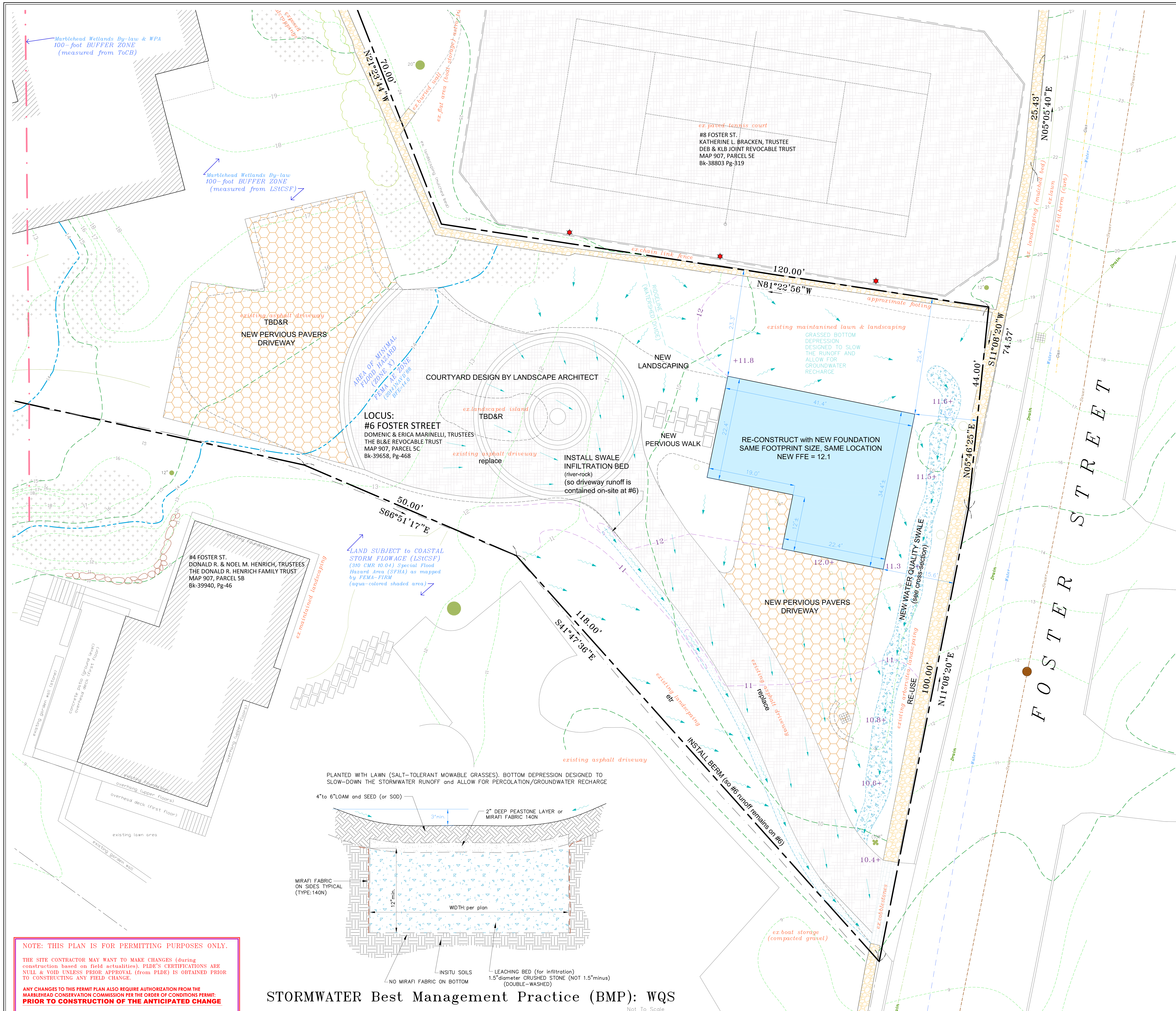
S:\Data\LAND PROJECTS 4\Marblehead\MARINELLI #6 Foster Street\!23-36\dwg\2024-01-23 SITEPLAN(s).dwg



Marblehead Wetlands By-law & WPA 100-foot BUFFER ZONE (measured from ToCB)
Marblehead Wetlands By-law 100-foot BUFFER ZONE (measured from LStCSF)
#8 FOSTER ST.
KATHERINE L. BRACKEN, TRUSTEE
DEB & KLB JOINT REVOCABLE TRUST
MAP 907, PARCEL 5E
Bk-38803 Pg-319
ex.paved tennis court
N21°23'44"W
70.00'
120.00'
N81°22'56"W
S11°08'20"W
74.57'
44.00'
N05°46'25"E
100.00'
N11°08'20"E
25.43'
N05°05'40"E
50.00'
S66°51'17"E
118.00'
S41°47'36"E
TBD&R
existing asphalt driveway
NEW PERVIOUS PAVERS DRIVEWAY
COURTYARD DESIGN BY LANDSCAPE ARCHITECT
AREA OF MINIMAL FLOOD HAZARD (ZONE X)
FEMA AE ZONE
LOCUS:
#6 FOSTER STREET
DOMENIC & ERICA MARINELLI, TRUSTEES
THE BL&E REVOCABLE TRUST
MAP 907, PARCEL 5C
Bk-39658, Pg-468
ex.landscaped island
replace
INSTALL SWALE INFILTRATION BED
(river-rock)
(so driveway runoff is contained on-site at #6)
NEW LANDSCAPING
NEW PERVIOUS WALK
existing maintained lawn & landscaping
GRASSED BOTTOM DEPRESSION DESIGNED TO SLOW THE RUNOFF AND ALLOW FOR GROUNDWATER RECHARGE
approximate footing
+11.8
RE-CONSTRUCT with NEW FOUNDATION
SAME FOOTPRINT SIZE, SAME LOCATION
NEW FFE = 12.1
41.4'
22.4'
19.0'
34.4'
12.5'
12.0+
11.3
11.5+
11.6+
10.8+
10.6+
10.4+
NEW PERVIOUS PAVERS DRIVEWAY
NEW WATER QUALITY SWALE
(see cross-section)
RE-USE
existing arborvitae landscaping
ex.cobblestones
ex.boat storage (compacted gravel)
INSTALL BERM (so #6 runoff remains on #6)
existing asphalt driveway
#4 FOSTER ST.
DONALD R. & NOEL M. HENRICH, TRUSTEES
THE DONALD R. HENRICH FAMILY TRUST
MAP 907, PARCEL 5B
Bk-39940, Pg-46
ex.maintained landscaping
LAND SUBJECT to COASTAL STORM FLOWAGE (LStCSF)
(310 CMR 10.04) Special Flood Hazard Area (SFHA) as mapped by FEMA-FIRM
(aqua-colored shaded area)
FOSTER STREET
PLANTED WITH LAWN (SALT-TOLERANT MOWABLE GRASSES). BOTTOM DEPRESSION DESIGNED TO SLOW-DOWN THE STORMWATER RUNOFF and ALLOW FOR PERCOLATION/GROUNDWATER RECHARGE
4"to 6"LOAM and SEED (or SOD)
2" DEEP PEASTONE LAYER or MIRAFI FABRIC 140N
MIRAFI FABRIC ON SIDES TYPICAL (TYPE:140N)
12"min.
WIDTH:per plan
INSITU SOILS
NO MIRAFI FABRIC ON BOTTOM
LEACHING BED (for infiltration) 1.5"diameter CRUSHED STONE (NOT 1.5"minus) (DOUBLE-WASHED)
STORMWATER Best Management Practice (BMP): WQS
Not To Scale

NOTE: THIS PLAN IS FOR PERMITTING PURPOSES ONLY.

THE SITE CONTRACTOR MAY WANT TO MAKE CHANGES (during construction based on field actualities). PLDE'S CERTIFICATIONS ARE NULL & VOID UNLESS PRIOR APPROVAL (from PLDE) IS OBTAINED PRIOR TO CONSTRUCTING ANY FIELD CHANGE.

ANY CHANGES TO THIS PERMIT PLAN ALSO REQUIRE AUTHORIZATION FROM THE MARBLEHEAD CONSERVATION COMMISSION PER THE ORDER OF CONDITIONS PERMIT:
PRIOR TO CONSTRUCTION OF THE ANTICIPATED CHANGE

IMPERVIOUS AREA CALCULATIONS:

The area for this calculation is the proposed altered lands within the property line and 100-foot buffer line (as measured from the FEMA delineation and ToCB, whichever is the most landward). The impervious area is the summation of those applicable percentages (not all apply to this project, but listed here as the standards applied to many projects in Town):

100% IMPERVIOUS AREAS: buildings (including foundations + any roof overhangs [greater than 18"] + cantilevered portions of the building [greater than 18"]), concrete retaining walls (without "lips"), masonry stone walls (without "lips"), steps, concrete landings, asphalt pavement, mortared flagstone/bluestone/stone & brick patios (set on concrete slabs or Lynnpac), exposed ledge outcroppings, shallow soil over ledge, and

100% IMPERVIOUS AREAS: pool (even though the pool is not filled entirely and does allow for some stormwater detention), and

85% IMPERVIOUS AREAS: brick pavers/brick/stone patios/walkways/driveway pavers (tight joints set on sand bed), 6 to 12-inches of soil cover over ledge, compacted earth, stone-dust, lynn-pac driveways, and

50% IMPERVIOUS AREAS: un-mortared stone steps (stairs traversing a slope with or without railings) set in a bed of sand and/or crushed stone (with lawn/landscaping/terraced gardens surrounding the steps), and

30% IMPERVIOUS AREAS: properly maintained porous pavers/porous pavement per MassDEP Stormwater Handbook Volume 2, Chapter 2 pages 118-122, and

10% IMPERVIOUS AREAS: Sloping lawn areas (with steep topography) will have shorter Time of Concentrations (ToC), thus resulting in higher runoff rates (CFS), compared to flat-sloped terraced land

NOTE: The following are all considered pervious (i.e 0% impervious):
(a) Open un-covered wooden/composite decks/raised patios (boards with 1/4-inch minimum space in-between & crushed stone/riprap underneath),
(b) Peastone/crushed stone/clam-shell beds (with stepping stones and/or without stepping stones since there is enough space between the stones so that water is allowed to percolate in that space and then infiltrate into the pervious sub-base below the stepping stones (including granite risers with peastone treads)
Note: the space (minimum 1/2-inch) in-between the stones is typically filled with peastone and/or crushed stone),
(c) Rain Gardens (shaped as topographic depressions detaining runoff allowing for percolation),
(d) Placed retaining walls/seawalls (and/or edging) with up-gradient "lips" (since they act as a curb/dam/blockage to retain/detain runoff), and
(e) Lawn (flat-sloped areas) with or without stepping stones (with grass and/or peastone/crushed stone between the stepping stones).
(f) Roof overhangs (with overhangs less than 18-inches wide).
(g) Grass-crete (concrete grid pavers with grass growing or peastone in voids).

Un-altered areas (not in the scope of proposed work), are not included in these calculations. The percentage (of impervious) is already factored into the areas below.

	EXISTING:	PROPOSED:
100% IMPERVIOUS:	6,682±SF	4,863±SF
30% IMPERVIOUS: (the result of multiplying 0.30)	00±SF	844±SF
TOTALS: (IMPERVIOUS AREA)	6,682±SF	5,707±SF

CONCLUSION:

Net **DECREASE** of impervious surfaces = **975±SF**

This Site Plan proposes the following design features (stormwater BMP controls to supplement the net reduction of impervious surfaces) designed to further conservatively mitigate runoff:

(a) Conversion of existing asphalt into pervious pavers.

(b) Construction of a flat terraced Water Quality Swale (designed to absorb runoff water allowing for percolation, filtration and groundwater recharge).

(c) River Rock swale (to catch driveway water) and subtle berm (along the property line) so that runoff does not flow onto abutter's property.

(d) Landscaped areas shall use only organic fertilizers that contain slow-release nitrogen (not more than 3% phosphorus) and do not contain pesticides/herbicides.

Therefore, with the proposed mitigation measures (slowing down stormwater runoff, allowing for percolation into the ground), impacts to wetland resource areas will MITIGATED before stormwater enters Foster Street (and Town drainage system which flows into Marblehead Harbor beyond.

SITE PLAN
PROPOSED SCOPE of WORK
(with Impervious Calculations)

for

LStCSF (& Buffer Zones) project ONLY
{No work is proposed within any other wetland resource area}

to accompany a

NOTICE OF INTENT APPLICATION

to the

Marblehead Conservation Commission

for

Existing Garage Re-Construction & Site Work/Landscaping

located at:

#6 Foster Street
Marblehead, MA

January 23, 2024

Plan Scale: 1" = 10'
Sheet 2 of 2

Massachusetts State Plane Coordinate System Grid North

Datum: NAVD'88

0 2 4 6 8 10 20
GRAPHIC SCALE (in feet)
1 inch = 10 feet

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