



City of Biddeford Planning Board

February 4, 2026 at 5:00 PM
City Hall Council Chambers & Zoom

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Or call in by phone: +1 312 626 6799
Meeting ID: 982 7714 1369
Passcode:735012

1. Workshop
 - 1.a Workshop with the Sustainability Commission to discuss & create the Landscaping Ordinance
2. Pledge of Allegiance
3. Declaration of Quorum/Voting Members
4. Adjustment(s) to Agenda
5. Planner's Business
6. Consent Agenda
 - 6.a Approval of Agenda from January 21, 2026
7. Unfinished Business
8. New Business
 - 8.a 2026.05 The Planning Board will review a Sketch Plan for Haley's Properties, LLC at 539 Elm Street (Tax Map 13, Lots 21 & 21-1) in the B-2 zone. The proposal is to remove the existing garage to build a showroom and to also build a warehouse on the property.
9. Other Business
 - 9.a The Conservation Commission will present the Natural Resources Chapter of the Comprehensive Plan to the Planning Board.
10. Adjourn

The Board reserves the right to halt official business at 9:30 p.m. Items not heard at tonight's meeting shall be rescheduled to the next meeting of the Board. All materials pertaining to items on the agenda are available for public review at the Biddeford Planning Department, second floor, Biddeford City Hall during normal business hours.

Part III Land Development Regulations
Article VI Performance Standards
Section 12.1 Landscape Standards

A. Purpose

The purpose of this ordinance is to provide minimum requirements for landscaping of proposed development to maintain a base standard of quality of life and general appearance for private and public properties in the City.

It is the intent of this ordinance to encourage the use of landscaped areas to promote Low Impact Development (LID), stormwater management systems, and to reduce the amount of impervious surface heat islands in urban areas, which are recommended strategies in the Biddeford Climate Action Plan.

B. Applicability

All new development and re-development approved after the effective date of this Ordinance shall comply with these requirements. This includes, but is not limited to, new landscape, replacement planting, or any other landscaping proposed through the Site Plan Review or Subdivision Review process.

C. Definitions

Balled-and-Burlapped Plants: Balled-and-burlapped (or B&B) trees and shrubs are grown in nursery rows.

Bare-Root Plants: Bare-root plants are grown in the field, then harvested. The soil is washed or shaken from their roots after digging. Nearly all are dormant.

Buffer: A combination of physical space and vertical elements, such as but not limited to plants, berms, fences or walls, the purpose of which is to separate and screen incompatible land uses from each other.

Container Grown Plants: Container-grown refers to a plant that has been grown in a container or one that has been transplanted into a container from the field.

Diameter at Breast Height (DBH): DBH is the diameter of a tree measured 4.5 feet above the ground.

Greenspace: Greenspaces are pervious areas of grass, trees or other vegetation, for recreation or aesthetic purposes.

Groundcover: Low-growing, spreading vegetation.

Impervious surface: The total area of a parcel that consists of buildings and any associated structures as well as roads, driveways, and parking areas, whether paved or unpaved and any additional area that is covered with a low-permeability material such as asphalt, stone or concrete or compacted through design or use to reduce permeability

Invasive Species: an organism not native to the region and one that is likely to cause harm to the environment, infrastructure, or public health. For the purposes of this ordinance, invasive species are those enumerated in the Advisory List of Invasive Plants by the Maine Department of Agriculture, Conservation & Forestry.

Landscape Plan: A component of a development plan which shows the quantity, species, and size of all proposed vegetation.

Landscape Planter strip: A vegetated area (naturally vegetated and/or landscaped) located adjacent and parallel to a road or street and designed to visually and functionally separate the roadway from the abutting property upon which it is located.

Low-Impact Design (LID): A management approach to reduce runoff and pollutants by managing runoff close to its source, using natural systems. LID replicates the natural hydrology of a site.

Native Plants: A native or indigenous plant species is one that occurs in a particular place without the aid of humans. They are well adapted to the climate, light, and soil conditions that characterize their ecosystem. Species native to North America are generally recognized as those occurring on the continent prior to European settlement.

Open space: All dedicated portions of a parcel that has vegetated surfaces or is in an undisturbed natural state, such as a wetland or forested area. Vegetated rooftops or portions of a parking area that are landscaped are considered open space per this definition. Areas designated as outdoor storage are not considered open space.

Outdoor Storage Area: a designated space outside of a building for the storage of commercial inventory including but not limited to equipment, vehicles, construction materials, or packaged goods.

Rain Garden: a depressed area in the landscape, planted with grasses and or flowering perennials, that collects rainwater from a roof, driveway or street and allows it to soak into the ground alleviating storm water runoff.

Screening: A method of significantly reducing the impact of noise and unsightly visual intrusions with less offensive or more harmonious elements, such as plants, berms, fences, walls, or any appropriate combination thereof. This is accomplished either by a strip of dense existing or planted vegetation at least four feet in height, an opaque wall of at least six feet in height, or a uniformly covered fence at least six feet in height

Street Tree: A tree that grows within a right-of-way or twenty-five feet from the edge of a right-of-way, intended to provide shade for pedestrians and a separation between the property and abutting streets and structures.

D. General Landscaping Requirements

Landscaping shall be designed as an integral part of an overall site or subdivision plan with the purpose of enhancing building design, public views and spaces, while also providing buffering and screening to abutting properties and roads when appropriate.

Native species should be selected for their benefits of conserving water, protecting

soil from erosion, creating habitat and providing food for many different animals including birds, pollinators, and small mammals, thereby generally promoting plant and animal biodiversity. Invasive species are prohibited. Invasive species, as enumerated by the Maine Department of Agriculture, Conservation, and Forestry, shall not be considered in landscape plans and explicitly avoided.

E. Landscaping Plan Required

1. Unless otherwise directed by the Approval Authority (Planning Board, Staff Review Committee, or City Planner) a landscaping plan prepared by a licensed landscape architect is required for the following proposed projects. At the City Planner's discretion, a qualified professional other than a licensed landscape architect may create such plan:
 - a. Projects requiring Site Plan review per Part III, Article XI, Site Plan Review;
 - b. Projects requiring Subdivision review per Part II, Chapter 66, Subdivisions;
 - c. The construction of 20,000 or more square feet of outdoor storage area;
 - d. The expansion of an existing parking lot by greater than 20% of total spaces measured over a five-year period, unless the number of existing spaces is fewer than 10 spaces;
 - e. The expansion of an existing impervious surface area by greater than 20% of the total area, measured over a 5-year period, unless the area of impervious surface is fewer than 4,000 square feet;
 - f. The expansion of an existing outdoor storage area by greater than 20% of the total area, as measured over a five-year period.
2. The required landscape plan may be waived or modified by the Approval Authority (Planning Board, City Planner or Staff Review Committee) under special circumstances:
 - a. The preservation of unique wildlife habitat
 - b. The preservation of mature vegetation or natural areas
 - c. Compliance with easements such as providing public access, conservation, or utility maintenance.
 - d. Redevelopment of existing properties where the requirements in this title are impossible to meet;.
 - e. Insufficient distance between an existing structure and a property line for required landscaping
 - f. Unique sites such as including vegetation that provides food or medicinal properties.

3. At the discretion of the Approval Authority (Planning Board, Staff Review Committee or City Planner), a landscape plan may be waived with the provision by owner or developer of a fee deposited into a city fund dedicated to tree planting, care, and maintenance on city-owned property.

F. Minimum Landscaping Required

1. A minimum percentage of the total land area being developed shall be landscaped in accordance with the following percentages, except where pre-existing impervious surface prevents:

Multifamily dwellings (5 or more units):	15%
Mixed-use buildings, commercial, retail and lodging use:	10%
Office and professional uses:	15%
Institutional and civic uses:	15%
Industrial and manufacturing uses:	10%

The total area of landscaping as defined above will be considered toward open space minimum requirements.

Species planted in accordance with this ordinance should adhere to the preferred planting list maintained by the University of Maine Cooperative Extension.

2. Tree and shrub requirements for multi-family, commercial, institutional and civic uses:
 - a. For every 500 square feet of landscaping required, or portion thereof, at least two (2) large trees and two (2) shrubs are required.
 - b. Four (4) small ornamental trees may be substituted for two (2) required large trees, not to exceed 50% of the required large trees.
3. Tree and shrub requirements for industrial and manufacturing uses:
 - a. For every 1,000 square feet of landscaping required, or portion thereof, at least one (1) large tree and two (2) shrubs are required.
 - b. Two (2) small ornamental trees may be substituted for one (1) required large tree, not to exceed 50% of the required large trees.
4. Each development shall provide at least two (2) different species. No more than 50% of all trees, per development, shall be of the same species. This standard applies only to trees being planted to meet requirements, not to existing trees.
5. Ground cover is required. Landscaped area that is not planted with trees and shrubs must be planted in ground cover plants, which may include grasses and lawn areas. Mulch (as a ground cover) must be confined to areas underneath plants and is not a substitute for ground cover plants.

6. The retention of existing and healthy shade trees or plantings, not identified by the State of Maine as an invasive species, shall be permitted to achieve these requirements.
7. Deciduous trees shall be a minimum of one and one-half (1 1/2) inch diameter at the time of planting. Evergreen trees shall be minimum six (6) feet high at planting. Tree spacing shall be as appropriate for the species.
8. Ground covers are low-growing vegetative materials with a mound or spreading manner of growth. Spacing is dependent on the type and size of the plant material and must be adequate to provide total coverage of the landscape area within three (3) years. Ground cover plants, other than grasses, must be at least the four (4) inch pot size at time of planting.
9. Shrubs shall be a minimum of eighteen (18) inches in height, or two (2) gallon container size, at the time of planting.
10. Stormwater treatment areas including retention and detention areas shall not be counted toward the required minimum landscaped area, unless significant landscape elements are incorporated into the design of such areas.
11. If a development proposes stormwater treatment systems within or near landscaped areas, they must show that said treatment system will not pose a risk to the effectiveness of the landscaped area, and vice versa. Low-impact design and vegetated treatment systems are encouraged whenever possible.

G. Buffers and Screening

1. Parking Lot Screening along Public Right-of-Way. Where all or a portion of a surface parking area is located within 30 feet of a public right-of-way, and is not separated from the public right-of-way by a structure, the parking area shall include a buffer area five feet in width (minimum) comprising a continuous line of shrubs that achieves 80% opaque screening 30-48" in height during summer months.
2. Buffer Standards.
 - a. General. Where required, buffer areas shall comprise existing trees and vegetation, new landscaping or a combination thereof to create a dense, mixed buffer incorporating both understory and tree canopy layers. Such screening should also effectively provide screening when viewed from upper floors of surrounding properties, where applicable.
 - b. Vegetative buffers. New shrubs shall be spaced six (6) to eight (8) feet apart. Buffers between contrasting land uses may incorporate earthen berms not exceeding 4:1 slope, opaque fencing of high architectural quality, masonry wall or a combination thereof, in addition to landscape plantings. Where fencing or masonry wall is proposed as part of a buffer, less landscaping density is acceptable; however, buffers shall still include trees, shrubs and other vegetation.

Category	Industrial and Manufacturing Uses	Office and Professional Uses	Mixed-Use, Commercial, Retail, and Lodging Use	Institutional Uses	Multi-family Dwellings (5 units or more)
Buffer Depth or Width	<p>15 feet wide along frontage of public and/or private rights-of way.</p> <p>30 feet wide along property lines abutting residential uses,</p> <p>10 feet wide along property lines abutting non-industrial or manufacturing uses</p>	<p>10 feet wide along private and public rights-of-way,</p> <p>30 feet wide along property lines when abutting a residential use,</p> <p>5 feet wide when abutting a non-office use</p>	<p>10 feet wide along public or private right of way,</p> <p>30 feet wide along property lines abutting residential use</p>	<p>15 feet wide along public and private rights-of-way,</p> <p>50 feet wide along property lines abutting a residential use</p>	<p>5 feet wide along a public or private right of way,</p> <p>5 feet wide along property lines abutting a residential use,</p> <p>10 feet wide along property lines abutting a non-residential use.</p>
Description	<p>Shall consist of evergreen trees or tall shrubs with a minimum height of six 6 feet at planting, which will provide a 100% sight-obscuring screen within 3 years from the time of planting; or a combination of evergreen and deciduous trees and shrubs backed by 100% sight-obscuring fence</p>	<p>Shall consist of evergreen or a mixture of evergreen and deciduous trees with large shrubs and ground cover interspersed with the trees.</p> <p>A sight-obscuring fence may be required if determined during plan review that such a fence is necessary.</p>	<p>Shall consist of evergreen or a mixture of evergreen and deciduous trees with large shrubs and ground cover interspersed with the trees. Where used to separate parking from streets, plantings must create a visual barrier of at least 12 inches in height at time of planting and form a solid screen 3 years after planting.</p>	<p>Shall consist of a mixture of evergreen and deciduous trees, shrubs, and ground cover; to provide solid covering of the entire landscaped area within 3 years of planting</p>	<p>Shall consist of evergreen or deciduous trees planted with supporting shrubs or ground cover. Each landscape area shall be of sufficient size to promote and protect growth of plantings, with a one hundred 100 square foot minimum area and no dimension less than 5 feet.</p>

- c. Parking areas. Landscaping shall be incorporated into the development of surface parking to reduce adverse environmental and aesthetic impacts, to shade pavement to reduce heat island effect and to screen parking areas from public view. Plant materials shall be selected for appearance, durability, and tolerance to salt.
 - i. Landscaping that abuts areas of vehicular use shall be adequately protected and separated from vehicles. Protection should take the form of physical or visual separation, such as curb stops, bollards, or continuous curbing. Protection shall be designed with adequate visibility and durability in order to withstand normal snow plowing operations.
 - ii. Landscaped islands shall be curbed and a minimum of eight (8) feet in width, not including curbing. The incorporation of bio-retention into landscaped islands is strongly encouraged.
- d. Snow storage. Snow storage areas may be located in landscaped areas provided that appropriate landscape materials are selected which can withstand such snow storage. Snow storage shall not be located in a stormwater treatment measure, shoreland zoning setback buffers, or where it would adversely impact the functionality of bioretention or other stormwater management measures.

3. Installation and Maintenance of Plantings.

- a. No screen or buffer shall be installed in a manner that obscures sight lines necessary for safe traffic circulation.
- b. No plant shall be moved after the bud break. Planting periods are between April 1st and July 1st and/or September 1st and November 1st.
- c. Tree planting and other landscaping for subdivisions that cannot be installed prior to the release of the performance guarantee must be insured by a defect bond as described in Article 13 of the City Land Use Code.
- d. All bare soil areas shall be vegetated and/or mulched prior to the issuance of a Certificate of Occupancy.
- e. New vegetation that shows signs of construction damage within a one-year period following construction, including but not limited to bark damage or excessive root damage, grade changes other than those originally indicated in the approved grading plan, soil compaction due to heavy equipment traversing closely, or general decline due to mechanical or natural conditions shall be rejected and must be replaced prior to the release of any defect guarantee.
- f. Landscaping required in accordance with the provisions of this ordinance or any addition or amendments to this ordinance, or in accordance with the provisions of any previous code or ordinance of the city, the landscaping shall be permanently maintained in such a manner as to accomplish the purpose for which it was initially required. All landscaping which, due to accident, damage, disease, lack of maintenance, or other cause, fails to show a healthy appearance and growth shall be restored, or replaced, within one year of initial installation, with the same type of

landscaping elements and in the same location as required in the approved landscape plan.

- g. Slopes with between a 5% and 50% grade change shall incorporate installation of a mixture of vegetation, organic mulch and/or erosion control seed mix. Stabilization of slopes greater than 50% must incorporate biotechnical and/or structural methods including but not limited to terracing rip rap or retaining walls in addition to vegetation.

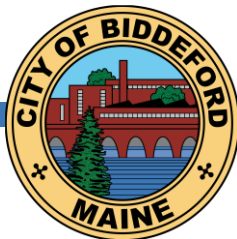
H. Incentives

To help facilitate the goals of the 2023 Biddeford Climate Action Plan, development review applications may receive modifications to density, setback, lot size, and/or height requirements if the development meets all requirements of the landscaping plan as well as one or more the following additional benefits:

1. Ensure at minimum 50% of the plantings are pollinator friendly, drought resistant and/or invasive pest tolerant.
2. Use open space areas for food production such as greenhouses, community gardens, or food plots.
3. Provide public access easements, conservation easements, or public access trails on the site.
4. Provide landscaping beyond the requirements of this ordinance, to the satisfaction of the Approval Authority.

I. Violations / Enforcement [Roby Fecteau to advise.]

To ensure all new landscaping meets the standards set herein, 125% of the cost of landscaping will be held in escrow for one year as a performance guarantee to ensure plantings are healthy and thriving.



PLANNING BOARD MEETING MINUTES

January 21, 2026

DRAFT

1. Other Business-Workshop

1.a. Workshop the Comprehensive Plan with the Conservation Commission.

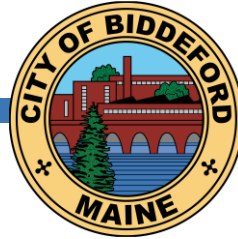
Attendance: Planning Board: John McCurry, Matt Sargent-Dubois, Leah Schaffer, Kayla Lewis

Conservation Commission: Richard Rhames, Patrick Conlon, Denis Rioux, Peter Robbins, Richard Rhames

Staff: David Galbraith, Adi Iriqat & Nan Whitten

- McCurry called the workshop to order at 5:00 PM
- Iriqat gave a history of the Comprehensive Plan
- Heumiller spoke on his contributions for this meeting
- Rhames talked about LD 2003, he talked about how the Comp Plan is a moving target, he feels the City has little understanding of natural resources, he questions the accuracy of the numbers in the draft of working forest, he feels the numbers are way off, however the numbers came from the Assessing Department.
- Lewis would like to implement where the information being used was derived from.
- Rhames mentioned that the City uses the same zoning as we were in the 1960's.
- Lewis would like explanations and suggestions for changes in the ordinance.
- Heumiller feels some of the evaluation of zoning may not work
- Galbraith mentioned that some of the language in the rezoning must be rephased such as the word "shall" is to be "may."
- Iriqat mentioned that some of the text is copied and pasted from the state
- Galbraith wants a Natural Resources blueprint to expand the setbacks of the Natural Resources areas.
- Schaffer asked if there was a check and recheck of documentation.
- Iriqat talked about implementation matrix and timelines
- Schaffer said there is a problem with no follow up
- Lewis mentioned Implementation Pathways Committees
- McCurry said that we will be doing some of that but there is only so much that can be done with a small staff
- Please send all edits to Heumiller

- Sargent-Dubois asked about the February deadline
 - Iriqat explained that we had 90 days from September which would be 2-4-26.
 - The workshop ended at 6:00 PM
2. Pledge of Allegiance Meeting came to order at 6:00 PM
 3. Declaration of Quorum/Voting Members
John McCurry, Chair, Matthew Sargent-Dubois, Leah Schaffer, Kayla Lewis (Alternate)
Lewis to vote in place of Angers
Staff-David Galbraith & Nan Whitten
 4. Adjustment(s) to Agenda-none
 5. Planner's Business
 - 5.a. Election of Officers: Vice Chair & Secretary
MOTIONS 6:01 PM
Motion-Schaffer-Motion to elect Matthew Sargent-Dubois as Vice Chair
Second-Lewis
Vote-Motion passed unanimously
Motion-Sargent-Dubois-Motion to elect Leah Schaffer as Secretary
Second-Lewis
Vote-Motion passed unanimously
 6. Consent Agenda
 - 5.a. Approval of Meeting Minutes from December 17, 2025
MOTIONS: 6:02 PM
Motion-Sargent-Dubois-Motion to approve Meeting Minutes as posted
Second-Schaffer
Vote-Motion passed unanimously
 7. Unfinished Business-None
 8. New Business
 - 8.a. 2025.46 The Planning Board will review a Sketch Plan for Mastoran Corporation (Burger King) to add another drive-thru lane at their location of 349 Alfred Street, also known as Tax Map 28, Lot 57 in the B2 Zone.
 - Galbraith introduced the project mentioning that the project had too much parking therefore they are removing a row of parking and adding a staggered drive thru.
 - Chris MacDonald of BH2M represented the applicant.
 - There is an upgrade to the site plan
 - The project will reduce parking and impervious surface
 - They will be replacing all pavement, curbing and concrete pavement.
 - NO PUBLIC COMMENTS
 - Sargent-Dubois asked about the easements and plans to close off 1 of the access points-no
 - Sargent-Dubois asked about traffic issues and if they will be removing the exit lane closest to West St? He described the backup and blockage of traffic there, traffic going in and out of the site is scary.



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- MacDonald answered that removing one access point may be troublesome.
- Lewis asked MacDonald to walk them through additional landscaping & screening
- MacDonald said that he needs to make sure that the text Lewis quoted is for commercial and not for residential abutters. Some of the landscaping will be redone but it is a narrow area for tall plants, but he will look into additional screening.
- McCurry mentioned that the exit in question is a right turn only, but can the engineers make sure that it is a hard right.
- MacDonald will check for signage
- Lewis confirmed that there are no waivers
- Galbraith asked if there is anything else the Board wants to see
- McCurry-No left turn to the east, No blocking (intersection or entrance) painted on West Street
- MacDonald asked Galbraith if a project of this size be allowed to have only 1 entrance/exit. The applicant does not want to mess up Walgreens.
- Board has agreed that the Preliminary & Final decision will take place at the next presentation.

9. Unfinished Business-none

10. Adjourn

MOTION: 6:29 PM

Motion-Sargent-Dubois-Motion to adjourn

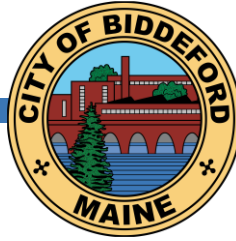
Second-Lewis

Vote-Motion passed unanimously

Signature-Planning Board Chair

Date

These minutes are summary and are not intended to be verbatim. Archived meetings are viewable on the City's website: www.biddefordmaine.org.



PLANNING BOARD STAFF REPORT

TO: Chair McCurry and Members of the Biddeford Planning Board

FROM: David C.M. Galbraith, City Planner / Acting Director Planning & Development Department

DATE: January 28, 2026

RE: **Case # 2026.05 Sketch Plan Review for Haley Properties, LLC (dba Hayley's Metal Shop, Inc.) for a Conditional Use (light manufacturing) Site Plan Amendment to an existing Development Plan to remove and reconstruct a 1,250 +/- square foot (footprint) detached building and construction of a new 3,000 square foot detached building, located at 539 Elm Street (Tax Map 13, and Lot 21 and 21-1) located within the B2 (Highway Business) Zoning District.**

MEETING DATE: February 4, 2026, 6:00 PM

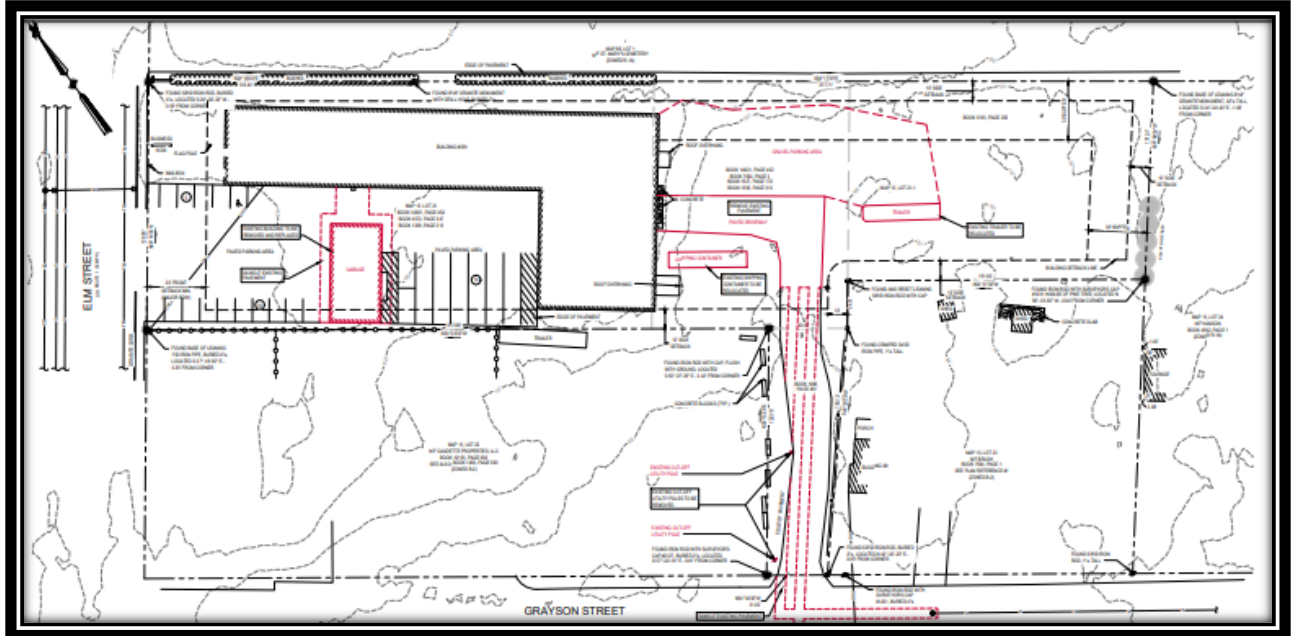
1. INTRODUCTION

This "Sketch Plan" application is being presented by Kyle Berwick of Trillium Engineering Group, the Project Engineer and Agent for Haley Properties, LLC (dba Hayley's Metal Shop, Inc.) for a Site Plan Amendment to an existing Development Plan located at 539 Elm Street (Tax Map 13, and Lot 21 and 21-1) located within the B2 (Highway Business) Zoning District.

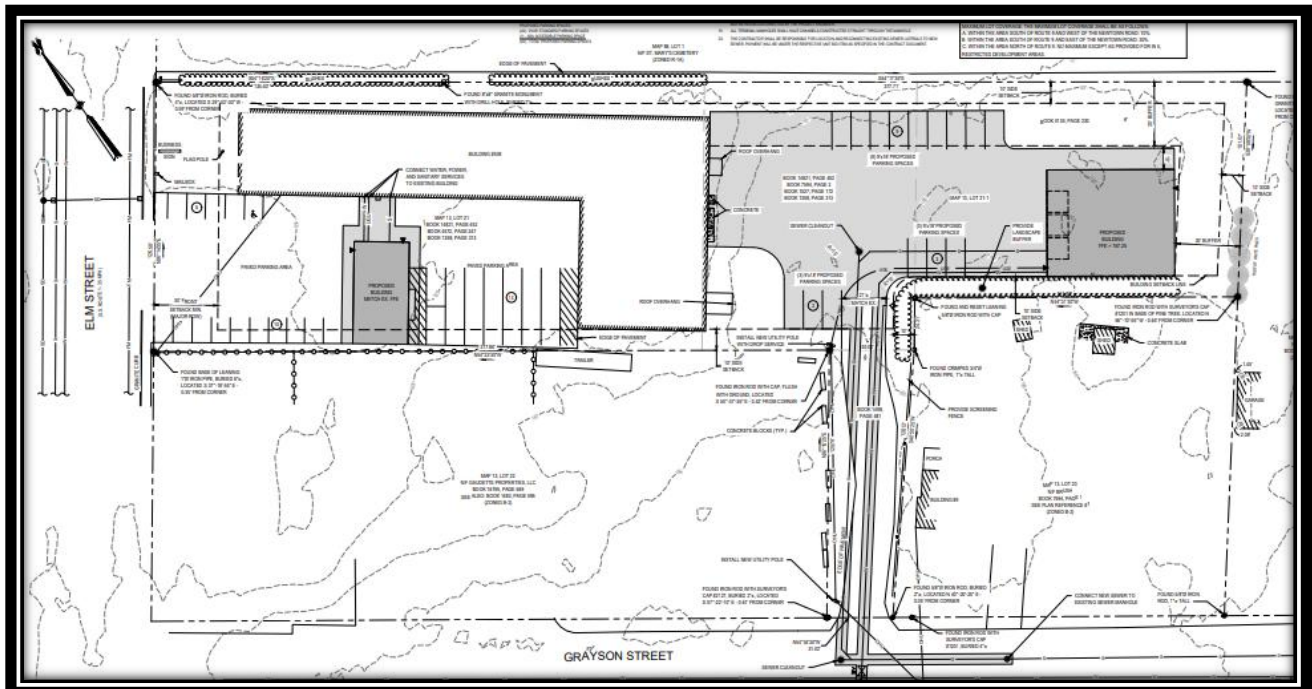
As proposed, the applicant would like to erect two pre-engineered metal buildings, by Irishspan from Arundel, on their property. The larger of the two structures is proposed to be 60' X 50' (3,000 square feet) with a 22' high volume placed in the rear part of their lot and used for warehousing staged HVAC materials for projects. It would have two partial upper mezzanines for storage. The second structure would be a 48' x 26' (1,248 square feet) also 22' in height to replace an existing single story wood framed garage in the front part of their lot next to their office. The idea is to replace the existing with a two story building; first floor would be a show room and training. Second floor would be offices for their staff.

Case # 2026.05 Sketch Plan Review for Haley Properties, LLC (dba Hayley's Metal Shop, Inc.) for a Conditional Use (light manufacturing) Site Plan Amendment to an existing Development Plan to remove and reconstruct a 1,250 +/- square foot (footprint) detached building and construction of a new 3,000 square foot detached building, located at 539 Elm Street (Tax Map 13, and Lot 21 and 21-1) located within the B2 (Highway Business) Zoning District.

MEETING DATE: February 4, 2026, 6:00 PM



Hayley's Metal Shop, Inc., 539 Elm Street – Existing Conditions

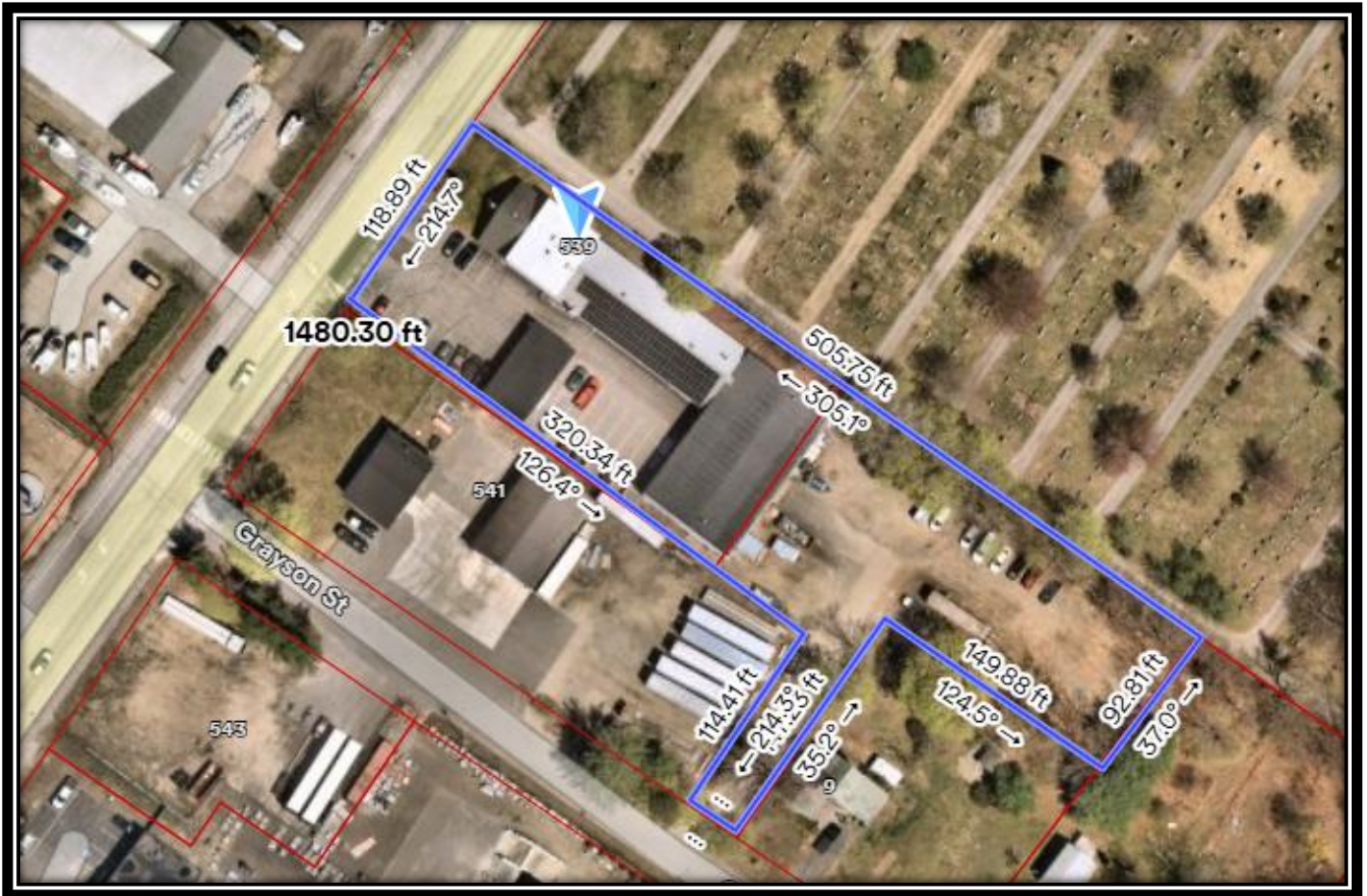


Hayley's Metal Shop, Inc., 539 Elm Street – Proposed Conditions

Case # 2026.05 Sketch Plan Review for Haley Properties, LLC (dba Hayley's Metal Shop, Inc.) for a Conditional Use (light manufacturing) Site Plan Amendment to an existing Development Plan to remove and reconstruct a 1,250 +/- square foot (footprint) detached building and construction of a new 3,000 square foot detached building, located at 539 Elm Street (Tax Map 13, and Lot 21 and 21-1) located within the B2 (Highway Business) Zoning District.

MEETING DATE: February 4, 2026, 6:00 PM

According to their web site Hayley's Metal Shop is a local, fifth generation family owned metal shop which has been operational since 1917. (See www.hayleymetal.com).



Hayley's Metal Shop, Inc., 539 Elm Street – Existing Conditions

The site has two existing curb-cuts; the primary entrance directly off Elm Street and secondary access off Grayson Street.

Case # 2026.05 Sketch Plan Review for Haley Properties, LLC (dba Hayley's Metal Shop, Inc.) for a Conditional Use (light manufacturing) Site Plan Amendment to an existing Development Plan to remove and reconstruct a 1,250 +/- square foot (footprint) detached building and construction of a new 3,000 square foot detached building, located at 539 Elm Street (Tax Map 13, and Lot 21 and 21-1) located within the B2 (Highway Business) Zoning District.

MEETING DATE: February 4, 2026, 6:00 PM



1-story, 4 bay garage proposed to be demolished and replaced with new 22' tall building

The Application includes a project narrative from Mr. Berwick which is provided below in italics:

Trillium Engineering Group is providing this project narrative for the proposed project located at 539 Elm St. in Biddeford, ME and encompasses both lots 21 and 21-1 on Tax Map 13, per Biddeford tax maps, both under common ownership by Haley Properties, LLC. The existing site consists of a commercial building and garage on lot 21 with paved and gravel parking/laydown areas. The commercial building and garage is occupied/used by Haley's Metal Shop, Inc. On lot 21-1 there is a disturbed area seemingly used as additional parking/laydown area with a trailer structure that is to be relocated. A shared paved drive serves the two lots and extends to the main commercial building on site.

The project proposes the removal of the existing garage building on lot 21 with the construction of a new two-story building with a 1st floor training/conference room & showroom and 2nd floor offices. Other improvements involve the construction of a new warehouse building on lot 21-2 with a paved drive and parking area along with utilities.

Regarding impervious areas, the overall site (including both lots as one common lot for this exercise) has a lot area of 65,194 SF. The existing conditions include the commercial building, garages, paved and gravel surfaces. Combining all existing impervious areas equates to approximately 38,176 SF or 58.6% as a total coverage percentage of the existing lot. The proposed conditions include the addition of a new two-story building in the location of the existing garage, along with a new warehouse/storage building and additional areas of paved surfaces. Combining all proposed impervious areas equates to approximately 45,739 SF or 70.2% as a total coverage percentage of the proposed lot.

Case # 2026.05 Sketch Plan Review for Haley Properties, LLC (dba Hayley’s Metal Shop, Inc.) for a Conditional Use (light manufacturing) Site Plan Amendment to an existing Development Plan to remove and reconstruct a 1,250 +/- square foot (footprint) detached building and construction of a new 3,000 square foot detached building, located at 539 Elm Street (Tax Map 13, and Lot 21 and 21-1) located within the B2 (Highway Business) Zoning District.

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All proposed additions are to have associated grading, buffer landscaping, along with appropriate and sufficient E&S control measures during construction. Please see the attached supporting documentation such as site plans, details, etc. for more information.

2. PROJECT DATA/INFORMATION

1.	Applicant:	Haley Properties, LLC 21 Weymouth Street Saco, ME 04072
2.	Owner of Property:	Haley Properties, LLC 21 Weymouth Street Saco, ME 04072
3.	Agent:	Kyle Berwick Trillium Engineering Group 251 US Route 1, Suite O-2 Falmouth, ME 04105
4.	Surveyor:	Trillium Engineering Group 251 US Route 1, Suite O-2 Falmouth, ME 04105
5.	Project Location:	539 Elm Street Biddeford, ME 04005
6.	Project Tax Map #/Lot #:	Tax Map 13, and Lot 21 and 21-1
7.	Lot Size:	65,194 Square Feet (1.496-acres)
8.	Base Zoning:	B2 (Highway Business)
9.	Overlay Zoning:	N/A
10.	Existing Use:	Hayley’s Metal Shop, Inc.
11.	Proposed Use:	Hayley’s Metal Shop, Inc.0- Expansion of existing operation
12.	Approvals Required:	A. Site Plan Review – Article XI B. Conditional Use Expansion– Light Manufacturing C. Article VI (Performance Standards), Sections 12 (Buffers); Section 41 (Industrial facilities and related uses), Section 49 (off-street parking and loading)
13.	Uses in the Vicinity:	Commercial / Cemetery

Case # 2026.05 Sketch Plan Review for Haley Properties, LLC (dba Hayley’s Metal Shop, Inc.) for a Conditional Use (light manufacturing) Site Plan Amendment to an existing Development Plan to remove and reconstruct a 1,250 +/- square foot (footprint) detached building and construction of a new 3,000 square foot detached building, located at 539 Elm Street (Tax Map 13, and Lot 21 and 21-1) located within the B2 (Highway Business) Zoning District.

MEETING DATE: February 4, 2026, 6:00 PM

14.		Waivers Requested:	a. None
15.		Waivers Granted:	a. None
16.		Other Non-City Permits Required:	a. None
17.		LDR Attachment A: Fees Paid	Sketch Plan Fees Paid
18.		Planning Board Review History:	Sketch Plan- February 4. 2026

3. REVIEW PROCESS

Per City ordinance, this application is subject to the following:

- A. Site Plan Review (Article XI)
- B. Expansion of a Conditional Use (Light Manufacturing),
- C. Article VI (Performance Standards), Sections 12 (Buffers); Section 41 (Industrial facilities and related uses), Section 49 (off-street parking and loading).

The above Ordinances require approval by the Planning Board. This process involves Sketch Plan review, followed by Preliminary Plan Review, and ultimately Final Plan review / approval.

4. GENERAL REVIEW COMMENTS:

- **APPLICATION COMPLETENESS:** This application is for subdivision sketch plan review, so the purpose of this memorandum introduces the project/s to the Board, with the desire to identify items the Board believes are important and necessary for the continued review of this plan / project.

5. **ZONING:** The subject property is zoned B2 (Highway Business) and light manufacturing is a Conditional Use within the district.

6. **WAIVERS:** None requested

7. Staff Review Committee (SRC) Preliminary Comments:

- A. Existing and proposed building dimensions, building footprint square footage, and total existing and proposed square footages shall be shown on revised plans.
- B. All exterior stairways and building protrusions (chimneys, heating/AC units, etc.) shall be shown on the plans and “clear / unobstructed” pathways, such as parking / drive aisles shall be shown.
- C. The application proposes to demolish an existing detached garage and reconstruct a new building of a similar size in the same location. This proposed building is located within the required 10’ side yard building setback. The existing building is considered legally non-conforming, but as it is proposed to be demolished all new structures are required to meet required setbacks. Staff recommend turning the proposed building sideways so the long

Case # 2026.05 Sketch Plan Review for Haley Properties, LLC (dba Hayley's Metal Shop, Inc.) for a Conditional Use (light manufacturing) Site Plan Amendment to an existing Development Plan to remove and reconstruct a 1,250 +/- square foot (footprint) detached building and construction of a new 3,000 square foot detached building, located at 539 Elm Street (Tax Map 13, and Lot 21 and 21-1) located within the B2 (Highway Business) Zoning District.

MEETING DATE: February 4, 2026, 6:00 PM

side of the building runs along / near the southern setback line, so that it can be placed outside of the required setback.

- D. The City's Code of Ordinances, Part III (Land Development Regulations), Article VI (Performance Standards) Section 12 (Buffers), Item A states:

No structure shall be erected or any use permitted in nonresidential districts, which abut residential districts, unless a buffer strip at least 30 feet wide is provided and maintained between any adjoining residential district or use and the nonresidential structure or use (emphasis added). Such buffer area shall be for the purpose of eliminating or minimizing any adverse effects upon the environmental or esthetic qualities of abutting properties or any type of nuisance affecting the health, safety, welfare and property values of the residents of Biddeford. This requirement may be waived by the Planning Board upon request of the applicant if it can be demonstrated that the waiver is warranted or necessary due to existing conditions and/or other means of eliminating or minimizing any adverse impacts on residential structures or uses can achieve the same purpose, such as, but not limited to, the installation of stockade fencing or noise barriers.

Plans shall be modified to provide the required 30' wide buffer as outlined in Article VI, Section 12.

- E. Nine parking stalls are proposed to be located along the northern property line approximately 15' from the adjacent to St. Mary's Cemetery (Map 88, Lot 1). State law requires no excavation within 25' of this shared property line. The proposed parking shall be relocated outside of the 25' cemetery setback, which shall be illustrated on formal application plans. This is also the area requiring a 30' buffer outlined in comment "C" above.
- F. Formal application plans shall include dimensions of all drive aisles, large pavement areas (including between buildings), and parking stalls.
- G. Snow storage areas shall be illustrated on formal application plans, and the narrative shall be updated to include a snow removal description.
- H. How will refuse and recycling be handled The formal application plans (Preliminary review) shall and snow removal plans.
- I. Preliminary submittal plans shall include a breakdown of required parking (under City Ordinance) and proposed parking.
- J. Stormwater Management Plans shall be included in the Preliminary Application submittal.

Case # 2026.05 Sketch Plan Review for Haley Properties, LLC (dba Hayley's Metal Shop, Inc.) for a Conditional Use (light manufacturing) Site Plan Amendment to an existing Development Plan to remove and reconstruct a 1,250 +/- square foot (footprint) detached building and construction of a new 3,000 square foot detached building, located at 539 Elm Street (Tax Map 13, and Lot 21 and 21-1) located within the B2 (Highway Business) Zoning District.

MEETING DATE: February 4, 2026, 6:00 PM

8. STAFF RECOMMENDATION

The Application is for Site Plan "sketch plan review" so no formal Planning Board action is required. However, the Board should take this opportunity to review the proposed plans and identify any items the Board may wish to review or modify as part of this application. The Planning Board should also consider holding a "Site Walk" to review existing conditions and proposed site plan amendment.

539 Elm St. Development

Sketch Plan Review Package

Date Issued: January 21, 2026



Project Title: 539 Elm Renovation

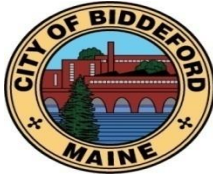
Owner: Haley Properties, LLC

Site Location: 539 Elm St. Biddeford, ME 04005

Attachments

- A. Application
- B. Project Narrative
- C. Deed
- D. Agent Authorization
- E. LLC Docs
- F. Misc. Maps
- G. Site Plans

A. Application



City of Biddeford – Planning Department
Planning Board Application

P.O. Box 586, 205 Main Street Biddeford, Maine 04005
207-284-9115

Type of Application:

- Shoreland Zoning Permit
Conditional Use Permit
Other:
X Site Plan Review (Please include checklist)
Subdivision
Extraction
Private Way

Applicant Information:

Name: Haley Properties, LLC
Mailing Address: 21 Weymouth St. Saco, ME 04072
Telephone:
Email: brian@haleysmetal.com

What is your legal interest in the property?
Owner
Potential Buyer with Contract
Lease/Rental Agreement

Owner's Information:

Name: Haley Properties, LLC
Mailing Address: 21 Weymouth St. Saco, ME 04072
Telephone:
Email: brian@haleysmetal.com

Agent's Information:

Name: Trillium Engineering Group (TEG)
Mailing Address: 251 US Route 1 Suite O-2 Falmouth, ME 04150
Telephone: (207) 307-0872
Email: ericd@trilliumeg.com

Engineer/Surveyor's Information:

Name: Eric Dube
Mailing Address: 251 US Route 1 Suite O-2 Falmouth, ME 04150
Telephone: (207) 307-0872
Email: ericd@trilliumeg.com

Project Location and Lot Information:

Street Address: 539 Elm St. Drainage Watershed: Thacher Brook
Tax Map: 13 Lot: 21, 21-1
Current Zoning: B2-Highway Business Shoreland Zoning:

Size of Lot: 65,194 () acres (X)s.f. Lot Frontage: 157' +/-
Existing Use of Property: The existing site currently has a commercial building (Haley's metal shop, Inc.) and garage on site with a laydown/storage area for supplies, vehicles, etc. along with paved and gravel surfaces.

Property currently serviced by:

- X City Road X Public Sewer X Public Water Public Trash
X Private Road Septic System Private Well Private Hauler

Slope Conditions in Area of Construction (if applicable):

- X Flat (0-3% slope) Rolling (3-8% slope) Hilly (8-15% slope) Steep (15%+ Slope)

Are there any wetlands or waterbodies on the site? (Yes) X (No) if yes attach information

Is the project within the 100-year floodplain? (Yes) X (No) if yes attach information

Do you plan to bring fill onto the lot? (Yes) X (No) If yes attach information

Description of proposed use of property:

Project/Proposed Use:

The project proposes the removal of the existing garage with a new showroom/office building to be constructed in its place located on lot 21. In addition a new warehouse building is proposed on lot 21-1. See plans for more detail.

Property to be Serviced by:

City Road Public Sewer Public Water Public Trash
 Private Road Septic System Private Well Private Hauler

Limits of Disturbance: 26,471 +/- () acres (X)s.f.

Net change in impervious cover: + 7,563 () acres (X)s.f.

Is this project part of a larger project? (Yes) (No)

Is the project proposing a new Private or Public Road? (Yes, Private) (Yes, Public) (No)

Is this project within the Urbanized Area/MS4 (see [City Drainage Map](#)) (Yes) (No)

Is the project proposing any Stormwater facilities/BMPs? (Yes) (No)

Will a Traffic Movement Permit (TMP) be required?: (Yes) (No)

If in a Shoreland Zone:

Percent of residential lot coverage (Max 20%): _____

Percent of structure expansion (Max 30%): _____

If Subdivision Review, number of lots proposed: _____

If a Private Way is proposed, number of lots served: _____

If Site Plan Review, you must provide the following information:

Total new square feet footprint of structure: 4,248 SF +/-

Total new square feet paving/parking: 15,973 SF +/-

Waiver Requests (attach details):

1. _____
2. _____
3. _____
4. _____
5. _____

Required Submittal Attachments:

- A. Letters of Approval
 - Fire Department – Contact Chief or Deputy Chief – 282-9986
 - Ability to Serve for Water Service – Maine Water – 282-1543
 - Ability to Serve for Sewer Service – Engineering Department – Tom Milligan 284-9118
 - Police Department – e-911 Road Name Designation – Contact Joanne Fisk 282-5127
 - Ability to Serve for Electrical Service-CMP-1-866-225-4200
 - Letter to Planning Board describing project, Waiver requests, proposed improvements, addressing permit requirements, etc.
- B. Photographs of Site.
- C. Architectural renderings/drawings of proposed buildings, as required.
- D. Engineering Plans, as required.
- E. Stormwater Management Report, as required.

Fees (Due at time of Submission):

- \$75 Nonrefundable Administration Fee is required for every application.
- Refer to “Attachment A Fees and Charges” of the Land Development Regulations for more information. Consult with Planning Staff if you have questions.

Required Signatures:

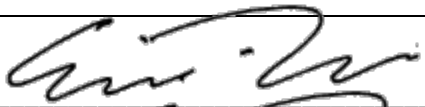
By signing this application, as the foresaid applicant or authorized agent:

- I certify that I have read and completely understand the application;
- I certify that the information contained in this application and its attachments are true and correct;
- I understand that all information provided on this form and all other documents submitted as part of my proposal is a matter of public record;
- I understand that copies of this information may be supplied upon request to an interested party.
- I understand that additional funds may be required through the course of the review for special studies, legal review costs, and/or engineering review.
- I understand that by submitting an application I am not guaranteed a place on any particular agenda. I further understand that the City Planner will place me on an agenda for review when the application is deemed substantially complete.

Will the proposed project cause 1 acre or more of site disturbance? __ (Yes) __ (No)

- **If Yes, applicant is responsible for any required Maine Construction General Permits and shall comply with the requirements of DEP Chapter 500 Stormwater Regulations, as they apply.**

Signature of Applicant:



Date

1/20/26

- AGENT

Signature of Property Owner:



Date

1/20/26

- AGENT

DIGITAL SUBMITTAL REQUIREMENTS FOR ALL SUBMITTALS:

- A) PDF OF SIGNED APPLICATION
- B) PDFs OF ALL DRAWING SETS AND OTHER REQUIRED SUBMITTAL ATTACHMENTS NOTED ABOVE

HARD-COPY SUBMITTAL REQUIREMENTS FOR PLANNING BOARD APPLICATIONS:

- A) SEVEN (7) FULL-SIZE PAPER COPIES OF DRAWING SETS

DIGITAL SUBMITTAL REQUIREMENTS FOR FINAL APPROVAL:

- A) INDIVIDUALLY NAMED PDFs OF EACH DRAWING (NOT A COMBINED PDF SET)
- *Individual Drawing PDF Naming Format: 'PROJECT/SHEETSET NAME_INDIVIDUAL DRAWING NAME.pdf'*
- B) PDF COPIES OF ALL PERMIT APPROVALS, APPLICATIONS, REPORTS, NARRATIVES, LETTERS, ETC.
- C) FINAL CAD REFERENCE FILES IN DWG FORMAT (SURVEY & PROPOSED DESIGN LINEWORK)
- *All drawings & CAD reference files must be to-scale and within the following coordinate systems:
- MAINE STATE PLANE WEST NAD83 (Horizontal Datum) & NAVD88 (Vertical Datum)*

HARD-COPY SUBMITTAL REQUIREMENTS FOR FINAL APPROVAL:

- A) THREE (3) FULL-SIZE PAPER COPIES OF INDIVIDUAL DRAWINGS REQUIRING BOARD SIGNATURE
- B) ONE (1) FULL-SIZE PAPER COPY OF ENTIRE DRAWING SET FOR ENGINEERING RECORDS

PLEASE CONFIRM WITH PLANNING STAFF FOR CLARIFICATION

B. Project Narrative



251 US Route 1, Suite O-2
Falmouth, ME 04150

January 21, 2026

City of Biddeford
205 Main St.
Biddeford, ME 04005

**RE: 539 Elm St. Development
Sketch Plan Review**

Dear City of Biddeford:

Trillium Engineering Group is providing this project narrative for the proposed project located at 539 Elm St. in Biddeford, ME and encompasses both lots 21 and 21-1 on Tax Map 13, per Biddeford tax maps, both under common ownership by Haley Properties, LLC. The existing site consists of a commercial building and garage on lot 21 with paved and gravel parking/laydown areas. The commercial building and garage is occupied/used by Haley's Metal Shop, Inc. On lot 21-1 there is a disturbed area seemingly used as additional parking/laydown area with a trailer structure that is to be relocated. A shared paved drive serves the two lots and extends to the main commercial building on site.

The project proposes the removal of the existing garage building on lot 21 with the construction of a new two-story building with a 1st floor training/conference room & showroom and 2nd floor offices. Other improvements involve the construction of a new warehouse building on lot 21-2 with a paved drive and parking area along with utilities.

Regarding impervious areas, the overall site (including both lots as one common lot for this exercise) has a lot area of 65,194 SF. The existing conditions include the commercial building, garages, paved and gravel surfaces. Combining all existing impervious areas equates to approximately 38,176 SF or 58.6% as a total coverage percentage of the existing lot. The proposed conditions include the addition of a new two-story building in the location of the existing garage, along with a new warehouse/storage building and additional areas of paved surfaces. Combining all proposed impervious areas equates to approximately 45,739 SF or 70.2% as a total coverage percentage of the proposed lot.

All proposed additions are to have associated grading, buffer landscaping, along with appropriate and sufficient E&S control measures during construction. Please see the attached supporting documentation such as site plans, details, etc. for more information.

Thank you for taking the time to review this. Should you have any further questions or require any additional information, please do not hesitate to ask.

Sincerely,

A handwritten signature in black ink, appearing to read 'KB', is written over a light blue horizontal line.

Kyle Berwick
Trillium Engineering Group

C. Deed

WARRANTY DEED

THAT, **THOMAS J. HALEY**, of Saco, County of York, State of Maine, for consideration paid, grant to **HALEY PROPERTIES, LLC**, a Maine Limited Liability Company whose mailing address is 21 Weymouth Street, Saco, ME 04072, with **WARRANTY COVENANTS**, the land in Biddeford, York County, Maine, described as follows:

A certain lot or parcel of land, with the buildings thereon, situated in said Biddeford and bounded and described as follows:

Beginning at an iron pipe driven into the ground on the southeasterly side of Elm Street, so-called, at the westerly corner of St. Mary's Cemetery;

Thence, southeasterly by said Cemetery land one hundred thirty-five and 40/100 (135.40) feet to a stone bound set in the ground;

Thence, continuing southeasterly by said Cemetery land and in the same course one hundred twenty-two and 58/100 (122.58) feet to an iron pipe driven into the ground at the northerly corner of land conveyed by Joseph A. Haley and Ruth A. Haley to Paragon Oil Company;

Thence, southwesterly by said Oil Company land and by a line making an included angle of 80° 27' with the first described line one hundred twenty-five and 94/100 (125.94) feet to land now or formerly of one Davis;

Thence, northwesterly by said Davis land and by a line forming an included angle of 90° 42' with the least described line two hundred fifty-seven and 98/100 (257.98) feet to said Elm Street;

Thence, northeasterly by said Elm Street and by a line which forms an included angle of 89° 18' with the last described line one hundred twenty-six and 59/100 (126.59) feet to the point of beginning.

Also conveying that real estate situated in Biddeford, York County, Maine, situated generally at or near Elm Street at or near Grayson Street as described in a warranty deed to Thomas J. Haley, Brian R. Haley and Joyce Haley-Martin, Trustees of the Ruth A. Haley Intervivos Trust dated October 13, 1995 and recorded in the York County Registry of Deeds in Book 7594, Page 003.

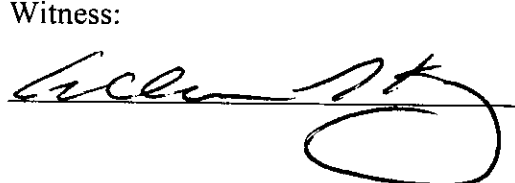
PENDING00002043

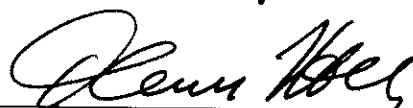
NO R.E. TRANSFER TAX PAID

Being the same premises conveyed by deed of Thomas J. Haley, Brian R. Haley and Joyce Haley-Martin, Trustees of the Ruth A. Haley Intervivos Trust to Thomas J. Haley dated June 11, 2001 and recorded in the York County Registry of Deeds in Book 10746, Page 038.

WITNESS my hand and seal, this 25th day of April, 2006.

Witness:




Thomas J. Haley

STATE OF MAINE
COUNTY OF YORK

April 25, 2006

Then personally appeared the above named Thomas J. Haley, and acknowledged the foregoing instrument to be his free act and deed.

Before me,



~~Notary Public~~

Attorney-at-Law

Return Original Recorded Deed to: ^E
Thomas J. & Elaine R. Haley
21 Weymouth St.
Saco, ME 04072

↑
2p

END OF DOCUMENT

PENDING00002043

D. Agent Authorization



189 Main Street, Suite 200
Yarmouth, ME 04096

November 24, 2025

To Whom It May Concern:

We hereby authorize

Trillium Engineering Group
251 US Route 1, Suite O-2
Falmouth, ME 04150

As our agent to act on our behalf in all matters relating to all processes required in the proposed 539 Elm Renovation project located on Elm St. in Biddeford, ME.

This certification commences on the date of signing and is valid for two years from November 24, 2025, to November 24, 2027.

This certificate will become null and void unless it is agreed between both parties to make an extension.

Sincerely,

A handwritten signature in black ink on a white background, appearing to read 'Eric Dube'.

Eric Dube, P.E.
Trillium Engineering Group

Brian Haley P.E.
Haley's Metal Shop, Inc.
Chief Executive Officer
2025.11.25 09:47:53-05'00'

Signature of Owner(s)/Representative(s)
Haley Properties, LLC

A handwritten signature in black ink on a white background, appearing to read 'Brian Haley'.

Signature of Agent
Eric Dube, P.E.

E. LLC Docs



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: Wed Oct 22 2025 10:51:12. Please print or save for your records.

Legal Name	Charter Number	Filing Type	Status
HALEY PROPERTIES, LLC	20062760DC	LIMITED LIABILITY COMPANY	GOOD STANDING

Filing Date	Expiration Date	Jurisdiction
03/09/2006	N/A	MAINE

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

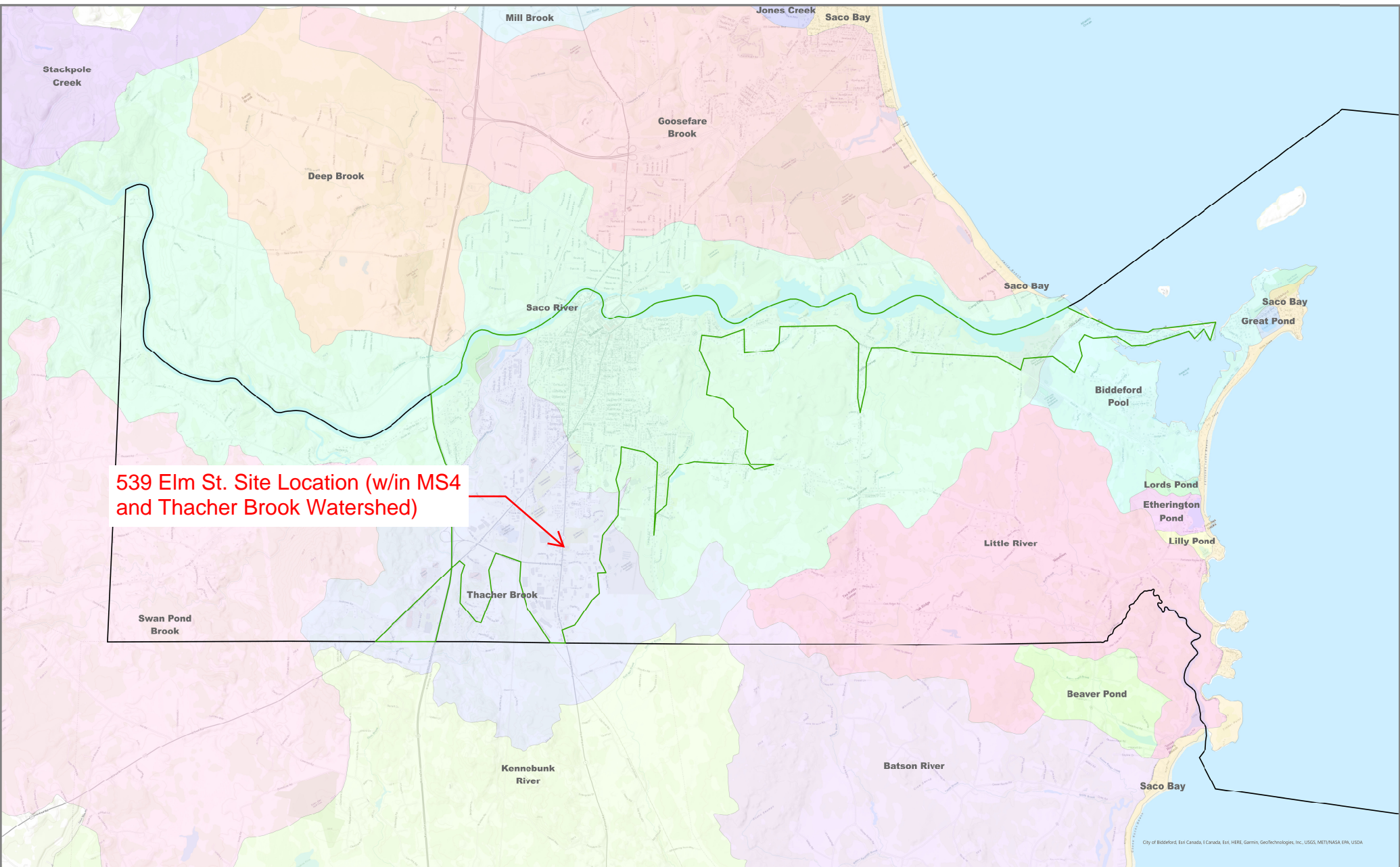
Principal Home Office Address

Physical	Mailing
568 FERRY ROAD SACO, ME 04072	568 FERRY ROAD SACO, ME 04072

Clerk/Registered Agent

Physical	Mailing
JEFFREY S ZDUNCZYK, ESQ 234 MAIN STREET BIDDEFORD, ME 04005	JEFFREY S ZDUNCZYK, ESQ P.O. BOX 468 BIDDEFORD, ME 04005

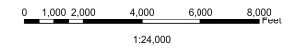
F. Misc. Maps



539 Elm St. Site Location (w/in MS4 and Thacher Brook Watershed)



The City of Biddeford, Maine
Technologies Department - GIS Mapping
 205 Main Street - P.O. Box 586 - Biddeford, Maine 04005-0586
 Tel. 207-571-0660 - Email gis@biddefordmaine.org



Biddeford Watersheds MS4 Boundary

Legend

MS4 Area	Biddeford Pool	Great Pond	Little River	Saco River
Deep Brook	Jones Creek	Lords Pond	Stackpole Creek	Swan Pond Brook
Etherington Pond	Kennebunk River	Lilly Pond	Mill Brook	Thacher Brook
Batson River	Goosefare Brook	Beaver Pond	Biddeford Pool	Biddeford Pool

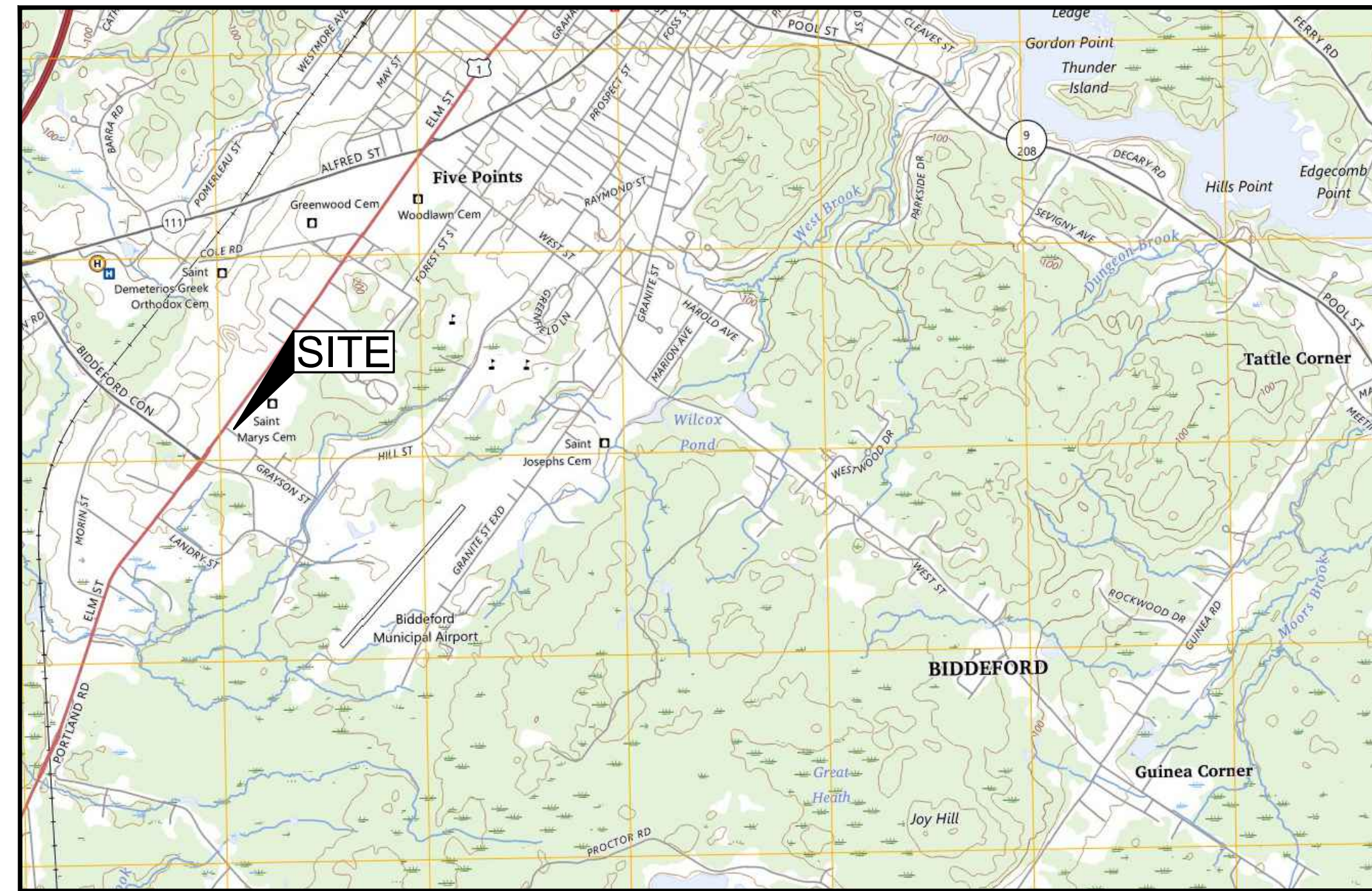
Page 39 of 72

G. Site Plans

PRELIMINARY
NOT FOR CONSTRUCTION

539 ELM STREET DEVELOPMENT

539 ELM STREET, BIDDEFORD MAINE
JANUARY 2026



LOCUS MAP
NOT TO SCALE

DRAWING LIST

- C001 COVER SHEET
- C100 EXISTING CONDITIONS AND DEMOLITION PLAN
- C101 PROPOSED SITE PLAN
- C200 SITE DETAILS
- C300 EROSION CONTROL DETAILS

OWNER:

LANDMARC CONSTRUCTION CORP.
415 CONGRESS ST., SUITE 202
PORTLAND, ME 04101

CONSULTANTS:

TRILLIUM ENGINEERING GROUP
251 US ROUTE 1, SUITE 2
FALMOUTH, ME 04105

539 ELM STREET
SITE DEVELOPMENT

539 ELM STREET
BIDDEFORD, MAINE

ISSUED NUMBER	DESCRIPTION	DATE	BY	
			ED	ED
A	PRELIMINARY REVIEW	12/2/2025		
B	ISSUED FOR SKETCH PLAN REVIEW	1/21/2026		

SHEET TITLE:

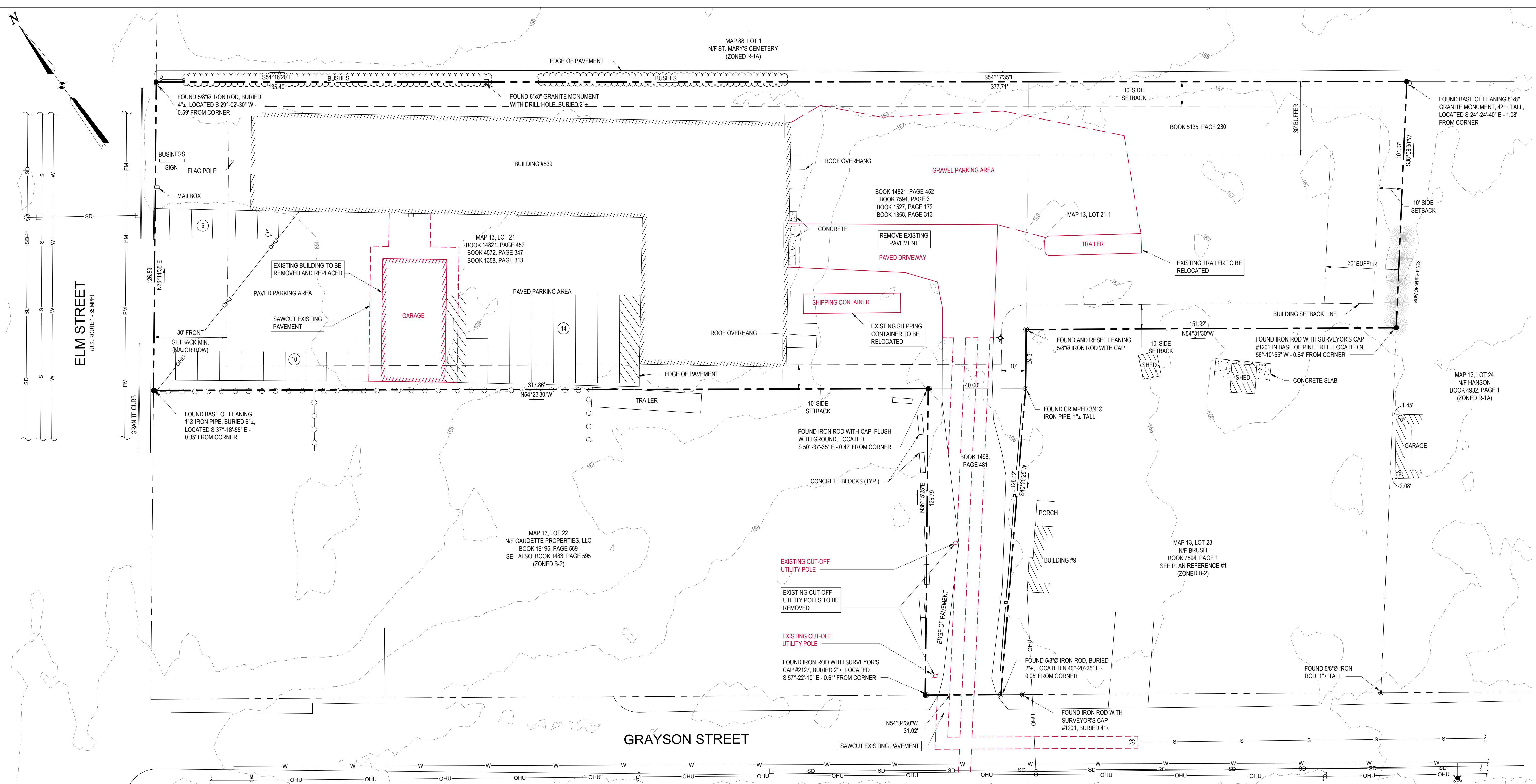
COVER SHEET

DESIGNED BY: BVD
DRAWN BY: BVD
DATE: 1/20/2026
PROJECT NUMBER: 25-327

C001

539 ELM STREET
SITE DEVELOPMENT

539 ELM STREET
BIDDEFORD, MAINE



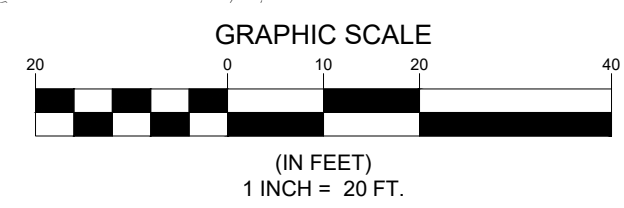
1 EXISTING CONDITIONS AND DEMOLITION PLAN

- GENERAL NOTES** 1" = 20'
- BOUNDARY SURVEY PERFORMED BY DOW & COULMAGE, INC. PLAN TITLED "PLAN SHOWING BOUNDARY SURVEY MADE FOR HALEY PROPERTIES, LLC" DATED FEBRUARY 2, 2023.
 - THE CONTRACT WORK TO BE PERFORMED ON THIS PROJECT CONSISTS OF FURNISHING ALL REQUIRED LABOR, MATERIALS, EQUIPMENT, IMPLEMENTS, PARTS AND SUPPLIES NECESSARY FOR OR APPURTINANCE TO, THE INSTALLATION OF CONSTRUCTION IMPROVEMENTS IN ACCORDANCE WITH THESE DRAWINGS AND AS FURTHER ELABORATED IN ANY ACCOMPANYING SPECIFICATIONS.
 - THE WORK SHALL BE PERFORMED IN A THOROUGH WORKMANLIKE MANNER. ALL CONTRACTORS TO CONFORM TO ALL APPLICABLE OSHA STANDARDS. ANY REFERENCE TO A SPECIFICATION OR DESIGNATION OF THE AMERICAN SOCIETY FOR TESTING MATERIALS, FEDERAL SPECIFICATIONS, OR OTHER STANDARDS, CODES OR ORDERS, REFERS TO THE MOST RECENT (LATEST) SPECIFICATION OR DESIGNATION.
 - ALL CONSTRUCTION WITHIN THE CITY RIGHT OF WAY SHALL COMPLY WITH CITY PUBLIC WORKS STANDARDS. ALL CONSTRUCTION WITHIN A STATE RIGHT OF WAY SHALL COMPLY WITH MAINE D.O.T. STANDARDS. ALL UTILITY CONSTRUCTION SHALL CONFORM TO RESPECTIVE UTILITY STANDARDS.
 - THE OWNER IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS REQUIRED BY THE CITY PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FROM THE CITY REQUIRED TO PERFORM ALL THE WORK (STREET OPENINGS, BUILDING PERMIT, ETC.). THE CONTRACTOR SHALL POST ALL BONDS AS REQUIRED, PAY ALL FEES, PROVIDE PROOF OF INSURANCE AND PROVIDE TRAFFIC CONTROL NECESSARY FOR THE WORK.
 - PRIOR TO CONSTRUCTION, THE SITE CONTRACTOR IS TO INFORM ALL AREA UTILITY COMPANIES AND GOVERNMENTAL AGENCIES OF PLANNED CONSTRUCTION. THE SITE CONTRACTOR IS REQUIRED TO CONTACT DIG-SAFE (1-800-224-4877) AT LEAST 3 BUSINESS DAYS PRIOR TO ANY EXCAVATION TO VERIFY ALL UNDERGROUND AND OVERHEAD UTILITY LOCATIONS.
 - THE PROJECT DRAWINGS ARE GENERALLY SCHEMATIC AND INDICATE THE POSSIBLE LOCATION OF EXISTING UNDERGROUND UTILITIES. INFORMATION ON EXISTING UTILITIES HAS BEEN COMPILED FROM AVAILABLE INFORMATION INCLUDING UTILITY COMPANY MAPS, MUNICIPAL RECORD MAPS, AND FIELD SURVEY. IT IS NOT GUARANTEED TO BE CORRECT OR COMPLETE. UTILITIES ARE SHOWN TO ALERT THE CONTRACTOR TO THEIR PRESENCE. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING ACTUAL LOCATIONS AND ELEVATIONS OF ALL UTILITIES, INCLUDING SERVICES WHICH THOSE SERVICES ARE TO BE LEFT IN PLACE. THE CONTRACTOR IS TO PROVIDE ADEQUATE MEANS OF SUPPORT AND PROTECTION DURING THE EXCAVATING AND BACKFILLING OPERATIONS. SHOULD ANY UNCHARTERED OR INCORRECTLY CHARTERED UTILITIES BE FOUND, THE CONTRACTOR SHALL CONTACT THE DESIGN ENGINEER IMMEDIATELY FOR DIRECTIONS BEFORE PROCEEDING FURTHER WITH THE WORK IN THIS AREA.
 - OSHA REGULATIONS MAKE IT UNLAWFUL TO OPERATE CRANES, BOOMS, HOISTS, ETC. WITHIN TEN FEET (10') OF ANY ELECTRIC LINE. IF THE CONTRACTOR MUST OPERATE CLOSER THAN 10', THE CONTRACTOR MUST CONTACT THE POWER COMPANY TO MAKE ARRANGEMENTS FOR PROPER SAFEGUARDS BEFORE ENDOUCHING ON THIS REQUIREMENT.
 - IT IS THE CONTRACTOR'S RESPONSIBILITY TO EXAMINE ALL PLANS, APPROVALS, AND DETAILS FOR ADDITIONAL INFORMATION. THE CONTRACTOR SHALL VERIFY ALL THE SITE CONDITIONS IN THE FIELD AND CONTACT THE DESIGN ENGINEER IF THERE ARE ANY DISCREPANCIES REGARDING THE CONSTRUCTION DOCUMENTS AND/OR FIELD CONDITIONS SO THAT AN APPROPRIATE REVISION CAN BE MADE PRIOR TO BIDDING.
 - THE CONTRACTOR SHALL REFERENCE ARCHITECTURAL PLANS FOR EXACT DIMENSIONS AND CONSTRUCTION DETAILS OF THE BUILDING AREA. BUILDING AND DRIVEWAYS SHOWN ARE CONCEPTUAL. ALL SITE DIMENSIONS ARE REFERENCED TO PROPERTY LINES, THE FACE OF CURBS, OUTSIDE FACE OF WALLS, OR EDGE OF PAVING UNLESS OTHERWISE NOTED.
 - ALTERNATIVE METHODS AND PRODUCTS OTHER THAN THOSE SPECIFIED MAY BE USED IF REVIEWED AND APPROVED IN WRITING BY THE OWNER, DESIGN ENGINEER, AND APPROPRIATE GOVERNMENTAL AGENCY PRIOR TO INSTALLATION.
 - THE CONTRACTOR SHALL RESTORE ALL UTILITY STRUCTURES, PIPE, UTILITIES, PAVEMENT, CURBS, SIDEWALKS, AND LANDSCAPED AREAS DISTURBED BY CONSTRUCTION TO AS GOOD AS BEFORE BEING DISTURBED AS DETERMINED BY CITY CODE ENFORCEMENT OFFICIALS. ANY DAMAGES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

CITY OF BIDDEFORD ZONING SUMMARY
TAX MAP 13 / LOT 21, 21-1
ZONE: B2 - HIGHWAY BUSINESS
(WATER AND SEWER PROVIDED)

	REQUIRED
MIN. LOT AREA	10,000 S.F. / UNIT
STREET FRONTAGE	150'
MIN. FRONT SETBACK (MAJOR R.O.W.)	30'
MIN. REAR SETBACK	10'
MIN. SIDE SETBACK	10'
MAX. BUILDING HEIGHT	3 STORIES / 35'
MAX. LOT COVERAGE *	N/A

MAXIMUM LOT COVERAGE: THE MAXIMUM LOT COVERAGE SHALL BE AS FOLLOWS:
A. WITHIN THE AREA SOUTH OF ROUTE 9 AND WEST OF THE NEWTOWN ROAD: 10%.
B. WITHIN THE AREA SOUTH OF ROUTE 9 AND EAST OF THE NEWTOWN ROAD: 30%.
C. WITHIN THE AREA NORTH OF ROUTE 9: NO MAXIMUM EXCEPT AS PROVIDED FOR IN 5, RESTRICTED DEVELOPMENT AREAS.



LEGEND

EXISTING	DESCRIPTION	EXISTING	DESCRIPTION
	GRANITE MONUMENT - 3' OFFSET		SEWER LINE
	IRON PIN FOUND/SET		SEWER MANHOLE
	IRON ROD FOUND		DRAINAGE MANHOLE
	CAPPED IRON ROD FOUND		CATCH BASIN
	DRILL HOLE FOUND		STORMDRAIN
	GRANITE MONUMENT FOUND		UNDERDRAIN
	STREET LINE		SILT FENCE
	LOT SETBACKS		TEMP. STONE CHECK DAM
	PROPERTY LINE		GRADING AND FLOW DIRECTION
	ABUTTER LINE		HAY BALES
	*NO CUT-BUFFER		EROSION CONTROL BLANKET
	WETLANDS		STORMWATER BOUNDARY
	EDGE OF ROAD/TRAVELED WAY		STORMWATER FLOW (T)
	SOIL TEST PIT		FACE OF LEDGE OUTCROP
	CONTOUR		DECDUOUS TREE
	SPOT GRADE		CONIFEROUS TREE
	GAS SHUT-OFF		TREE LINE
	UTILITY POLE		SITE LIGHTING
	OVERHEAD UTILITIES		STONE WALL
	UNDERGROUND ELECTRICAL		
	ELECTRICAL TRANSFORMER		
	FIRE HYDRANT		
	WATER LINE		
	WATER GATE		

ISSUED

NUMBER	DESCRIPTION	DATE
A <td>PRELIMINARY REVIEW <td>12/22/2025</td> </td>	PRELIMINARY REVIEW <td>12/22/2025</td>	12/22/2025
B <td>ISSUED FOR SKETCH PLAN REVIEW <td>1/21/2026</td> </td>	ISSUED FOR SKETCH PLAN REVIEW <td>1/21/2026</td>	1/21/2026

SHEET TITLE:
EXISTING CONDITIONS & DEMO PLAN

DESIGNED BY: BVD
DRAWN BY: BVD
DATE: 1/20/2026
PROJECT NUMBER: 25-327

C100

LEGEND					
EXISTING	DESCRIPTION	PROPOSED	EXISTING	DESCRIPTION	PROPOSED
■	MONUMENT	□	—W—	WATER LINE	—W—
●	IRON REBAR/ROD/PIPE, LOCATED BY TEG	○	—S—	SEWER LINE	—S—
○	IRON REBAR/ROD/PIPE, LOCATED BY OTHERS	○	—DMH—	SEWER MANHOLE	● SMH-1
—	STREET LINE	—	—DMH—	DRAINAGE MANHOLE	● DMH-1
—	LOT SETBACKS	—	—CB—	CATCH BASIN	■ CB-1
—	PROPERTY LINE	—	—SD—	STORMDRAIN	—SD—
—	ABUTTER LINE	—	—UD—	UNDERDRAIN	—UD—
—	"NO CUT" BUFFER	—	—SF—	SILT FENCE	—SF—
—	WETLANDS	—	—DT—	DECIDUOUS TREE	—DT—
—	EDGE OF ROAD/TRAVELED WAY	—	—CT—	CONIFEROUS TREE	—CT—
—	SOIL TEST PIT	—	—TL—	TREE LINE	—TL—
—	CONTOUR	—	—SL—	SITE LIGHTING	—SL—
—	SPOT GRADE	—			
—	GAS SHUT-OFF	—			
—	UTILITY POLE	—			
—	OVERHEAD UTILITIES	—			
—	UNDERGROUND ELECTRICAL	—			
—	ELECTRICAL TRANSFORMER	—			
—	FIRE HYDRANT	—			

**CITY OF BIDDEFORD
PLANNING BOARD APPROVAL:**

CHAIR: _____ DATE: _____

PARKING CALCULATION:
INDUSTRIAL BUSINESS: 1 SPACE PER EMPLOYEE ON THE MAXIMUM WORKING SHIFT.
TOTAL NUMBER OF EMPLOYEES: 63
TOTAL NUMBER OF ON-SITE WORKERS: 14
EST. NUMBER OF CUSTOMERS: 4 - 6 PER DAY

EXISTING PARKING SPACES:
(28) - 9'x18' STANDARD PARKING SPACES
(1) - ADA ACCESSIBLE PARKING SPACE
(29) - TOTAL EXISTING PARKING SPACES

PROPOSED PARKING SPACES:
(43) - 9'x18' STANDARD PARKING SPACES
(1) - ADA ACCESSIBLE PARKING SPACE
(44) - TOTAL PROPOSED PARKING SPACES

- GENERAL NOTES**
- LOCATIONS OF UTILITIES ARE APPROXIMATE.
 - IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO HAVE EACH UTILITY COMPANY LOCATE THEIR INDIVIDUAL SERVICES PRIOR TO THE START OF CONSTRUCTION.
 - PRIOR TO THE BEGINNING OF CONSTRUCTION, THE CONTRACTOR SHALL SECURE A STREET OPENING PERMIT FROM CITY OF BIDDEFORD PUBLIC WORKS DEPARTMENT. NO FEE WILL BE CHARGED FOR THIS PERMIT.
 - ALL THE UTILITY WORK SHALL BE DONE BY OTHERS.
 - PROPERTY MARKERS AND STREET LINE MONUMENTS SHALL BE PROPERLY PROTECTED AND SHALL NOT BE DISTURBED. IF DISTURBED, THEY SHALL BE REPLACED BY A LICENSED SURVEYOR AT THE CONTRACTOR'S EXPENSE.
 - ALL EXISTING CATCH BASINS, MANHOLES, CONNECTIONS, AND OUTLET PIPING SHALL BE CLEANED AND LEFT IN SATISFACTORY OPERATING CONDITION AFTER CONSTRUCTION HAS BEEN COMPLETED. NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK.
 - ALL LAWN AREAS, WALKWAYS, AND DRIVEWAYS OUTSIDE THE WORK AREA, DAMAGED BY THE CONTRACTOR, SHALL BE REPAIRED BY THE CONTRACTOR AT NO EXPENSE TO THE CITY.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PRESERVATION OF ALL TREES AND SHRUBS ON THE PROJECT WHICH ARE NOT REMOVED.
 - EXISTING PAVEMENT SHALL BE SAW CUT AND BUTTED TO THE NEW PAVEMENT. NO FEATHERING OF PAVEMENT WILL BE PERMITTED.
 - EXISTING DRAINAGE STRUCTURES SHALL NOT BE DISTURBED UNLESS OTHERWISE NOTED.
 - ALL EXISTING DRAINAGE PIPES TO BE ABANDONED SHALL BE PLUGGED WITH CONCRETE OR AS DIRECTED BY THE PROJECT ENGINEER.
 - BEFORE CONNECTION NEW PIPES TO AN EXISTING SEWER LINE, THE CONTRACTOR SHALL NOTIFY THE SEWER MAINTENANCE DIVISION OF THE CITY PUBLIC WORKS DEPARTMENT. NO WORK SHALL BE DONE WITHOUT THEIR APPROVAL.
 - NO ADDITIONAL PAYMENT WILL BE MADE FOR GRADING SIDE SLOPES OF DRIVEWAYS.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY TRENCH PAVEMENT THAT HAS EXPERIENCED EXCESSIVE SETTLEMENT, CRACKING, OR OPENING OF JOINTS, REPAIRS MAY INCLUDE OVERLAY, REMOVAL OF UNACCEPTABLE MATERIALS, COMPLETE REPLACEMENT, JOINT SEALING, OR REBUTTING PAVEMENT AS REQUIRED. THIS WORK MAY BE NECESSARY AFTER THE FINAL ACCEPTANCE OF WORK OR PRIOR TO THE END OF THE ONE-YEAR GUARANTEE. THIS WORK SHALL BE DONE AT THE CONTRACTOR'S EXPENSE.
 - ALL MANHOLE FRAMES SHALL BE SUPPLIED WITH SOLID MANHOLE COVERS, SEE STANDARD DETAIL.
 - NEW CATCH BASINS SHALL BE INSTALLED WITH A TYPE A-4 CATCH BASIN INLET STONE.
 - NO ADDITIONAL PAYMENT WILL BE MADE FOR THE REMOVAL OF EXISTING PIPES.
 - ALL GRANITE CATCH BASIN STONES, MANHOLE FRAMES AND COVERS TO BE REMOVED SHALL BE DELIVERED TO THE CITY LOCATION AS DIRECTED. NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK. THESE EXISTING MATERIALS MAY BE REUSED AS DIRECTED BY THE PROJECT ENGINEER.
 - ALL TERMINAL MANHOLES SHALL HAVE CHANNELS CONSTRUCTED STRAIGHT THROUGH THE MANHOLE.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATION AND RECONNECTING EXISTING SEWER LATERALS TO NEW SEWER. PAYMENT WILL BE UNDER THE RESPECTIVE UNIT BID ITEM AS SPECIFIED IN THE CONTRACT DOCUMENT.

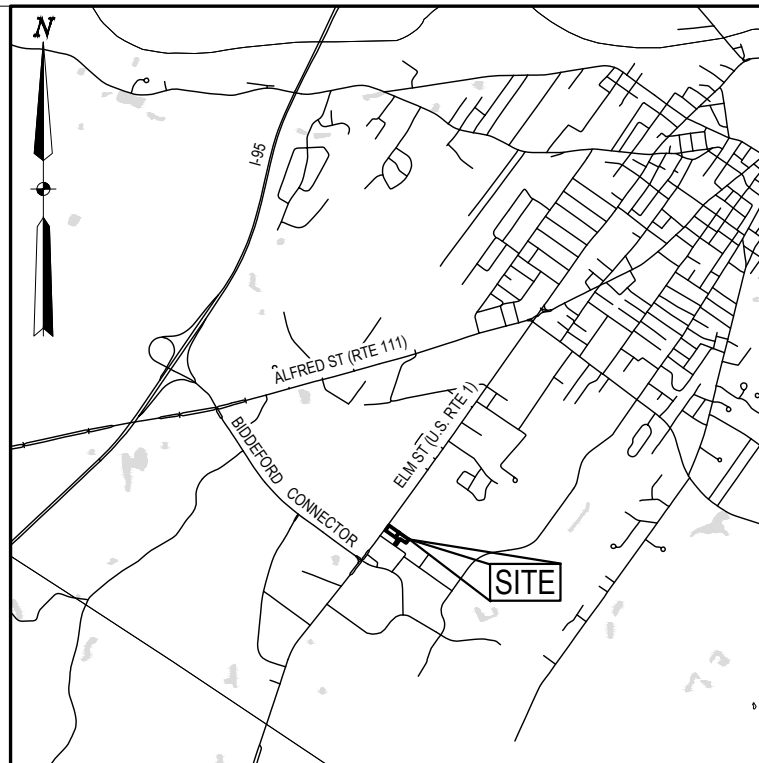
IMPERVIOUS AREA TABLE

LOT AREA (S.F.)	65,194	
TYPE OF COVER	EXISTING IMP. AREA (S.F.)	PROPOSED IMP. AREA (S.F.)
BUILDING	14,032	16,954
PAVEMENT	24,144	28,785
TOTAL	38,176	45,739
CHANGE FROM EXISTING (+/-)	-	7,563
PERCENT IMPERVIOUS	58.6%	70.2%

CITY OF BIDDEFORD ZONING SUMMARY
TAX MAP 13 / LOT 21, 21-1
ZONE: B2 - HIGHWAY BUSINESS (WATER AND SEWER PROVIDED)

	REQUIRED	PROPOSED
MIN. LOT AREA	10,000 S.F. / UNIT	65,194 S.F.
STREET FRONTAGE	150'	157±
MIN. FRONT SETBACK (MAJOR R.O.W.)	30'	39' (EX)
MIN. REAR SETBACK	10'	30' (PR)
MIN. SIDE SETBACK	10'	3' (EX)
MAX. BUILDING HEIGHT	3 STORIES / 35'	< 35'
MAX. LOT COVERAGE *	N/A	70.2%

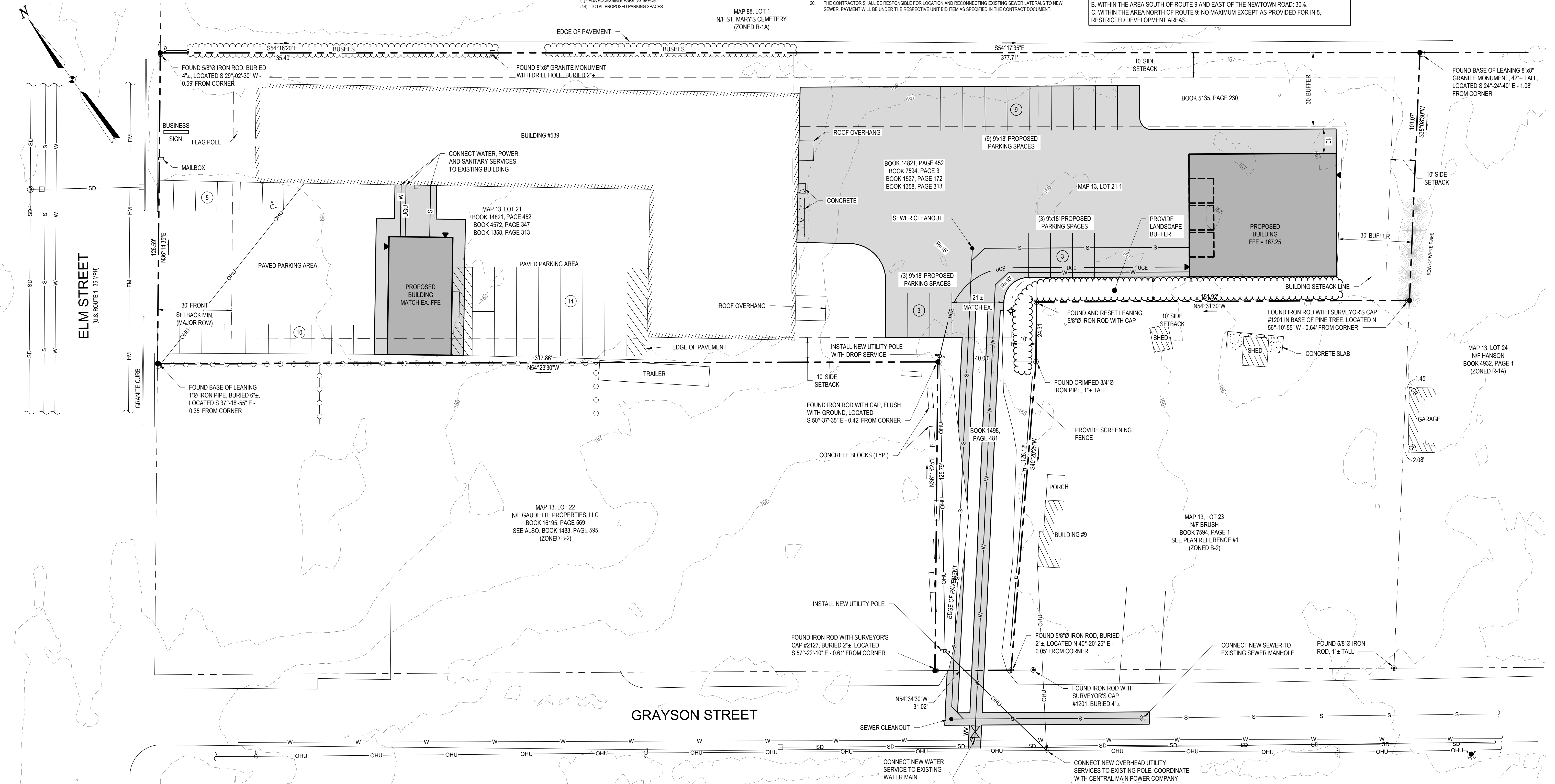
MAXIMUM LOT COVERAGE: THE MAXIMUM LOT COVERAGE SHALL BE AS FOLLOWS:
A. WITHIN THE AREA SOUTH OF ROUTE 9 AND WEST OF THE NEWTOWN ROAD: 10%
B. WITHIN THE AREA SOUTH OF ROUTE 9 AND EAST OF THE NEWTOWN ROAD: 30%
C. WITHIN THE AREA NORTH OF ROUTE 9: NO MAXIMUM EXCEPT AS PROVIDED FOR IN 5, RESTRICTED DEVELOPMENT AREAS.



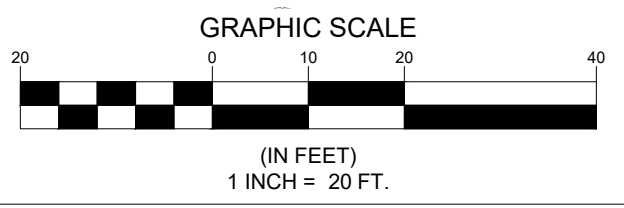
CLIENT:
**LANDMARC
CONSTRUCTION CORP.**

415 CONGRESS ST.
PORTLAND, ME 04101

PRELIMINARY
NOT FOR CONSTRUCTION



1 PROPOSED SITE PLAN
1" = 20'



**539 ELM STREET
SITE DEVELOPMENT**
539 ELM STREET
BIDDEFORD, MAINE

ISSUED

NUMBER	DESCRIPTION	BY	DATE
A	PRELIMINARY REVIEW		12/22/2025
B	ISSUED FOR SKETCH PLAN REVIEW		1/21/2026

SHEET TITLE:
**PROPOSED SITE
PLAN**

DESIGNED BY: BVD
DRAWN BY: BVD
DATE: 1/20/2026
PROJECT NUMBER: 25-327

C101

EROSION AND SEDIMENTATION NOTES

1. THIS PLAN HAS BEEN DEVELOPED TO PROVIDE A STRATEGY FOR DEALING WITH SOIL EROSION AND SEDIMENTATION DURING AND AFTER PROJECT CONSTRUCTION. THIS PLAN IS BASED ON THE STANDARD AND SPECIFICATIONS FOR EROSION PREVENTION AS CONTAINED IN THE MAINE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION. "MAINE EROSION AND SEDIMENT CONTROL BMPs" PUBLISHED BY THE MAINE DEP, LATEST EDITION.

GENERAL EROSION AND SEDIMENTATION CONTROL PRACTICES

1. EROSION/SEDIMENTATION CONTROL DEVICES

THE FOLLOWING EROSION SEDIMENTATION CONTROL DEVICES ARE PROPOSED FOR CONSTRUCTION ON THIS PROJECT. INSTALL THESE DEVICES AS INDICATED ON THE PLANS.

- SILT FENCE:** SILT FENCE WILL BE INSTALLED ALONG THE DOWN GRADING EDGES OF DISTURBED AREAS TO TRAP RUNOFF BORNE SEDIMENTS UNTIL THE SITE IS STABILIZED. IN AREAS WHERE STORMWATER DISCHARGES THE SILT FENCE WILL BE REINFORCED WITH HAY BALES TO HELP MAINTAIN THE INTEGRITY OF THE SILT FENCE AND TO PROVIDE ADDITIONAL TREATMENT.
- HAY BALES TO BE PLACED IN LOW FLOW DRAINAGE SWALES AND PATHS TO TRAP SEDIMENTS AND REDUCE RUNOFF VELOCITIES. DO NOT PLACE HAY BALES IN FLOWING WATER OR STREAMS.
- RIPRAP: PROVIDE RIPRAP IN AREAS WHERE CULVERTS DISCHARGE OR AS SHOWN ON THE PLANS.
- LOAM, SEED, & MULCH: ALL DISTURBED AREAS, WHICH ARE NOT OTHERWISE TREATED, SHALL RECEIVE PERMANENT SEEDING AND MULCH TO STABILIZE THE DISTURBED AREAS. THE DISTURBED AREAS WILL BE REVEGETATED WITHIN 5 DAYS OF FINAL GRADING. SEEDING REQUIREMENTS ARE PROVIDED AT THE END OF THIS SPECIFICATION.
- STRAW AND HAY MULCH: USED TO COVER DENUDEED AREAS UNTIL PERMANENT SEED OR EROSION CONTROL MEASURES ARE IN PLACE. MULCH BY ITSELF CAN BE USED ON SLOPES LESS THAN 15% IN SUMMER AND 8% IN WINTER. ALL OTHER SLOPES MUST BE COVERED WITH JUTE MESH OVER MULCH, OR CURLEX II OR EXCELISOR MAY BE USED IN PLACE OF JUTE MESH AND MULCH OVER LOAM AND SEED.
- MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL DRAINAGE WAYS WITH A SLOPE GREATER THAN 3% FOR SLOPES EXPOSED TO DIRECT WINDS AND FOR ALL OTHER SLOPES GREATER THAN 8%. VEGETATED DRAINAGE SWALES SHALL BE LINED WITH EXCELISOR OR CURLEX.
- TEMPORARY EROSION/SEDIMENTATION CONTROL MEASURES**
PROVIDE THE FOLLOWING TEMPORARY EROSION/SEDIMENTATION CONTROL MEASURES DURING CONSTRUCTION OF THE DEVELOPMENT:
 - SILTATION FENCE ALONG THE DOWNGRADIANT SIDE OF THE PARKING AREAS AND OF ALL FILL SECTIONS. THE SILTATION FENCE WILL REMAIN IN PLACE UNTIL THE SITE IS 85% REVEGETATED.
 - HAY BALES PLACED AT KEY LOCATIONS TO SUPPLEMENT THE SILT FENCE.
 - PROTECT TEMPORARY STOCKPILES OF STUMPS, GRUBBING, OR COMMON EXCAVATION AS FOLLOWS:
 - SOIL STOCKPILE SIDE SLOPES SHALL NOT EXCEED 2:1.
 - AVOID PLACING TEMPORARY STOCKPILES IN AREAS WITH SLOPES OVER 10 PERCENT, OR NEAR DRAINAGE SWALES. SEE ITEM 3 IN CONSTRUCTION PHASE NOTES BELOW.
 - STABILIZE STOCKPILES WITHIN 15 DAYS BY TEMPORARILY SEEDING WITH A HYDROSEED METHOD CONTAINING AN EMULSIFIED MULCH TACKIFIER OR BY COVERING THE STOCKPILE WITH MULCH.
 - SURROUND STOCKPILE SOIL WITH SILTATION FENCE AT BASE OF PILE.
 - ALL DENUDEED AREAS WHICH HAVE BEEN ROUGH GRADED AND ARE NOT LOCATED WITHIN THE BUILDING PAD, OR PARKING AND DRIVEWAY SUBBASE AREA SHALL RECEIVE MULCH WITHIN 30 DAYS OF INITIAL DISTURBANCE OF SOIL OR WITHIN 15 DAYS AFTER COMPLETING THE ROUGH GRADING OPERATIONS. IN THE EVENT THE CONTRACTOR COMPLETES FINAL GRADING AND INSTALLATION OF LOAM AND SOD WITHIN THE TIME PERIODS PRESENTED ABOVE, INSTALLATION OF MULCH AND NETTING, WHERE APPLICABLE, IS NOT REQUIRED.
 - IF WORK IS CONDUCTED BETWEEN OCTOBER 15 AND APRIL 15, ALL DENUDEED AREAS ARE TO BE COVERED WITH HAY MULCH. APPLIED AT TWICE THE NORMAL APPLICATION RATE, AND ANCHORED WITH FABRIC NETTING. THE PERIOD BETWEEN FINAL GRADING AND MULCHING SHALL BE REDUCED TO A 15 DAY MAXIMUM.
 - TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED ONCE THE SITE HAS BEEN STABILIZED OR IN AREAS WHERE PERMANENT EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
- PERMANENT EROSION CONTROL MEASURES**
THE FOLLOWING PERMANENT CONTROL MEASURES ARE REQUIRED BY THIS EROSION/SEDIMENTATION CONTROL PLAN:
 - ALL AREAS DISTURBED DURING CONSTRUCTION, BUT NOT SUBJECT TO OTHER RESTORATION (PAVING, RIPRAP, ETC.), WILL BE LOAMED, LIMED, FERTILIZED AND SEEDED. NATIVE TOPSOIL SHALL BE STOCKPILED AND REUSED FOR FINAL RESTORATION WHEN IT IS OF SUFFICIENT QUALITY.
 - SLOPES GREATER THAN 2:1 WILL RECEIVE RIPRAP.

CONSTRUCTION PHASE

THE FOLLOWING GENERAL PRACTICES WILL BE USED TO PREVENT EROSION DURING CONSTRUCTION OF THIS PROJECT.

- ONLY THOSE AREAS UNDER ACTIVE CONSTRUCTION WILL BE CLEARED AND LEFT IN AN UNTREATED OR UNVEGETATED CONDITION. IF FINAL GRADING, LOAMING AND SEEDING WILL NOT OCCUR WITHIN 15 DAYS, SEE ITEM NO. 4.
- PRIOR TO THE START OF CONSTRUCTION IN A SPECIFIC AREA, SILT FENCING AND/OR HAY BALES WILL BE INSTALLED AT THE TOE OF SLOPE AND IN AREAS AS LOCATED ON THE PLANS TO PROTECT AGAINST ANY CONSTRUCTION RELATED EROSION. IMMEDIATELY FOLLOWING CONSTRUCTION OF CULVERTS AND SWALES, RIP RAP APRONS SHALL BE INSTALLED, AS SHOWN ON THE PLANS.
- TOPSOIL WILL BE STOCKPILED WHEN NECESSARY IN AREAS WHICH HAVE MINIMUM POTENTIAL FOR EROSION AND WILL BE KEPT AS FAR AS POSSIBLE FROM THE EXISTING DRAINAGE COURSE. NO STOCKPILE SHALL BE CLOSER THAN 100' OF A RESOURCE INCLUDING, BUT NOT LIMITED TO, WETLANDS, STREAMS, AND OPEN WATER BODIES. ALL STOCKPILES SHALL HAVE A SILTATION FENCE BELOW THEM REGARDLESS OF TIME OF PRESENCE. ALL STOCKPILES EXPECTED TO REMAIN LONGER THAN 15 DAYS SHALL BE:
 - TREATED WITH ANCHORED MULCH (WITHIN 5 DAYS OF THE LAST DEPOSIT OF STOCKPILED SOIL).
 - SEEDED WITH CONSERVATION MIX AND MULCHED IMMEDIATELY.
 - INSTALL SILT FENCE AROUND STOCKPILE AT BASE OF PILE.
 STOCKPILES TO HAVE SILT FENCE INSTALLED AT TIME OF ESTABLISHMENT AT BASE OF PILE.
- ALL DISTURBED AREAS EXPECTED TO REMAIN LONGER THAN 30 DAYS SHALL BE EITHER:
 - TREATED WITH ANCHORED MULCH IMMEDIATELY, OR
 - SEEDED WITH CONSERVATION MIX OF ANNUAL RYE GRASS (0.9 LBS/1000 SQ. FT) AND MULCHED IMMEDIATELY.
- ALL GRADING WILL BE HELD TO A MAXIMUM 2:1 SLOPE WHERE PRACTICAL. ALL SLOPES WILL BE STABILIZED WITH PERMANENT SEEDING, OR WITH STONE, WITHIN 5 DAYS AFTER FINAL GRADING IS COMPLETE. (SEE POST-CONSTRUCTION REVEGETATION FOR SEEDING SPECIFICATION.)
- ALL CULVERTS WILL BE PROTECTED WITH STONE RIPRAP (D50 = 6" UNLESS OTHERWISE SPECIFIED) AT INLETS AND OUTLETS.

POST-CONSTRUCTION REVEGETATION

THE FOLLOWING GENERAL PRACTICES WILL BE USED TO PREVENT EROSION AS SOON AS AN AREA IS READY TO UNDERGO FINAL GRADING.

- A MINIMUM OF 4" OF LOAM WILL BE SPREAD OVER DISTURBED AREAS AND GRADED TO A UNIFORM DEPTH AND NATURAL APPEARANCE, OR STONE WILL BE PLACED ON SLOPES TO STABILIZE SURFACES.
- IF FINAL GRADING IS REACHED DURING THE NORMAL GROWING SEASON (4/15 TO 9/15), PERMANENT SEEDING WILL BE DONE AS SPECIFIED BELOW. PRIOR TO SEEDING, LIMESTONE SHALL BE APPLIED AT A RATE OF 138 LBS/1000 SQ. FT. AND 10:20:20 FERTILIZER AT A RATE OF 18.4 LBS/1000 SQ.FT WILL BE APPLIED. BROADCAST SEEDING AT THE FOLLOWING RATES:

LAWNS	SWALES
KENTUCKY BLUEGRASS 0.46 LBS/1000 SF.	RED TOP 0.05 LBS/1000 SF.
CREeping RED FESCUE 0.46 LBS/1000 SF.	TALL FESCUE 0.46 LBS/1000 SF.
PERENNIAL RYE GRASS 0.11 LB/1000 SF.	
- AN AREA SHALL BE MULCHED IMMEDIATELY AFTER IS HAS BEEN SEEDED. MULCHING SHALL CONSIST OF HAY MULCH, HYDRO-MULCH, JUTE NET OVER MULCH, PRE-MANUFACTURED EROSION MATS OR ANY SUITABLE SUBSTITUTE DEEMED ACCEPTABLE BY THE DESIGNER.
 - HAY MULCH SHALL BE APPLIED AT THE RATE OF 2 TONS PER ACRE. HAY MULCH SHALL BE SECURED BY EITHER: (NOTE: SOIL SHALL NOT BE VISIBLE)
 - BEING DRIVEN OVER BY TRACKED CONSTRUCTION EQUIPMENT ON GRADES OF 5% AND LESS.
 - BLANKETED BY TACKED PHOTODEGRADABLE/BIODEGRADABLE NETTING, OR WITH SPRAY, ON GRADES GREATER THAN 5%.
 - SEE NOTE 6, GENERAL NOTES, AND NOTE 8, WINTER CONSTRUCTION.
 - HYDRO-MULCH SHALL CONSIST OF A MIXTURE OF EITHER ASPHALT, WOOD FIBER OR PAPER FIBER AND WATER SPRAYED OVER A SEEDED AREA. HYDRO-MULCH SHALL NOT BE USED BETWEEN 9/15 AND 4/15.
- CONSTRUCTION SHALL BE PLANNED TO ELIMINATE THE NEED FOR SEEDING BETWEEN SEPTEMBER 15 AND APRIL 15. SHOULD SEEDING BE NECESSARY BETWEEN SEPTEMBER 15 AND APRIL 15 THE FOLLOWING PROCEDURE SHALL BE FOLLOWED. ALSO REFER TO NOTE 9 OF WINTER CONSTRUCTION.
 - ONLY UNFROZEN LOAM SHALL BE USED.
 - LOAMING, SEEDING AND MULCHING WILL NOT BE DONE OVER SNOW OR ICE COVER. IF SNOW EXISTS, IT MUST BE REMOVED PRIOR TO PLACEMENT OF SEED.
 - WHERE PERMANENT SEEDING IS NECESSARY, ANNUAL WINTER RYE (1.2 LBS/1000 SQ. FT) SHALL BE ADDED TO THE PREVIOUSLY NOTED AREAS.
 - WHERE TEMPORARY SEEDING IS REQUIRED, ANNUAL WINTER RYE (2.6 LBS/1000 SQ. FT) SHALL BE SOWN INSTEAD OF THE PREVIOUSLY NOTED SEEDING RATE.
 - FERTILIZING, SEEDING AND MULCHING SHALL BE APPLIED TO LOAM THE DAY THE LOAM IS SPREAD BY MACHINERY.
 - ALTERNATIVE HAY MULCH SHALL BE SECURED WITH PHOTODEGRADABLE/BIODEGRADABLE NETTING. TRACKING BY MACHINERY ALONE WILL NOT SUFFICE.
- FOLLOWING FINAL SEEDING, THE SITE WILL BE INSPECTED EVERY 30 DAYS UNTIL 85% COVER HAS BEEN ESTABLISHED. RESEEDING WILL BE CARRIED OUT BY THE CONTRACTOR WITHIN 10 DAYS OF NOTIFICATION BY THE ENGINEER THAT THE EXISTING CATCH IS INADEQUATE.

MONITORING SCHEDULE

THE CONTRACTOR IS 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. AFTER EACH RAINFALL, A VISUAL INSPECTION WILL BE MADE OF ALL EROSION AND SEDIMENTATION CONTROLS AS FOLLOWS:

- HAY BALE BARRIERS, SILT FENCE, AND STONE CHECK DAMS SHALL BE INSPECTED AND REPAIRED ONCE A WEEK OR IMMEDIATELY FOLLOWING ANY SIGNIFICANT RAINFALL. SEDIMENT TRAPPED BEHIND THESE BARRIERS SHALL BE EXCAVATED WHEN IT REACHES A DEPTH OF 6" AND REDISTRIBUTED TO AREAS UNDERGOING FINAL GRADING. SHOULD THE HAY BALE BARRIERS PROVE TO BE INEFFECTIVE, THE CONTRACTOR SHALL INSTALL SILT FENCE BEHIND THE HAY BALES.
- VISUALLY INSPECT RIPRAP ONCE A WEEK OR AFTER EACH SIGNIFICANT RAINFALL AND REPAIR AS NEEDED. REMOVE SEDIMENT TRAPPED BEHIND THESE DEVICES ONCE IT ATTAINS A DEPTH EQUAL TO 1/2 THE HEIGHT OF THE DAM OR RISER. DISTRIBUTE REMOVED SEDIMENT OFF SITE OR TO AN AREA UNDERGOING FINAL GRADING.
- REVEGETATION OF DISTURBED AREAS WITHIN 25' OF DRAINAGE-COURSE/STREAM WILL BE SEEDED WITH THE "MEADOW AREA MIX" AND INSPECTED ON A WEEKLY BASIS OR AFTER EACH SIGNIFICANT RAINFALL AND RESEEDING AS NEEDED. EXPOSED AREAS WILL BE RESEEDING AS NEEDED UNTIL THE AREA HAS OBTAINED 100% GROWTH RATE. PROVIDE PERMANENT RIPRAP FOR SLOPES IN EXCESS OF 3:1 AND WITHIN 25' OF DRAINAGE COURSE.

EROSION CONTROL DURING WINTER CONSTRUCTION

- WINTER CONSTRUCTION PERIOD: NOVEMBER 1 THROUGH APRIL 15.
- WINTER EXCAVATION AND EARTHWORK SHALL BE COMPLETED SUCH THAT NO MORE THAN 1 ACRE OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME.
- EXPOSED AREA SHALL BE LIMITED TO THOSE AREAS TO BE MULCHED IN ONE DAY PRIOR TO ANY SNOW EVENT. AT THE END OF EACH WORK WEEK NO AREAS MAY BE LEFT UNSTABILIZED OVER THE WEEKEND.
- CONTINUATION OF EARTHWORK OPERATIONS ON ADDITIONAL AREAS SHALL NOT BEGIN UNTIL THE EXPOSED SOIL SURFACE ON THE AREA BEING WORKED HAS BEEN STABILIZED, SUCH THAT NO LARGER AREA OF THE SITE IS WITHOUT EROSION CONTROL PROTECTION AS LISTED IN ITEM 2 ABOVE.
- AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED WITH STRAW OR HAY AT A RATE OF 150 LB. PER 1000 S.F. (WITH OR WITHOUT SEEDING) OR DORMANT SEEDED, MULCHED AND ANCHORED SUCH THAT SOIL SURFACE IS NOT VISIBLE THROUGH THE MULCH. NOTE: AN AREA IS ALSO CONSIDERED STABLE IF SOODED, COVERED WITH GRAVEL (PARKING LOTS) OR STRUCTURAL SAND.
- BETWEEN THE DATES OF OCTOBER 15 AND APRIL 1, LOAM OR SEED WILL NOT BE REQUIRED. DURING PERIODS OF ABOVE FREEZING TEMPERATURES THE SLOPES SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED. IF THE DATE IS AFTER NOVEMBER 1 AND IF THE EXPOSED AREA HAS BEEN LOAMED, FINAL GRADED WITH A UNIFORM SURFACE, THEN THE AREA MAY BE DORMANT SEEDED AT A RATE OF 3 TIMES HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED. IF CONSTRUCTION CONTINUES DURING FREEZING WEATHER, ALL EXPOSED AREAS SHALL BE CONTINUOUSLY GRADED BEFORE FREEZING AND THE SURFACE TEMPORARILY PROTECTED FROM EROSION BY THE APPLICATION OF MULCH. SLOPES SHALL NOT BE LEFT UNCOVERED OVER THE WINTER OR ANY OTHER EXTENDED TIME OF WORK SUSPENSION UNLESS TREATED IN THE ABOVE MANNER. UNTIL SUCH TIME AS WEATHER CONDITIONS ALLOW, DITCHES TO BE FINISHED WITH THE PERMANENT SURFACE TREATMENT. EROSION SHALL BE CONTROLLED BY THE INSTALLATION OF BALES OF HAY, SILT FENCE OR STONE CHECK DAMS IN ACCORDANCE WITH THE STANDARD DETAILS SHOWN ON THE DESIGN DRAWINGS. NOTE: DORMANT SEEDING SHOULD NOT BE ATTEMPTED UNLESS SOIL TEMPERATURE REMAINS BELOW 50 DEGREES AND DAY TIME TEMPERATURES REMAIN IN THE 30'S.
- MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL DRAINAGE WAYS WITH A SLOPE GREATER THAN 3% FOR SLOPES EXPOSED TO DIRECT WINDS AND FOR ALL OTHER SLOPES GREATER THAN 8%. VEGETATED DRAINAGE SWALES SHALL BE LINED WITH EXCELISOR OR CURLEX.
- MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL DRAINAGE WAYS WITH SLOPES GREATER THAN 15%. AFTER OCTOBER 1 THE SAME APPLIES FOR ALL SLOPES GREATER THAN 8%.
- BETWEEN THE DATES OF OCTOBER 15 TO NOVEMBER 1, WINTER RYE IS RECOMMENDED FOR STABILIZATION. AFTER NOVEMBER 1 WINTER RYE IS NOT EFFECTIVE. AROUND NOVEMBER 15 OR LATER, ONCE TEMPERATURES OF THE AIR AND SOIL PERMIT, DORMANT SEEDING IS EFFECTIVE.
- IN THE EVENT OF SNOWFALL (FRESH OR CUMULATIVE) GREATER THAN 1 INCH DURING WINTER CONSTRUCTION PERIOD ALL SNOW SHALL BE REMOVED FROM THE AREAS OF SEEDING AND MULCHING PRIOR TO PLACEMENT.

SITE INSPECTION AND MAINTENANCE

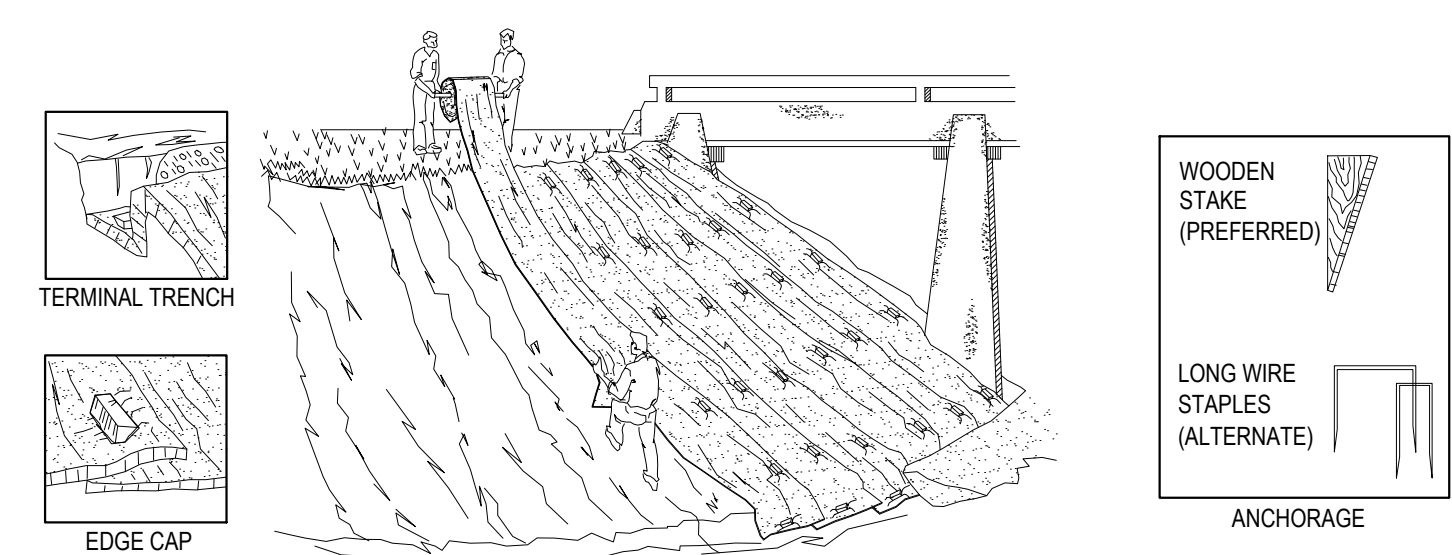
1. WEEKLY INSPECTIONS, AS WELL AS ROUTINE INSPECTIONS FOLLOWING RAIN FALLS, SHALL BE CONDUCTED BY THE GENERAL CONTRACTOR OF ALL TEMPORARY AND PERMANENT EROSION CONTROL DEVICES UNTIL FINAL ACCEPTANCE OF THE PROJECT (85% GRASS CATCH). NECESSARY REPAIRS SHALL BE MADE TO CORRECT UNDERMINING OR DETERIORATION. FINAL ACCEPTANCE SHALL INCLUDE A SITE INSPECTION TO VERIFY THE STABILITY OF ALL DISTURBED AREAS AND SLOPES. UNTIL FINAL INSPECTION, ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL IMMEDIATELY BE CLEANED, AND REPAIRED BY THE GENERAL CONTRACTOR AS REQUIRED. DISPOSAL OF ALL TEMPORARY EROSION AND CONTROL DEVICES SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.

IT IS RECOMMENDED THAT THE OWNER HIRE THE SERVICES OF THE DESIGN ENGINEER TO PROVIDE COMPLIANCE INSPECTIONS (DURING ACTIVE CONSTRUCTION) RELATIVE TO IMPLEMENTATION OF THE STORMWATER AND EROSION CONTROL PLANS. SUCH INSPECTIONS SHOULD BE LIMITED TO ONCE A WEEK OR AS NECESSARY AND BE REPORTABLE TO THE OWNER, TOWN AND DEP.

2. SHORT-TERM SEDIMENTATION MAINTENANCE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CLEAN OUT ALL SWALES AND STRUCTURES PRIOR TO TURNING PROJECT OVER TO THE CITY.

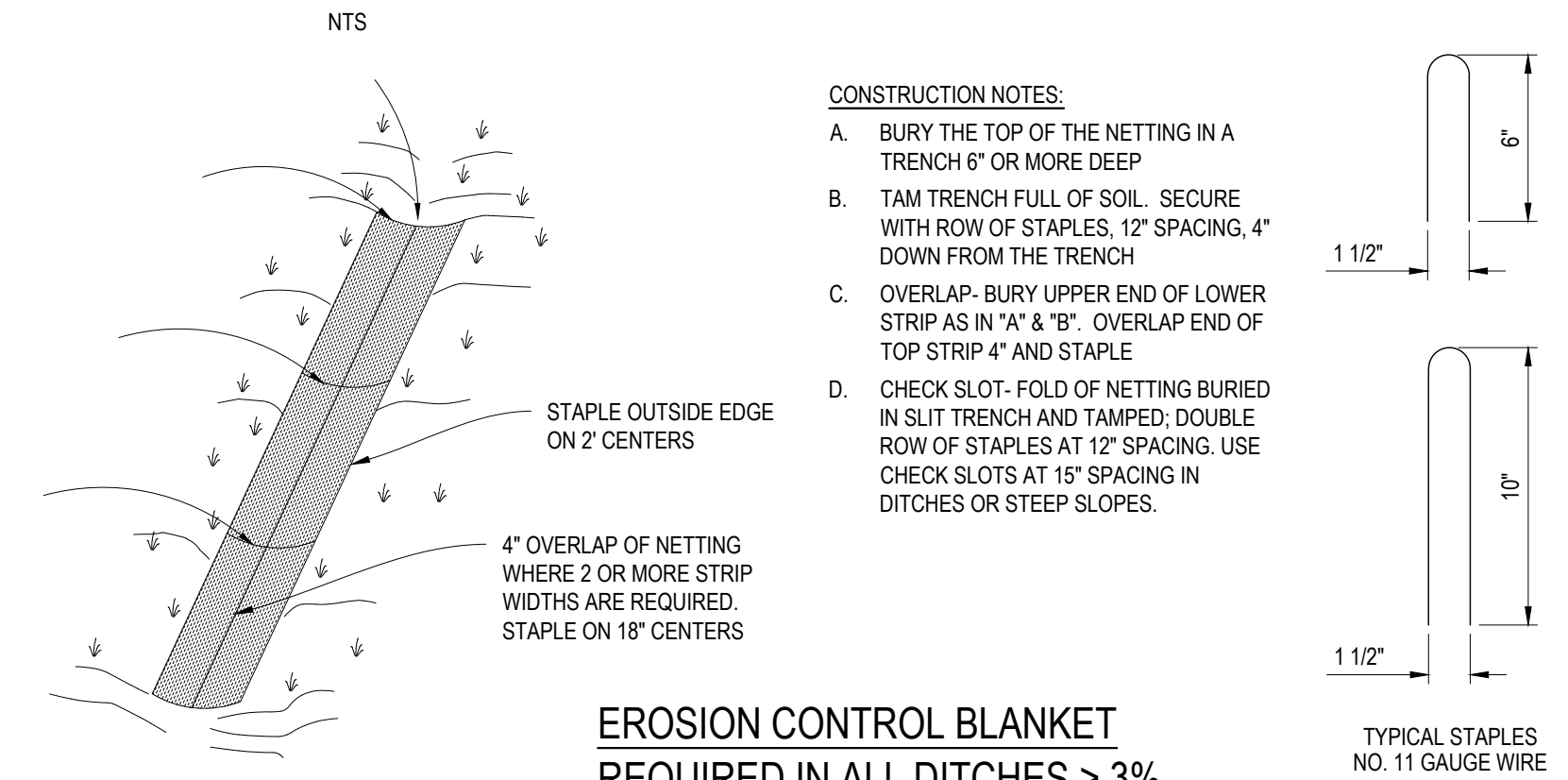
MAINTENANCE AFTER CONSTRUCTION

- LONG-TERM PROVISIONS FOR PERMANENT MAINTENANCE OF ALL EROSION AND SEDIMENTATION CONTROL FACILITIES AFTER ACCEPTANCE OF THE PROJECT SHALL BE THE RESPONSIBILITY OF THE OWNER OR THEIR DESIGNEE. SUCH RESPONSIBILITIES INCLUDE BUT ARE NOT LIMITED TO THOSE DETAILED AS FOLLOWS:
 - PARKING LOT SHALL BE MECHANICALLY SWEEPED TWICE PER YEAR. THE FIRST SHALL TAKE PLACE IN THE MID WINTER (JANUARY THAW) TO REMOVE ACCUMULATED SANDS FROM WINTER SANDING TO THIS POINT. THE SECOND SWEEPING SHALL TAKE PLACE AFTER WINTER SANDING OPERATIONS TERMINATE BUT PRIOR TO MAY 1.
 - INSPECTION OF STORMWATER OUTLET STRUCTURE SHOULD BE CONDUCTED TWICE PER YEAR. ACCESS TO THE STRUCTURE IS THROUGH THE TOP. THE OIL/WATER SEPARATOR UNIT SHALL BE PUMPED DOWN AND THE SEDIMENT AND TRASH SHALL BE REMOVED AT THE TIME OF THE INSPECTION. THE REMOVAL OF ALL SEDIMENT AND TRASH WILL HELP MINIMIZE VOLUME LOSS.
- THE OWNER SHALL FILE A YEARLY MAINTENANCE REPORT TO THE CITY DOCUMENTING THE REQUIRED MAINTENANCE FOR THE STORMWATER SYSTEM.



- UNROLL MAT ONTO GROUND IN DIRECTION OF WATER FLOW.
- MAT SHOULD LIE FLAT. DO NOT STRETCH MAT OVER GROUND. STRETCHING MAY CAUSE MAT TO BRIDGE DEPRESSIONS IN THE SURFACE AND ALLOW EROSION UNDERNEATH.
- BURY TRANSVERSE TERMINAL ENDS OF MAT TO SECURE AND PREVENT EROSION UNDERNEATH.
- SECURE MAT SNUGLY INTO ALL TRANSVERSE CHECK SLOTS.
- BACKFILL AND COMPACT TRENCHES AND CHECK SLOTS AFTER STAKING THE MAT IN BOTTOM OF TRENCH.
- OVERLAP ROLL ENDS BY THREE (3) FEET (MIN.) WITH UPSLOPE MAT ON TOP TO PREVENT UPLIFT OF MAT END BY WATER FLOW. IF INSTALLING IN THE DIRECTION OF A CONCENTRATED WATER FLOW, START NEW ROLLS IN A TRANSVERSE DITCH.
- OVERLAP ADJACENT EDGES OF MAT BY THREE (3) INCHES (MIN.) AND STAKE.
- WOOD STAKES ARE RECOMMENDED FOR PINNING MAT TO THE GROUND SURFACE. STAKES SHOULD BE 1" X 3" NOMINAL STOCK CUT IN A TRIANGULAR SHAPE. STAKES SHOULD BE 12" TO 18" LONG, DEPENDING ON SOIL DENSITY.
- DRIVE WOODEN STAKES TO WITHIN THREE (3) INCHES OF GROUND SURFACE. DO NOT DRIVE FLUSH TO SURFACE.
- IN ALL TRANSVERSE TERMINAL TRENCHES AND CHECK SLOTS, STAKE EACH MAT AT ITS CENTER AND OVERLAP EDGES BEHIND BACKFILLING AND COMPACTING.
- STAKE OVERLAPS LONGITUDINALLY AT THREE (3) TO FIVE (5) FOOT INTERVALS.
- FOLLOW COLORED DOT PATTERNS BY MANUFACTURER REQUIRED ON ALL SLOPES > 8% (WINTER CONSTRUCTION) REQUIRED ON ALL SLOPES > 15% (SUMMER CONSTRUCTION)

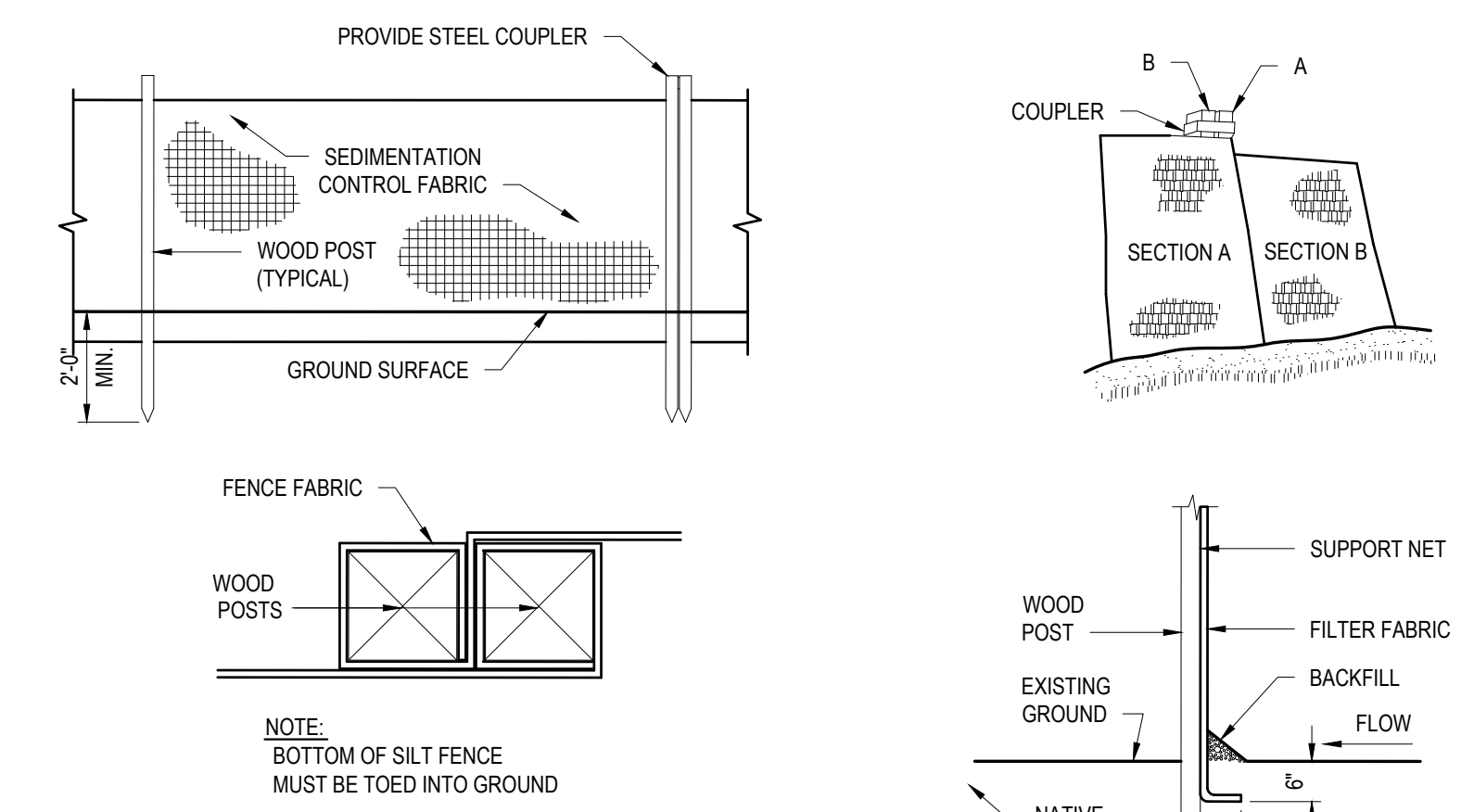
EROSION CONTROL BLANKET GENERAL INSTALLATION GUIDELINES ON SLOPES



CONSTRUCTION NOTES:

- BURY THE TOP OF THE NETTING IN A TRENCH 6" OR DEEPER.
- TAM TRENCH FULL OF SOIL. SECURE WITH ROW OF STAPLES, 12" SPACING, 4" DOWN FROM THE TRENCH.
- OVERLAP: BURY UPPER END OF LOWER STRIP AS IN "A" & "B". OVERLAP END OF TOP STRIP 4" AND STAPLE.
- CHECK SLOT: FOLD OF NETTING BURIED IN SLIT TRENCH AND TAMPED; DOUBLE ROW OF STAPLES AT 12" SPACING. USE CHECK SLOTS AT 15" SPACING IN DITCHES OR STEEP SLOPES.

EROSION CONTROL BLANKET REQUIRED IN ALL DITCHES > 3% NOTE: GRADING PLAN GOVERNS IN ALL LOCATIONS



SILTATION FENCE DETAIL

- ### SILTATION FENCE INSTALLATION
- EXCAVATE A 6"x6" TRENCH ALONG THE LINE OF PLACEMENT FOR THE FILTER BARRIER.
 - UNROLL A SECTION AT A TIME AND POSITION THE POSTS AGAINST THE BACK (DOWNSTREAM) WALL OF THE TRENCH.
 - DRIVE POSTS INTO THE GROUND UNTIL APPROXIMATELY 2" OF FABRIC IS LYING ON THE TRENCH BOTTOM. JOIN SECTION AS SHOWN ABOVE.
 - LAY THE TOE-IN FLAP OF FABRIC ONTO THE UNDISTURBED BOTTOM OF THE TRENCH. BACKFILL THE TRENCH AND TAMP THE SOIL. TOE-IN CAN ALSO BE ACCOMPLISHED BY LAYING THE FABRIC FLAP ON UNDISTURBED GROUND AND PILING AND TAMPING FILL AT THE BASE, BUT MUST BE ACCOMPLISHED BY AN INTERCEPTION DITCH.
 - BARRIER SHALL BE MIRAFI SILT FENCE OR APPROVED EQUIVAL.

EROSION CONTROL MIX DETAIL

N.T.S.

"SILTSACK" INSTALLATION INSTRUCTION

- REMOVE THE CATCH BASIN GRATE AND PLACE THE SACK INTO THE OPENING. HOLD OUT APPROXIMATELY SIX (6) INCHES OF THE SACK BEYOND THE BASIN FRAME TO ALLOW ACCESS TO THE "SILTSACK" LIFTING STRAPS. REPLACING THE GRATE BACK INSIDE OF ITS FRAME WILL HOLD THE SACK IN PLACE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MONITORING AND MAINTAINING THIS SEDIMENT CONTROL DEVICE. THE SACK IS CONSIDERED FULL AND READY TO EMPTY WHEN THE "RESTRAINT CORD" IS NO LONGER VISIBLE.
- THE "SILTSACK" IS REMOVED BY PLACING TWO (2) PIECES OF 1 INCH DIAMETER REBAR THROUGH THE LIFTING LOOPS LOCATED ON EACH SIDE OF THE SACK AND LIFTING WITH AN APPROPRIATE PIECE OF CONSTRUCTION EQUIPMENT. THE LIFTING STRAPS ARE CONNECTED TO THE BOTTOM OF THE SACK AND THE LIFTING ACTION WILL CAUSE THE SACK TO TURN INSIDE OUT, AND EMPTYING THE CONTENTS. THE SACK SHOULD THEN BE CLEANED, RINSED AND RETURNED TO ITS ORIGINAL SHAPE AND PLACED BACK IN THE BASIN.
- THE "SILTSACK" IS REUSABLE, THEREFORE, ONCE THE CONSTRUCTION CYCLE IS COMPLETE, REMOVE THE SACK FROM THE BASIN, CLEAN AND STORE OUT OF DIRECT SUNLIGHT UNTIL ITS NEXT USE.
- THE "SILTSACK" SEDIMENT CONTROL DEVICE IS MANUFACTURED BY: ACF ENVIRONMENTAL

TRILLIUM ENGINEERING GROUP
235 US ROUTE 1, SUITE 0-2
FALMOUTH, ME 04105

CLIENT:
LANDMARC CONSTRUCTION CORP.

415 CONGRESS ST.
PORTLAND, ME 04101

PRELIMINARY
NOT FOR CONSTRUCTION

539 ELM STREET
SITE DEVELOPMENT

539 ELM STREET
BIDDEFORD, MAINE

NUMBER	DESCRIPTION	DATE	
		BY	ED
A	PRELIMINARY REVIEW		12/22/2025
B	ISSUED FOR SKETCH PLAN REVIEW		1/21/2026

SHEET TITLE:
EROSION CONTROL DETAILS

DESIGNED BY: BVD
DRAWN BY: BVD
DATE: 1/21/2026
PROJECT NUMBER: 25-327

C300

SECTION 11: NATURAL RESOURCES

1 Overview of Natural Resources

Biddeford is diverse in its geological and ecological setting. With a mix of large, regionally important forested wetlands, agricultural soils, coastal regions, ten (10) separate watersheds, both rural homes and dense downtown areas, as well as industrial areas — there is a need to find balance in the environmental effects of our continued growth on natural resources throughout Biddeford.

2 Natural Resources at a Glance

Size & Characteristics

- 12.8 miles of riverfront*
- 16 miles of coastline*
- 19,000 acres of total land in Biddeford*
- 9,700 acres of undeveloped forested land* (25.7% of total acreage)*
 - 5,000 acres of this exist with State Focus Areas* (XX% of total acreage)*
- 1,700 acres with permanent conservation protections (8.9% of total acreage)**
- 254 acres of municipal-owned land classified as Open Space**

Working Landscapes

- 3,700 acres of combined commercial timber harvesting (1991-2023)***
- 463 acres enrolled in the farmland program (27 parcels)**
 - Most parcels include acreage of woodlands not registered as tree growth

Wildlife & Habitat Info****

- 31 special concern, threatened, or endangered plant and animal species
- 9 rare and exemplary Natural Communities
- 4 Significant Wildlife Habitats
- 2 Essential Wildlife Habitats
- A focus area of Statewide Ecological Significance
- Biddeford currently ranks 6th in all of Maine for the total number of listed species

Sources:

* Conservative estimates, using cover type analysis using satellite images

** Biddeford Assessing Department, 2025

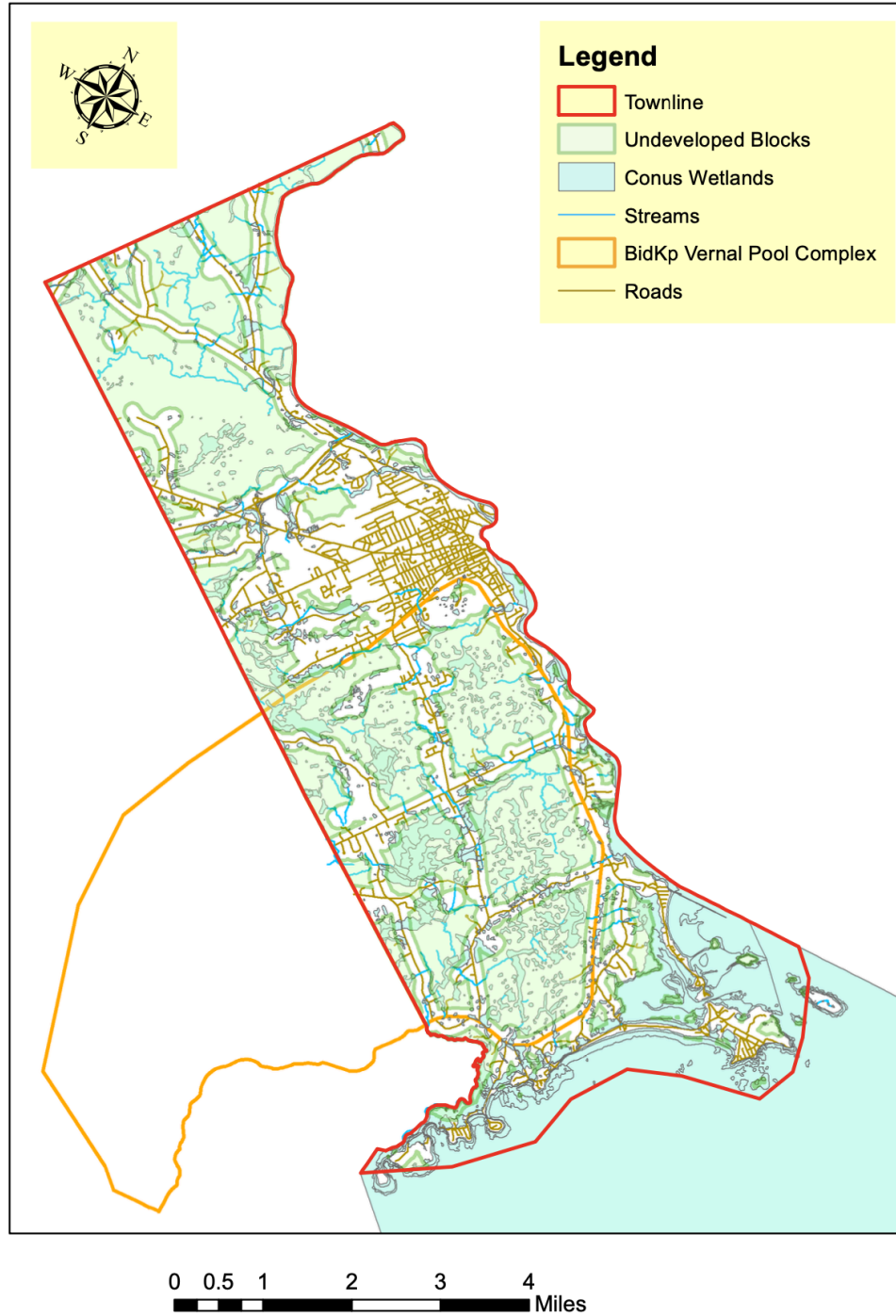
*** Department of Agriculture, Conservation, and Forestry / Maine Forest Service

**** Data from *Beginning with Habitat*, MDIFW, September 2025

Note: These figures may change pending new data requested from BwH and MPAP

3 Habitats in Biddeford

FIGURE 11.1 — Undeveloped Habitat Blocks in Biddeford



Source: Dave Parker, Contract Forester

Beginning with Habitat (BwH) helps Maine municipalities, landowners, and land trusts build habitat conservation into their long-term plans. Their data show that Biddeford is home to a wide range of wildlife and habitats.

Biddeford's unique location and availability of undeveloped forest form an important "stepping stone" for wildlife in a region of Maine that is densely developed. This allows wildlife to move between habitats throughout their seasonal migrations and provides areas to feed, reproduce, and seek shelter.

The habitats found throughout Biddeford, specifically in the Biddeford/Kennebunkport Coastal Forest (BKCF), are one of the largest habitat blocks remaining east of the I-95 highway in southern Maine. The BKCF is designated by BwH as a Focus Area of Statewide Ecological Significance.

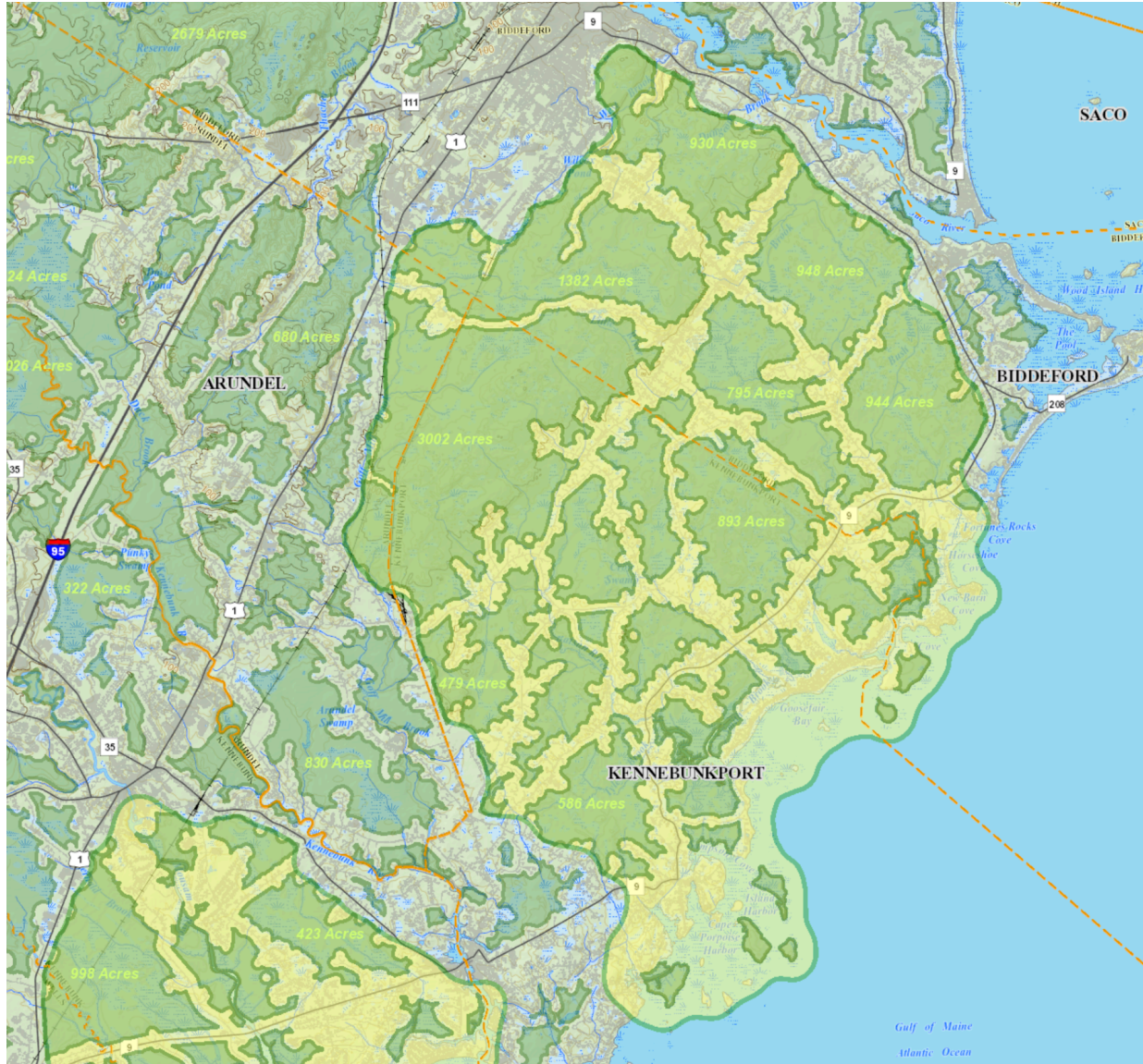
4 Focus Areas & Natural Communities

BwH Focus Areas of Statewide Ecological Significance contain several rare and/or endangered plants or animals as well as their habitats.

These focus areas are large enough to maintain a diverse population of species, and are identified by biologists from the Maine Department of Inland Fisheries and Wildlife (MDIFW), the Maine Natural Areas Program (MNAP), Maine Department of Marine Resources (DMR), U.S. Fish and Wildlife Service (USFWS), The Nature Conservancy (TNC), Maine Audubon, and Maine Coast Heritage Trust (MCHT).

4.1 Biddeford/Kennebunkport Coastal Forest

FIGURE 11.2 — Coastal Forest with Undeveloped Habitat Blocks



Source: *Beginning with Habitat*, [Interactive Map Viewer](#)

Biddeford/Kennebunkport Coastal Forest Focus Area (BKCF)

The following information regarding the BKCF is adapted from BwH resources.

Established around 2010, the Biddeford/Kennebunkport Coastal Forest (formerly known as the Biddeford/Kennebunkport Vernal Pool Complex) is a focus area of statewide ecological significance that covers roughly 16,000 acres. This focus area includes a significant portion of eastern Biddeford.

The biological significance of this area is due to a specific set of geological and soil features, and a high concentration of pocket swamps and vernal pools in undeveloped forested areas, which are becoming increasingly rare in Maine, and are seeing increased development pressure within Biddeford.

Protection Status

A number of individual parcels held by Maine Coast Heritage Trust, Saco Valley Land Trust, and the Blandings Wildlife Preserve provide some conservation protections within this critical habitat area, but this piecemeal approach does not prevent habitat fragmentation in the BKCF. The Biddeford Conservation Commission is actively pursuing conservation strategies to provide more holistic protection for this critical natural resource.

Conservation Considerations for the Focus Area

Preserving natural communities and other sensitive features can be best achieved by maintaining the integrity of the larger natural systems in which these features occur. Conserving the larger systems helps ensure both common and rare natural features will persist in this part of the state.

Some ways this can be achieved include:

- Minimizing habitat fragmentation through cluster mandates in zoning ordinances
- Reducing allowable net density in areas zoned Rural Farm or Conservation Overlay
- Increasing funding for permanent land conservation
- Creation of critical resource zoning overlay districts to prevent, minimize, mitigate, or compensate for disturbance to large unfragmented habitat blocks or wildlife corridors
- Using Best Management Practices for forestry and logging, especially near wetlands, headwaters, and vernal pools, to help prevent erosion and habitat loss
- Enhancing landowners' and motorists' awareness of species habitat, such as "turtle crossing" signs, while also working to replace culverts and install wildlife crossings or barriers that keep at-risk species away from roadways

4.2 Natural Communities & Wildlife Habitats

Biddeford is home to a diverse range of wildlife, birds, fish, and invertebrates. We are currently ranked 6th (out of all Maine municipalities) for the number of species listed as significant, threatened, or endangered.

STATE RANKING — KEY
S1 = Critically Imperiled
S2 = Imperiled
S3 = Vulnerable
S4 = Apparently Secure
S5 = Secure

TABLE 11.1 — Habitat Types and Natural Communities

Name	Group	State Rank
Roseate Tern Nesting Area	Essential Wildlife Habitats	n/a
Piping Plover-Least Tern Nesting, Feeding, & Brood-Rearing Area	Essential Wildlife Habitats	n/a
Inland Waterfowl & Wading Bird	Significant Wildlife Habitats	n/a
Tidal Waterfowl & Wading Bird	Significant Wildlife Habitats	n/a
Significant Vernal Pools	Significant Wildlife Habitats	n/a
Seabird Nesting Islands	Significant Wildlife Habitats	n/a
Oak - Hickory Forest	Rare & Exemplary Natural Communities	S1
Pocket Swamp	Rare & Exemplary Natural Communities	S2
Salt-Hay Saltmarsh	Rare & Exemplary Natural Communities	S3
Brackish Tidal Marsh	Rare & Exemplary Natural Communities	S3
Freshwater Tidal Marsh	Rare & Exemplary Natural Communities	S2
Pitch Pine Bog	Rare & Exemplary Natural Communities	S2
Pitch Pine Woodland	Rare & Exemplary Natural Communities	S3
Coastal Dune-Marsh Ecosystem	Rare & Exemplary Natural Communities	S3
Red Maple Swamp	Exemplary Common Natural Communities	S4S5

Source: *Natural Resources Inventory, Beginning with Habitat, MDIFW (Sept. 2025)*

5 Wildlife

TABLE 11.2 — Rare Animals, Plants, and Natural Communities in Biddeford

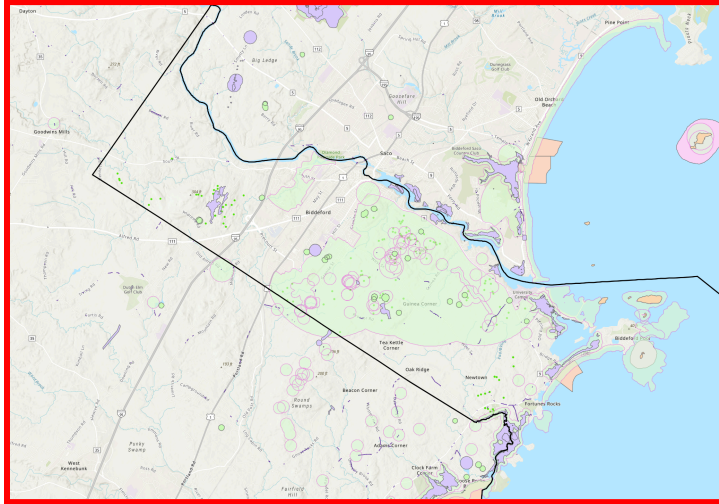
Name	SOURCE	State Rank	State Status
Arrowhead Spiketail	ETSC Animals	S1	Special Concern
Dusted Skipper	ETSC Animals	S1S2	Special Concern
Eastern Ribbonsnake	ETSC Animals	S3	Special Concern
Great Blue Heron	ETSC Animals	S4B	Special Concern
Purple Sandpiper	ETSC Animals	S4S5N	Special Concern
Harlequin Duck	ETSC Animals	S2S3N	Threatened
Peregrine Falcon	ETSC Animals	S1S2N, S2B	Endangered
Piping Plover	ETSC Animals	S2B	Endangered
Saltmarsh Sparrow	ETSC Animals	S1B	Endangered
Spotted Turtle	ETSC Animals	S3	Threatened
Wood Turtle	ETSC Animals	S4	Special Concern
Blanding's Turtle	ETSC Animals	S2	Endangered
Southern Pygmy Clubtail	ETSC Animals	S1S2	Special Concern
Lilaeopsis	MNAP Plants	S2	Special Concern
Smooth Winterberry Holly	MNAP Plants	S3	Special Concern
Beach Wormwood	MNAP Plants	S1S2	Special Concern
Estuary Bur-marigold	MNAP Plants	S3	Special Concern
Hollow Joe-pye Weed	MNAP Plants	S2	Special Concern
Dwarf Glasswort	MNAP Plants	S1	Threatened
American Sea-blite	MNAP Plants	S2	Threatened
Sweet Pepper-bush	MNAP Plants	S2	Special Concern
Pygmyweed	MNAP Plants	S2S3	Special Concern
Water Pimpernel	MNAP Plants	S3	Special Concern

Beach Plum	MNAP Plants	S1	Endgangered
Saltmarsh False-foxtail	MNAP Plants	S3	Special Concern
Mudwort	MNAP Plants	S3	Special Concern
Spongy-leaved Arrowhead	MNAP Plants	S3	Special Concern
Stiff Arrowhead	MNAP Plants	S2	Special Concern
Button Sedge	MNAP Plants	S2	Special Concern
Parker's Pipewort	MNAP Plants	S3	Special Concern
Horned Pondweed	MNAP Plants	S2	Special Concern

Source: *Natural Resources Inventory, Beginning with Habitat, MDIFW (Sept. 2025)*
Rare Plants in Maine, Maine Natural Areas Program ([online](#))

5.1 Species Cooccurrence

FIGURE 11.3 — Wildlife Locations in Biddeford



Source: *Beginning with Habitat*, MDIFW (*new map pending*)

One method to identify priority conservation areas and areas where development may have greater environmental impacts is to measure species cooccurrence. This is when multiple species and environmental assets are co-located in the same area.

BwH assigns scores to specific environmental values, and a composite score is developed based on the known locations of these values. The map symbolizes the composite score using a green color ramp, with darker green meaning a higher score – a proxy for greater environmental value.

The environmental values include:

- Rare and exemplary natural communities
- Rare plants
- Listed animals
- Significant wildlife habitats
- Riparian zones and water resources
- Undeveloped habitat blocks

The areas with the highest cooccurrence in Biddeford include:

- East Point Bird Sanctuary
- Biddeford Pool
- Biddeford/Kennebunkport Coastal Forest

Note: *This info may change pending new data requested from BwH*

6 Vernal Pools

FIGURE 11.4 — An egg mass in one of Clifford Park’s vernal pools (circa 2023)



Photo Credit: Erik Heumiller

While the State of Maine defines a Vernal Pool as “*Any natural water body that holds water long enough in a typical year to support breeding fairy shrimp, wood frogs, and/or spotted or blue-spotted salamanders.*” — it also acknowledges that, “*While vernal pools are typically natural landscape features, occasionally anthropogenically created or modified water bodies such as abandoned gravel pits, can function as important vernal pool breeding habitat as well.*”

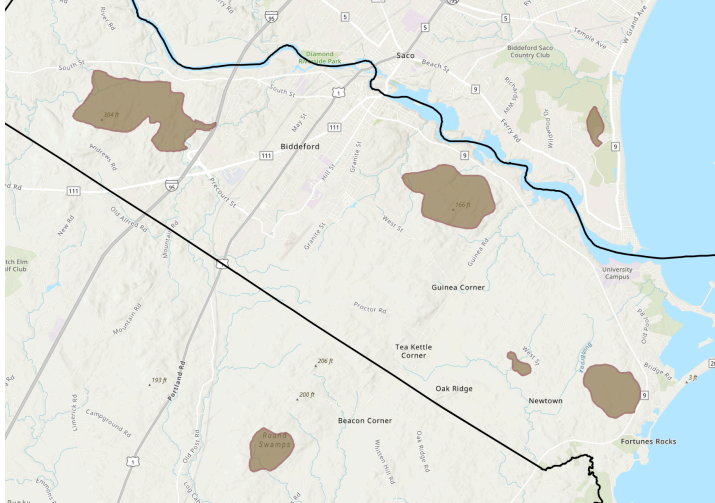
Vernal Pools act as a “grocery store” within forested areas, serving as an important resource for wildlife communities. Pools provide services beyond habitat, including massive nutrient exchange (14% of our forest nitrogen comes from wood frogs alone*), groundwater recharge, and flood prevention.

As important as the vernal pools are, the upland areas surrounding them are equally important to seasonal habitat needs of the wildlife that rely on them. Connectivity of vernal pools, wetlands, and upland areas surrounding them needs to be considered in conservation planning.

Source: *Beginning with Habitat, MDIFW, 2025

7 Deer Wintering Areas

FIGURE 11.5 — Deer Wintering Areas



Source: *Beginning with Habitat*, [Interactive Map Viewer](#)

In the Winter months, deer seek out areas with a mix of shelter and nearby sources of food in the scarce Winter conditions. These are known as “deer wintering areas” or “deer yards,” of which Biddeford has historically documented multiple locations.

To reduce roadway collisions and mortality during the winter, these areas should be prioritized when considering habitat conservation and other means of preserving open space within the development of private parcels. Wildlife-vehicle collisions cost Mainers \$134 million annually.*

Shelter conditions typically include:

- **Conifer Forests** that contain Hemlock, Pine, and Cedar. These provide thermal cover by blocking wind, preventing snow accumulation, and by absorbing heat from the sun.
- **Southern Slopes & Valleys** are often warmer due to the southern sun exposure, and tend to see less snow accumulation.

Energy conservation and food sources typically include:

- Woody plants (twigs, stems), which are often readily available.
- Tree nuts (acorns, etc.) that remain accessible may also be forage opportunities.
- Deer are typically less active in the winter to conserve energy, often relying on a reduced metabolism and fat reserves to survive on a limited diet. However, the availability or lack of food sources during the Fall can drive them in search of food if their fat reserves are not sufficient to sustain them.

* Based on data from Maine DOT 2018-2022 “Collisions Between Wildlife Species and Motor Vehicles” Report

8 Riparian Habitats, Watersheds, and Wetlands

Biddeford's water uses reflect the city's strong connection to the Saco River along with its coastal shoreline, groundwater resources, and network of vernal pools, wetlands, and estuaries. The City's rivers and streams include the Saco River Watershed, and ten (10) sub-watersheds.

It's important to recognize the interconnectedness of these habitats and how they support fish, waterfowl, and wildlife populations as well as other natural resources throughout Biddeford.

The Water Resources and Marine Resources chapters provide additional information.

8.1 Riparian Habitats

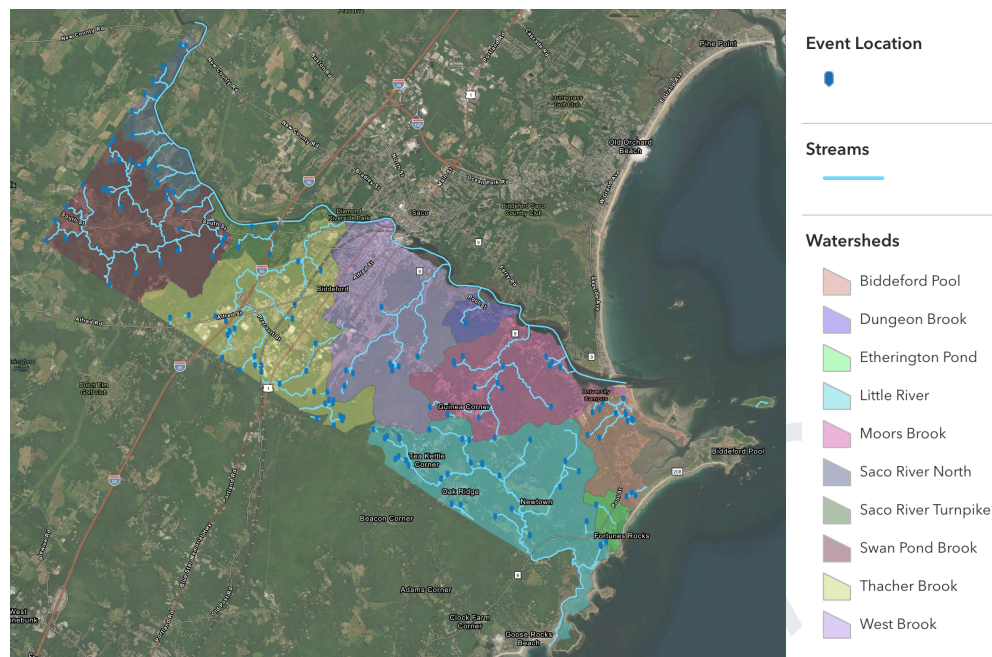
The areas adjacent to, and surrounding, wetlands and streams, known as Riparian Habitat, are inextricably linked to many significant wildlife species for feeding, nesting, denning, or as travel corridors in Biddeford.

- Over 85% of Maine's vertebrate wildlife use riparian habitats at some point in their annual life cycle.
- Riparian habitats are often used as travel corridors between forested areas.
- Forested riparian zones are known to store large amounts of carbon and add to landscape-scale climate resilience.
- Forested riparian zones also reduce runoff and erosion risks by stabilizing the banks of rivers and streams.

The State of Maine maintains minimums of 100-foot "no cut" buffers, but also acknowledges that if opportunities exist to extend the "no cut buffer" distance, or to protect entire riparian habitats, there is a preference for those protections.

8.2 Watersheds and Fisheries

FIGURE 11.6 — Watersheds in Biddeford



Source: NEA Streams Data, [Biddeford GIS Map Gallery](#)

MDIFW has identified Swan Pond Brook, its tributaries, and two unnamed tributaries to the Saco River upstream from where Swan Pond Brook outlets into the Saco River as being likely brook trout habitat. The Little River and its tributaries, including Bush Brook, are also identified as a likely brook trout habitat. These water bodies represent the characteristics conducive to brook trout: “clean, cool, well oxygenated water”.

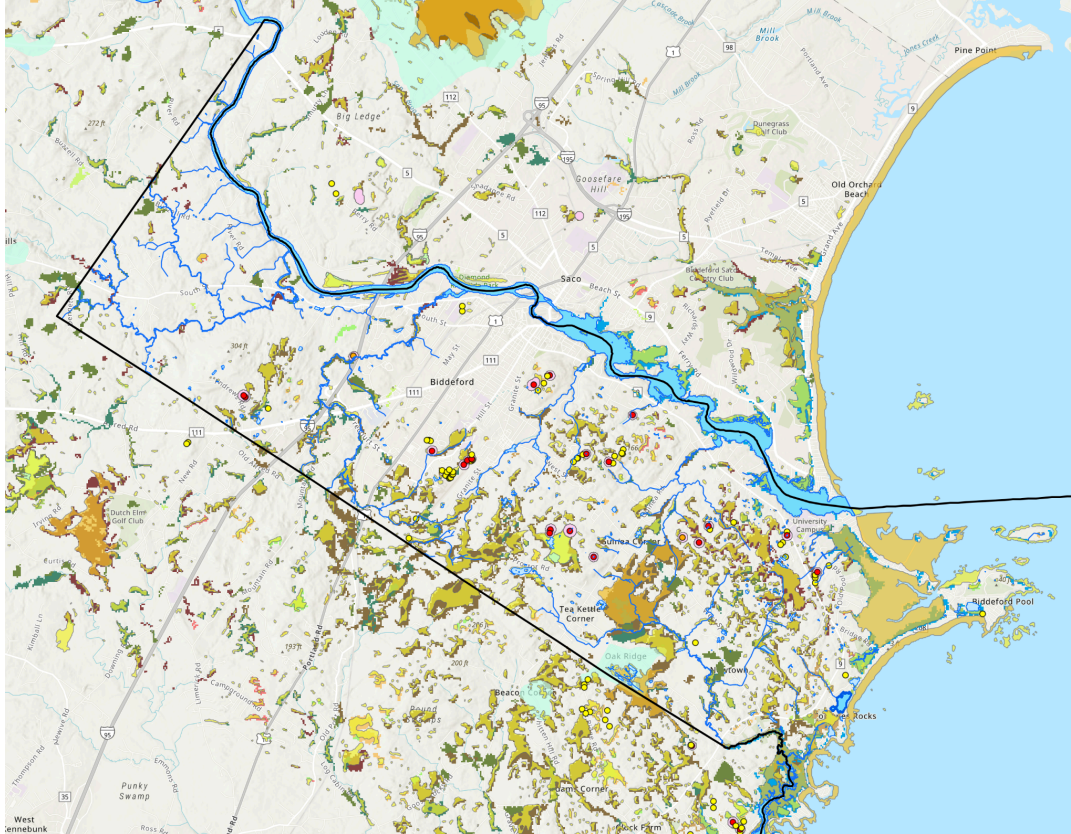
MDIFW has also identified Swan Pond Brook and its tributaries as a likely spawning habitat for Atlantic Salmon entering the Saco River.

“Stream habitat suitability is maintained by the presence of intact, stable, mature wooded riparian corridors that: conserve forest soils, provide shade to reduce stream warming, protect stream water quality, provide cover for fish, provide a source of woody debris and leaf litter from mature trees that maintain critical in-stream habitat for fish and the aquatic insects they feed upon (leaves provide the energy source that drives productivity in streams). Floodplain and fringe wetlands associated with streams are a significant source of springs and groundwater discharge that maintain stream flows and cool temperatures during warm, low-flow summer periods. Protection of these important riparian and wetland functions ensures that the overall health of stream habitat and watershed is maintained.”

—MDIFW Habitat Report; Swan Pond Brook

8.3 **Wetlands & Marshes**

FIGURE 11.7 — Wetlands and Wading Bird Habitat



Source: *Wetlands and Waterbodies*, [Biddeford GIS Map Gallery](#)

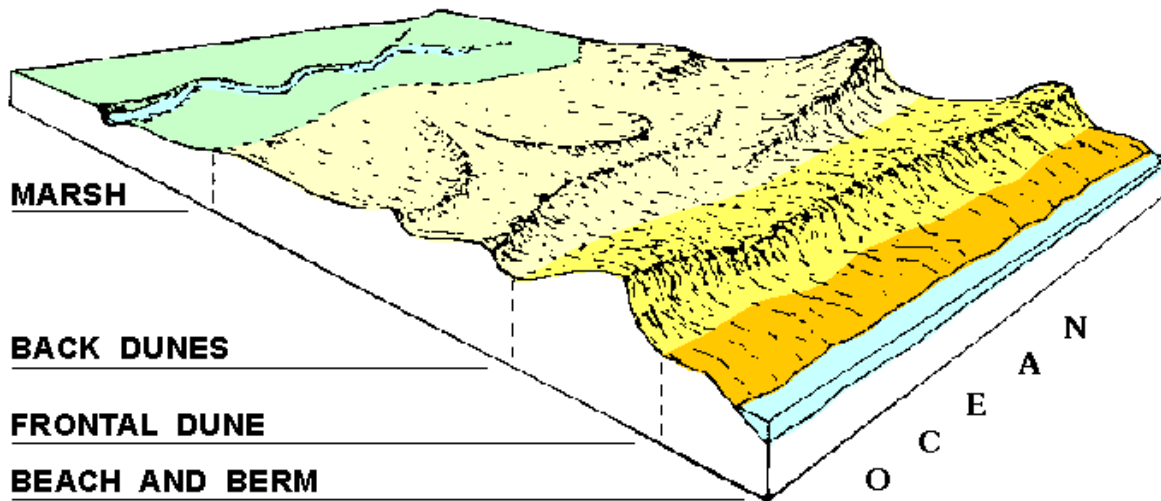
Areas of the Saco River Estuary, coastal shorelines, and Biddeford Pool provide a diverse mix of mud and sand flats, as well as salt and brackish marshes. These areas provide vital habitat for wildlife and natural flood protection.

The mud flats of Biddeford Pool are comprised of sediment finer than sand, which is teeming with shellfish, worms, and other species that support both recreational and commercial harvesting, as well as attracting a variety of bird species.

Biddeford also has several notable inland waterfowl and wading bird habitat locations as mapped by MDIFW. These areas are fairly spread out through the town and are comprised mainly of larger freshwater wetlands.

9 Dunes and Shorelands

Sand dune systems are dynamic landforms of sand and gravel created by wind and water action. They include various features like beach berms, frontal dunes, and back dunes — and they serve as natural barriers against storms while providing vital habitat



Source: *Maine Department of Agriculture, Conservation, and Forestry*
[Maine Geological Survey](#)

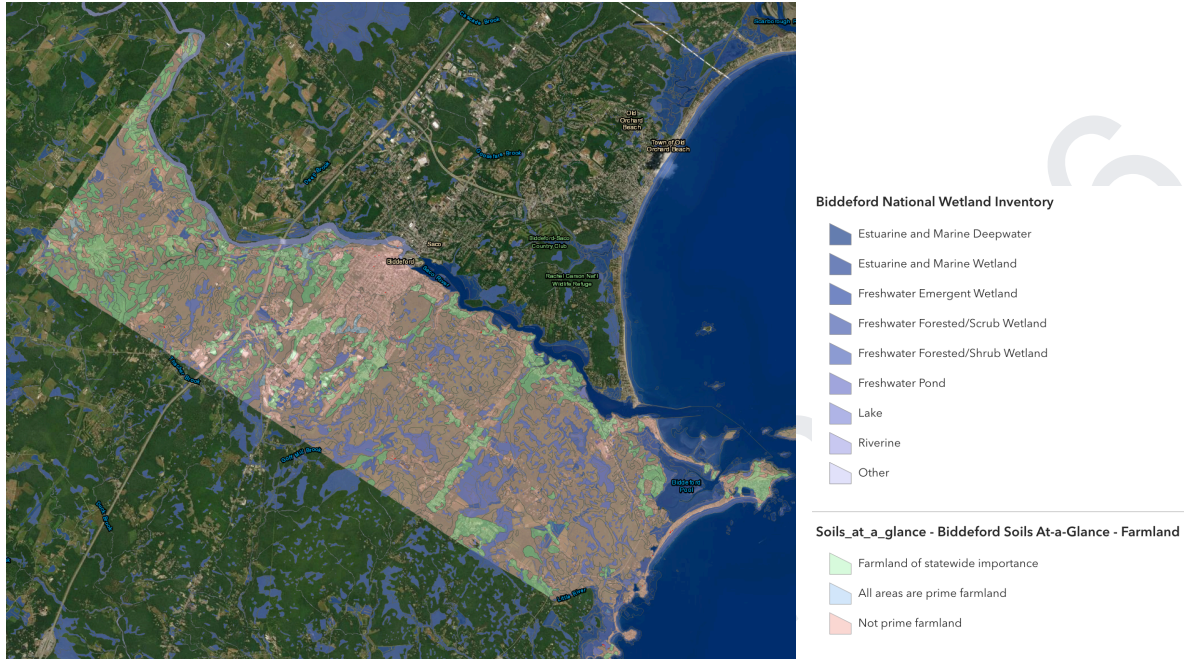
Dune formation and maintenance depend on a constant supply of sand and the stabilization provided by vegetation like dune grass.

According to the Maine Geological Society, there are generally seven (7) sand dune systems located within the City of Biddeford, as follows:

1. Hills Beach
2. Hills Beach – Fort Hill
3. Mile Stretch Beach
4. Fortunes Rocks Beach
5. Horseshoe Cove
6. New Barn Cove Beach
7. Curtis Cove Beach

10 Soils

FIGURE 11.8 — Soils Maps



Source: *Biddeford Parcels and Soils*, [Biddeford GIS Map Gallery](#)

Prime agricultural soils, whether forested or in active agricultural use, are a vital natural resource within Biddeford. Much of the prime soil acreage throughout Biddeford has already been developed; therefore, drastically reducing what was historically available.

The qualities of these soils are not something easily replicated, and as such, the City should prioritize protections for these soils to ensure local food availability, agricultural viability, and other resiliency measures.

11 Scenic Resources

Scenic resources within a community are attributes that give communities identity and make them appealing places to live. These resources may be specific, extraordinary views, or they may be vistas of segments of the community, such as traditional working rural landscapes, village centers, or historic districts.

The City of Biddeford is fortunate to have a diversity of geographical landscapes within the City's boundaries, including beaches, open areas, islands, harbors, tidal flats, wetlands, historical resources, and village centers.

Table 11.3 — Biddeford's Scenic Resource Inventory

Area	Description	Usage
Clifford Park & Trail System	A forested trail network maintained by Public Works and the Recreation Department. Portions of the park contain a conservation easement held by MCHT.	Hiking, dog walking, mountain biking, wildlife photography. No motorized vehicles, camping, or fires permitted
Rotary Park	A riverfront park system with walking trails, sports fields, and a beach. The park contains a significant amount of Japanese Knotweed (invasive species) and visitors should take care not to transport it elsewhere.	Skateboarding, walking, dog walking, frisbee, sports fields, swimming, and other recreational opportunities
Biddeford Forest	Conservation land established on Maine Water company property to preserve forested habitat.	Nature preserve
Biddeford Pool	Tidal mud flats that include a boat launch and scenic marsh areas full of birds.	Sightseeing, commercial and recreational clamming, paddle sports
Maine Audubon East Point Sanctuary	Coastal habitat preserve with walking trails and a few benches.	Hiking, bird watching, fishing
Rachel Carson Wildlife Refuge	Protected habitat areas along the coast.	Nature preserve

Blandings Park Wildlife Sanctuary	A patchwork of parcels held in conservation to create a wildlife preserve.	Nature preserve, hiking
Wood Island Harbor and various neighboring islands	TBD	Nature preserve
Wood Island Lighthouse	TBD	Nature preserve
Timber Point	TBD	Nature preserve
Hills Beach	TBD	Public beach
Fortunes Rock	TBD	Public beach
Curtis Cove, Horseshoe Cove, Fortunes Rock Cove / New Barn Cove	TBD	Private beach
Saco River & Riverwalk	TBD	Walking, sightseeing
Farmlands and open areas	TBD	

Biddeford’s scenic resources are highly valued not only for their aesthetic appeal, but for the natural character and connected ecosystems they preserve in our city. These areas often sit at the junction of habitat, recreation, and tourism — requiring the City to balance the needs of each in protecting and maintaining these regions.

Note: Needs further documentation

12 Regional Cooperation on Natural Resource Protection

Wildlife and habitat do not exist within the lines drawn on maps, and as such, the need for regional cooperation and collaboration on land use, connectivity, and acquisition strategies between Biddeford and surrounding communities is critical to the protection of our natural resources. The City may work with governmental agencies, nonprofit organizations, and private landowners to pursue protections for wildlife habitat, soils, and other critical natural resources.

Some organizations and initiatives include:

- Saco Valley Land Trust
- Maine Coast Heritage Trust
- Maine Audubon
- Blandings Wildlife Preserve
- The Nature Conservancy (TNC)
- Maine Dept. of Environmental Protection
- Saco River Corridor Commission
- Saco Salmon Restoration Alliance
- Saco Watershed Collaborative

Land trusts are instrumental in permanently preserving land and water resources. These organizations act as monitors and managers of land to ensure development restrictions on conservation parcels are enforced, and they often maintain trails and other opportunities for public access, education, and other recreational opportunities — while ensuring our natural resources persist for future generations.

13 Further Analysis

13.1 Threats to Natural Resources

- Human impact and disturbance through commercial, residential, or recreational uses
- Reduction and fragmentation of habitat by development, roads, parking lots, etc.
- Inappropriate zoning designations that conflict with natural resource protection goals
- Lack of habitat identification before development
- Deforestation or over-harvesting of resources
- Point and non-point source pollution (runoff)
- Degradation of water quality (increased temperatures, lack of canopy cover, etc.)
- Invasive species (insects, crabs, etc.)
- Invasive plants (knotweed, bittersweet, etc.)
- Increases in precipitation and climate events (flooding, erosion)
- State-wide policy changes from new administrations and legislators can upend long-term conservation and natural resource protections, and as such, the City of Biddeford should work to develop ordinances and zoning that don't rely on state-mandates and policies

13.2 Specific threats to identified resources:

Threats to Wetlands

Land use development and human impact can result in the loss or degradation of wetlands, which can lead to impacts such as increased flooding, extinction of species, and decline in water quality. Untreated runoff from agricultural lands, urban areas, and other sources into wetlands can result in changed species composition, increased pollutant loadings, and replacement of complex wetland systems with open water. Land use development projects should be managed carefully to avoid these threats.

Threats to Vernal Pools

Land use development and human impact can result in the loss or degradation of vernal pools, including the upland areas around vernal pools that are necessary for parts of the lifecycle of many rare, threatened, and endangered species that rely on vernal pools. Land use development projects should be evaluated carefully to avoid these threats.

Threats to Thatcher Brook Watershed

The Thatcher Brook Watershed Management Plan (TBWMP) 2015-2025, has identified the following threats to the water quality of the brook:

Thatcher Brook is listed as an Urban Impaired Stream in MDEP's Chapter 502. A stream is considered "urban impaired" if it fails to meet state and federal water quality classifications due to the effects of stormwater runoff from impervious surfaces such as rooftops, parking lots, and roads.

During the development of this Plan, the following threats to water quality (a.k.a. stressors) were identified:

- Stream channel alteration and the resulting stream bank erosion and degraded habitat;
- Elevated phosphorus and decreased dissolved oxygen [DO] (in part due to naturally-occurring conditions in associated wetlands); and,
- Elevated bacteria and specific conductance.

Additional monitoring and updates to the TBWMP are necessary to continue efforts to reduce runoff impacts and improve water quality.

Threats to Deer Wintering Areas

New development and other modifications to the habitat within traditional deer wintering areas reduce the overall ability of an area to support deer during periods of severe winter weather. The more development that occurs within these areas, the greater the potential impact on local deer populations. The availability of high-quality winter range allows a higher winter population of deer, and enables them to more fully occupy their summer habitat.

However, one type of land use that is essential for deer wintering area management is timber harvesting. According to IFW, the general goal in managing deer wintering areas is to maintain approximately 50% of the area in mature conifer forest types. This allows each landowner in the deer wintering area to harvest as much as 20% of the total timber volume on his/her ownership in any 15-year period. Non-permanent, minimal disturbance (light or no bulldozing and no graveling of the travel surface) roads are recommended by IFW when a land management road must be located in a deer wintering area to allow access for timber harvesting.

Threats to Sand Dune Systems

Coastal geological processes such as wind, waves, tides, currents, and coastal hazards such as storm surge, sea level rise, erosion, and inlet migration will all inevitably shift the locations and decrease the size of sand dune systems located within Biddeford. Coastal flooding and erosion can destroy improperly located structures on beaches and sand dunes. Winter northeaster storms striking during high tides cause the most serious beach and dune erosion.

Continuing natural movement of the beach and perhaps more abrupt shoreline changes caused by major coastal storms or an acceleration of sea level rise make some areas unsuitable for coastal development. Structures should be placed in locations that have minimal interference with natural geologic processes and are in areas with low risk from natural hazards.

DRAFT 1/29/26

14 Goals, Policies & Strategies

TIMELINE — KEY
1 = Immediate (0-1 yr)
2 = Near-term (1-3 yrs)
3 = Medium-term (3-6 yrs)
4 = Long-term (6-10 yrs)
Ongoing = Indicates a strategy will take many years or continuous work for implementation.

State Goals			
Goal 1	Healthy Fish and Wildlife Habitats: Partner with the public to achieve shared goals for sustainability, and both maintaining and improving healthy fish and wildlife populations and habitats, despite environmental changes and shifts in land ownership.		
Policy 1	Collaborate with BwH, MDIFW, and other organizations to enact habitat protections.		
Strategy 1a	The City shall request state agency review for all developments in critical natural resource areas (Map X-X) to coordinate land-use decision-making with local and regional goals. Agencies include but are not limited to the Maine Department of Environmental Protection (DEP), Maine Department of Inland Fisheries and Wildlife (IFW), Maine Natural Areas Program (MNAP), and others.	Ongoing	Planning & Development Dept., Planning Board
Strategy 1b	Collaborate with IFW's Beginning with Habitat Program to aid in the development of conservation planning, the development of overlay zoning, natural resource inventories, and/or other habitat protection programs to prioritize wildlife corridors and vernal pools.	1	Conservation Commission, Planning Board

TIMELINE — KEY
<p>1 = Immediate (0-1 yr) 2 = Near-term (1-3 yrs) 3 = Medium-term (3-6 yrs) 4 = Long-term (6-10 yrs) Ongoing = Indicates a strategy will take many years or continuous work for implementation.</p>

Biddeford's Goals			
Goal 1	<p>To protect, maintain, and, where possible, improve the quality of the City's natural environment and resources.</p> <p>This goal is in alignment with the State's goal: <i>To increase, by 2030, the total acreage of conserved lands in the state to 30% through voluntary, focused purchases of land, and working forest/farm conservation easements. Increasing carbon storage in our natural and working lands to offset carbon emissions and impacts from climate change. Source: Maine Climate Action Plan, 2025</i></p>		
Policy 1	To conserve critical natural resources in the community.		
Strategy 1A	Ensure that land use ordinances are consistent with applicable state law regarding important natural resources.	Ongoing	Planning & Development Dept., Planning Board
Strategy 1B	The City shall designate critical natural resources as Critical Resource Areas in the Future Land Use Plan.	1	Planning & Development Dept., Planning Board
Strategy 1C	<p>The City shall review and upgrade its enacted Zoning Ordinances, which were conceived to protect and preserve the quality of local surface water and wildlife habitats, to</p> <p>A) develop new ordinances, zoning updates, overlay zones, and incentive programs to reduce development pressures in critical natural resource areas,</p> <p>B) prioritize projects with greater-than-minimum buffers, increased open space preservation, and wildlife habitat connectivity, and</p> <p>C) ensure development proposals identify critical natural resources that may be on-site and to take appropriate measures to protect those resources, including but not limited to, modification of the proposed site design, construction timing, and/or extent of excavation.</p>	2	Planning & Development Dept., Planning Board, Conservation Commission
Strategy 1D	Amend the Zoning Ordinance to ensure the Planning Board (or its designee) includes as part of the review process, consideration of pertinent BwH maps and information regarding critical natural resources.	1	Planning & Development Dept., Planning Board

Strategy 1E	Evaluate the Cluster Subdivision and Net Density Performance Standards in the Zoning Ordinance for their effectiveness and value with respect to protecting important natural resources, exploring options/programs that include, but are not limited to: A) Reducing allowable net density in Rural Farm or Conservation Overlay zoned areas, B) Development Rights Transfer, C) Development Transfer Fee, and D) Conservation & Limited Development Projects (CLDP)	2	Planning & Development Dept., Planning Board, Conservation Commission
Strategy 1F	Revise the Wildlife Preservation Performance Standards to ensure that through the review of development proposals, wildlife preservation requirements are clear and practical.	Ongoing	Planning & Development Dept., Planning Board, Conservation Commission
Strategy 1G	Explore other regulatory means to protect important natural resources to the greatest extent practicable.	Ongoing	Planning & Development Dept., Planning Board, Conservation Commission
Strategy 1H	Pursue public/private partnerships to protect critical and important natural resources, such as through the purchase of land or easements from willing landowners.	Ongoing	Planning & Development Dept., Conservation Commission
Strategy 1I	Distribute or make available information about current use tax programs and applicable local, state, or federal regulations to those living in or near critical and/or important natural resource areas.	1 Ongoing	Conservation Commission
Strategy 1J	The City may create a “no development, other than timber harvesting” ordinance that will protect all of the City’s deer wintering areas (as designated by the Maine Department of Inland Fisheries & Wildlife).	2	Policy Committee, Planning Board, City Council
Strategy 1K	Conduct bi-annual reviews of development growth, evaluating impacts on natural resources, to be reviewed as part of a zoning ordinance review process. This includes, but is not limited to: A) increase/decrease of habitat, B) habitat fragmentation, and C) development “hot spots” where development is taking place to identify proximity to natural resources.	Ongoing	Planning & Development Dept., Planning Board, Conservation Commission
Strategy 1L	Conduct an annual review of parcels identified as conservation, open space, municipal land, and public access areas to identify; A) the percentage of open space vs. habitat preservation (to the needs of humans and wildlife in Biddeford), B) opportunities to increase unfragmented habitat blocks through the sale/donation of municipal lands, and	Ongoing	Conservation Commission, GIS Staff

	C) identify trends and growth around/in natural resources areas		
Strategy 1M	Continue to monitor state agency GIS maps and data to integrate natural resource inventory information into Biddeford's own GIS maps and to inform municipal decision-making.	Ongoing	GIS Staff, Conservation Commission
Strategy 1N	Increase awareness of incentive programs to aid private landowners in investing in the long-term stewardship of their property.	Ongoing	Conservation Commission
Strategy 1O	Pursue more detailed surveys and documentation of vernal pools throughout Biddeford, with the State Focus Area of Ecological Significance being the priority. This work may be conducted in partnership with UNE, local land trusts, and/or consultants.	2	Conservation Commission, City Staff
Strategy 1P	Develop a pipeline for reduced processing time and permitting requirements for development applications that meet certain standards (e.g., habitat preserved, habitat connectivity, etc.) to encourage smart growth, habitat-friendly developments, and a focus on development in growth areas.	2	Planning & Development Dept., Planning Board
Strategy 1Q	Incentivize increased buffers, habitat conservation, and connectivity through voluntary programs that allow smaller lot sizes in exchange for more open space preserved.	2	Planning & Development Dept., Planning Board, Conservation Commission
Strategy 1R	The City shall develop a list of buffers specific to each natural resource, seeking to increase buffers beyond state minimums, and to align with recommendations from habitat experts to protect Biddeford's specific natural resources.	2	Planning & Development Dept., Planning Board, Conservation Commission
Strategy 1S	The City shall select and hire a Consultant for all environmental reviews for development applications, to be paid for with funds from the developer, with the Consultant reporting directly to the City.	1	Planning & Development Dept., Planning Board
Policy 2	To coordinate with neighboring communities and both regional/state resource agencies to protect shared critical natural resources.		
Strategy 2A	Collaborate with IFW's Beginning with Habitat Program to aid in the development of conservation planning, the development of overlay zoning, natural resource inventories, and/or other habitat protection programs to prioritize wildlife corridors and vernal pools.	1	Conservation Commission, Planning Board
Strategy 2B	Continue to collaborate with local Land Trusts through conservation planning, title-in-fee donations, and easements to protect parcels that can be added to, or begin forming unfragmented blocks of habitat and natural resources.	Ongoing	Planning & Development Dept., Conservation Commission

Policy 3	Prioritize habitat connectivity in reviewing development proposals within critical natural resource areas, as a means of reducing habitat fragmentation and roadway mortality for all wildlife species.		
Strategy 3A	The City may work with IFW to identify areas where wildlife crossings can benefit listed species, developing a plan and timeline for installation of crossings in natural resource areas — with “turtle crossings” being a priority. Design and implementation resources are listed in the appendix. (bmp_herp_2016.pdf, pages 30-32)	3	Planning & Development Dept., Public Works, Conservation Commission
Strategy 3B	Monitor public works projects (road work, infrastructure updates, etc) near stream crossings to identify opportunities to proactively update stream crossings to Stream Smart designs that improve and restore stream function.	Ongoing	Public Works
Strategy 3C	Conduct an annual review of reported wildlife collisions and roadkill removal requests to identify areas of increased roadway mortality that can benefit from the following (in priority order); A) altering wildlife behavior (reducing forage plants along roadways, adding fencing, and/or wildlife crossings beneath roadways), B) altering driver behavior (reduced speed limits, speed humps, etc.), and C) improved driver awareness (signage, lighting, roadway markings).	Ongoing	Conservation Commission, Police, Animal Control
Strategy 3D	Identify properties that may overlap with Saltmarsh Migration as sea levels rise, prioritizing the acquisition of these parcels to allow for habitat expansion and to reduce strains on municipal services in these areas.	3 / 4	Planning & Development Dept., Conservation Commission
END			