



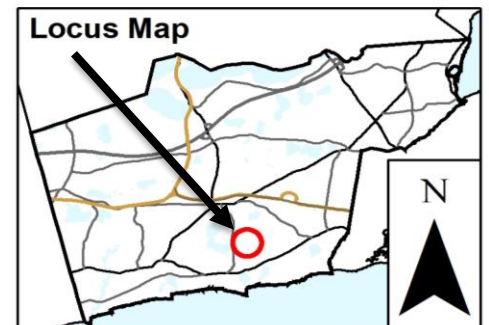
P.O. Box 101, South Harwich, MA 02661
Ph. 508-432-3997 • E-mail: info@harwichconservationtrust.org
www.harwichconservationtrust.org

To: Town of Harwich Community Preservation Committee
From: Michael Lach, Executive Director, Harwich Conservation Trust (HCT)
Date: October 13, 2022
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 according to Americans with Disabilities Act [ADA] standards 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.

HCT representatives attended meetings for the Phase One & Phase Two aspects of the Harwich Natural Heritage Trail Project on the following dates:

- April 20, 2022 design team meeting
- May 18, 2022 design team meeting
- June 15, 2022 Town Conservation Commission meeting
- June 28, 2022 Town Conservation Commission meeting
- Aug. 3, 2022 Town Conservation Commission meeting



Location of Phase 1 & 2 trail project

The following project partners and representatives participated:

- 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
- MA Division of Ecological Restoration: 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 \(interfluve.com\)](http://interfluve.com)]
 - Nick Nelson, Regional Director & Fluvial Geomorphologist
 - Mike Burke, Principal Engineer
 - Marcel Young-Scaggs, Engineer
- Stimson Associates Landscape Architects, website link: [STIMSON \(stimsonstudio.com\)](http://stimsonstudio.com)
 - Joe Wahler, Ryosuke Takahashi, Cassandra Lanson

Design outcomes:

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 as well as a wheelchair accessible viewing area to be located off the preferred parking area of 203 Bank Street. Note that the final location of the viewing area will most likely be on the westerly side of the connector trail, not the easterly side as currently shown. The connector trail is the segment of wheelchair accessible trail extending from the parking area to the half-mile wheelchair accessible trail loop.

Parking:

Parking preference is at the town-owned property known collectively as 203 Bank Street. 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. For many years, this site has provided parking 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 and a purchase & sale agreement is in process with a closing date expected this fall.

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.

Next steps:

- HCT to work with selected contractor on Phase Three design (parking area design/integration with wheelchair accessible trailhead, viewing area, and half-mile trail loop). In Feb. 2022, HCT applied for and in July was approved for a MassTrails grant of \$100,000 to support the Harwich Natural Heritage Trail Project. It is anticipated that approx. 75% of the grant will fund Phase Three design/permitting.
- Closing on 203 Bank Street to be completed in fall 2022
- Permitting to be completed in fall 2022
- Eco-restoration construction to begin winter 2023 and last until fall 2023
- Trail construction aspects to begin spring 2023 and last until fall 2023 with parking area to be final construction element

Attachment:

- June 30, 2022 engineered design/construction plan from Stimson Associates Landscape Architects

COLD BROOK ECO-RESTORATION PROJECT

HARWICH CONSERVATION TRUST (HCT)
0 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

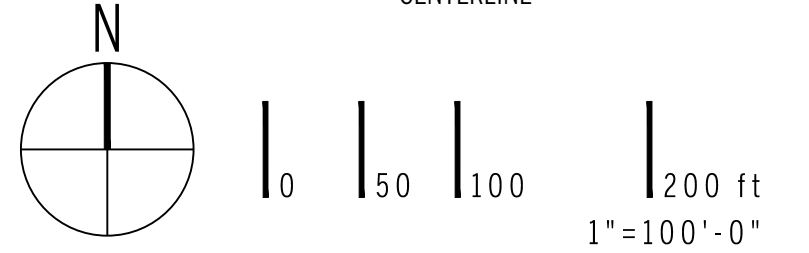
@	AT	EW	EACH WAY	PA	PLANTING AREA
ARCH	ARCHITECT	FEE	FINISH FLOOR ELEVATION	±	PLUS OR MINUS
B&B	BALL AND BURLAP	FG	FINISH GRADE	PC	POINT OF CURVATURE
BC	BOTTOM OF CURB	FOC	FACE OF CURB	PERF	PERFORATED
BLDG	BUILDING	FOW	FACE OF WALL	POB	POINT OF BEGINNING
BIT CONC	BITUMINOUS CONCRETE	FS	FINISH SURFACE	POC	POINT OF CONNECTION
BOC	BACK OF CURB	GALV	GALVANIZED	PSI	POUNDS PER SQUARE INCH
BS	BOTTOM OF STEP	GB	GRADE BREAK	PT	POINT OF TANGENCY
CAL	CALIPER	HH	HANDHOLE	R	RADIUS
CB	CATCH BASIN	HORIZ	HORIZONTAL	ROW	RIGHT OF WAY
CJ	CONTROL JOINT	HP	HIGH POINT	SJ	SCORE JOINT
CIP	CAST IN PLACE	ID	INSIDE DIAMETER	SQ	SQUARE
CL	CENTER LINE	INV	INVERT	SS	STAINLESS STEEL
CLR	CLEARANCE	JT	JOINT	STRUC	STRUCTURAL
CO	CLEAN OUT	LAND	LANDSCAPE	STD	STANDARD
COL	COLUMN	LN	LAWN	STL	STEEL
CONC	CONCRETE	LONGIT	LONGITUDINAL	T&B	TOP AND BOTTOM
CONT	CONTINUOUS	LOW	LIMIT OF WORK	TC	TOP OF CURB
∅	DIAMETER	LP	LOW POINT	TD	TRENCH DRAIN
DN	DOWN	LT	LIGHT POLE	TFG	TOP OF FOOTING
DTL	DETAIL	MH	MANHOLE	TS	TOP OF STEP
DWG/S	DRAWING/S	MAX	MAXIMUM	TYP	TYPICAL
EA	EACH	MFTR	MANUFACTURER	UON	UNLESS OTHERWISE NOTED
EJ	EXPANSION JOINT	MIN	MINIMUM	VEH	VEHICULAR
ELECT	ELECTRICAL	NIC	NOT IN CONTRACT	VERT	VERTICAL
ELEV	ELEVATION	NTS	NOT TO SCALE	VIF	VERIFY IN FIELD
EOP	EDGE OF PAVEMENT	OC	ON CENTER	W/	WITH
EQ	EQUAL	OD	OUTSIDE DIAMETER		

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

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- LEGEND
- EXISTING CONTOURS
 - PROPOSED CONTOURS
 - - - MOWED PATH EDGE
 - - - PROPERTY BOUNDARY
 - - - CENTERLINE



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 71 GATES ROAD PRINCETON, MA 01541 T 978 464 5200
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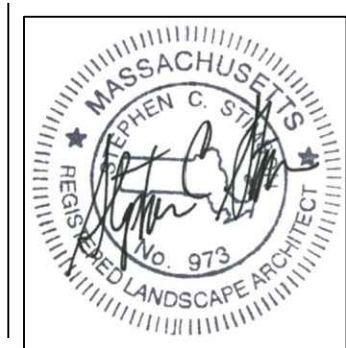
STRUCTURAL ENGINEER
 RSE ASSOCIATES, INC.
 63 PLEASANT STREET SUITE 200 WATERTOWN, MA 02472 T 617 926 9300

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

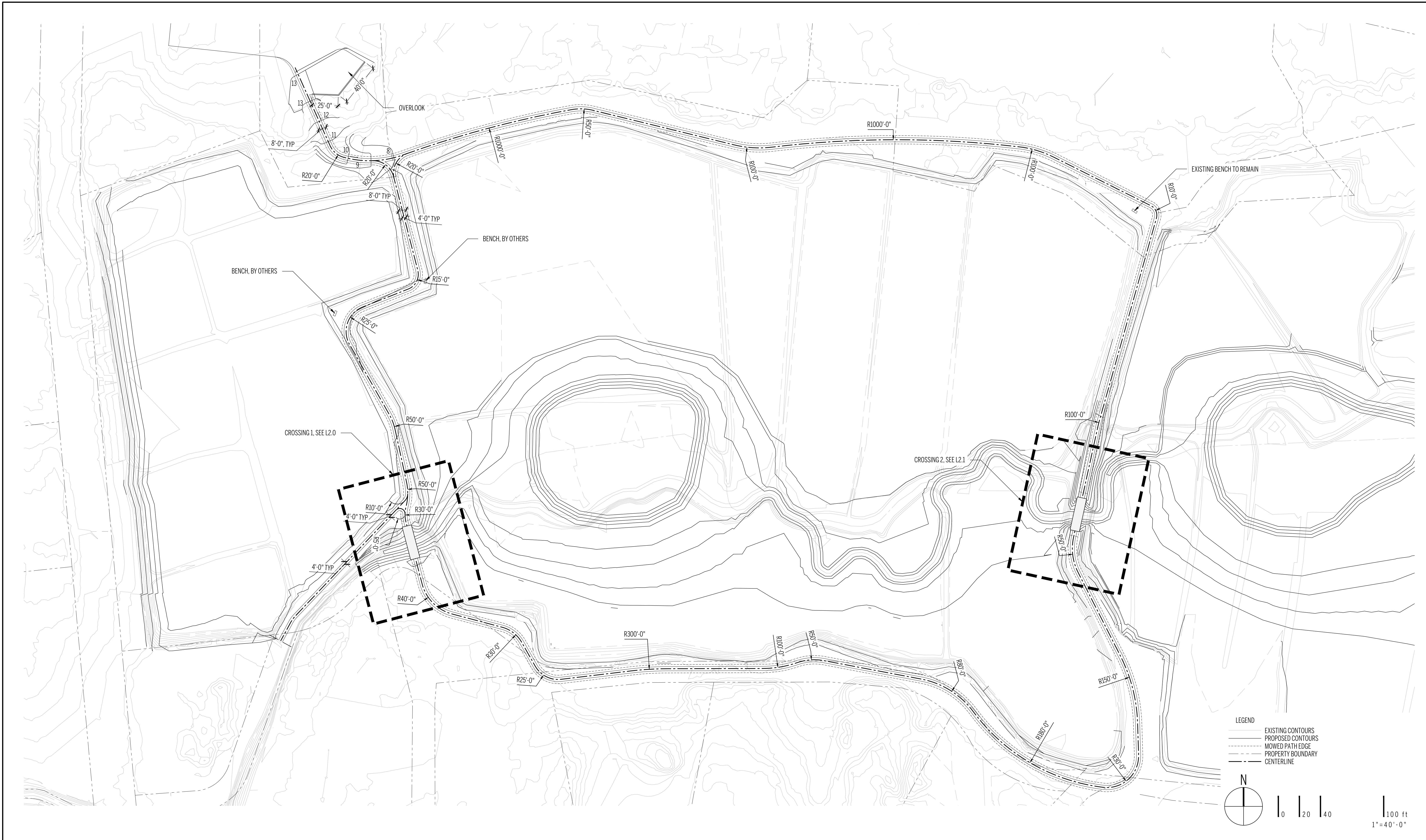
**COLD BROOK
 ECO-RESTORATION PROJECT**
 HCT
 0 BANK ST
 HARWICH PORT, MA 02646

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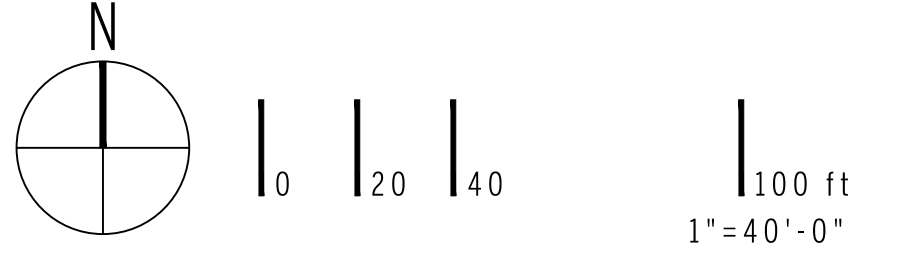
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 RT, CL
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 JW



SITE PLAN
 CONSTRUCTION DOCUMENT | **L1.0**



LEGEND
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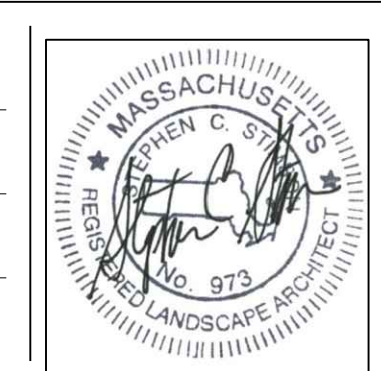
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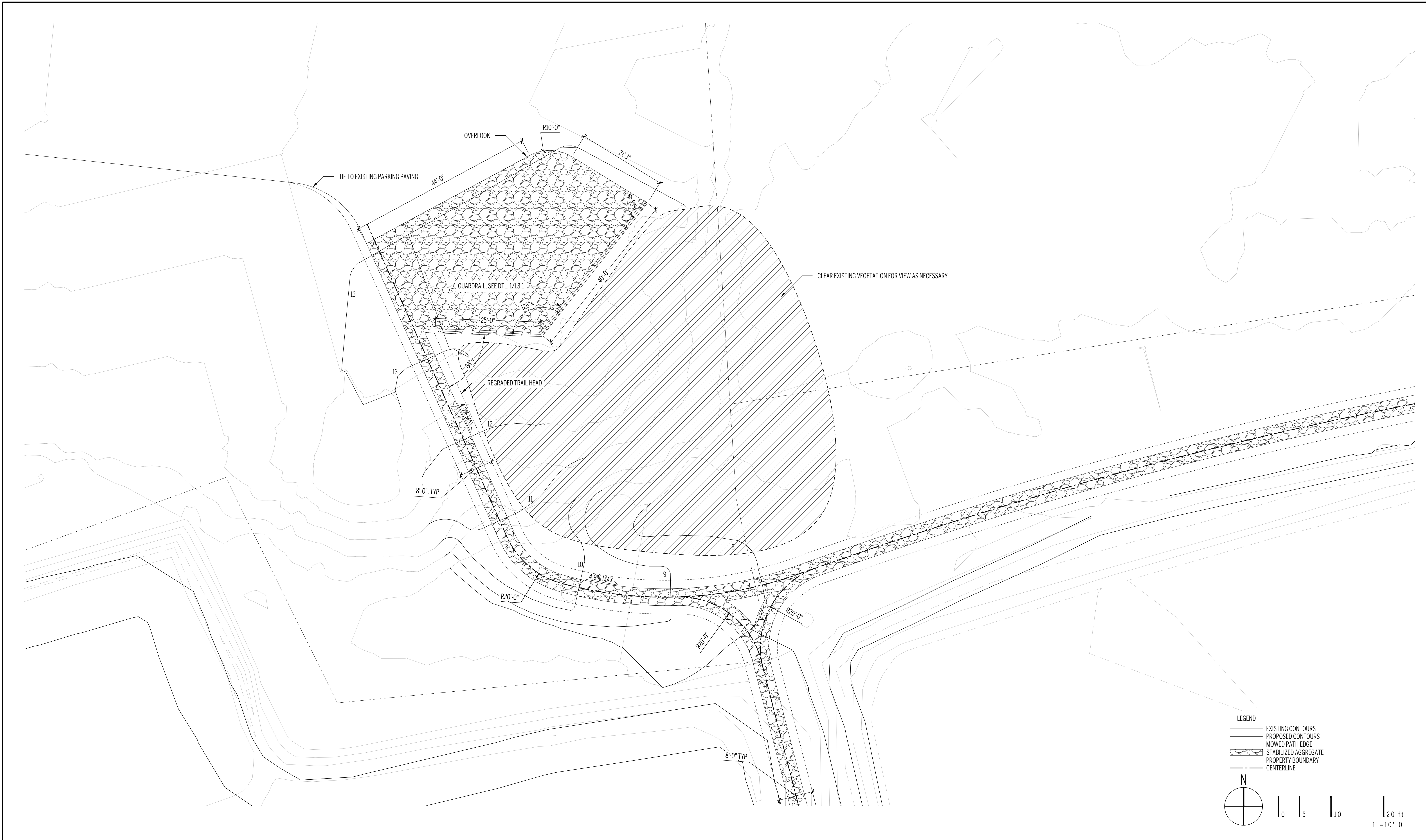
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ADA ACCESS PLAN
 CONSTRUCTION DOCUMENT | L1.1



LEGEND

- EXISTING CONTOURS
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- STABILIZED AGGREGATE
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- CENTERLINE

N

0 5 10 20 ft
1"=10'-0"

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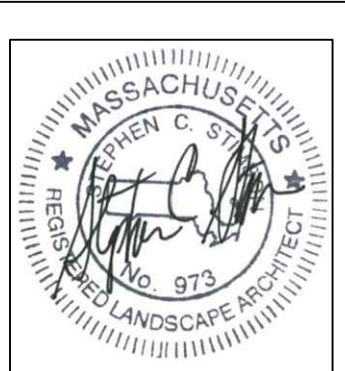
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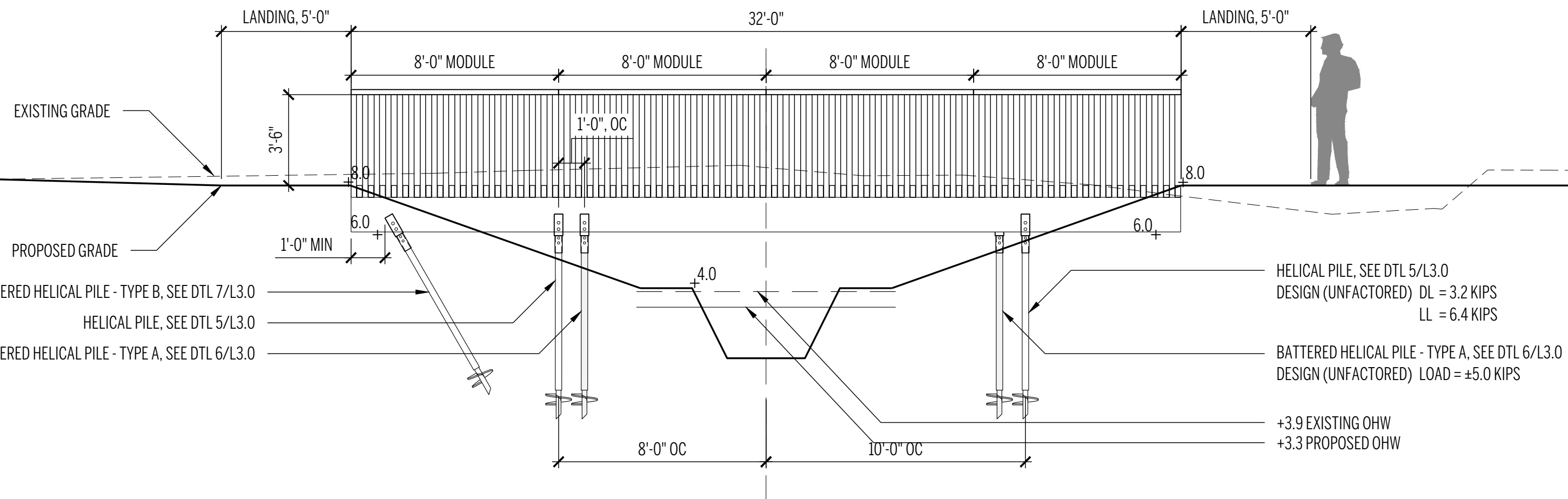
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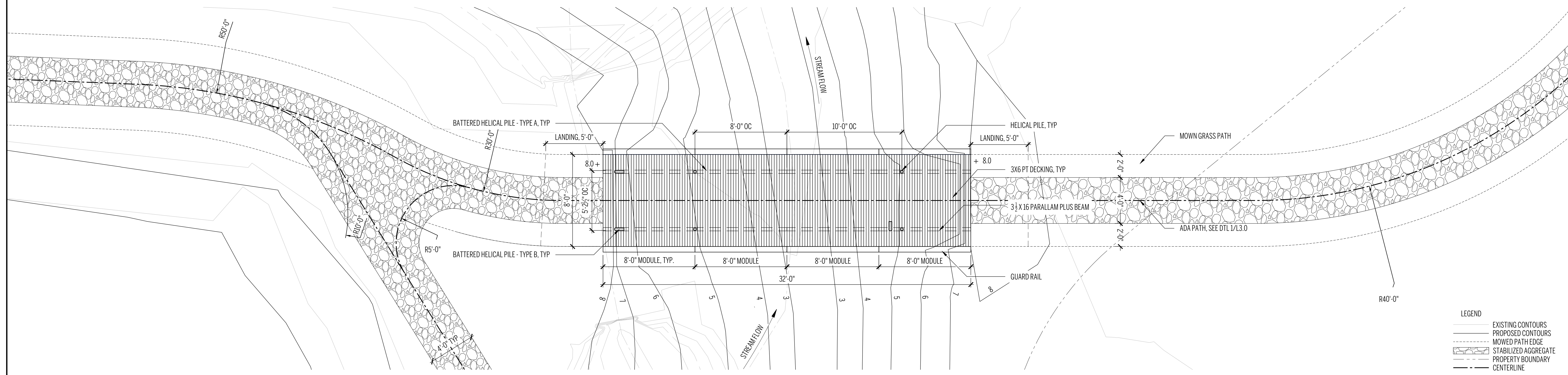
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OVERLOOK
 CONSTRUCTION DOCUMENT
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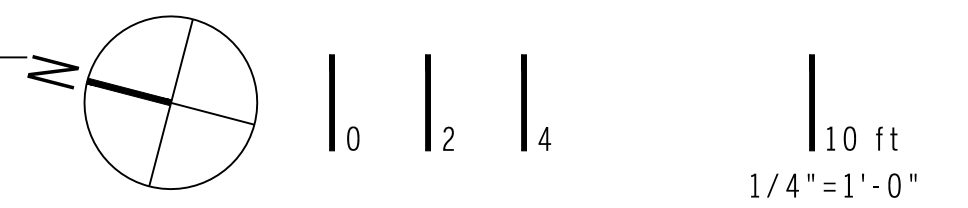


2 CROSSING SECTION FACING DOWNSTREAM
1/4" = 1'-0"



- LEGEND
- EXISTING CONTOURS
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1 CROSSING 1 PLAN
1/4" = 1'-0"



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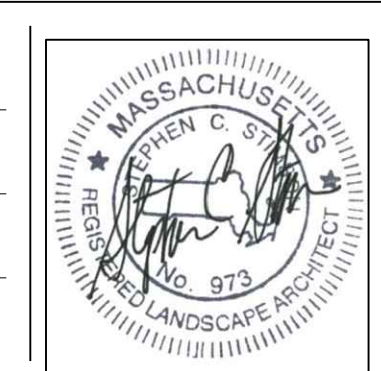
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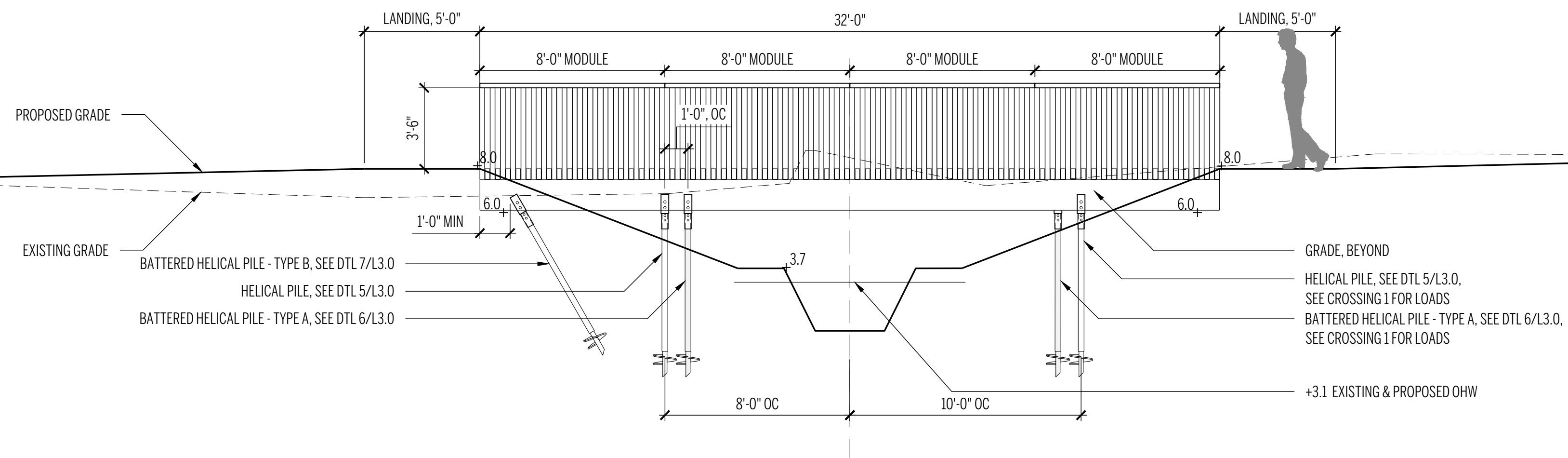
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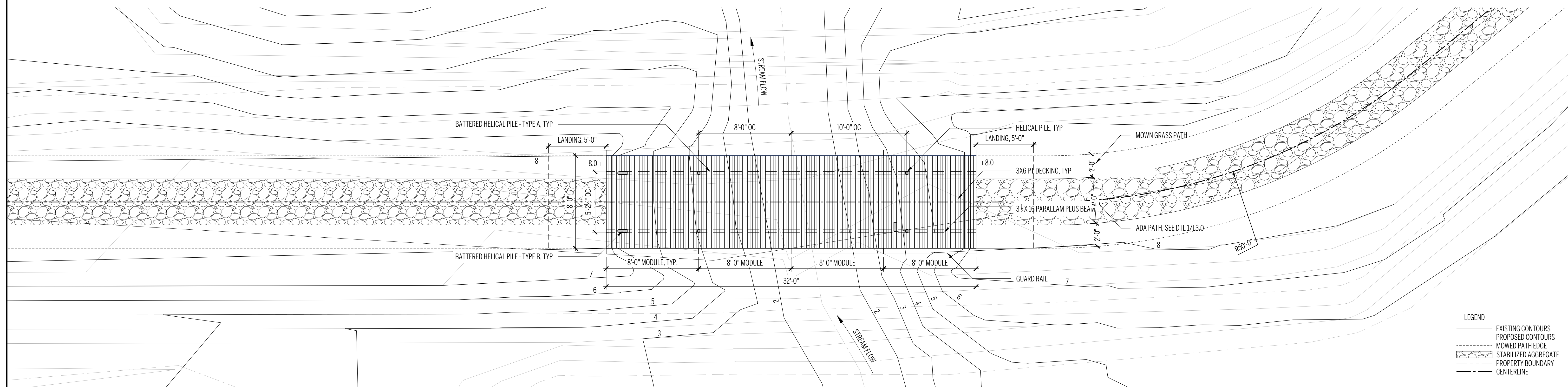
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CONSTRUCTION DOCUMENT | **L2.0**

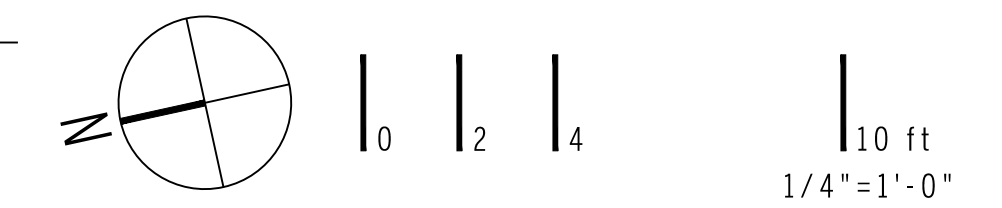


2 CROSSING SECTION FACING DOWNSTREAM
1/4" = 1'-0"



1 CROSSING 2 PLAN
1/4" = 1'-0"

- LEGEND
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 - PROPOSED CONTOURS
 - MOWED PATH EDGE
 - STABILIZED AGGREGATE
 - PROPERTY BOUNDARY
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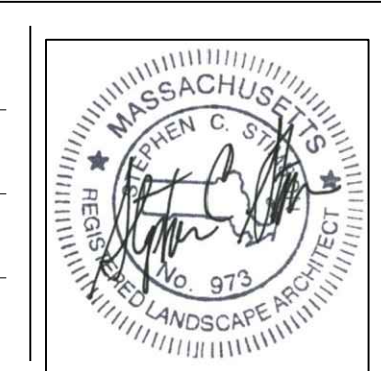
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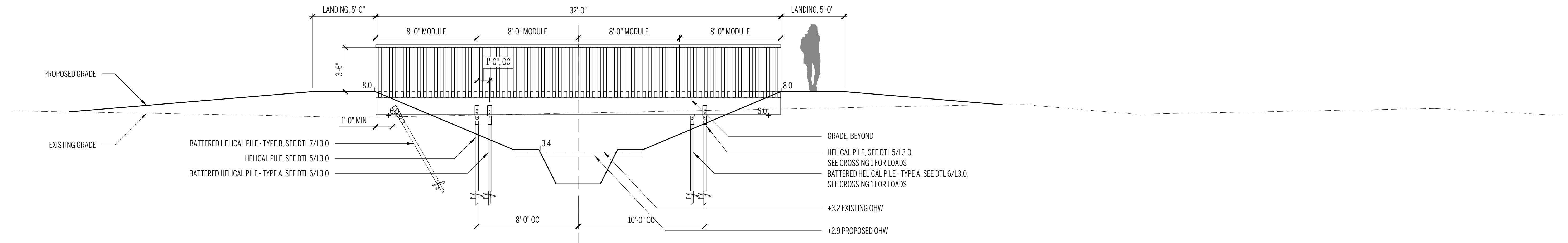
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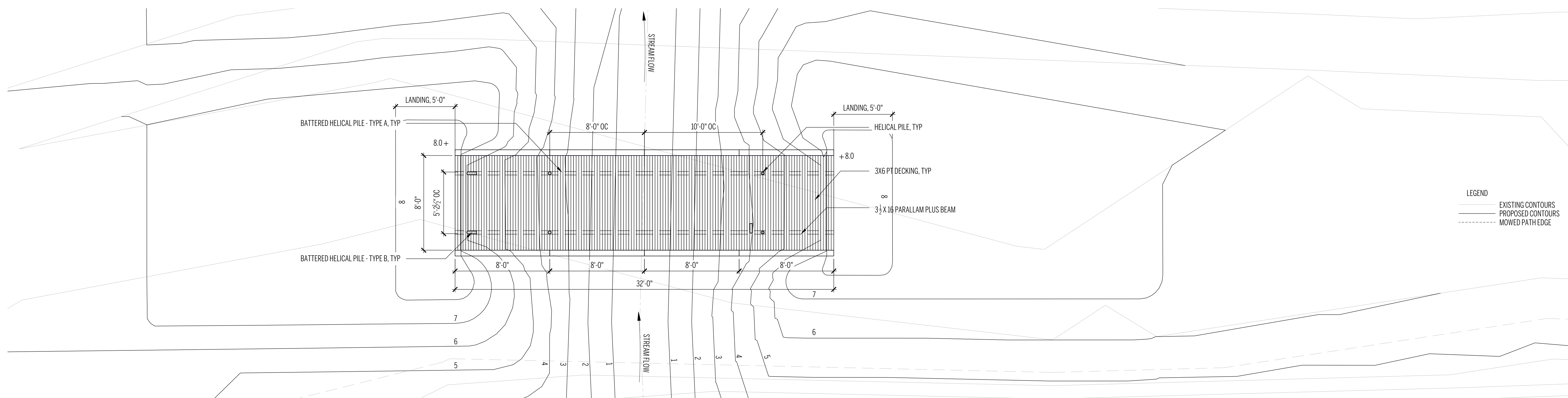
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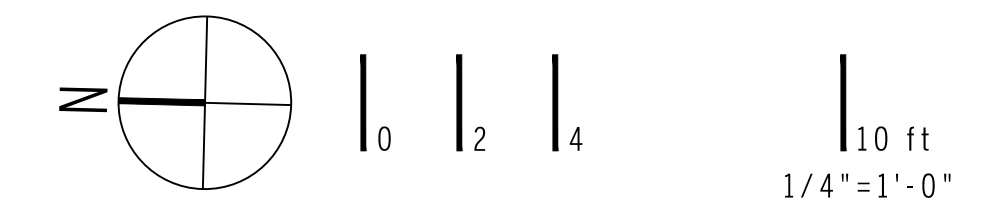
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PLAN & SECTION**
CONSTRUCTION DOCUMENT | **L2.0**



2 CROSSING SECTION FACING DOWNSTREAM
1/4" = 1'-0"



1 CROSSING 3 PLAN
1/4" = 1'-0"



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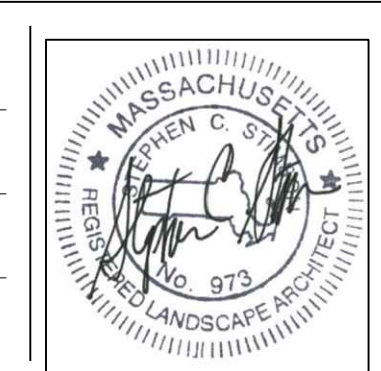
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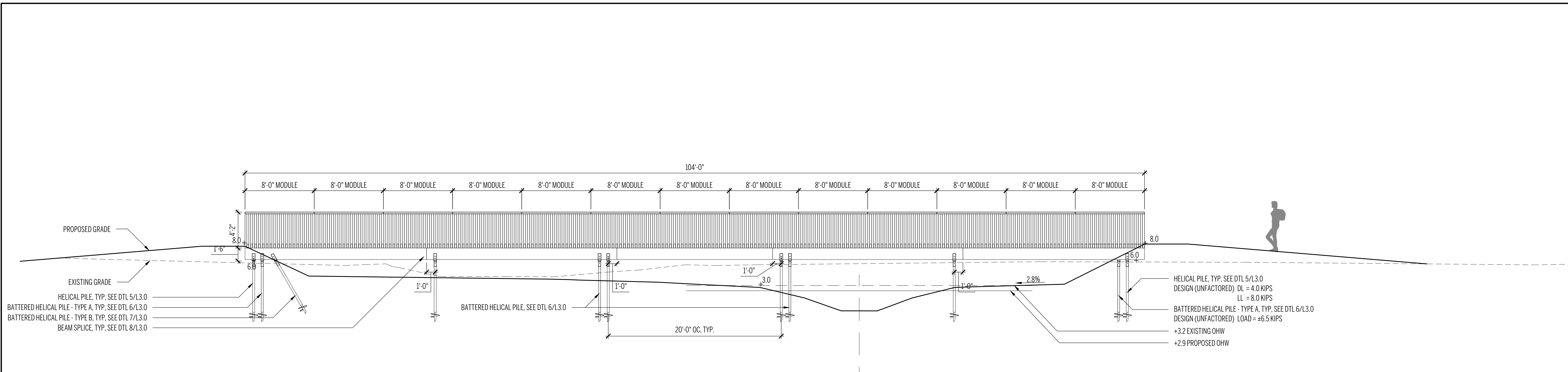
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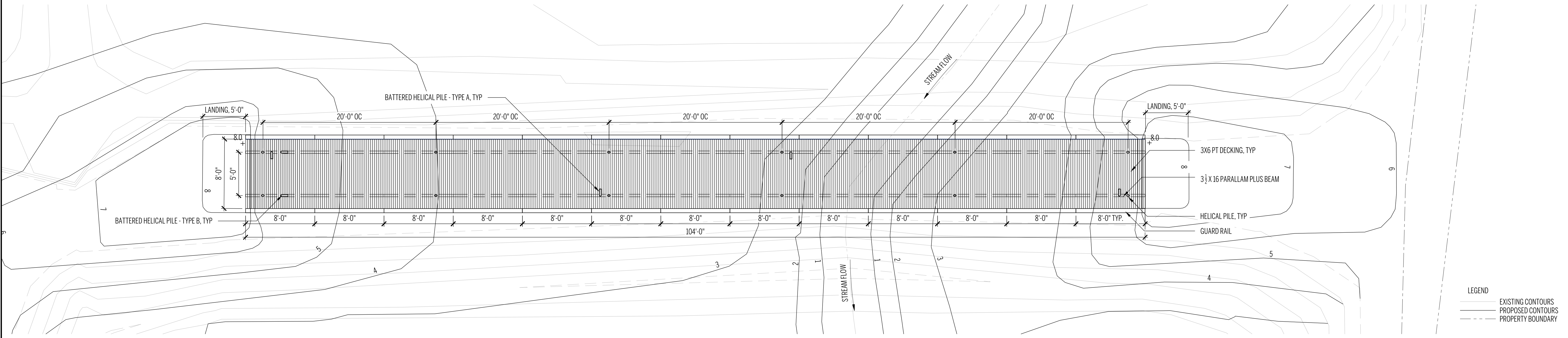
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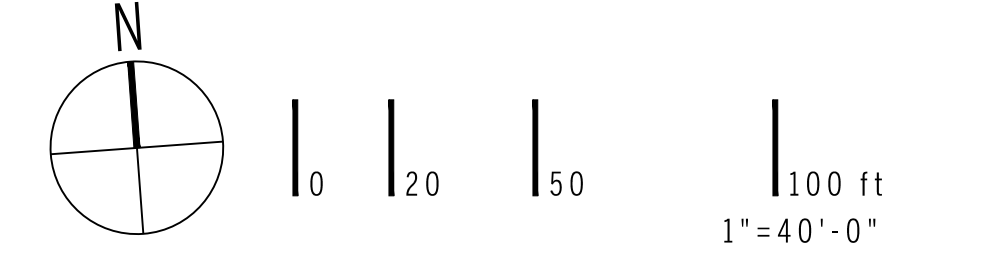
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PLAN & SECTION**
CONSTRUCTION DOCUMENT | **L2.0**



2 CROSSING SECTION FACING UPSTREAM
3/16" = 1'-0"



1 CROSSING 1 PLAN
3/16" = 1'-0"



**COLD BROOK
ECO-RESTORATION PROJECT**

HCT
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HARWICH PORT, MA 02646

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DATE
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**BOARDWALK
PLAN & SECTION**
CONSTRUCTION DOCUMENT | **L2.0**

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STRUCTURAL NOTES

General

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

Foundation

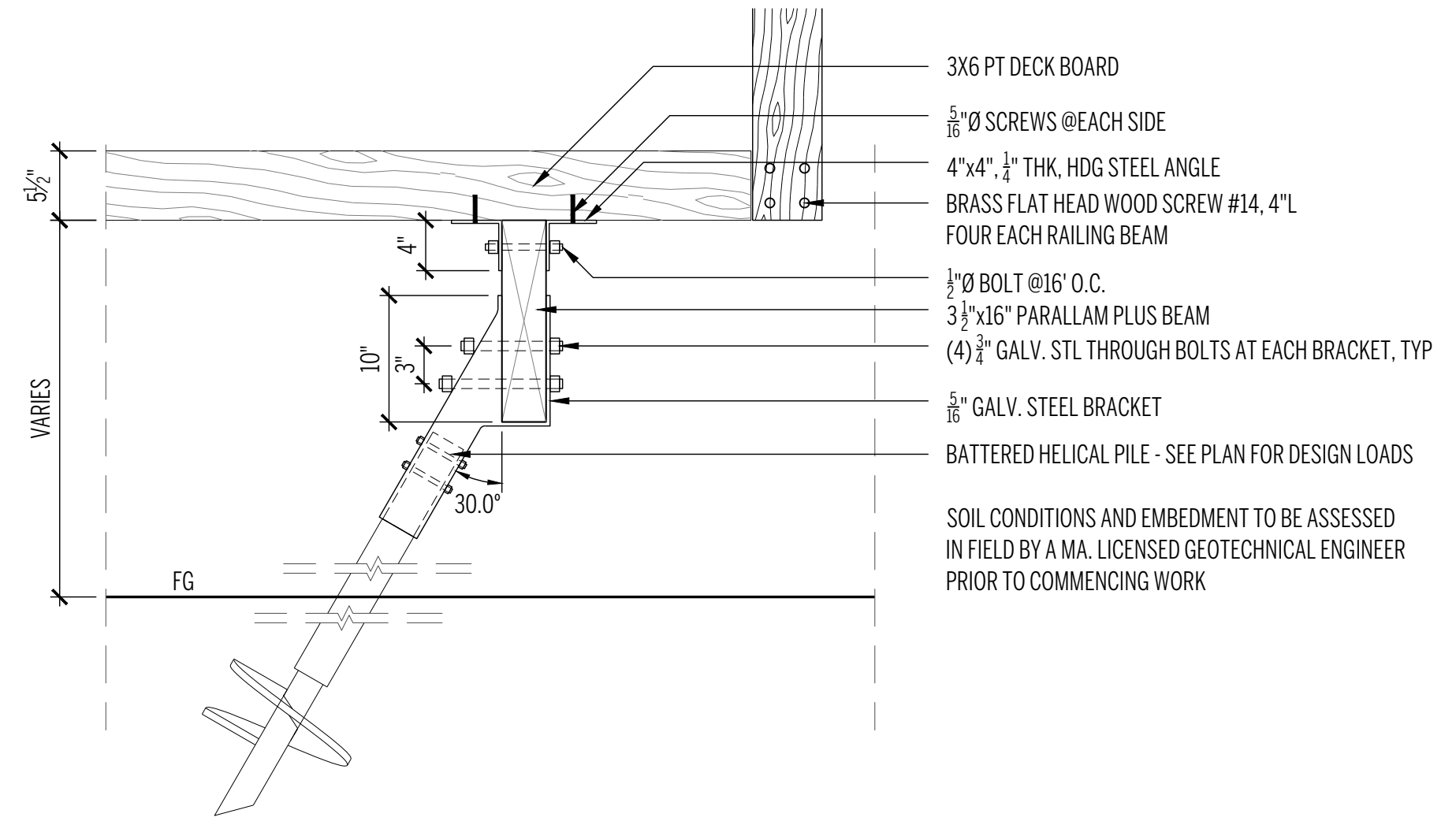
1. Provide minimum 4'-0" frost cover for headwall footings.
2. Allowable soil bearing pressure assumed to be 2,000 psf for headwall footings. This is to be confirmed by a geotechnical engineer prior to pouring footings.
3. See Drawings for unfactored pile design loads. Pile design to be carried out by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

Structural Steel

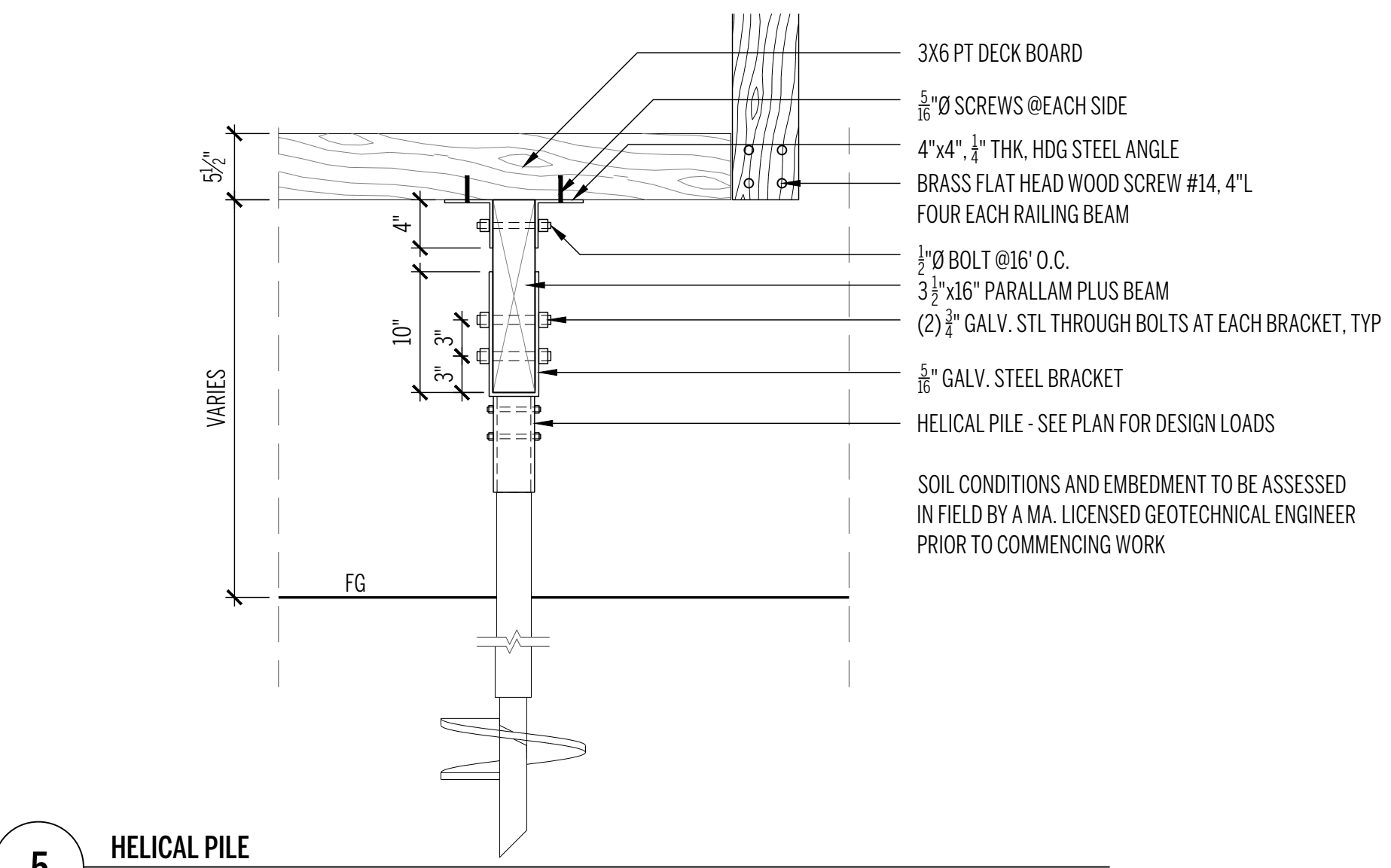
1. Structural steel tube columns to be ASTM A500 Grade B. Structural steel pipe columns to be ASTM A53 Type S Grade B. Steel beams to be ASTM A992 Grade 50. Steel plates to be ASTM A36.
2. Steel connection bolts to be ASTM A325. Anchor bolts to be ASTM A307.
3. Steel connections to be 3/16" continuous 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

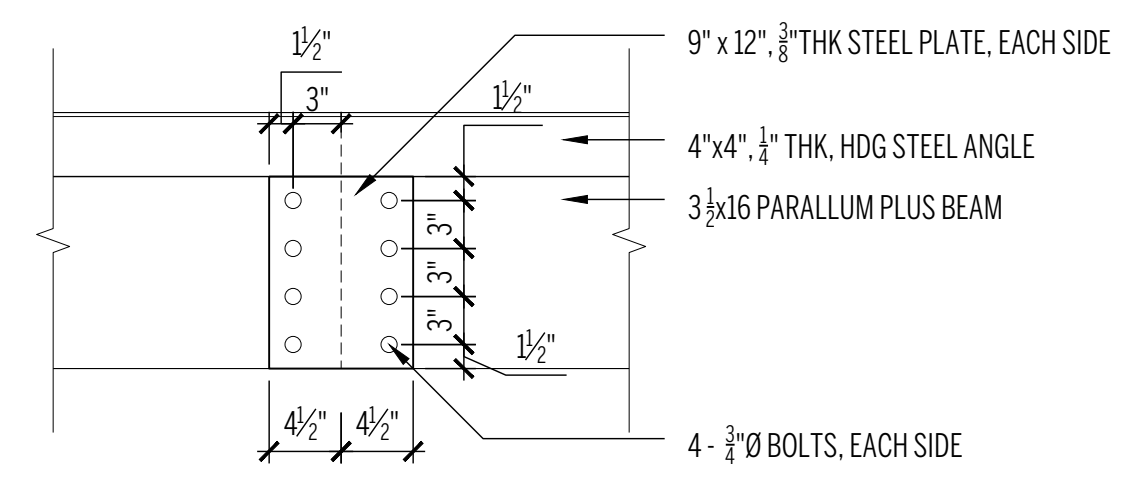
1. Timber to be SPF No. 2 or better unless noted.
2. All exterior timber to be pressure treated.
3. Provide Simpson joist hangers where joists are supported by beams.
4. Unless otherwise noted, provide Simpson connectors at column/beam and beam/beam connections. Details to be in accordance with manufacturer instructions. Alternatively, provide bolted connections using 1/4" thick steel angles with min. 4" edge distance and spacing.
5. Provide 1/4" 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%.
10. All exterior bolts, nails and hardware to be hot dipped galvanized.



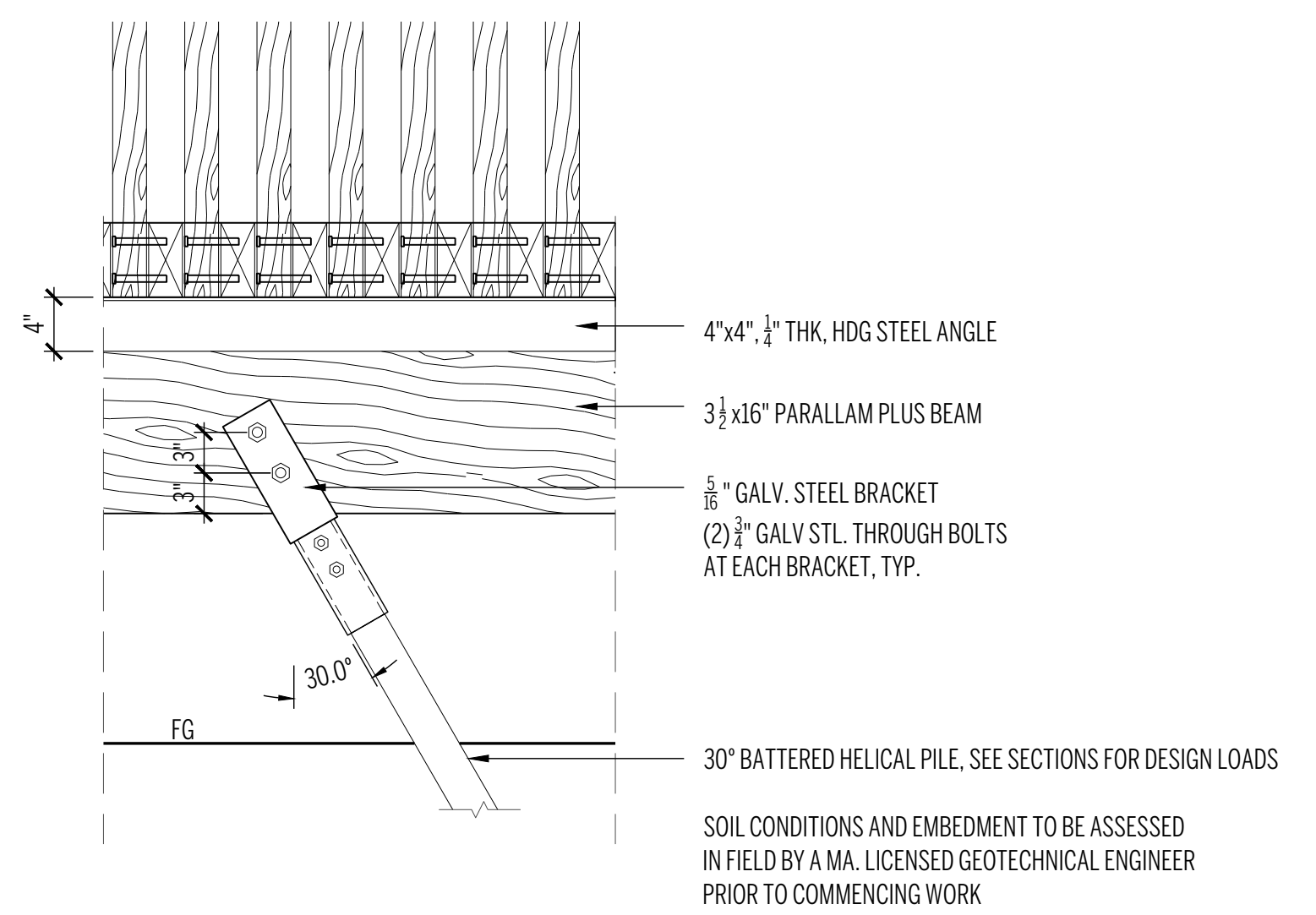
6 BATTERED HELICAL PILE - TYPE A
1" = 1'-0"



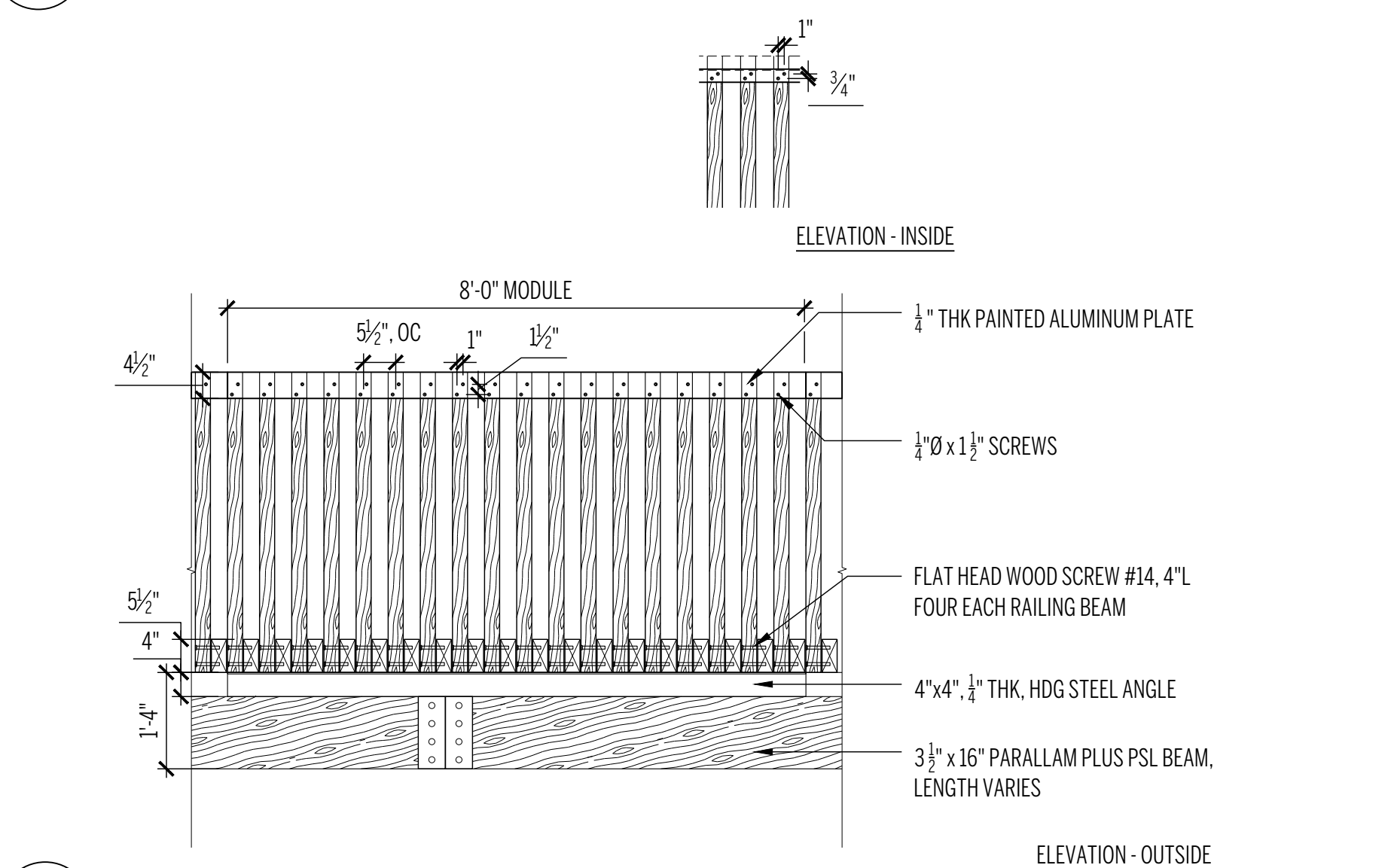
5 HELICAL PILE
1" = 1'-0"



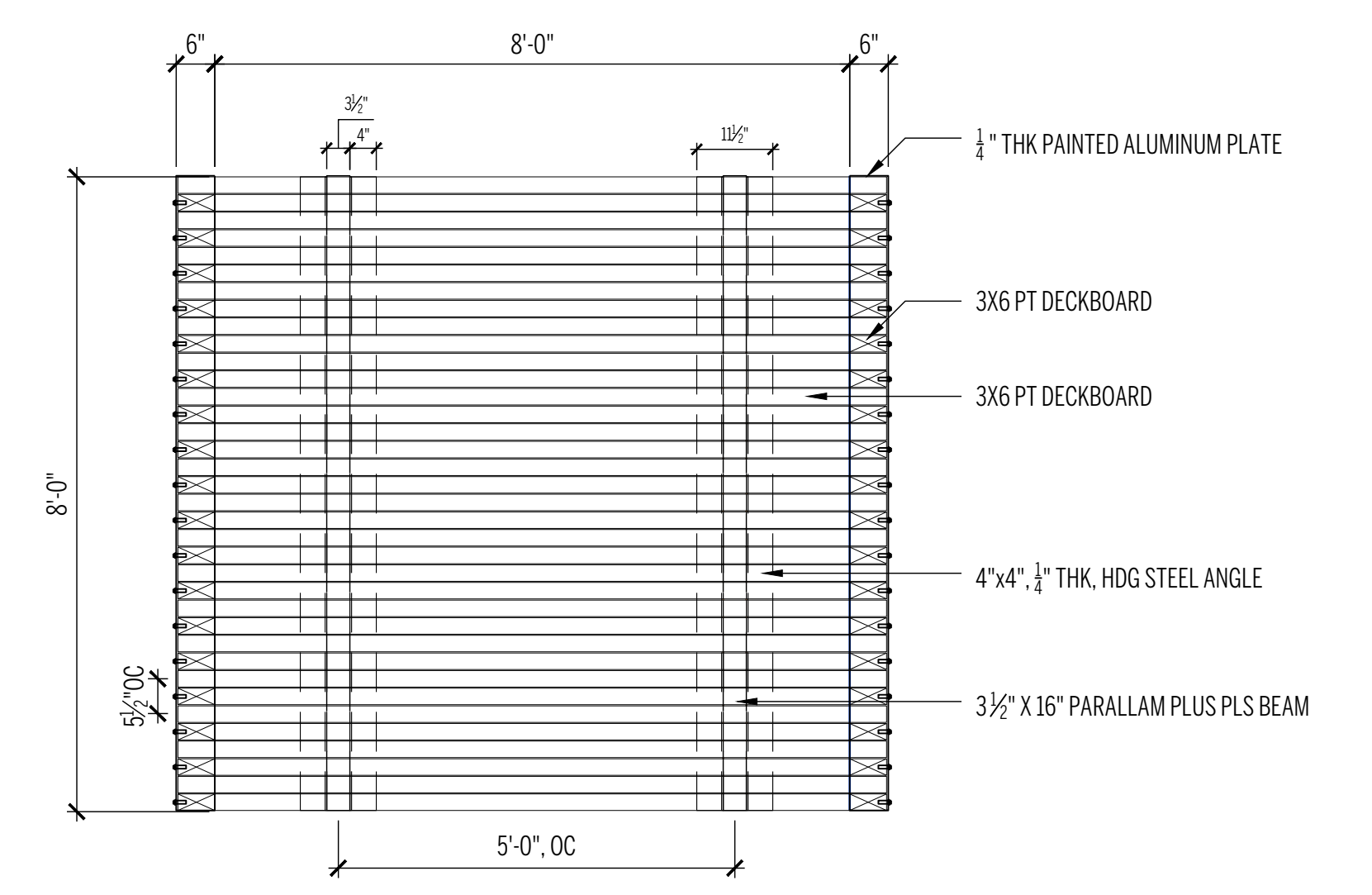
8 BEAM SPLICE
1" = 1'-0"



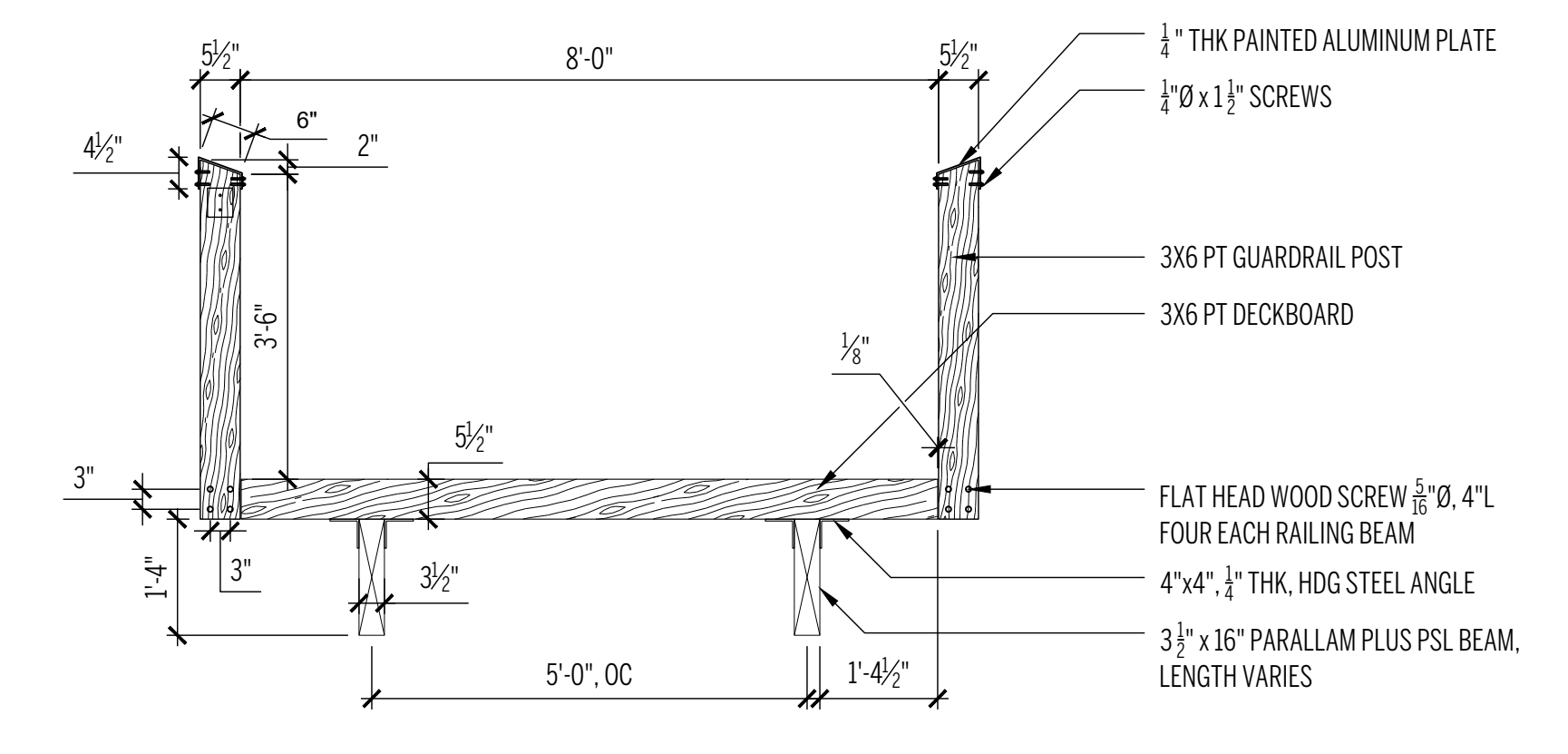
7 BATTERED HELICAL PILE - TYPE B
1" = 1'-0"



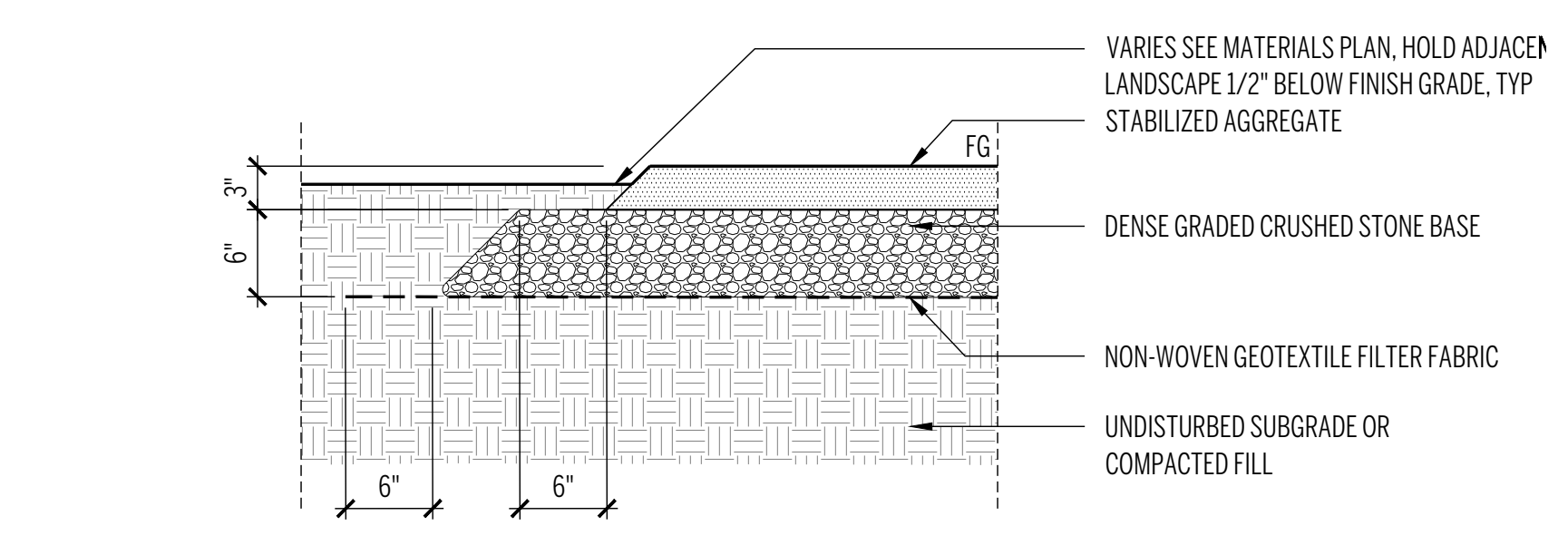
4 CROSSING MODULE ELEVATION
1/2" = 1'-0"



3 CROSSING MODULE PLAN
1/2" = 1'-0"



2 CROSSING MODULE SECTION
1/2" = 1'-0"



1 ADA PATH PAVING
1 1/2" = 1'-0"

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

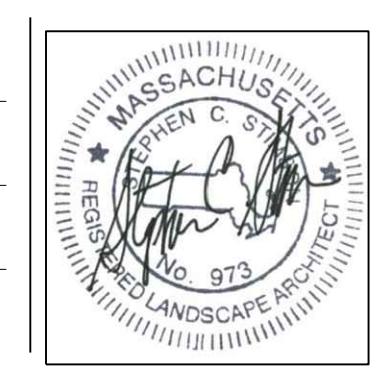
STRUCTURAL ENGINEER
RSE ASSOCIATES, INC.
63 PLEASANT STREET SUITE 200 WATERTOWN, MA 02472
T 617 926 9300

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

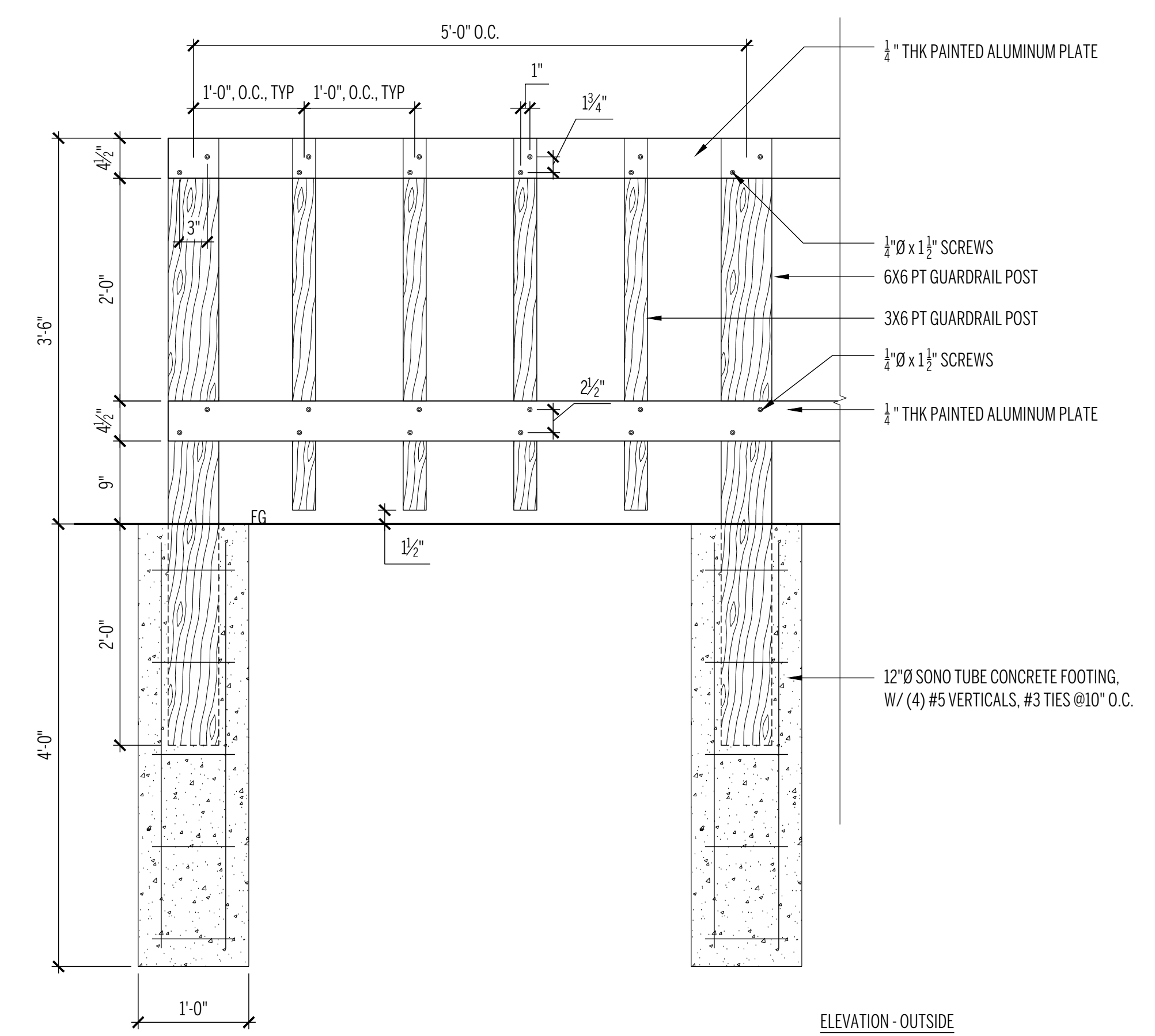
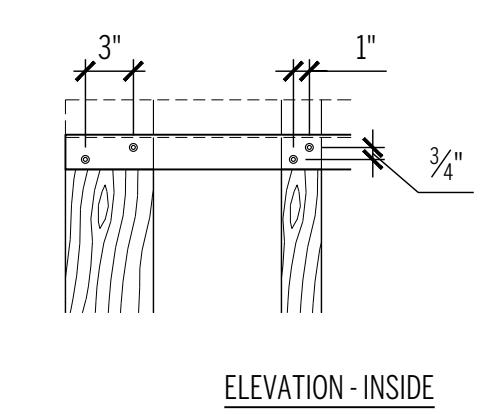
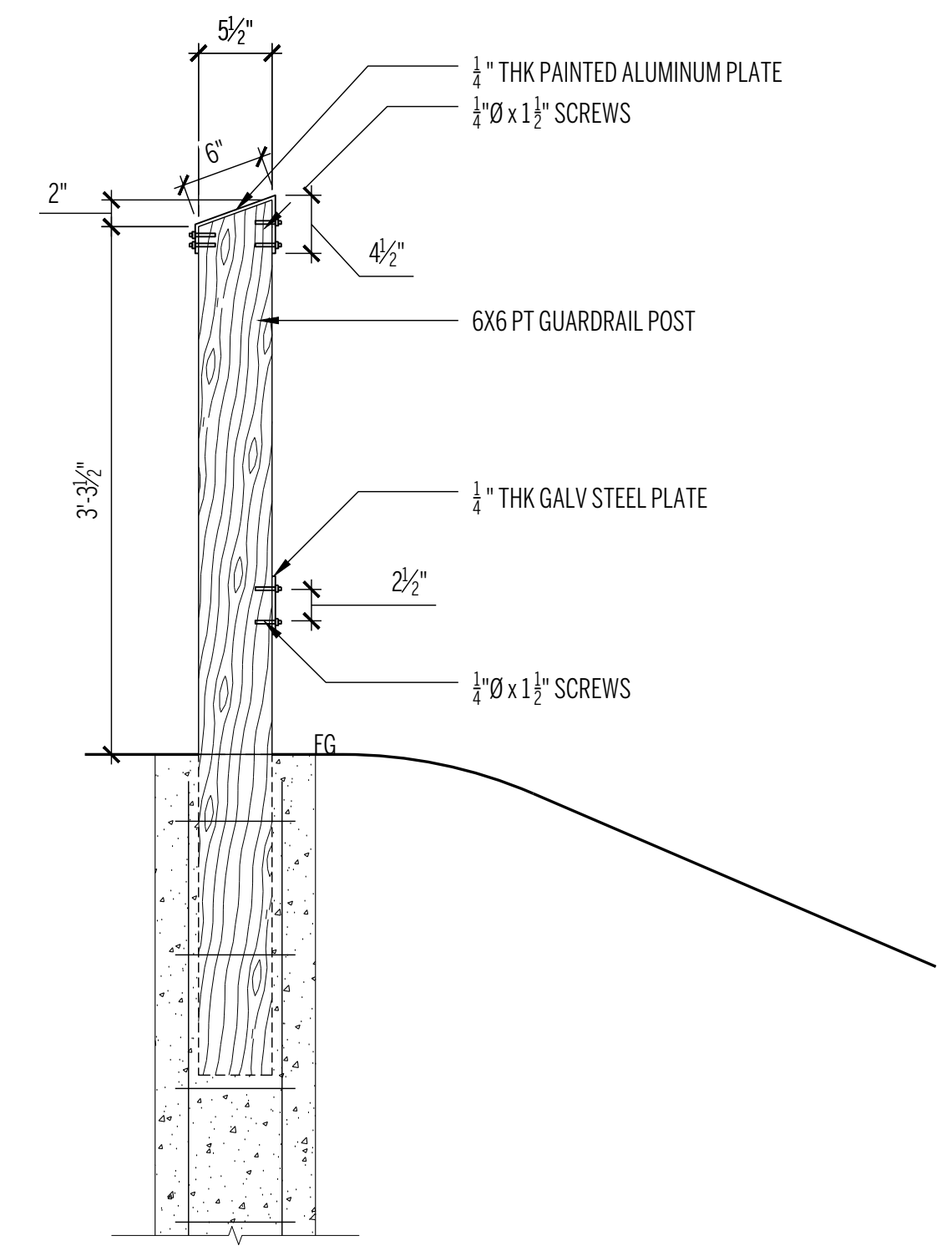
**COLD BROOK
ECO-RESTORATION PROJECT**
HCT
0 BANK ST
HARWICH PORT, MA 02646

ISSUE	DATE	DESCRIPTION
1		
2		
3		
4		
5		
6		
7		
8		

SCALE AS NOTED
DATE 06.30.2022
DRAWN BY RT, CL
REVIEWED BY JW



DETAILS
CONSTRUCTION DOCUMENT
L3.0



1 OVERLOOK GUARDRAIL
1"=1'-0"

LANDSCAPE ARCHITECT

STIMSON

STEPHEN STIMSON ASSOCIATES LANDSCAPE ARCHITECTS, INC.

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CAMBRIDGE, MA 02139
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ENVIRONMENTAL ENGINEER

INTER-FLUVE

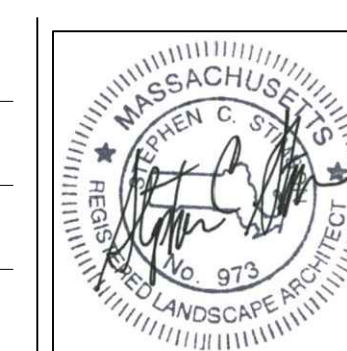
220 CONCORD AVENUE, 2ND FLOOR
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**COLD BROOK
ECO-RESTORATION PROJECT**

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JW



DETAILS

CONSTRUCTION
DOCUMENT

L3.1