

#### P.O. Box 101, South Harwich, MA 02661 Ph. 508-432-3997 • E-mail: info@harwichconservationtrust.org www.harwichconservationtrust.org

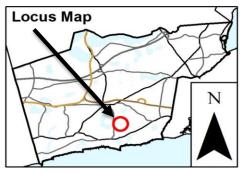
To:	Town of Harwich Community Preservation Committee
From:	Michael Lach, Executive Director, Harwich Conservation Trust (HCT)
Date:	April 13, 2023
Subject:	Status Report
	2021 Town Mtg. Article #34 Harwich Natural Heritage Trail Project, Phase One
	2022 Town Mtg. Article #34 Harwich Natural Heritage Trail Project, Phase Two

Thank you for the opportunity to provide a status report for Phase One & Two of the Harwich Natural Heritage Trail Project located at HCT's Robert F. Smith Cold Brook Preserve in Harwich Port. To summarize, Phase One focuses on design, permitting, and construction of the half-mile wheelchair accessible trail loop in the westerly portion of the Preserve. Phase Two focuses on design, permitting, and construction of the approx. 100 ft. boardwalk in the easterly portion of the Preserve.

Since the last status report dated Oct. 13, 2022, HCT representatives attended meetings that included Phase One & Phase Two aspects of the Harwich Natural Heritage Trail Project on the following dates:

- Nov. 2, 3, 16 and 28, 2022
- Feb. 8 (two meetings) and 10, 2023
- March 1, 3 and 8, 2023
- April 5 and 6, 2023

The following project partners and representatives participated:



Location of Cold Brook Preserve

- Harwich Conservation Trust (HCT): Tom Evans, President; Colin Leonard, Trustee & Chair of Land Stewardship Committee; Michael Lach, Exec. Dir.; Connor O'Brien, Dir. of Land Stewardship
- The Compact of Cape Cod Conservation Trusts, Inc.: Kelly Grant, Land Protection Specialist
- MA Division of Ecological Restoration: Kate Bentsen, Ecological Restoration Specialist & Ecohydrologist; Eric Ford, Ecological Restoration Specialist & Professional Wetland Scientist
- Inter-Fluve [engineering firm specializing in river & wetland ecological restoration & access projects, website link: Inter-Fluve | River Restoration and Water Resources Engineering (interfluve.com)]
  - o Nick Nelson, Regional Director & Fluvial Geomorphologist
  - Mike Burke, Principal Engineer
  - o Emmanuel da Costa, Engineer
- Stimson Associates Landscape Architects, website link: <u>STIMSON (stimsonstudio.com)</u>
  - o Joe Wahler, Ryosuke Takahashi, Cassandra Lanson (Landscape Architects)
- The BSC Group, website link: <u>Home Page BSC Group</u>

- Brian Yergatian, Principal Engineer
- Casey-Lee Bastien, Landscape Architect

#### **Design & Permitting Progress:**

As mentioned in the fall 2022 status report, Stimson Associates Landscape Architects generated engineered design plans (please see attached) for both the proposed half-mile wheelchair accessible trail loop and approx. 100 ft. boardwalk. Since the fall, Stimson and Inter-Fluve have been refining the designs and Inter-Fluve has been advancing the overall project through the permitting process with state and federal agencies, which is nearly complete. Recall that in Aug. 2022, the Town of Harwich Conservation Commission voted its approval of a Notice of Intent permit with corresponding Order of Conditions.

#### **Property Acquisition & Parking:**

Parking for the Cold Brook Preserve had historically been located since 2001 at the town-owned property known collectively as 203 Bank Street, an assemblage of four parcels totaling approx. 2 acres. That property is comprised of Parcels B2, B2-1 and B3 shown on Assessor Map 23 as well as Parcel R7-B on Assessor Map 32. This parking site has provided visitor access and adequate driver safety sight lines along either direction of Bank Street.

In June 2022, HCT partnered with the nonprofit Harwich Fire Association (HFA) to submit a joint proposal in response to a request for proposals from the Select Board regarding purchase of the property for \$300,000. HFA's primary goal is to restore the architectural features of the Town's first fire station to offer the public an opportunity to see an antique fire engine and other memorable aspects of the Town's public safety history.

The Select Board selected the HCT/HFA proposal. Property conveyance from Town to HCT/HFA was completed on December 8, 2022.

On Sept. 15, 2022, HCT released a request for proposals seeking qualified contractors to bid on Phase Three for the parking area design in order to integrate parking with the wheelchair accessible trailhead, viewing area, and half-mile trail loop. In late October, HCT selected The BSC Group to design an enhanced parking area, trail connector to the envisioned Phase One wheelchair accessible trail loop, and viewing overlook.

As shown on the attached draft parking area design, the proposed location of the viewing overlook will allow visitor access from the parking area to the connector trail that links the parking area to the wheelchair accessible trail loop. In other words, the connector trail is the segment of wheelchair accessible trail extending from the parking area to the half-mile wheelchair accessible trail loop.

#### Free Guided Walks:

Since the fall, Harwich Conservation Trust's Director of Land Stewardship Connor O'Brien has been leading free guided walks at the Robert F. Smith Cold Brook Preserve. These walks are open to the public and help participants learn about the important changes that will result from the planned ecological restoration designed to improve the health of habitats, water quality, and wildlife as well as enhance the visitor experience including the trail elements funded by Town CPA funds.

These free guided walks have been offered on the following dates:

- Sept. 22 and 29, 2022
- Oct. 12, 13 and 19, 2022
- Nov. 2, 9, 23 and 30 2022
- Dec. 14, 2022

- March 1, 8, 22 and 29, 2023
- April 5, 2023

#### Status of CPA funding disbursement:

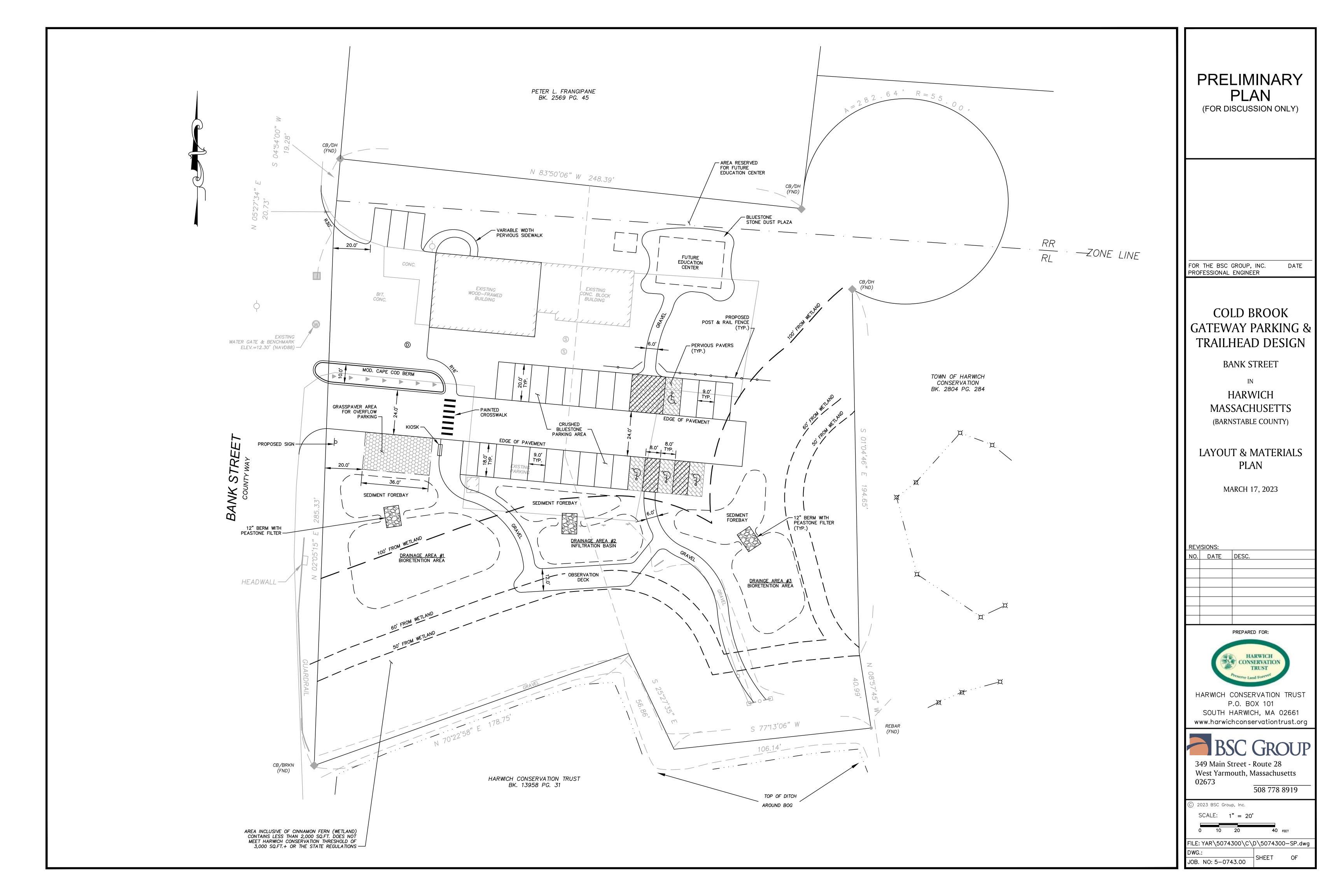
In November 2022, HCT submitted paid invoices to the Town Accounting Dept. and received a Community Preservation Act (CPA) fund disbursement of \$47,573.00 toward the 75% design and permitting of the wheelchair accessible trail.

#### Next steps:

- HCT and Town of Harwich Select Board finalize written agreement that governs the overall ecorestoration construction funding from town, state, and federal sources.
- HCT continue work with The BSC Group on Phase Three design (parking area design/integration with wheelchair accessible trailhead, viewing area, and connector to half-mile trail loop).
- Permitting to be completed in spring 2023.
- Eco-restoration construction to begin summer/fall 2023 and last until spring 2024.
- Trail construction aspects to begin winter 2024 and last through spring with <sup>1</sup>/<sub>2</sub>-mile wheelchair accessible trail loop and parking area to be final construction elements.

#### Attachments:

- March 17, 2023 draft parking area design from The BSC Group
- June 30, 2022 wheelchair accessible trail loop with stream crossings and boardwalk design/construction plans from Stimson Associates Landscape Architects



# COLD BROOK ECO-RESTORATION PROJECT

# HARWICH CONSERVATION TRUST (HCT) O Bank St. Harwich Port, MA 02646

CONSTRUCTION DOCUMENT June 30, 2022

# DRAWING LIST

L1.0	SITE PLAN
L1.1	ADA ACCESS PLAN
L1.2	OVERLOOK ENLARGEMENT PLAN
L2.0	CROSSING 1 PLAN & SECTION
L2.1	CROSSING 2 PLAN & SECTION
L2.2	CROSSING 3 PLAN & SECTION
L2.3	BOARDWALK PLAN & SECTION
L3.0	DETAILS-1
L3.1	DETAILS-2

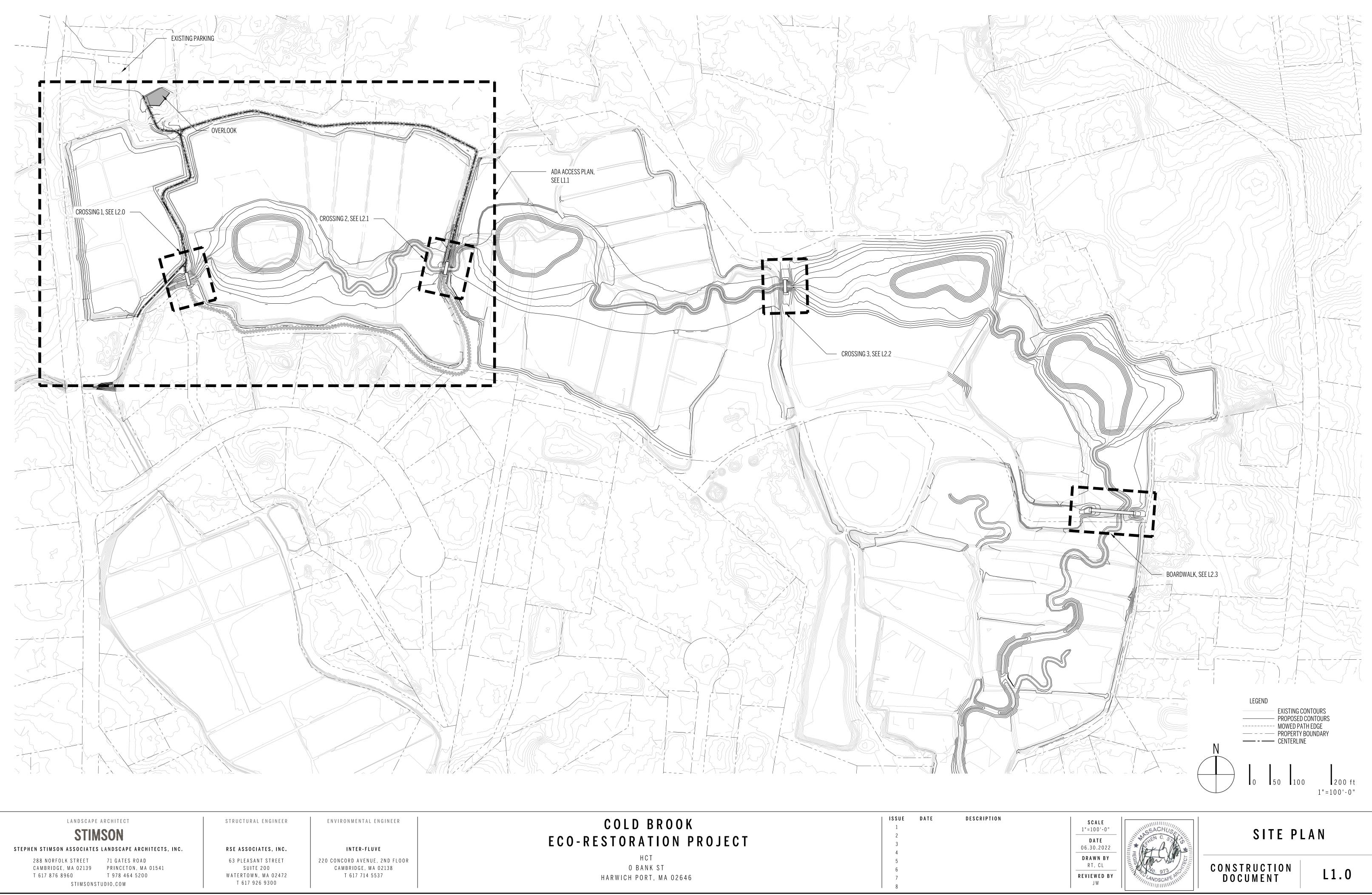
## ABBREVIATIONS

@	AT
ARCH	ARCHITECT
B&B	BALL AND BURLAP
BC	BOTTOM OF CURB
BLDG	BUILDING
BIT CONC	BITUMINOUS CONCRETE
BOC	BACK OF CURB
BS	BOTTOM OF STEP
CAL	CALIPER
CB	CATCH BASIN
CJ	CONTROL JOINT
CIP	CAST IN PLACE
CL	CENTER LINE
CLR	CLEARANCE
CO	CLEAR OUT
COL	COLUMN
CONC	CONCRETE
CONT	CONTINUOUS
Ø	DIAMETER
DN	DOWN
DTL	DETAIL
DWG/S	DRAWING/S
EA	EACH
EJ	EXPANSION JOINT
ELECT	ELECTRICAL
ELEV	ELEVATION
EOP	EDGE OF PAVEMENT
EQ	EQUAL

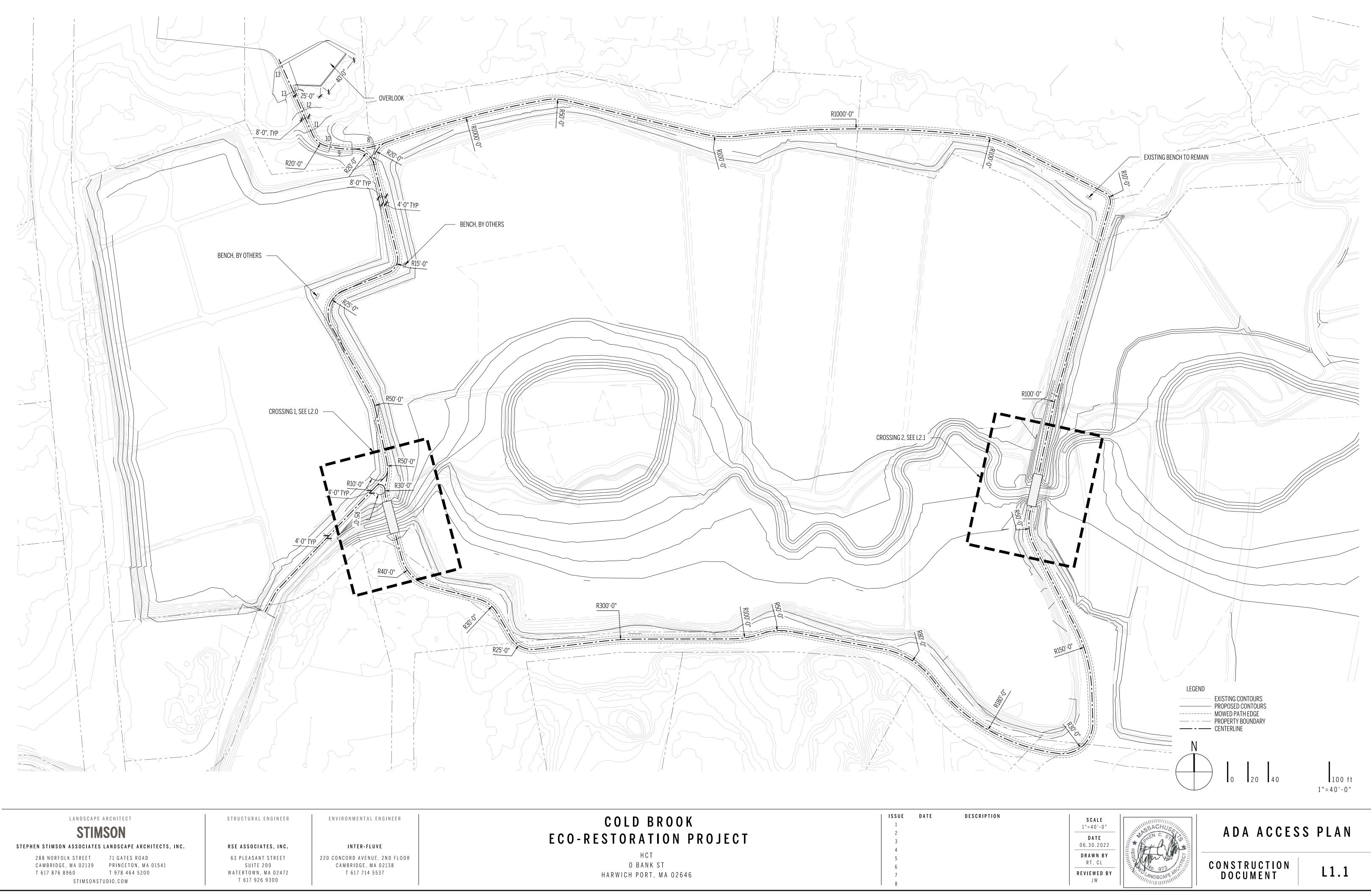
STEPHEN STIMSON ASSOCIATES LANDSCAPE ARCHITECTS, INC. 288 NORFOLK STREET, CAMBRIDGE MA 02139 PH (617) 876-8960

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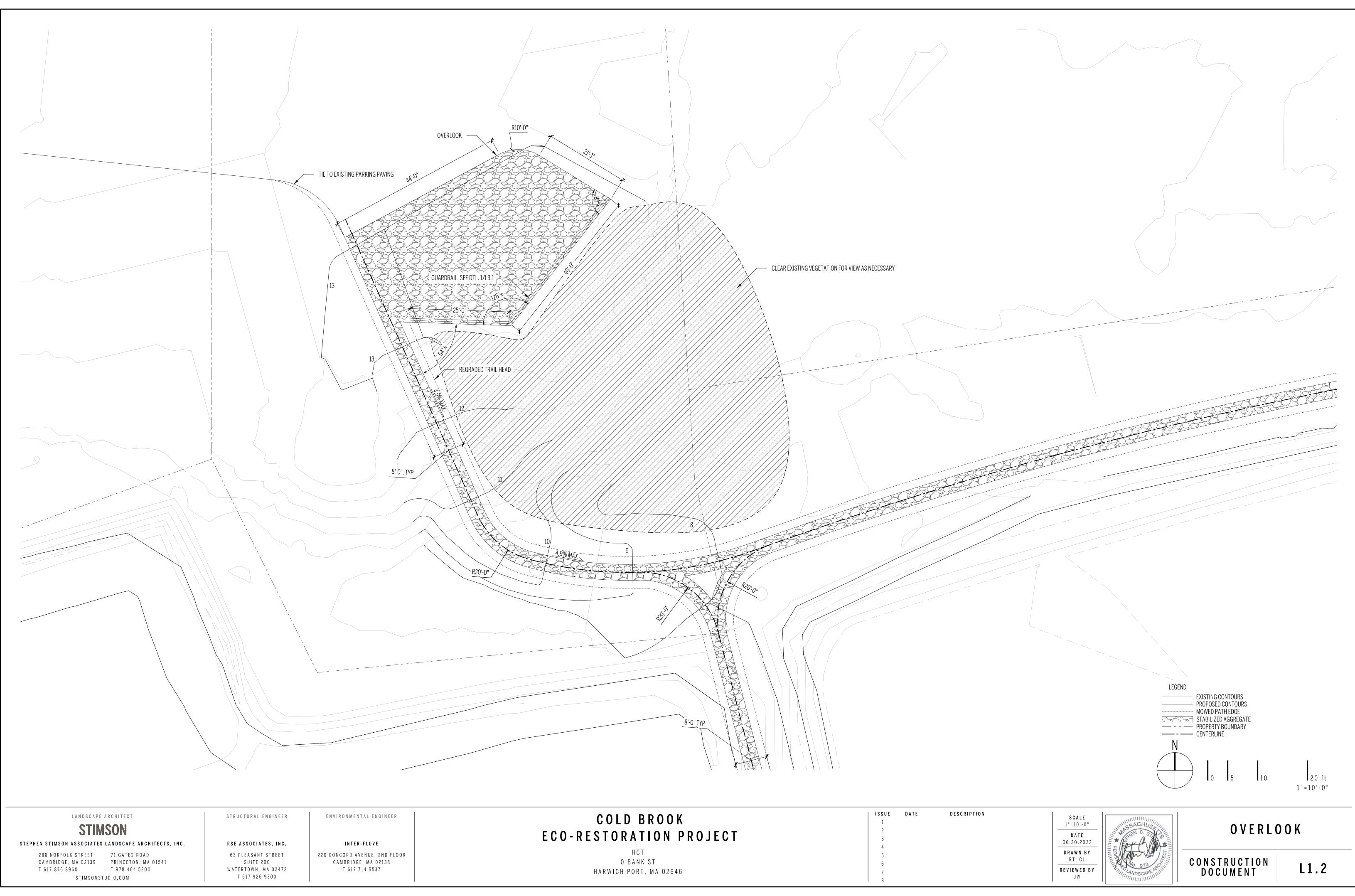
EW	EACH WAY	PA	PLANTING AREA
FFE	FINISH FLOOR ELEVATION	±	PLUS OR MINUS
FG	FINISH GRADE	PC	POINT OF CURVATURE
FOC	FACE OF CURB	PERF	PERFORATED
FOW	FACE OF WALL	POB	POINT OF BEGINNING
FS	FINISH SURFACE	POC	POINT OF CONNECTION
GALV	GALVANIZED	PSI	POUNDS PER SQUARE INCH
GB	GRADE BREAK	PT	POINT OF TANGENCY
HH	HANDHOLE	R	RADIUS
HORIZ	HORIZONTAL	ROW	RIGHT OF WAY
HP	HIGH POINT	SJ	SCORE JOINT
ID	INSIDE DIAMETER	SQ	SQUARE
INV	INVERT	SS	STAINLESS STEEL
JT	JOINT	STRUC	STRUCTURAL
LAND	LANDSCAPE	STD	STANDARD
LN	LAWN	STL	STEEL
LONGIT	LONGITUDINAL	T&B	TOP AND BOTTOM
LOW	LIMIT OF WORK	TC	TOP OF CURB
LP	LOW POINT	TD	TRENCH DRAIN
LT	LIGHT POLE	TFG	TOP OF FOOTING
MH	MANHOLE	TS	TOP OF STEP
MAX	MAXIMUM	TYP	TYPICAL
MFTR	MANUFACTURER	UON	UNLESS OTHERWISE NOTED
MIN	MINIMUM	VEH	VEHICULAR
NIC	NOT IN CONTRACT	VERT	VERTICAL
NTS	NOT TO SCALE	VIF	VERIFY IN FIELD
00	ON CENTER	W/	WITH
OD	OUTSIDE DIAMETER		



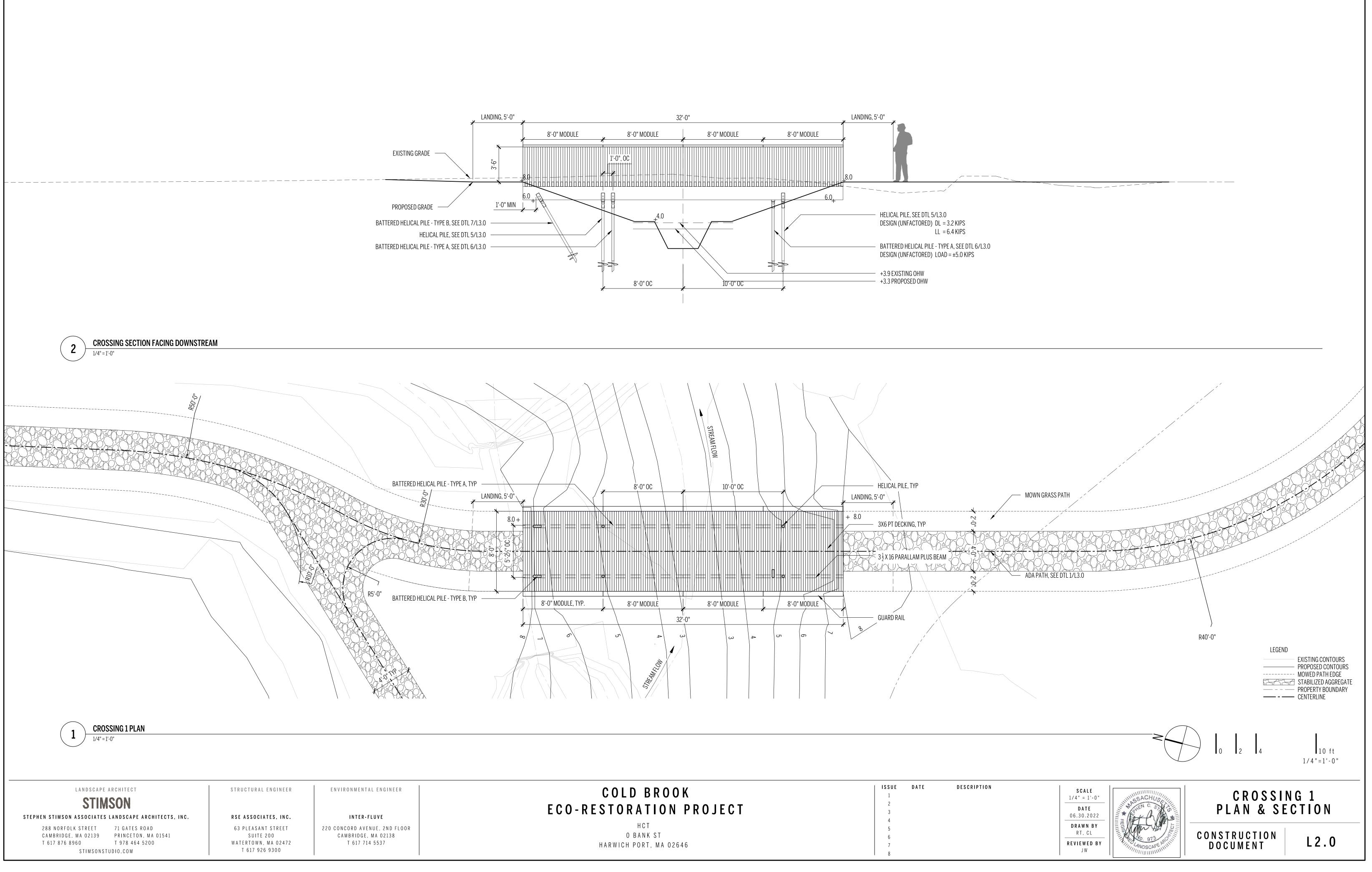
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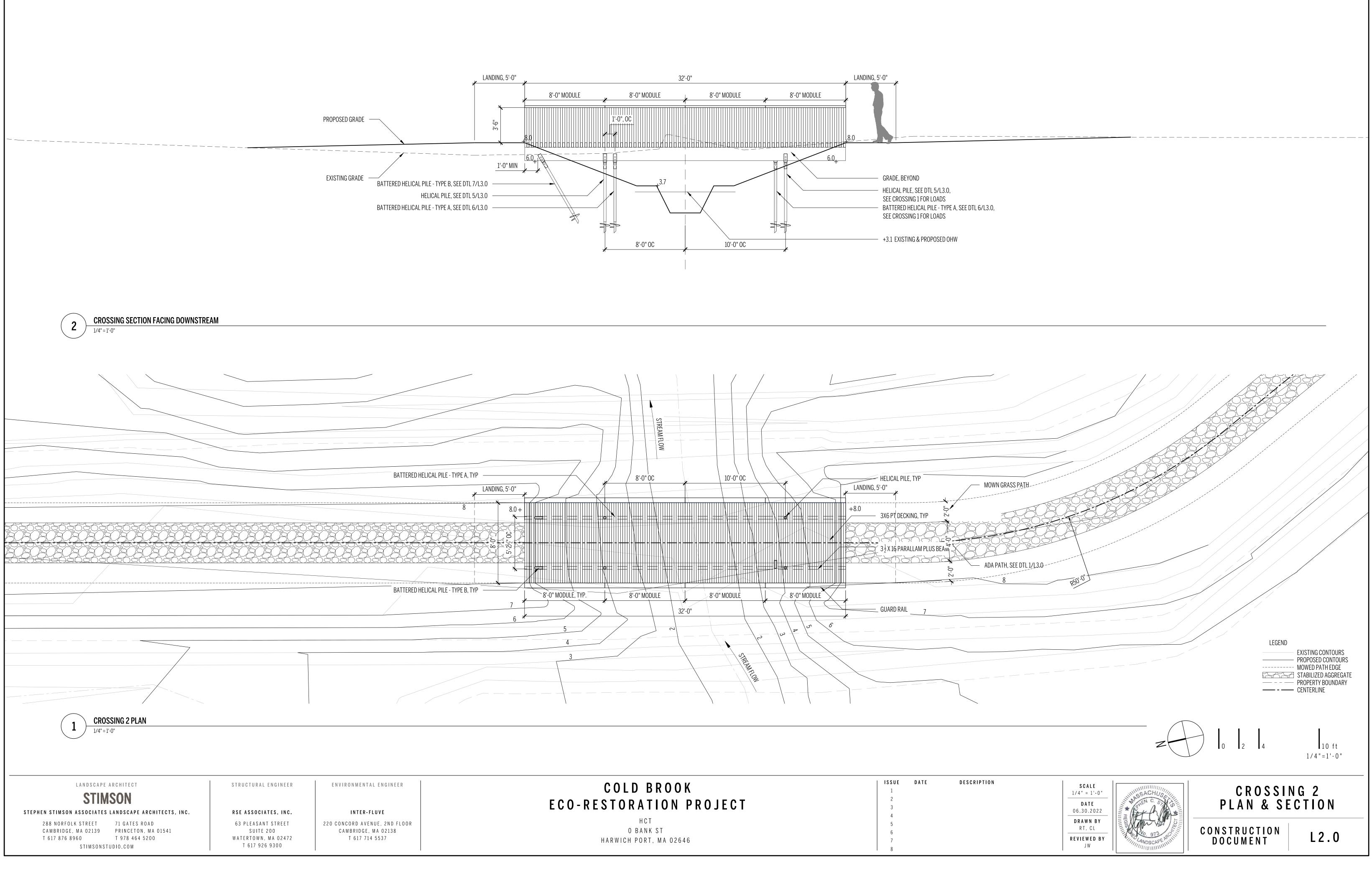
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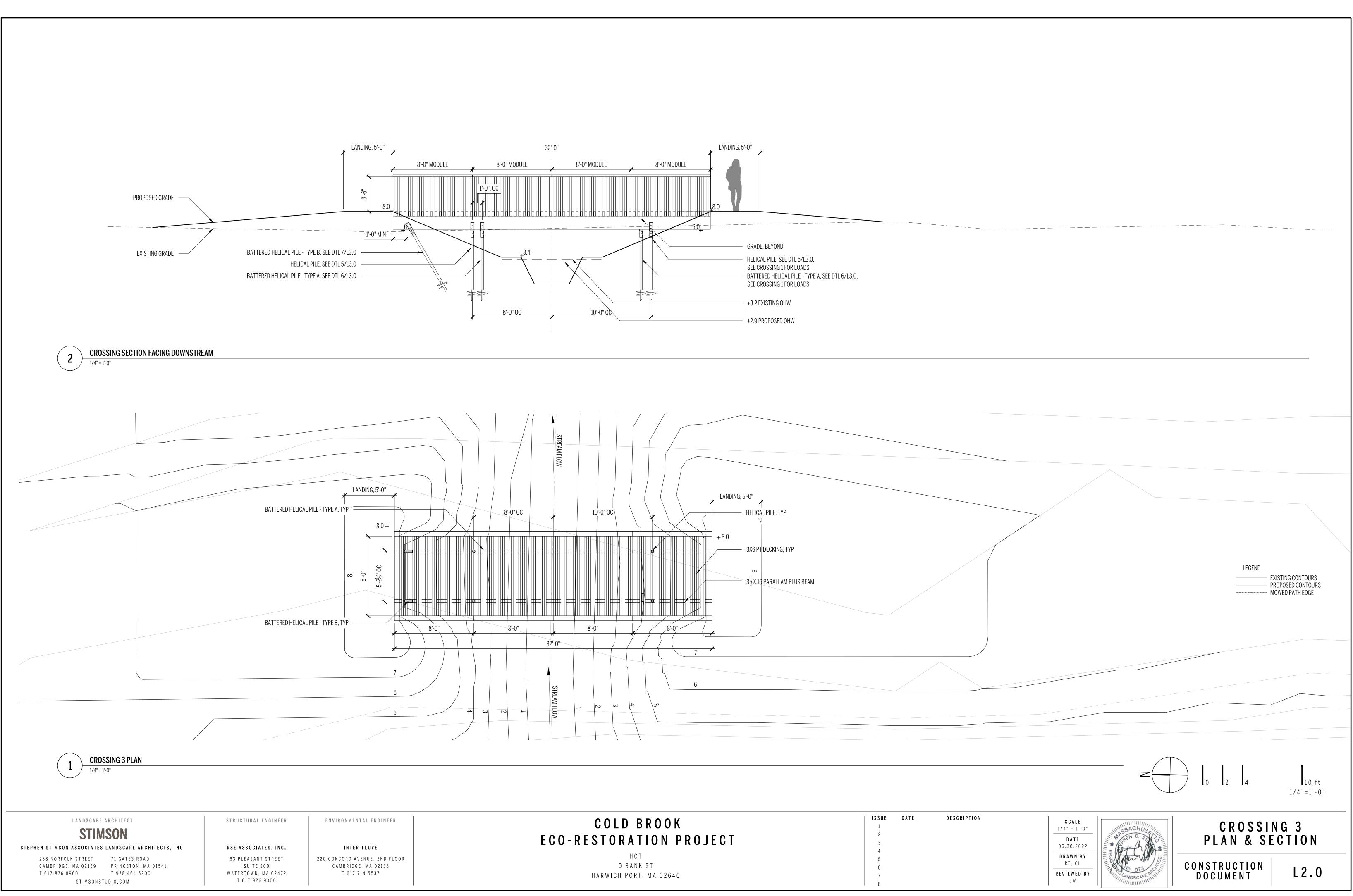
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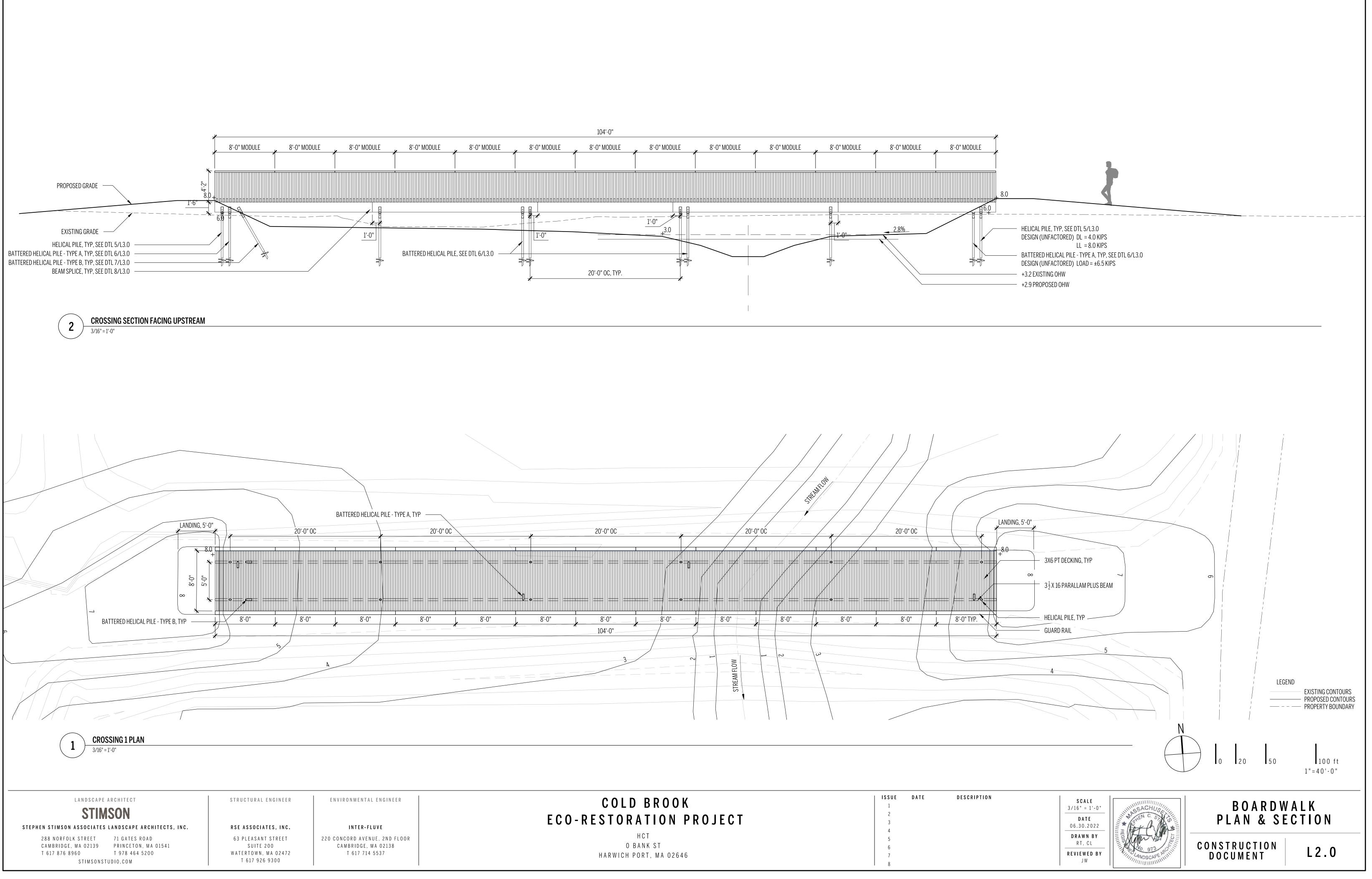
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# STRUCTURALNOTES

# General

All structural work to be carried out in accordance with the Massachusetts Building Code.

#### Foundation

- 1. Provide minimum 4'-0" frost cover for headwall footings.
- 2. Allowable soil bearing pressure assumed to be 2,000 psf for headwall footings. This is to be confirmed by a geotechnical engineer prior to pouring footings.
- 3. See Drawings for unfactored pile design loads. Pile design to be carried out by a Geotechnical engineer licensed in Massachusetts. Submit pile design for approval.

## Structural Steel

- 1. Structural steel tube columns to be ASTM A500 Grade B. Structural steel pipe columns to be ASTM A53 Type S Grade B. Steel beams to be ASTM A992 Grade 50. Steel plates to be ASTM A36.
- 2. Steel connection bolts to be ASTM A325. Anchor bolts to be ASTM A307.
- 3. Steel connections to be 3/16" continuous fillet weld unless otherwise
- noted on plan. 4. Bolt holes in steel to be 1/16" larger in diameter than the nominal size of
- bolts used.
- 5. All connection hardware to be hot dipped galvanized.

## Wood Construction

- 1. Timber to be SPF No. 2 or better unless noted.
- 2. All exterior timber to be pressure treated.
- 3. Provide Simpson joist hangers where joists are supported by beams.
- 4. Unless otherwise noted, provide Simpson connectors at column/beam and beam/beam connections. Details to be in accordance with manufacturer instructions. Alternatively, provide bolted connections using <sup>1</sup>/<sub>4</sub> thick steel angles with min. 4" edge distance and spacing.
- 5. Provide <sup>1</sup>/<sub>4</sub> steel brackets to connect wood beams to steel channels
- 6. Provide Simpson Hurricane Ties at joist/beam connections.
- 7. Where pockets in concrete piers/walls are provided for bearing of wood beams, provide Simpson cast in anchors.
- 8. Maximum nail or screw spacing to be 6" for deck fastening.
- 9. Maximum moisture content to be 19%.

LANDSCAPE ARCHITECT

STIMSON

STEPHEN STIMSON ASSOCIATES LANDSCAPE ARCHITECTS, INC.

CAMBRIDGE, MA 02139 PRINCETON, MA 01541

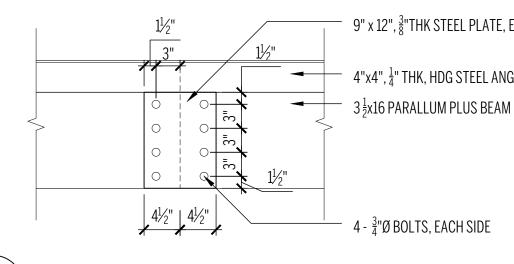
STIMSONSTUDIO.COM

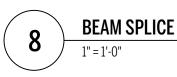
T 978 464 5200

288 NORFOLK STREET 71 GATES ROAD

T 617 876 8960

10. All exterior bolts, nails and hardware to be hot dipped galvanized.





4"x4",  $\frac{1}{4}$ " THK, HDG STEEL ANGLE

3<sup>1</sup>/<sub>7</sub>x16" PARALLAM PLUS BEAM

5 " GALV. STEEL BRACKET  $(2)^{\frac{3}{4}}$  GALV STL. THROUGH BOLTS AT EACH BRACKET, TYP.

30° BATTERED HELICAL PILE, SEE SECTIONS FOR DESIGN LOADS

SOIL CONDITIONS AND EMBEDMENT TO BE ASSESSED IN FIELD BY A MA. LICENSED GEOTECHNICAL ENGINEER PRIOR TO COMMENCING WORK



**BATTERED HELICAL PILE - TYPE B** 

STRUCTURAL ENGINEER

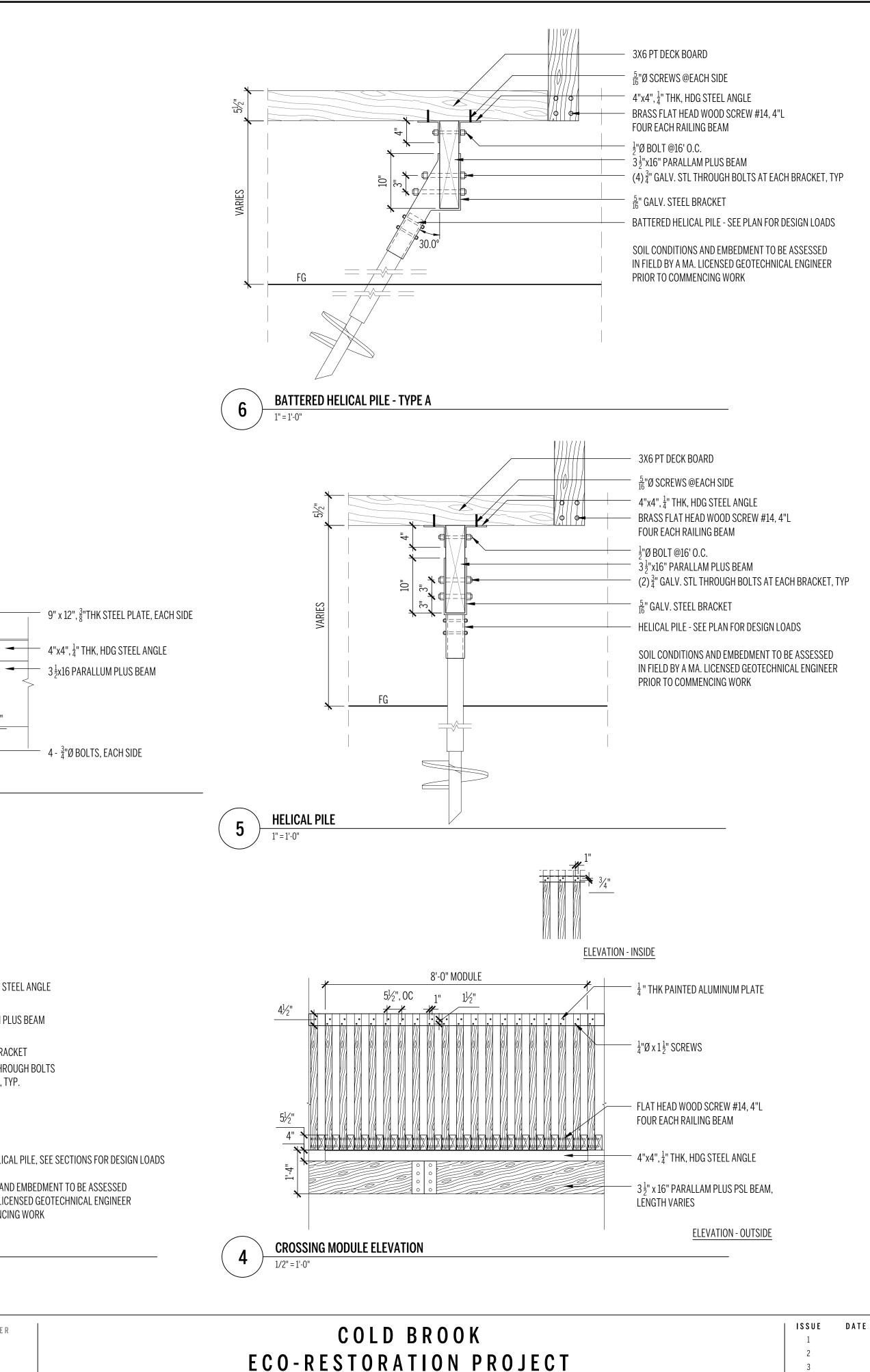
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ENVIRONMENTAL ENGINEER

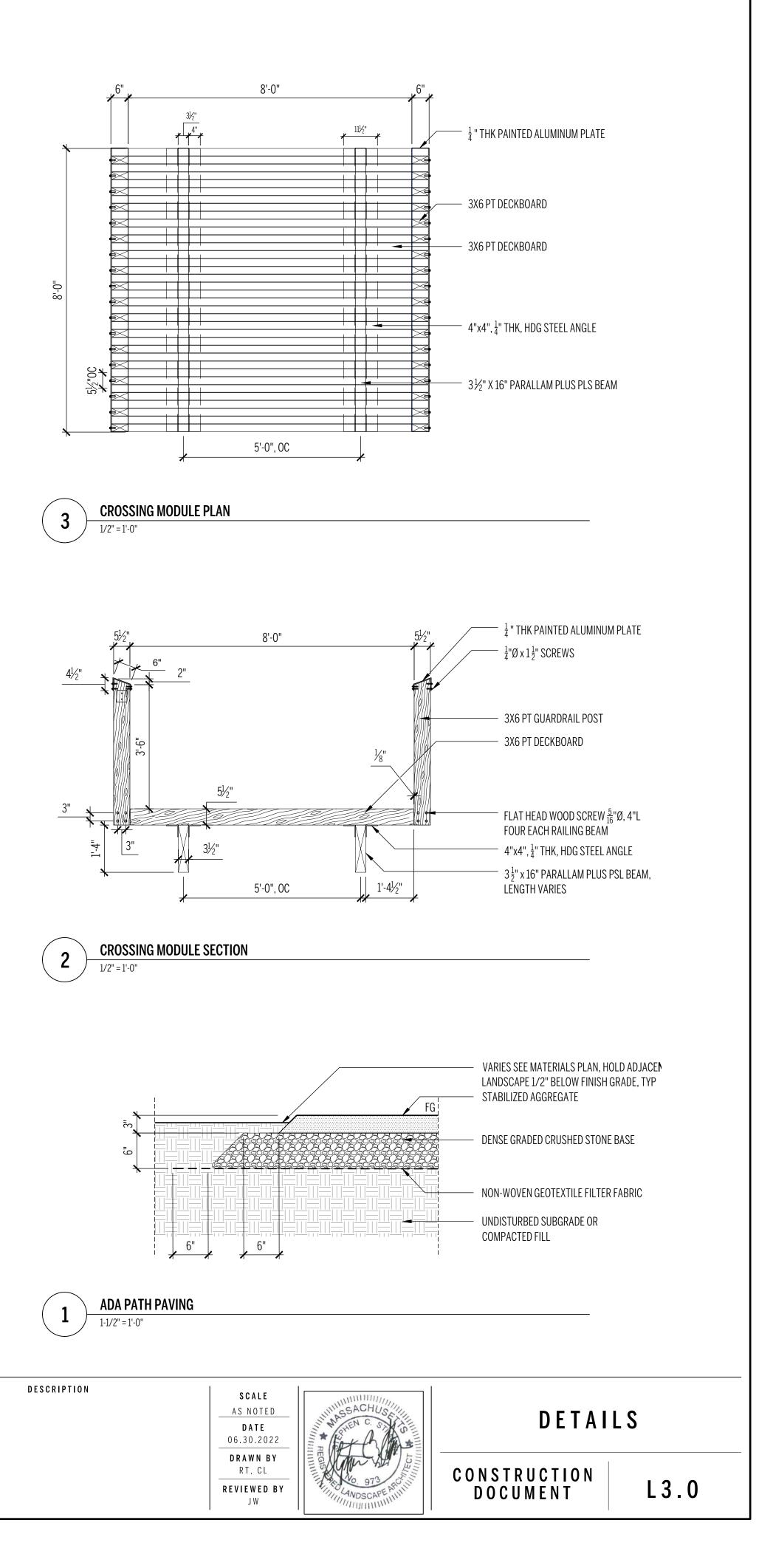
RSE ASSOCIATES, INC. 63 PLEASANT STREET SUITE 200 WATERTOWN, MA 02472 T 617 926 9300

INTER-FLUVE 220 CONCORD AVENUE, 2ND FLOOR CAMBRIDGE, MA 02138 T 617 714 5537



НСТ O BANK ST

HARWICH PORT, MA 02646



LANDSCAPE ARCHITECT

STEPHEN STIMSON ASSOCIATES LANDSCAPE ARCHITECTS, INC. 288 NORFOLK STREET 71 GATES ROAD CAMBRIDGE, MA 02139 PRINCETON, MA 01541 T 617 876 8960 T 978 464 5200 STIMSONSTUDIO.COM

STRUCTURAL ENGINEER

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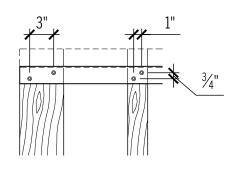
# STIMSON



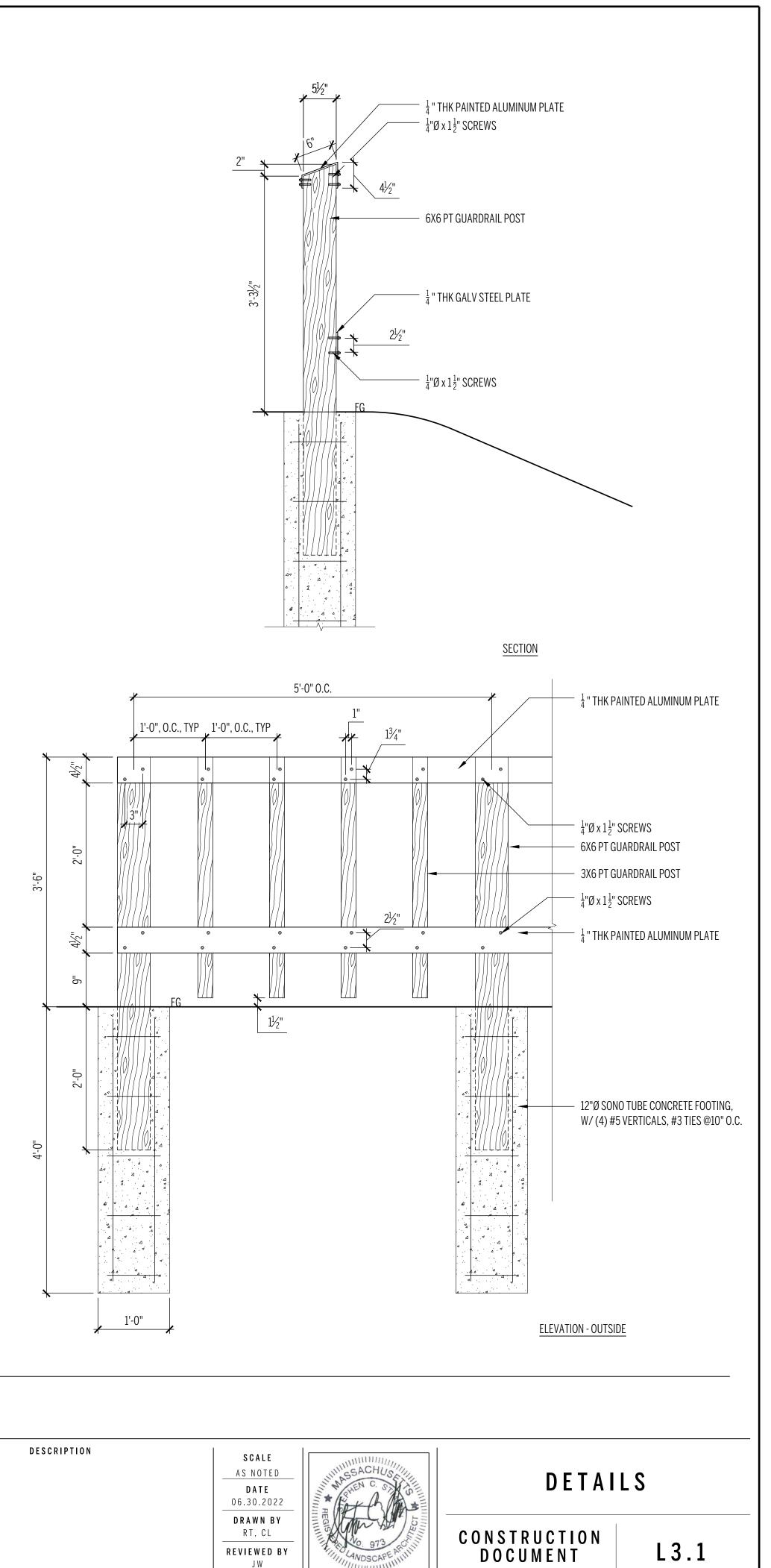
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ELEVATION - INSIDE



JW