Town of Damariscotta
21 School Street
Damariscotta, ME 04543

Michael Martone
Town Planner
(207) 563-5168
Planner@DamariscottaME.com

Town of Damariscotta
Planning Board Meeting Agenda
Monday, April11, 2023 – 6:00PM
Hybrid Meeting: Town Office & via Zoom

Join Zoom Meeting: https://us02web.zoom.us/j/88985249796
Meeting ID: 889 8524 9796
Passcode: DamaPB

1. Pledge of Allegiance

2. Call to Order

3. **Review of Application for Site Plan Approval**:
    a. Review of submitted application for a proposed 32-unit residential age-restricted apartment development at **207 Ledgewood Court Dr** (Tax Map 001 Lot 050-003)
        - Applicant: DC Ledgewood LLC
        - Zone: Rural

4. Other Business:
    a. Housekeeping (signature of previously approved findings of fact and notices of decision)

    b. Questions from the public (an opportunity for the public to ask questions on items not on the agenda)

    c. Planner's Report

5. Adjournment

GORRILL PALMER

300 Southborough Drive | Suite 200
South Portland, Maine 04106
207.772.2515

February 17, 2023

Ms. Isabelle Oechslie
Town Planner
Town of Damariscotta Maine
21 School Street
Damariscotta, Maine 04543

Subject: Ledgewood Court Expansion
Piper Mill Road/207 Ledgewood Court Drive
Map 001 Lot 050-003
Applicant: Midcoast Maine Community Action/DC Ledgewood LLC

Dear Isabelle:

On behalf of **Midcoast Maine Community Action/DC Ledgewood LLC (applicant)** our office is supplying the accompanying application materials in accordance with Sections §102.5.E for site plan approval consideration by staff and the Planning Board at their next available meeting. The applicant is proposing a two-story building to contain 32 senior affordable living units as an expansion of the existing 24-unit Ledgewood Court apartment complex. The existing development occupies approximately 1.96 acres of the otherwise undeveloped 10.54-acre parcel. As a part of this submission, the applicant is reserving the right to subdivide the existing parcel into two separate lots: one approximately 3.95-acre parcel (A) containing the existing complex, and one approximately 6.59-acre parcel (B) containing the proposed new building. It should be noted that this development is exempt from subdivision review under Maine Statute 30-A (2) (6A) (c187) (4) §4402.6.

The existing complex was constructed in 2002/03 and included four buildings with six units each. The proposed development area currently consists of wooded area and is located just southeast of the existing apartment complex. The design plan includes an extension of the existing drive easterly to an area that will contain an approximately 12,820 SF two-story building footprint and total building area of 25,497 SF. The building size puts the development into the Large-Scale Development Category for review. The Winton Scott Architects design includes two floors and each will contain sixteen (16) single bedroom units. Unit size varies from 578 SF to 636 SF. There will be a community room and shared laundry facilities in the building.

The development will include 33 parking spaces, which meets the minimum one parking space per unit requirement for "senior citizen multi-family" developments noted in the Zoning and Site plan standards. ADA parking will be provided to match the availability of ADA units in the building. This may be at least 6 to as many as 12 units which is tied to tenant demand. The site will also contain new landscaped areas while continuing to benefit from the substantial existing forested conditions throughout the remaining undeveloped area of the property. The complex will provide raised community garden space on the grounds while also offering outdoor seating, bike racks, and other low key recreational features to benefit residents.

We have had contact with the Great Salt Bay Sanitary District and they have verbally confirmed there is adequate capacity at the wastewater treatment plant to accept the sanitary flow from the expansion. The Great Salt Bay Water District also confirmed there is adequate water supply from the system in Piper Mill Road to serve the development. We await written responses for each capacity request. Overhead power is

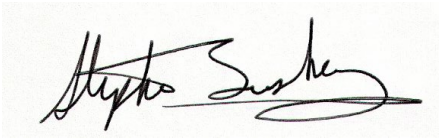
proposed from Piper Mill Road to the proposed building via the existing cleared corridor along the southern lot line. This corridor also contains the sewer force main associated with the existing complex. Service into the proposed building will be underground from a nearby transformer. An Emergency generator is also proposed for the building.

Stormwater runoff associated with the site will be collected and released through an underdrained soil filter and a bio-retention filter to the north of the proposed building. The existing complex received a Maine Department of Environmental Protection Stormwater Management permit in 2002[1]. An amendment application has been sent to MaineDEP for review along with a Maine DEP Natural Resources Protection Act permit application for wetland impacts.

A check for $509.94 ($0.02 / SF of the proposed building) accompanies this application in accordance with the Town of Damariscotta fee schedule. In accordance with the Site plan application checklist and submission requirements we offer the following information pertaining to the Checklist and attached exhibits:

Exhibit	Description
1	Application forms and Documents
2	Project Data Sheet
3	Construction
4	Right, title or Interest
5	Service and Infrastructure Capacity for the project
6	Third Party Authorization
7	Natural Resources
8	Plan Set
9	Stormwater Management Report
10	Erosion Control
11	Miscellaneous
12/13	Additional requirements for Large Scale Developments
14	Compliance with Performance Standards §102.6
15	Compliance with Performance Standards §102.7

Sincerely,
GORRILL PALMER



Steve Bushey, PE
Sr. Project Manager – Associate
Phone: 207-772-2515 x286
sbushey@gorrillpalmer.com
Enclosure:

cc: Meg Robinson – DC Ledgewood LLC
Steve Weatherhead – Winton Scott Architects

[1] **See Order L-21139-NI-A_N**

DEVELOPERS
COLLABORATIVE

November 16, 2022

RE: Agent Authorization
DC Ledgewood, LLC
Ledgewood Court Expansion – Piper Mill Road Damariscotta, Maine

To Damariscotta Planning Dept/Planning Board,

DC Ledgewood, LLC authorizes Gorrill Palmer Consulting Engineers to act as an Agent in the production and submission of applications, response letters and related communications related to all local, State and Federal permit applications.

Sincerely,

Kevin Bunker
Manager
DC Ledgewood, LLC

GORRILL PALMER

300 Southborough Drive, Suite 200
South Portland, Maine 04106
207.772.2515

Exhibit 1 – Application forms and Documents

- See attached Universal application form
- See Cover letter for more information
- Check for $509.94 for site plan application ($0.02 / SF for the 25,497 SF building proposed)

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21 School Street,
Damariscotta, ME 04543

Isabelle Oechslie
Town Planner
Phone: (207) 563-5168
IOechslie@damariscottame.com

PLANNING BOARD APPLICATION

OFFICE USE ONLY

Application Fee: _____ **PID**: _____

Date Received:

Applications may be accepted electronically, though the Planning Board reserves the right to request physical submissions. Please email your full submission binder to the Town Planner.

SITE DETAILS

Street Address:	207 Ledgewood Court Drive
Deed Book and Page:	Bk 5472 Pg 299
Existing Subdivision Name:	☐ Not Applicable
Lot within subdivision:	☐ Not Applicable
Tax Map & Lot:	Map 001 Lot 050-003
Zoning district:	Rural
Existing land use(s):	Residential - 24-unit apartment complex

PROPERTY OWNER INFORMATION

Property Owner Name:	Midcoast Maine Community Action
Mailing Address:	34 Wing Farm Parkway
	Bath, ME 04530
Phone Number:	
Email:	

APPLICANT INFORMATION *(IF DIFFERENT FROM ABOVE)*

Applicant Name:	DC Ledgewood LLC
Mailing Address:	631 Stevens Ave, Suite 203
	South Portland, ME 04106
Phone Number:	207-772-7673
Email:	meg.robinson@dcmaine.com

CONTACT PERSON / AGENT INFORMATION

The Planner will only contact one designated person regarding the application. Please identify the primary contact:

❑ Property owner ❑ Applicant ■ Other (fill out section below):

Applicant Name:	Agent - Stephen Bushey PE - Gorrill Palmer Consulting Engineers
Mailing Address:	300 Southborough Drive, Suite 200
	South Portland, ME 04106
Phone Number:	207-756-9359
Email:	sbushey@gorrillpalmer.com

PROJECT INFORMATION

Description: New 2-story 32 unit apartment building with associated access and parking. Units will be affordable, senior housing units

Is the project located within any of the following? *(Please select all that apply)*:

❑ Special Flood Hazard Area
❑ Shoreland Zoning Area
❑ Historic District

APPLICATION TYPE

*Please select **ALL** that apply:*

❑ Conditional Use Application
❑ Small Wind Energy System
❑ Conditional Use Application
❑ Final Major Subdivision
❑ Sketch Plan Pre-application (Subdivision)
❑ Zoning Map Amendment
■ Site Plan Application
❑ Site Plan Pre-application
❑ Preliminary Major Subdivision
❑ Minor Subdivision
❑ Zoning Text Amendment

Note: Please consult with the Planner if you are unsure about which applications you will need.

SIGNATURES

PROPERTY OWNER'S CONSENT REQUIRED:

I declare under penalty of perjury that I am the owner of said property. I certify that all of the submitted information is true and correct to the best of my knowledge and belief. I understand that any misrepresentation of submitted data may invalidate any approval of this application.

Signature of Property Owner

3/10/2023
Date

OWNER INITIAL

I, Claire Berkowitz, President/CEO, authorize the noted applicant or agent named on this application to file this application on my behalf.

APPLICANT / AGENT CERTIFICATION:

I certify that all of the information provided within this application form and accompanying materials is true and accurate to the best of my knowledge. I understand that any misrepresentation of submitted data may invalidate any approval of this application.

Signature of Applicant

3/7/2023
Date

Stephen Bushey Agent Senior Associate
Print Name and Title

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SITE PLAN APPLICATION CHECKLIST

Project Address: 207 Ledgewood Court Drive

Applicant Name: DC Ledgewood LLC

Note: *Applications and supporting materials must be submitted in PDF format, via email to the Town Planner.*

APPLICATION SUBMITTAL REQUIREMENTS

Exhibit 1 – Application Forms and Documents

☑Universal Application Form

☑Cover Letter summarizing project intent

☑All applicable application fees (see the Town's Fee Schedule or contact the Planner)

Exhibit 2 – Project Data Sheet, including the following information:

☑Total land area of site (all contiguous land in same ownership) in square feet

☑Total amount of land disturbance proposed in square feet

☑Footprint of each proposed building in square feet

☑Height of proposed buildings (both feet and stories)

☑Total number of proposed parking spaces

☑Number of proposed handicap parking spaces

☑Existing conditions of the site

Exhibit 3 – Construction

☑Construction schedule outlining the anticipated sequence of construction (beginning and completion) for major aspects of the proposed project, including roads, erosion control and drainage measures, etc.

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☑A construction phasing plan showing parking, vehicles and pedestrian circulation, traffic control, and tree and wetland protections during construction. The plan will consist of a written explanation and drawings, as appropriate, and will include such items as parking for construction workers, parking for displaced employees or customers, and provisions for deliveries.

☑Estimated cost of the project (building and site work)

☑Evidence of applicant's financial capacity to complete the project. This item may be satisfied using any of the following:

1. A written statement from the applicant's bank or a certified public accountant who recently audited the applicant's finances stating that the applicant has cash reserves in the amount of the estimated cost of the project and can devote those reserves to the project.
2. When the applicant will personally finance the development, provide copies of bank statements or other evidence, which will indicate availability of funds, and evidence that the applicant can devote these funds to the project.
3. The most recent corporate annual report indicating availability of sufficient funds to finance the development, together with a statement from the applicant that the funds are available and will be used for the proposed project.
4. Copies of contracts, which will provide the source of funding for the operation and maintenance of the development when completed.
5. A letter from a financial institution, governmental agency, or other funding agency which indicates a timely commitment to provide a specified amount of funds and the uses for which the funds may be utilized.
6. In cases where outside funding is required, but there can be no commitment of money until regulatory approvals are received, a formal letter of "intent to fund upon approval" from the appropriate funding institution indicating the amount of funds it is prepared to provide and their specified uses and the conditions on which funds will be made available.
7. A letter from a financial institution indicating knowledge of the applicant and a potential interest in providing funding for the project. If this type of letter is submitted as evidence of financial capacity to complete the project, the application may be deemed to be complete but the Planning Board may require as a condition of approval that one of the other six methods provided herein for demonstrating financial capacity be submitted before a building permit may be issued for the project. (Please note: If this option is chosen, the Planning Board will condition the by approval requiring one of the above methods to be provided prior to issuing a Building Permit or holding a preconstruction meeting.)

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☑Evidence of the applicant's technical capacity to complete the project, including a list of any or all projects completed by the applicant within the last 5 years as well as a list of all consultants retained for this proposed project, such as engineers, landscape architects, architects, environmental consultants; and those firms or personnel who will be responsible for constructing, operating and maintaining the project.

Exhibit 4 – Right, Title, or Interest

☑Evidence of applicant's right, title, or interest in the site (in the form of a lease, deed, purchase & sale agreement, or similar)

☑Summary of all existing and all proposed easements or other burdens for this property. Reference each easement to the plan or drawing on which it is shown. Copies of all relevant documents relating to existing and proposed easements and burdens placed on the property, including metes and bounds descriptions or other specific mechanisms to describe proposed easements. Each copy should be numbered to correspond to the lists.

☐If a condominium, homeowners, or property owners association will be established: the articles of incorporation, the Declaration of Covenants and Responsibilities, and the proposed by-laws of the organization

Exhibit 5 – Service and Infrastructure Capacity for the Project

☑A written confirmation from all public services providers necessary to serve the proposed project, indicating sufficient capacity exists for the project. If connection to public water and/or public sewer is proposed, a letter from the Great Salt Bay Sanitary District indicating sufficient capacity to serve the project.

☑Proposed sewer use in gallons per day (GPD) and the types and amounts of any industrial or non-sanitary waster that will enter the public sewer or drains, if applicable

☑A written evaluation and demonstration of the adequacy and availability of adjacent streets to handle traffic generated by the proposed project (including construction traffic)

☑An estimate of the amount and type of vehicular traffic to be generated on a daily basis and at peak hours, and the sight distances for each driveway that intersects and existing or proposed public or private road in accordance with the requirements of Sec. 102.6G.

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☐For developments estimated to generate more than 200 vehicle trips per day, a traffic impact analysis prepared by a registered professional engineer with experience in traffic engineering which shall include: the expected average daily vehicular trips, peak-hour volumes, access conditions at the site, distribution of traffic, types of vehicles expected, effect upon the Level of Service on the road giving access to the proposed development and neighboring roads that may be affected, and recommended improvements to maintain the desired level of service on the affected roads. Trip Generation rates shall be obtained from the latest edition of the Institute of Traffic Engineers Trip Generation Manual.

> ☐A written evaluation and demonstration of the adequacy and availability of adjacent streets to handle traffic generated by the proposed project (including construction traffic)

☑A description of the proposed method for handling solid waste (trash), both during and after construction

☑Plan for supplying water sufficient for fire protection

☐If use of a septic system is proposed, an on-site soils investigation report identifying the types of soil, location of all test pits, and the proposed location and design of the subsurface disposal system

Exhibit 6 – Third Party Authorizations

☑A list of approvals needed from other agencies and copies of all necessary reviews, licenses, permits, variances, and approvals from other agencies

Exhibit 7 – Natural Resources

☑A letter from the Maine Department of Inland Fisheries & Wildlife attesting to whether or not there are any habitats of any rare or endangered animals on the project site

☑If there are any major natural features on or within 250' of the site, including wetlands, streams, ponds, floodplains, groundwater aquifers, significant wildlife habitats, significant stands of trees, archeological resources or other important natural features, a statement of how such features will be maintained or protected

> ☑If a wetland is impacted, an alternatives analysis must be submitted explaining what steps were taken to avoid or mitigate wetland impact, including why other sites were not considered or if the project could reasonably have been reduced or reconfigured.

☐If any portion of the development is within the watershed of a great pond, a phosphorus impact report

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Exhibit 8 – Plan Set

All plans presented for site plan review shall be drawn at a scale of 50 feet or less to the inch. All plan sets shall include the following:

☑The name and address of the property owner and the name and address of the applicant (if different)

☑The property lines of all abutting properties, including those across the street and waterways

☑Sketch map showing general location of the site within the town

☑Location map showing the boundaries of all contiguous property under the control of the owner or applicant, regardless of whether all or only part is being developed at this time

☑The bearings and distances of all property lines and the source of this information (Note: the Board may waive the requirement of a formal boundary survey when sufficient information is available to clearly establish, on the ground, all property boundaries)

☑The names and professional seals of those who aided in preparation of the plan

☑Zoning classification(s) of the property and location of zoning district boundaries, if the property is located in more than one zoning district or abuts a different district (including the Shoreland zone and either the 75' or 100' Shoreland Zone setback, as appropriate)

☑Location and size of any existing and proposed sewer and water mains, culverts, and drains on the property to be developed and any that will serve the development from abutting streets or land

☑Location, names and present widths of existing or proposed streets and rights-of-way within or adjacent to the proposed development

☑The location, dimensions, required buffers, and setbacks of all existing and proposed buildings on site

☑The location of buildings on abutting properties and within 50 feet of the property lines of the parcel to be developed

☑Location of intersecting roads or driveways within 200 feet of the site

☑Location of any floodplains on the project parcel, as well as any wetlands and streams (as identified by a wetlands scientist or other certified wetlands professional)

☑Existing topography of the site at two foot contour intervals (Note: this item may be waived by the Board if no major changes to the existing topography are being proposed)

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☑Identification of districts, sites, buildings, structures or objects, significant in American history, architecture, archeology, engineering or culture that are listed, or eligible for listing, in the National Register of Historic Places, or, if none, the applicant shall provide documentation from the Maine State Historic Preservation Office documenting such

☑Floor plans of the proposed buildings and any accessory structures

☑Elevations drawings of all sides of proposed buildings and accessory structures clearly indicating the type, color, and texture of all exterior surfacing materials of all proposed buildings and any accessory structures

☑A landscaping plan intended to meet the standards of 102.6A

☑A photometric plan of all exterior lighting proposed, intended to meet the standards of 102.6D

Exhibit 9 – Stormwater Management Report

☑A description of drainage on the site and topography, including direction of flow, existing grades, and a description of any existing impact to surrounding properties

☑A complete stormwater management plan, including drainage calculations, a drainage plan, an assessment of any pollutants in the stormwater, and any Low Impact Development (LID) measures being proposed in conformance with the provisions of Sec. 102.6.L

Exhibit 10 – Erosion Control

☑An erosion and sedimentation control plan as described in Sec. 102.6M

☑A medium intensity soil survey (though please be advised that a high intensity soils map may be required if issues of water quality, wetlands, or other natural constraints are noted)

Exhibit 11 – Miscellaneous

☑Documentation that the project will comply with applicable standards for noise (Sec. 102.6E) and air quality (Sec. 102.6C)

☑Copies of any proposed easements, covenants, deed restrictions, etc.

☑A written request for any desired waivers, including an explanation of the undue hardship or special design requirements which are the basis for the requests as well as supporting documentation as to why the waiver should be granted

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Additional, Project-Specific Standards

Exhibit 12 – Additional Requirements for Large-Scale Developments (>7,500 s.f. of total floor area, per Sec. 102.7)

☑Elevations drawings showing the exterior of the proposed structure on all sides, prepared in accordance with the referenced section

Exhibit 13 – Additional Requirements for Large-Scale Developments (>20,000 s.f. of total floor area, per Sec. 102.7H)

☑An economic and fiscal impact analysis that includes the following elements:

1. Identification and assessment of the impacts of the proposed project, including positive, negative, and indirective impacts.

2. Proposed measures to mitigate adverse impacts and/or maximize positive impacts, including provision of infrastructure or public service improvements sufficient to support this project. Any adverse impacts that cannot be mitigated shall be identified. Any mitigation measures to be implemented by the applicant shall be identified.

3. Proposed measures to mitigate negative traffic impacts to road plans of the Town and how to integrate the proposed development into the road plans of the Town.

4. Types of jobs created.

5. Number of full-time (40 hours per week) and part-time (less than 40 hours per week) jobs created.

6. Evaluation of the market and financial feasibility of the project. Include a trade area analysis indicating the market area proposed for the project and the area from which patrons will be attracted and any plans for phased construction. Include any further market studies prepared for the project by the applicant.

7. Evaluation for the potential of the proposed project to create an over-supply of retail space in Town using industry-accepted standards for commercial floor area per resident.

8. Evaluation of the impact of the proposed project on commercial vacancy rates in Damariscotta and Lincoln County.

9. Estimate to what extent the proposed project would reduce the diversity of the Town's economic base by eliminating smaller businesses.

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10. Comparison and evaluation of the projected costs and benefits to the Town resulting from the project including:

    a. Projected costs arising from increased demand for and required improvements to public services and infrastructure.

    b. Value of improvements to public services and infrastructure to be provided by the project.

    c. Projected tax revenues to the Town to be generated by the project and the need for increased financial support for infrastructure improvements and protective services.

    d. Projected impact of the project on land values (both residential and commercial) and potential loss or increase in tax revenues to the Town.

    e. Short-term and long-term projection of increased revenues to the Town and costs resulting from the proposed project.

    f. Estimate the difference between how much of the revenue generated by the proposed project would be retained and redirected back into the economy of the community compared to other retail chain stores and locally-owned, independent retailers in Town.

GORRILL PALMER

300 Southborough Drive, Suite 200
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Exhibit 2 – Project Data Sheet

- Total Land Area = 10.54 acres or 459,122 SF
- Total Land Disturbance = 68,698 SF or 1.56 acres
- Building footprint = 12,820 SF
- Building height = 33'-8" /two stories
- Total Parking = 33 total spaces
- Handicapped parking = 6 ADA spaces.
- Approximately 1.96 acres of the 10.54 acre parcel is developed with a 24-unit apartment complex spread throughout four buildings. The existing site contains 43 parking spaces and a modest amount of landscaped area around the buildings

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Exhibit 3 – Construction

The proposed development is anticipated to begin construction in the spring of 2024 with hopes of it being occupied in the fall of the same year. For a detailed construction sequence, see the erosion control plan included in Exhibit 10. A stand-alone phasing plan has been omitted, as the proposed construction will be a single phase. No significant impacts to the use of the existing Ledgewood Court parking area are expected during construction. While a space or two in the existing lot may be occupied by workers during construction, there appears to still be ample space in the lot for residents. Traffic control and pedestrian circulation will not be of concern as the construction will extend the end of a private, dead-end road.

The project, in total, is anticipated to cost approximately $8-10 million, A statement from NBT BANK indicating the Applicant's ability to fully fund the project is attached. The project may also seek Maine State Housing support and will be subject to their requirements and funding procedures.

The Applicant and its consultants have the technical ability to develop the project in a manner consistent with state and local environmental standards. The design and permitting of the project are being completed under the direction of Gorrill Palmer Consulting Engineers. Gorrill palmer and other consultants have the technical ability to prepare the construction documents and oversee construction of the project in compliance with applicable regulations.

Gorrill Palmer is the primary consultant involved with the civil/site design and site permitting of the project and has assembled the materials in this application. The following firms are acting as consultants to DC Ledgewood, LLC for the project.

Firm	Services	Contact
Gorrill Palmer 707 Sable Oaks Drive, Suite 30 South Portland, ME 04106 207.772.2515	Civil-Site Traffic	Stephen Bushey, PE sbushey@gorrillpalmer.com
Boothbay Region Surveyors 1037 Wiscasset Road Boothbay, ME 04537 207.633.4445	Surveyor	Nicholas Plummer, PLS nplummer@BRSmaine.com
Flycatcher, LLC 106 Lafayette Street Yarmouth, ME 04096 207.217.0959	Wetland Scientist	Rodney Kelsaw
Summit Geoengineering Services, Inc. 145 Lisbon Street, Suite 701 Lewiston, ME 04240 207.576.3313	Geotechnical Engineering	William Peterlein, PE bpeterlein@summitgeoeng.com
Winston Scott Architects 215 Commercial Street Portland, ME 04101 207.774.4811	Architect	Steve Weatherhead sweatherhead@winstonscott.com

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Firm	Services	Contact
SwiftCurrent Engineering Services 10 Forest Falls Drive, #4B Yarmouth, ME 04096 207.847.9280	MEP Designer	Tim Matthews tim@swiftcurrenteng.com
Aceto Landscape Architects 565 Congress Street, Suite 310 Portland, ME 04101 207.221.3990	Landscape Architect	Nick Aceto

The team of consultants for the project as expertise and experience in the design of multi-family developments that require both local and state permitting. A list of relevant Gorrill Palmer projects can be provided upon request.

DC Ledgewood, LLC is a subsidiary of Developers Collaborative, a full-service real estate management company whose portfolio includes numerous housing units across southern Maine. Recently, they were the applicant for a similar affordable senior housing facility in Rockland, ME.

Attachments:

A – Financial Capacity Letter

February 23, 2023

RE: New Ledgewood Senior Affordable Housing Project, Damariscotta, Maine

To Whom It May Concern:

Please accept this letter as validation that Kevin Bunker of Developers Collaborative Predevelopment, LLC has an existing relationship with NBT Bank, NA and has brought this financing need to our attention. Pending full underwriting and formal approval, we are supportive of this request and believe that the applicant has the ability to source all projected project costs.

Sincerely,

Mark Y. Schaub
Vice President, Senior Commercial Relationship Manager
NBT Bank, National Association

GORRILL PALMER

300 Southborough Drive, Suite 200
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207.772.2515

Exhibit 4 Right, Title or Interest

See attached deed recorded in the Lincoln County Registry of Deeds book 5472, page 299. All existing and proposed easements are shown on the proposed Lot Line Adjustment Plan, sheet C-3.1 in the plan set. The attached Assignment of Amendment to Purchase and Sale Agreement between Midcoast Maine Community Action and Developers Collaborative Predevelopment LLC/DC Ledgewood LLC serves as evidence of the applicant's current interest in the property. As part of the agreement, DC Ledgewood LLC will also become the asset manager of the existing Ledgewood Court 24 units as outlined in the Asset Management Agreement.

Attachments:
A – Deed
B- Amendment to Purchase and Sale Agreement

ATTACHMENT A

Receipt # 31967
E-RECORDED
Bk 5472 PG 299
12/20/2019 03:53:03 PM
Pages 5
DEEDS
Instr # 57096
Rebecca S. Wotton Lincoln County Registry of Deeds

DLN: 1001940082783

SHORT FORM QUITCLAIM DEED WITH COVENANT

PIPER MILL HOUSING ASSOCIATES LP, a Maine limited partnership with a place of business and mailing address of 34 Wing Farm Parkway, Bath, Maine 04530 ("Grantor"), FOR CONSIDERATION PAID, grants to MIDCOAST MAINE COMMUNITY ACTION, a Maine nonprofit corporation having a place of business and mailing address of 34 Wing Farm Parkway, Bath, Maine 04530 ("Grantee"), WITH QUITCLAIM COVENANT, the following described real property located at 207 Ledgewood Court Drive in the Town of Damariscotta, County of Lincoln, and State of Maine:

SEE EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF.

IN WITNESS WHEREOF, Claire Berkowitz, President and CEO of Midcoast Maine Community Action, General Partner of Piper Mill Housing Associates LP, has executed this instrument as of the 18th day of December, 2019.

WITNESS:

[signature]

PIPER MILL HOUSING ASSOCIATES LP

By: Midcoast Maine Community Action, its General Partner

By: [signature]
Claire Berkowitz, its President and CEO

STATE OF MAINE
LINCOLN, SS.

December 18, 2019

Personally appeared the above-named Claire Berkowitz, President and CEO of Midcoast Maine Community Action, General Partner of Piper Mill Housing Associates LP and acknowledged the foregoing instrument to be her free act and deed.

Before me,

[signature]
~~Notary Public~~/Attorney-at-Law
Print Name: MASEUNGAREN
My commission expires:

O:\Piper Mill Housing Assoc (70012)\Damariscotta Project (300)\Transfer documents\Deed_FINAL.docx

MAINE REAL ESTATE TRANSFER TAX PAID

EXHIBIT A

PARCEL A (Fee Parcel)

A certain lot or parcel of land situated on the southerly side of Piper Mill Road, a private road leading easterly from School Street, in the Town of Damariscotta, County of Lincoln and State of Maine bounded and described as follows:

Beginning at a 5/8" x 9" iron bar set in 1999 in the southerly sideline of Piper Mill Road, being an easement to the land now or formerly of Great Salt Bay Sanitary District as described in a deed recorded in Book 1276, Page 282, at the northeast corner of the land now or formerly of Central Lincoln County Ambulance Services, Inc. as described in a deed recorded in Book 2485, Page 337, and as shown on a plan titled "Central Lincoln County Ambulance Services, Inc." dated June 7, 1999 by Mann Associates, Inc. recorded in Plan Book 64, Page 22, said iron bar lying S 88°58'00" E a distance of 215.21' from a 5/8" iron bar found buried 14" at an angle point in the southerly sideline of Piper Mill Road;

Thence S 88°58'00" E along the southerly sideline of said Piper Mill Road and remaining land of Amelia K. French 789.51' to a 5/8" iron bar found buried 8";

Thence along the sideline of Piper Mill Road and remaining land of Amelia K. French by a curve concave to the southwest having an arc length of 408.84', a radius of 260.00', a central angle of 90°05'40", a chord bearing of S 43°54'19" E and a chord length of 368.00' to a 5/8" iron bar found 1" tall;

Thence S 01°04'43" W along the westerly sideline of Piper Mill Road and remaining land of Amelia K. French 216.77' to a 5/8" iron bar in a boulder found at the northeast corner of the land now or formerly of Joel Huston Dodge as described in a deed recorded in Book 493, Page 433;

Thence westerly along land now or formerly of Dodge and in part along or near a stonewall to a 5/8" iron bar set in 1999 at the southeast corner of the aforementioned land of Central Lincoln County Ambulance Services, Inc. being N 89°51'10" W a distance of 905.3' from the last mentioned iron bar;

Thence N 15°19'04" W along land of said Central Lincoln County Ambulance Services, Inc. 511.95' to the point of beginning.

For further reference see a plan titled "Boundary Survey of Parcel To Be Conveyed by Amelia K. French" dated February 28, 2002 by Mann Associates, Inc.

Bearings recited above are referenced to Grid North as shown on the aforementioned plans by Mann Associates, Inc.

The iron bars mentioned above as "set" refer to a 5/8" reinforcing bar topped with a 2"

diameter aluminum cap stamped "Mann Associates, Inc."

PARCEL B (Access Easement)

TOGETHER WITH a right of way, in common with others including Grantor, for ingress and egress, by foot or vehicle, over that portion of the right of way known as Piper Mill Road as described in deed to Great Salt Bay Sanitary District, dated November 19, 1985, recorded at Book 1276, Page 282 at the Lincoln County Registry of Deeds which is located between School Street to and along the northerly and easterly bounds of the parcel hereinabove conveyed to the 5/8" diameter iron bar marking the northerly bounds of the land of Joel Huston Dodge as depicted on the plan entitled "Boundary Survey of a Parcel to be Conveyed by Amelia K. French" dated January 30, 2003 by Mann Associates, Inc. to be recorded. Except as provided herein, Grantee's use of this right of way including entrance-ways from the above described parcel is limited to where the paved road in said right of way now or in the future is widened to meet the Town of Damariscotta's width standards for construction of a town road designed to accommodate two-way traffic, but not less than twenty-two (22) feet in width. Grantee shall have the right to install, maintain, and repair such paved road as is used as access for the above described parcel at its expense, including the right to expand said pavement to a total width to meet the Town of Damariscotta's width standard for construction of a town road designed to accommodate two-way traffic, but not less than the present standard of twenty-two (22) feet in width, and all consistent with the rights of others to make use of, install, maintain and repair said paved roadway. Any pavement expansion or replacement by Grantee and the roadbed underneath the same shall be constructed in accordance with standards applied by the Town of Damariscotta for new town road construction. Grantee shall have the right to use the right of way for the full length of the northerly and easterly boundaries of the parcel hereinabove conveyed up to the land of Dodge for access to complete construction and maintenance on the parcel hereinabove conveyed and as permitted within the right of way, provided that Grantee shall prohibit and not permit Grantee's tenants and invitees to use such portions of said right of way that have not been widened as required hereinabove.

TOGETHER WITH an easement, in common with others including Grantor, within said right of way for Piper Mill Road as referenced above in deed to Great Salt Bay Sanitary District between School Street to the above described parcel and continuing easterly and southerly along the northerly and easterly bounds of the above described parcel to the north line of land now or formerly of Great Salt Bay Sanitary District for the installation, maintenance, repair and replacement of utilities, including but not limited to electrical, telephone, cable television, and sewer utilities with all necessary fixtures, and including the right to use necessary motor vehicles on Piper Mill Road to complete such work. Utilities installed in said right of way, easterly of the entrance way to the above described parcel (which easterly bounds of said entrance way is to be located 180' more or less along Piper Mill Road from the northeast corner of the land now or formerly of Central Lincoln County Ambulance Services, Inc.) shall be installed underground. Grantee shall have the right to trim, cut down, and remove bushes, trees and vegetation and to excavate and fill as is reasonably necessary to install, maintain, repair and replace said utilities. Grantee covenants that upon completion of such work the areas so disturbed shall be restored to the same condition as prior to such removal and excavation as is reasonably feasible, but full grown trees need not be replanted.

Grantee covenants (i) to make use of reputable contractors which are insured in completing any work under the terms of the above easements and covenants, (ii) to make a good faith effort to notify in advance Grantor and other effected parties of any intended work and when it is to occur, (iii) to complete said work in an expeditious manner to minimize disruption to others, (iv) to repair any damage beyond normal wear and tear which Grantee causes to the Piper Mill Road right of way, and (v) to indemnify and hold harmless Grantor, her heirs, successors and assigns from any damage or injury arising from such work, including any lawsuits, demands, and claims, expenses, and attorney fees incurred as a consequence.

Grantee covenants that all portions of the parcel hereinabove conveyed which are located within twenty-five feet of the southerly and westerly bounds of the Piper Mill Road right of way as referenced hereinabove shall remain a vegetated buffer with no improvements to be constructed therein, except such vehicular entrances (not to exceed two) and utility access routes as are reasonably necessary to make use of the above described parcel.

These terms, covenants and restrictions contained herein shall run with the land for the benefit of the remaining land of Amelia K. French as set forth in deeds recorded at Book 1144, Page 120 and Book 2658, Page 91 at said Registry, and to burden the land herein conveyed. A failure to promptly enforce against any breach of an easement, term, covenant or restriction in this deed shall not be deemed a waiver of rights due to such breach or any subsequent breach. Grantee accepts the terms of the terms, covenants and restrictions contained herein by recording of this deed. A reference to Grantor and Grantee shall mean to include their respective heirs, successors and assigns.

EXCEPTING AND SUBJECT TO the easements, terms, covenants, and restrictions pertaining to the use of Piper Mill Road right of way as more fully set forth in deed to Great Salt Bay Sanitary District, dated November 19, 1985, recorded at Book 1276, Page 282 at the Lincoln County Registry of Deeds, and the right of use by Central Lincoln County Ambulance Services, Inc. in deed dated August 4, 1999 and recorded at Book 2485, Page 337 at said Registry, notwithstanding any easements, terms, covenants, and restrictions granted herein to the contrary pertaining to the Piper Mill Road right of way.

EXCEPTING AND RESERVING to Grantor all right, title and interest to the fee in that land within the Piper Mill Road right of way and all rights of use thereto, which have not specifically been granted herein or by prior deed, including as reserved in deed to Great Salt Bay Sanitary District, dated November 19, 1985, recorded at Book 1276, Page 282 at the Lincoln County Registry of Deeds, and including the right to grant other properties or others use of the Piper Mill Road right of way subject to such present and previous grants.

Being all and the same premises described in a Warranty Deed from Amelia K. French to Piper Mill Housing Associates LP dated February 6, 2003 and recorded in said Registry in Book 2996, Page 310.

PARCEL C (Sewer Easement)

An easement for the purposes described below, over and across certain land of the Great Salt Bay Sanitary District located off a private way known as Piper Mill Road in the Town of Damariscotta, Lincoln County, Maine and more particularly described in a Notice of Eminent Domain Taking dated November 13, 1985 and recorded in the Lincoln County Registry of Deeds in Book 1276, Page 285.

The purpose of the easement granted above is to provide the Grantee with an easement or right of way for the installation, maintenance, repair and replacement of up to a ten inch diameter underground sewer pipe running across Grantor's Land from the most southerly terminus of Piper Mill Road as described in an easement to Grantor dated November 19, 1985 and recorded in said Registry of Deeds in Book 1276, Page 282, running in a generally southerly direction and terminating at the so-called "grit chamber" adjacent to the buildings located on Grantor's Land, together with the right to pass and repass over that portion of Grantor's Land up to fifteen feet on either side of the centerline of such sewer pipe by foot and vehicle for the purpose of maintaining, repairing and replacing from time to time such sewer pipe. Grantee agrees by acceptance of this easement (i) specifications for the materials and process to be used in the installation of the sewer pipe shall be provided to the Grantee or its engineers and shall be inspected and approved at such stages as the Grantee may direct, such approval not to be unreasonably withheld, delayed or conditioned; (ii) after initial construction and any repair, maintenance or replacement, to restore the surface of Grantor's Land as much as possible to its original condition, including grading and seeding; and (iii) after the initial installation of such sewer pipe, to enter into a restatement of this easement for the purpose of more specifically delineating the location of the easement granted herein.

ATTACHMENT B

.

ASSIGNMENT OF AND AMENDMENT TO PURCHASE AND SALE AGREEMENT

THIS ASSIGNMENT OF AND AMENDMENT TO PURCHASE AND SALE AGREEMENT made and entered into as of January 25, 2022 by and between MIDCOAST MAINE COMMUNITY ACTION, a Maine nonprofit corporation with a place of business and mailing address of 34 Wing Farm Parkway, Bath, Maine 05430 ("Seller"), DEVELOPERS COLLABORATIVE PREDEVELOPMENT LLC, a Maine limited liability company with a place of business and mailing address of 631 Stevens Avenue, Suite 203, Portland, Maine 04103 ("DCP") and DC LEDGEWOOD LLC, a Maine limited liability company with a place of business and mailing address of 631 Stevens Avenue, Suite 203, Portland, Maine 04103 (the "Buyer").

WITNESSETH:

WHEREAS, Seller and DCP entered into that certain Purchase and Sale Agreement dated as of October 1, 2021 (the "Agreement") concerning the purchase by DCP of land and buildings in Damariscotta, Maine, more particularly described in the Agreement; DCP now wishes to assign its rights in the Agreement to Buyer; and the parties now wish to amend the Agreement as set forth herein.

NOW THEREFORE, FOR VALUABLE CONSIDERATION, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

1. As allowed by Section 13 of the Agreement, DCP hereby assigns all its right, title and interest in and to the Agreement to Buyer, and Buyer accepts such assignment and agrees to be bound by and to perform the obligations of the "Buyer" under the Agreement. Seller recognizes DC Ledgewood LLC as "Buyer" under the Agreement and agrees to look solely to DC Ledgewood LLC for performance of the obligations of the Buyer under the Agreement.

2. The Closing Date, as defined and set forth in Section 4 of the Agreement, is hereby extended to December 15, 2023.

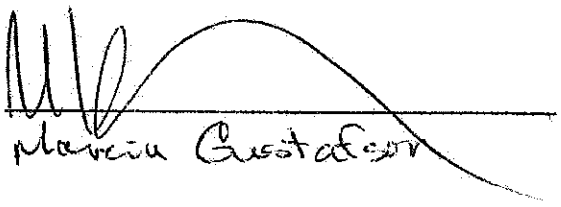
3. The parties agree that Buyer may elect to acquire an undeveloped portion of the Premises before closing on the entire Premises. If Buyer so elects, Buyer shall be responsible for negotiating all necessary releases from MaineHousing, at no cost to Seller. Buyer may engage in all necessary predevelopment activities as to such portion of the Premises to be acquired by Buyer, including seeking permits and approvals, obtaining surveys, environmental and engineering reports and appraisals, all at Buyer's sole cost and expense. Buyer shall indemnify, defend and hold harmless the Seller from and against all costs, expenses, claims and damages relating to Buyer's predevelopment activities. Seller shall cooperate with Buyer in such predevelopment activities; provided, however, Seller shall not be required to expend any funds in connection with Buyer's said activities.

4. As assigned and amended hereby, the Agreement continues in full force and effect, and Buyer and Seller ratify and affirm their respective obligations to one another under

the Agreement as assigned and amended hereby. Capitalized terms used but not defined herein shall have the meanings assigned to them in the Agreement.

IN WITNESS WHEREOF, the parties have executed this Assignment of and Amendment to Purchase and Sale Agreement as of the date written above.

WITNESS:



MIDCOAST MAINE COMMUNITY ACTION, Seller

By: _____
Claire Berkowitz, its President and CEO

[remainder of page left blank intentionally—signatures continue on next page]

IN WITNESS WHEREOF, the parties have executed this Assignment of and Amendment to Purchase and Sale Agreement as of the date written above.

WITNESS:

DEVELOPERS COLLABORATIVE PREDEVELOPMENT LLC

By:_____
Kevin R. Bunker, its Manager

DC LEDGEWOOD LLC, Buyer

By:_____
Kevin R. Bunker, its Manager

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ASSET MANAGEMENT AGREEMENT

THIS ASSET MANAGEMENT AGREEMENT (the "Agreement") is made and entered into as of the 25th day of January, 2022, by and between MIDCOAST MAINE COMMUNITY ACTION, a Maine nonprofit corporation with a place of business and mailing address of 34 Wing Farm Parkway, Bath, Maine 04530 (the "Owner"), and DC LEDGEWOOD LLC, a Maine limited liability company with a place of business and mailing address of 631 Stevens Avenue, Suite 203, Portland, Maine 04103 (hereinafter referred to as the "Asset Manager")

WITNESSETH:

WHEREAS, the Owner owns certain real property, consisting of a parcel of land located at or near 207 Ledgewood Court in Damariscotta, Maine, described in a deed to Owner recorded at the Lincoln County Registry of Deeds in Book 5472, Page 299, having 10.54 acres, more or less (the "Land"), on which Land are located buildings, fixtures and improvements, consisting of a lawfully permitted 24 unit affordable rental housing project, consisting of 14 two bedroom units and 10 three bedroom units in four buildings, driveway and parking spaces, and related facilities , known as Ledgewood Court (collectively with the Land, the "Project"); and

WHEREAS, the Owner wishes to retain Asset Manager as overall asset manager of the Project to oversee the management, operation, maintenance and repair of the Project according to the terms of this Agreement; and

WHEREAS, the Asset Manager is willing to act as asset manager pursuant to the terms of this Agreement.

NOW, THEREFORE, in consideration of the foregoing and of the full and faithful performance of the Asset Manager and the Owner of all the terms, conditions, and obligations undertaken pursuant to this Agreement, the parties agree as follows:

1. APPOINTMENT OF ASSET MANAGER

The Owner hereby appoints the Asset Manager as the exclusive asset manager for the operation and maintenance of the Project with the responsibilities and upon the terms and conditions set forth herein, and the Asset Manager, by its execution hereof, does hereby accept such appointment and agrees to perform the duties assigned to it under this Agreement. Owner delegates to Asset Manager all decision making concerning the operation, maintenance and repair of the Project. Asset Manager accepts such delegation and agrees that its services under this Agreement, while undertaken for its own account, shall nonetheless also be in furtherance of the Owner's best interests as record owner of the Project, as determined by Asset Manager in its reasonable discretion. This Agreement shall not be deemed to constitute Asset Manager as a fiduciary of Owner or to impose any kind of fiduciary duties upon Asset Manager.

2. SERVICES OF ASSET MANAGER

2.1 Standard of Care. In the operation and maintenance of the Project, the Asset Manager shall devote its best efforts consonant with first-class professional asset management of affordable housing projects, and shall perform its duties hereunder in a diligent manner. The services of the Asset Manager hereunder are to be of a scope and quality not less than those generally performed by professional asset managers of other similar projects in the area.

2.2 Operation of the Project. The Asset Manager shall cause the Project to be operated strictly in accordance with all applicable laws, rules, regulations and ordinances and restrictive covenants in favor of Maine State Housing Authority ("MaineHousing"). Asset Manager agrees not knowingly to permit the use of the Project for any purpose which might void or increase the rates of any policy of insurance held by the Owner or which might render any loss insured thereunder uncollectible, or which would be in violation of any governmental restriction, statue, ordinance, rule, or regulation. The Asset Manager at all times during the term of the Agreement shall cause the Project to be operated and maintained in accordance with all MaineHousing property management rules and regulations, including all applicable management handbooks, as may be revised from time to time by MaineHousing. The Asset Manager shall have full control and possession of all income of the Project, shall be solely responsible for the payment of all expenses of the Project and shall bear all the risk of operating shortfalls during the term of this Agreement. In order to provide Asset Manager with the ability to control the income and expenses of the Project, Owner shall cooperate with Asset Manager and shall assist Asset Manager in becoming an authorized signatory on all Project accounts.

2.3 Specific Duties of the Asset Manager. Without limiting the duties and obligations of the Asset Manager under any other provisions of this Agreement, the Asset Manager shall devote its best efforts to perform the following duties during the term of this Agreement:

(a) Monies Collected. Asset Manager shall cause to be collected all rent and other payments due from lessees, sublessees, concessionaires, and others in the Project and any other sums otherwise due to the Project in the ordinary course of business. The Owner authorizes the Asset Manager to request, demand, collect, receive, and receipt for all such rent and other charges and to institute legal proceedings in the name of the Owner for the collection thereof and for the lawful dispossession of lessees, sublessees, concessionaires, and other persons from the Project upon their default not cured within any applicable grace period. Such expenses may include the engaging of counsel of the Asset Manager's choice for any such matter. All monies collected by the Asset Manager or its agent shall be forthwith deposited by Asset Manager in the Project's operating account.

(b) Payment of Project Expenses. Asset Manager cause to be paid in a timely manner all Project operating expenses as the same become due and payable, including, without limitation, property taxes and insurance, maintenance costs. Such costs shall, without limitation, include plowing, sanding and salting, groundskeeping, light-duty painting, repairs and general maintenance, but shall exclude capital expenses, defined as expenses that would be depreciated under standard accounting practices. If the need for any capital expense arises

during the term of this Agreement, the parties shall consult as to the nature, extent and cost of the work to be done and how the work shall be paid for. Asset Manager shall cause to be paid all amounts that are to be paid into the Project's replacement reserve and tax and insurance escrow accounts held or controlled by MaineHousing.

(c) **Repairs and Maintenance**. Asset Manager shall cause to be made all repairs and maintenance on the Project, including buildings and grounds, as in Asset Manager's reasonable, prudent judgment are necessary from time to time.

(d) **Management Agent**. Asset Manager shall continue to employ the services of the existing property manager, C & C Realty ("C & C"). Owner shall cooperate with Asset Manager in causing C & C to recognize Asset Manager's role and responsibilities in the operation and maintenance of the Project as set forth in this Agreement.

2.4 Compliance with Laws. Both the Owner and the Asset Manager shall comply with all statutes, ordinances, rules and regulations governing the operation, maintenance, repair and use of the Project, as well as all loan documents and restrictive covenants in favor of MaineHousing relating to the Project. Within a reasonable time of discovering any violation of any such law, ordinance, rule, regulation, order, loan document or restrictive covenant, the Asset Manager shall use its best efforts at Asset Manager's sole cost and expense to remedy promptly such violation.

2.5 Indemnification.

(a) **Indemnification by Owner**. The Owner shall indemnify, defend, and hold the Asset Manager and its affiliates and each of their respective members, managers, employees, partners, agents and each of their respective successors and assigns harmless from and against all claims, losses and liabilities (including costs and reasonable attorneys' fees as such fees are periodically incurred) incurred by Asset Manager or such other parties arising directly or indirectly out of or resulting in any way from or in connection with (i) the operation, maintenance or repair of the Project prior to the date of this Agreement and (ii) any hidden conditions within the Project that arose prior to the date of this Agreement.

(b) **Indemnification by Asset Manager**. Asset Manager shall indemnify, defend and hold the Owner and its affiliates and each of their respective employees, officers, directors, and agents harmless from and against any and all costs, expenses, attorneys' fees, suits, liabilities, damages, or claim for damages, in any way arising out of (i) any negligent or willful acts or omissions of Asset Manager, its agents or employees that are not otherwise insured under property or liability policies, including deductibles and retentions, required to be maintained by Owner under this Agreement; (ii) any failure of Asset Manager to promptly perform in any material respect any of its obligations under this Agreement after the date hereof, to the extent the loss is not otherwise insured under property or liability policies including deductibles and retentions, required to be maintained by Owner under this Agreement, provided such failure was not caused by the negligence or willful acts of the Owner; (iii) any willful misconduct or intentional breach of this Agreement by Asset Manager; and (iv) the existence of any operating shortfalls or deficits in revenues leading to Project expenses being greater than

Project revenues.

3. COMPENSATION FOR MANAGEMENT SERVICES; OPERATING SHORTFALLS

Asset Manager's sole compensation under this Agreement shall be the retention of yearly surplus cash, if any, from the operation of the Project after payment of all Project operating expenses, required MaineHousing reserve account deposits and payment of the C & C management fee. Asset Manager understands that surplus cash is determined annually by MaineHousing in its sole discretion after review of the Project's annual audited financial statements. In exchange for receiving all annual surplus cash, if any, from the operation of the Project, Asset Manager assumes (i) responsibility for payment of all Project operating expenses and (ii) all risk that Project expenses exceed Project revenues.

4. TERM AND TERMINATION

4.1 Term. Subject to the termination provisions in Section 4.2 below, the term of this Agreement shall commence on the date set forth at the beginning of this Agreement and shall terminate on [December 15, 2023].

4.2 Termination by Either Party for Default. Either party may terminate this Agreement if the other party defaults in its obligations under this Agreement and such default is not cured within thirty (30) days after written notice specifying the nature of the default.

4.3 Asset Manager's Obligations After Termination. Upon the termination of this Agreement as provided above, the Asset Manager shall:

(a) Deliver Records. Deliver to the Owner, or such other person or persons designated by the Owner, copies of all books and records of the Project and all funds in the possession of the Asset Manager belonging to the Owner or received by the Manger pursuant to the terms of this Agreement.

(b) Assignment. Assign, transfer, or convey to Owner or such person or persons designated by Owner all service contracts and personal property relating to or used in the operation and maintenance of the Project, except any new personal property which was paid for and is owned by the Asset Manager.

(c) Termination of Obligations; Right to Compensation. Upon any termination pursuant to this Section 4, the obligations of the parties hereto shall cease as of the date specified in the notice of termination; provided that the Asset Manager shall comply with the applicable provisions hereof; and, provided further that the Asset Manager shall be entitled to receive a pro rated amount of surplus cash for the year of the termination.

(d) Final Accounting. The Asset Manager shall, within thirty (30) days of the date of expiration or termination of this Agreement, deliver to the Owner the

following: (i) an accounting reflecting the balance of income and expenses of and from the Project to the date of termination or expiration of the Agreement; (ii) any fuds relating to the Project then held by the Asset Manager; and (iii) all Project-related leases, receipts for deposits., insurance policies, unpaid bills, correspondence, and other documents which are in the possession of the Asset Manager. Upon delivery of the aforementioned items, the Asset Manager shall be deemed to have fully performed all of its obligations under this Agreement and shall be fully released by the Owner from any and all liability and obligation to the Owner under this Agreement and the performance thereof by the Asset Manager. The Asset Manager may retain copies or duplicates of all documents, accountings, leases, and other papers delivered to the Owner that are required to be maintained or retained under, or in order to comply with, Maine law.

5. RESPONSIBILITY FOR PERSONNEL

The Asset Manager shall be responsible for the actions of its employees, for the supervision of all persons performing services in connection with the maintenance and operation of the Project, and for determining the manner and time of performance of all acts hereunder. Nothing herein contained shall be construed to establish the Asset Manager or any of its employees or agents as employees of the Owner.

6. SALE OF THE PROPERTY.

Owner and Asset Manager have previously entered into a Purchase and Sale Agreement dated as of October 1, 2021, concerning the acquisition of the Project by Asset Manager (as amended by Assignment of and Amendment to Purchase and Sale Agreement of even or near date, and as it may be further amended, the "P & S Agreement"). Asset Manager has disclosed to Owner Asset Manager's interest in subdividing and developing a portion of the Land into additional housing. Owner agrees that Asset Manager may pursue predevelopment activities, at Asset Manager's sole cost and expense, concerning the subdivision and additional development of a portion of the Land. Owner shall cooperate with Asset Manager, at no cost to Owner, in Asset Manager's pursuit of necessary engineering work and permitting with respect to such additional development. In the event this Agreement is terminated for any reason, all surveys, plans, studies, contracts, permits and approvals (collectively the "Predevelopment Materials") shall become the property of Owner at no cost to Owner, and Asset Manager shall assign to Owner by written assignment all Predevelopment Materials. The parties recognize any subdivision or sale of a portion of the Land requires the approval of MaineHousing. Asset Manager shall at its expense repair any damage to the Land caused by Asset Manager's surveys, tests or studies conducted on the Land.

7. NOTICES

All notices, demands, statements, and communications required. or desired to be given hereunder shall be in writing, and shall he sent by certified mail or reputable overnight delivery services, addressed to the recipient at the address set forth at the beginning of this Agreement, or to such other address as shall from time to time have been designated by written notice by either party to the other party as herein provided.

8. MISCELLANEOUS

The captions of this Agreement are inserted only for the purposes of convenient reference and do not define, limit, or prescribe the scope or intent of this Agreement or any part hereof. Words used herein shall include both the plural and singular, and the masculine shall include the feminine and neuter genders. This Agreement shall be construed in accordance with the laws of Maine. Neither party may assign this agreement without the written consent of the other party. This Agreement, together with the P & S Agreement, embodies the entire understanding of the parties and there are no further agreements or understandings, written or oral, in effect between the parties relating to the subject matter hereof. Nothing in this Agreement shall be deemed to be a transfer of the Project by Owner to Asset Manager. Until there occur one or more closings under the P & S Agreement, record title to the Project shall at all times remain vested in Owner. This Agreement may be executed in any number of counterparts, and all such counterparts shall constitute one and the same Agreement.

IN WITNESS WHEREOF, the parties hereto have executed this Asset Management Agreement as of the day and year first above written.

MIDCOAST MAINE COMMUNITY ACTION, Owner

By: _____
Claire Berkowitz, its President and CEO

[remainder of page left blank intentionally—signatures continue on next page]

IN WITNESS WHEREOF, the parties hereto have executed this Asset Management Agreement as of the day and year first above written.

DC LEDGEWOOD LLC, Asset Manager

By: _____

Kevin R. Bunker, its Manager

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GORRILL PALMER

300 Southborough Drive, Suite 200
South Portland, Maine 04106
207.772.2515

Exhibit 5 – Service and Infrastructure Capacity for the Project

Correspondence with the Great Salt Bay Sanitary District will be forwarded upon receipt. The development is anticipated to demand approximately 3,840 gallons of water per day, with a peak rate of 6,912 gpd. Public water supply and sanitary collection are available to serve the project site.

It is our understanding that the existing 6" watermain within Piper Mill Road ends roughly at the existing driveway for Ledgewood Court. A 6" main extends into the existing complex, with 2" services off this main to each of the buildings. The Applicant intends to connect to the existing 6" main within the complex, circumvent the complex around the east side, and come into the proposed building in the center of the north side. A 4" domestic service for the building is proposed to tap off the 6" fire line just outside the building. Separate valves will be provided for the domestic and fire services. The building will have a full sprinkler system. There is an existing fire hydrant at the Ledgewood Court driveway on Piper Mill Road. A new private hydrant will also be installed just to the west side of the proposed building.

There is an existing sanitary pump station on the site associated with the existing complex. From this pump station, we believe a 4" force main runs along the southern property line out to Piper Mill Road, just north of the Sewage treatment facility. The private force main extends to the WWTP site and discharges into the grit chamber associated with the sanitary facility according to District personnel. The applicant intends to construct an 8" gravity sewer from the proposed building to tie into the existing pump station. Wastewater from the proposed building will then combine with the wastewater for the existing complex and exit the site via the existing force main. The existing force main alignment falls within the area of the proposed parking lot which may result in the need to adjust the FM pipe depth during the course of work. This work will be performed in a manner to minimize any disruption of service to the existing Ledgewood Court residences.

Trip generation associated with the proposed development has been calculated using the Institute of Transportation Engineers' (ITE) Trip Generation Manual, Eleventh Edition. After careful review of the Land Use Codes (LUCs) listed in the manual, LUC 252 – Multifamily Senior Housing was selected to represent the proposed development. The table below presents the trip generation associated with the development.

LUC 252 – 32 Units	Trip Generation (Trip Ends)		
	Enter	Exit	Total
Weekday	52	52	104
AM Peak Hour Adjacent	2	4	6
PM Peak Hour Adjacent	4	4	8
AM Peak Hour Generator	4	5	9
PM Peak Hour Generator	5	5	10
Saturday	44	44	88
Saturday Peak Hour Gen.	6	4	10

Complete trip generation calculations are attached. As seen in the table, the proposed development is forecast to generate 52 trips on the typical weekday and 10 trips during the Saturday peak hour. Given this

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300 Southborough Drive, Suite 200
South Portland, Maine 04106
207.772.2515

minimal amount of traffic associated with the proposed development, no adverse impacts are expected on the existing public roadway network in the area.

Solid waste generated by the proposed development will be handled by Pine Tree Waste in the same way solid waste is removed from the existing development. Residents will bring their solid waste to a new dumpster enclosure where it will be picked up by Pine Tree Waste and disposed on a weekly or more often as needed, basis.

Attachments:
A – Ability to Serve Letters from GSBSD and CMP
B – Vehicle Trip Generation calculations

ATTACHMENT A

GORRILL PALMER

707 Sable Oaks Drive, Suite 30
South Portland, Maine 04106
207.772.2515

January 12, 2023

Mr. Timothy Laney
Central Maine Power
57 Old Winthrop Road
Augusta, Maine 04330

Subject: Proposed Residential Development
DC Ledgewood, LLC
207 Ledgewood Court Drive; Damariscotta, ME
Letter of Ability to Serve Request

Dear Mr. Laney:

On behalf of **DC Ledgewood, LLC,** we would like to verify Central Maine Power's ability to provide electrical utility service for a proposed residential development at 207 Ledgewood Court Drive – off Piper Mill Road – in Damariscotta, Maine. The project site is identified on the Town of Damariscotta's Tax Maps as Map 001, Lot 050-003. The subject parcel is approximately 10.54 acres.

The existing site is partially developed and operates as a 24-unit apartment complex. The existing 24 units are spread throughout 6 buildings in a cul-de-sac with associated parking. The existing apartment complex is intended to remain unchanged both during and upon completion of the proposed development. The existing units in the development are served by underground electric lines that extend from CMP pole 5 on the south side of Piper Mill Road, just west of the existing site driveway. The proposed development is anticipated to include a single 32-unit, 2-story residential building with associated access, parking, and outdoor space.

The MEP designer for the development will be SwiftCurrent Engineering. Initial load information is not readily available, although it is anticipated that the development will require three-phase power. Our initial review of the site and infrastructure in the vicinity has identified three-phase overhead power on the north side of Piper Mill Road, along the majority of the site frontage. It should be noted that the overhead power crosses Piper Mill Road and crosses the subject parcel via an easement. As mentioned above, service to the existing complex is underground from CMP pole 5 on the south side of Piper Mill Road, adjacent the existing site driveway. This service will remain unchanged both during and upon completion of the proposed development.

We have included with this letter a utility plan depicting the proposed utilities for the project. We currently are proposing new three-phase overhead services to the development via new riser poles in an existing cleared corridor along the southern property boundary, containing a sewer force main associated with the existing development. The service will stem from pole 8 on Piper Mill Road, just north of the sewage treatment plant. Services to the building itself will be underground from the nearest pole and will pass through a transformer pad.

We are in the process of completing a Site Plan Application with the Town of Damariscotta and are writing to request a letter indicating the ability of Central Maine Power to serve the project. In addition, we are interested in receiving information regarding:

- Upgrades to nearby CMP infrastructure
- All onsite overhead and underground improvements
- CMP engineering costs
- Any other information that you believe would be useful as this project proceeds.

If you have any questions on the information submitted, please contact our office.

Regards,

GORRILL PALMER

Brad Pineau, EI
Design Engineer
Phone: (207) 772-2515x289
bpineau@gorrillpalmer.com

Attachment:

Location Map
Layout & Utility Plans

U:\3996 - Ledgewood Court Expansion - Damariscotta 5-16-22\H Utilities\CMP\abs_cmp_cough_12_29_22.docx

GORRILL PALMER

707 Sable Oaks Drive, Suite 30
South Portland, ME 04106
207.772.2515

February 17, 2023

Ms. LeeAnna Libby - Wastewater Manager
Great Salt Bay Sanitary District
121 Piper Mill Road
P.O. Box 23
Damariscotta, Maine 04543

Subject: Proposed 32 unit Residential Development
DC Ledgewood LLC
207 Ledgewood Court
Capacity to Serve Request

Dear LeeAnna:

On behalf of **DC Ledgewood, LLC,** we would like to verify Great Salt Bay Sanitary District's capacity to provide sewer service for a proposed residential development at 207 Ledgewood Court Drive – off Piper Mill Road – in Damariscotta, Maine. The project site is identified on the Town of Damariscotta's Tax Maps as Map 001, Lot 050-003. The subject parcel is approximately 10.54 acres.

The existing site is partially developed and operates as a 24-unit apartment complex. The existing 24 units are spread throughout 6 buildings in a cul-de-sac with associated parking. The existing complex is served by an on-site duplex pump station and either a 3" or 4" force main line discharging directly to the Great Salt Bay Sanitary District's grit chamber at the end of Piper Mill Road.

The applicant is proposing to connect an 8" gravity sewer from the proposed building into the existing on-site pump station as shown on the attached utility plan. The existing force main pipe is likely to be reset during the course of construction as the pipe is within area to be excavated for the proposed parking lot. The force main pipe will be lowered. According to Tim Stevens of Stevens Electric & Pump service the existing station has duplex submersible 3" pumps with an approximately 15' deep wetwell. The existing equipment has the capacity for the additional flow to be generated by the proposed development.

We've also discussed the needs of the project with Andrew Johnston of ARC who are involved with the Clippership nursing home development. We understand they may pursue their own force main extension within Piper Mill Road and the proposal to combine their force main pipe with the Ledgewood Force main, outside of the grit chamber, thus avoiding any new connection to that structure. We've also discussed whether the Clippership development might be responsible to connect the pumps stations via telemetry or similar systems to optimize their operations and flows to the grit chamber. The details for these conditions are to be determined.

For purposes of this preliminary analysis, the anticipated wastewater generation for the development was computed based on Section 4.E.2 of the Maine Subsurface Wastewater Disposal Rules, which states that for multiple family dwelling units, the design flow is calculated at 120 gallons per day per 1-bedroom unit, and 90 gallons per bedroom per day for multiple bedroom units. Based on the publication, *Water Supply*

and Pollution Control, Third Edition, by Clark, Viessman and Hammer, Chapter 4, Section 5; the peak daily use can be considered to about 180% of the average daily use.

The table below is a summary of the wastewater generation that is anticipated for the development.

Anticipated Flow Generation		
	Average Daily Flow Generation (gpd)	Peak Daily Flow Generation (gpd)
32 One-bedroom units	3,840	6,912

As required by the Town of Damariscotta, we are writing to request a letter indicating the ability of the Wastewater Division to serve this project. Specifically, our office is interested in a letter from you indicating the following:

- The ability of the Wastewater Division's facilities to serve the project.
- Any other factors which may affect the sewer to this site.
- Any connection service or impact fees.

Based on the flows demonstrated above, we trust that the existing sewer system has adequate capacity to serve this project and we will continue to coordinate with the Wastewater Division as the design progresses. We are currently in the process of completing a Site Plan Application with the Town of Damariscotta and would appreciate your confirmation of site conditions in a timely manner.

If you have any questions on the information submitted, please contact our office.

Sincerely

GORRILL PALMER

Brad Pineau, EI
Design Engineer
Phone: (207) 772-2515x289
bpineau@gorrillpalmer.com

Attachment: Location Plan
Preliminary Utility Plan

GORRILL PALMER

707 Sable Oaks Drive, Suite 30
South Portland, ME 04106
207.772.2515

February 17, 2023

Scott Abbotoni – Water Division Manager
Great Salt Bay Sanitary District
121 Piper Mill Road
P.O. Box 23
Damariscotta, Maine 04543

Subject: Proposed Residential Development
DC Ledgewood, LLC
207 Ledgewood Court Drive; Damariscotta, ME
Letter of Ability to Serve Request

Dear Scott:

On behalf of **DC Ledgewood, LLC,** we would like to verify Great Salt Bay Sanitary District's capacity to provide water services for a proposed residential development at 207 Ledgewood Court Drive – off Piper Mill Road – in Damariscotta, Maine. The project site is identified on the Town of Damariscotta's Tax Maps as Map 001, Lot 050-003. The subject parcel is approximately 10.54 acres.

The existing site is partially developed and operates as a 24-unit apartment complex. The existing 24 units are spread throughout 6 buildings in a cul-de-sac with associated parking. It is our understanding, through field observations and communications with your office that the existing 6" main within Piper Mill Road ends approximately at the eastern end of the existing site driveway. The existing apartment complex is serviced by a single 6" main extending into the site, with a hydrant and individual services off this main to each of the buildings. The existing development and associated water service are intended to remain unchanged both during and upon completion of the proposed development.

The proposed development will require both fire and domestic water services. For purposes of this preliminary analysis, the anticipated water use for the development was computed based on Section 4.E.2 of the Maine Subsurface Wastewater Disposal Rules, which states that for multiple family dwelling units, the design flow is calculated at 120 gallons per day per 1-bedroom unit, and 90 gallons per day per bedroom, for multiple bedroom units. Based on the publication, *Water Supply and Pollution Control, Third Edition,* by Clark, Viessman and Hammer, Chapter 4, Section 5; the peak daily use can be considered to about 180% of the average daily use.

The table below is a summary of the wastewater generation that is anticipated for the development.

Anticipated Flow Generation		
	Average Daily Flow Generation (gpd)	Peak Daily Flow Generation (gpd)
32 One-bedroom units	3,840	6,912

A utility plan is attached to this letter showing the proposed water service to the building. The design intends to connect to the 6" main within the existing complex, circumvent the complex around the east side, and come into the proposed building in the center of the north side. A 4" domestic service for the building is proposed to tap off the 6" fire line just outside the building. Separate valves will be provided for the domestic and fire services.

As required by the Town of Damariscotta, we are writing to request a letter indicating the capacity of the Water Division to serve this project.

Specifically, our office is interested in a letter from you indicating the following:

- The ability of Great Salt Bay Sanitary District's water infrastructure to serve the project.
- Any other factors which may affect the water service to this site.
- Any connection service or impact fees.

We are currently in the process of completing a Site Plan Applications with the Town of Damariscotta and would appreciate your confirmation of site conditions.

If you have any questions on the information submitted, please contact our office.

Sincerely

GORRILL PALMER

Brad Pineau, EI
Design Engineer
Phone: (207) 772-2515x289
bpineau@gorrillpalmer.com

Attachment: Location Map
Utility Plan

u:\3996 - ledgewood court expansion - damariscotta 5-16-22\h utilities\water\bp_abs_gsbwd_02.17.23.docx

ATTACHMENT B

.

Land Use: 252
Senior Adult Housing—Multifamily

Description

Senior adult housing—multifamily sites are independent living developments that are called various names including retirement communities, age-restricted housing, and active adult communities. The development has a specific age restriction for its residents, typically a minimum of 55 years of age for at least one resident of the household.

Residents in these communities are typically considered active and requiring little to no medical supervision. The percentage of retired residents varies by development. The development may include amenities such as a golf course, swimming pool, 24-hour security, transportation, and common recreational facilities. They generally lack centralized dining and on-site health facilities.

The dwelling units share both floors and walls with other units in the residential building. Senior adult housing—single-family (Land Use 251), congregate care facility (Land Use 253), assisted living (Land Use 254), and continuing care retirement community (Land Use 255) are related land uses.

Additional Data

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

The sites were surveyed in the 1980s, the 1990s, and the 2000s in Alberta (CAN), California, Maryland, New Hampshire, New Jersey, Ontario (CAN), and Pennsylvania.

Source Numbers

237, 272, 576, 703, 734, 970, 1060

Senior Adult Housing - Multifamily
(252)

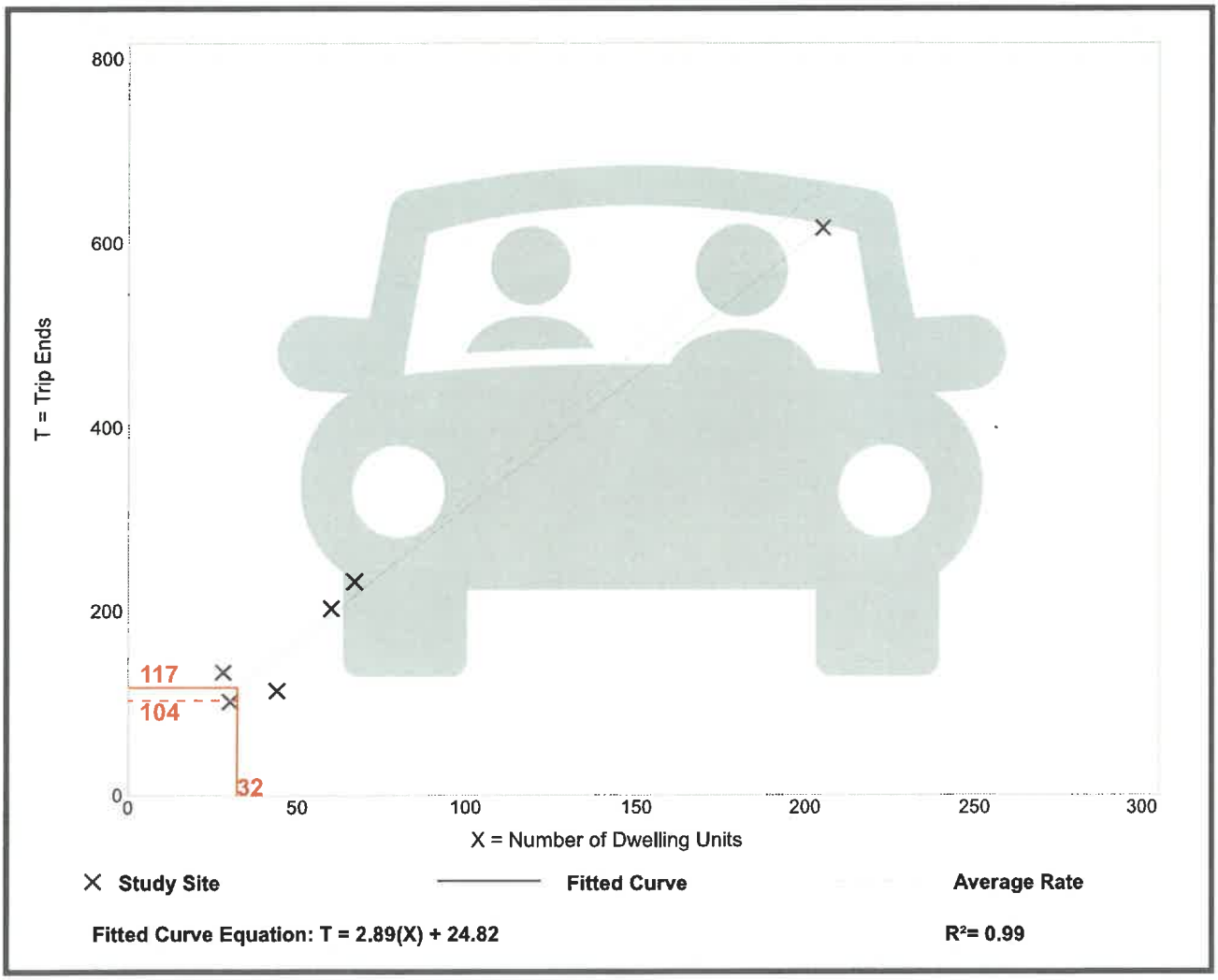
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 6
Avg. Num. of Dwelling Units: 72
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
3.24	2.59 - 4.79	0.53

Data Plot and Equation



Fitted Curve Equation: T = 2.89(X) + 24.82

R^2= 0.99

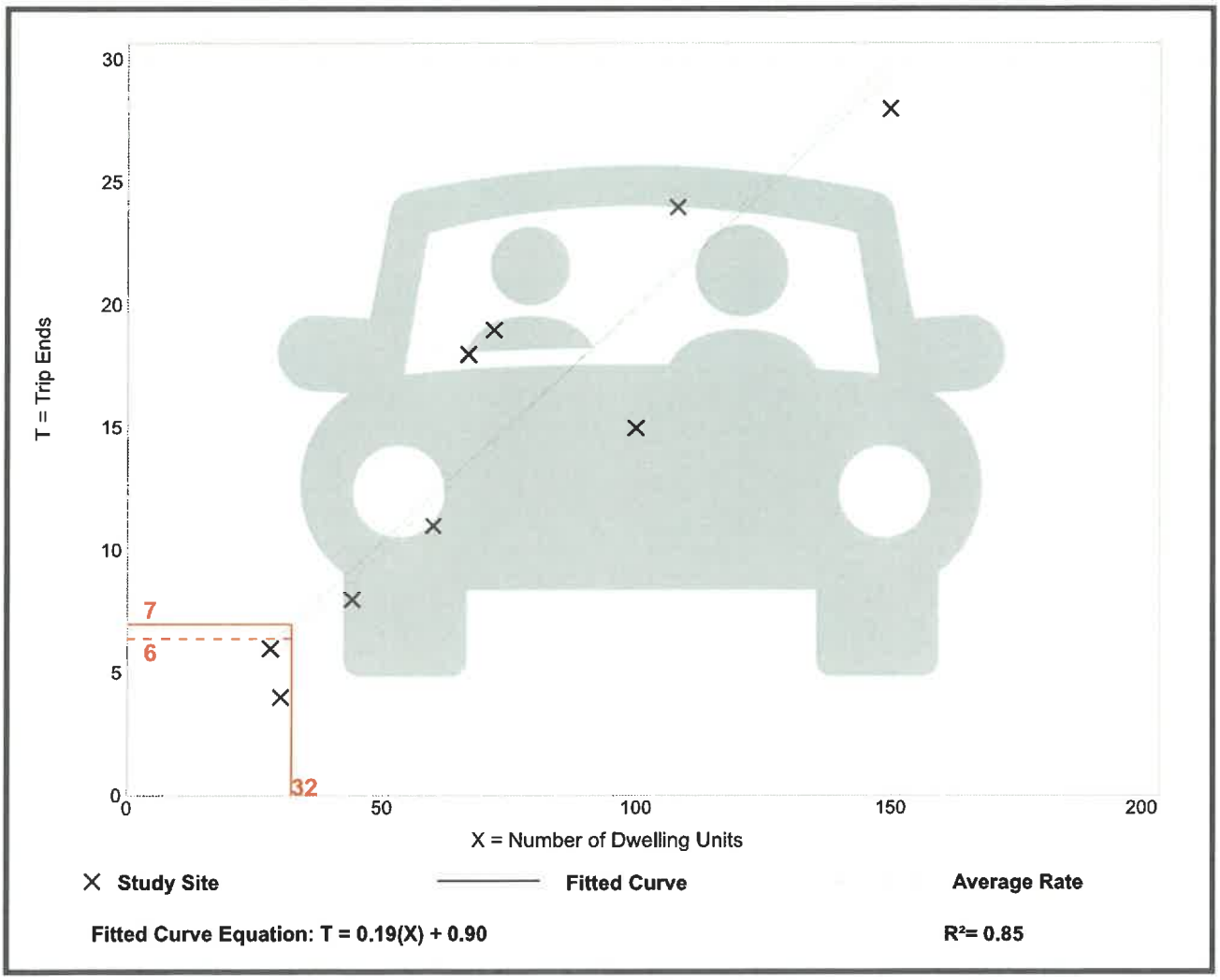
Senior Adult Housing - Multifamily
(252)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 9
Avg. Num. of Dwelling Units: 73
Directional Distribution: 34% entering, 66% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.20	0.13 - 0.27	0.04

Data Plot and Equation



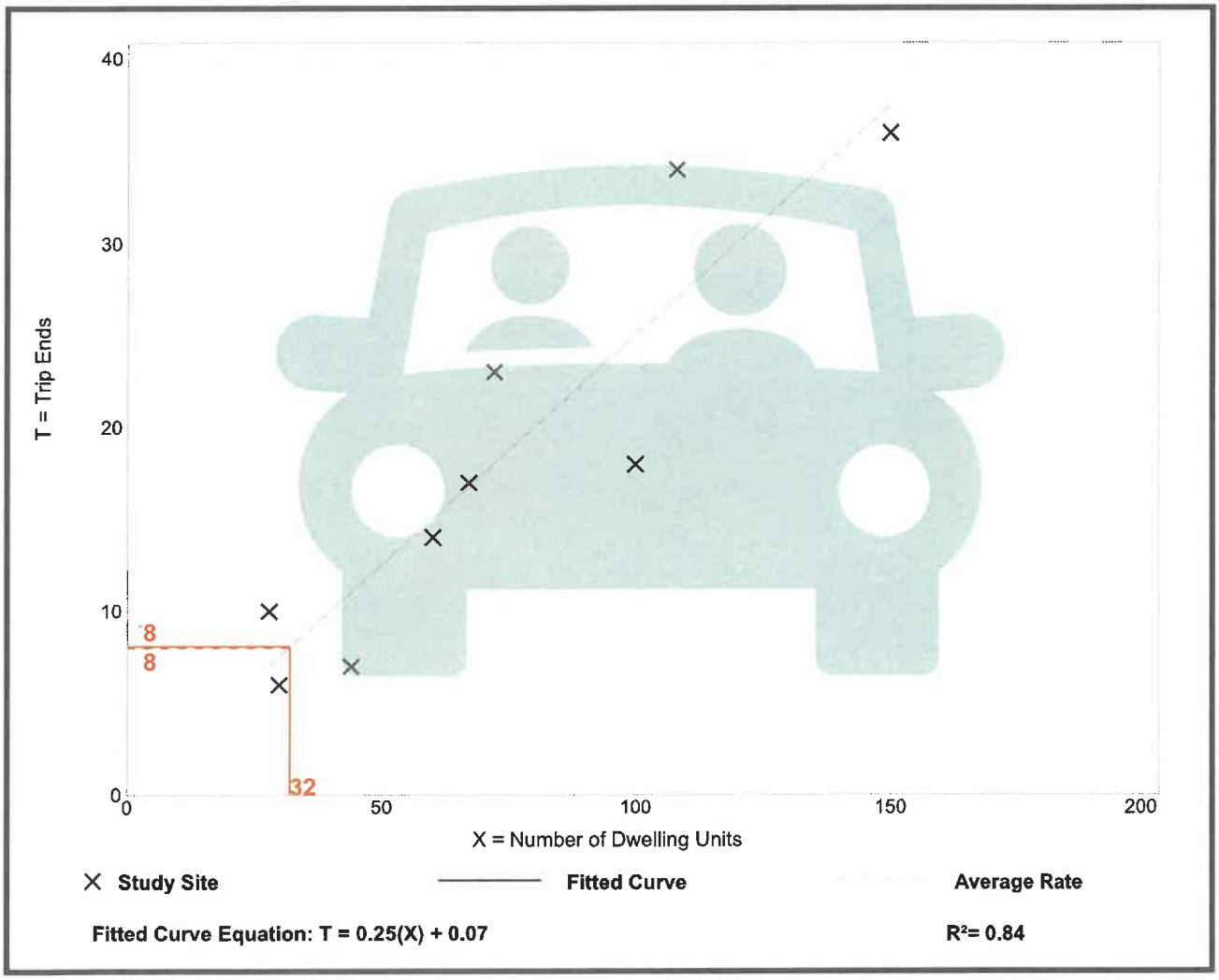
Senior Adult Housing - Multifamily
(252)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 9
Avg. Num. of Dwelling Units: 73
Directional Distribution: 56% entering, 44% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.25	0.16 - 0.36	0.06

Data Plot and Equation



Senior Adult Housing - Multifamily
(252)

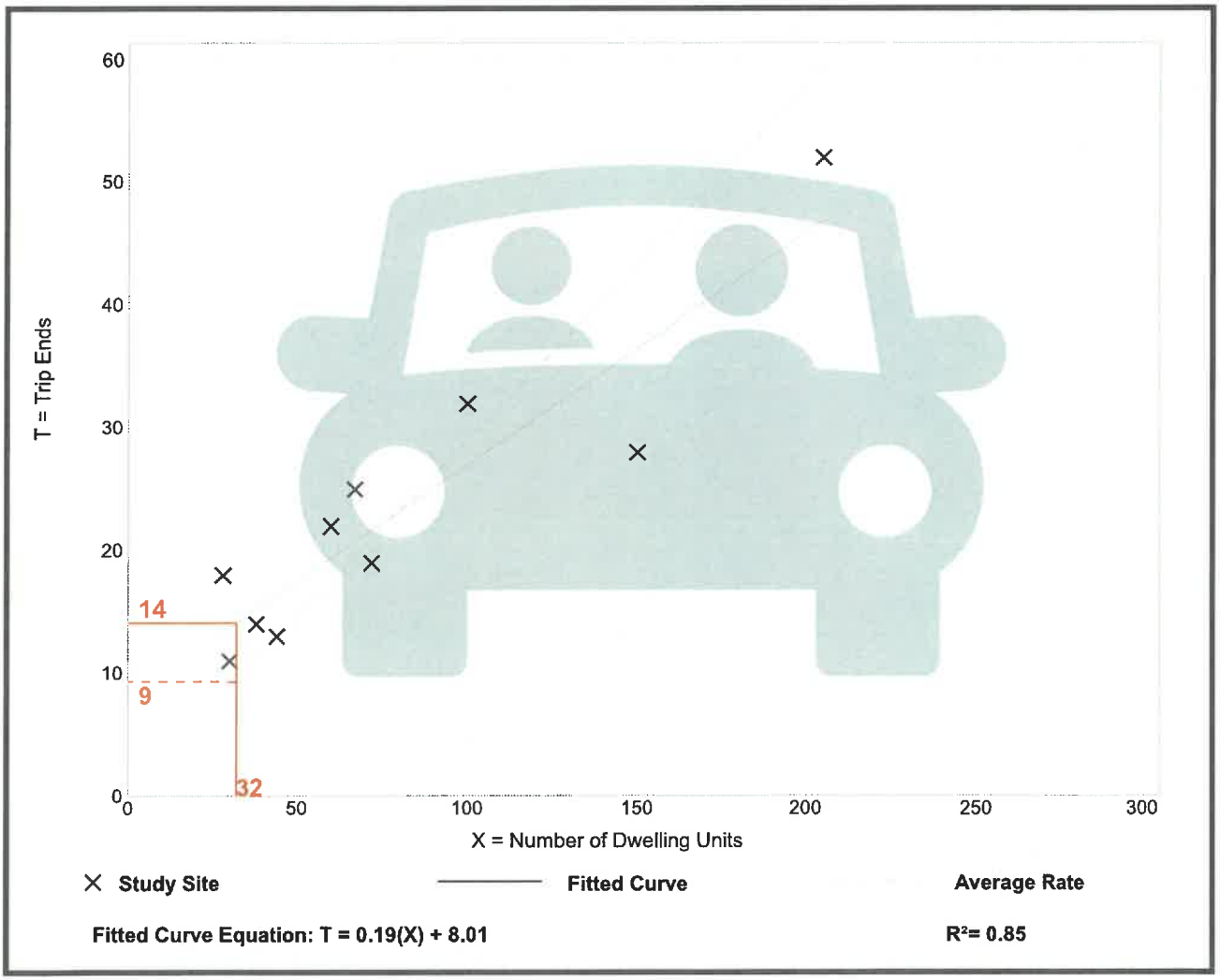
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
AM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 10
Avg. Num. of Dwelling Units: 79
Directional Distribution: 45% entering, 55% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.29	0.19 - 0.64	0.10

Data Plot and Equation



Senior Adult Housing - Multifamily
(252)

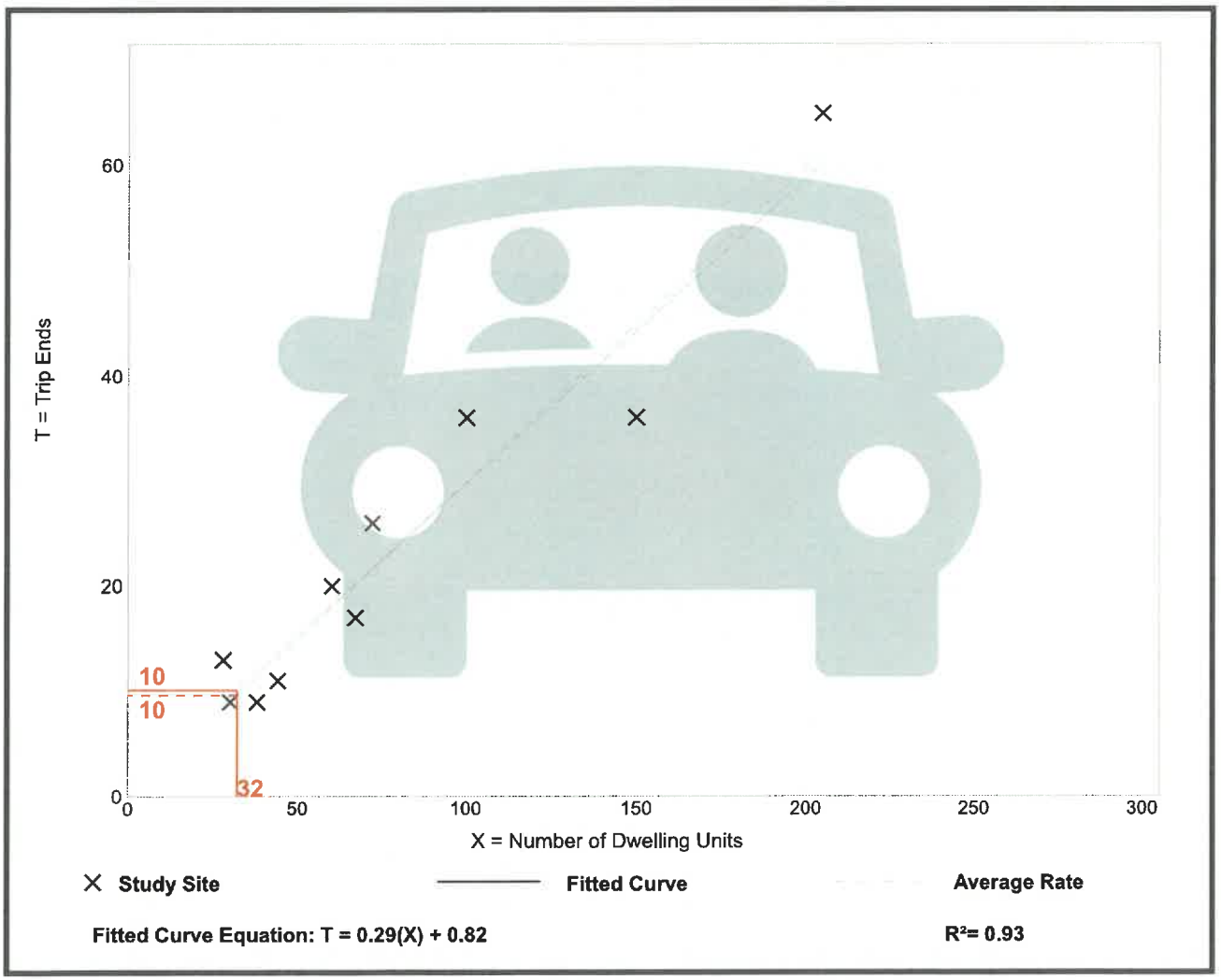
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
PM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 10
Avg. Num. of Dwelling Units: 79
Directional Distribution: 54% entering, 46% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.30	0.24 - 0.46	0.06

Data Plot and Equation



Senior Adult Housing - Multifamily
(252)

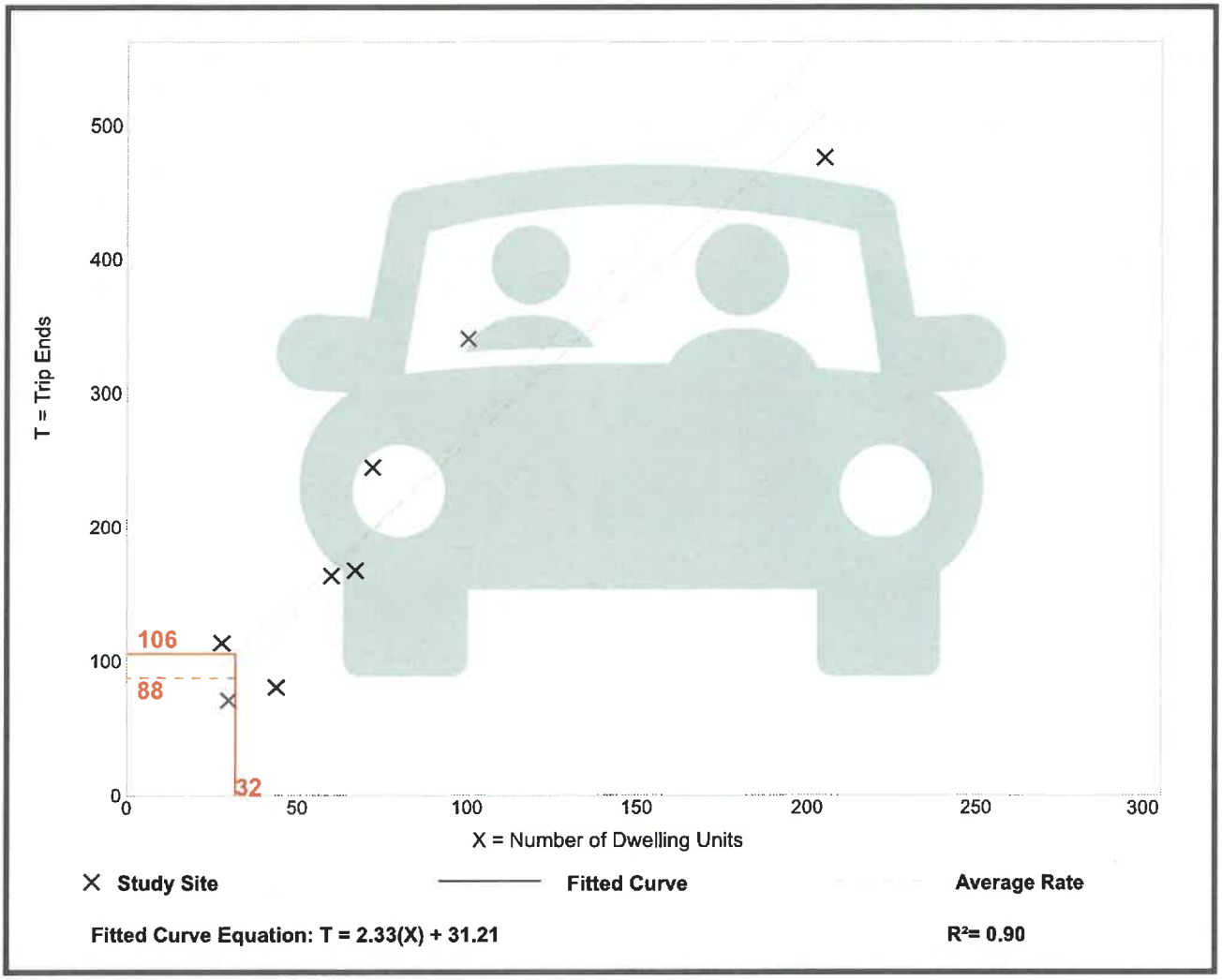
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Saturday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 8
Avg. Num. of Dwelling Units: 76
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
2.74	1.84 - 4.07	0.62

Data Plot and Equation



Senior Adult Housing - Multifamily
(252)

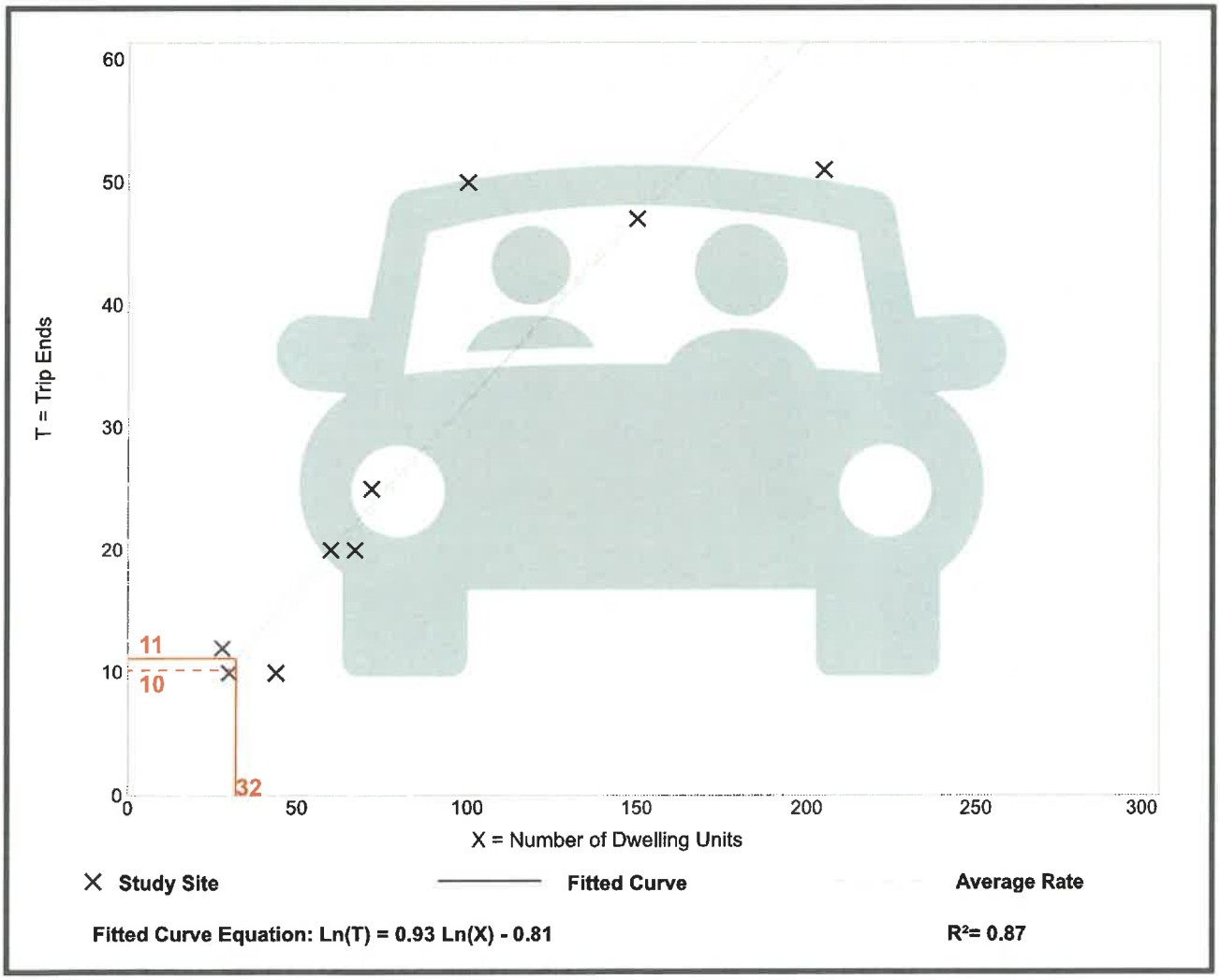
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Saturday, Peak Hour of Generator**

Setting/Location: **General Urban/Suburban**
Number of Studies: 9
Avg. Num. of Dwelling Units: 84
Directional Distribution: 54% entering, 46% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.32	0.23 - 0.50	0.09

Data Plot and Equation



GORRILL PALMER

300 Southborough Drive, Suite 200
South Portland, Maine 04106
207.772.2515

Exhibit 6 – Third Party Authorizations

The proposed development is subject to a permit amendment to the Stormwater Management Permit previously issued by the Maine Department of Environmental Protection for the existing site.

The project will require a Tier 1 NRPA permit for wetland impacts. A general authorization for wetland impacts from US Army Corps of Engineers (ACOE) will also be required. These applications have been filed and the applicant request that receipt of these permits be made a condition of approval tied to the issuance of a building permit.

The project will require a Maine State Housing Authorization, local building permit and State Fire Marshall review.

No other permits are expected.

GORRILL PALMER

300 Southborough Drive, Suite 200
South Portland, Maine 04106
207.772.2515

Exhibit 7 – Natural Resources

The development team contacted the Maine Department of Inland Fisheries & Wildlife regarding rare or endangered animals on the site on Tuesday, December 20, 2022. We received a response from MDIFW on February 2, 2023, stating that there are no rare or endangered animals, nor critical habitats on the site.

The site has been reviewed by Rodney Kelsaw of Flycatcher LLC who delineated the wetland boundaries as shown on the existing conditions plan. A small amount of wetland will be crossed by the proposed access road, and small areas of sideslope protrude into the wetland along the north side of the development. The proposed site design results in approximately 2,694 SF of wetland fill within the development site. We understand the original development had impacted approximately 2,615 SF of wetland, which did not trigger a permit need at the time, however that impact will now be included in the overall total for the property. The proposed developed area has been configured to minimize impacts to the onsite wetlands. Areas suitable for development have been determined by avoiding large impacts to sensitive natural areas, with the existing and proposed development located in the southwestern upland portion of the parcel and lower-lying areas to the northeast remaining undeveloped. The largest wetland area on site follows a drainage course which bisects the parcel and flows from southwest to northeast. A minimal amount of flowing water can be observed within the wetland in the northeast area of the parcel, near the culvert within Piper Mill Road, but not within the proposed development area. Three smaller wetland areas exist within the parcel along the Piper Mill Road frontage, primarily in the form of roadside ditches. No development is proposed in the area of these smaller wetlands. The largest wetland along the drainage course needed to be crossed as part of the proposed development in order to access the remaining buildable land on the parcel. Impacts in the area of the crossing have been minimized to the greatest extent practicable by crossing in an area where the delineated wetland is narrower than the majority of its length within the parcel, and by utilizing 2:1 slopes to minimize grading impacts. The toe of the slope associated with the proposed development has been laid out in a way that avoids impacts to the remainder of the large wetland. It should be noted that the proposed wetland crossing follows the path of an existing force sewer main associated with the existing development across the wetland. It should be noted that a self-verification notification form was submitted to ACOE on February 13, 2023.

The site is not within the watershed of a great pond.

Attachments:
A – Maine IF&W Letter

ATTACHMENT A

JANET T. MILLS
GOVERNOR

STATE OF MAINE
DEPARTMENT OF
INLAND FISHERIES & WILDLIFE
353 WATER STREET
41 STATE HOUSE STATION
AUGUSTA ME 04333-0041

JUDITH CAMUSO
COMMISSIONER

February 2, 2023

Bradford Pineau
Gorrill-Palmer
707 Sable Oaks Drive, Suite 30
South Portland, ME 04106

RE: Information Request – Multi-Unit Pipe Mill Road Project, Damariscotta

Dear Bradford:

Per your request received on December 21, 2022, we have reviewed current Maine Department of Inland Fisheries and Wildlife (MDIFW) information for known locations of Endangered, Threatened, and Special Concern species; designated Essential and Significant Wildlife Habitats; and inland fisheries habitat concerns within the vicinity of the *Multi-Unit Pipe Mill Road* project in Damariscotta.

Our Department has not mapped any Essential Habitats or inland fisheries habitats that would be directly affected by your project.

Endangered, Threatened, and Special Concern Species

Bat Species – Of the eight species of bats that occur in Maine, the three *Myotis* species are protected under Maine's Endangered Species Act (MESA) and are afforded special protection under 12 M.R.S §12801 - §12810. The three *Myotis* species include little brown bat (State Endangered), northern long-eared bat (State Endangered), and eastern small-footed bat (State Threatened). The five remaining bat species are listed as Special Concern: big brown bat, red bat, hoary bat, silver-haired bat, and tri-colored bat. While a comprehensive statewide inventory for bats has not been completed, based on historical evidence it is likely that several of these species occur within the project area during migration and/or the breeding season. However, our Agency does not anticipate significant impacts to any of the bat species as a result of this project.

Significant Wildlife Habitat

Significant Vernal Pools - At this time MDIFW Significant Wildlife Habitat (SWH) maps indicate no known presence of SWHs subject to protection under the Natural Resources Protection Act (NRPA) within the project area, which include Waterfowl and Wading Bird Habitats, Seabird Nesting Islands, Shorebird Areas, and Significant Vernal Pools. However, a comprehensive statewide inventory for Significant Vernal Pools has not been completed. Therefore, we recommend that surveys for vernal pools be conducted within the project boundary by qualified wetland scientists prior to final project design to determine whether there are Significant Vernal Pools present in the area. These surveys should extend up to 250 feet beyond the anticipated project footprint because of potential performance standard requirements for off-site Significant Vernal Pools, assuming such pools are located on land owned or controlled by the applicant. Once surveys are completed, survey forms should be submitted to our Agency for review well before the submission of any necessary permits. Our Department will need to review and verify any vernal pool data prior to final determination of significance.

This consultation review has been conducted specifically for known MDIFW jurisdictional features and should not be interpreted as a comprehensive review for the presence of other regulated features that may occur in this area. Prior to the start of any future site disturbance we recommend additional consultation with the municipality, and other state resource agencies including the Maine Natural Areas Program, Maine Department of Marine Resources, and Maine Department of Environmental Protection in order to avoid unintended protected resource disturbance.

Please feel free to contact my office if you have any questions regarding this information, or if I can be of any further assistance.

Best regards,

Becca Settele
Wildlife Biologist

GORRILL PALMER

300 Southborough Drive, Suite 200
South Portland, Maine 04106
207.772.2515

Exhibit 8 – Plan Set

See attached plan set.

GORRILL PALMER

300 Southborough Drive, Suite 200
South Portland, Maine 04106
207.772.2515

Exhibit 9 – Stormwater Management Report

See attached Stormwater Management Report.

STORMWATER MANAGEMENT REPORT

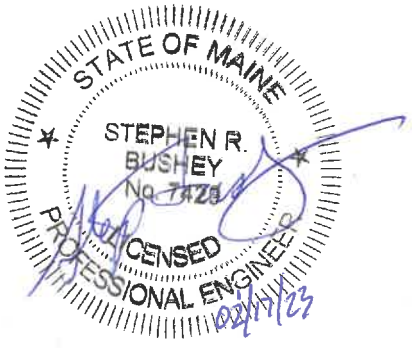
LEDGEWOOD COURT APARTMENTS EXPANSION
207 LEDGEWOOD COURT DRIVE
DAMARISCOTTA, MAINE

Prepared for

DC LEDGEWOOD LLC
631 STEVENS AVENUE, SUITE 203
PORTLAND, MAINE 04103

PREPARED BY

GORRILL PALMER
300 SOUTHBOROUGH DRIVE – SUITE 200
SOUTH PORTLAND, MAINE 04106
207.772.2515



FEBRUARY 2023

STORMWATER MANAGEMENT REPORT

TABLE OF CONTENTS

1.0 INTRODUCTION

DC Ledgewood LLC has an Assignment of Amendment to Purchase and Sale Agreement to develop a 10.54-acre parcel of land owned by Midcoast Maine Community Action[1], east of the existing 24-unit Ledgewood Court Apartments Complex. The applicant is proposing a single, free-standing, 12,820 SF two-story building containing 32 affordable housing apartment units.

The existing Ledgewood Court Apartments development received a MeDEP Stormwater Management Law permit prior to construction in December of 2002. It is our understanding that the development was designed and constructed in accordance with Department policies at the time, and consistent with what was depicted on the design plans. The permit order number associated with the existing development is L-21139-NI-A-N and it was approved on December 18, 2002. No modifications are proposed to be made to the existing development, however the proposed residential expansion requires local Site Plan approval and an Amendment to the SWM permit, both of which have standards pertaining to Stormwater management. . In the case of the DEP Chapter 500 Stormwater Management Rules, the proposed activity is subject to only water quality standards since the activity on the property will remain under 3 acres of impervious area. For the local Site plan review, The Town's standards only include a flooding provision.

The proposed site development also includes surface parking for 33 vehicles, an access drive, Grasspave™ fire lanes to the sides of the building, community garden boxes, and open spaces. The project location is identified on the project plans and on Figure 1 in Attachment A.

The purpose of this analysis and report is to document the following:

- The measures that will be implemented to provide stormwater management for the project,
- Per the local Site plan code, determine what is required to control the peak rate of discharge during large storm events, and
- To provide water quality treatment to stormwater runoff as determined by Maine DEP's Chapter 500 Rules and Town of Damariscotta Standards for Stormwater Management and Erosion Control.

Both the impact on peak rates of runoff and water quality measures are considered in this evaluation.

Erosion and Sedimentation Controls satisfying the MeDEP Basic Standards will be employed during the construction of this project and are summarized in the Basic Standards Report and, in the Erosion, and Sedimentation Control Plans provided on Sheets C-4.0, C-5.7 and C-5.8 of the plan set.

2.0 REFERENCES

The following reference sources were reviewed during preparation of the stormwater analysis:

[1] See LCRD Book 5472, page 299. A copy of the purchase and sale agreement accompanies the application.

1. Maine Erosion and Sedimentation Control Handbook for Construction: Best Management Practices, MaineDEP, current edition.
2. Stormwater Management for Maine, Volume III BMPS Technical Design Manual, MeDEP, May 2016.

The following sources were used for preparation of the stormwater quality and quantity analysis:

1. Stormwater Management for Maine, Volume III BMPS Technical Design Manual, MaineDEP, May 2016
2. MeDEP Chapter 500, Stormwater Management Rules.
3. Town of Damariscotta Site Plan Review Ordinance Chapter 102 Section 102.6 (L)

Computer programs used to assist in the various components of this analysis include:

1. HydroCAD 10.00, HydroCAD Software Solutions LLC – used for modeling watersheds for pre and post development conditions.
2. Microsoft Excel, Microsoft Corporation – used for spreadsheet computations.
3. AutoCAD Civil 3D 2010, 2011, 2019, and 2021, Autodesk - used to determine areas and graphical representation of design.

Data resources used to obtain the hydrologic input data for the stormwater models are identified later in this report.

3.0 EXISTING SITE CONDITIONS

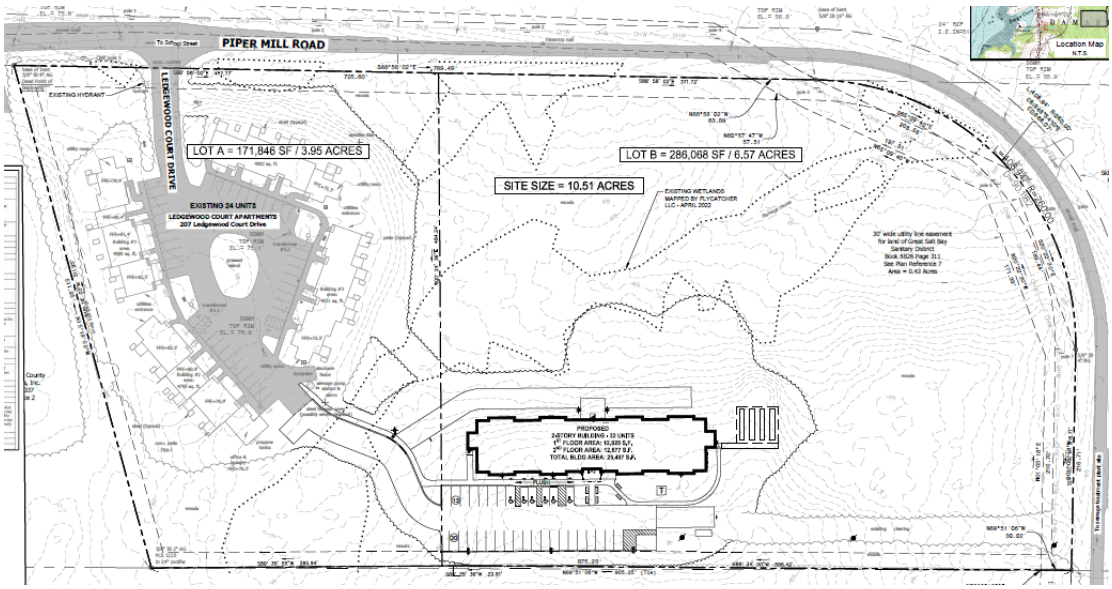
The currently wooded/undeveloped project site is located south of US Route 1, east of ME Route 239, off the east side of School Street, just northwest of the Great Salt Bay Sanitary District treatment facility on Piper Mill Road as shown on the project plans and below. The total lot area is 10.54 acres in size. The development area of proposed Lot B is 6.57 acres and contains a large, undeveloped wooded area and wetland system which functions as a natural drainage swale running southwest to northeast bisecting the property. The site is set into a hillside with generally higher elevations to the south and southwest and lower elevations to the north and northeast.

The existing 24-unit Ledgewood Court Apartments includes an access drive and parking area, which according to the original permit order amounted to 1.25 acres of impervious area. The site is not within a watershed most at risk to new development or a sensitive or threatened watershed. In 2002 the activity was required to meet stormwater quantity standards only. A cursory review of the original application documents indicates that the original activity would not exacerbate capacity issues at the point of analysis which is a 24" culvert under Piper Mill Road so therefore, no specific measures for water quantity control were performed as part of the original activity.

Aerial Image

Abutting land and nearby land uses include:

- North – Undeveloped forested land. Development along the south side of US Route 1 is approximately 2000' away. The proposed Clippership Nursing Home facility will be located north of Piper Mill Road. That facility has yet to enter under construction.
- East – Undeveloped forested land. Heater Road is approximately 3,000' away
- South – Industrial – Great Salt Bay Sanitary District Treatment facility approximately 600' away, then undeveloped forested land
- West – Residential / Commercial – Existing Ledgewood Court Apartments and Central Lincoln County Ambulance Service. Development along the east side of School Street is approximately 1,200' away



Land Transfer/Lot Line Adjustment Plan

Stormwater runoff from the site is conveyed via overland flow from southwest to northeast within a wetland / drainage flow path which bisects the property. The swale conveys drainage flow from the existing apartment complex as well as the upland area south of the subject parcel. The drainage course flow path is from southwest to northeast and it funnels runoff to an existing 24" culvert which passes underneath Piper Mill Road. Based on the Manning's Equation, the full flow capacity of this culvert is estimated to be approximately 27 cfs. The culvert discharges on the north side of Piper Mill Road, where flow continues overland for approximately 700'. Ultimately, runoff from the site is tributary to an unnamed stream which flows south to north, east of Piper Mill Road, and ultimately discharges into the Damariscotta River, just north of the Route 1 bridge. It should be noted that the level of the Damariscotta River in this area is tidally influenced.

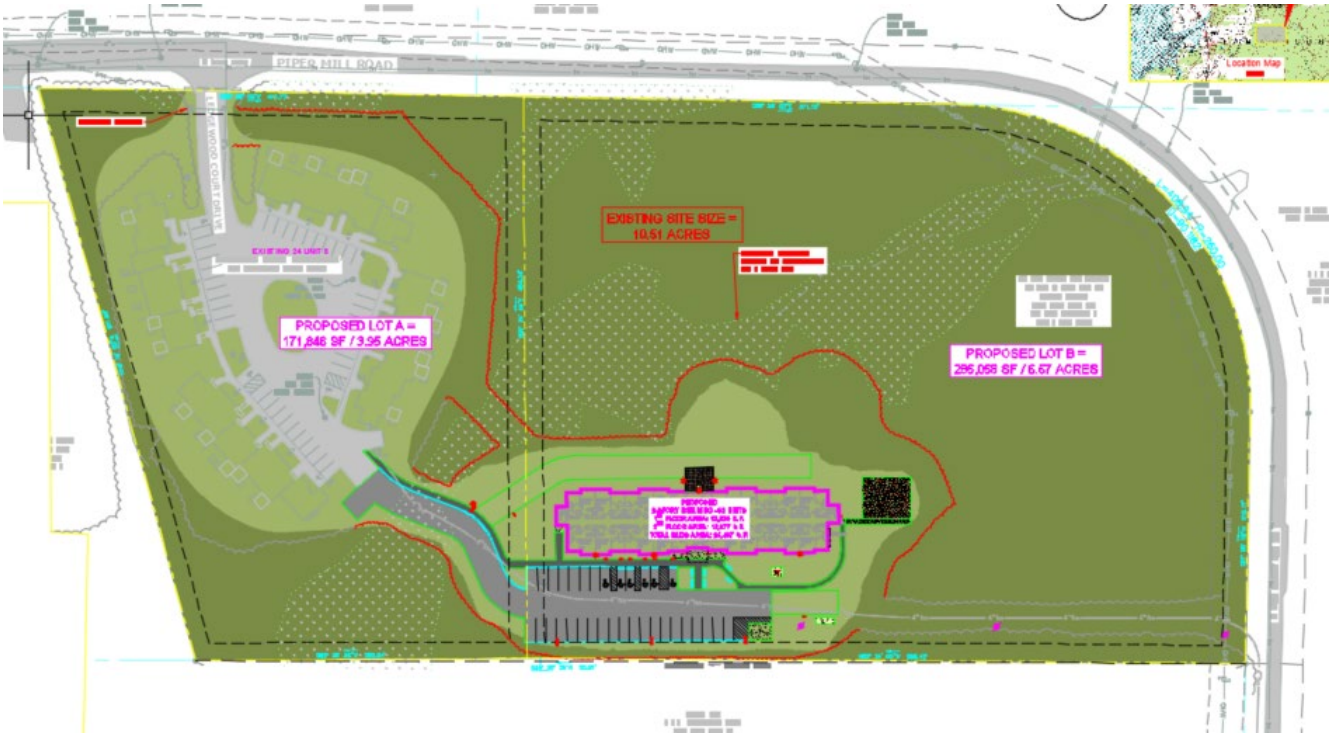
The project site is currently undeveloped as a large, wooded area. It should be noted that the existing apartment complex is on the opposite side of the wetland drainage swale, so it is part of the adjacent – but separate – subcatchment. Existing topography on the site consists of mild to moderate slopes, generally in the realm of 5% to 10%, however steeper slopes (up to 30%) are present in some of the upland areas within the parcel boundaries. Elevations range from elev. 85' along the southern property line, to elev. 53' along the northeastern property line. The low point on the subject parcel is adjacent to the aforementioned 24" culvert which passes underneath Piper Mill Road. To the best of our understanding the 24" culvert has remained unchanged since the original site permitting in 2002.

The soils on the site are shown on the watershed maps and are from the USDA NRCS Medium Intensity Soil Survey. The entire project area and the majority of the soils within the parcel are hydrologic soil group D soils, with some C soils underlying the existing apartment complex development. Wetland areas were assumed HSG D. Wetlands were mapped in 2022 by Rodney Kelshaw at Flycatcher, LLC.

4.0 DEVELOPMENT DESCRIPTION

The proposed project includes the construction of a single new building with a footprint of 13,275 SF. An access drives will be constructed by extending the existing Ledgewood Court Drive to provide access to the parking areas.

Changes in land cover will include removal of wooded areas within the site, along with the addition of roof, paved surfaces, and lawn areas. **Overall, the proposed project will create approximately 42,109 SF (0.97 acres) of new impervious area and 68,698 SF (1.58 acres) of developed area.**



Proposed Site Plan – Existing Development shown on Left

The site has been designed to generally follow the existing topography; higher in the southwest (rear of the site) and trending down to the northeast (at the road frontage). The site will drain southwest to northeast, similar to the existing condition. Stormwater runoff associated with the site will be split by a high point in the parking lot and will flow around either side of the building within a closed drainage system. Flows from either side of the building will outlet into either a small bio-retention basis or a common grassed underdrained soil filter BMP. Stormwater will then be treated and conveyed to the north and into the drainage course on the property as it currently drains today.

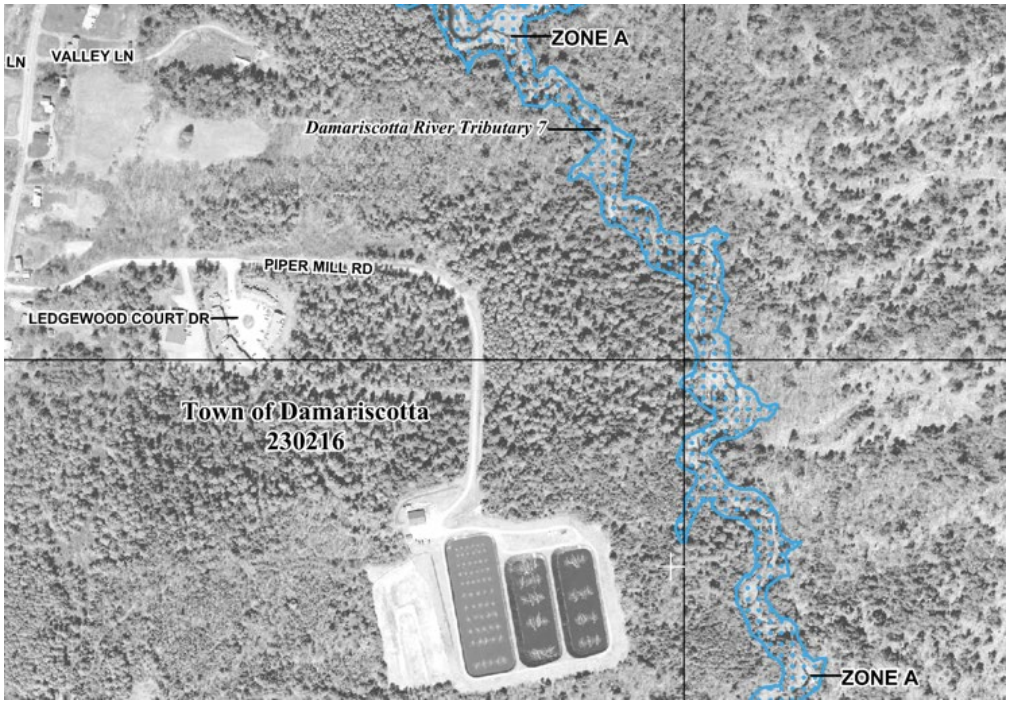
5.0 SURFACE WATER

The project ultimately discharges to an unnamed stream[2] approximately 700' northwest of the property as shown on the 2021 USGS Damariscotta Quadrangle topographic map. A natural drainage course / wetland bisects the site and separates the site from the existing complex to the west, and it is tributary to the unnamed stream to the east. The unnamed stream discharges into the tidally influenced Damariscotta River just north of the Route One bridge. The drainage course / wetland receives water from the adjacent existing apartment complex as well as the undeveloped upland area to the south of the site. There are no mapped significant groundwater aquifers present in the development area.

6.0 FLOODING

The project is not located in a 100-year flood zone, per FEMA Flood Insurance Rate Map Number 23015C0269, dated July 16, 2015.

[2] Identified as Damariscotta River Tributary 7 on FIRM Panel 269 of 525 for Lincoln Country Maine



7.0 NATURAL DRAINAGE WAYS

The wetland drainage course that boarders the proposed development will need to be crossed as part of this development. The applicant is proposing to use a rock sandwich style[3] cross section and 24" culvert beneath the proposed access drive to allow water within this wetland to be conveyed underneath the proposed access drives and parking lot. A Rational Method calculation was completed to estimate the amount of flow that would be tributary to this culvert during the 100-year storm. Based on the Rational Method calculation, the culvert would experience a flow of approximately 10 cfs during the 100-year storm event. Based on Manning's Equation, the proposed culvert has a capacity of 44.3 cfs. Given this, the proposed culvert should not have any capacity issues as proposed. Further the rock sandwich will maintain soil hydrology for the surrounding wetlands.

8.0 ALTERATIONS TO LAND COVER

Changes in land cover will include the conversion of wooded areas to new building, parking, lawn, and stormwater facilities..

9.0 OVERVIEW OF STORMWATER RUNOFF MODELING

The stormwater analysis evaluates the following elements:

- The impacts of the proposed development and subsequent modification to site discharges and locations.

[3] See Figure 8.4 Rock Sandwich Cross Section of the BMP Manual, which is included in the plan documents.

- The effect of land cover modifications within the site, especially those that are expected to increase site runoff rates.
- The requirements for stormwater management including compliance with Chapter 500 and the Town of Damariscotta flooding standards as compared to existing conditions.
- Storm drainage requirements for parking areas and other improvements; and
- Requirements for water quality measures based upon MDEP Basic and General Standards.

10.0 METHODS OF ANALYSIS

10.1.1 Stormwater Quantity (for Town of Damariscotta compliance only)

Per the current Town of Damariscotta Site Plan review standards, the project is required to demonstrate a decrease in the peak rate of runoff emanating from the project site from pre- to post-developed conditions for the 2-inch storm as well as the 25-, 50-, and 100-year storm events. The hydrologic analyses for predevelopment and post development conditions have been conducted based upon the methodology contained in the USDA Soil Conservation Service's Technical Releases No. 20 and 55 (SCS TR-20 and TR-55) as modified for special site conditions. For this section of Lincoln County, Maine, a 24-hour SCS Type III Storm distribution was used for the analysis using the following storm intensities as required by the Town of Damariscotta standards and for comparison, Chapter 500:

Table 1 – Rainfall Amounts

Storm Event	24-Hour Rainfall (per Town standards)	24-Hour Rainfall MeDEP Lincoln County
2-Inch Storm	2.0	
2-Year Storm		3.1
10-Year Storm		4.5
25-Year Storm	5.8	5.5
50-Year Storm	6.6	6.5
100-Year Storm	7.3	7.6

The SCS TR-20 methodology, using the HydroCAD computer program, was employed by Gorrill Palmer to analyze the pre- and post-development watersheds.

Land use, cover, delineation of watershed subcatchments, hydraulic flow paths, and hydrologic soil types were obtained using the following data:

1. USDA NRCS Web Soil Survey.
2. Existing topography based on a survey completed on July 7, 2022 by Boothbay Region Surveyors
3. Previously approved plans for the existing Ledgewood Court Apartments development as contained in the MeDEP file record.
4. Field reconnaissance.

10.1.2 Stormwater Quality (for Maine DEP compliance only)

Water quality treatment for the development has been designed to meet the Stormwater Management Rules (Chapter 500) General Standard, which requires the treatment of at least 95% of impervious area and at least 80% of developed area generated. Treatment requirements were analyzed within the new site area only, to meet the General Standard.

11.0 DESCRIPTION OF SITE WATERSHED MODEL

The watershed model was developed to predict peak discharge rates at the Point of Interest (POI) depicted on the watershed maps. The following sections describe the pre-development and the post-development conditions.

12.0 PRE-DEVELOPMENT CONDITIONS

The predevelopment conditions for this analysis were considered to be the current condition of the site as described in the Existing Site Conditions section above.

The predevelopment condition was analyzed as a single subcatchment with a single point of interest (POI) as shown in Figure WS-1. The subcatchment consists of just the area impacted by the development and it does not contain the entire contributing watershed to the POI. POI 1 is the upstream invert of the existing 24" culvert that passes underneath Piper Mill Road at the parcel's northeastern boundary. The following table summarizes the pre-development watershed characteristics:

Table 2 - Pre-Development Watershed Hydraulic Characteristics

Watershed ID	Area (ac)	CN	Hydraulic Time of Concentration (min.)
1S	5.37	77	13.8

The following is a brief description of the predevelopment subcatchment:

- Subcatchment 1S consists of the hillside containing the project area which is undeveloped, forested land in the existing condition

There is no impervious or developed cover within the 5.37 subcatchment area.

A watershed map for the predevelopment condition is attached to this section as drawing number WS1 in Attachment A. Attachment B contains the predevelopment TR-20 calculations.

Table 3 presents the peak flow rates at the POI for the design storms in the pre-developed condition.

Point of Interest	Table 3 – Pre-Development Peak Flow Rates (cfs)			
	Peak Flow (cfs)			
	2 Inch	25 Year	50 Year	100 Year
POI # 1	1.84	16.14	19.55	22.56

13.0 POST DEVELOPMENT CONDITION

Analysis for the post development condition consists of determining post development peak flows and limiting the post development flows to at or below predevelopment levels at the point of interest. Temporary runoff storage will be provided within the grassed underdrained soil filter to the north of the building and the bio-retention filter to the west of the building.

The predevelopment subcatchment is affected by the proposed development and has been modified to reflect the post development condition. The post development condition contains three subcatchments tributary to the same single point of interest – the culvert under Piper Mill Road. The proposed development has been designed in a way that minimizes impacts within the wetland / drainage course. Both the grassed underdrained soil filter and the bio-retention filter have been located and shaped to follow the delineated wetland boundary. The following table summarizes the post-development watershed characteristics:

Table 4 - Post Development Watersheds Hydraulic Characteristics

Watershed ID	Area (ac)	CN	Hydraulic Time of Concentration (min.)
1S	3.97	77	11.7
2S	1.22	92	6.0*
3S	0.18	90	6.0*
Total	**5.37**		

*A minimum of 6 minutes was assumed to be the time of concentration for subcatchments 2S and 3S as the minimum time of concentration for analysis is 0.1 hours per TR-55

The following is a brief description of each post development subcatchment.

- Subcatchment 1S is generally the same as in in the existing condition and represents the undeveloped perimeter of the study area. It has been updated by subtracting the developed project area that will be treated by the stormwater BMP's. In addition, some of the previously undeveloped forested area has been modified and replaced with some landscaped, grassed areas and a minimal amount of paved area from the sidewalk and access drive west of the existing drainage course. It should be noted that sideslope areas around the perimeter of the development will be left as as a meadow condition, and thus, undeveloped.

- Subcatchment 2S consists of the majority of the project area including the entirety of the building and parking lot, as well as the majority of the landscaped area. Runoff from subcatchment 2S will be captured with catch basins and conveyed via a closed drainage system to the grassed underdrained soil filter north of the proposed building and fire lane. Runoff treated by the grassed underdrained soil filter will be conveyed via the underdrain to a riprap outfall adjacent to the existing drainage course. Runoff from larger storm events will leave the soil filter via the piped overflow or the spillway and will also flow into the existing drainage course. From there, runoff flows through the remaining length of the drainage course to POI 1.

- Subcatchment 3S consists of the access drive connecting the existing and proposed developments on the east side of the wetland and west of the proposed building, as well as a portion of the landscaped yard area to the west of the building. Most of the runoff from subcatchment 3S associated with the access drive will be collected in a catch basin along the gutter line. be funneled to the low point on the access drive by the curbing on the north side of the drive. There, it will flow through a foxhole pretreatment device under the sidewalk and into a bio-retention filter, on the north side of the corner formed by the access drive and the reinforced turf fire lane. The remainder of the runoff from subcatchment 3S will make its way to the biofilter via overland flow. Runoff treated by the biofilter will be conveyed via the underdrain to a riprap outfall adjacent to the existing drainage course. Runoff from larger storm events will leave the bio-filter via the overflow riser or will spill over the north side of the biofilter – which acts as a spillway – and into the drainage course. From here, runoff flows through the remaining length of the drainage course to POI 1.

The total watershed area analyzed contains 5.37 acres including 0.97 acres of impervious area and 1.58 acres of developed area. All of the paved and developed included in the analysis is proposed – none is existing.

A watershed map for the post development condition is attached as drawing number WS2 in Attachment A. Attachment B contains the postdevelopment TR-20 calculations.

The following table reflects the pre- and post-development peak flow rates comparison at the point of interest:

Table 5 – Comparison of Peak flows (cfs)

Point of Interest	Peak Flow (cfs)							
	2 Inch		25 Year		50 Year		100 Year	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
POI #1	1.84	1.39	16.14	14.37	19.55	18.60	22.56	22.32
Change	-0.45		-1.78		-0.95		-0.24	

As shown in Table 5 above, the Post development peak flows for the 2-inch rainfall as well as the 25-, 50-, and 100-yr storm events are less than the pre-development peak flows at POI 1. Thus, we conclude that the proposed onsite management of stormwater runoff will result in no impacts to the downstream conditions related to flood capacity. The design has included runoff storage and control to keep peak discharge to at or below predevelopment levels.

14.0 STORMWATER MANAGEMENT WATER QUALITY SUMMARY

The following narrative discusses the General Standard of the MaineDEP Stormwater Law. The development will be required to provide the treatment volume for 1-inch times the subcatchment's impervious area plus 0.4-inch times the subcatchment's landscaped developed area. The project is not required to meet the Phosphorous Standard as the development site is not tributary to a lake watershed. As required by the BMP Standards, the developer is proposing to utilize a grassed underdrain soil filter and a bio-retention filter.

It should be noted that the applicant is seeking an exception from the general standard for the portion of the access drive crossing the wetland under the "wetland road crossing" exception under Ch. 500 sec 4(C)(5)(e). This exception is for 1,268 SF of impervious road and sidewalk area within the mapped wetland boundary. This 1,268 SF of impervious area was deducted from the later calculations of the treatment percentages.

The following sections summarize the BMPs that are being employed to meet the water quality standards for the proposed development. The proposed development will treat no less than 95% of the impervious area and 80% of the developed area in accordance with MaineDEP Chapter 500 Section 4.C.5(c).

14.1.1 Grassed Underdrained Soil Filter

Grassed Underdrained Soil Filters are defined in Volume III, Section 7.1 of the Stormwater Best Management Practices Manual published by the Maine Department of Environmental Protection. The surface area of each filter is required to be no less than the sum of 5% of the impervious area and 2% of the landscaped area draining to the filter. The sediment forebay shall be sized based on the annual cubic feet of collected sediment which equates to 10 storms per year each depositing 500 lbs/acre-storm over the sanded area of the tributary watershed. The water quality treatment volume can pond up to 18" deep within the soil filter.

Runoff from storms producing the water quality volume will be conveyed from the basin through the soil media and underdrain system. A valve or equivalent control measure will be placed on the soil filter's underdrains to regulate the outflow through the soil media. The control device may be field adjusted to maintain the outflow time between 24 and 48 hours. Runoff that exceeds the water quality volume will be conveyed through a 12" culvert to further control the peak flow rates out of the filter. Runoff from storms possibly larger or more intense than a 25-year event may be conveyed via the overflow culvert, as well as through a riprap overflow spillway, discharging into undisturbed wooded area. The filter is sized large enough to contain the 100-year storm within the basin area.

Yearly maintenance of the grassed underdrain will include monitoring the outflow after a rainfall event to ensure the retention time is within the required parameters of 24-48 hours. There are two options for the construction of the filter media. The first option may consist of a soil mixture combining sand, sandy loam, and either fine shredded bark or wood fiber mulch. The resulting mixture should contain 8-12% passing the No. 200 sieve and a clay content of less than 2%. The second option will be a layered system consisting of 12" of loamy coarse sand and 6" of loamy topsoil with a transition layer of 2" of the topsoil rototilled into to the sand layer. These options are detailed in the plan documents.

Table 6 below presents information for the Grassed Underdrain Soil Filter identified as P2 in the HydroCAD model. TR-20 calculations can be found in Attachment B.

Table 6		
Grassed Underdrain Soil Filter		
	Required	**Provided**
Impervious Area (sq. ft.)		35,561
Landscaped Area (non-impervious) (sq. ft.)		17,812
Developed Area (Imp. + Landscaped) (sq. ft.)		53,373
Treatment Volume (cu. ft.)	3,557	5,039
Filter Surface Area		
5% (imp. Area) +2% (landscaped Area)	2,134	2,666
Pond Base Elevation		71.00
WQV Elevation		72.50
Pond Outflow (cfs)		0.04
Release Time	24-48 Hours	24 Hours

The storage table for the grassed underdrain soil filter is included in Attachment B. An additional analysis of the grassed underdrain soil filter emergency spillway performance as the sole outlet (to create a scenario where the primary outlet has failed for example) was conducted for the 25- and 100-year 24-hour storms. Based on this analysis the spillway will be able to convey the 100-year storm without overtopping the adjacent berm, and the 25-year storm while maintaining at least one foot of freeboard between the peak elevation and top of berm.

In total, the grassed underdrained soil filter will provide treatment for 35,561 SF of impervious area and 53,373 SF of developed area. This accounts for 87.07% of the total impervious area and 79.71% of the total developed area. Design calculations for the GUSF are included in Attachment A.

14.1.2 Bio-retention Filter

Bio-retention filters are defined in Volume III, Section 7.2 of the Stormwater Best Management Practices Manual published by the Maine Department of Environmental Protection. The surface area of the filter is required to be no less than the sum of 7% of the impervious area and 3% of the landscaped area draining to the filter. The water quality treatment volume can pond up to 6" deep within the biofilter.

Runoff from storms producing the water quality volume will be conveyed from the basin through the filter media and underdrain system. The filter media is designed to pass water at a rate of 2.4" per hour. Runoff that exceeds the water quality volume will be conveyed through a piped overflow or will spill over the north side of the basin, which acts as a spillway. An overflow structure in the form of a 6" diameter standpipe with a domed grate will be placed 6" above the filter bed within the basin to convey excess amounts of runoff to the underdrain pipe that discharges out to a rip rap apron on the northeast side of the filter.

Table 7 below presents information for the Bio-Retention Filter identified as P3 in the HydroCAD model. TR-20 calculations can be found in Attachment B.

Table 7		
Bio-Retention Filter		
	Required	**Provided**
Impervious Area (sq. ft.)		4,353
Landscaped Area (non-impervious) (sq. ft.)		3,283
Developed Area (Imp. + Landscaped) (sq. ft.)		7,636
Treatment Volume (cu. ft.)	472	567
Filter Surface Area		
7% (imp. Area) +3% (landscaped Area)	403	403
Base Elevation		74.00
Overflow Elevation		74.50

In total, the bio-retention filter will provide treatment for 4,353 SF of impervious area and 7,636 SF of developed area. This accounts for 10.66% of the total impervious area and 11.40% of the total developed area. Design calculations for the bio-retention filter is included in Attachment A.

15.0 WATER QUALITY SUMMARY

The construction of BMPs employed as part of the development will allow the project to meet the standards set forth in Chapter 500 and the Town's stormwater management standards. The grassed underdrained soil filter and the bio-retention filter successfully treat approximately 0.92 acres of impervious area and 1.40 acres of developed area. This equates to overall treatment percentages of 97.73% and 91.12% for impervious and developed area, respectively. A summary of the project's treatment percentages is provided below:

Treatment Summary

Table 8 – Overall Treatment Summary		
	IMPERVIOUS (SF)	**DEVELOPED (SF)** (Impervious + Landscaped)
Grassed Underdrained Soil Filter	35,561	53,373
Bio-Retention Filter	4,353	7,636
Percent Treated	**97.73%**	**91.12%**
Percent Required	95.0%	80.0%

Additional Water Quality Calculations that demonstrate compliance with The Chapter 500 General Standards for the development are provided in Attachment C.

This project is required to treat 95% of the impervious area along with 80% of the developed area (impervious and landscaped) from the project site. As can be seen in Table 8 above, the project meets the required treatment levels.

The project provides stormwater quality treatment to meet the General Standards for Chapter 500 and will not cause degradation of the receiving waters due to the stormwater runoff from the site.

16.0 CONSTRUCTION BMPS – BASIC STANDARDS

Additional water quality treatment will be provided during construction through the use of temporary erosion control Best Management Practices (BMP). This is outlined in the Erosion and Sediment Control Report submitted with the Stormwater Permit Application. Standard BMPs to be employed include siltation fencing or equivalent sediment barriers such as erosion control mix berms, around the downslope construction perimeter, siltation fence or equivalent barriers around the soil filters, temporary sedimentation basins, permanent riprap, stabilized construction entrances and erosion control fabrics and blankets applied to slopes prior to revegetation.

17.0 MAINTENANCE OF FACILITIES

The stormwater management facilities will be maintained by the Applicant or their assigns after construction is completed. The general contractor will be responsible for maintenance during construction. The contract documents will require that the contractor designate a person for maintenance of the facilities during construction as required by this application. Long-term operation/maintenance schedules for the facilities are provided in the O&M Manual included in Attachment D of this report.

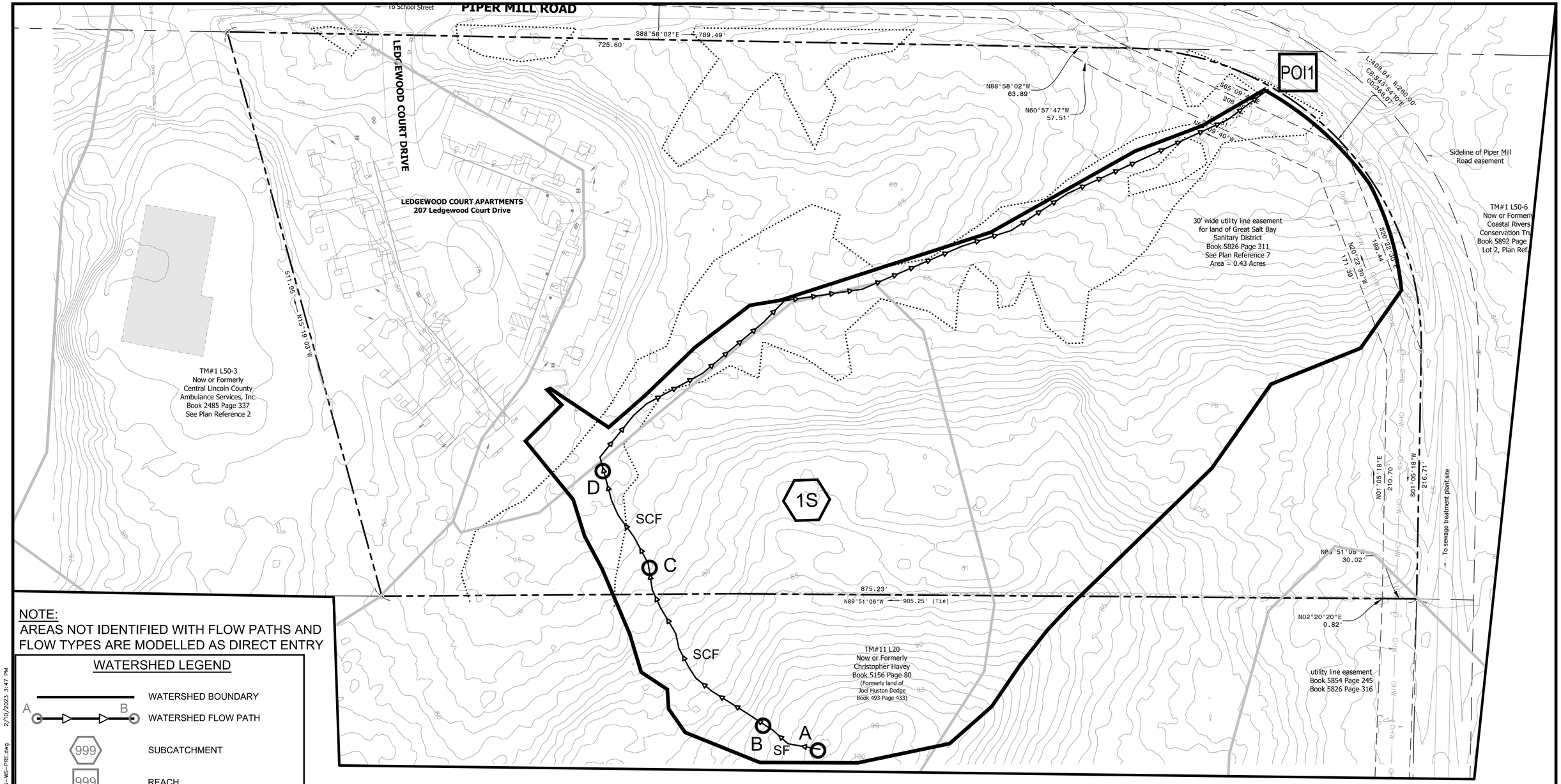
18.0 CONCLUSION

The Stormwater Management Plan for this project outlines the measures proposed to achieve compliance with the Chapter 500 Stormwater Management standards for water quality treatment and quantity peak discharge control. The design includes stormwater quantity controls including storage components within the grassed underdrained soil filter and the bio-retention filter.

Based on the proposed design, the runoff from the proposed development will be captured and conveyed in a manner that will not have an adverse impact to the downstream receptors or the environment.

ATTACHMENT A

WATERSHED MAPS



NOTE:
AREAS NOT IDENTIFIED WITH FLOW PATHS AND FLOW TYPES ARE MODELLED AS DIRECT ENTRY

WATERSHED LEGEND

- WATERSHED BOUNDARY
- A — B: WATERSHED FLOW PATH
- 999: SUBCATCHMENT
- 999: REACH
- SF: SHEET FLOW
- SCF: SHALLOW CONCENTRATED FLOW
- CF: CHANNEL FLOW
- CC: CIRCULAR CHANNEL
- POI: POINT OF INTEREST
- 999: POND
- SOIL BOUNDARY

NOTE: SOILS ON SITE ARE:
1. Sc SCANTIC SILT LOAM
2. BuB LAMOINE SILT LOAM
3. TrB TUNBRIDGE / LYMAN COMPLEX

NORTH

GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1 inch = 40 ft.

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES & SHALL NOT BE USED FOR CONSTRUCTION.

STATE OF MAINE
STEPHEN R. BUSHEY
02.10.23
LICENSED PROFESSIONAL ENGINEER
STEPHEN R. BUSHEY, P.E.
LIC. #7429

Rev.	Date	Revision

Rev.	Date	Revision
1	2023.02.10	PRELIMINARY SITE PLAN / SUBDIVISION PLAN APPLICATION

Design: SRB	Draft: CDD	Date: NOV. 2022
Checked: SRB	Scale: AS NOTED	Job No.: 3996
File Name: 3996-WS-PRE.dwg		

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Drawing Name: PREDEVELOPMENT WATERSHED PLAN

Project: LEDGEWOOD COURT EXPANSION - 32 UNITS
207 LEDGEWOOD COURT DRIVE, DAMARISCOTTA, MAINE

Client: DC PREDEVELOPMENT LLC / DC LEDGEWOOD LLC
631 STEVENS AVENUE, SUITE 203, PORTLAND, MAINE 04103 PH. 207.772.7673

Drawing No. WS-1

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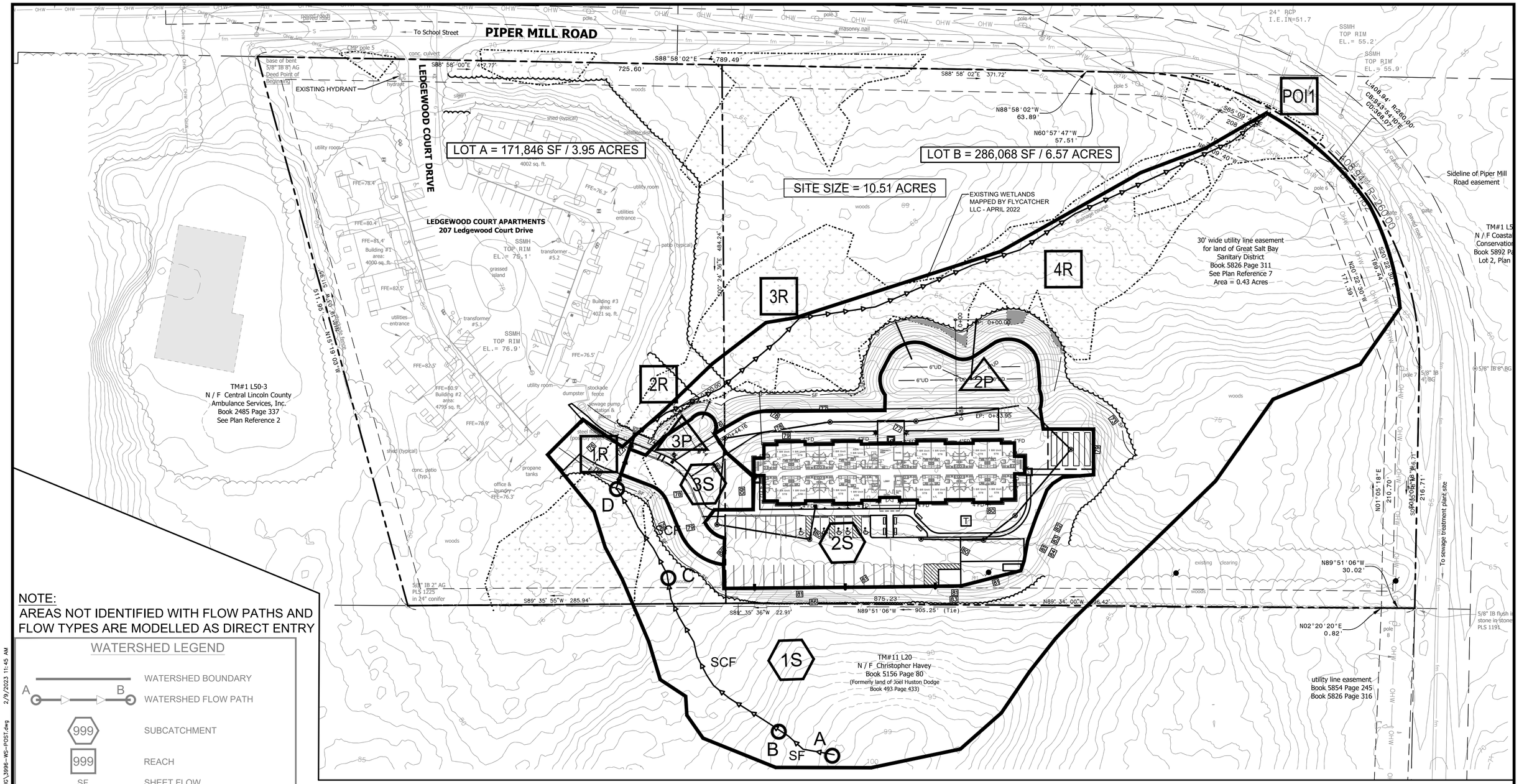

NOTE:
AREAS NOT IDENTIFIED WITH FLOW PATHS AND FLOW TYPES ARE MODELLED AS DIRECT ENTRY

WATERSHED LEGEND

	WATERSHED BOUNDARY
A — B	WATERSHED FLOW PATH
999	SUBCATCHMENT
999	REACH
SF	SHEET FLOW
SCF	SHALLOW CONCENTRATED FLOW
CF	CHANNEL FLOW
CC	CIRCULAR CHANNEL
POI	POINT OF INTEREST
999	POND
	SOIL BOUNDARY

NOTE: SOILS ON SITE ARE:
1. Sc SCANTIC SILT LOAM
2. BuB LAMOINE SILT LOAM
3. TrB TUNBRIDGE / LYMAN COMPLEX

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES & SHALL NOT BE USED FOR CONSTRUCTION.

NORTH

GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1 inch = 40 ft.

STATE OF MAINE
STEPHEN R. BUSHEY
08.11.22
LICENSED PROFESSIONAL ENGINEER
STEPHEN R. BUSHEY, P.E.
LIC. #7429

Rev.	Date	Revision

Rev.	Date	Revision
1	2022.11.__	PRELIMINARY SITE PLAN / SUBDIVISION PLAN APPLICATION

Design: SRB	Draft: CDD	Date: NOV. 2022
Checked: SRB	Scale: AS NOTED	Job No.: 3996
File Name: 3996-WS-POST.dwg		

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Drawing Name: POST-DEVELOPMENT WATERSHED PLAN

Project: LEDGEWOOD COURT EXPANSION - 32 UNITS
207 LEDGEWOOD COURT DRIVE, DAMARISCOTTA, MAINE

Client: DC PREDEVELOPMENT LLC / DC LEDGEWOOD COURT II LP
631 STEVENS AVENUE, SUITE 203, PORTLAND, MAINE 04103 PH. 207.772.7673

Drawing No. WS-2

PIPER MILL ROAD

To School Street

LEDGEWOOD COURT DRIVE

LOT A = 171,846 SF / 3.95 ACRES

LOT B = 286,068 SF / 6.57 ACRES

SITE SIZE = 10.51 ACRES

LEDGEWOOD COURT APARTMENTS
207 Ledgewood Court Drive

EXISTING WETLANDS
MAPPED BY FLYCATCHER
LLC - APRIL 2022

30' wide utility line easement
for land of Great Salt Bay
Sanitary District
Book 5826 Page 311
See Plan Reference 7
Area = 0.43 Acres

Sideline of Piper Mill
Road easement

TM#1 L50-3
N / F Central Lincoln County
Ambulance Services, Inc.
Book 2485 Page 337
See Plan Reference 2

TM#1 L5
N / F Coasta
Conservatio
Book 5892 Pa
Lot 2, Plan

TM#11 L20
N / F Christopher Havey
Book 5156 Page 80
(Formerly land of Joel Huston Dodge
Book 493 Page 433)

utility line easement
Book 5854 Page 245
Book 5826 Page 316

STORMWATER TREATMENT METHOD LEGEND

TO GRASSED UNDERDRAINED SOIL FILTER - 53,373 SF

TO PROPRIETARY BIO-RETENTION FILTER - 7,636 SF

UNTREATED AREA - 7,689 SF

STORMWATER MANAGEMENT SUMMARY

3996 Ledgewood Court Expansion - Damariscotta

12.12.2022
Designed By: BP
Checked By: KAB

Area	BMP	New Development			Treated New Impervious Area (sf)	Treated New Landscaped Area (sf)
		Impervious Area (sf)	Landscaped Area (sf)	Total Developed Area (sf)		
Development	GUSF1	35,561	17,812	53,373	35,561	17,812
	Biofilter	4,353	3,283	7,636	4,353	3,283
Wetland Crossing	*Reduction*	*1,268*	*472*	*1,740*		
	Untreated	2,195	5,494	*7,689*	0	0
	Total (sf)	**40,841**	**22,834**	**66,958**	**39,914**	**21,095**
	Total (ac)	**1**	**1**	**2**	**1**	**0**

BMP Summary

Treatment Method	Water Quality Volume Required (cf)	Water Quality Volume Provided (cf)	BMP Surface Area Required (sf)	BMP Surface Area Provided (sf)
GUSF	3,557	5,039	2,134	2,666
Biofilter	472	567	403	403

Treatment Summary

	Required	Provided
Treated New Impervious (%)	95%	97.73%
Treated New Developed (%)	80%	91.12%

NOTE: SOILS ON SITE ARE:
1. Sc SCANTIC SILT LOAM
2. BuB LAMOINE SILT LOAM
3. TrB TUNBRIDGE / LYMAN COMPLEX

NORTH

GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1 inch = 40 ft.

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES & SHALL NOT BE USED FOR CONSTRUCTION.

STATE OF MAINE
STEPHEN R. BUSHEY
08.11.22
LICENSED PROFESSIONAL ENGINEER

STEPHEN R. BUSHEY, P.E.
LIC. #7429

Rev.	Date	Revision

Rev.	Date	Revision
1	2022.11.__	PRELIMINARY SITE PLAN / SUBDIVISION PLAN APPLICATION

Design: SRB	Draft: CDD	Date: NOV. 2022
Checked: SRB	Scale: AS NOTED	Job No.: 3996
File Name: 3996-WS-POST.dwg		

GORRILL PALMER
707 Sable Oaks Drive, Suite 30
South Portland, Me 04106
207.772.2515 / www.gorrillpalmer.com
Relationships. Responsiveness. Results.

Drawing Name: STORMWATER MANAGEMENT PLAN

Project: LEDGEWOOD COURT EXPANSION - 32 UNITS
207 LEDGEWOOD COURT DRIVE, DAMARISCOTTA, MAINE

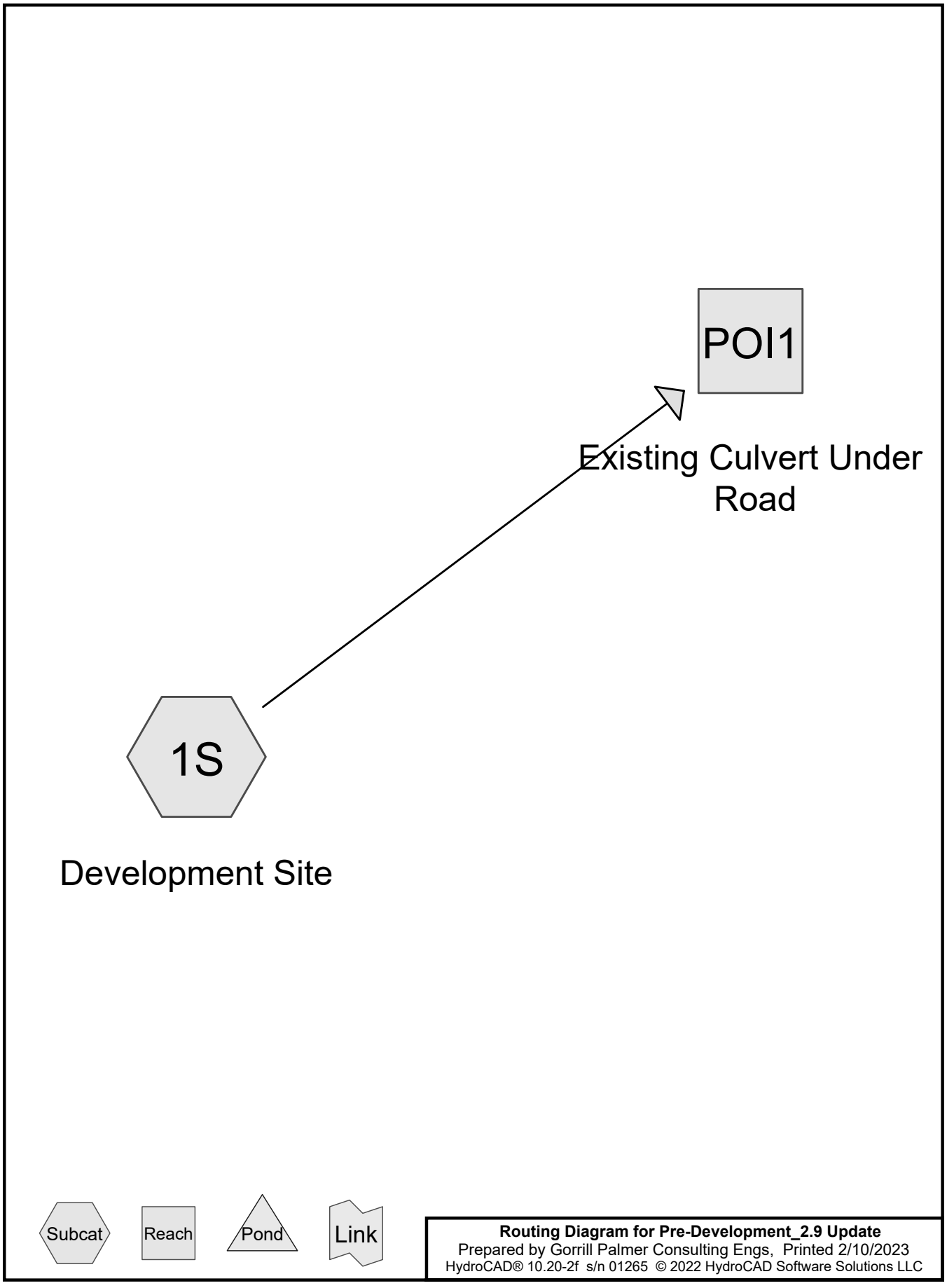
Client: DC PREDEVELOPMENT LLC / DC LEDGEWOOD COURT II LP
631 STEVENS AVENUE, SUITE 203, PORTLAND, MAINE 04103 PH. 207.772.7673

Drawing No. SWM

U:\3996 - Ledgewood Court Expansion - Damariscotta 5-16-22\2 - CAD\DWG\3996-WS-POST.dwg 2/9/2023 2:39 PM

ATTACHMENT B

PRE AND POST DEVELOPMENT HYDROCAD MODEL



Routing Diagram for Pre-Development_2.9 Update
Prepared by Gorrill Palmer Consulting Engs, Printed 2/10/2023

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Development Site Runoff Area=233,901 sf 0.00% Impervious Runoff Depth>3.30"
Flow Length=1,120' Tc=13.8 min CN=77 Runoff=16.14 cfs 1.475 af

Reach POI1: Existing Culvert Under Road Inflow=16.14 cfs 1.475 af
Outflow=16.14 cfs 1.475 af

Total Runoff Area = 5.370 ac Runoff Volume = 1.475 af Average Runoff Depth = 3.30"
100.00% Pervious = 5.370 ac 0.00% Impervious = 0.000 ac

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Development Site Runoff Area=233,901 sf 0.00% Impervious Runoff Depth>4.00"
Flow Length=1,120' Tc=13.8 min CN=77 Runoff=19.55 cfs 1.789 af

Reach POI1: Existing Culvert Under Road Inflow=19.55 cfs 1.789 af
Outflow=19.55 cfs 1.789 af

Total Runoff Area = 5.370 ac Runoff Volume = 1.789 af Average Runoff Depth = 4.00"
100.00% Pervious = 5.370 ac 0.00% Impervious = 0.000 ac

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Development Site Runoff Area=233,901 sf 0.00% Impervious Runoff Depth>0.45"
Flow Length=1,120' Tc=13.8 min CN=77 Runoff=1.84 cfs 0.200 af

Reach POI1: Existing Culvert Under Road Inflow=1.84 cfs 0.200 af
Outflow=1.84 cfs 0.200 af

Total Runoff Area = 5.370 ac Runoff Volume = 0.200 af Average Runoff Depth = 0.45"
100.00% Pervious = 5.370 ac 0.00% Impervious = 0.000 ac

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Development Site Runoff Area=233,901 sf 0.00% Impervious Runoff Depth>0.45"
Flow Length=1,120' Tc=13.8 min CN=77 Runoff=1.84 cfs 0.200 af

Reach POI1: Existing Culvert Under Road Inflow=1.84 cfs 0.200 af
Outflow=1.84 cfs 0.200 af

Total Runoff Area = 5.370 ac Runoff Volume = 0.200 af Average Runoff Depth = 0.45"
100.00% Pervious = 5.370 ac 0.00% Impervious = 0.000 ac

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Development Site Runoff Area=233,901 sf 0.00% Impervious Runoff Depth>4.63"
Flow Length=1,120' Tc=13.8 min CN=77 Runoff=22.56 cfs 2.070 af

Reach POI1: Existing Culvert Under Road Inflow=22.56 cfs 2.070 af
Outflow=22.56 cfs 2.070 af

Total Runoff Area = 5.370 ac Runoff Volume = 2.070 af Average Runoff Depth = 4.63"
100.00% Pervious = 5.370 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment 1S: Development Site

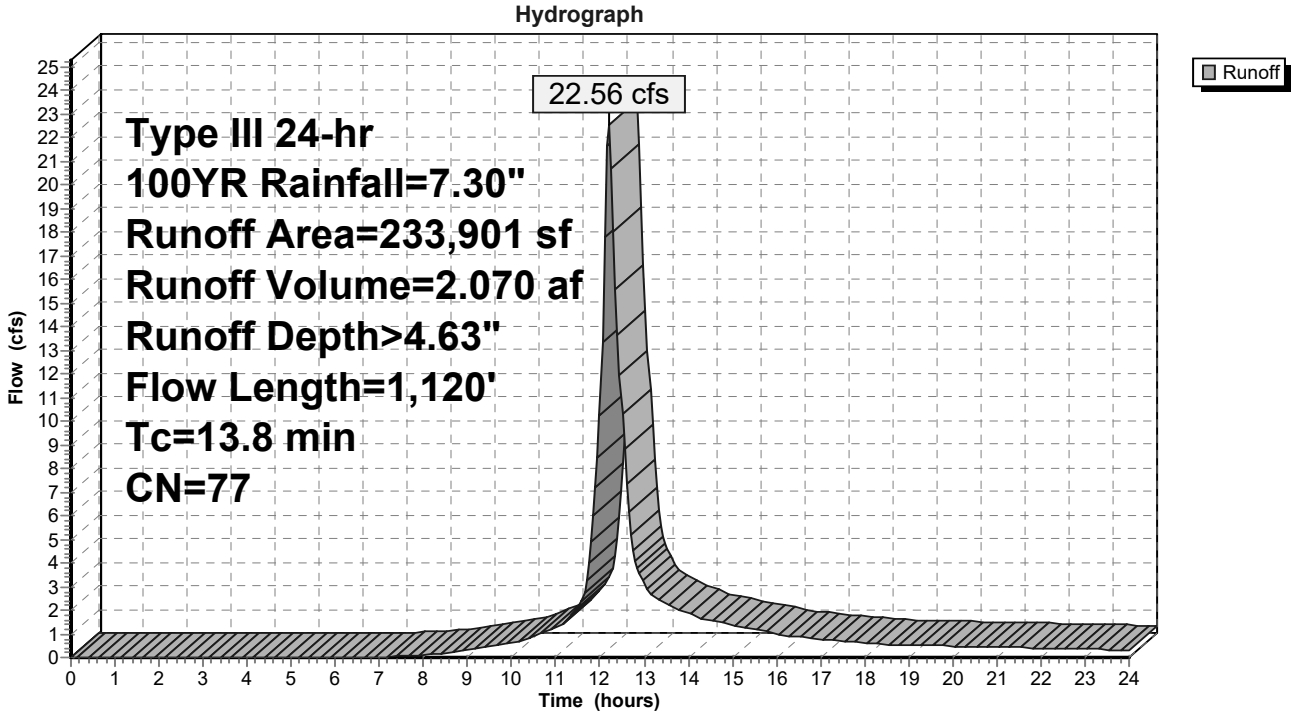
Runoff = 22.56 cfs @ 12.19 hrs, Volume= 2.070 af, Depth> 4.63"
Routed to Reach POI1 : Existing Culvert Under Road

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100YR Rainfall=7.30"

Area (sf)	CN	Description
233,901	77	Woods, Good, HSG D
233,901		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.6	60	0.1000	0.13		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.10"
2.3	200	0.0850	1.46		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
1.8	105	0.0380	0.97		**Shallow Concentrated Flow, C-D** Woodland Kv= 5.0 fps
2.1	755	0.0302	5.87	76.28	**Trap/Vee/Rect Channel Flow,** Bot.W=3.00' D=1.00' Z= 10.0 '/' Top.W=23.00' n= 0.030 Earth, grassed & winding
13.8	1,120	Total			

Subcatchment 1S: Development Site

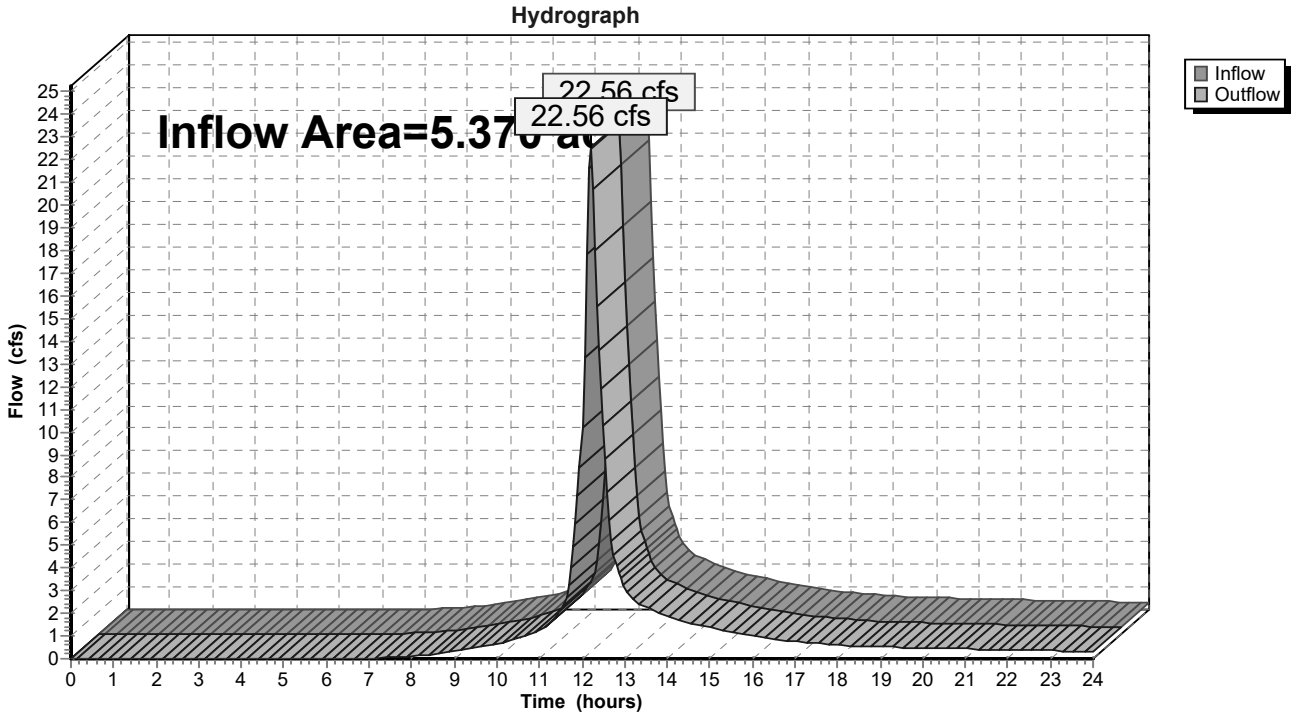


Summary for Reach POI1: Existing Culvert Under Road

Inflow Area = 5.370 ac, 0.00% Impervious, Inflow Depth > 4.63" for 100YR event
Inflow = 22.56 cfs @ 12.19 hrs, Volume= 2.070 af
Outflow = 22.56 cfs @ 12.19 hrs, Volume= 2.070 af, Atten= 0%, Lag= 0.0 min

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

Reach POI1: Existing Culvert Under Road



Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Development Site Runoff Area=233,901 sf 0.00% Impervious Runoff Depth>0.45"
Flow Length=1,120' Tc=13.8 min CN=77 Runoff=1.84 cfs 0.200 af

Reach POI1: Existing Culvert Under Road Inflow=1.84 cfs 0.200 af
Outflow=1.84 cfs 0.200 af

Total Runoff Area = 5.370 ac Runoff Volume = 0.200 af Average Runoff Depth = 0.45"
100.00% Pervious = 5.370 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment 1S: Development Site

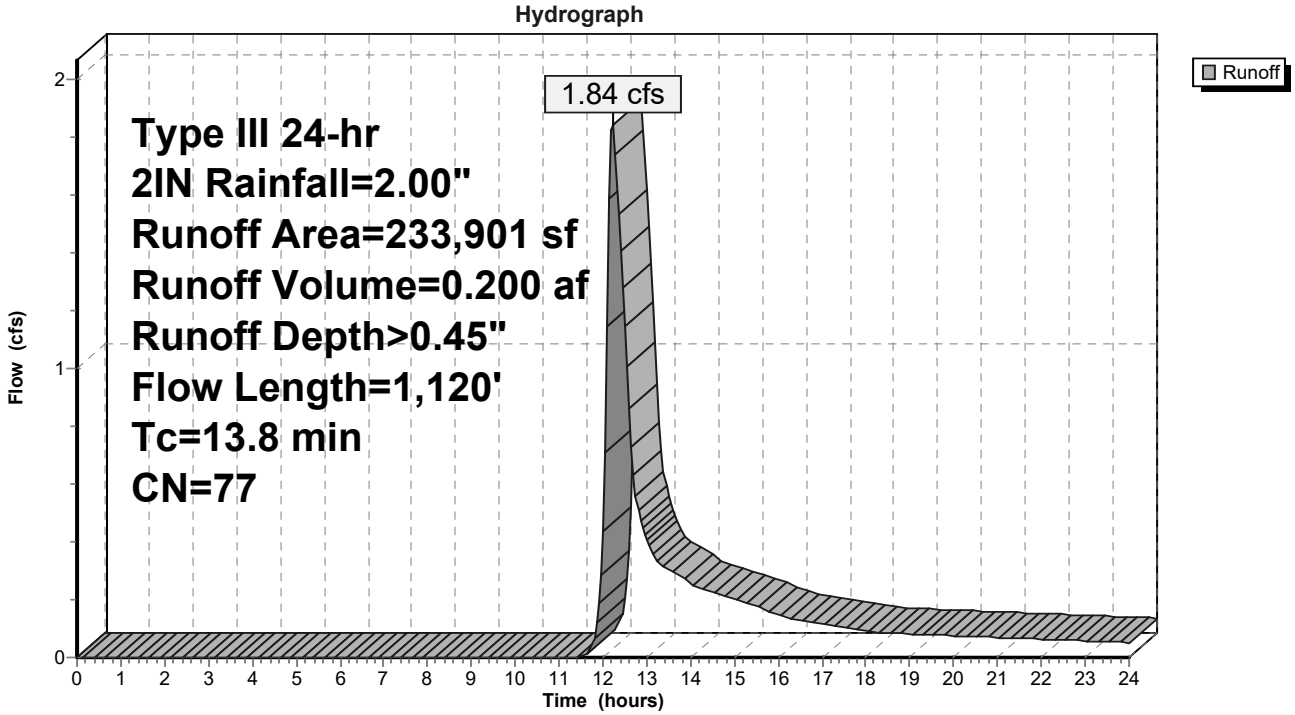
Runoff = 1.84 cfs @ 12.22 hrs, Volume= 0.200 af, Depth> 0.45"
Routed to Reach POI1 : Existing Culvert Under Road

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2IN Rainfall=2.00"

Area (sf)	CN	Description
233,901	77	Woods, Good, HSG D
233,901		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.6	60	0.1000	0.13		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.10"
2.3	200	0.0850	1.46		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
1.8	105	0.0380	0.97		**Shallow Concentrated Flow, C-D** Woodland Kv= 5.0 fps
2.1	755	0.0302	5.87	76.28	**Trap/Vee/Rect Channel Flow,** Bot.W=3.00' D=1.00' Z= 10.0 '/' Top.W=23.00' n= 0.030 Earth, grassed & winding
13.8	1,120	Total			

Subcatchment 1S: Development Site

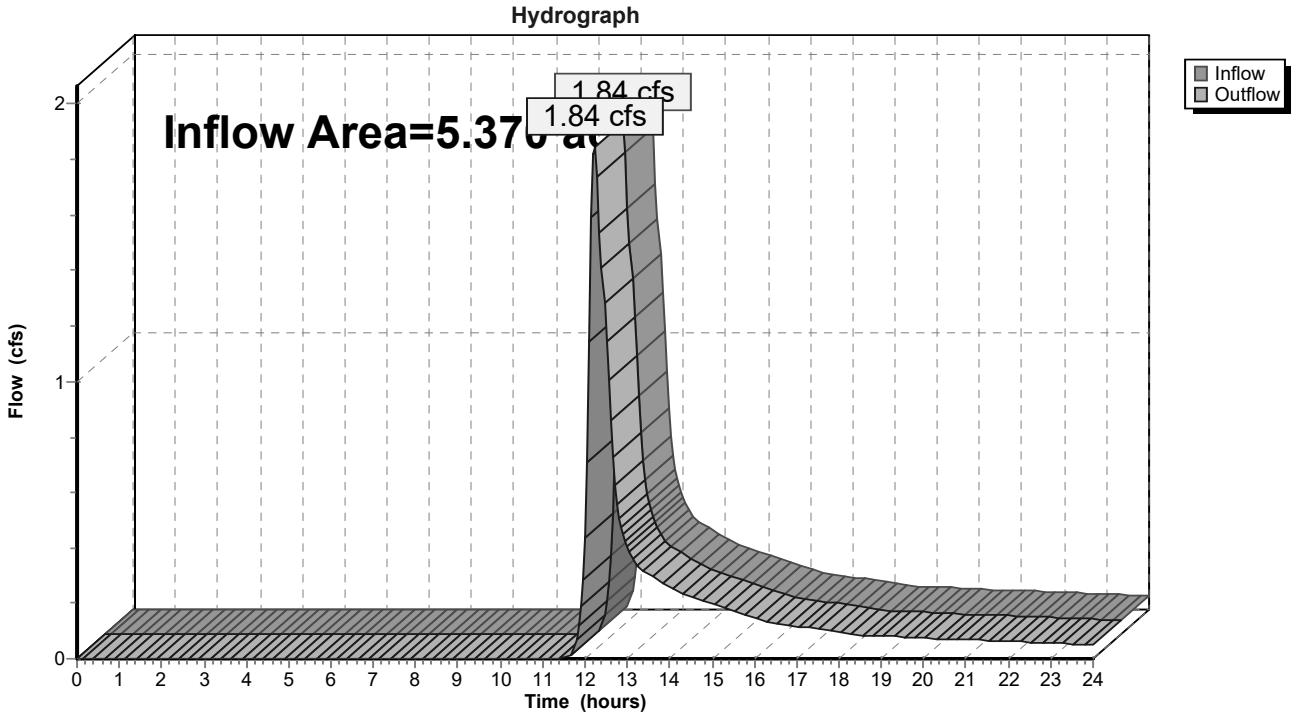


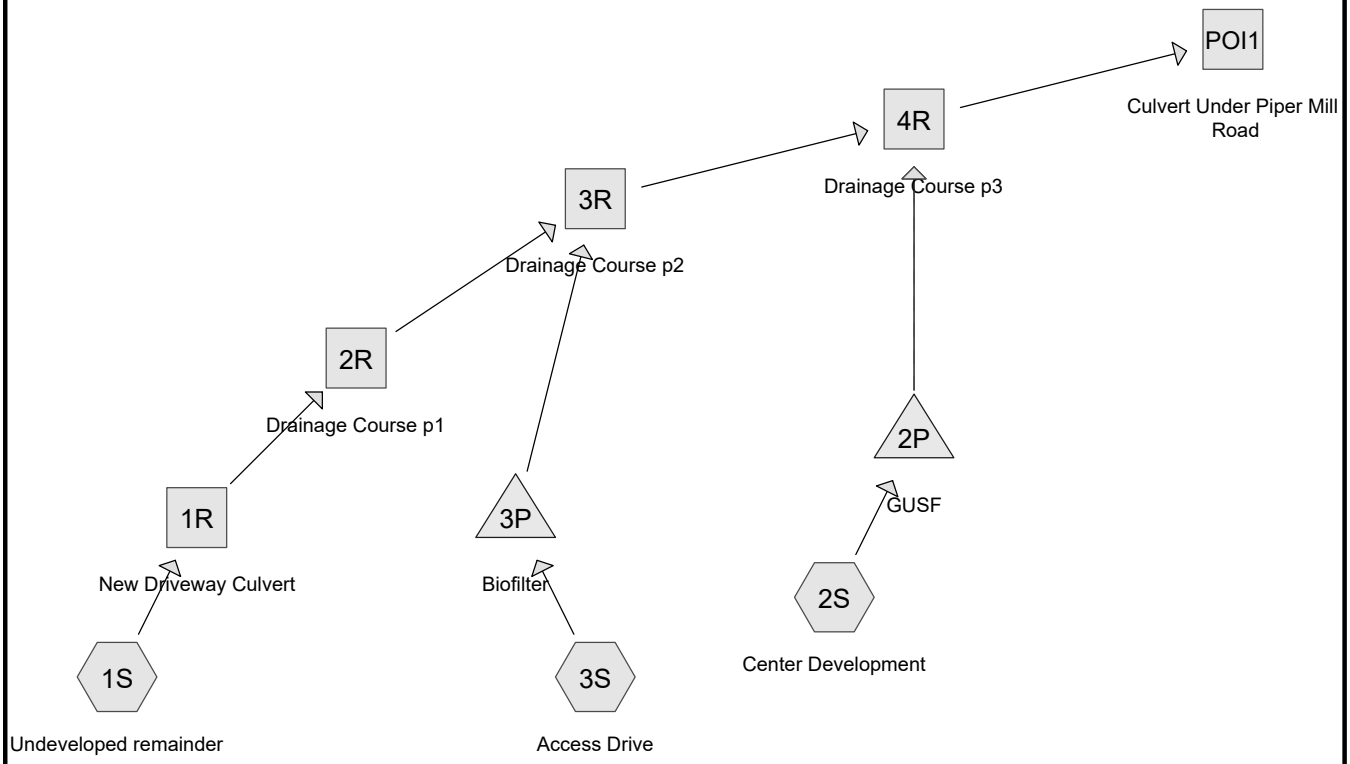
Summary for Reach POI1: Existing Culvert Under Road

Inflow Area = 5.370 ac, 0.00% Impervious, Inflow Depth > 0.45" for 2IN event
Inflow = 1.84 cfs @ 12.22 hrs, Volume= 0.200 af
Outflow = 1.84 cfs @ 12.22 hrs, Volume= 0.200 af, Atten= 0%, Lag= 0.0 min

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

Reach POI1: Existing Culvert Under Road





Subcat Reach Pond Link

Routing Diagram for Post-Development_1.25 Update
Prepared by Gorrill Palmer Consulting Engs, Printed 2/10/2023

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Undeveloped remainder Runoff Area=172,892 sf 1.27% Impervious Runoff Depth>0.45"
Flow Length=365' Tc=11.7 min CN=77 Runoff=1.44 cfs 0.148 af

Subcatchment 2S: Center Development Runoff Area=53,373 sf 66.63% Impervious Runoff Depth>1.24"
Tc=6.0 min CN=92 Runoff=1.74 cfs 0.126 af

Subcatchment 3S: Access Drive Runoff Area=7,636 sf 57.01% Impervious Runoff Depth>1.09"
Tc=6.0 min CN=90 Runoff=0.22 cfs 0.016 af

Reach 1R: New Driveway Culvert Avg. Flow Depth=0.25' Max Vel=6.30 fps Inflow=1.44 cfs 0.148 af
24.0" Round Pipe n=0.012 L=46.0' S=0.0304 '/' Capacity=42.75 cfs Outflow=1.43 cfs 0.148 af

Reach 2R: Drainage Course p1 Avg. Flow Depth=0.20' Max Vel=1.47 fps Inflow=1.43 cfs 0.148 af
n=0.030 L=126.0' S=0.0121 '/' Capacity=48.37 cfs Outflow=1.40 cfs 0.147 af

Reach 3R: Drainage Course p2 Avg. Flow Depth=0.17' Max Vel=1.68 fps Inflow=1.42 cfs 0.163 af
n=0.030 L=274.0' S=0.0182 '/' Capacity=59.29 cfs Outflow=1.37 cfs 0.163 af

Reach 4R: Drainage Course p3 Avg. Flow Depth=0.14' Max Vel=2.31 fps Inflow=1.41 cfs 0.211 af
n=0.030 L=301.0' S=0.0442 '/' Capacity=92.27 cfs Outflow=1.39 cfs 0.210 af

Reach POI1: Culvert Under Piper Mill Road Inflow=1.39 cfs 0.210 af
Outflow=1.39 cfs 0.210 af

Pond 2P: GUSF Peak Elev=72.16' Storage=3,689 cf Inflow=1.74 cfs 0.126 af
Primary=0.04 cfs 0.048 af Secondary=0.00 cfs 0.000 af Outflow=0.04 cfs 0.048 af

Pond 3P: Biofilter Peak Elev=73.84' Storage=267 cf Inflow=0.22 cfs 0.016 af
Outflow=0.02 cfs 0.016 af

Total Runoff Area = 5.370 ac Runoff Volume = 0.290 af Average Runoff Depth = 0.65"
82.00% Pervious = 4.403 ac 18.00% Impervious = 0.967 ac

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Undeveloped remainder Runoff Area=172,892 sf 1.27% Impervious Runoff Depth>3.30"
Flow Length=365' Tc=11.7 min CN=77 Runoff=12.67 cfs 1.091 af

Subcatchment 2S: Center Development Runoff Area=53,373 sf 66.63% Impervious Runoff Depth>4.87"
Tc=6.0 min CN=92 Runoff=6.43 cfs 0.497 af

Subcatchment 3S: Access Drive Runoff Area=7,636 sf 57.01% Impervious Runoff Depth>4.65"
Tc=6.0 min CN=90 Runoff=0.89 cfs 0.068 af

Reach 1R: New Driveway Culvert Avg. Flow Depth=0.75' Max Vel=11.83 fps Inflow=12.67 cfs 1.091 af
24.0" Round Pipe n=0.012 L=46.0' S=0.0304 '/' Capacity=42.75 cfs Outflow=12.65 cfs 1.091 af

Reach 2R: Drainage Course p1 Avg. Flow Depth=0.56' Max Vel=2.63 fps Inflow=12.65 cfs 1.091 af
n=0.030 L=126.0' S=0.0121 '/' Capacity=48.37 cfs Outflow=12.35 cfs 1.090 af

Reach 3R: Drainage Course p2 Avg. Flow Depth=0.51' Max Vel=3.08 fps Inflow=12.97 cfs 1.153 af
n=0.030 L=274.0' S=0.0182 '/' Capacity=59.29 cfs Outflow=12.60 cfs 1.151 af

Reach 4R: Drainage Course p3 Avg. Flow Depth=0.44' Max Vel=4.42 fps Inflow=14.66 cfs 1.523 af
n=0.030 L=301.0' S=0.0442 '/' Capacity=92.27 cfs Outflow=14.37 cfs 1.521 af

Reach POI1: Culvert Under Piper Mill Road Inflow=14.37 cfs 1.521 af
Outflow=14.37 cfs 1.521 af

Pond 2P: GUSF Peak Elev=73.49' Storage=9,741 cf Inflow=6.43 cfs 0.497 af
Primary=2.14 cfs 0.372 af Secondary=0.00 cfs 0.000 af Outflow=2.14 cfs 0.372 af

Pond 3P: Biofilter Peak Elev=74.88' Storage=775 cf Inflow=0.89 cfs 0.068 af
Outflow=0.62 cfs 0.063 af

Total Runoff Area = 5.370 ac Runoff Volume = 1.656 af Average Runoff Depth = 3.70"
82.00% Pervious = 4.403 ac 18.00% Impervious = 0.967 ac

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Undeveloped remainder Runoff Area=172,892 sf 1.27% Impervious Runoff Depth>4.00"
Flow Length=365' Tc=11.7 min CN=77 Runoff=15.35 cfs 1.323 af

Subcatchment 2S: Center Development Runoff Area=53,373 sf 66.63% Impervious Runoff Depth>5.66"
Tc=6.0 min CN=92 Runoff=7.40 cfs 0.578 af

Subcatchment 3S: Access Drive Runoff Area=7,636 sf 57.01% Impervious Runoff Depth>5.43"
Tc=6.0 min CN=90 Runoff=1.03 cfs 0.079 af

Reach 1R: New Driveway Culvert Avg. Flow Depth=0.83' Max Vel=12.47 fps Inflow=15.35 cfs 1.323 af
24.0" Round Pipe n=0.012 L=46.0' S=0.0304 '/' Capacity=42.75 cfs Outflow=15.32 cfs 1.323 af

Reach 2R: Drainage Course p1 Avg. Flow Depth=0.61' Max Vel=2.76 fps Inflow=15.32 cfs 1.323 af
n=0.030 L=126.0' S=0.0121 '/' Capacity=48.37 cfs Outflow=14.97 cfs 1.322 af

Reach 3R: Drainage Course p2 Avg. Flow Depth=0.56' Max Vel=3.24 fps Inflow=15.67 cfs 1.395 af
n=0.030 L=274.0' S=0.0182 '/' Capacity=59.29 cfs Outflow=15.24 cfs 1.393 af

Reach 4R: Drainage Course p3 Avg. Flow Depth=0.50' Max Vel=4.73 fps Inflow=18.88 cfs 1.845 af
n=0.030 L=301.0' S=0.0442 '/' Capacity=92.27 cfs Outflow=18.60 cfs 1.843 af

Reach POI1: Culvert Under Piper Mill Road Inflow=18.60 cfs 1.843 af
Outflow=18.60 cfs 1.843 af

Pond 2P: GUSF Peak Elev=73.63' Storage=10,459 cf Inflow=7.40 cfs 0.578 af
Primary=2.41 cfs 0.427 af Secondary=1.25 cfs 0.024 af Outflow=3.65 cfs 0.451 af

Pond 3P: Biofilter Peak Elev=75.00' Storage=844 cf Inflow=1.03 cfs 0.079 af
Outflow=0.71 cfs 0.073 af

Total Runoff Area = 5.370 ac Runoff Volume = 1.980 af Average Runoff Depth = 4.42"
82.00% Pervious = 4.403 ac 18.00% Impervious = 0.967 ac

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Undeveloped remainder Runoff Area=172,892 sf 1.27% Impervious Runoff Depth>4.63"
Flow Length=365' Tc=11.7 min CN=77 Runoff=17.72 cfs 1.531 af

Subcatchment 2S: Center Development Runoff Area=53,373 sf 66.63% Impervious Runoff Depth>6.35"
Tc=6.0 min CN=92 Runoff=8.25 cfs 0.648 af

Subcatchment 3S: Access Drive Runoff Area=7,636 sf 57.01% Impervious Runoff Depth>6.11"
Tc=6.0 min CN=90 Runoff=1.16 cfs 0.089 af

Reach 1R: New Driveway Culvert Avg. Flow Depth=0.90' Max Vel=12.95 fps Inflow=17.72 cfs 1.531 af
24.0" Round Pipe n=0.012 L=46.0' S=0.0304 '/' Capacity=42.75 cfs Outflow=17.69 cfs 1.530 af

Reach 2R: Drainage Course p1 Avg. Flow Depth=0.65' Max Vel=2.86 fps Inflow=17.69 cfs 1.530 af
n=0.030 L=126.0' S=0.0121 '/' Capacity=48.37 cfs Outflow=17.28 cfs 1.529 af

Reach 3R: Drainage Course p2 Avg. Flow Depth=0.60' Max Vel=3.37 fps Inflow=18.11 cfs 1.612 af
n=0.030 L=274.0' S=0.0182 '/' Capacity=59.29 cfs Outflow=17.62 cfs 1.610 af

Reach 4R: Drainage Course p3 Avg. Flow Depth=0.54' Max Vel=4.95 fps Inflow=22.77 cfs 2.131 af
n=0.030 L=301.0' S=0.0442 '/' Capacity=92.27 cfs Outflow=22.32 cfs 2.128 af

Reach POI1: Culvert Under Piper Mill Road Inflow=22.32 cfs 2.128 af
Outflow=22.32 cfs 2.128 af

Pond 2P: GUSF Peak Elev=73.71' Storage=10,907 cf Inflow=8.25 cfs 0.648 af
Primary=2.56 cfs 0.468 af Secondary=2.61 cfs 0.053 af Outflow=5.17 cfs 0.521 af

Pond 3P: Biofilter Peak Elev=75.04' Storage=872 cf Inflow=1.16 cfs 0.089 af
Outflow=1.02 cfs 0.082 af

Total Runoff Area = 5.370 ac Runoff Volume = 2.268 af Average Runoff Depth = 5.07"
82.00% Pervious = 4.403 ac 18.00% Impervious = 0.967 ac

Summary for Subcatchment 1S: Undeveloped remainder

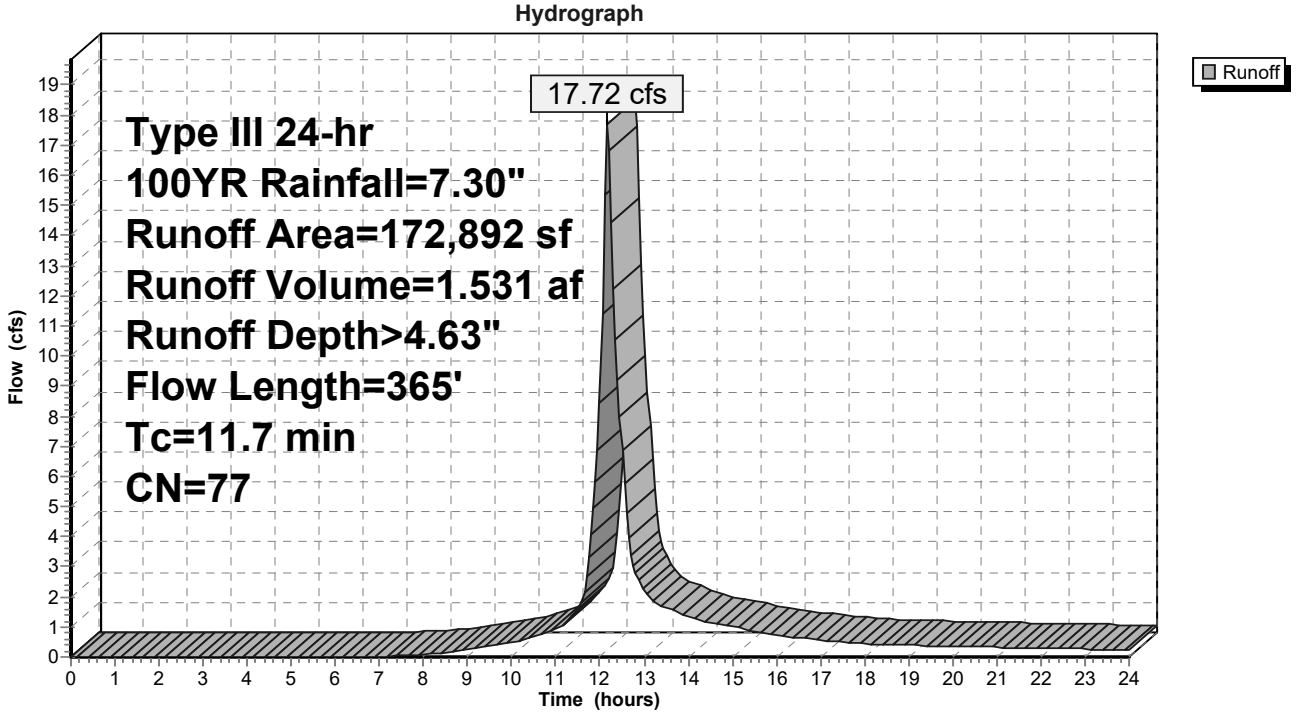
Runoff = 17.72 cfs @ 12.16 hrs, Volume= 1.531 af, Depth> 4.63"
Routed to Reach 1R : New Driveway Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100YR Rainfall=7.30"

Area (sf)	CN	Description
165,203	77	Woods, Good, HSG D
2,195	98	Paved parking, HSG D
5,494	80	>75% Grass cover, Good, HSG D
172,892	77	Weighted Average
170,697		98.73% Pervious Area
2,195		1.27% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.6	60	0.1000	0.13		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.10"
2.3	200	0.0850	1.46		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
1.8	105	0.0380	0.97		**Shallow Concentrated Flow, C-D** Woodland Kv= 5.0 fps
11.7	365	Total			

Subcatchment 1S: Undeveloped remainder



Summary for Subcatchment 2S: Center Development

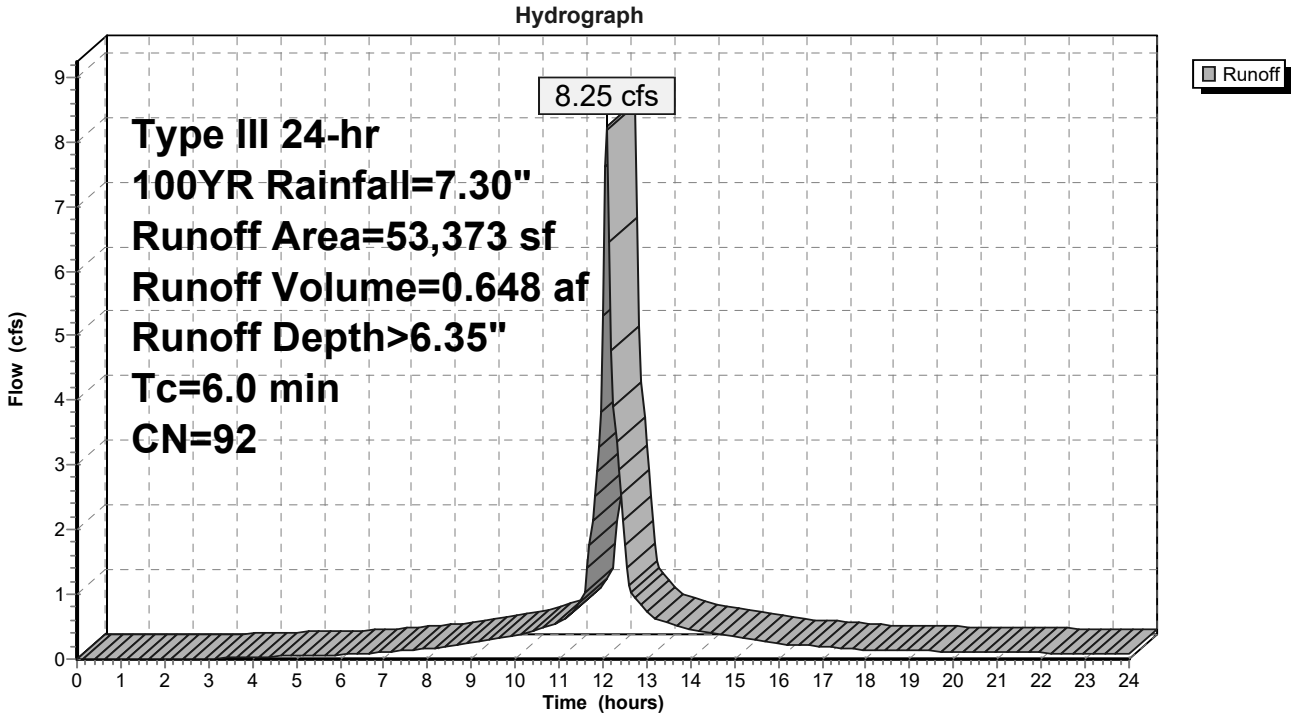
Runoff = 8.25 cfs @ 12.09 hrs, Volume= 0.648 af, Depth> 6.35"
Routed to Pond 2P : GUSF

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100YR Rainfall=7.30"

Area (sf)	CN	Description
35,561	98	Paved parking, HSG D
17,812	80	>75% Grass cover, Good, HSG D
53,373	92	Weighted Average
17,812		33.37% Pervious Area
35,561		66.63% Impervious Area

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

Subcatchment 2S: Center Development



Summary for Subcatchment 3S: Access Drive

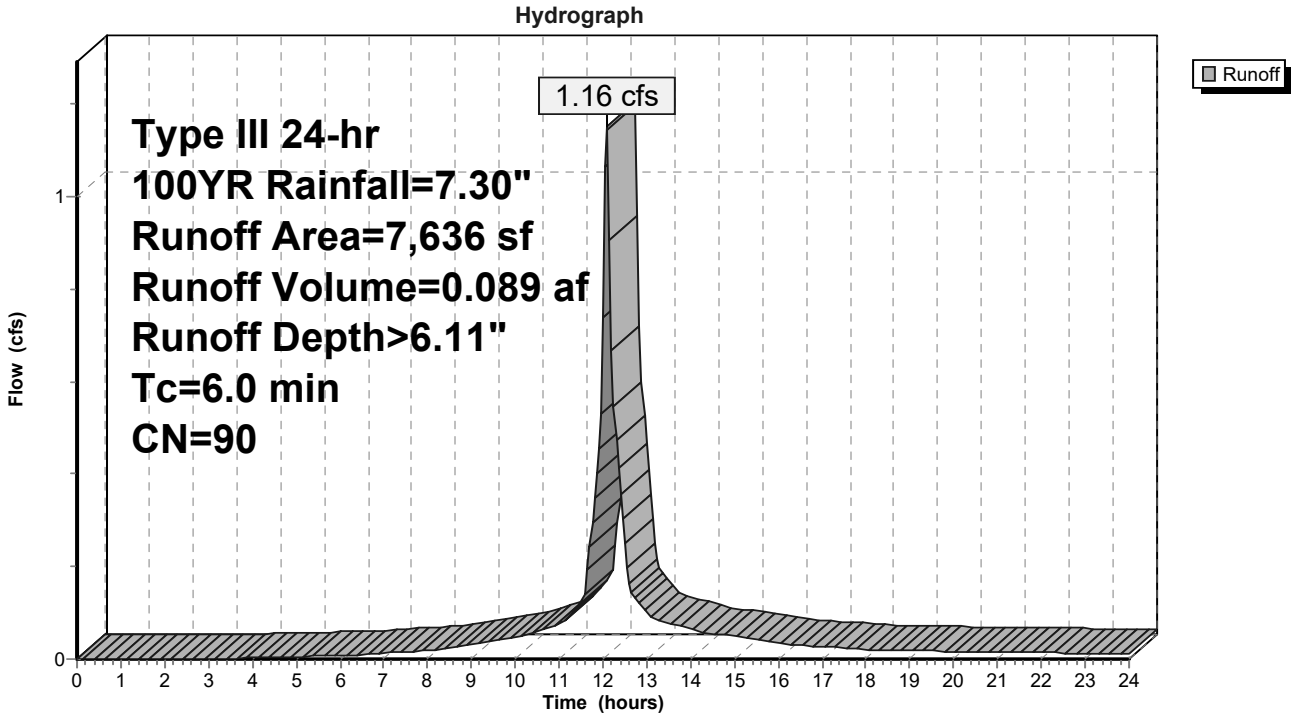
Runoff = 1.16 cfs @ 12.09 hrs, Volume= 0.089 af, Depth> 6.11"
Routed to Pond 3P : Biofilter

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100YR Rainfall=7.30"

Area (sf)	CN	Description
4,353	98	Paved parking, HSG D
3,283	80	>75% Grass cover, Good, HSG D
7,636	90	Weighted Average
3,283		42.99% Pervious Area
4,353		57.01% Impervious Area

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

Subcatchment 3S: Access Drive



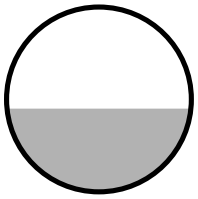
Summary for Reach 1R: New Driveway Culvert

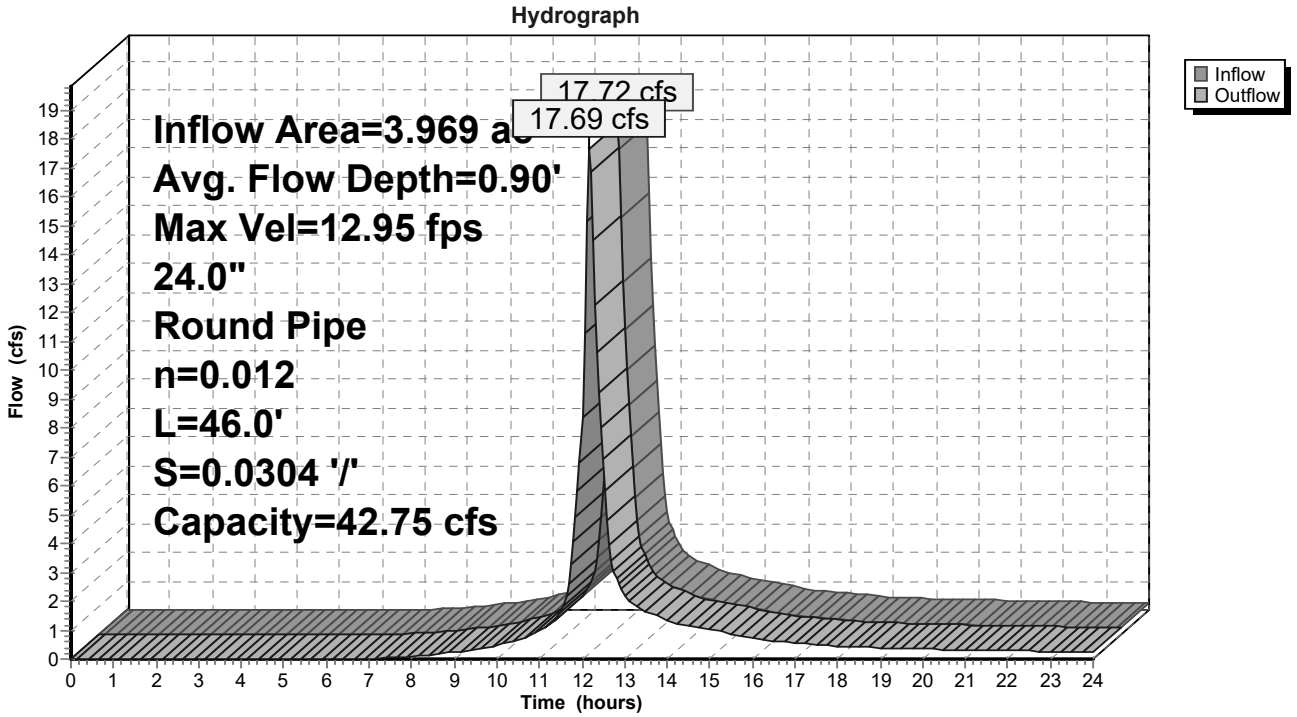
Inflow Area = 3.969 ac, 1.27% Impervious, Inflow Depth > 4.63" for 100YR event
Inflow = 17.72 cfs @ 12.16 hrs, Volume= 1.531 af
Outflow = 17.69 cfs @ 12.16 hrs, Volume= 1.530 af, Atten= 0%, Lag= 0.1 min
Routed to Reach 2R : Drainage Course p1

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Max. Velocity= 12.95 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 4.82 fps, Avg. Travel Time= 0.2 min

Peak Storage= 63 cf @ 12.16 hrs
Average Depth at Peak Storage= 0.90' , Surface Width= 1.99'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 42.75 cfs

24.0" Round Pipe
n= 0.012 Corrugated PP, smooth interior
Length= 46.0' Slope= 0.0304 '/'
Inlet Invert= 74.43', Outlet Invert= 73.03'





Summary for Reach 2R: Drainage Course p1

Inflow Area = 3.969 ac, 1.27% Impervious, Inflow Depth > 4.63" for 100YR event
Inflow = 17.69 cfs @ 12.16 hrs, Volume= 1.530 af
Outflow = 17.28 cfs @ 12.19 hrs, Volume= 1.529 af, Atten= 2%, Lag= 1.5 min
Routed to Reach 3R : Drainage Course p2

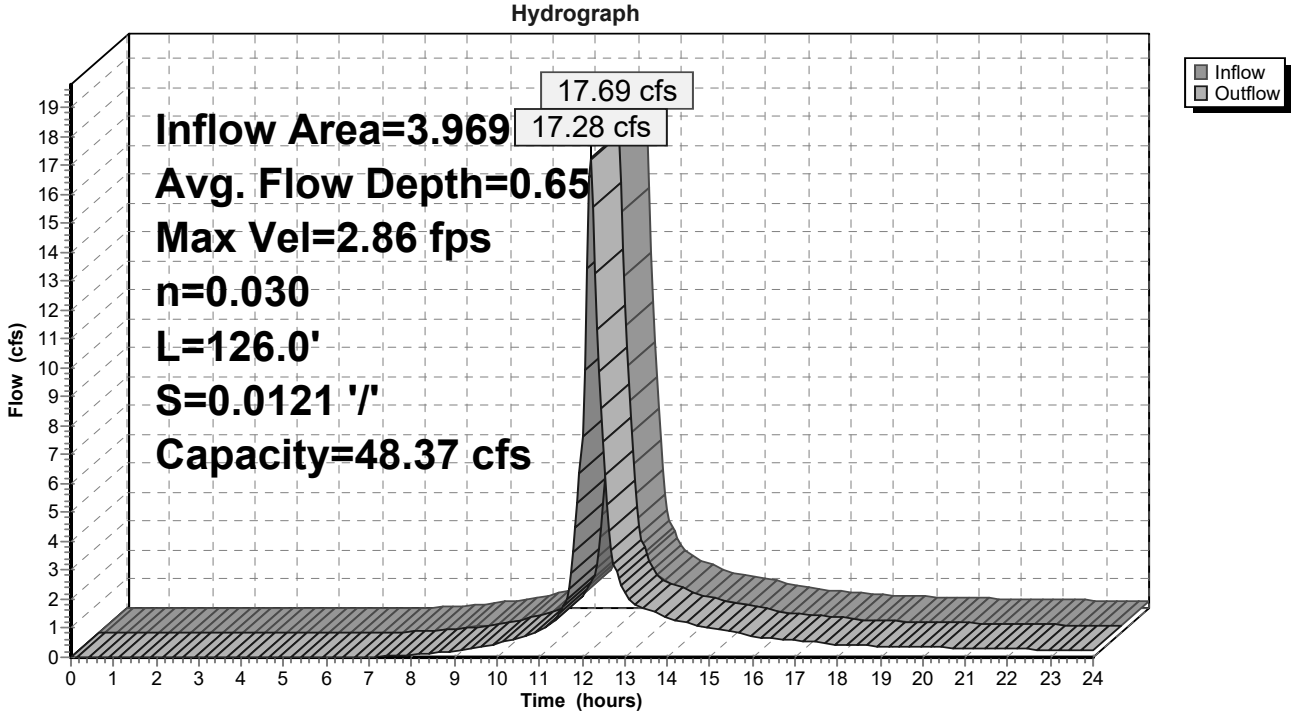
Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.86 fps, Min. Travel Time= 0.7 min
Avg. Velocity = 1.12 fps, Avg. Travel Time= 1.9 min

Peak Storage= 772 cf @ 12.17 hrs
Average Depth at Peak Storage= 0.65' , Surface Width= 15.94'
Bank-Full Depth= 1.00' Flow Area= 13.0 sf, Capacity= 48.37 cfs

3.00' x 1.00' deep channel, n= 0.030 Earth, grassed & winding
Side Slope Z-value= 10.0 '/' Top Width= 23.00'
Length= 126.0' Slope= 0.0121 '/'
Inlet Invert= 73.03', Outlet Invert= 71.50'

‡

Reach 2R: Drainage Course p1



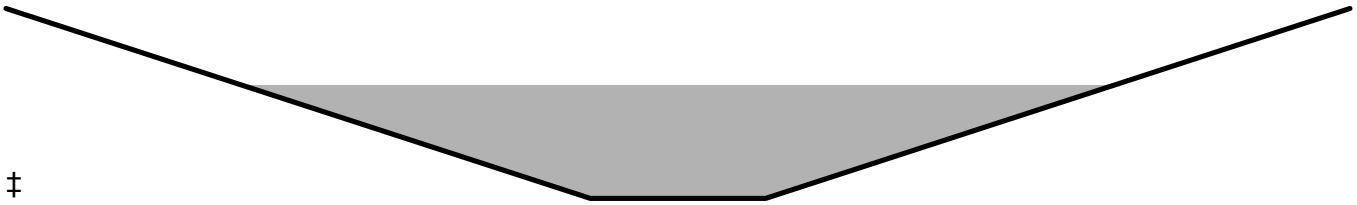
Summary for Reach 3R: Drainage Course p2

Inflow Area = 4.144 ac, 3.63% Impervious, Inflow Depth > 4.67" for 100YR event
Inflow = 18.11 cfs @ 12.18 hrs, Volume= 1.612 af
Outflow = 17.62 cfs @ 12.23 hrs, Volume= 1.610 af, Atten= 3%, Lag= 2.7 min
Routed to Reach 4R : Drainage Course p3

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.37 fps, Min. Travel Time= 1.4 min
Avg. Velocity = 1.15 fps, Avg. Travel Time= 4.0 min

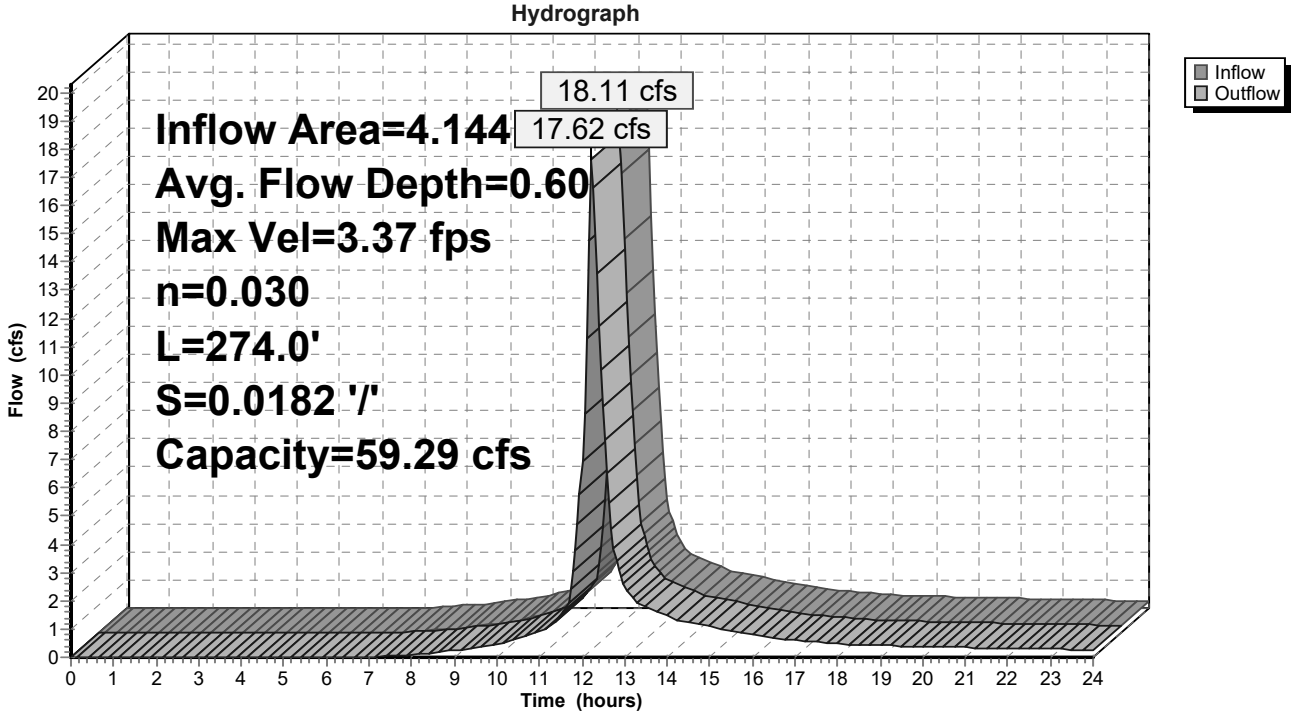
Peak Storage= 1,470 cf @ 12.20 hrs
Average Depth at Peak Storage= 0.60' , Surface Width= 14.95'
Bank-Full Depth= 1.00' Flow Area= 13.0 sf, Capacity= 59.29 cfs

3.00' x 1.00' deep channel, n= 0.030
Side Slope Z-value= 10.0 '/' Top Width= 23.00'
Length= 274.0' Slope= 0.0182 '/'
Inlet Invert= 70.00', Outlet Invert= 65.00'



‡

Reach 3R: Drainage Course p2



Summary for Reach 4R: Drainage Course p3

Inflow Area = 5.370 ac, 18.00% Impervious, Inflow Depth > 4.76" for 100YR event
Inflow = 22.77 cfs @ 12.22 hrs, Volume= 2.131 af
Outflow = 22.32 cfs @ 12.26 hrs, Volume= 2.128 af, Atten= 2%, Lag= 2.1 min
Routed to Reach POI1 : Culvert Under Piper Mill Road

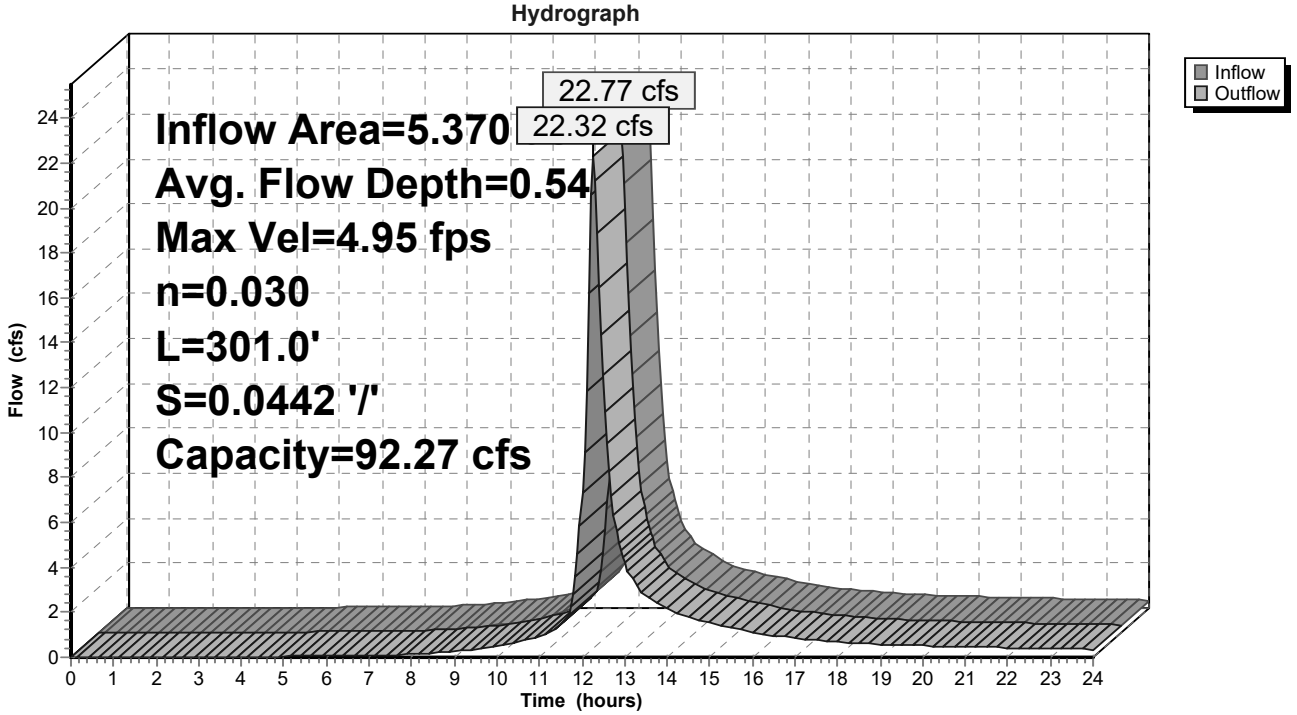
Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.95 fps, Min. Travel Time= 1.0 min
Avg. Velocity = 1.70 fps, Avg. Travel Time= 3.0 min

Peak Storage= 1,371 cf @ 12.24 hrs
Average Depth at Peak Storage= 0.54' , Surface Width= 13.83'
Bank-Full Depth= 1.00' Flow Area= 13.0 sf, Capacity= 92.27 cfs

3.00' x 1.00' deep channel, n= 0.030
Side Slope Z-value= 10.0 '/' Top Width= 23.00'
Length= 301.0' Slope= 0.0442 '/'
Inlet Invert= 65.00', Outlet Invert= 51.70'

‡

Reach 4R: Drainage Course p3

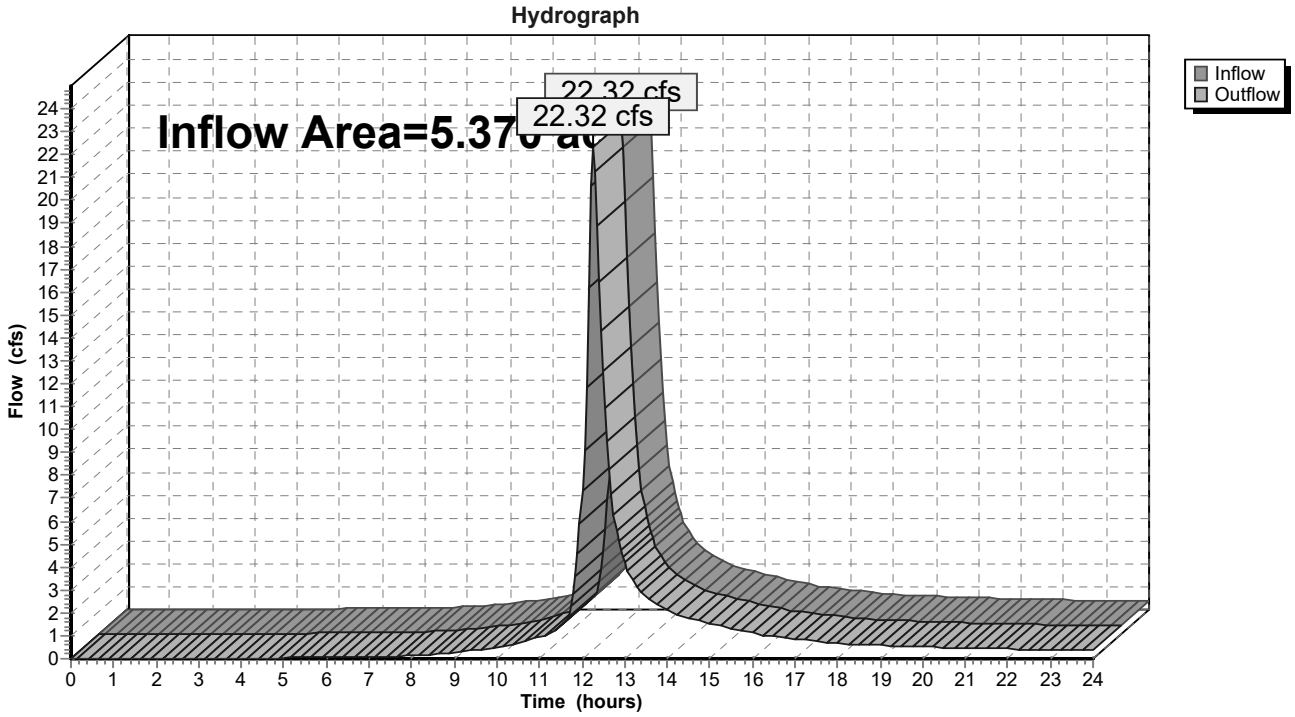


Summary for Reach POI1: Culvert Under Piper Mill Road

Inflow Area = 5.370 ac, 18.00% Impervious, Inflow Depth > 4.76" for 100YR event
Inflow = 22.32 cfs @ 12.26 hrs, Volume= 2.128 af
Outflow = 22.32 cfs @ 12.26 hrs, Volume= 2.128 af, Atten= 0%, Lag= 0.0 min

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

Reach POI1: Culvert Under Piper Mill Road



Summary for Pond 2P: GUSF

Inflow Area = 1.225 ac, 66.63% Impervious, Inflow Depth > 6.35" for 100YR event
Inflow = 8.25 cfs @ 12.09 hrs, Volume= 0.648 af
Outflow = 5.17 cfs @ 12.20 hrs, Volume= 0.521 af, Atten= 37%, Lag= 6.8 min
Primary = 2.56 cfs @ 12.20 hrs, Volume= 0.468 af
Routed to Reach 4R : Drainage Course p3
Secondary = 2.61 cfs @ 12.20 hrs, Volume= 0.053 af
Routed to Reach 4R : Drainage Course p3

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 73.71' @ 12.20 hrs Surf.Area= 5,510 sf Storage= 10,907 cf

Plug-Flow detention time= 143.6 min calculated for 0.520 af (80% of inflow)
Center-of-Mass det. time= 70.1 min (841.2 - 771.1)

Volume	Invert	Avail.Storage	Storage Description
#1	71.00'	15,707 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

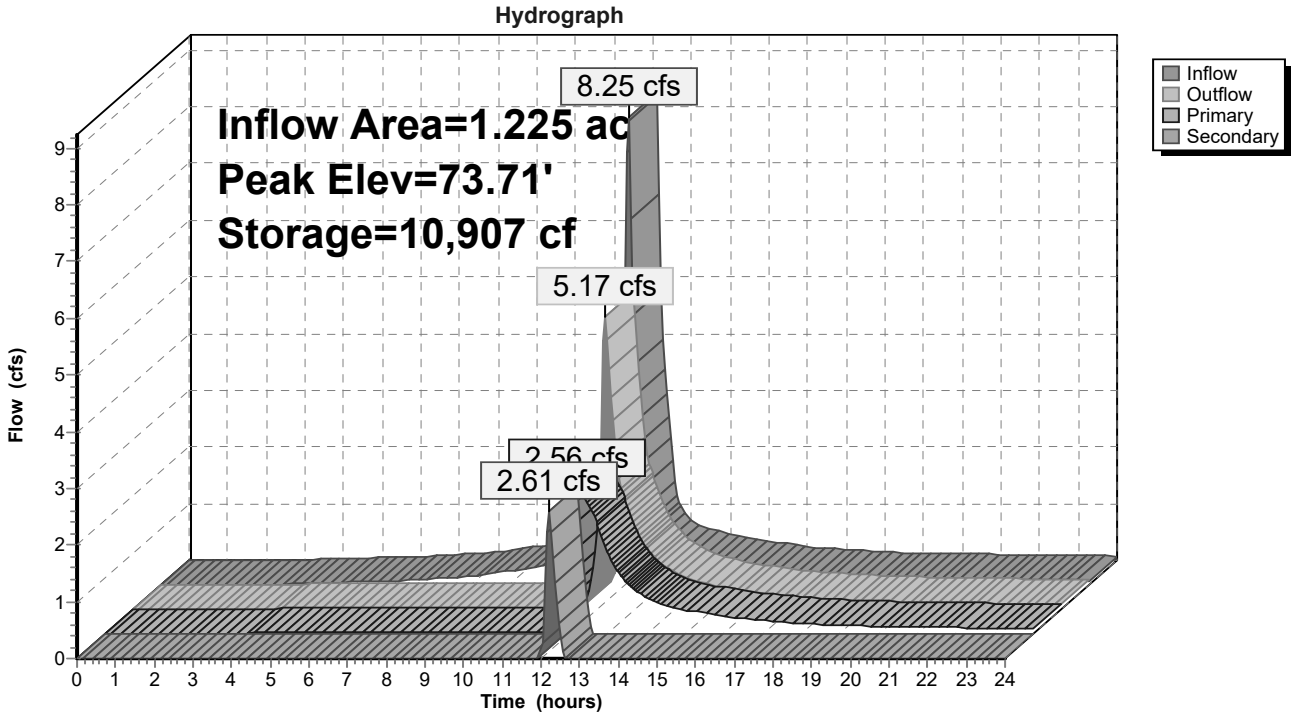
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
71.00	2,666	0	0
72.00	3,558	3,112	3,112
73.00	4,742	4,150	7,262
74.00	5,822	5,282	12,544
74.50	6,830	3,163	15,707

Device	Routing	Invert	Outlet Devices
#1	Primary	71.00'	**0.04 cfs Exfiltration at all elevations**
#2	Secondary	73.50'	**10.0' long x 20.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#3	Primary	72.50'	**12.0" Round Culvert** L= 30.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 72.50' / 66.50' S= 0.2000 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=2.56 cfs @ 12.20 hrs HW=73.71' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.04 cfs)
└**3=Culvert** (Inlet Controls 2.52 cfs @ 3.21 fps)

Secondary OutFlow Max=2.60 cfs @ 12.20 hrs HW=73.71' (Free Discharge)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 2.60 cfs @ 1.23 fps)

Pond 2P: GUSF


Hydrograph
Inflow
Outflow
Primary
Secondary
8.25 cfs
Inflow Area=1.225 ac
Peak Elev=73.71'
Storage=10,907 cf
5.17 cfs
2.56 cfs
2.61 cfs
Flow (cfs)
Time (hours)
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
0 1 2 3 4 5 6 7 8 9

Stage-Area-Storage for Pond 2P: GUSF

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
71.00	2,666	0
71.05	2,711	134
71.10	2,755	271
71.15	2,800	410
71.20	2,844	551
71.25	2,889	694
71.30	2,934	840
71.35	2,978	988
71.40	3,023	1,138
71.45	3,067	1,290
71.50	3,112	1,445
71.55	3,157	1,601
71.60	3,201	1,760
71.65	3,246	1,921
71.70	3,290	2,085
71.75	3,335	2,250
71.80	3,380	2,418
71.85	3,424	2,588
71.90	3,469	2,761
71.95	3,513	2,935
72.00	3,558	3,112
72.05	3,617	3,291
72.10	3,676	3,474
72.15	3,736	3,659
72.20	3,795	3,847
72.25	3,854	4,039
72.30	3,913	4,233
72.35	3,972	4,430
72.40	4,032	4,630
72.45	4,091	4,833
72.50	4,150	5,039
72.55	4,209	5,248
72.60	4,268	5,460
72.65	4,328	5,675
72.70	4,387	5,893
72.75	4,446	6,114
72.80	4,505	6,337
72.85	4,564	6,564
72.90	4,624	6,794
72.95	4,683	7,026
73.00	4,742	7,262
73.05	4,796	7,500
73.10	4,850	7,742
73.15	4,904	7,985
73.20	4,958	8,232
73.25	5,012	8,481
73.30	5,066	8,733
73.35	5,120	8,988
73.40	5,174	9,245
73.45	5,228	9,505
73.50	5,282	9,768
73.55	5,336	10,033
73.60	5,390	10,302
73.65	5,444	10,572
73.70	5,498	10,846
73.75	5,552	11,122
73.80	5,606	11,401
73.85	5,660	11,683
73.90	5,714	11,967
73.95	5,768	12,254
74.00	5,822	12,544
74.05	5,923	12,838
74.10	6,024	13,136
74.15	6,124	13,440
74.20	6,225	13,749
74.25	6,326	14,063
74.30	6,427	14,381
74.35	6,528	14,705
74.40	6,628	15,034
74.45	6,729	15,368
74.50	**6,830**	**15,707**

Summary for Pond 3P: Biofilter

Inflow Area = 0.175 ac, 57.01% Impervious, Inflow Depth > 6.11" for 100YR event
Inflow = 1.16 cfs @ 12.09 hrs, Volume= 0.089 af
Outflow = 1.02 cfs @ 12.15 hrs, Volume= 0.082 af, Atten= 12%, Lag= 3.9 min
Primary = 1.02 cfs @ 12.15 hrs, Volume= 0.082 af
Routed to Reach 3R : Drainage Course p2

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 75.04' @ 12.15 hrs Surf.Area= 713 sf Storage= 872 cf

Plug-Flow detention time= 97.7 min calculated for 0.082 af (92% of inflow)
Center-of-Mass det. time= 57.5 min (835.6 - 778.2)

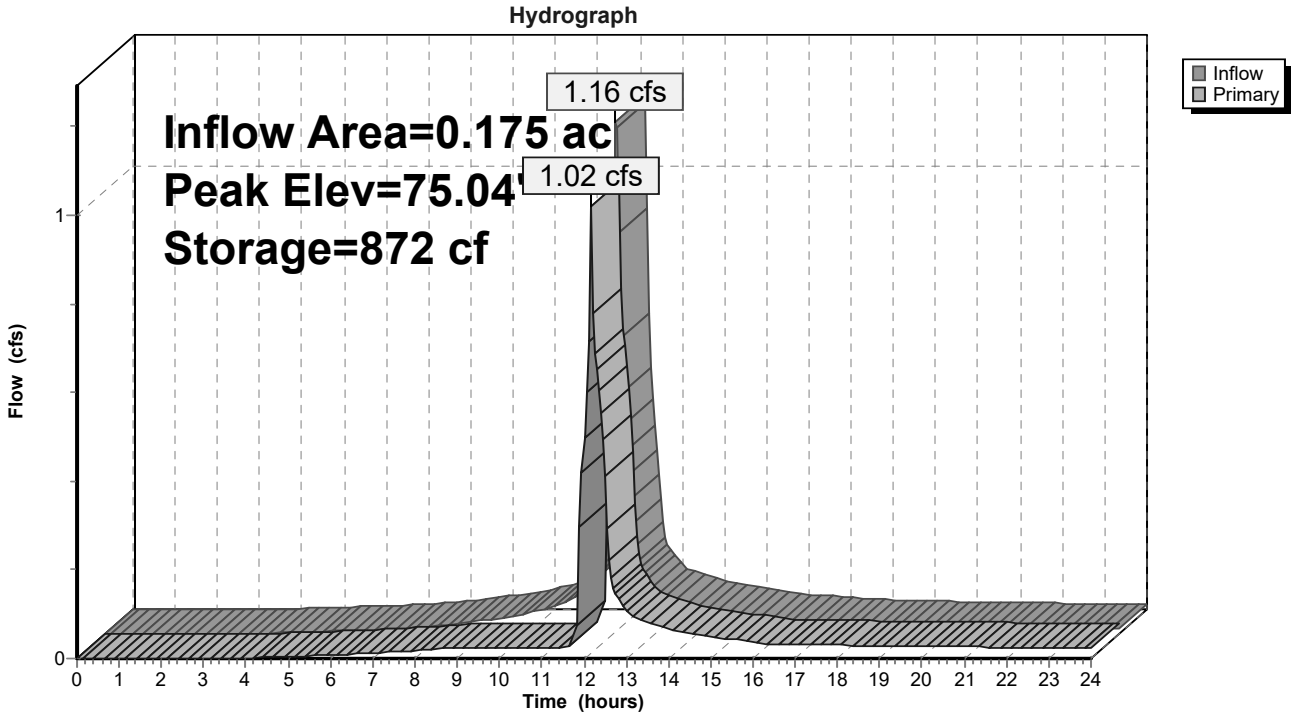
Volume	Invert	Avail.Storage	Storage Description
#1	71.83'	1,237 cf	**Custom Stage Data (Prismatic)**Listed below

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
71.83	403	0.0	0	0
72.50	403	33.0	89	89
73.99	403	33.0	198	287
74.00	403	100.0	4	291
75.00	699	100.0	551	842
75.50	879	100.0	395	1,237

Device	Routing	Invert	Outlet Devices
#1	Primary	71.83'	**6.0" Round Culvert** L= 26.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 71.83' / 71.50' S= 0.0127 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.20 sf
#2	Device 1	71.83'	**2.400 in/hr Exfiltration over Surface area**
#3	Device 1	74.50'	**6.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	75.00'	**15.0' long x 3.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=0.98 cfs @ 12.15 hrs HW=75.04' (Free Discharge)
- **1=Culvert** (Passes 0.73 cfs of 1.28 cfs potential flow)
  - **2=Exfiltration** (Exfiltration Controls 0.04 cfs)
  - **3=Orifice/Grate** (Orifice Controls 0.69 cfs @ 3.52 fps)
- **4=Broad-Crested Rectangular Weir** (Weir Controls 0.25 cfs @ 0.46 fps)

Pond 3P: Biofilter



Stage-Area-Storage for Pond 3P: Biofilter

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
71.83	403	0
71.88	403	7
71.93	403	13
71.98	403	20
72.03	403	27
72.08	403	33
72.13	403	40
72.18	403	47
72.23	403	53
72.28	403	60
72.33	403	66
72.38	403	73
72.43	403	80
72.48	403	86
72.53	403	93
72.58	403	100
72.63	403	106
72.68	403	113
72.73	403	120
72.78	403	126
72.83	403	133
72.88	403	140
72.93	403	146
72.98	403	153
73.03	403	160
73.08	403	166
73.13	403	173
73.18	403	180
73.23	403	186
73.28	403	193
73.33	403	199
73.38	403	206
73.43	403	213
73.48	403	219
73.53	403	226
73.58	403	233
73.63	403	239
73.68	403	246
73.73	403	253
73.78	403	259
73.83	403	266
73.88	403	273
73.93	403	279
73.98	403	286
74.03	412	308
74.08	427	335
74.13	441	363
74.18	456	390
74.23	471	418
74.28	486	446
74.33	501	473
74.38	515	501
74.43	530	528
74.48	545	556
74.53	560	583
74.58	575	611
74.63	589	638
74.68	604	666
74.73	619	694
74.78	634	721
74.83	649	749
74.88	663	776
74.93	678	804
74.98	693	831
75.03	710	866
75.08	728	905
75.13	746	945
75.18	764	984
75.23	782	1,024
75.28	800	1,063
75.33	818	1,103
75.38	836	1,142
75.43	854	1,182
75.48	**872**	**1,221**

ATTACHMENT C

WATER QUALITY CALCULATIONS

3996 Ledgewood Court Expansion - Damariscotta

12.12.2022
Designed By: BP
Checked By: KAB

Area	BMP	New Development			Treated New Impervious Area (sf)	Treated New Landscaped Area (sf)
		Impervious Area (sf)	Landscaped Area (sf)	Total Developed Area (sf)		
Development	GUSF1	35,561	17,812	53,373	35,561	17,812
	Biofilter	4,353	3,283	7,636	4,353	3,283
Wetland Crossing	*Reduction*	*1,268*	*472*	*1,740*		
	Untreated	2,195	5,494	*7,689*	0	0
	Total (sf)	**40,841**	**22,834**	**66,958**	**39,914**	**21,095**
	Total (ac)	**1**	**1**	**2**	**1**	**0**

BMP Summary				
Treatment Method	Water Quality Volume Required (cf)	Water Quality Volume Provided (cf)	BMP Surface Area Required (sf)	BMP Surface Area Provided (sf)
GUSF	3,557	5,039	2,134	2,666
Biofilter	472	567	403	403

Treatment Summary		
	Required	Provided
Treated New Impervious (%)	95%	97.73%
Treated New Developed (%)	80%	91.12%

ATTACHMENT D

OPERATION & MAINTENANCE MANUAL

LEDGEWOOD COURT APARTMENTS EXPANSION
207 LEDGEWOOD COURT DRIVE
DAMARISCOTTA, MAINE

STORMWATER MANAGEMENT SYSTEM OPERATION AND MAINTENANCE MANUAL FOR STORMWATER FACILITIES

Prepared for

DC Ledgewood, LLC
631 Stevens Avenue
Portland, ME 04103

Prepared by

Gorrill Palmer
300 Southborough Drive – Suite 200
South Portland, Maine 04106
207.772.2515

February 2023

TABLE OF CONTENTS

APPENDICES

I. INTRODUCTION

Runoff from developed areas, may contain a number of contaminants especially when emanating from rooftops, paved or lawn areas. This runoff can contain a significant amount of non-point contaminants, which can have an adverse impact on the receiving waters. The installation of soil media filters can significantly reduce the non-point pollution discharge from the developed area.

The effectiveness of filter basins and other components of the system are dependent on their upkeep and maintenance to assure they meet their design function over an extended period of years. It is critical that the stormwater management facilities are inspected on a regularly scheduled basis, and that maintenance is performed on an as needed basis. It must also be recognized that the effectiveness of these facilities, and their maintenance requirements, are related to the stormwater drainage facilities that transport the flow to the ponds or treatment measures. Thus, maintenance should be directed to the total system, not just the BMPs.

The purpose of this document is to define in detail the inspection and maintenance requirements deemed necessary to assure that the stormwater management facilities function as intended on a long-term basis for the Ledgewood Court Apartments expansion development. This Operations and Maintenance Manual is specific to the existing and proposed stormwater measures utilized to execute a successful stormwater management plan. Subsequent sections identify individual maintenance items, give a brief commentary of the function and need of the item, a description of the work required, and a suggested frequency of accomplishment. While the suggested programs and schedules must be adapted to specific projects, the material presented should provide guidance for a successful long-term program.

A. Guidelines Overview

A summary of the individual components of stormwater management facilities for this project has been prepared. The format used in the summary is as follows:

Preface: A general description of what function/benefit the element is intended to provide. This is a short summary and not intended to provide the design basis, which can be found in other sources.

Inspection: This section provides the inspection requirements for the individual component.

Maintenance: The section provides general information on the routine maintenance requirements of this element.

Frequency: This section outlines the best judgment of the designer of the system to the frequency of maintenance.

Comments: This section provides any particular comment on the site-specific features of this element. This is a summary only. The owner/operator should review the design drawings and documents carefully to understand the particular elements of the project. The end of this section should allow the owner/operator to make notes on the specific

program. This may include the selected maintenance procedure, cross-references to applicable design drawings, etc.

A list of the individual inspection/maintenance elements is provided in the table of contents. The guidelines are proposed for initial use with adjustments made as appropriate based upon specific project experience.

This report includes the Operation and Maintenance requirements for any potential BMP identified in the Stormwater Management Report for this project.

B. Responsible Party

The responsible party for operation and maintenance of the stormwater and other site infrastructure will be the applicant or their agents or assigns.

II. PROJECT OVERVIEW

Key permits issued (or applied for) on the project include:

- Town of Bridgton Site Plan Approval
- Maine DEP Stormwater Management Law Permit

A copy of the permits and Stormwater Management Report should be appended to this manual as Appendix C. The Owner/Operator of the stormwater management system should review these permits for a general description and background of the project, as well as any specific permit conditions or requirements of the project.

The applicant has retained Gorrill Palmer for civil engineering for the development project. Gorrill Palmer has prepared the design for the stormwater management facilities and may be contacted at:

Gorrill Palmer
707 Sable Oaks Drive – Suite 30
South Portland, Maine 04106
207.772.2515

The applicable plans and design documents which apply to the project are:

1. Civil Site Plans Prepared by Gorrill Palmer
2. The Erosion Control/Sedimentation Control Plan for the project
3. The Stormwater Management Plan for the project

A copy of these documents should be retained with this manual.

The proposed design includes inlets, stormwater conveyance systems, a bio-retention filter, roof line drip edge system, outlet control devices, and pipe outlet protection.

The key receiving waters for this project is the Damariscotta River to the north of the project site. This water is not listed as an urban impaired stream according to MaineDEP Ch. 502, Appendix A.

The manual is intended for general guidance; however, any substituted deviations from the manual should be reviewed with respect to provisions of Appendix C.

III. STANDARD INSPECTION/MAINTENANCE DESCRIPTIONS

The following narratives describe the inspection/maintenance provisions for the Stormwater Management system. Proper O&M is necessary to make sure the system will provide its intended purpose of conveying runoff, removing a substantial amount of the suspended solids, and other contaminants in the stormwater runoff.

A. Stormwater Inlets

Preface: The success of any stormwater facility relies on the ability to intercept stormwater runoff at the design locations. Stormwater inlets for this project include a driveway culvert at the northerly driveway location.

Inspection: The inspection of inlet points will need to be coordinated with other maintenance items, these include:

- Building maintenance areas
- Grounds maintenance

The key elements of the inspection are to assure the inlet entry point is clear of debris and will allow the intended water entry.

Maintenance: The key maintenance is the removal of any blockage which restricts the entry of stormwater to the inlet. The removed material should be taken out of the area of the inlet and placed where it will not reenter the runoff collection system. Snow should be removed from the inlet and outlet as necessary. Grass clippings and leaves should be bagged and removed at the culvert inlet and outlet.

Frequency: The inlet should be inspected on a quarterly basis, and after/during significant storm events i.e. >1" rainfall).

Maintenance Personnel: The maintenance personnel will perform the normal maintenance/ inspections of the inlets and tributary drainage system.

Comments: Maintenance of inlets is critical on this project as this provides stormwater relief for the building roof and front yard area.

B. Tributary Drainage System

Preface: Stormwater from most of the project will be directed through a conveyance (tributary) system which transports the flow to the proposed BMPs This conveyance system will be principally overland flow discharging to piped drain systems. Most of the sediment

carried by the drainage system is intended to be trapped in structures. Maintenance of this system can play a major role in the long-term maintenance costs and the effectiveness of the onsite systems. The primary pretreatment measure for the site will be through deep sumped catch basins with hooded outlets.

Inspection: The tributary drainage system should be periodically inspected to assure that it is operating as intended, and that the carrying capacity has not been diminished by accumulations of debris and sediment or other hydraulic impediments. On piped systems, the inlets must be inspected to ensure the rims are set at the proper elevation to optimize flow entry and are not clogged with debris.

The level of sediment in the sumps should be checked to assure their effectiveness. Pipelines connecting the inlets should be checked to determine if siltation is occurring. This will be most critical on drain lines laid at minimal slopes. This can usually be accomplished by a light and mirror procedure.

Maintenance: Maintenance of the storm drainage system must assure that it continues to serve its design function on a long-term basis, and that its operation does not transport excessive sediments to any downstream treatment device or the receiving waters. Elevations on the rim of catch basins should be adjusted as needed to assure optimal water entry. Depending on the frost susceptibility of the soil, the rims may become elevated over time causing flow to circumvent the inlet. If a temporary filter bag has been designated for the inlet during construction, silt or other deleterious materials, can significantly reduce capacity and the bags should be removed with the sediment and replaced during construction. Catch basin cleaning would normally be accomplished with vacuum trucks contracted as a maintenance service for the Development. The removed material must be disposed of at an approved site for such materials.

If sediment in the pipeline is observed, it should be removed. This may be accomplished by hydraulic flushing, or by mechanical means. If hydraulic flushing is used the downstream conditions should be analyzed.

Frequency: The tributary drainage system should be inspected on an annual basis. Adjustment of inlet rim elevations should be on an as needed basis. Cleaning catch basin sumps and pipelines will depend on the rate of accumulation.

C. Grassed Underdrained Soil Filter

Preface: The GUSF is critical to the stormwater management plan for the project. It will be planted with grass not to be cut more than twice per year.

Inspection/Monitoring: The soil filter will be inspected within the first three months after construction; thereafter the filter will be inspected 2 times per year (preferably in Spring and Fall) to ensure that the filter is draining within 24 to 48 hours of a rain event equivalent to 1" or more. Adjustments will be made to the outlet valve to ensure that the filter drains within 24 to 48 hours. Failure to drain in 72 hours will require part or all of the soil filter media to be removed and replaced with new material meeting the soil filter gradation. The facilities

will be inspected after major storms and any identified deficiencies will be corrected. Harvesting and weeding of excessive growth shall be performed as needed. Inspect for unwanted or invasive plants and remove as necessary.

Maintenance: Remove excess leaves, sticks and debris from the basin bottom. Vegetation other than grass shall be removed from the basin.

Frequency: Inspect the basin in the late summer or early fall at the end of the growing season. Cutting and removal of additional grass will be required for lengths in excess of 6"-8". The basin should be inspected bi-annually and weeded as necessary.

D. Bio-Retention Filters

Preface: The bio-retention filters are soil filters with planted soil beds, an underdrain system with multi-media aggregates set in a shallow basin. Stormwater runoff is conveyed to the filters from the surface before passing through the filter and into a closed drainage system.

Inspection: The bio-retention filters can be inspected visually. Visual inspections should also occur after large storm events (i.e. >1").

Maintenance: The procedures for maintenance are as follows:

Inlets

Inlets to each soil filter area should be kept open and in good working condition. This is particularly important since runoff reaches the basin via overland flow. The edges of the basin should be clear of buildup from lawn areas and pavement areas to ensure stormwater can travel its intended path. Snow storage should not be provided in front of basins.

Large Debris

Large debris such as trash should be removed on a routine basis.

Vegetation & Mulch

Periodic weeding and other upkeep of the plantings will be necessary on a monthly basis during Spring, Summer and Fall. Hand weeding is required as the use of herbicides is not recommended. Every Spring, a new layer of mulch should be added to the soil filter. This should also be performed by hand in order to protect the vegetation. Woody vegetation should be removed from the basin as necessary.

Erosion In And Around Soil Filter

Check slopes along the sidewalk areas to ensure that they are stabilized and show no signs of erosion. Eroded areas should be repaired as soon as possible.

Sedimentation (or Clogging) of Soil Filter Area

If the soil filter area is holding water for a period longer than 48-72 hours, the soil mix has, more than likely, become clogged with sediment and/or the underdrains have clogged. To correct a standing water problem, the following remedial actions are recommended:

1. Evaluate the drainage area to the soil filter area to identify any potential sources of sediment, such as an erosive condition, that may be contributing to the clogging of the device. If a source is identified, it is recommended that that source be eliminated to the fullest extent practicable before proceeding with the remaining recommendations provided below.
2. Flush the underdrains. Use cleanouts to flush the underdrains. Sediment in the drains may be preventing the soil mix from draining. Make sure to provide a way to capture any flushed sediment before it enters the stream environment or storm drain system downstream of the device. If, after flushing the underdrains, the device continues to hold water, the soil mix may be contaminated. As such, following the guidelines provided below is recommended.
3. Gage the extent of soil contamination. To do this, it is recommended that one or more test pits be dug with a shovel and that the soil layer be evaluated for contamination. Once the levels of contamination have been determined (for example, the top 4" of soil appears to be contaminated), it is recommended that you proceed with the remaining remedial actions.
4. Harvest the plants (when applicable). Care should be taken in the removal and temporary storage of the plants so that as many as possible can be harvested for replanting in the soil filter area once the functioning of the device has been restored sufficiently.
5. Remove the mulch layer.
6. Remove the top few inches of contaminated soil plus an additional 2-inch of soil and replace the removed soil with a clean soil mix in accordance with the soil mix specification applicable to the particular soil filter area.
7. Monitor the functioning of the soil filter area during the next two to three rain events. If the device appears to be draining as intended (e.g., there is no standing water 48-72 following a rain event), proceed with the remaining remedial actions. If the area continues to hold standing water, then the entire soil filter area soil mix and the underdrains may need to be removed and replaced. Reuse of any undamaged underdrains may be possible once they have been cleaned thoroughly.
8. Replant the harvested plants and replace any plants that were rendered unusable during or following their removal from the soil filter area.
9. Replace the removed mulch layer with fresh mulch.
10. Water the plants in the soil filter for the next two or more weeks unless there is sufficient rainfall. This will help the plants to re-establish themselves.

Frequency: The bio-retention filters should be inspected semi-annually and maintained as necessary.

Comments: Snow storage within the filter area is prohibited by Maintenance Personnel.

E. Sediment in Forebay

Preface: Both BMPs rely on a sediment forebay to capture sediment and debris from the runoff. The purpose of this sump is to collect and detain larger particles in the sediment,

which may enter the pond through the inlet pipe. A secondary benefit of the forebay sump is to achieve better hydraulic flow distribution in the main segment of the pond.

Inspection: Inspect the forebay sump to measure the sediment accumulation.

Maintenance: If a significant accumulation of sediment is recorded in the sump, it should be removed. Depending on the size of the sump, the amount of sediment collected, and its location, the sediment may be removed manually, by a vacuum truck or other methods. The material removed from the sump should be disposed of in accordance with local practice for disposing of catch basin cleanings.

Frequency: The forebay sump should be inspected semi-annually if possible, preferably in the early summer after spring runoff, and in the fall. The frequency of sump cleaning will depend on the rate of sediment buildup. Cleaning on a 1 to 2 year basis is likely. It is noted that cleaning of the forebay sump will lengthen the time between pond cleanings.

The rate of sediment buildup will depend on the tributary drainage facilities, i.e., faster buildup with open ditch transport systems and buildup from pipe systems with sumped catch basins. Maintenance practiced for the tributary drainage system will also impact sediment buildups.

Comments: None.

F. Pond Berms

Preface: Many times pond construction will include installation of an earthen berm or dike to contain the water. The maintenance and monitoring discussed here applies to both the side slopes of excavated pond areas and the constructed pond berms. All excavated slopes and constructed berms must maintain their integrity to contain water without catastrophic leakage. Erosion or piping could cause pond failure. It is critical that the integrity of the berm be maintained.

Inspection: The berm must be periodically inspected to note any sags, slope sloughing, erosion, cracking, or undesirable tree growth. Inspection can be best accomplished at low pond level in the late summer to allow observation of normally submerged slopes. Any defects in the berm must be noted and documented. It is noted that on larger ponds rodents can burrow into the sidewall to the extent that the wall's structural integrity can be diminished.

Any noted sags, or slope sloughing should be corrected after the causative factor has been identified and mitigated. If rodent burrows become a problem the rodents should be trapped and removed from the site. This should be accomplished in cooperation with wildlife officials. Some situations have occurred where burrowing animals cause a significant problem with pond integrity. While this situation is generally rare, in certain instances it may warrant placement of a barrier. Chain link fence with shallow cover has been a successful deterrent in some cases.

Frequency: Berm inspections should be done annually during a low water regime. Grassed areas along the top of the berm should be mowed monthly during the growing season. Repair of any berm defects should be accomplished in a timely manner to limit further deterioration.

Comments: None

G. Outlet Control Devices

Preface: Outlet control devices of assorted sizes are commonly utilized to control discharge from stormwater management features. This project uses gate valves to control discharge from the bio-retention filter and roof line drip edge system.

Inspection: Inspection of gate valves should be performed after each major rainfall event to ensure that stormwater runoff is able to discharge through the gate valve and that it is not clogged or needs to be adjusted. This should be done after major storm events (>1") to ensure that the BMP's are draining within 24-48hrs.

Maintenance: The gate valve should be opened, and all debris flushed from the pipe. If the basin is not draining within 24-48 hrs, the gate valve should be adjusted accordingly.

Frequency: The outlet control devices should be inspected semi-annually and maintained as needed.

Comments: None.

H. Pipe Outlet Protection

Rip rap outlet protection will be employed at discharge from BMP's and outlet pipes. The rip rap outlet apron must be periodically inspected to note any sags, slope sloughing, erosion, cracking, or undesirable tree growth. Remove debris such as leaf litter, branches and tree growth from the rip rap outlet. Dispose of the sediments and debris appropriately. The reconstruction of the rip rap outlet embankment may be necessary if the embankment is showing signs of failure that might impede the flow of water. The rip rap outlet protection is critical in stabilizing the outlet and providing energy dissipation as discharge from the site enters the stream.

I. Ditches, Swales, and Other Open Stormwater Channels

Inspect 2 times per year (preferably in Spring and Fall) to ensure they are working in their intended fashion and that they are free of sediment and debris. Remove any obstructions to flow, including accumulated sediments and debris and vegetated growth. Repair any erosion of the ditch lining. Vegetated ditches will be mowed at least annually or otherwise maintained to control the growth of woody vegetation and maintain flow capacity. Any woody vegetation growing through riprap linings must also be removed. Repair any slumping side slopes as soon as practicable. If the ditch has a riprap lining, replace riprap on areas where any underlying filter fabric or underdrain gravel is showing through the stone or where stones have dislodged. Correct any erosion of the channel's bottom or side slopes. The facilities shall be inspected after major storms and any identified deficiencies shall be corrected.

J. Drive Aisle and Parking Surfaces

Clear accumulations of winter sand in parking lots and along drive aisles at least once per year, preferably in the spring. Accumulations on pavement may be removed by pavement sweeping. Accumulations of sand along the gutter line may be removed by sweeping excess sand to the pavement edge and removing it manually or by a front-end loader. Repair potholes and other roadway obstructions and hazards. Plowing and sanding of paved areas shall be performed as necessary to maintain vehicular traffic safety.

K. Litter

Litter should be removed as a matter of course by workers and as part of the ground's maintenance contract.

IV. PROGRAM ADMINISTRATION

A. General

A reliable administrative structure must be established to assure implementation of the maintenance programs described in the foregoing section. Key factors that must be considered in establishing a responsive administrative structure include:

1. Administrative body must be responsible for long-term operation and maintenance of the facilities. (Maintenance continues for the lifespan of the development in accordance with this document)

2. Administrative body must have the financial resources to accomplish the inspection and maintenance program over the life of the facility.

3. The administrative body must have a responsible administrator to manage the inspection and maintenance programs.

4. The administrative body must have the staff to accomplish the inspection and maintenance programs or must have authority to contract for the required services.

5. The administrative body must have a management information system sufficient to file, retain, and retrieve all inspection and maintenance records associated with the inspection and maintenance programs.

6. A qualified post construction inspector shall be retained by the Owner. His/her duties shall include preparing schedules for the Owner's maintenance, summarizing the results of this maintenance and preparing an annual report on the operation, maintenance, and repair of the stormwater system which must be copied to the Town of Saco. (The Owner shall be responsible for retaining a separate entity to perform maintenance which cannot be performed by the management of building and property grounds.) This person shall also participate in troubleshooting of the stormwater management system if a problem develops.

If any of the above criteria cannot be met by the entity assigned inspection and maintenance responsibilities, it is likely that the system will fail to meet its water quality objectives at some

point during its life. While each of the above criteria may be met by a variety of formats, it is critical to clearly establish the assigned administrative body in a responsible and sustainable manner.

B. Record Keeping

Records of all inspections and maintenance work accomplished must be kept and maintained to document facility operations. These records should be filed and retained for a minimum 5-year time span. The filing system should be capable of ready retrieval of data for periodic reviews by appropriate regulatory bodies. Where possible, copies of such records should also be filed with the designated primary regulatory agency for their review for compliance with permit conditions. Typical inspection and maintenance record forms are attached hereto as Appendix B.

In accordance with the Stormwater Law Permit, this project will be required to file a recertification with DEP five years after the permit issuance date.

C. Contract Services

In some instances, or at specific times, the Maintenance Personnel may not have the staff to conduct the required inspection and/or maintenance programs as outlined in this document. In such cases, the work should be accomplished on a contractual basis with a firm or organization that has the staff and equipment to accomplish the required work.

The service contract for inspection and maintenance should be formal, well written legal document which clearly defines the services to be provided, the contractual conditions that will apply, and detailed payment schedules. Liability insurance should be required in all contracts.

APPENDIX A

Summary Checklist
Inspection and Maintenance

Stormwater Management System Maintenance Program Summary Checklist						
Item	**Commentary**	**Frequency**				
		Monthly	**Quarterly**	**Semi-Annual**	**Annual**	**Long Term**
Stormwater Inlets	The driveway culvert should be kept clear at the inlet and outlet. Inspect entry for debris accumulation. Remove debris to allow unimpeded entry/exit. Lawn clippings and leaves should be removed from yard areas.		X		X	
Tributary Drainage System	Inspect to assure that the carrying capacity has not been diminished by debris, sediment or other hydraulic impediments.				X	
GUSF	Review function of basin. Remove excess debris from basin surface and outlet control structure.			X		
Bio-Retention Filters	Remove woody vegetation and debris from filter area. Inspect health of vegetation at beginning and end of year. Fix eroded areas as soon as possible. Replace mulch every year. Snow storage is prohibited on filter area.			X		X
Sediment in Forebay	Observe sediment accumulation in forebay sumps. Remove sediment from sump.			X		
Pond Berms	Inspect for damage to berms.				X	
Outlet Control Devices	Inspect after major storm events and clear debris from orifice. May require flushing of pipes.			X		
Gate Valves	Inspect after major storm events and clear debris from orifice. May require flushing of pipes. Review if basin is draining within 24-48 hrs.			X		
Pipe Outlet Protection	Remove any trash and debris from the rip rap outlet. Check integrity of apron and that it is able to dissipate energy and decrease erosion as flow enters the apron.				X	
Ditches Swales and Other open Stormwater Channels	Inspect to ensure the ditch is not eroding or blocked by debris. Ensure that berms at edge of drive aisles are not eroding/ponding.			X		
Drive Aisles and Parking Surfaces	Remove accumulated sand.				X	
Litter	Litter should be removed daily.					

APPENDIX B

Sample Inspection Logs

DEVELOPERS COLLABORATIVE PREDEVELOPMENT, LLC
DAMARISCOTTA, MAINE

STORMWATER MANAGEMENT
SAMPLE STORMWATER INSPECTION & MAINTENANCE LOG

This log is intended to accompany the Operation and Maintenance Manual for Stormwater Management and Related Facilities. All stormwater BMPs shall be maintained in effective operating condition. A person with knowledge of erosion and stormwater control, including the standards shall conduct inspections of the facilities as described in the O&M Manual and on this form, and identified deficiencies must be corrected. This log shall be kept on file for a minimum of five (5) years.

A. General Information			
Project Name:		**Inspection Date:**	
Parcel/Lot:		**Current Weather:**	
BMP Owner:		**Date/Amount Last Precip.:**	
Owner Mailing Address:		**Inspection Company:**	
Owner Phone #:		**Inspection Co. Mailing Address:**	
Owner Email:		**Inspector Name:**	
		Inspector Phone #:	
		Inspector Email:	

B. Stormwater Inlets	**Observations**
Frequency: Annually in the spring	
Accumulated grass clippings, leaves, have been cleared from culvert	☐ Yes ☐ No ☐ NA
Debris and large particles have been removed from inlet/outlet aprons	☐ Yes ☐ No ☐ NA
Stormwater Inlet Notes:	

C. Tributary Drainage System	**Observations**
Frequency: Annually spring or late fall and after heavy rains	
Remove and legally dispose of sediments	☐ Yes ☐ No ☐ NA
Remove floatables and other objects	☐ Yes ☐ No ☐ NA
Check for overgrown vegetation impeding flow	☐ Yes ☐ No ☐ NA
Check pipelines for siltation and clogging	☐ Yes ☐ No ☐ NA
Repair any slumping side slopes or erosion	☐ Yes ☐ No ☐ NA

Replace any riprap on areas where any underlying fabric or underlying gravel is exposed.	☐ Yes ☐ No ☐ NA
Tributary Drainage System Notes:	

E. GUSF	**Observations**
Frequency: Semi Annually, spring and late fall	
Inspect basin for debris and litter	☐ Yes ☐ No ☐ NA
Inspect pond for 90% grass cover of vegetated surfaces.	☐ Yes ☐ No ☐ NA
Remove unwanted vegetation and dispose of properly.	☐ Yes ☐ No ☐ NA
Repair any eroded areas.	☐ Yes ☐ No ☐ NA
Reseed areas without 90% grass catch.	☐ Yes ☐ No ☐ NA
Ensure filter drains within 24 to 48 hours.	☐ Yes ☐ No ☐ NA
Adjust outlet valve to obtain 24 to 48 hour drain time for storms over 1".	☐ Yes ☐ No ☐ NA
Remove and replace all, or part of the soil media if it fails to drain pond in 72 hours.	☐ Yes ☐ No ☐ NA
Vegetation Notes:	

C. Bio-Retention Filters	**Observations**
Frequency: Semi-annually	
Check that inlets are clear and flow into basin is not obstructed	☐ Yes ☐ No ☐ NA
Clear debris from filter basin area	☐ Yes ☐ No ☐ NA
Replace mulch once per year	☐ Yes ☐ No ☐ NA
Check health of vegetation and remove woody vegetation	☐ Yes ☐ No ☐ NA
Check for erosion around basin area or at inlets	☐ Yes ☐ No ☐ NA
Check for signs of clogging, or water is not draining within 48-72 hours	☐ Yes ☐ No ☐ NA
Bio-filter Notes:	

F. Sediment in Forebay	**Observations**
Frequency: Annually	
Check for sediment buildup in sump	☐ Yes ☐ No ☐ NA
Check for other debris and large sediment particles in sump	☐ Yes ☐ No ☐ NA
Remove sediment and dispose of properly	☐ Yes ☐ No ☐ NA
Inspect rip rap and repair if erosion is evident.	☐ Yes ☐ No ☐ NA

Inspect stone berm and repair any deficiencies.	☐ Yes ☐ No ☐ NA
Ensure runoff is not bypassing stone berm or eroding sideslopes, repair as necessary.	☐ Yes ☐ No ☐ NA
Forebay Notes:	
D. Pond Berm	**Observations**
Frequency: Annually spring or late fall and after heavy rains	
Inspect slopes for sags, sloughing, erosion, cracking, undesirable vegetation growth.	☐ Yes ☐ No ☐ NA
Check for rodent burrows.	☐ Yes ☐ No ☐ NA
Repair any defects.	☐ Yes ☐ No ☐ NA
Pond Berm Notes:	
E. Outlet Control Devices (Gate Valves)	**Observations**
Frequency: Semi-Annually	
Check for debris blocking device	☐ Yes ☐ No ☐ NA
If applicable, flush underdrain pipe	☐ Yes ☐ No ☐ NA
Review if basin is draining within 24-48 hrs and adjust valve as necessary	☐ Yes ☐ No ☐ NA
Outlet Control Devices Notes:	
F. Ditches, Swales, and Other Open Stormwater Channels	Observations
Frequency: Semi Annually spring and late fall and after heavy rains	
Remove of sediments and debris	☐ Yes ☐ No ☐ NA
Mow to control growth and maintain flow capacity.	☐ Yes ☐ No ☐ NA
Repair any slumping side slopes or erosion and stabilize	☐ Yes ☐ No ☐ NA
Ditches Swales and Other Channel Notes:	
G. Drive Aisles and Parking Surfaces	**Observations**
Frequency: Annually preferably in spring	
Remove and legally dispose of accumulated winter sand	☐ Yes ☐ No ☐ NA
Repair potholes and other roadway obstructions and hazards.	☐ Yes ☐ No ☐ NA
Drive Aisles and Parking Surfaces Notes:	

APPENDIX C

Permits for Project

(To be Added at a Subsequent Time)

GORRILL PALMER

300 Southborough Drive, Suite 200
South Portland, Maine 04106
207.772.2515

Exhibit 10 – Erosion Control

See attached Erosion Control Report.

EROSION CONTROL REPORT
(Basic Standards Submission)

LEDGEWOOD COURT APARTMENTS EXPANSION
207 LEDGEWOOD COURT DRIVE
DAMARISCOTTA, MAINE

Prepared for

DC Ledgewood, LLC
631 Stevens Avenue
Portland, Maine 04103

Prepared by

Gorrill Palmer
300 Southborough Drive – Suite 200
South Portland, Maine 04106
207.772.2515

February 2023

EROSION CONTROL REPORT

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12.0 Introduction

Gorrill Palmer has been retained by **DC Ledgewood, LLC** to provide site design and permitting for a 12,820 SF, 32-unit affordable senior residential building in Damariscotta, ME. Site improvements will include a 12,820 SF building, an access drive extending from the existing Ledgewood Court Drive, parking for thirty-three (33) vehicles, community gardens, and other site, utility, and drainage infrastructure. The property is accessed at 207 Ledgewood Court Drive, off Piper Mill Road, in Damariscotta, Maine approximately 900' east of the intersection of Piper Mill Road and School Street. The development activity will disturb approximately 1.58 acres of land area.

The purpose of this report will be to identify any erosion and sedimentation control issues associated with the development, discuss both temporary and permanent control devices to be used on the project, and to discuss timing of all action related to erosion and sedimentation control. The goal of the report is to address the Chapter 500 Rules for Stormwater Management Basic Standards, Town of Damariscotta standards and all other pertinent literature relating to erosion and sedimentation control.

Erosion and Sedimentation Controls (Basic Standards) will be employed during the construction of this project and are summarized in the Erosion and Sedimentation Control Plans provided on Sheets C-4.0, C-5.6, and C-5.7.

12.1 Existing Site Conditions

The project site, accessed via Piper Mill Road in Damariscotta, Maine, is bounded by Piper Mill Road to the north, the existing Ledgewood Court apartment complex and Central Lincoln Count Ambulance Service to the west, Piper Mill Road and undeveloped land to the east, and the Great Salt Bay Sanitary District treatment facility and undeveloped land to the south. The property is identified on the Town of Damariscotta's Assessors Map as Tax Map 050/Lot 003 and is approximately 10.51 acres. The lot is located in the Rural District (R) zone as identified on the Town of Damariscotta Zoning Map. The site has direct access onto Piper Mill Road including approximately 1400' of frontage. The site is currently partially developed with the existing Ledgewood Court apartments occupying approximately 2 acres. The remainder of the 10+ acre site is currently undeveloped and consists of forested area.

The property is located in the Damariscotta River watershed which is not identified as an urban impaired stream according to MaineDEP Ch. 502, Appendix A. The existing Ledgewood Court development received a Stormwater Management Law Permit prior to construction in December 2002. It is our understanding that the development was designed and constructed in accordance with the Department policies at the time, and consistent with what was depicted on the permit plans. The permit order associated with the existing development is L-21139-NI-A-N and it was approved on December 18, 2002.

Runoff generally drains from south to north. The site's drainage pattern follows a wetland system that bisects the site from southwest to northeast. The wetland drains to the northeast of the property where a 24" concrete culvert underneath Piper Mill Road discharges into a larger wetland complex on the north side of the road. North of Piper Mill Road an intermittent stream conveys water to a more significant, unnamed stream to the east, and ultimately into the

Damariscotta River, just north of the Route 1 bridge. The property generally slopes from south to north from elevation 85 along the southern property line to elevation 53 along the northeastern property line, by the culvert under Piper Mill Road. The proposed project area is located within the higher southern portion of the property which flows to the northeast corner of the lot.

The site is comprised of three different soil types according to the USDA NRCS Medium Intensity Soil Survey which are listed as follows with soil information:

Soil Type	Soil Description	K Factor	Hydrologic Group
Lamoine	Silt Loam, 3 to 8 percent slopes	0.37	C / D
Scantic	Silt Loam, 0 to 3 percent slopes	0.28	D
Tunbridge / Lyman	3 to 8 percent slopes, rocky	-	C

Image of NRCS Soil Survey Map

The existing project site is depicted on the drawings included in the Site Plan Review application. A geotechnical investigation has been conducted by Summit Geoengineering and they found the site primarily consists of a roughly 0.5' layer of topsoil overlying glacial till. The glacial till consists of varying constituents of sand, silt, clay and gravel. The till layer is 6.9 feet to 19.1 feet thick so it will be the primary earth material encountered during earthwork activity. The soils are classified as either SM, ML, or CL, in accordance with the USCS. Groundwater depth varies from 2.4 to 7.7 feet.

12.2 Site History

The site is currently partially developed with the existing Ledgewood Court Apartment complex, which contains 24 units. The existing development is to remain. The majority of the subject parcel

and the entirety of the project site is undeveloped and forested, with the exception of the utility corridor along the southern boundary which contains the sanitary force main associated with the existing development. The survey for the site was prepared by Boothbay Region Surveyors in July of 2022.

12.3 Overview of Soil Erosion and Sedimentation Concerns

The primary goals of the Erosion and Sediment Control Plan for the project are to minimize exposure of native soil materials during construction, to prevent soil erosion and sediment transport to downstream areas, receiving waters and natural resources. Measures will also be taken to ensure sediment is not tracked onto adjacent streets and that stockpiles of imported construction materials are protected. The susceptibility of soils to erosion is indicated on a relative "K" scale of values over a range of 0.02 to 0.69. The "K" value is frequently used with the universal soil loss equation. The higher values are indicative of the more erodible soils. The project area consists of native, undisturbed soils with potential made land at the project frontage where the existing curb cut is located, suggesting a previous driveway and structure. The site is mostly vegetated with mixed growth and larger mature trees located to the perimeter of the site and meadow areas with shrubs and grasses in the center. Based on the information provided by the NRCS Soil Survey, once stripped the project site is moderately susceptible to erosion and sedimentation.

The primary emphasis of the Erosion and Sedimentation Control Plan to be implemented for this project is as follows:

- Construction Schedule – Major earth moving activities at the site will be started when a suitable weather window has been identified. This will minimize the potential for exposure of bare soil to inclement weather.
- Temporary Measures – Planning the project to have erosion resistant measures in place with measures to prevent erosion from occurring.
- The plan includes measures to intercept and convey runoff to temporary sediment control devices as the construction of the project occurs.
- Stabilization of areas denuded to underlying parent material to minimize the period of soil exposure.
- Stabilization of drainage paths to avoid rill and gully erosion.
    - The use of on-site measures to capture sediment (hay bales/silt fence/erosion control mix, etc.) before it is conveyed to sediment sumps or related BMP's.

12.4 Existing and Proposed Drainage Features

The site generally drains in a northeasterly direction towards the property corner which contains the culvert underneath Piper Mill Road. Runoff is conveyed through overland sheet flow and shallow concentrated flow to the linearly oriented wetland which bisects the site from southwest to northeast. No significant changes will be made to existing drainage patterns at the site. In the post-developed condition stormwater will be collected in a new closed drainage system via sheet flow and shallow concentrated flow using the natural northeasterly flow patterns across the drive aisle and parking area. Runoff will ultimately discharge to the proposed under drained soil filter

or bio-retention filter. Runoff associated with the site will ultimately be tributary to the existing culvert underneath Piper Mill Road at the northeast corner of the property.

12.5 Critical Areas

The critical areas associated with this project will be the exposed cut/fill slopes that form as part of the construction process and the individual discharge points of the BMPs along the edge of the wetland. Prevention of sediment transport to the wetlands is imperative. Also preventing mud transport to nearby vehicular travel paths and dust prevention will also be prioritized. The entire project is tributary to the Damariscotta River which is not listed as an urban impaired stream according to Ch. 502, Appendix A.

12.6 Erosion/Sedimentation Control Devices

As part of the site development, the Contractor will be obligated to implement the following erosion and sediment control devices. These devices shall be installed as indicated on the plans or as described within this report. For further reference on these devices, see the Maine Erosion and Sediment Control Handbook for Construction: Best Management Practices.

1. Silt fence shall be installed along the downgradient side of construction work areas, with locations being adjusted along with the construction phasing areas. The Contractor may supplement and/or substitute the control barrier with erosion mix set as a berm barrier in place of single silt fence barrier. Erosion control mix may also be used as a cover material over denuded areas to prevent soils exposure to rain and runoff. It is expected that the site clearing activity will result in a sufficient stockpile of erosion control mix materials.

2. Silt fence will be installed along the upstream perimeter of the work area as shown on the plans, to divert run-on from upslope areas and prevent surface water from entering the construction area. If necessary, and at the direction of the Project Engineer, interception trenches shall be constructed to prevent shallow groundwater from flowing into construction areas.

3. Temporary sediment sumps will provide sedimentation control for stormwater runoff from disturbed areas during construction until stabilization has been achieved.

4. A construction entrance will be constructed at all access points onto the site to prevent tracking of soil onto the existing Ledgewood Court Drive and Piper Mill Road.

5. Dirtbags™ will be required to be on site and available for construction dewatering. The Contractor will be required to provide two Dirtbags™ with one prepared for operation prior to commencing any trenching operations. Dewatering discharge may not be directed to wetland areas.

6. Silt logs are an option for stone check dams and may be substituted provided the devices are well anchored.

12.7 Temporary Erosion/Sedimentation Control Devices

The following are planned as temporary erosion/sedimentation control measures during construction:

1. The primary and most effective soil erosion and sediment control measure is proactive work scheduling to minimize exposure of erodible soils. The Contractor will make every effort to promptly stabilize any disturbed areas on the site, after removal of existing vegetation by placing imported granular material over disturbed areas. This will limit exposure of native soils and fill materials and provide a stable surface with minimal erosion potential.

2. Crushed stone-stabilized construction entrance(s) shall be placed at any construction access points. The locations of the construction entrance shown on the drawings should be considered illustrative and will need to be adjusted as appropriate and located at any area where there is the potential for tracking of mud and debris onto the adjacent roadway. Stone stabilized construction entrances will require the stone to be removed and replaced, if it becomes covered or filled with mud and material tracked by vehicles exiting the site.

3. Siltation fence or erosion control mix barriers shall be installed along the downgradient side of the proposed improvement areas. The barriers will remain in place and properly maintained until the site is acceptably stabilized. Silt fence needs to be checked to ensure the bottom is properly keyed in and inspected after significant rains (i.e.>1"). Erosion control mix from clearing is often used in support the silt fence to provide an extra margin of safety and security for the silt fence. This practice is encouraged, provided the erosion control mix is properly removed or spread upon completion of the project.

4. Temporary stockpiles of common excavation will be protected with erosion control mix cover or manufactured blankets if left in place for greater than two weeks.

5. Stone check dams, silt logs, or hay bale barriers will be installed at any evident concentrated flow discharge points during construction and earthwork operations.

6. Silt fencing with a maximum stake spacing of 6 feet should be used, unless the fence is supported by wire fence reinforcement of minimum 14 gauge and with a maximum mesh spacing of 6 inches, in which case stakes may be spaced a maximum of 10 feet apart. The bottom of the fence should be properly anchored a minimum of 6" per the plan detail and backfilled. Any silt fence identified by the owner or reviewing agencies as not being properly installed during construction shall be immediately repaired in accordance with the installation details.

7. All slopes steeper than 3:1 shall receive erosion control blanket such as Curlex® by American Excelsior or equal.

8. Areas of visible erosion and the temporary sediment sumps shall be stabilized with crushed stone or erosion control mix material. The size of the stone or depth of ECM coverage shall be determined by the contractor's designated representative in consultation with the Owner.

12.8 Special Measures for Fall Construction

The fall season is generally good for construction in Maine, but it is also the period when intense late season storms of a tropical nature are most common, making denuded areas very susceptible to erosion. During these periods, the Contractor must:

1. Implement a program to apply dust control measures on a daily basis except those days where the precipitation exceeds 0.25 inch. This program shall extend to and include adjacent streets.

2. Temporary seed or sod may be required to stabilize disturbed areas.

3. Cover stockpiles of fine-grained materials, or excavated soils which are susceptible to erosion.

4. Take additional steps needed, including watering, or covering excavated materials to control fugitive dust emissions to minimize reductions in visibility and the airborne disbursement of fine-grained soils. This is particularly important given the potential presence of soil contaminants, and the proximity along the adjacent road and properties.

12.9 Permanent Erosion Control Measures

The following permanent erosion control measures have been designed as part of the Erosion/Sedimentation Control Plan:

1. The drainage conveyance systems have been designed to intercept and convey the 100-year storm.

2. All areas disturbed during construction, but not subject to other restoration (paving, riprap, etc.), will be loamed, limed, fertilized, mulched, and seeded. Fabric netting, anchored with staples, shall be placed over the mulch in areas where the finish grade slope is greater than 10 percent. Native topsoil shall be stockpiled and temporarily stabilized with seed and mulch and reused for final restoration when it is of sufficient quality.

3. The perimeter slopes will be restabilized with vegetation including various shrubs, trees, and grass mix which will be left unmaintained. Onsite areas against the building and at the project frontage are anticipated to be regularly maintained and will be similarly stabilized with shrubs, trees, and grass mix.

12.10 Timing and Sequence of Erosion/Sedimentation Control Features

The following construction sequence shall be required to ensure the effectiveness of the erosion and sedimentation control measures is optimized:

1. Install construction entrance.

2. Install safety and construction fence to secure the site clearing limits.

3. Complete tree clearing.

4. Install all siltation fence and/or barriers.

5. Construct activities on the site to optimize the handling of materials and restrict the denuded areas to the time stipulated.

6. Commence Foundation construction.

7. Install underground utilities and storm drain piping.

8. Construct parking lot and drives in segments which will comply with the limitations for denuded areas of the plan.

9. Install binder pavement.

10. Install landscaping and grass planting.

11. Install surface pavements.

12. Install striping, signage, and miscellaneous site improvements.

13. Review and punch list the site.

14. Remove any temporary erosion control measures.

It is anticipated that grading activities and construction of base gravels will be complete and the site will be fully stabilized before the onset of winter. However, should site activities continue after November 1st, the General Contractor shall schedule a meeting with the Owner, and Engineer to review the site for conformance with the plan and to review the need for additional erosion control measures. This meeting shall be scheduled at least 10 days prior to October 1st. The Owner may elect to provide the Contractor with a punch list for measures to be completed to satisfy this erosion control plan before the interim shutdown. The Owner's punch list shall not obviate the Contractor's responsibility for compliance with the erosion control requirements of the project or permits.

12.11 Contracting Procedure

The project will be constructed by a General Contractor under contract to the Owner/Applicant. The Contractor shall submit a schedule for the completion of the work, which will satisfy the following criteria:

1. The above construction sequence should generally be completed in the specified order; however, several separate items may be constructed simultaneously. Work must also be scheduled or phased to prevent the extent of the exposed areas as specified below. The intent of this sequence is to provide for erosion control and to have structural measures such as silt fence and construction entrances in place before large areas of land are denuded.

2. The work shall be conducted in sections which will:

a) Limit the amount of exposed area to those areas in which work is expected to be undertaken during the proceeding 30 days. It is noted, however, that the total developed footprint is less than 1 acre and that work may be undertaken around the entire site at the same time.
b) Stabilize disturbed areas as rapidly as possible. All areas shall be permanently stabilized within 7 days of final grading and temporarily stabilized within 7 days of initial disturbance or before a predicted storm event of over ½" of rain.
c) Incorporate planned inlets and drainage system as early as possible into the construction phase.

3. The area of denuded, non-stabilized construction shall be limited to the minimum area practicable. An area shall be considered to be denuded until the subbase gravel is installed in parking areas, or the areas of future loam and seed have been loamed, seeded, and mulched, or stabilized with erosion control blanket.

4. The schedule shall be subject to the approval of the Owner.

5. The Contractor must maintain an accurate set of record drawings indicating the date when an area is first denuded, the date of temporary stabilization, and the date of final stabilization. On October 1 of any calendar year, the Contractor shall submit a detailed plan for stabilizing the site for the winter and a description of what activities are planned during the winter.

6. The Contractor must install any added measures which may be necessary to control erosion/sedimentation and fugitive dust emissions from the site, with adjustments made dependent upon forecasted and actual site and weather conditions.

12.12 Provisions for Maintenance of the Erosion/Sedimentation Control Features

The project will be contracted by the Owner. The Contractor shall prepare a list and designate by name, address and telephone number all individuals who will be responsible for implementation, inspection, and maintenance of all erosion control measures identified within this section and as contained in the Erosion and Sedimentation Control Plan of the contract drawings. Specific responsibilities of the inspector(s) will include:

1. Execution of the Contractor/Subcontractor Certification contained in Appendix A by any and all parties responsible for erosion control measures on the site.

2. Assuring and certifying the Owner's construction sequence is in conformance with the specified schedule of this section. A weekly certification stating compliance, any deviations, and corrective measures necessary to comply with the erosion control requirements of this section shall be prepared and signed by the inspector(s).

3. In addition to the weekly certifications, the inspector(s) shall maintain written reports recording construction activities on site which include:
   - Dates when major grading activities occur in particular areas.
   - Dates when major construction activities cease in a particular area, either temporarily or permanently.

- Dates when an area is stabilized.

4. Inspection of this project work site on a weekly basis and after each significant rainfall event (0.5 inch or more within any consecutive 24-hour period) during construction until permanent erosion control measures have been properly installed and the site has been stabilized. Inspection of the project work site shall include:
   - Identification of proper erosion control measure installation in accordance with the erosion control detail sheet or as specified in this section.
   - Determine whether each erosion control measure is properly operating. If not, identify damage to the control device and determine remedial measures.
   - Identify areas which appear vulnerable to erosion and determine additional erosion control measures which should be used to improve conditions.
   - Inspect areas of recent seeding to determine percent catch of grass. A minimum catch of 90 percent is required prior to removal of erosion control measures.
   - All erosion controls shall be removed within 30 days of permanent stabilization except for mulch and netting not detrimental to the project. Removals shall include but not be limited to all silt fence, hay bales, inlet protection, and stone check dams.
   - Accumulated silt/sediment should be removed when the depth of sediment reaches 50 percent of the barrier height. Accumulated silt/sediment should be removed from behind silt fencing when the depth of the sediment reaches 6 inches.
   - Silt sacks should be removed and replaced at least every three months and at any time where the weekly inspection reveals that siltation has significantly retarded the rate of flow through the silt sack.

5. If inspection of the site indicates a change should be made to the erosion control plan, to either improve effectiveness or correct a site-specific deficiency, the inspector shall immediately implement the corrective measure and notify the Owner of the change.

All certifications, inspection forms, and written reports prepared by the inspector(s) shall be filed with the Owner, and the Permit File contained on the project site. All written certifications, inspection forms, and written reports must be filed within one (1) week of the inspection date.

The Contractor has sole responsibility for complying with the erosion/sediment control report, including control of fugitive dust, and shall be responsible for any monetary penalties resulting from failure to comply with these standards.

Once construction has been completed, long-term maintenance of the stormwater management system will be the responsibility of the Applicant. Operations & Maintenance items with a list of maintenance requirements and frequency are listed at the end of the Project Stormwater Management Report.

12.13 Preconstruction Conference

Prior to any construction at the site, representatives of the Contractor, the Architect, the Owner, and the site design engineer shall meet to discuss the scheduling of the site construction and the

designation of the responsible parties for implementing the plan. The Contractor shall be responsible for scheduling the meeting. Prior to the meeting, the Contractor will prepare a detailed schedule and a marked-up site plan indicating areas and components of the work and key dates showing date of disturbance and completion of the work. The Contractor shall conduct a meeting with employees and sub-contractors to review the erosion control plan, the construction techniques which will be employed to implement the plan and provide a list of attendees and items discussed at the meeting to the Owner. Three copies of the schedule, the Contractor's meeting minutes, and marked-up site plan shall be provided to the Owner.

APPENDIX A
Sample Erosion Control Compliance Certification and Inspection Forms

CONTRACTOR/SUBCONTRACTOR CERTIFICATION

PROJECT INFORMATION

Project Name: Ledgewood Court Apartments Expansion

Address: 207 Ledgewood Court Drive – Damariscotta, ME 04543

CONTRACTOR/SUBCONTRACTOR INFORMATION

Firm Name:

Address:

Telephone:

Type of Firm:

CERTIFICATION STATEMENT

"I certify under penalty of law that I understand the terms and conditions of the Maine DEP Stormwater Management Law Permit that authorizes the stormwater discharges associated with construction activity from the project site identified as part of this certification."

_____
Signature

_____
Typed Name

_____
Title

_____
Date

SOIL EROSION AND SEDIMENT CONTROL

INSPECTION REPORT

PROJECT INFORMATION

Project Name: Ledgewood Court Apartments Expansion

Address: 207 Ledgewood Court Drive – Damariscotta, ME 04543

INSPECTOR INFORMATION

Inspector Name: _____

Firm: _____

Title: _____

Qualifications: _____

INSPECTION SUMMARY

Date of Inspection: _____

Major Observations: _____

_____

_____

_____

THE FACILITY IS IN COMPLIANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN WITH THE FOLLOWING EXCEPTIONS:

_____

_____

_____

_____

ACTIONS NECESSARY TO BRING FACILITY INTO COMPLIANCE:

_____

_____

REQUIRED MODIFICATIONS TO STORMWATER POLLUTION PREVENTION PLAN (MUST BE IMPLEMENTED WITHIN 7 DAYS OF INSPECTION):

_____

CERTIFICATION STATEMENT:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the systems, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of find and imprisonment for knowing violations."

Signature

Typed Name

Title

Date

GORRILL PALMER

300 Southborough Drive, Suite 200
South Portland, Maine 04106
207.772.2515

Exhibit 11 – Miscellaneous

See Exhibit 13 for compliance with standards for noise and air quality (§102.6 & §102.7).

The following waivers are requested for the proposed development:

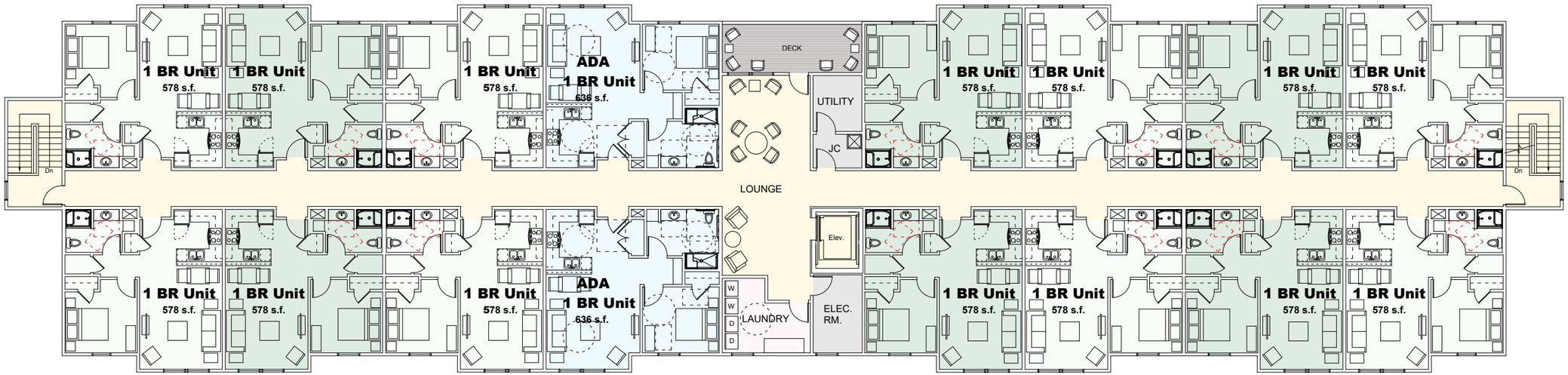
1. A waiver is requested from 102.6 (H)(6)(b) requiring landscaped islands be placed within the parking aisles at a rate no greater than one island per every twenty spaces. This waiver is requested as the parking area is small (only 33 spaces) and is divided into two parking bays off a single access drive. Given the presence of the patio by the entry way and the adjacent ADA spaces, the northern parking aisle contains fewer spaces than the southern parking aisle. The proposed distribution is 21 spaces in the southern aisle and 12 spaces in the northern. It seems unreasonable to require the applicant to provide a landscaped island within the 21-space aisle just because it is one space longer than the ordinance requirement – especially considering the applicant could narrow the front patio and squeeze another space in the northern aisle and meet the ordinance requirement. Providing an island would spread the parking area out further and require more grading work be done to level the lot. It is our opinion that the intended goal of the ordinance provisions is still accomplished as the parking area and patio will be landscaped and the residents will benefit more from a larger patio space than a single landscaped island in the parking lot.
2. A waiver is requested from 102.7 (A)(2)(a) requiring the protrusions and recesses in the building façade to be at least 6 feet in depth. This waiver is requested as the building is not directly facing or paralleling a public street. The Ledgewood Court Drive extension which will serve the site is to be a private drive, and the proposed building will not be visible from Piper Mill Road. All other standards in this section – including the intervals for protrusions and recesses and the multi-tone color scheme – have been met. Further, the building design does provide for architectural features that will break up the appearance of the long facades, which appears consistent with the overall code objective.
3. A waiver is requested from 102.7 (D)(1) requiring sidewalks internal to the development be no less than 8 feet wide. This waiver is requested as the sidewalks on site are to be private and will be used only by residents of the complex. Given the proposed building only contains 32 affordable senior housing units, an 8-foot-wide sidewalk seems to be excessive for the amount of use anticipated. On top of this, no public sidewalks exist on Piper Mill Road or along School Street in the area of Piper Mill Road. The 6-foot wide sidewalks proposed are anticipated to be sufficiently wide for the anticipated amount of usage. This width also satisfies an objective of minimizing onsite impervious area.
4. A waiver is requested from 102.7 (D)(2) requiring sidewalks at least 5-feet wide be constructed along all sides of a lot abutting a public street. This waiver is requested as no public sidewalks currently exist on Piper Mill Road, and no facilities exist on Piper Mill Road that would expect foot-traffic. The subject parcel has approximately 1300 feet of frontage along Piper Mill Road, and constructing that much sidewalk starting from an intersection with no sidewalks, ending at a dead-end with a sewage treatment plant is considered an extraordinary requirement of the applicant.

GORRILL PALMER

300 Southborough Drive, Suite 200
South Portland, Maine 04106
207.772.2515

Exhibit 12 – Additional Requirements for Large Scale Developments

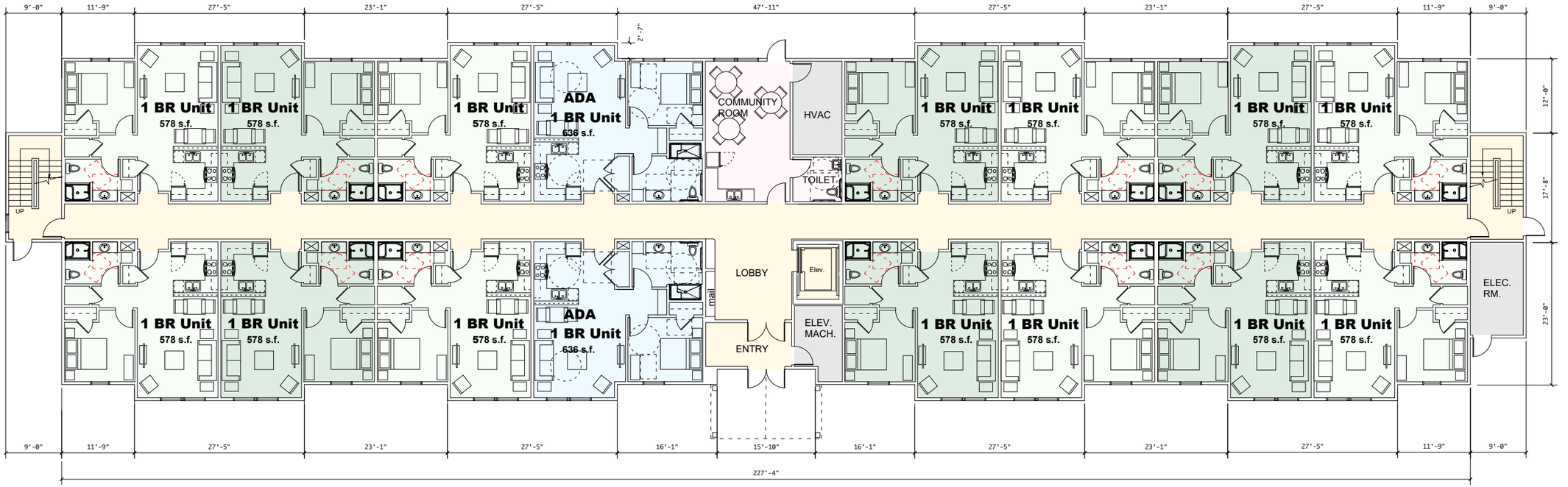
See attached building elevations. Compliance with building appearance standards explained in Exhibit 15 – Compliance with Performance Standards 102.7.



NORTH

SECOND FLOOR PLAN

16 UNITS | 12,677 GROSS S.F.

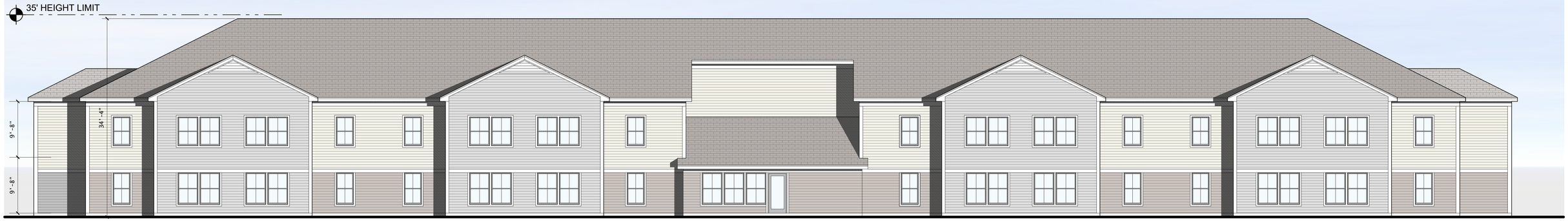


FIRST FLOOR PLAN

16 UNITS | 12,820 GROSS S.F.

Winton Scott Architects

217 COMMERCIAL STREET, SUITE 200
PORTLAND, MAINE 04101
207.774.4811 | wintonscott.com

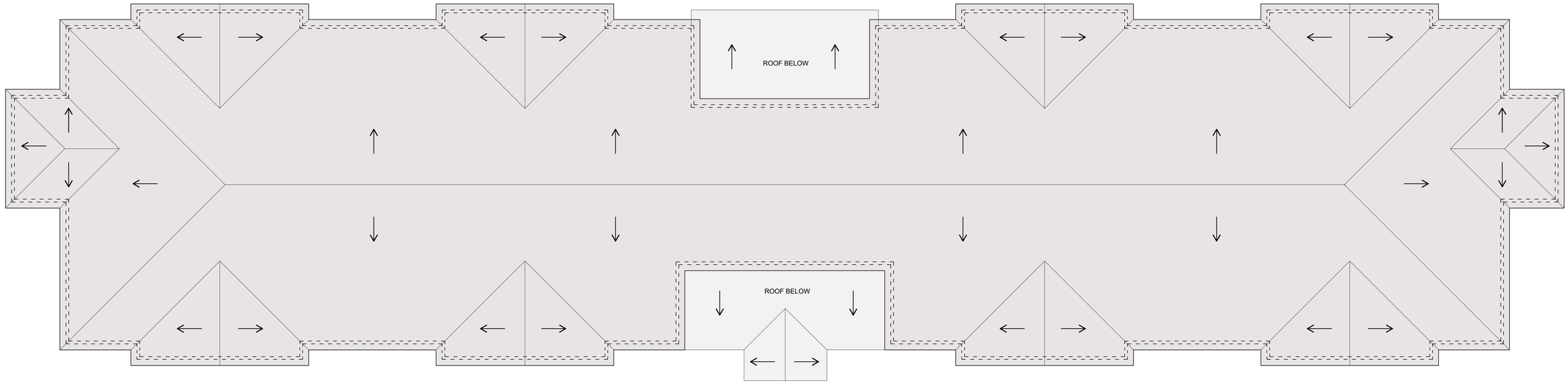


NORTH ELEVATION

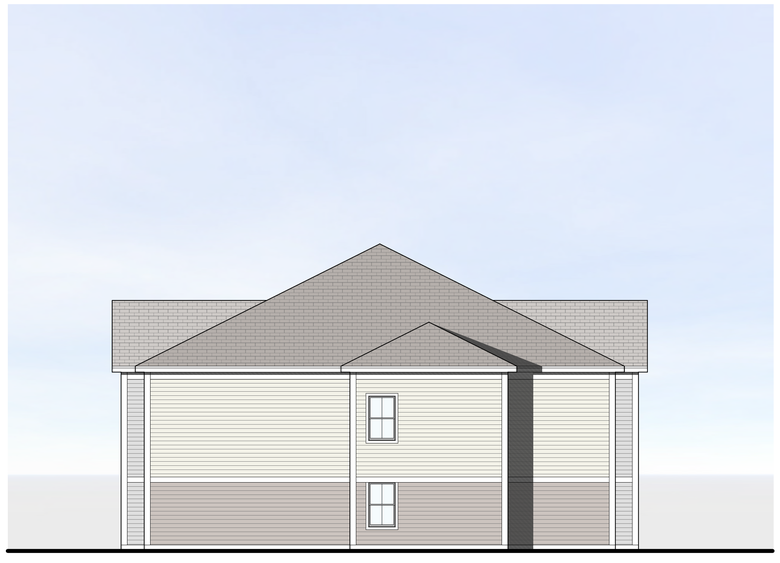
SOUTH ELEVATION

Winton Scott
Architects

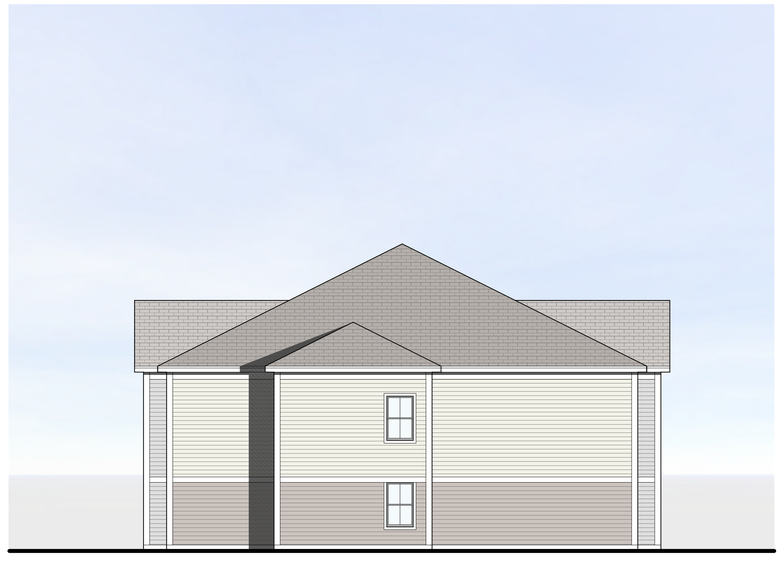
217 COMMERCIAL STREET, SUITE 200
PORTLAND, MAINE 04101
207.774.4811 | wintonscott.com



ROOF PLAN



EAST ELEVATION



WEST ELEVATION

Winton Scott Architects

217 COMMERCIAL STREET, SUITE 200
PORTLAND, MAINE 04101
207.774.4811 | wintonscott.com

GORRILL PALMER

300 Southborough Drive, Suite 200
South Portland, Maine 04106
207.772.2515

Exhibit 13 – Additional Requirements for Large Scale Developments

See attached economic and fiscal impact study prepared by the Applicant.

GORRILL PALMER

300 Southborough Drive | Suite 200
South Portland, Maine 04106
207.772.2515

Subject: Ledgewood Court Expansion
Community Impact Statement

In accordance with Chapter 102, Site Plan Review Ordinance §102.7 Large Scale Development Part H.3. **Community Impacts**, the following evidence is provided:

a. *The impact statement shall include the following elements:*

1) *Identification and assessment of the impacts of the proposed project, including positive, negative, and indirect impacts.*

Evidence:

Positive Impacts

- **Increase in affordable housing opportunity in a new, high-quality contemporary building.**
- **Affordable unit occupancy remains steady and is not as subject to fluctuating vacancy attributable to market rate housing.**
- **Property tax revenue increases for the community.**
- **Senior housing doesn't burden the local school system.**
- **Senior housing allows older homeowners the opportunity to reenter their homes into the market for sale to younger people and families.**
- **Affordable housing allows residents the chance to spend money on other goods and services they may not otherwise in the absence of an affordable living condition.**

Negative Impacts

- **A minor impact to local services such as emergency and fire department due to new development.**
- **Loss of existing privately owned undeveloped land.**
- **Minimal impact to wildlife habitat.**
- **Minor increased burden on utilities.**

2) *Proposed measures to mitigate adverse impacts and/or maximize positive impacts including provision of infrastructure or public service improvements sufficient to support the project. Any adverse impacts that cannot be mitigated shall be identified. Mitigations measures to be implemented by the applicant shall be identified.*

Evidence: The applicant is responsible for the construction of the project and that will include all connections to public utilities. The development site is well-served by existing public infrastructure including access and utilities. The site layout positions the new building in a manner that will buffer it from neighboring properties and residences. Senior housing results in very low traffic generation and will not burden local streets. The limited clearing area and retainage of a substantial amount of wooded area on the site will offset the impact to habitat. The layout also minimizes the impact to the onsite wetlands.

3) Proposed measures to mitigate negative traffic impacts to road plans of the town and how to integrate the proposed development into the road plans of the Town.

Evidence: The development will utilize an existing driveway onto Piper Mill Road, so no new driveway opening(s) is required. The land use results in a minor amount of traffic volumes on nearby streets. The applicant is researching opportunities for rideshare and local transportation options for residents, which may result in lessening the impact from single occupant vehicular traffic.

b. The Impact statement shall assess the following areas of potential impact:

1) Types of jobs created.

Evidence: The project is a multi-unit residential senior affordable housing building. The development is an expansion of an existing 24-unit development that requires maintenance by the property manager, which in this case will be provided by an operations and maintenance division of the applicant's organization. The expanded development may involve the need for additional support personnel over time, however this will likely be limited in scale and quantity. More information on economic impacts can be found at The Economic Impact of MaineHousing's Investment in Affordable Multifamily Housing: State and Regional. This report contains the following example of what a similar project provided in employment and wages benefits.

Table 7: New Construction, Rehabilitation and Reuse Projects Funded by MaineHousing, 2015 - 16
Waldo-Knox/Lincoln-Sagadahoc (1 Project, 36 Units)

	MaineHousing and Other Sources of Funding			
Expenditures	$5.4 million			
Impact	Employment	Wages and Salaries (millions)	Total Output (millions)	GDP (millions)
Direct	58			
Indirect and Induced	61	3.0	11.3	6.5
Total	119			

2) *Number of full-time (forty (40) hours per week) and part-time (less than forty (40) hours per week) jobs created.*

Evidence: The project construction is likely to generate as many as 100 jobs during the course of construction. Due to the residential nature and relatively small size, the development is not expected to directly generate any new jobs post construction, however any number of support services and businesses in the town/region are likely to benefit from the opportunities related to affordable housing.

3) *Evaluation of the market and financial feasibility of the project. Include a trade area analysis indicated the market area proposed for the project and the area from which patrons will be attracted and any plans for phase construction. Include any further market studies prepared for the project by the applicant.*

Evidence: See the housing facts and affordability index[1] contained in Attachment A to this analysis for more information

4) *Evaluation of the potential for the proposed project to create an over supply of retail space in town using industry accepted standards for commercial floor area per resident.*

Evidence: This is not directly applicable to a residential project. Indirectly, the opportunities afforded by an increase in affordable housing are broad and positively impactful to a regional economy. See How Whole Communities Benefit From Affordable Housing (forbes.com).

5) *Evaluation of the impact of the proposed project on commercial vacancy rates in Damariscotta and Lincoln County.*

[1] Taken from rptHFMaine 2021

Evidence: An increase in senior affordable housing will allow those residents less burden on their finances while also allowing them to spend more on other essential items which translates into improved opportunities for businesses that sell goods and services.

6) *Estimate to what extent the proposed project would reduce the diversity of the Town's economic base by eliminating smaller businesses.*

Evidence: To the contrary, the proposed project will aid smaller businesses as residents will have greater ability to spend more on other essential items besides their monthly rent.

7) *Comparison and evaluation of the projected costs and benefits to the Town resulting from the project including:*

i. *Projected costs arising from increased demand for and required improvements to public services and infrastructure.*

Evidence: The project will result in increased demand for utilities from the Great Salt Bay Sanitary District for both water and wastewater, however the GSBSD has indicated ample capacity to serve the project which ultimately increases their revenue. Senior affordable housing places little to no burden on municipal school needs, however emergency services may see increased demand. These costs are expected to be minimal and are offset by the increased property tax revenue attributable to the development.

ii. *Value of Improvements to Public services and infrastructure to be provided by the project.*

Evidence: the project will not involve improvements to public services or infrastructure.

iii. *Project tax revenues to the Town to be generated by the project and the need for increased financial support for infrastructure improvements and protective services.*

Evidence: Based on the Town's mil rate of $15.90/$1,000 valuation the tax revenues might be expected to be between $100,000 to $150,000/year.

iv. *Projected impact of the project on land values (both residential and commercial) and potential loss or increase in tax revenues to the Town.*

Evidence: The project is expected to result in no impact to housing and land values. Further the development will result in a net increase to tax revenues in the Town. Senior housing also results in the re-entry of older housing stock in the community as older residents may decide to sell their existing home for the benefit of downsizing etc. In many cases residents on fixed income find their homes have become challenging and costly to maintain while facing increasing property tax burden. Those residents find new senior housing as an affordable option while also allowing their original home to be made available to younger residents and families, who are otherwise also faced with insufficient housing stock on which to purchase.

v. *Short-term and long-term project of increased revenues to the Town and costs resulting from the proposed project.*

Evidence: Short-term revenues during the course of construction may include:

- **Local contracting support for materials and labor.**
- **Local retail/hospitality gains for contractor lodging, food, fuel, and supplies**

Long-term increased revenue resulting from new property taxes are expected to be $100,000 to $150,000/year. Further, the facility will employ various services for maintenance, utilities, winter operations, and building management.

vi. *Estimate of the difference between how much of the revenue generated by the proposed project would be retained and re-directed back into the economy of the community compared to other retail chain stores and locally owned, independent retailers in Town.*

Evidence: this impact is not applicable to a senior housing development.

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Exhibit 14 – Compliance with Performance Standards §102.6

102.6 (A) Preserve and Enhance the Landscape

The natural state of the landscape has been preserved to the greatest extent practicable by minimizing tree removal and soil disturbance, and by retaining existing vegetation during construction. Clearing for the project has been limited only to essential areas for the building, parking, fire lane, and garden areas while the remainder of the 10+ acre parcel is to remain forested. A cut/fill analysis was completed to confirm that large quantities of material would not need to be brought in to fill the site or removed from the existing site.

Disturbance within the buffer yards has been limited to the greatest extent practicable. All proposed development activity is being proposed along the southern lot line of the parcel, while the north, east, and west lot line areas will remain undisturbed. Land south of the site is largely undeveloped and heavily wooded except for the wastewater treatment plant at the end of Piper Mill Road. A minimal amount of grading work is proposed along the southern property line within the bufferyard, adjacent the parking lot..

102.6 (B) Relationship to Environment and Neighboring Buildings

The proposed structure will be related harmoniously to the terrain as it will be constructed with the upland area of the site, and the majority of existing forest cover on the property is to be maintained. The proposed structure will be related harmoniously to the existing buildings on the property as the view from the existing complex will be partially obstructed by mature trees. The proposed building will also be similar in height to the existing units, as all buildings will be 2-story, and the finish floor elevation of the proposed building is to be similar to that of the existing units.

A minimum 15-foot buffer from the property line to parking/paved areas has been maintained around the proposed development. Generally, the buffer is considerably larger than this, with the exception of the southern property line along the boundary of the proposed parking lot.

The development is not in the downtown commercial area, nor is it along the C2 area of Route 1B (Upper Main Street).

102.6 (C) Air Quality

Given the residential nature of the proposed development, no undue air pollution or odors are expected associated with the development.

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102.6 (D) Lighting and Glare

Exterior lighting is proposed on the south side of the building in order to serve security and safety needs for the residents of the property. The proposed lighting will not directly or indirectly produce negative effects on abutting properties. The lighting fixtures will be "full cut-off" shielded or hooded so that the lighting elements are not exposed to view by motorists or from adjacent dwellings or by pedestrians more than 30 feet beyond the base of the lighting fixture. Direct or indirect illumination will not exceed one-tenth foot-candles upon abutting residential properties.

No rotating or flashing lights are proposed as part of the development. See the lighting plan and light fixture cut sheets attached to this section.

102.6 (E) Noise

Given the residential (senior housing) nature of the proposed development, the site is not expected to increase noise levels to the extent that abutting or nearby properties are adversely affected.

102.6 (F) Adequacy of Public Road System

Given the limited amount of vehicular traffic anticipated to be associated with the site (see Exhibit 5), the existing roadway network is expected to be adequate to support the limited additional traffic. This includes traffic conditions on Piper Mill Road and School Street which have been previously studied as part of the Clippership Nursing home facility[2].

102.6 (G) Access into the Site

Vehicular access to and from the site will be safe and appropriate. No new vehicular access locations are proposed as a part of this development. The development will use the existing access associated with the Ledgewood Court Apartment complex, identified as "Ledgewood Court Drive". A site visit was completed on December 16, 2023 to confirm that the existing driveway meets the MaineDOT sight distance standards. It has been determined that 300+ feet of sight distance is available at the existing driveway in either direction. This exceeds the required Sight Distrnace of 200 feet for a 25 MPH speed limit.

[2] See Traffic Assessment and Technical Memorandum from Barton & Loguidice

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Piper Mill Road is minimally traveled in its current form, as the only existing developments along the road are the Central Lincoln County ambulance service and the Great Salt Bay Sanitary District sewage treatment facility. Neither one of these existing developments produce significant vehicular traffic. The addition of the recently approved nursing home on the north side of Piper Mill Road is expected to increase traffic, but not significantly. Therefore, no conflicts with existing traffic movements and flows are expected as a result of the proposed development.

The existing Ledgewood Court Drive is understood to meet all grading, level of service, capacity and queue requirements set forth in the site plan review ordinance.

102.6 (H) Parking and Circulation

The proposed parking area provides safe, convenient, and efficient access for vehicles and pedestrians. The number of spaces provided by the developments meets the standards set forth by the Town of Damariscotta of one parking space per dwelling unit for multifamily senior housing.

The proposed parking area has been located to the rear of the building, meaning it will not be between the front façade of the building and Piper Mill Road. The building and proposed parking area will be shielded from view by the vegetation that is to remain between the proposed development and the street. The nearest residence will be located greater than 1,000 feet away.

Walkways and sidewalks are provided throughout the proposed development to allow for safe and efficient pedestrian movement. The proposed parking is off-street, and designed so that vehicles exit the parking area in a forward motion. The existing, single entrance from Piper Mill Road into the Ledgewood Court complex is to be used for the proposed development as well as the existing.

The single proposed parking lot contains 33 spaces, which is less than the maximum of 40 noted in the ordinance. The proposed parking area will be landscaped, and contain stormwater management measures. A swale is proposed along the southern lot line to convey water from the area uphill of the site around the development to the drainage course within the mapped wetland. Also, catch basins are proposed within the parking lot to capture runoff from the pavement and adjacent landscaped and building areas. The parking area is to be curbed on the north and south sides - perpendicular to the parking spaces. Landscaped areas are provided around the parking lot, but no landscaped islands are proposed within the lot due to the relatively small size of the proposed lot.

The parking spaces provided are not accessible from a public way, and are not accessed from major interior travel lanes. The spaces are oriented perpendicular to the proposed building and will be 9'0" wide and 20' deep which exceeds the 9' x 18'-5" standard. The aisle width between the spaces is to be 24'0". These dimensions are in accordance with the parking stall layout standards provided in this section of the ordinance.

The parking stripes within the lot are to be painted 4" in white paint. The number of spaces provided is 33 for the proposed 32 units. This is in accordance with the requirements for the number of off-street parking spaces required for senior citizen multifamily housing presented in this section of the ordinance.

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102.6 (I) Pedestrian Circulation

Walkways and sidewalks are proposed throughout the development that connect from the proposed building entrances and exits to the parking area, the existing complex, and the community gardens and landscaped areas on the property. The internal sidewalks proposed on the property are separated from the driving surfaces by vertical slipform concrete curb or equal.

No public sidewalks currently exist in the vicinity of the proposed development. There are no sidewalks on Piper Mill Road, School Street, or High Street in the immediate area, or near the intersection of Piper Mill Road and School Street. Therefore, no offsite sidewalk connection or construction is proposed as a part of this project.

102.6 (J) Existing Public utilities and Services

The proposed development will not impose a burden on any public utilities. Ability to serve letters have been requested of the Great Salt Bay Sanitary District indicating their ability to provide water and sewer services to the development. The development is not proposing to connect to any existing public storm drain infrastructure.

The proposed development is not anticipated to have an adverse impact on municipal services such as the road system, fire department, police department, solid waste program, or other municipal services and facilities.

102.6 (K) Water Quality

The proposed development will not unduly affect the quality or quantity of groundwater, The development is not located on a significant sand and gravel aquifer according to the Maine USGS Significant Sand and Gravel Aquifers Map of the Damariscotta quadrangle. The map is attached to this section of the application. No well is proposed for this development as it will be connected to the public water supply. No pollutants or materials that would pose a risk for groundwater contamination are expected to be on site in large enough quantities to be a concern.

102.6 (L) Storm Water Management

See the stormwater management report included with Exhibit 9, attached to this application. The development does not require DEP review under SLDA. A Stormwater Management law permit was issued for the existing apartment complex. This new proposed development requires an amendment application be filed with MaineDEP.

The stormwater management facilities for the site have been designed to meet the flooding standard as described by the Town ordinance for the 2-inch, 25-, 50-, and 100-year storms. LID measures have been utilized to the greatest extent practicable by using a bio-retention filter and a grassed underdrained soil filter – as opposed to a single large system. Infiltration was not a practical alternative as the Type D soils comprising the site do not pass water quickly enough. Also given the need to meet the flooding standard for the 100-year storm, a significant amount of flood storage needs to be provided on site. A grassed underdrained soil filter will provide flood storage for the

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development. The project will achieve a no net increase to peak discharge at the point of analysis which is a 24" culvert under Piper Mill Road, north of the development area.

102.6 (M) Erosion Control

See the erosion and sedimentation control narrative and plans included with Exhibit 10, attached to this application.

102.6 (N) Water Supply

Sufficient water is available to satisfy the reasonably foreseeable needs of the development. See the correspondence with Great Salt Bay Sanitary District – Water Division, included with Exhibit 5 attached to this application.

102.6 (O) Natural Beauty

The development will not have an undue adverse effect on the scenic or natural beauty of the area or rare and irreplaceable natural features. The development team contacted the Maine Natural Areas Program on December 20, 2022, to confirm that no unusual natural areas would be impacted by the proposed development. MNAP responded confirming that there are no rare botanical features within the project area. See the response letter from MNAP, included as an attachment to this section of the application.

The clearing of trees has been minimized to the greatest extent practicable by limiting the clearing to the building, parking lot, and fire lane areas primarily. A minimal amount of clearing to the east of the building is proposed to provide a landscaped, outdoor space for residents to enjoy.

The development has been designed to minimize the visibility of the proposed building from existing public roads. The land cover type at the time of the application is forested. Therefore a 50-foot minimum buffer has been provided between the proposed development and Piper Mill Road. In fact, the proposed development is approximately 300 feet from Piper Mill Road on both the north and east sides. Thus, the proposed development is not expected to be visible from Piper Mill Road, nor nearby development.

102.6 (P) Historic and Archaeological Resources

The proposed development will not impact any historically or archaeologically significant areas. The development team contacted the Maine Historical Preservation Commission on December 20, 2022. Kirk Mohney, the State Historic Preservation Officer, responded on January 4, 2023, confirming that no historical properties would be impacted by the proposed development.

The development team also reached out to the four Maine-based Native American Tribes (Micmac, Passamaquoddy, Penobscot, and Maliseet) to confirm that no historic, archaeological, or tribal resources would be impacted by the proposed development on December 28, 2022. At this time, we have received responses from the Micmac nation confirming no historic, archaeological, or

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tribal resources will be impacted. The response letter from the Micmac nation is included as an attachment to this section, as well as the request letters sent to the remaining three tribes

102.6 (Q) Filling and Excavation

No excavations of sand & gravel, borrow, clay, topsoil, silt, or rock that are not incidental to the proposed building, parking lot, fire lanes, and landscaped areas are proposed as part of this project.

102.6 (R) Sewage Disposal

The proposed development has been provided with a method of disposing of sewage which complies with the State Plumbing Code. Public sewage collection is available to the development as the development is very near the existing Great Salt Bay Sanitary District sewage treatment facility. There is a private 4" force main associated with the existing Ledgewood Court Apartment complex that runs from a pump station within the existing complex, through a utility corridor along the subject property's southern lot line, and discharges into the sanitary facility's grit chamber at the end of Piper Mill Road. The proposed development intends to construct an 8" gravity sewer main from the proposed building to the existing pump station within the complex. We understand that the Clippership Development may seek to modify the Ledgewood force main at the grit chamber terminus so that the two sites are combined into a single force main discharge. The exact details of this connection are under design by the Clippership design team.

The development team contacted Tim Stevens of Stevens Pump Service, the company contracted to service the existing pump station, to confirm that there would be no capacity issues with the existing pump station design if the additional flow from the new building were introduced. It is our understanding that no capacity or operational issues have been experienced at the existing pump station and the introduction of additional flow from the 32 senior housing units will remain within the pump station capacity

An extension of the existing public connection system will not be necessary as a part of the proposed development. No onsite sewage disposal is proposed as a part of this project. The existing complex and the proposed building are to be serviced by a common disposal system that will continue to be serviced by Stevens Pump Service. No industrial or commercial wastewater is anticipated as a part of this proposed development given the residential nature of what is being proposed.

The existing systems will remain under common management and operation regardless of the possible lot division between the existing Ledgewood units and new proposed building.

102.6 (S) Phosphorous Control

The proposed development is not in the watershed of a lake or great pond and therefore is not required to meet the Phosphorous Standard as described in Chapter 500.

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102.6 (T) Buffer Areas

No industrial or commercial buildings are proposed as a part of this development. No water bodies exist within or adjacent to the project site. The lot abutting the proposed development to the south is currently undeveloped and forested. A 15-foot buffer is provided from the southern lot line to the proposed parking area in accordance with the dimensional standards for the Rural District.

Screening within the buffers surrounding the development will be provided by existing forest vegetation for the majority of the proposed development activity. Natural features within the buffers have been preserved to the greatest extent practicable as the majority of the parcel will remain in its forested, undeveloped state both during and upon completion of construction. Some grading activity is proposed within the buffer along the southern lot line, adjacent to the proposed parking lot, as it is a hillside and work needs to be done in order to level the site. This buffer will be revegetated in accordance with items b and c noted in this section of the ordinance. A landscaping plan prepared by Aceto Landscaping has been included with the plan set in Exhibit 8.

102.6 (U) Signs

No new signs are proposed as a part of this development.

102.6 (V) Building Appearance

Given that the proposed building is to be larger than 7,500 SF, the project meets the criteria for a "large-scale development" in the Town Ordinance. Therefore, the standards for building appearance are addressed in the following Exhibit 15 which addresses Town Ordinance Section §102.7 – Large Scale Development.

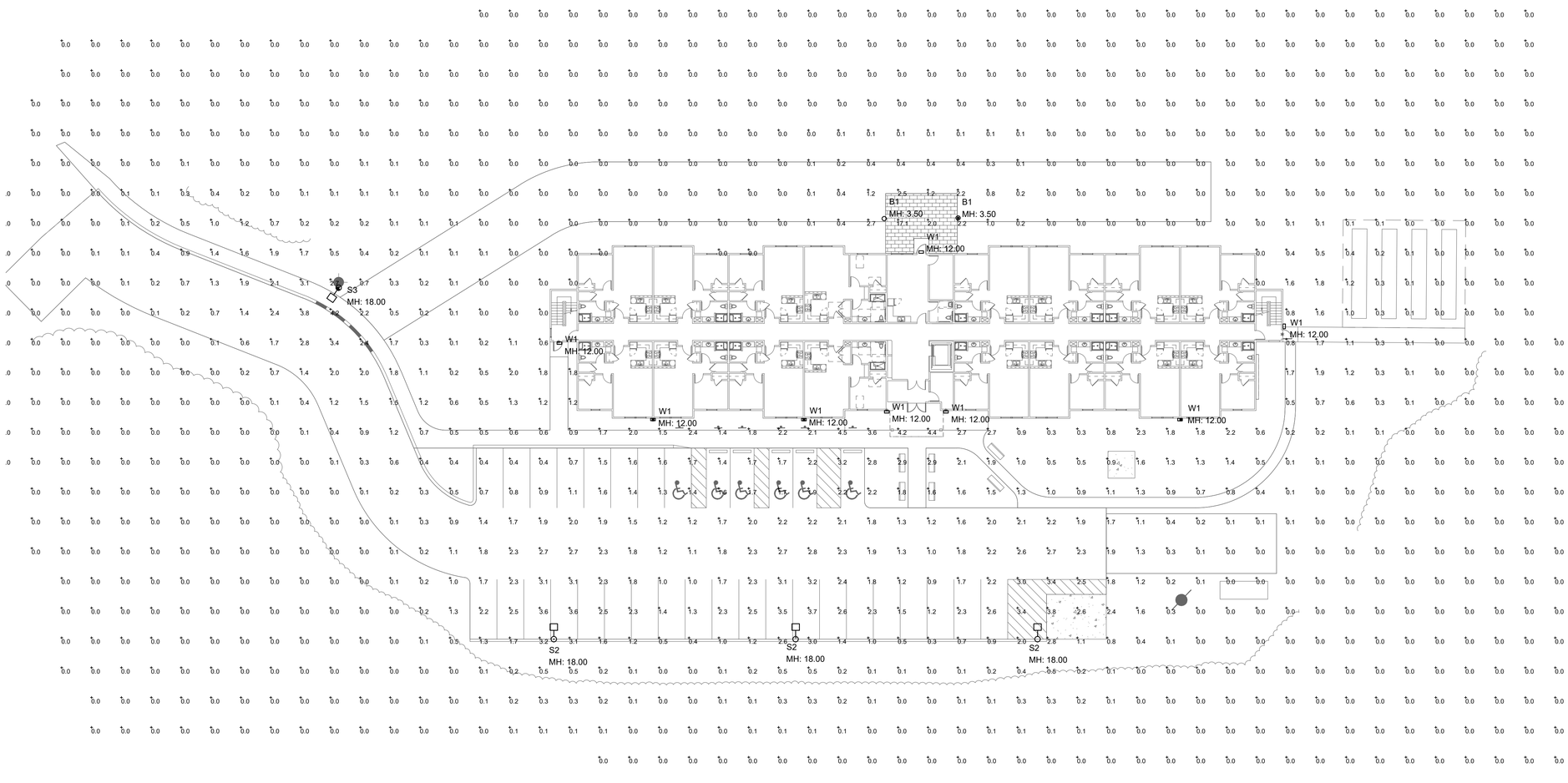
Attachments:
A – Lighting Plan and Cut Sheets
B – Significant Sand & Gravel Aquifers Map
C – MNAP & MHPC Letters

ATTACHMENT A

LIGHTING SCHEDULE

TYPE	DESCRIPTION	MANFACTURER	LAMPS	MOUNTING	NOTES
B1	42" BOLLARD LIGHT WITH FULL CUTOFF LED DARK BRONZE MATTE FINISH B-U-G RATING = 0-0-1 120V	KIM LIGHTING	22W LED 3000K 1128 LUMENS	42" BOLLARD	MODEL #: PAR7-FT-NU-3-12L-020-3K7-42-DBT
W1	FULL CUTOFF LED WALL PACK WITH DARK BRONZE MATTE FINISH B-U-G RATING = 1-0-1 120V	BEACON LIGHTING	25W LED 3000K 6416 LUMENS	WALL MOUNT 12' AFG	MODEL #: RDI1-24L-25-3K7-4W-UNV-DBT
S2	POLE MOUNTED LED LIGHT. TYPE 4F DISTRIBUTION. DARK BRONZE TEXTURED FINISH. B-U-G RATING = 1-0-2 120V	BEACON LIGHTING	84W LED 3000K 9026 LUMENS	18' SQUARE STEEL POLE	MODEL #: VP-ST-1-36L-85-3K7-4-UNV-DBT
S3	POLE MOUNTED LED LIGHT. TYPE 3 DISTRIBUTION. DARK BRONZE TEXTURED FINISH. B-U-G RATING = 1-0-2 120V	BEACON LIGHTING	84W LED 3000K 9214 LUMENS	18' SQUARE STEEL POLE	MODEL #: VP-ST-1-36L-85-3K7-3-UNV-DBT

2 LIGHTING SCHEDULE
SCALE: NOT TO SCALE



1 ELECTRICAL SITE LIGHTING PLAN
SCALE: 1" = 20'

WSA
Winton Scott Architects
5 milk street, portland, maine 04101
• 207.774.4811 • wintonscott.com

WINTON SCOTT ARCHITECTS, PA
5 Milk Street
Portland, ME 04101
774-4811
www.wintonscott.com

SWIFTCURRENT ENGINEERING SERVICES
Royal River Center, Unit 4B
10 Forest Falls Drive
Yarmouth, ME 04096
207.847.9280

STATE OF MAINE
TIMOTHY D. MATTHEWS
No. 9199
LICENSED PROFESSIONAL ENGINEER

Ledgewood Court Expansion

Damariscotta, Maine

Revisions #	Date	Description

Drawing Title: ELECTRICAL SITE LIGHTING PLAN | Scale: AS NOTED

ES1.0

Date: 2.3.23
Phase: PROGRESS PRINT

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design . performance . technology

GEOPAK SERIES 1

SIZE 1 - TRP1/QSP1/RDI1

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

GEOPAK™

FEATURES

- GeoPak Series consists of three compact Geometric wall-pack shapes in four popular finishes
- 24 mid-power LEDs create 3115 lumens in AC and 1628 lumens in emergency mode
- Environmentally friendly, long-life Lithium Iron Phosphate battery
- Standard Battery Temperature Range: 0°C to 40°C, Optional Heater: -30°C to 40°C
- Zero uplight distributions

C US

SPECIFICATIONS

CONSTRUCTION

- Housing is made from die-cast aluminum with a hinged back-plate for ease of installation and maintenance
- Powder paint finish provides durability in outdoor environments. Tested to meet 1000 hour salt spray rating.
- Wet Location Listed to UL924 and UL1598 Standard

OPTICS

- 24 mid power LEDs delivering up to 3,000 lumens
- Up to 118 lumens per watt
- Type III and IV distributions for a wide variety of applications
- Zero uplight (UO), dark sky, neighbor friendly

INSTALLATION

- Universal plate for mounting to standard 3 1/2" and 4" square electrical boxes. All connections are made from connections at the rear of the unit
- Optional back-box accessory available for surface conduit application.

ELECTRICAL

- 120-277 and 347-480V operation, 50/60Hz
- 0-10V dimming driver standard. Dimming leads are extended from the product.
- 10kA surge protector
- Photocell and occupancy sensor options available for complete on/off and dimming control
- Intergral Battery Backup provides emergency lighting for the required 90 minute path of egress
- Includes a long-life Lithium Iron Phosphate battery with optional battery heater for cold temperature application
- Ambient operating temperature -40˚C to 40˚C
- Button photocontrol is suitable for 120-277V operation
- Please consult brand or sales representative when combining control and electrical options as some combinations may not operate as anticipated depending on your application.

CERTIFICATIONS

- Drivers IP66 and RoHS compliant
- Listed to UL1598 and CSAC22.2#250.0-24 for wet location

WARRANTY

- 5 year warranty

KEY DATA	
Lumen Range	1720-2896
Wattage Range	15-25
Efficacy Range (LPW)	107-131
Weights lbs. (kg)	10.5–11.5 (4.8–5.2)

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DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

GEOPAK SERIES 1

SIZE 1 - TRP1/QSP1/RDI1

ORDERING GUIDE

Example: TRP2-24L30-3K7-2-UNV-DBT

CATALOG #

ORDERING INFORMATION

Series		# LEDs		Wattage		CCT/CRI		Distribution		Voltage	
TRP1	Trapezoid	**24L**	24 LEDs	**15**	15 watts	**3K7**	3000K, 70 CRI	**3**	TYPE III	**UNV**	120-277V
RDI1	Radius			**20**	20 watts	**4K7**	4000K, 70 CRI	**4W**	TYPE IV	**120**	120V
QSP1	Qtr-sphere			**25**	25 watts	**5K7**	5000K, 70 CRI			**208**	208V
						3K8	3000K, 80 CRI			**240**	240V
						4K8	4000K, 80 CRI			**277**	277V
						5K8	5000K, 80 CRI			**347**	347V
										480	480V

Color		Control Options Network		Options	
BLT	Black Matte Textured	**PC**	Button Photocontrol	**F**[4]	Fusing (only available with STD fixture configuration, 120-277V only)
BLS	Black Gloss Smooth	**SCP**[2,3]	Programmable occupancy sensor, factory default is 10% light output	**E**[1,5]	Battery pack (0°C)
DBT	Dark Bronze Matte Textured	**Spec SCP/SCO & SWPM Mount Height**		**EH**[1,5]	Battery pack (-30°C) with heater
DBS	Dark Brone Gloss Smooth	**-8F**	Up to 8ft mount height		
GTT	Graphite Matte Textured	**-20F**	Up to 20ft mount height		
LGS	Light Grey Gloss Smooth				
PSS	Platinum Silver Smooth				
WHT	White Matte Textured				
WHS	White Gloss Smooth				
VGT	Verde Green Textured				
Color Option					
CC	Custom Color				

Notes:

1 Voltage specific (120 or 277V only)

2 Must order minimum of one remote control to program dimming settings, 0-10V fully adjustable dimming with automatic daylight calibration and different time delay settings, 120-277V only

3 PCU option not applicable, included in sensor

4 Must specify input voltage (120, 208, 240 or 277)

5 PCU and EH cannot be combined in the QSP1 because of space constraints

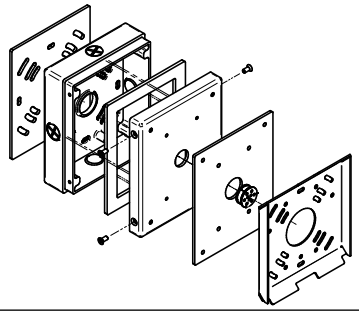
ACCESSORIES (ORDERED SEPARATELY)

	Catalog Number	Description
☐	**SCP-REMOTE***	Remote control for SCP option. Order at least one per
☐	**WP-BB-XXX**	Accessory for conduit entry, replace "xxx" with color option

Notes:

* Must order minimum of one remote control to program dimming settings, 0-10V fully adjustable dimming with automatic daylight calibration and different time delay settings.

WB-BB Wallpack Back Box



DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

GEOPAK SERIES 1

SIZE 1 - TRP1/QSP1/RDI1

PERFORMANCE DATA

Description	Drive Current	System Watts	Dist. Type	5K (5000K NOMINAL 70 CRI)					4K (4000K NOMINAL 70 CRI)					3K (3000K NOMINAL 80 CRI)				
				Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G
24L	350 mA	15	3	1888	127	0	0	1	1879	126	0	0	1	1807	121	0	0	1
	350 mA	15	4W	1797	121	0	0	1	1789	120	0	0	1	1720	115	0	0	1
	500 mA	20	3	2607	131	1	0	1	2594	130	1	0	1	2495	125	1	0	1
	500 mA	20	4W	2481	125	1	0	1	2469	124	1	0	1	2374	119	1	0	1
	600 mA	25	3	2896	113	1	0	1	2884	112	1	0	1	2773	110	1	0	1
	600 mA	25	4W	2756	107	1	0	1	2754	107	1	0	1	2640	108	1	0	1

ELECTRICAL DATA

INPUT POWER CONSUMPTION

System Watts	Input Voltage (V)	System Power (W)	Current (Amps)
15W	120	14.9	0.125
	277		0.053
	347		0.043
	480		0.031
20W	120	20.6	0.172
	277		0.074
	347		0.059
	480		0.043
25W	120	25.3	0.216
	277		0.091
	347		0.073
	480		0.053

Battery backup units consume additional power during charging (maximum 32.2 watts for E, 50.7 watts for EH)

INPUT POWER CONSUMPTION

Ambient Temperature	OPERATING HOURS					
	0	25,000	50,000	TM-21-11* L96 60,000	100,000	L70 (Hours)
25C	1	0.97	0.95	0.94	0.91	4,25,000
40C	0.99	0.96	0.94	0.93	0.9	3,70,000

LUMINAIRE AMBIENT TEMPERATURE FACTOR (LATF)

Ambient Temperature		Lumen Multiplier
0C	32F	1.03
10C	50F	1.01
20C	68F	1
25C	77F	1
30C	86F	0.99
40C	104F	0.98

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

GEOPAK SERIES 1

SIZE 1 - TRP1/QSP1/RDI1

DATE: LOCATION:

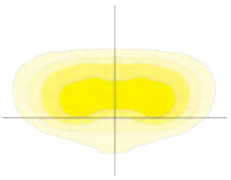
TYPE: PROJECT:

CATALOG #:

PHOTOMETRY

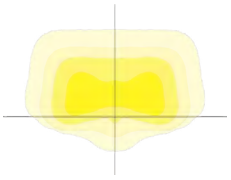
The following diagrams represent the general distribution options offered for this product.

Type III



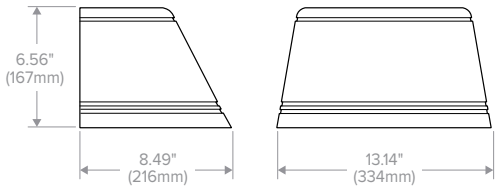
Mounting Height: 10'

Type IV (Forward throw)

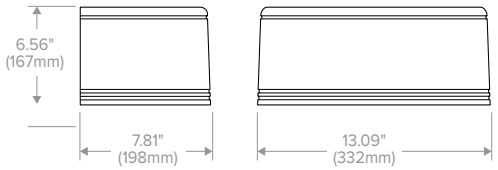


Mounting Height: 10'

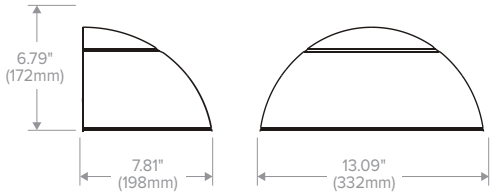
DIMENSIONS



Trapezoid
(TRP1)



Round
(RDI1)



Quartersphere
(QSP1)

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

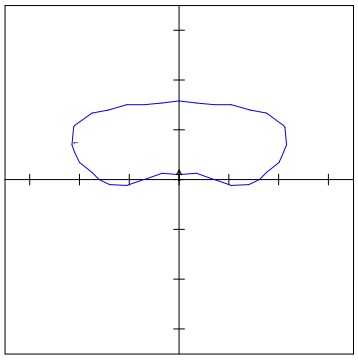
GEOPAK SERIES 1

SIZE 1 - TRP1/QSP1/RDI1

ADDITIONAL INFORMATION

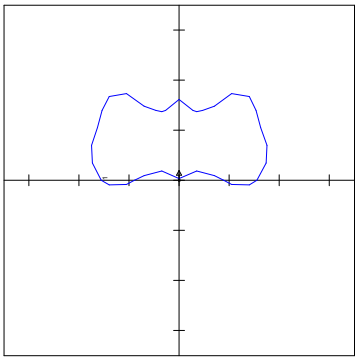
GEOPAK - BATTERY BACK UP

Type 3 Emergency Mode



13W battery when powered covers 20' throw to either side of fixture and 15' throw forward at a 10' mounting height.

Type 4 Emergency Mode



13W battery when powered covers 18' throw to either side of fixture and 15' throw forward at a 10' mounting height.

Provides Life Safety Code average illuminance of 1.0 fc. Assumes open space with no obstructions.

Diagrams for illustration purposes only, please consult factory for application layout.

KIM LIGHTING®

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

PA7R

BOLLARD

Pavilion™

FEATURES

- IDA Dark Sky Compliant, No Up-light configuration
- Elegant form factor blended with Performance Optics
- Integral NEMA 3R Enclosure
- Dual receptacle power panel
- PA System capability
- Bluetooth® enabled RGBW accent

c UL us LISTED

ida DARK SKY APPROVED 2016

IK10

NU configurations in 3000K and warmer CCTs only

Pavilion

RELATED PRODUCTS

Pavilion Square

Pavilion Round Impact Rated

CONTROL TECHNOLOGY

Bluetooth® DMX

pharos

NX LIGHTING CONTROLS

SPECIFICATIONS

CONSTRUCTION

HOUSING:

- Castings are low copper aluminum alloy die-cast
- Gaskets are molded silicone to prevent harmful ingress to the lamp and driver compartments
- IP65 rated

SHAFT:

- Aluminum shaft(s) is .125" thick extruded aluminum 6061 alloy
- Concrete shaft(s) conforms to current specifications for "Portland Cement." ASTM C150, Type I or II. Aggregates shall meet current requirements of "Specifications for Concrete Aggregates," ASTM C33. Water shall be clean and free from deleterious amounts of silt, oil, acids, alkalies or organic materials. Wire for reinforcement shall conform to ASTM A185. Steel for lugs and plates shall conform to ASTM A36, or A283 grade D
- Concrete shaft(s) is medium sand-blasted with anti-graffiti sealer and material color shall be integral to the concrete mix
- Concrete shaft(s) is cured to allow for completion of the hydration process, and result in a 28 day compressive strength of not less than 4,500 psi
- Concrete shaft(s) is cast from fiberglass molds used to insure uniform parts. Mold parting lines maybe slightly visible in finished parts

OPTICS

- LEDs mount to a metal printed circuit board assembly (MCPCB)
- Optical lenses are clear injection molded PMMA acrylic
- U0 configurations have an optically clear flat tempered glass lens, all other configurations have either an optically clear or high transmission diffused acrylic lens

INSTALLATION

- Aluminum shaft configurations will have four 3/8" x 10" x 2" zinc plated L-hook anchor bolts shall to be installed with an included template. Nuts and washers are provided to level and secure the mounting plate to the anchor bolts
- Aluminum shaft configurations will have a mounting plate and be able to be rotated 20° in either direction during installation for aiming adjustment
- Concrete shaft configurations will have four steel mounting tabs for installation on four 1/2" x 10" + 2" zinc electroplated L-hook anchor bolts. Each anchor bolt is supplied with two nuts, two washers, and a rigid pressed board template
- Concrete shaft configurations are palletized with adequate hold-downs to prevent load movement in transit
- Fixtures must be grounded in accordance with national, state and/or local electrical codes. Failure to do so may result in serious personal injury

ELECTRICAL

- Universal voltage, 120 through 277V with a ±10% tolerance. Driver is Underwriters Laboratories listed
- High voltage configurations, 208-277, 347/480. Driver is Underwriters Laboratories listed
- "Thermal Shield", secondary side, thermistor provides protection for the sustainable life of LED module and electronic components
- Drivers are greater than a 0.9 power factor, less than 20% harmonic distortion, and be suitable for operation in -40°C to 40°C ambient environments
- Luminaire is capable of operating at 100% brightness in a 40°C environment. Both driver and optical array have integral thermal protection that will dim the luminaire upon detection of temperatures in excess of 85°C

(Specifications continued on page 3)

KEY DATA	
Lumen Range	397–2350
Wattage Range	14–22
Efficacy Range (LPW)	29–108
Reported Life (Hours)	L70/60,000

KIM LIGHTING®

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

PA7R

BOLLARD

ORDERING GUIDE

Example: PA7R-FT-NU-1-12L-010-5K7-24A-BLS-UNV-EM

CATALOG #

HOUSING

PA7R

Model		Top		Optics		Distribution		Light Engine [13]	
PA7R	Pavilion 7" Ø Round	FT	Flat Top	NU	No Up-light	1	Type I	12L-010-AMB [11]	14W, Monochromatic Amber
		CT [1]	Crowned Top	CH	Clear Horizontal Lens	2	Type II	12L-010-3K7	14W (1000 nominal lm), 3000K, 70 CRI
				CL [2]	Clear Vertical Lens	3	Type III	12L-010-4K7	14W (1000 nominal lm), 4000K, 70 CRI
				DL [2,3]	Diffuse Vertical Lens	3HS	Type III + House side shield	12L-010-5K7	14W (1000 nominal lm), 5000K, 70 CRI
				LV	Louvers	4	Type IV	12L-020-AMB [11]	22W, Monochromatic Amber
				GC	Grille with clear vertical lens	5	Type V	12L-020-3K7	22W (2000 nominal lm), 3000K, 70 CRI
				GD [3]	Grille with diffuse vertical lens			12L-020-4K7	22W (2000 nominal lm), 4000K, 70 CRI
								12L-020-5K7	22W (2000 nominal lm), 5000K, 70 CRI
								Consult factory for other CCTs (2700K - 6500K) and CRIs (80, 90 CRI)	

Body		Fixture Finish		Control Options		Voltage		Options	
24A	24" OAH, Aluminum	BLS	Black Gloss Smooth	MW [6]	Motion sensing (50% dim, 100% output upon detection)	UNV	120-277V	EM [8]	Battery Backup
42A	42" OAH, Aluminum	BLT	Black Matte Textured	NXW	NX Networked Wireless Radio Module NXRM2 and Bluetooth Programming, without Sensor	120 [7]	120V	LR [9]	Luminous Accent
42BR-C	42" OAH, Brown Concrete	DBS	Dark Bronze Gloss Smooth			277 [7]	208-277V	SF [10]	Single Fuse
42CH-C	42" OAH, Charcoal Concrete	DBT	Dark Bronze Matte Textured			347 [7]	347V	DF [10]	Double Fuse
42NG-C	42" OAH, Natural Gray Concrete	GTT	Graphite Matte Textured			480 [7]	480V		
42WH-C	42" OAH, White Concrete	LGS	Light Grey Gloss Smooth						
42A-ROP [4]	42" OAH, Aluminum + Dual Receptacle Outlet Panel and Cover	LGT	Light Grey Matte Textured						
42A-ROP-L [4]	42" OAH, Aluminum + Dual Receptacle Outlet Panel and Locking Cover	PSS	Platinum Silver Gloss Smooth						
42A-2GEB	42" OAH, Aluminum + Integral Recessed 2 Gang Electrical Box	VGT	Verde Green Matte Textured						
42A-SG3	42" OAH, Aluminum + Speaker Grille Enclosure for 3" Ø speaker	WHS	White Gloss Smooth						
44A	44" Non-Impact Resistant OAH, Aluminum	WHT	White Matte Textured						
44A-ROP	44" Non-Impact Resistant OAH, Aluminum + Dual Receptacle Outlet Panel and Cover	**Color Option**							
44A-ROP-L	44" Non-Impact Resistant OAH, Aluminum + Dual Receptacle Outlet Panel and Locking Cover	CC [12]	Custom Color						
44A-2GEB	44" Non-Impact Resistant OAH, Aluminum + Integral Recessed 2 Gang Electrical Box								
44A-SG3	44" Non-Impact Resistant OAH, Aluminum + Speaker Grille Enclosure for 3" Ø speaker								
For Impact Rated 44" OAH Round Pavilion									

1 Adds .6 / 15mm to OAH (over all height).
2 CL and DL configurations shall be IK04
3 Only Available with 1 Type I or 5 Type V distributions only.
4 For GFCI/USB limited voltage to 120VAC only.
6 24'Ø typical coverage area, not available with CH.
7 Dedicated input voltage, required for MW Motions sensing.
8 0°C min starting temperature, 90+ minute run time, output equivalent to 12L-010-#K7
9 Adds +5 watts and 1" / 254mm to overall height.
10 SF for 120, 277 and 347 input voltage, DF for 208, 240 and 480 input voltage.
11 Turtle friendly
12 Consult factory for custom color, marine and corrosive finish options
13 5-step MacAdam Ellipse Binning standard. Consult factory for 3-step MacAdam Ellipse Binning.

PA7R

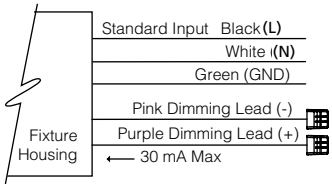
BOLLARD

CATALOG #:

SPECIFICATIONS CONT'D

CONTROLS

- Standard fixtures dimming range shall be from 10% to 100% and be compatible with 0-10V, user-defined, control devices



- Optional motion sensor shall be capable of detecting motion 360° around the bollard. When no motion is detected for the specified time, the sensor wattage to factory preset level, reducing the light level accordingly. When motion is detected by the sensor, the bollard shall return to full wattage and full light output. Please contact KIM Lighting if project requirements vary from standard configuration

WIRELESS CONTROLS

BLUETOOTH®:

- The Integral module shall enable the adjustment of the Luminous Accent to dim or change color to the desired setting when paired with RGBW Remote App via celluar/tablet device
- The integral module shall be compatible with Bluetood Low Energy (BLE) or Bluetooth® Smart mobile devices operating on iOS8 or Android Gingerbread operating systems or newer
- Mobile App. dimming range from 0% to 100% through the use of RGBW app (available on IOS and Android)
- Color selection and adjustment
- Camera function for color matching
- Intensity slider for dimming/ramping up
- Save and rename up to 10 presets
- Group and rename fixtures
- Fixture is password protected, refer to instructions to set unique password

DMX:

- 6 wires: Red (DMX+), Brown (DMX-), Yellow (DMX Ground), Black (Line Voltage), White (common), and Green (Ground)
- Single DMX universe with six slots/addresses of virtual control which are pre-programmed at the factory:
- DMX slot/address 1 = red
- DMX slot/address 2 = green
- DMX slot/address 3 = blue
- DMX slot/address 4 = white
- Fully DMX RDM compatible
- Mobile App specification in additional information section

NX

- Luminaires enabled with NX Lighting Controls wireless radios create an intelligent mesh networkwith the interior controls. Groups are dimmed via an astronomical time clock and schedules can be updated at any time with the Bluetooth® commissioning app. Contact factory for more information

OPTIONAL BACKUP BATTERY

- Integral battery backup provides emergency path of egress lighting for the required 90 minutes for 0°C ambient environments

CAUTION:

- Fixtures must be grounded in accordance with national, state and/or local electrical codes. Failure to do so may result in serious personal injury

CERTIFICATIONS AND LISTINGS

- Listed to UL1598 and CSA C22.2#250.0-24 for wet locations and 40˚C ambient temperatures
- IP65 rated
- IEC 66262 Mechanical Impact Code IK10
- IDA approved, 3000K and warmer CCTs only
- RoHS compliant

WARRANTY

- 5 year warranty
- See HLI Standard Warranty for additional information

Bluetooth® Download on the App Store ANDROID APP ON Google play

KIM LIGHTING®

DATE: LOCATION:

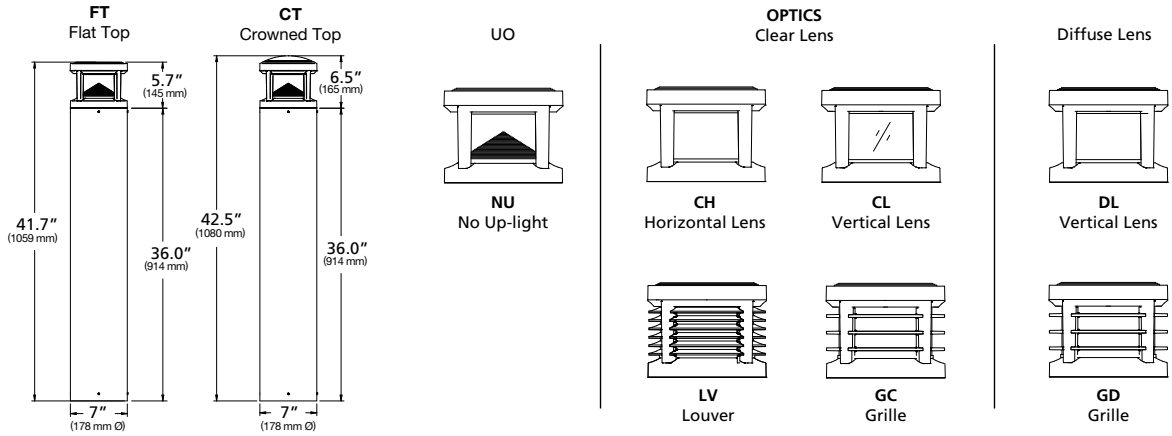
TYPE: PROJECT:

CATALOG #:

PA7R

BOLLARD

DIMENSIONS



DELIVERED LUMENS

Drive Current	LEDs #	Nominal Watts	Nominal Lumens	Lens Options	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
						Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
							B	U	G			B	U	G			B	U	G	
550mA	12L	22	2,000	NU U0 Optics	1	1044	0	0	0	48	1136	0	0	0	52	1164	0	0	0	54
					2	1199	0	0	0	55	1305	0	0	0	60	1336	0	0	0	62
					3	1128	0	0	1	52	1228	0	0	1	57	1257	0	0	1	58
					3HS	953	0	0	0	44	1037	0	0	0	48	1062	0	0	1	49
					4	1362	0	0	0	63	1482	0	0	1	68	1518	0	0	1	70
					5	1265	1	0	0	58	1377	1	0	0	63	1410	1	0	0	65
				CH Clear Horizontal Lens	1	1778	0	3	1	82	1935	0	3	1	89	1981	0	3	1	91
					2	1711	1	3	1	79	1862	1	3	1	86	1906	1	3	1	88
					3	1643	1	3	1	76	1788	1	3	1	82	1831	1	3	1	84
					3HS	1443	0	3	1	66	1570	0	3	1	72	1608	0	3	1	74
					4	1731	0	3	1	80	1884	0	3	1	87	1929	0	3	1	89
					5	1841	1	3	1	85	2003	1	3	1	92	2051	1	3	1	95
				CL Clear Vertical Lens	1	1852	0	4	1	85	2016	1	4	1	93	2064	1	4	1	95
					2	1984	1	3	1	91	2159	1	3	1	99	2211	1	3	1	102
					3	2062	1	3	1	95	2244	1	3	1	103	2298	1	3	1	106
					3HS	1665	0	3	1	77	1811	0	3	1	83	1855	0	3	1	85
					4	2055	0	3	1	95	2236	1	3	1	103	2290	1	3	1	106
					5	2109	1	3	1	97	2295	1	3	1	106	2350	1	3	1	108

PA7R
BOLLARD

DELIVERED LUMENS (CONTINUED)

Drive Current	LEDs #	Nominal Watts	Nominal Lumens	Lens Options	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
						Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
							B	U	G			B	U	G			B	U	G	
550mA	12L	22	2,000	DL Diffused Vertical Lens	1	1639	1	3	2	76	1783	1	3	2	82	1826	1	3	2	84
					5	1721	1	3	2	79	1873	1	3	2	86	1918	1	3	2	88
				LV External Louvers	1	746	0	3	1	34	811	1	3	1	37	831	1	3	1	38
					2	814	1	3	1	37	885	1	3	1	41	907	1	3	1	42
					3	838	1	3	1	39	912	1	3	1	42	934	1	3	1	43
					3HS	605	0	3	1	28	658	0	3	1	30	674	0	3	1	31
					4	879	0	3	1	41	956	1	3	1	44	979	1	3	1	45
					5	888	1	3	1	41	966	1	3	1	45	989	1	3	1	46
				GC Grill with Clear Lens	1	1038	0	3	1	48	1130	0	3	1	52	1157	0	3	1	53
					2	1021	0	3	1	47	1111	1	3	1	51	1138	1	3	1	52
					3	1024	0	3	1	47	1114	1	3	1	51	1141	1	3	1	53
					3HS	854	0	3	1	39	930	0	3	1	43	952	0	3	1	44
					4	1109	0	3	1	51	1207	0	3	1	56	1236	0	3	1	57
					5	1037	1	3	1	48	1128	1	3	1	52	1155	1	3	1	53
				GD Grill with Diffused Lens	1	1036	0	3	1	48	1127	1	3	2	52	1154	1	3	2	53
					5	953	1	3	1	44	1037	1	3	1	48	1062	1	3	1	49

PA7R
BOLLARD

DELIVERED LUMENS (CONTINUED)

Drive Current	LEDs #	Nominal Watts	Nominal Lumens	Lens Options	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
						Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
							B	U	G			B	U	G			B	U	G	
350mA	12L	14	1,000	NU U0 Optics	1	749	0	0	0	54	815	0	0	0	59	835	0	0	0	60
					2	860	0	0	0	62	936	0	0	0	67	958	0	0	0	69
					3	809	0	0	0	58	881	0	0	0	63	902	0	0	0	65
					3HS	684	0	0	0	49	744	0	0	0	53	762	0	0	0	55
					4	977	0	0	0	70	1063	0	0	0	76	1089	0	0	0	78
					5	908	1	0	0	65	988	1	0	0	71	1011	1	0	0	73
				CH Clear Horizontal Lens	1	1184	0	3	1	85	1288	0	3	1	92	1319	0	3	1	95
					2	1139	0	3	1	82	1239	0	3	1	89	1269	0	3	1	91
					3	1094	0	3	1	79	1190	0	3	1	85	1219	0	3	1	87
					3HS	960	0	3	1	69	1045	0	3	1	75	1070	0	3	1	77
					4	1152	0	3	1	83	1254	0	3	1	90	1284	0	3	1	92
					5	1225	1	3	1	88	1333	1	3	1	96	1365	1	3	1	98
				CL Clear Vertical Lens	1	1146	0	3	1	82	1247	0	3	1	90	1277	0	3	1	92
					2	1228	0	3	1	88	1336	1	3	1	96	1368	1	3	1	98
					3	1276	0	3	1	92	1389	1	3	1	100	1422	1	3	1	102
					3HS	1030	0	3	1	74	1121	0	3	1	80	1148	0	3	1	82
					4	1272	0	3	1	91	1384	0	3	1	99	1417	0	3	1	102
					5	1305	1	3	1	94	1420	1	3	1	102	1454	1	3	1	104
				DL Diffused Vertical Lens	1	1086	0	3	1	78	1182	0	3	1	85	1210	0	3	1	87
					5	1141	1	3	1	82	1241	1	3	1	89	1271	1	3	1	91

PA7R
BOLLARD

DELIVERED LUMENS (CONTINUED)

Drive Current	LEDs #	Nominal Watts	Nominal Lumens	Lens Options	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
						Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
							B	U	G			B	U	G			B	U	G	
350mA	12L	14	1,000	LV External Louvers	1	489	0	3	1	35	533	0	3	1	38	545	0	3	1	39
					2	534	0	3	1	38	581	0	3	1	42	595	0	3	1	43
					3	550	0	3	1	40	599	0	3	1	43	613	0	3	1	44
					3HS	397	0	3	1	29	432	0	3	1	31	442	0	3	1	32
					4	577	0	3	1	41	628	0	3	1	45	643	0	3	1	46
					5	583	1	3	1	42	634	1	3	1	46	649	1	3	1	47
				GC Grill with Clear Lens	1	843	0	3	1	61	917	0	3	1	66	939	0	3	1	67
					2	829	0	3	1	60	903	0	3	1	65	924	0	3	1	66
					3	831	0	3	1	60	905	0	3	1	65	926	0	3	1	67
					3HS	694	0	3	1	50	755	0	3	1	54	773	0	3	1	56
					4	901	0	3	1	65	980	0	3	1	70	1004	0	3	1	72
					5	842	1	3	1	60	916	1	3	1	66	938	1	3	1	67
				GD Grill with Diffused Lens	1	728	0	3	1	52	792	0	3	1	57	811	0	3	1	58
					5	782	1	3	1	56	851	1	3	1	61	872	1	3	1	63

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

PA7R

BOLLARD

PHOTOMETRY

PA7R-CH1-12L-020-4K7

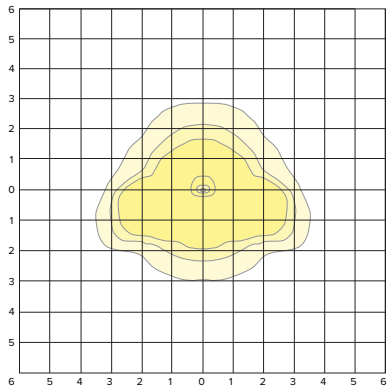
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**1935**
Watts	**22**
Efficacy	**88.0**
IES Type	**II**
BUG Rating	**B0-U3-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	1132	81.8%
Downward House Side	251	18.1%
Downward Total	1384	71%
Upward Street Side	348	63%
Upward House Side	205	37%
Upward Total	553	29%
Total Flux	1937	100%

ISOFOOT CANDLE PLOT



PA7R-CH2-12L-020-4K7

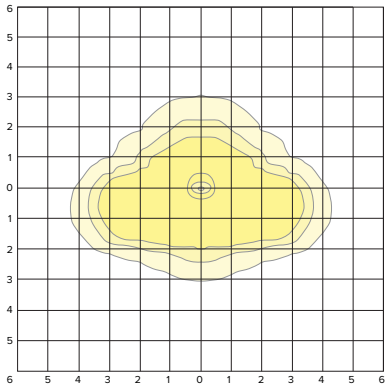
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**1862**
Watts	**22**
Efficacy	**85.0**
IES Type	**II**
BUG Rating	**B1-U3-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	1176	78.7%
Downward House Side	319	21.3%
Downward Total	1494	80%
Upward Street Side	220	60%
Upward House Side	149	40%
Upward Total	369	20%
Total Flux	1863	100%

ISOFOOT CANDLE PLOT



PA7R-CH3-12L-020-4K7

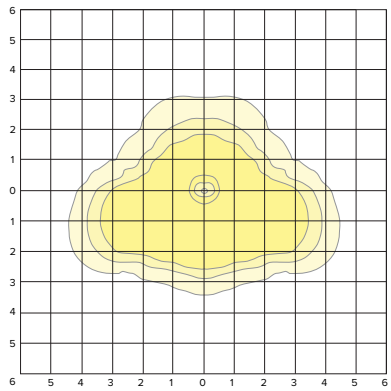
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**1788**
Watts	**21.76**
Efficacy	**82.0**
IES Type	**III**
BUG Rating	**B1-U3-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	1184	80.3%
Downward House Side	290	19.7%
Downward Total	1474	82%
Upward Street Side	185	59%
Upward House Side	130	41%
Upward Total	315	18%
Total Flux	1789	100%

ISOFOOT CANDLE PLOT



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PHOTOMETRY

PA7R-CH3HS-12L-020-4K7

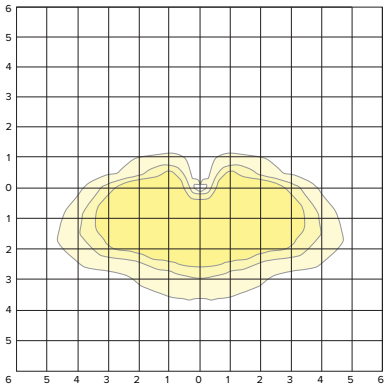
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**1570**
Watts	**21.64**
Efficacy	**73.0**
IES Type	**III**
BUG Rating	**B0-U3-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	1187	92.0%
Downward House Side	103	8.0%
Downward Total	1290	82%
Upward Street Side	230	82%
Upward House Side	51	18%
Upward Total	282	18%
Total Flux	1571	100%

ISOFOOT CANDLE PLOT



PA7R-CH4-12L-020-4K7

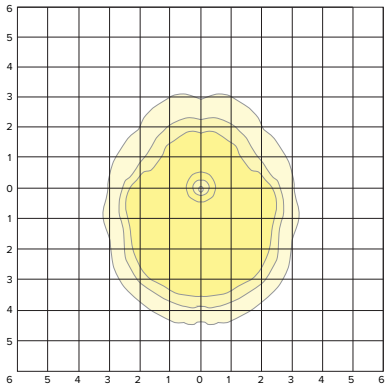
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**1884**
Watts	**21.73**
Efficacy	**87.0**
IES Type	**IV**
BUG Rating	**B0-U3-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	1316	84.0%
Downward House Side	250	16.0%
Downward Total	1566	83%
Upward Street Side	184	58%
Upward House Side	136	42%
Upward Total	319	17%
Total Flux	1885	100%

ISOFOOT CANDLE PLOT



PA7R-CH5-12L-020-4K7

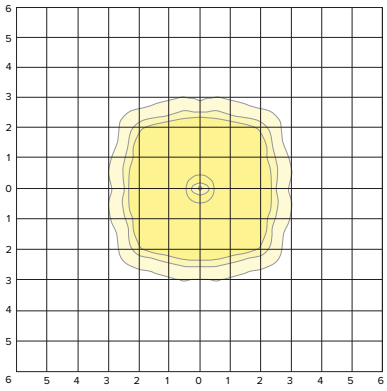
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**2003**
Watts	**21.73**
Efficacy	**92.0**
IES Type	**VS**
BUG Rating	**B1-U3-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	825	50.0%
Downward House Side	825	50.0%
Downward Total	1650	82%
Upward Street Side	177	50%
Upward House Side	177	50%
Upward Total	354	18%
Total Flux	2004	100%

ISOFOOT CANDLE PLOT



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PA7R-CL1-12L-020-4K7

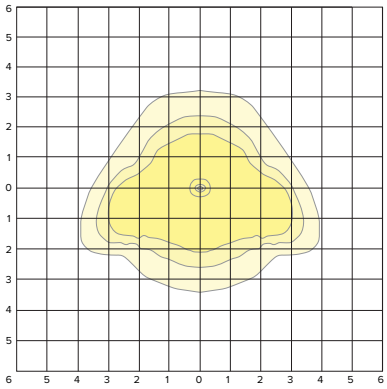
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**2016**
Watts	**21.7**
Efficacy	**93.0**
IES Type	**II**
BUG Rating	**B1-U4-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	1078	77.5%
Downward House Side	312	22.5%
Downward Total	1390	69%
Upward Street Side	373	59%
Upward House Side	254	41%
Upward Total	627	31%
Total Flux	2017	100%

ISOFOOT CANDLE PLOT



PA7R-CL2-12L-020-4K7

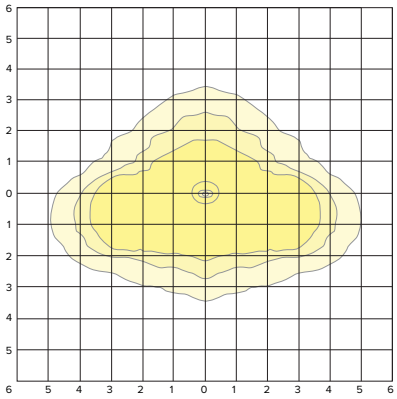
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**2159**
Watts	**21.69**
Efficacy	**100.0**
IES Type	**II**
BUG Rating	**B1-U3-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	1325	77.5%
Downward House Side	384	22.5%
Downward Total	1709	79%
Upward Street Side	258	57%
Upward House Side	193	43%
Upward Total	451	21%
Total Flux	2160	100%

ISOFOOT CANDLE PLOT



PA7R-CL3-12L-020-4K7

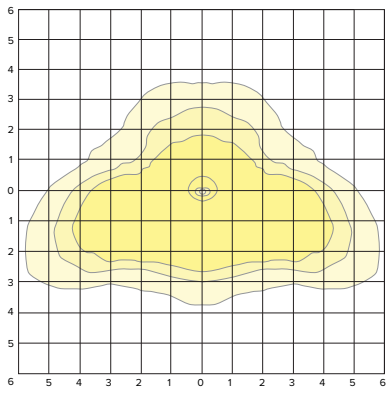
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**2244**
Watts	**21.72**
Efficacy	**103.0**
IES Type	**III**
BUG Rating	**B1-U3-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	1472	80.0%
Downward House Side	367	20.0%
Downward Total	1839	82%
Upward Street Side	231	57%
Upward House Side	175	43%
Upward Total	406	18%
Total Flux	2245	100%

ISOFOOT CANDLE PLOT



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PA7R-CL3HS-12L-020-4K7

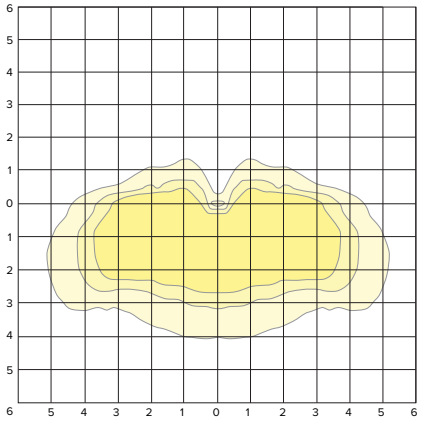
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**1811**
Watts	**21.7**
Efficacy	**83.0**
IES Type	**III**
BUG Rating	**B0-U3-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	1361	92.0%
Downward House Side	118	8.0%
Downward Total	1479	82%
Upward Street Side	277	83%
Upward House Side	56	17%
Upward Total	334	18%
Total Flux	1812	100%

ISOFOOT CANDLE PLOT



PA7R-CL4-12L-020-4K7

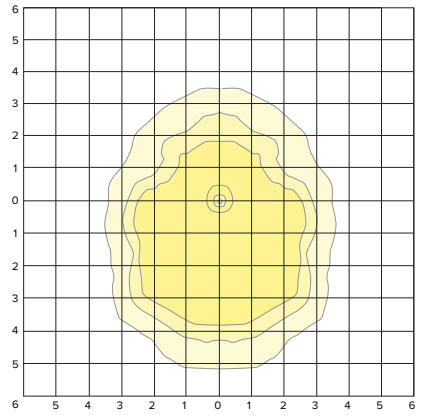
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**2236**
Watts	**21.71**
Efficacy	**103.0**
IES Type	**IV**
BUG Rating	**B1-U3-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	1552	84.9%
Downward House Side	275	15.0%
Downward Total	1827	82%
Upward Street Side	230	56%
Upward House Side	180	44%
Upward Total	410	18%
Total Flux	2237	100%

ISOFOOT CANDLE PLOT



PA7R-CL5-12L-020-4K7

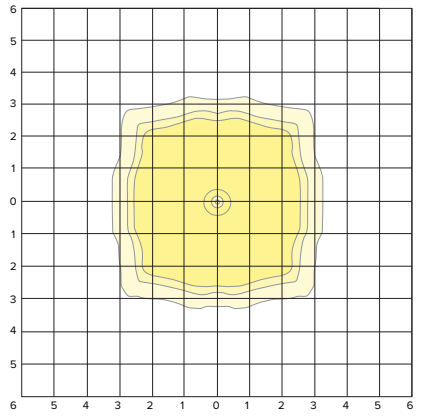
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**2296**
Watts	**21.75**
Efficacy	**106.0**
IES Type	**VS**
BUG Rating	**B1-U3-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	937	50.0%
Downward House Side	937	50.0%
Downward Total	1874	82%
Upward Street Side	211	50%
Upward House Side	211	50%
Upward Total	422	18%
Total Flux	2296	100%

ISOFOOT CANDLE PLOT



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PA7R-DL1-12L-020-4K7

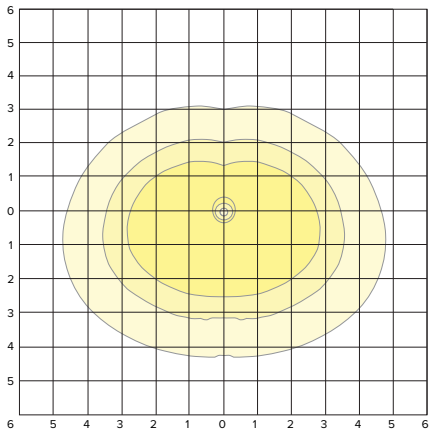
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**1783**
Watts	**21.74**
Efficacy	**82.0**
IES Type	**IV**
BUG Rating	**B1-U3-G2**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	746	66.2%
Downward House Side	381	33.8%
Downward Total	1127	63%
Upward Street Side	408	62%
Upward House Side	248	38%
Upward Total	657	37%
Total Flux	1784	100%

ISOFOOT CANDLE PLOT



PA7R-DL5-12L-020-4K7

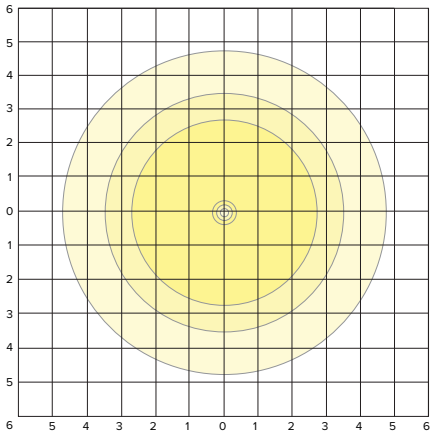
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**1873**
Watts	**21.75**
Efficacy	**86.0**
IES Type	**VS**
BUG Rating	**B1-U3-G2**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	656	50.0%
Downward House Side	656	50.0%
Downward Total	1313	70%
Upward Street Side	281	50%
Upward House Side	281	50%
Upward Total	561	30%
Total Flux	1874	100%

ISOFOOT CANDLE PLOT



PA7R-GC1-12L-020-4K7

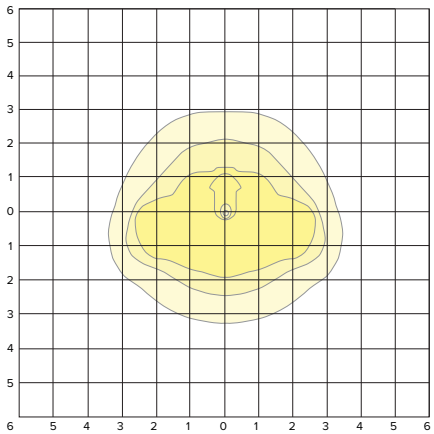
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**1130**
Watts	**21.73**
Efficacy	**52.0**
IES Type	**II**
BUG Rating	**B0-U3-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	434	67.6%
Downward House Side	208	32.4%
Downward Total	642	57%
Upward Street Side	298	61%
Upward House Side	191	39%
Upward Total	489	43%
Total Flux	1131	100%

ISOFOOT CANDLE PLOT



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PA7R-GC2-12L-020-4K7

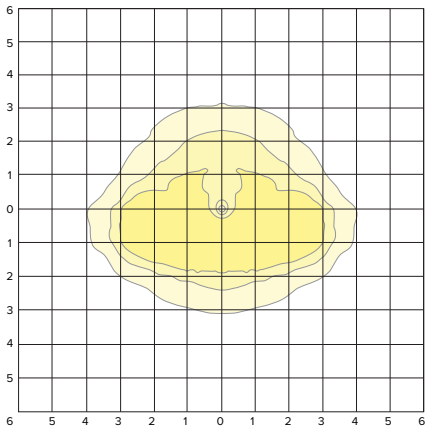
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**1111**
Watts	**21.59**
Efficacy	**51.0**
IES Type	**II**
BUG Rating	**B1-U3-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	488	68.3%
Downward House Side	227	31.7%
Downward Total	715	64%
Upward Street Side	238	60%
Upward House Side	159	40%
Upward Total	397	36%
Total Flux	1112	100%

ISOFOOT CANDLE PLOT



PA7R-GC3-12L-020-4K7

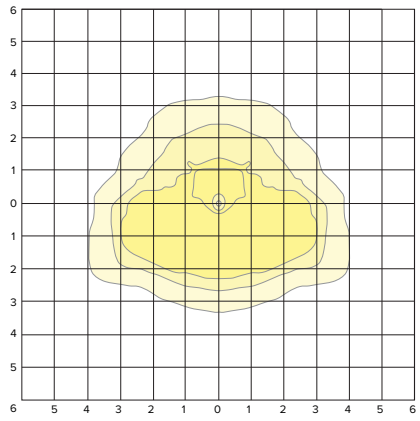
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**1114**
Watts	**21.7**
Efficacy	**51.0**
IES Type	**II**
BUG Rating	**B1-U3-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	513	69.8%
Downward House Side	221	30.1%
Downward Total	735	66%
Upward Street Side	234	62%
Upward House Side	146	38%
Upward Total	380	34%
Total Flux	1114	100%

ISOFOOT CANDLE PLOT



PA7R-GC3HS-12L-020-4K7

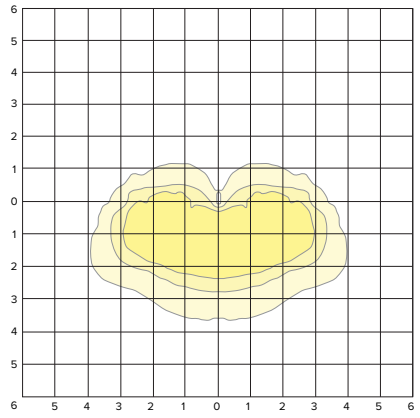
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**930**
Watts	**21.59**
Efficacy	**43.0**
IES Type	**III**
BUG Rating	**B0-U3-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	533	87.1%
Downward House Side	79	12.8%
Downward Total	612	66%
Upward Street Side	265	83%
Upward House Side	54	17%
Upward Total	319	34%
Total Flux	931	100%

ISOFOOT CANDLE PLOT



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PA7R-GC4-12L-020-4K7

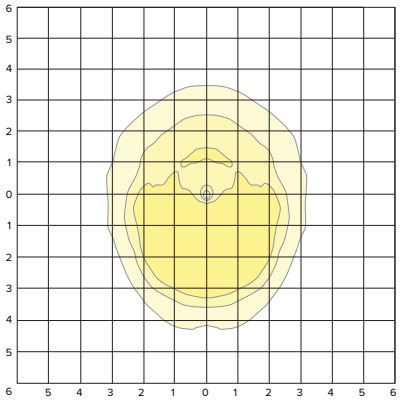
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**1207**
Watts	**21.59**
Efficacy	**56.0**
IES Type	**IV**
BUG Rating	**B0-U3-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	591	74.2%
Downward House Side	205	25.8%
Downward Total	796	66%
Upward Street Side	267	65%
Upward House Side	146	35%
Upward Total	412	34%
Total Flux	1208	100%

ISOFOOT CANDLE PLOT



PA7R-GC5-12L-020-4K7

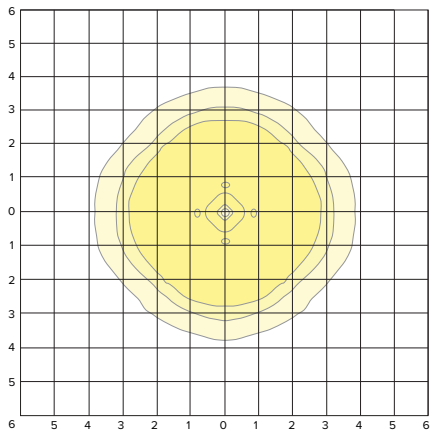
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**1128**
Watts	**21.59**
Efficacy	**52.0**
IES Type	**VS**
BUG Rating	**B1-U3-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	382	50.0%
Downward House Side	382	50.0%
Downward Total	764	68%
Upward Street Side	183	50%
Upward House Side	183	50%
Upward Total	365	32%
Total Flux	1129	100%

ISOFOOT CANDLE PLOT



PA7R-GD1-12L-020-4K7

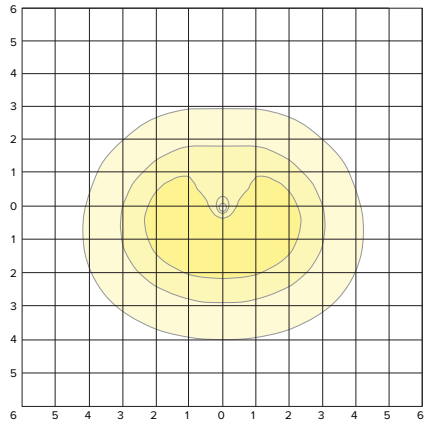
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**1127**
Watts	**21.71**
Efficacy	**51.9**
IES Type	**IV**
BUG Rating	**B1-U3-G2**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	407	62.8%
Downward House Side	241	37.2%
Downward Total	648	57%
Upward Street Side	287	60%
Upward House Side	193	40%
Upward Total	479	43%
Total Flux	1127	100%

ISOFOOT CANDLE PLOT



DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

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PA7R-GD5-12L-020-4K7

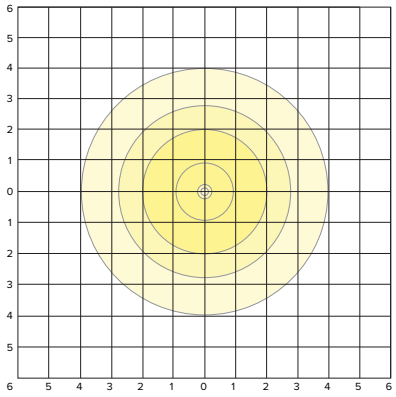
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**1037**
Watts	**21.6**
Efficacy	**48.0**
IES Type	**VS**
BUG Rating	**B1-U3-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	309	50.0%
Downward House Side	309	50.0%
Downward Total	618	60%
Upward Street Side	210	50%
Upward House Side	210	50%
Upward Total	420	40%
Total Flux	1038	100%

ISOFOOT CANDLE PLOT



PA7R-LV1-12L-020-4K7

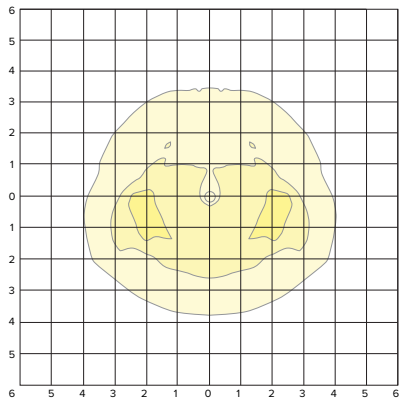
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**811**
Watts	**21.73**
Efficacy	**37.0**
IES Type	**II**
BUG Rating	**B1-U3-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	303	57.7%
Downward House Side	222	42.2%
Downward Total	526	65%
Upward Street Side	160	56%
Upward House Side	126	44%
Upward Total	286	35%
Total Flux	812	100%

ISOFOOT CANDLE PLOT



PA7R-LV2-12L-020-4K7

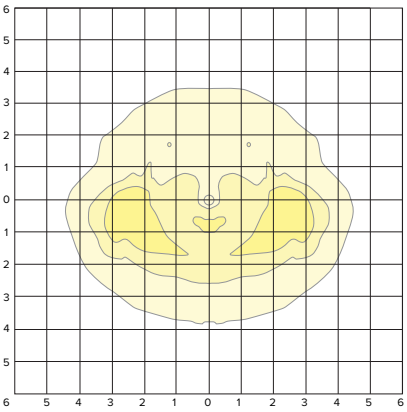
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**885**
Watts	**21.68**
Efficacy	**41.0**
IES Type	**II**
BUG Rating	**B1-U3-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	378	61.9%
Downward House Side	233	38.1%
Downward Total	611	69%
Upward Street Side	158	58%
Upward House Side	116	42%
Upward Total	274	31%
Total Flux	885	100%

ISOFOOT CANDLE PLOT



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PA7R-LV3-12L-020-4K7

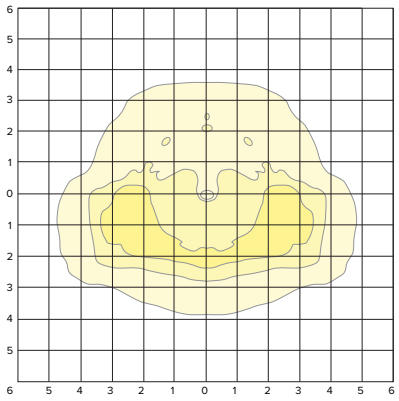
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**912**
Watts	**21.69**
Efficacy	**42.0**
IES Type	**III**
BUG Rating	**B1-U3-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	414	63.7%
Downward House Side	233	35.8%
Downward Total	650	71%
Upward Street Side	154	59%
Upward House Side	109	41%
Upward Total	263	29%
Total Flux	913	100%

ISOFOOT CANDLE PLOT



PA7R-LV3HS-12L-020-4K7

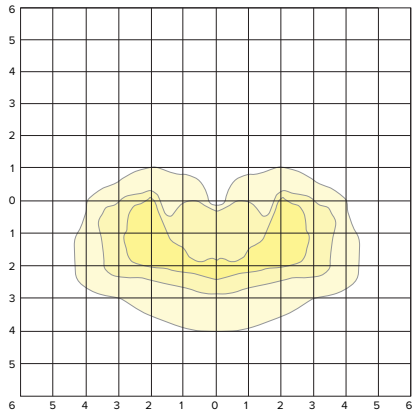
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**658**
Watts	**21.69**
Efficacy	**30.0**
IES Type	**III**
BUG Rating	**B0-U3-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	383	82.5%
Downward House Side	81	17.5%
Downward Total	464	71%
Upward Street Side	155	80%
Upward House Side	39	20%
Upward Total	194	29%
Total Flux	658	100%

ISOFOOT CANDLE PLOT



PA7R-LV4-12L-020-4K7

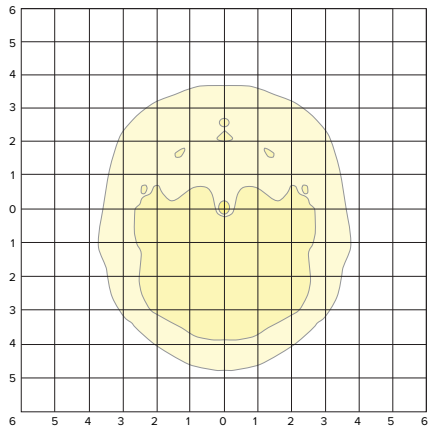
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**956**
Watts	**21.69**
Efficacy	**44.0**
IES Type	**IV**
BUG Rating	**B1-U3-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	454	67.5%
Downward House Side	219	32.5%
Downward Total	673	70%
Upward Street Side	176	62%
Upward House Side	107	38%
Upward Total	283	30%
Total Flux	956	100%

ISOFOOT CANDLE PLOT



DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

PA7R

BOLLARD

PHOTOMETRY

PA7R-LV5-12L-020-4K7

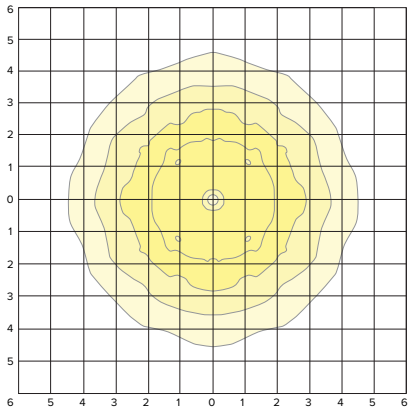
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**966**
Watts	**21.7**
Efficacy	**45.0**
IES Type	**VS**
BUG Rating	**B1-U3-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	354	50.0%
Downward House Side	354	50.0%
Downward Total	708	73%
Upward Street Side	129	50%
Upward House Side	129	50%
Upward Total	259	27%
Total Flux	967	100%

ISOFOOT CANDLE PLOT



PA7R-NU1-12L-020-4K7

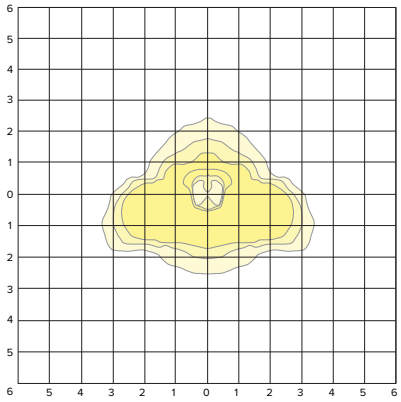
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**1136**
Watts	**21.75**
Efficacy	**52.0**
IES Type	**I**
BUG Rating	**B0-U0-G0**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	986	86.7%
Downward House Side	151	13.3%
Downward Total	1137	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	1137	100%

ISOFOOT CANDLE PLOT



PA7R-NU2-12L-020-4K7

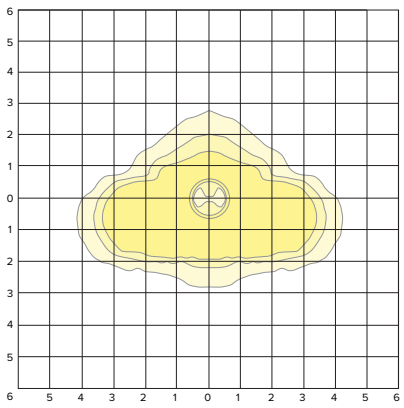
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**1305**
Watts	**21.74**
Efficacy	**60.0**
IES Type	**II**
BUG Rating	**B0-U0-G0**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	1073	82.2%
Downward House Side	233	17.8%
Downward Total	1306	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	1306	100%

ISOFOOT CANDLE PLOT



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BOLLARD

PHOTOMETRY

PA7R-NU3-12L-020-4K7

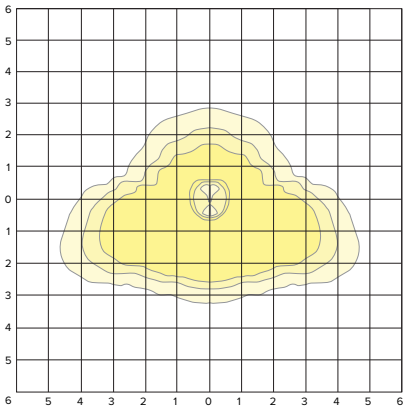
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**1228**
Watts	**21.76**
Efficacy	**56.0**
IES Type	**III**
BUG Rating	**B0-U0-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	1035	84.3%
Downward House Side	194	15.8%
Downward Total	1228	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	1228	100%

ISOFOOT CANDLE PLOT



PA7R-NU3HS-12L-020-4K7

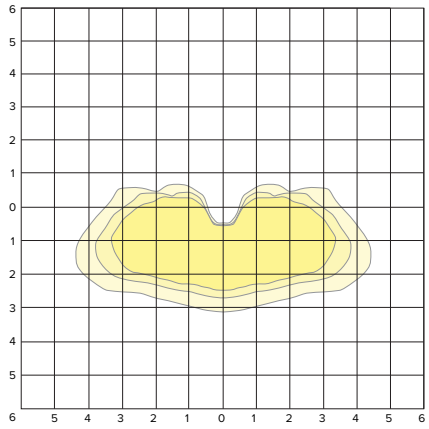
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**1037**
Watts	**21.74**
Efficacy	**48.0**
IES Type	**III**
BUG Rating	**B0-U0-G0**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	987	95.1%
Downward House Side	51	4.9%
Downward Total	1038	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	1038	100%

ISOFOOT CANDLE PLOT



PA7R-NU4-12L-020-4K7

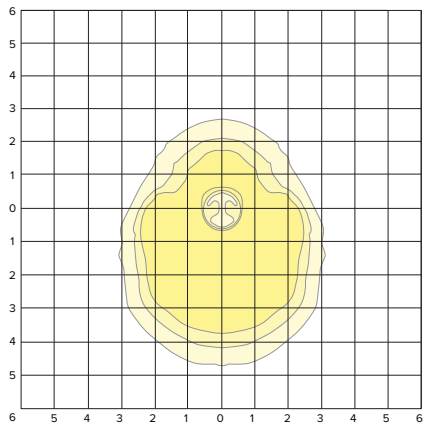
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**1482**
Watts	**21.67**
Efficacy	**68.0**
IES Type	**IV**
BUG Rating	**B0-U0-G1**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	1318	88.9%
Downward House Side	164	11.1%
Downward Total	1483	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	1483	100%

ISOFOOT CANDLE PLOT



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BOLLARD

PHOTOMETRY(CONTINUED)

PA7R-NU5-12L-020-4K7

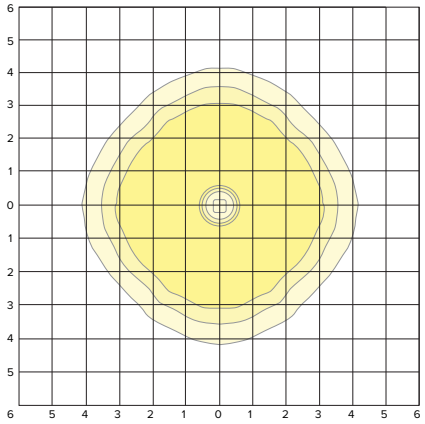
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**1377**
Watts	**21.68**
Efficacy	**63.0**
IES Type	**VS**
BUG Rating	**B1-U0-G0**
Mounting Height	**3.5 ft**
Grid Scale	**6 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	689	50.0%
Downward House Side	689	50.0%
Downward Total	1377	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	1377	100%

ISOFOOT CANDLE PLOT



DATE: LOCATION:

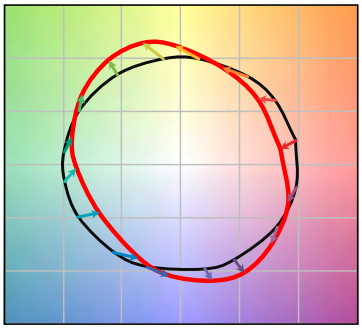
TYPE: PROJECT:

CATALOG #:

PA7R
BOLLARD

TM-30 DATA

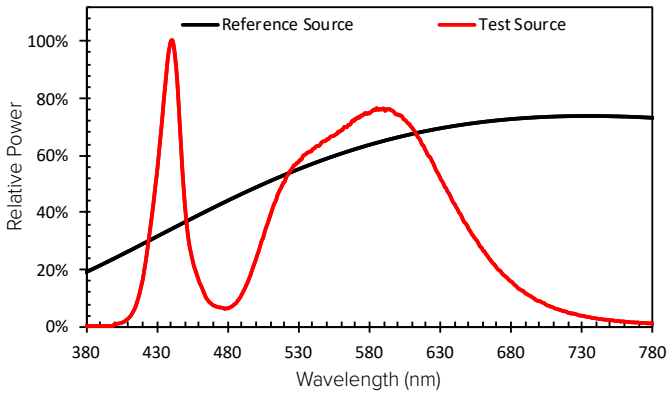
COLOR VECTOR GRAPHIC



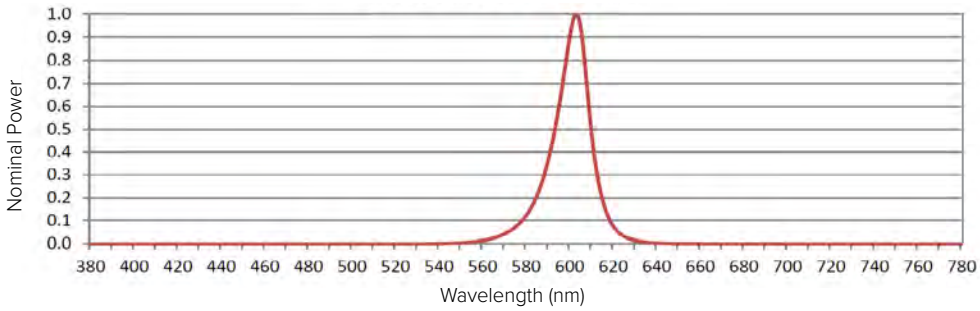
TEST SOURCE

R_f	68
R_g	99
CCT(K)	3947
D_{UV}	0.0004
x	0.3831
y	0.3793
CIE R_a	72

SPECTRAL POWER DISTRIBUTION COMPARISON



AMBER SPECTRAL POWER DISTRIBUTION



ELECTRICAL DATA

Electrical													Dimming				
# LED	System Watts	Drive Current	Line Voltage		Amps AC						Min. Power Factor	Max THD (%)	Dimming Range	Source current out of 0-10V		Absolute voltage range on 0-10V (+)	
			VAC	Hz	120	208	240	277	347	480				Min	Max	Min	Max
12	22	550mA	120-480	50/60	0.18	0.11	0.09	0.08	0.06	0.05	>0.9	20	10% to 100%	0mA	1mA	0V	10V
	14	350mA			0.12	0.07	0.06	0.05	0.04	0.03							

TM-21 Lifetime Calculation - Projected Lumen Maintenance (25°C / 77°C) & (40°C / 104°C)						
Hours	0	25,000	36,000	50,000	100,000	Reported L70
Projected Lumen Maintenance	100%	98%	97%	95%	90%	60khrs

CRI Lumen Multiplier 80 and 90 CRI		
CCT	80 CRI	90 CRI
2700K	0.859	0.655
3000K	0.9119	0.7033
3500K	0.906	0.732
4000K	0.8941	0.734
5000K	0.879	0.7712
Scailing factor of 5000K 70CRI lumen packages		

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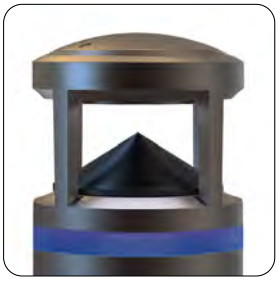
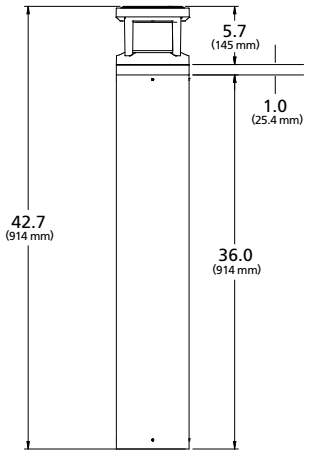
ADDITIONAL INFORMATION

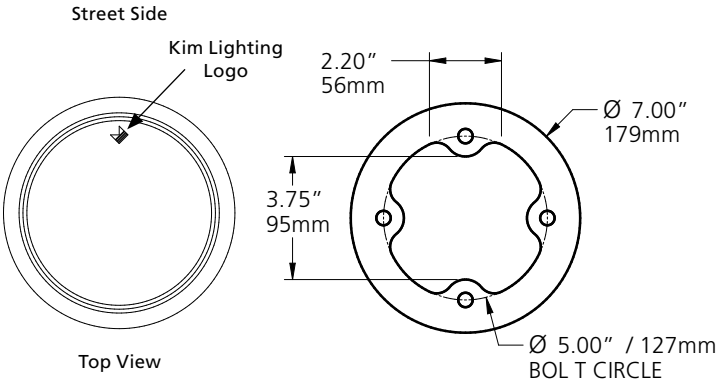
LUMINOUS ACCENT:
- The Luminous Accent option adds an additional 1" / 25.4mm to the overall fixture height and may be controlled via wired DMX RDM or Bluetooth® wireless. The Luminous Accent shall be IK08.



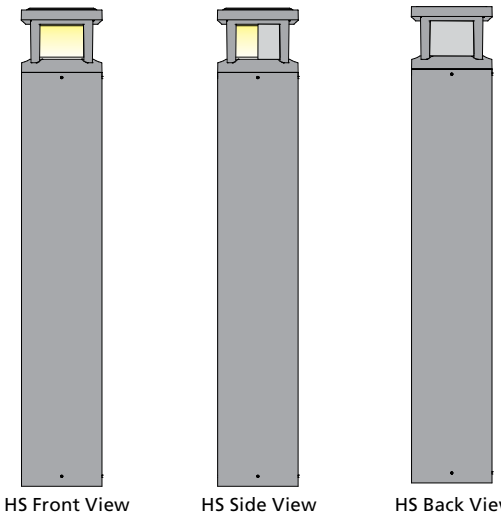


RGBW REMOTE APP
- The RGBW Remote application may be downloaded free of charge from the Apple App Store or Google Play.
- Color selection and adjustment.
- Camera function for color matching.
- Intensity slider for dimming/ramping up.
- Save and rename up to 10 presets.
- Group and rename fixtures.
- Fixture is password protected, refer to instructions to set unique password.

MOUNTING
ALUMINUM BODY
- Once attached to base mounting plate, fixture may be rotated 20° in either direction and secured with set screws at base of the bollard body. KIM Lighting logo indicates 'street side' output.



SHIELDING
- HS configurations feature factory installed 180° shield(s) that may also be installed in the field for any Optic configuration.

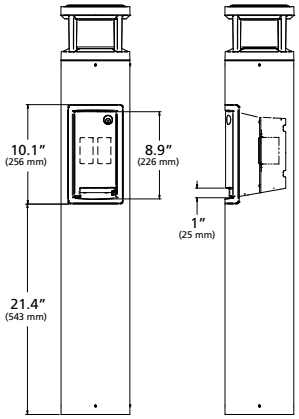


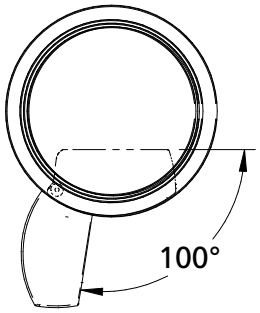
PA7R
BOLLARD

ADDITIONAL INFORMATION (CONTINUED)

RECEPTACLE OUTLET PANEL

- The Receptacle outlet panel shall be NEMA 3R rated for wet location(s) while in use and shall be compatible with any single receptacle outlet device with standard mounting holes. Door shall be self-closing. Tamper resistant lock must be specified at time of order. Devices and device wiring by others.

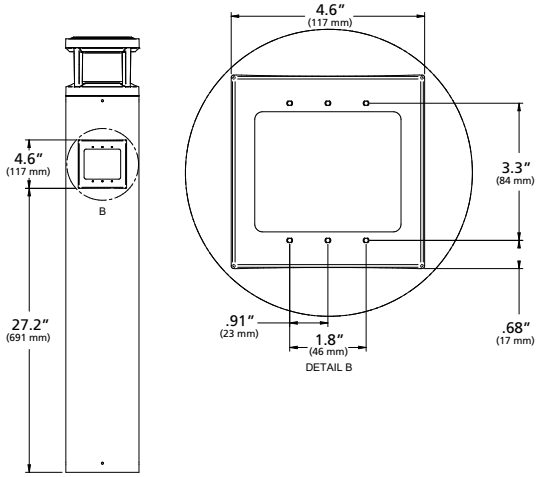




Range of Motion for access door

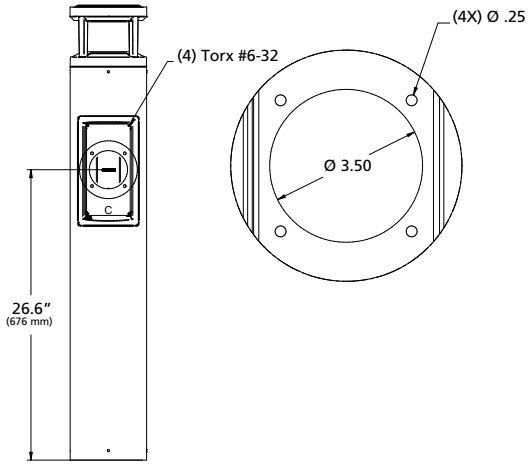
INTEGRAL ELECTRICAL BOX

- The integral 2 Gang electrical box shall be 3" deep and have standard mounting holes for installing either a single receptacle outlet device or a pair of single receptacle outlet device. Devices, device wiring, device hardware and bezel by others.



SPEAKER GRILLE ENCLOSURE

- The speaker grille enclosure shall accommodate a 3"Ø marine grade speaker rated for outdoor use. Grille shall be secured with (4) Torx # screws for accessibility. Mounting provisions as shown. Speaker, mounting bracket/hardware and wiring by others.



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VIPER Area/Site

VIPER LUMINAIRE

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

MICROSTRIKE | OPTICS STRIKE

FEATURES

- Low profile LED area/site luminaire with a variety of IES distributions for lighting applications such as auto dealership, retail, commercial, and campus parking lots
- Featuring two different optical technologies, Strike and Micro Strike Optics, which provide the best distribution patterns for retrofit or new construction
- Rated for high vibration applications including bridges and overpasses. All sizes are rated for 1.5G
- Control options including photo control, occupancy sensing, NX Lighting Controls™, wiSCAPE and 7-Pin with networked controls
- New customizable lumen output feature allows for the wattage and lumen output to be customized in the factory to meet whatever specification requirements may entail
- Field interchangeable mounting provides additional flexibility after the fixture has shipped

c UL us IP65 | BUY AMERICAN SOLUTIONS See Certification Specifications | DLC LISTED | DLC LISTED PREMIUM

CONTROL TECHNOLOGY

NX LIGHTING CONTROLS | wiSCAPE™

SPECIFICATIONS

CONSTRUCTION

- Die-cast housing with hidden vertical heat fins are optimal for heat dissipation while keeping a clean smooth outer surface
- Corrosion resistant, die-cast aluminum housing with 1000 hour powder coat paint finish
- External hardware is corrosion resistant

OPTICS

- Micro Strike Optics (160, 320, 480, or 720 LED counts) maximize uniformity in applications and come standard with mid-power LEDs which evenly illuminate the entire luminous surface area to provide a low glare appearance. Catalog logic found on page 2
- Strike Optics (36, 72, 108, or 162 LED counts) provide best in class distributions and maximum pole spacing in new applications with high powered LEDs. Strike optics are held in place with a polycarbonate bezel to mimic the appearance of the Micro Strike Optics so both solutions can be combined on the same application. Catalog logic found on page 3
- Both optics maximize target zone illumination with minimal losses at the house-side, reducing light trespass issues. Additional backlight control shields and house side shields can be added for further reduction of illumination behind the pole
- One-piece silicone gasket ensures a weatherproof seal
- Zero up-light at 0 degrees of tilt
- Field rotatable optics

INSTALLATION

- Mounting patterns for each arm can be found on page 11
- Optional universal mounting block for ease of installation during retrofit applications. Available as an option (ASQU) or accessory for square and round poles
- All mounting hardware included

INSTALLATION (CONTINUED)

- Knuckle arm fitter option available for 2-3/8" OD tenon
- For products with EPA less than 1 mounted to a pole greater that 20ft, a vibration damper is recommended

ELECTRICAL

- Universal 120-277 VAC or 347-480 VAC input voltage, 50/60 Hz
- Ambient operating temperature -40˚C to 40˚C
- Drivers have greater than 90% power factor and less than 20% THD
- LED drivers have output power over-voltage, over-current protection and short circuit protection with auto recovery
- Field replaceable surge protection device provides 20kA protection meeting ANSI/IEEE C62.41.2 Category C High and Surge Location Category C3; Automatically takes fixture off-line for protection when device is compromised
- Dual Driver option provides 2 drivers within luminaire but only one set of leads exiting the luminaire, where Dual Power Feed provides two drivers which can be wired independently as two sets of leads are extended from the luminaire. Both options cannot be combined

CONTROLS

- Photo control, occupancy sensor programmable controls, and Zigbee wireless controls available for complete on/off and dimming control
- Please consult brand or sales representative when combining control and electrical options as some combinations may not operate as anticipated depending on your application
- 7-pin ANSI C136.41-2013 photocontrol receptacle option available for twist lock photocontrols or wireless control modules (control accessories sold separately)

CONTROLS (CONTINUED)

- 0- 10V Dimming Drivers are standard and dimming leads are extended out of the luminaire unless control options require connection to the dimming leads. Must specify if wiring leads are to be greater than the 6" standard
- NX Lighting Controls™ available with in fixture wireless control module, features dimming and occupancy sensor
- wiSCAPE® available with in fixture wireless control module, features dimming and occupancy sensor. Also available in 7-pin configuration

CERTIFICATIONS

- DLC® (DesignLights Consortium Qualified), with both Premium and Standard Qualified configurations. Please refer to the DLC website for specific product qualifications at http://www.designlights.org
- Listed to UL1598 and CSA C22.2#250.0-24 for wet locations and 40˚C ambient temperatures
- 1.5 G rated for ANSI C136.31 high vibration applications
- Fixture is IP65 rated
- Meets IDA recommendations using 3K CCT configuration at 0 degrees of tilt
- This product qualifies as a "designated country construction material" per FAR 52.225-11 Buy American-Construction Materials under Trade Agreements effective 04/23/2020.

WARRANTY

- 5 year warranty

KEY DATA	
Lumen Range	5,000–80,000
Wattage Range	36–600
Efficacy Range (LPW)	92–155
Weight lbs. (kg)	13.7-30.9 (6.2-13.9)

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DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

VIPER Area/Site

VIPER LUMINAIRE

STRIKE OPTIC – ORDERING GUIDE

Example: VP–ST–1–36L-39–3K7–2–UNV–A–BLT

CATALOG #

VP –

Series	Optic Platform	Size	Light Engine	CCT/CRI	Distribution	Optic Rotation	Voltage
VP Viper	**ST** Strike	**1** Size 1	**36L-39** [8] 5500 lumens	**AM** monochromatic amber, 595nm	**FR** Auto Front Row	**BLANK** No Rotation	**UNV** 120-277V
			36L-55 [8] 7500 lumens		**2** Type 2		
			36L-85 10000 lumens	**27K8** 2700K, 80 CRI	**3** Type 3	**L** Optic rotation left	**120** 120V
			36L-105 12500 lumens	**3K7** 3000K, 70 CRI	**4F** Type 4 Forward		**208** 208V
			36L-120 14000 lumens	**3K8** 3000K, 80 CRI	**4W** Type 4 Wide	**R** Optic rotation right	**240** 240V
		2 Size 2	**72L-115** 15000 lumens	**3K9** 3000K, 90 CRI	**5QN** Type 5 Square Narrow		**277** 277V
			72L-145 18000 lumens	**35K8** 3500K, 80 CRI	**5QW** Type 5 Square Wide		**347** 347V
			72L-180 21000 lumens	**4K7** 4000K, 70 CRI	**5QM** Type 5 Square Medium		**480** 480V
			72L-210 24000 lumens	**4K8** 4000K, 80 CRI	**5W** Type 5 Wide (Round)		
			72L-240 27000 lumens	**4K9** 4000K, 90 CRI	**5RW** Type 5 Rectangular		
		3 Size 3	**108L-215** [8] 27000 lumens	**5K7** 5000K, 70 CRI	**C** Corner Optic		
			108L-250 30000 lumens	**5K8** 5000K, 80 CRI	**TC** Tennis Court Optic		
			108L-280 33000 lumens				
			108L-325 36000 lumens				
			108L-365 40000 lumens				
		4 Size 4	**162L-320** 40000 lumens				
			162L-365 [10] 44000 lumens				
			162L-405 48000 lumens				
			162L-445 52000 lumens				
			162L-485 55000 lumens				
			162L-545 [8] 60000 lumens				
			CLO Custom Lumen Output [1]				

–

Mounting	Color	Options
A Arm mount for square pole/flat surface	**BLT** Black Matte Textured	**F** Fusing
A_ Arm mount for round pole [3]	**BLS** Black Gloss Smooth	**E** Battery Backup [1,2,7,8,9]
ASQU Universal arm mount for square pole	**DBT** Dark Bronze Matte Textured	**2PF** Dual Power Feed
A_U Universal arm mount for round pole [3]	**DBS** Dark Bronze Gloss Smooth	**2DR** Dual Driver
AAU Adjustable arm for pole mounting (universal drill pattern)	**GTT** Graphite Matte Textured	**TE** Tooless Entry
AA_U Adjustable arm mount for round pole [3]	**LGS** Light Grey Gloss Smooth	**BC** Backlight Control
ADU Decorative upswept Arm (universal drill pattern)	**LGT** Light Grey Gloss Textured	**TB** Terminal Block
AD_U Decorative upswept arm mount for round pole [3]	**PSS** Platinum Silver Smooth	
MAF Mast arm fitter for 2-3/8" OD horizontal arm	**WHT** White Matte Textured	
K Knuckle	**WHS** White Gloss Smooth	
T Trunnion	**VGT** Verde Green Textured	
WB Wall Bracket, horizontal tenon with MAF	**Color Option**	
WM Wall mount bracket with decorative upswept arm	**CC** Custom Color	
WA Wall mount bracket with adjustable arm		

Network Control Options	
NXWS16F	NX Networked Wireless Enabled Integral NXSMP2-LMO PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming [1,3,4]
NXWS40F	NX Networked Wireless Enabled Integral NXSMP2-HMO PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming [1,3,4]
NXW	NX Networked Wireless Radio Module NXRM2 and Bluetooth Programming, without Sensor [3,4]
WIR	wiSCAPE® In-Fixture Module [3,4]
WIRSC	wiSCAPE® Module and Occupancy Sensor [3,4]
Stand Alone Sensors	
BTS-14F	Bluetooth® Programmable, BTSMP-LMO PIR Occupancy Sensor with Automatic Dimming Photocell and 360° Lens
BTS-40F	Bluetooth® Programmable, BTSMP-HMO PIR Occupancy Sensor with Automatic Dimming® Photocell and 360° Lens
BTSO-12F	Bluetooth® Programmable, BTSMP-OMNI-O PIR Occupancy Sensor with Automatic Dimming Photocell and 360° Lens
7PR	7-Pin Receptacle [4]
7PR-SC	7-Pin Receptacle with shorting cap [4]
3PR	3-Pin twist lock [4]
3PR-SC	3-Pin receptacle with shorting cap [4]
3PR-TL	3-Pin PCR with photocontrol [4]
Programmed Controls	
ADD	AutoDim Timer Based Dimming [4]
ADT	AutoDim Time of Day Dimming [4]
Photocontrols	
PC	Button Photocontrol [4,7]

1 – Items with a grey background can be done as a custom order. Contact brand representative for more information
2 – Battery temperature rating -20C to 55C
3 – Replace "_" with "3" for 3.5"-4.13" OD pole, "4" for 4.18"-5.25" OD pole, "5" for 5.5"-6.5" OD pole
4 – Networked Controls cannot be combined with other control options
5 – Not available with 2PF option
6 – Not available with 480V
7 – Not available with 347 or 480V
8 – Not available with Dual Driver option
9 – Only available in Size 1 housing, up to 105 Watts
10 – Some voltage restrictions may apply when combined with controls

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VIPER Area/Site

VIPER LUMINAIRE

ORDERING GUIDE (CONTINUED)

CATALOG #

Accessory Type		Size		Option		Color	
SHD	Shield	1	Size 1	HSS-90-B	House Side Shield 90° Back	BLS	Black Gloss Smooth
		2	Size 2	HSS-90-F	House Side Shield 90° Front	BLT	Black Matte Textured
		3	Size 3	HSS-90-S	House Side Shield 90° Side	DBS	Dark Bronze Gloss Smooth
		4	Size 4	HSS-270-BSS	House Side Shield 270° Back/Side/Side	DBT	Dark Bronze Matte Textured
				HSS-270-FSS	House Side Shield 270° Front/Side/Side	GTT	Graphite Matte Textured
				HSS-270-FSB	House Side Shield 270° Front/Side/Back	LGS	Light Gray Gloss Smooth
				HSS-360	House Side Shield 360°	PSS	Platinum Silver Smooth
				BC	Back Light Control	WHS	White Gloss Smooth
MTG	Mounting			A	Arm Mount for square pole/flat surface	WHT	White Matte Textured
				ASQU	Universal Arm Mount for square pole	VGT	Green Landscape Decorative
				AAU	Adjustable Arm for pole mounting	LEG	Legacy Colors
				ADU	Decorative upswept Arm	**Color Option**	
				RPA	Round Pole Adapter	CC	Custom Color
				MAF	Mast Arm Fitter for 2-3/8" OD horizontal arm		
				K	Knuckle		
				T	Trunnion		
				WB	Wall Bracket (compatible with universal arm mounts)		

Accessory Type		Option	
MSC	Miscellaneous	BIRD SPK	Bird Spike

Current Control Solutions — Accessories (Sold Separately)

NX Lighting Controls

- ☐ **NXOFM-1R1D-UNV** — On-fixture Module (7-pin), On / Off / Dim, Daylight Sensor with NX Radio and Bluetooth® Radio, 120–480VAC

wiSCAPE® Lighting Control

- ☐ **WIR-RME-L** — On-fixture Module (7-pin or 5-pin), On / Off / Dim, Daylight Sensor with wiSCAPE Radio, 110–480VAC
- ☐ **SCP-REMOTE** — Remote Control for SCP/_F option. Order at least one per project to program and control the occupancy sensor

For additional information related to these accessories please visit currentlighting.com/beacon. Options provided for use with integrated sensor, please view specification sheet ordering information table for details.

CONTROLS

wiSCAPE™ NX LIGHTING CONTROLS™

Control Option	Sensor	Networkable	Scheduling	Occupancy	Daylight Harvesting	On/Off Control	Programming	Pair with Sensor	Sensor Mounting Height
NXW	–	✔	✔	–	–	✔	✔	–	–
NXWS_F	NXSMP2	✔	✔	✔	✔	✔	✔	–	16ft, 40ft
BTSO12F	BTSMP-OMNI-O	–	–	✔	✔	✔	Bluetooth	–	12ft
BTS_F	BTSMP	–	–	✔	✔	✔	Bluetooth	–	14ft, 40ft
ADD	–	–	✔	–	–	✔	–	✔	–
ADT	–	–	✔	–	–	✔	–	✔	–
7PR	–	Paired with external control	Paired with external control	–	Paired with external control	Paired with external control	–	✔	–
7PR-SC	–	–	–	–	–	–	–	✔	–
3PR	–	–	–	–	–	Paired with external control	–	✔	–
3PR-SC	–	–	–	–	–	–	–	✔	–
3PR-TL	–	–	–	–	✔	✔	–	✔	–
WIR	–	✔	✔	–	✔	✔	Gateway	–	–
WIRSC	BTSMP	✔	✔	✔	✔	✔	Gateway	–	14ft, 40ft

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VIPER LUMINAIRE

DELIVERED LUMENS

For delivered lumens, please see Lumens Data PDF on www.Currentlighting.com

PROJECTED LUMEN MAINTENANCE

Ambient Temp.	0	25,000	*TM-21-11 36,000	50,000	100,000	Calculated L_{70} (Hours)
25°C / 77°F	1.00	0.97	0.96	0.95	0.91	408,000
40°C / 104°F	0.99	0.96	0.95	0.94	0.89	356,000

LUMINAIRE AMBIENT TEMPERATURE FACTOR (LATF)

Ambient Temperature		Lumen Multiplier
0°C	32°F	1.03
10°C	50°F	1.01
20°C	68°F	1.00
25°C	77°F	1.00
30°C	86°F	0.99
40°C	104°F	0.98

Micro Strike Lumen Multiplier			
CCT	70 CRI	80 CRI	90 CRI
2700K	–	0.841	–
3000K	0.977	0.861	0.647
3500K	–	0.900	–
4000K	1	0.926	0.699
5000K	1	0.937	0.791
Monochromatic Amber Multiplier			
Amber	0.250		

Strike Lumen Multiplier			
CCT	70 CRI	80 CRI	90 CRI
2700K	0.9	0.81	0.62
3000K	0.933	0.853	0.659
3500K	0.959	0.894	0.711
4000K	1	0.9	0.732
5000K	1	0.9	0.732
Monochromatic Amber Multiplier			
Amber	0.255		

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VIPER LUMINAIRE

ELECTRICAL DATA: STRIKE

# OF LEDS	36				
NOMINAL WATTAGE	39	55	85	105	120
SYSTEM POWER (W)	39.6	56.8	83.6	108.2	120.9
INPUT VOLTAGE (V)	CURRENT (Amps)				
120	0.33	0.46	0.71	0.88	0.96
208	0.19	0.26	0.41	0.50	0.55
240	0.16	0.23	0.35	0.44	0.48
277	0.14	0.20	0.31	0.38	0.42
347	0.11	0.16	0.24	0.30	0.33
480	0.08	0.11	0.18	0.22	0.24

# OF LEDS	72				
NOMINAL WATTAGE	115	145	180	210	240
SYSTEM POWER (W)	113.7	143.2	179.4	210.2	241.7
INPUT VOLTAGE (V)	CURRENT (Amps)				
120	1.00	1.21	1.50	1.75	1.79
208	0.58	0.70	0.87	1.01	1.03
240	0.50	0.60	0.75	0.88	0.90
277	0.43	0.52	0.65	0.76	0.78
347	0.35	0.42	0.52	0.61	0.62
480	0.25	0.30	0.38	0.44	0.45

# OF LEDS	108				
NOMINAL WATTAGE	215	250	280	325	365
SYSTEM POWER (W)	214.8	250.8	278.3	324.7	362.6
INPUT VOLTAGE (V)	CURRENT (Amps)				
120	2.00	2.08	2.33	3.04	2.67
208	1.15	1.20	1.35	1.75	1.54
240	1.00	1.04	1.17	1.52	1.33
277	0.87	0.90	1.01	1.32	1.16
347	0.69	0.72	0.81	1.05	0.92
480	0.50	0.52	0.58	0.76	0.67

# OF LEDS		162				
NOMINAL WATTAGE	320	365	405	445	485	545
SYSTEM POWER (W)	322.1	362.6	403.6	445.1	487.1	543.9
INPUT VOLTAGE (V)		CURRENT (Amps)				
120	2.71	2.67	3.38	3.71	4.04	4.54
208	1.56	1.54	1.95	2.14	2.33	2.62
240	1.35	1.33	1.69	1.85	2.02	2.27
277	1.17	1.16	1.46	1.61	1.75	1.97
347	0.94	0.92	1.17	1.28	1.40	1.57
480	0.68	0.67	0.84	0.93	1.01	1.14

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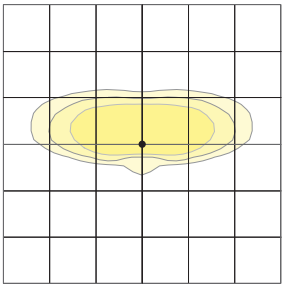
VIPER LUMINAIRE

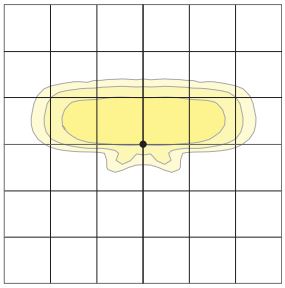
OPTIC STRIKE PHOTOMETRY

The following diagrams represent the general distribution options offered for this product. For detailed information on specific product configurations, see website photometric test reports.

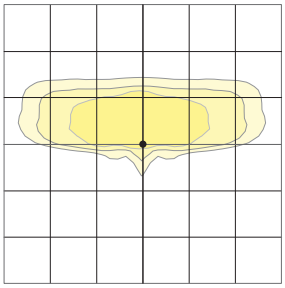
Type FR – Front Row/Auto Optic



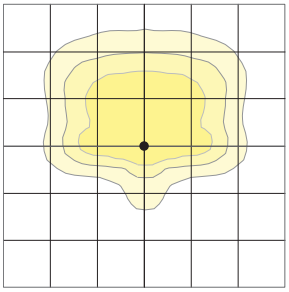
Type 2



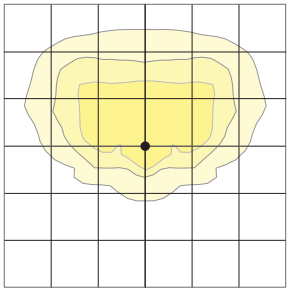
Type 3



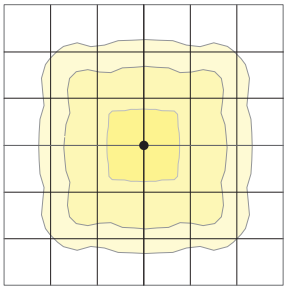
Type 4 Forward



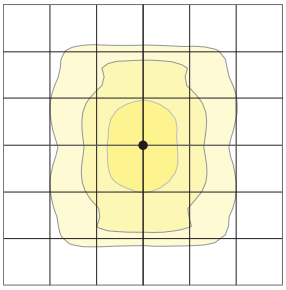
Type 4 Wide



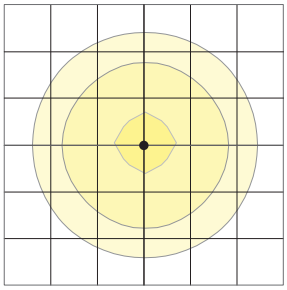
Type 5QM



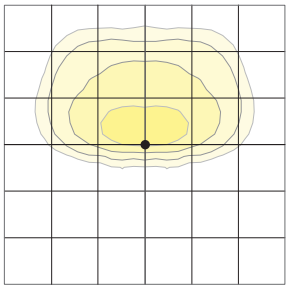
Type 5R (rectangular)



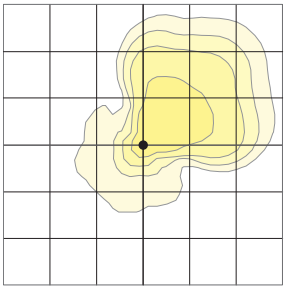
Type 5W (round wide)



Type TC



Type Corner



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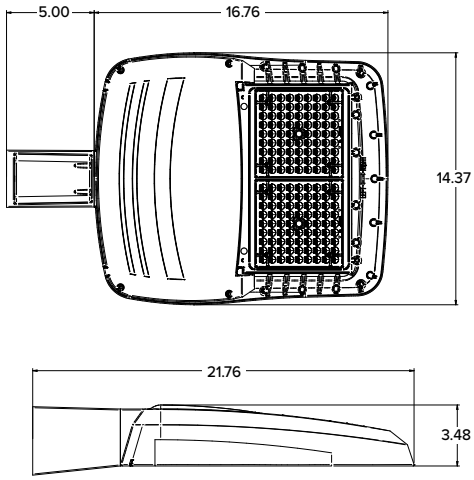
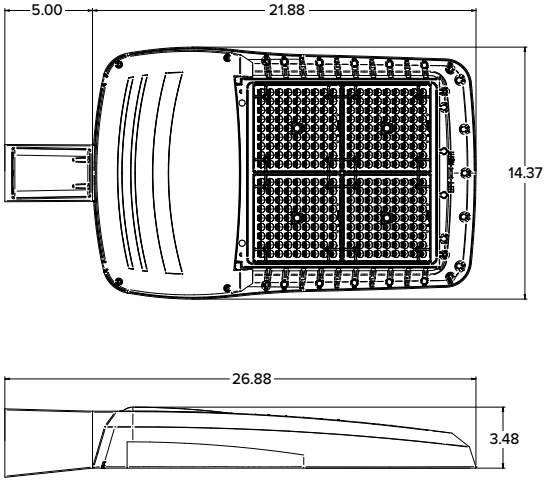
VIPER LUMINAIRE

DIMENSIONS

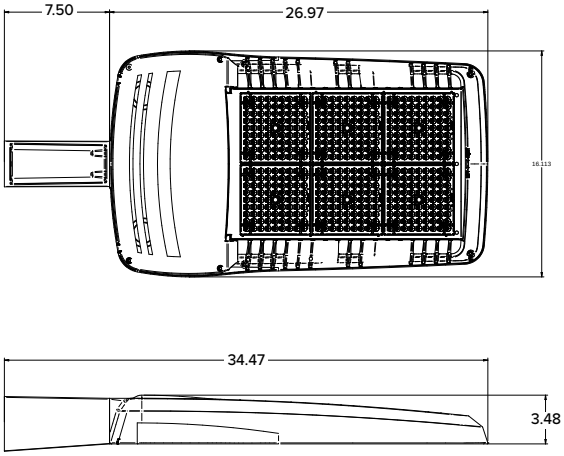
SIZE 1



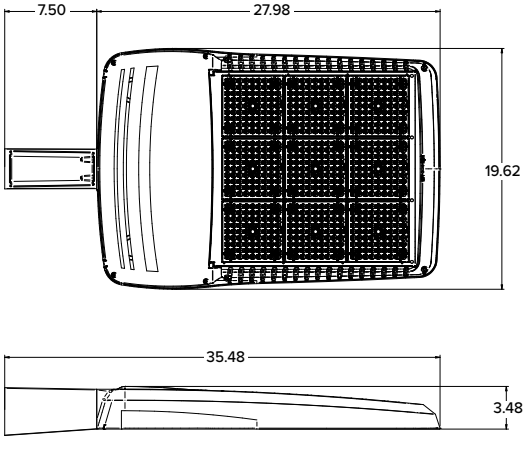
SIZE 2



SIZE 3



SIZE 4



	EPA				
	VP1 (Size 1)	VP2 (Size 2)	VP3 (Size 3)	VP4 (Size 4)	Config.
Single Fixture	0.454	0.555	0.655	0.698	
Two at 180	0.908	1.110	1.310	1.396	
Two at 90	0.583	0.711	0.857	0.948	
Three at 90	1.037	1.266	1.512	1.646	
Three at 120	0.943	1.155	1.392	1.680	
Four at 90	1.166	1.422	1.714	1.896	

	Weight	
	lbs	kgs
VP1 (Size 1)	13.7	6.2
VP2 (Size 2)	16.0	7.26
VP3 (Size 3)	25.9	11.7
VP4 (Size 4)	30.8	13.9

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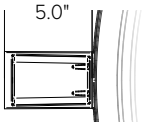
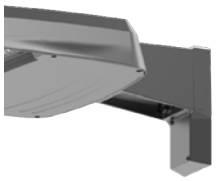
MOUNTING

A–STRAIGHT ARM MOUNT

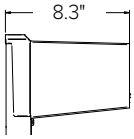
Fixture ships with integral arm for ease of installation. Compatible with Current Outdoor B3 drill pattern for ease of installation on square poles. For round poles add applicable suffix (2/3/4/5)

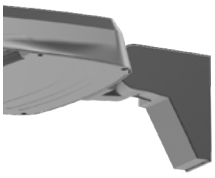




ASQU–UNIVERSAL ARM MOUNT

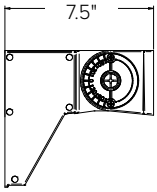
Universal mounting block for ease of installation. Compatible with drill patterns from 2.5" to 4.5" and Current drill pattern S2. For round poles add applicable suffix (2/3/4/5)

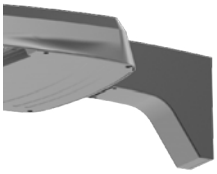




AAU–ADJUSTABLE ARM FOR POLE MOUNTING

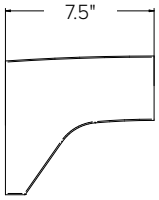
Rotatable arm mounts directly to pole. Compatible with drill patterns from 2.5" to 4.5" and Current drill pattern S2 and B3. For round poles add applicable suffix (2/3/4/5). Rotatable in 15˚ aiming angle increments. Micro Strike configurations have a 45° aiming limitation.
Strike configurations have a 30° aiming limitation.

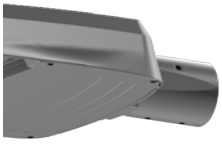




ADU–DECORATIVE UPSWEPT ARM

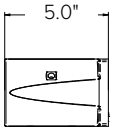
Upswept Arm compatible with drill patterns from 2.5" to 4.5" and Current drill pattern S2. For round poles add applicable suffix (2/3/4/5).

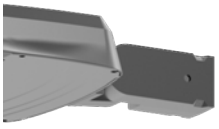




MAF–MAST ARM FITTER

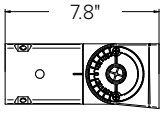
Fits 2-3/8" OD horizontal tenons.

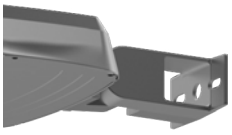




K–KNUCKLE

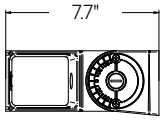
Knuckle mount 15˚ aiming angle increments for precise aiming and control, fits 2-3/8" tenons or pipes. Micro Strike configurations have a 45° aiming limitation. Strike configurations have a 30° aiming limitation.





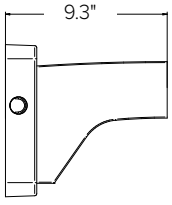
T–TRUNNION

Trunnion for surface and crossarm mounting using (1) 3/4" or (2) 1/2" size through bolts. Micro Strike configurations have a 45° aiming limitation. Strike configurations have a 30° aiming limitation.



WM–WALL MOUNT

Compatible with universal arm mount, adjustable arm mount, and decorative arm mount. The WA option uses the same wall bracket but replaces the decorative arm with an adjustable arm.



VIPER Area/Site

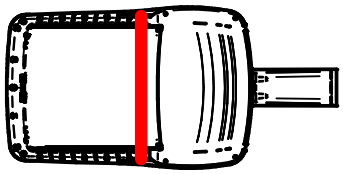
VIPER LUMINAIRE

ADDITIONAL INFORMATION (CONTINUED)

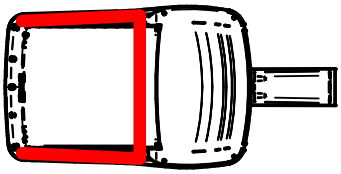
HOUSE SIDE SHIELD FIELD INSTALL ACCESSORIES

HSS has a depth of 5" for all Viper sizes
Not to be used with Occupancy Sensors as the shield may block the light to the sensor.

VPR2x HSS-90-B-xx



VPR2x HSS-270-BSS-xx



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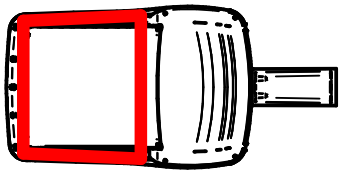
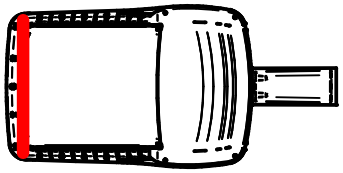


VPR2x HSS-90-F-xx



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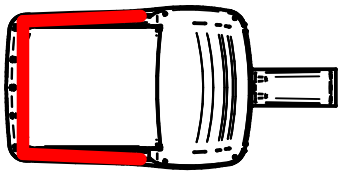

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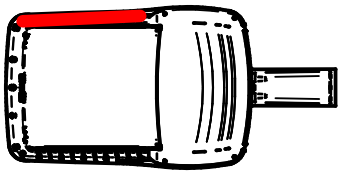
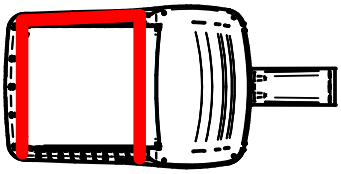


VPR2x HSS-270-FSB-xx



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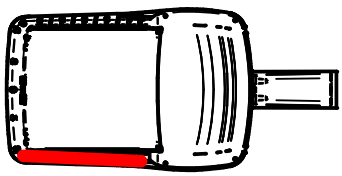
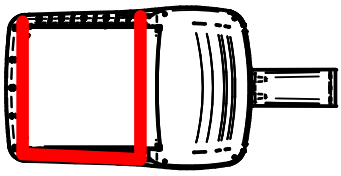


VPR2x HSS-270-FSB-xx



ADDITIONAL INFORMATION (CONTINUED)

PROGRAMMED CONTROLS

ADD-AutoDim Timer Based Options

- Light delay options from 1-9 hours after the light is turned on to dim the light by 10-100%. To return the luminaire to its original light level there are dim return options from 1-9 hours after the light has been dimmed previously.

EX: ADD-6-5-R6

ADD Control Options	Configurations Choices	Example Choice Picked
Auto-Dim Options	1-9 Hours	6 - Delay 6 hours
Auto-Dim Brightness	10-100% Brightness	5 - Dim to 50% brightness
Auto-Dim Return	Delay 0-9 Hours	R6 - Return to full output after 6 hours

ADT-AutoDim Time of Day Based Option

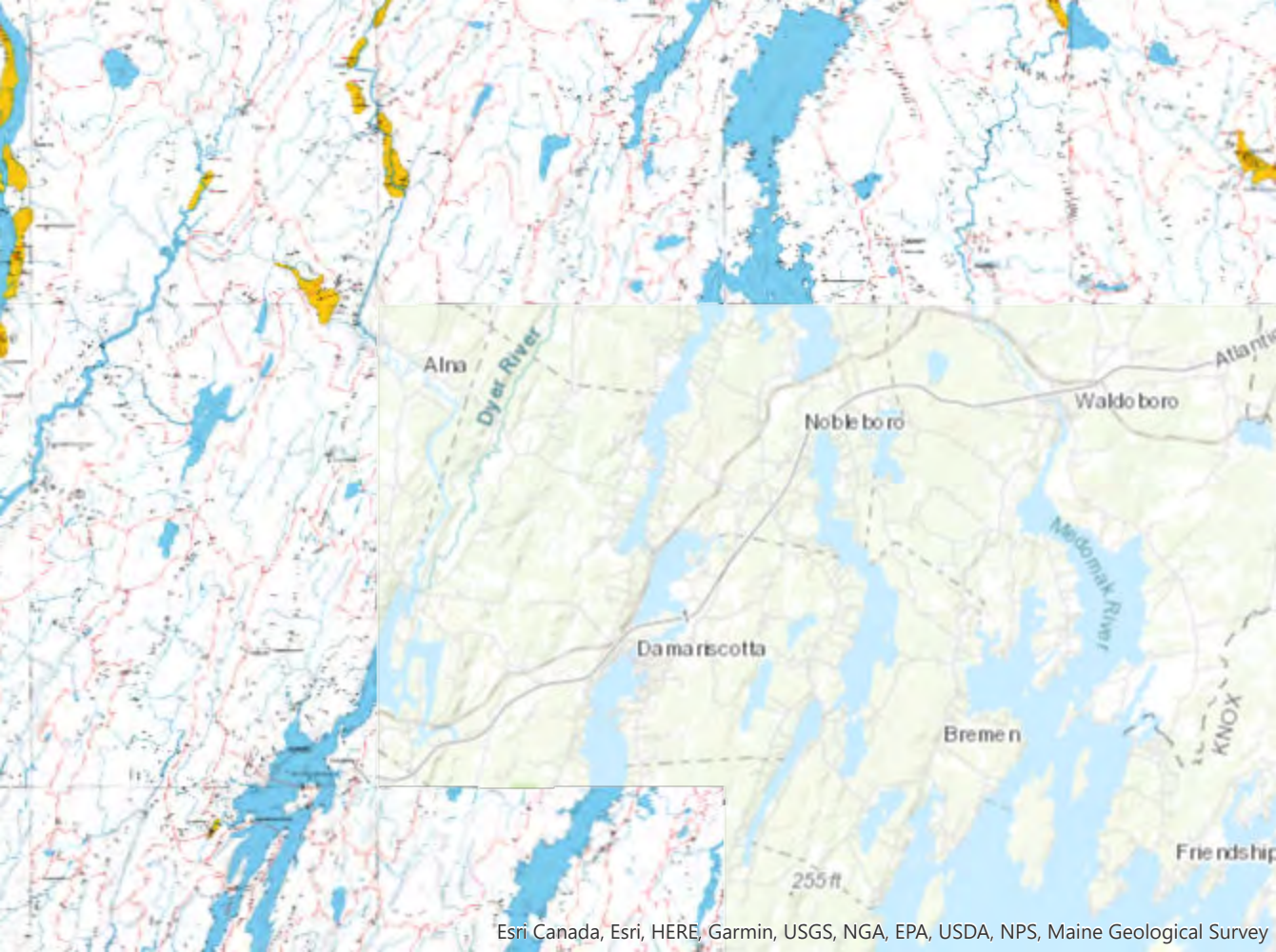
- Light delay options from 1AM-9PM after the light is turned on to dim the light by 10-100%. To return the luminaire to its original light level there are dim return options from 1AM-9PM after the light has been dimmed previously.

EX: ADT-6-5-R6

ADD Control Options	Configurations Choices	Example Choice Picked
Auto-Dim Options	12-3 AM and 6-11 PM	6 - Dim at 6PM
Auto-Dim Brightness	10-100% Brightness	5 - Dim to 50%
Auto-Dim Return	12-6 AM and 9-11P	R6 - Return to full output at 6AM

ATTACHMENT B

.


Alna
Dyer River
Nobleboro
Waldoboro
Damariscotta
Bremen
Friendship
255 ft
Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS, Maine Geological Survey

ATTACHMENT C

.

STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY
177 STATE HOUSE STATION
AUGUSTA, MAINE 04333

JANET T. MILLS
GOVERNOR

AMANDA E. BEAL
COMMISSIONER

December 20, 2022

Bradford Pineau
Gorrill Palmer
707 Sable Oaks Drive, Suite 30
South Portland, ME 04106

Via email: bpineau@gorrillpalmer.com

Re: Rare and exemplary botanical features in proximity to: #3996, Ledgewood Court Apartment Expansion, Piper Mill Road, Damariscotta, Maine

Dear Mr. Pineau:

I have searched the Maine Natural Areas Program's Biological and Conservation Data System files in response to your request received December 20, 2022 for information on the presence of rare or unique botanical features documented from the vicinity of the project in Damariscotta, Maine. Rare and unique botanical features include the habitat of rare, threatened, or endangered plant species and unique or exemplary natural communities. Our review involves examining maps, manual and computerized records, other sources of information such as scientific articles or published references, and the personal knowledge of staff or cooperating experts.

Our official response covers only botanical features. For authoritative information and official response for zoological features you must make a similar request to the Maine Department of Inland Fisheries and Wildlife, 284 State Street, Augusta, Maine 04333.

According to the information currently in our Biological and Conservation Data System files, there are no rare botanical features documented specifically within the project area. This lack of data may indicate minimal survey efforts rather than confirm the absence of rare botanical features. You may want to have the site inventoried by a qualified field biologist to ensure that no undocumented rare features are inadvertently harmed.

If a field survey of the project area is conducted, please refer to the enclosed supplemental information regarding rare and exemplary botanical features documented to occur in the vicinity of the project site. The list may include information on features that have been known to occur historically in the area as well as recently field-verified information. While historic records have not been documented in several years, they may persist in the area if suitable habitat exists. The enclosed list identifies features with potential to occur in the area, and it should be considered if you choose to conduct field surveys.

This finding is available and appropriate for preparation and review of environmental assessments, but it is not a substitute for on-site surveys. Comprehensive field surveys do not exist for all natural areas in Maine, and in the absence of a specific field investigation, the Maine Natural Areas Program cannot provide a definitive statement on the presence or absence of unusual natural features at this site.

MOLLY DOCHERTY, DIRECTOR
MAINE NATURAL AREAS PROGRAM
BLOSSOM LANE, DEERING BUILDING

DEPARTMENT OF Agriculture Conservation & Forestry

PHONE: (207) 287-804490
WWW.MAINE.GOV/DACF/MNAP

The Maine Natural Areas Program (MNAP) is continuously working to achieve a more comprehensive database of exemplary natural features in Maine. We would appreciate the contribution of any information obtained should you decide to do field work. MNAP welcomes coordination with individuals or organizations proposing environmental alteration or conducting environmental assessments. If, however, data provided by MNAP are to be published in any form, the Program should be informed at the outset and credited as the source.

The Maine Natural Areas Program has instituted a fee structure of $75.00 an hour to recover the actual cost of processing your request for information. You will receive an invoice for $150.00 for two hours of our services.

Thank you for using MNAP in the environmental review process. Please do not hesitate to contact me if you have further questions about the Natural Areas Program or about rare or unique botanical features on this site.

Sincerely,

Lisa St. Hilaire

Lisa St. Hilaire | Information Manager | Maine Natural Areas Program
207-287-8044 | lisa.st.hilaire@maine.gov

Rare and Exemplary Botanical Features within 4 miles of
Project: #3996, Ledgewood Court Apartments Expansion, Piper Mill Rd, Damariscotta, ME

Common Name	State Status	State Rank	Global Rank	Date Last Observed	Occurrence Number	Habitat
Adder's Tongue Fern						
	E	S1	G5	1932-07-28	9	Non-tidal rivershore (non-forested, seasonally wet),Open
Brackish Tidal Marsh						
		S3	GNR	2011-06-21	14	
Mixed Saltmarsh						
		S3	G5	2011-09-27	7	
Saltmarsh False-foxglove						
	SC	S3	G5	2011-06-21	17	Tidal wetland (non-forested, wetland)
Smooth Winterberry Holly						
	SC	S3	G5	1897-07-13	42	Forested wetland
Spotted Pondweed						
	T	S1	G5	2002-08-01	5	Open water (non-forested, wetland)

Date Exported: 2022-12-20 14:57

Conservation Status Ranks

State and Global Ranks: This ranking system facilitates a quick assessment of a species' or habitat type's rarity and is the primary tool used to develop conservation, protection, and restoration priorities for individual species and natural habitat types. Each species or habitat is assigned both a state (S) and global (G) rank on a scale of critically imperiled (1) to secure (5). Factors such as range extent, the number of occurrences, intensity of threats, etc., contribute to the assignment of state and global ranks. The definitions for state and global ranks are comparable but applied at different geographic scales; something that is state imperiled may be globally secure.

The information supporting these ranks is developed and maintained by the Maine Natural Areas Program (state ranks) and NatureServe (global ranks).

Rank	Definition
S1 **G1**	**Critically Imperiled** – At very high risk of extinction or elimination due to very restricted range, very few populations or occurrences, very steep declines, very severe threats, or other factors.
S2 **G2**	**Imperiled** – At high risk of extinction or elimination due to restricted range, few populations or occurrences, steep declines, severe threats, or other factors.
S3 **G3**	**Vulnerable** – At moderate risk of extinction or elimination due to a fairly restricted range, relatively few populations or occurrences, recent and widespread declines, threats, or other factors.
S4 **G4**	**Apparently Secure** – At fairly low risk of extinction or elimination due to an extensive range and/or many populations or occurrences, but with possible cause for some concern as a result of local recent declines, threats, or other factors.
S5 **G5**	**Secure** – At very low risk of extinction or elimination due to a very extensive range, abundant populations or occurrences, and little to no concern from declines or threats.
SX **GX**	**Presumed Extinct** – Not located despite intensive searches and virtually no likelihood of rediscovery.
SH **GH**	**Possibly Extinct** – Known from only historical occurrences but still some hope of rediscovery.
S#S# **G#G#**	**Range Rank** – A numeric range rank (e.g., S2S3 or S1S3) is used to indicate any range of uncertainty about the status of the species or ecosystem.
SU **GU**	**Unrankable** – Currently unrankable due to lack of information or due to substantially conflicting information about status or trends.
GNR **SNR**	**Unranked** – Global or subnational conservation status not yet assessed.
SNA **GNA**	**Not Applicable** – A conservation status rank is not applicable because the species or ecosystem is not a suitable target for conservation activities (e.g., non-native species or ecosystems.
Qualifier	**Definition**
S#? **G#?**	**Inexact Numeric Rank** – Denotes inexact numeric rank.
Q	**Questionable taxonomy that may reduce conservation priority** – Distinctiveness of this entity as a taxon or ecosystem type at the current level is questionable. The "Q" modifier is only used at a global level.
T#	**Infraspecific Taxon (trinomial)** – The status of infraspecific taxa (subspecies or varieties) are indicated by a "T-rank" following the species' global rank.

State Status: Endangered and Threatened are legal status designations authorized by statute. Please refer to MRSA Title 12, §544 and §544-B.

Status	Definition
E	**Endangered** – Any native plant species in danger of extinction throughout all or a significant portion of its range within the State or Federally listed as Endangered.
T	**Threatened** – Any native plant species likely to become endangered within the foreseeable future throughout all or a significant portion of its range in the State or Federally listed as Threatened.
SC	**Special Concern** – A native plant species that is rare in the State, but not rare enough to be considered Threatened or Endangered.
PE	**Potentially Extirpated** – A native plant species that has not been documented in the State in over 20 years, or loss of the last known occurrence.

Element Occurrence (EO) Ranks: Quality assessments that designate viability of a population or integrity of habitat. These ranks are based on size, condition, and landscape context. Range ranks (e.g., AB, BC) and uncertainty ranks (e.g., B?) are allowed. The Maine Natural Areas Program tracks all occurrences of rare plants and natural communities/ecosystems (S1-S3) as well as exemplary common natural community types (S4-S5 with EO ranks A/B).

Rank	Definition
A	**Excellent** – Excellent estimated viability/ecological integrity.
B	**Good** – Good estimated viability/ecological integrity.
C	**Fair** – Fair estimated viability/ecological integrity.
D	**Poor** – Poor estimated viability/ecological integrity.
E	**Extant** – Verified extant, but viability/ecological integrity not assessed.
H	**Historical** – Lack of field information within past 20 years verifying continued existence of the occurrence, but not enough to document extirpation.
X	**Extirpated** – Documented loss of population/destruction of habitat.
U	**Unrankable** – Occurrence unable to be ranked due to lack of sufficient information (e.g., possible mistaken identification).
NR	**Not Ranked** – An occurrence rank has not been assigned.

Visit the Maine Natural Areas Program website for more information
http://www.maine.gov/dacf/mnap

maine DEPARTMENT OF Agriculture Conservation & Forestry
NATURAL AREAS

GORRILL PALMER

707 Sable Oaks Drive, Suite 30
South Portland, Maine 04106
207.772.2515

December 20, 2022

RECEIVED
DEC 20 2022
By 2245-22

Attn:
Mr. Kirk Mohney
State Historic Preservation Officer
Maine Historic Preservation Commission
55 Capitol Street, State House Station 65
Augusta, ME 04333-0065

Subject: Presence of Historic Structures
Proposed Ledgewood Court Apartments Expansion – Piper Mill Rd, Damariscotta, ME
Midcoast Maine Community Action/DC Ledgewood, LLC

Dear Mr. Mohney,

Gorrill Palmer has been retained by DC Ledgewood, LLC to prepare plans and permit applications for the proposed expansion of the existing Ledgewood Court Apartments development in Damariscotta. The project site is located on the south side of Piper Mill Road, north of the Great Salt Bay Sanitary District treatment facility and is shown on the Town of Damariscotta Tax Map 001 as Lot 050-003. The project location is shown on the attached Location Map. Approximately 2 acres of the roughly 10.5-acre parcel is developed as the existing Ledgewood Court Apartment complex. Currently, we anticipate the use of approximately 1.5 acres of the remaining undeveloped land, southeast of the existing development for the proposed multi-unit building. Access to the new development will be via an extension of the existing Ledgewood Court Drive access.

To aid in the redevelopment design, and as part of the permit applications, Gorrill Palmer requests information from your department relative to the presence of any nearby structure or area with historical, architectural, or archeological significance as defined by the National Historic Preservation Act.

Thank you for your consideration. If you have any questions regarding the proposed project, please contact our office.

Sincerely,

Gorrill Palmer

Bradford Pineau, EI
Design Engineer
Phone: 207-772-2515
bpineau@gorrillpalmer.com

Attachment

Based on the information submitted, I have concluded that there will be no historic properties affected by the proposed undertaking, as defined by Section 106 of the National Historic Preservation Act. Consequently, pursuant to 36 CFR 800.4(d)(1), no further Section 106 consultation is required unless additional resources are discovered during project implementation pursuant to 36 CFR 800.13.

Kirk F. Mohney, 1/4/23
Kirk F. Mohney, Date
State Historic Preservation Officer
Maine Historic Preservation Commission

Tribal Historic Preservation Office
Mi'kmaq Nation (Formerly known as the Aroostook Band of Micmac)
Kendyl Reis
Tribal Historic Preservation Officer
7 Northern Road
Presque Isle, ME 04769
Phone: (207)764-1972 ext. 161
kreis@micmac-nsn.gov

Proposed Residential Development
207 Ledgewood Court Drive – Damariscotta, ME
DC Ledgewood, LLC
January 11th, 2023

Based on the project description, we do not have knowledge of any specific sites or cultural features that exist at the proposed project location(s).

However, this geographic area does constitute traditional areas that were historically utilized by members of the Mi'kmaq Nation and the other Wabanaki Tribes. Therefore, we respectfully request that if during the course of excavation/construction activities, human remains, artifacts, or any other evidence of Native American presence is discovered, that site activities in the vicinity of the discovery immediately cease, pending notification to us.

In addition, if this project results in wetland disturbances requiring mitigation, we are requesting that you utilize the black ash (Fraginus nigra) as the principal wetland species for wetland restoration activities. The black ash tree has special significance in the culture of the northeastern Tribes and is used extensively for weaving baskets and other Native American crafts. The black ash tree also provides valuable food and habitat for migratory waterfowl and other wildlife. Unfortunately, however, this species has been selected against by foresters and landowners who favor other tree species. As a result of this, and other environmental factors, the black ash tree is in serious decline in Maine. The Mi'kmaq Nation has completed several black ash wetland restoration projects and have a dependable source for highly-quality seedlings, and the experience and expertise to assist you with black ash wetland restoration projects.

On the subject of human remains, artifacts, or any other evidence of Native American presence is discovered. The human remains will be reburied with the appropriate respect for the remains that is required at a distinctive and respectable site. The artifacts and other evidence of Native American discovery will be documented with appropriate detail. The items will be analyzed for the precise period of the items' distinctive period and will be documented by the Tribal Historic Preservation Officer for the Mi'kmaq Nation.

If you have any questions or comments, please feel free to contact me.

Sincerely,

Kendyl Reis
Tribal Historic Preservation Officer

GORRILL PALMER

707 Sable Oaks Drive, Suite 30
South Portland, Maine 04106
207.772.2515

December 28, 2022

Attn:
Isaac St. John, THPO
Houlton Band of Maliseets
88 Bell Road
Littleton, ME 04730

Subject: **Proposed Residential Development**
207 Ledgewood Court Drive – Damariscotta, ME
DC Ledgewood, LLC

Dear Mr. St. John,

Our office has been retained by **DC Ledgewood, LLC** to assist in State and Local permitting for a proposed residential development located at 207 Ledgewood Court Drive in Damariscotta, ME. The project site is shown on the attached Location Map and is identified on Map 001 as Lot 050-003 on the Town's Tax Map. The proposed 13,275 SF, 2-story building is to contain 32 apartment units and is to accompany the existing 24 apartment units on the property. The proposed project site is southeast of the existing complex and is currently undeveloped, with the exception of a utility corridor containing a sewer force main associated with the existing complex.

To aid in the design, and as part of the permit applications, Gorrill Palmer requests information from the Houlton Band of Maliseets relative to the presence of any nearby historic, archaeological, or tribal resources.

Thank you for your consideration. If you have any questions regarding the proposed project, please contact our office.

Sincerely,

Gorrill Palmer

Bradford Pineau, EI
Design Engineer
Phone: 207-772-2515
bpineau@gorrillpalmer.com

Attachment

U:\3996_Ledgewood_Court_Expansion_Damariscotta, ME\P Applications\Local\Resource Letters\Tribes\Maliseet

GORRILL PALMER

707 Sable Oaks Drive, Suite 30
South Portland, Maine 04106
207.772.2515

December 28, 2022

Attn: Mr. Chris Sockalexis, THPO
Penobscot Nation
12 Wabanaki Way
Indian Island, ME 04468

Subject: Proposed Residential Development
207 Ledgewood Court Drive – Damariscotta, ME
DC Ledgewood, LLC

Dear Mr. Sockalexis:

Our office has been retained by **DC Ledgewood, LLC** to assist in State and Local permitting for a proposed residential development located at 207 Ledgewood Court Drive in Damariscotta, ME. The project site is shown on the attached Location Map and is identified on Map 001 as Lot 050-003 on the Town's Tax Map. The proposed 13,275 SF, 2-story building is to contain 32 apartment units and is to accompany the existing 24 apartment units on the property. The proposed project site is southeast of the existing complex and is currently undeveloped, with the exception of a utility corridor containing a sewer force main associated with the existing complex.

To aid in the design, and as part of the permit applications, Gorrill Palmer requests information from the Penobscot Nation relative to the presence of any nearby historic, archaeological, or tribal resources.

If you have any questions or require any further additional information, please contact our office.

Sincerely,

Gorrill Palmer

Bradford Pineau, EI
Design Engineer
Phone: 207-772-2515
bpineau@gorrillpalmer.com

Attachment

U:\3996_Ledgewood_Court_Expansion_Damariscotta, ME\P Applications\Local\Resource Letters\Tribes\Penobscot

GORRILL PALMER

707 Sable Oaks Drive, Suite 30
South Portland, Maine 04106
207.772.2515

December 28, 2022

Attn:
Donald Soctomah, THPO
Passamaquoddy Tribe of Indians
Indian Township Reservation
PO Box 301
Princeton, ME 04668-0301

Subject: Proposed Residential Development
207 Ledgewood Court Drive – Damariscotta, ME
DC Ledgewood, LLC

Dear Mr. Soctomah:

Our office has been retained by **DC Ledgewood, LLC** to assist in State and Local permitting for a proposed residential development located at 207 Ledgewood Court Drive in Damariscotta, ME. The project site is shown on the attached Location Map and is identified on Map 001 as Lot 050-003 on the Town's Tax Map. The proposed 13,275 SF, 2-story building is to contain 32 apartment units and is to accompany the existing 24 apartment units on the property. The proposed project site is southeast of the existing complex and is currently undeveloped, with the exception of a utility corridor containing a sewer force main associated with the existing complex.

To aid in the design, and as part of the permit applications, Gorrill Palmer requests information from the Passamaquoddy Tribe of Indians relative to the presence of any nearby historic, archaeological or tribal resources.

If you have any questions or require any further additional information, please contact our office.

Sincerely,

Gorrill Palmer

Bradford Pineau, EI
Design Engineer
Phone: 207-772-2515
bpineau@gorrillpalmer.com

Attachment

U:\3996_Ledgewood_Court_Expansion_Damariscotta, ME\P Applications\Local\Resource Letters\Tribes\Passamaquoddy

GORRILL PALMER

300 Southborough Drive, Suite 200
South Portland, Maine 04106
207.772.2515

Exhibit 15 – Compliance with Performance Standards §102.7

102.7 (A) Building Appearance

See the proposed building elevations supplied by Winston Scott Architects, included as an attachment to this section. The proposed building design employs varying setbacks, heights, roof treatments, and window openings to reduce the apparent size of the building. A multi-tone siding is also proposed for the building, with a darker color around the bottom floor, and a lighter color around the upper floor. The roof varies in pitch, but no flat areas are proposed.

More than fifty percent of the proposed building's façade has employed protrusions and recesses to break up the facade, and the longest uninterrupted façade is less than 49 feet (47 feet 11 inches). The first floor façade facing the proposed Ledgewood Court Drive extension is to be comprised of windows, entry-ways, awnings, and doors for more than fifty percent of the horizontal length of the building.

More than twenty percent of all the linear roof eaves on all sides of the building employ differences in height. The proposed roofs have been designed with the minimum pitch of 5/12 as per ordinance standards. It should be noted that the proposed building will not be visible from Piper Mill Road given the approximately 300-foot distance from the road to the building and the existing vegetation that is to be maintained shielding the view of the building from the road.

The proposed building façade includes a color change pattern where the siding around the bottom floor of the building is to be a darker color than the siding on the upper floor of the building. The proposed façade color will be non-reflective, subtle, and an earth tone. All four sides of the proposed building are to receive this treatment, though it again should be noted that the building will not be visible from Piper Mill Road and the extension of Ledgewood Court Drive is being treated as the public street frontage – even though it is a private access drive.

The proposed exterior building material will be_____,. Even though the building will only be visible from Ledgewood Court Drive, all four sides of the building are to receive the same materials and will have the same aesthetic appearance.

The proposed windows for the building are to be between 3 and 8 feet above the walkway along the Ledgewood Court Drive extension and will be transparent glass. No large areas of plate glass are proposed. No retail areas are proposed as part of this development. The public entryway to the proposed building is clearly defined and highly visible, in the center of the building and adjacent the parking lot which emphasizes the on-site flow of pedestrian and vehicular traffic. A peaked-roof overhang and an outdoor patio are provided at the building entrance.

102.7 (B) Outdoor Sales

No outdoor sales are proposed as a part of this development. The residential building will not contain any retail facilities.

GORRILL PALMER

300 Southborough Drive, Suite 200
South Portland, Maine 04106
207.772.2515

102.7 (C) Parking

The parking area has been designed to conform to the performance standards of 102.6 (H) as explained in the prior Exhibit of this application. No off-street parking has been sited between the front façade of the building and the primary abutting streets. All proposed parking is to the rear of the lot and will not be visible from Piper Mill Road.

102.7 (D) Bicycles and Pedestrian Facilities

Sidewalks internal to the development have been provided and are proposed to be 6 feet wide. A waiver is requested for the provision requiring the sidewalks to be a minimum eight feet wide. The design team believes the 6-foot sidewalks will be sufficient given the residential nature of the proposed development. There are no sidewalks along Piper Mill Road, and no public facilities within the existing or proposed portions of Ledgewood Court. Therefore, it is reasonable to assume that the only people using the on-site sidewalks will be residents of the development. With this understanding, it is our opinion that the 6-foot sidewalk will be sufficient to support the minimal usage expected.

Sidewalks are proposed from the building entrance, along the parking lot and access drive, to the existing complex. The sidewalks along the roadway will be raised 6 inches above the road and separated by a concrete slipform or equal curb. A walkway is also provided from the building entrances and the outdoor patio to the proposed community garden space to the east of the building.

A waiver is requested for the requirement to provide sidewalks along all sides of the lot abutting a public street. This is because there are no existing sidewalks on Piper Mill Road, and providing a sidewalk along the parcel frontage would be seemingly pointless given the lack of facilities along Piper Mill Road. Given the lack of traffic on Piper Mill Road, it is expected that residents would be able to walk along the roadway safely without much concern for traffic.

No customer entrances are proposed as the project will be a private residential building. No internal crosswalks are proposed as the sidewalk never needs to cross Ledgewood Court Drive. Exterior pedestrian furniture has been provided in the form of benches in the front patio area and within the community garden area. Secure bicycle parking is provided in the form of a bike rack near the building entrance with three spots for the 32 units in the building. This is in accordance with the provision requiring three bicycle spaces per 50 vehicle parking spaces.

102.7 (E) Landscaping

A landscaping plan prepared by Aceto Landscape Architects is included with the plan set. At least 75% of the proposed plantings are native species, as specified in the Town ordinance. A minimum of 30% of the building's foundation has been planted with landscaping items at least 18 inches in height. The front patio and parking lot contain landscaped areas around the perimeter, The bufferyard along the rear lot line will be landscaped and revegetated in accordance with this section. No landscaping is proposed along Piper Mill Road (the public street) as no site work is proposed along the road frontage. The existing forest vegetation will remain as it is today. No commercial buildings are proposed as part of this project.

GORRILL PALMER

300 Southborough Drive, Suite 200
South Portland, Maine 04106
207.772.2515

102.7 (F) Screening

Ground and wall-mounted mechanical equipment, refuse containers, and outdoor storage will be fully concealed from on-site and off-site ground-level views. No ground or wall-mounted mechanical equipment is anticipated, and the proposed dumpster will be enclosed behind a fence and gate and shielded from view on all sides. No roof-top equipment is being proposed. No gate or fencing of the property is proposed. No loading docks are being proposed.

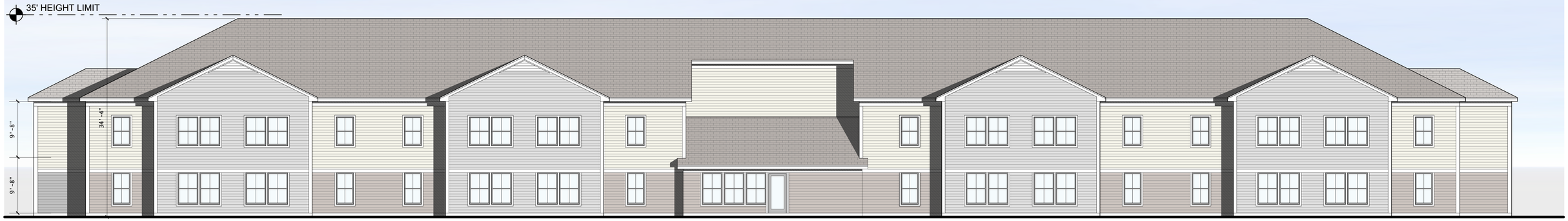
102.7 (G) Building Reuse

No buildings are proposed to be reused as part of this project. No vacant buildings existing on the project site.

102.7 (H) Additional Standards for Larger Buildings (>20,000 SF gfa)

No retail facilities are proposed as a part of this project. the proposed building will not be visible from Piper Mill Road as significant forest growth exists in the near 300-foot buffer between Piper Mill Road and the proposed building. No commercial buildings are being proposed.

Attachments:
A – Architectural Elevations

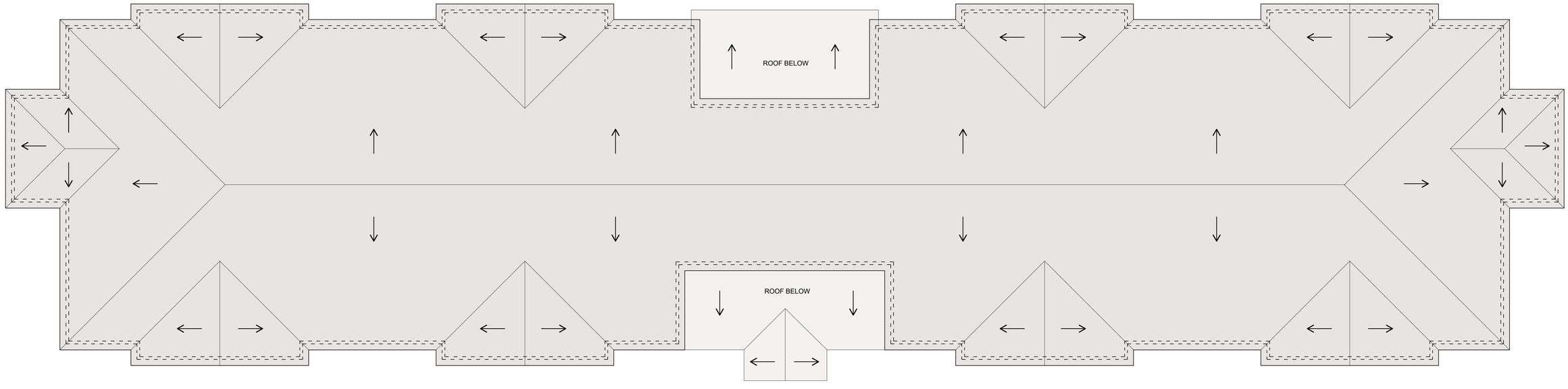


NORTH ELEVATION

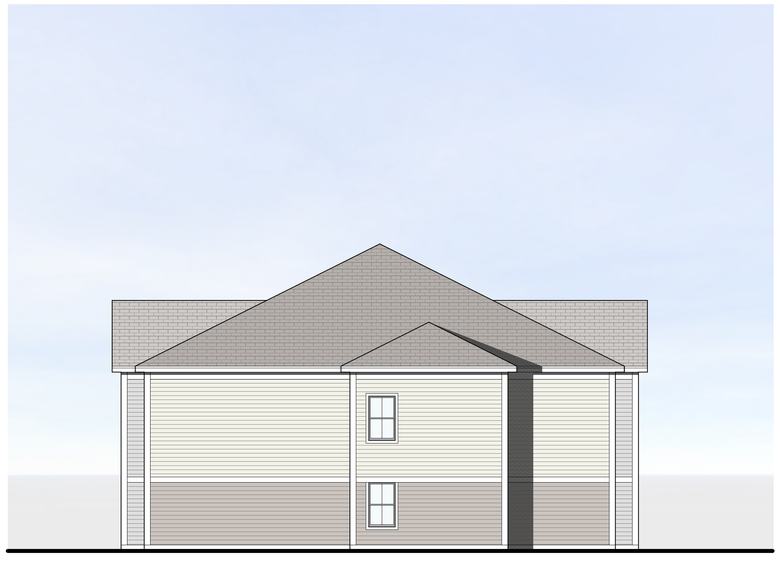
SOUTH ELEVATION

Winton Scott
Architects

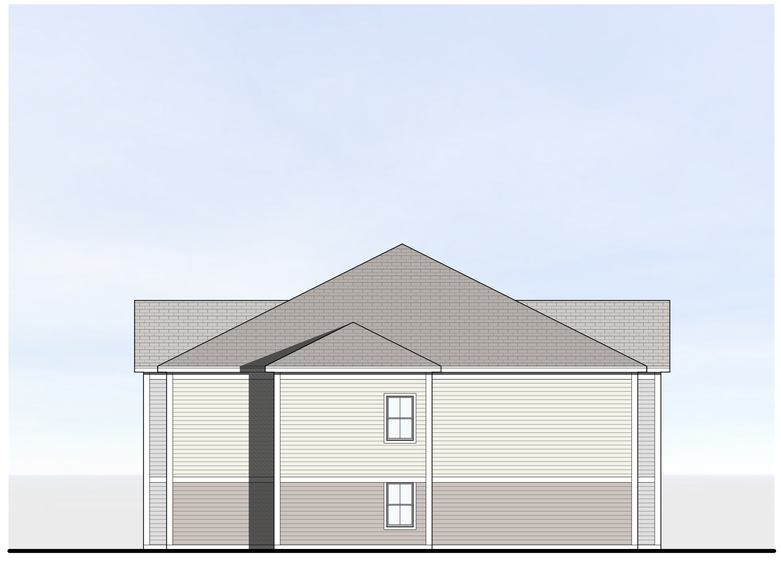
217 COMMERCIAL STREET, SUITE 200
PORTLAND, MAINE 04101
207.774.4811 | wintonscott.com



ROOF PLAN



EAST ELEVATION



WEST ELEVATION

Winton Scott Architects

217 COMMERCIAL STREET, SUITE 200
PORTLAND, MAINE 04101
207.774.4811 | wintonscott.com

PROJECT PARCEL SITE
TOWN OF DAMARISCOTTA
TAX ASSESSOR'S MAP AND LOT NUMBERS

MAP	PARCEL	LCRD
1	003	B 5472 / P 299

PROJECT APPLICANT:
DC LEDGEWOOD, LLC
631 STEVENS AVENUE, SUITE 203
PORTLAND, ME 04103
ATTN: KEVIN BUNKER / MEG ROBINSON

CURRENT PROPERTY OWNER OF RECORD:
MIDCOAST MAINE COMMUNITY ACTION
34 WING FARM PARKWAY
BATH, ME 04530
L.C.R.D. BOOK 5472, PAGE 299

ZONING:
RURAL

SITE IMPROVEMENT PLANS

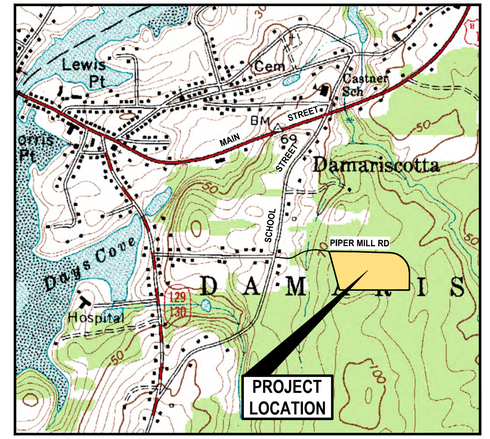
FOR

LEDGEWOOD COURT EXPANSION - 32 UNITS

PIPER MILL ROAD, DAMARISCOTTA, MAINE

FEBRUARY 2023

SITE PLAN APPLICATION SUBMISSION



LOCATION MAP
SCALE: 1" = 1000'

INDEX

UTILITIES

SEWER
ATTN: LEEANNA LIBBY
GREAT SALT BAY SANITARY DISTRICT
121 PIPER MILL ROAD
PO BOX 23
DAMARISCOTTA, MAINE 04543
207.563.5105
wastewater@gsbsd.org

WATER
ATTN: SCOTT ABBOTONI
GREAT SALT BAY SANITARY DISTRICT
121 PIPER MILL ROAD
PO BOX 23
DAMARISCOTTA, MAINE 04543
207.563.3010
scottabotoni@gsbsd.org

ELECTRIC
ATTN: GARY HAM
CENTRAL MAINE POWER COMPANY
162 CANCO ROAD
P.O. BOX 1801
PORTLAND, MAINE 04104
gary.ham@cmpco.com

TELEPHONE
ATTN: PATRICK MORRISON
CONSOLIDATED COMMUNICATIONS
5 DAVIS FARM ROAD
PORTLAND, MAINE 04103
207.797.1866

CABLE
ATTN: MARK PELLETIER
CHARTER COMMUNICATIONS
118 JOHNSON ROAD
PORTLAND, MAINE 04102
207.253.2291
mark.pelletier@charter.com

DIG SAFE
1.800.225.4977

PERMITS / APPROVALS

LOCAL	GOVERNING BODY	STATUS
SITE PLAN / SUBDIVISION PERMIT	DAMARISCOTTA PLANNING BOARD DAMARISCOTTA TOWN OFFICE 21 SCHOOL STREET DAMARISCOTTA, MAINE 04543 207.563.5168 ATTN: ISABELLE OECHSLIE	SKETCH PLAN SUBMITTED 11.16.2022 SITE WALK 12.19.2022 SITE PLAN SUBMITTED 02.10.2023
BUILDING PERMIT	DAMARISCOTTA CODE ENFORCEMENT DAMARISCOTTA TOWN OFFICE 21 SCHOOL STREET DAMARISCOTTA, MAINE 04543 207.563.5168 ATTN: GEORGE CHASE	TO BE SUBMITTED BY CONTRACTOR

STATE

STORMWATER MANAGEMENT PERMIT AMENDMENT	MAINE DEP 17 STATE HOUSE STATION AUGUSTA, MAINE 04333-0017 207.287.7688	EXISTING PERMIT #' L-21139-NI-A-N SUBMITTED
NATURAL RESOURCES PROTECTION ACT (NRPA) TIER I PERMIT	MAINE DEP 17 STATE HOUSE STATION AUGUSTA, MAINE 04333-0017 207.287.7688	SUBMITTED 02.10.2023

I HEREBY ACKNOWLEDGE THAT THESE PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECT SUPERVISION, AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MAINE AND THAT I AM COMPETENT TO PREPARE THIS DOCUMENT.

ALL PERMITS ARE ANTICIPATED TO HAVE CONDITIONS ATTENDANT WITH THEIR APPROVAL. THE CONTRACTOR SHALL REVIEW ALL PERMITS AND THE CONDITIONS ATTENDANT WITH APPROVALS PRIOR TO THE START OF THE WORK. UNLESS OTHERWISE STIPULATED BY THE CONTRACT DOCUMENTS, THE CONTRACTOR IS REQUIRED TO COMPLY AND FULFILL ALL CONDITIONS OF APPROVAL.

CONSULTANT LIST

CIVIL ENGINEER:
Gorrill Palmer Consulting Engineers, Inc.
300 SOUTHBOROUGH DRIVE, SUITE 200
SOUTH PORTLAND, MAINE 04106
207.772.2515, EXT. 297
CONTACT: STEPHEN BUSHEY, PE
sbushey@gorrillpalmer.com

ARCHITECT:
Winston Scott Architects
5 MILK STREET
PORTLAND, MAINE 04101
207.774.4811
CONTACT: STEVE WEATHERHEAD
sweatherhead@winstonscott.com

SURVEYOR (TOPOGRAPHY AND BOUNDARY):
Boothbay Region Surveyors
1037 WISCASSET ROAD
BOOTHBAY, MAINE 04537
207.633.4445
CONTACT: NICHOLAS PLUMMER, RLS

GEOTECHNICAL ENGINEER:
Summit Geoengineering
P.O. BOX 7216
LEWISTON, MAINE 04243
207.576.3313
CONTACT: BILL PETERLEIN
bpeterlein@summitgeoeng.com

LANDSCAPE ARCHITECT:
Aceto Landscape Architects
565 CONGRESS STREET, SUITE 310
PORTLAND, MAINE 04101
207.221.3390
CONTACT: NICK ACETO / GRACE MacNEIL

WETLAND SCIENTIST
Flycatcher, LLC
106 LAFAYETTE STREET
YARMOUTH, MAINE 04096
207.217.0959
CONTACT: RODNEY KELSAW

ELECTRICAL / LIGHTING
Swift Current Engineering
10 FOREST FALLS DRIVE, #4B
YARMOUTH, MAINE 04096

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES & SHALL NOT BE USED FOR CONSTRUCTION.

STATE OF MAINE
STEPHEN R. BUSHEY
02.10.23
LICENSED PROFESSIONAL ENGINEER
STEPHEN R. BUSHEY, P.E.
LIC. #7429

Rev.	Date	Revision

Rev.	Date	Revision
1	2023.02.10	PRELIMINARY SITE PLAN / SUBDIVISION PLAN APPLICATION

Design: SRB	Draft: CDD	Date: NOV. 2022
Checked: SRB	Scale: AS NOTED	Job No.: 3996
File Name: 3996-COVER.dwg		

GORRILL PALMER
707 Sable Oaks Drive, Suite 30
South Portland, Me 04106
207.772.2515 / www.gorrillpalmer.com
Relationships. Responsiveness. Results.

Drawing Name:	COVER SHEET
Project:	LEDGEWOOD COURT EXPANSION - 32 UNITS 207 LEDGEWOOD COURT DRIVE, DAMARISCOTTA, MAINE
Client:	DC PREDEVELOPMENT LLC / DC LEDGEWOOD LLC 631 STEVENS AVENUE, SUITE 203, PORTLAND, MAINE 04103 PH. 207.772.7673

Drawing No.
C-1.0

U:\3996 - Ledgewood Court Expansion - Damariscotta 5-16-22\Z - CAD\DWG\3996-COVER.dwg 2/10/2023 3:48 PM

GENERAL NOTES

1. IN ADDITION TO THESE PLANS AND NOTES, THE CONTRACTOR SHALL REFER TO PROJECT DOCUMENTS PREPARED BY WINTON SCOTT ARCHITECTS FOR CONSTRUCTION SPECIFICATIONS AND BIDDING PROCEDURES.

2. THIS PROJECT WILL BE SUBJECT TO THE TERMS AND CONDITIONS OF ALL PERMITS OR STANDARDS ISSUED BY THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, LOCAL UTILITY COMPANIES, THE TOWN OF DAMARISCOTTA & MAINE STATE HOUSING.

3. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF THE ENTRANCE, PAVING, PRECISE BUILDING DIMENSIONS, AND EXACT BUILDING UTILITY ENTRANCE POINTS. ENTRANCES IN MOST LOCATIONS REQUIRE STRUCTURAL SLABS. REFER TO THE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR INFORMATION ON THE STRUCTURAL SLAB ENTRANCES.

4. ALL REQUIRED AND NECESSARY INSPECTIONS AND OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSIONS AND THE FINAL SERVICE CONNECTIONS.

5. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR THE ELEVATION OF THE EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AND DIG SAFE AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS, AT ITS SOLE COST.

6. MAINTENANCE OF EROSION CONTROL MEASURES IS OF PARAMOUNT IMPORTANCE TO THE APPLICANT AND THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL EROSION CONTROL MEASURES SHOWN ON THE PLANS. ADDITIONAL EROSION CONTROL MEASURES SHALL BE INSTALLED IF DEEMED NECESSARY BY ONSITE INSPECTIONS OF THE OWNER, THEIR REPRESENTATIVES, OR THE CITY, AT NO ADDITIONAL COST TO THE OWNER.

7. ALL MATERIAL SCHEDULES SHOWN ON THE PLANS ARE FOR GENERAL INFORMATION ONLY. THE CONTRACTOR SHALL PREPARE HIS OWN MATERIAL SCHEDULES BASED UPON HIS PLAN REVIEW. ALL SCHEDULES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO ORDERING MATERIALS OR PERFORMING WORK.

8. ALL MATERIALS AND CONSTRUCTION METHODS SHALL CONFORM TO THE PROJECT SPECIFICATIONS, THE TOWN OF DAMARISCOTTA & SERVICING UTILITY REQUIREMENTS, IN CASES WHERE THESE CONFLICT THE MOST STRINGENT SHALL APPLY AT NO EXTRA COST TO THE OWNER.

9. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING RECORD DRAWINGS THROUGHOUT THE PROJECT AND PROVIDING THE OWNER WITH A SET OF ELECTRONIC FINAL RECORD DRAWINGS WHEN THE PROJECT IS COMPLETE.

10. THE CONTRACTOR WILL BE RESPONSIBLE FOR CREATING AND ADMINISTRATING A POLLUTION PREVENTION PLAN FOR THE PROJECT TO PREVENT CONTAMINATION OF ALL AUTHORIZED AND UNAUTHORIZED NON-STORMWATER DISCHARGES INTO THE STORMWATER SYSTEM OR NEARBY WETLAND RESOURCES. SEE BELOW FOR A LIST OF NON-STORMWATER DISCHARGES:

AUTHORIZED NON-STORMWATER DISCHARGES:

(a) DISCHARGES FROM FIREFIGHTING ACTIVITY;
(b) FIRE HYDRANT FLUSHINGS;
(c) VEHICLE WASHWATER IF DETERGENTS ARE NOT USED AND WASHING IS LIMITED TO THE EXTERIOR OF VEHICLES (ENGINE, UNDERCARRIAGE AND TRANSMISSION WASHING IS PROHIBITED);
(d) DUST CONTROL RUNOFF IN ACCORDANCE WITH PERMIT CONDITIONS AND APPENDIX (C)(3);
(e) ROUTINE EXTERNAL BUILDING WASHDOWN, NOT INCLUDING SURFACE PAINT REMOVAL, THAT DOES NOT INVOLVE DETERGENTS;
(f) PAVEMENT WASHWATER (WHERE SPILLS/LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE NOT OCCURRED, UNLESS ALL SPILLED MATERIAL HAD BEEN REMOVED) IF DETERGENTS ARE NOT USED;
(g) UNCONTAMINATED AIR CONDITIONING OR COMPRESSOR CONDENSATE;
(h) UNCONTAMINATED GROUNDWATER OR SPRING WATER;
(i) FOUNDATION OR FOOTER DRAIN-WATER WHERE FLOWS ARE NOT CONTAMINATED;
(j) UNCONTAMINATED EXCAVATION DEWATERING (SEE REQUIREMENTS IN APPENDIX C(5));
(k) POTABLE WATER SOURCES INCLUDING WATERLINE FLUSHINGS; AND
(l) LANDSCAPE IRRIGATION.

UNAUTHORIZED NON-STORMWATER DISCHARGES:

(a) WASTEWATER FROM THE WASHOUT OR CLEANOUT OF CONCRETE, STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS OR OTHER CONSTRUCTION MATERIALS;
(b) FUELS, OILS OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE;
(c) SOAPS, SOLVENTS, OR DETERGENTS USED IN VEHICLE AND EQUIPMENT WASHING; AND
(d) TOXIC OR HAZARDOUS SUBSTANCES FROM A SPILL OR OTHER RELEASE.

SITE LAYOUT NOTES

1. ALL HANDICAP PARKING SPACES ARE TO RECEIVE HANDICAP SIGNS AND PAVEMENT MARKINGS AS ILLUSTRATED ON THE DETAIL SHEETS.

2. BITUMINOUS CONCRETE CURB, SLIPFORM CONCRETE CURB AND GRANITE CURB SHALL MEET THE REQUIREMENTS OF MDOT 702.001, 703.07 AND 609.04.

3. ALL DIMENSIONING, UNLESS NOTED OTHERWISE, IS TO THE FACE OF CURB OR THE FACE OF THE BUILDING.

4. EXCEPT WHERE INDICATED OTHERWISE, THE PAVEMENT IS TO BE STANDARD DUTY PAVEMENT.

5. ALL TRAFFIC CONTROL SIGNS INDICATED ON THE SITE LAYOUT PLAN ARE TO MEET ALL REQUIREMENTS & STANDARDS OF THE MAINE DEPARTMENT OF TRANSPORTATION, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITIONS AND THE AMERICANS WITH DISABILITIES ACT REQUIREMENTS.

6. STRIPE PARKING AREAS, DRIVES AND ROADWAY AS SHOWN, INCLUDING PARKING SPACES, STOP BARS, CROSSWALKS, HANDICAP SYMBOLS, PAINTED ISLANDS AND FIRE LANES. (ALL MARKINGS EXCEPT MEDIAN ISLANDS AND CENTERLINES TO BE CONSTRUCTED USING WHITE TRAFFIC PAINT). ALL TRAFFIC PAINT SHALL MEET THE REQUIREMENTS OF AASHTO M248 TYPE "F". MEDIAN ISLANDS AND CENTERLINES TO BE CONSTRUCTED USING YELLOW TRAFFIC PAINT.

7. SEE DETAILS FOR PARKING STALL DIMENSIONS, HANDICAP SYMBOLS, SIGNS AND SIGN POSTS.

8. STOP BARS SHALL BE 12" WIDE.

9. PAINTED ISLANDS SHALL BE 4" WIDE DIAGONAL LINES @ 3'-0" O.C. BORDERED BY 4" WIDE LINES.

GRADING & DRAINAGE NOTES:

1. ALL STORM DRAIN PIPE SHALL BE SMOOTH BORE INTERIOR PROVIDING A MANNINGS ROUGHNESS COEFFICIENT OF N = 0.012 OR LESS.

2. PROVIDE TURF REINFORCEMENT IN AREAS INDICATED ON THE PLANS.

3. AN "AS-BUILT" CERTIFICATION AND PLANS OF THE STORMWATER DRAINAGE SYSTEM IS REQUIRED PRIOR TO THE OWNER ACCEPTING ANY BUILDINGS AND PROPERTY. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT ANY DEVIATION FROM THE PLANS MAY DELAY THE ACCEPTANCE OF THE PROJECT, WITH CONTRACTOR RESPONSIBLE FOR ANY ASSOCIATED COSTS.

4. SEE EXISTING CONDITIONS FOR BENCHMARK INFORMATION.

5. SEE GRADING, DRAINAGE AND EROSION/SEDIMENT CONTROL FOR PROPOSED GRADING AND EROSION CONTROL MEASURES.

6. ALL DISTURBED AREAS NOT TO BE PAVED, SODDED OR OTHERWISE TREATED SHALL RECEIVE 6" LOAM, SEED, FERTILIZER AND MULCH.

7. COMPACTION REQUIREMENTS:

LOCATION	MINIMUM COMPACTION*
SUBBASE AND BASE GRAVEL BELOW PAVED OR CONCRETE AREAS	95%
SUBGRADE FILL BELOW PAVED AREAS	90%
TRENCH BEDDING MATERIAL AND SAND BLANKET BACKFILL	95%
BELOW LOAM AND SEED AREAS	90%
STRUCTURAL FILL WITHIN PROPOSED BUILDING AREA	95%
SELECT FILL ADJACENT BUILDING FOUNDATIONS, EXTERIOR FOUNDATIONS AND WITHIN 8 INCHES OF THE SLAB-ON-GRADE	95%

*ALL PERCENTAGES OF COMPACTION SHALL BE OF THE MAXIMUM DRY DENSITY AT THE OPTIMUM MOISTURE CONTENT AS DETERMINED AND CONTROLLED IN ACCORDANCE WITH ASTM-D-1557.

8. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.

9. CONTRACTOR SHALL PROVIDE A FINISH PAVEMENT SURFACE FREE OF LOW SPOTS AND PONDING AREAS. CRITICAL AREAS INCLUDE BUILDING ENTRANCES AND EXIT RAMPS ADJACENT TO THE BUILDING AND ALONG NEW CURBED AREAS.

10. PROVIDE STABILIZATION OR SEPARATION GEOTEXTILE FABRIC OVER UNSTABLE SOILS AS DIRECTED BY THE OWNER'S REPRESENTATIVE AND IN ACCORDANCE WITH THE FINAL GEOTECHNICAL RECOMMENDATIONS.

11. ALL ADA ACCESSIBLE PARKING SPACES SHALL BE GRADED / PAVED TO **NOT** EXCEED 2% MAX. GRADE IN ANY DIRECTION. ALL ADA ROUTES SHALL NOT EXCEED 5% LONGITUDINAL SLOPE AND 2% CROSS SLOPE. IN REPAIRS TO NON-COMPLIANT SURFACES SHALL BE COMPLETED AT NO EXTRA EXPENSE TO THE OWNER.

LOCAL APPROVALS, WAIVERS AND VARIANCES

THE CONSTRUCTION PLANS ARE TO BE SUBMITTED TO THE TOWN OF DAMARISCOTTA FOR THEIR REVIEW, APPROVAL AND RECORDS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

UTILITY NOTES

1. ALL REQUIRED UTILITIES SERVING THE PROJECT SHALL BE COORDINATED AND CONSTRUCTED BY THE DIVISION SITE CONTRACTOR TO WITHIN 5 FEET OF THE BUILDINGS, AT A LOCATION COORDINATED WITH THE MEP CONTRACTOR(S) AND THE BUILDING PLANS. SITE WORK WITHIN 5 FEET OF UNDERSLAB UTILITIES SHALL CONSIST OF TRENCHING AND BACKFILLING. ACTUAL UTILITY INSTALLATION SHALL BE BY THE MEP CONTRACTOR. ALL REQUIRED CONNECTION FEES SHALL BE PAID BY THE GENERAL CONTRACTOR.

2. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF AND/OR RELOCATION OF OVERHEAD AND UNDERGROUND TELEPHONE WITH THE LOCAL TELEPHONE COMPANY. CONTRACTOR SHALL BE RESPONSIBLE FOR CONDUITS, PULL WIRES, TRENCHING AND BACKFILLING NECESSARY TO COMPLETE THE WORK.

3. ALL SANITARY SEWER WORK SHALL MEET THE STANDARDS OF THE MAINE STATE PLUMBING CODE AND GREAT SALT BAY SANITARY DISTRICT REQUIREMENTS.

4. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF ELECTRIC SERVICE WITH CENTRAL MAINE POWER.

5. COORDINATE ALL UTILITY WORK WITH THE APPROPRIATE UTILITY COMPANY. ALL UTILITY WORK SHALL CONFORM TO THE STANDARDS OF THE UTILITY COMPANY AND PROJECT SPECIFICATIONS, WHICHEVER IS MORE STRINGENT.

6. THE LOCATIONS OF THE NEW UTILITY SERVICES AND CONNECTIONS SHALL BE COORDINATED WITH THE SERVICING UTILITY COMPANY, CONTRACTOR AND MEP DESIGNERS.

7. UNDERGROUND ELECTRICAL, CONDUIT MATERIAL AND INSTALLATION SHALL CONFORM TO UTILITY COMPANY STANDARDS AND PROJECT SPECIFICATIONS, WHICH EVER IS MORE STRINGENT.

8. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OR WORK TO FINISH GRADE.

9. ALL UNDERGROUND CONDUITS SHALL HAVE NYLON PULL ROPES TO FACILITATE PULLING CABLES.

10. THE CONTRACTOR SHALL OBTAIN, PAY FOR, AND COMPLY WITH ALL REQUIRED PERMITS, ARRANGE FOR ALL INSPECTIONS, AND SUBMIT COPIES OF ACCEPTANCE CERTIFICATES TO THE OWNER PRIOR TO COMPLETION OF THE PROJECT.

11. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL BOXES, FITTINGS, CONNECTORS, COVER PLATES AND OTHER MISCELLANEOUS ITEMS NOT NECESSARILY DETAILED ON THE DRAWINGS TO RENDER INSTALLATION OF UTILITIES COMPLETE AND OPERATIONAL, AT NO EXTRA EXPENSE TO THE OWNER.

12. A 5 FOOT MINIMUM EDGE TO EDGE HORIZONTAL SEPARATION SHALL BE PROVIDED BETWEEN ALL WATER AND SANITARY SEWER LINES. AN 18 INCH OUTSIDE TO OUTSIDE VERTICAL SEPARATION SHALL BE PROVIDED AT ALL WATER AND SANITARY SEWER CROSSINGS.

13. THE CONTRACTOR SHALL PHASE UTILITY CONSTRUCTION AND PROVIDE TEMPORARY SERVICES AS REQUIRED TO PROVIDE CONTINUOUS SERVICE TO THE JOB SITE. TEMPORARY SERVICES SHALL COMPLY WITH ALL FEDERAL, STATE, LOCAL AND UTILITY COMPANY STANDARDS. COORDINATE ALL TEMPORARY SERVICES WITH UTILITY COMPANY, OWNER AND AFFECTED BUSINESSES.

LANDSCAPE NOTES

(SUBJECT TO COORDINATION WITH LANDSCAPE DRAWINGS. IN CASE OF CONFLICT BETWEEN THIS SECTION AND THE LANDSCAPE DRAWINGS, THE LANDSCAPING DRAWINGS SHALL GOVERN)

1. ALL PLANTS SHALL BE NURSERY GROWN AND WORKMANSHIP SHALL CONFORM TO THE AMERICAN ASSOCIATION OF NURSERYMEN, STANDARDS AND SHALL BE SUBJECT TO THE APPROVAL OF THE OWNERS REPRESENTATIVE BEFORE AND AFTER PLANTING.

2. PLANTS SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER INSPECTION AND ACCEPTANCE, AND SHALL HAVE AT LEAST 80% HEALTHY GROWTH AT THE END OF THE GUARANTEED PERIOD.

3. ALL DISTURBED AREAS NOT TO BE PAVED OR OTHERWISE TREATED SHALL RECEIVE 6" LOAM AND SEED.

4. THREE (3) INCH BARK MULCH IS TO BE USED AROUND THE TREE AND SHRUB PLANTING AS SPECIFIED IN THE DETAILS. WHERE BARK MULCH IS USED IN A CURBED ISLAND, THE BARK SHALL MEET THE TOP INSIDE EDGE OF THE CURB. ALL OTHER AREAS SHALL RECEIVE 6" LOAM AND SEED.

5. THE CONTRACTOR SHALL SUPPLY ALL PLANT MATERIALS IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTING AS SHOWN.

6. PARKING AREA PLANTED ISLANDS TO HAVE A MINIMUM OF 6" TOPSOIL. REMOVE ALL CONSTRUCTION DEBRIS BEFORE TOPSOILING. TOPSOIL SHALL BE PLACED TO TOP OF CURB.

7. ALL PLANT MATERIAL SHALL BE APPROVED BY THE OWNER OR THE OWNERS REPRESENTATIVE PRIOR TO ARRIVAL ON THE SITE.

8. PLANT MATERIAL SHALL BEAR THE SAME RELATIONSHIP TO FINISHED GRADE AS TO THE ORIGINAL PLANTING GRADE PRIOR TO DIGGING.

9. THE CONTRACTOR SHALL LOCATE, VERIFY, AND MARK ALL EXISTING AND NEWLY INSTALLED UNDERGROUND UTILITIES PRIOR TO ANY LAWN WORK OR PLANTING. ANY CONFLICTS WHICH MIGHT OCCUR BETWEEN PLANTINGS AND UTILITIES SHALL BE IMMEDIATELY REPORTED TO THE OWNER SO THAT ALTERNATE PLANTING LOCATIONS CAN BE DETERMINED.

10. NO SUBSTITUTION OF PLANT MATERIALS SHALL BE ALLOWED WITHOUT THE PRIOR WRITTEN APPROVAL OF THE OWNER.

11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL PLANTING AND LAWNS AGAINST DAMAGE FROM ONGOING CONSTRUCTION. THIS PROTECTION SHALL BEGIN AT THE TIME THE PLANT IS INSTALLED AND CONTINUE UNTIL THE FORMAL ACCEPTANCE OF ALL THE PLANTINGS.

12. SEE PLANTING DETAILS FOR WEED BARRIER INFORMATION.

13. ALL PLANTING LOCATED AT THE ENTRANCE TO THE PROJECT OR AT INTERSECTIONS WITHIN THE SITE WILL BE MAINTAINED AND WILL NOT EXCEED 3 FEET IN HEIGHT WITHIN A TRIANGLE FORMED 25' INTO THE DRIVEWAY AND 25' ALONG THE TRAVEL WAY.

EROSION CONTROL NOTES:

1. PRIOR TO BEGINNING ANY LAND DISTURBING ACTIVITIES, CLEARING AND GRADING LIMITS SHALL BE STAKED BY THE CONTRACTOR BASED ON THE LIMITS OF GRADING SHOWN ON THE DRAWINGS AND ACCEPTED BY THE OWNER'S REPRESENTATIVE IN THE FIELD. AFTER THE CLEARING AND GRADING LIMITS HAVE BEEN ACCEPTED, THE CONTRACTOR SHALL INSTALL THE PERIMETER SILT FENCES, SEDIMENT BARRIERS AND THE CONSTRUCTION ENTRANCES ASSOCIATED WITH THE PROJECT.

2. ALL GROUND AREAS DISTURBED FOR CONSTRUCTION SHALL BE GRADED, LOAMED, SEEDED AND MULCHED AS SOON AS POSSIBLE. TEMPRORARY/PERMANENT SEED MIXTURES SHALL CONFORM TO THE SEEDING PLAN CONTAINED IN THE EROSION CONTROL PROJECT PREPARED FOR THIS PROJECT.

3. PRIOR TO PAVING, THE CONTRACTOR SHALL REMOVE SILT FROM ALL STORM LINES AND APPURTENANCES.

4. ALL STORM DRAIN INLETS AND OUTLETS NOT IN PAVED AREAS ARE TO RECEIVE RIPRAP PROTECTION APRONS DURING CONSTRUCTION.

5. SILT FENCES SHALL BE INSPECTED, REPAIRED AND CLEANED AS NOTED IN THE EROSION CONTROL NOTES SHOWN ON THE EROSION CONTROL DETAIL SHEET.

6. THE CONTRACTOR SHALL REPAIR AND ADD STONE TO THE CONSTRUCTION ENTRANCE AS NECESSARY TO ENSURE THAT IT FUNCTIONS TO CAPTURE MUD FROM THE TIRES OF CONSTRUCTION VEHICLES DURING CONSTRUCTION. THE PURPOSE OF THE CONSTRUCTION ENTRANCE IS TO KEEP ADJACENT STREETS CLEAR OF DIRT AND MUD. SWEEPING OF THE ROADWAYS SHALL BE PERFORMED BY THE CONTRACTOR ON AN AS NEEDED BASIS, BUT AT A MINIMUM ONCE A WEEK.

7. SILT REMOVED FROM AROUND INLETS AND BEHIND THE SILT FENCES SHALL BE PLACED ON A TOPSOIL STOCKPILE AND MIXED INTO TOPSOIL FOR USE IN LANDSCAPING OPERATIONS.

8. LAND DISTURBING ACTIVITIES SHALL BE ACCOMPLISHED IN A MANNER AND SEQUENCE WHICH CAUSE THE LEAST PRACTICAL UNPROTECTED DENUDED AREAS ON THE SITE DURING CONSTRUCTION.

9. THE CONTRACTOR IS CAUTIONED THAT FAILURE TO COMPLY WITH THE SEQUENCE OF CONSTRUCTION, EROSION/SEDIMENT CONTROL PLAN, AND OTHER PERMIT REQUIREMENTS MAY RESULT IN MONETARY PENALTIES AS ENFORCED BY THE MEDEP OR LOCAL AGENCIES. THE CONTRACTOR SHALL BE ASSESSED ALL SUCH PENALTIES AT NO COST TO THE OWNER OR PERMITTEE.

10. A FULL EROSION/SEDIMENTATION CONTROL PLAN ACCOMPANIES THIS DRAWING SET.

11. PROVIDE INLET PROTECTION BARRIERS AROUND ALL EXISTING AND PROPOSED STORM DRAINAGE INLETS AS SHOWN AND MAINTAIN FOR THE DURATION OF THE PROJECT UNTIL PAVEMENT HAS BEEN INSTALLED.

12. INSPECT EROSION AND SEDIMENT CONTROL DEVICES AFTER EACH RAIN STORM OF 0.25 INCHES OR GREATER.

13. INSTALL CURLEX EROSION CONTROL MAT OR EQUAL ON ALL SLOPES STEEPER THAN 3:1.

14. THE CONTRACTOR SHALL INSTALL ALL EROSION CONTROL MEASURES IN ACCORDANCE WITH THE "MAINE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES AND MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, OCTOBER 2016".

RECORD DRAWING NOTE:

1. THE CONTRACTOR SHALL PROVIDE RECORD INFORMATION OF WORK COMPLETED IN ORDER TO SATISFY THE RECORD DRAWING REQUIREMENTS OF THE TOWN OF DAMARISCOTTA.

GEOTECHNICAL NOTES:

SEE GEOTECHNICAL REPORT BY SUMMIT GEOENGINEERING SERVICES, PROJECT #22412, DATED 2 / 1 / 2023.

(TO BE ADDED FOR CONSTRUCTION DOCUMENTS)

LEGEND (APPLICABLE TO GP DRAWINGS ONLY)

EXISTING

- BOUNDARY LINE/R.O.W.
- ABUTTER LINE/R.O.W.
- DEED LINE/ROW
- TIE LINE
- EASEMENT
- FLOODPLAIN
- CENTERLINE
- IRON PIPE/ROD
- BENCHMARK
- BUILDING
- SIGN
- EDGE PAVEMENT
- ---122--- CONTOURS
- ×30.20 SPOT GRADE
- CHAIN LINK FENCE
- DECIDUOUS TREE
- CONIFEROUS TREE
- GUARDRAIL
- WATER GATE VALVE/SHUTOFF
- HYDRANT
- W WATER MAIN
- 12" san SANITARY SEWER
- 12"RCP 24"SD STORM DRAIN
- MANHOLE (AS LABELLED)
- CATCH BASIN
- UNIDENTIFIED MH
- OHU OVERHEAD UTILITIES
- EM ELECTRIC METER BOX
- LIGHT POLE
- UTILITY POLE
- GUY
- BOULDER
- B-1 BORING LOCATION BY SUMMIT GEOENGINEERING
- ZONING DISTRICT BOUNDARY
- WETLANDS
- STREAM
- MAILBOX
- TREELINE

PROPOSED

- BARRIER FREE SYMBOL
- SIGN
- A SIGN LABEL
- GUIDERAIL - METAL
- GUIDERAIL - TIMBER
- FENCE - CHAINLINK
- FENCE - WOOD
- BUILDING / BUILDING ACCESS
- PROPERTY LINE
- CONDOMINIUM LOT LINE
- RETAINING WALL
- PEDESTRIAN CROSSWALK
- TRAFFIC ARROWS
- BOLLARD
- SLIPFORM CONCRETE CURB
- BITUMINOUS CURB
- CATCH BASIN
- 100 CONTOUR LABEL
- DRAIN MANHOLE
- RIPRAP INLET APRON
- RIPRAP OUTLET APRON
- 2 / 1 2:1 SLOPE DESIGNATION
- 100.00 SPOT GRADE
- TC 99.0 / FC 98.50 SPOT GRADE AT CURB (TC=TOP / BC=BOTTOM)
- WATER MARK
- 10"UD UNDERDRAIN
- SD9 STORM DRAIN
- TREE LINE OR LIMIT OF CLEARING
- CURB STOP
- HYDRANT
- LIGHT POLE WITH FIXTURE(S)
- WALL MOUNT LIGHT
- SANITARY SEWER MANHOLE
- TEST PIT
- T TRANSFORMER PAD
- UTILITY POLE
- VALVE
- SANITARY SEWER
- 6"W WATER MAIN
- 2"G GAS MAIN
- UGE UNDERGROUND ELECTRIC
- OHE OVERHEAD ELECTRIC
- TRAIL
- SNOW STORAGE

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES & SHALL NOT BE USED FOR CONSTRUCTION.

STATE OF MAINE — STEPHEN R. BUSHEY — 10.10.23 — LICENSED PROFESSIONAL ENGINEER

STEPHEN R. BUSHEY, P.E.
LIC. #7429

Rev.	Date	Revision

Rev.	Date	Revision
1	2023.02.10	PRELIMINARY SITE PLAN / SUBDIVISION PLAN APPLICATION

Design: SRB	Draft: CDD	Date: NOV. 2022
Checked: SRB	Scale: AS NOTED	Job No.: 3996
File Name: 3996-COVER.dwg		

GORRILL PALMER
707 Sable Oaks Drive, Suite 30
South Portland, Me 04106
207.772.2515 / www.gorrillpalmer.com
Relationships. Responsiveness. Results.

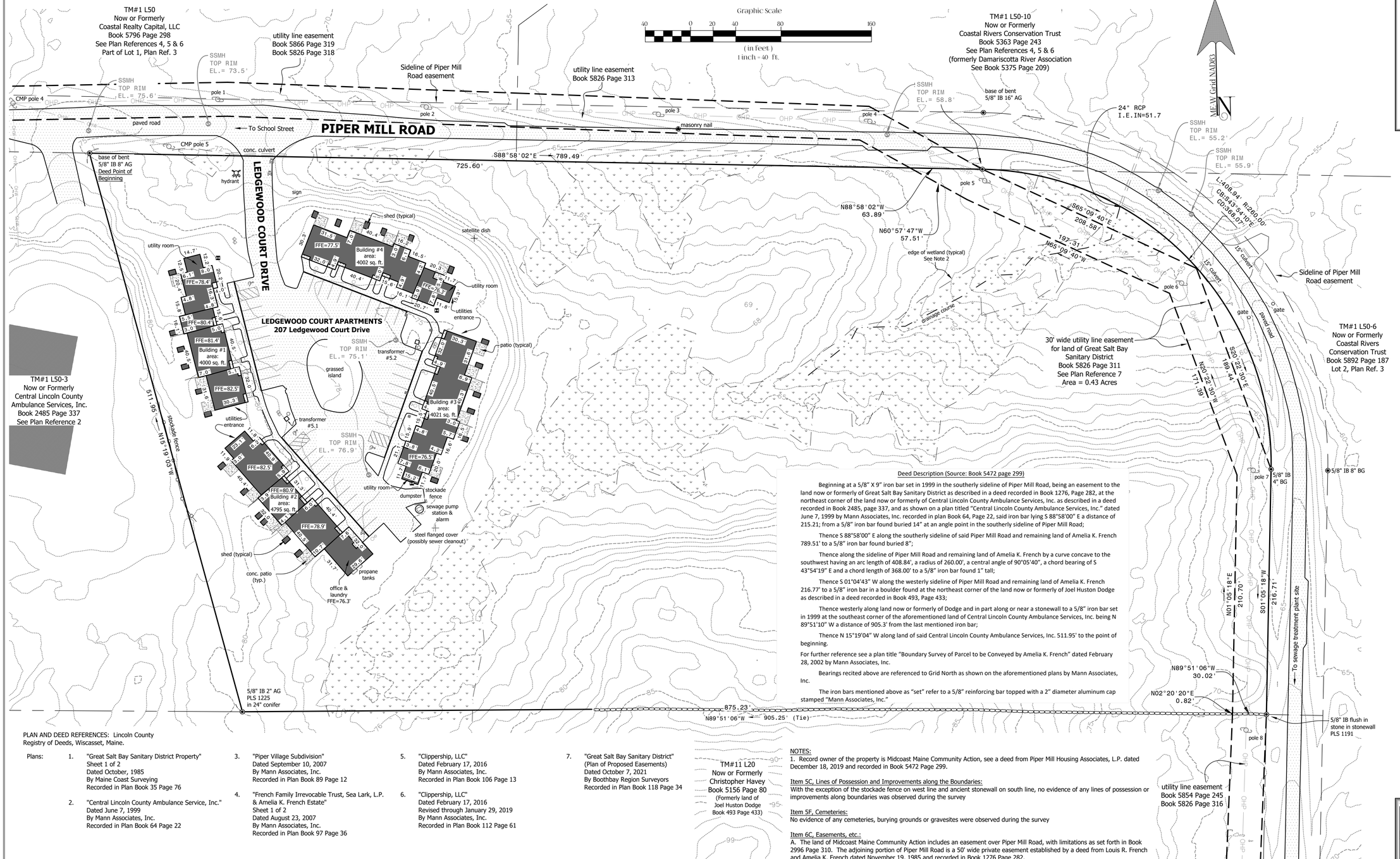
Drawing Name: GENERAL NOTES AND LEGEND

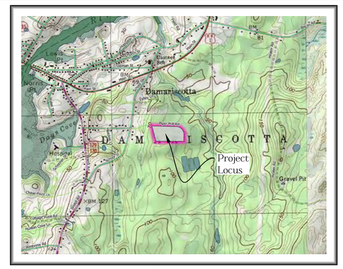
Project: LEDGEWOOD COURT EXPANSION - 32 UNITS
207 LEDGEWOOD COURT DRIVE, DAMARISCOTTA, MAINE

Client: DC PREDEVELOPMENT LLC / DC LEDGEWOOD LLC
631 STEVENS AVENUE, SUITE 203, PORTLAND, MAINE 04103 PH. 207.772.7673

Drawing No. C-1.1

U:\3996 - Ledgewood Court Expansion - Damariscotta 5-16-22\Z - CAD\DWG\3996-COVER.dwg 2/9/2023 5:44 PM





Location Map

SITE DEVELOPMENT NOTES:

1. The site was oriented to State Plane Coordinates using a survey grade, differential (RTK) GPS and data collector utilizing an established OPUS base station and network rover (NTRIP) by averaging epochs on two points for 3 minutes each with a RMS of < 0.06'.

2. Horizontal datum is NAD83 Maine West Grid - US survey feet

3. Some data shown hereon was traced from orthorectified photo produced from data collected during aerial drone survey. This drone was equipped with sub centimeter precision RTK DGPS, camera and Aerial LiDaR unit capable of capturing point data with accuracy of +/-0.25'.

4. Vertical datum is NAVD88.

5. Hypsographical contour interval is 1' inside of the area of interest. This data was provided by Aerial LiDaR drone survey on July 5, 2022. This data is good for planning but the area of interest should be located conventionally for exact grade elevations prior to final design and construction.

6. Wetland bounds were provided by GPS observations from wetland scientist, forwarded by client . These were only field verified at the periphery by this office. If development is intended to abut these lines, the lines should be field verified. Though, there was close agreement in the GPS orientation and the field location using conventional means, of less than a 5 feet, which was determined acceptable for flags tied onto branches to indicate nearby ground wetlands. Delineation was performed by others see report by responsible wetland scientist.

7. The parcel is located inside of Zone 'X' which denotes areas outside the 0.2% annual chance flood based on FEMA Flood Map 23015C0269D, effective date July 16, 2015.

8. Underground features on or near the property were not located at client request. Call Dig-Safe prior to soil disturbance.

9. Site is Zoned Rural District.

10. Town imposed site restrictions for Rural District per Land Use ordinance dated 11-5-19 are as follows (assumed sewered):

Minimum Land	-	10,000 sq.ft. per Dwelling Unit
Front BSB	-	20 feet
Side BSB	-	15 feet
Rear BSB	-	15 feet
Minimum Frontage	-	100 feet
Maximum Bldg. Ht.	-	35 feet

Deed Description (Source: Book 5472 page 299)

Beginning at a 5/8" X 9" iron bar set in 1999 in the southerly sideline of Piper Mill Road, being an easement to the land now or formerly of Great Salt Bay Sanitary District as described in a deed recorded in Book 1276, Page 282, at the northeast corner of the land now or formerly of Central Lincoln County Ambulance Services, Inc. as described in a deed recorded in Book 2485, page 337, and as shown on a plan titled "Central Lincoln County Ambulance Services, Inc." dated June 7, 1999 by Mann Associates, Inc. recorded in plan Book 64, Page 22, said iron bar lying S 88°58'00" E a distance of 215.21; from a 5/8" iron bar found buried 14" at an angle point in the southerly sideline of Piper Mill Road;

Thence S 88°58'00" E along the southerly sideline of said Piper Mill Road and remaining land of Amelia K. French 789.51' to a 5/8" iron bar found buried 8";

Thence along the sideline of Piper Mill Road and remaining land of Amelia K. French by a curve concave to the southwest having an arc length of 408.84', a radius of 260.00', a central angle of 90°05'40", a chord bearing of S 43°54'19" E and a chord length of 368.00' to a 5/8" iron bar found 1" tall;

Thence S 01°04'43" W along the westerly sideline of Piper Mill Road and remaining land of Amelia K. French 216.77' to a 5/8" iron bar in a boulder found at the northeast corner of the land now or formerly of Joel Huston Dodge as described in a deed recorded in Book 493, Page 433;

Thence westerly along land now or formerly of Dodge and in part along or near a stonewall to a 5/8" iron bar set in 1999 at the southeast corner of the aforementioned land of Central Lincoln County Ambulance Services, Inc. being N 89°51'10" W a distance of 905.3' from the last mentioned iron bar;

Thence N 15°19'04" W along land of said Central Lincoln County Ambulance Services, Inc. 511.95' to the point of beginning.

For further reference see a plan title "Boundary Survey of Parcel to be Conveyed by Amelia K. French" dated February 28, 2002 by Mann Associates, Inc.

Bearings recited above are referenced to Grid North as shown on the aforementioned plans by Mann Associates, Inc.

The iron bars mentioned above as "set" refer to a 5/8" reinforcing bar topped with a 2" diameter aluminum cap stamped "Mann Associates, Inc."

PLAN AND DEED REFERENCES: Lincoln County Registry of Deeds, Wiscasset, Maine.

Plans:

1. "Great Salt Bay Sanitary District Property" Sheet 1 of 2 Dated October, 1985 By Maine Coast Surveying Recorded in Plan Book 35 Page 76
2. "Central Lincoln County Ambulance Service, Inc." Dated June 7, 1999 By Mann Associates, Inc. Recorded in Plan Book 64 Page 22
3. "Piper Village Subdivision" Dated September 10, 2007 By Mann Associates, Inc. Recorded in Plan Book 89 Page 12
4. "French Family Irrevocable Trust, Sea Lark, L.P. & Amelia K. French Estate" Sheet 1 of 2 Dated August 23, 2007 By Mann Associates, Inc. Recorded in Plan Book 97 Page 36
5. "Clippership, LLC" Dated February 17, 2016 By Mann Associates, Inc. Recorded in Plan Book 106 Page 13
6. "Clippership, LLC" Dated February 17, 2016 Revised through January 29, 2019 By Mann Associates, Inc. Recorded in Plan Book 112 Page 61
7. "Great Salt Bay Sanitary District" (Plan of Proposed Easements) Dated October 7, 2021 By Boothbay Region Surveyors Recorded in Plan Book 118 Page 34

NOTES:

1. Record owner of the property is Midcoast Maine Community Action, see a deed from Piper Mill Housing Associates, L.P. dated December 18, 2019 and recorded in Book 5472 Page 299.

Item 5C, Lines of Possession and Improvements along the Boundaries:
With the exception of the stockade fence on west line and ancient stonewall on south line, no evidence of any lines of possession or improvements along boundaries was observed during the survey

Item 5F, Cemeteries:
No evidence of any cemeteries, burying grounds or gravesites were observed during the survey

Item 6C, Easements, etc.:
A. The land of Midcoast Maine Community Action includes an easement over Piper Mill Road, with limitations as set forth in Book 2996 Page 310. The adjoining portion of Piper Mill Road is a 50' wide private easement established by a deed from Louis R. French and Amelia K. French dated November 19, 1985 and recorded in Book 1276 Page 282.

B. Reference is made to an easement deed granted to Central Maine Power Company and Verizon New England, Inc. dated February 21, 2003 and recorded in Book 3029 Page 198 which describes a utility line easement of unspecified width from pole/pad 5, Ambulance Line, extending to include pole/pad 5.1 and 5.2.

C. Reference is made to an easement deed granted to Great Salt Bay Sanitary District dated October 12, 2021 and recorded in Book 5826 Page 311 which describes a 30' wide utility line easement within and near/along the east line of the parcel.

D. The deed from Amelia K. French to Piper Mill Housing, L.P. dated February 6, 2003 and recorded in Book 2996 Page 310 describes covenants and restrictions regarding the property, including the requirement for a 25' wide vegetated buffer (with exceptions) along the south and west sides of Piper Mill Road.

Legend

- CMS - Calculated Monument Set unless otherwise stated - 5/8" rebar capped. "N.W. PLUMER PLS# 2547"
- IP - Iron pipe (found)
- IB - Iron Bolt, iron rod, or rebar (RB) (found)
- Utility pole
- Lamp Post
- Electrical Access Cover
- Water Valve
- Sewer Manhole
- Sewer Cleanout
- Catch Basin
- Stone wall
- OHW — Overhead Wires
- BG Below Grade
- AG Above Grade

ALTA/NSPS LAND TITLE SURVEY
PROPERTY OF
MIDCOAST MAINE COMMUNITY ACTION
207 LEDGEWOOD COURT DRIVE
DAMARISCOTTA, LINCOLN COUNTY, MAINE

State of Maine
_____ss Registry of Deeds
Received _____ at
_____H. _____M. __M. and recorded
in Plan Book _____ Page _____
Attest:
_____ Register

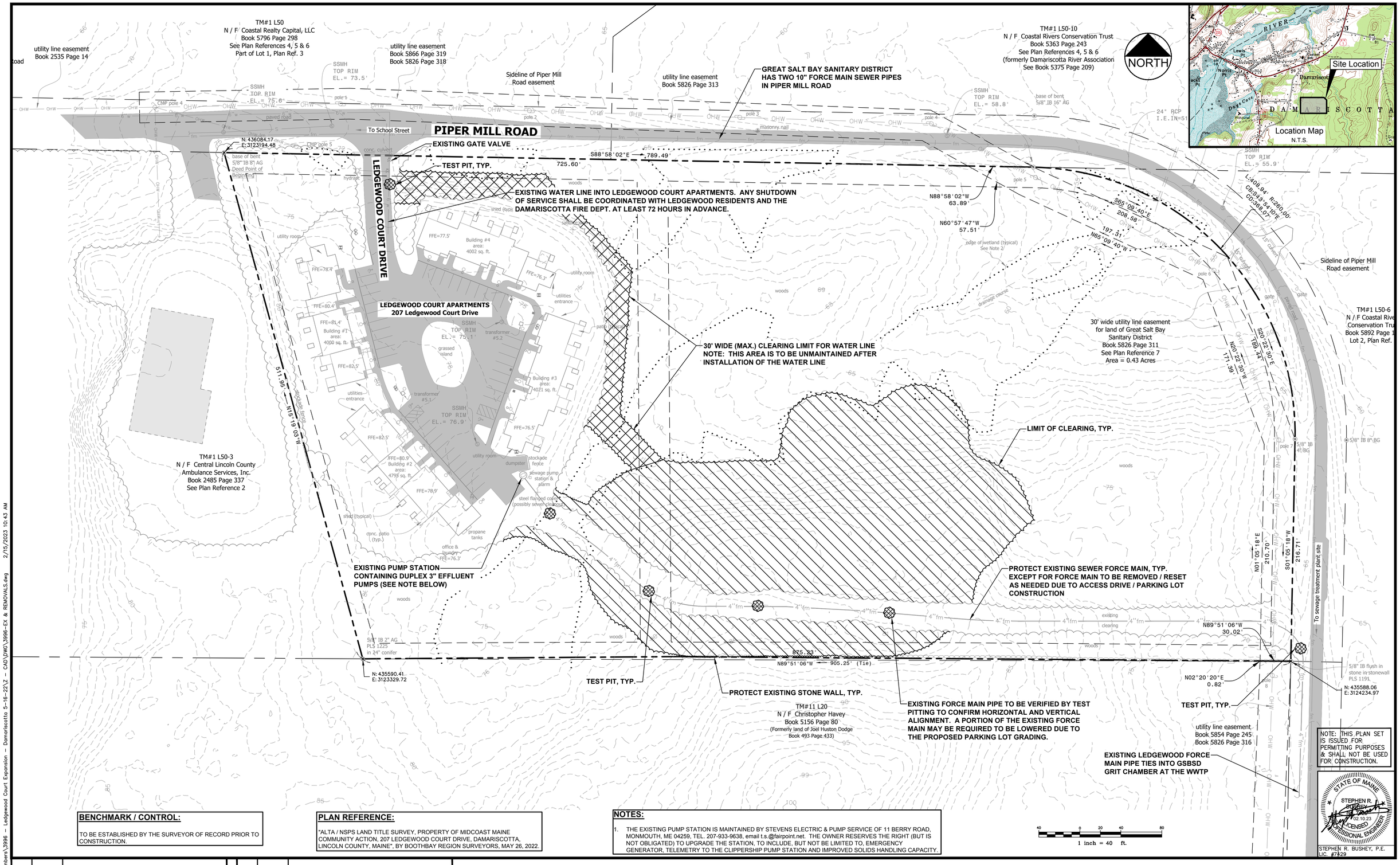
To Maine Community Action. (name of lender, if known), (name of insurer, if known), (names of others as negotiated with the client):This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2021 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes Items 1, 2, 3, 4, 6(a) and (b), 7(a), (b)(1) and (c), 8, 9, 11(a) and (b), 13, 16 and 17 of Table A thereof. The fieldwork was completed on July 5, 2022.

Date of Plat or Map:
PRELIMINARY
July 7, 2022 - N.W.P.

Nicholas W. Plumer
Professional Land Surveyor #2547

BOOTHBAY REGION SURVEYORS SINCE 1960
1037 Wiscasset Road
Boothbay Maine
(207) 633-4445
N.Plumer@BRSMaine.com

Property Owner: Midcoast Maine Community Action			
Owner Address: c/o Gorrill Palmer, 707 Sable Oaks Drive, Suite 30, So. Portland, ME 0410			
Crew Chief:	SDG	Field Date:	May 26, 2022
Drawn By:	JDM	Job No:	22455 BRS-8
Checked by:	NWP	Plot date:	July 7, 2022
File Name: 22455 Gorrill Palmer Piper Mill Road Damariscotta		Sheet:	1 of 1



BENCHMARK / CONTROL:

TO BE ESTABLISHED BY THE SURVEYOR OF RECORD PRIOR TO CONSTRUCTION.

PLAN REFERENCE:

"ALTA / NSPS LAND TITLE SURVEY, PROPERTY OF MIDCOAST MAINE COMMUNITY ACTION, 207 LEDGEWOOD COURT DRIVE, DAMARISCOTTA, LINCOLN COUNTY, MAINE", BY BOOTHBAY REGION SURVEYORS, MAY 26, 2022.

NOTES:

1. THE EXISTING PUMP STATION IS MAINTAINED BY STEVENS ELECTRIC & PUMP SERVICE OF 11 BERRY ROAD, MONMOUTH, ME 04259, TEL. 207-933-9638, email t.s.@fairpoint.net. THE OWNER RESERVES THE RIGHT (BUT IS NOT OBLIGATED) TO UPGRADE THE STATION, TO INCLUDE, BUT NOT BE LIMITED TO, EMERGENCY GENERATOR, TELEMETRY TO THE CLIPPERSHIP PUMP STATION AND IMPROVED SOLIDS HANDLING CAPACITY.

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES & SHALL NOT BE USED FOR CONSTRUCTION.

STATE OF MAINE
STEPHEN R. BUSHEY
07.10.23
LICENSED PROFESSIONAL ENGINEER
STEPHEN R. BUSHEY, P.E.
LIC. #7829

Rev.	Date	Revision

Rev.	Date	Revision
1	2023.02.10	PRELIMINARY SITE PLAN / SUBDIVISION PLAN APPLICATION

Design: SRB	Draft: CDD	Date: NOV. 2022
Checked: SRB	Scale: AS NOTED	Job No.:3996
File Name: 3996-EX & REMOVALS.dwg		

GORRILL PALMER
707 Sable Oaks Drive, Suite 30
South Portland, Me 04106
207.772.2515 / www.gorrillpalmer.com
Relationships. Responsiveness. Results.

Drawing Name: EXISTING CONDITIONS & REMOVALS PLAN

Project: LEDGEWOOD COURT EXPANSION - 32 UNITS
207 LEDGEWOOD COURT DRIVE, DAMARISCOTTA, MAINE

Client: DC PREDEVELOPMENT LLC / DC LEDGEWOOD LLC
631 STEVENS AVENUE, SUITE 203, PORTLAND, MAINE 04103 PH. 207.772.7673

Drawing No. C-2.0

\\Gpstorage-srv\Job_numbers\3996 - Ledgewood Court Expansion - Damariscotta 5-16-22\Z - CAD\DWG\3996-EX & REMOVALS.dwg 2/15/2023 10:43 AM

TM#1 L50
N / F Coastal Realty Capital, LLC
Book 5796 Page 298
See Plan References 4, 5 & 6
Part of Lot 1, Plan Ref. 3
utility line easement
Book 2535 Page 14
utility line easement
Book 5866 Page 319
Book 5826 Page 318
Sideline of Piper Mill Road easement
utility line easement
Book 5826 Page 313
TM#1 L50-10
N / F Coastal Rivers Conservation Trust
Book 5363 Page 243
See Plan References 4, 5 & 6
(formerly Damariscotta River Association
See Book 5375 Page 209)
NORTH
Site Location
Location Map
N.T.S.
PIPER MILL ROAD
To School Street
LEDGEWOOD COURT DRIVE
EXISTING HYDRANT
6" x 6" TAPPING SLEEVE & VALVE ASSEMBLY
CONNECT TO EXISTING WATER MAIN IN LEDGEWOOD COURT DRIVE - TEST PIT TO DETERMINE EXACT LOCATION & DEPTH OF EXISTING WATER MAIN , TYP.
EXISTING 24 UNITS
LEDGEWOOD COURT APARTMENTS
207 Ledgewood Court Drive
PROPOSED LOT A =
171,846 SF / 3.95 ACRES
EXISTING SITE SIZE =
10.51 ACRES
PROPOSED LOT B =
286,068 SF / 6.57 ACRES
PROPOSED 6" WATER MAIN
NOTE: AREA CLEARED FOR WATER MAIN IS TO BE UNMAINTAINED AFTER INSTALLATION OF THE WATER LINE
EXISTING WETLANDS MAPPED BY FLYCATCHER LLC - APRIL 2022
30' wide utility line easement
for land of Great Salt Bay
Sanitary District
Book 5826 Page 311
See Plan Reference 7
Area = 0.43 Acres
Sideline of Piper Mill Road easement
TM#1 L50-6
N / F Coastal Rivers Conservation Trust
Book 5892 Page
Lot 2, Plan Ref.
BOLLARD LIGHT, TYP. OF 2 - SEE ELECTRICAL SITE LIGHTING PLAN
15' SIDE SETBACK
PROPOSED HYDRANT (PRIVATE)
LOW-PROFILE (CAPE COD MOLD) SLIPFORM CONCRETE CURB (FOR ACCESS TO FIRE LANE)
6" x 4" SWIVEL TEE & 4" GATE VALVE
6" x 6" TEE
1" BLOWOFF
20' x 24' PATIO WITH BRICK PAVER OR SIMILAR SURFACE (SEE LANDSCAPE PLAN FOR DETAILS)
CLEARING LIMIT, TYP.
WALL-MOUNTED LIGHT, TYP. OF 8 - SEE ELECTRICAL SITE LIGHTING PLAN
6" x 6" TEE & GATE VALVE
6" 1/8 BEND, TYP.
EXISTING PUMP STATION
6' WIDE BIT. SIDEWALK WITH SLIPFORM CONCRETE CURB
MATCH EXISTING PAVEMENT ALONG LEDGEWOOD COURT DRIVE, TYP.
FIRE LANE (GRASSPAVE)
6" FIRE SERVICE
4" DOMESTIC WATER SERVICE
6' WIDE BIT. SIDEWALK
PROPOSED
2-STORY BUILDING - 32 UNITS
1ST FLOOR AREA: 12,820 S.F.
2ND FLOOR AREA: 12,677 S.F.
TOTAL BLDG AREA: 25,497 S.F.
BENCH, TYP. - SEE LS PLANS
(4) 5' x 30' COMMUNITY GARDEN BOXES 36' x 41' CRUSHED STONE AREA CONSISTING OF 3/4" STONE AND / OR PEASTONE AT 6" DEPTH OVER FABRIC
STONE DUST PATH TO GARDEN BEDS
BUILDING-MOUNTED SITE LIGHTING FIXTURE, TYP. (SEE LIGHTING / PHOTOMETRICS PLAN FOR MORE INFORMATION)
3.5' WIDE BIT. SIDEWALK
6' x 16' REINFORCED CONCRETE GENERATOR PAD, VERIFY SIZING WITH GEN SET SUPPLIER
SNOW STORAGE
20' x 20' PAVEMENT SURFACE FOR PLAY SPACE (BASKETBALL, ETC.)
STANDARD-DUTY BITUMINOUS ASPHALT PAVEMENT, TYP.
WETLAND IMPACT: 1,953 S.F.
VERT. SLIPFORM CONCRETE CURB
REINFORCED CONCRETE FROST SLAB AT ALL BUILDING ENTRANCES, TYP.
TOTAL: 33 SPACES
POLE-MOUNTED LIGHT, TYP. OF 4 - SEE ELECTRICAL SITE LIGHTING PLAN
4" WIDE WHITE PAVEMENT MARKINGS , TYP.
SLIPFORM VERTICAL CONCRETE CURB, TYP.
STANDARD-DUTY BITUMINOUS ASPHALT PAVEMENT, TYP.
TM#11 L20
N / F Christopher Havey
Book 5156 Page 80
(Formerly land of Joel Huston Dodge Book 493 Page 433)
PRECAST WHEEL STOP , TYP. OF 5
7' x 7' TRANSFORMER PAD
15' x 20' REINFORCED CONCRETE PAD & SOLID WASTE ENCLOSURE
EXISTING 4" FM TO WWTP
CONCEPTUAL OHE / T / C ROUTE - COORDINATE WITH CMP & COMMUNICATIONS PROVIDERS FOR ROUTING
utility line easement
Book 5854 Page 245
Book 5826 Page 316
To sewage treatment plant site
S88°58'02"E 789.49'
S89°35'55"W 285.94'
N89°34'00"W 596.42'
N89°51'06"W 905.25' (Tie)
N02°20'20"E 0.82'
1 inch = 40 ft.
NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES & SHALL NOT BE USED FOR CONSTRUCTION.
STATE OF MAINE
STEPHEN R. BUSHEY
LICENSED PROFESSIONAL ENGINEER
STEPHEN R. BUSHEY, P.E.
LIC. #7429

2. DIMENSIONAL STANDARDS

Dimensional Standard[8]	District[2]					
	GR	C1[7,15]	C2[7,14]	R	WC	M
Minimum land area						
-Sewered	10,000 sf per first principal building or DU, 6,000 sf thereafter	10,000 sf	10,000 sf per first principal building or DU, 6,000 sf thereafter	10,000 sf per first principal building or DU, 6,000 sf thereafter	13	10,000 sf per principal building
-Non-sewered	40,000 sf per DU	N/A	40,000 sf per principal building or DU	80,000 sf per principal building or DU	13	40,000 sf per principal building
Setbacks						
-Front	20 feet[1]	3	20 feet[1,12]	20 feet[12]	12	20 feet
-Side	15 feet	4,5,6	15 feet[9,12]	15 feet[12]	12	0 feet
-Rear	15 feet	4,5,6	15 feet[9,12]	15 feet[12]	12	0 feet
Minimum street frontage						
-Sewered	75 feet	None	100 feet	200 feet	13	200 feet
-Non-sewered	100 feet	N/A	100 feet	200 feet	13	200 feet
Maximum building height	35 feet	40 feet	40 feet[10]	35 feet[10,11]	10	40 feet[10]

[1] Or the average of existing setbacks on abutting properties

[2] Or as required by the Shoreland Zoning Ordinance

[3] For those lots with existing buildings, front yard setbacks shall be the same or greater than the setback of existing buildings on that lot. If a structure is removed as part of the project, the location of that structure may be considered as an existing building provided the permit for new construction remains valid. For those lots with no existing buildings, the setback shall be the average setback of buildings on abutting properties.

[4] If walls adjacent to side lot lines on buildings on both the applicants and adjacent property are of noncombustible construction as defined in this ordinance, the setback from the property lines may be reduced to 0 feet.

[5] If the conditions stated in note 4 are not met, then a minimum 10-foot buffer strip to the side or rear lot lines or a 20-foot separation distance to adjacent building shall be maintained.

[6] Yards abutting other districts shall be at least 15 feet deep and have a landscaped buffer strip.

[7] No single retail store whether located in a single building, a combination of buildings, single tenant space, and/or combination of tenant spaces shall exceed 35, 000 gross square feet of floor area in the aggregate. This size restriction shall apply to new retail stores and expansion of existing retail stores, effective November 1, 2005.

[8] Unless modified by the requirements of § 101.6.

[9] Except abutting the Municipal District they shall be 0 feet

[10] Maximum 190 feet for wireless communications facilities

[11] Water supply standpipes for water supply utilities may be 100 feet above the ground

[12] A new or expanded wireless telecommunications facility must comply with the setback requirements for the zoning district in which it is located, or be set back one hundred five percent (105%) of its height from all property lines, whichever is greater. The setback may be satisfied by including the areas outside the property boundaries if secured by an easement. The following exemptions apply: i. The setback may be reduced by the Planning Board upon a showing by the applicant that the facility is designed to collapse in a manner that will not harm other property. ii. An antenna is exempt from the setback requirement if it extends no more than five (5) feet horizontally from the edge of the structure to which it is attached, and it does not encroach upon an abutting property.

[13] The standards of the specific district (C2 or Rural) will apply.

[14] See § 101.7 for additional performance standards for adult entertainment establishments

[15] The parking standards of the Site Plan Review Ordinance as amended for this district shall apply.

SIGN LEGEND:

R7-8 12"x18"	R7-8 12"x18" / R7-8A 12"x6"	18"x24"
RESERVED PARKING	RESERVED PARKING / VAN ACCESSIBLE	NO PARKING FIRE LANE
POST MOUNTED	POST MOUNTED	
A	B	C

SANITARY SEWER STRUCTURE SCHEDULE

STRUCTURE	SIZE	RIM	INV. IN/SIZE (FROM)	INV. OUT/SIZE (TO)
SMH 1	4'ø	77.75	67.02/8"(BLDG)	66.92/8"(SMH 2)
SMH 2	4'ø	69.98	66.44/8"(SMH 1)	66.44/8"(EX PS)

PLAN REFERENCE:

"ALTA / NSPS LAND TITLE SURVEY, PROPERTY OF MIDCOAST MAINE COMMUNITY ACTION, 207 LEDGEWOOD COURT DRIVE, DAMARISCOTTA, LINCOLN COUNTY, MAINE", BY BOOTHBAY REGION SURVEYORS, MAY 26, 2022.

NOTE:

1. DEVELOPER RESERVES THE RIGHT TO MODIFY ONSITE CURBING TO BITUMINOUS, CONCRETE OR GRANITE, SUBJECT TO COSTS & AVAILABILITY.

Rev.	Date	Revision
1	2023.02.10	PRELIMINARY SITE PLAN / SUBDIVISION PLAN APPLICATION

Design: SRB | Draft: CDD | Date: NOV. 2022
Checked: SRB | Scale: AS NOTED | Job No.: 3996
File Name: 3996-SITE-UTIL.dwg

GORRILL PALMER
707 Sable Oaks Drive, Suite 30
South Portland, Me 04106
207.772.2515 / www.gorrillpalmer.com
Relationships. Responsiveness. Results.

Drawing Name: SITE LAYOUT & UTILITY PLAN

Project: LEDGEWOOD COURT EXPANSION - 32 UNITS
207 LEDGEWOOD COURT DRIVE, DAMARISCOTTA, MAINE

Client: DC PREDEVELOPMENT LLC / DC LEDGEWOOD LLC
631 STEVENS AVENUE, SUITE 203, PORTLAND, MAINE 04103 PH. 207.772.7673

Drawing No. C-3.0

2. DIMENSIONAL STANDARDS

Dimensional Standard[8]	District[2]					
	GR	C1[7,15]	C2[7,14]	R	WC	M
Minimum land area						
-Sewered	10,000 sf per first principal building or DU, 6,000 sf thereafter	10,000 sf	10,000 sf per first principal building or DU, 6,000 sf thereafter	10,000 sf per first principal building or DU, 6,000 sf thereafter	13	10,000 sf per principal building
-Non-sewered	40,000 sf per DU	N/A	40,000 sf per principal building or DU	80,000 sf per principal building or DU	13	40,000 sf per principal building
Setbacks						
-Front	20 feet[1]	3	20 feet [1, 12]	20 feet [12]	12	20 feet
-Side	15 feet	4,5,6	15 feet [9, 12]	15 feet [12]	12	0 feet
-Rear	15 feet	4,5,6	15 feet [9, 12]	15 feet [12]	12	0 feet
Minimum street frontage						
-Sewered	75 feet	None	100 feet	200 feet	13	200 feet
-Non-sewered	100 feet	N/A	100 feet	200 feet	13	200 feet
Maximum building height	35 feet	40 feet	40 feet[10]	35 feet[10, 11]	10	40 feet[10]

[1] Or the average of existing setbacks on abutting properties

[2] Or as required by the Shoreland Zoning Ordinance

[3] For those lots with existing buildings, front yard setbacks shall be the same or greater than the setback of existing buildings on that lot. If a structure is removed as part of the project, the location of that structure may be considered as an existing building provided the permit for new construction remains valid. For those lots with no existing buildings, the setback shall be the average setback of buildings on abutting properties.

[4] If walls adjacent to side lot lines on buildings on both the applicants and adjacent property are of noncombustible construction as defined in this ordinance, the setback from the property lines may be reduced to 0 feet.

[5] If the conditions stated in note 4 are not met, then a minimum 10-foot buffer strip to the side or rear lot lines or a 20-foot separation distance to adjacent building shall be maintained.

[6] Yards abutting other districts shall be at least 15 feet deep and have a landscaped buffer strip.

[7] No single retail store whether located in a single building, a combination of buildings, single tenant space, and/or combination of tenant spaces shall exceed 35, 000 gross square feet of floor area in the aggregate. This size restriction shall apply to new retail stores and expansion of existing retail stores, effective November 1, 2005.

[8] Unless modified by the requirements of § 101.6.

[9] Except abutting the Municipal District they shall be 0 feet

[10] Maximum 190 feet for wireless communications facilities

[11] Water supply standpipes for water supply utilities may be 100 feet above the ground

[12] A new or expanded wireless telecommunications facility must comply with the setback requirements for the zoning district in which it is located, or be set back one hundred five percent (105%) of its height from all property lines, whichever is greater. The setback may be satisfied by including the areas outside the property boundaries if secured by an easement. The following exemptions apply: i. The setback may be reduced by the Planning Board upon a showing by the applicant that the facility is designed to collapse in a manner that will not harm other property. ii. An antenna is exempt from the setback requirement if it extends no more than five (5) feet horizontally from the edge of the structure to which it is attached, and it does not encroach upon an abutting property.

[13] The standards of the specific district (C2 or Rural) will apply.

[14] See § 101.7 for additional performance standards for adult entertainment establishments

[15] The parking standards of the Site Plan Review Ordinance as amended for this district shall apply.

PROPOSED LOT DESCRIPTIONS – NET RESIDENTIAL DENSITY CALCS.

LOT	SIZE	STREET FRONTAGE	AREA UNSUITABLE FOR DEVELOPMENT	NET RESIDENTIAL AREA AVAILABLE	MINIMUM LAND AREA REQUIRED / UNIT
A	171,846 SF / 3.95 ACRES	417.77'	22,825 SF (WETLANDS)	171,846 SF – 22,825 SF = 149,021 SF	24 UNITS: 10,000 (1ST UNIT) + 6,000 X 23 UNITS = 148,000 SF
B	286,068 SF / 6.57 ACRES	997.37'	48,262 SF (WETLANDS)	286,068 SF – 48,262 SF = 237,806 SF	32 UNITS: 10,000 (1ST UNIT) + 6,000 X 31 UNITS = 196,000 SF

PLAN REFERENCE:

"ALTA / NSPS LAND TITLE SURVEY, PROPERTY OF MIDCOAST MAINE COMMUNITY ACTION, 207 LEDGEWOOD COURT DRIVE, DAMARISCOTTA, LINCOLN COUNTY, MAINE", BY BOOTHBAY REGION SURVEYORS, MAY 26, 2022.

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES & SHALL NOT BE USED FOR CONSTRUCTION.

STATE OF MAINE – STEPHEN R. BUSHEY – LICENSED PROFESSIONAL ENGINEER – 02.10.23

STEPHEN R. BUSHEY, P.E.
LIC. #7429

Rev.	Date	Revision
1	2023.02.10	PRELIMINARY SITE PLAN / SUBDIVISION PLAN APPLICATION

Design: SRB	Draft: CDD	Date: NOV. 2022
Checked: SRB	Scale: AS NOTED	Job No.: 3996
File Name: 3996-SITE-UTIL.dwg		

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GORRILL PALMER
707 Sable Oaks Drive, Suite 30
South Portland, Me 04106
207.772.2515 / www.gorrillpalmer.com
Relationships. Responsiveness. Results.

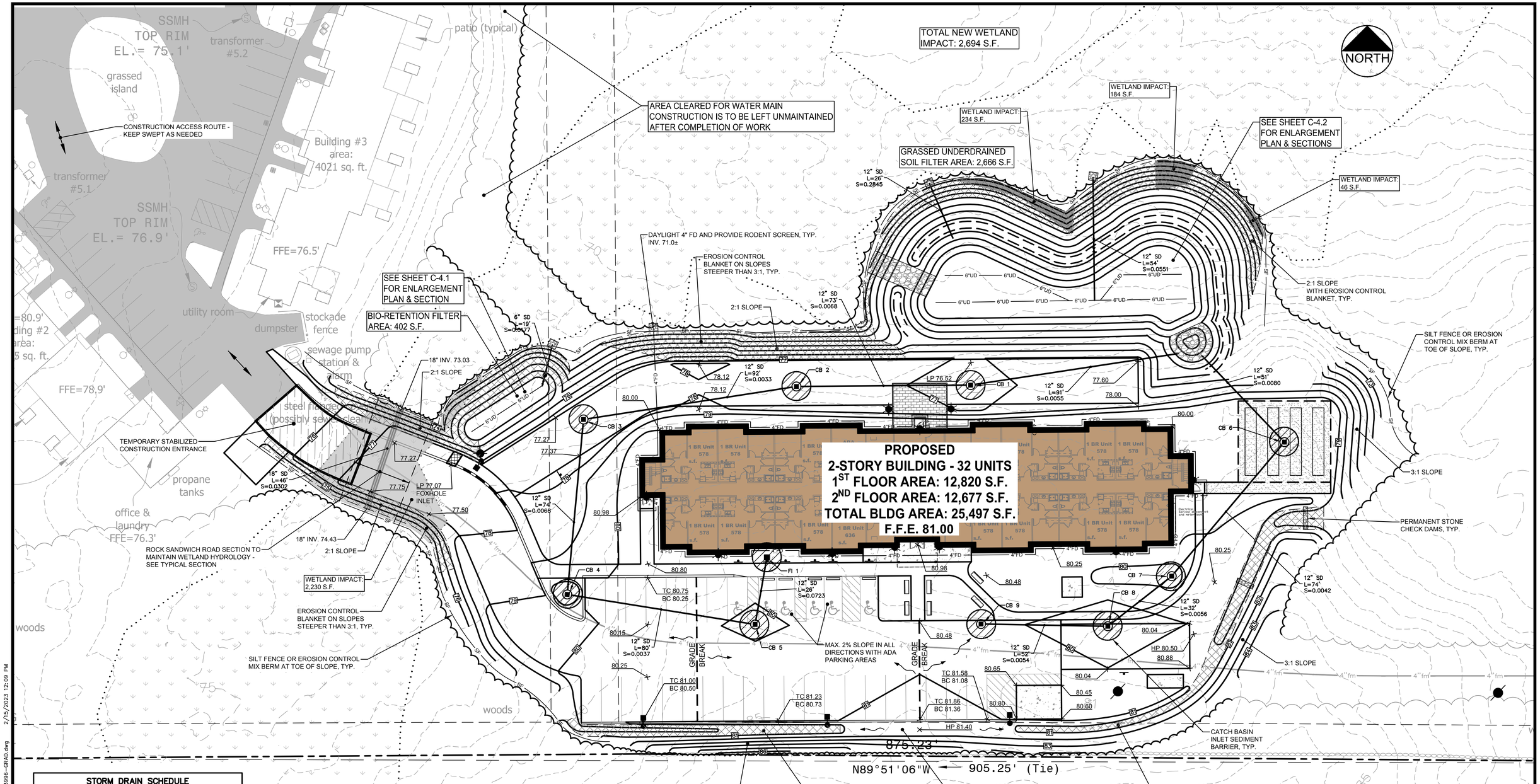
Drawing Name: LOT LINE ADJUSTMENT PLAN

Project: LEDGEWOOD COURT EXPANSION - 32 UNITS
207 LEDGEWOOD COURT DRIVE, DAMARISCOTTA, MAINE

Client: DC PREDEVELOPMENT LLC / DC LEDGEWOOD LLC
631 STEVENS AVENUE, SUITE 203, PORTLAND, MAINE 04103 PH. 207.772.7673

Drawing No. C-3.1

U:\3996 – Ledgewood Court Expansion – Damariscotta 5-16-22\Z – CAD\DWG\3996-SITE-UTIL.dwg 2/10/2023 5:03 PM



STORM DRAIN SCHEDULE

STRUCTURE	SIZE	RIM	INV. IN/SIZE (FROM)	INV. OUT/SIZE (TO)
CB 1	4'ø	76.10	72.10/12"(CB 2)	72.00/12"(OUTFALL 1)
CB 2	4'ø	76.70	72.70/12"(CB 3)	72.60/12"(CB 1)
CB 3	4'ø	77.10	73.10/12"(CB 4)	73.00/12"(CB 2)
CB 4	4'ø	78.70	74.70/12"(CB 5)	73.60/12"(CB 3)
CB 5	4'ø	83.35	75.10/12"(FI 1)	75.00/12"(CB 4)
CB 6	4'ø	78.36	74.36/12"(CB 7)	74.26/12"(OUTFALL 2)
CB 7	4'ø	79.10	74.77/12"(CB 8)	74.67/12"(CB 6)
CB 8	4'ø	79.55	75.05/12"(CB 9)	74.95/12"(CB 7)
CB 9	4'ø	80.15		75.33/12"(CB 8)
FI 1	2' SQ.	81.00		77.00/12"(CB 5)

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STATE OF MAINE — STEPHEN R. BUSHEY — 02.10.23 — LICENSED PROFESSIONAL ENGINEER

STEPHEN R. BUSHEY, P.E.
LIC. #7429

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Drawing Name: GRADING, DRAINAGE & EROSION CONTROL PLAN

Project: LEDGEWOOD COURT EXPANSION - 32 UNITS
207 LEDGEWOOD COURT DRIVE, DAMARISCOTTA, MAINE

Client: DC PREDEVELOPMENT LLC / DC LEDGEWOOD LLC
631 STEVENS AVENUE, SUITE 203, PORTLAND, MAINE 04103 PH. 207.772.7673

Drawing No. C-4.0

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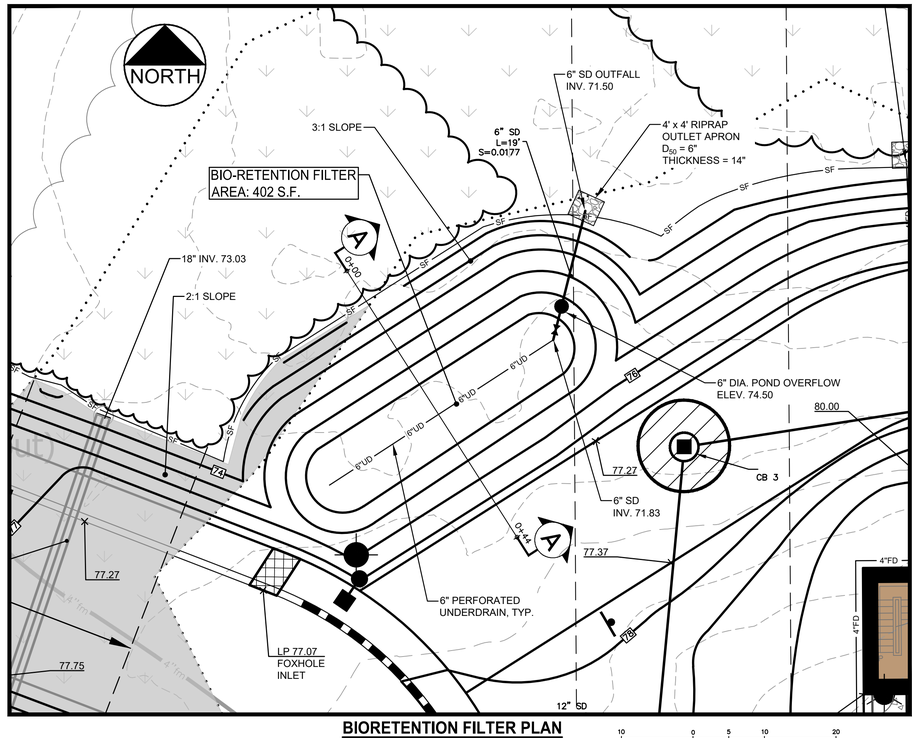
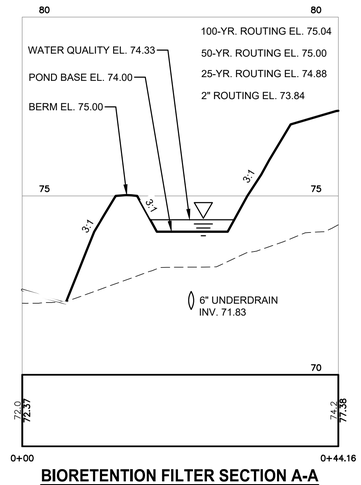


BIORETENTION FILTER PLAN
SCALE: 1" = 10'

10 0 5 10 20
1 inch = 10 ft.



BIORETENTION FILTER SECTION A-A
SCALE: 1" = 10' HORZ. / 1" = 2' VERT.

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STATE OF MAINE
STEPHEN R. BUSHEY
02.10.23
LICENSED PROFESSIONAL ENGINEER
STEPHEN R. BUSHEY, P.E.
LIC. #7429

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Drawing Name: STORMWATER MANAGEMENT PLAN & SECTIONS

Project: LEDGEWOOD COURT EXPANSION - 32 UNITS
207 LEDGEWOOD COURT DRIVE, DAMARISCOTTA, MAINE

Client: DC PREDEVELOPMENT LLC / DC LEDGEWOOD LLC
631 STEVENS AVENUE, SUITE 203, PORTLAND, MAINE 04103 PH. 207.772.7673

Drawing No. C-4.1

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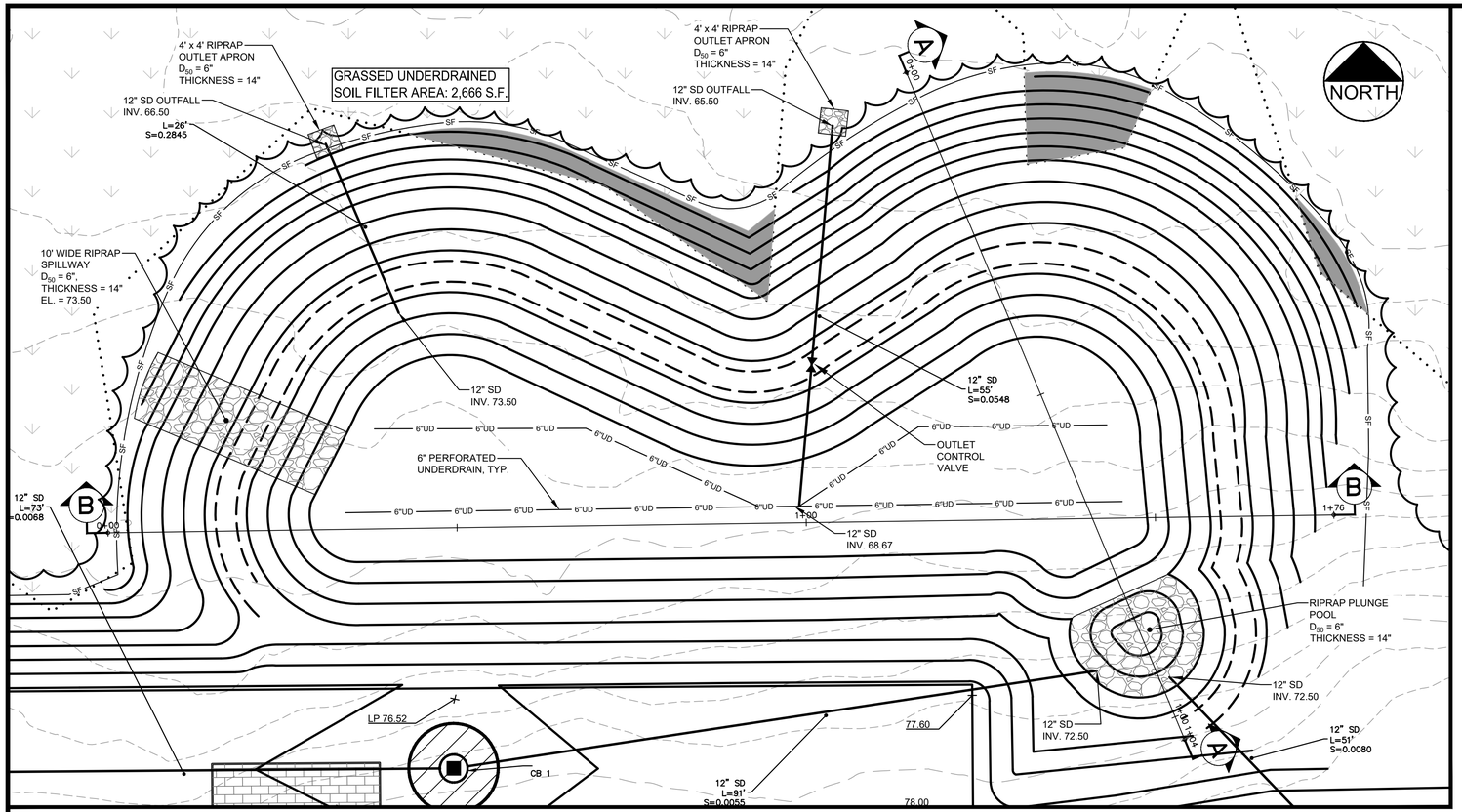
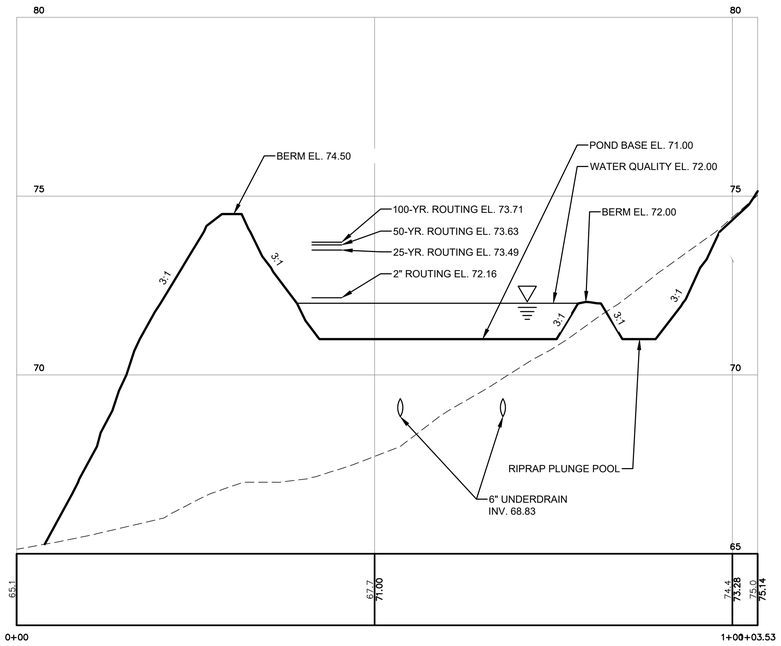
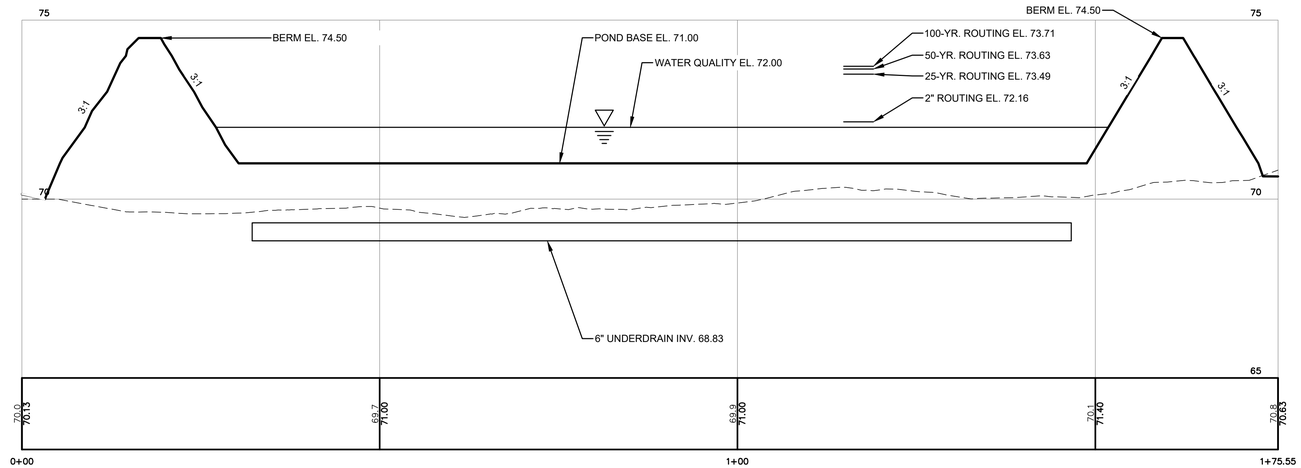


GRASSED UNDERDRAINED SOIL FILTER PLAN
SCALE: 1" = 10'

10 0 5 10 20
1 inch = 10 ft.



GRASSED UNDERDRAINED SOIL FILTER SECTION A-A
SCALE: 1" = 10' HORZ. / 1" = 2' VERT.



GRASSED UNDERDRAINED SOIL FILTER SECTION B-B
SCALE: 1" = 10' HORZ. / 1" = 2' VERT.

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES & SHALL NOT BE USED FOR CONSTRUCTION.

STATE OF MAINE
STEPHEN R. BUSHEY
02.10.23
LICENSED PROFESSIONAL ENGINEER
STEPHEN R. BUSHEY, P.E.
LIC. #7429

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207 LEDGEWOOD COURT DRIVE, DAMARISCOTTA, MAINE

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631 STEVENS AVENUE, SUITE 203, PORTLAND, MAINE 04103 PH. 207.772.7673

Drawing No. C-4.2

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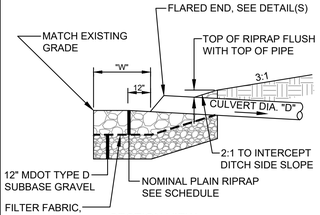
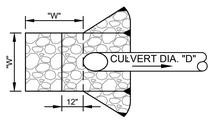


SCHEDULE			
CULVERT DIAMETER (D)	WIDTH (W)	STONE d_{50}	RIPRAP THICKNESS
12"	2'	6"	14"
15"	4'	6"	14"
18"	4'	6"	14"
24"	6'	6"	14"
30"	8'	12"	27"
36"	8'	12"	27"
42"	10'	12"	27"
48"	12'	12"	27"

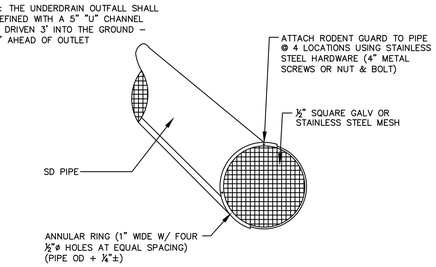
SECTION VIEW



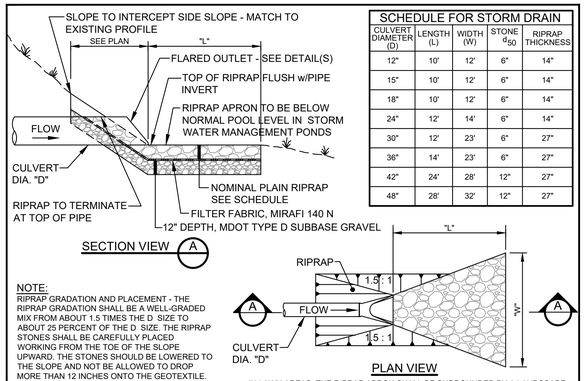
PLAN VIEW

NOTE:
RIPRAP GRADATION AND PLACEMENT - THE RIPRAP GRADATION SHALL BE A WELL-GRADED MIX FROM ABOUT 1.5 TIMES THE D SIZE TO ABOUT 25 PERCENT OF THE D SIZE. THE RIPRAP STONES SHALL BE CAREFULLY PLACED WORKING FROM THE TOE OF THE SLOPE UPWARD. THE STONES SHOULD BE LOWERED TO THE SLOPE AND NOT BE ALLOWED TO DROP MORE THAN 12 INCHES ONTO THE GEOTEXTILE. THE FINISHED SURFACE SHALL BE A RELATIVELY SMOOTH UNIFORMLY SLOPED SURFACE.

A RIPRAP INLET APRON DETAIL
N.T.S.



D DETAIL FOR EXPOSED PIPE OUTLETS & UD OUTFALLS
N.T.S.



SCHEDULE FOR STORM DRAIN				
CULVERT DIAMETER (D)	LENGTH (L)	WIDTH (W)	STONE d_{50}	RIPRAP THICKNESS
12"	10'	12'	6"	14"
15"	10'	12'	6"	14"
18"	10'	12'	6"	14"
24"	12'	14'	6"	14"
30"	12'	23'	6"	27"
36"	14'	23'	6"	27"
42"	24'	28'	12"	27"
48"	28'	32'	12"	27"

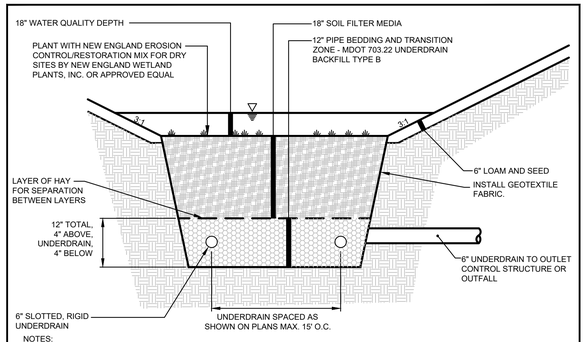
SECTION VIEW A

PLAN VIEW

NOTE:
RIPRAP GRADATION AND PLACEMENT - THE RIPRAP GRADATION SHALL BE A WELL-GRADED MIX FROM ABOUT 1.5 TIMES THE D SIZE TO ABOUT 25 PERCENT OF THE D SIZE. THE RIPRAP STONES SHALL BE CAREFULLY PLACED WORKING FROM THE TOE OF THE SLOPE UPWARD. THE STONES SHOULD BE LOWERED TO THE SLOPE AND NOT BE ALLOWED TO DROP MORE THAN 12 INCHES ONTO THE GEOTEXTILE. THE FINISHED SURFACE SHALL BE A RELATIVELY SMOOTH UNIFORMLY SLOPED SURFACE.

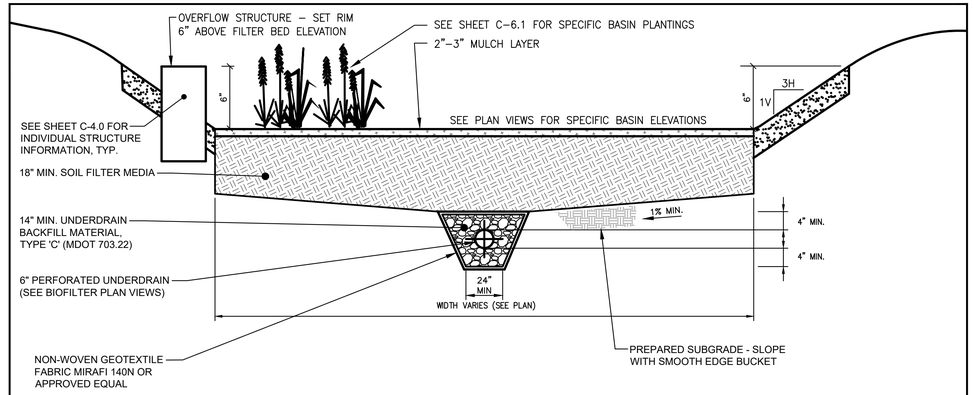
IN LAWN AREAS, THE RIPRAP APRON SHALL BE SURROUNDED BY A LANDSCAPE TIMBER TO PROVIDE AN ATTRACTIVE APRON. LANDSCAPE TIMBER TO BE 5/4" TREX SECURED WITH 4'-0" LONG METAL U CHANNEL SPACED @ 4'-0" O.C. OR APPROVED EQUAL.

B RIPRAP OUTLET APRON DETAIL
N.T.S.

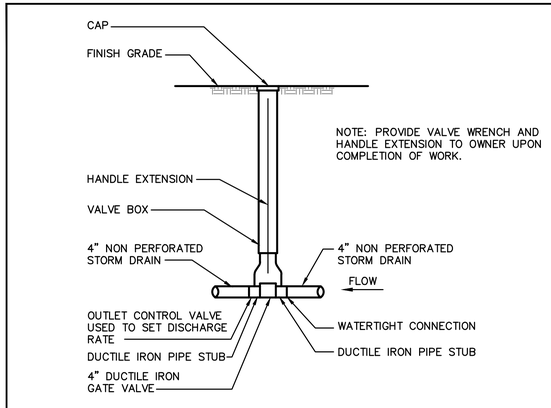


NOTES:
1. FILTER IS DESIGNED TO TREAT 1.0" RUNOFF FROM PAVED OR IMPERVIOUS SURFACES AND 0.4" RUNOFF FROM LANDSCAPED AREAS.
2. SEASONAL HIGH GROUND WATER ELEVATION IS EXPECTED TO BE ABOVE THE BOTTOM OF THE FILTER.

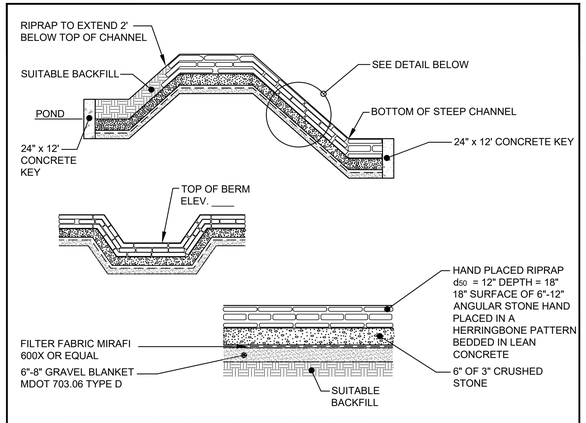
TYPICAL SECTION FOR UNDERDRAINED GRASSED SOIL FILTER
E
N.T.S.



H BIORETENTION FILTER (RAIN GARDEN)
N.T.S.



C OUTLET CONTROL VALVE DETAIL
N.T.S.



F EMERGENCY SPILLWAY CHANNEL
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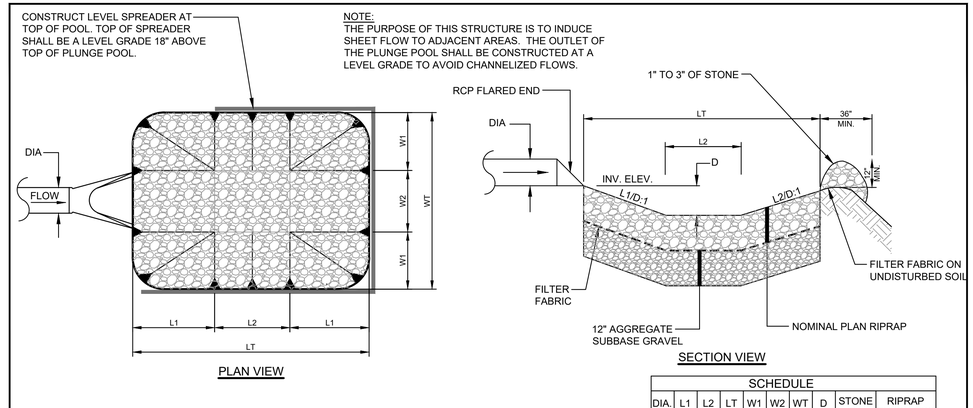

SCHEDULE									
DIA.	L1	L2	LT	W1	W2	WT	D	STONE D_{50}	RIPRAP THICKNESS
15"	3'	2'	8'	3'	2'	8'	1'	6"	14"
24"	3'	2'	8'	3'	2'	8'	1'	6"	14"

I RIPRAP PLUNGE POOL WITH LEVEL LIP SPREADER DETAIL
N.T.S.

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES & SHALL NOT BE USED FOR CONSTRUCTION.

STATE OF MAINE
STEPHEN R. BUSHEY
10.23
LICENSED PROFESSIONAL ENGINEER
STEPHEN R. BUSHEY, P.E.
LIC. #7429

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207 LEDGEWOOD COURT DRIVE, DAMARISCOTTA, MAINE

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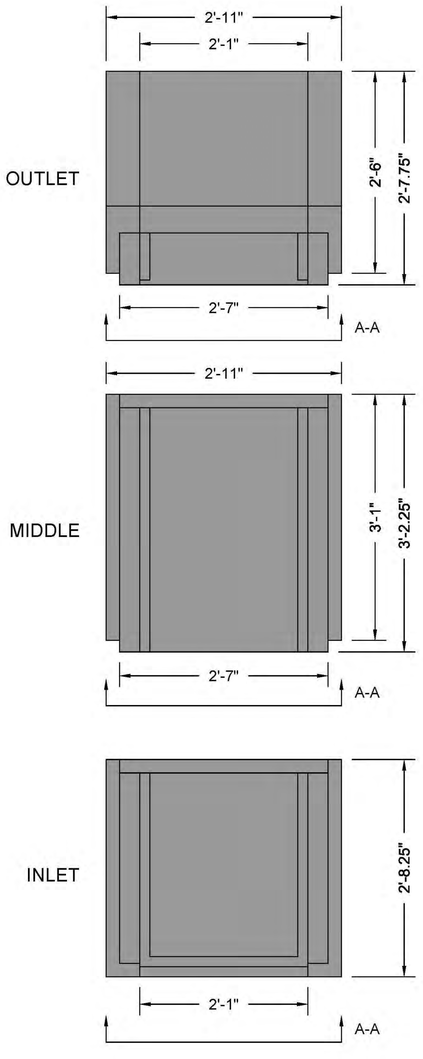
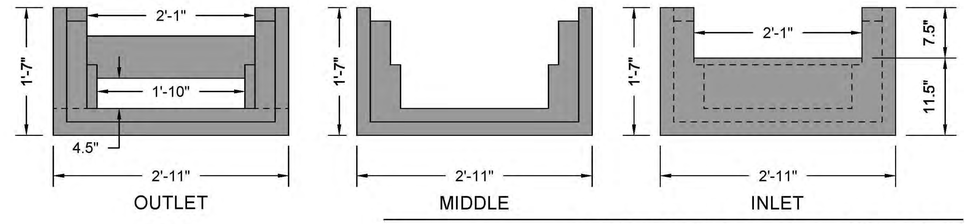
Drawing No. C-4.3

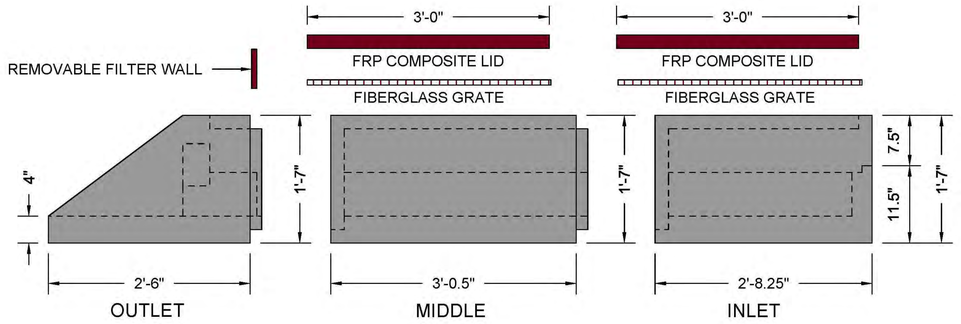
U:\3996 – Ledgewood Court Expansion – Damariscotta 5-16-22\Z – CAD\DWG\3996-GRAD.dwg 2/10/2023 2:14 PM



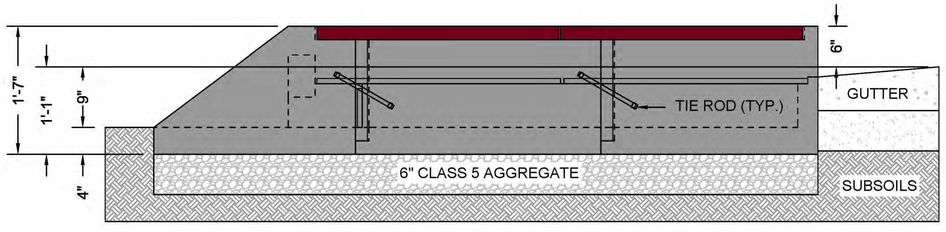
RAIN GUARDIAN FOXHOLE - PLAN VIEW



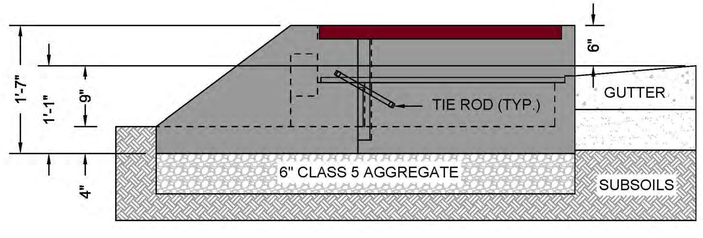
RAIN GUARDIAN FOXHOLE - SECTION A-A



RAIN GUARDIAN FOXHOLE - ELEVATION VIEW



RAIN GUARDIAN FOXHOLE - INSTALLED ELEVATION - INLET/MIDDLE/OUTLET



RAIN GUARDIAN FOXHOLE - INSTALLED ELEVATION - MIDDLE/OUTLET ONLY

SPECIFICATIONS

1. STEEL REINFORCED, COLD JOINT SECURED MONOLITHIC CONCRETE STRUCTURES (INLET 875 LBS, MIDDLE 965 LBS, AND OUTLET 730 LBS). CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 5,000 PSI AT 28 DAYS. CONCRETE AIR ENTRAINED (4% TO 8% BY VOLUME). MANUFACTURED AND DESIGNED TO ASTM C858.
2. 2-POINT PICK USING RECESSED LIFTING POCKETS WITH A STANDARD HOOK.
3. FIBERGLASS GRATE (11 LBS/PIECE).
4. FRP COMPOSITE LID (38 LBS/PIECE) WITH CONCENTRATED LOAD CAPACITY OF 11,200 LBS.

INSTALLATION NOTES

1. INSTALL A CLASS 5 BASE (COMPACTED TO 95% STANDARD PROCTOR). IT IS CRITICAL THAT THE CLASS 5 BASE IS EVEN TO ENSURE THE FOXHOLE PIECES ALIGN VERTICALLY SUCH THAT THE TOP LIDS LAY FLUSH WITH THE TOP OF THE FOXHOLE PIECES AND ADJACENT BOULEVARD, SIDEWALK, OR PATH. THE DISTANCE FROM THE BACK OF THE CURB MAY VARY BASED ON SITE CONDITIONS. EXCAVATE 1' 7" BELOW THE GUTTERLINE ELEVATION (I.E. THE BIORETENTION OVERFLOW ELEVATION) TO ACCOMMODATE THE 9" PONDING DEPTH, 6" CLASS 5 AGGREGATE, AND 4" RAIN GUARDIAN FOXHOLE BASE (INCLUDED). THEREFORE, THE TOP OF THE CLASS 5 COMPACTED BASE IS PRECISELY 1' 1" BELOW THE GUTTERLINE ELEVATION. THE TOP OF THE RAIN GUARDIAN FOXHOLE INLET POINT WILL BE 7-1/2" ABOVE THE TOP OF THE CONCRETE BASE AND 1-1/2" BELOW THE GUTTERLINE ELEVATION TO ACCOMMODATE A SLOPED INLET FROM THE GUTTER TO THE RAIN GUARDIAN FOXHOLE.
2. SET RAIN GUARDIAN FOXHOLE INLET FIRST, FOLLOWED BY MIDDLE SECTION(S), AND FINALLY THE OUTLET ON THE PREPARED CLASS 5 BASE. POSITION RAIN GUARDIAN FOXHOLE OUTLET PIECE SO PRIMARY OUTLET ALIGNS WITH TOE OF BASIN SIDE SLOPE TO AVOID SOIL INTERFERENCE WITH REMOVABLE FILTER WALL.
3. SECURE MODULAR FOXHOLE PIECES AT EACH JOINT USING PROVIDED GALVANIZED TIE RODS.
4. INSTALL EXPANSION/CONTRACTION JOINT MATERIAL OR A SHEET OF POLY TO SERVE AS A BOND BREAK BETWEEN RAIN GUARDIAN FOXHOLE AND CONCRETE INLET BEFORE POURING INLET.
5. REMOVABLE FILTER WALL SHOULD BE INSTALLED WITH FILTER FABRIC FACING THE RAIN GUARDIAN FOXHOLE INLET.
6.

DEVELOPED BY:

ANOKA CONSERVATION DISTRICT

U.S. PATENT NO(S).: 8,501,016 AND 8,858,804

RAIN GUARDIAN PRETREATMENT FOR BIORETENTION
Rain Gardens • Swales • Filtration Basin • Infiltration Basins

ENGINEER OF RECORD TO REVIEW, APPROVE AND ENDORSE FINAL SITE SPECIFIC DESIGN.

FERGUSON WATERWORKS

FOR ADDITIONAL INFORMATION PLEASE CONTACT:
FERGUSON WATERWORKS,
1-800-448-3636, www.ferguson.com

RAIN GUARDIAN
FOXHOLE PRETREATMENT CHAMBER
BIORETENTION PONDING DEPTH: 9"
TYPICAL DETAIL

DRAWN BY: JKB

DATE: 7/29/2022

SHEET NO.: 1 of 1

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES & SHALL NOT BE USED FOR CONSTRUCTION.

STATE OF MAINE
STEPHEN R. BUSHEY
02.10.23
LICENSED PROFESSIONAL ENGINEER
STEPHEN R. BUSHEY, P.E.
LIC. #7429

Rev.	Date	Revision

Rev.	Date	Revision
1	2023.02.10	PRELIMINARY SITE PLAN / SUBDIVISION PLAN APPLICATION

Design: SRB	Draft: CDD	Date: NOV. 2022
Checked: SRB	Scale: ~~AS SHOWN~~	Job No.: 3996
File Name: 3996-GRAD.dwg		

GORRILL PALMER
707 Sable Oaks Drive, Suite 30
South Portland, Me 04106
207.772.2515 / www.gorrillpalmer.com
Relationships. Responsiveness. Results.

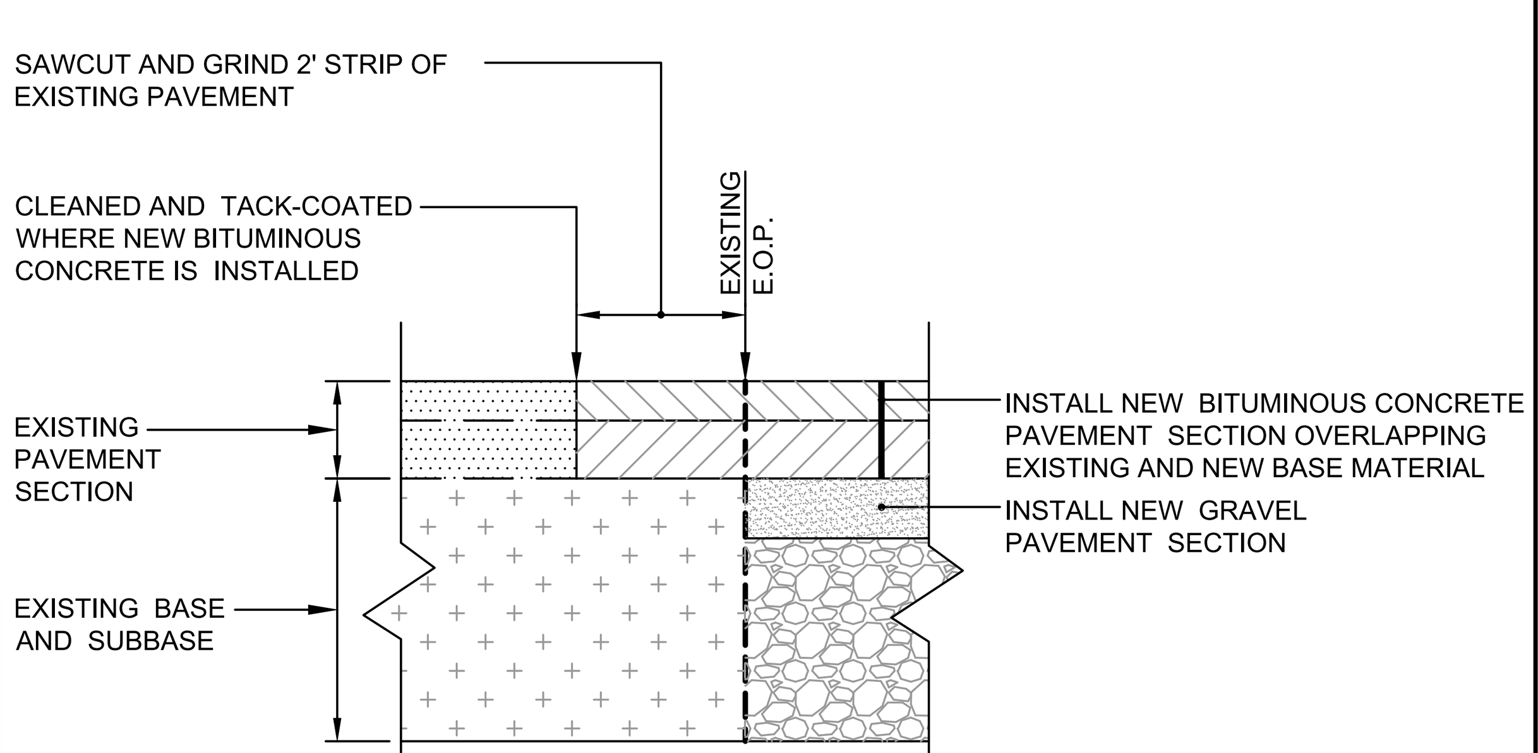
Drawing Name: STORMWATER MANAGEMENT DETAILS

Project: LEDGEWOOD COURT EXPANSION - 32 UNITS
207 LEDGEWOOD COURT DRIVE, DAMARISCOTTA, MAINE

Client: DC PREDEVELOPMENT LLC / DC LEDGEWOOD LLC
631 STEVENS AVENUE, SUITE 203, PORTLAND, MAINE 04103 PH. 207.772.7673

Drawing No. C-4.4

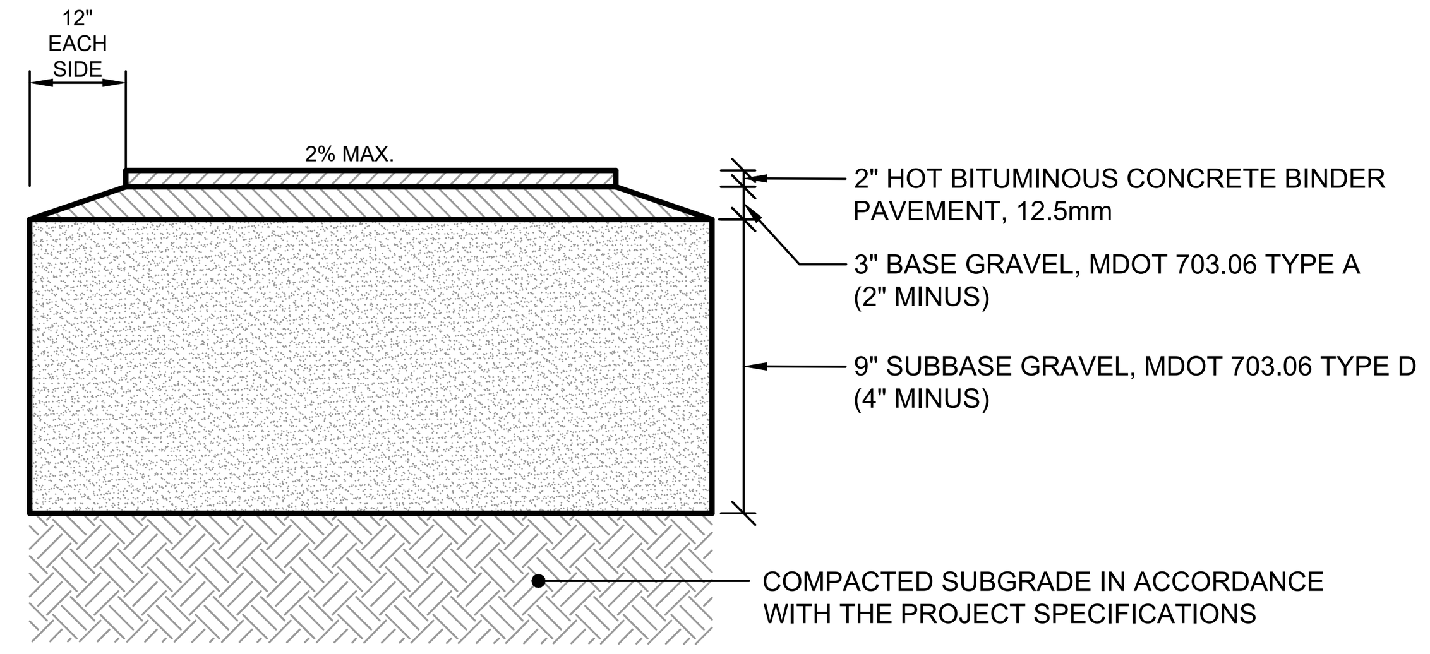
U:\3996 - Ledgewood Court Expansion - Damariscotta 5-16-22\Z - CAD\DWG\3996-GRAD.dwg 2/10/2023 1:48 PM



NOTES:

1. APPLY TACK COAT BETWEEN BINDER AND SURFACE COURSES.
2. ALL MATERIALS SHALL CONFORM TO MDOT SPECIFICATIONS, LATEST REVISION.
3. COMPACTION OF ALL MATERIALS TO BE IN ACCORDANCE WITH THE SPECIFICATIONS.

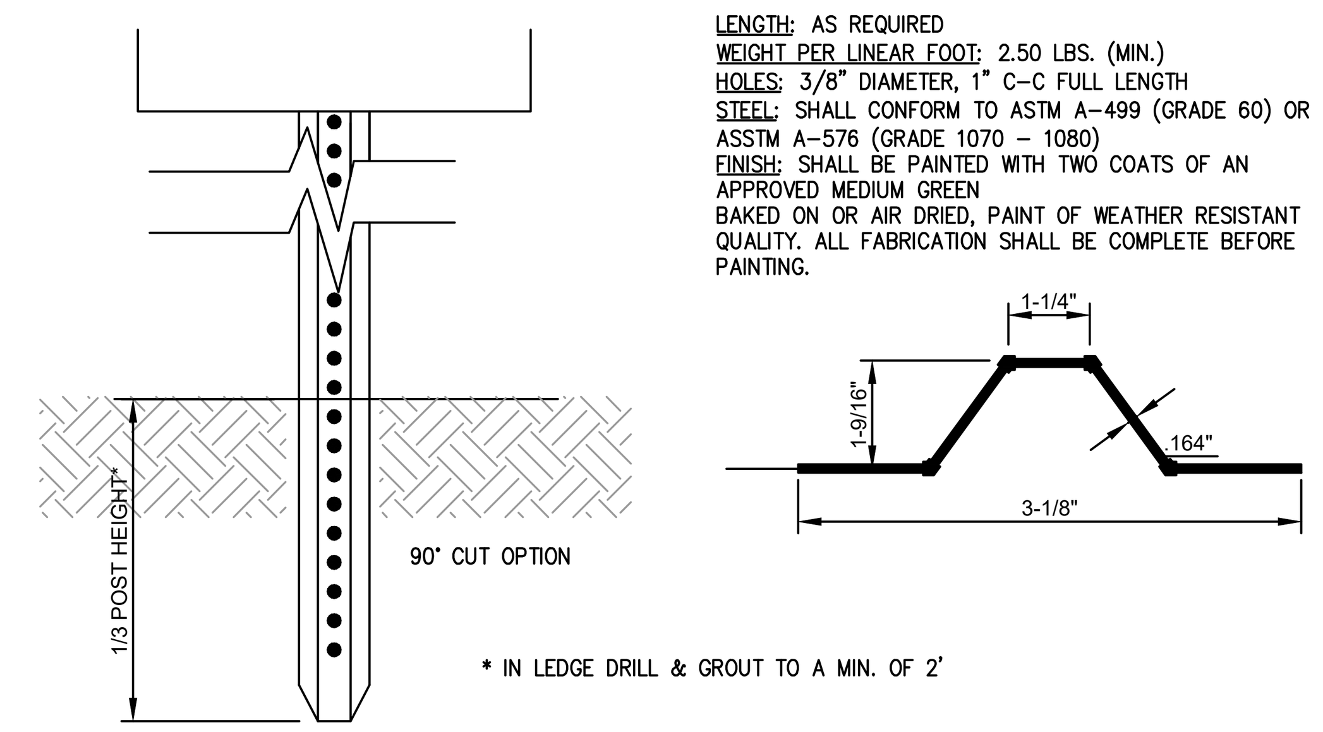
A — TYPICAL PAVEMENT SECTION
NEW PAVEMENT ADJACENT TO EXISTING PAVEMENT
N.T.S.



NOTES:

1. ALL MATERIALS SHALL CONFORM TO MDOT SPECIFICATIONS, LATEST REVISION.
2. COMPACTION OF ALL MATERIALS TO BE IN ACCORDANCE WITH THE SPECIFICATIONS.
3. 2% MAXIMUM CROSS SLOPE ON ALL SIDEWALKS.

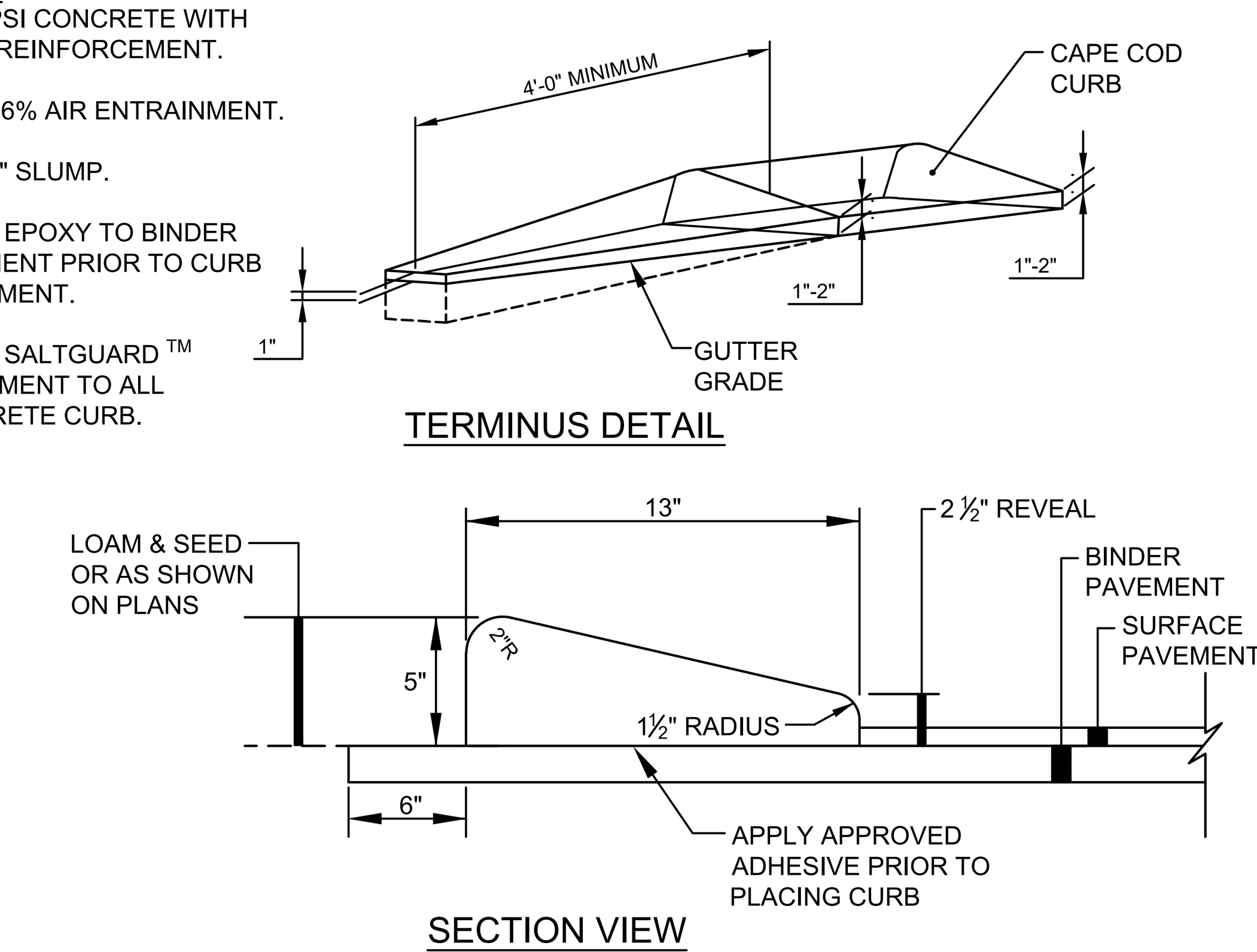
D — BITUMINOUS CONCRETE SIDEWALK SECTION
FOR SITE INSTALLATION
N.T.S.



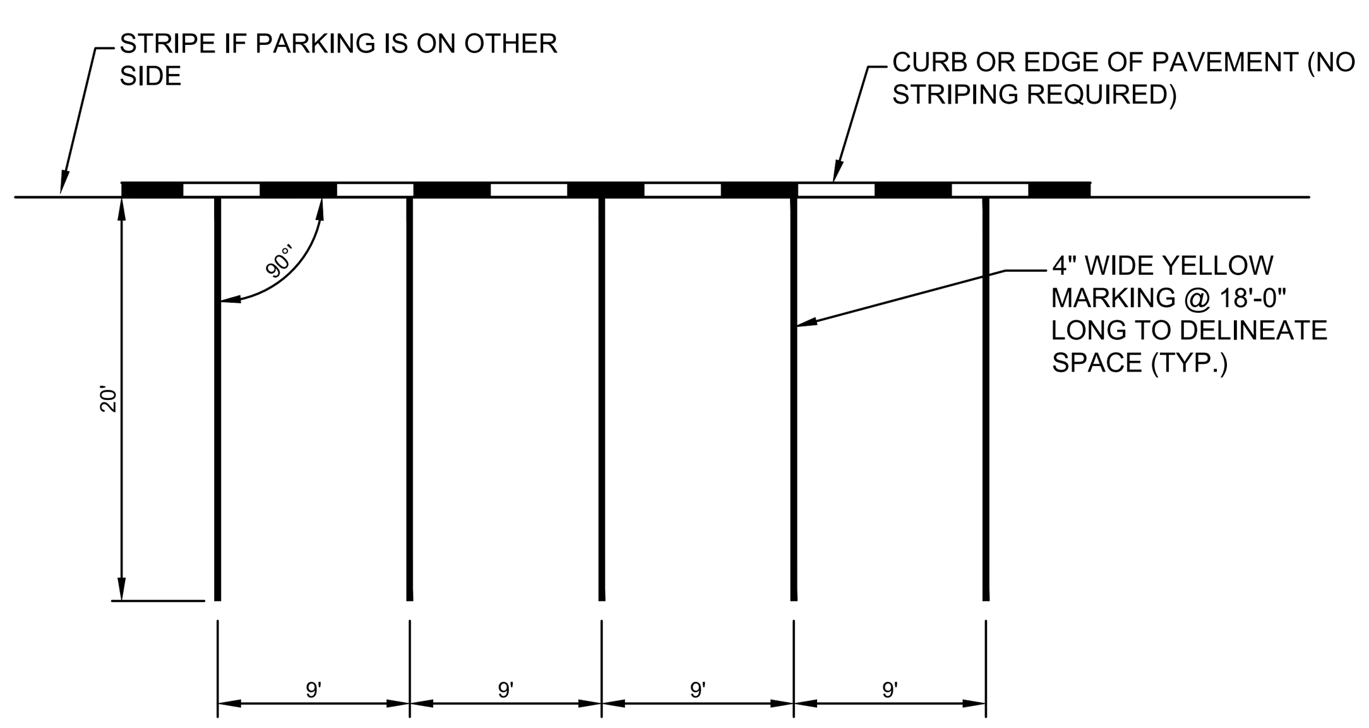
G — TYPICAL SIGN POST DETAIL
N.T.S.

NOTES:

1. 4,000 PSI CONCRETE WITH FIBER REINFORCEMENT.
2. 4% TO 6% AIR ENTRAINMENT.
3. 1" TO 2" SLUMP.
4. APPLY EPOXY TO BINDER PAVEMENT PRIOR TO CURB PLACEMENT.
5. APPLY SALTGUARD TM TREATMENT TO ALL CONCRETE CURB.

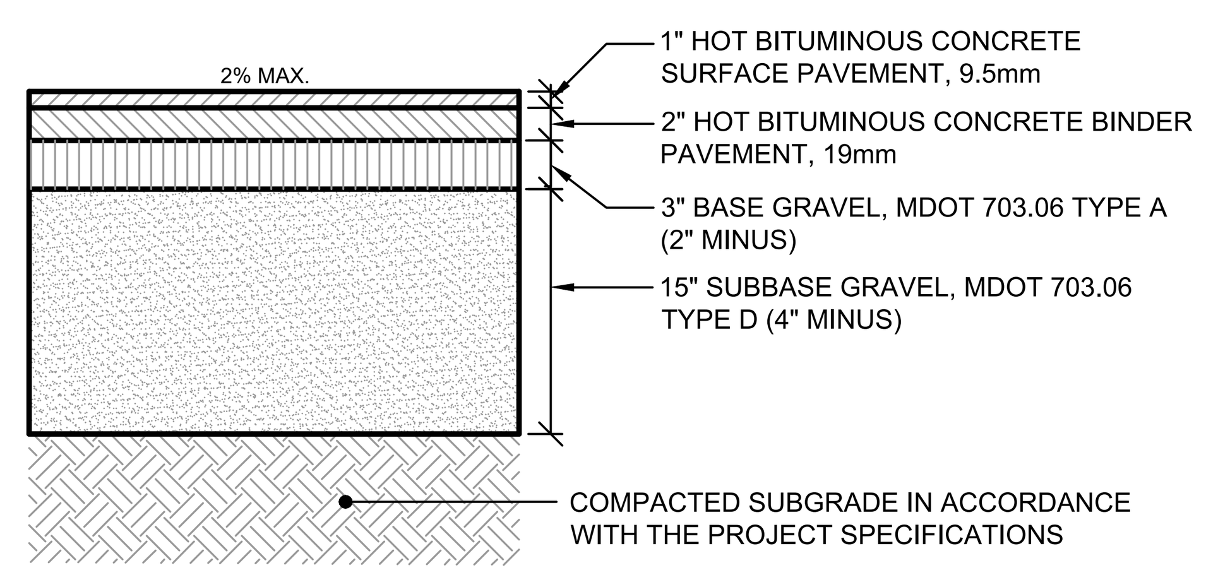


J — EXTRUDED SLIPFORM CAPE COD CURB DETAIL
N.T.S.



NOTE:
WHEN PARKING IS ON A CURVE THE NARROWEST PORTION OF THE PARKING STALL SHALL MEET THE WIDTH SHOWN.

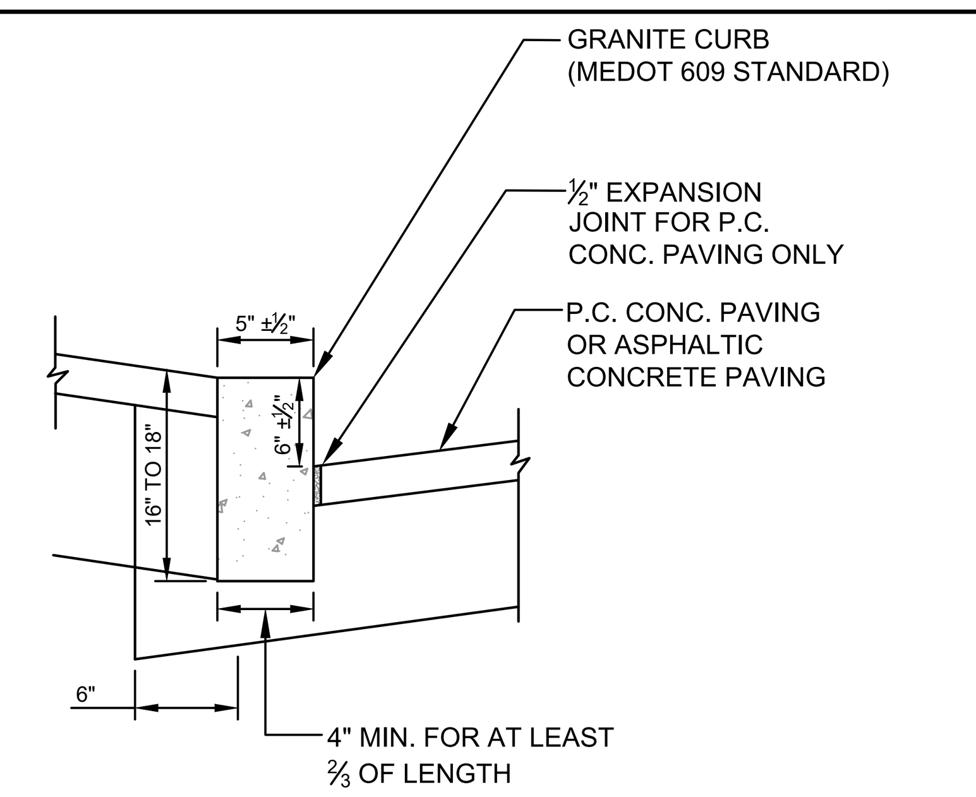
B — STANDARD PARKING STALL STRIPING
N.T.S.



NOTES:

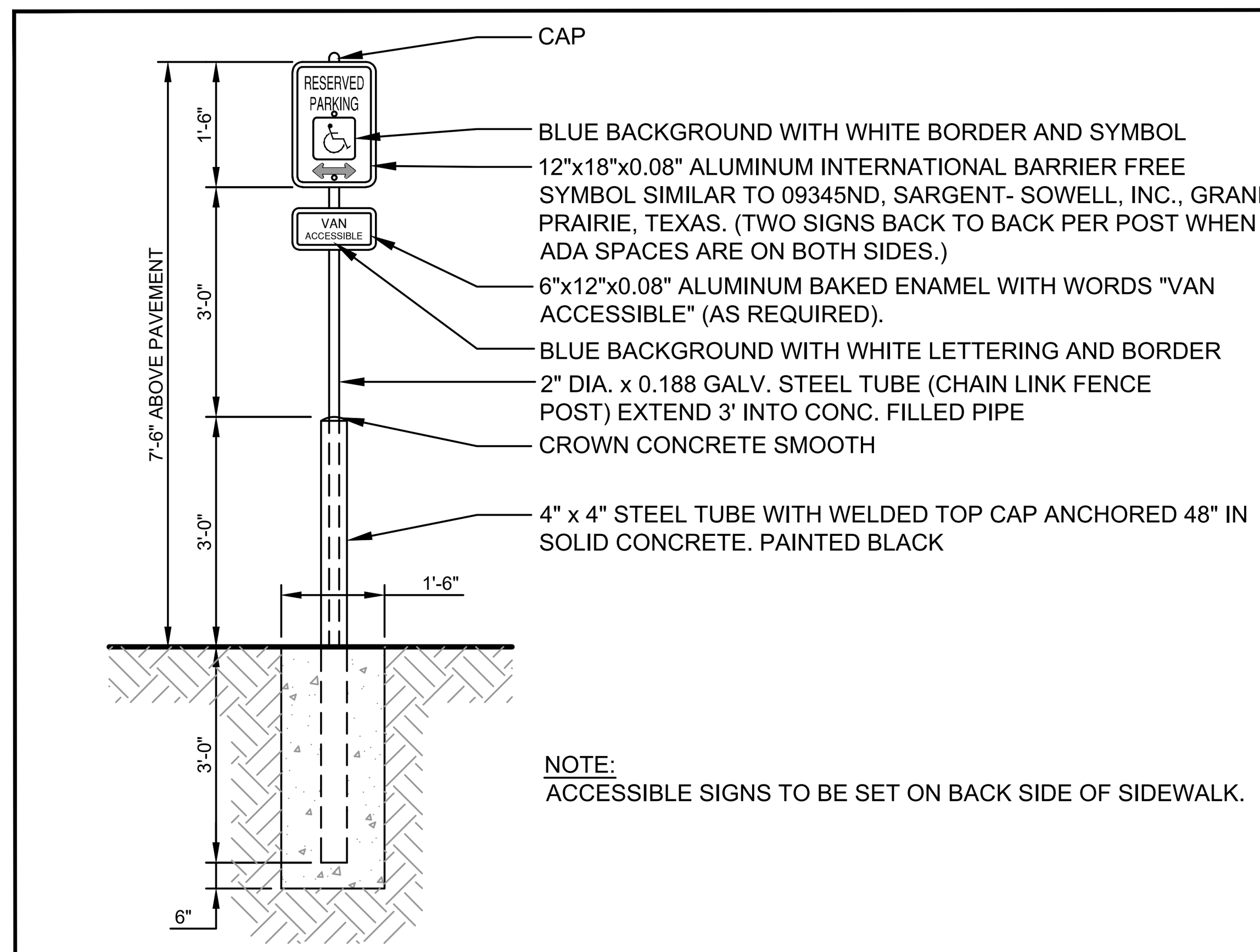
1. APPLY TACK COAT BETWEEN BINDER AND SURFACE COURSES.
2. ALL MATERIALS SHALL CONFORM TO MDOT SPECIFICATIONS, LATEST REVISION.
3. COMPACTION OF ALL MATERIALS TO BE IN ACCORDANCE WITH THE SPECIFICATIONS.
4. 2% MAXIMUM CROSS SLOPE ON ALL SIDEWALKS AND DRIVEWAYS.

E — STANDARD DUTY
BITUMINOUS CONCRETE PAVEMENT SECTION
N.T.S.



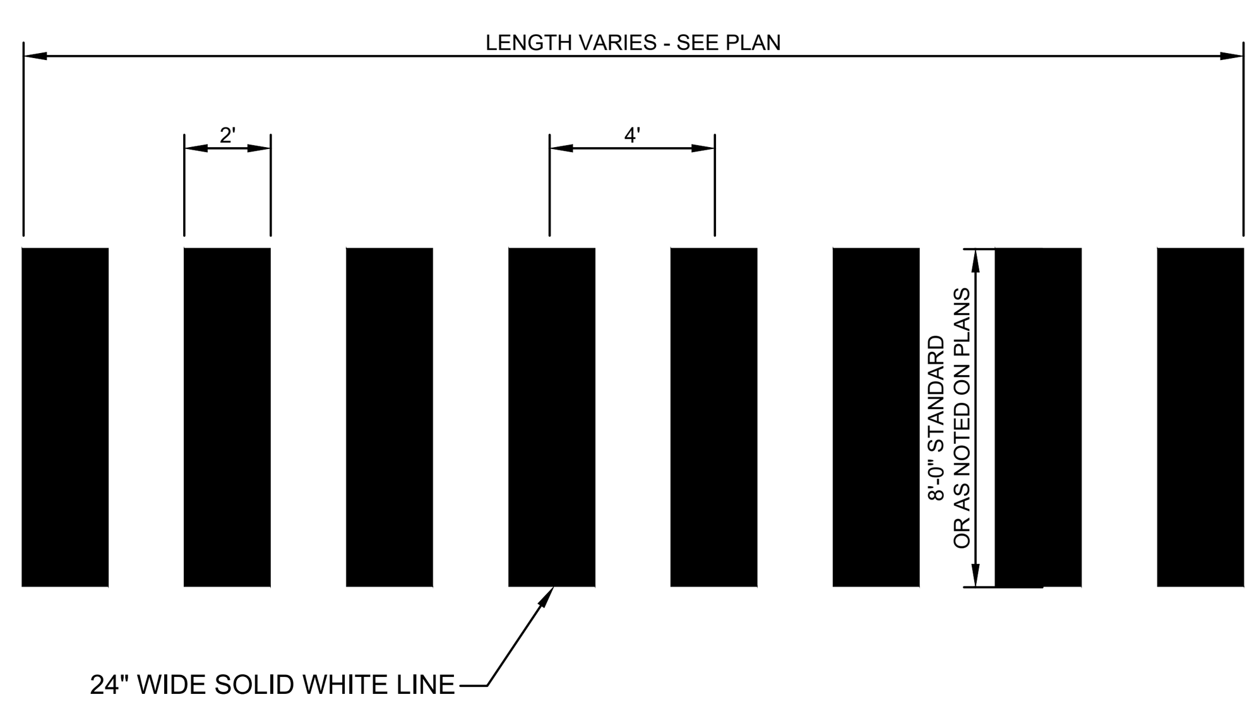
NOTES:
1. VERTICAL GRANITE CURB TO MEET MeDOT STANDARD SPECIFICATIONS
2. JOINTS SHALL BE MORTARED
3. JOINT SEPARATION SHALL BE ¼" AND ⅝"
4. MAX. LENGTH OF STRAIGHT CURB STONES = 8'; MIN. LENGTH = 4'
5. CIRCULAR CURB REQUIRED FOR RADIUS LESS THAN 50'
6. FOR USE IN PUBLIC RIGHT-OF-WAY IF REQUIRED BY MaineDOT OR THE CITY.

H — VERTICAL GRANITE CURB DETAIL
N.T.S.

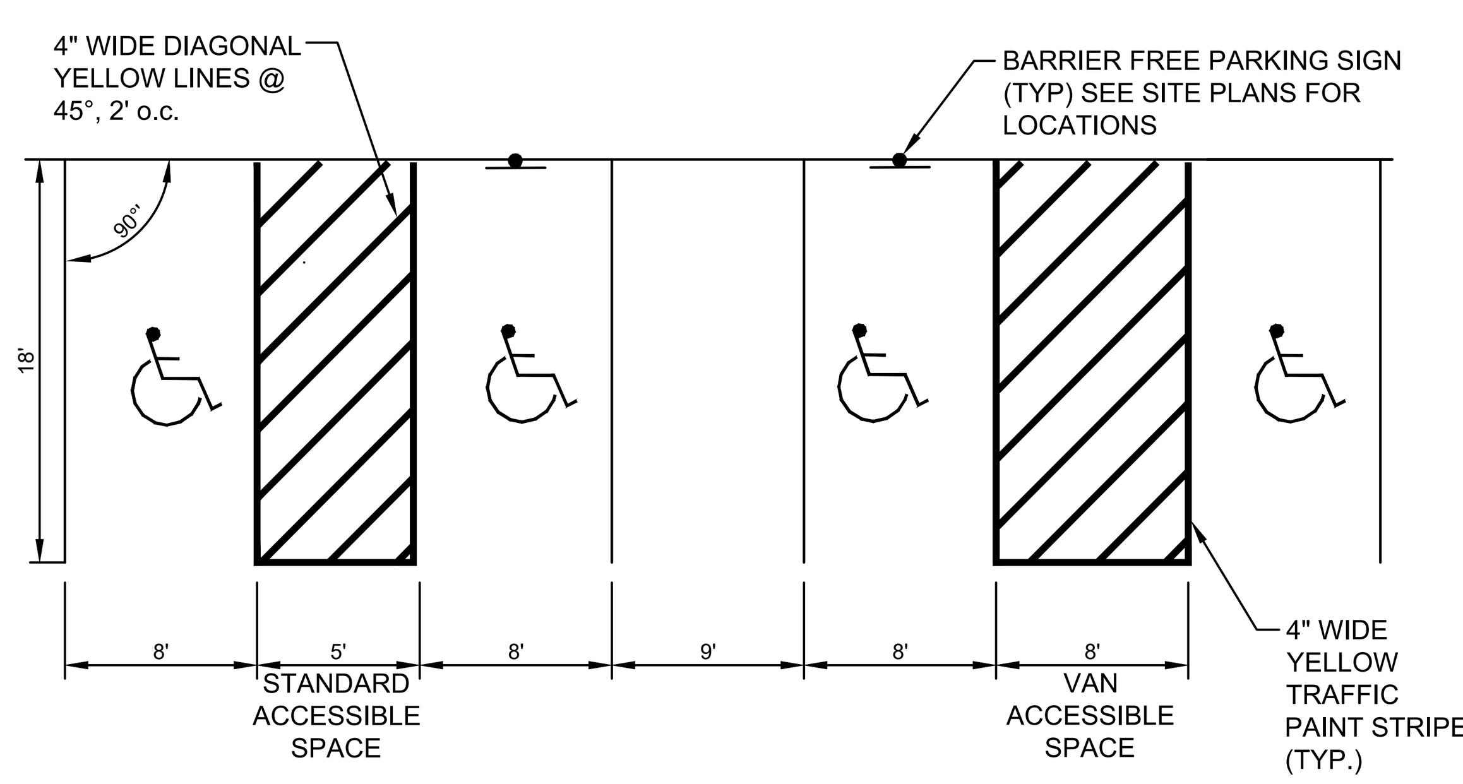


NOTE:
ACCESSIBLE SIGNS TO BE SET ON BACK SIDE OF SIDEWALK.

K — BARRIER FREE PARKING SIGN
N.T.S.



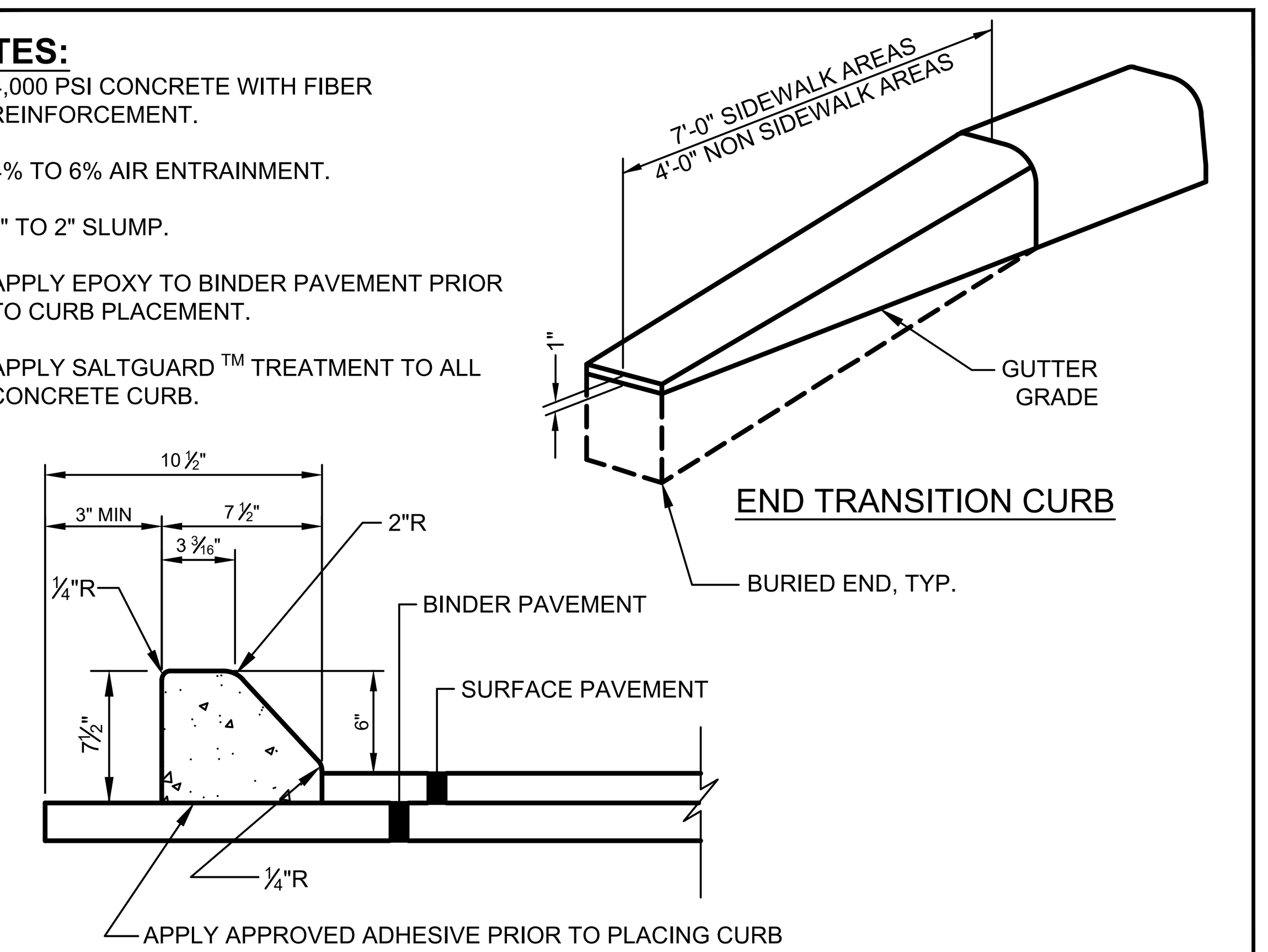
C — CROSSWALK STRIPING DETAIL
N.T.S.



NOTES:
1. ONE IN EIGHT BARRIER FREE SPACES (MIN.) MUST BE VAN ACCESSIBLE. THIS HAS BEEN PROVIDED FOR ON THE SITE LAYOUT PLAN.
2. BARRIER FREE GRAPHIC SYMBOL (PAINTED WHITE) TO BE CENTERED IN PARKING STALL. SYMBOL TO BE PAINTED ON BLUE NON-SKID BACKGROUND.

F — TYPICAL BARRIER FREE PARKING STALL DIMENSIONS
N.T.S.

NOTES:
1. 4,000 PSI CONCRETE WITH FIBER REINFORCEMENT.
2. 4% TO 6% AIR ENTRAINMENT.
3. 1" TO 2" SLUMP.
4. APPLY EPOXY TO BINDER PAVEMENT PRIOR TO CURB PLACEMENT.
5. APPLY SALTGUARD TM TREATMENT TO ALL CONCRETE CURB.



I — EXTRUDED SLIPFORM SLOPED CONCRETE CURB DETAIL
N.T.S.

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES & SHALL NOT BE USED FOR CONSTRUCTION.

STATE OF MAINE — STEPHEN R. BUSHEY — 02.10.23 — LICENSED PROFESSIONAL ENGINEER
STEPHEN R. BUSHEY, P.E.
LIC. #7429

U:\3996 – Ledgewood Court Expansion – Damariscotta 5–16–22\Z – CAD\DWG\3996–DETAILS.dwg 2/10/2023 8:47 AM

Rev.	Date	Revision

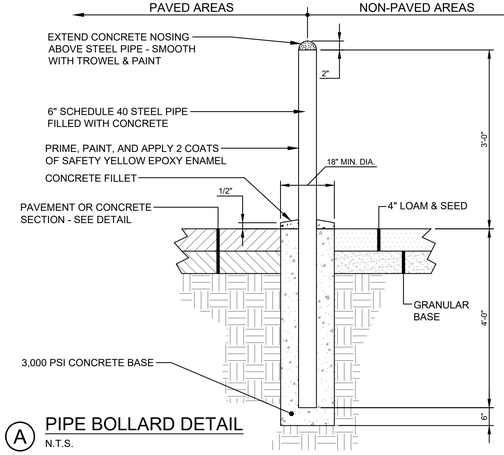
Rev.	Date	Revision
1	2023.02.10	PRELIMINARY SITE PLAN / SUBDIVISION PLAN APPLICATION

Design: SRB	Draft: CDD	Date: NOV. 2022
Checked: SRB	Scale: AS NOTED	Job No.: 3996
File Name: 3996–DETAILS.dwg		

GORRILL PALMER
707 Sable Oaks Drive, Suite 30
South Portland, Me 04106
207.772.2515 / www.gorrillpalmer.com
Relationships. Responsiveness. Results.

Drawing Name: SITE DETAILS
Project: LEDGEWOOD COURT EXPANSION - 32 UNITS
207 LEDGEWOOD COURT DRIVE, DAMARISCOTTA, MAINE
Client: DC PREDEVELOPMENT LLC / DC LEDGEWOOD LLC
631 STEVENS AVENUE, SUITE 203, PORTLAND, MAINE 04103 PH. 207.772.7673

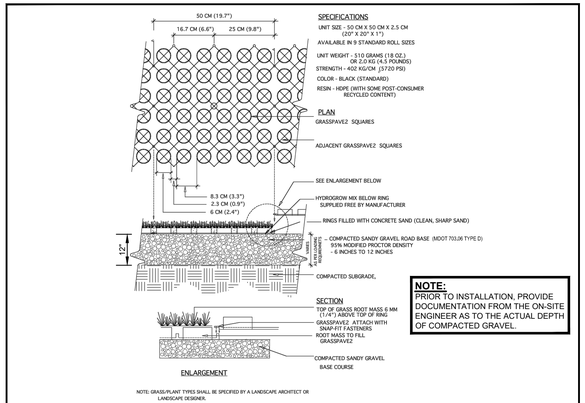
Drawing No. C-5.0



A PIPE BOLLARD DETAIL
N.T.S.

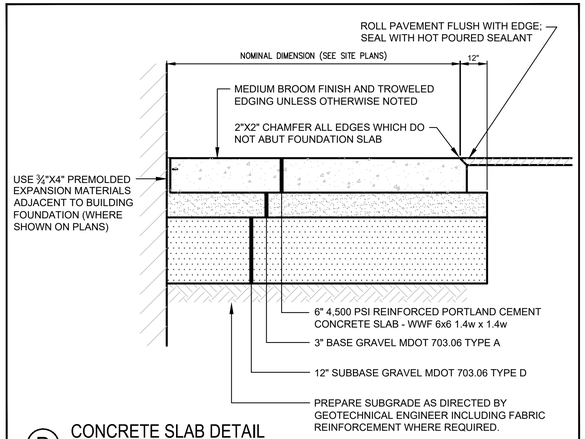
NOTE:
1. BARRIER FREE STALLS SHALL BE DELINEATED WITH THIS SYMBOL IN WHITE MARKING ON NON-SKID BLUE BACKGROUND.
2. CONTRACTOR SHALL COORDINATE WITH THE MUNICIPALITY FOR CURRENT INTERNATIONAL SYMBOL OF ACCESS PAINTING STENCIL.

D INTERNATIONAL BARRIER FREE SYMBOL DETAIL
N.T.S.

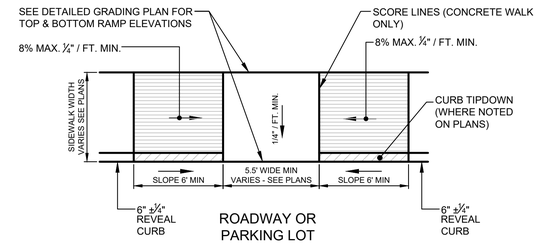


NOTE:
PRIOR TO INSTALLATION, PROVIDE DOCUMENTATION FROM THE ON-SITE ENGINEER AS TO THE ACTUAL DEPTH OF COMPACTED GRAVEL.

G GRASSPAVE2 DETAIL OR APPROVED EQUAL
N.T.S.



B CONCRETE SLAB DETAIL
N.T.S.

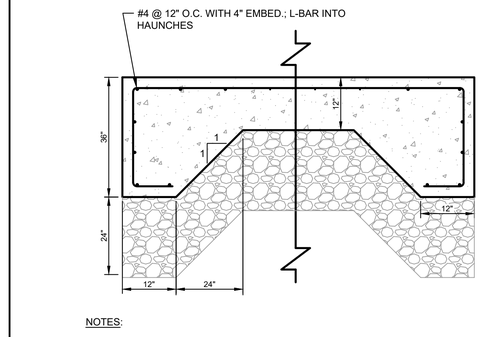


NOTES:
1. RAMP SHALL BE CONSTRUCTED IN ACCORDANCE WITH AMERICANS WITH DISABILITIES ACT (ADA).

2. SCORE LINES ARE NOT APPLICABLE TO BITUMINOUS CONCRETE SIDEWALKS.

3. SEE PLANS FOR LOCATION(S) AND TYPES OF CURB.

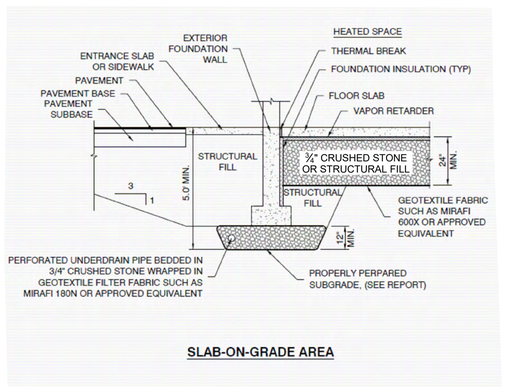
E BARRIER FREE RAMP DETAIL
N.T.S.



NOTES:

1. SEE SITE LAYOUT PLAN FOR PAD DIMENSIONS.
2. 24" BASE GRAVEL SHALL BE MDOT 703.06 STANDARDS FOR TYPE D GRAVEL.
3. CONCRETE PAD SHALL HAVE COMPRESSIVE STRENGTH OF 4,500 PSI.
4. PROVIDE BROOM FINISH AND SALTGUARD™ CHLORIDE INHIBITOR.

H CONCRETE GENERATOR PAD DETAIL
N.T.S.



C BUILDING ENTRANCE SLAB DETAIL
N.T.S.

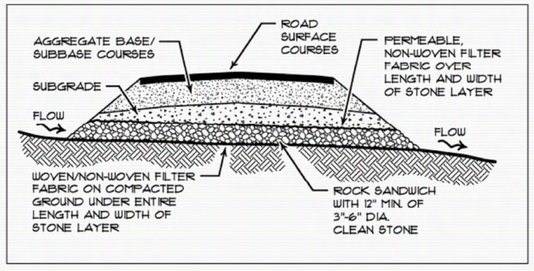


Figure 8.4 – Rock Sandwich Cross-Section

F ROCK SANDWICH TYPICAL ROAD SECTION DETAIL
N.T.S.

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES & SHALL NOT BE USED FOR CONSTRUCTION.

STATE OF MAINE
STEPHEN R. BUSHEY
02.10.23
LICENSED PROFESSIONAL ENGINEER
STEPHEN R. BUSHEY, P.E.
LIC. #7429

Rev.	Date	Revision

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1	2023.02.10	PRELIMINARY SITE PLAN / SUBDIVISION PLAN APPLICATION

Design: SRB	Draft: CDD	Date: NOV. 2022
Checked: SRB	Scale: AS NOTED	Job No.: 3996
File Name: 3996–DETAILS.dwg		

GORRILL PALMER
707 Sable Oaks Drive, Suite 30
South Portland, Me 04106
207.772.2515 / www.gorrillpalmer.com
Relationships. Responsiveness. Results.

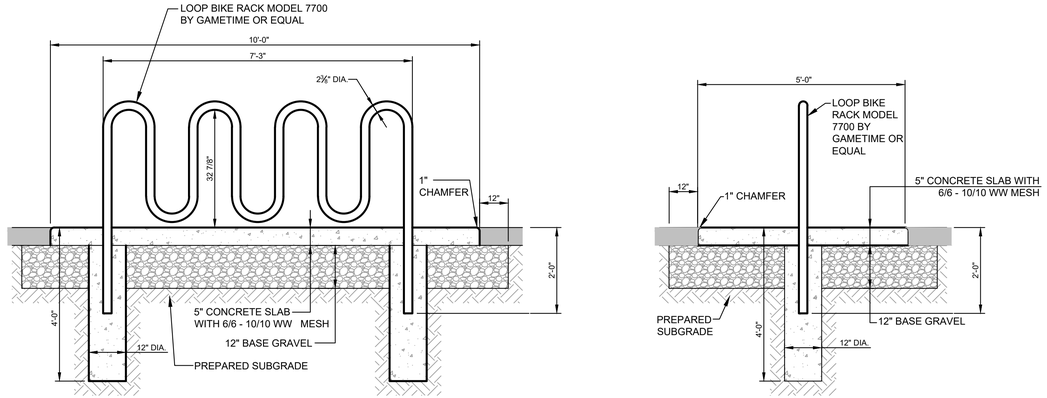
Drawing Name: SITE DETAILS

Project: LEDGEWOOD COURT EXPANSION - 32 UNITS
207 LEDGEWOOD COURT DRIVE, DAMARISCOTTA, MAINE

Client: DC PREDEVELOPMENT LLC / DC LEDGEWOOD LLC
631 STEVENS AVENUE, SUITE 203, PORTLAND, MAINE 04103 PH. 207.772.7673

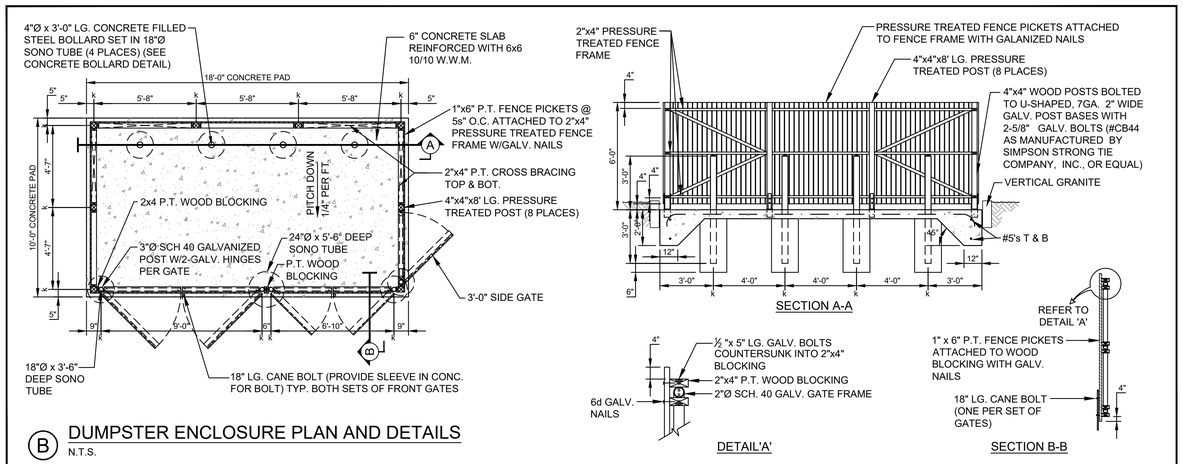
Drawing No. C-5.1

U:\3996 – Ledgewood Court Expansion – Damariscotta 5-16-22\Z – CAD\DWG\3996-DETAILS.dwg 2/10/2023 9:02 AM



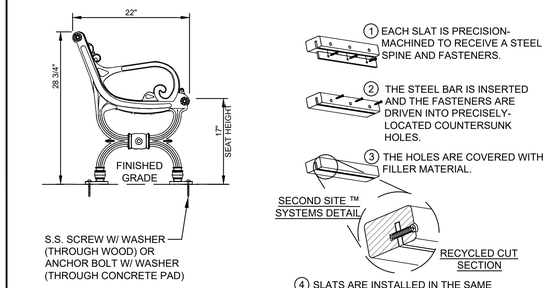
(A) 7 SPACE RIBBON STYLE BICYCLE RACK

N.T.S.

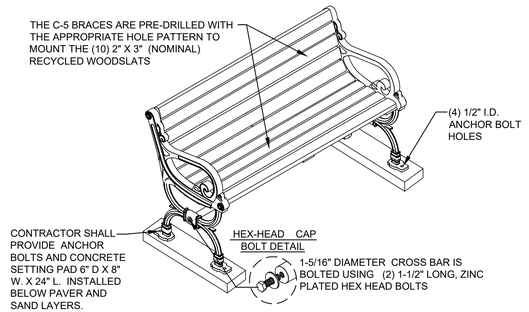


(B) DUMPSTER ENCLOSURE PLAN AND DETAILS

N.T.S.



SIDE VIEW



TOP VIEW PERSPECTIVE

NOTES:

1. CASTING DIMENSIONS VARY SLIGHTLY.
2. IT IS NOT RECOMMENDED TO LOCATE ANCHOR SCREWS UNTIL ASSEMBLED BENCH IS IN PLACE.
3. CLASSIC SERIES C-10 BENCH AS MANUFACTURED BY VICTOR STANLEY, INC OR APPROVED EQUAL.
4. ANCHOR BOLTS PROVIDED BY OTHERS.
5. ALL FABRICATED COMPONENTS ARE STEEL SHOT-BLASTED, ETCHED, PHOSPHATIZED AND ELECTROSTATICALLY POWDER-COATED WITH TGIC POLYESTER POWDER COATINGS (COLOR: BLACK)
6. DUCTILE IRON CASTINGS COME WITH A 5 YEAR WARRENTY AGAINST BREAKAGE.
7. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE. PLEASE CONTACT FACTORY FOR DETAILS.

(D) 4'-0" LONG BENCH DETAIL

N.T.S.

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES & SHALL NOT BE USED FOR CONSTRUCTION.

STATE OF MAINE
STEPHEN R. BUSHEY
02.10.23
LICENSED PROFESSIONAL ENGINEER

STEPHEN R. BUSHEY, P.E.
LIC. #7429

Rev.	Date	Revision

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707 Sable Oaks Drive, Suite 30
South Portland, Me 04106
207.772.2515 / www.gorrillpalmer.com
Relationships. Responsiveness. Results.

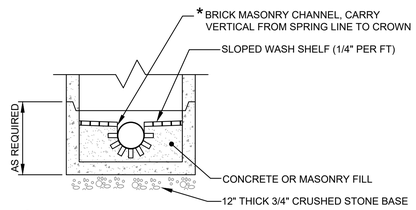
Drawing Name: SITE & MISCELLANEOUS DETAILS

Project: LEDGEWOOD COURT EXPANSION - 32 UNITS
207 LEDGEWOOD COURT DRIVE, DAMARISCOTTA, MAINE

Client: DC PREDEVELOPMENT LLC / DC LEDGEWOOD LLC
631 STEVENS AVENUE, SUITE 203, PORTLAND, MAINE 04103 PH. 207.772.7673

Drawing No. C-5.2

*NOTE:
CHANNEL MAY ALSO BE A PREFABRICATED FIBERLINER 2000 CHANNEL AS FABRICATED BY GDT, INC. OF ESSEX, CT OR EQUAL

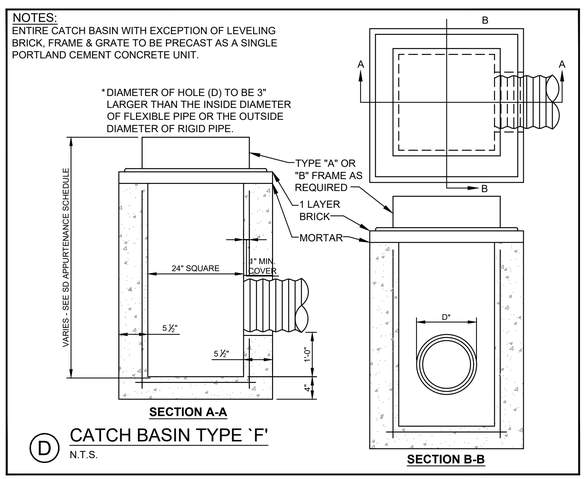


NOTES:

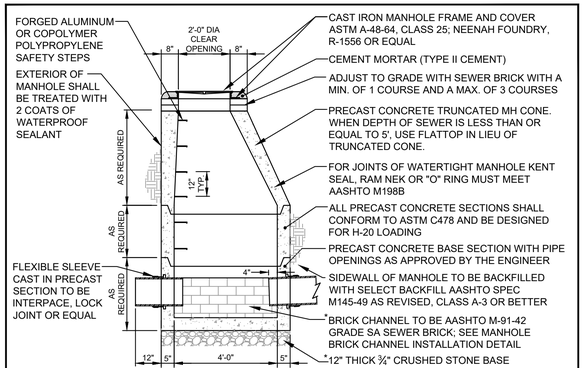
1. BRICK CHANNEL TO BE AASHTO M-91-42 GRADE SA SEWER BRICK.*
2. MANHOLE TEST TO BE ACCOMPLISHED AFTER CHANNEL INSTALLATION IS COMPLETE.
3. WHERE THE ALIGNMENT CHANGES OR SIDE FLOW ENTERS THE MANHOLE, CONSTRUCT CHANNEL WITH A SMOOTH RADIAL CHANNEL TO ACCOMPLISH ALL JUNCTIONAL CHANGE OF ALIGNMENT WITHIN MANHOLE.

(A) MANHOLE BRICK CHANNEL INSTALLATION DETAIL
N.T.S.

NOTES:
ENTIRE CATCH BASIN WITH EXCEPTION OF LEVELING BRICK, FRAME & GRATE TO BE PRECAST AS A SINGLE PORTLAND CEMENT CONCRETE UNIT.

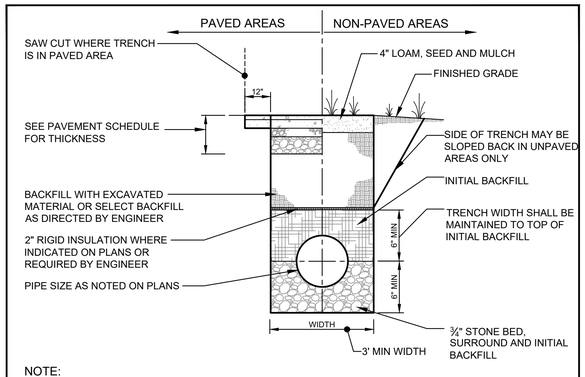


(D) CATCH BASIN TYPE `F'
N.T.S.



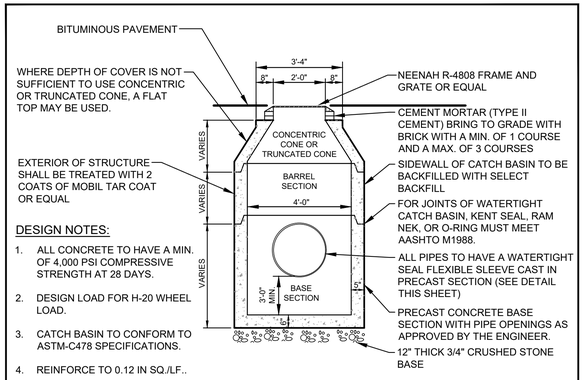
(B) 4'-0" DIA. PRECAST SEWER & STORM DRAIN MANHOLE DETAIL
N.T.S.

NOTE:
CHANNEL MAY ALSO BE A PREFABRICATED FIBERLINER 2000 CHANNEL AS FABRICATED BY GDT, INC. OF ESSEX, CT OR EQUAL



NOTE:
BRACING AND SHEETING OR OTHER TRENCH PROTECTION TO BE PROVIDED TO MEET APPLICABLE STATE AND O.S.H.A. SAFETY STANDARDS. ALL SUCH TRENCH PROTECTION TO BE THE RESPONSIBILITY OF THE CONTRACTOR.

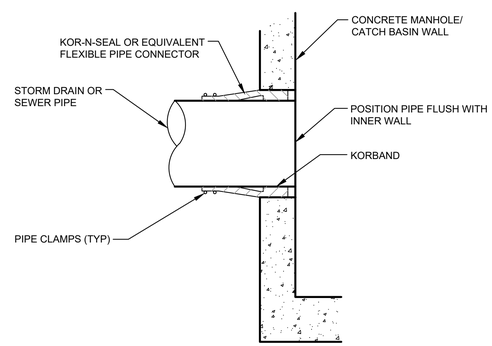
(E) TYPICAL SEWER AND STORM DRAIN TRENCH SECTION
N.T.S.



DESIGN NOTES:

1. ALL CONCRETE TO HAVE A MIN. OF 4,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
2. DESIGN LOAD FOR H-20 WHEEL LOAD.
3. CATCH BASIN TO CONFORM TO ASTM-C478 SPECIFICATIONS.
4. REINFORCE TO 0.12 IN SQ./LF..

(C) 4'-0" PRECAST CATCH BASIN DETAIL
N.T.S.



PIPE CONNECTION TO PRECAST CONCRETE SANITARY SEWER AND STORM DRAINAGE STRUCTURES
(F)
N.T.S.

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES & SHALL NOT BE USED FOR CONSTRUCTION.

STATE OF MAINE
STEPHEN R. BUSHEY
02.10.23
LICENSED PROFESSIONAL ENGINEER
STEPHEN R. BUSHEY, P.E.
LIC. #7429

Rev.	Date	Revision

Rev.	Date	Revision
1	2023.02.10	PRELIMINARY SITE PLAN / SUBDIVISION PLAN APPLICATION

Design: SRB	Draft: CDD	Date: NOV. 2022
Checked: SRB	Scale: AS NOTED	Job No.: 3996
File Name: 3996-DETAILS.dwg		

GORRILL PALMER
707 Sable Oaks Drive, Suite 30
South Portland, Me 04106
207.772.2515 / www.gorrillpalmer.com
Relationships. Responsiveness. Results.

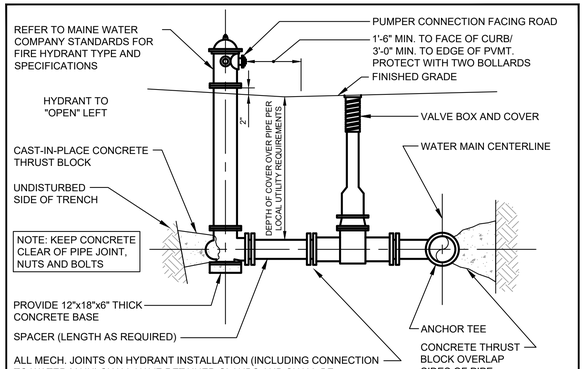
Drawing Name: STORM DRAIN & UTILITY DETAILS

Project: LEDGEWOOD COURT EXPANSION - 32 UNITS
207 LEDGEWOOD COURT DRIVE, DAMARISCOTTA, MAINE

Client: DC PREDEVELOPMENT LLC / DC LEDGEWOOD LLC
631 STEVENS AVENUE, SUITE 203, PORTLAND, MAINE 04103 PH. 207.772.7673

Drawing No. C-5.3

U:\3996 - Ledgewood Court Expansion - Damariscotta 5-16-22\Z - CAD\DWG\3996-DETAILS.dwg 2/10/2023 9:22 AM



(A) FIRE HYDRANT INSTALLATION DETAIL
N.T.S.

1. INSTALL POLY BARRIER BETWEEN PIPE AND ALL THRUST BLOCKS.

2. ANY MODIFICATION TO THRUST BLOCK SIZING OR PIPE RESTRAINT REVISIONS SHALL BE APPROVED IN WRITING BY THE ENGINEER PRIOR TO IMPLEMENTATION IN THE FIELD.

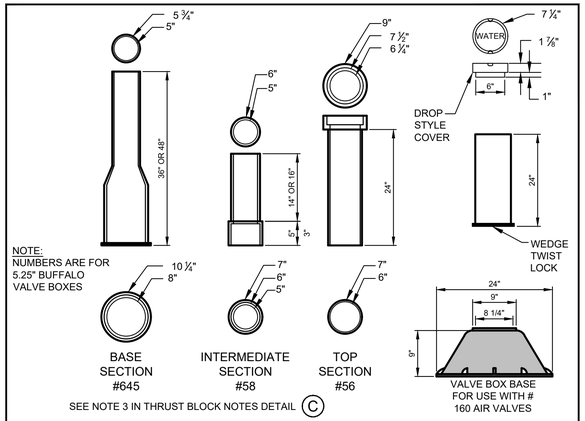
3. ANY WORK RELATING TO WATER PIPING OR DETAILS SHALL BE IN ACCORDANCE WITH THE GREAT SALT BAY SANITARY DISTRICT SPECIFICATIONS.

4. ALL RESTRAINED JOINTS MUST HAVE GRIPRING.™

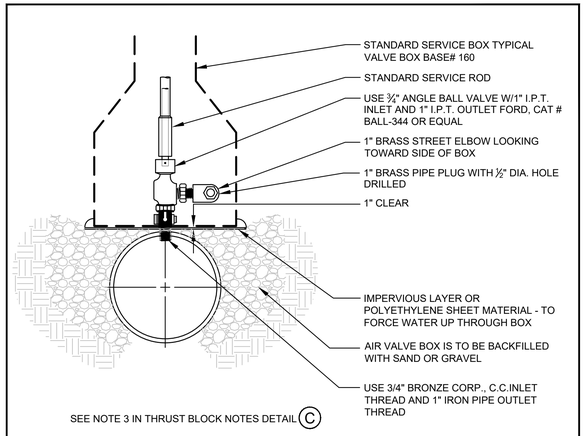
BEARING SURFACE REQUIRED IN SQUARE FEET

PIPE SIZE	1/32 BEND	1/16 BEND	1/8 BEND	1/4 BEND	TEES/CAPS
6"/8"	5.0	5.0	5.0	6.5	5.0
12"	11.5	11.5	11.5	20.0	22.0

(C) THRUST BLOCK NOTES
N.T.S.



(E) TYPICAL VALVE BOXES
N.T.S.



TORQUE SCHEDULE			
PIPE SIZE IN.	BOLT SIZE IN.	RANGE OF TORQUE FT-LB.	LENGTH OF WRENCH IN *
2 - 3	5/8	45 - 60	8
4 - 24	3/4	75 - 90	10
30 - 36	1	85 - 100	12
42 - 48	1 1/4	105 - 120	14

* THE TORQUE LOADS MAY BE APPLIED WITH TORQUE MEASURING OR TORQUE INDICATING WRENCHES, WHICH MAY ALSO BE USED TO CHECK THE APPLICATION OF APPROXIMATE TORQUE LOADS APPLIED BY A PERSON TRAINED TO GIVE AN AVERAGE PULL ON A DEFINITE LENGTH OF REGULAR SOCKET WRENCH.

(H) TYPICAL AIR VALVE SECTION (1")
(IF REQUIRED BY MAINE WATER COMPANY)
N.T.S.

PLAN

NOTE:
KEEP CONCRETE CLEAR OF PIPE JOINT, NUTS AND BOLTS

SECTION

THRUST/RETAINER GLAND SCHEDULE		
¼ BEND	(90°)	USE POURED-IN-PLACE THRUST BLOCK WITH GRIPRING™ MECHANICAL JOINT RESTRAINT
⅛ BEND	(45°)	THRUST BLOCK w/ GRIPRING™
1/16 BEND	(22 ½°)	THRUST BLOCK w/ GRIPRING™
1/32 BEND	(11 ¼°)	THRUST BLOCK w/ GRIPRING™

THE ABOVE SCHEDULE IS SUBJECT TO THE APPROVAL OF THE ON-SITE INSPECTOR DUE TO SOILS AND WORKING PRESSURES IN THE AREA.

NOTES:

1. THE GREAT SALT BAY SANITARY DISTRICT MAY HAVE INSPECTION FEES AND REQUIRE OBSERVATION OF ALL PIPING INSTALLATION BEFORE BURIAL. REFER TO SPECIFICATIONS.
2. FOR WATER MAIN LAYOUT SEE SHEET C-3.0.
3. FOR WATER MAIN TRENCH SEE DETAILS ON THIS SHEET.
4. REFER TO GREAT SALT BAY SANITARY DISTRICT SPECIFICATIONS FOR TESTING AND CHLORINATION REQUIREMENTS.
5. ALL HYDRANTS AND VALVES TO BE EPOXY COATED, NUTS AND BOLTS TO BE STAINLESS STEEL.
6. SERVICE RODS FOR DOMESTIC SERVICE OR AIR VALVES TO BE STAINLESS STEEL.

(B) TYPICAL THRUST BLOCK PLACEMENT BENDS
N.T.S.

PLAN

NOTE:
KEEP CONCRETE CLEAR OF PIPE JOINT, NUTS AND BOLTS

SECTION

(D) TYPICAL THRUST BLOCK PLACEMENT ON TEES
N.T.S.

(F) STANDARD TEE BLOCKING DETAIL
N.T.S.

(G) WATER TRENCH DETAIL
N.T.S.

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES & SHALL NOT BE USED FOR CONSTRUCTION.

STATE OF MAINE
STEPHEN R. BUSHEY
02.10.23
LICENSED PROFESSIONAL ENGINEER
STEPHEN R. BUSHEY, P.E.
LIC. #7429

Rev.	Date	Revision

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1	2023.02.10	PRELIMINARY SITE PLAN / SUBDIVISION PLAN APPLICATION

Design: SRB	Draft: CDD	Date: NOV. 2022
Checked: SRB	Scale: AS NOTED	Job No.: 3996
File Name: 3996-DETAILS.dwg		

GORRILL PALMER
707 Sable Oaks Drive, Suite 30
South Portland, Me 04106
207.772.2515 / www.gorrillpalmer.com
Relationships. Responsiveness. Results.

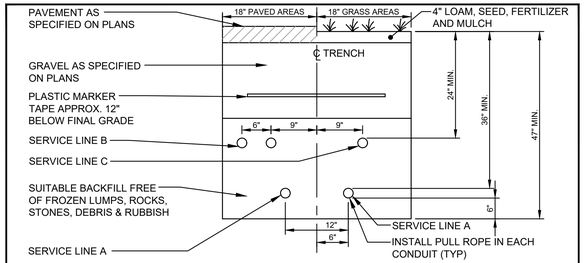
Drawing Name: WATER SYSTEM DETAILS

Project: LEDGEWOOD COURT EXPANSION - 32 UNITS
207 LEDGEWOOD COURT DRIVE, DAMARISCOTTA, MAINE

Client: DC PREDEVELOPMENT LLC / DC LEDGEWOOD LLC
631 STEVENS AVENUE, SUITE 203, PORTLAND, MAINE 04103 PH. 207.772.7673

Drawing No. C-5.4

U:\3996 - Ledgewood Court Expansion - Damariscotta 5-16-22\Z - CAD\DWG\3996-DETAILS.dwg 2/10/2023 9:34 AM

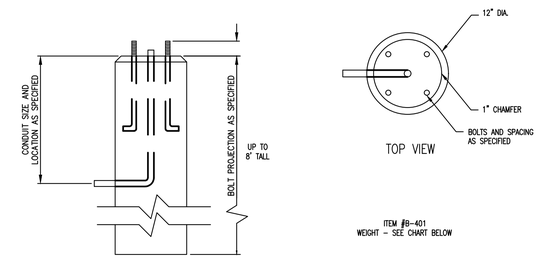


NOTES:

1. FOR CONDUIT TYPES AND SIZES SEE ELECTRICAL PLAN

A UTILITY TRENCH - PRIMARY ELECTRIC, TELEPHONE & COMMUNICATIONS

N.T.S.



ITEM #B-401
WEIGHT - SEE CHART BELOW

HEIGHT	WEIGHT	ITEM #
4' TALL	472 LBS	B-4014
5' TALL	590 LBS	B-4015
6' TALL	708 LBS	B-4016
7' TALL	826 LBS	B-4017
8' TALL	944 LBS	B-4018

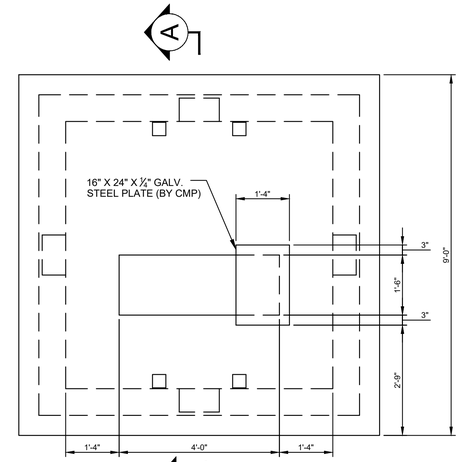
DESIGN NOTES:

1 - CONCRETE 4000 PSI AT 28 DAYS.
2 - REINFORCING IS AS SPECIFIED. (TYP. 4 - #4 VERTICALLY AND #3 STIRRUPS 12" O.C. HORIZONTALLY)
3 - ANCHOR BOLTS AND GROUNDING AS SPECIFIED.
4 - BALLAST POURED AROUND BASE IF REQUIRED.

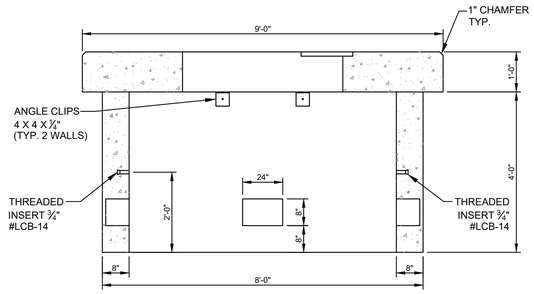
PRECAST CONCRETE PRODUCTS OF MAINE, INC. PHONE (207) 729-1628 FAX (207) 729-8710

D PRECAST CONCRETE LIGHT POLE BASE

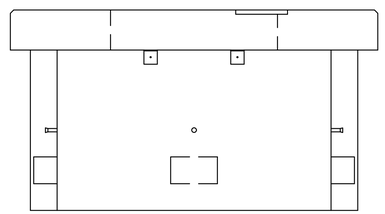
N.T.S.



PLAN VIEW



SECTION VIEW



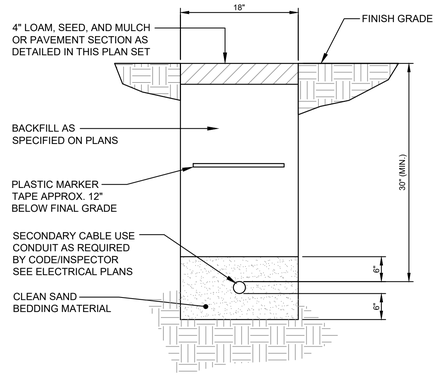
END VIEW

NOTES:

1. CONCRETE MINIMUM COMPRESSIVE STRENGTH 4,000 PSI @ 28 DAYS WITH STEEL REINFORCEMENT.
2. AS PER CENTRAL MAINE POWER COMPANY SPECIFICATIONS.
3. ONE 8" x 24" KNOCKOUT PROVIDED EACH WALL.
4. FOR 750 - 5000 KVA THREE PHASE TRANSFORMER.
5. FINISH GRADE SHALL BE GRADED TO ALLOW SURFACE WATER TO FLOW AWAY FROM THE PAD.

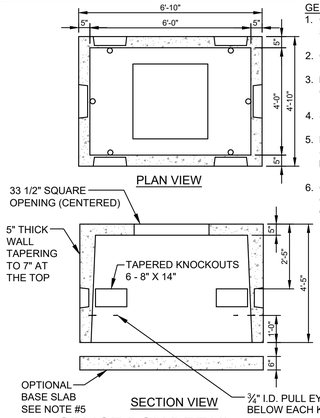
G 9'-0" TRANSFORMER PAD

N.T.S.



B SECONDARY ELECTRICAL TRENCH DETAIL

N.T.S.

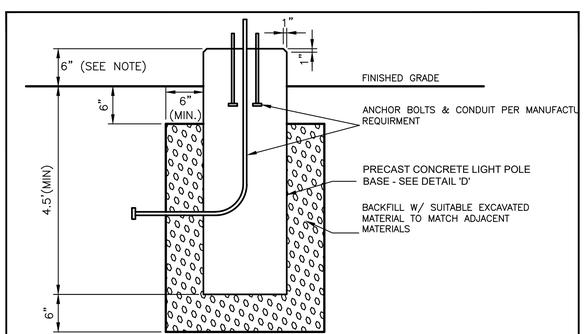


GENERAL NOTES

1. CONCRETE MINIMUM COMPRESSIVE STRENGTH 5000 PSI @ 28 DAYS WITH STEEL REINFORCEMENT
2. OPENINGS SIZED FOR 4" & 6" CONDUITS.
3. MEETS ALL CENTRAL MAINE POWER CO.SPECIFICATIONS.
4. SUITABLE FOR PRIMARY CABLE INSTALLATIONS.
5. IF INSTALLED IN A PAVED AREA, ORDER PRECAST SLAB FOR USE UNDER HANDHOLE FOR H-20 LOADING.
6. ORDER 3 PIECE ETHERIDGE FOUNDRY "TYPE B" CASTING. MINIMUM ONE COURSE OF BRICK TO GRADE.

E SPLICE BOX DETAIL

N.T.S.



NOTES:

1. ALL LIGHT POLE BASES TO BE SET 6" ABOVE GRADE (MINIMUM) AND LIGHT BOLLARD BASES SHALL BE SET 3" ABOVE GRADE. OR AS DESCRIBED BY THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE. CONTRACTOR SHALL CONFIRM PRIOR TO ANY POLE INSTALLATIONS.
2. BASE SIZE TO BE CONFIRMED WITH THE LIGHT POLE SUPPLIER.

C TYPICAL PARKING LOT LIGHTING POLE FOUNDATION

N.T.S.

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES & SHALL NOT BE USED FOR CONSTRUCTION.

STATE OF MAINE
STEPHEN R. BUSHEY
02.10.23
LICENSED PROFESSIONAL ENGINEER
STEPHEN R. BUSHEY, P.E.
LIC. #7429

Rev.	Date	Revision

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GORRILL PALMER
707 Sable Oaks Drive, Suite 30
South Portland, Me 04106
207.772.2515 / www.gorrillpalmer.com
Relationships. Responsiveness. Results.

Drawing Name: ELECTRICAL & UTILITY DETAILS

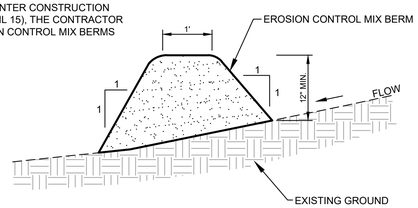
Project: LEDGEWOOD COURT EXPANSION - 32 UNITS
207 LEDGEWOOD COURT DRIVE, DAMARISCOTTA, MAINE

Client: DC PREDEVELOPMENT LLC / DC LEDGEWOOD LLC
631 STEVENS AVENUE, SUITE 203, PORTLAND, MAINE 04103 PH. 207.772.7673

Drawing No. C-5.5

U:\3996 - Ledgewood Court Expansion - Damariscotta 5-16-22\Z - CAD\DWG\3996-DETAILS.dwg 2/10/2023 9:36 AM

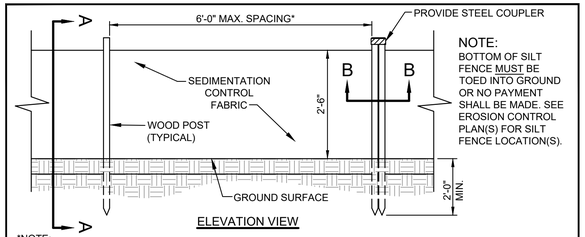
NOTE:
DURING PERIODS OF WINTER CONSTRUCTION (NOV. 15 THROUGH APRIL 15), THE CONTRACTOR SHALL INSTALL EROSION CONTROL MIX BERMS IN LIEU OF SILT FENCE.



EROSION CONTROL MIX:
EROSION CONTROL MIX SHALL CONTAIN A WELL-GRADED MIXTURE OF PARTICLE SIZES & MAY CONTAIN ROCKS LESS THAN 4" IN DIAMETER. EROSION CONTROL MIX MUST BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH. THE MIX COMPOSITION SHALL MEET THE FOLLOWING STANDARDS:

- THE ORGANIC MATTER CONTENT SHALL BE BETWEEN 80 AND 100%, DRY WEIGHT BASIS.
- PARTICLE SIZE BY WEIGHT SHALL BE 100% PASSING A 6" SCREEN AND A MINIMUM OF 70%, MAXIMUM OF 85%, PASSING A 0.75" SCREEN.
- THE ORGANIC PORTION NEEDS TO BE FIBROUS AND ELONGATED.
- LARGE PORTIONS OF SILTS, CLAYS OR FINE SANDS ARE NOT ACCEPTABLE IN THE MIX.
- SOLUBLE SALTS CONTENT SHALL BE < 4.0 mmhos/cm.
- PH SHALL FALL BETWEEN 5.0 AND 8.0.

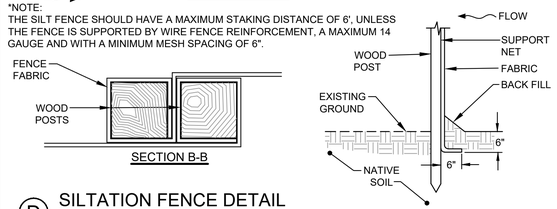
(A) EROSION CONTROL MIX BERM DETAIL
N.T.S.



NOTE:
BOTTOM OF SILT FENCE MUST BE TOED INTO GROUND OR NO PAYMENT SHALL BE MADE. SEE EROSION CONTROL PLAN(S) FOR SILT FENCE LOCATION(S).

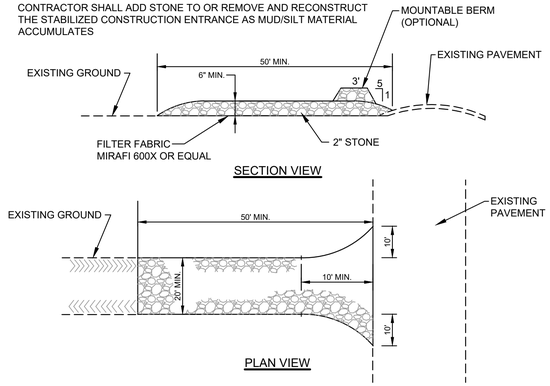
ELEVATION VIEW

*NOTE:
THE SILT FENCE SHOULD HAVE A MAXIMUM STAKING DISTANCE OF 6', UNLESS THE FENCE IS SUPPORTED BY WIRE FENCE REINFORCEMENT, A MAXIMUM 14 GAUGE AND WITH A MINIMUM MESH SPACING OF 6".

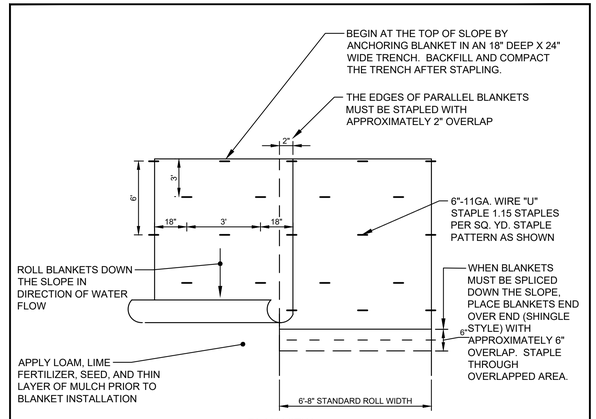


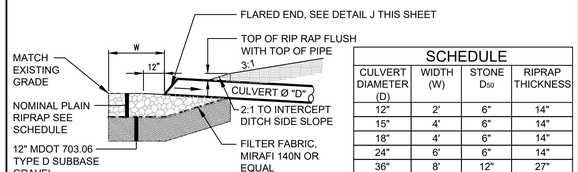
(D) SILTATION FENCE DETAIL
N.T.S.

NOTE:
CONTRACTOR SHALL ADD STONE TO OR REMOVE AND RECONSTRUCT THE STABILIZED CONSTRUCTION ENTRANCE AS MUD/SILT MATERIAL ACCUMULATES

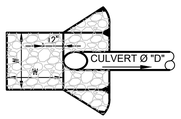


(G) STABILIZED CONSTRUCTION ENTRANCE DETAIL
N.T.S.



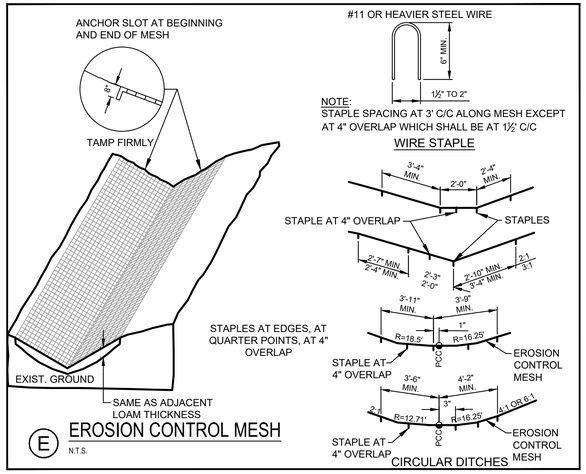


SCHEDULE			
CULVERT DIAMETER (D)	WIDTH (W)	STONE D_{50}	RIPRAP THICKNESS
12"	2'	6"	14"
15"	4'	6"	14"
18"	4'	6"	14"
24"	6'	6"	14"
36"	8'	12"	27"
42"	10'	12"	27"
48"	12'	12"	27"



NOTE:
RIPRAP GRADATION AND PLACEMENT - THE RIPRAP GRADATION SHALL BE A WELL-GRADED MIX FROM ABOUT 1.5 TIMES THE D SIZE TO ABOUT 25 PERCENT OF THE D SIZE. THE RIPRAP STONES SHALL BE CAREFULLY PLACED WORKING FROM THE TOE OF THE SLOPE UPWARD. THE STONES SHOULD BE LOWERED TO THE SLOPE AND NOT BE ALLOWED TO DROP MORE THAN 12 INCHES ONTO THE GEOTEXTILE. THE FINISHED SURFACE SHALL BE A RELATIVELY SMOOTH UNIFORMLY SLOPED SURFACE.

(B) PIPE/CULVERT INLET APRON
N.T.S.



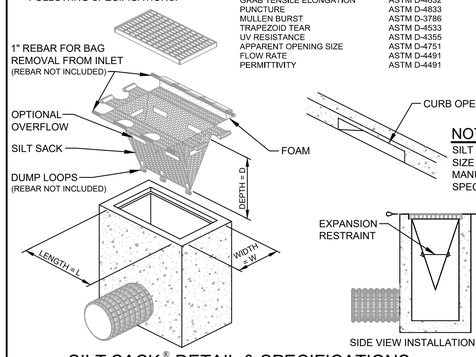
NOTE:
STAPLE SPACING AT 3' C/C ALONG MESH EXCEPT AT 4" OVERLAP WHICH SHALL BE AT 1½' C/C

(E) EROSION CONTROL MESH
N.T.S.

NOTE: THE SILT SACK ® WILL BE MANUFACTURED FROM A WOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS:

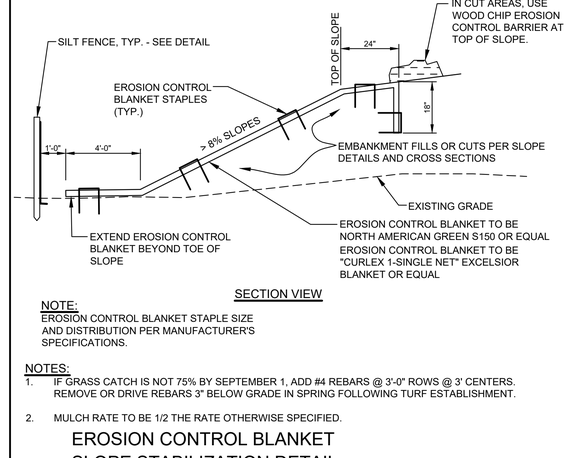
HIGH-FLOW SILT SACK ® (FOR USE IN LOW POINTS/SAGS)
(FOR AREAS OF MODERATE TO HEAVY PRECIPITATION AND RUN-OFF)

PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	265 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20 %
PUNCTURE	ASTM D-4833	135 LBS
MULLEN BURST	ASTM D-3786	420 PSI
TRAPEZOID TEAR	ASTM D-4533	45 LBS
UV RESISTANCE	ASTM D-4355	90 %
APPARENT OPENING SIZE	ASTM D-4751	20 US SIEVE
FLOW RATE	ASTM D-4491	200 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	1.5 SEC -1



NOTE:
SILT SACK ® SIZE & DIMENSIONS PER MANUFACTURER'S SPECIFICATIONS.

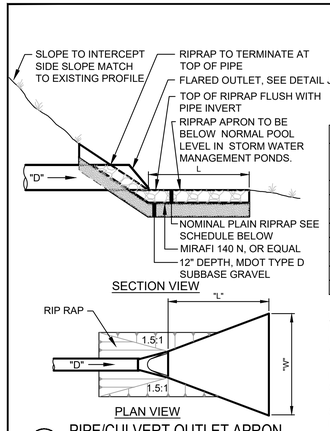
(H) SILT SACK ® DETAIL & SPECIFICATIONS
N.T.S.



NOTE:
EROSION CONTROL BLANKET STAPLE SIZE AND DISTRIBUTION PER MANUFACTURER'S SPECIFICATIONS.

NOTES:
1. IF GRASS CATCH IS NOT 75% BY SEPTEMBER 1, ADD #4 REBARS @ 3'-0" ROWS @ 3' CENTERS. REMOVE OR DRIVE REBARS 3" BELOW GRADE IN SPRING FOLLOWING TURF ESTABLISHMENT.
2. MULCH RATE TO BE 1/2 THE RATE OTHERWISE SPECIFIED.

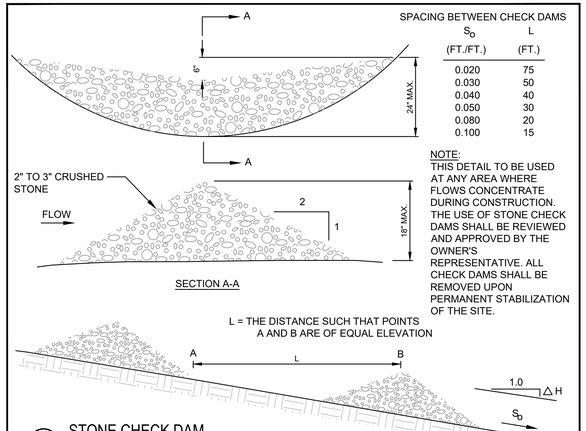
(J) EROSION CONTROL BLANKET SLOPE STABILIZATION DETAIL
N.T.S.



SCHEDULE				
CULVERT DIAMETER (D)	WIDTH (W)	LENGTH (L)	STONE D_{50}	RIPRAP THICKNESS
12"	8'	10'	6"	14"
15"	8'	10'	6"	14"
18"	10'	14'	6"	14"
24"	12'	16'	9"	21"
30"	12'	16'	12"	27"
36"	20'	24'	12"	27"
42"	24'	26'	12"	27"
48"	28'	32'	12"	27"

NOTE:
RIPRAP GRADATION AND PLACEMENT - THE RIPRAP GRADATION SHALL BE A WELL-GRADED MIX FROM ABOUT 1.5 TIMES THE D SIZE TO ABOUT 25 PERCENT OF THE D SIZE. THE RIPRAP STONES SHALL BE CAREFULLY PLACED WORKING FROM THE TOE OF THE SLOPE UPWARD. THE STONES SHOULD BE LOWERED TO THE SLOPE AND NOT BE ALLOWED TO DROP MORE THAN 12 INCHES ONTO THE GEOTEXTILE. THE FINISHED SURFACE SHALL BE A RELATIVELY SMOOTH UNIFORMLY SLOPED SURFACE.

(C) PIPE/CULVERT OUTLET APRON
N.T.S.

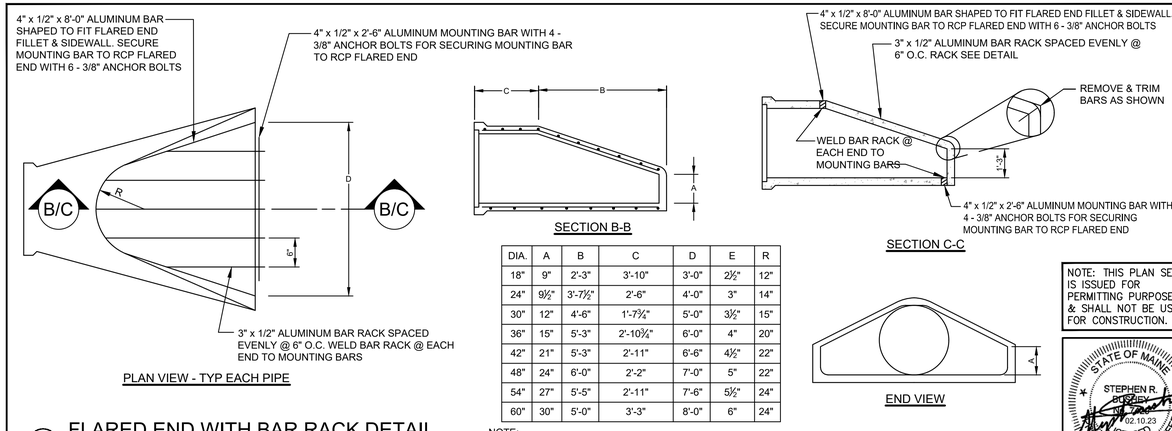


SPACING BETWEEN CHECK DAMS

S_D (FT./FT.)	L (FT.)
0.020	75
0.030	50
0.040	40
0.050	30
0.080	20
0.100	15

NOTE:
THIS DETAIL TO BE USED AT ANY AREA WHERE FLOWS CONCENTRATE DURING CONSTRUCTION. THE USE OF STONE CHECK DAMS SHALL BE REVIEWED AND APPROVED BY THE OWNER'S REPRESENTATIVE. ALL CHECK DAMS SHALL BE REMOVED UPON PERMANENT STABILIZATION OF THE SITE.

(F) STONE CHECK DAM
N.T.S.



DIA.	A	B	C	D	E	R
18"	9"	2'-3"	3'-10"	3'-0"	2½"	12"
24"	9½"	3'-7½"	2'-6"	4'-0"	3"	14"
30"	12"	4'-6"	1'-7¾"	5'-0"	3½"	15"
36"	15"	5'-3"	2'-10¾"	6'-0"	4"	20"
42"	21"	5'-3"	2'-11"	6'-6"	4½"	22"
48"	24"	6'-0"	2'-2"	7'-0"	5"	22"
54"	27"	5'-5"	2'-11"	7'-6"	5½"	24"
60"	30"	5'-0"	3'-3"	8'-0"	6"	24"

NOTE:
JOINTS MAY BE FURNISHED WITH EITHER BELL & SPIGOT OR TONGUE & GROOVE ENDS. CULVERT END SECTIONS SHALL CONFORM TO MDOT STANDARD SPECS.

(I) FLARED END WITH BAR RACK DETAIL
N.T.S.

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES & SHALL NOT BE USED FOR CONSTRUCTION.

STATE OF MAINE
STEPHEN R. BUSHEY
10
02.10.23
LICENSED PROFESSIONAL ENGINEER
STEPHEN R. BUSHEY, P.E.
LIC. #7429

Rev.	Date	Revision

Rev.	Date	Revision
1	2023.02.10	PRELIMINARY SITE PLAN / SUBDIVISION PLAN APPLICATION

Design: SRB	Draft: CDD	Date: NOV. 2022
Checked: SRB	Scale: AS NOTED	Job No.: 3996
File Name: 3996-DETAILS.dwg		

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707 Sable Oaks Drive, Suite 30
South Portland, Me 04106
207.772.2515 / www.gorrillpalmer.com
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Drawing Name: EROSION CONTROL & MISCELLANEOUS DETAILS

Project: LEDGEWOOD COURT EXPANSION - 32 UNITS
207 LEDGEWOOD COURT DRIVE, DAMARISCOTTA, MAINE

Client: DC PREDEVELOPMENT LLC / DC LEDGEWOOD LLC
631 STEVENS AVENUE, SUITE 203, PORTLAND, MAINE 04103 PH. 207.772.7673

Drawing No. C-5.6

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1.3.5 EROSION CONTROL MEASURES AND SITE STABILIZATION

THE PRIMARY EMPHASIS OF THE EROSION/SEDIMENTATION CONTROL PLAN, WHICH WILL BE IMPLEMENTED FOR THIS PROJECT, IS AS FOLLOWS:

- DEVELOPMENT OF A CAREFUL CONSTRUCTION SEQUENCE.
- RAPID REVEGETATION OF DENUDED AREAS TO MINIMIZE THE PERIOD OF SOIL EXPOSURE.
- RAPID STABILIZATION OF DRAINAGE PATHS TO AVOID RILL AND GULLY EROSION.
- THE USE OF ON-SITE MEASURES TO CAPTURE SEDIMENT (HAY BALES/ STONE CHECK DAMS/SILT FENCE, ETC.)

THE FOLLOWING TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL DEVICES WILL BE IMPLEMENTED AS PART OF THE SITE DEVELOPMENT. THESE DEVICES SHALL BE INSTALLED AS INDICATED ON THE PLANS OR AS DESCRIBED WITHIN THIS REPORT. FOR FURTHER REFERENCE, SEE THE LATEST EDITION OF THE MAINE EROSION AND SEDIMENT CONTROL PRACTICES FIELD GUIDE FOR CONTRACTORS.

A. DEWATERING

WATER FROM CONSTRUCTION TRENCH DEWATERING SHALL PASS FIRST THROUGH A FILTER BAG OR SECONDARY CONTAINMENT STRUCTURE (E.G. HAY BALE LINED POOL) PRIOR TO DISCHARGE. THE DISCHARGE SITE SHALL BE SELECTED TO AVOID FLOODING, ICING, AND SEDIMENT DISCHARGES TO A PROTECTED RESOURCE. IN NO CASE SHALL THE FILTER BAG OR CONTAINMENT STRUCTURE BE LOCATED WITHIN 50 FEET OF A PROTECTED NATURAL RESOURCE. DEWATERING DISCHARGE SHALL NOT BE DIRECTED ACROSS ADJACENT PROPERTIES IN A CONCENTRATED MANNER.

B. INSPECTION AND MONITORING

MAINTENANCE MEASURES SHALL BE APPLIED AS NEEDED DURING THE ENTIRE CONSTRUCTION SEASON. AFTER EACH RAINFALL, SNOW STORM OR PERIOD OF THAWING AND RUNOFF, THE SITE CONTRACTOR SHALL PERFORM A VISUAL INSPECTION OF ALL INSTALLED EROSION CONTROL MEASURES AND PERFORM REPAIRS AS NEEDED TO INSURE THEIR CONTINUOUS FUNCTION. FOLLOWING THE TEMPORARY AND/OR FINAL SEEDING AND MULCHING, THE CONTRACTOR SHALL IN THE SPRING INSPECT AND REPAIR ANY DAMAGES AND/OR UNESTABLISHED SPOTS. ESTABLISHED VEGETATIVE COVER MEANS A MINIMUM OF 90% OF AREAS VEGETATED WITH VIGOROUS GROWTH.

THE FOLLOWING STANDARDS MUST BE MET DURING CONSTRUCTION.

(a) **INSPECTION AND CORRECTIVE ACTION**. INSPECT DISTURBED AND IMPERVIOUS AREAS, EROSION CONTROL MEASURES, MATERIALS STORAGE AREAS THAT ARE EXPOSED TO PRECIPITATION, AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE. INSPECT THESE AREAS AT LEAST ONCE A WEEK AS WELL AS BEFORE AND WITHIN 24 HOURS AFTER A STORM EVENT (RAINFALL), AND PRIOR TO COMPLETING PERMANENT STABILIZATION MEASURES. A PERSON WITH KNOWLEDGE OF EROSION AND STORMWATER CONTROL, INCLUDING THE STANDARDS AND CONDITIONS IN THE PERMIT, SHALL CONDUCT THE INSPECTIONS.

(b) **MAINTENANCE**. IF BEST MANAGEMENT PRACTICES (BMPS) NEED TO BE REPAIRED, THE REPAIR WORK SHOULD BE INITIATED UPON DISCOVERY OF THE PROBLEM BUT NO LATER THAN THE END OF THE NEXT WORKDAY. IF ADDITIONAL BMPS OR SIGNIFICANT REPAIR OF BMPS ARE NECESSARY, IMPLEMENTATION MUST BE COMPLETED WITHIN 7 CALENDAR DAYS AND PRIOR TO ANY STORM EVENT (RAINFALL). ALL MEASURES MUST BE MAINTAINED IN EFFECTIVE OPERATING CONDITION UNTIL AREAS ARE PERMANENTLY STABILIZED.

(c) **DOCUMENTATION**. KEEP A LOG (REPORT) SUMMARIZING THE INSPECTIONS AND ANY CORRECTIVE ACTION TAKEN. THE LOG MUST INCLUDE THE NAME(S) AND QUALIFICATIONS OF THE PERSON MAKING THE INSPECTIONS, THE DATE(S) OF THE INSPECTIONS, AND MAJOR OBSERVATIONS ABOUT THE OPERATION AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROLS, MATERIALS STORAGE AREAS, AND VEHICLE ACCESS POINTS TO THE PARCEL. MAJOR OBSERVATIONS MUST INCLUDE BMPS THAT NEED MAINTENANCE, BMPS THAT FAILED TO OPERATE AS DESIGNED OR PROVED INADEQUATE FOR A PARTICULAR LOCATION, AND LOCATION(S) WHERE ADDITIONAL BMPS ARE NEEDED. FOR EACH BMP REQUIRING MAINTENANCE, BMP NEEDING REPLACEMENT, AND LOCATION NEEDING ADDITIONAL BMPS, NOTE IN THE LOG THE CORRECTIVE ACTION TAKEN AND WHEN IT WAS TAKEN.

THE LOG MUST BE MADE ACCESSIBLE TO CITY STAFF AND A COPY MUST BE PROVIDED UPON REQUEST. THE PERMITTEE SHALL RETAIN A COPY OF THE LOG FOR A PERIOD OF AT LEAST THREE YEARS FROM THE COMPLETION OF PERMANENT STABILIZATION.

C. TEMPORARY EROSION CONTROL MEASURES

TEMPORARY EROSION CONTROL MEASURES SHALL BE INSTALLED BY THE CONTRACTOR AS REQUIRED BY THIS REPORT AND AS SHOWN ON THE PLAN SET FOR THE PROJECT. ADDITIONAL EROSION CONTROL MEASURES SHALL BE INSTALLED IF DEEMED NECESSARY BY ON-SITE INSPECTIONS OF THE OWNER, THE TOWN OF DAMARISCOTTA, OR THEIR REPRESENTATIVES AT NO ADDITIONAL COST TO THE OWNER.

THE FOLLOWING MEASURES ARE PLANNED AS TEMPORARY EROSION/SEDIMENTATION CONTROL MEASURES DURING CONSTRUCTION:

1. CRUSHED STONE-STABILIZED CONSTRUCTION ENTRANCE SHALL BE PLACED AT THE ENTRANCE TO EACH CONSTRUCTION AREA.

2. SILTATION FENCE OR WOOD WASTE COMPOST BERMS SHALL BE INSTALLED DOWNSTREAM OF ANY DISTURBED AREAS TO TRAP RUNOFF- BORNE SEDIMENTS UNTIL GRASS AREAS ARE REVEGETATED. THE SILT FENCE AND/OR WOOD WASTE COMPOST BERMS SHALL BE INSTALLED PER THE DETAILS PROVIDED IN THIS PACKAGE AND INSPECTED AT LEAST ONCE A WEEK AND BEFORE AND IMMEDIATELY AFTER A STORM EVENT OF 0.5 INCHES OR GREATER, AND AT LEAST DAILY DURING PROLONGED RAINFALL. REPAIRS SHALL BE MADE IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THE FENCE OR BERM LINE. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THE FENCE OR BERM, THE BARRIER SHALL BE REPLACED WITH A STONE CHECK DAM. WOOD WASTE COMPOST BERMS ARE NOT TO BE USED ADJACENT TO WETLAND AREAS THAT ARE NOT TO BE DISTURBED.

3. STRAW OR HAY MULCH INCLUDING HYDROSEEDING IS INTENDED TO PROVIDE COVER FOR DENUDED OR SEEDED AREAS UNTIL REVEGETATION IS ESTABLISHED. MULCH PLACED BETWEEN APRIL 15TH AND OCTOBER 15TH ON SLOPES OF LESS THEN 15 PERCENT SHALL BE ANCHORED BY APPLYING WATER; MULCH PLACED ON SLOPES OF EQUAL TO OR STEEPER THAN 15 PERCENT SHALL BE COVERED BY A FABRIC NETTING AND ANCHORED WITH STAPLES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION. FABRIC NETTING AND STAPLES SHALL BE USED ON DISTURBED AREAS WITHIN 50' OF LAKES, STREAMS, AND WETLANDS REGARDLESS OF THE UPSTREAM SLOPE. MULCH PLACED BETWEEN OCTOBER 15TH AND APRIL 15TH ON SLOPES EQUAL TO OR STEEPER THAN 8 PERCENT SHALL BE COVERED WITH A FABRIC NETTING AND ANCHORED WITH STAPLES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. SLOPES STEEPER THAN 3:1 AND EQUAL TO OR FLATTER THAN 2:1, WHICH ARE TO BE REVEGETATED, SHALL RECEIVE CURLEX BLANKETS BY AMERICAN EXCELSIOR OR EQUAL. SLOPES STEEPER THAN 2:1 SHALL RECEIVE RIPRAP AS NOTED ON THE PLANS. THE MULCH APPLICATION RATE FOR BOTH TEMPORARY AND PERMANENT SEEDING IS 75 LBS PER 1000 SF AS IDENTIFIED IN ATTACHMENT A OF THIS SECTION. MULCH SHALL NOT BE PLACED OVER SNOW.

4. TEMPORARY STOCKPILES OF STUMPS, GRUBBINGS, OR COMMON EXCAVATION WILL BE PROTECTED AS FOLLOWS:

   a) TEMPORARY STOCKPILES SHALL NOT BE LOCATED WITHIN 100 FEET OF ANY WETLANDS WHICH WILL NOT BE DISTURBED AND SHALL BE LOCATED AWAY FROM DRAINAGE SWALES.

   b) STOCKPILES SHALL BE STABILIZED WITHIN 7 DAYS BY EITHER TEMPORARILY SEEDING THE STOCKPILE BY A HYDROSEED METHOD CONTAINING AN EMULSIFIED MULCH TACKIFIER OR BY COVERING THE STOCKPILE WITH MULCH, SUCH AS HAY, STRAW, OR EROSION CONTROL MIX.

   c) STOCKPILES SHALL BE SURROUNDED BY SEDIMENTATION BARRIER AT THE TIME OF FORMATION.

5. ALL DENUDED AREAS THAT ARE WITHIN 100 FEET OF AN UNDISTURBED WETLAND, WHICH HAVE BEEN ROUGH GRADED AND ARE NOT LOCATED WITHIN A BUILDING PAD, PARKING AREA, OR ACCESS DRIVE SUBBASE AREA, SHALL RECEIVE MULCH OR EROSION CONTROL MESH FABRIC WITHIN 48 HOURS OF INITIAL DISTURBANCE OF SOIL. ALL AREAS WITHIN 100 FEET OF AN UNDISTURBED WETLAND SHALL BE MULCHED PRIOR TO ANY PREDICTED RAIN EVENT REGARDLESS OF THE 48 HOUR WINDOW. IN OTHER AREAS, THE TIME PERIOD MAY BE EXTENDED TO 7 DAYS.

6. FOR WORK, WHICH IS CONDUCTED BETWEEN OCTOBER 15^{TH} AND APRIL 15^{TH} OF ANY CALENDAR YEAR, ALL DENUDED AREAS, SHALL BE COVERED WITH HAY MULCH OR EROSION CONTROL MIX, APPLIED AT TWICE THE NORMAL APPLICATION RATE AND ANCHORED WITH A FABRIC NETTING. THE TIME PERIOD FOR APPLYING MULCH SHALL BE LIMITED TO 2 DAYS FOR ALL AREAS.

7. PIPER MILL ROAD AND LEDGEWOOD COURT DRIVE SHALL BE SWEPT TO CONTROL MUD AND DUST AS NECESSARY. ADDITIONAL STONE SHALL BE ADDED TO THE STABILIZED CONSTRUCTION ENTRANCE TO MINIMIZE THE TRACKING OF MATERIAL OFF THE SITE AND ONTO THE SURROUNDING ROADWAYS.

8. DURING GRUBBING OPERATIONS STONE CHECK DAMS SHALL BE INSTALLED AT ANY EVIDENT CONCENTRATED FLOW DISCHARGE POINTS AND AS DIRECTED ON THE EROSION CONTROL PLANS.

9. SILT FENCING WITH A MINIMUM STAKE SPACING OF 6 FEET SHALL BE USED, UNLESS THE FENCE IS SUPPORTED BY WIRE FENCE REINFORCEMENT OF MINIMUM 14 GAUGE AND WITH A MAXIMUM MESH SPACING OF 6 INCHES, IN WHICH CASE STAKES MAY BE SPACED A MAXIMUM OF 10 FEET APART. THE BOTTOM OF THE FENCE SHALL BE ANCHORED. A DOUBLE ROW OF SILT FENCE SHALL BE USED ADJACENT TO WETLANDS.

10. WOOD WASTE COMPOST/BARK BERMS MAY BE USED IN LIEU OF SILTATION FENCING. BERMS SHALL BE REMOVED AND SPREAD IN A LAYER NOT TO EXCEED 3" THICK ONCE UPSTREAM AREAS ARE COMPLETED AND A 90% CATCH OF VEGETATION IS ATTAINED.

11. STORM DRAIN CATCH BASIN INLET PROTECTION SHALL BE PROVIDED THROUGH THE USE OF STONE SEDIMENT BARRIERS OR APPROVED SEDIMENT BAGS (SUCH AS SILT SACK). INSTALLATION DETAILS ARE PROVIDED IN THE PLAN SET. THE BARRIERS SHALL BE INSPECTED AFTER EACH RAINFALL AND REPAIRS MADE AS NECESSARY. SEDIMENT SHALL BE REMOVED AND THE BARRIER RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ½ THE DESIGN DEPTH OF THE BARRIER. THE BARRIER SHALL BE REMOVED WHEN THE TRIBUTARY DRAINAGE AREA HAS BEEN STABILIZED.

12. WATER AND/OR CALCIUM CHLORIDE SHALL BE FURNISHED AND APPLIED IN ACCORDANCE WITH MDOT SPECIFICATIONS - SECTION 637 - DUST CONTROL.

13. LOAM AND SEED IS INTENDED TO SERVE, AS THE PRIMARY PERMANENT REVEGETATIVE MEASURE FOR ALL DENUDED AREAS NOT PROVIDED WITH OTHER EROSION CONTROL MEASURES, SUCH AS RIPRAP. APPLICATION RATES ARE PROVIDED IN ATTACHMENT A OF THIS SECTION. SEEDING SHALL NOT OCCUR OVER SNOW.

D. PERMANENT EROSION CONTROL MEASURES

THE FOLLOWING PERMANENT EROSION CONTROL MEASURES HAVE BEEN DESIGNED AS PART OF THE EROSION/SEDIMENTATION CONTROL PLAN:

1. THE DRAINAGE CONVEYANCE SYSTEMS HAVE BEEN DESIGNED TO INTERCEPT AND CONVEY THE 100-YEAR STORM.

2. ALL AREAS DISTURBED DURING CONSTRUCTION, BUT NOT SUBJECT TO OTHER RESTORATION (PAVING, RIPRAP, ETC.) WILL BE LOAMED, LIMED, FERTILIZED, MULCHED, AND SEEDED. FABRIC NETTING, ANCHORED WITH STAPLES, SHALL BE PLACED OVER THE MULCH IN AREAS AS NOTED IN **TEMPORARY EROSION CONTROL MEASURES** PARAGRAPH 3 OF THIS REPORT. ALL AREAS WITHIN 100 FEET OF AN UNDISTURBED WETLAND SHALL BE MULCHED PRIOR TO ANY PREDICTED RAIN EVENT REGARDLESS OF THE 48 HOUR WINDOW. NATIVE TOPSOIL SHALL BE STOCKPILED AND REUSED FOR FINAL RESTORATION WHEN IT IS OF SUFFICIENT QUALITY.

3. ALL STORM DRAIN PIPE OUTLETS SHALL HAVE RIPRAP APRONS AT THEIR OUTLET TO PROTECT THE OUTLET AND RECEIVING CHANNEL FROM SCOUR AND DETERIORATION. INSTALLATION DETAILS ARE PROVIDED IN THE PLAN SET. THE APRONS SHALL BE INSTALLED AND STABILIZED TO THE EXTENT PRACTICABLE PRIOR TO DIRECTING RUNOFF TO THE TRIBUTARY PIPE OR CULVERT.

4. THE PERIMETER SLOPES WILL BE RESTABILIZED WITH VEGETATION INCLUDING VARIOUS SHRUBS, TREES, AND GRASS MIX WHICH WILL BE LEFT UNMAINTAINED. ONSITE AREAS AGAINST THE BUILDING AND AT THE PROJECT FRONTAGE ARE ANTICIPATED TO BE REGULARLY MAINTAINED AND WILL BE SIMILARLY STABILIZED WITH SHRUBS, TREES, AND GRASS MIX.

1.4 IMPLEMENTATION SCHEDULE

THE FOLLOWING CONSTRUCTION SEQUENCE SHALL BE REQUIRED TO ENSURE THE EFFECTIVENESS OF THE EROSION AND SEDIMENTATION CONTROL MEASURES ARE OPTIMIZED:

NOTE: FOR ALL GRADING ACTIVITIES, THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION NOT TO OVEREXPOSE THE SITE, THIS SHALL BE ACCOMPLISHED BY LIMITING THE DISTURBED AREA.

1. INSTALL STABILIZED CONSTRUCTION ENTRANCE AT CONSTRUCTION ACCESS POINTS FROM PAVED ROADWAYS.
2. INSTALL SAFETY AND CONSTRUCTION FENCE TO SECURE THE SITE.
3. INSTALL CATCH BASIN INLET PROTECTION, AND PERIMETER SILT FENCE/WOOD WASTE BERMS PRIOR TO GRUBBING RESPECTIVE AREAS.
4. CLEAR AND GRUB AREA TO BE DEVELOPED. INSTALL STONE CHECK DAMS AT ANY EVIDENT CONCENTRATED FLOW DISCHARGE POINTS.
5. FOUNDATION PREPARATION AREA SHALL BE EXCAVATED FOR INSTALLATION OF THE BUILDING FOOTINGS. BUILDING WORK WILL BE ON GOING THROUGH THE REMAINDER OF THE PROJECT.
6. COMMENCE INSTALLATION OF DRAINAGE APPURTENANCES.
7. COMMENCE CONSTRUCTION OF BIO-RETENTION AND GRASSED SOIL FILTERS AND OTHER SWM MEASURES.
8. COMMENCE EARTHWORK AND GRADING TO SUBGRADE.
9. COMMENCE INSTALLATION OF UTILITIES.
10. COMPLETE INSTALLATION OF UNDERGROUND UTILITIES TO WITHIN 5' OF THE BUILDINGS.
11. INSTALL LIGHT POLE FOUNDATIONS AND LIGHT POLES.
12. COMPLETE REMAINING EARTHWORK OPERATIONS.
13. COMPLETE INSTALLATION OF CATCH BASINS AND APPURTENANCES.
14. INSTALL SUB-BASE AND BASE GRAVEL WITHIN PARKING FIELDS, WALKWAYS, AND ALL DRIVEWAYS.
15. INSTALL BASE COURSE PAVING FOR ACCESS DRIVE AND PARKING AREA AS WELL AS CONCRETE SURFACES.
16. INSTALL CURBING IN PARKING FIELDS, DRIVEWAYS, AND ALONG THE STREETS AS NEEDED.
17. LOAM, LIME, FERTILIZE, SEED AND MULCH DISTURBED AREAS AND COMPLETE ALL LANDSCAPING.
18. ONCE THE SITE IS STABILIZED AND A 90% CATCH OF VEGETATION HAS BEEN OBTAINED, REMOVE ALL TEMPORARY EROSION CONTROL MEASURES.
19. TOUCH UP LOAM AND SEED.

NOTE: ALL DENUDED AREAS NOT SUBJECT TO FINAL PAVING, RIPRAP, OR GRAVEL SHALL BE REVEGETATED.

PRIOR TO CONSTRUCTION OF THE PROJECT, THE CONTRACTOR SHALL SUBMIT TO THE OWNER A SCHEDULE FOR THE COMPLETION OF THE WORK, WHICH WILL SATISFY THE FOLLOWING CRITERIA:

1. THE ABOVE CONSTRUCTION SEQUENCE SHOULD GENERALLY BE COMPLETED IN THE SPECIFIED ORDER; HOWEVER, SEVERAL SEPARATE ITEMS MAY BE CONSTRUCTED SIMULTANEOUSLY. WORK MUST ALSO BE SCHEDULED OR PHASED TO REDUCE THE EXTENT OF THE EXPOSED AREAS AS SPECIFIED BELOW. THE INTENT OF THIS SEQUENCE IS TO PROVIDE FOR EROSION CONTROL AND TO HAVE STRUCTURAL MEASURES SUCH AS SILT FENCE AND CONSTRUCTION ENTRANCES IN PLACE BEFORE LARGE AREAS OF LAND ARE DENUDED.

2. THE WORK SHALL BE CONDUCTED IN SECTIONS WHICH SHALL:

   a) LIMIT THE AMOUNT OF EXPOSED AREA TO THOSE AREAS IN WHICH WORK IS EXPECTED TO BE UNDERTAKEN DURING THE PROCEEDING 30 DAYS.

   b) REVEGETATE DISTURBED AREAS AS RAPIDLY AS POSSIBLE. ALL AREAS SHALL BE PERMANENTLY STABILIZED WITHIN 7 DAYS OF FINAL GRADING OR BEFORE A STORM EVENT; OR TEMPORARILY STABILIZED WITHIN 48 HOURS OF INITIAL DISTURBANCE OF SOIL FOR AREAS WITHIN 100 FEET OF AN UNDISTURBED WETLAND AND 7 DAYS FOR ALL OTHER AREAS. AREAS WITHIN 100 FEET OF AN UNDISTURBED WETLAND SHALL BE MULCHED PRIOR TO ANY PREDICTED RAIN EVENT REGARDLESS OF THE 48 HOUR WINDOW.

   c) INCORPORATE PLANNED INLETS AND DRAINAGE SYSTEM AS EARLY AS POSSIBLE INTO THE CONSTRUCTION PHASE. THE DITCHES SHALL BE IMMEDIATELY LINED OR REVEGETATED AS SOON AS THEIR INSTALLATION IS COMPLETE.

1.5 EROSION, SEDIMENTATION AND STABILIZATION CONTROL PLAN

THE EROSION CONTROL PLAN IS INCLUDED IN THE PLAN SET.

1.6 DETAILS AND SPECIFICATIONS

THE EROSION CONTROL DETAILS AND SPECIFICATIONS ARE INCLUDED IN THE PLAN SET.

1.7 WINTER STABILIZATION PLAN

THE WINTER CONSTRUCTION PERIOD IS FROM NOVEMBER 1 THROUGH APRIL 15. IF THE CONSTRUCTION SITE IS NOT STABILIZED WITH PAVEMENT, A ROAD GRAVEL BASE, 75% MATURE VEGETATION COVER OR RIPRAP BY NOVEMBER 15 THEN THE SITE NEEDS TO BE PROTECTED WITH OVER-WINTER STABILIZATION. AN AREA CONSIDERED OPEN IS ANY AREA NOT STABILIZED WITH PAVEMENT; VEGETATION, MULCHING, EROSION CONTROL MATS, RIPRAP OR GRAVEL BASE ON A ROAD.

WINTER EXCAVATION AND EARTHWORK SHALL BE COMPLETED SUCH THAT ANY AREA LEFT EXPOSED CAN BE CONTROLLED BY THE CONTRACTOR. LIMIT THE EXPOSED AREA TO THOSE AREAS IN WHICH WORK IS EXPECTED TO BE UNDERTAKEN DURING THE PROCEEDING 15 DAYS AND THAT CAN BE MULCHED IN ONE DAY PRIOR TO ANY SNOW EVENT.

ALL AREAS SHALL BE CONSIDERED TO BE DENUDED UNTIL THE SUBBASE GRAVEL IS INSTALLED IN ROADWAY/PARKING AREAS OR THE AREAS OF FUTURE LOAM AND SEED HAVE BEEN LOAMED, SEEDED AND MULCHED. HAY AND STRAW MULCH RATE SHALL BE A MINIMUM OF 150 LBS./1,000 S.F. (3 TONS/ACRE) AND SHALL BE PROPERLY ANCHORED.

THE CONTRACTOR SHALL INSTALL ANY ADDED MEASURES WHICH MAY BE NECESSARY TO CONTROL EROSION/SEDIMENTATION FROM THE SITE DEPENDENT UPON THE ACTUAL SITE AND WEATHER CONDITIONS. CONTINUATION OF EARTHWORK OPERATIONS ON ADDITIONAL AREAS SHALL NOT BEGIN UNTIL THE EXPOSED SOIL SURFACE ON THE AREA BEING WORKED HAS BEEN STABILIZED, IN ORDER TO MINIMIZE AREAS WITHOUT EROSION CONTROL PROTECTION.

1. SOIL STOCKPILES

STOCKPILES OF SOIL OR SUBSOIL SHALL BE MULCHED FOR OVER WINTER PROTECTION WITH HAY OR STRAW AT TWICE THE NORMAL RATE OR AT 150 LBS/1,000 S.F. (3 TONS PER ACRE) OR WITH A FOUR-INCH LAYER OF WOODWASTE EROSION CONTROL MIX. THIS SHALL BE DONE WITHIN 24 HOURS OF STOCKING AND RE-ESTABLISHED PRIOR TO ANY RAINFALL OR SNOWFALL. ANY SOIL STOCKPILE SHALL NOT BE PLACED (EVEN COVERED WITH HAY OR STRAW) WITHIN 100 FEET FROM ANY NATURAL RESOURCES.

2. NATURAL RESOURCE PROTECTION

ANY AREAS WITHIN 100 FEET FROM ANY NATURAL RESOURCES, IF NOT STABILIZED WITH A MINIMUM OF 75% MATURE VEGETATION CATCH, SHALL BE MULCHED BY DECEMBER 1 AND ANCHORED WITH PLASTIC NETTING OR PROTECTED WITH EROSION CONTROL MATS. DURING WINTER CONSTRUCTION, A DOUBLE LINE OF SEDIMENT BARRIERS (I.E. SILT FENCE BACKED WITH HAY BALES OR EROSION CONTROL MIX) SHALL BE PLACED BETWEEN ANY NATURAL RESOURCE AND THE DISTURBED AREA. PROJECTS CROSSING THE NATURAL RESOURCE SHALL BE PROTECTED A MINIMUM DISTANCE OF 100 FEET ON EITHER SIDE FROM THE RESOURCE. EXISTING PROJECTS NOT STABILIZED BY DECEMBER 1 SHALL BE PROTECTED WITH THE SECOND LINE OF SEDIMENT BARRIER TO ENSURE FUNCTIONALITY DURING THE SPRING THAW AND RAINS.

3. SEDIMENT BARRIERS

DURING FROZEN CONDITIONS, SEDIMENT BARRIERS SHALL CONSIST OF WOODWASTE FILTER BERMS AS FROZEN SOIL PREVENTS THE PROPER INSTALLATION OF HAY BALES AND SEDIMENT SILT FENCES.

4. MULCHING

AN AREA SHALL BE CONSIDERED DENUDED UNTIL AREAS OF FUTURE LOAM AND SEED HAVE BEEN LOAMED, SEEDED AND MULCHED. HAY AND STRAW MULCH SHALL BE APPLIED AT A RATE OF 150 LB. PER 1,000 SQUARE FEET OR 3 TONS/ACRE (TWICE THE NORMAL ACCEPTED RATE OF 75-LBS./1,000 S.F. OR 1.5 TONS/ACRE) AND SHALL BE PROPERLY ANCHORED. MULCH SHALL NOT BE SPREAD ON TOP OF SNOW. THE SNOW SHALL BE REMOVED DOWN TO A ONE-INCH DEPTH OR LESS PRIOR TO APPLICATION. AFTER EACH DAY OF FINAL GRADING, THE AREA SHALL BE PROPERLY STABILIZED WITH ANCHORED HAY OR STRAW OR EROSION CONTROL MATTING. 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 1,000 SQUARE FEET (3 TONS/ACRE) AND ADEQUATELY ANCHORED THAT GROUND SURFACE IS NOT VISIBLE THOUGH THE MULCH.

BETWEEN THE DATES OF NOVEMBER 1 AND APRIL 15, ALL MULCH SHALL BE ANCHORED BY PEG LINE, MULCH NETTING, ASPHALT EMULSION CHEMICAL, OR WOOD CELLULOSE FIBER. WHEN GROUND SURFACE IS NOT VISIBLE THROUGH THE MULCH THEN COVER IS SUFFICIENT. AFTER NOVEMBER 1^{ST}, MULCH AND ANCHORING OF ALL BARE SOIL SHALL OCCUR AT THE END OF EACH FINAL GRADING WORKDAY.

5. MULCHING ON SLOPES AND DITCHES

SLOPES SHALL NOT BE LEFT EXPOSED FOR ANY EXTENDED TIME OF WORK SUSPENSION UNLESS FULLY MULCHED AND ANCHORED WITH PEG AND NETTING OR WITH EROSION CONTROL BLANKETS. MULCHING SHALL BE APPLIED AT A RATE OF 230 LBS/1,000 S.F. ON ALL SLOPES GREATER THAN 8%.

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 THAT 8%. EROSION CONTROL BLANKETS SHALL BE USED IN LIEU OF MULCH IN ALL DRAINAGE WAYS WITH SLOPES GREATER THAN 8%. EROSION CONTROL MIX CAN BE USED TO SUBSTITUTE EROSION CONTROL BLANKETS ON ALL SLOPES EXCEPT DITCHES.

6. SEEDING

BETWEEN THE DATES OF OCTOBER 15 AND APRIL 1^{ST}, LOAM OR SEED WILL NOT BE REQUIRED. DURING PERIODS OF ABOVE FREEZING TEMPERATURES FINISHED AREAS 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^{ST} 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. DORMANT SEEDING MAY BE SELECTED TO BE PLACED PRIOR TO THE PLACEMENT OF MULCH AND FABRIC NETTING ANCHORED WITH STAPLES. IF DORMANT SEEDING IS USED FOR THE SITE, ALL DISTURBED AREAS SHALL RECEIVE 4" OF LOAM AND SEED AT AN APPLICATION RATE OF 5 LBS/1,000 S.F. ALL AREAS SEEDED DURING THE WINTER SHALL BE INSPECTED IN THE SPRING FOR ADEQUATE CATCH. ALL AREAS INSUFFICIENTLY VEGETATED (LESS THAN 75% CATCH) SHALL BE REVEGETATED BY REPLACING LOAM, SEED AND MULCH. IF DORMANT SEEDING IS NOT USED FOR THE SITE, ALL DISTURBED AREAS SHALL BE REVEGETATED IN THE SPRING.

STANDARDS FOR TIMELY STABILIZATION OF CONSTRUCTION SITES DURING WINTER

1. **STANDARD FOR THE TIMELY STABILIZATION OF DITCHES AND CHANNELS** -- THE APPLICANT SHALL CONSTRUCT AND STABILIZE ALL STONE-LINED DITCHES AND CHANNELS ON THE SITE BY NOVEMBER 15. THE APPLICANT SHALL CONSTRUCT AND STABILIZE ALL GRASS-LINED DITCHES AND CHANNELS ON THE SITE BY SEPTEMBER 1. IF THE APPLICANT FAILS TO STABILIZE A DITCH OR CHANNEL TO BE GRASS-LINED BY SEPTEMBER 1, THEN THE APPLICANT WILL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE DITCH FOR LATE FALL AND WINTER.

INSTALL A SOD LINING IN THE DITCH -- THE APPLICANT SHALL LINE THE DITCH WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES THE APPLICANT PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL, AND ANCHORING THE SOD WITH JUTE OR PLASTIC MESH TO PREVENT THE SOD STRIPS FROM SLOUGHING DURING FLOW CONDITIONS.

INSTALL A STONE LINING IN THE DITCH --THE APPLICANT SHALL LINE THE DITCH WITH STONE RIPRAP BY NOVEMBER 15. THE APPLICANT SHALL HIRE A REGISTERED PROFESSIONAL ENGINEER TO DETERMINE THE STONE SIZE AND LINING THICKNESS NEEDED TO WITHSTAND THE ANTICIPATED FLOW VELOCITIES AND FLOW DEPTHS WITHIN THE DITCH. IF NECESSARY, THE APPLICANT SHALL REGRADE THE DITCH PRIOR TO PLACING THE STONE LINING SO TO PREVENT THE STONE LINING FROM REDUCING THE DITCH'S CROSS-SECTIONAL AREA.

2. **STANDARD FOR THE TIMELY STABILIZATION OF DISTURBED SLOPES** -- THE APPLICANT SHALL CONSTRUCT AND STABILIZE STONE-COVERED SLOPES BY NOVEMBER 15. THE APPLICANT SHALL SEED AND MULCH ALL SLOPES TO BE VEGETATED BY SEPTEMBER 1. THE DEPARTMENT SHALL CONSIDER ANY AREA HAVING A GRADE GREATER THAN 15% TO BE A SLOPE. IF THE APPLICANT FAILS TO STABILIZE ANY SLOPE TO BE VEGETATED BY SEPTEMBER 1, THEN THE APPLICANT SHALL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE SLOPE FOR LATE FALL AND WINTER.

STABILIZE THE SOIL WITH TEMPORARY VEGETATION AND EROSION CONTROL MATS -- BY SEPTEMBER 1 THE APPLICANT SHALL SEED THE DISTURBED SLOPE WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1,000 SQUARE FEET AND APPLY EROSION CONTROL MATS OVER THE MULCHED SLOPE. THE APPLICANT SHALL MONITOR GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR COVER AT LEAST 75% OF THE DISTURBED SLOPE BY NOVEMBER 1, THEN THE APPLICANT SHALL COVER THE SLOPE WITH A LAYER OF WOODWASTE COMPOST AS DESCRIBED IN ITEM III OF THIS STANDARD OR WITH STONE RIPRAP AS DESCRIBED IN ITEM IV OF THIS STANDARD.

STABILIZE THE SLOPE WITH SOD -- THE APPLICANT SHALL STABILIZE THE DISTURBED SLOPE WITH PROPERLY INSTALLED SOD BY SEPTEMBER 1. PROPER INSTALLATION INCLUDES THE APPLICANT PINNING THE SOD ONTO THE SLOPE WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL. THE APPLICANT SHALL NOT USE LATE-SEASON SOD INSTALLATION TO STABILIZE SLOPES HAVING A GRADE GREATER THAN 33% (3H:1V).

STABILIZE THE SLOPE WITH WOODWASTE COMPOST -- THE APPLICANT SHALL PLACE A SIX-INCH LAYER OF WOODWASTE COMPOST ON THE SLOPE BY NOVEMBER 15. PRIOR TO PLACING THE WOODWASTE COMPOST, THE APPLICANT SHALL REMOVE ANY SNOW ACCUMULATION ON THE DISTURBED SLOPE. THE APPLICANT SHALL NOT USE WOODWASTE COMPOST TO STABILIZE SLOPES HAVING GRADES GREATER THAN 50% (2H:1V) OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.

STABILIZE THE SLOPE WITH STONE RIPRAP -- THE APPLICANT SHALL PLACE A LAYER OF STONE RIPRAP ON THE SLOPE BY NOVEMBER 15. THE APPLICANT SHALL HIRE A REGISTERED PROFESSIONAL ENGINEER TO DETERMINE THE STONE SIZE NEEDED FOR STABILITY AND TO DESIGN A FILTER LAYER FOR UNDERNEATH THE RIPRAP.

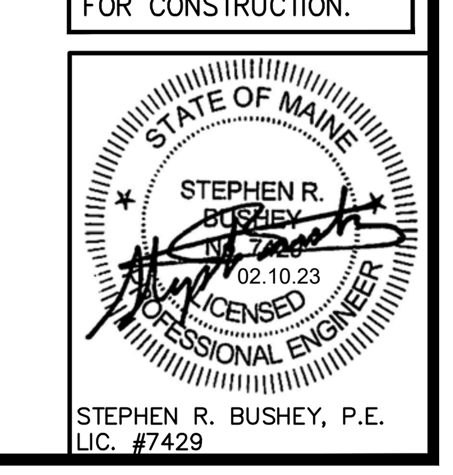
3. **STANDARD FOR THE TIMELY STABILIZATION OF DISTURBED SOILS** -- BY SEPTEMBER 15 THE APPLICANT SHALL SEED AND MULCH ALL DISTURBED SOILS ON AREAS HAVING A SLOPE LESS THAN 15%. IF THE APPLICANT FAILS TO STABILIZE THESE SOILS BY THIS DATE, THEN THE APPLICANT SHALL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE SOIL FOR LATE FALL AND WINTER.

STABILIZE THE SOIL WITH TEMPORARY VEGETATION -- BY SEPTEMBER 1 THE APPLICANT SHALL SEED THE DISTURBED SOIL WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1000 SQUARE FEET, LIGHTLY MULCH THE SEEDED SOIL WITH HAY OR STRAW AT 75 POUNDS PER 1000 SQUARE FEET, AND ANCHOR THE MULCH WITH PLASTIC NETTING. THE APPLICANT SHALL MONITOR GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR COVER AT LEAST 75% OF THE DISTURBED SOIL BEFORE NOVEMBER 1, THEN THE APPLICANT SHALL MULCH THE AREA FOR OVER-WINTER PROTECTION AS DESCRIBED BELOW.

STABILIZE THE SOIL WITH SOD -- THE APPLICANT SHALL STABILIZE THE DISTURBED SOIL WITH PROPERLY INSTALLED SOD BY SEPTEMBER 15. PROPER INSTALLATION INCLUDES THE APPLICANT PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL.

STABILIZE THE SOIL WITH MULCH -- BY NOVEMBER 15 THE APPLICANT SHALL MULCH THE DISTURBED SOIL BY SPREADING HAY OR STRAW AT A RATE OF AT LEAST 150 POUNDS PER 1000 SQUARE FEET ON THE AREA SO THAT NO SOIL IS VISIBLE THROUGH THE MULCH. PRIOR TO APPLYING THE MULCH, THE APPLICANT SHALL REMOVE ANY SNOW ACCUMULATION ON THE DISTURBED AREA. IMMEDIATELY AFTER APPLYING THE MULCH, THE APPLICANT WILL ANCHOR THE MULCH WITH PLASTIC NETTING TO PREVENT WIND FROM MOVING THE MULCH OFF THE DISTURBED SOIL.

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES & SHALL NOT BE USED FOR CONSTRUCTION.



STEPHEN R. BUSHEY, P.E.
LIC. #7429

Rev.	Date	Revision

Rev.	Date	Revision
1	2023.02.10	PRELIMINARY SITE PLAN / SUBDIVISION PLAN APPLICATION

Design: SRB	Draft: CDD	Date: NOV. 2022
Checked: SRB	Scale: AS NOTED	Job No.: 3996
File Name: 3996–DETAILS.dwg		

This plan shall not be modified without written permission from Gorrill Palmer. Any alterations, authorized or otherwise, shall be at the user's sole risk and without liability to Gorrill Palmer.

GORRILL PALMER
707 Sable Oaks Drive, Suite 30
South Portland, Me 04106
207.772.2515 / www.gorrillpalmer.com
Relationships. Responsiveness. Results.

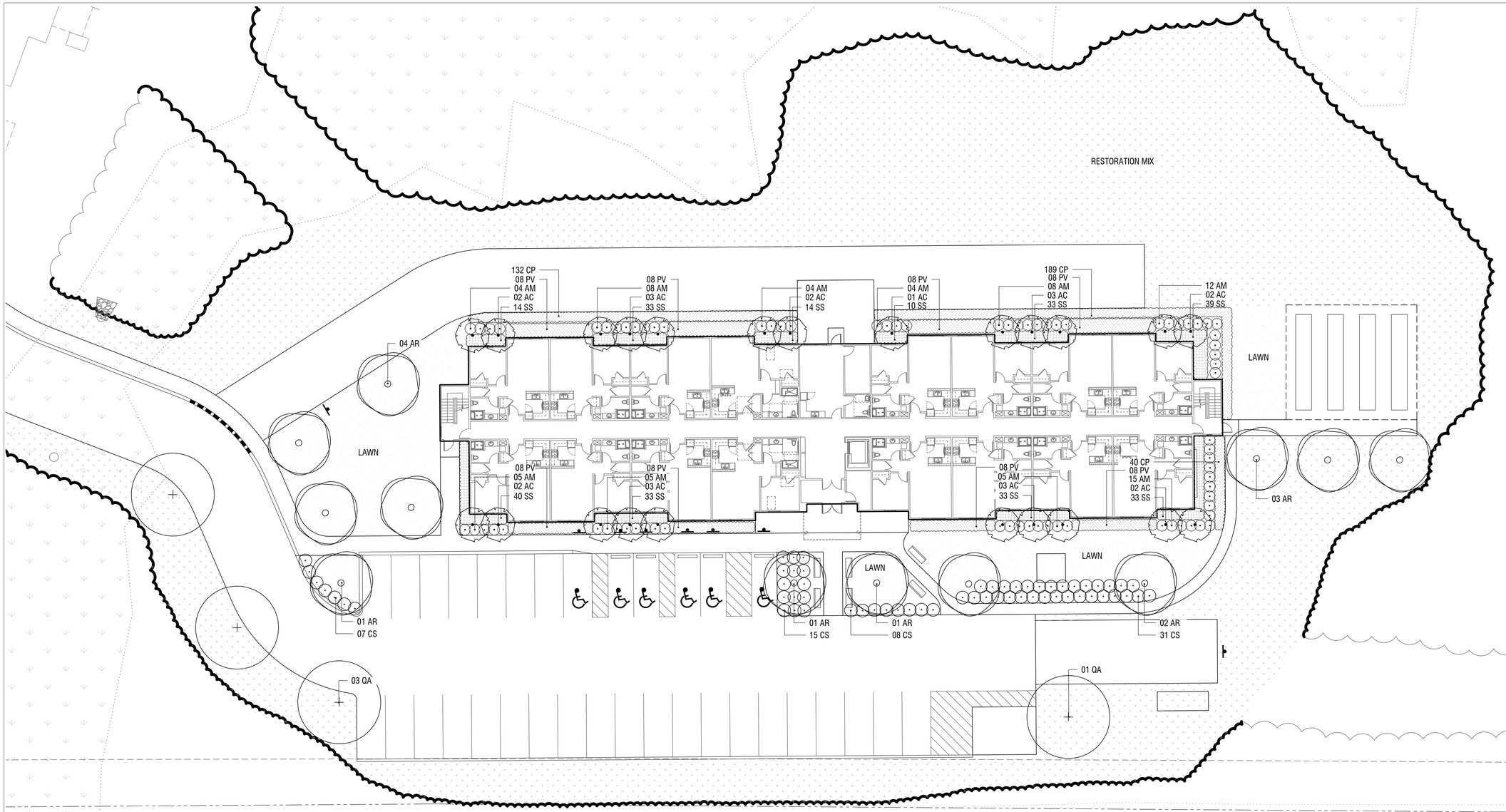
Drawing Name: EROSION & SEDIMENT CONTROL NARRATIVE

Project: LEDGEWOOD COURT EXPANSION - 32 UNITS
207 LEDGEWOOD COURT DRIVE, DAMARISCOTTA, MAINE

Client: DC PREDEVELOPMENT LLC / DC LEDGEWOOD LLC
631 STEVENS AVENUE, SUITE 203, PORTLAND, MAINE 04103 PH. 207.772.7673

Drawing No. C-5.7

U:\3996 – Ledgewood Court Expansion – Damariscotta 5–16–22\Z – CAD\DWG\3996–DETAILS.dwg 2/10/2023 9:38 AM



PLANT LIST

SYMB.		BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING
	TREES - DECIDUOUS					
	AC	AMELANCHIER CANADENSIS	SERVICEBERRY	23	2.5" CAL. MIN.	PER PLAN
	AR	ACER RUBRUM	RED MAPLE	12	2.5" CAL. MIN.	PER PLAN
	QA	QUERCUS ALBA	WHITE OAK	11	2.5" CAL. MIN.	PER PLAN
	SHRUBS					
⊙	AM	ARONIA MELANOCARPA 'LOW SCAPE MOUND'	CHOKEBERRY	70	#2	PER PLAN
⊙	CS	CORNUS SERICEA	RED-TWIG DOGWOOD	61	#5	PER PLAN
	PERENNIALS					
	CP	CAREX PENSYLVANICA	OAK SEDGE	361	#1	18" O.C.
	PV	PANICUM VIRGATUM 'SHENANDOAH'	SHENANDOAH SWITCH GRASS	64	#1	36" O.C.
	SS	SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM	282	#1	18" O.C.

SEEDING

RESTORATION MIX
NEW ENGLAND CONSERVATION/WILDLIFE MIX
MFR: NEW ENGLAND WETLAND PLANTS
TOTAL AREA: 29,940 SF
APPLICATION RATE 25LBS/ACRE | 1750 SQ FT/LB
(SEEDING RATE MAY VARY DEPENDING ON TIME OF YEAR, SEE SPEC. SHEET FOR INSTRUCTIONS)

LAWN
WILDFLOWER FARM'S ECO-LAWN GRASS SEED
TOTAL AREA: 5,674 SF
ECO-LAWN IS A DROUGHT-RESISTANT GRASS THAT REQUIRES MOWING ONLY ONCE PER MONTH. EACH 5 POUND BAG OF SEED COVERS 1,000 SQUARE FEET. A THICK, HEALTHY LAWN IS THE BEST DEFENCE AGAINST WEEDS, DISEASE, DROUGHT AND INSECT DAMAGE.

0 4 8 16

ACETO LANDSCAPE ARCHITECTS
207 221 3390 | ACETOLA.COM

SEAL

PROJECT TITLE

LEDGEWOOD

LEDGEWOOD COURT DR
DAMARISCOTTA, ME

PREPARED FOR

DEVELOPER'S COLLABORATIVE

631 STEVENS AVE
PORTLAND, ME 04103

207-772-7673

REVISIONS DATE

ISSUE DATE

FEBRUARY 3, 2023

SHEET TITLE

PLANTING PLAN

SHEET INFORMATION

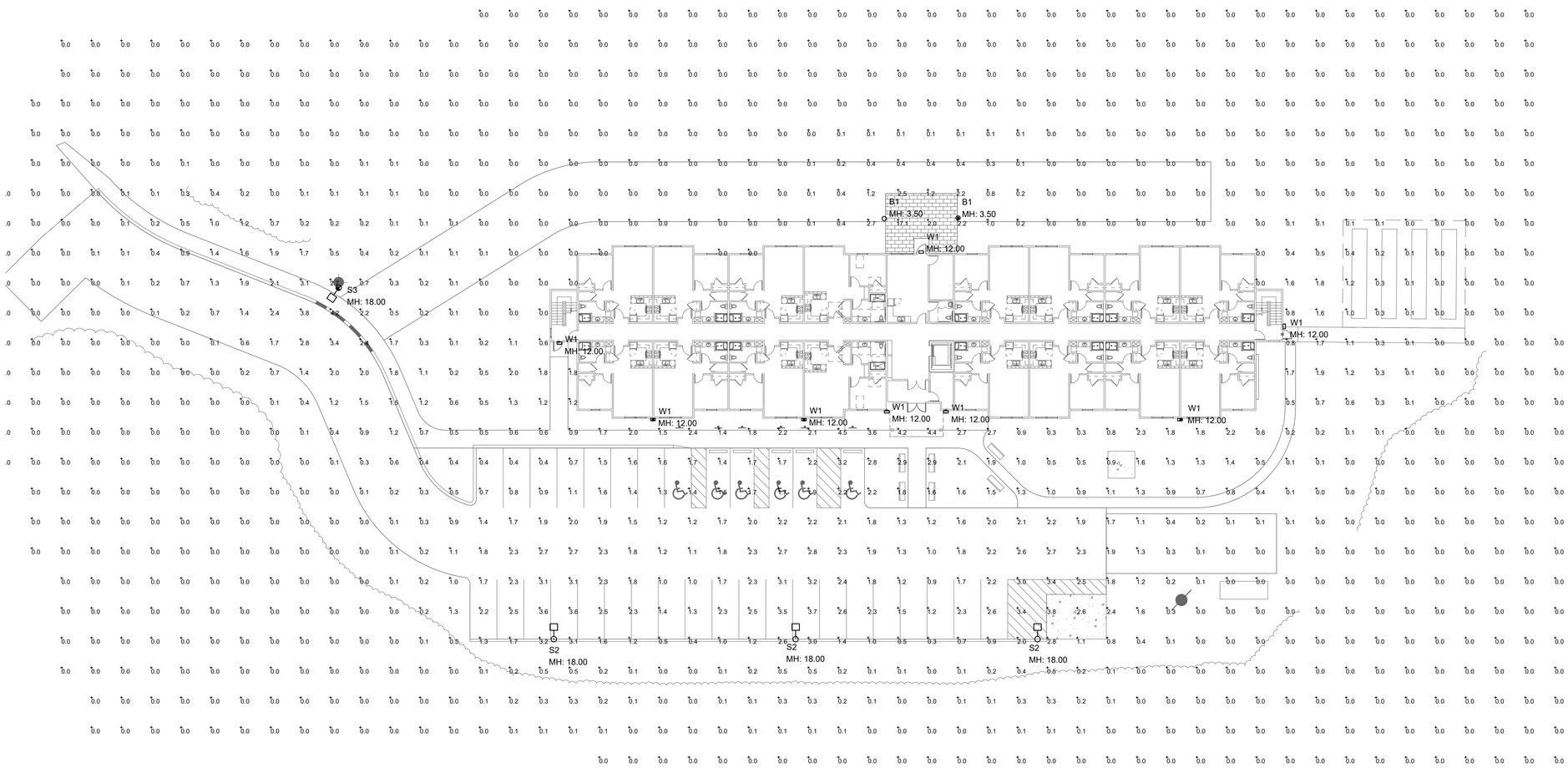
L 1-00

NOT FOR CONSTRUCTION

LIGHTING SCHEDULE

TYPE	DESCRIPTION	MANFACTURER	LAMPS	MOUNTING	NOTES
B1	42" BOLLARD LIGHT WITH FULL CUTOFF LED DARK BRONZE MATTE FINISH B-U-G RATING = 0-0-1 120V	KIM LIGHTING	22W LED 3000K 1128 LUMENS	42" BOLLARD	MODEL #: PAR7-FT-NU-3-12L-020-3K7-42-DBT
W1	FULL CUTOFF LED WALL PACK WITH DARK BRONZE MATTE FINISH B-U-G RATING = 1-0-1 120V	BEACON LIGHTING	25W LED 3000K 6416 LUMENS	WALL MOUNT 12' AFG	MODEL #: RDI1-24L-25-3K7-4W-UNV-DBT
S2	POLE MOUNTED LED LIGHT. TYPE 4F DISTRIBUTION. DARK BRONZE TEXTURED FINISH. B-U-G RATING = 1-0-2 120V	BEACON LIGHTING	84W LED 3000K 9026 LUMENS	18' SQUARE STEEL POLE	MODEL #: VP-ST-1-36L-85-3K7-4-UNV-DBT
S3	POLE MOUNTED LED LIGHT. TYPE 3 DISTRIBUTION. DARK BRONZE TEXTURED FINISH. B-U-G RATING = 1-0-2 120V	BEACON LIGHTING	84W LED 3000K 9214 LUMENS	18' SQUARE STEEL POLE	MODEL #: VP-ST-1-36L-85-3K7-3-UNV-DBT

2 LIGHTING SCHEDULE
SCALE: NOT TO SCALE



1 ELECTRICAL SITE LIGHTING PLAN
SCALE: 1" = 20'

WSA
Winton Scott Architects
5 milk street, portland, maine 04101
• 207.774.4811 • wintonscott.com

WINTON SCOTT ARCHITECTS, PA
5 Milk Street
Portland, ME 04101
774-4811
www.wintonscott.com

SWIFTCURRENT ENGINEERING SERVICES
Royal River Center, Unit 4B
10 Forest Falls Drive
Yarmouth, ME 04096
207.847.9280

STATE OF MAINE
TIMOTHY D. MATTHEWS
No. 9199
LICENSED PROFESSIONAL ENGINEER

Ledgewood Court Expansion

Damariscotta, Maine

Revisions #	Date	Description

Drawing Title: ELECTRICAL SITE LIGHTING PLAN | Scale: AS NOTED

ES1.0

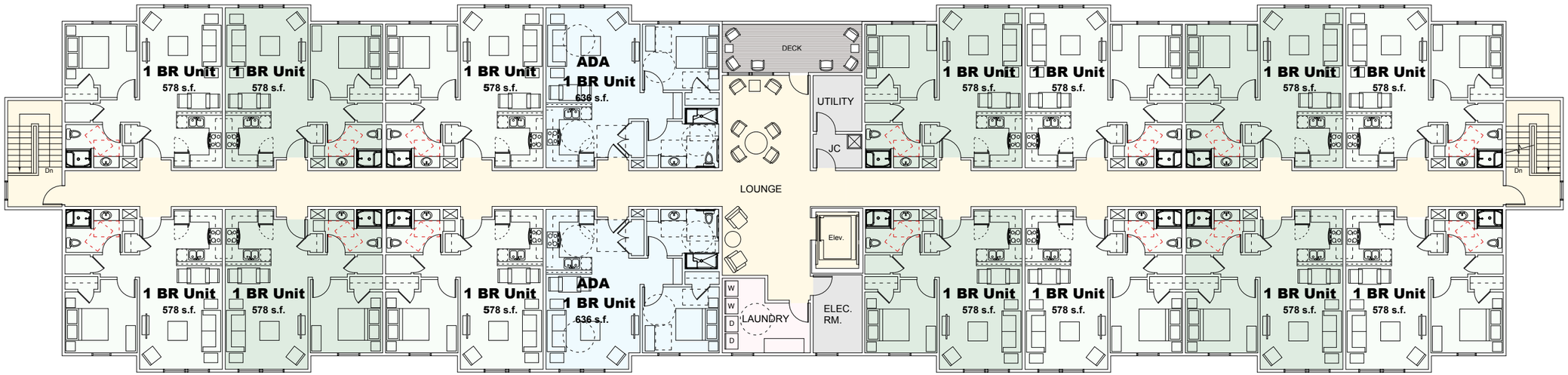
Date: 2.3.23
Phase: PROGRESS PRINT

SOUTH ELEVATION

NORTH ELEVATION

Winton Scott
Architects

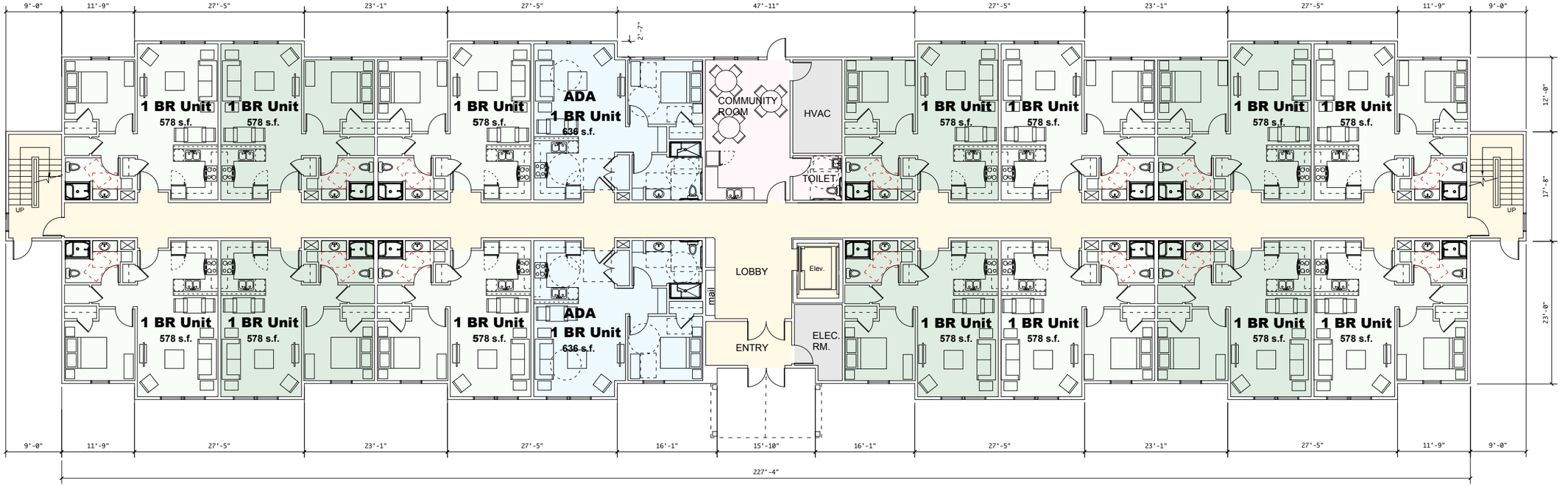
217 COMMERCIAL STREET, SUITE 200
PORTLAND, MAINE 04101
207.774.4811 | wintonscott.com



NORTH

SECOND FLOOR PLAN

16 UNITS | 12,677 GROSS S.F.



FIRST FLOOR PLAN

16 UNITS | 12,820 GROSS S.F.

Winton Scott Architects

217 COMMERCIAL STREET, SUITE 200
PORTLAND, MAINE 04101
207.774.4811 | wintonscott.com

GORRILL PALMER

300 Southborough Drive | Suite 200
South Portland, Maine 04106
207.772.2515

April 3, 2023

Mr. Michael Martone
Acting Town Planner
Town of Damariscotta Maine
21 School Street
Damariscotta, Maine 04543

Subject: Ledgewood Court Expansion
Piper Mill Road/207 Ledgewood Court Drive
Map 001 Lot 050-003
Applicant: Midcoast Maine Community Action/DC Ledgewood LLC

Dear Michael:

On behalf of **Midcoast Maine Community Action/DC Ledgewood LLC (applicant)** our office is providing the following information in response to the planner's questions emailed on April 1, 2023. For ease of review, we offer each comment followed by our supporting response/evidence.

Comment #1 - Can you confirm that with this application, you are not seeking subdivision approval and the site is not being subdivided?

Response: The proposed activity will not involve the division of land to create 3 or more lots. As the activity includes greater than 3 dwelling units within a single building and since the activity will be going thru municipal site plan review, the activity qualifies as "Exempt" under Title 30-A, §4402 for subdivisions (which reads as follows:)

> **6. Division of new or existing structures.** Beginning July 1, 2018, a division of a new or existing structure into 3 or more dwelling units whether the division is accomplished by sale, lease, development or otherwise in a municipality where the project is subject to municipal site plan review.
>
> A. For the purposes of this subsection, "municipal site plan review" means review under a municipal ordinance that sets forth a process for determining whether a development meets certain specified criteria, which must include criteria regarding stormwater management, sewage disposal, water supply and vehicular access and which may include criteria regarding other environmental effects, layout, scale, appearance and safety. [PL 2019, c. 174, §2 (NEW).]
>
> B. The municipal reviewing authority in each municipality shall determine whether a municipal site plan review ordinance adopted by the municipality meets the requirements of paragraph A.

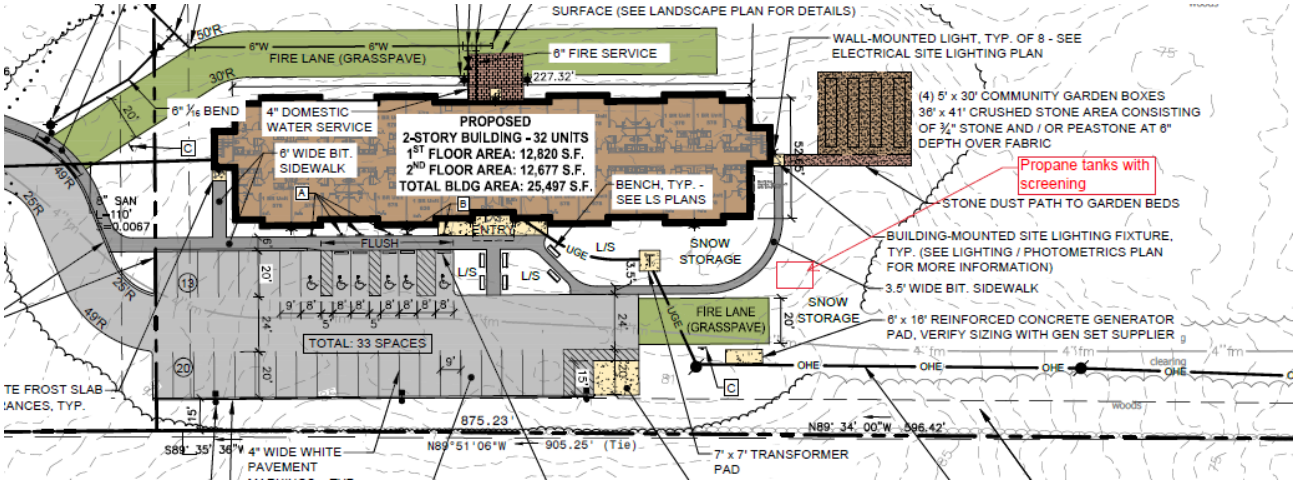
Therefore, we do not believe that it qualifies for Subdivision review. We note that the 10.51-acre lot will be divided into two parcels as shown on Drawing C-3.1 Lot Line Adjustment Plan. The action does not qualify for Subdivision review to the best of our understanding.

Comment #2 - I am not seeing any indication that the Beacon Viper Area/Stie light fixture has shielding to provide a beam cut-off at no more than 75 degrees nadir. Maybe you can point it out to me? It does state 0 uplight at 0° tilt, but my understanding would put that at 90° of nadir—so more that 75°.

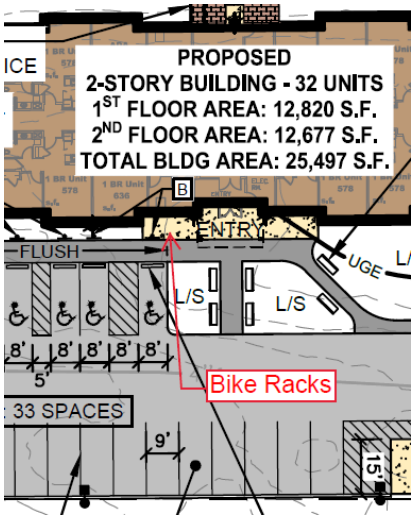
Response: We have reviewed this comment with the electrical/lighting designer and the lighting supplier from Swaney Lighting and we request an opportunity to discuss the lighting standards with you this week so we might review some questions they have regarding the lighting standards under Chapter 102.6.D

Comment #3 - Does the application address how the building will be heated? What kind of fuel it may use and how /where it will be stored?

Response: The design team is currently considering various options including the potential for propane as the primary fuel for heating. If propane is used the intent is to place one or more above ground tanks with fencing and screening around the tank farm. The tanks will be positioned for ease of service/filling and also for screening from tenants to the extent practicable. The location below is being considered.



Comment #4 - Where is the proposed bike rack located?



Response: The site plan inadvertently did not have the bike racks shown. We propose for at least two bike racks to be provided near the front building entrance. The owner reserves the right for the style selection.

Comment #5 - Is any blasting expected? For foundations or anything like that?

Response: No blasting is currently contemplated at this time. Any rock encountered may be removed by hammering.

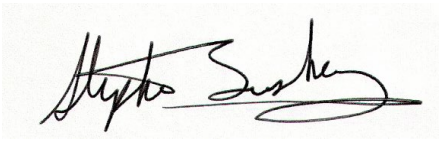
Comment #6 - Can you also provide the following specifics for me?
1) The distance from the building to the rear and side property lines.
2) The total frontage length along Piper Mill Rd.

Response: The proposed building is setback on the east side 350' from Piper Mill Road. It will be setback 25' from the side line (new lot line shared with the original Ledgewood Court) and it will be setback 89 feet from the rear lot line. The building is setback 334 feet from the

Piper Mill Road frontage. The total street frontage is 1,415.14 feet.

We trust this information satisfies your needs and we look forward to appearing before the Planning Board next week.

Sincerely,
GORRILL PALMER



Steve Bushey, PE
Sr. Project Manager – Associate
Phone: 207-772-2515 x286
sbushey@gorrillpalmer.com
Enclosure:

cc: Meg Robinson – DC Ledgewood LLC
Steve Weatherhead – Winton Scott Architects

U:\3996 - Ledgewood Court Expansion - Damariscotta 5-16-22\P Applications\Local\Site Plan\LOR #1 2023.04.03

The Great Salt Bay
Sanitary District
Water and Wastewater

PO Box 23 • Damariscotta • ME 04543

Water Division (207) 563-3010
Wastewater Division (207) 563-5105
www.gsbsd.org

March 3, 2023

Dear Brad,

Thank you for contacting me in regards to the proposed residential development at 207 Ledgewood Court Drive.

The Water supply for the district is Little Pond in Damariscotta which is well protected, is approximately 78 acres in size and has a safe yield of over 600,000 gpd (Gallons Per Day). At this time, we pump on average about 185,000 gpd so there is no problem with water supply for the project.

The Waterline is fairly new in your area and is constructed of 8 and 6-inch ductile iron which would be more than adequate for your needs. It would be your choice to continue with Ductile Iron Pipe or HDPE pipe. The district has transitioned to HDPE pipe in most cases. If HDPE is used, we require DR11 IPS size pipe. I was pleased to see the location of the fire hydrant as this could be used to flush the line properly in the spring and fall. When the construction phase begins, I would like to talk about possibly adding a tee and a valve where the waterline turns into the woods. This would be for a future fire hydrant further down the road. This would not be an increased cost as we would pay for this change.

The only thing that the District would need would be an application for service and a tapping fee for hooking into the water. This price can vary according to the size tap needed and cost of materials and labor at that time.

If you have any questions, please do not hesitate to contact me.

Sincerely,

Scott Abbotoni

Water Division Manager
Great Salt Bay Sanitary District

The following is a review of the application submitted by DC Ledgewood, LLC for a proposed 36-unit, affordable, age-restricted, residential, apartment building in the Rural zoning district of Damariscotta. As of 04/05/2023, the Site Plan Review application has not been deemed complete by the Planning Board, but this project has been before the Board as part of the Pre-Application process defined under §102.5 of the Town's Site Plan Review Ordinance.

PROJECT OVERVIEW

Applicant
DC Ledgewood LLC

Property Owner
Midcoast Maine Community Action

Project Location
Tax Map 001, Lot 050-003 (207 Ledgewood Court Dr)
The project would be an expansion of the existing 24-unit Ledgewood Court apartment complex, located on the same parcel of land. Map 001, Lot 050-003 is approximately 10.54 acres, with about two acres occupied by the current development.

Proposed Development
A two-story, 25,497 sq. ft., 36-unit, affordable, age-restricted, residential, apartment building. The building footprint and both floors will be approximately 12,800 sq. ft. each.

Applicable Zoning District
According to the Zoning Map for the Town of Damariscotta and Appendix A of Chapter 101, Land Use Ordinance, the entirety of Tax Map 001, Lot 050-003 (207 Ledgewood Court Drive) falls within the Town's Rural zoning district.

Applicability of Shoreland Zoning
According to the Shoreland Zoning Map for the Town of Damariscotta the entirety of Tax Map 001, Lot 050-003 (207 Ledgewood Court Drive) falls outside of any Shoreland zoning district.

Ch. 101, LAND USE ORDINANCE

Permitted Land Uses

Per §101.5.D.1, a Multifamily Dwelling project is allowed as a conditional use in the Rural zoning district.

Note: Multi-family Dwellings are defined under §101.4 as "Three or more dwelling units in single or multiple buildings on a single lot."

Conditional Use Standards

The conditions for approval of conditional uses, as defined by §101.9.C.2., are:

1) That the use requested meets the requirements of this Ordinance as set forth in Articles 1 through 8 and the requirements for the Damariscotta Site Review Ordinance.
2) That the use requested will not have an adverse effect on the health, safety, or general welfare of the residents of the area or the general public. In making this

determination, the Planning Board shall take into consideration the potential effect of the use on the environment from air, water, or soil pollution, noise, traffic, congestion, soil erosion, the burden on the sewage disposal, or water supply systems or other municipal facilities, services, or public ways, and any other relevant factors as set forth in Articles 1 through 8.

3) The Planning Board may attach such conditions as necessary to ensure that the above requirements are met.

Dimensional Standards

Per §101.5.D.2, a development with 36 units, utilizing the local sewer system will require 220,000 sq. ft. or 5.05 acres of land area. 220,000 sq. ft. = (1 unit * 10,000 sq. ft.) + (35 units *6,000 sq. ft.).

*Note: The existing 24 units on the same parcel–which utilize the local sewer system–require 148,000 sq. ft. or 3.40 acres of land area. 148,000 sq. ft. = (1 unit * 10,000 sq. ft.) + (23 units *6,000 sq. ft.). The combined land area required to accommodate both developments is 368,000 sq. ft. or 8.45 acres–less than the available 10.54 acre parcel's total area.*

The required minimum setbacks in the Rural district are–

Front setback: 20 ft Side setbacks: 15 ft Rear setback: 15 ft

The proposed minimum setbacks for this project are–

Front setback: 334 ft Side setbacks: 25 ft / 350 ft Rear setback: 89 ft

Note: Setback is defined under §101.4 as "The minimum horizontal distance from a lot line to the nearest part of a building."

The required minimum street frontage for parcels utilizing the local sewer system in the Rural district is 200 ft. Map 001, Lot 050-003 has 1,415 ft of frontage along Piper Mill Rd.

The maximum allowed building height in the Rural district is 35 ft. The proposed building's height is 34 ft. and 4 in.

Ch. 102, SITE PLAN REVIEW ORDINANCE

Landscape

Per 102.6.A. "The landscape should be preserved in its natural State insofar as practical by minimizing tree removal, disturbance of soil and by retaining existing vegetation during construction."

In addition, "All bufferyards shall be preserved in their natural States, insofar as practical and appropriate…" However, landscaping, fencing, landscape lighting, essential utilities, signage, points of egress and ingress, and sidewalks, trails, and passive stormwater infiltration areas. Stormwater retention or detention structures are specifically prohibited in a bufferyard.

Note: BUFFER (or BUFFERYARD): A buffer or bufferyard is a unit of land together with existing or planted vegetation, fencing, wall or berm located at the perimeter of a property and encompasses the width of the required setback as designated in the Town ordinance. Butters are used to separate land uses from each other in order to eliminate or reduce potential nuisances or adverse impacts from dirt, litter, noise, glare, unsightly structures or uses of adjacent property, effectively providing greater privacy to neighboring land uses. Vegetated butters also capture, diffuse and reduce stormwaterrun-off from adjacent impervious surface.

Neighboring Buildings

Per §102.6.B.2.b., for parcels, “greater than 3 acres a 30 foot minimum buffer strip with undisturbed natural vegetation from the property line to any parking paved areas will be maintained.”

Potential conflict with ordinance:

The application proposes a paved parking area that falls within 30 ft. of the rear property line.

Lighting

Per §102.6.D.4.a., lighting intensity shall not exceed 1.0 foot-candles throughout a parking lot.

Potential conflict with ordinance:

The application proposes lighting that is expected to be up to 3.8 foot-candles in the parking area.

Per §102.6.D.4.f., all lights shall have shielding to provide a beam cut-off at no more than 75 degrees from nadir.

Potential conflict with ordinance:

Unless full four-sided shielding is used on the parking lot lights, they may not meet this standard as the lighting spec sheet indicated 90º cut off from Nader, not 75º.

Per §102.6.D.4.f., the source of any light (illumination; e.g. the bulb) shall not be visible from any place on any abutting lot.

Potential conflict with ordinance:

This will require shielding similar to above, but some geometry will be needed to confirm if the light source will be visible off-sight.

Per §102.6.D.7., non-parking lot pathways, sidewalks and trails may be lighted with low mushroom-type standards or bollard type lights 3 feet or less in height.

Potential conflict with ordinance:

Proposed bollards are 42 in. or 3.5 ft.

Parking

Per 102.6.H.6.b., “Each 40 space (or traction thereof)parking area shall be landscaped to accommodate both parking and stormwater management needs by incorporating vegetated islands/swales and/or tree box filters as landscaped islands designed to retain stormwater. (see Storm Water Management Section L.) Each o f these parking areas shall be landscaped with curbed medians with a minimum curb to curb width often (10)feet. Curbed landscaped islands shall be sited at the end of each parking aisle and within parking aisles at intervals greater than one island per every twenty (20) spaces. Islands at the ends of aisles shall be counted toward meeting this requirement. Each required landscaped island shall be a minimum of three hundred sixty (360)square feet in landscaped area.”

Waiver requested by Applicant:

"A waiver is requested from 102.6 (H)(6)(b) requiring landscaped islands be placed within the parking aisles at a rate no greater than one island per every twenty spaces. This waiver is requested as the parking area is small (only 33 spaces) and is divided into two parking bays off a single access drive. Given the presence of the patio by the entry way and the adjacent ADA spaces, the northern parking aisle contains fewer spaces than the southern parking aisle. The proposed distribution is 21 spaces in the southern aisle and 12 spaces in the northern. It seems unreasonable to require the applicant to provide a landscaped island within the 21-space aisle just because it is one space longer than the ordinance requirement – especially considering the applicant could narrow the front patio and squeeze another space in the northern aisle and meet the ordinance requirement. Providing an island would spread the parking area out further and require more grading work be done to level the lot. It is our opinion that the intended goal of the ordinance provisions is still accomplished as the parking area and patio will be landscaped and the residents will benefit more from a larger patio space than a single landscaped island in the parking lot."

Per 102.6.H.6.e., the minimum required dimensions for 90° parking stalls are:

Minimum of 9' Stall Width required.	9' Stall Width proposed.
Minimum of 18'-5" Stall Depth required.	20' Stall Depth proposed.
Minimum of 24'-0" Aisle Width required.	24' Aisle Width proposed.

Per 102.6.H.6.h., bumpers/wheel stops are required where parked cars might overhang adjacent walkways.

Potential conflict with ordinance:

Bumpers are not provided in all spaces facing the sidewalk along the side of the building.

Per 102.6.H.6.i.1, the number of off-street parking spaces required for Senior Citizen Multi-family uses is one parking space per dwelling unit.

This project proposes 33 parking spaces or 1.03 parking spaces per dwelling unit.

Natural Beauty

In accordance with §102.6.O.3., would the Board like to request that the landscape plan address the preservation of any existing large trees or the replacement of trees or vegetation?

102.7 LARGE-SCALE DEVELOPMENT

Building Appearance

Per 102.7.A.2.a., "A minimum of fifty (50) percent of the structure's facades, 50 feet or longer in length and that are directly facing (i.e. parallel to) a public street, shall employ architectural features such as, but not limited to, actual protrusions or recesses with a depth of at least six (6) feet. No uninterrupted façade shall extend more than forty-nine (49) feet."

Waiver requested by Applicant:

"A waiver is requested from 102.7 (A)(2)(a) requiring the protrusions and recesses in the building façade to be at least 6 feet in depth. This waiver is requested as the building is not directly facing or paralleling a public street. The Ledgewood Court Drive extension which will serve the site is to be a private drive, and the proposed building will not be visible from Piper Mill Road. All other standards in this section – including the intervals for protrusions and recesses and the multi-tone color scheme

– have been met. Further, the building design does provide for architectural features that will break up the appearance of the long facades, which appears consistent with the overall code objective."

Pedestrian Facilities

Per 102.7.D.1., "Sidewalks internal to the development shall be provided and shall be no less than eight (8) feet in width and raised at least 6 inches above the vehicle travelway. Also, they shall be provided from the public sidewalk or right-ot-way to the principal customer entrance(s) of all larger commercial buildings on the site. At a minimum, walkways shall connect focal points of pedestrian activity such as, but not limited to, transit stops, street crossings, building and store entry points and shall feature adjoining landscaped areas that includes trees, shrubs, benches, flower beds, ground covers and other such materials for no less than fifty (50) percent of the length of the walkway."

Waiver requested by Applicant:

"A waiver is requested from 102.7 (D)(1) requiring sidewalks internal to the development be no less than 8 feet wide. This waiver is requested as the sidewalks on site are to be private and will be used only by residents of the complex. Given the proposed building only contains 32 affordable senior housing units, an 8-foot-wide sidewalk seems to be excessive for the amount of use anticipated. On top of this, no public sidewalks exist on Piper Mill Road or along School Street in the area of Piper Mill Road. The 6-foot wide sidewalks proposed are anticipated to be sufficiently wide for the anticipated amount of usage. This width also satisfies an objective of minimizing onsite impervious area."

Per 102.7.D.2., "Sidewalks at least five (5) feet in width shall be provided along all sides of the lot that abuts a public street."

Waiver requested by Applicant:

"A waiver is requested from 102.7 (D)(2) requiring sidewalks at least 5-feet wide be constructed along all sides of a lot abutting a public street. This waiver is requested as no public sidewalks currently exist on Piper Mill Road, and no facilities exist on Piper Mill Road that would expect foot-traffic. The subject parcel has approximately 1300 feet of frontage along Piper Mill Road, and constructing that much sidewalk starting from an intersection with no sidewalks, ending at a dead-end with a sewage treatment plant is considered an extraordinary requirement of the applicant."

Landscaping

Per 102.7.E, the following should be made a condition of approval:

"The applicant shall replace within thirty (30) days, or as seasonally required by the species, any landscaping that dies, is removed or otherwise requires replacement. Such replacement landscaping shall be equivalent in species and size to the original landscaping unless the applicant can demonstrate to the satisfaction of the Planning Board that the site conditions require an alternative species of comparable size. Landscaping as depicted on the site plan is considered an integral component of the approved development. Should any portion of the landscaping that dies, is removed or otherwise requires replacement, is not replaced within thirty (30) days, or as seasonally required by the species, it shall be considered a violation of the approval granted by the Board pursuant to § 102.5.H and shall be subject to the enforcement provisions of§ 102.14."

Screening

Per 102.7.F.2., all trash collection areas must be at least 50 feet from any lot line.

Potential conflict with ordinance:

Proposed trash collection area appears to be 15 feet from the rear lot line.

DAMARISCOTTA PLANNING BOARD
FINDINGS OF FACT AND NOTICE OF DECISION

Date: March 6, 2023

Site Plan and Conditional Use – Du Jardin

2 Hodgdon Street – Susan Chalmers

PID #2209

The Town of Damariscotta Planning Board issues the following Findings of Fact and Conclusions of Law at its duly-noticed meeting of **March 6, 2023**:

A. The Planning Board considered the Project, the staff report, and received and considered all written and oral public comments on the Project which were submitted up to and at the time of the meeting for the Project; and

B. Legal advertisements regarding this application were mailed on February 13, 2023 to 8 property owners abutting the subject property and were posted at the Town Office; and

C. The project description is as follows:

Applicant Susan Chalmers is requesting Site Plan and Conditional Use review in order to upgrade her existing Home Occupation to an Arts and Crafts Studio, a Conditional Use in the General Residential (GR) zone. The applicant has indicated that no building or site work is proposed as part of this request. The parcel is further identified as Assessor's Tax Map 6, Lot 55; and

D. The Project is subject to the following policies and standards of review:

a. Chapter 101, Sec. 101.9(C)(2): Standards [Conditional Uses], and Chapter 102, Sec. 102.6: Performance Standards [Site Plan Review].

E. The core Project Data includes:

Zoning:	General Residential (GR)	
Land Area:	0.42 acres	
Existing Land Use:	Single-family home + home occupation	
Proposed Land Use:	Single-family home + arts and crafts studio	
	Allowed:	**Proposed:**
Max. Building Height:	35 feet	No change
Min. Front Yard:	20 feet	No change
Min. Side Yard:	15 feet	No change
Min. Rear Yard:	15 feet	No change
Min. Off-Street Parking*:	6.5 spaces / 1,000 s.f. of floor area (or 4 spaces required)	6 parking spaces (existing)

*Pursuant to Sec. 102.6(H)(7)(i).

F. Based on its review of the entire record herein, the Planning Board has determined that the Project meets the applicable policies and standards of review, and the Planning Board makes the following findings:

Determination of Proposed Use:

1. Sec. 101.4 Definition of Art and Crafts Studio

Because Art and Crafts Studios are identified as a conditional land use under Sec. 101.5 (D)(1) Schedule of Land Uses, but no definition of the term is provided in Sec. 101.4 Definitions, the Planning Board used the following definition to determine that the proposed use does fit the definition of Art and Crafts Studio:

> *ART AND CRAFT STUDIO: The workshop of an artist, sculptor, photographer, craftsperson, furniture maker, glass blower, potter or cabinet maker primarily used for on-site production of unique custom goods by hand manufacturing involving the use of hand tools and small-scale equipment, which may include an accessory gallery.*

Standards for Conditional Uses:

2. Sec. 101.9(C)(2)(a)(i): Certain Requirements Met

The use requested meets the requirements of the Land Use Ordinance as outlined in the project data table above, as well as the requirements of the Damariscotta Site Plan Review Ordinance as outlined in the analyses below.

3. Sec. 101.9(C)(2)(a)(ii): Effect Not Adverse

The use will not have an adverse impact on the health, safety or general welfare of the residents of the area or on the general public, consistent with the standards for Site Plan Review as outlined below.

4. Sec. 101.9(C)(2)(a)(iii): Conditions

The approved conditions of approval are as outlined below.

Standards for Site Plan Review:

5. Sec. 102.6(A): Preserve and Enhance the Landscape
Given that no construction, removal of landscape, or disturbance of soil is proposed with this application, the Planning Board finds this standard to be not applicable.

6. Sec. 102.6(B): Relationship to Environment and Neighboring Buildings
Given that no construction or expansion of the existing parking area is proposed with this application, the Planning Board finds these standards to be not applicable.

7. Sec. 102.6(C): Air Quality
The applicant is proposing an expansion to her existing business, which focuses on the creation and sale of small-batch soaps and herbal beauty products. The emission of dust, fly ash, fumes, vapors or smoke which could damage human or animal health, vegetation or property are not anticipated as a result of this use.

8. **Sec. 102.6(D): Lighting and Glare**
   Changes to existing site lighting are not proposed with this application nor required by this section. Therefore, the Planning Board finds this standard to be not applicable.

9. **Sec. 102.6(E): Noise**
   All noise is required to adhere to the provisions of this section, including staying below the sound level limitations as described. For a project abutting a residential use, as this does, the sound level limits are 55 dBA between the hours of 7 a.m. and 7 p.m., and 45 dBA between the hours of 7 p.m. to 7 a.m. Condition #3 reaffirms this requirement.

10. **Sec. 102.6(F), (G), (H), and (I): Traffic, Circulation, and Access**
    Trips

    The applicant is currently Du Jardin's only employee. However, she has indicated that she plans to hire three additional employees within the next year. Products crafted are offered for sale through three main channels: limited store hours at the barn located on the subject property, online retail website, and at local farmers and makers markets (off-site).

    The store hours at the barn are Wednesdays and Thursdays from 11 a.m. to 4 p.m., and Saturdays from 11 a.m. to 1 p.m. The applicant has indicated that these are not anticipated to change this year.

    Given the limited open hours for in-person shopping, and the limited number of additional trips that could be generated by three total employees (approximately 6 trips per day), the proposed project is in compliance with the requirements of Section 102.6(G).

    Access

    Access to the site is via the existing driveway off of Hodgdon Street, a public street. The driveway is located near the intersection of Elm, Church, and Hodgdon Streets and a public sidewalk is available.

    Given the level traffic generation anticipated and the capacity and design of the roadways connected to the site, the project will not cause unreasonable public road congestion or unsafe conditions on private or public ways, consistent with the requirements of Section 102.6(F) and (G).

    Parking

    Site Plan Review Ordinance Section 102.6(H)(7)(i) requires that art galleries, museums, libraries and similar uses provide 6.5 parking spaces per 1,000 s.f. of floor area, therefore the project requires at least 4 spaces. The site currently has 6 parking spaces. As designed the parking supplied meets the requirements of Section 102.6(H).

11. Sec. 102.6(J): Existing Public Utilities and Services

The applicant will be required to pay impact fees to the Great Salt Bay Sanitary District to accommodate the expanded sewer demand, per conversation with the Wastewater Director. Condition #4 affirms this requirement. Therefore, the project as conditioned meets the requirements for adequate sewage waste disposal. Public water access is detailed in item 11 below.

Construction is not being proposed, so trash will come only from operations. There are no known capacity constraints regarding solid waste, therefore the project is consistent with this section.

12. Sec. 102.6(K): Water Quality

The proposed project will not adversely affect the quality or quantity of groundwater, consistent with Sec. 102.6(K), given the limited expansion of the business being proposed and given that the site is connected to public water.

13. Sec. 102.6(L): Stormwater Management

Given that no construction is proposed with this application, the Planning Board finds this standard to be not applicable.

14. Sec. 102.6(M): Erosion & Sediment Control

Given there no construction is proposed with this application, the Planning Board finds this standard to be not applicable.

15. Sec. 102.6(N): Water Supply

There are no known capacity issues with the public water supply, therefore, this standard has been met.

16. Sec. 102.6(O): Natural Beauty

No construction or clearing of trees is proposed with this application, therefore, this standard has been met.

Wetlands will not be impacted by the proposed development, given that no construction is proposed.

17. Sec. 102.6(P): Historic and Archeological Resources

No documented archeological or historic resources will be impacted by the proposed operation.

18. Sec. 102.6(Q): Filling and Excavation

As no construction (and thus, no excavation is proposed), this standard is not applicable to this project.

19. Sec. 102.6(R): Sewage Disposal

As discussed in item 10 above, the subject property is tied into the existing public sewer system. Therefore, this standard has been met.

20. Sec. 102.6(S): Phosphorus Control

The subject property is not located within the watershed of a great pond, therefore this standard is not applicable.

21. Sec. 102.6(T): Buffer Areas

This project is adjacent to Elder Care Network of Lincoln County to the east, and a residential property to the east. The barn where the operation takes place is setback from the front property line about 90 feet. As shown on the Google Earth imagery shown below, a landscape buffer exists between this use and neighboring uses.

22. Sec. 102.6(U): Signs

Signage is not proposed with this application. A small sign currently exists on the subject property. Any future signage will be regulated through the Code Enforcement Office in accordance with the Damariscotta Sign Ordinance, Chapter 107.

23. Sec. 102.6(V): Building Appearance

Changes to the building are not proposed with this application and thus, the Planning Board has determined this standard to be not applicable.

G. No waivers were granted as part of this project.

DECISION:

H. Based on its review of the entire record herein, including the March 6, 2023 Planning Board staff report; all supporting, referenced, and incorporated documents; and all comments received; the Site Plan and Conditional Use application of Susan Chalmers (dba Du Jardin), dated through January 31, 2023; for the project at 2 Hodgdon Street is hereby:

	YAE	NAE	Absent/Abstain
DENIED			
APPROVED WITH THE CONDITIONS BELOW	5	0	0

CONDITIONS

	Condition	Staff Assigned	Must be Completed By:
1.	This approval is dependent upon and limited to the proposals and plans contained in the application and supporting documents submitted and affirmed to by the applicant. Any variation from the plans, proposals and supporting documents are subject to the review and approval of the Planning Board prior to implementation.	Town Planner	Ongoing
2.	This Planning Board approval is valid for 12 months from the date of approval and shall expire if work has not substantially commenced within that time period.	Code Officer	Ongoing
3.	All noise associated with the proposed development shall be regulated in accordance with the provisions of Sec. 102.6. Applicants and their contractors are well-advised to familiarize themselves with that section of the Town's Ordinances.	Code Officer	Ongoing

	Condition	Staff Assigned	Must be Completed By:
4.	Applicant should be aware that payment of an impact fee to the Great Salt Bay Sanitary District will be required prior to operation.	Wastewater Director, GSBSD	Prior to Operation
5.	Neither the envelope of the building within which the business currently operates—the 'barn' to the northeast of the main house—nor the number of days per week the business is open for in-person retail sales—currently three (3) days—may increase or the entirety of this approval shall be null and void.	Code Officer	Ongoing

Signatures:

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