CITY OF BRIDGEPORT

File No. ____________

PLANNING & ZONING COMMISSION APPLICATION

1. NAME OF APPLICANT: Eaton Enterprises, LLC
2. Is the Applicant's name Trustee of Record? Yes ______ No X
   If yes, a sworn statement disclosing the Beneficiary shall accompany this application upon filing.
3. Address of Property: 378 East Main Street CT / 371 East Main Street CT
   (number) (street) (state) (zip code)
4. Assessor's Map Information: Block No. 36/825 / 36/808 Lot No. 21 / 2
5. Amendments to Zoning Regulations: (indicate) Article: ______ Section: ______
   (Attach copies of Amendment)
6. Description of Property (Metes & Bounds): Nichols Street 483', Pembroke Street 45', State Highway Line, East Main Street 143'. Nichols Street 104', East Main Street 165', State Highway Line 184', State Highway Line 103'.
7. Existing Zone Classification: NX3, Row House
8. Zone Classification requested: ______
9. Describe Proposed Development of Property: Sub-Divide the two lots into 29 individual lots for the construction of Two Bedroom Townhouses.

Approval(s) requested: Municipal Coastal Site Plan Review

Signature: Stephen Eaton **Date:** 4/4/2024

Print Name: Steve Eaton

If signed by Agent, state capacity (Lawyer, Developer, etc.) **Signature:** ______

Print Name: Patrick M Rose, Architect

Mailing Address: Rose-Tiso & Co., LLC, 35 Brentwood Ave., Fairfield, CT 06825

Phone: 203-610-6262 Cell: 203-581-2788 Fax: 203-610-6404

E-mail Address: prose@rosetiso.com

$ ______ Fee received Date: ______ Clerk: ______

THIS APPLICATION MUST BE SUBMITTED IN PERSON AND WITH COMPLETED CHECKLIST

- [x] Completed & Signed Application Form
- [x] A-2 Site Survey
- [x] Building Floor Plans
- [x] Completed Site / Landscape Plan
- [x] Drainage Plan
- [x] Building Elevations
- [x] Written Statement of Development and Use
- [x] Property Owner's List
- [x] Fee
- [x] Cert. of Incorporation & Organization and First Report (Corporations & LLC's)

PROPERTY OWNER'S ENDORSEMENT OF APPLICATION

Print Owner's Name	Owner's Signature	Date
BLD-WF LLC	[signature]	4-24-24

Rev. 6/18/2016

ROSE •TISO & CO. LLC
ARCHITECTS • SURVEYORS • ENGINEERS

Multi-Family Housing, East Main Street & Nichols Street, Bridgeport, CT

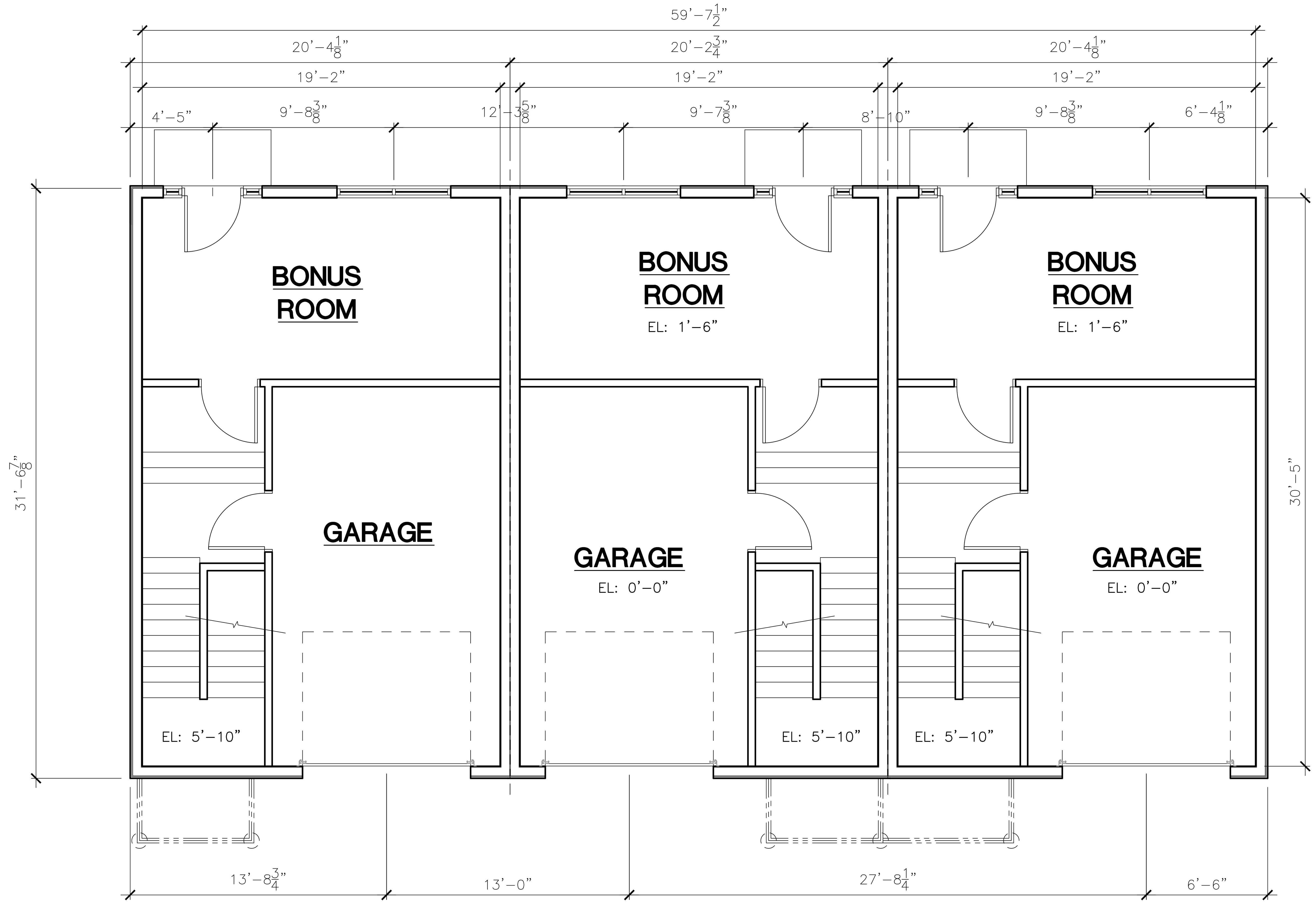
Project Overview:

The project site is located in two parcels one at 378 East Main Street and one at 371 East Main Street in Bridgeport, Connecticut.

The proposed project involves the sub-division of the 1.769Ac. properties into 29 building lots for two bedroom Row Houses with common access to parking in the rear of the buildings. The Row Houses will be clusted in six, five, four and three unit Row House buildings. Development will include buildings, driveways, utilities and parking area. Project requires approval for Municipal Coastal Site Plan Review.

Current application:

The current Zone is NX3 Mixed Residential 1 Zone and the Building Type being used for Zone is Row Building. The Row House units shall have an entry at street level a minimum of 18" above grade, an entrance in the rear and garage entry in the rear. Each Row House shall be two bedroom, two and one half baths with a one car garage and parking space behind garage. Each lot shall be serviced by electrical, water, gas & sewer. Due to 3.70.4 Item 2 requires that 85% of the street frontage be occupied by a building we require a waiver for two townhouses that have a driveway adjacent and two townhouses that have extra land at the corner of East Main Street & Nichols Street due to the irregular shape of the lot in this location.



GRADE LEVEL FLOOR PLAN
SCALE: 1/4" = 1'-0"

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TEL: (203)610-6262 • FAX: (203)610-6404

REVISIONS

NO.	BY	DATE	DESCRIPTION

PROJECT TITLE

MULTI-FAMILY RESIDENTIAL DEVELOPMENT

NICHOLS AND EAST MAIN STREET BRIDGEPORT, CT

PREPARED FOR:

EATON ENTERPRISES, LLC

SHEET TITLE

FLOOR PLAN 3 TOWNHOUSES

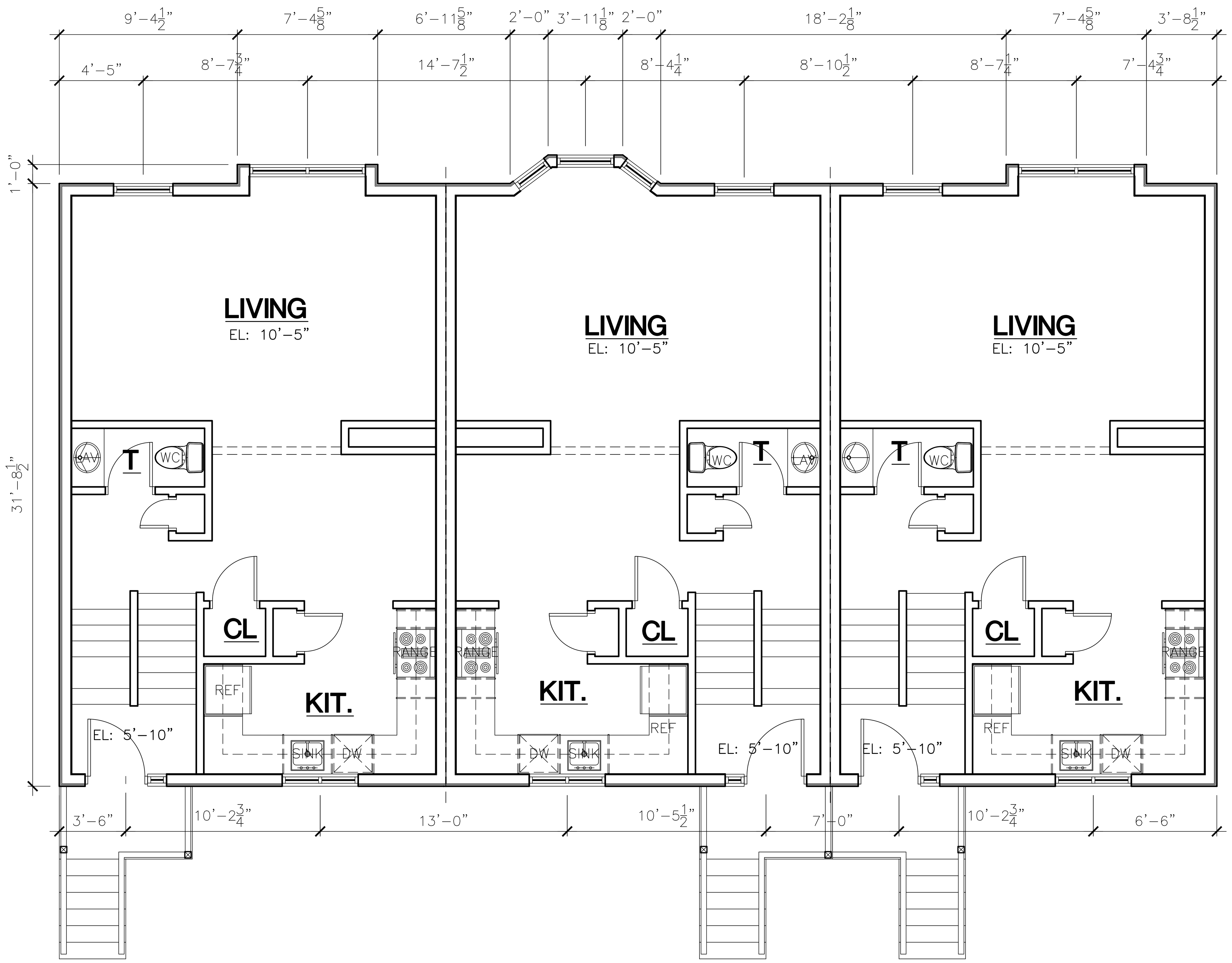
DESIGNED BY: KM	SCALE: AS NOTED
DRAWN BY: KM	DATE: 06.20.2023
CHECKED BY: PR	PROJECT NUMBER: 2772
CAD FILE: R:/2772/ARCH/A-101.DWG	

SEAL

STATE OF CONNECTICUT · PATRICK M. ROSE · #8732 · LICENSED ARCHITECT

SHEET NUMBER

A-101



FIRST FLOOR PLAN
SCALE: 1/4" = 1'-0"

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REVISIONS

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PROJECT TITLE

MULTI-FAMILY RESIDENTIAL DEVELOPMENT

NICHOLS AND EAST MAIN STREET BRIDGEPORT, CT

PREPARED FOR:

EATON ENTERPRISES, LLC

SHEET TITLE

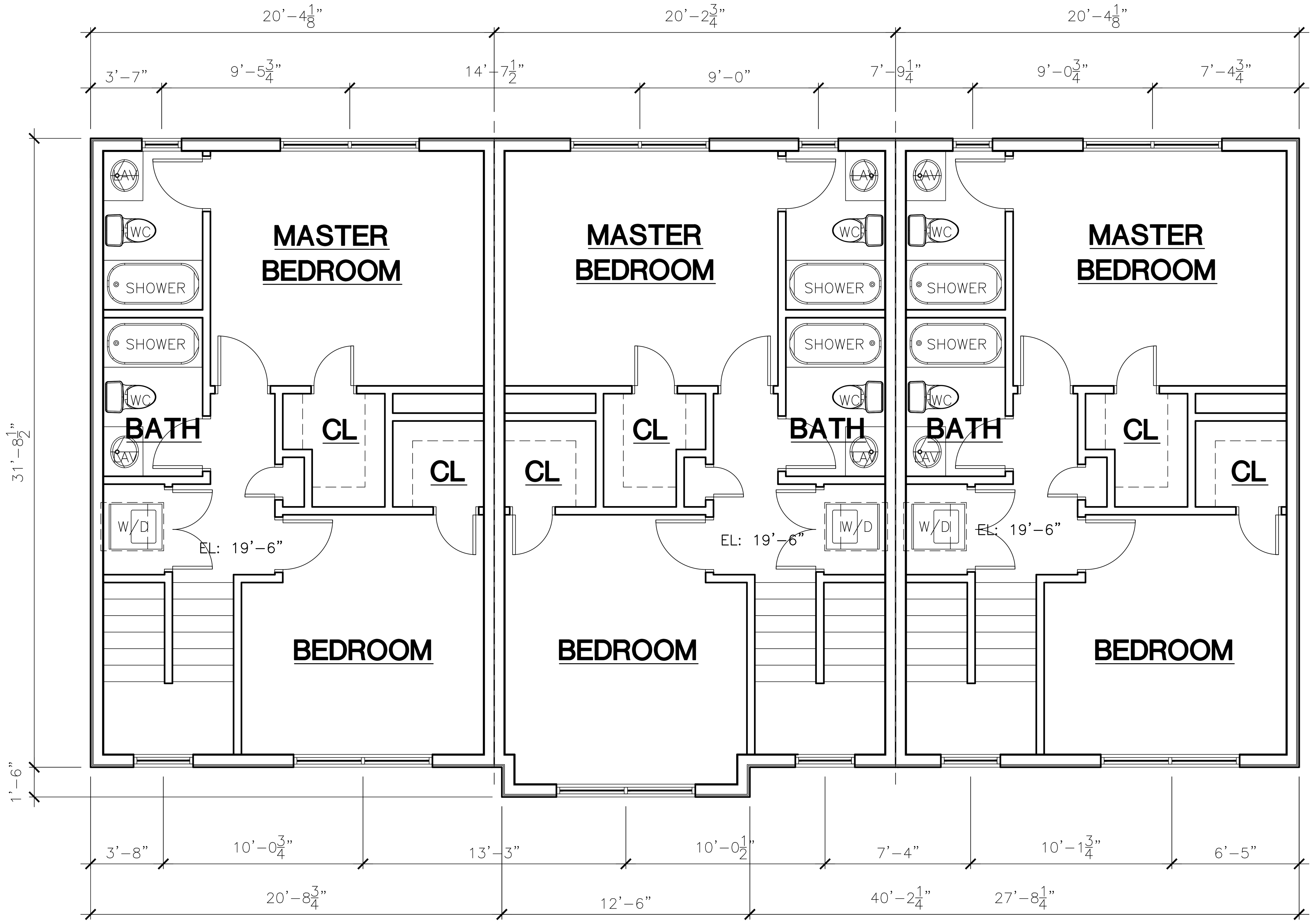
FLOOR PLAN 3 TOWNHOUSES

DESIGNED BY: KM	SCALE: AS NOTED
DRAWN BY: KM	DATE: 06.20.2023
CHECKED BY: PR	PROJECT NUMBER: 2772
CAD FILE: R:/2772/ARCH/A-101.DWG	

SEAL

SHEET NUMBER

A-102



SECOND FLOOR PLAN
SCALE: 1/4" = 1'-0"

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REVISIONS

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PROJECT TITLE

MULTI-FAMILY RESIDENTIAL DEVELOPMENT

NICHOLS AND EAST MAIN STREET BRIDGEPORT, CT

PREPARED FOR:

EATON ENTERPRISES, LLC

SHEET TITLE

FLOOR PLAN 3 TOWNHOUSES

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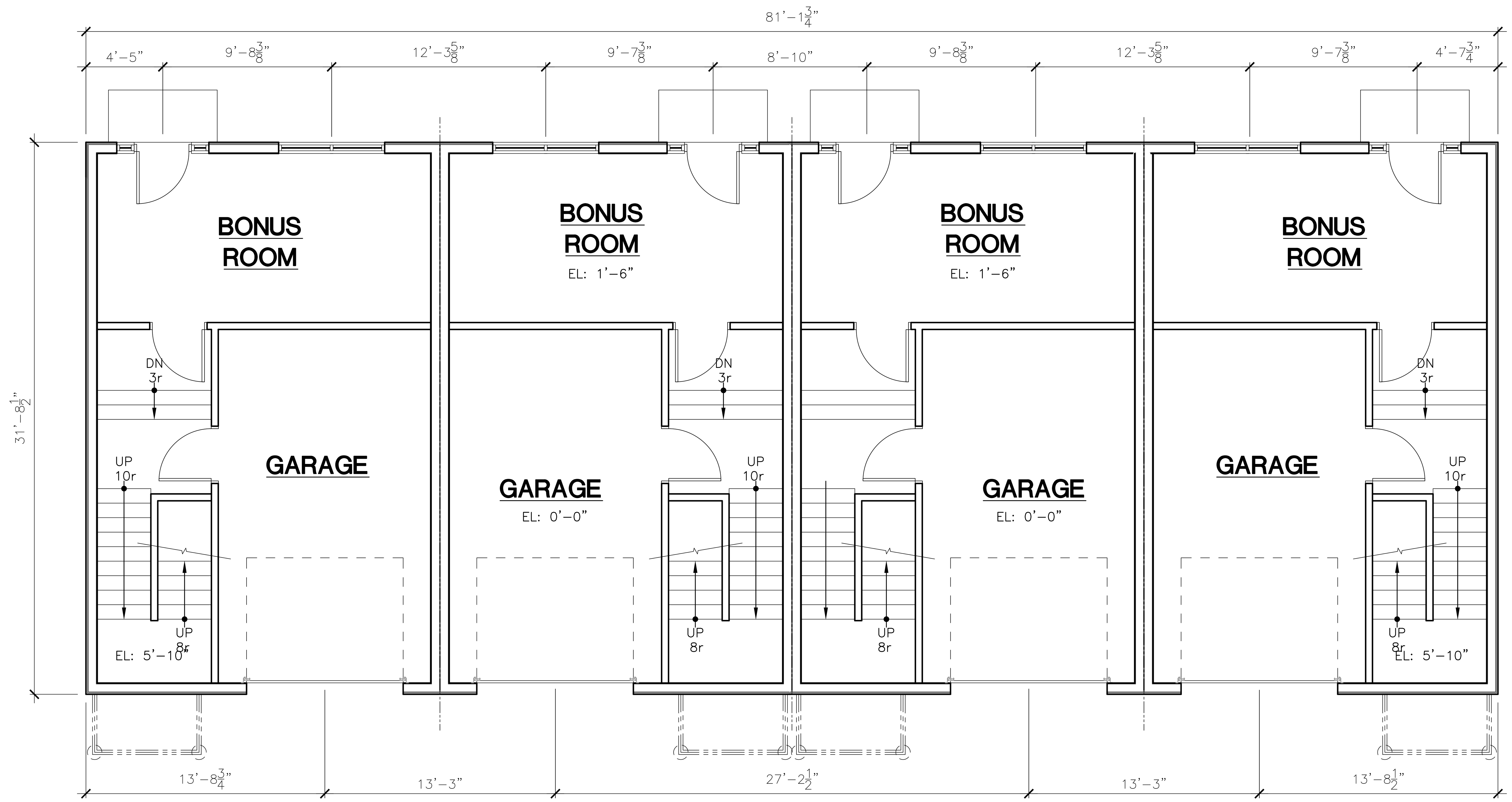
SEAL

STATE OF CONNECTICUT · PATRICK M. ROSE · 8732 · LICENSED ARCHITECT

SHEET NUMBER

A-103



GRADE LEVEL FLOOR PLAN

SCALE: 1/4" = 1'-0"

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MULTI-FAMILY RESIDENTIAL DEVELOPMENT

NICHOLS AND EAST MAIN STREET BRIDGEPORT, CT

PREPARED FOR:

EATON ENTERPRISES, LLC

SHEET TITLE

FLOOR PLAN 4 TOWNHOUSES

DESIGNED BY: KM	SCALE: AS NOTED
DRAWN BY: KM	DATE: 06.20.2023
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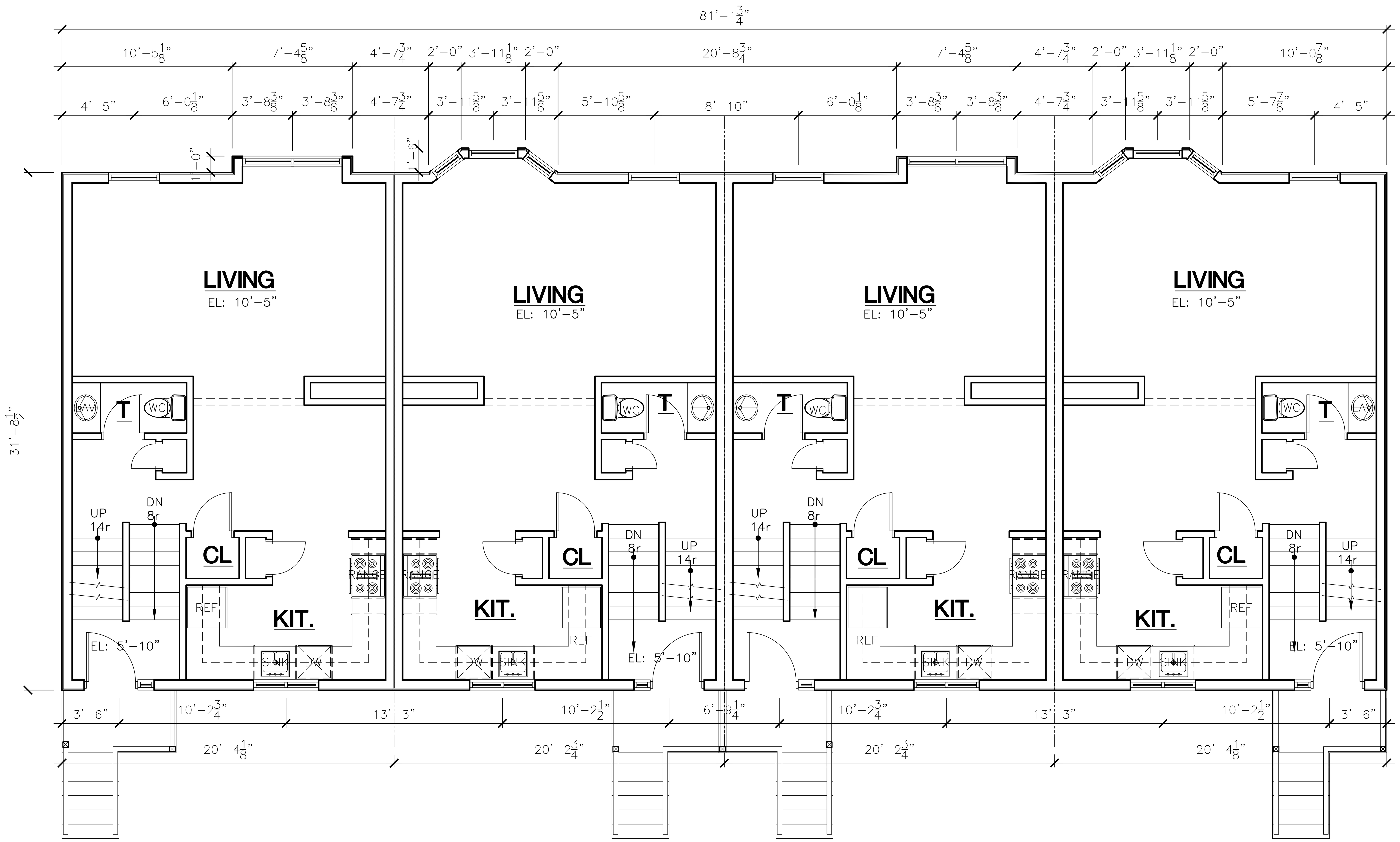
CAD FILE: R:/2772/ARCH/A-101.DWG	

SEAL

STATE OF CONNECTICUT PATRICK M. ROSE #8732 LICENSED ARCHITECT

SHEET NUMBER

A-104



FIRST FLOOR PLAN

SCALE: 1/4" = 1'-0"

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MULTI-FAMILY RESIDENTIAL DEVELOPMENT

NICHOLS AND EAST MAIN STREET BRIDGEPORT, CT

PREPARED FOR:

EATON ENTERPRISES, LLC

SHEET TITLE

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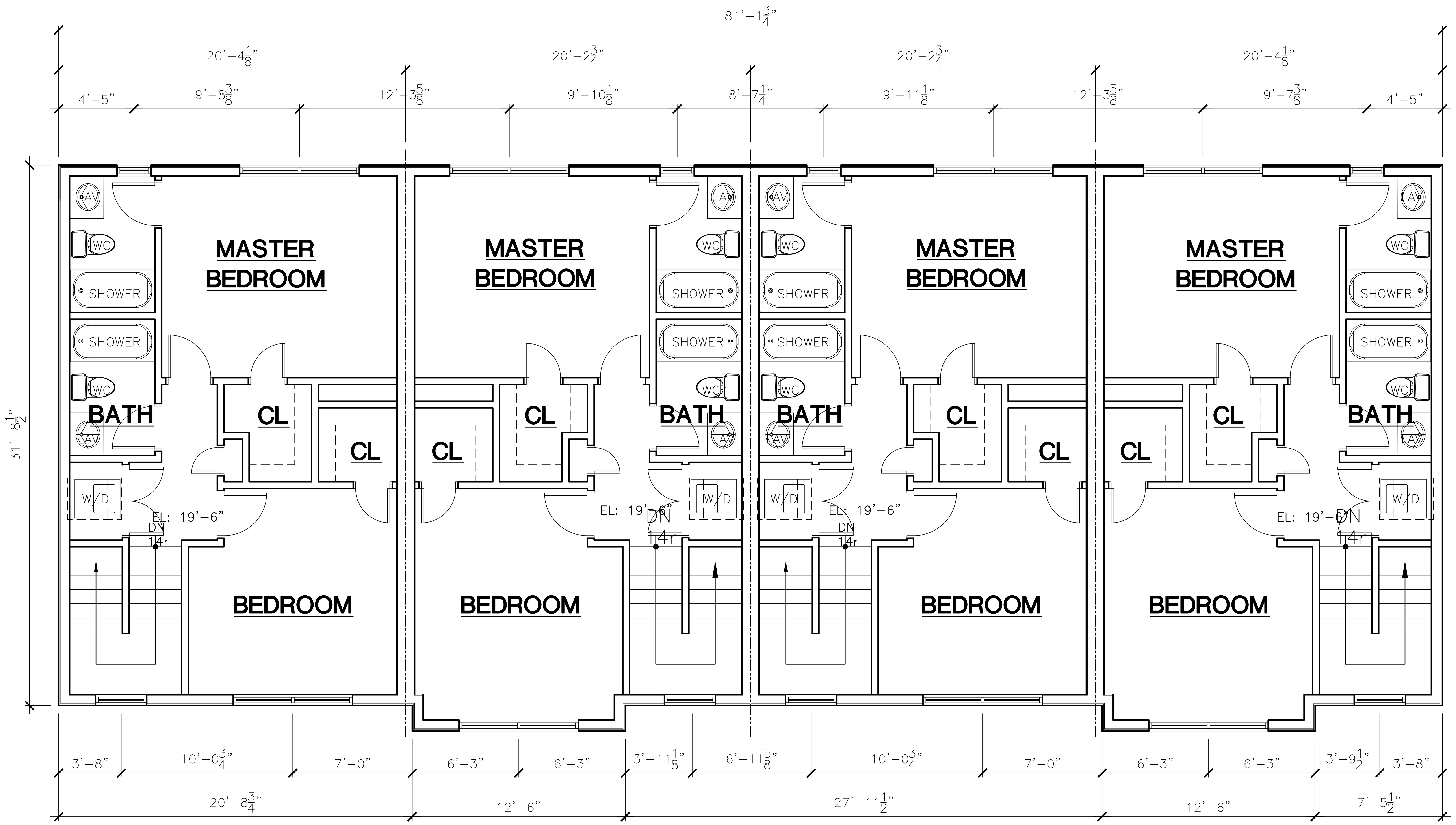
SEAL

SHEET NUMBER

A-105



SECOND FLOOR PLAN
SCALE: 1/4" = 1'-0"

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PREPARED FOR:

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SHEET TITLE

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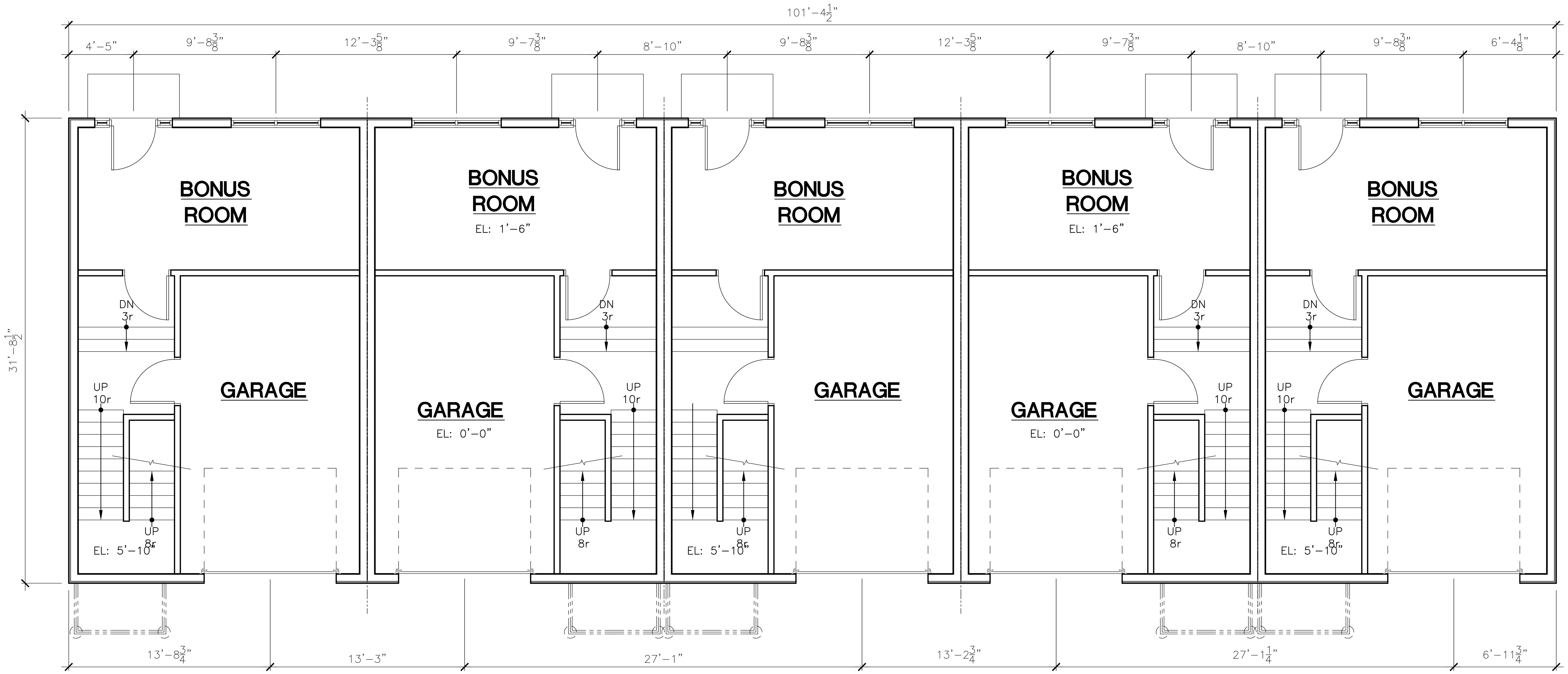
SEAL

SHEET NUMBER

A-106



GRADE LEVEL FLOOR PLAN

SCALE: 1/4" = 1'-0"

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PROJECT TITLE

MULTI-FAMILY RESIDENTIAL DEVELOPMENT

NICHOLS AND EAST MAIN STREET BRIDGEPORT, CT

PREPARED FOR:

EATON ENTERPRISES, LLC

SHEET TITLE

FLOOR PLAN 5 TOWNHOUSES

DESIGNED BY: KM	SCALE: AS NOTED
DRAWN BY: KM	DATE: 06.20.2023
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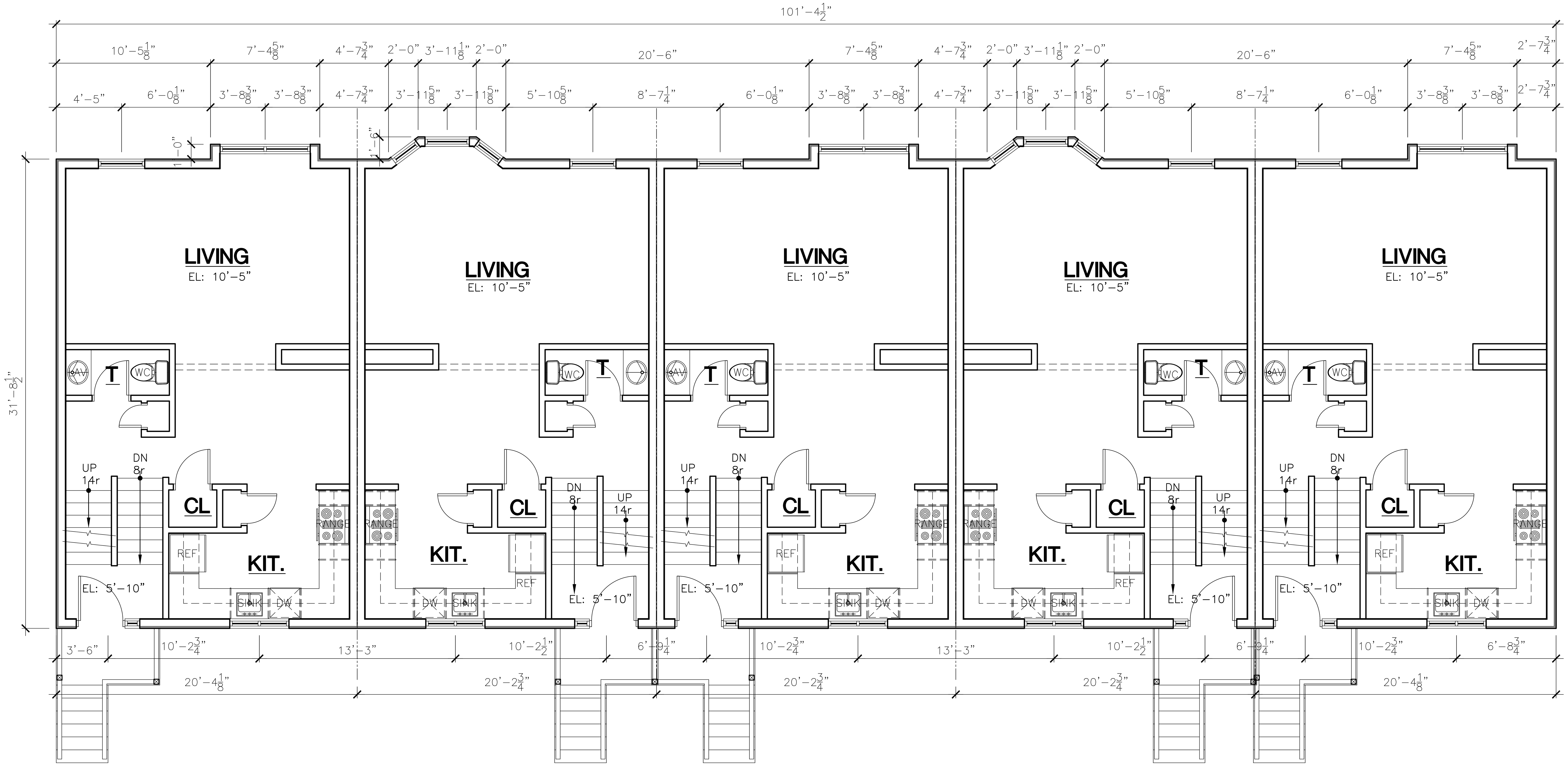
SEAL

STATE OF CONNECTICUT • PATRICK M. ROSE • 8732 • LICENSED ARCHITECT

SHEET NUMBER

A-107



FIRST FLOOR PLAN

SCALE: 1/4" = 1'-0"

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REVISIONS			
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MULTI-FAMILY RESIDENTIAL DEVELOPMENT

NICHOLS AND EAST MAIN STREET BRIDGEPORT, CT

PREPARED FOR:

EATON ENTERPRISES, LLC

SHEET TITLE

FLOOR PLAN 5 TOWNHOUSES

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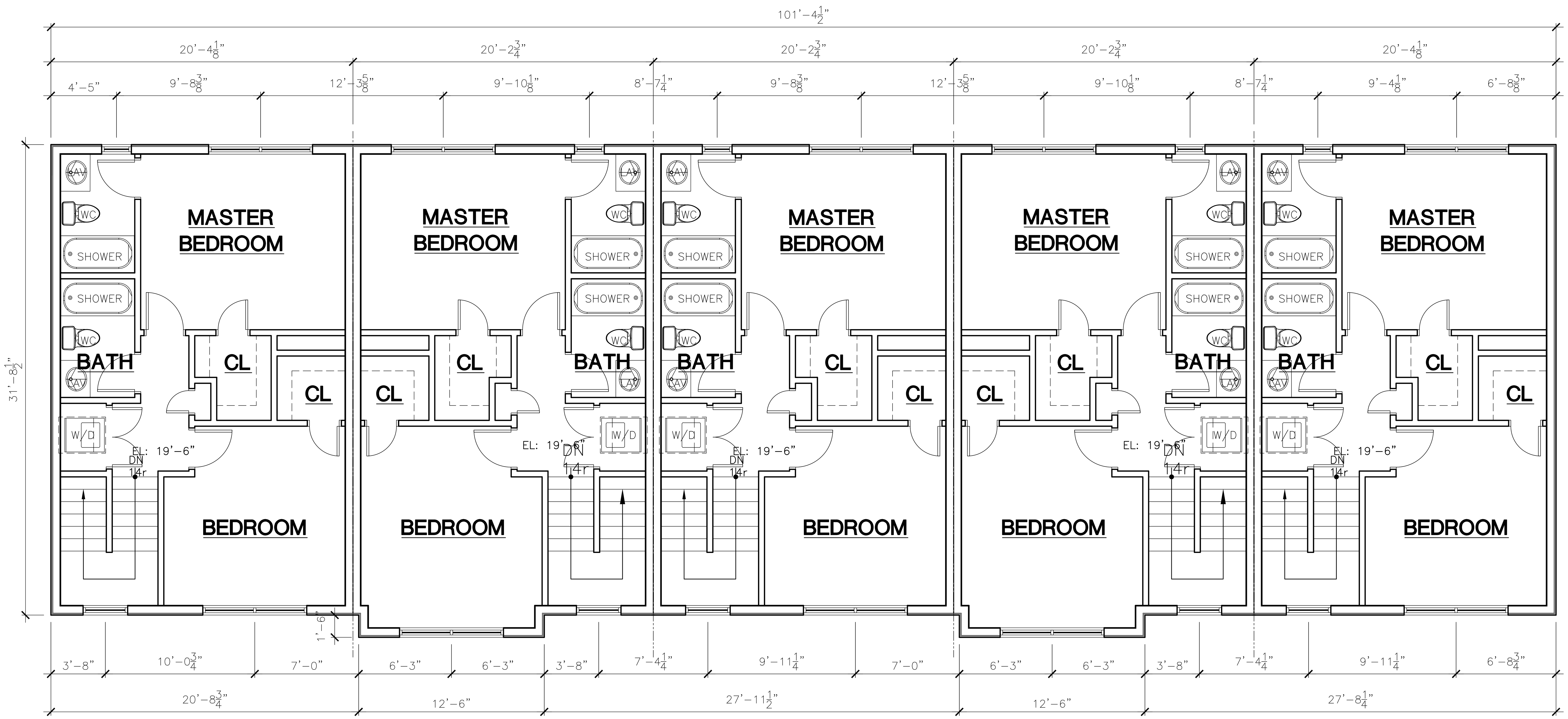
SEAL

STATE OF CONNECTICUT · PATRICK M. ROSE · #8732 · LICENSED ARCHITECT

SHEET NUMBER

A-108



SECOND FLOOR PLAN

SCALE: 1/4" = 1'-0"

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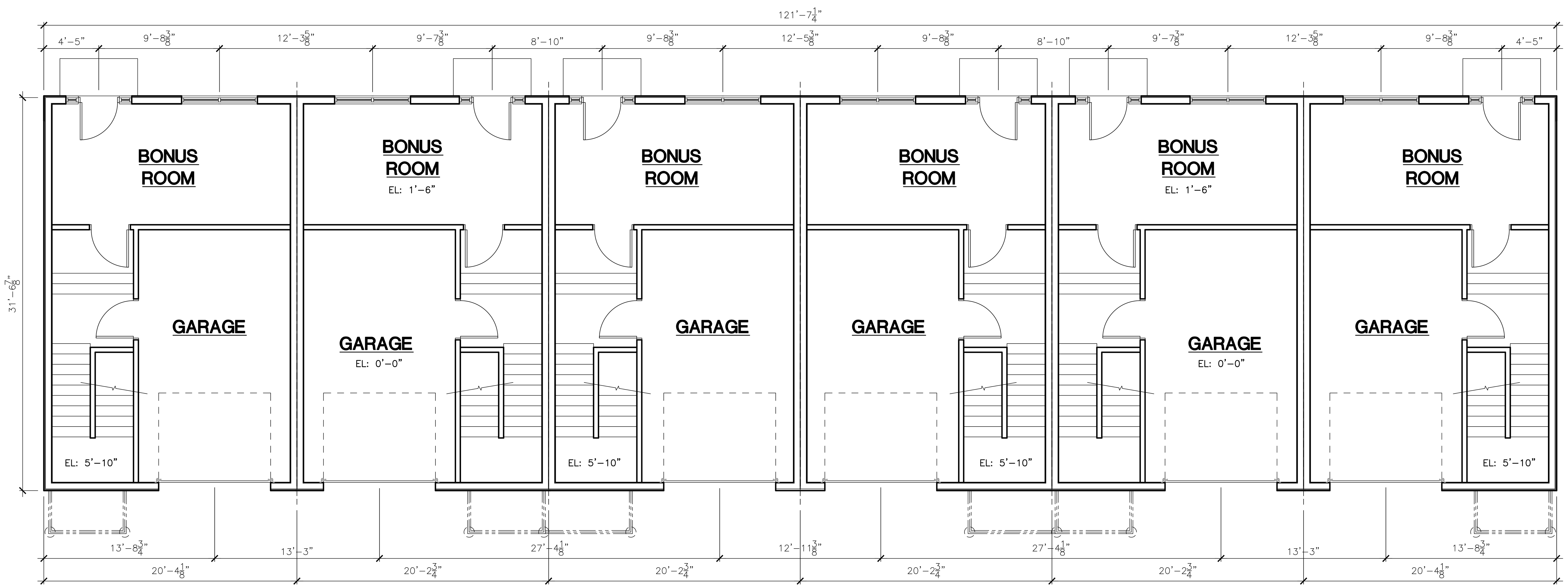
SEAL

SHEET NUMBER

A-109



GRADE LEVEL FLOOR PLAN

SCALE: 3/16" = 1'-0"

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MULTI-FAMILY RESIDENTIAL DEVELOPMENT

NICHOLS AND EAST MAIN STREET BRIDGEPORT, CT

PREPARED FOR:

EATON ENTERPRISES, LLC

SHEET TITLE

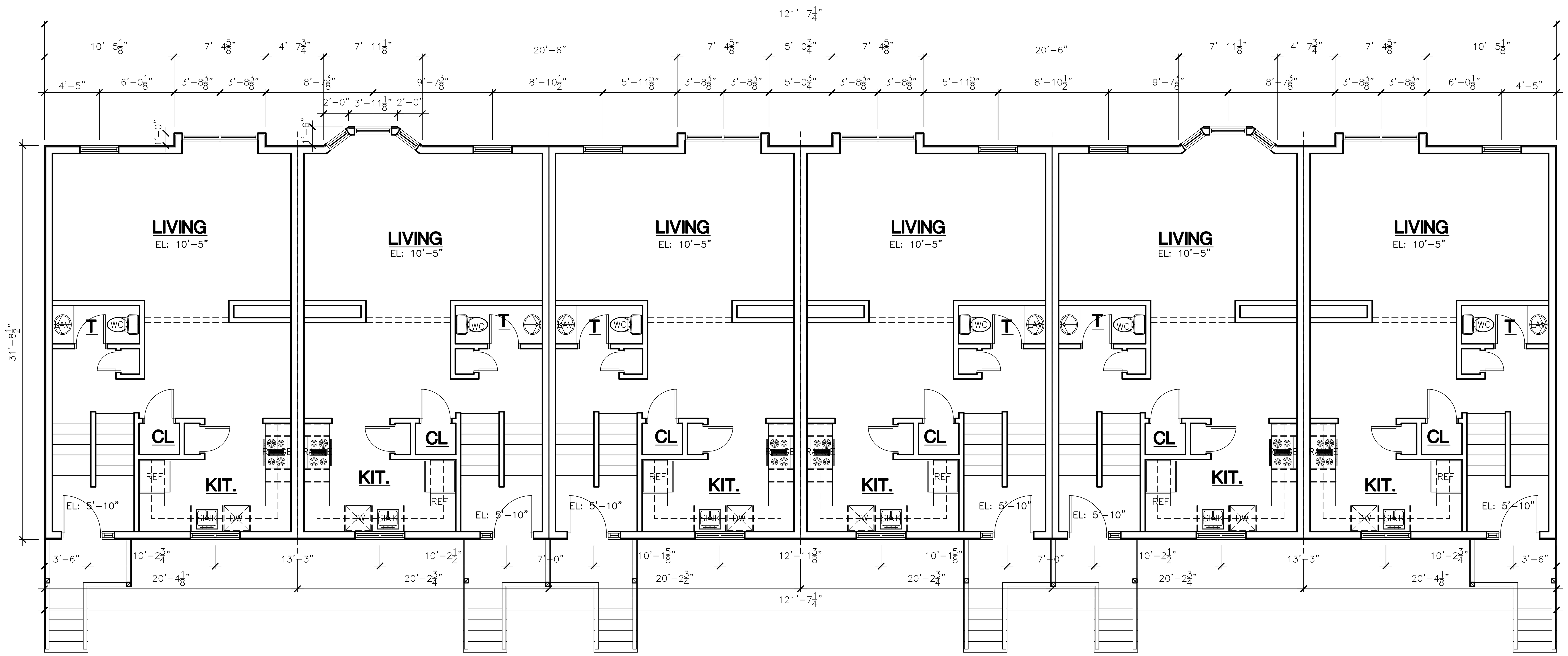
FLOOR PLAN 6 TOWNHOUSES

DESIGNED BY: KM	SCALE: AS NOTED
DRAWN BY: KM	DATE: 06.20.2023
CHECKED BY: PR	PROJECT NUMBER: 2772
CAD FILE: R:/2772/ARCH/A-101.DWG	

SEAL: STATE OF CONNECTICUT — PATRICK M. ROSE — 8732 — LICENSED ARCHITECT

SHEET NUMBER

A-110



FIRST FLOOR PLAN

SCALE: 3/16" = 1'-0"

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REVISIONS			
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MULTI-FAMILY RESIDENTIAL DEVELOPMENT

NICHOLS AND EAST MAIN STREET BRIDGEPORT, CT

PREPARED FOR:

EATON ENTERPRISES, LLC

SHEET TITLE

FLOOR PLAN 6 TOWNHOUSES

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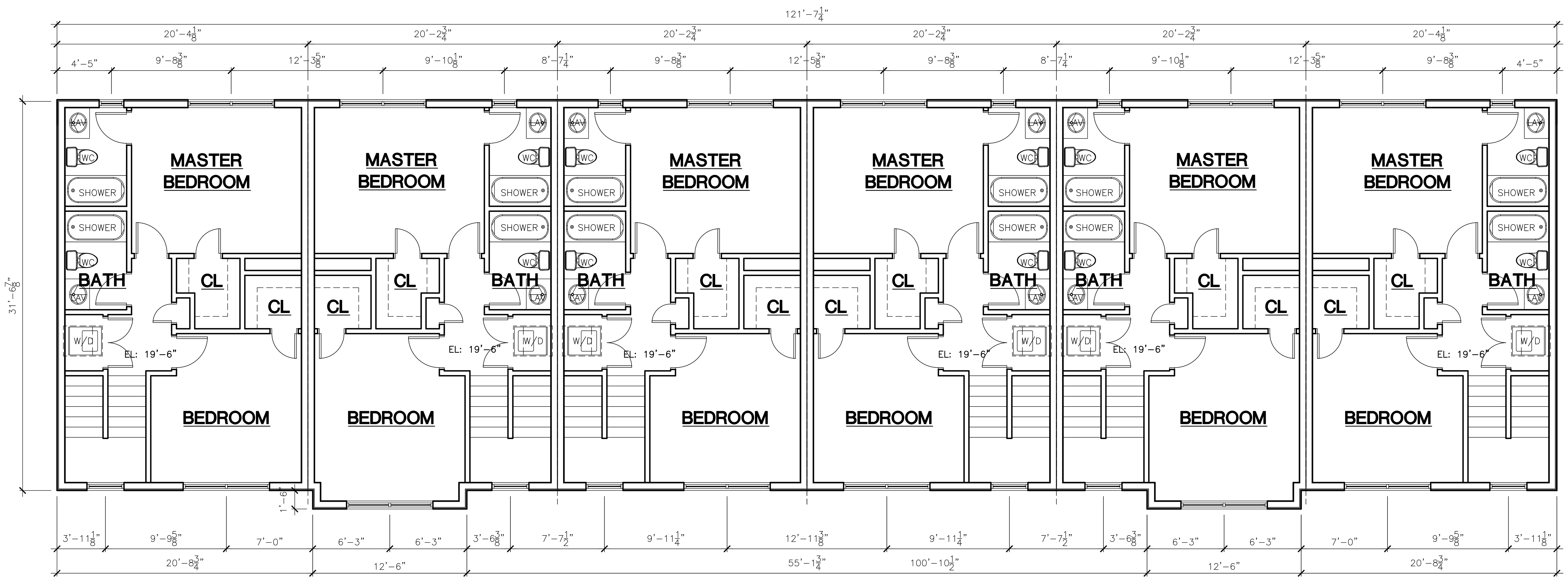
SEAL

SHEET NUMBER

A-111



SECOND FLOOR PLAN

SCALE: 3/16" = 1'-0"

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REVISIONS

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PROJECT TITLE

MULTI-FAMILY RESIDENTIAL DEVELOPMENT

NICHOLS AND EAST MAIN STREET BRIDGEPORT, CT

PREPARED FOR:

EATON ENTERPRISES, LLC

SHEET TITLE

FLOOR PLAN 6 TOWNHOUSES

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CAD FILE: R:/2772/ARCH/A-101.DWG	

SEAL

SHEET NUMBER

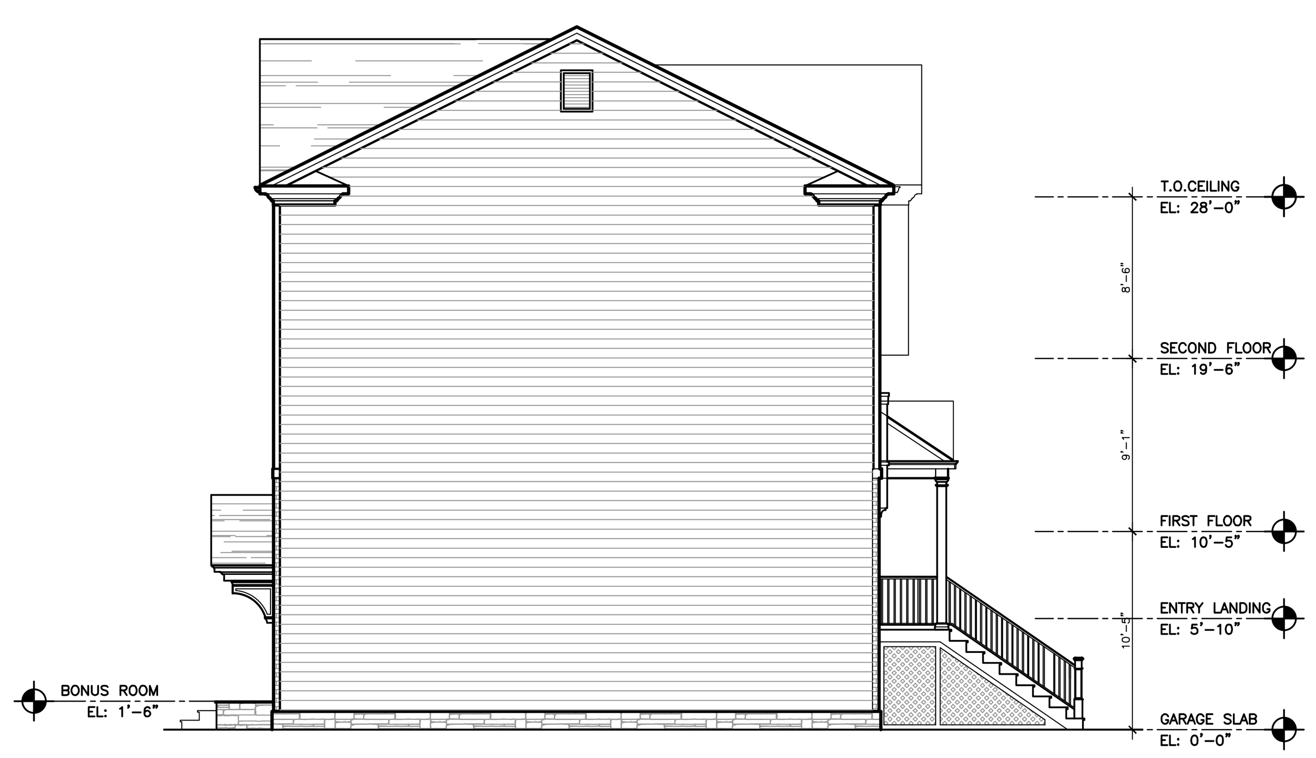
A-112

FRONT ELEVATION

SCALE: 1/8" = 1'-0"

REAR ELEVATION

SCALE: 1/8" = 1'-0"



RIGHT ELEVATION

SCALE: 1/8" = 1'-0"

LEFT ELEVATION

SCALE: 1/8" = 1'-0"

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PROJECT TITLE

MULTI-FAMILY RESIDENTIAL DEVELOPMENT

NICHOLS AND EAST MAIN STREET BRIDGEPORT, CT

PREPARED FOR:

EATON ENTERPRISES, LLC

SHEET TITLE

ELEVATIONS 3 TOWNHOUSES

DESIGNED BY: KM	SCALE: AS NOTED
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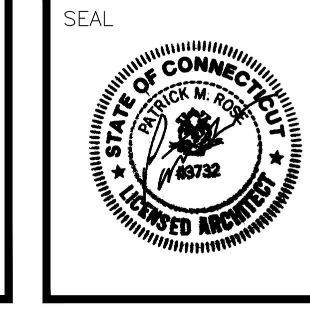
CHECKED BY: PR	PROJECT NUMBER: 2772
CAD FILE: R:/2772/ARCH/200SERIES.DWG	

SEAL



SHEET NUMBER

A-201

FRONT ELEVATION
SCALE: 1/8" = 1'-0"

REAR ELEVATION
SCALE: 1/8" = 1'-0"

RIGHT ELEVATION
SCALE: 1/8" = 1'-0"

LEFT ELEVATION
SCALE: 1/8" = 1'-0"

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PROJECT TITLE

MULTI-FAMILY RESIDENTIAL DEVELOPMENT

NICHOLS AND EAST MAIN STREET BRIDGEPORT, CT

PREPARED FOR:

EATON ENTERPRISES, LLC

SHEET TITLE
ELEVATIONS 4 TOWNHOUSES

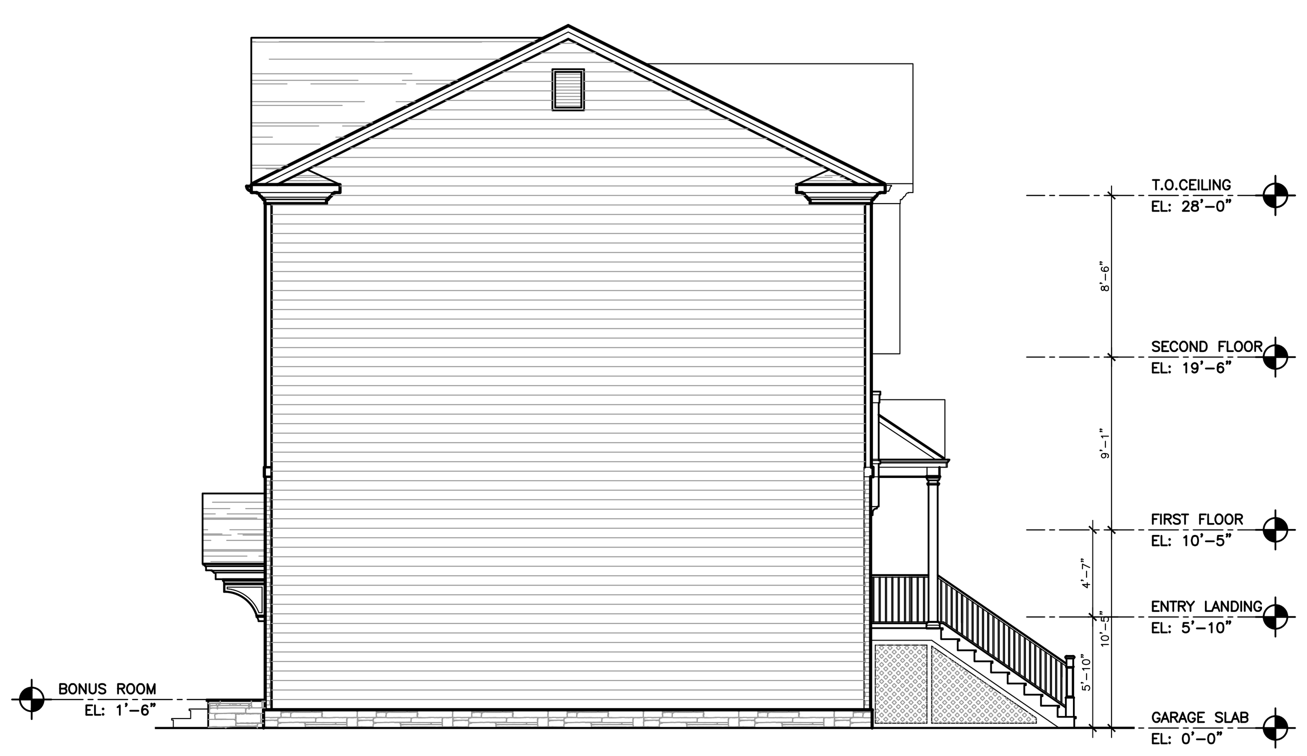
DESIGNED BY: KM	SCALE: AS NOTED
DRAWN BY: KM	DATE: 06.20.2023
CHECKED BY: PR	PROJECT NUMBER: 2772
CAD FILE: R:/2772/ARCH/200SERIES.DWG	

SEAL

SHEET NUMBER
A-202

FRONT ELEVATION
SCALE: 1/8" = 1'-0"

REAR ELEVATION
SCALE: 1/8" = 1'-0"



RIGHT ELEVATION
SCALE: 1/8" = 1'-0"

LEFT ELEVATION
SCALE: 1/8" = 1'-0"

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MULTI-FAMILY RESIDENTIAL DEVELOPMENT

NICHOLS AND EAST MAIN STREET BRIDGEPORT, CT

PREPARED FOR:

EATON ENTERPRISES, LLC

SHEET TITLE

ELEVATIONS 5 TOWNHOUSES

DESIGNED BY: KM	SCALE: AS NOTED
DRAWN BY: KM	DATE: 06.20.2023
CHECKED BY: PR	PROJECT NUMBER: 2772
CAD FILE: R:/2772/ARCH/200SERIES.DWG	

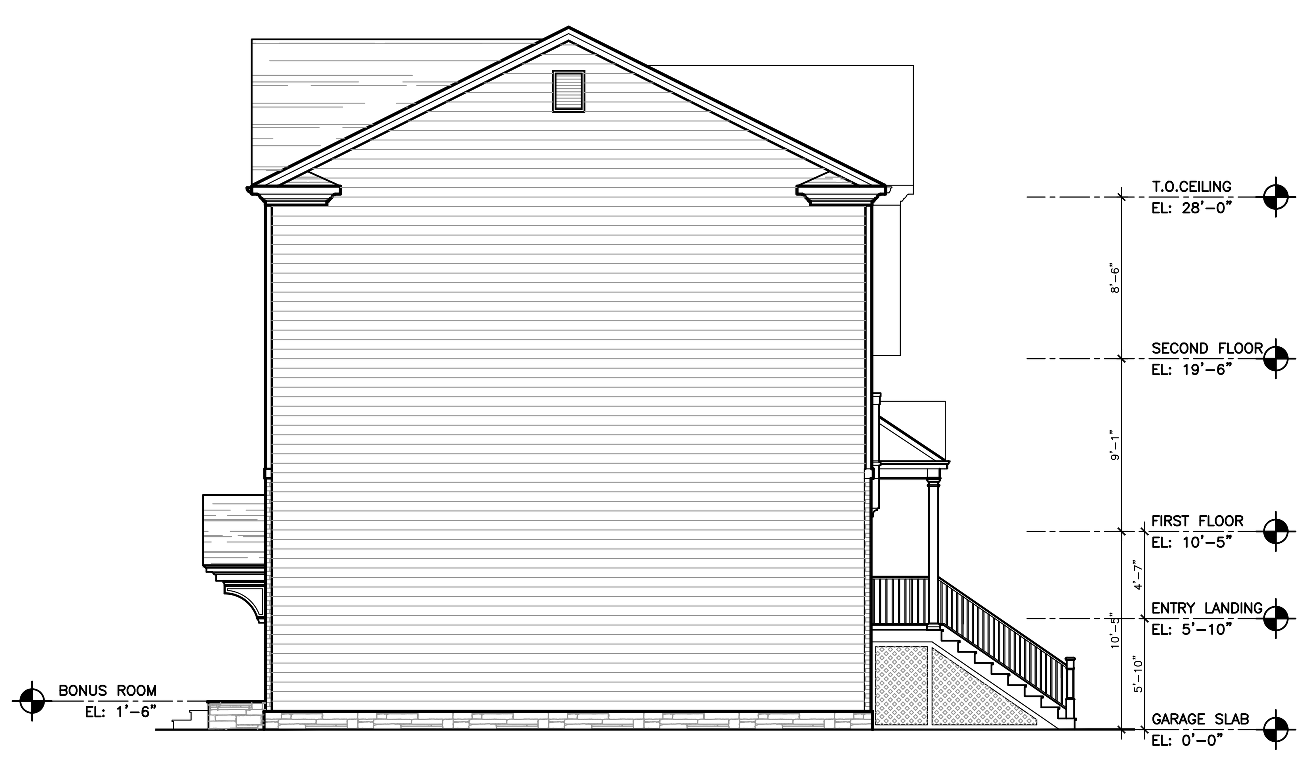
SEAL

SHEET NUMBER

A-203

FRONT ELEVATION
SCALE: 1/8" = 1'-0"

REAR ELEVATION
SCALE: 1/8" = 1'-0"



RIGHT ELEVATION
SCALE: 1/8" = 1'-0"

LEFT ELEVATION
SCALE: 1/8" = 1'-0"

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NICHOLS AND EAST MAIN STREET BRIDGEPORT, CT

PREPARED FOR:

EATON ENTERPRISES, LLC

SHEET TITLE

ELEVATIONS 6 TOWNHOUSES

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CAD FILE: R:/2772/ARCH/200SERIES.DWG	

SEAL

STATE OF CONNECTICUT PATRICK M. ROSE No. 8732 LICENSED ARCHITECT

SHEET NUMBER

A-204

ZONE NX3 - ROW BLDG.	STANDARDS	LOT A PROPOSED	LOT 1 PROPOSED	LOT 2 PROPOSED	LOT 3 PROPOSED	LOT 4 PROPOSED	LOT 5 PROPOSED	LOT 6 PROPOSED	LOT 7 PROPOSED	LOT 8 PROPOSED	LOT 9 PROPOSED
3.70.4 BUILDING LOCATION	–										
1.) LOT WIDTH	14 ft. min.*	45.00 ft.	23.90 ft.	20.23 ft.	20.23 ft.	20.23 ft.	29.21 ft.*	27.47 ft.	20.23 ft.	20.23 ft.	27.47 ft.
2.) PRIMARY STREETWALL	85% min.	No Bldg.	85.1%	100.0%	100.0%	100.0%	69.6%***	74.0%***	100.0%	100.0%	74.0%***
FACADE WIDTH PER STREET FRONTAGE	3 min, 10 max units	No Bldg.	5 Units per Building with Lots 1–5 (101.38', 89.1% Total Streetwall)					4 Units per Building w/Lots 6–9 (81.15', 85.1% Tot. St–Wall)			
3.) PRIMARY STREET TO BUILD LINE	10 ft.	No Bldg.	10.3 ft.	10.3 ft.	10.3 ft.	10.3 ft.	10.3 ft.	10.3 ft.	10.3 ft.	10.3 ft.	10.3 ft.
4.) PORCH, ENCLOSED PORCH, BAY SETBACK	5 ft. min.	No Bldg.	9.3 ft.	8.8 ft.	9.3 ft.	8.8 ft.	9.3 ft.	8.8 ft.	9.3 ft.	8.8 ft.	9.3 ft.
5.) NON–PRIMARY STREET SETBACK	5 ft. min	No Bldg.	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
6.) SIDE SETBACK	2 ft. min.**	No Bldg.	0 ft.**	0 ft.**	0 ft.**	0 ft.**	0 ft.**	0 ft.**	0 ft.**	0 ft.**	0 ft.**
–	8 ft. total both sides**	No Bldg.	3.6 ft.**	0 ft.**	0 ft.**	0 ft.**	8.9 ft.**	7.1 ft.**	0 ft.**	0 ft.**	7.1 ft.**
SPACE BETWEEN ADJACENT BUILDINGS	6 ft. min.**	No Bldg.	n/a	n/a	n/a	n/a	16.0 ft.	16.0 ft.	n/a	n/a	16.0 ft.
7.) REAR SETBACK	20 ft. min.	No Bldg.	34.8 ft.	37.1 ft.	39.6 ft.	42.3 ft.	45.1 ft.	59.2 ft.	63.3 ft.	67.4 ft.	71.4 ft.
8.) SITE COVERAGE	80% max.	3.8%	63.7%	79.0%	79.3%	79.9%	71.8%	66.8%	64.3%	62.1%	59.6%
3.70.5 PARKING & ACCESSORY STRUCTURES	–										
1.) PARKING & DRIVEWAY ACCESS	non–primary street	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
IF NO NON–PRIMARY STREET	primary street	No Bldg.	Three access points provided on Nichols Street for four buildings.					Three access points provided on Nichols St. for four bldgs.			
DRIVE WIDTH AT SIDEWALK	12 ft. max	n/a	12 ft.	12 ft.	12 ft.	12 ft.	12 ft.	12 ft.	12 ft.	12 ft.	12 ft.
2.) ATTACHED GARAGE SETBACK	rear; min. 15 ft.	31.7 ft.	31.7 ft.	31.7 ft.	31.7 ft.	31.7 ft.	31.7 ft.	31.7 ft.	31.7 ft.	31.7 ft.	31.7 ft.
ALLOWED GARAGE DOOR LOCATION (FACADE)	rear, not visible	No Gar.	Rear Bldg.	Rear Bldg.	Rear Bldg.	Rear Bldg.	Rear Bldg.	Rear Bldg.	Rear Bldg.	Rear Bldg.	Rear Bldg.
3.) PARKING LOT SIDE & REAR SETBACK	3 ft. min.	No Gar.	17.1 ft.	20.3 ft.	22.0 ft.	25.6 ft.	27.6 ft.	43.3 ft.	46.0 ft.	51.5 ft.	54.2 ft.

ZONE NX3 - ROW BLDG.	LOT 10 PROPOSED	LOT 11 PROPOSED	LOT 12 PROPOSED	LOT 13 PROPOSED	LOT 14 PROPOSED	LOT 15 PROPOSED	LOT 16 PROPOSED	LOT 17 PROPOSED	LOT 18 PROPOSED	LOT 19 PROPOSED	LOT 20 PROPOSED
3.70.4 BUILDING LOCATION											
1.) LOT WIDTH	29.21 ft.	20.23 ft.	20.23 ft.	20.23 ft.	23.90 ft.	36.02 ft.	20.23 ft.	20.23 ft.	20.23 ft.	20.23 ft.	25.99 ft.
2.) PRIMARY STREETWALL	69.6%***	100.0%	100.0%	100.0%	85.1%	56.5%***	100.0%	100.0%	100.0%	100.0%	78.3%***
FACADE WIDTH PER STREET FRONTAGE	5 Units per Building with Lots 10–14 (101.38', 89.1% Total Streetwall)					6 Units per Building with Lots 15–20 (121.60', 85.0% Total Streetwall)					
3.) PRIMARY STREET TO BUILD LINE	10.3 ft.	10.3 ft.	10.3 ft.	10.3 ft.	10.3 ft.	10.3 ft.	10.3 ft.	10.3 ft.	10.3 ft.	10.3 ft.	10.3 ft.
4.) PORCH, ENCLOSED PORCH, BAY SETBACK	9.3 ft.	8.8 ft.	9.3 ft.	8.8 ft.	9.3 ft.	9.3 ft.	8.8 ft.	9.3 ft.	9.3 ft.	8.8 ft.	9.3 ft.
5.) NON–PRIMARY STREET SETBACK	n/a	n/a	n/a	n/a	n/a	8.7 ft.	n/a	n/a	n/a	n/a	n/a
6.) SIDE SETBACK	0 ft.**	0 ft.**	0 ft.**	0 ft.**	0 ft.**	0 ft.**	0 ft.**	0 ft.**	0 ft.**	0 ft.**	0 ft.**
–	8.9 ft.**	0 ft.**	0 ft.**	0 ft.**	3.6 ft.**	8.7 ft.**	0 ft.**	0 ft.**	0 ft.**	0 ft.**	5.3 ft.**
SPACE BETWEEN ADJACENT BUILDINGS	16.0 ft.	n/a	n/a	n/a	59.2 ft.	62.2 ft.	59.2 ft.	59.9 ft.	61.7 ft.	70.1 ft.	82.7 ft.
7.) REAR SETBACK	74.7 ft.	75.1 ft.	77.6 ft.	81.7 ft.	81.7 ft.	58.7 ft.	55.4 ft.	52.1 ft.	48.8 ft.	45.6 ft.	42.3 ft.
8.) SITE COVERAGE	60.0%	58.7%	56.2%	56.1%	52.4%	55.1%	79.3%	78.9%	80.0%	79.7%	60.5%
3.70.5 PARKING & ACCESSORY STRUCTURES											
1.) PARKING & DRIVEWAY ACCESS	n/a	n/a	n/a	n/a	n/a	Three access points provided on Nichols Street for four buildings.					
IF NO NON–PRIMARY STREET	Three access points provided on Nichols Street for four buildings.					n/a	n/a	n/a	n/a	n/a	n/a
DRIVE WIDTH AT SIDEWALK	12 ft.	12 ft.	12 ft.	12 ft.	12 ft.	12 ft.	12 ft.	12 ft.	12 ft.	12 ft.	12 ft.
2.) ATTACHED GARAGE SETBACK	31.7 ft.	31.7 ft.	31.7 ft.	31.7 ft.	31.7 ft.	31.7 ft.	31.7 ft.	31.7 ft.	31.7 ft.	31.7 ft.	31.7 ft.
ALLOWED GARAGE DOOR LOCATION (FACADE)	Rear Bldg.	Rear Bldg.	Rear Bldg.	Rear Bldg.	Rear Bldg.	Rear Bldg.	Rear Bldg.	Rear Bldg.	Rear Bldg.	Rear Bldg.	Rear Bldg.
3.) PARKING LOT SIDE & REAR SETBACK	56.7 ft.	57.2 ft.	60.5 ft.	64.2 ft.	65.2 ft.	41.2 ft.	39.0 ft.	34.6 ft.	32.5 ft.	28.1 ft.	25.9 ft.

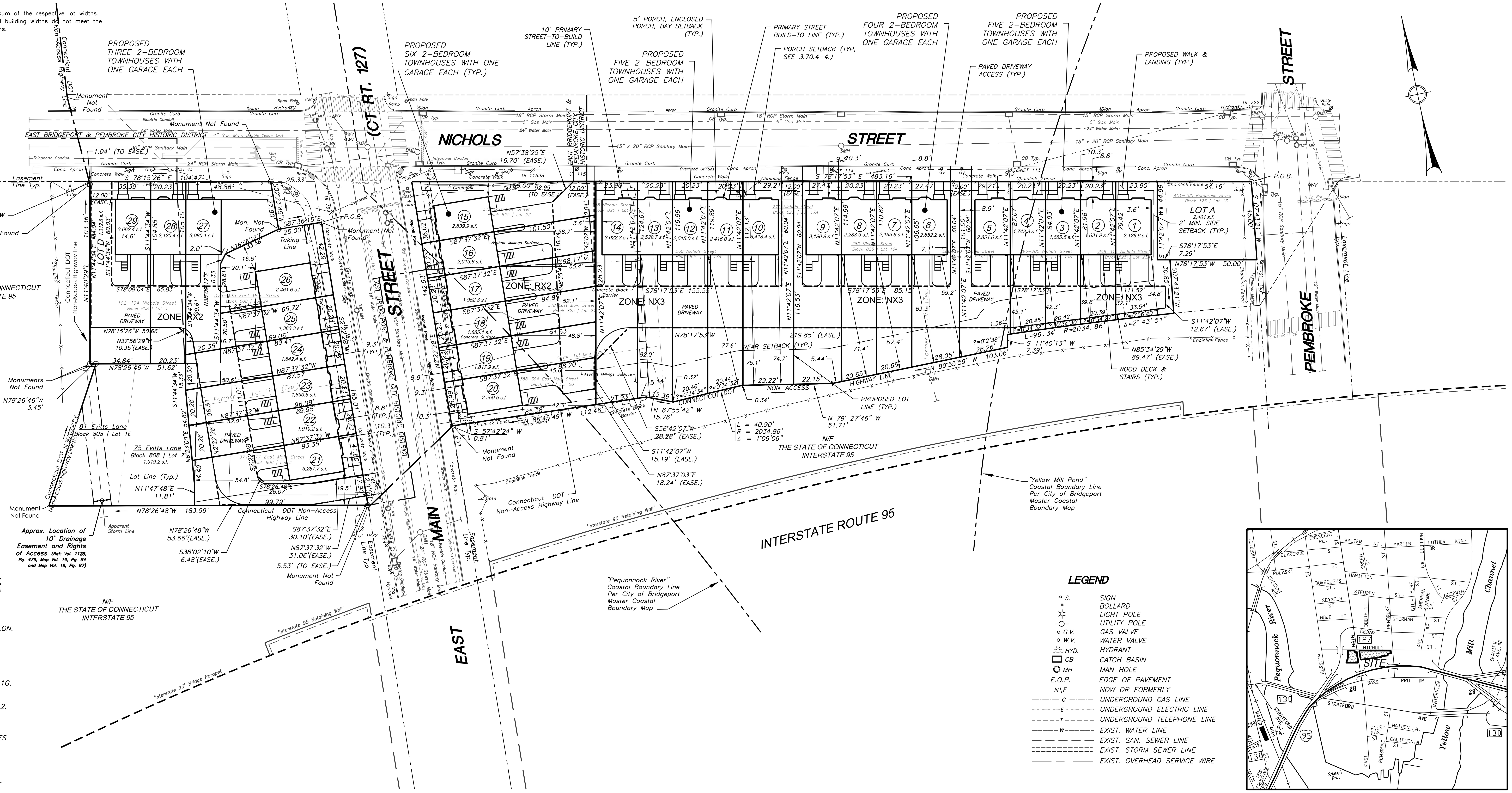
ZONE NX3 - ROW BLDG.	LOT 21 PROPOSED	LOT 22 PROPOSED	LOT 23 PROPOSED	LOT 24 PROPOSED	LOT 25 PROPOSED	LOT 26 PROPOSED	LOT 27 PROPOSED	LOT 28 PROPOSED	LOT 29 PROPOSED
3.70.4 BUILDING LOCATION									
1.) LOT WIDTH	41.8 ft.	20.23 ft.	20.23 ft.	20.23 ft.	20.23 ft.	42.29 ft.	23.90 ft.	20.23 ft.	35.39 ft.
2.) PRIMARY STREETWALL	48.7%****	100.0%	100.0%	100.0%	100.0%	48.1%****	41.6%****	100.0%	57.5%****
FACADE WIDTH PER STREET FRONTAGE	6 Units per Building with Lots 15–20 (121.60', 94.7% Total Streetwall)						3 Units per Bldg w/Lots 27–29 (60.92', 91.6%)		
3.) PRIMARY STREET TO BUILD LINE	10.3 ft.	10.3 ft.	10.3 ft.	10.3 ft.	10.3 ft.	10.3 ft.	10.3 ft.	10.3 ft.	10.3 ft.
4.) PORCH, ENCLOSED PORCH, BAY SETBACK	9.3 ft.	8.8 ft.	9.3 ft.	9.3 ft.	8.8 ft.	9.3 ft.	9.3 ft.	8.8 ft.	9.3 ft.
5.) NON–PRIMARY STREET SETBACK	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
6.) SIDE SETBACK	0 ft.**	0 ft.**	0 ft.**	0 ft.**	0 ft.**	0 ft.**	0 ft.**	0 ft.**	0 ft.**
–	19.5 ft.**	0 ft.**	0 ft.**	0 ft.**	0 ft.**	16.6 ft.**	2.0 ft.**	0 ft.**	14.6 ft.
SPACE BETWEEN ADJACENT BUILDINGS	n/a	n/a	n/a	n/a	n/a	22.1 ft.	22.1 ft.	n/a	n/a
7.) REAR SETBACK	54.8 ft.	52.0 ft.	50.6 ft.	46.7 ft.	23.4 ft.	20.1 ft.	53.5 ft.	62.7 ft.	62.8 ft.
8.) SITE COVERAGE	70.8%	74.0%	75.0%	76.9%	79.4%	43.6%	53.2%	67.0%	62.8%
3.70.5 PARKING & ACCESSORY STRUCTURES									
1.) PARKING & DRIVEWAY ACCESS	One access point provided on Nichols Street for two buildings.						One access on East Main St. for two bldgs.		
IF NO NON–PRIMARY STREET	One access point provided on East Main Street for two buildings.						One access on Nichols St. for two buildings.		
DRIVE WIDTH AT SIDEWALK	12 ft.	12 ft.	12 ft.	12 ft.	12 ft.	12 ft.	12 ft.	12 ft.	12 ft.
2.) ATTACHED GARAGE SETBACK	31.7 ft.	31.7 ft.	31.7 ft.	31.7 ft.	31.7 ft.	31.7 ft.	31.7 ft.	31.7 ft.	31.7 ft.
ALLOWED GARAGE DOOR LOCATION (FACADE)	Rear Bldg.	Rear Bldg.	Rear Bldg.	Rear Bldg.	Rear Bldg.	Rear Bldg.	Rear Bldg.	Rear Bldg.	Rear Bldg.
3.) PARKING LOT SIDE & REAR SETBACK	36.6 ft.	36.3 ft.	35.0 ft.	33.8 ft.	5.8 ft.	3.7 ft.	35.7 ft.	44.8 ft.	44.8 ft.

*Amendment to §3.70.4(1), Minimum lot width of 14' for row building subdivision where property line is divided by a party wall.

**Proposed buildings to be divided into individual lots along party walls.

***Total building width meets the minimum primary streetwall requirement with the sum of the respective lot widths.

****Lots 5, 6, 9, 10, 15, 20, 21, 26, 27, and 29 will need a variance as the total building widths do not meet the minimum primary streetwall requirement with the sum of the respective lot widths.



VICINITY MAP 1" = 800'

NOTES:

1. THIS SURVEY HAS BEEN PREPARED IN ACCORDANCE WITH THE REGULATIONS OF CONNECTICUT STATE AGENCIES, SECTIONS 20–300b–1THROUGH 20–300b–20, "THE MINIMUM STANDARDS OF ACCURACY, CONTENT AND CERTIFICATION FOR SURVEYS AND MAPS", AS AMENDED ON OCTOBER 26, 2018. THE TYPE OF SURVEY IS A SUBDIVISION MAP. THE BOUNDARY DETERMINATION CATEGORY IS DEPENDENT RESURVEY OF MAP REFERENCES 1 & 2. THIS SURVEY CONFORMS TO CLASS A–2 HORIZONTAL ACCURACY STANDARDS.

2. ALL MONUMENTATION FOUND OR SET HAS BEEN DEPICTED HEREON.

3. HORIZONTAL COORDINATES ARE REFERENCED TO NAD 1983.

4. PROPERTIES ARE IN A O–R ZONE DISTRICT.

5. PROPERTIES ARE SITUATED IN A FEMA ZONE X, PER FLOOD INSURANCE RATE MAP PANEL 441G, OF 626, MAP NO. 09001C0441G, MAP REVISED JULY 8, 2013.

6, UNDERGROUND UTILITIES ARE BASED ON MAP REFERENCE 1 & 2. LOCATIONS OF UNDERGROUND UTILITIES ARE TO BE CONSIDERED APPROXIMATE.

7. PORTIONS OF PROPERTIES ARE LOCATED IN COASTAL BOUNDARIES AS DEPICTED HEREON.

8. PORTIONS OF PROPERTIES ARE SITUATED WITHIN THE EAST BRIDGEPORT AND PEMBROKE CITY HISTORIC DISTRICT.

9. ALL IMPROVEMENTS DEPICTED WITHIN THE PROPERTIES LINE ARE PROPOSED.

10. FORMER 379–395 EAST MAIN ST. PARCEL IS SUBJECT TO AN EASEMENT TO SOUTHERN CONNECTICUT GAS COMPANY RECORDED IN VOL. 2702, PG. 131, FOR SERVICE TO A 6 STORY APARTMENT BUILDING, WHICH NO LONGER EXISTS.

11. PROPERTY IS SUBJECT TO A "DECLARATION OF RESTRICTIVE USE COVENANT", RECORDED IN VIOL. 10657, PG. 171.

TO MY KNOWLEDGE AND BELIEF THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

PHILIP L. TISO, L.S. CONN. LIC. No. 12324

NO CERTIFICATION IS EXPRESSED OR IMPLIED UNLESS THIS MAP BEARS THE SIGNATURE AND THE EMBOSSED SEAL OF THE ABOVE NAMED LAND SURVEYOR.

MAP REFERENCES:

1. "PROPERTY SURVEY AND TOPOGRAPHIC SURVEY, PREPARED FOR BRIDGEPORT LANDING DEVELOPMENT, LLC, ELEVEN PARCELS, LOCATED AT "STEELPOINTE NORTH", EAST MAIN STREET, (STATE ROUTE NO. 127), NICHOLS STREET & PEMBROKE STREET, BRIDGEPORT, CONNECTICUT, ASSESSORS REFERENCE, MAP 36, BLOCK 825, LOTS 22, 21, 20, 19, 17A, 16A, 15, 14A, 23A, &13, SHEET 1 OF 1, FEBRUARY 2, 2021, WASHINGTON CABEZAS, JR. PE, LS, SCALE 1"= 20', CABEZAS DEANGELIS, LLC, ENGINEERS & SURVEYORS.

2. "PROPERTY SURVEY AND TOPOGRAPHIC SURVEY, PREPARED FOR BRIDGEPORT LANDING DEVELOPMENT, LLC, FIVE PARCELS, LOCATED AT "STEELPOINTE NORTH", EAST MAIN STREET, (STATE ROUTE NO. 127), & NICHOLS STREET BRIDGEPORT, CONNECTICUT, ASSESSORS REFERENCE, MAP 36, BLOCK 808, LOTS 3, 2A, 2, 1E, & 7 SHEET 1 OF 1, FEBRUARY 2, 2021, WASHINGTON CABEZAS, JR. PE, LS, SCALE 1"= 20', CABEZAS DEANGELIS, LLC, ENGINEERS & SURVEYORS.

REVISIONS

NO.	DESCRIPTION	DATE
1.	ZBA Lots 5, 6, 9, 10, 15, 20, 21, 26, 27 & 29 85% Primary Street Wall	7/12/2024

0 10' 30' 60' 90'
SCALE IN FEET

SUBDIVISION MAP

OF PROPERTY LOCATED AT

371 & 378 EAST MAIN STREET

AND BOUNDED ON NICHOLS STREET

BRIDGEPORT, CONNECTICUT

PREPARED FOR

EATON ENTERPRISES, LLC

ROSE • TISO & CO. LLC.
ARCHITECTS • SURVEYORS • ENGINEERS
WWW.ROSETISO.COM
35 BRENTWOOD AVENUE, FAIRFIELD, CT 06825
TEL: (203)610-6262 • FAX: (203)610-6404

DATE: DECEMBER 7, 2023
SCALE: 1"=30'
DRAWN BY: PKG
CHECKED BY: PLT
SHEET 1 OF 1
DWG: 2772–M1
PATH: S:\2772–Bpt.–.Nich.\dwg

ZONE NX3 - ROW BLDG.	STANDARDS	LOT A PROPOSED	LOT 1 PROPOSED	LOT 2 PROPOSED	LOT 3 PROPOSED	LOT 4 PROPOSED	LOT 5 PROPOSED	LOT 6 PROPOSED	LOT 7 PROPOSED	LOT 8 PROPOSED
3.70.4 BUILDING LOCATION	–									
1.) LOT WIDTH	14 ft. min.*	45.00 ft.	23.90 ft.	20.23 ft.	20.23 ft.	20.23 ft.	29.21 ft.*	27.47 ft.	20.23 ft.	20.23 ft.
2.) PRIMARY STREETWALL	85% min.	No Bldg.	85.1%	100.0%	100.0%	100.0%	69.6%***	74.0%***	100.0%	100.0%
FACADE WIDTH PER STREET FRONTAGE	3 min, 10 max units	No Bldg.	5 Units per Building with Lots 1–5 (101.38', 89.1% Total Streetwall)					4 Units per Building w/Lots 6–9 (81.15', 85.1% Tot. St-Wall)		
3.) PRIMARY STREET TO BUILD LINE	10 ft.	No Bldg.	10.3 ft.	10.3 ft.	10.3 ft.	10.3 ft.	10.3 ft.	10.3 ft.	10.3 ft.	10.3 ft.
4.) PORCH, ENCLOSED PORCH, BAY SETBACK	5 ft. min.	No Bldg.	9.3 ft.	8.8 ft.	9.3 ft.	8.8 ft.	9.3 ft.	8.8 ft.	9.3 ft.	8.8 ft.
5.) NON–PRIMARY STREET SETBACK	5 ft. min	No Bldg.	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
6.) SIDE SETBACK	2 ft. min.**	No Bldg.	0 ft.**	0 ft.**	0 ft.**	0 ft.**	0 ft.**	0 ft.**	0 ft.**	0 ft.**
–	8 ft. total both sides**	No Bldg.	3.6 ft.**	0 ft.**	0 ft.**	0 ft.**	8.9 ft.**	7.1 ft.**	0 ft.**	0 ft.**
SPACE BETWEEN ADJACENT BUILDINGS	6 ft. min.**	No Bldg.	n/a	n/a	n/a	n/a	16.0 ft.	16.0 ft.	n/a	n/a
7.) REAR SETBACK	20 ft. min.	No Bldg.	34.8 ft.	37.1 ft.	39.6 ft.	42.3 ft.	45.1 ft.	59.2 ft.	63.3 ft.	67.4 ft.
8.) SITE COVERAGE	80% max.	3.8%	63.7%	79.0%	79.3%	79.9%	71.8%	66.8%	64.3%	62.1%
3.70.5 PARKING & ACCESSORY STRUCTURES	–									
1.) PARKING & DRIVEWAY ACCESS	non–primary street	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
IF NO NON–PRIMARY STREET	primary street	No Bldg.	Three access points provided on Nichols Street for four buildings.					Three access points provided on Nichols St. for four bldgs.		
DRIVE WIDTH AT SIDEWALK	12 ft. max	n/a	12 ft.	12 ft.	12 ft.	12 ft.	12 ft.	12 ft.	12 ft.	12 ft.
2.) ATTACHED GARAGE SETBACK	rear; min. 15 ft.	31.7 ft.	31.7 ft.	31.7 ft.	31.7 ft.	31.7 ft.	31.7 ft.	31.7 ft.	31.7 ft.	31.7 ft.
ALLOWED GARAGE DOOR LOCATION (FACADE)	rear, not visible	No Gar.	Rear Bldg.	Rear Bldg.	Rear Bldg.	Rear Bldg.	Rear Bldg.	Rear Bldg.	Rear Bldg.	Rear Bldg.
3.) PARKING LOT SIDE & REAR SETBACK	3 ft. min.	No Gar.	17.1 ft.	20.3 ft.	22.0 ft.	25.6 ft.	27.6 ft.	43.3 ft.	46.0 ft.	51.5 ft.

ZONE NX3 - ROW BLDG.	LOT 9 PROPOSED	LOT 10 PROPOSED	LOT 11 PROPOSED	LOT 12 PROPOSED	LOT 13 PROPOSED	LOT 14 PROPOSED	LOT 15 PROPOSED	LOT 16 PROPOSED	LOT 17 PROPOSED	LOT 18 PROPOSED	LOT 19 PROPOSED
3.70.4 BUILDING LOCATION											
1.) LOT WIDTH	27.47 ft.	29.21 ft.	20.23 ft.	20.23 ft.	20.23 ft.	23.90 ft.	36.02 ft.	20.23 ft.	20.23 ft.	20.23 ft.	20.23 ft.
2.) PRIMARY STREETWALL	74.0%***	69.6%***	100.0%	100.0%	100.0%	85.1%	56.5%***	100.0%	100.0%	100.0%	100.0%
FACADE WIDTH PER STREET FRONTAGE		5 Units per Building with Lots 10–14 (101.38', 89.1% Total Streetwall)					6 Units per Building with Lots 15–20 (121.60', 85.0% Total Streetwall)				
3.) PRIMARY STREET TO BUILD LINE	10.3 ft.	10.3 ft.	10.3 ft.	10.3 ft.	10.3 ft.	10.3 ft.	10.3 ft.	10.3 ft.	10.3 ft.	10.3 ft.	10.3 ft.
4.) PORCH, ENCLOSED PORCH, BAY SETBACK	9.3 ft.	9.3 ft.	8.8 ft.	9.3 ft.	8.8 ft.	9.3 ft.	9.3 ft.	8.8 ft.	9.3 ft.	9.3 ft.	8.8 ft.
5.) NON–PRIMARY STREET SETBACK	n/a	n/a	n/a	n/a	n/a	n/a	8.7 ft.	n/a	n/a	n/a	n/a
6.) SIDE SETBACK	0 ft.**	0 ft.**	0 ft.**	0 ft.**	0 ft.**	0 ft.**	0 ft.**	0 ft.**	0 ft.**	0 ft.**	0 ft.**
–	7.1 ft.**	8.9 ft.**	0 ft.**	0 ft.**	0 ft.**	3.6 ft.**	8.7 ft.**	0 ft.**	0 ft.**	0 ft.**	0 ft.**
SPACE BETWEEN ADJACENT BUILDINGS	16.0 ft.	16.0 ft.	n/a	n/a	n/a	59.2 ft.	62.2 ft.	59.2 ft.	59.9 ft.	61.7 ft.	70.1 ft.
7.) REAR SETBACK	71.4 ft.	74.7 ft.	75.1 ft.	77.6 ft.	81.7 ft.	81.7 ft.	58.7 ft.	55.4 ft.	52.1 ft.	48.8 ft.	45.6 ft.
8.) SITE COVERAGE	59.6%	60.0%	58.7%	56.2%	56.1%	52.4%	55.1%	79.3%	78.9%	80.0%	79.7%
3.70.5 PARKING & ACCESSORY STRUCTURES											
1.) PARKING & DRIVEWAY ACCESS	n/a	n/a	n/a	n/a	n/a	n/a	Three access points provided on Nichols Street for four buildings.				
IF NO NON–PRIMARY STREET		Three access points provided on Nichols Street for four buildings.					n/a	n/a	n/a	n/a	n/a
DRIVE WIDTH AT SIDEWALK	12 ft.	12 ft.	12 ft.	12 ft.	12 ft.	12 ft.	12 ft.	12 ft.	12 ft.	12 ft.	12 ft.
2.) ATTACHED GARAGE SETBACK	31.7 ft.	31.7 ft.	31.7 ft.	31.7 ft.	31.7 ft.	31.7 ft.	31.7 ft.	31.7 ft.	31.7 ft.	31.7 ft.	31.7 ft.
ALLOWED GARAGE DOOR LOCATION (FACADE)	Rear Bldg.	Rear Bldg.	Rear Bldg.	Rear Bldg.	Rear Bldg.	Rear Bldg.	Rear Bldg.	Rear Bldg.	Rear Bldg.	Rear Bldg.	Rear Bldg.
3.) PARKING LOT SIDE & REAR SETBACK	54.2 ft.	56.7 ft.	57.2 ft.	60.5 ft.	64.2 ft.	65.2 ft.	41.2 ft.	39.0 ft.	34.6 ft.	32.5 ft.	28.1 ft.

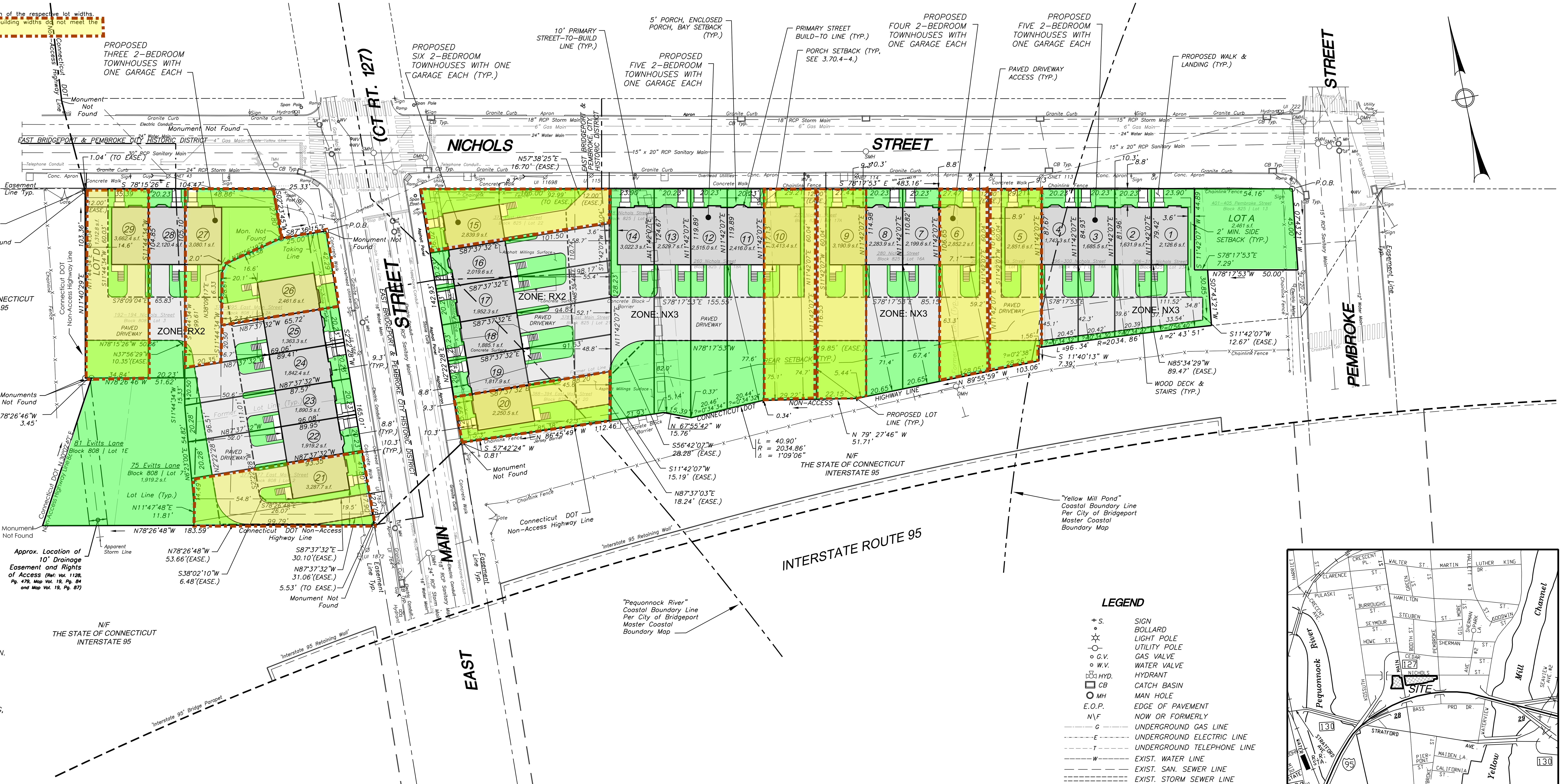
ZONE NX3 - ROW BLDG.	LOT 20 PROPOSED	LOT 21 PROPOSED	LOT 22 PROPOSED	LOT 23 PROPOSED	LOT 24 PROPOSED	LOT 25 PROPOSED	LOT 26 PROPOSED	LOT 27 PROPOSED	LOT 28 PROPOSED	LOT 29 PROPOSED
3.70.4 BUILDING LOCATION										
1.) LOT WIDTH	25.99 ft.	41.8 ft.	20.23 ft.	20.23 ft.	20.23 ft.	20.23 ft.	42.29 ft.	23.90 ft.	20.23 ft.	35.39 ft.
2.) PRIMARY STREETWALL	78.3%***	48.7%****	100.0%	100.0%	100.0%	100.0%	48.1%****	41.6%****	100.0%	57.5%****
FACADE WIDTH PER STREET FRONTAGE		6 Units per Building with Lots 15–20 (121.60', 94.7% Total Streetwall)						3 Units per Bldg w/Lots 27–29 (60.92', 91.6%)		
3.) PRIMARY STREET TO BUILD LINE	10.3 ft.	10.3 ft.	10.3 ft.	10.3 ft.	10.3 ft.	10.3 ft.	10.3 ft.	10.3 ft.	10.3 ft.	10.3 ft.
4.) PORCH, ENCLOSED PORCH, BAY SETBACK	9.3 ft.	9.3 ft.	8.8 ft.	9.3 ft.	9.3 ft.	8.8 ft.	9.3 ft.	9.3 ft.	8.8 ft.	9.3 ft.
5.) NON–PRIMARY STREET SETBACK	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
6.) SIDE SETBACK	0 ft.**	0 ft.**	0 ft.**	0 ft.**	0 ft.**	0 ft.**	0 ft.**	0 ft.**	0 ft.**	0 ft.**
–	5.3 ft.**	19.5 ft.**	0 ft.**	0 ft.**	0 ft.**	0 ft.**	16.6 ft.**	2.0 ft.**	0 ft.**	14.6 ft.
SPACE BETWEEN ADJACENT BUILDINGS	82.7 ft.	n/a	n/a	n/a	n/a	n/a	22.1 ft.	22.1 ft.	n/a	n/a
7.) REAR SETBACK	42.3 ft.	54.8 ft.	52.0 ft.	50.6 ft.	46.7 ft.	23.4 ft.	20.1 ft.	53.5 ft.	62.7 ft.	62.8 ft.
8.) SITE COVERAGE	60.5%	70.8%	74.0%	75.0%	76.9%	79.4%	43.6%	53.2%	67.0%	62.8%
3.70.5 PARKING & ACCESSORY STRUCTURES										
1.) PARKING & DRIVEWAY ACCESS		One access point provided on Nichols Street for two buildings.						One access on East Main St. for two bldgs.		
IF NO NON–PRIMARY STREET	n/a	One access point provided on East Main Street for two buildings.						One access on Nichols St. for two buildings.		
DRIVE WIDTH AT SIDEWALK	12 ft.	12 ft.	12 ft.	12 ft.	12 ft.	12 ft.	12 ft.	12 ft.	12 ft.	12 ft.
2.) ATTACHED GARAGE SETBACK	31.7 ft.	31.7 ft.	31.7 ft.	31.7 ft.	31.7 ft.	31.7 ft.	31.7 ft.	31.7 ft.	31.7 ft.	31.7 ft.
ALLOWED GARAGE DOOR LOCATION (FACADE)	Rear Bldg.	Rear Bldg.	Rear Bldg.	Rear Bldg.	Rear Bldg.	Rear Bldg.	Rear Bldg.	Rear Bldg.	Rear Bldg.	Rear Bldg.
3.) PARKING LOT SIDE & REAR SETBACK	25.9 ft.	36.6 ft.	36.3 ft.	35.0 ft.	33.8 ft.	5.8 ft.	3.7 ft.	35.7 ft.	44.8 ft.	44.8 ft.

*Amendment to §3.70.4(1), Minimum lot width of 14' for row building subdivision where property line is divided by a party wall.

**Proposed buildings to be divided into individual lots along party walls.

***Total building width meets the minimum primary streetwall requirement with the sum of the respective lot widths.

****Lots 5, 6, 9, 10, 15, 20, 21, 26, 27, and 29 will need a variance as the total building widths do not meet the minimum primary streetwall requirement with the sum of the respective lot widths.



VICINITY MAP 1" = 800'

NOTES:

1. THIS SURVEY HAS BEEN PREPARED IN ACCORDANCE WITH THE REGULATIONS OF CONNECTICUT STATE AGENCIES, SECTIONS 20–300b–1THROUGH 20–300b–20, "THE MINIMUM STANDARDS OF ACCURACY, CONTENT AND CERTIFICATION FOR SURVEYS AND MAPS", AS AMENDED ON OCTOBER 26, 2018. THE TYPE OF SURVEY IS A SUBDIVISION MAP. THE BOUNDARY DETERMINATION CATEGORY IS DEPENDENT RESURVEY OF MAP REFERENCES 1 & 2. THIS SURVEY CONFORMS TO CLASS A–2 HORIZONTAL ACCURACY STANDARDS.

2. ALL MONUMENTATION FOUND OR SET HAS BEEN DEPICTED HEREON.

3. HORIZONTAL COORDINATES ARE REFERENCED TO NAD 1983.

4. PROPERTIES ARE IN A O–R ZONE DISTRICT.

5. PROPERTIES ARE SITUATED IN A FEMA ZONE X, PER FLOOD INSURANCE RATE MAP PANEL 441G, OF 626, MAP NO. 09001C0441G, MAP REVISED JULY 8, 2013.

6. UNDERGROUND UTILITIES ARE BASED ON MAP REFERENCE 1 & 2. LOCATIONS OF UNDERGROUND UTILITIES ARE TO BE CONSIDERED APPROXIMATE.

7. PORTIONS OF PROPERTIES ARE LOCATED IN COASTAL BOUNDARIES AS DEPICTED HEREON.

8. PORTIONS OF PROPERTIES ARE SITUATED WITHIN THE EAST BRIDGEPORT AND PEMBROKE CITY HISTORIC DISTRICT.

9. ALL IMPROVEMENTS DEPICTED WITHIN THE PROPERTIES LINE ARE PROPOSED.

10. FORMER 379–395 EAST MAIN ST. PARCEL IS SUBJECT TO AN EASEMENT TO SOUTHERN CONNECTICUT GAS COMPANY RECORDED IN VOL. 2702, PG. 131, FOR SERVICE TO A 6 STORY APARTMENT BUILDING, WHICH NO LONGER EXISTS.

11. PROPERTY IS SUBJECT TO A "DECLARATION OF RESTRICTIVE USE COVENANT", RECORDED IN VIOL. 10657, PG. 171.

TO MY KNOWLEDGE AND BELIEF THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

PHILIP L. TISO, L.S. CONN. LIC. No. 12324

NO CERTIFICATION IS EXPRESSED OR IMPLIED UNLESS THIS MAP BEARS THE SIGNATURE AND THE EMBOSSED SEAL OF THE ABOVE NAMED LAND SURVEYOR.

MAP REFERENCES:

1. "PROPERTY SURVEY AND TOPOGRAPHIC SURVEY, PREPARED FOR BRIDGEPORT LANDING DEVELOPMENT, LLC, ELEVEN PARCELS, LOCATED AT "STEELPOINTE NORTH", EAST MAIN STREET, (STATE ROUTE NO. 127), NICHOLS STREET & PEMBROKE STREET, BRIDGEPORT, CONNECTICUT, ASSESSORS REFERENCE, MAP 36, BLOCK 825, LOTS 22, 21, 20, 19, 17A, 16A, 15, 14A, 23A, &13, SHEET 1 OF 1, FEBRUARY 2, 2021, WASHINGTON CABEZAS, JR. PE, LS, SCALE 1"= 20', CABEZAS DEANGELIS, LLC, ENGINEERS & SURVEYORS.

2. "PROPERTY SURVEY AND TOPOGRAPHIC SURVEY, PREPARED FOR BRIDGEPORT LANDING DEVELOPMENT, LLC, FIVE PARCELS, LOCATED AT "STEELPOINTE NORTH", EAST MAIN STREET, (STATE ROUTE NO. 127), & NICHOLS STREET BRIDGEPORT, CONNECTICUT, ASSESSORS REFERENCE, MAP 36, BLOCK 808, LOTS 3, 2A, 2, 1E, & 7 SHEET 1 OF 1, FEBRUARY 2, 2021, WASHINGTON CABEZAS, JR. PE, LS, SCALE 1"= 20', CABEZAS DEANGELIS, LLC, ENGINEERS & SURVEYORS.

*** LOTS 5, 6, 9, 10, 15, 20, 21, 26, 27, & 29 WILL REQUIRE A VARIANCE FOR 85% PRIMARY STREETWALL DUE TO THE DRIVEWAY ON LOTS 5, 6, 9, 10, 21 & 29 AND DUE TO THE UNUSUAL SHAPE OF THE LOT FOR LOTS 15, 20, 26 & 27

REVISIONS

NO.	DESCRIPTION	DATE
1.	ZBA Lots 5, 6, 9, 10, 15, 20, 21, 26, 27 & 29 85% Primary Street Wall	7/12/2024

0 10' 30' 60' 90'
SCALE IN FEET

SUBDIVISION MAP

OF PROPERTY LOCATED AT

371 & 378 EAST MAIN STREET

AND BOUNDED ON NICHOLS STREET

BRIDGEPORT, CONNECTICUT

PREPARED FOR

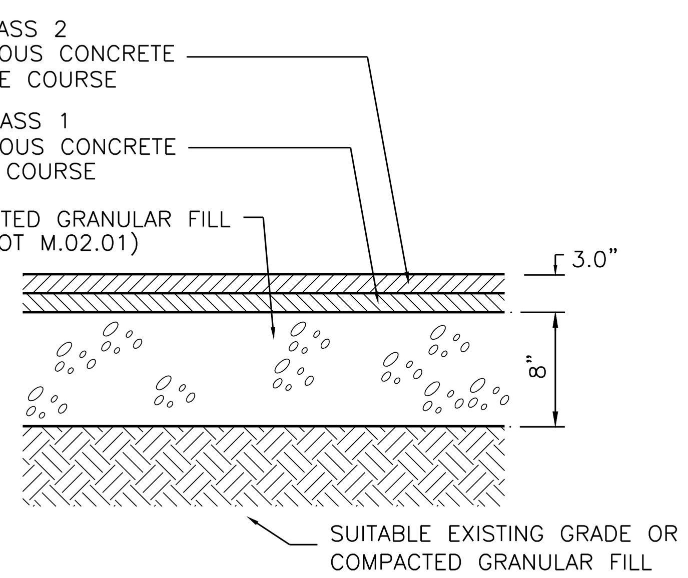
EATON ENTERPRISES, LLC

ROSE TISO & CO. LLC
ARCHITECTS SURVEYORS ENGINEERS

DATE: DECEMBER 7, 2023
SCALE: 1"=30'
DRAWN BY: PKG
CHECKED BY: PLT
SHEET 1 OF 1
DWG: 2772-M1
PATH: S:\2772-Bpt.-.Nich.\dwg

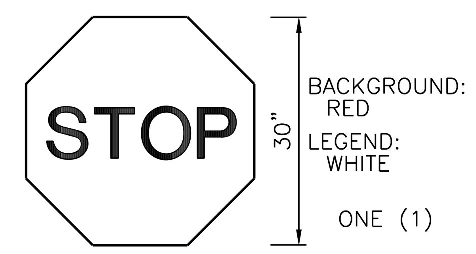
NOTES

1. THIS PLAN IS FOR PERMITTING ONLY AND IS NOT TO BE USED FOR CONSTRUCTION.
2. ALL PAVEMENT CURBING IS TO BE BITUMINOUS CONCRETE UNLESS OTHERWISE NOTED.
3. DO NOT SCALE DRAWING. DIMENSIONS GOVERN OVER SCALED DIMENSIONS.
4. ALL NOTES AND DIMENSIONS LABELED "TYP." APPLY TO ALL LIKE OR SIMILAR CONDITIONS THROUGHOUT THE PLAN SET.



3 INCH BITUMINOUS PAVEMENT

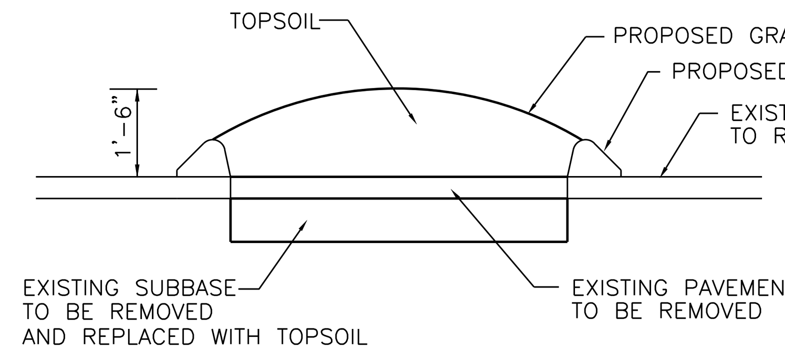
N.T.S.



STOP SIGN
CONNDOT #31-0552

TRAFFIC CONTROL SIGNS

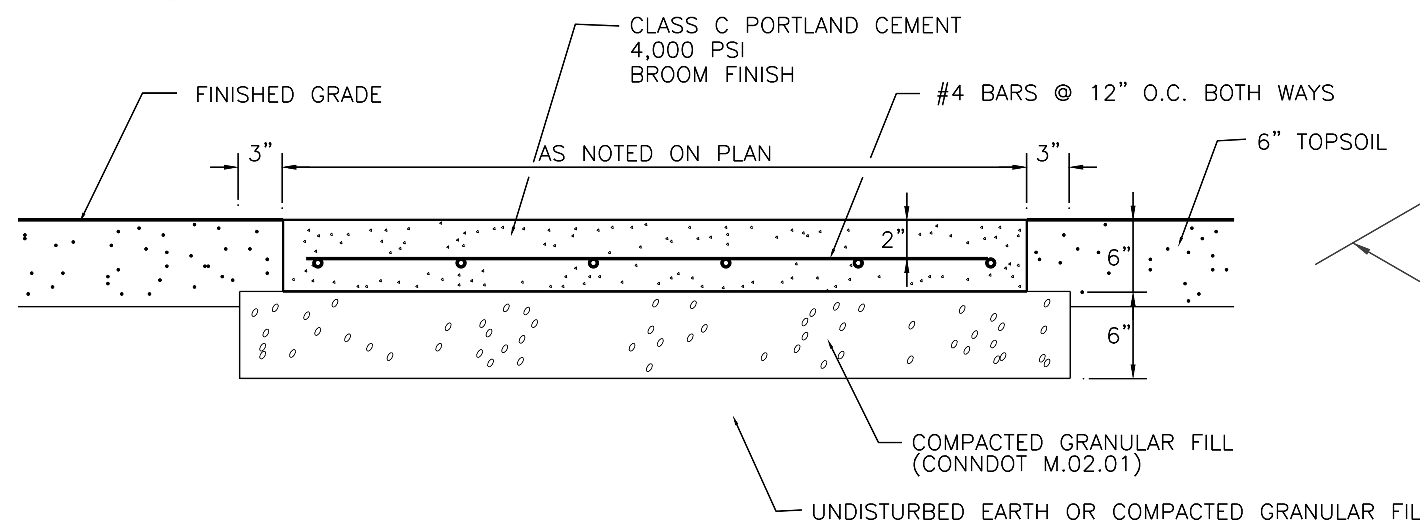
N.T.S.



NOTE:
APPLICABLE FOR ALL PROPOSED PLANTING BEDS PROPOSED WITHIN EXISTING PAVEMENT

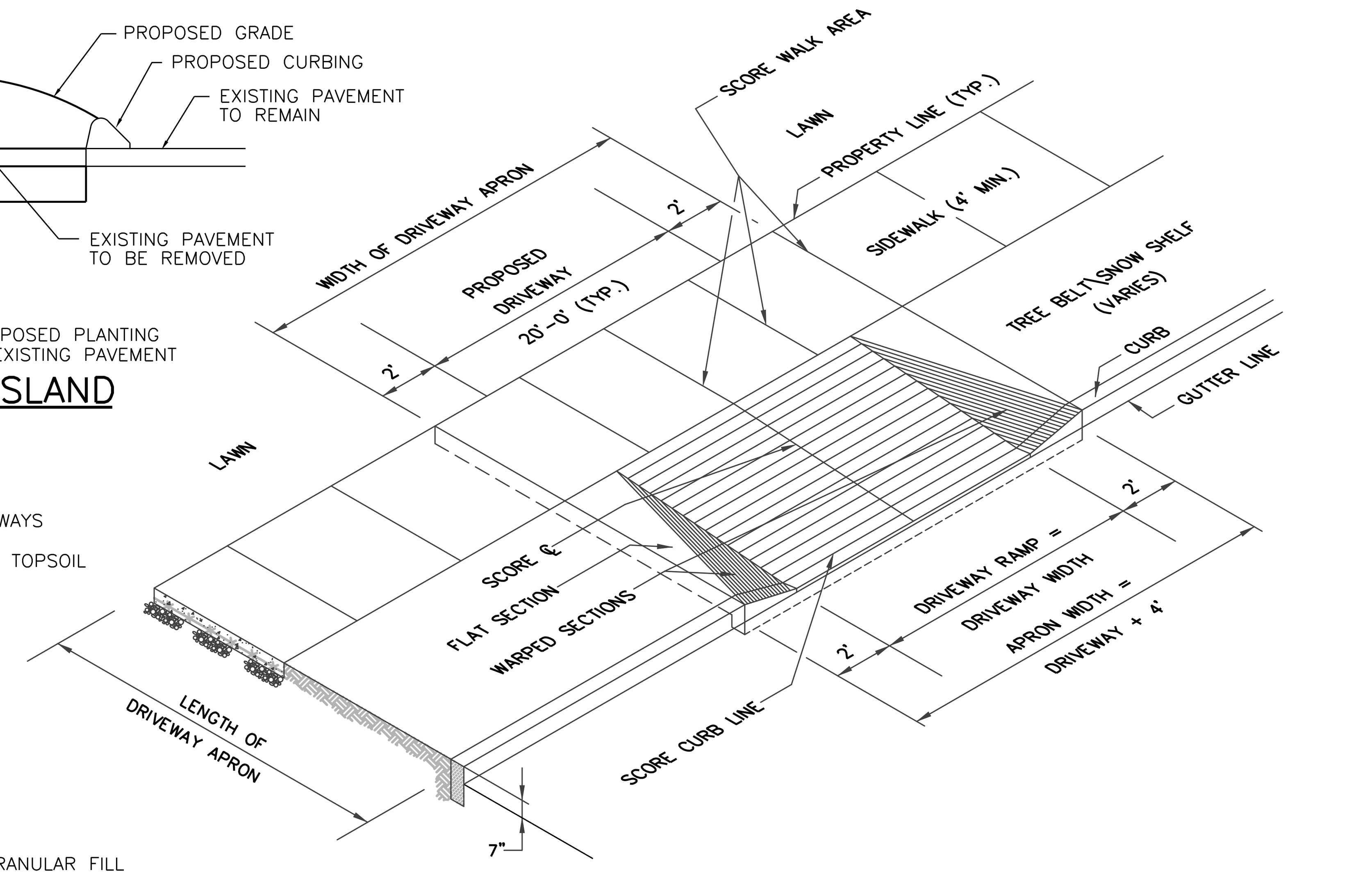
PLANTING ISLAND

N.T.S.



CONCRETE DUMPSTER PAD

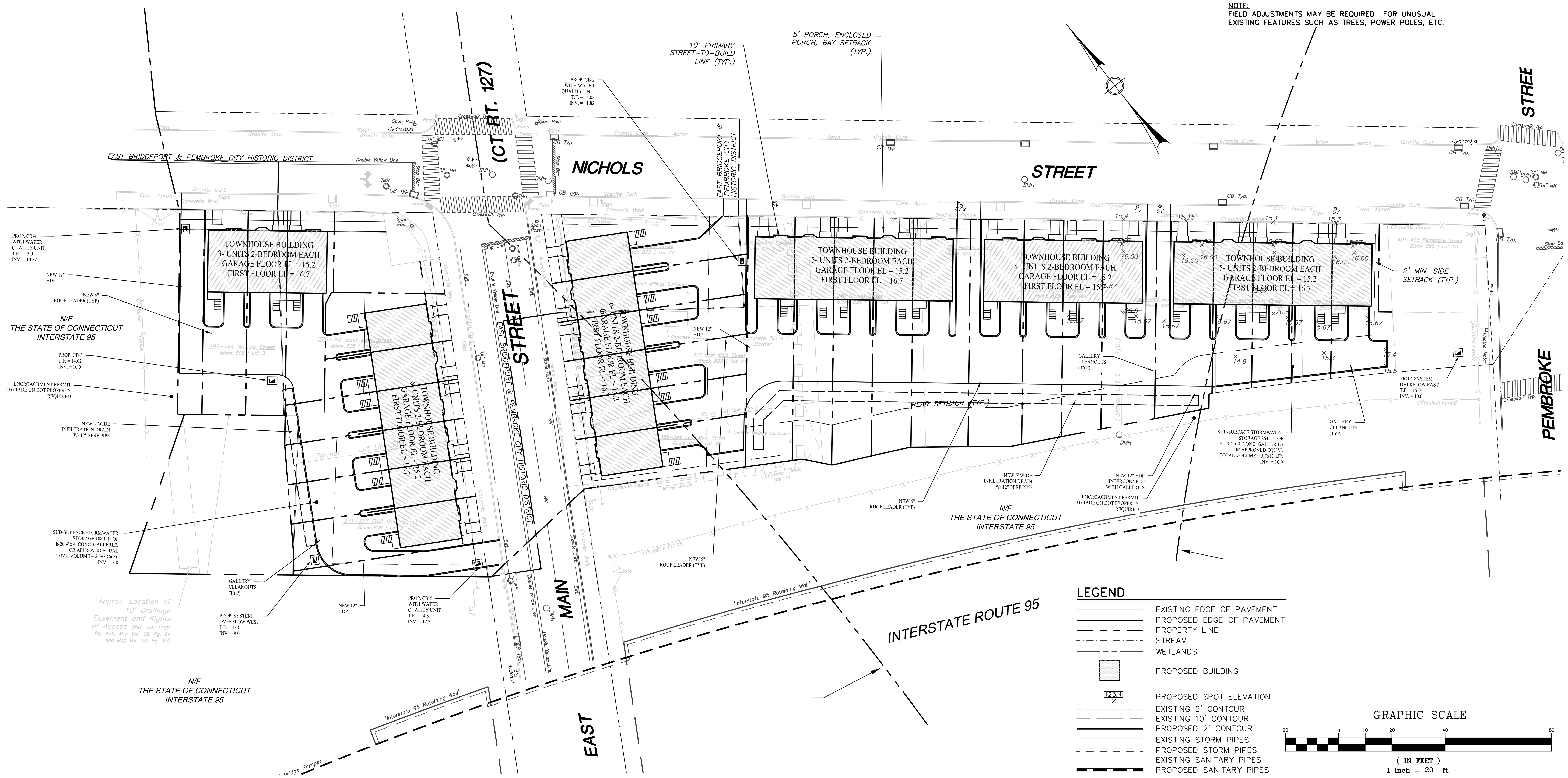
N.T.S.



TYPICAL CONCRETE DRIVEWAY RAMP (ISOMETRIC VIEW)

SCALE: 1/4"=1'-0"

NOTE:
FIELD ADJUSTMENTS MAY BE REQUIRED FOR UNUSUAL EXISTING FEATURES SUCH AS TREES, POWER POLES, ETC.



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REVISIONS			
NO.	BY	DATE	DESCRIPTION
1	MJS	06-07-24	DEEP COMMENTS

PROJECT TITLE

PROPOSED TOWNHOUSES

371 & 378 EAST MAIN STREET
BRIDGEPORT, CONNECTICUT

Prepared For:

EATON ENTERPRISES, LLC

SHEET TITLE

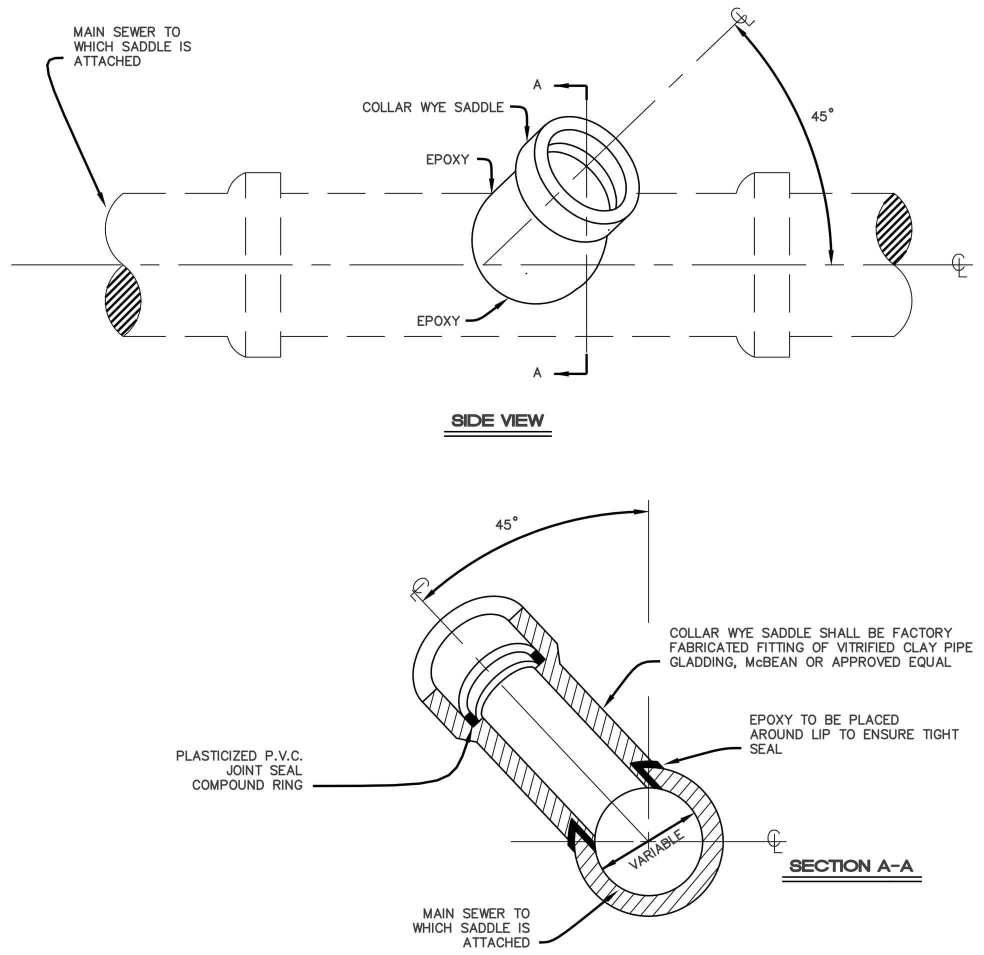
SITE PLAN

DESIGNED BY: PR	SCALE: 1"=20'
DRAWN BY: MJS	DATE: 05-01-24
CHECKED BY: MJS	PROJECT NUMBER: 2772
CAD FILE: R:\2772\DWG	

SEAL

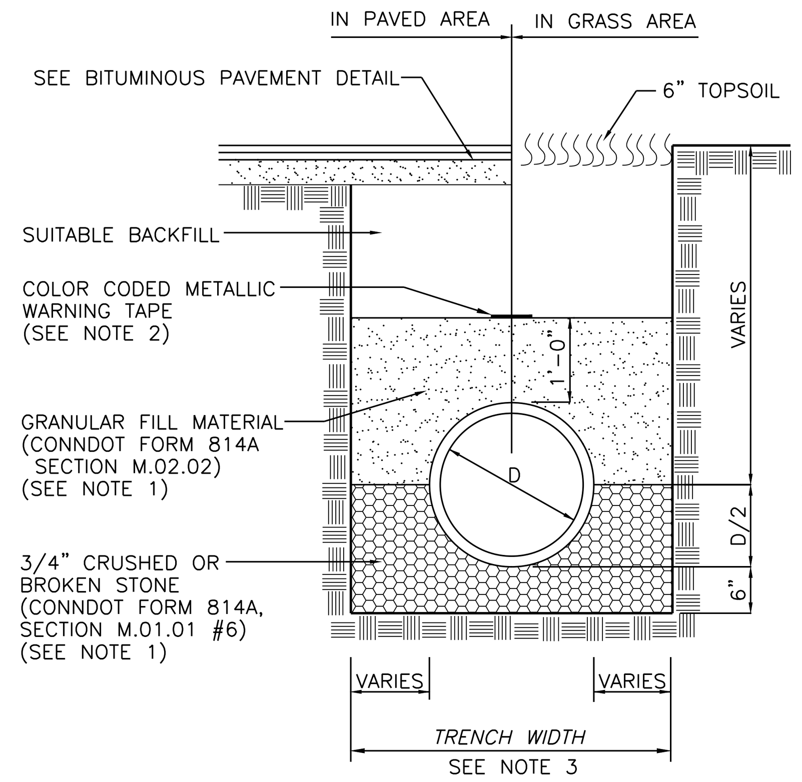
SHEET NUMBER

SP-1



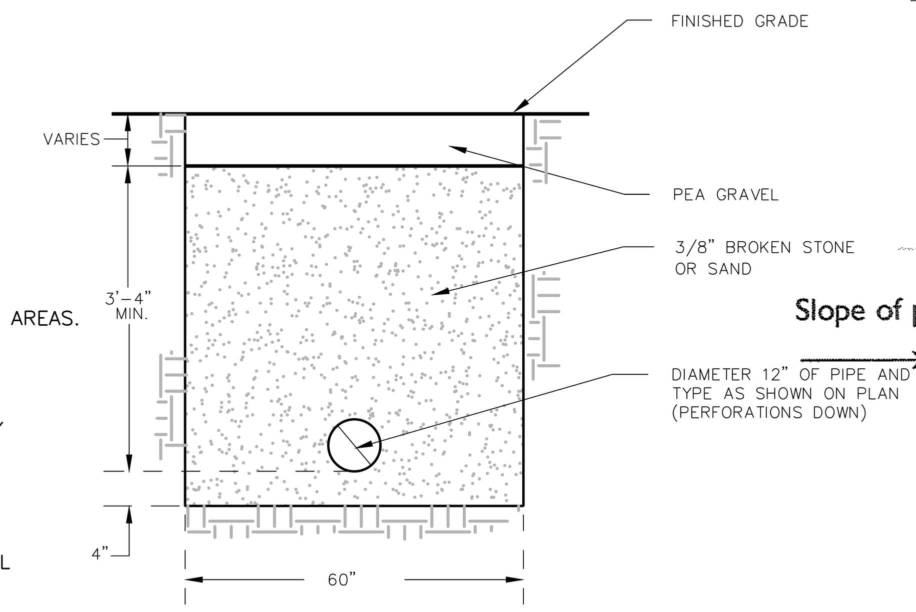
GENERAL NOTES

1. DRAWING NOT TO SCALE.
2. MAIN SEWER SHALL NOT BE SADDLED WHEN THE DIFFERENCE IN DIAMETER BETWEEN THE MAIN AND THE LATERAL IS LESS THAN 4".
3. NO SEWER SHALL BE SADDLED UNLESS THE CUT INTO THE MAIN IS MADE WITH A CORE DRILL WHICH CUTS A ROUND HOLE AND A COLLARED WYE IS FASTENED TO PIPE WITH EPOXY.
4. NO SEWER SHALL BE SADDLED WITHOUT PRIOR APPROVAL OF THE CITY ENGINEER.
5. ALL SADDLES SHALL BE APPROVED BY THE CITY ENGINEER BEFORE BACKFILLING.

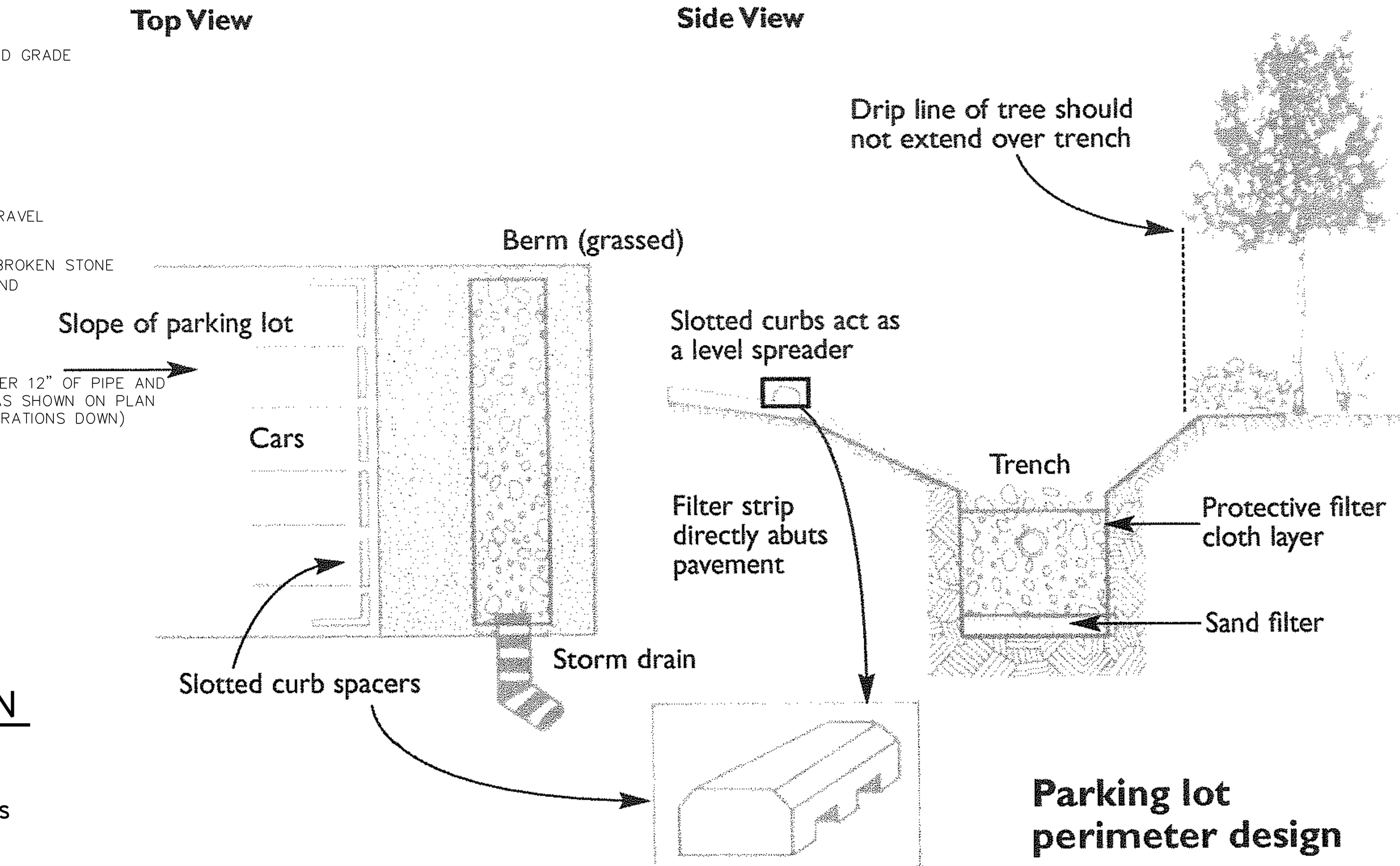


NOTES:
1. FILL MATERIALS SHALL BE COMPACTED TO 95% DRY DENSITY UNDER PAVED AREAS, SIDEWALKS AND OTHER STRUCTURES AND TO 90% DRY DENSITY (MIN.) UNDER UNPAVED AREAS.
2. COLOR OF METALLIC WARNING TAPE SHALL CONFORM TO:
   BLUE – WATER
   GREEN – STORM & SANITARY
   RED – ELECTRICAL
   ORANGE – COMMUNICATIONS
   YELLOW – GAS
3. TRENCH WIDTH SHALL BE D+2' WHEN D IS LESS THAN 30" AND SHALL BE D+3' WHEN D=30" OR LARGER.
   D = NOMINAL PIPE DIAMETER

TYPICAL UTILITY TRENCH
N.T.S.



12" PERFORATED PIPE UNDERDRAIN
SCALE 3/4"=1'-0"



FILTERING INFILTRATION TRENCH

TEST PIT LOGS

TEST PIT 1
- 00 – 5" TOPSOIL
- 5" –21" SANDY LOAM
- 21"–79" LT. BROWN COURSE SAND W/ GRAVEL

* LEDGE NONE
* GW NONE
* MOTTLING NONE
* ROOTS AT NONE"
* RESTRICTIVE LAYER NONE

PERCOLATION TEST RESULTS
Date: 4–21–24
PERC HOLE No. PT–1

TIME	DEPTH TO WATER
12:08	12.5"
12:18	15.5"
12:28	17"
12:38	18"
12:48	19"
12:58	20"

RATE: 1" IN 10 MIN

TEST PIT LOGS

TEST PIT 3
- 00 – 8" ASPHALT MILLINGS
- 8" –36" DARK BROWN SANDY LOAM
- 36"–84" LT. BROWN COURSE SAND W/ GRAVEL

* LEDGE NONE
* GW NONE
* MOTTLING NONE
* ROOTS AT 24"
* RESTRICTIVE LAYER NONE

PERCOLATION TEST RESULTS
Date: 4–21–24
PERC HOLE No. PT–5

TIME	DEPTH TO WATER
12:03	11"
12:13	15"
12:23	17"
12:33	18"
12:43	19"
12:53	20"

RATE: 1" IN 10 MIN

TEST PIT LOGS

TEST PIT 3
- 00 – 16" TOPSOIL
- 16" –84" DARK BROWN SANDY LOAM
- 84"–96" LT. BROWN COURSE SAND W/ GRAVEL

* LEDGE NONE
* GW NONE
* MOTTLING NONE
* ROOTS AT 24"
* RESTRICTIVE LAYER NONE

TEST PIT LOGS

TEST PIT 5
- 00 – 24" TOPSOIL
- 24" –80" DARK BROWN SANDY LOAM
- 80"–101" LT. BROWN COURSE SAND W/ GRAVEL

* LEDGE NONE
* GW NONE
* MOTTLING NONE
* ROOTS AT 24"
* RESTRICTIVE LAYER NONE

TEST PIT LOGS

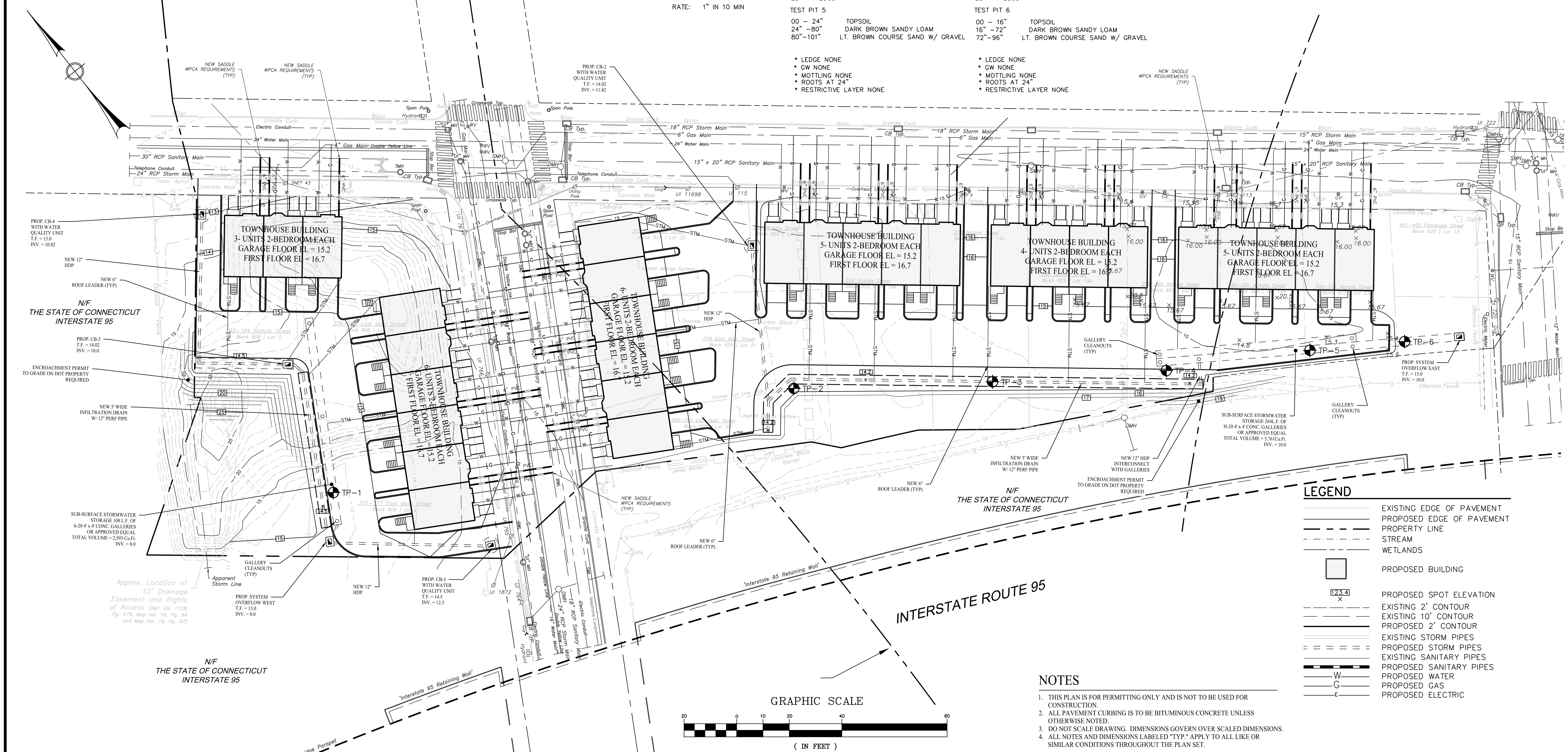
TEST PIT 4
- 00 – 16" TOPSOIL
- 16" –96" DARK BROWN SANDY LOAM
- 96"–107" LT. BROWN COURSE SAND W/ GRAVEL

* LEDGE NONE
* GW NONE
* MOTTLING NONE
* ROOTS AT 24"
* RESTRICTIVE LAYER NONE

TEST PIT LOGS

TEST PIT 6
- 00 – 16" TOPSOIL
- 16" –72" DARK BROWN SANDY LOAM
- 72"–96" LT. BROWN COURSE SAND W/ GRAVEL

* LEDGE NONE
* GW NONE
* MOTTLING NONE
* ROOTS AT 24"
* RESTRICTIVE LAYER NONE



NOTES

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LEGEND

- EXISTING EDGE OF PAVEMENT
- PROPOSED EDGE OF PAVEMENT
- PROPERTY LINE
- STREAM
- WETLANDS
- PROPOSED BUILDING
- 123.4 × PROPOSED SPOT ELEVATION
- EXISTING 2' CONTOUR
- EXISTING 10' CONTOUR
- PROPOSED 2' CONTOUR
- EXISTING STORM PIPES
- PROPOSED STORM PIPES
- EXISTING SANITARY PIPES
- PROPOSED SANITARY PIPES
- W PROPOSED WATER
- G PROPOSED GAS
- E PROPOSED ELECTRIC

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REVISIONS

NO.	BY	DATE	DESCRIPTION
1	MJS	06-07-24	DEEP COMMENTS

PROJECT TITLE

PROPOSED TOWNHOUSES

371 & 378 EAST MAIN STREET BRIDGEPORT, CONNECTICUT

Prepared For:

EATON ENTERPRISES, LLC

SHEET TITLE

GRADING & UTILITY PLAN

DESIGNED BY: PR	SCALE: 1"=20'
DRAWN BY: MJS	DATE: 05-01-24
CHECKED BY: MJS	PROJECT NUMBER: 2772
CAD FILE: R:\2772\DWG	

SEAL

SHEET NUMBER

SP-2

EROSION CONTROL NARRATIVE

1. THE PROPOSED DEVELOPMENT WILL CONSIST OF THE CREATION OF A 29 TOWNHOUSES TWO DRAINAGE SYSTEMS AND A PARKING LOT.

2. PROJECT START DATE FALL 2024
PROJECT COMPLETION DATE FALL 2026

3. CONSTRUCTION SEQUENCE

   A. INSTALL ALL EROSION CONTROL MEASURES TO THE EXTENT POSSIBLE. THIS WILL INCLUDE FILTER FABRIC FENCE AROUND THE PERIMETER OF THE PROJECT AND ANTI-TRACKING APRONS AT THE PROPOSED DRIVEWAY ENTRANCES.

   B. PROTECT EXISTING CATCH BASINS WITH STAKED HAY BALES AS INDICATED ON THE PLAN.

   C. ROUGH GRADE SITE AS REQUIRED FOR CONSTRUCTION OF PARKING AREA AND BUILDINGS. EXCESS FILL TO BE REMOVED FROM SITE.

   D. CONSTRUCT STORM DRAINAGE SYSTEM TO THE EXTENT POSSIBLE AS SHOWN ON THE PLAN. INSTALL STAKED HAY BALES AROUND ALL PROPOSED CATCH BASIN INLETS.

   E. INSTALL CURBING, SIDEWALKS, AND BITUMINOUS PAVEMENT AS SHOWN ON THE PLAN.

   F. SPREAD TOPSOIL AND STABILIZE WITH SEED AS SOON AS POSSIBLE.

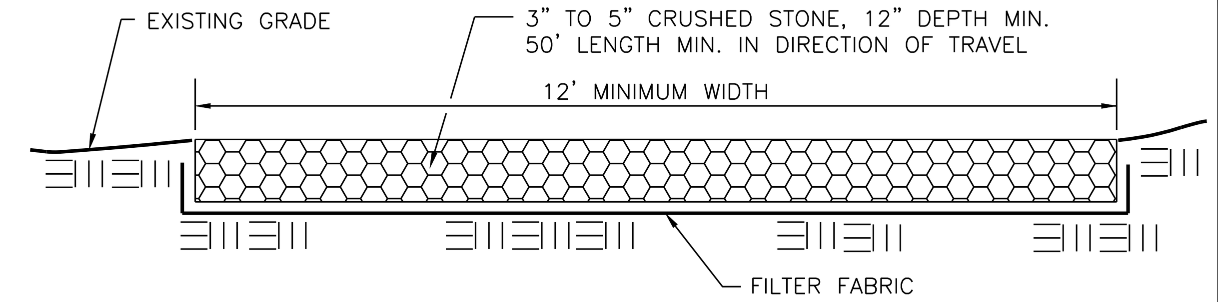
   G. INSTALL LANDSCAPING AS SHOWN ON THE PLAN.

   H. REMOVE ALL EROSION AND SEDIMENTATION CONTROL MEASURES ONCE SITE HAS BEEN STABILIZED WITH VEGETATED COVER.

   I. SITE CLEAN-UP.

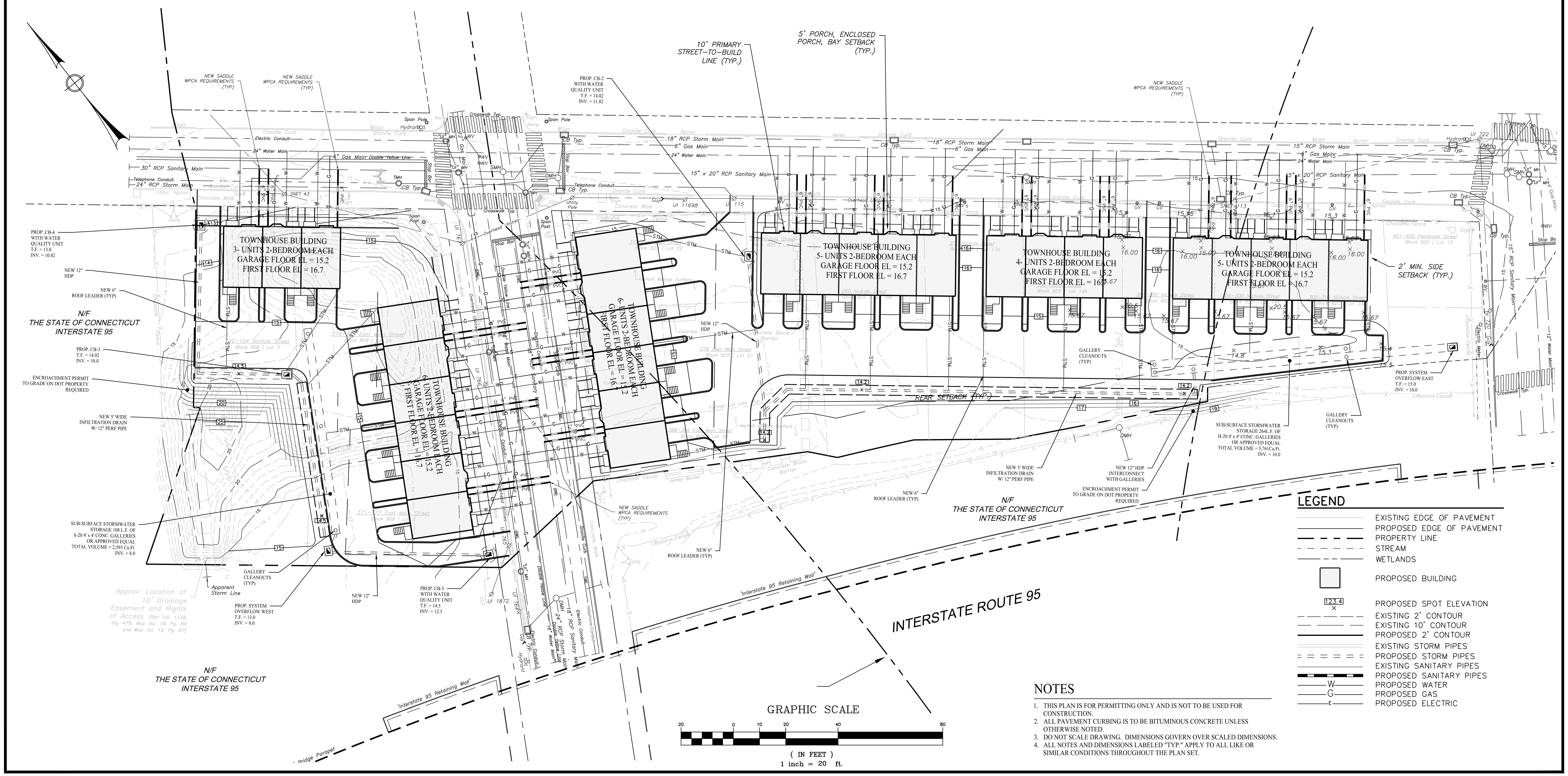
EROSION CONTROL NOTES

1. LAND DISTURBANCE WILL BE KEPT TO A MINIMUM; RESTABILIZATION WILL BE SCHEDULED AS SOON AS PRACTICAL.
2. HAY BALE AND/OR FABRIC FILTERS WILL BE INSTALLED AT ALL CULVERT OUTLETS AND ALONG THE TOE OF ALL CRITICAL CUT AND FILL SLOPES.
3. CATCH BASINS WILL BE PROTECTED WITH HAY BALE FILTERS THROUGHOUT THE CONSTRUCTION PERIOD AND UNTIL ALL DISTURBED AREAS ARE THOROUGHLY STABILIZED.
4. ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE "CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL".
5. EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED PRIOR TO CONSTRUCTION.
6. ALL EROSION CONTROL MEASURES WILL BE MAINTAINED DURING THE CONSTRUCTION PERIOD.
7. ADDITIONAL CONTROL MEASURES WILL BE INSTALLED DURING THE CONSTRUCTION PERIOD IF NECESSARY OR REQUIRED.
8. SEDIMENT REMOVED FROM CONTROL STRUCTURES WILL BE DISPOSED OF IN A MANNER WHICH IS CONSISTENT WITH THE INTENT OF THE PLAN.
9. THE CONTRACTOR IS ASSIGNED THE RESPONSIBILITY FOR IMPLEMENTING THIS EROSION AND SEDIMENT CONTROL PLAN. THIS RESPONSIBILITY INCLUDES THE INSTALLATION AND MAINTENANCE OF CONTROL MEASURES, INFORMING ALL PARTIES ENGAGED ON THE CONSTRUCTION SITE OF THE REQUIREMENTS AND OBJECTIVES OF THE PLAN AND FOR CONVEYING A COPY OF THE EROSION AND SEDIMENT CONTROL PLAN IF THE TITLE TO THE LAND IS TRANSFERRED.
10. NOTIFY AUTHORIZED CITY AGENT 48 HOURS IN ADVANCE PRIOR TO START OF ANY PHASE OF CONSTRUCTION.



THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC REPLACEMENT OF STONE AND/OR ADDITIONAL APRON LENGTH. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC RIGHTS-OF WAY MUST BE REMOVED IMMEDIATELY.

ANTI-TRACKING APRON
N.T.S.



LEGEND

———	EXISTING EDGE OF PAVEMENT
———	PROPOSED EDGE OF PAVEMENT
— — —	PROPERTY LINE
— · —	STREAM
— —	WETLANDS
▭	PROPOSED BUILDING
123.4 ×	PROPOSED SPOT ELEVATION
— —	EXISTING 2' CONTOUR
— —	EXISTING 10' CONTOUR
———	PROPOSED 2' CONTOUR
———	EXISTING STORM PIPES
= = =	PROPOSED STORM PIPES
— —	EXISTING SANITARY PIPES
━━━	PROPOSED SANITARY PIPES
—W—	PROPOSED WATER
—G—	PROPOSED GAS
—E—	PROPOSED ELECTRIC

NOTES

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4. ALL NOTES AND DIMENSIONS LABELED "TYP." APPLY TO ALL LIKE OR SIMILAR CONDITIONS THROUGHOUT THE PLAN SET.

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

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REVISIONS

NO.	BY	DATE	DESCRIPTION
1	MJS	06-07-24	DEEP COMMENTS

PROJECT TITLE

PROPOSED TOWNHOUSES

371 & 378 EAST MAIN STREET BRIDGEPORT, CONNECTICUT

Prepared For:

EATON ENTERPRISES, LLC

SHEET TITLE

SOIL EROSION CONTROL

DESIGNED BY: PR	SCALE: 1"=20'
DRAWN BY: MJS	DATE: 05-01-24
CHECKED BY: MJS	PROJECT NUMBER: 2772
CAD FILE: R:\2772\DWG	

SEAL

STATE OF CONNECTICUT — MANUEL JOSE SILVA — No. 29268 — LICENSED PROFESSIONAL ENGINEER

SHEET NUMBER

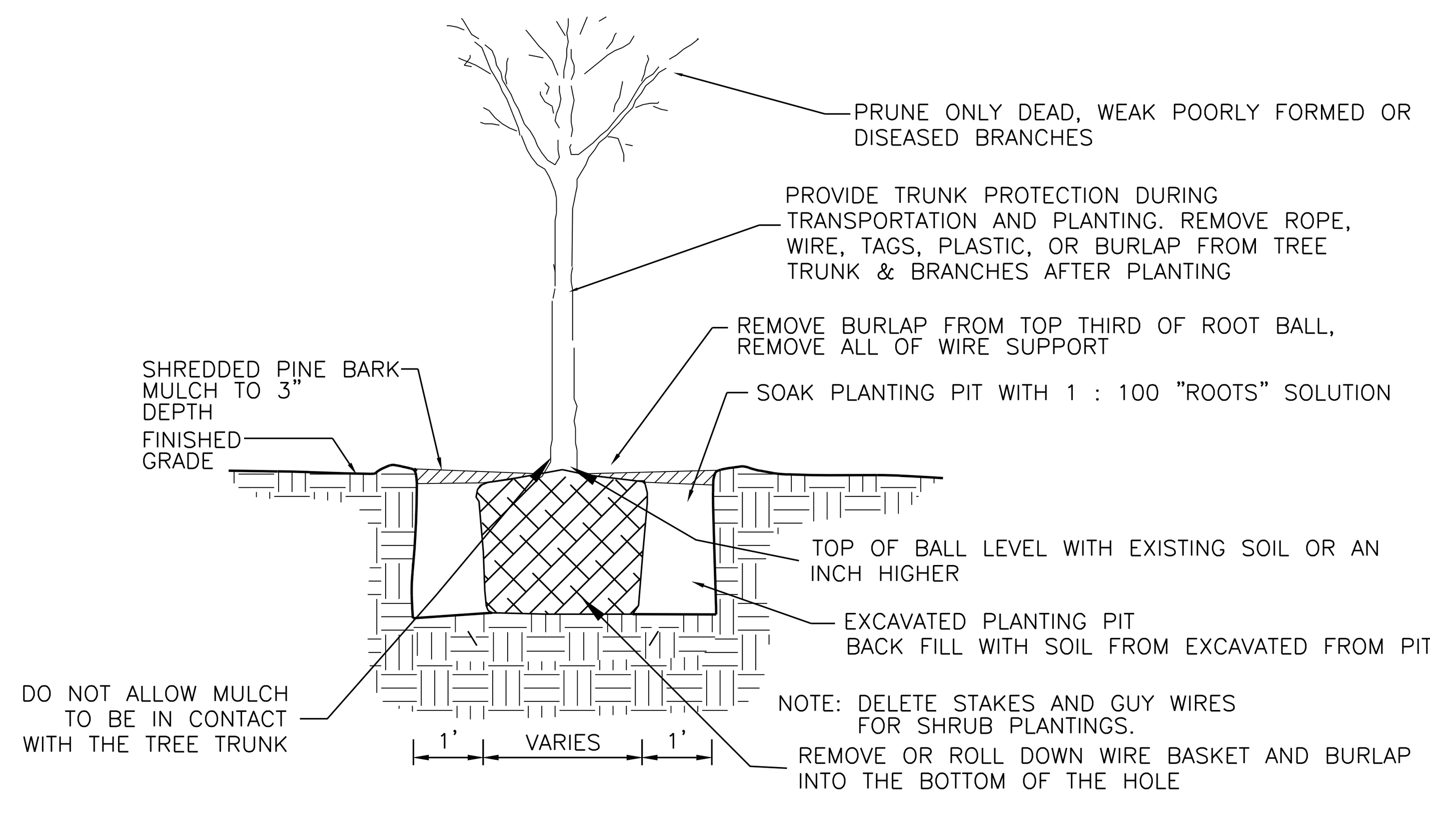
SP-3

PLANT LIST

KEY	QUANT.	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
TREES:					
	8	CORNUS KOUSA	KOREAN DOGWOOD	2" CAL.	B&B **
	7	PLANTANUS X ACERIFOLIA 'BLOODGOOD'	LONDON PLANE TREE	2-2 1/2" CAL.	B&B *
	4	THUJA OCCIDENTALIS	ARBORVITAE	7 FT.HT.	B&B
	17	ACER RUBRUM 'OCTOBER GLORY'	RED MAPLE	2-2 1/2" CAL	B&B
	15	QUERCUS PALUSTRIS	PIN OAK	2-2 1/2" CAL	B&B
	3	ABIES CONCOLOR	WHITE FIR	7 FT.HT.	B&B
	3	PINUS NIGRA	AUSTRIAN PINE	7 FT.HT.	B&B
SHRUBS:					
	26	TAXUS BACCATA 'REPANDENS'	SPREADING ENGLISH YEW	18-24" HT.	B&B

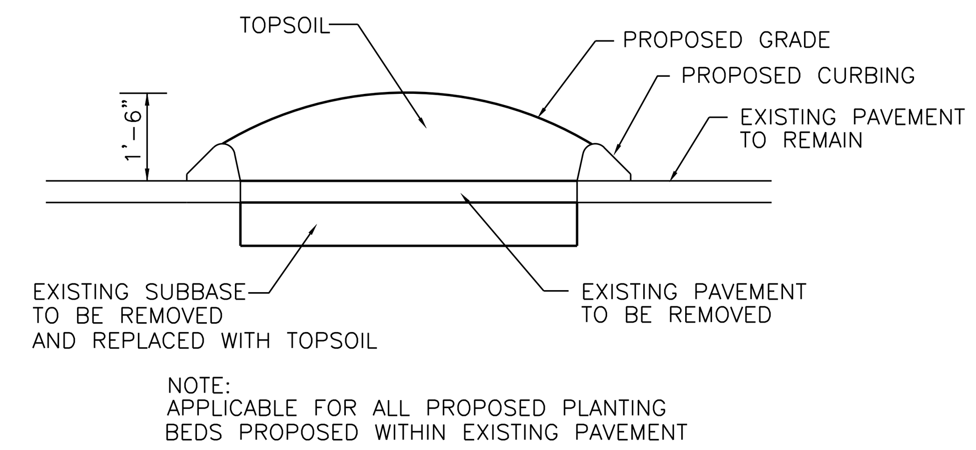
NOTES:

1. STAKE ONLY WHEN ABSOLUTELY NECESSARY AND AS DIRECTED BY THE OWNERS REPRESENTATIVE
2. PROTECT ALL TREES NOT TO BE REMOVED
3. *LOAM AND SEED ALL DISTURBED AREAS UNLESS OTHERWISE SPECIFIED.*
4. *GRASS SEEDING BLEND (BY WEIGHT) SHALL BE NK 200 PERENNIAL RYE GRASS 25%, KENTUCKY BLUEGRASS 25%, AND PENN LAWN RED FESCUE 50%.*
5. *PROVIDE PVC CONDUIT FOR LANDSCAPE ISLAND IRRIGATION.*
6. *SHADE TREES ARE TO HAVE 7' MIN BRANCHING FOR SAFETY.*
7. *REMOVAL OF EXISTING PUBLIC TREES REQUIRES WRITTEN NOTIFICATION OF AND PERMISSION OF TREE WARDEN OR D.O.T. DISTRICT 3, AS APPLICABLE.*



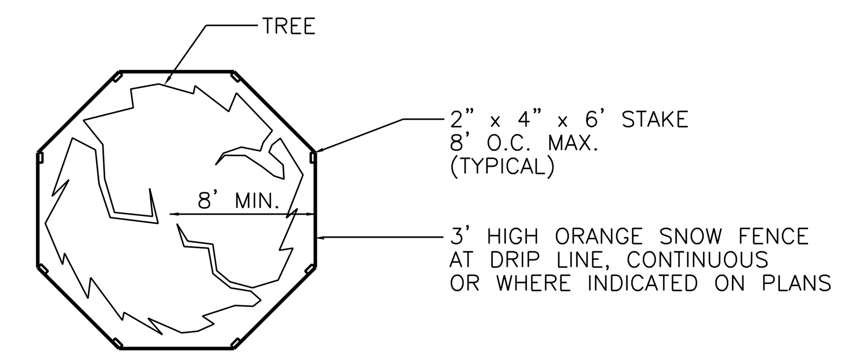
TREE AND SHRUB PLANTING DETAIL

N.T.S.



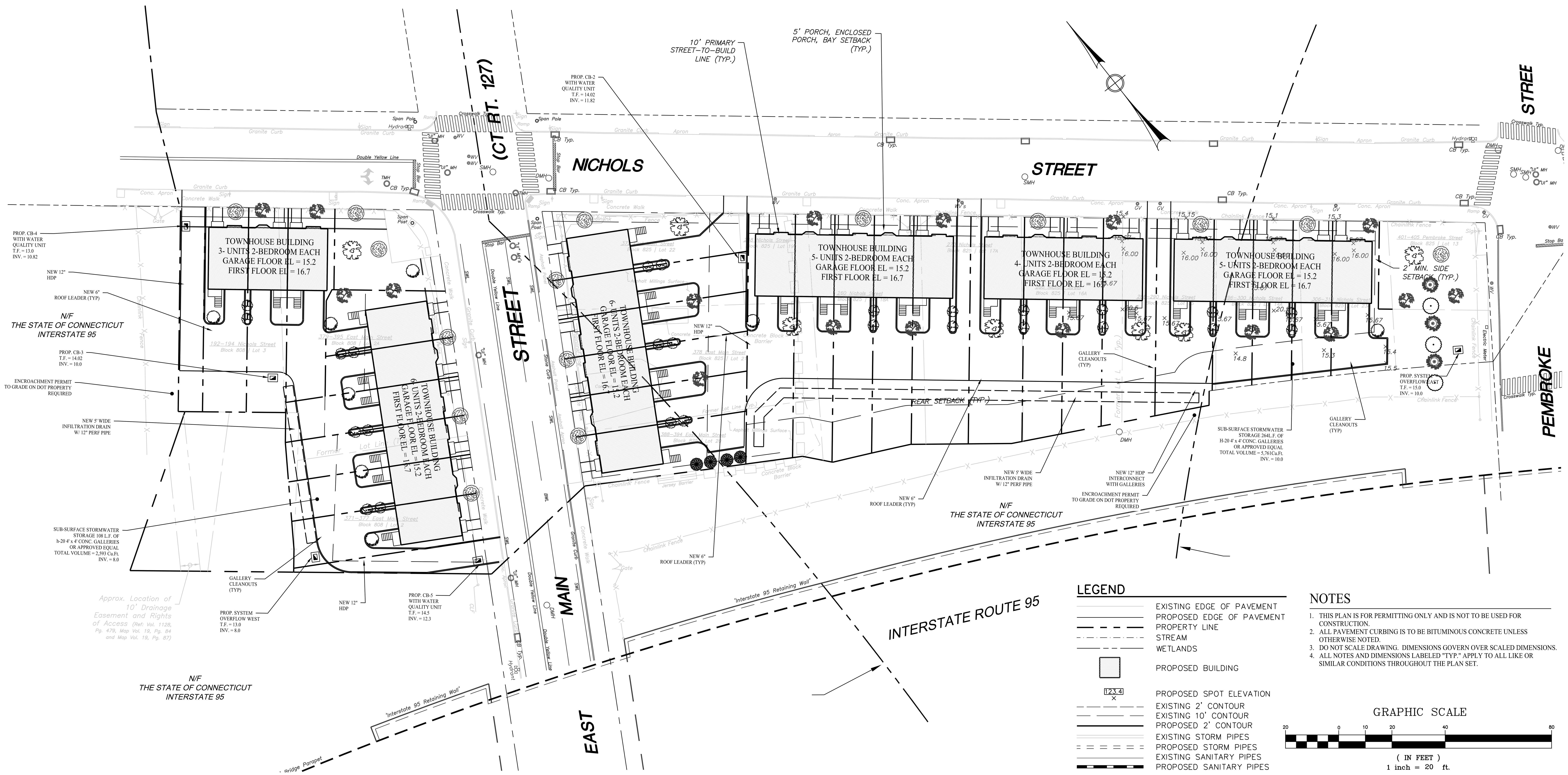
PLANTING ISLAND

N.T.S.



TREE PROTECTION

N.T.S.



LEGEND

- EXISTING EDGE OF PAVEMENT
- PROPOSED EDGE OF PAVEMENT
- PROPERTY LINE
- STREAM
- WETLANDS
- PROPOSED BUILDING
- PROPOSED SPOT ELEVATION
- EXISTING 2' CONTOUR
- EXISTING 10' CONTOUR
- PROPOSED 2' CONTOUR
- EXISTING STORM PIPES
- PROPOSED STORM PIPES
- EXISTING SANITARY PIPES
- PROPOSED SANITARY PIPES

NOTES

1. THIS PLAN IS FOR PERMITTING ONLY AND IS NOT TO BE USED FOR CONSTRUCTION.
2. ALL PAVEMENT CURBING IS TO BE BITUMINOUS CONCRETE UNLESS OTHERWISE NOTED.
3. DO NOT SCALE DRAWING. DIMENSIONS GOVERN OVER SCALED DIMENSIONS.
4. ALL NOTES AND DIMENSIONS LABELED "TYP." APPLY TO ALL LIKE OR SIMILAR CONDITIONS THROUGHOUT THE PLAN SET.

GRAPHIC SCALE

(IN FEET)
1 inch = 20 ft.

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35 BRENTWOOD AVENUE, FAIRFIELD, CT 06825
TEL: (203)610-6262 • FAX: (203)610-6404

REVISIONS			
NO.	BY	DATE	DESCRIPTION
1	MJS	06-07-24	DEEP COMMENTS

PROJECT TITLE

PROPOSED TOWNHOUSES

371 & 378 EAST MAIN STREET BRIDGEPORT, CONNECTICUT

Prepared For:

EATON ENTERPRISES, LLC

SHEET TITLE

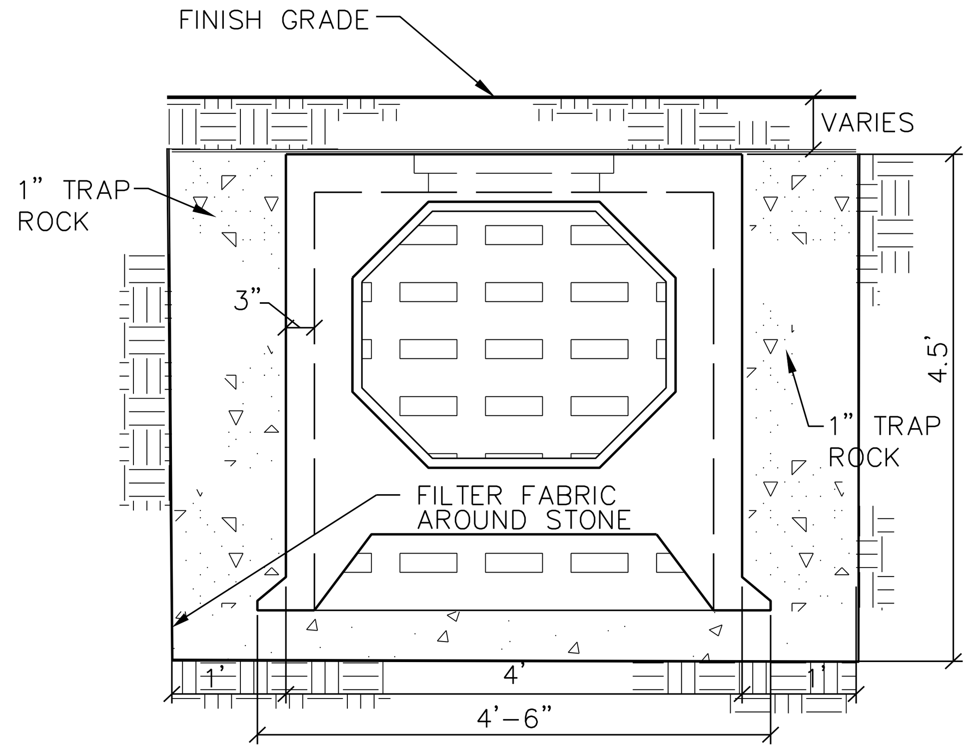
LANDSCAPE PLAN

DESIGNED BY: PR	SCALE: 1"=20'
DRAWN BY: MJS	DATE: 05-01-24
CHECKED BY: MJS	PROJECT NUMBER: 2772
CAD FILE: R:\2772\DWG	

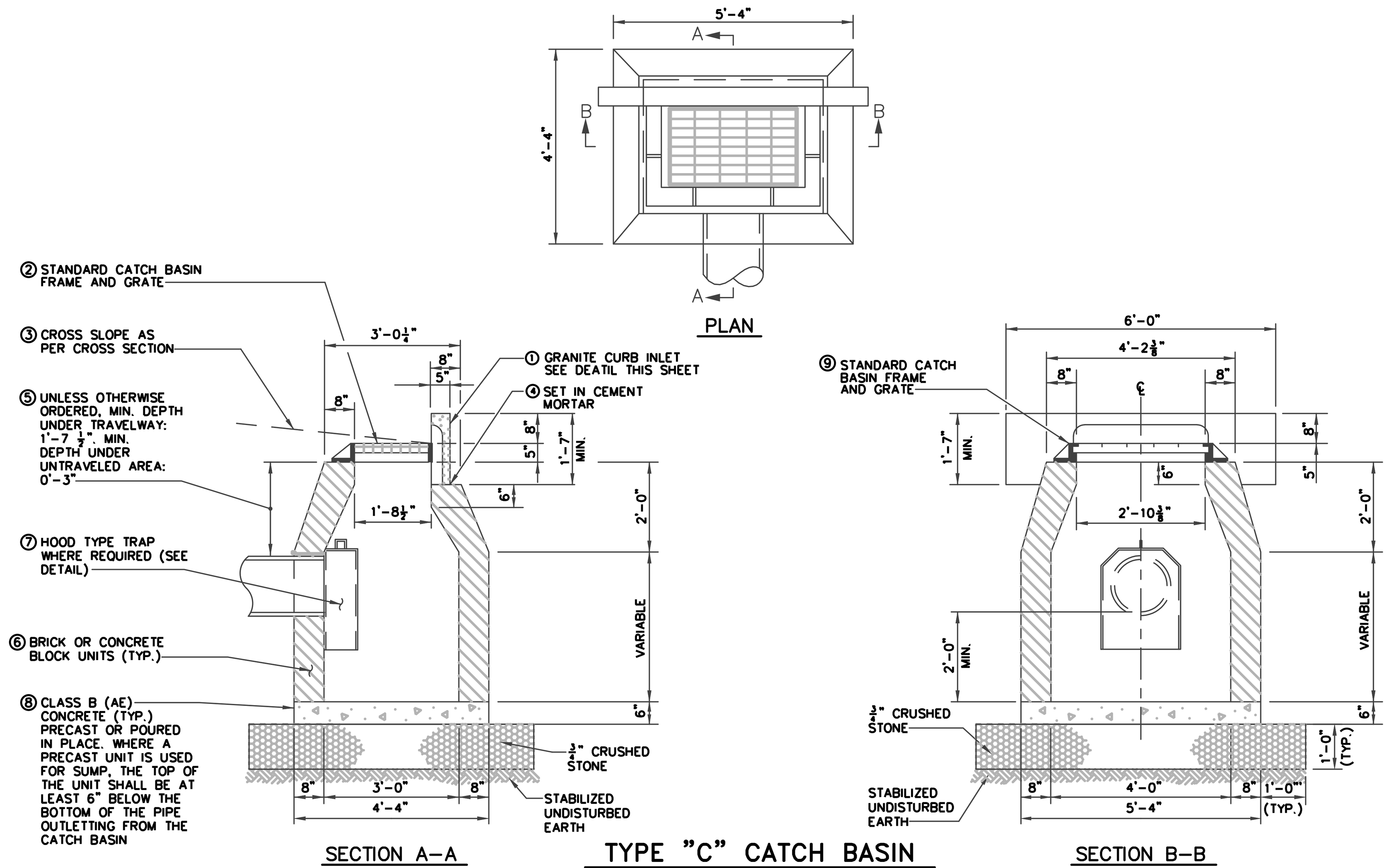
SEAL

SHEET NUMBER

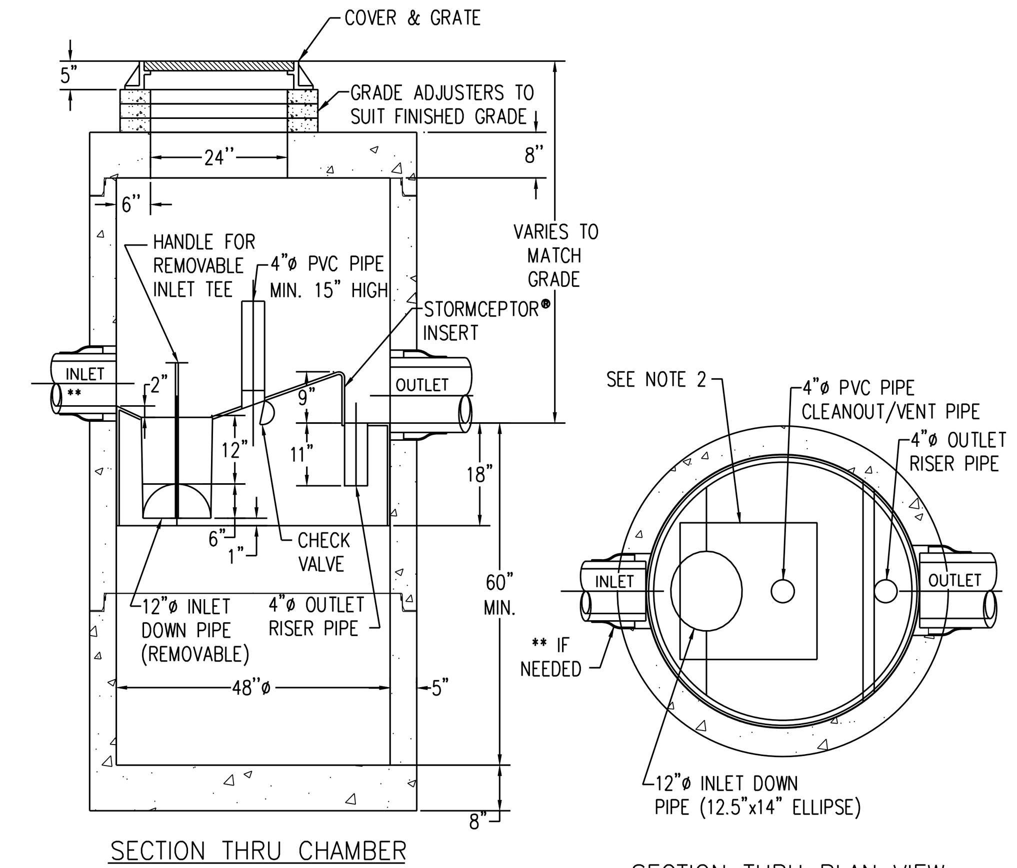
SP-4



TYPICAL 4'x4' GALLERY
SCALE: 1/2" = 1' - 0"

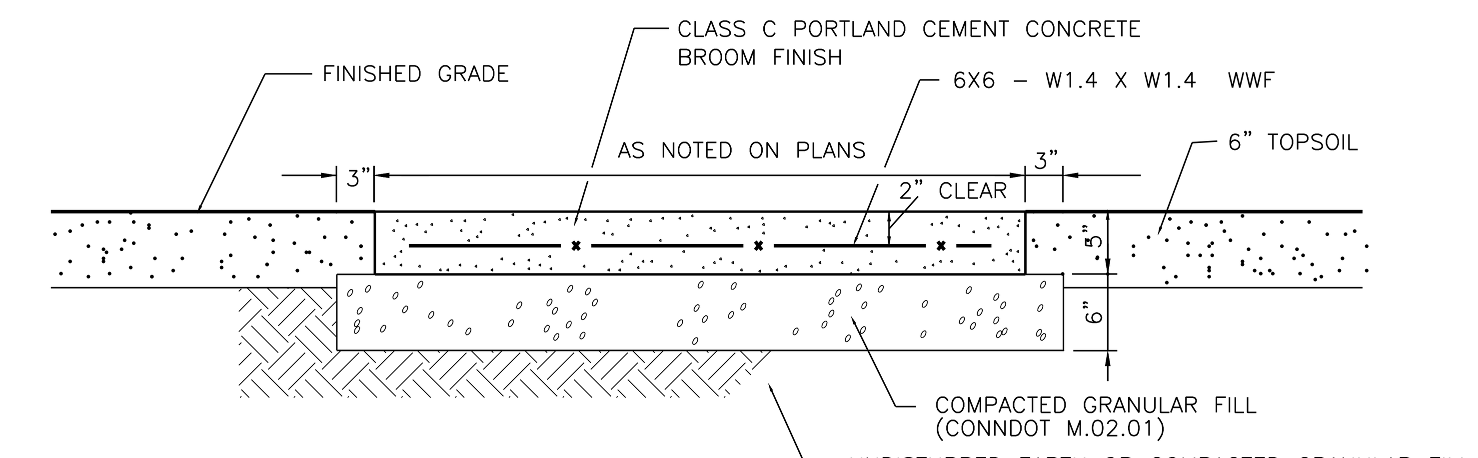


TYPE "C" CATCH BASIN
SCALE: 1/2"=1'-0"



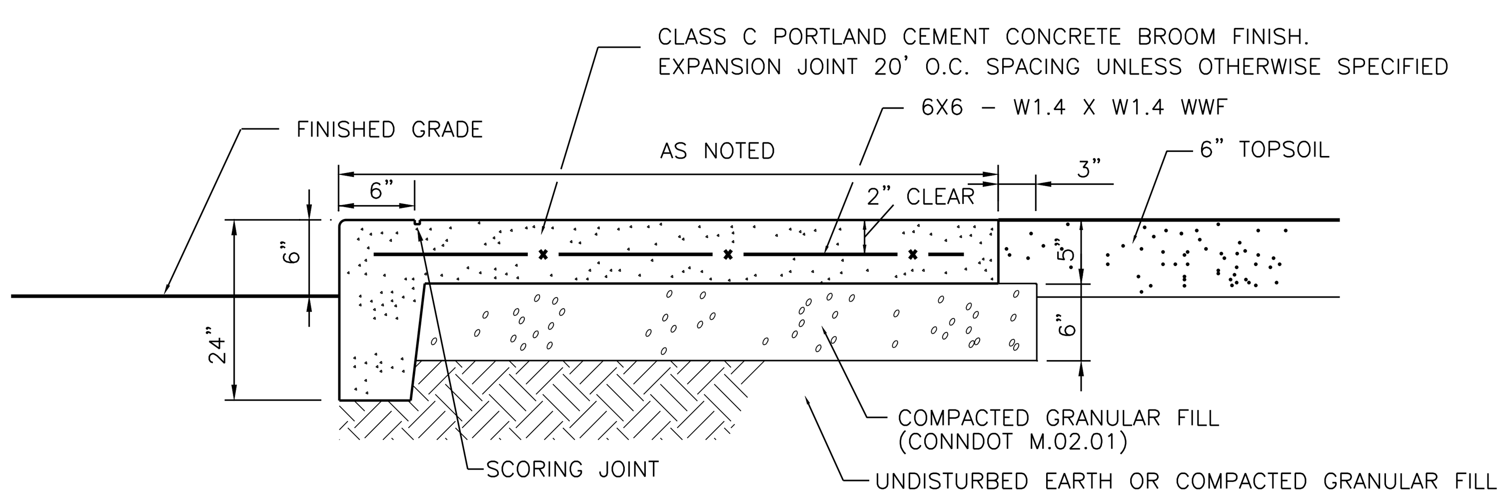
NOTE :
1. THE USE OF FLEXIBLE CONNECTIONS IS RECOMMENDED AT THE INLET AND OUTLET WHERE APPLICABLE.
2. THE COVER SHOULD BE POSITIONED OVER THE CLEANOUT/ VENT PIPE.
3. THIS IS A GENERAL ARRANGEMENT DRAWING CONSULT LOCAL REPRESENTATIVE FOR SPECIAL CONDITIONS.

STORMCEPTOR STC 450i
N.T.S.

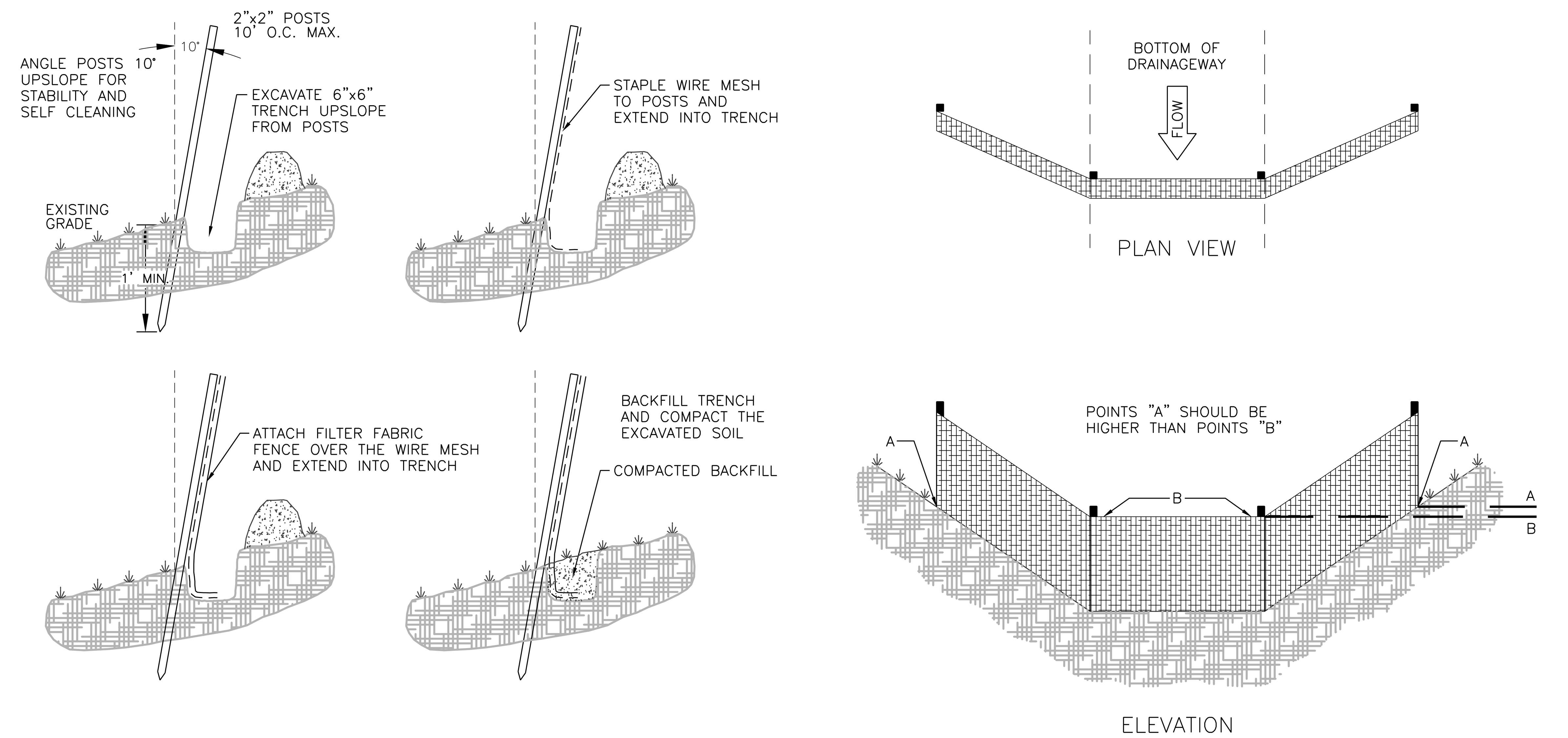


NOTE: 1/2" PREMOLDED EXPANSION JOINTS SHALL BE INSTALLED AT 20' O.C., AND CONTROL JOINTS AT 5' OC UNLESS OTHERWISE SPECIFIED.

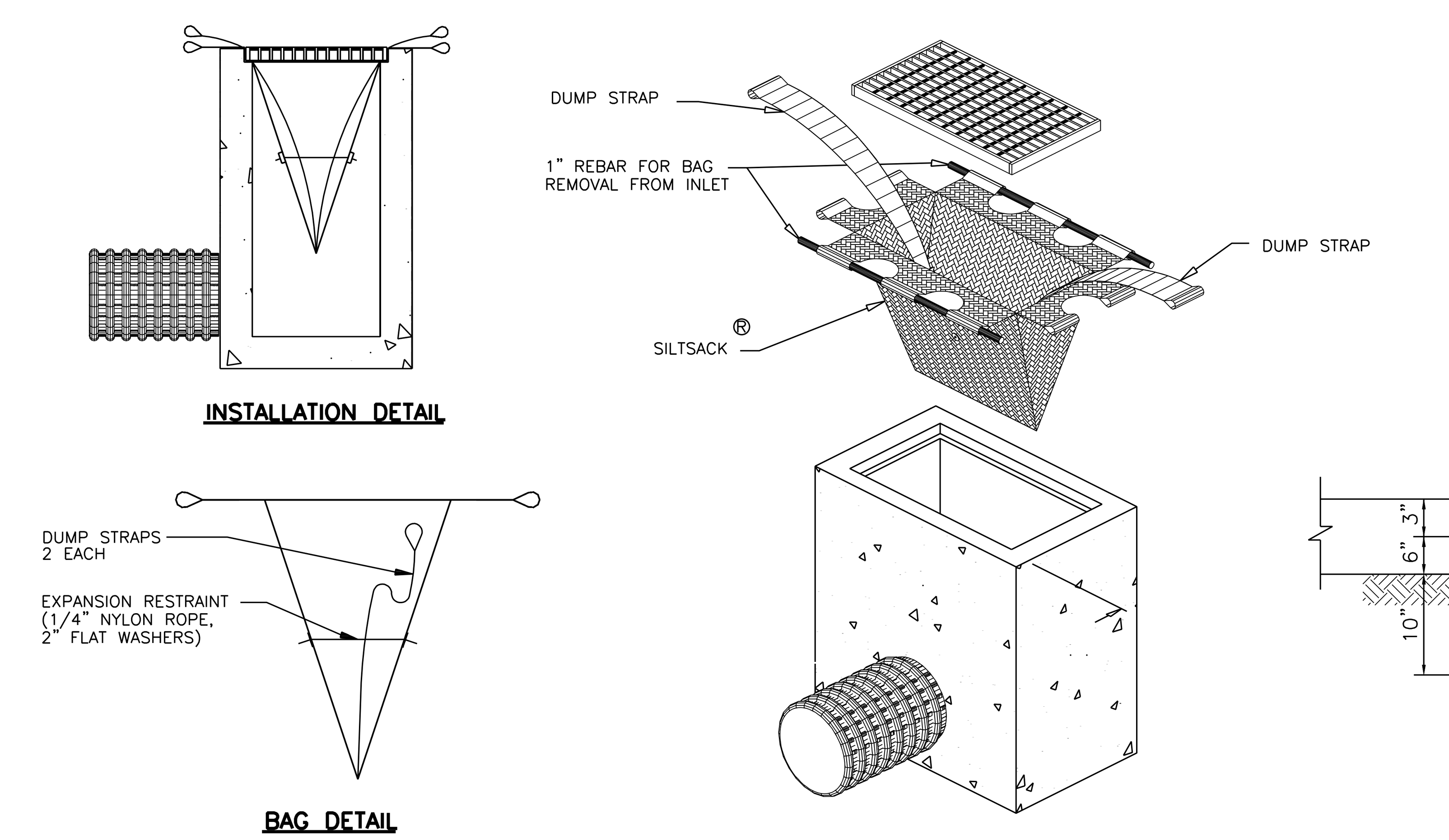
CONCRETE WALK
N.T.S.



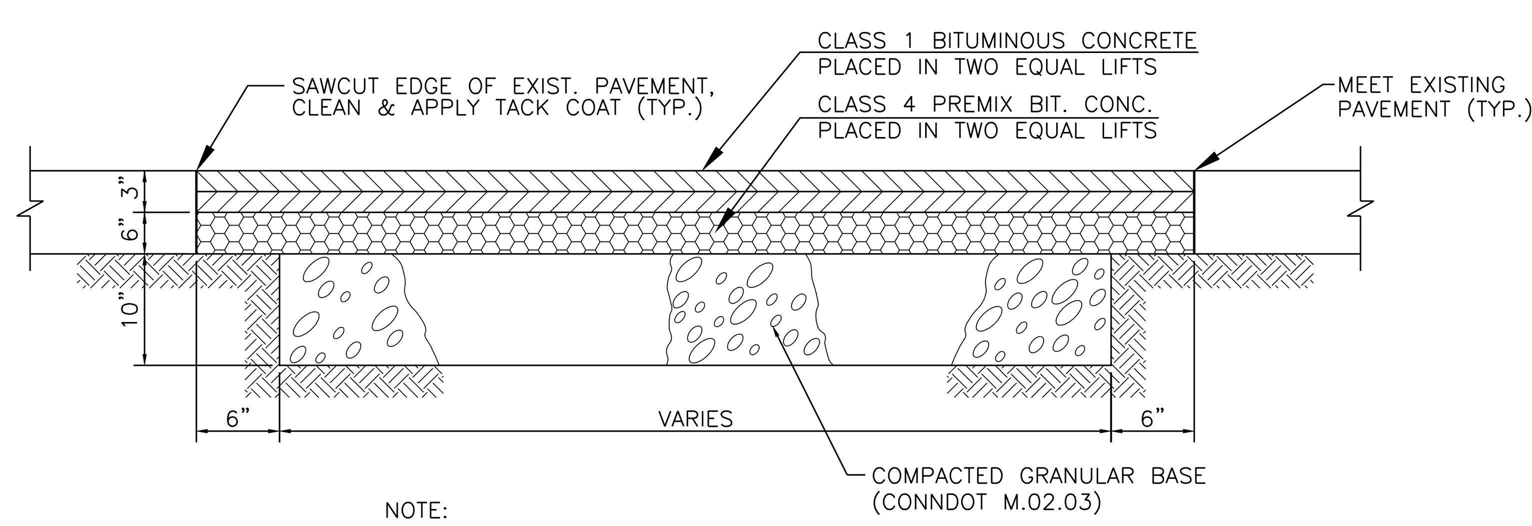
INTEGRAL CONCRETE WALK AND CURB
N.T.S.



FILTER FABRIC FENCE
N.T.S.

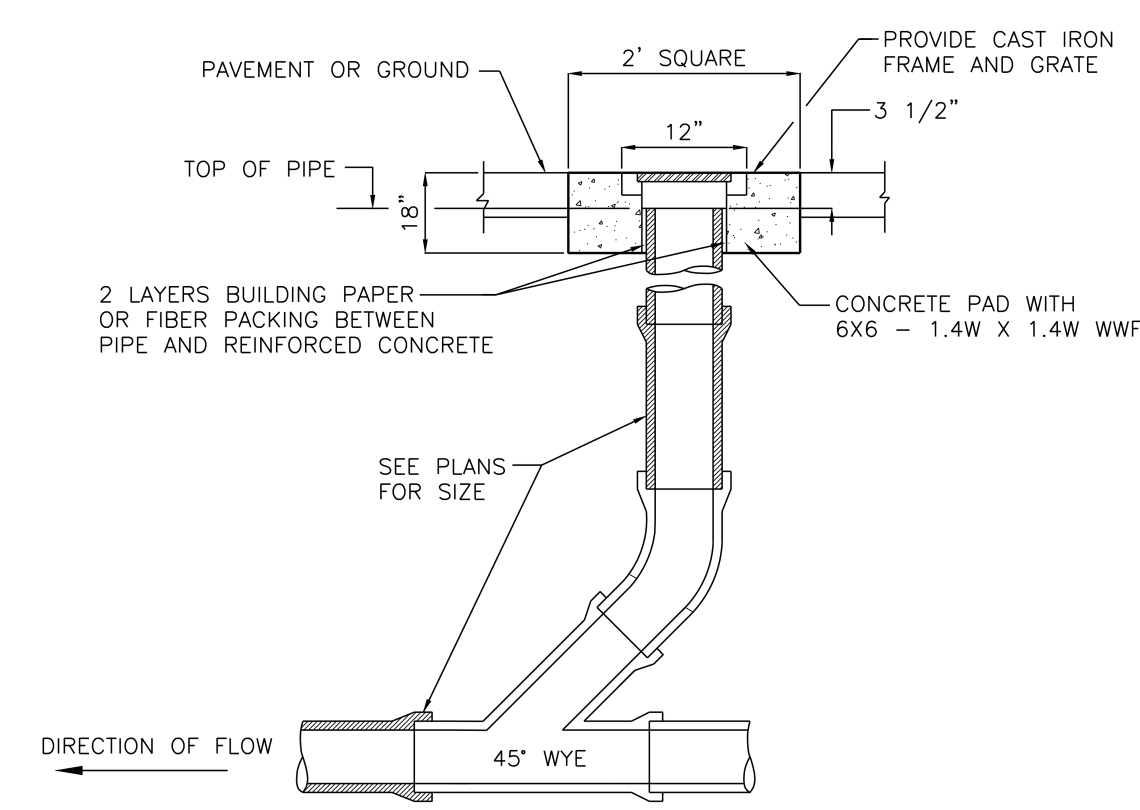


SILTSACK DETAIL
N.T.S.



NOTE:
REMOVE ALL EXISTING PAVEMENT AND BASE MATERIALS WITHIN REPAIR AREA AND REPLACE AS SHOWN.

STREET PAVEMENT REPAIR DETAIL - CONNDOT
N.T.S.



CLEANOUT
N.T.S.

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REVISIONS			
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PROJECT TITLE

PROPOSED TOWNHOUSES

371 & 378 EAST MAIN STREET BRIDGEPORT, CONNECTICUT

Prepared For:

EATON ENTERPRISES, LLC

SHEET TITLE

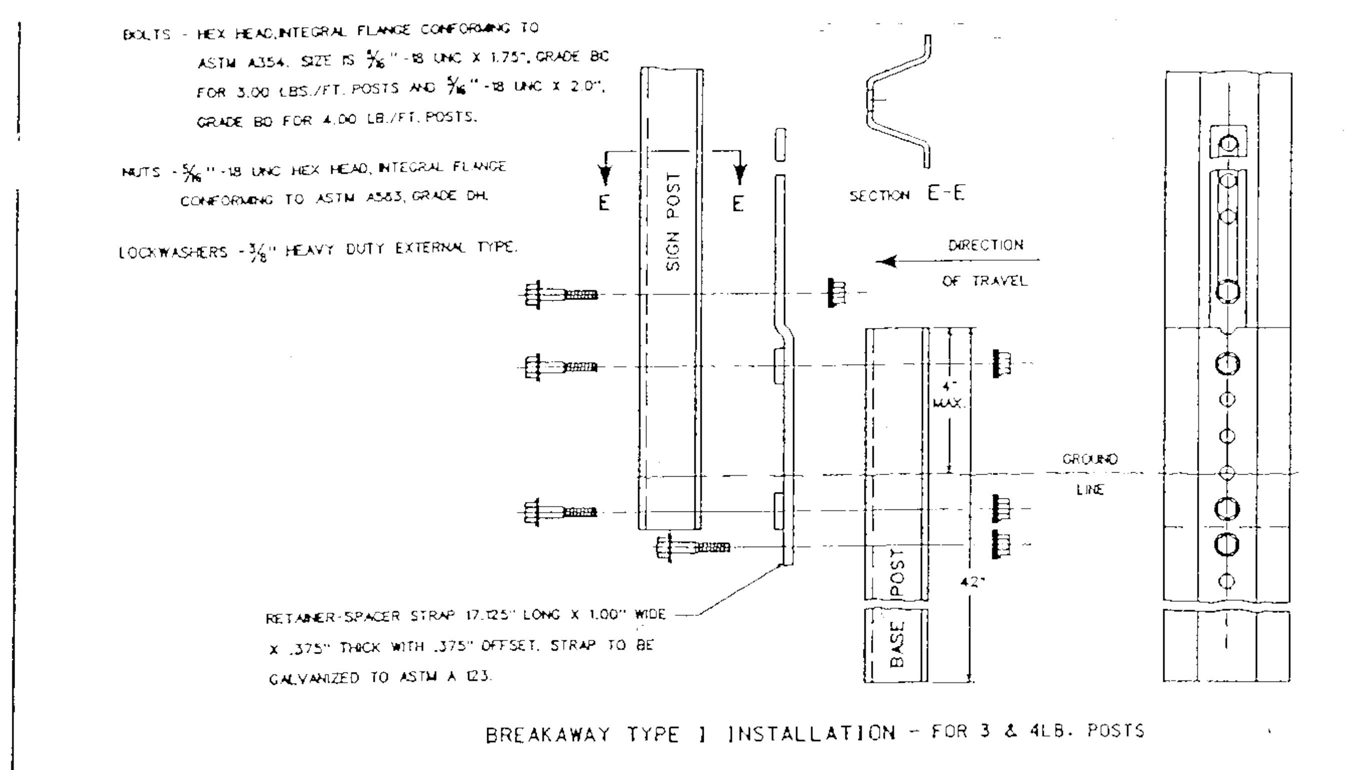
DETTAILS

DESIGNED BY: PR	SCALE: 1"=20'
DRAWN BY: MJS	DATE: 05-01-24
CHECKED BY: MJS	PROJECT NUMBER: 2772
CAD FILE: R:\2772\DWG	

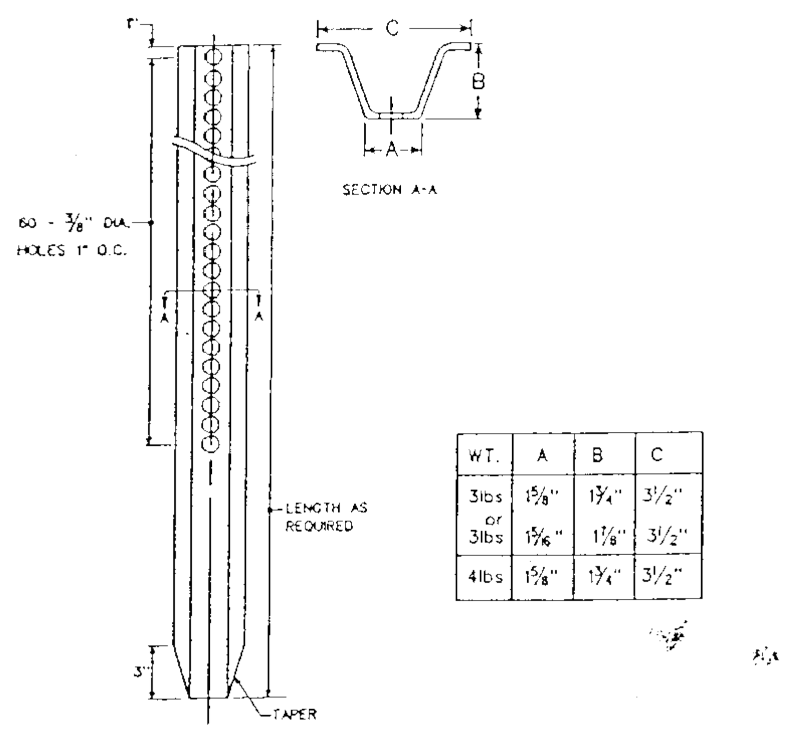
SEAL

SHEET NUMBER

SP-5



BREAKAWAY TYPE I INSTALLATION - FOR 3 & 4LB. POSTS



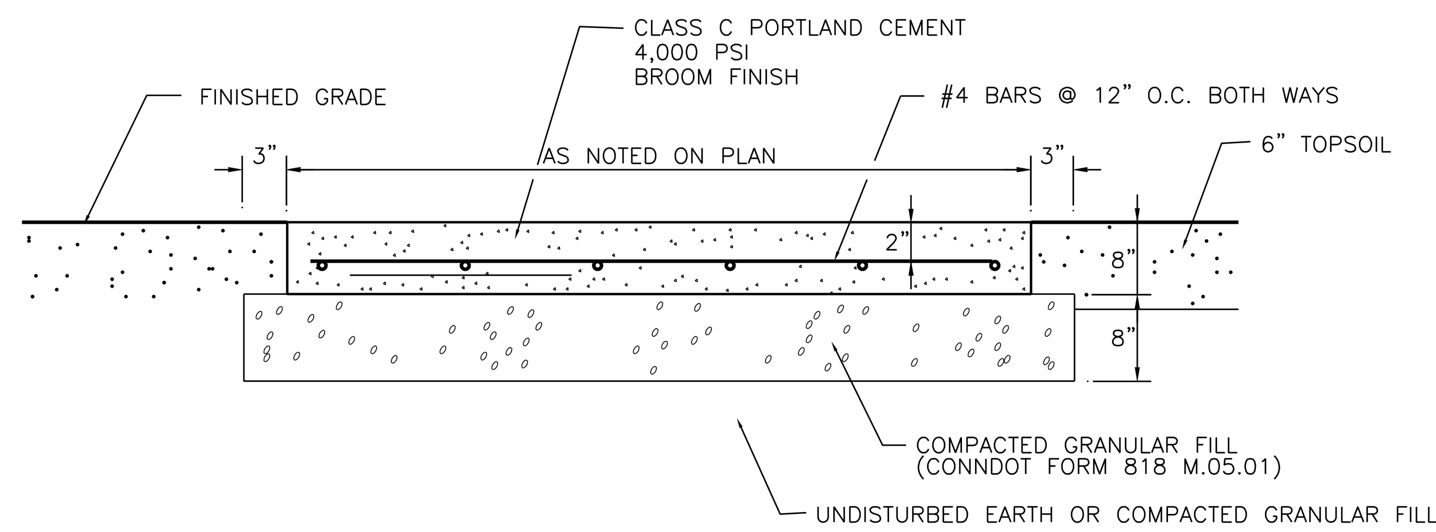
WT.	A	B	C
3lbs or 3lbs	1 5/8" / 1 5/16"	1 3/4" / 1 5/8"	3 1/2" / 3 1/2"
4lbs	1 5/8"	1 3/4"	3 1/2"

TYPICAL METAL SIGN POSTS

NOTES:

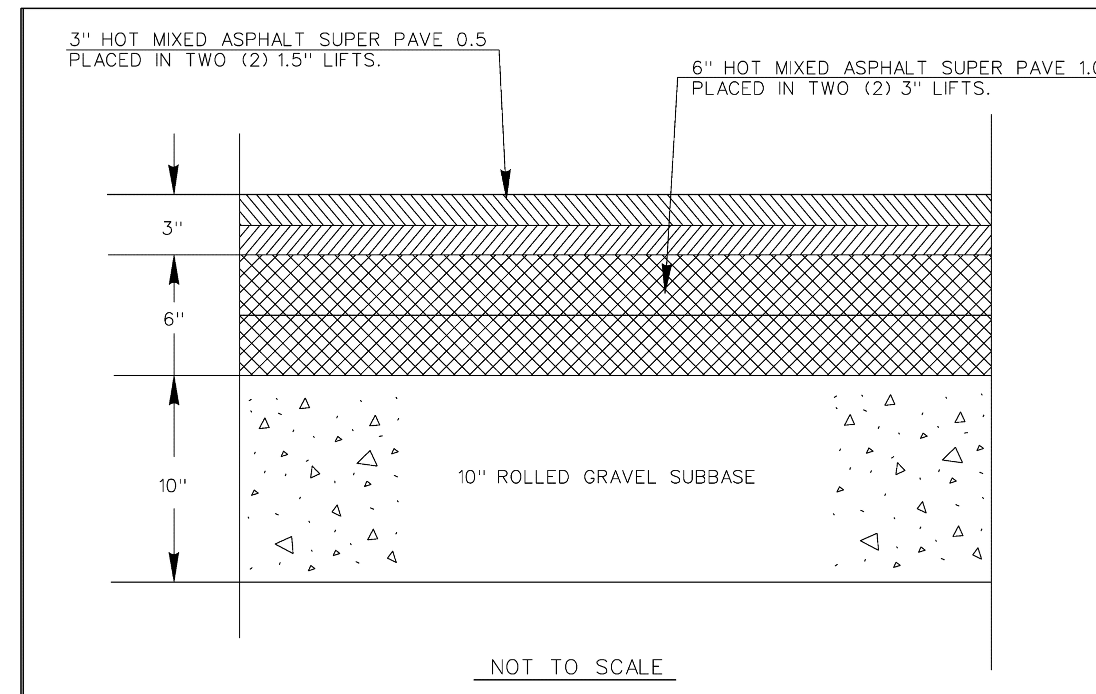
1. STEEL FOR POSTS SHALL CONFORM TO THE MECHANICAL REQUIREMENTS OF ASTM A 499-81 GRADE 60 AND TO THE CHEMICAL REQUIREMENTS OF ASTM A1-76 CARBON STEEL TEE RAIL HAVING NOMINAL WEIGHT OF 91 LBS. OR GREATER PER LINEAR YARD. STEEL FOR DELINEATOR POSTS SHALL BE ASTM A36 STEEL.
2. AFTER FABRICATION, ALL STEEL POSTS SHALL BE GALVANIZED TO MEET THE REQUIREMENTS OF ASTM A 123.
3. ALL SIGN POSTS SHALL HAVE "BREAKAWAY" FEATURES THAT MEET AASHTO REQUIREMENTS CONTAINED IN "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS-1985." THE "BREAKAWAY" FEATURES SHALL BE STRUCTURALLY ADEQUATE TO CARRY THE SIGNS SHOWN IN THE PLANS AT 60 MPH WIND LOADINGS. INSTALLATIONS SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
4. TYPE A POSTS - 3 LB/FT TYPE B POSTS - 4 LB/FT.

BREAK-A-WAY SIGN DETAIL



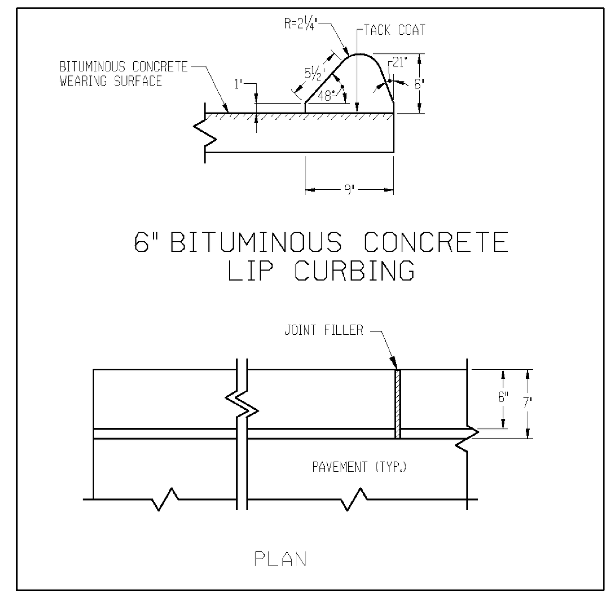
HEAVY-DUTY RIGID CONCRETE DETAIL

(TRUCK ENTRANCE, LOADING DOCK SLABS AND DUMPSTER PAD)

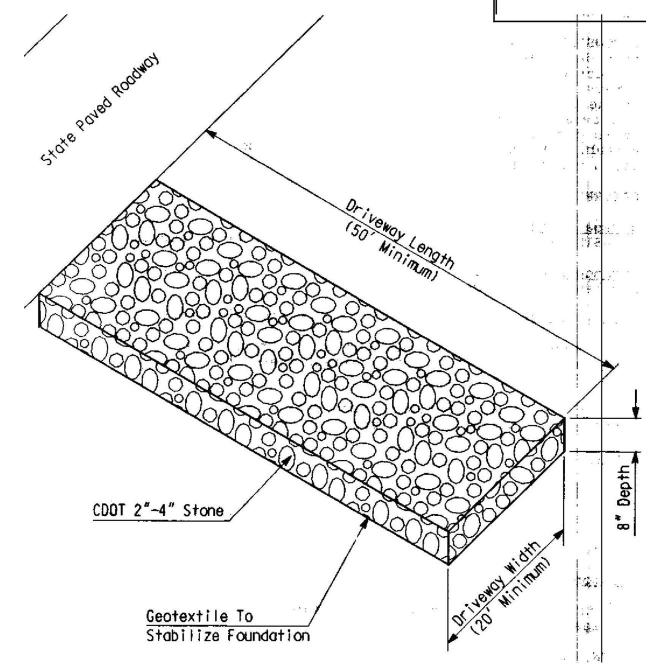


REFER TO STATE OF CONNECTICUT STANDARD SPECIFICATIONS FOR ROADS, BRIDGES AND INCIDENTAL CONSTRUCTION - FORM 816-2004, SECTION 4.06 AND CTDOT HIGHWAY DESIGN MANUAL.

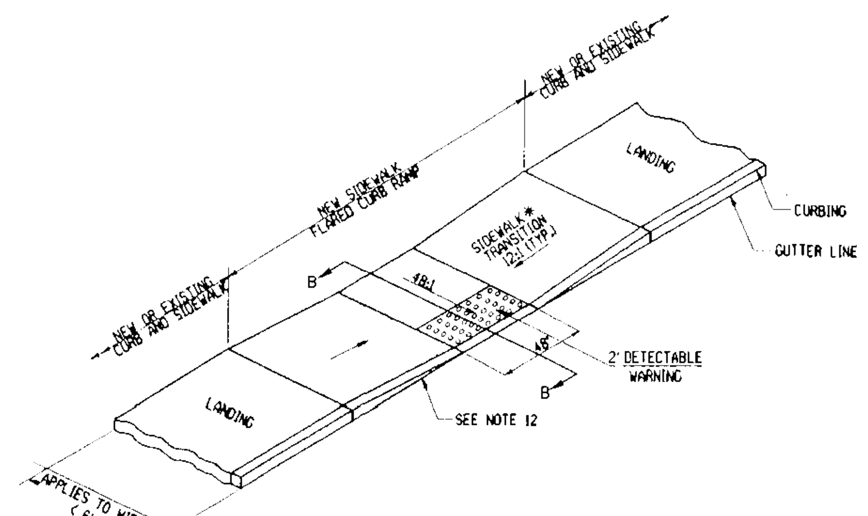
CT DOT SUPER PAVE



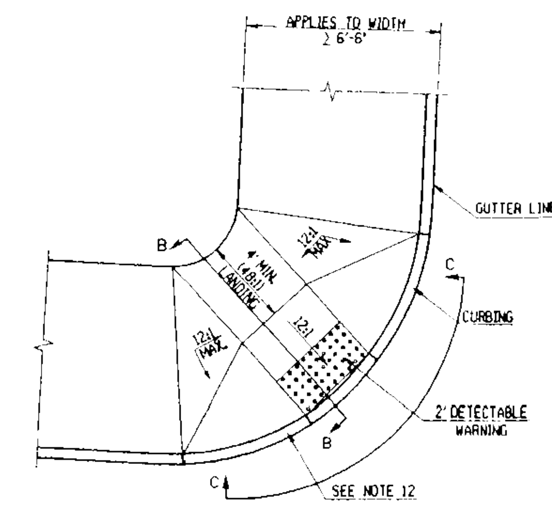
6" BITUMINOUS CONCRETE LIP CURBING



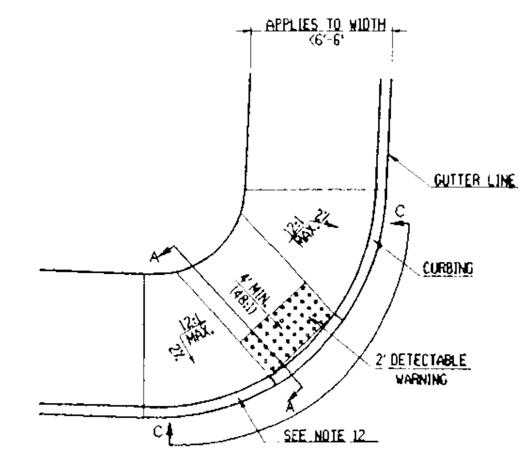
ANTI-TRAKING PAD



PARALLEL SIDEWALK RAMP (TYPE 1)



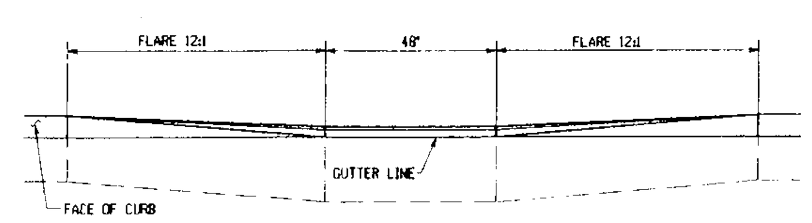
DIAGONAL SIDEWALK RAMP (TYPE 4a)



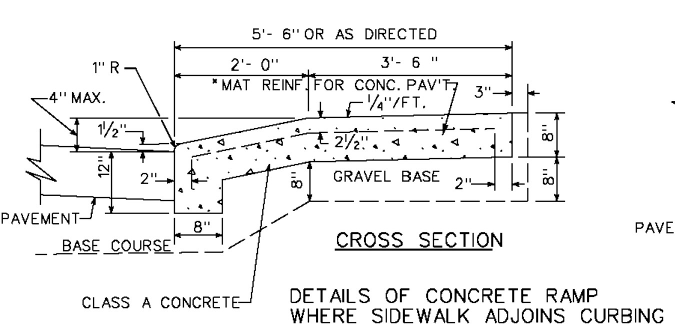
DIAGONALSIDEWALK RAMP (TYPE 4b)

GENERAL NOTES

1. MAXIMUM SLOPES OF ADJOINING GUTTERS AND ROAD SURFACES IMMEDIATELY ADJACENT TO THE SIDEWALK RAMP OR ACCESSIBLE ROUTE SHOULD NOT EXCEED 20:1.
2. CARE SHALL BE TAKEN TO ASSURE UNIFORM GRADE ON THE RAMP, FREE OF SAGS AND ABRUPT GRADE CHANGES.
3. ALL RAMPS SHALL BE CONSTRUCTED OF CLASS "C" CONCRETE IN ACCORDANCE WITH CONNECTICUT STANDARD SPECIFICATIONS ARTICLE M.03.01.
4. SIDEWALK RAMPS SHALL HAVE A COARSE BROOM FINISH TRANSVERSE TO THE SLOPE OF THE RAMP. THE SURFACE ALONG ACCESSABLE ROUTES SHALL BE STABLE, FIRM AND SLIP RESISTANT IN COMPLIANCE WITH ADAAG SECTION 4.5.
5. DIAGONAL SIDEWALK RAMPS AT MARKED CROSSINGS SHALL BE WHOLLY CONTAINED WITHIN THE MARKINGS, EXCLUDING ANY FLARED SIDES.
* 6. REMOVAL OF EXISTING SIDEWALK FOR NEW RAMP INSTALLATIONS SHALL BE TO THE NEAREST EXPANSION/CONTRACTION JOINT OR DUMMY JOINT. 12:1 MAY NOT BE ACHEIVABLE DUE TO SIDEWALK GRADE. IN RECOGNITION OF THIS, A MINIMUM LIMIT OF 15' FOR A PARALLEL RAMP SHALL BE USED. REMOVAL SHALL NOT BE FURTHER THAN 2' FROM THE PROPOSED RAMP UNLESS DIRECTED BY THE ENGINEER. SAW CUT REQUIRED FOR DUMMY JOINTS SHALL BE INCLUDED IN THE COST OF "CONCRETE SIDEWALK".
7. EXPANSION JOINTS IN CONCRETE SHALL MATCH THOSE IN ADJACENT SIDEWALKS BUT IN NO CASE SHALL THE SPACING BETWEEN EXPANSION JOINTS EXCEED 12' UNLESS OTHERWISE NOTED.
8. RAISED ISLANDS IN MARKED CROSSINGS SHALL HAVE SIDEWALK RAMPS AT BOTH SIDES AND A LEVEL AREA AT LEAST 4' LONG BETWEEN THE RAMPS. IF THIS CAN NOT BE ACHIEVED, THE RAISED ISLAND SHALL BE CUT THROUGH LEVEL WITH THE ROADWAY AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
9. SIDEWALK RAMPS SHALL BE CONSTRUCTED AND PAID FOR UNDER THE ITEM "CONCRETE SIDEWALK", INCLUDING CURBING WITHIN THE LIMITS OF THE NEW SIDEWALK RAMP AND DETECTABLE WARNING STRIPS.
10. CURBING WITHIN THE LIMITS OF THE NEW SIDEWALK RAMP SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE REQUIREMENTS OF FORM 814A SECTIONS 8.11 AND 8.13.
11. HANDICAP RAMPS CONFORMING WITH CONNECTICUT GENERAL STATUTES, SEC. 7-118a, SHALL BE INCORPORATED IN ALL PROPOSED SIDEWALKS AT ALL STREET INTERSECTIONS, AND AT ALL OTHER LOCATIONS WHERE THE GRADE OF A DRIVEWAY OR OTHER FACILITY TAKES PRECEDENCE OVER THE GRADE OF THE PROPOSED SIDEWALK.
12. TRANSITION TO FULL HEIGHT CURB. INSTALL STONE CURBING IF ADJACENT CURBING IS STONE. INSTALL CONCRETE CURBING IF ADJACENT CURBING IS CONCRETE OR BITUMINOUS.
13. INSTALL THE EDGE OF THE DETECTABLE WARNING 6' FROM THE EDGE OF ROAD.
14. TO PERMIT WHEELCHAIR WHEELS TO ROLL BETWEEN DOMES, ALIGN DOMES ON A SQUARE GRID IN THE DIRECTION OF PEDESTRIAN TRAVEL.



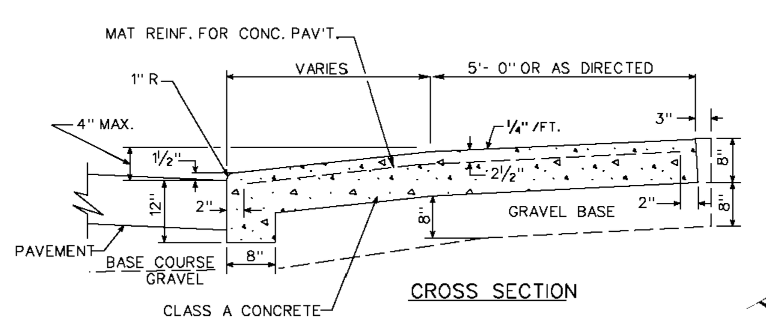
SECTION C-C



CROSS SECTION

DETAILS OF CONCRETE RAMP WHERE SIDEWALK ADJOINS CURBING

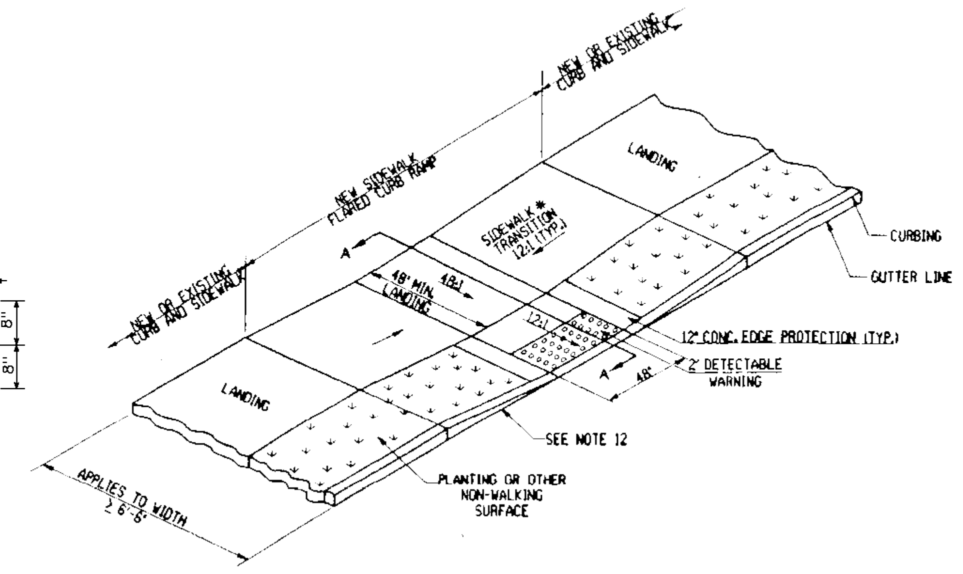
*REINFORCING MATS OF CLOSER SPACING MAY BE USED.



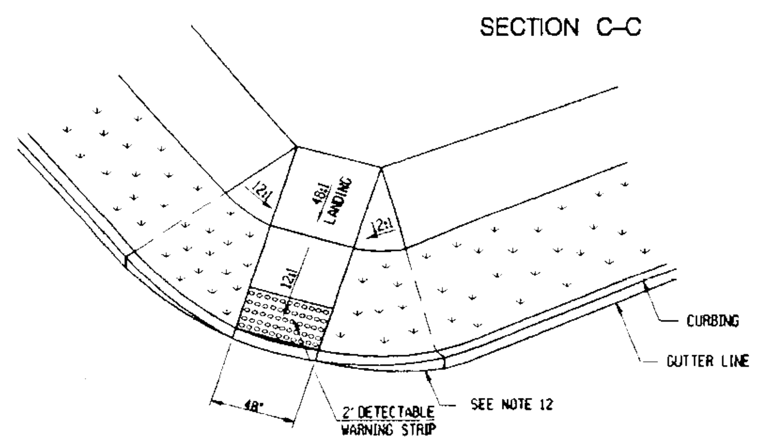
CROSS SECTION

DETAILS OF CONCRETE RAMP WHERE CURB IS SEPARATED FROM SIDEWALK BY GRASS PLOT

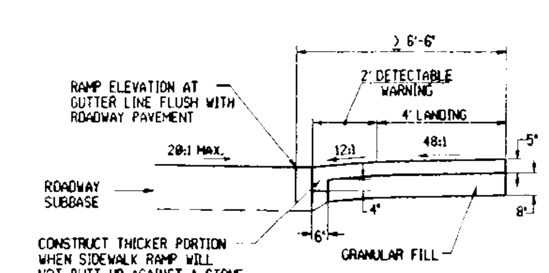
CONCRETE DRIVEWAY RAMPS



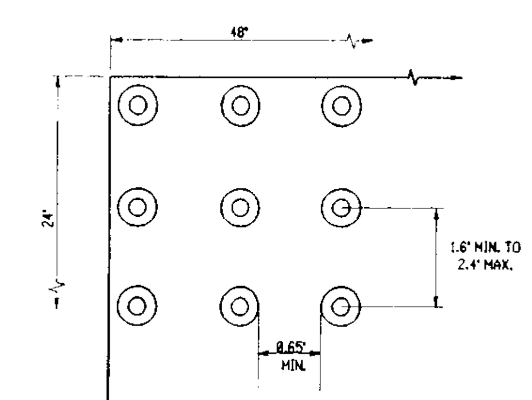
PERPENDICULAR SIDEWALK RAMP (TYPE 2)



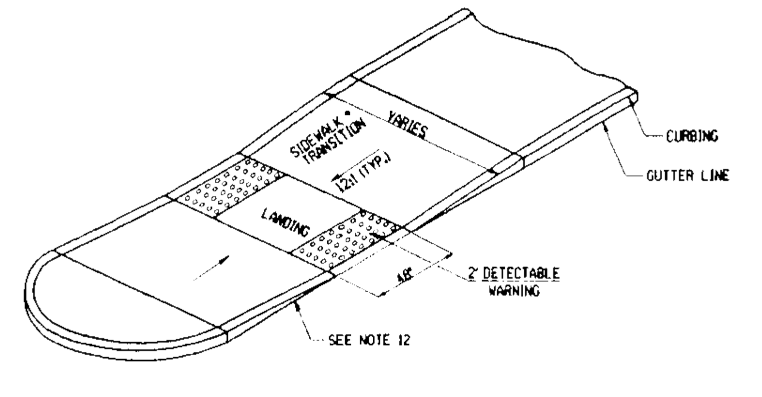
DIAGONAL SIDEWALK RAMP (TYPE 4c)



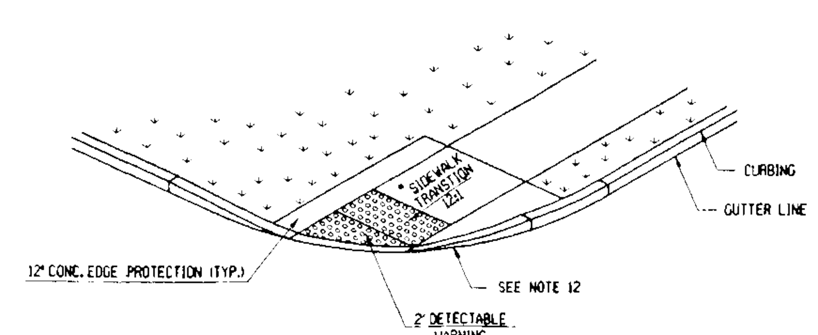
SECTION A-A



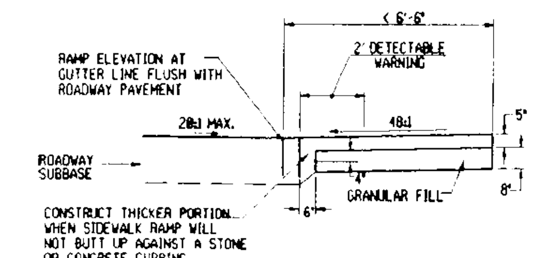
DOME SPACING



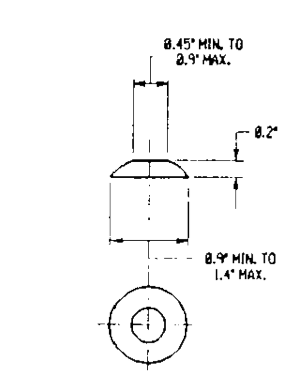
RAISED ISLAND SIDEWALK RAMP (TYPE 3)



DIAGONALSIDEWALK RAMP (TYPE 4d)



SECTION B-B



DOME SECTION

CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARD NOTES:

Removal of pavement markings along state roadways shall be completed by a non-destructive method in compliance with the State of Connecticut Department of Transportation Standard Specifications for Road, Bridges, and Incidental Construction Form 818 Section 12.11 as revised.

New pavement markings shall be painted with epoxy resin paint in compliance with the State of Connecticut Department of Transportation Standard Specifications for Roads, Bridges, and Incidental Construction Form 818 Section 12.10 as revised.

New sign material and sheeting shall be made of reflective material in compliance with State of Connecticut Department of Transportation Standard Specifications for Roads, Bridges, and Incidental Construction Form 818 Section 12.08 as revised. Type 1 Reflective Sheeting shall be used for signs with white background, Type 3 Reflective Sheeting shall be used for signs with colored background except for signs with red background that shall be Type 8 or 9 Reflective Sheeting.

All signs and pavement markings installed along the state road must conform to the "Manual on Uniform Traffic Control Devices," the latest State of Connecticut Catalog of Signs and standard as revised.

Any damage to the existing curb, sidewalk or any other highway appurtenances during the development of the permitted site will be replaced by the contractor as directed by the District 3 Permit Section at no cost to the state.

All work within the state right of way will comply with the State of Connecticut Department of Transportation Standard Specifications for Roads, Bridges and Incidental Construction Form 818 with the latest Special Provisions and Typical State Standard Details.

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TEL: (203)610-6262 • FAX: (203)610-6404

REVISIONS

NO.	BY	DATE	DESCRIPTION
1	MJS	06-07-24	DEEP COMMENTS

PROJECT TITLE

PROPOSED TOWNHOUSES

371 & 378 EAST MAIN STREET BRIDGEPORT, CONNECTICUT

Prepared For:

EATON ENTERPRISES, LLC

SHEET TITLE

STATE DETTAILS

DESIGNED BY: PR	SCALE: 1"=20'
DRAWN BY: MJS	DATE: 05-01-24
CHECKED BY: MJS	PROJECT NUMBER: 2772
CAD FILE: R:\2772\DWG	

SEAL

SHEET NUMBER

SP-6

371 East Main Street

Parcel_ID	LOCATION	SLH_OWN_NA	SLH_CO_(	SLH_OWN_AD	SLH_CITY	SLH_STT	SLH_ZIP
825-21	378 EAST MAIN ST	BLD-WF LLC		10 EAST MAIN ST STE 201	BRIDGEPORT	CT	06608
824-6	245 NICHOLS ST #247	RIVERA SAMUEL		245 NICHOLS ST #247	BRIDGEPORT	CT	06608-2708
824-3	432 EAST MAIN ST #438	432 EAST MAIN LLC		48 DELAWARE RD	EASTON	CT	06612
809-11A	439 EAST MAIN ST #449	2068 MAIN LLC		4403 15TH AVE SUITE 215	BROOKLYN	NY	11219
824-1	458 EAST MAIN ST #464	FOCUS POINTE LLC		24 LINDEN STREET	MANHASSETT	NY	11030

378 East Main Street

Parcel_ID	LOCATION	SLH_OWN_NA	SLH_CO_OWN	SLH_OWN_AD	SLH_CITY	SLH_STT	SLH_ZIP
839-3	353 NICHOLS ST #359	STILLMAN & NICHOLS LLC		565 ELLSWORTH AVE	NEW HAVEN	CT	06511
808-2	371 EAST MAIN ST #377	BLD-WF LLC		10 EAST MAIN STREET SUITE 201	BRIDGEPORT	CT	06608
839-2	444 PEMBROKE ST #446	RODRIGUEZ JOSE F JR	NATALIE ACEVEDO	444 PEMBROKE ST #446	BRIDGEPORT	CT	06608-2603
824-12	441 PEMBROKE ST	REBOIRA RAYMOND		441 PEMBROKE ST	BRIDGEPORT	CT	06608
809-10	411 EAST MAIN ST #425	EAST MAIN ST		320 QUINNIPIAC AVE SUITE 4F	NEW HAVEN	CT	06513
824-3	432 EAST MAIN ST #438	432 EAST MAIN LLC		48 DELAWARE RD	EASTON	CT	06612
824-7B	263 NICHOLS ST	HOUSING AUTHORITY CITY OF BPT		376 EAST WASHINGTON AVE	BRIDGEPORT	CT	06608
809-11A	439 EAST MAIN ST #449	2068 MAIN LLC		4403 15TH AVE SUITE 215	BROOKLYN	NY	11219
839/2A							

NOTES

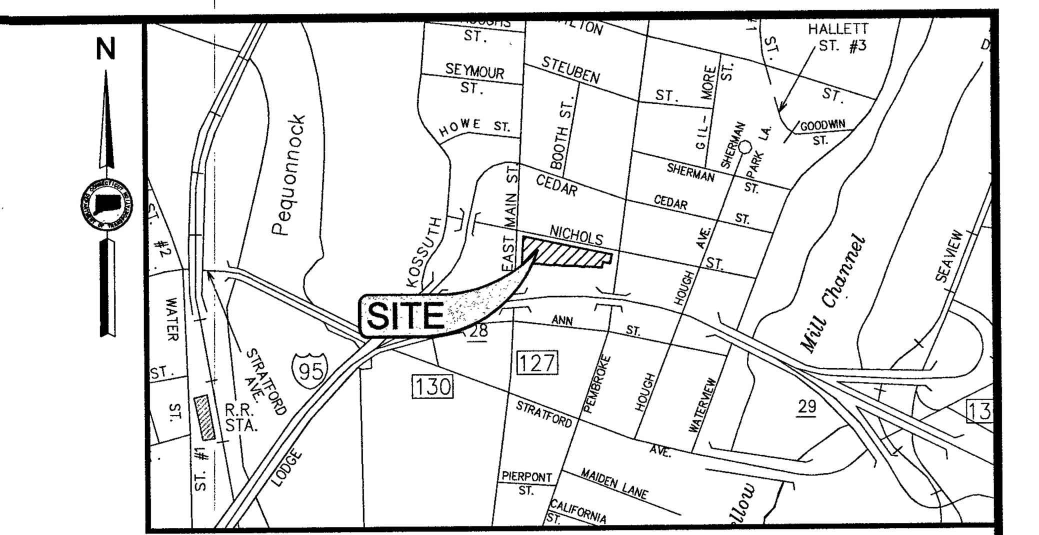
1. THIS SURVEY AND MAP HAS BEEN PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTIONS 20-300b-1 THROUGH 20-300b-20 AND "THE STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPTEMBER 26, 1996. IT IS A **PROPERTY SURVEY** AND **TOPOGRAPHIC SURVEY** BASED ON A DEPENDENT RESURVEY CONFORMING TO HORIZONTAL ACCURACY CLASS **A-2** AND TOPOGRAPHIC ACCURACY CLASS **T-2** AND IS INTENDED FOR **CONVEYANCE** PURPOSES.
2. THIS MAP IS NOT VALID WITHOUT A LIVE SIGNATURE AND EMBOSSED SEAL.
3. ALL IMPROVEMENTS SHOWN BASED ON FIELD EVIDENCE FOUND.
4. HORIZONTAL COORDINATES REFER TO THE CONNECTICUT COORDINATE SYSTEM OF 1983 (NAD83). ELEVATIONS ARE BASED ON NAVD 1988 DATUM.
5. REFERENCE IS MADE TO THE FOLLOWING MAPS:
   A. MAP ENTITLED "CONNECTICUT, DEPARTMENT OF TRANSPORTATION, BUREAU OF HIGHWAYS, RIGHT OF WAY MAP, TOWN OF BRIDGEPORT, CONNECTICUT TURNPIKE FROM THE FAIRFIELD-BRIDGEPORT TOWN LINE EASTERLY TO THE BRIDGEPORT-STRATFORD TOWN LINE." SCALE: 1" = 80', DATED AUGUST 19, 1974; LAST REVISED 12/20/96 PREPARED BY THE STATE OF CONNECTICUT, DEPARTMENT OF TRANSPORTATION AS MAP NUMBER **15-03, SHEET 7 OF 9** AND FOUND ON FILE IN THE STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION DISTRICT 3 SURVEYS.
   B. MAP ENTITLED "TOWN OF BRIDGEPORT, MAP SHOWING LAND ACQUIRED FROM LEONARD RICCIO ET ALS, BY THE STATE OF CONNECTICUT, GREENWICH-KILLINGY EXPRERSSWAY, SCALE: 1" = 40', DATED JANUARY 1955", PREPARED BY THE STATE OF CONNECTICUT, DEPARTMENT OF TRANSPORTATION AS MAP NUMBER **15**, PROJECT **31, SHEET 1 OF 1** AND FOUND ON FILE IN THE STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION DISTRICT 3 SURVEYS.
   C. CITY OF BRIDGEPORT ENGINEERING PIN SHEET DEPICTING **BLOCK 825**

NOTES-*Continued*

6. REFERENCE TO OTHER INSTRUMENTS:
   BLOCK 825
   VOL. 1123 PG. 623 (LOT 18A) — 260 NICHOLS STREET - WAIVE AND RELINQUISHES ALL RIGHTS OF ACCESS... (MAP VOL. 20 PG. 60)
   VOL. 1113 PG. 29 (LOT 17A) — 270 NICHOLS STREET - DENIAL OF ACCESS TO EXPRESSWAY BY CERTIFICATE OF CONDEMNATION... (MAP VOL. 19 PG. 15)
   VOL. 1120 PG. 537 (LOT 16A) — 280 NICHOLS STREET - WAIVE AND RELINQUISHES ALL RIGHTS OF ACCESS... (MAP VOL. 19 PG. 16)
   VOL. 1122 PG. 65 (LOT 14A) — 296-300 NICHOLS STREET - WAIVE AND RELINQUISHES ALL RIGHTS OF ACCESS... (MAP VOL. 18 PG. 92)
   VOL. 1145 PG. 630 (LOT 23A) — 306-310 NICHOLS STREET - DENIAL OF ACCESS TO EXPRESSWAY BY CERTIFICATE OF CONDEMNATION... (MAP VOL. 18 PG. 96)
7. ASSESSOR'S REFERENCE:
   MAP 36 | BLOCK 825 | LOTS 13, 14A, 15, 16A, 17A, 18A, 19, 20, 21, 22, 23A
8. PARCEL IS LOCATED WITHIN THE '**O-R**' ZONING DISTRICT.
9. SEE FLOOD INSURANCE RATE MAP: FAIRFIELD COUNTY, CONNECTICUT (ALL JURISDICTIONS), PANEL **441G** OF 626, COMMUNITY **BRIDGEPORT**, CITY OF, NUMBER **090002** PANEL **0441** SUFFIX **G**, MAP NUMBER **09001C0441G**, MAP REVISED **JULY 8, 2013**. THE PARCEL IS LOCATED IN AN AREA DESIGNATED AS **ZONE X (UNSHADED)**.

NOTES-*Continued*

10. PARCELS DEPICTED HEREON ARE LOCATED WITHIN THE PEQUONNOCK RIVER AND THE YELLOW MILL CHANNEL COASTAL BOUNDARY - RESIDENTIAL ZONE. SEE COASTAL MASTER PLAN OF BRIDGEPORT, CONNECTICUT SHEET 3 OF 4, SCALE: 1"=500', DATED AUGUST 1982, LAST REVISED NOVEMBER 18, 1982 AND PREPARED BY KASPER ASSOCIATES, INC.
11. RECORD MAPS, DEEDS, AND OTHER DRAWINGS IN THE FILES OF VARIOUS DEPARTMENTS OF THE **CITY OF BRIDGEPORT** EVIDENCE DISCREPANCIES, IN SOME CASES SIGNIFICANT, WITH RESPECT TO LINES OF TITLE (INCLUDING STREET LINES). DISCREPANCIES HAVE BEEN FOUND WITH THE LINES OF TITLE EVIDENCED IN THE DOCUMENTS REFERENCED HEREIN AND DO NOT NECESSARILY AGREE WITH PINS, PIPES, MONUMENTS, ETC. FOUND OR WITH OTHER PHYSICAL EVIDENCE FOUND. THE **CITY OF BRIDGEPORT** HAS ESTABLISHED STREET LINES IN THE SUBJECT AREA; HOWEVER, ORIGINAL MONUMENTATION HAS BEEN REMOVED OR NOT FOUND. THE PROPERTY LINES, INCLUDING THE STREET LINES DEPICTED AND NOTED HEREON REPRESENT THE APPARENT "**BEST FIT**" OF THESE CONFLICTING ELEMENTS AND ARE CONSIDERED TO BE THOSE WHICH ARE TO BE MOST LIKELY CORRECT AND ARE SUBJECT TO ANY REVISION OR CORRECTION WHICH MAY BE REQUIRED BY APPROPRIATE LEGAL PROCEEDINGS OR BY DISCOVERY OF ADDITIONAL INFORMATION.
12. THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. CABEZAS DeANGELIS MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. CABEZAS DeANGELIS FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH IT IS CERTIFIED THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. CABEZAS DeANGELIS HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. CALL BEFORE YOU DIG, INC. (**1-800-922-4455**).
13. IT IS UNDERSTOOD THE PARCEL(S) DEPICTED HEREON MAY BE SUBJECT, BUT NOT LIMITED TO, ADDITIONAL EASEMENTS, COVENANTS, DECLARATIONS, RESTRICTIONS OF ANY KIND AND RIGHTS TO OTHERS AS MAY APPEAR ON RECORD AND/OR IN PRIVATE.
14. LOT 22 IN BLOCK 825 IS LOCATED WITHIN THE EAST BRIDGEPORT AND PEMBROKE CITY HISTORIC DISTRICT.



LEGEND

N/F	NOW OR FORMERLY
MON.	MONUMENT
I.P.	IRON PIPE
FND.	FOUND
S.F.	SQUARE FEET
CONC.	CONCRETE
BIT.	BITUMINOUS
OHU	OVERHEAD UTILITIES
U/G	UNDER GROUND
MH	MANHOLE
ELEC.	ELECTRIC
Ø	UTILITY POLE
DYL	DOUBLE YELLOW LINE
SWL	SINGLE WHITE LINE
BWL	BROKEN WHITE LINE
EOP	EDGE OF PAVEMENT
RET.	RETAINING
CLF	CHAIN LINK FENCE
FFE	FINISHED FLOOR ELEVATION
C.O.	CLEANOUT
LP	LIGHT POST
CB	CATCH BASIN
WM	WATER METER
WV	WATER VALVE
GV	GAS VALVE
RET.	RETAINING
SNET	SOUTHERN NEW ENGLAND TELEPHONE
UI	UNITED ILLUMINATING COMPANY
TMH	TELEPHONE MANHOLE
INT.	INTERSECTION
INV.	INVERT
C.I.	CAST IRON
V.C.	VITRIFIED CLAY
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN
MW	MONITOR WELL
x 8.65	EXISTING SPOT GRADE
--100--	EXISTING CONTOUR ELEVATION
L.O.	LAYOUT OF STREET WIDTH
(2)	PARKING SPACES
HDPE	HIGH DENSITY POLYETHYLENE
PVC	POLYVINYL CHLORIDE
(symbol)	EXISTING DECIDUOUS TREE
(symbol)	EXISTING CONIFER TREE

Combined Parcel Area

49,902± SF or 1.146± Ac.

BLOCK 825

TC #CT-4833787 PARCEL NO.	LOT	OWNER	VOL.	PG.	GRANTEE
6	22	372 East Main Street	4356	136	Bridgeport Redevelopment Agency (as Agent for City of Bridgeport)
7	21	378 East Main Street	4453	21	Bridgeport Redevelopment Agency (as Agent for City of Bridgeport)
8	20	388-394 East Main Street	4287	194	Bridgeport Redevelopment Agency
9	19	248 Nichols Street	4287	194	Bridgeport Redevelopment Agency
10	18A	260 Nichols Street	4323	96	Bridgeport Redevelopment Agency (as Agent for City of Bridgeport)
11	17A	270 Nichols Street	4310	69	Bridgeport Redevelopment Agency
12	16A	280 Nichols Street	4299	197	Bridgeport Redevelopment Agency
13	15	286-290 Nichols Street	4299	195	Bridgeport Redevelopment Agency
14	14A	296-300 Nichols Street	4299	190	Bridgeport Redevelopment Agency
15	23A	306-310 Nichols Street	4299	188	Bridgeport Redevelopment Agency
16	13	401-405 Pembroke Street	4323	90	Bridgeport Redevelopment Agency (as Agent for City of Bridgeport)

EXCEPTIONS

FIRST AMERICAN TITLE INSURANCE COMPANY
TITLE COMMITMENT NO.: CT-4833787
EFFECTIVE DATE: JULY 21, 2021 AT 8:00AM

Exceptions are numbered according to those found in Title Commitment File No.: CT-4833787

BLOCK 825

AS TO PARCEL 10
13. Vol. 1123 Pg. 623 — All rights of access to Greenwich-Killingly Expressway relinquished (dated June 20, 1956)

AS TO PARCEL 11
14. Vol. 1113 Pg. 29 — Denial of access to Expressway by Certificate of Condemnation (dated June 6, 1956)

AS TO PARCEL 12
15. Vol. 1120 Pg. 537 — Denial of access (dated June 6, 1956)

AS TO PARCEL 14
16. Vol. 1122 Pg. 65 — Rights of access denied (dated August 22, 1956)

AS TO PARCEL 15
17. Vol. 1145 Pg. 630 — Denial of access to Greenwich-Killingly Expressway (dated August 20, 1957)

CERTIFICATION TO

This survey is made for the benefit of:

Title Company: First American Title Insurance Company
Additional Parties: Bridgeport Landing, LLC and BLD-WF, LLC

To the best of my knowledge and belief this map is substantially correct as noted here.

STATE OF CONNECTICUT — WASHINGTON CABEZAS JR. — No. 70210 — LICENSED LAND SURVEYOR

WASHINGTON CABEZAS, JR — PEL 70210

SCALE: 0 20 40 60 100

Cabezas DeAngelis
ENGINEERS & SURVEYORS
78 ELM STREET, BRIDGEPORT, CT 06604
P:203 330 8700 • F:203 330 8701

SCALE: 1"=20'
FIELD FILE: steelpointe north survey.rw5
PROJECT NO. CD1478
DATE: February 2, 2021
CAD FILE: Steelpointe North PS.dwg
SHEET 1 OF 1
REV: Attorney Comments 09-22-2021

PROPERTY SURVEY
- AND -
TOPOGRAPHIC SURVEY

- PREPARED FOR -

BRIDGEPORT LANDING DEVELOPMENT, LLC

ELEVEN PARCELS

- LOCATED AT -

"STEELPOINTE NORTH"
EAST MAIN STREET (STATE ROUTE NO. 127),
NICHOLS STREET & PEMBROKE STREET
BRIDGEPORT, CONNECTICUT

- ASSESSOR'S REFERENCE -
MAP 36 | BLOCK 825 | LOTS 22, 21, 20, 19, 18A, 17A, 16A, 15, 14A, 23A & 13

SHEET 1 OF 1

FEBRUARY 2, 2021 — WASHINGTON CABEZAS, JR., PE, LS — SCALE: 1" = 20'

NOTES

1. THIS SURVEY AND MAP HAS BEEN PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTIONS 20-300b-1 THROUGH 20-300b-20 AND "THE STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPTEMBER 26, 1996. IT IS A **PROPERTY SURVEY** AND **TOPOGRAPHIC SURVEY** BASED ON A DEPENDENT RESURVEY CONFORMING TO HORIZONTAL ACCURACY CLASS A-2 AND TOPOGRAPHIC ACCURACY CLASS T-2 AND IS INTENDED FOR **CONVEYANCE PURPOSES.**

2. THIS MAP IS NOT VALID WITHOUT A LIVE SIGNATURE AND EMBOSSED SEAL.

3. ALL IMPROVEMENTS SHOWN BASED ON FIELD EVIDENCE FOUND.

4. HORIZONTAL COORDINATES REFER TO THE CONNECTICUT COORDINATE SYSTEM OF 1983 (NAD83). ELEVATIONS ARE BASED ON NAVD 1988 DATUM.

5. REFERENCE IS MADE TO THE FOLLOWING MAPS:

   A. MAP ENTITLED "PLOT PLAN PREPARED FOR AFFORDABLE HOUSING/CHAPMAN LIMITED PARTNERSHIP." SCALE: 1" = 10', DATED JANUARY 8, 1990; LAST REVISED 11/29/1990 PREPARED BY CODESPOTI & ASSOCIATES.

   B. MAP ENTITLED "CONNECTICUT, DEPARTMENT OF TRANSPORTATION, BUREAU OF HIGHWAYS, RIGHT OF WAY MAP, TOWN OF BRIDGEPORT, CONNECTICUT TURNPIKE FROM THE FAIRFIELD-BRIDGEPORT TOWN LINE EASTERLY TO THE BRIDGEPORT-STRATFORD TOWN LINE." SCALE: 1" = 80', DATED AUGUST 19, 1974; LAST REVISED 12/20/96 PREPARED BY THE STATE OF CONNECTICUT, DEPARTMENT OF TRANSPORTATION AS **MAP NUMBER 15-03, SHEET 7 OF 9** AND FOUND ON FILE IN THE STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION DISTRICT 3 SURVEYS.

   C. MAP ENTITLED "TOWN OF BRIDGEPORT MAP SHOWING LAND ACQUIRED FROM THE CITY OF BRIDGEPORT BY THE STATE OF CONNECTICUT, DEPARTMENT OF TRANSPORTATION FOR STEELPOINTE HARBOR ROADWAY IMPROVEMENTS." SCALE 1"=20', DATED SEPT. 20, 2011; LAST REVISED 4/9/12 PREPARED BY THE STATE OF CONNECTICUT, DEPARTMENT OF TRANSPORTATION AS **PROJECT NO. 015-000, SERIAL NO. 067, SHEET 9 OF 9** AND FOUND ON FILE IN THE CITY OF BRIDGEPORT ENGINEERING DEPARTMENT.

   D. MAP ENTITLED "TOWN OF BRIDGEPORT MAP SHOWING LAND EASEMENT & RIGHTS OF ACCESS ACQUIRED FROM EMPIRE REALTY CORP. BY THE STATE OF CONNECTICUT, GREENWICH - KILLINGSLY EXPRESSWAY." SCALE: 1"=40', DATED JUNE 1955; LAST REVISED JULY 1956 PREPARED BY THE STATE OF CONNECTICUT, DEPARTMENT OF TRANSPORTATION AS PROJECT NO. 31, SERIAL NO. 149, SHEET 1 OF 1 AND SHEET 2 OF 2 AND FOUND ON FILE IN THE CITY OF BRIDGEPORT TOWN CLERK'S OFFICE AS **MAP VOL. 19 PG. 84** AND **VOL. 19 PG. 87** RESPECTIVELY.

   E. CITY OF BRIDGEPORT ENGINEERING PIN SHEET DEPICTING **BLOCK 808**

6. REFERENCE TO OTHER INSTRUMENTS:
   BLOCK 808

ROAD INDEX	"EVITTS LANE" - PRIVATE ROAD AS NOTED IN THE ROAD INDEX FOUND IN THE CITY OF BRIDGEPORT ENGINEERING DEPARTMENT.
VOL. 4287 PG. 196	75 & 81 EVITTS LANE - PARCELS CONVEYED TOGETHER WITH FEE TO EVITTS LANE AND RIGHT OF WAY FOR ALL PURPOSES OVER SAID EVITTS LANE (LOT 7 & 1E)
VOL. 1292 PG. 422	75 & 81 EVITTS LANE - PARCELS CONVEYED TOGETHER WITH FEE TO EVITTS LANE AND RIGHT OF WAY FOR ALL PURPOSES OVER SAID EVITTS LANE (LOT 7 & 1E)
VOL. 1121 PG. 323	81 EVITTS LANE - TAKING AND DRAINAGE RIGHT OF WAY
VOL. 1128 PG. 479	81 EVITTS LANE - FULL AND PERPETUAL DRAINAGE EASEMENT
VOL. 8587 PG. 115	379 EAST MAIN STREET - TAKING BY STATE OF CONNECTICUT

7. ASSESSOR'S REFERENCE: MAP 36 | BLOCK 808 | LOTS 1E, 2, 2A, 3 & 7

8. PARCEL IS LOCATED WITHIN THE '**O-R**' ZONING DISTRICT.

9. SEE FLOOD INSURANCE RATE MAP: FAIRFIELD COUNTY, CONNECTICUT (ALL JURISDICTIONS), PANEL **441G** OF **626**, COMMUNITY **BRIDGEPORT**, CITY OF, NUMBER **090002** PANEL **0441** SUFFIX **G**, MAP NUMBER **09001C0441G**, MAP REVISED **JULY 8, 2013**. THE PARCEL IS LOCATED IN AN AREA DESIGNATED AS **ZONE X (UNSHADED)**.

10. ALL PARCELS DEPICTED HEREON ARE LOCATED WITHIN THE PEQUONNOCK RIVER COASTAL BOUNDARY - RESIDENTIAL ZONE. SEE COASTAL MASTER PLAN OF BRIDGEPORT, CONNECTICUT SHEET 3 OF 4, SCALE: 1"=500', DATED AUGUST 1982, LAST REVISED NOVEMBER 18, 1982 AND PREPARED BY KASPER ASSOCIATES, INC.

11. RECORD MAPS, DEEDS, AND OTHER DRAWINGS IN THE FILES OF VARIOUS DEPARTMENTS OF THE **CITY OF BRIDGEPORT** EVIDENCE DISCREPANCIES, IN SOME CASES SIGNIFICANT, WITH RESPECT TO LINES OF TITLE (INCLUDING STREET LINES). DISCREPANCIES HAVE BEEN FOUND WITH THE LINES OF TITLE EVIDENCED IN THE DOCUMENTS REFERENCED HEREIN AND DO NOT NECESSARILY AGREE WITH PINS, PIPES, MONUMENTS, ETC. FOUND OR WITH OTHER PHYSICAL EVIDENCE FOUND. THE **CITY OF BRIDGEPORT** HAS ESTABLISHED STREET LINES IN THE SUBJECT AREA; HOWEVER, ORIGINAL MONUMENTATION HAS BEEN REMOVED OR NOT FOUND. THE PROPERTY LINES, INCLUDING THE STREET LINES DEPICTED AND NOTED HEREON REPRESENT THE APPARENT "**BEST FIT**" OF THESE CONFLICTING ELEMENTS AND ARE CONSIDERED TO BE THOSE WHICH ARE TO BE MOST LIKELY CORRECT AND ARE SUBJECT TO ANY REVISION OR CORRECTION WHICH MAY BE REQUIRED BY APPROPRIATE LEGAL PROCEEDINGS OR BY DISCOVERY OF ADDITIONAL INFORMATION.

12. THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. CABEZAS DeANGELIS MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. CABEZAS DeANGELIS FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH IT IS CERTIFIED THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. CABEZAS DeANGELIS HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. CALL BEFORE YOU DIG, INC. (**1-800-922-4455**).

13. PARCEL(S) DEPICTED HEREON MAY BE SUBJECT, BUT NOT LIMITED TO, ADDITIONAL EASEMENTS, COVENANTS, DECLARATIONS, RESTRICTIONS OF ANY KIND AND RIGHTS TO OTHERS AS MAY APPEAR ON RECORD AND/OR IN PRIVATE.

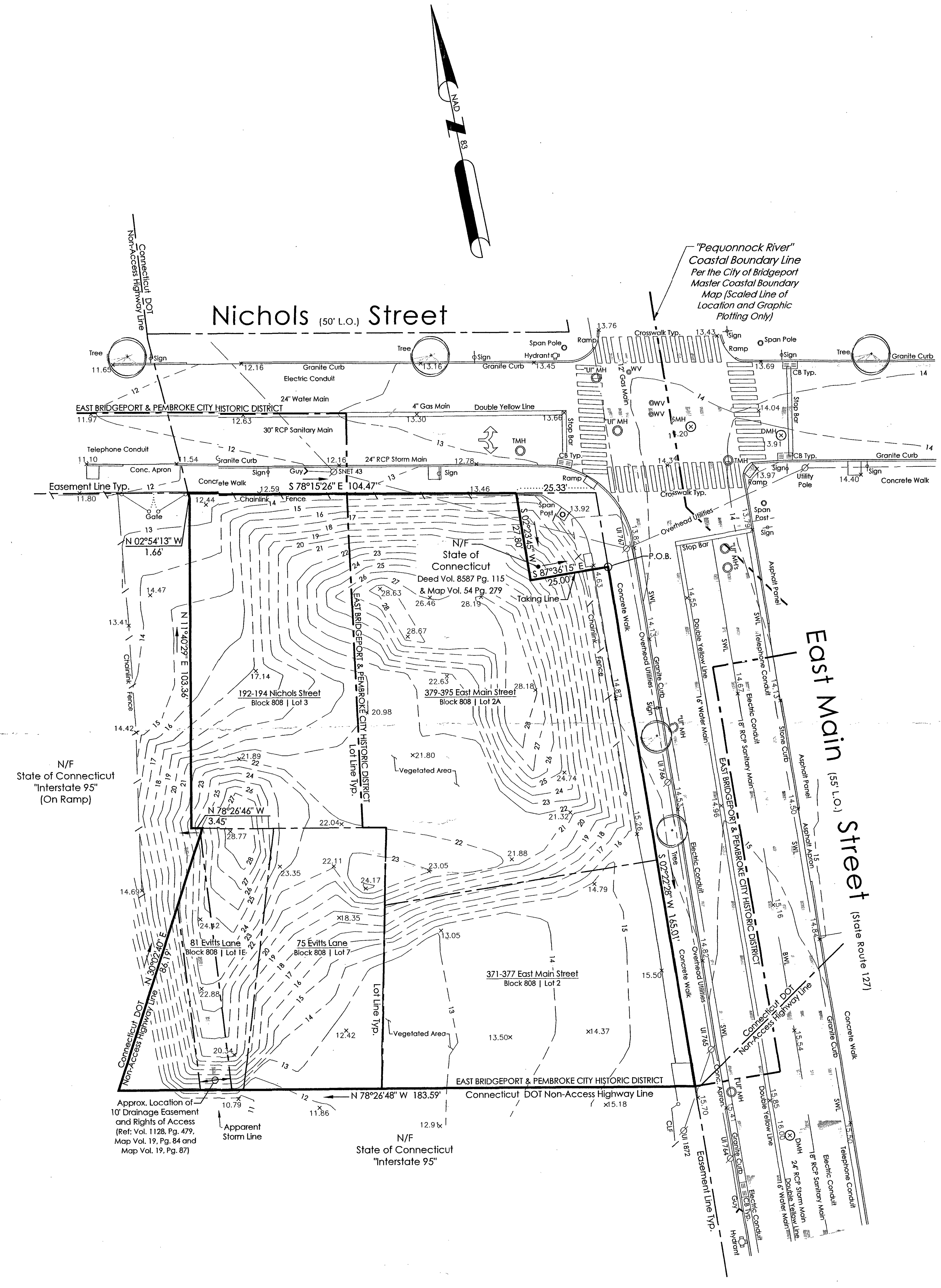
14. LOT 2 AND LOT 2A IN BLOCK 808 ARE LOCATED WITHIN THE EAST BRIDGEPORT AND PEMBROKE CITY HISTORIC DISTRICT.

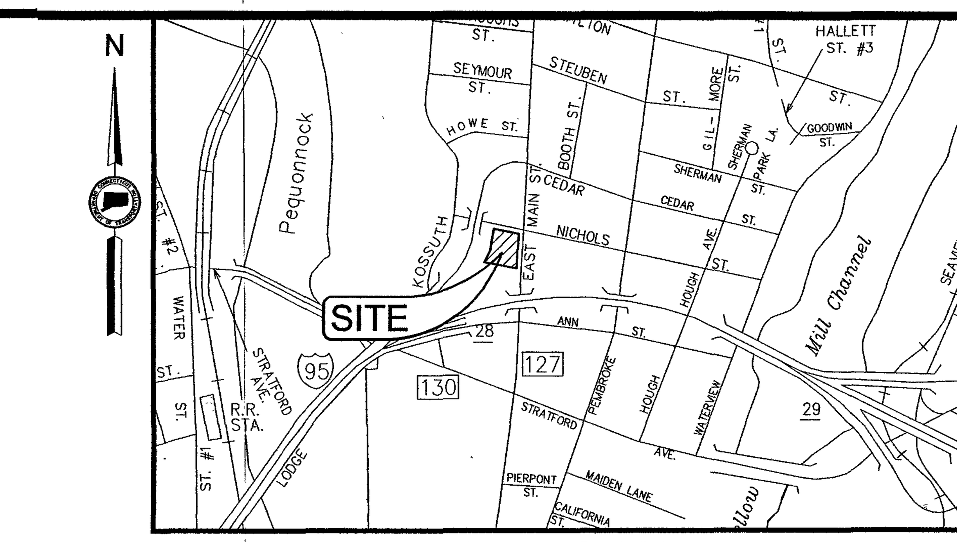
LEGEND

N/F	NOW OR FORMERLY	CB	CATCH BASIN
MON.	MONUMENT	WM	WATER METER
I.P.	IRON PIPE	WV	WATER VALVE
FND.	FOUND	GV	GAS VALVE
S.F.	SQUARE FEET	RET.	RETAINING
CONC.	CONCRETE	SNET	SOUTHERN NEW ENGLAND TELEPHONE
BIT.	BITUMINOUS	UI	UNITED ILLUMINATING COMPANY
OHU	OVERHEAD UTILITIES	TMH	TELEPHONE MANHOLE
U/G	UNDER GROUND	INT.	INTERSECTION
MH	MANHOLE	INV.	INVERT
ELEC.	ELECTRIC	C.I.	CAST IRON
Ø	UTILITY POLE	V.C.	VITRIFIED CLAY
DYL	DOUBLE YELLOW LINE	RCP	REINFORCED CONCRETE PIPE
SWL	SINGLE WHITE LINE	RD	ROOF DRAIN
BWL	BROKEN WHITE LINE	MW	MONITOR WELL
EOP	EDGE OF PAVEMENT	x 8.65	EXISTING SPOT GRADE
RET.	RETAINING	——100——	EXISTING CONTOUR ELEVATION
CLF	CHAIN LINK FENCE	L.O.	LAYOUT OF STREET WIDTH
FFE	FINISHED FLOOR ELEVATION	(2)	PARKING SPACES
C.O.	CLEANOUT	HDPE	HIGH DENSITY POLYETHYLENE
LP	LIGHT POST	PVC	POLYVINYL CHLORIDE
	EXISTING CONIFER TREE		EXISTING DECIDUOUS TREE

Cabezas DeAngelis
ENGINEERS & SURVEYORS
78 ELM STREET, BRIDGEPORT, CT 06604
P:203 330 8700 • F:203 330 8701

SCALE: 1"=20'
FIELD FILE: steelpointe north survey.rw5
PROJECT NO. CD1478
DATE: February 2, 2021
CAD FILE: Steelpointe North PS.dwg
SHEET 1 OF 1
REV: Attorney Comments 09-22-2021





LOCATION MAP
SCALE: 1" = 800'

Combined Parcel Area 27,154± SF or 0.623± Ac.					
BLOCK 808					
TC #CT-4833787 PARCEL NO.	LOT	ADDRESS	VOL.	PG.	GRANTEE
1	3	192-194 Nichols Street	1782	313	City of Bridgeport
2	2A	379-395 East Main Street	4323	102	Bridgeport Redevelopment Agency (as Agent for City of Bridgeport)
3	1E	81 Evitts Lane	4287	194	Bridgeport Redevelopment Agency
4	7	75 Evitts Lane	4287	194	Bridgeport Redevelopment Agency
5	2	371-377 East Main Street	4323	99	Bridgeport Redevelopment Agency (as Agent for City of Bridgeport)

EXCEPTIONS

FIRST AMERICAN TITLE INSURANCE COMPANY
TITLE COMMITMENT NO.: CT-4833787
EFFECTIVE DATE: JULY 21, 2021 AT 8:00AM

Exceptions are numbered according to those found in Title Commitment File No.: CT-4833787

BLOCK 808

AS TO PARCEL 2
10. Vol. 2702 Pg. 131 — Easement to Southern Connecticut Gas Company (dated January 17, 1997)

AS TO PARCEL 3 & 4 — Vesting deed contains appurtenant language regarding Evitts Lane. Evitts Lane has not been searched

AS TO PARCEL 5
11. Vol. 2619 Pg. 153 — Variance - waive regulation prohibiting a residential use in a Light Industrial Zone (dated January 30, 1989)

8-10

DATE APPROVED: 12-7-21
CITY PLANNING & ZONING
COMMISSION BPT., CT.
ATTEST: [signature] ZEO
LUCR DIR. [ ] ZONING ADMIN. [ ]

APPROVED 12/7/2021
BY [signature] CITY ENGINEER

9/4/21/[illegible] cmo

APPROVED FOR
ZONING COMPLIANCE ONLY
ZONING DEPARTMENT
CITY OF BRIDGEPORT, CT
BY [signature] DATE 12-2-21

CERTIFICATION TO

This survey is made for the benefit of:
Title Company: First American Title Insurance Company
Additional Parties: Bridgeport Landing, LLC and BLD-WF, LLC
To the best of my knowledge and belief this map is substantially correct as noted here.

[signature]
WASHINGTON CABEZAS, JR. PEL 70210

STATE OF CONNECTICUT · WASHINGTON CABEZAS JR. · No. 70210 · LICENSED LAND SURVEYOR

0 20 40 60 100
SCALE

PROPERTY SURVEY
- AND -
TOPOGRAPHIC SURVEY

- PREPARED FOR -
BRIDGEPORT LANDING DEVELOPMENT, LLC

FIVE PARCELS
- LOCATED AT -
"STEELPOINTE NORTH"
EAST MAIN STREET (STATE ROUTE NO. 127) & NICHOLS STREET
BRIDGEPORT, CONNECTICUT
- ASSESSOR'S REFERENCE -
MAP 36 | BLOCK 808 | LOTS 3, 2A, 2, 1E & 7

SHEET 1 OF 1

FEBRUARY 2, 2021 WASHINGTON CABEZAS, JR., PE, LS SCALE: 1" = 20'

CITY OF BRIDGEPORT

File No. ____________

PLANNING & ZONING COMMISSION APPLICATION

1. **NAME OF APPLICANT:** A.J.V. LLC
2. Is the Applicant's name Trustee of Record? Yes ______ No X ______.
   If yes, a sworn statement disclosing the Beneficiary shall accompany this application upon filing.
3. Address of Property: 4890 Main Street, 25 & 45 Sequioa Road and 2587 Old Town Road, Bridgeport, CT 06606
   (number) (street) (state) (zip code)
4. Assessor's Map Information: Block No. 89/2600 Lot No. 4/C, 4/B, B/5 , B/4
5. Amendments to Zoning Regulations: (indicate) Article: N/A Section: ____________
   (Attach copies of Amendment)
6. Description of Property (Metes & Bounds): 120' x 136.62' x 65.02' x 176.62' x 185' x 23.56' x 30.35' x 141'
7. Existing Zone Classification: N4
8. Zone Classification requested: MX2
9. Describe Proposed Development of Property: The Application proposes to change the Property from the N4 Zone to the MX2 Zone

Approval(s) requested: Zone Change

Signature: ____________ **Date**: 08/12/2024

Print Name: ____________

If signed by Agent, state capacity (Lawyer, Developer, etc.) **Signature:** ____________

Print Name: Chris Russo

Mailing Address: 10 Sasco Hill Rd, Fairfield, CT 06824

Phone: 203-255-9928 Cell: 203-255-9928 Fax: 203-576-6626

E-mail Address: Chris@russorizio.com

$ ____________ Fee received **Date**: ____________ **Clerk**: ____________

THIS APPLICATION MUST BE SUBMITTED IN PERSON AND WITH COMPLETED CHECKLIST

- ■ Completed & Signed Application Form
- ■ A-2 Site Survey
- □ Building Floor Plans
- ■ Completed Site / Landscape Plan
- □ Drainage Plan
- □ Building Elevations
- ■ Written Statement of Development and Use
- ■ Property Owner's List
- □ Fee
- ■ Cert. of Incorporation & Organization and First Report (Corporations & LLC's)

PROPERTY OWNER'S ENDORSEMENT OF APPLICATION

A.J.V. LLC	____________	08/12/2024
Print Owner's Name	Owner's Signature	Date
____________	____________	____________
Print Owner's Name	Owner's Signature	Date

Rev. 6/18/2016

Lisa S. Broder*
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Tel 646-357-3527

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Rutland, VT 05702
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Jane Ford Shaw
Jane@russorizio.com
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Vanessa@russorizio.com

* *Also Admitted in NY*
♠ *Also Admitted in VT*
+ *Of Counsel*

August 12, 2024

Paul Boucher
Zoning Administrator
Zoning Department
45 Lyon Terrace
Bridgeport, CT 06604
HAND-DELIVERED

Re: Petition for Zone Change – 4890 Main St., 2587 Old Town Rd. and 25 & 45 Sequoia Rd.

Dear Mr. Boucher:

Please accept the following narrative and enclosed application materials as part of an application for a zone change under the Bridgeport Zoning Regulations (the "Regulations") for the properties located at 4890 Main Stret and 25 Sequoia Road (the "Site") to change the zone from N4 Zone to the MX2 Zone.

Narrative

The Site is currently located in the N4 Zone. The Applicant proposes to convert the Site to the MX2 Zone, which is located along the same commercial corridor of Main Street. The Site is located south of the Merritt Parkway and the City's border with Trumbull and contains three street frontages – Main Street, Sequoia Road and Old Town Road. There is a TD Bank located across Main Street and a large medical office building located across Old Town Road.

The Site is located in a transition area with a mix of uses of zones in the area, including the RX1, RX2, MX1 and MX2 Zones. Commercial properties are located directly across and north of the Site, while residential uses are located to the rear and south of the Site. The Site is obviously also located on one of the main commercial corridors in the City. Significant commercial uses are located in the area. Main Street is a vehicle-heavy corridor, but it does have an infrastructure of bus stops and sidewalks that can promote pedestrian activity.

Zone Change

The Petition satisfies the review and approval criteria for a zoning map amendment under Section 11.40.7 of the Regulations. The Petition is in conformity with the comprehensive plan as the Petition appropriately designates the Site within the MX2 Zone to which it conforms under the

Regulations. Commercial zones are located directly across from the Site and the MX2 Zone is in close proximity. The Regulations have put these zones under the umbrella of Mixed-Use & Commercial Zones. The properties along Main Street switch between the zones under this same umbrella. In addition, the Site contains enough lot area to provide a significant buffer between any use of the Site and the neighboring residential areas. Under the Regulations, the MX2 Zone is intended for a mixed-use center, which can serve the region. With its location on Main Street, the Site is easily accessible by City residents as well as regional residents by vehicle. It also makes the Site easily accessible by pedestrian means. The nearby bus stops and sidewalks promote the pedestrian activity that is desired in the City's Plan of Conservation and Development ("POCD"). One of the POCD's Guiding Principles for Bridgeport as a "Livable City" holds that the commercial corridors have to remain "safe and attractive places for walking and bicycling." Currently, there are no sidewalks on the Site because it is a residential zone that breaks up the sidewalks that exist to the north and south of the Site. It disrupts the connectivity desired in the POCD. The Application will help provide this connection. The POCD also acknowledges that economic activity in the City has slowed over the decades that have left Bridgeporters "wanting for businesses that support their daily needs as well as an occasional shopping trip." The Application will promote a continuous commercial corridor that can have the Site host one of these businesses to support the daily needs of Bridgeporters.

For the above-stated reasons, the Application satisfies all the applicable standards for a change in zone under the Regulations and the Applicant respectfully requests its approval.

Sincerely,

Chris Russo
Attorney for Applicant

4890 MAIN ST 2587 OLD TOW ROAD, 25 & 45 SEQUOIA RD - 100 ABUTTERS LIST

LOCATION	OWNER	OWNER ADDRESS	CITY	STATE	ZIP
25 SEQUOIA RD	MFD LLC	6527 MAIN ST 2ND FLR	TRUMBULL	CT	06611
4865 MAIN ST	PT MAIN STREET LLC	252 ROBBY LANE	MANHASSET HILLS	NY	11040
45 SEQUOIA RD	MFD LLC	6527 MAIN ST 2ND FLR	TRUMBULL	CT	06611
4890 MAIN ST	A J V LLC	PO BOX 110384	TRUMBULL	CT	06611
2587 OLD TOWN RD	A J V LLC	PO BOX 110384	TRUMBULL	CT	06611
2571 OLD TOWN RD	ST. GERMAIN MARIE	2571 OLD TOWN RD	BRIDGEPORT	CT	06606
4920 MAIN ST	CENTURION HOLDINGS 1 INC	4920 MAIN ST	BRIDGEPORT	CT	06606
16 MINTURN RD	FERRANTE JOSEPHINE C/O VICTOR M FERRANTE	1087 BROAD STREET STE 202	BRIDGEPORT	CT	06604
4840 MAIN ST #4842	MAIN SEQUOIA LLC	P O BOX 110384	TRUMBULL	CT	06611
44 SEQUOIA RD	J G V BUILDERS	P O BOX 110384	TRUMBULL	CT	06611
60 SEQUOIA RD	VANSCOY LAVETTE PAUL & MARIA VANSCOY	60 SEQUOIA RD	BRIDGEPORT	CT	06606
61 SEQUOIA RD	NOLE COLETTE	61 SEQUOIA RD	BRIDGEPORT	CT	06606-1352
2555 OLD TOWN RD	MACHADO JUVENTINA	2555 OLD TOWN RD	BRIDGEPORT	CT	06606
2543 OLD TOWN RD	OSORIO DAVID & ELIZABETH	2543 OLD TOWN ROAD	BRIDGEPORT	CT	06606
77 SEQUOIA RD	DA COSTA EVANDRO L	77 SEQUOIA ROAD	BRIDGEPORT	CT	06606
76 SEQUOIA RD	ADARKWA ADWOA AKOTO NYAMEK	76 SEQUOIA RD	BRIDGEPORT	CT	06606

A.J.V. LLC

ACTIVE

6527 MAIN STREET TOP FLOOR, TRUMBULL, CT, 06611, United States

BUSINESS DETAILS

Business Details

General Information

Business Name
A.J.V. LLC

Business status
ACTIVE

Citizenship/place of formation
Domestic/Connecticut

Business address
6527 MAIN STREET TOP FLOOR, TRUMBULL, CT, 06611, United States

Annual report due
3/31/2025

NAICS code
Other Activities Related to Real Estate (531390)

Business ALEI
0550595

Date formed
12/23/1996

Business type
LLC

Mailing address
PO BOX 110384 TOP FLOOR, TRUMBULL, CT, 06611, United States

Last report filed
2024

NAICS sub code
531390

Principal Details

Principal Name
ANTOINETTE P VOLL

Principal Title
Member

Principal Business address
6527 MAIN STREET, TOP FLOOR, TRUMBULL, CT, 06611, United States

Principal Residence address
17 COLONIAL DRIVE, MONROE, CT, 06468, United States

Agent details

Agent name
JOSEPH G. VOLL

Agent Business address
6527 MAIN STREET, TOP FLOOR, TRUMBULL, CT, 06611, United States

Agent Mailing address
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Filing History

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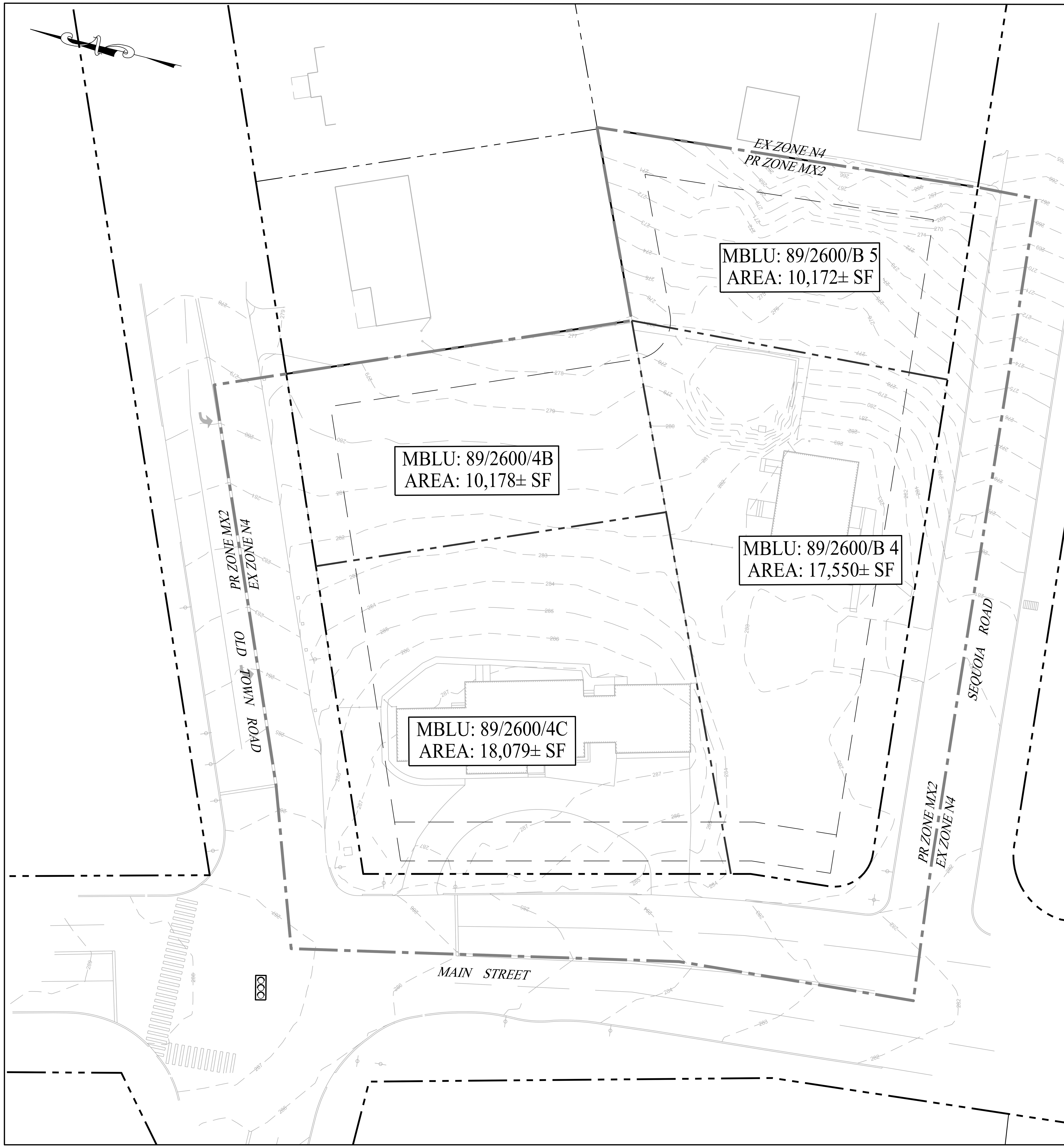


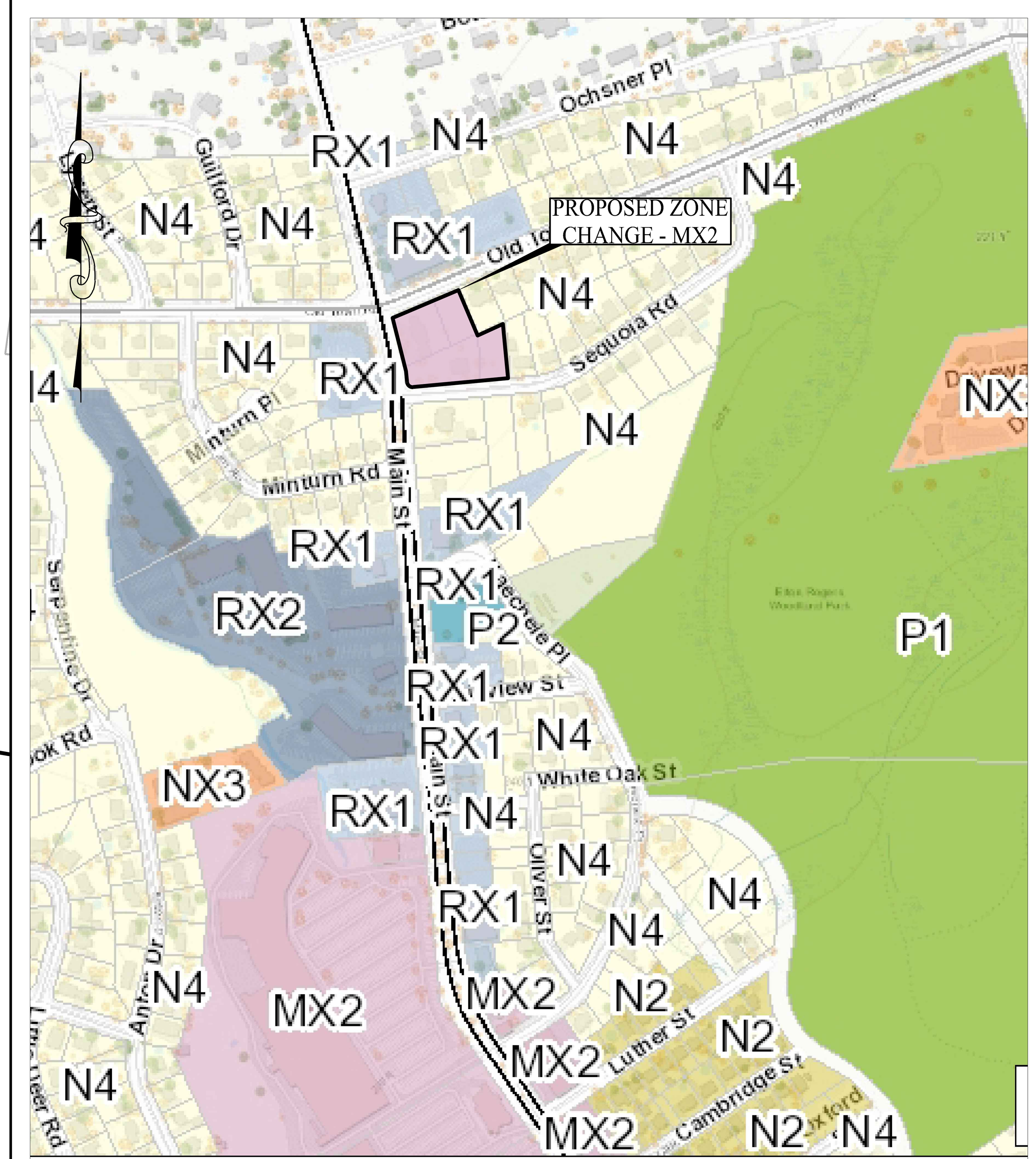
GENERAL NOTES

1. THIS FIGURE IS FOR PERMITTING PURPOSES ONLY AND HAS BEEN CREATED FOR VISUAL AIDE TO SUPPORT THE PROPOSED ZONE CHANGE. THE ACCURACY OF THE PROPOSED ZONE LINES SHOULD BE CONSIDERED APPROXIMATE.
2. BOUNDARY INFORMATION EXISTING SITE CONDITIONS AND BOUNDARY INFORMATION TAKEN FROM A PLAN TITLED "EXISTING CONDITIONS SURVEY AND TOPOGRAPHIC SURVEY", DATED DECEMBER 2023, SCALE: 1' = 20', PREPARED BY CABEZAS DEANGELIS ENGINEERS & SURVERYORS.
3. THE SUBJECT SITE CONSISTS OF FOUR (4) PARCELS OF LAND: TAX BLOCK 2600 LOTS 4B & 4C, TAX BLOCK 2600/B LOTS 4 & 5. THE TOTAL AREA OF LAND IS APPROXIMATELY 1.826 ± ACRES. THE LAND IS CURRENTLY WITHIN THE NEIGHBORHOOD SUBURBAN (N4) ZONING DISTRICT OF THE CITY OF BRIDGEPORT, CT.

ZONING COMPLIANCE TABLE

ZONE: PROPOSED ZONE: MIXED-USE 2 (MX2)
EXISTING ZONE: NEIGHBORHOOD SUBURBAN (N4)

ZONING REQUIREMENT	MX2 REQUIREMENT	N4 REQUIREMENT	EXISTING CONDITIONS
MIN LOT WIDTH	0 FT	60 FT	173± FT
PRIMARY STREETWALL	75%	N/A	N/A
PRIMARY STREET BUILD-TO-ZONE MIN / MAX	5 FT / 20 FT	20 FT (MIN)	N/A
NON-PRIMARY STREET BUILD-TO ZONE MIN / MAX	0 FT / 15 FT	10 FT (MIN)	N/A
MIN SIDE YARD SETBACK	5 FT	6 FT	N/A
MIN REAR YARD SETBACK *(NEXT TO N ZONE)	15 FT*	20 FT	N/A
MAX SITE COVERAGE	95%	65%	N/A
BUILDING HEIGHT (STORIES) MIN / MAX	2 / 3	1 / 2	N/A



BRIDGEPORT GIS ZONING INSET MAP

SCALE: 1" = 300'

Rev. #:	Date	Description

Graphic Scale: 20 0 20 40

SOLLI ENGINEERING
MONROE, CT | W. HARTFORD, CT | NORWOOD, MA
SOLLIENGINEERING.COM
T: (203) 880-5455 | F: (203) 880-9695

Drawn By: PDS
Checked By: STM
Approved By: KMS
Project #: 1607901
Plan Date: 08/1/24
Scale: 1" = 20'

Kevin Solli, P.E.
CT 25759

Project: PROPOSED COMMERCIAL REDEVELOPMENT
4890 MAIN STREET
BRIDGEPORT, CONNECTICUT

Sheet Title: ZONING MAP

Sheet #: ZM-1

CITY OF BRIDGEPORT

File No. ______________

PLANNING & ZONING COMMISSION
APPLICATION

1. **NAME OF APPLICANT:** Swanston Family Ventures, LLC and Connecticut Sports Group, LLC
2. Is the Applicant's name Trustee of Record? Yes ________ No X ________.
   If yes, a sworn statement disclosing the Beneficiary shall accompany this application upon filing.
3. Address of Property: 141 Stratford Ave. and 255 Kossuth St., Bridgeport, CT 06605
   (number) (street) (state) (zip code)
4. Assessor's Map Information: Block No. 36/804 & 805 Lot No. 1/X & 5/A
5. Amendments to Zoning Regulations: (indicate) Article: N/A Section: ________
   (Attach copies of Amendment)
6. Description of Property (Metes & Bounds): See Attached Survey
7. Existing Zone Classification: P1, P2 and DX2
8. Zone Classification requested: N/A
9. Describe Proposed Development of Property: To construct a soccer stadium, public plaza and open space, brewery/restaurant building, off-street parking and associated site improvements

   Approval(s) requested: Special Permit, Subdivision, Site Plan Review and Coastal Site Plan Review

Signature: ______________________ **Date**: 07/25/2024

Print Name: ______________________

If signed by Agent, state capacity (Lawyer, Developer, etc.) **Signature:** [signature]

Print Name: Chris Russo

Mailing Address: 10 Sasco Hill Rd, Fairfield, CT 06824

Phone: 203-255-9928 Cell: 203-255-9928 Fax: 203-576-6626

E-mail Address: Chris@russorizio.com

$ __________ Fee received **Date**: __________ **Clerk**: __________

THIS APPLICATION MUST BE SUBMITTED IN PERSON AND WITH COMPLETED CHECKLIST

- ■ Completed & Signed Application Form
- ■ A-2 Site Survey
- ■ Building Floor Plans
- ■ Completed Site / Landscape Plan
- ■ Drainage Plan
- ■ Building Elevations
- ■ Written Statement of Development and Use
- ■ Property Owner's List
- □ Fee
- ■ Cert. of Incorporation & Organization and First Report (Corporations & LLC's)

PROPERTY OWNER'S ENDORSEMENT OF APPLICATION

Print Owner's Name	Owner's Signature	Date
255 Kossuth LLC	[signature]	07/25/2024

Rev. 6/18/2016

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* *Also Admitted in NY*
♠ *Also Admitted in VT*
+ *Of Counsel*

July 25, 2024

Paul Boucher
Zoning Administrator
Bridgeport Zoning Department
45 Lyon Terrace
Bridgeport, CT 06604

Re: Application to Bridgeport Planning and Zoning Commission for properties located at 141 Stratford Avenue and 255 Kossuth Street

Dear Mr. Boucher:

Please accept the following narrative and enclosed application materials as part of an application for Subdivision, Special Permit, Site Plan Review and Coastal Site Plan Review under the Bridgeport Zoning Regulations (the "Regulations") for the properties located at 141 Stratford Avenue and 255 Kossuth Street (the "Site") to construct a soccer stadium, public plaza and open space, brewery/restaurant building and associated Site improvements in the P1 & P2 Zone.

<u>Written Statement of Development and Use</u>

The Applicant proposes to construct a soccer stadium, public plaza and open space, brewery/restaurant building and associated Site improvements on the Site. The Site consists of property over three (3) acres and has received the necessary approval for a master plan development ("MPD") from the Commission. This Application marks the first phase of the MPD and is in accordance with that approval.

The Site is the location of a former dog track and jai alai facility on the property identified as 255 Kossuth Street. It contains dog track facilities on its southern end and an existing parking area on its northern half. The property identified as 141 Stratford Avenue is the former location of the AGI Rubber Company. The Applicant proposes to demolish all existing structures on the Site and revitalize the Site with completely new construction. The Site contains a significant frontage on Kossuth Street from its southern end to its northern end. Along its southern boundary line, the Site is bounded by Stratford Avenue. The Pequonnock River is located along its western boundary.

The Applicant proposes to construct a new soccer stadium to be located on the southern portion of 255 Kossuth Street in the location of the existing dog track facilities. The "Civic, Large" use is permitted through a Special Permit under the Civic Building Type in the P2 Zone. Said stadium will be the host of a new minor league soccer team and will contain 7,500 seats. The stadium has been designed with open concourses to provide views onto the field and visibility from I-95. It features a sleek and modern design with a shipping-container-inspired architecture as a reference to Bridgeport's history. Extensive lighting of the stadium in various colors will add vibrancy to the area as depicted in the submitted renderings. It will be a tremendous new landmark for the City of Bridgeport. The stadium will contain its own food and vending options for patrons.

To the south of the stadium, the Applicant proposes a park that will serve as a fan zone for pre- and post-game activities on game-day. This area will contain a number of soccer-related features, including a central plaza in the shape and design of a soccer ball. On days without soccer games, the park will serve as a community asset with public access and recreational use on the proposed multi-sports fields. Children in Bridgeport will be able to play on a soccer field with the backdrop of a professional soccer stadium behind them. This area will also include a restaurant building envisioned for a brewery/restaurant along the Pequonnock River waterfront. The "Retail & Entertainment" use is permitted through a Special Permit under the Civic Building Type in the P1 Zone. The exterior design of the restaurant will consist of glass and metal panels to complement the stadium.

On-site parking in the southwestern corner of the Site will provide daily access from Stratford Avenue to this restaurant as well as parking for patrons to the soccer merchandise store. An existing parking area on the north side of the stadium, which was previously used for the dog track, will be utilized for parking at the stadium. Service access to the stadium will be provided at the northeast corner of the stadium to allow large tractor-trailers and other delivery cans to easily circulate to a loading zone. The loading zone will be screened from the public roadway. The majority of attendees will park in the several parking garages in the nearby vicinity within short walking distance. These garages are well below capacity and can accommodate a large portion of the attendees' vehicles. A parking study has been submitted with this application, which found that there will be an excess of parking during weekday evening games and that additional garages could be utilized for weekend games to ensure there is sufficient parking. The Applicant has been in conversations with the City to make that parking available. Attendees walking to the stadium will utilize the Stratford Avenue Bridge for access. It should also be noted that the Site is in close proximity to the train station, which will also provide easy access for many attendees.

The Application will also provide for a temporary access to the riverfront. The riverfront will not be fully complete until the next phase of the development, but the Applicant has provided this temporary access in the Application to provide access to the public, which has been prevented for decades. Native vegetation will be located throughout the Site. A significant improvement to the Site will be the integration of new stormwater features. The transformation of the Site, which is currently a brownfield, to a property that contains improvements to current standards and creates public open space is a complete revitalization of a large and underutilized waterfront property. The Site is also located within the floodplain. The Applicant has included a floodplain study with this submission, which concluded that the project would not result in any impact to downriver properties. Retaining walls will be utilized to avoid tidal wetlands associated with the riverbank and ensure there will be no impact to wetlands. The Site will utilize public water and sanitary sewer through newly installed lines.

As part of the Application, the Applicant is requesting to subdivide the property known as 255 Kossuth Street to split the parcel between the area containing the soccer stadium and the area containing the existing parking. For these reasons, the existing parking area will require a Special Permit as it will become a non-accessory parking use. It will support the soccer stadium, which will be on a separate lot. This will also divide the parcel among the zone lines approved in the MPD. The upper portion of 255 Kossuth Street is located within the DX-2 Zone and the lower portion of 255 Kossuth Street is located in the P2 Zone. The proposed lots meet the lot requirements under the Regulations as there is no minimum lot area and the lot proposed to contain the stadium will contain more than 50' of lot width.

Special Permit

The Application satisfies the Sec. 11.50 Special Permit standards of the Regulations. First, the proposed soccer stadium, restaurant/brewery and non-accessory parking uses are consistent with and implement the objectives and policies of the master plan of conservation and development (the "POCD"). The POCD's vision viewed Bridgeport as a regional center in eastern Fairfield County. It is the very first sentence of the Vision Statement. The Application will create a sports and entertainment district unlike any in Fairfield County. The Site will host a professional team in one of the most popular sports in the world. A sport which has experienced gains in popularity year after year. In its goal for Bridgeport to become a regional center, the POCD actually states that there should be an initiative to redevelop the waterfront "with an eye towards the potential to create a recreational attraction unique in the Northeast." The Application clearly satisfies that initiative.

The Application also helps create a livable city with easy access to a major public venue while also growing Bridgeport's economy with the wealth of job opportunities it will provide. It will also create a walkable attraction in the Downtown area with easy access to mass transit thereby reducing the need for vehicles. The transformation of the Site from a vacant and derelict brownfield to a vibrant public attraction providing open space and waterfront access satisfies multiple goals of the POCD, but particularly its goal to improve the environment. One of the main guiding principles for the benefit of the City's economy was the revitalization of the City's waterfront. Vacant parcels and outdated buildings are cited as the significant existing challenge. This Application represents the first phase of a multi-phase project, which will completely rehabilitate a waterfront that extends over 1,500' from the Stratford Avenue bridge to the railroad tracks.

In accordance with the second Special Permit standard, the Application, including the proposed subdivision and site plan, is fully compliant with all applicable Regulations. Further, the proposed use and site plan will not impair the future development of the surrounding areas. In fact, it will spur development. The proposed use will attract thousands to Downtown Bridgeport and create jobs on- and off-Site. It will utilize existing parking garages which are significantly below capacity. It will encourage the use of mass transit thereby boosting the importance of the Bridgeport train station. The Applicant has submitted a traffic and parking study, which found that the demand from the proposed use will not impair development in the surrounding area.

The proposed uses will not be detrimental to existing development in the surrounding area because of the height, scale, design or method of operation. The proposed buildings are in conformity with the bulk standards of the Regulations. They will be constructed in the manner the Commission deliberately planned through its Regulations. In fact, reopening the waterfront on the Site to the public will be an asset to existing development. It will be an amenity for all in the area, including the residents of the multitude of high-density developments recently approved in the surrounding area. To ensure safety, security cameras and other security measures will be placed throughout the Site. During gamedays, staff will also be utilized off-Site to ensure safe and efficient access of attendees to the Site.

The proposed use is not likely to cause a depreciation in the value of nearby properties. It will cause the opposite. As a vibrant city landmark that will become a sports and entertainment hub for the entire region while still providing a local public amenity with its access to open spaces and the waterfront, the proposed use will increase nearby property values.

Finally, the potential for environmental impacts to Long Island Sound have been appropriately mitigated by the proposed measures under the Application. As stated above, a floodplain study has been submitted with this Application which concluded there will be no impact to downriver properties.

<u>Site Plan Review</u>

The Application satisfies the Sec. 11.70 Site Plan Review standards of the Regulations as it fully complies with the standards of the Regulations. The design of the proposed building and landscaping create a harmonious building-street interaction providing a tremendous improvement to the existing streetscape from the existing vacant site. The scale and proportion of the buildings conform to the P1, P2 and DX-2 Development Standards. The Application proposes significant public access to the Site and waterfront. This is access that has been denied to the residents of Bridgeport for decades. The proposed use will be a tremendous complement to the surrounding commercial and residential areas as regional landmark. It will also be a significant employer. The Site is located in close proximity to I-95, a major thoroughfare, multiple water access points and the train station, which provides a number of modes of access to the Site. In addition, the Site is in close proximity to underutilized Downtown parking garages. It is an ideal location for this use.

Coastal Site Plan Review

The Application also complies with Section 11.80 of the Regulations regarding coastal site plan review. As stated above, the Application fully complies with the site plan review standards of the Regulations. The Application poses no danger or threat to coastal resources and it has no potential adverse impacts as demonstrated in the submitted materials. While the Application does not propose a water-dependent use, it will provide public access to a waterfront which has not been open for decades. The proposed building and Site improvements will all be constructed in accordance with current codes and regulations, including the appropriate stormwater drainage systems. Sediment and erosion controls, such as silt fencing and anti-tracking aprons, will be utilized during construction. The Applicant has provided for necessary measures, such as the construction of retaining walls, to protect nearby tidal wetlands.

Subdivisions

The Application satisfies the standards of Sec. 11.100 of the Regulations regarding Subdivisions. As stated above, the Application complies with all applicable sections of the Regulations. The Applicant only requests to subdivide the property identified as 255 Kossuth Street. The upper portion of said property is located in the DX-2 Zone and the lower portion is located in the P2 Zone. Neither zone requires a minimum lot area and both lots significantly exceed the 50' minimum lot width requirement. For these reasons, the proposed subdivision is fully compliant.

For all the above-stated reasons, the Application satisfies all the applicable standards of the Regulations and the Applicant respectfully requests approval for the proposed special permit uses, subdivision, coastal site plan review and site plan review.

Sincerely,

Christopher Russo

LIST OF PROPERTY WINNERS WITHIN 100' OF 141 STRATFORD AVENUE AND 255 KOSSUTH STREET, BRIDGEPORT, CT

LOCATION	OWNER	OWNER ADDRESS	CITY	STATE	ZIP
104 BURROUGHS ST	MAVI GROUP LLC	17 WOODLAWN RD	TRUMBULL	CT	06611
370 KOSSUTH ST #372	ST MICHAEL ARCHANGEL ROMAN	310 PULASKI ST	BRIDGEPORT	CT	06608
363 KOSSUTH ST	255 KOSSUTH LLC	133 RIVER RD	MYSTIC	CT	06355
1 NOBLE AV	CHEMICAL ABUSE SERV AGENCY INC	690 ARCTIC STREET	BRIDGEPORT	CT	06608
401 KOSSUTH ST	CENTRAL CONNECTICUT COAST MEN'S CHRISTIAN ASSOC. INC.	1240 CHAPEL ST	NEW HAVEN	CT	06511
255 KOSSUTH ST	255 KOSSUTH LLC	133 RIVER ST	MYSTIC	CT	06355
150 KOSSUTH ST	255 KOSSUTH LLC	133 RIVER ST	MYSTIC	CT	06355
83 HOWE ST #153	255 KOSSUTH LLC	133 RIVER RD	MYSTIC	CT	06355
46 SEYMOUR ST	VARGAS BILLING SERVICES LLC	46 SEYMOUR ST	BRIDGEPORT	CT	06608
141 STRATFORD AV	BRIDGEPORT CITY OF	45 LYON TER	BRIDGEPORT	CT	06604
100 KOSSUTH ST	255 KOSSUTH LLC	133 RIVER RD	MYSTIC	CT	06355
304 KOSSUTH ST	MAVI GROUP LLC	17 WOODLAWN RD	TRUMBULL	CT	06611
110 PULASKI ST	STATE OF CONNECTICUT	PO DRAWER A	WETHERSFIELD	CT	06109
90 PULASKI ST	STATE OF CONNECTICUT	PO DRAWER A	WETHERSFIELD	CT	06109
125 PULASKI ST	STATE OF CONNECTICUT	165 CAPITOL AVE	HARTFORD	CT	06106
155 PULASKI ST #157	MAPLEWOOD AVE LLC	4403 15TH AVE SUITE 215	BROOKLYN	NY	11219
202 NOBLE AV #204	MAPLEWOOD AVE LLC	4403 15TH AVE SUITE 215	BROOKLYN	NY	11219
44 CRESCENT AV #52	STATE OF CONNECTICUT	PO DRAWER A	WETHERSFIELD	CT	06109

CONNECTICUT SPORTS GROUP, LLC ACTIVE

750 E. MAIN STREET, SUITE 620, STAMFORD, CT, 06902, UNITED STATES

BUSINESS DETAILS

Business Details

General Information

Business Name
CONNECTICUT SPORTS GROUP, LLC

Business status
ACTIVE

Citizenship/place of formation
Foreign/DE

Business address
750 E. MAIN STREET, SUITE 620, STAMFORD, CT, 06902, UNITED STATES

Annual report due
3/31/2024

NAICS code
711310

Business ALEI
2755921

Date formed
3/24/2023

Business type
LLC

Mailing address
750 E. MAIN STREET, SUITE 620, STAMFORD, CT, 06902, UNITED STATES

Last report filed

NAICS sub code

Principal Details

Principal Name
ANDRE SWANSTON

Principal Title
MANAGER

Principal Business address
750 E. MAIN STREET, SUITE 620, STAMFORD, CT, 06902, United States

Principal Residence address
122 NOD HILL ROAD, RIDGEFIELD, CT, 06877, United States

Agent details

Agent name
COGENCY GLOBAL INC.

Agent Business address
29 WEST HIGH STREET, EAST HAMPTON, CT, 60424, United States

Agent Mailing address
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Name History

None

LaBella
Powered by partnership.

July 25, 2024

City of Bridgeport Planning and Zoning Commission
City Hall
45 Lyon Terrace
Bridgeport, Ct. 06604

RE: Technical Submission for Phase 1 Redevelopment of 255 & 363 Kossuth St. and 141 Stratford Avenue in the City of Bridgeport, Connecticut

Dear Commission Members:

On behalf of the Connecticut Sports Group (CTSG) we are pleased to submit this technical submission for Phase 1 of the Bridgeport Waterfront Project, the development of a 7,500 seat soccer stadium and associated facilities.

Written Statement of Project Use (Project Description)

The project will redevelop the subject waterfront property into a vibrant, sustainable, state-of-the-art waterfront community. The multi-phased redevelopment program is designed to transform the site from a vacant and underutilized property into an energetic development that will create a sports and entertainment district with an abundance of first-class quality amenities that include (i) commercial retail; (ii) public greenspace/parks; (iii) housing accommodations; (iv) sustainable waterfront condition; (v) a hotel; and (vi) a sports and entertainment facility serving as the cornerstone of the project. The project will serve as a catalyst for economic growth, job creation, and an increased tax base for the City of Bridgeport. This project aligns with all six Guiding Principles of Bridgeport's Plan of Conservation and Development (2019). For example, Principle 1 - Bridgeport is a livable city - Goal 1.2 is to "Encourage density of development in areas that are well served by transit and are within walking distance of places of residence, employment, goods, and services." The site is less than half a mile from the Bridgeport train and bus stations. The project aligns with Principle 5 - Bridgeport values nature - Goal: 5.4: "Improve existing parks and open space network to ensure that functional open space is accessible to residents of all neighborhoods." The current green spaces on the site are not accessible but will be transformed. The project will also create new green spaces, accessible to the public.

The Phase 1 development comprises a 7,500-seat stadium and a park offering three soccer fields and a riverfront retail location and/or cafe. The stadium will showcase open concourses with views to the field, team facilities, party terraces, suites, a pitch club, and stadium club featuring a wide variety of seating and food options.

Submission Materials

The Submission consists of the following materials. A brief description of project components follows.

1. Site Plan Application
2. Coastal Zone Application
3. Property Owners List
4. Cert. or Corporation/Org. of First Report
5. Site Plans consisting of:
   a. Cover sheet
   b. Survey
   c. Site Plan
   d. Drainage Plan
   e. Water/Sewer plan
   f. Floor plans
   g. Elevations
6. Technical Reports consisting of:
   a. Parking Study
   b. Floodplain Study
   c. Wetlands Report
   d. Utilities Engineering

Site Design

Phase-1 Site: The initial Phase-1 site development is located on the southern half of the redevelopment site and includes the following development areas:

- **Stadium Lot Size:** 405,268 SF (9.30 acres)
- **Stadium Footprint Area:** Approximately 235,000 SF
- **South Park and Retail Location and/ or Café Lot Size:** 109,107 SF (2.5 acres)
- **Retail Location and/ or Cafe Footprint:** 4,400 SF
- **Total Phase I Area:** 514,375 SF (11.8 acres)

Design Approach for Phase-1 Development: The Phase-1 stadium site has been designed to accommodate two possible future scenarios:

1. The Phase-1 stadium remains long-term as a permanent stadium and home to an MLS Next Pro soccer team and other potential teams.
2. Connecticut Sports Group, the City of Bridgeport, and the State of Connecticut succeed in bringing a Major League Soccer team to Bridgeport, at which point the Phase-1 modular stadium will be disassembled and relocated to another site and replaced with a larger state-of-the-art MLS soccer stadium.

Some elements of the Phase-1 site will be affected during the construction of a possible Phase-2 stadium. Therefore, the site and landscaping materials used in the initial development will accommodate future construction considerations and site upgrades, ensuring a seamless transition.

Riverfront Development: The Phase-1 development will not encroach on the existing riverfront, thereby minimizing initial construction costs and regulatory reviews. The initial phase envisions a Phase-1 riverwalk set back from the shoreline, extending the full length of the Phase-1 site. It is anticipated that the Phase-2 development will more dramatically impact the shoreline, creating a more extensive and dynamic riverwalk and linear park along the full length of the property, connecting the small pocket park on the north end to the larger park on the south end.

South Park: The park will serve as a community asset for public access, recreational use, and active competition on the multi-sport fields. The southwest corner of the park will include a restaurant, retail location, and/ or cafe, which will be open to the public on both gamedays and non-gamedays. The restaurant will include some onsite parking for daily use and provide convenient parking during the week for visitors purchasing tickets or merchandise at the stadium. The south end park will serve as a fan zone on game days for pre- and post-game activities. Most stadium attendees will walk across the Stratford Avenue Bridge from downtown and enter the stadium through the south plaza.

Parking: In addition to new parking adjacent to the restaurant and stadium in the southwest corner of the property, the existing parking lot to the north will be used for VIP parking until further development during Phase-2. Access to the stadium from the north parking lot is provided at several locations on the north endzone. All other parking will be offsite, utilizing existing downtown surface lots and parking garages, along with public transit.

Landscape Design: The stadium's perimeter and park landscape are designed to reflect the shipping container-inspired architecture of the stadium and the hexagonal pattern found on a soccer ball. This enhances the soccer experience and creates a unique thematic and visual cohesion between the structure and the site. The riverfront location offers a unique setting with opportunities to engage with and experience the river's edge on both game days and non-gamedays. Spaces adjacent to the stadium allow for gameday circulation and activities for large groups while maintaining human-scaled pockets for smaller gatherings. Customized shipping containers will be used throughout the site to reinforce the architecture and define spaces. A palette including local materials and native vegetation will pay homage to the natural Connecticut landscape. Additionally, stormwater features will be integrated into the overall design. The park includes active and passive areas, such as open fields for soccer and other activities, a splash pad fountain, a container garden, unique play elements, wide promenades, and a tree bosque plaza. It is designed to provide flexibility for both park and stadium guests, connecting the south end of the stadium to the street network leading to the stadium.

Stadium Service Access: Service access will be provided at the northeast corner of the stadium to allow large tractor-trailers and other delivery vans to easily circulate to a loading zone that will be visually screened from the adjacent roadway and parcels to the east.

Architectural Design

Overview: The Bridgeport Stadium project aims to transform a vacant waterfront property into a vibrant, sustainable, and state-of-the-art community hub. This multi-phased redevelopment will create a dynamic sports and entertainment district, including commercial retail, public greenspace, housing, a hotel, and a sports facility. This development will catalyze economic growth, job creation, and an increased tax base for Bridgeport, aligning with the city's Plan of Conservation and Development.

Phase I Development: Phase I encompasses a 7,500-seat stadium, expandable to 10,000-15,000 seats. The stadium will offer open concourses with field views, team facilities, party terraces, suites, a pitch club, and a third-floor stadium club with diverse seating and food options.

Design Philosophy: Since its advanced ship-building industry in the mid-18th century, Bridgeport has been a city of industry, commerce, and collaboration. With the booming immigrant population that came with the industrial revolution in the 19th century, Bridgeport became a thriving industrial center, shipping products all over the globe with more than 500 factories, including giants like Wheeler and Wilson, Remington UMC, Bridgeport Brass, Columbia Records, General Electric, and the American Graphophone Company.

The Bridgeport Modular Soccer Stadium celebrates this history. On the main West Grandstand and Building, instead of hiding the modularity of the components, modules of different tones are joined and offset to create solids and voids that highlight the stacking effect and industrial nature of the prefabricated "kit of parts." From the riverwalk and downtown views on the west, these modules resemble stacked containers at a port, working together to create an elegant building topped by a crane-like roof canopy structure that silhouettes the skyline and honors the uniqueness of Bridgeport's history.

Construction Details:

- **West Building:** A 3-story structure using volumetric or modular construction and custom-building exterior designs, capable of supporting all intended uses and significantly reducing construction time.
- **Grandstands:** Aluminum and steel modular grandstands with individual armchair seating, complemented by modular construction for essential facilities like restrooms and concessions.

Restaurant/ Retail Location and/or Cafe: The restaurant/retail location and/ or café will feature a versatile exterior design of glass and metal panels, complementing the stadium architecture and ensuring compatibility with both conventional and modular construction methods. This venue adds to the vibrant atmosphere, offering an enticing element to visitors and sports enthusiasts alike.

Community Impact: The project is strategically located less than half a mile from Bridgeport train and bus stations, supporting the city's goal of encouraging dense development in transit-friendly areas. The transformation of a brownfield site with inaccessible green spaces into public parks aligns with Bridgeport's vision of improving open space accessibility for all residents.

Access and Parking

The proposed stadium is located on the east side of the Pequonnock River, while the majority of the parking will be located on the west side of the river in the core of Downtown Bridgeport. It is expected that the majority of attendees will park on streets or in lots and garages on the west side of the river and then cross the Stratford Avenue bridge to access the stadium. Therefore, a detailed review of the existing parking options located in Downtown Bridgeport was completed; see attached parking study. This review demonstrated that there will be an excess of parking during weekday evening games and that arrangements should be made to open the Park City Parking Garage and the Harbor Yard Transit Garage during weekend games to ensure that there is sufficient parking. The Applicant is engaged in discussions to do so.

Pedestrians will access the stadium by crossing the Stratford Avenue Bridge. It is likely that temporary lane closures will be required before and after games to accommodate pedestrians. The Applicant will pursue discussions with the State of Connecticut, which owns Stratford Avenue, in this regard.

The Applicant is currently conducting a traffic study to determine if improvements are needed in association with the Phase 1 project. The results will be submitted as soon as they are complete.

Floodplain

Portions of the site are located within the 100-year floodplain of the Pequonnock River. The floodplain on the site is tidal rather than riverine in nature. The attached floodplain study was conducted to determine whether project grading would cause a rise in downriver flood levels. The study concluded that no such rise would occur and that the project would not result in any impact to downriver properties.

Wetlands

A wetland delineation was performed for the project site.; see attached report Tidal wetlands are associated with the Pequonnock Riverbanks. All Phase 1 development will avoid wetlands; retaining walls will be employed to separate site development from the wetlands. The Phase 1 project will avoid the river bank and its associated wetlands and therefore there will be no impact to wetlands.

Utilities Engineering

Water and sanitary sewer are available at the site. The existing utility lines will be removed and new lines installed. Water tests were conducted which demonstrated that there is adequate flow for both potable and fire protection needs. Wastewater will be conveyed to an existing 12" line in Kossuth Avenue and from there to the City's wastewater treatment plant.

Stormwater from the site is directed to the Pequonnock River via three existing outfalls. Some stormwater from the City's system is routed through the site via these outfalls. Because site soils are likely contaminated it is unlikely that stormwater infiltration practices will be utilized. Stormwater is likely to be conveyed off site. Wherever possible impervious parking and related surfaces will be used to minimize stormwater runoff.

Environmental Remediation

Historic utilization and imported urban fill material have impacted soil and groundwater at the Site. The full nature and extent of soil and groundwater contamination is currently under investigation. To this end, CTSG has received $8,000,000 in Municipal Brownfield Cleanup Grants that will be applied toward investigative and remedial activities. CTSG has also applied for acceptance to the Connecticut Abandoned Brownfields Cleanup (ABC) Program. Upon acceptance, the Site will be entered into the Voluntary Cleanup Plan and CTSG will complete their acquisition of the property.

A Remedial Investigation consisting of a Phase III Environmental Site Assessment will be performed under direct supervision of Connecticut Licensed Environmental Professional and in accordance with Connecticut Department of Energy and Environmental Protection and ABC Program regulations. A comprehensive evaluation of soil, groundwater, and soil vapor will be performed to assess for impacts associated with historic Site utilization, poor-quality urban fill materials, and release(s) of petroleum and hazardous materials. Groundwater at the Site will also be evaluated for per- and poly-fluoroalkyl substances (pfas) and 1,4-dioxane, commonly known as "emerging contaminants."

Findings obtained from the completed/approved Site Characterization activities will be used to develop a site-specific Remedial Action Plan (RAP). The RAP will present the remedial alternatives available for implementation and a cost/benefit analysis will be used to select an appropriate remedy. The RAP will identify the appropriate remedial activities and controls selected for implementation during Site redevelopment.

Fee

We understand the City will calculate and advise us of the application fee.

Conclusion

We request that this matter be placed on the next available agenda and look forward to your review.

Respectfully submitted,

LaBella Associates

Mike Woollen

Michael Woollen, AIA, LEED AP
Vice President, National PLAY Studio Leader

CC: Russ Wheeler
Alexsis Blakely
Cristian Petschen
Darnel Leader
Stuart Mesinger, AICP
John Szarowski, PE

Application Form
Municipal Coastal Site Plan Review
For Projects Located Fully or Partially Within the Coastal Boundary

Please complete this form in accordance with the attached instructions and submit it with the appropriate plans to appropriate **municipal agency**.

Section I: Applicant Identification

Applicant: Connecticut Sports Group Date: 7/19/24

Address: 9 West Broad Street, Suite 430 Stamford, Ct 06902 Phone: 571-437-1666

Project Address or Location: 225 & 363 Kossuth Street & 141 Stratford Avenue

Interest in Property: ☐ fee simple ☑ option ☐ lessee ☐ easement

Γ other (specify)__________

List primary contact for correspondence if other than applicant:

Name:__________

Address:__________

City/Town:__________ State: _____ Zip Code:______

Business Phone:__________

e-mail: russ@swanston.org

Section II: Project Site Plans

Please provide project site plans that clearly and accurately depict the following information, and check the appropriate boxes to indicate that the plans are included in this application:

- ☑ Project location
- ☑ Existing and proposed conditions, including buildings and grading
- ☑ Coastal resources on and contiguous to the site
- ☑ High tide line [as defined in CGS Section 22a-359(c)] and mean high water mark elevation contours (for parcels abutting coastal waters and/or tidal wetlands only)
- ☑ Soil erosion and sediment controls
- ☑ Stormwater treatment practices
- ☑ Ownership and type of use on adjacent properties
- ☑ Reference datum (i.e., National Geodetic Vertical Datum, Mean Sea Level, etc.)

Section III: Written Project Information

Please check the appropriate box to identify the plan or application that has resulted in this Coastal Site Plan Review:

- ☑ Site Plan for Zoning Compliance
- ☐ Subdivision or Resubdivision
- ☐ Special Permit or Special Exception
- ☐ Variance
- ☐ Municipal Project (CGS Section 8-24)

Part I: Site Information

1. Street Address or Geographical Description:

   City or Town: City of Bridgeport

2. Is project or activity proposed at a waterfront site (includes tidal wetlands frontage)? ☑ YES ☐ NO

3. Name of on-site, adjacent or downstream coastal, tidal or navigable waters, if applicable:
   Pequonnock River

4. Identify and describe the existing land use on and adjacent to the site. Include any existing structures, municipal zoning classification, significant features of the project site:
   The site is occupied with structures associated with a former dog racing track, including a grandstand/restaurant, kennels, scoreboard, maintenance buildings and related structures. The site was formerly occupied by a variety of industrial uses and strucutres. Adjacent land uses include the Pequonnock River and a variety of commercial and industrial uses. The project site is zoned P1 and P2.

5. Indicate the area of the project site: 23.08 acres acres or square feet (circle one)

6. Check the appropriate box below to indicate total land area of disturbance of the project or activity (please also see Part II.B. regarding proposed stormwater best management practices):

   ☑ Project or activity will disturb 5 or more total acres of land area on the site. It may be eligible for registration for the Department of Environmental Protection's (DEP) General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities

   ☐ Project or activity will disturb one or more total acres but less than 5 total acres of land area. A soil erosion and sedimentation control plan must be submitted to the municipal land use agency reviewing this application.

   ☐ Project or activity will not disturb 1 acre total of land area. Stormwater management controls may be required as part of the coastal site plan review.

7. Does the project include a shoreline flood and erosion control structure as defined in CGS section 22a-109(d) ☐ Yes ▣ No

Part II.A.: Description of Proposed Project or Activity

Describe the proposed project or activity including its purpose and related activities such as site clearing, grading, demolition, and other site preparations; percentage of increase or decrease in impervious cover over existing conditions resulting from the project; phasing, timing and method of proposed construction; and new uses and changes from existing uses (attach additional pages if necessary):

The project will will result in the demolition of all structures associated with the former dog track. The Phase 1 development will consist of a 7,500 seat soccer stadium, as well as two practice fields and a brewpub. The stadium will include an open concourse with views to the field, party terraces, team facilities, a pitch club and a stadium club featuring a variety of seating and food options.

Construction will follow a typical sequence to include demolition of all dog track buildings, Site clearing, grading, installation of utilities and foundation, erection of new structures and construction of finishes and landscaping.

Much of the existing site is impervious, approximatelly 12.63 acres. The project will result in 7.16 acres of impervious area, a net reduction of 5.47 acres. Total construction time is estimated at 15 months.

Part II.B.: Description of Proposed Stormwater Best Management Practices

Describe the stormwater best management practices that will be utilized to ensure that the volume of runoff generated by the first inch of rainfall is retained on-site, especially if the site or stormwater discharge is adjacent to tidal wetlands. If runoff cannot be retained on-site, describe the site limitations that prevent such retention and identify how stormwater will be treated before it is discharged from the site. Also demonstrate that the loadings of total suspended solids from the site will be reduced by 80 percent on an average annual basis, and that post-development stormwater runoff rates and volumes will not exceed pre-development runoff rates and volumes (attach additional pages if necessary):

By John

Part III: Identification of Applicable Coastal Resources and Coastal Resource Policies

Identify the coastal resources and associated policies that apply to the project by placing a check mark in the appropriate box(es) in the following table.

Coastal Resources	On-site	Adjacent	Off-site but within the influence of project	Not Applicable
General Coastal Resources* - Definition: CGS Section 22a-93(7); Policy: CGS Section 22a-92(a)(2)	☑	☐	☐	☐
Beaches & Dunes - Definition: CGS Section 22a-93(7)(C); Policies: CGS Sections 22a-92-(b)(2)(C) and 22a-92(c)(1)(K)	☐	☐	☐	☑
Bluffs & Escarpments - Definition: CGS Section 22a-93(7)(A); Policy: CGS Section 22a-92(b)(2)(A)	☐	☐	☐	☑
Coastal Hazard Area - Definition: CGS Section 22a-93(7)(H); Policies: CGS Sections 22a-92(a)(2), 22a-92(a)(5), 22a-92(b)(2)(F), 22a-92(b)(2)(J), and 22a-92(c)(2)(B)	☐	☐	☐	☑
Coastal Waters, Estuarine Embayments, Nearshore Waters, Offshore Waters - Definition: CGS Sections 22a-93(5), 22a-93(7)(G), and 22a-93(7)(K), and 22a-93(7)(L) respectively; Policies: CGS Sections 22a-92(a)(2) and 22a-92(c)(2)(A)	☐	☐	☐	☑
Developed Shorefront - Definition: CGS Section 22a-93(7)(I); Policy: 22a-92(b)(2)(G)	☐	☐	☐	☑
Freshwater Wetlands and Watercourses - Definition: CGS Section 22a-93(7)(F); Policy: CGS Section 22a-92(a)(2)	☐	☐	☐	☑
Intertidal Flats - Definition: CGS Section 22a-93(7)(D); Policies: 22a-92(b)(2)(D) and 22a-92(c)(1)(K)	☐	☐	☐	☑
Islands - Definition: CGS Section 22a-93(7)(J); Policy: CGS Section 22a-92(b)(2)(H)	☐	☐	☐	☑
Rocky Shorefront - Definition: CGS Section 22a-93(7)(B); Policy: CGS Section 22a-92(b)(2)(B)	☐	☐	☐	☑
Shellfish Concentration Areas - Definition: CGS Section 22a-93(7)(N); Policy: CGS Section 22a-92(c)(1)(I)	☐	☐	☐	☑
Shorelands - Definition: CGS Section 22a-93(7)(M); Policy: CGS Section 22a-92(b)(2)(I)	☐	☐	☐	☑
Tidal Wetlands - Definition: CGS Section 22a-93(7)(E); Policies: CGS Sections 22a-92(a)(2), 22a-92(b)(2)(E), and 22a-92(c)(1)(B)	☑	☐	☐	☐

* General Coastal Resource policy is applicable to all proposed activities

Part IV: Consistency with Applicable Coastal Resource Policies and Standards

Describe the location and condition of the coastal resources identified in Part III above and explain how the proposed project or activity is consistent with all of the applicable coastal resource policies and standards; also see adverse impacts assessment in Part VII.A below (attach additional pages if necessary):

Tidal wetlands associated with the Pequonnock River are located on the project site on the banks of the Pequonnock River. The project will not impact the wetlands in any way. There are no other coastal resources associated with the project site. See Attachment 1.

Part V: Identification of Applicable Coastal Use and Activity Policies and Standards

Identify all coastal policies and standards in or referenced by CGS Section 22a-92 applicable to the proposed project or activity:

- [x] General Development* - CGS Sections 22a-92(a)(1), 22a-92(a)(2), and 22a-92(a)(9)
- [ ] Water-Dependent Uses** - CGS Sections 22a-92(a)(3) and 22a-92(b)(1)(A); Definition CGS Section 22a-93(16)
- [ ] Ports and Harbors - CGS Section 22a-92(b)(1)(C)
- [ ] Coastal Structures and Filling - CGS Section 22a-92(b)(1)(D)
- [ ] Dredging and Navigation - CGS Sections 22a-92(c)(1)(C) and 22a-92(c)(1)(D)
- [ ] Boating - CGS Section 22a-92(b)(1)(G)
- [ ] Fisheries - CGS Section 22a-92(c)(1)(I)
- [ ] Coastal Recreation and Access - CGS Sections 22a-92(a)(6), 22a-92(C)(1)(j) and 22a-92(c)(1)(K)
- [x] Sewer and Water Lines - CGS Section 22a-92(b)(1)(B)
- [ ] Fuel, Chemicals and Hazardous Materials - CGS Sections 22a-92(b)(1)(C), 22a-92(b)(1)(E) and 22a-92(c)(1)(A)
- [x] Transportation - CGS Sections 22a-92(b)(1)(F), 22a-92(c)(1)(F), 22a-92(c)(1)(G), and 22a-92(c)(1)(H)
- [ ] Solid Waste - CGS Section 22a-92(a)(2)
- [ ] Dams, Dikes and Reservoirs - CGS Section 22a-92(a)(2)
- [ ] Cultural Resources - CGS Section 22a-92(b)(1)(J)
- [ ] Open Space and Agricultural Lands - CGS Section 22a-92(a)(2)

* General Development policies are applicable to all proposed activities

** Water-dependent Use policies are applicable to all activities proposed at waterfront sites, including those with tidal wetlands frontage.

Part VI: Consistency With Applicable Coastal Use Policies And Standards

Explain how the proposed activity or use is consistent with all of the applicable coastal use and activity policies and standards identified in Part V. **For projects proposed at waterfront sites (including those with tidal wetlands frontage)**, particular emphasis should be placed on the evaluation of the project's consistency with the water-dependent use policies and standards contained in CGS Sections 22a-92(a)(3) and 22a-92(b)(1)(A) -- also see adverse impacts assessment in Part VII.B below (attach additional pages if necessary):

See Attachment 1

Part VII.A.: Identification of Potential Adverse Impacts on Coastal Resources

Please complete this section for all projects.

Identify the adverse impact categories below that apply to the proposed project or activity. The Aapplicable≅ column **must** be checked if the proposed activity has the **potential** to generate any adverse impacts as defined in CGS Section 22a-93(15). If an adverse impact may result from the proposed project or activity, please use Part VIII to describe what project design features may be used to eliminate, minimize, or mitigate the potential for adverse impacts.

Potential Adverse Impacts on Coastal Resources	Applicable	Not Applicable
Degrading tidal wetlands, beaches and dunes, rocky shorefronts, and bluffs and escarpments through significant alteration of their natural characteristics or functions - CGS Section 22a-93(15)(H)	☐	☑
Increasing the hazard of coastal flooding through significant alteration of shoreline configurations or bathymetry, particularly within high velocity flood zones - CGS Section 22a-93(15)(E)	☐	☑
Degrading existing circulation patterns of coastal water through the significant alteration of patterns of tidal exchange or flushing rates, freshwater input, or existing basin characteristics and channel contours - CGS Section 22a-93(15)(B)	☐	☑
Degrading natural or existing drainage patterns through the significant alteration of groundwater flow and recharge and volume of runoff - CGS Section 22a-93(15)(D)	☐	☑
Degrading natural erosion patterns through the significant alteration of littoral transport of sediments in terms of deposition or source reduction - CGS Section 22a-93(15)(C)	☐	☑
Degrading visual quality through significant alteration of the natural features of vistas and view points - CGS Section 22a-93(15)(F)	☐	☑
Degrading water quality through the significant introduction into either coastal waters or groundwater supplies of suspended solids, nutrients, toxics, heavy metals or pathogens, or through the significant alteration of temperature, pH, dissolved oxygen or salinity - CGS Section 22a-93(15)(A)	☐	☑
Degrading or destroying essential wildlife, finfish, or shellfish habitat through significant alteration of the composition, migration patterns, distribution, breeding or other population characteristics of the natural species or significant alterations of the natural components of the habitat - CGS Section 22a-93(15)(G)	☐	☑

Part VII.B.: Identification of Potential Adverse Impacts on Water-dependent Uses

Please complete the following two sections **only if the project or activity is proposed at a waterfront site**:

1. Identify the adverse impact categories below that apply to the proposed project or activity. The Aapplicable≅ column **must** be checked if the proposed activity has the **potential** to generate any adverse impacts as defined in CGS Section 22a-93(17). If an adverse impact may result from the proposed project or activity, use Part VIII to describe what project design features may be used to eliminate, minimize, or mitigate the potential for adverse impacts.

Potential Adverse Impacts on Future Water-dependent Development Opportunities and Activities	Applicable	Not Applicable
Locating a non-water-dependent use at a site physically suited for or planned for location of a water-dependent use - CGS Section 22a-93(17)	☐	☑
Replacing an existing water-dependent use with a non-water-dependent use - CGS Section 22a-93(17)	☐	☑
Siting a non-water-dependent use which would substantially reduce or inhibit existing public access to marine or tidal waters - CGS Section 22a-93(17)	☐	☑

2. Identification of existing and/or proposed Water-dependent Uses

Describe the features or characteristics of the proposed activity or project that qualify as water-dependent uses as defined in CGS Section 22a-93(16). If general public access to coastal waters is provided, please identify the legal mechanisms used to ensure public access in perpetuity, and describe any provisions for parking or other access to the site and proposed amenities associated with the access (e.g., boardwalk, benches, trash receptacles, interpretative signage, etc.)*:

The project does not propose any water dependent uses, nor would it interfere with any such existing or proposed uses.

*If there are no water-dependent use components, describe how the project site is not appropriate for the development of a water-dependent use.

Part VIII: Mitigation of Potential Adverse Impacts

Explain how all potential adverse impacts on coastal resources and/or future water-dependent development opportunities and activities identified in Part VII have been avoided, eliminated, or minimized (attach additional pages if necessary):

No impacts have been identified. The only coastal resource associated with the project site is tidal wetlands on the bank of the Pequonnock River. The project will not affect these wetlands and therefore no impacts will occur.

Part IX: Remaining Adverse Impacts

Explain why any remaining adverse impacts resulting from the proposed activity or use have not been mitigated and why the project as proposed is consistent with the Connecticut Coastal Management Act (attach additional pages if necessary):

No other impacts have been identified.

Coastal Site Plan Application Attachment 1

Identification of Applicable Coastal Use and Activity Policies and Standards and Discussion of Consistency With Such Standards

1. General Development

    a. CGS Section 22a-92(a)(1) To ensure that the development, preservation or use of the land and water resources of the coastal area proceeds in a manner consistent with the rights of private property owners and the capability of the land and water resources to support development, preservation or use without significantly disrupting either the natural environment or sound economic growth.

       Discussion: The project is consistent with City zoning and does not impede on private property owner rights. The project will revitalize an abandoned and underused site and will result in clean-up of contaminated soils, thus improving the environment.

    b. CGS Section 22a-92(a)(2) To preserve and enhance coastal resources in accordance with the policies established by chapters 439, 440, 446i, 446k, 447, 474 and 477.

       Discussion: The project is consistent with these policies.

    c. CGS Section22a-92(a)(9) To give high priority and preference to uses and facilities which are dependent upon proximity to the water or the shorelands immediately adjacent to marine and tidal waters;

       Discussion: The project will take advantage of the site's proximity to the Pequonock River by providing views to the River from the stadium and by outdoor play activities and the brewpub in proximity to the river.

2. Sewer and Water Lines

    a. CGS Section 22a-92(b)(1)(B) to locate and phase sewer and water lines so as to encourage concentrated development in areas which are suitable for development; and to disapprove extension of sewer and water services into developed and undeveloped beaches, barrier beaches and tidal wetlands except that, when necessary to abate existing sources of pollution, sewers that will accommodate existing uses with limited excess capacity may be used.

       Discussion: The site is served by existing water and sewer lines. These lines will be removed and new lines installed. There will be no extension of water and sewer lines into other areas.

3. Transportation

a. CGS Section 22a-92(b)(1)(F) To make use of rehabilitation, upgrading and improvement of existing transportation facilities as the primary means of meeting transportation needs in the coastal area.

   Discussion: A traffic study is currently underway. It is not anticipated that new transportation facilities will be required. If necessary, upgrades or improvements to existing transportation will be made to ensure that adequate levels of service are maintained.

4. Tidal Wetlands

   a. CGS Section 22a-92(a)(2) To preserve and enhance coastal resources in accordance with the policies established by chapters 439, 440, 446i, 446k, 447, 474 and 477

      Discussion: The project will not disturb and will preserve the tidal wetlands on the project site.

   b. CGS Section 22a-92(b)(2)(E) to preserve tidal wetlands and to prevent the despoliation and destruction thereof in order to maintain their vital natural functions; to encourage the rehabilitation and restoration of degraded tidal wetlands and where feasible and environmentally acceptable, to encourage the creation of wetlands for the purposes of shellfish and finfish management, habitat creation and dredge spoil disposal.

      Discussion: The project will preserve the tidal wetlands on the project site. It is not feasible to develop new wetlands for shellfish or finfish management on the site.

   c. CGS Section 22a-92(c)(1)(B) to disallow any filling of tidal wetlands and nearshore, offshore and intertidal waters for the purpose of creating new land from existing wetlands and coastal waters which would otherwise be undevelopable, unless it is found that the adverse impacts on coastal resources are minimal.

      Discussion: The project does not propose the filling of any wetlands.

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WETLAND AND WATERCOURSE EVALUATION REPORT

Soccer Stadium and Mixed-Use Project

255 & 363 Kossuth Street & 83-153 Howe Street, Bridgeport, CT

Prepared for:

Mr. Stuart Mesinger
LaBella Associates
21 Fox Street
Poughkeepsie, NY 12601

Prepared by:

BL Companies
355 Research Parkway
Meriden, CT 06450-7100

Date: September 29, 2023
BL Project No: 2301485

Sagan Simko, CPSS, PWS
Senior Project Scientist II

Wesley Wolf
Senior Project Manager

TABLE OF CONTENTS

APPENDICES

I. INTRODUCTION

A. PROJECT LOCATION AND DESCRIPTION

The proposed Project is for redevelopment of an existing dog track racing facility and two (2) adjacent parking areas, along with associated site improvements, situated on three (3) parcels in Bridgeport, CT containing a total of approximately 19.7 acres ("Project Area"). The Project Area is located at 255 and 363 Kossuth Street and 83-153 Howe Street, Bridgeport, CT (see **Appendix A, Figure 1**).

LaBella Associates ("Client") has contracted BL Companies ("BL") to characterize existing wetlands and watercourses that may be affected by the Project and describe the habitats and major vegetative cover types within the study area. BL conducted wetland and watercourse field delineations within a study area defined by the Client (see **Appendix A**) on September 6 & 18, 2023. This study area included the entire 19.7-acre area described above. Investigations were conducted to identify, and delineate if present, the extent and location of jurisdictional wetlands and "Waters of the U.S." within the Project Area pursuant to the Federal Clean Water Act (Sections 401 and 404), and Connecticut regulated activities in non-tidal wetlands regulated under Section 22a-38(15) of the Connecticut General Statutes (CGS). In conjunction with U.S. Army Corps of Engineers (USACE), this program is administered by the Connecticut Department of Energy and Environmental Protection (CT DEEP). Jurisdictional wetlands were defined using the 1987 *U.S. Army Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory 1987) and subsequent guidance documents including the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0)* (US Corps of Engineers, January 2012). Waters of the U.S., which include all streams, adjacent wetlands, and other waterbodies, are defined in 33 CFR 328.3(a). Professional qualifications of the individual(s) involved in the performance of field surveys and preparation of this report are provided in **Appendix D**.

B. DESCRIPTION OF STUDY AREA

The Project Area is located at 255 and 363 Kossuth Street and 83-153 Howe Street, Bridgeport, CT.

The Project Area lies within the New England physiographic province, which is a mountainous area that has been subjected to Pleistocene glaciation. Structural features of this province include block-fault basins, large intrusive igneous masses, and shoreline cliffs. (NPS, 2017).

II. METHODOLOGY

A. RECORDS RESEARCH

A desktop analysis of the study area was conducted prior to performing field surveys and included the entire defined area of investigation. Data reviewed included aerial photography, US Geological Survey 7.5-Minute Topographic Quadrangle Maps, US Fish and Wildlife Service (USFWS) National Wetland Inventory Maps (NWI), Flood Insurance Rate Maps (FIRM) provided by the Federal Emergency Management Administration (FEMA), Connecticut's Geographic Information Systems Open Data Website, and soil information from the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS). Other sensitive resource data were reviewed as available. This compiled data was used during field investigations and the subsequent report.

B. FIELD INVESTIGATION

Field investigations were conducted to verify records research and identify land use and plant communities within the Project Area, and to determine the presence or absence of wetland and watercourse features.

1. WETLAND AND WATERCOURSE DELINEATION

Investigations were conducted to identify, and delineate if present, the extent and location of jurisdictional wetlands and "Waters of the U.S." within the Project Area pursuant to the Federal Clean Water Act (Sections 401 and 404). In Connecticut, activities in non-tidal wetlands are regulated under Section 22a-38(15) of the Connecticut General Statutes (CGS), and activities in tidal wetlands are regulated under Section 22a-30-2(h). In conjunction with USACE, these programs are administered by the Connecticut Department of Energy and Environmental Protection (CT DEEP). Jurisdictional wetlands were defined using the 1987 U.S. Army Corps of Engineers Wetland Delineation Manual (Environmental Laboratory 1987) and subsequent guidance documents including the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0) (US Corps of Engineers, January 2012). Waters of the U.S., which include all streams, adjacent wetlands, and other waterbodies, are defined in 33 CFR 328.3(a). Connecticut state wetlands are defined as areas containing poorly drained soils, very poorly drained soils, and alluvial / floodplain soils (i.e., soils occurring along watercourses occupying nearly all level areas subject to periodic flooding).

When identified, wetland sampling was conducted along the gradient between wetland and adjacent upland areas to identify the location of the wetland boundary based upon the above criteria. Sample Points (and/or data points) were placed within selected locations of wetland areas to identify important, defining characteristics and to resolve obscure transitions between mixed wetlands and uplands. Visual estimates of percent vegetation cover by species, indicators of hydrology, and a soil profile were recorded on Wetland Determination Data Forms.

When identified, waterbody data collection included various physical parameters such as height of banks, top of bank to top of bank width, ordinary high water, water depth, presence of aquatics, substrate characteristics, and flow regime.

Mapping of any wetland boundaries and watercourse ordinary high-water marks ("OHWM") was supplemented using a Trimble® TDC150 Global Positioning System (GPS) unit with sub-foot accuracy.

2. WETLAND AND WATERCOURSE CLASSIFICATION

Identified wetlands were classified in accordance with the methods of Cowardin *et al*. (1979), which categorizes wetlands based on dominant (>30 percent cover within a single stratum) vegetation: palustrine emergent ("PEM"), palustrine scrub-shrub ("PSS"), palustrine forested ("PFO"), or some combination of these wetland types. Inundated features, such as ponds and lakes, were classified as palustrine unconsolidated bottom ("PUB"). Wetlands were also classified with the Hydrogeomorphic Method (HGM) of wetland classification (Brinson, 1993).

Hydrology was considered present when a minimum of one (1) primary or two (2) secondary indicators were identified. Indicators of wetland hydrology (saturated or inundated soils) along with signs of previous prolonged inundation within the upper 12 inches of the surface were noted at each sample location where observed. Other positive primary indicators of hydrology include high water table, watermarks, sediment deposits, drift deposits, algal mat or crust, iron deposits, inundation visible on aerial imagery, sparsely vegetated concave surface, water-stained leaves, aquatic fauna, marl deposits, hydrogen sulfide odor, oxidized rhizospheres on living roots, presence of reduced iron, recent iron reduction in tilled soils, or thin muck surface. Additionally, secondary indicators of hydrology include surface soil cracks, drainage patterns, moss trim lines, dry-season water table, crayfish burrows, saturation visible on aerial imagery, stunted or stressed plants, geomorphic position, shallow aquitard, and microtopographic relief. A positive FAC-neutral test which was evaluated as a hydrophytic vegetation indicator is also considered a secondary indicator of hydrology.

Dominant species in a stratum (tree, shrub, herbaceous or vine) were determined by visually estimating the percent cover of each species within a plot of an approximately 30-foot (ft.) radius for trees, 15-ft. radius for saplings/shrubs, 5-ft. radius for herbs, and a 30-ft. radius for woody vines. Dominant vegetation was determined by the 50/20 Rule; by establishing the plant species that individually or collectively account for more than 50 percent of the total coverage of vegetation in the stratum, plus any other species that, by itself, accounts for at least 20 percent of the total. Species nomenclature and wetland indicator status follows that of the USACE National Wetland Plant List (2020, Version 3.5). Hydrophytic species are those wetland plants with an indicator status of OBL (obligate wetland), FACW (facultative wetland), or FAC (facultative). Species listed as FACU (facultative upland) or UPL (upland) are more indicative of upland areas and generally do not occur in wetlands. The hydrophytic vegetation criterion was determined to be present if the following tests were met including the Rapid Test, the Dominance Test or the Prevalence Index. All wetland habitats were classified according to the USFWS, and Classification of Wetlands and Deepwater Habitats of the United States (Cowardin *et al*. 1979).

As outlined in the National Technical Committee for Hydric Soils Version 8.2 (2018), soils were examined and sampled by using a hand auger or sharpshooter shovel to dig to a depth of approximately 16 to 20 inches or to refusal. Soil colors were determined using the 2010 Munsell® Soil Color Chart and taken while moist, or were wetted. Observations of redoximorphic (redox) concentrations, the apparent accumulation of iron (Fe) and manganese (Mn) oxides within the soil profile were noted as appropriate. Redox depletions, bodies of low chroma and value of four (4) or more where Fe-Mn oxides have been stripped were also noted, where observed. These features are usually an indication of periodic, seasonal, or permanent saturated soil conditions (Vepraskas 1994). Observations of hydric soil characteristics were based on the United States Department of Agriculture (USDA) textures, and hydric soil was considered present if one or more of the indicators were identified.

Biophysical elements such as a wetland’s landscape position, geology, hydrology, substrate, and vegetation determine the wetland’s functions and to what capacity they are performed. Due to the differing biophysical characteristics between on-site wetlands, the functions the wetlands provide and the capacity to perform those functions can vary. To better understand these differences, a description of the assessed wetland functions and values is completed based on the 1999 USACE Highway Methodology Workbook Supplement. This method requires describing each of the wetland communities and indicating the functions and values they provide. Biological, physical, chemical, and anthropogenic variables are all considered in the assessment. Wetland functions are defined as self-sustaining properties of a wetland ecosystem that exist in the absence of society. Wetland values are defined as benefits derived from one or more wetland functions and the physical characteristics that are associated with the wetland.

Field investigations also included the identification of watercourses based on flow regime: perennial (PER), intermittent (INT), or ephemeral (EPH). Perennial watercourses contain base flow supported with ground water throughout the year. Intermittent watercourses are those that contain base flow supported by ground water at least seasonally. Ephemeral waterbodies are primarily supported by precipitation. Watercourses were also classified in accordance with Cowardin *et al*. (1979). Riverine Systems include all wetlands and deep-water habitats contained within a channel. A channel is defined as “an open conduit either naturally or artificially created which periodically or continuously contains moving water, or which forms a connecting link between two bodies of standing water.” There are six (6) subsystems: Tidal, Lower Perennial, Upper Perennial, Intermittent, Unknown Perennial, and Ephemeral. Jurisdiction is ultimately determined through the USACE’s Jurisdictional Determination process.

III. RESULTS

A. RECORDS RESEARCH

The USGS Bridgeport, Connecticut 7.5-Minute Topographic Quadrangle (see **Appendix A, Figure 2**), and Google Earth, indicate the Project Area has an elevation range between approximately 3 feet and 20 feet above mean sea level (AMSL).

According to the NRCS Web Soil Survey, one (1) soil series was identified within the Project Area. Table 1 includes the soil series and its physical characteristics and limitations. Soils mapping for the Project Area is provided in **Appendix A, Figure 3**.

Table 1. Soil Series within the Project Area

Map Unit Symbol	Soil Unit Name	Hydric Soil Components (%)	Drainage Class	Depth to Restrictive Layer (inches)	Depth to Water Table (inches)
307	Urban land	0	N/A	N/A	N/A

The Connecticut state wetlands mapping with integrated USFWS NWI wetlands indicated the presence of one (1) mapped feature within the Project Area: an Estuarine, Subtidal, Unconsolidated Bottom, Subtidal (E1UBL) estuary area (see **Appendix A, Figure 4**).

Review of the Federal Emergency Management Agency (FEMA) map indicates that the western boundary of the Project Area falls within Special Flood Hazard Areas, Zone AE (With BFE or Depth) and a regulatory Floodway. Approximately half of the Project Area falls within an Area of Minimal Flood Hazard, Zone X (see **Appendix A, Figure 5**).

Aerial photography indicates the study area is mainly comprised of paved parking areas, two (2) commercial sized buildings, a race track, maintained (mowed) lawn areas and shrubby areas. The commercial buildings are located in the central and southern portions of the Project Area. Shrubby areas exist along the western boundary of the Project Area as well as certain areas near the dog racing track (see **Appendix A, Figure 6**).

B. FIELD INVESTIGATION

Field observations reflected similar land use as observed during the desktop review.

Based on field observations, it has been determined that one (1) wetland area was present within and along the western boundary of the Project Area (see **Appendix A, Figure 7**). Field Data Location Mapping, photographs of the Project Area, and Wetland Determination Data Forms are provided in **Appendices A**, **B**, and **C**, respectively.

1. WETLANDS

One wetland area, Wetland A, was located within and along the western boundary of the Project Area. Wetland A is an Estuarine, Subtidal, Unconsolidated Bottom, Subtidal (E1UBL) estuary area, and flows north to south within and along the western boundary of the Project Area. The substrate of Wetland A consisted primarily of muck and sand, with cobble along the shoreline of the entire reach of Wetland A. The depth of the wetland varied at the time of investigation with slow flow. The wetland varied in width from 310 to 450 feet along the Project Area. Contributing flow to the wetland includes high ground water discharge from the surrounding areas, surface water runoff, and inputs from the Pequonnock River, located immediately north of the Project Area.

2. WATERCOURSES

No watercourses were observed within the Project Area during the time of the site reconnaissance.

C. FUNCTIONS & VALUES

The functions and values of Wetland A include ground water recharge/discharge, floodflow alteration, fish and shellfish habitat, sediment/toxicant retention, sediment/shoreline stabilization, and wildlife habitat. Nutrients and sediments from the adjacent commercial properties, as well as roadways, can be absorbed and retained within the wetland. This wetland also provides a contrasting habitat to the surrounding commercial and upland areas.

IV. SUMMARY

Based upon these observations and best professional judgement, it has been determined that one (1) wetland area (Wetland A) that constitutes a potential jurisdictional feature is located within/ immediately adjacent to the Project Area.

The findings of this investigation represent a study of the proposed project for non-tidal wetlands and watercourses. This type of study depends on the time of year, the conditions at that time of year, site-specific influences (e.g., artificial disturbance), and individual professional judgment. It is, therefore, a professional estimate of the study area's wetlands and watercourses based upon available information and techniques.

The data that is the basis for this report is on file at BL Companies' Meriden, CT office.

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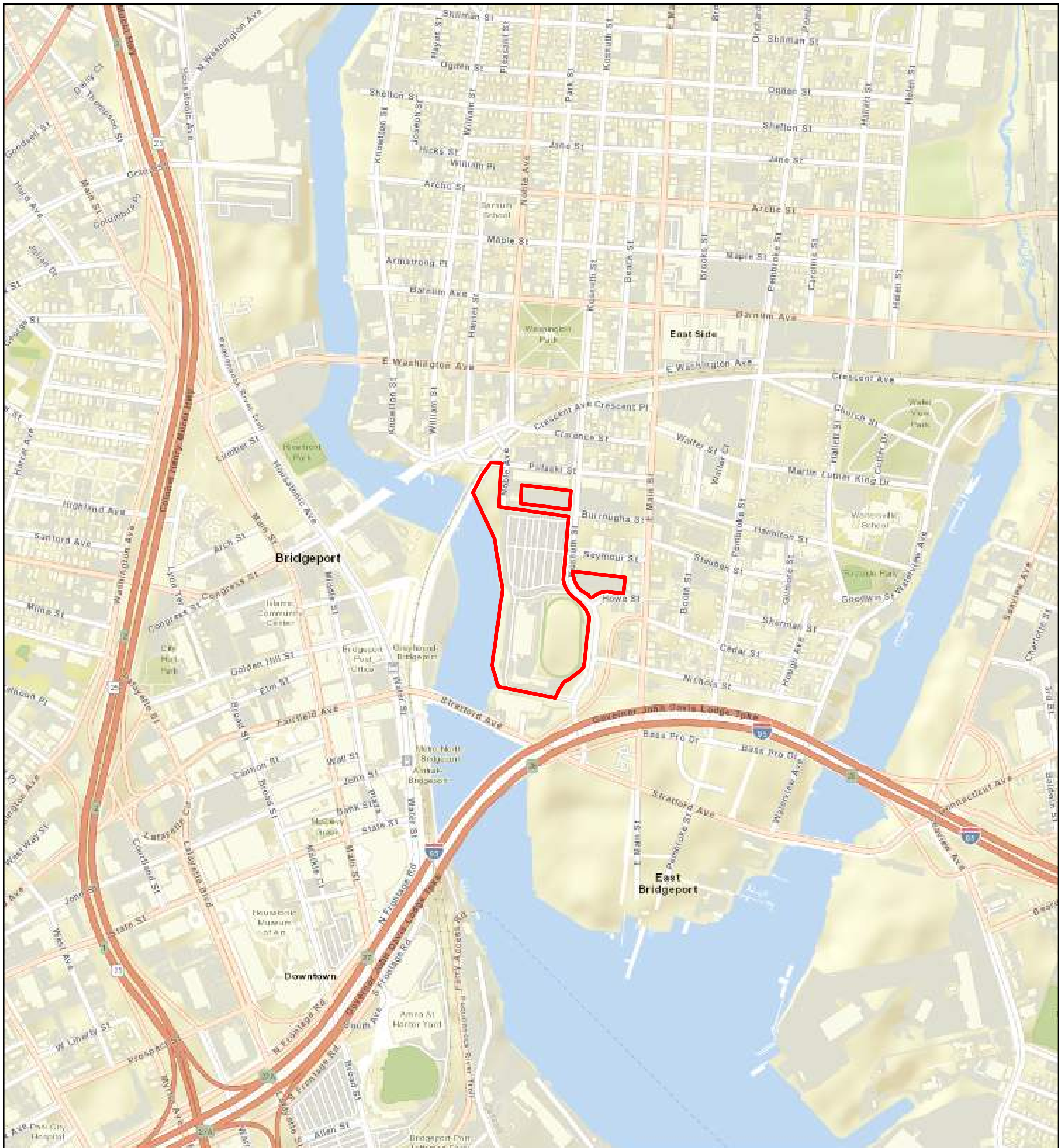
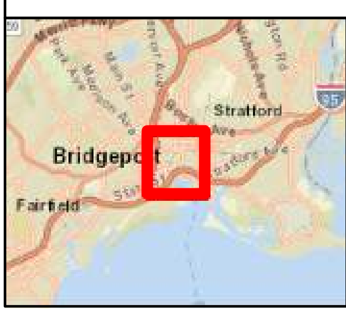
APPENDIX A

Wetland and Watercourse Delineation Mapping



SOCCER STADIUM AND MIXED USE PROJECT - PROJECT LOCATION MAP



GRAPHIC SCALE

0 500 1,000 1,500 2,000

Feet

DRAWN BY: SMS

CHECKED BY: WGW

PROJECT NO: 2301485

SCALE: 1:12,000

Figure 1

Legend

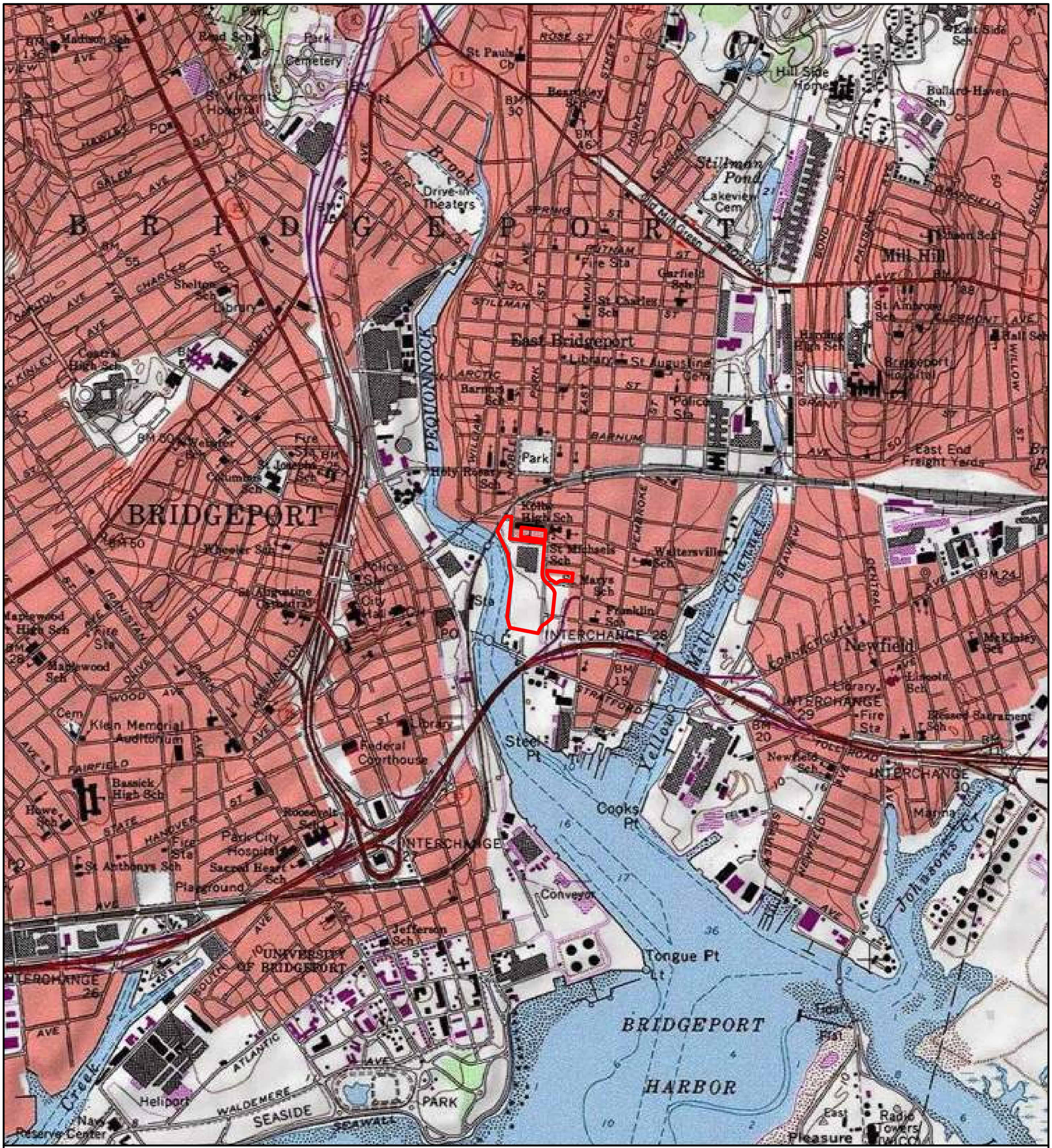
Project Area

BL Companies
Architecture Engineering Environmental Land Surveying

355 Research Parkway
Meriden, CT 06450-7100
(203) 630-1406

255 and 363 Kossuth Street and 83-153 Howe Street, Bridgeport, CT

Document Path: G:\JOBS23\14\2301485\GIS\MXD\1. Project Location Map.mxd



SOCCER STADIUM AND MIXED USE PROJECT - USGS TOPOGRAPHIC MAP

GRAPHIC SCALE

0 1,000 2,000 3,000 4,000

Feet

Legend

Project Area

255 and 363 Kossuth Street and 83-153 Howe Street, Bridgeport, CT

DRAWN BY: SMS	PROJECT NO: 2301485
CHECKED BY: WGW	
SCALE: 1:24,000	Figure 2
BL Companies — Architecture, Engineering, Environmental, Land Surveying	355 Research Parkway Meriden, CT 06450-7100 (203) 630-1406

Document Path: G:\JOBS23\14\2301485\GIS\MXD\2. USGS Topographic Map.mxd

SOCCER STADIUM AND MIXED USE PROJECT - SOILS MAP

GRAPHIC SCALE

0 125 250 375 500

Feet

DRAWN BY: SMS	PROJECT NO: 2301485
CHECKED BY: WGW	
SCALE: 1:3,000	Figure 3

Legend

Project Area

Soils Type / Boundary

255 and 363 Kossuth Street and 83-153 Howe Street, Bridgeport, CT

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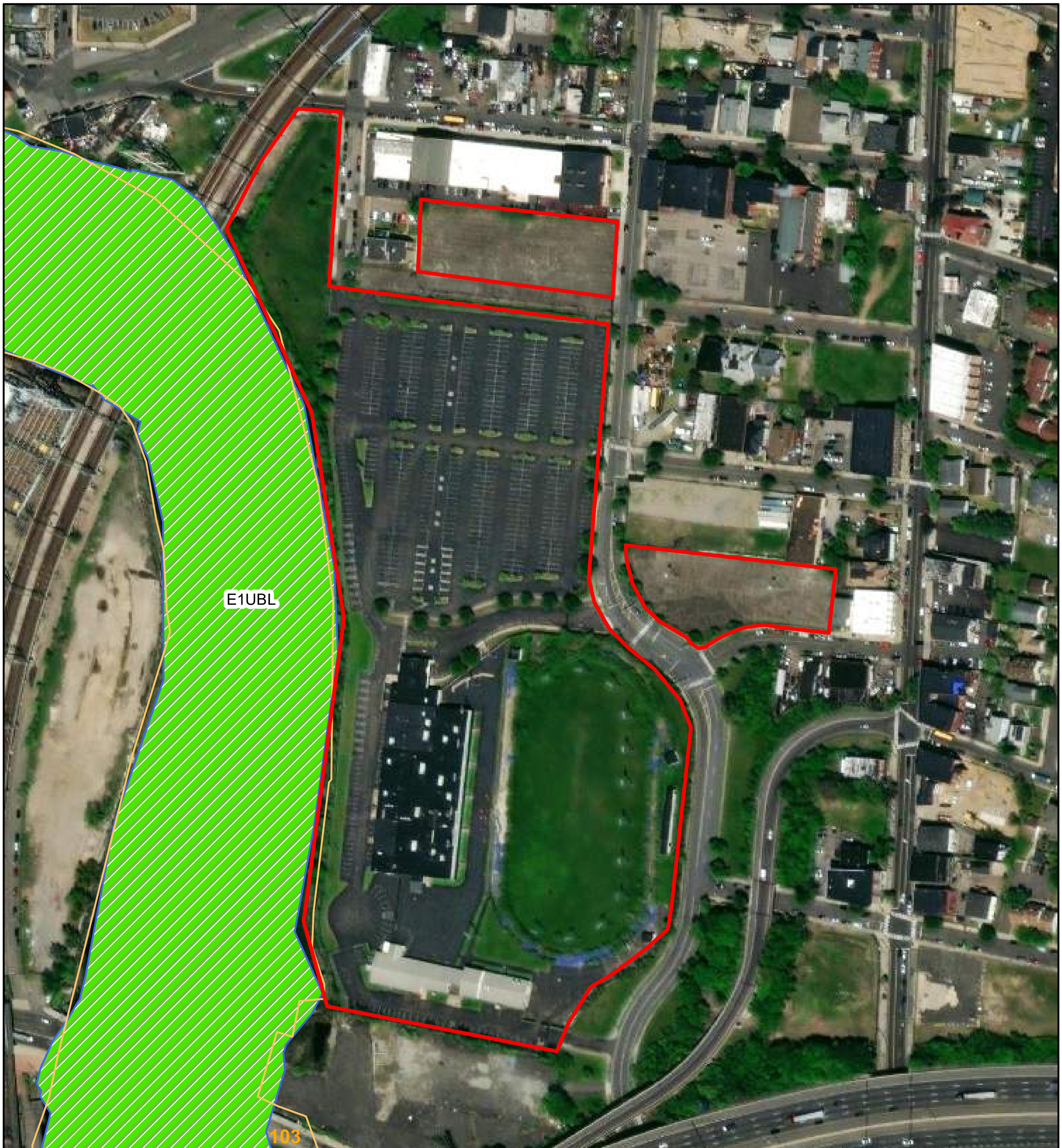
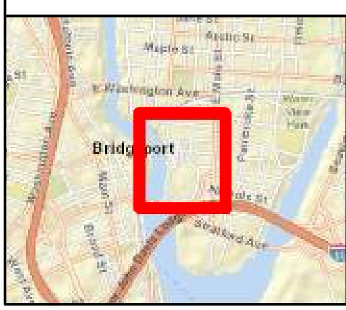
Document Path: G:\JOBS23\14\2301485\GIS\MXD\3. Soil Survey Map.mxd



SOCCER STADIUM AND MIXED USE PROJECT - NATIONAL WETLAND INVENTORY & CT WETLANDS MAP



GRAPHIC SCALE

0 125 250 375 500

Feet

Legend

- Project Area
- CT Wetlands (Soils)
- NWI / CT Wetlands

255 and 363 Kossuth Street and 83-153 Howe Street, Bridgeport, CT

DRAWN BY: SMS	PROJECT NO: 2301485
CHECKED BY: WGW	
SCALE: 1:3,000	Figure 4
BL Companies — Architecture, Engineering, Environmental, Land Surveying	355 Research Parkway Meriden, CT 06450-7100 (203) 630-1406

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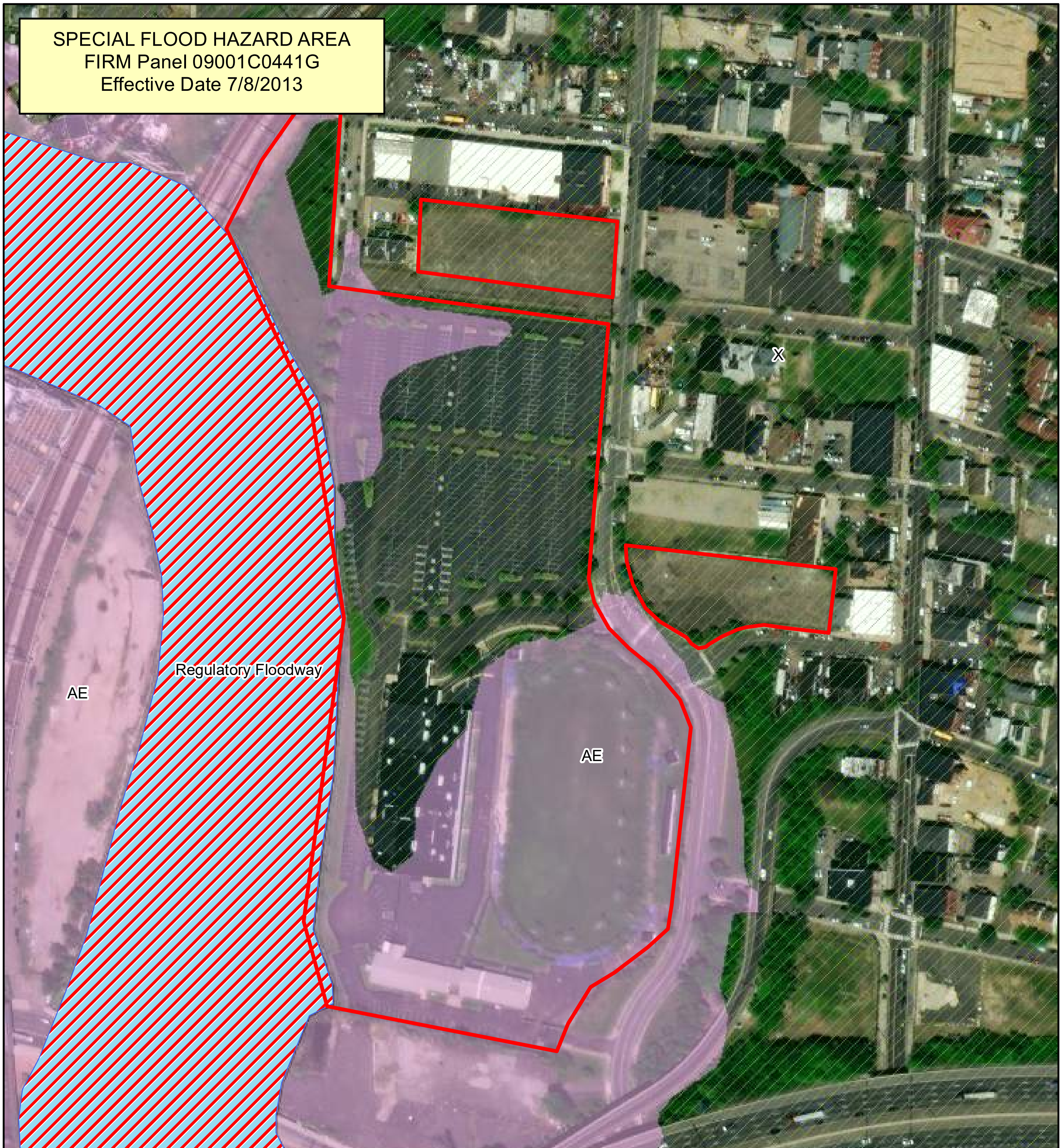
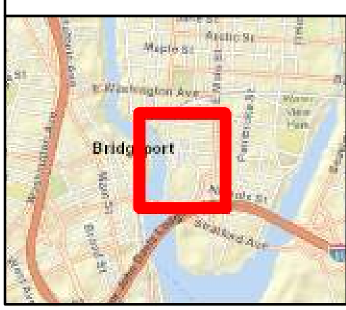


SOCCER STADIUM AND MIXED USE PROJECT - FEMA MAP



GRAPHIC SCALE

0 125 250 375 500

Feet

DRAWN BY: SMS	PROJECT NO:	2301485
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SCALE: 1:3,000		Figure 5

Legend

Project Area
A
AE
X
Regulatory Floodway

255 and 363 Kossuth Street and 83-153 Howe Street, Bridgeport, CT

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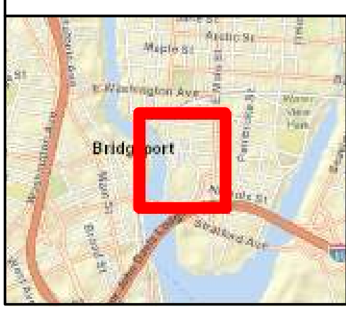
SOCCER STADIUM AND MIXED USE PROJECT - AERIAL IMAGERY MAP



GRAPHIC SCALE

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Feet

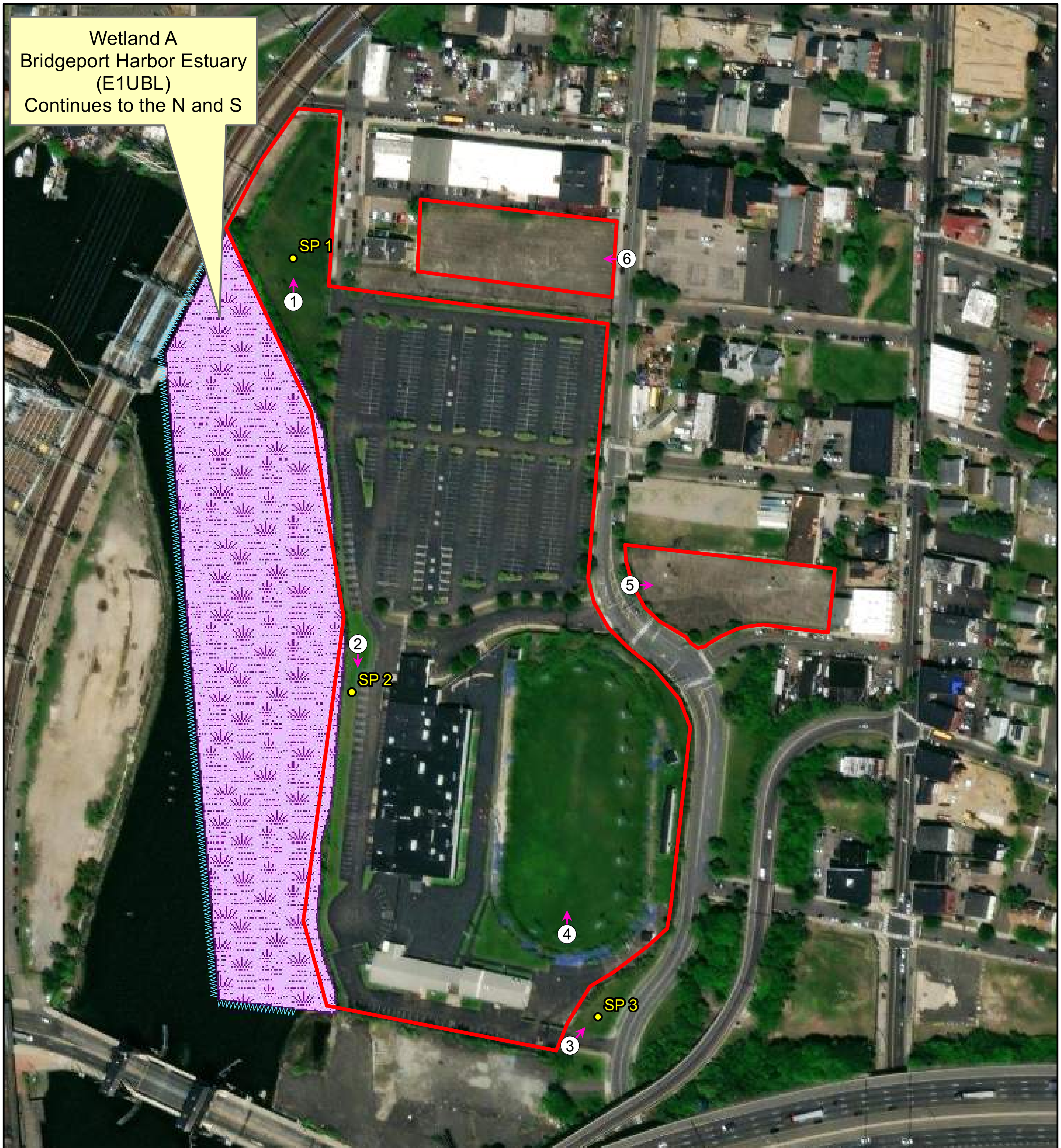
Legend

Project Area

255 and 363 Kossuth Street and 83-153 Howe Street, Bridgeport, CT

DRAWN BY: SMS	PROJECT NO: 2301485
CHECKED BY: WGW	
SCALE: 1:3,000	Figure 6
BL Companies — Architecture Engineering Environmental Land Surveying	355 Research Parkway Meriden, CT 06450-7100 (203) 630-1406

Document Path: G:\JOBS23\14\2301485\GIS\MXD\6. Aerial Imagery Map.mxd



SOCCER STADIUM AND MIXED USE PROJECT - FIELD DATA LOCATION MAP

GRAPHIC SCALE
0 125 250 375 500
Feet

Legend

- Project Area
- Sample Point (SP)
- Photo Number / Direction
- Delineated Wetland
- Continuous Feature

255 and 363 Kossuth Street and 83-153 Howe Street, Bridgeport, CT

DRAWN BY: SMS	PROJECT NO: 2301485
CHECKED BY: WGW	
SCALE: 1:3,000	Figure 7
BL Companies — Architecture, Engineering, Environmental, Land Surveying	355 Research Parkway Meriden, CT 06450-7100 (203) 630-1406

Document Path: G:\JOBS23\14\2301485\GIS\MXD\7. Field Data Location Map.mxd

APPENDIX B

Color Photographs

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Soccer Stadium & Mixed-Use Project
Bridgeport, Connecticut
Photographic Documentation

Photo # 1
Date: September 6, 2023
Direction: North

Description

Northern view of Sample Point 1 in an herbaceous, upland point, located in the northwestern portion of the Project Area.

Photo # 2
Date: September 6, 2023
Direction: South

Description

Southern view of Sample Point 2 in an herbaceous, upland point, located in the central-western portion of the Project Area.

Architecture
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Environmental
Land Surveying
Companies

Soccer Stadium & Mixed-Use Project
Bridgeport, Connecticut
Photographic Documentation

Photo # 3
Date: September 6, 2023
Direction: Northeast

Description
Northeastern view of Sample Point 3 in an herbaceous, upland point, located in the southeastern portion of the Project Area.

Photo # 4
Date: September 18, 2023
Direction: North

Description
Northern view of the herbaceous, upland area, located within the dog track portion of the Project Area.

Soccer Stadium & Mixed-Use Project
Bridgeport, Connecticut
Photographic Documentation

Photo # 5
Date: September 6, 2023
Direction: East

<u>Description</u>

Eastern view of parking lot area, located on the eastern side of Kossuth Road.

Photo # 6
Date: September 6, 2023
Direction: West

<u>Description</u>

Western view of parking lot area, located on the western side of Kossuth Road.

APPENDIX C

Data Forms

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Soccer Stadium and Mixed-Use City/County: Bridgeport, Fairfield County Sampling Date: 9/6/2023
Applicant/Owner: LaBella Associates, D.P.C. State: CT Sample Point: SP 1
Investigator(s): Sagan M. Simko, CPSS, PWS Section, Township, Range: ______
Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-1
Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 41.18339 Long: -73.18511 Datum: NAD83
Soil Map Unit Name: Urban land (307) NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
Are Vegetation **No** ,Soil **No** ,or Hydrology **No** significantly disturbed? Are "Normal Circumstances" present? Yes **X** No ____
Are Vegetation **No** ,Soil **No** ,or Hydrology **No** naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No **X**
Hydric Soil Present?	Yes ____	No **X**
Wetland Hydrology Present?	Yes ____	No **X**

Is the Sampled Area within a Wetland? **Yes** ____ **No** **X**

If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report)

Sample Point 1 is located within an herbaceous, upland area located within the northwestern portion of the Project Area.

HYDROLOGY

Wetland hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ____ Surface Water (A1)
- ____ High Water Table (A2)
- ____ Saturation (A3)
- ____ Water Marks (B1)
- ____ Sediment Deposits (B2)
- ____ Drift Deposits (B3)
- ____ Algal Mat or Crust (B4)
- ____ Iron Deposits (B5)
- ____ Inundation Visible on Aerial Imagery (B7)
- ____ Sparsely Vegetated Concave Surface (B8)
- ____ Water-Stained Leaves (B9)
- ____ Aquatic Fauna (B13)
- ____ Marl Deposits (B15)
- ____ Hydrogen Sulfide Odor (C1)
- ____ Oxidized Rhizospheres on Living Roots (C3)
- ____ Presence of Reduced Iron (C4)
- ____ Recent Iron Reduction in Tilled Soils (C6)
- ____ Thin Muck Surface (C7)
- ____ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ____ Surface Soil Cracks (B6)
- ____ Drainage Patterns (B10)
- ____ Moss Trim Lines (B16)
- ____ Dry-Season Water Table (C2)
- ____ Crayfish Burrows (C8)
- ____ Saturation Visible on Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No **X**	Depth (inches): ____
Water Table Present?	Yes ____	No **X**	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No **X**	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No primary or secondary indicators were present; therefore, the hydrology criterion has not been met.

VEGETATION (Four Strata) - Use scientific names of plants.

Sampling Point: **SP 1**

Tree Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. *None observed*			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		

Sapling/Shrub Stratum (Plot size: 15 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. *Elaeagnus umbellata*	10	Yes	NI
2.			
3.			
4.			
5.			
6.			
7.			
	10 = Total Cover		

Herb Stratum (Plot size: 5 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. *Poa pratensis*	80	Yes	FACU
2. *Daucus carota*	10	No	UPL
3. *Taraxacum officinale*	10	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		

Woody Vine Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. *None observed*			
2.			
3.			
4.			
	0 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: **0** (A)

Total Number of Dominant Species Across All Strata: **1** (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: **0** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	**0**	x 1 =	**0**
FACW species	**0**	x 2 =	**0**
FAC species	**0**	x 3 =	**0**
FACU species	**90**	x 4 =	**360**
UPL species	**10**	x 5 =	**50**
Column Totals:	**100** (A)		**410** (B)

Prevalence Index = B/A = **4.10**

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤ 3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH) regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks:

The hydrophytic vegetation criterion has not been met.

SOIL

Sampling Point: **SP 1**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 4/3	100					Silt Loam	
3-18	10YR 5/3	100					Silt Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators:

____ Histosol (A1)
____ Histic Epipedon (A2)
____ Black Histic (A3)
____ Hydrogen Sulfide (A4)
____ Stratified Layers (A5)
____ Depleted Below Dark Surface (A11)
____ Thick Dark Surface (A12)
____ Sandy Mucky Mineral (S1)
____ Sandy Gleyed Matrix (S4)
____ Sandy Redox (S5)
____ Stripped Matrix (S6)
____ Dark Surface (S7) **(LRR R, MLRA 149B)**
____ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
____ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
____ Loamy Mucky Mineral (F1) **(LRR K, L)**
____ Loamy Gleyed Matrix (F2)
____ Depleted Matrix (F3)
____ Redox Dark Surface (F6)
____ Depleted Dark Surface (F7)
____ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

____ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
____ Coast Prairie Redox (A16) **(LRR K, L, R)**
____ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
____ Dark Surface (S7) **(LRR K, L)**
____ Polyvalue Below Surface (S8) **(LRR K, L)**
____ Thin Dark Surface (S9) **(LRR K, L)**
____ Iron-Manganese Masses (F12) **(LRR K, L, R)**
____ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
____ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
____ Red Parent Material (F12)
____ Very Shallow Dark Surface (F22)
____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ____________

Depth (inches): ____________

Hydric Soil Present? Yes ____ No X

Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Soccer Stadium and Mixed-Use City/County: Bridgeport, Fairfield County Sampling Date: 9/6/2023
Applicant/Owner: LaBella Associates, D.P.C. State: CT Sample Point: SP 2
Investigator(s): Sagan M. Simko, CPSS, PWS Section, Township, Range: ____
Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-1
Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 41.18127 Long: -73.18472 Datum: NAD83
Soil Map Unit Name: Urban land (307) NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
Are Vegetation **No** ,Soil **No** ,or Hydrology **No** significantly disturbed? Are "Normal Circumstances" present? Yes **X** No ____
Are Vegetation **No** ,Soil **No** ,or Hydrology **No** naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No **X**
Hydric Soil Present?	Yes ____	No **X**
Wetland Hydrology Present?	Yes ____	No **X**

Is the Sampled Area within a Wetland? **Yes** ____ **No** **X**

If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report)

Sample Point 2 is located within an herbaceous, upland area located within the central-western portion of the Project Area.

HYDROLOGY

Wetland hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ____ Surface Water (A1)
- ____ High Water Table (A2)
- ____ Saturation (A3)
- ____ Water Marks (B1)
- ____ Sediment Deposits (B2)
- ____ Drift Deposits (B3)
- ____ Algal Mat or Crust (B4)
- ____ Iron Deposits (B5)
- ____ Inundation Visible on Aerial Imagery (B7)
- ____ Sparsely Vegetated Concave Surface (B8)
- ____ Water-Stained Leaves (B9)
- ____ Aquatic Fauna (B13)
- ____ Marl Deposits (B15)
- ____ Hydrogen Sulfide Odor (C1)
- ____ Oxidized Rhizospheres on Living Roots (C3)
- ____ Presence of Reduced Iron (C4)
- ____ Recent Iron Reduction in Tilled Soils (C6)
- ____ Thin Muck Surface (C7)
- ____ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ____ Surface Soil Cracks (B6)
- ____ Drainage Patterns (B10)
- ____ Moss Trim Lines (B16)
- ____ Dry-Season Water Table (C2)
- ____ Crayfish Burrows (C8)
- ____ Saturation Visible on Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No **X**	Depth (inches): ____
Water Table Present?	Yes ____	No **X**	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No **X**	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No primary or secondary indicators were present; therefore, the hydrology criterion has not been met.

VEGETATION (Four Strata) - Use scientific names of plants.

Sampling Point: **SP 2**

Tree Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. *Ailanthus altissima*		5	UPL
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		

Sapling/Shrub Stratum (Plot size: 15 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. *Elaeagnus umbellata*	10	Yes	NI
2. *Robinia pseudoacacia*	5	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	15 = Total Cover		

Herb Stratum (Plot size: 5 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. *Poa pratensis*	80	Yes	FACU
2. *Trifolium repens*	10	No	FACU
3. *Taraxacum officinale*	10	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		

Woody Vine Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. *None observed*			
2.			
3.			
4.			
	0 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: **0** (A)

Total Number of Dominant Species Across All Strata: **2** (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: **0** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	**0**	x 1 =	**0**
FACW species	**0**	x 2 =	**0**
FAC species	**0**	x 3 =	**0**
FACU species	**105**	x 4 =	**420**
UPL species	**0**	x 5 =	**0**
Column Totals:	**105** (A)		**420** (B)

Prevalence Index = B/A = **4.00**

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation
____ 2 - Dominance Test is >50%
____ 3 - Prevalence Index is ≤ 3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH) regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ____ **No** **X**

Remarks:

The hydrophytic vegetation criterion has not been met.

SOIL

Sampling Point: **SP 2**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 4/3	100					Silt Loam	
3-15	10YR 5/3	95					Silt Loam	
	10YR 5/6	5						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators:

- ____ Histosol (A1)
- ____ Histic Epipedon (A2)
- ____ Black Histic (A3)
- ____ Hydrogen Sulfide (A4)
- ____ Stratified Layers (A5)
- ____ Depleted Below Dark Surface (A11)
- ____ Thick Dark Surface (A12)
- ____ Sandy Mucky Mineral (S1)
- ____ Sandy Gleyed Matrix (S4)
- ____ Sandy Redox (S5)
- ____ Stripped Matrix (S6)
- ____ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ____ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ____ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ____ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ____ Loamy Gleyed Matrix (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ____ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ____ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ____ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ____ Dark Surface (S7) **(LRR K, L)**
- ____ Polyvalue Below Surface (S8) **(LRR K, L)**
- ____ Thin Dark Surface (S9) **(LRR K, L)**
- ____ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ____ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ____ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ____ Red Parent Material (F12)
- ____ Very Shallow Dark Surface (F22)
- ____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ____

Depth (inches): ____

Hydric Soil Present? Yes ____ No X

Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site:	Soccer Stadium and Mixed-Use	City/County:	Bridgeport, Fairfield County	Sampling Date:	9/6/2023
Applicant/Owner:	LaBella Associates, D.P.C.	State:	CT	Sample Point:	SP 3
Investigator(s):	Sagan M. Simko, CPSS, PWS	Section, Township, Range:			
Landform (hillslope, terrace, etc.):	Terrace	Local relief (concave, convex, none):	None	Slope (%):	0-1
Subregion (LRR or MLRA):	LRR R, MLRA 144A	Lat: 41.18127	Long: -73.18472	Datum:	NAD83
Soil Map Unit Name:	Urban land (307)	NWI Classification:	None		

Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)

Are Vegetation **No** ,Soil **No** ,or Hydrology **No** significantly disturbed? Are "Normal Circumstances" present? Yes **X** No ____

Are Vegetation **No** ,Soil **No** ,or Hydrology **No** naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

	Yes	No
Hydrophytic Vegetation Present?		X
Hydric Soil Present?		X
Wetland Hydrology Present?		X

Is the Sampled Area within a Wetland? **Yes** ____ **No X**

If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report)

Sample Point 3 is located within an herbaceous, upland area located within the southeastern portion of the Project Area.

HYDROLOGY

Wetland hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ____ Surface Water (A1)
- ____ High Water Table (A2)
- ____ Saturation (A3)
- ____ Water Marks (B1)
- ____ Sediment Deposits (B2)
- ____ Drift Deposits (B3)
- ____ Algal Mat or Crust (B4)
- ____ Iron Deposits (B5)
- ____ Inundation Visible on Aerial Imagery (B7)
- ____ Sparsely Vegetated Concave Surface (B8)
- ____ Water-Stained Leaves (B9)
- ____ Aquatic Fauna (B13)
- ____ Marl Deposits (B15)
- ____ Hydrogen Sulfide Odor (C1)
- ____ Oxidized Rhizospheres on Living Roots (C3)
- ____ Presence of Reduced Iron (C4)
- ____ Recent Iron Reduction in Tilled Soils (C6)
- ____ Thin Muck Surface (C7)
- ____ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ____ Surface Soil Cracks (B6)
- ____ Drainage Patterns (B10)
- ____ Moss Trim Lines (B16)
- ____ Dry-Season Water Table (C2)
- ____ Crayfish Burrows (C8)
- ____ Saturation Visible on Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Field Observations:

	Yes	No	Depth (inches):
Surface Water Present?		X	
Water Table Present?		X	
Saturation Present? (includes capillary fringe)		X	

Wetland Hydrology Present? **Yes** ____ **No X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No primary or secondary indicators were present; therefore, the hydrology criterion has not been met.

VEGETATION (Four Strata) - Use scientific names of plants.

Sampling Point: **SP 3**

Tree Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. *Ailanthus altissima*		10	UPL
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		

Sapling/Shrub Stratum (Plot size: 15 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. *None observed*			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		

Herb Stratum (Plot size: 5 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. *Poa pratensis*	80		FACU
2. *Plantago lanceolata*	20		FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		

Woody Vine Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. *None observed*			
2.			
3.			
4.			
	0 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: **0** (A)

Total Number of Dominant Species Across All Strata: **0** (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: **0** (A/B)

Prevalence Index Worksheet:

Total % Cover of:			Multiply by:
OBL species	**0**	x 1 =	**0**
FACW species	**0**	x 2 =	**0**
FAC species	**0**	x 3 =	**0**
FACU species	**100**	x 4 =	**400**
UPL species	**0**	x 5 =	**0**
Column Totals:	**100**	(A)	**400** (B)

Prevalence Index = B/A = **4.00**

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation
____ 2 - Dominance Test is >50%
____ 3 - Prevalence Index is ≤ 3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH) regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ____ **No** **X**

Remarks:

The hydrophytic vegetation criterion has not been met.

SOIL

Sampling Point: **SP 3**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 4/3	100					Silt Loam	
3-17	10YR 5/4	95					Silt Loam	
	10YR 5/8	5						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators:

____ Histosol (A1)
____ Histic Epipedon (A2)
____ Black Histic (A3)
____ Hydrogen Sulfide (A4)
____ Stratified Layers (A5)
____ Depleted Below Dark Surface (A11)
____ Thick Dark Surface (A12)
____ Sandy Mucky Mineral (S1)
____ Sandy Gleyed Matrix (S4)
____ Sandy Redox (S5)
____ Stripped Matrix (S6)
____ Dark Surface (S7) **(LRR R, MLRA 149B)**
____ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
____ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
____ Loamy Mucky Mineral (F1) **(LRR K, L)**
____ Loamy Gleyed Matrix (F2)
____ Depleted Matrix (F3)
____ Redox Dark Surface (F6)
____ Depleted Dark Surface (F7)
____ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

____ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
____ Coast Prairie Redox (A16) **(LRR K, L, R)**
____ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
____ Dark Surface (S7) **(LRR K, L)**
____ Polyvalue Below Surface (S8) **(LRR K, L)**
____ Thin Dark Surface (S9) **(LRR K, L)**
____ Iron-Manganese Masses (F12) **(LRR K, L, R)**
____ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
____ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
____ Red Parent Material (F12)
____ Very Shallow Dark Surface (F22)
____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ____________

Depth (inches): ____________

Hydric Soil Present? Yes ____ No X

Remarks:

No positive indication of hydric soils was observed.

APPENDIX D

Professional Qualifications

SAGAN SIMKO, CPSS, PWS

RESUME

PROJECT ROLE
Senior Project Scientist II

EDUCATION
Bachelor of Science in Environmental Resource Management, The Pennsylvania State University, 2005
Master of Science in Biology, Bloomsburg University of Pennsylvania, 2015

REGISTRATION
Certified Professional Soil Scientist (CPSS), 2012, #36359
Professional Wetland Scientist (PWS), 2012, #2284

PROFESSIONAL MEMBERSHIPS
Soil Science Society of America, Society of Wetland Scientists, The Wildlife Society

SUMMARY OF QUALIFICATIONS

Mr. Simko has approximately 17 years of experience in performing an array of wetland delineations and site assessments. His experience encompasses soil morphological evaluations, infiltration and percolation testing, wetland mitigation design and monitoring, bog turtle habitat identification, as well as threatened and endangered species surveys. In addition, he has completed carbonate geology site evaluations, identification of asbestos-containing material, and underground storage tank removals and investigations. Mr. Simko's computer skills include ArcGIS 10 and GPS Pathfinder Office. As a Senior Project Scientist II at BL Companies, Mr. Simko's responsibilities include wetland investigations, soil investigations, ground water investigations, Phase I site assessments, remediation related activities, remediation system monitoring and maintenance, and engineering compliance inspection for natural gas pipeline projects.

RELEVANT EXPERIENCE

Peer Review, 4-Lot Subdivision Inland Wetland Commission, Stratford, Connecticut
Served as lead Soil and Wetland Scientist in the performance of a peer review of a proposed 4-lot subdivision application submission to the Inland Wetland Commission of Stratford, CT. The peer review required a site visit to verify previous wetland delineations and assistance with the technical review of the submission. Upon completion of review, findings were presented in-person to the Stratford Inland Wetland Commission.

Carter Road Culvert Improvements, Thomaston, Connecticut
Served as Environmental Scientist (Soil/Wetland Scientist) for the delineation of wetlands and preparation of function/value report for the repair and improvements to this deteriorated stone masonry abutment culvert that was impacted by flood events and long-term deterioration.

Bridge Replacement Group 13E-W, West River Bridge, Rhode Island Department of Transportation, Providence, Rhode Island
Conducted stream and wetland delineations in the vicinity of the West River Bridge in Providence as part of the Rhode Island Department of Transportation Bridge Replacement project. Additional assessment of the functions and values of the water resources was completed and a habitat survey of the substrate and surrounding vegetative communities was conducted within the vicinity of the bridge abutments and potential work area. Also served as Senior Project Scientist to investigate the presence or absence of inland wetlands and watercourses in the area of the West River Bridge in Providence, RI. Additionally, conducted substrate observations and analyses of the West River within the area of proposed bridge work to ascertain the likelihood of threatened & endangered species presence and/or their habitat.

Route 37 Bridge Rehabilitations and Replacements, Rhode Island Department of Transportation, Warwick and Cranston, Rhode Island
Served as Senior Project Scientist, with responsibilities including wetlands delineation, function and values assessment, and close coordination with the bridge designer in order to submit environmental permit documentation on a fast-track basis.

East Bay Bike Path, Barrington River & Warren River Bridges Replacement, Rhode Island Department of Transportation, Barrington and Warren, Rhode Island
Served as Wetland and Soil Scientist, with responsibilities including wetlands delineation, function and values assessment, determination of coastal and freshwater wetland jurisdiction, and close coordination with the bridges designer to submit environmental permit documentation with the greatest efficiency. Also served as Senior Project Scientist to investigate the presence or absence of inland and coastal wetlands, and watercourses in the area of the Barrington Bike Path Bridge

#837, over the Barrington River, and the Warren Bike Path Bridge #838, over the Palmer River. Additionally, conducted substrate observations and analyses of the Barrington River and Palmer River within the area of proposed bridge piers / supports to ascertain likelihood of shellfish or threatened & endangered species presence and/or their habitat.

Bridge Group 17A, Rhode Island Department of Transportation, Cumberland, Rhode Island
Served as Senior Project Scientist to investigate the presence or absence of inland wetlands and watercourses for the proposed rehabilitation of bridge number 075401 carrying Rt. 114 (Diamond Hill Road) over I-295 in Cumberland, RI, bridge number 075101 carrying Rt. 122 (Mendon Road) over I-295 in Cumberland, RI, and bridge numbers 074601; and 074621 carrying Rt. 7 over I-295 in Smithfield, RI. Additionally, wetland and stream biophysical elements such as landscape position, size, geology, hydrology, substrate, and vegetation were observed to determine the wetland and stream functions and to what capacity they are performed.

Consultant Liaison Engineering Services for the State and Federal Local Bridge Program, Connecticut Department of Transportation, Statewide, Connecticut
Served as Senior Project Scientist for several bridge rehabilitation and replacement projects for the Connecticut Department of Transportation across the state. Responsibilities included performing wetland delineations, function and values assessments, and bat habitat assessments at each bridge location where natural resources were identified as being within the proximity of proposed work. Additional responsibilities included attaining environmental permitting for the Connecticut Department of Energy and Environmental Protection and U.S. Army Corps of Engineers, identifying invasive species, and coordination for listed species.

Connecticut Department of Transportation State Project No. 108-189 – Moosup Valley State Park Trail, Plainfield to Sterling, Connecticut
Served as Senior Project Scientist to investigate the presence or absence of vernal pools along the Moosup Valley State Park Trial. Vernal pools were identified utilizing available mapping, aerial photography and field investigation. Evidence of obligate amphibian species presence and breeding was noted in the field via inspection beyond visual and audial, including trapping and dip-netting.

Metro North Milvon Substation – West River Substation Vernal Pool Assessment, Milford to New Haven, Connecticut
Served as Senior Project Scientist to investigate the presence or absence of vernal pools along a portion of the commuter train route. Any vernal pool areas were noted and recorded with GPS coordinates to submeter accuracy. Vernal pools were identified utilizing available mapping, aerial photography, and field investigation. Evidence of obligate amphibian species presence and breeding was noted in the field via visual and audial inspection.

Bog Turtle Surveys – Mid-Atlantic Center for Herpetology & Conservation – Various locations within Eastern Pennsylvania
Served as Survey Volunteer over the course of several surveying seasons with the Mid-Atlantic Center for Herpetology & Conservation. Bog turtle habitat was identified, and species-specific surveying techniques were utilized. Experience assisting with implantation of Passive Integrated Transponders (PIT tags) was also gained. Mr. Simko has located 23 bog turtles, a critically endangered species, throughout his surveying career.

American Tower Sites-Various States throughout the Northeast
Conducted NEPA reviews and clearances for cellular communication tower installation sites that include wetland delineations, migratory bird and bat habitat, GIS mapping, and National Historic Preservation Act Section 106 clearances as needed.

PSEG Long Island, Western Nassau Transmission Project, Valley Stream to Garden City, New York
Serves as Construction Field Inspector for a 7.5 mile underground electric transmission line in Nassau County, NY. As Construction Field Inspector Mr. Simko is tasked with day-to-day inspection of the project site with respect to contractor activities constructing, installing, testing, and placing in service an underground 138kV circuit.

Amazon.com Services LLC, DEB3 – Delivery Station Buildout, Waterbury, Connecticut
Served as lead Soil Scientist and Wetlands Investigator for a proposed site redevelopment project. Responsibilities included reverification of wetland delineations and coordination with the City Planner for Waterbury, CT in order to move the project through the Inland Wetland Commission application process.

Bog Turtle Survey, PNDI Review, Wetland Delineation, Amazon.com Services LLC – Quakertown, Pennsylvania
Served as Senior Project Scientist to perform habitat survey for bog turtles, as well as performing other Pennsylvania Natural Diversity Inventory (PNDI) tasks. Also performed a wetland delineation for the site in accordance with the Army Corps of Engineers Wetland Delineation Manual and the appropriate Regional Supplement.

Hope Street Culvert Replacement, City of Stamford, Connecticut
Served as lead Wetland Investigator for an emergency culvert replacement project in the vicinity of Hope Street & Mead Street, Stamford Connecticut.

4-Lot Subdivision Inland Wetland Commission Peer Review, Stratford, Connecticut
Served as lead Soil and Wetland Scientist in the performance of a peer review of a proposed 4-lot subdivision application submission to the Inland Wetland Commission of Stratford, CT.

Avangrid – Wetland Delineations and Vernal Pool Investigation Within Metro North Railroad Corridor, Westport to New Haven, CT
Served as lead Soil and Wetland Scientist and Biologist in the performance of survey work for wetlands and vernal pool areas along the railroad corridor between Westport and New Haven, CT.

Simmonsville Bridge Replacement, Rhode Island Department of Transportation, Johnston, Rhode Island
Served as Senior Project Scientist, with responsibilities including wetlands delineation, function and values assessment, bat habitat assessments, and close coordination with the bridge designer in order to submit environmental permit documentation on a fast-track basis.

Route 37 Bridge Rehabilitations and Replacements, Rhode Island Department of Transportation, Warwick and Cranston, Rhode Island
Served as Senior Project Scientist, with responsibilities including wetlands delineation, function and values assessment, and close coordination with the bridge designer in order to submit environmental permit documentation on a fast-track basis.

Williams, Transco Pipeline, Atlantic Sunrise Pipeline Project, Various Counties, Pennsylvania
Serves as Senior Engineering Compliance Inspector within Columbia County, PA. Served as Senior Project Scientist for the completion of soil test pit evaluations and stormwater detention basin infiltration testing for compressor station sites throughout the state.

Kinder Morgan, Utopia Pipeline, Various Counties, Ohio
Serves as Senior Project Scientist for an approximately 225-miles ethane/propane pipeline through northern Ohio. Responsibilities include conducting wetland, soils, and natural resource studies.

Dominion Energy, Atlantic Coast Pipeline, Various Counties, West Virginia & Virginia
Served as an Environmental Scientist and conducted wetland screenings, delineations, permitting, and mitigation design and monitoring for 130 miles of natural gas pipeline projects for the Krause and Wellsboro pipelines.

SWEPI (Shell), Various Counties, Pennsylvania
As an Environmental Scientist, Mr. Simko conducted wetland screenings, delineations, permitting, and mitigation design and monitoring for 130 miles of natural gas pipeline projects for the Krause and Wellsboro pipelines. Services were completed in 2015.

Hilcorp & Cabot Natural Gas, Various Natural Gas Well Pads & Pipeline Projects, Various Counties, Pennsylvania
As Erosion and Sedimentation (E&S) inspector, Mr. Simko conducted E&S inspections at various natural gas well pads and gathering pipeline projects located in the northern tier and southwestern portions of Pennsylvania. His duties involved preparing inspection reports and photo documentation. Services were completed in 2014.

PVR Natural Gas Gathering, Various Natural Gas Well Pads & Pipeline Projects, Susquehanna & Wyoming Counties, Pennsylvania
Served as the Environmental Scientist responsible for wetland screenings and delineations for another company to install a gas pipeline at their facility, as well as various other natural gas pipeline and well pad projects throughout northern Wyoming County and Susquehanna County in Pennsylvania. Services were completed in 2013.

Williams (Access) Midstream Company, Various Natural Gas Well Pad Sites, Columbia County, Pennsylvania
Served as the Environmental Scientist responsible for wetland screenings and delineations, as well as threatened and endangered species habitat assessments, for various natural gas well pad sites within Columbia County, Pennsylvania. Services were completed in 2013.

PP&L Susquehanna to Roseland 500 KV Electric Transmission Line, Pennsylvania
Served as the Environmental Scientist responsible for wetland delineations, as well as threatened and endangered species habitat assessments, for a large segment of electric transmission line within Pennsylvania of the PPL Electric Utilities project known as the Susquehanna-Roseland Line. Firm of Record: Woodland Design Associates, Inc., Honesdale, Pennsylvania

Southeast Bristol Business Park - Lot 3, Lot 9, Lot 10, Bristol, Connecticut
Serving as Senior Project Scientist, conducted a wetland delineation survey for Lot 3, Lot 9, and Lot 10 of the Southeast Bristol Business Park in August of 2021. Following field delineation efforts, a wetland delineation report was created to give details regarding the field work findings. Additionally, a field site visit meeting with the City of Bristol's Inland Wetlands and Watercourses Commission (IWWC) was performed to present wetland delineation findings to the Commission for their review and subsequent approval. Following the IWWC site meeting and agreement with the wetlands and watercourses delineation work, the City of Bristol's official IWWC wetland mapping was updated from previous delineation work to reflect BL Companies' more inclusive and comprehensive field findings and geographical positioning system (GPS) data collection.

894 Middle Street - Lot 17, Lot 17-3 & Lot 17-4-1, Bristol, Connecticut
Serving as Senior Project Scientist, conducted a wetland delineation survey in October of 2021 on the property located at 894 Middle Street in the City of Bristol, comprised of Lot 17, Lot 17-3 & Lot 17-4-1. Following field delineation efforts, a wetland delineation report was created to give details regarding the field work findings. The field survey revealed several areas of erosional features in and around the wetlands and watercourses on the site, as well as areas of dumping of household refuse and other assorted trash and debris. These findings were brought to the attention of the City of Bristol and a site meeting with the City's Inland Wetlands and Watercourses Commission (IWWC), Wetland Scientist, and City Engineer was performed to present findings.

Wetland/Waterbody Identification and Delineation, Ludlow, Massachusetts
Serving as Senior Project Scientist, conducted a wetland delineation survey, including functions and values assessment for a property in Ludlow, MA in June of 2022. Following field delineation efforts, a wetland delineation memo was created to give details regarding the field work findings.

Utility Pipeline Crossing, Brockton, Massachusetts
BL Companies provided the integration of GIS-based, GPS-based, and CAD-based data utilizing ArcMap software to develop an Environmental Plot Plan for the design and permitting of a natural gas utility line over the Salisbury River in Brockton, MA. The scope of services that BL is providing consisted of the following:

- Received and integrated non-BL GIS data, BL survey data, and design-related CAD data into an overall ENV plot plan. This included a multitude of geoprocessing techniques within the ArcMap software.
- Provided E&S design for project on the plan.
- Incorporated local environmental buffer ordinances utilizing geoprocessing techniques.
- Prepared and plotted the data in a visually aesthetic manner for use in the local permitting process.

Utility Line Crossing Evaluation Proposed River Crossing Project-Norwell, Massachusetts
BL's engineering and environmental team conducted an in-depth evaluation of the different river crossing methods for a proposed utility line crossing over a regulated river in Norwell, MA. The methodologies considered impacts regulated features including wetlands, rivers, Riverfront and potential impacts to migratory fish and avian species. Horizontal directional drill, mounting the utility line and impacts to the existing bridge and construction of a stand-alone aerial crossing independent of an existing bridge structure where evaluated. The crossing method has not been finalized and further cost evaluations are being considered by the client.

WESLEY G. WOLF, PWS

RESUME

PROJECT ROLE
Senior Project Manager

EDUCATION
Bachelor of Science in Biology, West Chester University, 1992

CERTIFICATIONS / TRAINING
Professional Wetlands Scientist (PWS), Society of Wetlands Scientists
PA Fish & Boat Commission Scientific Collector's Permit
PA DCNR Wild Plant Management Permit
OSHA 40-Hour Hazardous Waste Site Training CFR29 1910.120, 1986
OSHA 8-Hour Refresher Training for Hazardous Waste Sites, 1987-2021
PA DEP Certified Drinking Water Laboratory Director 1996-2007
Pollution Biology, Penn State University, 2002
Environmental Law, Penn State University, 2001

SUMMARY OF QUALIFICATIONS

Mr. Wolf specializes in building client trust and enduring relationships within the environmental studies and permitting sections across multiple disciplines of the engineering field. His overall experience is focused on natural resources evaluations to include wetlands and aquatic resources, operating, and overseeing drinking water and water quality testing laboratories, and overseeing groups conducting wetland delineations, permitting, mitigation, and plant and animal surveys. Additional responsibilities include managing large scale projects with multi-disciplined teams to accomplish client permitting and site evaluation goals. Technical background includes experience with studies in terrestrial ecology and botany, environmental compliance monitoring, and construction oversight during and after completion of construction projects.

Mr. Wolf has extensive experience leading teams that interface with multiple state, local, and federal regulatory agencies, including the U.S. Army Corps of Engineers (USACE), state environmental protection departments, and the US Environmental Protection Agency (USEPA) Inland Wetland Commissions (IWC) as part of ongoing project coordination for multi-faceted development, energy generation and transmission projects. Mr. Wolf is team lead and project manager for linear energy siting and routing projects over thousands of acres throughout the northeast down through Florida and into the Midwestern states.

RELEVANT EXPERIENCE

Large Scale Warehouse Development Oldmans Township, New Jersey
Conduct field and permitting oversite for team of wetland and stream delineators. Assess ditch wetlands, various isolated wetlands and abutting wetlands associated with riverine systems. Complete LOI coordination with the NJDEP and complete the Section 404 permitting process for the conversion of former federal army barracks and training compound to office and warehouse development.

Spark Carwash Site – Ocean Township, New Jersey
Project Manager overseeing field teams conducting wetland presence/absence surveys and P/A LOI for approval to the NJDEP. Utilize NJ Freshwater wetlands mapper along with hydric soils layers prior to visiting sites to determine potential problem areas and field verify wetland parameters, or lack of, using the Unified Federal Methodology of the 1989 Manual along with appropriate field determination data sheets for the specific region in which wetlands are identified.

Industrial Development - New Greenwich, New Jersey
Project manager overseeing field teams completing wetland delineations and completing LOIs for inland wetlands delineations for within the project area.

Telecom Provider, 28 Sites Throughout New Jersey
Project Manager overseeing teams conducting NEPA assessments, Phase I Environmental Site Assessments, wetland delineations, and GIS analysis for multiple new and expansion projects for telecommunication compounds/towers. Project management included managing various phases of individual projects, including preparation of proposals, budgets, change orders, and client care activities. Additional project-specific responsibilities include identifying cultural and historic concerns in and around the project sites, wetland delineations within an identified study corridor, 404 wetlands permitting, asbestos and

lead-based paint surveys, and collection of GPS data utilizing a Trimble GPS system and client care. Utilizes ArcGIS to create visual aid maps and exhibits for permits and construction plans.

14601 Sweitzer Lane, Prince George's County, Maryland

Provided Project Senior technical environmental oversight and guidance for field team conducting forest stand delineation, tree conservation plans, and completing invasive species management plan for a warehouse refit project. Our team utilized grid assessments of 1/10th-acre sample plot analysis, completed documentation of primary canopy layer, subcanopy species, and understory species to provide a qualitative and quantitative analysis to determine the health of the on-site forest habitat. The data was then compiled and presented as site plans, forest management plans, and an overall forest stand delineation report. Upon completion of the forest stand delineation, a tree conservation plan that included conservation easements for both existing forest and forest natural regeneration areas was developed. As part of the management of the conservation areas, an invasive species management plan was developed and approved by the MD National Parks and Planning Commission on behalf of Prince George's County. The invasives species management plan identified the predominate invasive species and developed a four-year plan to eradicate the invasive species by manual, mechanical, and herbicide application methods. The plan preparation and certification of the forest stand delineation and tree conservation plan was completed during 2021. The forest natural species regeneration and invasive species management is on-going through September of 2024.

Walker Farms, New Castle County, Delaware

Served as the Project Manager and technical environmental lead in conducting a natural resource assessment utilizing the New Castle County (NCC) updates to the Unified Development Code under the *New Castle County Delaware, Code of Ordinances*, *Chapter 40, Article 10, Environmental Standards*, "Green NCC" protocol enacted by the County Commissioners in December 2021. On-site forest habitat assessments utilizing grid assessments of 1/10th-acre sample plot analysis. Data was collected documenting the dominate canopy species, subcanopy species, and understory species to provide a qualitative and quantitative analysis to determine the health of the on-site forest habitat. Other on-site evaluations consisted of wetland and watercourse delineations, and desktop assessments of floodplains/floodways, riparian zones, steep slopes, and problematic geological formations. The data was compiled and presented as site plans and technical reports. BL Companies completed plan and report preparation in early 2022 with the information submitted to New Castle County for regulatory clearance.

Baseline Ecological Evaluations and Baseline Ecological Assessment and Evaluations

Conduced Baseline Ecological Evaluations (BEEs) and BERAs within NJ Industrial Reclamation program. Also conducted these BEEs for coal fired power plants in NJ and DE. Observed Peregrine falcon nesting behavior at two facilities.
Conducted ecological risk assessments for Brownfields and Industrial Reuse sites in PA and NJ. The risk assessments included pathway reduction and observations of local birds of prey and the nesting behaviors associated within the project area.

Natural Gas Transmission Installation, PGCDCRRP, Maryland

Oversaw and conducted stream and wetlands field surveys, forest stand delineations, cultural resources surveys, mitigation, site investigation, and permitting assistance through a high-density residential area of Laurel through Waldorf MD of a proposed natural gas transmission line. Interfaced with Maryland Department of the Environment and the Baltimore Districts of the USACE to complete the field review of a jurisdictional determination for the pipeline route.

Natural Gas Transmission Line Replacement, Virginia and Maryland

Oversaw and conducted stream and wetlands field surveys along the VA and MD transmission line segments. Conducted threatened and endangered (T&E) species clearances and interfaced with Norfolk and Baltimore Districts of the USACE to document Nationwide Permit (NWP) and State Programmatic General Permit (SPGP) 5 Permit applicability for the projects. Obtained in-place state Memorandums of Agreements (MOAs) for ongoing maintenance activities within the transmission line right of way.

Gas Fired Power Generation Plant, Southern Virginia

Lead permitting for natural resources assessments, including streams and wetlands, permitting for impact to streams and wetlands, mitigation bank identification, and credit secure for wetlands and stream impacts. Oversaw field crews that conducted habitat surveys to provide documentation for clearance of U.S. Fish and Wildlife Service (USFWS), identified T&E species at the location, and successfully permitted roadway impacts to the site.

Coal Combustion Residuals Remediation, Eastern Virginia
Lead natural resources team for identification of T&E species reviews and field survey verification, guided and oversaw surveys for small whorled pogonia and northern long-eared bat, USFWS eagle take and monitoring permitting, stream and wetlands surveys utilizing the 1987 USACE Wetlands Delineation Manual and regional supplement for the Atlantic and Gulf Coastal Plain and the Unified Stream Methodology (USM) for the entire 489+ acre parcel. Procured the Jurisdictional Determination (JD) and successful Section 404/401 Virginia Department of Environmental Quality permitting for impacts to streams and wetlands, including mitigation for impacts. Oversaw cultural resources surveys and interactions with the Virginia Department of Historic Resources, which included archeological assessments of historic structures and Phase 1a for locations on-site identified from desktop surveys. Completed and successfully fulfilled requirements for impacts to Resource Protection Areas (RPAs) under the County's Chesapeake Bay Preservation Act, including the Preservation Area Site Assessment (PASA) using the Fairfax method to conduct Perennial Flow Determinations (PFD) and the associated Water Quality Impact Assessment (WQIA) for encroachments into RPAs and mitigation for RPA impacts.

Battery Storage Facility, Holyoke, Massachusetts
Conducted wetland field delineation and completed the wetlands report for inland freshwater wetland located at a potential Energy Storage Site in Holyoke, MA. The freshwater wetland buffer was proposed for impacts from the project footprint. After consultation with the Holyoke Conservation Commission, the client revised the project layout to eliminate buffer impacts. The project included coordination with both the Mass. Department of Environmental Protection (MADEP) and the Holyoke Conservation Commission, due to the uncertainty of the jurisdictional limits at the time of application. Review of the MASSMapper revealed that there were no threatened or endangered species or Areas of Special Environmental Concern located in the project area.

Utility Pipeline Crossing, Brockton, Massachusetts
BL Companies provided the integration of GIS-based, GPS-based, and CAD-based data utilizing ArcMap software to develop an Environmental Plot Plan for the design and permitting of a natural gas utility line over the Salisbury River in Brockton, MA. The scope of services that BL is providing consisted of the following:

- Received and integrated non-BL GIS data, BL survey data, and design-related CAD data into an overall Environmental plot plan. This included a multitude of geoprocessing techniques within the ArcMap software.
- Provided Erosion and Sediment (E&S) design for project on the plan.
- Incorporated local environmental buffer ordinances utilizing geoprocessing techniques.
- Prepared and plotted the data in a visually aesthetic manner for use in the local permitting process.

Utility Line Crossing Evaluation Proposed River Crossing Project, Norwell, Massachusetts
BL's engineering and environmental team conducted an in-depth evaluation of the different river crossing methods for a proposed utility line crossing over a regulated river in Norwell, MA. The methodologies considered impacts to regulated features including wetlands, rivers, riverfront, and potential impacts to migratory fish and avian species. Horizontal directional drill, mounting the utility line, and impacts to the existing bridge and construction of a stand-alone aerial crossing independent of an existing bridge structure were evaluated. The crossing method has not been finalized and further cost evaluations are being considered by the client.

Peer Review, 4-Lot Subdivision Inland Wetland Commission, Stratford, Connecticut
Conducted third party review of a proposed residential development near a Tier 1 vernal pool and associated inland freshwater wetland. The Town of Stratford's Inland Wetland Commission (IWC) had requested a third-party review of a development proposed near a sensitive resource and surrounding neighborhood. Reviewed and critiqued proposed impacts from stormwater, on-site septic, and proximity to bedrock. Evaluated possible impacts to the wetlands at the site from these components. Identified approximately 25 different negative components and presented findings to the IWC. These findings helped the IWC determine that the development needed significant improvement before it could be approved.

Pameacha Pond Dam Removal Project, Middletown, Connecticut
Conducted dam and natural resources assessment and developed a containment plan to ensure that the invasive northern snakehead fish was contained within the impoundment area of the Pameacha Pond. Worked with stream restoration team to develop a post dam removal restoration strategy, including evaluating an upstream reference reach using horizontal surveys and channel evaluation.

Metro North Railroad Catenary Bonnet Replacement Project, Fairfield to Bridgeport, Connecticut
Oversaw and lead natural resources (NR) investigations along the Metro North Railroad as part of electric transmission line support upgrades. NR investigations included vernal pool surveys and identification of obligate species or eggs present in pools as indicator species, and inland and tidal wetlands delineations using high tide lines, coupled with vegetative transition demarcations as identified in the field.

Multiple Solar Sites, Connecticut
Oversee and direct natural resources team to conduct wetland delineations, functions and values assessments, and habitat surveys for multiple sites located throughout Connecticut. Field delineations are conducted utilizing the US Army Corps of Engineers 1987 Wetland Delineation Manual (Environmental Laboratory, 1987) along with the appropriate Regional Supplements. The CT hydric or poorly drained soils delineation line is included in the final report mapping to align with both state and federal guidance in mapping wetland areas. Interface with various Inland Wetland Commissions within different local jurisdictions.

Thin Layer Placement Marsh Restoration, Old Lyme, Connecticut
Lead mitigation options discussion, researched methodologies, and presented white paper to the USACE - New England District, the Connecticut Department of Energy and Environmental Protection (CTDEEP), and Office of Environmental Protection within the Connecticut Department of Transportation (CTDOT). Prepare research teams to conduct on-site testing, locate potential dredge material sources, and interfaced with multiple state, federal, and private entities to corroborate feasibility of restoration design. Coordinated with multiple outside agencies, consultants, and stakeholders to identify the appropriate mitigation strategy for coastal and tidal wetlands systems. Presented white paper to the USACE and CTDEEP for review and approval to use Thin Layer Placement as an appropriate marsh restoration strategy within a State Park in CT.

Pipeline Replacement and Relocation Projects, Northwest Pennsylvania
Served as project manager for multiple pipeline replacement projects within several Exceptional Value (EV) and wild trout streams located adjacent to wetlands. Oversaw and assisted field teams in delineating water resources, collecting Level Two Rapid Assessment (L2RA) data and compiling the environmental assessment. Managed surveyors conducting rare, threatened, or endangered species surveys for endangered plants and reptiles known to occur within the project boundaries. Facilitated and oversaw preparation and final review for submittal of Joint Permit Application (JPA) and associated restoration plan in lieu of mitigation for impacts to water resources on the project. Interfaced with PA Department of Environmental Protection (PADEP) and USACE representatives to conduct a jurisdictional determination (JD) for routes and permit successful JPA or general permit submittal. The projects' scope also included stream restoration, cultural resources clearances, NPDES permitting, construction monitoring, environmental inspections, and post construction monitoring of restored resources and impacted wetlands and streams.

Laboratory Director, East Berlin, Pennsylvania

Envisioned, designed, constructed, and developed all protocol, procedures, Quality Assurance/Quality Control Plan and instrumentation for a Pennsylvania Department of Environmental Protection certified drinking water and wastewater analytical laboratory. Presented business plan to lenders and secured funding for operations, developed employees, employee benefits program and oversaw day to day operations as laboratory director of the start-up venture from inception to over $2MM in revenue within 5 years.

Laboratory Director, East Stroudsburg, Pennsylvania
Oversaw and updated all sample collection, testing and quality assurance/quality control procedures for a failing Pennsylvania Department of Environmental Protection (PADEP) certified drinking water and water quality testing laboratory. Assumed day to

day control of sample procedures and updated all testing methodologies to retain certification by the PADEP within a two-month time frame. Rewrote all QA/QC manuals and updated testing procedures to assure adherence to recognized testing procedures.

12 Mitigation Sites, Northeast Pennsylvania
Served as project manager on inception of monitoring for 12 mitigation sites located in northeast Pennsylvania. Wetlands mitigation and stream restoration were required for 12 different pipeline projects located in Wyoming and Susquehanna County, PA. Oversaw and conducted site identification, met with landowners, and secured approvals from the PADEP and USACE to construct the sites. Installed groundwater monitoring wells, performed initial assessments of the water resources, and designed the mitigation sites for construction. Selected the construction contractor and conducted oversight during construction. Performed post construction monitoring for each of the 12 successful mitigation and stream restoration locations.

Rhode Island Department of Transportation, Bridge Replacement Group 13E-W West River Bridge, Providence, Rhode Island
Served as Environmental Project Manager for the natural resources group that conducted stream and wetland delineations in the vicinity of the West River bridge in Providence as part of the RIDOT Bridge Replacement project. Additional assessment of the functions and values of the water resources was completed, and a habitat survey of the substrate and surrounding vegetative communities was conducted within the vicinity of the bridge abutments and potential work area.

Rhode Island Department of Transportation, Route 37 Bridge Rehabilitations and Replacements, Warwick and Cranston, Rhode Island
Served as Environmental Project Manager of the multi-disciplined team conducting wetlands delineation and function and values assessment. Worked in close coordination with the bridge designer in order to submit environmental permit documentation on a fast-track basis.

Barrington & Warren Bike Path Bridges, Barrington and Warren, Rhode Island
Served as Environmental Project Manager of the natural resources team that conducted wetland and stream delineation of the East Bay Bike Path bridges over the Barrington and Palmer Rivers in Barrington and Warren, RI. A regulated watercourse and four (4) coastal wetlands were identified within the project area. An initial assessment of the coastal habitat and substrate was conducted to facilitate information to the NOAA's National Marine Fisheries Service. In addition, the functions and values of the wetlands were assessed, and avoidance and minimization measures were considered to reduce impacts to the wetland areas.

Consultant Liaison Engineering Services for the State and Federal Local Bridge Program, Connecticut Department of Transportation, Statewide, Connecticut
Served as Senior Project Scientist for several bridge rehabilitation and replacement projects for CTDOT across the state. Responsibilities included performing wetland delineations, function and values assessments, and bat habitat assessments at each bridge location where natural resources were identified as being within the proximity of proposed work. Additional responsibilities included attaining environmental permitting for the CTDEEP and U.S. ACOE, identifying invasive species, and coordination for listed species.

City of Bristol, Bristol, Connecticut
Coordinate assessment of stream and wetland delineation and develop a site restoration plan for impacted watercourses and wetland features located on a city owned property. The City's IWC had identified several areas of concern on a City owned property that included a soil stock pile of PCB contaminated soils that was being eroded by uncontrolled stormwater discharge from the site. Lead team to conduct an evaluation of remedial alternatives to stabilize the sandy soils on the site, remove sediment from wetlands, and propose a restoration plan for review and approval by the IWC. Restoration is ongoing and expected to be completed in October 2022.

Southeast Bristol Business Park, Bristol, Connecticut
Served as Project Manager for a wetland delineation survey for Lot 3, Lot 9, and Lot 10 of the Southeast Bristol Business Park in August of 2021. The Lots are approximately 12.67 acres in combined size and approximately 16 hours of surveying efforts were performed at the Lots. Following field delineation efforts, a wetland delineation report was created to give details regarding the

field work findings. Additionally, a field site visit meeting with the City of Bristol's Inland Wetlands and Watercourses Commission (IWWC) was performed to present BL Companies' wetland delineation findings to the Commission for their review and subsequent approval. Following the IWWC site meeting and agreement with BL Companies' wetlands and watercourses delineation work, the City of Bristol's official IWWC wetland mapping was updated from previous delineation work to reflect BL Companies' more inclusive and comprehensive field findings and geographical positioning system (GPS) data collection. BL Companies' extensive geographical information system (GIS) knowledge and experience was utilized to present the City of Bristol with mapping and digital data to quickly and easily update their official mapping.

Additional Relevant Projects
Initiate and develop Post Construction Monitoring program suitable for USACE permit compliance on natural gas pipelines in PA as part of ongoing pipeline construction.

Lead field teams delineating streams and wetlands along a 20-mile pipeline through the Washington DC/MD suburbs. Secured JD from the USACE. Oversaw and assisted with Forest Stand Delineations (FSD) and Tree Conservation Plans (TCP's) for hundreds of acres of woodland along the proposed route, including multiple alternative routes.

Pipelines in and Susquehanna Wyoming Counties PA. T&E plant survey along proposed pipelines. Multiple plant species identified during the initial PNDI clearance phase. Presence/absence surveys conducted within the pipeline ROW and buffer to 300' away.

Conducted multiple Rare, Threatened, and Endangered (RTE) surveys for habitat capable of supporting snow trillium (*Trillium nivale)*. Sites were cleared based upon completion of extensive ground surveys.

Completed multiple site field surveys for RTE species to include *Ellisia nyctelea*, *Aplectrum hyemale* along with assessments for macroinvertebrates, terrestrial amphibians, and fish inventories. Studies were conducted as part of ongoing investigations or monitoring events for sites under restoration and occurred in the multi state region from CT to VA.

Design and develop stormwater treatment system utilizing common reed (*Phragmites australis*) to treat stormwater runoff from a lead battery recycling facility prior to discharge to surface water.

Served as biologist overseeing an award-winning team of geologists, engineers, and biologists coordinating with state and federal regulatory groups that designed a storm and surface water runoff treatment system for a commercial development within Karst terrain. The system utilized stormwater treatment with physical (Stormceptor) primary treatment to a release into a wetlands treatment system to provide tertiary treatment prior to release to wetlands adjacent to an exceptional value wild trout stream.

Conducted preliminary remediation alternatives analysis for a tidally influenced marsh system in New York. This Superfund site was contaminated with heavy metals and is currently under remediation. The analysis included the location, identification, and observation of bald eagles in the vicinity of the site.

Conducted RTE plant surveys in Susquehanna, Wyoming, Lackawanna, Chester, Delaware, Dauphin and Juniata, Susquehanna and Wyoming Counties, Pennsylvania and assisted with RTE studies of plant populations at various locations in MD and VA.

Conducted water quality surveys, sediment sampling, and quantification of contaminants of coal fired electrical generation plants in response to TMDL documentation.

Provided project scope and budget for teams conducting environmental, cultural and land development permitting acquisition for solar, wind and fossil fuel projects.

Lead team of specialists in habitat assessment and potential impacts assessment of plant and animal species for a proposed pipeline that would impact a portion of the US Forestry Service property. The project was under review by FERC and the timelines were very abbreviated for the review and findings submittal for the Biological Assessment.

Affiliations

Director, PA Certified Drinking Water Laboratory, 1996-2002, 2008-2011

Professional Wetlands Scientist, Society of Wetlands Scientists

July 8, 2024

Bridgeport Stadium
255 Kosuth Street
Bridgeport, CT 06608

RE: Floodplain Assessment for Proposed Bridgeport Stadium

BACKGROUND

LaBella is designing a modular soccer stadium and related improvements at 255 Kossuth Road and 141 Stratford Avenue totaling 20.45 acres. The site is currently occupied by an unused dog track and associated 2-story, 47,000 square-foot (sq-ft) building, 1-story, 16,000 sq-ft and a 5-acre parking lot (see Figure 1). The project site is in the floodplain fringe of Zone AE (100-year) Special Flood Hazard Area. It is outside of the 100-year regulatory floodway.

LaBella performed a hydraulic analysis to assess potential impacts resulting from the construction and grading associated with the proposed soccer stadium. The 2013 Fairfield County Flood Insurance Study (FIS) and applicable Flood Insurance Rate Map (FIRM) 09001C0441G illustrate that the existing dog track and 16,000 sq-ft building are within the floodplain fringe. However, the large parking lot and a majority of the 47,000 sq-ft building are outside of the floodplain fringe. The entire site is inundated by the base (100-year) flood, except for the parking lot and a portion of the 47,000 sq-ft building (see Figures 2 and 3).

Per State regulations, any proposed development constructed in a regulated floodplain must result in 1.0 foot or less of rise for the base (100-year) elevation.

PROCEDURE

LaBella utilized the standard FEMA process for assessing floodplain impacts. This typically includes preparing four separate models, which are described as follows.

1. **Duplicate Effective (DE) Model** – Reconstruction of an approx. 2,300-foot-long portion of the hydraulic model in a recent version of HEC-RAS. In this instance, the original model was limited to HEC-2 pdf documentation. The tabular HEC-2 data was decoded into excel to provide factors including cross-section points, manning's n-values, downstream distances and bridge opening data. This data was then entered into HEC-RAS to generate the DE model. Cross-sections from upstream to downstream included:
    a. Section A (0.116);
    b. Intermediate section just downstream of the Route 130 bridge (0.131);
    c. Section B (0.257);
    d. Intermediate section (0.390) between B and C; and
    e. Section C (0.437).

    The Route 130 bridge (near Section 0.131) was modeled as a special bridge and used a pressure and weir submerged inlet and outlet coefficient of discharge of 1.56. The bounding cross-sections for the Route 130 bridge were 0.257 and 0.131. Cross-section 0.131 contained a variety of high points, which were interpreted to be piers or piles for the bridge. The high points were left in place for the DE model.

Cross-section 0.390 appeared to fall in line with the Conrail bridge. The HEC-2 model did not use a bridge code at this location and therefore the Conrail bridge was left as a cross-section. The cross-section had a variety of high points, which were interpreted to be piers or piles for the bridge.

Cross-sections A, B and C are shown on the FEMA insurance rate map (FIRM), however the intermediate cross-section locations are not known.

2. **Corrected Effective (CE) Model** – This model is a copy of the DE model, which was updated to reflect existing survey topography.

   Changes to the model were made to improve modeling of the Route 130 bridge, including:

   - Changing coefficient of discharge to 0.8 (from 1.56);
   - Removing high points from cross-section 0.131;
   - Adding 7 piers to the bridge section;
   - Creating bounding cross-section 0.150 by duplicating the edited cross-section 0.131; and
   - Changing Deck/Roadway distance to 1 foot (from 600 feet) due to the addition of cross-section 0.131.

   Per FEMA standards, downstream reach lengths and manning's n-values were not changed from the DE to CE model.

3. **Existing Conditions Model** – This model is a copy of the CE model. Model updates were limited to adding two blocked obstructions to cross-section 0.257, which represent the dog track buildings that were constructed after publication of the original FEMA HEC-2 model data.

   Per FEMA standards, downstream reach lengths and manning's n-values were not changed from the CE to Existing Conditions model.

4. **Proposed Conditions Model** – This model is a copy of the Existing Conditions model, which was updated to reflect proposed grading changes associated with the proposed soccer stadium at FEMA cross-section B (0.257). Note that cross-section B is roughly in line with the northern end of the stadium. The remaining cross-sections were not changed since they are outside of the project area.

   Per FEMA standards, downstream reach lengths and manning's n-values were not changed from the Existing Conditions model to Proposed Conditions model.

The models each utilized subcritical flow. Downstream boundary conditions for the 100-year flow for the three scenarios included:

- 100-year flow with no tide (3.6 feet);
- 100-year flow with tide (9.8 feet); and
- 100-year flow with tidal plus surge (12.0 feet).

RESULTS AND CONCLUSIONS

A comparison of the DE and CE model results indicate no change in the water surface profile for the first two scenarios. However, there was a 0.01-foot increase in the '100-year flow plus tidal surge' scenario at cross-sections 0.437, 0.390 and 0.257. This change appears to be due to the change in orifice coefficient at the Route 130 bridge. Downstream of the bridge, the DE and CE profiles match for all three scenarios. Per FEMA standards, all profiles match, respectively, the specified water surface elevations of 3.6, 9.8 or 12.0 feet at Section A (downstream end of model).

A comparison of the CE, Existing Conditions and Proposed Conditions models indicates no change in water surface profiles for the entire 2,300-foot-long model reach. Per FEMA standards, all profiles match, respectively, the specified water surface elevations of 3.6, 9.8 or 12.0 feet at Section A (downstream end of model) for each scenario.

Therefore, it is concluded that the project does not cause a rise in the 100-year flood level and meets FEMA standards. The models also demonstrate that the study reach of the Pequonnock River is generally controlled by backwater starting at Section A and continuing upstream. A Letter of Map Change is not required at this time.

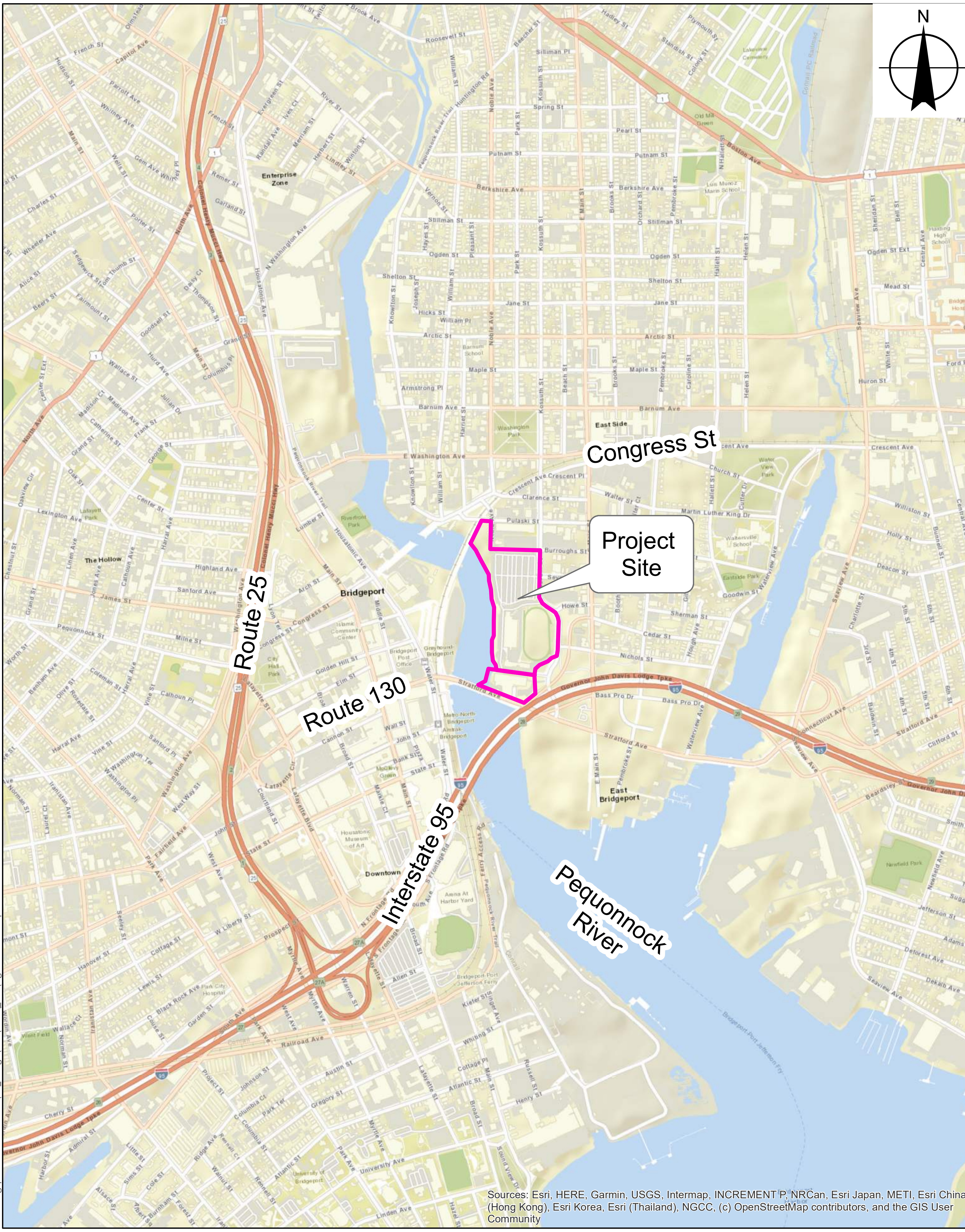
Respectfully submitted,

LaBella Associates

Seth Erlich, PE, CFM
Senior Civil Engineer

Cc: Stuart Mesinger

FIGURE 1 - PROJECT SITE LOCATION MAP



LaBella
Powered by partnership.

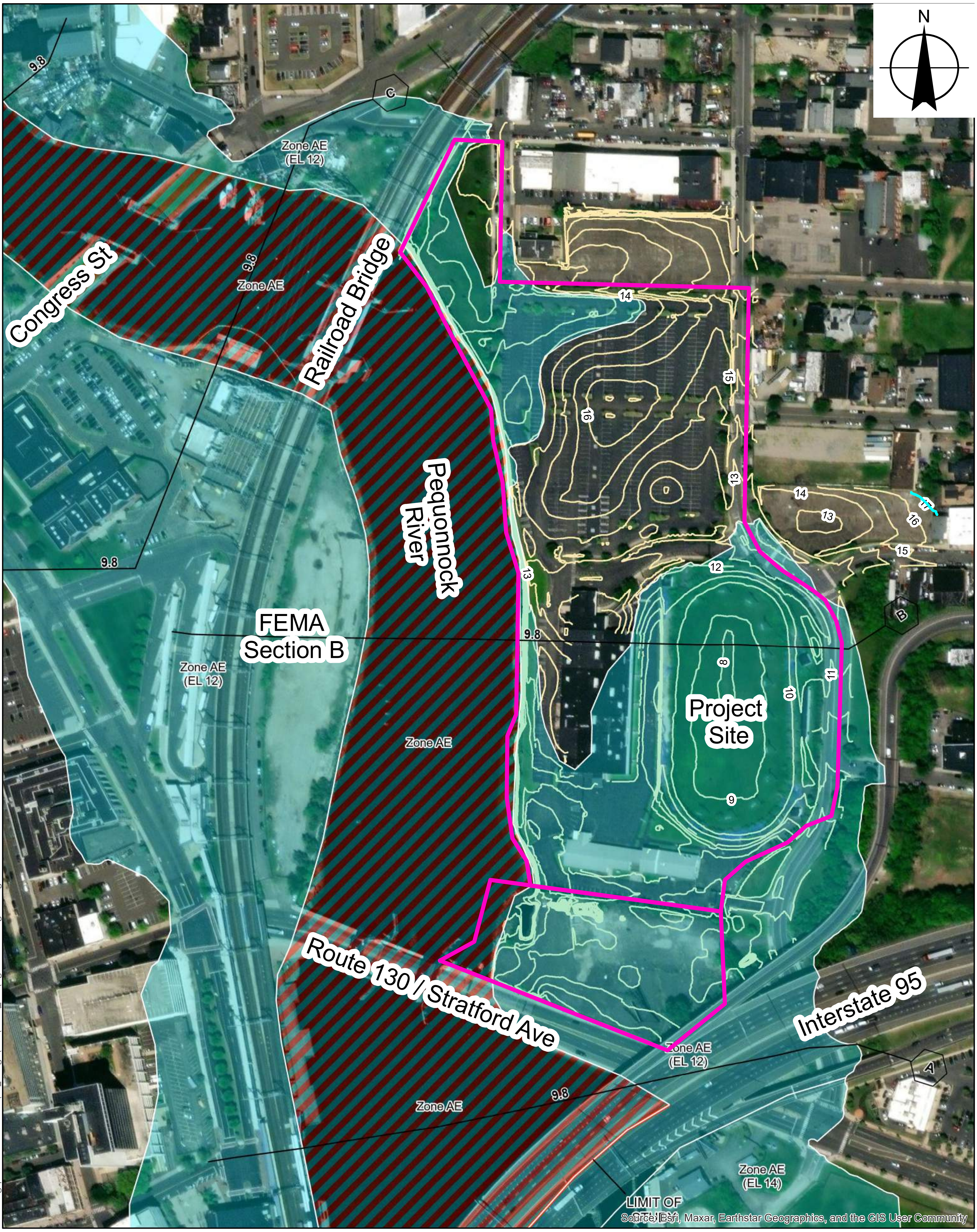
0 1,000 2,000 Feet

Approx. Parcel Boundary

Creator: SE Reviewer: SM

Path: B:\GLOBAL\Projects\Connecticut Innovation\2230111 - Bridgeport CT MLS Stadium\05_Design\Civil\Muni_GIS\Figure 1 - Site Map.mxd

FIGURE 2 - EXISTING CONDITIONS



LaBella
Powered by partnership.

0 200 400 Feet

Approx. Parcel Boundary

Cross-Sections

Base Flood Elevations

Existing Contours

Flood Hazard Zones

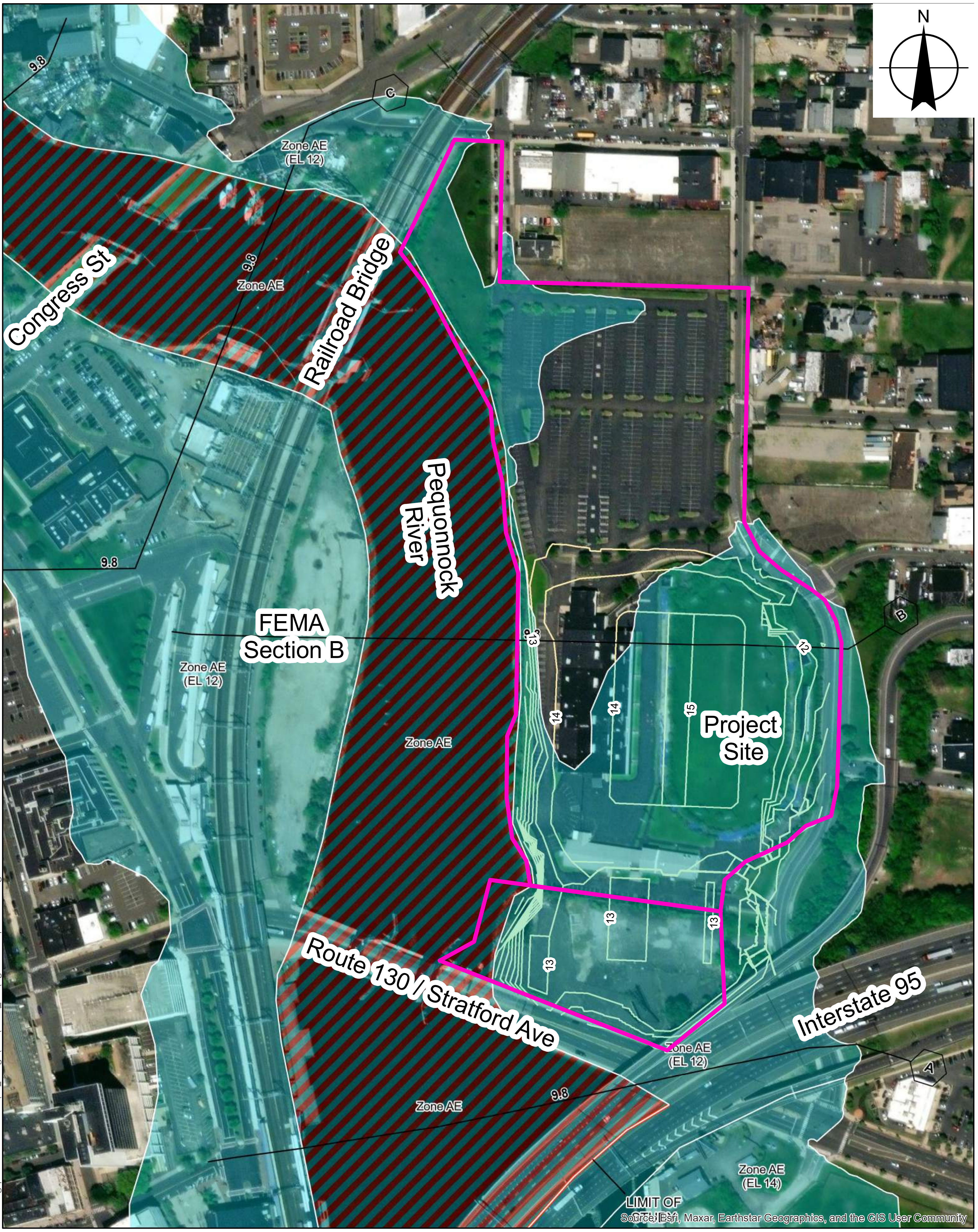
Zone Type

- 1% Annual Chance Flood Hazard
- Regulatory Floodway
- Special Floodway
- Area of Undetermined Flood Hazard
- 0.2% Annual Chance Flood Hazard
- Future Conditions 1% Annual Chance Flood Hazard
- Area with Reduced Risk Due to Levee
- Area with Risk Due to Levee

Creator: BJ Reviewer: BJ

Path: B:\GLOBAL\Projects\Connecticut Innovation\2230111 - Bridgeport CT MLS Stadium\05_Design\Civil\Muni_GIS\Figure 2 - Existing Grading.mxd

FIGURE 3 - PROPOSED CONDITIONS



LaBella
Powered by partnership.

0 200 400 Feet

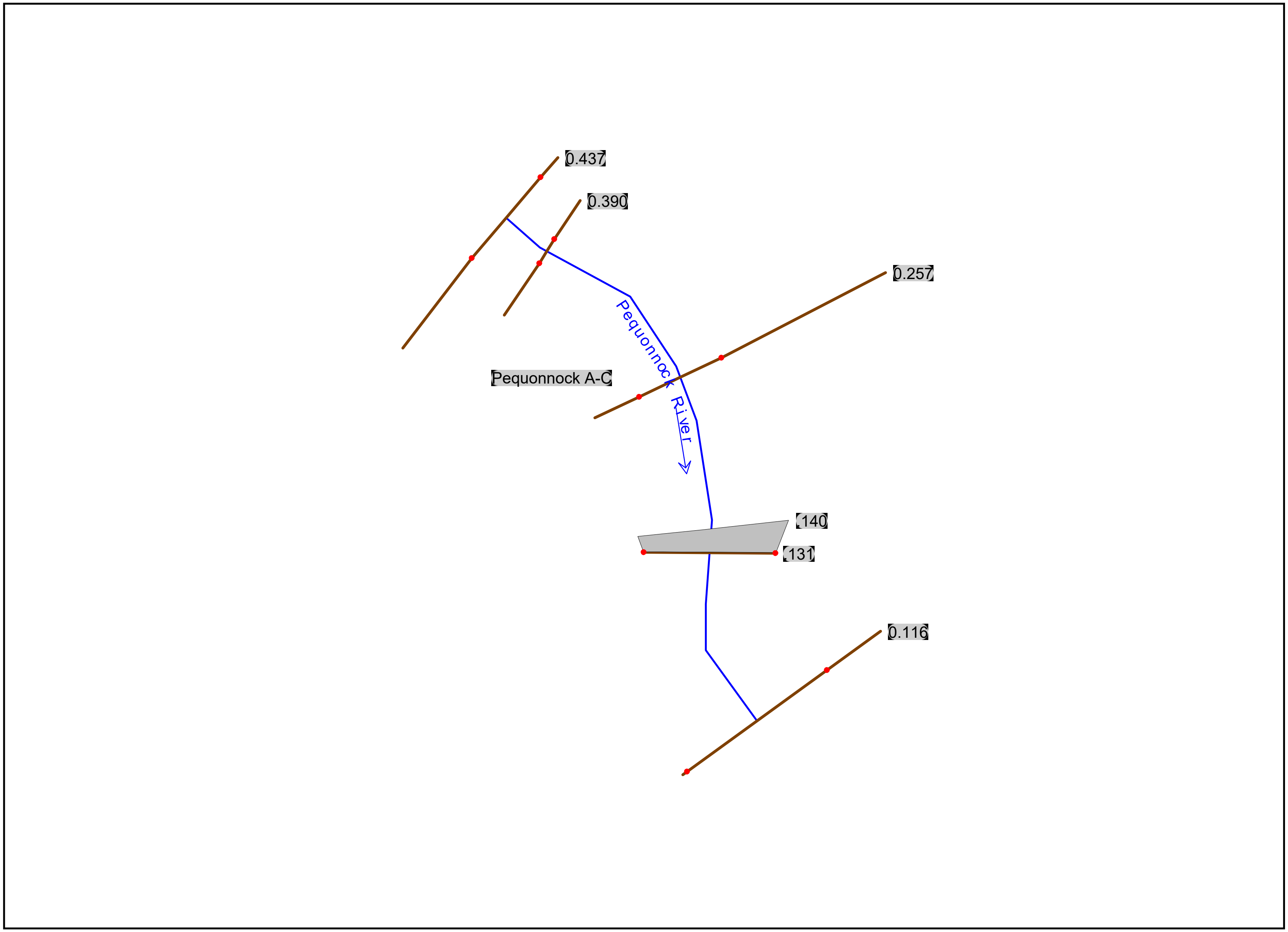
Approx. Parcel Boundary
Cross-Sections
Base Flood Elevations
Proposed Contours

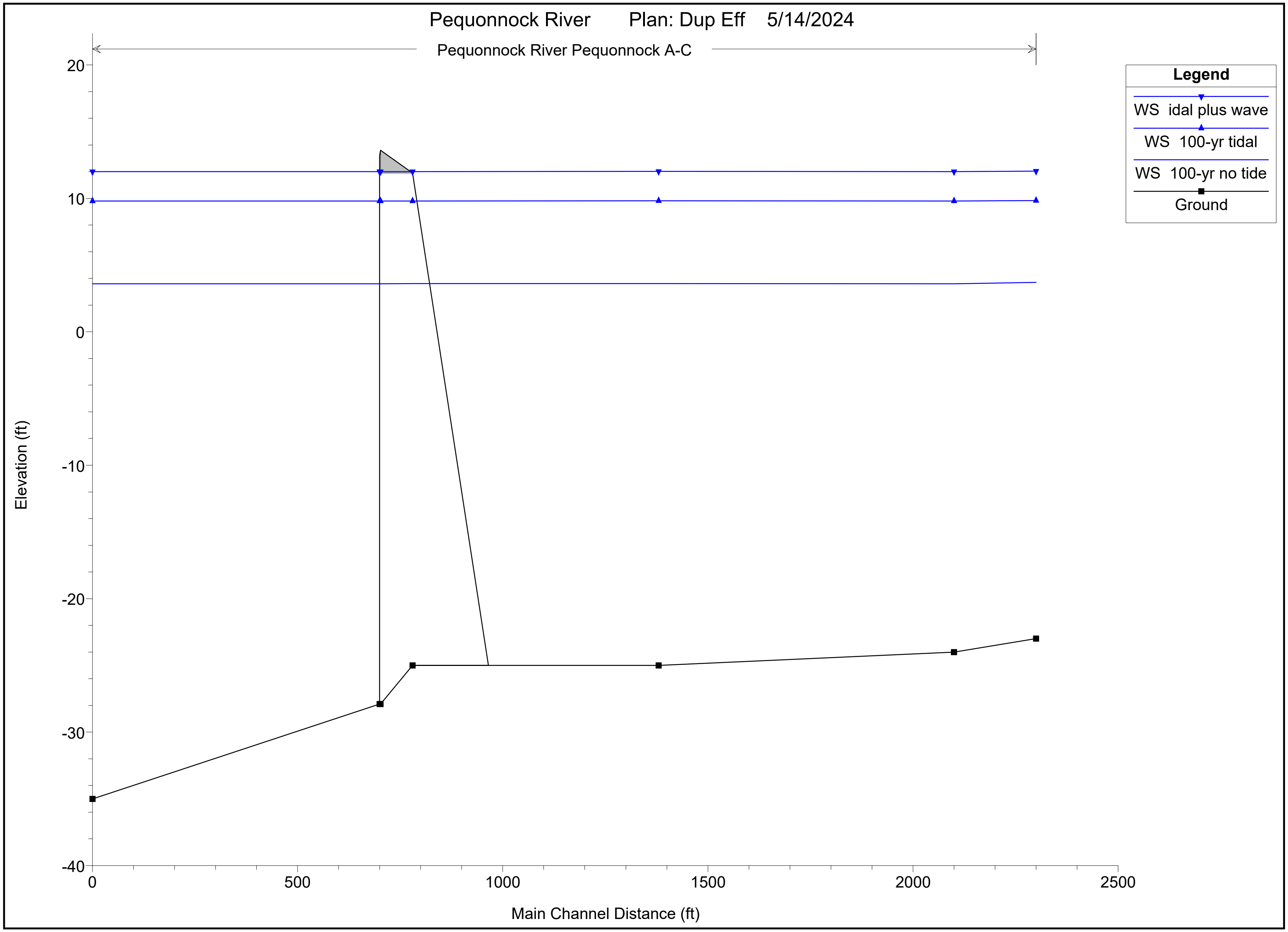
Flood Hazard Zones

Zone Type

- 1% Annual Chance Flood Hazard
- Regulatory Floodway
- Special Floodway
- Area of Undetermined Flood Hazard
- 0.2% Annual Chance Flood Hazard
- Future Conditions 1% Annual Chance Flood Hazard
- Area with Reduced Risk Due to Levee
- Area with Risk Due to Levee

DUPLICATE EFFECTIVE MODEL

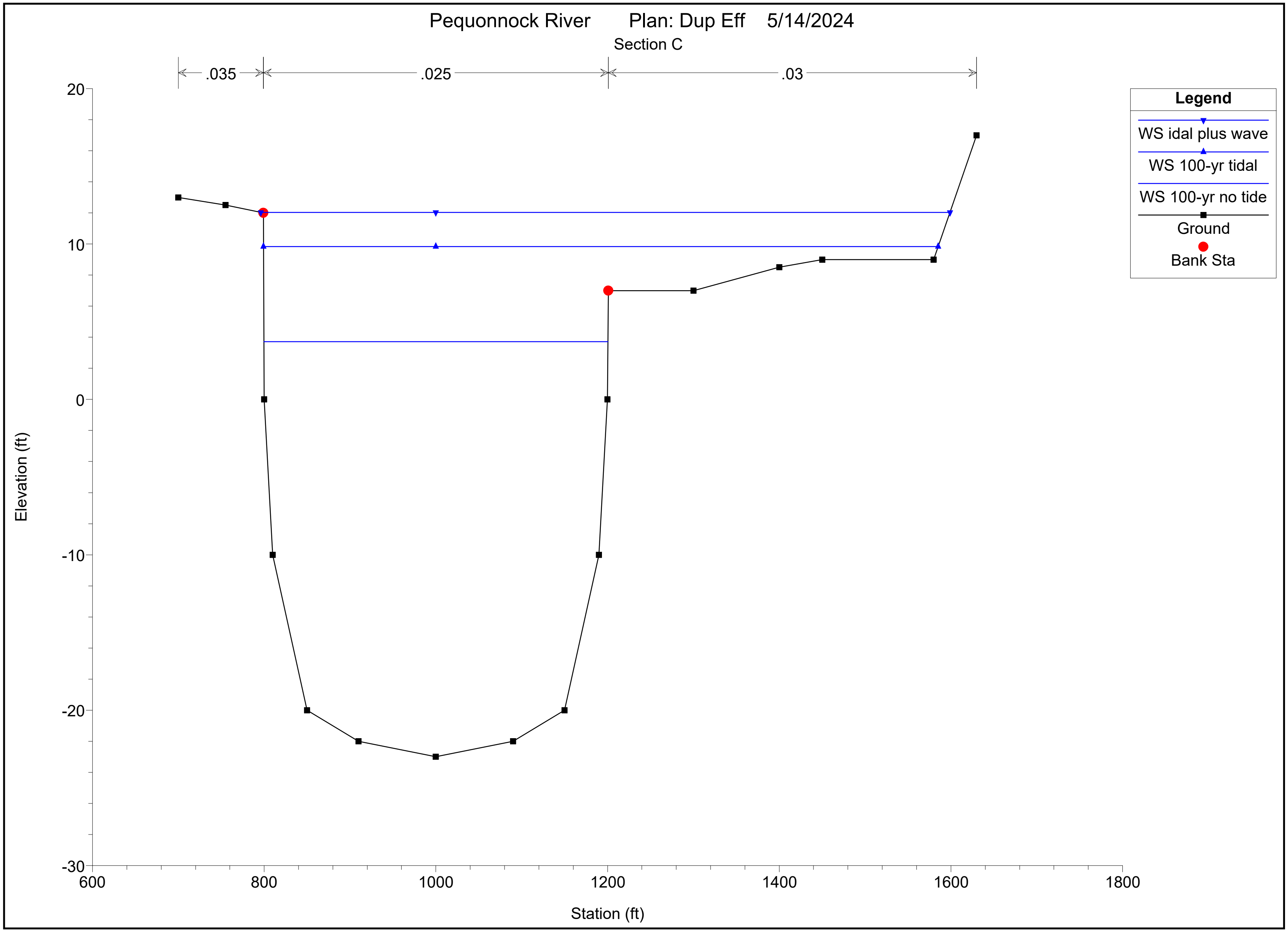




Pequonnock River Plan: Dup Eff 5/14/2024
Pequonnock River Pequonnock A-C
Legend
WS idal plus wave
WS 100-yr tidal
WS 100-yr no tide
Ground
Elevation (ft)
20
10
0
-10
-20
-30
-40
0
500
1000
1500
2000
2500
Main Channel Distance (ft)

HEC-RAS Plan: DE River: Pequonnock River Reach: Pequonnock A-C

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Pequonnock A-C	0.437	100-yr no tide	9560.00	-23.00	3.71		3.72	0.000005	1.02	9354.74	400.84	0.04
Pequonnock A-C	0.437	100-yr tidal	9560.00	-23.00	9.84		9.85	0.000002	0.80	12473.04	786.07	0.03
Pequonnock A-C	0.437	idal plus wave	9560.00	-23.00	12.03		12.04	0.000002	0.73	14212.71	802.99	0.02
Pequonnock A-C	0.390	100-yr no tide	9560.00	-24.00	3.60		3.69	0.000101	2.74	4295.22	338.91	0.10
Pequonnock A-C	0.390	100-yr tidal	9560.00	-24.00	9.81		9.84	0.000035	1.70	6846.21	457.91	0.06
Pequonnock A-C	0.390	idal plus wave	9560.00	-24.00	12.01		12.03	0.000024	1.48	7856.47	459.21	0.05
Pequonnock A-C	0.257	100-yr no tide	9560.00	-25.00	3.62	-19.76	3.64	0.000020	1.29	7395.02	327.34	0.05
Pequonnock A-C	0.257	100-yr tidal	9560.00	-25.00	9.81	-19.76	9.82	0.000009	0.97	10316.54	608.73	0.03
Pequonnock A-C	0.257	idal plus wave	9560.00	-25.00	12.01	-19.76	12.02	0.000006	0.87	12497.22	1122.72	0.03
Pequonnock A-C	.140		Bridge									
Pequonnock A-C	.131	100-yr no tide	9560.00	-27.90	3.59		3.63	0.000047	1.55	6178.19	342.44	0.06
Pequonnock A-C	.131	100-yr tidal	9560.00	-27.90	9.79		9.81	0.000024	1.14	8418.11	429.21	0.05
Pequonnock A-C	.131	idal plus wave	9560.00	-27.90	12.00		12.01	0.000019	1.02	9412.24	499.92	0.04
Pequonnock A-C	0.116	100-yr no tide	9560.00	-35.00	3.60	-29.80	3.60	0.000001	0.52	18504.34	651.65	0.02
Pequonnock A-C	0.116	100-yr tidal	9560.00	-35.00	9.80	-29.80	9.80	0.000001	0.42	22597.95	698.57	0.01
Pequonnock A-C	0.116	idal plus wave	9560.00	-35.00	12.00	-29.80	12.00	0.000001	0.40	24512.47	891.00	0.01


Pequonnock River Plan: Dup Eff 5/14/2024
Section C
.035
.025
.03
Legend
WS idal plus wave
WS 100-yr tidal
WS 100-yr no tide
Ground
Bank Sta
Elevation (ft)
20
10
0
-10
-20
-30
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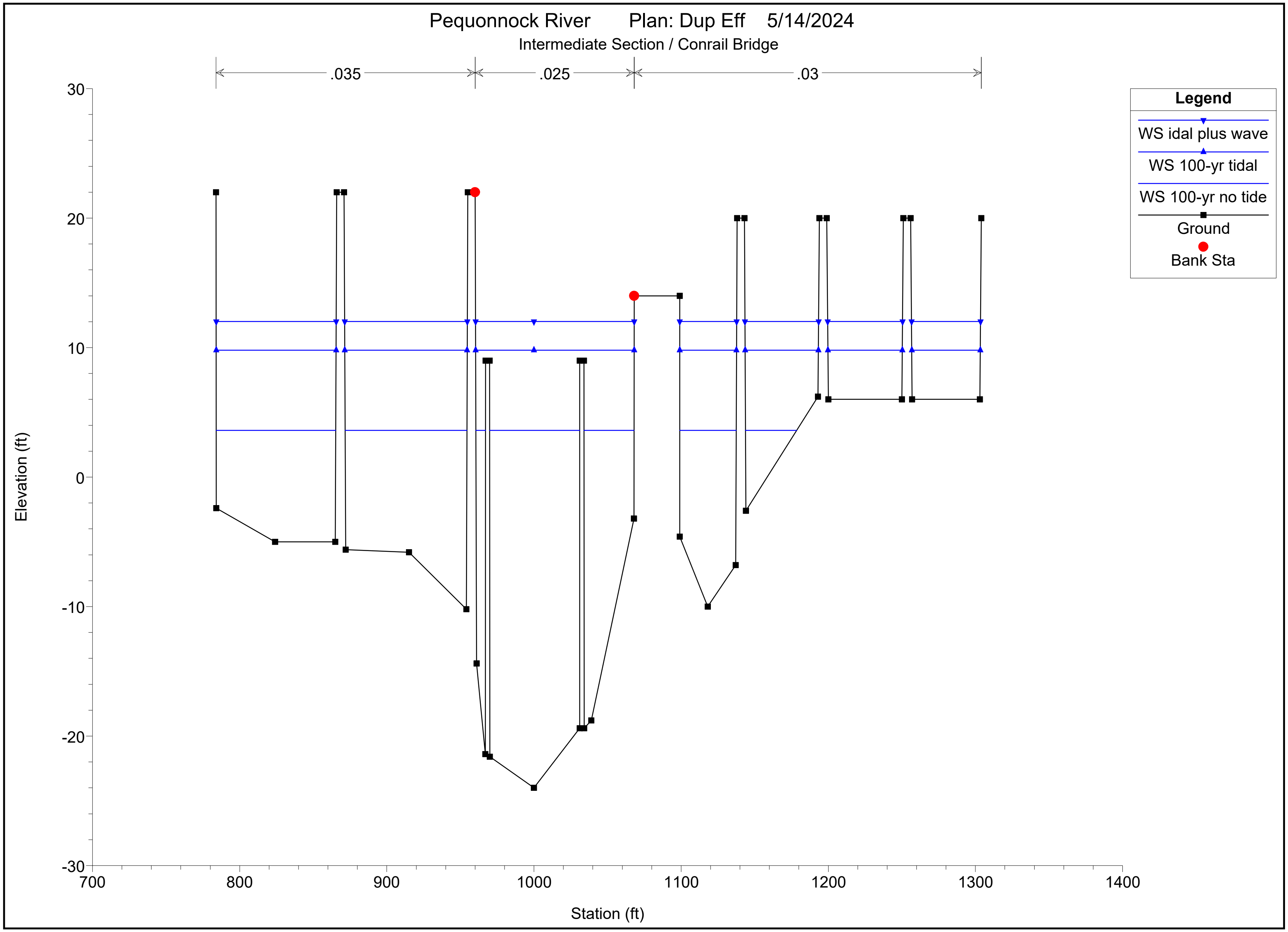
1600
1800
Station (ft)



Pequonnock River Plan: Dup Eff 5/14/2024
Intermediate Section / Conrail Bridge
.035
.025
.03
Legend
WS idal plus wave
WS 100-yr tidal
WS 100-yr no tide
Ground
Bank Sta
Elevation (ft)
Station (ft)
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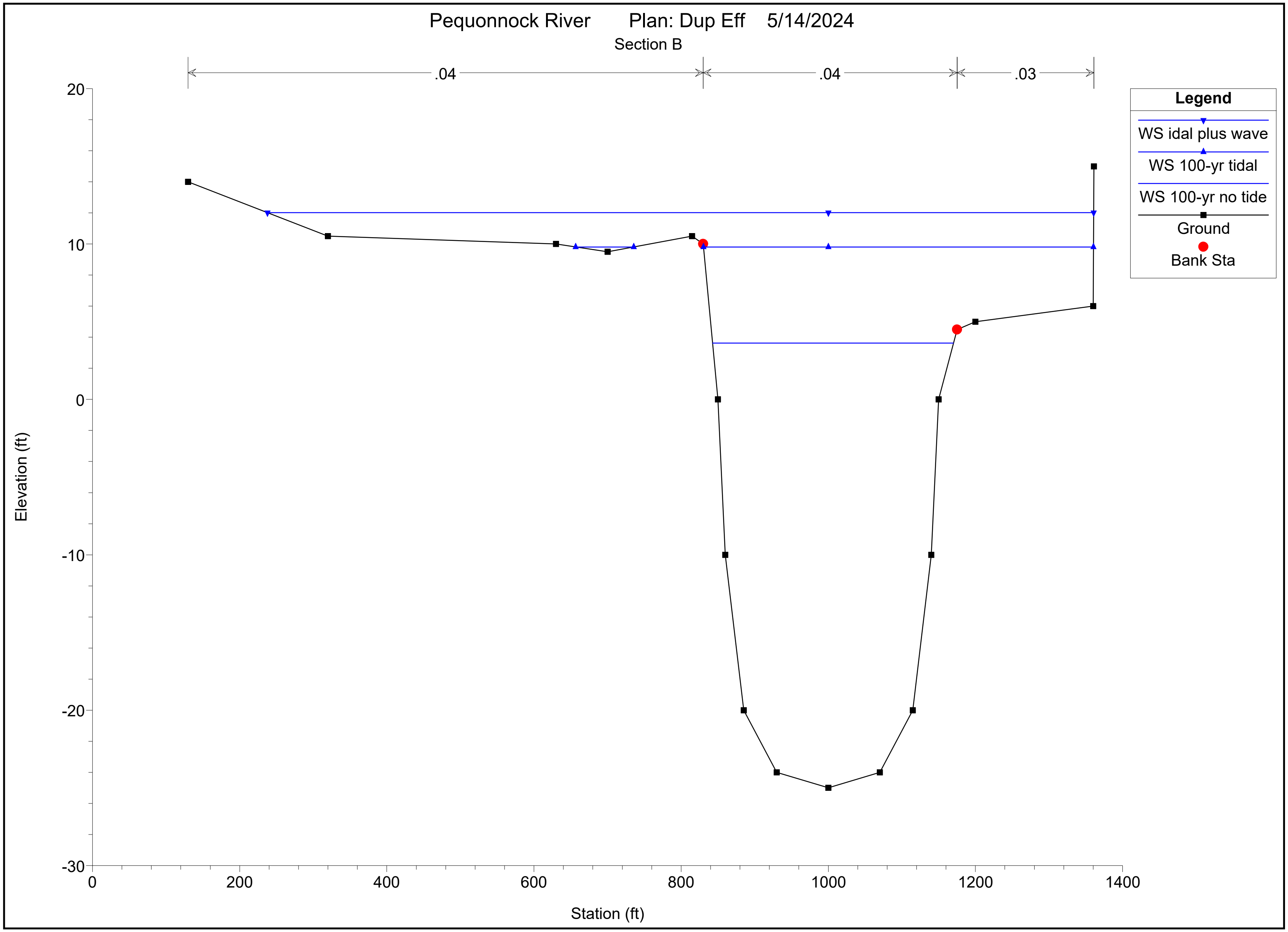

Pequonnock River Plan: Dup Eff 5/14/2024
Section B
.04
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.03
Legend
WS idal plus wave
WS 100-yr tidal
WS 100-yr no tide
Ground
Bank Sta
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-10
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Elevation (ft)
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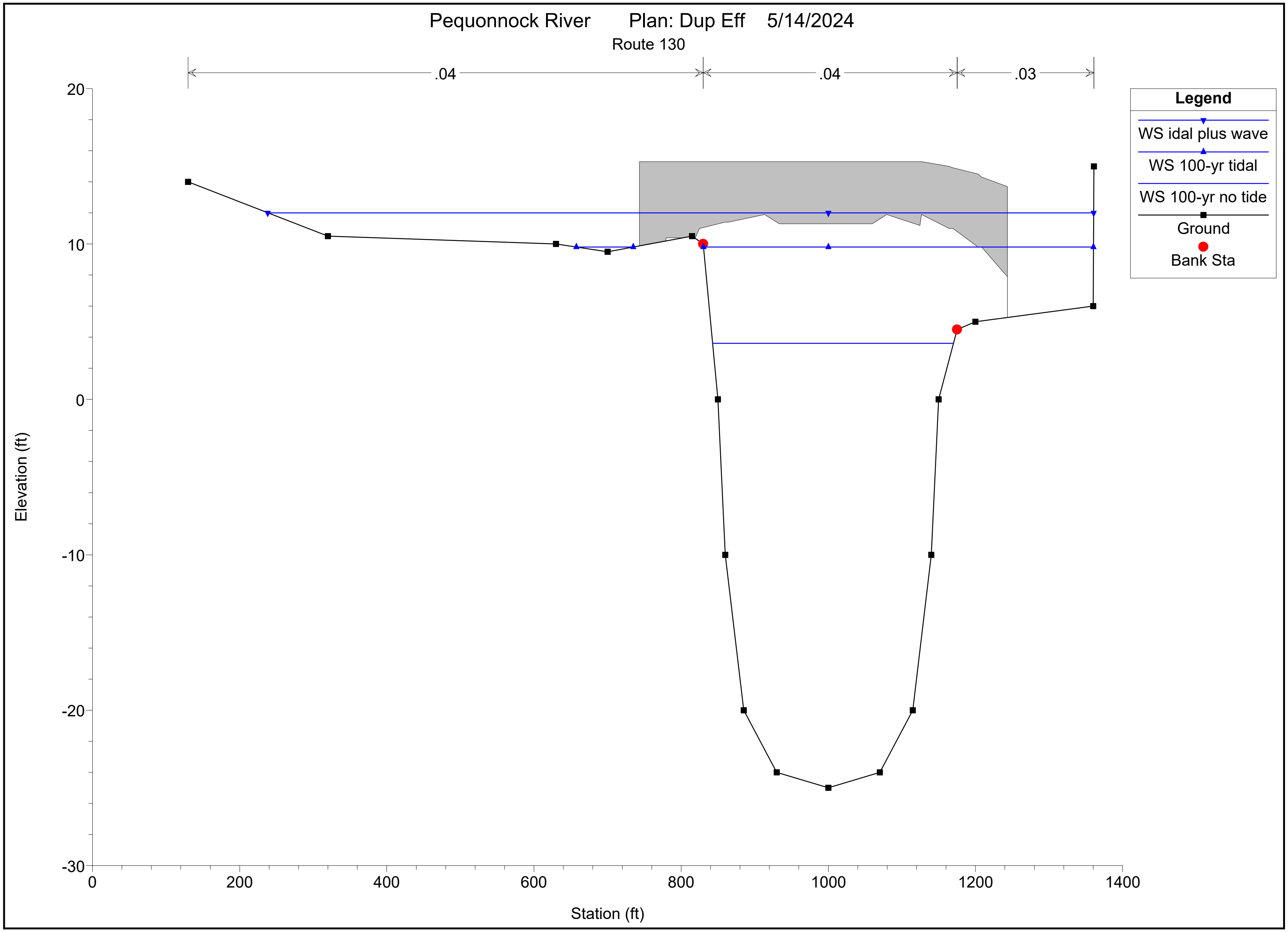
Station (ft)


Pequonnock River Plan: Dup Eff 5/14/2024
Route 130
.04
.04
.03
Legend
WS idal plus wave
WS 100-yr tidal
WS 100-yr no tide
Ground
Bank Sta
Elevation (ft)
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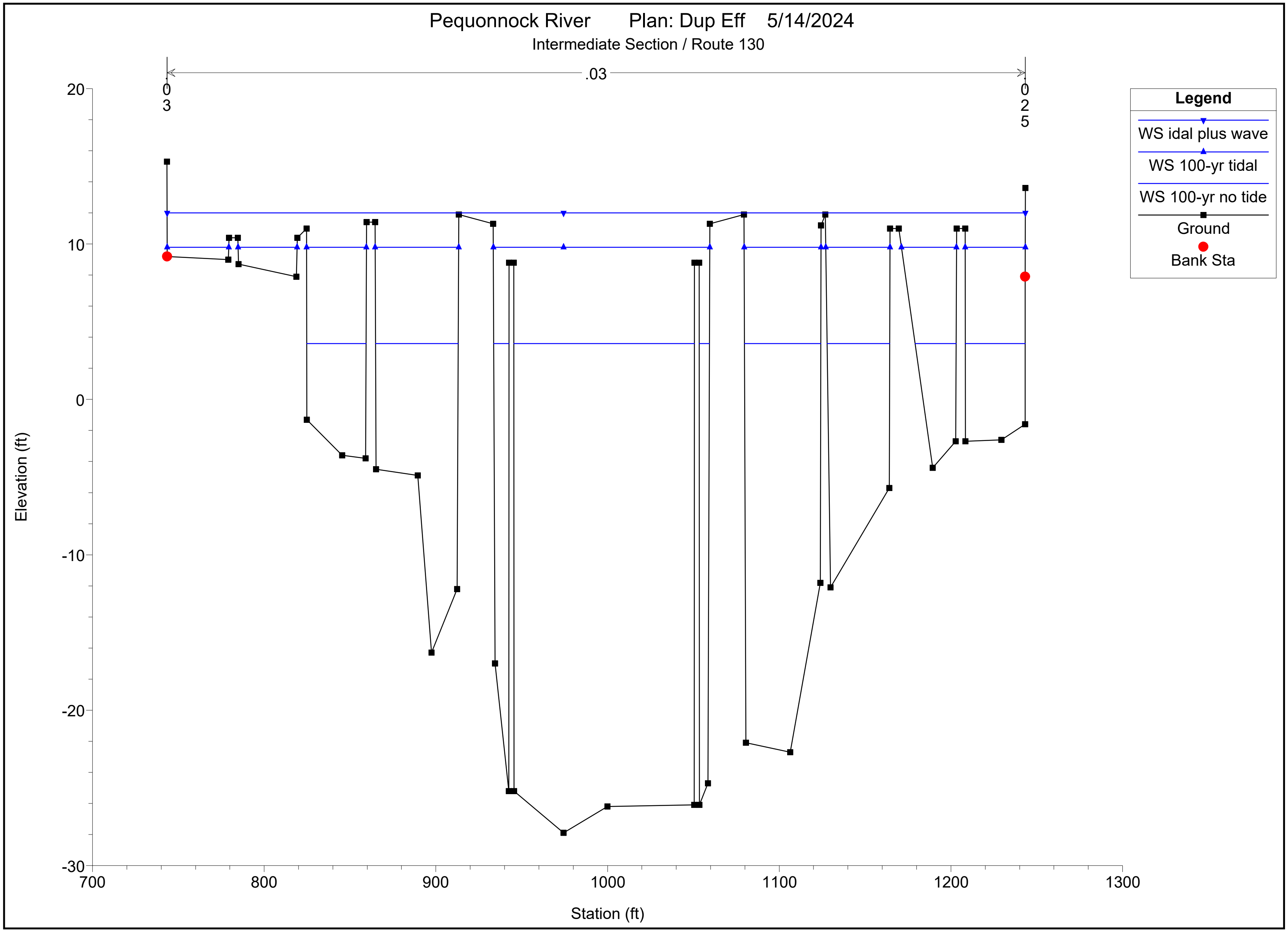
Station (ft)



Pequonnock River Plan: Dup Eff 5/14/2024
Intermediate Section / Route 130
.03
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0
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5
Legend
WS idal plus wave
WS 100-yr tidal
WS 100-yr no tide
Ground
Bank Sta
Elevation (ft)
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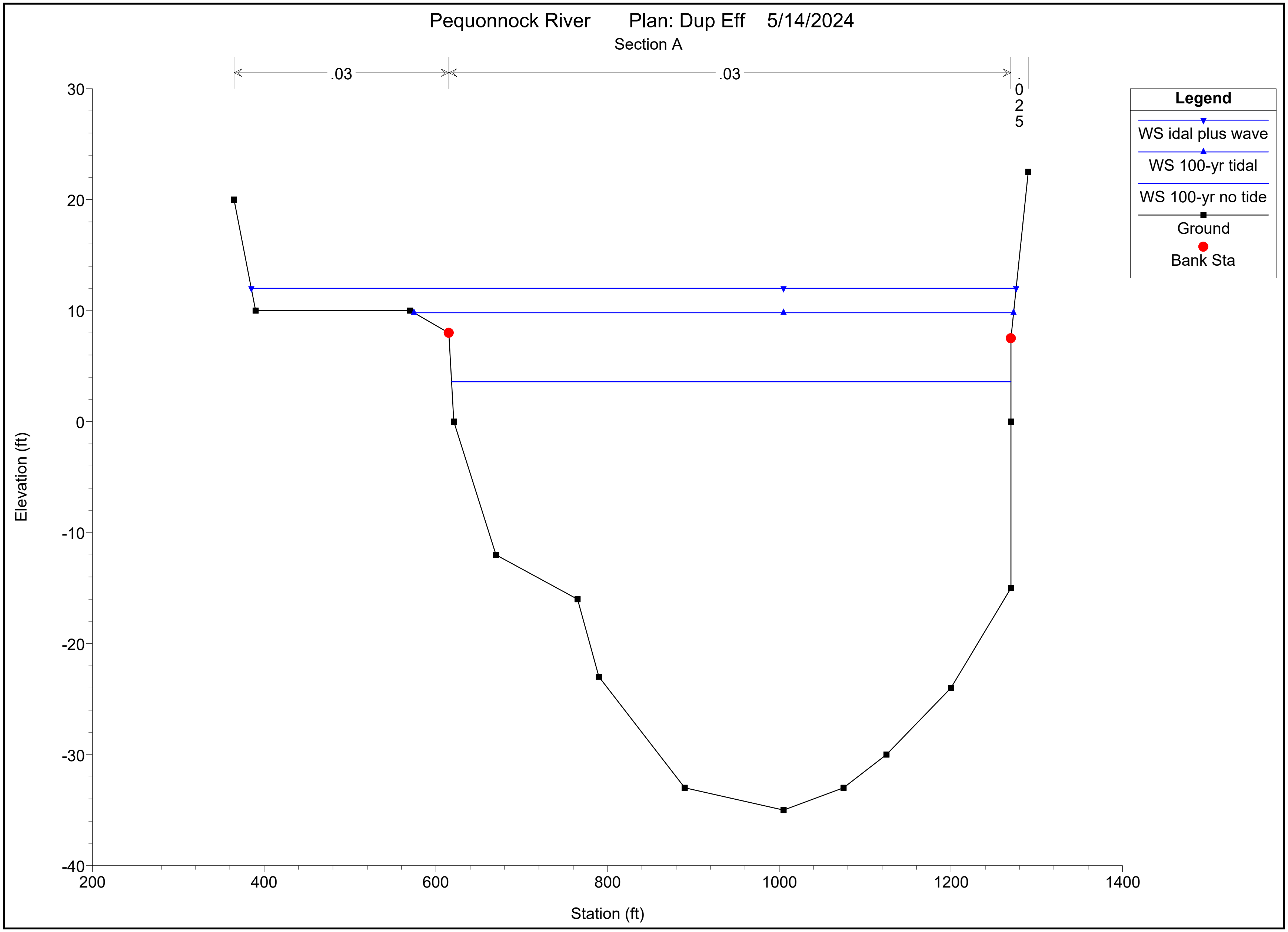
1100
1200
1300
Station (ft)



Pequonnock River Plan: Dup Eff 5/14/2024
Section A
.03
.03
.025
Legend
WS idal plus wave
WS 100-yr tidal
WS 100-yr no tide
Ground
Bank Sta
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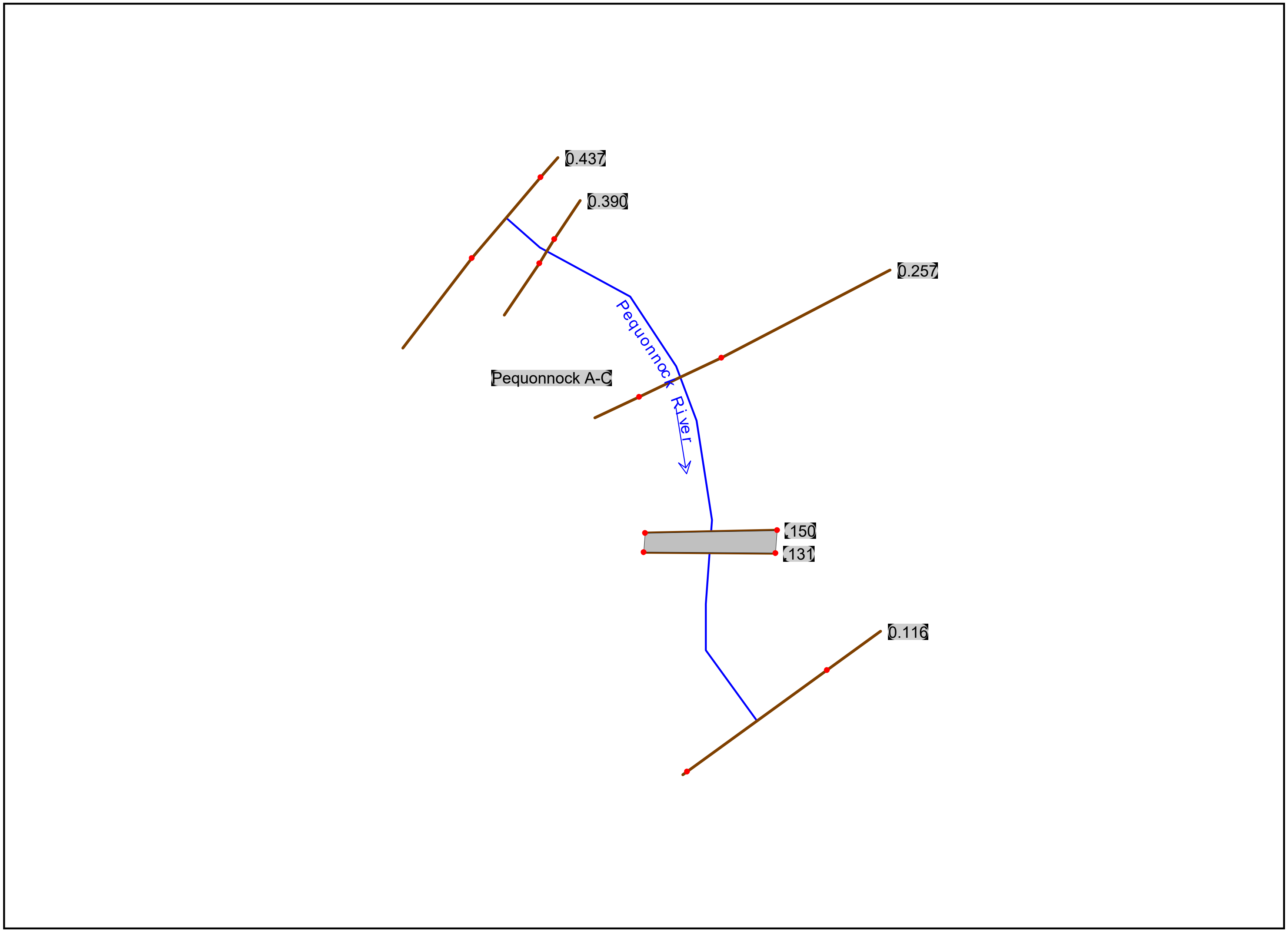
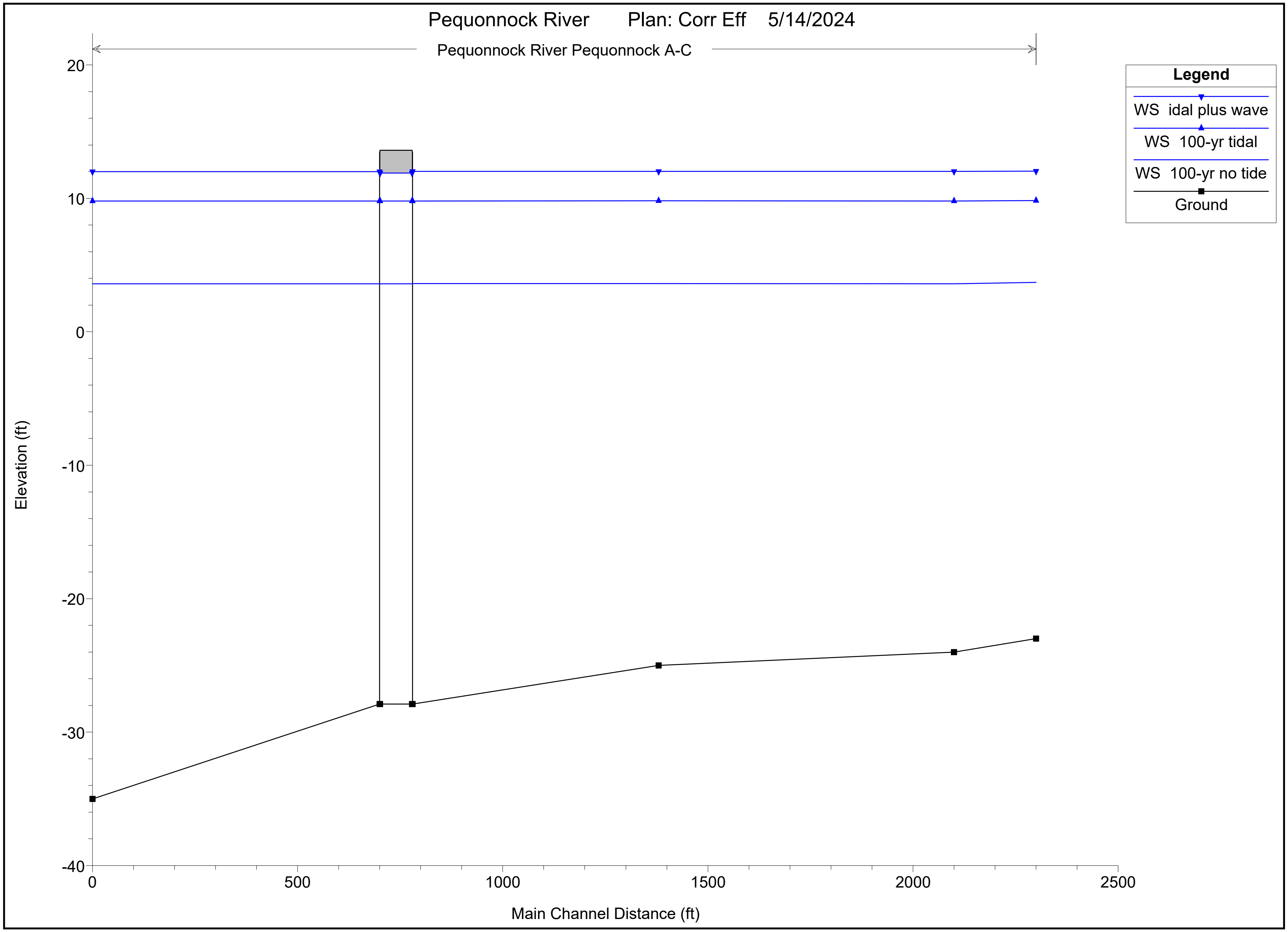
Elevation (ft)
Station (ft)

CORRECTED EFFECTIVE MODEL




Pequonnock River Plan: Corr Eff 5/14/2024
Pequonnock River Pequonnock A-C
Legend
WS idal plus wave
WS 100-yr tidal
WS 100-yr no tide
Ground
Elevation (ft)
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0
-10
-20
-30
-40
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500
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1500
2000
2500
Main Channel Distance (ft)

HEC-RAS Plan: CE River: Pequonnock River Reach: Pequonnock A-C

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
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Pequonnock A-C	0.437	100-yr tidal	9560.00	-23.00	9.84		9.85	0.000002	0.80	12473.34	786.08	0.03
Pequonnock A-C	0.437	idal plus wave	9560.00	-23.00	12.04		12.05	0.000002	0.73	14217.58	803.57	0.02
Pequonnock A-C	0.390	100-yr no tide	9560.00	-24.00	3.60		3.69	0.000101	2.74	4295.32	338.91	0.10
Pequonnock A-C	0.390	100-yr tidal	9560.00	-24.00	9.81		9.84	0.000035	1.70	6846.39	457.91	0.06
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Pequonnock A-C	0.257	100-yr no tide	9560.00	-25.00	3.62		3.64	0.000020	1.29	7395.12	327.34	0.05
Pequonnock A-C	0.257	100-yr tidal	9560.00	-25.00	9.81		9.82	0.000009	0.97	10672.64	832.93	0.03
Pequonnock A-C	0.257	idal plus wave	9560.00	-25.00	12.02		12.03	0.000006	0.86	12893.53	1174.14	0.03
Pequonnock A-C	.150	100-yr no tide	9560.00	-27.90	3.61	-20.52	3.63	0.000021	1.28	7485.69	415.95	0.05
Pequonnock A-C	.150	100-yr tidal	9560.00	-27.90	9.80	-20.52	9.82	0.000010	0.94	10162.39	499.84	0.04
Pequonnock A-C	.150	idal plus wave	9560.00	-27.90	12.01	-20.52	12.02	0.000007	0.85	11266.89	499.92	0.03
Pequonnock A-C	.140		Bridge									
Pequonnock A-C	.131	100-yr no tide	9560.00	-27.90	3.59		3.62	0.000021	1.28	7480.28	415.94	0.05
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Pequonnock A-C	.131	idal plus wave	9560.00	-27.90	12.00		12.01	0.000007	0.85	11258.89	499.92	0.03
Pequonnock A-C	0.116	100-yr no tide	9560.00	-35.00	3.60	-29.80	3.60	0.000001	0.52	18504.34	651.65	0.02
Pequonnock A-C	0.116	100-yr tidal	9560.00	-35.00	9.80	-29.80	9.80	0.000001	0.42	22597.95	698.57	0.01
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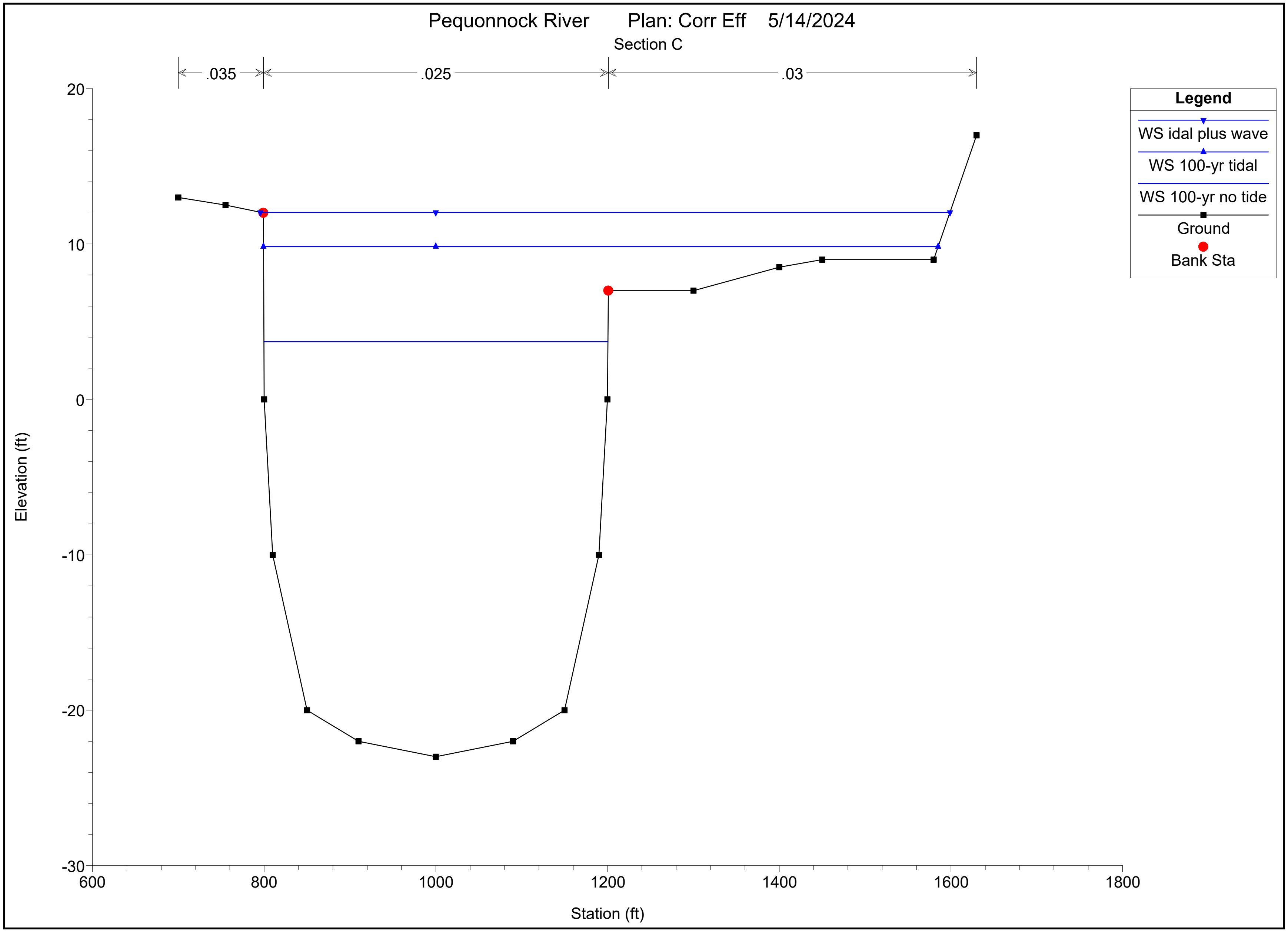
Pequonnock River Plan: Corr Eff 5/14/2024
Section C
.035
.025
.03
Legend
WS idal plus wave
WS 100-yr tidal
WS 100-yr no tide
Ground
Bank Sta
Elevation (ft)
Station (ft)
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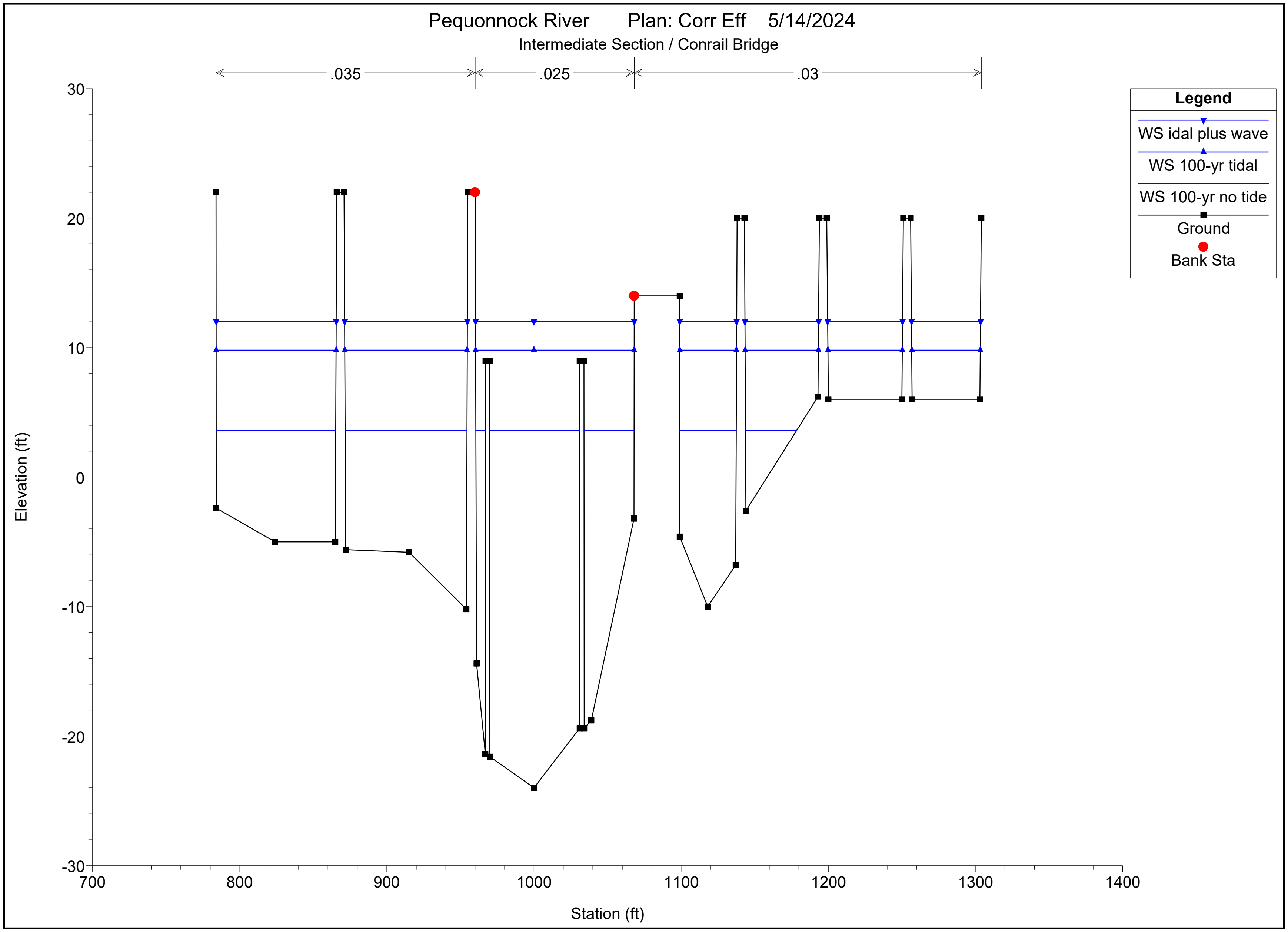

Pequonnock River Plan: Corr Eff 5/14/2024
Intermediate Section / Conrail Bridge
.035
.025
.03
Legend
WS idal plus wave
WS 100-yr tidal
WS 100-yr no tide
Ground
Bank Sta
Elevation (ft)
Station (ft)
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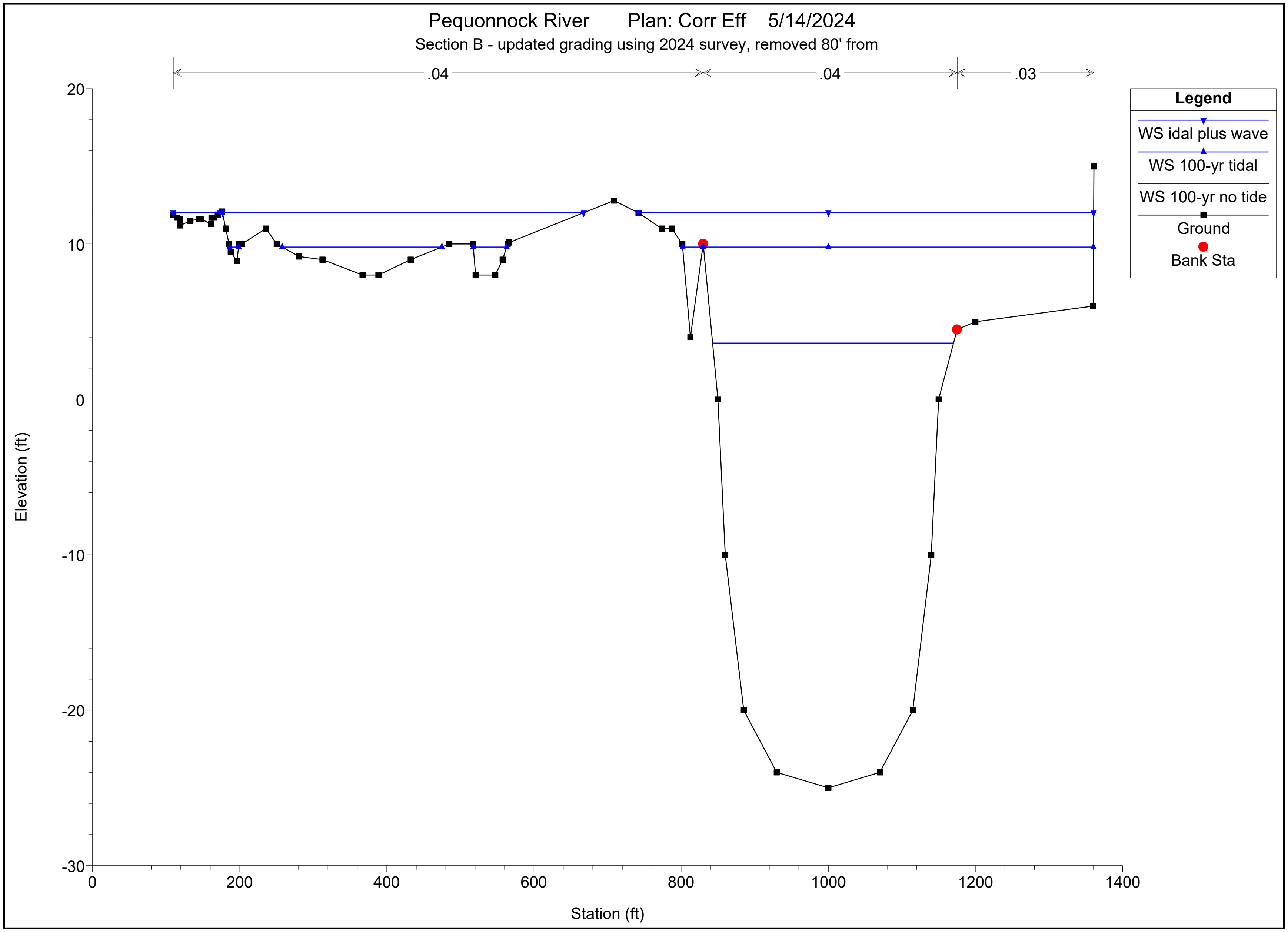

Pequonnock River Plan: Corr Eff 5/14/2024
Section B - updated grading using 2024 survey, removed 80' from
.04
.04
.03
Legend
WS idal plus wave
WS 100-yr tidal
WS 100-yr no tide
Ground
Bank Sta
Elevation (ft)
Station (ft)
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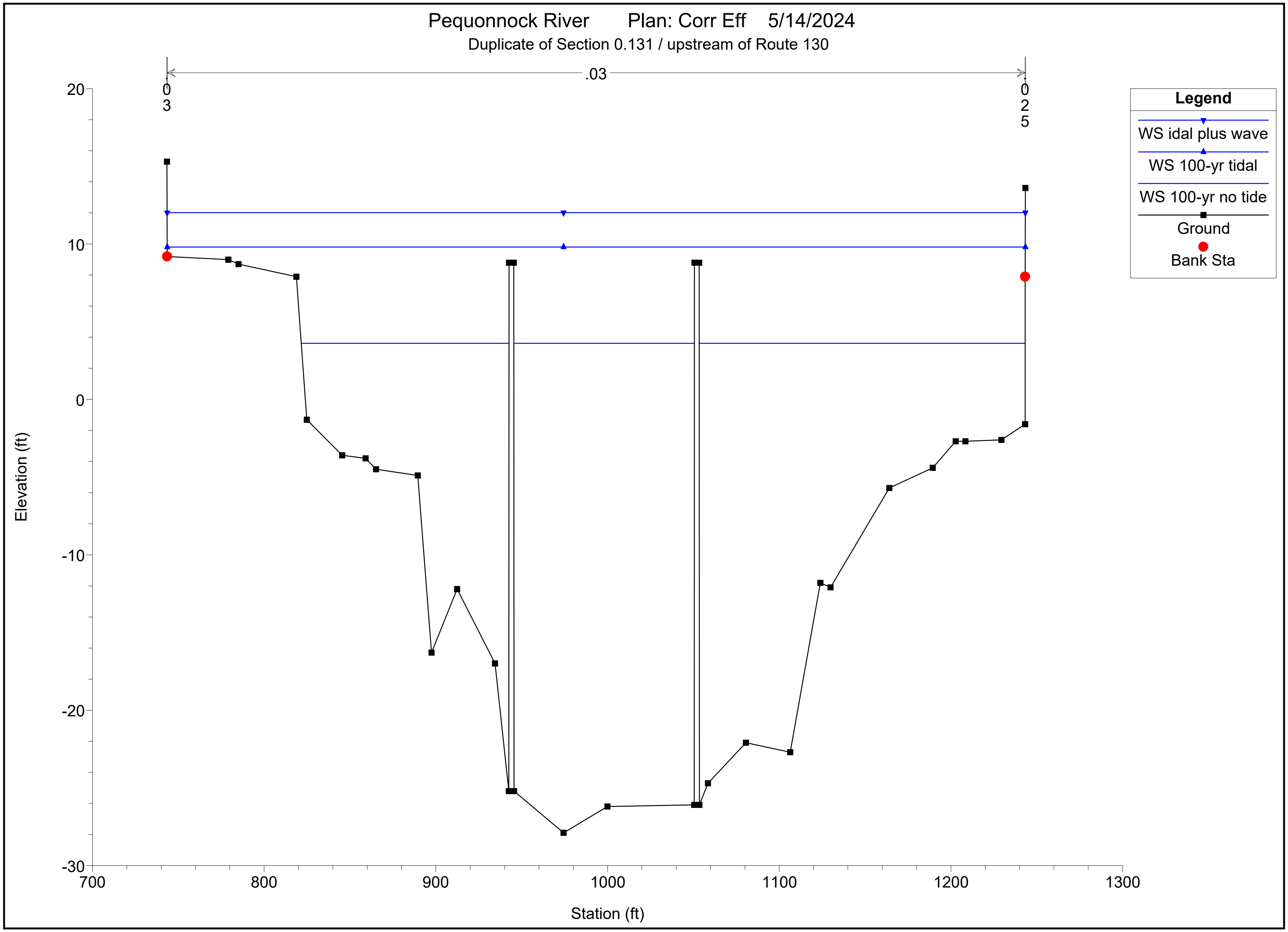

Pequonnock River Plan: Corr Eff 5/14/2024
Duplicate of Section 0.131 / upstream of Route 130
.03
0
3
0
2
5
Legend
WS idal plus wave
WS 100-yr tidal
WS 100-yr no tide
Ground
Bank Sta
Elevation (ft)
20
10
0
-10
-20
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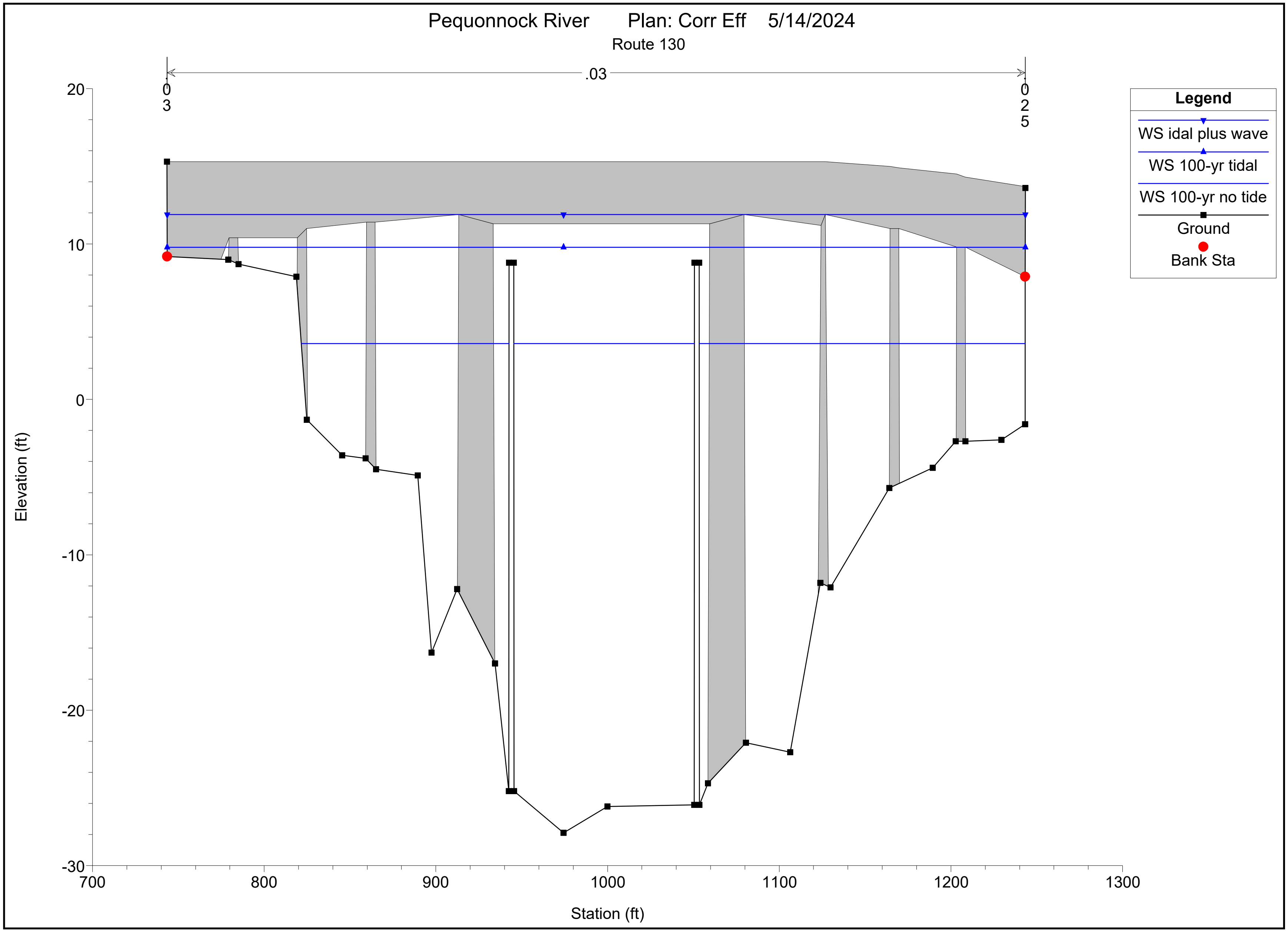
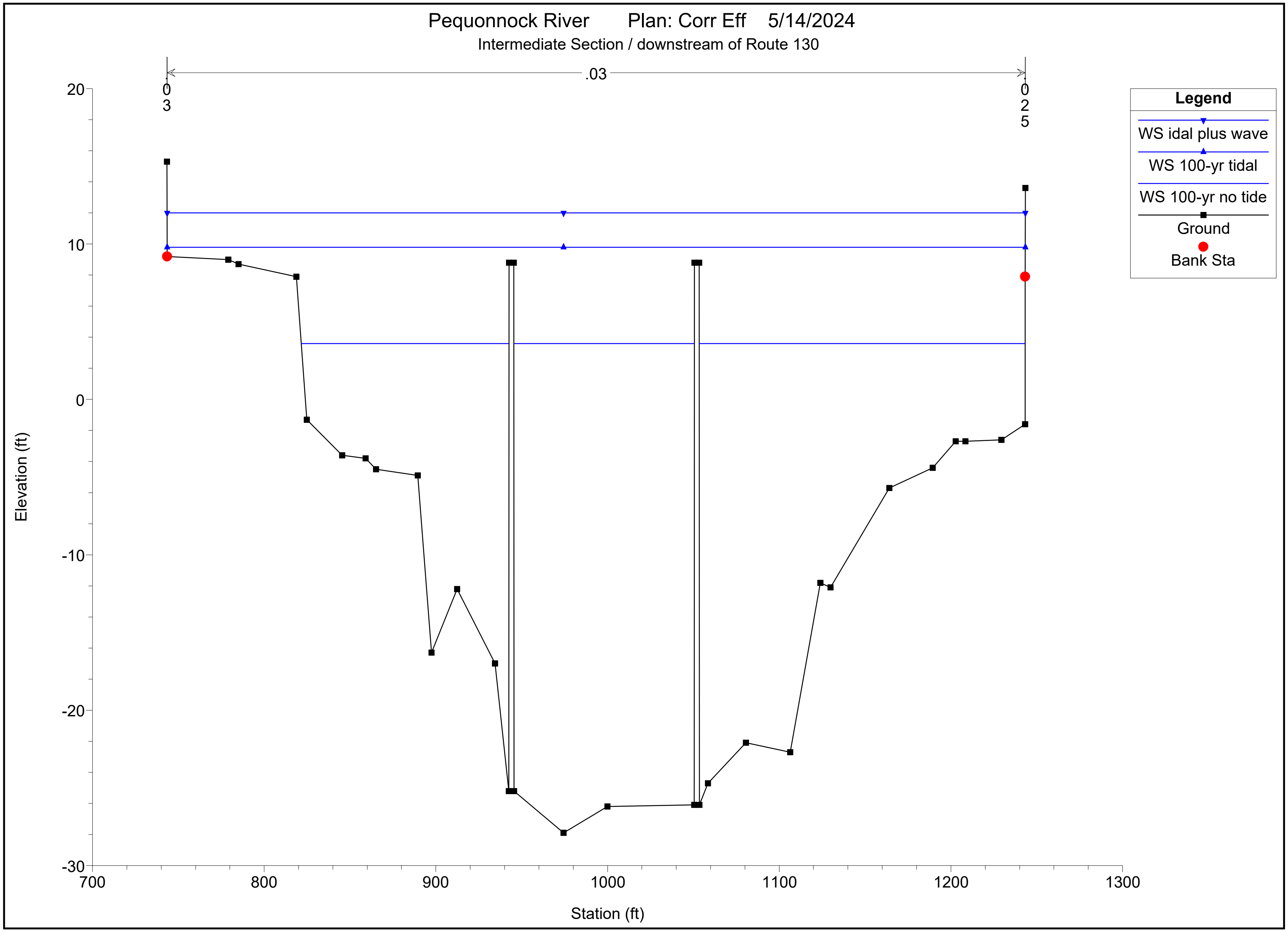
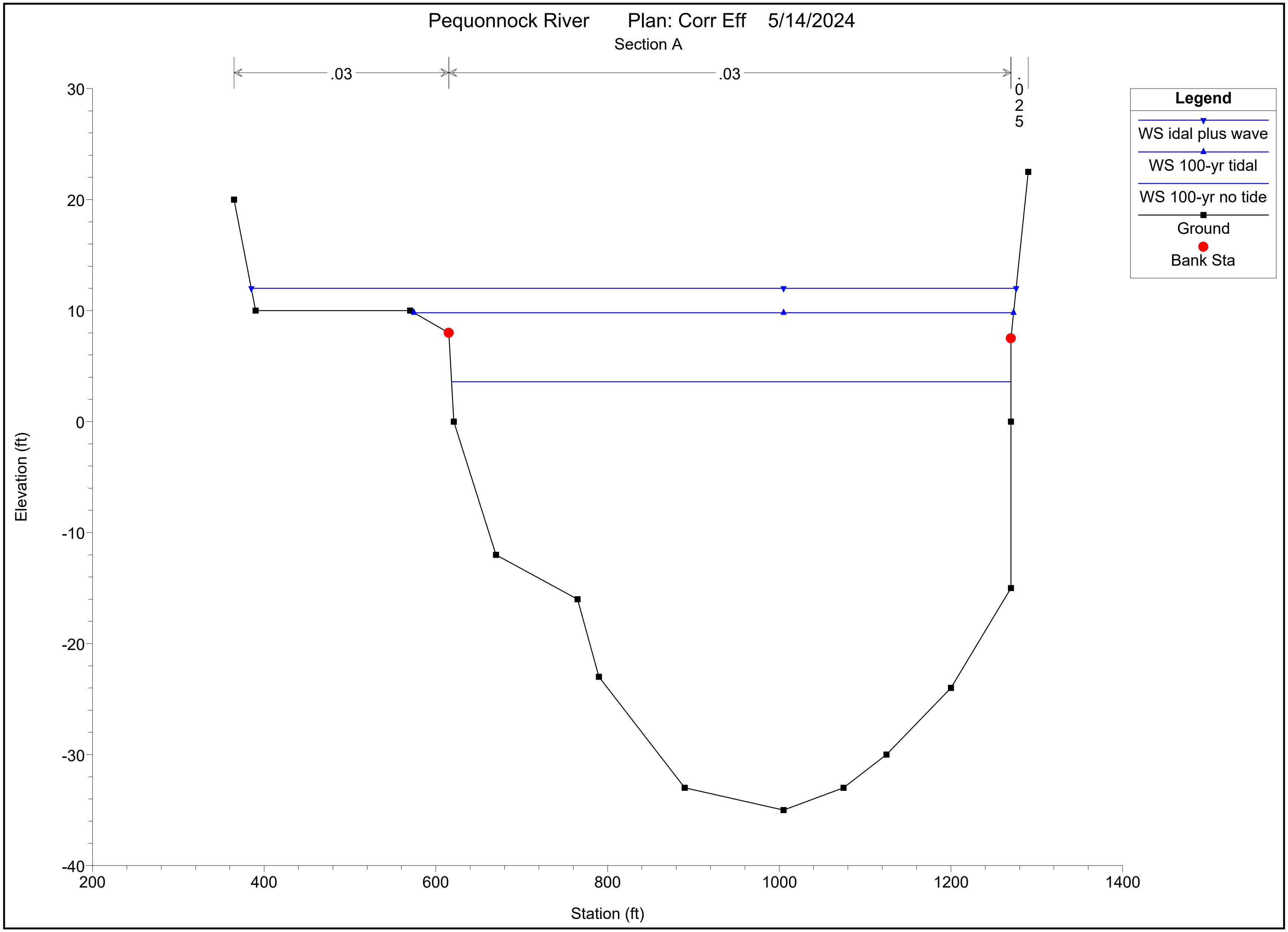
1200
1300
Station (ft)



Pequonnock River Plan: Corr Eff 5/14/2024
Route 130
.03
0
3
0
2
5
Legend
WS idal plus wave
WS 100-yr tidal
WS 100-yr no tide
Ground
Bank Sta
20
10
0
-10
-20
-30
Elevation (ft)
700
800
900
1000
1100
1200
1300
Station (ft)

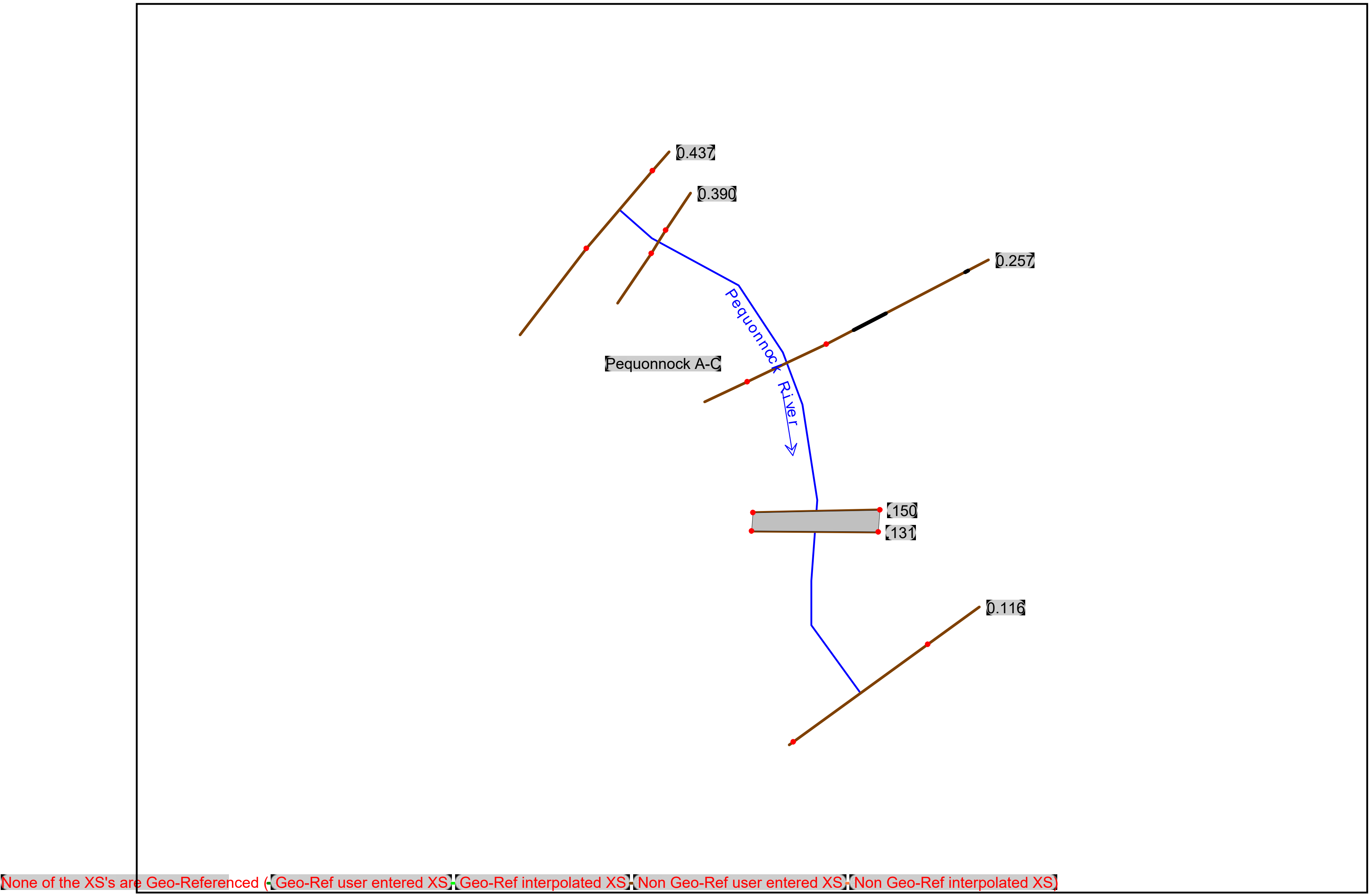


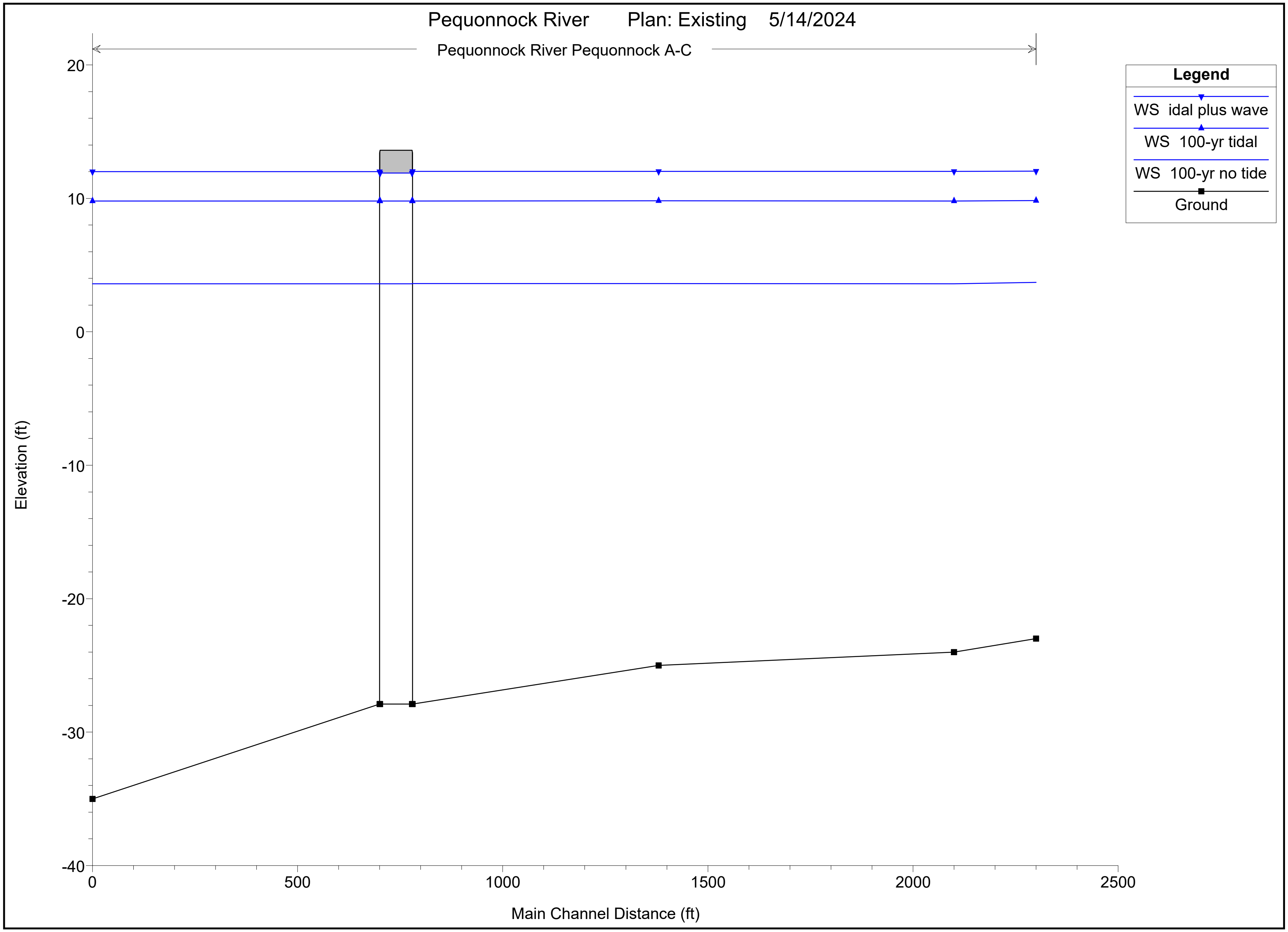
Pequonnock River Plan: Corr Eff 5/14/2024
Intermediate Section / downstream of Route 130
.03
0
3
0
2
5
Legend
WS idal plus wave
WS 100-yr tidal
WS 100-yr no tide
Ground
Bank Sta
Elevation (ft)
20
10
0
-10
-20
-30
700
800
900
1000
1100
1200
1300
Station (ft)



Pequonnock River Plan: Corr Eff 5/14/2024
Section A
.03
.03
.025
Legend
WS idal plus wave
WS 100-yr tidal
WS 100-yr no tide
Ground
Bank Sta
Elevation (ft)
Station (ft)
30
20
10
0
-10
-20
-30
-40
200
400
600
800
1000
1200
1400

EXISTING CONDITIONS MODEL

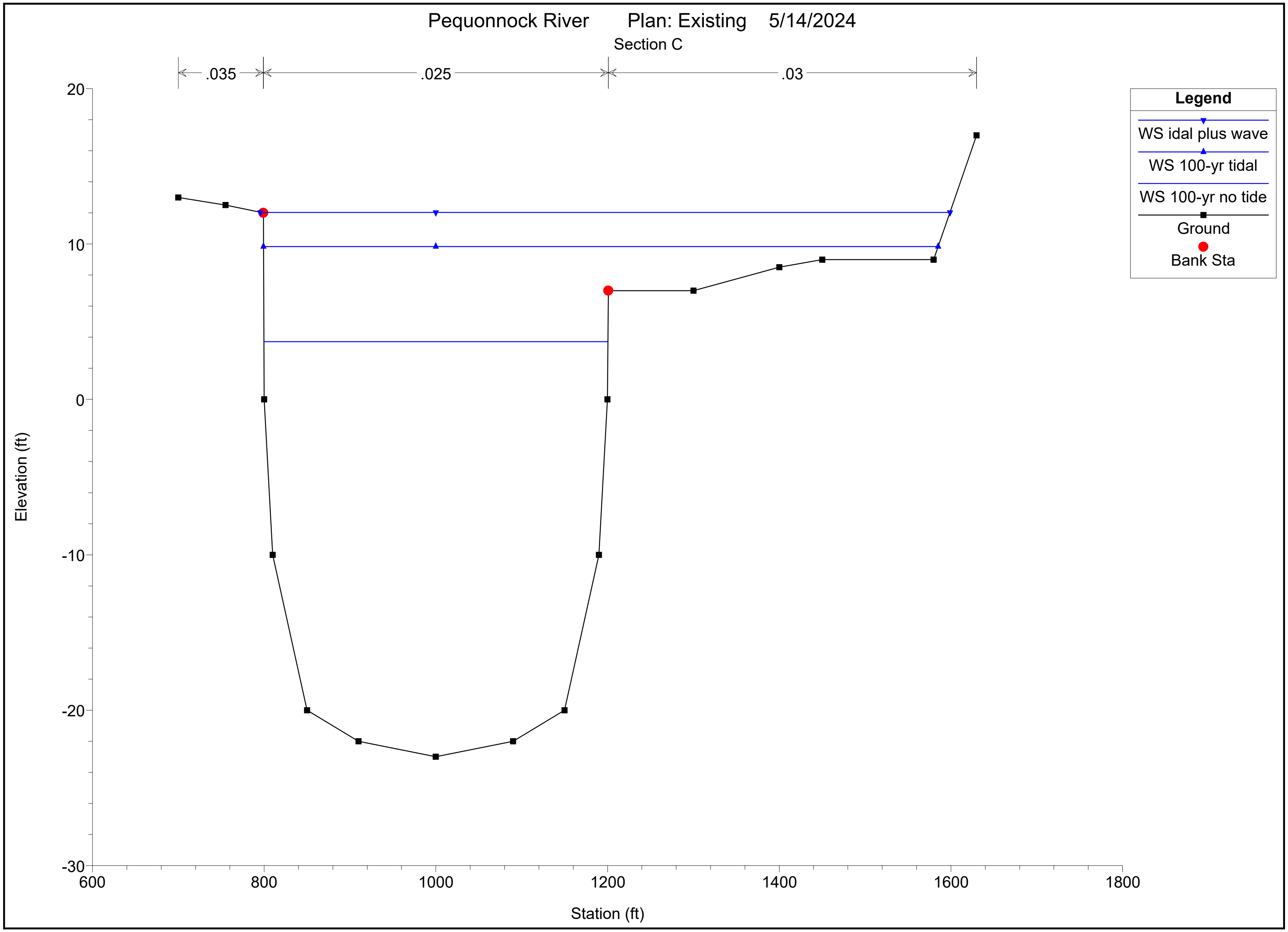




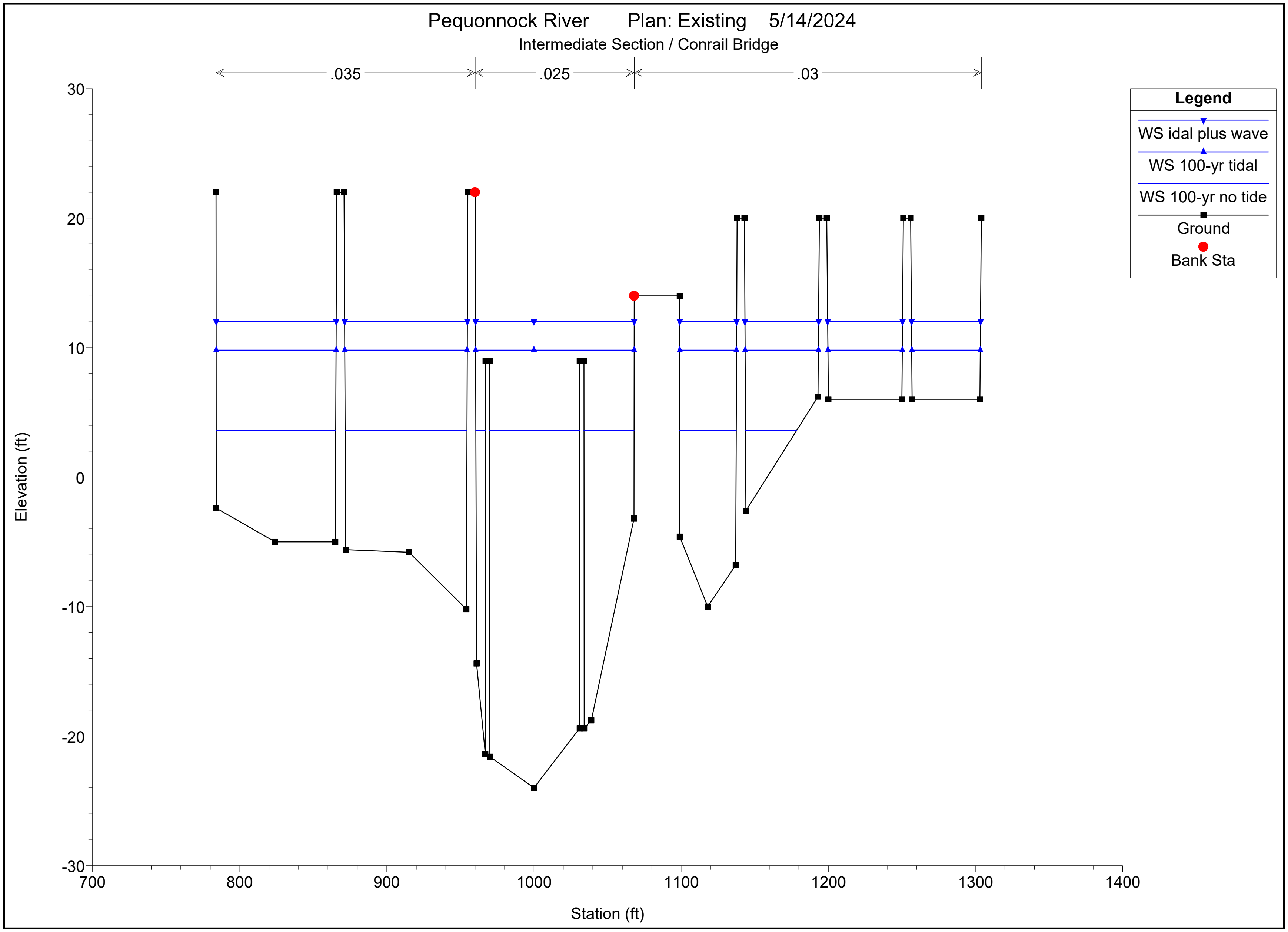
Pequonnock River Plan: Existing 5/14/2024
Pequonnock River Pequonnock A-C
Legend
WS idal plus wave
WS 100-yr tidal
WS 100-yr no tide
Ground
Elevation (ft)
20
10
0
-10
-20
-30
-40
0
500
1000
1500
2000
2500
Main Channel Distance (ft)

HEC-RAS Plan: Exist River: Pequonnock River Reach: Pequonnock A-C

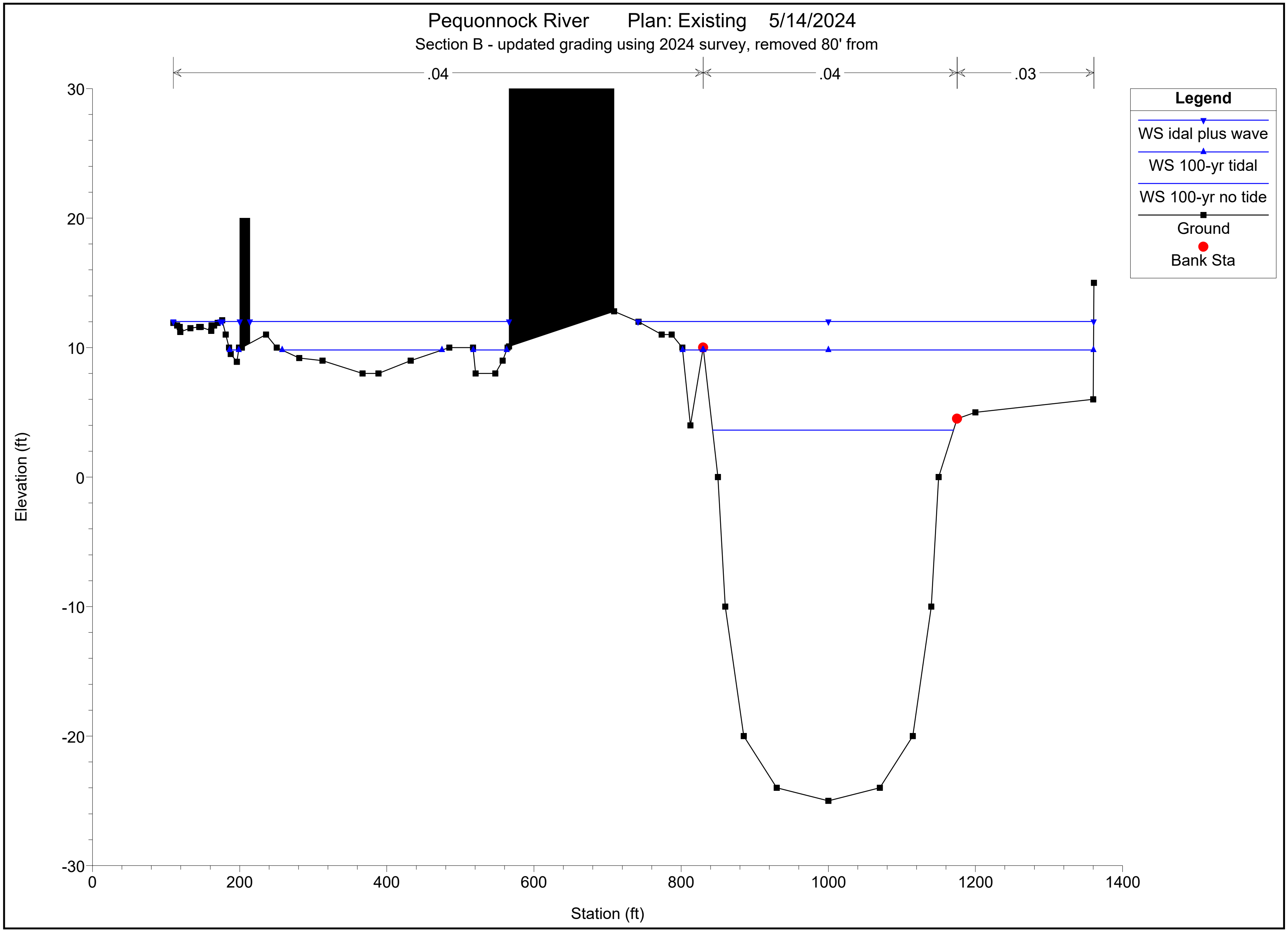
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Pequonnock A-C	0.437	100-yr no tide	9560.00	-23.00	3.71		3.72	0.000005	1.02	9354.86	400.84	0.04
Pequonnock A-C	0.437	100-yr tidal	9560.00	-23.00	9.84		9.85	0.000002	0.80	12473.34	786.08	0.03
Pequonnock A-C	0.437	idal plus wave	9560.00	-23.00	12.04		12.05	0.000002	0.73	14217.58	803.57	0.02
Pequonnock A-C	0.390	100-yr no tide	9560.00	-24.00	3.60		3.69	0.000101	2.74	4295.32	338.91	0.10
Pequonnock A-C	0.390	100-yr tidal	9560.00	-24.00	9.81		9.84	0.000035	1.70	6846.39	457.91	0.06
Pequonnock A-C	0.390	idal plus wave	9560.00	-24.00	12.02		12.04	0.000024	1.48	7859.26	459.21	0.05
Pequonnock A-C	0.257	100-yr no tide	9560.00	-25.00	3.62		3.64	0.000020	1.29	7395.12	327.34	0.05
Pequonnock A-C	0.257	100-yr tidal	9560.00	-25.00	9.81		9.82	0.000009	0.97	10672.64	832.93	0.03
Pequonnock A-C	0.257	idal plus wave	9560.00	-25.00	12.02		12.03	0.000006	0.86	12769.91	1058.77	0.03
Pequonnock A-C	.150	100-yr no tide	9560.00	-27.90	3.61	-20.52	3.63	0.000021	1.28	7485.69	415.95	0.05
Pequonnock A-C	.150	100-yr tidal	9560.00	-27.90	9.80	-20.52	9.82	0.000010	0.94	10162.39	499.84	0.04
Pequonnock A-C	.150	idal plus wave	9560.00	-27.90	12.01	-20.52	12.02	0.000007	0.85	11266.89	499.92	0.03
Pequonnock A-C	.140		Bridge									
Pequonnock A-C	.131	100-yr no tide	9560.00	-27.90	3.59		3.62	0.000021	1.28	7480.28	415.94	0.05
Pequonnock A-C	.131	100-yr tidal	9560.00	-27.90	9.80		9.81	0.000010	0.94	10158.84	499.84	0.04
Pequonnock A-C	.131	idal plus wave	9560.00	-27.90	12.00		12.01	0.000007	0.85	11258.89	499.92	0.03
Pequonnock A-C	0.116	100-yr no tide	9560.00	-35.00	3.60	-29.80	3.60	0.000001	0.52	18504.34	651.65	0.02
Pequonnock A-C	0.116	100-yr tidal	9560.00	-35.00	9.80	-29.80	9.80	0.000001	0.42	22597.95	698.57	0.01
Pequonnock A-C	0.116	idal plus wave	9560.00	-35.00	12.00	-29.80	12.00	0.000001	0.40	24512.47	891.00	0.01



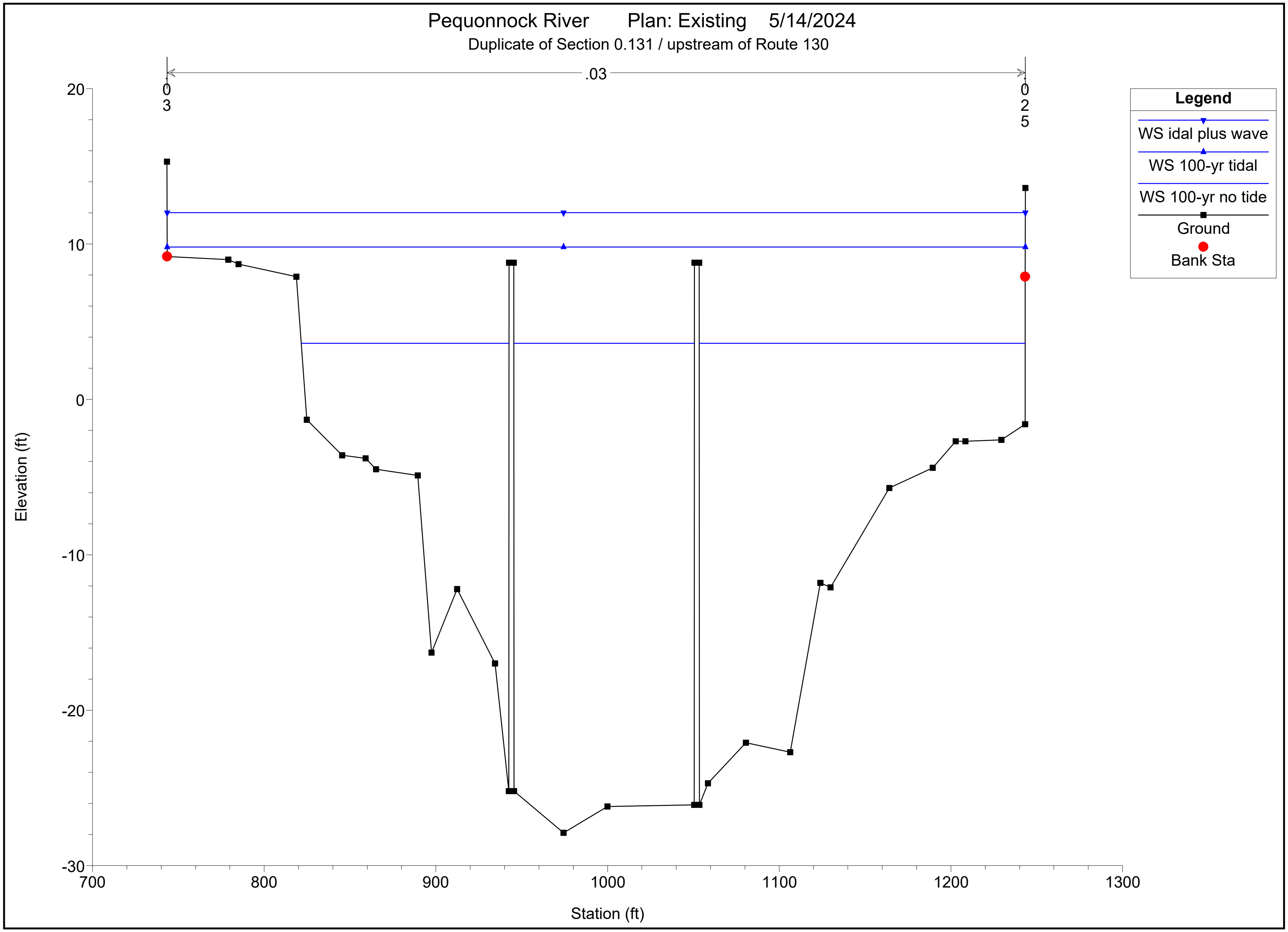
Pequonnock River Plan: Existing 5/14/2024
Section C
.035
.025
.03
Legend
WS idal plus wave
WS 100-yr tidal
WS 100-yr no tide
Ground
Bank Sta
Elevation (ft)
Station (ft)
20
10
0
-10
-20
-30
600
800
1000
1200
1400
1600
1800



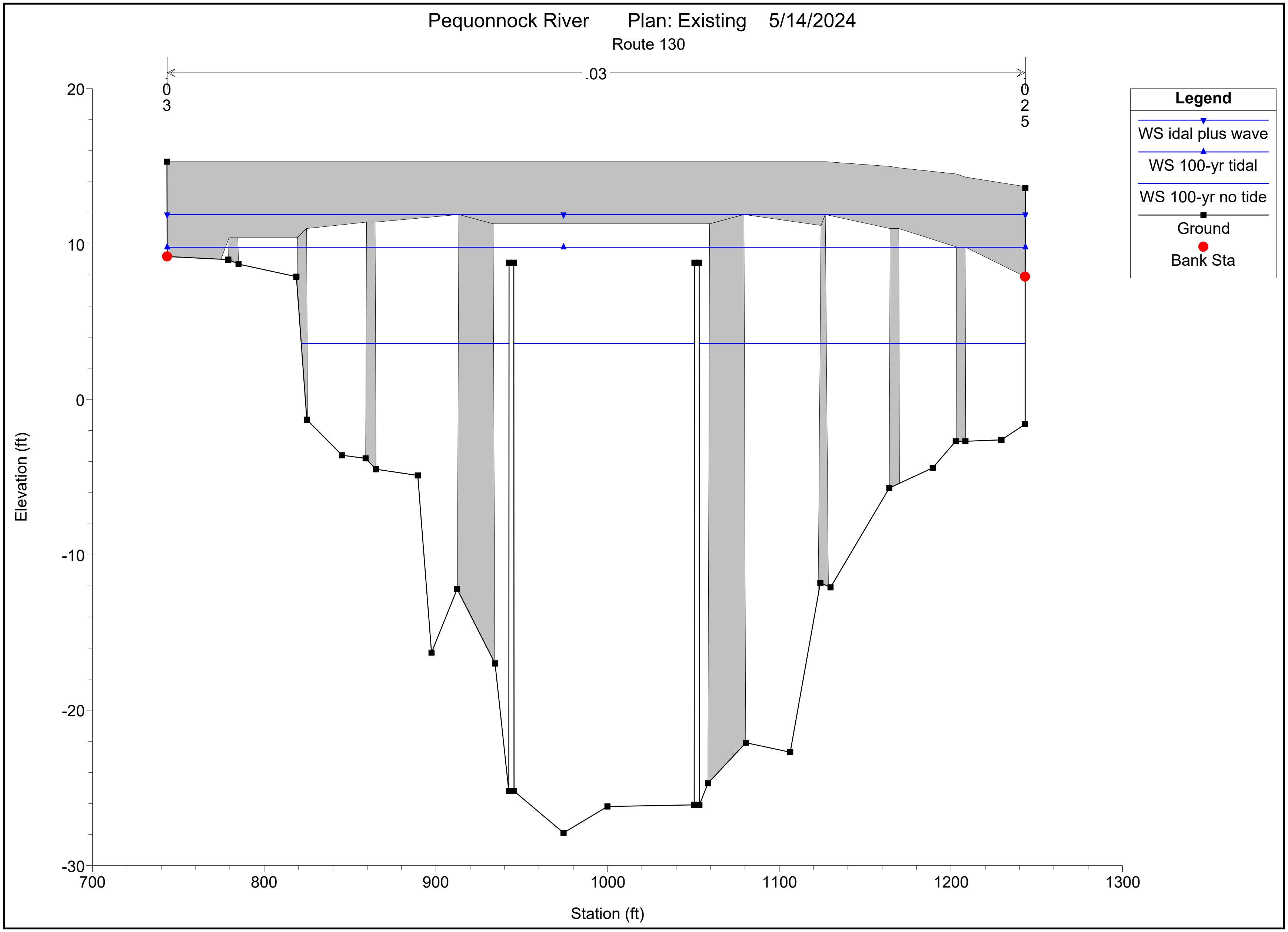
Pequonnock River Plan: Existing 5/14/2024
Intermediate Section / Conrail Bridge
.035
.025
.03
Legend
WS idal plus wave
WS 100-yr tidal
WS 100-yr no tide
Ground
Bank Sta
Elevation (ft)
30
20
10
0
-10
-20
-30
700
800
900
1000
1100
1200
1300
1400
Station (ft)



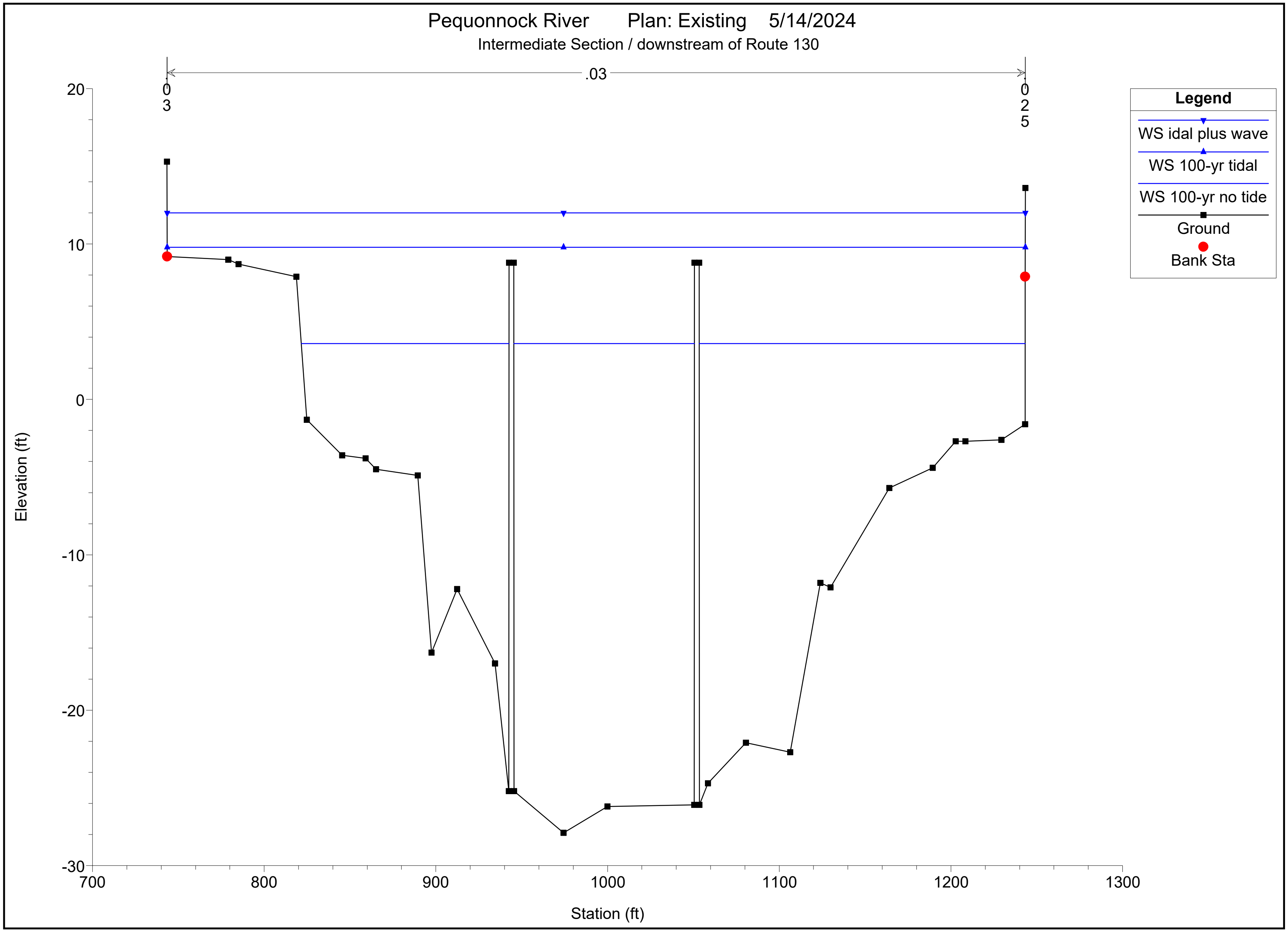
Pequonnock River Plan: Existing 5/14/2024
Section B - updated grading using 2024 survey, removed 80' from
.04
.04
.03
Legend
WS idal plus wave
WS 100-yr tidal
WS 100-yr no tide
Ground
Bank Sta
Elevation (ft)
Station (ft)
30
20
10
0
-10
-20
-30
0
200
400
600
800
1000
1200
1400



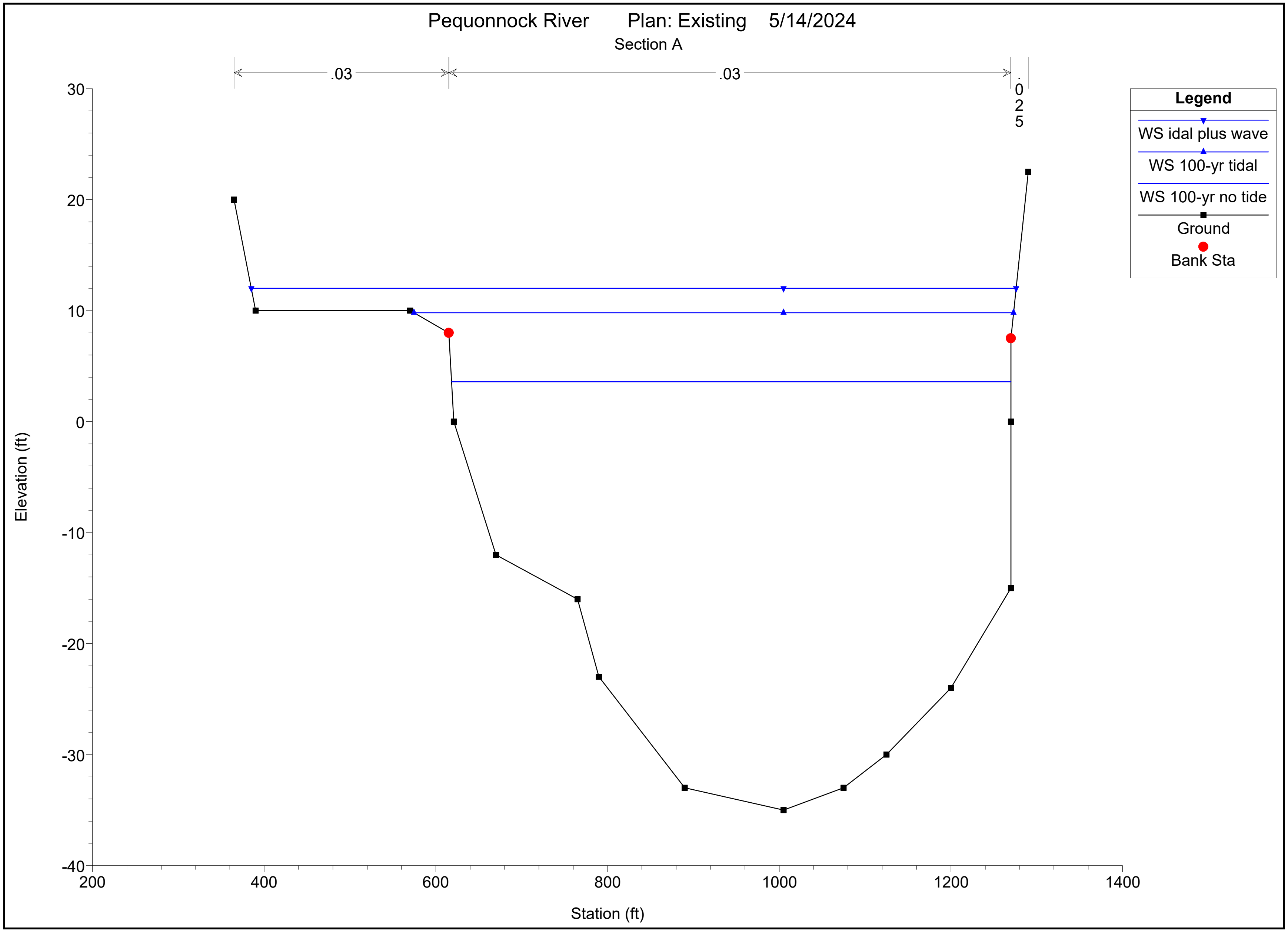
Pequonnock River Plan: Existing 5/14/2024
Duplicate of Section 0.131 / upstream of Route 130
.03
0
3
0
2
5
Legend
WS idal plus wave
WS 100-yr tidal
WS 100-yr no tide
Ground
Bank Sta
20
10
0
-10
-20
-30
Elevation (ft)
700
800
900
1000
1100
1200
1300
Station (ft)



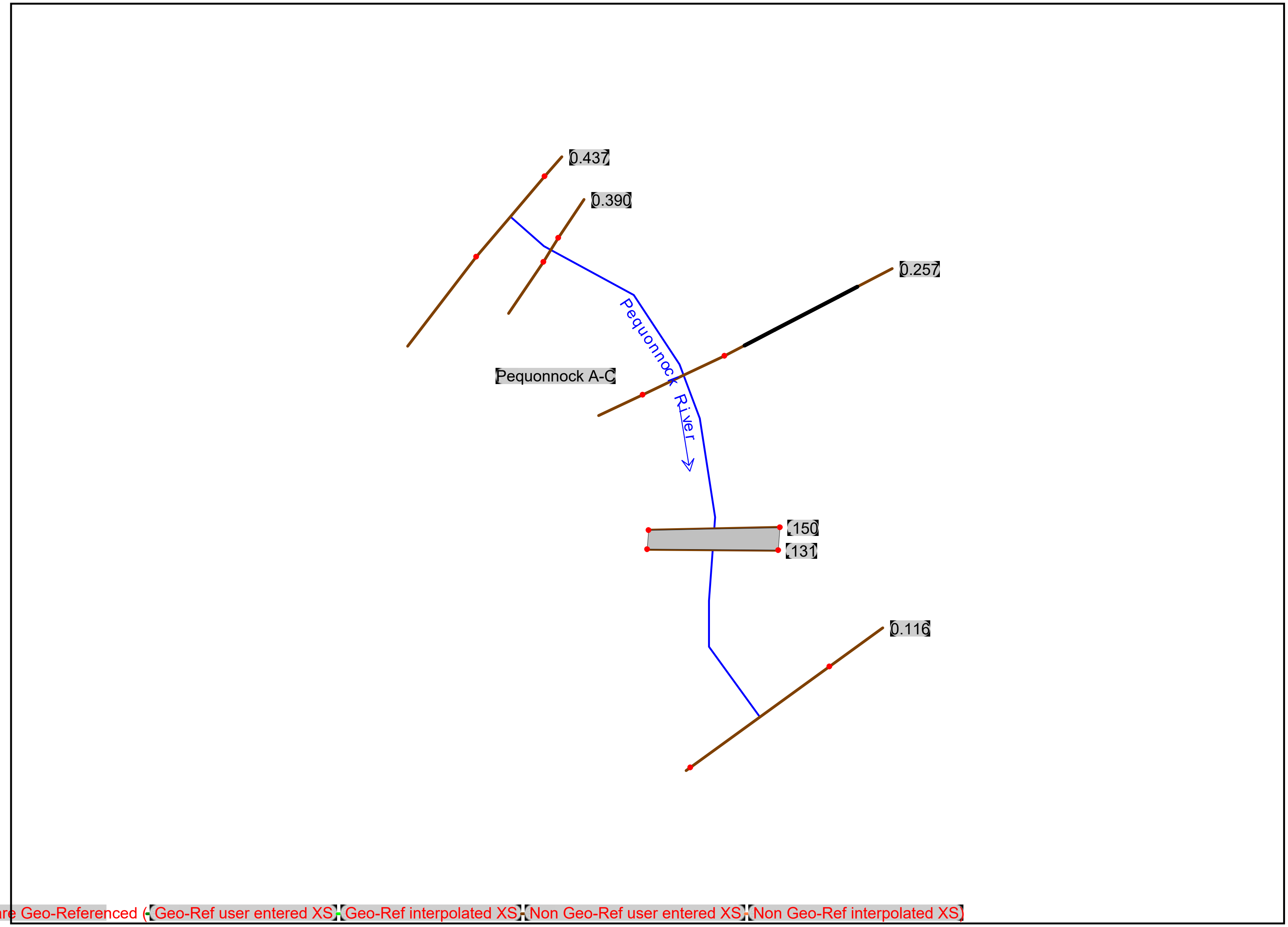
Pequonnock River Plan: Existing 5/14/2024
Route 130
.03
0
3
0
2
5
Legend
WS idal plus wave
WS 100-yr tidal
WS 100-yr no tide
Ground
Bank Sta
20
10
0
-10
-20
-30
Elevation (ft)
700
800
900
1000
1100
1200
1300
Station (ft)



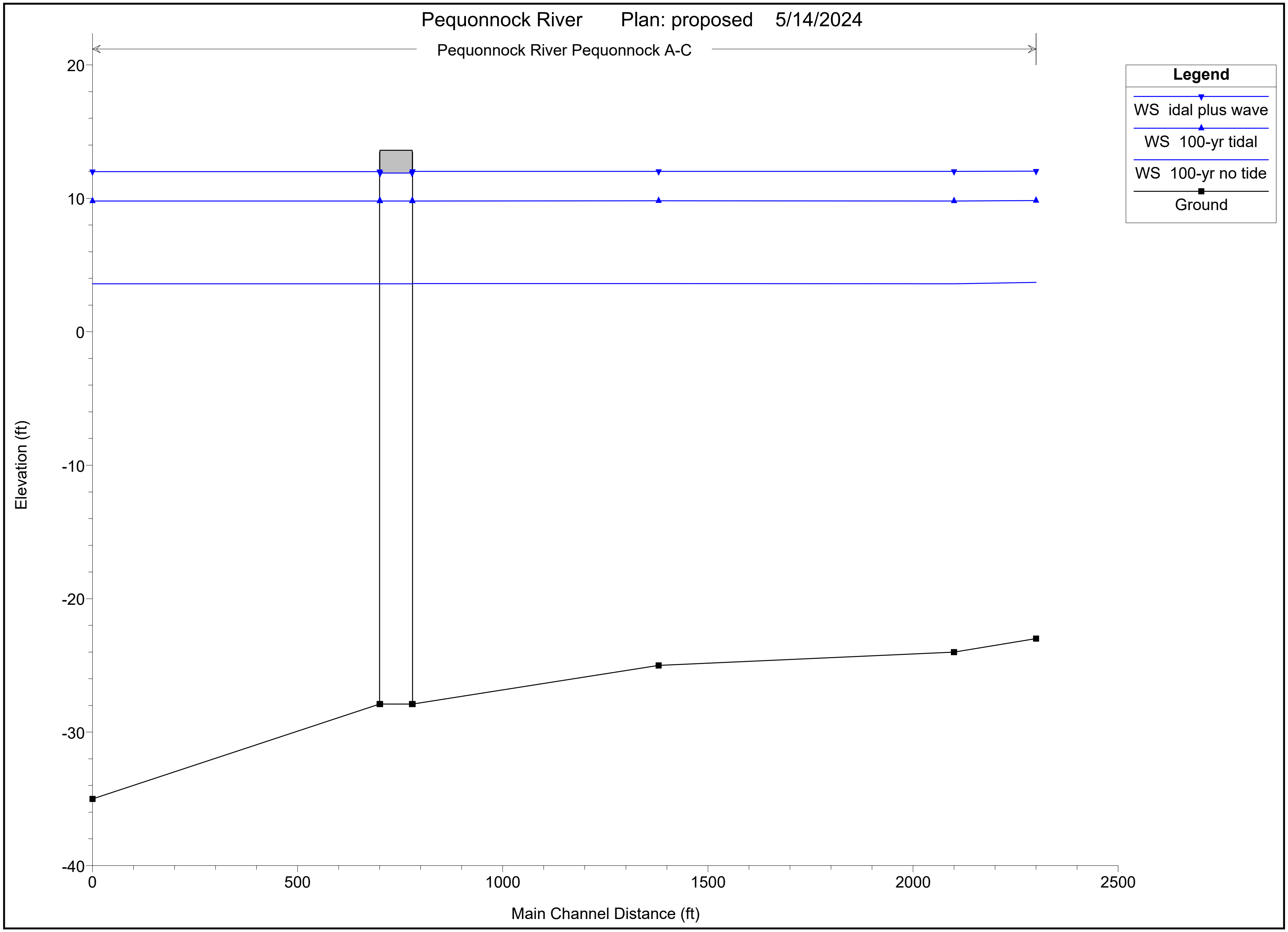
Pequonnock River Plan: Existing 5/14/2024
Intermediate Section / downstream of Route 130
.03
0
3
0
2
5
Legend
WS idal plus wave
WS 100-yr tidal
WS 100-yr no tide
Ground
Bank Sta
Elevation (ft)
20
10
0
-10
-20
-30
700
800
900
1000
1100
1200
1300
Station (ft)


Pequonnock River Plan: Existing 5/14/2024
Section A
.03
.03
.025
Legend
WS idal plus wave
WS 100-yr tidal
WS 100-yr no tide
Ground
Bank Sta
Elevation (ft)
30
20
10
0
-10
-20
-30
-40
200
400
600
800
1000
1200
1400
Station (ft)

PROPOSED CONDITIONS MODEL

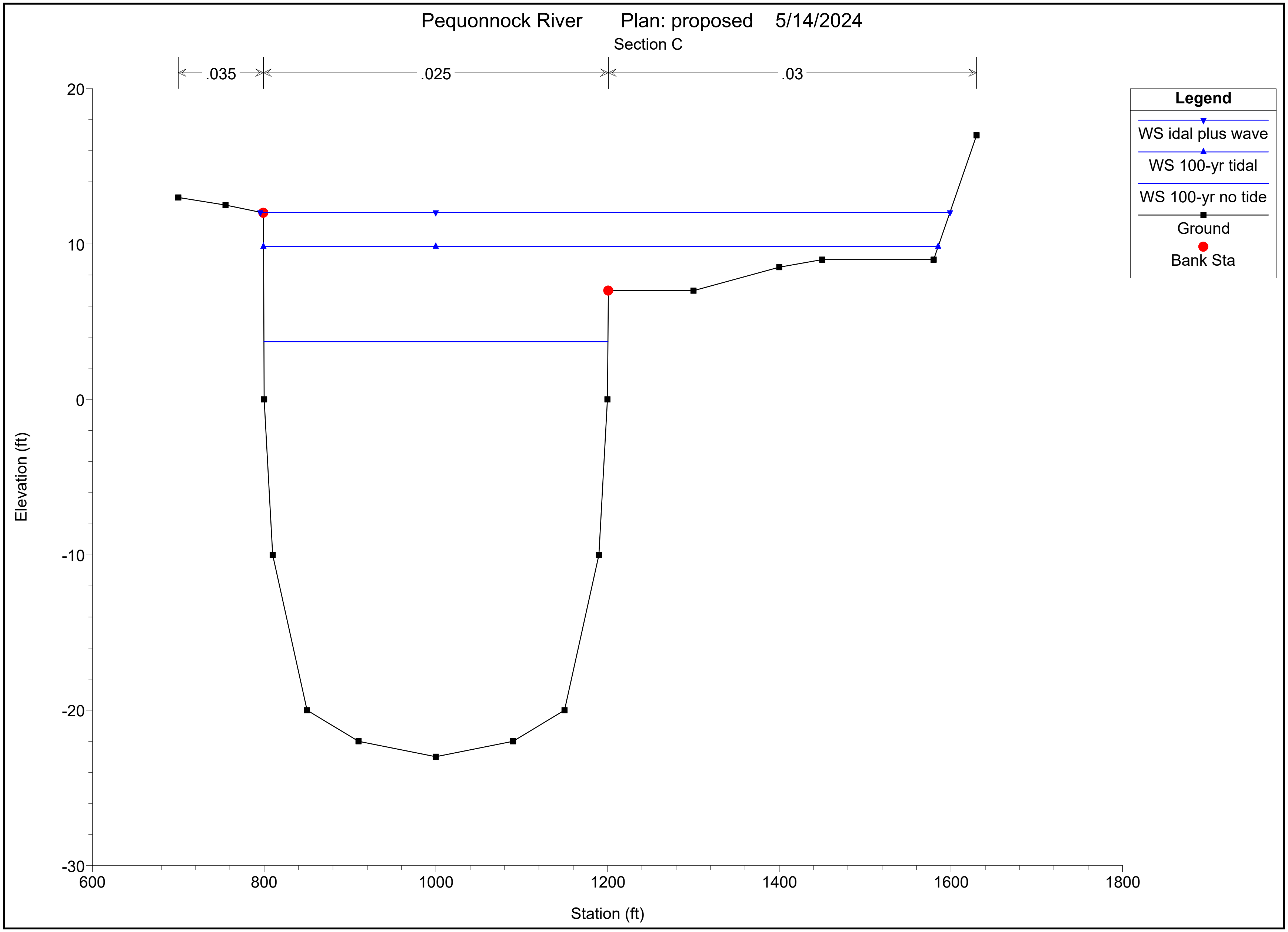


None of the XS's are Geo-Referenced (Geo-Ref user entered XS Geo-Ref interpolated XS Non Geo-Ref user entered XS Non Geo-Ref interpolated XS)

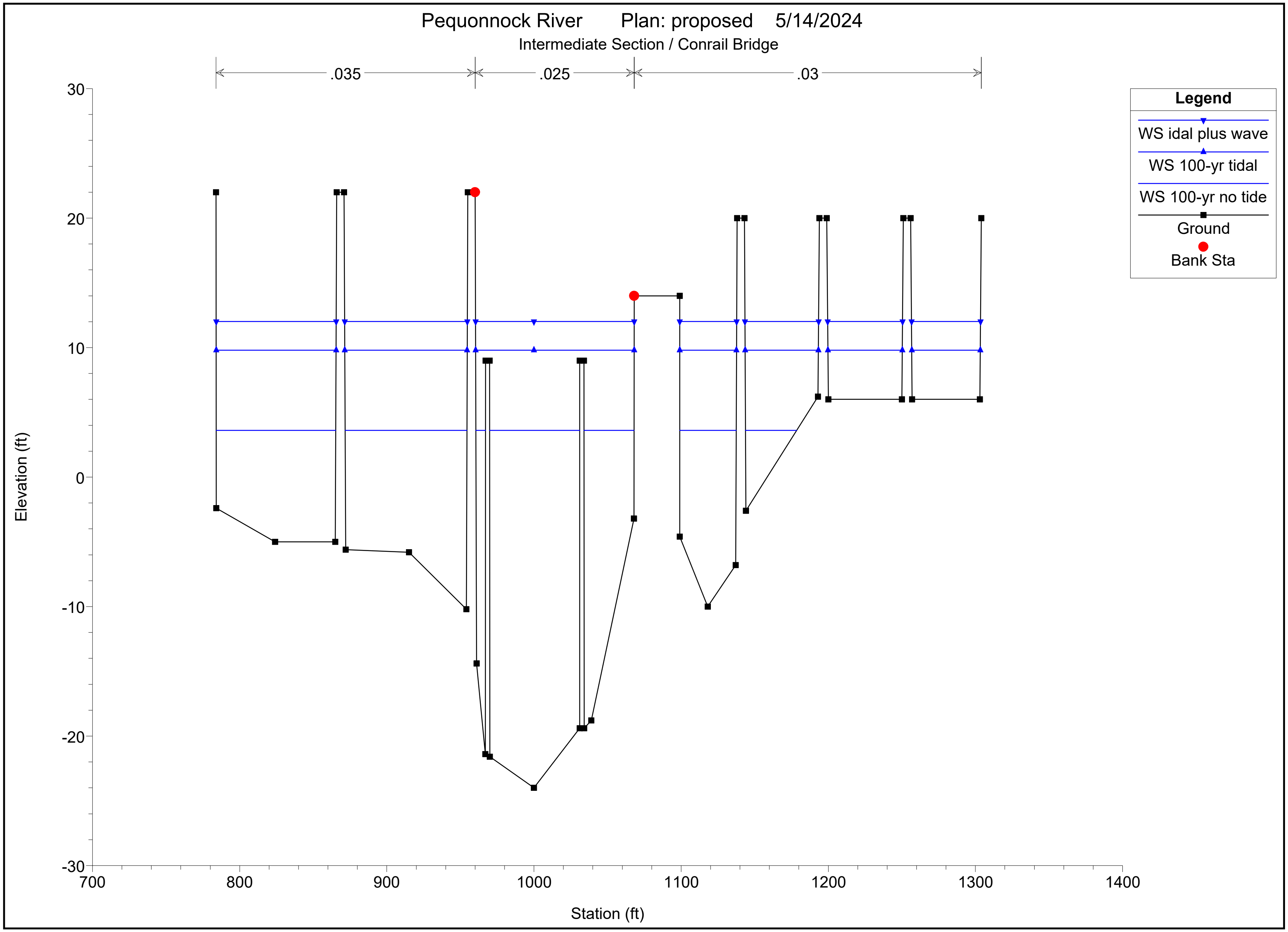

Pequonnock River Plan: proposed 5/14/2024
Pequonnock River Pequonnock A-C
Legend
WS idal plus wave
WS 100-yr tidal
WS 100-yr no tide
Ground
Elevation (ft)
20
10
0
-10
-20
-30
-40
0
500
1000
1500
2000
2500
Main Channel Distance (ft)

HEC-RAS Plan: PR   River: Pequonnock River   Reach: Pequonnock A-C

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Pequonnock A-C	0.437	100-yr no tide	9560.00	-23.00	3.71		3.72	0.000005	1.02	9354.86	400.84	0.04
Pequonnock A-C	0.437	100-yr tidal	9560.00	-23.00	9.84		9.85	0.000002	0.80	12473.43	786.08	0.03
Pequonnock A-C	0.437	idal plus wave	9560.00	-23.00	12.04		12.05	0.000002	0.73	14217.64	803.57	0.02
Pequonnock A-C	0.390	100-yr no tide	9560.00	-24.00	3.60		3.69	0.000101	2.74	4295.32	338.91	0.10
Pequonnock A-C	0.390	100-yr tidal	9560.00	-24.00	9.81		9.84	0.000035	1.70	6846.44	457.91	0.06
Pequonnock A-C	0.390	idal plus wave	9560.00	-24.00	12.02		12.04	0.000024	1.48	7859.30	459.21	0.05
Pequonnock A-C	0.257	100-yr no tide	9560.00	-25.00	3.62		3.64	0.000020	1.29	7395.12	327.34	0.05
Pequonnock A-C	0.257	100-yr tidal	9560.00	-25.00	9.81		9.82	0.000009	0.97	10384.01	557.34	0.03
Pequonnock A-C	0.257	idal plus wave	9560.00	-25.00	12.02		12.03	0.000006	0.88	11656.40	667.75	0.03
Pequonnock A-C	.150	100-yr no tide	9560.00	-27.90	3.61	-20.52	3.63	0.000021	1.28	7485.69	415.95	0.05
Pequonnock A-C	.150	100-yr tidal	9560.00	-27.90	9.80	-20.52	9.82	0.000010	0.94	10162.39	499.84	0.04
Pequonnock A-C	.150	idal plus wave	9560.00	-27.90	12.01	-20.52	12.02	0.000007	0.85	11266.89	499.92	0.03
Pequonnock A-C	.140		Bridge									
Pequonnock A-C	.131	100-yr no tide	9560.00	-27.90	3.59		3.62	0.000021	1.28	7480.28	415.94	0.05
Pequonnock A-C	.131	100-yr tidal	9560.00	-27.90	9.80		9.81	0.000010	0.94	10158.84	499.84	0.04
Pequonnock A-C	.131	idal plus wave	9560.00	-27.90	12.00		12.01	0.000007	0.85	11258.89	499.92	0.03
Pequonnock A-C	0.116	100-yr no tide	9560.00	-35.00	3.60	-29.80	3.60	0.000001	0.52	18504.34	651.65	0.02
Pequonnock A-C	0.116	100-yr tidal	9560.00	-35.00	9.80	-29.80	9.80	0.000001	0.42	22597.95	698.57	0.01
Pequonnock A-C	0.116	idal plus wave	9560.00	-35.00	12.00	-29.80	12.00	0.000001	0.40	24512.47	891.00	0.01



Pequonnock River Plan: proposed 5/14/2024
Section C
.035
.025
.03
Legend
WS idal plus wave
WS 100-yr tidal
WS 100-yr no tide
Ground
Bank Sta
Elevation (ft)
20
10
0
-10
-20
-30
600
800
1000
1200
1400
1600
1800
Station (ft)



Pequonnock River Plan: proposed 5/14/2024
Intermediate Section / Conrail Bridge
.035
.025
.03
Legend
WS idal plus wave
WS 100-yr tidal
WS 100-yr no tide
Ground
Bank Sta
Elevation (ft)
Station (ft)
30
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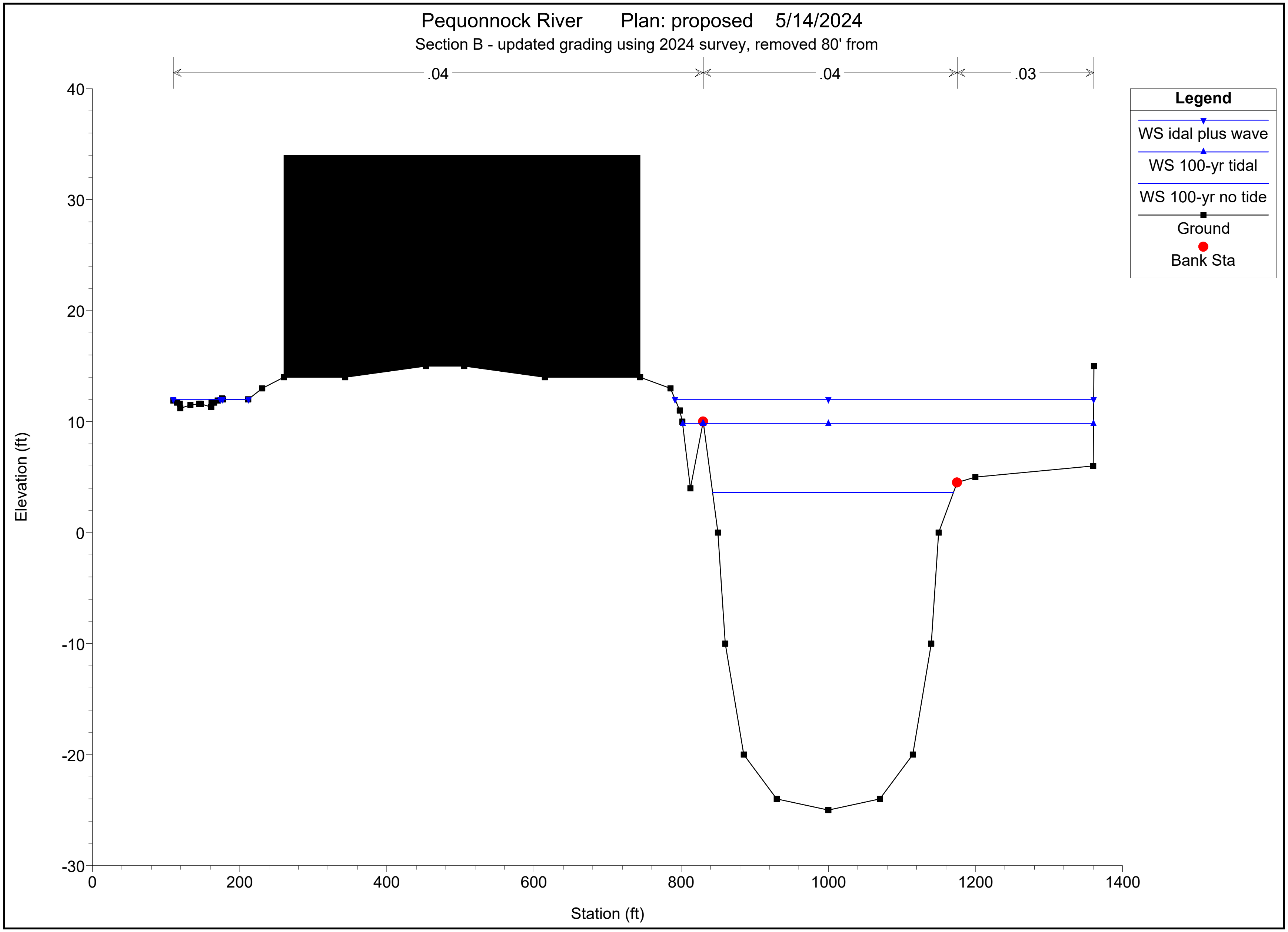

Pequonnock River Plan: proposed 5/14/2024
Section B - updated grading using 2024 survey, removed 80' from
.04
.04
.03
Legend
WS idal plus wave
WS 100-yr tidal
WS 100-yr no tide
Ground
Bank Sta
Elevation (ft)
40
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20
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-10
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-30
0
200
400
600
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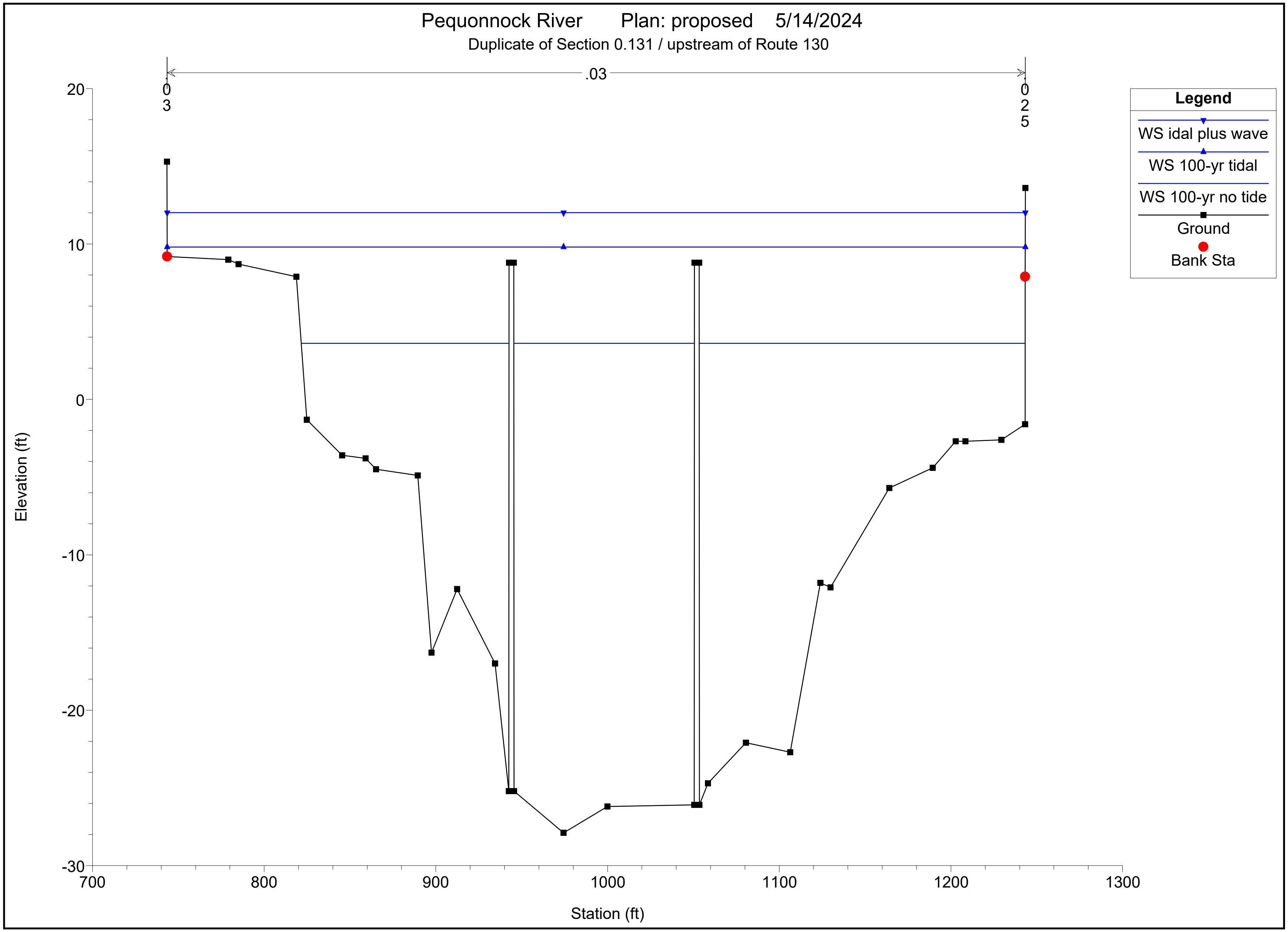
1000
1200
1400
Station (ft)



Pequonnock River Plan: proposed 5/14/2024
Duplicate of Section 0.131 / upstream of Route 130
.03
0
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2
5
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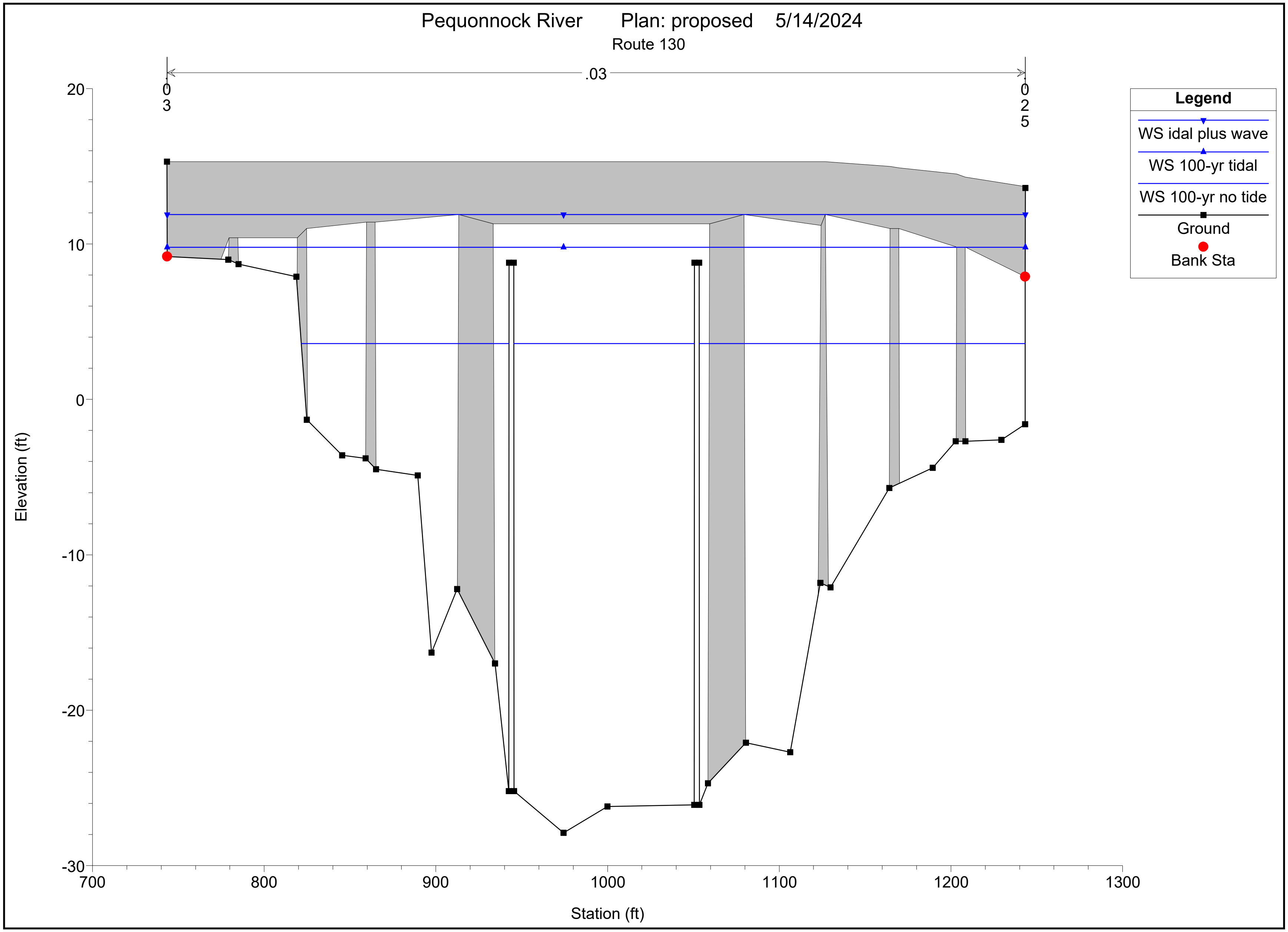
-10
-20
-30
700
800
900
1000
1100
1200
1300
Elevation (ft)
Station (ft)
Legend
WS idal plus wave
WS 100-yr tidal
WS 100-yr no tide
Ground
Bank Sta



Pequonnock River Plan: proposed 5/14/2024
Route 130
.03
0
3
0
2
5
Legend
WS idal plus wave
WS 100-yr tidal
WS 100-yr no tide
Ground
Bank Sta
20
10
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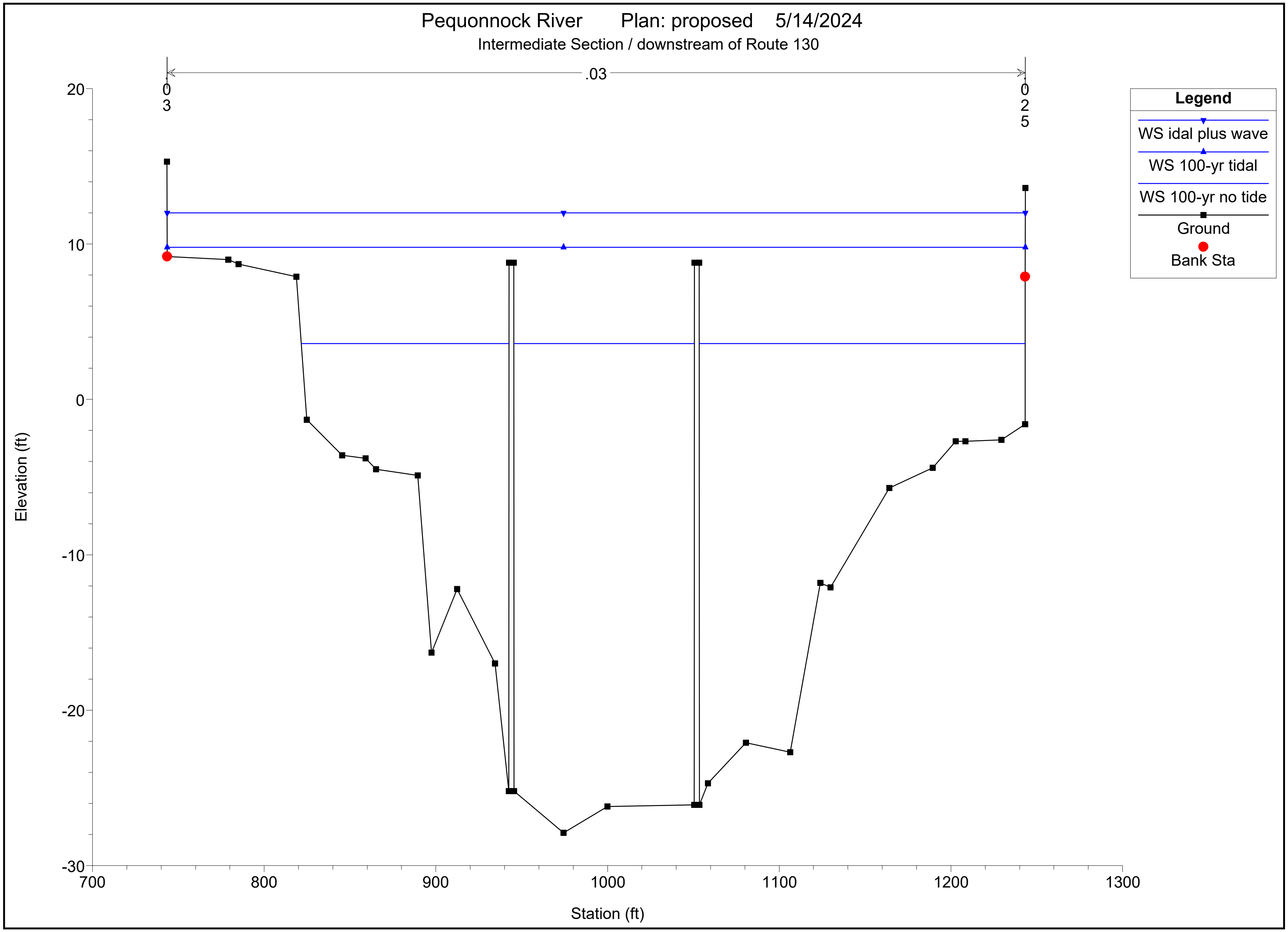
-10
-20
-30
Elevation (ft)
700
800
900
1000
1100
1200
1300
Station (ft)


Pequonnock River Plan: proposed 5/14/2024
Intermediate Section / downstream of Route 130
.03
0
3
0
2
5
Legend
WS idal plus wave
WS 100-yr tidal
WS 100-yr no tide
Ground
Bank Sta
Elevation (ft)
20
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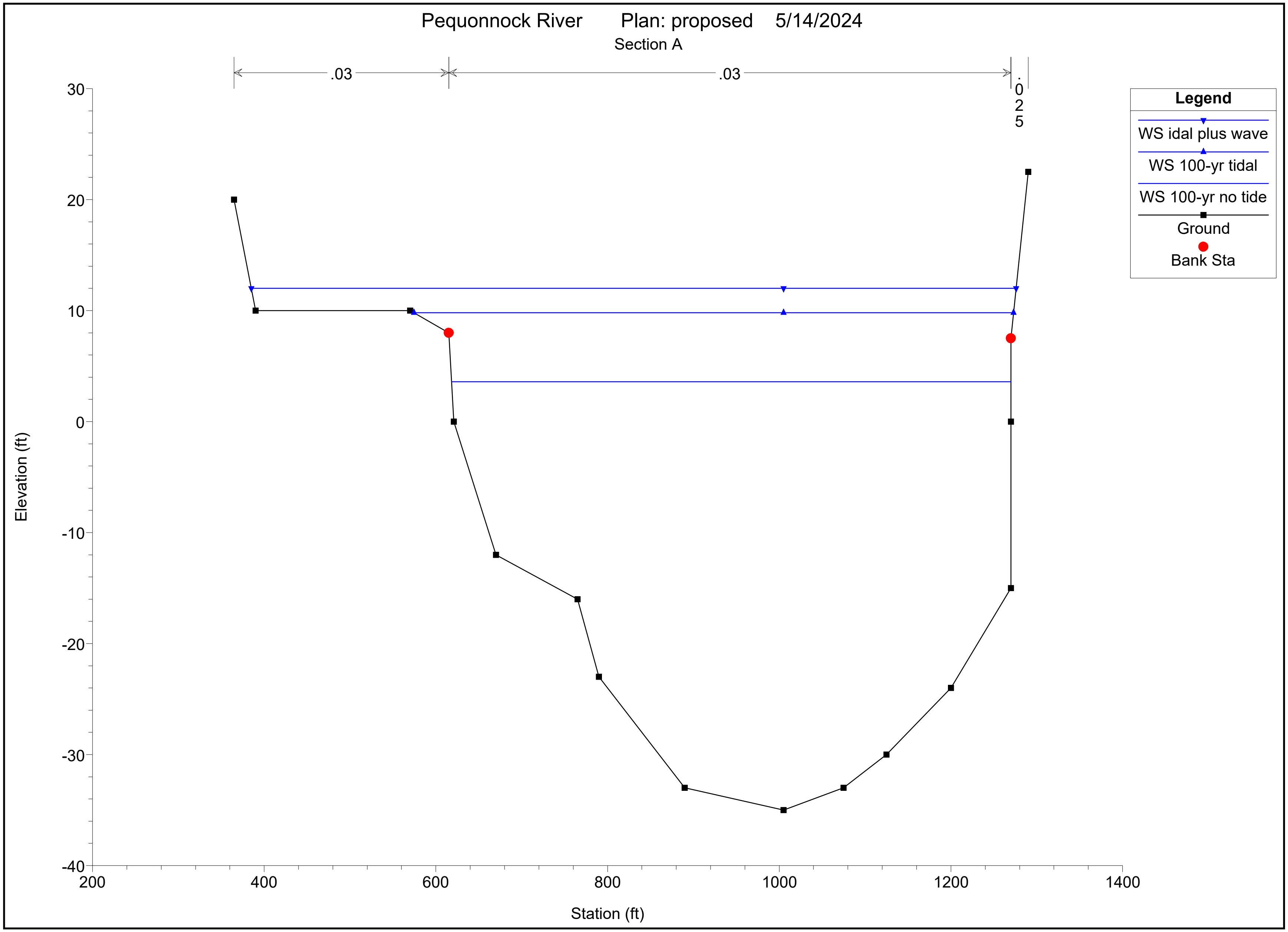
0
-10
-20
-30
700
800
900
1000
1100
1200
1300
Station (ft)



Pequonnock River Plan: proposed 5/14/2024
Section A
.03
.03
.025
Legend
WS idal plus wave
WS 100-yr tidal
WS 100-yr no tide
Ground
Bank Sta
Elevation (ft)
Station (ft)
30
20
10
0
-10
-20
-30
-40
200
400
600
800
1000
1200
1400

****

HEC2 RELEASE DATED NOV 76 UPDATED AUG1977
ERROR CORR - 01,02
MODIFICATION - 50,51,52,53

****

T1 CONNECTICUT FLOOD INSURANCE STUDY HUD CONTRACT ≠H-4560
T2 CITY OF BRIDGEPORT CEM ≠3027.921 SEPTEMBER 20,1978
T3 PEQUONNOCK RIVER STA.0.057 TO STA. 3.500 100 YEAR NATURAL

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	-0.	6.	-0.	-0.	-0.000000	-0.00	-0.0	-0.	3.600	-0.000

J2	NPROF	IPLOT	PREVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	1.000	-0.000	-1.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000

J3 VARIABLE CODES FOR SUMMARY PRINTOUT

38.000	1.000	43.000	26.000	3.000	50.000	61.000	53.000	27.000	21.000
22.000	28.000	54.000	0.000	200.000	-0.000	-0.000	-0.000	-0.000	-0.000

MANNING'S N VALUE: LEFT, RIGHT, CHANNEL — CONTRACTION — EXPANSION

NC	.030	.025	.030	.300	.600	-0.000	-0.000	-0.000	-0.000	-0.000
QT	9.000	2630.000	6700.000	9560.000	21240.000	9560.000	9560.000	9560.000	9560.000	9560.000
ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	10.400	9.100	615.000	1270.000

ID — # of sections — LEFT BANK STATION — RIGHT BANK STATION

X1	.057	17.000	615.000	1270.000	0.000	0.000	0.000	-0.000	-0.000	-0.000
GR	20.000	365.000	10.000	390.000	10.000	570.000	8.000	615.000	0.000	621.000
GR	-12.000	670.000	-16.000	765.000	-23.000	790.000	-33.000	890.000	-35.000	1005.000
GR	-33.000	1075.000	-30.000	1125.000	-24.000	1200.000	-15.000	1269.800	0.000	1269.900
GR	7.500	1270.000	22.500	1290.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	10.600	-0.000	-0.000	-0.000

A

ENCORACHMENTS

INEFF AREA USED UNTIL BANKS EXCEEDED — LEFT BANK STATION — RIGHT BANK STATION — DOWNSTREAM DISTANCE: LEFT, RIGHT, CHANNEL — INEFF STA LEFT — INEFF STA RIGHT

	.116	52.000	743.500	1243.300	250.000	400.000	310.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	11.900	11.900	-0.000
GR	15.300	743.400	9.200	743.500	9.000	779.100	10.400	779.600	10.400	784.600
GR	8.700	785.100	7.900	818.800	10.400	819.300	11.000	824.700	-1.300	824.900
GR	-3.600	845.400	-3.800	859.100	11.400	859.600	11.400	864.600	-4.500	865.100
GR	-4.900	889.400	-16.300	897.400	-12.200	912.400	11.900	913.400	11.300	933.400
GR	-17.000	934.500	-25.200	942.500	8.800	942.600	8.800	945.400	-25.200	945.500
GR	-27.900	974.400	-26.200	1000.000	-26.100	1050.500	8.800	1050.600	8.800	1053.400
GR	-26.100	1053.500	-24.700	1058.500	11.300	1059.600	11.900	1079.500	-22.100	1080.600
GR	-22.700	1106.400	-11.800	1123.900	11.200	1124.400	11.900	1126.900	-12.100	1129.900
GR	-5.700	1164.100	11.000	1164.600	11.000	1169.600	-4.400	1189.400	-2.700	1202.800
GR	11.000	1203.300	11.000	1208.300	-2.700	1208.400	-2.600	1229.400	-1.600	1243.200
GR	7.900	1243.300	13.600	1243.400	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
SB	-0.000	1.560	2.600	-0.000	100.000		8900.000	5.020	-27.900	-27.900

SECT ID — ORIFICE CD — WEIR CD — BOT. OF BRIDGE OPENING — NET AREA OF BRIDGE OPENING — SS — US AND DS CHANNEL INVERT AT BRIDGE

INEFF AREA USED UNTIL BANKS EXCEEDED — SPECIAL BRIDGE USED — LOW CHORD, IGNORE FOR SB — DOWNSTREAM DISTANCE — INEFF STA LEFT — INEFF STA RIGHT

X1	.131	-0.	-0.	-0.000	70.000	70.000	70.000	-0.0	-0.000	-0.000
X2	-0.000	-0.	1.000	11.900	13.600	-0.000	-0	-0.0	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0	15.300	13.600	-0.000
BT	20.000	743.400	15.300	0.000	743.500	15.300	9.200	779.600	15.300	10.400
BT	784.600	15.300	10.400	819.300	15.300	10.400	824.700	15.300	11.000	859.600
BT	15.300	11.400	864.600	15.300	11.400	913.400	15.300	11.900	933.400	15.300
BT	11.300	1059.600	15.300	11.300	1079.500	15.300	11.900	1124.400	15.300	11.200

BT	1126.900	15.300	11.900	1164.600	15.000	11.000	1169.600	14.900	11.000	1203.300
BT	14.500	9.800	1208.300	14.300	9.800	1243.300	13.700	7.900	1243.400	13.600
BT	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
NC	LEFT .015	RIGHT .020	CHANNEL .025	.100	.300	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	MANNING'S N VALUE	-0.000	-0.000	-0.000	-0.000	10.600	9.100	830.000	1175.000

ENCORACHMENTS

DOWNSTREAM DISTANCE

LEFT BANK STATION — RIGHT BANK STATION — LEFT — RIGHT — CHANNEL

B

X1	.257	19.000	830.000	1175.000	760.000	600.000	680.000	-0.000	-0.000	-0.000
GR	14.000	130.000	10.500	320.000	10.000	630.000	9.500	700.000	10.500	815.000
GR	10.000	830.000	0.000	850.000	-10.000	860.000	-20.000	885.000	-24.000	930.000
GR	-25.000	1000.000	-24.000	1070.000	-20.000	1115.000	-10.000	1140.000	0.000	1150.000
GR	4.500	1175.000	5.000	1200.000	6.000	1360.000	15.000	1361.000	-0.000	-0.000
NC	LEFT .040	RIGHT .040	CHANNEL .030	.300	.600	-0.000	-0.000	-0.000	-0.000	-0.000

MANNING'S N VALUE

DOWNSTREAM DISTANCE

LEFT BANK STATION — RIGHT BANK STATION — LEFT — RIGHT — CHANNEL

X1	.390	41.000	960.000	1068.100	920.000	520.000	720.000	-0.000	-0.000	-0.000
GR	22.000	784.000	-2.400	784.100	-5.000	824.000	-5.000	865.000	22.000	866.000
GR	22.000	871.000	-5.600	872.000	-5.800	912.000	-10.200	954.000	22.000	955.000
GR	22.000	960.000	-14.400	961.000	-21.400	967.000	9.000	967.100	9.000	959.900
GR	-21.600	970.000	-24.000	1000.000	-19.400	1031.000	9.000	1031.100	9.000	1034.000
GR	-19.400	1034.100	-18.800	1039.000	-3.200	1068.000	14.000	1068.100	14.000	1099.000
GR	-4.600	1099.100	-10.000	1118.000	-6.800	1137.000	20.000	1138.000	20.000	1143.000
GR	-2.600	1144.000	6.200	1193.000	20.000	1194.000	20.000	1199.000	6.000	1200.000
GR	6.000	1250.000	20.000	1251.000	20.000	1256.000	6.000	1257.000	6.000	1303.000
GR	20.000	1304.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
NC	LEFT .035	RIGHT .030	CHANNEL .025	.100	.300	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	MANNING'S N VALUE	-0.000	-0.000	-0.000	-0.000	-0.000	9.100	800.000	1205.000

ENCORACHMENTS

DOWNSTREAM DISTANCE

LEFT BANK STATION — RIGHT BANK STATION — LEFT — RIGHT — CHANNEL

C

X1	.437	18.000	799.000	1201.000	200.000	200.000	200.000	-0.000	-0.000	-0.000
GR	13.000	700.000	12.500	755.000	12.000	799.000	0.000	800.000	-10.000	810.000
GR	-20.000	850.000	-22.000	910.000	-23.000	1000.000	-22.000	1090.000	-20.000	1150.000
GR	-10.000	1190.000	0.000	1200.000	7.000	1201.000	7.000	1300.000	8.500	1400.000
GR	9.000	1450.000	9.000	1580.000	17.000	1630.000	-0.000	-0.000	-0.000	-0.000
NC	-0.000	-0.000	-0.000	.400	.700	-0.000	-0.000	-0.000	-0.000	-0.000

X1	.481	36.000	794.000	1202.200	150.000	320.000	240.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	12.200	12.800	-0.000
GR	19.000	786.000	8.500	787.000	8.500	794.000	5.500	796.000	-1.800	796.100
GR	-8.200	821.100	-9.200	856.100	3.000	856.200	3.500	866.100	-10.400	866.200
GR	-11.200	888.100	-9.600	930.000	4.200	930.100	9.400	960.100	-12.800	960.200
GR	-20.800	963.100	9.600	963.200	9.600	967.000	-20.800	967.100	-18.800	1010.000
GR	-12.800	1038.000	9.400	1038.100	9.400	1042.000	3.800	1068.000	-12.200	1068.100
GR	-9.200	1102.000	-7.000	1133.100	3.000	1133.200	3.200	1143.100	-4.800	1143.200
GR	-2.400	1202.100	6.400	1202.200	14.400	1266.000	14.000	1330.000	9.000	1550.000
GR	25.000	1560.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
SB	-0.000	1.560	2.600	-0.000	136.000	-0.000	7030.000	3.800	-20.800	-20.800

X1	.498	-0.000	-0.000	-0.000	80.000	80.000	80.000	-0.000	-0.000	-0.000
X2	-0.000	-0.000	1.000	15.000	9.000	-0.000	-0.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	18.900	9.000	-0.000
BT	34.000	786.000	19.000	0.000	787.000	19.100	8.500	794.000	19.200	8.500
BT	806.000	19.500	10.000	821.000	20.000	12.200	837.000	20.200	10.400	856.000
BT	19.800	3.000	866.100	21.000	3.500	876.000	21.100	9.500	888.000	21.500
BT	13.400	904.000	21.700	13.700	930.000	22.100	4.200	960.000	22.800	0.000
BT	960.100	18.900	9.400	980.000	19.100	12.800	1000.000	19.500	15.000	1020.000
BT	19.200	13.500	1042.000	18.800	9.400	1043.000	22.800	0.000	1068.000	22.200
BT	3.800	1089.000	22.000	13.200	1102.000	21.800	14.400	1121.000	21.300	10.700
BT	1133.000	21.000	3.000	1143.100	20.700	3.200	1157.000	20.300	10.200	1174.000
BT	19.900	12.800	1187.000	19.400	11.800	1202.200	19.300	6.400	1265.900	19.000
BT	0.000	1266.000	14.400	0.000	1330.000	14.000	0.000	1550.000	9.000	0.000
BT	1560.000	25.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
NC	.035	.045	.025	.300	.500	-0.000	-0.000	-0.000	-0.000	-0.000

ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	9.100	880.000	1120.000

D

X1	.573	19.000	884.000	1120.000	440.000	380.000	410.000	-0.000	-0.000	-0.000
GR	12.800	600.000	12.500	640.000	11.000	760.000	9.000	830.000	8.500	884.000
GR	0.000	885.000	-10.000	895.000	-18.000	925.000	-20.000	1000.000	-18.000	1075.000
GR	-10.000	1100.000	0.000	1110.000	5.000	1120.000	8.500	1150.000	9.000	1220.000
GR	8.500	1280.000	10.500	1350.000	11.000	1380.000	22.500	1400.000	-0.000	-0.000
NC	-0.000	-0.000	.030	.400	.700	-0.000	-0.000	-0.000	-0.000	-0.000

X1	.701	28.000	851.000	1034.000	600.000	740.000	670.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	9.100	9.100	-0.000
GR	17.000	610.000	16.800	660.000	16.000	710.000	15.000	835.000	8.300	851.000
GR	-2.800	851.100	-13.400	874.000	-17.400	897.000	8.900	897.100	9.000	904.900
GR	-15.600	905.000	-13.800	929.000	-15.300	952.000	9.100	952.100	9.100	959.900
GR	6.600	963.000	6.600	966.000	-18.300	966.100	-19.200	983.000	-18.700	1000.000
GR	-17.400	1014.000	-13.500	1031.000	7.500	1031.100	8.400	1034.000	14.800	1093.000
GR	14.500	1200.000	15.500	1700.000	25.000	1715.000	-0.000	-0.000	-0.000	-0.000
SB	-0.000	1.560	2.600	-0.000	131.000	-0.000	3900.000	.920	-19.200	-19.200

X1	.711	-0.000	-0.000	-0.000	70.000	70.000	70.000	-0.000	-0.000	-0.000
X2	-0.000	-0.000	1.000	9.100	14.500	-0.000	-0.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	15.000	14.500	-0.000
BT	8.000	610.000	17.000	0.000	660.000	16.800	0.000	710.000	16.000	0.000
BT	835.000	15.000	0.000	1093.000	14.800	0.000	1200.000	14.500	-0.000	1700.000
BT	15.500	0.000	1715.000	25.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
NC	.035	.045	.025	.300	.500	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	9.100	870.000	1140.000

E

X1	.834	17.000	870.000	1140.000	660.000	660.000	660.000	-0.000	-0.000	-0.000
GR	15.000	550.000	12.500	560.000	12.500	590.000	11.000	670.000	7.500	870.000
GR	1.000	880.000	-10.000	910.000	-18.000	930.000	-19.000	1000.000	-18.000	1070.000
GR	-10.000	1090.000	1.000	1100.000	9.500	1140.000	10.500	1220.000	10.500	1270.000
GR	11.500	1330.000	13.500	1395.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000

X1	.952	55.000	817.000	1179.600	600.000	660.000	630.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	13.000	13.000	-0.000
GR	19.000	600.000	17.000	650.000	16.500	710.000	17.800	748.000	13.000	817.000
GR	7.400	818.000	7.700	860.500	1.800	861.000	-3.400	880.000	16.000	880.100
GR	-10.200	888.100	-14.500	918.000	-13.900	937.900	8.000	938.000	8.000	941.000
GR	-13.800	941.100	-13.600	947.900	7.400	948.000	12.500	950.500	16.000	950.600
GR	14.000	954.000	7.400	957.400	-15.200	957.500	-18.100	962.400	8.400	962.500
GR	8.400	965.000	-18.200	965.100	-18.600	1000.000	-16.600	1022.000	-16.300	1033.400
GR	8.000	1033.500	8.000	1036.000	-16.300	1036.100	-13.100	1042.500	7.400	1042.600
GR	13.100	1045.500	15.600	1052.300	-10.400	1052.500	-9.800	1059.900	6.400	1060.000
GR	6.400	1062.500	-9.600	1062.600	-8.600	1082.500	-3.900	1111.500	16.000	1111.600
GR	16.000	1119.400	-1.200	1119.500	1.900	1135.500	6.500	1147.500	6.500	1148.500
GR	4.800	1152.500	5.300	1179.500	15.200	1179.600	22.700	1179.700	22.700	1208.000
SB	-0.000	1.560	2.600	-0.000	107.000	-0.000	6290.000	3.510	-18.000	-18.000

X1	.962	-0.000	-0.000	-0.000	60.000	60.000	60.000	-0.000	-0.000	-0.000
X2	-0.000	-0.000	1.000	17.000	16.500	-0.000	-0.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	16.500	22.700	-0.000
BT	16.000	600.000	19.000	0.000	650.000	17.000	0.000	710.000	16.500	0.000
BT	748.000	17.800	0.000	817.000	20.100	13.000	880.000	21.200	16.000	880.100
BT	21.400	16.000	950.600	22.100	16.000	954.000	22.300	14.000	1000.000	23.000
BT	17.000	1045.500	23.000	12.300	1052.300	22.900	15.600	1111.600	22.800	16.000
BT	1119.400	22.800	16.000	1179.600	22.700	15.200	1208.000	22.700	-0.000	-0.000
NC	.055	.030	.025	.300	.500	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	9.100	875.000	1130.000

F

X1	1.096	19.000	875.000	1130.000	680.000	640.000	660.000	-0.000	-0.000	-0.000
GR	15.000	680.000	10.000	690.000	9.000	720.000	8.500	775.000	7.500	835.000
GR	5.000	875.000	1.000	880.000	-5.000	890.000	-12.000	925.000	-13.300	1000.000
GR	-12.000	1075.000	-5.000	1110.000	1.000	1120.000	5.000	1130.000	9.500	1155.000
GR	10.000	1170.000	10.500	1225.000	12.000	1275.000	12.800	1330.000	-0.000	-0.000
NC	.075	.030	.025	.100	.300	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	9.100	865.000	1160.000

G

X1	1.250	10.000	867.000	1160.000	780.000	1000.000	1000.000	-0.000	-0.000	-0.000
GR	15.000	867.000	5.000	870.000	2.000	875.000	-5.000	900.000	-7.100	1000.000
GR	-5.000	1100.000	2.000	1120.000	5.000	1125.000	10.000	1135.000	15.000	1160.000
NC	.050	.050	.025	.300	.500	-0.000	-0.000	-0.000	-0.000	-0.000

X1	1.319	26.000	917.500	1026.000	380.000	400.000	390.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	15.000	15.000	-0.000
GR	20.000	870.000	19.500	880.000	16.100	914.500	6.500	917.500	5.000	917.600
GR	2.300	925.500	-.200	934.000	-2.900	943.500	-4.400	953.000	-4.500	969.500
GR	6.500	969.600	6.500	974.000	-3.700	974.100	-3.300	990.500	-3.600	1000.000
GR	-1.300	1009.500	6.700	1026.000	9.000	1045.000	10.700	1055.000	11.300	1080.000
GR	15.900	1090.000	16.500	1105.000	15.500	1150.000	15.300	1270.000	17.000	1390.000
GR	20.000	1500.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
SB	-0.000	1.560	2.600	-0.000	44.000	-0.000	1030.000	3.310	-3.700	-3.700

X1	1.329	-0.000	-0.000	-0.000	50.000	50.000	50.000	-0.000	-0.000	-0.000
X2	-0.000	-0.000	1.000	9.500	15.300	-0.000	-0.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	16.100	15.300	-0.000
BT	22.000	870.000	20.000	0.000	880.000	19.500	0.000	914.500	16.100	0.000
BT	917.500	16.100	6.500	934.000	16.100	9.100	943.500	16.000	9.500	953.000
BT	16.000	9.100	969.600	16.000	6.500	974.000	16.000	6.500	990.600	15.900
BT	9.000	1000.000	15.900	9.100	1026.000	15.900	6.700	1030.000	15.900	7.200
BT	1045.000	15.900	9.000	1055.000	15.900	10.700	1080.000	15.900	11.300	1090.000
BT	15.900	0.000	1105.000	16.500	0.000	1150.000	15.500	0.000	1270.000	15.300
BT	0.000	1390.000	17.000	0.000	1500.000	20.000	-0.000	-0.000	-0.000	-0.000
NC	.045	.040	.035	.600	.800	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	9.100	960.000	1055.000

H

X1	1.349	11.000	962.000	1055.000	130.000	130.000	130.000	-0.000	-0.000	-0.000
GR	15.000	962.000	5.000	965.000	2.000	970.000	-3.500	975.000	-4.400	1000.000
GR	-3.500	1025.000	2.000	1030.000	5.000	1040.000	10.000	1045.000	15.500	1055.000
GR	17.000	1425.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
NC	-0.000	-0.000	-0.000	.100	.300	-0.000	-0.000	-0.000	-0.000	-0.000
NH	5.000	.055	925.000	.030	1070.000	.075	1095.000	.025	1700.000	.040
NH	2550.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	9.100	910.000	1075.000

I

X1	1.490	19.000	910.000	1075.000	800.000	670.000	740.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	11.500	11.500	-0.000
GR	20.000	900.000	10.000	910.000	5.000	925.000	2.000	940.000	-3.000	980.000
GR	-3.500	1000.000	-3.000	1020.000	2.000	1060.000	5.000	1070.000	9.800	1075.000
GR	9.500	1140.000	10.500	1180.000	11.500	1300.000	12.000	1435.000	14.300	1550.000
GR	10.500	1700.000	12.000	1920.000	15.000	2020.000	20.000	2170.000	-0.000	-0.000
NC	.060	.050	.030	.600	.800	-0.000	-0.000	-0.000	-0.000	-0.000
QT	9.000	2375.000	6035.000	8615.000	19140.000	8615.000	8615.000	8615.000	8615.000	8615.000
ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	9.100	970.000	1750.000

X1	1.583	17.000	985.000	1015.000	480.000	540.000	510.000	-0.000	-0.000	-0.000
GR	20.000	750.000	15.000	950.000	12.500	960.000	10.000	970.000	5.000	980.000

J

GR	2.500	985.000	-3.000	988.000	-2.800	1000.000	-3.000	1010.000	2.500	1015.000
GR	5.000	1025.000	10.000	1030.000	12.000	1220.000	11.500	1700.000	11.500	2100.000
GR	15.000	2190.000	20.000	2340.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
NC	-0.000	.060	.025	.300	.500	-0.000	-0.000	-0.000	-0.000	-0.000

X1	1.590	30.000	972.000	1018.100	40.000	70.000	60.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	8.800	10.000	-0.000
GR	25.000	460.000	24.000	500.000	20.000	740.000	18.000	800.000	17.000	930.000
GR	16.300	952.000	16.600	969.000	10.000	972.000	.900	972.100	-1.300	1000.000
GR	-2.500	1010.000	-2.900	1018.000	8.800	1018.100	15.300	1022.000	14.100	1042.000
GR	13.000	1120.000	13.500	1180.000	12.300	1250.000	10.500	1305.000	11.000	1370.000
GR	10.800	1430.000	12.300	1730.000	12.800	1860.000	12.500	2100.000	12.500	2430.000
GR	11.300	2670.000	12.000	2770.000	15.000	2940.000	20.000	2950.000	25.000	2970.000
SB	-0.000	1.560	3.000	-0.000	41.000	-0.000	470.000	.231	-1.300	-1.300

X1	1.600	-0.000	-0.000	-0.000	50.000	50.000	50.000	-0.000	-0.000	-0.000
X2	-0.000	-0.000	1.000	10.000	10.500	-0.000	-0.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	16.300	10.500	-0.000
BT	23.000	930.000	17.000	0.000	952.000	16.300	0.000	969.000	16.600	0.000
BT	969.100	20.100	0.000	972.000	19.900	10.000	1018.100	19.000	8.800	1021.900
BT	18.800	0.000	1022.000	15.300	0.000	1042.000	14.100	0.000	1120.000	13.000
BT	0.000	1180.000	13.500	0.000	1250.000	12.300	0.000	1305.000	10.500	0.000
BT	1370.000	11.000	0.000	1430.000	10.800	0.000	1730.000	12.300	0.000	1860.000
BT	12.800	0.000	2100.000	12.500	0.000	2430.000	12.500	0.000	2670.000	11.300
BT	0.000	2770.000	12.000	0.000	2940.000	15.000	0.000	3020.000	18.000	-0.000
NC	.065	.075	.030	.300	.500	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	9.100	940.000	1700.000

X1	1.604	24.000	960.000	1055.000	20.000	20.000	20.000	-0.000	-0.000	-0.000
GR	25.000	670.000	23.500	730.000	20.000	890.000	18.000	900.000	16.000	940.000
GR	15.000	960.000	5.000	970.000	2.500	975.000	-1.500	980.000	-2.800	1000.000
GR	-1.500	1020.000	2.500	1025.000	5.000	1030.000	10.000	1040.000	13.500	1055.000
GR	14.300	1090.000	14.300	1130.000	11.000	1300.000	11.700	1560.000	12.300	2400.000
GR	12.000	2740.000	15.000	2880.000	18.000	2950.000	25.000	2970.000	-0.000	-0.000
NC	-0.000	-0.000	-0.000	.100	.300	-0.000	-0.000	-0.000	-0.000	-0.000
NH	4.000	.045	960.000	.035	1040.000	.015	1165.000	.050	2570.000	-0.000
ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	9.100	950.000	1950.000

K

X1	1.714	25.000	950.000	1040.000	610.000	610.000	610.000	-0.000	-0.000	-0.000
GR	25.000	790.000	20.000	900.000	19.000	910.000	18.000	950.000	15.000	960.000
GR	5.000	970.000	4.000	980.000	1.600	1000.000	4.000	1020.000	5.000	1025.000
GR	10.000	1035.000	14.000	1040.000	13.000	1075.000	13.000	1125.000	12.500	1165.000
GR	11.200	1300.000	12.500	1490.000	13.500	1640.000	12.000	1765.000	11.000	1900.000
GR	15.000	2220.000	18.000	2350.000	19.000	2570.000	20.500	2770.000	25.000	3190.000
NC	.065	.050	.030	.100	.300	-0.000	-0.000	-0.000	-0.000	-0.000

X1	1.732	29.000	961.000	1037.000	150.000	80.000	110.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	11.300	11.300	-0.000
GR	25.000	790.000	22.800	825.000	15.000	940.000	11.300	961.000	2.200	962.000
GR	.300	972.000	.800	986.000	1.900	1000.000	11.300	1000.010	11.300	1001.000
GR	1.900	1001.010	.700	1014.000	1.400	1026.000	3.300	1036.000	11.300	1037.000
GR	14.000	1065.000	12.500	1220.000	12.000	1370.000	12.500	1500.000	13.500	1630.000
GR	11.500	1800.000	11.000	1880.000	12.300	2130.000	15.000	2200.000	18.000	2300.000
GR	18.000	2465.000	19.000	2560.000	20.500	2770.000	25.000	3190.000	-0.000	-0.000

X1	1.733	-0.000	-0.000	-0.000	1.000	1.000	1.000	-0.000	-0.000	-0.000
X2	-0.000	-0.000	-0.000	11.300	11.000	-0.000	-0.000	-0.000	-0.000	-0.000
BT	18.000	790.000	25.000	0.000	825.000	22.800	0.000	940.000	15.000	0.000
BT	961.000	14.300	11.300	970.000	14.000	11.300	1025.000	13.500	11.300	1037.000

BT	13.600	11.300	1065.000	14.000	0.000	1220.000	12.500	0.000	1370.000	12.000
BT	0.000	1500.000	12.500	0.000	1630.000	13.500	0.000	1800.000	11.500	0.000
BT	1880.000	11.000	0.000	2130.000	12.300	0.000	2200.000	15.000	0.000	2300.000
BT	18.000	0.000	2465.000	18.000	0.000	2560.000	19.000	0.000	2770.000	20.500
BT	0.000	3190.000	25.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
NC	-0.000	-0.000	-0.000	.500	.700	-0.000	-0.000	-0.000	-0.000	-0.000

X1	1.884	31.000	959.400	1041.000	800.000	800.000	800.000	-0.000	-0.000	-0.000
X2	-0.000	-0.000	-0.000	1200.000	8.800	-0.000	-0.000	-0.000	-0.000	-0.000
BT	21.000	0.000	25.000	0.000	60.000	20.000	0.000	90.000	15.000	0.000
BT	200.000	10.000	0.000	580.000	8.800	0.000	670.000	9.500	0.000	730.000
BT	10.500	0.000	840.000	10.500	0.000	930.000	11.500	0.000	957.000	14.200
BT	12.000	1041.000	14.200	12.000	1050.000	12.500	0.000	1100.000	13.000	0.000
BT	1150.000	12.500	0.000	1400.000	12.300	0.000	1470.000	15.000	0.000	1640.000
BT	18.000	0.000	1720.000	18.000	0.000	1730.000	20.000	0.000	2100.000	20.000
BT	0.000	2170.000	25.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
GR	25.000	0.000	20.000	60.000	15.000	90.000	10.000	200.000	8.800	580.000
GR	9.500	670.000	10.500	730.000	10.500	840.000	11.500	930.000	11.700	957.000
GR	12.000	959.400	6.400	959.500	2.100	986.000	2.400	1000.000	12.000	1030.010
GR	11.900	1001.000	2.400	1001.010	2.600	1015.000	4.100	1038.000	6.000	1040.000
GR	12.000	1041.000	12.500	1050.000	13.000	1100.000	12.500	1150.000	12.300	1400.000
GR	15.000	1470.000	18.000	1640.000	18.000	1720.000	20.000	1730.000	20.000	2100.000
GR	25.000	2170.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000

X1	1.885	-0.000	-0.000	-0.000	1.000	1.000	1.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	9.100	800.000	1200.000

L

X1	1.895	30.000	976.000	1031.000	60.000	60.000	60.000	-0.000	-0.000	-0.000
GR	25.000	0.000	20.000	90.000	15.000	110.000	11.000	190.000	10.000	210.000
GR	9.800	240.000	9.800	380.000	9.500	430.000	8.500	490.000	9.000	545.000
GR	8.800	590.000	9.300	640.000	9.500	680.000	10.000	700.000	10.500	920.000
GR	11.000	976.000	4.500	977.000	2.500	980.000	2.000	1000.000	2.500	1020.000
GR	4.500	1025.000	10.000	1030.000	12.000	1031.000	13.000	1080.000	11.000	1270.000
GR	15.000	1420.000	18.000	1580.000	20.000	1650.000	20.000	2040.000	25.000	2080.000
NC	-0.000	-0.000	-0.000	.100	.300	-0.000	-0.000	-0.000	-0.000	-0.000
NH	5.000	.050	705.000	.025	860.000	.050	980.000	.035	1060.000	.050
NH	1480.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	9.100	750.000	1250.000

M

X1	1.960	32.000	980.000	1060.000	340.000	370.000	350.000	-0.000	-0.000	-0.000
GR	25.000	0.000	20.000	220.000	15.000	230.000	12.500	295.000	10.000	340.000
GR	8.800	395.000	10.300	475.000	10.500	660.000	10.500	705.000	11.500	760.000
GR	11.500	780.000	11.000	815.000	10.500	860.000	10.300	955.000	10.000	980.000
GR	5.000	984.000	2.500	990.000	1.600	1000.000	2.500	1010.000	4.500	1015.000
GR	5.000	1016.000	10.000	1060.000	10.200	1090.000	10.500	1135.000	10.800	1175.000
GR	11.300	1230.000	11.300	1280.000	13.500	1330.000	18.000	1410.000	20.000	1480.000
GR	20.000	2000.000	25.000	2100.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
NC	.070	.070	.020	.400	.700	-0.000	-0.000	-0.000	-0.000	-0.000

X1	1.979	29.000	974.000	1026.300	120.000	100.000	110.000	-0.000	-0.000	-0.000
GR	20.000	210.000	15.000	230.000	10.000	380.000	11.000	660.000	11.000	720.000
GR	13.000	855.000	13.500	900.000	13.300	953.000	13.300	973.000	10.000	974.000
GR	3.300	974.100	1.800	990.100	10.000	990.200	10.000	991.500	1.800	991.600
GR	1.300	1007.800	10.000	1007.900	10.000	1009.200	1.300	1009.200	3.800	1026.200
GR	9.900	1026.300	12.500	1050.100	11.000	1080.000	10.000	1130.000	10.300	1260.000
GR	11.000	1300.000	15.000	1400.000	18.000	1470.000	20.000	1550.000	-0.000	-0.000

X1	1.980	-0.000	-0.000	-0.000	1.000	1.000	1.000	-0.000	-0.000	-0.000
X2	-0.000	-0.000	-0.000	10.000	10.000	-0.000	-0.000	-0.000	-0.000	-0.000

BT	22.000	0.000	25.000	0.000	210.000	20.000	0.000	230.000	15.000	0.000
BT	380.000	10.000	0.000	660.000	11.000	0.000	720.000	11.000	0.000	855.000
BT	13.000	0.000	900.000	13.500	0.000	953.000	13.300	0.000	973.000	13.300
BT	0.000	974.000	15.300	10.000	1026.300	14.900	10.000	1050.100	12.500	0.000
BT	1080.000	11.000	0.000	1130.000	10.000	0.000	1260.000	10.300	0.000	1300.000
BT	11.000	0.000	1400.000	15.000	0.000	1470.000	18.000	0.000	1550.000	20.000
BT	0.000	1900.000	20.000	0.000	2000.000	25.000	-0.000	-0.000	-0.000	-0.000
X1	2.057	22.000	971.000	1029.500	450.000	350.000	400.000	-0.000	-0.000	-0.000
X2	-0.000	-0.000	-0.000	10.000	11.500	-0.000	-0.000	-0.000	-0.000	-0.000
BT	9.000	195.000	25.000	0.000	210.000	20.000	0.000	260.000	15.000	0.000
BT	640.000	11.500	0.000	720.000	12.500	0.000	850.000	15.000	0.000	971.000
BT	19.000	10.000	1029.500	2100.000	1000.000	112000.000	2500.000	-0.000	-0.000	-0.000
GR	25.000	195.000	20.000	210.000	15.000	260.000	11.500	640.000	12.500	720.000
GR	15.000	850.000	10.000	971.000	1.100	971.100	3.200	979.000	3.100	988.300
GR	10.000	988.400	10.000	989.700	2.700	989.800	1.600	1000.000	.100	1010.800
GR	10.000	1010.900	10.000	1012.200	.900	1012.300	.900	1021.000	.100	1029.400
GR	10.000	1029.500	25.000	1120.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
X1	2.058	-0.000	-0.000	-0.000	1.000	1.000	1.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	11.500	11.500	-0.000
ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	9.100	750.000	1050.000
NC	.035	.035	.030	.300	.500	-0.000	-0.000	-0.000	-0.000	-0.000
X1	2.063	17.000	920.000	1041.000	50.000	30.000	40.000	-0.000	-0.000	-0.000
GR	25.000	250.000	20.000	320.000	18.000	360.000	15.000	530.000	12.000	710.000
GR	12.000	830.000	11.500	900.000	10.000	920.000	4.500	965.000	2.000	970.000
GR	1.800	1000.000	2.000	1030.000	4.500	1040.000	9.500	1041.000	15.000	1100.000
GR	20.000	1130.000	25.000	1160.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
NC	.035	.035	.030	.600	.800	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	9.100	960.000	1200.000
X1	2.141	22.000	960.000	1030.000	420.000	420.000	420.000	-0.000	-0.000	-0.000
GR	25.000	700.000	20.000	701.000	20.000	715.000	17.300	800.000	17.500	860.000
GR	17.500	890.000	15.000	920.000	11.000	940.000	10.000	960.000	7.500	975.000
GR	7.000	1000.000	7.500	1025.000	10.000	1030.000	11.800	1050.000	12.500	1110.000
GR	13.000	1190.000	12.300	1260.000	12.500	1340.000	15.000	1370.000	16.300	1410.000
GR	17.000	1449.000	25.000	1450.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
NC	-0.000	-0.000	-0.000	.600	.800	-0.000	-0.000	-0.000	-0.000	-0.000
X1	2.150	19.000	968.000	1032.000	50.000	50.000	50.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	14.000	13.900	-0.000
GR	25.000	800.000	20.000	855.000	19.000	942.000	18.500	951.800	14.000	968.000
GR	8.100	970.000	7.700	980.000	7.400	1000.000	7.500	1012.000	7.900	1030.000
GR	13.900	1032.000	19.000	1049.000	18.800	1068.000	17.500	1100.000	15.000	1220.000
GR	13.000	1340.000	15.000	1430.000	16.500	1490.000	25.000	1491.000	-0.000	-0.000
SB	-0.000	1.560	2.600	-0.000	63.000	-0.000	400.000	.793	7.700	7.700
X1	2.157	-0.000	-0.000	-0.000	35.000	35.000	35.000	-0.000	-0.000	-0.000
X2	-0.000	-0.000	1.000	14.000	13.000	-0.000	-0.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	18.500	13.000	-0.000
BT	19.000	800.000	25.000	0.000	855.000	20.000	0.000	942.000	19.000	0.000
BT	951.800	18.500	0.000	953.000	23.400	0.000	965.000	23.600	0.000	965.400
BT	21.800	0.000	1000.000	22.100	13.900	1035.000	21.800	0.000	1035.100	23.600
BT	0.000	1047.000	23.400	0.000	1049.000	19.000	0.000	1068.000	18.800	0.000
BT	1100.000	17.500	0.000	1220.000	15.000	0.000	1340.000	13.000	0.000	1430.000
BT	15.000	0.000	1490.000	16.500	0.000	1491.000	25.000	-0.000	-0.000	-0.000
NH	5.000	.050	890.000	.025	945.000	.060	960.000	.040	1040.000	.025
NH	1501.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000

ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	9.100	900.000	1350.000

P

X1	2.161	19.000	960.000	1040.000	20.000	20.000	20.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	16.500	16.500	-0.000
GR	25.000	850.000	20.000	890.000	18.500	920.000	19.000	945.000	15.000	960.000
GR	10.000	965.000	8.000	975.000	8.000	1025.000	10.000	1030.000	15.000	1035.000
GR	16.000	1040.000	15.500	1060.000	16.500	1100.000	17.500	1160.000	16.000	1305.000
GR	15.000	1320.000	15.000	1440.000	16.300	1500.000	25.000	1501.000	-0.000	-0.000
NC	.060	.050	.045	.100	.300	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	9.100	950.000	1450.000

Q

X1	2.265	10.000	965.000	1021.000	600.000	520.000	560.000	-0.000	-0.000	-0.000
GR	25.000	885.000	20.000	895.000	15.000	965.000	10.000	980.000	10.000	1020.000
GR	13.000	1021.000	15.000	1065.000	16.000	1250.000	16.000	1600.000	25.000	1601.000
NC	.080	.030	.030	.100	.300	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	9.100	890.000	1050.000

R

X1	2.788	16.000	890.000	1046.000	2220.000	2480.000	2530.000	-0.000	-0.000	-0.000
X5	6.000	37.750	40.250	41.700	45.450	41.700	-0.000	41.700	-0.000	-0.000
GR	58.500	832.000	36.800	890.000	35.000	897.000	31.500	911.000	29.400	919.000
GR	28.000	940.000	28.000	971.000	25.100	1000.000	29.600	1022.000	30.800	1029.000
GR	33.400	1039.000	35.000	1040.000	40.100	1046.000	42.500	1075.000	45.000	1085.000
GR	50.000	1090.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
NC	.040	.055	.030	.200	.400	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	9.100	945.000	1055.000

S

X1	3.096	15.000	945.000	1055.000	1630.000	1630.000	1630.000	-0.000	-0.000	-0.000
GR	50.000	560.000	45.000	590.000	41.500	650.000	43.000	700.000	40.500	760.000
GR	40.200	840.000	38.600	880.000	38.000	945.000	35.200	960.000	32.500	970.000
GR	32.300	1030.000	35.200	1040.000	39.000	1055.000	40.000	1060.000	50.000	1070.000
NC	.035	.045	.030	.100	.300	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	9.100	940.000	1050.000

T

X1	3.351	21.000	940.000	1050.000	1330.000	1300.000	1310.000	-0.000	-0.000	-0.000
GR	55.000	390.000	52.000	420.000	50.000	450.000	48.500	470.000	48.000	525.000
GR	45.200	575.000	46.600	645.000	46.000	710.000	48.000	785.000	45.000	860.000
GR	44.600	875.000	43.500	940.000	40.000	965.000	38.500	970.000	38.000	1000.000
GR	38.500	1030.000	40.000	1035.000	41.500	1050.000	45.000	1100.000	50.000	1105.000
GR	55.000	1125.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
NC	.035	.035	.030	.200	.400	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	9.100	910.000	1050.000

U

X1	3.475	13.000	975.000	1050.000	640.000	680.000	660.000	-0.000	-0.000	-0.000
GR	55.000	840.000	52.500	865.000	50.000	890.000	49.000	920.000	49.500	945.000
GR	49.000	975.000	45.000	980.000	41.000	985.000	41.000	1015.000	47.000	1025.000
GR	47.000	1045.000	50.000	1050.000	55.000	1060.000	-0.000	-0.000	-0.000	-0.000
EJ	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000

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HEC2 RELEASE DATED NOV 76 UPDATED AUG1977
ERROR CORR - 01,02
MODIFICATION - 50,51,52,53
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NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

PEQUONNOCK RIVER

SUMMARY PRINTOUT

	SECNO	CWSEL	Q	VCH	EG	DIFWSP	DIFEG	SSTA	STENCL	STCHL	STCHR	STENCR	ENDST
floodway A	.057	3.60	9560.00	.52	3.60	0.00	0.00	618.30	0.00	615.00	1270.00	0.00	1269.95
no floodway	.057	3.60	9560.00	.52	3.60	0.00	.00	618.30	615.00	615.00	1270.00	1270.00	1269.95
floodway	.116	3.59	9560.00	1.55	3.63	0.00	0.00	824.82	0.00	743.50	1243.30	0.00	1243.25
no floodway	.116	3.59	9560.00	1.55	3.63	.00	.00	824.82	0.00	743.50	1243.30	0.00	1243.25
floodway	.131	3.59	9560.00	1.55	3.63	0.00	0.00	824.82	0.00	743.50	1243.30	0.00	1243.25
no floodway	.131	3.59	9560.00	1.55	3.63	.00	.00	824.82	0.00	743.50	1243.30	0.00	1243.25
floodway B	.257	3.61	9560.00	1.29	3.64	0.00	0.00	842.75	0.00	830.00	1175.00	0.00	1170.13
no floodway	.257	3.61	9560.00	1.29	3.64	-.00	-.00	842.75	830.00	830.00	1175.00	1175.00	1170.13
floodway	.390	3.61	9560.00	2.55	3.69	0.00	0.00	784.08	0.00	960.00	1068.10	0.00	1178.56
no floodway	.390	3.61	9560.00	2.55	3.69	-.00	-.00	784.08	0.00	960.00	1068.10	0.00	1178.56
floodway C	.437	3.68	9560.00	1.02	3.70	0.00	0.00	799.69	0.00	799.00	1201.00	0.00	1200.53
no floodway	.437	3.68	9560.00	1.02	3.70	-.00	.00	800.00	800.00	799.00	1201.00	1205.00	1200.53
	.481	3.67	9560.00	2.14	3.74	0.00	0.00	796.03	0.00	794.00	1202.20	0.00	1202.17
	.481	3.67	9560.00	2.14	3.74	.00	.00	796.03	0.00	794.00	1202.20	0.00	1202.17
	.498	3.67	9560.00	2.16	3.75	0.00	0.00	796.03	0.00	794.00	1202.20	0.00	1202.17
	.498	3.67	9560.00	2.16	3.75	.00	.00	796.03	0.00	794.00	1202.20	0.00	1202.17
D	.573	3.70	9560.00	2.09	3.77	0.00	0.00	884.56	0.00	884.00	1120.00	0.00	1117.41
	.573	3.70	9560.00	2.09	3.77	.00	.00	884.56	880.00	884.00	1120.00	1120.00	1117.41
	.701	3.71	9560.00	3.22	3.87	0.00	0.00	851.04	0.00	851.00	1034.00	0.00	1031.08
	.701	3.71	9560.00	3.22	3.87	.00	.00	851.04	0.00	851.00	1034.00	0.00	1031.08
	.711	3.70	9560.00	4.01	3.95	0.00	0.00	851.04	0.00	851.00	1034.00	0.00	1031.08
	.711	3.70	9560.00	4.01	3.95	.00	.00	851.04	0.00	851.00	1034.00	0.00	1031.08
E	.834	3.98	9560.00	2.26	4.06	0.00	0.00	875.43	0.00	870.00	1140.00	0.00	1113.99
	.834	3.98	9560.00	2.26	4.06	.00	.00	875.43	870.00	870.00	1140.00	1140.00	1113.99
	.952	4.00	9560.00	2.70	4.11	0.00	0.00	860.81	0.00	817.00	1179.60	0.00	1140.98
	.952	4.00	9560.00	2.70	4.11	.00	.00	860.81	0.00	817.00	1179.60	0.00	1140.98

	SECNO	CWSEL	Q	VCH	EG	DIFWSP	DIFEG	SSTA	STENCL	STCHL	STCHR	STENCR	ENDST
	.962	4.01	9560.00	2.70	4.12	0.00	0.00	860.81	0.00	817.00	1179.60	0.00	1141.01
	.962	4.01	9560.00	2.70	4.12	.00	.00	860.81	0.00	817.00	1179.60	0.00	1141.01
F	1.096	4.07	9560.00	2.71	4.18	0.00	0.00	876.16	0.00	875.00	1130.00	0.00	1127.68
	1.096	4.07	9560.00	2.71	4.18	.00	.00	876.16	875.00	875.00	1130.00	1130.00	1127.68
G	1.250	4.07	9560.00	4.19	4.35	0.00	0.00	871.54	0.00	867.00	1160.00	0.00	1123.46
	1.250	4.07	9560.00	4.19	4.35	-.00	-.00	871.54	865.00	867.00	1160.00	1160.00	1123.46
*	1.319	4.76	9560.00	14.64	8.09	0.00	0.00	918.30	0.00	917.50	1026.00	0.00	1022.00
*	1.319	4.76	9560.00	14.64	8.09	-.00	.00	918.30	0.00	917.50	1026.00	0.00	1022.00
	1.329	6.79	9560.00	11.20	8.74	0.00	0.00	917.50	0.00	917.50	1026.00	0.00	1026.00
	1.329	6.79	9560.00	11.20	8.74	.00	.00	917.50	0.00	917.50	1026.00	0.00	1026.00
H	1.349	7.20	9560.00	13.74	10.13	0.00	0.00	964.34	0.00	962.00	1055.00	0.00	1042.20
	1.349	7.20	9560.00	13.74	10.13	.00	.00	964.34	960.00	962.00	1055.00	1055.00	1042.20
I	1.490	10.85	9560.00	5.55	11.32	0.00	0.00	910.00	0.00	910.00	1075.00	0.00	1075.00
	1.490	10.84	9560.00	5.55	11.32	-.00	-.00	910.00	910.00	910.00	1075.00	1075.00	1075.00
* J	1.583	13.11	8615.00	10.69	14.15	0.00	0.00	957.56	0.00	985.00	1015.00	0.00	2141.43
*	1.583	13.31	8615.00	11.37	14.53	.20	.43	970.00	970.00	985.00	1015.00	1750.00	1750.00
*	1.590	13.23	8615.00	9.86	14.36	0.00	0.00	970.53	0.00	972.00	1018.10	0.00	2839.44
	1.590	14.63	8615.00	6.00	14.92	1.41	.56	969.89	0.00	972.00	1018.10	0.00	2919.17
	1.600	13.63	8615.00	8.44	14.36	0.00	0.00	972.00	0.00	972.00	1018.10	0.00	2862.42
	1.600	14.66	8615.00	5.81	14.92	1.03	.56	972.00	0.00	972.00	1018.10	0.00	2920.59
	1.604	14.19	8615.00	5.49	14.50	0.00	0.00	960.82	0.00	960.00	1055.00	0.00	2841.93
	1.604	14.54	8615.00	6.47	15.06	.35	.56	960.46	940.00	960.00	1055.00	1700.00	1700.00
K	1.714	14.70	8615.00	5.25	14.93	0.00	0.00	960.30	0.00	950.00	1040.00	0.00	2196.36
	1.714	15.34	8615.00	4.39	15.49	.63	.56	958.86	950.00	950.00	1040.00	1950.00	1950.00
	1.732	14.76	8615.00	5.04	15.00	0.00	0.00	941.38	0.00	961.00	1037.00	0.00	2193.67
	1.732	15.38	8615.00	4.21	15.53	.62	.53	934.41	0.00	961.00	1037.00	0.00	2212.64
	1.733	14.76	8615.00	5.04	15.00	0.00	0.00	941.38	0.00	961.00	1037.00	0.00	2193.69
	1.733	15.38	8615.00	4.21	15.53	.62	.53	934.40	0.00	961.00	1037.00	0.00	2212.65
	1.884	15.42	8615.00	1.86	15.45	0.00	0.00	87.50	0.00	959.40	1041.00	0.00	1493.64
	1.884	15.82	8615.00	1.69	15.84	.40	.39	85.10	0.00	959.40	1041.00	0.00	1516.28
	1.885	15.41	8615.00	3.03	15.47	0.00	0.00	87.49	0.00	959.40	1041.00	0.00	1493.68
	1.885	15.81	8615.00	2.77	15.86	.40	.39	85.10	0.00	959.40	1041.00	0.00	1516.30
L	1.895	15.42	8615.00	3.58	15.49	0.00	0.00	108.30	0.00	976.00	1031.00	0.00	1442.71
	1.895	15.65	8615.00	7.89	16.29	.23	.80	800.00	800.00	976.00	1031.00	1200.00	1200.00
M	1.960	15.52	8615.00	2.65	15.56	0.00	0.00	228.99	0.00	980.00	1060.00	0.00	1365.67
	1.960	16.41	8615.00	3.84	16.55	.89	.98	750.00	750.00	980.00	1060.00	1250.00	1250.00
	1.979	15.50	8615.00	5.38	15.70	0.00	0.00	228.00	0.00	974.00	1026.30	0.00	1411.67
	1.979	16.47	8615.00	4.35	16.59	.97	.89	224.08	0.00	974.00	1026.30	0.00	1434.52

	SECNO	CWSEL	Q	VCH	EG	DIFWSP	DIFEG	SSTA	STENCL	STCHL	STCHR	STENCR	ENDST
	1.980	15.70	8615.00	3.34	15.76	0.00	0.00	227.21	0.00	974.00	1026.30	0.00	1416.26
	1.980	16.58	8615.00	2.68	16.62	.88	.86	223.68	0.00	974.00	1026.30	0.00	1436.86
	2.057	15.81	8615.00	8.30	16.63	0.00	0.00	251.93	0.00	971.00	1029.50	0.00	1064.54
	2.057	16.64	8615.00	7.11	17.18	.83	.56	243.64	0.00	971.00	1029.50	0.00	1069.54
	2.058	16.18	8615.00	7.17	16.73	0.00	0.00	248.25	0.00	971.00	1029.50	0.00	1066.76
	2.058	16.84	8615.00	6.30	17.24	.67	.51	241.53	0.00	971.00	1029.50	0.00	1070.81
N	2.063	16.72	8615.00	3.66	16.87	0.00	0.00	432.29	0.00	920.00	1041.00	0.00	1110.35
	2.063	17.08	8615.00	4.24	17.31	.36	.44	750.00	750.00	920.00	1041.00	1050.00	1050.00
O	2.141	16.83	8615.00	5.55	17.11	0.00	0.00	897.99	0.00	960.00	1030.00	0.00	1439.78
	2.141	17.20	8615.00	7.46	17.83	.37	.72	960.00	960.00	960.00	1030.00	1200.00	1200.00
	2.150	16.71	8615.00	10.23	17.89	0.00	0.00	958.22	0.00	968.00	1032.00	0.00	1490.03
	2.150	17.24	8615.00	8.83	18.06	.53	.18	956.33	0.00	968.00	1032.00	0.00	1490.09
	2.157	17.35	8615.00	8.50	18.11	0.00	0.00	968.00	0.00	968.00	1032.00	0.00	1490.10
	2.157	17.72	8615.00	7.71	18.32	.36	.21	968.00	0.00	968.00	1032.00	0.00	1490.14
P	2.161	17.39	8615.00	8.36	18.22	0.00	0.00	951.02	0.00	960.00	1040.00	0.00	1500.13
*	2.161	17.67	8615.00	9.74	18.89	.29	.68	949.98	900.00	960.00	1040.00	1350.00	1350.00
Q	2.265	19.27	8615.00	5.35	19.49	0.00	0.00	905.29	0.00	965.00	1021.00	0.00	1600.36
	2.265	20.00	8615.00	5.29	20.23	.73	.74	950.00	950.00	965.00	1021.00	1450.00	1450.00
* R	2.788	41.70	8615.00	4.49	42.01	0.00	0.00	876.90	0.00	890.00	1046.00	0.00	1065.33
*	2.788	41.70	8615.00	4.51	42.02	0.00	.00	890.00	890.00	890.00	1046.00	1050.00	1050.00
S	3.096	42.36	8615.00	7.42	43.07	0.00	0.00	635.17	0.00	945.00	1055.00	0.00	1062.36
	3.096	42.17	8615.00	9.43	43.55	-.19	.48	945.00	945.00	945.00	1055.00	1055.00	1055.00
* T	3.351	45.53	8615.00	11.62	47.44	0.00	0.00	569.08	0.00	940.00	1050.00	0.00	1100.53
	3.351	46.04	8615.00	11.94	48.25	.51	.81	940.00	940.00	940.00	1050.00	1050.00	1050.00
* U	3.475	51.78	8615.00	12.84	54.05	0.00	0.00	872.22	0.00	975.00	1050.00	0.00	1053.56
*	3.475	51.61	8615.00	13.63	54.26	-.16	.21	910.00	910.00	975.00	1050.00	1050.00	1050.00

SUMMARY OF ERRORS

CAUTION SECNO= 1.319 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 1.319 PROFILE= 1 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 1.319 PROFILE= 1 20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO= 1.319 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 1.319 PROFILE= 2 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 1.319 PROFILE= 2 20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO= 1.583 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 1.583 PROFILE= 1 MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 1.583 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 1.583 PROFILE= 2 MINIMUM SPECIFIC ENERGY

CAUTION SECNO= 1.590 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 1.590 PROFILE= 1 MINIMUM SPECIFIC ENERGY

CAUTION SECNO= 2.161 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 2.161 PROFILE= 2 MINIMUM SPECIFIC ENERGY

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NOTE     SECNO=     2.788  PROFILE= 1  WSEL BASED ON X5 CARD
NOTE     SECNO=     2.788  PROFILE= 2  WSEL BASED ON X5 CARD

CAUTION  SECNO=     3.351  PROFILE= 1  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=     3.351  PROFILE= 1  MINIMUM SPECIFIC ENERGY

CAUTION  SECNO=     3.475  PROFILE= 1  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=     3.475  PROFILE= 1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION  SECNO=     3.475  PROFILE= 1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION  SECNO=     3.475  PROFILE= 2  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=     3.475  PROFILE= 2  MINIMUM SPECIFIC ENERGY
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  HEC2 RELEASE DATED NOV 76 UPDATED  AUG1977
  ERROR CORR -  01,02
  MODIFICATION -  50,51,52,53
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T1      CONNECTICUT FLOOD INSURANCE STUDY
T2      CITY OF BRIDGEPORT
T3      PEQUONNOCK RIVER        STA. 0.057 TO STA. 3.500 METHOD 1 FLOODWAY
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J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	-0.	8.	-0.	-0.	-0.000000	-0.00	-0.0	-0.	3.600	-0.000
J2	NPROF	IPLOT	PREVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	15.000	-0.000	-1.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000

FLOODWAY DATA, PEQUONNOCK RIVER
PROFILE NO. 2

STATION	------- FLOODWAY ------- WIDTH (FT)	SECTION AREA	MEAN VELOCITY	WATER SURFACE ELEVATION WITH FLOODWAY	WITHOUT FLOODWAY	DIFFERENCE
.057	652.	18504.	.5	3.6	3.6	0.0
.116	418.	6180.	1.5	3.6	3.6	0.0
.131	418.	6178.	1.5	3.6	3.6	0.0
.257	327.	7397.	1.3	3.6	3.6	0.0
.390	394.	4304.	2.2	3.6	3.6	0.0
.437	401.	9344.	1.0	3.7	3.7	0.0
.481	406.	4466.	2.1	3.7	3.7	0.0
.498	406.	4420.	2.2	3.7	3.7	0.0
.573	233.	4569.	2.1	3.7	3.7	0.0
.701	180.	2970.	3.2	3.7	3.7	0.0
.711	180.	2385.	4.0	3.7	3.7	0.0
.834	239.	4231.	2.3	4.0	4.0	0.0
.952	280.	3541.	2.7	4.0	4.0	0.0
.962	280.	3543.	2.7	4.0	4.0	0.0
1.096	252.	3527.	2.7	4.1	4.1	0.0
1.250	252.	2283.	4.2	4.1	4.1	0.0
1.319	104.	653.	14.6	4.8	4.8	0.0
1.329	109.	853.	11.2	6.8	6.8	0.0
1.349	78.	696.	13.7	7.2	7.2	0.0
1.490	165.	1722.	5.6	10.8	10.8	0.0
1.583	780.	1977.	4.4	13.3	13.1	.2
1.590	1949.	5205.	1.7	14.6	13.2	1.4
1.600	1949.	5249.	1.6	14.6	13.6	1.0
1.604	740.	2645.	3.3	14.5	14.2	.3
1.714	991.	3629.	2.4	15.3	14.7	.6
1.732	1278.	4567.	1.9	15.4	14.8	.6
1.733	1278.	4567.	1.9	15.4	14.8	.6
1.884	1431.	7037.	1.2	15.8	15.4	.4
1.885	1431.	7262.	1.2	15.8	15.4	.4
1.895	400.	2146.	4.0	15.6	15.4	.2
1.960	500.	3266.	2.6	16.4	15.5	.9
1.979	1210.	6305.	1.4	16.5	15.5	1.0
1.980	1213.	6098.	1.4	16.6	15.7	.9
2.057	826.	3112.	2.8	16.6	15.8	.8
2.058	829.	3708.	2.3	16.9	16.2	.7
2.063	300.	2541.	3.4	17.1	16.7	.4
2.141	240.	1495.	5.8	17.2	16.8	.4
2.150	534.	1530.	5.6	17.2	16.7	.5
2.157	522.	1732.	5.0	17.8	17.4	.4
2.161	400.	1082.	8.0	17.7	17.4	.3
2.265	500.	2483.	3.5	20.0	19.3	.7
2.788	160.	1916.	4.5	41.7	41.7	0.0
3.096	110.	914.	9.4	42.3	42.4	-.1
3.351	110.	721.	11.9	46.0	45.5	.5
3.475	140.	723.	11.9	51.7	51.8	-.1

STARTING WATER SURFACE ELEVATION

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  HEC2 RELEASE DATED NOV 76 UPDATED  AUG1977
  ERROR CORR -  01,02
  MODIFICATION -  50,51,52,53
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T1      CONNECTICUT FLOOD INSURANCE STUDY HUD CONTRACT =H-4560
T2      CITY OF BRIDGEPORT  CEM =3027.921  AUGUST 1978
T3      PEQUONNOCK RIVER          STA.0.057 TO STA. 3.500 10 YEAR BACKWATER

J1  ICHECK     INO      NINV      IDIR      STRT     METRIC    HVINS      Q        WSEL      FQ
      -0.       2.       -0.       -0. -0.000000    -0.00     -0.0       -0.       3.600    -0.000

J2  NPROF     IPLOT     PREVS     XSECV     XSECH      FN      ALLDC      IBW      CHNIM    ITRACE
     1.000    -0.000    -1.000    -0.000    -0.000    -0.000    -0.000    -0.000    -0.000    -0.000

J3  VARIABLE CODES FOR SUMMARY PRINTOUT

    38.000     1.000    43.000    61.000    51.000    50.000    26.000     4.000     3.000    46.000

    10.000    11.000    12.000     0.000    38.000     1.000    40.000    41.000    39.000    42.000

    33.000    13.000    14.000    15.000    57.000    53.000    54.000     0.000   207.000    83.000

    91.000    99.000   104.000   119.000   145.000   181.000    -0.000    -0.000    -0.000    -0.000

NC      .030      .025      .030      .300      .600    -0.000    -0.000    -0.000    -0.000    -0.000
QT     9.000  2630.000  6700.000  9560.000 21240.000  9560.000  9560.000  9560.000  9560.000  9560.000
ET    -0.000    -0.000    -0.000    -0.000    -0.000    -0.000    10.400     9.100   101.000  1101.000

X1      .057    17.000   615.000  1270.000     0.000     0.000     0.000    -0.000    -0.000    -0.000
GR    20.000   365.000    10.000   390.000    10.000   570.000     8.000   615.000     0.000   621.000
GR   -12.000   670.000   -16.000   765.000   -23.000   790.000   -33.000   890.000   -35.000  1005.000
GR   -33.000  1075.000   -30.000  1125.000   -24.000  1200.000   -15.000  1269.800     0.000  1269.900
GR     7.500  1270.000    22.500  1290.000    -0.000    -0.000    -0.000    -0.000    -0.000    -0.000
ET    -0.000    -0.000    -0.000    -0.000    -0.000    -0.000    10.600    -0.000    -0.000    -0.000

X1      .116    52.000   743.500  1243.300   250.000   400.000   310.000    -0.000    -0.000    -0.000
X3    10.000    -0.000    -0.000    -0.000    -0.000    -0.000    -0.000    11.900    11.900    -0.000
GR    15.300   743.400     9.200   743.500     9.000   779.100    10.400   779.600    10.400   784.600
GR     8.700   785.100     7.900   818.800    10.400   819.300    11.000   824.700    -1.300   824.900
GR    -3.600   845.400    -3.800   859.100    11.400   859.600    11.400   864.600    -4.500   865.100
GR    -4.900   889.400   -16.300   897.400   -12.200   912.400    11.900   913.400    11.300   933.400
GR   -17.000   934.500   -25.200   942.500     8.800   942.600     8.800   945.400   -25.200   945.500
GR   -27.900   974.400   -26.200  1000.000   -26.100  1050.500     8.800  1050.600     8.800  1053.400
GR   -26.100  1053.500   -24.700  1058.500    11.300  1059.600    11.900  1079.500   -22.100  1080.600
GR   -22.700  1106.400   -11.800  1123.900    11.200  1124.400    11.900  1126.900   -12.100  1129.900
GR    -5.700  1164.100    11.000  1164.600    11.000  1169.600    -4.400  1189.400    -2.700  1202.800
GR    11.000  1203.300    11.000  1208.300    -2.700  1208.400    -2.600  1229.400    -1.600  1243.200
GR     7.900  1243.300    13.600  1243.400    -0.000    -0.000    -0.000    -0.000    -0.000    -0.000
SB    -0.000     1.560     2.600    -0.000   100.000    -0.000  8900.000     5.020   -27.900   -27.900

X1      .131    -0.000    -0.000    -0.000    70.000    70.000    70.000    -0.000    -0.000    -0.000
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	X2	-0.000	-0.000	1.000	11.900	13.600	-0.000	-0.000	-0.000	-0.000	-0.000
	X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	15.300	13.600	-0.000
	BT	20.000	743.400	15.300	0.000	743.500	15.300	9.200	779.600	15.300	10.400
	BT	784.600	15.300	10.400	819.300	15.300	10.400	824.700	15.300	11.000	859.600
	BT	15.300	11.400	864.600	15.300	11.400	913.400	15.300	11.900	933.400	15.300
	BT	11.300	1059.600	15.300	11.300	1079.500	15.300	11.900	1124.400	15.300	11.200
	BT	1126.900	15.300	11.900	1164.600	15.000	11.000	1169.600	14.900	11.000	1203.300
	BT	14.500	9.800	1208.300	14.300	9.800	1243.300	13.700	7.900	1243.400	13.600
	BT	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	NC	.015	.020	.025	.100	.300	-0.000	-0.000	-0.000	-0.000	-0.000
	ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	10.600	9.100	102.000	1102.000
	X1	.257	19.000	830.000	1175.000	760.000	600.000	680.000	-0.000	-0.000	-0.000
B	GR	14.000	130.000	10.500	320.000	10.000	630.000	9.500	700.000	10.500	815.000
	GR	10.000	830.000	0.000	850.000	-10.000	860.000	-20.000	885.000	-24.000	930.000
	GR	-25.000	1000.000	-24.000	1070.000	-20.000	1115.000	-10.000	1140.000	0.000	1150.000
	GR	4.500	1175.000	5.000	1200.000	6.000	1360.000	15.000	1361.000	-0.000	-0.000
	NC	.040	.040	.030	.300	.600	-0.000	-0.000	-0.000	-0.000	-0.000
	X1	.390	41.000	960.000	1068.100	920.000	520.000	720.000	-0.000	-0.000	-0.000
	GR	22.000	784.000	-2.400	784.100	-5.000	824.000	-5.000	865.000	22.000	866.000
	GR	22.000	871.000	-5.600	872.000	-5.800	912.000	-10.200	954.000	22.000	955.000
	GR	22.000	960.000	-14.400	961.000	-21.400	967.000	9.000	967.100	9.000	969.900
	GR	-21.600	970.000	-24.000	1000.000	-19.400	1031.000	9.000	1031.100	9.000	1034.000
	GR	-19.400	1034.100	-18.800	1039.000	-3.200	1068.000	14.000	1068.100	14.000	1099.000
	GR	-4.600	1099.100	-10.000	1118.000	-6.800	1137.000	20.000	1138.000	20.000	1143.000
	GR	-2.600	1144.000	6.200	1193.000	20.000	1194.000	20.000	1199.000	6.000	1200.000
	GR	6.000	1250.000	20.000	1251.000	20.000	1256.000	6.000	1257.000	6.000	1303.000
	GR	20.000	1304.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	NC	.035	.030	.025	.100	.300	-0.000	-0.000	-0.000	-0.000	-0.000
	ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	9.100	103.000	1103.000
	X1	.437	18.000	799.000	1201.000	200.000	200.000	200.000	-0.000	-0.000	-0.000
	GR	13.000	700.000	12.500	755.000	12.000	799.000	0.000	800.000	-10.000	810.000
C	GR	-20.000	850.000	-22.000	910.000	-23.000	1000.000	-22.000	1090.000	-20.000	1150.000
	GR	-10.000	1190.000	0.000	1200.000	7.000	1201.000	7.000	1300.000	8.500	1400.000
	GR	9.000	1450.000	9.000	1580.000	17.000	1630.000	-0.000	-0.000	-0.000	-0.000
	NC	-0.000	-0.000	-0.000	.400	.700	-0.000	-0.000	-0.000	-0.000	-0.000
	X1	.481	36.000	794.000	1202.200	150.000	320.000	240.000	-0.000	-0.000	-0.000
	X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	12.200	12.800	-0.000
	GR	19.000	786.000	8.500	787.000	8.500	794.000	5.500	796.000	-1.800	796.100
	GR	-8.200	821.100	-9.200	856.100	3.000	856.200	3.500	866.100	-10.400	866.200
	GR	-11.200	888.100	-9.600	930.000	4.200	930.100	9.400	960.100	-12.800	960.200
	GR	-20.800	963.100	9.600	963.200	9.600	967.000	-20.800	967.100	-18.800	1010.000
	GR	-12.800	1038.000	9.400	1038.100	9.400	1042.000	3.800	1068.000	-12.200	1068.100
	GR	-9.200	1102.000	-7.000	1133.100	3.000	1133.200	3.200	1143.100	-4.800	1143.200
	GR	-2.400	1202.100	6.400	1202.200	14.400	1266.000	14.000	1330.000	9.000	1550.000
	GR	25.000	1560.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	SB	-0.000	1.560	2.600	-0.000	136.000	-0.000	7030.000	3.800	-20.800	-20.800
	X1	.498	-0.000	-0.000	-0.000	80.000	80.000	80.000	-0.000	-0.000	-0.000
	X2	-0.000	-0.000	1.000	15.000	9.000	-0.000	-0.000	-0.000	-0.000	-0.000
	X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	18.900	9.000	-0.000
	BT	34.000	786.000	19.000	0.000	787.000	19.100	8.500	794.000	19.200	8.500
		806.000	19.500	10.000	821.000	20.000	12.200	837.000	20.200	10.400	856.000
		19.800	3.000	866.100	21.000	3.500	876.000	21.100	9.500	888.000	21.500
		13.400	904.000	21.700	13.700	930.000	22.100	4.200	960.000	22.800	0.000
		960.100	18.900	9.400	980.000	19.100	12.800	1000.000	19.500	15.000	1020.000
		19.200	13.500	1042.000	18.800	9.400	1043.000	22.800	0.000	1068.000	22.200

BT	3.800	1089.000	22.000	13.200	1102.000	21.800	14.400	1121.000	21.300	10.700
BT	1133.000	21.000	3.000	1143.100	20.700	3.200	1157.000	20.300	10.200	1174.000
BT	19.900	12.800	1187.000	19.400	11.800	1202.200	19.300	6.400	1265.900	19.000
BT	0.000	1266.000	14.400	0.000	1330.000	14.000	0.000	1550.000	9.000	0.000
BT	1560.000	25.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
NC	.035	.045	.025	.300	.500	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	9.100	104.000	1104.000

X1	.573	19.000	884.000	1120.000	440.000	380.000	410.000	-0.000	-0.000	-0.000
GR	12.800	600.000	12.500	640.000	11.000	760.000	9.000	830.000	8.500	884.000
GR	0.000	885.000	-10.000	895.000	-18.000	925.000	-20.000	1000.000	-18.000	1075.000
GR	-10.000	1100.000	0.000	1110.000	5.000	1120.000	8.500	1150.000	9.000	1220.000
GR	8.500	1280.000	10.500	1350.000	11.000	1380.000	22.500	1400.000	-0.000	-0.000
NC	-0.000	-0.000	.030	.400	.700	-0.000	-0.000	-0.000	-0.000	-0.000

X1	.701	28.000	851.000	1034.000	600.000	740.000	670.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	9.100	9.100	-0.000
GR	17.000	610.000	16.800	660.000	16.000	710.000	15.000	835.000	8.300	851.000
GR	-2.800	851.100	-13.400	874.000	-17.400	897.000	8.900	897.100	9.000	904.900
GR	-15.600	905.000	-13.800	929.000	-15.300	952.000	9.100	952.100	9.100	959.900
GR	6.600	963.000	6.600	966.000	-18.300	966.100	-19.200	983.000	-18.700	1000.000
GR	-17.400	1014.000	-13.500	1031.000	7.500	1031.100	8.400	1034.000	14.800	1093.000
GR	14.500	1200.000	15.500	1700.000	25.000	1715.000	-0.000	-0.000	-0.000	-0.000
SB	-0.000	1.560	2.600	-0.000	131.000	-0.000	3900.000	.920	-19.200	-19.200

X1	.711	-0.000	-0.000	-0.000	70.000	70.000	70.000	-0.000	-0.000	-0.000
X2	-0.000	-0.000	1.000	9.100	14.500	-0.000	-0.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	15.000	14.500	-0.000
BT	8.000	610.000	17.000	0.000	660.000	16.800	0.000	710.000	16.000	0.000
BT	835.000	15.000	0.000	1093.000	14.800	0.000	1200.000	14.500	-0.000	1700.000
BT	15.500	0.000	1715.000	25.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
NC	.035	.045	.025	.300	.500	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	9.100	105.000	1105.000

X1	.834	17.000	870.000	1140.000	660.000	660.000	660.000	-0.000	-0.000	-0.000
GR	15.000	550.000	12.500	560.000	12.500	590.000	11.000	670.000	7.500	870.000
GR	1.000	880.000	-10.000	910.000	-18.000	930.000	-19.000	1000.000	-18.000	1070.000
GR	-10.000	1090.000	1.000	1100.000	9.500	1140.000	10.500	1220.000	10.500	1270.000
GR	11.500	1330.000	13.500	1395.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000

X1	.952	55.000	817.000	1179.600	600.000	660.000	630.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	13.000	13.000	-0.000
GR	19.000	600.000	17.000	650.000	16.500	710.000	17.800	748.000	13.000	817.000
GR	7.400	818.000	7.700	860.500	1.800	861.000	-3.400	880.000	16.000	880.100
GR	-10.200	888.100	-14.500	918.000	-13.900	937.900	8.000	938.000	8.000	941.000
GR	-13.800	941.100	-13.600	947.900	7.400	948.000	12.500	950.500	16.000	950.600
GR	14.000	954.000	7.400	957.400	-15.200	957.500	-18.100	962.400	8.400	962.500
GR	8.400	965.000	-18.200	965.100	-18.600	1000.000	-16.600	1022.000	-16.300	1033.400
GR	8.000	1033.500	8.000	1036.000	-16.300	1036.100	-13.100	1042.500	7.400	1042.600
GR	13.100	1045.500	15.600	1052.300	-10.400	1052.500	-9.800	1059.900	6.400	1060.000
GR	6.400	1062.500	-9.600	1062.600	-8.600	1082.500	-3.900	1111.500	16.000	1111.600
GR	16.000	1119.400	-1.200	1119.500	1.900	1135.500	6.500	1147.500	6.500	1148.500
GR	4.800	1152.500	5.300	1179.500	15.200	1179.600	22.700	1179.700	22.700	1208.000
SB	-0.000	1.560	2.600	-0.000	107.000	-0.000	6290.000	3.510	-18.000	-18.000

X1	.962	-0.000	-0.000	-0.000	60.000	60.000	60.000	-0.000	-0.000	-0.000
X2	-0.000	-0.000	1.000	17.000	16.500	-0.000	-0.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	16.500	22.700	-0.000
BT	16.000	600.000	19.000	0.000	650.000	17.000	0.000	710.000	16.500	0.000

BT	748.000	17.800	0.000	817.000	20.100	13.000	880.000	21.200	16.000	880.100
BT	21.400	16.000	950.600	22.100	16.000	954.000	22.300	14.000	1000.000	23.000
BT	17.000	1045.500	23.000	12.300	1052.300	22.900	15.600	1111.600	22.800	16.000
BT	1119.400	22.800	16.000	1179.600	22.700	15.200	1208.000	22.700	-0.000	-0.000
NC	.055	.030	.025	.300	.500	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	9.100	106.000	1106.000

X1	1.096	19.000	875.000	1130.000	680.000	640.000	660.000	-0.000	-0.000	-0.000
GR	15.000	680.000	10.000	690.000	9.000	720.000	8.500	775.000	7.500	835.000
GR	5.000	875.000	1.000	880.000	-5.000	890.000	-12.000	925.000	-13.300	1000.000
GR	-12.000	1075.000	-5.000	1110.000	1.000	1120.000	5.000	1130.000	9.500	1155.000
GR	10.000	1170.000	10.500	1225.000	12.000	1275.000	12.800	1330.000	-0.000	-0.000
NC	.075	.030	.025	.100	.300	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	9.100	107.000	1107.000

X1	1.250	10.000	867.000	1160.000	780.000	1000.000	1000.000	-0.000	-0.000	-0.000
GR	15.000	867.000	5.000	870.000	2.000	875.000	-5.000	900.000	-7.100	1000.000
GR	-5.000	1100.000	2.000	1120.000	5.000	1125.000	10.000	1135.000	15.000	1160.000
NC	.050	.050	.025	.300	.500	-0.000	-0.000	-0.000	-0.000	-0.000

X1	1.319	26.000	917.500	1026.000	380.000	400.000	390.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	15.000	15.000	-0.000
GR	20.000	870.000	19.500	880.000	16.100	914.500	6.500	917.500	5.000	917.600
GR	2.300	925.500	-.200	934.000	-2.900	943.500	-4.400	953.000	-4.500	969.500
GR	6.500	969.600	6.500	974.000	-3.700	974.100	-3.300	990.500	-3.600	1000.000
GR	-1.300	1009.500	6.700	1026.000	9.000	1045.000	10.700	1055.000	11.300	1080.000
GR	15.900	1090.000	16.500	1105.000	15.500	1150.000	15.300	1270.000	17.000	1390.000
GR	20.000	1500.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
SB	-0.000	1.560	2.600	-0.000	44.000	-0.000	1030.000	3.310	-3.700	-3.700

X1	1.329	-0.000	-0.000	-0.000	50.000	50.000	50.000	-0.000	-0.000	-0.000
X2	-0.000	-0.000	1.000	9.500	15.300	-0.000	-0.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	16.100	15.300	-0.000
BT	22.000	870.000	20.000	0.000	880.000	19.500	0.000	914.500	16.100	0.000
BT	917.500	16.100	6.500	934.000	16.100	9.100	943.500	16.000	9.500	953.000
BT	16.000	9.100	969.600	16.000	6.500	974.000	16.000	6.500	990.600	15.900
BT	9.000	1000.000	15.900	9.100	1026.000	15.900	6.700	1030.000	15.900	7.200
BT	1045.000	15.900	9.000	1055.000	15.900	10.700	1080.000	15.900	11.300	1090.000
BT	15.900	0.000	1105.000	16.500	0.000	1150.000	15.500	0.000	1270.000	15.300
BT	0.000	1390.000	17.000	0.000	1500.000	20.000	-0.000	-0.000	-0.000	-0.000
NC	.045	.040	.035	.600	.800	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	9.100	108.000	1108.000

X1	1.349	11.000	962.000	1055.000	130.000	130.000	130.000	-0.000	-0.000	-0.000
GR	15.000	962.000	5.000	965.000	2.000	970.000	-3.500	975.000	-4.400	1000.000
GR	-3.500	1025.000	2.000	1030.000	5.000	1040.000	10.000	1045.000	15.500	1055.000
GR	17.000	1425.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
NC	-0.000	-0.000	-0.000	.100	.300	-0.000	-0.000	-0.000	-0.000	-0.000
NH	5.000	.055	925.000	.030	1070.000	.075	1095.000	.025	1700.000	.040
NH	2550.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	9.100	109.000	1109.000

X1	1.490	19.000	910.000	1075.000	800.000	670.000	740.000	-0.000	-0.000	-0.000
GR	20.000	900.000	10.000	910.000	5.000	925.000	2.000	940.000	-3.000	980.000
	-3.500	1000.000	-3.000	1020.000	2.000	1060.000	5.000	1070.000	9.800	1075.000
	9.500	1140.000	10.500	1180.000	11.500	1300.000	12.000	1435.000	14.300	1550.000
	10.500	1700.000	12.000	1920.000	15.000	2020.000	20.000	2170.000	-0.000	-0.000
	.060	.050	.030	.600	.800	-0.000	-0.000	-0.000	-0.000	-0.000
	9.000	2375.000	6035.000	8615.000	19140.000	8615.000	8615.000	8615.000	8615.000	8615.000

ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	9.100	110.000	1110.000

X1	1.583	17.000	985.000	1017.000	480.000	540.000	510.000	-0.000	-0.000	-0.000
GR	20.000	750.000	15.000	950.000	12.500	960.000	10.000	970.000	5.000	980.000
GR	2.500	985.000	-3.000	988.000	-2.800	1000.000	-3.000	1010.000	2.500	1015.000
GR	5.000	1025.000	10.000	1030.000	12.000	1220.000	11.500	1700.000	11.500	2100.000
GR	15.000	2190.000	20.000	2340.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
NC	-0.000	.060	.025	.300	.500	-0.000	-0.000	-0.000	-0.000	-0.000

X1	1.590	30.000	972.000	1018.100	40.000	70.000	60.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	8.800	10.000	-0.000
GR	25.000	460.000	24.000	500.000	20.000	740.000	18.000	800.000	17.000	930.000
GR	16.300	952.000	16.600	969.000	10.000	972.000	.900	972.100	-1.300	1000.000
GR	-2.500	1010.000	-2.900	1018.000	8.800	1018.100	15.300	1022.000	14.100	1042.000
GR	13.000	1120.000	13.500	1180.000	12.300	1250.000	10.500	1305.000	11.000	1370.000
GR	10.800	1430.000	12.300	1730.000	12.800	1860.000	12.500	2100.000	12.500	2430.000
GR	11.300	2670.000	12.000	2770.000	15.000	2940.000	20.000	2950.000	25.000	2970.000
SB	-0.000	1.560	3.000	-0.000	41.000	-0.000	470.000	.231	-1.300	-1.300

X1	1.600	-0.000	-0.000	-0.000	50.000	50.000	50.000	-0.000	-0.000	-0.000
X2	-0.000	-0.000	1.000	10.000	10.500	-0.000	-0.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	16.300	10.500	-0.000
BT	23.000	930.000	17.000	0.000	952.000	16.300	0.000	969.000	16.600	0.000
BT	969.100	20.100	0.000	972.000	19.900	10.000	1018.100	19.000	8.800	1021.900
BT	18.800	0.000	1022.000	15.300	0.000	1042.000	14.100	0.000	1120.000	13.000
BT	0.000	1180.000	13.500	0.000	1250.000	12.300	0.000	1305.000	10.500	0.000
BT	1370.000	11.000	0.000	1430.000	10.800	0.000	1730.000	12.300	0.000	1860.000
BT	12.800	0.000	2100.000	12.500	0.000	2430.000	12.500	0.000	2670.000	11.300
BT	0.000	2770.000	12.000	0.000	2940.000	15.000	0.000	3020.000	18.000	-0.000
NC	.065	.075	.030	.300	.500	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	9.100	111.000	1111.000

X1	1.604	24.000	960.000	1055.000	20.000	20.000	20.000	-0.000	-0.000	-0.000
GR	25.000	670.000	23.500	730.000	20.000	890.000	18.000	900.000	16.000	940.000
GR	15.000	960.000	5.000	970.000	2.500	975.000	-1.500	980.000	-2.800	1000.000
GR	-1.500	1020.000	2.500	1025.000	5.000	1030.000	10.000	1040.000	13.500	1055.000
GR	14.300	1090.000	14.300	1130.000	11.000	1300.000	11.700	1560.000	12.300	2400.000
GR	12.000	2740.000	15.000	2880.000	18.000	2950.000	25.000	2970.000	-0.000	-0.000
NC	-0.000	-0.000	-0.000	.100	.300	-0.000	-0.000	-0.000	-0.000	-0.000
NH	4.000	.045	960.000	.035	1040.000	.015	1165.000	.050	2570.000	-0.000
ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	9.100	112.000	1112.000

X1	1.714	25.000	950.000	1040.000	610.000	610.000	610.000	-0.000	-0.000	-0.000
GR	25.000	790.000	20.000	900.000	19.000	910.000	18.000	950.000	15.000	960.000
GR	5.000	970.000	4.000	980.000	1.600	1000.000	4.000	1020.000	5.000	1025.000
GR	10.000	1035.000	14.000	1040.000	13.000	1075.000	13.000	1125.000	12.500	1165.000
GR	11.200	1300.000	12.500	1490.000	13.500	1640.000	12.000	1765.000	11.000	1900.000
GR	15.000	2220.000	18.000	2350.000	19.000	2570.000	20.500	2770.000	25.000	3190.000
NC	.065	.050	.030	.100	.300	-0.000	-0.000	-0.000	-0.000	-0.000

X1	1.732	29.000	961.000	1037.000	150.000	80.000	110.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	11.300	11.300	-0.000
GR	25.000	790.000	22.800	825.000	15.000	940.000	11.300	961.000	2.200	962.000
GR	.300	972.000	.800	986.000	1.900	1000.000	11.300	1000.010	11.300	1001.000
GR	1.900	1001.010	.700	1014.000	1.400	1026.000	3.300	1036.000	11.300	1037.000
GR	14.000	1065.000	12.500	1220.000	12.000	1370.000	12.500	1500.000	13.500	1630.000
GR	11.500	1800.000	11.000	1880.000	12.300	2130.000	15.000	2200.000	18.000	2300.000
GR	18.000	2465.000	19.000	2560.000	20.500	2770.000	25.000	3190.000	-0.000	-0.000

X1	1.733	-0.000	-0.000	-0.000	1.000	1.000	1.000	-0.000	-0.000	-0.000
X2	-0.000	-0.000	-0.000	11.300	11.000	-0.000	-0.000	-0.000	-0.000	-0.000
BT	18.000	790.000	25.000	0.000	825.000	22.800	0.000	940.000	15.000	0.000
BT	961.000	14.300	11.300	970.000	14.000	11.300	1025.000	13.500	11.300	1037.000
BT	13.600	11.300	1065.000	14.000	0.000	1220.000	12.500	0.000	1370.000	12.000
BT	0.000	1500.000	12.500	0.000	1630.000	13.500	0.000	1800.000	11.500	0.000
BT	1880.000	11.000	0.000	2130.000	12.300	0.000	2200.000	15.000	0.000	2300.000
BT	18.000	0.000	2465.000	18.000	0.000	2560.000	19.000	0.000	2770.000	20.500
BT	0.000	3190.000	25.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
NC	-0.000	-0.000	-0.000	.500	.700	-0.000	-0.000	-0.000	-0.000	-0.000

X1	1.884	31.000	959.400	1041.000	800.000	800.000	800.000	-0.000	-0.000	-0.000
X2	-0.000	-0.000	-0.000	1200.000	8.800	-0.000	-0.000	-0.000	-0.000	-0.000
BT	21.000	0.000	25.000	0.000	60.000	20.000	0.000	90.000	15.000	0.000
BT	200.000	10.000	0.000	580.000	8.800	0.000	670.000	9.500	0.000	730.000
BT	10.500	0.000	840.000	10.500	0.000	930.000	11.500	0.000	957.000	14.200
BT	12.000	941.000	14.200	12.000	1050.000	12.500	0.000	1100.000	13.000	0.000
BT	1150.000	12.500	0.000	1400.000	12.300	0.000	1470.000	15.000	0.000	1640.000
BT	18.000	0.000	1720.000	18.000	0.000	1730.000	20.000	0.000	2100.000	20.000
BT	0.000	2170.000	25.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
GR	25.000	0.000	20.000	60.000	15.000	90.000	10.000	200.000	8.800	580.000
GR	9.500	670.000	10.500	730.000	10.500	840.000	11.500	930.000	11.700	957.000
GR	12.000	959.400	6.400	959.500	2.100	986.000	2.400	1000.000	12.000	1000.010
GR	11.900	1001.000	2.400	1001.010	2.600	1015.000	4.100	1038.000	6.000	1040.000
GR	12.000	1041.000	12.500	1050.000	13.000	1100.000	12.500	1150.000	12.300	1400.000
GR	15.000	1470.000	18.000	1640.000	18.000	1720.000	20.000	1730.000	20.000	2100.000
GR	25.000	2170.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000

X1	1.885	-0.000	-0.000	-0.000	1.000	1.000	1.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	9.100	113.000	1113.000

X1	1.895	30.000	976.000	1031.000	60.000	60.000	60.000	-0.000	-0.000	-0.000
GR	25.000	0.000	20.000	90.000	15.000	110.000	11.000	190.000	10.000	210.000
GR	9.800	240.000	9.800	380.000	9.500	430.000	8.500	490.000	9.000	545.000
GR	8.800	590.000	9.300	640.000	9.500	680.000	10.000	700.000	10.500	920.000
GR	11.000	976.000	4.500	977.000	2.500	980.000	2.000	1000.000	2.500	1020.000
GR	4.500	1025.000	10.000	1030.000	12.000	1031.000	13.000	1080.000	11.000	1270.000
GR	15.000	1420.000	18.000	1580.000	20.000	1650.000	20.000	2040.000	25.000	2080.000
NC	-0.000	-0.000	-0.000	.100	.300	-0.000	-0.000	-0.000	-0.000	-0.000
NH	5.000	.050	705.000	.025	860.000	.050	980.000	.035	1060.000	.050
NH	1480.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	9.100	114.000	1114.000
X1	1.960	32.000	980.000	1060.000	340.000	370.000	350.000	-0.000	-0.000	-0.000
GR	25.000	0.000	20.000	220.000	15.000	230.000	12.500	295.000	10.000	340.000
GR	8.800	395.000	10.300	475.000	10.500	660.000	10.500	705.000	11.500	760.000
GR	11.500	780.000	11.000	815.000	10.500	860.000	10.300	955.000	10.000	980.000
GR	5.000	984.000	2.500	990.000	1.600	1000.000	2.500	1010.000	4.500	1015.000
GR	5.000	1016.000	10.000	1060.000	10.200	1090.000	10.500	1135.000	10.800	1175.000
GR	11.300	1230.000	11.300	1280.000	13.500	1330.000	18.000	1410.000	20.000	1480.000
GR	20.000	2000.000	25.000	2100.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
NC	.070	.070	.020	.400	.700	-0.000	-0.000	-0.000	-0.000	-0.000

X1	1.979	29.000	974.000	1026.300	120.000	100.000	110.000	-0.000	-0.000	-0.000
GR	20.000	210.000	15.000	230.000	10.000	380.000	11.000	660.000	11.000	720.000
GR	13.000	855.000	13.500	900.000	13.300	953.000	13.300	973.000	10.000	974.000
GR	3.300	974.100	1.800	990.100	10.000	990.200	10.000	991.500	1.800	991.600
GR	1.300	1007.800	10.000	1007.900	10.000	1009.200	1.300	1009.300	3.800	1026.200
GR	9.900	1026.300	12.500	1050.100	11.000	1080.000	10.000	1130.000	10.300	1260.000

GR	11.000	1300.000	15.000	1400.000	18.000	1470.000	20.000	1550.000	-0.000	-0.000

X1	1.980	-0.000	-0.000	-0.000	1.000	1.000	1.000	-0.000	-0.000	-0.000
X2	-0.000	-0.000	-0.000	10.000	10.000	-0.000	-0.000	-0.000	-0.000	-0.000
BT	22.000	0.000	25.000	0.000	210.000	20.000	0.000	230.000	15.000	0.000
BT	380.000	10.000	0.000	660.000	11.000	0.000	720.000	11.000	0.000	855.000
BT	13.000	0.000	900.000	13.500	0.000	953.000	13.300	0.000	973.000	13.300
BT	0.000	974.000	15.300	10.000	1026.300	14.900	10.000	1050.100	12.500	0.000
BT	1080.000	11.000	0.000	1130.000	10.000	0.000	1260.000	10.300	0.000	1300.000
BT	11.000	0.000	1400.000	15.000	0.000	1470.000	18.000	0.000	1550.000	20.000
BT	0.000	1900.000	20.000	0.000	2000.000	25.000	-0.000	-0.000	-0.000	-0.000

X1	2.057	22.000	971.000	1029.500	450.000	350.000	400.000	-0.000	-0.000	-0.000
X2	-0.000	-0.000	-0.000	10.000	11.500	-0.000	-0.000	-0.000	-0.000	-0.000
BT	9.000	195.000	25.000	0.000	210.000	20.000	0.000	260.000	15.000	0.000
BT	640.000	11.500	0.000	720.000	12.500	0.000	850.000	15.000	0.000	971.000
BT	19.000	10.000	1029.500	2100.000	1000.000	112000.000	2500.000	-0.000	-0.000	-0.000
GR	25.000	195.000	20.000	210.000	15.000	260.000	11.500	640.000	12.500	720.000
GR	15.000	850.000	10.000	971.000	1.100	971.100	3.200	979.000	3.100	988.300
GR	10.000	988.400	10.000	989.700	2.700	989.800	1.600	1000.000	.100	1010.800
GR	10.000	1010.900	10.000	1012.200	.900	1012.300	.900	1021.000	.100	1029.400
GR	10.000	1029.500	25.000	1120.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000

X1	2.058	-0.000	-0.000	-0.000	1.000	1.000	1.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	11.500	11.500	-0.000
ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	9.100	115.000	1115.000
NC	.035	.035	.030	.300	.500	-0.000	-0.000	-0.000	-0.000	-0.000

X1	2.063	17.000	920.000	1041.000	50.000	30.000	40.000	-0.000	-0.000	-0.000
GR	25.000	250.000	20.000	320.000	18.000	360.000	15.000	530.000	12.000	710.000
GR	12.000	830.000	11.500	900.000	10.000	920.000	4.500	965.000	2.000	970.000
GR	1.800	1000.000	2.000	1030.000	4.500	1040.000	9.500	1041.000	15.000	1100.000
GR	20.000	1130.000	25.000	1160.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
NC	.035	.035	.030	.600	.800	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	9.100	116.000	1116.000

X1	2.141	22.000	960.000	1030.000	420.000	420.000	420.000	-0.000	-0.000	-0.000
GR	25.000	700.000	20.000	701.000	20.000	715.000	17.300	800.000	17.500	860.000
GR	17.500	890.000	15.000	920.000	11.000	940.000	10.000	960.000	7.500	975.000
GR	7.000	1000.000	7.500	1025.000	10.000	1030.000	11.800	1050.000	12.500	1110.000
GR	13.000	1190.000	12.300	1260.000	12.500	1340.000	15.000	1370.000	16.300	1410.000
GR	17.000	1449.000	25.000	1450.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
NC	-0.000	-0.000	-0.000	.600	.800	-0.000	-0.000	-0.000	-0.000	-0.000

X1	2.150	19.000	968.000	1032.000	50.000	50.000	50.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	14.000	13.900	-0.000
GR	25.000	800.000	20.000	855.000	19.000	942.000	18.500	951.800	14.000	968.000
GR	8.100	970.000	7.700	980.000	7.400	1000.000	7.500	1012.000	7.900	1030.000
GR	13.900	1032.000	19.000	1049.000	18.800	1068.000	17.500	1100.000	15.000	1220.000
GR	13.000	1340.000	15.000	1430.000	16.500	1490.000	25.000	1491.000	-0.000	-0.000
SB	-0.000	1.560	2.600	-0.000	63.000	-0.000	400.000	.793	7.700	7.700

X1	2.157	-0.000	-0.000	-0.000	35.000	35.000	35.000	-0.000	-0.000	-0.000
X2	-0.000	-0.000	1.000	14.000	13.000	-0.000	-0.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	18.500	13.000	-0.000
BT	19.000	800.000	25.000	0.000	855.000	20.000	0.000	942.000	19.000	0.000
BT	951.800	18.500	0.000	953.000	23.400	0.000	965.000	23.600	0.000	965.400
BT	21.800	0.000	1000.000	22.100	13.900	1035.000	21.800	0.000	1035.100	23.600

BT	0.000	1047.000	23.400	0.000	1049.000	19.000	0.000	1068.000	18.800	0.000
BT	1100.000	17.500	0.000	1220.000	15.000	0.000	1340.000	13.000	0.000	1430.000
BT	15.000	0.000	1490.000	16.500	0.000	1491.000	25.000	-0.000	-0.000	-0.000
NH	5.000	.050	890.000	.025	945.000	.060	960.000	.040	1040.000	.025
NH	1501.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	9.100	117.000	1117.000

X1	2.161	19.000	960.000	1040.000	20.000	20.000	20.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	16.500	16.500	-0.000
GR	25.000	850.000	20.000	890.000	18.500	920.000	19.000	945.000	15.000	960.000
GR	10.000	965.000	8.000	975.000	8.000	1025.000	10.000	1030.000	15.000	1035.000
GR	16.000	1040.000	15.500	1060.000	16.500	1100.000	17.500	1160.000	16.000	1305.000
GR	15.000	1320.000	15.000	1440.000	16.300	1500.000	25.000	1501.000	-0.000	-0.000
NC	.060	.050	.045	.100	.300	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	9.100	118.000	1118.000

X1	2.265	10.000	965.000	1021.000	600.000	520.000	560.000	-0.000	-0.000	-0.000
GR	25.000	885.000	20.000	895.000	15.000	965.000	10.000	980.000	10.000	1020.000
GR	13.000	1021.000	15.000	1065.000	16.000	1250.000	16.000	1600.000	25.000	1601.000
NC	.080	.030	.030	.100	.300	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	9.100	119.000	1119.000

X1	2.788	16.000	890.000	1046.000	2220.000	2480.000	2530.000	-0.000	-0.000	-0.000
X5	4.000	37.750	40.250	41.700	45.450	-0.000	-0.000	-0.000	-0.000	-0.000
GR	58.500	832.000	36.800	890.000	35.000	897.000	31.500	911.000	29.400	919.000
GR	28.000	940.000	28.000	971.000	25.100	1000.000	29.600	1022.000	30.800	1029.000
GR	33.400	1039.000	35.000	1040.000	40.100	1046.000	42.500	1075.000	45.000	1085.000
GR	50.000	1090.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
NC	.040	.055	.030	.200	.400	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	9.100	120.000	1120.000

X1	3.096	15.000	945.000	1055.000	1630.000	1630.000	1630.000	-0.000	-0.000	-0.000
GR	50.000	560.000	45.000	590.000	41.500	650.000	43.000	700.000	40.500	760.000
GR	40.200	840.000	38.600	880.000	38.000	945.000	35.200	960.000	32.500	970.000
GR	32.300	1030.000	35.200	1040.000	39.000	1055.000	40.000	1060.000	50.000	1070.000
NC	.035	.045	.030	.100	.300	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	9.100	121.000	1121.000

X1	3.351	21.000	940.000	1050.000	1330.000	1300.000	1310.000	-0.000	-0.000	-0.000
GR	55.000	390.000	52.000	420.000	50.000	450.000	48.500	470.000	48.000	525.000
GR	45.200	575.000	46.600	645.000	46.000	710.000	48.000	785.000	45.000	860.000
GR	44.600	875.000	43.500	940.000	40.000	965.000	38.500	970.000	38.000	1000.000
GR	38.500	1030.000	40.000	1035.000	41.500	1050.000	45.000	1100.000	50.000	1105.000
GR	55.000	1125.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
NC	.035	.035	.030	.200	.400	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	9.100	122.000	1122.000

X1	3.475	13.000	975.000	1050.000	640.000	680.000	660.000	-0.000	-0.000	-0.000
GR	55.000	840.000	52.500	865.000	50.000	890.000	49.000	920.000	49.500	945.000
GR	49.000	975.000	45.000	980.000	41.000	985.000	41.000	1015.000	47.000	1025.000
GR	47.000	1045.000	50.000	1050.000	55.000	1060.000	-0.000	-0.000	-0.000	-0.000
EJ	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000

50-YEAR BACKWATER

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**************************************************
 HEC2 RELEASE DATED NOV 76 UPDATED  AUG1977
 ERROR CORR -  01,02
 MODIFICATION -  50,51,52,53
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T1       CONNECTICUT FLOOD INSURANCE STUDY
T2       CITY OF BRIDGEPORT
T3       PEQUONNOCK RIVER          STA. 0.057 TO STA. 3.500 50 YEAR BACKWATER

J1  ICHECK     INQ       NINV       IDIR       STRT      METRIC     HVINS      Q        WSEL      FQ
       -0.        3.       -0.        -0.  -0.000000    -0.00      -0.0      -0.      3.600    -0.000

J2  NPROF     IPLOT     PREVS      XSECV      XSECH       FN       ALLDC      IBW      CHNIM     ITRACE
       2.000    -0.000    -1.000     -0.000     -0.000    -0.000    -0.000    -0.000    -0.000    -0.000
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2

100-YEAR BACKWATER

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  HEC2 RELEASE DATED NOV 76 UPDATED  AUG1977
  ERROR CORR -  01,02
  MODIFICATION -  50,51,52,53
*************************************************

T1      CONNECTICUT FLOOD INSURANCE STUDY
T2      CITY OF BRIDGEPORT
T3      PEQUONNOCK RIVER        STA. 0.057 TO STA. 3.500 100 YEAR BACKWATER
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J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	-0.	4.	-0.	-0.	-0.000000	-0.00	-0.0	-0.	3.600	-0.000

J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	3.000	-0.000	-1.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000

3

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  HEC2 RELEASE DATED NOV 76 UPDATED  AUG1977
  ERROR CORR -  01,02
  MODIFICATION -  50,51,52,53
*********************************************


T1       CONNECTICUT FLOOD INSURANCE STUDY
T2       CITY OF BRIDGEPORT
T3       PEQUONNOCK RIVER        STA. 0.057 TO STA. 3.500 500 YEAR BACKWATER

J1  ICHECK     INQ        NINV       IDIR       STRT       METRIC     HVINS      Q          WSEL       FQ

      -0.        5.        -0.        -0.  -0.000000      -0.00      -0.0        -0.        3.600     -0.000

J2  NPROF      IPLOT      PRFVS      XSECV      XSECH      FN         ALLDC      IBW        CHNIM      ITRACE

     15.000     -0.000     -1.000     -0.000     -0.000     -0.000     -0.000     -0.000     -0.000     -0.000
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4

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*********************************************
HEC2 RELEASE DATED NOV 76 UPDATED  AUG1977
ERROR CORR -  01,02
MODIFICATION -  50,51,52,53
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NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

PEQUONNOCK RIVER   BACKWATER

SUMMARY PRINTOUT

	SECNO	CWSEL	Q	DIFEG	DIFWSX	DIFWSP	VCH	TOPWID	EG	QWEIR	HV	HL	OLOSS
A	.057	3.60	2630.00	0.00	0.00	0.00	.14	651.65	3.60	0.00	.00	0.00	0.00
	.057	3.60	6700.00	.00	0.00	0.00	.36	651.65	3.60	0.00	.00	0.00	0.00
	.057	3.60	9560.00	.00	0.00	0.00	.52	651.65	3.60	0.00	.00	0.00	0.00
	.057	3.60	21240.00	.02	0.00	0.00	1.15	651.65	3.62	0.00	.02	0.00	0.00
	.116	3.60	2630.00	0.00	-.00	0.00	.43	342.46	3.60	0.00	.00	.00	.00
	.116	3.59	6700.00	.01	-.01	-.00	1.08	342.46	3.61	0.00	.02	.00	.01
	.116	3.59	9560.00	.02	-.01	-.01	1.55	342.45	3.63	0.00	.04	.00	.02
	.116	3.54	21240.00	.12	-.06	-.05	3.45	342.36	3.72	0.00	.18	.01	.10
	.131	3.60	2630.00	0.00	.00	0.00	.43	342.46	3.60	0.00	.00	.00	.00
	.131	3.60	6700.00	.01	.00	-.00	1.08	342.45	3.61	0.00	.02	.00	.00
	.131	3.59	9560.00	.03	.00	-.00	1.55	342.44	3.63	0.00	.04	.00	.00
	.131	3.56	21240.00	.14	.02	-.03	3.45	342.37	3.74	0.00	.18	.02	.00
	.257	3.60	2630.00	0.00	.00	0.00	.36	327.21	3.60	0.00	.00	.00	.00
B	.257	3.61	6700.00	.02	.01	.01	.91	327.29	3.62	0.00	.01	.01	.00
	.257	3.61	9560.00	.04	.02	.01	1.29	327.38	3.64	0.00	.03	.01	.00
	.257	3.67	21240.00	.20	.12	.06	2.87	327.75	3.80	0.00	.13	.05	.01
	.390	3.60	2630.00	0.00	-.00	0.00	.70	338.91	3.61	0.00	.01	.00	.00
	.390	3.60	6700.00	.04	-.00	.00	1.79	338.95	3.64	0.00	.04	.01	.02
	.390	3.61	9560.00	.08	-.01	.00	2.55	338.93	3.69	0.00	.08	.01	.03
	.390	3.63	21240.00	.43	-.04	.03	5.66	339.10	4.04	0.00	.40	.07	.17
	.437	3.61	2630.00	0.00	.01	0.00	.28	400.81	3.61	0.00	.00	.00	.00
	.437	3.64	6700.00	.04	.04	.03	.72	400.82	3.65	0.00	.01	.00	.00
C	.437	3.68	9560.00	.09	.08	.04	1.02	400.83	3.70	0.00	.02	.00	.01
	.437	4.01	21240.00	.48	.37	.32	2.24	400.91	4.08	0.00	.08	.01	.03
	.481	3.61	2630.00	0.00	-.00	0.00	.59	342.35	3.61	0.00	.01	.00	.00
	.481	3.63	6700.00	.06	-.01	.03	1.50	342.35	3.67	0.00	.04	.00	.02
	.481	3.67	9560.00	.13	-.01	.03	2.14	342.35	3.74	0.00	.07	.00	.04
	.481	3.94	21240.00	.67	-.06	.27	4.66	343.02	4.28	0.00	.34	.01	.18
	.498	3.61	2630.00	0.00	.00	0.00	.60	342.35	3.61	0.00	.01	.00	.00
	.498	3.64	6700.00	.06	.00	.03	1.52	342.35	3.67	0.00	.04	.00	.00
	.498	3.67	9560.00	.14	.01	.04	2.16	342.35	3.75	0.00	.07	.01	.00
	.498	3.97	21240.00	.70	.03	.29	4.73	343.15	4.32	0.00	.35	.03	.01

	SECNO	CWSEL	Q	DIFEG	DIFWSX	DIFWSP	VCH	TOPWID	EG	QWEIR	HV	HL	OLOSS
	.573	3.61	2630.00	0.00	.00	0.00	.58	232.64	3.61	0.00	.01	.00	.00
D	.573	3.65	6700.00	.07	.01	.04	1.47	232.74	3.68	0.00	.03	.01	.00
	.573	3.70	9560.00	.15	.02	.05	2.09	232.85	3.77	0.00	.07	.02	.00
	.573	4.08	21240.00	.79	.11	.38	4.56	233.65	4.41	0.00	.32	.08	.01
	.701	3.61	2630.00	0.00	.00	0.00	.89	158.26	3.62	0.00	.01	.00	.00
	.701	3.65	6700.00	.11	.00	.04	2.26	158.26	3.73	0.00	.08	.02	.03
	.701	3.71	9560.00	.25	.01	.05	3.22	158.27	3.87	0.00	.16	.04	.06
	.701	4.12	21240.00	1.26	.03	.41	7.00	158.28	4.88	0.00	.76	.16	.31
	.711	3.61	2630.00	0.00	-.00	0.00	1.10	158.26	3.63	0.00	.02	.00	.00
	.711	3.65	6700.00	.15	-.00	.04	2.81	158.26	3.77	0.00	.12	.01	.03
	.711	3.70	9560.00	.32	-.01	.05	4.01	158.27	3.95	0.00	.25	.02	.06
	.711	4.07	21240.00	1.68	-.04	.37	8.91	158.28	5.31	0.00	1.23	.10	.33
	.834	3.63	2630.00	0.00	.02	0.00	.63	236.41	3.63	0.00	.01	.00	.00
E	.834	3.79	6700.00	.19	.14	.16	1.60	237.38	3.83	0.00	.04	.03	.02
	.834	3.98	9560.00	.42	.28	.19	2.26	238.56	4.06	0.00	.08	.06	.05
	.834	5.48	21240.00	2.18	1.41	1.50	4.62	248.00	5.82	0.00	.33	.24	.27
	.952	3.63	2630.00	0.00	.00	0.00	.76	237.53	3.64	0.00	.01	.00	.00
	.952	3.80	6700.00	.21	.01	.17	1.92	238.02	3.85	0.00	.06	.02	.01
	.952	4.00	9560.00	.47	.02	.20	2.70	238.64	4.11	0.00	.11	.04	.02
	.952	5.58	21240.00	2.39	.09	1.58	5.40	272.32	6.03	0.00	.45	.15	.06
	.962	3.63	2630.00	0.00	.00	0.00	.76	237.51	3.64	0.00	.01	.00	.00
	.962	3.80	6700.00	.22	.00	.17	1.92	238.03	3.86	0.00	.06	.00	.00
	.962	4.01	9560.00	.48	.01	.21	2.70	238.67	4.12	0.00	.11	.01	.00
	.962	5.62	21240.00	2.43	.04	1.61	5.38	272.53	6.07	0.00	.45	.04	.00
	1.096	3.64	2630.00	0.00	.00	0.00	.77	249.90	3.65	0.00	.01	.01	.00
F	1.096	3.83	6700.00	.25	.03	.20	1.93	250.66	3.89	0.00	.06	.03	.00
	1.096	4.07	9560.00	.54	.06	.24	2.71	251.52	4.18	0.00	.11	.06	.00
	1.096	5.85	21240.00	2.64	.23	1.78	5.34	273.24	6.29	0.00	.44	.22	.00
	1.250	3.64	2630.00	0.00	.00	0.00	1.21	250.48	3.66	0.00	.02	.01	.00
G	1.250	3.83	6700.00	.32	.00	.20	3.01	251.11	3.98	0.00	.14	.06	.02
	1.250	4.07	9560.00	.69	.00	.24	4.19	251.92	4.35	0.00	.27	.11	.05
	1.250	5.87	21240.00	3.14	.02	1.79	7.75	256.99	6.80	0.00	.93	.36	.15
	1.319	3.48	2630.00	0.00	-.15	0.00	4.96	92.87	3.87	0.00	.38	.03	.18
*	1.319	3.16	6700.00	2.08	-.68	-.33	13.40	91.23	5.94	0.00	2.79	.17	1.32
*	1.319	4.76	9560.00	4.22	.69	1.60	14.64	99.27	8.09	0.00	3.33	.29	1.53
*	1.319	9.39	21240.00	10.88	3.52	4.62	18.58	108.50	14.75	0.00	5.36	.63	2.21
	1.329	3.54	2630.00	0.00	.05	0.00	4.91	93.18	3.91	0.00	.37	.04	.00
	1.329	5.02	6700.00	2.62	1.86	1.48	9.87	100.50	6.53	0.00	1.51	.20	.38
	1.329	6.79	9560.00	4.83	2.03	1.77	11.20	108.50	8.74	0.00	1.95	.23	.41
	1.329	15.72	21240.00	13.58	6.34	8.94	10.96	332.93	17.49	2602.45	1.77	2.74	0.00
	1.349	3.65	2630.00	0.00	.12	0.00	6.11	68.23	4.23	0.00	.58	.16	.16
H	1.349	5.39	6700.00	3.40	.38	1.74	12.03	75.51	7.64	0.00	2.25	.52	.59
	1.349	7.20	9560.00	5.90	.41	1.81	13.74	77.86	10.13	0.00	2.93	.61	.79
	1.349	15.63	21240.00	14.92	-.09	8.43	15.05	125.05	19.15	0.00	3.52	.26	1.40

	SECNO	CWSEL	Q	DIFEG	DIFWSX	DIFWSP	VCH	TOPWID	EG	QWEIR	HV	HL	OLOSS
I	1.490	4.75	2630.00	0.00	1.10	0.00	3.41	142.94	4.93	0.00	.18	.66	.04
	1.490	8.43	6700.00	3.90	3.04	3.68	5.04	158.88	8.83	0.00	.39	1.01	.19
	1.490	10.85	9560.00	6.37	3.65	2.41	5.45	376.93	11.30	0.00	.45	.92	.25
	1.490	19.57	21240.00	14.71	3.94	8.72	2.78	1256.35	19.64	0.00	.07	.15	.34
J	1.583	5.14	2375.00	0.00	.39	0.00	0.00	45.43	6.65	0.00	1.51	.66	1.06
	1.583	8.65	6035.00	5.22	.21	3.51	0.00	55.95	11.87	0.00	3.22	.78	2.26
*	1.583	12.20	8615.00	6.16	1.35	3.55	0.00	1156.80	12.81	0.00	.62	.61	.13
	1.583	19.67	19140.00	13.06	.10	7.47	0.00	1566.90	19.71	0.00	.04	.05	.02
	1.590	6.28	2375.00	0.00	1.14	0.00	7.09	46.04	7.06	0.00	.78	.19	.22
	1.590	10.54	6035.00	5.48	1.89	4.26	11.36	53.43	12.54	0.00	2.00	.30	.37
*	1.590	13.26	8615.00	7.30	1.06	2.72	9.75	1746.51	14.36	0.00	1.10	.16	.24
	1.590	19.67	19140.00	12.67	.00	6.41	3.96	2199.63	19.73	0.00	.06	.01	.01
	1.600	6.38	2375.00	0.00	.10	0.00	6.99	46.04	7.14	0.00	.76	.07	.01
	1.600	10.54	6035.00	5.40	-.00	4.16	11.36	52.84	12.54	1959.98	2.00	0.00	0.00
	1.600	13.60	8615.00	7.22	.35	3.07	8.52	1832.82	14.36	7052.10	.76	0.00	0.00
	1.600	19.75	19140.00	12.67	.08	6.15	3.90	2202.15	19.81	18176.59	.06	.08	0.00
	1.604	6.85	2375.00	0.00	.47	0.00	5.16	65.57	7.27	0.00	.41	.02	.10
	1.604	12.31	6035.00	5.71	1.77	5.46	6.67	1608.39	12.97	0.00	.66	.03	.40
	1.604	14.19	8615.00	7.24	.59	1.88	5.48	1830.64	14.51	0.00	.31	.01	.13
	1.604	19.75	19140.00	12.56	-.00	5.56	3.72	2063.81	19.82	0.00	.07	.00	.01
K	1.714	7.30	2375.00	0.00	.45	0.00	10.30	61.93	8.95	0.00	1.65	1.31	.37
	1.714	13.16	6035.00	4.82	.85	5.85	7.18	1001.50	13.77	0.00	.62	.80	.00
	1.714	14.71	8615.00	5.98	.51	1.55	5.24	1236.33	14.93	0.00	.22	.42	.01
	1.714	19.86	19140.00	10.97	.11	5.15	2.97	1783.47	19.92	0.00	.06	.09	.00
	1.732	9.01	2375.00	0.00	1.71	0.00	4.16	74.47	9.28	0.00	.27	.19	.14
	1.732	13.60	6035.00	4.63	.45	4.59	5.04	1171.32	13.91	0.00	.30	.10	.03
	1.732	14.76	8615.00	5.72	.05	1.16	5.04	1252.39	15.00	0.00	.24	.06	.01
	1.732	19.86	19140.00	10.66	.00	5.11	3.60	1813.86	19.94	0.00	.08	.01	.01
	1.733	9.01	2375.00	0.00	.00	0.00	4.16	74.47	9.28	0.00	.27	.00	.00
	1.733	13.60	6035.00	4.63	.00	4.59	5.04	1170.95	13.91	0.00	.31	.00	.00
	1.733	14.76	8615.00	5.72	.00	1.16	5.04	1252.41	15.00	0.00	.24	.00	.00
	1.733	19.86	19140.00	10.66	.00	5.10	3.61	1812.73	19.94	0.00	.08	.00	.00
	1.884	10.38	2375.00	0.00	1.36	0.00	5.87	610.90	10.70	0.00	.32	1.38	.03
	1.884	14.45	6035.00	3.78	.84	4.07	1.32	1353.34	14.47	0.00	.03	.42	.14
	1.884	15.46	8615.00	4.79	.70	1.01	1.49	1408.63	15.49	0.00	.03	.38	.11
	1.884	20.08	19140.00	9.41	.22	4.62	1.55	2042.06	20.11	0.00	.03	.15	.02
	1.885	10.62	2375.00	0.00	.25	0.00	3.44	745.43	10.78	0.00	.16	.00	.08
	1.885	14.44	6035.00	3.71	-.01	3.81	2.69	1353.44	14.49	0.00	.05	.00	.02
	1.885	15.45	8615.00	4.73	-.01	1.01	3.00	1408.71	15.51	0.00	.06	.00	.02
	1.885	20.08	19140.00	9.34	-.00	4.63	2.97	2042.07	20.12	0.00	.05	.00	.01
L	1.895	10.63	2375.00	0.00	.00	0.00	4.59	791.24	10.89	0.00	.26	.04	.07
	1.895	14.45	6035.00	3.62	.01	3.82	3.19	1278.50	14.51	0.00	.06	.01	.01
	1.895	15.46	8615.00	4.64	.01	1.01	3.55	1336.88	15.53	0.00	.07	.01	.01
	1.895	20.08	19140.00	9.25	.01	4.62	3.51	1952.20	20.13	0.00	.05	.01	.01

	SECNO	CWSEL	Q	DIFEG	DIFWSX	DIFWSP	VCH	TOPWID	EG	QWEIR	HV	HL	OLOSS
	1.960	10.96	2375.00	0.00	.33	0.00	4.41	780.64	11.21	0.00	.25	.32	.00
M	1.960	14.54	6035.00	3.37	.09	3.57	2.39	1106.37	14.58	0.00	.04	.07	.00
	1.960	15.55	8615.00	4.39	.09	1.02	2.62	1137.44	15.60	0.00	.05	.07	.00
	1.960	20.13	19140.00	8.97	.05	4.57	2.67	1788.31	20.18	0.00	.05	.05	.00
	1.979	11.02	2375.00	0.00	.05	0.00	5.14	655.08	11.40	0.00	.39	.10	.10
	1.979	14.52	6035.00	3.30	-.01	3.51	4.79	1143.68	14.70	0.00	.18	.03	.10
	1.979	15.54	8615.00	4.33	-.01	1.02	5.33	1184.73	15.73	0.00	.20	.03	.10
	1.979	20.12	19140.00	8.85	-.01	4.58	5.30	1340.00	20.26	0.00	.13	.02	.06
	1.980	10.99	2375.00	0.00	-.02	0.00	5.69	590.09	11.46	0.00	.46	.00	.05
	1.980	14.67	6035.00	3.29	.15	3.68	3.77	1152.09	14.75	0.00	.07	.00	.04
	1.980	15.73	8615.00	4.33	.19	1.06	3.31	1189.97	15.79	0.00	.06	.00	.05
	1.980	20.23	19140.00	8.83	.11	4.50	3.15	1340.00	20.29	0.00	.06	.00	.03
	2.057	11.53	2375.00	0.00	.53	0.00	4.27	109.74	11.81	0.00	.28	.28	.07
	2.057	14.79	6035.00	3.64	.12	3.26	7.03	759.93	15.45	0.00	.66	.29	.41
	2.057	15.84	8615.00	4.83	.11	1.05	8.25	813.10	16.64	0.00	.81	.33	.52
	2.057	20.27	19140.00	9.08	.04	4.44	8.85	882.30	20.89	0.00	.61	.21	.39
	2.058	11.53	2375.00	0.00	.01	0.00	4.25	109.96	11.81	0.00	.28	.00	.00
	2.058	15.00	6035.00	3.70	.21	3.47	6.39	799.67	15.51	0.00	.51	.00	.06
	2.058	16.20	8615.00	4.94	.36	1.20	7.14	818.87	16.75	0.00	.55	.00	.10
	2.058	20.48	19140.00	9.13	.21	4.28	7.93	884.19	20.95	0.00	.47	.00	.06
	2.063	11.78	2375.00	0.00	.25	0.00	2.52	204.49	11.88	0.00	.10	.01	.05
N	2.063	15.52	6035.00	3.76	.52	3.74	3.20	602.53	15.64	0.00	.12	.01	.12
	2.063	16.74	8615.00	5.01	.54	1.22	3.65	678.98	16.88	0.00	.15	.01	.12
	2.063	20.87	19140.00	9.17	.39	4.14	4.33	827.46	21.05	0.00	.17	.01	.09
	2.141	11.83	2375.00	0.00	.05	0.00	7.73	116.36	12.71	0.00	.88	.20	.63
O	2.141	15.62	6035.00	3.17	.10	3.79	5.30	476.47	15.88	0.00	.26	.13	.11
	2.141	16.85	8615.00	4.41	.11	1.23	5.53	542.75	17.12	0.00	.27	.14	.10
	2.141	20.97	19140.00	8.51	.10	4.12	5.60	748.69	21.22	0.00	.26	.11	.07
	2.150	11.98	2375.00	0.00	.15	0.00	8.93	62.67	13.21	0.00	1.24	.22	.28
	2.150	15.46	6035.00	3.65	-.16	3.48	10.31	325.05	16.86	0.00	1.40	.07	.91
	2.150	16.73	8615.00	4.67	-.12	1.27	10.18	436.40	17.89	0.00	1.16	.06	.71
	2.150	20.93	19140.00	8.31	-.04	4.20	8.37	645.77	21.53	0.00	.60	.03	.27
*	2.157	15.05	2375.00	0.00	3.08	0.00	7.89	282.56	15.80	0.00	.75	.32	.30
*	2.157	16.28	6035.00	1.71	.82	1.23	7.61	394.80	17.51	0.00	1.23	.23	.10
	2.157	17.36	8615.00	2.31	.63	1.08	8.48	459.42	18.11	5627.95	.75	.23	0.00
	2.157	21.58	19140.00	6.24	.64	4.21	7.43	652.99	22.04	16279.74	.46	.51	0.00
	2.161	15.81	2375.00	0.00	.76	0.00	4.50	79.06	16.12	0.00	.31	.06	.26
P	2.161	17.87	6035.00	2.02	1.59	2.06	4.85	550.95	18.14	0.00	.27	.05	.58
	2.161	17.40	8615.00	2.10	.03	-.47	8.33	534.18	18.22	0.00	.82	.05	.06
	2.161	21.69	19140.00	5.97	.12	4.29	5.18	624.16	22.09	0.00	.40	.02	.04
	2.265	16.75	2375.00	0.00	.94	0.00	4.35	659.57	16.94	0.00	.19	.81	.01
	2.265	18.62	6035.00	1.84	.75	1.87	4.64	685.98	18.79	0.00	.17	.63	.01
Q	2.265	19.27	8615.00	2.54	1.87	.65	5.36	695.05	19.48	0.00	.22	1.20	.06
	2.265	22.33	19140.00	5.67	.64	3.07	5.85	710.37	22.61	0.00	.28	.50	.01

		SECNO	CWSEL	Q	DIFEG	DIFWSX	DIFWSP	VCH	TOPWID	EG	QWEIR	HV	HL	OLOSS
	*	2.788	37.75	2375.00	0.00	21.00	0.00	1.83	155.77	37.80	0.00	.05	.55	.01
R	*	2.788	40.25	6035.00	2.65	21.63	2.50	3.58	167.03	40.45	0.00	.20	1.15	.01
	*	2.788	41.70	8615.00	4.21	22.43	1.45	4.49	188.43	42.01	0.00	.31	1.48	.03
	*	2.788	45.45	19140.00	8.49	23.12	3.75	7.46	218.57	46.29	0.00	.84	2.08	.17
		3.096	37.87	2375.00	0.00	.12	0.00	5.36	104.88	38.32	0.00	.45	.36	.16
S		3.096	40.71	6035.00	3.15	.46	2.84	7.28	305.80	41.47	0.00	.75	.79	.22
		3.096	42.36	8615.00	4.75	.66	1.65	7.42	390.78	43.07	0.00	.71	.90	.16
		3.096	46.82	19140.00	9.15	1.37	4.46	7.84	487.77	47.47	0.00	.64	1.13	.04
		3.351	41.73	2375.00	0.00	3.86	0.00	9.17	100.61	43.04	0.00	1.31	4.46	.26
T	*	3.351	44.12	6035.00	3.07	3.41	2.39	11.46	184.25	46.10	0.00	1.98	3.98	.37
	*	3.351	45.53	8615.00	4.40	3.17	1.41	11.62	276.32	47.44	0.00	1.91	3.03	.36
	*	3.351	48.40	19140.00	7.21	1.57	2.87	12.90	622.28	50.25	0.00	1.85	2.02	.36
		3.475	46.68	2375.00	0.00	4.95	0.00	10.93	46.56	48.53	0.00	1.85	5.28	.22
U	*	3.475	50.47	6035.00	4.00	6.35	3.79	11.83	165.65	52.54	0.00	2.06	3.95	.03
	*	3.475	51.78	8615.00	5.52	6.25	1.31	12.84	181.34	54.05	0.00	2.27	3.24	.14
	*	3.475	55.14	19140.00	9.84	6.74	3.36	16.23	220.00	58.37	0.00	3.24	2.73	.55

PEQUONNOCK RIVER

SUMMARY PRINTOUT BACKWATER

	SECNO	CWSEL	ELTRD	ELLC	XLCH	ELMIN	K*CHSL	QLOB	QCH	QROB	ALPHA	SSTA	ENDST
A	.057	3.60	0.00	0.00	0.00	-35.00	0.00	0.00	2630.00	0.00	1.00	618.30	1269.95
	.057	3.60	0.00	0.00	0.00	-35.00	0.00	0.00	6700.00	0.00	1.00	618.30	1269.95
	.057	3.60	0.00	0.00	0.00	-35.00	0.00	0.00	9560.00	0.00	1.00	618.30	1269.95
	.057	3.60	0.00	0.00	0.00	-35.00	0.00	0.00	21240.00	0.00	1.00	618.30	1269.95
	.116	3.60	0.00	0.00	310.00	-27.90	22.90	0.00	2630.00	0.00	1.00	824.82	1243.25
	.116	3.59	0.00	0.00	310.00	-27.90	22.90	0.00	6700.00	0.00	1.00	824.82	1243.25
	.116	3.59	0.00	0.00	310.00	-27.90	22.90	0.00	9560.00	0.00	1.00	824.82	1243.25
	.116	3.54	0.00	0.00	310.00	-27.90	22.90	0.00	21240.00	0.00	1.00	824.82	1243.25
	.131	3.60	13.60	11.90	70.00	-27.90	0.00	0.00	2630.00	0.00	1.00	824.82	1243.25
	.131	3.60	13.60	11.90	70.00	-27.90	0.00	0.00	6700.00	0.00	1.00	824.82	1243.25
	.131	3.59	13.60	11.90	70.00	-27.90	0.00	0.00	9560.00	0.00	1.00	824.82	1243.25
	.131	3.56	13.60	11.90	70.00	-27.90	0.00	0.00	21240.00	0.00	1.00	824.82	1243.25
B	.257	3.60	0.00	0.00	680.00	-25.00	4.26	0.00	2630.00	0.00	1.00	842.80	1170.01
	.257	3.61	0.00	0.00	680.00	-25.00	4.26	0.00	6700.00	0.00	1.00	842.78	1170.06
	.257	3.61	0.00	0.00	680.00	-25.00	4.26	0.00	9560.00	0.00	1.00	842.75	1170.13
	.257	3.67	0.00	0.00	680.00	-25.00	4.26	0.00	21240.00	0.00	1.00	842.66	1170.40
	.390	3.60	0.00	0.00	720.00	-24.00	1.39	773.00	1580.87	276.13	1.07	784.08	1178.54
	.390	3.60	0.00	0.00	720.00	-24.00	1.39	1970.31	4025.90	703.79	1.07	784.08	1178.58
	.390	3.61	0.00	0.00	720.00	-24.00	1.39	2810.68	5745.32	1003.99	1.07	784.08	1178.56
	.390	3.63	0.00	0.00	720.00	-24.00	1.39	6257.23	12747.96	2234.81	1.07	784.08	1178.72
C	.437	3.61	0.00	0.00	200.00	-23.00	5.00	0.00	2630.00	0.00	1.00	799.70	1200.51
	.437	3.64	0.00	0.00	200.00	-23.00	5.00	0.00	6700.00	0.00	1.00	799.70	1200.52
	.437	3.68	0.00	0.00	200.00	-23.00	5.00	0.00	9560.00	0.00	1.00	799.69	1200.53
	.437	4.01	0.00	0.00	200.00	-23.00	5.00	0.00	21240.00	0.00	1.00	799.67	1200.57
	.481	3.61	0.00	0.00	240.00	-20.80	9.17	0.00	2630.00	0.00	1.00	796.03	1202.17
	.481	3.63	0.00	0.00	240.00	-20.80	9.17	0.00	6700.00	0.00	1.00	796.03	1202.17
	.481	3.67	0.00	0.00	240.00	-20.80	9.17	0.00	9560.00	0.00	1.00	796.03	1202.17
	.481	3.94	0.00	0.00	240.00	-20.80	9.17	0.00	21240.00	0.00	1.00	796.02	1202.17
	.498	3.61	9.00	15.00	80.00	-20.80	0.00	0.00	2630.00	0.00	1.00	796.03	1202.17
	.498	3.64	9.00	15.00	80.00	-20.80	0.00	0.00	6700.00	0.00	1.00	796.03	1202.17
	.498	3.67	9.00	15.00	80.00	-20.80	0.00	0.00	9560.00	0.00	1.00	796.03	1202.17
	.498	3.97	9.00	15.00	80.00	-20.80	0.00	0.00	21240.00	0.00	1.00	796.02	1202.17
D	.573	3.61	0.00	0.00	410.00	-20.00	1.95	0.00	2630.00	0.00	1.00	884.58	1117.22
	.573	3.65	0.00	0.00	410.00	-20.00	1.95	0.00	6700.00	0.00	1.00	884.57	1117.31
	.573	3.70	0.00	0.00	410.00	-20.00	1.95	0.00	9560.00	0.00	1.00	884.56	1117.41
	.573	4.08	0.00	0.00	410.00	-20.00	1.95	0.00	21240.00	0.00	1.00	884.52	1118.16
	.701	3.61	0.00	0.00	670.00	-19.20	1.19	0.00	2630.00	0.00	1.00	851.04	1031.08
	.701	3.65	0.00	0.00	670.00	-19.20	1.19	0.00	6700.00	0.00	1.00	851.04	1031.08
	.701	3.71	0.00	0.00	670.00	-19.20	1.19	0.00	9560.00	0.00	1.00	851.04	1031.08
	.701	4.12	0.00	0.00	670.00	-19.20	1.19	0.00	21240.00	0.00	1.00	851.04	1031.08
	.711	3.61	14.50	9.10	70.00	-19.20	0.00	0.00	2630.00	0.00	1.00	851.04	1031.08
	.711	3.65	14.50	9.10	70.00	-19.20	0.00	0.00	6700.00	0.00	1.00	851.04	1031.08
	.711	3.70	14.50	9.10	70.00	-19.20	0.00	0.00	9560.00	0.00	1.00	851.04	1031.08
	.711	4.07	14.50	9.10	70.00	-19.20	0.00	0.00	21240.00	0.00	1.00	851.04	1031.08

	SECNO	CWSEL	ELTRD	ELLC	XLCH	ELMIN	K*CHSL	QLOB	QCH	QROB	ALPHA	SSTA	ENDST
E	.834	3.63	0.00	0.00	660.00	-19.00	.30	0.00	2630.00	0.00	1.00	875.96	1112.37
	.834	3.79	0.00	0.00	660.00	-19.00	.30	0.00	6700.00	0.00	1.00	875.72	1113.10
	.834	3.98	0.00	0.00	660.00	-19.00	.30	0.00	9560.00	0.00	1.00	875.43	1113.99
	.834	5.48	0.00	0.00	660.00	-19.00	.30	0.00	21240.00	0.00	1.00	873.10	1121.10
	.952	3.63	0.00	0.00	630.00	-18.60	.63	0.00	2630.00	0.00	1.00	860.84	1140.03
	.952	3.80	0.00	0.00	630.00	-18.60	.63	0.00	6700.00	0.00	1.00	860.83	1140.45
	.952	4.00	0.00	0.00	630.00	-18.60	.63	0.00	9560.00	0.00	1.00	860.81	1140.98
	.952	5.58	0.00	0.00	630.00	-18.60	.63	0.00	21240.00	0.00	1.00	860.68	1179.50
	.962	3.63	16.50	17.00	60.00	-18.60	0.00	0.00	2630.00	0.00	1.00	860.84	1140.02
	.962	3.80	16.50	17.00	60.00	-18.60	0.00	0.00	6700.00	0.00	1.00	860.83	1140.46
	.962	4.01	16.50	17.00	60.00	-18.60	0.00	0.00	9560.00	0.00	1.00	860.81	1141.01
	.962	5.62	16.50	17.00	60.00	-18.60	0.00	0.00	21240.00	0.00	1.00	860.68	1179.50
F	1.096	3.64	0.00	0.00	660.00	-13.30	8.03	0.00	2630.00	0.00	1.00	876.70	1126.60
	1.096	3.83	0.00	0.00	660.00	-13.30	8.03	0.00	6700.00	0.00	1.00	876.45	1127.10
	1.096	4.07	0.00	0.00	660.00	-13.30	8.03	0.00	9560.00	0.00	1.00	876.16	1127.68
	1.096	5.85	0.00	0.00	660.00	-13.30	8.03	1.28	21237.92	.80	1.00	861.46	1134.70
G	1.250	3.64	0.00	0.00	1000.00	-7.10	6.20	0.00	2630.00	0.00	1.00	872.26	1122.74
	1.250	3.83	0.00	0.00	1000.00	-7.10	6.20	0.00	6700.00	0.00	1.00	871.94	1123.06
	1.250	4.07	0.00	0.00	1000.00	-7.10	6.20	0.00	9560.00	0.00	1.00	871.54	1123.46
	1.250	5.87	0.00	0.00	1000.00	-7.10	6.20	0.00	21240.00	0.00	1.00	869.74	1126.73
	1.319	3.48	0.00	0.00	390.00	-4.50	6.67	0.00	2630.00	0.00	1.00	922.04	1019.37
*	1.319	3.16	0.00	0.00	390.00	-4.50	6.67	0.00	6700.00	0.00	1.00	922.99	1018.69
*	1.319	4.76	0.00	0.00	390.00	-4.50	6.67	0.00	9560.00	0.00	1.00	918.30	1022.00
*	1.319	9.39	0.00	0.00	390.00	-4.50	6.67	0.00	21240.00	0.00	1.00	917.50	1026.00
	1.329	3.54	15.30	9.50	50.00	-4.50	0.00	0.00	2630.00	0.00	1.00	921.85	1019.49
	1.329	5.02	15.30	9.50	50.00	-4.50	0.00	0.00	6700.00	0.00	1.00	917.60	1022.53
	1.329	6.79	15.30	9.50	50.00	-4.50	0.00	0.00	9560.00	0.00	1.00	917.50	1026.00
	1.329	15.72	15.30	9.50	50.00	-4.50	0.00	0.00	20067.16	1172.84	1.25	917.50	1300.41
H	1.349	3.65	0.00	0.00	130.00	-4.40	.77	0.00	2630.00	0.00	1.00	967.26	1035.49
	1.349	5.39	0.00	0.00	130.00	-4.40	.77	0.00	6700.00	0.00	1.00	964.88	1040.39
	1.349	7.20	0.00	0.00	130.00	-4.40	.77	0.00	9560.00	0.00	1.00	964.34	1042.20
	1.349	15.63	0.00	0.00	130.00	-4.40	.77	0.00	21239.19	.81	1.00	962.00	1087.05
I	1.490	4.75	0.00	0.00	740.00	-3.50	1.22	0.00	2630.00	0.00	1.00	926.24	1069.18
	1.490	8.43	0.00	0.00	740.00	-3.50	1.22	0.00	6700.00	0.00	1.00	914.70	1073.58
	1.490	10.85	0.00	0.00	740.00	-3.50	1.22	.10	9395.29	164.62	1.10	909.15	1750.82
	1.490	19.57	0.00	0.00	740.00	-3.50	1.22	22.42	8774.10	12443.47	1.24	900.44	2156.79
	1.583	5.14	0.00	0.00	510.00	-3.00	.98	0.00	0.00	2375.00	1.00	979.71	1025.14
J	1.583	8.65	0.00	0.00	510.00	-3.00	.98	0.00	0.00	6035.00	1.00	972.70	1028.65
*	1.583	12.20	0.00	0.00	510.00	-3.00	.98	0.00	0.00	8615.00	1.00	961.20	2118.00
	1.583	19.67	0.00	0.00	510.00	-3.00	.98	0.00	0.00	19140.00	1.00	763.20	2330.10
	1.590	6.28	0.00	0.00	60.00	-2.90	1.67	0.00	2375.00	0.00	1.00	972.04	1018.08
	1.590	10.54	0.00	0.00	60.00	-2.90	1.67	.00	6034.37	.63	1.00	971.76	1309.89
*	1.590	13.26	0.00	0.00	60.00	-2.90	1.67	1.64	6399.01	2214.35	6.64	970.52	2841.26
	1.590	19.67	0.00	0.00	60.00	-2.90	1.67	226.66	3768.01	15145.33	2.65	749.72	2949.35

	SECNO	CWSEL	ELTRD	ELLC	XLCH	ELMIN	K*CHSL	QLOB	QCH	QROB	ALPHA	SSTA	ENDST
	1.600	6.38	10.50	10.00	50.00	-2.90	0.00	0.00	2375.00	0.00	1.00	972.04	1018.08
	1.600	10.54	10.50	10.00	50.00	-2.90	0.00	0.00	6034.37	.63	1.00	972.00	1309.62
	1.600	13.60	10.50	10.00	50.00	-2.90	0.00	0.00	5727.91	2887.09	6.95	972.00	2860.94
	1.600	19.75	10.50	10.00	50.00	-2.90	0.00	235.69	3732.41	15171.90	2.63	747.36	2949.51
	1.604	6.85	0.00	0.00	20.00	-2.80	5.00	0.00	2375.00	0.00	1.00	968.14	1033.71
	1.604	12.31	0.00	0.00	20.00	-2.80	5.00	0.00	5787.97	247.03	2.52	962.70	2754.12
	1.604	14.19	0.00	0.00	20.00	-2.80	5.00	0.00	5705.77	2909.23	5.97	960.81	2842.11
	1.604	19.75	0.00	0.00	20.00	-2.80	5.00	126.25	5832.34	13181.41	3.28	891.21	2955.02
K	1.714	7.30	0.00	0.00	610.00	1.60	7.21	0.00	2375.00	0.00	1.00	967.69	1029.62
	1.714	13.16	0.00	0.00	610.00	1.60	7.21	0.00	4598.15	1436.85	2.77	961.84	2072.87
	1.714	14.71	0.00	0.00	610.00	1.60	7.21	0.00	3993.16	4621.84	2.22	960.29	2196.63
	1.714	19.86	0.00	0.00	610.00	1.60	7.21	28.66	3582.19	15529.15	1.20	901.39	2684.86
	1.732	9.01	0.00	0.00	110.00	.30	-11.82	0.00	2375.00	0.00	1.00	961.25	1036.71
	1.732	13.60	0.00	0.00	110.00	.30	-11.82	9.33	4615.60	1410.07	3.02	947.91	2163.89
	1.732	14.76	0.00	0.00	110.00	.30	-11.82	25.85	5057.72	3531.44	3.00	941.37	2193.75
	1.732	19.86	0.00	0.00	110.00	.30	-11.82	249.77	5016.34	13873.89	1.70	868.17	2682.04
	1.733	9.01	11.00	11.30	1.00	.30	0.00	0.00	2375.00	0.00	1.00	961.25	1036.71
	1.733	13.60	11.00	11.30	1.00	.30	0.00	9.31	4618.21	1407.49	3.02	947.92	2163.82
	1.733	14.76	11.00	11.30	1.00	.30	0.00	25.85	5056.97	3532.18	3.00	941.36	2193.77
	1.733	19.86	11.00	11.30	1.00	.30	0.00	249.48	5020.56	13869.97	1.70	868.28	2681.01
	1.884	10.38	8.80	1200.00	800.00	2.10	2.25	1122.24	1252.76	0.00	1.87	191.79	1040.73
	1.884	14.45	8.80	1200.00	800.00	2.10	2.25	4893.98	408.30	732.72	1.03	102.24	1455.58
	1.884	15.46	8.80	1200.00	800.00	2.10	2.25	6581.82	581.69	1451.49	1.01	87.26	1495.89
	1.884	20.08	8.80	1200.00	800.00	2.10	2.25	12343.67	1194.45	5601.87	1.00	59.05	2101.11
	1.885	10.62	0.00	0.00	1.00	2.10	0.00	377.65	1997.35	0.00	2.71	186.24	1040.77
	1.885	14.44	0.00	0.00	1.00	2.10	0.00	3167.33	2396.01	471.66	2.59	102.19	1455.63
	1.885	15.45	0.00	0.00	1.00	2.10	0.00	4673.24	2921.09	1020.66	2.28	87.25	1495.96
	1.885	20.08	0.00	0.00	1.00	2.10	0.00	10455.69	4006.23	4678.08	1.59	59.04	2101.11
	1.895	10.63	0.00	0.00	60.00	2.00	-1.67	484.77	1890.23	0.00	3.69	197.43	1030.31
L	1.895	14.45	0.00	0.00	60.00	2.00	-1.67	3487.01	1986.12	561.87	2.91	120.96	1399.46
	1.895	15.46	0.00	0.00	60.00	2.00	-1.67	5097.10	2404.87	1113.03	2.50	108.12	1445.00
	1.895	20.08	0.00	0.00	60.00	2.00	-1.67	11228.27	3270.28	4641.44	1.68	88.47	2040.68
	1.960	10.96	0.00	0.00	350.00	1.60	-1.14	422.80	1901.83	50.36	2.35	322.78	1192.22
M	1.960	14.54	0.00	0.00	350.00	1.60	-1.14	3440.66	1711.66	882.68	1.45	242.05	1348.42
	1.960	15.55	0.00	0.00	350.00	1.60	-1.14	5141.57	2093.46	1379.97	1.33	228.91	1366.35
	1.960	20.13	0.00	0.00	350.00	1.60	-1.14	12251.87	3107.63	3780.49	1.15	214.29	2002.60
	1.979	11.02	0.00	0.00	110.00	1.30	-2.73	55.93	2248.30	70.78	2.54	349.52	1300.40
	1.979	14.52	0.00	0.00	110.00	1.30	-2.73	1868.45	2973.28	1193.27	5.12	244.36	1388.04
	1.979	15.54	0.00	0.00	110.00	1.30	-2.73	3130.15	3591.86	1892.99	4.54	227.84	1412.57
	1.979	20.12	0.00	0.00	110.00	1.30	-2.73	9084.65	4846.87	5208.48	2.82	210.00	1550.00
	1.980	10.99	10.00	10.00	1.00	1.30	0.00	82.76	2188.59	103.66	2.50	350.18	1299.65
	1.980	14.67	10.00	10.00	1.00	1.30	0.00	2864.56	1448.99	1721.45	1.94	239.77	1391.86
	1.980	15.73	10.00	10.00	1.00	1.30	0.00	4595.77	1382.40	2636.83	1.32	227.08	1417.05
	1.980	20.23	10.00	10.00	1.00	1.30	0.00	10952.31	2056.44	6131.25	1.14	210.00	1550.00

	SECNO	CWSEL	ELTRD	ELLC	XLCH	ELMIN	K*CHSL	QLOB	QCH	QROB	ALPHA	SSTA	ENDST
	2.057	11.53	11.50	10.00	400.00	.10	-3.00	.00	2372.58	2.42	1.02	637.08	1038.71
	2.057	14.79	11.50	10.00	400.00	.10	-3.00	803.16	5161.94	69.90	3.57	282.61	1058.41
	2.057	15.84	11.50	10.00	400.00	.10	-3.00	1955.48	6527.39	132.13	4.41	251.62	1064.72
	2.057	20.27	11.50	10.00	400.00	.10	-3.00	9464.40	9140.09	535.52	3.97	209.18	1091.48
	2.058	11.53	0.00	0.00	1.00	.10	0.00	9.76	2362.83	2.41	1.11	636.97	1038.72
	2.058	15.00	0.00	0.00	1.00	.10	0.00	1116.74	4848.71	69.55	4.40	260.00	1059.67
	2.058	16.20	0.00	0.00	1.00	.10	0.00	2568.63	5916.54	129.84	4.81	248.02	1066.89
	2.058	20.48	0.00	0.00	1.00	.10	0.00	10093.95	8555.24	490.80	3.81	208.55	1092.74
N	2.063	11.78	0.00	0.00	40.00	1.80	42.50	12.81	2344.86	17.33	1.08	860.95	1065.45
	2.063	15.52	0.00	0.00	40.00	1.80	42.50	1375.12	4423.80	236.08	1.61	500.59	1103.11
	2.063	16.74	0.00	0.00	40.00	1.80	42.50	2596.64	5586.73	431.63	1.57	431.45	1110.43
	2.063	20.87	0.00	0.00	40.00	1.80	42.50	8985.31	8780.29	1374.40	1.38	307.78	1135.24
O	2.141	11.83	0.00	0.00	420.00	7.00	12.38	85.15	2244.46	45.39	1.15	935.87	1052.23
	2.141	15.62	0.00	0.00	420.00	7.00	12.38	463.57	2945.59	2625.84	1.47	912.57	1389.04
	2.141	16.85	0.00	0.00	420.00	7.00	12.38	699.04	3551.00	4364.96	1.35	897.82	1440.57
	2.141	20.97	0.00	0.00	420.00	7.00	12.38	2692.11	5210.07	11237.82	1.23	700.81	1449.50
	2.150	11.98	0.00	0.00	50.00	7.40	8.00	0.00	2375.00	0.00	1.00	968.69	1031.36
	2.150	15.46	0.00	0.00	50.00	7.40	8.00	7.55	5029.51	997.94	1.63	962.74	1448.45
	2.150	16.73	0.00	0.00	50.00	7.40	8.00	35.65	5792.25	2787.09	1.70	958.17	1490.03
	2.150	20.93	0.00	0.00	50.00	7.40	8.00	567.46	7010.17	11562.37	1.36	844.75	1490.52
*	2.157	15.05	13.00	14.00	35.00	7.40	0.00	0.00	1022.85	1352.15	1.05	968.00	1432.14
*	2.157	16.28	13.00	14.00	35.00	7.40	0.00	0.00	995.31	5039.68	1.01	968.00	1481.30
	2.157	17.36	13.00	14.00	35.00	7.40	0.00	0.00	5169.24	3445.76	1.60	968.00	1490.10
	2.157	21.58	13.00	14.00	35.00	7.40	0.00	747.56	6530.71	11861.72	1.32	837.61	1490.60
P	2.161	15.81	0.00	0.00	20.00	8.00	30.00	0.00	2375.00	0.00	1.00	960.00	1040.00
	2.161	17.87	0.00	0.00	20.00	8.00	30.00	15.32	3355.33	2664.34	1.16	949.23	1500.18
	2.161	17.40	0.00	0.00	20.00	8.00	30.00	17.03	5454.71	3143.26	1.20	950.98	1500.13
	2.161	21.69	0.00	0.00	20.00	8.00	30.00	591.58	5168.13	13380.28	1.04	876.46	1500.62
Q	2.265	16.75	0.00	0.00	560.00	10.00	3.57	19.88	1474.58	880.53	2.11	940.51	1600.08
	2.265	18.62	0.00	0.00	560.00	10.00	3.57	123.37	2059.99	3851.64	1.46	914.31	1600.29
	2.265	19.27	0.00	0.00	560.00	10.00	3.57	208.91	2569.56	5836.53	1.35	905.32	1600.36
	2.265	22.33	0.00	0.00	560.00	10.00	3.57	858.22	3809.38	14472.40	1.14	890.33	1600.70
* R	2.788	37.75	0.00	0.00	2530.00	25.10	5.97	.12	2374.88	0.00	1.00	887.46	1043.24
*	2.788	40.25	0.00	0.00	2530.00	25.10	5.97	6.14	6028.84	.02	1.02	880.78	1047.81
*	2.788	41.70	0.00	0.00	2530.00	25.10	5.97	18.06	8585.46	11.47	1.04	876.90	1065.33
*	2.788	45.45	0.00	0.00	2530.00	25.10	5.97	114.28	18625.31	400.41	1.11	866.88	1085.45
S	3.096	37.87	0.00	0.00	1630.00	32.30	4.42	0.00	2375.00	0.00	1.00	945.67	1050.56
	3.096	40.71	0.00	0.00	1630.00	32.30	4.42	549.41	5477.93	7.67	1.33	754.91	1060.71
	3.096	42.36	0.00	0.00	1630.00	32.30	4.42	1651.94	6932.66	30.40	1.49	635.17	1062.36
	3.096	46.82	0.00	0.00	1630.00	32.30	4.42	7829.04	11171.57	139.39	1.48	579.05	1066.82
T	3.351	41.73	0.00	0.00	1310.00	38.00	4.35	0.00	2374.72	.28	1.00	952.65	1053.26
*	3.351	44.12	0.00	0.00	1310.00	38.00	4.35	18.63	5854.42	161.95	1.14	903.22	1087.46
*	3.351	45.53	0.00	0.00	1310.00	38.00	4.35	411.67	7740.66	462.67	1.33	569.08	1100.53
*	3.351	48.40	0.00	0.00	1310.00	38.00	4.35	4932.88	12655.25	1551.88	1.63	481.12	1103.40

	SECNO	CWSEL	ELTRD	ELLC	XLCH	ELMIN	K*CHSL	QLOB	QCH	QROB	ALPHA	SSTA	ENDST
	3.475	46.68	0.00	0.00	660.00	41.00	4.55	0.00	2375.00	0.00	1.00	977.90	1024.46
*	3.475	50.47	0.00	0.00	660.00	41.00	4.55	324.08	5710.67	.24	1.23	885.29	1050.94
*	3.475	51.78	0.00	0.00	660.00	41.00	4.55	1149.90	7457.11	7.98	1.28	872.22	1053.56
*	3.475	55.14	0.00	0.00	660.00	41.00	4.55	5483.61	13520.64	135.75	1.25	840.00	1060.00

SUMMARY OF ERRORS

```
CAUTION  SECNO=   1.319  PROFILE= 2  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=   1.319  PROFILE= 2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION  SECNO=   1.319  PROFILE= 2  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION  SECNO=   1.319  PROFILE= 3  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=   1.319  PROFILE= 3  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION  SECNO=   1.319  PROFILE= 3  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION  SECNO=   1.319  PROFILE= 4  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=   1.319  PROFILE= 4  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION  SECNO=   1.319  PROFILE= 4  20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION  SECNO=   1.583  PROFILE= 3  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=   1.583  PROFILE= 3  MINIMUM SPECIFIC ENERGY

CAUTION  SECNO=   1.590  PROFILE= 3  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=   1.590  PROFILE= 3  MINIMUM SPECIFIC ENERGY

CAUTION  SECNO=   2.157  PROFILE= 1  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=   2.157  PROFILE= 1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION  SECNO=   2.157  PROFILE= 1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION  SECNO=   2.157  PROFILE= 2  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=   2.157  PROFILE= 2  MINIMUM SPECIFIC ENERGY

NOTE     SECNO=   2.788  PROFILE= 1  WSEL BASED ON X5 CARD
NOTE     SECNO=   2.788  PROFILE= 2  WSEL BASED ON X5 CARD
NOTE     SECNO=   2.788  PROFILE= 3  WSEL BASED ON X5 CARD
NOTE     SECNO=   2.788  PROFILE= 4  WSEL BASED ON X5 CARD

CAUTION  SECNO=   3.351  PROFILE= 2  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=   3.351  PROFILE= 2  MINIMUM SPECIFIC ENERGY
CAUTION  SECNO=   3.351  PROFILE= 3  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=   3.351  PROFILE= 3  MINIMUM SPECIFIC ENERGY
CAUTION  SECNO=   3.351  PROFILE= 4  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=   3.351  PROFILE= 4  MINIMUM SPECIFIC ENERGY

CAUTION  SECNO=   3.475  PROFILE= 2  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=   3.475  PROFILE= 2  MINIMUM SPECIFIC ENERGY
CAUTION  SECNO=   3.475  PROFILE= 3  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=   3.475  PROFILE= 3  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION  SECNO=   3.475  PROFILE= 3  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION  SECNO=   3.475  PROFILE= 4  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=   3.475  PROFILE= 4  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION  SECNO=   3.475  PROFILE= 4  20 TRIALS ATTEMPTED TO BALANCE WSEL
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FLOOD INSURANCE ZONE DATA FOR PEQUONNOCK RIVER

FLOOD HAZARD FACTOR FOR ENTIRE REACH USING SECTIONS

SECTION NUMBER	CUMULATIVE DISTANCE	ELEVATION DIFFERENCE BETWEEN BASE FLOOD AND[10[	2[	0.2[
.057	0.	0.00	0.00	0.00
.116	310.	.01	.01	-.05
.131	380.	.01	.00	-.03
.257	1060.	-.01	-.01	.06
.390	1780.	-.01	-.00	.03
.437	1980.	-.08	-.04	.32
.481	2220.	-.06	-.03	.27
.498	2300.	-.07	-.04	.29
.573	2710.	-.09	-.05	.38
.701	3380.	-.10	-.05	.41
.711	3450.	-.09	-.05	.37
.834	4110.	-.35	-.19	1.50
.952	4740.	-.37	-.20	1.58
.962	4800.	-.38	-.21	1.61
1.096	5460.	-.43	-.24	1.78
1.250	6460.	-.44	-.24	1.79
1.319	6850.	-1.28	-1.60	4.62
1.329	6900.	-3.25	-1.77	8.94
1.349	7030.	-3.55	-1.81	8.43
1.490	7770.	-6.09	-2.41	8.72
1.583	8280.	-7.06	-3.55	7.47
1.590	8340.	-6.97	-2.72	6.41
1.600	8390.	-7.22	-3.07	6.15
1.604	8410.	-7.34	-1.88	5.56
1.714	9020.	-7.41	-1.55	5.15
1.732	9130.	-5.75	-1.16	5.11
1.733	9131.	-5.75	-1.16	5.10
1.884	9931.	-5.08	-1.01	4.62
1.885	9932.	-4.83	-1.01	4.63
1.895	9992.	-4.83	-1.01	4.62
1.960	10342.	-4.59	-1.02	4.57
1.979	10452.	-4.52	-1.02	4.58
1.980	10453.	-4.74	-1.06	4.50
2.057	10853.	-4.31	-1.05	4.44
2.058	10854.	-4.67	-1.20	4.28
2.063	10894.	-4.96	-1.22	4.14
2.141	11314.	-5.02	-1.23	4.12
2.150	11364.	-4.76	-1.27	4.20
2.157	11399.	-2.31	-1.08	4.21
2.161	11419.	-1.59	.47	4.29
2.265	11979.	-2.52	-.65	3.07
2.788	14509.	-3.95	-1.45	3.75
3.096	16139.	-4.49	-1.65	4.46
3.351	17449.	-3.80	-1.41	2.87
3.475	18109.	-5.10	-1.31	3.36
WEIGHTED AVG FOR REACH		-2.82	-.92	3.19

FHF FOR THE REACH = 030 WITH 18.4[OF THE REACH WITHIN 1.0 FEET
ZONE FOR THE REACH = A 6

CONTINUOUS FLOOD HAZARD FACTORS BY EVEN INCREMENTS

INC NO.	TOTAL LENGTH	AVG ELEVATION DATA 100	10	DIFF.	WTD. AVG.	FHF	PERCENT WITHIN
	0.				SEC.		.057
1	100.	3.60	3.60	0.00	0.00	005	100.
2	200.	3.60	3.59	.01	.01	005	100.
3	300.	3.60	3.59	.01	.01	005	100.
	310.				SEC.		.116
	380.				SEC.		.131
4	400.	3.60	3.59	.01	.01	005	100.
5	500.	3.60	3.59	.01	.01	005	100.
6	600.	3.60	3.60	0.00	.01	005	100.
7	700.	3.60	3.60	0.00	.01	005	100.
8	800.	3.60	3.60	0.00	.01	005	100.
9	900.	3.60	3.61	-.01	.00	005	100.
10	1000.	3.60	3.61	-.01	.00	005	100.
	1060.				SEC.		.257
11	1100.	3.60	3.61	-.01	.00	005	100.
12	1200.	3.60	3.61	-.01	0.00	005	100.
13	1300.	3.60	3.61	-.01	-.00	005	100.
14	1400.	3.60	3.61	-.01	-.00	005	100.
15	1500.	3.60	3.61	-.01	-.00	005	100.
16	1600.	3.60	3.61	-.01	-.00	005	100.
17	1700.	3.60	3.61	-.01	-.00	005	100.
	1780.				SEC.		.390
18	1800.	3.60	3.61	-.01	-.00	005	100.
19	1900.	3.60	3.63	-.03	-.00	005	100.
	1980.				SEC.		.437
20	2000.	3.61	3.67	-.06	-.01	005	100.
21	2100.	3.61	3.68	-.07	-.01	005	100.
22	2200.	3.61	3.67	-.06	-.01	005	100.
	2220.				SEC.		.481
23	2300.	3.61	3.67	-.06	-.01	005	100.
	2300.				SEC.		.498
24	2400.	3.61	3.68	-.07	-.02	005	100.
25	2500.	3.61	3.68	-.07	-.02	005	100.
26	2600.	3.61	3.69	-.08	-.02	005	100.
27	2700.	3.61	3.69	-.08	-.02	005	100.
	2710.				SEC.		.573
28	2800.	3.61	3.70	-.09	-.03	005	100.
29	2900.	3.61	3.70	-.09	-.03	005	100.
30	3000.	3.61	3.70	-.09	-.03	005	100.
31	3100.	3.61	3.70	-.09	-.03	005	100.
32	3200.	3.61	3.70	-.09	-.03	005	100.
33	3300.	3.61	3.70	-.09	-.04	005	100.
	3380.				SEC.		.701
34	3400.	3.61	3.70	-.09	-.04	005	100.
	3450.				SEC.		.711
35	3500.	3.61	3.71	-.10	-.04	005	100.
36	3600.	3.61	3.74	-.13	-.04	005	100.
37	3700.	3.61	3.78	-.17	-.05	005	100.
38	3800.	3.62	3.83	-.21	-.05	005	100.
39	3900.	3.62	3.87	-.25	-.05	005	100.
40	4000.	3.62	3.91	-.29	-.06	005	100.
41	4100.	3.63	3.95	-.32	-.07	005	100.
	4110.				SEC.		.834
42	4200.	3.63	3.98	-.35	-.07	005	100.
43	4300.	3.63	3.98	-.35	-.08	005	100.
44	4400.	3.63	3.99	-.36	-.09	005	100.
45	4500.	3.63	3.99	-.36	-.09	005	100.

46	4600.	3.63	3.99	-.36	-.10	005	100.
47	4700.	3.63	4.00	-.37	-.10	005	100.
	4740.				SEC.		.952
48	4800.	3.63	4.00	-.37	-.11	005	100.
	4800.				SEC.		.962
49	4900.	3.63	4.01	-.38	-.12	005	100.
50	5000.	3.63	4.02	-.39	-.12	005	100.
51	5100.	3.63	4.03	-.40	-.13	005	100.
52	5200.	3.63	4.04	-.41	-.13	005	100.
53	5300.	3.63	4.05	-.42	-.14	005	100.
54	5400.	3.64	4.06	-.42	-.14	005	100.
	5460.				SEC.		1.096
55	5500.	3.64	4.07	-.43	-.15	005	100.
56	5600.	3.64	4.07	-.43	-.15	005	100.
57	5700.	3.64	4.07	-.43	-.16	005	100.
58	5800.	3.64	4.07	-.43	-.16	005	100.
59	5900.	3.64	4.07	-.43	-.17	005	100.
60	6000.	3.64	4.07	-.43	-.17	005	100.
61	6100.	3.64	4.07	-.43	-.18	005	100.
62	6200.	3.64	4.07	-.43	-.18	005	100.
63	6300.	3.64	4.07	-.43	-.18	005	100.
64	6400.	3.64	4.07	-.43	-.19	005	100.
	6460.				SEC.		1.250
65	6500.	3.63	4.11	-.48	-.19	005	100.
66	6600.	3.60	4.23	-.63	-.20	005	100.
67	6700.	3.56	4.41	-.85	-.21	005	99.
68	6800.	3.52	4.59	-1.07	-.22	005	97.
	6850.				SEC.		1.319
69	6900.	3.52	5.73	-2.21	-.25	005	96.
	6900.				SEC.		1.329
70	7000.	3.58	6.95	-3.37	-.29	005	94.
	7030.				SEC.		1.349
71	7100.	3.69	7.32	-3.63	-.34	005	93.
72	7200.	3.83	7.79	-3.96	-.39	005	93.
73	7300.	3.98	8.28	-4.30	-.44	005	92.
74	7400.	4.13	8.78	-4.65	-.50	005	85.
75	7500.	4.28	9.27	-4.99	-.56	005	64.
76	7600.	4.43	9.76	-5.33	-.62	005	43.
77	7700.	4.57	10.26	-5.69	-.69	005	40.
	7770.				SEC.		1.490
78	7800.	4.71	10.71	-6.00	-.76	010	37.
79	7900.	4.81	11.06	-6.25	-.83	010	34.
80	8000.	4.89	11.32	-6.43	-.90	010	23.
81	8100.	4.97	11.59	-6.62	-.97	010	5.
82	8200.	5.04	11.85	-6.81	-1.04	010	4.
	8280.				SEC.		1.583
83	8300.	5.30	12.27	-6.97	-1.11	010	4.
	8340.				SEC.		1.590
	8390.				SEC.		1.600

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ELEVATION DIFFERENCE
BETWEEN BASE FLOOD AND

	10[	2[	0.2[
WEIGHTED AVG FOR REACH	-1.11	-.54	2.24

FHF FOR REACH 1 = 010 WITH 4.[OF THE REACH WITHIN .5 FEET
ZONE FOR THE REACH = A 2

===

84	8400.	6.07	13.23	-7.16	-7.16	070	100.
	8410.				SEC.		1.604
85	8500.	6.77	14.08	-7.31	-7.24	070	100.
86	8600.	6.96	14.31	-7.35	-7.27	075	100.
87	8700.	7.03	14.40	-7.37	-7.30	075	100.
88	8800.	7.10	14.48	-7.38	-7.31	075	100.

89	8900.	7.18	14.56	-7.38	-7.33	075	100.
90	9000.	7.25	14.65	-7.40	-7.34	075	100.
	9020.					SEC.	1.714
91	9100.	7.92	14.72	-6.80	-7.27	075	100.
	9130.					SEC.	1.732
	9131.					SEC.	1.733

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ELEVATION DIFFERENCE
BETWEEN BASE FLOOD AND

	10[	2[	0.2[
WEIGHTED AVG FOR REACH	-7.27	-1.87	5.50

FHF FOR REACH 2 = 075 WITH 100.[OF THE REACH WITHIN 2.0 FEET
ZONE FOR THE REACH = A15

==

92	9200.	8.84	14.78	-5.94	-5.94	060	100.
93	9300.	9.22	14.86	-5.64	-5.79	060	99.
94	9400.	9.39	14.95	-5.56	-5.71	055	99.
95	9500.	9.56	15.04	-5.48	-5.66	055	99.
96	9600.	9.73	15.13	-5.40	-5.60	055	99.
97	9700.	9.90	15.21	-5.31	-5.56	055	99.
98	9800.	10.07	15.30	-5.23	-5.51	055	99.
99	9900.	10.24	15.39	-5.15	-5.46	055	99.
	9931.					SEC.	1.884
	9932.					SEC.	1.885
	9992.					SEC.	1.895

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ELEVATION DIFFERENCE
BETWEEN BASE FLOOD AND

	10[	2[	0.2[
WEIGHTED AVG FOR REACH	-5.46	-1.10	4.88

FHF FOR REACH 3 = 055 WITH 99.[OF THE REACH WITHIN 1.0 FEET
ZONE FOR THE REACH = A11

==

100	10000.	10.48	15.45	-4.97	-4.97	050	100.
101	10100.	10.68	15.48	-4.80	-4.89	050	100.
102	10200.	10.78	15.50	-4.72	-4.83	050	100.
103	10300.	10.87	15.53	-4.66	-4.79	050	100.
	10342.					SEC.	1.960
104	10400.	10.96	15.54	-4.58	-4.75	050	100.
	10452.					SEC.	1.979
	10453.					SEC.	1.980

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ELEVATION DIFFERENCE
BETWEEN BASE FLOOD AND

	10[	2[	0.2[
WEIGHTED AVG FOR REACH	-4.75	-1.02	4.60

FHF FOR REACH 4 = 050 WITH 100.[OF THE REACH WITHIN 1.0 FEET
ZONE FOR THE REACH = A10

Combine 10% 2% 0.2%
-5.19 -1.07 4.76
FHF = 050 for Reach 3 - 100% within 1.0 feet for Zone A10.

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105	10500.	11.02	15.64	-4.62	-4.62	045	100.
106	10600.	11.12	15.76	-4.64	-4.63	045	100.
107	10700.	11.26	15.78	-4.52	-4.59	045	100.
108	10800.	11.39	15.81	-4.42	-4.55	045	100.
	10853.					SEC.	2.057
	10854.					SEC.	2.058
	10894.					SEC.	2.063
109	10900.	11.62	16.28	-4.66	-4.57	045	100.
110	11000.	11.79	16.75	-4.96	-4.64	045	100.
111	11100.	11.80	16.78	-4.98	-4.69	045	100.

112	11200.	11.81	16.80	-4.99	-4.72	045	100.
113	11300.	11.82	16.83	-5.01	-4.76	050	100.
	11314.				SEC.		2.141
	11364.				SEC.		2.150
	11399.				SEC.		2.157
114	11400.	13.46	17.11	-3.65	-4.65	045	100.
	11419.				SEC.		2.161
115	11500.	15.52	17.52	-2.00	-4.40	045	99.
116	11600.	16.03	17.84	-1.81	-4.19	040	98.
117	11700.	16.20	18.17	-1.97	-4.02	040	97.
118	11800.	16.36	18.50	-2.14	-3.88	040	93.
119	11900.	16.53	18.84	-2.31	-3.78	040	92.
	11979.				SEC.		2.265

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	ELEVATION DIFFERENCE BETWEEN BASE FLOOD AND 10[	2[	0.2[
WEIGHTED AVG FOR REACH	-3.78	-.80	4.12

FHF FOR REACH 5 = 040 WITH 92.[OF THE REACH WITHIN 1.0 FEET
ZONE FOR THE REACH = A 8

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120	12000.	16.77	19.23	-2.46	-2.46	025	100.
121	12100.	17.34	19.90	-2.56	-2.51	025	100.
122	12200.	18.17	20.78	-2.61	-2.54	025	100.
123	12300.	19.00	21.67	-2.67	-2.58	025	100.
124	12400.	19.83	22.56	-2.73	-2.61	025	100.
125	12500.	20.66	23.44	-2.78	-2.64	025	100.
126	12600.	21.49	24.33	-2.84	-2.66	025	100.
127	12700.	22.32	25.22	-2.90	-2.69	025	100.
128	12800.	23.15	26.10	-2.95	-2.72	025	100.
129	12900.	23.98	26.99	-3.01	-2.75	030	100.
130	13000.	24.81	27.88	-3.07	-2.78	030	100.
131	13100.	25.64	28.76	-3.12	-2.81	030	100.
132	13200.	26.47	29.65	-3.18	-2.84	030	100.
133	13300.	27.30	30.54	-3.24	-2.87	030	100.
134	13400.	28.13	31.42	-3.29	-2.89	030	100.
135	13500.	28.96	32.31	-3.35	-2.92	030	100.
136	13600.	29.79	33.20	-3.41	-2.95	030	100.
137	13700.	30.62	34.08	-3.46	-2.98	030	100.
138	13800.	31.45	34.97	-3.52	-3.01	030	100.
139	13900.	32.28	35.86	-3.58	-3.04	030	100.
140	14000.	33.11	36.74	-3.63	-3.06	030	100.
141	14100.	33.94	37.63	-3.69	-3.09	030	100.
142	14200.	34.77	38.52	-3.75	-3.12	030	100.
143	14300.	35.60	39.40	-3.80	-3.15	030	100.
144	14400.	36.43	40.29	-3.86	-3.18	030	100.
145	14500.	37.26	41.18	-3.92	-3.21	030	100.
	14509.				SEC.		2.788

===

	ELEVATION DIFFERENCE BETWEEN BASE FLOOD AND 10[	2[	0.2[
WEIGHTED AVG FOR REACH	-3.21	-1.03	3.40

FHF FOR REACH 6 = 030 WITH 100.[OF THE REACH WITHIN 1.0 FEET
ZONE FOR THE REACH = A 6

===

Combine

146	14600.	37.72	41.68	-3.96	-3.96	040	100.
147	14700.	37.76	41.76	-4.00	-3.98	040	100.
148	14800.	37.77	41.80	-4.03	-4.00	040	100.
149	14900.	37.78	41.84	-4.06	-4.01	040	100.
150	15000.	37.78	41.88	-4.10	-4.03	040	100.

151	15100.	37.79	41.92	-4.13	-4.05	040	100.
152	15200.	37.80	41.96	-4.16	-4.06	040	100.
153	15300.	37.81	42.00	-4.19	-4.08	040	100.
154	15400.	37.81	42.04	-4.23	-4.10	040	100.
155	15500.	37.82	42.08	-4.26	-4.11	040	100.
156	15600.	37.83	42.12	-4.29	-4.13	040	100.
157	15700.	37.84	42.17	-4.33	-4.15	040	100.
158	15800.	37.84	42.21	-4.37	-4.16	040	100.
159	15900.	37.85	42.25	-4.40	-4.18	040	100.
160	16000.	37.86	42.29	-4.43	-4.20	040	100.
161	16100.	37.87	42.33	-4.46	-4.21	040	100.
	16139.				SEC.		3.096
162	16200.	37.96	42.43	-4.47	-4.23	040	100.
163	16300.	38.20	42.63	-4.43	-4.24	040	100.
164	16400.	38.50	42.87	-4.37	-4.25	045	100.
165	16500.	38.79	43.12	-4.33	-4.25	045	100.
166	16600.	39.08	43.36	-4.28	-4.25	045	100.
167	16700.	39.38	43.60	-4.22	-4.25	045	100.
168	16800.	39.67	43.84	-4.17	-4.25	045	100.
169	16900.	39.97	44.08	-4.11	-4.24	040	100.
170	17000.	40.26	44.33	-4.07	-4.23	040	100.
171	17100.	40.56	44.57	-4.01	-4.23	040	100.
172	17200.	40.85	44.81	-3.96	-4.22	040	100.
173	17300.	41.15	45.05	-3.90	-4.20	040	100.
174	17400.	41.44	45.29	-3.85	-4.19	040	100.
	17449.				SEC.		3.351
175	17500.	41.85	45.71	-3.86	-4.18	040	100.
176	17600.	42.49	46.49	-4.00	-4.18	040	100.
177	17700.	43.24	47.43	-4.19	-4.18	040	100.
178	17800.	43.99	48.38	-4.39	-4.18	040	100.
179	17900.	44.74	49.33	-4.59	-4.19	040	100.
180	18000.	45.49	50.27	-4.78	-4.21	040	100.
181	18100.	46.24	51.22	-4.98	-4.23	040	100.
	18109.				SEC.		3.475

==

	ELEVATION DIFFERENCE BETWEEN BASE FLOOD AND 10[	2[	0.2[
WEIGHTED AVG FOR REACH	-4.23	-1.51	3.76

FHF FOR REACH 7 = 040 WITH 100.[OF THE REACH WITHIN 1.0 FEET
ZONE FOR THE REACH = A 8

==

10%	2%	0.2%
-4.11	-1.48	3.76

FHF For Reach 4 = 040
100% within 1.0 feet for
Zone A8

SRF

Draft Memorandum

SRF No. 16924.00

To:	Tom Johnson, PE, PTOE Labella Associates
From:	Phil Kulis, PE, Senior Project Manager Tom Sachi, PE, Senior Project Manager Ashley Sherry, PE, Engineer III
Date:	May 31, 2024
Subject:	Bridgeport Soccer Stadium Parking Study – Existing Conditions

Introduction

SRF has completed a study of the existing parking conditions in Downtown Bridgeport, Connecticut in support of a future detailed parking analysis for stadium events at the proposed Bridgeport Soccer Stadium (see Figure 1). The proposed stadium is located on the east side of the Pequonnock River, while the majority of the parking will be located on the west side of the river in the core of Downtown Bridgeport. It is expected that the majority of attendees will need to cross the Stratford Avenue bridge to access parking and transit options. Therefore, a detailed review of the existing parking options located in Downtown was completed. Note, given the lack of public parking options on the east side of the river near the stadium, there was not a detailed study completed in this area. The boundaries of the parking study were approximately the Pequonnock River to the east, Washington Avenue to the north, Highway 8 to the west and the railroad tracks to the south, as shown in Figure 1. Note, this study area approximately reflects a one-half mile walkshed from the stadium, which is a typical walk that could be expected from an event attendee. Note, a few larger parking areas are shown outside of the one-half mile radius from the stadium but were included within the analysis. The main objectives of this study are to review the existing parking utilization within the project area, document locations that may be suitable for event parking, and plan for future parking analysis necessary for stadium events. The following assumptions and data is offered for your consideration.

Existing Conditions

The existing conditions were reviewed to establish a baseline of the existing parking supply and demand during a typical event timeframe. It was assumed that events would occur on either a weeknight or Saturday evening at 7:00 p.m. Therefore, parking data was collected between approximately 6:00 and 7:00 p.m. when event attendees would be expected to arrive. The parking lot and garage locations shown in Figure 2 detail all of the public or potential event parking opportunities that were identified. Additionally, on-street parking was collected to understand the magnitude of parking available along City roadways.

SRF

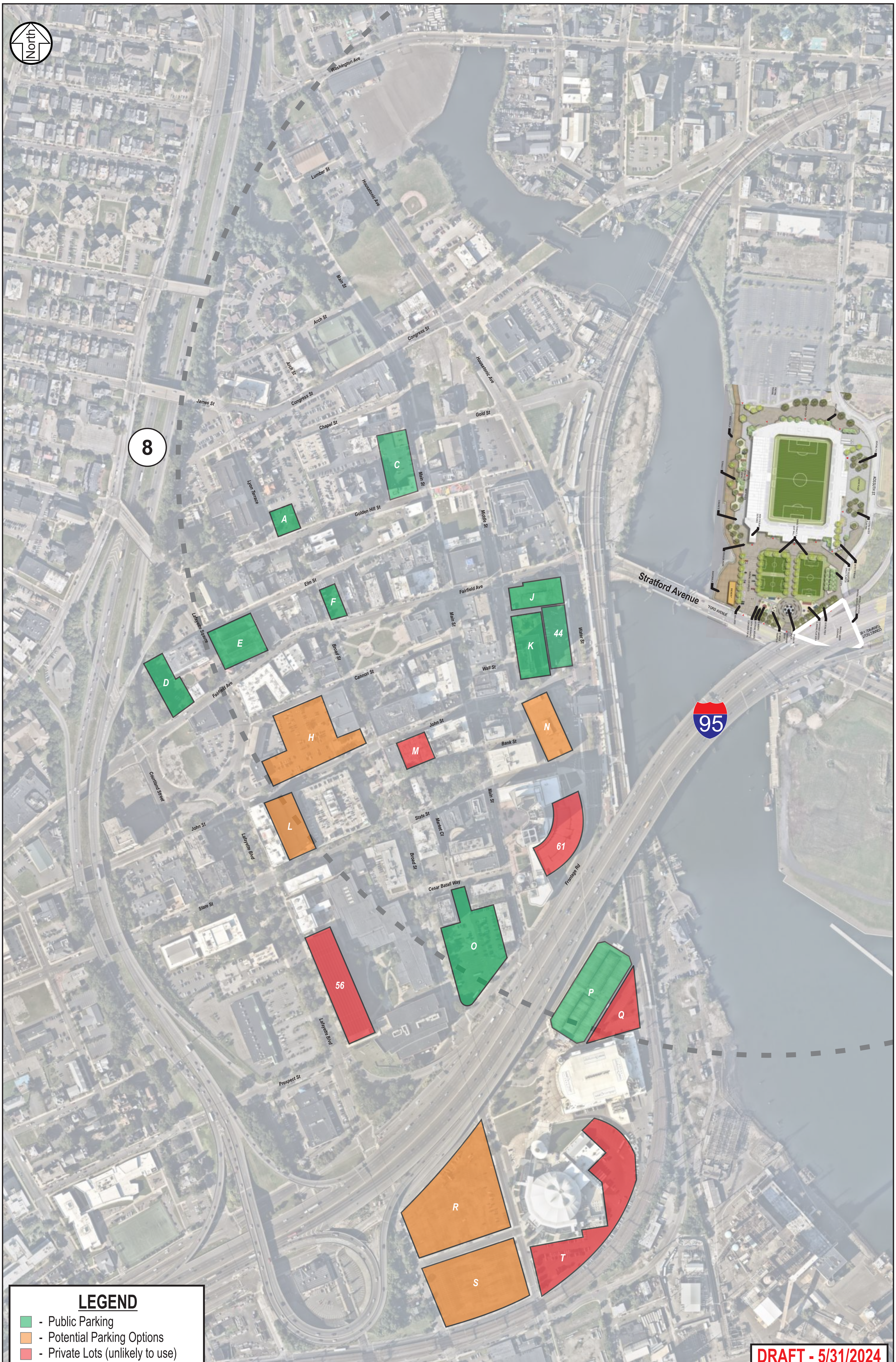
002416924
May 2024

Project Location

Bridgeport, Connecticut

Bridgeport Soccer Stadium Parking Study

Figure 1



SRF

Parking Zones

Bridgeport, Connecticut

Bridgeport Soccer Stadium Parking Study

Figure 2

002416924
May 2024

Parking Utilization Survey

Parking utilization surveys were collected on Wednesday, May 1 and Saturday, May 4, 2024 between approximately 6:00 and 7:00 p.m. at the surface lots, garages, and on-street locations shown in Figure 2. This information will serve as the baseline of parking demand at these locations on a typical weekday evening and Saturday evening. Note, the University of Bridgeport did have an afternoon commencement ceremony occurring at the Hartford Healthcare Amphitheater on Saturday. While the majority of attendees had left by 6:00 p.m., the parking lots surrounding the amphitheater were restricted to use by event attendees only. Note, this is a one time a year event and should be considered when scheduling potential soccer matches at the proposed stadium. Results of the parking utilization surveys are detailed within Table 1 for the public parking locations.

Table 1. Parking Utilization Survey – Public Parking Lots

Lot ID	Parking Supply	Parking Demand				Weeknight Surplus	Saturday Surplus
		Wednesday, May 1		Saturday, May 4			
		6:00 PM	Percent Utilized	6:00 PM	Percent Utilized		
A	32	9	28%	11	34%	23	21
C	65	21	32%	20	31%	44	45
D	50	33	66%	15	30%	17	35
E	895	58	6%	52	6%	837	843
F	32	14	44%	17	53%	18	15
J	596	184	31%	197	33%	412	399
44	89	15	17%	10	11%	74	79
K (1)	318	37	12%	0	0%	281	318
O	250	39	16%	56	22%	211	194
P (1)	1,400	272	19%	0	0%	1,128	1,400
Total Lots and Garages	3,727	682	18%	378	10%	3,045	3,349
On-Street	890	478	54%	536	60%	412	354
Total Public Parking	**4,617**	**1,160**	**25%**	**914**	**20%**	**3,457**	**3,703**

(1) Typically closed on weekends, but infrastructure is set up for events

As shown in Table 1, the public parking facilities in Downtown are currently between 20 to 25 percent utilized during the Saturday and weekday evening timeframes, respectively. During a weeknight evening, this would result in a surplus of 3,457 parking stalls and on a Saturday evening there is a surplus of 3,703 parking stalls. Note that on-street parking is between 54 to 60 percent utilized.

There are two (2) parking garages that were included in the analysis were observed to be closed on the weekends. Lot K, or Park City Plaza Garage, which is located near the Stratford Avenue and Water Street intersection, is one of the locations that is closed. Additionally, Lot P, or the Harbor Yard Transit Garage, located adjacent to Total Mortgage Arena is noted to be closed on weekends except for events. It is recommended that the development team begin discussions with these garage operators about potential use for weekend events.

In addition to the public parking locations shown in green on Figure 2 and Table 1, there were several other parking locations identified that have the potential to be utilized for event parking (shown in orange in Figure 2). These locations were either only noted as being used for events or had some public/private components. The parking utilization is shown in Table 2.

Table 2. Parking Utilization Survey – Potential Parking Locations

Lot ID	Parking Supply	Parking Demand				Weeknight Surplus	Saturday Surplus
		Wednesday, May 1		Saturday, May 4			
		6:00 PM	Percent Utilized	6:00 PM	Percent Utilized		
H	354	20	6%	6	2%	334	348
L (1)	727	136	19%	0	0%	591	727
R (2)	494	0	0%	0	0%	494	494
S (2)	366	0	0%	0	0%	366	366
N (3)	469	34	7%	16	3%	435	453
Total Garages and Lots	**2,410**	**190**	**8%**	**22**	**0.9%**	**2,220**	**2,388**

(1) Lot is closed on evenings and weekends (monthly permits only)

(2) Lots are closed for events only

(3) Lot restricted to monthly pass users only. Parking ticket machine was broken during collection.

At the potential locations, there is a parking demand between one (1) to eight (8) percent during the Saturday and weekday evenings, respectively. However, it should be noted that these lots may not be used for event parking. Lot H, was observed to be partially public and partially private parking. Lot L, or the Wright Building Garage, was observed to close to public parking in the evenings and weekends, with a monthly parking pass required to open the gate. Lots R and S, surface lots by the arena, were gated off for event parking only, and lastly, Lot N, or the Bridgeport Transit Garage, was restricted to monthly pass users only as the parking ticket machine was out of order. There is potential that if additional parking options were needed to accommodate event parking at the proposed Bridgeport Soccer Stadium, that these lots could be explored as potential options.

Preliminary Future Parking Demand

A high level estimate the potential parking demand for an event was completed by Labella. Based on their trip generation estimates, the following preliminary parking demand was determined for a 10,000 person event:

- Assumed 10 percent of attendees are walking/biking trips from nearby neighborhoods.
- Of the 9,000 remaining attendees, it was assumed that 20 percent will utilize transit and 80 percent will utilize vehicles. This results in 1,800 transit attendees and 7,200 auto attendees.
- With the 7,200 auto trips, it was assumed that there is a vehicle occupancy of 2.5 persons per vehicle, resulting in the need to park 2,880 vehicles.
- It is expected that 570 on-site parking stalls will be provided, leaving the remaining 2,310 vehicles to park within Downtown Bridgeport.

Based on this analysis, a preliminary parking demand estimate was completed using the public parking locations in Table 1. The results of the preliminary analysis are shown in Table 3, detailing the potential surplus or deficits that may occur. Note, an analysis was done for the Saturday event for two (2) scenarios, with and without Lots K and P, which were noted to be closed on Saturdays.

Table 3. Parking Utilization Survey – Potential Parking Locations

Parking Analysis	Weekday Evening	Saturday Evening (all public locations)	Saturday Evening (without closed garages)
Existing Parking Demand	1,160	914	914
Expected Event Demand	2,310	2,310	2,310
Total Demand	3,470	3,224	3,224
Total Supply	4,617	4,617	2,899
Expected Surplus/(Deficit)	1,147	1,393	(-325)

Based on the results of the preliminary parking analysis, it is expected that with the parking locations listed in Table 1, there will be a surplus of 1,147 parking stalls on a weekday evening event. If Lots K and P are available for use on a Saturday for an event there is expected to be a surplus of 1,393 parking stalls. However, if those lots are closed, there would be a 325 parking stall deficit during an event. **Therefore, exploration of use of Lots K and P is recommended to accommodate event parking demands for the proposed Bridgeport Soccer Stadium**. With those lots included in the analysis, there is not currently a need to explore use of the lots within Table 2.

Next Steps

Further details of the parking study are expected to be completed in the future. This is expected to include further detailed collection reports of the data collected in the field and any analysis updates as additional information from the development and Labella teams is determined. This memo is intended to provide a review of the initial data collection and preliminary parking findings to allow the traffic study to move forward with distributing auto trips to the roadway network in any associated traffic modeling efforts. As further study efforts and event management planning efforts are completed, the following items are recommended to be considered by the project team:

- Contact the owners/operators of Lot K, Park City Parking Garage and Lot P, Harbor Yard Transit Garage.
    - Lot K is operated by Imperial Parking Company
    - Lot P is operated by Connecticut Department of Transportation.
- Given Lot K's location (immediately adjacent to the bridge were attendees cross into Downtown), there will likely be a high desire by fans for use of this garage. Additionally, Lot P is set up to handle large event parking demands given its location and use for arena and amphitheater events. Both of these garages would be prime parking locations for the proposed Bridgeport Soccer Stadium event attendees.
- Given the location of the majority of the parking needed for events, the transit platforms, and bars and restaurants within the area, there is expected to be over 7,500 people crossing the Stratford Avenue bridge before and after events.
    - With narrow sidewalks on the lift portion of the bridge, there is expected to be significant issues crossing that many people before/after a game.
    - Additional considerations of closing lanes of traffic on the bridge will be necessary to safely and efficiently transport people from the stadium side to Downtown before and after games.
- Consideration should be given to avoid scheduling games during conflicting events at either Total Mortgage Arena or Hartford Healthcare Amphitheater, as parking demands may overlap and cause a potential parking deficit.

Prepared For:
Swanston Organization. LLC.
750 E Main St
Stamford, CT 06902

Submitted by:
LaBella Associates
400 S Tryon St, Suite 1300
Charlotte, NC 28285

Original: 07/19/24

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Bridgeport CT MLS Stadium Engineering Report

30% REPORT JUNE 19, 2024
2230111

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LIST OF FIGURES

LIST OF TABLES

APPENDICES

1. EXECUTIVE SUMMARY

This Engineering Report (Report) provides engineering information for proposed water, sewer, and stormwater infrastructure improvements that are necessary to serve a proposed stadium. This Report will be submitted to regulatory agencies for approval and permitting.

2. PROJECT BACKGROUND AND HISTORY

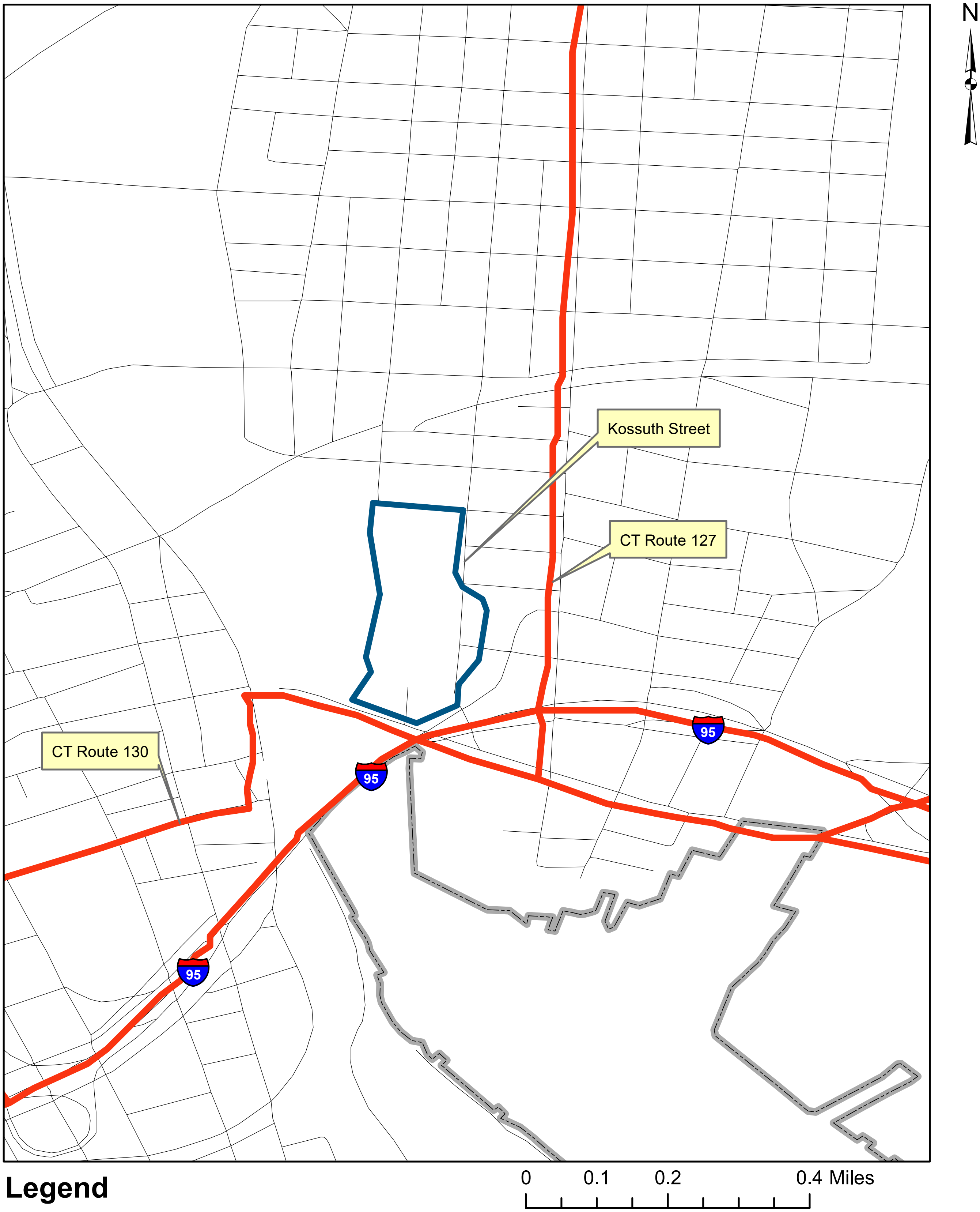
2.1 Site Information

The project site is currently occupied by a dog track, associated buildings, and parking lot. The project intent is to redevelop the site to serve as a venue for professional sporting events. The project entails the construction of a modular soccer stadium and related improvements.

2.1.1 Location

The project site is located at 255 Kossuth St and 141 Stratford Ave in the City of Bridgeport in Fairfield county, CT. The project site is bordered by Pulaski St to the North, Kossuth St to the East, Stratford Ave to the South, and Pequonnock River to the West. Refer to Figure 2.1 for Site Location Map.

Site Location Map



Legend

- Bridgeport Stadium Project Boundary
- Highway
- State of Connecticut Boundary
- Town Boundaries
- Municipal Road

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2.1.2 Geologic Conditions

The site geologic conditions are summarized in a separate document titled "Geotechnical Subsurface Investigation and Engineering Report Bridgeport Stadium Bridgeport, Connecticut" prepared by LaBella Associates and dated June 17, 2024.

2.1.3 Environmental Resources

The site environmental resources are summarized in a separate document titled "Wetland and Watercourse Evaluation Report" prepared by BL Companies and dated September 29, 2023.

2.1.4 Environmental Justice

The project site is located in Environmental Justice Block Groups 2023: 090010740001.

2.1.5 Environmental Remediation

The site soil and groundwater are contaminated. The nature and extent of the contamination are currently under investigation. Appropriate remedial activities and controls will be implemented after a Phase III Environmental Site Assessment is performed and a Remedial Action Plan is prepared.

2.1.6 Floodplain Considerations

The site floodplain considerations are summarized in a separate document titled "Floodplain Assessment for Proposed Bridgeport Stadium" prepared by LaBella Associates and dated July 8, 2024.

2.2 Ownership

The property is privately owned by Swanston Organization, LLC.

2.3 Existing Facilities and Present Condition

2.3.1 Water

Water is supplied to the site by the City of Bridgeport water system through an existing 16-inch diameter pipe. A fire flow test was performed on this water main by Aquarion Water Company on July 15, 2024 at 5:45pm, and the test results indicate that the available fire flow capacity is 7, 258 gpm @ 20 psi. The fire flow test report is included in Appendix A.

2.3.2 Wastewater

Wastewater generated on site is conveyed to the City of Bridgeport wastewater system through a connection to a 12-inch pipe.

2.3.3 Stormwater

Stormwater collected on site is conveyed to the Pequonnock River. There are three (3) existing outfalls. Some stormwater flow from the City of Bridgeport is routed through the onsite stormwater system to these outfalls.

3. PROPOSED IMPROVEMENTS

3.1 Water and Sewer

The proposed modular stadium will be constructed to seat 7,500 people. The stadium will be designed to accommodate a future expansion that will increase the seating capacity of the stadium. At a later time, a new stadium with the capacity to seat 20,000 people may replace the expanded stadium. To ensure the water and sewer infrastructure serving the site are adequately sized, the seating capacity of the full buildout stadium will be used to estimate the demand.

Table 3-1: Projected Water Demand at Buildout[1]

Type of Use	Unit	Unit Quantity	Hydraulic Loading Rate[2] (gpd/unit)	Average Daily Flow (gpd)
Stadium	Seat	20,000	3.5	70,000
Employees[3]	Person	1,000	7	7,000
Concessions[4]	Meal	20,000	5	100,000
			Average Daily Flow (gpd)	177,000
			Average Daily Flow (gpm)	123
Max Day Peak Factor: 2				
			Max Daily Flow (gpd)	354,000
			Max Daily Flow (gpm)	246
Hourly Peak Factor: 4				
			Peak Hourly Flow (gpd)	708,000
			Peak Hourly Flow (gpm)	492

1. Projected wastewater flows assume full buildout and maximum occupancy of facilities.

2. Hydraulic loading rates from table 4 of Connecticut Public Health Code On-Site Sewage Disposal Regulations and Technical Standards for Subsurface Sewage Disposal Systems unless otherwise noted below.

3. Assumed the hydraulic loading rate for a stadium employee is double that of a stadium guest, and assumed quantity of employees.

4. Assumed stadium concessions is equivalent to a Take-Out Food Service and the total number of meals served in the stadium is equal to the seating capacity of the stadium.

Peak demand can also be estimated by assuming that all fixtures that consume water in the facility are in use simultaneously.

	Table 3-2: Projected Peak Water Demand[1]					
Type of Use	**Unit**	**Unit Quantity[2]**	**Fixture Consumption[3]**		**Hydraulic Loading Rate (gpm)**	**Peak Instantaneous Flow (gpm)**
Sink	Each	354	0.5	gpm	0.5	177
Toilet[4]	Each	355	1.6	gal/flush	1.6	568
Urinal[4]	Each	83	1.0	gal/flush	1.0	83
Shower	Each	40	2.5	gpm	2.5	100
Kitchen Sink	Each	20	2.5	gpm	2.5	50
					Total	976

1. The projected flow is for the current buildout (7,500 seat stadium) because floor plans are not available at this time for the full buildout (20,000 seat stadium).

2. Unit quantities are estimated based on counts of the fixtures shown on the first floor plan, except it was assumed each concession stand has one kitchen sink and the kitchen on the first floor was assumed to have 4 kitchen sinks. Assumed the 2nd and 3rd floor of the stadium would have the same fixture counts as the 1st floor, except the West side of the 2nd floor and 3rd floor were assumed to be the same as the East side of the 1st floor.

3. Fixture consumption assumed to be compliant with Connecticut regulations establishing minimum efficiency standards for plumbing fixtures and other water-saving devices (Section 21a-86a).

4. Assumed toilets and urinals are flushed once per minute.

Based on the peak flows estimated in Table 3-1 and Table 3-2 in comparison to the estimated flow available in the existing water main per fire flow testing (Appendix A), the existing 16-inch water main has adequate capacity to meet the peak demand of the facility while providing fire suppression flow.

Site wastewater will be conveyed into the City of Bridgeport wastewater system. The connection between the two systems will be examined further to ensure that the existing pipes receiving the wastewater discharge from the site have adequate capacity to convey the peak flows from the site.

3.2 Stormwater

The project is anticipated to disturb 14 acres of soil by a conservative estimate. This exceeds more than 5 acre of disturbance; therefore, a Stormwater Pollution Control Plan will be prepared for this project in accordance with CTDEEP requirements.

The soil and groundwater on site are contaminated; therefore, stormwater collected from redeveloped areas of the site will not be discharged on site through infiltration.

The stormwater runoff from the existing parking lots is collected by catch basins in the pavement and conveyed off site.

The proposed parking lots will be paved with permeable pavement to improve stormwater quality. The permeable pavement subbase will be equipped with underdrains placed over an impermeable liner to prevent infiltration and collect the stormwater so it can be conveyed off site.

Stormwater runoff from the remaining redeveloped areas of the site (stadium roof, sidewalks, etc, …) will also be collected and discharged off site. The design intent is to minimize the amount of impervious area and treat as much collected stormwater runoff as practicable from the redeveloped area with tree filters to improve the quality of that stormwater runoff before it is discharged off site.

3.3 Engineer's Opinion of Probable Construction Cost

An Opinion of Probable Construction Cost will be prepared.

3.4 Project Schedule

A Project Schedule will be prepared.

3.5 Next Steps

A list of approvals that are required for construction will be prepared.

Appendix A:
Fire Flow Test Results

Reference Page _______________

Aquarion Water Company Fire Flow Test

Test Location: BRIDGEPORT, CT

Test Date: 07/15/2024 Test Time: 05:45 PM

Flow Hydrant: 1633 Location:Kossuth St @ Nichols St

Flow Hydrant Parameters:

Main Size:	16"
Pipe/Nozzle Diameter:	4.0 Diffuser inches
Pito Pressure:	40 psi
PSI Before:	94 psi

Residual Hydrant: 1649 Location: Howe St @ Kossuth St

Residual Hydrant Parameters:

PSI Before:	94 psi
Residual During Flow:	82 psi
PSI After:	94 psi
PSI Drop:	12 psi

Test Results:

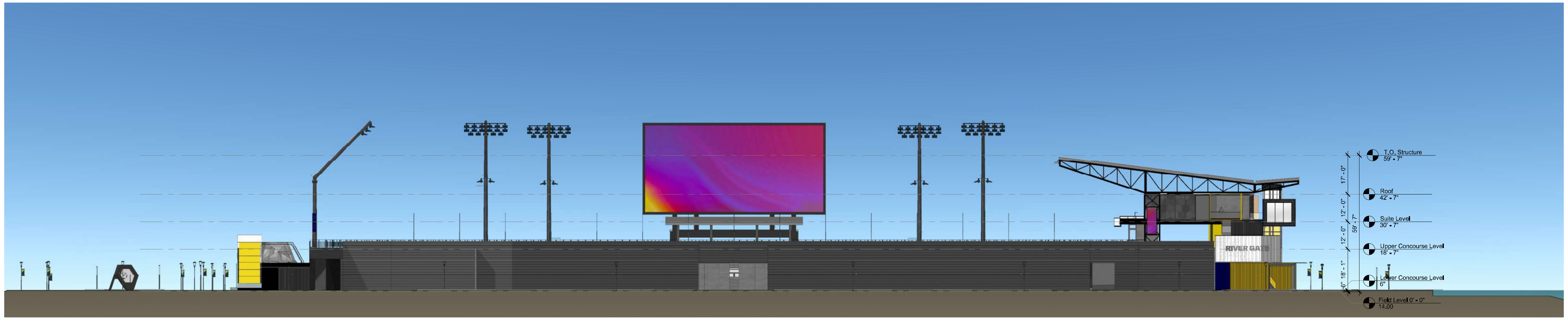
GPM Available:	2,720
GPM @20 psi:	7,258

Test Performed By: JP&WILLB

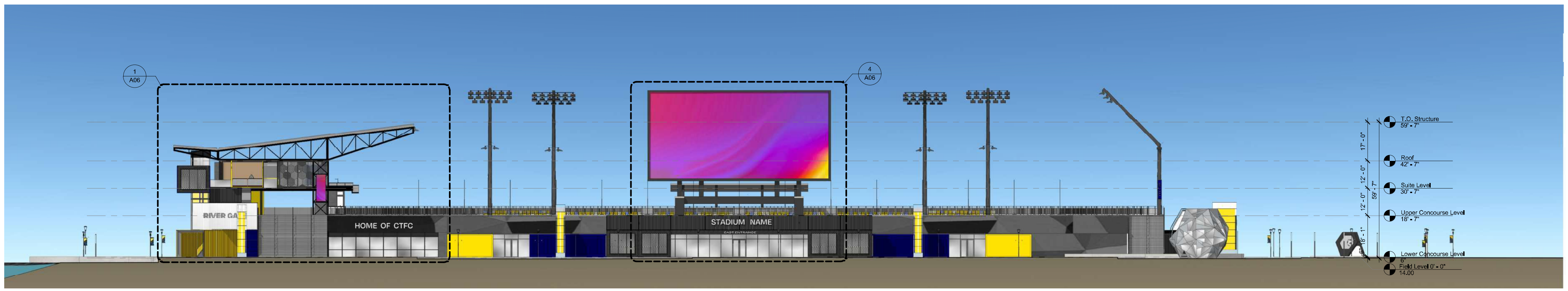
NOTE: Static Pressure readings are actual, and test results are not corrected for elevation differential.

Test Method: Calibrated Orifice

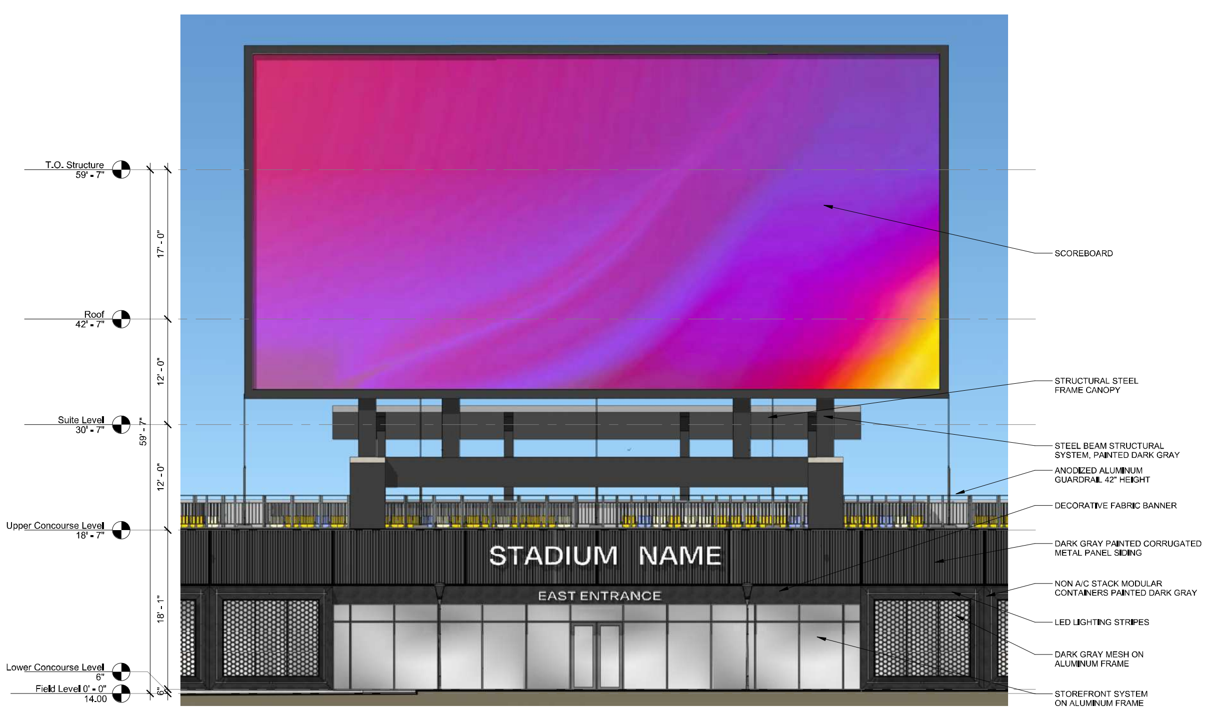
Disclaimer: This data represents system conditions on the date and time that the test was performed. System conditions may vary significantly throughout the year. The design of new water service installations and the identification and gathering of all necessary data is the sole responsibility of the Developer or his representative. In all instances, the water service designer should apply engineering judgment to ensure proper design. Aquarion Water Company does not guarantee the accuracy of this data.



3 NORTH ELEVATION.
1" = 20'-0"



2 SOUTH ELEVATION.
1" = 20'-0"



4 ENLARGED SOUTH ELEV - MATERIALS REFERENCE #2
1/8" = 1'-0"

1 ENLARGED SOUTH ELEV - MATERIALS REFERENCE #1
1/8" = 1'-0"

NORTH & SOUTH ELEVATION STADIUM

07/19/24

Technical Review Package | **A06**

Bridgeport, Connecticut.

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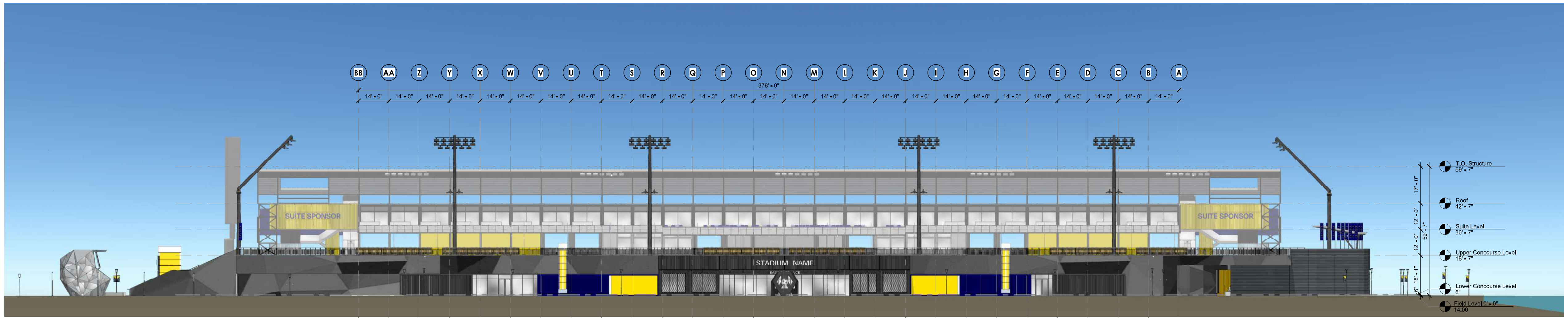
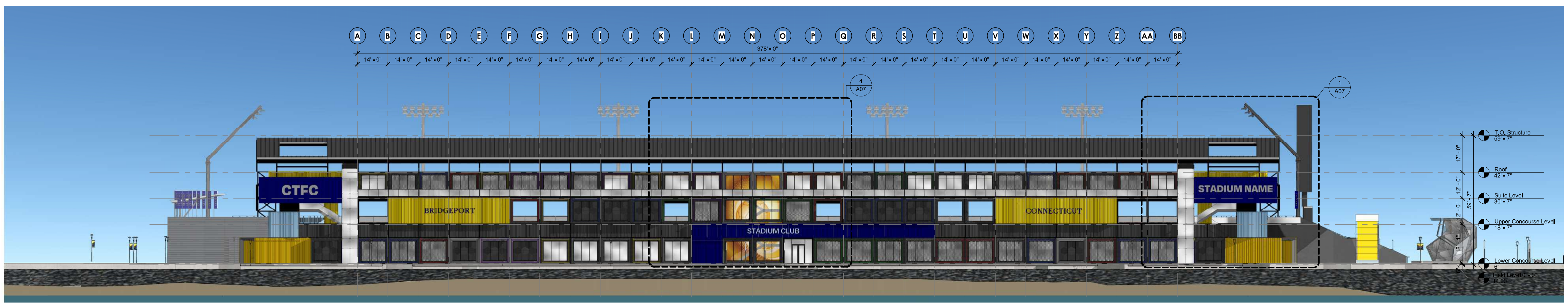
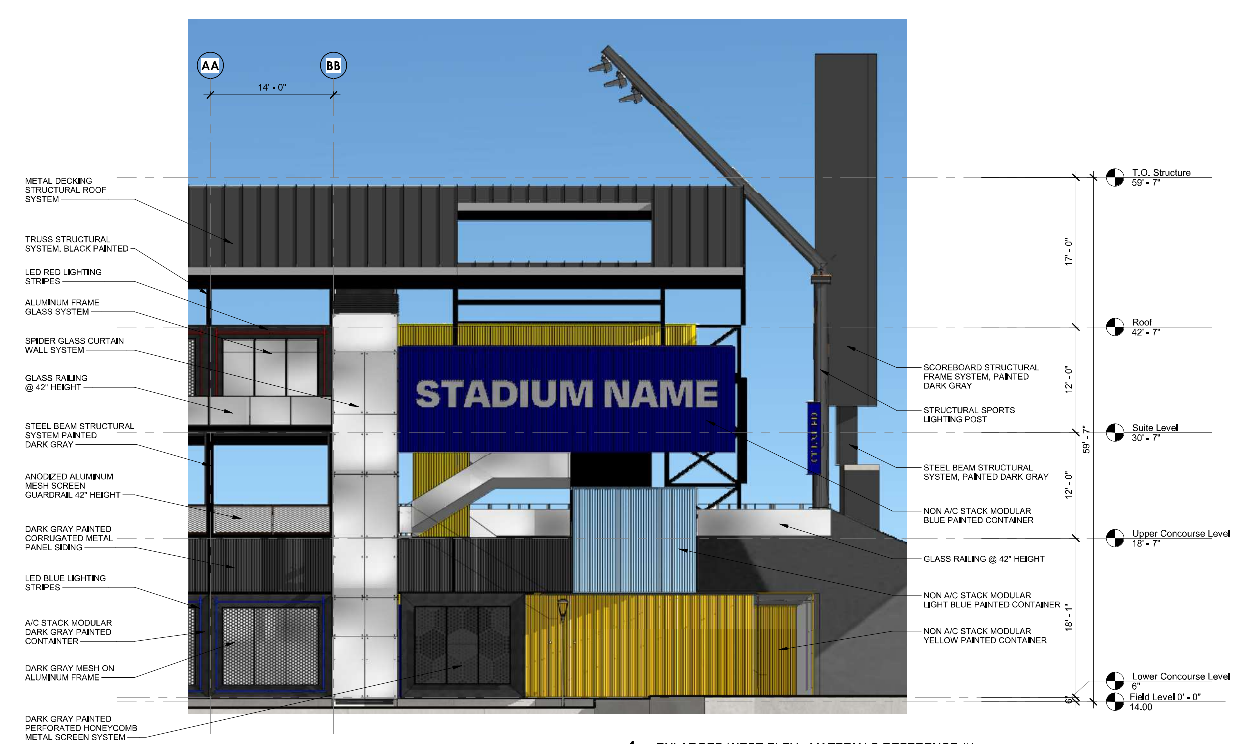


3 EAST ELEVATION.
1" = 20'-0"



2 WEST ELEVATION.
1" = 20'-0"

4 ENLARGED WEST ELEV - MATERIALS REFERENCE #2
1/8" = 1'-0"



1 ENLARGED WEST ELEV - MATERIALS REFERENCE #1
1/8" = 1'-0"

EAST & WEST ELEVATION STADIUM

07/19/24

Technical Review Package

A07

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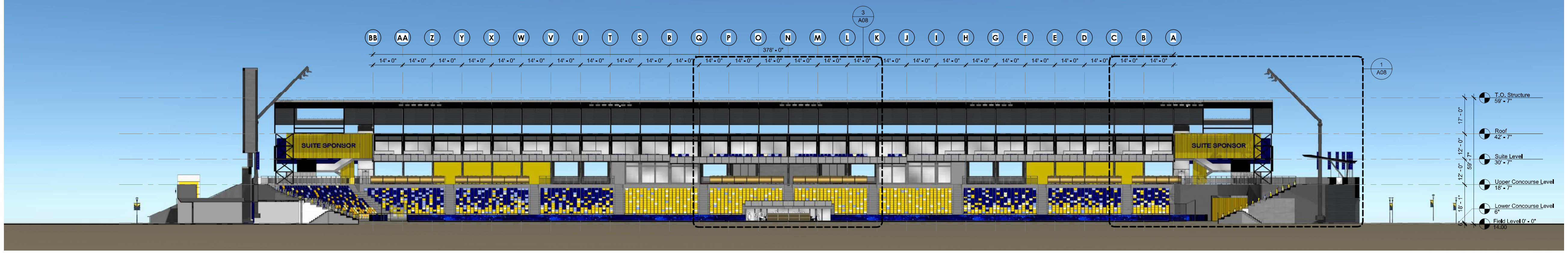
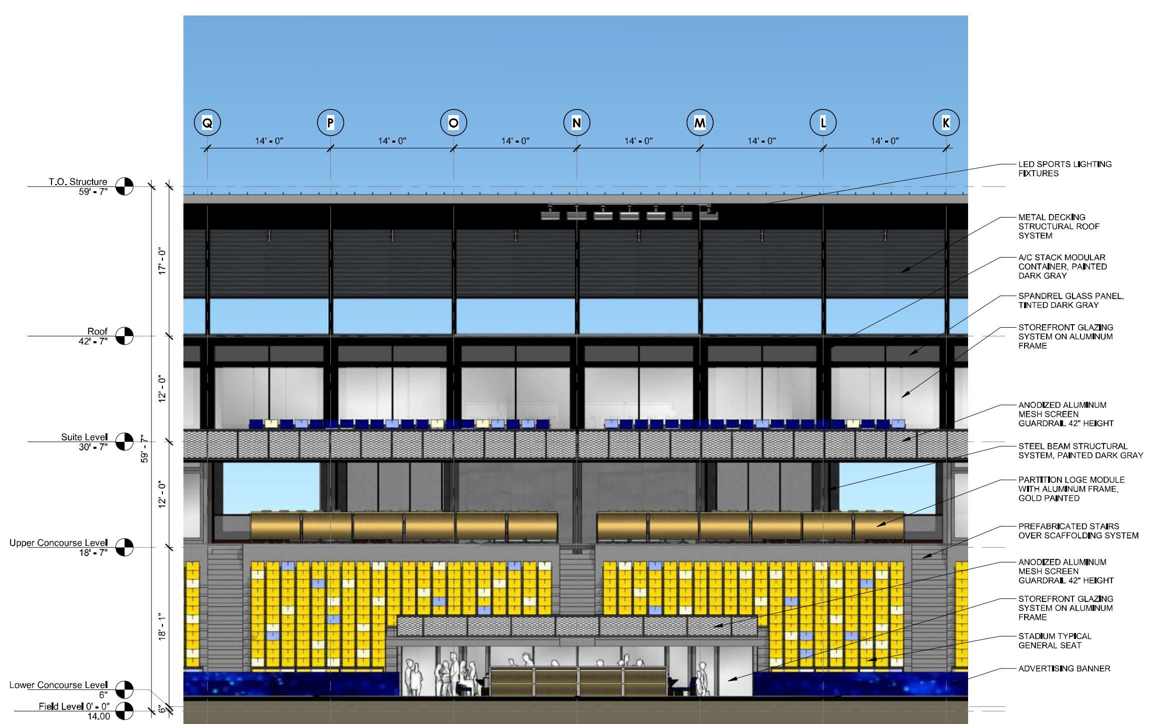
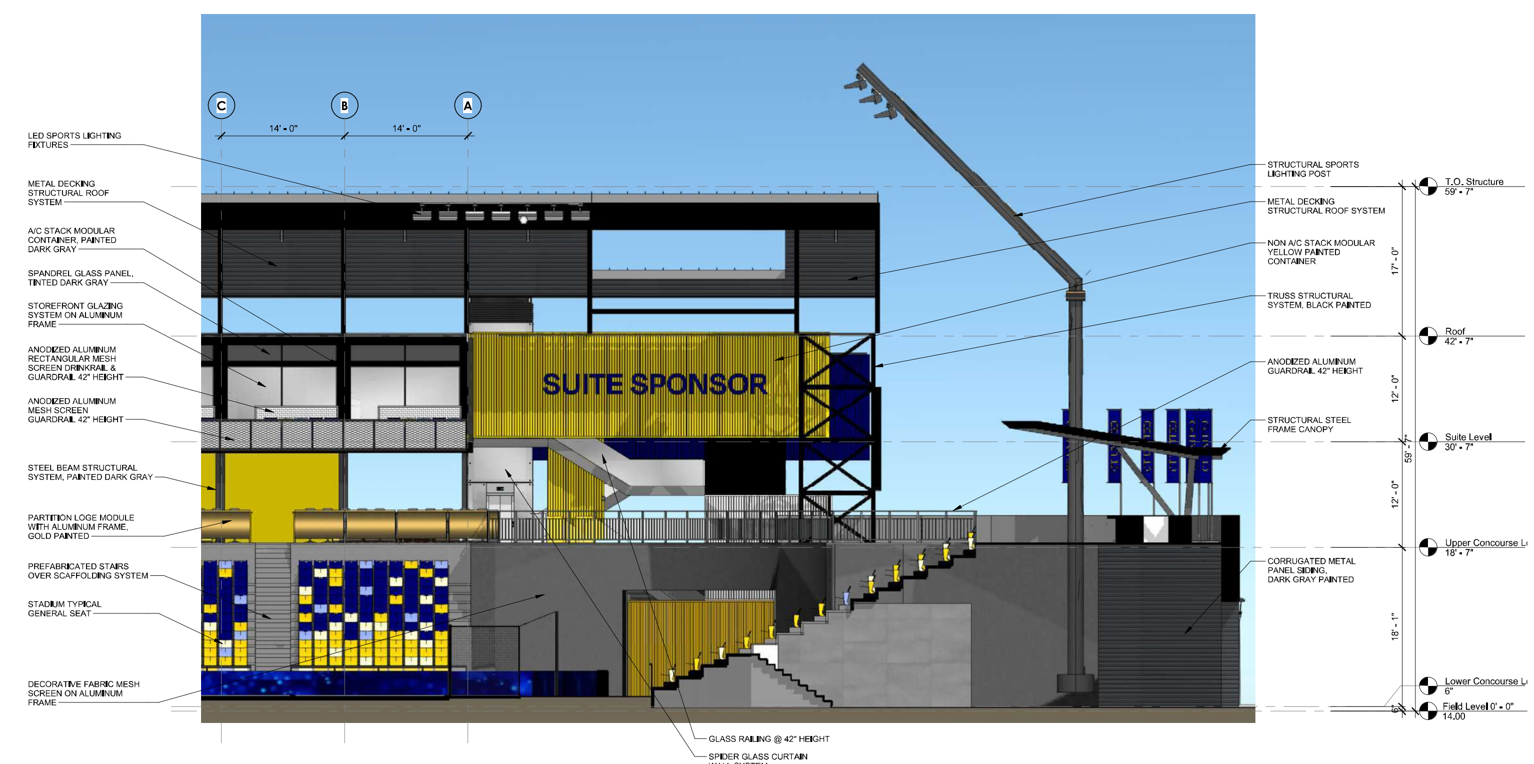


2 Technical Review - West - East Interior Elevation
1" = 20'-0"



3 INTERIOR EAST ELEV - MATERIAL REFERENCE #2
1/8" = 1'-0"



1 INTERIOR EAST ELEV - MATERIAL REFERENCE #1
1/8" = 1'-0"

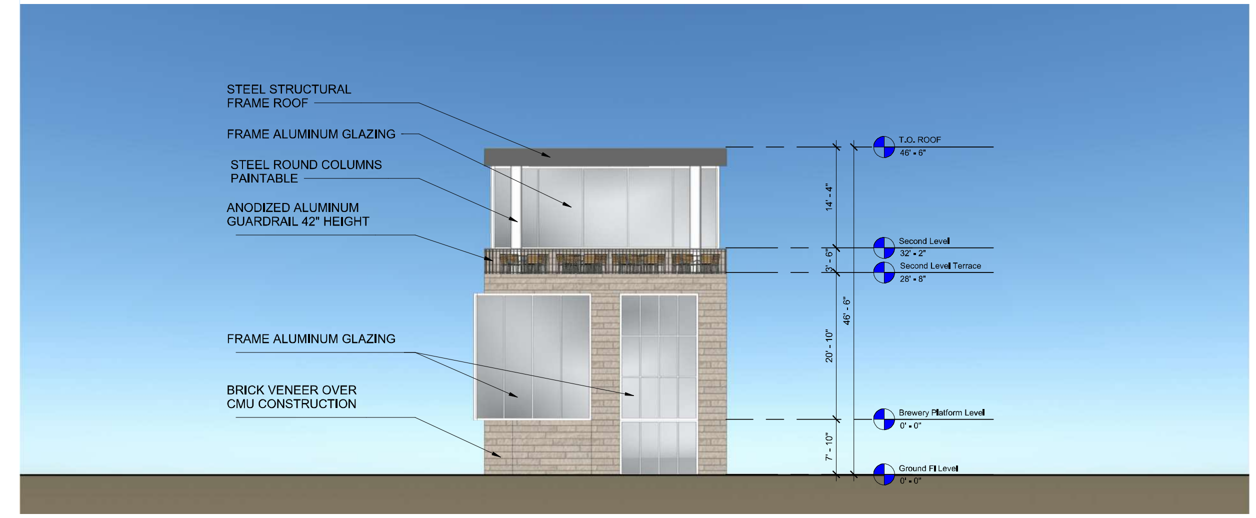
WEST ELEVATION INTERIOR SECTION

07/16/24

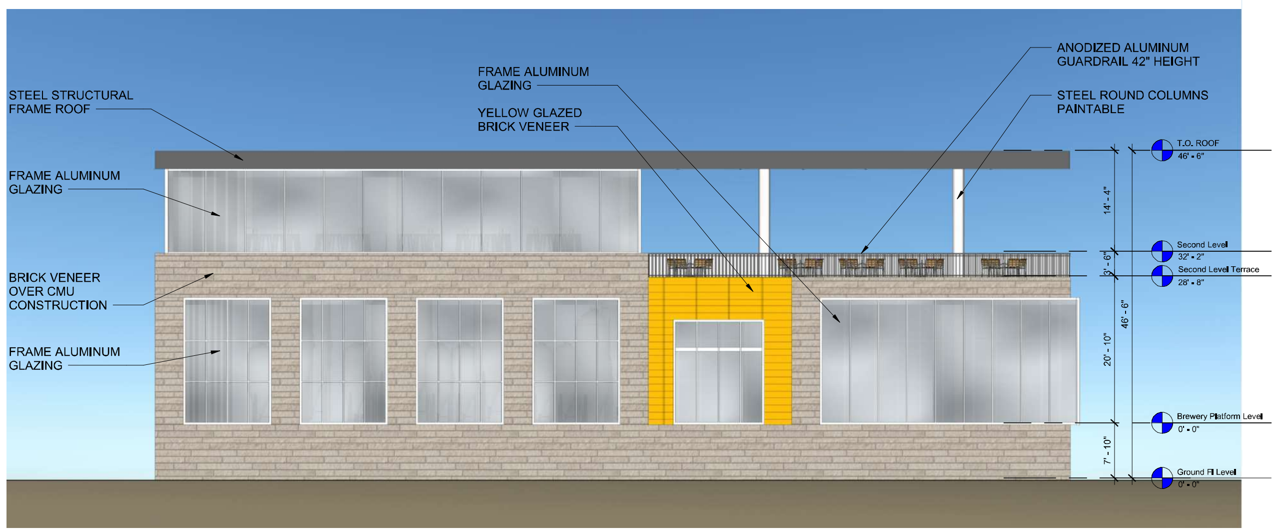
Technical Review Package A08

Bridgeport, Connecticut.

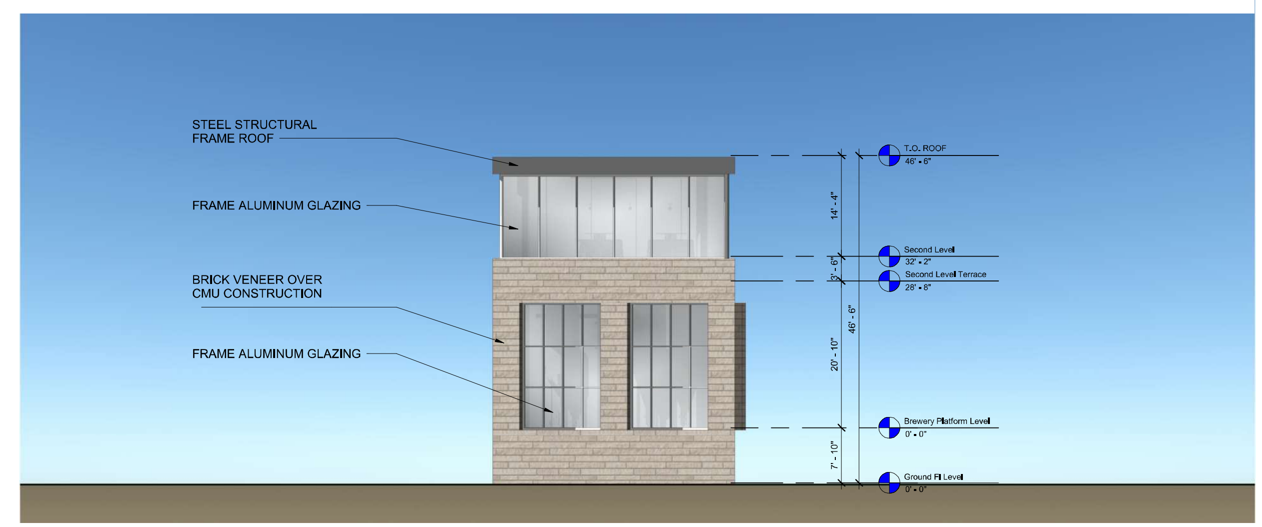
6 BREWERY WEST ELEVATION
1" = 10'-0"



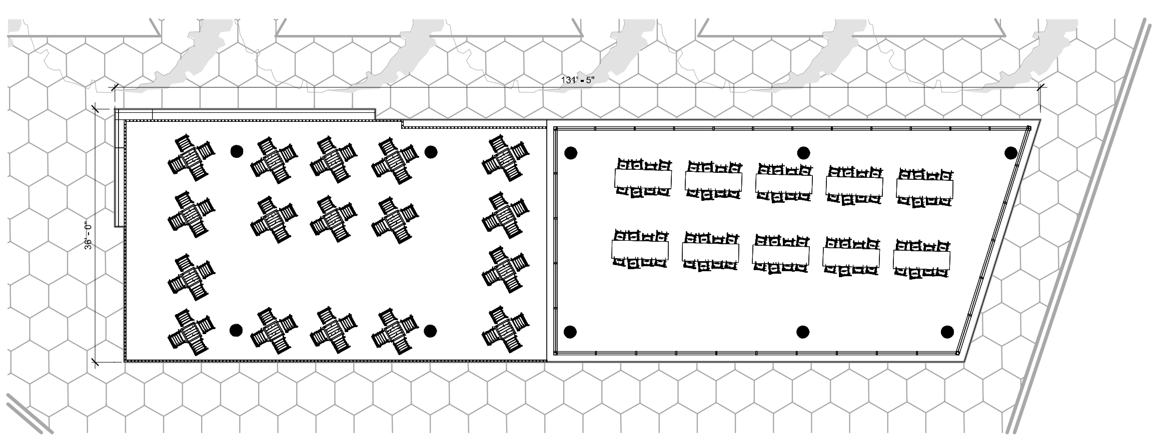
3 BREWERY SOUTH ELEVATION
1" = 10'-0"



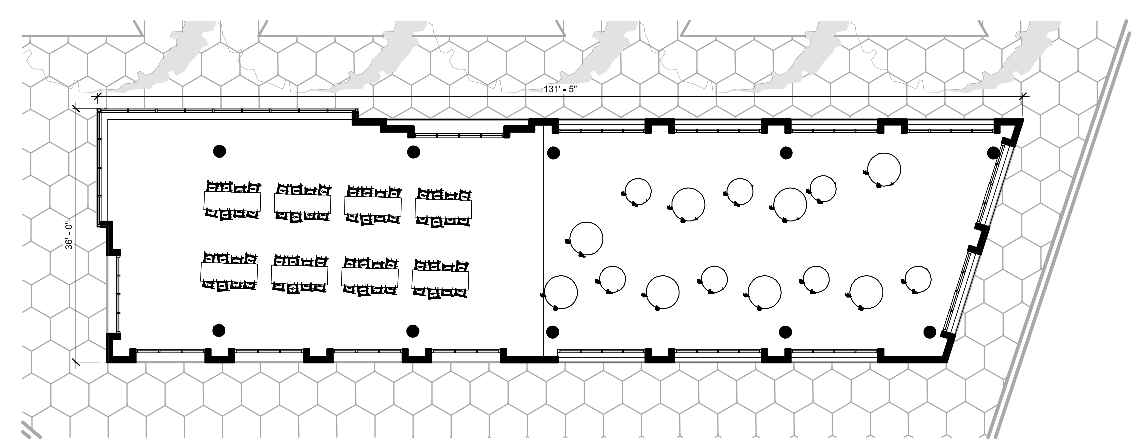
5 BREWERY EAST ELEVATION
1" = 10'-0"



2 BREWERY NORTH ELEVATION
1" = 10'-0"



4 BREWERY SECOND LEVEL
1" = 10'-0"



1 BREWERY GROUND FLOOR LEVEL
1" = 10'-0"

PLAN NORTH
TRUE NORTH

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BREWERY ELEVATIONS
07/19/24

Technical Review Package **A09**
Bridgeport, Connecticut.

2 AERIAL NORTHEAST PERSPECTIVE - NIGHT
NTS (OPTIONAL EAST GRANDSTAND CANOPY & SUPPORTER BAR & CONCESSION STAND)

1 AERIAL SOUTHEAST PERSPECTIVE - NIGHT
NTS

4 WEST PERSPECTIVE - NIGHT
NTS

3 AERIAL NORTHWEST PESPECTIVE - NIGHT
NTS

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RENDERINGS
07/19/24

Technical Review Package A10
Bridgeport, Connecticut.

1 SOUTHWEST PERSPECTIVE CLOSE UP
NTS

RENDERINGS
07/18/24

Technical Review Package **A11**
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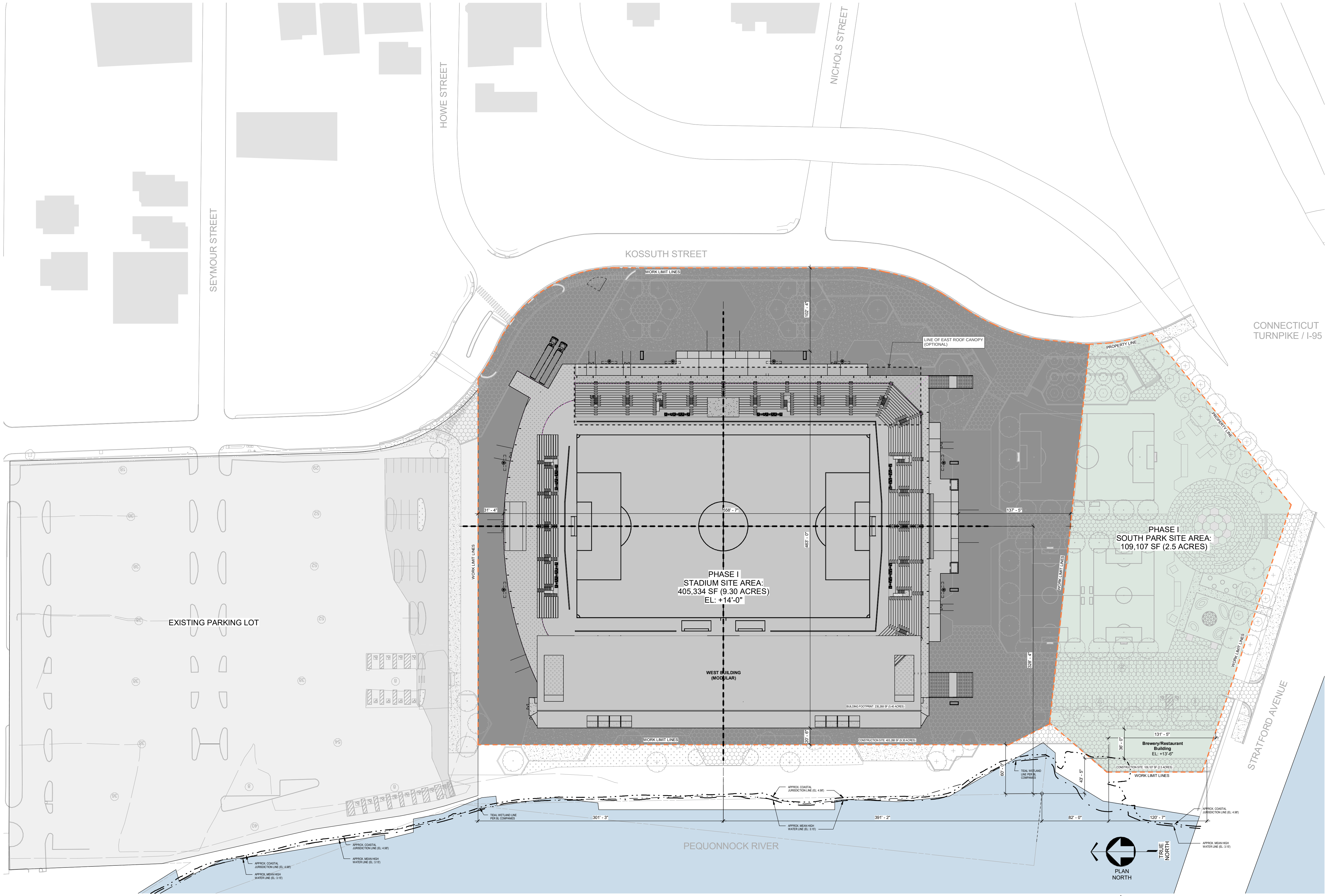
BRIDGEPORT CT - UNITED STADIUM - TECHNICAL REVIEW PACKAGE



1 TECHNICAL REVIEW - SITE PLAN
1" = 40'-0"

SITE PLAN

07/19/24

Technical Review Package | **A01**

Bridgeport, Connecticut.

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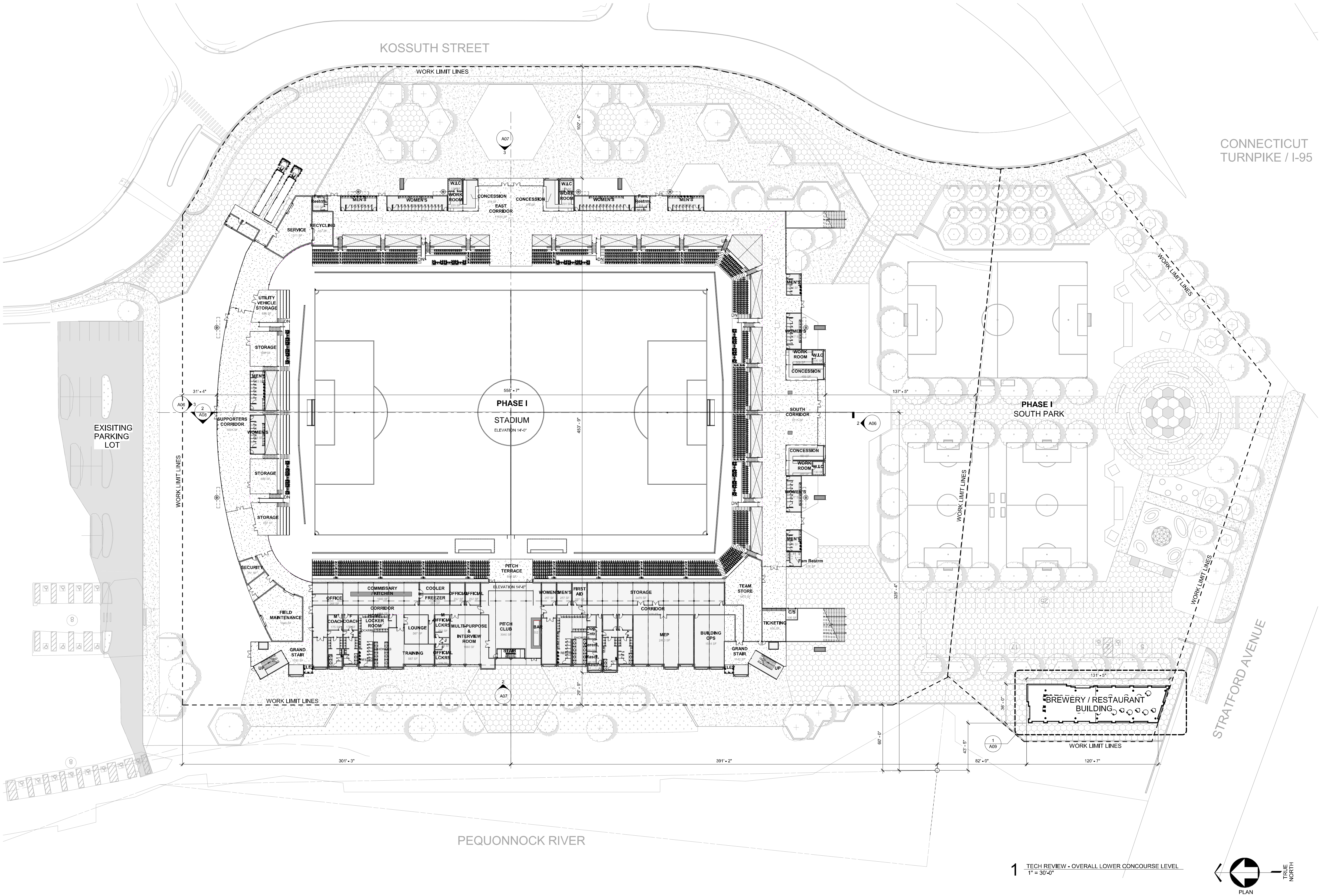

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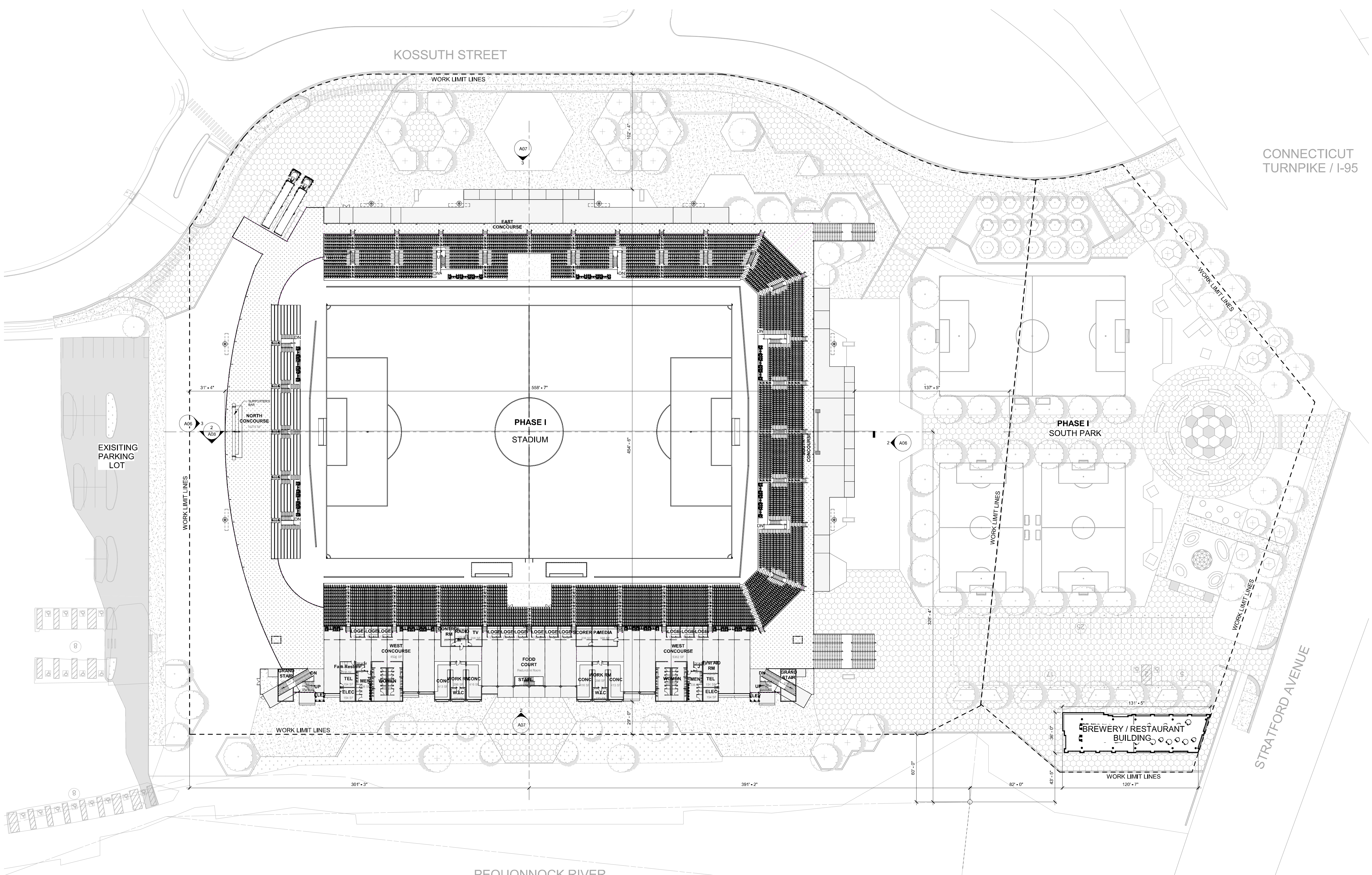
LOWER CONCOURSE FLOOR PLAN

07/19/24

Technical Review Package A02

Bridgeport, Connecticut.



1 TECH REVIEW - OVERALL UPPER CONCOURSE LEVEL
1" = 30'-0"

UPPER CONCOURSE FLOOR PLAN

07/19/24

Technical Review Package

A03

Bridgeport, Connecticut.

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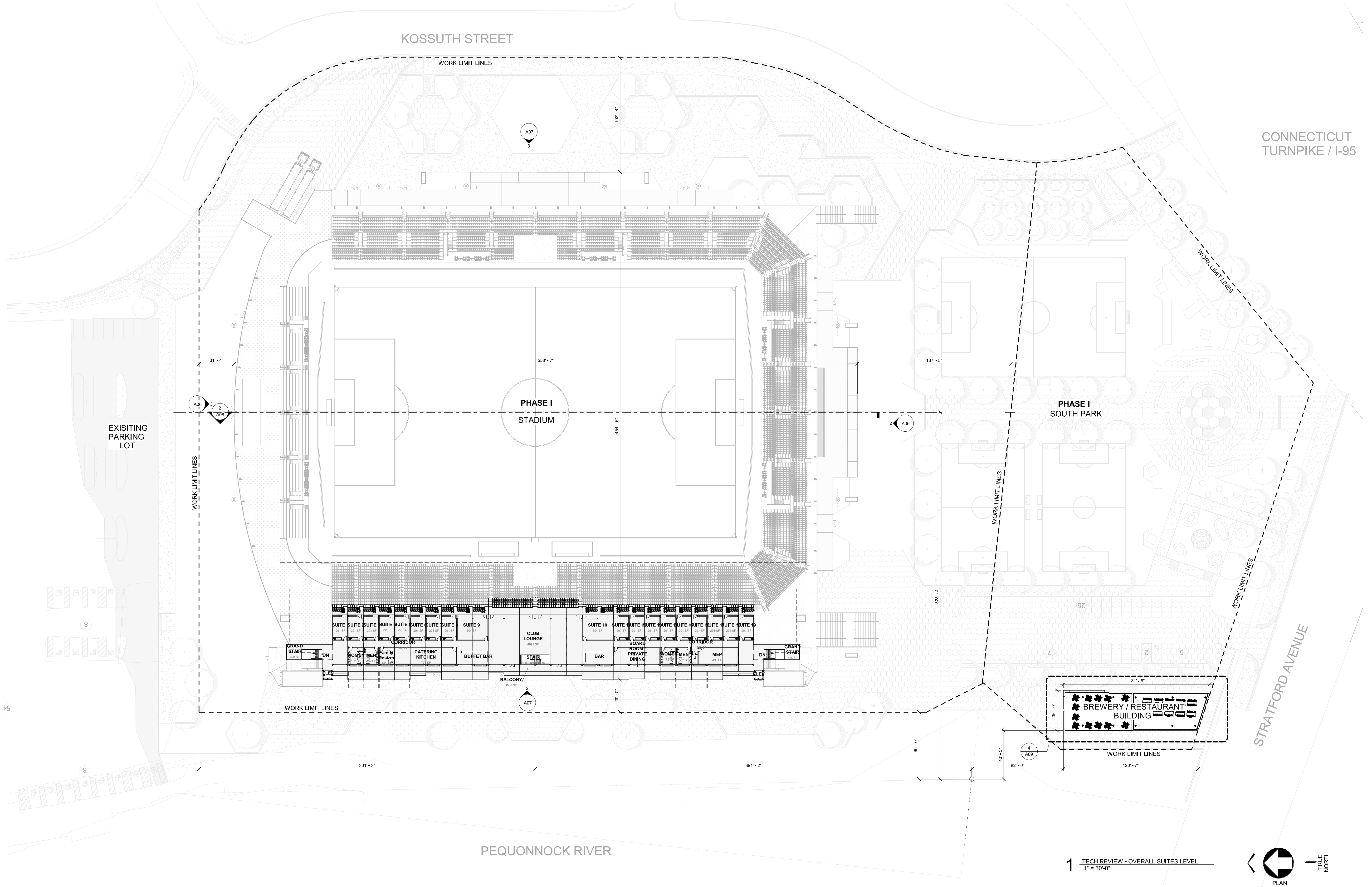

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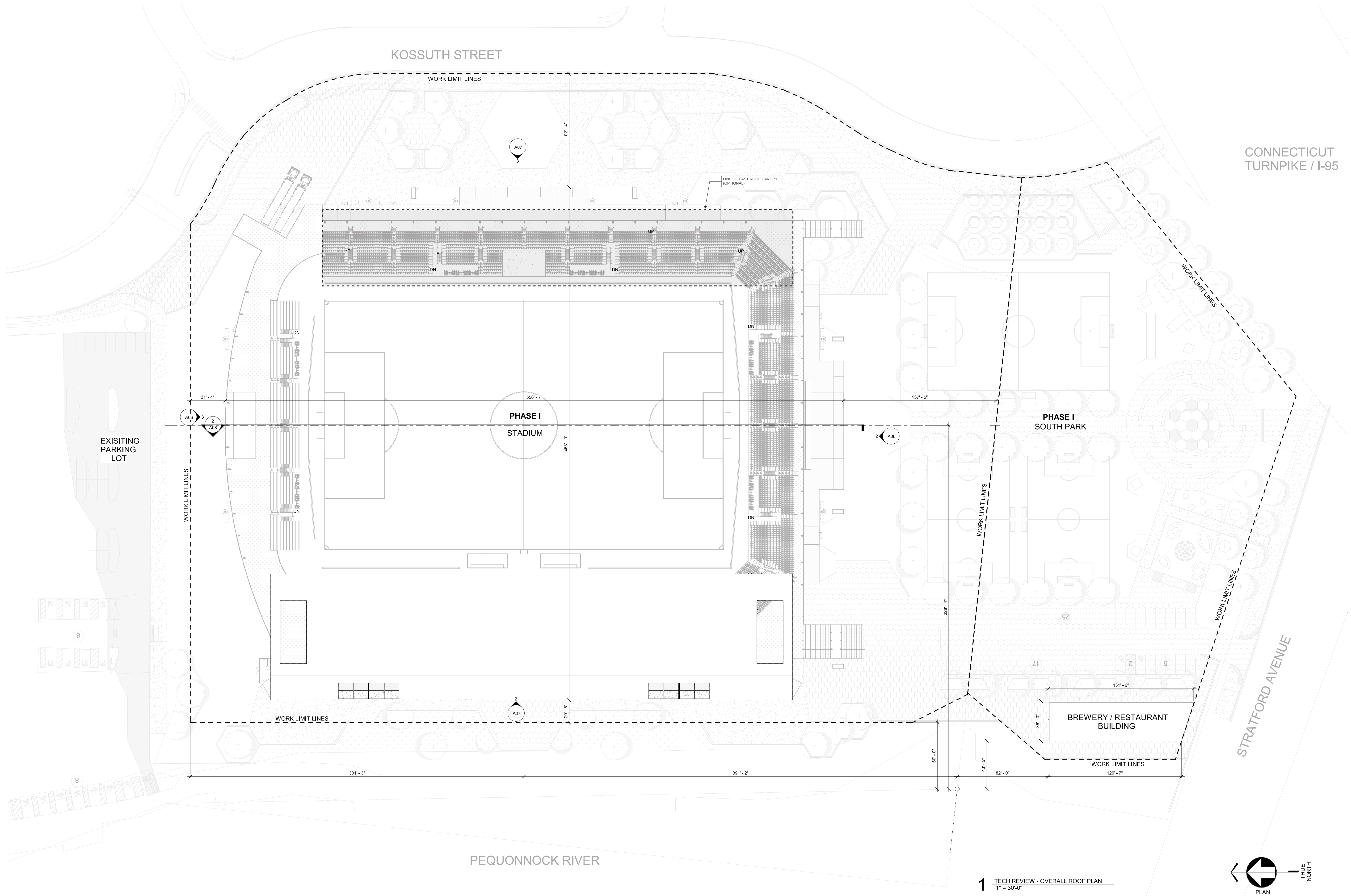
SUITES LEVEL FLOOR PLAN

07/19/24

Technical Review Package A04

Bridgeport, Connecticut.



1 TECH REVIEW - OVERALL ROOF PLAN
1" = 30'-0"

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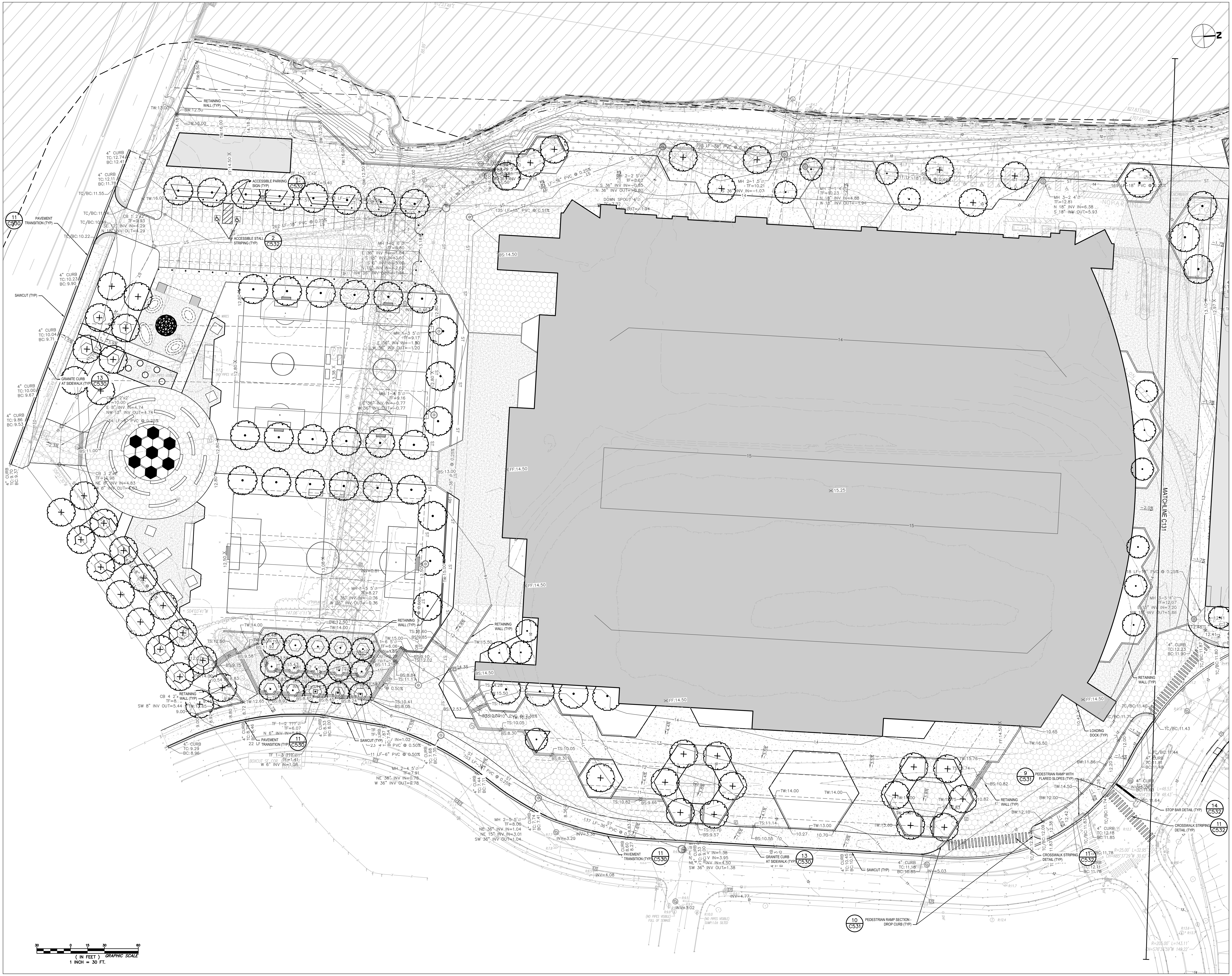
ROOF PLAN
07/19/24

Technical Review Package | **A05**
Bridgeport, Connecticut.



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BRIDGEPORT, CT 06608

NO.	DATE:	DESCRIPTION:
Revisions		

PROJECT NUMBER: 2230111

DRAWN BY: JL

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ISSUED FOR: ISSUED FOR

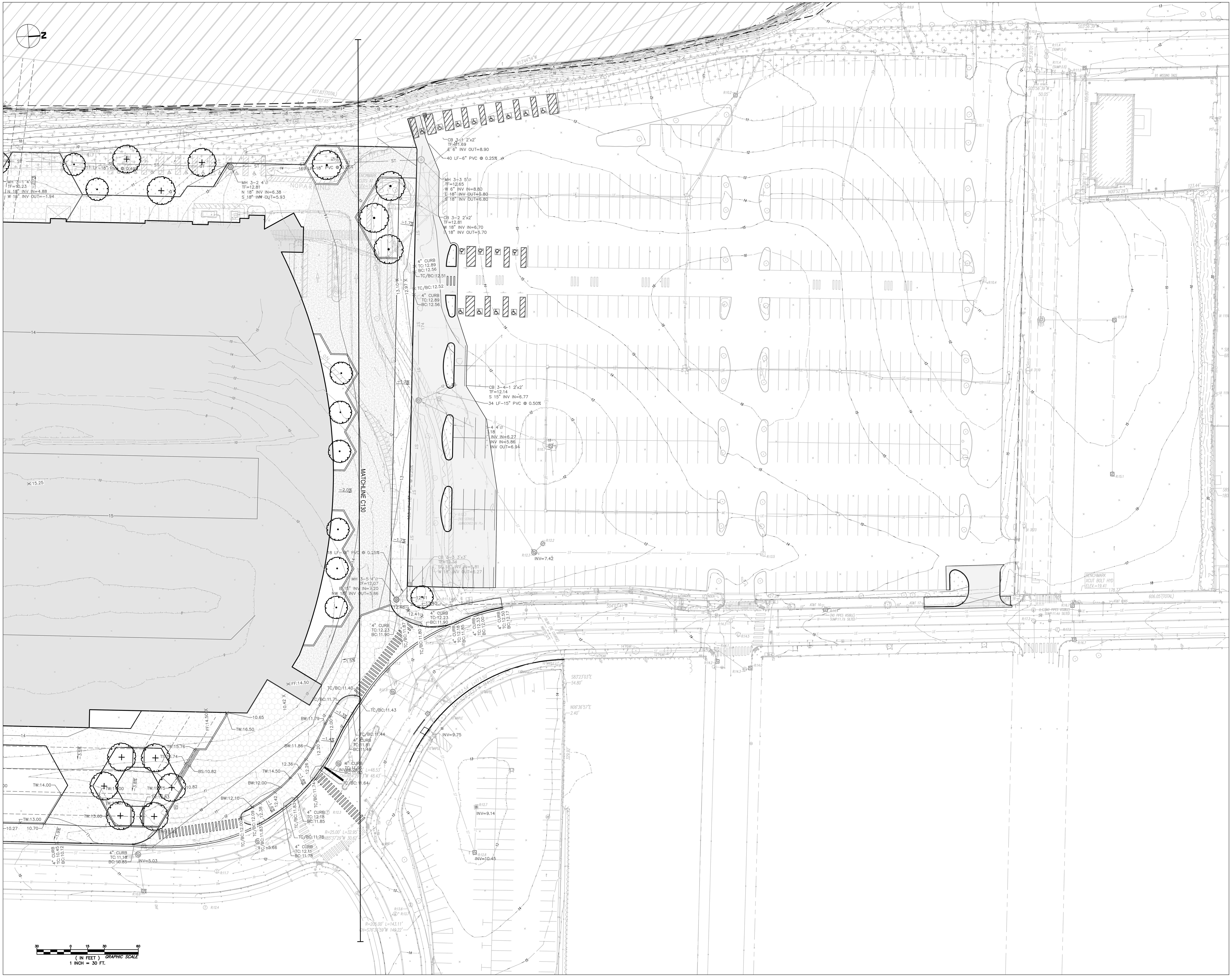
DATE: 04/08/2024

DRAWING NAME:

SITE PLAN

DRAWING NUMBER:

C130



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BRIDGEPORT, CT 06608

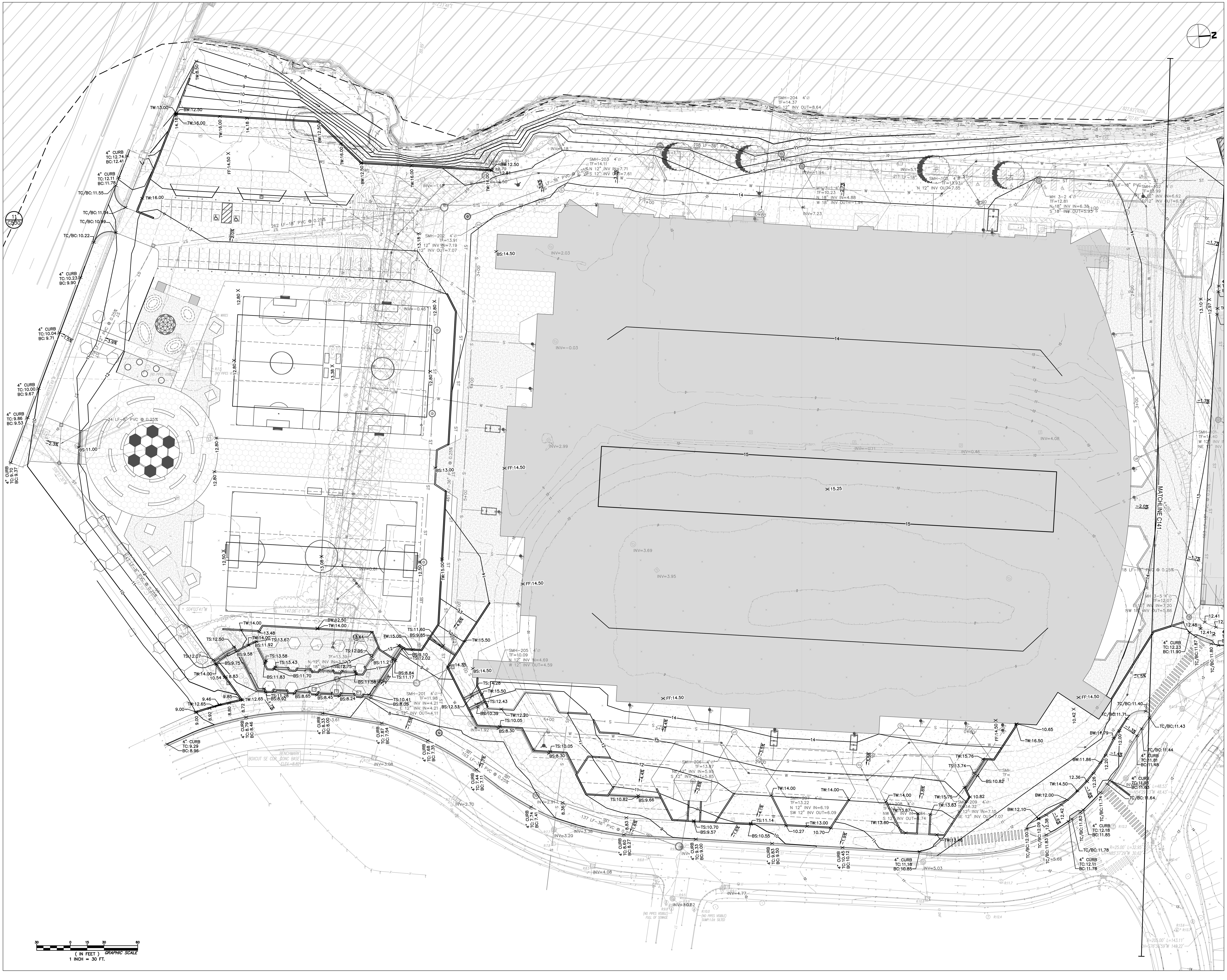
NO:	DATE:	DESCRIPTION:
Revisions		

PROJECT NUMBER: 2230111
DRAWN BY: JL
REVIEWED BY: JRS
ISSUED FOR: ISSUED FOR
DATE: 04/08/2024
DRAWING NAME:

SITE PLAN

DRAWING NUMBER:

C131



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BRIDGEPORT, CT 06608

NO:	DATE:	DESCRIPTION:
Revisions		

PROJECT NUMBER: 2230111
DRAWN BY: JL
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DATE: 04/08/2024
DRAWING NAME:

GRADING PLAN

DRAWING NUMBER:

C140

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BRIDGEPORT STADIUM & MIXED USE
255 & 363 KOSSUTH STREET
BRIDGEPORT, CT 06608

NO:	DATE:	DESCRIPTION:
Revisions		

PROJECT NUMBER: 2230111
DRAWN BY: JL
REVIEWED BY: JRS
ISSUED FOR: ISSUED FOR
DATE: 04/08/2024
DRAWING NAME:

GRADING PLAN

DRAWING NUMBER:

C141

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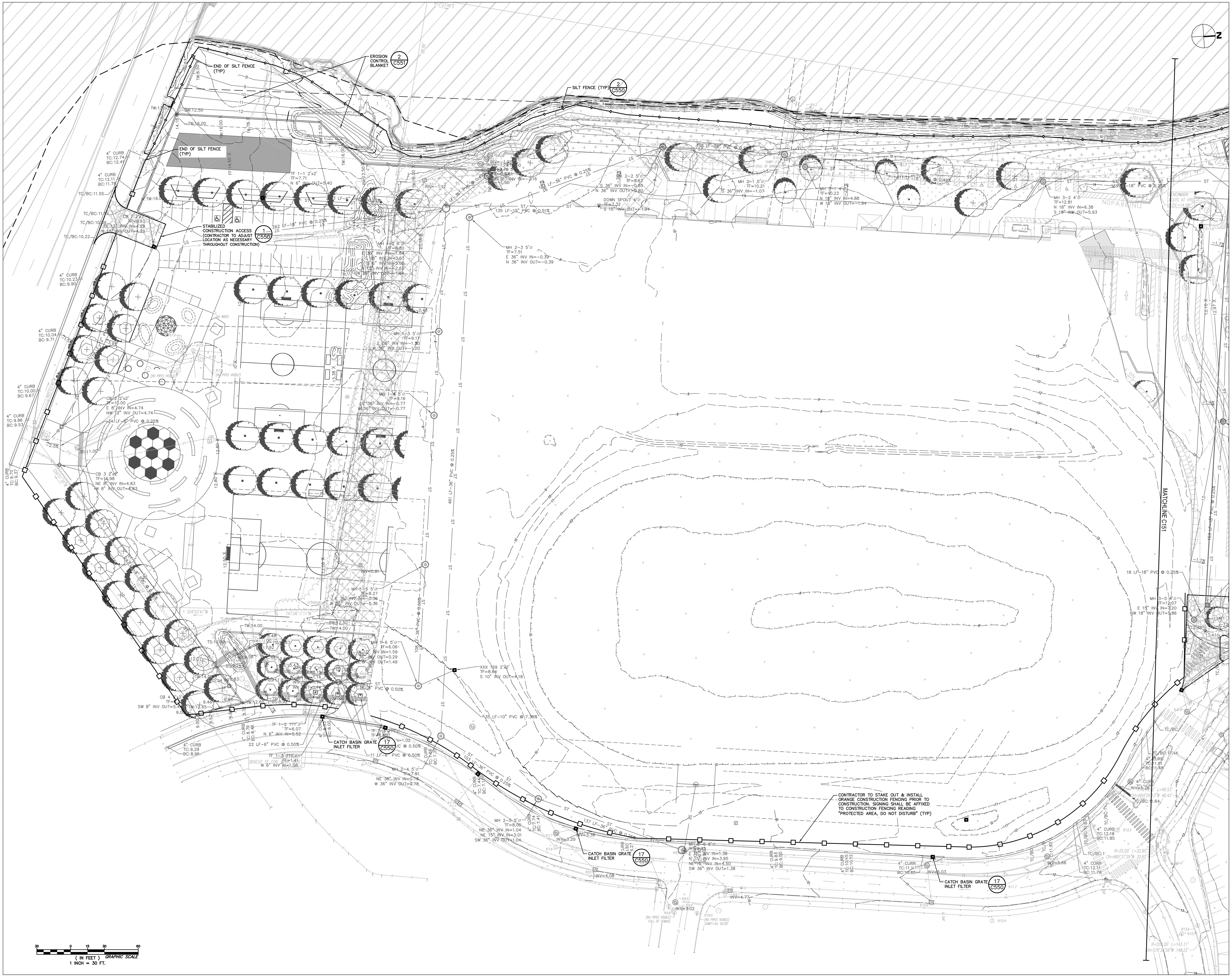

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BRIDGEPORT, CT 06608

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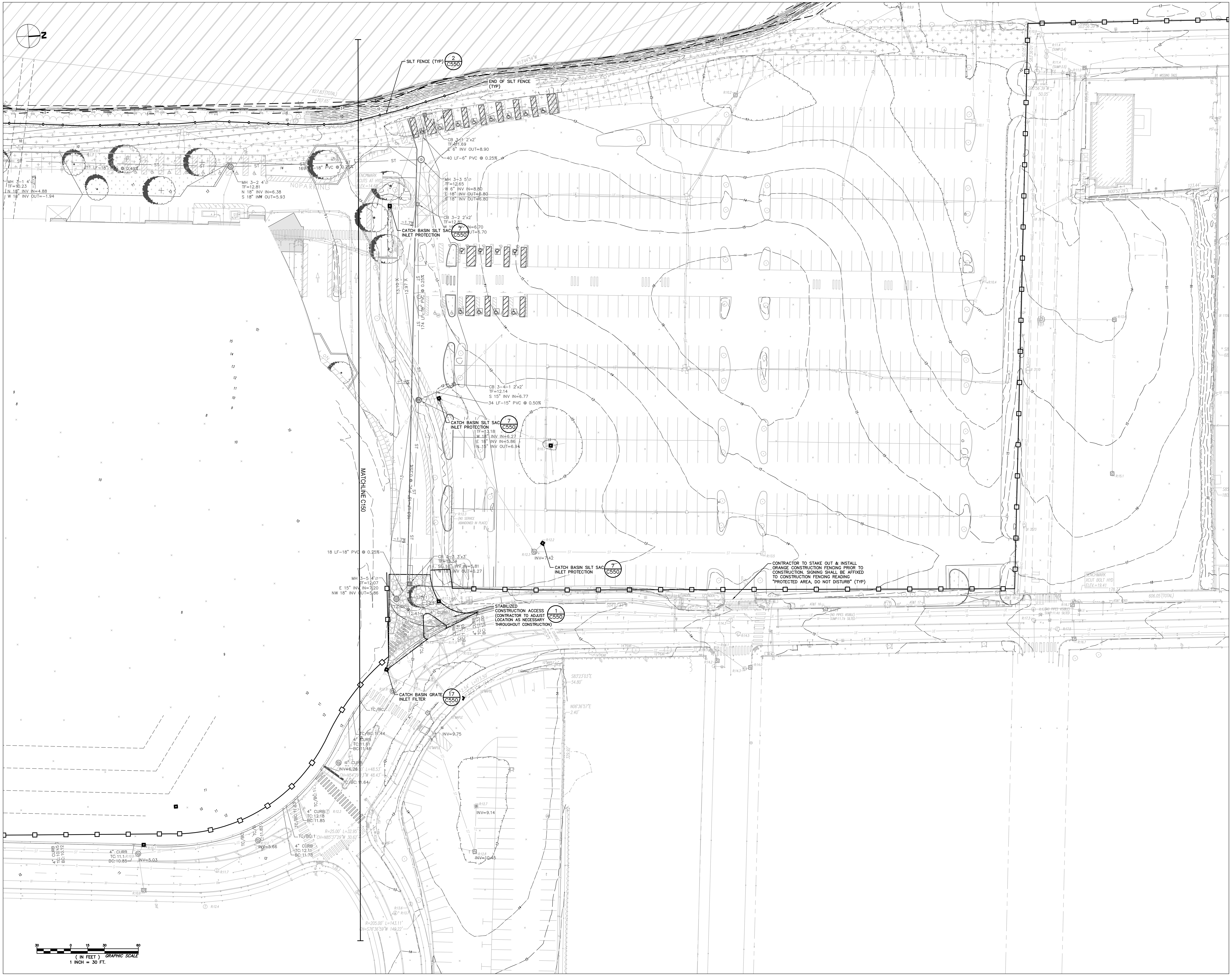
Revisions		

PROJECT NUMBER: 2230111
DRAWN BY: JL
REVIEWED BY: JRS
ISSUED FOR: ISSUED FOR
DATE: 04/08/2024
DRAWING NAME:

EROSION & SEDIMENT CONTROL PLAN

DRAWING NUMBER:

C150



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BRIDGEPORT, CT 06608

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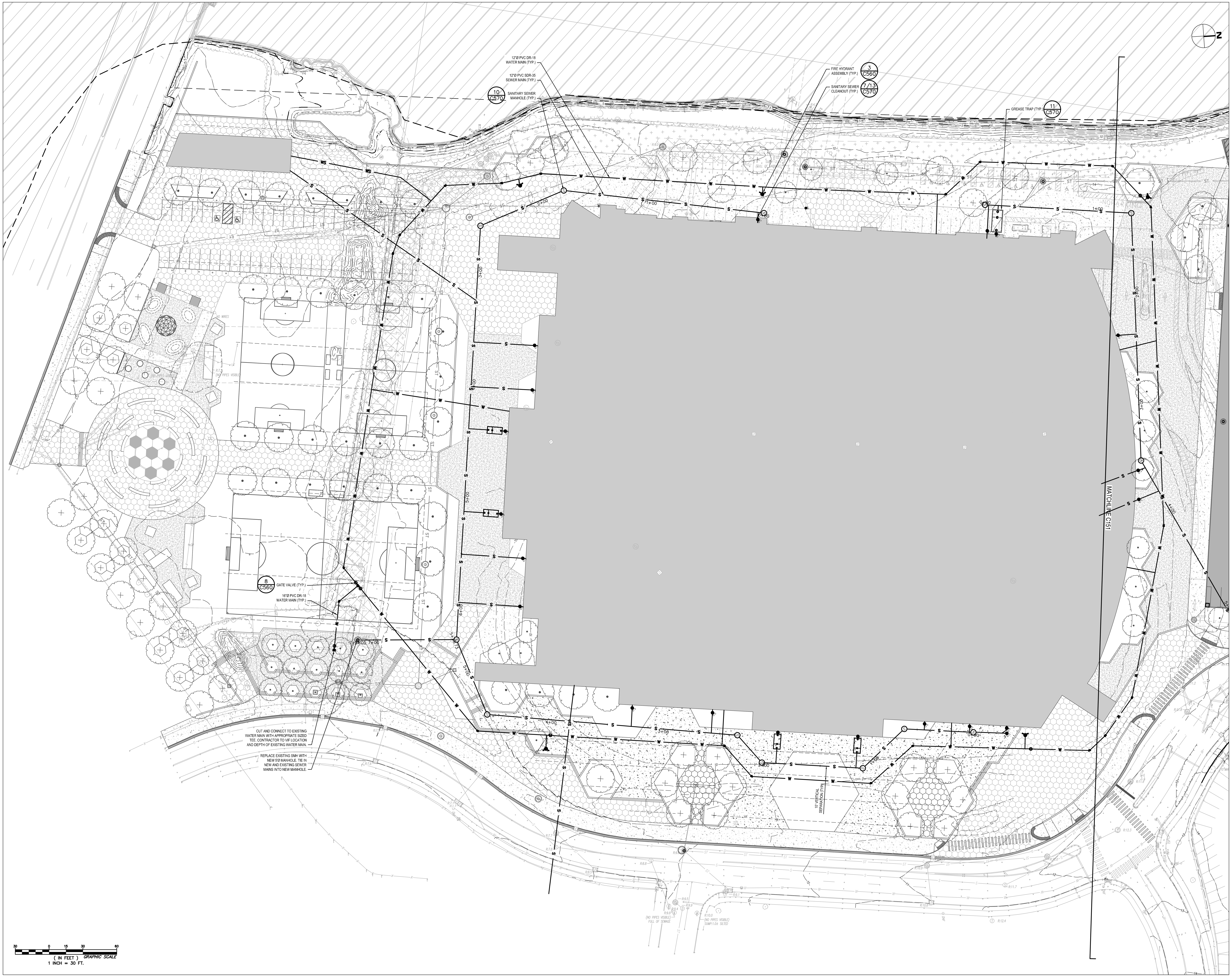
Revisions		

PROJECT NUMBER: 2230111
DRAWN BY: JL
REVIEWED BY: JRS
ISSUED FOR: ISSUED FOR
DATE: 04/08/2024
DRAWING NAME:

EROSION & SEDIMENT CONTROL PLAN

DRAWING NUMBER:

C151



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255 & 363 KOSSUTH STREET
BRIDGEPORT, CT 06608

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Revisions		

PROJECT NUMBER: 2230111

DRAWN BY: AC

REVIEWED BY: JRS

ISSUED FOR: ISSUED FOR

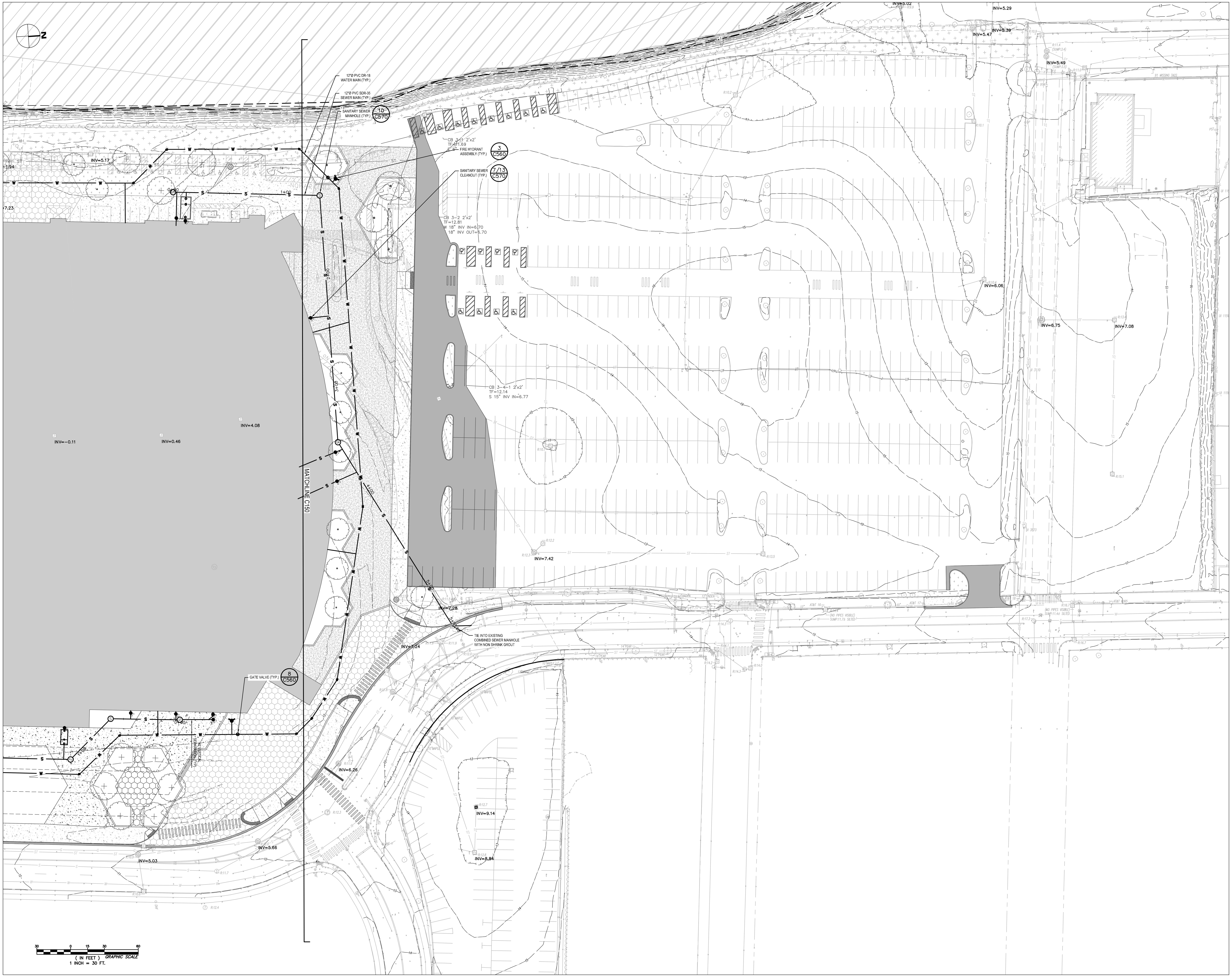
DATE: 04/08/2024

DRAWING NAME:

UTILITY PLAN

DRAWING NUMBER:

C160



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255 & 363 KOSSUTH STREET
BRIDGEPORT, CT 06608

NO:	DATE:	DESCRIPTION:
Revisions		

PROJECT NUMBER: 2230111

DRAWN BY: AC

REVIEWED BY: JRS

ISSUED FOR: ISSUED FOR

DATE: 04/08/2024

DRAWING NAME:

UTILITY PLAN

DRAWING NUMBER:

C161

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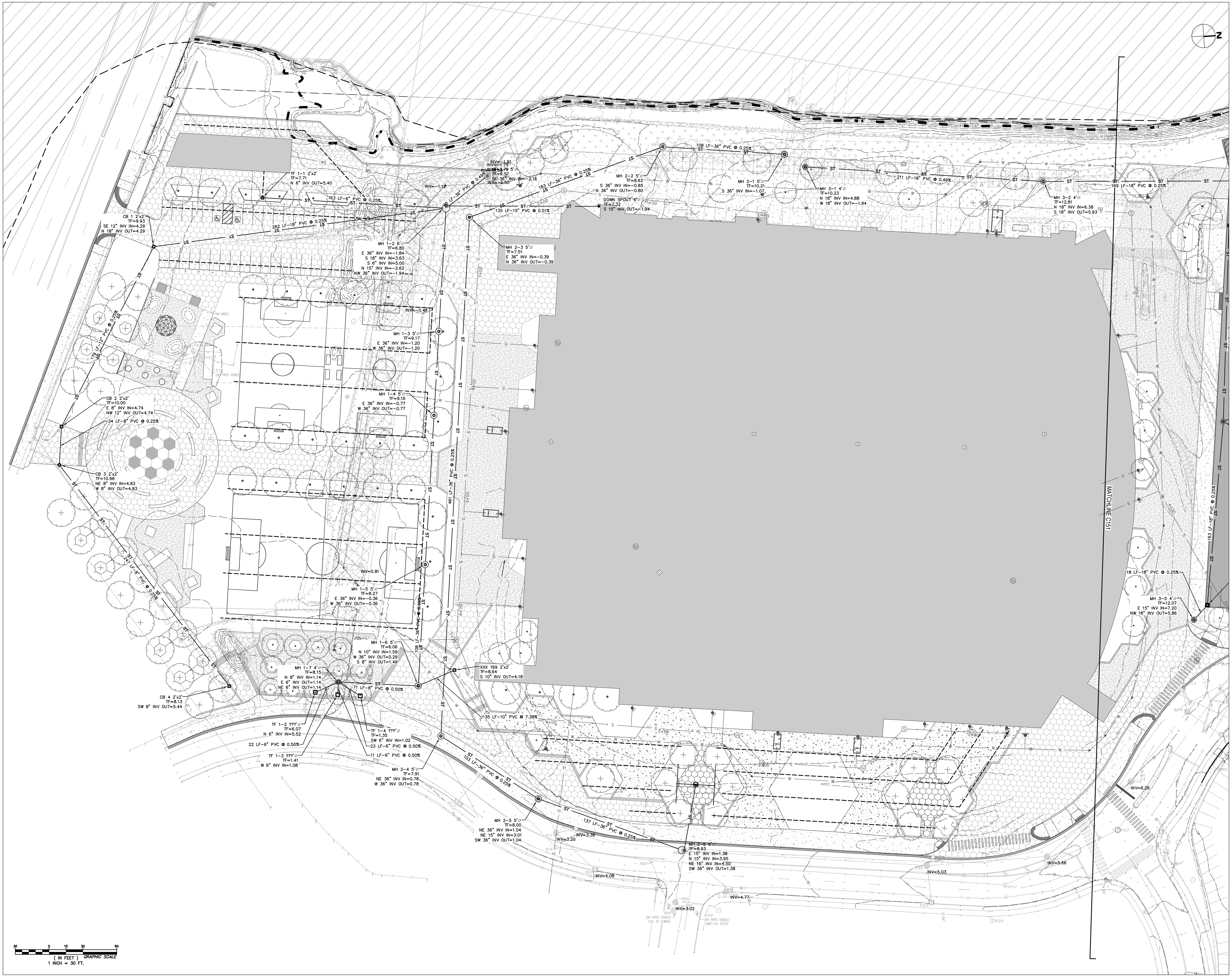

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255 & 363 KOSSUTH STREET
BRIDGEPORT, CT 06608

NO.	DATE:	DESCRIPTION:
Revisions		

PROJECT NUMBER: 2230111

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REVIEWED BY: JRS

ISSUED FOR: ISSUED FOR

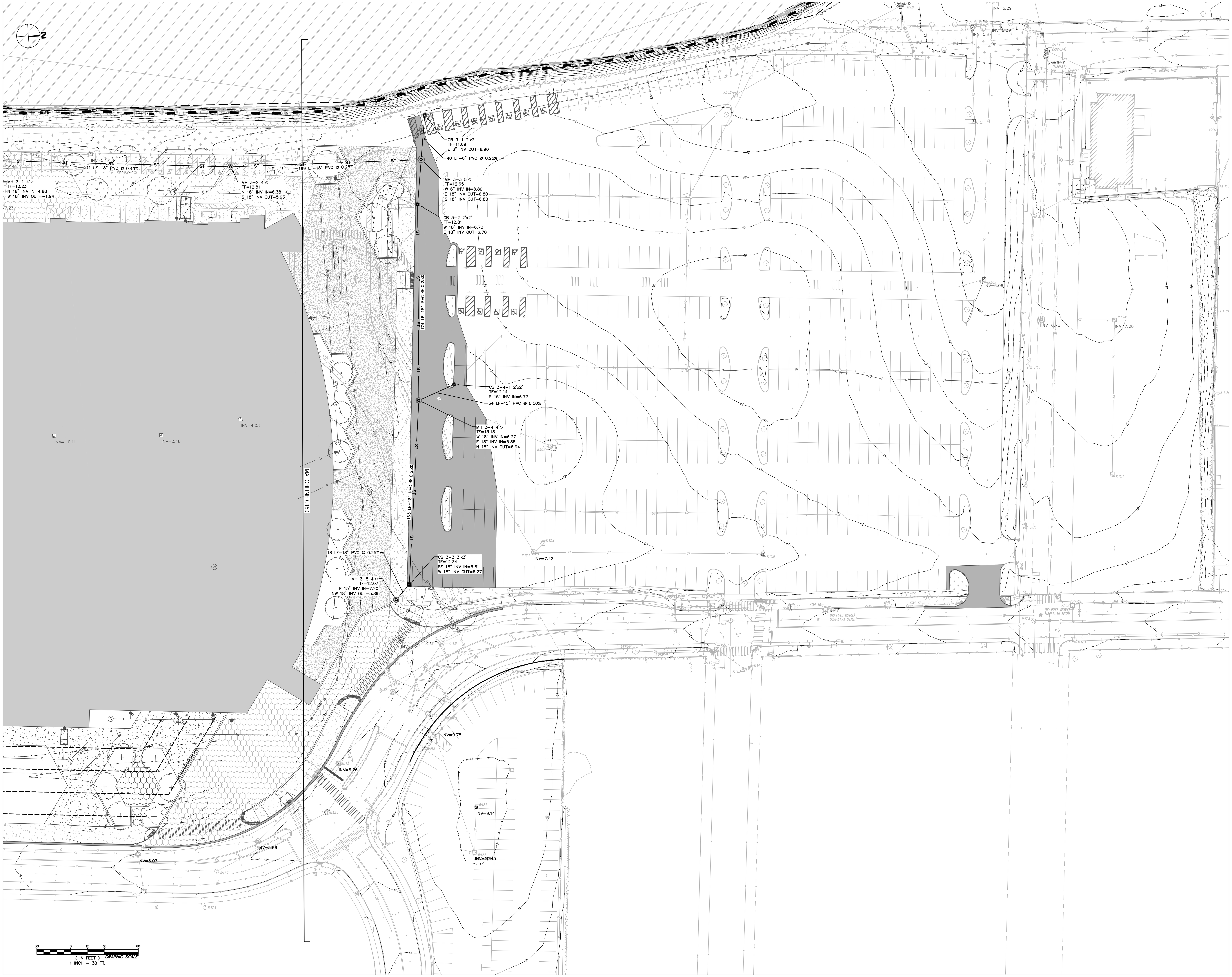
DATE: 04/08/2024

DRAWING NAME:

DRAINAGE PLAN

DRAWING NUMBER:

C162



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Revisions		

PROJECT NUMBER: 2230111

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REVIEWED BY: JRS

ISSUED FOR: ISSUED FOR

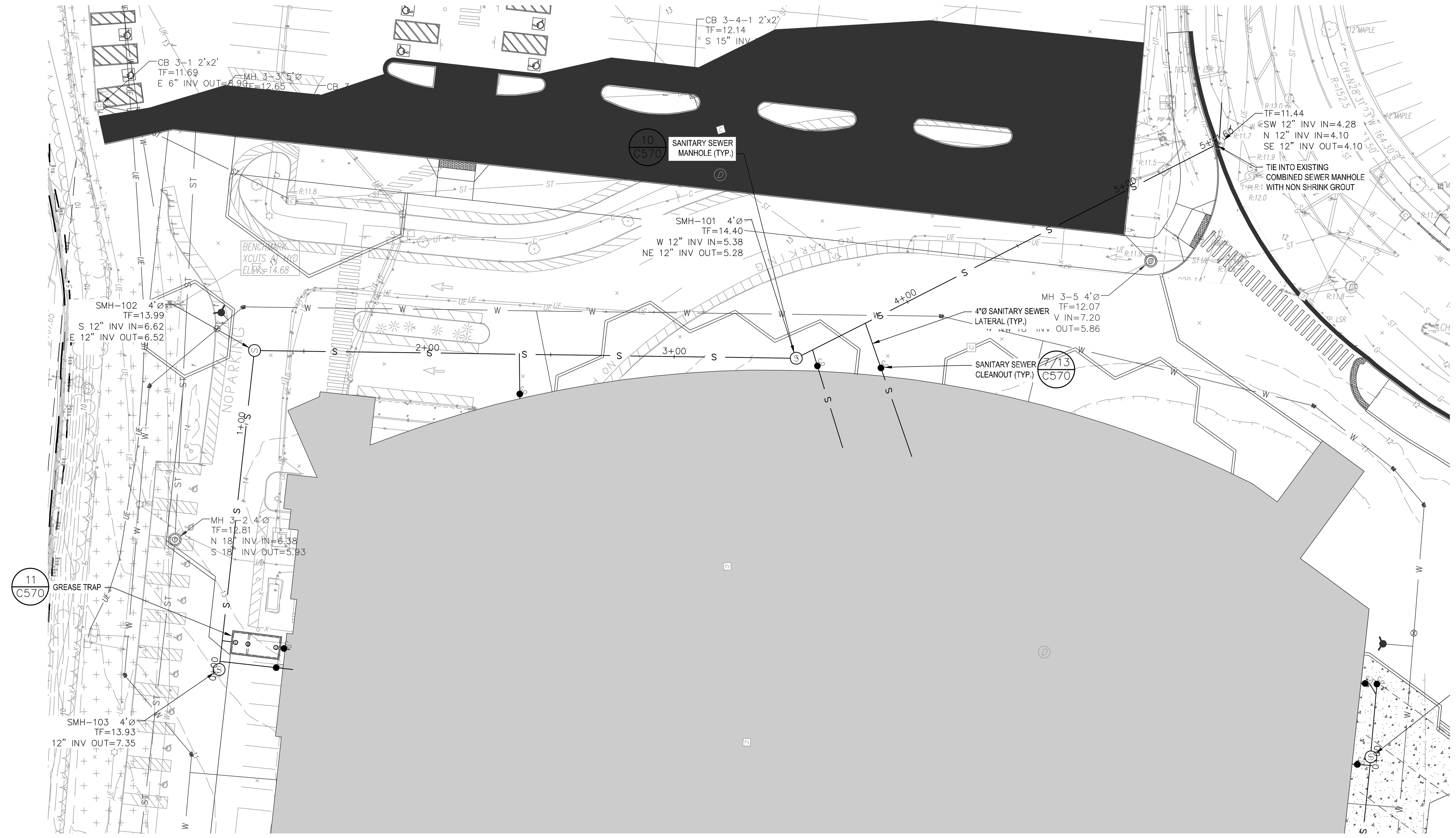
DATE: 04/08/2024

DRAWING NAME:

DRAINAGE PLAN

DRAWING NUMBER:

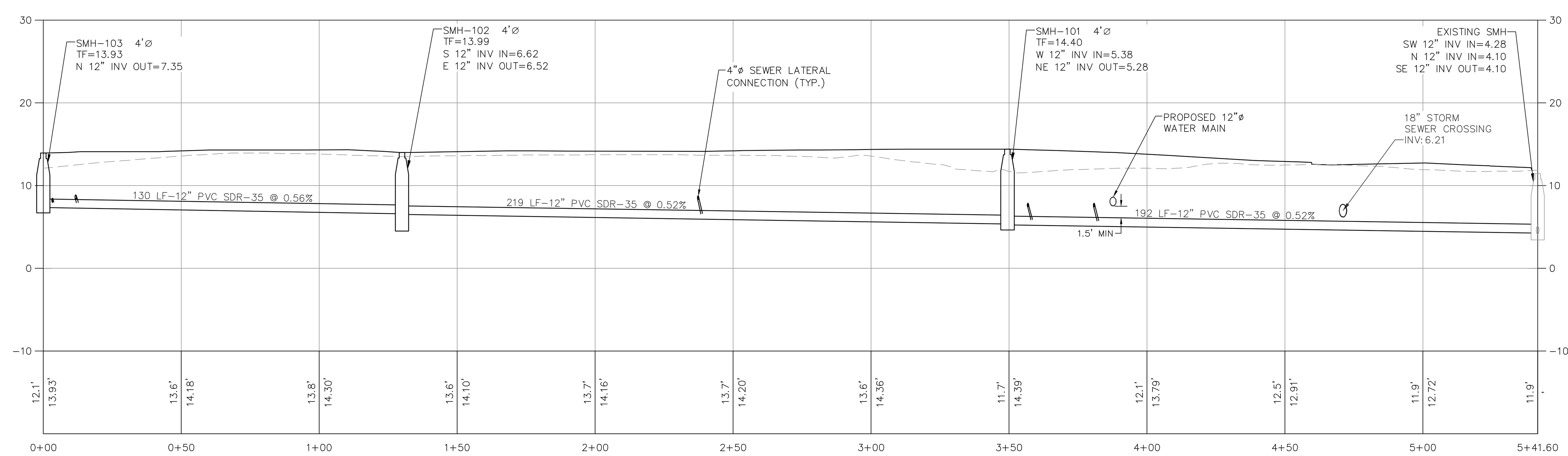
C163



(IN FEET)
GRAPHIC SCALE
1 INCH = 30 FT.

N

1 C170 SANITARY SEWER PLAN STA: 0+00 TO 5+41.60



2 C170 SANITARY SEWER PROFILE STA: 0+00 TO 5+41.60
H-SCALE: 1" = 30'
V-SCALE: 1" = 10'

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BRIDGEPORT, CT 06608

NO:	DATE:	DESCRIPTION:
Revisions		

PROJECT NUMBER: 2230111
DRAWN BY: AC
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DATE: 04/08/2024
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SANITARY SEWER PLAN & PROFILE NORTH SIDE STA 0+00 TO 5+41.60

DRAWING NUMBER:

C170

7/19/2024 12:59:09 PM
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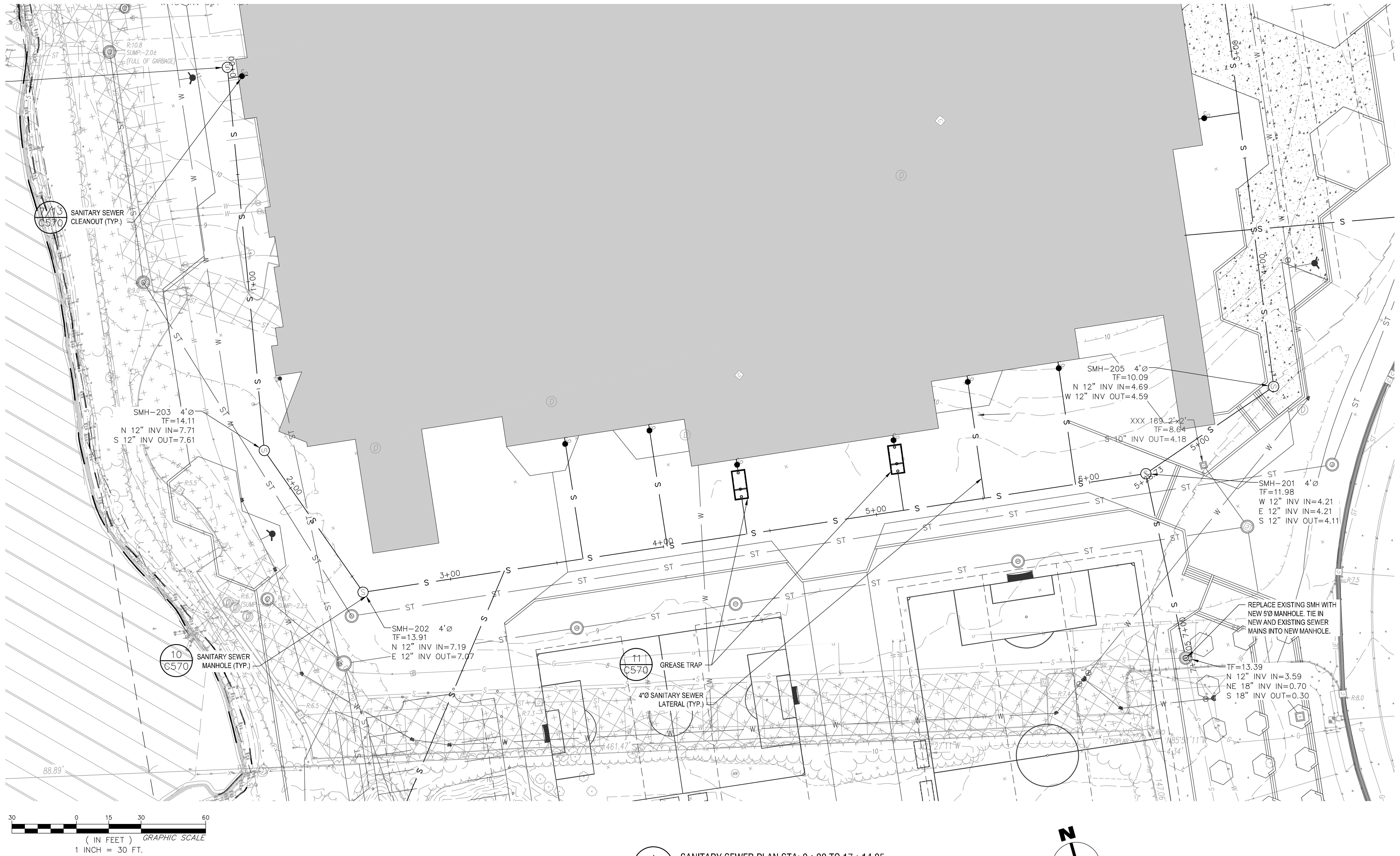
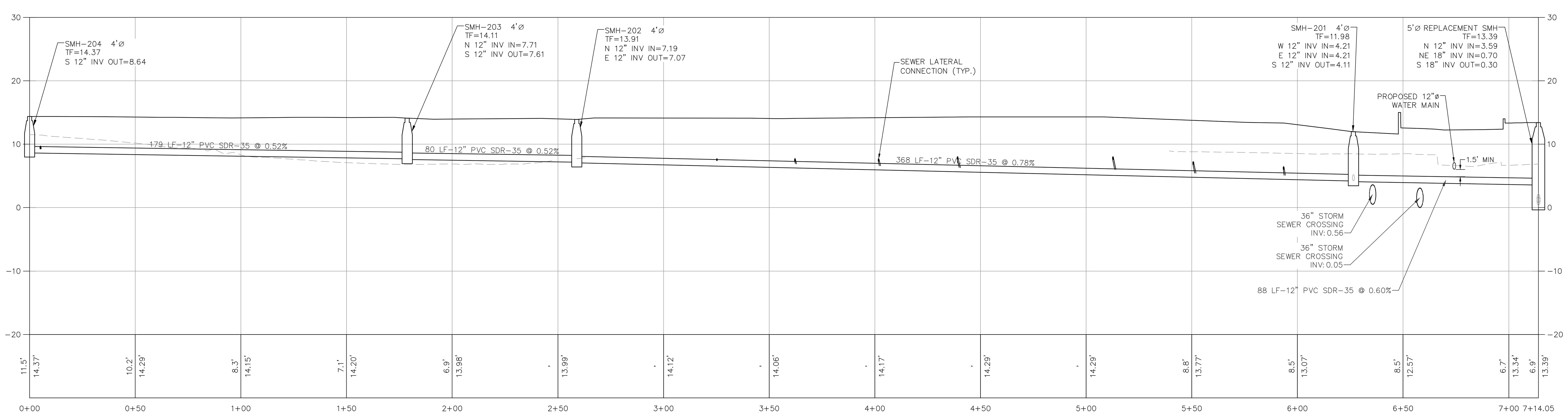


1 C171 SANITARY SEWER PLAN STA: 0+00 TO 17+14.05



2 C171 SANITARY SEWER PROFILE STA: 0+00 TO 17+14.05
H-SCALE: 1" = 30'
V-SCALE: 1" = 10'

BRIDGEPORT STADIUM & MIXED USE
255 & 363 KOSSUTH STREET
BRIDGEPORT, CT 06608

NO:	DATE:	DESCRIPTION:
Revisions		

PROJECT NUMBER: 2230111
DRAWN BY: AC
REVIEWED BY: JRS
ISSUED FOR: ISSUED FOR
DATE: 04/08/2024
DRAWING NAME:

SANITARY SEWER PLAN & PROFILE SOUTH SIDE STA 0+00 TO 7+14.05

DRAWING NUMBER:

C171

7/19/2024 12:59:24 PM
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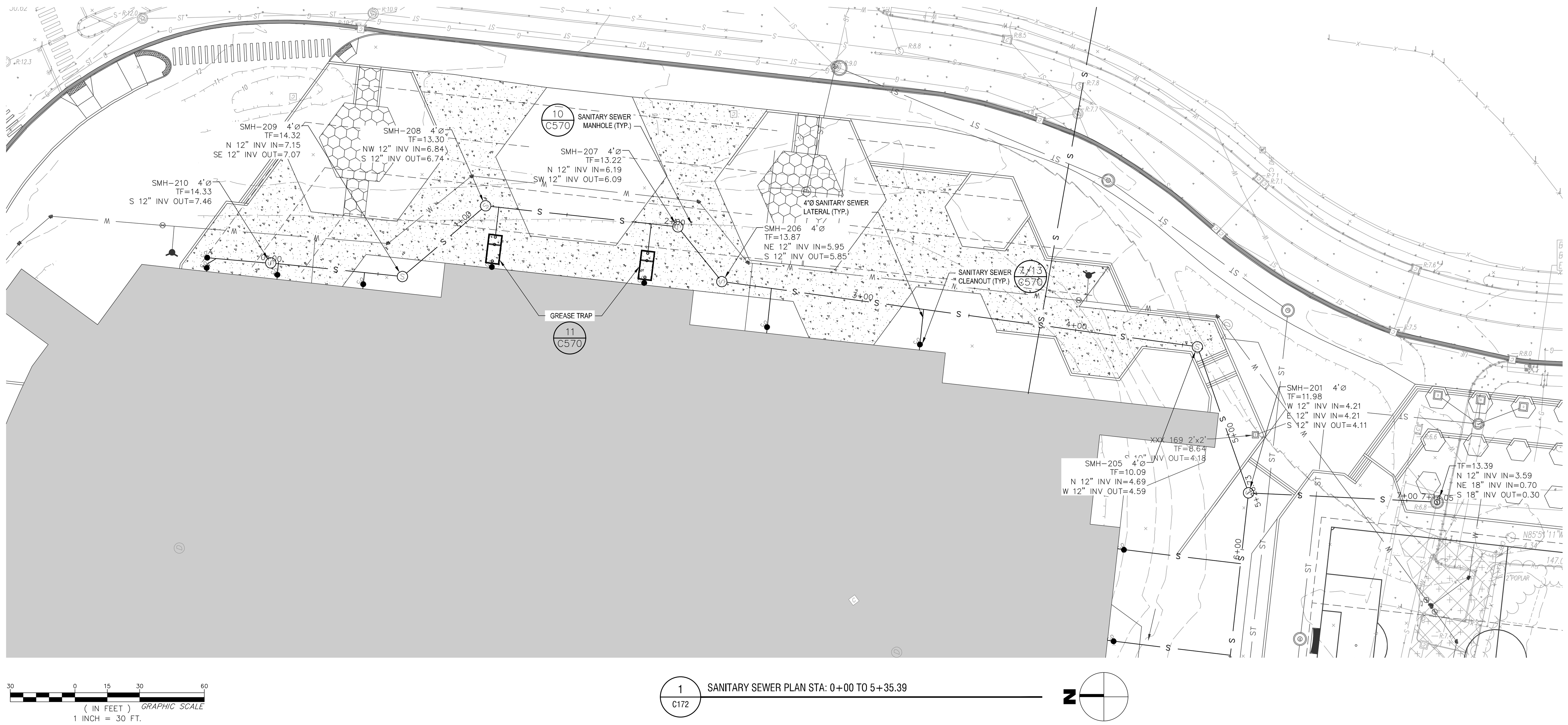

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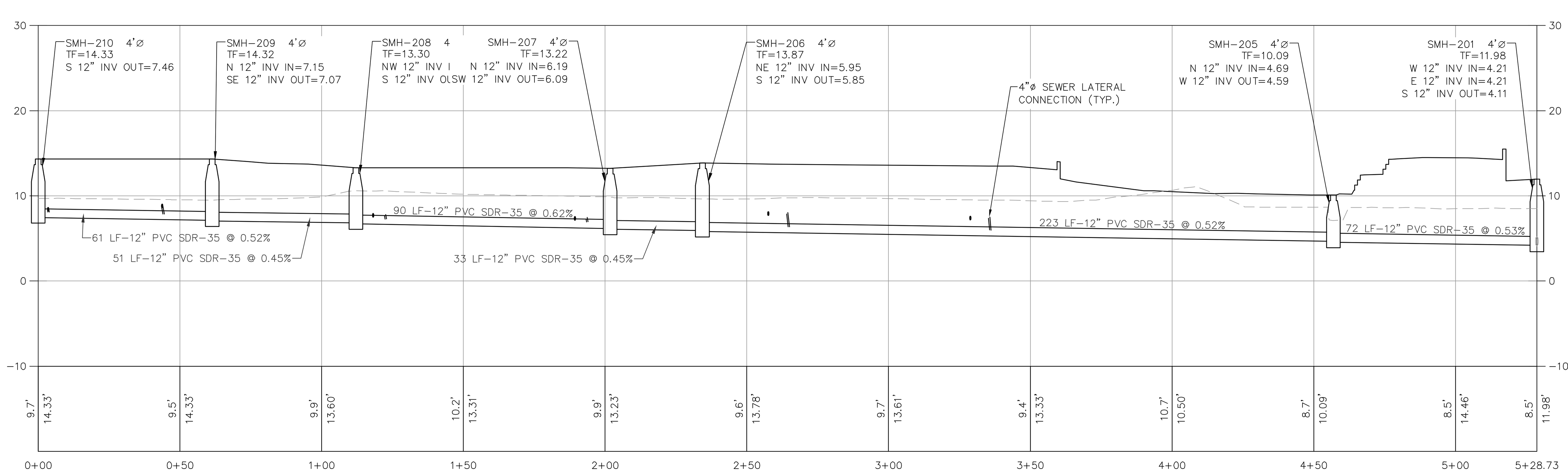
C172
SANITARY SEWER PLAN STA: 0+00 TO 5+35.39



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C172
SANITARY SEWER PROFILE STA: 0+00 TO 5+35.39
H-SCALE: 1" = 30'
V-SCALE: 1" = 10'

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CORPORATE ENGINEERING LICENSE NO. C-0430

LABELLA ASSOCIATES, D.P.C.
CERT. NO. 52904
CHARLOTTE, N.C.

CONNECTICUT SPORTS GROUP
9 W BROAD STREET
SUITE 430
STAMFORD, CT 06902

BRIDGEPORT STADIUM & MIXED USE
255 & 363 KOSSUTH STREET
BRIDGEPORT, CT 06608

NO:	DATE:	DESCRIPTION:
Revisions		

PROJECT NUMBER: 2230111
DRAWN BY: AC
REVIEWED BY: JRS
ISSUED FOR: ISSUED FOR
DATE: 04/08/2024
DRAWING NAME:

SANITARY SEWER PLAN & PROFILE EAST SIDE STA 0+00 TO 5+35.39

DRAWING NUMBER:

C172

7/19/2024 12:59:47 PM
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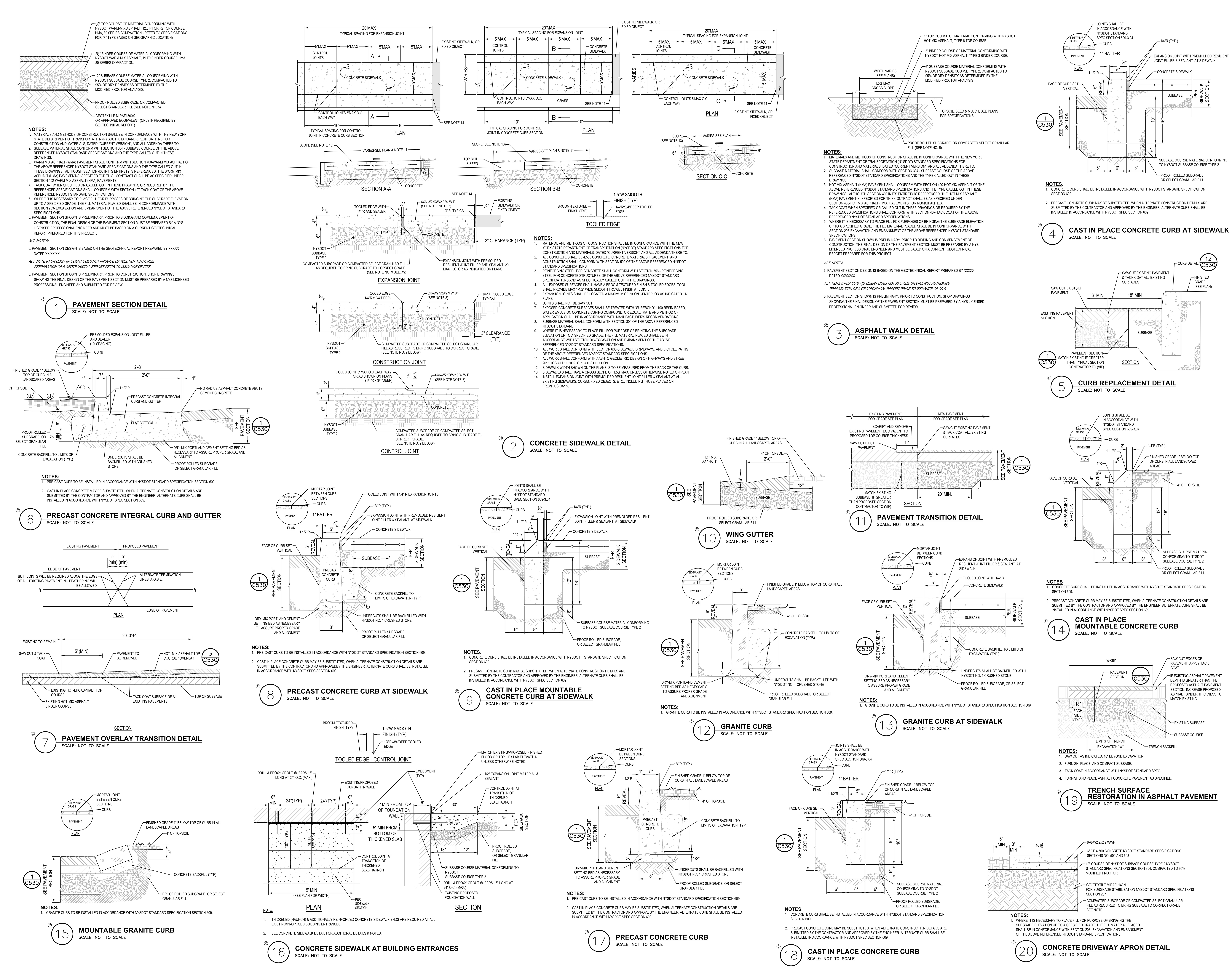

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Charlotte, NC 28285
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NO:	DATE:	DESCRIPTION:
Revisions		

PROJECT NUMBER:	2230111
DRAWN BY:	GA
REVIEWED BY:	JRS
ISSUED FOR:	ISSUED FOR
DATE:	04/08/2024
DRAWING NAME:	SITE DETAILS 1
DRAWING NUMBER:	C530

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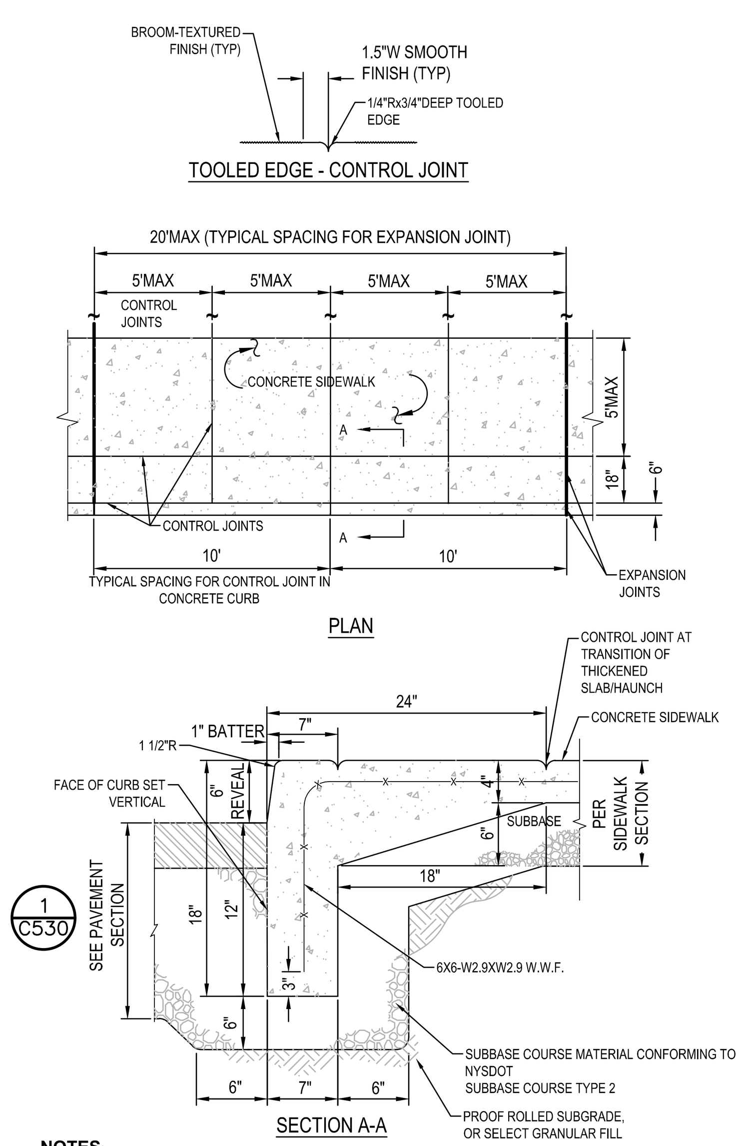
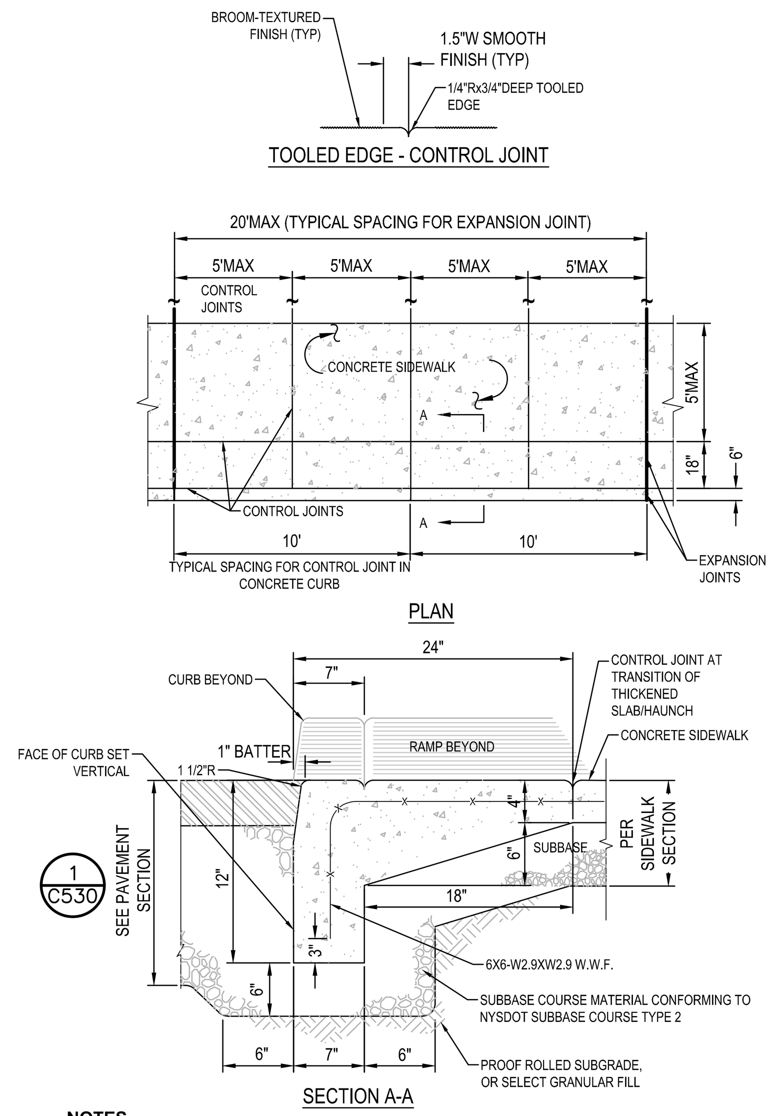


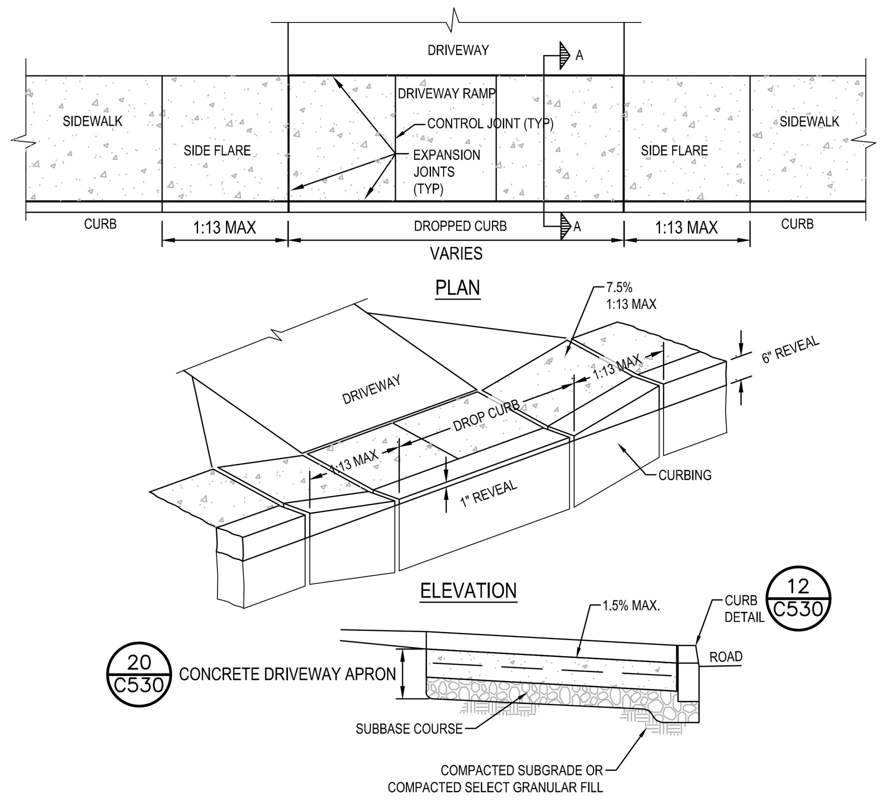
NOTES:
1. CONCRETE CURB SHALL BE INSTALLED IN ACCORDANCE WITH NYSDOT STANDARD SPECIFICATION SECTION 609.
2. SEE CONCRETE SIDEWALK DETAIL FOR ADDITIONAL DETAILS & NOTES.

© 1 **INTEGRAL CONCRETE CURB & SIDEWALK**
SCALE: NOT TO SCALE



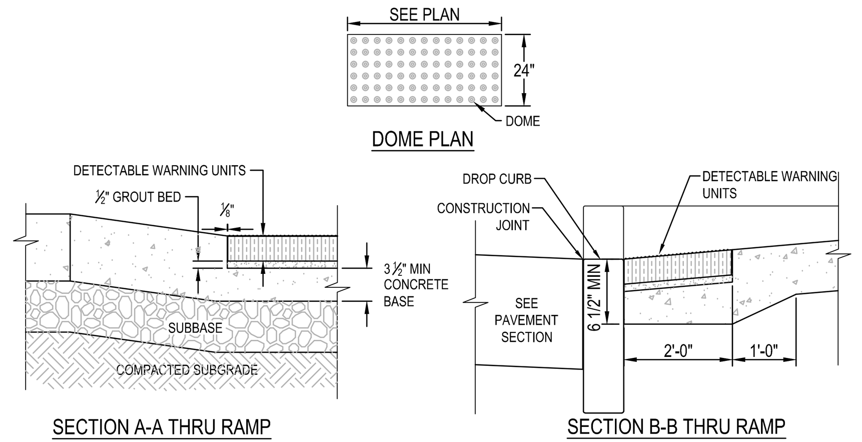
NOTES:
1. CONCRETE CURB SHALL BE INSTALLED IN ACCORDANCE WITH NYSDOT STANDARD SPECIFICATION SECTION 609.
2. SEE CONCRETE SIDEWALK DETAIL FOR ADDITIONAL DETAILS & NOTES.

© 2 **INTEGRAL CONCRETE CURB & SIDEWALK @ DROP CURB**
SCALE: NOT TO SCALE



NOTES:
1. ALL WORK SHALL CONFORM WITH THE NYSDOT STANDARD SPECIFICATION FOR CONSTRUCTION AND MATERIALS DATED, "CURRENT VERSION", AND ALL ADDENDA THERE TO; SPECIFICALLY SECTION 608- SIDEWALKS, DRIVEWAYS, AND BICYCLE PATHS.
2. SLOPE RAMP AND SIDE FLARES AS INDICATED IN THE PLANS OR AS ORDERED BY THE ENGINEER.

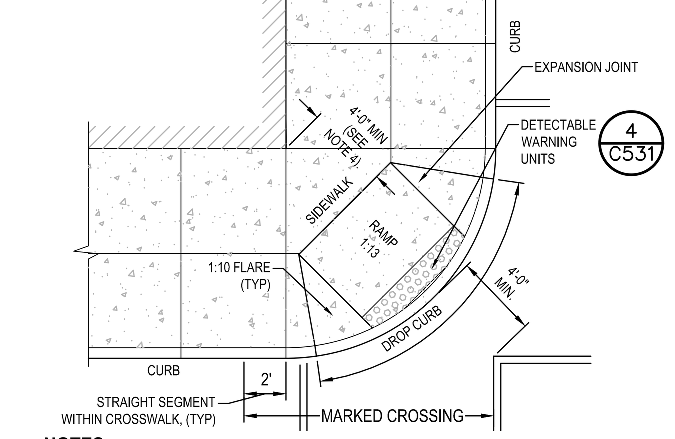
© 3 **DRIVEWAY RAMP WITH DROP CURB**
SCALE: NOT TO SCALE



NOTES:
1. COORDINATE W/ OWNER FOR COLOR.
2. DETECTABLE WARNING UNIT SHALL BE ADA COMPLIANT, AND SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES.
3. MATERIALS: UNIT SHALL BE 24-INCH DETECTABLE WARNING ADA PAVERS, DOME STRAIGHT ROW SPACING PATTERN ADA-2 OR ADA-3, ADA COMPLIANT WARNING PAVER AS MANUFACTURED BY WAUSAU TILE OR CAST IRON, CAST IN PLACE ADA COMPLIANT WARNING PLATE A MANUFACTURED BY TUFTILE OR EQUAL.

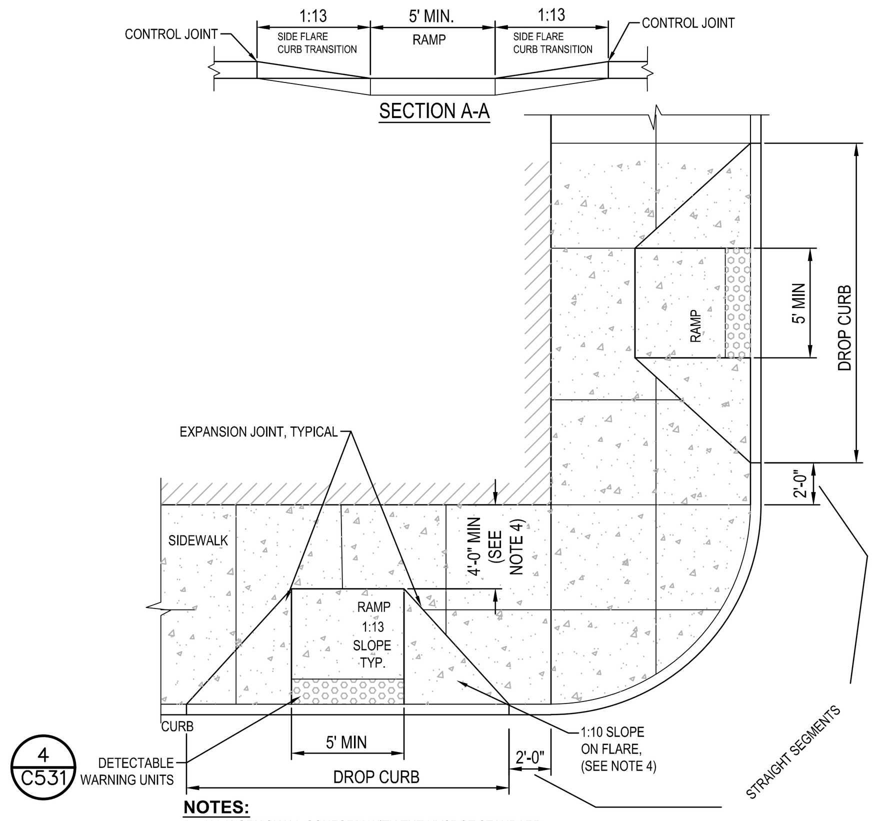
ALTERNATIVE NOTE 3: SEE SPECIFICATION SECTION 3XXXXXX FOR DETECTABLE WARNING ADA PAVERS.

© 4 **DETECTABLE WARNING UNITS FOR RAMPS**
SCALE: NOT TO SCALE



NOTES:
1. ALL WORK SHALL CONFORM WITH THE NYSDOT STANDARD SPECIFICATION FOR CONSTRUCTION AND MATERIALS DATED, "CURRENT VERSION", AND ALL ADDENDA THERE TO; SPECIFICALLY SECTION 608- SIDEWALKS, DRIVEWAYS, AND BICYCLE PATHS.
2. SLOPE RAMP AND SIDE FLARES AS INDICATED IN THE PLANS OR AS ORDERED BY THE ENGINEER.
3. DETECTABLE WARNING UNITS SHALL BE PROVIDED ON ALL RAMPS IN ACCORDANCE W/ ADA REQUIREMENTS.
4. WHERE THIS DIMENSION IS LESS THAN 4'-0", THE SIDE FLARES SHALL HAVE A SLOPE OF 1:13 OR FLATTER.

© 5 **DIAGONAL PEDESTRIAN RAMP WITH FLARED SLOPES**
SCALE: NOT TO SCALE



NOTES:
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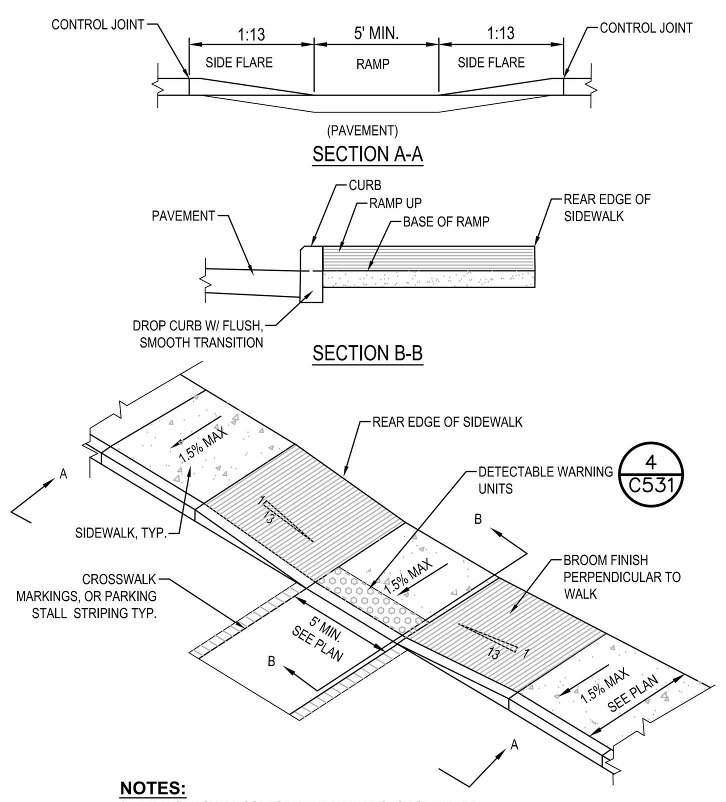
4. WHERE THIS DIMENSION IS LESS THAN 4'-0", THE SIDE FLARES SHALL HAVE A SLOPE OF 1:13 OR FLATTER

© 6 **RAMPS NEAR CORNER AND WITHIN STRAIGHT SEGMENT OF CURB**
SCALE: NOT TO SCALE



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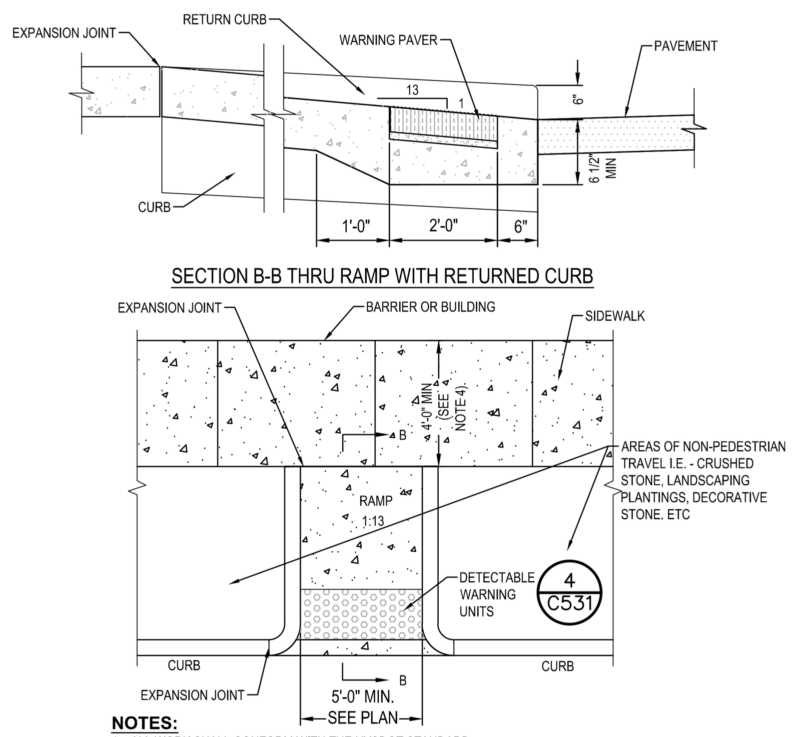
1. ALL WORK SHALL CONFORM WITH THE NYSDOT STANDARD SPECIFICATION FOR CONSTRUCTION AND MATERIALS DATED, "CURRENT VERSION", AND ALL ADDENDA THERE TO; SPECIFICALLY SECTION 608- SIDEWALKS, DRIVEWAYS, AND BICYCLE PATHS.
2. SLOPE RAMP AND SIDE FLARES AS INDICATED IN THE PLANS OR AS ORDERED BY THE ENGINEER.
3. DETECTABLE WARNING UNITS SHALL BE PROVIDED ON ALL RAMPS IN ACCORDANCE W/ ADA REQUIREMENTS.

© 7 **PEDESTRIAN RAMP SECTION - DROP CURB**
SCALE: NOT TO SCALE



NOTES:
1. ALL WORK SHALL CONFORM WITH THE NYSDOT STANDARD SPECIFICATION FOR CONSTRUCTION AND MATERIALS DATED, "CURRENT VERSION", AND ALL ADDENDA THERE TO; SPECIFICALLY SECTION 608- SIDEWALKS, DRIVEWAYS, AND BICYCLE PATHS.
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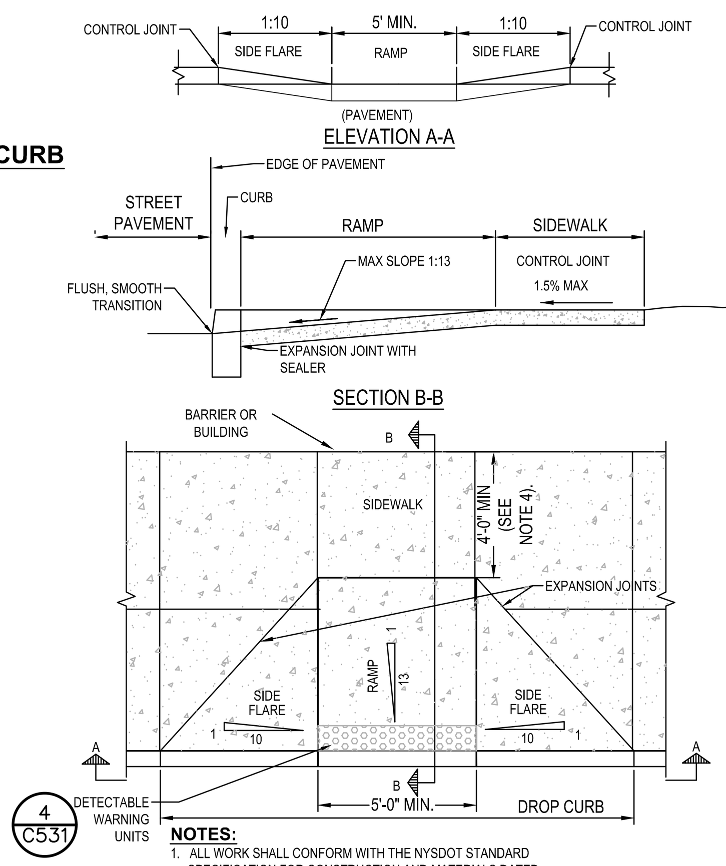
3. DETECTABLE WARNING UNITS SHALL BE PROVIDED ON ALL RAMPS IN ACCORDANCE W/ ADA REQUIREMENTS.
4. WHERE THIS DIMENSION IS LESS THAN 4'-0", THE SIDE FLARES SHALL HAVE A SLOPE OF 1:13 OR FLATTER.

© 8 **PEDESTRIAN RAMP WITH RETURNED CURB**
SCALE: NOT TO SCALE



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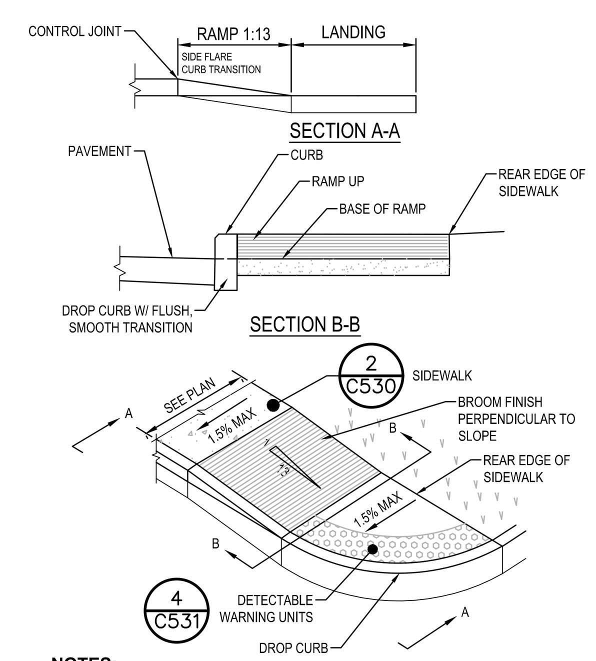
3. DETECTABLE WARNING UNITS SHALL BE PROVIDED ON ALL RAMPS IN ACCORDANCE W/ ADA REQUIREMENTS.
4. WHERE THIS DIMENSION IS LESS THAN 4'-0", THE SIDE FLARES SHALL HAVE A SLOPE OF 1:13 OR FLATTER.

© 9 **PEDESTRIAN RAMP WITH FLARED SLOPES**
SCALE: NOT TO SCALE



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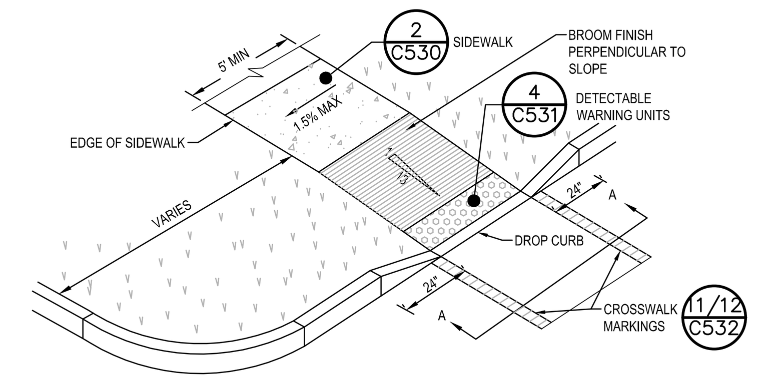
2. SLOPE RAMP AND SIDE FLARES AS INDICATED IN THE PLANS OR AS ORDERED BY THE ENGINEER.
3. DETECTABLE WARNING UNITS SHALL BE PROVIDED ON ALL RAMPS IN ACCORDANCE W/ ADA REQUIREMENTS.

© 10 **PEDESTRIAN RAMP SECTION - DROP CURB**
SCALE: NOT TO SCALE



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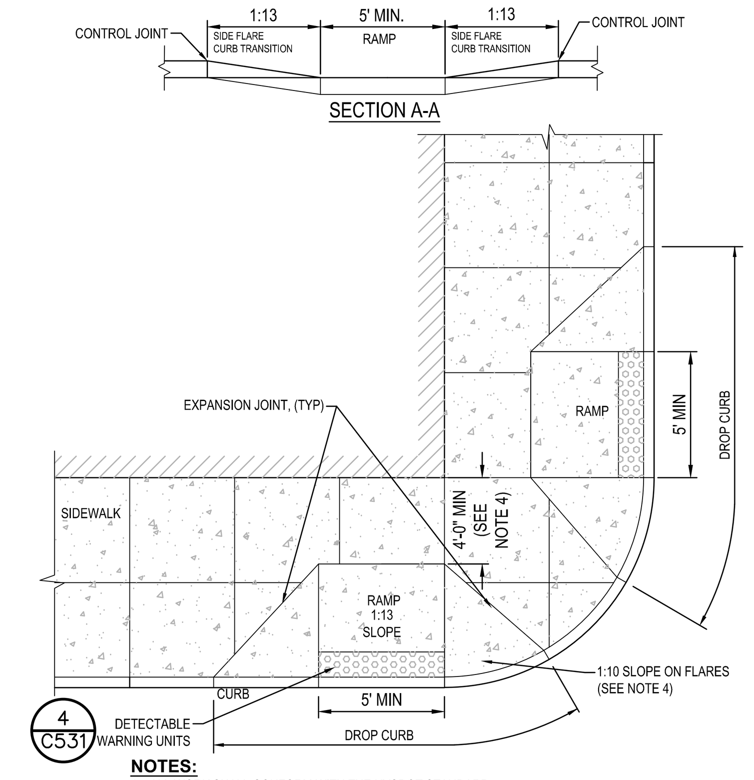
2. SLOPE RAMP AND SIDE FLARES AS INDICATED IN THE PLANS OR AS ORDERED BY THE ENGINEER.
3. DETECTABLE WARNING UNITS SHALL BE PROVIDED ON ALL RAMPS IN ACCORDANCE W/ ADA REQUIREMENTS.

© 11 **PEDESTRIAN RAMP SECTION - DROP CURB**
SCALE: NOT TO SCALE



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4. WHERE THIS DIMENSION IS LESS THAN 4'-0", THE SIDE FLARES SHALL HAVE A SLOPE OF 1:13 OR FLATTER

© 12 **RAMPS NEAR CORNER AND INTO RADIUS OF CURB**
SCALE: NOT TO SCALE

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CORPORATE ENGINEERING
LICENSE NO. C-0430
LABELLA ASSOCIATES P.C. REGISTERED ARCHITECTURAL CORPORATION CERT. NO. 52904 NORTH CAROLINA CHARLOTTE, N.C.

CONNECTICUT SPORTS GROUP
9 W BROAD STREET
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PROJECT NUMBER: 2230111
DRAWN BY: GA
REVIEWED BY: JRS
ISSUED FOR: ISSUED FOR
DATE: 04/08/2024
DRAWING NAME:
SITE DETAILS 2
DRAWING NUMBER:
C531

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MUTCD SIGN SCHEDULE

SIGN NO.	SIGN FACE	MUTCD NUMBER	MIN SIZE	COLORS BCK GRND	COLORS LEGEND	MOUNTING
1	STOP	R1-1	30"x30"	RED	WHITE	--/C532
2	ALL WAY	R1-4	18"x6"	RED	WHITE	--/C532
3		R4-7c	18"x24"	WHITE	BLACK	--/C532
4	ONE WAY	R6-1L	36"x12"	BLACK	WHITE	--/C532
5	ONE WAY	R6-1R	36"x12"	BLACK	WHITE	--/C532
6		W11-2	24"x24"	YELLOW/ FYG	BLACK	--/C532
7		W16-7P	24"x12"	YELLOW/ FYG	BLACK	--/C532
8	SPEED LIMIT 30	R2-1	18"x24"	WHITE	BLACK	--/C532
9	DO NOT ENTER	R5-1	30"x30"	RED	WHITE	--/C532
10	RESERVED PARKING	NY R7-8D	12"x18"	WHITE/ BLUE	GREEN/ WHITE	--/C532
11	VAN ACCESSIBLE	R7-8P	12"x6"	WHITE	BLUE	--/C532
12	YIELD	R1-2	30"	WHITE/RED	RED	--/C532
13	NO PARKING ANY TIME	R7-1	12"x18"	WHITE	RED	--/C532
14		R3-2	30"x30"	WHITE	BLACK/ RED	--/C532
J	ELECTRIC VEHICLE CHARGING STATION	AS SHOWN	12"x18"	WHITE	GREEN	--/C532

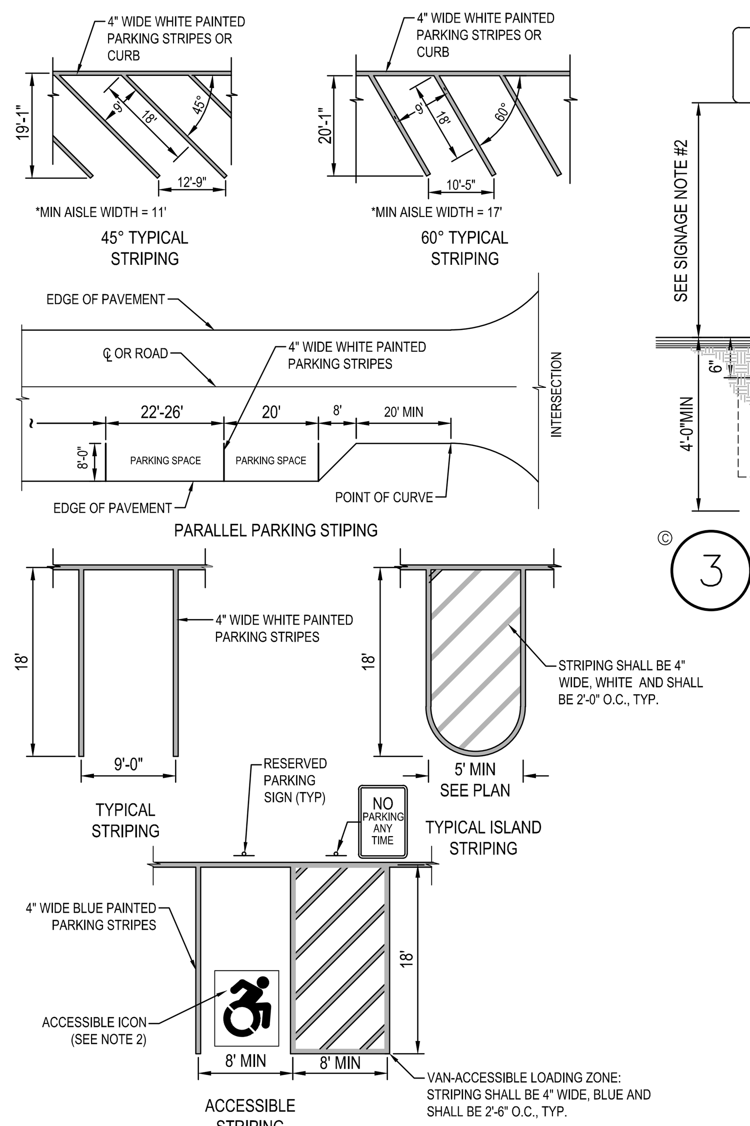
1 **MUTCD SIGN SCHEDULE**
SCALE: NOT TO SCALE

STRIPING NOTES:

1. ALL STRIPING SHALL CONFORM TO THE LATEST EDITION OF THE NYSDOT STANDARD SPECIFICATIONS, SECTION 640 AND THE "NATIONAL MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" - 2009 EDITION AND THE "NYS SUPPLEMENT."
2. STRIPE PAVEMENT AS INDICATED ON THE PLANS AND/OR IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REQUIREMENTS.
3. STRIPING WORK WILL BE REVIEWED AND ACCEPTED BY THE AUTHORITY HAVING JURISDICTION.
4. COLOR: DRIVE LANE DIVIDERS - WHITE OR AOBE
   NO PARKING ZONE WARNINGS - WHITE OR AOBE
   PARKING DIVIDERS - WHITE OR AOBE
   WALKING LINES - WHITE OR AOBE
   ACCESSIBLE PARKING LINES & SYMBOL - BLUE

SIGNAGE NOTES:

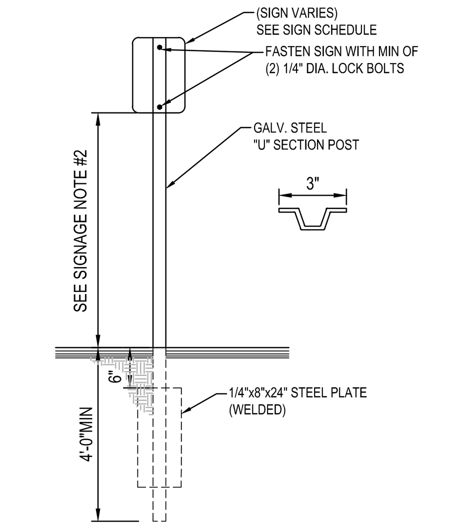
1. ALL SIGNS SHALL CONFORM TO THE LATEST EDITION OF THE NYSDOT STANDARD SPECIFICATIONS, SECTION 645 AND THE "NATIONAL MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" - 2009 EDITION AND THE "NYS SUPPLEMENT."
2. SIGN MOUNTING HEIGHT SHALL BE A MINIMUM OF 7'. MINIMUM MOUNTING HEIGHT MAY BE ADJUSTED ONLY IN ACCORDANCE WITH PROVISIONS OUTLINED IN THE "NATIONAL MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" - 2009 EDITION AND THE "NYS SUPPLEMENT."
3. SIGN POST SHALL BE IN ACCORDANCE W/ NYSDOT STANDARD SPECS SECTION 730.



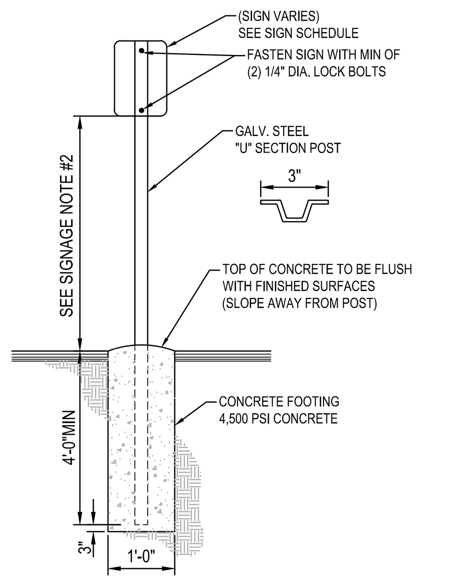
NOTES:

1. ALL DIMENSIONS SHALL BE IN ACCORDANCE WITH ADA STANDARD AND CURRENT ZONING AND SITE REGULATIONS.
2. PAINTED ACCESSIBLE LOGO TO BE IN ACCORDANCE W/ NEW YORK STATE LAW.
3. SLOPE OF PAVEMENT SURFACE IN ACCESSIBLE PARKING AREA SHALL NOT EXCEED 1.5% IN ANY DIRECTION.
4. SEE PLAN FOR ACTUAL LOCATION OF SIGNAGE

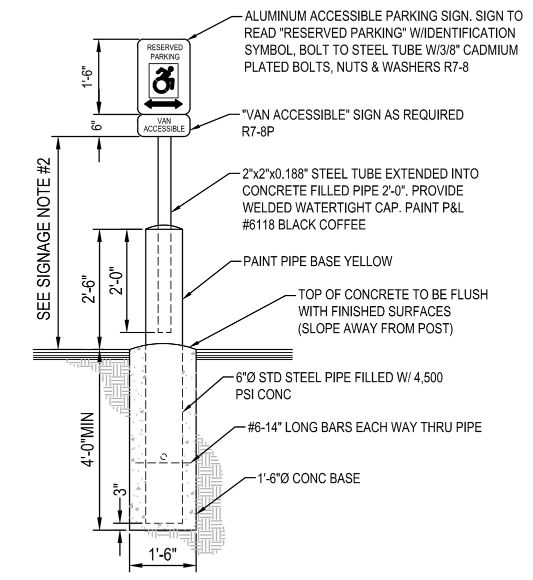
2 **PAVEMENT MARKING DETAIL PARKING STRIPING**
SCALE: NOT TO SCALE



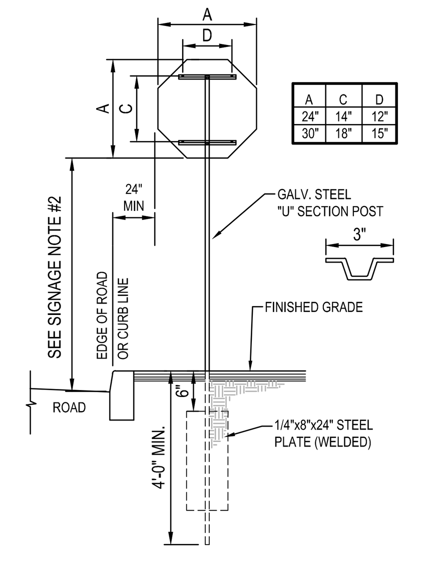
3 **SINGLE POST SIGN MOUNTING DETAIL**
SCALE: NOT TO SCALE



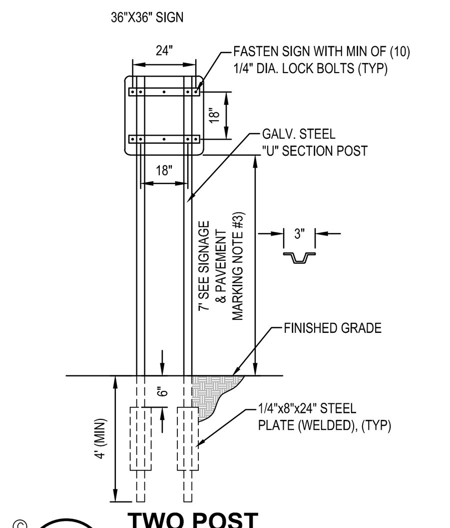
4 **SINGLE POST IN CONCRETE SIGN MOUNTING DETAIL**
SCALE: NOT TO SCALE



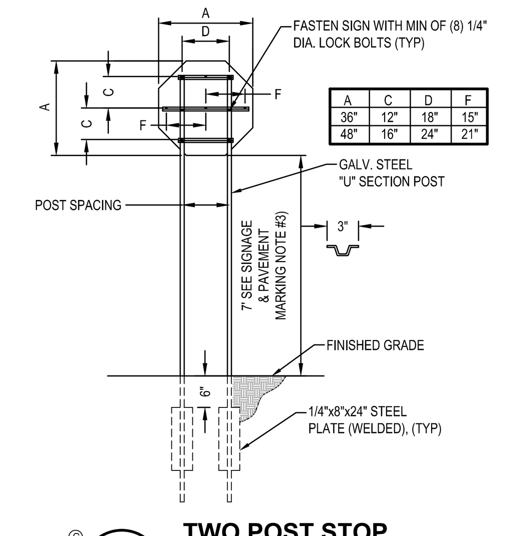
5 **TUBULAR POST SIGN MOUNTING DETAIL**
SCALE: NOT TO SCALE



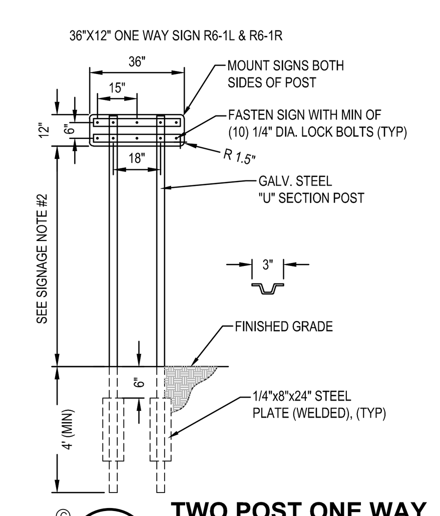
6 **SINGLE POST STOP SIGN MOUNTING DETAIL**
SCALE: NOT TO SCALE



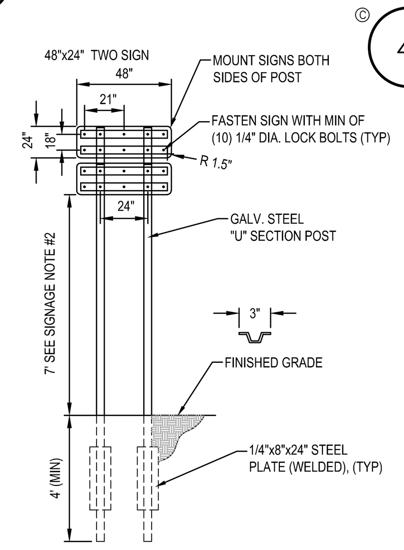
7 **TWO POST SIGN MOUNTING DETAIL**
SCALE: NOT TO SCALE



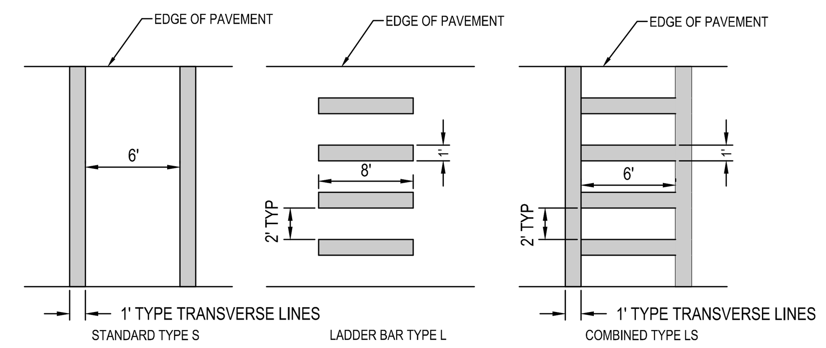
8 **TWO POST STOP SIGN MOUNTING DETAIL**
SCALE: NOT TO SCALE



9 **TWO POST ONE WAY SIGN MOUNTING DETAIL**
SCALE: NOT TO SCALE



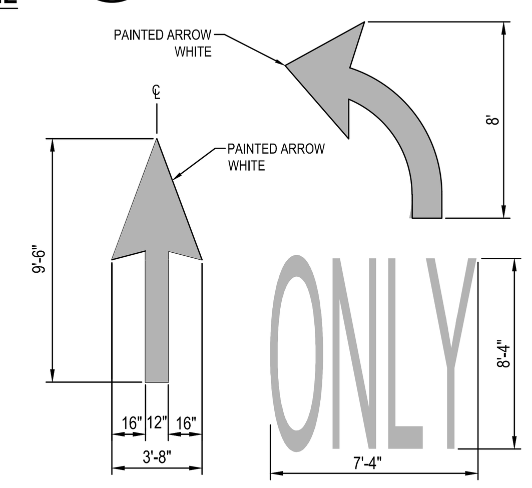
10 **TWO POST TWO SIGN MOUNTING DETAIL**
SCALE: NOT TO SCALE



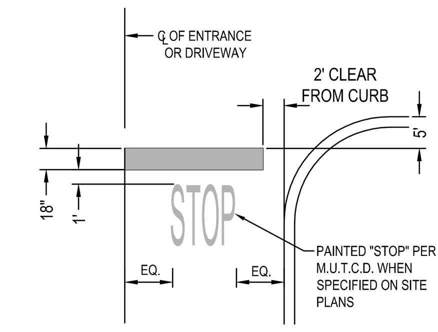
NOTES:

1. ALL CROSS WALK STRIPING SHALL BE WHITE
2. TYPE S CROSS WALK SHALL BE USED IN LOW TRAFFIC VOLUME STREET CROSSINGS.
3. TYPE L CROSS WALK SHALL BE USED IN MEDIUM TRAFFIC VOLUME STREET CROSSINGS.
4. TYPE LS CROSS WALK SHALL BE USED IN HIGH TRAFFIC VOLUME STREET CROSSINGS.

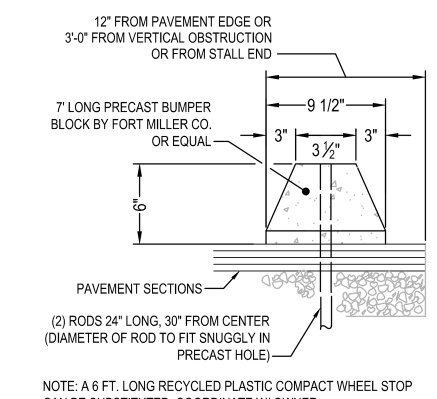
11 **CROSSWALK STRIPING DETAIL**
SCALE: NOT TO SCALE



13 **PAVEMENT MARKING DETAIL DIRECTIONAL ARROW**
SCALE: NOT TO SCALE

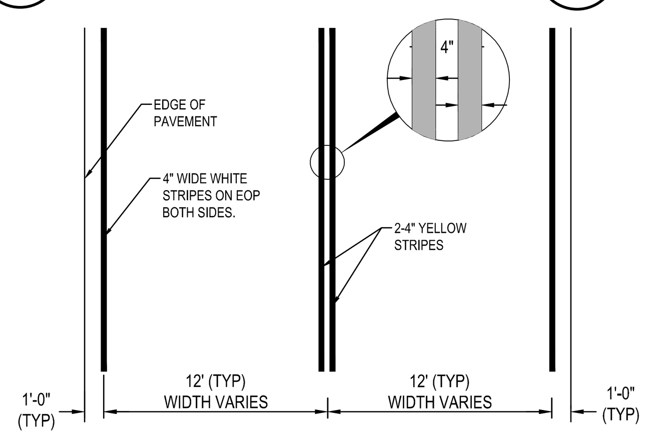


14 **STOP BAR DETAIL**
SCALE: NOT TO SCALE

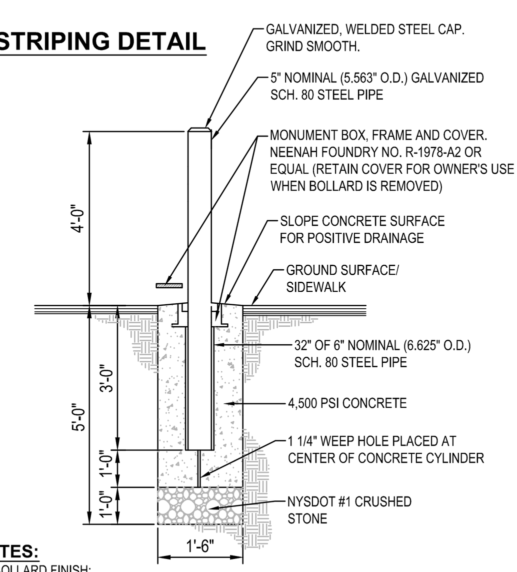


NOTE: A 6 FT. LONG RECYCLED PLASTIC COMPACT WHEEL STOP CAN BE SUBSTITUTED. COORDINATE W/ OWNER

15 **PRECAST CONCRETE WHEEL STOP**
SCALE: NOT TO SCALE



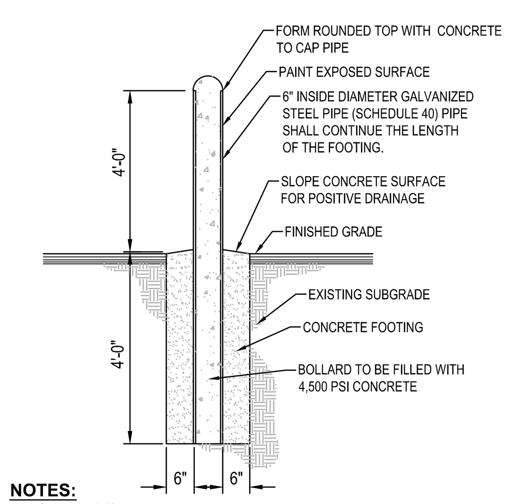
17 **PAVEMENT MARKING DETAIL TYPICAL ROAD STRIPING**
SCALE: NOT TO SCALE



NOTES:

1. BOLLARD FINISH:
   PREPARE GALVANIZED COATING TO RECEIVE PAINTED FINISH. APPLY (1) COAT OF RUST INHIBITOR PRIMER.
   APPLY (2) COATS OF GLOSS ENAMEL (COLOR TO BE SELECTED BY THE OWNER.)
2. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,500 PSI @ 28 DAYS.
3. ALL CONCRETE SHALL HAVE A SLUMP OF NO GREATER THAN 4" (WITH A TOLERANCE OF 1").
4. ALL CONCRETE SHALL HAVE A 5% ENTRAINED AIR (WITH A TOLERANCE OF 1%) CONFORMING WITH ASTM C260.

18 **REMOVABLE PIPE BOLLARD DETAIL**
SCALE: NOT TO SCALE



NOTES:

1. BOLLARD FINISH:
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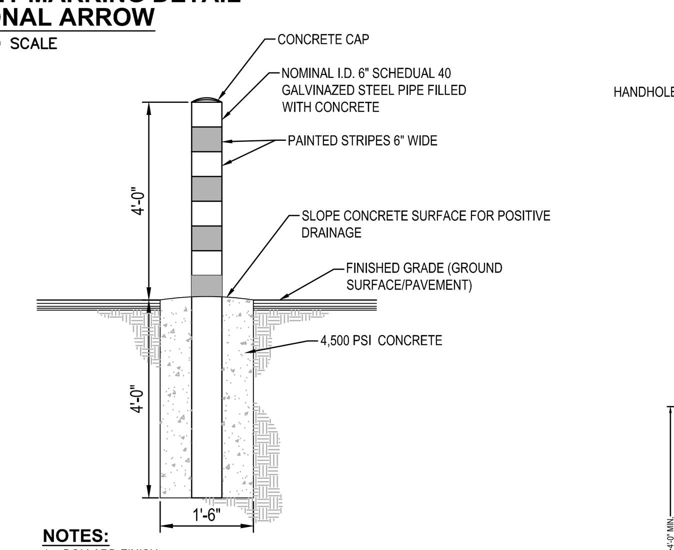
4. ALL CONCRETE SHALL HAVE A 5% ENTRAINED AIR (WITH A TOLERANCE OF 1%) CONFORMING WITH ASTM C260.

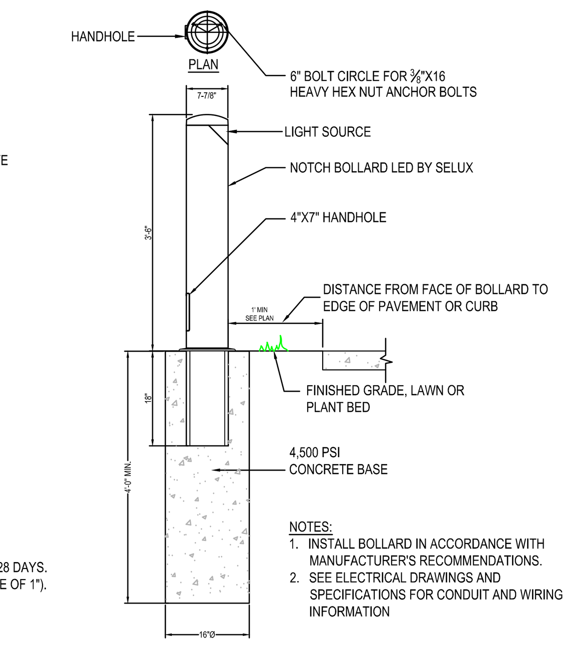
19 **STEEL & CONCRETE BOLLARD DETAIL**
SCALE: NOT TO SCALE



NOTES:

1. BOLLARD FINISH:
   PREPARE GALVANIZED COATING TO RECEIVE PAINTED FINISH. APPLY (1) COAT OF RUST INHIBITOR PRIMER.
   APPLY (2) COATS OF GLOSS ENAMEL (COLOR TO BE SELECTED BY THE OWNER.)
2. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,500 PSI @ 28 DAYS.
3. ALL CONCRETE SHALL HAVE A SLUMP OF NO GREATER THAN 4" (WITH A TOLERANCE OF 1").
4. ALL CONCRETE SHALL HAVE A 5% ENTRAINED AIR (WITH A TOLERANCE OF 1%) CONFORMING WITH ASTM C260.

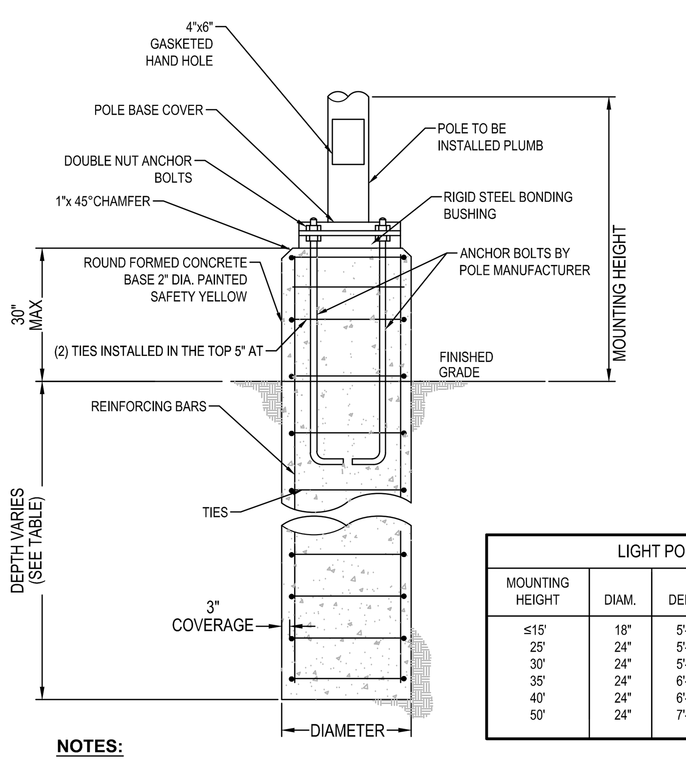
20 **PAINTED STRIPED BOLLARD DETAIL**
SCALE: NOT TO SCALE



NOTES:

1. INSTALL BOLLARD IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
2. SEE ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR CONDUIT AND WIRING INFORMATION

21 **BOLLARD LIGHT - LED - DETAIL**
SCALE: NOT TO SCALE

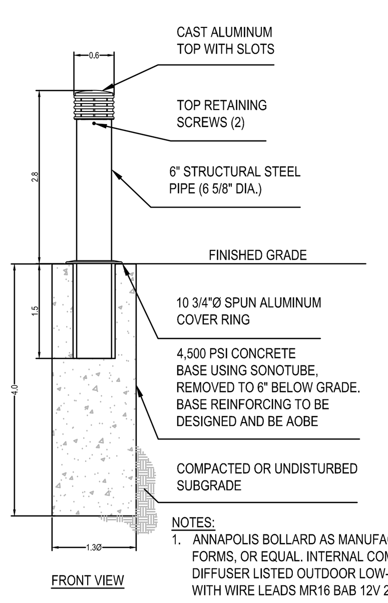


LIGHT POLE FOUNDATIONS				
MOUNTING HEIGHT	DIAM.	DEPTH	REINF BARS	TIES
≤15'	18"	5'-0"	(6)#6	#3@18"
25'	24"	5'-0"	(6)#6	#3@12"
30'	24"	5'-6"	(6)#6	#3@12"
35'	24"	6'-0"	(6)#6	#3@12"
40'	24"	6'-0"	(6)#6	#3@12"
50'	24"	7'-0"	(6)#8	#3@12"

NOTES:

1. CONDUITS AND GROUNDING SHALL BE AS REQUIRED BY THE ELECTRICAL DESIGN.
2. ALL CONCRETE SHALL BE 4,500 PSI @ 28 DAYS.
3. ALL REINFORCING STEEL SHALL BE GRADE 60.
4. DESIGNED FOR 90 MPH WIND WITH FIXTURE AREA OF 13 SF.
5. FOUNDATION DIAMETER AND REINFORCING CIRCLE SHALL BE COORDINATED WITH ANCHOR BOLT LIMITS.
6. FOUNDATIONS SHALL BE AUGERED INTO UNDISTURBED NATURAL SOIL OR COMPACTED FILL PER SITE GRADING PLANS.

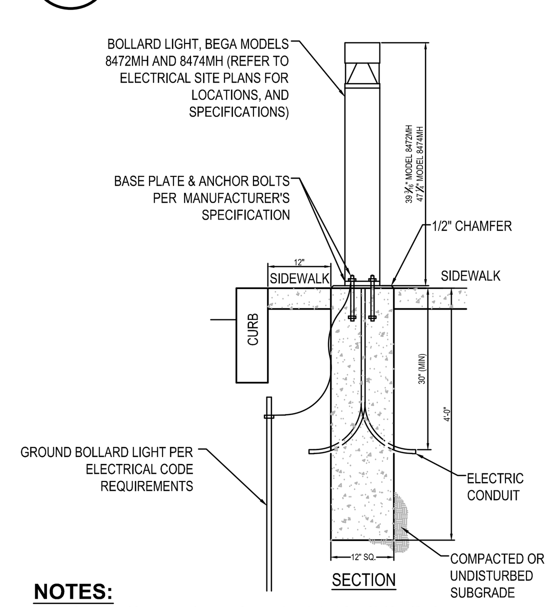
22 **LOT LIGHTING CONCRETE BASE**
SCALE: NOT TO SCALE



NOTES:

1. ANNAPOLIS BOLLARD AS MANUFACTURED BY LANDSCAPE FORMS, OR EQUAL. INTERNAL COMPONENTS: WHITE PVC DIFFUSER LISTED OUTDOOR LOW-VOLTAGE LIGHT FIXTURE WITH WIRE LEADS MR16 BAB 12V 20W HALOGEN FLOOD LAMP.
2. INSTALL BOLLARD IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

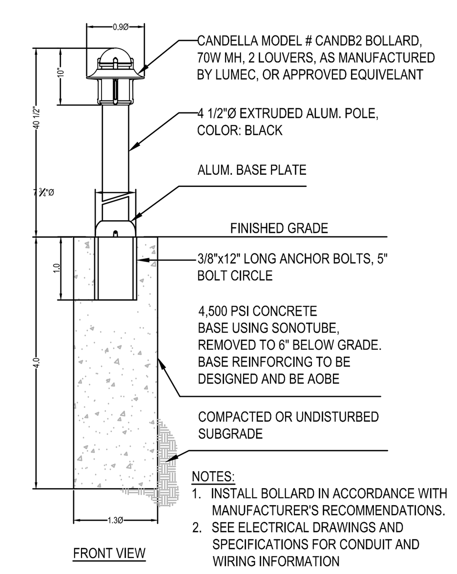
23 **BOLLARD LIGHT DETAIL**
SCALE: NOT TO SCALE



NOTES:

1. BOLLARD LIGHT AND FIXTURE SHALL BE AS PER SPECIFICATIONS.
2. LIGHTING SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS.
3. CONDUITS AND GROUNDING SHALL BE AS REQUIRED BY THE ELECTRICAL DESIGN.
4. ALL CONCRETE SHALL BE 4,500 PSI @ 28 DAYS, WITH 4" (MAX) SLUMP AND BETWEEN 5-7% AIR.
5. FOUNDATION SIZE SHALL BE COORDINATED WITH ANCHOR BOLT LIMITS.
6. FOUNDATIONS SHALL BEAR ON UNDISTURBED NATURAL SOIL OR COMPACTED CRUSH STONE.
7. ALL EXCAVATIONS SHALL BE BACKFILLED WITH STRUCTURAL FILL AND COMPACTED TO 95% OF MAXIMUM MATERIAL DENSITY.
8. EXPOSED AREAS OF CONCRETE AND ONE FOOT MIN BELOW FINISHED GRADE SHALL BE FORMED.

24 **BOLLARD LIGHT DETAIL**
SCALE: NOT TO SCALE



NOTES:

1. INSTALL BOLLARD IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
2. SEE ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR CONDUIT AND WIRING INFORMATION

25 **BOLLARD LIGHT DETAIL**
SCALE: NOT TO SCALE

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Charlotte, NC 28285
704-376-6423
labellapc.com

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CORPORATE ENGINEERING LICENSE NO. C-0430

CONNECTICUT SPORTS GROUP
9 W BROAD STREET
SUITE 430
STAMFORD, CT 06902

BRIDGEPORT STADIUM & MIXED USE
255 & 363 KOSSUTH STREET
BRIDGEPORT, CT 06608

NO:	DATE:	DESCRIPTION:
Revisions		

PROJECT NUMBER: 2230111
DRAWN BY: GA
REVIEWED BY: JRS
ISSUED FOR: ISSUED FOR
DATE: 04/08/2024
DRAWING NAME:

SITE DETAILS 3

DRAWING NUMBER:

C532

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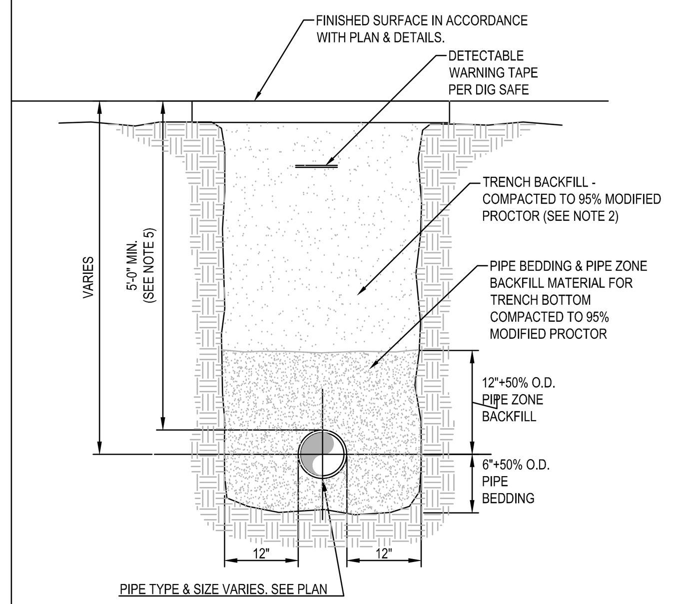


NOTES:
1. PIPE BEDDING & PIPE ZONE BACKFILL SHALL BE A NATURAL RUN-OF-BANK (R.O.B.) SAND OR A MIXTURE OF CRUSHED STONE AND GRAVEL, FREE OF SOFT, NONDURABLE PARTICLES, ORGANIC MATERIALS AND ELONGATED PARTICLES, AND SHALL BE WELL GRADED FROM FINE TO COARSE PARTICLES. BEDDING GRADATIONS SHALL BE APPROVED BY THE ENGINEER AND SHALL MEET THE FOLLOWING GRADATION REQUIREMENTS:

SIEVE DESIGNATION	% PASSING
3/4"	100%
NO. 40	0-70%
NO. 200	0-10%

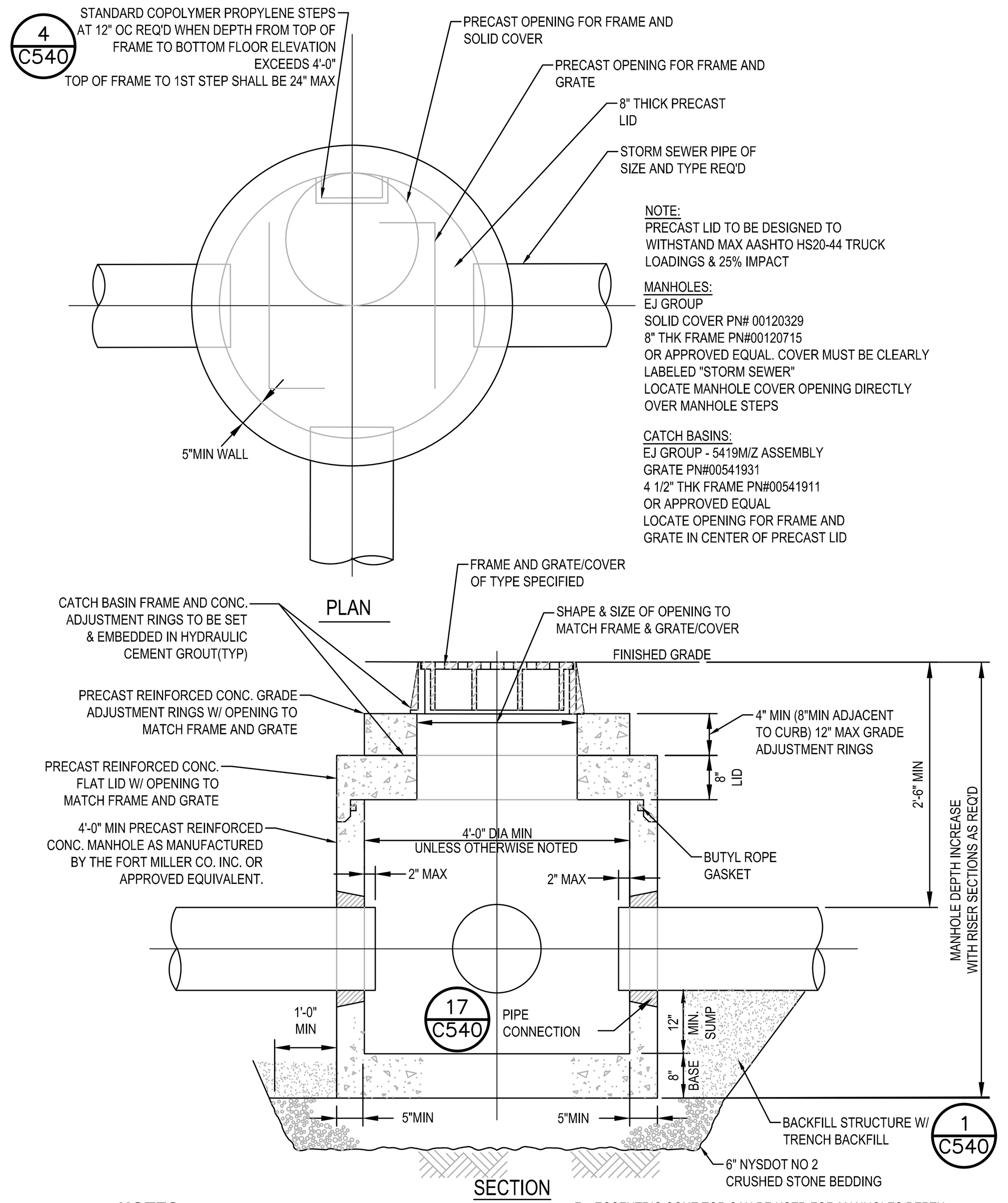
2. TRENCH BACKFILL SHALL BE A NATURAL RUN-OF-BANK (R.O.B.) OR PROCESSED GRAVEL, OR EXCAVATED MATERIAL FREE OF SOFT, NONDURABLE PARTICLES, ORGANIC MATERIALS AND ELONGATED PARTICLES, AND SHALL BE WELL GRADED FROM FINE TO COARSE PARTICLES. TRENCH BACKFILL GRADATIONS SHALL BE APPROVED BY THE ENGINEER AND SHALL MEET THE FOLLOWING GRADATION REQUIREMENTS:

SIEVE DESIGNATION	% PASSING
4"	100%
NO. 40	0-70%
NO. 200	0-10%

IN NON-TRAFFIC UNPAVED AREAS TRENCH BACKFILL CAN BE MATERIALS EXCAVATED FROM THE TRENCH AS APPROVED BY THE ENGINEER AND COMPACTED TO 90% MODIFIED PROCTOR.

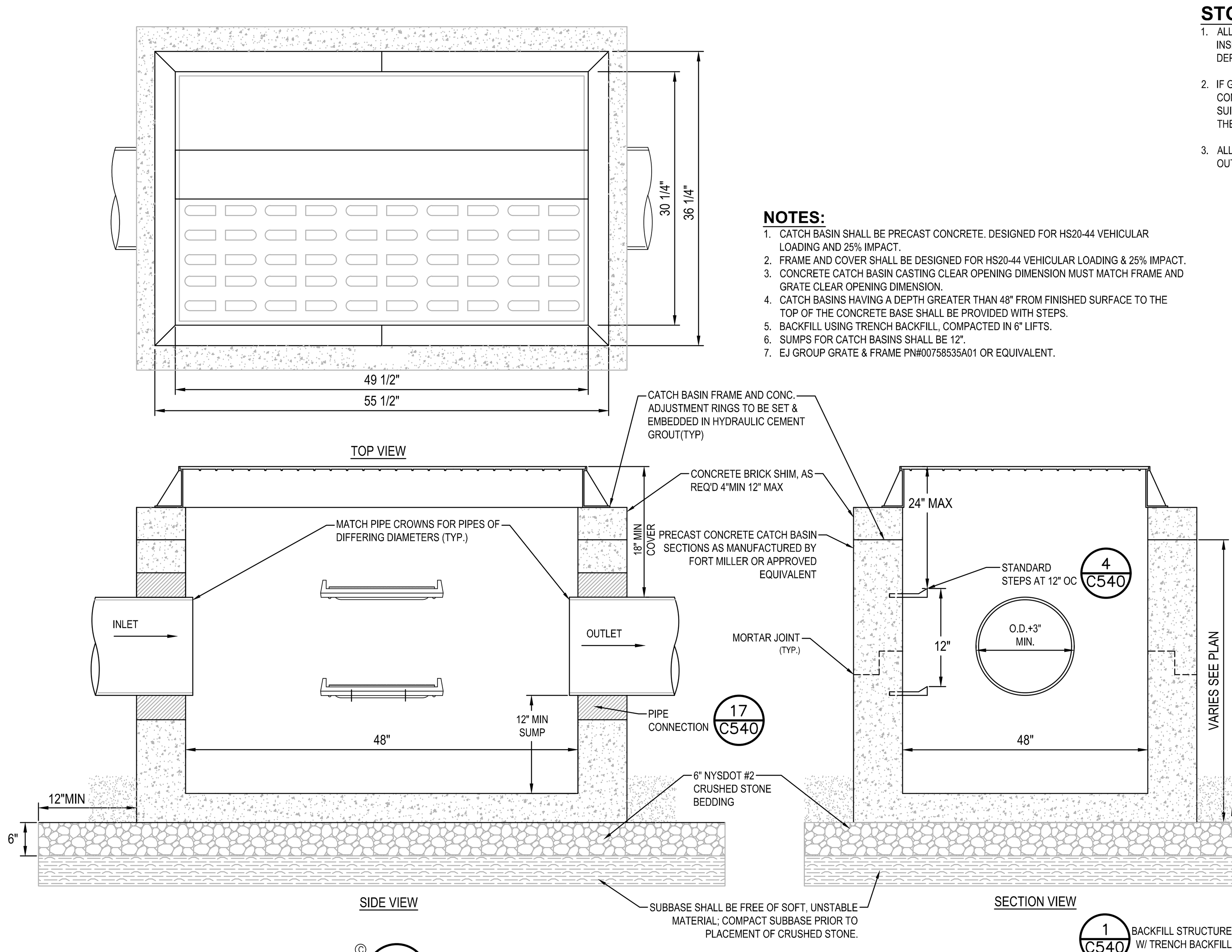
3. INSTALL CONTINUOUS DETECTABLE MARKING TAPE DURING BACKFILLING OF TRENCH FOR UNDERGROUND PIPING. LOCATE TAPE 12" BELOW FINISHED GRADE, DIRECTLY OVER PIPING, EXCEPT 6" BELOW SUBGRADE UNDER PAVEMENTS & SLAB.
4. TRENCHING SHALL BE IMPLEMENTED IN ACCORDANCE WITH O.S.H.A. STANDARDS.
5. 5'-0" MIN COVER SHALL BE APPLIED TO WATER MAIN OR SANITARY SEWER FORCE MAINS ONLY.
6. DEWATERING:
7. TRENCH BOX:

1 PIPE TRENCH DETAIL (TYPICAL)
SCALE: NOT TO SCALE



NOTES:
1. CATCH BASIN SHALL BE PRECAST CONCRETE. DESIGNED FOR HS20-44 VEHICULAR LOADING AND 25% IMPACT.
2. FRAME AND COVER SHALL BE DESIGNED FOR HS20-44 VEHICULAR LOADING & 25% IMPACT.
3. CONCRETE CATCH BASIN LID CLEAR OPENING DIMENSION MUST MATCH FRAME AND GRATE CLEAR OPENING DIMENSION.
4. CATCH BASINS HAVING A DEPTH GREATER THAN 48" FROM FINISHED SURFACE TO THE FLOOR OF THE CONCRETE BASE SHALL BE PROVIDED WITH STEPS.
5. BACKFILL USING TRENCH BACKFILL, COMPACTED IN 6" LIFTS.
6. SUMPS FOR CATCH BASINS SHALL BE 12".
7. ECCENTRIC CONE TOP CAN BE USED FOR MANHOLES DEPTH GREATER THAN 7 FEET.
8. SEE CHART FOR REQUIRED MANHOLES / CATCH BASINS DIAMETERS.
9. ALL PRECAST CONSTRUCTION IN ACCORDANCE W/ ASTM C478

2 PRECAST CONCRETE CATCH BASIN/MANHOLE DETAIL
SCALE: NOT TO SCALE



NOTES:
1. CATCH BASIN SHALL BE PRECAST CONCRETE. DESIGNED FOR HS20-44 VEHICULAR LOADING AND 25% IMPACT.
2. FRAME AND COVER SHALL BE DESIGNED FOR HS20-44 VEHICULAR LOADING & 25% IMPACT.
3. CONCRETE CATCH BASIN CASTING CLEAR OPENING DIMENSION MUST MATCH FRAME AND GRATE CLEAR OPENING DIMENSION.
4. CATCH BASINS HAVING A DEPTH GREATER THAN 48" FROM FINISHED SURFACE TO THE TOP OF THE CONCRETE BASE SHALL BE PROVIDED WITH STEPS.
5. BACKFILL USING TRENCH BACKFILL, COMPACTED IN 6" LIFTS.
6. SUMPS FOR CATCH BASINS SHALL BE 12".
7. EJ GROUP GRATE & FRAME PN#00758535A01 OR EQUIVALENT.

3 PRECAST CONCRETE RECTANGULAR CATCH BASIN DETAIL
SCALE: NOT TO SCALE

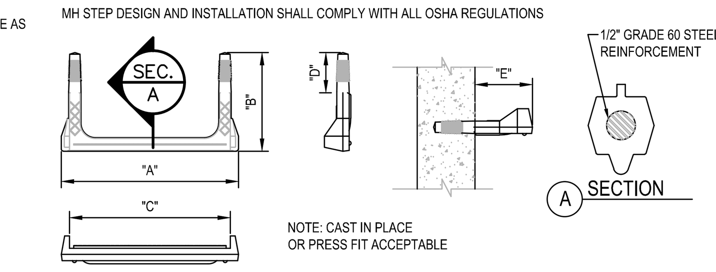
STORM SEWER NOTES:
1. ALL STORM WATER MANAGEMENT STRUCTURES (I.E. CATCH BASIN, ETC.) SHALL BE REGULARLY INSPECTED FOR SEDIMENT ACCUMULATIONS. CATCH BASINS SHALL BE CLEANED WHEN SEDIMENT DEPTH REACHES A MAXIMUM OF 1/2 THE AVAILABLE SUMP DEPTH.
2. IF GROUNDWATER IS ENCOUNTERED DURING CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL CONSTRUCT A DEWATERING PIT (A.K.A. SUMP PIT) TO TRAP AND FILTER WATER FOR PUMPING TO A SUITABLE DISCHARGE AREA. THE DEWATERING PIT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE NEW YORK STATE GUIDELINES FOR URBAN EROSION AND SEDIMENT CONTROL, LATEST EDITION.
3. ALL EROSION CONTROL MEASURES EMPLOYED DURING THE CONSTRUCTION PROCESS SHALL BE AS OUTLINED ON THE EROSION AND SEDIMENT CONTROL PLANS, DETAILS AND NOTES.

ACCEPTABLE MANHOLE STEPS

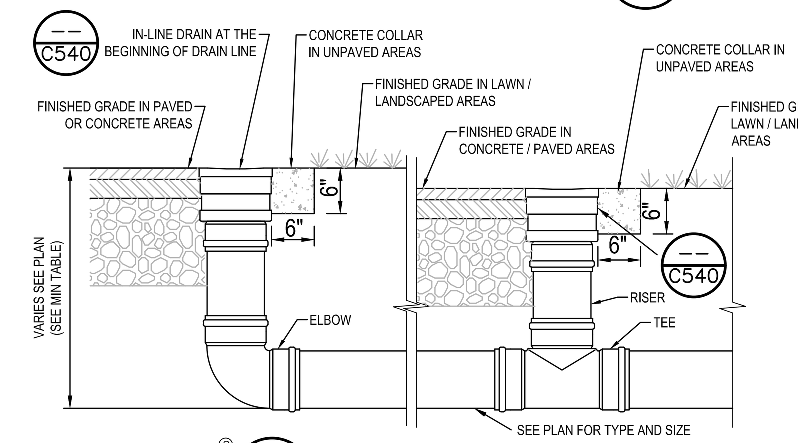
MANUFACTURER	PATTERN NUMBER	"A" STEP WIDTH	"B" LEG LENGTH	"C" RUNG CLEAR	"D" EMBED-MENT	"E" RUNG CLEAR
M.A. INDUSTRIES INC*	PS2-PF	14 3/4	9 1/4	13 3/4	3 3/8	5 7/8
M.A. INDUSTRIES INC*	PS2-PFS	14 3/4	8 1/4	13 3/4	3 3/8	4 7/8

* OR EQUIVALENT

MH STEP DESIGN AND INSTALLATION SHALL COMPLY WITH ALL OSHA REGULATIONS

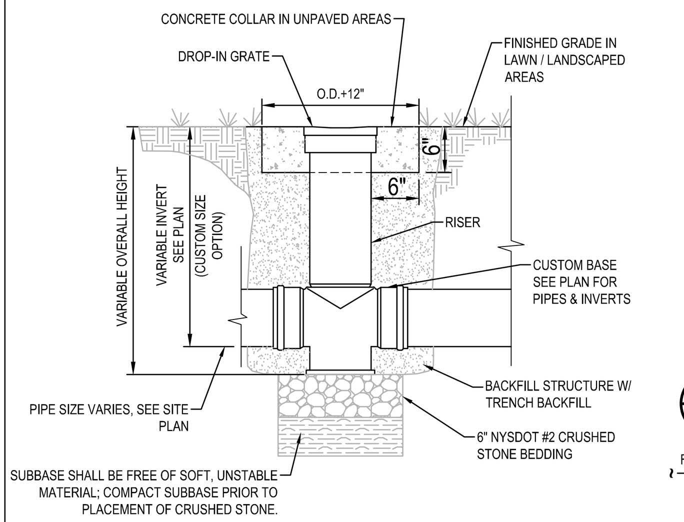


4 COPOLYMER POLYPROPYLENE MH STEP
SCALE: NOT TO SCALE

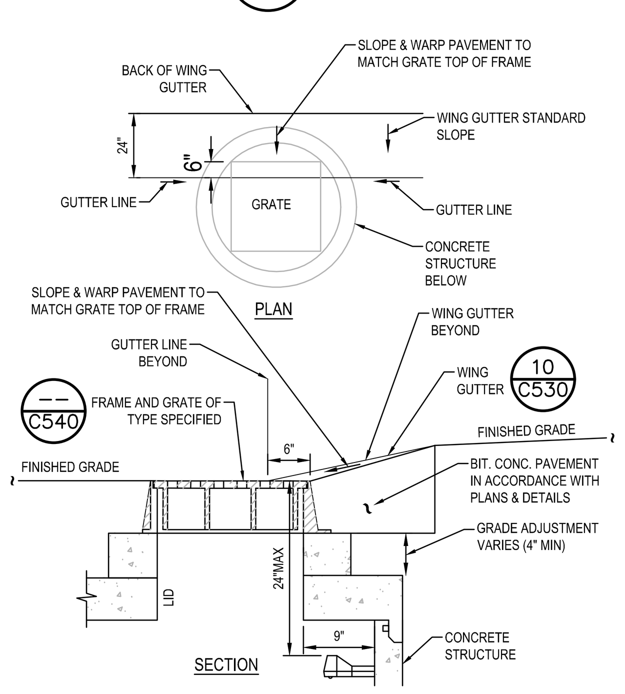


IN-LINE DRAIN DIMENSIONS		
BODY	ADAPTOR	MIN INV DEPTH
8"	6"	2'-0"
8"	8"	2'-2"
10"	6"	2'-2"
10"	8"	2'-2"
10"	10"	3'-0"
12"	6"	2'-6"
12"	8"	3'-0"
12"	10"	3'-4"
12"	12"	3'-6"

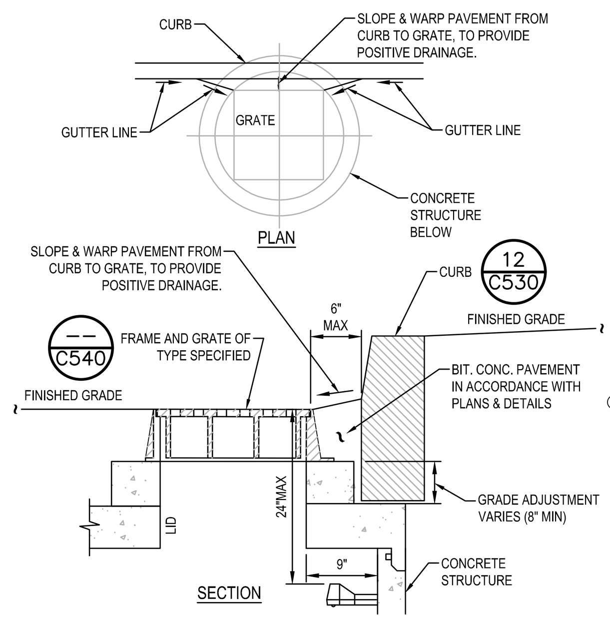
5 YARD IN-LINE DRAIN
SCALE: NOT TO SCALE



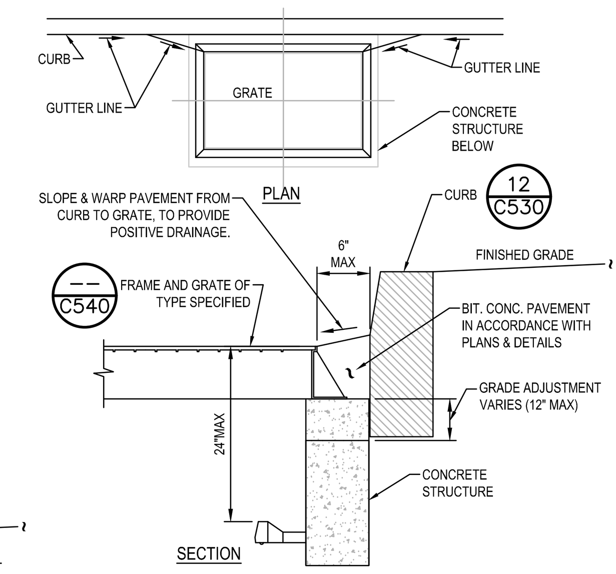
6 NYOPLAST IN-LINE DRAIN BASIN
SCALE: NOT TO SCALE



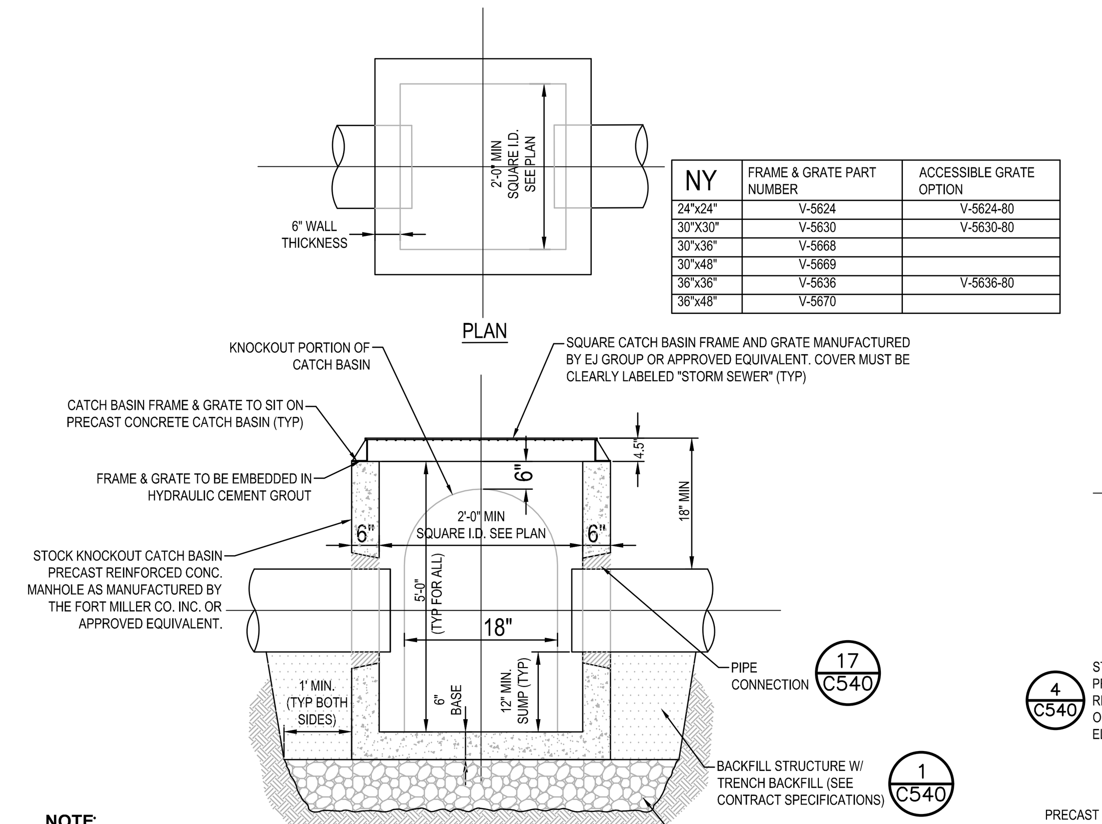
7 48" ROUND STRUCTURE PLACEMENT AT WING GUTTER
SCALE: NOT TO SCALE



8 48" ROUND STRUCTURE PLACEMENT AT CURB
SCALE: NOT TO SCALE



9 30"x48" RECTANGULAR STRUCTURE PLACEMENT AT CURB
SCALE: NOT TO SCALE

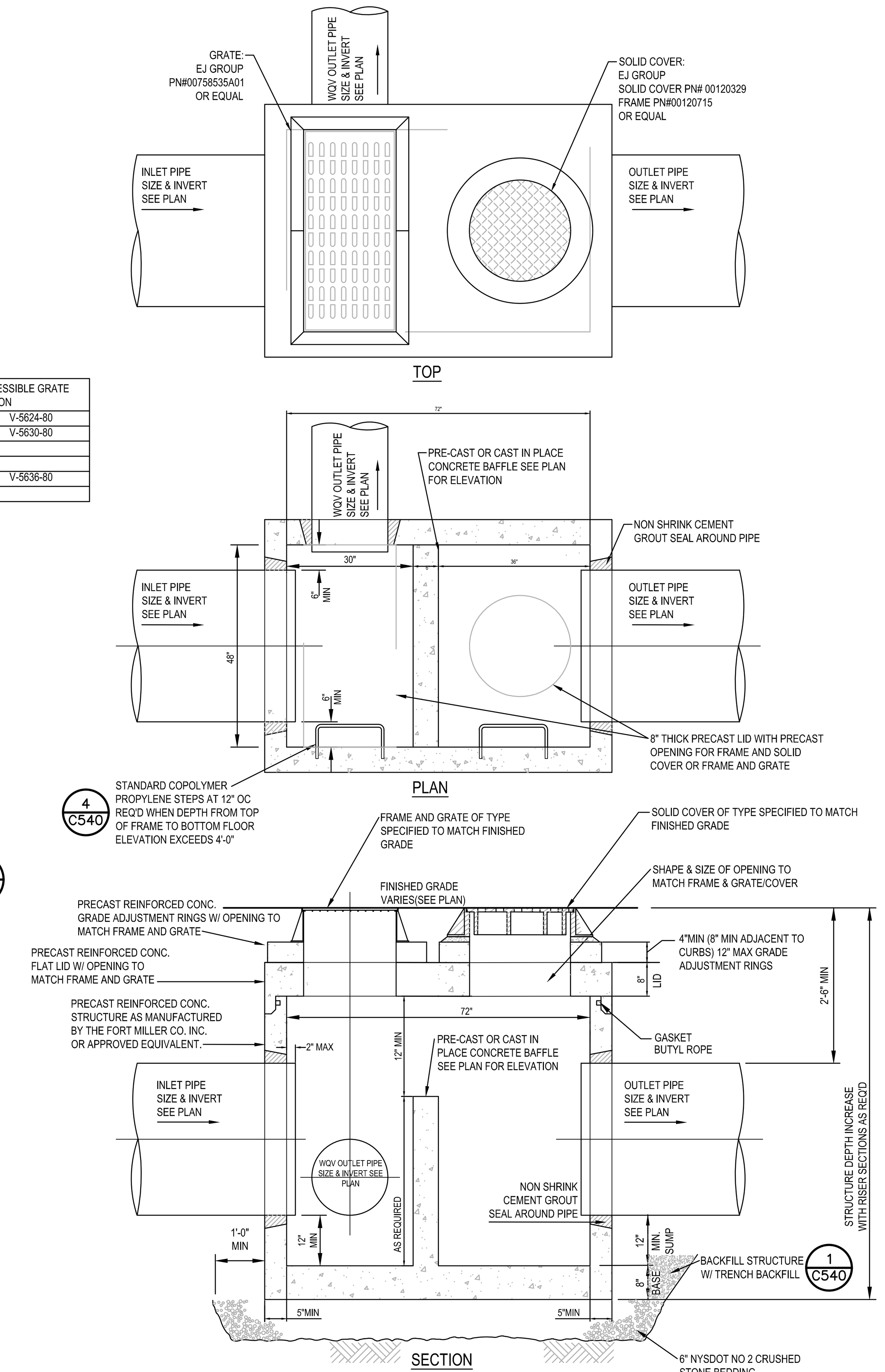


NY	FRAME & GRATE PART NUMBER	ACCESSIBLE GRATE OPTION
24"x24"	V-5624	V-5624-80
30"X30"	V-5630	V-5630-80
30"x36"	V-5668	
30"x48"	V-5669	
36"x36"	V-5636	V-5636-80
36"x48"	V-5670	

NOTE:
ALL PRECAST CONSTRUCTION IN ACCORDANCE W/ ASTM C478

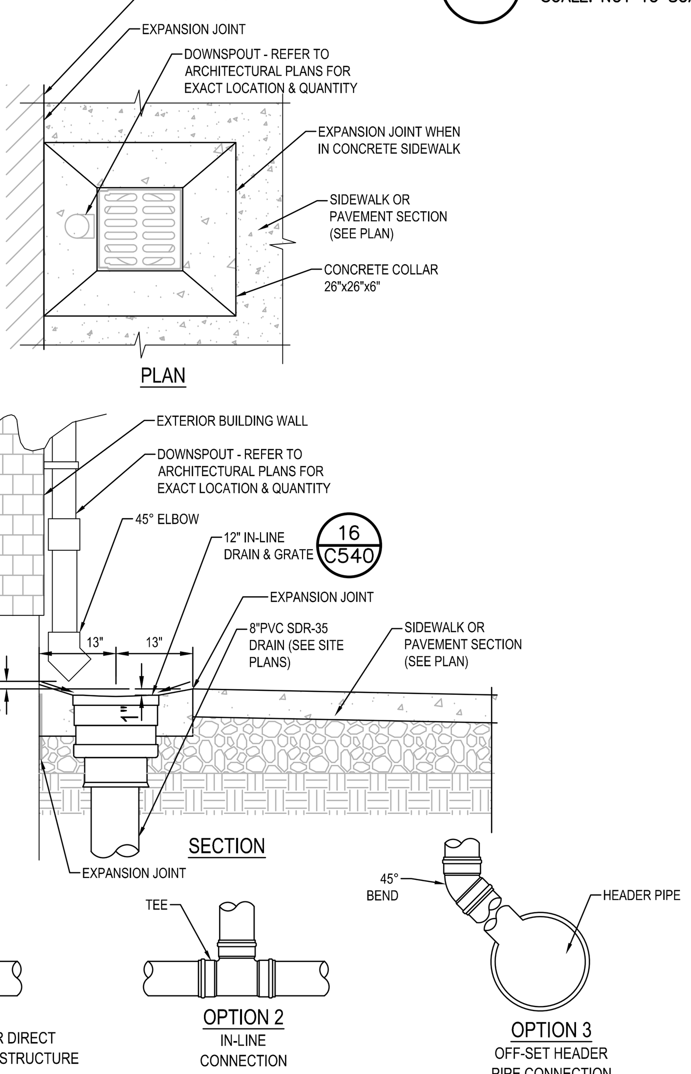
NOTES:
1. CATCH BASIN INLET BASINS SHALL BE PRECAST CONCRETE. DESIGNED FOR HS20-44 VEHICULAR LOADING + 25% IMPACT AS MANUFACTURED BY FORT MILLER OR APPROVED EQUAL.
2. CATCH BASIN SHALL NOT HAVE A DEPTH GREATER THAN 60" FROM FINISHED SURFACE.
3. BACKFILL USING TRENCH BACKFILL, COMPACTED IN 6" LIFTS.
4. MAX STORM SEWER PIPE FOR SHALLOW 2' CATCH BASIN IS 15"

10 PRECAST CONCRETE SHALLOW CATCH BASIN DETAIL
SCALE: NOT TO SCALE



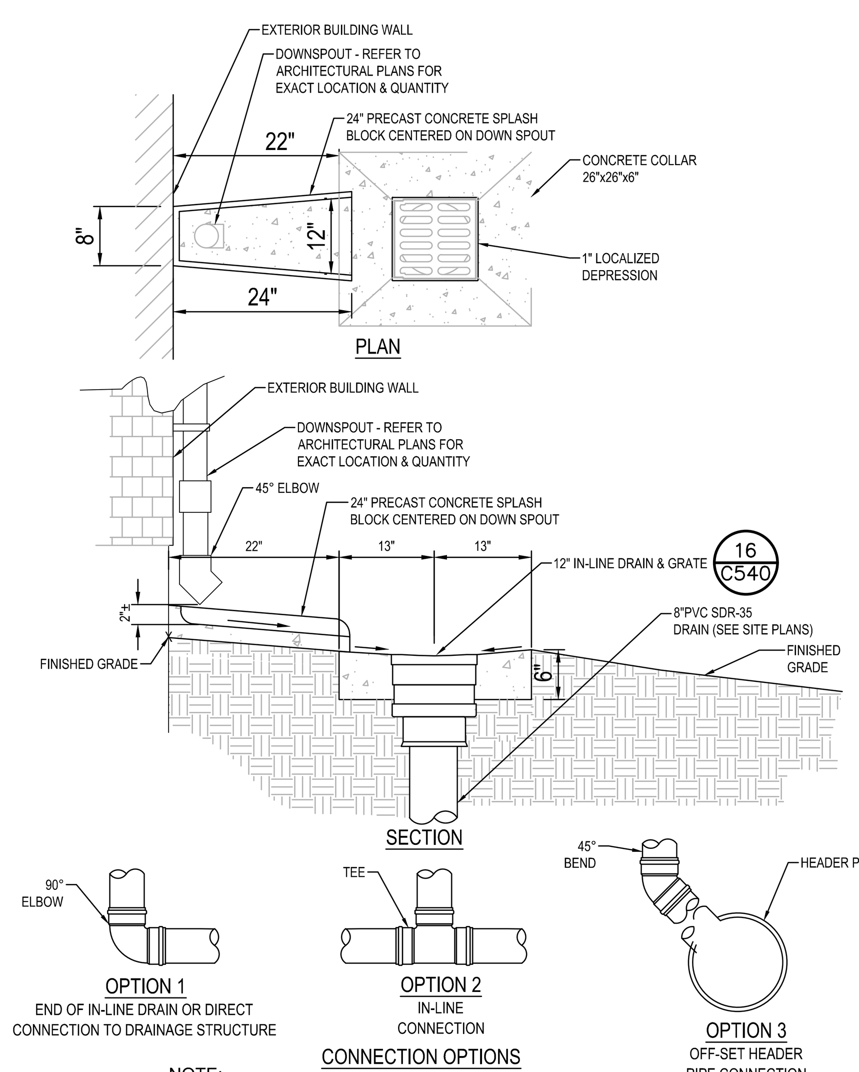
NOTES:
1. ALL PRECAST CONSTRUCTION IN ACCORDANCE W/ ASTM C478.
2. STORM WATER DIVERSION STRUCTURE SHALL BE PRECAST CONCRETE. DESIGNED FOR H20-44 VEHICULAR LOADING AND 25% IMPACT.
3. FRAME AND COVER SHALL BE DESIGNED FOR HS20-44 VEHICULAR LOADING & 25% IMPACT.
4. CONCRETE STORM WATER DIVERSION STRUCTURE LID CLEAR OPENING DIMENSION MUST MATCH FRAME AND GRATE CLEAR OPENING DIMENSION.
5. STORM WATER DIVERSION STRUCTURE HAVING A DEPTH GREATER THAN 48" FROM FINISHED SURFACE TO THE FLOOR OF THE CONCRETE BASE SHALL BE PROVIDED WITH STEPS.
6. BACKFILL USING TRENCH BACKFILL, COMPACTED IN 6" LIFTS.
7. SUMP FOR STORM WATER DIVERSION STRUCTURE SHALL BE 12".
8. ALTERNATE CONFIGURATION OF STORM WATER DIVERSION STRUCTURE UNIT MAY BE SUBMITTED BY CONTRACTOR WITH APPROVAL FROM PROJECT ENGINEER. CLEAR SPACE ABOVE BAFFLE SHALL BE 12"MIN TYPICAL.
9. PIPE PENETRATIONS SHALL BE AS SHOWN ON THE STORMWATER UTILITY PLAN.
10. CAST IRON STORM WATER DIVERSION STRUCTURE TRAP BY EJ GROUP OR APPROVED EQUAL TO BE INSTALLED AT WATER QUALITY DIVERSION PIPE OUTLET.

11 STORM WATER DIVERSION STRUCTURE
SCALE: NOT TO SCALE



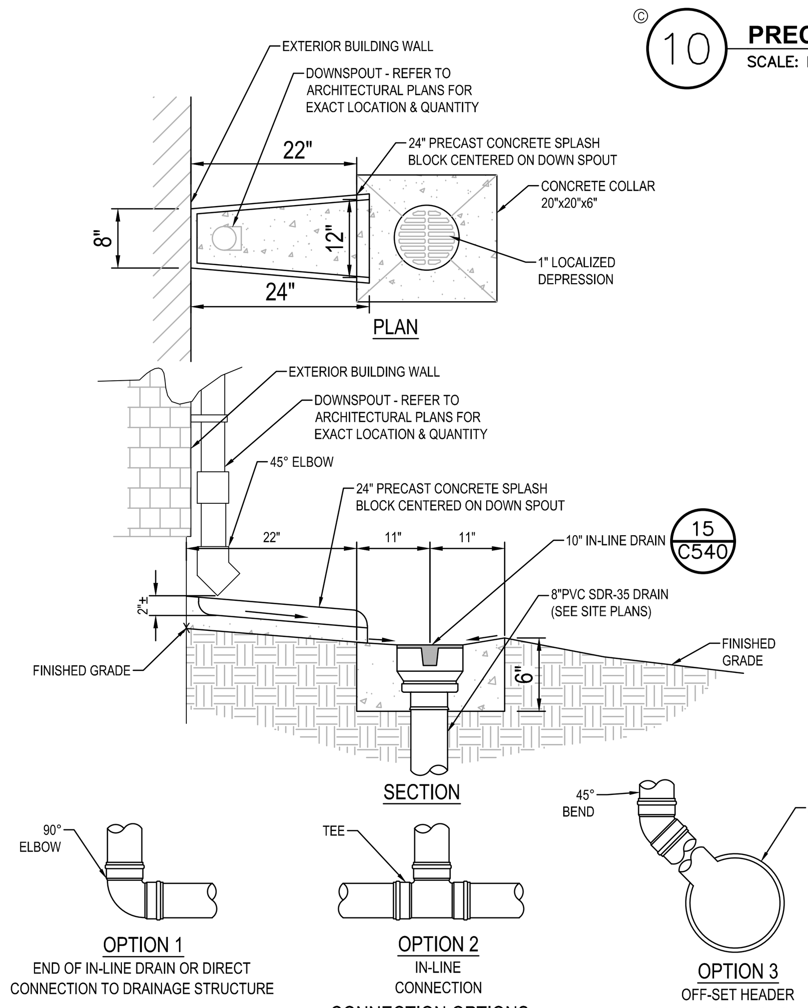
NOTE:
1. CONTRACTOR TO ADJUST IN-LINE DRAINS AS NECESSARY TO CORRESPOND W/ DOWN SPOUTS ON ARCHITECTURAL PLANS.
2. SEE PLAN FOR TOP OF FRAME(TF) & INVERT INFORMATION.
3. SEE PLAN FOR CONNECTION OPTIONS

12 12" IN-LINE DRAIN IN CONCRETE SIDEWALK & PAVED AREAS
SCALE: NOT TO SCALE



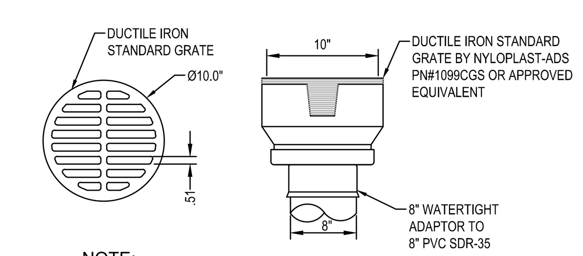
NOTE:
1. CONTRACTOR TO ADJUST IN-LINE DRAINS AS NECESSARY TO CORRESPOND W/ DOWN SPOUTS ON ARCHITECTURAL PLANS.
2. SEE PLAN FOR TOP OF FRAME(TF) & INVERT INFORMATION.
3. SEE PLAN FOR CONNECTION OPTIONS

13 12" IN-LINE DRAIN W/ SPLASH BLOCK IN LAWN / LANDSCAPED AREAS
SCALE: NOT TO SCALE



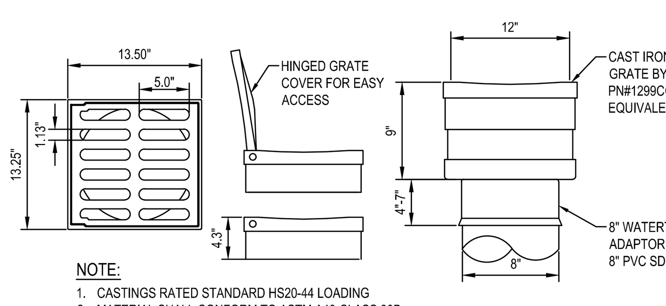
NOTE:
1. CONTRACTOR TO ADJUST IN-LINE DRAINS AS NECESSARY TO CORRESPOND W/ DOWN SPOUTS ON ARCHITECTURAL PLANS.
2. SEE PLAN FOR TOP OF FRAME(TF) & INVERT INFORMATION.
3. SEE PLAN FOR CONNECTION OPTIONS

14 10" IN-LINE DRAIN W/ SPLASH BLOCK IN LAWN / LANDSCAPED AREAS
SCALE: NOT TO SCALE



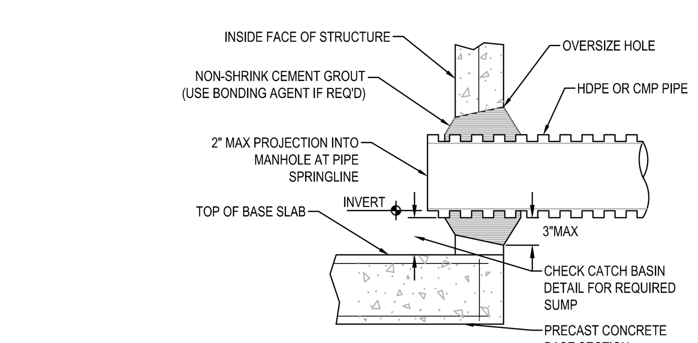
NOTE:
1. CASTINGS RATED FOR LIGHT WHEEL LOAD TRAFFIC
2. MATERIAL SHALL CONFORM TO ASTM A48-CLASS 30B
3. PAINT: CASTINGS TO BE FURNISHED WITH A BLACK PAINT
4. IN-LINE DRAIN BY NYLOPLAST OR APPROVED EQUIVALENT

15 10" IN-LINE DRAIN & GRATE
SCALE: NOT TO SCALE



NOTE:
1. CASTINGS RATED STANDARD HS20-44 LOADING
2. MATERIAL SHALL CONFORM TO ASTM A48-CLASS 30B
3. PAINT: CASTINGS TO BE FURNISHED WITH A BLACK PAINT
4. IN-LINE DRAIN BY NYLOPLAST OR APPROVED EQUIVALENT
5. DRAIN AREA = 62.7 SQ. INCH

16 12" IN-LINE DRAIN & GRATE
SCALE: NOT TO SCALE



17 PIPE CONNECTION TO DRAINAGE STRUCTURE-CMP OR HDPE CEMENT GROUT SEAL JOINT
SCALE: NOT TO SCALE

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Charlotte, NC 28285
704-376-6423
labellapc.com

NOT FOR CONSTRUCTION

CORPORATE ENGINEERING LICENSE NO. C-0430

CONNECTICUT SPORTS GROUP
9 W BROAD STREET
SUITE 430
STAMFORD, CT 06902

BRIDGEPORT STADIUM & MIXED USE
255 & 363 KOSSUTH STREET
BRIDGEPORT, CT 06608

NO:	DATE:	DESCRIPTION:
Revisions		

PROJECT NUMBER: 2230111
DRAWN BY: GA
REVIEWED BY: JRS
ISSUED FOR: ISSUED FOR
DATE: 04/08/2024
DRAWING NAME:

STORM SEWER DETAILS

DRAWING NUMBER:

C540

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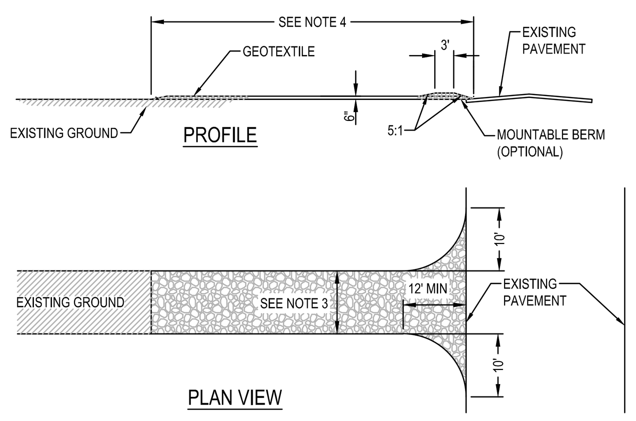
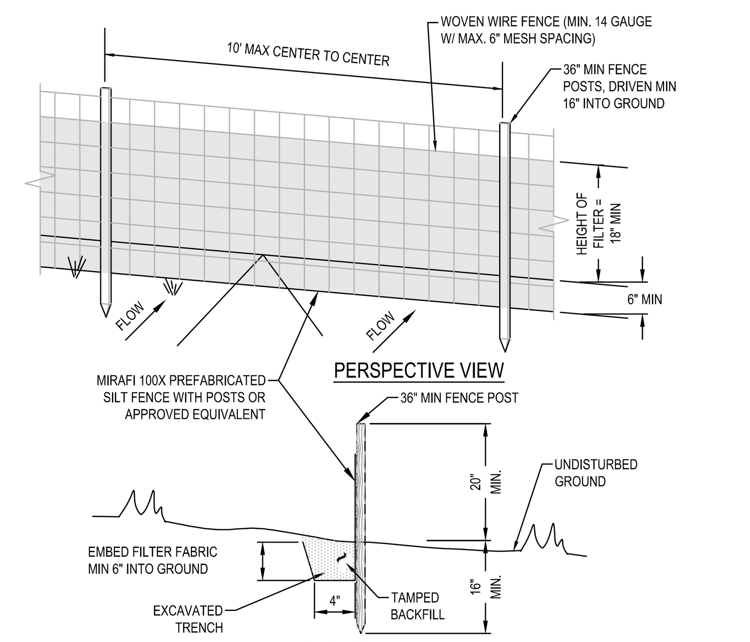


CONSTRUCTION ENTRANCE SPECIFICATIONS:
1. STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. THICKNESS - NOT LESS THAN SIX (6) INCHES.
3. WIDTH - TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY FOUR (24) FEET IF SINGLE ENTRANCE TO SITE.
4. LENGTH - NOT LESS THAN 50' (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30' MINIMUM LENGTH WOULD APPLY).
5. GEOTEXTILE - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

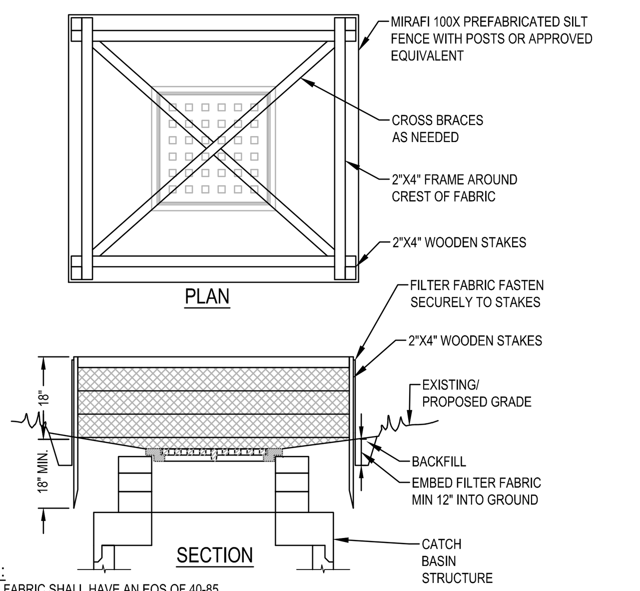
© 1 **STABILIZED CONSTRUCTION ACCESS DETAIL**
SCALE: NOT TO SCALE



NOTES:
1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL "T" OR "U" TYPE OR HARDWOOD.
2. FILTER FABRIC TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 6" MAX MESH OPENING.
3. WHEN TWO SECTIONS OF FILTER FABRIC ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY 6" AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIALS REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.
5. MAXIMUM DRAINAGE AREA FOR OVERLAND FLOW TO A SILT FENCE SHALL NOT EXCEED 1/4 ACRE PER 100 FEET OF FENCE.
6. SILT FENCE SHALL BE USED WHERE EROSION COULD OCCUR IN THE FORM OF SHEET EROSION.
7. SILT FENCE SHALL NOT BE USED WHEN A CONCENTRATION OF WATER IS FLOWING TO THE BARRIER.
8. MAXIMUM ALLOWABLE SLOPE LENGTHS CONTRIBUTING RUN-OFF TO A SILT FENCE ARE:

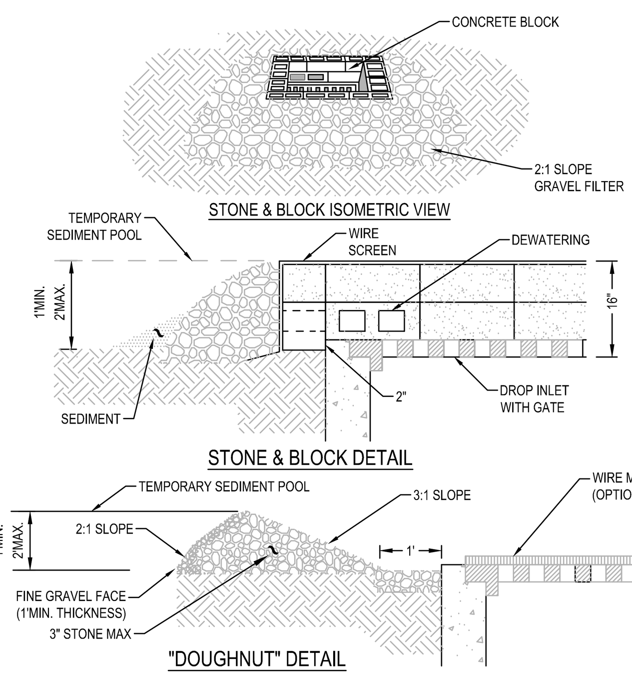
SLOPE STEEPNESS	MAXIMUM SLOPE LENGTH(FT)
2:1	25
3:1	50
4:1	75
5:1 OR FLATTER	100

© 2 **SILT FENCE INSTALLATION DETAIL**
SCALE: NOT TO SCALE



NOTES:
1. FILTER FABRIC SHALL HAVE AN EOS OF 40-85.
2. CUT FABRIC FROM CONTINUOUS ROLL TO ELIMINATE JOINTS. IF JOINTS ARE NEEDED, OVERLAP TO THE NEXT STAKE.
3. STAKE MATERIALS WILL BE STANDARD 2"x4" WOOD OR EQUIVALENT, WITH A MINIMUM LENGTH OF 3 FEET.
4. SPACE STAKES EVENLY AROUND INLET 3 FEET APART AND DRIVE MINIMUM 18" DEEP. SPANS GREATER THAN 3 FEET MAY BE BRIDGED WITH THE USE OF WIRE MESH BEHIND FABRIC FOR SUPPORT.
5. FABRIC SHALL BE EMBEDDED 1 FOOT MINIMUM BELOW GROUND AND BACKFILLED. IT SHALL BE SECURELY FASTENED TO THE STAKES AND FRAME.
6. A 2"x4" WOOD FRAME SHALL BE COMPLETED AROUND THE CREST OF THE FABRIC FOR OVERFLOW STABILITY.
7. MAXIMUM DRAINAGE AREA IS 1 ACRE.
8. INLET PROTECTION SHALL REMAIN IN-PLACE UNTIL SITE HAS BEEN STABILIZED.

© 3 **TEMPORARY OUT OF PAVEMENT FILTER FABRIC DROP INLET PROTECTION DETAIL**
SCALE: NOT TO SCALE

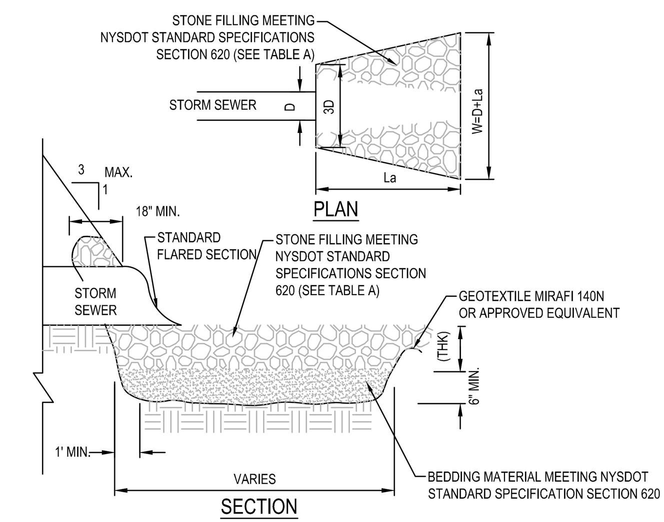


CONSTRUCTION SPECIFICATIONS:
1. LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE FOR DEWATERING. FOUNDATION SHALL BE 2 INCHES MINIMUM BELOW REST OF INLET AND BLOCKS SHALL BE PLACED AGAINST INLET FOR SUPPORT.
2. HARDWARE FABRIC OR 1/2" WIRE MESH SHALL BE PLACED OVER BLOCK OPENINGS TO SUPPORT STONE.
3. USE NYSDOT #4 CRUSHED STONE FILLING PLACED 2 INCHES BELOW TOP OF THE BLOCK ON A 2:1 SLOPE OR FLATTER.
4. FOR STONE STRUCTURES ONLY, A 1 FOOT THICK LAYER OF THE FILTER STONE WILL BE PLACED AGAINST THE 3 INCH STONE AS SHOWN ON THE DRAWINGS. MAXIMUM DRAINAGE AREA 1 ACRE.
5. MAXIMUM DRAINAGE AREA IS 1 ACRE.

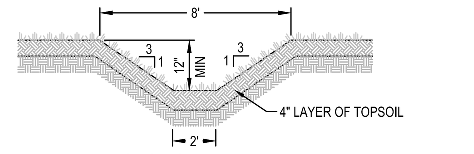
© 4 **CATCH BASIN STONE AND BLOCK INLET PROTECTION DETAIL**
SCALE: NOT TO SCALE

STONE APRON SIZING REQUIREMENT - TABLE "A"

CULVERT DIA. (D)	CULVERT SLOPE, %	NYSDOT STANDARD STONE FILLING APRON MATERIAL	d50	dMAX	MINIMUM APRON THICKNESS (IN)	MINIMUM OUTLET APRON LENGTH(FT) (La)
12"	< 8	LIGHT	6"	9"	18	10
	8-10	MEDIUM	9"-12"	14"-18"	24	10
18"	< 4	LIGHT	6"	9"	18	10
	4-6	MEDIUM	9"-12"	14"-18"	24	12
	6-8	HEAVY	15"-18"	22"-27"	36	12
	8-10	HEAVY	15"-18"	22"-27"	36	18
24"	< 3	LIGHT	6"	9"	18	12
	3-4	MEDIUM	9"-12"	14"-18"	24	16
	4-8	HEAVY	15"-18"	22"-27"	36	24
30"	< 1	LIGHT	6"	9"	18	15
	1-2	MEDIUM	9"-12"	14"-18"	24	20
	2-4	HEAVY	15"-18"	22"-27"	36	25
	4-6	HEAVY	15"-18"	22"-27"	36	30
36"	< 2	MEDIUM	9"-12"	14"-18"	24	24
	2-3	HEAVY	15"-18"	22"-27"	36	30
	3-5	HEAVY	15"-18"	22"-27"	36	36
42"	< 1	MEDIUM	9"-12"	14"-18"	24	28
	1-2	HEAVY	15"-18"	22"-27"	36	35
	2-3	HEAVY	15"-18"	22"-27"	36	42
48"	< 1	MEDIUM	9"-12"	14"-18"	24	32
	1-2	HEAVY	15"-18"	22"-27"	36	40
	2-3	HEAVY	15"-18"	22"-27"	36	48

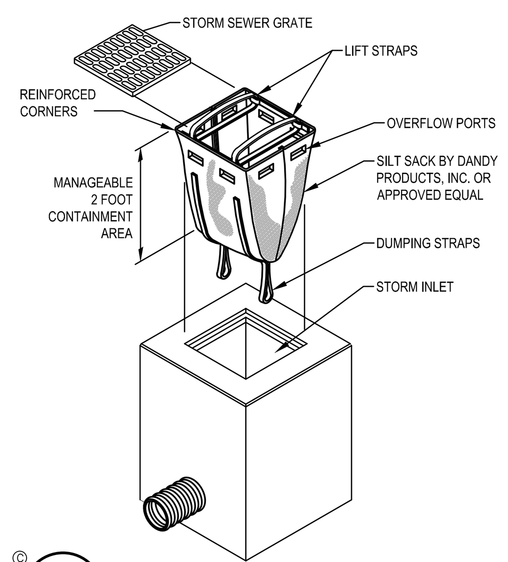


© 5 **END SECTION WITH STONE LINED APRON DETAIL**
SCALE: NOT TO SCALE



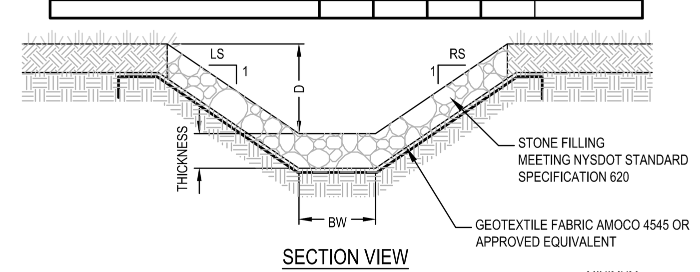
NOTES:
1. MINIMUM DEPTH OF SWALE SHALL BE 12".
2. SWALE SHALL BE AT LEAST 6 FEET WIDE AT TOP.
3. SWALE SHALL BE SEEDED AND MULCHED WITH FAST GERMINATING RYE 15 LBS. TO 25 LBS. PER 1,000 SF.
4. SLOPE OF SWALE SHALL BE MINIMUM 2%.

© 6 **PERMANENT GRASS LINED DIVERSION SWALE DETAIL**
SCALE: NOT TO SCALE



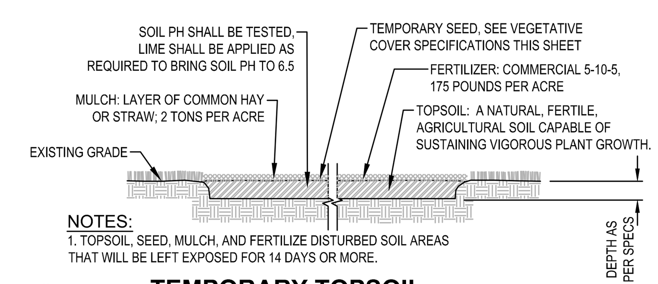
© 7 **SILT SACK DETAIL**
SCALE: NOT TO SCALE

SWALE ID #	D (FT)	LS (FT)	RS (FT)	BW (FT)	NYSDOT RIPRAP
2	X	X	X	X	X



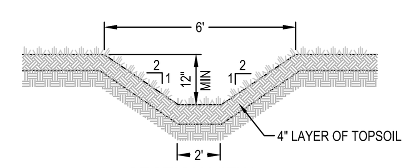
STONE FILLING TYPE	MINIMUM THICKNESS
LIGHT FILLING	12 IN
MEDIUM FILLING	18 IN
HEAVY FILLING	30 IN

© 8 **STONE LINED CHANNEL DETAIL**
SCALE: NOT TO SCALE



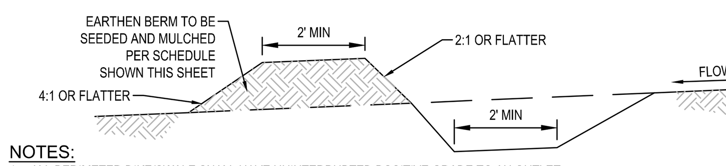
NOTES:
1. TOPSOIL, SEED, MULCH, AND FERTILIZE DISTURBED SOIL AREAS THAT WILL BE LEFT EXPOSED FOR 14 DAYS OR MORE.

© 9 **TEMPORARY TOPSOIL, FERTILIZER, SEED & MULCH DETAIL**
SCALE: NOT TO SCALE



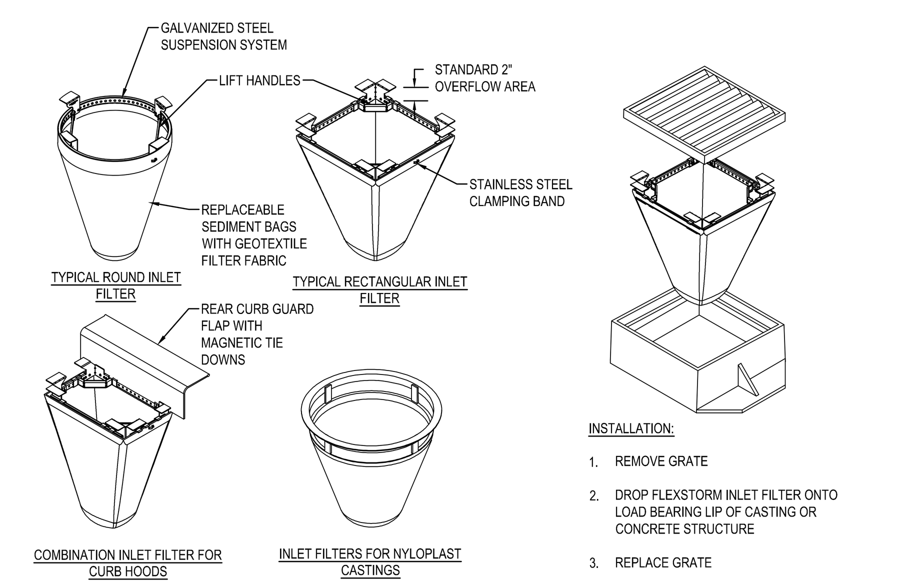
NOTES:
1. MINIMUM DEPTH OF SWALE SHALL BE 12".
2. SWALE SHALL BE AT LEAST 6 FEET WIDE AT TOP.
3. SWALE SHALL BE SEEDED AND MULCHED WITH FAST GERMINATING RYE 15 LBS. TO 25 LBS. PER 1,000 SF.
4. SLOPE OF SWALE SHALL BE MINIMUM 2%.

© 10 **TEMPORARY GRASS LINED DIVERSION SWALE DETAIL**
SCALE: NOT TO SCALE



NOTES:
1. ALL PERIMETER DIKE/SWALE SHALL HAVE UNINTERRUPTED POSITIVE GRADE TO AN OUTLET.
2. DIVERTED RUNOFF FROM A DISTURBED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE.
3. DIVERTED RUNOFF FROM AN UNDISTURBED AREA SHALL OUTLET INTO AN UNDISTURBED STABILIZED AREA AT NON-EROSION VELOCITY.
4. THE SWALE SHALL BE EXCAVATED OR SHAPED TO LINE GRADE, AND CROSS SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED IN THE STANDARD.
5. STABILIZATION OF THE AREA DISTURBED BY THE DIKE AND SWALE SHALL BE DONE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS FOR SEED AND STRAW MULCHING, AND SHALL BE DONE WITHIN 10 CALENDAR DAYS.
6. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.
7. MAXIMUM DRAINAGE AREA IS 2 ACRES.

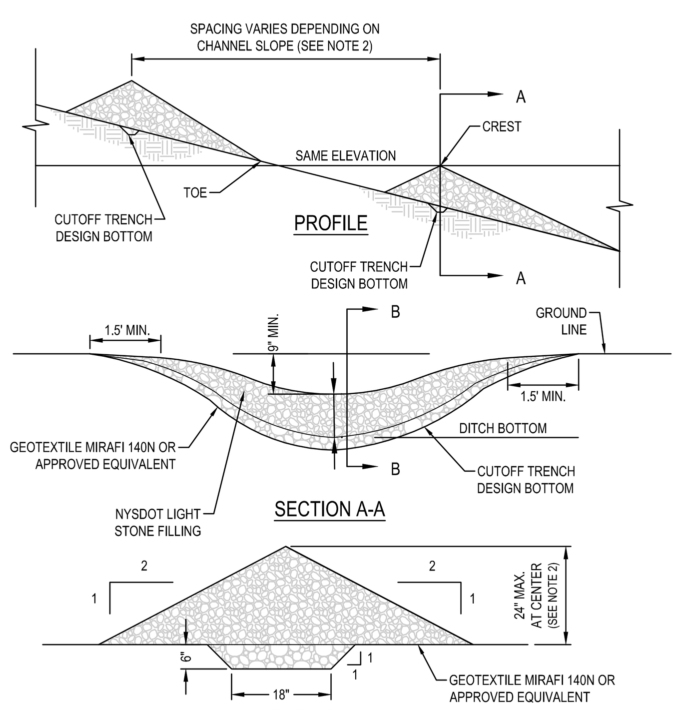
© 11 **DIVERSION DIKE DETAIL**
SCALE: NOT TO SCALE



INSTALLATION:
1. REMOVE GRATE
2. DROP FLEXSTORM INLET FILTER ONTO LOAD BEARING LIP OF CASTING OR CONCRETE STRUCTURE
3. REPLACE GRATE

NOTES:
1. FLEXSTORM CATCH-IT FILTERS FOR TEMPORARY INLET PROTECTION BY INLET & PIPE PROTECTION, INC. A DIVISION OF ADS, INC. OR EQUIVALENT.
2. ALL FRAMING TO BE CONSTRUCTED OF CORROSION RESISTANT STEEL (ZINC PLATED OR GALVANIZED).
3. CONTRACTOR TO FIELD VERIFY EXISTING STRUCTURE DIMENSIONS PRIOR TO ORDERING FILTERS.

© 12 **FLEXSTORM CATCH-IT FILTERS FOR TEMPORARY INLET PROTECTION**
SCALE: NOT TO SCALE

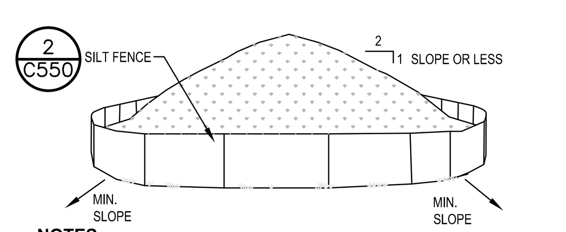


CONSTRUCTION SPECIFICATIONS:
1. STONE SHALL BE PLACED ON A FILTER FABRIC FOUNDATION TO THE LINES, GRADES AND LOCATIONS SHOWN ON THE PLAN.
2. SET SPACING OF CHECK DAMS IN ACCORDANCE W/ THE FOLLOWING:
CHECK DAM SPACING INCREMENT 2'-6" DEEP DITCH/SWALE W/
1'-9" HIGH CHECK DAM: (SPACING = $\frac{\text{100xCHECK DAM HEIGHT (FT)}}{\text{CHANNEL SLOPE \%}}$)

SLOPE:	SPACING:	SLOPE:	SPACING:
0.5%	305'	6%	29'
1%	175'	7%	25'
2%	87'	8%	21'
3%	58'	9%	19'
4%	44'	10%	17'
5%	35'		

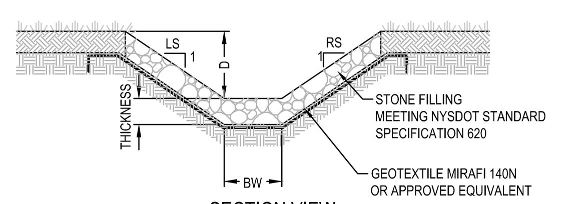
CONTRACTOR TO ADJUST SPACING ACCORDINGLY BASED ON ACTUAL DEPTH & SLOPE OF DITCH.
3. EXTEND THE STONE A MINIMUM OF 1.5 FEET BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
4. PROTECT THE CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
5. ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAM ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONE.
6. MAXIMUM DRAINAGE AREA IS 2 ACRES.

© 13 **STONE CHECK DAM DETAIL**
SCALE: NOT TO SCALE



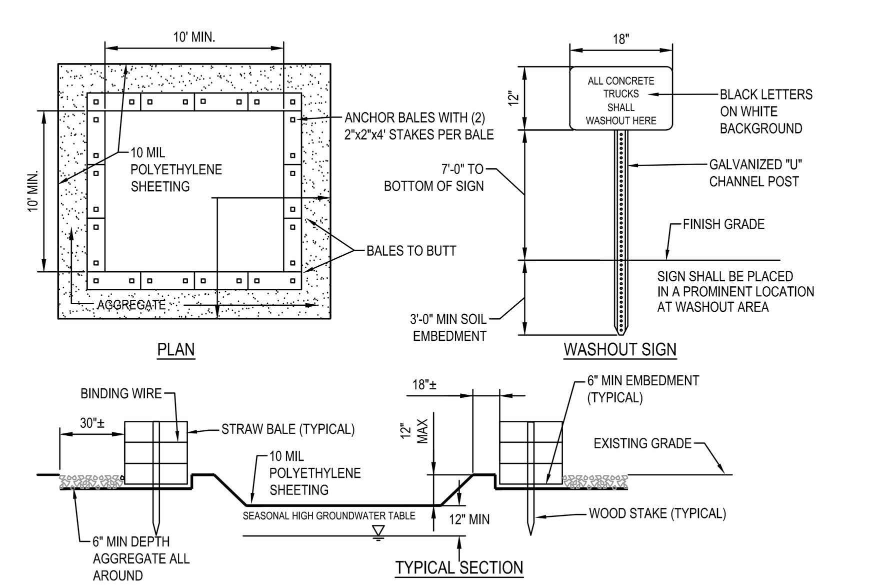
NOTES:
1. AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 1V:2H.
3. UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH SILT FENCING, THEN STABILIZED WITH VEGETATION OR COVERED.
4. SEE SPECIFICATIONS FOR INSTALLATION OF SILT FENCE.

© 14 **TEMPORARY SOIL STOCKPILE DETAIL**
SCALE: NOT TO SCALE



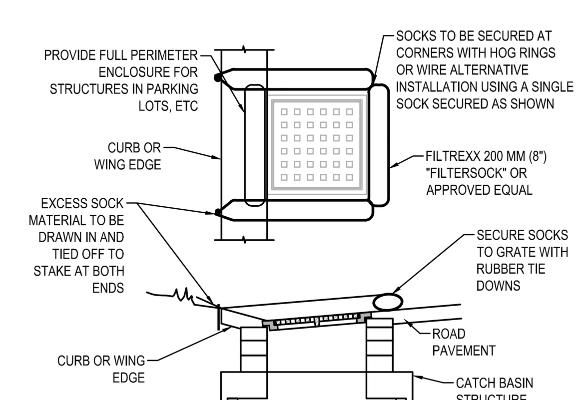
CHANNEL	D (FT)	LS (FT)	RS (FT)	BW (FT)	d50 (IN)	dMAX (IN)	NYSDOT STANDARD RIPRAP	THICKNESS (FT)
A	XX	XX	XX	XX	XX	XX	XX	XX
B	XX	XX	XX	XX	XX	XX	XX	XX
C	XX	XX	XX	XX	XX	XX	XX	XX

© 15 **STONE LINED CHANNEL DETAIL**
SCALE: NOT TO SCALE



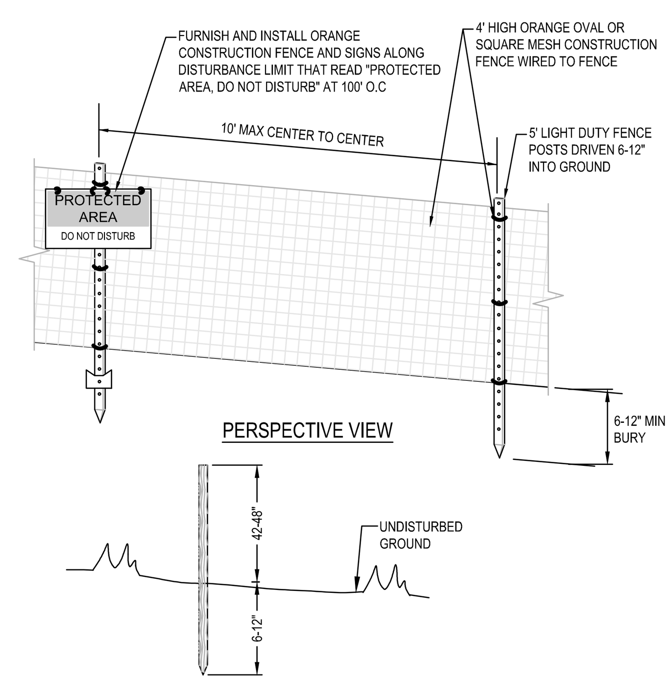
NOTES:
1. CONTAINMENT MUST BE STRUCTURALLY SOUND AND LEAK FREE AND CONTAIN ALL LIQUID WASTES.
2. CONTAINMENT DEVICES MUST BE OF SUFFICIENT QUANTITY OR VOLUME TO COMPLETELY CONTAIN THE LIQUID WASTES GENERATED.
3. WASHOUT MUST BE CLEANED OR NEW FACILITIES CONSTRUCTED AND READY TO USE ONCE WASHOUT IS 75% FULL. THIS INCLUDES REPLACEMENT OF THE 10 MIL POLYETHLENE SHEETING.
4. WASHOUT AREA(S) SHALL BE INSTALLED IN A LOCATION EASILY ACCESSIBLE BY CONCRETE TRUCKS.
5. ONE OR MORE AREAS MAY BE INSTALLED ON THE CONSTRUCTION SITE AND MAY BE RELOCATED AS CONSTRUCTION PROGRESSES.
6. AT LEAST WEEKLY, REMOVE ACCUMULATION OF SAND AND AGGREGATE AND DISPOSE OF PROPERLY.

© 16 **CONCRETE WASHOUT AREA DETAIL**
SCALE: NOT TO SCALE



NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. SECURE FILTERSOCK TO GROUND AT BOTH ENDS.
3. INLET PROTECTION SHALL REMAIN IN-PLACE UNTIL SITE HAS BEEN STABILIZED.

© 17 **CATCH BASIN GRATE INLET FILTER DETAIL**
SCALE: NOT TO SCALE



© 18 **TEMPORARY ORANGE CONSTRUCTION FENCE DETAIL**
SCALE: NOT TO SCALE

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STAMFORD, CT 06902

BRIDGEPORT STADIUM & MIXED USE
255 & 363 KOSSUTH STREET
BRIDGEPORT, CT 06608

NO:	DATE:	DESCRIPTION:
Revisions		

PROJECT NUMBER: 2230111
DRAWN BY: GA
REVIEWED BY: JRS
ISSUED FOR: ISSUED FOR
DATE: 04/08/2024
DRAWING NAME:

EROSION & SEDIMENT CONTROL DETAILS 1

DRAWING NUMBER:

C550

7/19/2024 2:16:24 PM
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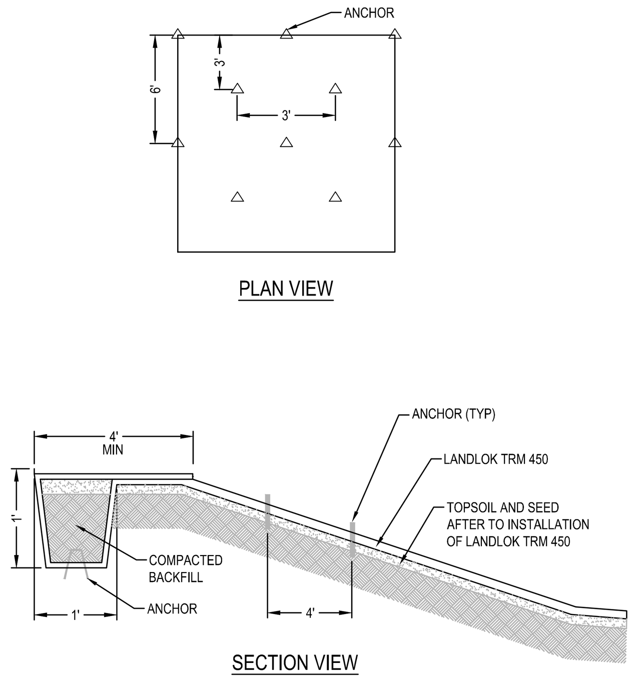
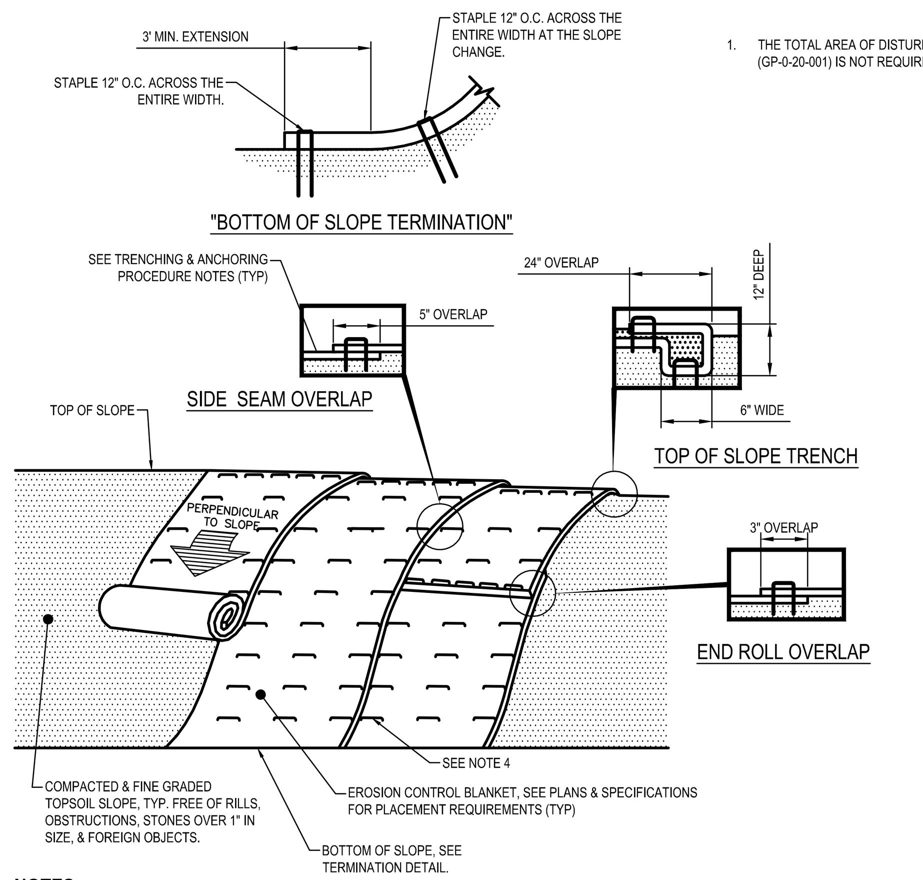


LANDLOK TRM 450 TURF REINFORCEMENT NOTES:

1. INSTALL LANDLOK TRM 450 TURF REINFORCEMENT PER MANUFACTURER'S RECOMMENDATIONS.
2. GRADE AND COMPACT AREA OF INSTALLATION, REMOVING ALL ROCKS, VEGETATION, ETC.
3. EXTEND TRM 3'-0" OVER CREST OF SLOPE AND EXCAVATE A 12"X12" TERMINAL ANCHOR TRENCH.
4. ANCHOR TRM IN TRENCH @ 1'-0" SPACING, BACKFILL AND COMPACT SOIL.
5. UNROLL TRM DOWN SLOPE WITH SMALL NETTING ON BOTTOM, LARGE NETTING ON TOP. (ON SLOPES > 3:1, NETTING TO BE UNROLLED DOWN SLOPE)
6. OVERLAP ADJACENT ROLLS AT LEAST 6" AND ANCHOR EVERY 12".
7. LAY TRM LOOSE TO MAINTAIN DIRECT CONTACT WITH SOIL (DO NOT PULL TAUGHT).
8. SECURE TRM TO GROUND SURFACE USING U-SHAPED WIRE STAPLES.
9. TRM TO BE ANCHORED IN A CHECKERBOARD PATTERN (SEE PLAN VIEW).
10. 3" MINIMUM TOPSOIL AND SEED AFTER INSTALLATION OF TURF REINFORCEMENT.

1 LANDLOK TRM 450 TURF REINFORCEMENT MAT DETAIL

SCALE: NOT TO SCALE



1. THE TOTAL AREA OF DISTURBANCE PLANNED FOR THIS PROJECT IS LESS THAN 1 ACRE THEREFORE A SPDES GENERAL PERMIT (GP-0-20-001) IS NOT REQUIRED.

NOTES:

1. PREPARE THE TOPSOIL (SEEDBED) FIRST BY RAKING, SHAPING, FINE GRADING, COMPACTING, SEEDING & FERTILIZING THE SLOPES.

2. USE THE TRENCHING & ANCHORING PROCEDURES DETAILED HEREIN TO SECURE ANY EXPOSED MATERIAL ENDS. SECURE ALL PRODUCT OVERLAPS. OVERLAP IN THE DIRECTION OF WATER FLOW, PERPENDICULAR TO THE SLOPE.

3. KEEP EROSION CONTROL BLANKET IN SOLID CONTACT WITH THE TOPSOIL.

4. USE THE REQUIRED NUMBER OF STAPLES/STAKES TO SECURELY FASTEN THE EROSION CONTROL BLANKET TO THE SLOPE. IN LOOSE SOIL CONDITIONS, THE USE OF STAPLES/STAKES LENGTHS GREATER THAN 6" MAYBE NECESSARY FOR PROPER SECURING. STAPLE PATTERNS & OVERLAPS ARE DEPENDENT ON SITE CONDITIONS & MANUFACTURER'S REQUIREMENTS. CONTRACTOR SHALL CONSULT WITH MANUFACTURER FOR ACTUAL SITE SPECIFIC REQUIREMENTS.

TRENCHING & ANCHORING PROCEDURE NOTES:

SIDE SEAM OVERLAP: THE EDGES OF PARALLEL BLANKETS SHALL BE STAPLED WITH A 5" OVERLAP.

TOP OF SLOPE TRENCH: BEGIN AT THE TOP OF SLOPE BY ANCHORING THE EROSION CONTROL BLANKET IN A 6"D x 6"W TRENCH WITH A 12" OVERLAP EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR WITH A ROW OF STAPLES/STAKES 12" O.C. IN THE BOTTOM OF THE TRENCH. BACKFILL & COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO THE COMPACTED SOIL & FOLD THE REMAINING 12" PORTION OF THE EROSION CONTROL BLANKET BACK OVER THE SEED & COMPACTED SOIL. SECURE THE EROSION CONTROL BLANKET OVER THE COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED 12" O.C. ACROSS THE ENTIRE WIDTH.

END ROLL OVERLAP: CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE SHALL BE PLACED END OVER END (SHINGLE-STYLE) WITH A 3" OVERLAP. STAPLE THRU OVERLAPPED AREAS, 12" APART ACROSS THE ENTIRE WIDTH.

2 EROSION CONTROL BLANKET INSTALLATION DETAIL

SCALE: NOT TO SCALE

SPDES GENERAL PERMIT GP-0-20-001 COMPLIANCE NOTES:

THIS PLAN SET AND THE ACCOMPANYING SWPPP ENTITLED "[NAME]" HAVE BEEN SUBMITTED AS A SET. THESE ENGINEERING DRAWINGS ARE CONSIDERED AN INTEGRAL PART OF THE SWPPP, THEREFORE THE PLAN SET IS NOT CONSIDERED COMPLETE WITHOUT THE SWPPP.

1. THIS PROJECT HAS NOT RECEIVED WRITTEN APPROVAL FROM ________ (INSERT NYSDEC OR MUNICIPALITY (IF MS4)) ALLOWING THE DISTURBANCE OF MORE THAN FIVE (5) ACRES OF LAND AT ANY ONE TIME. THEREFORE, IF THE CONTRACTOR'S CONSTRUCTION SEQUENCE REQUIRES THE DISTURBANCE OF MORE THAN FIVE ACRES AT ANY ONE TIME, WRITTEN APPROVAL MUST BE OBTAINED FROM NYSDEC PRIOR TO EXCEEDING THE 5 ACRE LIMIT.

1. THIS PROJECT HAS REQUESTED WRITTEN APPROVAL FROM ________ (INSERT NYSDEC OR MUNICIPALITY (IF MS4)) ALLOWING THE DISTURBANCE OF MORE THAN FIVE (5) ACRES OF LAND AT ANY ONE TIME. CONTRACTOR SHALL NOT DISTURB MORE THAN FIVE (5) ACRES UNTIL SUCH TIME THAT THE WAIVER IS GRANTED AND WRITTEN AUTHORIZATION IS RECEIVED FROM NYSDEC.

CONSTRUCTION SEQUENCING NOTES:

1. PRIOR TO COMMENCING ANY CLEARING, GRUBBING, EARTHWORK ACTIVITIES, ETC. AT THE SITE, THE CONTRACTOR SHALL FLAG THE WORK LIMITS AND SHALL INSTALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES (I.E. SILT FENCES, TREE PROTECTION/BARRIER FENCES, STABILIZED CONSTRUCTION ENTRANCES, STORM DRAIN SEDIMENT FILTERS, DRAINAGE DITCH SEDIMENT FILTERS, ETC.) INDICATED ON THE PLANS OR DEEMED NECESSARY PRIOR TO THE START OF ANY CLEARING AND/OR CONSTRUCTION ACTIVITIES. TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES MUST BE CONSTRUCTED, STABILIZED, AND FUNCTIONAL BEFORE SITE DISTURBANCE BEGINS WITHIN THEIR TRIBUTARY AREAS.
2. THE CONTRACTOR SHALL CLEAR AND GRUB THE AREA OF THE STORMWATER MANAGEMENT FACILITIES. THIS AREA SHALL NOT EXCEED FIVE (5) ACRES IN EXTENT WITHOUT TEMPORARY STABILIZATION.
3. THE STORMWATER DETENTION BASIN SHALL BE UTILIZED AS A TEMPORARY SEDIMENT TRAP DURING CONSTRUCTION. THE CONTRACTOR SHALL INSTALL THE OUTLET CONTROL STRUCTURES AND THE EARTHEN BERM. THE BASIN SHALL BE GRADED TO THE TOP OF THE AQUATIC BENCH AS INDICATED IN THE TYPICAL STORMWATER MANAGEMENT BASIN SECTION PRESENTED IN THE PROJECT DRAWINGS.
4. PRIOR TO COMMENCING CLEARING, GRUBBING AND/OR EARTHWORK ACTIVITIES IN ANY OTHER AREA OF THE SITE, THE CONTRACTOR SHALL INSTALL INLET AND OUTLET PROTECTION MEASURES (RIPRAP OVERFLOW WEIR(S), CULVERT INLET/OUTLET PROTECTION, ETC.) AND SHALL STABILIZE THE AREAS DISTURBED DURING THE CONSTRUCTION OF THE SEDIMENT BASIN.
5. THE CONTRACTOR SHALL INSTALL TEMPORARY DIVERSION MEASURES WITH ASSOCIATED STABILIZATION MEASURES (I.E., VEGETATIVE COVER, DRAINAGE DITCH SEDIMENT FILTERS, STORM DRAIN SEDIMENT FILTERS, ETC.) TO CONVEY STORMWATER RUNOFF FROM DISTURBED AREAS TO THE TEMPORARY SEDIMENT BASIN.
6. TEMPORARY DIVERSION MEASURES SHALL BE LOCATED IN A MANNER THAT WILL ASSURE THAT THE AREA TRIBUTARY TO EACH DIVERSION DOES NOT EXCEED FIVE (5) ACRES. THESE TEMPORARY DIVERSION MEASURES SHALL BE INSPECTED DAILY AND REPAIRED/STABILIZED AS NECESSARY TO MINIMIZE EROSION.
7. THE CONTRACTOR SHALL COMMENCE SITE CONSTRUCTION ACTIVITIES INCLUDING CLEARING & GRADING OF THE PROPOSED AREA OF DISTURBANCE AS REQUIRED.
8. INSTALL PROTECTIVE MEASURES AT THE LOCATIONS OF ALL GRATE INLETS, CURB INLETS, AND AT THE ENDS OF ALL EXPOSED STORM SEWER PIPES.
9. CONSTRUCT ALL UTILITIES, CURB AND GUTTER, GUTTER INLETS, AREA INLETS, AND STORM SEWER MANHOLES, AS SHOWN ON THE PLANS. INLET PROTECTION MAY BE REMOVED TEMPORARILY FOR THIS CONSTRUCTION. PLACE REQUIRED RIP-RAP AT LOCATIONS SHOWN ON THE PLANS.
10. FINALIZE PAVEMENT SUB-GRADE PREPARATION.
11. REMOVE PROTECTIVE MEASURES AROUND INLETS AND MANHOLES NO MORE THAN 24 HOURS PRIOR TO PLACING STABILIZED BASE COURSE.
12. INSTALL SUB-BASE MATERIAL AS REQUIRED FOR PAVEMENT.
13. PRIOR TO FINALIZING CONSTRUCTION OF THE STORMWATER MANAGEMENT FACILITY, ALL CATCH BASINS AND DRAINAGE LINES SHALL BE CLEANED OF ALL SILT AND SEDIMENT.
14. UPON COMPLETION OF SITE CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL FINALIZE CONSTRUCTION OF THE STORMWATER MANAGEMENT FACILITY. CONTRACTOR SHALL FINISH GRADE THE FOREBAY(S), AQUATIC BENCHES, AND WET POOL(S) AND STABILIZE AS INDICATED IN THE PROJECT DRAWINGS.
15. THE CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES AND IMMEDIATELY ESTABLISH PERMANENT VEGETATION ON THE AREAS DISTURBED DURING THEIR REMOVAL.

EROSION AND SEDIMENT CONTROL MEASURES:

1. DAMAGE TO SURFACE WATERS RESULTING FROM EROSION AND SEDIMENTATION SHALL BE MINIMIZED BY STABILIZING DISTURBED AREAS AND BY REMOVING SEDIMENT FROM CONSTRUCTION SITE DISCHARGES.
2. AS MUCH AS IS PRACTICAL, EXISTING VEGETATION SHALL BE PRESERVED. FOLLOWING THE COMPLETION OF CONSTRUCTION ACTIVITIES IN ANY PORTION OF THE SITE, PERMANENT VEGETATION SHALL BE ESTABLISHED ON ALL EXPOSED SOILS.
3. SITE PREPARATION ACTIVITIES SHALL BE PLANNED TO MINIMIZE THE SCOPE AND DURATION OF SOIL DISRUPTION.
4. PERMANENT TRAFFIC CORRIDORS SHALL BE ESTABLISHED AND "ROUTES OF CONVENIENCE" SHALL BE AVOIDED. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT ALL POINTS OF ENTRY ONTO THE PROJECT SITE.

MAINTENANCE OF EROSION AND SEDIMENT CONTROL MEASURES:

PERMANENT AND TEMPORARY VEGETATION:
INSPECT ALL AREAS THAT HAVE RECEIVED VEGETATION EVERY SEVEN DAYS & AFTER EVERY RAIN EVENT. ALL AREAS DAMAGED BY EROSION OR WHERE SEED HAS NOT ESTABLISHED SHALL BE REPAIRED AND RESTABILIZED IMMEDIATELY.

STABILIZED CONSTRUCTION ENTRANCE:
INSPECT THE ENTRANCE PAD EVERY SEVEN DAYS & AFTER EVERY RAIN EVENT. CHECK FOR MUD, SEDIMENT BUILD-UP AND PAD INTEGRITY. MAKE DAILY INSPECTIONS DURING WET WEATHER. RESHAPE PAD AS NEEDED FOR DRAINAGE AND RUNOFF CONTROL. WASH AND REPLACE STONE AS NEEDED. THE STONE IN THE ENTRANCE SHOULD BE WASHED OR REPLACED WHENEVER THE ENTRANCE FAILS TO REDUCE MUD BEING CARRIED OFF-SITE BY VEHICLES. IMMEDIATELY REMOVE MUD AND SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROADS BY BRUSHING OR SWEEPING. REMOVE TEMPORARY CONSTRUCTION ENTRANCE AS SOON AS THEY ARE NO LONGER NEEDED TO PROVIDE ACCESS TO THE SITE.

SILT FENCE:
INSPECT FOR DAMAGE EVERY SEVEN DAYS & AFTER EVERY RAIN EVENT. MAKE ALL REPAIRS IMMEDIATELY. REMOVE SEDIMENT FROM THE UP-SLOPE FACE OF THE FENCE BEFORE IT ACCUMULATES TO A HEIGHT EQUAL TO 1/3 THE HEIGHT OF THE FENCE. IF FENCE FABRIC TEARS, BEGINS TO DECOMPOSE, OR IN ANY WAY BECOMES INEFFECTIVE, REPLACE THE AFFECTED SECTION OF FENCE IMMEDIATELY.

SOIL STOCKPILE:
INSPECT SEDIMENT CONTROL BARRIERS (SILT FENCE OR HAY BALE) AND VEGETATION FOR DAMAGE EVERY SEVEN DAYS & AFTER EVERY RAIN EVENT. MAKE ALL REPAIRS IMMEDIATELY. REMOVE SEDIMENT FROM THE UP-SLOPE FACE OF THE SEDIMENT CONTROL BARRIER BEFORE IT ACCUMULATES TO 1/3 THE HEIGHT OF THE SEDIMENT CONTROL BARRIER. IF SEDIMENT CONTROL BARRIER TEARS, BEGINS TO DECOMPOSE, OR IN ANYWAY BECOMES INEFFECTIVE, REPLACE THE SEDIMENT CONTROL BARRIER IMMEDIATELY. REVEGETATE DISTURBED AREA TO STABILIZE SOIL STOCK PILE. REMOVE THE SEDIMENT CONTROL BARRIER WHEN THE SOIL STOCKPILE HAS BEEN REMOVED.

DUST CONTROL:
SCHEDULE CONSTRUCTION OPERATIONS TO MINIMIZE THE AMOUNT OF DISTURBED AREAS AT ANY ONE TIME DURING THE COURSE OF WORK. APPLY TEMPORARY SOIL STABILIZATION PRACTICES SUCH AS MULCHING, SEEDING, AND SPRAYING (WATER). STRUCTURAL MEASURES (MULCH, SEEDING) SHALL BE INSTALLED IN DISTURBED AREAS BEFORE SIGNIFICANT BLOWING PROBLEMS DEVELOP. WATER SHALL BE SPRAYED AS NEEDED. REPEAT AS NEEDED, BUT AVOID EXCESSIVE SPRAYING, WHICH COULD CREATE RUNOFF AND EROSION PROBLEMS.

CHECK DAM:
INSPECT CHECK DAMS EVERY SEVEN DAYS & AFTER EVERY RAIN EVENT. IF SIGNIFICANT EROSION HAS OCCURRED BETWEEN STRUCTURES A LINER OF STONE OR OTHER SUITABLE MATERIAL SHOULD BE INSTALLED IN THAT PORTION OF THE CHANNEL. REMOVE SEDIMENT ACCUMULATED BEHIND THE DAM AS NEEDED TO ALLOW CHANNEL TO DRAIN THROUGH THE STONE CHECK DAM AND PREVENT LARGE FLOWS FROM CARRYING SEDIMENT OVER THE DAM. REPLACE STONES AS NEEDED TO MAINTAIN THE DESIGN CROSS SECTION OF THE STRUCTURES. REMOVE CHECK DAMS AS PER APPROVAL OF ENGINEER.

EROSION CONTROL BLANKET:
INSPECT THE BLANKET EVERY SEVEN DAYS & AFTER EVERY RAIN EVENT. REPLACE WIRE STAPLES AS REQUIRED. REPAIR AND RESEED WHERE CRACKS AND DAMAGED VEGETATION IS EVIDENT. WHEN DAMAGED BEYOND REPAIR OR NO LONGER FUNCTIONING, THE BLANKET SHALL BE REPLACED.

EARTH DIKE:
INSPECT ALL EARTH DIKES EVERY SEVEN DAYS & AFTER EVERY RAIN EVENT. ALL AREAS DAMAGED BY EROSION SHALL BE REPAIRED IMMEDIATELY.

TEMPORARY SWALE:
INSPECT ALL EARTH DIKES EVERY SEVEN DAYS & AFTER EVERY RAIN EVENT. ALL AREAS DAMAGED BY EROSION SHALL BE REPAIRED IMMEDIATELY.

SEDIMENT TRAP:
INSPECT ALL SEDIMENT TRAPS EVERY SEVEN DAYS & AFTER EVERY RAIN EVENT. REPAIRS SHALL BE MADE AS NEEDED. SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO THE ORIGINAL DIMENSIONS WHEN SEDIMENT HAS ACCUMULATED TO 1/2 OF THE DESIGN DEPTH OF THE TRAP.

STORM DRAIN INLET PROTECTION:
INSPECT ALL STORM DRAIN INLET PROTECTION DEVICES EVERY SEVEN DAYS & AFTER EVERY RAIN EVENT. MAKE REPAIRS AS NEEDED, REMOVE SEDIMENT FROM THE POOL AREA AS NECESSARY.

DEWATERING PITS:
(IF REQUIRED) - INSPECT DAILY DURING OPERATION FOR CLOGGING OR OVERFLOW. CLEAR INLET AND DISCHARGE PIPES OF OBSTRUCTIONS. IF A FILTER MATERIAL BECOMES CLOGGED WITH SEDIMENT, PIT SHALL BE DISMANTLED AND CONSTRUCT NEW PITS AS NEEDED.

SNOW AND ICE CONTROL:
PARKING LOTS, ROADWAYS, AND DRIVEWAYS ADJACENT TO WATER QUALITY FILTERS SHALL NOT BE SANDED DURING SNOW EVENTS DUE TO HIGH POTENTIAL FOR CLOGGING FROM SAND IN SURFACE WATER RUNOFF. USE SALT ONLY FOR SNOW AND ICE CONTROL.

GENERAL EROSION AND SEDIMENT CONTROL NOTES:

1. ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE IN STRICT COMPLIANCE WITH "NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL", NOVEMBER 2016.
2. EXCESS SOIL TO BE STOCKPILED WITHIN THE LIMITS OF SITE DISTURBANCE IF NOT USED IMMEDIATELY FOR GRADING PURPOSES. INSTALL SILT FENCE AROUND SOIL STOCKPILES.
3. APPLY SURFACE STABILIZATION AND RESTORATION MEASURES. AREAS UNDERGOING CLEARING OR GRADING AND ANY AREAS DISTURBED BY CONSTRUCTION ACTIVITIES WHERE WORK IS DELAYED, SUSPENDED, OR INCOMPLETE AND WILL NOT BE REDISTURBED FOR 21 DAYS OR MORE SHALL BE STABILIZED WITH TEMPORARY VEGETATIVE COVER WITHIN 14 DAYS AFTER CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS CEASED. (SEE SPECIFICATIONS FOR TEMPORARY VEGETATIVE COVER). AREAS UNDERGOING CLEARING OR GRADING AND ANY AREAS DISTURBED BY CONSTRUCTION ACTIVITIES WHERE WORK IS COMPLETE AND WILL NOT BE REDISTURBED SHALL BE STABILIZED AND RESTORED WITH PERMANENT VEGETATIVE COVER AS SOON AS SITE AREAS ARE AVAILABLE AND WITHIN 14 DAYS IF WORK IS COMPLETE. (SEE SPECIFICATIONS FOR PERMANENT VEGETATIVE COVER). SEEDING FOR PERMANENT VEGETATIVE COVER WILL BE WITHIN THE SEASONAL LIMITATIONS. PROVIDE STABILIZATION WITH TEMPORARY VEGETATIVE COVER WITHIN 14 DAYS AFTER WORK IS COMPLETE, FOR SEEDING OUTSIDE PERMITTED SEEDING PERIODS.
4. SEEDED AREAS TO BE MULCHED WITH STRAW OR HAY MULCH IN ACCORDANCE WITH VEGETATIVE COVER SPECIFICATIONS.
5. THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL MEASURES THROUGHOUT THE COURSE OF CONSTRUCTION.
6. THE CONTRACTOR IS RESPONSIBLE FOR CONTROLLING DUST BY SPRINKLING EXPOSED SOIL AREAS PERIODICALLY WITH WATER AS REQUIRED. THE CONTRACTOR IS TO SUPPLY ALL EQUIPMENT AND WATER.
7. WHEN ALL DISTURBED AREAS ARE STABLE, ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED.

TOPSOIL SPECIFICATIONS:

1. EXISTING EXCESS TOPSOIL SHALL BE REMOVED AND STORED IN TOPSOIL STOCKPILES SUFFICIENTLY REMOVED FROM OTHER EXCAVATION OR DISTURBANCE TO AVOID MIXING. SILT FENCE SHALL BE INSTALLED AROUND TOPSOIL STOCKPILE AREAS.

SITE PREPARATION:

1. COMPLETE ROUGH GRADING AND FINAL GRADE, ALLOWING FOR DEPTH OF TOPSOIL TO BE ADDED.
2. SCARIFY ALL COMPACT, SLOWLY PERMEABLE, MEDIUM AND FINE TEXTURED SUBSOIL AREAS. SCARIFY AT APPROXIMATELY RIGHT ANGLES TO THE SLOPE DIRECTION IN SOIL AREAS THAT ARE STEEPER THAN 5%.
3. REMOVE REFUSE, WOODY PLANT PARTS, STONES OVER 3 INCHES IN DIAMETER, AND OTHER LITTER.

TOPSOIL MATERIALS:

1. NEW TOPSOIL SHALL BE BETTER THAN OR EQUAL TO THE QUALITY OF THE EXISTING ADJACENT TOPSOIL. IT SHALL MEET THE FOLLOWING CRITERIA:
   - A. ORIGINAL LOAM TOPSOIL, WELL DRAINED HOMOGENEOUS TEXTURE AND OF UNIFORM GRADE, WITHOUT THE ADMIXTURE OF SUBSOIL MATERIAL AND FREE OF DENSE MATERIAL, HARDPAN, CLAY, STONES, SOD OR OTHER OBJECTIONABLE MATERIAL.
   - B. CONTAINING NOT LESS THAN 5% NOR MORE THAN 20% ORGANIC MATTER IN THAT PORTION OF A SAMPLING PASSING A 1/4" SIEVE WHEN DETERMINED BY THE WET COMBUSTION METHOD ON A SAMPLE DRIED AT 105°C.
   - C. CONTAINING A PH VALUE WITHIN THE RANGE OF 6.5 TO 7.5 ON THAT PORTION OF THE SAMPLE WHICH PASSES A 1/4" SIEVE.
   - D. CONTAINING THE FOLLOWING WASHED GRADATIONS:

SIEVE DESIGNATION	% PASSING
1"	100
1/4"	97-100
NO 200	20-60

APPLICATION AND GRADING:

1. TOPSOIL SHALL BE DISTRIBUTED TO A UNIFORM DEPTH OF 4" OVER THE AREA. IT SHALL NOT BE PLACED WHEN IT IS PARTLY FROZEN, MUDDY, OR ON FROZEN SLOPES OR OVER ICE, SNOW, OR STANDING WATER.
2. TOPSOIL PLACED AND GRADED ON SLOPES STEEPER THAN 5% SHALL BE PROMPTLY FERTILIZED, SEEDED, MULCHED AND STABILIZED BY "TRACKING" WITH SUITABLE EQUIPMENT.

VEGETATIVE COVER SPECIFICATIONS:

TEMPORARY VEGETATIVE COVER (DURING CONSTRUCTION):

1. SITE PREPARATION
   (SAME AS PERMANENT VEGETATIVE COVER)
2. SEED MIX: (APPLY AT RATE OF 3 TO 4 LBS PER 1000 SF)

AMOUNT BY: WEIGHT	SPECIES OR VARIETY	MINIMUM % PURITY	GERMINATION
100%	ANNUAL RYEGRASS	98%	90%

3. SEEDING
   (SAME AS PERMANENT VEGETATIVE COVER)

PERMANENT VEGETATIVE COVER (AFTER CONSTRUCTION):

1. SITE PREPARATION
   - A. BRING AREA TO BE SEEDED TO REQUIRED GRADE. A MINIMUM OF 4" OF TOPSOIL IS REQUIRED.
   - B. PREPARE SEEDBED BY LOOSENING SOIL TO A DEPTH OF 4 INCHES.
   - C. REMOVE ALL STONES OVER 1 INCH IN DIAMETER, STICKS AND FOREIGN MATTER FROM THE SURFACE.
   - D. LIME TO PH OF 6.5.
   - E. FERTILIZER: USE 5-10-5 (NPK) OR EQUIVALENT. APPLY AT RATE OF 4 LBS/1000 SF.
   - F. INCORPORATE LIME AND FERTILIZER IN THE TOP 4 INCHES OF TOPSOIL.
   - G. SMOOTH AND FIRM THE SEEDBED.

2. SEED MIXTURE FOR USE ON LAWN AREAS:
   PROVIDE FRESH, CLEAN, NEW-CROP SEED MIXED IN THE PROPORTIONS SPECIFIED FOR SPECIES AND VARIETY, AND CONFORMING TO FEDERAL AND STATE STANDARDS.

   LAWN SEED MIX: (APPLY AT RATE OF 5 TO 6 LBS PER 1000 SF)

   SUN AND PARTIAL SHADE:

AMOUNT BY: WEIGHT	SPECIES OR VARIETY	MINIMUM % PURITY	GERMINATION
50%	KENTUCKY BLUE GRASS*	95%	80%
20%	PERENNIAL RYE	98%	90%
30%	CREEPING RED FESCUE	97%	85%
100%			

*MINIMUM 2 (EQUAL PROPORTIONS) VARIETIES AS LISTED IN CORNELL RECOMMENDATIONS FOR TURFGRASS.

SHADE:

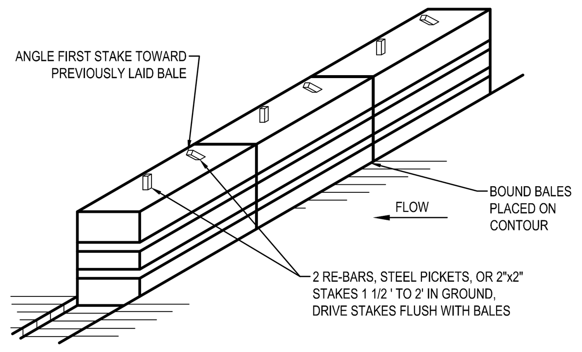
AMOUNT BY: WEIGHT	SPECIES OR VARIETY	MINIMUM % PURITY	GERMINATION
25%	KENTUCKY BLUE GRASS**	95%	80%
20%	PERENNIAL RYE	98%	90%
35%	CREEPING RED FESCUE	97%	85%
20%	CHEWINGS RED FESCUE	97%	85%
100%			

**SHADE TOLERANT VARIETY

3. SEEDING
   - A. APPLY SEED UNIFORMLY BY CYCLONE SEEDER CULTI-PACKER OR HYDRO-SEEDER AT RATE INDICATED.
   - B. ALL SEEDED AREAS SHALL BE PROTECTED FROM EROSION BY ONE OF THE FOLLOWING METHODS:
     - i. A UNIFORM BLANKET OF STRAW APPLIED AT A RATE OF 2 TONS /ACRE MIN., TO BE APPLIED ONCE SEEDING IS COMPLETE.
     - ii. WOOD FIBER CELLULOSE APPLIED WITH SEED MIX BY HYDROSEEDER AT RATE OF 2,000 LBS/ACRE.
   - C. ALL SEEDED SLOPES 3:1 OR GREATER SHALL BE PROTECTED FROM EROSION WITH JUTE MESH OR APPROVED EQUAL.
   - D. IRRIGATE TO FULLY SATURATE SOIL LAYER, BUT NOT TO DISLODGE PLANTING SOIL.
   - E. UNLESS OTHERWISE DIRECTED IN WRITING, SEED FROM MARCH 15TH TO JUNE 15TH, AND FROM AUGUST 15TH TO OCTOBER 15TH.

COMPACTION REQUIREMENTS

LOCATION	COMPACTION	TESTING FREQUENCY
PIPE TRENCH BACKFILL (IN PAVED AREAS)	95% ASTM D1557	1 SERIES OF TESTS FOR EACH 150 FT OR LESS OF TRENCH LENGTH. SERIES INCLUDE 3 COMPACTION TESTS SPREAD EVENLY ALONG TRENCH PROFILE.
PIPE TRENCH BACKFILL (IN UNPAVED AREAS)	90% ASTM D1557	1 SERIES OF TESTS FOR EACH 150 LF OR LESS OF TRENCH LENGTH. SERIES INCLUDE 3 COMPACTION TESTS SPREAD EVENLY ALONG TRENCH PROFILE.
PIPE BEDDING AND PIPE ZONE BACKFILL	95% ASTM D1557	1 TEST FOR EACH 150 FT OR LESS OF TRENCH LENGTH.
PAVEMENT SUBBASE AND LAST LIFT OF SELECT GRANULAR FILL (FILL BETWEEN SHEET PILES)	95% ASTM D1557	1 TEST FOR EVERY 2,000 SQ FT, OF LIFT AREA BUT NO FEWER THAN TWO TESTS PER LIFT



NOTES:

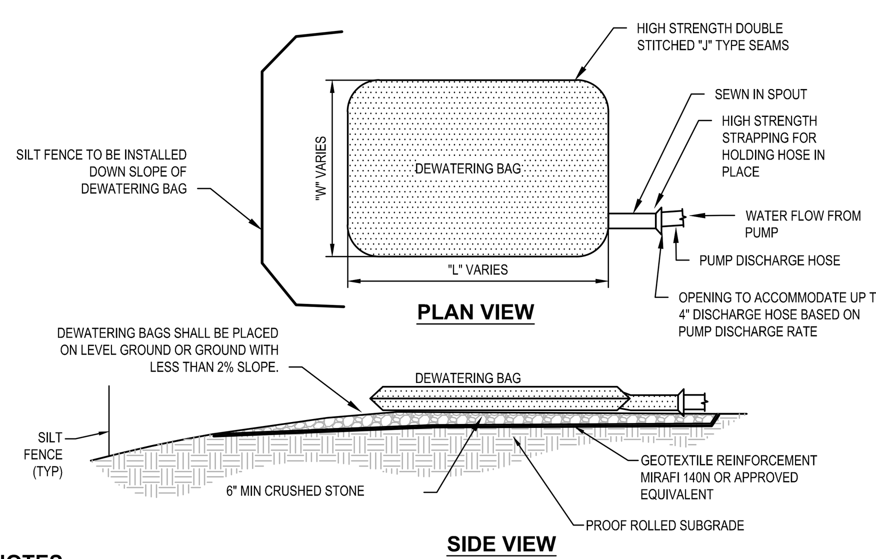
1. BALES SHALL BE PLACED AT THE TOE OF A SLOPE OR ON THE CONTOUR AND IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
2. EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF (4)INCHES AND PLACED SO THE BINDINGS ARE HORIZONTAL.
3. BALES SHALL BE SECURELY ANCHORED IN PLACE BY EITHER TWO STAKES OR RE-BARS DRIVEN THROUGH THE BALE. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE AT AN ANGLE TO FORCE THE BALES TOGETHER. STAKES SHALL BE DRIVEN FLUSH WITH THE BALE.
4. INSPECTION SHALL BE FREQUENT AND REPAIR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
5. BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
6. HAY OR STRAW BALE DIKES SHALL BE USED WHERE EROSION COULD OCCUR IN THE FORM OF SHEET EROSION.
7. HAY OR STRAW BALE DIKES SHALL NOT BE USED WHEN A CONCENTRATION OF WATER IS FLOWING TO THE BARRIER.
8. MAXIMUM ALLOWABLE SLOPE LENGTHS CONTRIBUTING TO A HAY OR STRAW BALE DIKE ARE:

SLOPE STEEPNESS	MAXIMUM SLOPE LENGTH(FT)
2:1	25
3:1	50
4:1	75
< 4:1	100

9. MAXIMUM DRAINAGE AREA FOR OVERLAND FLOW TO A HAY OR STRAW BALE DIKE SHALL NOT EXCEED 0.25 ACRES PER 100 FEET OF DIKE FOR SLOPES < 25%.

3 HAY OR STRAW BALE DIKE DETAIL

SCALE: NOT TO SCALE

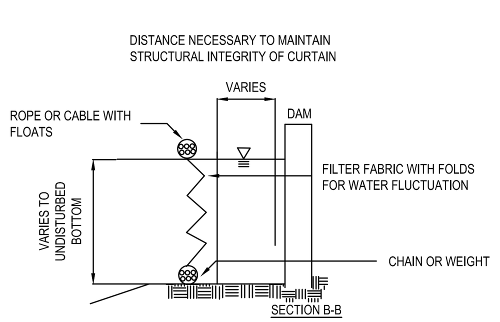


NOTES:

1. SEDIMENT COLLECTION BAG SHALL BE EQUAL TO DIRTBAG® 55, AS MARKETED BY ACF ENVIRONMENTAL. RICHMOND. VIRGINIA (800-448-3636). OR APPROVED EQUIVALENT.
2. SEDIMENT COLLECTION BAG SHALL BE A NONWOVEN BAG SEWN WITH HIGH STRENGTH THREAD. THE SEAMS SHALL BE HIGH STRENGTH, DOUBLE STITCHED, "J" TYPE SEAMS.
3. BAGS SHALL HAVE SEWN IN FILL SPOUT LARGE ENOUGH TO ACCOMMODATE UP TO A 4" DISCHARGE HOSE. FILL SPOUT SHALL HAVE HIGH STRENGTH STRAPPING TO HOLD HOSE IN PLACE AND PREVENT PUMPED WATER FROM ESCAPING WITHOUT BEING FILTERED.
4. SEDIMENT COLLECTION BAGS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS, OR AS DIRECTED BY THE ENGINEER.
5. SEDIMENT COLLECTED SHALL BE DISPOSED OF AT AN APPROPRIATE FACILITY.
6. SEDIMENT COLLECTION BAGS SHALL BE REMOVED AND REPLACED UNDER ANY OF THE FOLLOWING CONDITIONS:
   - WHEN BAGS ARE FULL.
   - WHEN BAGS HAVE BEEN IN PLACE FOR MORE THAN 30 DAYS (REMOVAL REQUIRED DUE TO ULTRAVIOLET DETERIORATION).
   - WHEN BAGS ARE DAMAGED.
4. ALL SEDIMENT COLLECTION BAGS SHALL BE INSPECTED DAILY BY THE CONTRACTOR.
5. CARE SHALL BE TAKEN DURING REMOVAL TO MINIMIZE LOSS OF ENTRAPPED SEDIMENT.

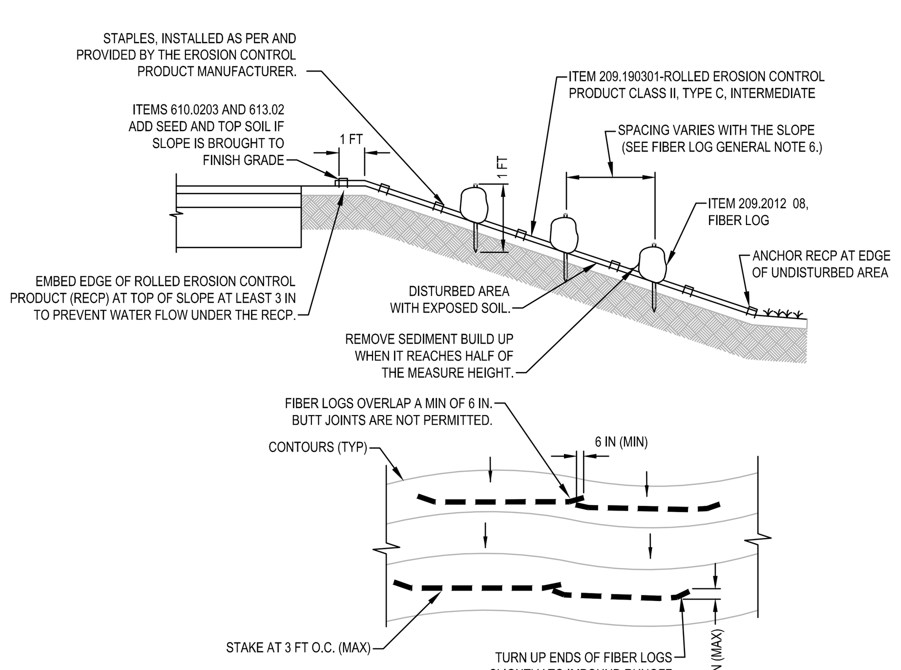
4 SEDIMENT COLLECTION DEWATERING BAG DETAIL

SCALE: NOT TO SCALE



5 TURBIDITY CURTAIN DETAIL

SCALE: NOT TO SCALE



FIBER LOG APPLICATION NOTES:

1. THE PRIMARY PURPOSE OF A FIBER LOG DIKE IS TO REDUCE RUNOFF VELOCITY AND TRAP SEDIMENT. VELOCITY IS REDUCED, WATER IS IMPOUNDED BEHIND THE MEASURE, AND SEDIMENT FALLS OUT OF SUSPENSION.
2. FIBER LOG DIKES CAN BE USED IN SENSITIVE AREAS WHERE CONTROL OF WEEDS AND INVASIVE PLANT SPECIES IS DESIRED.
3. FIBER LOG DIKE SHALL BE INSTALLED ON A LINE OF EQUAL ELEVATION (CONTOUR). THEY MAY BE INSTALLED AT INTERMEDIATE POINTS UP SLOPES AS WELL AS AT THE BOTTOM. THE ENDS SHALL CURVE UP SLIGHTLY TO IMPOUND RUNOFF.
4. FIBER LOGS SHALL NOT BE USED IN OR ACROSS A FLOWING NATURAL CHANNEL.
5. FIBER LOGS ARE NOT TO BE INSTALLED SO THAT RUNOFF WILL FLOW ALONG THE FIBER LOG IN A CONCENTRATED MANNER.

FIBER LOG GENERAL NOTES:

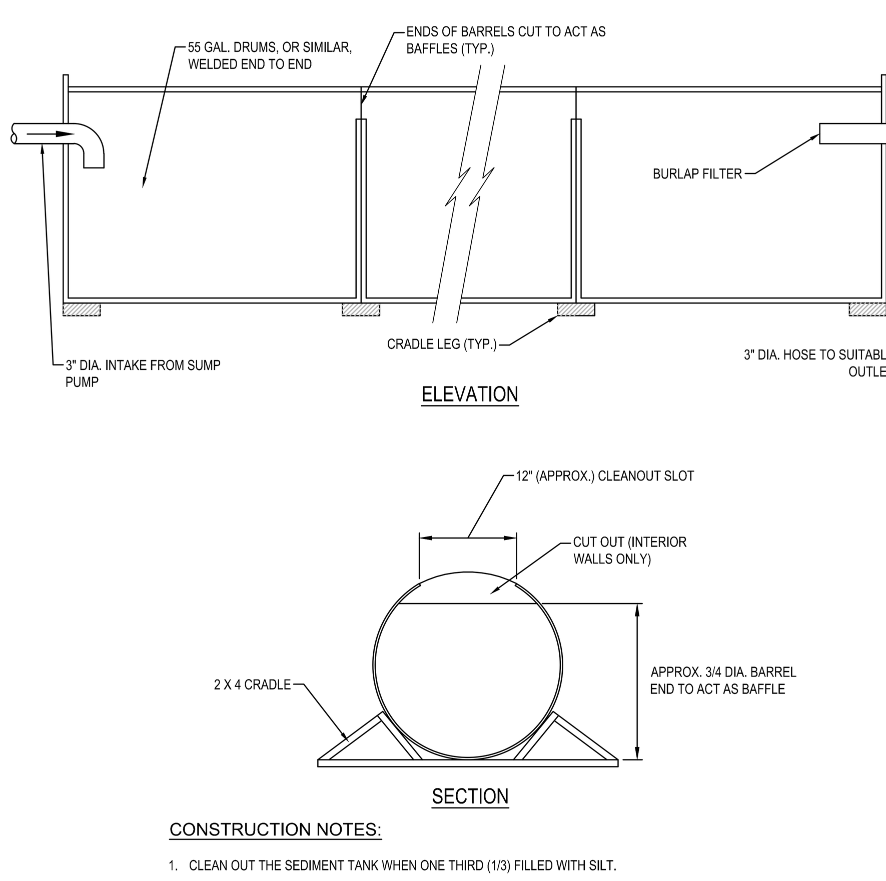
1. FIBER LOG DIKE SHALL BE PLACED A MINIMUM OF 2 FT FROM THE TOE OF SLOPE, (5 FT PREFERRED), TO PROVIDE ADEQUATE AREA FOR SEDIMENT STORAGE AND TO FACILITATE MAINTENANCE OF THE SEDIMENT CONTAINMENT AREA.
2. POSTS MAY BE 1.5 IN X 1.5 IN (MIN) HARDWOOD, OR 1.5 IN X 3.5 IN (MIN) SOFTWOOD. SPACING SHALL BE 3 FT (MAX) BETWEEN STAKES.
3. THE CONTRACTOR SHALL INSPECT MEASURES EVERY SEVEN CALENDAR DAYS AND/OR AFTER EACH RAINFALL EVENT. MEASURES SHALL BE CLEANED AND REPAIRED AS REQUIRED.
4. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATION REACHES ONE HALF OF THE MEASURE HEIGHT. SEDIMENT SHALL BE DISPOSED OF AS UNSUITABLE MATERIAL.
5. MAXIMUM DRAINAGE AREA TRIBUTARY TO 100 FT OF FIBER LOG SHALL BE 0.5 AC.
6. THE FOLLOWING ARE MAXIMUM SLOPE LENGTHS TO FIBER LOG MEASURES:

SLOPE	S (FT)
1:2	10
1:2 - 1:4	15
1:4	20

7. INSTALLATION, I.E. EXCAVATION, BACKFILL, COMPACTION, FIBER LOGS SHALL BE INCLUDED IN UNIT PRICE BID FOR ITEM 209.2012 08.

6 FIBER LOG DETAIL

SCALE: NOT TO SCALE

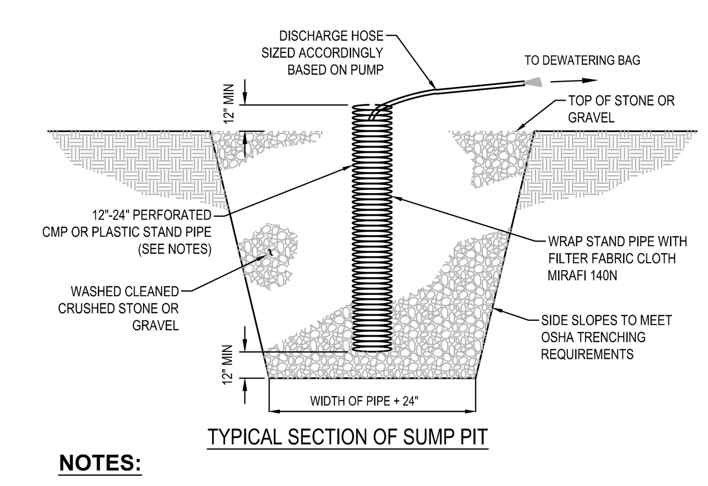


CONSTRUCTION NOTES:

1. CLEAN OUT THE SEDIMENT TANK WHEN ONE THIRD (1/3) FILLED WITH SILT.
2. STEEL DRUMS ARE USED AS AN EXAMPLE DUE TO THEIR READY AVAILABILITY. ANY TANKS MAY BE USED, PROVIDING THAT THE VOLUME REQUIREMENTS ARE MET.
3. ALL SEDIMENT COLLECTED IN THE TANK SHALL BE DISPOSED OF IN A SEDIMENT TRAPPING DEVICE OR AS APPROVED BY THE QUALIFIED INSPECTOR.

7 PORTABLE SEDIMENT TANK DETAIL

SCALE: NOT TO SCALE



NOTES:

1. SUMP PIT QUANTITY & LOCATION SHALL BE DETERMINED BY CONTRACTOR.
2. PERFORATIONS IN THE STANDPIPE SHALL BE EITHER CIRCULAR OR SLOTS. PERFORATION SIZE SHALL NOT EXCEED 1/2" INCH DIAMETER. PUMP RATE SHALL NOT EXCEED INFLOW RATE INTO STAND PIPE.
3. CRUSHED STONE OR GRAVEL SHALL BY NYSDOT #2 SIZE OR EQUIVALENT AND SHALL BE WASHED PRIOR TO PLACEMENT WITHIN SUMP.
4. DISCHARGE SHALL BE THROUGH DEWATERING BAGS, OR AS DIRECTED BY ENGINEER.
5. CONTRACTOR TO SUBMIT DEWATERING PLAN TO ENGINEER FOR REVIEW & APPROVAL.

8 DEWATERING & SUMP PIT DETAIL

SCALE: NOT TO SCALE

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400 S. Tryon Street, Suite 1300
Charlotte, NC 28285
704-376-6423
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Revisions		

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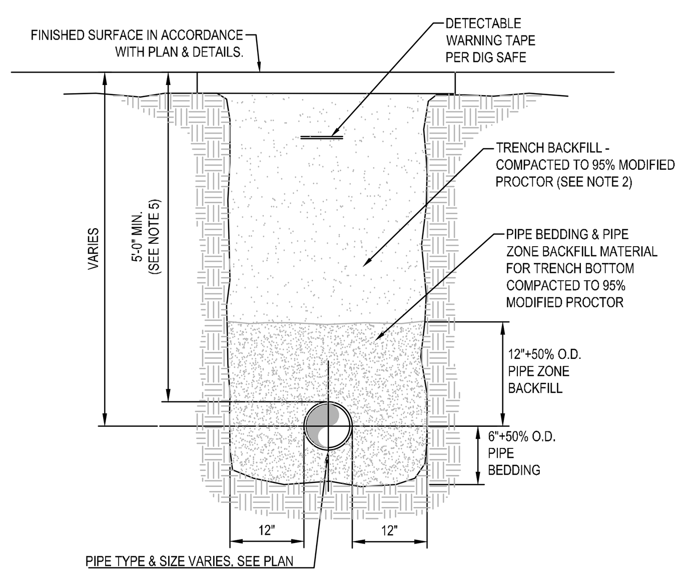


NOTES:
1. PIPE BEDDING & PIPE ZONE BACKFILL SHALL BE AN IMPORTED NATURAL RUN-OF-BANK (R.O.B.) SAND OR A MIXTURE OF CRUSHED STONE AND GRAVEL, FREE OF SOFT, NONDURABLE PARTICLES, ORGANIC MATERIALS AND ELONGATED PARTICLES, AND SHALL BE WELL GRADED FROM FINE TO COARSE PARTICLES. BEDDING GRADATIONS SHALL BE APPROVED BY THE ENGINEER AND SHALL MEET THE FOLLOWING GRADATION REQUIREMENTS:

SIEVE DESIGNATION	% PASSING
3/4"	100%
NO. 40	0-70%
NO. 200	0-10%

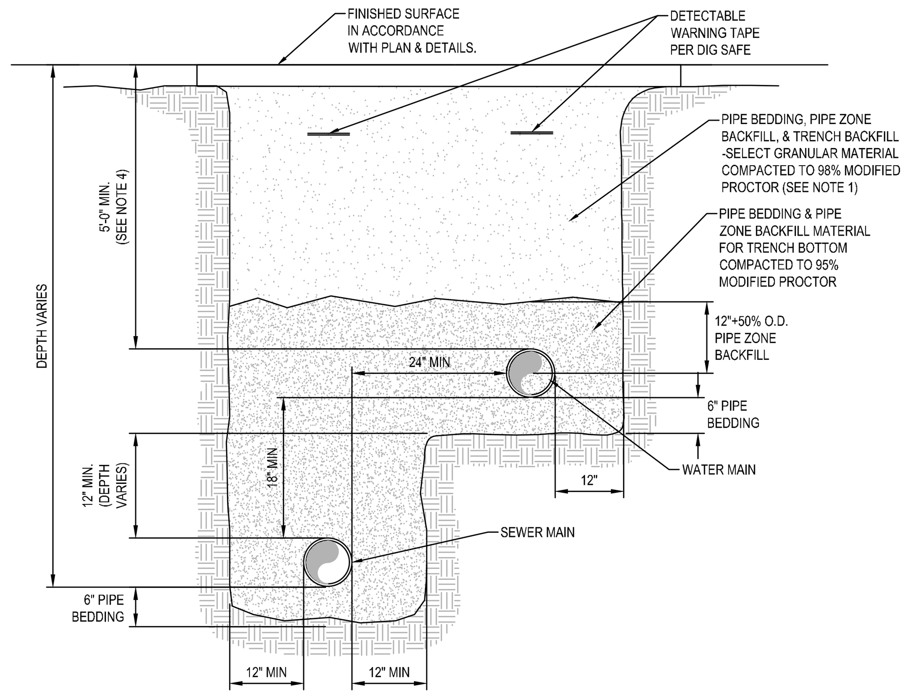
2. TRENCH BACKFILL SHALL BE A NATURAL RUN-OF-BANK (R.O.B.) OR PROCESSED GRAVEL, OR EXCAVATED MATERIAL FREE OF SOFT, NONDURABLE PARTICLES, ORGANIC MATERIALS AND ELONGATED PARTICLES, AND SHALL BE WELL GRADED FROM FINE TO COARSE PARTICLES. TRENCH BACKFILL GRADATIONS SHALL BE APPROVED BY THE ENGINEER AND SHALL MEET THE FOLLOWING GRADATION REQUIREMENTS:

SIEVE DESIGNATION	% PASSING
4"	100%
NO. 40	0-70%
NO. 200	0-10%

IN NON-TRAFFIC UNPAVED AREAS TRENCH BACKFILL CAN BE MATERIALS EXCAVATED FROM THE TRENCH AS APPROVED BY THE ENGINEER AND COMPACTED TO 90% MODIFIED PROCTOR.

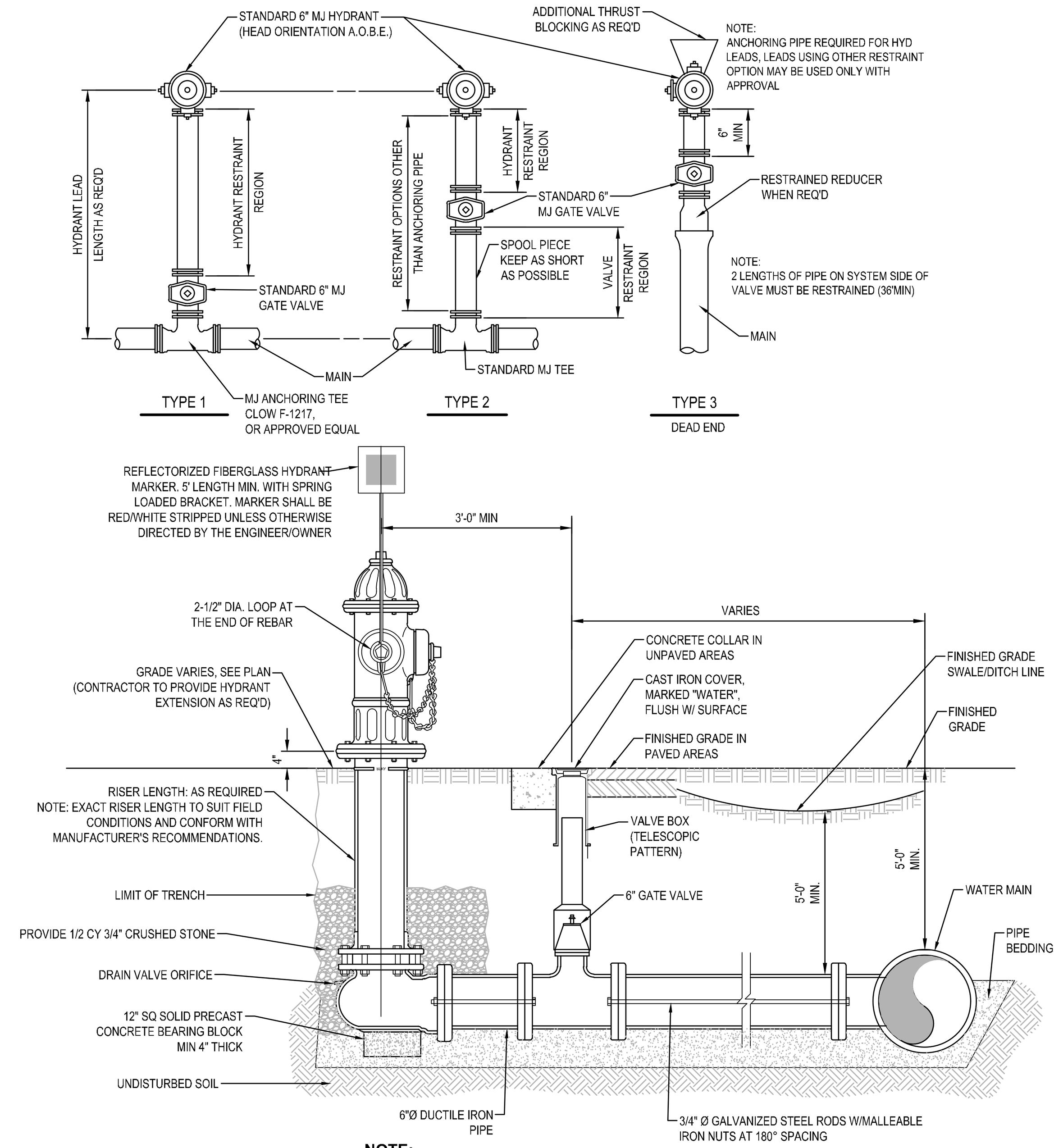
3. INSTALL CONTINUOUS DETECTABLE MARKING TAPE DURING BACKFILLING OF TRENCH FOR UNDERGROUND PIPING. LOCATE TAPE 12" BELOW FINISHED GRADE, DIRECTLY OVER PIPING, EXCEPT 6" BELOW SUBGRADE UNDER PAVEMENTS & SLAB.
4. TRENCHING SHALL BE IMPLEMENTED IN ACCORDANCE WITH O.S.H.A. STANDARDS.
5. 5'-0" MIN COVER SHALL BE APPLIED TO WATER MAIN OR SANITARY SEWER FORCE MAINS ONLY.

© 1 **PIPE TRENCH DETAIL (TYPICAL)**
SCALE: NOT TO SCALE



NOTES:
1. SELECT BACKFILL SHALL BE INSTALLED IN 6" LIFTS AND COMPACTED TO 98% MODIFIED PROCTOR COMPACTION.
2. INSTALL CONTINUOUS DETECTABLE MARKING TAPE DURING BACKFILLING OF TRENCH FOR UNDERGROUND PIPING. LOCATE TAPE 12" BELOW FINISHED GRADE, DIRECTLY OVER PIPING, EXCEPT 6" BELOW SUBGRADE UNDER PAVEMENTS & SLAB.
3. TRENCHING SHALL BE IMPLEMENTED IN ACCORDANCE WITH O.S.H.A. STANDARDS.
4. 5'-0" MIN COVER SHALL BE APPLIED TO WATER MAIN.
5. HORIZONTAL SEPARATION BETWEEN THE INSIDE EDGES OF THE WATER MAIN AND SEWER MAIN SHALL BE A MIN. OF 24" AND VERTICAL SEPARATION BETWEEN THE BOTTOM OF WATER MAIN AND TOP OF SEWER MAIN SHALL BE A MIN. OF 18".

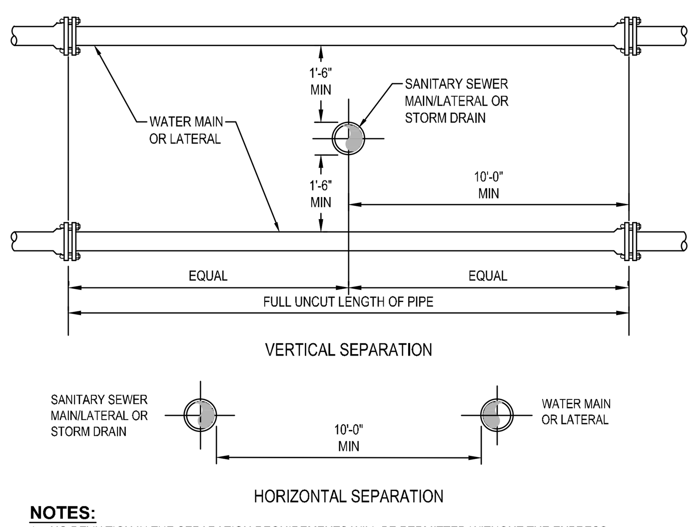
© 2 **DUAL PIPE TRENCH DETAIL**
SCALE: NOT TO SCALE



NOTE:
1. HYDRANT SHALL MEET REQUIREMENTS OF AWWA C502.

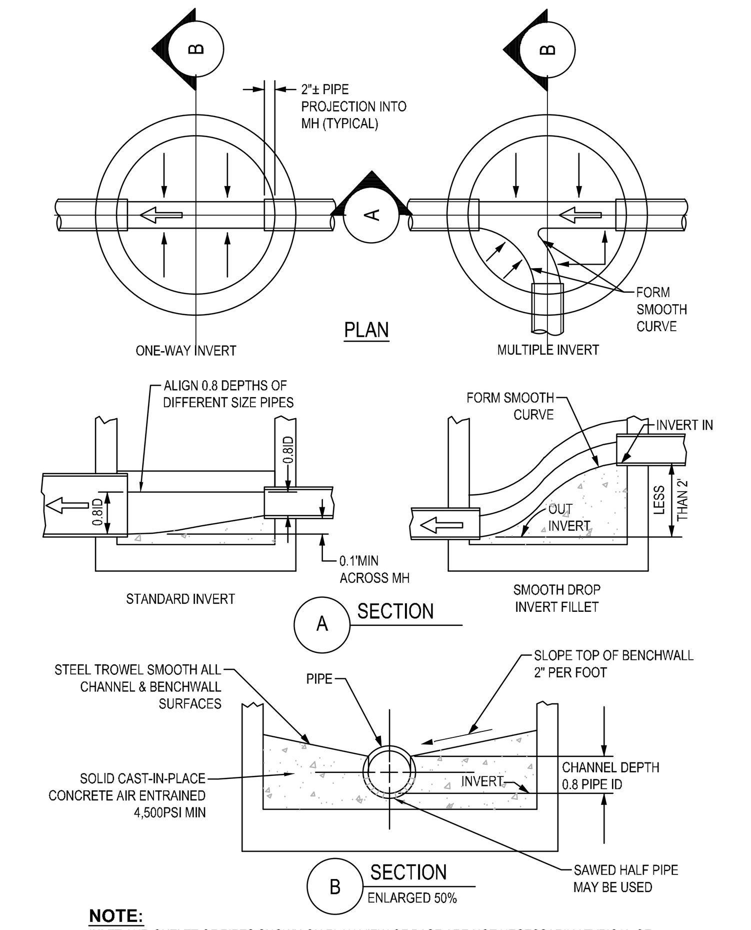
© 3 **HYDRANT ASSEMBLY DETAIL**
SCALE: NOT TO SCALE

NOTES:
1. HYDRANTS SHALL BE MUELLER SUPER CENTURION 250 OR APPROVED EQUIVALENT BY THE AUTHORITY HAVING JURISDICTION. HYDRANTS SHALL MEET REQUIREMENTS OF AWWA STANDARD C-502.
2. HYDRANTS SHALL BE CAST IRON BODY, DRY BARREL DESIGN, COMPRESSION-TYPE VALVE, OPENING AGAINST PRESSURE AND CLOSING WITH PRESSURE, 6-INCH MECHANICAL JOINT INLET FOOT PIECE, 5 ¼ INCH MAIN VALVE OPENING, PROVIDE RATED FOR 250-PSI WORKING PRESSURE, TWO (2) 2 ½ INCH HOSE NOZZLES AND ONE (1) 4 ½ INCH PUMPER NOZZLE.
3. NOZZLE OUTLET THREADS SHALL MEET LOCAL FIRE DEPARTMENT REQUIREMENTS AND HAVE CAST IRON CAPS WITH NON-KINKING STEEL CHAINS. OPERATING AND CAP NUTS: PENTAGON 1 ½ INCH POINT TO FLAT. HYDRANT VALVES SHALL BE OPENED BY TURNING OPERATING NUT TO THE LEFT, OR COUNTERCLOCKWISE.
4. HYDRANTS SHALL BE TRAFFIC TYPE WITH BREAKABLE SAFETY FLANGE WITH RED EXTERIOR ALKYD GLOSS ENAMEL PAINT. HYDRANTS SHALL BE TOUCHED UP TO REMOVE ANY MARKS OR SCRAPED PAINT CAUSED BY INSTALLATION OR TRANSIT.



NOTES:
1. NO DEVIATION IN THE SEPARATION REQUIREMENTS WILL BE PERMITTED WITHOUT THE EXPRESS APPROVAL OF THE NYS HEALTH DEPARTMENT. OFFSETTING OF WATERLINE SHALL BE REQUIRED WHERE SEPARATION DISTANCES CANNOT BE MAINTAINED.
2. WHEN IT IS IMPOSSIBLE TO OBTAIN VERTICAL SEPARATION AS INDICATED ABOVE, BOTH THE WATER MAIN AND THE SEWER MAIN SHALL BE CONSTRUCTED OF MECHANICAL JOINT DUCTILE IRON PIPE OR PVC WATER WORKS GRADE PRESSURE PIPE FOR 10' EACH SIDE OF CROSSING AND SHALL BE PRESSURE TESTED TO 150 PSI TO ASSURE WATER TIGHTNESS.

© 4 **SANITARY/STORM SEWER AND WATERMAIN SEPARATION DETAIL**
SCALE: NOT TO SCALE



NOTE:
INLET AND OUTLET OF PIPES SHOWN ON PLAN VIEW OF BASE ARE NOT NECESSARILY TYPICAL OF ALL MANHOLES. REFER TO UTILITY PLAN FOR INLET AND OUTLET DIRECTIONS.

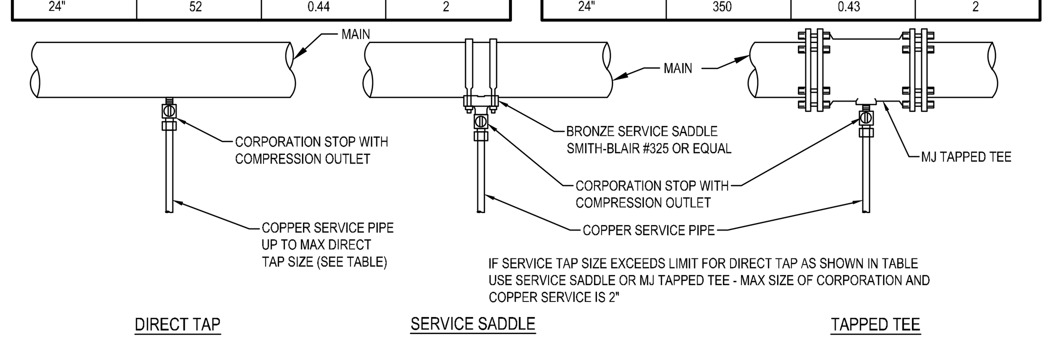
© 5 **INVERT, CHANNEL AND BENCHWALLS**
SCALE: NOT TO SCALE

MAX DIRECT TAP SIZE FOR DIP

PIPE SIZE (INCHES)	THICKNESS CLASS	WALL THICKNESS (INCHES)	MAX TAP SIZE INCHES
4"	52	0.29	3/4
6"	52	0.31	1
8	52	0.33	1 1/4
10"	52	0.35	1 1/2
12"	52	0.37	2
14"	52	0.39	2
16"	52	0.40	2
18"	52	0.41	2
20"	52	0.42	2
24"	52	0.44	2

MAX DIRECT TAP SIZE FOR DIP

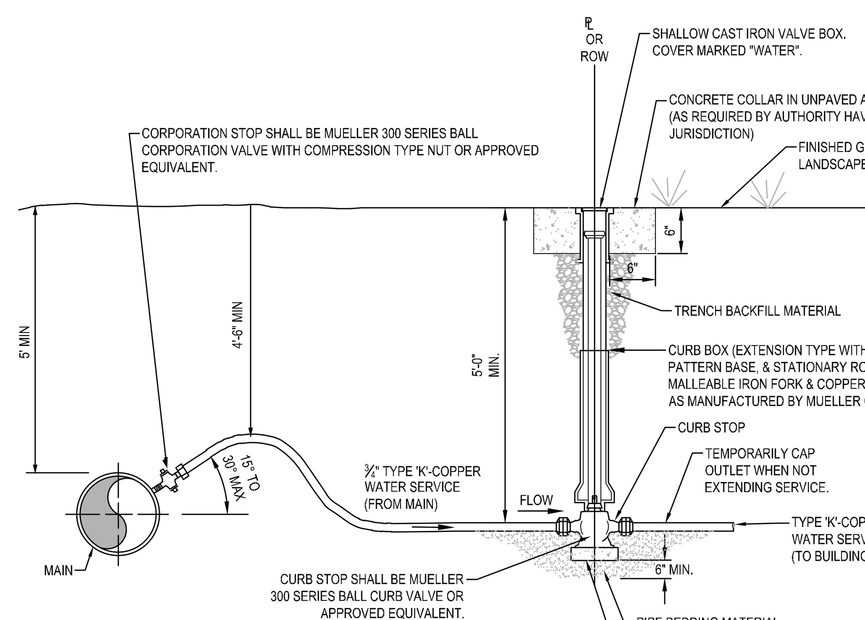
PIPE SIZE (INCHES)	PRESSURE CLASS	WALL THICKNESS (INCHES)	MAX TAP SIZE INCHES
4"	350	0.25	3/4
6"	350	0.25	1
8	350	0.25	1
10"	350	0.26	1 1/4
12"	350	0.28	1 1/4
14"	350	0.31	1 1/2
16"	350	0.34	2
18"	350	0.36	2
20"	350	0.38	2
24"	350	0.43	2



IF SERVICE TAP SIZE EXCEEDS LIMIT FOR DIRECT TAP AS SHOWN IN TABLE USE SERVICE SADDLE OR MJ TAPPED TEE - MAX SIZE OF CORPORATION AND COPPER SERVICE IS 2"

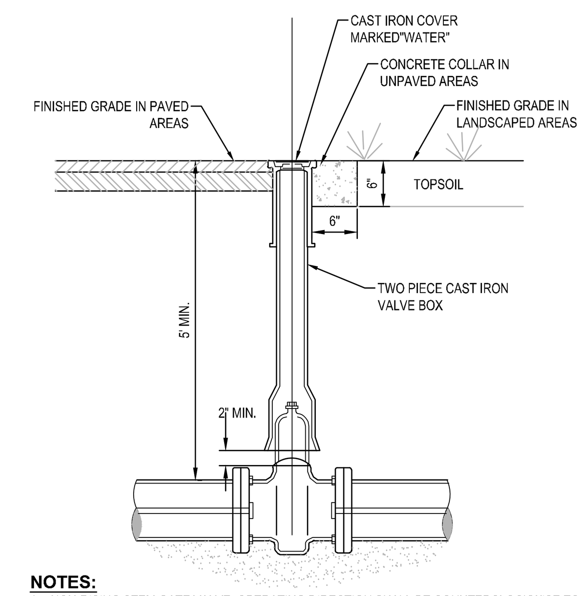
DIRECT TAP — SERVICE SADDLE — TAPPED TEE

© 6 **TYPICAL COPPER WATER SERVICE TAPS**
SCALE: NOT TO SCALE



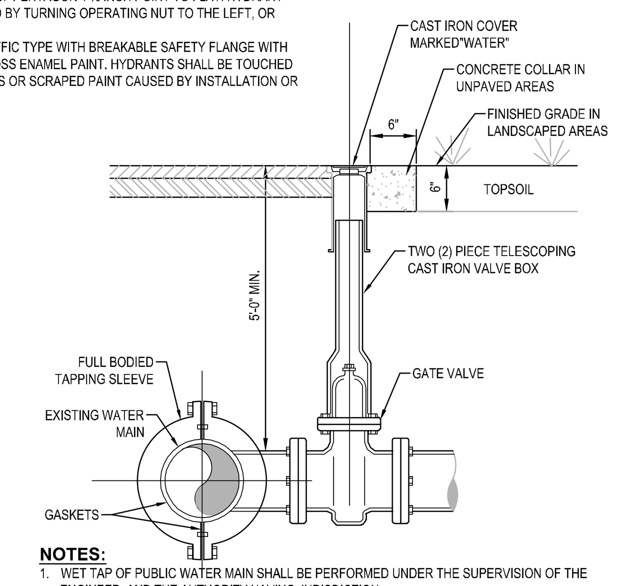
NOTE:
1. MINIMUM DISTANCE TO JOINTS, FITTINGS OR OTHER WET TAPS OR STOPS SHALL BE MAINTAINED IN ACCORDANCE WITH REGULATORY AGENCY.

© 7 **COPPER WATER SERVICE**
SCALE: NOT TO SCALE



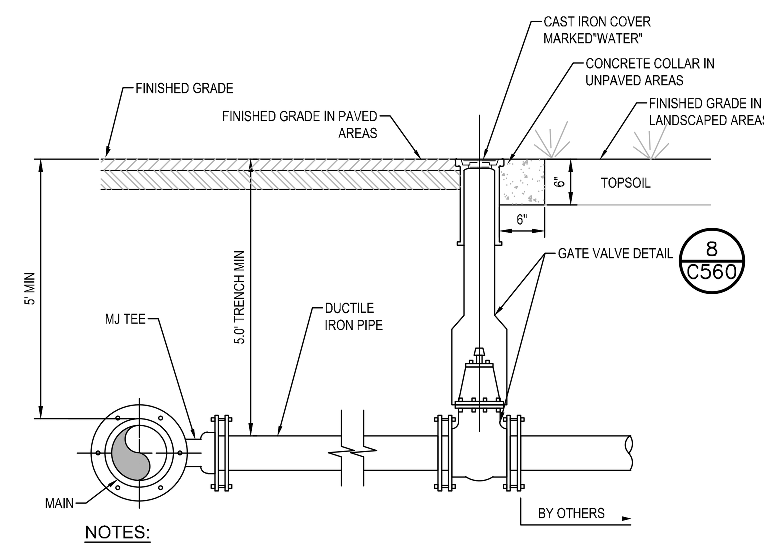
NOTES:
1. NON-RISING STEM GATE VALVE, OPERATING DIRECTION SHALL BE COUNTERCLOCKWISE TO OPEN.
2. MINIMUM DISTANCE TO JOINTS, FITTINGS, OR OTHER WET TAPS OR STOPS SHALL BE 3 FEET.
3. IF VALVE IS TO BE RODDED, PROVIDE VALVE WITH RODDING FLANGES OR EYEBOLTS. TWO (2) 3/4"Ø GALVANIZED STEEL RODS WITH MALLEABLE IRON NUTS AT 180° SPACING SHALL BE USED FOR RODDING VALVES. FOR 12" DIA. PIPE OR LESS. FOR LARGER PIPE SIZES, SEE TABLE FOR NUMBER OF TIE RODS REQUIRED-"JOINT RESTRAINT OPTION DETAILS.)
4. GATE VALVE & VALVE BOX SHALL BE IN ACCORDANCE WITH MUNICIPAL STANDARDS & AS MANUFACTURED BY (MUELLER, CLOW OR WATEROUS) OR APPROVED EQUIVALENT.

© 8 **TYPICAL GATE VALVE DETAIL**
SCALE: NOT TO SCALE



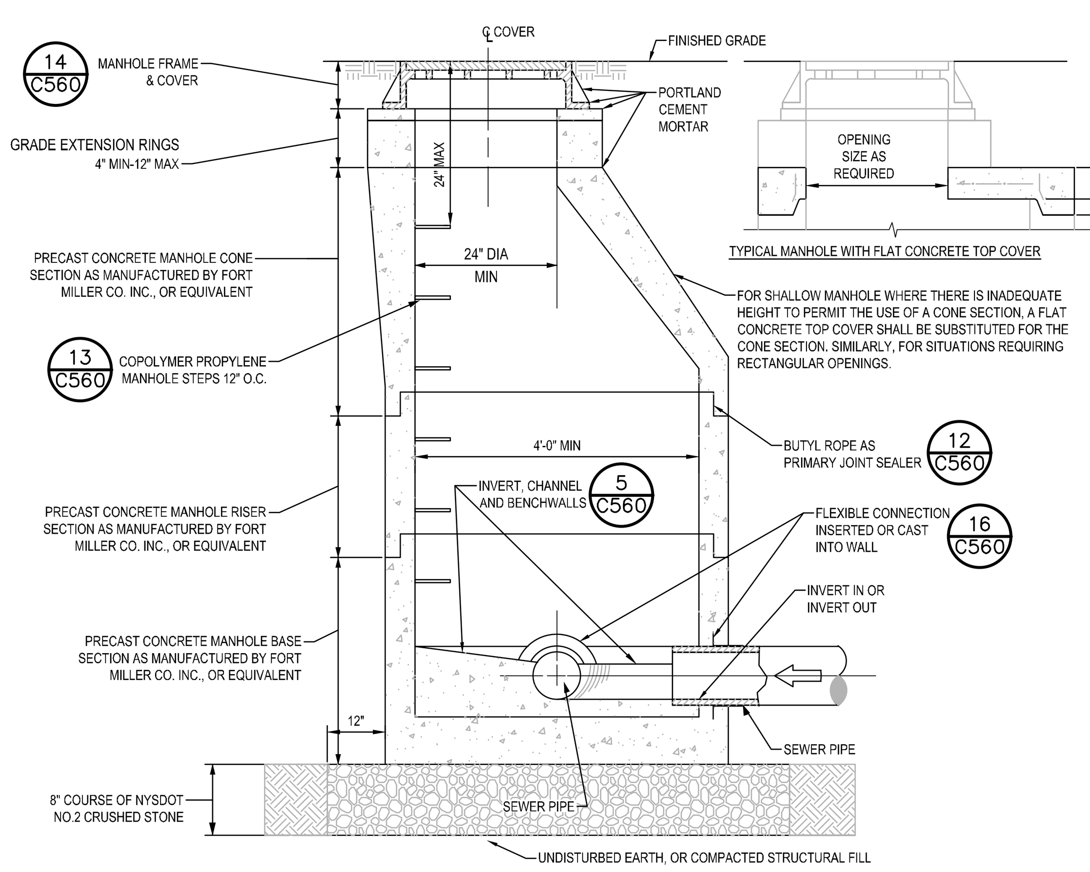
NOTES:
1. WET TAP OF PUBLIC WATER MAIN SHALL BE PERFORMED UNDER THE SUPERVISION OF THE ENGINEER, AND THE AUTHORITY HAVING JURISDICTION.
2. TAPPING SLEEVE AND VALVE SUPPORT SHALL BE COORDINATED WITH THE ENGINEER TO SUIT FIELD CONDITIONS.
3. MINIMUM DISTANCE TO JOINTS, FITTINGS, OR OTHER WET TAPS OR STOPS SHALL BE 3 FEET.
4. VALVE OPERATING DIRECTION SHALL BE COUNTERCLOCKWISE TO OPEN (TURNING LEFT).
5. TAPPING SLEEVE SHALL BE SELECTED TO FIT EXISTING PIPE MATERIAL (C.I., D.I., A.C.) AND OUTSIDE DIAMETERS.
6. THRUST BLOCK IS REQUIRED WHERE THE BRANCH OF THE TAPPING SLEEVE DOES NOT HAVE RESTRAINED JOINT.
7. TAPPING SLEEVE, VALVE & VALVE BOX SHALL BE IN ACCORDANCE WITH MUNICIPAL STANDARDS & AS MANUFACTURED BY (MUELLER, CLOW OR WATEROUS) OR APPROVED EQUIVALENT.

© 9 **TAPPING SLEEVE AND VALVE DETAIL**
SCALE: NOT TO SCALE



NOTES:
1. GATE VALVE & VALVE BOX SHALL BE IN ACCORDANCE WITH MUNICIPAL STANDARDS & AS MANUFACTURED BY (MUELLER, CLOW OR WATEROUS) OR APPROVED EQUIVALENT.

© 10 **DUCTILE IRON SERVICE PIPE**
SCALE: NOT TO SCALE



NOTES:

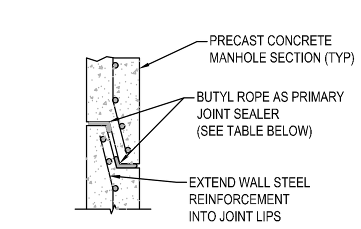
USE ONLY WET-CAST UNITS. DRY-CAST NOT ACCEPTABLE

1.

CONE DIMENSIONS	
DIAM. OPENING	HEIGHT
24"	24" OR 42"
30"	34"

2. INVERT SHALL BE FILLETED.
3. REINFORCEMENT FOR MANHOLE COMPONENTS SHALL BE DESIGNED BY A LICENSED NEW YORK STATE PROFESSIONAL ENGINEER PRIOR TO CONSTRUCTION. SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW. STRUCTURE SHALL BE DESIGNED FOR HS20-44 VEHICULAR LOADING PLUS 25% IMPACT.
4. CONCRETE TO TEST 4,500 PSI AT 28 DAYS IN CONFORMANCE WITH A.S.T.M. C-478.
5. BENCH SHALL BE BUILT FOR FLOW BETWEEN INLET AND OUTLET.
6. EACH MANHOLE EXTERIOR SHALL RECEIVE TWO BITUMINOUS COATS.

© 11 **PRECAST CONCRETE MANHOLE**
SCALE: NOT TO SCALE



MANHOLE INSIDE DIAMETER	SIZE OF BUTYL ROPE JOINT SEALER
4'-0"	1"
5'-0" & LARGER	1 1/2"

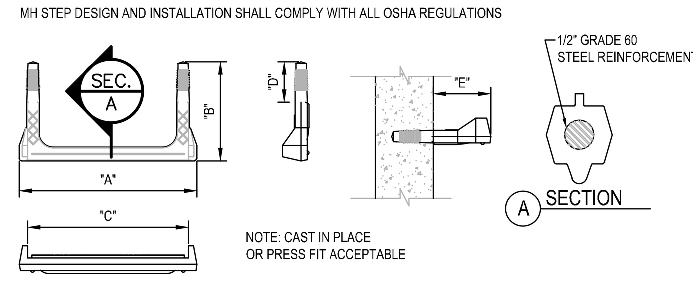
© 12 **MANHOLE JOINT**
SCALE: NOT TO SCALE

ACCEPTABLE MANHOLE STEPS

MANUFACTURER	PATTERN NUMBER	"A" STEP WIDTH	"B" LEG LENGTH	"C" RUNG CLEAR	"D" EMBED-MENT	"E" RUNG CLEAR
M.A. INDUSTRIES INC*	PS2-PF	14 3/4	9 1/4	13 3/4	3 3/8	5 7/8
M.A. INDUSTRIES INC*	PS2-PFS	14 3/4	8 1/4	13 3/4	3 3/8	4 7/8

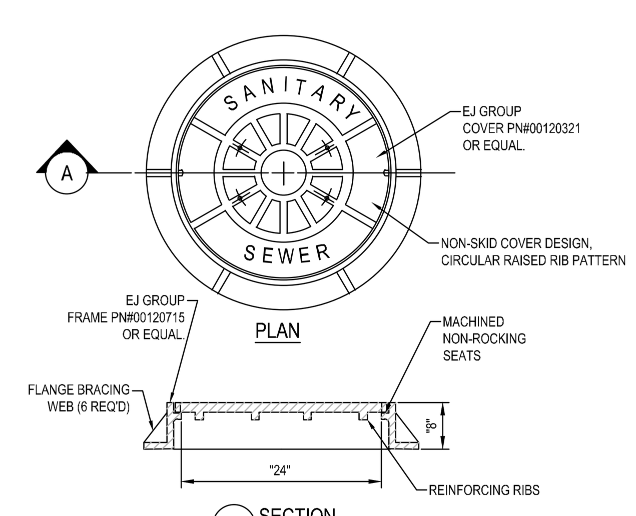
* OR EQUIVALENT

MH STEP DESIGN AND INSTALLATION SHALL COMPLY WITH ALL OSHA REGULATIONS



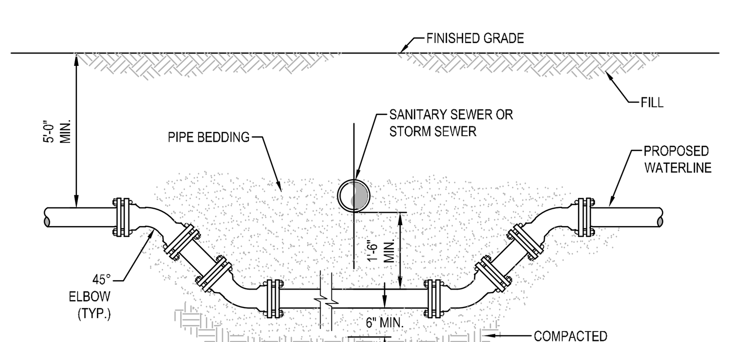
NOTE: CAST IN PLACE OR PRESS FIT ACCEPTABLE

© 13 **COPOLYMER POLYPROPYLENE MH STEP**
SCALE: NOT TO SCALE



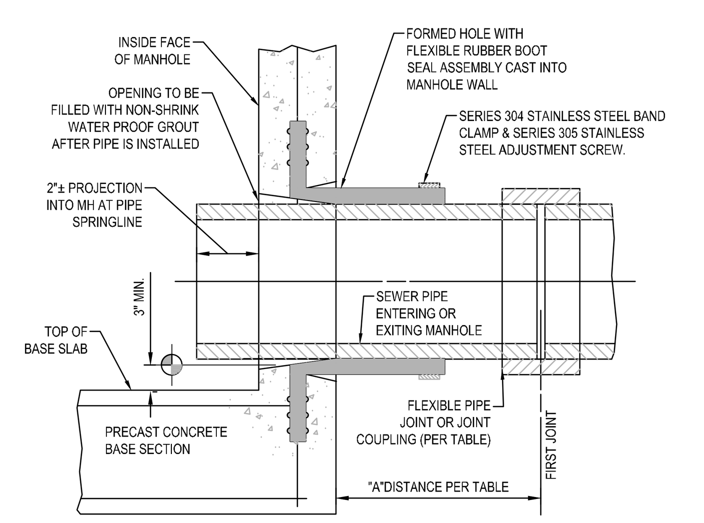
NOTE:
1. FRAME AND COVER SHALL BE DESIGNED FOR HS20-44 VEHICLE LOADING AND 25% IMPACT.

© 14 **HEAVY DUTY STANDARD CAST IRON MH COVER**
SCALE: NOT TO SCALE



NOTES:
1. WHEN THE ELEVATION OF THE SEWER CAN NOT BE VARIED TO MEET THE ABOVE REQUIREMENTS, THE WATER MAIN SHALL BE RELOCATED TO PROVIDE THIS REQUIRED SEPARATION.
2. WHEN IT IS IMPOSSIBLE TO OBTAIN VERTICAL SEPARATION AS INDICATED ABOVE, BOTH THE WATER MAIN AND THE SEWER MAIN SHALL BE CONSTRUCTED OF MECHANICAL JOINT DUCTILE IRON PIPE OR PVC WATER WORKS GRADE PRESSURE PIPE FOR 10' EACH SIDE OF CROSSING AND SHALL BE PRESSURE TESTED TO 150 PSI TO ASSURE WATER TIGHTNESS.

© 15 **WATERLINE OFFSET DETAIL**
SCALE: NOT TO SCALE

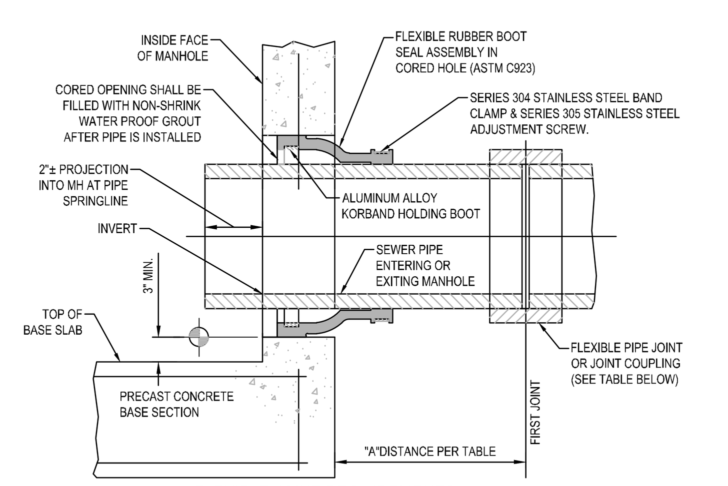


FLEXIBLE JOINT REQUIREMENTS

SEWER PIPE TYPE	FLEXIBLE JOINT TYPE IN & OUT	"A" DISTANCE (FEET)
DUCTILE IRON	STD RUBBER GASKET PIPE JOINT ONLY	10' MAX
PVC	STD RUBBER GASKET PIPE JOINT ONLY	3' MAX

NOTE:
REFERENCE MANHOLE DETAIL(S) FOR REQUIRED INVERT CHANNEL CONFIGURATION.

© 16 **PIPE CONNECTION TO MANHOLE- FLEXIBLE RUBBER BOOT CAST INTO MANHOLE WALL**
SCALE: NOT TO SCALE

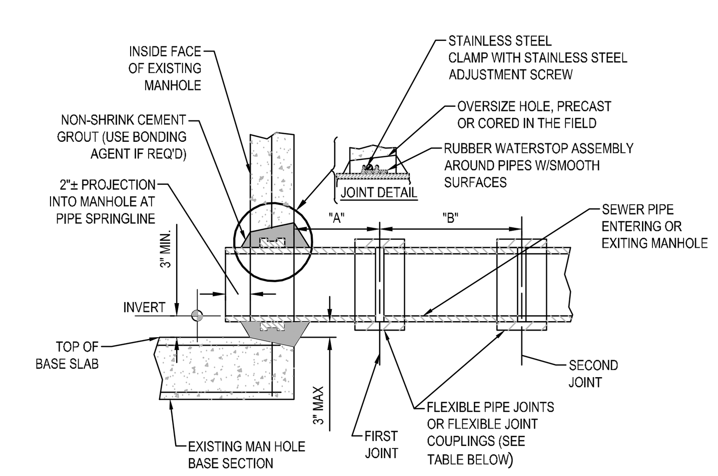


FLEXIBLE JOINT REQUIREMENTS

SEWER PIPE TYPE	FLEXIBLE JOINT TYPE IN & OUT	"A" DISTANCE (FEET)
DUCTILE IRON	STD RUBBER GASKET PIPE JOINT ONLY	10' MAX
PVC	STD RUBBER GASKET PIPE JOINT ONLY	3' MAX

NOTE:
REFERENCE MANHOLE DETAIL(S) FOR REQUIRED INVERT CHANNEL CONFIGURATION.

© 17 **PIPE CONNECTION TO MANHOLE- PRECAST OR CORED HOLE W/ INSERTED FLEXIBLE BOOT**
SCALE: NOT TO SCALE



FLEXIBLE JOINT & WATERSTOP REQUIREMENTS

SEWER PIPE TYPE	FLEXIBLE JOINT TYPE IN & OUT	"A"DISTANCE (FEET)	"B"DISTANCE (FEET)	MH WATER STOP REQD
DUCTILE IRON	STD RUBBER GASKET PIPE JOINT ONLY	10'MAX	NO LIMIT	YES
PVC	SPECIAL FLEXIBLE JOINT COUPLING	1'MAX	3'MAX	YES

NOTES:
1. THIS DETAIL SHALL BE USED AT NO EXTRA COST IN PLACE OF EITHER OF THE PIPE-TO-MANHOLE CONNECTION DETAILS ONLY WHEN CONNECTING TO EXISTING MANHOLES THAT HAVE NO FLEXIBLE RUBBER BOOT PROVIDED.
2. REFERENCE MANHOLE DETAIL(S) FOR REQUIRED INVERT CHANNEL CONFIGURATION.

© 18 **PIPE CONNECTION TO EXISTING MANHOLE- CEMENT GROUT SEAL WITH WATER STOP**
SCALE: NOT TO SCALE

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Charlotte, NC 28285
704-376-6423
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NOT FOR CONSTRUCTION

CORPORATE ENGINEERING LICENSE NO. C-0430

CONNECTICUT SPORTS GROUP
9 W BROAD STREET
SUITE 430
STAMFORD, CT 06902

BRIDGEPORT STADIUM & MIXED USE
255 & 363 KOSSUTH STREET
BRIDGEPORT, CT 06608

NO:	DATE:	DESCRIPTION:
Revisions		

PROJECT NUMBER: 2230111
DRAWN BY: GA
REVIEWED BY: JRS
ISSUED FOR: ISSUED FOR
DATE: 04/08/2024
DRAWING NAME:

WATER SYSTEM DETAILS 1

DRAWING NUMBER:

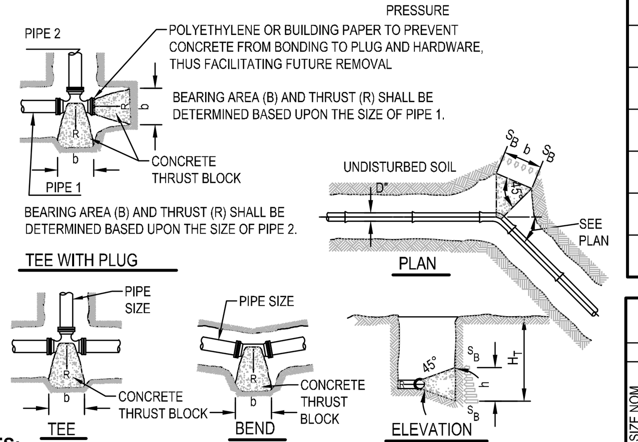
C560

REQUIRED BEARING AREAS -B (SQFT) FOR BEARING BLOCKS*

PIPE SIZE (INCHES)	TEE	90° BEND	45° BEND	22 1/2 ° BEND	11 1/4 ° BEND
4	2.0	2.8	1.5	0.8	0.4
6	4.2	5.9	3.2	1.6	0.8
8	7.2	10.1	5.5	2.8	1.4
10	10.9	15.4	8.3	4.2	2.1
12	15.4	21.8	11.8	6.0	3.0
14	20.6	29.1	15.8	8.0	4.0
16	26.8	37.9	20.5	10.4	5.2
18	33.6	47.5	25.7	13.1	6.6
20	41.2	58.2	31.5	16.1	8.1
24	58.8	83.1	45.0	22.9	11.5
30	90.5	128.0	69.2	35.3	17.7
36	129.6	183.3	99.1	50.5	25.4

*FACTOR OF SAFETY=1.5 SOIL BEARING OF 3,000 PSF 225 PSI DESIGN PRESSURE

*BEARING AREA (B) = both BEARING PRESSURE

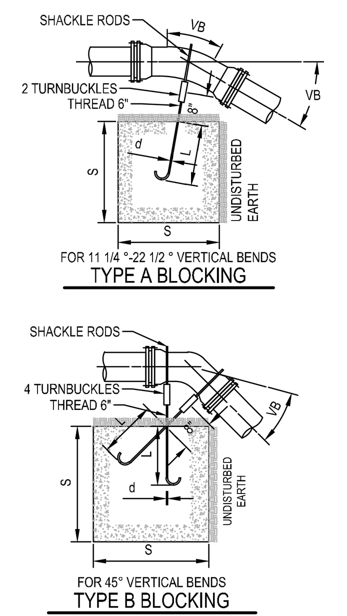


TYPE A BLOCKING

FOR 11 1/4 - 22 1/2 VERT BENDS

PIPE SIZE NOM (INCHES)	VERTICAL BEND DEGREES (VB)	NO. OF CU FT OF CONC BLOCKING (S)	SIDE OF CUBE (FEET) (d)	DIA OF SHACKLE RODS (INCHES)	DEPTH OF RODS IN CONC (FEET) (L)
4"	11 1/4	8	2.0	3/4"	1.6
	22 1/2	16	2.5		
6"	11 1/4	16	2.5	3/4"	1.6
	22 1/2	32	3.2		
8"	11 1/4	26	3.0	3/4"	1.6
	22 1/2	55	3.8		
10"	11 1/4	42	3.5	3/4"	1.6
	22 1/2	83	4.4		
12"	11 1/4	60	3.9	3/4"	1.6
	22 1/2	118	4.9	7/8"	2.2
14"	11 1/4	81	4.3	7/8"	2.2
	22 1/2	158	5.4		
16"	11 1/4	104	4.7	7/8"	2.2
	22 1/2	205	5.9	1 1/8"	3.7
18"	11 1/4	131	5.1	7/8"	2.2
	22 1/2	257	6.4	1 1/8"	3.7
20"	11 1/4	161	5.4	7/8"	2.2
	22 1/2	316	6.8	1 1/4"	4.6
24"	11 1/4	226	6.1	1"	2.9
	22 1/2	450	7.7	1 3/8"	5.7

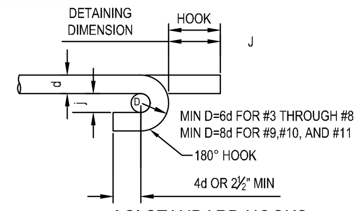
* FOR 60KSI THREADED REBAR



TYPE B BLOCKING

FOR 45° VERTICAL BENDS

PIPE SIZE NOM (INCHES)	NO. OF CU FT OF CONC BLOCKING (S)	SIDE OF CUBE (FEET) (d)	DIA OF SHACKLE RODS (INCHES)	DEPTH OF RODS IN CONC (FEET) (L)
4"	29	3.1	3/4"	1.6
6"	59	3.9		
8"	102	4.7		
10"	154	5.4		
12"	216	6.0		
14"	292	6.6	7/8"	2.2
16"	378	7.2	1 1/8"	3.7
18"	478	7.8		
20"	583	8.3	1 1/4"	4.6
24"	832	9.4	1 3/8"	5.7



BAR SIZE	J (IN)
#6	8
#7	7
#8	8
#9	11 1/4
#10	12 3/4
#11	14 1/4

2 **GRAVITY THRUST BLOCK DETAILS**
SCALE: NOT TO SCALE

NOTES:

1. CONCRETE SHALL NOT TO OVERLAP ANY JOINT.
2. THRUST BLOCKS SHALL BE CONFIGURED IN A MANNER THAT DOES NOT INTERFERE WITH REMOVAL OR INSTALLATION OF ANY JOINTING COMPONENTS.
3. FOR REDUCERS, USE MECHANICAL JOINT FITTINGS WITH RETAINER GLANDS.
4. BEARING SURFACE SHALL, WHERE POSSIBLE, BE PLACED AGAINST UNDISTURBED SOIL. WHERE THAT IS NOT POSSIBLE, THE FILL BETWEEN THE BEARING SURFACE AND UNDISTURBED SOIL MUST BE COMPACTED TO AT LEAST 90% STANDARD PROCTOR DENSITY.
5. BLOCK HEIGHT (H) SHALL BE EQUAL TO OR LESS THAN ONE-HALF THE TOTAL DEPTH TO THE BOTTOM OF THE BLOCK, (HT), BUT NOT LESS THAN THE PIPE DIAMETER (D).
6. BLOCK HEIGHT (H) SHALL BE ESTABLISHED SUCH THAT THE CALCULATED BLOCK WIDTH (b) VARIES BETWEEN ONE AND TWO TIMES THE HEIGHT.
7. VALUES FOR TEES APPLY TO TEES, END PLUGS, CAPS, AND TAPPING SLEEVES.
8. REQUIRED BEARING AREAS ARE DEVELOPED TO RESIST THRUSTS RESULTING FROM 150 PSI WORKING PRESSURE PLUS 50%(75 PSI) SURGE ALLOWANCE RESULTING IN 225 PSI TOTAL INTERNAL PRESSURE. REQUIRED BEARING AREAS ARE BASED UPON AN ALLOWABLE SOIL BEARING CAPACITY OF 3,000 POUNDS PER SQUARE FOOT. IN RESPONSE TO OTHER SOIL CONDITIONS ENCOUNTERED, BEARING AREAS REQUIRED MAY BE MODIFIED BY THE ENGINEER.

SOIL	BEARING STRENGTH Sb (LB/SQ FT)
MUCK	0
SOFT CLAY	1,000
SILT	1,500
SANDY SILT	3,000
SAND	4,000
SANDY CLAY	6,000
HARD CLAY	9,000

9. IN MUCK, PEAT, OR RECENTLY PLACED FILL, ALL THRUSTS SHALL BE RESISTED BY PILES OR TIE RODS TO SOLID FOUNDATIONS, OR BY REMOVAL OF SUCH UNSTABLE MATERIAL AND REPLACEMENT WITH BALLAST OF SUFFICIENT STABILITY TO RESIST THE THRUSTS; ALL AS REQUIRED BY THE ENGINEER.
10. CONCRETE THRUST BLOCK SHALL BE USED ONLY AS ALLOWED BY THE PROJECT PLANS AND/OR SPECIFICATION. (IF RESTRAINED JOINT PIPE IS TO BE USED SEE SCHEDULE OF JOINT RESTRAINED PIPE.)

1 **CONCRETE THRUST BLOCK DETAILS**
SCALE: NOT TO SCALE

CONCRETE THRUST BLOCK DETAILS - (TO ONLY BE USED AS REQUIRED, SEE WATER MAIN NOTES 5)

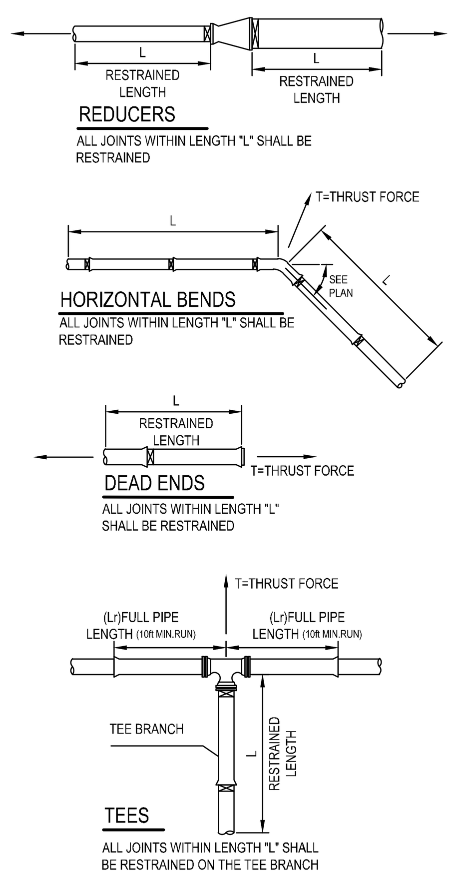
SCHEDULE OF JOINT RESTRAINT: (PVC OR POLYWRAPPED DIP)
(LENGTH OF PIPE EACH SIDE OF FITTING TO BE RESTRAINED IN FEET "L")

PIPE SIZE (INCHES)	90°	45°	22 1/2°	11 1/4°	TEE	VALVE	DEAD END	REDUCER 24"	18"	16"	14"	12"	10"	8"	6"	4"
30"	241	100	48	24	202	236	206	72	130	145	159					
24"	196	82	39	20	163	196	186		72	91	106	123	136			
18"	149	62	30	15	122	125	125			26	49	68	80	95		
16"	134	56	27	14	109	112	112				26	48	67	80	95	
14"	118	49	24	12	95	98	98					26	45	64	78	89
12"	102	42	21	11	82	85	85						25	45	62	74
10"	86	36	18	9	69	71	71							25	44	58
8"	71	30	15	7	56	59	59								25	43
6"	54	22	11	6	41	44	44									23
4"	38	16	8	4	26	31	31									

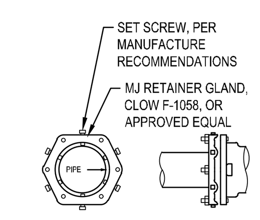
NOTES:

1. THE LENGTH OF PIPE REQUIRING RESTRAINT IS BASED UPON THE FOLLOWING ASSUMPTIONS:
   A. BEDDING TYPE 2 - FLAT BOTTOM TRENCH, BACKFILL LIGHTLY CONSOLIDATED TO CENTER LINE OF PIPE.
   B. SOIL TYPE CLAY 1 - CLAY OF MEDIUM TO LOW PLASTICITY, LL<50, <25% COURSE PARTICLES (CL & CL-ML) :
      CL - INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY GRAVELY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
      ML - INORGANIC SILTS, VERY FINE SAND, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS.
   C. PIPE TABLE CALCULATION IS BASED ON PVC OR POLYWRAPPED DIP
   D. DEPTH TO TOP OF PIPE 5'-0" MINIMUM
   E. MAXIMUM OPERATING PRESSURE OF 150 PSI
   F. FACTOR OF SAFETY OF 1.5
2. FOR END PLUGS, USE RESTRAIN PIPE LENGTH GIVEN FOR DEAD END FITTING.
3. THE LENGTH ("L") OF NEW PIPE TO BE RESTRAINED IS THE LENGTH FOR EACH SIDE OF THE FITTING.
4. THE ABOVE INFORMATION WAS PROVIDED USING THE THRUST RESTRAINT PROGRAM ISSUED BY THE DUCTILE IRON PIPE RESEARCH ASSOCIATION (DIPRA) AND IS BASED ON THE ASSUMPTIONS LISTED IN NOTE 1. RESTRAINED LENGTH REQUIREMENTS FOR FIELD CONDITIONS AND PIPE SIZES DIFFERING FROM THOSE LISTED ABOVE SHOULD BE EVALUATED SEPARATELY.
5. RESTRAINED JOINT PIPE AND FITTINGS SHALL BE USED ONLY AS ALLOWED BY THE PROJECT PLANS AND/OR SPECIFICATION. (IF THRUST BLOCKS ARE USED SEE THRUST BLOCK DETAIL)
6. TEE FITTINGS: PIPE SIZE SHOWN FOR THE TEE IS THE SIZE OF THE RUN. THE RESTRAINED LENGTH SHOWN IS FOR THE BRANCH. THE VALUE OF THE RESTRAINED LENGTH ASSUMES THAT THE SIZE OF THE BRANCH IS EQUAL TO OR LESS THAN THE RUN. THE VALUE OF THE L=USED IN THE TABLE IS 10 FEET. (L= TOTAL LENGTH BETWEEN FIRST JOINTS ON EITHER SIDE OF THE TEE ON THE RUN.)

3 **JOINT RESTRAINT SCHEDULE AND NOTES**
SCALE: NOT TO SCALE



4 **RESTRAINED JOINT PIPE DIAGRAMS**
SCALE: NOT TO SCALE

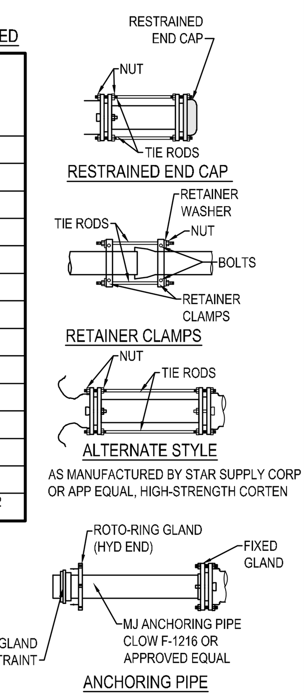


5 **RESTRAINED JOINT THRUST RESTRAINT DETAIL**
SCALE: NOT TO SCALE

PIPE SIZE INCHES	MIN. NO. OF 3/4 "RODS
2	2 [1]
3	2 [1]
4	2
6	2
8	2
10	2
12	2
14	4
16	4
18	6
20	6
24	8
30	14(8) [2]
36	18(12) [2]

NO. OF TIE RODS REQUIRED

NOTES:
1. APPLIES TO 5/8" RODS AS WELL.
2. MIN NO. OF 1" RODS.



6 **JOINT RESTRAINT OPTIONS**
SCALE: NOT TO SCALE

RESTRAINED JOINT DETAILS

WATER MAIN NOTES:

1. ALL WATER LINES SHALL BE CEMENT LINED DUCTILE IRON PIPE, CLASS 52, OR PVC C900 UNLESS OTHERWISE SPECIFIED BY OR APPROVED BY THE ENGINEER.
2. THE WATER LINE MAY BE DEFLECTED WITHIN PIPE SPECIFICATIONS OR LAID DEEPER IN AREAS WHERE CROSSINGS WITH THE SANITARY LINE OCCUR, TO ACHIEVE THE REQUIRED 1.5' VERTICAL SEPARATION DISTANCE. (SEE WATERLINE OFFSET DETAIL FOR FURTHER INFORMATION).
3. WATER MAINS SHALL BE TESTED PER AWWA SECTION C600 OR C605. (SEE WATER MAIN TESTING NOTES)
4. THE WATER MAIN IS TO BE INSTALLED AT A CONTINUOUS GRADE WITH NO ABRUPT HIGH OR LOW POINTS.
5. THRUST RESTRAINT:
   A. THE WATER MAIN THRUST RESTRAINT METHOD USED FOR THIS PROJECT SHALL BE RESTRAINED JOINT PIPE AND FITTINGS.
   B. IN ADDITION TO THE RESTRAINED JOINT PIPE AND FITTINGS, CONCRETE THRUST BLOCKS ARE REQUIRED ON ALL FITTINGS AT CONNECTIONS TO EXISTING WATER MAINS. IF THE CONNECTION TO AN EXISTING MAIN IS MADE WITH A STRAIGHT RUN OF PIPE AND THE CONNECTION TO THE EXISTING MAIN FALLS WITHIN THE RESTRAINED LENGTH REQUIRED FOR THE FIRST PROPOSED FITTING BEYOND THE CONNECTION THEN A CONCRETE THRUST BLOCK SHALL BE INSTALLED AT THAT FITTING.
   C. IN GENERAL CONCRETE THRUST BLOCKS MAY BE USED TO SUPPLEMENT, BUT NOT REPLACE, THE RESTRAINED JOINT PIPE AND FITTINGS WHERE NEEDED.
6. DISINFECTION OF PORTABLE WATER MAINS:
   D. DISINFECTION WILL BE ACCOMPLISHED AFTER PIPE HAS PASSED ANY LEAKAGE TESTS.
   E. THE MUNICIPALITY AND THE ENGINEER SHALL BE NOTIFIED AT LEAST 48 HOURS PRIOR TO THE START OF PRESSURE TESTING, LEAKAGE TESTING, AND DISINFECTION.
   F. DISINFECTION WILL BE PERFORMED IN ACCORDANCE WITH AWWA STANDARD C651 LATEST EDITION. (EXCLUDING SECTION 4.4.2 COVERING THE TABLET METHOD). (SEE WATER MAIN DISINFECTION NOTES)

FORCE MAIN TESTING:

1. THE COMPLETE SEWAGE FORCE MAIN INCLUDING VALVES, FITTINGS CONNECTIONS TO PUMPS AND OTHER PIPELINE SYSTEMS SHALL BE TESTED FOR LEAKAGE.
2. THE SYSTEM SHALL BE PRESSURIZED TO 1.5 TIMES THE PIPE WORKING PRESSURE AT THE LOWEST P0INT OF THE MAIN OR 100 PSI, WHICHEVER IS GREATER, . AFTER THIS PRESSURE, ±5 PSI, HAS BEEN MAINTAINED SUCCESSFULLY FOR ONE HOUR, THE LEAKAGE TEST SHALL BE PERFORMED FOR A PERIOD OF NO LESS THAN 2 HOURS. HYDROSTATIC TESTS SHALL BE PERFORMED AND SUCCESSFUL TEST RESULTS DERIVED IN ACCORDANCE WITH AWWA C 600-05, SECTION 5. IN NO CASE SHALL THE TEST PRESSURE EXCEED THE DESIGN PRESSURE LIMITS FOR ANY PIPE, THRUST RESTRAINT, FITTINGS, VALVES OR OTHER APPURTENANCE OF THE TEST SECTION.
3. IF THE LEAKAGE IN THE SYSTEM EXCEEDS THE SPECIFIED AMOUNT, MAKE ANY REPAIRS OR REPLACEMENTS NECESSARY TO REDUCE THE LEAKAGE TO THE REQUIRED LIMITS AND RETEST THE SYSTEM.

THE MAXIMUM ALLOWABLE LEAKAGE SHALL BE AS SHOWN IN THE FOLLOWING TABLE: ALLOWABLE LEAKAGE IN GALLONS PER HOUR 1000 FT OF PIPELINE (GPH).

AVG. TEST PRESSURE PSI	NOMINAL PIPE DIAMETER-IN. 2	4	6
450	0.29	0.57	0.86
400	0.27	0.54	0.81
350	0.26	0.51	0.76
300	0.24	0.47	0.70
275	0.23	0.45	0.67
250	0.22	0.43	0.64
225	0.21	0.41	0.61
200	0.19	0.38	0.57
175	0.18	0.36	0.54
150	0.17	0.33	0.50
125	0.15	0.30	0.45
100	0.14	0.27	0.41

TESTING GRAVITY SEWER SYSTEM:

1. CONTRACTOR SHALL INSPECT AND TEST THE INSTALLATIONS AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION WHEN WORK IS READY FOR TESTING. AFTER ALL TESTS HAVE BEEN PERFORMED, EVIDENCE OF COMPLIANCE SHALL BE FORWARDED TO OWNER/ENGINEER AND THE AUTHORITY HAVING JURISDICTION PRIOR TO ACCEPTANCE.
2. THE CONTRACTOR SHALL TEST AND INSPECT FOR ALIGNMENT AND INFILTRATION AND EXFILTRATION OF ALL SANITARY SEWERS AND RELATED UTILITY STRUCTURES. INFILTRATION OR EXFILTRATION OF THE SANITARY SEWER SYSTEM SHALL NOT EXCEED 0.80 GAL/INCH OF INTERNAL PIPE DIAMETER PER 1000' OF PIPELINE PER HOUR WITH A MINIMUM HYDROSTATIC HEAD AT THE TOP OF THE PIPE OF 2 FT. OR AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION. WHEN INFILTRATION OR EXFILTRATION OCCURS IN EXCESS OF AMOUNT ALLOWED, DEFECTS SHALL BE LOCATED AND REPAIRED.
3. INFILTRATION LEAKAGE TESTS SHALL BE RUN ON EACH SINGLE MANHOLE-TO-MANHOLE SECTION, OR REACH, INDEPENDENTLY OF ALL OTHER MANHOLE-TO-MANHOLE SECTIONS. A PIPELINE SECTION UNDER TEST SHALL INCLUDE ALL PIPE AND FITTINGS BETWEEN THE TWO MANHOLES PLUS THE UPSTREAM MANHOLE.
4. EACH MANHOLE-TO-MANHOLE SECTION SHALL BE REJECTED OR ACCEPTED BASED ONLY ON RESULTS OF ITS OWN INDEPENDENT SECTION TEST AND NOT ON RESULTS OF ANY ONE TEST RUN SIMULTANEOUSLY OVER MORE THAN ONE CONSECUTIVE MANHOLE-TO-MANHOLE SECTION. THE ONLY EXCEPTION ALLOWED: ACCEPTING SEVERAL CONSECUTIVE MANHOLE-TO-MANHOLE SECTIONS BASED ON ONE COMBINED INFILTRATION TEST INDICATING ZERO INFILTRATION.
5. INFILTRATION TESTS SHALL BE MADE BY INSTALLING A FLOW MEASURING DEVICE IN THE DOWNSTREAM MANHOLE OF SECTION BEING TESTED. TEST DURATION SHALL BE 24 HRS, OR LONGER PERIOD, PROVIDED A STEADY STATE FLOW CONDITION HAS BEEN ACHIEVED IN THE TEST PERIOD, AND RESULTS PROJECTED TO A 24 HR PERIOD.
6. EXFILTRATION TESTS SHALL BE RUN ON EACH SINGLE MANHOLE-TO-MANHOLE SECTION, OR REACH, INDEPENDENTLY OF ALL OTHER MANHOLE-TO-MANHOLE SECTIONS. A PIPELINE SECTION UNDER TEST SHALL INCLUDE ALL PIPE AND FITTINGS BETWEEN THE TWO MANHOLES PLUS THE UPSTREAM MANHOLE.
7. EXFILTRATION TESTS SHALL BE MADE BY MEASURING THE DROP IN WATER ELEVATION IN THE UPSTREAM MANHOLE 24 HRS AFTER INITIAL WATER LEVEL IS RECORDED. INITIAL WATER LEVEL IN UPSTREAM MANHOLE SHALL BE 2 FEET HIGHER THAN EITHER THE TOP OF PIPE OR GROUNDWATER ELEVATION AT THE DOWNSTREAM MANHOLE. ANY MANHOLE-TO-MANHOLE SECTION UNDERGOING AN EXFILTRATION TEST MUST HAVE THE NEXT ADJACENT SECTIONS, BOTH UPSTREAM AND DOWNSTREAM, DRY AND NOT UNDER TEST. THIS PROCEDURE MINIMIZES HYDROSTATIC PRESSURE PLACED ON STOPPERS, PLUGS, AND END CAPS.
8. LOW PRESSURE AIR TESTING MAY BE ALLOWED IN LIEU OF EXFILTRATION TESTS ONLY. WHEN SO ALLOWED, TEST SHALL BE PERFORMED UNDER DIRECTION OF ENGINEER ACCORDING TO ASTM F1417. LOW PRESSURE AIR TEST IS A COMPARISON OF THE MEASURED TIME NECESSARY FOR ONE (1) PSIG PRESSURE DROP TO OCCUR, IF AT ALL, WITH MINIMUM ALLOWABLE TIME FOR THAT PRESSURE DROP TO OCCUR DETERMINED BY METHODS INDICATED IN ASTM F1417. IF THE ONE (1) PSIG PRESSURE DROP OCCURS FASTER THAN ALLOWABLE TIME, SECTION IS UNACCEPTABLE.
9. AN AIR TEST SHALL NOT BE RUN UNTIL SECTION OF LINE TO BE TESTED HAS BEEN CLEANED OF ALL FOREIGN MATERIAL BY FLUSHING AND HAS BEEN VISUALLY INSPECTED AND APPROVED BY THE ENGINEER. CERTAIN PIPE MATERIALS PRODUCE MORE CONSISTENT RESULTS WHEN INTERIOR OF PIPE IS WETTED PRIOR TO TESTING.
10. WHERE AIR-TESTING IS TO BE USED FOR LINE ACCEPTANCE, CORROBORATIVE HYDROSTATIC TESTING SHALL BE PERFORMED ON SEWER INSTALLATION OF THE SAME PIPE SIZE, MATERIAL, AND CONDITIONS OF INSTALLATION. SEWER SECTIONS WHICH INDICATE RATES OF AIR LOSS PER UNIT OF SURFACE AREA WHICH MOST NEARLY APPROXIMATE RATE FOR PIPELINE ACCEPTANCE SHOULD BE SELECTED FOR CORROBORATIVE TESTS. AT LEAST 3 SECTIONS ARE TO BE SO TESTED. THE PURPOSE OF THESE CORROBORATIVE TESTS IS TO PERMIT A REASONABLE ASSUMPTION THAT, IF THESE 3 TEST SECTIONS MEET THE HYDROSTATIC TEST, THE BALANCE OF PROJECT ALSO MEETS OR EXCEEDS THESE REQUIREMENTS. IF AIR TEST IS NOT SUPPORTED BY ACCEPTABLE CORROBORATIVE HYDROSTATIC TESTS, COMPLETE HYDRO-STATIC TESTING OF SEWER LINES SHALL BE REQUIRED.
11. WHERE FLEXIBLE PIPE IS USED, CONTRACTOR SHALL TEST ALL MAINLINE PIPE FOR MAXIMUM ALLOWABLE DEFLECTION OF 5% OF OUTSIDE DIAMETER. DEFLECTION TESTS SHALL BE PERFORMED USING A CIRCULAR STEEL BALL OR SLED 1/16-INCH IN DIAMETER SMALLER THAN ALLOWABLE INSIDE DIAMETER OF FLEXIBLE PIPE WHEN DEFLECTED A MAXIMUM OF 5% OF OUTSIDE DIAMETER. DEFLECTION TESTING OF ANY PIPE SHALL BE DONE NO SOONER THAN 30 DAYS AFTER DATE OF INSTALLATION OF PIPE SECTION UNLESS WRITTEN EXCEPTION.
12. SEWERS SHALL BE LAID WITH STRAIGHT ALIGNMENT BETWEEN MANHOLES. STRAIGHT ALIGNMENT SHALL BE CHECKED EITHER USING A LASER BEAM OR LAMPING. TESTING SHALL COMPLY WITH REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
13. MANHOLES, WHICH CANNOT BE PROPERLY AIR TESTED, SHOULD BE VISUALLY INSPECTED AND LEAKAGE-TESTED USING INTERNAL OR EXTERNAL HYDROSTATIC PRESSURE. LEAKAGE TESTING SHALL COMPLY WITH REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
14. IN AREAS WHERE CONVENTIONAL TESTING IS IMPRACTICAL (I.E. AREAS DESIGNATED BY ENGINEER WHERE EXISTING SERVICES ARE TIED INTO NEW LINE IMMEDIATELY AND ANY BLOCKAGE COULD RESULT IN HEALTH PROBLEMS) NO LINES SHALL BE BACKFILLED UNTIL EACH PIPE SECTION AND CONNECTION IS INSPECTED AND APPROVED.
15. WHERE SEWERS ARE CONSTRUCTED OF PRESSURE-RATED PIPE AND INSTALLED WITH LESS THAN 18 INCHES VERTICAL SEPARATION FROM EXISTING OR PROPOSED WATER MAINS, SEWERS SHALL BE HYDROSTATICALLY TESTED AT 150 PSI TO ASSURE WATER TIGHTNESS. HYDROSTATIC ACCEPTANCE TESTS SHALL BE CONDUCTED AS SPECIFIED FOR TESTING WATER MAINS, EXCEPT THAT TESTING MAY BE PERFORMED WITH THE PIPE SECTION PARTIALLY BACK-FILLED.
16. IF THE ALLOWABLE RATE OF INFILTRATION, EXFILTRATION, OR AIR LEAKAGE IS EXCEEDED, THE CONTRACTOR SHALL LOCATE POINTS OF EXCESSIVE LEAKAGE AND SHALL PROMPTLY CORRECT, REPAIR, AND BRING SYSTEM UP TO THE STANDARD. COSTS OF ALL SUCH REPAIRS AND CORRECTIVE MEASURES, INCLUDING COSTS OF REPEATED TESTS, SHALL BE BORNE BY THE CONTRACTOR, THE SEWER LINE SECTION (INCLUDING MANHOLES AND BUILDING SERVICES) SHALL NOT BE ACCEPTED UNTIL THESE TEST CRITERIA ARE MET.

MANHOLES AND OTHER BELOW GRADE STRUCTURES:

1. STRUCTURAL DESIGN FOR MANHOLES AND OTHER BELOW-GRADE PRECAST CONCRETE STRUCTURES:
   A. NON-TRAFFIC LOADS:
      BELOW GRADE PRECAST CONCRETE STRUCTURES SHALL BE DESIGNED TO WITHSTAND LOADS IMPOSED BY STRUCTURE WEIGHT, EARTH COVER, LATERAL PRESSURE FROM EARTH AND GROUND WATER, AND LIVE LOADS SUCH AS PEDESTRIAN TRAFFIC OR MACHINERY ON OR ABOVE THE STRUCTURE; AND
   B. TRAFFIC LOADS:
      BELOW GRADE PRECAST CONCRETE STRUCTURES SHALL BE DESIGNED TO ALSO WITHSTAND TRAFFIC LOADS CREATED BY AN HS20-44 TRUCK PLUS 25% IMPACT AS DEFINED IN THE LATEST EDITION OF THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) DESIGN STANDARDS.
2. MATERIAL WHICH SHALL BE UTILIZED IN THE CONSTRUCTION OF PRECAST CONCRETE STRUCTURES:
   CEMENT: ASTM C-150, TYPES I, II, III, VI
   SAND: NYSDOT STD. SPEC. SECTION NO. 703-0 CONCRETE SAND
   STONE: NYSDOT STD. SPEC. SECTION NO. 703-02 COARSE AGGREGATE
   STEEL BAR REINFORCEMENT: ASTM A615, GRADE 60
   WIRE MESH REINFORCEMENT: ASTM A185 PLAIN
   CONCRETE STRENGTH (28 DAY): 4,500 PSI (F'C)
   ENTRAINED AIR: 5% MIN.
3. ALL CASTINGS (FRAMES AND COVERS, FRAMES AND GRATES, ETC.) FOR USE IN CONJUNCTION WITH MANHOLES AND OTHER BELOW GRADE STRUCTURES SHALL BE MANUFACTURED FROM GRAY IRON OR DUCTILE IRON. GRAY IRON SHALL CONFORM WITH ASTM A 48, CLASS 30B AND DUCTILE IRON SHALL CONFORM WITH ASTM A 536 AND BE OF A GRADE APPROPRIATE TO ITS INTENDED USE.
4. ALL CASTINGS (FRAMES AND COVERS, FRAMES AND GRATES, ETC.) FOR USE IN CONJUNCTION WITH MANHOLES AND OTHER BELOW GRADE STRUCTURES SHALL BE DESIGNED TO WITHSTAND AASHTO HS 20-44 HIGHWAY LOADING PLUS 25% IMPACT.
5. ALL ASTM REFERENCES SHALL BE FOR THE LATEST ACTIVE STANDARD.

DISINFECTION OF POTABLE WATER SERVICE MAINS:

1. CHLORINE-WATER SOLUTION IS PREPARED BY ADDING SODIUM HYPOCHLORITE TO WATER IN ACCORDANCE WITH THE FOLLOWING TABLE (VERIFY AGAINST TOWN REQUIREMENTS): CHLORINE REQUIRED TO PRODUCE 25 MG/L CONCENTRATION IN 100 FT. OF PIPE BY DIAMETER

PIPE SIZE IN.	100 PERCENT CHLORINE LB.	1 PERCENT CHLORINE SOLUTIONS GAL.
4	0.013	0.16
6	0.030	0.36
8	0.054	0.65
10	0.085	1.02
12	0.120	1.44
16	0.217	2.60

NOTE: 1% SOLUTIONS REQUIRE 1 POUND OF SODIUM HYPOCHLORITE IN 8 GAL OF WATER

2. PRODUCT DETERIORATION MUST BE CONSIDERED IN COMPUTING THE QUANTITY OF SODIUM HYPOCHLORITE REQUIRED FOR THE DESIRED CONCENTRATION.
3. CHLORINE-WATER SOLUTION SHALL BE INTRODUCED INTO THE WATER MAIN WITH A GASOLINE OR ELECTRICALLY POWERED CHEMICAL FEED PUMP DESIGNED FOR FEEDING CHLORINE SOLUTIONS. FEED LINES SHALL BE OF SUCH MATERIAL AND STRENGTH TO SAFELY WITHSTAND SAFELY THE MAXIMUM PRESSURE THAT MAY BE CREATED BY PUMP. ALL CONNECTIONS SHALL BE CHECKED FOR TIGHTNESS BEFORE HYPOCHLORITE SOLUTION IS APPLIED TO MAIN.
4. THE CONTRACTOR SHALL FURNISH AND INSTALL A CORPORATION STOP JUST DOWNSTREAM FROM THE NEWLY INSTALLED GATE VALVE OR AS OTHERWISE SHOWN ON DRAWINGS OR APPROVED BY THE ENGINEER.
5. GENERALLY, THE FOLLOWING PROCEDURE SHALL BE USED TO DISINFECT THE NEW MAIN. THE CONTRACTOR SHALL HOWEVER, REVIEW THEIR PROPOSED PROCEDURES WITH THE ENGINEER AT LEAST 48 HOURS PRIOR TO START OF DISINFECTION. ALL DISINFECTION PROCEDURES MUST BE APPROVED BY THE ENGINEER BEFORE DISINFECTION STARTS.
   A. ALL GATE VALVES AND HYDRANTS MUST BE CLOSED. THE NEW MAIN SHOULD ALREADY BE FULL OF WATER FROM THE HYDROSTATIC TESTS. IF NOT, IT SHALL BE FILLED.
   B. MIX CHLORINE-WATER SOLUTION IN 55 GALLON DRUMS; CONNECT FEED LINE TO PUMP AND NEW MAIN.
   C. OPEN GATE VALVE ON THE HYDRANT LEAD OF END HYDRANT; THEN OPEN HYDRANT FULLY. (NOTE: HYDRANT MUST ALWAYS BE EITHER FULLY OPENED OF FULLY CLOSED. THE HYDRANT FLOW MAY BE CONTROLLED BY THROTTLING THE GATE VALVE ON THE HYDRANT LEAD).
   D. START PUMPING CHLORINE-WATER SOLUTION INTO WATER MAIN; THEN OPEN UPSTREAM GATE VALVE SLOWLY UNTIL FLOW FROM HYDRANT IS PROPORTIONATE TO THE AMOUNT OF CHLORINE-WATER SOLUTION BEING PUMPED (30 PARTS WATER TO 1 PART CHLORINE-WATER SOLUTION). IF A WATER METER IS NOT AVAILABLE, DISCHARGE RATE MAY BE DETERMINED BY USING EITHER A PITOT GAUGE IN THE DISCHARGE OR BY MEASURING THE TIME TO FILL A CONTAINER OF KNOWN VOLUME (SUCH AS A 55 GAL. BARREL). THE PUMPING RATE CAN BE DETERMINED BY MEASURING THE DROP IN LIQUID LEVEL IN A GIVEN LENGTH OF TIME. (NOTE: A STANDARD 55 GALLON STEEL BARREL CONTAINS 15.75 GAL/FT OF DEPTH OR 1.64 GAL/IN OF DEPTH).
   E. AFTER HYDRANT FLOW AND PUMPING RATE HAVE BEEN ADJUSTED, MAINTAIN A CONSTANT FLOW SO THAT CHLORINE CONCENTRATION IN THE MAIN IS MAINTAINED AT A MINIMUM OF 25 PPM.
   F. PERIODICALLY CHECK HYDRANT DISCHARGE FOR CHLORINE CONCENTRATION BY USING A FIELD CHLORINE RESIDUAL TEST KIT. MAINTAIN HYDRANT DISCHARGE AND PUMPING RATE UNTIL THE MINIMUM CHLORINE CONCENTRATION OF 25 PPM HAS BEEN ACHIEVED THROUGHOUT THE ENTIRE MAIN DISINFECTED.
   G. AFTER THE REQUIRED CONCENTRATION HAS BEEN ACHIEVED, ALL VALVES AND HYDRANTS ON THE MAIN LINE BETWEEN THE UPSTREAM GATE VALVE AND THE DISCHARGE HYDRANT SHALL BE OPERATED TO DISINFECT THE INTERNAL APPURTENANCES. DO NOT OPERATE ANY GATE VALVE THAT IS LOCATED ON A CONNECTION TO AN EXISTING WATER MAIN THAT IS IN SERVICE.
6. AFTER THE WATER SAMPLES HAVE BEEN TAKEN AND THE MINIMUM 25 PPM CHLORINE CONCENTRATION HAS BEEN VERIFIED, THE CONTRACTOR SHALL RETAIN THE CHLORINATED WATER IN THE MAIN BY THE FOLLOWING METHOD:
   A. FIRST, CLOSE THE UPSTREAM GATE VALVE.
   B. SECOND, CLOSE THE DISCHARGE HYDRANT.
   C. THIRD, SHUT OFF THE PUMP.
7. CHLORINATED WATER SHALL REMAIN IN THE MAIN FOR A MINIMUM OF 24 HOURS.
8. IF THE CHLORINE RESIDUAL IS LESS THAN 10 PPM AT THE END OF THE 24 HOURS, REPEAT SYSTEM TREATMENT.
9. ANY SECTION OF PIPE, VALVES OR FITTINGS, INCLUDING TAPPING SLEEVES AND VALVES WHICH ARE INSTALLED OUTSIDE THE LIMITS OF THE SYSTEM SUBJECTED TO THE CHLORINATION PROCEDURES SPECIFIED ABOVE, SHALL BE SPRAYED OR SWABBED WITH A 1% HYPOCHLORITE SOLUTION PRIOR TO INSTALLATION.
10. AFTER THE WATER SAMPLES HAVE BEEN TAKEN AND THE MINIMUM 10 PPM CHLORINE RESIDUAL HAS BEEN VERIFIED, CONTRACTOR SHALL THOROUGHLY FLUSH CHLORINATED WATER FROM THE MAIN BY THE FOLLOWING METHOD:
    A. FIRST, OPEN THE DISCHARGE HYDRANT
    B. SECOND, OPEN THE UPSTREAM GATE VALVE.
    C. THIRD, OPEN ANY HYDRANTS ON THE MAIN LINE TO REMOVE ALL CHLORINATED WATER FROM THE HYDRANT LEADS.
11. FLUSH THE MAIN WITH POTABLE WATER IN SUCH A MANNER THAT DOES NOT ADVERSELY AFFECT FISH, PLANT, OR ANIMAL LIFE. PROVIDE FOR PROPER DISPOSAL OF HEAVY CHLORINATED WATER OR NEUTRALIZE IN ACCORDANCE WITH APPENDIX C OF AWWA C651 LATEST EDITION.
12. THE QUANTITY AND LOCATION OF WATER SAMPLES TO BE TAKEN SHALL BE IN ACCORDANCE WITH AWWA C651 LATEST EDITION.
13. WATER SAMPLES SHALL BE TAKEN BY THE CONTRACTOR IN STERILIZED BOTTLES.
14. ANALYZE WATER SAMPLES IN ACCORDANCE WITH STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER, 14TH EDITION, PUBLISHED BY AMERICAN WATER WORKS ASSN., 6666 WEST QUINCY AVE., DENVER, CO 80235.
15. IF A BACTERIOLOGICAL TEST PROVES THE WATER QUALITY TO BE UNACCEPTABLE; REPEAT SYSTEM TREATMENT.
16. IF A BACTERIOLOGICAL TEST PROVES WATER TO BE ACCEPTABLE; REMOVE FEED LINE AND CORPORATION STOP. CORPORATION STOP WILL BE REPLACED WITH A THREADED BRASS PLUG UNLESS OTHERWISE DIRECTED BY ENGINEER.
17. SAMPLES MUST BE BACTERIOLOGICALLY SAFE AND THE MUNICIPALITY, ENGINEER & HEALTH DEPARTMENT MUST PROVIDE APPROVAL BEFORE THE WATER MAIN IS PLACED INTO SERVICE.

TESTING WATER MAINS:

1. THE CONTRACTOR SHALL SUBMIT A TESTING PLAN FOR FLUSHING, PRESSURE TESTING, LEAKAGE TESTING AND DISINFECTION OF WATER MAINS TO BE APPROVED BY THE ENGINEER PRIOR TO COMMENCING PIPING INSTALLATION.
2. AFTER TRENCH HAS BEEN BACKFILLED, HYDROSTATIC ACCEPTANCE TESTS, CONSISTING OF A PRESSURE TEST AND A LEAKAGE TEST, SHALL BE PERFORMED ON ALL SECTIONS OF WATER MAINS INSTALLED. LEAKAGE TEST SHALL BE CONDUCTED CONCURRENTLY WITH PRESSURE TEST. TEST SECTION SHALL BE LIMITED TO ABOUT 2,000 FT (MAX.) OR FOR EACH DIFFERENT PIPE MATERIAL SEGMENT, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
3. AFTER ALL TESTS AND INSPECTIONS HAVE BEEN PERFORMED EVIDENCE OF COMPLIANCE SHALL BE FORWARDED TO OWNER/ENGINEER AND THE MUNICIPALITY PRIOR TO ACCEPTANCE.
4. ALL WATER FOR TESTS SHALL BE FURNISHED AND DISPOSED OF BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE. SOURCE AND/OR QUALITY OF WATER WHICH THE CONTRACTOR PROPOSES TO USE IN TESTING LINES SHALL BE ACCEPTABLE TO THE ENGINEER.
5. HYDROSTATIC PRESUMPTIVE TESTS MAY BE PERFORMED WHEN SYSTEM IS PARTIALLY BACKFILLED TO SIMPLY CHECK WORK, BUT ACCEPTANCE OF SYSTEM SHALL BE BASED ON HYDROSTATIC TESTS RUN ON FINISHED SYSTEM AFTER IT HAS BEEN COMPLETELY BACKFILLED.
6. HYDROSTATIC TESTS SHALL BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING, AS MODIFIED HEREIN:
   6.1. SECTION 5 OF AWWA STANDARD C600, LATEST EDITION, FOR DUCTILE-IRON MAINS.
   6.2. SECTION 7 OF AWWA STANDARD C605, LATEST EDITION, FOR PVC MAINS.
   6.3. CHAPTER 9 OF AWWA STANDARD M55, LATEST EDITION, FOR HDPE MAINS.
7. FOR PRESSURE TESTING OF DUCTILE-IRON MAINS, THE SYSTEM SHALL BE PRESSURIZED AND MAINTAINED AT A MINIMUM OF 150 POUNDS PER SQUARE INCH, OR 1.5 TIMES THE WORKING PRESSURE, WHICHEVER IS GREATER, BASED ON THE ELEVATION OF THE LOWEST POINT IN THE SECTION BEING TESTED AND CORRECTED TO THE ELEVATION OF THE GAUGE. PROVISIONS SHALL BE MADE TO RELIEVE AIR TRAPPED AT HIGH POINTS IN THE SYSTEM THROUGH ADJACENT HYDRANTS OR THROUGH TAPS AND CORPORATION STOPS INSTALLED FOR THIS PURPOSE BY THE CONTRACTOR. AFTER SAID PRESSURE HAS BEEN MAINTAINED SUCCESSFULLY, WITH FURTHER PUMPING AS REQUIRED, FOR A PERIOD OF AT LEAST TWO HOURS, THE SECTION SHALL BE CONSIDERED TO HAVE PASSED THE PRESSURE TEST.
8. FOR PRESSURE TESTING OF PVC MAINS, THE SYSTEM SHALL BE PRESSURIZED AND MAINTAINED AT A MINIMUM OF 1.25 TIMES THE THE MAXIMUM ANTICIPATED SUSTAINED WORKING PRESSURE AT THE HIGHEST POINT ALONG THE TEST SECTION UNLESS THE PRESSURE EXCEEDS THE DESIGN PRESSURE LIMIT FOR ANY PIPE, THRUST RESTRAINT, VALVE FITTING, OR OTHER APPURTENANCE OF THE TEST SECTION & NOT LESS THAN 1.5 TIMES THE STATED SUSTAINED WORKING PRESSURE AT THE LOWEST ELEVATION OF THE TEST SECTION. PROVISIONS SHALL BE MADE TO RELIEVE AIR TRAPPED AT HIGH POINTS IN THE SYSTEM THROUGH ADJACENT HYDRANTS OR THROUGH TAPS AND CORPORATION STOPS INSTALLED FOR THIS PURPOSE BY THE CONTRACTOR. AFTER SAID PRESSURE HAS BEEN MAINTAINED SUCCESSFULLY, WITH FURTHER PUMPING AS REQUIRED, FOR A PERIOD OF AT LEAST TWO HOURS, THE SECTION UNDER TEST SHALL BE CONSIDERED TO HAVE PASSED THE PRESSURE TEST.
9. FOR PRESSURE TESTING OF HDPE MAINS, THE SYSTEM SHALL BE PRESSURIZED AND MAINTAINED AT 1.5 TIMES THE DESIGN WORKING PRESSURE AT THE ELEVATION OF THE LOWEST POINT IN THE SECTION BEING TESTED AND CORRECTED TO THE ELEVATION OF THE GAUGE. PROVISIONS SHALL BE MADE TO RELIEVE AIR TRAPPED AT HIGH POINTS IN THE SYSTEM THROUGH ADJACENT HYDRANTS OR THROUGH TAPS AND CORPORATION STOPS INSTALLED FOR THIS PURPOSE BY THE CONTRACTOR. AFTER SAID PRESSURE HAS BEEN MAINTAINED SUCCESSFULLY, WITH FURTHER PUMPING AS REQUIRED, FOR A PERIOD OF AT LEAST FOUR HOURS, THE SECTION SHALL BE CONSIDERED TO HAVE PASSED THE PRESSURE TEST. FAILING TEST SECTION MUST BE DEPRESSURIZED AND ALLOWED TO "RELAX" FOR AT LEAST EIGHT HOURS PRIOR TO RETESTING.
10. LEAKAGE TEST SHALL BE PERFORMED CONCURRENTLY USING A MINIMUM TEST PRESSURE OF 150 LBS/SQUARE INCH, OR 1.5 TIMES THE WORKING PRESSURE, WHICHEVER IS GREATER, BASED ON THE ELEVATION OF THE LOWEST POINT IN THE SECTION UNDER TEST AND CORRECTED TO ELEVATION OF THE GAUGE. LEAKAGE TEST DURATION SHALL BE A MINIMUM OF 2 HOURS AFTER LEAKAGE RATE HAS STABILIZED.
11. MAXIMUM ALLOWABLE LEAKAGE SHALL BE AS SHOWN IN THE FOLLOWING TABLE: ALLOWABLE LEAKAGE PER 1,000 FT (305M) OF PIPELINE (GPH)

AVG. TEST PRESSURE PSI	NOMINAL PIPE DIAMETER-IN. 4	6	8	10	12	14	16
450	0.57	0.86	1.15	1.43	1.72	2.01	2.29
400	0.54	0.81	1.08	1.35	1.62	1.89	2.16
350	0.51	0.76	1.01	1.26	1.52	1.77	2.02
300	0.47	0.70	0.94	1.17	1.40	1.64	1.87
275	0.45	0.67	0.90	1.12	1.34	1.57	1.79
250	0.43	0.64	0.85	1.07	1.28	1.50	1.71
225	0.41	0.61	0.81	1.01	1.22	1.42	1.62
200	0.38	0.57	0.76	0.96	1.15	1.34	1.53
175	0.36	0.54	0.72	0.89	1.07	1.25	1.43
150	0.33	0.50	0.66	0.83	0.99	1.16	1.32
125	0.30	0.45	0.60	0.76	0.91	1.06	1.21
100	0.27	0.41	0.54	0.68	0.81	0.95	1.08

12. IF LEAKAGE IN SYSTEM EXCEEDS THE SPECIFIED AMOUNT, THE CONTRACTOR SHALL, AT NO ADDED COST TO THE OWNER, LOCATE, REPAIR, AND/OR REPLACE DEFECT(S) AND RE-TEST PIPING SYSTEM.

LaBella
Powered by partnership.
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Charlotte, NC 28285
704-376-6423
labellapc.com

NOT FOR CONSTRUCTION

CORPORATE ENGINEERING LICENSE NO. C-0430

LABELLA ASSOCIATES P.C. REGISTERED ARCHITECTURAL CORPORATION CERT. NO. 52904 NORTH CAROLINA CHARLOTTE, N.C.

CONNECTICUT SPORTS GROUP
9 W BROAD STREET
SUITE 430
STAMFORD, CT 06902

BRIDGEPORT STADIUM & MIXED USE
255 & 363 KOSSUTH STREET
BRIDGEPORT, CT 06608

NO:	DATE:	DESCRIPTION:
Revisions		

PROJECT NUMBER: 2230111
DRAWN BY: GA
REVIEWED BY: JRS
ISSUED FOR: ISSUED FOR
DATE: 04/08/2024
DRAWING NAME:

WATER SYSTEM DETAILS 2

DRAWING NUMBER:

C561

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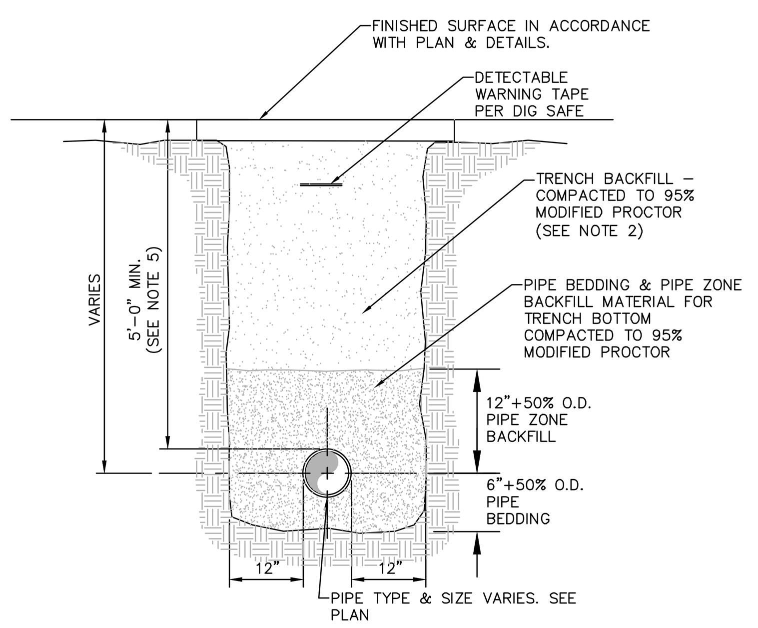


NOTES:

1. PIPE BEDDING & PIPE ZONE BACKFILL SHALL BE AN IMPORTED NATURAL RUN–OF–BANK (R.O.B.) SAND OR A MIXTURE OF CRUSHED STONE AND GRAVEL, FREE OF SOFT, NONDURABLE PARTICLES, ORGANIC MATERIALS AND ELONGATED PARTICLES, AND SHALL BE WELL GRADED FROM FINE TO COARSE PARTICLES. BEDDING GRADATIONS SHALL BE APPROVED BY THE ENGINEER AND SHALL MEET THE FOLLOWING GRADATION REQUIREMENTS:

SIEVE DESIGNATION	% PASSING
3/4"	100%
NO. 40	0–70%
NO. 200	0–10%

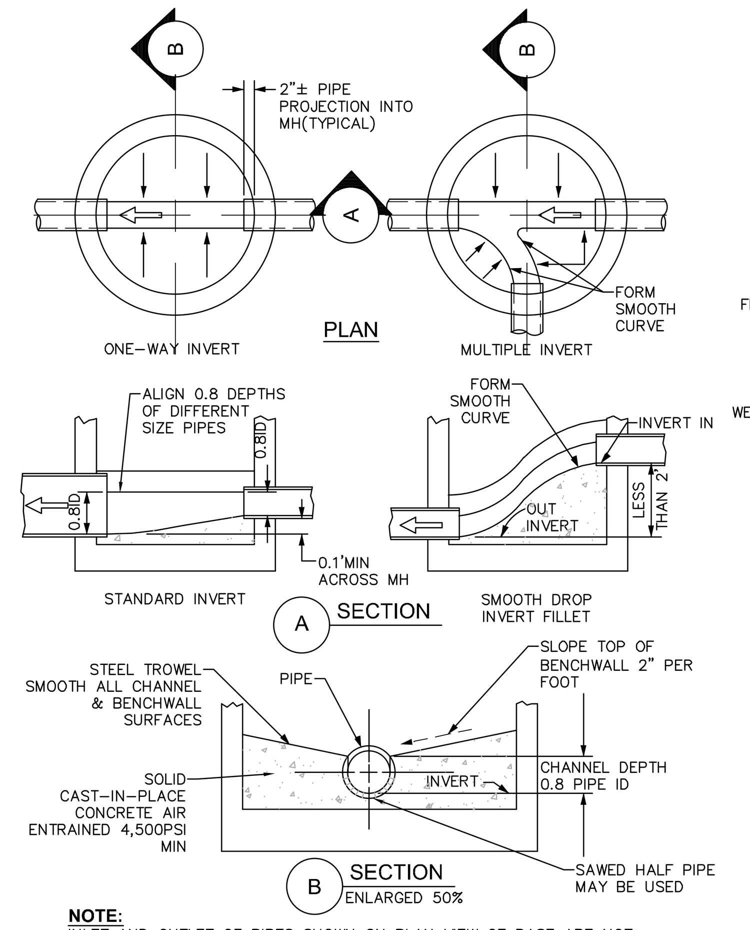
2. TRENCH BACKFILL SHALL BE A NATURAL RUN–OF–BANK (R.O.B.) OR PROCESSED GRAVEL, OR EXCAVATED MATERIAL FREE OF SOFT, NONDURABLE PARTICLES, ORGANIC MATERIALS AND ELONGATED PARTICLES, AND SHALL BE WELL GRADED FROM FINE TO COARSE PARTICLES. TRENCH BACKFILL GRADATIONS SHALL BE APPROVED BY THE ENGINEER AND SHALL MEET THE FOLLOWING GRADATION REQUIREMENTS:

SIEVE DESIGNATION	% PASSING
4"	100%
NO. 40	0–70%
NO. 200	0–10%

IN NON–TRAFFIC UNPAVED AREAS TRENCH BACKFILL CAN BE MATERIALS EXCAVATED FROM THE TRENCH AS APPROVED BY THE ENGINEER AND COMPACTED TO 90% MODIFIED PROCTOR.

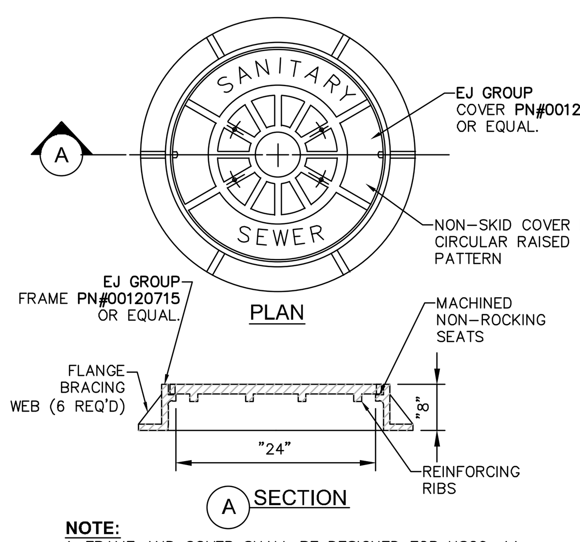
3. INSTALL CONTINUOUS DETECTABLE MARKING TAPE DURING BACKFILLING OF TRENCH FOR UNDERGROUND PIPING. LOCATE TAPE 12" BELOW FINISHED GRADE, DIRECTLY OVER PIPING, EXCEPT 6" BELOW SUBGRADE UNDER PAVEMENTS & SLAB.
4. TRENCHING SHALL BE IMPLEMENTED IN ACCORDANCE WITH O.S.H.A. STANDARDS.
5. 5'–0" MIN COVER SHALL BE APPLIED TO WATER MAIN OR SANITARY SEWER FORCE MAINS ONLY.

© 1 **PIPE TRENCH DETAIL (TYPICAL)**
SCALE: NOT TO SCALE



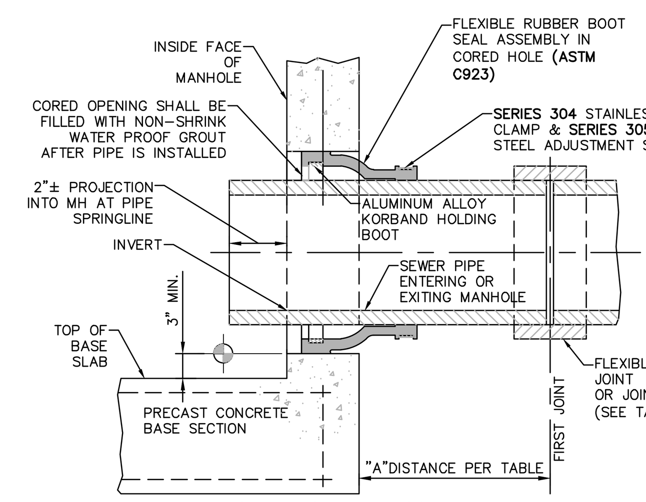
NOTE:
INLET AND OUTLET OF PIPES SHOWN ON PLAN VIEW OF BASE ARE NOT NECESSARILY TYPICAL OF ALL MANHOLES. REFER TO UTILITY PLAN FOR INLET AND OUTLET DIRECTIONS.

© 2 **INVERT, CHANNEL AND BENCHWALLS**
SCALE: NOT TO SCALE



NOTE:
1. FRAME AND COVER SHALL BE DESIGNED FOR HS20–44 VEHICLE LOADING AND 25% IMPACT.

© 3 **HEAVY DUTY STANDARD CAST IRON MH COVER**
SCALE: NOT TO SCALE

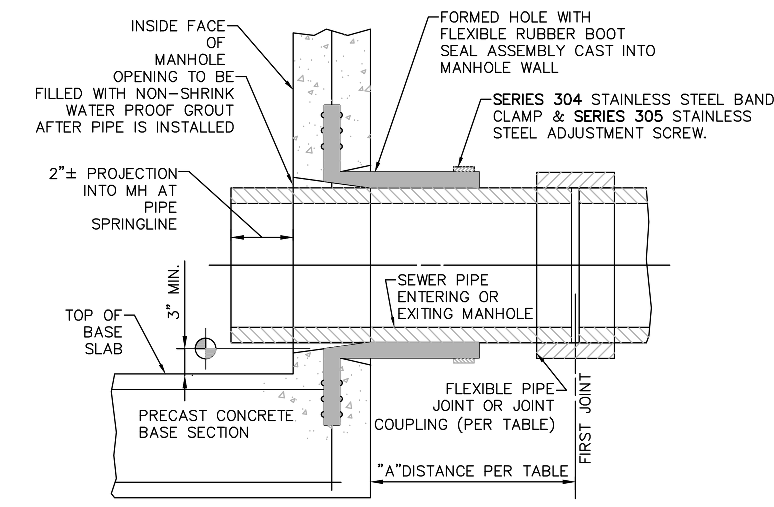


FLEXIBLE JOINT REQUIREMENTS

SEWER PIPE TYPE	FLEXIBLE JOINT TYPE IN & OUT	"A"DISTANCE (FEET)
DUCTILE IRON	STD RUBBER GASKET PIPE JOINT ONLY	10' MAX
PVC	STD RUBBER GASKET PIPE JOINT ONLY	3' MAX

NOTE:
REFERENCE MANHOLE DETAIL(S) FOR REQUIRED INVERT CHANNEL CONFIGURATION.

© 4 **PIPE CONNECTION TO MANHOLE- PRECAST OR CORED HOLE W/ INSERTED FLEXIBLE BOOT**
SCALE: NOT TO SCALE

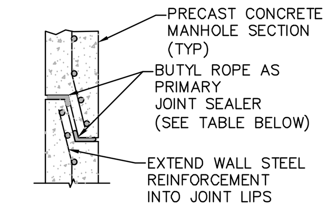


FLEXIBLE JOINT REQUIREMENTS

SEWER PIPE TYPE	FLEXIBLE JOINT TYPE IN & OUT	"A"DISTANCE (FEET)
DUCTILE IRON	STD RUBBER GASKET PIPE JOINT ONLY	10' MAX
PVC	STD RUBBER GASKET PIPE JOINT ONLY	3' MAX

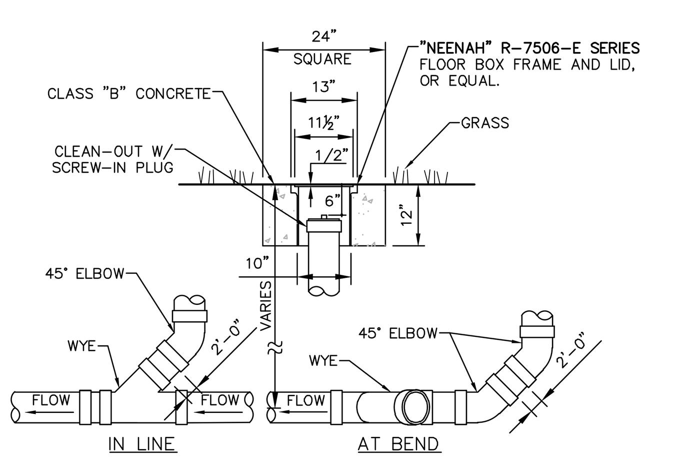
NOTE:
REFERENCE MANHOLE DETAIL(S) FOR REQUIRED INVERT CHANNEL CONFIGURATION.

© 5 **PIPE CONNECTION TO MANHOLE- FLEXIBLE RUBBER BOOT CAST INTO MANHOLE WALL**
SCALE: NOT TO SCALE



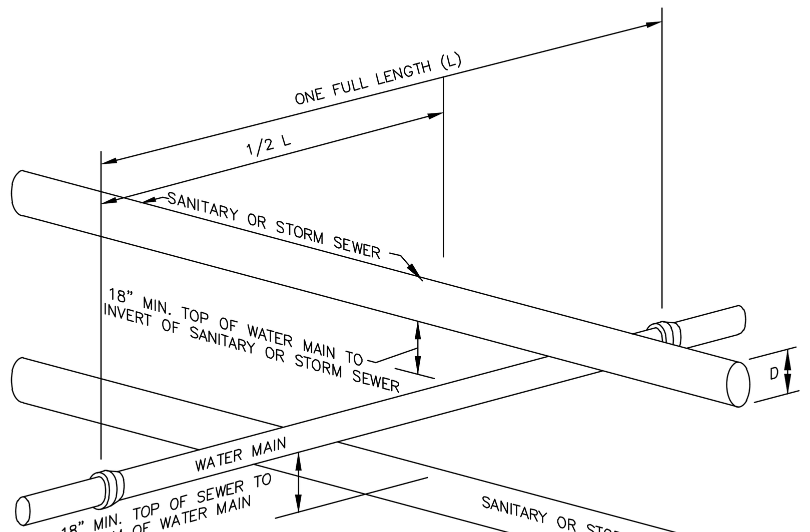
MANHOLE INSIDE DIAMETER	SIZE OF BUTYL ROPE JOINT SEALER
4'-0"	1"
5'-0" & LARGER	1 1/2"

© 6 **MANHOLE JOINT**
SCALE: NOT TO SCALE



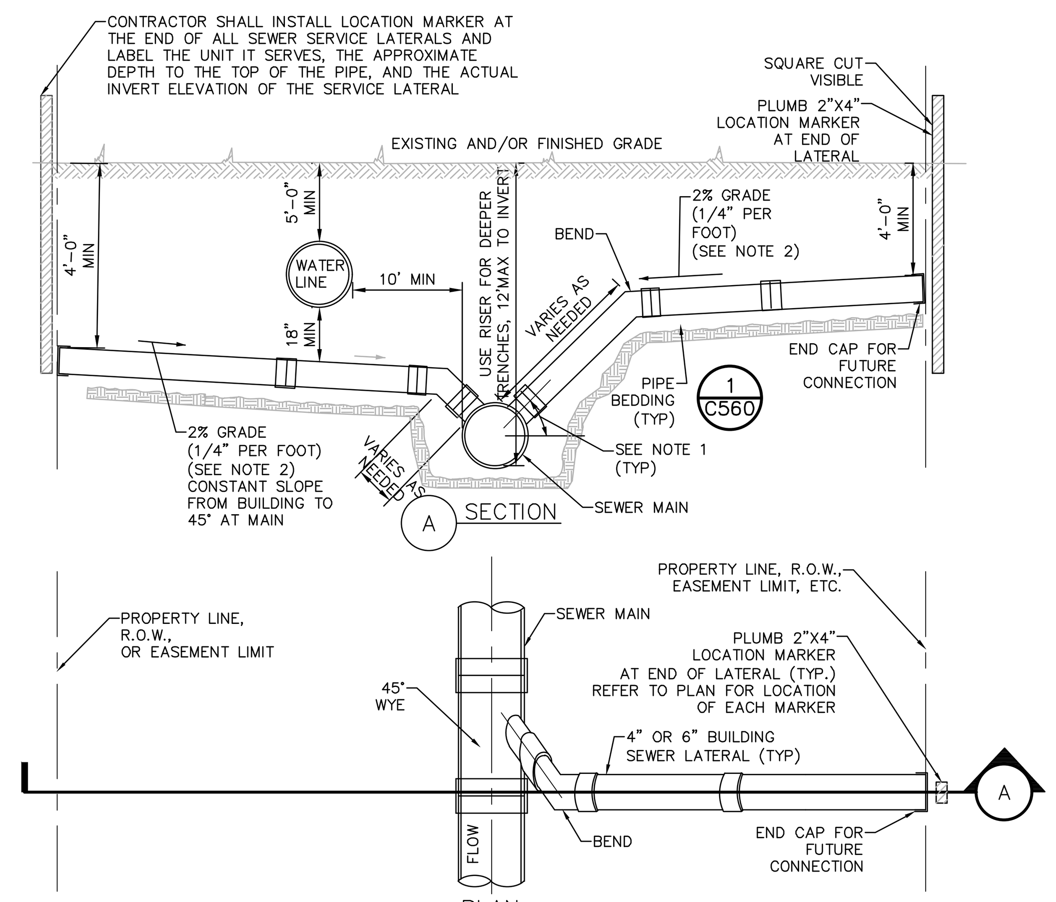
NOTES:
1. SEWER PIPE FITTINGS TO BE ASTM D–3033 OR D–3034 SDR–35.
2. TO BE USED FOR GRAVITY PORTION OF SANITARY SYSTEM AS WELL AS THE STORM ROOF DRAINAGE SYSTEM.

© 7 **CLEAN OUT - NON TRAFFIC AREAS**
SCALE: NOT TO SCALE



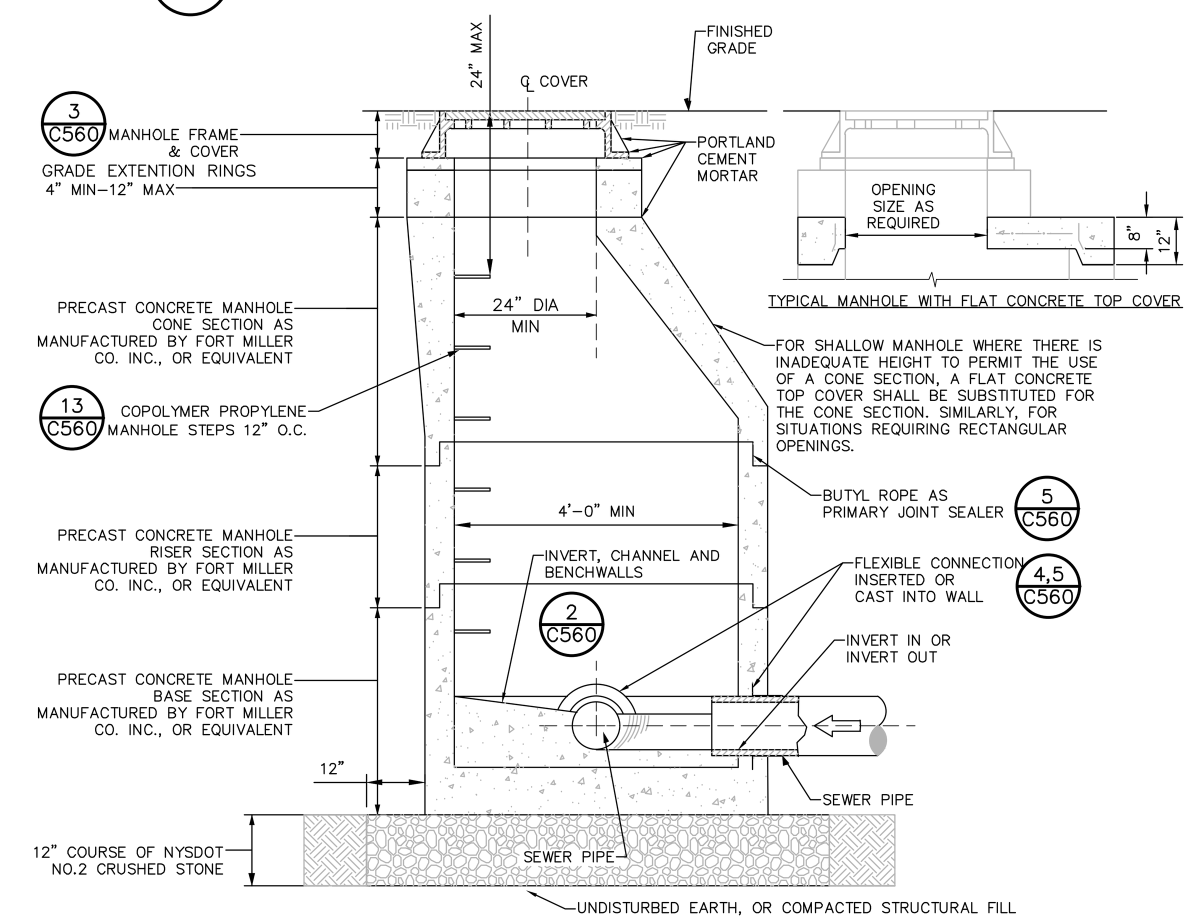
NOTES:
IF 18" VERTICAL SEPARATION CAN NOT BE ACHIEVED AT LOCATIONS OF WATER MAIN & SEWER CROSSINGS, CONTRACTOR SHALL CONSTRUCT EITHER OF THE FOLLOWING OPTIONS:
1. CONSTRUCT SEWER OF PVC WATERWORKS GRADE PRESSURE PIPE MATERIAL 10' ON EACH SIDE OF THE WATER MAIN AND TEST TO 150PSI TO ASSURE TIGHTNESS.
2. EITHER THE WATER MAIN OR THE SEWER LINE MAY BE ENCASED IN A WATER TIGHT CARRIER PIPE WHICH EXTENDS 10 FEET ON BOTH SIDES OF THE CROSSING. THE CARRIER PIPE SHALL BE OF MATERIAL APPROVED FOR THE USE IN WATER MAIN CONSTRUCTION.

© 8 **SECTION WATER/SEWER SEPARATION REQUIREMENTS**
SCALE: NOT TO SCALE



NOTES:
1. OPTIMUM ANGLE IS 45°. THE ENGINEER MAY CALL FOR OTHER ANGLES TO SUIT JOB CONDITIONS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING THE SEWER LATERAL AS CONFIGURED AT THE SLOPE SPECIFIED, AND FOR ESTABLISHING THE ELEVATION AT THE TERMINATION POINT OF THE LATERAL, IF EXISTING UTILITIES OR OTHER FEATURES PREVENT INSTALLATION IN THAT MANNER. THE ENGINEER SHALL BE CONSULTED PRIOR TO INSTALLATION.

© 9 **STANDARD SEWER SERVICE CONNECTION PLAN**
SCALE: NOT TO SCALE



NOTES:

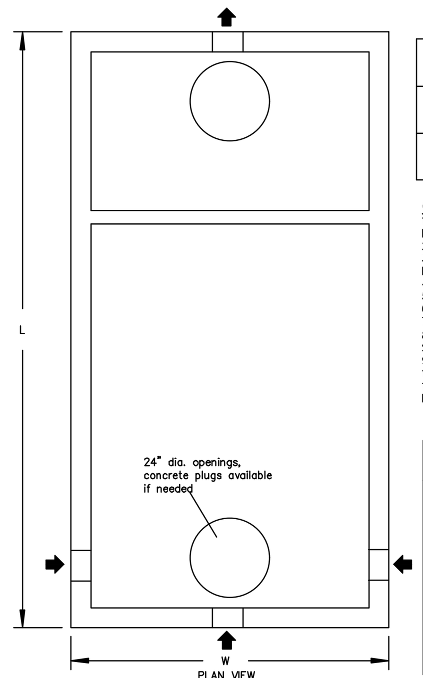
USE ONLY WET–CAST UNITS. DRY–CAST NOT ACCEPTABLE

1.

CONE DIMENSIONS	
DIAM. OPENING	HEIGHT
24"	24" OR 42"
30"	34"

2. INVERT SHALL BE FILLETED.
3. REINFORCEMENT FOR MANHOLE COMPONENTS SHALL BE DESIGNED BY A LICENSED PROFESSIONAL ENGINEER PRIOR TO CONSTRUCTION. SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW. STRUCTURE SHALL BE DESIGNED FOR HS20–44 VEHICULAR LOADING PLUS 25% IMPACT.
4. CONCRETE TO TEST **4,500 PSI** AT 28 DAYS IN CONFORMANCE WITH **A.S.T.M. C–478.**
5. BENCH SHALL BE BUILT FOR FLOW BETWEEN INLET AND OUTLET.
6. EACH MANHOLE EXTERIOR SHALL RECEIVE TWO BITUMINOUS COATS.

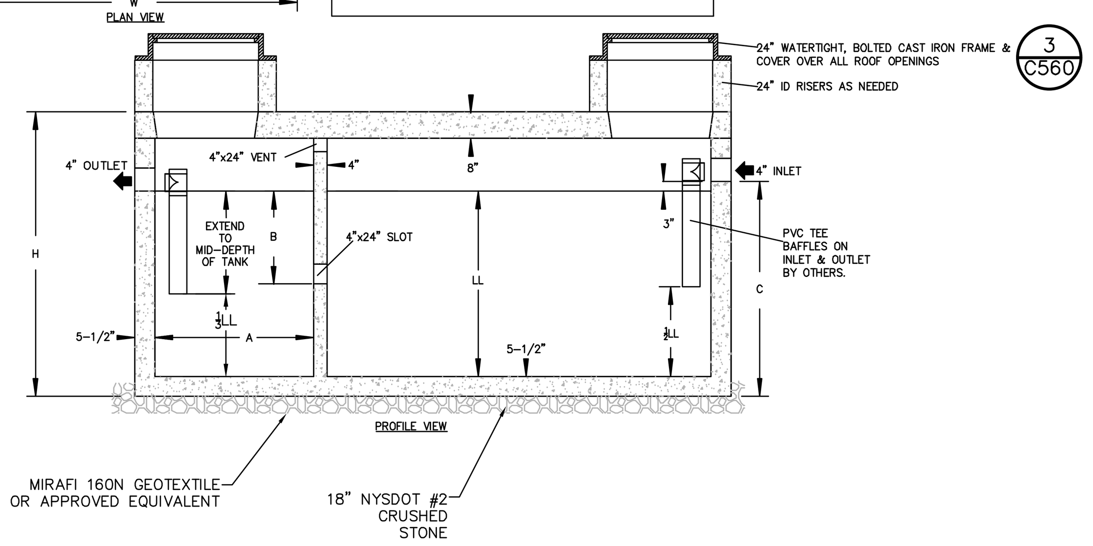
© 10 **PRECAST CONCRETE MANHOLE**
SCALE: NOT TO SCALE



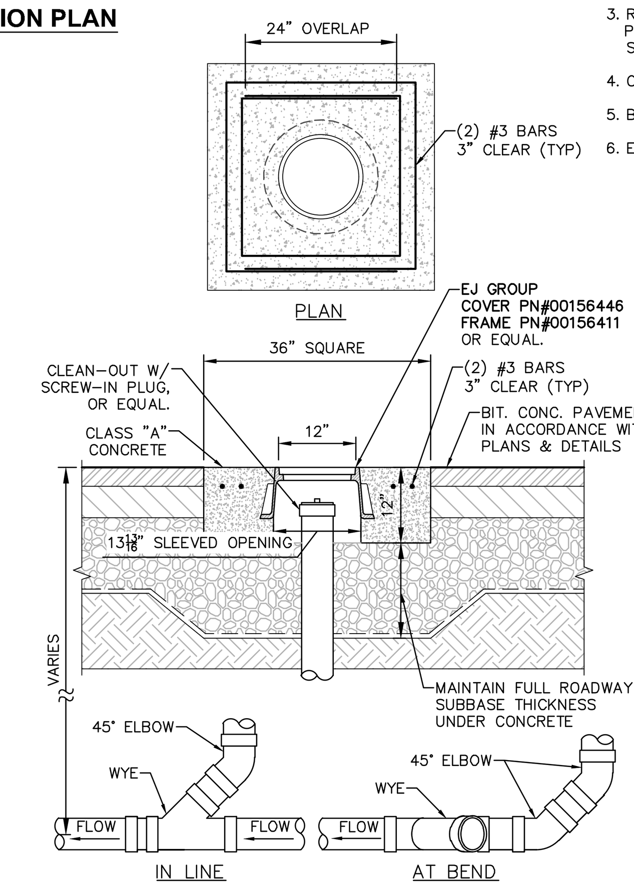
Gallons	L	W	H	LL	A	B	C	E
1000	10'–9"	5'–11"	4'–8"	35"	38"	16"	43"	18"
2000	12'–6"	6'–0"	7'–2"	58"	46"	31"	67"	29"

GREASE TRAP NOTES:
1. GREASE TRAPS SHALL BE AS MANUFACTURED BY WOODARDS CONCRETE PRODUCTS OR APPROVED EQUIVALENT.
2. DIMENSIONS SHOWN ARE PER STRUCTURES MANUFACTURED BY FORT MILLER CO.
3. BELOW GRADE STRUCTURES AND COVERS SHALL BE DESIGNED TO WITHSTAND AASHTO HS–44 HIGHWAY IMPACT PLUS 25% IMPACT.
4. ENTIRE EXTERIOR AND EXTENSION OF STRUCTURE SHALL RECEIVE TWO BITUMINOUS COATS.
5. CONCRETE TO TEST 4,500 PSI AT 28 DEEP IN CONFORMANCE WITH ASTMC–478.
6. CONTRACTOR RESPONSIBLE FOR ALL DEWATERING DURING EXCAVATION.
7. CONTRACTOR SHALL COMPACT THE BOTTOM OF EXCAVATION PRIOR TO PLACEMENT OF GEOTEXTILE.
8. IF THE SUBGRADE IS SOFT, COURSE RIP–RAP MATERIAL (MAX SIZE 6 INCHES) SHALL BE ROLLED INTO SUBGRADE THE UNTIL IT BECOMES FIRM.
9. GREASE TRAP SHALL PASS A 24 HOUR HYDROSTATIC TEST, UNLESS IT IS SEAMLESS.
10. GREASE TRAP SHALL HAVE 2 BITUMINOUS COATS APPLIED TO THE EXTERIOR OF THE STRUCTURE.
11. GREASE TRAPS SHALL BE PUMPED OUT EVERY 6 MONTHS. A LOG OF ALL INSPECTIONS AND THE RESULTS THEREOF SHALL BE KEPT ONSITE.

SPECIFICATIONS
CONCRETE MIN. STRENGTH: 4,000 PSI AT 28 DAYS
REINFORCEMENT: #4 & #5 REBAR / ASTM A615
AIR ENTRAINMENT: 6%
CONSTRUCTION JOINT: BUTYL RUBBER SEALANT
PIPE CONNECTION: POLYLOK SEAL OR AS NEEDED
LOAD RATING: HS20–44 + 30% / ASTM C857



© 11 **HEAVY DUTY CONCRETE GREASE TRAP**
SCALE: NOT TO SCALE



NOTES:
1. PIPE AND FITTINGS TO MATCH SERVICE LINE PER PLAN.
2. TO BE USED FOR GRAVITY PORTION OF SANITARY SYSTEM AS WELL AS THE STORM DRAINAGE SYSTEM.

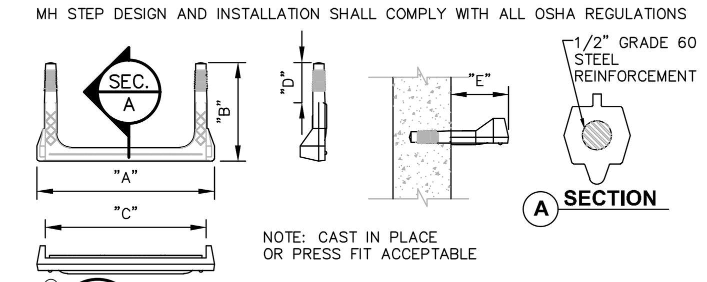
© 12 **CLEAN OUT - TRAFFIC AREAS**
SCALE: NOT TO SCALE

ACCEPTABLE MANHOLE STEPS

MANUFACTURER	PATTERN NUMBER	"A" STEP WIDTH	"B" LEG LENGTH	"C" RUNG CLEAR	"D" EMBED–MENT	"E" RUNG CLEAR
M.A. INDUSTRIES INC*	PS2–PF	14 3/4	9 1/4	13 3/4	3 3/8	5 7/8
M.A. INDUSTRIES INC*	PS2–PFS	14 3/4	8 1/4	13 3/4	3 3/8	4 7/8

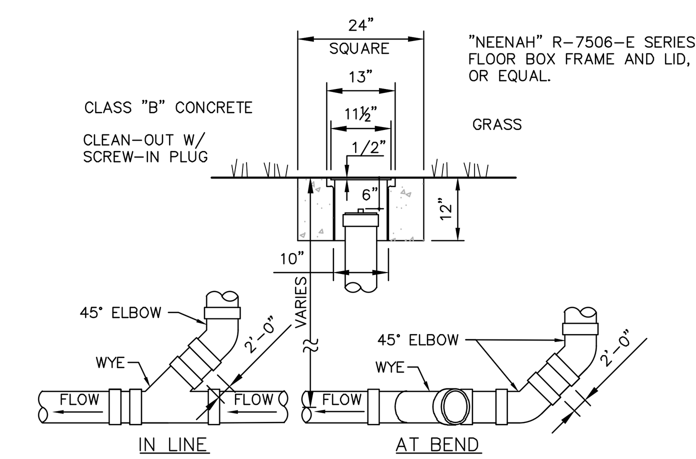
* OR EQUIVALENT

MH STEP DESIGN AND INSTALLATION SHALL COMPLY WITH ALL OSHA REGULATIONS



NOTE: CAST IN PLACE OR PRESS FIT ACCEPTABLE

© 13 **COPOLYMER POLYPROPYLENE MH STEP**
SCALE: NOT TO SCALE



NOTES:
1. SEWER PIPE FITTINGS TO BE ASTM D–3033 OR D–3034 SDR–35.
2. TO BE USED FOR GRAVITY PORTION OF SANITARY SYSTEM AS WELL AS THE STORM ROOF DRAINAGE SYSTEM.

© 14 **CLEAN OUT WITH CONCRETE - NON TRAFFIC AREAS**
SCALE: NOT TO SCALE

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CORPORATE ENGINEERING LICENSE NO. C-0430
LABELLA ASSOCIATES P.C. CERT. NO. 52904 NORTH CAROLINA CHARLOTTE N.C.

CONNECTICUT SPORTS GROUP
9 W BROAD STREET
SUITE 430
STAMFORD, CT 06902

BRIDGEPORT STADIUM & MIXED USE
255 & 363 KOSSUTH STREET
BRIDGEPORT, CT 06608

NO:	DATE:	DESCRIPTION:
Revisions		

PROJECT NUMBER: 2230111
DRAWN BY: AC
REVIEWED BY: JRS
ISSUED FOR: ISSUED FOR
DATE: 04/08/2024
DRAWING NAME:

SANITARY SEWER DETAILS

DRAWING NUMBER:
C570

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City of Bridgeport
OFFICE OF PLANNING & ECONOMIC DEVELOPMENT
Margaret E. Morton Government Center
999 Broad Street, Bridgeport, Connecticut 06604

JOSEPH P. GANIM
Mayor

THOMAS F. GILL
Director

WILLIAM J. COLEMAN
Deputy Director

TO: Honorable Members of the Planning and Zoning Commission

COPY: Paul Boucher, Zoning Administrator
William Coleman, Deputy Director of Economic Development

FROM: Jackson Strong, Design Review Coordinator

DATE: 9/10/2024

RE: Zoning Text Amendments

Petition of the Office of Planning and Economic Development to amend provisions of *Zone Bridgeport* related to Row Building site & development standards, procedures, and definitions.

Please find the following items contained in this report:

CITY OF BRIDGEPORT

File No. ____________

PLANNING & ZONING COMMISSION
APPLICATION

1. NAME OF APPLICANT: City of Bridgeport, OPED
2. Is the Applicant's name Trustee of Record? Yes ________ No ________.
   If yes, a sworn statement disclosing the Beneficiary shall accompany this application upon filing.
3. Address of Property: ____________
   (number) (street) (state) (zip code)
4. Assessor's Map Information: Block No. ____________ Lot No. ____________
5. Amendments to Zoning Regulations: (indicate) Article: See attached Section: ____________
   (Attach copies of Amendment)
6. Description of Property (Metes & Bounds): ____________
7. Existing Zone Classification: ____________
8. Zone Classification requested: ____________
9. Describe Proposed Development of Property: ____________

Approval(s) requested: Row Bldg Type Text Amendments

Signature: [signature] Date: 9/10/24

Print Name: Thomas F. Gill

If signed by Agent, state capacity (Lawyer, Developer, etc.) **Signature:** ____________

Print Name: ____________

Mailing Address: ____________

Phone: ____________ Cell: ____________ Fax: ____________

E-mail Address: ____________

$ ________ Fee received **Date:** ________ **Clerk:** ________

THIS APPLICATION MUST BE SUBMITTED IN PERSON AND WITH COMPLETED CHECKLIST

- ☐ Completed & Signed Application Form
- ☐ A-2 Site Survey
- ☐ Building Floor Plans
- ☐ Completed Site / Landscape Plan
- ☐ Drainage Plan
- ☐ Building Elevations
- ☐ Written Statement of Development and Use
- ☐ Property Owner's List
- ☐ Fee
- ☐ Cert. of Incorporation & Organization and First Report (Corporations & LLC's)

PROPERTY OWNER'S ENDORSEMENT OF APPLICATION

Print Owner's Name	Owner's Signature	Date
Print Owner's Name	Owner's Signature	Date

Section 3.70: Row Building Type

1. **§3.70.9**

   Description of Change: Create separate columns for NX1 and NX2 to allow for different standards to be established for the different zoning districts

2. **§3.70.9 (2)**

   Description of Change: Reduce primary streetwall percentage to avoid unnecessary variances

   Existing Text: 80% min, 85% min

   Proposed Text: 70% min.

3. **§3.70.8**

   Description of Change: Limit number of units to 2 per row house in NX1 zone; currently no limit exists for Row Buildings or Row Houses within Row Buildings

   Proposed Text: 2 Per Row House

4. **§3.70.9**

   Description of Change: Limit number of units to 3 per row house in NX2 zone; currently no limit exists for Row Buildings or Row Houses within Row Buildings

   Proposed Text: 3 Per Row House

5. **§3.70.6**

   Description of Change: Create separate column for NX3, Combine NX4 and RX2 columns; Combine NX2 and RX1 Columns

   Existing Text: NX3, NX4, RX1, RX2

   Proposed Text: NX3; NX4; RX2; NX2 RX1

6. **§3.70.6 (1)**

   Description of Change: Change max. no. of stories from 3 to 3.5 within NX3 zoning districts

   Existing Text: 3

   Proposed Text: 3.5

7. **§3.70.6 (1)**

   Description of Change: Change max. no. of stories from 3 to 5 within NX4 & RX2 zoning districts

   Existing Text: 3

   Proposed Text: 5

8. **§3.70.7 (5)**

   Description of Change: Allow flat, parapet roof types in NX1 zones

   Existing Text: Pitched

   Proposed Text: Pitched, flat, parapet

9. **§3.70.8 (2)**

   Description of Change: Change language to specify one entrance per row house

   Existing Text: One per unit on primary façade except 1 per every 3 units may be located off a courtyard.

   Proposed Text: One per Row House on primary façade except 1 per every 3 units may be located off a courtyard.

10. **§3.70.8 (2)**

    Description of Change: Remove restriction on number of row houses to allow for Row Building configuration to be based on size of lot

    Existing Text: 4 units max.; 8 units max.; 10 units max

11. **§3.70.10.D**

    Description of Change: Provide annotated design diagram for row building types

    Proposed Text: (Diagram)

    -Vertical division element between rowhouses

    -Entrance Locations

Chapter 12: Procedures

12. **Subdivisions**
    §11.100

    Description of Change: Exempt row buildings from §10.40 subdivision standards if lot is being subdivided along Party Walls.

Existing Text: The subdivision procedures of this section are intended to ensure that proposed subdivisions are reviewed to determine compliance with all applicable regulations, including the subdivision design regulations of 10.40. All subdivisions of land are subject to these procedures

Proposed Text: The subdivision procedures of this section are intended to ensure that proposed subdivisions are reviewed to determine compliance with all applicable regulations, including the subdivision design regulations of 10.40. All subdivisions of land are subject to these procedures except where land subdivisions are divided by a Party Wall.

Chapter 14: Measuring & Definitions

13. **Row House**
    §14.200

    Description of Change: Row House term needs definition

    Existing Text: N/A

    Proposed Text: Row House: A residential structure within a Row Building, designed to accommodate one or more independent dwelling units. Each Row House shares one or more common dividing walls with adjacent structures and is oriented to the street or courtyard featuring an entrance off the public sidewalk.

Row Building , Subdivision, and Definitions Text Amendments

	Category	Sub Category	Section	Description of Change	Proposed Text Amendment	Page
1	Row Building Standards	Use	§3.70.9	Create separate columns for NX1 and NX2	*NX1; NX2*	3-50
2		Building Location	§3.70.4 (2)	Reduce primary streetwall percentage	NX2 Column: ~~80% Min~~ *70% Min* NX3, NX4, RX1, RX2 Column: ~~85% Min~~ *70% Min*	3-46
3		Use	§3.70.8	Limit number of units to 2 per row house in NX1 zone	*2 Per Row House*	3-50
4		Use	§3.70.9	Limit number of units to 3 per row house in NX2 zone	*3 Per Row House*	3-50
5		Height	§3.70.6	Create separate column for NX3, Combine NX4 and RX2 colums; Combine NX2 and RX1 Columns	~~NX3, NX4,~~ ~~RX1, RX2~~;*NX3; NX4; RX2; NX2 RX1*	3-48
6		Height	§3.70.6 (1)	Change max. no. of stories from 3 to 3.5 within NX3 zoning districts	*3.5*	3-48
7		Height	§3.70.6 (1)	Change max. no. of stories from 3 to 5 within RX2 & NX4 zoning districts	5	3-48
8		Roofs	§3.70.7 (5)	Allow flat, parapet roof types in NX1 zones	Pitched, *flat, parapet*	3-48
9		Building Entrances Location	§3.70.8 (2)	Change language to specify one entrance per row house	One per ~~unit~~ *Row House* on primary façade except 1 per every 3 units may be located off a courtyard.	3-49
10		Façade Witdth Per Street Frontage	§3.70.4 (2)	Remove restriction on number of row houses	~~4 units max.; 8 units max.; 10 units max~~	3-46
11		Design Standards	§3.70.10.D	Provide annotated design diagram for row building types	(Diagram) -Vertical division element between rowhouses -Entrance Locations	3-52
12	Procedures	Subdivisions	§11.100	Exempt row buildings from §10.40 subdivision standards	The subdivision procedures of this section are intended to ensure that proposed subdivisions are reviewed to determine compliance with all applicable regulations, including the subdivision design regulations of 10.40. All subdivisions of land are subject to these procedures *except where land subdivisions are divided by a Party Wall.*	11-15
13	Definitions	Row House	§14.200	define term	*Row House: A* **residential** *structure within a Row* **Building, designed** *to accommodate one or more independent* **dwelling** *units. Each Row House shares one or more common dividing walls with adjacent structures and is oriented to the street or courtyard featuring an entrance off the* **public** *sidewalk.*	14-15