ITEM 1

Town of Kittery Planning Board Meeting July 28, 2022

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5 134 Whipple Road – Shoreland Development Plan Review

6 <u>Action: Close public hearing: Continue, Approve, or Deny the plan.</u> Owners/Applicants Nicolas and Amy 7 Mercier request approval for a shoreland development plan on a legally non-conforming lot with a legally 8 non-conforming structure which will be replaced per a Shoreland Development Plan approved by the 9 Planning Board last year to construct a seawall located within the base zone setback of the Shoreland 10 Overlay Zone located on real property with the address of 134 Whipple Road, Tax Map 10, Lot 6A, in the 11 Residential-Urban (R-U) Zone and the Shoreland (SL-OZ-250) Overlay Zone

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PROJECT TRACKING

PROJECT T	RACKING				
REQ'D	ACTION	COMMENTS	STATUS		
NO	Sketch Plan	None	NOT APPLICABLE		
NO	Site Visit	June 28, 2022	HELD		
YES	Shoreland Development Plan Review Completeness/Acceptance	June 9, 2022 & July 28, 2022	ACCEPTED		
NO	Public Hearing	July 28, 2022	PENDING		
YES	Shoreland Development Plan Review Plan Approval	TBD	PENDING		
Applicant: Plan Review Notes reflect comments and recommendations regarding applicability of Town Land Use Development Code, and standard planning and development practices. Only the PB makes final decisions on code compliance and approves, approves with conditions or denies final plans. Prior to the signing of the approved Plan any Conditions of Approval related to the Findings of Fact along with variances (by the BOA) must be placed on the Final Plan and when applicable, recorded at the Verk County Paristry of					
waivers and	variances (by the BOA) mus	t be placed on the Final Plan and, when applicable, recorded at the Yor	k County Registry of		

waivers and variances (by the BOA) must be placed on the Final Plan and, when applicable, recorded at the York County Registry of Deeds. PLACE THE MAP AND LOT NUMBER IN 1/4" HIGH LETTERS AT LOWER RIGHT BORDER OF ALL PLAN SHEETS. As per Section 16.4.4.13 - Grading/Construction Final Plan Required. - Grading or construction of roads, grading of land or lots, or construction of buildings is prohibited until the original copy of the approved final plan endorsed has been duly recorded in the York County registry of deeds when applicable.

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15 **Project Introduction**

16 134 Whipple Road ("Property") is located on the Back Channel of the Piscataqua River, a water body 17 between mainland Kittery and the Portsmouth Naval Shipyard within the Residential-Urban (R-U) Zone, 18 the Shoreland Overlay Zone (OZ-SL-250) and the Resource Protection Zone (OZ-RP). The property is 19 legally nonconforming in size (13,381-sf so less than the 20,000 sf required) with 100-foot shoreland 20 setbacks per §16.4.28.E. The existing building will be removed and replaced with another structure which 21 was reviewed and approved by the Board in 2021. The proposed seawall will replace an existing wall which 22 is failing and is designed with sea level rise considerations in mind.

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In addition to the Piscataqua River, directly abutting 134 Whipple Road is a vacant lot owned by the Townof Kittery and a lot containing a single-family dwelling unit.

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The applicant's path to permit the seawall is two pronged: obtaining approval from the Kittery Port Authority ("KPA") for any portion of the wall below the Highest Annual Tide (HAT) and the Planning Board ("Board") approval for a shoreland development. Since the KPA only meet once a month, the KPA meeting during which this project will be heard for the second time is Thursday, June 2nd. If the project is

31 approved, staff will get any pertinent information to the Board on the KPA's determination as soon as

32 possible, otherwise this application will be postponed to a July Planning Board meeting.

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34 The seawall as proposed is intended to stabilize the entire shoreline of the property. It is 1,179 square feet

35 (of permanent impact), with a linear measurement of 165 feet. The plans do not yet show the area of

temporary construction impact, most of which will be above the HAT. Plan note #19 on Sheet C-1 states

- that seawall construction below the HAT will be performed at low tide which is the KPA's purview.Inquiries of the applicant's engineer revealed that the work above the HAT will be done from the property.
- not from a barge. The laydown/materials staging area will also need to be shown along with the temporary
- 40 construction area on a future plan submission.
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The seawall work proposed will include the following tasks:

- 1. Remove the existing stone wall currently serving as a seawall.
- 2. Construct a new seawall of Redi-Rock (pre-formed concrete) in a gravity wall design.
- 3. Attach a turbidity curtain to each end of the property's shoreline to control erosion and sedimentation from both construction (of the new house) and stormwater runoff.

48 **Development Standards**

49 The devegetation calculations on Sheet C-1 indicate that including the upland seawall work proposed and 50 the new house to be constructed, the property will come in under the existing conditions' devegetation 51 percentage (24.6% existing vs 24.1% proposed) on the lot. 52

53 It is presumed that the landscape plan (included with the building replacement plan) approved by the Board 54 last year will be the plan followed to repair the damage caused by construction of both the seawall and the 55 new building.

57 <u>Staff Review</u>58

 The applicant's engineer has indicated that the wall's 1,179 square feet and 165 linear feet is inland of the HAT.

Staff was informed that the Redi-Rock product was chosen for the seawall because it is one of the most stable products for this type of application. The concrete is specially formulated to stand up to salt water. Sea level rise was the main impetus for rebuilding the seawall to the dimensions shown. What is the expected lifetime of such a wall barring a catastrophic event? How would that compare to a stone seawall?

UPDATE: The Town's peer review engineer, CMA, has reviewed the plans and provided the following comments from the enclosed letter from William Straub:

Segmental block gravity retaining wall systems are a commonly applied method of creating grade changes. There are several well-established providers of such systems, which generally include pre-cast concrete interlocking blocks, select foundation soils, and select crushed stone and gravel backfill. The systems are engineered for specific application and can provide flexible horizontal and vertical geometric configurations. The preliminary design prepared by SFC using the "Redi-Rock" system includes conventional applications of these elements.

Soils and subsurface information are necessary for the final design of the wall system. The SFC plan states that they have no site-specific subsurface data, and assumptions as to what they are. The plan should not be constructed without supporting information on subsurface and uphill soil characteristics. The plan for acquiring that data should be prepared by the design engineer (SFC).

- 83 The applicant has provided additional information on the Redi-Rock system in the plan sets on Sheet 84 S1.0, and noting that "prior to installation the site engineer shall confirm that design assumptions are 85 consistent with actual field conditions."
- 86
- 87 3. The Redi-Rock Wall Design sheet's Note #22 says that unless the wall construction is observed by SFC 88 (the maker), they will not certify it. It goes on to say that periodic site visits are necessary in order for 89 SFC to prepare the certification. This certification seems desirable so staff recommends it in addition 90 to the Town's peer review engineer's review of the plans. There may also need to be a site visit by the 91 Town's peer review engineer. The applicant should be prepared to assume these costs.
- 92
- 93 4. The applicant's engineer told staff that the turbidity curtain will be anchored to the shore by either a 94 post, tree or a pin driven into the ground. It will be as close to the seawall as it can be without hindering 95 construction. It will serve to control erosion and sedimentation caused by construction activities and 96 stormwater. Once construction and landscaping are completed, the curtain will be removed. 97
- 98 5. As mentioned earlier, the area of temporary construction above and below the HAT should be shown 99 on the plans. In addition, temporary siting of the seawall materials should also be shown. It is presumed 100 that the seawall will be built prior to demolition and re-construction of the residence. If not, the 101 applicant/applicant's engineer should explain the sequence of construction events to the Board.
- 102
- 103 UPDATE: The applicant has added to sheet C-1 language noting that the existing house will be 104 demolished and the existing basement slab will be used for construction staging. Sheet C-2 includes a 105 note stating the following sequence of major activities:
 - 1. Install temporary erosion control measures including perimeter controls as noted on the plan. All temporary erosion control measures shall be maintained in good working condition for the duration of the project.
 - 2. Raze existing residence, retain basement slab for staging of wall construction.
 - 3. Remove vegetation from work limits. Strip loam and stockpile.
 - 4. Remove portion of dock as required to construct wall.
 - 5. Demolish existing wall in phases as work progresses.
 - 6. Construct wall in phases corresponding to removal of existing wall. Work below the tide line is to be performed at low tide.
 - 7. Rough grade site including placement of borrow materials behind wall.
 - 8. Loam (6" min) and seed all disturbed areas not paved or otherwise stabilized.
 - 9. Install landscaping per plans.
 - 10. Install ramp to dock.
 - 11. When all construction activity is complete and site is stabilized, remove all temporary erosion control measures and any sediment that has been trapped by these devices.
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108 Submissions

- 109 Submission content
- 110 The shoreland development plan and application is nearly complete and includes the information as 111 required pursuant to §16.9.3.C with the following exceptions: 112
 - Area of temporary construction and siting of construction materials
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- 114 UPDATE: The applicant has shown on the updated plans the areas of temporary construction and siting of 115 construction materials, see Sheet C-1.
- 116
- 117 Waivers
- 118 The applicant is not requesting any waivers from any review or ordinance standards.
- 119

- 120 Additional Permits
- 121 The proposed seawall will have received KPA approval (because the seawall touches the HAT and the dock 122 adjustment) if the Board is hearing the application on June 9th. The USACE approval and NRPA permit 123 from the Department of Environmental Protection is pending. The applicant will submit the applications
- 124 for the next meeting.125

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126	UPDATE: The KPA approved the project at their June 20, 2022 meeting (see enclosed letter from KPA
127	Chair Kelly Philbrook). The Army Corps of Engineers has also issued Permit No. NAE-2018-00873-MOD
128	to the applicant on June 16, 2022 (see enclosed correspondence).

- 130 Planning Board Procedural Steps
- 133 At the July 28, 2022 meeting, the Board should take the following steps:
 - 1. Hold the public hearing as advertised. Close the public hearing once comments have been received.
 - 2. Discuss the project and question the applicant, if necessary.
 - 3. Decide whether to continue the application to a subsequent meeting or approving the plan, if satisfied with the application.

140 **Recommended Motions**

Below are recommended motions for the Board's consideration:

144 *Motion to approve application (with or without conditions)*

Move to approve the shoreland development application from Owners/Applicants Nicolas and Amy Mercier to construct a 165-foot seawall totaling 1,179 square feet located within the base zone setback of the Shoreland Overlay Zone located on real property with the address of 134 Whipple Road, Tax Map 10, Lot 6A, in the Residential-Urban (R-U) Zone and the Shoreland (SL-OZ-250) Overlay Zone with *[conditions as follows:]*That all permit applications and review actions by Maine Department of Environmental Protection

- 151That all permit applications and review actions by Maine Department of Environmental Protection152(Natural Resource Protection Act, NRPA) and the US Army Corps of Engineers should be153submitted to the Town prior to the issuance of any building permit.
- 154

Mercier Seawall Shoreland Development Plan

Owner/Applicant:

Amy L. & Nicholas E. Mercier

35 Goffstown Road Hooksett, NH 03106–2400 (603) 674–8239

Surveyor:



Civil Engineer:



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

Structural Engineer:



134 Whipple Road Kittery, Maine

Assessor's Parcel 10, Lot 6A

Issued for Planning Board

Plan Issue Date:

June 28, 2022



Sheet Index Title

Existing Conditions Plan Shoreland Development Plan Detail Sheet Redi-Rock Wall Design Draw Landscape Plan THIS DRAWING SET HAS NOT BEEN RELEASED FOR CONSTRUCTION

	Sheet No.:	Rev.	Date
١	1 of 1 C-1	B 1	11/01/21
I	C-2	1	06/21/22
vings	S1.0 L-1	4 1	06/15/22 06/28/22



MAINE KITTERY ZONING DATA PER KITTERY ZONING ORDINANCE -NEWSON AVE. BASE ZONE: Residential-Urban (R-U) OVERLAY ZONE: Shoreland (OZ-SL-250') MINIMUM LAND AREA PORTSMOUTH NEW PER DWELLING UNIT: 20,000 Sq Ft CASTLE 20,000 Sq Ft MINIMUM LOT SIZE: MINIMUM STREET FRONTAGE: 100 Ft ATLANTIC OCEAN NEW | HAMPSHIRE MINIMUM FRONT YARD: 30 Ft MINIMUM REAR AND SIDE YARDS: 15 Ft* MAXIMUM BUILDING COVERAGE: 20% MAXIMUM BUILDING HEIGHT: 35 Ft* MINIMUM SHORE FRONTAGE: 50 Ft LOCATION MAP MAXIMUM DEVEGETATED AREA: 20% (not to scale) Per Town of Kittery Code Title 16 (Sec. 16.3.2.4) 1. "STANDARD BOUNDARY SURVEY FOR PROPERTY AT 134 WHIPPLE ROAD, KITTERY, YORK COUNTY, MAINE, OWNED BY ESTATE OF CARRIE B. VARNEY", PREPARED BY NORTH EASTERLY SURVEYING, INC., DATED AUGUST 10, 2017. 2. "PROPOSED SIDEWALK EASEMENT, FOR A PORTION OF WHIPPLE ROAD, KITTERY, YORK COUNTY, MAINE, CLIENT, KITTERY PUBLIC WORKS DEPARTMENT, SHEETS 2&3 OF 6" PREPARED BY NORTH EASTERLY SURVEYING, INC., DATED AUGUST 20, 4. APPROXIMATE ABUTTER'S LINES SHOWN HEREON ARE FOR REFERENCE PURPOSES ONLY AND SHALL NOT BE RELIED UPON AS 5. EASEMENTS OR OTHER UNWRITTEN RIGHTS MAY EXIST THAT ENCUMBER OR BENEFIT THE PROPERTY NOT SHOWN HEREON. 6. ZONING INFORMATION AND SETBACKS SHOWN HEREON ARE FOR REFERENCE PURPOSES. CONFIRM CURRENT ZONING 7. THE BOUNDARY SHOWN HEREON IS DETERMINED FROM WRITTEN RECORDS AND FIELD EVIDENCE RECOVERED AT THE TIME OF 8. SUBJECT PARCEL IS CONVEYED TOGETHER WITH ALL THE TIDE LAND LYING BETWEEN HIGH AND LOW WATER MARK ON THE BACK CHANNEL OF THE PISCATAQUA RIVER ADJOINING THE SOUTHWESTERLY SIDE OF SAID LOT. RIPARIAN BOUNDARIES HAVE 10. A PORTION OF THE SUBJECT PARCEL IS WITHIN A SPECIAL FLOOD HAZARD AREA (SFHA). REFERENCE IS MADE TO FEMA PURPOSE OF PLAN: THE PURPOSE OF THIS PLAN IS TO SHOW EXISTING CONDITIONS FOR DESIGN PURPOSES. THIS PLAN IS NOT A STANDARD BOUNDARY SURVEY AND IS NOT INTENDED TO BE RECORDED, USED FOR CONVEYANCE, OR ANY OTHER TITLE PURPOSE. EXISTING CONDITIONS PLAN FOR PROPERTY AT 134 Whipple Road Kittery, York County, Maine OWNED BY Nicholas E. Mercier Amy L. Mercier 35 Goffstown Road, Hookset, NH 03106 North W \Leftrightarrow EASTERLY SURVEYING, Inc. SURVEYORS IN N.H. & MAINE 191 STATE ROAD, SUITE #1

(207) 439-6333 KITTERY, MAINE 03904 ROJECT NO. SCALE: CHECKED BY: DRAWN BY: HFFT A.M.P. P.L.A 1" = 10' 20612 2/27/202 1 OF 1 A.H.P. A.M.P. A.M.P DRAWING No: 20612 EXISTING CONDITIONS REV_A Tax Map 10 Lot 6A BY CHKD APPD. FIELD BOOK No: "Kittery #38"



1. DESIGN INTENT - THIS PLAN SET IS INTENDED TO DEPICT THE REPLACEMENT OF 2. PLAN REFERENCE: "EXISTING CONDITIONS PLAN FOR PROPERTY AT 134 WHIPPLE ENGINEERING, INC. ROAD, KITTERY, YORK COUNTY, MAINE", DATED FEBRUARY 27, 2020, PREPARED BY 3. APPROXIMATE LOT AREA: $0.31 \text{ AC.} \pm (13,381 \text{ S.F.} \pm)$ 133 Court Street Portsmouth, NH 03801 (603) 433-2335 www.altus-eng.com 4. DIMENSIONAL REQUIREMENTS PER TOWN OF KITTERY CODE TITLE 16 (SEC. 16.3.2.4): 20,000 S.F. ERIC D. 20,000 S.F. MEINRIEB 100' No. 6658 30' 15' 15' 23.0' (EXISTING) AS APPROVED = 23.0'EXIST. COVERAGE (1,358 SF) + 30% = 1,765 SF50' 100' NOT FOR CONSTRUCTION 5. ALL CONSTRUCTION SHALL MEET THE MINIMUM STANDARDS OF THE TOWN OF ISSUED FOR: 6. ALL EROSION CONTROL MEASURES SHALL COMPLY WITH STATE (DEP) AND LOCAL ISSUE DATE: 7. HIGHEST ANNUAL TIDE (H.A.T.) IS TAKEN FROM MAINE DEPARTMENT OF JUNE 21, 2022 <u>REVISIONS</u> 8. THE ENTIRE PARCEL IS LOCATED WITHIN THE OZ-SL-250 ZONE. NO. DESCRIPTION BY DATE 9. A PORTION OF THE PARCEL IS WITHIN A SPECIAL FLOOD HAZARD AREA (SFHA) PER 0 PLANNING BOARD EBS 05/19/2 FEMA FIRM 230171 0005 D. LATEST REVISION JULY 3, 1986. 1 REV. PER PLANNING BOARD EBS 06/21/22 10. ALL BONDS AND FEES SHALL BE PAID/POSTED PRIOR TO INITIATING CONSTRUCTION. 11. THE CONTRACTOR SHALL VERIFY ALL BENCHMARKS AND TOPOGRAPHY IN THE FIELD 12. THE CONTRACTOR SHALL VERIFY ALL WALL DIMENSIONS WITH THE STRUCTURAL PLANS PRIOR TO CONSTRUCTION. ALL DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION. DRAWN BY:. 17. ALL PERIMETER SEDIMENT AND EROSION CONTROL MEASURES (I.E. SILTFENCE, APPROVED BY: SILTSOXX OR FILTER BERM) MUST BE INSTALLED PRIOR TO THE COMMENCEMENT OF 5186.dwg DRAWING FILE: SCALE: 18. ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE STABILIZED WITH 6" OF COMPACTED LOAM AND SEED. COORDINATE WITH LANDSCAPE PLANS. $22" \times 34" - 1" = 10'$ $11" \times 17" - 1" = 20'$ 19. ALL SEAWALL CONSTRUCTION BELOW THE H.A.T. (ELEVATION 6.6') SHALL BE OWNER/APPLICANT: 20. DEMOLITION OF EXISTING SEAWALL AND CONSTRUCTION OF NEW SEAWALL TO BE DONE IN PHASES IN ORDER TO MINIMIZE AREAS OF EXPOSED UNSTABILIZED AMY L. SHORELINE. PHASES SHALL BE LIMITED TO THE AMOUNT OF WORK THAT CAN BE & NICHOLAS E. MERCIER REASONABLY ACCOMPLISHED DURING A SINGLE INTERTIDAL PERIOD. 21. ALL PLAN ELEMENTS AND CONDITIONS OF APPROVAL SHOWN ON THE 35 GOFFSTOWN ROAD PREVIOUSLY-APPROVED SHORELAND DEVELOPMENT PLAN DATED MARCH 7, 2022 HOOKSETT, NH 03106-2400 REMAIN APPLICABLE TO THIS PLAN. CONTRACTOR SHALL REVIEW BOTH PLANS PROJECT: MERCIER BUILDING COVERAGE/DEVEGETATION CALCULATIONS SEAWALL SHORELAND SETBACKS SHORELAND <u>0 — 100'</u> <u>100' – 250'</u> ENTIRE LOT DEVELOPMENT ±1,358 SF (10.1%) ±1,358 SF ±0 SF PLAN ±1,608 SF (12.0%) ±0 SF ±0 SF ±3,292 SF (24.6%) TAX MAP 10, LOT 6A ±0 SF ±3,219 SF (24.1%) 134 WHIPPLE ROAD * AREAS AND HEIGHT LIMITATIONS ARE PER KITTERY LAND USE AND DEVELOPMENT CODE KITTERY, MAINE (TITLE 16) SECTION 16.7.3.3.B(3)(e)[5][a] / SECTION 16.3.2.17.D(1)(d) <u>TITLE:</u> EXISTING DEVEGETATION CALC .: HOUSE, PORCH, DECK & STAIRS (1,434 SF) + PAVED DRIVEWAY (1,059 SF) + PAVED WALKWAY (164 SF) + FLAGSTONE WALKWAY (50 SF) + GRAVEL ADJ. TO HOUSE (67 SF) + GRAVEL AT SEAWALL (218 SF) + WOOD STEPS AND GRAVEL (124 SF) + FRONT RETAINING WALL (16 SF) + SEAWALL (126 SF) + WOOD SHORELAND RETAINING WALLS (16 SF) + RETAINING WALL AT NE (19 SF) + RR TIES (9 SF) DEVELOPMENT PLAN PROPOSED DEVEGETATION CALC (REVISED) .: PROPOSED HOUSE (1,524) + DECK & STAIRS SHEET NUMBER: (82 SF) + STEPS TO DOCK (46 SF) + EX. SEAWALL (1 SF) + PROP. SEAWALL (80 SF) + FRONT WALKWAY (32 SF) + PATIO (64 SF) + PAVED DRIVE (1,099 SF) + TOP OF CURB (32 SF) + TOP OF RETAINING WALL (21 SF) + DRIP EDGE (222 SF) + MECH. PADS **C-1** $(16 \text{ SF}) = \pm 3,219 \text{ SF} (24.1\% \text{ OF LOT}, 73 \text{ SF LESS THAN EXISTING AREA})$

RLH

EBS

SEDIMENT AND EROSION CONTROL NOTES

PROJECT NAME AND LOCATION

MERCIR RESIDENCE 134 WHIPPLE ROAD KITTERY, MAINE

TAX MAP 10 LOT 6A

OWNER/APPLICANT:

AMY L. AND NICHOLAS E. MERCIER 35 GOFFSTOWN ROAD HOOKSETT, NH 03106-2400

DESCRIPTION

The project consists of the replacement of an existing seawall in its current location with an increase in height.

DISTURBED AREA

The total area to be disturbed for the development is approximately $\pm 7,200$ S.F. (± 0.17 acres). Maine CGP compliance not required.

PROJECT PHASING

The proposed seawall improvements will be completed in one phase.

NAME OF RECEIVING WATER

The site drains over land to the Back Channel of the Piscatagua River.

SEQUENCE OF MAJOR ACTIVITIES

- 1. Install temporary erosion control measures including perimeter controls as noted on the plan. All temporary erosion control measures shall be maintained in good working condition for the duration of the project.
- 2. Raze existing residence, retain basement slab for staging of wall construction.
- 3. Remove vegetation from work limits. Strip loam and stockpile.
- 4. Remove portion of dock as required to construct wall. 5. Demolish existing wall in phases as work progresses.
- 6. Construct wall in phases corresponding to removal of existing wall. Work below the tide line is to be performed at low tide.
- 7. Rough grade site including placement of borrow materials behind wall.
- 8. Loam (6" min) and seed all disturbed areas not paved or otherwise stabilized. 9. Install landscaping per plans.
- 10. Install ramp to dock.
- 11. When all construction activity is complete and site is stabilized, remove all temporary erosion control measures and any sediment that has been trapped by these devices.

TEMPORARY EROSION & SEDIMENT CONTROL AND STABILIZATION PRACTICES

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

As indicated in the sequence of Major Activities, perimeter controls shall be installed prior to commencing any clearing or grading of the site. Structural controls shall be installed concurrently with the applicable activity. Once construction activity ceases permanently in an area and permanent measures are established, perimeter controls shall be removed.



NOTES:

TURBIDITY BARRIER TO BE SECURELY ANCHORED TO SHORE AT EACH END. TYPICAL SPECIFICATIONS -FABRIC: 20 MIL., 18 OZ. NOMINAL PVC-COVERED POLYESTER OR NYLON REINFORCED VINYL. ROPE: 5/8" POLY ROPE, 600# BREAK STRENGTH, WITH #5 BRASS OR STAINLESS STEEL GROMMETS. CABLE: 5/16" GALVANIZED STEEL 7x19 LOAD CABLE w/ PVC COATING, 9800# BREAK STRENGTH. BALLAST: 5/16" GALVANIZED CHAIN BALLAST IN BOTTOM OF CURTAIN. PLATES: ALUMINUM STRESS PLATES AT ALL CABLE AND CHAIN TERMINATIONS. FLOTATION: 8" CLOSED-CELL SOLID PLASTIC, 17 LB./FT MIN. BUOYANCY. NOT TO SCALE

TURBIDITY BARRIER

LATITUDE: 43° 05' 07" N LONGITUDE: 70°43'45"W

During construction, runoff will be diverted around the Sheet runoff from the site shall be filtered through ap inlets shall be provided with inlet protection measures.

Temporary and permanent vegetation and mulching is sedimentation control plan. All areas shall be inspected established. These control measures are essential to e of graded and shaped areas.

Temporary vegetation shall be maintained in these area Additionally, erosion and sediment control measures sho established.

INSTALLATION, MAINTENANCE AND INSPECT TEMPORARY EROSION AND SEDIMENT CC

A. GENERAL

These are general inspection and maintenance plan:

- 1. The smallest practical portion of the site shall 2. All control measures shall be inspected at least
- of 0.5 inches or greater. 3. All measures shall be maintained in good workir
- initiated within 24 hours. 4. Built-up sediment shall be removed from perim
- height of the barrier or when "bulges" occur.
- 5. All diversion dikes shall be inspected and any 6. Temporary seeding and planting shall be inspect
- growth. 7. The owner's authorized engineer shall inspect th
- with the Plans. 8. An area shall be considered stable if one of th a. Base coarse gravels have been installed in b. A minimum of 85% vegetated growth as bee c. A minimum of 3 inches of non-erosive mat
- or d. Erosion control blankets have been properly 9. The length of time of exposure of area disturbe
- B. MULCHING

Mulch shall be used on highly erodible soils, on conservation of moisture will facilitate plant esta

- 1. Timing In order for mulch to be effective, it events. There are two (2) types of standards a. Apply mulch prior to any storm event. This is applicable when working within 100 feet of wetlands. It will be necessary to closely monitor weather predictions, usually by contacting the National Weather Service in Concord, to have adequate warning of significant storms.
- 28 days of inactivity on a area, the length of time varying with site conditions. Professional judgment shall be used to evaluate the interaction of site conditions (soil erodibility, season of year, extent of disturbance, proximity to sensitive resources, etc.) and



CROSS SECTION A - A

site with stabilized channels where possible. ppropriate perimeter controls. All storm drain	2.	Guidelines for Winter Mul	ch Application —			
		Туре	<u>Rate per 1,000 s.f.</u>			
an integral component of the erosion and ed and maintained until vegetative cover is erosion prevention and also reduce costly rework		Hay or Straw	70 to 90 lbs.			
		Wood Chips or Bark Mulch	460 to 920 lbs.			
as until permanent seeding is applied. nall be maintained until permanent vegetation is	INST.	ALLATION, MAINTEN	ANCE AND INSPECT			
	<u>IEM</u> ł	PORARY EROSION A	ND SEDIMENT CON			
<u>ONTROL MEASURES</u>		Jute and Fibrous Matting (Erosion Blanket	As per manufacturer Specifications			
practices that shall be used to implement the		Crushed Stone 1/4" to 1-1/2" dia.	Spread more than 1/2" thick			
be denuded at one time. It once each week and following any storm event		Erosion Control Mix	2" thick (min)			
ing order; if a repair is necessary, it will be						
neter barriers when it has reached one-third the						
breaches promptly repaired. Sted for bare spots, washouts, and unhealthy						
he site on a periodic basis to review compliance						
he following has occurred: areas to be paved; year catablished;	3.	Maintenance — All mulches must be inspected check for rill erosion. If less than 90% of the mulch shall be immediately applied.				
iterial such as stone of riprap has been installed;	С.	PERMANENT SEEDING -				
installed. bed during construction shall not exceed 45 days.	1.	Bedding — stones larger seeding and future main should be tilled to a de	than $1^{1}\!/_{2}$ ", trash, roots, tenance of the area shou pth of 5" to prepare a s			
n critically eroding areas, on areas where tablishment, and where shown on the plans.	2.	Fertilizer — lime and fer of seeding and incorpore should be based on an following minimum amou	tilizer should be applied e ated into the soil. Kinds evaluation of soil tests. nts should be applied:			
which shall be used to assure this:		Agricultural Limes	tone @ 100 lbs. per 1,0(

b. Required Mulching within a specified time period. The time period can range from 21 to

the potential impact of erosion on adjacent areas to choose an appropriate time restriction.

	Huy of Struw	70 10 90 105.	from mold. May be used with plantings.	
	Wood Chips or Bark Mulch	460 to 920 lbs.	Used mostly with trees and shrub plantings.	
<u>NSTA</u> TEMF	ALLATION, MAINTENANG PORARY EROSION AND	CE AND INSPECTION D SEDIMENT CONTROL	<u>PROCEDURES_FOR</u> MEASURES_(CONTINUED)	
	Jute and Fibrous Matting (Erosion Blanket	As per manufacturer Specifications	Used in slope areas, water courses and other Control areas.	
	Crushed Stone 1/4" to 1-1/2" dia.	Spread more than 1/2" thick	Effective in controlling wind and water erosion.	
	Erosion Control Mix	2" thick (min)	 * The organic matter content is between 80 and 100%, dry weight basis. * Particle size by weight is 100% passing a 6"screen and a minimum of 70 %, maximum of 85%, passing a 0.75" screen. *The organic portion needs to be fibrous and elongated. *Large portions of silts, clays or fine sands are not acceptable in the mix. * Soluble salts content is less than 4.0 mmhos/cm. *The pH should fall between 5.0 and 8.0. 	4.
3.	Maintenance — All mulches check for rill erosion. If le mulch shall be immediately	must be inspected periodical ess than 90% of the soil sur applied.	ly, in particular after rainstorms, to face is covered by mulch, additional	<u>WIN</u>
C.	PERMANENT SEEDING -			1.
		1.		

<u>Use and Comments</u>

roots, and other debris that will interfere with rea should be removed. Where feasible, the soil bare a seedbed and mix fertilizer into the soil.

- pplied evenly over the area prior to or at the time Kinds and amounts of lime and organic fertilizer tests. When a soil test is not available, the lied:
 - oer 1.000 s.f. 10-20-20 organic fertilizer @ 12 lbs. per 1,000 s.f.

EXISTING GRADE FINISH GRADE 0+20 0+30 0+10 0 + 40

3. Seed Mixture (to be used only in areas where the Landscaping Plan is silent,	3.	Seed	Mixture	(to	be	used	only	in	areas	where	the	Landscaping	Plan	is	silent):
---	----	------	---------	-----	----	------	------	----	-------	-------	-----	-------------	------	----	----------

<u>Lbs. / Acre</u>	<u>Lbs. / 1,000 sf</u>
24	0.55
24	0.55
48	1.10

Seed Mixture (For slope embankments):

Type Tall Fescue

Total

Туре

Redtop

Alsike Clover

Creeping Red Fescue

Creeping Red Fescue (c)

Perennial Rye Grass (a)

Diplomat, or eaual.

Jamestown.

Grass Seed: Provide fresh, clean, new-crop seed complying with tolerance for purity and germination established by Official Seed Analysts of North America. Provide seed mixture composed of grass species, proportions and minimum percentages of purity, germination, and maximum percentage of weed seed, as specified:

Min. <u>Purity (%)</u> 96 98 95 97	Min. <u>Germination (</u> 85 90 80 90(e)	<u>%)</u>	Kg./Hectare (<u>Lbs/Acre)</u> 45 (40) 35 (30) 5 (5) 5 (5)
		Total	90 (80)

a. Ryegrass shall be a certified fine-textured variety such as Pennfine, Fiesta, Yorktown,

b. Fescue varieties shall include - Creeping Red and/or Hard Reliant, Scaldis, Koket, or

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

ITER CONSTRUCTION NOTES

All proposed vegetated areas which do not exhibit a minimum of 85% vegetative growth by October 15th, or which are disturbed after October 15th, shall be stabilized by seeding and installing erosion control blankets on slopes greater than 3:1, and elsewhere seeding and placing 3 to 4 tons of mulch per acre, secured with anchored netting. The installation of erosion control blankets or mulch and netting shall not occur over accumulated snow or on frozen ground and shall be completed in advance of thaw or spring melt events;

2. All ditches or swales which do not exhibit a minimum of 85% vegetative growth by October 15th, or which are disturbed after October 15th, shall be stabilized temporarily with stone or erosion control blankets appropriate for the design flow conditions; and

3. After November 15th, incomplete road or parking surfaces where work has stopped for the winter season shall be protected with a minimum of 3 inches of crushed gravel.







EDI-ROCK BLOCK RETAINING WALL NOTES:		NAP	NAP	NAP	NAP Bv	5
THE PURPOSE OF THIS PLAN IS TO SHOW THE DESIGN OF A RETAINING WALL TO REPLACE THE EXISTING SEAWALL.						
THIS RETAINING WALL SYSTEM MAY IMPACT OR BE IMPACTED BY OTHER SITE FEATURES, INCLUDING STORMWATER MANAGEMENT FACILITIES, UTILITIES, AND BUILDING SYSTEMS. THE APPROPRIATE RESPONSIBLE PROFESSIONALS SHALL REVIEW THESE PLANS TO INSURE PROPER COORDINATION.		on detail				
THIS DESIGN IS PREPARED IN ACCORDANCE WITH THE STATE BUILDING CODE AND APPLICABLE MANUFACTURERS GUIDELINES. SPECIFIC LOCAL REGULATIONS HAVE NOT BEEN INVESTIGATED.		in sectio				
CONCRETE USED FOR WALL UNITS SHALL HAVE A 28-DAY COMPRESSIVE STRENGTH OF 5,000 P.S.I. WALL UNITS SHALL COMPLY WITH REDI-ROCK INTERNATIONAL'S SPECIFICATIONS, ASTM C-1776 AND ACI-301-99, HAVE 4 1/2% - 7 1/2% ENTRAINED AIR, 4" - 6" SLUMP, AND MUST BE PLACED AT A MINIMUM AMBIENT TEMPERATURE OF 50°F.		at top of wall	ided wall		& block count	
PROOF COMPACTION OF SUBGRADE SHALL BE COMPLETED PRIOR TO PLACEMENT OF LEVELING PAD AND RETAINING WALL BLOCKS. THE EXISTING SUBGRADE WITHIN THE STRESS ZONES OF THE RETAINING WALL BASE SHOULD BE FIRM NATURAL SOILS OR COMPETENT BEDROCK. IF EXISTING SUBGRADE IS NOT SUITABLE, IT SHOULD BE REMOVED WITHIN A 1:1 FROM THE RETAINING WALL BASE. ONCE SUITABLE SUBGRADE IS REACHED, BACKFILL WITH STRUCTURAL FILL OR CRUSHED STONE.		ated finished arade	ed return and exter	l new design	ated end of wall 1 8	
LEVELING PAD SHALL BE 3/4" CRUSHED STONE WITH NO MORE THAN 5% PASSING A #200 SIEVE. ENSURE THAT THE FIRST COURSE OF WALL UNITS IS IN FULL CONTACT WITH LEVELING PAD. INSTALL SUBSEQUENT COURSES OF UNITS SUCH THAT THE VERTICAL SEAMS ARE STAGGERED BETWEEN ADJACENT COURSES. GAPS SHALL BE FILLED WITH DRAINAGE STONE PRIOR TO STARTING THE NEXT COURSE.			2022 Add	2022 Tota	/2020 Upd: ate Revi	
BASE BLOCKS SHALL BE SET BACK 1-1/2" WHEN STEPPING UP AND SET FORWARD 1-1/2" WHEN STEPPING DOWN. WALL ANGLES SHALL BE SLIGHTLY ADJUSTED TO ACCOMMODATE PROPERTY LINES AND OBSTRUCTIONS.		6/15	3/4/	<u>2</u> 3/1/	An D	
. REDI-ROCK MANUFACTURER'S RECOMMENDATIONS SHALL BE CONSIDERED A MINIMUM REQUIREMENT FOR PROPER ASSEMBLY.		IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	OF A	MIIII	111	
. MIRAFI 140N OR APPROVED EQUAL FILTER FABRIC SHALL BE PLACED BETWEEN ALL INTERFACES OF DRAINAGE STONE AND OTHER SOILS. EXPOSED DRAINAGE STONE SHALL BE PROTECTED FROM FINE SOIL MIGRATION THROUGHOUT CONSTRUCTION.	innun .	ST	EFFRE M.	A A A A A A A A A A A A A A A A A A A	ALL DAY	
. CONTRACTOR SHALL TAKE CARE TO NOT DISTURB OR INTERFERE WITH THE EFFECTIVENESS OF THE FILTER FABRIC WHEN INSTALLING ANY FEATURES THAT REQUIRE PENETRATIONS THROUGH THE FABRIC.		A	o. 1291	8	ER +	
DRAINS SHALL BE PERFORATED, 4" DIAMETER HDPE PIPE, AND SHALL MEET THE REQUIREMENTS OF ASTM F405. DRAINS SHALL BE PITCHED FOR POSITIVE WATER FLOW. THE ELEVATION OF THE DRAIN SHALL ALLOW FOR INTERCEPTED FLOWS TO DISCHARGE AT OUTLET LOCATIONS. THE DRAIN SHALL FACE AT OUTLET LOCATIONS. OUTLET LOCATIONS SHALL BE NO GREATER THAN 50' APART. THE LOCATION OF THE DRAIN OUTLETS SHALL BE DETERMINED IN THE FIELD BY THE SITE ENGINEER. INSTALL SALT WATER RESISTANT FLAP VALVE	OT	June	ONAL 75,11	Email 202	2	
ON END OF DRAIN PIPES. . GRAVEL BACKFILL BEYOND DRAINAGE STONE SHALL BE WELL GRADED SAND/GRAVEL AND SHALL MEET THE FOLLOWING GRADATION:						
SIEVE SIZEPERCENT PASSING3 IN.1003/4 IN.70-100			AST)		
NO. 4 40-90 NO. 40 10-50 NO. 200 0-10			л с С	37		
. ALL GRAVEL BACKFILL SHALL BE COMPACTED TO 95% OF STANDARD PROCTOR (ASTM D698). ONLY HAND-OPERATED COMPACTION EQUIPMENT SHALL BE ALLOWED WITHIN THREE FEET OF THE BACK OF THE WALL BLOCKS. CONTRACTOR SHALL COMPACT THE BACKFILL MATERIAL BEHIND		-		0308	700 com	
THE WALL AS THE WALL IS INSTALLED. SPREAD BACKFILL IN UNIFORM LIFTS NOT EXCEEDING 9 INCHES. FINISHED GRADE AT TOP OF WALL IS APPROXIMATE ONLY. FINISHED GRADE AT TOP OF WALL SHOULD CHANNEL DRAINAGE FLOW AWAY FROM.			u ⊿ u ≥	ν, NH	347-8 cena	D
THE RETAINING WALL SYSTEM. CONTRACTOR TO DRESS FINISHED GRADE TO CREATE SMOOTH TRANSITION TO BLOCK.				HAN	03) 6 wv <u>.sf</u>	
. FALL PROTECTION IS RECOMMENDED AT THE TOP OF WALLS. CROSS SECTIONS MAY SHOW FALL PROTECTION AS SCHEMATIC DESIGN. THIS IS			ר אוא ער		9)	
ANY FENCE ANCHORING SYSTEM SHALL BE INSTALLED PER RETAINING WALL MANUFACTURER'S RECOMMENDATION.			Z (2 Z (2 Z (2)			
. THE WALL DESIGN ENGINEER SHALL BE NOTIFIED IMMEDIATELY IF CONDITIONS ARE DIFFERENT THAN DESCRIBED ON THIS PLAN. . UNLESS SFC ENGINEERING IS CONTRACTED TO OBSERVE CONSTRUCTION, SFC ENGINEERING WILL NOT CERTIFY THE CONSTRUCTION. PERIODIC SITE VISITS WILL BE NECESSARY IN ORDER FOR THE WALL DESIGN ENGINEER TO PREPARE A CERTIFICATION AT THE END OF CONSTRUCTION. THE OWNER SHALL COORDINATE THE FEES AND SCHEDULE FOR THESE SITE VISITS WITH THE WALL DESIGN ENGINEER PRIOR TO THE START OF CONSTRUCTION.				<u>-</u>		
SEE NOTE 19						
1.6 MIN.						
SLOPE TO WALL S=0.02'/' (MIN)						
ELEV:10.00'						
GRAVEL GRAVEL BACKFILL FREE DRAINING						
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RETAINED SOIL				ĥ	ale: AS	
28" MIDDLE	nce	oad		בופג	AP SC	
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GRADE 41" BOTTOM	Re	lqq	Ϋ́,	2	Drav	
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LEVELING PAD			0 		65993(1 2
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APPROXIMATE / 1+50 1+64.8 FINISHED GRADE FRONT OF WALL			י <u>-</u> ק			
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MERCIER WHIPPLE RD KITTERY ME REDIROCK 659930-REV4



TREE PLANTING DETAIL

LANDSCAPE NOTES

- Design is based on drawings by Altus Engineering dated and may require adjustment due to actual field conditions. 2. The contractor shall follow best management practices during construction and shall take all means necessary to stabilize and protect the site from erosion.
- 3. Erosion Control shall be in place prior to construction.
- 4. Erosion Control to consist of Hay Bales and Erosion Control Fabric shall be staked in place between the work and Water bodies, Wetlands and/or drainage ways prior to any construction.
- The Contractor shall verify layout and grades and inform the Landscape Architect or Client's Representative of any discrepancies or changes in layout and/or grade relationships prior to construction.
- 6. It is the contractor's responsibility to verify drawings provided are to the correct scale prior to any bid, estimate or installation. A graphic scale bar has been provided on each sheet for this purpose. If it is determined that the scale of the drawing is incorrect, the landscape architect will provide a set of drawings at the correct scale, at the request of the contractor.
- 7. Trees to Remain within the construction zone shall be protected from damage for the duration of the project by snow fence or other suitable means of protection to be approved by Landscape Architect or Client's Representative. Snow fence shall be located at the drip line at a minimum and shall include any and all surface roots. Do not fill or mulch on the trunk flare. Do not disturb roots. In order to protect the integrity of the roots, branches, trunk and bark of the tree(s) no vehicles or construction equipment shall drive or park in or on the area within the drip line(s) of the tree(s). Do not store any refuse or construction materials or portalets within the tree protection area.
- This plan is for review purposes only, NOT for Construction. Construction Documents will be provided upon request. Location, support, protection, and restoration of all existing utilities and appurtenances shall be the responsibility of the Contractor.
- 10. The Contractor shall verify exact location and elevation of all utilities with the respective utility owners prior to construction. Call DIGSAFE at 1-888-344-7233.
- 11. The Contractor shall procure any required permits prior to construction 12. Prior to any landscape construction activities Contractor shall test all existing loam and loam from off-site intended to be used for lawns and plant beds using a thorough sampling throughout the supply. Soil testing shall indicate levels of pH, nitrates, macro and micro nutrients, texture, soluble salts, and organic matter. Contractor shall provide Landscape Architect with test results and recommendations from the testing facility along with soil amendment plans as necessary for the proposed plantings to thrive. All loam to be used on site shall be amended as approved by the Landscape Architect prior to placement.
- 13. Contractor shall notify landscape architect or owner's representative immediately if at any point during demolition or construction a site condition is discovered which may negatively impact the completed project. This includes, but is not limited to, unforeseen drainage problems, unknown subsurface conditions, and discrepancies between the plan and the site. If a contractor is aware of a potential issue, and does not bring it to the attention of the landscape architect or owner's representative immediately, they may be responsible for the labor and materials associated with correcting the problem.
- 14. The Contractor shall furnish and plant all plants shown on the drawings and listed thereon. All plants shall be nursery-grown under climatic conditions similar to those in the locality of the project. Plants shall conform to the botanical names and standards of size, culture, and quality for the highest grades and standards as adopted by the American Association of Nurserymen, Inc. in the American Standard of Nursery Stock, American Standards Institute, Inc. 230 Southern Building, Washington, D.C. 20005.
- 15. A complete list of plants, including a schedule of sizes, quantities, and other requirements is shown on the drawings. In the event that quantity discrepancies or material omissions occur in the plant materials list, the planting plans shall govern.
- 16. All plants shall be legibly tagged with proper botanical name. 17. The Contractor shall guarantee all plants for not less than one year from time of acceptance.
- 18. Owner or Owner's Representative will inspect plants upon delivery for conformity to Specification requirements. Such approval shall not affect the right of inspection and rejection during or after the progress of the work. The Owner reserves the right to inspect and/or select all trees at the place of growth and reserves the right to approve a representative sample of each type of shrub, herbaceous perennial, annual, and ground cover at the place of growth. Such sample will serve as a minimum standard for all plants of the same species used in this work.
- 19. No substitutions of plants may be made without prior approval of the Owner or the Owner's Representative for any reason. 20. All landscaping shall be provided with the following:
- a. Outside hose attachments spaced a maximum of 150 feet apart, and b. An underground irrigation system, or
- c. A temporary irrigation system designed for a two-year period of plant establishment.
- 21. If an automatic irrigation system is installed, all irrigation valve boxes shall be located within planting bed areas. 22. The contractor is responsible for all plant material from the time their work commences until final acceptance. This includes but is not limited to maintaining all plants in good condition, the security of the plant material once delivered to the site, and watering of plants. Plants shall be appropriately watered prior to, during and after planting. It is the contractor's responsibility to provide clean water suitable for plant health from off site, should it not be available on site.
- 23. All disturbed areas will be dressed with 6" of topsoil and planted as noted on the plans or seeded except plant beds. Plant beds shall be prepared to a depth of 12" with 75% loam and 25% compost.
- 24. Trees, ground cover, and shrub beds shall be mulched to a depth of 2" with one-year-old, well-composted, shredded native bark not longer than 4" in length and ½" in width, free of woodchips and sawdust. Mulch for ferns and herbaceous perennials shall be no longer than 1" in length. Trees in lawn areas shall be mulched in a 5' diameter min. saucer. Color of mulch shall be black
- 25. In no case shall mulch touch the stem of a plant nor shall mulch ever be more than 3" thick total (including previously applied mulch) over the root ball of any plant.
- 26. Secondary lateral branches of deciduous trees overhanging vehicular and pedestrian travel ways shall be pruned up to a height of 6' to allow clear and safe passage of vehicles and pedestrians under tree canopy. Within the sight distance triangles at vehicle intersections the canopies shall be raised to 8' min.
- 27. Snow shall be stored a minimum of 5' from shrubs and trunks of trees.
- 28. Landscape Architect is not responsible for the means and methods of the contractor.



Name	Common Name	Quantity	Size	Comments
	Dura Heat River Birch	1	10-12' Ht	B&B, Multi Stem
rmis 'Crusader'	Crusader Thornless Hawthorn	1	2-2.5" Cal	
nerald Sentinel'	Emerald Sentinel Red Cedar	4	4-5' Ht	B&B
	Black Tupelo	1	3-3.5" Cal	B&B
lia	Japanese Stewaria	1	8-10' Ht	B&B, Multi Stem, Specimen
nt'	Green Giant Arborvitae	3	8-10' Ht	B&B
Name	Common Name	Quantity	Size	Comments
nabird'	Hummingbird Compact Summersweet	30	3 gal	planted above sea wall
าร่	Ardens Rose-of -Sharon (Double Blue)	1	6-7' Ht	B&B
ittle Quick Fire'	Little Quick Fire Hydrangea	6	3 gal	
'Incrediball'	Incrediball Hydrangea	11	5 gal	
	Gem Box Inkberry	23	3 gal	
	Mountain Laurel	8	4-5' Ht	B&B, Full
	Northern Bayberry	30	3 gal	planted above sea wall
.ow'	Grow Low Sumac	30	3 gal	planted above sea wall
	Peach Drift Rose	34	3 gal	
	Bloomerang Lilac	7	5 gal	
/e'	Greenwave Yew	12	5 gal	
ו	Lowbush Blueberry	250	1 qt	
VINES and ANNU	JALS			
Name	Common Name	Quantity	Size	Comments
ert'	Windflower	11	1 gal	
	Peach Astilbe	34	1 gal	
'Karl Foerster'	Feather Reed Grass	12	1 gal	
1	Hay-scented Fern	40	1 gal	
les 'Hameln'	Hameln Dwarf Fountain Grass	30	1 gal	
acillimus'	Maiden Grass	7	1 gal	
'ona'	Dark Blue Salvia	14	1 gal	
	Bowles Periwinkle	450	2" plugs	



Drawn By	: VM
Checked H	By: RW
Scale:	1" = 10'-0"
Date:	November 4, 2021
Revisions: re	June 28, 2022 placement sea wall



© 2021 Woodburn & Company Landscape Architecture, LLC

Adam Causey

William Straub <wstraub@cmaengineers.com> Wednesday, July 20, 2022 2:44 PM Adam Causey Kathy Connor; Jodie Bray Strickland 134 Whipple Road Shoreland Development Plan 591.133-Kittery-DL-201015-134 Whipple Road Shoreland WAS.pdf **Attachments:**

Adam,

Subject:

From:

Sent:

To:

Cc:

We have reviewed the PRN for the proposed shoreland development at 134 Whipple Road, including the plan sheets prepared by Altus Engineering of Portsmouth (C-1 Shoreland Development Plan), and SFC Engineering (S-1 Redi Rock Wall Design Drawings). There may be other drawings that we have not reviewed.

There was a previous site plan associated with the demolition of the existing residence and construction of a new residence that we have not reviewed (referenced as October 2021 approval by Planning Board).

We reviewed a previous proposal in 2020. (Letter attached, dated October 15, 2020). That proposal did not include replacement of the residence. The proposed new walls used similar precast concrete methods as what is currently proposed, but with an entirely different configuration of walls.

The current proposal is for the replacement of an existing aged dry laid rock wall at the riverfront with a precast concrete segmental system ("so called "Redi-Rock"). The height of the proposed wall is 7'-6" max above the river bottom and is proposed in essentially the same horizontal location as the existing stone wall at the river's edge. It is noted that the 2020 proposal included two separate walls, with much higher elevations, and leaving the existing wall in place. The current proposal is much simpler and does not pose some of the geotechnical stability issues we raised in 2020.



The new precast Redi-Rock wall would replace the existing river-front stone wall

We offer the following comments on the current proposal:

- The replacement of the existing stone wall with the precast system eliminates the previous questions of the integrity of the stone wall
- Segmental block gravity retaining wall systems are a commonly applied method of creating grade changes. There are several well-established providers of such systems, which generally include pre-cast concrete interlocking blocks, select foundation soils, and select crushed stone and gravel backfill. The systems are engineered for specific application and can provide flexible horizontal and vertical geometric configurations. The preliminary design prepared by SFC using the "Redi-Rock" system includes conventional applications of these elements.
- Soils and subsurface information are necessary for the final design of the wall system. The SFC plan states that they have no site-specific subsurface data, and assumptions as to what they are. The plan should not be constructed without supporting information on subsurface and uphill soil characteristics. The plan for acquiring that data should be prepared by the design engineer (SFC).
- The SFC plan describes requirements for observation of construction by them as designer. We concur.
- We have not reviewed any of the narrative of the shoreland development plan.
- The PRN describes that permit applications have been prepared and submitted to MEDEP (Natural Resource Protection Act, NRPA); and the US Army Corps of Engineers (approval under Maine's general permit). These permit applications typically include documentation relative to the environmental impacts of the construction, natural systems, wildlife, and other issues that parallel requirements for approval under the LUDC, section 16.93.C. Those permit applications, and the review actions by MEDEP and the USACOE should be made available and reviewed by Town before final action.
- The PRN includes issues regarding staging of construction materials, and control of temporary impacts of construction, and construction sequencing. We concur that these should be developed if they have not been under the MEDEP or USACOE documentation.

If you have any questions, please do not hesitate to call.

William A. Straub, P.E. Principal/Project Manager



CMA Engineers, Inc. 35 Bow Street Portsmouth, NH 03801 CELL 603 828-6167 www.cmaengineers.com



KITTERY PORT AUTHORITY TOWN HALL 200 ROGERS RD. KITTERY, ME 03904

Phone: 207-439-0452 ext 301 Email:kpa@kitteryme.org www.kittery.org

June 20, 2022

Nicholas & Amy Mercier 134 Whipple Road Kittery ME 03904

Dear Nicholas & Amy Mercier

Your request for the replacement of an of an existing seawall and alterations to an existing pier where it meets the seawall was approved at the June 2, 2022 Kittery Port Authority meeting.

This is your letter to proceed from the Kittery Port Authority. A copy has been provided to the Code Enforcement Officer. This approval is contingent on the approval of any other governing bodies that may be required before building commences.

Your approval is good for one year from the date the building permit is issued. A permit for which no substantial work has commenced within a year of date of issue will expire. A permit for which work is not substantially complete within two years from date of issue will expire. Expired permits will need to be renewed. If you have any further questions or make any alterations to your approved plans please contact the Chair of the Kittery Port Authority.

Respectfully,

Kelly L. Philbrook Kittery Port Authority Chair

cc: Code Enforcement Officer File



MAINE GENERAL PERMITS (GPs) <u>AUTHORIZATION LETTER</u> AND SCREENING SUMMARY

Nicholas Mercier 35 Goffstown Road Hooksett, NH 03106

 CORPS PERMIT # NAE-2018-00873-MOD

 CORPS GP(s) #
 1

 STATE ID#
 NRPA

DESCRIPTION OF WORK:

Place approximately 1151 s.f. of stone revetment and approximately 218 s.f of temporary fill below the HTL of Piscataqua River (Back Channel) off 134 Whipple Road at Kittery, Maine in order to perform an in-kind reconstruction of approximately 156 linear feet of deteriorating seawall. This work is described on the attached plans entitled "NAE-2018-00873-MOD - Mercier Residence Seawall Restoration" on four (4) sheets undated. See Conditions

LAT/LONG COORDINATES: 43.085248° N -70.729341° W USGS QUAD: <u>KITTERY, MAINE</u>

I. CORPS DETERMINATION:

Based on our review of the information you provided, we have determined that your project will have only minimal individual and cumulative impacts on waters and wetlands of the United States. Your work is therefore authorized by the U.S. Army Corps of Engineers under the Federal Permit, the Maine General Permit which can be found at: https://www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/ Accordingly, we do not plan to take any further action on this project.

You must perform the activity authorized herein in compliance with all the terms and conditions of the GP(s) [including any attached Additional Conditions and any conditions placed on the State 401 Water Quality Certification <u>including any required mitigation</u>]. Please review the GP(s) carefully, including the GP(s) conditions beginning on page 5, to familiarize yourself with its contents. You are responsible for complying with all of the GP(s) requirements; therefore you should be certain that whoever does the work fully understands all of the conditions. You may wish to discuss the conditions of this authorization with your contractor to ensure the contractor can accomplish the work in a manner that conforms to all requirements.

If you change the plans or construction methods for work within our jurisdiction, please contact us immediately to discuss modification of this authorization. This office must approve any changes before you undertake them.

Condition 45 of the GP(s) (page 19) provides one year for completion of work that has commenced or is under contract to commence prior to the expiration of the GP(s) on October 14, 2025. You will need to apply for reauthorization for any work within Corps jurisdiction that is not completed by October 14, 2026.

This authorization presumes the work shown on your plans noted above is in waters of the U.S. Should you desire to appeal our jurisdiction, please submit a request for an approved jurisdictional determination in writing to the undersigned.

No work may be started unless and until all other required local, State and Federal licenses and permits have been obtained. This includes but is not limited to a Flood Hazard Development Permit issued by the town if necessary.

II. STATE ACTIONS:	PENDING [Х], ISSUED [],	DENIED []	DATE

APPLICATION TYPE: PBR: ____TIER 1: ___, TIER 2: ____, TIER 3: ____ INDIV_X_LURC: ____ DMR LEASE: _____ NA: ____

III. FEDERAL ACTIONS:

JOINT PROCESSING MEETING: June 2, 2022 LEVEL OF REVIEW: Self-Verification: Pre-Construction Notification: X

AUTHORITY (Based on a review of plans and/or State/Federal applications): SEC 10_____, 404__X 10/404____, 103_____

EXCLUSIONS: The exclusionary criteria identified in the general permit do not apply to this project.

FEDERAL RESOURCE AGENCY OBJECTIONS: EPA_NO_, USF&WS_NO_, NMFS_NO_

If you have any questions on this matter, please contact my staff at 207-623-8367 at our Augusta, Maine Project Office. In order for us to better serve you, we would appreciate your completing our Customer Service Survey located at http://per2.nwp.usace.army.mil/survey.html

HEATHER S. STUKAS PROJECT MANAGER MAINE PROJECT OFFICE For: FRANK J. DEL GIUDICE CHIEF, PERMITS & ENFORCEMENT BRANCH REGULATORY DIVISION



PLEASE NOTE THE FOLLOWING GENERAL CONDITIONS FOR DEPARTMENT OF THE ARMY GENERAL PERMIT 1 NO. NAE-2018-00873-MOD

23. Soil Erosion, Sediment, and Turbidity Controls.

23(a). Adequate sedimentation and erosion control management measures, practices and devices, such as phased construction, installation of sediment control barriers (i.e. silt fence, vegetated filter strips, geotextile silt fences, erosion control mixes, hay bales or other devices) downhill of all exposed areas, retention of existing vegetated buffers, application of temporary mulching during construction, and permanent seeding and stabilization shall be installed and properly maintained to reduce erosion and retain sediment on-site during and after construction. They shall be capable of preventing erosion; of collecting sediment, suspended and floating materials; and of filtering fine sediment.

23(b). Temporary sediment control barriers shall be removed upon completion of work, but not until all disturbed areas are permanently stabilized. The sediment collected by these sediment barriers shall be removed and placed at an upland location and stabilized to prevent its later erosion into a waterway or wetland.

23(c). All exposed soil and other fills shall be permanently stabilized at the earliest practicable date.

33. Permit(s)/Authorization Letter On-Site. The permittee shall ensure that a copy of the terms and conditions of these GPs and any accompanying authorization letter with attached plans are at the site of the work authorized by these GPs whenever work is being performed and that all construction personnel performing work which may affect waters of the U.S. are fully aware of the accompanying terms and conditions. The entire permit authorization shall be made a part of any and all contracts and subcontracts for work that affects areas of Corps jurisdiction at the site of the work authorized by these GPs. This shall be achieved by including the entire permit authorization in the specifications for work. The term "entire permit authorization" means all terms and conditions of the GPs, the GPs, and the authorization letter (including its drawings, plans, appendices and other attachments) and subsequent permit modifications as applicable. If the authorization letter is issued after the construction specifications. If the authorization letter is erceipt of bids or quotes, the entire permit authorization shall be included as an addendum to the specifications. If the authorization letter is assign various aspects of the work to different contractors or subcontractors, all contractors and subcontractors shall be obligated by contract to comply with all environmental protection provisions contained within the entire GP authorization, and no contract or subcontract shall require or allow unauthorized work in areas of Corps jurisdiction.

34. Inspections. The permittee shall allow the Corps to make periodic inspections at any time deemed necessary in order to ensure that the work is eligible for authorization under these GPs, is being, or has been performed in accordance with the terms and conditions of these GPs. To facilitate these inspections, the permittee shall complete and return to the Corps the Work-Start Notification Form and the Compliance Certification Form when either is provided with an authorization letter. The Corps may also require post-construction engineering drawings and/or photographs for completed work or post-dredging survey drawings for any dredging work to verify compliance.



WORK-START NOTIFICATION FORM

(Minimum Notice: Two weeks before work begins)

EMAIL TO: heather.s.stukas@usace.army.mil or

MAIL TO: Heather Stukas Regulatory Division U.S. Army Corps of Engineers, New England District 696 Virginia Road Concord, Massachusetts 01742-2751

Corps of Engineers Permit No. **NAE-2018-00873-MOD** was issued to **Nicholas Mercier**. This work authorizes the placement of 1151 s.f. of stone revetment and approximately 218 s.f of temporary fill below the HTL of Piscataqua River (Back Channel) off 134 Whipple Road at Kittery, Maine in order to perform an in-kind reconstruction of approximately 156 linear feet of deteriorating seawall.

The people (e.g., contractor) listed below will do the work, and they understand the permit's conditions and limitations.

PLEASE PRINT OR TYPE

Name of 1	Person/Firm:			
Business	Address:			
Phone &	email: ()	()		
Proposed	Work Dates: Start:	Finish:		
Permittee	e/Agent Signature:	Date:		
Printed N	lame:	Title:		
Date Permit Issued:		Date Permit Expires:		
*****	****	****		
	FOR USE	BY THE CORPS OF ENGINEERS		
PM:	Stukas	Submittals Required:		
Inspectio	n Recommendation:	random compliance inspections		



(Minimum Notice: Permittee must sign and return notification within one month of the completion of work.)

COMPLIANCE CERTIFICATION FORM

Permit Number: NAE-2018-00873-MOD

Name of Permittee: Nicholas Mercier

Permit Issuance Date:

Please sign this certification and return it to the following address upon completion of the activity and any mitigation required by the permit. You must submit this after the mitigation is complete, but not the mitigation monitoring, which requires separate submittals.

**	********	***************************************	***
*	MAIL TO:	U.S. Army Corps of Engineers, New England District	*
*		Permits and Enforcement Branch C	*
*		Regulatory Division	*
*		696 Virginia Road	*
*		Concord, Massachusetts 01742-2751	*
**	********	***************************************	***

Please note that your permitted activity is subject to a compliance inspection by an U.S. Army Corps of Engineers representative. If you fail to comply with this permit you are subject to permit suspension, modification, or revocation.

I hereby certify that the work authorized by the above referenced permit was completed in accordance with the terms and conditions of the above referenced permit, and any required mitigation was completed in accordance with the permit conditions.

Signature of Permittee

Date

Printed Name

Date of Work Completion

(____) Telephone Number

(____) Telephone Number











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