SITE PLAN REVIEW APPLICATION (SP-2022-05)

JAX LOT B ACCESS PROJECT

Woodard & Curran

0232695.03
The Jackson Laboratory
Bar Harbor, ME

woodardcurran.com

May 12, 2022

80 Exchange St. | Suite 400
Bangor, Maine 04401
www.woodardcurran.com

T 800.426.4262
F 207.945.5492

May 12, 2022

Michele Gagnon
Town of Bar Harbor
93 Cottage Street
Bar Harbor, ME 04609

Re: JAX Lot B Access Project
Site Plan Review Application #SP-2022-05

Dear Michele:

Please find enclosed the submittal package for review of the Lot B Access Project by The Jackson Laboratory (JAX). We respectfully request that you review the enclosed application and that it be considered for Completeness Review at the Planning Board's meeting on June 1st, 2022.

A payment in the amount of $2,282 for the Site Plan Review fee has been provided separately.

JAX has been working to improve the safety of employees around the Bar Harbor campus. In Fall 2020, JAX upgraded the Route 3 crosswalk from Parking Lot B to the JAX campus by working with the Town of Bar Harbor to install Rectangular Rapid Flashing Beacons (RRFBs), new pedestrian crossing signs, and dynamic speed feedback signs on the approaches to the crossing. In 2021, JAX augmented this pedestrian crossing safety with further safety measures including the separation of the walking path from driveway entrance in parking Lot B, the removal of a separate right-turn exit lane from Lot B, and the installation of additional lighting and traffic delineator posts.

JAX is now proposing to relocate the existing driveway access to their parking Lot B located on the west side of Main Street (Route 3) in Bar Harbor. This relocation will separate the pedestrian traffic access crossing Route 3 from the main vehicular traffic entering and leaving the parking lot improving pedestrian safety. The proposed access driveway is located approximately 250 feet north of the existing driveway. A new right turn lane on Route 3 with a raised landscaped island will be installed for southbound traffic access to the parking lot. The existing right turn lane and driveway pavement will be removed to provide additional landscaped area with sidewalk access between the parking lot and Route 3. A portion of this area will remain paved as a sidewalk to bring pedestrians from the parking area to the existing signaled Route 3 crossing. As part of the proposed Route 3 corridor safety improvements, a speed table with a raised midblock crosswalk will be installed across Route 3 in the same location as the existing crosswalk.

The proposed entrance drive is approximately 600' long, with a paved footprint area of 10,895 sf. The Project adds 0.43 ac of new impervious and eliminates 0.20 ac of pavement for a balance of 0.23 ac of impervious. The total developed area of the Project is 0.85 ac. An underdrain soil filter with peak storage capacity provides stormwater treatment for the new access drive. There will be no wetland impact from this Project.

Construction for this Project is scheduled to begin in October 2022 and is anticipated to take six months to complete.

We believe the data contained in this application provides all the information necessary for the Planning Board to find that the proposed Project meets the criteria for approval under the Town of Bar Harbor's Land Use Ordinance.

The proposed Project meets the General Review Standards, with reference to the section numbers of the Ordinance, for site plan approval as follows.

125-67 A. PERMITTED USES

The parcel is in Zone Z-Scientific Research. The proposed Project is an allowable accessory use in this zone (parking).

125-67 B. LOT STANDARDS

The proposed Project meets all lot standards for the Scientific Research zone, including the required lot setbacks.

As specified in the ordinance (125-67.B.2), front setback distances are measured from the center line of the traveled way in Scientific Research District.

The setbacks are illustrated for reference on Figure 9-1 in Exhibit 9 and the Project meets these except where it necessarily connects to the Route 3 roadway. Lot Coverage is discussed in Exhibit 9 as well; current coverage on this lot (west side of Route 3) is calculated at 11.0%. After construction, coverage will be 11.6%. The Project meets all lot standards.

125-67 C. HEIGHT

The proposed Project is not a building so there is no applicable height standard.

125-67 D. PARKING REQUIREMENTS

The Project will slightly reconfigure some parking spaces in Lot B with a net loss of three spaces overall. The Lab currently has 1,415 employees and, as shown on the parking counts table attached in Exhibit 12, there will be 974 spaces available for employee parking. Applying the ordinance standard of one space per every 1.5 employees, the available parking is sufficient for as many as 1,461 employees. Therefore, the Project meets the parking requirement.

125-67 E. PARKING AREAS AND DRIVEWAYS

The first 50' of the driveway off of Route 3 is graded to 4%, which meets the ordinance standard that the first 25' of a driveway does not exceed a 5% grade. As shown on the proposed driveway profile, the maximum grade is 8%, less than the maximum allowable of 15%.

The sight distance from the driveway exceeds the MDOT standard of 305' for a road posted at 35 mph. The actual sight distance is to the north exceeds 600 feet, and to the south is approximately 350 feet. Therefore, the proposed Lot B entrance provides satisfactory sight distance.

125-67 F. LOADING REQUIREMENTS

There is no need for loading areas at Lot B.

125-67 G. STREETS, SIDEWALKS, AND ACCESS

A new sidewalk will be constructed to provide access to the existing designated pedestrian crossing of Route 3 at the south end of Lot B. The purpose of the proposed Project is to increase safety for pedestrians crossing Route 3 by separate vehicular and pedestrian movements in and out of Lot B.

125-67 H. BUFFERING AND SCREENING

The small amount of new pavement proposed to allow for reconfiguration of the parking spaces at the south end of Lot B is outside of the 100' setback from Route 3 (measured from the centerline) so no buffering or screening is required. The area where pavement is removed to build the sidewalk will be loamed and seeded.

125-67 I. WATER SUPPLY

The proposed Project will not connect to the Town's water supply.

125-67 J. MUNICIPAL WATER SUPPLY

There is no water supply connection proposed.

125-67 K. GROUNDWATER

There will be no groundwater use and no impact to the quality of groundwater in the vicinity of the proposed Project.

125-67 L. STORMWATER MANAGEMENT

Stormwater management for the proposed Project has been incorporated into the design and will be reviewed by Maine DEP for compliance with the state standards in Chapter 500 and the Maine Stormwater Best Management Practices (BMPs).

The Project will utilize an underdrained soil filter, a standard Maine DEP BMP, to manage stormwater quality and quantity for the proposed Project. Erosion and sedimentation will be adequately controlled.

125-67 M. MUNICIPAL SEWER FACILITIES

The proposed Project will not connect to the Town's sewer system.

125-67 N. SEWAGE DISPOSAL

There will be no sewer flow from the proposed Project.

125-67 O. SOILS

The proposed Project will not impact any area where the soil is rated severe or very severe by the County Soil Survey of the USDA Soil Conservation Service. A soil survey map is provided in Exhibit 10.

125-67 P. LANDSCAPING

No landscaping is required for this Project site. Beyond site restoration, any landscaping that is ultimately provided will be consistent with the planting aesthetics for the rest of the campus.

125-67 Q. EROSION

Adequate erosion and sedimentation control will be provided. The measures to be utilized are discussed in Exhibit 17.

125-67 R. FLOOD PERMIT

The proposed Project is not in the flood zone, and no flood permitting is required.

125-67 S. AIR QUALITY

The proposed Project will not impact air quality, and no permit is required. There will be no emissions of dust, smoke, ash, odors, gases, chemicals, or other particulate matter from the proposed Project.

125-67 T. REFUSE DISPOSAL

The proposed Project is a driveway and will not generate solid waste.

125-67 U. DANGEROUS OR HAZARDOUS MATERIALS AND WASTES

The proposed Project will not generate any hazardous waste.

125-67 V. VIBRATION

The proposed Project will not generate excessive vibration.

125-67 W. WILDLIFE HABITAT

Inland Fish & Wildlife staff were asked to review the JAX properties again in early 2020 because it had been several years since their last file review. The correspondence is included in Exhibit 9; they have no records of species of concern on the Project site or JAX properties in general. None of the habitats or species are present on the site of the proposed Project.

There are no wetlands on the proposed Project site.

125-67 X. AESTHETIC AREAS AND PHYSICAL AND VISUAL ACCESS

No aesthetic, cultural, or natural areas will be affected by the proposed Project. There will not be any change to physical or visual access to shorelines.

125-67 Y. HEAT

The proposed Project will not generate excessive heat.

125-67 Z. LIGHT AND GLARE

The proposed Project will not create excessive light or glare. New pole mounted fixtures will be installed as shown on the Lighting Plan. These fixtures are full cut-off, with a color temperature of 3000k. The manufacturers' cut sheets for the proposed fixtures are included in Exhibit 21.

125-67 AA. NOISE

The proposed Project will not generate excessive noise.

125-67 BB. SIGNS AND ADVERTISING

No new signs are proposed for this Project.

125-67 CC. OUTDOOR STORAGE AND DISPLAYS

No outdoor storage or displays are part of the proposed Project.

125-67 DD. UTILITIES

The only utility connection for the proposed Project is power for the site lighting.

125-67 EE. FIRE PROTECTION

Access to the site meets the requirements for the fire department. There is no water supply at Lot B.

125-67 FF. COMPREHENSIVE PLAN

A memo from the Bar Harbor Planning Department stating that the proposed Project is in conformance with the Town's Land Use ordinances will be provided by staff.

125-67 GG. FINANCIAL AND TECHNICAL CAPACITY

Documentation has been provided to demonstrate that JAX has the financial capacity to complete, operate, and maintain the proposed Project. Information verifying this capacity is included in Exhibit 24.

125-67 HH. FARMLAND

There is no registered farmland property within 150 feet of the proposed Project.

125-67 II. OTHER MUNICIPAL SERVICES

The proposed Project will not have a negative impact on Bar Harbor municipal services. This is discussed further in Exhibit 6.

125-67 JJ. VIOLATIONS

The Applicant is not in violation of the Bar Harbor Land Use Ordinance nor is it in arrears in payment of any local taxes or assessments. Further information is included in Exhibit 2.

125-67 KK. LEGAL DOCUMENTS

The Lab holds the deed to the property upon which the proposed Project is to be constructed. A discussion of this is included in Exhibit 3. No other easements or real estate is needed for the proposed Project.

125-67 LL. HISTORIC AND ARCHAEOLOGICAL RESOURCES

The proposed Project site has not been identified by the Maine Historic Preservation Commission or the Bar Harbor Comprehensive Plan as containing historic or archaeological resources.

125-67 MM. UTILIZATION OF THE SITE

The proposed Project does not impact environmentally sensitive areas.

125-67 NN. NATURAL FEATURES

Maine Natural Areas Program staff were asked in early 2020 to review the JAX properties again because it had been several years since their last file review. The correspondence is included in Exhibit 9. They have no records of species of concern on the Project site.

We believe this application provides all the information necessary for Completeness Review. Please let us know if you have any questions or require any additional information.

Thank you for your assistance with this Project.

Sincerely,

WOODARD & CURRAN, INC.

Sarah Nicholson, P.E.
Technical Manager

Enclosure

cc: John Scheckel, The Jackson Laboratory
Kelly Doran, The Jackson Laboratory

PN: 0232695.03

TABLE OF CONTENTS

SECTION		PAGE NO.
Exhibit 1	125-66.A Form	1
Exhibit 2	125-66.B Fees, Taxes, Compliance with Previously Approved Plans	4
Exhibit 3	125-66.C Title and Interest	5
Exhibit 4	125-66.D Legal Documents	6
Exhibit 5	125-66.E Permits	8
Exhibit 6	125-66.F Approval of Capacity and Design	9
Exhibit 7	125-66.G, H, I Design Approval	11
Exhibit 8	125-66.J.(2) Location Map	13
Exhibit 9	125-66.J Maps, Plats, or Plans	15
Exhibit 10	125-66.J.(15) Medium Density Soils Survey	22
Exhibit 11	125-66.J.(22) Buffering and Screening	25
Exhibit 12	125-66.J.(44) Streets, Sidewalks and Access	26
Exhibit 13	125-66.K Assessor's Certification of Street Names	27
Exhibit 14	125-66.L Photographs	28
Exhibit 15	125-66.M Subsurface Wastewater Disposal	36
Exhibit 16	125-66.N Groundwater	37
Exhibit 17	125-66.O Erosion and Sedimentation	38
Exhibit 18	125-66.P Fire Protection	39
Exhibit 19	125-66.Q Solid Waste and Hazardous Waste or Material	40
Exhibit 20	125-66.R Building Plans, Elevations, and Interior Use	41
Exhibit 21	125-66.S Lighting	42
Exhibit 22	125-66.T Signs	45
Exhibit 23	125-66.U Traffic Impact	46
Exhibit 24	125-66.V Technical and Financial Capacity	48
Exhibit 25	125-66.W Business Operations	50
Exhibit 26	125-66.X Mining	51

LIST OF TABLES

TABLE		PAGE NO.
Table 1:	Lot Coverage Calculations	16

LIST OF FIGURES

Figure 1-1: Site Plan Application Form 2
Figure 1-2: Site Plan Application Checklist 3
Figure 3-1: Deeds 6
Figure 6-1: Capacity Statements 11
Figure 8-1: Location Map 14
Figure 9-1: Site Plan 17
Figure 9-2: Pre-Development Site Plan 18
Figure 9-3: Post-Development Site Plan (Project Design Set) 19
Figure 9-4: Agency Review Correspondence 20
Figure 9-5: FEMA Flood Map Firmette 21
Figure 10-1: SCS Soils Map 23
Figure 10-2: Test Pit Locations 24
Figure 14-1: Town Aerial Photograph 29
Figure 21-1: Lighting Plan 43
Figure 21-2: Manufacturers' Lighting Cut Sheets 44
Figure 23-1: MDOT Letter of Concurrence 47
Figure 24-1: JAX CFO Funding Letter 49

EXHIBIT 1
125-66.A SITE PLAN APPLICATION

Exhibit 1 contains the completed Checklist and Site Plan Application on the forms provided by the Planning Department. There is no registered farmland within 150 feet of the proposed Project site.

The proposed Project is construction of a new access driveway for Lot B, the large parking lot on the west side of Route 3. The new driveway will be 250' north of the existing vehicle entrance, which will be removed.

The relevant application form is the Site Plan Application, attached. The cover letter explains how the Project meets all the applicable standards. All waiver requests are indicated on the Checklist.

Access to the site by the Bar Harbor Code Enforcement Officer is allowed by the Certification paragraph of the Site Plan Application Form.

BAR HARBOR PLANNING BOARD

APPLICATION FOR SITEPLAN

(as described by Article V of the Bar Harbor Land Use Ordinance)

APPLICATION # SP - 2022 - 05 **DATE** May 12, 2022

FEE $ 2,282.00 **MAP** 115 **LOT** 021 **USE** research (accessory)

APPLICANT :

Name The Jackson Laboratory, c/o John Scheckel

Address 600 Main Street

Bar Harbor, ME 04609

Telephone 207-288-6744

Email John. Scheckel@jax.org

OWNER :

Name The Jackson Laboratory, c/o Kelly Doran

Address 600 Main Street

Bar Harbor, ME 04609

Telephone 207-288-6585

Email kelly.doran@jax.org

PROJECT REPRESENTATIVES:

Name Woodard & Curran, c/o Sarah Nicholson

Address 80 Exchange Street, Suite 400

Bangor, ME 04401

Telephone 207-632-5039

Email snicholson@woodardcurran.com

Revised date 3-27-12

BAR HARBOR PLANNING BOARD

APPLICATION FOR SITEPLAN

(as described by Article V of the Bar Harbor Land Use Ordinance)

Please provide a complete written summary that accurately describes the project for which you seek approval (attach additional pages if necessary) :

The proposed project is construction of a relocated access driveway to JAX's parking Lot B located on the west side of Main Street (Route 3) to improve pedestrian safety. The proposed access driveway is located approximately 250 feet north of the existing driveway. A new right turn lane on Route 3 with a raised landscaped island will be installed for southbound traffic access to the parking lot. The existing right turn lane and driveway pavement will be removed. A portion of this area will remain paved as a sidewalk to bring pedestrians from the parking area to the existing signaled Route 3 crossing. A new stormwater BMP will treat runoff from the new access drive. Anticipated completion of construction is scheduled for Spring 2023.

CERTIFICATION:

This application and all information submitted are true and correct to the best of our knowledge. If approval is granted, all work executed shall be performed in strict conformance with the approved application, conditions imposed by the Bar Harbor Planning Board and the Bar Harbor Land Use Ordinance. **Permission is hereby granted to the Bar Harbor Code Enforcement Officer, or his/her designee, to enter and have access to the subject property at all times during and immediately upon completion of construction to ensure compliance with the approved application and the Bar Harbor Land Use Ordinance.** Failure to grant such access shall result in the immediate issuance of a stop work order.

It is understood that no application shall be deemed pending until and unless it has been certified as complete by the Bar Harbor Planning Board, that the Planning Board shall not conduct substantive review, a review of the application to determine whether is complies with the standards set forth in the Bar Harbor Land Use Ordinance, until the application has been deemed complete. It is further understood that neither the submission or review of, nor public comments a about a pre-application sketch plan, nor the conduct of a site inspection shall be construed to be a substantive review of the proposed development.

Applicant	May 12, 2022 **Date**
Owner	May 12, 2022 **Date**

Revised date 3-27-12

CHECKLIST – FOR SITE & SUBDIVISION PLANS

Application #: SP-2022-05 JAX Traffic **Owner/Applicant:** JAX **Permit Consultants:** S. Nicholson, W&C	**Exhibit (E)** **Waiver (W)** **Staff**	**Appli-cant**	**STAFF COMMENTS/NOTES**	**APPLICANT COMMENTS/NOTES**

Project Description: The proposed project is construction of a relocated access driveway to their parking Lot B located on the west side of Main Street (Route 3). This relocation will separate the pedestrian traffic access crossing Route 3 from the main vehicular traffic entering and leaving the parking lot improving pedestrian safety.

The proposed access driveway is located approximately 250 feet north of the existing driveway. A new right turn lane on Route 3 with a raised landscaped island will be installed for southbound traffic access to the parking lot. The existing right turn lane and driveway pavement will be removed to provide additional landscaped area with sidewalk access between the parking lot and Route 3. A portion of this area will remain paved as a sidewalk to bring pedestrians from the parking area to the existing signaled Route 3 crossing.

Zones: Scientific Research Eleemosynary Purposes
Map/Lot/Physical Address: Map 115, Lot 21/14 Woodlands Lane (large parking area on Route across from the Lab)
Lot Size: 35.6 acres, per assessing record
Allowed Use in Zone: Lab
Date/Time Pre-App: May 9 @ 2:30 PM
Department Official: MG

1. SITE PLAN APPLICATION — Refer to Land Use Ordinance §125-66 A

A	Checklist	**E**		**This document is the checklist**	
B	Property owner's name/address	**E**		**Application form**	
C	Applicant's name/address	**E**		**Application form**	
D	Project representatives name/address	**E**		**Application form**	
E	Abutters name & address within 300 ft. of property lines	**E**		**Staff Provided**	
F	Registered farmland w/in 150 ft.	**W**		**No farmland in BH**	
G	Description of proposed use	**E**		**Application form**	
H	Authorization for town official access	**E**		**Application form**	
I	Explain how project meets standards	**E**		**Per 125-67 A. Permitted uses; B. Lot standards; C. Height; D. Parking requirements; E. Parking areas and driveways; L. Stormwater management; O. Soils; P. Landscaping; Q. Erosion; W. Wildlife Habitat; X. Aesthetic areas and physical and visual access; Z. Light and glare; BB. Signs and advertising; DD. Utilities; EE. Fire Protection; GG. Financial capacity; II. Other**	

CHECKLIST – FOR SITE & SUBDIVISION PLANS

Application #: SP-2022-05 JAX Traffic **Owner/Applicant:** JAX **Permit Consultants:** S. Nicholson, W&C		**Exhibit (E)** **Waiver (W)** **Staff**	**Appli-cant**	**STAFF COMMENTS/NOTES**	**APPLICANT COMMENTS/NOTES**
				municipal services; JJ. Violations; LL. Historic and archaeological resources; MM. Utilization of site; and NN Natural features.	
2. FEES PAID - Copy of Receipt — Refer to Land Use Ordinance §125-66 B					
A	Administrative fee	**E**		**$2282/fee to be paid when the application is submitted**	
B	Ordinance & reg. compliance	**E**		**Provided by CEO**	
3. TITLE and INTEREST — Refer to Land Use Ordinance §125-66 C					
A/B	Current deed or P&S agreement	**E**		**Provide copy of deed**	
C	Easements, deed restriction, ROW's, etc.	**E**		**Provide copy of deed**	
4. LEGAL DOCUMENTS — Refer to Land Use Ordinance §125-66 D					
A	Proposed easements, covenants, agreements, etc.	**W**			
B	Proposed deed for roads or other property to be dedicated	**W**			
C	Proposed performance and plant maintenance guarantees	**W**			
D	For condominiums proposed declaration, by laws, etc.	**W**			
E	Site restoration guarantee (if required)	**W**			
	5. PERMITS — Refer to Land Use Ordinance §125-66 E				

CHECKLIST – FOR SITE & SUBDIVISION PLANS

Application #: SP-2022-05 JAX Traffic **Owner/Applicant:** JAX **Permit Consultants:** S. Nicholson, W&C		**Exhibit (E)** **Waiver (W)** **Staff**	**Appli-cant**	**STAFF COMMENTS/NOTES**	**APPLICANT COMMENTS/NOTES**
A	Army Corps of Engineers	**W**			
B	Maine D.E.P.	**E**		SLODA amendment	
C	Other (DOT, DRB, BOA, etc.)	**E**		**DOT Entrance permit**	
	6. STATEMENTS OF CAPACITY & DESIGN — Refer to Land Use Ordinance §125-66 F				
A	Police	**E**		**Provided by the Planning Dept**	
B	PW, Solid Waste; SW; Street, Rec	**E**		**Provided by the Planning Dept.**	
C	Sewer	**W**			
D	Schools & Busing	**W**			
E	Water	**W**			
	7. DESIGN PLANS — Refer to Land Use Ordinance §125-66 G				
A	Public water supply	**W**			
B	Central private water supply	**W**			
C	Individual wells	**W**			
D	Fire and dry hydrants, and fire ponds	**W**			
E	Public sewer	**W**			
F	Central subsurface wastewater system	**W**			
G	Shared subsurface wastewater system	**W**			
H	Stormwater disposal system	**W**			
I	All other utilities (gas, elec., cable, etc.)	**W**			
	7.1 DESIGN APPROVAL by State & Local Agencies -— Refer to Land Use Ordinance §125-66 H				
A	Central water supply/DHHS	**W**			

CHECKLIST – FOR SITE & SUBDIVISION PLANS

Application #: SP-2022-05 JAX Traffic **Owner/Applicant:** JAX **Permit Consultants:** S. Nicholson, W&C		**Exhibit (E)** **Waiver (W)** **Staff**	**Appli-cant**	**STAFF COMMENTS/NOTES**	**APPLICANT COMMENTS/NOTES**
B	Individual wells/DHHS	**W**			
C	Central Subsurface Sewage disp/DHHS	**W**			
D	Wastewater discharge/DEP	**W**			
E	Approval by DOT	**E**			
	8. MAPS & PLANS — Refer to Land Use Ordinance §125-66 J. (2) ***Location map***				
	Magnetic north	**E**		**This is a project location map. Show project location and this information on a USGS 7.5-minute map**	
	Plan preparation date	**E**			
	Graphic scale	**E**			
	Owner & applicant name/address	**E**			
	Designer, surveyor, engineer	**E**			
	Name of town development is in	**E**			
	Tax Map & Lot numbers and District	**E**			
	9. SITE PLAN Scale not to Exceed 1"=40' — Refer to Land Use Ordinance § 125-66 J ***Information to be shown on site plan***				
	Magnetic north	**E**			
	Plan preparation date	**E**			
	Graphic scale	**E**			
	Owner & applicant name/address	**E**			
	Designer, surveyor, engineer	**E**			
	Name of town where development is	**E**			
A	Name of abutters & Book/Page #	**E**			
B	Tax Map & Lot Number(s)	**E**			

CHECKLIST – FOR SITE & SUBDIVISION PLANS

Application #: SP-2022-05 JAX Traffic **Owner/Applicant:** JAX **Permit Consultants:** S. Nicholson, W&C		**Exhibit (E)** **Waiver (W)** **Staff**	**Appli-cant**	**STAFF COMMENTS/NOTES**	**APPLICANT COMMENTS/NOTES**
C	Land use district(s)	**E**			
D	Lot line dimensions (metes & bounds)	**E**			
E	Lot size in square feet	**W**			
F	Locations of lot monumentations	**W**			
G	Total proposed development acreage	**W**			
H	Remaining undeveloped land retained	**W**			
I	Lot numbers	**W**			
J	Lots developed/sold w/in past 5 years	**W**			
K	Subs w/in 200 ft. w/ owners names	**W**			
L	Existing/proposed 5 or 10 ft. contours	**E**			
M	Items w/in 200 ft of subject property:	**E**			
	Buildings & structures	**E**			
	Streets (w/names)	**E**			
	Sidewalks	**E**			
	Easements	**E**			
	Driveways, entrances, exits	**E**			
N	Existing/proposed bldgs/structures	**E**			
O	Distance btw proposed bldgs/structures	**W**			
P	Utilities locations - existing/proposed	**E**			
Q	Sign locations - existing/proposed	**E**			
R	Drainage, wetlands, V pools, aquifers	**E**			
S	Stone walls, graveyards, and fences	**E**			
T	Significant wildlife habitat or spawning grounds locations (IF&W)	**E**		**Need clearance letter from state**	
U	Rare & irreplaceable natural areas locations (Critical Areas Program)	**E**		**Need clearance letter from state**	
V	Historic & archaeological site locations	**E**		**Need clearance letter from state**	
W	ALL wetlands & waterbodies w/in 200'	**E**			

CHECKLIST – FOR SITE & SUBDIVISION PLANS

Application #: SP-2022-05 JAX Traffic **Owner/Applicant:** JAX **Permit Consultants:** S. Nicholson, W&C		**Exhibit (E)** **Waiver (W)** **Staff**	**Appli-cant**	**STAFF COMMENTS/NOTES**	**APPLICANT COMMENTS/NOTES**
X	Shoreline	**W**			
Y	100-year flood elevation	**E**			
Z	Areas w/ routine flood/standing water	**E**			
AA	Setbacks – Lot lines and water bodies	**E**			
BB	Fire hydrants & ponds existing/proposed	**E**			
CC	Fire/emergency equipment site access	**E**			
DD	Easements/access to water bodies existing/proposed	**W**			
EE	Access locations to adjacent undeveloped land	**W**			
FF	Rec/open space land existing/proposed	**W**			
GG	Solid, industrial, chemical, explosive or hazardous waste locations	**W**			
HH	Lot coverage calculations - existing/proposed	**E**			
II	Parking locations with dimension, angles, radii, etc.	**E**			
JJ	Soil test pit location	**W**			
10.	**MEDIUM INTENSITY SOIL SURVEY – Refer to Land Use Ordinance §125-66 J. (15)**	**E**			
11. LANDSCAPING, BUFFERING & SCREENING PLAN Refer to Land Use Ordinance §125- 66 J (22)					
A	Botanical & common names	**W**			
B	Plant locations & size	**W**			

CHECKLIST – FOR SITE & SUBDIVISION PLANS

Application #: SP-2022-05 JAX Traffic **Owner/Applicant:** JAX **Permit Consultants:** S. Nicholson, W&C		**Exhibit (E)** **Waiver (W)** **Staff**	**Appli-cant**	**STAFF COMMENTS/NOTES**	**APPLICANT COMMENTS/NOTES**
C	Installation schedule	**W**			
D	Maintenance plan	**W**			
E	Vegetation clearing limits	**W**			
F	Tree (8+" dbh) locations	**W**			
12. STREET, SIDEWALK & ACCESS PLAN — Refer to Land Use Ordinance §125-66 J (44) ***Construction Drawings Showing a Plan View, Profile, and Typical Cross Section of the following within 300' at 50' Intervals***					
A	Drainage scheme at all intersections existing/proposed	**E**		**This project is not subject to 125-67 G but subject to 125-67 E**	
B	Intersections of proposed streets with existing streets	**E**			
C	Access - roadway/ROW with edge of payment, shoulders, sidewalks and curbs	**E**			
D	Drainage feature - type, size, profile, cross section, and inverts	**E**			
E	Horizontal & vertical curve data	**E**			
F	Intersections - turning radii	**E**			
G	Centerline grade	**E**			
H	Bearing, distance, tangent, radii for all street lines	**E**			
I	Location, dimension, grade, radii of acceleration and deceleration lanes	**E**			
J	Design details for street improvements	**W**			
K	Travel direction	**W**			
L	Crosswalk locations	**W**			
M	Street names	**W**			
N	Subdivision name	**W**			

CHECKLIST – FOR SITE & SUBDIVISION PLANS

Application #: SP-2022-05 JAX Traffic **Owner/Applicant:** JAX **Permit Consultants:** S. Nicholson, W&C		**Exhibit (E)** **Waiver (W)** **Staff**	**Appli-cant**	**STAFF COMMENTS/NOTES**	**APPLICANT COMMENTS/NOTES**
13. E-911 — Refer to Land Use Ordinance §125-66 K					
A	Street name certification - E911	**W**			
14. PHOTOGRAPHS — Refer to Land Use Ordinance §125-66 L ***All pictures must be labeled with a description***					
A	Town's aerial photograph	**E**			
B	Pictorial of site from public ways, site location/N,S,E,W	**E**			
	Existing improvements within 200'	**E**			
	Existing vegetation within 200'	**E**			
	Other physical/natural features w/in 200'	**E**			
15. SUBSURFACE WASTEWATER DISPOSAL — Refer to Land Use Ordinance §125-66 M					
A	HHE 200 Forms	**W**			
16. GROUNDWATER - to be extracted — Refer to Land Use Ordinance §125-66 N					
A	Use assessment rates for day, month, yr	**W**			
B	Hydrogeological impact study	**W**			
17. EROSION & SEDIMENTATION PLAN — Refer to Land Use Ordinance §125-66 O					
A	Erosion & sedimentation control plan	**E**			
18. FIRE PROTECTION — Refer to Land Use Ordinance §125-66 P					
A	**Statement from Fire Chief**	**E**		**Provided by the Planning Dept.**	

CHECKLIST – FOR SITE & SUBDIVISION PLANS

Application #: SP-2022-05 JAX Traffic **Owner/Applicant:** JAX **Permit Consultants:** S. Nicholson, W&C		**Exhibit (E)** **Waiver (W)** **Staff**	**Appli-cant**	**STAFF COMMENTS/NOTES**	**APPLICANT COMMENTS/NOTES**
B	Fire Marshal's Office prelim. approval	**W**			
19. SOLID & HAZARDOUS WASTE — Refer to Land Use Ordinance §125-66 Q					
A	Description, amount, nature of solid and/or hazardous waste	**W**			
	Copy of applicable fed & state regs for spec. & hazardous wastes	**W**			
	Copy of applicable fed & state permits for spec. & hazardous wastes	**W**			
	Method of transport, storage, disposal and material handling	**W**			
20. BUILDING PLANS & ELEVATIONS — Refer to Land Use Ordinance §125-66R					
A	Floor plans for all levels of all structures	**W**			
B	All elevations indicating height and proposed exterior materials and colors	**W**			
C	Proposed use of all floors	**W**			
D	Seating capacity - restaurants only	**W**			
21. LIGHTING PLAN — Refer to Land Use Ordinance §125-66 S					
A	Exterior lighting details existing & proposed	**E**			
B	Types of fixture with manufacturer' specifications sheets	**E**			
C	Radius of intensity of illumination	**E**			
22. SIGNS — Refer to Land Use Ordinance §125-66 T					

CHECKLIST – FOR SITE & SUBDIVISION PLANS

Application #: SP-2022-05 JAX Traffic **Owner/Applicant:** JAX **Permit Consultants:** S. Nicholson, W&C		**Exhibit (E)** **Waiver (W)** **Staff**	**Appli-cant**	**STAFF COMMENTS/NOTES**	**APPLICANT COMMENTS/NOTES**
A	Design details existing & proposed	**E**			
23. TRAFFIC IMPACT — Refer to Land Use Ordinance §125-66 U					
A	Trip counts per day & peak hour	**W**			
B	Engineering impact analysis	**W**			
24. TECHNICAL & FINANCIAL CAPACITY — Refer to Land Use Ordinance §125-66 V					
A	Cost estimate	**E**			
B	Financing arrangements	**E**			
C	Curriculum vitae of designers	**W**			
D	Descriptions of similar project by developer	**W**			
25. BUSINESS OPERATIONS — Refer to Land Use Ordinance §125-66 W					
A	Operating statement & mitigation plan	**W**			
B	Employment & operation hours projections	**W**			
C	Operator information (if not owner)	**W**			
26. MINING — Refer to Land Use Ordinance §125-66 X					
A	D.E.P. Permit where applicable	**W**			
B	Extraction plan	**W**			
C	Restoration plan	**W**			
D	Performance guarantee for restoration	**W**			
E	Washing operation plans	**W**			
F	Evidence of insurance	**W**			

EXHIBIT 2

125-66.B FEES AND COMPLIANCE WITH PREVIOUSLY APPROVED PLANS

The administrative and public notice fees, totaling $2,282, are provided in conjunction with the submission of this Site Plan Application. The total budget for the Lot B Access Project is $2,500,000. This budget includes the cost of design, permitting, construction, and other associated costs. The estimated of construction cost alone is $2,000,000.

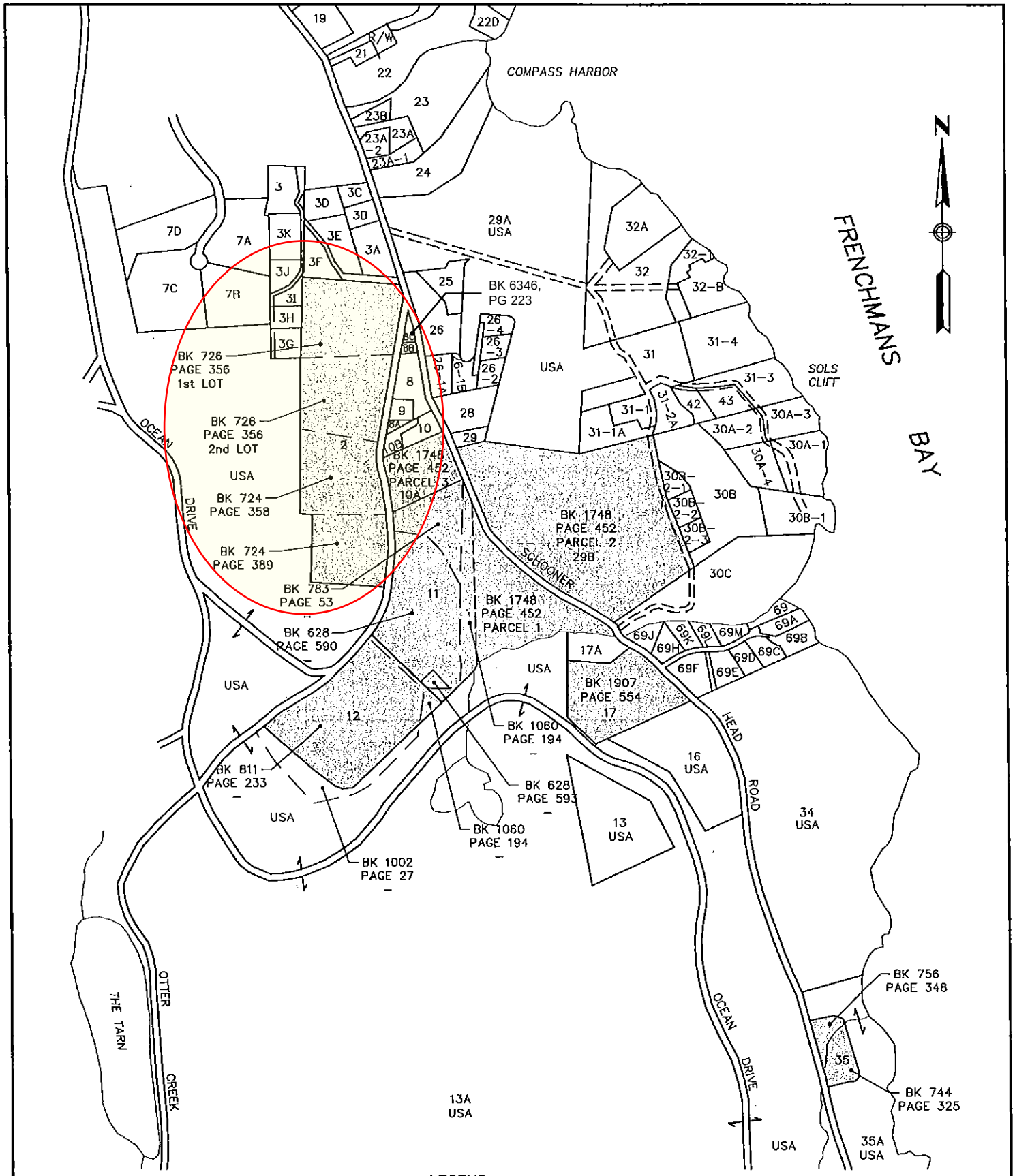
The Jackson Laboratory complies with all Land Use ordinances and regulations of the Town of Bar Harbor. Evidence of this will be provided by the CEO.

EXHIBIT 3
125-66.C TITLE AND INTEREST

The Jackson Laboratory is located on several parcels of land in the Town of Bar Harbor. The Site Plan included in Exhibit 9 illustrates the lot and parcel boundaries in the vicinity of the proposed Project.

Attached is the deed to the lot that will be developed by this Project, Tax Map 115, Lot 021. The deed references for this lot are 726/356, 724/358, and 724/359. There are no easements or rights-of-way on the Project site.

As documented on the Checklist, waivers are requested for this Exhibit.



SOURCE:
"TAX MAP OF TOWN OF BAR HARBOR, MAINE"
SHEET 15A, UPDATED APRIL 1, 2001

WOODARD & CURRAN
Engineering · Science · Operations
BANGOR, MAINE 800-564-2333

DEED REFERENCE PLAN

DESIGNED BY: WHC | CHECKED BY: SSN
DRAWN BY: NTD | FILE: 20301908-fig_2-1

THE JACKSON LABORATORY
BAR HARBOR, MAINE

SITE LOCATION OF DEVELOPMENT
MINOR AMENDMENT

JOB NO: 203019.08
DATE: APRIL 2003
SCALE: 1"=1000'±

FIG. 2-1

page 356

K N O W A L L M E N B Y T H E S E P R E S E N T S,

THAT I, Edith P. Moore of Bar Harbor, Hancock County, Maine in consideration of one dollar and other valuable considerations paid by Roscoe B. Jackson Memorial Laboratory, a corporation duly organized and existing under the laws of the State of Maine, located in said Bar Harbor the receipt whereof I do hereby acknowledge, do hereby REMISE RELEASE, BARGAIN, SELL AND CONVEY, and forever QUIT-CLAIM unto the said Roscoe B. Jackson Memorial Laboratory, its successors and assigns forever, two certain lots or parcels of land, situated in said Bar Harbor, and being the same property described as conveyed in deed Louis B. McCagg to Edith P. Moore dated November 25, 1919 and recorded in Hancock County Registry of Deeds in Book 550, Page 47, description in said deed being as follows:

"FIRST LOT: Beginning at a stone post set in the ground in the western side of the highway leading from Bar Harbor to Otter Creek, at the southeastern corner of land formerly of Gardiner Sherman; thence by said highway, south five degrees and fifteen minutes west one hundred and thirty-five feet, to the junction of said highway with the Schooner Head Road; thence still following said highway leading to Otter Creek, south twenty-six degrees west four hundred and seventy-one and five-tenths feet to a stone post set in the ground on the western side of said highway, at the northeastern corner of land formerly of Roberts, now of the grantor herein, said lot being the lot hereafter described marked "Second Lot"; thence north sixty-nine degrees and thirty minutes west, but everywhere following the northern line of said land hereinafter described marked "Second Lot", seven hundred and twenty-one and five-tenths feet to a stone post set in the ground in the eastern line of land now or formerly of Stanford and others; thence north nineteen degrees east, but everywhere following said eastern line of said land now or formerly of Stanford and others, five hundred and ninety-seven feet to a stone post set in the ground in the southwestern corner of said land formerly of Gardiner Sherman; thence south sixty-nine degrees and fifteen minutes east, but everywhere following the southern line of said land formerly of Gardiner Sherman, seven hundred and forty-five and five-tenths feet to the stone post set in the ground at the place of beginning, containing ten and sixty-four one-hundredths acres, more or less.

SECOND LOT: Beginning on the west side of the road leading from Bar Harbor to Otter Creek at a stone post at the southeast corner of the lot of land hereinabove described marked "First Lot"; thence southerly, but always following said road, five hundred and eighty-five feet, more or less, to apiece of iron pipe driven in the ground at the northeast corner of a lot of land formerly owned by Frank M. Conners; thence north sixty-eight degrees west, but always following the north line of said land formerly of Conners, six hundred and thirty-eight feet, more or less, to an iron bolt set in the ground in the east line of a lot of land owned now or formerly by F.W. Hill, Trustee; thence north twenty degrees and thirty minutes east, but always following the east line of said land now or formerly of F.W. Hill, Trustee, five hundred and eighty-five feet, more or less, to the southwest corner of said lot of land hereinabove described marked "First Lot"; thence south seventy-two degrees east, but always following the south line of said lot of land marked "First Lot", seven hundred and twenty-six feet, more or less, to the place of beginning, containing nine and one-half acres, more or less.

Meaning and intending to include and convey, and I do hereby sell and convey, whether included in the above specific descriptions or not, all and the same land described as conveyed to me, the said Louis B. McCagg, in three certain deeds, to wit: Deed from Ches. T. How, dated February 6, 1903, and recorded in the Hancock County, Maine, Registry of Deeds, in Vol. 388, Page 299; deed from Francis Murdock, William P. Ellison and Edward H. Mason, dated February 6, 1903, and recorded in said Registry in Vol. 388, Page 294; deed from Tobias E. Roberts, dated September 12, 1906, and recorded in said Registry in Vol. 433, Page 209."

TO HAVE AND TO HOLD, the same, together with all the privileges and appurtenances thereunto belonging, to the said Roscoe B. Jackson Memorial Laboratory, its successors and assigns forever.

AND I do COVENANT with the said Grantee, its successors and assigns, that I will WARRANT AND FOREVER DEFEND the premises to the said Grantee, its successors and assigns forever, against the lawful claims and demands of all persons claiming by, through, or under me.

IN WITNESS WHEREOF, I the said Edith P. Moore, being unmarried, have hereunto set my hand and seal this 23rd day of March in the year of our Lord one thousand nine hundred and forty-nine.

SIGNED, SEALED AND DELIVERED
IN PRESENCE OF

Edith P. Moore (L.S.)

STATE OF New York)
County of New York) SS . March 23 1949.

Personally appeared the above named Edith P. Moore and acknowledged the above instrument to be her free act and deed.

Before me,

IN WITNESS WHEREOF, said Liberty National Bank in Ellsworth has caused this instrument to be signed with its corporate name and sealed with its corporate seal by Addie R. Carlisle its cashier thereunto duly authorized, this 24th day of December A. D. 19

Signed, Sealed and Delivered in presence of Margaret K Patten

Corporate Seal

LIBERTY NATIONAL BANK IN ELLSWORTH
By Addie R. Carlisle
Its Cashier

STATE OF MAINE

HANCOCK SS. DEC 24 1948 19

Personally appeared the above named Addie R Carlisle and acknowledged the foregoing instrument to be the free act and deed of Liberty National Bank in Ellsworth and his free act and deed in his said capacity.

Before me,

Notarial Seal

Margaret K. Patten
Notary Public.
MY COMMISSION EXPIRES APR. 17, 1953

Rec'd Dec. 27, 1948 at 9h. -m. A.M., and entered by,
Tessie B. Patten, Reg'r.

724 358

U.S.I.R. Stamps $.55 12/20/48 B. I. Co.

KNOW ALL MEN BY THESE PRESENTS, That the Brewer Ice Company, a corporation duly organized and existing under the laws of the State of Maine, and located at Bar Harbor in the County of Hancock in said state, in consideration of one dollar and other valuable considerations, paid by the Roscoe B. Jackson Memorial Laboratory, a corporation duly organized and existing under the laws of the State of Maine, and located at said Bar Harbor, the receipt whereof it does hereby acknowledge, does hereby GIVE, GRANT, BARGAIN, SELL AND CONVEY, unto the said Roscoe B. Jackson Memorial Laboratory its successors and assigns forever, a certain lot or parcel of land situated in said Bar Harbor and being the same property described as conveyed in deed John K. Preble and Myra E. Preble to Brewer Ice Company and recorded in Hancock County Registry of Deeds on February 16, 1923, Vol. 574, Page 486, said description being as follows, to wit:

"Beginning at a point on the Westerly side of the Otter Creek Road and ten feet southerly from a stone post set in the ground; thence North 67 degrees West following old line 717 feet to a stone post set in mount of stone; thence North 27 degrees East 610 feet to an oak stump; thence South 67 degrees East 620 feet to westerly line of said Otter Creek Road; thence by the westerly line of said Road Southerly 610 feet to place of beginning containing 9.3 acres, more or less."

TO HAVE AND TO HOLD the aforegranted and bargained premises with all the privileges and appurtenances thereof, to the said Roscoe B. Jackson Memorial Laboratory, its successors and assigns, to it and their use and behoof forever.

AND It does COVENANT with the said Grantee, its successors and assigns, that it is lawfully seized in fee of the premises, that they are free of all incumbrances; that it has good right to sell and convey the same to the said Grantee to hold as aforesaid; and that it and its successors shall and will WARRANT AND DEFEND the same to the said Grantee, its successors and assigns forever, against the lawful claims and demands of all persons.

IN WITNESS WHEREOF, the said Brewer Ice Company has caused this instrument to be sealed with its corporate seal and signed in its corporate name by Armida R. Higgins, President, thereunto duly authorized, this seventeenth day of December, in the year of our Lord one thousand nine hundred and forty-eight.

Signed, Sealed and Delivered
in presence of

Corporate Seal

Brewer Ice Company
By Armida R. Higgins
President

STATE OF MAINE

County of Hancock, ss. December 17, 1948.

Then personally appeared the above named Armida R. Higgins, President of the Brewer Ice Company, and acknowledged the foregoing instrument to be her free act and deed in her said capacity and the free act and deed of said corporation

Before me,

Norman Shaw.
Justice of the Peace

Rec'd Dec. 27, 1948 at 9h. -m. A.M., and entered by,
Tessie B. Patten, Reg'r.

EXHIBIT 4

125-66.D LEGAL DOCUMENTS

There are no proposed easements, covenants, agreements, or other legal documents needed for the Project. It is also not necessary to secure deeds for roads or other dedicated properties, or to propose performance, maintenance, or restoration guarantees.

As documented on the Checklist, waivers are requested for this Exhibit.

EXHIBIT 5
125-66.E PERMITS

The Jackson Laboratory (JAX) campus Site Location of Development Permit (SLOD) #L-015327-26 will be amended to permit this Project.

An application has been submitted to Maine DEP for full Project review concurrently with the Planning Board review. The approved permit will be provided to the Bar Harbor Planning Office when it is received, likely in Fall 2022.

No other environmental permits beside the SLOD Amendment are required for this Project. As documented on the Checklist, waivers are requested for this Exhibit.

EXHIBIT 6
125-66.F APPROVAL OF CAPACITY AND DESIGN

The proposed Project will not require any public services. If required, communications/capacity statements from the Town Water Division and Public Works, as well as from the Police and Fire Departments, will be attached.

A Stormwater Analysis and report was prepared for the proposed Project to incorporate stormwater management BMPs. The Project will be required to meet the DEP's Basic, General, and Flooding Standards. The stormwater management details are shown on the Design Plans set included as Figure 9-3.

The stormwater will be managed in accordance with the requirements of the SLOD permit, and both quantity and quality impacts from the development will be mitigated so the runoff from the site will not negatively impact downstream drainageways. This information has been provided to Maine DEP for their review and approval with the amendment to the SLOD permit. A copy of the full Analysis Report will be provided to the Town if requested, but a summary of the findings is provided here.

The proposed entrance drive is approximately 600′ long, with a paved footprint area of 10,895 sf. The widened pavement along Route 3 that will allow for a divided turn lane will create 6,225 sf of new pavement, as well. An area of existing pavement (920 sf) near the top of the new drive will be removed to create a clear driving lane, and an equivalent area of new paving (965 sf) will be added near the old entrance where new parking spaces will be defined to replace those lost to the new driveway. The paving at the existing parking lot entrance will be removed and converted to a sidewalk and landscaped area.

Overall, the Project adds 0.42 ac of new impervious and eliminates 0.20 ac existing impervious for an impervious increase of 0.22 ac. As an access road, this is a linear Project, and the target treatment levels are 75% of the impervious area and 50% of the total developed area. The fill slope below the new drive will be seeded with MDOT roadside mixture #3 to stabilize it, and it will also be planted with native shrubs and allowed to naturalize. Since it will not be mowed, this area is excluded from the "developed" area of the Project.

An underdrained soil filter with peak runoff storage capacity will provide stormwater treatment for the new access drive. The table below from the report shows that the BMP provides adequate retention to ensure that the flooding standard is met.

STORM EVENT	EXISTING CONDITIONS (CFS)	PROPOSED CONDITIONS (CFS)	DIFFERENCE
2-yr	8.66	8.07	-0.59
10-yr	14.34	12.91	-1.43
25-yr	17.93	15.96	-1.97

The underdrained soil filter will capture and treat runoff from most of the new access drive and also the filter itself. It will also collect runoff from an area of existing pavement at the top of the new drive.

As described in the report, the filter provides 1,690 cf of water quality volume between the surface of the filter (el. 156′) and the rim of the outlet grate (el. 157′). This exceeds the required channel protection

volume of 1,337 cf, providing excess treatment capacity. As shown in the table below, this excess capacity (353 cf) provides additional treatment for the equivalent of 4,220 sf of impervious area. This excess capacity will compensate in part for the new widened pavement along Route 3 that will create a right-hand turn lane into the new drive, as well as the lowest part of the new drive. The location of this new pavement within the MDOT right-of-way makes it difficult to provide treatment for it.

At the south end of the lot, the existing entrance pavement will be removed, and the area loamed and seeded (7,800 sf). A 5′ wide bituminous sidewalk (580 sf) will cross the area to provide access to the Route 3 pedestrian crossing. The pavement that remains above (west of) the sidewalk will be restriped as parking spaces, and two small areas of pavement (965 sf) will be added. This will provide a total of 23 "new" spaces to compensate for the 26 impacted by the reconfiguration of vehicular and pedestrian access to the parking lot.

The table below tabulates the areas of the Project that are altered by the proposed Project and where treatment will be provided:

Development Impact (SF)	Area (SF)	WQV (CF)
Vegetated to Pavement	18,085	
Existing Pavement to New Pavement	580	
TOTAL IMPERVIOUS	**18,665**	**1,555**
Pavement to Vegetation	8,720	
Existing Vegetated to New Landscaped	9,600	
TOTAL LANDSCAPED	**18,320**	**611**
TOTAL AREA/TOTAL WQV REQ.	**36,985**	**2,166**
WQV Provided		**1,690**
Pavement Treated	12,200	1,017
Pavement Overtreated	4,240*	353
Vegetation Treated	9,600	320
Treatment Credit from Previous Lot B Project		1,604

*Equivalent area that is overtreated (353 CF/(1"/12"))=4,240 SF

Based on the areas above, the following table demonstrates that the treatment area standards for a linear Project are met:

	Impervious	Developed
Treated Area (SF)	16,440	25,040
Total Area (SF)	18,665	36,985
% Treated	**88.1%**	**70.4%**

Figure 6-1: Capacity Statements

EXHIBIT 7
125-66.G, H, I DESIGN APPROVAL

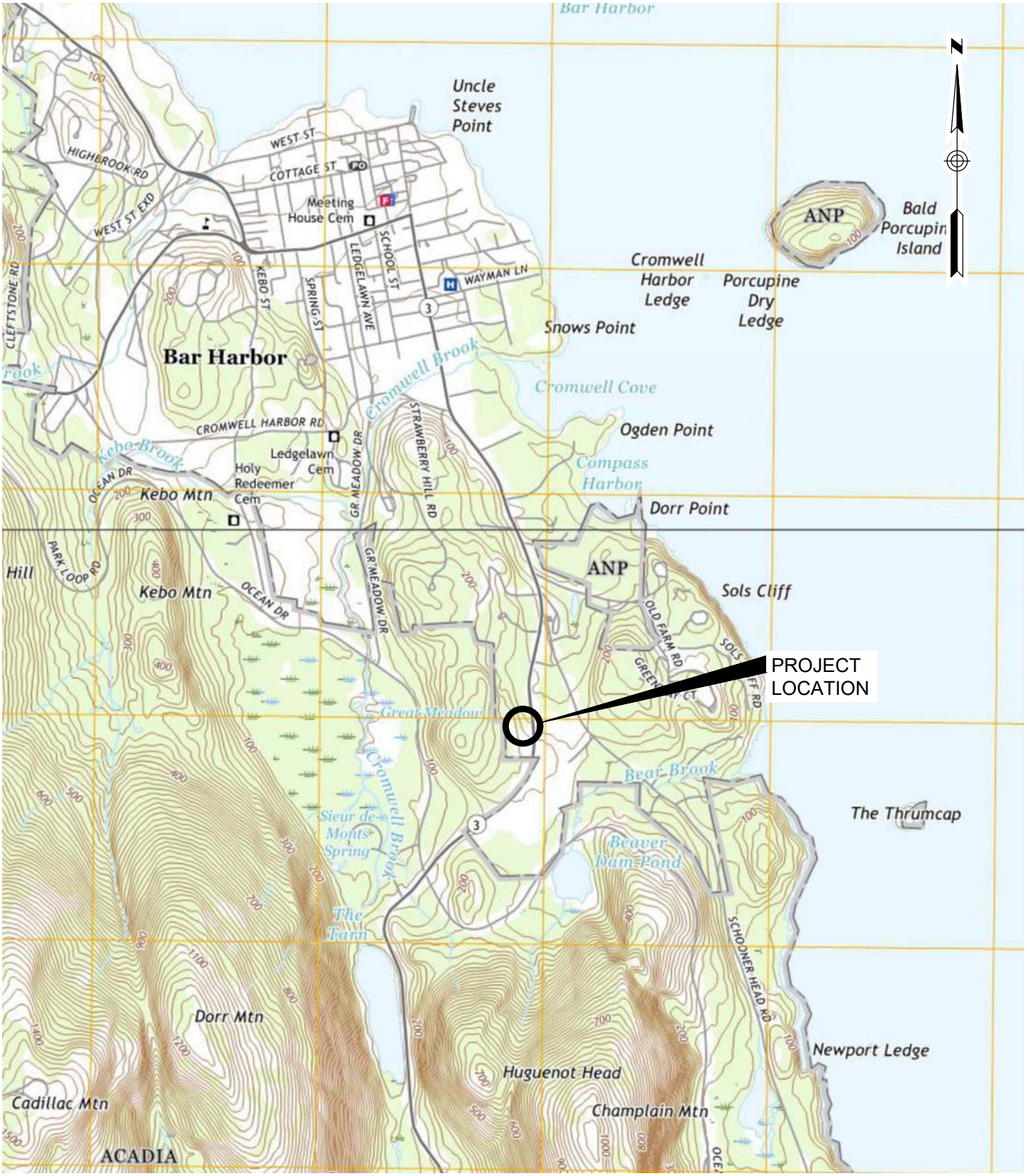
An MDOT Entrance/Driveway permit will be required for the Project. This permit has been applied for and the approval will be provided to the Town when it is received.

The Project will not create any new traffic as the parking lot itself will be unchanged. No other MDOT permitting is required.

As documented on the Checklist, waivers are requested for this Exhibit.

EXHIBIT 8
125-66.J.(2) LOCATION MAP

A Location Map or context plan, Figure 8-1, is included in this Exhibit. It shows the location of the proposed Project in relation to the surrounding area.



SOURCE:
U.S.G.S. TOPOGRAPHIC QUADRANGLE
BAR HARBOR, MAINE AND SEAL HARBOR, MAINE
DATED 2018 AT 1:24,000

2000' 0 2000' 4000'

BAR SCALE
1" = 2000'
CHECK GRAPHIC SCALE BEFORE USING

Woodard & Curran
80 Exchange Street, Suite 400
Bangor, Maine 04401
800. 564.2333 | www.woodardcurran.com
COMMITMENT & INTEGRITY DRIVE RESULTS

LOCATION MAP

DESIGNED BY: SSN	CHECKED BY: SSN
DRAWN BY: JDE	23269503-FIG 8-1.dwg

THE JACKSON LABORATORY
BAR HARBOR, MAINE

TOWN OF BAR HARBOR
SITE PLAN REVIEW APPLICATION
LOT B ACCESS

JOB NO: 232695.03
DATE: MAY 2022
SCALE: 1"=2000'

FIGURE 8-1

\\woodardcurran.net\shared\Projects\0232695.03 Jackson Lab Circulation Upgrades Permitting\wip\Drawings\Site Plan Review Figures\23269503-FIG 8-1.dwg, May 10, 2022 - 2:19pm JEVERETT

EXHIBIT 9

125-66.J MAPS, PLATS, OR PLANS

Exhibit 9 contains plans illustrating the proposed Project and existing conditions at the site. All information requested by the Application that is relevant to the existing conditions or to the proposed Project is illustrated on one or several of the plans as explained below.

The Site Plan, Figure 9-1, gives a general orientation of the Project in relation to the abutting properties. The footprint of the proposed Project is illustrated. The scale of the plan is 1 inch = 200 feet.

Figure 9-2 illustrates existing conditions at the site. The Project design set is included here as Figure 9-3 to provide all site design details for proposed conditions.

Correspondence from Maine Natural Areas Program, IF&W and the Maine Historic Preservation Commission is attached as Figure 9-4. These requests were made in reference to a previous Project at JAX but were analyzed for the entire campus area.

Table 2 shows the change in lot coverage for the entire JAX campus resulting from the proposed Project.

125-66.J.(32) FLOOD PERMIT

A Flood Zone Map is attached illustrating that The Jackson Laboratory properties are not located within either the 100-year or the 500-year flood zones, as determined by the Federal Emergency Management Agency. No Flood Hazard Development Permit will be necessary for the proposed Project.

As documented in the Checklist, waivers are requested for this Exhibit.

Proposed Project Lot B Access Project

Before Proposed Project

Parcel	Description	Map; Lot	Total Lot Area sq. ft.	Total Lot Area acres	Footprint Area sq. ft.	Footprint Area acres	Lot Coverage %
A	Main Campus	253; 7, 3, 2, 4, 5 and 115; 37	3,172,605	72.83	1,094,273	25.12	34.49%
B	Lot B and Woodland Cottages	115; 21	1,550,736	35.60	171,950	3.95	11.09%
C	East side of Schooner Head Road	253; 11, 10*	1,608,017	36.92	-	-	0.00%
D	High Seas Cottage	259; 1	182,952	4.20	14,800	0.34	8.09%

After Proposed Project

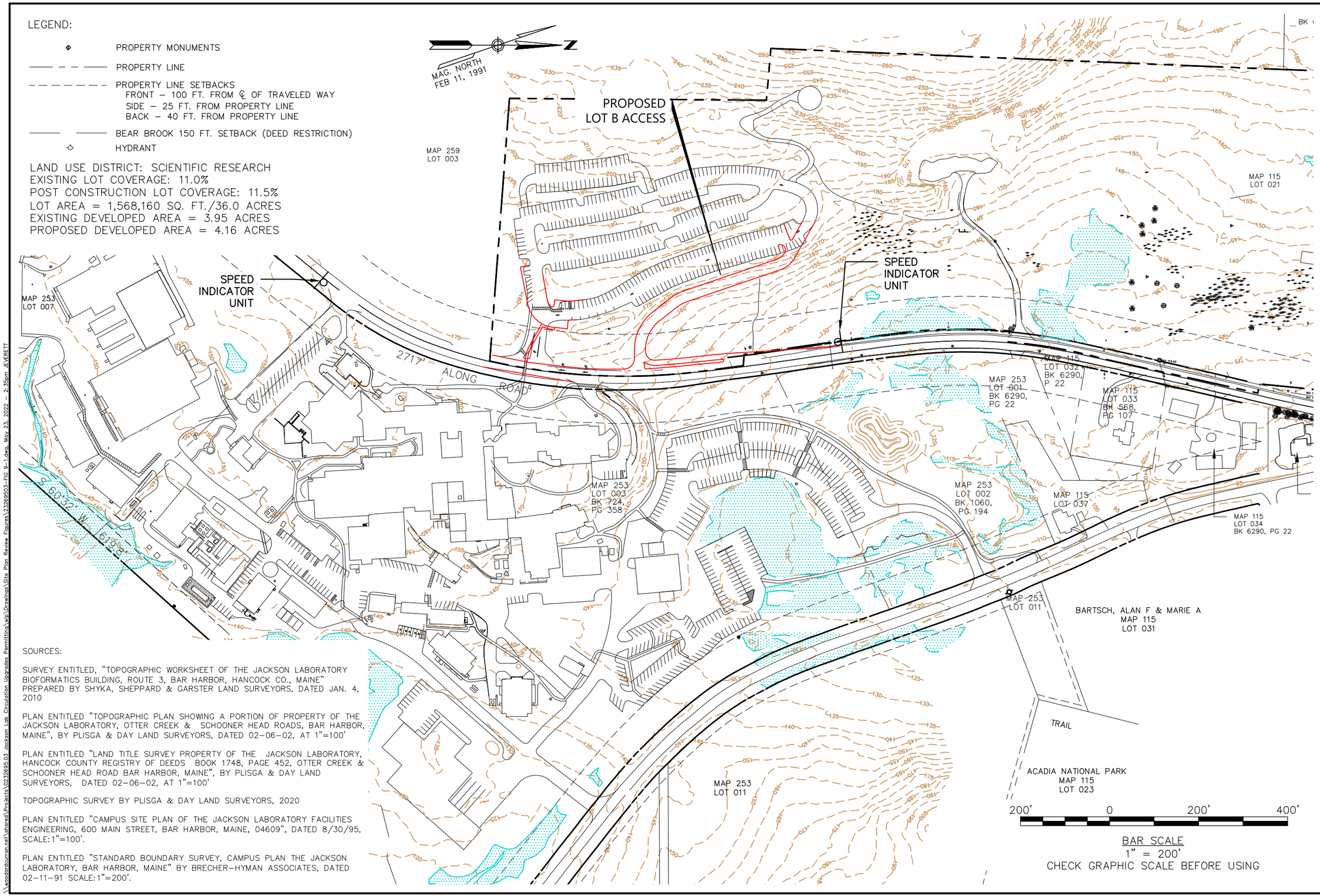
Parcel	Description	Proposed Project sq. ft.	Total Lot Area sq. ft.	Total Lot Area acres	Footprint Area sq. ft.	Footprint Area acres	Lot Coverage %
A	Main Campus		3,172,605	72.83	1,094,273	25.12	34.49%
B	Lot B and Woodland Cottages	9,365	1,550,736	35.60	181,315	4.16	11.69%
C	East side of Schooner Head Road		1,591,247	36.92	-	0.00	0.00%
D	High Seas Cottage		182,952	4.20	14,800	0.34	8.09%
	Totals		**6,497,540**	**149.55**	**1,290,388**	**29.62**	**19.81%**

*Added Lot 253-010 purchased 2011, corrected area based on boundary survey 2020

LEGEND:

- PROPERTY MONUMENTS
- PROPERTY LINE
- PROPERTY LINE SETBACKS
  - FRONT – 100 FT. FROM ℄ OF TRAVELED WAY
  - SIDE – 25 FT. FROM PROPERTY LINE
  - BACK – 40 FT. FROM PROPERTY LINE
- BEAR BROOK 150 FT. SETBACK (DEED RESTRICTION)
- HYDRANT

LAND USE DISTRICT: SCIENTIFIC RESEARCH
EXISTING LOT COVERAGE: 11.0%
POST CONSTRUCTION LOT COVERAGE: 11.5%
LOT AREA = 1,568,160 SQ. FT./36.0 ACRES
EXISTING DEVELOPED AREA = 3.95 ACRES
PROPOSED DEVELOPED AREA = 4.16 ACRES



SOURCES:

SURVEY ENTITLED, "TOPOGRAPHIC WORKSHEET OF THE JACKSON LABORATORY BIOFORMATICS BUILDING, ROUTE 3, BAR HARBOR, HANCOCK CO., MAINE" PREPARED BY SHYKA, SHEPPARD & GARSTER LAND SURVEYORS, DATED JAN. 4, 2010

PLAN ENTITLED "TOPOGRAPHIC PLAN SHOWING A PORTION OF PROPERTY OF THE JACKSON LABORATORY, OTTER CREEK & SCHOONER HEAD ROADS, BAR HARBOR, MAINE", BY PLISGA & DAY LAND SURVEYORS, DATED 02-06-02, AT 1"=100'

PLAN ENTITLED "LAND TITLE SURVEY PROPERTY OF THE JACKSON LABORATORY, HANCOCK COUNTY REGISTRY OF DEEDS BOOK 1748, PAGE 452, OTTER CREEK & SCHOONER HEAD ROAD BAR HARBOR, MAINE", BY PLISGA & DAY LAND SURVEYORS, DATED 02-06-02, AT 1"=100'

TOPOGRAPHIC SURVEY BY PLISGA & DAY LAND SURVEYORS, 2020

PLAN ENTITLED "CAMPUS SITE PLAN OF THE JACKSON LABORATORY FACILITIES ENGINEERING, 600 MAIN STREET, BAR HARBOR, MAINE, 04609", DATED 8/30/95, SCALE: 1"=100'.

PLAN ENTITLED "STANDARD BOUNDARY SURVEY, CAMPUS PLAN THE JACKSON LABORATORY, BAR HARBOR, MAINE" BY BRECHER-HYMAN ASSOCIATES, DATED 02-11-91 SCALE: 1"=200'.

80 Exchange Street, Suite 400
Bangor, Maine 04401
800. 564.2333 | www.woodardcurran.com
COMMITMENT & INTEGRITY DRIVE RESULTS
Woodard & Curran

SITE PLAN

DESIGNED BY: SSN
DRAWN BY: JDE
CHECKED BY: SSN
2326903-FIG 9-1.dwg

THE JACKSON LABORATORY
BAR HARBOR, MAINE

TOWN OF BAR HARBOR
SITE PLAN REVIEW APPLICATION
LOT B ACCESS

JOB NO: 232695.03
DATE: MAY 2022
SCALE: 1"=200'

FIGURE 9-1

\\woodardcurran.net\shared\Projects\0232695.03 Jackson Lab Circulation Upgrades Permitting\wip\Drawings\Site Plan Review Figures\2326903-FIG 9-1.dwg, May 23, 2022 – 2:35pm JEVERETT

MAP REFERENCES & NOTES:

1. BASE MAPPING INFORMATION TAKEN FROM A PLAN ORIGINAL SOURCE WOODARD-CURRAN ALT1 SITE-5-16-02 ENTITLED "THE JACKSON LABORATORY CAMPUS-SITE PROPERTY LINES" LATEST REVISION 03/09/2020.

2. EXISTING WETLAND LOCATIONS TAKEN FROM A PLAN ENTITLED "THE JACKSON LABORATORY BAR HARBOR, MAINE ROUTE 3 HOUSING PROJECT SITE PLAN, FIGURE 1-2, DATE: JAN. 2021 AND SCALE: 1" = 200', PREPARED BY WOODARD & CURRAN 80 EXCHANGE STREET, SUITE 400, BANGOR, MAINE 04401"

3. UNDERGROUND UTILITY, STRUCTURE AND FACILITY LOCATIONS DEPICTED AND NOTED HEREON HAVE BEEN COMPILED, IN PART, FROM RECORD MAPPING SUPPLIED BY THE RESPECTED UTILITY COMPANIES OR GOVERNMENT AGENCIES, FROM PAROL TESTIMONY AND FROM OTHER SOURCES. THESE LOCATIONS MUST BE CONSIDERED APPROXIMATE IN NATURE. ADDITIONALLY, OTHER SUCH FEATURES MAY EXIST ON THE SITE, THE EXISTENCE OF WHICH ARE UNKNOWN TO BARTON AND LOGUIDICE, LLC, THE SIZE, LOCATION AND EXISTENCE OF ALL SUCH FEATURES MUST BE FIELD DETERMINED AND VERIFIED BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION. DIG SAFE SYSTEM, INC.: 1- (888) 344-7233.

LEGEND:

- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- EXISTING WETLAND BOUNDARY
- APPROXIMATE TEST PIT LOCATION

PLAN

40 0 40 80 120 160

SCALE: 1"= 40'

PERMIT PLAN SET
NOT RELEASED FOR CONSTRUCTION

J:\4531-001\design_mb\circulation_lot b drive_pilot lot b drive layout Jackson.fetu.dgn

Barton & Loguidice
383 U.S. Route One
Suite 2A, Box 4
Scarborough, ME 04074
Phone: (207) 289-6147
www.BartonandLoguidice.com
Civil Engineering • Environmental Consulting • Land Surveying • Construction Management

PROJ. ENGINEER	DPL
PROJ. MANAGER	JQA
OFFICE REVIEW	KRG

REVISIONS

CIRCULATION & SAFETY UPGRADES

PREPARED FOR
THE JACKSON LABORATORY

EXISTING CONDITIONS PLAN

MAIN STREET (ROUTE 3) BAR HARBOR, ME

SCALE:	PROJECT	DATE	SHEET NO.	OF
AS NOTED	4531-001	05/10/22	1	1

Figure 9-3: Post-Development Site Plan (Project Design Set)

Figure 9-3.1 Circulation & Safety Upgrade Plans – Parking Lot B Access Relocation Cover Sheet

Figure 9-3.2 Lot B Access Grading Plan (Sheet 1 of 3)

Figure 9-3.3 Lot B Access Plan & Profile (Sheet 2 of 3)

Figure 9-3.4 Lot B Access E&S Notes and Details (Sheet 3 of 3)

CIRCULATION & SAFETY UPGRADE PLANS

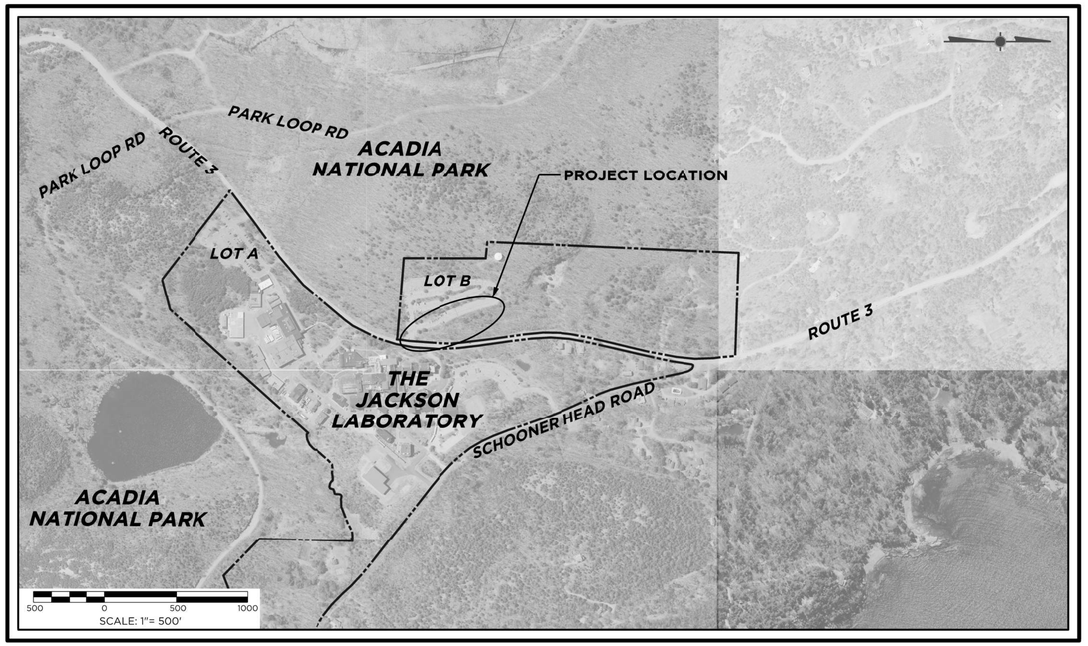
OF

PARKING LOT B ACCESS RELOCATION

BAR HARBOR, ME

PREPARED FOR

THE JACKSON LABORATORY
600 MAIN STREET
BAR HARBOR, ME 04609



LOCATION MAP
SCALE: 1" = 500'

LIST OF SHEETS

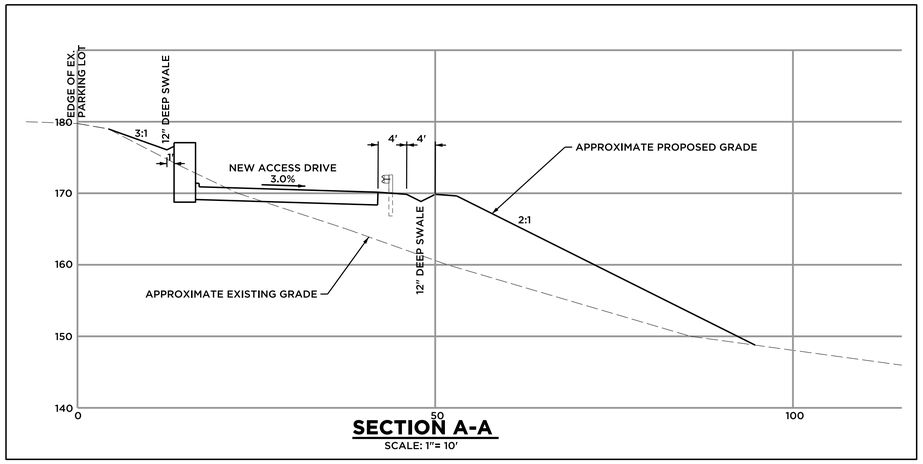
DATE: 04/20/22
REVISED:

LOT B ACCESS GRADING PLAN	1
LOT B ACCESS PLAN & PROFILE	2
LOT B ACCESS E&S NOTES AND DETAILS	3

PREPARED BY:

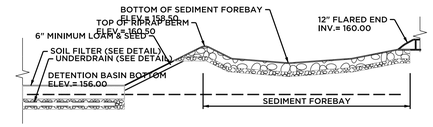
Barton & Loguidice
383 U.S. Route One
Suite 2A, Box 4
Scarborough, ME 04074
Phone: (207) 289-6147
www.BartonandLoguidice.com
Civil Engineering • Environmental Consulting • Land Surveying • Construction Management

Project No. 4531-001



SECTION A-A

SCALE: 1"= 10'



SEDIMENT FOREBAY SECTION

NOT TO SCALE

SEEDING & LANDSCAPING NOTES

SEED MIX	LOCATIONS	APPROX. AREA
MAINE DOT: METHOD #1 PARK MIXTURE	EXISTING DRIVEWAY & ROADWAY REMOVAL	7,800 S.F.
MAINE DOT: METHOD #3 ROADSIDE MIXTURE 3	STORMWATER BASIN BERM & 2:1 SLOPE ALONG ACCESS & BEHIND RETAINING WALL	34,200 S.F.
NEW ENGLAND PLANTS, INC NEW ENGLAND EROSION CONTROL/RESTORATION MIX FOR MOIST SITES	STORMWATER BASIN, SWALE ALONG ACCESS & SWALE ALONG ROUTE 3	10,800 S.F.
PER DOT'S MAINE NATIVE PLANTS FOR ROADSIDE RESTORATION: LITTLE BLUESTEM, DOWNY GOLDENROD & FLAX-LEAVED STIFF ASTER WILDFLOWER MIX	ISLAND AT ROUTE 3 TURN LANE	950 S.F.

SHRUBS

A MIXTURE OF NATIVE SHRUBS (PER DOT'S MAINE NATIVE PLANTS FOR ROADSIDE RESTORATION) EVENLY DISTRIBUTED FROM THE LIST BELOW SHALL BE PLANTED ON THE 2:1 SLOPE ON THE EAST SIDE OF THE NEW ACCESS DRIVE. THESE PLANTINGS SHALL BE SPREAD EQUALLY THROUGHOUT THE AREA WITH GROUPINGS OF NO MORE THAN THREE PLANTINGS TOGETHER TO ALLOW FOR THE RE-ESTABLISHMENT TO NATIVE CONDITIONS.

PROVIDE 100 - 3 GALLON SHRUBS (AREA= 19,000 S.F.+/-):

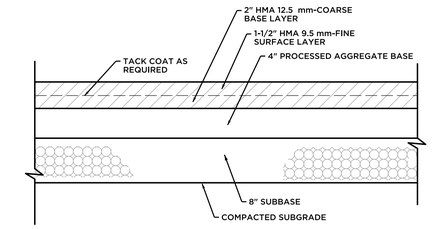
BAYBERRY	COMMON JUNIPER
BEARBERRY	WILD ROSE
LOWBUSH BLUEBERRY	DWARF SHADBUSH
BLACK CHOKEBERRY	SWEET-FERN
BLACK HUCKLEBERRY	VIBURNUM, SMOOTH ARROWWOOD

LOT B IDENTIFICATION SIGN

NOT TO SCALE

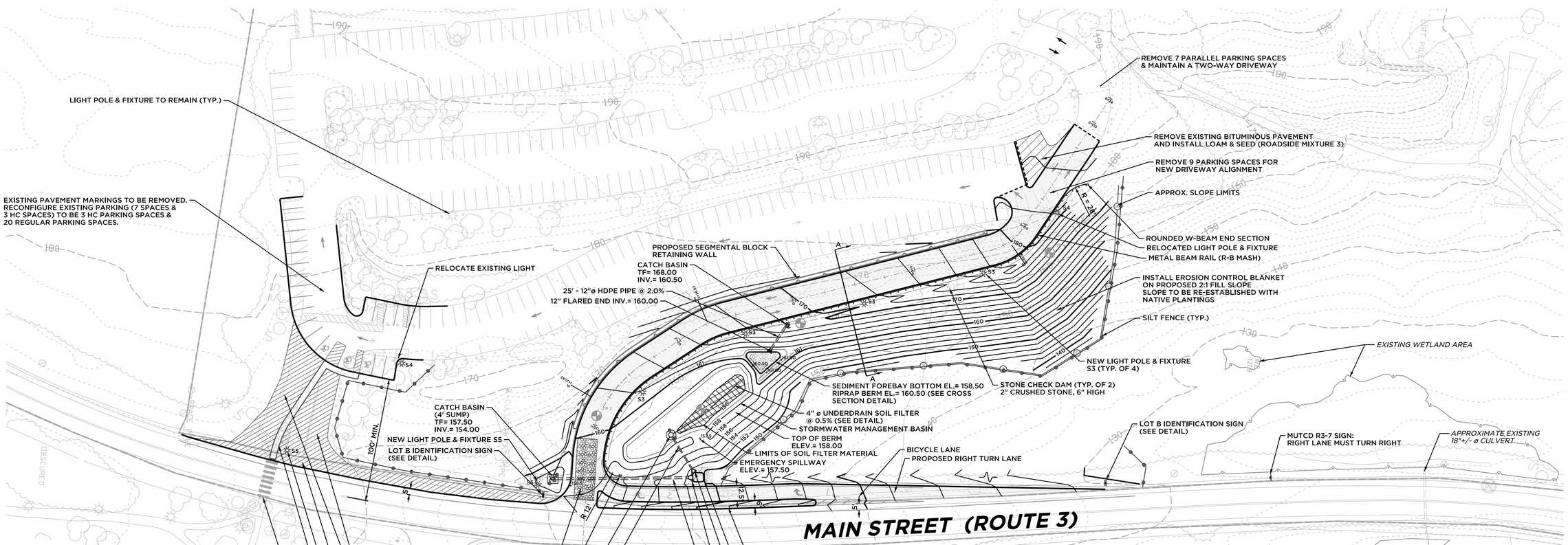
MAP REFERENCES & NOTES:

1. BASE MAPPING INFORMATION TAKEN FROM A PLAN ORIGINAL SOURCE WOODARD-CURRAN ALT1 SITE-5-16-02 ENTITLED "THE JACKSON LABORATORY CAMPUS-SITE PROPERTY LINES" LATEST REVISION 03/09/2020.
2. EXISTING WETLAND LOCATIONS TAKEN FROM A PLAN ENTITLED "THE JACKSON LABORATORY BAR HARBOR, MAINE ROUTE 3 HOUSING PROJECT SITE PLAN, FIGURE 1-2, DATE: JAN. 2021 AND SCALE: 1" = 200', PREPARED BY WOODARD & CURRAN 80 EXCHANGE STREET, SUITE 400, BANGOR, MAINE 04401"
3. UNDERGROUND UTILITY, STRUCTURE AND FACILITY LOCATIONS DEPICTED AND NOTED HEREON HAVE BEEN COMPILED, IN PART, FROM RECORD MAPPING SUPPLIED BY THE RESPECTED UTILITY COMPANIES OR GOVERNMENT AGENCIES, FROM PAROL TESTIMONY AND FROM OTHER SOURCES. THESE LOCATIONS MUST BE CONSIDERED APPROXIMATE IN NATURE. ADDITIONALLY, OTHER SUCH FEATURES MAY EXIST ON THE SITE, THE EXISTENCE OF WHICH ARE UNKNOWN TO BARTON AND LOGUIDICE, LLC, THE SIZE, LOCATION AND EXISTENCE OF ALL SUCH FEATURES MUST BE FIELD DETERMINED AND VERIFIED BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION. DIG SAFE SYSTEM, INC.: 1- (888) 344-7233.



BITUMINOUS DRIVEWAY

NOT TO SCALE



NOTE: A TOTAL OF 26 EXISTING PARKING SPACES WILL BE REMOVED AND 23 PROPOSED PARKING SPACES WILL BE ADDED, FOR A NET LOSS OF THREE SPACES.

PLAN

40 0 40 80 120 160

SCALE: 1"= 40'

LEGEND:

- EXISTING MINOR CONTOUR
- 150 EXISTING MAJOR CONTOUR
- 158 PROPOSED MINOR CONTOUR
- 160 PROPOSED MAJOR CONTOUR
- EXISTING WETLAND BOUNDARY
- PROPOSED SILT FENCE
- PROPOSED LIMIT OF FILL SLOPE
- CD PROPOSED UNDERDRAIN (CURTAIN DRAIN)
- TP 2 APPROXIMATE TEST PIT LOCATION

PERMIT PLAN SET
NOT RELEASED FOR CONSTRUCTION

J:\4531-001\design_rlk\installation_kit\ti-inline_plot kit\ti-inline layout jackson lab.dgn

Barton & Loguidice
383 U.S. Route One
Suite 2A, Box 4
Scarborough, ME 04074
Phone: (207) 289-6147
www.BartonandLoguidice.com
Civil Engineering • Environmental Consulting • Land Surveying • Construction Management

PROJ. ENGINEER	DPL
PROJ. MANAGER	JQA
OFFICE REVIEW	KRG
REVISIONS	
05/24/22	

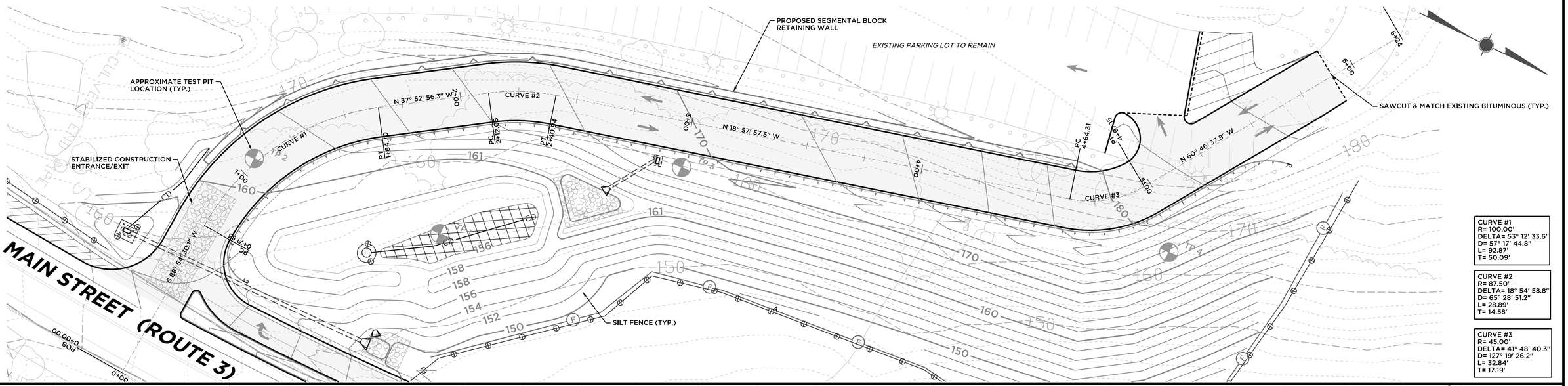
CIRCULATION & SAFETY UPGRADES

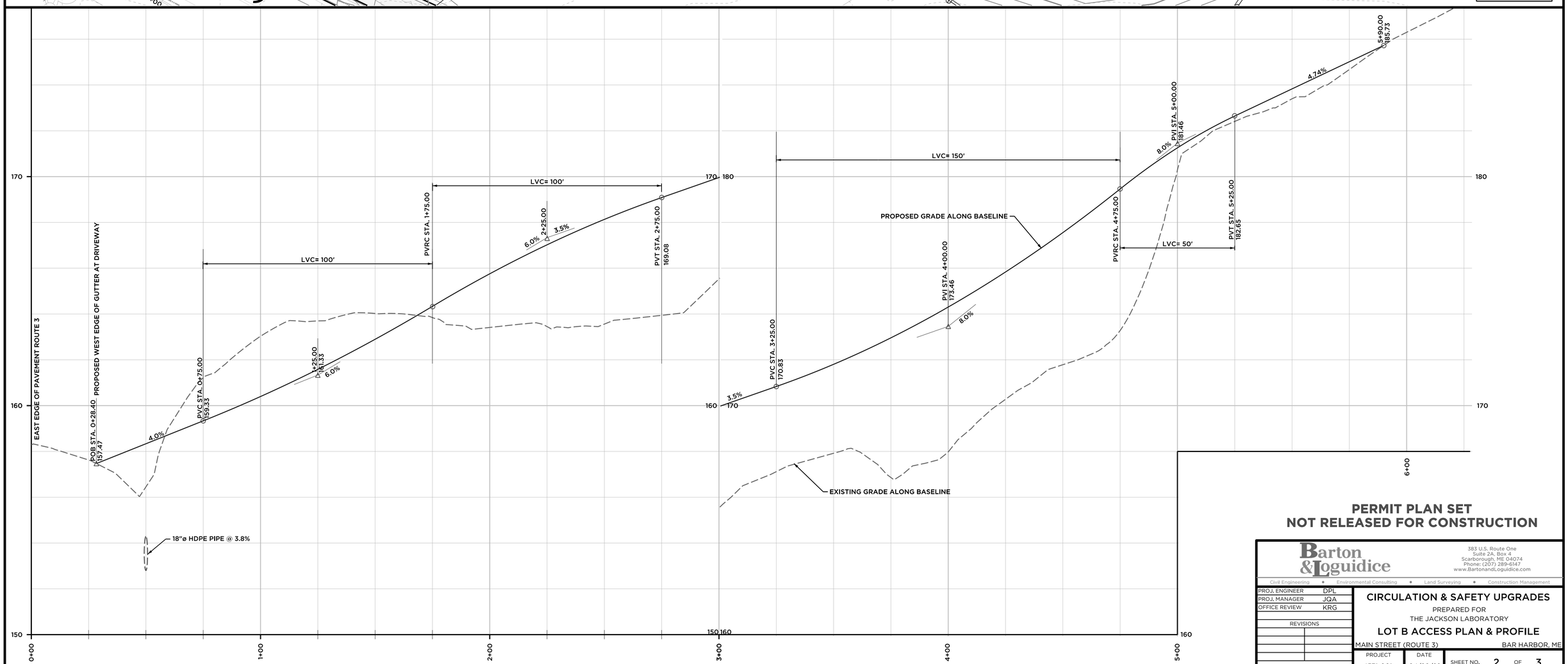
PREPARED FOR
THE JACKSON LABORATORY

LOT B ACCESS GRADING PLAN

MAIN STREET (ROUTE 3) BAR HARBOR, ME

SCALE:	PROJECT	DATE	SHEET NO.	OF
AS NOTED	4531-001	04/20/22	1	3





PERMIT PLAN SET
NOT RELEASED FOR CONSTRUCTION

Barton & Loguidice
383 U.S. Route One
Suite 2A, Box 4
Scarborough, ME 04074
Phone: (207) 289-6147
www.BartonandLoguidice.com
Civil Engineering • Environmental Consulting • Land Surveying • Construction Management

PROJ. ENGINEER	DPL
PROJ. MANAGER	JQA
OFFICE REVIEW	KRG
REVISIONS	
SCALE:	1" = 40'

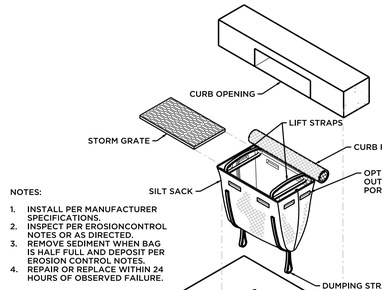
CIRCULATION & SAFETY UPGRADES

PREPARED FOR
THE JACKSON LABORATORY

LOT B ACCESS PLAN & PROFILE

MAIN STREET (ROUTE 3) — BAR HARBOR, ME

PROJECT	DATE	SHEET NO.	OF
4531-001	04/20/22	2	3

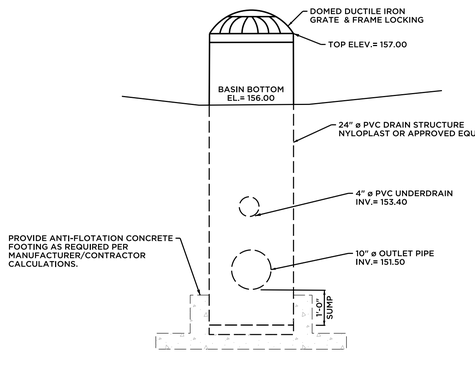


NOTES:

1. INSTALL PER MANUFACTURER SPECIFICATIONS.
2. INSPECT PER EROSIONCONTROL NOTES OR AS DIRECTED.
3. REMOVE SEDIMENT WHEN BAG IS HALF FULL AND DEPOSIT PER EROSION CONTROL NOTES.
4. REPAIR OR REPLACE AS EVER THIN 24 HOURS OF OBSERVED FAILURE.

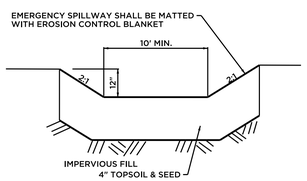
INLET SEDIMENT CONTROL DEVICE

NOT TO SCALE



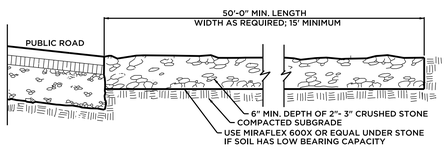
DETENTION BASIN OUTLET STRUCTURE

NOT TO SCALE



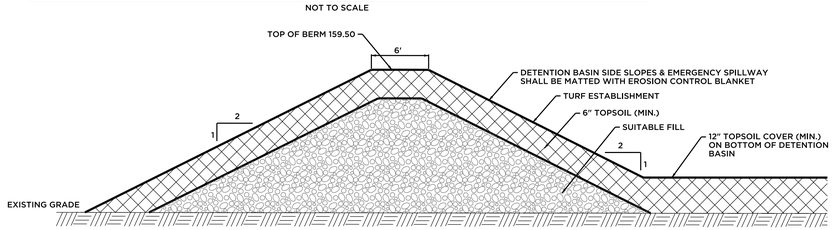
EMERGENCY SPILLWAY DETAIL

NOT TO SCALE



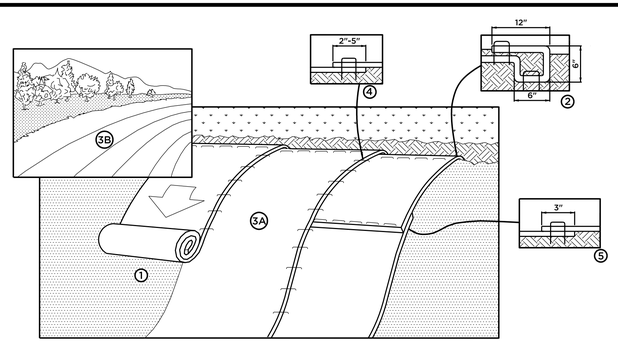
STABILIZED CONSTRUCTION ENTRANCE/EXIT PAD DETAIL

NOT TO SCALE



DETENTION BERM

NOT TO SCALE

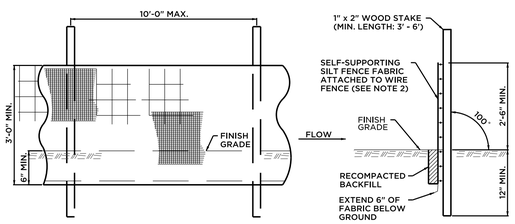


NOTES:

1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP'S), INCLUDING AND NECESSARY APPLICATION OF LIME, FERTILIZER AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP'S IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF RECP'S EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECO'S WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF RECP'S BACK OVER SEED AND COMPACTED SOIL. SECURE RECP'S OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKED SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE RECP'S.
3. ROLL THE RECP'S (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. RECP'S WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP'S MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL RECP'S MUST BE STAPLED WITH APPROXIMATELY 2"-5" OVERLAP DEPENDING ON RECP'S TYPE.
5. CONSECUTIVE RECP'S SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROX. 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE RECP'S WIDTH.

EROSION CONTROL BLANKET SLOPE INSTALLATION

NOT TO SCALE



ELEVATION

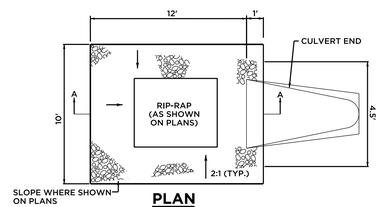
SECTION

NOTES:

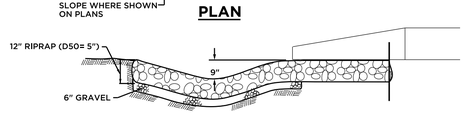
1. INSTALL SILT FENCE & WOOD STAKES AS RECOMMENDED BY MANUFACTURER.
2. SILT FENCE SUBJECT TO HEAVY LOADS SHALL BE REINFORCED WITH FARM FENCING & STEEL POSTS (0.5 # STEEL/L.F.). THE MINIMUM POST LENGTH SHALL BE 5'-0".
3. SILT FENCE FABRIC SHALL BE A PERVIOUS SHEET OF WOVEN PROPYLENE, NYLON, POLYESTER OR POLYETHYLENE FILAMENTS AND SHALL BE CERTIFIED BY THE MANUFACTURER OR SUPPLIER.

SILT FENCE

NOT TO SCALE



PLAN



SECTION A-A

RIPRAP SPLASH PAD

NOT TO SCALE

EROSION & SEDIMENTATION CONTROL NOTES:

IN ORDER TO EFFECTIVELY PREVENT AND CONTROL EROSION RELATED TO SOIL DISTURBANCE, THE FOLLOWING BEST MANAGEMENT PRACTICES (BMPS) SHALL BE EMPLOYED. ALL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH THE MAINE EROSION AND SEDIMENTCONTROL BEST MANAGEMENT PRACTICES (BMPs) MANUAL FOR DESIGNERS AND ENGINEERS, OCTOBER 2016.

1. TEMPORARY SOIL STABILIZATION BMPS

T EMPORARY MULCHING SHALL BE APPLIED IMMEDIATELY TO ANY AREAS THAT HAVE BEEN TEMPORARILY OR PERMANENTLY SEEDED. ANY DISTURBED SOIL WITHIN 100' OF A STREAM, WATER BODY OR WETLAND MUST RECEIVE TEMPORARY MULCH WITHIN 7 DAYS FOLLOWING DISTURBANCE AND BEFORE ANY STORM EVENT. ALL OTHER AREAS SHALL RECEIVE TEMPORARY MULCH WITHIN 14 DAYS OF DISTURBANCE. AREAS WHICH CANNOT BE SEEDED DURING THE GROWING SEASON SHALL BE MULCHED FOR OVER-WINTER PROTECTION. THE FOLLOWING ARE ACCEPTABLE TEMPORARY MULCHING METHODS:

H AY OR STRAW MULCHES NEED TO BE AIR-DRIED, FREE OF UNDESIRABLE SEEDS AND COARSE MATERIALS. APPLICATION RATE MUST BE 2 BALES (70-90 POUNDS) PER 1000 SQ FT OR 1.5 TO 2 TONS (90-100 BALES) PER ACRE TO COVER 75-90% OF THE GROUND SURFACE. HAY OR STRAW CAN BE DRIVEN INTO THE GROUND WITH TRACKED EQUIPMENT IF SLOPES ARE LESS THAN 3%, OR CAN BE ANCHORED WITH JUTE, WOOD FIBER OR PLASTIC NETTING ON STEEPER SLOPES.

EROSION CONTROL MIX IS A DENSE, PROCESSED MIXTURE OF INTERTWINING SHREDDED WOOD FRAGMENTS AND GRIT THAT WILL STABILIZE A SITE IMMEDIATELY WITHOUT VEGETATION. EROSION CONTROL MIX CONSISTS PRIMARILY OF ORGANIC MATERIAL MANUFACTURED ON OR OFF THE PROJECT SITE AND MAY INCLUDE: SHREDDED BARK, STUMP GRINDINGS, OR PARTIALLY COMPOSTED WOOD PRODUCTS. EROSION CONTROL MIX CAN BE USED AS A STAND-ALONE REINFORCEMENT ON SLOPES OF 2 HORIZONTAL TO 1 VERTICAL OR LESS AND DRAINING IN SHEET FLOW. IT CAN BE PLACED EVENLY WITH A HYDRAULIC BUCKET, WITH A PNEUMATIC BLOWER OR BY HAND, AND MUST PROVIDE 100% SOIL COVERAGE. IT CAN BE USED ON FROZEN GROUND, FORESTED AREAS, ON CUT AND FILL SLOPES AND ON ROADSIDE EMBANKMENTS.

EROSION CONTROL MIX MUST BE WELL-GRADED WITH AN ORGANIC COMPONENT THAT IS BETWEEN 50 AND 100% OF DRY WEIGHT, AND THAT IS COMPOSED OF FIBROUS AND ELONGATED FRAGMENTS. THE MINERAL PORTION OF THE MIX SHOULD BE NATURALLY INCLUDED IN THE PRODUCT WITH NO LARGER ROCKS (>4") OR LARGE AMOUNTS OF FINES (SILTS AND CLAYS). IN STUMP GRINDING, THE MINERAL SOIL ORIGINATES FROM THE ROOT BALL AND SHOULD NOT BE REMOVED BEFORE GRINDING. THE MIX SHOULD BE FREE OF REFUSE, MATERIAL TOXIC TO PLANT GROWTH OR UNSUITABLE MATERIAL (BARK CHIPS, GROUND CONSTRUCTION DEBRIS OR REPROCESSED WOOD PRODUCTS).

WHEN USED AS MULCH, THE THICKNESS OF THE EROSION CONTROL MIX IS BASED UPON THE FOLLOWING:

LENGTH OF SLOPE	3:1 SLOPE OR LESS	BETWEEN 2:1 AND 3:1 SLOPE
LESS THAN 20 FT	2.0 IN.	4.0 IN.
BETWEEN 20 - 60 FT	3.0 IN.	5.0 IN.
BETWEEN 60 -100 FT	4.0 IN.	6.0 IN.

CHEMICAL MULCHES AND SOIL BINDERS MAY BE USED AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL CONSULT WITH THE MANUFACTURER TO DETERMINE ADEQUATE APPLICATION RATES AND METHODS.

EROSION CONTROL BLANKETS AND MATS SHALL BE USED ON STEEP SLOPES AND IN THE BOTTOM OF GRASSED WATERWAYS, OR AS OTHERWISE DIRECTED BY THE ENGINEER. THE MAT SHALL BE INSTALLED WITH FIRM CONTINUOUS CONTACT WITH THE SOIL AND STAPLED ACCORDING TO THE MANUFACTURER'SRECOMMENDATIONS.

TEMPORARY MULCH SHALL BE INSPECTED FOLLOWING ANY SIGNIFICANT RAINFALL EVENT. IF LESS THAN 90% OF THE SOIL SURFACE IS COVERED BY MULCH, ADDITIONAL MULCH SHALL BE IMMEDIATELY APPLIED. ERISION CONTROL MATS AND MULCH ANCHORING MUST BE INSPECTED AFTER RAINFALL EVENTS FOR DISLOCATION OR FAILURE, AND REPAIRED IMMEDIATELY. INSPECTIONS SHALL TAKE PLACE UNTIL 95% OF THE SOIL SURFACE IS COVERED WITH PERMANENT VEGETATION. WHERE MULCH IS USED WITH ORNAMENTAL PLANTINGS, INSPECT PERIODICALLY THROUGHOUT THE YEAR TO DETERMINE IF MULCH IS MAINTAINING COVERAGE OF THE SOIL SURFACE, AND REPAIR AS NEEDED.

TEMPORARY VEGETATION SHALL BE ESTABLISHED ON SOILS THAT WILL NOT BE BROUGHT TO FINAL GRADE FOR A PERIOD OF MORE THAN 30 DAYS. IF TEMPORARY VEGETATION CANNOT BE ESTABLISHED PRIOR TO OCTOBER 15, TEMPORARY MULCH SHALL BE APPLIED THROUGH THE WINTER AND TEMPORARY VEGETATION SHALL BE PLANTED AT THE BEGINNING OF THE GROWING SEASON THE FOLLOWING YEAR. TO PREPARE THE SEEDBED, THE CONTRACTOR SHALL APPLY FERTILIZER AT A RATE OF 600 POUNDS PER ACRE OF 10-10-10 (N-P205-K20) OR EQUIVALENT AND LIMESTONE AT A RATE OF 3 TONS PER ACRE, IF NECESSARY. LOOSEN SOIL TO A DEPTH OF 2 INCHES IN AREAS THAT HAVE BEEN COMPACTED BY CONSTRUCTION ACTIVITIES. GRASS SEED SHALL BE SELECTED BASED UPON THE TIME OF YEAR THE PLANTING WILL TAKE PLACE AS SUMMARIZED IN THE FOLLOWING TABLE:

SEED	LB. PER ACRE	RECOMMENDED SEEDING DATES
WINTER RYE	112	8/15 - 10/1
OATS	80	4/1 - 7/1 8/15 - 9/15
ANNUAL RYEGRASS	40	4/1 - 7/1

TEMPORARY SEEDING SHALL BE PERIODICALLY INSPECTED TO MAINTAIN AT LEAST 95% VEGETATIVE COVER OF SOIL SURFACE. IF ANY EVIDENCE OF EROSION OR SEDIMENTATION IS APPARENT, REPAIRS SHALL BE MADE AND OTHER TEMPORARY MEASURES SHALL BE USED IN THE INTERIM SUCH AS TEMPORARY MULCH, FILTER BARRIERS, ETC.

2. SEDIMENT BARRIER BMPS

TEMPORARY SEDIMENT BARRIERS ARE INSTALLED ACROSS OR ALONG THE TOE OF A SLOPE AND INCLUDE ANY OF THE FOLLOWING:

FILTER BARRIER FENCE, ALSO CALLED SILT FENCE, SHALL BE INSTALLED WHERE SHOWN ON THE PLANS AND IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. THE FILTER FABRIC SHALL BE A PERVIOUS SHEET OF PROPYLENE, NYLON, POLYESTER OR ETHYLENE YARN AND SHALL PROVIDE A MINIMUM OF 6 MONTHS USABLE CONSTRUCTION LIFE INCLUDING PROTECTION AGAINST ULTRA-VIOLET LIGHT. THE HEIGHT OF THE FENCE SHALL NOT EXCEED 36 INCHES INSTALLED AND POST SPACING SHALL NOT EXCEED 6 FEET. JOINTS IN THE FENCE SHALL BE AVOIDED TO THE EXTENT POSSIBLE, AND IF NECESSARY SHALL BE SPLICED TOGETHER AT A SUPPORT POST WITH A MINIMUM 6 INCH OVERLAP. A TRENCH SHALL BE EXCAVATED APPROXIMATELY 4 INCHES WIDE AND 4 INCHES DEEP, AND THE BOTTOM 6-8 INCHES OF FABRIC SHALL BE "TOED-IN" TO THE TRENCH AND COMPACTED. THE TRENCH SHOULD BE UPHILL OF THE FABRIC PRIOR TO BURIAL.

EROSION CONTROL MIX BERMS ARE LINEAR BARRIERS COMPOSED OF EROSION CONTROL MIX AS SPECIFIED ABOVE. THE BERM MUST BE A MINIMUM OF 12 INCHES TALL AND 24 INCHES WIDE AT THE BASE IF UPHILL SLOPES ARE LESS THAN 5%. STEEPER SLOPES OR SLOPES GREATER THAN 20 FEET LONG MAY REQUIRE A LARGER WIDTH BERM. EROSION CONTROL MIX BERMS AT THE BASE OF A LONG OR STEEP SLOPE MAY ALSO REQUIRE A FILTER FENCE TO BE INSTALLED ON THE DOWNHILL SIDE OF THE BERM TO PROVIDE ADDITIONAL STABILIZATION AGAINST HIGH RUNOFF FLOWS.

CONTINUOUS CONTAINED BERMS, WHICH ARE ALSO REFERRED TO AS A FILTER SOCK, PROVIDES ADDITIONAL STABILITY TO AN EROSION CONTROL MIX BERM AND SHOULD BE USED IN FROZEN GROUND CONDITIONS OR IN AREAS THAT RECEIVE CONCENTRATED FLOWS.

SEDIMENT BARRIERS SHALL BE INSPECTED AFTER ANY SIGNIFICANT RAINFALL EVENT AND REPAIRED IMMEDIATELY IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THE BARRIERS. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR EDGES OF THE BARRIER, OR IF LARGE VOLUMES OF WATER ARE IMPOUNDED BEHIND THE BARRIER, IT MAY BE NECESSARY TO REPLACE THE BARRIER WITH A TEMPORARY STONE CHECK DAM. SEDIMENT SHALL BE REMOVED ONCE IT REACHES HALF THE BARRIER HEIGHT. AFTER THE BARRIER IS REMOVED, ANY REMAINING SILT SHALL EITHER BE REMOVED OR GRADED TO CONFORM WITH THE EXISTING TOPOGRAPHY AND VEGETATED.

3. TEMPORARY CHECK DAMS

STONE CHECK DAMS SHALL BE INSTALLED IN SWALES OR DRAINAGE DITCHES TO REDUCE STORMWATER VELOCITIES AS SHOWN ON THE PLANS. STONE CHECK DAMS ARE NOT EFFECTIVE IN REMOVING SEDIMENT AND SHOULD BE USED IN CONJUNCTION WITH SEDIMENT BARRIERS IDENTIFIED ABOVE. TEMPORARY CHECK DAMS MAY BE LEFT IN PLACE PERMANENTLY IN MOST CASES. CHECK DAMS SHOULD BE NO HIGHER THAN 24 INCHES, AND THE CENTER OF THE CHECK DAM MUST BE AT LEAST 6 INCHES LOWER THAN THE OUTSIDE EDGES. CHECK DAMS SHOULD BE SPACED SUCH THAT THE CREST OF THE DOWNSTREAM CHECK DAM IS AT THE SAME ELEVATION AS THE TOE OF THE UPSTREAM CHECK DAM. CHECK DAMS IN A DRAINAGE DITCH OR WATERWAY SHOULD BE INSTALLED PRIOR TO DIRECTING RUNOFF TO THEM.

4. STORM DRAIN INLET PROTECTION

STORM DRAIN INLETS THAT ARE MADE OPERATIONAL BEFORE THEIR DRAINAGE AREA IS STABILIZED SHALL BE PROTECTED WITH A FILTER UNTIL THE DRAINAGE AREA IS EITHER PAVED OR STABILIZED WITH 95% VEGETATIVE GROWTH. THE FOLLOWING ARE ACCEPTABLE BMPS ASSOCIATED WITH STORM DRAIN INLETPROTECTION:

HAY BALE OR SILT FENCE INLET STRUCTURE CONSISTS OF HAY BALES OR SILT FENCE CONFIGURED AROUND A CATCH BASIN INLET FRAME AND INSTALLED ACCORDING TO THE METHODS OUTLINED ABOVE. THIS METHOD IS SUITABLE FOR OPEN PIPE (CULVERT) INLETS, FIELD INLETS OR ROAD INLETS THAT HAVE NOT YET BEEN PAVED.

MANUFACTURED SEDIMENT FILTERS ARE THE PREFERRED METHOD FOR PROTECTING CATCH BASIN INLETS IN PAVED OR GRAVEL ROADWAYS. THE FILTERS TYPICALLY CONSIST OF A FABRIC OR OTHER PERVIOUS MATERIAL THAT IS PLACED ABOVE OR BELOW THE GRATE THAT TRAPS SEDIMENT ON THE SURFACE AND ALLOWS WATER TO FLOW THROUGH THE GRATE. CONSIDERATIONS SUCH AS WEATHER CONDITIONS, SLOPES, TRIBUTARY WATERSHED AREA AND EXPECTED SEDIMENT ACCUMULATION SHOULD BE FACTORED INTO MAKING A DECISION ON ANY PARTICULAR PRODUCT, AND THE MANUFACTURER'S RECOMMENDATIONS ON INSTALLATION AND MAINTENANCE SHALL BE STRICTLY ADHERED TO.

5. STABILIZED CONSTRUCTION ENTRANCE/EXIT

TO REDUCE THE TRACKING OF SEDIMENT ONTO ROADWAYS, A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE INSTALLED AT ALL POINTS OF EGRESS WHERE VEHICLES MAY TRAVEL FROM THE PROJECT SITE TO A PUBLIC ROAD OR OTHER PAVED AREA. THE STONE PAD SHALL CONSIST OF A MINIMUM 6-INCH DEPTH OF 2-3 INCH CRUSHED STONE, AND SHALL BE PLACED ON A GEOTEXTILE FABRIC. THE PAD SHALL EXTEND AT LEAST 50 FEET INTO THE PROJECT SITE AND BE A MINIMUM OF 15 FEET WIDE. THE EXIT SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY, AND THE CONTRACTOR SHALL SWEEP OR WASH PAVEMENT AT EXITS THAT HAVE EXPERIENCED ANY MUD-TRACKING.

6. DUST CONTROL

THE CONTRACTOR IS RESPONSIBLE FOR CONTROLLING DUST ON THE PROJECT SITE AND ON ADJACENT ROADWAYS. EXPOSED SOIL SURFACES SHALL BE MOISTENED PERIODICALLY WITH ADEQUATE WATER TO CONTROL DUST. GRAVEL SURFACES SHALL EITHER BE TREATED WITH AN APPLICATION OF CALCIUM CHLORIDE OR COVERED WITH CRUSHED STONE IF DUST CONTROL BECOMES DIFFICULT WITH NORMAL WATER APPLICATIONS.

7. LAND GRADING AND SLOPE PREPARATION

GRADING SHALL BE PLANNED SO AS TO MINIMIZE THE LENGTH OF TIME BETWEEN INITIAL SOIL EXPOSURE AND FINAL GRADING. ON LARGE PROJECTS THIS SHOULD BE ACCOMPLISHED BY PHASING THE OPERATION AND COMPLETING THE FIRST PHASE UP TO FINAL GRADING AND SEEDING BEFORE STARTING THE NEXT PHASE. ANY EXPOSED AREA THAT WILL NOT BE FINISH GRADED WITHIN 14 DAYS SHALL BE TREATED WITH MULCH OR PLANTED WITH TEMPORARY VEGETATION. PROVISIONS SHALL BE MADE TO SAFELY CONVEY SURFACE RUNOFF TO STORM DRAINS, PROTECTED OUTLETS OR TO STABLE WATER COURSES TO ENSURE THAT SURFACE RUNOFF WILL NOT DAMAGE SLOPES OR OTHER GRADED AREAS. CUT AND FILL SLOPES THAT ARE TO BE STABILIZED WITH GRASS SHALL NOT BE STEEPER THAN 2:1. AREAS TO BE FILLED SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS OR OTHER OBJECTIONABLE MATERIALS. AREAS SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 INCHES PRIOR TO PLACEMENT OF TOPSOIL. ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES AND CONDUITS, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES. ALL FILLS SHALL BE PLACED AND COMPACTED IN LAYERS NOT TO EXCEED 8 INCHES IN THICKNESS. FILL MATERIAL SHALL BE FREE OF STUMPS, BUILDING DEBRIS AND OTHER OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY LIFTS. FROZEN MATERIAL OR SOFT, MUCKY OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILL SLOPES OR STRUCTURAL FILLS. FILL SHALL NOT BE PLACED ON A FROZEN FOUNDATION. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED APPROPRIATELY. ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY FOLLOWING FINISHED GRADING.

8. TOPSOIL

IF POSSIBLE, TOPSOIL SHALL BE STOCKPILED ON THE PROJECT SITE AND REUSED. HIGH QUALITY TOPSOIL SHALL BE FRIABLE AND LOAMY (LOAM, SANDY LOAM, SILT LOAM, SANDY CLAY LOAM, CLAY LOAM), AND SHALL BE FREE OF DEBRIS, TRASH, STUMPS, ROCKS, ROOTS AND NOXIOUS WEEKS. AFTER THE AREAS TO BE TOPSOILED HAVE BEEN BROUGHT TO GRADE, AND IMMEDIATELY PRIOR TO SPREADING THE TOPSOIL, THE SUBGRADE SHALL BE LOOSENED BY SCARIFYING TO A DEPTH OF AT LEAST 2 INCHES TO ENSURE BONDING WITH SUBSOIL. THE TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED TO A MINIMUM COMPACTED DEPTH OF 4 INCHES. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS SHALL BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS. IT IS NECESSARY TO COMPACT THE TOPSOIL ENOUGH TO ENSURE GOOD CONTACT WITH THE UNDERLYING SOIL, BUT UNDUE COMPACTION IS TO BE AVOIDED.

9. PERMANENT VEGETATION

TO PREPARE THE SEEDBED, APPLY 10-20-20 FERTILIZER AT A RATE OF 800 POUNDS PER ACRE AND GROUND LIMESTONE AT A RATE OF 3 TONS PER ACRE. WORK THE FERTILIZER AND LIMESTONE INTO THE TOPSOIL TO A DEPTH OF 4 INCHES AND REMOVE ANY STONES, ROOTS OR OTHER VISIBLE DEBRIS. SELECT A SEED MIXTURE THAT IS APPROPRIATE FOR THE SOIL TYPE AND MOISTURE CONTENT AS FOUND AT THE SITE, AND FOR THE AMOUNT OF SUN EXPOSURE AND FOR LEVEL OF USE. REFER TO THE USDA SOIL CONSERVATION SERVICE OR THE LOCAL SOIL AND WATER CONSERVATION DISTRICT FOR APPROPRIATE SEED MIXTURES. APPLY SEED UNIFORMLY IN ACCORDANCE WITH SUPPLIER RECOMMENDATIONS AND IMMEDIATELY COVER WITH MULCH AS DESCRIBED IN THE TEMPORARY MULCHING SECTION OF THIS PLAN.

HYDROSEEDING SHALL BE DONE IN ACCORDANCE WITH SUPPLIERS RECOMMENDATIONS.

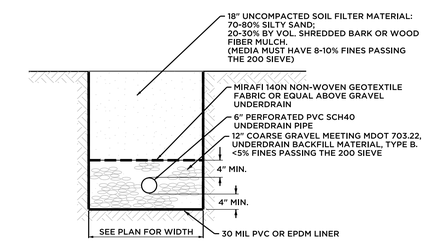
SOD STRIPS SHALL BE LAID AT RIGHT ANGLES TO DIRECTION OF SLOPE OR FLOW OF WATER STARTING AT LOWEST ELEVATION. JOINTS SHALL BE STAGGERED, AND ALL STRIPS SHALL BE ROLLED OR TAMPED INTO PLACE. ON SLOPES, SOD SHALL BE ANCHORED WITH STAPLES, WIRE OR PINS. IRRIGATE SODDED AREA IMMEDIATELY AFTER INSTALLATION.

10. PERMANENT MULCHING

PERMANENT MULCH IS A LONG TERM COVER THAT PROVIDES A GOOD BUFFER AROUND DISTURBED AREAS. THE EROSION CONTROL MIX SHALL CONSIST PRIMARILY OF ORGANIC MATERIAL AND MAY INCLUDE SHREDDED BARK, STUMP GRINDINGS OR COMPOSTED BARK. WOOD CHIPS, GROUND CONSTRUCTION DEBRIS, REPROCESSED WOOD PRODUCTS OR BARK CHIPS ARE NOT ACCEPTABLE. THE EROSION CONTROL MIX SHALL CONTAIN A WELL-GRADED MIXTURE OF PARTICLE SIZES AND MAY CONTAIN ROCKS LESS THAN 4 INCHES IN DIAMETER. EROSION CONTROL MIX MUST BE FREE OF REFUSE, PHYSICAL CONTAINMANTS AND MATERIAL TOXIC TO PLANT GROWTH.

11. RIPRAP SLOPE STABILIZATION

RIPRAP STONE SHALL CONSIST OF SUB-ANGULAR FIELD STONE OR ROUGH UNHEWN QUARRY STONE OF APPROXIMATELY RECTANGULAR SHAPE. THE DEPTH OF STONE SHALL BE A MINIMUM OF 2.2 TIMES THE MAXIMUM STONE DIAMETER. A GRAVEL OR GEOTEXTILE FILTER BLANKET SHALL BE PLACED BETWEEN THE RIPRAP AND UNDERLYING SOIL SURFACE. GRAVEL FILTER BLANKETS SHALL MEET MDOT TYPE-C UNDERDRAIN MATERIAL SPECIFICATIONS AND BE AT LEAST 6 INCHES THICK. GEOTEXTILE FILTER BLANKETS SHALL BE SPECIFIED BASED ON SITE CONDITIONS. RIPRAP SLOPES SHALL BE TOED INTO THE BASE OF THE EMBANKMENT BY EXCAVATING A TRENCH AT THE BOTTOM OF THE SLOPE AND INSTALLING A STABLE BASE OF RIPRAP TO GRADE.



NOTES

1. UNDERDRAIN SOIL FILTER SHALL BE SEEDED WITH A DROUGHT-TOLERANT GRASS SEED MIX AND LIGHTLY RAKED INTO THE SOIL MEDIA FILTER SURFACE. A LIGHT HAY MULCH APPLICATION WILL HELP IMPROVE SEED ESTABLISHMENT.
2. CONTRACTOR SHALL BLEND ALL SPECIFIED SOIL FILTER MEDIA MATERIALS OFF-SITE AND PRIOR TO PLACEMENT.
3. FILTER SOIL MEDIA AND UNDERDRAIN BEDDING MATERIAL MUST BE COMPACTED TO BETWEEN 90% AND 92% STANDARD PROCTOR. THE BED SHOULD BE INSTALLED IN AT LEAST 2 LIFTS OF 9" TO PREVENT POCKETS OF LOOSE MEDIA.
4. CONTRACTOR SHALL LIMIT COMPACTION OF SUBGRADE OR SOIL FILTER AREAS DURING EXCAVATION.
5. SOIL FILTER MEDIA SHALL BE PLACED AND VERY LIGHTLY COMPACTED PRIOR TO PLACEMENT OF MULCH. THE SOIL FILTER MEDIA SURFACE SHALL BE FLAT IN ORDER TO REDUCE THE POTENTIAL FOR CHANNELING WATER ACROSS THE SURFACE MEDIA.

SOIL FILTER & UNDERDRAIN DETAIL

NOT TO SCALE

EROSION & SEDIMENTATION CONTROL PLAN:

1. ALL EROSION AND CONTROL MEASURES WILL BE INSTALLED AT THE PROJECT SITE PRIOR TO CONSTRUCTION WHEREEVER POSSIBLE.
2. AN ANTI-TRACKING APRON WILL BE INSTALLED AT THE ENTRANCE TO THE CONSTRUCTION SITE IN ORDER TO PREVENT THE TRANSPORT OF SEDIMENTS OFF THE CONSTRUCTION SITE BY TRUCK AND CONSTRUCTION EQUIPMENT TRAFFIC.
3. AN EROSION CONTROL SYSTEM SHALL BE INSTALLED AROUND ALL ON-SITE STOCKPILES OF SOIL.
4. DUST CONTROL MEASURES WILL BE APPLIED DURING THE CONSTRUCTION PERIOD UNTIL ALL DISTURBED AREAS HAVE BEEN STABILIZED, AS REQUIRED BY FIELD CONDITIONS.
5. TEMPORARY SEDIMENT TRAPS WILL BE INSTALLED AS NECESSARY DURING CONSTRUCTION ACTIVITIES. ALL TEMPORARY STORMWATER DISCHARGE WILL BE DIRECTED TO THESE TRAPS.
6. ALL EROSION CONTROL DEVICES SHALL BE MAINTAINED OR REPLACED DURING CONSTRUCTION AS NECESSARY OR AS REQUIRED BY THE ENGINEER OR TOWN.
7. ALL DISTURBED AREAS OUTSIDE OF PAVED AND STONE AREAS ARE TO RECEIVE A MINIMUM OF 4" OF TOPSOIL AND SEEDED.

PERMIT PLAN SET
NOT RELEASED FOR CONSTRUCTION

Barton & Loguidice
383 U.S. Route One
Suite 2A, Box 4
Scarborough, ME 04074
Phone: (207) 289-6147
www.BartonandLoguidice.com
Civil Engineering • Environmental Consulting • Land Surveying • Construction Management

PROJ. ENGINEER	DPL
PROJ. MANAGER	JQA
OFFICE REVIEW	KRG
REVISIONS	
SCALE:	1" = 40'

CIRCULATION & SAFETY UPGRADES
PREPARED FOR
THE JACKSON LABORATORY
LOT B ACCESS E&S NOTES AND DETAILS
MAIN STREET (ROUTE 3) BAR HARBOR, ME

PROJECT	DATE	SHEET NO.
4531-001	04/20/22	3 OF 3

STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY
177 STATE HOUSE STATION
AUGUSTA, MAINE 04333

JANET T. MILLS
GOVERNOR

AMANDA E. BEAL
COMMISSIONER

March 18, 2020

Jennifer Hodgens
Woodard & Curran
One Merchants Plaza, Suite 501
Bangor, ME 04401

Via email: jhodgens@woodardcurran.com

Re: Rare and exemplary botanical features in proximity to: #L15327-26 The Jackson Laboratory, Multi-Unit Residential Project, Bar Harbor, Maine

Dear Ms. Hodgens:

I have searched the Maine Natural Areas Program's Biological and Conservation Data System files in response to your request received February 18, 2020, with details provided February 20, 2020 for information on the presence of rare or unique botanical features documented from the vicinity of the project in Bar Harbor, 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.

The Jackson Laboratory Property includes areas designated as Pitch Pine Woodland, a rare natural community type in Maine (see table below, attached map and factsheet). If any work is planned in those mapped Pitch Pine Woodland areas located west of Schooner Head Rd., please contact MNAP for further recommendations to avoid or minimize adverse impacts. It appears that there may also be additional Pitch Pine Woodland in areas of the current Multi-unit Residences project, east of Schooner Head Road at Tax Map 253 Lot 11. MNAP recommends a field survey by a qualified field biologist to the project area to survey for Pitch Pine Woodland. Please contact me via email, kristen.puryear@maine.gov, if you would like to schedule an MNAP field visit.

Feature	State Status	State Rank	Global Rank	Occurrence Rank	Site / Notes
Pitch Pine Woodland	N/A	S3	G2	E Extant	West of Compass Harbor
Pitch Pine Woodland	N/A	S3	G2	H Historical	Huguenot Head

If a field survey of the project area is conducted, please also refer to the enclosed supplemental information regarding rare and exemplary botanical features documented to occur in the vicinity of the project site. The list

MOLLY DOCHERTY, DIRECTOR
MAINE NATURAL AREAS PROGRAM
90 BLOSSOM LANE, DEERING BUILDING

PHONE: (207) 287-8044
WWW.MAINE.GOV/DACF/MNAP

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.

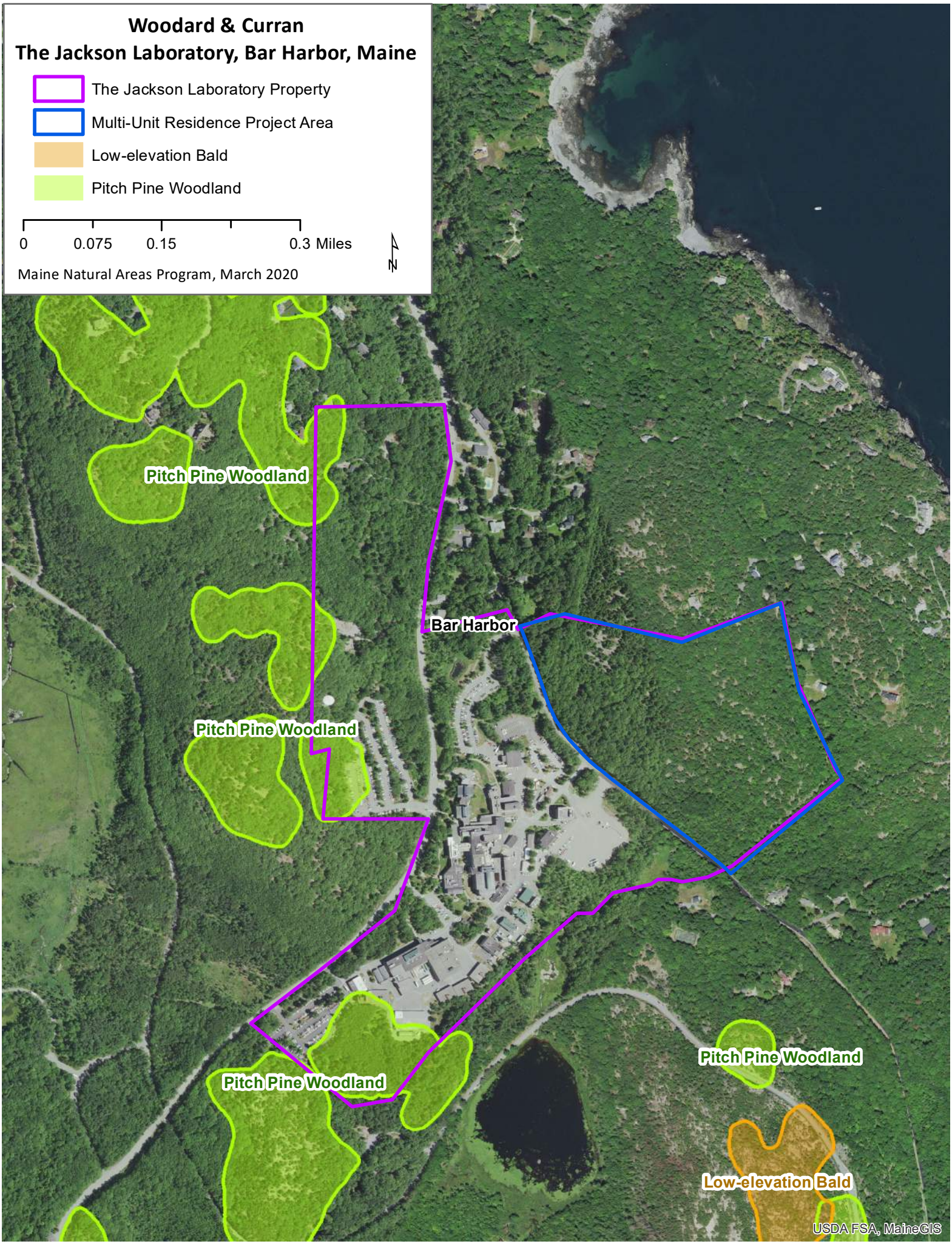
The Maine Natural Areas Program (MNAP) is continuously working to achieve a more comprehensive database of exemplary natural features in Maine. We would appreciate the contribution of any information obtained should you decide to do field work. MNAP welcomes coordination with individuals or organizations 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 $225.00 for three 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,

Kristen Puryear | Ecologist | Maine Natural Areas Program
207-287-8043 | kristen.puryear@maine.gov


Woodard & Curran
The Jackson Laboratory, Bar Harbor, Maine
The Jackson Laboratory Property
Multi-Unit Residence Project Area
Low-elevation Bald
Pitch Pine Woodland
0
0.075
0.15
0.3 Miles
N
Maine Natural Areas Program, March 2020
Pitch Pine Woodland
Bar Harbor
Pitch Pine Woodland
Pitch Pine Woodland
Pitch Pine Woodland
Low-elevation Bald
USDA FSA, MaineGIS

Rare and Exemplary Botanical Features within 4 miles of

Project: #L15327-26, The Jackson Laboratory SLODA, Bar Harbor, Maine

Common Name	State Status	State Rank	Global Rank	Date Last Observed	Occurrence Number	Habitat
Acadian Quillwort						
	SC	S2	G3	1995-08-11	3	Open water (non-forested, wetland)
Alpine Blueberry						
	SC	S2	G4G5	2015-08-19	4	Alpine or subalpine (non-forested, upland),Rocky coastal (non-forested, upland)
Birch - Oak Rocky Woodland						
	<null>	S3	G3G5	2004-12-10	15	Rocky summits and outcrops (non-forested, upland),Dry barrens (partly forested, upland)
	<null>	S3	G3G5	2004-12-09	17	Rocky summits and outcrops (non-forested, upland),Dry barrens (partly forested, upland)
	<null>	S3	G3G5	2004-12-09	16	Rocky summits and outcrops (non-forested, upland),Dry barrens (partly forested, upland)
	<null>	S3	G3G5	1999-09-15	11	Rocky summits and outcrops (non-forested, upland),Dry barrens (partly forested, upland)
	<null>	S3	G3G5	1999-08-26	12	Rocky summits and outcrops (non-forested, upland),Dry barrens (partly forested, upland)
	<null>	S3	G3G5	2004-12-09	14	Rocky summits and outcrops (non-forested, upland),Dry barrens (partly forested, upland)
Bog Bedstraw						
	SC	S2	G5	1998-08-26	16	Conifer forest (forest, upland)
Bush's Sedge						
	PE	SX	G4	1898-07-22	1	Open wetland, not coastal nor rivershore (non-forested, wetland)
Canada Mountain-ricegrass						
	SC	S2	G4G5	1897-07-14	10	Dry barrens (partly forested, upland)
Comb-leaved Mermaid-weed						
	E	S1	G5	1938-10-02	4	Open wetland, not coastal nor rivershore (non-forested, wetland)
	E	S1	G5	2004-11-04	5	Open wetland, not coastal nor rivershore (non-forested, wetland)

Rare and Exemplary Botanical Features within 4 miles of

Project: #L15327-26, The Jackson Laboratory SLODA, Bar Harbor, Maine

Common Name	State Status	State Rank	Global Rank	Date Last Observed	Occurrence Number	Habitat
	E	S1	G5	1937-09	3	Open wetland, not coastal nor rivershore (non-forested, wetland)
Dune Grassland						
	<null>	S2	G4?	2009-05-15	10	Rocky coastal (non-forested, upland)
Jack Pine Woodland						
	<null>	S3	G3G5	1999-08-27	9	Conifer forest (forest, upland),Dry barrens (partly forested, upland)
Low-elevation Bald						
	<null>	S3	GNR	1998-07-15	3	Rocky summits and outcrops (non-forested, upland)
	<null>	S3	GNR	2004-12-09	20	Rocky summits and outcrops (non-forested, upland)
	<null>	S3	GNR	2004-12-10	22	Rocky summits and outcrops (non-forested, upland)
	<null>	S3	GNR	1997-08-02	18	Rocky summits and outcrops (non-forested, upland)
	<null>	S3	GNR	2004-12-10	23	Rocky summits and outcrops (non-forested, upland)
	<null>	S3	GNR	1998-08-04	19	Rocky summits and outcrops (non-forested, upland)
	<null>	S3	GNR	2004-12-09	21	Rocky summits and outcrops (non-forested, upland)
	<null>	S3	GNR	1998-08-06	14	Rocky summits and outcrops (non-forested, upland)
	<null>	S3	GNR	2004-12-10	24	Rocky summits and outcrops (non-forested, upland)
Maritime Spruce - Fir Forest						
	<null>	S4	G4G5	1996-06-11	18	Conifer forest (forest, upland)
Mountain-laurel						
	SC	S2	G5	1890	26	Conifer forest (forest, upland),Hardwood to mixed forest (forest, upland)
Mountain Firmoss						
	SC	S2	G5	2015-08-19	10	Rocky summits and outcrops (non-forested, upland),Alpine or subalpine (non-forested, upland)
Mountain Sandwort						

Rare and Exemplary Botanical Features within 4 miles of

Project: #L15327-26, The Jackson Laboratory SLODA, Bar Harbor, Maine

Common Name	State Status	State Rank	Global Rank	Date Last Observed	Occurrence Number	Habitat
	SC	S3	G5	1992-07-01	16	Rocky summits and outcrops (non-forested, upland),Alpine or subalpine (non-forested, upland)
	SC	S3	G5	2015-08-19	22	Rocky summits and outcrops (non-forested, upland),Alpine or subalpine (non-forested, upland)
	SC	S3	G5	1996-06-12	39	Rocky summits and outcrops (non-forested, upland),Alpine or subalpine (non-forested, upland)
	SC	S3	G5	1989	40	Rocky summits and outcrops (non-forested, upland),Alpine or subalpine (non-forested, upland)
Nantucket Shadbush						
	T	S2	G3Q	1991-05-15	6	Dry barrens (partly forested, upland),Non-tidal rivershore (non-forested, seasonally wet),Old field/roadside (non-forested, wetland or upland)
	T	S2	G3Q	2011-05-31	9	Dry barrens (partly forested, upland),Non-tidal rivershore (non-forested, seasonally wet),Old field/roadside (non-forested, wetland or upland)
Northern Bog Sedge						
	SC	S2	G5	1997-08-29	13	Conifer forest (forest, upland),Forested wetland
Northern Reed Grass						
	E	S1	G5T5	1988	3	Rocky coastal (non-forested, upland)
	E	S1	G5T5	1986	9	Rocky coastal (non-forested, upland)
Pitch Pine Woodland						
	<null>	S3	G2	1997-08-21	13	Rocky summits and outcrops (non-forested, upland)
	<null>	S3	G2	1999-09-02	14	Rocky summits and outcrops (non-forested, upland)
	<null>	S3	G2	1999-09-01	24	Rocky summits and outcrops (non-forested, upland)
	<null>	S3	G2	2004-12-09	27	Rocky summits and outcrops (non-forested, upland)
	<null>	S3	G2	2004-12-09	18	Rocky summits and outcrops (non-forested, upland)
	<null>	S3	G2	1998-08-04	23	Rocky summits and outcrops (non-forested, upland)

Rare and Exemplary Botanical Features within 4 miles of
Project: #L15327-26, The Jackson Laboratory SLODA, Bar Harbor, Maine

Common Name	State Status	State Rank	Global Rank	Date Last Observed	Occurrence Number	Habitat
	<null>	S3	G2	2004-12-09	26	Rocky summits and outcrops (non-forested, upland)
Prototype Quillwort						
	T	S1	G2	1992-09-19	1	Open water (non-forested, wetland)
Red and White Pine Forest						
	<null>	S3	G3G4	1997-09-10	19	Conifer forest (forest, upland)
Secund Rush						
	T	S1	G5?	2004-09-21	4	Rocky summits and outcrops (non-forested, upland)
Smooth Sandwort						
	SC	S3	G4	1996-06-27	21	Rocky summits and outcrops (non-forested, upland)
	SC	S3	G4	1996-06-19	22	Rocky summits and outcrops (non-forested, upland)
	SC	S3	G4	1998-08-04	27	Rocky summits and outcrops (non-forested, upland)
	SC	S3	G4	1998-08-04	30	Rocky summits and outcrops (non-forested, upland)
	SC	S3	G4	1998-08-04	31	Rocky summits and outcrops (non-forested, upland)
Spruce - Fir - Northern Hardwoods Ecosystem						
	<null>	S5	GNR	1999	21	Conifer forest (forest, upland),Hardwood to mixed forest (forest, upland)
Swarthy Sedge						
	E	S2	G5	1899-07-17	9	Rocky coastal (non-forested, upland)
	E	S2	G5	1897-07-12	11	Rocky coastal (non-forested, upland)
	E	S2	G5	1883-08-16	3	Rocky coastal (non-forested, upland)
	E	S2	G5	1898-08-17	6	Rocky coastal (non-forested, upland)
	E	S2	G5	2003-10	24	Rocky coastal (non-forested, upland)
	E	S2	G5	1899-07-22	10	Rocky coastal (non-forested, upland)

Rare and Exemplary Botanical Features within 4 miles of

Project: #L15327-26, The Jackson Laboratory SLODA, Bar Harbor, Maine

Common Name	State Status	State Rank	Global Rank	Date Last Observed	Occurrence Number	Habitat
	E	S2	G5	1891-06-24	5	Rocky coastal (non-forested, upland)
White Cedar Woodland						
	<null>	S2	GNR	1996-06-27	1	Conifer forest (forest, upland),Dry barrens (partly forested, upland)

Pitch Pine Woodland

State Rank S3

Community Description

These very open to semi open woodlands (25-65% canopy, occasionally to 75%) are dominated by pitch pine, often with a much smaller component of red oak, red or white pine, or black or red spruce. The well spaced pines allow a substantial amount of light to reach the understory. The sapling/shrub layer is usually <40% cover, with smaller pitch pines, mountain holly, or black huckleberry. The herb layer is well developed (>30% cover) and strongly dominated by dwarf, mostly heath, shrubs. At some sites, broom-crowberry is a prominent species. Herbs contribute <10% cover, and the composition varies. The bryoid layer may be 0-50% cover (rarely more) and is typically dominated by reindeer lichens.

Soil and Site Characteristics

Typical sites are ledges or rock outcrops in coastal areas. They may be flat to gently sloping, at elevations up to 1500'. Soils are usually very thin, consisting of a coarse mineral fraction or a layer of poorly decomposed duff over bedrock, with pH 4.6-5.4. Many sites have evidence of past fire.

Pitch Pine Cones

Diagnostics

These pitch pine dominated woodlands (25-65% canopy cover) grow on bedrock with very little soil.

Similar Types

Pitch Pine - Scrub Oak Barrens, Pitch Pine - Heath Barrens, and Pitch Pine Dune Woodlands differ in that they develop on sandy outwash or dunes, rather than on thin soil over bedrock. Pitch Pine Bogs are wetlands, with wetland plants, including peat mosses.

Conservation, Wildlife, and Management Considerations

This community appears to be relatively stable in Maine, with little habitat conversion. Fire has apparently played a role in maintaining this woodland type by preventing the invasion of fire sensitive hardwood trees and shrubs. The suppression of fire may result in the conversion of these woodlands to a different type. Many sites receive recreational use. In a few locations use is heavy enough to have degraded the community, but most foot traffic recreational use is compatible. Communications towers could impact some sites on mid-elevation summits.

Birds such as the pine warbler and prairie warbler may prefer this open habitat. This community type may include rare moths that utilize pitch pines as a larval host plant such as the oblique zale, southern pine sphinx, and pine-devil moth, a historical species for Maine.

Location Map

Pitch Pine Woodland

Distribution

Coastal Maine, east to Mount Desert Island; extending southward along the Atlantic coastal plain and Appalachian foothills.

Landscape Pattern: Small Patch; size range variable from a few acres to nearly 100 acres.

Characteristic Plants

These plants are frequently found in this community type. Those with an asterisk are often diagnostic of this community.

Canopy
Red spruce
Pitch pine*
Red oak*
Red pine*
White pine*

Sapling/shrub
Black huckleberry*
Gray birch*
Mountain holly*
Pitch pine*
Red spruce

Dwarf Shrub
Black huckleberry*
Broom-crowberry*
Lowbush blueberry*
Rhodora*
Sheep laurel*

Herb
Bracken fern

Bryoid
Reindeer lichen

Associated Rare Plants

Mountain sandwort
Smooth sandwort

Associated Rare Animals

Pine-devil moth
Southern pine sphinx

Examples on Conservation Lands You Can Visit

- Bald Head Preserve – Sagadahoc Co.
- Champlain Mountain, Acadia National Park – Hancock Co.
- Dorr Mountain, Acadia National Park – Hancock Co.
- Reid State Park – Sagadahoc Co.

STATE RARITY RANKS

S1 Critically imperiled in Maine because of extreme rarity (five or fewer occurrences or very few remaining individuals or acres) or because some aspect of its biology makes it especially vulnerable to extirpation from the State of Maine.
S2 Imperiled in Maine because of rarity (6-20 occurrences or few remaining individuals or acres) or because of other factors making it vulnerable to further decline.
S3 Rare in Maine (20-100 occurrences).
S4 Apparently secure in Maine.
S5 Demonstrably secure in Maine.
SU Under consideration for assigning rarity status; more information needed on threats or distribution.
SNR Not yet ranked.
SNA Rank not applicable.
S#? Current occurrence data suggests assigned rank, but lack of survey effort along with amount of potential habitat create uncertainty (e.g. S3?).

Note: **State Rarity Ranks** are determined by the Maine Natural Areas Program for rare plants and rare and exemplary natural communities and ecosystems. The Maine Department of Inland Fisheries and Wildlife determines State Rarity Ranks for animals.

GLOBAL RARITY RANKS

G1 Critically imperiled globally because of extreme rarity (five or fewer occurrences or very few remaining individuals or acres) or because some aspect of its biology makes it especially vulnerable to extinction.
G2 Globally imperiled because of rarity (6-20 occurrences or few remaining individuals or acres) or because of other factors making it vulnerable to further decline.
G3 Globally rare (20-100 occurrences).
G4 Apparently secure globally.
G5 Demonstrably secure globally.
GNR Not yet ranked.

Note: **Global Ranks** are determined by NatureServe.

STATE LEGAL STATUS

Note: State legal status is according to 5 M.R.S.A. § 13076-13079, which mandates the Department of Conservation to produce and biennially update the official list of Maine's **Endangered** and **Threatened** plants. The list is derived by a technical advisory committee of botanists who use data in the Natural Areas Program's database to recommend status changes to the Department of Conservation.

E ENDANGERED; Rare and in danger of being lost from the state in the foreseeable future; or federally listed as Endangered.
T THREATENED; Rare and, with further decline, could become endangered; or federally listed as Threatened.

NON-LEGAL STATUS

SC SPECIAL CONCERN; Rare in Maine, based on available information, but not sufficiently rare to be considered Threatened or Endangered.
PE Potentially Extirpated; Species has not been documented in Maine in past 20 years or loss of last known occurrence has been documented.

Visit our website for more information on rare, threatened, and endangered species!
http://www.maine.gov/dacf/mnap

MAINE HISTORIC PRESERVATION COMMISSION
55 CAPITOL STREET
65 STATE HOUSE STATION
AUGUSTA, MAINE
04333

JANET T. MILLS
GOVERNOR

KIRK F. MOHNEY
DIRECTOR

December 28, 2020

Ms. Sarah Nicholson
Woodard & Curran
80 Exchange Street
Suite 400
Bangor, ME 04401

Project: MHPC #2029-20 Jackson Laboratory; West Side of Route 3; Woodlands Lane Proposed Housing Project

Town: Bar Harbor, ME

Dear Ms. Nicholson:

In response to your recent request, I have reviewed the information received December 21, 2020 to initiate consultation on the above referenced project in accordance with the requirements of Maine Department of Environmental Protection.

Based on the information provided, I have concluded that there are no National Register eligible properties on or adjacent to the parcels. In addition, the project area is not considered sensitive for archaeological resources.

Please contact Megan M. Rideout of our staff, at megan.m.rideout@maine.gov or 207-287-2992, if we can be of further assistance in this matter.

Sincerely,

Kirk F. Mohney

Kirk F. Mohney
State Historic Preservation Officer

PHONE: (207) 287-2132 FAX: (207) 287-2335

JANET T. MILLS
GOVERNOR

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

JUDITH CAMUSO
COMMISSIONER

March 16, 2020

Sarah Nicholson
Woodard & Curran
One Merchants Plaza, Suite 501
Bangor, ME 04401

RE: Information Request – Jackson Laboratory Lands, Bar Harbor

Dear Sarah:

Per your request received on February 21, 2020, 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 *Jackson Laboratory Lands* in Bar Harbor.

Our Department has not mapped any Essential Habitats in the vicinity of the Jackson Laboratory Lands.

Endangered, Threatened, and Special Concern Species

Bats – 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.

It is possible that other rare species may be resident or transient in the project area based on location, habitats present, and life history requirements, including one or more rare species of migratory birds during spring and fall migrations. Therefore, the list above should not be considered all-inclusive.

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 so it is possible that this habitat could be present in the area.

Fisheries Habitat

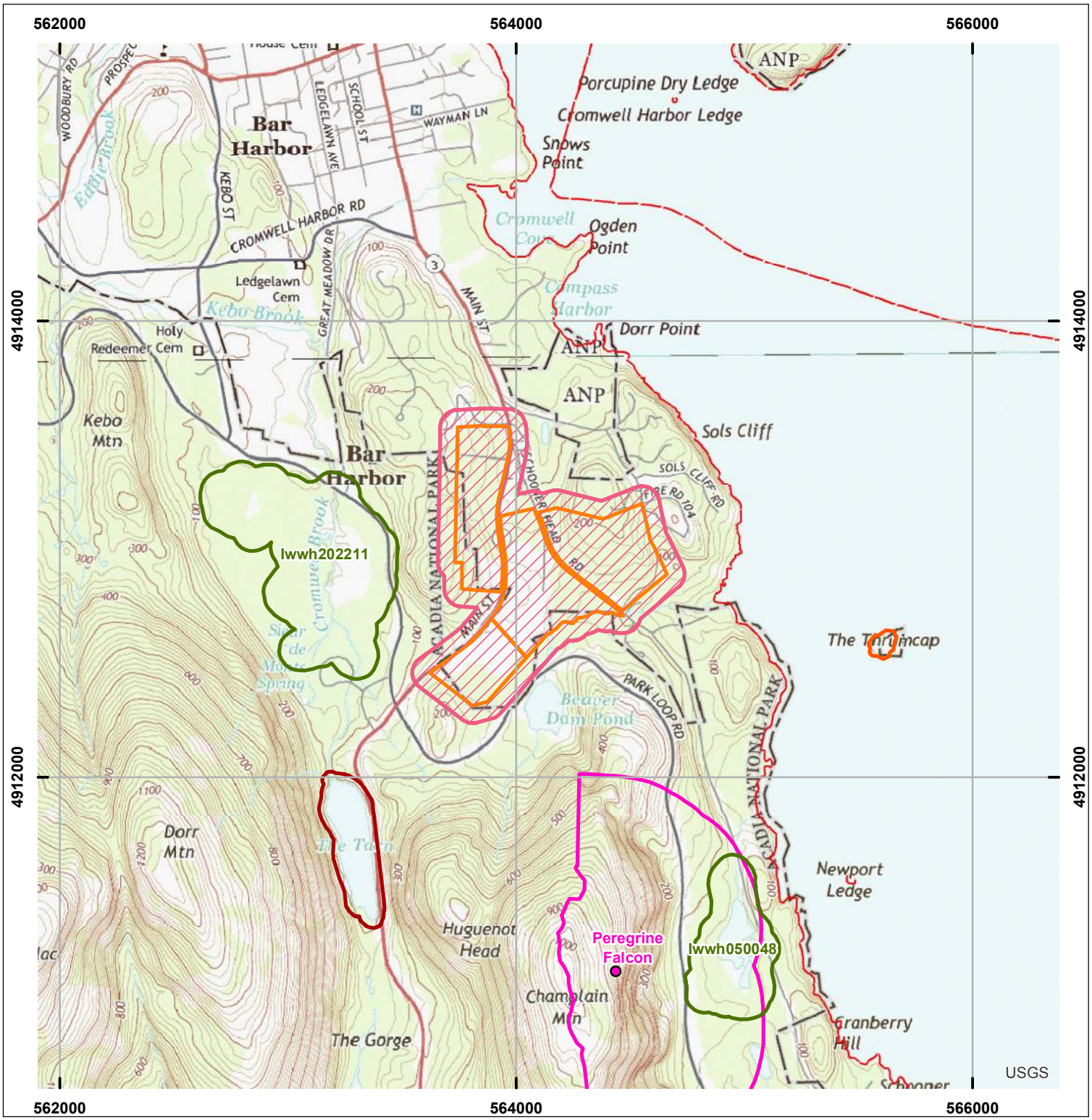
The parcel search area contains several streams. Small streams, including intermittent streams, can provide crucial rearing habitat, cold water for thermal refugia, and abundant food for juvenile salmonids on a seasonal basis.

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 our Agency as well as 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



Environmental Review of Fish and Wildlife Observations and Priority Habitats

Project Name: Jackson Laboratory, Bar Harbor (Version 1)

Maine Department of Inland Fisheries and Wildlife

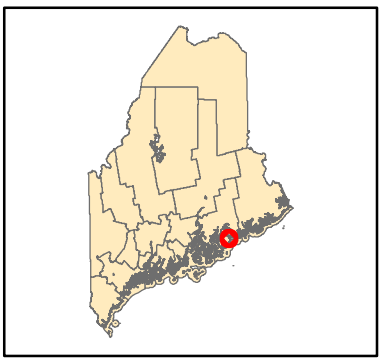
Miles

0 0.1250.25 0.5 0.75 1

Projection: UTM, NAD83, Zone 19N

Date: 2/21/2020

- ProjectPoints
- ProjectLines
- ProjectPolys
- ProjectSearchAreas
- Maine Cliff and Talus Areas
- Deer Winter Area
- LUPC p-fw
- Cooperative DWAs
- Seabird Nesting Islands
- Shorebird Areas
- Inland Waterfowl and Wading Bird
- 2008 Iwwh - Shoreland Zoning
- Tidal Waterfowl and Wading Bird
- Significant Vernal Pools
- Environmental Review Polygons
- Roseate Tern
- Piping Plover and Least Tern
- Aquatic ETSc - 2.5 mi review
- Rare Mussels - 5 mi review
- Maine Heritage Fish Waters
- Arctic Charr Habitat
- Redfin Pickerel and Swamp Darter Habitats - buffer100ft
- Special Concern occupied habitats - 100ft buffer
- Wild Lake Trout Habitats



ELEMENT OCCURRENCE RANKS - EO RANKS

Element Occurrence ranks are used to describe the quality of a rare plant population or natural community based on three factors:

- **Size**: Size of community or population relative to other known examples in Maine. Community or population's viability, capability to maintain itself.
- **Condition**: For communities, condition includes presence of representative species, maturity of species, and evidence of human-caused disturbance. For plants, factors include species vigor and evidence of human-caused disturbance.
- **Landscape context**: Land uses and/or condition of natural communities surrounding the observed area. Ability of the observed community or population to be protected from effects of adjacent land uses.

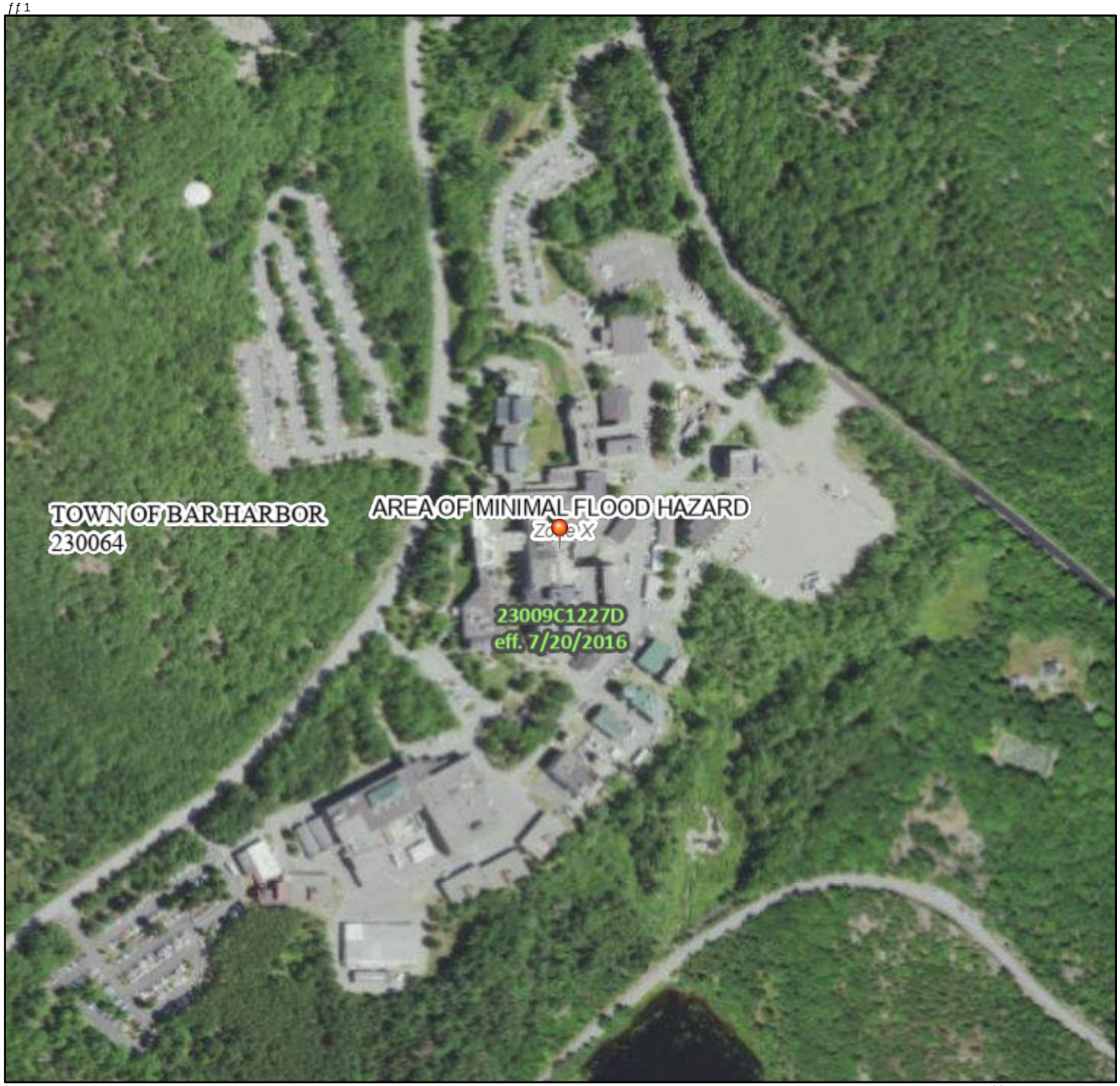
These three factors are combined into an overall ranking of the feature of **A**, **B**, **C**, or **D**, where **A** indicates an **excellent** example of the community or population and **D** indicates a **poor** example of the community or population. A rank of **E** indicates that the community or population is **extant** but there is not enough data to assign a quality rank. The Maine Natural Areas Program tracks all occurrences of rare (S1-S3) plants and natural communities as well as A and B ranked common (S4-S5) natural communities.

Note: **Element Occurrence Ranks** are determined by the Maine Natural Areas Program for rare plants and rare and exemplary natural communities and ecosystems. The Maine Department of Inland Fisheries and Wildlife determines Element Occurrence ranks for animals.

Visit our website for more information on rare, threatened, and endangered species!
http://www.maine.gov/dacf/mnap

1DWLRQDO)ORRG-EDUGDUHU)6WWH

FEMA



)HHW

%DUHUHVKHG 2UWKRLPDJHU\ DWD UHUHVKHG 2WREHU

/HJHQG

6(&7,21 &21&(5(1(1*&(5

L:WKRXW %DVH)ORRG (OHYDWLRQ %(
=RQH$ 9 $
L:WK %(RUHBWK =RQH$ $ 9 9($
5HDO DWRU\ )ORRGZD

$QQXDO &KDQFH)ORRG-EDUG $UHDV
RI DQQXDO FKDQFH IORRG ZKDYHUDH
GHBWKOHVV WKDQ RQH IRRW RU ZWKGUDLQ
DUHDV RI OHVV WKDQ RQH VTXDUH PLOH =RQH;

)WXUH &RQLWLRQV $QQXDO
&KDQFH)ORRG-EDUG =RQH;
$UHD ZWK 5HGXHG)ORRG 5LVNGXH WR
/HYHH 6HH EWHV =RQH;
$UHD ZWK)ORRG 5LVNGXH WR /HYHH =RQH'

$UHD RI LQLBO)ORRG-EDUG =RQH;
(IHFWLYH EV
$UHD RI 8QGHWHUPLQHG)ORRG-EDUG =RQH'

&KDQQHO &OYHUW RU 6WUXFWHU
/HYHH L'NH RU)ORRGZDO

&URVV 6HFWLRQ ZWK$QQXDO &KDQFH
DWHU 6UIDFH(OHYDWLRQ
&RDWDO 7UDQVHFW
%DVH)ORRG(OHYDWLRQ/LQH %(
/LPW R 6WXG
-XULVGLFWLRQ%RXQGDU\
&RDWDO 7UDQVHFW %DVHOLQH
3UROH %DVHOLQH
+GURUDBKLF)HDWXUH

L'LWDO DWD$YDLODEOH
1R'LWDO DWD$YDLODEOH
8QPSSHG

7KHSLQGLVSODHGRQWKHPSLV DQ DSSURLPDWH
SRLQW VHOHFWHG EWKHXHU DQG GRHV QRW UHSUH
DQ DWKRUL WDWLYH SURFHUW\ OFDWLRQ

7KLV PS FRRO LHV ZWK$V VWDQGDUG/ IRU WKHXHR
GLJLWDO IORRG PS/ LI LW LV QRW YRLGDV GHVFULEHG EHORZ
7KHEDVHPS VKRZQ FRRO LHV ZWK$V EDVHPS
DFXUDF\ WDQGDUG/

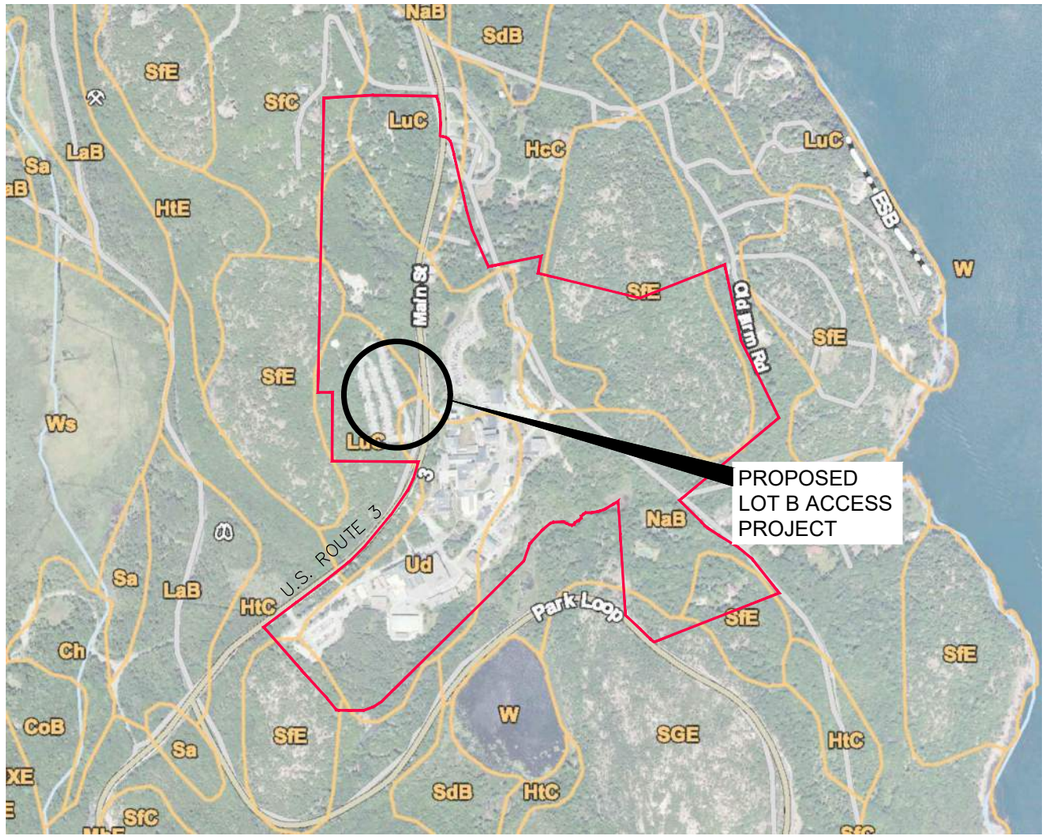
7KH IORRG KDUGLQRUPDWLRQ LV GHULYHG GLUHFWO\ IURP WKH
DWKRUL WDWLYH)HZEE VHUYLFHV SURYLGHG EY$ 7KLV PS
ZDV HSFUWHG RQ DW $ DQG GRHV QRW
UHOHFW FKDQHV RU DQGRQWV VXEVHXHQW WR WKLV GDWH DQG
WLPH 7KH)HDQG HHFWLYH LHLQRUPDWLRQ EH FKDQHRU
EHFRPH VXSHUVHGHG EQHZGDWDRYHU WLPH

7KLV PS LBHL V YRLGLI WKHRQHRU RUHR WKHIRO ORZLQ PS
HOHQWV GRQRW DSSHDU EDVHPS LBHU\ IORRG RQHOD EHOV
OHHQG VFDOHHDU PS FUHDWLRQGDWH FRRQLW\ LGHQWLILHUV
)5$QQHO QHEU DQG)5HHFWLYHGDWH DSLBHV IRU
XQPSSHG DQG XQPRGHUQL]HG DUHDV FDQQRW EH XVHG IRU
UHDO DWRU\ SUSRVHV

EXHIBIT 10
125-66.J.(15) MEDIUM DENSITY SOILS SURVEY

The Checklist for this Site Plan Review calls for a medium-density soils survey. Attached is a copy of the USDA Soil Conservation Service Map as Figure 10-1.

S. W. Cole conducted three test pits along the proposed route of the new access driveway. Much of the drive will be built on fill and so depth to bedrock is not a problem. The lower end of the drive (approximately 200 feet) will be in cut and the test pits and ledge outcroppings illustrated on the attached Figure 10-2 indicate that ledge removal, likely to include blasting, may be necessary to construct this part of the Project.



PROPOSED
LOT B ACCESS
PROJECT

1000' 0 1000' 2000'

BAR SCALE
1" = 1000'
CHECK GRAPHIC SCALE BEFORE USING

SOURCE:
UNITED STATES DEPARTMENT OF AGRICULTURE,
NATURAL RESOURCES CONSERVATION SERVICE

SOILS LEGEND

Map Unit Symbol	Map Unit Name
Ch	Charles silt loam, 0 to 2 percent slopes, occasionally flooded
CoB	Colton gravelly sandy loam, 0 to 8 percent slopes
HcC	Hermon-Colton-Rock outcrop complex, 3 to 15 percent slopes, very stony
HtC	Hermon-Monadnock complex, 8 to 15 percent slopes, very stony
HtE	Hermon-Monadnock complex, 15 to 45 percent slopes, very stony
LaB	Lamoine silt loam, 3 to 8 percent slopes
LuC	Lyman-Tunbridge complex, 0 to 15 percent slopes, very stony
MhE	Monadnock-Hermon complex, 15 to 45 percent slopes, extremely bouldery
MXE	Monadnock-Hermon-Peru complex, very hilly, extremely bouldery
NaB	Naskeag-Schoodic complex, 0 to 8 percent slopes, very stony
Sa	Scantic silt loam, 0 to 3 percent slopes
SdB	Scantic-Lamoine complex, 0 to 8 percent slopes, very stony
SfC	Schoodic-Rock outcrop complex, 0 to 15 percent slopes
SfE	Schoodic-Rock outcrop complex, 15 to 65 percent slopes
SGE	Schoodic-Rock outcrop-Lyman complex, 15 to 60 percent slopes
Ud	Udorthents-Urban land complex
W	Water bodies
Ws	Wonsqueak and Bucksport mucks, 0 to 2 percent slopes

80 Exchange Street, Suite 400
Bangor, Maine 04401
800. 564.2333 | www.woodardcurran.com
COMMITMENT & INTEGRITY DRIVE RESULTS
Woodard & Curran

SOILS MAP

DESIGNED BY: SSN
DRAWN BY: JDE
CHECKED BY: SSN
2326950 3-FIG 10-1.dwg

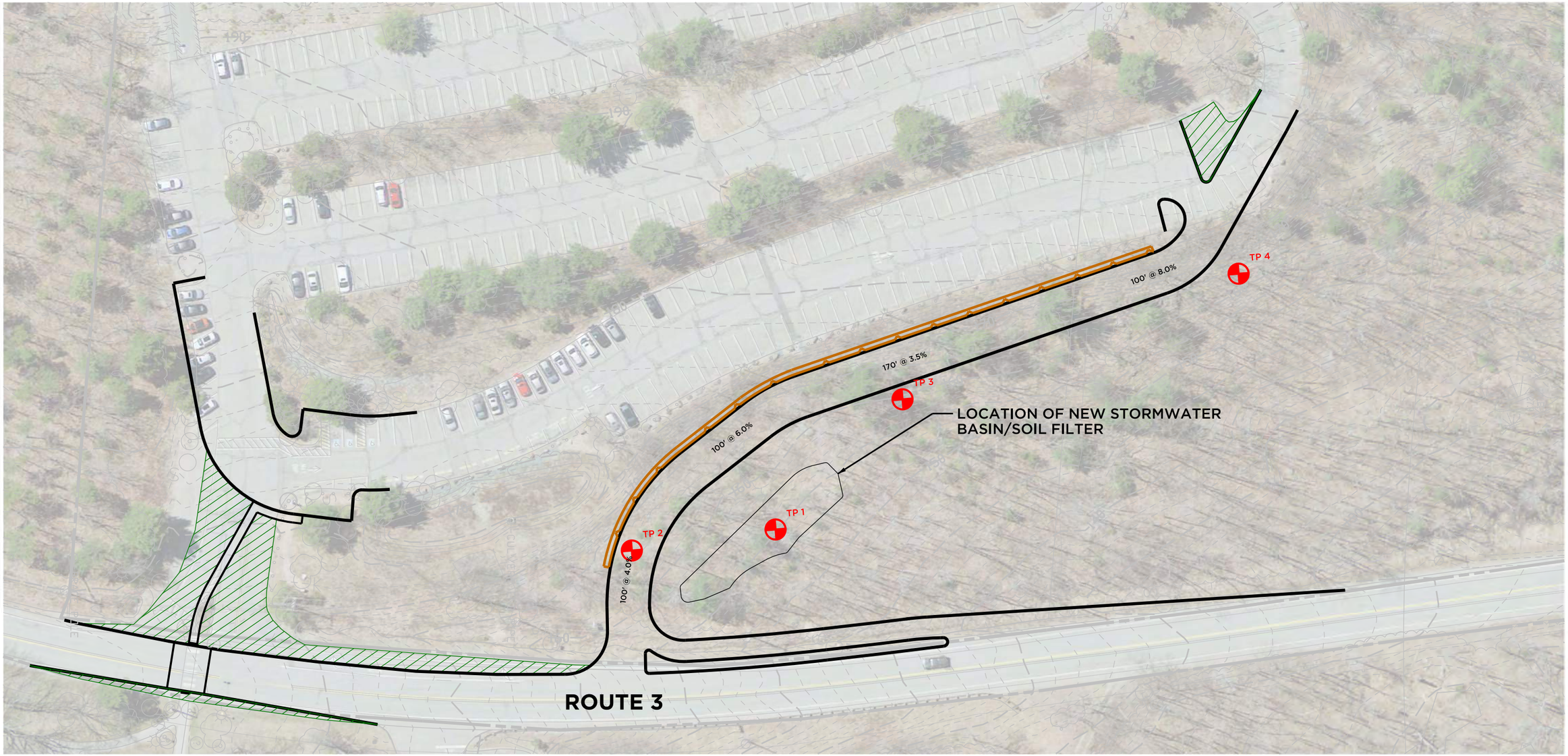
THE JACKSON LABORATORY
BAR HARBOR, MAINE

TOWN OF BAR HARBOR
SITE PLAN REVIEW APPLICATION
LOT B ACCESS

JOB NO:232695.03
DATE: MAY 2022
SCALE: 1"=1000'

FIGURE 10-1

\\woodardcurran.net\shared\Projects\0232695.03_Jackson Lab Circulation Upgrades Permitting\wip\Drawings\Site Plan Review Figures\23269503-FIG 10-1.dwg, May 10, 2022 – 2:21pm JEVERETT



J:\4531\001\Microstation\Lot B Drive\PLOT_Test Pit Locations.dgn

60 0 60 120

SCALE: 1"=60'

Barton & Loguidice
383 U.S. Route One
Suite 2A, Box 4
Scarborough, ME 04074
Phone: (207) 289-6147
www.BartonandLoguidice.com

Civil Engineering • Environmental Consulting • Land Surveying • Construction Management

PROJ. ENGINEER	NAN
PROJ. MANAGER	KRG
OFFICE REVIEW	JQA
REVISIONS	
SCALE:	1"=60'

TEST PIT LOCATIONS

PREPARED FOR
THE JACKSON LABORATORY

LOT B ACCESS DRIVE

MAIN STREET (ROUTE 3) BAR HARBOR, ME

PROJECT	DATE	SHEET NO.	OF
4531.001	04/29/22	1	1

TEST PIT LOGS

CLIENT: Barton & Loguidice, LLC
PROJECT: Proposed JAX Lot B Access Road
LOCATION: 600 Main Street, Bar Harbor, Maine

PROJECT NO.: 22-0494
LOGGED BY: Nate Strout
CONTRACTOR: John Goodwin Jr. Construction
EQUIPMENT: Case CX 145C

TEST PIT TP-2

DATE: 4/18/2022 **LOCATION:** See Exploration Location Plan **SURFACE ELEVATION (FT):** 162' +/- **COMPLETION DEPTH (FT):** 5.6
WATER LEVEL DEPTHS (FT): Light seepage at 5.3 feet +/- **REMARKS:**

Depth (feet)	Graphic Log	Stratum Description	H_20 Depth	Sample No.	Type	Sample Depth (ft)	Field / Lab Test Data
		Topsoil					
		0.3 Brown silty gravelly SAND with cobbles		S-1		1.5-2.5	
		2.6 Gray SILT and SAND, some gravel with cobbles (Glacial Till)					
5							

Refusal at 5.6 feet
(Probable Bedrock)

TEST PIT TP-3

DATE: 4/18/2022 **LOCATION:** See Exploration Location Plan **SURFACE ELEVATION (FT):** 165' +/- **COMPLETION DEPTH (FT):** 2.4
WATER LEVEL DEPTHS (FT): No free water observed **REMARKS:**

Depth (feet)	Graphic Log	Stratum Description	H_20 Depth	Sample No.	Type	Sample Depth (ft)	Field / Lab Test Data
		Topsoil					
		1.0 Red-brown silty gravelly SAND with cobbles					

Refusal at 2.4 feet
(Probable Bedrock)

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

KEY TO NOTES AND SYMBOLS:
Water Level
At time of Digging
At Completion of Digging
After Digging

q_p = Pocket Penetrometer Strength, kips/sq.ft.

DRAFT

TEST PIT LOGS

CLIENT: Barton & Loguidice, LLC
PROJECT: Proposed JAX Lot B Access Road
LOCATION: 600 Main Street, Bar Harbor, Maine

PROJECT NO.: 22-0494
LOGGED BY: Nate Strout
CONTRACTOR: John Goodwin Jr. Construction
EQUIPMENT: Case CX 145C

TEST PIT TP-4

DATE: 4/18/2022 **LOCATION:** See Exploration Location Plan **SURFACE ELEVATION (FT):** 165' +/- **COMPLETION DEPTH (FT):** 0.0
WATER LEVEL DEPTHS (FT): No free water observed **REMARKS:**

Depth (feet)	Graphic Log	Stratum Description	H_20 Depth	Sample No.	Type	Sample Depth (ft)	Field / Lab Test Data
	0.0	Refusal at 0 feet (Probable Bedrock)					

DRAFT

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

KEY TO NOTES AND SYMBOLS:
Water Level
At time of Digging
At Completion of Digging
After Digging

q_p = Pocket Penetrometer Strength, kips/sq.ft.

EXHIBIT 11
125-66.J.(22) BUFFERING AND SCREENING

The existing vegetation in the ROW along the front of the site will provide significant buffering of the Project from Route 3. The fill slope created by the road grading will be planted with native vegetation and allowed to naturalize. No other landscaping is proposed.

As documented on the Checklist, waivers are requested for this Exhibit.

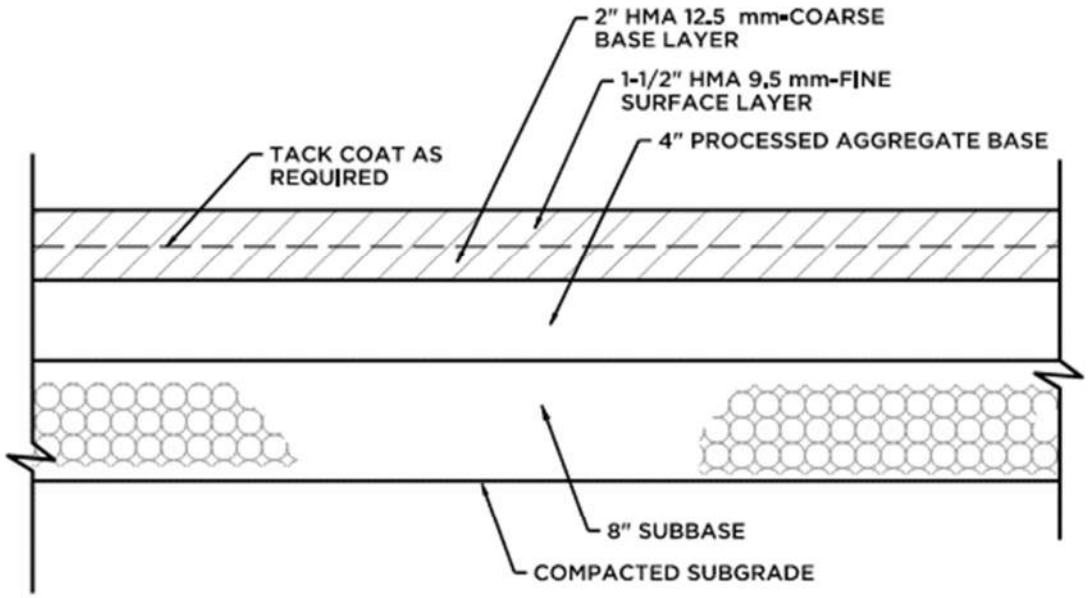
EXHIBIT 12
125-66.J.(44) STREETS, SIDEWALKS AND ACCESS

Figure 9-3 provides the design set for the proposed Project. The Project comprises a new driveway, the conversion of an old driveway into a sidewalk and grassed area, and some minor paving to allow for reconfiguration of several parking spaces. These improvements will be asphalt paving. The bituminous paving detail from the Lot B Access Grading Plan (Sheet 1 of 3 in the design set included in Exhibit 9) is illustrated below.

The first 50′ of the driveway off of Route 3 is graded to 4%, which meets the ordinance standard that the first 25′ of a driveway does not exceed a 5% grade.

No streets are proposed.

As documented on the Checklist, waivers are requested for this Exhibit.



BITUMINOUS DRIVEWAY

NOT TO SCALE

EXHIBIT 13

125-66.K ASSESSOR'S CERTIFICATION OF STREET NAMES

No streets or street names are proposed as part of the Lot B Access Project. Therefore, no certification of the municipal tax assessor is included in this Exhibit.

As documented on the Checklist, waivers are requested for this Exhibit.

EXHIBIT 14

125-66.L PHOTOGRAPHS

Exhibit 14 contains the Town's aerial photo from the GIS system, focused on the Project parcel.

Attached are photographs looking from and into the proposed location of the Lot B Access Project site. These photos were taken by Sarah Nicholson of Woodard & Curran on May 10, 2022.

0 400 800 ft

Printed on 05/11/2022 at 01:17 PM

MapsOnline

Photo 1: Looking into the site from the north.

Photo 2: Looking into the site from the west where access drive will connect to existing parking lot.

Photo 3: Looking east into the site from the edge of the parking lot.

Photo 4: Looking west into the site from Route 3.

Photo 5: Looking east from the site towards Route 3.

Photo 6: Looking south from the site. Light at edge of parking lot is visible.

Photo 7: Looking west from the site.

Photo 8: Looking north from the site.

Photo 9: Looking east at existing entrance to be removed and replaced with a sidewalk.

Photo 10: Looking north at existing entrance to be removed.

Photo 11: Looking west into the parking lot along existing entrance to be removed.

Photo 12: Looking south towards the existing entrance from lowest row of parking.

EXHIBIT 15
125-66.M SUBSURFACE WASTEWATER DISPOSAL

No subsurface wastewater disposal system is required for the Lot B Access Project. Therefore, no plans for such improvements are included in this Exhibit.

As documented on the Checklist, waivers are requested for this Exhibit.

EXHIBIT 16
125-66.N GROUNDWATER

No groundwater will be extracted for the construction or operation of the proposed Lot B Access Project. Therefore, no details to that effect are included in this Exhibit.

As documented on the Checklist, waivers are requested for this Exhibit.

EXHIBIT 17
125-66.O EROSION AND SEDIMENTATION

The overall goal of the Erosion and Sedimentation Control Plan is to restrict the potential for erosion on the site and sedimentation of areas downhill of the site. A variety of erosion control techniques will be implemented to achieve this goal. These are illustrated in the design plan set included as Figure 9-3.

All measures will be implemented in accordance with the *Maine Erosion and Sedimentation Handbook for Construction: Best Management Practices*. All temporary measures will be removed after the areas are permanently stabilized. Permanent erosion control measures for the Project include vegetation and pavement.

EXHIBIT 18
125-66.P FIRE PROTECTION

The proposed access drive would be navigable by a fire truck, but in general because it leads to a parking lot, there is little need for fire protection.

As documented on the Checklist, waivers are requested for this Exhibit.

EXHIBIT 19

125-66.Q SOLID WASTE AND HAZARDOUS WASTE OR MATERIAL

The proposed Project is a parking lot driveway and will not be a source of any type of solid or hazardous waste.

As documented on the Checklist, waivers are requested for this Exhibit.

EXHIBIT 20

125-66.R BUILDING PLANS, ELEVATIONS AND INTERIOR USE

No buildings are proposed as part of the Project.

As documented on the Checklist, waivers are requested for this Exhibit.

EXHIBIT 21

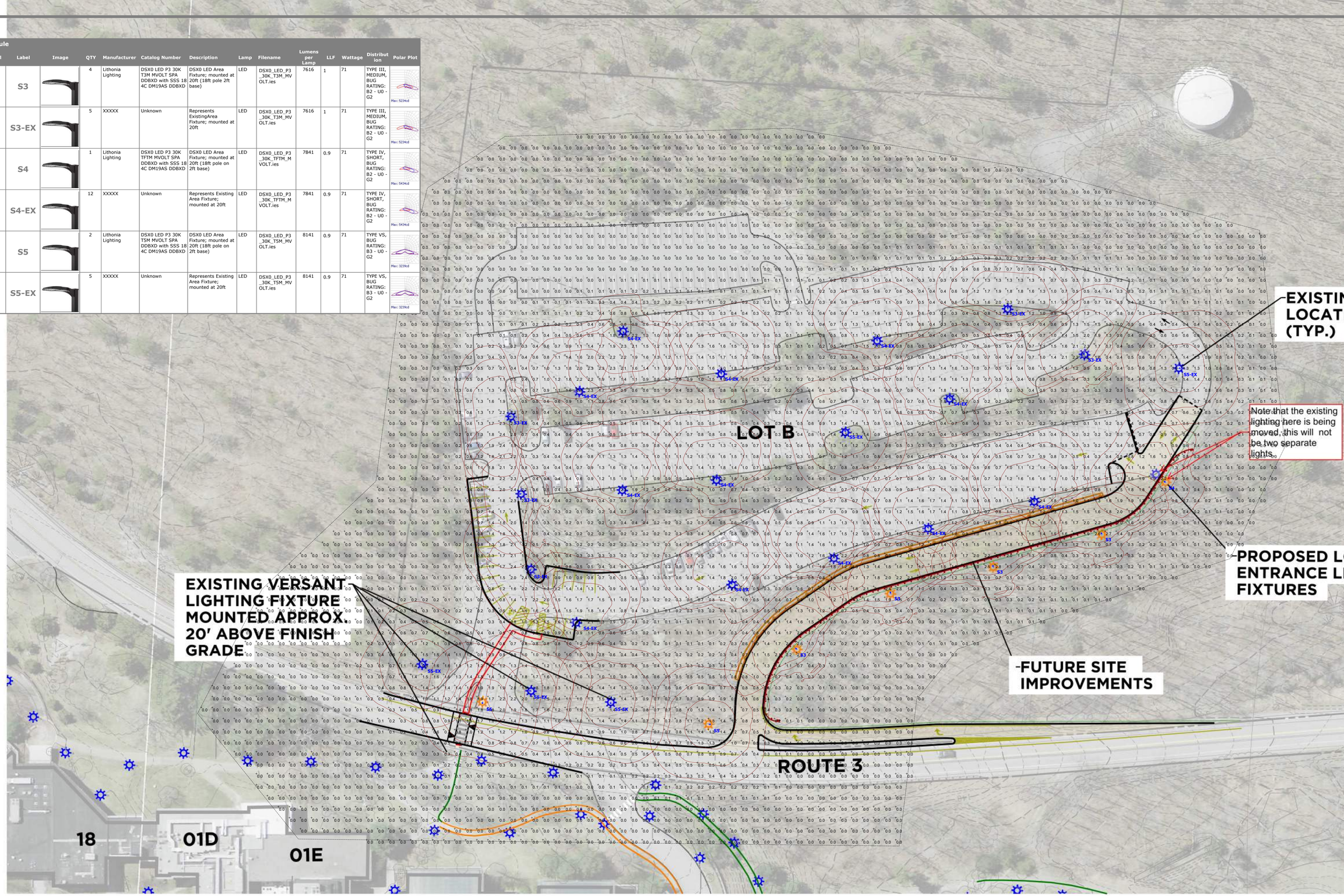
125-66.S LIGHTING

Pole lights are proposed along the new access drive and near the proposed sidewalk to the pedestrian crossing of Route 3.

The lighting pattern for each type of fixture is included in the attached information and illustrated on the Photometric Lighting Plan (Figure 21-1). Cut sheets for the proposed lighting fixtures are attached as Figure 21-2. All fixtures are full cut-off.

Schedule

Symbol	Label	Image	QTY	Manufacturer	Catalog Number	Description	Lamp	Filename	Lumens per Lamp	LLF	Wattage	Distribution	Polar Plot
	S3		4	Lithonia Lighting	DSX0 LED P3 30K T3M MVOLT SPA DDBXD with SSS 18 4C DM19AS DDBXD	DSX0 LED Area Fixture; mounted at 20ft (18ft pole 2ft base)	LED	DSX0_LED_P3_30K_T3M_MVOLT.ies	7616	1	71	TYPE III, MEDIUM, BUG RATING: B2 - U0 - G2	Max: 523cd
	S3-EX		5	XXXXX	Unknown	Represents ExistingArea Fixture; mounted at 20ft	LED	DSX0_LED_P3_30K_T3M_MVOLT.ies	7616	1	71	TYPE III, MEDIUM, BUG RATING: B2 - U0 - G2	Max: 523cd
	S4		1	Lithonia Lighting	DSX0 LED P3 30K TFTM MVOLT SPA DDBXD with SSS 18 4C DM19AS DDBXD	DSX0 LED Area Fixture; mounted at 20ft (18ft pole on 2ft base)	LED	DSX0_LED_P3_30K_TFTM_MVOLT.ies	7841	0.9	71	TYPE IV, SHORT, BUG RATING: B2 - U0 - G2	Max: 543cd
	S4-EX		12	XXXXX	Unknown	Represents Existing Area Fixture; mounted at 20ft	LED	DSX0_LED_P3_30K_TFTM_MVOLT.ies	7841	0.9	71	TYPE IV, SHORT, BUG RATING: B2 - U0 - G2	Max: 543cd
	S5		2	Lithonia Lighting	DSX0 LED P3 30K T5M MVOLT SPA DDBXD with SSS 18 4C DM19AS DDBXD	DSX0 LED Area Fixture; mounted at 20ft (18ft pole on 2ft base)	LED	DSX0_LED_P3_30K_T5M_MVOLT.ies	8141	0.9	71	TYPE VS, BUG RATING: B3 - U0 - G2	Max: 323cd
	S5-EX		5	XXXXX	Unknown	Represents Existing Area Fixture; mounted at 20ft	LED	DSX0_LED_P3_30K_T5M_MVOLT.ies	8141	0.9	71	TYPE VS, BUG RATING: B3 - U0 - G2	Max: 323cd



LEGEND

EXISTING LIGHT FIXTURE

PROPOSED LIGHT POLE FIXTURE

VISUAL

JACKSON LABS
Site Lighting Layout

Designer
Heidi G. Connors
Visible Light, Inc.
24 Stickney Terrace
Suite 6
Hampton, NH 03842

Date
05/11/2022

Scale
1"=40'

Drawing No.
1

Summary

Figure 21-2: Manufacturers' Lighting Cut Sheets

Manufacturer's Cut Sheet – D-Series Size O LED Area Luminaire (Lithonia Lighting)

Manufacturer's Cut Sheet – D-Series Size 1 LED Area Luminaire (Lithonia Lighting)

D-Series Size 0
LED Area Luminaire

Buy American

Catalog Number

Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

EPA: 0.95 ft² (.09 m²)

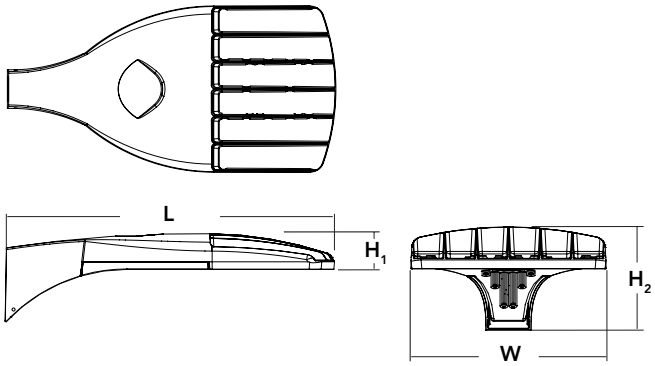
Length: 26" (66.0 cm)

Width: 13" (33.0 cm)

Height$_1$: 3" (7.62 cm)

Height$_2$: 7" (17.8 cm)

Weight (max): 16 lbs (7.25 kg)



Introduction

The modern styling of the D-Series is striking yet unobtrusive - making a bold, progressive statement even as it blends seamlessly with its environment. The D-Series distills the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire.

The outstanding photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. It is ideal for replacing up to 400W metal halide with typical energy savings of 70% and expected service life of over 100,000 hours.

Ordering Information

EXAMPLE: DSX0 LED P6 40K T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

DSX0 LED

Series	LEDs	Color temperature	Distribution		Voltage	Mounting
DSX0 LED	**Forward optics** P1 P5 P2 P6 P3 P7[1] P4[1] **Rotated optics** P10[2] P12[2] P11[2] P13[1,2]	30K 3000 K 40K 4000 K 50K 5000 K	T1S Type I short (Automotive) T2S Type II short T2M Type II medium T3S Type III short T3M Type III medium T4M Type IV medium TFTM Forward throw medium T5VS Type V very short[3]	T5S Type V short[3] T5M Type V medium[3] T5W Type V wide[3] BLC Backlight control[4] LCCO Left corner cutoff[4] RCCO Right corner cutoff[4]	MVOLT (120V-277V)[5,6] XVOLT (277V-480V)[7,8,9] 120[6] 208[6] 240[6] 277[6] 347[6] 480[6]	**Shipped included** SPA Square pole mounting RPA Round pole mounting[10] WBA Wall bracket[3] SPUMBA Square pole universal mounting adaptor[11] RPUMBA Round pole universal mounting adaptor[11] **Shipped separately** KMA8 DDBXD U Mast arm mounting bracket adaptor (specify finish)[12]

Control options		Other options	Finish *(required)*
Shipped installed NLTAIR2 nLight AIR generation 2 enabled[13,14] PIRHN Network, high/low motion/ambient sensor[15] PER NEMA twist-lock receptacle only (control ordered separate)[16] PER5 Five-pin receptacle only (control ordered separate)[16,17] PER7 Seven-pin receptacle only (leads exit fixture) (control ordered separate)[16,17] DMG 0-10V dimming extend out back of housing for external control (control ordered separate)[18] PIR High/low, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 5fc[19,20] PIRH High/low, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 5fc[19,20] PIR1FC3V High/low, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 1fc[19,20] PIRH1FC3V High/low, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc[19,20] FAO Field adjustable output[21]		**Shipped installed** HS House-side shield[22] SF Single fuse (120, 277, 347V)[6] DF Double fuse (208, 240, 480V)[6] L90 Left rotated optics[2] R90 Right rotated optics[2] DDL Diffused drop lens[22] HA 50°C ambient operations[1] BAA Buy America(n) Act Compliant **Shipped separately** BS Bird spikes[23] EGS External glare shield	DDBXD Dark bronze DBLXD Black DNAXD Natural aluminum DWHXD White DDBTXD Textured dark bronze DBLBXD Textured black DNATXD Textured natural aluminum DWHGXD Textured white

© 2011-2021 Acuity Brands Lighting, Inc. All rights reserved.

D-Series Size 1

LED Area Luminaire

Buy American

Catalog Number

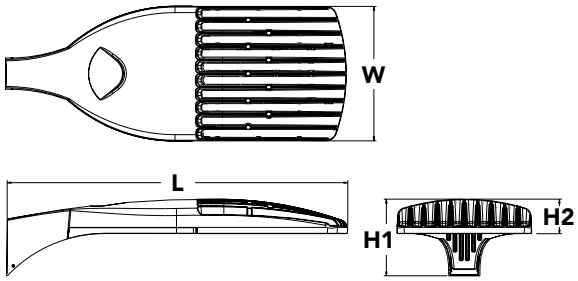
Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

EPA:	1.01 ft² (0.09 m²)
Length:	33″ (83.8 cm)
Width:	13″ (33.0 cm)
Height H1:	7-1/2″ (19.0 cm)
Height H2:	3-1/2″
Weight (max):	27 lbs (12.2 kg)



Introduction

The modern styling of the D-Series is striking yet unobtrusive - making a bold, progressive statement even as it blends seamlessly with its environment. The D-Series distills the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire.

The outstanding photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. It is ideal for replacing up to 750W metal halide in pedestrian and area lighting applications with typical energy savings of 65% and expected service life of over 100,000 hours.

Ordering Information

EXAMPLE: DSX1 LED P7 40K T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

DSX1 LED

Series

DSX1 LED

LEDs

Forward optics

P1	P4 [1]	P7 [1]
P2	P5 [1]	P8
P3	P6 [1]	P9 [1]

Rotated optics

P10 [2]	P12 [2]
P11 [2]	P13 [1,2]

Color temperature

30K	3000 K
40K	4000 K
50K	5000 K

Distribution

T1S	Type I short (Automotive)
T2S	Type II short
T2M	Type II medium
T3S	Type III short
T3M	Type III medium
T4M	Type IV medium
TFTM	Forward throw medium
T5VS	Type V very short [3]
T5S	Type V short [3]
T5M	Type V medium [3]
T5W	Type V wide [3]
BLC	Backlight control [4]
LCCO	Left corner cutoff [4]
RCCO	Right corner cutoff [4]

Voltage

MVOLT [5]
XVOLT (277V-480V) [6,7,8]
120 [9]
208 [9]
240 [9]
277 [9]
347 [9]
480 [9]

Mounting

Shipped included

SPA	Square pole mounting
RPA	Round pole mounting [10]
WBA	Wall bracket [3]
SPUMBA	Square pole universal mounting adaptor [11]
RPUMBA	Round pole universal mounting adaptor [9]

Shipped separately

KMA8 DDBXD U	Mast arm mounting bracket adaptor (specify finish) [12]

Control options

Shipped installed

NLTAIR2	nLight AIR generation 2 enabled [13]
PIRHN	Network, high/low motion/ambient sensor [14]
PER	NEMA twist-lock receptacle only (controls ordered separate) [15]
PER5	Five-pin receptacle only (controls ordered separate) [15,16]
PER7	Seven-pin receptacle only (controls ordered separate) [15,16]
DMG	0-10v dimming wires pulled outside fixture (for use with an external control, ordered separately) [17]
DS	Dual switching [18,19,20]
PIR	High/low, motion/ambient sensor, 8-15′ mounting height, ambient sensor enabled at 5fc [20,21]
PIRH	High/low, motion/ambient sensor, 15-30′ mounting height, ambient sensor enabled at 5fc [20,21]
PIR1FC3V	High/low, motion/ambient sensor, 8-15′ mounting height, ambient sensor enabled at 1fc [20,21]
PIRH1FC3V	Bi-level, motion/ambient sensor, 15-30′ mounting height, ambient sensor enabled at 1fc [20,21]
FAO	Field adjustable output [20,21]

Other options

Shipped installed

HS	House-side shield [23]
SF	Single fuse (120, 277, 347V) [9]
DF	Double fuse (208, 240, 480V) [9]
L90	Left rotated optics [2]
R90	Right rotated optics [2]
HA	50°C ambient operations [1]
BAA	Buy America(n) Act Compliant

Shipped separately

BS	Bird spikes [24]
EGS	External glare shield

Finish *(required)*

DDBXD	Dark bronze
DBLXD	Black
DNAXD	Natural aluminum
DWHXD	White
DDBTXD	Textured dark bronze
DBLBXD	Textured black
DNATXD	Textured natural aluminum
DWHGXD	Textured white

© 2011-2021 Acuity Brands Lighting, Inc. All rights reserved.

Ordering Information

Accessories

Ordered and shipped separately.

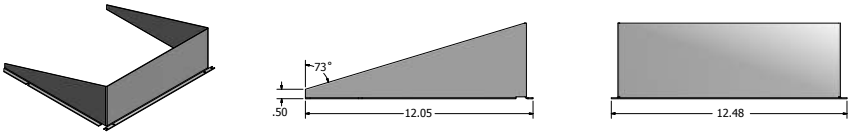
DLL127F 1.5 JU	Photocell - SSL twist-lock (120-277V) [25]
DLL347F 1.5 CUL JU	Photocell - SSL twist-lock (347V) [25]
DLL480F 1.5 CUL JU	Photocell - SSL twist-lock (480V) [25]
DSHORT SBK U	Shorting cap [25]
DSX1HS 30C U	House-side shield for P1, P2, P3, P4 and P5 [23]
DSX1HS 40C U	House-side shield for P6 and P7 [23]
DSX1HS 60C U	House-side shield for P8, P9, P10, P11 and P12 [23]
PUMBA DDBXD U*	Square and round pole universal mounting bracket (specify finish) [26]
KMA8 DDBXD U	Mast arm mounting bracket adaptor (specify finish) [12]
DSX1EGS (FINISH) U	External glare shield

For more control options, visit DTL and ROAM online.

NOTES
1 HA not available with P4, P5, P6, P7, P9 and P13.
2 P10, P11, P12 or P13 and rotated optics (L90, R90) only available together.
3 Any Type 5 distribution with photocell, is not available with WBA.
4 Not available with HS.
5 MVOLT driver operates on any line voltage from 120-277V (50/60 Hz).
6 XVOLT only suitable for use with P3, P5, P6, P7, P9 and P13.
7 XVOLT works with any voltage between 277V and 480V.
8 XVOLT not available with fusing (SF or DF) and not available with PIR, PIRH, PIR1FC3V, PIRH1FC3V.
9 Single fuse (SF) requires 120V, 277V or 347V. Double fuse (DF) requires 208V, 240V or 480V. XVOLT not available with fusing (SF or DF.
10 Suitable for mounting to round poles between 3.5" and 12" diameter.
11 Universal mounting brackets intended for retrofit on existing, pre-drilled poles only. 1.5 G vibration load rating per ANCI C136.31. Only usable when pole's drill pattern is NOT Lithonia template #8
12 Must order fixture with SPA option. Must be ordered as a separate accessory; see Accessories information. For use with 2-3/8" diameter mast arm (not included).
13 Must be ordered with PIRHN. Sensor cover available only in dark bronze, black, white and natural aluminum colors.
14 Must be ordered with NLTAIR2. For more information on nLight Air 2 visit this link.
15 Photocell ordered and shipped as a separate line item from Acuity Brands Controls. See accessories. Shorting cap included.
16 If ROAM® node required, it must be ordered and shipped as a separate line item from Acuity Brands Controls. Node with integral dimming.
17 DMG not available with PIRHN, PER5, PER7, PIR, PIRH, PIR1FC3V or PIRH1FC3V, FAO.
18 Provides 50/50fixture operation via (2) independent drivers. Not available with PER, PER5, PER7, PIR or PIRH. Not available P1, P2, P3, P4 or P5.
19 Requires (2) separately switched circuits with isolated neutrol.
20 Reference Controls Option Default settings table on page 4.
21 Reference Motion Sensor table on page 4 to see functionality.
22 Not available with other dimming controls options.
23 Not available with BLC, LCCO and RCCO distribution. Also available as a separate accessory; see Accessories information.
24 Must be ordered with fixture for factory pre-drilling.
25 Requires luminaire to be specified with PER, PER5 or PER7 option. See Control Option Table on page 4.
26 For retrofit use only. Only usable when pole's drill pattern is NOT Lithonia template #8.

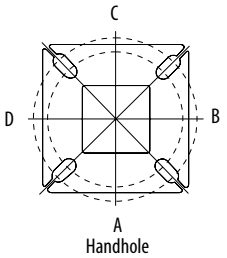
Options

EGS - External Glare Shield

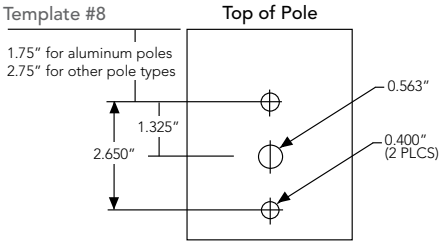


Drilling

HANDHOLE ORIENTATION



Template #8



Tenon Mounting Slipfitter

Tenon O.D.	Mounting	Single Unit	2 @ 180	2 @ 90	3 @ 90	3 @120	4 @ 90
2-3/8"	RPA	AS3-5 190	AS3-5 280	AS3-5 290	AS3-5 390	AS3-5 320	AS3-5 490
2-7/8"	RPA	AST25-190	AST25-280	AST25-290	AST25-390	AST25-320	AST25-490
4"	RPA	AST35-190	AST35-280	AST35-290	AST35-390	AST35-320	AST35-490

Mounting Option	Drilling Template	Single	2 @ 180	2 @ 90	3 @ 90	3 @ 120	4 @ 90
Head Location		Side B	Side B & D	Side B & C	Side B, C & D	Round Pole Only	Side A, B, C & D
Drill Nomenclature	#8	DM19AS	DM28AS	DM29AS	DM39AS	DM32AS	DM49AS

DSX1 Area Luminaire - EPA

*Includes luminaire and integral mounting arm. Other tenons, arms, brackets or other accessories are not included in this EPA data.

Fixture Quantity & Mounting Configuration	Single DM19	2 @ 180 DM28	2 @ 90 DM29	3 @ 90 DM39	3 @ 120 DM32	4 @ 90 DM49
Mounting Type						
DSX1 LED	1.013	2.025	1.945	3.038	2.850	3.749

	Drilling Template	Minimum Acceptable Outside Pole Dimension					
SPA	#8	2-7/8"	2-7/8"	3.5"	3.5"	3"	3.5"
RPA	#8	2-7/8"	2-7/8"	3.5"	3.5"	3"	3.5"
SPUMBA	#5	2-7/8"	3"	4"	4"	3.5"	4"
RPUMBA	#5	2-7/8"	3.5"	5"	5"	3.5"	5"

© 2011-2021 Acuity Brands Lighting, Inc. All rights reserved.

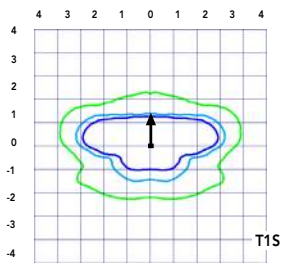
Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's D-Series Area Size 1 homepage.

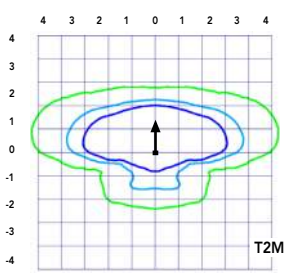
Isofootcandle plots for the DSX1 LED 60C 1000 40K. Distances are in units of mounting height (25').

LEGEND

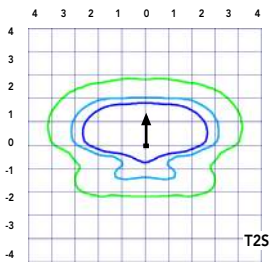
- 0.1 fc
- 0.5 fc
- 1.0 fc



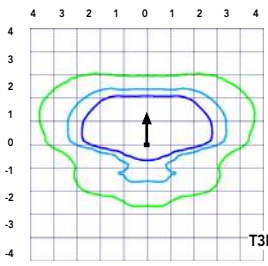
Test No. LTL23211 tested in accordance with IESNA LM-79-08.



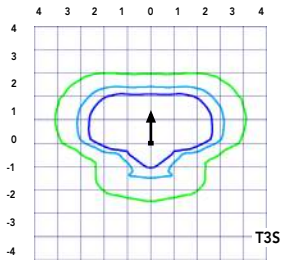
Test No. LTL23164B tested in accordance with IESNA LM-79-08.



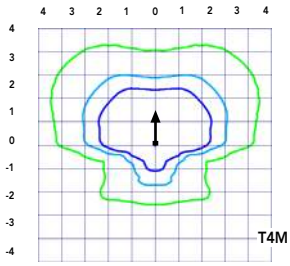
Test No. LTL23222 tested in accordance with IESNA LM-79-08.



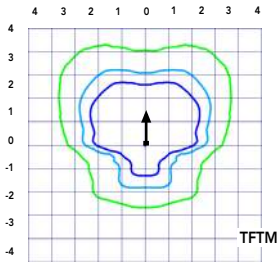
Test No. LTL23271 tested in accordance with IESNA LM-79-08.



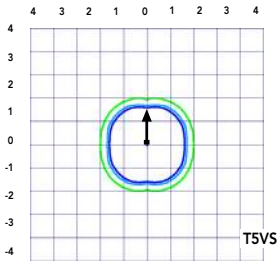
Test No. LTL23211 tested in accordance with IESNA LM-79-08.



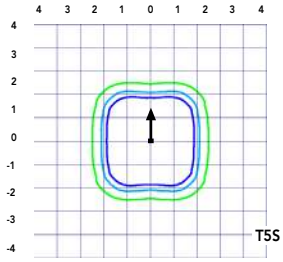
Test No. LTL23164B tested in accordance with IESNA LM-79-08.



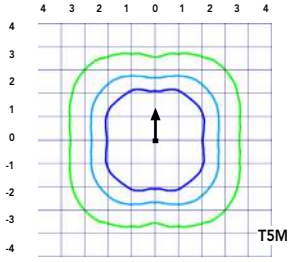
Test No. LTL23222 tested in accordance with IESNA LM-79-08.



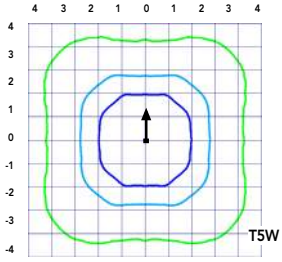
Test No. LTL23271 tested in accordance with IESNA LM-79-08.



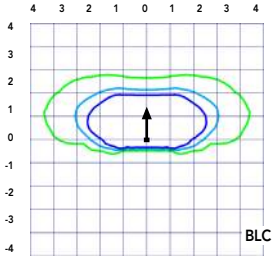
Test No. LTL23211 tested in accordance with IESNA LM-79-08.



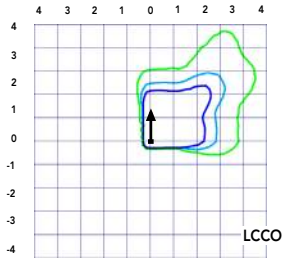
Test No. LTL23164B tested in accordance with IESNA LM-79-08.



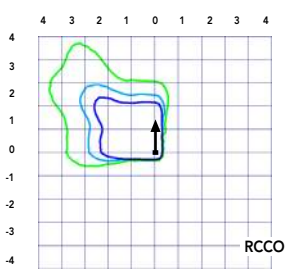
Test No. LTL23222 tested in accordance with IESNA LM-79-08.



Test No. LTL23271 tested in accordance with IESNA LM-79-08.



Test No. LTL23211 tested in accordance with IESNA LM-79-08.



Test No. LTL23164B tested in accordance with IESNA LM-79-08.

© 2011-2021 Acuity Brands Lighting, Inc. All rights reserved.

Performance Data

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.04
5°C	41°F	1.04
10°C	50°F	1.03
15°C	50°F	1.02
20°C	68°F	1.01
25°C	**77°F**	**1.00**
30°C	86°F	0.99
35°C	95°F	0.98
40°C	104°F	0.97

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platforms noted in a **25°C ambient**, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	Lumen Maintenance Factor
0	1.00
25,000	0.96
50,000	0.92
100,000	0.85

Motion Sensor Default Settings						
Option	Dimmed State	High Level (when triggered)	Phototcell Operation	Dwell Time	Ramp-up Time	Ramp-down Time
PIR or PIRH	3V (37%) Output	10V (100%) Output	Enabled @ 5FC	5 min	3 sec	5 min
*PIR1FC3V or PIRH1FC3V	3V (37%) Output	10V (100%) Output	Enabled @ 1FC	5 min	3 sec	5 min
*for use when motion sensor is used as dusk to dawn control.						

Electrical Load

					Current (A)					
	Performance Package	LED Count	Drive Current	Wattage	120	208	240	277	347	480
Forward Optics (Non-Rotated)	P1	30	530	54	0.45	0.26	0.23	0.19	0.10	0.12
	P2	30	700	70	0.59	0.34	0.30	0.25	0.20	0.16
	P3	30	1050	102	0.86	0.50	0.44	0.38	0.30	0.22
	P4	30	1250	125	1.06	0.60	0.52	0.46	0.37	0.27
	P5	30	1400	138	1.16	0.67	0.58	0.51	0.40	0.29
	P6	40	1250	163	1.36	0.78	0.68	0.59	0.47	0.34
	P7	40	1400	183	1.53	0.88	0.76	0.66	0.53	0.38
	P8	60	1050	207	1.74	0.98	0.87	0.76	0.64	0.49
	P9	60	1250	241	2.01	1.16	1.01	0.89	0.70	0.51
Rotated Optics (Requires L90 or R90)	P10	60	530	106	0.90	0.52	0.47	0.43	0.33	0.27
	P11	60	700	137	1.15	0.67	0.60	0.53	0.42	0.32
	P12	60	1050	207	1.74	0.99	0.87	0.76	0.60	0.46
	P13	60	1250	231	1.93	1.12	0.97	0.86	0.67	0.49

Controls Options				
Nomenclature	**Description**	**Functionality**	**Primary control device**	**Notes**
FAO	Field adjustable output device installed inside the luminaire; wired to the driver dimming leads.	Allows the luminaire to be manually dimmed, effectively trimming the light output.	FAO device	Cannot be used with other controls options that need the 0-10V leads
DS	Drivers wired independently for 50/50 luminaire operation	The luminaire is wired to two separate circuits, allowing for 50/50 operation.	Independently wired drivers	Requires two separately switched circuits. Consider nLight AIR as a more cost effective alternative.
PER5 or PER7	Twist-lock photocell recepticle	Compatible with standard twist-lock photocells for dusk to dawn operation, or advanced control nodes that provide 0-10V dimming signals.	Twist-lock photocells such as DLL Elite or advanced control nodes such as ROAM.	Pins 4 & 5 to dimming leads on driver, Pins 6 & 7 are capped inside luminaire
PIR or PIRH	Motion sensors with integral photocell. PIR for 8-15' mounting; PIRH for 15-30' mounting	Luminaires dim when no occupancy is detected.	Acuity Controls SBGR	Also available with PIRH1FC3V when the sensor photocell is used for dusk-to-dawn operation.
NLTAIR2 PIRHN	nLight AIR enabled luminaire for motion sensing, photocell and wireless communication.	Motion and ambient light sensing with group response. Scheduled dimming with motion sensor over-ride when wirelessly connected to the nLight Eclypse.	nLight Air rSDGR	nLight AIR sensors can be programmed and commissioned from the ground using the CIAIRity Pro app.

© 2011-2021 Acuity Brands Lighting, Inc. All rights reserved.

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts Contact factory for performance data on any configurations not shown here.

Forward Optics

LED Count	Drive Current	Power Package	System Watts	Dist. Type	30K (3000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
30	530	**P1**	54W	T1S	6,457	2	0	2	120	6,956	2	0	2	129	7,044	2	0	2	130
				T2S	6,450	2	0	2	119	6,949	2	0	2	129	7,037	2	0	2	130
				T2M	6,483	1	0	1	120	6,984	2	0	2	129	7,073	2	0	2	131
				T3S	6,279	2	0	2	116	6,764	2	0	2	125	6,850	2	0	2	127
				T3M	6,468	1	0	2	120	6,967	1	0	2	129	7,056	1	0	2	131
				T4M	6,327	1	0	2	117	6,816	1	0	2	126	6,902	1	0	2	128
				TFTM	6,464	1	0	2	120	6,963	1	0	2	129	7,051	1	0	2	131
				T5VS	6,722	2	0	0	124	7,242	3	0	0	134	7,334	3	0	0	136
				T5S	6,728	2	0	1	125	7,248	2	0	1	134	7,340	2	0	1	136
				T5M	6,711	3	0	1	124	7,229	3	0	1	134	7,321	3	0	2	136
				T5W	6,667	3	0	2	123	7,182	3	0	2	133	7,273	3	0	2	135
				BLC	5,299	1	0	1	98	5,709	1	0	2	106	5,781	1	0	2	107
				LCCO	3,943	1	0	2	73	4,248	1	0	2	79	4,302	1	0	2	80
				RCCO	3,943	1	0	2	73	4,248	1	0	2	79	4,302	1	0	2	80
30	700	**P2**	70W	T1S	8,249	2	0	2	118	8,886	2	0	2	127	8,999	2	0	2	129
				T2S	8,240	2	0	2	118	8,877	2	0	2	127	8,989	2	0	2	128
				T2M	8,283	2	0	2	118	8,923	2	0	2	127	9,036	2	0	2	129
				T3S	8,021	2	0	2	115	8,641	2	0	2	123	8,751	2	0	2	125
				T3M	8,263	2	0	2	118	8,901	2	0	2	127	9,014	2	0	2	129
				T4M	8,083	2	0	2	115	8,708	2	0	2	124	8,818	2	0	2	126
				TFTM	8,257	2	0	2	118	8,896	2	0	2	127	9,008	2	0	2	129
				T5VS	8,588	3	0	0	123	9,252	3	0	0	132	9,369	3	0	0	134
				T5S	8,595	3	0	1	123	9,259	3	0	1	132	9,376	3	0	1	134
				T5M	8,573	3	0	2	122	9,236	3	0	2	132	9,353	3	0	2	134
				T5W	8,517	3	0	2	122	9,175	4	0	2	131	9,291	4	0	2	133
				BLC	6,770	1	0	2	97	7,293	1	0	2	104	7,386	1	0	2	106
				LCCO	5,038	1	0	2	72	5,427	1	0	2	78	5,496	1	0	2	79
				RCCO	5,038	1	0	2	72	5,427	1	0	2	78	5,496	1	0	2	79
30	1050	**P3**	102W	T1S	11,661	2	0	2	114	12,562	3	0	3	123	12,721	3	0	3	125
				T2S	11,648	2	0	2	114	12,548	3	0	3	123	12,707	3	0	3	125
				T2M	11,708	2	0	2	115	12,613	2	0	2	124	12,773	2	0	2	125
				T3S	11,339	2	0	2	111	12,215	3	0	3	120	12,370	3	0	3	121
				T3M	11,680	2	0	2	115	12,582	2	0	2	123	12,742	2	0	2	125
				T4M	11,426	2	0	3	112	12,309	2	0	3	121	12,465	2	0	3	122
				TFTM	11,673	2	0	2	114	12,575	2	0	3	123	12,734	2	0	3	125
				T5VS	12,140	3	0	1	119	13,078	3	0	1	128	13,244	3	0	1	130
				T5S	12,150	3	0	1	119	13,089	3	0	1	128	13,254	3	0	1	130
				T5M	12,119	4	0	2	119	13,056	4	0	2	128	13,221	4	0	2	130
				T5W	12,040	4	0	3	118	12,970	4	0	3	127	13,134	4	0	3	129
				BLC	9,570	1	0	2	94	10,310	1	0	2	101	10,440	1	0	2	102
				LCCO	7,121	1	0	3	70	7,671	1	0	3	75	7,768	1	0	3	76
				RCCO	7,121	1	0	3	70	7,671	1	0	3	75	7,768	1	0	3	76
30	1250	**P4**	125W	T1S	13,435	3	0	3	107	14,473	3	0	3	116	14,657	3	0	3	117
				T2S	13,421	3	0	3	107	14,458	3	0	3	116	14,641	3	0	3	117
				T2M	13,490	2	0	2	108	14,532	3	0	3	116	14,716	3	0	3	118
				T3S	13,064	3	0	3	105	14,074	3	0	3	113	14,252	3	0	3	114
				T3M	13,457	2	0	2	108	14,497	2	0	2	116	14,681	2	0	2	117
				T4M	13,165	2	0	3	105	14,182	2	0	3	113	14,362	2	0	3	115
				TFTM	13,449	2	0	3	108	14,488	2	0	3	116	14,672	2	0	3	117
				T5VS	13,987	4	0	1	112	15,068	4	0	1	121	15,259	4	0	1	122
				T5S	13,999	3	0	1	112	15,080	3	0	1	121	15,271	3	0	1	122
				T5M	13,963	4	0	2	112	15,042	4	0	2	120	15,233	4	0	2	122
				T5W	13,872	4	0	3	111	14,944	4	0	3	120	15,133	4	0	3	121
				BLC	11,027	1	0	2	88	11,879	1	0	2	95	12,029	1	0	2	96
				LCCO	8,205	1	0	3	66	8,839	1	0	3	71	8,951	1	0	3	72
				RCCO	8,205	1	0	3	66	8,839	1	0	3	71	8,951	1	0	3	72
30	1400	**P5**	138W	T1S	14,679	3	0	3	106	15,814	3	0	3	115	16,014	3	0	3	116
				T2S	14,664	3	0	3	106	15,797	3	0	3	114	15,997	3	0	3	116
				T2M	14,739	3	0	3	107	15,878	3	0	3	115	16,079	3	0	3	117
				T3S	14,274	3	0	3	103	15,377	3	0	3	111	15,572	3	0	3	113
				T3M	14,704	2	0	3	107	15,840	3	0	3	115	16,040	3	0	3	116
				T4M	14,384	2	0	3	104	15,496	3	0	3	112	15,692	3	0	3	114
				TFTM	14,695	2	0	3	106	15,830	3	0	3	115	16,030	3	0	3	116
				T5VS	15,283	4	0	1	111	16,464	4	0	1	119	16,672	4	0	1	121
				T5S	15,295	3	0	1	111	16,477	4	0	1	119	16,686	4	0	1	121
				T5M	15,257	4	0	2	111	16,435	4	0	2	119	16,644	4	0	2	121
				T5W	15,157	4	0	3	110	16,328	4	0	3	118	16,534	4	0	3	120
				BLC	12,048	1	0	2	87	12,979	1	0	2	94	13,143	1	0	2	95
				LCCO	8,965	1	0	3	65	9,657	1	0	3	70	9,780	1	0	3	71
				RCCO	8,965	1	0	3	65	9,657	1	0	3	70	9,780	1	0	3	71

© 2011-2021 Acuity Brands Lighting, Inc. All rights reserved.

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Forward Optics

LED Count	Drive Current	Power Package	System Watts	Dist. Type	30K (3000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
40	1250	**P6**	163W	T1S	17,654	3	0	3	108	19,018	3	0	3	117	19,259	3	0	3	118
				T2S	17,635	3	0	3	108	18,998	3	0	3	117	19,238	3	0	3	118
				T2M	17,726	3	0	3	109	19,096	3	0	3	117	19,337	3	0	3	119
				T3S	17,167	3	0	3	105	18,493	3	0	3	113	18,727	3	0	3	115
				T3M	17,683	3	0	3	108	19,049	3	0	3	117	19,290	3	0	3	118
				T4M	17,299	3	0	3	106	18,635	3	0	4	114	18,871	3	0	4	116
				TFTM	17,672	3	0	3	108	19,038	3	0	4	117	19,279	3	0	4	118
				T5VS	18,379	4	0	1	113	19,800	4	0	1	121	20,050	4	0	1	123
				T5S	18,394	4	0	2	113	19,816	4	0	2	122	20,066	4	0	2	123
				T5M	18,348	4	0	2	113	19,766	4	0	2	121	20,016	4	0	2	123
				T5W	18,228	5	0	3	112	19,636	5	0	3	120	19,885	5	0	3	122
				BLC	14,489	2	0	2	89	15,609	2	0	3	96	15,806	2	0	3	97
				LCCO	10,781	1	0	3	66	11,614	1	0	3	71	11,761	2	0	3	72
				RCCO	10,781	1	0	3	66	11,614	1	0	3	71	11,761	2	0	3	72
40	1400	**P7**	183W	T1S	19,227	3	0	3	105	20,712	3	0	3	113	20,975	3	0	3	115
				T2S	19,206	3	0	3	105	20,690	3	0	3	113	20,952	3	0	3	114
				T2M	19,305	3	0	3	105	20,797	3	0	3	114	21,060	3	0	3	115
				T3S	18,696	3	0	3	102	20,141	3	0	3	110	20,396	3	0	4	111
				T3M	19,258	3	0	3	105	20,746	3	0	3	113	21,009	3	0	3	115
				T4M	18,840	3	0	4	103	20,296	3	0	4	111	20,553	3	0	4	112
				TFTM	19,246	3	0	4	105	20,734	3	0	4	113	20,996	3	0	4	115
				T5VS	20,017	4	0	1	109	21,564	4	0	1	118	21,837	4	0	1	119
				T5S	20,033	4	0	2	109	21,581	4	0	2	118	21,854	4	0	2	119
				T5M	19,983	4	0	2	109	21,527	5	0	3	118	21,799	5	0	3	119
				T5W	19,852	5	0	3	108	21,386	5	0	3	117	21,656	5	0	3	118
				BLC	15,780	2	0	3	86	16,999	2	0	3	93	17,214	2	0	3	94
				LCCO	11,742	2	0	3	64	12,649	2	0	3	69	12,809	2	0	3	70
				RCCO	11,742	2	0	3	64	12,649	2	0	3	69	12,809	2	0	3	70
60	1050	**P8**	207W	T1S	22,490	3	0	3	109	24,228	3	0	3	117	24,535	3	0	3	119
				T2S	22,466	3	0	4	109	24,202	3	0	4	117	24,509	3	0	4	118
				T2M	22,582	3	0	3	109	24,327	3	0	3	118	24,635	3	0	3	119
				T3S	21,870	3	0	4	106	23,560	3	0	4	114	23,858	3	0	4	115
				T3M	22,527	3	0	4	109	24,268	3	0	4	117	24,575	3	0	4	119
				T4M	22,038	3	0	4	106	23,741	3	0	4	115	24,041	3	0	4	116
				TFTM	22,513	3	0	4	109	24,253	3	0	4	117	24,560	3	0	4	119
				T5VS	23,415	5	0	1	113	25,224	5	0	1	122	25,543	5	0	1	123
				T5S	23,434	4	0	2	113	25,244	4	0	2	122	25,564	4	0	2	123
				T5M	23,374	5	0	3	113	25,181	5	0	3	122	25,499	5	0	3	123
				T5W	23,221	5	0	4	112	25,016	5	0	4	121	25,332	5	0	4	122
				BLC	18,458	2	0	3	89	19,885	2	0	3	96	20,136	2	0	3	97
				LCCO	13,735	2	0	3	66	14,796	2	0	4	71	14,983	2	0	4	72
				RCCO	13,735	2	0	3	66	14,796	2	0	4	71	14,983	2	0	4	72
60	1250	**P9**	241W	T1S	25,575	3	0	3	106	27,551	3	0	3	114	27,900	3	0	3	116
				T2S	25,548	3	0	4	106	27,522	3	0	4	114	27,871	3	0	4	116
				T2M	25,680	3	0	3	107	27,664	3	0	3	115	28,014	3	0	3	116
				T3S	24,870	3	0	4	103	26,791	3	0	4	111	27,130	3	0	4	113
				T3M	25,617	3	0	4	106	27,597	3	0	4	115	27,946	3	0	4	116
				T4M	25,061	3	0	4	104	26,997	3	0	4	112	27,339	3	0	4	113
				TFTM	25,602	3	0	4	106	27,580	3	0	4	114	27,929	3	0	4	116
				T5VS	26,626	5	0	1	110	28,684	5	0	1	119	29,047	5	0	1	121
				T5S	26,648	4	0	2	111	28,707	5	0	2	119	29,070	5	0	2	121
				T5M	26,581	5	0	3	110	28,635	5	0	3	119	28,997	5	0	3	120
				T5W	26,406	5	0	4	110	28,447	5	0	4	118	28,807	5	0	4	120
				BLC	20,990	2	0	3	87	22,612	2	0	3	94	22,898	2	0	3	95
				LCCO	15,619	2	0	4	65	16,825	2	0	4	70	17,038	2	0	4	71
				RCCO	15,619	2	0	4	65	16,825	2	0	4	70	17,038	2	0	4	71

© 2011-2021 Acuity Brands Lighting, Inc. All rights reserved.

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Rotated Optics

LED Count	Drive Current	Power Package	System Watts	Dist. Type	30K (3000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
60	530	**P10**	106W	T1S	13,042	3	0	3	123	14,050	3	0	3	133	14,228	3	0	3	134
				T2S	12,967	4	0	4	122	13,969	4	0	4	132	14,146	4	0	4	133
				T2M	13,201	3	0	3	125	14,221	3	0	3	134	14,401	3	0	3	136
				T3S	12,766	4	0	4	120	13,752	4	0	4	130	13,926	4	0	4	131
				T3M	13,193	4	0	4	124	14,213	4	0	4	134	14,393	4	0	4	136
				T4M	12,944	4	0	4	122	13,945	4	0	4	132	14,121	4	0	4	133
				TFTM	13,279	4	0	4	125	14,305	4	0	4	135	14,486	4	0	4	137
				T5VS	13,372	3	0	1	126	14,405	4	0	1	136	14,588	4	0	1	138
				T5S	13,260	3	0	1	125	14,284	3	0	1	135	14,465	3	0	1	136
				T5M	13,256	4	0	2	125	14,281	4	0	2	135	14,462	4	0	2	136
				T5W	13,137	4	0	3	124	14,153	4	0	3	134	14,332	4	0	3	135
				BLC	10,906	3	0	3	103	11,749	3	0	3	111	11,898	3	0	3	112
				LCCO	7,789	1	0	3	73	8,391	1	0	3	79	8,497	1	0	3	80
				RCCO	7,779	4	0	4	73	8,380	4	0	4	79	8,486	4	0	4	80
60	700	**P11**	137W	T1S	16,556	3	0	3	121	17,835	3	0	3	130	18,061	4	0	4	132
				T2S	16,461	4	0	4	120	17,733	4	0	4	129	17,957	4	0	4	131
				T2M	16,758	4	0	4	122	18,053	4	0	4	132	18,281	4	0	4	133
				T3S	16,205	4	0	4	118	17,457	4	0	4	127	17,678	4	0	4	129
				T3M	16,748	4	0	4	122	18,042	4	0	4	132	18,271	4	0	4	133
				T4M	16,432	4	0	4	120	17,702	4	0	4	129	17,926	4	0	4	131
				TFTM	16,857	4	0	4	123	18,159	4	0	4	133	18,389	4	0	4	134
				T5VS	16,975	4	0	1	124	18,287	4	0	1	133	18,518	4	0	1	135
				T5S	16,832	4	0	1	123	18,133	4	0	2	132	18,362	4	0	2	134
				T5M	16,828	4	0	2	123	18,128	4	0	2	132	18,358	4	0	2	134
				T5W	16,677	4	0	3	122	17,966	5	0	3	131	18,193	5	0	3	133
				BLC	13,845	3	0	3	101	14,915	3	0	3	109	15,103	3	0	3	110
				LCCO	9,888	1	0	3	72	10,652	2	0	3	78	10,787	2	0	3	79
				RCCO	9,875	4	0	4	72	10,638	4	0	4	78	10,773	4	0	4	79
60	1050	**P12**	207W	T1S	22,996	4	0	4	111	24,773	4	0	4	120	25,087	4	0	4	121
				T2S	22,864	4	0	4	110	24,631	5	0	5	119	24,943	5	0	5	120
				T2M	23,277	4	0	4	112	25,075	4	0	4	121	25,393	4	0	4	123
				T3S	22,509	4	0	4	109	24,248	5	0	5	117	24,555	5	0	5	119
				T3M	23,263	4	0	4	112	25,061	4	0	4	121	25,378	4	0	4	123
				T4M	22,824	5	0	5	110	24,588	5	0	5	119	24,899	5	0	5	120
				TFTM	23,414	5	0	5	113	25,223	5	0	5	122	25,543	5	0	5	123
				T5VS	23,579	5	0	1	114	25,401	5	0	1	123	25,722	5	0	1	124
				T5S	23,380	4	0	2	113	25,187	4	0	2	122	25,506	4	0	2	123
				T5M	23,374	5	0	3	113	25,181	5	0	3	122	25,499	5	0	3	123
				T5W	23,165	5	0	4	112	24,955	5	0	4	121	25,271	5	0	4	122
				BLC	19,231	4	0	4	93	20,717	4	0	4	100	20,979	4	0	4	101
				LCCO	13,734	2	0	3	66	14,796	2	0	4	71	14,983	2	0	4	72
				RCCO	13,716	4	0	4	66	14,776	4	0	4	71	14,963	4	0	4	72
60	1250	**P13**	231W	T1S	25,400	4	0	4	110	27,363	4	0	4	118	27,709	4	0	4	120
				T2S	25,254	5	0	5	109	27,205	5	0	5	118	27,550	5	0	5	119
				T2M	25,710	4	0	4	111	27,696	4	0	4	120	28,047	4	0	4	121
				T3S	24,862	5	0	5	108	26,783	5	0	5	116	27,122	5	0	5	117
				T3M	25,695	5	0	5	111	27,680	5	0	5	120	28,031	5	0	5	121
				T4M	25,210	5	0	5	109	27,158	5	0	5	118	27,502	5	0	5	119
				TFTM	25,861	5	0	5	112	27,860	5	0	5	121	28,212	5	0	5	122
				T5VS	26,043	5	0	1	113	28,056	5	0	1	121	28,411	5	0	1	123
				T5S	25,824	4	0	2	112	27,819	5	0	2	120	28,172	5	0	2	122
				T5M	25,818	5	0	3	112	27,813	5	0	3	120	28,165	5	0	3	122
				T5W	25,586	5	0	4	111	27,563	5	0	4	119	27,912	5	0	4	121
				BLC	21,241	4	0	4	92	22,882	4	0	4	99	23,172	4	0	4	100
				LCCO	15,170	2	0	4	66	16,342	2	0	4	71	16,549	2	0	4	72
				RCCO	15,150	5	0	5	66	16,321	5	0	5	71	16,527	5	0	5	72

© 2011-2021 Acuity Brands Lighting, Inc. All rights reserved.

FEATURES & SPECIFICATIONS

INTENDED USE
The sleek design of the D-Series Size 1 reflects the embedded high performance LED technology. It is ideal for many commercial and municipal applications, such as parking lots, plazas, campuses, and streetscapes.

CONSTRUCTION
Single-piece die-cast aluminum housing has integral heat sink fins to optimize thermal management through conductive and convective cooling. Modular design allows for ease of maintenance and future light engine upgrades. The LED drivers are mounted in direct contact with the casting to promote low operating temperature and long life. Housing is completely sealed against moisture and environmental contaminants (IP65). Low EPA (1.01 ft^2) for optimized pole wind loading.

FINISH
Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Available in both textured and non-textured finishes.

OPTICS
Precision-molded proprietary acrylic lenses are engineered for superior area lighting distribution, uniformity, and pole spacing. Light engines are available in standard 3000 K, 4000 K and 5000 K (70 CRI) configurations. The D-Series Size 1 has zero uplight and qualifies as a Nighttime Friendly™ product, meaning it is consistent with the LEED® and Green Globes™ criteria for eliminating wasteful uplight.

ELECTRICAL
Light engine configurations consist of high-efficacy LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life (up to L85/100,000 hours at 25°C). Class 1 electronic drivers are designed to have a power factor >90%, THD <20%, and an expected life of 100,000 hours with <1% failure rate. Easily serviceable 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).

STANDARD CONTROLS
The DSX1 LED area luminaire has a number of control options. DSX Size 1, comes standard with 0-10V dimming drivers. Dusk to dawn controls can be utilized via optional NEMA twist-lock photocell receptacles. Integrated motion sensors with on-board photocells feature field-adjustable programing and are suitable for mounting heights up to 30 feet.

nLIGHT AIR CONTROLS
The DSX1 LED area luminaire is also available with nLight® AIR for the ultimate in wireless control. This powerful controls platform provides out-of-the-box basic motion sensing and photocontrol functionality and is suitable for mounting heights up to 40 feet. Once commissioned using a smartphone and the easy-to-use CLAIRITY app, nLight AIR equipped luminaries can be grouped, resulting in motion sensor and photocell group response without the need for additional equipment. Scheduled dimming with motion sensor over-ride can be achieved when used with the nLight Eclypse. Additional information about nLight Air can be found here.

INSTALLATION
Included mounting block and integral arm facilitate quick and easy installation. Stainless steel bolts fasten the mounting block securely to poles and walls, enabling the D-Series Size 1 to withstand up to a 3.0 G vibration load rating per ANSI C136.31. The D-Series Size 1 utilizes the AERIS™ series pole drilling pattern (template #8). NEMA photocontrol receptacle are also available.

LISTINGS
UL listed to meet U.S. and Canadian standards. UL Listed for wet locations. Light engines are IP66 rated; luminaire is IP65 rated. Rated for -40°C minimum ambient. U.S. Patent No. D672,492 S. International patent pending.

DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

International Dark-Sky Association (IDA) Fixture Seal of Approval (FSA) is available for all products on this page utilizing 3000K color temperature only.

BUY AMERICAN
Product with the BAA option is assembled in the USA and meets the Buy America(n) government procurement requirements under FAR, DFARS and DOT. Please refer to www.acuitybrands.com/buy-american for additional information.

WARRANTY
5-year limited warranty. Complete warranty terms located at:
www.acuitybrands.com/support/customer-support/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application.
All values are design or typical values, measured under laboratory conditions at 25 °C.
Specifications subject to change without notice.

© 2011-2021 Acuity Brands Lighting, Inc. All rights reserved.

EXHIBIT 22
125-66.T SIGNS

The existing sign indicating the turn for Lot B will be relocated to indicate the new entrance. The sign and its current and proposed locations are illustrated on the Lot B Access Grading Plan (Sheet 1 of 3 in the design set included in Exhibit 9).

LOT B IDENTIFICATION SIGN

NOT TO SCALE

EXHIBIT 23
125-66.U TRAFFIC IMPACT

JAX requested Diane Morabito, PE (Sewall) to evaluate the need for a Traffic Movement Permit (TMP) based on development at the campus over the last 10 years, including the Childcare Center being proposed for construction next year. This analysis indicated that a TMP is not necessary at this time. Diane shared her analysis with MDOT, and they have concurred with her findings. The DOT letter of concurrence is attached here as Figure 23-1.

The new driveway location for Lot B is approximately 250' north of the existing entrance. A new right turn lane for cars entering the parking lot will minimize any impact to traffic flow along Route 3.

The sight distance from the driveway to the north exceeds 600 feet, and to the south is approximately 350 feet. The posted speed limit of this section of Main Street is 35 mph. Maine DOT sight distance standards for this posted speed requires 305 ft of sight distance. Therefore, the proposed Lot B entrance provides satisfactory sight distance.

An Entrance Permit application has been submitted to MDOT for the new driveway location. Approval documentation will be provided to the Town when JAX receives it.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
REGION 4
219 HOGAN ROAD
BANGOR, MAINE 04401-5603

Janet T. Mills
GOVERNOR

Bruce A. Van Note
COMMISSIONER

May 4, 2022

Diane Morabito, P.E.
40 Forest Falls Drive, Suite 2
Yarmouth, ME 04096

RE: Traffic Evaluation
Jackson Labs, Bar Harbor

Dear Diane,

Based on the information submitted on May 2nd, 2022 the MaineDOT concurs that Phase 1 and the recently built buildings at the Jackson Labs campus at 600 Main St, Bar Harbor will not require a MaineDOT Traffic Movement Permit (TMP). This includes the following existing buildings built in the last 10 years: a 45,000 S.F. Warehouse, a 3496 S.F. Chiller Plant, and a 31,000 SF Research Facility. Phase 1 buildout includes a housing project with 24 dwelling units, which is currently under construction, a 22,000 S.F. Complex Animal Experimentation Facility (CAEF) Research Facility, a 55 Student Daycare, and Parking Lot Improvements. Since the recently built buildings and Phase 1 buildout are not anticipated to result in an increase in peak hour trip generation of more than 100 trip ends over the existing trips, a TMP is not required.

If you have any questions, feel free to contact me at (207) 941-4500

Sincerely,

Alan Farrington, P.E.
Region Traffic Engineer

cc: File

EXHIBIT 24

125-66.V TECHNICAL AND FINANCIAL CAPACITY

The total budget for the Lot B Access Project is $2,500,000. This budget includes the cost of design, permitting, construction, and other associated costs. The estimated of construction cost alone is $2,000,000. A letter from the JAX CFO documenting their capacity to fund this Project is attached as Figure 24-1.

This Project has been designed by Barton & Loguidice. Neither a contractor nor a construction manager has been selected yet for this Project. Resumes for the key professionals working on the design can be provided if requested.

As documented on the Checklist, waivers are requested for this Exhibit.

The Jackson Laboratory

Leading the search for tomorrow's cures

Douglas W. Abbott, CPA
Chief Financial Officer
207.288.6045 *t* | 207.228-5812 *m*
doug.abbott@jax.org

April 8, 2022

Maria Eggett, Environmental Specialist
Maine Department of Environmental Protection
106 Hogan Rd # 6
Bangor, ME 04401

Re: The Jackson Laboratory Lot B Entrance DEP Minor Amendment Application

Dear Ms. Eggett:

I, Douglas W. Abbott, in my capacity as Chief Financial Officer and authorized to legally represent The Jackson Laboratory, approve the funds of up to $2.5 million for the new Parking Lot B Entrance Modifications Project to be located at Parking Lot B on the western side of Route 3 at The Jackson Laboratory's Bar Harbor Campus.

This budget includes the cost of design, permitting, building construction and other associated costs. The estimated cost of the site construction is $2,000,000. Funding for this project is being made available from treasury cash.

Sincerely,

Douglas W. Abbott
Chief Financial Officer

EXHIBIT 25
125-66.W BUSINESS OPERATIONS

Operations within existing buildings will not change because of construction of the proposed Project, and operation of the proposed Project will not create significant toxic or noxious matter, vibrations, odor, noise, heat, glare, air pollution, gasses and fumes, waste, dirt, fly ash, dust, smoke, or other objectionable or offensive effects.

The hours of operation and the number of employees at the Lab will remain unchanged by the proposed Project.

As documented on the Checklist, waivers are requested for this Exhibit.

EXHIBIT 26
125-66.X MINING

The Project is not a proposed gravel extraction or mining operation. Therefore, no details are included in this Exhibit.

As documented on the Checklist, waivers are requested for this Exhibit.