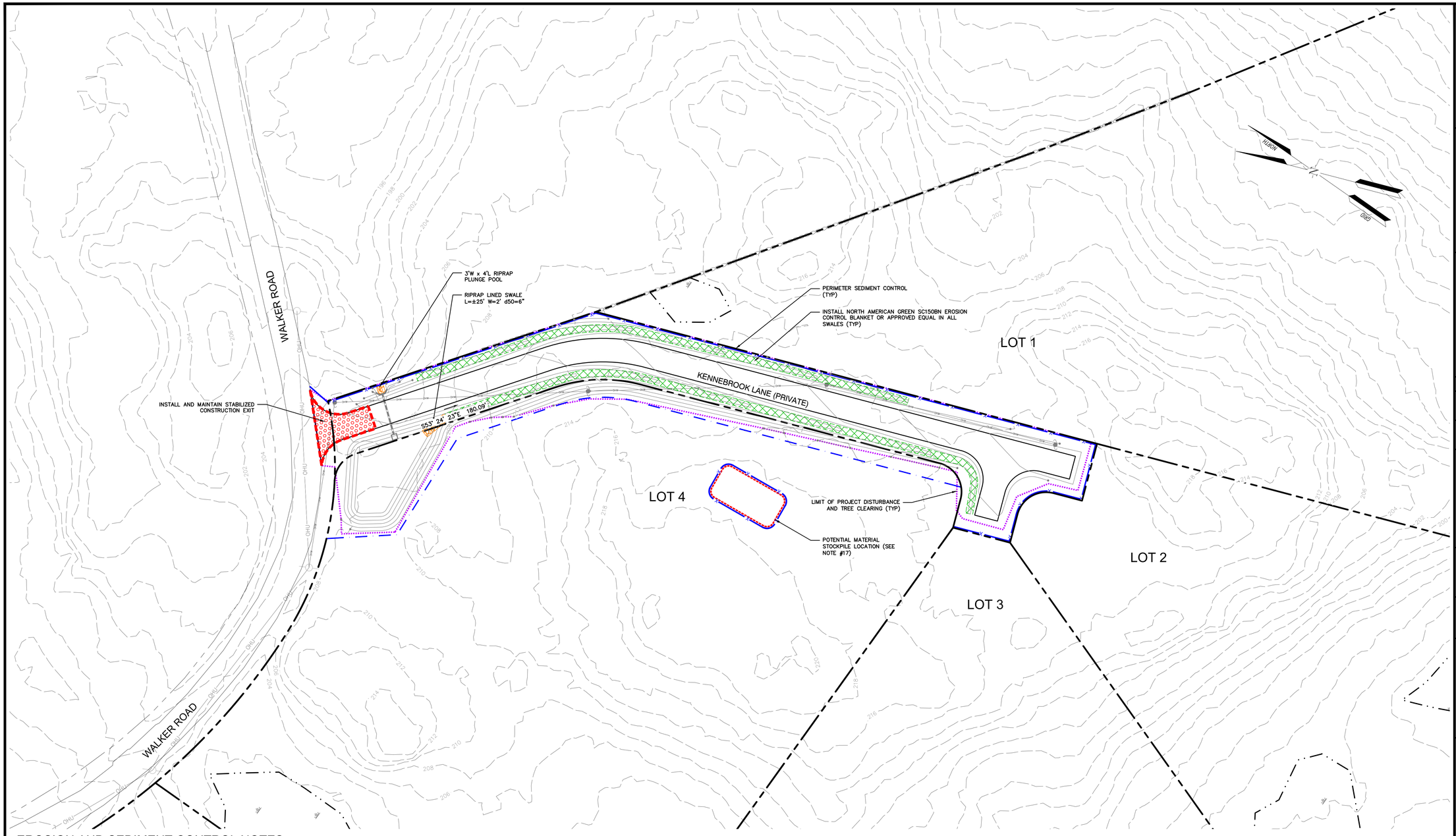
APPLICANT:
CARLISLE BROOK ESTATES, LLC
1000 U.S. ROUTE 1, SUITE 102
YORK, MAINE 03909

PROJECT:
CARLISLE BROOK ESTATES
ASSESSOR'S MAP 4, LOT 22
WALKER ROAD
LYMAN, MAINE

TITLE:
STORMWATER MANAGEMENT PLAN

SHEET NUMBER:
C-4

P5590



EROSION AND SEDIMENT CONTROL NOTES

1. PROJECT SUBJECT TO DEP NPDES PHASE II. NOI, SWPPP AND MINIMUM WEEKLY INSPECTIONS REQUIRED. NOI TO BE PREPARED AND SUBMITTED BY CONTRACTOR, SWPPP AND INSPECTIONS TO BE PREPARED AND PERFORMED BY CONTRACTOR. CONTRACTOR SHALL FILE NOI WITH DEP A MINIMUM OF 2 WEEKS PRIOR TO CONSTRUCTION.
2. PERIMETER SEDIMENT CONTROLS AND CULVERT AND CATCH BASIN INLET PROTECTION MEASURES SHALL BE INSTALLED AFTER TREE CLEARING OPERATIONS HAVE CEASED AND BEFORE ANY STUMPING, GRUBBING OR OTHER EARTH DISTURBANCE.
3. GRIND STUMPS AND REUSE GRINDINGS FOR EROSION CONTROL WHERE POSSIBLE OR TRUCK OFFSITE. NO STUMPS SHALL BE BURIED ON SITE OR LEFT AT ANY DEPTH BELOW ROADWAY OR PARKING LOT SURFACES.
4. NO EARTHWORK SHALL COMMENCE UNTIL ALL APPROPRIATE SEDIMENT AND EROSION CONTROL MEASURES HAVE BEEN INSTALLED. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE PROPERLY MAINTAINED IN GOOD WORKING ORDER FOR THE DURATION OF CONSTRUCTION AND THE SITE IS STABILIZED.
5. SEE DETAIL SHEETS FOR PERTINENT SEDIMENT AND EROSION CONTROL DETAILS AND ADDITIONAL NOTES.
6. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH THE DESIGN STANDARDS AND SPECIFICATIONS SET FORTH BY THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION.
7. THE CONTRACTOR SHALL TAKE WHATEVER MEANS NECESSARY TO PREVENT EROSION, PREVENT SEDIMENT FROM LEAVING THE SITE AND/OR ENTERING WETLANDS AND ENSURE PERMANENT SOIL STABILIZATION.
8. TEMPORARY INLET PROTECTION MEASURES SHALL BE INSTALLED AT ALL CULVERT ENTRANCES WHEN SITE WORK WITHIN CONTRIBUTING AREAS IS ACTIVE OR SAID AREAS HAVE NOT BEEN STABILIZED.
9. ALL EROSION CONTROL BLANKETS AND FASTENERS SHALL BE BIDEGRADEABLE.
10. ALL EROSION CONTROL BLANKETS SHALL BE BY NORTH AMERICAN GREEN OR EQUAL AS APPROVED IN WRITING BY THE ENGINEER.
11. ALL SWALES, STORMWATER PONDS AND THEIR CONTRIBUTING AREAS SHALL BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
12. ALL DISTURBED AREAS NOT TO BE PAVED OR OTHERWISE TREATED SHALL RECEIVE SIX (6") INCHES OF LOAM, LIMESTONE, FERTILIZER, SEED, AND HAY MULCH OR EROSION CONTROL BLANKET USING APPROPRIATE SOIL STABILIZATION TECHNIQUES. SEE DETAILS FOR ADDITIONAL INFORMATION.
13. UPON COMPLETION OF CONSTRUCTION, ALL DRAINAGE INFRASTRUCTURE SHALL BE CLEANED OF ALL DEBRIS AND SEDIMENT.
14. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED AFTER FINAL SITE STABILIZATION. TRAPPED SEDIMENT AND OTHER DISTURBED SOIL AREAS RESULTING FROM THE REMOVAL OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED WITHIN 30 DAYS.
15. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT DUST FROM LEAVING THE SITE. THIS SHALL INCLUDE BUT NOT BE LIMITED TO THE PROACTIVE MANAGEMENT OF STOCKPILES, MATERIALS PROCESSING ACTIVITIES, VEHICULAR TRAFFIC, THE EXCAVATION AND PLACEMENT OF EARTH MATERIALS, SPRAYING WATER, SWEEPING PAVED SURFACES, PROVIDING TEMPORARY VEGETATION, AND/OR MULCHING EXPOSED AREAS AND STOCKPILES.
16. SILT SOXX SHALL BE INSTALLED AROUND THE INLETS OFF ALL CULVERTS AND THE PERIMETER OF STORMWATER POND BOTTOMS. THESE MEASURES ARE TO REMAIN IN PLACE UNTIL CONTRIBUTING AREAS HAVE BEEN STABILIZED.
17. MATERIAL STOCKPILE LOCATIONS SHOWN ARE CONCEPTUAL. THE CONTRACTOR MAY LOCATE STOCKPILES WHERE NECESSARY PROVIDED THAT SILT SOXX OR OTHER PERIMETER SEDIMENT CONTROLS ARE INSTALLED AT THEIR DOWNSLOPE PERIMETERS.
18. ALL SWALES WITH SLOPES OF 5% OR GREATER SHALL BE STABILIZED WITH RIPRAP PER THE DETAILS. ALL OTHER SWALES SHALL BE STABILIZED WITH NORTH AMERICAN GREEN SC150BN EROSION CONTROL BLANKET.
19. SEE DETAIL SHEETS FOR LEGEND.

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)

ALTUS ENGINEERING
133 Court Street Portsmouth, NH 03801
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STATE OF MAINE ERIC D. WEINREB No. 8656 LICENSED PROFESSIONAL ENGINEER
3/18/25

NOT FOR CONSTRUCTION

ISSUED FOR: PRELIMINARY REVIEW

ISSUE DATE: MARCH 19, 2025

REVISIONS

NO.	DESCRIPTION	BY	DATE
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DRAWN BY: PMJ
APPROVED BY: EBS
DRAWING FILE: 5590-SITE.dwg

SCALE:
24" x 36" - 1" = 40'
11" x 17" - 1" = NTS

OWNER:
CARLISLE BROOK ESTATES, LLC
1000 U.S. ROUTE 1, SUITE 102
YORK, MAINE 03909

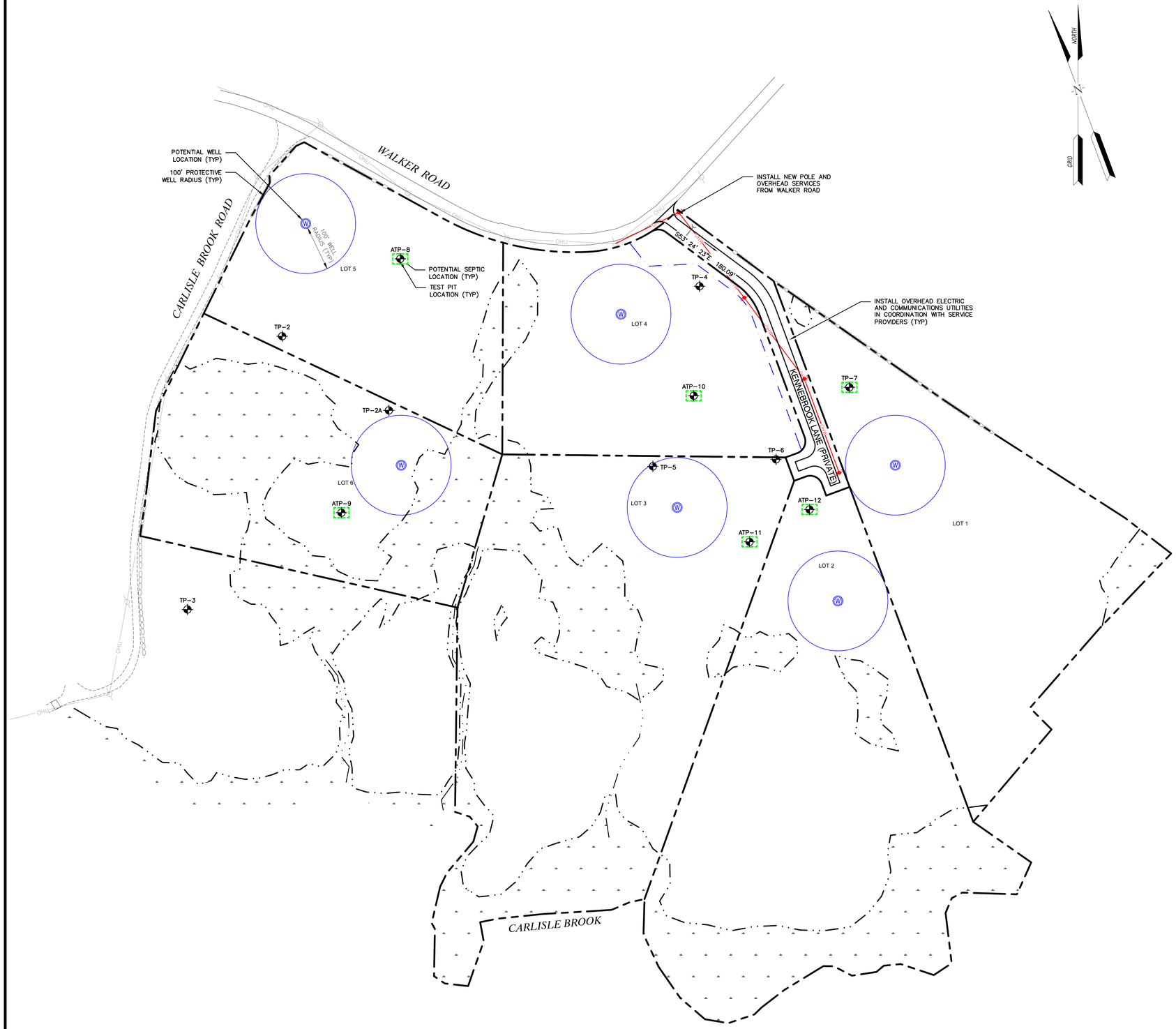
APPLICANT:
CARLISLE BROOK ESTATES, LLC
1000 U.S. ROUTE 1, SUITE 102
YORK, MAINE 03909

PROJECT:
CARLISLE BROOK ESTATES
ASSESSOR'S MAP 4, LOT 22
WALKER ROAD
LYMAN, MAINE

TITLE:
EROSION AND SEDIMENT CONTROL PLAN

SHEET NUMBER:
C-5

P5590



GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)

UTILITY NOTES

1. THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE AND ARE BASED UPON 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, LOCAL 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.
2. 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 NECESSARY, EXISTING UTILITIES SHALL BE RELOCATED AT NO EXTRA COST TO THE OWNER. ALL CONFLICTS SHALL BE RESOLVED WITH THE INVOLVEMENT OF THE ENGINEER, DPW AND APPROPRIATE UTILITY PROVIDERS.
3. ALL CONSTRUCTION SHALL MEET THE MINIMUM CONSTRUCTION STANDARDS OF THE TOWN OF LYMAN AND MDOT STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, LATEST EDITION. THE MORE STRINGENT SPECIFICATION SHALL GOVERN.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE POSTING OF ALL BONDS AND PAYMENT OF ALL TAP, TIE-IN AND CONNECTION FEES.
5. ALL NEW HOUSE LOTS TO BE SERVICED BY INDIVIDUAL PRIVATE WELLS AND SUBSURFACE SANITARY DISPOSAL SYSTEMS. DESIGN, PERMITTING AND INSTALLATION SHALL BE THE RESPONSIBILITY OF THE INDIVIDUAL LOT OWNERS.
6. ALL SEPTIC AND WELL INSTALLATIONS SHALL BE IN COMPLIANCE WITH ALL APPLICABLE STATE AND LOCAL REGULATIONS.
7. SEPTIC SYSTEM LOCATIONS SHOWN ARE SCHEMATIC AND INTENDED FOR PLANNING PURPOSES ONLY. ACTUAL SEPTIC SYSTEM LOCATIONS AND CONFIGURATIONS MAY VARY DEPENDING ON THE DESIGNS FOR INDIVIDUAL LOTS.
8. TEST PITS WERE EVALUATED BY JOSEPH W. NOEL, LSE #209 IN DECEMBER 2024 AND JANUARY 2025.
9. IF REQUIRED, ALL ROAD/LANE CLOSURES OR OTHER TRAFFIC INTERRUPTIONS SHALL BE COORDINATED WITH THE LOCAL POLICE DEPARTMENT, DPW AND ABUTTING PROPERTY OWNERS (WHERE APPROPRIATE) AT LEAST ONE WEEK PRIOR TO COMMENCING RELATED CONSTRUCTION.
10. ALL TRENCHING, PIPE LAYING AND BACKFILLING SHALL CONFORM TO FEDERAL OSHA AND LOCAL REGULATIONS.
11. 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.
12. ALL LOTS SHALL BE SERVICED BY OVERHEAD ELECTRIC AND COMMUNICATIONS SERVICES.
13. DETECTABLE WARNING TAPE SHALL BE PLACED OVER THE ENTIRE LENGTH OF ALL BURIED UTILITIES, COLORS PER THE RESPECTIVE UTILITY PROVIDERS.
14. UTILITY PROVIDERS:
    WATER: PRIVATE WELLS (RESPONSIBILITY OF INDIVIDUAL LOT OWNERS)
    SEWER: PRIVATE SEPTICS (RESPONSIBILITY OF INDIVIDUAL LOT OWNERS)
    CABLE/INTERNET/TELECOMMUNICATIONS: SPECTRUM, (888) 369-2408
    ELECTRIC: CENTRAL MAINE POWER, (800) 565-3181
    GAS: NONE AVAILABLE
15. FINAL UTILITY LOCATIONS TO BE COORDINATED BETWEEN THE CONTRACTOR, APPROPRIATE UTILITY COMPANIES AND DPW. FINAL UTILITY LAYOUTS PREPARED BY UTILITY PROVIDERS SHALL BE SUBMITTED TO THE DPW FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.
16. THE CONTRACTOR SHALL CONFIRM ALL UTILITY LINE AND CONDUIT SIZES WITH SERVICE PROVIDERS PRIOR TO INSTALLATION. ANY DISCREPANCY SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.
17. IF REQUIRED, THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL REQUIRED MANHOLES, PULL BOXES, PEDESTALS, HANDHOLES, TRANSFORMERS, TRANSFORMER PADS, FITTINGS, CONNECTORS, COVER PLATES AND OTHER MISCELLANEOUS ITEMS NOT NECESSARILY DETAILED ON THESE DRAWINGS IN ORDER TO RENDER THE FULL INSTALLATION OF COMPLETE AND OPERATIONAL UTILITY AND DRAINAGE SYSTEMS.
18. WELLS SHALL NOT BE CONSTRUCTED WITHIN 100' OF THE TRAVELED WAY OF ANY STREET IF LOCATED DOWNHILL FROM THE STREET, OR WITHIN 50' OF THE TRAVELED WAY OF ANY STREET IF LOCATED UPHILL OF THE STREET.
19. ALL UNITS IN THIS SUBDIVISION SHALL BE EQUIPPED WITH NFPA-COMPLIANT SPRINKLER SYSTEMS.
20. SEE DETAIL SHEETS FOR LEGEND.

ALTUS ENGINEERING
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STATE OF MAINE
ERIC D. WEINRIEB
No. 6656
LICENSED
PROFESSIONAL ENGINEER
3/18/25

NOT FOR CONSTRUCTION

ISSUED FOR:
PRELIMINARY REVIEW

ISSUE DATE:
MARCH 19, 2025

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	PRELIMINARY	PMJ	03/19/25

DRAWN BY: PMJ
APPROVED BY: EBS
DRAWING FILE: 5590-SITE.dwg

SCALE:
24" x 36" - 1" = 100'
11" x 17" - 1" = NTS

OWNER:
CARLISLE BROOK ESTATES, LLC
1000 U.S. ROUTE 1, SUITE 102
YORK, MAINE 03909

APPLICANT:
CARLISLE BROOK ESTATES, LLC
1000 U.S. ROUTE 1, SUITE 102
YORK, MAINE 03909

PROJECT:
CARLISLE BROOK ESTATES
ASSESSOR'S MAP 4, LOT 22
WALKER ROAD
LYMAN, MAINE

TITLE:
UTILITY PLAN

SHEET NUMBER:
C-6

P5590

EROSION AND SEDIMENT CONTROL NOTES

PROJECT NAME AND LOCATION

CARLISLE BROOK ESTATES
WALKER ROAD
LYMAN, MAINE
ASSESSOR'S MAP 4 LOT 22

LATITUDE: 43°27'21" N
LONGITUDE: 70°38'23" W

OWNER/APPLICANT:

CARLISLE BROOK ESTATES, LLC
1000 U.S. ROUTE 1, SUITE 102
YORK, MAINE 03909

DESCRIPTION

The project consists of the construction of a residential subdivision with a new roadway and associated site improvements.

DISTURBED AREA

The total area to be disturbed for the development is approximately ±45,812 S.F. (1.05 acres). MDEP NPDES Phase II compliance required.

PROJECT PHASING

The proposed road and associated utilities shown in this plan set will be completed in a single phase. Construction of individual house lots to be done separately from road construction at the discretion of the respective lot owners.

NAME OF RECEIVING WATER

The site drains to the Carlisle Brook.

SEQUENCE OF MAJOR ACTIVITIES

1. Pre-construction meeting between owner, contractor, engineer and municipal representatives to be held prior to any construction activity.
2. Cut and remove trees and brush.
3. Install temporary erosion control measures including perimeter controls, stabilized construction entrance 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.
4. Remove stumps. No stumps shall be buried on site.
5. Strip and stockpile loam.
6. Rough grade site including placement of borrow materials.
7. Construct drainage structures, culverts and utilities.
8. Install roadway subgrade.
9. Install base course paving.
10. Loam (6" min) and seed all disturbed areas not paved or otherwise stabilized.
11. Install top course paving.
12. 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.
13. House construction on individual lots will be done by others subsequent to roadway construction.

TEMPORARY EROSION AND SEDIMENT CONTROLS AND STABILIZATION PRACTICES

All work shall be in accordance with state and local permits. Installation or construction of erosion control measures shall conform to the practices described in the "2014 Revision to the 2003 Maine Erosion and Sediment Control Field Guide for Contractors," published by the Maine Department of Environmental Protection.

Minimum erosion control measures will need to be implemented and the contractor will be responsible to maintain all components of the erosion control plan until the site is fully stabilized. However, based on site and weather conditions during construction, additional erosion control measures may need to be implemented. All areas of instability and erosion must be repaired immediately during construction and need to be maintained until the site is fully stabilized or vegetation is established. A construction log must be maintained for the erosion and sedimentation control inspections and maintenance.

As indicated in the sequence of Major Activities, perimeter controls 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 hay bale barriers 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 will be filtered through hay bale barriers, stone check dams, and/or silt fences. All storm drain inlets shall be provided with inlet filters or stone check dams. Stone rip rap shall be provided at the outlets of drain pipes and culverts where shown on the drawings.

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 desired 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 sedimentation measures shall be maintained until permanent vegetation is established.

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

A. GENERAL

1. Perimeter controls shall be installed prior to earth moving operations.
2. The smallest practical portion of the site will be denuded at one time and no more than be mulched in one day. All disturbed areas must be stabilized by temporary measures within 5 days of initial disturbance and stabilized by permanent measures immediately after final grading.
3. Sediment barriers shall be installed downgradient of stockpiles and diversion swales installed upgradient of stockpiles to prevent movement of soil.
4. Built-up sediment shall be removed from silt fence or other barriers when it has reached one-third the height of the tubular barrier or bale, or when "bulges" occur in silt fence.
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. All ditches and swales shall be stabilized prior to directing runoff to them. All diversion dikes will be inspected and any breaches promptly repaired.
9. Temporary water diversion (swales, basins, etc) shall be used as necessary until areas are stabilized.
10. Ponds and swales shall be installed early on in the construction sequence (before rough grading site).
11. All cut and fill slopes shall be seeded/loamed within 72 hours of achieving finished grade.
12. 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 90% vegetated growth as been established;
    c. A minimum of 3 inches of non-erosive material such as stone or riprap has been installed; or
    d. Erosion control blankets have been properly installed.

B. MULCHING

Application

- In sensitive areas (within 100 ft of streams, wetlands and in lake watersheds) temporary mulch shall be applied within 7 days of exposing soil or prior to any storm event.
- Areas, which have been temporarily or permanently seeded, shall be mulched immediately following seeding.
- Areas which cannot be seeded within the growing season shall be mulched for over-winter protection and the area should be seeded at the beginning of the growing season.
- Mulch anchoring should be used on slopes greater than 5% in late fall (past September 15), and over-winter (September 15 – April 15).

Type of Mulch

Hay or Straw Mulches

Organic mulches, including hay and straw, shall be air-dried, free of undesirable seeds and coarse materials. Application rate shall be 2 bales (70-90 pounds) per 1000 sq. ft. or 1.5 to 2 tons (90-100 bales) per acre to cover 75 to 90 % of the ground surface. Hay mulch subject to wind blowing shall be anchored via: netting; peg and twine or tracking.

Erosion Control Mix

Erosion control mix shall consist primarily of organic material and shall include any of the following: shredded bark, stump grindings, composted bark or other acceptable products based on a similar raw source. Wood or bark chips, ground construction debris or reprocessed wood products shall not be acceptable as the organic component of the mix. It can be used as a stand-alone reinforcement:

- On slopes 2 horizontal to 1 vertical or less.
- On frozen ground or forested areas.
- At the edge of gravel parking areas and areas under construction.

Other reinforcement BMPs (i.e. riprap) should be used:

- On slopes with groundwater seepage;
- At low points with concentrated flows and in gullies;
- At the bottom of steep perimeter slopes exceeding 100 feet in length;
- Below culvert outlet aprons; and
- Around catch basins and closed storm systems.

Composition

Erosion control mix shall contain a well-graded mixture of particle sizes and may contain rocks less than 4" in diameter. Erosion control mix must be free of refuse, physical contaminants, and material toxic to plant growth. The mix composition shall meet the following standards:

- The organic matter content shall be between 80 and 100%, dry weight basis.
- Particle size by weight shall be 100% passing a 6" screen and a minimum of 70%, maximum of 85%, passing a 0.75" screen.
- The organic portion needs to be fibrous and elongated.
- Large portions of silts, clays or fine sands are not acceptable in the mix.

Installation

- Erosion control mix shall not be used on slopes steeper than 2:1.
- On slopes of 3:1 or less; 2 inches plus an additional 1/2 inch per 20 feet of slope up to 100 feet.
- On slopes between 3:1 and 2:1, 4 inch plus an additional 1/2 inch per 20 feet of slope up to 100 feet.

The thickness of the mulch at the bottom of the slope needs to be:

	<3:1 slope	slopes between 3:1 and 2:1
<20' of slope	2.0"	4.0'
<60' of slope	3.0"	5.0'
<100' of slope	4.0"	6.0'

- It shall be placed evenly and must provide 100% coverage with the soil totally invisible.

Any required repairs shall be made immediately, with additional erosion control mix placed on top of the mulch to reach the recommended thickness. When the mix is decomposed, clogged with sediment, eroded or ineffective, it shall be replaced or repaired. Erosion control mix mulch shall be left in place. If the mulch needs to be removed spread it out into the landscape.

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. Nets shall be inspected after rain events for dislocation or failure. If washouts or breakage occur, re-install the nets as necessary after repairing damage to the slope. Inspections shall take place until grasses are firmly established (95% soil surface covered with grass). Where mulch is used in conjunction with ornamental plantings, inspect periodically throughout the year to determine if mulch is maintaining coverage of the soil surface. Repair as needed.

C. TEMPORARY VEGETATION

Considerations

- Proper seedbed preparation and the use of quality seed are important in this practice just as in permanent seeding. Failure to carefully follow sound agronomic recommendations will often result in an inadequate stand of vegetation that provides little or no erosion control.
- Nutrients and pesticides used to establish and maintain a vegetation cover shall be managed to protect the surface and ground water quality.
- Temporary seeding shall be used extensively in sensitive areas (ponds and lake watersheds, steep slopes, streambanks, etc.).
- Late fall seeding may fail and cause water quality deterioration in spring runoff events, thus other measures such as mulching shall be implemented.

Specifications

Seedbed Preparation

Apply limestone and fertilizer according to soil test recommendations. If soil testing is not feasible on small or variable sites, or where timing is critical, fertilizer may be applied at the rate of 600 pounds per acre or 13.8 pounds per 1,000 square feet of 10-10-10 (N-P2O5-K20) or equivalent. Apply limestone (equivalent to 50 percent calcium plus magnesium oxide) at a rate of 3 tons per acre (138 lb. per 1,000 square feet).

Seeding

- Select seed from recommendations in enclosed table.
- Where the soil has been compacted by construction operations, loosen soil to a depth of 2 inches before applying fertilizer, lime and seed.
- Apply seed uniformly by hand, cyclone seeder, drill, cultipacker type seeder or hydroseeder (slurry including seed and fertilizer). Hydroseeding that includes mulch may be left on soil surface. Seeding rates must be increased 10% when hydroseeding.

Mulching

Apply mulch over seeded area according to the TEMPORARY MULCHING BMP.

Maintenance

Temporary seeding 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.).

Temporary Seeding Rates and Dates

Seed	Lb./Ac	Seeding Depth	Recommended Seeding Dates	Remarks
Winter Rye	112 (2.0 bu)	1-1.5 in	8/15-10/1	Good for fall seeding. Select a hardy species, such as Aroostook Rye.
Oats	80 (2.5 bu)	1-1.5 in	4/1-7/1 8/15-9/15	Best for spring seeding. Seeding will die when winter weather moves in, but mulch will provide protection.
Annual Ryegrass	40	.25 in	4/1-7/1	Grows quickly but is of short duration. Use where appearance is important. With mulch, seeding may be done throughout growing season.
Sudangrass	40 (1.0 bu)	.5-1 in	5/15-8/15	Good growth during hot summer periods.
Perennial	40 (2.0 bu)	.25 in	8/15-9/15	Good cover, longer lasting than Annual Ryegrass. Mulching will allow seeding throughout growing season.
Temporary mulch with or without dormant seeding			10/1-4/1	Refer to TEMPORARY MULCHING BMP and/or PERMANENT VEGETATION BMP.

D. SEDIMENT BARRIERS

Tubular Sediment Barrier

a. To be provided by an approved manufacturer or supplier:
b. Installed per manufacturer's specifications;
c. Barrier shall be removed when they have served their useful purpose but not before the upslope areas has been permanently stabilized.

Organic Filter Berm See detail

Installation

- Sediment barriers shall be installed along the down gradient side of proposed ground disturbance areas prior to any construction activities.
- The barrier must be placed along a relatively level contour.

Maintenance

- Perimeter sediment barriers shall be inspected immediately after each rainfall and at least daily during prolonged rainfall. They shall be repaired immediately if there are any signs of erosion or sedimentation below them. If there are signs of undercutting at the center or the edges of the barrier, or impounding of large volumes of water behind them, sediment barriers shall be replaced with a temporary check dam.
- 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.
- Sediment deposits should be removed when deposits reach approximately one third (1/3) the height of the barrier.
- Filter berms should be reshaped as needed.
- Any sediment deposits remaining in place after the barrier is no longer required shall be dressed or removed to conform to the existing grade, prepared and seeded.
- Additional stone may have to be added to the construction stabilized entrance, check dams, stone lined swales, etc., periodically to maintain proper function of the erosion control structure.

E. PERMANENT SEEDING

2. 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 6" to prepare a seedbed and mix fertilizer (refer to Landscape Drawings and Specifications) into the soil.

3. 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 organic 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 organic fertilizer @ 12 lbs. per 1,000 s.f.

4. 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:

   Seed Mixture (for lawns**):

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**):

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.
   ** In the event that the seed mixes shown here conflict with the project landscape plans, the landscape plans shall govern.

4. Seed Mixtures (See Landscape Drawings for additional information):
   4.1. All seed mixes shall be a fresh, clean new seed crop. The Contractor shall furnish a dealer's guaranteed statement of the composition of the mixture and the percentage of purity and germination of each variety.
   4.2. Seed mixture shall conform to landscape specifications.

5. 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.

MONITORING SCHEDULE

The contractor shall be responsible for installing, monitoring, maintaining, repairing, replacing and removing all of the erosion and sedimentation controls or appointing a qualified subcontractor to do so. Maintenance measures will be applied as needed during the entire construction cycle. immediately following any significant rainfall, and at least once a week, a visual inspection will be made of all erosion and sedimentation controls as follows:

1. Perimeter controls shall be inspected and repaired. Sediment trapped behind these barriers shall be excavated when it reaches a depth of 6"and redistributed to areas undergoing final grading.
2. Construction entrance shall be visually inspected and repaired as needed. Any areas subject to rutting shall be stabilized immediately. If the voids of the construction entrance become filled with mud, more crushed stone shall be added as needed. The public roadway shall be swept should mud be deposited/tracked onto them.

STANDARDS FOR STABILIZING SITES FOR THE WINTER

The following standards and methodologies shall be used for stabilizing the site during the winter construction period:

1. Standard for the timely stabilization of disturbed slopes (any area having a grade greater than 25%) – the contractor will seed and mulch all slopes to be vegetated by September 15th. If the contractor fails to stabilize any slope to be vegetated by September 15th, then the contractor will take one of the following actions to stabilize the slope for late fall and winter.

A. Stabilize the soil with temporary vegetation and erosion control mats: by October 1st the contractor will seed the disturbed slope with winter rye at a rate of 3 pounds per 1000 square feet and then install erosion control mats or anchored hay mulch over the seeding. The contractor will monitor growth of the rye over the next 30 days.
B. Stabilize the slope with wood-waste compost: the contractor will place a six-inch layer of wood-waste compost on the slope by November 15th. The contractor will not use wood-waste compost to stabilize slopes having grades greater than 50% (2h:1v) or having groundwater seeps on the slope face.
C. Stabilize the slope with stone riprap: the contractor will place a layer of stone riprap on the slope by November 15th. The development's owner will hire a registered professional engineer to determine the stone size needed for stability on the slope and to design a filter layer for underneath the riprap.

2. Standard for the timely stabilization of disturbed soils – by September 15th the contractor will seed and mulch all disturbed soils on the site. If the contractor fails to stabilize these soils by this date, then the contractor will take on of the following actions to stabilize the soil for late fall and winter.

A. Stabilize the soil with temporary vegetation: by October 1st the contractor will seed the disturbed soil with winter rye at a seeding rate of 3 pounds per 1000 square feet, lightly mulch the seeded soil with hay or straw at 75 pounds per 1000 square feet, and anchor the mulch with plastic netting. The contractor will monitor growth of the rye over the next 30 days. If the rye fails to grow at least three inches or fails to cover at least 75% of the disturbed soil before November 1, then the contractor will mulch the area for over-winter protection as described in item iii of this standard.
B. Stabilize the soil with sod: the contractor will stabilize the disturbed soil with properly installed sod by October 1st. proper installation includes the contractor pinning the sod onto the soil with wire pins, rolling the sod to guarantee contact between the sod and underlying soil, and watering the sod to promote root growth into the disturbed soil.
C. Stabilize the soil with mulch: by November 15th the contractor will mulch the disturbed soil by spreading hay or straw at a rate of at least 150 pounds per 1000 square feet on the area so that no soil is visible through the mulch. Immediately after applying the mulch, the contractor will anchor the mulch with netting or other method to prevent wind from moving the mulch off the disturbed soil.

Winter inspections shall be preformed after, each rainfall, snowstorm or thawing and at least once a week. All areas within 75 feet of a protected natural resource must be protected with a double row of sediment barrier.

EROSION CONTROL REMOVAL

An area is considered stable if it is paved or if 90% growth of planted seeds is established. once an area is considered stable, the erosion control measures can be removed as follows:

1. Silt Fence: Silt fence shall be disposed of legally and properly off-site. all sediment trapped behind these controls shall be distributed to an area undergoing final grading or removed and relocated off-site.
2. Stabilized Construction Exit: The stabilized construction exit shall be removed once the compacted roadway base is in place. Stone and sediment from the construction exit shall be redistributed to an area undergoing grading or removed and relocated offsite.
3. Miscellaneous: Once all the trapped sediments have been removed from the temporary sedimentation devices the disturbed areas must be regraded in an aesthetic manner to conform to the surrounding topography. Once graded these disturbed areas must be loamed (if necessary), fertilized, seeded and mulched in accordance with the rates previously stated.

The above erosion controls must be removed within 30 days of final stabilization of the site. Conformance with this plan and following these practices will result in a project that complies with State regulations and the standards of the Natural Resources Protection Act, and will protect water quality in areas downstream from the project.

INSPECTION AND MAINTENANCE

1. All sediment control measures shall be inspected at least once each week and following any storm event of 0.25 inches or greater for the duration of construction and until the site is fully stabilized. An inspection report shall be made after each inspection by a qualified inspector engaged by the Owner. The qualified inspector shall be a Professional Engineer licensed in Maine or be a Certified Professional in Erosion and Sediment Control approved by the Owner.
2. All measures shall be maintained in good working order; if a repair is necessary, it will be initiated within 24 hours and completed within 72 hours.
3. Inspection and maintenance requirements: Inspect disturbed and impervious areas, erosion and stormwater control measures, areas used for storage that are exposed to precipitation, and locations where vehicles enter or exit the site. Inspect these areas at least once a week as well as before and after a 0.25 inches or greater storm event and prior to completion of permanent stabilization measures. A person with knowledge of erosion and stormwater control, including the standards in the MCGP and any departmental companion document to the MCGP, must conduct the inspection. This person must be identified in the inspection log. If best management practices (BMPs) need to be modified or if additional BMPs are necessary, implementation must be completed within 7 calendar days and prior to any storm event (rainfall). All measures must be maintained in effective operating condition until areas area permanently stabilized.
4. Inspection Log (report): A log (report) must be kept summarizing the scope of the inspection, name(s) and qualifications of the personnel making the inspection, the date(s) of the inspection, and major observations relating to operation of erosion and sedimentation controls and pollution prevention measures. Major observations must include BMPs that need maintenance, BMPs that failed to operate as designed or proved inadequate for a particular location, and locations(s) where additional BMPs are needed. For each BMP requiring maintenance, BMP needing replacement, and location needing additional BMPs, note in the inspection log the correct action taken and when it was taken. The log must be made accessible to the department staff and a copy must be provided upon request. The permittee shall retain a copy of the log for a period of at least three years from the completion of the permanent stabilization.

HOUSEKEEPING

1. Spill prevention: Controls must be used to prevent pollutants from construction and waste materials stored onsite, including storage practices to minimize exposure of the materials to stormwater and appropriate spill prevention, containment, and response planning implementation. The contractor and owners need to take care with construction and waste materials such that contaminates do not enter the stormwater. The storage of materials such as paint, petroleum products, cleaning agents and the like are to be stored in watertight containers. The use of the products should be in accordance with manufacturer recommendations. When fueling equipment, including snowblowers and lawnmowers, have oil absorbent pads available below the fueling. Refueling of small engines by the owner should occur in the garage or on a paved surface. Any spill or release of toxic or hazardous substances must be reported to the department. For oil spills, call 1-800-482-0777 which is available 24 hours a day. For spills of toxic or hazardous material, call 1-800-452-4664 which is available 24 hours a day. For more information, visit the department's website at: HTTP://WWW.MAINE.GOV/DEP/SPILLS/EMERGSPILLRESP/

2. Groundwater protection: Protection of the groundwater is required by the contractor and owner. During construction, liquid petroleum products and other hazardous materials with the potential to contaminate groundwater may not be stored or handled in areas of the site draining to an infiltration area. An "infiltration area" is any area of the site that by design or as a result of soils, topography, and other relevant factors accumulates runoff that infiltrates into the soil. Petroleum products should be stored in manufactured cans designed for the purpose. Dikes, berms, sumps, and other forms of secondary containment that prevent discharge to groundwater may be used to isolate portions of the site for the purposes of storage and handling of these materials. Spill preventions procedures should be followed.

3. Fugitive sediment and dust: Actions must be taken to ensure that activities do not result in noticeable erosion of soils or fugitive dust emissions during or after construction. Oil may not be used for dust control.

4. Debris and other materials: Litter, construction debris, and construction chemicals exposed to stormwater must be prevented from becoming a pollutant source. Construction materials and construction debris should be covered to prevent rainwater from washing contaminants off the site. Any fertilizers, cleaning products, herbicides should be protected from the weather and used in accordance with manufacturers recommendations.

5. Any contaminants that are washed off the site by rainwater is a violation of the Clean Waters Act. To prevent these materials from becoming a source of pollutants, construction activities related to a project may be required to comply with applicable provisions of rules related to solid, universal, and hazardous waste, including, but not limited to, the Maine Solid Waste and Hazardous Waste Management Rules; Maine Hazardous Waste Management Rules; Maine Oil Conveyance and Storage Rules; and Maine Pesticide requirements.

6. Trench or foundation dewatering: Trench dewatering is the removal of water from trenches, foundations, coffer dams, ponds, and other areas within the construction area that retain water after excavation. In most cases the collected water is heavily silted and hinders correct and safe construction practices. The collected water removed from the ponded area, either through gravity or pumping, must be spread through natural wooded buffers or removed to areas that are specifically designed to collect the maximum amount of sediment possible, like a cofferdam sedimentation basin. Avoid allowing the water to flow over disturbed areas of the site. For guidance on dewatering controls, consult the Maine Erosion and Sediment Control BMPs, published by the Maine Department of Environmental Protection. Dewatering a stream without a permit from the department violates state water quality standards and the Natural Resources Protection Act.

7. Non-stormwater discharges: Identify and prevent contamination by non-stormwater discharges. Where allowed non-stormwater discharges exist, they must be identified and steps should be taken to ensure the implementation of appropriate pollution prevention measures for the non-stormwater component(s) of the discharge. Authorized non-stormwater discharges are:
   - Discharges from firefighting activities
   - Fire hydrant flushings
   - Vehicle washwater if detergents are not used and washing is limited to the exterior of vehicles (engine, undercarriage, and transmission washing is prohibited
   - Dust control runoff in accordance with permit conditions
   - Routine external building washdown, not including surface paint removal, that does not involve detergents
   - Pavement washwater (where spills/leaks of toxic or hazardous materials have not occurred, unless all spilled material had been removed) if detergents are not used
   - Uncontaminated air conditioning or compressor condensate
   - Uncontaminated groundwater or spring water
   - Foundation or footer drain-water where flows are not contaminated
   - Uncontaminated excavation dewatering
   - Potable water sources including waterline flushings

8. Unauthorized non-stormwater discharges: Identify and prevent contamination from discharges that is mixed with a source of non-stormwater, other than those discharges in compliance with 7. Unauthorized non-stormwater discharges are:
   - Wastewater from the washout or cleanout of concrete, stucco, paint, form release oils, curing compounds or other construction materials;
   - Fuels, oils, or other pollutants used in vehicle and equipment operations and maintenance;
   - Soaps, solvents or detergents used in vehicle and equipment wash;
   - Toxic or hazardous substances from a spill or other release.

Allowable non-stormwater discharges cannot be authorized unless they are directly related to and originate from a construction site or dedicated support activity.

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STATE OF MAINE
ERIC D. WEINRIEB
No. 6858
REGISTERED PROFESSIONAL ENGINEER
3/18/25

NOT FOR CONSTRUCTION

ISSUED FOR:
PRELIMINARY REVIEW

ISSUE DATE:
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NO.	DESCRIPTION	BY	DATE
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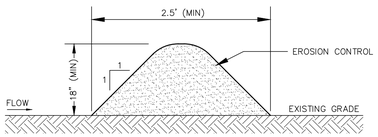
PROJECT:
CARLISLE BROOK ESTATES
ASSESSOR'S MAP 4, LOT 22
WALKER ROAD
LYMAN, MAINE

TITLE:
EROSION AND SEDIMENT CONTROL NOTES

SHEET NUMBER:
D-1

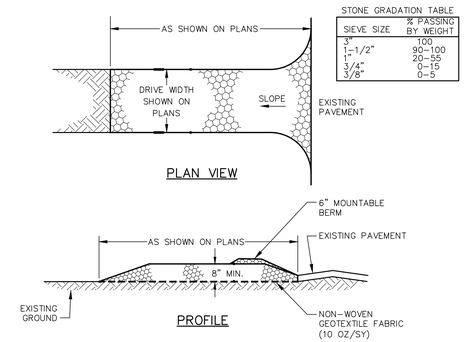
P5590



NOTES

1. ORGANIC FILTER BERMS MAY BE UTILIZED IN LIEU OF SILT FENCE OR OTHER SEDIMENT BARRIERS.
2. THE EROSION CONTROL MIXTURE USED IN FILTER BERMS SHALL BE A WELL-GRADED MIX OF PARTICLE SIZES THAT MAY CONTAIN ROCKS LESS THAN 4" IN DIAMETER, STUMP GRINDINGS, SHREDDED OR COMPOSTED BARK, AND/OR ACCEPTABLE MANUFACTURED PRODUCTS AND SHALL BE FREE OF REFUSE, PHYSICAL CONTAMINANTS AND MATERIAL TOXIC TO PLANT GROWTH. EROSION CONTROL MIXTURE SHALL MEET THE FOLLOWING STANDARDS:
   a) THE ORGANIC CONTENT SHALL BE 80-100% OF DRY WEIGHT.
   b) PARTICLE SIZE BY WEIGHT SHALL BE 100% PASSING A 6" SCREEN, AND 70-85% PASSING A 0.75" SCREEN.
   c) THE ORGANIC PORTION SHALL BE FIBROUS AND ELONGATED.
   d) LARGE PORTIONS OF SILTS, CLAYS, OR FINE SANDS SHALL NOT BE INCLUDED IN THE MIXTURE.
   e) SOLUBLE SALTS CONTENT SHALL BE >4.0mmhos/cm.
   f) THE pH SHALL BE BETWEEN 5.0 AND 8.0.
3. ORGANIC FILTER BERMS SHALL BE INSTALLED ALONG A RELATIVELY LEVEL CONTOUR. IT MAY BE NECESSARY TO CUT TALL GRASSES OR WOODY VEGETATION TO AVOID CREATING VOIDS AND BRIDGES THAT WOULD ENABLE FINES TO WASH UNDER THE BERM.
4. ON SLOPES LESS THAN 5%, OR AT THE BOTTOM OF SLOPES NO STEEPER THAN 3:1 AND UP TO 20' LONG, THE BERM SHALL BE A MINIMUM OF 12" HIGH (AS MEASURED ON THE UPHILL SIDE) AND A MINIMUM OF 36" WIDE. ON LONGER AND/OR STEEPER SLOPES, THE BERM SHALL BE TALLER AND WIDER TO ACCOMMODATE THE POTENTIAL FOR ADDITIONAL RUNOFF (MAXIMUM HEIGHT SHALL NOT EXCEED 2').
5. FROZEN GROUND, OUTCROPS OF BEDROCK, AND VERY ROOTED FORESTED AREAS PRESENT THE MOST PRACTICAL AND EFFECTIVE LOCATIONS FOR ORGANIC FILTER BERMS. OTHER BMP'S SHOULD BE USED AT LOW POINTS OF CONCENTRATED RUNOFF, BELOW CULVERT OUTLET APRONS, AROUND CATCH BASINS, AND AT THE BOTTOM OF STEEP PERIMETER SLOPES THAT HAVE A LARGE CONTRIBUTING AREA.
6. SEDIMENT SHALL BE REMOVED FROM BEHIND THE FILTER BERMS WHEN IT HAS ACCUMULATED TO ONE HALF THE ORIGINAL HEIGHT OF THE BERM.
7. ORGANIC FILTER BERMS MAY BE LEFT IN PLACE ONCE THE SITE IS STABILIZED PROVIDED ANY SEDIMENT DEPOSITS TRAPPED BY THEM ARE REMOVED AND DISPOSED OF PROPERLY.
8. FILTER BERMS ARE PROHIBITED AT THE BASE OF SLOPES STEEPER THAN 8% OR WHERE THERE IS FLOWING WATER WITHOUT THE SUPPORT OF ADDITIONAL MEASURES SUCH AS SILTFENCE.

ORGANIC FILTER BERM NOT TO SCALE



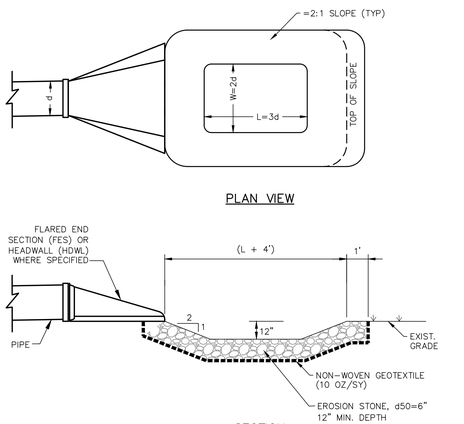
STONE GRADATION TABLE

SIEVE SIZE	% PASSING BY WEIGHT
3"	100
1-1/2"	90-100
1"	20-55
3/4"	0-15
3/8"	0-5

CONSTRUCTION SPECIFICATIONS

1. STONE SIZE - MaineDOT MATERIALS SPEC 703.24 (STONE FOR FRENCH DRAINS) AND 703.29 (STONE DITCH PROTECTION).
2. LENGTH - DETAILED ON PLANS (50 FOOT MINIMUM).
3. THICKNESS - EIGHT (8) INCHES (MINIMUM).
4. WIDTH - FULL DRIVE WIDTH UNLESS OTHERWISE SPECIFIED.
5. FILTER FABRIC - STANDARD SPEC 620, 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



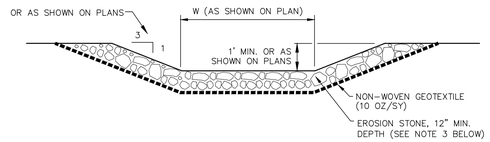
NOTES

1. CONSTRUCT PLUNGE POOL TO THE WIDTHS AND LENGTHS SHOWN ON THE PLAN.
2. THE SUBGRADE FOR THE GEOTEXTILE FABRIC AND RIPRAP SHALL BE PREPARED TO LINES AND GRADES SHOWN ON THE PLANS.
3. EROSION STONE USED FOR THE PLUNGE POOL SHALL MEET THE FOLLOWING GRADATION:

SIZE	PERCENT PASSING BY WEIGHT
18"	100
12"	90-100
4"	0-15

4. GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF THE EROSION STONE. DAMAGED AREAS IN THE FABRIC SHALL BE REPAIRED BY PLACING A PIECE OF FABRIC OVER THE DAMAGED AREA OR BY COMPLETE REPLACEMENT OF THE FABRIC. ALL OVERLAPS REQUIRED FOR REPAIRS OR JOINING TWO PIECES OF FABRIC SHALL BE A MINIMUM OF 18 INCHES.
5. THE EROSION STONE MAY BE PLACED BY EQUIPMENT AND SHALL BE CONSTRUCTED TO THE FULL LAYER THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO PREVENT SEGREGATION OF THE STONE SIZES.

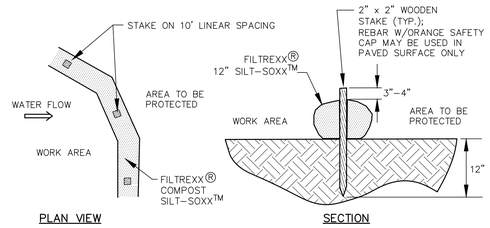
PLUNGE POOL NOT TO SCALE



NOTES

1. CONSTRUCT RIP RAP LINED SWALE TO THE WIDTHS AND LENGTHS SHOWN ON THE PLAN.
2. THE SUBGRADE FOR THE GEOTEXTILE FABRIC AND RIPRAP SHALL BE PREPARED TO LINES AND GRADES SHOWN ON THE PLANS.
3. EROSION STONE USED FOR THE RIP RAP LINED SWALE SHALL MEET THE GRADATION SHOWN ON THE PLANS.
4. GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF THE EROSION STONE. DAMAGED AREAS IN THE FABRIC SHALL BE REPAIRED BY PLACING A PIECE OF FABRIC OVER THE DAMAGED AREA OR BY COMPLETE REPLACEMENT OF THE FABRIC. ALL OVERLAPS REQUIRED FOR REPAIRS OR JOINING TWO PIECES OF FABRIC SHALL BE A MINIMUM OF 18 INCHES.
5. THE EROSION STONE MAY BE PLACED BY EQUIPMENT AND SHALL BE CONSTRUCTED TO THE FULL LAYER THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO PREVENT SEGREGATION OF THE STONE SIZES.

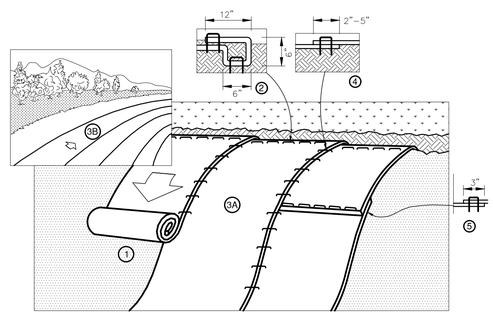
RIPRAP LINED SWALE NOT TO SCALE



NOTES:

1. SILTSOXX MAY BY USED IN PLACE OF SILT FENCE OR OTHER SEDIMENT BARRIERS.
2. ALL MATERIAL TO MEET FILTREXX SPECIFICATIONS.
3. SILTSOXX COMPOST/SOIL/ROCK/SEED FILL MATERIAL SHALL BE ADJUSTED AS NECESSARY TO MEET THE REQUIREMENTS OF THE SPECIFIC APPLICATION.
4. ALL SEDIMENT TRAPPED BY SILTSOXX SHALL BE DISPOSED OF PROPERLY.

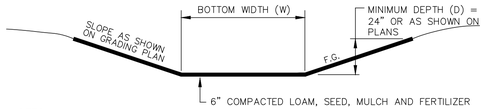
TUBULAR SEDIMENT BARRIER NOT TO SCALE



NOTES

1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" DEEP BY 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL THE BLANKETS (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2"-5" OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.
5. CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE BLANKET WIDTH. NOTE: IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.

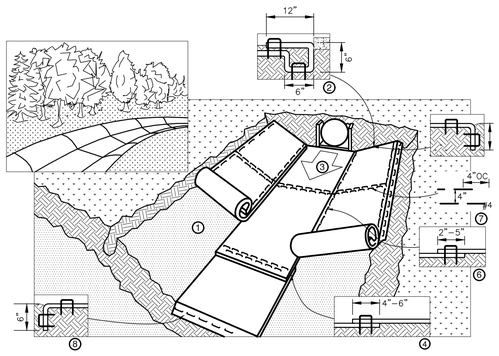
EROSION CONTROL BLANKET - SLOPE NOT TO SCALE



NOTES

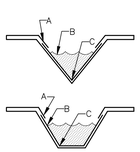
1. THE FOUNDATION AREA OF THE SWALE SHALL BE CLEARED AND GRUBBED OF ALL TREES, BRUSH, STUMPS, AND OTHER OBJECTIONABLE MATERIAL.
2. THE SWALE SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE AND CROSS SECTION AS REQUIRED TO MEET THE DESIGN CRITERIA AND BE FREE OF IRREGULARITIES.
3. EARTH FILLS REQUIRED TO MEET SUBGRADE REQUIREMENTS BECAUSE OF OVER EXCAVATION OR TOPOGRAPHY SHALL BE COMPACTED TO THE SAME DENSITY AS THE SURROUNDING SOIL TO PREVENT UNEQUAL SETTLEMENT THAT COULD CAUSE DAMAGE TO THE COMPLETED SWALE.
4. VEGETATION SHALL BE ESTABLISHED IN THE SWALE OR AN EROSION CONTROL MATTING INSTALLED PRIOR TO DIRECTING STORMWATER TO IT.
5. MAINTENANCE OF THE VEGETATION IS EXTREMELY IMPORTANT IN ORDER TO PREVENT RILLING, EROSION, AND FAILURE OF THE SWALE. MOWING SHALL BE DONE FREQUENTLY ENOUGH TO CONTROL ENCROACHMENT OF WEEDS AND WOODY VEGETATION AND TO KEEP GRASSES IN A VIGOROUS CONDITION. THE VEGETATION SHALL NOT BE MOWED TOO CLOSELY SO AS TO REDUCE THE EROSION RESISTANCE IN THE SWALE.
6. THE SWALE SHOULD BE INSPECTED PERIODICALLY AND AFTER ANY STORM GREATER THAN 0.5" OF RAINFALL IN 24 HOURS TO DETERMINE ITS CONDITION. RILLS AND DAMAGED AREAS SHOULD BE PROMPTLY REPAIRED AND REVEGETATED AS NECESSARY TO PREVENT FURTHER DETERIORATION.

VEGETATED SWALE NOT TO SCALE



NOTES

1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE BLANKET IN A 6" DEEP BY 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL CENTER BLANKET IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE.
4. PLACE CONSECUTIVE BLANKETS END OVER END (SHINGLE STYLE) WITH A 4"-6" OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4" ON CENTER TO SECURE BLANKETS.
5. FULL LENGTH EDGE OF BLANKETS AT TOP OF SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN A 6" DEEP BY 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
6. ADJACENT BLANKETS MUST BE OVERLAPPED APPROXIMATELY 2"-5" (DEPENDING ON BLANKET TYPE) AND STAPLED. TO INSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE BLANKET BEING OVERLAPPED.
7. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4" ON CENTER OVER ENTIRE WIDTH OF THE CHANNEL.
8. THE TERMINAL END OF THE BLANKETS MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN A 6" DEEP BY 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.



CRITICAL POINTS:

A. OVERLAPS AND SEAMS
B. PROJECTED WATER LINE
C. CHANNEL BOTTOM/SIDE SLOPE VERTICES

NOTES:

* HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.

** IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY ANCHOR THE BLANKETS.

EROSION CONTROL BLANKET - SWALE NOT TO SCALE

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STATE OF MAINE
ERIC D. WEINRIEB
No. 9556
LICENSED
PROFESSIONAL ENGINEER
3/18/25

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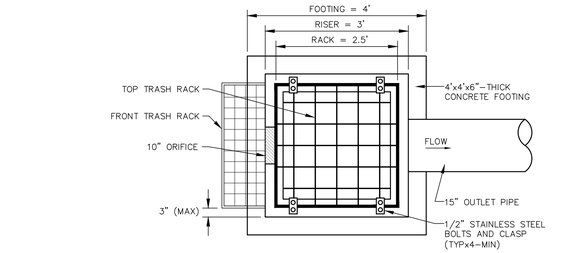
ASSESSOR'S MAP 4, LOT 22
WALKER ROAD
LYMAN, MAINE

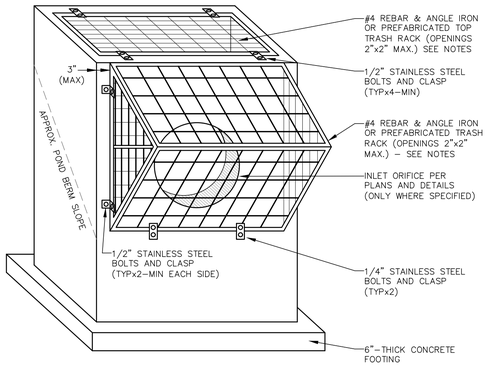
TITLE:
DETAIL SHEET

SHEET NUMBER:
D-2

P5590



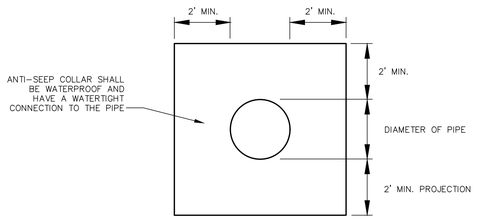
OUTLET STRUCTURE ("OS") #1 — NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

1. OUTLET STRUCTURE SHALL BE CONSTRUCTED OF STEEL REINFORCED CONCRETE FABRICATED ONSITE OR PRECAST TO EQUAL DIMENSIONS AND REINFORCING.
2. CONCRETE FOOTING TO BE CONSTRUCTED INTEGRAL WITH BASE. IF CONSTRUCTED SEPARATELY, FOOTING SHALL HAVE A CONTINUOUS KEYWAY INSTALLED AND REBAR CAST INTO IT THAT SHALL EXTEND ABOVE THE SLAB A MINIMUM OF 8" FOR CONNECTION TO THE BOX AND ANY REINFORCING.
3. ALL JOINTS AND PIPE OPENINGS SHALL BE SEALED WATERTIGHT WITH MORTAR.
4. ALL EXPOSED REBAR TO BE PAINTED WITH RUST-RESISTANT PAINT OR HOT-DIPPED GALVANIZED.
5. PRE-FABRICATED TRASH RACKS INSTALLED PER THE MANUFACTURERS RECOMMENDATIONS ARE ACCEPTABLE UPON WRITTEN ACCEPTANCE BY THE ENGINEER.
6. STRUCTURE IS TO BE BUILT TO WITHSTAND H10 LOADING.
7. NATIVE IN SITU SOILS UNDERLYING THE STRUCTURE'S STONE BASE PAD AND THE PAD ITSELF ARE TO BE COMPACTED PRIOR TO INSTALLING STRUCTURE.
8. ALL CONCRETE SHALL BE 4,000 PSI MINIMUM.
9. STAINLESS STEEL BOLTS FOR TRASH RACK TO BE INSTALLED WITH HILTI AND EPOXY OR CAST IN.
10. EXTERIOR TRASH RACK DIMENSIONS ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TRASH RACKS THAT ALLOW FULL SCREENING PROTECTION TO EVERY INLET ORIFICE AND THE TOP OF THE STRUCTURE. THIS MAY REQUIRE CUSTOM FABRICATION AND/OR ALTERNATE METHODS TO CONNECT THE RACKS TO THE OUTLET STRUCTURE.

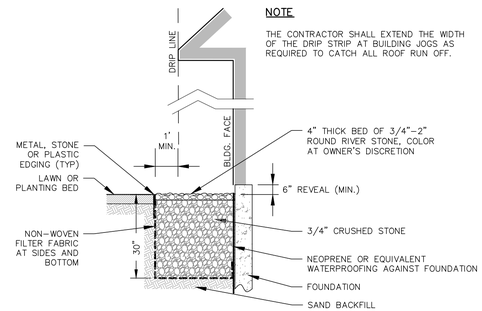
OUTLET STRUCTURE SPECS — NOT TO SCALE



NOTES

ANTI-SEEP COLLARS SHALL BE CLAY, CONCRETE, PLASTIC (AGRI-DRAIN), OR EQUAL APPROVED BY THE ENGINEER.

ANTI-SEEP COLLAR — NOT TO SCALE



STONE DRIP STRIP — NOT TO SCALE

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STATE OF MAINE — ERIC D. WEINRIEB No. 6656 — LICENSED PROFESSIONAL ENGINEER
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REVISIONS

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0	PRELIMINARY	PMJ	03/19/25

DRAWN BY: PMJ
APPROVED BY: EBS
DRAWING FILE: 5590-SITE.dwg

SCALE:
24" x 36" - 1" = NTS
11" x 17" - 1" = NTS

OWNER:
CARLISLE BROOK ESTATES, LLC
1000 U.S. ROUTE 1, SUITE 102
YORK, MAINE 03909

APPLICANT:
CARLISLE BROOK ESTATES, LLC
1000 U.S. ROUTE 1, SUITE 102
YORK, MAINE 03909

PROJECT:
CARLISLE BROOK ESTATES
ASSESSOR'S MAP 4, LOT 22
WALKER ROAD
LYMAN, MAINE

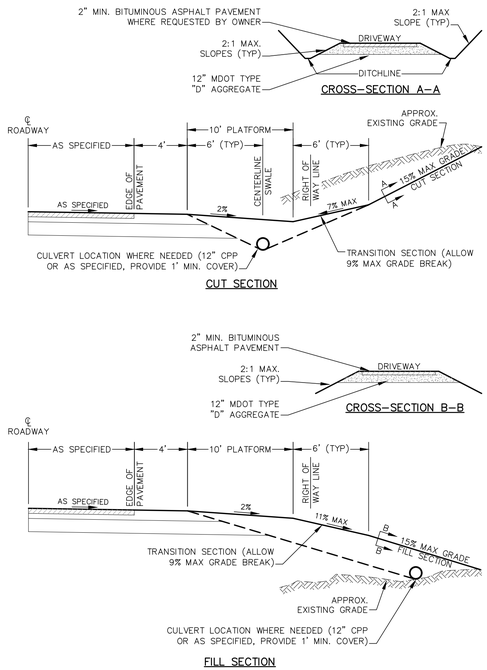
TITLE:
DETAIL SHEET

SHEET NUMBER:
D-3

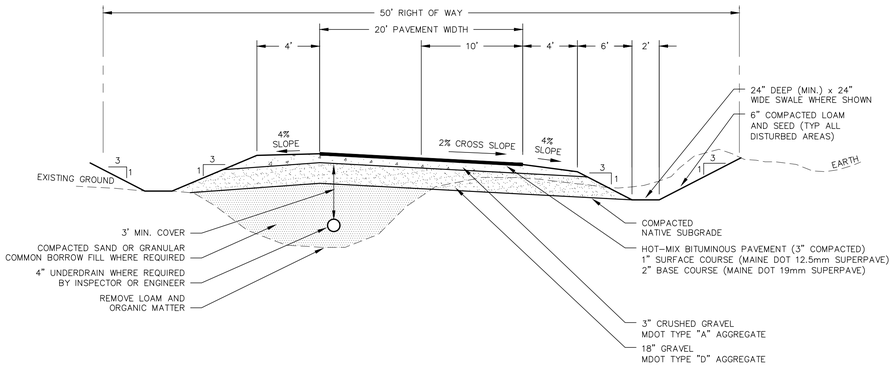
P5590

LEGEND (FOR CIVIL PLANS ONLY)

- PROPERTY LINE
- BUILDING SETBACK
- SHORELINE BUFFER ZONE
- PROPOSED EASEMENT
- WETLAND
- STREAM
- VGC SGC — EXISTING PAVEMENT/CURB
- PROP. PAVEMENT
- 60 — EXISTING CONTOUR
- 60 — PROPOSED CONTOUR
- OHW UGU — EXIST. OVERHEAD/UNDERGROUND UTILITIES/POLE
- D — EXISTING DRAINAGE/CB/DMH
- OHW — PROPOSED OVERHEAD UTILITIES/UTILITY POLE
- PROPOSED DRAINAGE (HARD PIPE)/CB/DCB/DMH/FES
- CPP FES HDWL — CORRUGATED PLASTIC PIPE/FLARED END SECTION/HEADWALL
- 4% — PROPOSED GROUND SLOPE/APPROX. GRADE/PLUNGE POOL
- SILTFENCE/SEDIMENT BARRIER/CONST. FENCE
- STABILIZED CONSTRUCTION EXIT
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED RIPRAP
- PROPOSED STORMWATER BASIN
- PROPOSED EROSION CONTROL BLANKET
- PROPOSED WELL
- MONUMENT AS DESCRIBED
- TP-# — TEST PIT



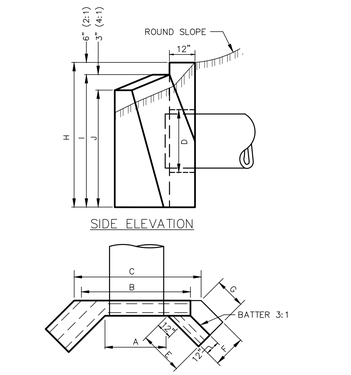
TYPICAL DRIVEWAY SECTIONS — NOT TO SCALE



NOTES

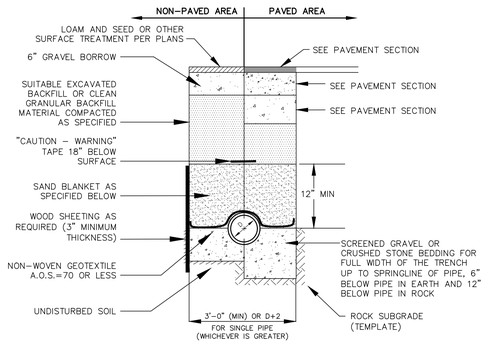
1. EACH GRAVEL BASE COURSE TO BE CONSTRUCTED AT THE PAVEMENT CROSS SLOPE.
2. REMOVE LEDGE 2' BELOW LOWEST WORK BEING INSTALLED.
3. REMOVE ALL LOAM, CLAY, MUCK, ORGANIC, YIELDING OR OTHERWISE UNSTABLE MATERIAL TO A MINIMUM OF 22" BELOW FINISHED GRADE. ADDITIONAL DEPTH MAY BE REQUIRED BY THE GEOTECHNICAL REPORT OR THE ENGINEER. SUCH ADDITIONAL REMOVAL SHALL REQUIRE THE PLACEMENT OF COMPACTED SAND OR GRAVEL BORROW APPROVED BY THE ENGINEER TO THE BOTTOM OF SUBGRADE.
4. THE OVER-EXCAVATION OF UNSUITABLE MATERIAL BEYOND THAT SPECIFIED ABOVE, THE INSTALLATION OF UNDERDRAINAGE, AND/OR THE INSTALLATION OF GEOTEXTILE FABRIC SHALL BE PROVIDED UPON DETERMINATION OF THE INSPECTOR OR THE ENGINEER.
5. FILL BELOW PAVEMENT SUBGRADE SHALL BE SAND OR GRANULAR COMMON BORROW COMPACTED PER MDOT REQUIREMENTS.
6. SITEWORK CONTRACTOR SHALL COORDINATE GEOTECHNICAL ENGINEERING INSPECTIONS PRIOR TO PLACEING GRAVELS.
7. SUBGRADE SHALL BE FREE OF VOIDS THAT ALLOW MOVEMENT AND/OR SETTLEMENT OF MATERIALS.
8. SUBGRADE SHALL BE ROLLED WITH A MINIMUM OF SIX PASSES OF A 10-TON VIBRATORY COMPACTOR OPERATING AT PEAK RATED FREQUENCY OR BY OTHER MEANS APPROVED BY THE ENGINEER.
9. COMPACT ALL MATERIALS TO 95% STANDARD PROCTOR. COMPACTION TESTING SHALL BE PERFORMED BY A GEOTECHNICAL ENGINEER FOR ALL MATERIAL COURSES AND THE RESULTS APPROVED BY THE ENGINEER PRIOR TO PLACING THE SUBSEQUENT COURSE.
10. SUBGRADE SHALL BE PROOF-ROLLED WITH A FULLY LOADED DUMP TRUCK PRIOR TO PLACEMENT OF SELECT GRAVELS. PROOF-ROLLING SHALL BE WITNESSED AND APPROVED BY THE ENGINEER AND MUNICIPAL INSPECTOR.
11. BITUMINOUS PAVEMENT SHALL BE COMPACTED TO 90 TO 97 PERCENT OF ITS THEORETICAL MAXIMUM DENSITY AS DETERMINED BY ASTM D-2041.
12. TACK COAT SHALL BE APPLIED BETWEEN SUCCESSIVE LIFTS OF ASPHALT PAVEMENT.

TYPICAL ROADWAY CROSS SECTION — NOT TO SCALE



D (PIPE DIA.)	DIMENSIONS (2:1 SLOPE)									
	A	B	C	E	F	G	H	I	J	K
15"	2'-6"	5'-4"	6-7"	3'-0"	1'-11"	2'-3"	5'-0"	4'-6"	3'-10"	1'-6"

CONCRETE HEADWALL w/WINGWALLS — NOT TO SCALE



NOTES

1. 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.
2. 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.
3. MAINTAIN 12" MINIMUM HORIZONTAL SEPARATION AND WIDEN TRENCH ACCORDINGLY IF MULTIPLE PIPES ARE IN TRENCH.

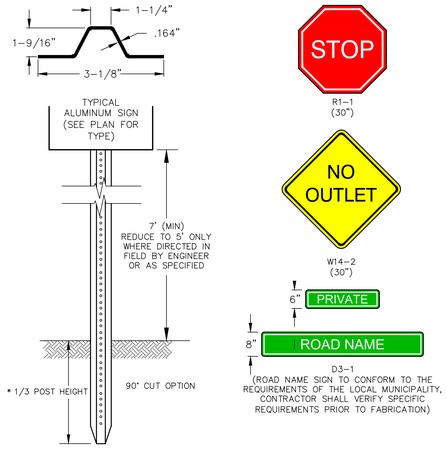
SAND BLANKET/BARRIER

SIEVE SIZE	% FINER BY WEIGHT
1/2"	90 - 100
200	0 - 15

SCREENED GRAVEL OR CRUSHED STONE BEDDING

SIEVE SIZE	% PASSING BY WEIGHT
1"	100
3/4"	90 - 100
3/8"	20 - 55
# 4	0 - 10
# 8	0 - 5

DRAINAGE TRENCH — NOT TO SCALE



LENGTH: AS REQUIRED

WEIGHT PER LINEAR FOOT: 2.50 LBS (MIN.)

HOLES: 3/8" DIAMETER, 1" C-C FULL LENGTH

STEEL: SHALL CONFORM TO ASTM A-499 (GRADE 60) OR ASTM A-576 (GRADE 1070 - 1080)

NOTES

1. ALL SIGNS SHALL MEET THE REQUIREMENTS OF AND BE INSTALLED AS INDICATED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.

SIGN DETAILS — NOT TO SCALE

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

STATE OF MAINE — ERIC D. WEINRIEB No. 6656 — LICENSED PROFESSIONAL ENGINEER
3/18/25

NOT FOR CONSTRUCTION

ISSUED FOR: PRELIMINARY REVIEW

ISSUE DATE: MARCH 19, 2025

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