



**TOWN OF WEST NEWBURY
PLANNING BOARD
Tuesday January 3rd, 2023 7:00 p.m.
AGENDA**

by Remote Participation (see below)

1. 7:15 PM Continued Public Hearing - Special Permit for Lighting at Pentucket Regional Middle High School
2. Review of Draft Line-Item Budget and Breakdown of Expenditures
3. Review Final Draft of Action Plan for MBTA Communities Compliance
4. Discussion on Chapter 91 License for Middle Street Bridge over Artichoke/Upper Artichoke Reservoir
5. Discussion on ADU "Accessory Dwelling Units"
6. General Business:
 - Town Planner Updates; if any
 - Minutes – December 20, 2022; Others, if any
 - Correspondence
 - Administrative Details
 - Placement of Items for Future Planning Board Agendas
 - Items not Reasonably Anticipated by the Chair 48 Hours in Advance of a Meeting

The Planning Board reserves the right to take Agenda items out of order.

Addendum to Meeting Notice Regarding Remote Participation

Pursuant to Chapter 22 of the Acts of 2022 (parts of which were extended on July 15, 2022) An Act Extending Certain COVID - 19 Measures Adopted During the State of Emergency," this meeting of the West Newbury Planning Board will be conducted via remote participation to the greatest extent possible. Specific information and the general guidelines for remote participation by members of the public and/or parties with a right and/or requirement to attend this meeting can be found on the Town of West Newbury website, at www.wnewbury.org. Members of the public who wish to view and/or listen to the meeting may do so using Zoom, by calling the telephone number or using the VideoLink listed below:

Zoom Meeting Instructions:

Phone: 1+(646) 558-8656

VideoLink: <https://us06web.zoom.us/j/87013102490?pwd=RTR2dEJjaEJ1akJVYTdFMmZlcDNrQT09>

Meeting ID: 870 1310 2490

Passcode: 271425

No in-person attendance of members of the public will be permitted, but every effort will be made to ensure that the public can adequately access the proceedings in real time, via technological means. In the event that we are unable to do so, despite best efforts, we will post on the Town of West Newbury website an audio or video recording, transcript, or other comprehensive record of proceedings as soon as practicable after the meeting.

APPENDIX A
(Adopted December 21, 2011)

TOWN OF WEST NEWBURY PLANNING BOARD
APPLICATION FOR SPECIAL PERMIT and/or SITE PLAN REVIEW

Application for: Special Permit Site Plan Review Both

Please type or print clearly.

Pentucket Regional School District,

1. Applicant: Superintendent Justin Batholomew

Applicant's Address: 22 Main Street, West Newbury, MA 01985

Telephone Number: 978-363-2280

2. Owners of the Land: Pentucket Regional School District

Address: 24 Main Street, West Newbury, MA 01985

Telephone Number: 978-363-2280

Number of years of Ownership: _____

3. Year Lot was Created: _____

4. Description of Proposed Project, including applicable section(s) of the Zoning

Bylaw: Proposed athletic field lighting for new fields that have
been previously approved with the high school/ middle
school building project.

5. Description of Premises: Existing high school/middle school building are
make of brick with flat roofs. Site consists of
bituminous parking and driveways with grass and
turf athletic fields and vegetation

6. Address of Property Affected: 0, 22, 30 Main Street, West Newbury

Zoning District: Res B and RES C

Assessors: Map: 05720 Lot #: 0331

Registry of Deeds: Book: 4239 Page: 90

Plan Book and Plan Number _____

7. Existing Lot:

Lot Area (sq. ft.) 851,626

Street Frontage _____

Front Setback _____

Floor Area Ratio _____

Building Height 40'

Side Setbacks 77' (closest prop line)

Rear Setback _____

Lot Coverage _____

8. Proposed Lot (if applicable):

Lot Area (sq. ft.) no change
Street Frontage _____
Front Setback _____
Floor Area Ratio _____

Building Height: _____
Side Setbacks _____
Rear Setback _____
Lot Coverage _____

9. Required Lot (as required by Zoning Bylaw):

Lot Area (sq. ft.) 40,000sf/20,000sf
Street Frontage 200'/150'
Front Setback 40'/40'
Floor Area Ratio 25%/30%

Building Height 35', Dover Ammendment
Side Setbacks 20'/20'
Rear Setback 20'/20'
Lot Coverage 30%/35%

10. Existing Building (if applicable):

Ground Floor (sq.ft.) 104,839
Total sq. ft. 211,700
Use: Education

of Floors 3
Height 49'7"
Type of Construction IIA, IIB, IV

11. Proposed Building:

Ground Floor (sq.ft.) no change
Total sq. ft. _____
Use: _____

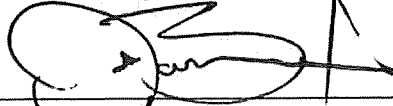
of Floors _____
Height _____
Type of Construction _____

12. Has there been a previous application for a Special Permit or Site Plan Review from the Planning Board on these premises? Yes If so, when, what type of construction, and the action made?

Construction of new middle school / high school building, parking and fields

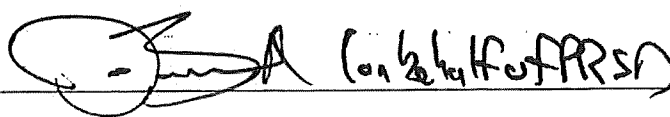
13. Applicant and Landowner signature(s):

Every Application for a Special Permit/Site Plan Review shall be made on this form which is the official form of the Planning Board. Every Application shall be filed with the Town Clerk's Office. It shall be the responsibility of the Applicant to furnish all supporting documentation with this application. The dated copy of this Application received by the Town Clerk or Planning Office does not absolve the Applicant from this responsibility. The Applicant shall be responsible for all expenses for filing and legal notification. Failure to comply with application requirements, as cited herein and in the Planning Board Regulations, may result in a dismissal by the Planning Board of this Application as incomplete.


Applicant's Signature: 

Print or type name here: Dr. Justin Bantylomen

Date: 11/28/22

Owner's Signature: 

Print or type name here: Dr. Justin Bartholomew

Owner's Signature: 

Print or type name here: Dr. Justin Bartholomew

Date: 21 November 2022

(Please note that all Owners of Record must sign the Application.)

15. Please list title of plans and documents you will be attaching to this Application.

**Pentucket Regional School District Special Permit Modification
November 29, 2022**

Supplemental Information

- 1. Specific Field and Bleacher Photometric plans (see pgs. 13-17)**
- 2. Overall Site Photometric Plan (see pg. 18)**
- 3. Equipment Layout Plan (see pg. 19)**
- 4. Technical Information (balance of Musco report)**
- 5. Foot Candle Reference Guide (Wisconsin Lighting Lab)**

RECEIVED

09/20/2022

DORE + WHITTIER
NEWBURYPORT, MA



W.T. RICH COMPANY, INC.

SUBMITTAL COVER SHEET

PROJECT:

Pentucket Regional School District Building Project
24 Main Street
West Newbury, MA 01985
WTR Project No. 201805

ARCHITECT:

Dore & Whittier Architects, Inc.
260 Merrimac Street
Building 7, 2nd Floor
Newburyport, MA 01950

CONSTRUCTION MANAGER:

W.T. Rich Company, Inc.
1075 Worcester Street, Suite 310
Natick, MA 01760

DATE OF SUBMISSION:

9/19/2022

SUBMISSION BY:

W.T. Rich Company, Inc.

SUBMITTAL DESCRIPTION:

265600-5.0 - Musco Sports Lighting Complete Package (For Record)

SPECIFICATION SECTION:

265600 - Exterior Lighting

SPECIFICATION PARAGRAPH:

LEED DATA SHEET PROVIDED:

YES NO

REMARKS:

Refer to comments on electrical review cover sheet.

- Reviewed (No Comments)
- Reviewed (See Comments)
- Reviewed (Accepted for Record)
- Reviewed (Revise & Resubmit)
- Rejected

Checked only for conformance with the design concept of the project and with the information provided in the Contract Documents. Review of shop drawings or other submittals shall not release the Contractor from responsibility for deviations from Drawings and Specifications, errors in shop drawings or schedules, quantities, dimensions, fabrication, installation, and coordination requirements. The Contractor shall check and verify all field measurements.

Joshua P Hagan

Digitally signed by Joshua P Hagan
DN: cn=US,
E=jphagan@doreandwhittier.com, o="Dore
& Whittier Architects, Inc.", CN=Joshua P
Hagan
Reason: I have reviewed this document
Date: 2022.09.22 15:11:36 -0400

Signature + Date

DORE + WHITTIER

Vermont | Massachusetts

doreandwhittier.com



FOR REVIEW AND APPROVAL

Pentucket Regional School District Building Project

This submittal has been reviewed by W.T. Rich Co. for general conformance with the information provided in the Contract Documents. All field dimensions, verification and conditions have been or will be verified prior to fabrication.

Ben Danforth

W.T. RICH COMPANY, INC.



Submittal Transmittal

Vanderweil Engineers | Boston MA 02210 United States

PROJECT: 29129 - Pentucket Regional HS Study/SD 29129.00 DATE SENT: 9/22/2022

SUBJECT: Musco Sports Lighting Complete Package (For Record) SUBMITTAL ID: 265600-5.0

TYPE: Submittal TRANSMITTAL ID: 01429

PURPOSE: Approved as Noted - Reviewed and found generally acceptable. Minor deviations may be noted. No further submittal required if notations are complied with. VIA: Email

SPEC SECTION: 265600

FROM

NAME	COMPANY	EMAIL	PHONE
DL-Bos-ShopDrawings	Vanderweil Engineers	DL-Bos-ShopDrawings@Vanderweil.com	

TO

NAME	COMPANY	EMAIL	PHONE
Josh Hagan	Dore & Whittier Architects, Inc.	jhagan@doreandwhittier.com	(978) 499-2999

REMARKS:

**Response (Approved as Noted - Reviewed and found generally acceptable. Minor deviations may be noted. No further submittal required if notations are complied with.)
from: Joanna Gustafson (Vanderweil Engineers)**

Remarks:

1. No Comments - Submittal reviewed for record. Equipment is purchased by owner and specified by MUSCO, Installed by Division 26.

CONTENTS

QUANTITY: 1 DATED: 9/22/2022 NUMBER:

DESCRIPTION:

265600-5.0 - Musco Sports Lighting Complete Package (For Record)-RGV.pdf

ACTION:

REMARKS:

Submittal Transmittal

DATE: 9/22/2022
ID: 01429

COPIES:

DL-Bos-ShopDrawings (Vanderweil Engineers)



W.T. Rich Company
 1075 Worcester Street, Suite 310
 Natick, Massachusetts 01730
 P: (617) 467-6010

Project: 201805 Pentucket Regional Middle-High School
 24 Main Street
 West Newbury, Massachusetts 01985

Submittal #265600-5.0 - Musco Sports Lighting Complete Package (For Record) 265600 - Exterior Lighting

Revision	0	Submittal Manager	Ben Danforth (W.T. Rich Company, Inc.)
Status	Open	Date Created	Sep 19, 2022
Issue Date	Sep 19, 2022	Spec Section	265600 - Exterior Lighting
Responsible Contractor	Dore & Whittier Architects, Inc.	Received From	Josh Hagan (Dore & Whittier Architects, Inc.)
Received Date		Submit By	
Final Due Date	Oct 3, 2022	Lead Time	
		Cost Code	
Location		Type	Other
Approvers	Josh Hagan (Dore & Whittier Architects, Inc.), Vanderweil Team Inbox (R.G. Vanderweil Engineers, LLP)		
Ball in Court	Vanderweil Team Inbox (R.G. Vanderweil Engineers, LLP)		
Distribution	Matt Waltermire (W.T. Rich Company, Inc.), Steve Theran (The Vertex Companies, Inc.), Steve Taylor (W.T. Rich Company, Inc.), Laurie Soave (The Vertex Companies, Inc.), Suzanne Sarles (The Vertex Companies, Inc.), Eric Rubin (The Vertex Companies, Inc.), Ken Nobrega (W.T. Rich Company, Inc.), Kyle Manny (W.T. Rich Company, Inc.), Kyle Leone (W.T. Rich Company, Inc.), Jon Lemieux (The Vertex Companies, Inc.), Josh Hagan (Dore & Whittier Architects, Inc.), Brad Dore (Dore & Whittier Architects, Inc.), Ben Danforth (W.T. Rich Company, Inc.), Dan Blumberg (W.T. Rich Company, Inc.)		

Description

Submittal Workflow

Name	Sent Date	Due Date	Returned Date	Response	Attachments
General Information					265600-5.0 - Musco Sports Lighting Complete Package (For Record).pdf
Josh Hagan	Sep 19, 2022	Oct 3, 2022	Sep 20, 2022	Forwarded For Review	265600-5.0 - Musco Sports Lighting Complete Package (For Record).pdf (Current)
Comment	Please review as high priority				
Vanderweil Team Inbox	Sep 20, 2022	Sep 30, 2022		Pending	

<input checked="" type="checkbox"/> Approved as Noted <input type="checkbox"/> Reviewed for Informator <input type="checkbox"/> Rejected: Revise and Resubmit <input type="checkbox"/> Rejected	Project Number: 23129.00 Submittal ID: 265600-5.0
<p><small>This review is only for general coordination with the design concept, and the information given in the Construction Documents. Corrections or comments made on the shop drawings during this review as well as approval. They will do not relieve us of our responsibility for compliance with the requirements of the plans and specifications and applicable laws, codes and regulations. Review of a specific item shall not indicate review or an assembly of which the item is a component. The Contractor is responsible for determining to be confirmed and so raised at the jobsite; information that pertains to any in the fabrication processes or in the materials, methods, techniques, sequences or procedures of construction; coordination of the Work with that of all other trades; and performing all Work in a safe and satisfactory manner.</small></p>	
Date 9/22/2022 By: JG R.G. Vanderweil Engineers, LLP	

Project Submittal: Approval Letter

September 16, 2022

Josh Hagan
Dore and Whitter Architects Inc
260 Merrimac Street
Newburyport, MA 01950

RE: Pentucket Regional High School Football
Project #102066

Dear Josh Hagan

This serves as approval for submittals provided by Musco Sports Lighting, LLC. Please review the enclosed documents and note changes where appropriate. Upon your approval, we can begin fabrication of the materials for your project. Any changes may result in delay of production, delivery, and additional costs.

We shall deliver equipment to the job site 10 - 12 weeks, after submittal approval or release of order.

Please indicate your approval of these submittals in their entirety by signing below.

Authorized Signature

Date

Printed Name

Company Name

Please return one copy of this form to:

Musco Sports Lighting, LLC
2107 Stewart Road
Muscatine, Iowa 52761

Toll Free: 800-756-1205
Fax: 800-374-6402
Email: pete.robles@musco.com



MUSCO LIGHTING SUBMITTAL FOR PRODUCTION

PREPARED FOR:

Pentucket Regional High School Football

Lighting Project
West Newbury, MA
September 16, 2022

Project #102066

Submitted by:

Musco Sports Lighting, LLC

Attn: Pete Robles
2107 Stewart Road
Muscatine, Iowa 52761

Toll Free: 800-756-1205
Fax: 800-374-6402



We Make It Happen.



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A. BILL OF MATERIALS

Equipment Description	
80	Light-Structure System™ Total Light Control™ TLC-LED-1200 luminaires
16	Light-Structure System™ Total Light Control™ TLC-BT-575 luminaires
2	Light-Structure System™ Total Light Control™ TLC-RGBW luminaires
4	70 ft galvanized steel poles
4	80 ft galvanized steel poles
2	90 ft galvanized steel poles
10	Pre-cast concrete foundations (9,500 PSI) with integrated grounding
✓	Factory wired and assembled pole top luminaire assemblies
✓	Factory wired electrical component enclosures
✓	Factory built wire harnesses with plug-in connections
Control and monitoring cabinet Show-Light – Football & Soccer	
1	24 x 48 Control and monitoring cabinet Show-Light™ entertainment package
6	30-amp contactors
2	On-Off-Auto (OOA) switches
Control and monitoring – Baseball & Soccer 2	
1	24 x 48 Control and monitoring cabinet
✓	High/medium/low dimming
6	30-amp contactors
2	On-Off-Auto (OOA) switches
Warranty	
✓	Musco's Constant 25™ product assurance and warranty program that eliminates 100% maintenance costs for 25 years, including labor, materials, monitoring and guaranteed light levels.





B. LIGHTING DESIGN



Pentucket Regional HS FB
West Newbury, MA

Lighting System

Pole/Fixture Summary						
Pole ID	Pole Height	Mnt Height	Fixture Qty	Luminaire Type	Load	Circuit
A1-A2	80'	80'	3	TLC-LED-1200	5.95 kW	C
B1-B2	90'	90'	8	TLC-LED-1200	0.98 kW	C
C1-C2	80'	16'	2	TLC-LED-1200	3.35 kW	B
		80'	7	TLC-LED-1200	1.15 kW	B
F1-F2	70'	16'	1	TLC-LED-1200	8.19 kW	B
		70'	10	TLC-LED-1200	0.98 kW	B
F3-F4	70'	16'	2	TLC-LED-1200	11.70 kW	A
		70'	10	TLC-LED-1200	1.15 kW	A
		16'	2	TLC-LED-1200	11.70 kW	A
		60'	1	TLC-RGBW	1.15 kW	A
		60'	1	TLC-RGBW	0.64 kW	D
10			98		104.48 kW	

Circuit Summary			
Circuit	Description	Load	Fixture Qty
A	Soccer 1	51.4 kW	48
B	Baseball / Soccer 2	38.55 kW	35
C	Baseball	12.85 kW	12
D	Blaschens	1.28 kW	2

Fixture Type Summary						
Type	Source	Wattage	Lumens	L20	L50	Quantity
TLC-LED-1200	LED 8700K -75 CRI	1170W	136,000	>120,000	>120,000	90
TLC-RGBW	LED 8700K -75 CRI	640W	28,500	>120,000	>120,000	2
TLC-RT-575	LED 5700K -75 CRI	575W	52,000	>120,000	>120,000	18

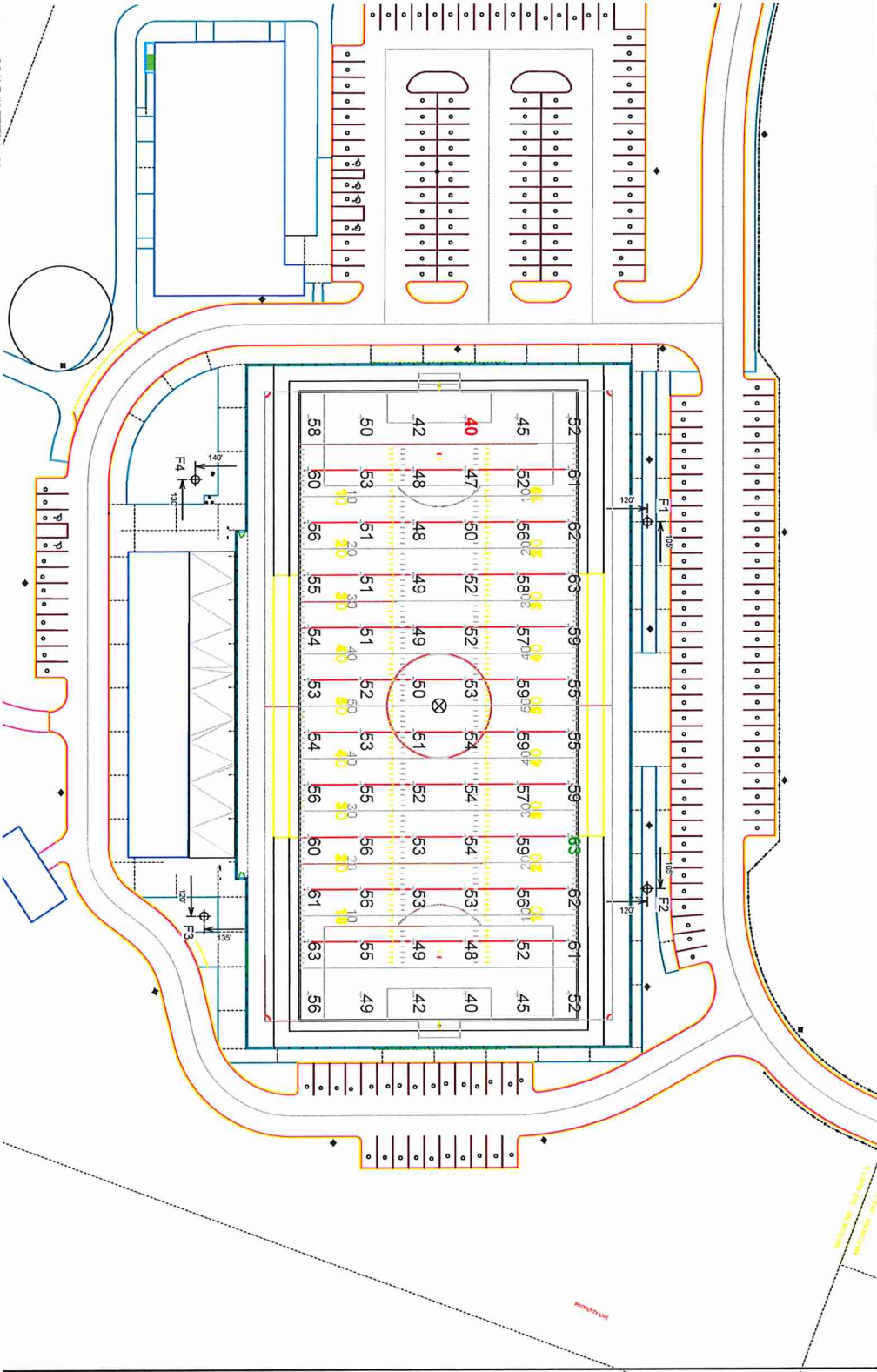
Light Level Summary

Calculation Grid Summary											
Grid Name	Calculation Method	Illumination					Circuits	Fixture Qty			
		Ave	Min	Max	Max/Min	Avg/Min					
Baseball (Infield)	Horizontal Illuminance	51.7	39	62	1.57	1.33	B,C	48			
Baseball (Outfield)	Horizontal Illuminance	31	22	43	1.98	1.41	B,C	48			
Football	Horizontal Illuminance	53.6	40	63	1.58	1.34	A	48			
Home Blaschens	Horizontal	28.5	7	50	7.61	4.07	A,D	50			
Soccer 1	Horizontal Illuminance	53	41	62	1.52	1.29	A	48			
Soccer 2	Horizontal Illuminance	30.3	25	37	1.46	1.21	B	38			
Zero Grid	Horizontal Illuminance	5.81	0	64	0.00		A,B,C	98			

From Hometown to Professional



EQUIPMENT LIST FOR AREAS SHOWN								
QTY	LOCATION	SIZE	ELECTRICAL ELEVATION	MOUNTING HEIGHT	LUMINAIRE MAKE / MODEL	NO. OF LUMINAIRES	WATTAGE	OTHER
2	F1-F2	7'0"	15.5'	7'0"	TLC-RB-575	2	2	0
2	F3-F4	7'0"	15.5'	7'0"	TLC-RB-575	2	2	0
					TLC-LED-200	10	10	0
					TLC-RB-575	2	2	0
					TLC-LED-200	10	10	0
4	TOTALS					50	48	2



SCALE IN FEET 1 : 60
 0' 60' 120'

ENGINEERED DESIGN BY: FILE #1020668 - 27-JUL-22

Pole location(s) ⚡ dimensions are relative to 0.0' reference point(s) ⊗

Pentucket Regional HS FB
 West Newbury, MA

GRID SUMMARY
 Name: Football
 Size: 360' x 160'
 Spacing: 30.0' x 30.0'
 Height: 3.0' above grade

LUMINATION SUMMARY
 MAINTAINED HORIZONTAL FOOTCANDLES
 Entire Grid

Guaranteed Average: 50
 San Average: 53.60
 Maximum: 63
 Minimum: 40
 Avg / Min: 1.34

Guaranteed Max / Min: 2
 Max / Min: 1.58
 UG (adjacent pts): 1.19
 CU: 0.61
 No. of Points: 72

LUMINAIRE INFORMATION
 Applied Circuits: A
 No. of Luminaires: 48
 Total Load: 51.4 KW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.5% dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-8-15.

Electrical System Requirements: Refer to Ampereage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

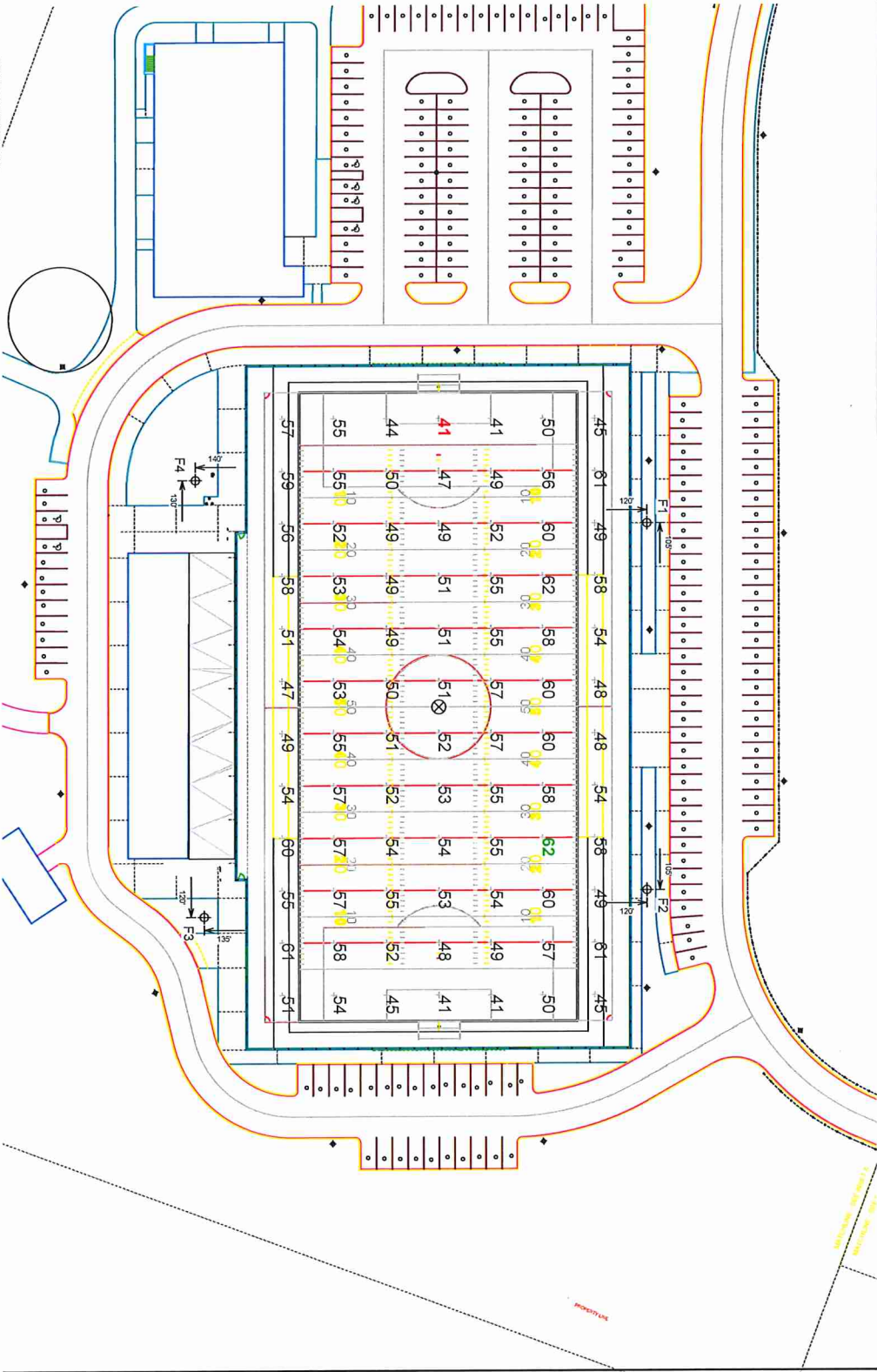
Installation Requirements: Results assume ± 3% nominal voltage at the side of the driver and structures located within 3 feet (1m) of design locations.

MUSCO Lighting
 We Make It Happen.

ILLUMINATION SUMMARY

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EQUIPMENT LIST FOR AREAS SHOWN					
QTY	LOCATION	SIZE	FOOTING	HEIGHT	WARRANTY
2	F1-F2	70"	0"	15.52'	TLC-ED-575
2	F3-F4	70"	0"	15.52'	TLC-ED-1200
TOTALS					
50					
48					
2					



SCALE IN FEET 1 : 60
 0' 60' 120'

ENGINEERED DESIGN BY: File #1020668 - 27-JUL-22

Pentucket Regional HS FB
 West Newbury, MA

GRID SUMMARY
 Name: Section 1
 Size: 360' x 200'
 Spacing: 30.0' x 30.0'
 Height: 3.0' above grade

ILLUMINATION SUMMARY

MAINTAINED HORIZONTAL FOOTCANDLES

Guaranteed Average:	50
San Average:	52.95
Maximum:	62
Minimum:	41
Avg / Min:	1.30
Guaranteed Max / Min:	2
UG (adjacent pt):	1.52
CU:	1.34
CU:	0.70
No. of Points:	84

LUMINAIRE INFORMATION

Applied Circuit:	A
No. of Luminaires:	48
Total Load:	51.4 KW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.3% dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

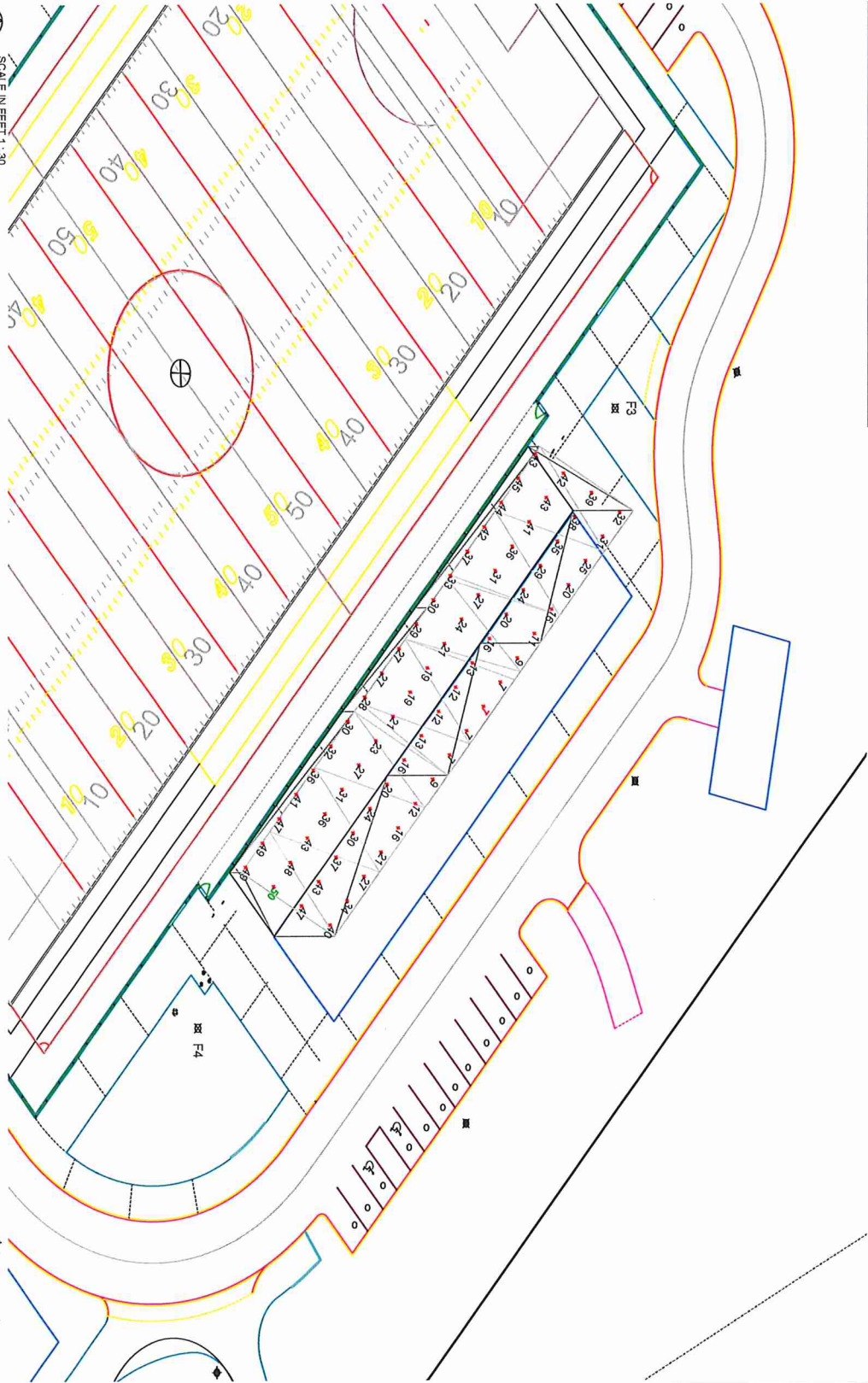
Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

MUSCO Lighting
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ILLUMINATION SUMMARY

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EQUIPMENT LIST FOR AREAS SHOWN									
QTY	LOCATION	SIZE	SCALE	MOUNTING HEIGHT	ELEVATION	Luminaires			
						LMN	HT	HTS	OTHER
2	F1-F2	70"	-	15.5'	TLC-RF-975	2	10	2	0
2	F3-F4	70"	-	15.5'	TLC-LED-2000	2	10	2	0
				90"	TLC-RF-975	1	10	2	0
				90"	TLC-RF-975	1	10	2	0
				90"	TLC-LED-2000	1	10	2	0
				90"	TLC-LED-2000	1	10	2	0
TOTALS						50	50	0	0



SCALE IN FEET 1:30
 0' 30' 60'

ENGINEERED DESIGN BY: FILE #1020668 - 27-JUL-22

Pole heights (⊕) dimensions are relative to 0.0 reference points (⊗)

Pentucket Regional HS FB

West Newbury, MA

GRID SUMMARY
 Name: Home Bleachers
 Spacing: 100' x 100'

ILLUMINATION SUMMARY

MAINTAINED HORIZONTAL FOOTCANDLES	
Spot Average:	28.67
Minimum:	50
Maximum:	7
Avg / Min:	4.32
UG (adjacent psi):	1.84
CU:	0.03
No. of Points:	72

LUMINAIRE INFORMATION
 Applied Circuits: A, D
 No. of Luminaires: 50
 Total Load: 52.68 kW

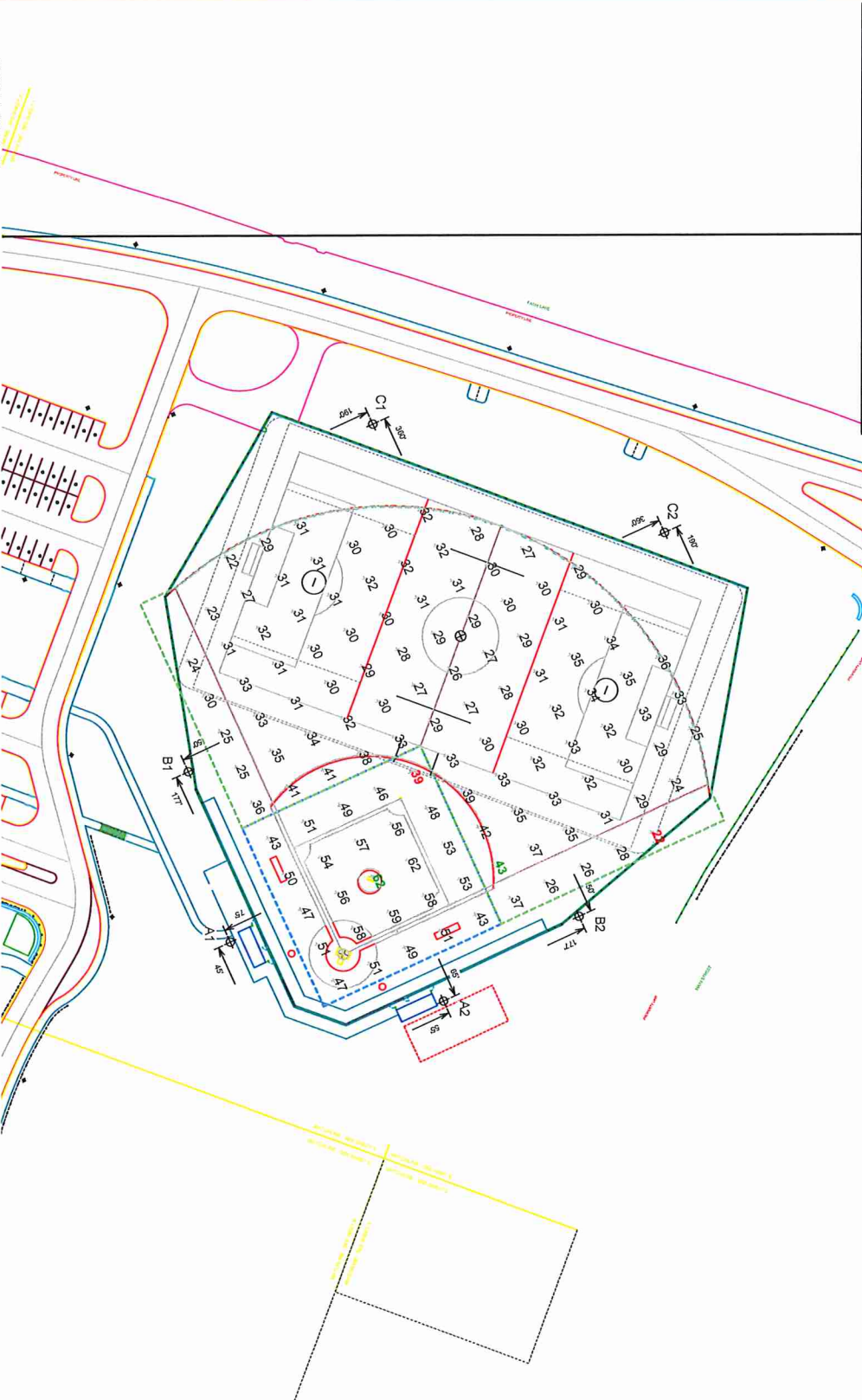
Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.5% dirt depreciation factor.
Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.
Electrical System Requirements: Refer to Ampereage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.
Installation Requirements: Results assume a 3% nominal voltage at the side of the driver and structures located within 3 feet (2m) of design locations.

MUSCO
 Lighting
 We Make It Happen.

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ILLUMINATION SUMMARY

EQUIPMENT LIST FOR AREAS SHOWN									
QTY	LOCATION	SIZE	SPACING	MOUNTING HEIGHT	LUMINAIRE	LUMINAIRE			
						QTY	HUB	OTHER	OTHER
2	A1-A2	80'	0'	15.5'	TLC-ER-975	1	1	0	0
2	B1-B2	90'	0'	15.5'	TLC-ER-975	2	2	0	0
2	C1-C2	80'	0'	15.5'	TLC-ER-975	2	2	0	0
					TLC-ED-2000	5	5	0	0
					TLC-ER-975	8	8	0	0
					TLC-ER-975	7	7	0	0
					TLC-ED-2000	7	7	0	0
5	TOTALS					48	48	0	0



ENGINEERED DESIGN BY: FILE #1020968 - 27-JUL-22

Pentucket Regional HS FB
 West Newbury, MA
GRID SUMMARY
 Name: Baseball
 Spacing: 30.0' x 30.0'
 Height: 3.0' above grade

ILLUMINATION SUMMARY

MAINTAINED HORIZONTAL FOOTCANDLES

Guaranteed Average:	50	Outfield	30
Spot Average:	51.74		31.03
Maximum:	62		43
Minimum:	39		22
Avg / Min:	1.31		1.44
Guaranteed Max / Min:	2		2.5
UG (adjacent psi):	1.57		1.98
CU:	1.23		1.48
No. of Points:	25		94

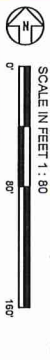
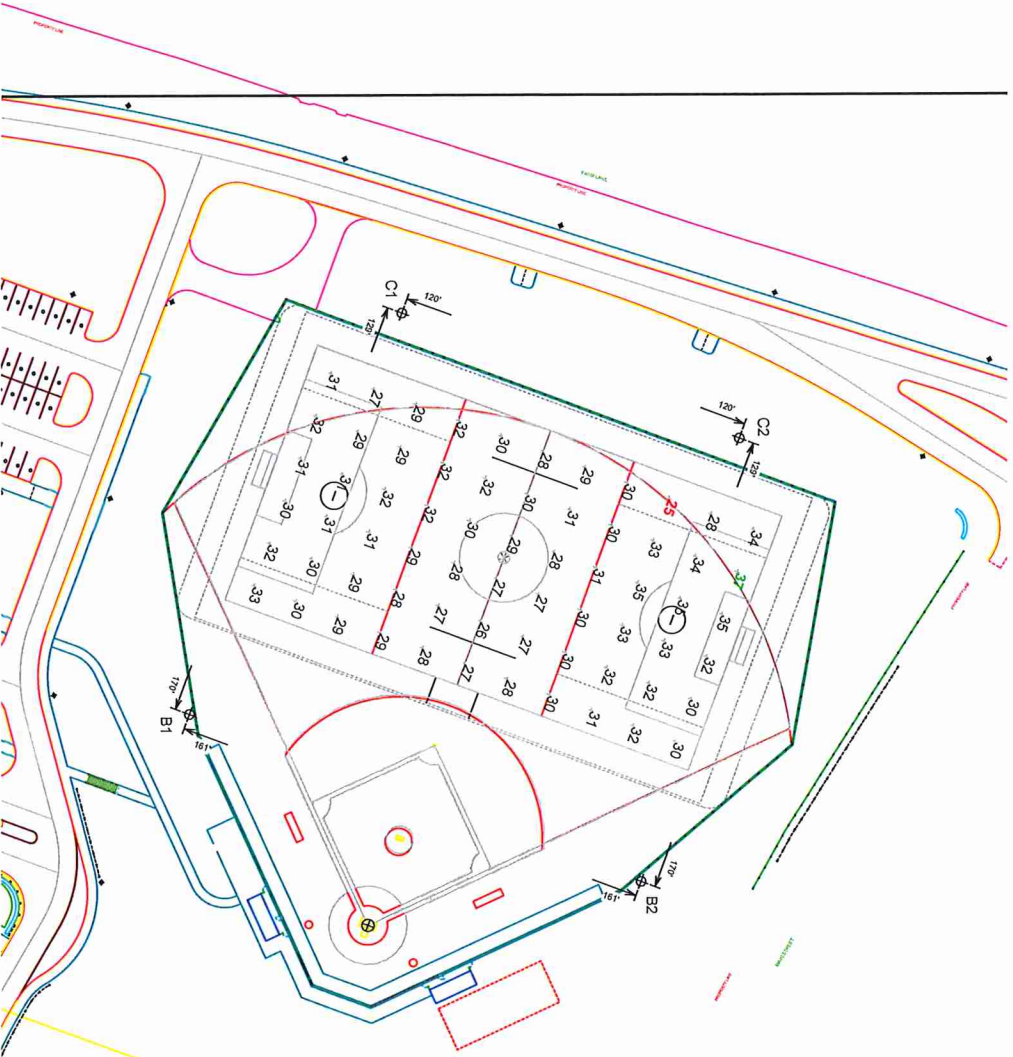
LUMINAIRE INFORMATION
 Applied Circuits: B, C
 No. of Luminaires: 48
 Total Load: 51.4 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.35 dirt depreciation factor.
Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.
Electrical System Requirements: Refer to Ampereage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.
Installation Requirements: Results assume ± 3% nominal voltage at the side of the driver and structures located within 3 feet (1m) of design locations.



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ILLUMINATION SUMMARY

EQUIPMENT LIST FOR AREAS SHOWN		Pole		Luminaires						
QTY	LOCATION	SIZE	HEIGHT	MANUFACTURER	MODEL	QTY	QTY	QTY	QTY	QTY
2	B1-B2	90"	15.48'	TLC-DR-975	TLC-LED-1200	2	2	8	8	0
2	C1-C2	80"	0'	15.48'	TLC-DR-975	1	1	1	1	0
4				80"	TLC-LED-1200	36	36	36	36	0
TOTALS						36	36	36	36	0



Pole location(s) with dimensions are relative to 0/0 reference point(s)

Pentucket Regional HS FB
West Newbury, MA

GRID SUMMARY
Name: Soccer 2
Site: 330' x 180'
Spacing: 30.0' x 30.0'
Height: 3.0' above grade

ILLUMINATION SUMMARY

MAINTAINED HORIZONTAL FOOT-CANDLES
Entire Grid

Guaranteed Average: 30
Scan Average: 30.33
Maximum: 37
Minimum: 25
AVG / MIN: 1.21
Guaranteed Max / Min: 2.5
Max / Min: 1.46
UG (adjacent psi): 1.32
CU: 0.42
No. of Points: 66

LUMINAIRE INFORMATION
Applied Circuits: B
No. of Luminaires: 36
Total Load: 38.53 KW

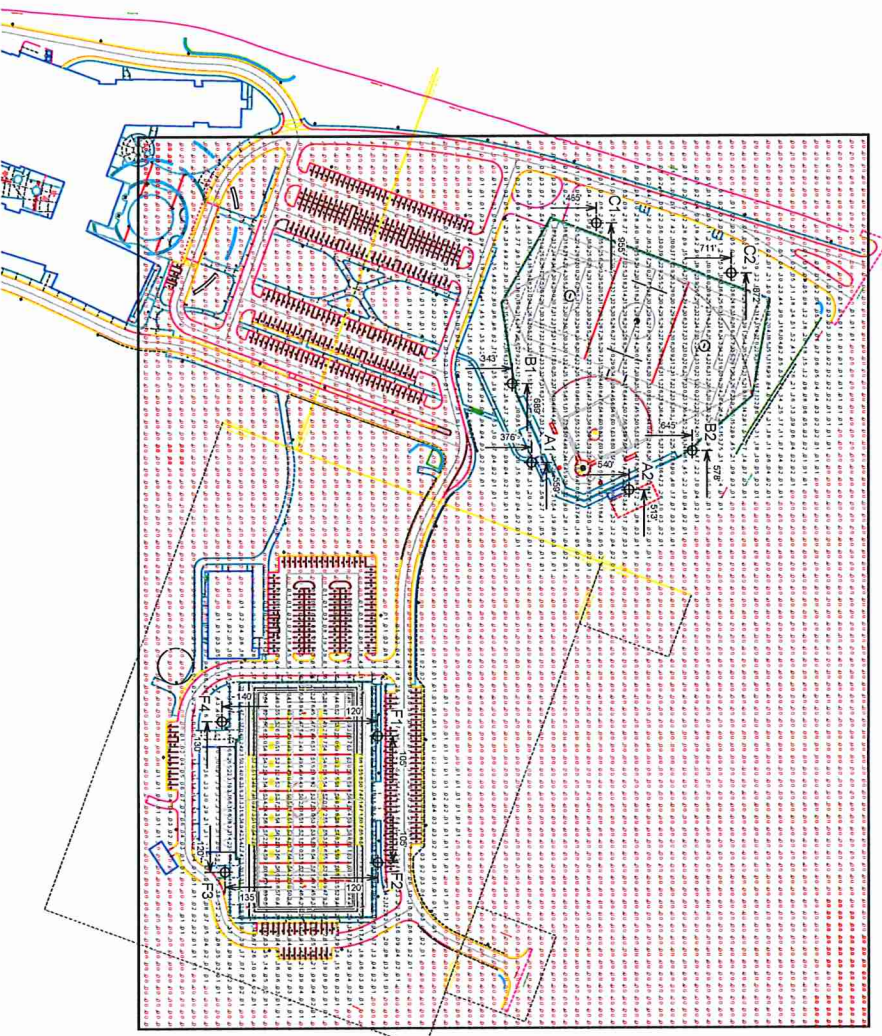
Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.5% dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

QTY	LOCATION	Pole	SIZE	GRADE	ELEVATION	Luminaires				
						MOONING	DRY	TRIP	OTHER	TOTAL
2	A1-A2	80'	0"	15.48'	TLC-RF-575	1	1	0	0	2
2	B1-B2	90'	0"	15.48'	TLC-LED-1200	5	5	0	0	10
2	C1-C2	80'	0"	15.48'	TLC-RF-575	2	2	0	0	4
2	F1-F2	70'	-	15.5'	TLC-LED-1200	7	7	0	0	14
2	F3-F4	70'	-	15.5'	TLC-LED-1200	10	10	0	0	20
TOTALS						98	96	0	0	194



ENGINEERED DESIGN BY: File #12020688 · 27-JUL-22

Pentucket Regional HS FB
 West Newbury, MA
GRID SUMMARY
 Name: Zone Grid
 Size: 1480' X 1230'
 Spacing: 200' X 200'
 Height: 3.0' above grade

ILLUMINATION SUMMARY
 MAINTAINED HORIZONTAL FOOTCANDLES
 Entire Grid
 Scan Average: 5.81
 Maximum: 64
 Minimum: 0
 Avg / Min: -
 Max / Min: 23.59
 UG (adjacent pjt): 0.92
 CU: 4514
 No. of Points: 4514
 LUMINAIRE INFORMATION
 Applied Circuits: A, B, C
 No. of Luminaires: 96
 Total Load: 102.8 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.
Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.
Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.
Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

Pole locations (P) - dimensions are relative to 0.0' reference point(s) (X)

MUSCO
Lighting
We Make It Happen.
ILLUMINATION SUMMARY

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Pentucket Regional HS FB

West Newbury, MA

EQUIPMENT LAYOUT

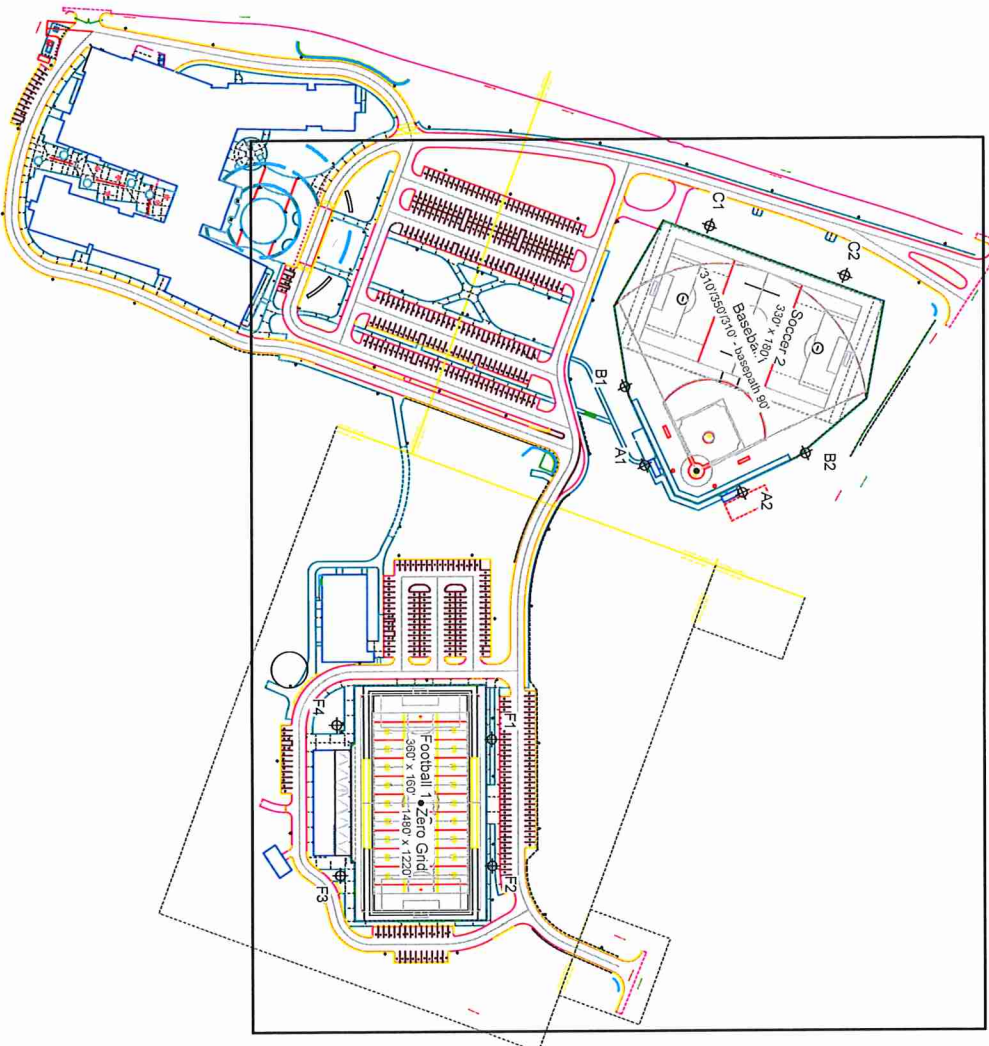
- INCLUDES:**
- Football 1
 - Soccer 1
 - Soccer 2
 - Zero grid
- Electrical System Requirements: Refer to Ampereage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.
- Installation Requirements: Results assume a 3% nominal voltage at the end of the electrical structures located within 3 feet (3m) of design locations.

EQUIPMENT LIST FOR AREAS SHOWN

QTY	LOCATION	POLE SIZE	STATUS	ELEVATION	HEIGHT	LUMINAIRE TYPE	QTY	POLE
2	A1-A2	80"	0"	15.5'	15.5'	TLC-BF575	1	480
2	B1-B2	90"	0"	15.5'	15.5'	TLC-CE1200	3	480
2	C1-C2	80"	0"	15.5'	15.5'	TLC-CE1200	6	480
2	F1-F2	70"	-	15.5'	15.5'	TLC-BF575	2	480
2	F3-F4	70"	-	15.5'	15.5'	TLC-BF575	2	480
TOTALS							10	98

SINGLE LUMINAIRE AMPERAGE DRAW CHART

Ballast Specifications (per luminaire)	Line Amperage Per Luminaire (based on power factor)
Single Phase Voltage	208 220 240 277 347 380 480
TLC-BF575	180 180 180 180 180 180 180
TLC-CE1200	720 624 624 528 424 424 320
TLC-BF575	324 324 228 228 228 228 128



SCALE IN FEET 1:200



ENGINEERED DESIGN BY: File #1020668 · 27-Jul-22

Pole location(s) Ⓞ dimensions are relative to 0-0 reference point(s) ⊗

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EQUIPMENT LAYOUT



C. CONTROLS AND MONITORING





Control System Summary

Project Specific Notes:

Project #: 102066
 Project Name: Pentucket Regional High School Football
 Date: 07/27/22
 Project Engineer: Tanner Lanphier
 Sales Representative: Mike Berry
 Control System Type: Control-Link™ Control and Monitoring System
 Communication Type: PowerLine-ST
 Scan: 102066B
 Document ID: 102066P1V6-0727094436
 Distribution Panel Location or ID: Baseball
 Total # of Distribution Panel Locations for Project: 2
 Design Voltage/Hertz/Phase: 480/60/3
 Control Voltage: 120

Project Information

Equipment Listing

DESCRIPTION	APPROXIMATE SIZE	QTY	SIZE (AMPS)
1.Control and Monitoring Cabinet	24 X 48		
Total Contactors		6	30 AMP
Total Off/On/Auto Switches:		2	

Materials Checklist

Contractor/Customer Supplied:

- A dedicated control circuit must be supplied per distribution panel location
 - If the control voltage is NOT available, a control transformer is required
- Electrical distribution panel to provide overcurrent protection for circuits
 - HID rated or D-curve circuit breaker sized per full load amps on Circuit Summary by Zone Chart
- Wiring
 - See chart on page 2 for wiring requirements
 - Equipment grounding conductor and splices must be insulated (per circuit)
 - Lightning ground protection (per pole), if not Musco supplied
- Electrical conduit wireway system
 - Entrance hubs rated NEMA 4, must be die-cast zinc, PVC, or copper-free die-cast aluminum
- Mounting hardware for cabinets
- Breaker lock-on device to prevent unauthorized power interruption to control power and powerline connection (if present)
- Anti-corrosion compound to apply to ends of wire, if necessary

Call Control-Link Central™ operations center at 877/347-3319 to schedule activation of the control system upon completion of the installation.

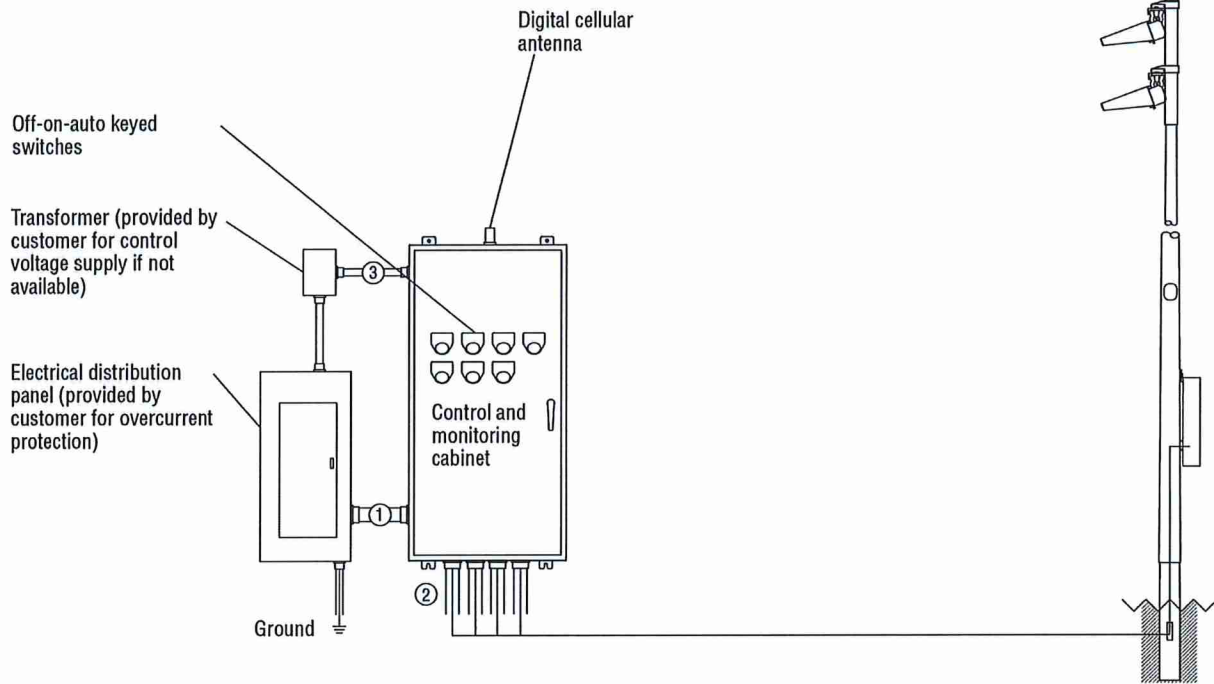
Note: Activation may take up to 1 1/2 hours.

IMPORTANT NOTES

1. Please confirm that the design voltage listed above is accurate for this facility. Design voltage/phase is defined as the voltage/phase being connected and utilized at each lighting pole's electrical components enclosure disconnect. Inaccurate design voltage/phase can result in additional costs and delays. Contact your Musco sales representative to confirm this item.
2. In a 3 phase design, all 3 phases are to be run to each pole. When a 3 phase design is used Musco's single phase luminaires come pre-wired to utilize all 3 phases across the entire facility.
3. One contactor is required for each pole. When a pole has multiple circuits, one contactor is required for each circuit. All contactors are 100% rated for the published continuous load. All contactors are 3 pole.
4. If the lighting system will be fed from more than one distribution location, additional equipment may be required. Contact your Musco sales representative.
5. A single control circuit must be supplied per control system.
6. Size overcurrent devices using the full load amps column of the Circuit Summary By Zone chart- Minimum power factor is 0.9.

NOTE: Refer to Installation Instructions for more details on equipment information and the installation requirements.

Control-Link. Control and Monitoring System



Conduit ID	Description	# of Wires	Wire (AWG)	Conduit (in)	Max. Wire Length (ft)	MUSCO Supplied	Notes
1	Line power to contactors, and equipment grounding conductor	*A	*B	*C	N/A	No	A-E
2	Load power to lighting circuits, and equipment grounding conductor	*A	*B	*C	N/A	No	A-E
3	Control power (dedicated, 20A)	3	12	*C	N/A	No	C,E

*** Notes:**

- A. See voltage and phasing per the notes on cover page.
- B. Calculate per load and voltage drop.
- C. All conduit diameters should be per code unless otherwise specified to allow for connector size.
- D. Equipment grounding conductor and any splices must be insulated.
- E. Refer to control and monitoring system installation instructions for more details on equipment information and the installation requirements.

R60-100-00_B

IMPORTANT: Control wires (3) must be in separate conduit from line and load power wires (1, 2).



Control System Summary

Pentucket Regional High School Football / 102066 - 102066B
Baseball - Page 3 of 8

SWITCHING SCHEDULE

<u>Field/Zone Description</u>	<u>Zones</u>
Baseball	1,2
-Baseball / Soccer 2	1
-Baseball	2
Soccer 2	1

CONTROL POWER CONSUMPTION	
120V Single Phase	
VA loading of Musco Supplied Equipment	INRUSH: 1470.0
	SEALED: 156.0

CIRCUIT SUMMARY BY ZONE

POLE	CIRCUIT DESCRIPTION	# OF FIXTURES	# OF DRIVERS	*FULL LOAD AMPS	CONTACTOR SIZE (AMPS)	CONTACTOR ID	ZONE
B1	Baseball / Soccer 2	10	10	17.0	30	C1	1
B2	Baseball / Soccer 2	10	10	17.0	30	C2	1
C1	Baseball / Soccer 2	8	8	14.4	30	C3	1
C2	Baseball / Soccer 2	8	8	14.4	30	C4	1
A1	Baseball	6	6	10.5	30	C5	2
A2	Baseball	6	6	10.5	30	C6	2

*Full Load Amps based on amps per driver.

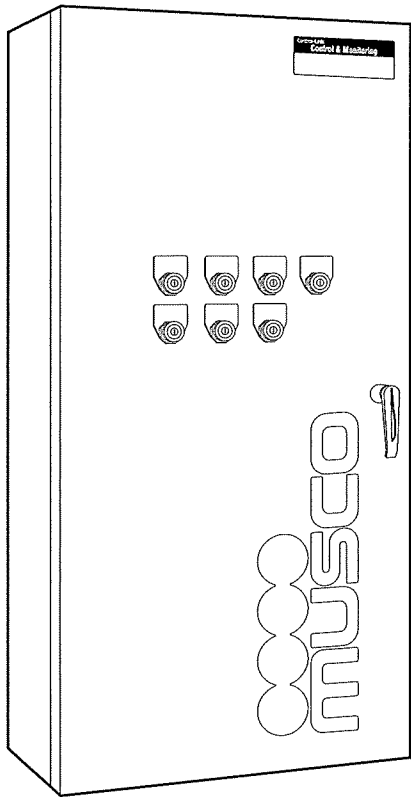


Control System Summary

Pentucket Regional High School Football / 102066 - 102066B
Baseball - Page 4 of 8

PANEL SUMMARY						
CABINET #	CONTROL MODULE LOCATION	CONTACTOR ID	CIRCUIT DESCRIPTION	FULL LOAD AMPS	DISTRIBUTION PANEL ID (BY OTHERS)	CIRCUIT BREAKER POSITION (BY OTHERS)
1	1	C1	Pole B1	17.00		
1	1	C2	Pole B2	17.00		
1	1	C3	Pole C1	14.38		
1	1	C4	Pole C2	14.38		
1	1	C5	Pole A1	10.50		
1	1	C6	Pole A2	10.50		

ZONE SCHEDULE				
ZONE	SELECTOR SWITCH	ZONE DESCRIPTION	CIRCUIT DESCRIPTION	
			POLE ID	CONTACTOR ID
Zone 1	1	Baseball / Soccer 2	B1	C1
			B2	C2
			C1	C3
			C2	C4
Zone 2	2	Baseball	A1	C5
			A2	C6



Overview

Control-Link® Control and Monitoring System provides remote on/off control, dimming, system monitoring, and management of your lighting system.

Features

Control

- Lighting system and auxiliary equipment
- Control with: Control-Link website, smartphone app, phone call, email, or fax up to 10 years in advance
- Seven controllable lighting zones
- Three customizable dimming levels (factory set at 100%, 50%, 20%)
- Multi-level user security settings
- Door-mounted or remote-mounted on/off/auto switches allow for manual override of automated control

Monitoring

- Detects luminaire outages and other issues that affect light quality

Management and Support

- Control-Link Central™ service center provides support 24 hours a day, 7 days a week for scheduling, monitoring, and reporting
- Luminaire outage notification within the next business day
- Customized usage reports through website

Technical Specifications

Control and Monitoring Cabinet Ratings

UL 508A Listed E204954
 CE declaration LVD, EMC, RoHS
 IEC 60439-1 compliant UL test report 05NK26317
 IEC Emissions/Immunity Class A compliant
 Operating temperature -4°F to 140°F (-20°C to 60°C)
 FCC Part 15 Class A compliant
 Weight for 72 inch (1829 mm) cabinet 180 lb (82 kg)
 Weight for 48 inch (1219 mm) cabinet 140 lb (64 kg)
 Short Circuit Current Rating (SCCR)

with 30 A contactors* 18 kA
 with 60 or 100 A contactors* 25 kA

*Minimum circuit breaker interrupt rating must be greater than or equal to SCCR rating listed above.

Construction

Control and Monitoring Cabinet

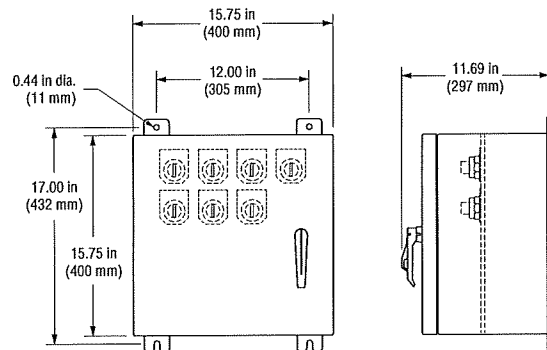
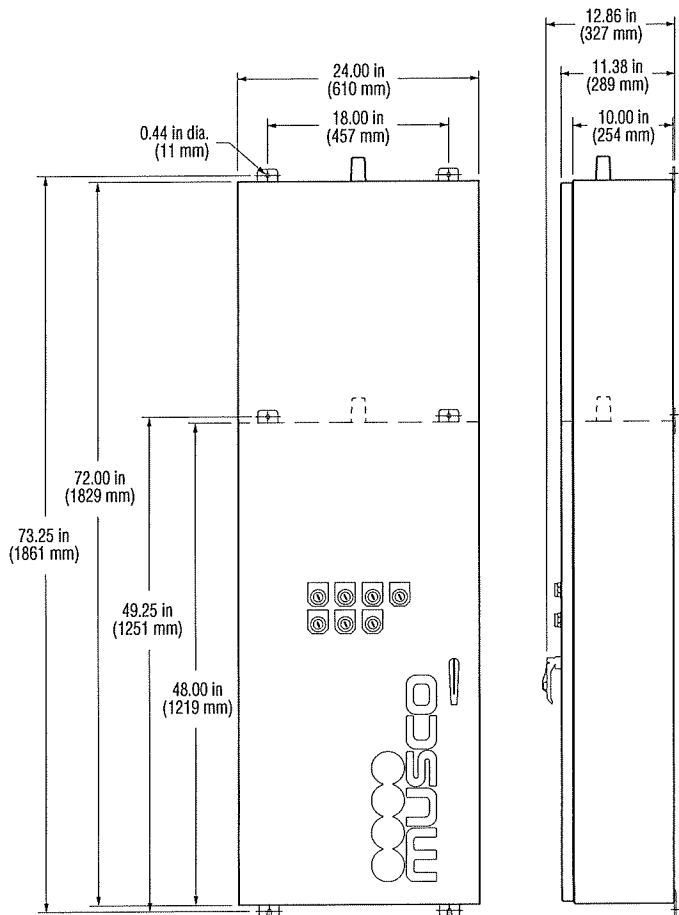
- NEMA type 4 (IP65) cabinet
- Powder-coated aluminum 5052 H32 cabinet and panel
- Lockable, 3-point latch
- Supports lighting system voltage up to 480 V
- Requires 120 V or 230 V phase-to-neutral control voltage
- Protective cover isolates high voltage

On/Off/Auto Manual Switches Cabinet (optional)

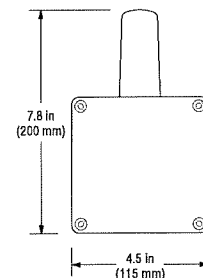
- NEMA type 4 (IP65) cabinet
- Powder-coated aluminum 5052 H32 cabinet and panel
- Lockable door
- Hinged interior panel for switch mounting

Remote Wireless Antenna Cabinet (for wireless communication)

- Cast aluminum with texture gray paint finish
- Omnidirectional antenna
- Operating temperature: -40°C (-40°F) to 85°C to (185°F)
- Frequency: 900 MHz or 2.4 GHz



Manual switches cabinet



Remote wireless antenna cabinet

Datasheet: Control-Link® Control and Monitoring System

Internal Details

- Factory wired, programmed, and tested
- Internally fused
- Control power terminal blocks provided
- One control circuit operates entire cabinet
- Plug-in wire harnesses provided to connect multiple cabinets

Control Module

Receives and stores schedules from Control-Link Central™ service center, operates your equipment, and verifies schedules were carried out.

- Executes scheduled on/off or dimming events.
- Stores schedules for up to 7 days
- Reboots automatically and executes current schedule when power is restored, in case of power interruption
- Monitors Musco lighting system and reports issues to keep facilities operating and to help plan routine maintenance. Alerts Control-Link Central service center to schedule appropriate action or maintenance.

Communication Modules

Communication with Control-Link Central is done via an integrated, high speed, cellular connection with no additional monthly charges during the warranty period.

Communication with light poles is done via powerline communication or wireless communication.

- Powerline communication requires a dedicated 20A circuit (lighting circuit distribution panel)
- Wireless communication requires a dedicated antenna to be mounted at least 3 ft above the cellular antenna, and 7 ft total distance away, and line of sight to lighting poles.

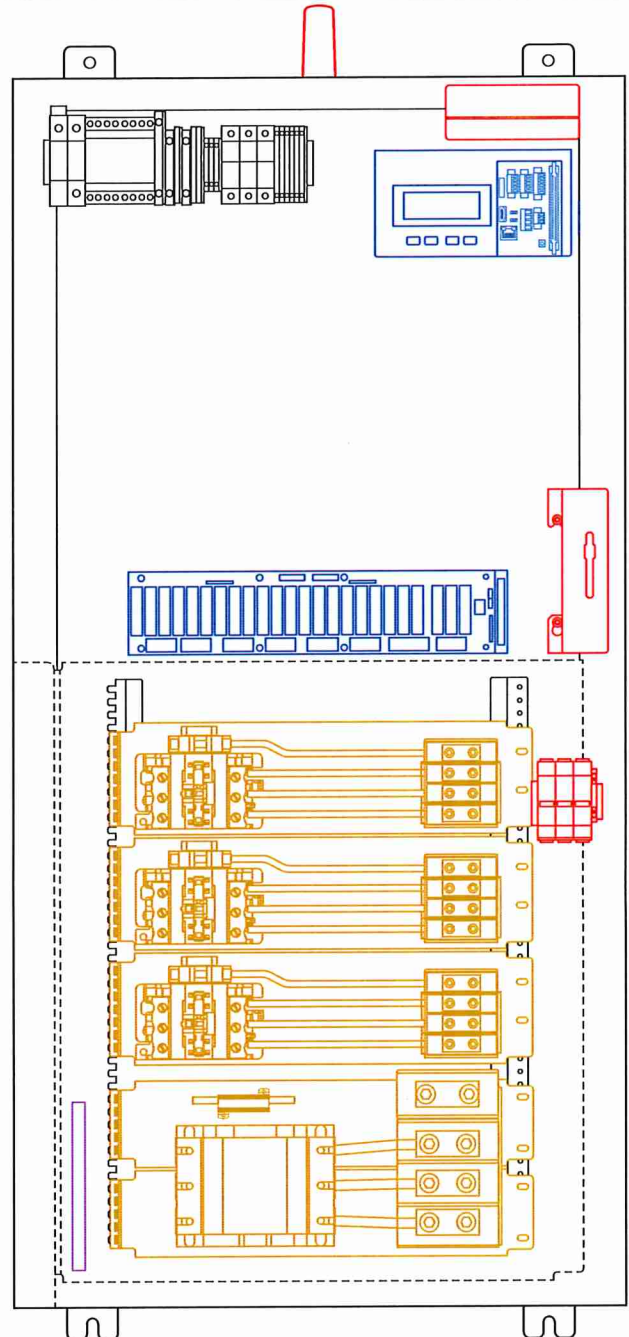
Contactor Modules

Operates equipment based on control module schedules.

- Compliant with IEC 60947-4-1 for continuous operation at 100% of rated current
- Contactors rated for 30, 60, or 100 amps

Ground Bar

Provides integral ground bar for lighting equipment grounding.





D. CONTROLS AND MONITORING - SHOW LIGHT





Control System Summary

Project Specific Notes:

Project Information

Project #: 102066
 Project Name: Pentucket Regional High School Football
 Date: 07/27/22
 Project Engineer: Tanner Lanphier
 Sales Representative: Mike Berry
 Control System Type: Control-Link™ Control and Monitoring System with Show-Light™ Entertainment Package
 Communication Type: PowerLine-ST
 Scan: 102066B
 Document ID: 102066P1V6-0727094436
 Distribution Panel Location or ID: Football Stadium
 Total # of Distribution Panel Locations for Project: 2
 Design Voltage/Hertz/Phase: 480/60/3
 Control Voltage: 120

Equipment Listing

DESCRIPTION	APPROXIMATE SIZE	QTY	SIZE (AMPS)
1.Control and Monitoring Cabinet	24 X 48		
Total Contactors		6	30 AMP
Total Off/On/Auto Switches:		2	

Materials Checklist

Contractor/Customer Supplied:

- A dedicated control circuit must be supplied per distribution panel location
 - If the control voltage is NOT available, a control transformer is required
- Electrical distribution panel to provide overcurrent protection for circuits
 - HID rated or D-curve circuit breaker sized per full load amps on Circuit Summary by Zone Chart
- Wiring
 - See chart on page 2 for wiring requirements
 - Equipment grounding conductor and splices must be insulated (per circuit)
 - Lightning ground protection (per pole), if not Musco supplied
- Electrical conduit wireway system
 - Entrance hubs rated NEMA 4, must be die-cast zinc, PVC, or copper-free die-cast aluminum
- Mounting hardware for cabinets
- Breaker lock-on device to prevent unauthorized power interruption to control power and powerline connection (if present)
- Anti-corrosion compound to apply to ends of wire, if necessary

Call Control-Link Central™ operations center at 877/347-3319 to schedule activation of the control system upon completion of the installation.

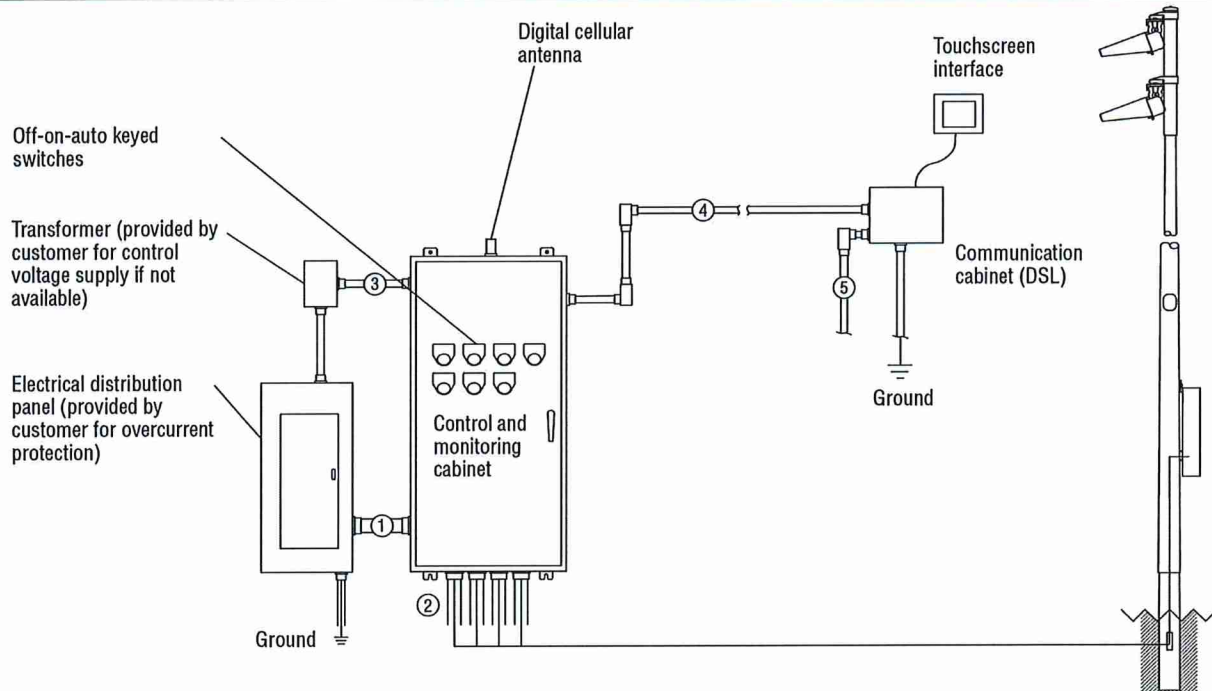
Note: Activation may take up to 1 1/2 hours.

IMPORTANT NOTES

1. Please confirm that the design voltage listed above is accurate for this facility. Design voltage/phase is defined as the voltage/phase being connected and utilized at each lighting pole's electrical components enclosure disconnect. Inaccurate design voltage/phase can result in additional costs and delays. Contact your Musco sales representative to confirm this item.
2. In a 3 phase design, all 3 phases are to be run to each pole. When a 3 phase design is used Musco's single phase luminaires come pre-wired to utilize all 3 phases across the entire facility.
3. One contactor is required for each pole. When a pole has multiple circuits, one contactor is required for each circuit. All contactors are 100% rated for the published continuous load. All contactors are 3 pole.
4. If the lighting system will be fed from more than one distribution location, additional equipment may be required. Contact your Musco sales representative.
5. A single control circuit must be supplied per control system.
6. Size overcurrent devices using the full load amps column of the Circuit Summary By Zone chart- Minimum power factor is 0.9.

NOTE: Refer to Installation Instructions for more details on equipment information and the installation requirements.

Control-Link® Control and Monitoring System



Conduit ID	Description	# of Wires	Wire (AWG)	Conduit (in)	Max. Wire Length (ft)	MUSCO Supplied	Notes
1	Line power to contactors, and equipment grounding conductor	*A	*B	*C	N/A	No	A-E
2	Load power to lighting circuits, and equipment grounding conductor	*A	*B	*C	N/A	No	A-E
3	Control power (dedicated, 20A)	3	12	*C	N/A	No	C,E
4	Communication cable to touchscreen	*F	*F	*C	1500	No	C,E,F
5	Control power	3	*B	*C	N/A	No	A-E

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* Notes:

- A. See voltage and phasing per the notes on cover page.
- B. Calculate per load and voltage drop.
- C. All conduit diameters should be per code unless otherwise specified to allow for connector size.
- D. Equipment grounding conductor and any splices must be insulated.
- E. Refer to control and monitoring system installation instructions for more details on equipment information and the installation requirements.
- F. Cat5e cable (Belden 7937A or equal) is required. Communication cabinet requires control power circuit and connection to earth ground. Standard wall outlet is required to power touchscreen. Touchscreen connects to communication cabinet with Ethernet cable (<300 ft.).

IMPORTANT: Control wires (3,5) and communication wire (4) must be in separate conduit from line and load power wires (1, 2).



Control System Summary

Pentucket Regional High School Football / 102066 -
Football Stadium - Page 7 of 8

SWITCHING SCHEDULE

<u>Field/Zone Description</u>	<u>Zones</u>
Football	1
Bleachers	2

CONTROL POWER CONSUMPTION	
120V Single Phase	
VA loading of Musco Supplied Equipment	INRUSH: 1470.0 SEALED: 156.0

CIRCUIT SUMMARY BY ZONE

POLE	CIRCUIT DESCRIPTION	# OF FIXTURES	# OF DRIVERS	*FULL LOAD AMPS	CONTACTOR SIZE (AMPS)	CONTACTOR ID	ZONE
F1	Football	12	12	19.6	30	C1	1
F2	Football	12	12	19.6	30	C2	1
F3	Football	12	12	19.6	30	C3	1
F4	Football	12	12	19.6	30	C4	1
F3	Bleachers	1	4	1.7	30	C5	2
F4	Bleachers	1	4	1.7	30	C6	2

*Full Load Amps based on amps per driver.



Control System Summary

Pentucket Regional High School Football / 102066 -
Football Stadium - Page 8 of 8

PANEL SUMMARY						
CABINET #	CONTROL MODULE LOCATION	CONTACTOR ID	CIRCUIT DESCRIPTION	FULL LOAD AMPS	DISTRIBUTION PANEL ID (BY OTHERS)	CIRCUIT BREAKER POSITION (BY OTHERS)
2	2	C1	Pole F1	19.62		
2	2	C2	Pole F2	19.62		
2	2	C3	Pole F3	19.62		
2	2	C4	Pole F4	19.62		
2	2	C5	Pole F3	1.66		
2	2	C6	Pole F4	1.66		

ZONE SCHEDULE				
ZONE	SELECTOR SWITCH	ZONE DESCRIPTION	CIRCUIT DESCRIPTION	
			POLE ID	CONTACTOR ID
Zone 1	1	Football	F1	C1
			F2	C2
			F3	C3
			F4	C4
Zone 2	2	Bleachers	F3	C5
			F4	C6

Show-Light® Entertainment Package

Overview

Control-Link® Control and Monitoring System with Show-Light® entertainment package provides remote on/off control, dimming, color changing, pre-programmed and custom light shows, system monitoring, and management of your lighting system.

Features

Control Features

- Controls: Lighting system and auxiliary equipment
- Control options: Control-Link website, smartphone app, onsite touchscreen, phone call, email, or fax up to 10 years in advance
- Multi-level user security settings
- Door-mounted or remote-mounted on/off/auto switches allow manual override of automated control
- Seven controllable lighting zones
- Four customizable dimming levels (factory defaults: 100%, 50%, 20% and blackout)

Show-Light Entertainment Package Features

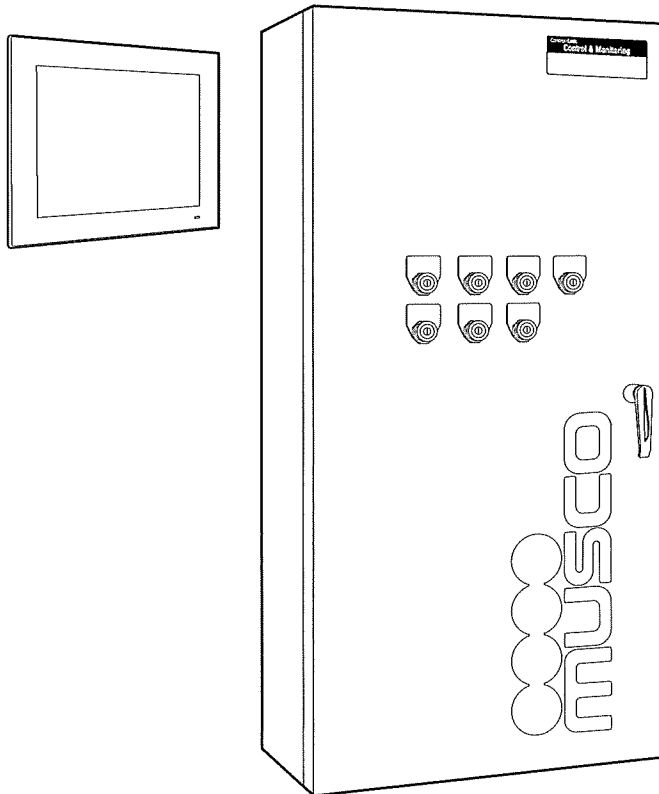
- Six preprogrammed light shows included, up to three of them can be custom
- Preprogrammed light shows include: pole chase, luminaire chase, score, wave, pulse, marquee, and random
- Customize the color of Musco TLC-RGBW luminaires if present

Monitoring

- Detects luminaire outages and other issues that affect light quality

Management and Support

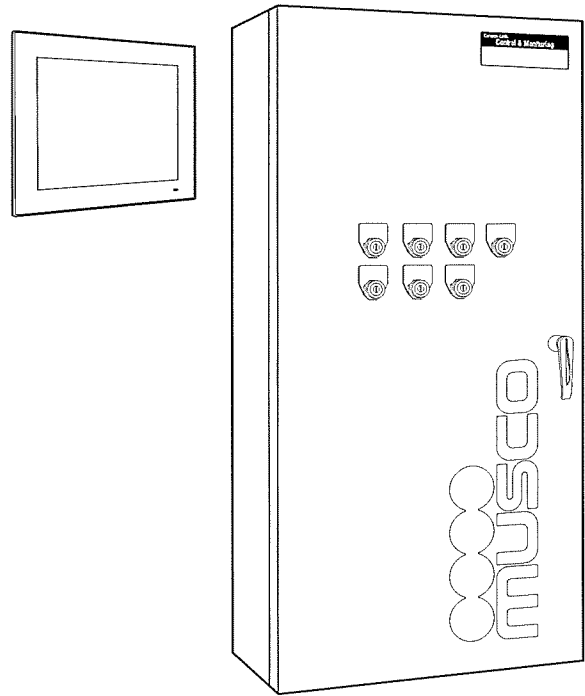
- Control-Link Central™ service center provides support 24 hours a day, 7 days a week for scheduling, monitoring, and reporting
- Luminaire outage notification within the next business day
- Customized usage reports through website



Technical Specifications - Ratings

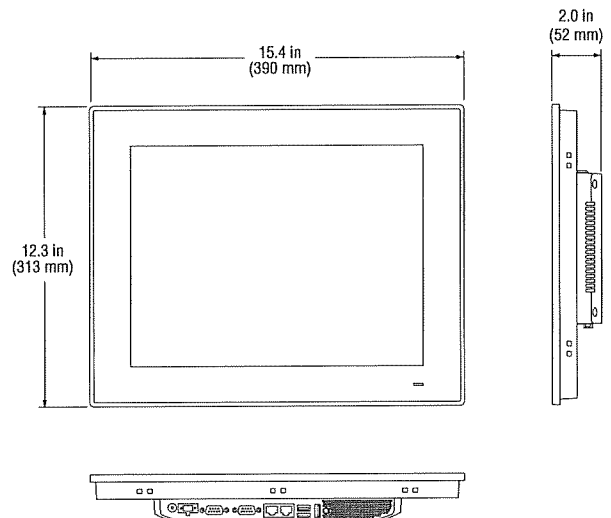
Control and Monitoring Cabinet

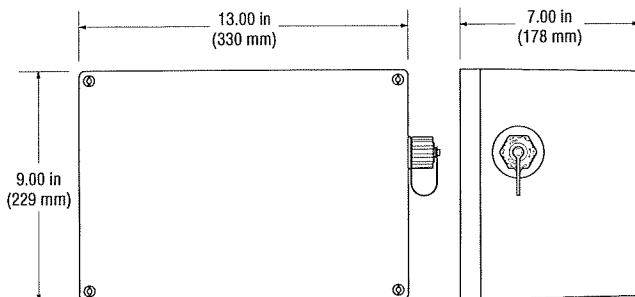
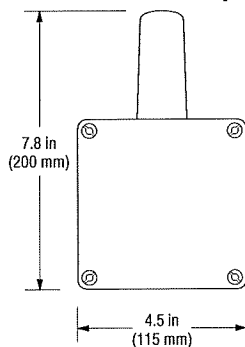
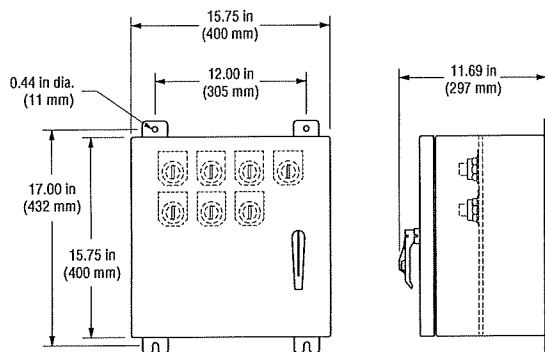
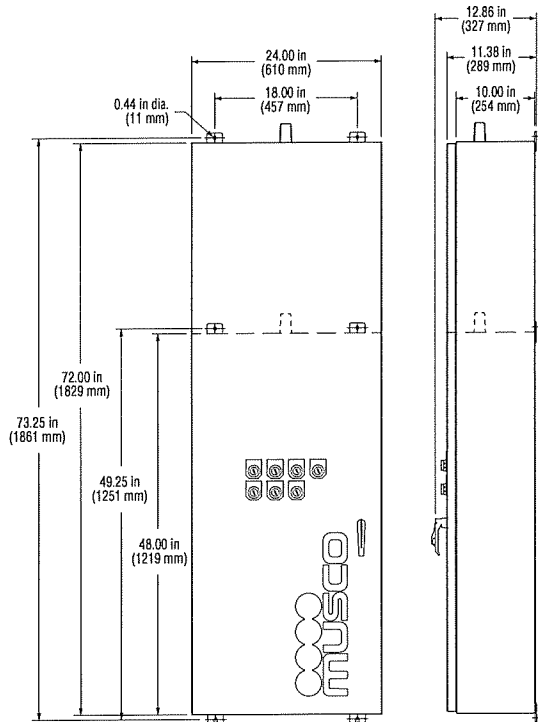
UL 508A Listed.....	E204954
CE declaration	LVD, EMC, RoHS
IEC 60439-1 compliant	UL test report 05NK26317
IEC Emissions/Immunity.....	Class A compliant
Operating temperature	-4°F to 140°F (-20°C to 60°C)
FCC Part 15	Class A compliant
Weight for 72 inch (1829 mm) cabinet	180 lb (82 kg)
Weight for 48 inch (1219 mm) cabinet	140 lb (64 kg)
Short Circuit Current Rating (SCCR)	
with 30 A contactors*	18 kA
with 60 or 100 A contactors*	25 kA
*Minimum circuit breaker interrupt rating must be greater than or equal to SCCR rating listed above.	



Touchscreen System Interface

Approvals.....	UL, CB, CCC, BSMI
CE declaration	LVD, EMC, RoHS
FCC Part 15	Class B Compliant
Operating temperature	32°F to 122°F (0°C to 50°C)
Storage temperature.....	-40°F to 140°F (-40°C to 60°C)
Backlight life.....	50,000 h
Input voltage	120 Vac 60 Hz, 240 Vac 50 Hz (Vdc power supply provided)
Mounting options.....	Wall or desk mounts
Environment.....	Indoor use only





Technical Specifications - Construction

Control and Monitoring Cabinets

- NEMA Type 4 (IP65) cabinet
- Powder-coated aluminum 5052 H32 cabinet and panel
- Lockable, 3-point latch
- Supports lighting system voltage up to 480 V
- Requires 120 V or 230 V phase-to-neutral control voltage
- Protective cover isolates high voltage

On/Off/Auto Manual Switches Cabinet (optional equipment)

- NEMA type 4 (IP65) cabinet
- Powder-coated aluminum 5052 H32 cabinet and panel
- Lockable door
- Hinged interior panel for switch mounting

Remote Wireless Antenna Cabinet (if wireless communication)

- Cast aluminum with texture gray paint finish
- Omnidirectional antenna
- Operating temperature: -40°F (-40°C) to 185°F to (85°C)
- Frequency: 900 MHz or 2.4 GHz

Touchscreen Communication Cabinet

- NEMA type 4 (IP65) cabinet
- Powder-coated aluminum 5052 H32 cabinet
- VDSL communication
- Requires 120 V or 230 V phase-to-neutral control voltage

Datasheet: Control-Link® Control and Monitoring System

Internal Details

- Factory wired, programmed, and tested
- Internally fused
- Control power terminal blocks provided
- Plug-in wire harnesses provided to connect multiple cabinets

Control Module

Receives and stores schedules from Control-Link Central™ service center, operates your equipment, and verifies schedules are carried out.

- Executes light show commands and scheduled on/off or dimming events.
- Stores schedules for up to 7 days
- Automatic recovery mode to current lighting schedule in the event of power interruption or loss.
- Monitors Musco lighting system and reports issues to keep facilities operating and to help plan routine maintenance. Alerts Control-Link Central service center to schedule appropriate action or maintenance.

Communication Modules

Communication with Control-Link Central is done via an integrated, high speed, cellular connection with no additional monthly charges during the warranty period.

Communication with luminaire controllers is done via powerline or wireless communication.

- Powerline communication requires a dedicated 20A circuit (distribution panel)
- Wireless communication requires a dedicated antenna to be mounted 3 ft above the cellular antenna, and 7 ft total distance away, and line of sight to remote antennas at light pole locations.
- VDSL communication with touchscreen user interface requires Cat5e cable (Belden 7937A)

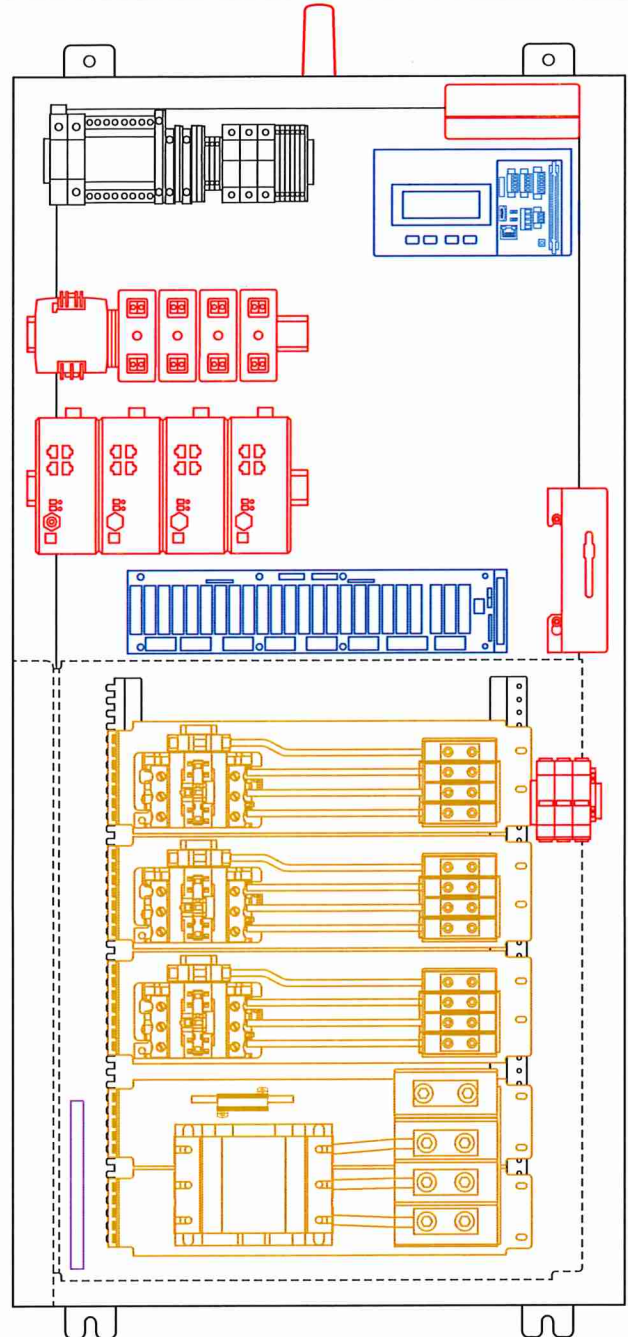
Contactors Modules

Switches equipment based on control module schedules.

- Compliant with IEC 60947-4-1 for continuous operation at 100% of rated current
- Contactors rated for 30, 60, or 100 A

Ground Bar

Provides integral ground bar for lighting equipment grounding.





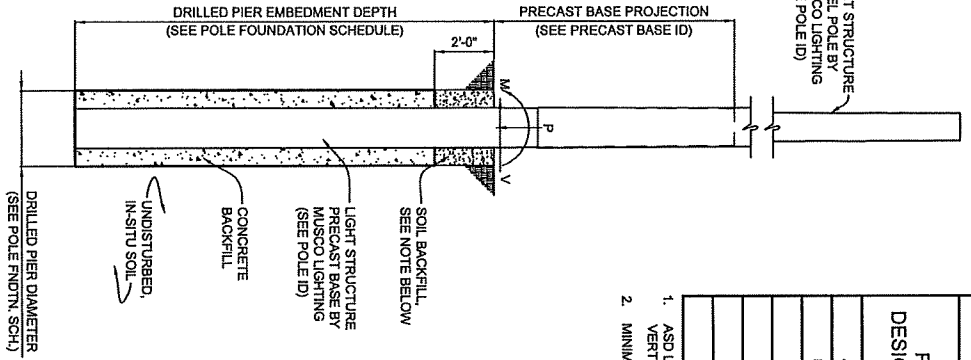
E. STRUCTURAL INFORMATION



POLE FOUNDATION SCHEDULE

POLE DESIGNATION	FORCES (k)			DRILLED PIER		
	MOMENT (M) FT-LBS	SHEAR (V) LBS	VERTICAL (P) LBS	DIAMETER INCHES	EMBEDMENT DEPTH	CONCRETE BACKFILL YD ³ (2)
A3, A4	93,824	2,005	2,916	30	16'-0"	1.7
B3, B4	130,640	2,393	3,405	30	16'-0"	1.7
C3	104,790	2,151	3,143	30	16'-0"	1.7
C4	107,908	2,196	3,149	30	16'-0"	1.7
F1, F2	89,774	2,058	3,191	30	16'-0"	1.7
F3, F4	91,532	2,085	3,241	30	16'-0"	1.7

- ASD LOAD COMBINATION D + 0.9W.
- VERTICAL FORCE IS WEIGHT OF PRESSED POLE (DOES NOT INCLUDE PRECAST BASE WEIGHT).
- MINIMUM CONCRETE BACKFILL VOLUME, SITE CONDITIONS MAY REQUIRE ADDITIONAL BACKFILL.



POLE FOUNDATION ELEV.

SOIL BACKFILL NOTE:
THE TOP TWO FEET OF ANNULUS SHALL BE BACKFILLED WITH SOIL, WITH A CLASSIFICATION OF CLASS 5 (TABLE 1802) OR BETTER. COMPACTION 95% FOR COHESIVE SOIL AND 98% FOR A COHESIONLESS SOIL BASED UPON STANDARD PROCTOR TESTING (ASTM D998).

PRECAST BASE IDENTIFICATION

PRECAST BASE TYPE	PRECAST BASE WEIGHT	PRECAST BASE LENGTH ABOVE GRADE	PROJECTION ABOVE GRADE	STANDARD EMBEDMENT	OUTSIDE DIAMETER
5B	4,580 LBS	23'-11"	7'-11"	16'-0"	18.25"

POLE IDENTIFICATION

POLE DESIGNATION	POLE TYPE	PRECAST BASE TYPE	FIXTURE CONFIGURATION (FIX. PER XARM)	FIXTURE AND ACCESSORIES EPA (F ³)
A3, A4	LSS90B	5B	6 (5)	14.0
B3, B4	LSS90A	5B	10 (4+4)	20.2
C3	LSS90B	5B	8 (7)	17.2
C4	LSS90B	5B	9 (4+4)	18.8
F1, F2	LSS70D	5B	12 (6+6)	23.3
F3, F4	LSS70D	5B	13 (6+6)	24.3

- POLES F3 & F4 HAVE (1) MUSCO LED FIXTURE AT 60'-0" AGL INCLUDED ABOVE.
- POLES A3, A4, C3, & C4 HAVE (1) MUSCO LED FIXTURE AT 15'-6" AGL INCLUDED ABOVE.
- POLES B3, B4, & F1 - F4 HAVE (2) MUSCO LED FIXTURES AT 15'-6" AGL INCLUDED ABOVE.

DESIGN NOTES

DESIGN PARAMETERS:
WIND: V₁₀ = 123 MPH, V₃₀ = 95 MPH (EXPOSURE C, RISK CATEGORY II) PER MASSACHUSETTS STATE BUILDING CODE - 780 CMR, 9TH EDITION (IBC 2015 / ASCE 7-10).

GEOTECHNICAL PARAMETERS:
ALLOWABLE END BEARING SOIL PRESSURE: 4,000 PSF
ALLOWABLE LATERAL SOIL BEARING PRESSURE: 0 PSF/FT (GRADE TO -2'-0"), 150 PSF/FT (-2'-0" TO -6'-0"), 200 PSF/FT (BELOW -6'-0") IN ACCORDANCE WITH MASSACHUSETTS STATE BUILDING CODE - 780 CMR, 9TH EDITION, CHAPTER 18.

DESIGN SOIL PARAMETERS ARE AS NOTED. ACTUAL ALLOWABLE SOIL PARAMETERS MUST BE VERIFIED ON SITE. REFERENCE SOILS AND FOUNDATION REPORT (9/10/2019) BY PEE ASSOCIATES AND BORINGS B-1 - B-4 BY GREEN ENVIRONMENTAL (#43519).

A GEOTECHNICAL ENGINEER OR REPRESENTATIVE OF IS RECOMMENDED (NOT REQUIRED) TO BE AVAILABLE AT THE TIME OF THE FOUNDATION INSTALLATION TO VERIFY THE SOIL DESIGN PARAMETERS AND TO PROVIDE ASSISTANCE IF ANY PROBLEMS ARISE IN FOUNDATION INSTALLATION.

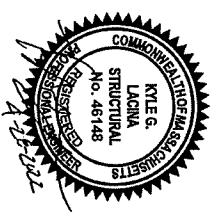
ENCOUNTERING SOIL FORMATIONS THAT WILL REQUIRE SPECIAL DESIGN CONSIDERATIONS OR EXCAVATION PROCEDURES MAY OCCUR. POLE FOUNDATIONS WILL NEED TO BE ANALYZED ACCORDING TO THE SOIL CONDITIONS THAT EXIST. IF ANY DISCREPANCIES OR INCONSISTENCIES ARISE, NOTIFY THE ENGINEER OF SUCH DISCREPANCIES. FOUNDATIONS WILL THEN BE REVISED ACCORDINGLY. REVISIONS WILL BE ANALYZED PER RECOMMENDATIONS DIRECTED BY A REGISTERED ENGINEER.

ALL EXCAVATIONS MUST BE FREE OF LOOSE SOIL AND DEBRIS PRIOR TO FOUNDATION INSTALLATION AND CONCRETE BACKFILL PLACEMENT. TEMPORARY CASINGS OR DRILLERS SLURRY MAY BE USED TO STABILIZE THE EXCAVATION DURING INSTALLATION. CASINGS MUST BE REMOVED DURING CONCRETE BACKFILL PLACEMENT. CONCRETE BACKFILL MUST BE PLACED WITH A TRIMME WHEN SLURRY OR WATER IS PRESENT WITHIN THE EXCAVATION OR WHEN THE FREE DROP EXCEEDS 5'-0".

CONTRACTOR MUST BE FAMILIAR WITH THE COMPLETE SOIL INVESTIGATION REPORT AND BORINGS AND CONTACT THE GEOTECHNICAL FIRM (IF NECESSARY) TO UNDERSTAND THE SOIL CONDITIONS AND THE POSSIBILITY OF GROUND WATER PUMPING AND EXCAVATION STABILIZATION OR BACKFILL DURING PRECAST BASE INSTALLATION AND PLACEMENT OF CONCRETE BACKFILL.

CONCRETE:
CONCRETE SHALL BE AIR-ENTRAINED AND HAVE A MINIMUM COMPRESSIVE DESIGN STRENGTH AT 28 DAYS OF 3,000 PSI. 3,000 PSI CONCRETE SPECIFIER'S EARLY POLE ERECTION, ACTUAL REQUIRED MINIMUM ALLOWABLE CONCRETE STRENGTH IS 1,000 PSI. ALL FIRMS AND CONCRETE BACKFILL MUST BEAR ON AND AGAINST FIRM UNDISTURBED SOIL.

GENERAL NOTES:
FIXTURES MUST BE LOCATED TO MAINTAIN 10'-0" MINIMUM HORIZONTAL CLEARANCE FROM ANY OBSTRUCTION. ENGINEER MUST BE NOTIFIED IF FOUNDATIONS ARE NEAR ANY REMAINING WALLS OR WITHIN/NEAR ANY STOPS STEEPERS THAN 3H : 1V. POLES, FIXTURES, PRECAST BASES, ELECTRICAL ITEMS AND INSTALLATION PER MUSCO LIGHTING.



<p>STRUCTURAL ENGINEERS, P.C. 114 NICHOLAS DRIVE MARSHALLTOWN, IOWA 50158 PHONE NUMBER: 641-752-6334 EMAIL: MSL.INFO@SEPC.BIZ</p>	<p>MUSCO Lighting CORPORATE: 100 1ST AVE WEST OSKAHOOLA, IA 52577 (800) 825-6020</p>	<p>PENTUCKET REGIONAL HS FOOTBALL FIELD LIGHTING WEST NEWBURY, MA</p>
<p>DRAWING TITLE: POLE AND FOUNDATION SCALE: SEE PLAN NOTES: SCAN #102066A-AR</p>	<p>DATE: 28 APRIL 2022</p>	<p>PROJECT NUMBER: 102066</p>
<p>DRAWING NUMBER: C1</p>		

USE OR REPRODUCTION OF THIS INFORMATION OTHER THAN ITS INTENDED PURPOSE FOR THIS PROJECT IS PROHIBITED WITHOUT WRITTEN CONSENT FROM MUSCO SPORTS LIGHTING, LLC.



F. WARRANTY





Musco Constant 25™

25-Year Product Assurance & Warranty Program

Project name: Pentucket Regional High School Project number: 102066

Owner: Pentucket Regional School District City: West Newbury State: MA

Covered product(s): Light-Structure System™ with TLC for LED™ technology

Date issued: Date of Shipment Expiration: Date of Shipment + 25 years

Musco Sports Lighting, LLC will provide all materials and labor to maintain operation of your lighting system to original design criteria for 25 years. Musco products and services are guaranteed to perform on your project as detailed in this document.

Light Performance

Specified illumination levels will be maintained and are marked as guaranteed in the Musco Illumination Summary. Individual luminaire outages that occur during the warranty and maintenance period are repaired when the usage of any field is materially impacted.

Spill Light Control

If specified, spill light levels at identified locations are guaranteed to be controlled to the maximum values provided in the Musco Illumination Summary.

Energy Consumption

Total average kW consumption for your lighting system is guaranteed to be not more than the total load shown in the Musco Illumination Summary.

Monitoring, Maintenance, and Control Services

Musco shall monitor the performance of your lighting system, including on/off status, hours of usage, and luminaire outages. If outages that affect playability are detected, Musco will contact you and proactively dispatch technicians.

On-off control of your lighting system is provided via an easy-to-use web site scheduling system, smartphone app, phone, email, or fax. Our trained Control-Link Central™ service center staff is available toll-free 24/7. Regular usage reports are always available on Control-Link Central's web site.

Structural Integrity

Your project has been designed to IBC, 2015, 130mph, Exposure C.
Structural integrity of equipment manufactured by Musco is guaranteed.

Musco has a team of people to ensure fulfillment of our product and services warranty and maintains financial reserves dedicated to support our fulfillment of this warranty. Please keep this document as your signed contract guaranteeing comprehensive service for the 25 year period.



Musco Constant 25™

25-Year Product Assurance & Warranty Program

Terms and Conditions

Service under this Contract is provided by Musco Sports Lighting, LLC ("Musco") or an authorized servicer approved by Musco. Services performed under this Contract shall consist of furnishing labor and parts necessary to restore the operation of the Covered Product(s) to original design criteria provided such service is necessitated by failure of the Covered Product(s) during normal usage. This Contract covers Product(s) consisting of Musco's Total Light Control – TLC for LED® with Control-Link® and any additional Musco manufactured product as listed on page 1.

"We", "us," and "our" mean Musco. "You" and "your" mean the purchaser of the Covered Product(s). No one has the authority to change this Contract without the prior written approval of Musco. Musco shall not assume responsibility for their agents or assignees other than as described below. If there is a conflict between the terms of this Contract and information communicated either orally or in writing by one or more of our employees or agents, this Contract shall control.

Additional Provisions

- 1. Availability of Service:** Control-Link Central™ operators shall be available 24/7 via web site, phone, fax, or email. Maintenance service specialists shall be available 8AM to 5PM Central Time, and services shall be rendered during these same hours in your local time zone, Monday through Friday (with the exception of national holidays). Hours of operation are subject to change without notice to you. Musco will exercise all reasonable efforts to perform service under this Contract, but will not be responsible for delays or failure in performing such services caused by adverse weather conditions, acts of any government, failure of transportation, accidents, riots, war, labor actions or strikes or other causes beyond its control.
- 2. Determination of Repairs:** Musco will utilize the field monitoring system and any information provided by the customer to determine when the usage of the field is materially impacted. From this information, Musco will determine needed repair and/or replacement of Covered Product(s) and parts. Repair will be with Product(s) of like kind and quality.
- 3. Your Requirements Under this Contract:** You must meet all electrical and installation requirements as specified by the manufacturer. In addition, you promise and assure: full cooperation with Musco, Musco's technicians and authorized servicers during telephone diagnosis and repair of the Covered Product(s); reasonable accessibility of the Covered Product(s); a nonthreatening and safe environment for service.

You agree to check fuses and to replace fuses as needed. Musco provides spare fuses in the lowest alpha-numeric numbered enclosure. Musco will replenish spare fuses used.

You agree to keep your control system online. This means keeping the required control voltage to the control system at all times. Any deviation from this practice must be discussed with Musco's Warranty Department.

- 4. Service Limitations — This Contract does not cover:** Maintenance, repair, or replacement necessitated by loss or damage resulting from any external causes such as, but not limited to, theft, environmental conditions, negligence, misuse, abuse, improper electrical/power supply, unauthorized repairs by third parties, attachments, damage to cabinetry, equipment modifications, vandalism, animal or insect infestation, physical damage to Covered Product(s) parts or components, failure of existing structures, supporting electrical systems or any non-Musco equipment, or acts of God/nature (including, but not limited to: earthquake, flood, tornadoes, typhoons, hurricanes, or lightning).

5. Contract Limitations:

- a. EXCLUSIONS FROM COVERAGE:** IN NO EVENT WILL MUSCO BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES WHICH INCLUDE, BUT ARE NOT LIMITED TO, ANY DELAY IN RENDERING SERVICE OR LOSS OF USE DURING THE REPAIR PERIOD OF THE COVERED PRODUCT(S) OR WHILE OTHERWISE AWAITING PARTS.
 - b. Limitation of Liability:** To the extent permitted by applicable law, the liability of Musco, if any, for any allegedly defective Covered Product(s) or components shall be limited to repair or replacement of the Covered Product(s) or components at Musco's option. THIS CONTRACT IS YOUR SOLE EXPRESS WARRANTY WITH RESPECT TO THE COVERED PRODUCT(S). ALL IMPLIED WARRANTIES WITH RESPECT TO THE COVERED PRODUCT(S) INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY EXPRESSLY EXCLUDED.
 - c. For the purposes of and by your acceptance of this Contract you acknowledge and agree that if a surety bond ("Bond") is provided the warranty and/or maintenance guarantee provided for in this Contract and any corresponding liability on behalf of the issuing surety under the Bond is limited to the first twelve (12) months of said warranty and/or maintenance guarantee coverage period. Any warranty and/or guarantee coverage period in excess of said initial 12 month period does not fall within the scope of the Bond and shall be the sole responsibility of Musco.**
 - d. Musco requires reasonable access for a crane or man lift equipment to service the lighting system. Musco will not be responsible for damage from operating the vehicle on the property when the equipment is operated in the prescribed manner over the designated access route.**
 - e. Obsolescence or Environmental Restrictions:** If during any maintenance or other work performed under this Warranty, any of the parts of the Covered Product(s) are found to be either obsolete, no longer available, or prohibited by any state of federal agency, Musco shall replace said parts with comparable parts and materials with equal operating characteristics solely at Musco's discretion. The cost of replacement of any obsolete cellular related technology shall be borne by you. Prior to completing any such work, Musco shall notify you of the cost (if any) you will incur in the replacement of such parts under this section.
- 6. Transfer and Assignment:** Except to owners, you shall not have the right to assign or otherwise transfer your rights and obligations under this Contract except with the prior written consent of Musco; however, a successor in interest by merger, operation of law, assignment or purchase or otherwise of your entire business shall acquire all of your interests under this Contract.
 - 7. Governing Law:** Unless otherwise governed by applicable state law, the Contract shall be interpreted and enforced according to the laws of the State of Iowa.
 - 8. Subrogation:** In the event Musco repairs or replaces any Covered Product(s), parts or components due to any defect for which the manufacturer or its agents or suppliers may be legally responsible, you agree to assign your rights of recovery to Musco. You will be reimbursed for any reasonable costs and expenses you may incur in connection with the assignment of your rights. You will be made whole before Musco retains any amounts it may recover.

Signature: _____

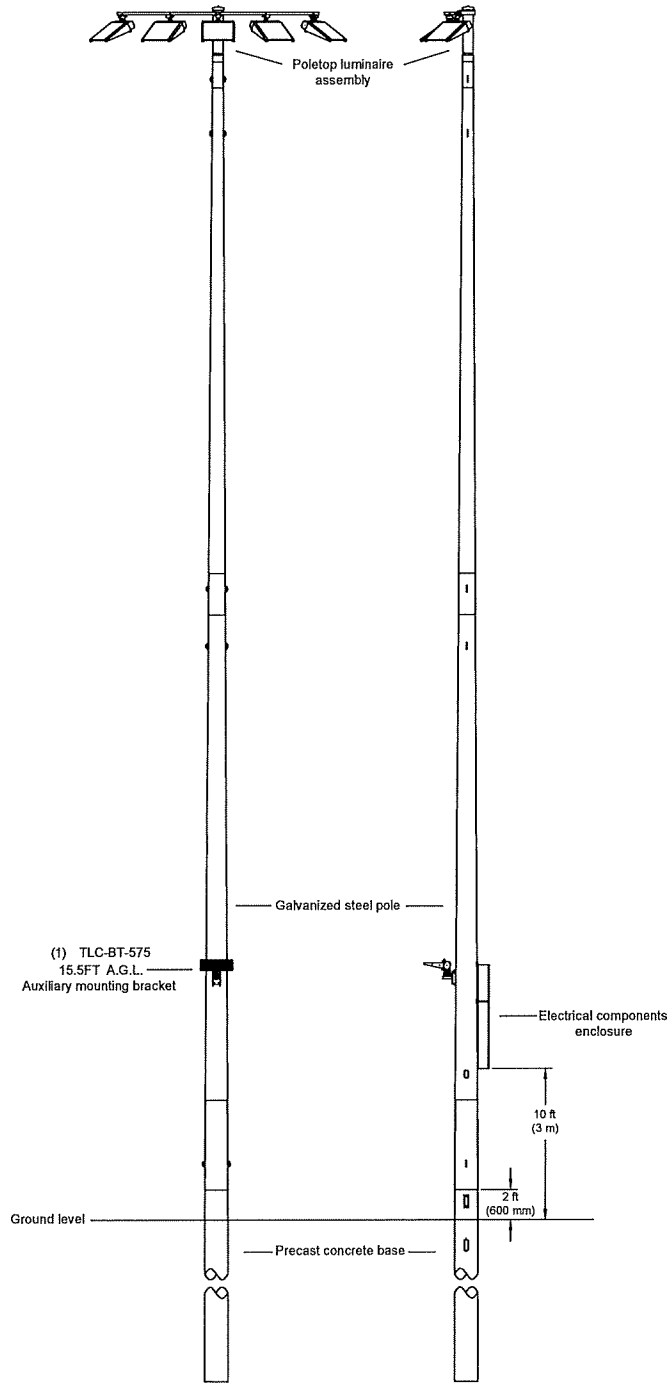
Vice President of Sales



G. PRODUCT INFORMATION



Musco Lighting, Inc. is an Equal Opportunity Employer. Minorities and women are encouraged to apply. Musco Lighting, Inc. is an Equal Opportunity Employer. Minorities and women are encouraged to apply.



POLE(S): A1-A2
 Musco 80FT Light-Structure System™ pole
 TLC for LED™ luminaires
 (5)TLC-LED-1200

DATE:	BY:	R.L.	REVISIONS:

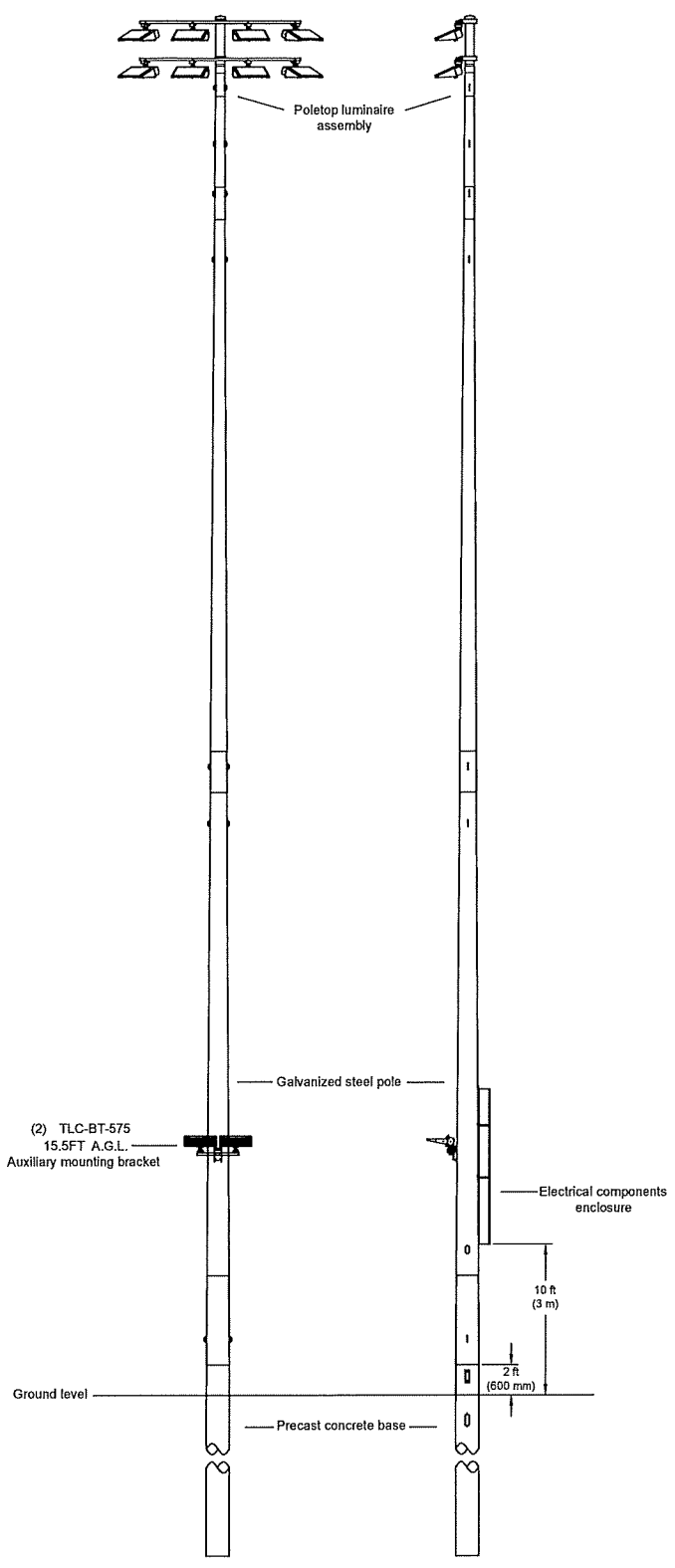
DATE:	BY:	R.L.	REVISIONS:


MUSCO
 Lighting

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 100 1st Avenue West
 Okaloosa, Iowa 52577
 +1-800-825-6020
 +1-841-673-0411

Pentucket Regional HS FB
 West Newbury, MA
 Pole Configuration Drawing **B**

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POLE(S): B1-B2
 Musco 90FT Light-Structure System™ pole
 TLC for LED™ luminaires
 (8)TLC-LED-1200

PROJECT NUMBER 102066	DATE 07/26/2022
DRAWN BY V. Maer	SCALE NTS
CHECKED BY V. Maer	DATE 07/26/2022
PROJECT NUMBER 102066P1	DATE 07/26/2022
2	OF 5 SHEETS

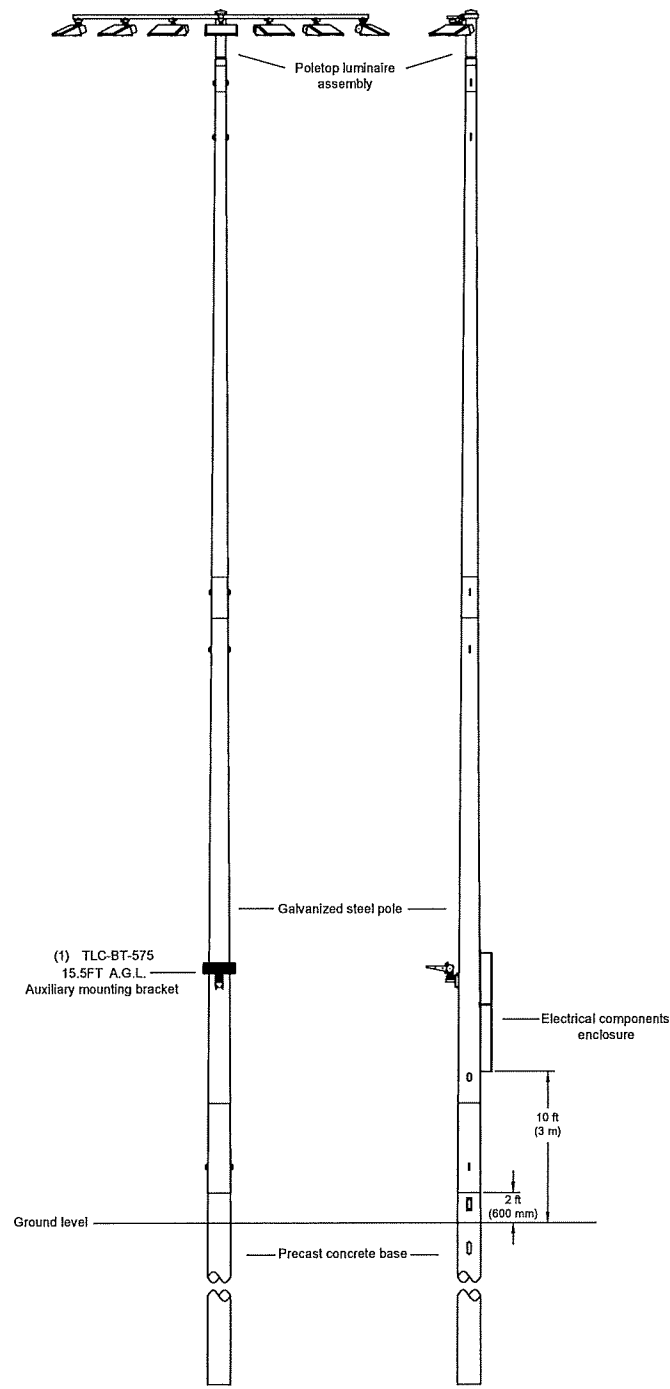
DATE:	BY:	R.L.	REVISIONS:


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 +1-641-673-0411

Pentucket Regional HS FB
 West Newbury, MA
 Pole Configuration Drawing **B**

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 Musco Lighting, Inc. is a registered provider of continuing education for the International Dark Sky Association (IDA).
 Musco Lighting, Inc. is a registered provider of continuing education for the International Association of Lighting Engineers (IALA).
 Musco Lighting, Inc. is a registered provider of continuing education for the Illuminating Engineering Society (IES).
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 Musco Lighting, Inc. is a registered provider of continuing education for the Society of Illumination Engineers (SIE).
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 Musco Lighting, Inc. is a registered provider of continuing education for the Society of Professional Lighting Engineers (SPLIE).



POLE(S): C1-C2
 Musco 80FT Light-Structure System™ pole
 TLC for LED™ luminaires
 (7)TLC-LED-1200

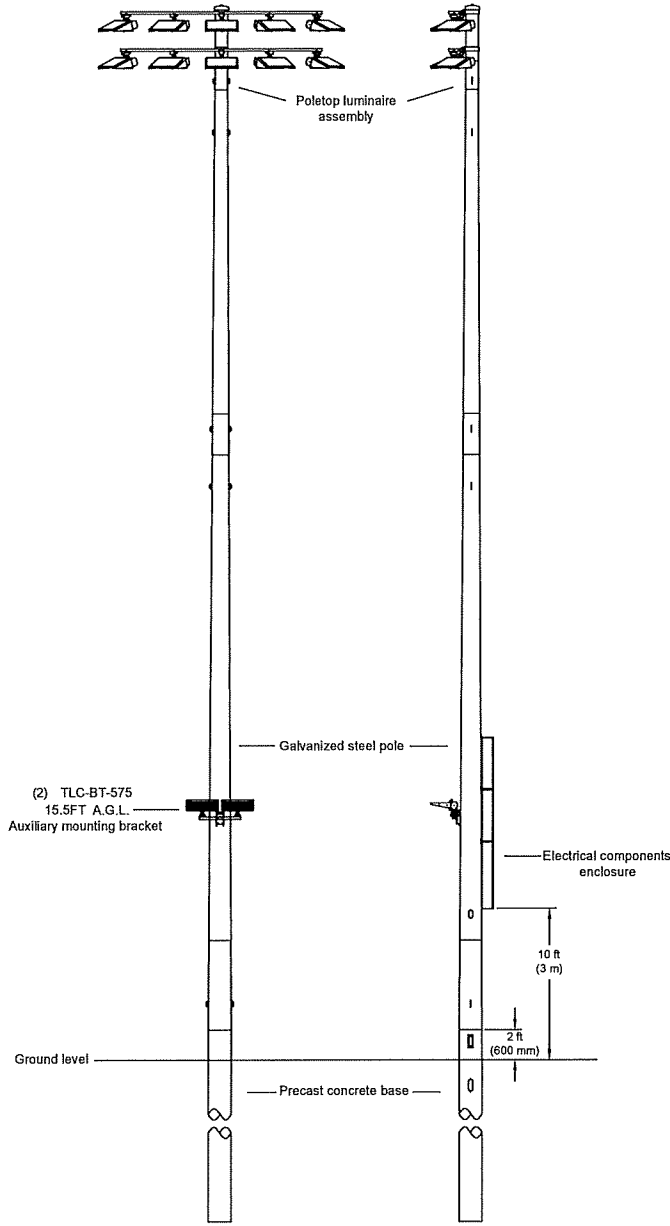
DATE:	07/26/2022
DESIGNER:	D.V. Maer
DRIVER:	NTS
PROJECT NUMBER:	102066p1
DATE:	07/26/2022
DESIGNER:	D.V. Maer
DRIVER:	NTS
PROJECT NUMBER:	102066p1
3 OF 5 SHEETS	

DATE:	BY:	R.L.	REVISIONS:

MUSCO Lighting
 CORPORATE OFFICE:
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 Oskaloosa, Iowa 52577
 +1-800-825-6020
 +1-641-673-0411

Pentucket Regional HS FB
 West Newbury, MA
 Pole Configuration Drawing **B**

Musco Lighting, Inc. is a registered provider of continuing education for landscape architects. This drawing is provided for informational purposes only. It is not intended to be used as a construction document.



POLE(S): F1-F2
 Musco 70FT Light-Structure System™ pole
 TLC for LED™ luminaires
 (10)TLC-LED-1200

DATE	07/26/2022
DESIGNED BY	NTS
CHECKED BY	Meer
PROJECT NUMBER	102066
DRAWING NUMBER	102066P1
SHEET	4 OF 5

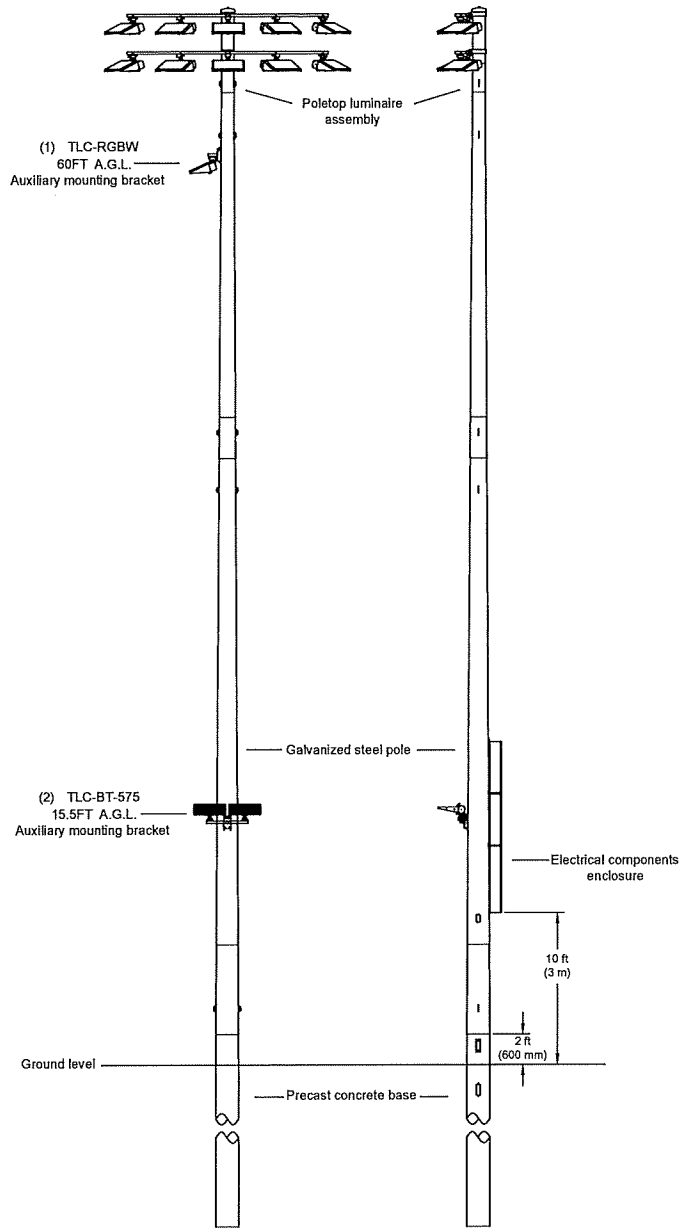
DATE:	BY:	R.L.	REVISIONS:


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 Lighting

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 +1-800-825-6020
 +1-641-673-0411

Pentucket Regional HS FB
 West Newbury, MA
 Pole Configuration Drawing **B**

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POLE(S): F3-F4
 Musco 70FT Light-Structure System™ pole
 TLC for LED™ luminaires
 (10)TLC-LED-1200

DATE:	BY:	REVISIONS:
01/28/2022	R.L.	
102066P1		

PROJECT NUMBER:	102066
DESIGNER:	D.Ver Meer
SCALE:	NTS
DRAWN:	NTS
CHECKED:	
DATE:	01/28/2022
PROJECT NUMBER:	102066P1
DATE:	01/28/2022

MUSCO
 Lighting

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 +1-841-873-0411

Pentucket Regional HS FB
 West Newbury, MA
 Pole Configuration Drawing **B**

5 Easy Pieces™

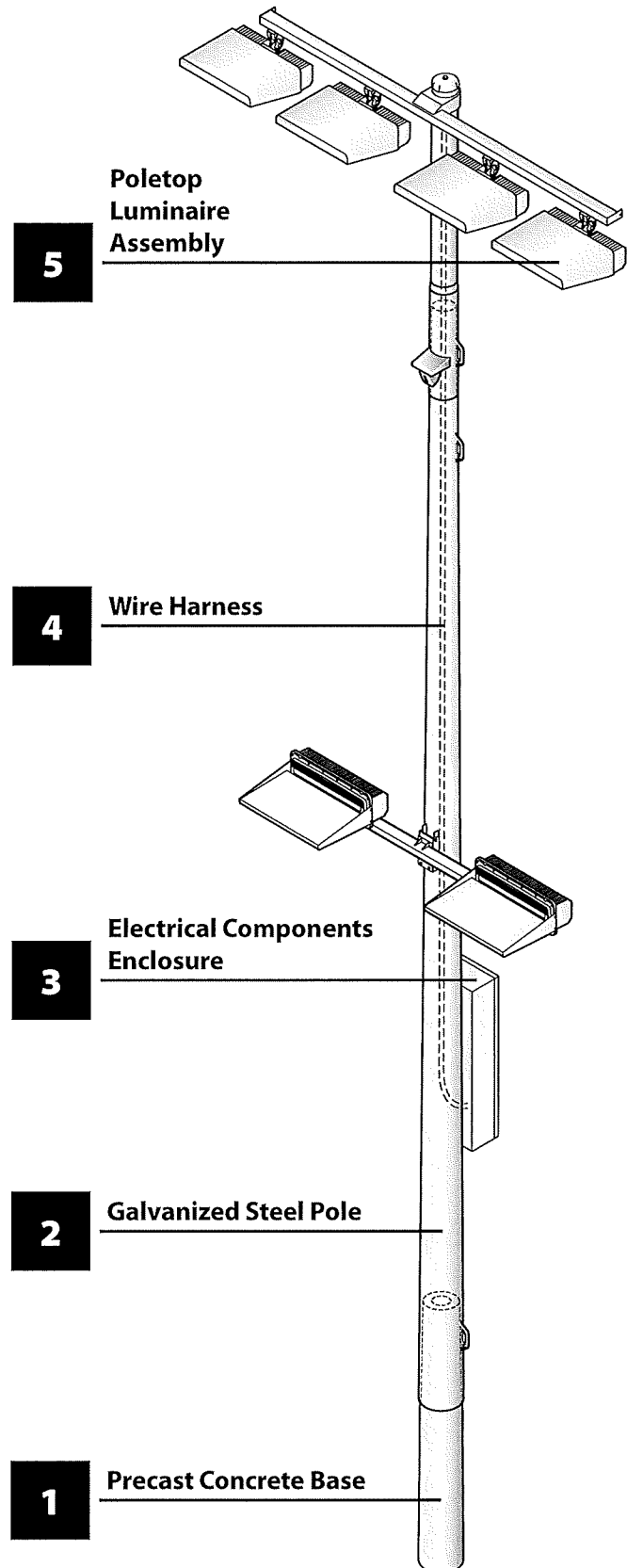
Complete System from Foundation to Poletop

Factory wired, aimed, and tested

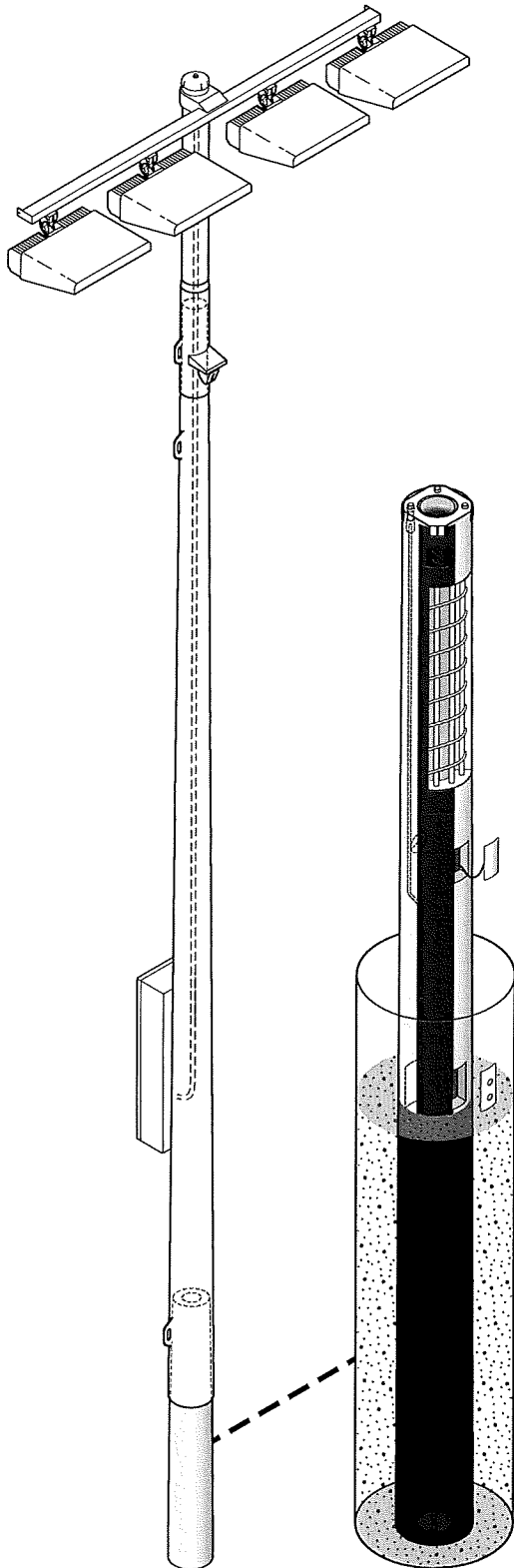
Fast, trouble-free installation

Comprehensive corrosion package

Integrated lightning ground



TLC for LED® – Precast Concrete Base



Overview

The precast concrete base is set directly into the ground and backfilled with concrete. The base includes an integrated lightning ground system.

Features

Base

- Set pole on base in 24 hours
- Tapered upper section for slip-fit steel pole
- Access holes for wire entry
- Epoxy-coated ends prevent water intrusion
- Lifting hole accepts load-rated steel rod provided by Musco

Integrated Lightning Ground System

- Complies with NFPA 780, UL 96A, and EN 62305 standards when installed per Musco installation instructions
- UL Listed, Class II Lightning Protection, file number E337467
- Tested up to 100 kA by independent laboratory
- Steel pole interfaces with integrated grounding system by means of the pole grounding connector
- 2/0 AWG (crosssectional area of 67.4 mm²) grounding electrode conductor
- Concrete-encased grounding electrode, 20 feet (6.1 m) total length, ½ inch (12.7 mm) diameter

Technical Specifications

Base dimensions vary. For measurements refer to project-specific *Foundation and Pole Assembly* drawing.

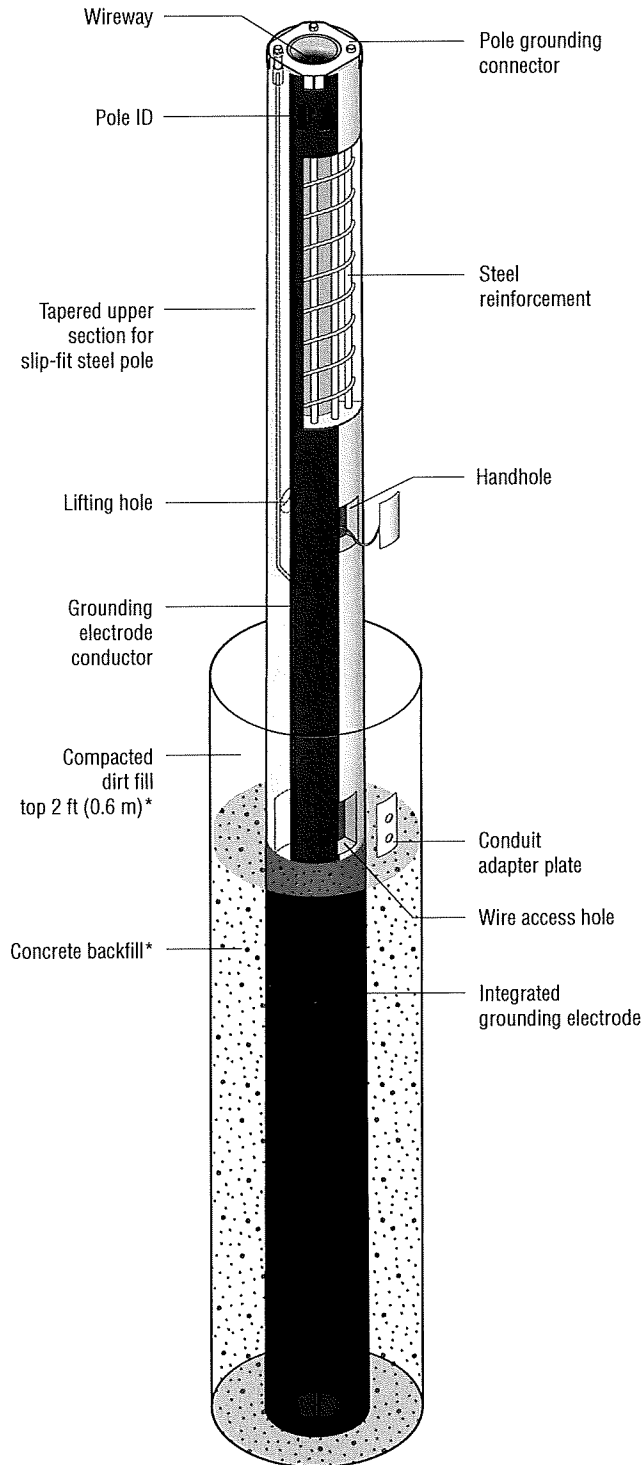
Construction

- Spun concrete construction
- Prestressed steel vertical strands and coil spiral for strength throughout base
- Minimum design strength is 9500 lb/in² (65.5 MPa) at 28 days
- Meets ASTM C1804 design requirements

Quality Assurance Tests

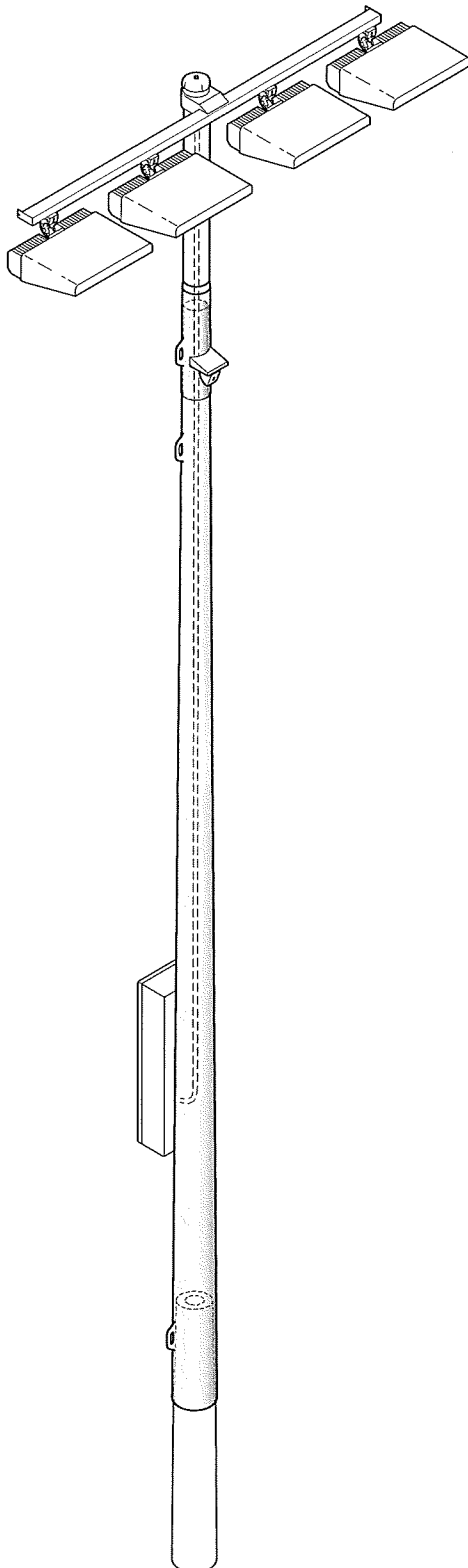
- 28-day compressive strength
- Bending moment capacity
- Grounding system continuity

TLC for LED® – Precast Concrete Base



*Standard pier foundation shown. Foundation and/or backfill may vary per alternate foundation design.

TLC for LED® – Galvanized Steel Pole



Overview

The galvanized steel pole is designed to slip-fit together with the precast concrete base and the poletop luminaire assembly.

Features

- Slip-fit connection allows pole assembly with come-alongs
- Built-in hardware for attaching electrical components enclosure
- Wire access from inside the pole (no exposed wiring or conduit)
- Shipped in sections for easier handling
- Labeled with pole identification for location on field

Technical Specifications

Pole dimensions vary. For measurements refer to project specific pole configuration drawing.

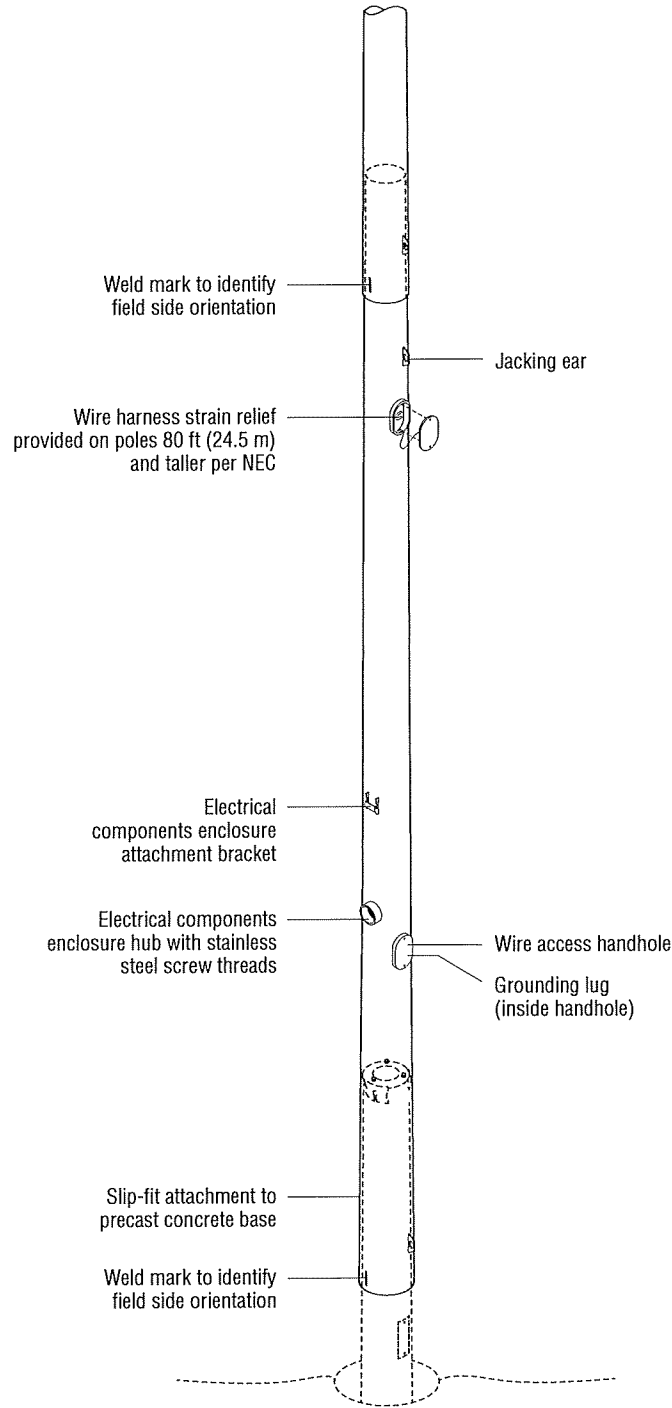
Construction

- Pole designs comply with all major building codes
- High strength, low alloy, tapered, round steel pole
- Hot-dip galvanizing inside and outside after fabrication meets ASTM-A123 and EN 1461 standards
- Conforms to AASHTO stress standards and BS EN 40-3-1
- Grounding lug—rated for aluminum (AL) or copper (CU) wiring
- Pole shipped in sections
- Stainless steel fasteners passivated and coated
- Material certifications are available

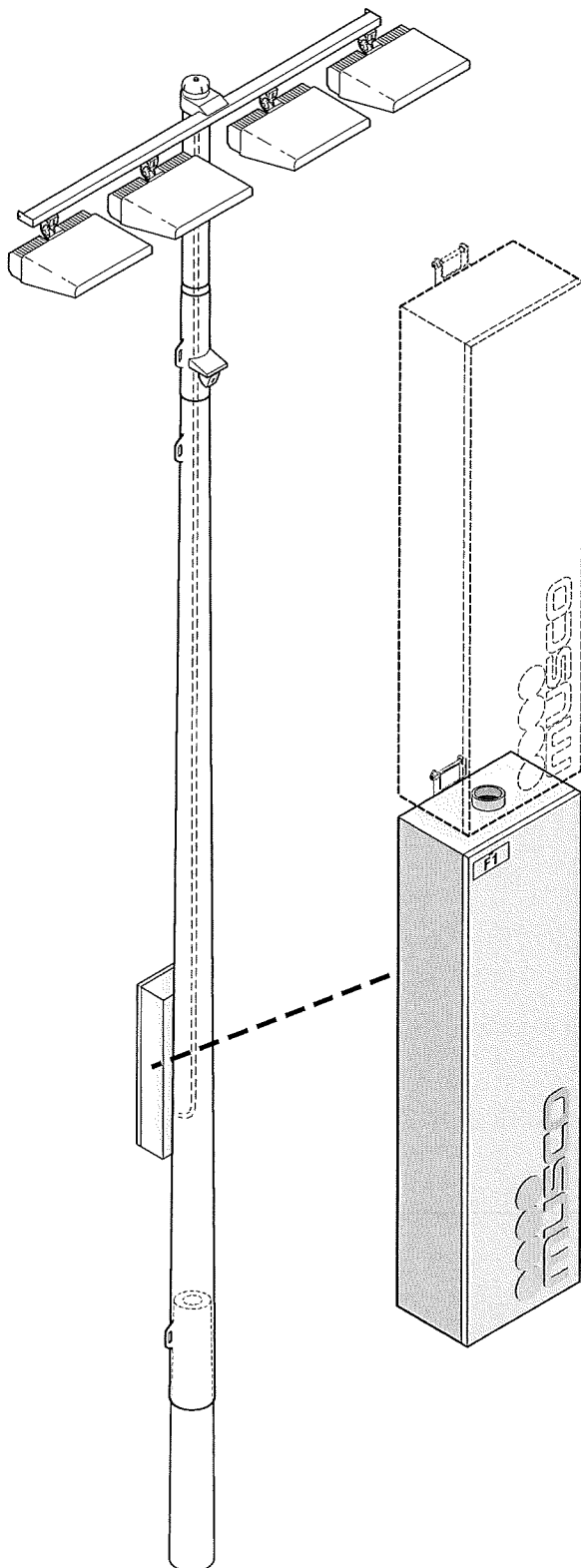
Quality Assurance Tests

- Bending stress
- Minimum galvanizing thickness
- Straightness measurement

TLC for LED® – Galvanized Steel Pole



TLC for LED® – Electrical Components Enclosure



Overview

The electrical components enclosure contains all necessary equipment to operate luminaires. Built-in mounting hardware allows for easy attachment to the galvanized steel pole. Quick connect plugs fasten to the wire harness.

Features

- Factory-built and tested as a unit
- Quick connect plug for easy field wiring
- Mounted 10 ft (3 m) above grade for servicing with ladder
- Labeled with pole identification and electrical information
- Drivers individually fused and spare fuses supplied
- Wire access from inside the pole (no exposed wiring or conduit)
- Disconnect per circuit

Technical Specifications

For amperage draws and circuitry refer to project specific document.

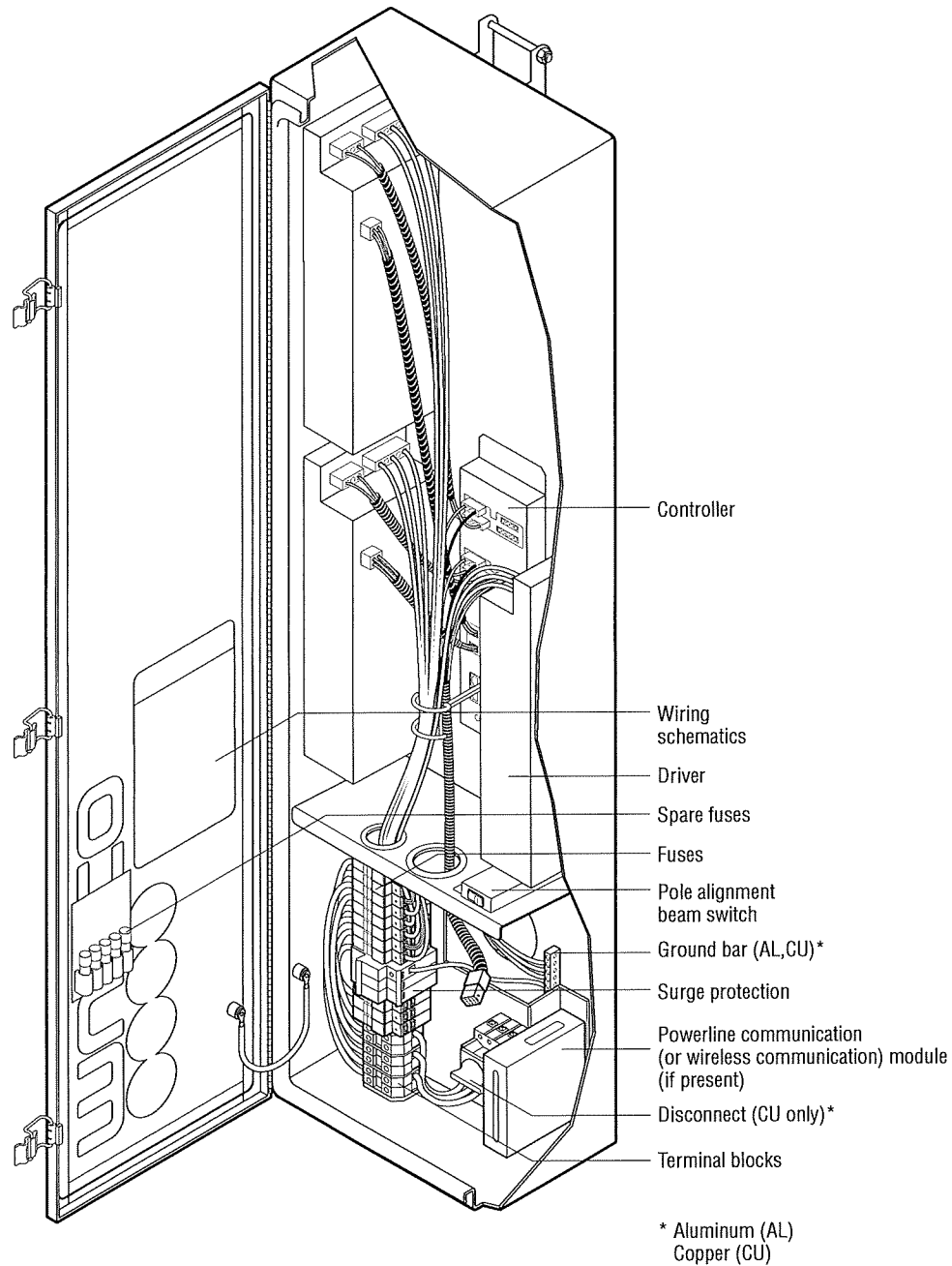
Construction

- 0.08 inch (2 mm) thick, powder-coated aluminum
- Enclosure ratings: NEMA 3R, IP54
- Designed to operate in up to 50° C (122° F) ambient temperature
- Full length stainless steel hinge
- All stainless steel fasteners passivated and coated
- Meets touchsafe standards
- Up to four drivers per enclosure
- Approximate weight 65 lb (29 kg)
- Lower enclosure size 14.25 in (362 mm) wide x 8 in (203 mm) deep x 52.5 in (1334 mm) high
- Upper enclosure size 14.25 in (362 mm) wide x 8 in (203 mm) deep x 40.5 in (1029 mm) high

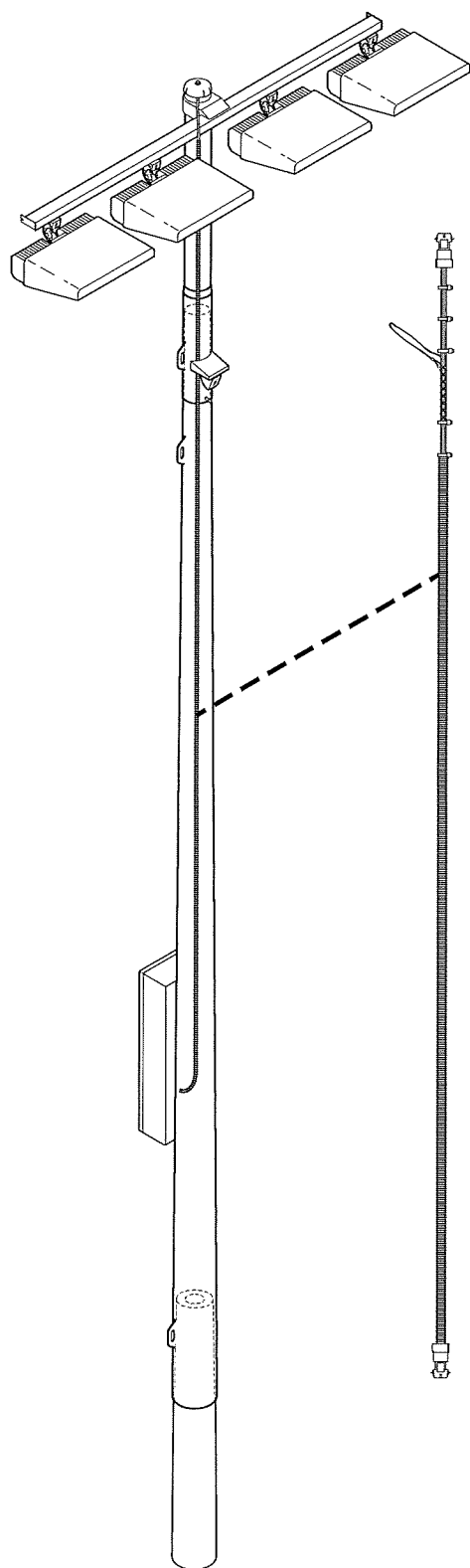
Quality Assurance Tests

- Grounding continuity
- High potential dielectric withstand
- Full functionality test

TLC for LED® – Electrical Components Enclosure



TLC for LED® – Wire Harness



Overview

The factory-built wire harness connects the electrical components enclosure to the poletop luminaire assembly.

Features

- Quick connect plugs for easy field wiring
- Factory-assembled support grip alleviates strain on connections
- Spiral wound cable eliminates slippage
- Protective sleeve prevents wire damage
- All internal wiring, no exposed wires
- Labels identify pole and luminaires

Technical Specifications

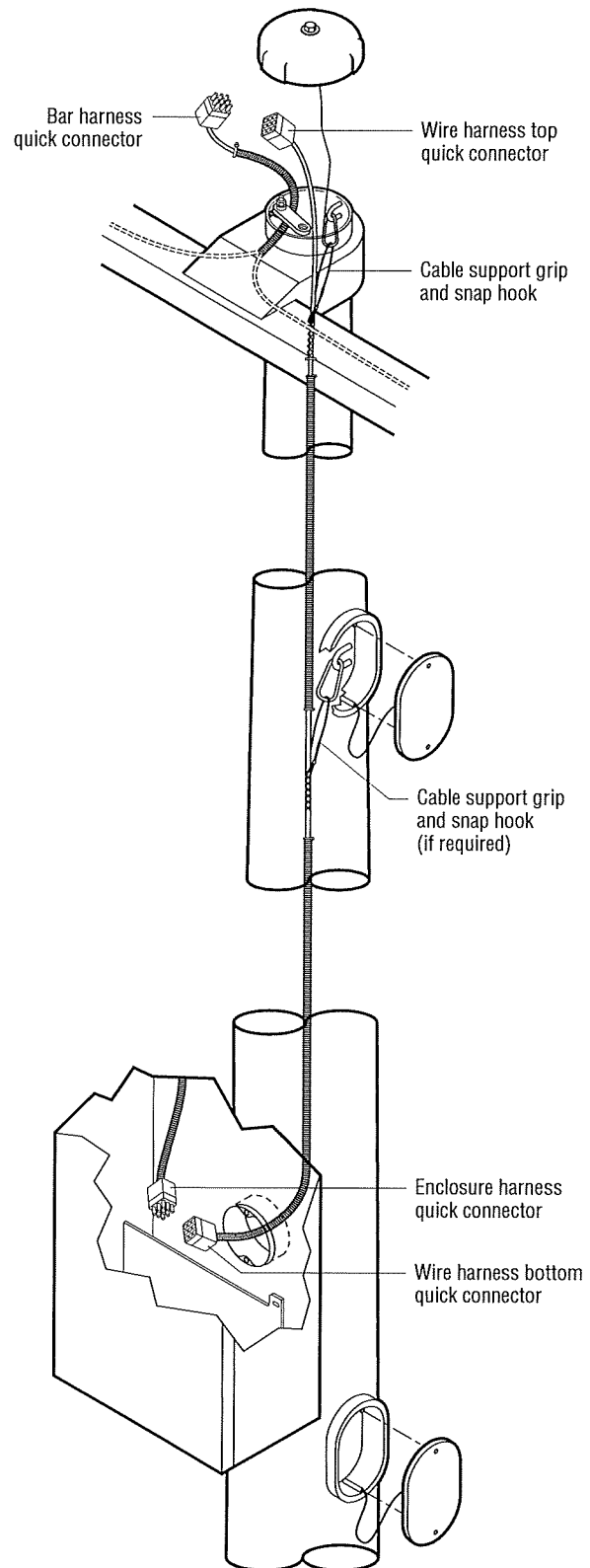
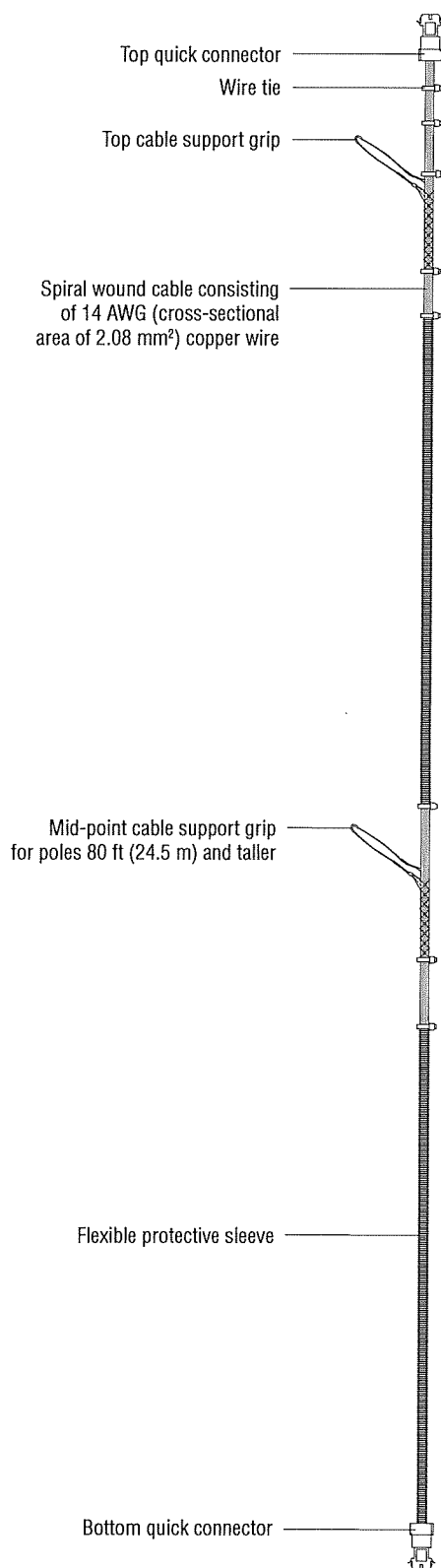
Construction

- Spiral wound, wrapped cable, 14 AWG (cross-sectional area of 2.08 mm²) copper wire
- Integral cable support grip
- Two wires per driver
- Each harness supports up to four drivers
- Multiple top connectors may be present if required for number of luminaires

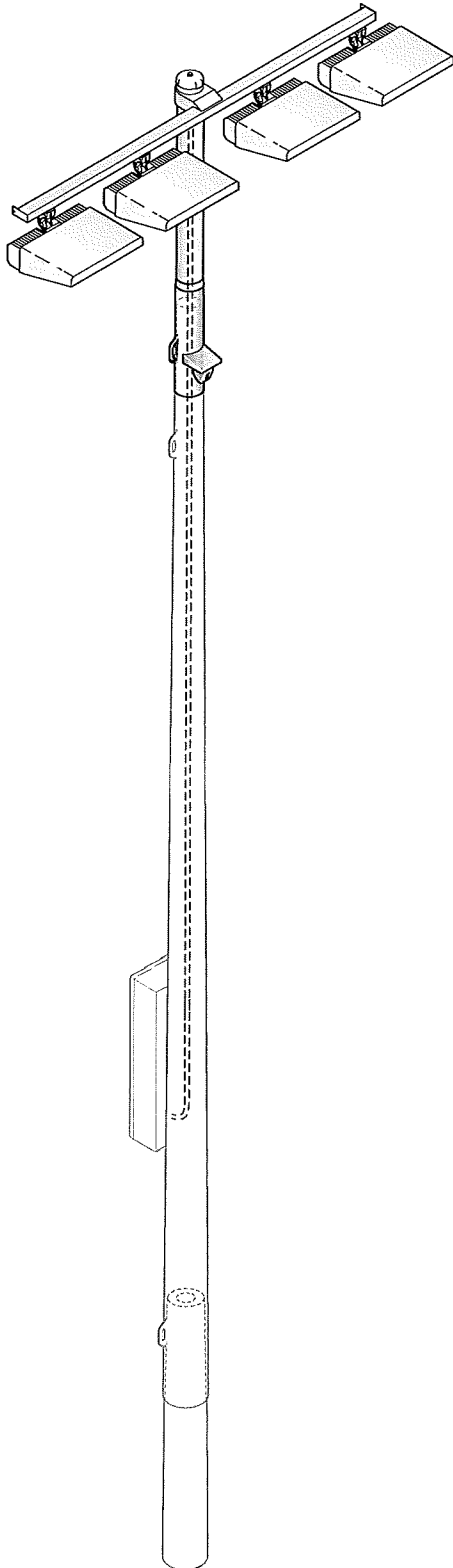
Quality Assurance Tests

- Connector/load resistance
- High potential dielectric withstand
- Grounding continuity
- Termination crimp

TLC for LED® – Wire Harness



TLC for LED® – Poletop Luminaire Assembly, Weld On



Overview

The factory-aimed poletop luminaire assembly is the upper section of the pole and slip-fits together with the galvanized steel pole.

Features

- Each luminaire is factory-built, tested, and ships as a unit
- Luminaires are factory-aimed to two-tenths degree of accuracy
- Luminaire mounts and connects in a single step
- Slip-fit connection allows assembly with come-alongs
- All luminaires are factory-wired to a quick connect harness for easy installation
- Labels identify pole and luminaire location
- No exposed wiring or conduit
- Factory-set pole alignment beam allows easy field alignment

Technical Specifications

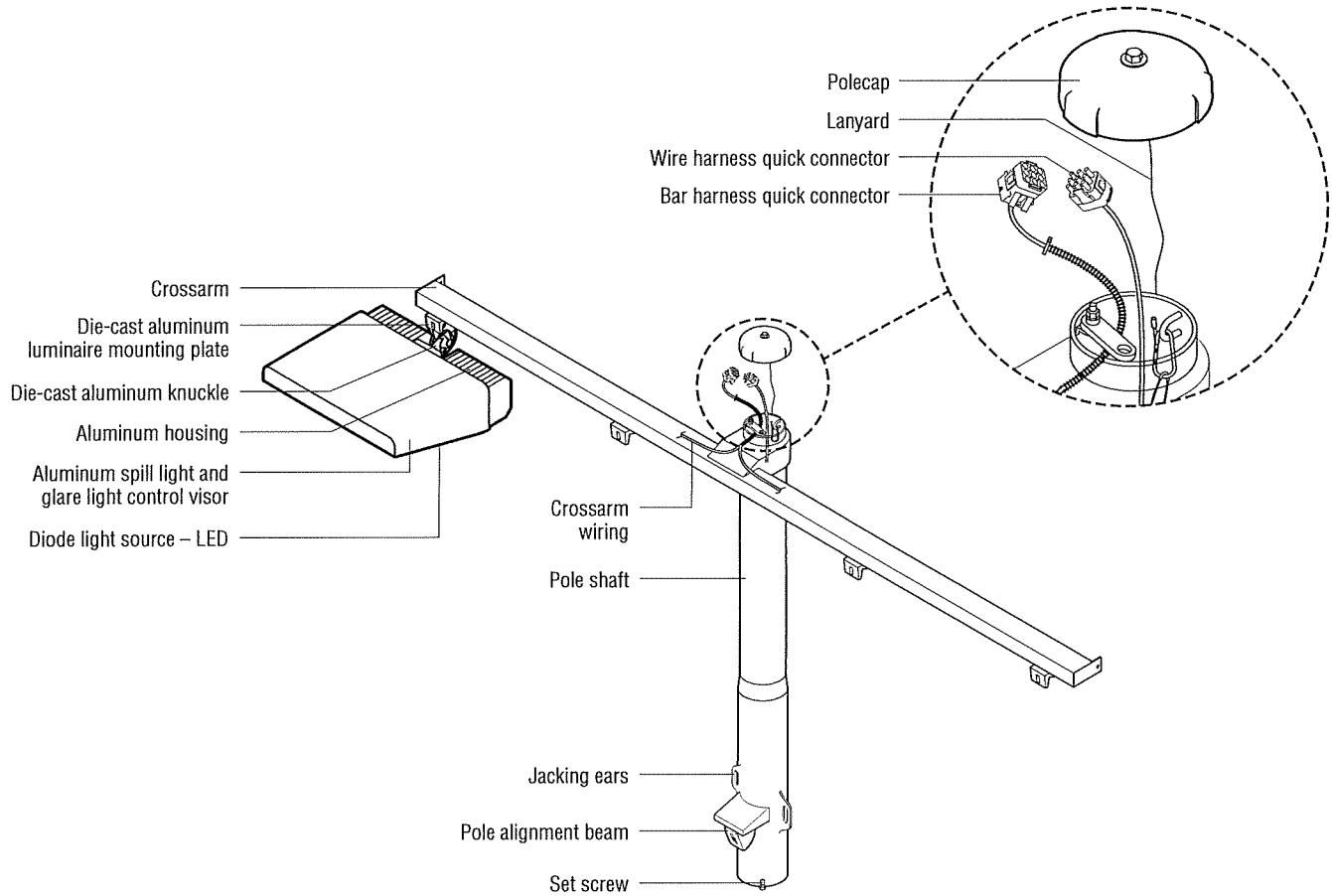
Construction

- Crossarms and pole shaft hot-dip galvanizing inside and outside after fabrication meets ASTM-A123 and EN 1461 standards
- All aluminum components are powder-coated or anodized to mil-A-8625F and BS 5599
- Luminaire and knuckle are powder-coated die-cast aluminum
- All stainless steel fasteners are passivated and coated
- Crossarms are constructed of rectangular steel tubing
- Polecap is attached with stainless steel lanyard and securing bolt

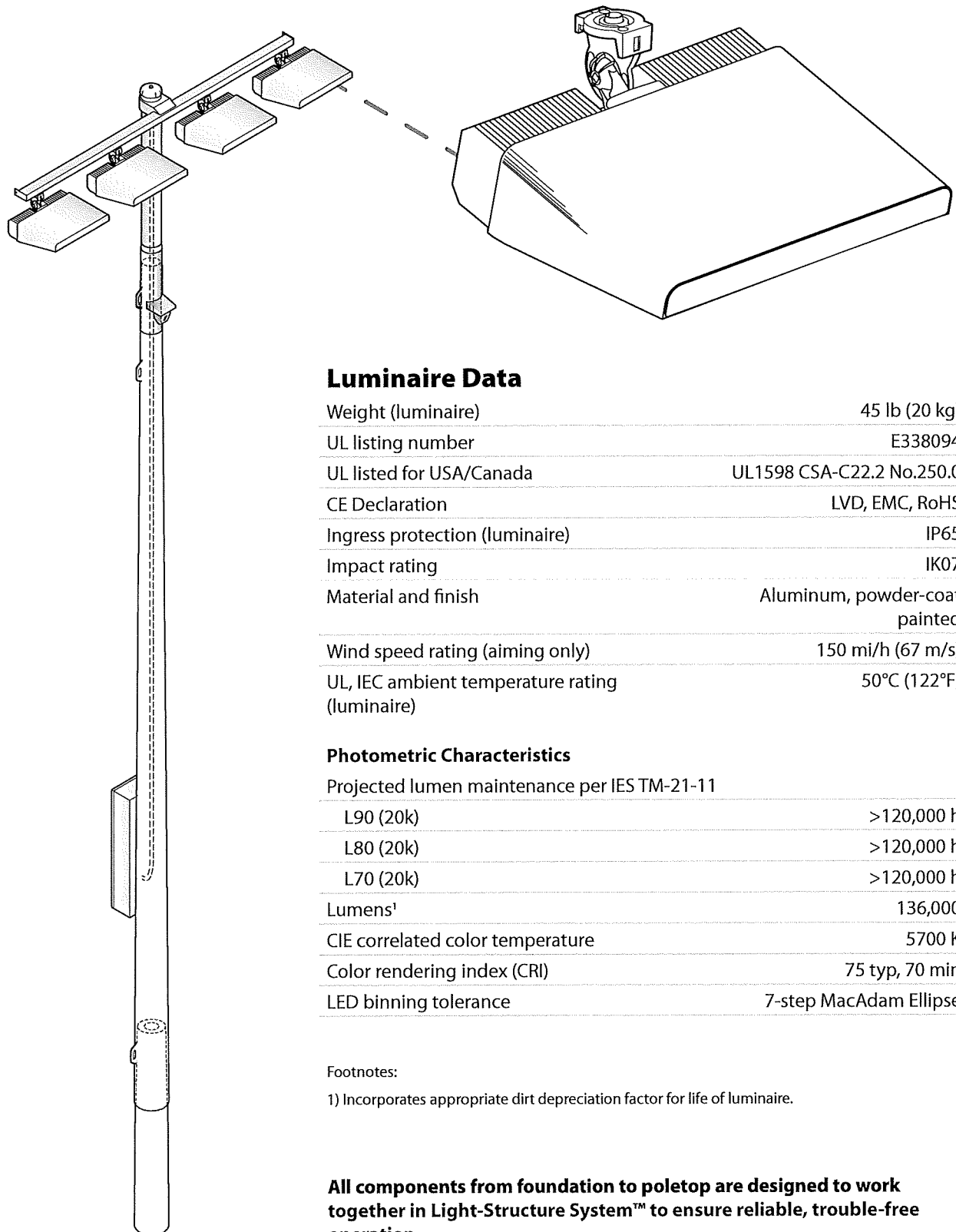
Quality Assurance Tests

- Galvanizing thickness
- High potential dielectric withstand
- Electrical continuity

TLC for LED® – Poletop Luminaire Assembly, Weld On



Luminaire and Driver – TLC-LED-1200



Luminaire Data

Weight (luminaire)	45 lb (20 kg)
UL listing number	E338094
UL listed for USA/Canada	UL1598 CSA-C22.2 No.250.0
CE Declaration	LVD, EMC, RoHS
Ingress protection (luminaire)	IP65
Impact rating	IK07
Material and finish	Aluminum, powder-coat painted
Wind speed rating (aiming only)	150 mi/h (67 m/s)
UL, IEC ambient temperature rating (luminaire)	50°C (122°F)

Photometric Characteristics

Projected lumen maintenance per IES TM-21-11	
L90 (20k)	>120,000 h
L80 (20k)	>120,000 h
L70 (20k)	>120,000 h
Lumens ¹	136,000
CIE correlated color temperature	5700 K
Color rendering index (CRI)	75 typ, 70 min
LED binning tolerance	7-step MacAdam Ellipse

Footnotes:

1) Incorporates appropriate dirt depreciation factor for life of luminaire.

All components from foundation to poletop are designed to work together in Light-Structure System™ to ensure reliable, trouble-free operation.

Luminaire and Driver – TLC-LED-1200

Driver Data

Electrical Data

Rated wattage¹

Per driver 1170 W

Per luminaire 1170 W

Number of luminaires per driver 1

Starting (inrush) current <40 A, 256 μs

Fuse rating 15 A

UL, IEC ambient temperature rating, electrical components enclosure 50°C (122°F)

Ingress protection, electrical components enclosure IP54

Efficiency 95%

Dimming mode optional

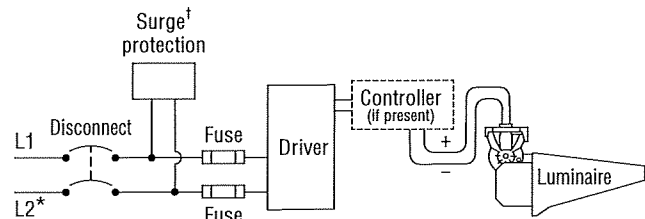
Range, energy consumption 14 – 100%

Range, light output 19 – 100%

Flicker <2%

Total harmonic distortion (THD) at full output <20%

Typical Wiring



* If L2 is neutral then not switched or fused.

† Not present if indoor installation.

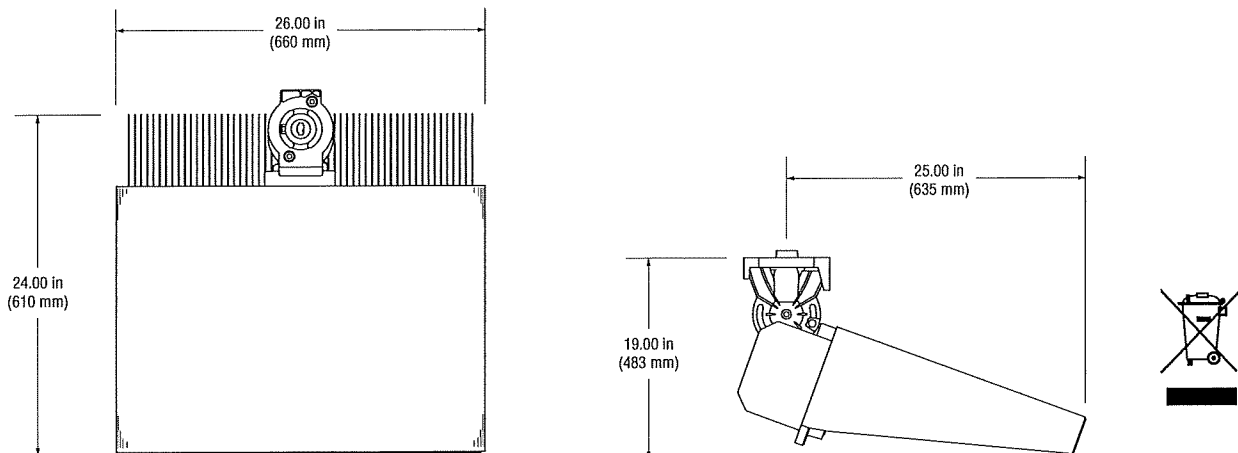
	200 Vac 50/60 Hz	208 Vac 60 Hz	220 Vac 50/60 Hz	230 Vac 50 Hz	240 Vac 50/60 Hz	277 Vac 60 Hz	347 Vac 60 Hz	380 Vac 50/60 Hz	400 Vac 50 Hz	415 Vac 50 Hz	480 Vac 60 Hz
Max operating current per luminaire ²	7.26 A	6.98 A	6.60 A	6.31 A	6.05 A	5.24 A	4.18 A	3.82 A	3.63 A	3.50 A	3.03 A

Footnotes:

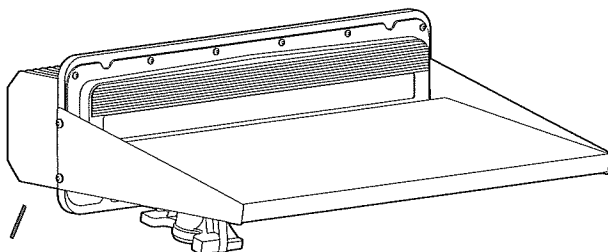
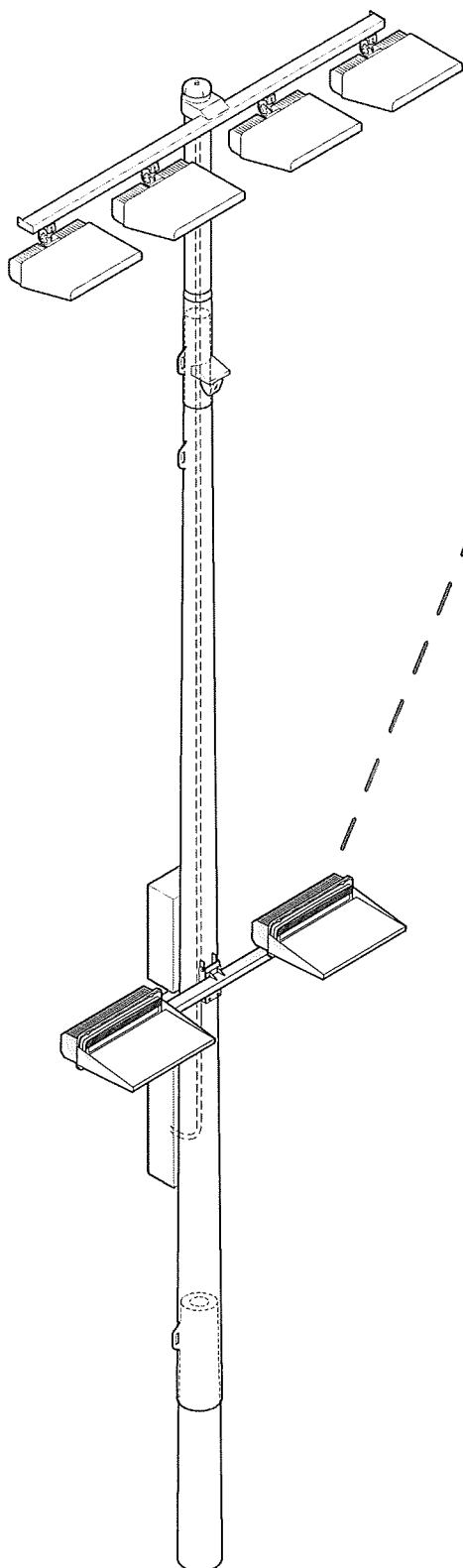
- 1) Rated wattage is the power consumption, including driver efficiency losses, at stabilized operation in 25°C ambient temperature environment.
- 2) Operating current includes allowance for 0.90 minimum power factor, operating temperature, and LED light source manufacturing tolerances.

Notes

1. Use thermal magnetic HID-rated or D-curve circuit breakers.
2. See *Musco Control System Summary* for circuit information.



Luminaire and Driver – TLC-BT-575



Luminaire Data

Weight (luminaire)	34 lb (15 kg)
UL listing number	E338094
UL listed for USA/Canada	UL1598 CSA-C22.2 No.250.0
CE Declaration	LVD, EMC, RoHS
Ingress protection (luminaire)	IP65
Impact rating	IK07
Material and finish	Aluminum, powder-coat painted
Wind speed rating (aiming only)	150 mi/h (67 m/s)
UL, IEC ambient temperature rating (luminaire)	50°C (122°F)

Photometric Characteristics

Projected lumen maintenance per IES TM-21-11	
L90 (20k)	>120,000 h
L80 (20k)	>120,000 h
L70 (20k)	>120,000 h
Lumens ¹	52,000
CIE correlated color temperature	5700 K
Color rendering index (CRI)	75 typ, 70 min
LED binning tolerance	7-step MacAdam Ellipse

Footnotes:

1) Incorporates appropriate dirt depreciation factor for life of luminaire.

All components from foundation to poletop are designed to work together in Light-Structure System™ to ensure reliable, trouble-free operation.

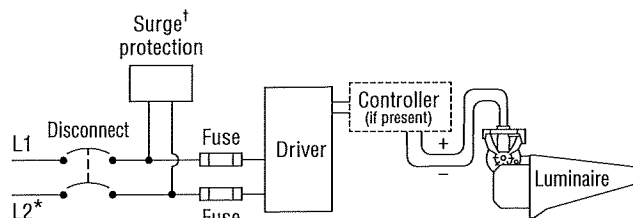
Luminaire and Driver – TLC-BT-575

Driver Data

Electrical Data

Rated wattage ¹	
Per driver	575 W
Per luminaire	575 W
Number of luminaires per driver	1
Starting (inrush) current	<40 A, 256 μs
Fuse rating	15 A
UL, IEC ambient temperature rating, electrical components enclosure	50°C (122°F)
Ingress protection, electrical components enclosure	IP54
Efficiency	95%
Total harmonic distortion (THD) at full output	<20%

Typical Wiring



* If L2 is neutral then not switched or fused.

† Not present if indoor installation.

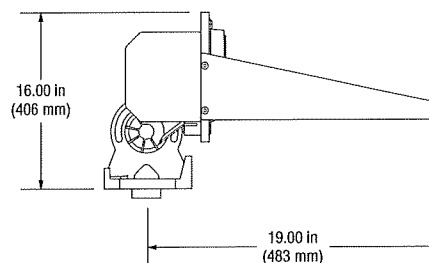
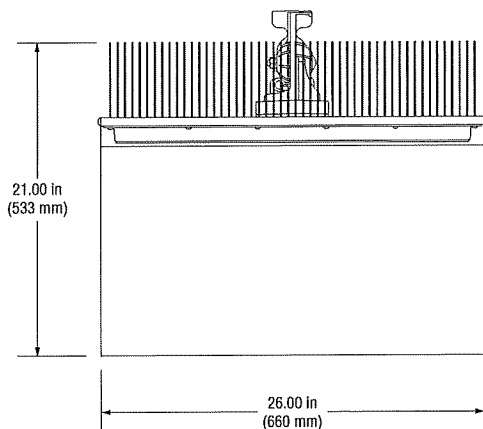
	200 Vac 50/60 Hz	208 Vac 60 Hz	220 Vac 50/60 Hz	230 Vac 50 Hz	240 Vac 50/60 Hz	277 Vac 60 Hz	347 Vac 60 Hz	380 Vac 50/60 Hz	400 Vac 50 Hz	415 Vac 50 Hz	480 Vac 60 Hz
Max operating current per luminaire ²	3.48 A	3.35 A	3.16 A	3.03 A	2.90 A	2.51 A	2.01 A	1.83 A	1.74 A	1.68 A	1.45 A

Footnotes:

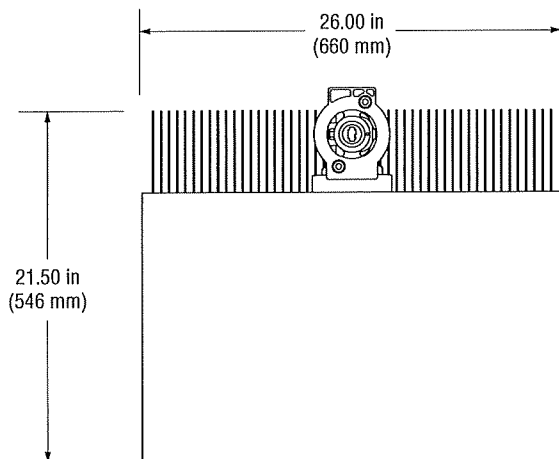
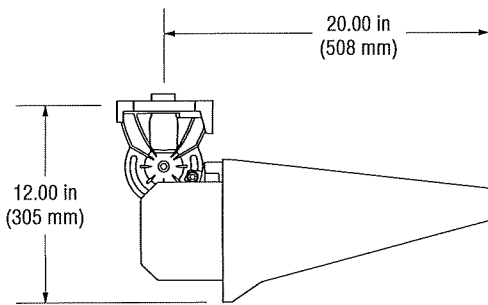
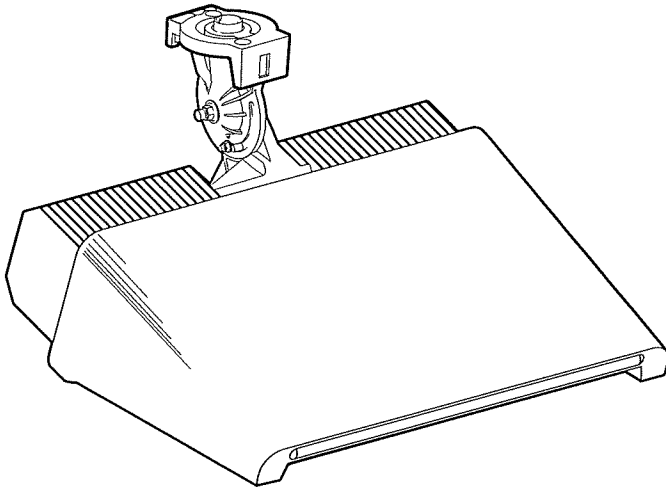
- 1) Rated wattage is the power consumption, including driver efficiency losses, at stabilized operation in 25°C ambient temperature environment.
- 2) Operating current includes allowance for 0.90 minimum power factor, operating temperature, and LED light source manufacturing tolerances.

Notes

1. Use thermal magnetic HID-rated or D-curve circuit breakers.
2. See *Musco Control System Summary* for circuit information.



Datasheet: TLC for LED® RGBW Luminaire and Driver



Luminaire Data

Weight (luminaire)	40 lb (18 kg)
UL listing number	E338094
UL listed for USA / Canada	UL 1598 CSA-C22-2 No.250.0
Ingress protection, luminaire	IP65
Impact rating	IK07
Material and finish	Aluminum, powder-coat painted
Wind speed rating (aiming only)	150 mi/h (67 m/s)
UL ambient temperature rating, luminaire	50°C (122°F)

Photometric Characteristics

Projected lumen maintenance per IES TM-21-11

L90 (20k) (white only)	>120,000 h
L80 (20k) (white only)	>120,000 h
L70 (20k) (white only)	>120,000 h
CIE correlated color temperature (white only)	5700 K
Color rendering index (CRI) (white only)	75 typ, 70 min
Lumens ¹ , white	28,500
Lumens ¹ , red	8,000
Lumens ¹ , green	20,000
Lumens ¹ , blue	8,000
LED binning tolerance	7-step MacAdam Ellipse (white LEDs only)

Footnotes:

1) Incorporates appropriate dirt depreciation factor for life of luminaire.

Datasheet: TLC for LED® RGBW Luminaire and Driver

Driver Data

Electrical Data

Rated wattage ¹	
Per luminaire, max	640 W
Number of drivers per luminaire	4
Starting (inrush) current	106 A, 5 ms
Fuse rating	20 A
UL, IEC ambient temperature rating, electrical components enclosure	50°C (122°F)
Ingress protection, electrical components enclosure	IP54
Efficiency	94%
Dimming mode	optional
Range, energy consumption	varies by color
Range, light output	varies by color

	200 Vac 50/60 Hz	208 Vac 60 Hz	220 Vac 50/60 Hz	230 Vac 50 Hz	240 Vac 50/60 Hz	277 Vac 60 Hz	347 Vac 60 Hz	480 Vac 60 Hz
Max operating current per luminaire ²	3.56 A	3.44 A	3.24 A	3.08 A	2.96 A	2.56 A	2.04 A	1.48 A

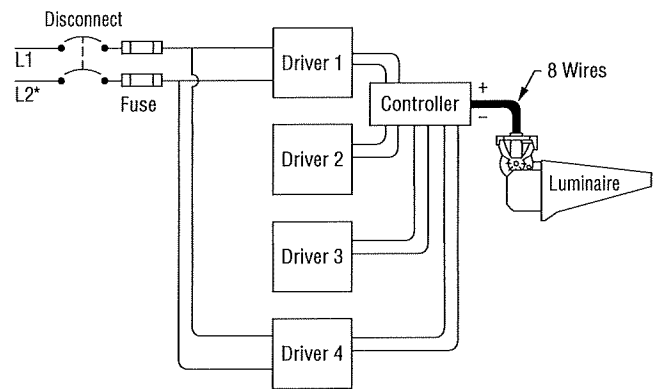
Footnotes:

- 1) Rated wattage is the power consumption, including driver efficiency losses, at stabilized operation in 25°C ambient temperature environment.
- 2) Operating current includes allowance for power factor, operating temperature, and LED light source manufacturing tolerances.

Notes

1. Use thermal magnetic HID-rated or D-curve circuit breakers.
2. See *Musco Control System Summary* for circuit information.

Typical Wiring



*If L2 is neutral then not switched or fused.



Safety: UL Product Certification

UL Product Certification for:

Musco Sports Lighting, LLC
 100 1st Ave W
 PO Box 808
 Oskaloosa, IA 52577
 USA



UL Category	Covers	UL Number
High-Intensity Discharge Surface-Mounted Luminaires	<ul style="list-style-type: none"> Green Generation™ luminaires and remote ballast assemblies SportsCluster® and SportsCluster-2® luminaires and remote ballast assemblies Light-Structure 2™ and Light-Structure System™ luminaires and remote ballast assemblies 1000 W Light-Pak™ and Light-Pak indoor luminaires with Multi-Watt™ control system 1000 W Show-Light™ and Show-Light Green™ luminaires with hooded light actuator system and remote ballast assemblies 2000 W Mirtran™ luminaire Stadium 2K Fixture™ 2000 W luminaire and Hot Restrike Green™ 2000 W hot restrike luminaire 	E33316
Management Equipment, Energy	Lighting control systems for: <ul style="list-style-type: none"> Control-Link® control and monitoring system Control-Link retrofit control system 	E139944
Industrial Control Panels	Control panels and enclosures for: <ul style="list-style-type: none"> Control-Link® control and monitoring system Control-Link retrofit control system Lighting contactor cabinets Multi-Watt™ control systems 	E204954
Emergency Lighting and Power Equipment	<ul style="list-style-type: none"> Auxiliary Lighting Interface Cabinet (ALIC) 	E311491
Luminaire Fittings	Galvanized steel poles 12 ft (3.7 m) or less for: <ul style="list-style-type: none"> Poles for Mirtran™ luminaire mounting Rooftop poles Special applications 	E132445
Luminaire Pole in Excess of 12 ft (3.7 m)	Galvanized steel poles greater than 12 ft (3.7 m) for: <ul style="list-style-type: none"> Light-Structure System™ luminaire mounting Sportspole™ structure or mounting system and special applications 	E325078

Safety: UL Product Certification

UL Category	Covers	UL Number
Devices, Scaffolding	Service platforms for: <ul style="list-style-type: none">• Light-Structure System™ luminaires and remote ballast assemblies• SportsCluster® System luminaires and remote ballast assemblies	SA7004
Lightning Conductors, Air Terminals, and Fittings	<ul style="list-style-type: none">• Light-Structure System™ pole structure concrete base	E337467
Light-Emitting-Diode Surface-Mounted Luminaires	<ul style="list-style-type: none">• LED luminaires and driver assemblies• LED auxiliary luminaires	E338094

A copy of the UL Certificate of Compliance is available upon your request.

Corrosion Protection

Manufacturer's Certification of Corrosion Protection for Light-Structure System™ and SportsCluster® Lighting Systems

The following standard corrosion protection is provided on your equipment:

- All exposed components are constructed of corrosion-resistant material and/or coated to protect against corrosion.
- All exposed carbon steel is hot-dip galvanized, meeting ASTM A123 and ISO/EN 1461.
- All exposed aluminum is powder-coated with high-performance polyester or anodized. All exterior reflective inserts are anodized, coated with a clear, high-gloss, durable fluorocarbon, and protected from direct environmental exposure to prevent reflective degradation or corrosion.
- All exposed hardware and fasteners are stainless steel, passivated, and coated with an aluminum based thermosetting epoxy resin for protection against corrosion and stress corrosion cracking. Alternately, for hardware in non-stressed applications, an electroless nickel coating meeting ASTM B733 may be used. Pole strapping used to mount certain equipment to light poles is annealed grade 304 stainless steel and passivated.
- Certain structural fasteners are carbon steel, galvanized meeting ASTM A153 and ISO/EN 1461 (for hot-dip galvanizing), or ASTM B695 (for mechanical galvanizing).

This corrosion protection package only applies to equipment manufactured by Musco.

Musco Sports Lighting, LLC

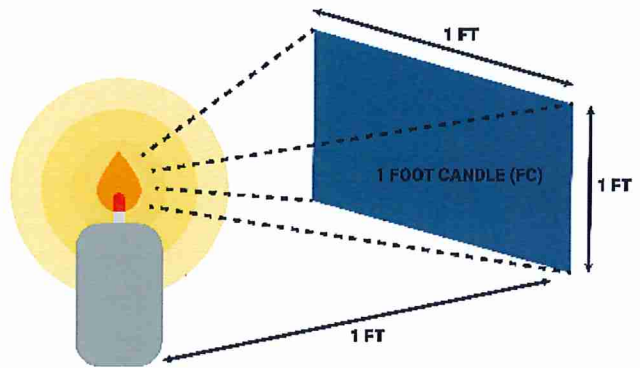


Greg Kubbe
Director of Product Performance

Foot Candle Reference Guide

A foot-candle is a form of measurement that is commonly used to determine sufficient lighting levels for our LED lighting projects. One foot-candle can stand for the amount of one lumen per square foot or about 10.764 lux. Being that it isn't particularly easy to measure the lighting levels above $\pm 10\%$, it is acceptable to consider one foot-candle as 10lux.

Foot Candle ranges provided are general recommendations. For specific project recommendations, consult a Light Poles Plus product specialist.



Application Examples

2-10 Foot Candles



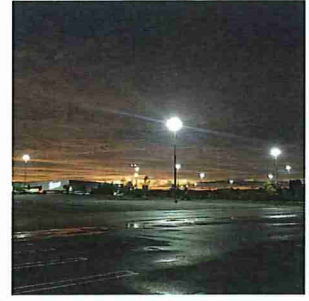
Walkway



Train Station



Parking Garage



Parking Lot

10-25 Foot Candles



Multi-Purpose Room



Parcel Distribution



Gun Range



Auto Dealership

25-40 Foot Candles



Airport



Workshop



Gymnasium



Fieldhouse

40-55 Foot Candles



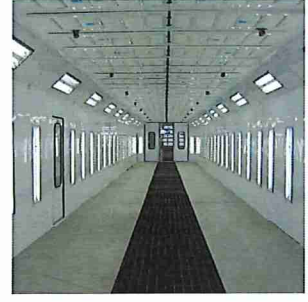
Factory



Gym



Gymnastics Gym



Paint Booth

60+ Foot Candles



Commercial Kitchen



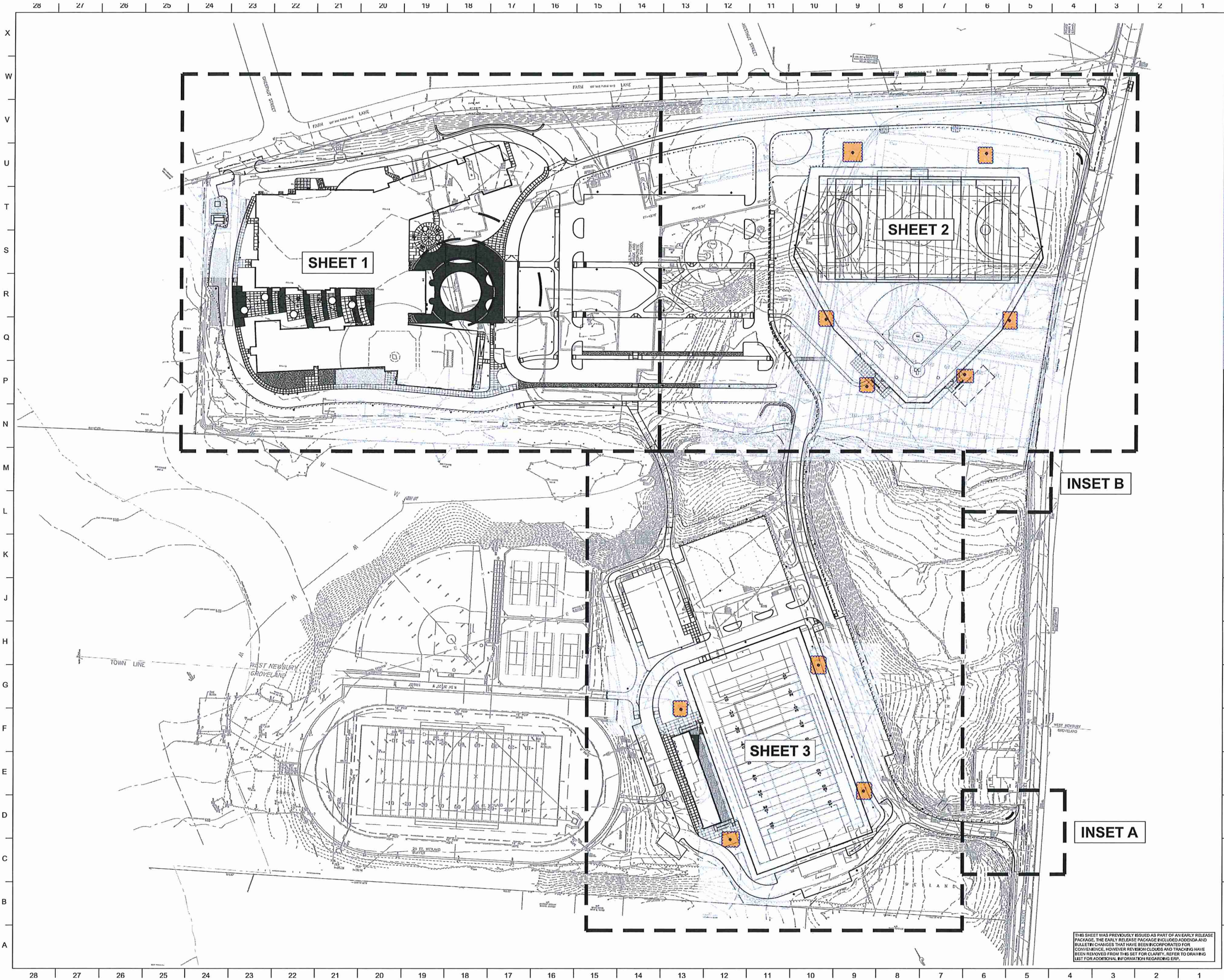
Office



Chemical Laboratory



Operating Room



dw
DORE + WHITTIER
 200 NORTH MAIN STREET, SUITE 101, WEST NEWBURY, MA 01985
 TEL: 978.234.1000
 WWW.DOREANDWHITTIER.COM

PROJECT NUMBER
 17-0762

SCALE AND SIGNATURE

REVISIONS:

NO.	DATE	TITLE

**PENTUCKET REGIONAL SCHOOL DISTRICT
 BUILDING PROJECT**
 24 MAIN STREET, WEST NEWBURY, MA 01985

ISSUE TITLE AND DATE:
 CONFORMED CONSTRUCTION SET
 07/24/2019

SCALE:
 SCALE: 1"=8' GRAPHIC SCALE

**SHEET LAYOUT
 PLAN -
 OVERALL**

SHEET NUMBER:
L1.00

THIS SHEET WAS PREVIOUSLY ISSUED AS PART OF AN EARLY RELEASE PACKAGE. THE EARLY RELEASE PACKAGE INCLUDED ADDENDA AND BULLETIN CHANGES THAT HAVE BEEN INCORPORATED FOR CONVENIENCE. HOWEVER REVISION CLOUDS AND TRACKING HAVE BEEN REMOVED FROM THIS SET FOR CLARITY. REFER TO DRAWING LIST FOR ADDITIONAL INFORMATION REGARDING EOP.

WEST NEWBURY PLANNING BOARD
BREAKDOWN OF EXPENDITURES
FISCAL YEAR 2024



Line Item Budget Heading	Breakdown		
	FY22 Approved	FY22 Actual	FY24 Proposed
1. <u>Expenses</u>			
Advertising Legal Notices as required by Statute, Bylaws & Regulations	\$1,000	\$1,000	\$1,500
Communications Zoom	\$150	\$150	\$200
Equipment, & Repairs	\$0	\$0	\$1000
Materials & Supplies Ink, Paper, Toner, Pens, Staples, etc.	\$400	\$400	\$600
Mileage/Travel Conferences, workshops, site visits, etc. for both staff and board members	\$100	\$100	\$100
Professional/Technical Services Recording Secretary <i>*currently not needed*</i> Other Consultants (Engineering, Planning, etc.)	\$4000 \$4,000 \$0	\$4000 \$4,000 \$0	\$2000 \$0 \$1500
Training/Education/Dues Massachusetts Association of Planning Directors (MAPD) Professional Training: Webinars, Workshops, Annual MAPD	\$850	\$850	\$500 \$90 \$410
Miscellaneous Recording of plans, Easements Other miscellaneous expenses incurred	\$100	\$100	\$200
2. <u>MVPC Annual Assessment</u> Per G.L. Ch. 40B, §4, the Merrimack Valley Planning Commission provides regional planning assistance to West Newbury in the areas of transportation, the environment, land use, economic development, and Geographic Information Services (GIS).	\$1,705	\$1,705	\$1,792



Town of West Newbury Departmental Expense Budgeting Form

Data as of 12/21/22

	FY2021	FY2022				FY2023				FY2024
	Actual Expended	Budget Requested	Budget Approved	Actual Expended	Turn back / Transfers	Budget Requested	Budget Approved	Actual YTD Expended	Turn back / Transfers	Budget Requested
PLANNING										
<u>Personnel</u>										
Salary & Wages	54,921	56,061	59,319	59,319		77,189	66,155	23,687		68,725
Overtime										
Other (incentives, longevity, stipends)								200		2,400
Sub-Total:	54,921	56,061	59,319	59,319		77,189	66,155	23,887		71,400
<u>Expenses</u>	5,950	6,600	6,151	6,151		9,220		707		5,600
Advertising	1,150	1,000	1,000	1,000		1,500	1,500	424		1,500
Communications	0	150	150	150		170	170	75		200
Equipment Purchase, Repairs	2,206	0	0	0		1,000	1,000	0		1,000
Materials & Supplies	540	400	400	400		600	600	208		600
Mileage / Travel	0	100	100	100		100	100	0		100
Prof/Tech Svcs/Recording Sec.	2,400	4,000	4,000	3,551		5,800	4,800	0		1,500
Training / Education / Dues	603	850	850	850		850	850	0		500
Other Expenses	0	100	100	100		200				200
Sub-Total:	5,950	6,600	6,151	6,151		10,220	9,020	707		5,600
<u>MVPC Assessment</u>	1,663	1,705	1,705	1,705		1,748	1,748	1,747		1,792
Sub-Total:	1,663	1,705	1,705	1,705		1,748	1,748	1,747		1,792
Department Total:	62,534	64,366	67,175	67,175		89,157	76,923	26,341		78,792

Please complete the above current fiscal year budget request.

For each line item that varies from prior year actual, provide a detailed explanation below.

Salary and wage detail to be provided on the Salary and Wage Worksheet, attached.

Expenditure Sign-Off Authorities - Planning Board Chair, Ann Bardeen
FY21 Explanation -
FY22 Explanation - MVPC: Assessment increases by no more than 2.5% per year. 2.5% increase from \$1663 to \$1705 was requested and approved. No other increases were requested.
FY23 Explanation - Salary & Wage request is based on a 52-week year. MVPC: Assessment increases by no more than 2.5% per year. 2.5% increase from \$1705 to \$1748 is requested. No other increases are requested.
FY24 Explanation - Salary & Wages increase of \$4,045.00 to reflect mid-FY23 raises - new employee with increased hours from 25 to 28hr/week and increase in pay to admin assistant to match DPW full time rate. "Others" line increase of \$2,400 to cover minutes to be completed by assistant. Increase of \$2000 for professional/technical services to cover mapping, other planning consultants, etc.
MVPC: Assessment increases by no more than 2.5% per year. 2.5% increase from \$1748 to \$1792 is requested. Minimal increase in communications line to cover a possible increase in Zoom monthly charges.

Budget request submitted by: _____

Contact (phone/email): _____

Middle Street/Artichoke River Bridge Project Update

Update of December 29, 2023

Another Step in a Lengthy Process to Replace the Middle Street/ Bridge

On December 23, The Department of Environmental Protection (DEP) provided Public Notice of the Waterways Application by the Town of West Newbury and the City of Newburyport to replace the existing Middle Street Bridge. DEP will consider all written comments received by Monday, January 23, 2023.

The Chapter 91 Waterways License is one more step in a lengthy process to permit and install a new bridge that received Grant funding of \$1M in 2020 and Town Meeting approval of \$600,00 in 2021. The Town and City of Newburyport have agreed to share project cost equally.

Project History Summary

2016 - Temporary Bridge closure, Mass DOT Bridge Inspection resulting in Severe rating

2017 – June - Full Bridge closure due to failure - Mass DOT Updated Inspection

July - Newburyport received Small Bridge Grant to support engineering and design work – secured services of BSC Group

2018 – Work proceeded with BSC Group– in coordination with West Newbury and including local outreach

2019 – West Newbury Submitted Massworks Grant Proposal for funding

9/23/19 _ SB Meeting - BSC presented design recommendations (7 alternatives provided) – SB received public input and selected option that included a sidewalk on the south side.

2020 – West Newbury Received \$1M Massworks Grant; Design and Permitting continued with BSC Group; a Memorandum Of Understanding (MOU) between W Newbury and Newburyport that outlined roles and responsibilities was executed.

2021 – Town Meeting Approved \$600,000 for Bridge Construction

ConCom Conditions of Approval granted by both W Newbury and Newburyport, MEPA (Mass Environmental Policy Act) Certificate received, indicating the project studied the environmental impacts of the project and is using all feasible measures to avoid, minimize, and mitigate damage to the environment or, to the extent damage to the environment cannot be avoided, to minimize and mitigate damage to the environment to the maximum extent practicable.

2022 – Town and City filed Application to MassDEP for a General Water-Dependent Chapter 91 Waterways License.

October 21, 2022

MassDEP Waterways Program
Chapter 91 Reviewer
1 Winter Street – 5th Floor
Boston, MA 02108

RE: Upper Artichoke Reservoir Bridge Replacement Project
West Newbury / Newburyport, Massachusetts
Chapter 91 License Application – BRP WW 01

Dear Chapter 91 Reviewer:

On behalf of the Town of West Newbury and the City of Newburyport, BSC Group, Inc. (BSC) is filing this Application to the Massachusetts Department of Environmental Protection (MassDEP) for a General Water-Dependent Chapter 91 Waterways License pursuant to Massachusetts Public Waterfront Act (M.G.L. c. 91) and implementing Regulations (310 CMR 9.00). The Applicants are proposing to replace the structurally deficient bridge on Middle Street / Plummer Spring Road over the Upper Artichoke Reservoir (Bridge No. N-11-007) in West Newbury & Newburyport, Massachusetts. The bridge is structurally deficient due to undermining of the existing roadway foundation and so the road has been closed to vehicular traffic since July 2018. The Applicant proposes to replace the bridge structure with a new structure on a similar horizontal and vertical alignment.

The municipalities are working in collaboration to permit, fund, and rebuild the bridge and are under constraining financial deadlines. The project is partially funded by a MassDOT municipal small bridge grant and a MassWorks Infrastructure grant both of which are time sensitive. The \$1,000,000 MassWorks grant includes construction funding which the grant administrators are considering a request to extend through June 30, 2023. In order to complete the project as designed. While we understand the typical Chapter 91 License review extends to 270 days or beyond, we respectfully request that the Waterways Program take access to funding into consideration. Significant additional time could be very damaging to the prospects of this project as the funds must be spent before the deadline, or they may be forfeited. Additionally, a majority of the project permitting was completed in 2021, and a delay might invalidate existing approvals.

The bridge over the Upper Artichoke Reservoir is a valuable public resource which is highly compatible with the public access interests protected and promoted by the Chapter 91 Waterways Program. While the essential function of the structure remains transportation infrastructure, and re-establishes a vehicular route, the proposed alterations will provide accommodations specifically for pedestrians to safely traverse the area, observe the reservoir, or fish from the sidewalk. This use was not previously available in a formalized way or in accordance with modern safety standards. In order to meet modern needs and standards for safety, the proposed bridge footprint requires minor widening; and in order to minimize expansion impacts to the Reservoir, the proposed design incorporates the use of retaining walls to maximize the required width but minimize footprint impacts.

The bridge has been in existence since 1891 when it was built over the Artichoke River channel, prior to the 1939 statutory change when c.91 jurisdiction was expanded to navigable rivers. As a result, there is no existing historic licensing documentation for the structure. It is likely that the proposed alterations would occur within areas of fill from the bridge construction in locations that were upgradient of the original OHW of the river

channel. The construction of the two dams downstream in the 1920s impounded the river, created the Artichoke Reservoir and changed the current extent of OHW.

Hydraulic studies have concluded the Upper Artichoke Reservoir Dam which impounds the Artichoke River, has a stabilizing effect on the water level with little difference between various storm events. The MHW/OHW is established at elevation 12.6' with top of bank flags placed conservatively and slightly upgradient on embankments. As seen in the attached plans, actual fill and change in elevations below MHW/OHW totals 175 sf across all four bridge quadrants and is attributed to the new retaining walls. The retaining walls are needed to support the replacement bridge at modern requirements for safe roadway widths and were selected to minimize impacts to the reservoir. An additional 649 sf of impacts below MHW/OHW are attributed to the removal of existing material and replacement with scour control rockfill (riprap). Areas will be maintained in-kind without fill or alteration to the existing elevations. The fill needed for the retaining walls, encumbers an area that is approximately 2% of the available area below the OHW elevation in the roadway layout in the project limits.

To date, the project has received its MEPA Certificate (August 2021), NOIs from each municipality (July 2021), and USACE Authorization under GP 10 (April 2021). An individual 401 WQC application was filed for impacts within the Reservoir, an Outstanding Resource Water (ORW), in January 2021, amended in May 2021, a site walk took place in June 2021, and then the application was put on-hold until the MEPA Certificate was completed. BSC Group has reached back out to the Reviewer to complete the application. During the MEPA process, the MassDEP Waterways Program asserted jurisdiction over the proposed project as a water dependent project under 310 CMR 9.04(1)(e) and concluded that the project was ineligible for approval under Minor Project Modification (MPM) under the MassDEP Waterways Program and implementing regulations 310 CMR 9.00; therefore, the Chapter 91 Application is before you now.

Two copies of this application package including the appendices have been enclosed. Each Municipal Conservation Commission has been notified of this application. Please do not hesitate to contact our office for further discussion or any inquiries you may have at skreisel@bscgroup.com. I may also be reached at 617-896-4579.

Sincerely,
BSC Group, Inc.



Sara Kreisel, PWS
Ecological Project Manager

cc: Angus Jennings, Town of West Newbury
Wayne Amaral, DPW Director, Town of West Newbury
Jon-Eric White, City Engineer, City of Newburyport
Micah Morrison, PE, BSC Group
Diana Walden, BSC Group

**Middle Street / Plummer Spring Road
over Upper Artichoke Reservoir
Bridge Replacement Project**

**Chapter 91 License Application
West Newbury and Newburyport, MA**

**MassDEP Waterways Program
October 2022**

Prepared for:

Town of West Newbury
381 Main Street
West Newbury, MA 01985

City of Newburyport
16C Perry Way
Newburyport, MA 01950

BSC Project No. 28395.00

Prepared by:



803 Summer Street
Boston, MA 02127

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Chapter 91 License Application

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	LIST OF ENVIRONMENTAL REGULATORY PROGRAMS
ATTACHMENT A	PROJECT NARRATIVE
ATTACHMENT B	SITE FIGURES AND PHOTOGRAPHS
ATTACHMENT C	SEDIMENT SAMPLING REPORT
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Middle Street / Plummer Spring Road over the Upper Artichoke Reservoir Bridge Replacement Project
 Chapter 91 License Application
 Artichoke River / Upper Artichoke Reservoir
 West Newbury / Newburyport, MA

MassDEP Form BRP WW01 Section C.7
 Abutter Information

Owner Name	Tax Assessor Map/Parcel	Mailing Address	Municipality	State	Zip Code
City Of Newburyport Water Department	92-1 and 92-7	16C Perry Way	Newburyport	MA	01950
Middle Street Realty Trust Robert W Higgins Tr	R27-32	45 Water Street	Newburyport	MA	01950
443 Middle Street Re Trust C/O Bennett & Co	R20-11	45 Water Street	Newburyport	MA	01950
Town Of West Newbury Conservation Commission		381 Main Street	West Newbury	MA	01985

List of Environmental Regulatory Programs

Pursuant to 310 CMR 9.11(3)(b)4., an application shall include a list of state environmental regulatory programs with which the project must comply, in accordance with the applicable provisions of 310 CMR 9.33. Please check all that are applicable and add any additional programs in the "Other" field.

Massachusetts Environmental Policy Act, M.G.L. c. 30, §§ 61 through 62H and 301 CMR 11.00: MEPA Regulations.

Wetlands Protection Act, M.G.L. c. 131, § 40, and 310 CMR 10.00: Wetlands Protection.

Wetlands Restriction Acts, M.G.L. c. 130, § 105 and c. 131, § 40A, and 310 CMR 12.00: Adopting Coastal Wetlands Orders and 310 CMR 13.00: Adopting Inland Wetlands Orders. All projects shall comply with wetland restriction orders recorded pursuant to these statutes.

Areas of Critical Environmental Concern, M.G.L. c. 21A, § 2(7) and St. 1974, c. 806, § 40(E), and 301 CMR 12.00: Areas of Critical Environmental Concern.

Massachusetts Clean Waters Act, M.G.L. c. 21, §§ 26 through 53, and 314 CMR 3.00: Surface Water Discharge Permit Program, 314 CMR 5.00: Ground Water Discharge Permit Program, 314 CMR 7.00: Sewer System Extension and Connection Permit Program, 314 CMR 9.00: 401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States Within the Commonwealth, and 310 CMR 15.00: The State Environmental Code, Title 5: Standard Requirements for the Siting, Construction, Inspection, Upgrade and Expansion of On-site Sewage Treatment and Disposal Systems and for the Transport and Disposal of Septage.

Ocean Sanctuaries Act, M.G.L. c. 132A, §§ 13 through 16 and 18, and 302 CMR 5.00: Ocean Sanctuaries. No license or permit shall be issued for any structure or fill that is expressly prohibited in M.G.L. c. 132A, §§ 1 through 16.

Marine Fisheries Laws, M.G.L. c. 130, and 322 CMR 1.00: Enforcement of Rules and Regulations.

Scenic Rivers Act, M.G.L. c. 21, § 17B, and 302 CMR 3.00: Scenic and Recreational Rivers Orders.

Massachusetts Historical Commission Act, M.G.L. c. 9, §§ 26 through 27C, as amended by St. 1982, c. 152 and St. 1988, c. 254, and 950 CMR 71.00: Protection of Properties Included in the State Register of Historic Places. For projects for which a Project Notification Form must be submitted pursuant to 950 CMR 71.07: Review of Projects the applicant shall file said form with the Massachusetts Historical Commission.

Mineral Resources Act, M.G.L. c. 21, §§ 54 through 58.

Massachusetts Drinking Water Act, M.G.L. c. 111, §§ 159 through 174A, and 310 CMR 22.00: Land Application of Sludge and Septage.

Underwater Archeological Resources Act, M.G.L. c. 91 and c. 6, §§ 179 and 180, and 312 CMR 2.00: Massachusetts Underwater Archaeological Resources.

Hazardous Waste Management Act, M.G.L. c. 21C and 310 CMR 30.000: Hazardous Waste.

Solid Waste Disposal Act, M.G.L. c. 16, §§ 18 through 24, and 310 CMR 16.00: Site Assignment Regulations for Solid Waste Facilities.

Air Pollution Act, M.G.L. c. 111, §§ 142A through I and 310 CMR 7.00: Air Pollution Control.

State Highway Curb Cuts, M.G.L. c. 81, § 21.

Energy Restructuring Act, M.G.L. c. 164, §§ 69G through S, and 980 CMR 1.00 through 12.00.

Regional land use control statutes, including the Martha's Vineyard Commission Act, St. 1974, c. 637, c. 831, and the Cape Cod Commission Act, St. 1989, c. 716.

Other

Attachment A

Bridge Replacement Project
Middle Street / Plummer Spring Road
over Upper Artichoke Reservoir,
West Newbury and Newburyport, MA

Chapter 91 License Application

PROJECT NARRATIVE

1.0 Introduction

The BSC Group Inc., on behalf of both the Town of West Newbury and the City of Newburyport (“the Applicants”) is filing this application with the Massachusetts Department of Environmental Protection (MassDEP) Waterways Program requesting a General Water-Dependent Chapter 91 Waterways License Application (BRP WW01b) pursuant to Massachusetts Public Waterfront Act (M.G.L. c. 91) and implementing Regulations (310 CMR 9.00).

The Applicants propose to replace the structurally deficient, undersized bridge (Bridge No. N-11-007) over the Artichoke River / Upper Artichoke Reservoir (hereby referred to as “the bridge”) located on Middle Street, West Newbury / Plummer Spring Road, Newburyport, MA (See **Attachment B** for Site Location Maps and Photos). The bridge is structurally deficient due to undermining of the existing roadway foundation and will be replaced with a new bridge with a similar horizontal and vertical alignment. The project involves mitigation measures intended to address existing structural and hydraulic deficiencies, while also minimizing disturbances to the surrounding environment and improving openness.

Orders of Conditions have been received by the respective Conservation Commissions in the Town of West Newbury (078-0724) and Newburyport (051-1047). A 401 Water Quality Certification (WQC) (BRP WW10 Major Fill and Excavation) was submitted to MassDEP January 2021, and supplemented May 2021 (DEP Transmittal Number: X287261). Pre-Construction Notification (PCN) authorization from the US Army Corps of Engineers (USACE) pursuant to Section 404 of the United States Clean Water Act (33 U.S.C.1251), under the General Permits for Massachusetts (GP)10 was provided April 2021. A MEPA Certificate was provided August 2021 (16412).

The project had been previously made available for notice and opportunity for public comment on two separate occasions: 401 WQC on Jan 22, 2021, and for the MEPA ENF on July 23, 2021. The Waterways Program’s August 13, 2021 letter in the MEPA public comment period asserted Chapter 91 jurisdiction over the project based on 310 CMR 9.04(1)(e), and on the assumption that the Upper Artichoke Reservoir/River is navigable. Subsequent arguments regarding the navigability of the Upper Artichoke Reservoir and acquiescent requests for approval as a Minor Project Modification were denied. Therefore, this application seeks a Water-Dependent, Chapter 91 Waterways License for the replacement of an existing, unauthorized public service project, the existing bridge on Middle Street / Plummer Spring Road that crosses the Upper Artichoke Reservoir.

The bridge has been in existence since 1891 when it was built over the Artichoke River channel, which was subsequently impounded in the 1920s creating the Artichoke Reservoir, which subsequently changed the current extent of the ordinary high water (OHW) line. The project will replace the existing 14.3-foot stone arch bridge with a 45-foot span bridge which will address existing structural deficiencies, while also minimizing disturbances to the surrounding environment and improving openness. The bridge structure will be protected by retaining walls and riprap, which will be overlaid with natural streambed material. The proposed replacement bridge will carry two lanes of traffic on Middle Street/Plummer Spring Road. The overall width of the bridge will increase from 24.2 feet to 32.5 feet to accommodate roadway safety improvements (~4 feet), including a new sidewalk (~4 feet); however, this does not constitute a substantial enlargement compared to existing conditions since enlargement is not the intent. Please refer to the Environmental Resource Map in **Attachment B** and Site Plans in **Attachment G** for details.

The proposed Project consists of the replacement of a bridge over a nontidal waterway that occurs within a manmade impoundment on a currently closed public roadway, by the Town of West Newbury and City of Newburyport, which proposes pedestrian facilities to promote continued public access and enjoyment adjacent to a waterway.

The Department has determined these activities can be classified as “water-dependent” under the Chapter 91 Waterways regulations per their August 13, 2021 comments during the MEPA ENF review process. The following sections describe the Project, the associated activities subject to Chapter 91 jurisdiction, and the Project’s compliance with the provisions of the Chapter 91 licensing regulations.

2.0 General Environmental Setting/Existing Conditions

West Newbury is located on the northwestern side of the bridge, and Newburyport is on the eastern side. Plummer Spring Road in Newburyport turns into Middle Street upon entering West Newbury. The project site is approximately 2,000 feet west of the intersection with Turkey Hill Road in Newburyport and approximately 0.7 mile east of the intersection with Garden Street in West Newbury. The crossing occurs within the Upper Artichoke Reservoir, a public water supply. The surrounding area is comprised of Article 97 lands, reserved for water supply protection. Beyond that, the area is generally characterized by low-density residential development. The bridge predates and divides the existing Upper Artichoke Reservoir, through which the Artichoke River flows. The Reservoir was originally formed by damming the Artichoke River which flows north to the Merrimack River. While the majority of the surrounding area consists of residential development and forested land, the project area is limited to previously disturbed Riverfront Area and other resource areas encumbered by the existing bridge.

The existing crossing structure consists of a 14.3-foot (span) by 13.2-foot (rise) by 24.2-foot (long) single span earth-filled stone arch, set at an approximate slope of 0%. The road and stone arch bridge were constructed in 1891 before the Upper Artichoke Reservoir was built. The low chord on the existing arch is set at an elevation of 16.20 feet. The paved roadway consists of two travel lanes that vary in width from 8.5 feet to 10-feet for a total roadway width of approximately 17-feet to 20-feet. There are no sidewalks on the bridge. The bridge was closed in 2018 to vehicular traffic due to the collapse of portions of the bridge, stone headwall, and southeast approach roadway, and is currently considered structurally deficient due to undermining of the paved roadway foundation. The project area consists of country drainage, whereby runoff travels to the approach roadway and informally runs off down the side slopes. Middle Street / Plummer Spring Road is functionally classified as a Rural Local road. The Artichoke River/ Upper Artichoke Reservoir is nontidal, and no tidelands occur within the project vicinity. License plans included in **Attachment G** depict the applicable elevations in reference to the work. Site Photos for reference are included in **Attachment B**.

2.1 FEMA Floodplain

According to the FEMA Flood Insurance Rate Maps for Newburyport / West Newbury (Community Panel Number 25009C0116F dated July 2012), the project occurs within the 100-year floodplain (Zone AE). The bridge is located within Zone AE for the 100-year storm event at, and below the 13-foot base flood elevation. A FEMA FIRMette is included in **Attachment B**.

2.2 Other Environmental Resources

Waters of the United States and resource areas jurisdictional to the Massachusetts Wetlands Protection Act such as Bank and Land Under Water, are located in areas impacted by the Project. The project area does not occur within Natural Heritage and Endangered Species (NHESP) Priority nor Estimated Habitat, nor Certified nor Potential Vernal Pools (CVP & PVP). According to MassGIS data layers, the entire project area occurs within an Outstanding Resource Water (ORW) and Surface Water Protection Zone associated with the Upper Artichoke Reservoir, which

is an Article 97, municipal land, and a public water supply watershed. According to MassGIS data layers, the project area does not fall within an Area of Critical Environmental Concern (ACEC), neither the Upper Artichoke Reservoir nor the river are EPA impaired waterways, nor Coldwater Fisheries (CFR). Please refer to the Environmental Resource Map in **Attachment B**.

3.0 Proposed Project

The duration of construction for the entire Project is anticipated to be approximately twenty (20) months weather-permitting and to begin Spring 2023.

The purpose of the project is to replace a structurally deficient, undersized bridge with a new bridge along a similar horizontal and vertical alignment. The project activities include the replacement of the bridge over the Upper Artichoke Reservoir in its entirety. The full sequence of project construction activities will take approximately twenty months to construct. The project involves mitigation measures intended to address existing structural deficiencies, while also minimizing disturbances to the surrounding environment and improving openness. The proposed replacement bridge will carry two lanes of traffic on Middle Street/Plummer Spring Road. The roadway width will increase by approximately 4 feet to include safety improvements to the existing alignment. A 5-foot sidewalk will be added to the south side of the bridge. Roadway reconstruction of Middle Street will occur 160-feet to the west of the bridge and 115-feet to the east on Plummer Spring Road for improved roadway approaches. The total length of the project is approximately 320-feet. The following project components detail the proposed project activities. Please refer to Project Site Plans (**Attachment G**) for additional details.

- **Proposed Bridge** – The proposed bridge is a high strength precast concrete structure that will follow a similar horizontal and vertical alignment as the existing bridge. The proposed span length will increase from the 14-feet to 45-feet. The overall width of the bridge will be 32.5-feet to accommodate safety improvements, including the sidewalk. In addition to substantially increasing the openness ratio, the increased span eliminates the need for the bridge’s substructure to be located in the deep portion of the reservoir. In accordance with the MassDOT Bridge Manual for a Rural Local road, the proposed bridge has been designed to meet the 10-year flood frequency storm event. Based on hydraulic analysis, the proposed bridge can also accommodate the 100-year flood frequency storm event. The proposed bridge increases the hydraulic opening by a factor of two compared to the existing condition.
- **Riprap Scour Protection** –With the increased span, to achieve a 1:1.5 vertical: horizontal ratio from the elevation of the existing streambed to the elevation at the new bridge abutments, slope stabilization is required. The slope stabilization will consist of 36-inches of variable sized riprap (10- to 22-inch stones) placed below the natural streambed material. In addition, 6-inches of natural streambed material is proposed on top of the riprap. Prior to streambed excavation, natural streambed material will be removed and stockpiled on site for use during restoration to ensure the sizing and arrangement of materials under pre- and post-construction conditions. Upon completion of the proposed bridge replacement activities, the streambed elevation will be restored to its natural condition.
- **Roadway Reconstruction** – At the approaches of the existing bridge the roadway is narrow and the slopes adjacent to the roadway are steep making the existing guardrail ineffective. To meet current roadway geometric and safety requirements, portions of the road will be widened and the slopes reduced and/or retaining walls installed. To limit impacts to the reservoir, retaining walls will be installed where applicable. However, in areas where slopes with a 1:1.5 vertical: horizontal ratio or less exist, they will be regraded (without impacting the reservoir),

- **Installation of Guardrail and Repaving Activity** – Bridge replacement activities provide an opportunity to make safety improvements to existing conditions surrounding the bridge. The existing functional roadway width will expand from approximately 20-foot to 24-foot wide over the bridge. The widened roadway will meet the existing roadway width at the limits of the project. The approaches to the bridge will be repaved following the completion of project activities. Extended steel guardrail is proposed along the approaches to the bridge to replace existing non-functioning guardrail posts.

Work in Wetland Resource Areas

The bridge replacement project is considered a redevelopment project. Impacts to wetland resource areas are unavoidable, however upon completion of the project, slopes will be stabilized and the streambed will be restored to match the natural stream channel. The outcome will result in an improvement over existing conditions. Table 1 provides an overview of impacts with regard to each resource area.

Area Below the Ordinary High-Water Line

Hydraulic studies have concluded the Upper Artichoke Reservoir Dam which impounds the Artichoke River, has a stabilizing effect on the water level with little difference between various storm events. The MHW/OHW is established at elevation 12.6’ with top of bank flags placed conservatively and slightly upgradient on embankments. The proposed structure is 1,217 sf and will require a total of 824 sf of excavation and fill. As seen in the attached plans, actual fill and change in elevations below MHW/OHW totals 175 sf across all four bridge quadrants and is attributed to the new retaining walls. The retaining walls are needed to support the replacement bridge at modern requirements for safe roadway widths and were selected to minimize impacts to the reservoir. An additional 649 sf of impacts below MHW/OHW are attributed to the removal of existing material and replacement with scour control rockfill (riprap) to protect the new bridge structure. Areas will be maintained in-kind without fill or alteration to the existing elevations. The fill needed for the retaining walls, encumbers an area that is approximately 2% of the available area below the OHW elevation in the roadway layout in the project limits. In total, 98 CY mechanical dredging is required, of this 48 CY will be permanent and 50 CY will be temporary. The project requires 19 CY fill. Please refer to Project Site Plans (**Attachment G**) for additional detail.

Table 1 below summarizes activities and approximate areas of impact subject to the Chapter 91 Program:

Table 1 – Summary of Chapter 91 Waterways Program Areas Under OHW Line

Project Component	Structure/Change in Use Detail	Area (SF)	Dredge / Fill (CY)
Riprap	Installation of riprap to protect the new structure	649 sf	48 CY Dredge (Permanent) 19 CY Fill 50 CY Dredge (Temporary)
Retaining Walls	Installation of retaining wall to minimize extent of roadway	175 sf	
Bridge Span	Area of proposed bridge structure over OHW	393 sf	
Wingwalls and Abutments	Created in upland	---	

4.0 Mitigation Measures

The proposed project will occur below the OHW. The project has been designed to incorporate construction Best Management Practices (BMPs) to ensure adequate protection to wetland resource areas within proximity of the

project location.

Disturbed areas within affected resources will be stabilized and restored following the completion of project activities. This will be achieved specifically by limiting alteration within resource areas to the maximum extent practicable. The proposed work is considered a Redevelopment Project but will preserve undisturbed areas adjacent to the bridge as much as possible. This will also be accomplished through project phasing activities that minimize work within resources to the maximum extent practicable.

Erosion and Sedimentation Controls

Siltation barriers composed of compost filter tubes will be installed at the downgradient limits of work. Sedimentation barriers will be checked on a weekly basis and following significant storm events. Sediment controls will remain in-place during all phases of the project and will be removed once the area is sufficiently stabilized. Please refer to **Attachment G** (Site Plans) for erosion and sedimentation control details and the proposed locations of controls.

Construction Stockpiling Locations

All stockpile locations and staging areas will be located within the existing roadway; and while locations are to be determined by the Contractor, they will need to be approved by the respective Municipality prior to use. In the event stockpiled materials must be left on site overnight, the piles will be covered with tarps and surrounded by erosion control measures (e.g. compost filter tubes). Stockpiled streambed material will be stored at a location within the existing roadway. Staging and storage areas will be outside of all jurisdictional environmental resource areas where feasible and practicable.

Water Control Measures and Dewatering

Prior to work, cofferdams will be installed for construction activities to occur in dry conditions. As such, work will require dewatering. The contractor will be required to develop and maintain a Construction Water Management Plan that is prepared in accordance with the contract design documents, and generally, the means and methods will be determined by the contractor. Flow will be maintained within the existing channel; while the dewatered construction area can be maintained by pumping the water out of the work areas.

All discharge resulting from dewatering activities shall be directed to temporary sedimentation/retention basins as specified by the contractor to control turbidity. At no time shall the discharge be directly released into adjacent resource areas, nor will any settling tank/basin be located within a wetland/waterway. If stone or other erosion control is utilized at the outlet of the settling tank/basin, this material will be removed, and the area will be restored to existing conditions prior to the completion of the project. Please refer to **Attachment G**, Project Site Plans for additional details on proposed water control measures.

5.0 Chapter 91 Licensing Requirements

5.1 Chapter 91 Jurisdiction and Water Dependency

As described, the proposed project occurs over the Artichoke River / Upper Artichoke Reservoir, which the DEP has already asserted jurisdiction over during the MEPA review process Certificate (EEA Number 16412) (August 2021). The Waterways Program's August 13, 2021 letter for the public comment period for the MEPA Certificate (EEA Number 16412) stipulated:

The existing fieldstone arch bridge and approach roadways were constructed in 1891, prior to the 1939 statutory change when c.91 jurisdiction was expanded to navigable rivers. As a result, the proponent did

not include any historic licensing documentation for the structures.

Water Dependency:

MassDEP has determined that this proposal is a water-dependent project, pursuant to 310 CMR 9.12(1)(a) & (2)(d).

Chapter 91 Jurisdiction:

The project is located on the Upper Artichoke River, a nontidal waterway subject to Chapter 91 jurisdiction, pursuant to 310 CMR 9.04(1)(e).

Chapter 91 Comments:

The project, as described, substantively complies with the applicable provisions for water dependent Public Service projects, specifically those enumerated at 310 CMR 9.35-9.37.

5.2 Chapter 91 Compliance

The following section reviews the proposed Project in light of the applicable Chapter 91 regulatory standards:

§9.31 Basic Requirements and Proper Public Purpose

§9.31 of the waterways regulations requires that all projects, other than those consisting of water-dependent projects on private tidelands, serve a proper public purpose that provides greater benefit than detriment to the rights of the public in said lands.

The proposed bridge replacement is presumed by regulation to serve a proper public purpose in that it involves the replacement of a bridge on a public municipal roadway. The roadway has been open to the public since 1891, until its closure to vehicular traffic in 2018 due to the bridge's deteriorated state. The replacement will provide public facilities for pedestrians. The nature of the project is that it is inherently water-dependent [§9.31(2)(a)].

§9.32: Categorical Restrictions on Fill and Structures

§9.32 of the waterways regulations identify the types of fill, structures and projects that are eligible for licensing. All of the proposed uses and activities proposed herein are categorically allowed as listed in §9.32(1)(d): “*fill or structures for uses below the high water mark, as listed for flowed tidelands in 310 CMR 9.32(1)(a).*” This includes:

§9.32(a)2: “fill or structures for water-dependent use located below the high water mark, provided that, in the case of proposed fill, reasonable measures are taken to minimize the amount of fill, including substitution of pile-supported or floating structures and relocation of the use to a position above the high water mark;”

§9.33: Environmental Protection Standards

§9.33 of the waterways regulations states that all projects must comply with applicable environmental regulatory programs of the Commonwealth.

In addition to this Chapter 91 Waterways License, the full Project will require various local, state, and federal permits, approvals and consultation as summarized in the table below:

Table 2: Summary of Compliance with Environmental Protection Standards

Agency	Permit/Approval/Consultation	Jurisdiction
Federal		
U.S. Army Corps of Engineers (USACE)	Section 404 Permit Pre-Construction Notification under the Massachusetts General Permit and National Historic Preservation Act (NHPA) 16 U.S.C. §470, <i>et. seq.</i>	Work in Waters of the U.S., above the Ordinary High Water (OHW) mark for Navigable Waters reviewable under Section 10 of Rivers and Harbors Act of 1899. Authorization was received April 9, 2021.
State		
Massachusetts Executive Office of Energy and Environmental Affairs (EEA)	MEPA Environmental Notification Form (ENF) 301 CMR 11.00	A Final Certificate (No. 16412) finding that the Project did not require the preparation of an Environmental Impact Report was issued by the Secretary on August 23, 2021.
Massachusetts Department of Environmental Protection (MassDEP)	Section 401 of the federal Clean Water Act (Water Quality Certificate); 314 CMR 9.00	Work in waters of the U.S., defined as Outstanding Resource Waters (ORW), The Upper Artichoke Reservoir is defined as an ORW. Approval of the January 2021 application (and subsequent May 2021 supplement) has not yet been received.
Massachusetts Historical Commission (MHC)/ Massachusetts Board of Underwater Archeological Resources (MBUAR)	Determination of effect on historic and archaeological properties (MGL c.9 § 27C)	A PNF and ENF was submitted to MHC/MBUAR for review. The MHC determined, by letter dated February 16, 2021 that the project is “ <i>unlikely to affect significant historic or archaeological resources</i> ” and the MBUAR indicated by letter dated August 12, 2021 that “ <i>the Project is unlikely to adversely impact submerged cultural resources.</i> ”
Local		
Tow of West Newbury Conservation Commission City of Newburyport Conservation Commission	Order of Conditions 310 CMR 10.00 and Local Conservation Ordinance/Bylaw	Work in jurisdictional resource areas under Massachusetts WPA and local Conservation Ordinance/Bylaw. Orders of Conditions (MassDEP File No. 78-724 (West Newbury) and 051-1047 (Newburyport)) approving project were provided in July 2021.

§9.34: Conformance with Municipal Zoning and Harbor Plans

Per §9.34 of the waterways regulations, any project located on private tidelands or filled Commonwealth tidelands must be determined to comply with applicable zoning ordinances and bylaws of the municipality in which such tidelands are located.

The project does not occur within tidelands / Coastal Zone. Therefore, the Project area is not subject to a Municipal Harbor Plan.

§9.35: Standards to Preserve Water-Related Public Rights

In accordance with §9.35, Chapter 91 jurisdictional projects are required to preserve any rights held by the Commonwealth in trust for the public to use tidelands and waterways for lawful purposes, and to preserve any public rights of access that are associated with such use. The consistency of the proposed Project with each of the protected rights is reviewed below.

- **Navigation** §9.35(2)(a). The Project proposes to triple the existing bridge span and the bridges low chord will remain the same. The Project will not reduce or otherwise constrain the channel of the Upper Artichoke Reservoir / Artichoke River, which is also is not accessible to public navigation due to the City of Newburyport Code of Ordinances in a public water supply, stating that “*Wading, swimming, bathing or boating in the municipal water supply or its tributaries*” are prohibited.
- **Free Passage Over and Through Water** §9.35(2)(b). The purpose of the Project is to provide the public free passage over the waterway and will improve the condition of the existing crossing. As noted, boating

is not allowed in the Reservoir; however, the bridge span will increase to three-times its existing span and will not impede passage through the waterway. The replacement of the structure will improve public access to and views of waterfront areas with the creation of pedestrian accommodations on the roadway bridge.

- **Access to Town Landings.** §9.35(2)(c). There are no existing public boat landings within the Project site. The Project, as designed, will not interfere with any landing, public easement or other historic legal form of public access from the land to the water.
- **Fishing and Fowling.** §9.35(3)(a). The Project will not interfere with or further restrict the public's existing rights of fishing and fowling in the Upper Artichoke Reservoir.
- **On-Foot Passage.** §9.35(3)(b). On-foot passage over the Upper Artichoke Reservoir will be enhanced and improved with the bridge replacement. The increased opportunity for public access and passive public recreation is one of the primary benefits of the Project.
- **Compensation for Interference with Public Rights in Commonwealth Tidelands.** §9.35(4). The Project does not involve fill or structures for private use of Commonwealth tidelands, as the proposed project is for public use and does not affect Commonwealth Tidelands.
- **Management of Areas Accessible to the Public** §9.35(5). Both the Town of West Newbury and the City of Newburyport will be responsible for the long-term management of the property and will manage the site to achieve the Project goals of public roadway access and use for pedestrians and vehicles. It will be the municipalities' objective to maintain the property in a safe and attractive condition including the removal of trash, cleaning of stormwater basins, and overall roadway maintenance.

§9.36: Standards to Protect Water-Dependent Uses

As noted above, the bridge has been in existence since 1891, and the project merely proposes to replace this bridge in a manner that increases public safety, access, and accessibility. The bridge will be slightly widened for safe vehicular access, and a sidewalk will be added for safe pedestrian usage. The project occurs entirely on a municipal-owned roadway layout. The Project will not disrupt any water-dependent uses currently in operation at off-site locations.

§9.37: Engineering Construction Standards

§9.37 of the waterways regulations requires all fill and structures be designed and constructed to be structurally sound, and that no residential units be constructed in high hazard flood zones. The proposed bridge has been designed by a Registered Professional Engineer to comply with the strict and thorough standards of MassDOT Bridge Design and will be constructed in a manner that is structurally sound. The Project does not involve any residential uses, and no residential structures within high hazard flood zones are proposed as part of the Project.

§9.54: Consistency with Coastal Zone Management Policies

§9.54 establishes the principle that all nonwater-dependent use projects located in the coastal zone “shall be consistent with all policies of the Massachusetts Coastal Zone Management (CZM) Program.” The proposed project is both outside of the Coastal Zone and is a water-dependent project.

6.0 Summary

The Applicants, the Town of West Newbury and the City of Newburyport, are proposing to replace a structurally deficient bridge on Middle Street / Plummer Spring Road over the Upper Artichoke Reservoir in order to re-open a public roadway that has been closed to vehicular traffic since 2018. This type of project exemplifies the intent and purpose of the Massachusetts Public Waterfront Act. The design approach taken was to first avoid impacts to wetland resources where feasible, and where unavoidable, to minimize the impacts to the extent practicable and mitigate where applicable. Throughout the project design process, the project team carefully considered various development alternatives and oved forward with the alternative that has the least impact to wetland resources while satisfying the project goals and providing the most public benefit. Reasonable measures have been taken to avoid, minimize, and mitigate potential adverse impacts. As such, the applicant requests project certification as described in this narrative and as shown on the project plans. The municipal applicants respectfully request that MassDEP issue a Chapter 91 Waterways License for this highly beneficial and program-compatible bridge replacement project, keeping the goal of utilizing time-sensitive funding in mind.

Attachment B

Bridge Replacement Project
Middle Street / Plummer Spring Road
over Upper Artichoke Reservoir,
West Newbury and Newburyport, MA

Chapter 91 License Application

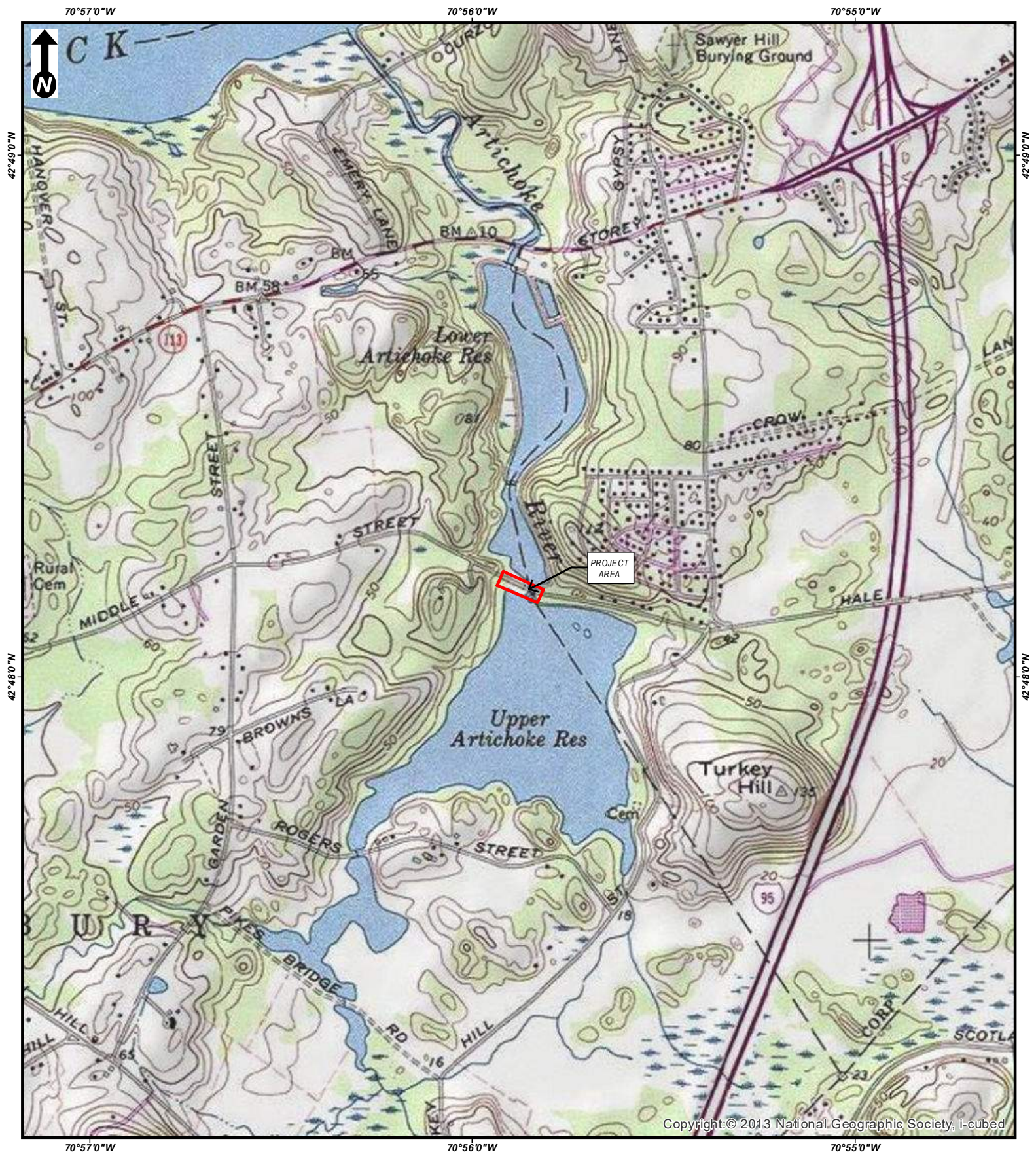
SITE FIGURES

USGS LOCUS

AERIAL ENVIRONMENTAL RESOURCES MAP

FEMA FIRMETTE

PHOTOGRAPHS



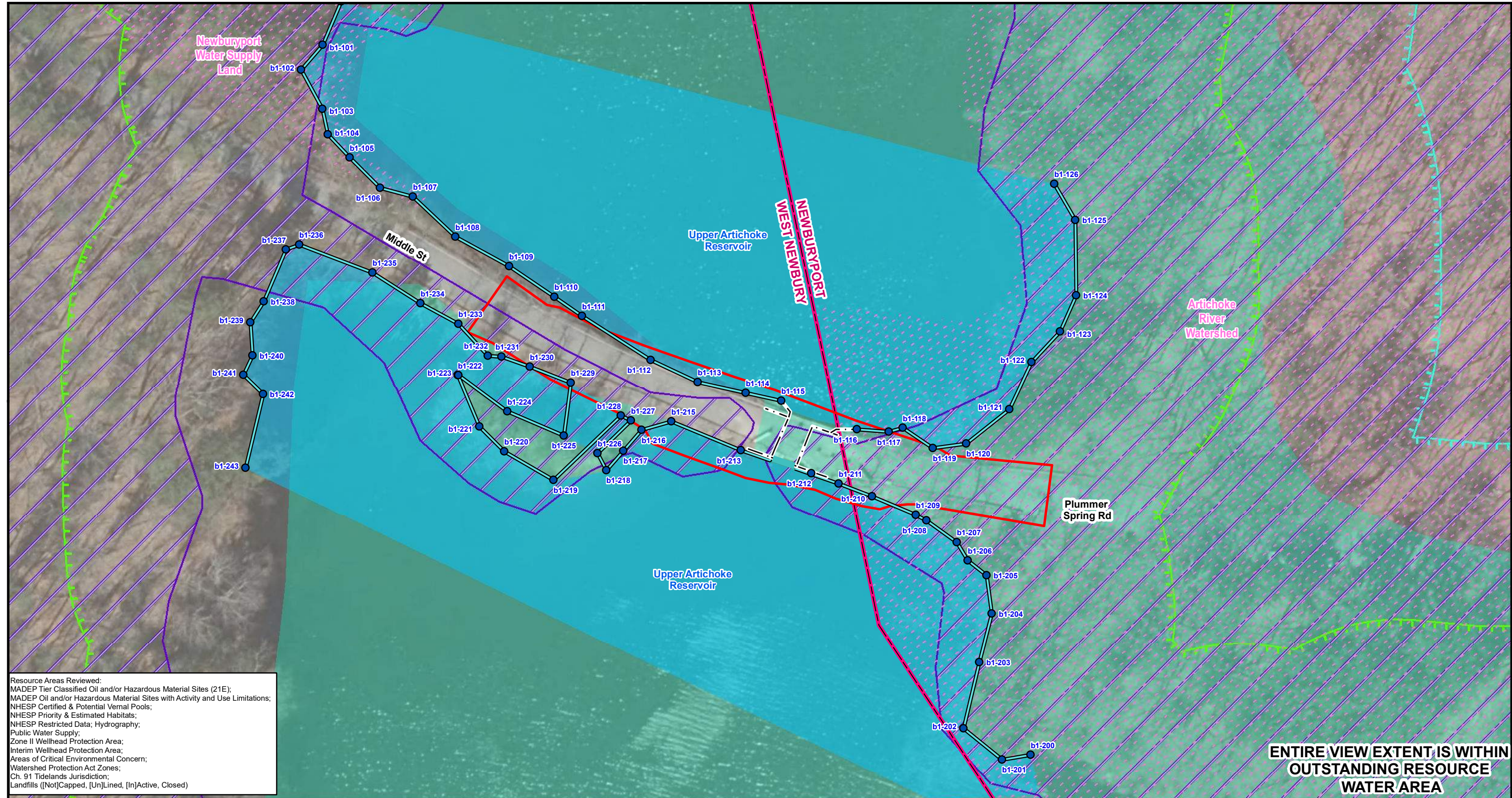
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1 inch = 2,000 feet
(page size: 8.5 X 11)

0 1,000 2,000
Feet

**MIDDLE ST / PLUMMER SPRING RD OVER UPPER ARTICHOKE RESERVOIR
BRIDGE REPLACEMENT PROJECT**

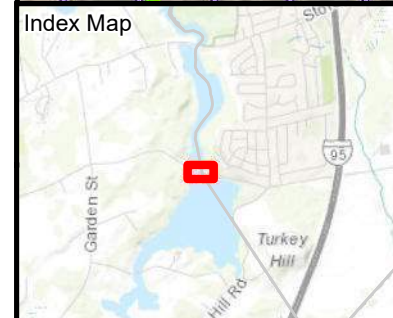
USGS Site Location Map
West Newbury & Newburyport, MA

Source: 2013
National Geographic
Society, i-cubed



Resource Areas Reviewed:
 MADEP Tier Classified Oil and/or Hazardous Material Sites (21E);
 MADEP Oil and/or Hazardous Material Sites with Activity and Use Limitations;
 NHESP Certified & Potential Vernal Pools;
 NHESP Priority & Estimated Habitats;
 NHESP Restricted Data; Hydrography;
 Public Water Supply;
 Zone II Wellhead Protection Area;
 Interim Wellhead Protection Area;
 Areas of Critical Environmental Concern;
 Watershed Protection Act Zones;
 Ch. 91 Tidelands Jurisdiction;
 Landfills ([Not]Capped, [Un]Lined, [In]Active, Closed)

**ENTIRE VIEW EXTENT IS WITHIN
 OUTSTANDING RESOURCE
 WATER AREA**



Legend

Project Area	100ft Buffer to Wetlands & Streams	Article 97 Lands
Existing Bridge Structure	200ft Riverfront Area	Municipal
Field Delineated Bank Flags	FEMA 100yr Floodplain (Zone AE)*	Surface Water Protection Zone
Field Delineated Edge of Bank	Town Boundary	
Field Delineated Waterbody		
MADEP Hydrologic Connections		

1 inch = 50 feet
 0 25 50
 Feet
 *Indicates Layers Set to Transparency

**MIDDLE STREET / PLUMMER SPRING ROAD
 OVER THE UPPER ARTICHOKE RESERVOIR
 BRIDGE REPLACEMENT PROJECT**

Environmental Resources Map

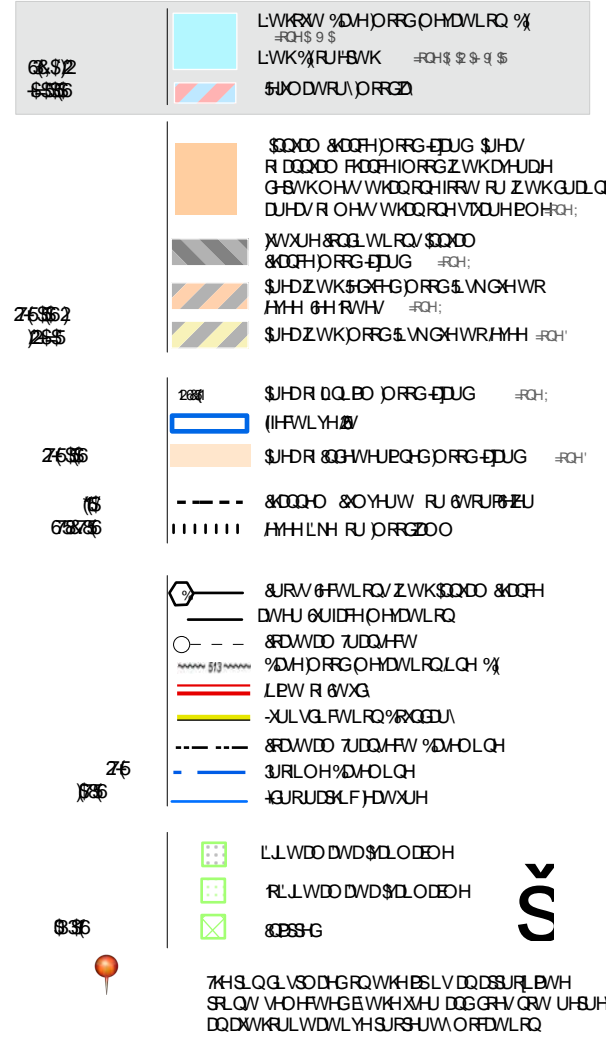
West Newbury & Newburyport, MA

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

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7.4.5. B. S. F. F. S. O. L. H. V. Z. W. K. P. V. W. D. Q. D. U. G. / I. R. U. W. H. X. H. R. G. L. J. W. D. I. O. R. R. G. E. S. / L. I. L. W. L. V. Q. R. W. Y. R. L. G. D. V. G. H. F. U. L. E. G. E. B. O. R. Z. 7.4.5. H. E. D. F. E. S. V. K. R. Q. F. F. S. O. L. H. V. Z. W. K. P. V. E. D. F. E. S. D. F. X. U. D. R. W. D. Q. D. U. G. /

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Photo #1: View northwest of Plummer Spring Rd, Newburyport facing Middle St, West Newbury over the Upper Artichoke Reservoir. Arrow indicates the failed section at the southern end of the roadway, directly over the bridge which is closed for public safety.



Photo #2: View northwest of Plummer Spring Rd, Newburyport facing Middle St, West Newbury over the Upper Artichoke Reservoir. Arrow indicates the failed section at the southern end of the roadway, directly over the bridge which is closed for public safety.



Photo #3: View northwest of Plummer Spring Rd, Newburyport facing Middle St, West Newbury over the Upper Artichoke Reservoir. View of the failed section at the southern end of the roadway, directly over the bridge which is closed for public safety.



Photo #4: View northwest of Plummer Spring Rd, Newburyport facing Middle St, West Newbury over the Upper Artichoke Reservoir.. Up close view of the bridge in disrepair.



Photo #5: View southeast of Middle St, West Newbury facing Plummer Spring Rd, Newburyport over the Upper Artichoke Reservoir. Arrow indicates the failed section at the southern end of the roadway, directly over the bridge which is closed for public safety.



Photo #6: View southwest of the northern side of the roadway and bridge over the Upper Artichoke Reservoir.

Attachment C

Bridge Replacement Project
Middle Street / Plummer Spring Road
over Upper Artichoke Reservoir,
West Newbury and Newburyport, MA

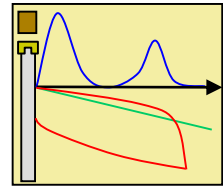
Chapter 91 License Application

SEDIMENT SAMPLING REPORT



GEOSCIENCES TESTING AND RESEARCH, INC.

55 Middlesex Street, Suite 225, N. Chelmsford, MA 01863
Ph: (978)251-9395, Fx: (978)251-9396



December 4, 2019

GTR Project #19.107

Mr. Micah Morrison P.E.
BSC Group
803 Summer Street
Boston, MA 02127

Re: **Streambed Sampling Results**
Plummer Spring Road over Artichoke Reservoir No. N-11-007 = W-20-001
Newburyport/West Newbury, Massachusetts

Dear Micah:

Geosciences Testing and Research, Inc. (GTR) is pleased to present this letter summarizing the results of our Streambed Sampling for Plummer Spring Road over Artichoke Reservoir (No. N-11-007 = W-20-001) Bridge Replacement on the Newburyport/West Newbury, Massachusetts line. See Figure 1 for a site locus plan.

The streambed soil sampling was performed by GTR personnel on February 5, 2019. Boulders and cobbles were observed along the streambed banks. See Appendix A for photographs of the existing conditions of the stream beds. One (1) bulk soil sample was collected from each of the following areas; Right Over Bank (SB-1), Left Over Bank (SB-2) and the middle of the Center (SB-3) for a total of three (3) samples. The samples were collected by using a hand auger/shovel to excavate a shallow test pit approximately 1 to 2 foot below existing grade. Material greater than 4-inches in diameter was not sampled. The SB-1 through SB-3 samples were collected at approximately 35 to 42 feet upstream from the existing bridge. See Figure 2 for the approximate locations of the streambed samples.

Sieve analyses and/or Atterberg Limits were performed in accordance with ASTM D422 and ASTM D4318, respectively, on the soil samples. See Appendix B for the results of the analyses, the Modified Burmister Soil Classification, the D50 particle sizes and plasticity index for the streambed samples.

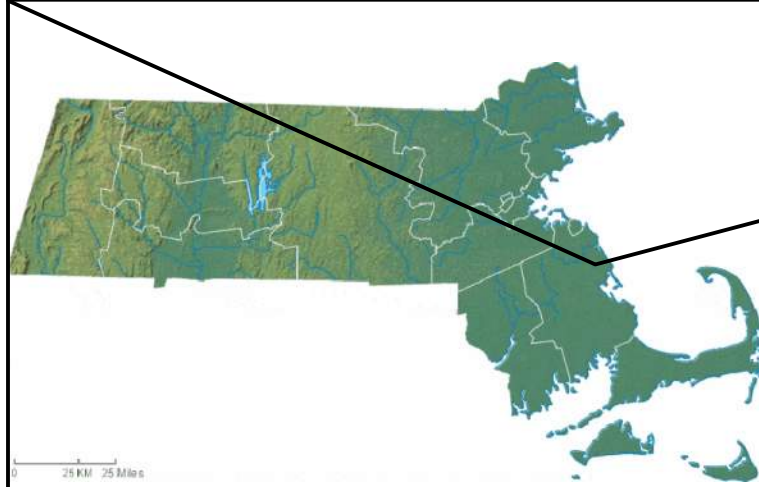
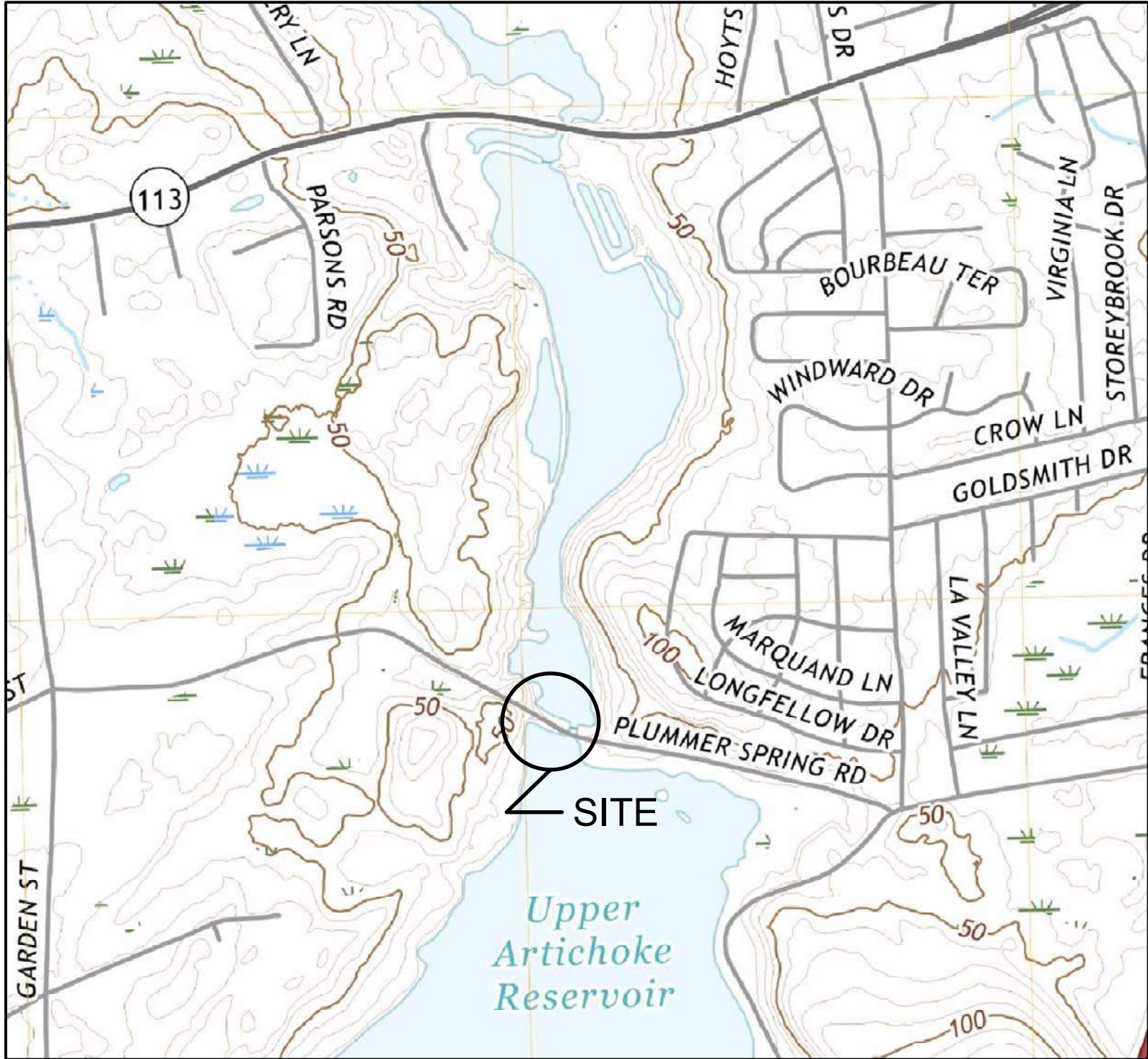
We trust this satisfies your current requirements and have appreciated working with you on this project. Please contact the undersigned if you have any questions.

Sincerely,
Geosciences Testing and Research, Inc.

Curtis A. George, P.E.
Principal

Attachments: Figure 1 and 2, Appendices A- B
19.107 Plummer St Newburyport -West Newbury MA - Streambed Sampling.docx

FIGURES



PLUMMER SPRING ROAD OVER ARTICHOKE RIVER -
 BRIDGE NO. N-11-007=W-20-001
 NEWBURYPORT, MASSACHUSETTS

LOCUS PLAN

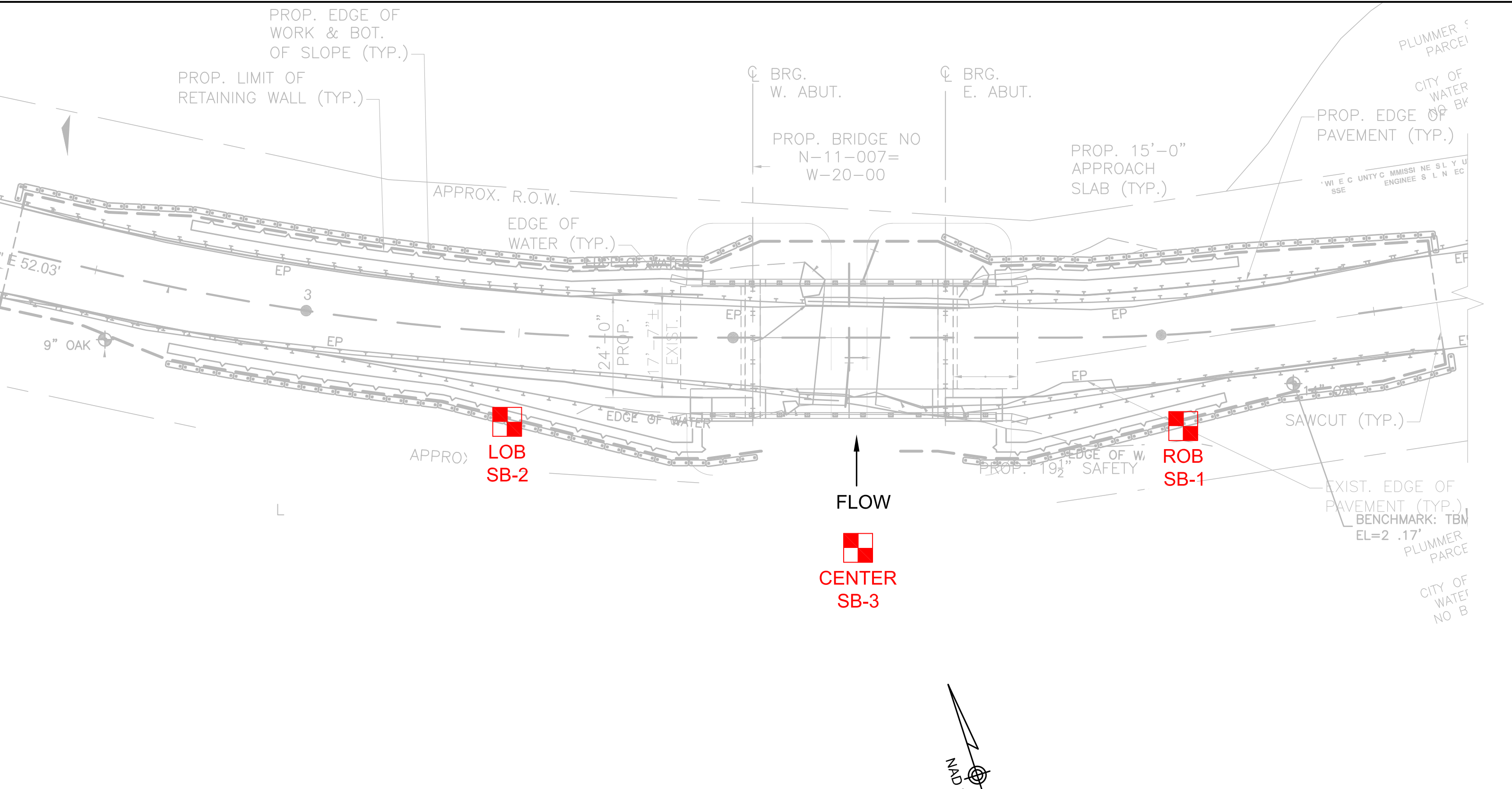
GEOSCIENCES TESTING AND RESEARCH, INC.

55 MIDDLESEX STREET, SUITE 225
 NORTH CHELMSFORD, MA, 01863


(TEL) 978-251-9395
 (FAX) 978-251-9396



DRAWN BY:	AJC	SCALE:	N/A	DESIGN BY:
CHK BY:	CAG	PROJECT NO.:	19.107	
DATE:	12/3/19	SHEET NO.:	FIGURE 1	



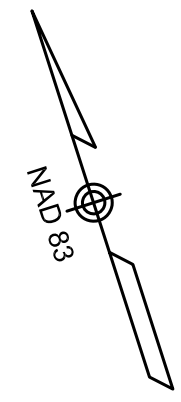
LEGEND:

 Approximate location and designation of streambed samples collected by GTR personnel on February 5, 2019.

ROB

Notes:

- The locations of streambed samples should be considered approximate to the degree implied by the method used to locate them. Location determined by tape and measure from existing site features.



PLUMMER SPRING ROAD OVER ARTICHOKE RIVER - BRIDGE NO. N-11-007=W-20-001
NEWBURYPORT, MASSACHUSETTS

STREAMBED SAMPLING PLAN

GEOSCIENCES TESTING AND RESEARCH, INC.
55 MIDDLESEX STREET, SUITE 225 NORTH CHELMSFORD, MA. 01863 (TEL) 978-251-9395 (FAX) 978-251-9396

DRAWN BY: AJC	SCALE: N/A	DESIGN BY:
CHK BY: CAG	PROJECT NO.: 19.107	
DATE: 12/3/19	SHEET NO.: FIGURE 2	

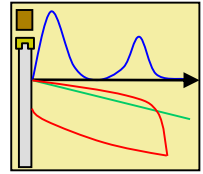


APPENDIX A



GEOSCIENCES TESTING AND RESEARCH, INC.

55 Middlesex Street, Suite 225, N. Chelmsford, MA 01863
Ph: (978)251-9395, Fx: (978)251-9396



Project: Plummer Spring St Over Water Artichoke River
Project No: 19.107
Drawn By: C. George
Date: 2/11/19

APPENDIX B



GEOSCIENCE TESTING & RESEARCH, INC.

55 MIDDLESEX ST., SUITE 225, NORTH CHELMSFORD, MA 01863

Phone: (978) 251-9395 Fax: (978) 251-9396

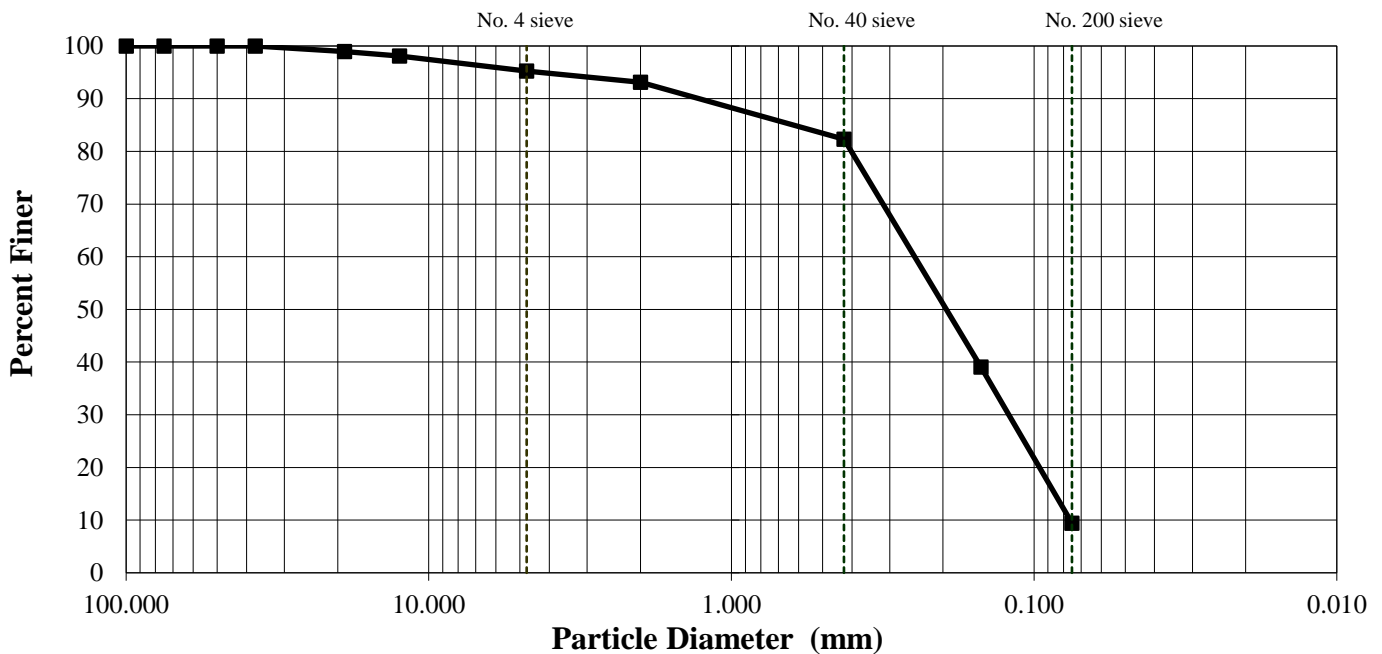
Sieve Analysis Data and Computation Sheet

Project Name: Plummer Street **Sample No.:** ROB SB-1
Project No.: 19.107 **Depth:** 0-1 ft
Test by: Domenic Valeri
Date: 5/6/2019

Soil Description: Brown, fine to medium SAND, trace Silt, trace Gravel, trace Roots.
Cobbles were not sampled.

Testing done in accordance with ASTM D-422

	Sieve Size	Sieve Opening (mm)	Cum. % Finer
Cobbles	4.0"	100.000	100.0
Coarse Gravel	3.0"	75.000	100.0
	2.0"	50.000	100.0
	1.5"	37.500	100.0
Medium Gravel	0.75"	19.000	98.9
Fine Gravel	0.5"	12.500	98.1
	4	4.750	95.3
Coarse Sand	10	2.000	93.1
Medium Sand	40	0.425	82.3
Fine Sand	100	0.150	39.1
	200	0.075	9.4
Silts & Clays			



Soil Parameters:

D₁₀: 0.078 mm

D₃₀: 0.13 mm

D₅₀: 0.20 mm



GEOSCIENCE TESTING & RESEARCH, INC.

55 MIDDLESEX ST., SUITE 225, NORTH CHELMSFORD, MA 01863

Phone: (978) 251-9395 Fax: (978) 251-9396

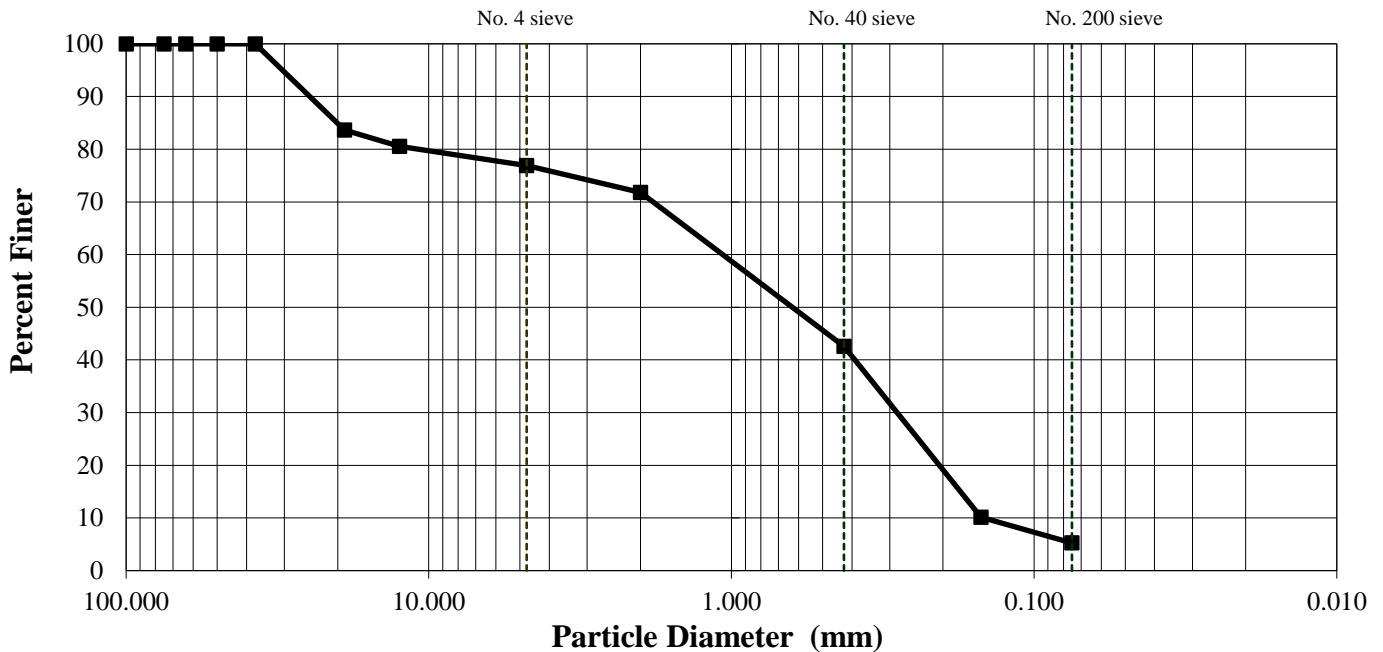
Sieve Analysis Data and Computation Sheet

Project Name:	<u>Plummer Street</u>	Sample No.:	<u>LOB SB-2</u>
Project No.:	<u>19.107</u>	Depth:	<u>0-1 ft</u>
Test by:	<u>Domenic Valeri</u>		
Date:	<u>5/6/2019</u>		

Soil Description: Brown, fine to medium SAND, some Gravel, trace Silt, trace Roots.
Cobbles were not sampled.

Testing done in accordance with ASTM D-422

	Sieve Size	Sieve Opening (mm)	Cum. % Finer
Cobbles	4.0"	100.000	100.0
Coarse Gravel	3"	75.000	100.0
	2.5"	63.500	100.0
	2.0"	50.000	100.0
	1.5"	37.500	100.0
	Medium Gravel	0.75"	19.000
Fine Gravel	0.5"	12.500	80.5
	4	4.750	76.9
Coarse Sand	10	2.000	71.8
Medium Sand	40	0.425	42.6
Fine Sand	100	0.150	10.1
	200	0.075	5.3
Silts & Clays			



Soil Parameters:

D₁₀: 0.15 mm

D₃₀: 0.28 mm

D₅₀: 0.63 mm

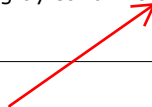


Client:	Geosciences Testing & Research		
Project:	Plummer St Bridge Replace		
Location:	Newburyport, MA	Project No:	GTX-309526
Boring ID:	---	Sample Type:	jar
Sample ID:	Center SB-3	Test Date:	02/13/19
Depth :	0-1	Test Id:	493103
Test Comment:	---		
Visual Description:	Wet, very dark gray sand with silt		
Sample Comment:	---		

Moisture Content of Soil and Rock - ASTM D2216

Boring ID	Sample ID	Depth	Description	Moisture Content, %
---	Center SB- 3	0-1	Wet, very dark gray sand with silt	144.8

Organic Silt

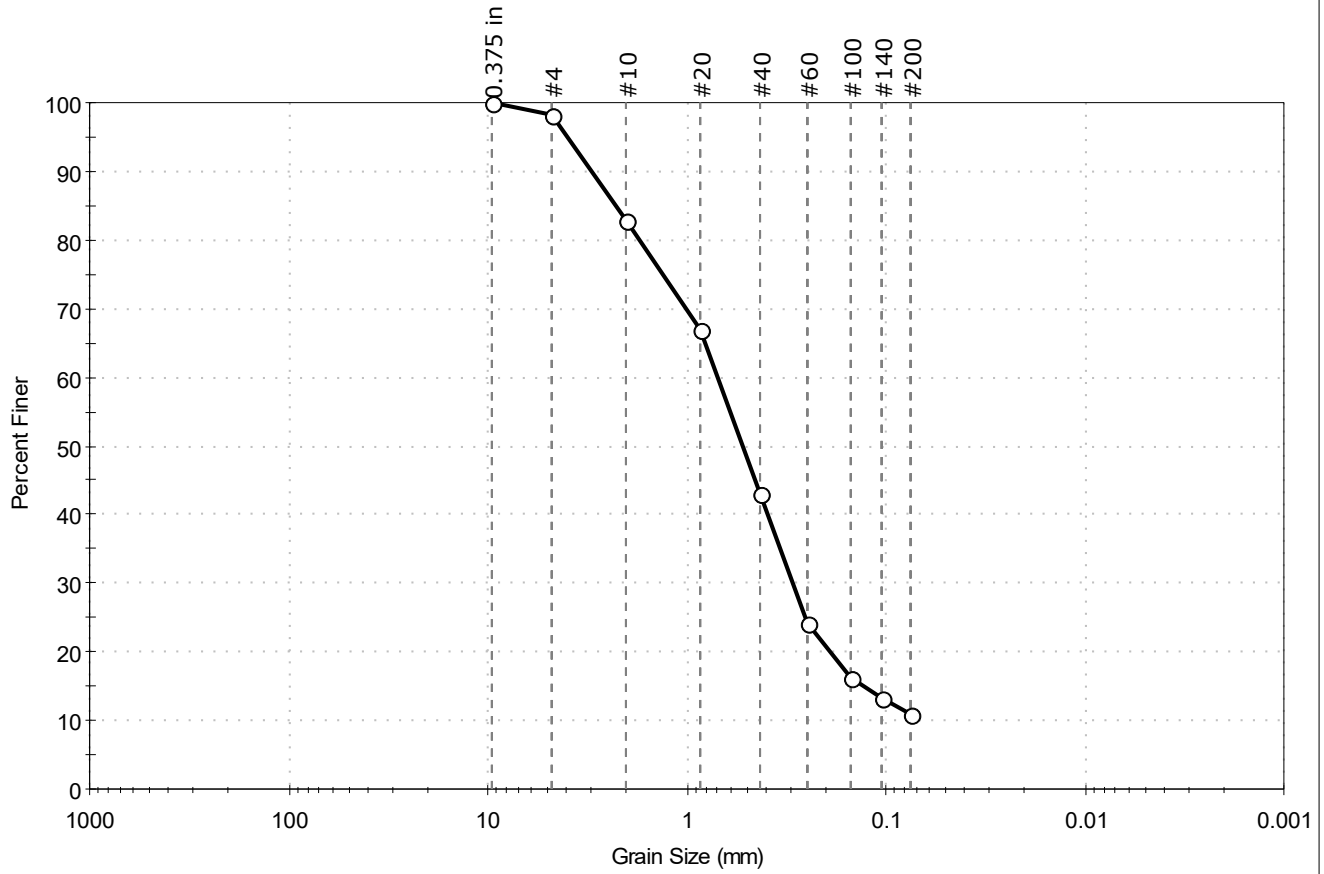


Notes: Temperature of Drying : 110° Celsius



Client:	Geosciences Testing & Research		
Project:	Plummer St Bridge Replace		
Location:	Newburyport, MA	Project No:	GTX-309526
Boring ID:	---	Sample Type:	jar
Sample ID:	Center SB-3	Test Date:	02/18/19
Depth :	0-1	Test Id:	493102
Test Comment:	---		
Visual Description:	Wet, very dark gray sand with silt		
Sample Comment:	---		

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	1.7	87.3	11.0

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	98		
#10	2.00	83		
#20	0.85	67		
#40	0.42	43		
#60	0.25	24		
#100	0.15	16		
#140	0.11	13		
#200	0.075	11		

<u>Coefficients</u>	
D ₈₅ = 2.2367 mm	D ₃₀ = 0.2944 mm
D ₆₀ = 0.6947 mm	D ₁₅ = 0.1281 mm
D ₅₀ = 0.5209 mm	D ₁₀ = N/A
C _u = N/A	C _c = N/A

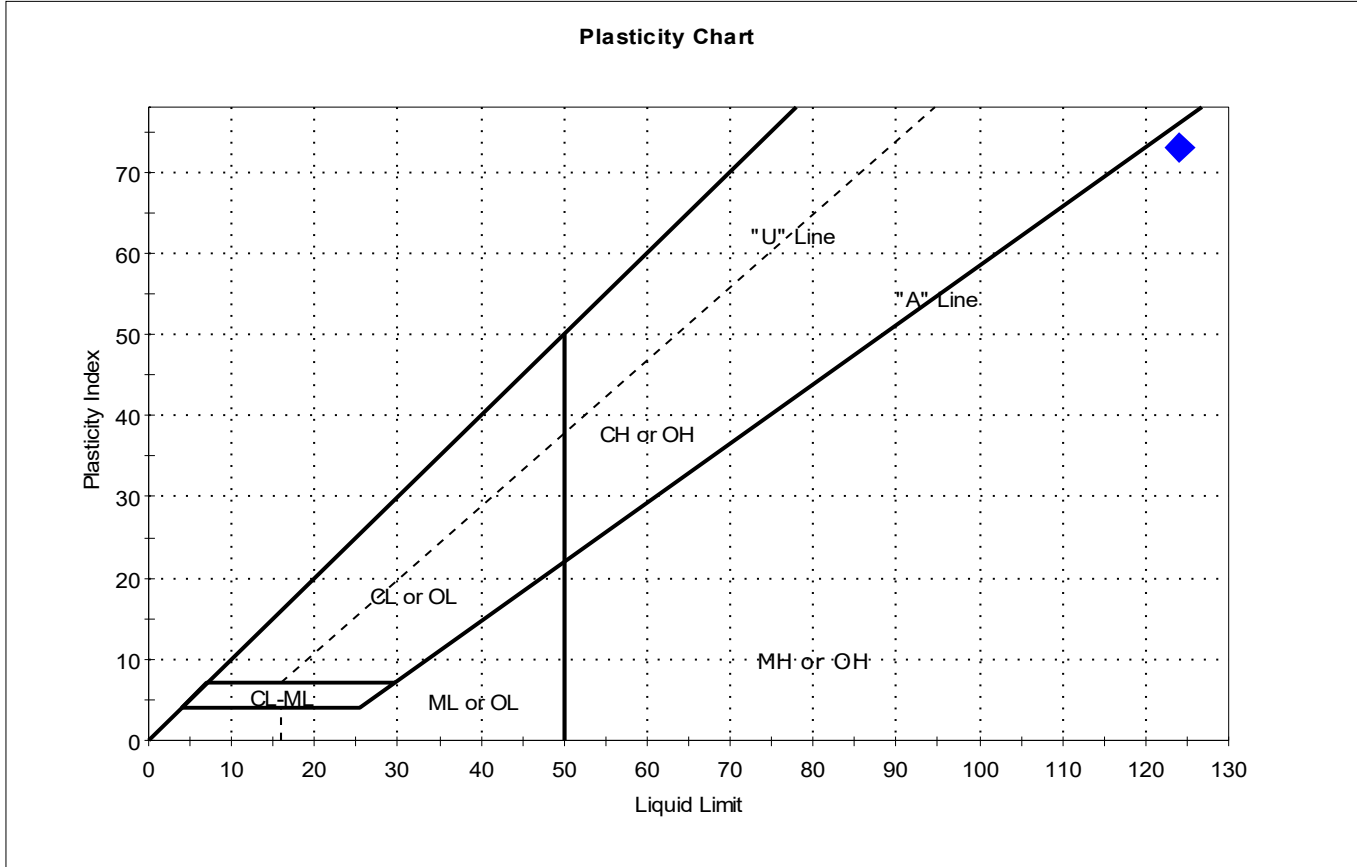
<u>Classification</u>	
ASTM	N/A
AASHTO	Clayey Gravel and Sand (A-2-7 (0))

<u>Sample/Test Description</u>
Sand/Gravel Particle Shape : ROUNDED
Sand/Gravel Hardness : HARD



Client:	Geosciences Testing & Research		Project No:	GTX-309526	
Project:	Plummer St Bridge Replace		Tested By:	cam	
Location:	Newburyport, MA	Sample Type:	jar	Checked By:	emm
Boring ID:	---	Test Date:	02/18/19	Test Id:	493101
Sample ID:	Center SB-3				
Depth :	0-1				
Test Comment:	---				
Visual Description:	Wet, very dark gray sand with silt				
Sample Comment:	---				

Atterberg Limits - ASTM D4318



Symbol	Sample ID	Boring	Depth	Natural Moisture Content, %	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	Center SB-3	---	0-1	145	124	51	73	1.3	

Sample Prepared using the WET method
 57% Retained on #40 Sieve
 Dry Strength: HIGH
 Dilatancy: SLOW
 Toughness: LOW

Attachment D

Bridge Replacement Project
Middle Street / Plummer Spring Road
over Upper Artichoke Reservoir,
West Newbury and Newburyport, MA

Chapter 91 License Application

WEST NEWBURY ORDER OF CONDITIONS (78-724)
NEWBURYPORT ORDER OF CONDITIONS (051-1047)
NOI PLANS



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 5 – Order of Conditions
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
78-724
MassDEP File #

eDEP Transaction #
West Newbury
City/Town

A. General Information

Please note:
this form has
been modified
with added
space to
accommodate
the Registry
of Deeds
Requirements

Important:
When filling
out forms on
the
computer,
use only the
tab key to
move your
cursor - do
not use the
return key.



1. From: West Newbury
Conservation Commission
2. This issuance is for (check one):
a. Order of Conditions b. Amended Order of Conditions
3. To: Applicant:
Angus Jennings
a. First Name b. Last Name
Town of West Newbury
c. Organization
381 Main St.
d. Mailing Address
West Newbury MA 01985
e. City/Town f. State g. Zip Code
4. Property Owner (if different from applicant):
same
a. First Name b. Last Name
c. Organization
d. Mailing Address
e. City/Town f. State g. Zip Code
5. Project Location:
Middle Street over Upper Artichoke Res. West Newbury
a. Street Address b. City/Town
Map: Town Roadway Layout N/A
c. Assessor's Map/Plat Number d. Parcel/Lot Number
Latitude and Longitude, if known: 42.802999d m 70.931053d m
s s



Massachusetts Department of Environmental Protection
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A. General Information (cont.)

6. Property recorded at the Registry of Deeds for (attach additional information if more than one parcel):

a. County	b. Certificate Number (if registered land)
N/A Town roadway Layout	
c. Book	d. Page

7. Dates: 1/21 6/21/21 6/29/21
a. Date Notice of Intent Filed b. Date Public Hearing Closed c. Date of Issuance

8. Final Approved Plans and Other Documents (attach additional plan or document references as needed):

Bridge Replacement Project	
a. Plan Title	
BSCS Group	
b. Prepared By	c. Signed and Stamped by
5/7/2021	varies
d. Final Revision Date	e. Scale
f. Additional Plan or Document Title	g. Date

B. Findings

1. Findings pursuant to the Massachusetts Wetlands Protection Act:

Following the review of the above-referenced Notice of Intent and based on the information provided in this application and presented at the public hearing, this Commission finds that the areas in which work is proposed is significant to the following interests of the Wetlands Protection Act (the Act). Check all that apply:

- | | | |
|---|--|---|
| a. <input checked="" type="checkbox"/> Public Water Supply | b. <input type="checkbox"/> Land Containing Shellfish | c. <input checked="" type="checkbox"/> Prevention of Pollution |
| d. <input checked="" type="checkbox"/> Private Water Supply | e. <input checked="" type="checkbox"/> Fisheries | f. <input checked="" type="checkbox"/> Protection of Wildlife Habitat |
| g. <input checked="" type="checkbox"/> Groundwater Supply | h. <input checked="" type="checkbox"/> Storm Damage Prevention | i. <input checked="" type="checkbox"/> Flood Control |

2. This Commission hereby finds the project, as proposed, is: (check one of the following boxes)

Approved subject to:

- a. the following conditions which are necessary in accordance with the performance standards set forth in the wetlands regulations. This Commission orders that all work shall be performed in accordance with the Notice of Intent referenced above, the following General Conditions, and any other special conditions attached to this Order. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, these conditions shall control.



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B. Findings (cont.)

Denied because:

- b. the proposed work cannot be conditioned to meet the performance standards set forth in the wetland regulations. Therefore, work on this project may not go forward unless and until a new Notice of Intent is submitted which provides measures which are adequate to protect the interests of the Act, and a final Order of Conditions is issued. **A description of the performance standards which the proposed work cannot meet is attached to this Order.**
- c. the information submitted by the applicant is not sufficient to describe the site, the work, or the effect of the work on the interests identified in the Wetlands Protection Act. Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides sufficient information and includes measures which are adequate to protect the Act's interests, and a final Order of Conditions is issued. **A description of the specific information which is lacking and why it is necessary is attached to this Order as per 310 CMR 10.05(6)(c).**
3. Buffer Zone Impacts: Shortest distance between limit of project disturbance and the wetland resource area specified in 310 CMR 10.02(1)(a) a. linear feet

Inland Resource Area Impacts: Check all that apply below. (For Approvals Only)

Resource Area	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
4. <input checked="" type="checkbox"/> Bank	<u>175</u> a. linear feet	<u>175</u> b. linear feet	<u>47</u> c. linear feet	<u>47</u> d. linear feet
5. <input type="checkbox"/> Bordering Vegetated Wetland	<u> </u> a. square feet	<u> </u> b. square feet	<u> </u> c. square feet	<u> </u> d. square feet
6. <input checked="" type="checkbox"/> Land Under Waterbodies and Waterways	<u>996</u> a. square feet <u>67cf</u> e. c/y dredged	<u>996</u> b. square feet <u>67cf</u> f. c/y dredged	<u>443</u> c. square feet	<u>443</u> d. square feet
7. <input checked="" type="checkbox"/> Bordering Land Subject to Flooding	<u>167</u> a. square feet <u>393</u> e. cubic feet	<u>167</u> b. square feet <u>393</u> f. cubic feet	<u>311</u> c. square feet <u>1438</u> g. cubic feet	<u>311</u> d. square feet <u>1438</u> h. cubic feet
8. <input type="checkbox"/> Isolated Land Subject to Flooding	<u> </u> a. square feet <u> </u> c. cubic feet	<u> </u> b. square feet <u> </u> d. cubic feet	<u> </u> e. cubic feet	<u> </u> f. cubic feet
9. <input checked="" type="checkbox"/> Riverfront Area	<u>5759</u> a. total sq. feet <u>5759</u> c. square feet	<u>5759</u> b. total sq. feet <u>5759</u> d. square feet	<u>570</u> e. square feet	<u>570</u> f. square feet
Sq ft within 100 ft	<u> </u> g. square feet	<u> </u> h. square feet	<u> </u> i. square feet	<u> </u> j. square feet
Sq ft between 100-200 ft	<u> </u>	<u> </u>	<u> </u>	<u> </u>



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B. Findings (cont.)

Coastal Resource Area Impacts: Check all that apply below. (For Approvals Only)

- | | Proposed
Alteration | Permitted
Alteration | Proposed
Replacement | Permitted
Replacement |
|--|---|-------------------------|-------------------------|--------------------------|
| 10. <input type="checkbox"/> Designated Port Areas | Indicate size under Land Under the Ocean, below | | | |
| 11. <input type="checkbox"/> Land Under the Ocean | _____ | _____ | _____ | _____ |
| | a. square feet | b. square feet | | |
| | _____ | _____ | | |
| | c. c/y dredged | d. c/y dredged | | |
| 12. <input type="checkbox"/> Barrier Beaches | Indicate size under Coastal Beaches and/or Coastal Dunes below | | | |
| 13. <input type="checkbox"/> Coastal Beaches | _____ | _____ | _____ cu yd | _____ cu yd |
| | a. square feet | b. square feet | c. nourishment | d. nourishment |
| 14. <input type="checkbox"/> Coastal Dunes | _____ | _____ | _____ cu yd | _____ cu yd |
| | a. square feet | b. square feet | c. nourishment | d. nourishment |
| 15. <input type="checkbox"/> Coastal Banks | _____ | _____ | | |
| | a. linear feet | b. linear feet | | |
| 16. <input type="checkbox"/> Rocky Intertidal Shores | _____ | _____ | | |
| | a. square feet | b. square feet | | |
| 17. <input type="checkbox"/> Salt Marshes | _____ | _____ | _____ | _____ |
| | a. square feet | b. square feet | c. square feet | d. square feet |
| 18. <input type="checkbox"/> Land Under Salt Ponds | _____ | _____ | | |
| | a. square feet | b. square feet | | |
| | _____ | _____ | | |
| | c. c/y dredged | d. c/y dredged | | |
| 19. <input type="checkbox"/> Land Containing Shellfish | _____ | _____ | _____ | _____ |
| | a. square feet | b. square feet | c. square feet | d. square feet |
| 20. <input type="checkbox"/> Fish Runs | Indicate size under Coastal Banks, Inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above | | | |
| | _____ | _____ | | |
| | a. c/y dredged | b. c/y dredged | | |
| 21. <input type="checkbox"/> Land Subject to Coastal Storm Flowage | _____ | _____ | | |
| | a. square feet | b. square feet | | |
| 22. <input type="checkbox"/> Riverfront Area | _____ | _____ | | |
| | a. total sq. feet | b. total sq. feet | | |
| Sq ft within 100 ft | _____ | _____ | _____ | _____ |
| | c. square feet | d. square feet | e. square feet | f. square feet |
| Sq ft between 100-200 ft | _____ | _____ | _____ | _____ |
| | g. square feet | h. square feet | i. square feet | j. square feet |



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B. Findings (cont.)

* #23. If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.5.c (BVW) or B.17.c (Salt Marsh) above, please enter the additional amount here.

23. Restoration/Enhancement *:

a. square feet of BVW

b. square feet of salt marsh

24. Stream Crossing(s):

0

1

a. number of new stream crossings

b. number of replacement stream crossings

C. General Conditions Under Massachusetts Wetlands Protection Act

The following conditions are only applicable to Approved projects.

1. Failure to comply with all conditions stated herein, and with all related statutes and other regulatory measures, shall be deemed cause to revoke or modify this Order.
2. The Order does not grant any property rights or any exclusive privileges; it does not authorize any injury to private property or invasion of private rights.
3. This Order does not relieve the permittee or any other person of the necessity of complying with all other applicable federal, state, or local statutes, ordinances, bylaws, or regulations.
4. The work authorized hereunder shall be completed within three years from the date of this Order unless either of the following apply:
 - a. The work is a maintenance dredging project as provided for in the Act; or
 - b. The time for completion has been extended to a specified date more than three years, but less than five years, from the date of issuance. If this Order is intended to be valid for more than three years, the extension date and the special circumstances warranting the extended time period are set forth as a special condition in this Order.
 - c. If the work is for a Test Project, this Order of Conditions shall be valid for no more than one year.
5. This Order may be extended by the issuing authority for one or more periods of up to three years each upon application to the issuing authority at least 30 days prior to the expiration date of the Order. An Order of Conditions for a Test Project may be extended for one additional year only upon written application by the applicant, subject to the provisions of 310 CMR 10.05(11)(f).
6. If this Order constitutes an Amended Order of Conditions, this Amended Order of Conditions does not extend the issuance date of the original Final Order of Conditions and the Order will expire on 6/29/24 unless extended in writing by the Department.
7. Any fill used in connection with this project shall be clean fill. Any fill shall contain no trash, refuse, rubbish, or debris, including but not limited to lumber, bricks, plaster, wire, lath, paper, cardboard, pipe, tires, ashes, refrigerators, motor vehicles, or parts of any of the foregoing.



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C. General Conditions Under Massachusetts Wetlands Protection Act

8. This Order is not final until all administrative appeal periods from this Order have elapsed, or if such an appeal has been taken, until all proceedings before the Department have been completed.
9. No work shall be undertaken until the Order has become final and then has been recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land upon which the proposed work is to be done. In the case of the registered land, the Final Order shall also be noted on the Land Court Certificate of Title of the owner of the land upon which the proposed work is done. The recording information shall be submitted to the Conservation Commission on the form at the end of this Order, which form must be stamped by the Registry of Deeds, prior to the commencement of work.
10. A sign shall be displayed at the site not less than two square feet or more than three square feet in size bearing the words,

"Massachusetts Department of Environmental Protection" [or, "MassDEP"]
"File Number 78-724 "
11. Where the Department of Environmental Protection is requested to issue a Superseding Order, the Conservation Commission shall be a party to all agency proceedings and hearings before MassDEP.
12. Upon completion of the work described herein, the applicant shall submit a Request for Certificate of Compliance (WPA Form 8A) to the Conservation Commission.
13. The work shall conform to the plans and special conditions referenced in this order.
14. Any change to the plans identified in Condition #13 above shall require the applicant to inquire of the Conservation Commission in writing whether the change is significant enough to require the filing of a new Notice of Intent.
15. The Agent or members of the Conservation Commission and the Department of Environmental Protection shall have the right to enter and inspect the area subject to this Order at reasonable hours to evaluate compliance with the conditions stated in this Order, and may require the submittal of any data deemed necessary by the Conservation Commission or Department for that evaluation.
16. This Order of Conditions shall apply to any successor in interest or successor in control of the property subject to this Order and to any contractor or other person performing work conditioned by this Order.



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C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

17. Prior to the start of work, and if the project involves work adjacent to a Bordering Vegetated Wetland, the boundary of the wetland in the vicinity of the proposed work area shall be marked by wooden stakes or flagging. Once in place, the wetland boundary markers shall be maintained until a Certificate of Compliance has been issued by the Conservation Commission.
18. All sedimentation barriers shall be maintained in good repair until all disturbed areas have been fully stabilized with vegetation or other means. At no time shall sediments be deposited in a wetland or water body. During construction, the applicant or his/her designee shall inspect the erosion controls on a daily basis and shall remove accumulated sediments as needed. The applicant shall immediately control any erosion problems that occur at the site and shall also immediately notify the Conservation Commission, which reserves the right to require additional erosion and/or damage prevention controls it may deem necessary. Sedimentation barriers shall serve as the limit of work unless another limit of work line has been approved by this Order.
19. The work associated with this Order (the "Project")
- (1) is subject to the Massachusetts Stormwater Standards
- (2) is NOT subject to the Massachusetts Stormwater Standards

If the work is subject to the Stormwater Standards, then the project is subject to the following conditions:

- a) All work, including site preparation, land disturbance, construction and redevelopment, shall be implemented in accordance with the construction period pollution prevention and erosion and sedimentation control plan and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Construction General Permit as required by Stormwater Condition 8. Construction period erosion, sedimentation and pollution control measures and best management practices (BMPs) shall remain in place until the site is fully stabilized.
- b) No stormwater runoff may be discharged to the post-construction stormwater BMPs unless and until a Registered Professional Engineer provides a Certification that:
- i. all construction period BMPs have been removed or will be removed by a date certain specified in the Certification. For any construction period BMPs intended to be converted to post construction operation for stormwater attenuation, recharge, and/or treatment, the conversion is allowed by the MassDEP Stormwater Handbook BMP specifications and that the BMP has been properly cleaned or prepared for post construction operation, including removal of all construction period sediment trapped in inlet and outlet control structures;
 - ii. as-built final construction BMP plans are included, signed and stamped by a Registered Professional Engineer, certifying the site is fully stabilized;
 - iii. any illicit discharges to the stormwater management system have been removed, as per the requirements of Stormwater Standard 10;



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C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

iv. all post-construction stormwater BMPs are installed in accordance with the plans (including all planting plans) approved by the issuing authority, and have been inspected to ensure that they are not damaged and that they are in proper working condition;

v. any vegetation associated with post-construction BMPs is suitably established to withstand erosion.

c) The landowner is responsible for BMP maintenance until the issuing authority is notified that another party has legally assumed responsibility for BMP maintenance. Prior to requesting a Certificate of Compliance, or Partial Certificate of Compliance, the responsible party (defined in General Condition 18(e)) shall execute and submit to the issuing authority an Operation and Maintenance Compliance Statement ("O&M Statement") for the Stormwater BMPs identifying the party responsible for implementing the stormwater BMP Operation and Maintenance Plan ("O&M Plan") and certifying the following:

i.) the O&M Plan is complete and will be implemented upon receipt of the Certificate of Compliance, and

ii.) the future responsible parties shall be notified in writing of their ongoing legal responsibility to operate and maintain the stormwater management BMPs and implement the Stormwater Pollution Prevention Plan.

d) Post-construction pollution prevention and source control shall be implemented in accordance with the long-term pollution prevention plan section of the approved Stormwater Report and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Multi-Sector General Permit.

e) Unless and until another party accepts responsibility, the landowner, or owner of any drainage easement, assumes responsibility for maintaining each BMP. To overcome this presumption, the landowner of the property must submit to the issuing authority a legally binding agreement of record, acceptable to the issuing authority, evidencing that another entity has accepted responsibility for maintaining the BMP, and that the proposed responsible party shall be treated as a permittee for purposes of implementing the requirements of Conditions 18(f) through 18(k) with respect to that BMP. Any failure of the proposed responsible party to implement the requirements of Conditions 18(f) through 18(k) with respect to that BMP shall be a violation of the Order of Conditions or Certificate of Compliance. In the case of stormwater BMPs that are serving more than one lot, the legally binding agreement shall also identify the lots that will be serviced by the stormwater BMPs. A plan and easement deed that grants the responsible party access to perform the required operation and maintenance must be submitted along with the legally binding agreement.

f) The responsible party shall operate and maintain all stormwater BMPs in accordance with the design plans, the O&M Plan, and the requirements of the Massachusetts Stormwater Handbook.



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C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

- g) The responsible party shall:
1. Maintain an operation and maintenance log for the last three (3) consecutive calendar years of inspections, repairs, maintenance and/or replacement of the stormwater management system or any part thereof, and disposal (for disposal the log shall indicate the type of material and the disposal location);
 2. Make the maintenance log available to MassDEP and the Conservation Commission ("Commission") upon request; and
 3. Allow members and agents of the MassDEP and the Commission to enter and inspect the site to evaluate and ensure that the responsible party is in compliance with the requirements for each BMP established in the O&M Plan approved by the issuing authority.
- h) All sediment or other contaminants removed from stormwater BMPs shall be disposed of in accordance with all applicable federal, state, and local laws and regulations.
- i) Illicit discharges to the stormwater management system as defined in 310 CMR 10.04 are prohibited.
- j) The stormwater management system approved in the Order of Conditions shall not be changed without the prior written approval of the issuing authority.
- k) Areas designated as qualifying pervious areas for the purpose of the Low Impact Site Design Credit (as defined in the MassDEP Stormwater Handbook, Volume 3, Chapter 1, Low Impact Development Site Design Credits) shall not be altered without the prior written approval of the issuing authority.
- l) Access for maintenance, repair, and/or replacement of BMPs shall not be withheld. Any fencing constructed around stormwater BMPs shall include access gates and shall be at least six inches above grade to allow for wildlife passage.

Special Conditions (if you need more space for additional conditions, please attach a text document):

See attached four pages Standard and two pages Special Conditions

20. For Test Projects subject to 310 CMR 10.05(11), the applicant shall also implement the monitoring plan and the restoration plan submitted with the Notice of Intent. If the conservation commission or Department determines that the Test Project threatens the public health, safety or the environment, the applicant shall implement the removal plan submitted with the Notice of Intent or modify the project as directed by the conservation commission or the Department.

SPECIAL CONDITIONS
MIDDLE STREET OVER THE UPPER ARTICHOKE RESERVOIR BRIDGE
DEP #78-0724

1. All work shall conform to the following approved plans and documents, Bridge Replacement Project. Revised 5/7/21
2. Pesticides, insecticides, herbicides and fertilizers shall not be used on site within 100 feet of a resource area. Any proposed change in this limitation requires the submission of a plan to the WNCC and its approval by the WNCC before implementation of any change.
3. A construction schedule shall be submitted to the WNCC at least one week prior to the commencement of any site work.
4. A detailed plan for dewatering shall be submitted to and approved by the WNCC before the commencement of any dewatering.
5. A qualified wetlands scientist, whose qualifications and contact information shall be provided to the WNCC prior to any work under this Order, shall be on-site during the installation of dewatering structures, removal and replacement of the streambed materials, and other times deemed necessary by the WNCC.
6. Wetland flagging shall be reviewed and refreshed by the qualified wetland scientist prior to the commencement of work under this Order.
7. A pre-construction site meeting to review all documents associated with the work under this Order and the locations of erosion and sedimentation controls shall be held prior to any work under this Order and shall be attended by the contractor, resident engineer, the qualified wetland scientist, any other project supervisors, and the West Newbury Conservation Agent.
8. Erosion and sedimentation control measures, consisting of staked 12" compost filter tubes, shall be installed by the contractor and shall be inspected and approved by the WNCC prior to any other work under this Order. The installation shall be completed according to approved plans and the installation will be reviewed by the Qualified Wetland Scientist. The erosion control line along resource areas, except land under water, indicated on the plan shall be the limit of disturbance on the project.
9. Erosion and sedimentation control shall be maintained in good working order throughout all work under this Order. Built up sediment shall be removed when it reaches one-third the height of the filter tube and shall be disposed of outside the buffer zone of any resource area. The erosion and sedimentation controls shall be checked on a weekly basis and following storm events of more than .5 inch.

Inspection reports shall be submitted to the qualified wetland scientist and the WNCC.

10. Areas for stockpiling construction materials and the natural streambed material removed prior to streambed excavation within any resource area or any buffer zone shall be designated on a plan submitted to and approved by the WNCC prior to any work under this Order. Stockpiled materials shall be covered with tarps and surrounded by erosion control measures.
11. Material from demolition shall be disposed of outside any resource area and any buffer zones
12. All trees with a dbh of 3 inches or greater to be removed shall be marked in the field and reviewed by the WNCC prior to removal. Stumps shall remain in place where removal is not required for construction.
13. Any fill materials shall be free from masonry stumps, wood, tree branches, organic materials (other than topsoil), construction debris, refuse, trash and other similar materials.
14. A plan for the treatment of the bridge and approach road with deicing agents in winter shall be submitted to and approved by the WNCC prior to the conclusion of work.
15. 401 Water Quality Certification by the Massachusetts DEP shall be submitted to the WNCC prior to any work under this Order.
16. Confirmation from DEP that the project has been approved under MEPA or that a MEPA filing is not required shall be submitted to the WNCC prior to any work under this Order.
17. Work shall be done in accordance with the authorization and four special conditions provided by the US Army Corps of Engineers in its April 9, 2021 letter to Jon-Eric White, City engineer, City of Newburyport, a copy of which is attached to this Order
18. No time of year work restrictions are applicable to this project. Special Condition #18 supersedes Standard #19.
19. Condition #2 shall run with the land and shall remain in full force and effect after the issuance of a Certificate of Compliance.

The following Conditions are issued pursuant to Mass. General Laws c. 131 S40 and 301 CMR 10.00 et seq, and regulate those activities conducted in a Resource Area or Buffer Zone thereto.

STANDARD ORDER OF CONDITIONS

PROCEDURES:

1. All work must conform to the plans submitted and to the Notice of Intent unless otherwise stipulated in the Order of Conditions or authorized by the West Newbury Conservation Commission.
2. This Order of Conditions must be recorded at the Registry of Deeds, with the recording information submitted to this Commission, prior to the commencement of site work or construction, or within 60 days of the issuance of this Order if construction is not commenced.
3. If the applicant is not the record owner of the property subject to this Order of Conditions, the applicant must, prior to the recording of this Order, provide to this Commission, a written, notarized statement, executed by the owner of the property approving the recording of the Order of Conditions at said Registry of Deeds.
4. The Conservation Commission shall be notified, in writing, at the time of all transfers of title on this property that occur prior to the issuance of a Certificate of Compliance.
5. In conjunction with the sale of any lot with a resource area under an Order of Conditions, the applicant shall submit to the WNCC a signed statement by the buyer that he is aware of an outstanding Order of Conditions on the property.
6. The applicant or his successor shall notify the WNCC, in writing, and before site work begins, of the name, address, business and home phone numbers of the project supervisor responsible for compliance with this Order.
7. This Order shall be made part of all general and subcontractors' (responsible for site work) written contract.
8. Any modifications or revisions to the referenced plans and/or Notice of Intent shall be submitted to the WNCC for review and to determine if a new Notice of Intent is required. The WNCC reserves the right to require the applicant to file a new Notice of intent for any appropriate plan changes or submittals.
9. No additional new construction or disturbance of a wetland resource area, or the 100ft. buffer zone around a wetland resource area, shall be permitted on this site until the Commission has made a determination.

10. Issuance of this condition does not in any way imply or certify that the site or downstream areas will not be subject to flooding, storm damage, or any other form of damage due to wetness.
11. Upon completion of work, and in order to receive a Certificate of Compliance, the applicant shall submit an as-built plan of all areas within jurisdiction of the Wetlands Protection Act. The professional engineer of record, certifying compliance with this Order of Conditions, shall sign the plan. The plan shall include:
 - a. As-built elevations of all drainage ways constructed within 100 ft. of any wetland resource area.
 - b. As-built elevations and grades of all filled or altered wetland resource areas, buffer zones and replicated wetland areas.
 - c. Distances to all structures within 100ft. of any wetland resource area.
 - d. The original plan can be used and any changes in the elevations or locations be marked in red. Submit the request in writing or use the DEP form (WPA 8A). Make sure all the original Conditions were met.
12. All erosion control shall be removed as soon as disturbed areas have been revegetated and stabilized, but only after consultation with the Agent and a determination by the Agent that disturbed areas have been sufficiently revegetated/stabilized to warrant removal of the erosion control. The erosion control must be removed before a request for Certificate of Compliance is requested.
13. The Order of Conditions is valid for three years. A Certificate of Compliance must be requested before the Order of Conditions expires unless the Order has been extended.

SITE WORK

14. Erosion and siltation prevention measures must be properly installed before construction. Securely installed silt fence backed with doubly staked hay bales, both embedded a minimum of 6" into existing grade, shall be placed between construction areas and wetland areas. Unless otherwise specified. Prior to installation of these devices, the Conservation Agent shall be contacted for instruction as to proper installation. Both hay bales and silt fence shall be maintained throughout the project until all disturbed areas have been mulched, seeded and stabilized to prevent erosion.
15. The erosion control shall indicate the limit of construction on site and there shall be no disturbance between the erosion control and a wetland resource area unless specifically allowed by the Order of Conditions.
16. If during the course of construction, it is found that further erosion or siltation is needed, the WNCC shall direct the applicant upon its placement.

17. Grading shall conform to the plans and data referenced in special condition #1 above. In all cases final grades shall have a minimum of two inches of topsoil (measured in place) over all disturbed areas. In all cases exposed soil areas shall be stabilized with vegetation, e.g., grass or some form of ground cover plant. Pavement milling mulch alone may be used under the guardrail between the edge of the roadway and back of retaining wall.
18. Upon completion of construction and grading, all disturbed areas located outside resource areas shall be stabilized permanently against erosion. This shall be done either by sodding, or by loaming, seeding, and mulching according to Soil Conservation Service standards. If the latter course is chosen, stabilization will be complete when the surface shows complete vegetative cover.
19. Unless otherwise stipulated herein, all work within a resource area, or the 100ft. buffer zone, shall cease on October 15th of any given year, and the site shall be stabilized either with winter rye, mulch hay or other suitable material by November 1st. No work in the above stated areas should recommence until April 15th, of the following year.
20. Before hay bales or silt fences are removed, after the area in question has been stabilized by revegetation or at the completion of a project, all accumulated silt behind the fences shall be carefully removed and placed sufficiently far from the wetland area that it cannot wash into the wetlands.
21. No earthen embankment in any buffer zone area shall have a slope steeper than 2:1.
22. Dust control, if required, shall be limited to water; no salts or other wetting agents shall be used.
23. No dirt stockpiles, construction materials, spoils of construction, or equipment shall be stored, placed or operated in a wetland resource area, unless specifically allowed by the Order of Conditions.
24. Fill stored within 100ft. of the wetland of the must have adequate erosion control measures surrounding it.
25. Only clean fill shall be used on this site, as indicated in General Condition #6.
26. No construction site bury holes shall be located within 100ft. of the wetland.

POLLUTION CONTROL

27. No on-site dumpster shall be located within 100ft. of the wetland.
28. During and after work on this project, there shall be no discharge or spillage of fuel, oil, construction debris, or other pollutants into any wetland resource area.

29. Petroleum products, toxic materials, and construction debris shall be disposed of off-site.
30. Since the underground storage of petroleum products cannot be effectively monitored for loss, and presents a hazard to ground water and wetland resources, such storage is prohibited. This condition shall be included with the Certificate of Compliance so as to run with the land.
31. Equipment must be washed prior to entering the work area to remove leaked petroleum products and avoid introduction of invasive plants.
32. To avoid leaks, equipment must be repaired prior to construction.
33. Applicant must be prepared to use petroleum absorbing "diapers" if necessary.
34. Refueling areas and hazardous material containment areas shall be located away from streams and other sensitive areas. All refueling areas shall be outside of the 100 foot buffer zone and the 200 Riverfront Areas.
35. Appropriate areas for washing concrete mixers must be established outside the 100 foot buffer zone of a wetland resource area and outside the Riverfront Area; in order to prevent concrete wash water from entering rivers and streams.
36. Temporary stockpiles must be covered or surrounded with erosion controls to prevent erosion into resource areas



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Provided by MassDEP:

78-724

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eDEP Transaction #

West Newbury

City/Town

D. Findings Under Municipal Wetlands Bylaw or Ordinance

1. Is a municipal wetlands bylaw or ordinance applicable? Yes No
2. The _____ hereby finds (check one that applies):
Conservation Commission

- a. that the proposed work cannot be conditioned to meet the standards set forth in a municipal ordinance or bylaw, specifically:

1. Municipal Ordinance or Bylaw

2. Citation

Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides measures which are adequate to meet these standards, and a final Order of Conditions is issued.

- b. that the following additional conditions are necessary to comply with a municipal ordinance or bylaw:

1. Municipal Ordinance or Bylaw

2. Citation

3. The Commission orders that all work shall be performed in accordance with the following conditions and with the Notice of Intent referenced above. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, the conditions shall control.

The special conditions relating to municipal ordinance or bylaw are as follows (if you need more space for additional conditions, attach a text document):



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City/Town

E. Signatures

This Order is valid for three years, unless otherwise specified as a special condition pursuant to General Conditions #4, from the date of issuance.

6/29/21
1. Date of Issuance

Please indicate the number of members who will sign this form.

four
2. Number of Signers

This Order must be signed by a majority of the Conservation Commission.

The Order must be mailed by certified mail (return receipt requested) or hand delivered to the applicant. A copy also must be mailed or hand delivered at the same time to the appropriate Department of Environmental Protection Regional Office, if not filing electronically, and the property owner, if different from applicant.

[Signature]
Signature

Katherine T. Federer
Printed Name

[Signature]
Signature

Thomas M. Atwood
Printed Name

[Signature]
Signature

MARGARET HAWKINS
Printed Name

[Signature]
Signature

JULIA H. MIZNER
Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

by hand delivery on

by certified mail, return receipt requested, on

6/29/21
Date

Date



Massachusetts Department of Environmental Protection
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F. Appeals

The applicant, the owner, any person aggrieved by this Order, any owner of land abutting the land subject to this Order, or any ten residents of the city or town in which such land is located, are hereby notified of their right to request the appropriate MassDEP Regional Office to issue a Superseding Order of Conditions. The request must be made by certified mail or hand delivery to the Department, with the appropriate filing fee and a completed Request for Departmental Action Fee Transmittal Form, as provided in 310 CMR 10.03(7) within ten business days from the date of issuance of this Order. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

Any appellants seeking to appeal the Department's Superseding Order associated with this appeal will be required to demonstrate prior participation in the review of this project. Previous participation in the permit proceeding means the submission of written information to the Conservation Commission prior to the close of the public hearing, requesting a Superseding Order, or providing written information to the Department prior to issuance of a Superseding Order.

The request shall state clearly and concisely the objections to the Order which is being appealed and how the Order does not contribute to the protection of the interests identified in the Massachusetts Wetlands Protection Act (M.G.L. c. 131, § 40), and is inconsistent with the wetlands regulations (310 CMR 10.00). To the extent that the Order is based on a municipal ordinance or bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.



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G. Recording Information

Prior to commencement of work, this Order of Conditions must be recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land subject to the Order. In the case of registered land, this Order shall also be noted on the Land Court Certificate of Title of the owner of the land subject to the Order of Conditions. The recording information on this page shall be submitted to the Conservation Commission listed below.

West Newbury

Conservation Commission

Detach on dotted line, have stamped by the Registry of Deeds and submit to the Conservation Commission.

To:

West Newbury

Conservation Commission

Please be advised that the Order of Conditions for the Project at:

Upper Artichoke Bridge, Middle St.

Project Location

78-724

MassDEP File Number

Has been recorded at the Registry of Deeds of:

County

Book

Page

for: Town of West Newbury
Property Owner

and has been noted in the chain of title of the affected property in:

Book

Page

In accordance with the Order of Conditions issued on:

6/29/2021

Date

If recorded land, the instrument number identifying this transaction is:

Instrument Number

If registered land, the document number identifying this transaction is:

Document Number

Signature of Applicant



CITY OF NEWBURYPORT
CONSERVATION COMMISSION

60 PLEASANT STREET
NEWBURYPORT, MA 01950
978-465-4400

June 07, 2021

Jon-Eric White
City of Newburyport Department of Public Services
16C Perry Way
Newburyport MA 01950

Re: Order of Conditions File # 051-1047
- Plummer Spring Road

Dear Applicant:

Enclosed is the Order of Conditions for your project at the above referenced property. Before any work may begin, you must wait 10 business days (the appeal period) and then record this Order with the Registry of Deeds. Once the Order is recorded, you must submit proof to me (see page 11) prior to starting any work.

Please read the Order very carefully as it will govern how you may proceed with your project so that any potential impacts to the resource areas are minimized. Failure to adhere to the conditions specified in the Order may result in enforcement action, including fines. In addition, please note the following special conditions that must be met prior to your start of work:

- Prior to the commencement of any activity on the site, the applicant shall complete and submit the enclosed "Permit Compliance Contact Form".
- The applicant shall display the DEP file number for this Order on a sign within the minimum dimensions of two feet by two feet at a location clearly visible from the street. This sign shall remain in place and visible until a Certificate of Compliance is issued for the activity.
- The Conservation Administrator shall be notified at least 48 hours in advance of the commencement of work at the site.

Information may be provided to the Conservation Administrator by phone at (978) 465-4400 xt 1224, by email at: jgodtfredsens@cityofnewburyport.com, or by mail at 60 Pleasant Street, Newburyport, MA 01950.

Best of luck on your project and don't hesitate to contact me if you have questions.

Sincerely,

Julia Godtfredsen
Conservation Administrator



CITY OF NEWBURYPORT
CONSERVATION COMMISSION
60 PLEASANT STREET
NEWBURYPORT, MA 01950
978-465-4462

PERMIT COMPLIANCE CONTACT FORM

INSTRUCTIONS

Please complete the permit compliance contact form on the following page and return to the Conservation Administrator prior to the start of construction.

The purpose of this form is to ensure proper contact information for compliance with the permit (Order of Conditions) and follow-through with application for the Certificate of Compliance at the conclusion of construction.

Please Note:

1. No work shall begin on site until this form has been completed and received by the Conservation Administrator. The form may be hand delivered or mailed, faxed to 978-465-4452, or sent by email to: jgodtfredsen@cityofnewburyport.com.
2. Any changes to the responsible parties and/or their contact information that occur during the course of construction shall be immediately supplied to the Conservation Administrator on an updated form. Forms are downloadable from the Commission's website at: <http://www.cityofnewburyport.com/conservation-commission>
3. The Request for Certificate of Compliance must be submitted by the applicant at the completion of construction and prior to the expiration date of the Order of Conditions. If the Request for Certificate of Compliance is not submitted prior to the expiration date of the Order of Conditions, the applicant will be in violation of permit conditions and may be subject to enforcement action.

Corrected
10/3/2022



Massachusetts
Bureau of Resource Protection - Wetlands
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Provided by MassDEP:
051-1047
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City/Town

A. General Information

Please note:
this form has
been modified
with added
space to
accommodate
the Registry
of Deeds
Requirements

Important:
When filling
out forms on
the
computer,
use only the
tab key to
move your
cursor - do
not use the
return key.



1. From: Newburyport
Conservation Commission

2. This issuance is for (check one):
a. Order of Conditions b. Amended Order of Conditions

3. To: Applicant:
Jon-Eric White
a. First Name b. Last Name
City of Newburyport Department of Public Services
c. Organization
16C Perry Way
d. Mailing Address
Newburyport MA 01950
e. City/Town f. State g. Zip Code

4. Property Owner (if different from applicant):
a. First Name b. Last Name
City of Newburyport
c. Organization
60 Pleasant Street
d. Mailing Address
Newburyport MA 01950
e. City/Town f. State g. Zip Code

5. Project Location:
- Plummer Spring Road Newburyport
a. Street Address b. City/Town
n/a n/a
c. Assessors Map/Plat Number d. Parcel/Lot Number
Latitude and Longitude, if known: d m s d m s
d. Latitude e. Longitude



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A. General Information (cont.)

6. Property recorded at the Registry of Deeds for (attach additional information if more than one parcel):

Essex
 a. County
 b. Certificate Number (if registered land)
 c. Book
 d. Page

7. Dates: 1/12/2021 5/18/2021 6/7/2021
 a. Date Notice of Intent Filed b. Date Public Hearing Closed c. Date of Issuance

8. Final Approved Plans and Other Documents (attach additional plan or document references as needed):

Project Site Plans, Bridge Replacement Project, Middle Street/Plummer Spring Road
 a. Plan Title
 BSC Group varies
 b. Prepared By c. Signed and Stamped by
 12/21/2020, 5/7/2021 e. Scale
 d. Final Revision Date
 f. Additional Plan or Document Title g. Date

B. Findings

1. Findings pursuant to the Massachusetts Wetlands Protection Act:

Following the review of the above-referenced Notice of Intent and based on the information provided in this application and presented at the public hearing, this Commission finds that the areas in which work is proposed is significant to the following interests of the Wetlands Protection Act (the Act). Check all that apply:

- a. Public Water Supply
- b. Land Containing Shellfish
- c. Prevention of Pollution
- d. Private Water Supply
- e. Fisheries
- f. Protection of Wildlife Habitat
- g. Groundwater Supply
- h. Storm Damage Prevention
- i. Flood Control

2. This Commission hereby finds the project, as proposed, is: (check one of the following boxes)

Approved subject to:

- a. the following conditions which are necessary in accordance with the performance standards set forth in the wetlands regulations. This Commission orders that all work shall be performed in accordance with the Notice of Intent referenced above, the following General Conditions, and any other special conditions attached to this Order. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, these conditions shall control.



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B. Findings (cont.)

Denied because:

- b. the proposed work cannot be conditioned to meet the performance standards set forth in the wetland regulations. Therefore, work on this project may not go forward unless and until a new Notice of Intent is submitted which provides measures which are adequate to protect the interests of the Act, and a final Order of Conditions is issued. **A description of the performance standards which the proposed work cannot meet is attached to this Order.**
- c. the information submitted by the applicant is not sufficient to describe the site, the work, or the effect of the work on the interests identified in the Wetlands Protection Act. Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides sufficient information and includes measures which are adequate to protect the Act's interests, and a final Order of Conditions is issued. **A description of the specific information which is lacking and why it is necessary is attached to this Order as per 310 CMR 10.05(6)(c).**
- 3. Buffer Zone Impacts: Shortest distance between limit of project disturbance and the wetland resource area specified in 310 CMR 10.02(1)(a) 0
 a. linear feet

Inland Resource Area Impacts: Check all that apply below. (For Approvals Only)

Resource Area	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
4. <input checked="" type="checkbox"/> Bank	<u>68</u> a. linear feet	<u>68</u> b. linear feet	<u>14</u> c. linear feet	<u>14</u> d. linear feet
5. <input type="checkbox"/> Bordering Vegetated Wetland	<u> </u> a. square feet	<u> </u> b. square feet	<u> </u> c. square feet	<u> </u> d. square feet
6. <input checked="" type="checkbox"/> Land Under Waterbodies and Waterways	<u>43168</u> a. square feet <u> </u> e. c/y dredged	<u>431</u> b. square feet <u> </u> f. c/y dredged	<u>198</u> c. square feet	<u>198</u> d. square feet
7. <input checked="" type="checkbox"/> Bordering Land Subject to Flooding	<u>44</u> a. square feet	<u>44</u> b. square feet	<u>344</u> c. square feet	<u>344</u> d. square feet
Cubic Feet Flood Storage	<u>68132</u> e. cubic feet	<u>132</u> f. cubic feet	<u>1857</u> g. cubic feet	<u>1857</u> h. cubic feet
8. <input type="checkbox"/> Isolated Land Subject to Flooding	<u> </u> a. square feet	<u> </u> b. square feet	<u> </u> e. cubic feet	<u> </u> f. cubic feet
Cubic Feet Flood Storage	<u> </u> c. cubic feet	<u> </u> d. cubic feet	<u> </u> e. cubic feet	<u> </u> f. cubic feet
9. <input checked="" type="checkbox"/> Riverfront Area	<u>13158</u> a. total sq. feet	<u>13158</u> b. total sq. feet	<u> </u> c. square feet	<u> </u> d. square feet
Sq ft within 100 ft	<u>1333</u> c. square feet	<u>1333</u> d. square feet	<u>702</u> e. square feet	<u>702</u> f. square feet
Sq ft between 100-200 ft	<u> </u> g. square feet	<u> </u> h. square feet	<u> </u> i. square feet	<u> </u> j. square feet



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B. Findings (cont.)

Coastal Resource Area Impacts: Check all that apply below. (For Approvals Only)

	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
10. <input type="checkbox"/> Designated Port Areas	Indicate size under Land Under the Ocean, below			
11. <input type="checkbox"/> Land Under the Ocean	_____ a. square feet	_____ b. square feet		
	_____ c. c/y dredged	_____ d. c/y dredged		
12. <input type="checkbox"/> Barrier Beaches	Indicate size under Coastal Beaches and/or Coastal Dunes below			
13. <input type="checkbox"/> Coastal Beaches	_____ a. square feet	_____ b. square feet	_____ c. nourishment cu. yd	_____ d. nourishment cu. yd
14. <input type="checkbox"/> Coastal Dunes	_____ a. square feet	_____ b. square feet	_____ c. nourishment cu. yd	_____ d. nourishment cu. yd
15. <input type="checkbox"/> Coastal Banks	_____ a. linear feet	_____ b. linear feet		
16. <input type="checkbox"/> Rocky Intertidal Shores	_____ a. square feet	_____ b. square feet		
17. <input type="checkbox"/> Salt Marshes	_____ a. square feet	_____ b. square feet	_____ c. square feet	_____ d. square feet
18. <input type="checkbox"/> Land Under Salt Ponds	_____ a. square feet	_____ b. square feet		
	_____ c. c/y dredged	_____ d. c/y dredged		
19. <input type="checkbox"/> Land Containing Shellfish	_____ a. square feet	_____ b. square feet	_____ c. square feet	_____ d. square feet
20. <input type="checkbox"/> Fish Runs	Indicate size under Coastal Banks, Inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above			
	_____ a. c/y dredged	_____ b. c/y dredged		
21. <input type="checkbox"/> Land Subject to Coastal Storm Flowage	_____ a. square feet	_____ b. square feet		
22. <input type="checkbox"/> Riverfront Area	_____ a. total sq. feet	_____ b. total sq. feet		
Sq ft within 100 ft	_____ c. square feet	_____ d. square feet	_____ e. square feet	_____ f. square feet
Sq ft between 100-200 ft	_____ g. square feet	_____ h. square feet	_____ i. square feet	_____ j. square feet



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B. Findings (cont.)

- * #23. If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.5.c (BVW) or B.17.c (Salt Marsh) above, please enter the additional amount here.
23. vv Restoration/Enhancement *:
 0 _____ 0 _____
 a. square feet of BVW b. square feet of salt marsh
24. Stream Crossing(s):
 _____ 1 _____
 a. number of new stream crossings b. number of replacement stream crossings

C. General Conditions Under Massachusetts Wetlands Protection Act

The following conditions are only applicable to Approved projects.

1. Failure to comply with all conditions stated herein, and with all related statutes and other regulatory measures, shall be deemed cause to revoke or modify this Order.
2. The Order does not grant any property rights or any exclusive privileges; it does not authorize any injury to private property or invasion of private rights.
3. This Order does not relieve the permittee or any other person of the necessity of complying with all other applicable federal, state, or local statutes, ordinances, bylaws, or regulations.
4. The work authorized hereunder shall be completed within three years from the date of this Order unless either of the following apply:
 - a. The work is a maintenance dredging project as provided for in the Act; or
 - b. The time for completion has been extended to a specified date more than three years, but less than five years, from the date of issuance. If this Order is intended to be valid for more than three years, the extension date and the special circumstances warranting the extended time period are set forth as a special condition in this Order.
 - c. If the work is for a Test Project, this Order of Conditions shall be valid for no more than one year.
5. This Order may be extended by the issuing authority for one or more periods of up to three years each upon application to the issuing authority at least 30 days prior to the expiration date of the Order. An Order of Conditions for a Test Project may be extended for one additional year only upon written application by the applicant, subject to the provisions of 310 CMR 10.05(11)(f).
6. If this Order constitutes an Amended Order of Conditions, this Amended Order of Conditions does not extend the issuance date of the original Final Order of Conditions and the Order will expire on 6/7/2024 unless extended in writing by the Department.
7. Any fill used in connection with this project shall be clean fill. Any fill shall contain no trash, refuse, rubbish, or debris, including but not limited to lumber, bricks, plaster, wire, lath, paper, cardboard, pipe, tires, ashes, refrigerators, motor vehicles, or parts of any of the foregoing.



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C. General Conditions Under Massachusetts Wetlands Protection Act

8. This Order is not final until all administrative appeal periods from this Order have elapsed, or if such an appeal has been taken, until all proceedings before the Department have been completed.
9. No work shall be undertaken until the Order has become final and then has been recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land upon which the proposed work is to be done. In the case of the registered land, the Final Order shall also be noted on the Land Court Certificate of Title of the owner of the land upon which the proposed work is done. The recording information shall be submitted to the Conservation Commission on the form at the end of this Order, which form must be stamped by the Registry of Deeds, prior to the commencement of work.
10. A sign shall be displayed at the site not less than two square feet or more than three square feet in size bearing the words,

"Massachusetts Department of Environmental Protection" [or, "MassDEP"]
"File Number 051-1047 "
11. Where the Department of Environmental Protection is requested to issue a Superseding Order, the Conservation Commission shall be a party to all agency proceedings and hearings before MassDEP.
12. Upon completion of the work described herein, the applicant shall submit a Request for Certificate of Compliance (WPA Form 8A) to the Conservation Commission.
13. The work shall conform to the plans and special conditions referenced in this order.
14. Any change to the plans identified in Condition #13 above shall require the applicant to inquire of the Conservation Commission in writing whether the change is significant enough to require the filing of a new Notice of Intent.
15. The Agent or members of the Conservation Commission and the Department of Environmental Protection shall have the right to enter and inspect the area subject to this Order at reasonable hours to evaluate compliance with the conditions stated in this Order, and may require the submittal of any data deemed necessary by the Conservation Commission or Department for that evaluation.
16. This Order of Conditions shall apply to any successor in interest or successor in control of the property subject to this Order and to any contractor or other person performing work conditioned by this Order.



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City/Town

C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

17. Prior to the start of work, and if the project involves work adjacent to a Bordering Vegetated Wetland, the boundary of the wetland in the vicinity of the proposed work area shall be marked by wooden stakes or flagging. Once in place, the wetland boundary markers shall be maintained until a Certificate of Compliance has been issued by the Conservation Commission.
18. All sedimentation barriers shall be maintained in good repair until all disturbed areas have been fully stabilized with vegetation or other means. At no time shall sediments be deposited in a wetland or water body. During construction, the applicant or his/her designee shall inspect the erosion controls on a daily basis and shall remove accumulated sediments as needed. The applicant shall immediately control any erosion problems that occur at the site and shall also immediately notify the Conservation Commission, which reserves the right to require additional erosion and/or damage prevention controls it may deem necessary. Sedimentation barriers shall serve as the limit of work unless another limit of work line has been approved by this Order.
19. The work associated with this Order (the "Project")
 - (1) is subject to the Massachusetts Stormwater Standards
 - (2) is NOT subject to the Massachusetts Stormwater Standards

If the work is subject to the Stormwater Standards, then the project is subject to the following conditions:

- a) All work, including site preparation, land disturbance, construction and redevelopment, shall be implemented in accordance with the construction period pollution prevention and erosion and sedimentation control plan and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Construction General Permit as required by Stormwater Condition 8. Construction period erosion, sedimentation and pollution control measures and best management practices (BMPs) shall remain in place until the site is fully stabilized.
- b) No stormwater runoff may be discharged to the post-construction stormwater BMPs unless and until a Registered Professional Engineer provides a Certification that:
 - i.* all construction period BMPs have been removed or will be removed by a date certain specified in the Certification. For any construction period BMPs intended to be converted to post construction operation for stormwater attenuation, recharge, and/or treatment, the conversion is allowed by the MassDEP Stormwater Handbook BMP specifications and that the BMP has been properly cleaned or prepared for post construction operation, including removal of all construction period sediment trapped in inlet and outlet control structures;
 - ii.* as-built final construction BMP plans are included, signed and stamped by a Registered Professional Engineer, certifying the site is fully stabilized;
 - iii.* any illicit discharges to the stormwater management system have been removed, as per the requirements of Stormwater Standard 10;



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 5 – Order of Conditions
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
051-1047
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eDEP Transaction #
Newburyport
City/Town

C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

iv. all post-construction stormwater BMPs are installed in accordance with the plans (including all planting plans) approved by the issuing authority, and have been inspected to ensure that they are not damaged and that they are in proper working condition;

v. any vegetation associated with post-construction BMPs is suitably established to withstand erosion.

c) The landowner is responsible for BMP maintenance until the issuing authority is notified that another party has legally assumed responsibility for BMP maintenance. Prior to requesting a Certificate of Compliance, or Partial Certificate of Compliance, the responsible party (defined in General Condition 18(e)) shall execute and submit to the issuing authority an Operation and Maintenance Compliance Statement ("O&M Statement") for the Stormwater BMPs identifying the party responsible for implementing the stormwater BMP Operation and Maintenance Plan ("O&M Plan") and certifying the following:

i.) the O&M Plan is complete and will be implemented upon receipt of the Certificate of Compliance, and

ii.) the future responsible parties shall be notified in writing of their ongoing legal responsibility to operate and maintain the stormwater management BMPs and implement the Stormwater Pollution Prevention Plan.

d) Post-construction pollution prevention and source control shall be implemented in accordance with the long-term pollution prevention plan section of the approved Stormwater Report and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Multi-Sector General Permit.

e) Unless and until another party accepts responsibility, the landowner, or owner of any drainage easement, assumes responsibility for maintaining each BMP. To overcome this presumption, the landowner of the property must submit to the issuing authority a legally binding agreement of record, acceptable to the issuing authority, evidencing that another entity has accepted responsibility for maintaining the BMP, and that the proposed responsible party shall be treated as a permittee for purposes of implementing the requirements of Conditions 18(f) through 18(k) with respect to that BMP. Any failure of the proposed responsible party to implement the requirements of Conditions 18(f) through 18(k) with respect to that BMP shall be a violation of the Order of Conditions or Certificate of Compliance. In the case of stormwater BMPs that are serving more than one lot, the legally binding agreement shall also identify the lots that will be serviced by the stormwater BMPs. A plan and easement deed that grants the responsible party access to perform the required operation and maintenance must be submitted along with the legally binding agreement.

f) The responsible party shall operate and maintain all stormwater BMPs in accordance with the design plans, the O&M Plan, and the requirements of the Massachusetts Stormwater Handbook.



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Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

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C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

- g) The responsible party shall:
1. Maintain an operation and maintenance log for the last three (3) consecutive calendar years of inspections, repairs, maintenance and/or replacement of the stormwater management system or any part thereof, and disposal (for disposal the log shall indicate the type of material and the disposal location);
 2. Make the maintenance log available to MassDEP and the Conservation Commission ("Commission") upon request; and
 3. Allow members and agents of the MassDEP and the Commission to enter and inspect the site to evaluate and ensure that the responsible party is in compliance with the requirements for each BMP established in the O&M Plan approved by the issuing authority.
- h) All sediment or other contaminants removed from stormwater BMPs shall be disposed of in accordance with all applicable federal, state, and local laws and regulations.
- i) Illicit discharges to the stormwater management system as defined in 310 CMR 10.04 are prohibited.
- j) The stormwater management system approved in the Order of Conditions shall not be changed without the prior written approval of the issuing authority.
- k) Areas designated as qualifying pervious areas for the purpose of the Low Impact Site Design Credit (as defined in the MassDEP Stormwater Handbook, Volume 3, Chapter 1, Low Impact Development Site Design Credits) shall not be altered without the prior written approval of the issuing authority.
- l) Access for maintenance, repair, and/or replacement of BMPs shall not be withheld. Any fencing constructed around stormwater BMPs shall include access gates and shall be at least six inches above grade to allow for wildlife passage.

Special Conditions (if you need more space for additional conditions, please attach a text document):

See Attached

20. For Test Projects subject to 310 CMR 10.05(11), the applicant shall also implement the monitoring plan and the restoration plan submitted with the Notice of Intent. If the conservation commission or Department determines that the Test Project threatens the public health, safety or the environment, the applicant shall implement the removal plan submitted with the Notice of Intent or modify the project as directed by the conservation commission or the Department.



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Newburyport
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D. Findings Under Municipal Wetlands Bylaw or Ordinance

1. Is a municipal wetlands bylaw or ordinance applicable? Yes No
2. The Newburyport Conservation Commission hereby finds (check one that applies):
Conservation Commission
 - a. that the proposed work cannot be conditioned to meet the standards set forth in a municipal ordinance or bylaw, specifically:

1. Municipal Ordinance or Bylaw	2. Citation
---------------------------------	-------------

Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides measures which are adequate to meet these standards, and a final Order of Conditions is issued.

- b. that the following additional conditions are necessary to comply with a municipal ordinance or bylaw:

1. Municipal Ordinance or Bylaw	2. Citation
---------------------------------	-------------
3. The Commission orders that all work shall be performed in accordance with the following conditions and with the Notice of Intent referenced above. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, the conditions shall control.
The special conditions relating to municipal ordinance or bylaw are as follows (if you need more space for additional conditions, attach a text document):



CITY OF NEWBURYPORT
CONSERVATION COMMISSION
60 PLEASANT STREET
NEWBURYPORT, MA 01950
978-465-4400

Order of Conditions for Plummer Spring Road Bridge

Electronic Signature Page

DEP File Number: 051-1047

Public Hearing Date: May 18, 2021

Applicant: City of Newburyport, DPS

Property Owner: Same

Project Location: Plummer Spring Road

Map: n/a

Lot: n/a

Project Description: Reconstruction and widening of the bridge crossing the Upper Artichoke Reservoir.

E-Signatures:

The name(s) typed below represent the intent to sign the foregoing document:

Joe Teixeira, Chair

Stephen Moore, Vice Chair

Paul Healy, Member

David Vine, Member

Dan Warchol, Member

Ronald DiCola, Member

Carole Wagan, Member

Date Signed: May 18, 2021



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

051-1047

MassDEP File #

eDEP Transaction #

Newburyport

City/Town

E. Signatures

This Order is valid for three years, unless otherwise specified as a special condition pursuant to General Conditions #4, from the date of issuance.

6/7/2021

1. Date of Issuance

Please indicate the number of members who will sign this form.

7

This Order must be signed by a majority of the Conservation Commission.

2. Number of Signers

The Order must be mailed by certified mail (return receipt requested) or hand delivered to the applicant. A copy also must be mailed or hand delivered at the same time to the appropriate Department of Environmental Protection Regional Office, if not filing electronically, and the property owner, if different from applicant.

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

by hand delivery on

by certified mail, return receipt requested, on

6/7/2021

Date

Date



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

051-1047

MassDEP File #

eDEP Transaction #

Newburyport

City/Town

F. Appeals

The applicant, the owner, any person aggrieved by this Order, any owner of land abutting the land subject to this Order, or any ten residents of the city or town in which such land is located, are hereby notified of their right to request the appropriate MassDEP Regional Office to issue a Superseding Order of Conditions. The request must be made by certified mail or hand delivery to the Department, with the appropriate filing fee and a completed Request for Departmental Action Fee Transmittal Form, as provided in 310 CMR 10.03(7) within ten business days from the date of issuance of this Order. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

Any appellants seeking to appeal the Department's Superseding Order associated with this appeal will be required to demonstrate prior participation in the review of this project. Previous participation in the permit proceeding means the submission of written information to the Conservation Commission prior to the close of the public hearing, requesting a Superseding Order, or providing written information to the Department prior to issuance of a Superseding Order.

The request shall state clearly and concisely the objections to the Order which is being appealed and how the Order does not contribute to the protection of the interests identified in the Massachusetts Wetlands Protection Act (M.G.L. c. 131, § 40), and is inconsistent with the wetlands regulations (310 CMR 10.00). To the extent that the Order is based on a municipal ordinance or bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 5 – Order of Conditions
 Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
 051-1047
 MassDEP File #
 eDEP Transaction #
 Newburyport
 City/Town

G. Recording Information

Prior to commencement of work, this Order of Conditions must be recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land subject to the Order. In the case of registered land, this Order shall also be noted on the Land Court Certificate of Title of the owner of the land subject to the Order of Conditions. The recording information on this page shall be submitted to the Conservation Commission listed below.

Newburyport

Conservation Commission

Detach on dotted line, have stamped by the Registry of Deeds and submit to the Conservation Commission.

To:

Conservation Commission

Please be advised that the Order of Conditions for the Project at:

Project Location

MassDEP File Number

Has been recorded at the Registry of Deeds of:

County

Book

Page

for:

Property Owner

and has been noted in the chain of title of the affected property in:

Book

Page

In accordance with the Order of Conditions issued on:

Date

If recorded land, the instrument number identifying this transaction is:

Instrument Number

If registered land, the document number identifying this transaction is:

Document Number

Signature of Applicant



CITY OF NEWBURYPORT
CONSERVATION COMMISSION
60 PLEASANT STREET • P.O. BOX 550
NEWBURYPORT, MA 01950
(978) 465-4400
WWW.CITYOFNEWBURYPORT.COM

Standard and Special Conditions for Plummer Spring Road Bridge

DEP File Number: 051-1047

Date: June 7, 2021

Applicant: City of Newburyport, DPS

Property Owner: Same

Project Location: Plummer Spring Road **Map:** n/a **Lot:** n/a

Project Description: Reconstruction and widening of the bridge crossing the Upper Artichoke Reservoir.

These conditions are in addition to and part of the Order of Conditions (WPA Form 5) for the property located at **Plummer Spring Road Bridge**, Newburyport, MA 01950.

This project shall conform to the following documents and plans unless otherwise specified:

1. WPA Form 3 Notice of Intent, project narrative, and supporting documentation, prepared by BSC Group, dated January 2021.
2. Project Site Plans, Bridge Replacement Project, Middle Street/Plummer Spring Road, prepared by BSC Group, dated 12/21/2020. Revised by Addendum dated 05/07/2021.

A. General Conditions

19. The Conservation Commission shall be informed of all changes that may be made to the Plan(s) of Record by any other Board, Commission or Authority or as a result of changes by the Applicant. All changes shall require additional approvals from the Conservation Commission.
20. A member of the Newburyport Conservation Commission (the Commission) or its administrator may enter and inspect the property and the activity that are the subjects of this Order at all reasonable times, with or without probable cause or prior notice, and until a Certificate of Compliance is issued, for the limited purpose of evaluating compliance with this Order.
21. With respect to all conditions the Conservation Commission designates the Conservation Administrator as its agent with full powers to act on its behalf in administering and enforcing this Order.
22. The term "Applicant" as used in this Order of Conditions shall refer to the owner, any successor in interest or successor in control of the property referenced in the Notice of Intent, supporting documents and this Order of Conditions. The Commission shall be

notified in writing within 30 days of all transfers of title of any portion of property that take place prior to the issuance of the Certificate of Compliance.

23. This document shall be included by reference in all contracts, plans and specifications dealing with the activity that is the subject of this Order, and that are created or modified after the issuance date of this Order, along with a statement that this Order shall supersede any conflicting contractual arrangements, plans or specifications.
24. The applicant shall provide a copy of this Order to the person or persons supervising the activity that is the subject of this Order, and shall be responsible for ensuring that all persons performing the permitted activity are fully aware of the terms and conditions of this Order.
25. Any person performing work on the activity that is the subject of this Order is individually responsible for understanding and complying with the requirements of this Order, the Act, 310 CMR 10.00.
26. The Commission reserves the right to impose additional conditions on this project, including but not limited to, additional or modified erosion/siltation controls during construction, if it deems that site conditions warrant such measures to mitigate potential impacts.
27. If any changes are made in the above-described plan(s) which, in the Commission's opinion, may alter an area subject to protection under the Wetlands Protection Act, 310 CMR 10.00 or the Newburyport Wetlands Ordinance, the applicant shall inquire from this Commission or its agent, prior to implementing the change in the field, whether the change is significant enough to require the filing of a new Notice of Intent. Any errors in the plans or information submitted by the applicant shall be considered changes and the above procedures shall be followed. Approval of changes must be granted by the Conservation Commission before such work may continue.
28. This Order authorizes only the activity described on the approved plan(s) and approved documents referenced in this Order. Any other or additional activity in areas within the jurisdiction of the Commission shall require separate review and approval by the Commission or its agent.
29. The limits of work in the field shall be clearly marked and all workers shall be instructed not to work beyond the specified limits. Resource area flags shall be maintained and replaced as necessary until a final Certificate of Compliance is issued for the project.

B. Pre-Construction

30. Prior to the commencement of any activity on this site, the applicant or owner shall complete and submit the attached "Permit Compliance Contact Form," providing the name(s), address(es), phone number(s) and email address(es) of a contact person or persons responsible for compliance with this Order. Should the responsible parties change during the course of the project, the Commission shall be notified as soon as practical of such change.
31. The applicant shall display the Department of Environmental Protection (DEP) file number for this Order on a sign within the minimum dimensions of two feet by two feet at a location clearly visible from the street. This sign shall remain in place and visible until a Certificate of Compliance is issued for the activity.
32. The applicant shall arrange for a pre-construction meeting with the Conservation Commission or its designated representative(s) no less than 72 hours prior to the

commencement of construction. Commencement of construction includes any site clearing or grading. The purpose of this meeting is to inspect the erosion controls and to review all conditions of this Order of Conditions with the applicant, contractor and sub-contractors as appropriate to ensure they are understood.

33. The Commission shall be notified at least 48 hours in advance of the commencement of work at the site.

C. During Construction

34. A copy of this Order of Conditions and approved Plan(s) of Record shall be on the site upon commencement and during any site work for contractors to view and adhere to.
35. Any material placed in wetland resource areas or outside the Limit of Work by the applicant without express authorization under this Order shall be removed as soon as possible by the applicant upon the request of the Conservation Commission or its administrator.
36. All construction materials, earth stockpiles, landscaping materials, slurry pits, waste products, refuse, debris, stumps, slash, or excavate may only be stockpiled or collected in areas as shown and labeled on the approved plan(s) or in a stockpile location to be submitted on a plan and approved by the Conservation Administrator prior to the start of construction. All such materials must be covered and surrounded by a double-staked row of hay bales or other approved erosion control device to prevent contact with rain water.
37. As soon as possible, all disturbed areas shall be brought to final grade and shall be permanently stabilized within 30 days of that time by measures acceptable to the Commission.
38. The project manager shall be responsible for regular inspections of the erosion controls on at least a weekly basis and after each rain storm. Necessary repairs and maintenance of the erosion control devices shall be made expeditiously.
39. Any and all demo/construction debris resulting from the approved construction shall be placed in an enclosed covered container or removed from the site daily.
40. Trash dumpsters shall be located as far away from the resource areas as possible and shall be emptied at least once a week during construction.
41. No material of any kind may be buried, placed or dispersed in areas within the jurisdiction of the Commission by activities that are the subject of this Order.
42. No fuel, oil, urethanes, or other pollutants shall be stored in any resource area or the buffer zone.

D. Special Conditions

43. Prior to the start of construction, the applicant shall provide to the Commission for review and approval, an inventory, including caliper size, species and photographs, of all trees expected to be removed or damaged as part of the project and a plan to replace them within the project area with similar native species
44. Prior to the start of construction, the project contractor shall submit to the Commission for review and approval a dewatering and stabilization plan, showing the details,

dimensions and location of the dewatering area and shall locate this dewatering area within the already paved roadway to the greatest extent practicable.

45. A qualified wetland scientist shall join the selected contractor on-site during special activities such as a pre-construction kickoff meeting to go-over permits and emergency sheets in case of a release, and to identify locations of Erosion and Sedimentation (E&S) Controls as identified on the approved plans. The Qualified Scientist would then review the installed E&S Controls, ensure wetland resource area flags are in-place and send a report on such by email to the Commission at jgodtfredsen@cityofnewburyport.com.
46. The project's Resident Engineer shall be in-charge of day-to-day oversight during construction and for major storm rainfall events of > 0.5-inch. Reports by the Resident Engineer may then be reviewed by a Qualified Scientist, and the Engineer shall make them available to the Commission upon request.

E. Post Construction

47. Within 90 days after the completion of construction and prior to the expiration date of this Order of Conditions, the applicant shall submit the following to the Conservation Commission:
 - a. A completed Request for a Certificate of Compliance – WPA form 8A.
 - b. A letter from a registered professional engineer certifying compliance of the property with this Order of Conditions and detailing any deviations that exist and their potential effect on the project. A statement that the work is in "substantial compliance" with no detailing of the deviations shall not be accepted.
 - c. Photos of the completed project and an "As-Built" plan showing post-construction conditions, stamped and signed by a professional engineer or land surveyor. This plan shall note any deviations from the original plans/profiles and shall include final lot elevations when grades have been changed.

INDEX	
SHEET NO.	DESCRIPTION
1	INDEX
2	LOCUS MAP
3	EXISTING CONDITIONS
4	PROPOSED CONDITIONS
5-6	PROPOSED WALL ELEVATION
7	EXISTING SOUTH ELEVATION
8	PROPOSED SOUTH ELEVATION
9	IMPACTS
10-15	CONTROL OF WATER

IMPACTS TO WETLAND AND WATERBODY RESOURCES AND WATERS OF THE UNITED STATES					
		WEST NEWBURY	NEWBURYPORT	TOTAL	
LAND UNDER WATERS OF THE US (LUW) / WATERBODY	PERMANENT IMPACT	553	431	984	SF
	TEMPORARY IMPACT	443	198	641	SF
	PERMANENT IMPACT - DREDGE / FILL	39 / 17	9 / 2	48 / 19	CY
	TEMPORARY IMPACT - DREDGE / FILL	28 / 0	22 / 0	50 / 0	CY
INLAND BANK / ORDINARY HIGH WATER (OHW)	PERMANENT IMPACT	128	54	182	LF
	TEMPORARY IMPACT	47	14	61	LF
200-FOOT RIVERFRONT AREA (RFA)	REDEVELOPMENT	3,203	2,669	5,872	SF
	PERMANENT IMPACT	1,986	1,217	3,203	SF
	TEMPORARY IMPACT	570	548	1,118	SF
BORDERING LAND SUBJECT TO FLOODING (BLSF)	PROPOSED ALTERATION	167	44	211	SF
	PROPOSED REPLACEMENT	311	344	655	SF
	FLOOD STORAGE LOST	393	132	525	CF
	FLOOD STORAGE REPLACED	1,438	1,857	3,295	CF

NOTES:

- HORIZONTAL DATUM IS BASED OFF OF THE NORTH AMERICAN DATUM (NAD) 1983
- ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)

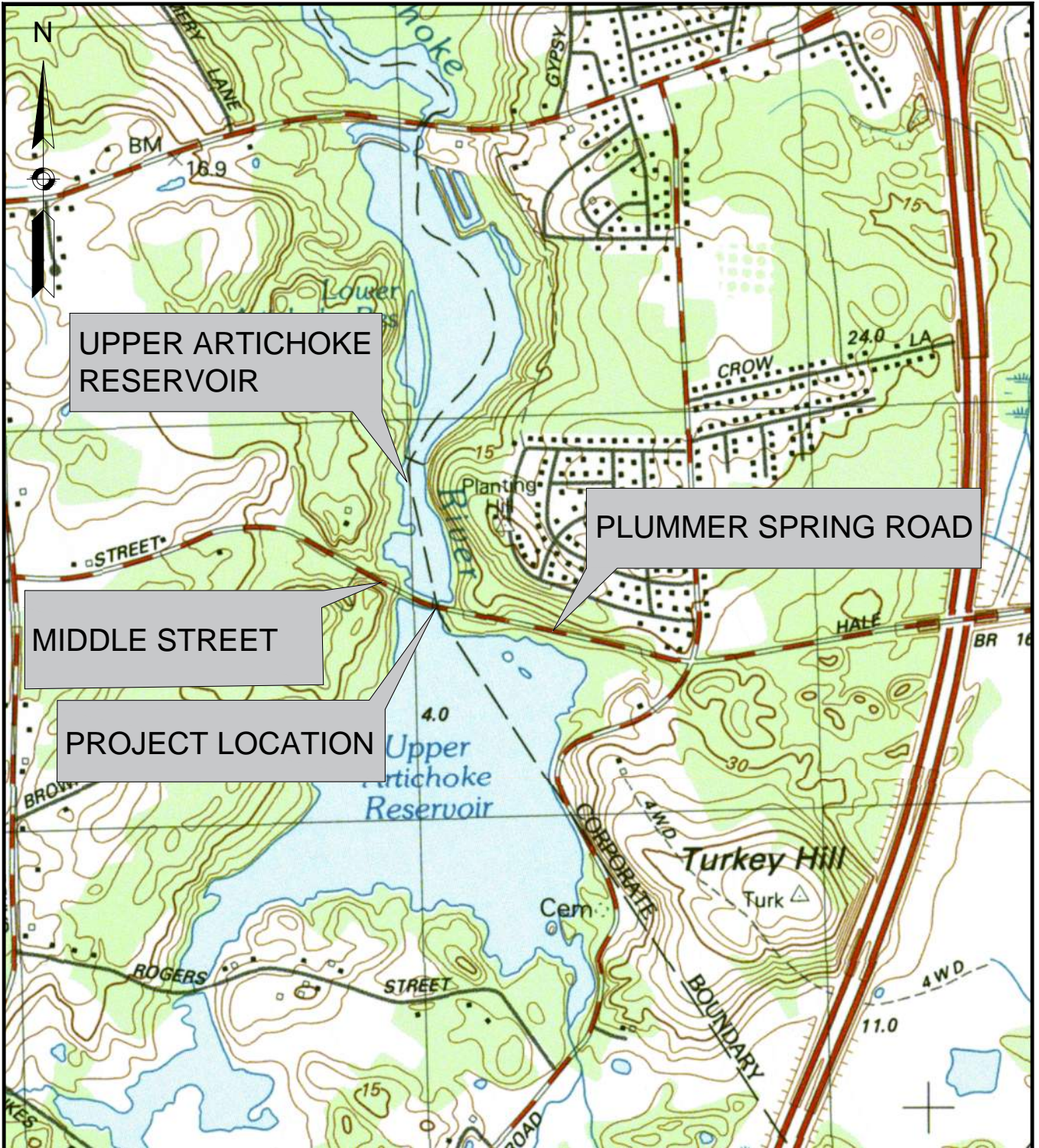
PREPARED FOR:
CITY OF NEWBURYPORT
 60 PLEASANT ST NEWBURYPORT,
 MA 01950
TOWN OF WEST NEWBURY
 381 MAIN ST, WEST NEWBURY,
 MA 01985

INDEX

Source:
 BRIDGE REPLACEMENT PROJECT
 MIDDLE STREET/PLUMMER SPRING ROAD OVER
 UPPER ARTICHOKE RESERVOIR, WEST NEWBURY/NEWBURYPORT, MA
 ESSEX COUNTY

Job No.: 28395.00 Date: 12/21/2020
 Scale: N/A Revised: _____
 Description: INDEX Figure: 1 OF 15

 **BSC GROUP**
 803 Summer Street
 Boston, Massachusetts
 02127
 617 896 4300



UPPER ARTICHOKE RESERVOIR

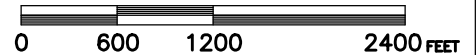
PLUMMER SPRING ROAD

MIDDLE STREET

PROJECT LOCATION

LATITUDE: 42°48'10.7"N
 LONGITUDE: -70°55'51.5"W

SCALE: 1" = 1200'



PREPARED FOR:
 CITY OF
 NEWBURYPORT
 60 PLEASANT ST
 NEWBURYPORT, MA 01950
 TOWN OF
 WEST NEWBURY
 381 MAIN ST, WEST
 NEWBURY, MA 01985

LOCUS MAP

Source:

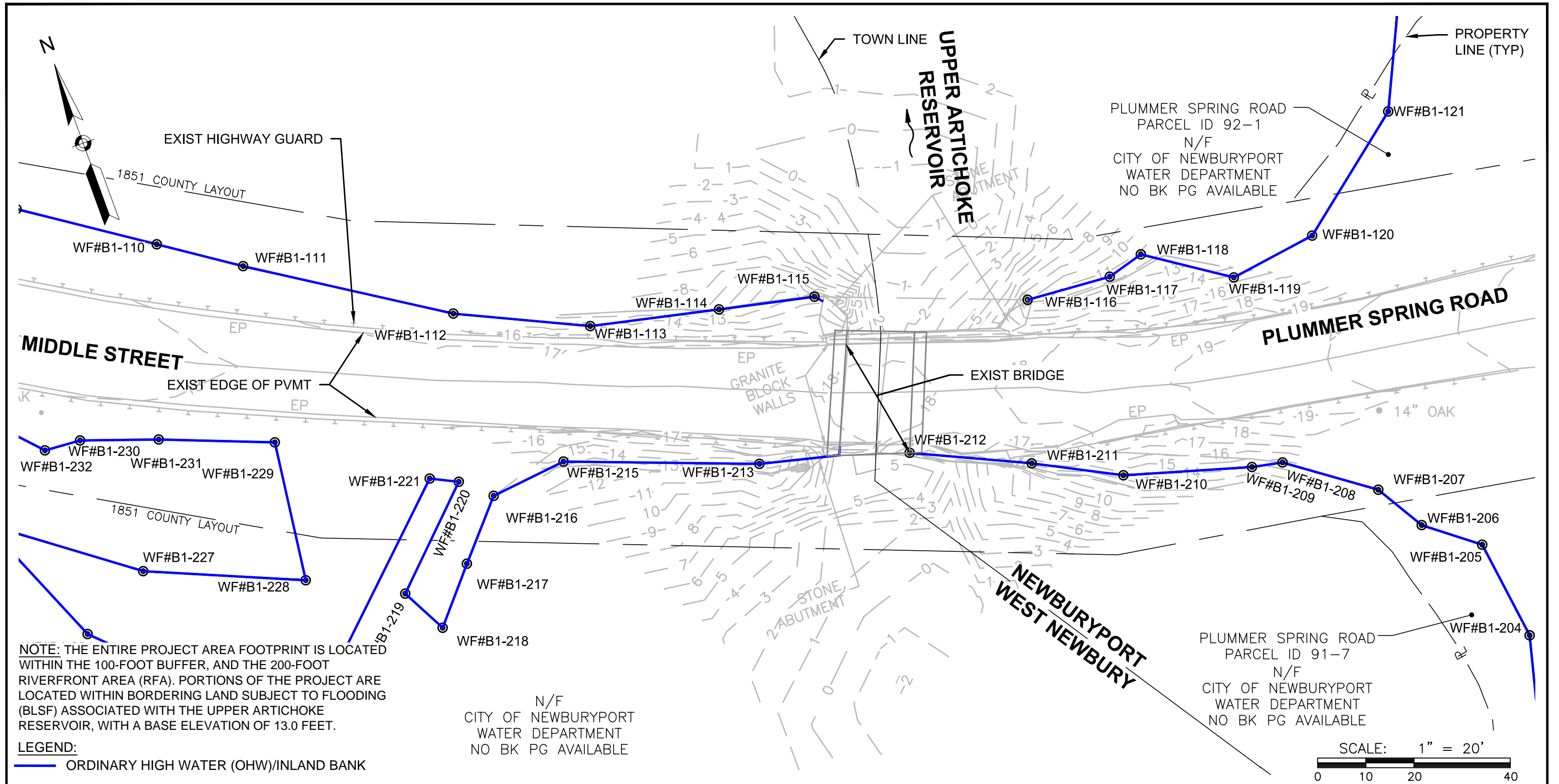
BRIDGE REPLACEMENT PROJECT
 MIDDLE STREET/PLUMMER SPRING
 ROAD OVER UPPER ARTICHOKE
 RESERVOIR, WEST NEWBURY/
 NEWBURYPORT, MA, ESSEX COUNTY



803 Summer Street
 Boston, Massachusetts
 02127

617 896 4300

Job No.:	28395.00	Date:	12/21/2020
Scale:	1"=1200'	Revised:	
Dwg. No.:	Locus	Figure:	2 OF 15



NOTE: THE ENTIRE PROJECT AREA FOOTPRINT IS LOCATED WITHIN THE 100-FOOT BUFFER, AND THE 200-FOOT RIVERFRONT AREA (RFA). PORTIONS OF THE PROJECT ARE LOCATED WITHIN BORDERING LAND SUBJECT TO FLOODING (BLSF) ASSOCIATED WITH THE UPPER ARTICHOKE RESERVOIR, WITH A BASE ELEVATION OF 13.0 FEET.

LEGEND:
 — ORDINARY HIGH WATER (OHW)/INLAND BANK

N/F
 CITY OF NEWBURYPORT
 WATER DEPARTMENT
 NO BK PG AVAILABLE

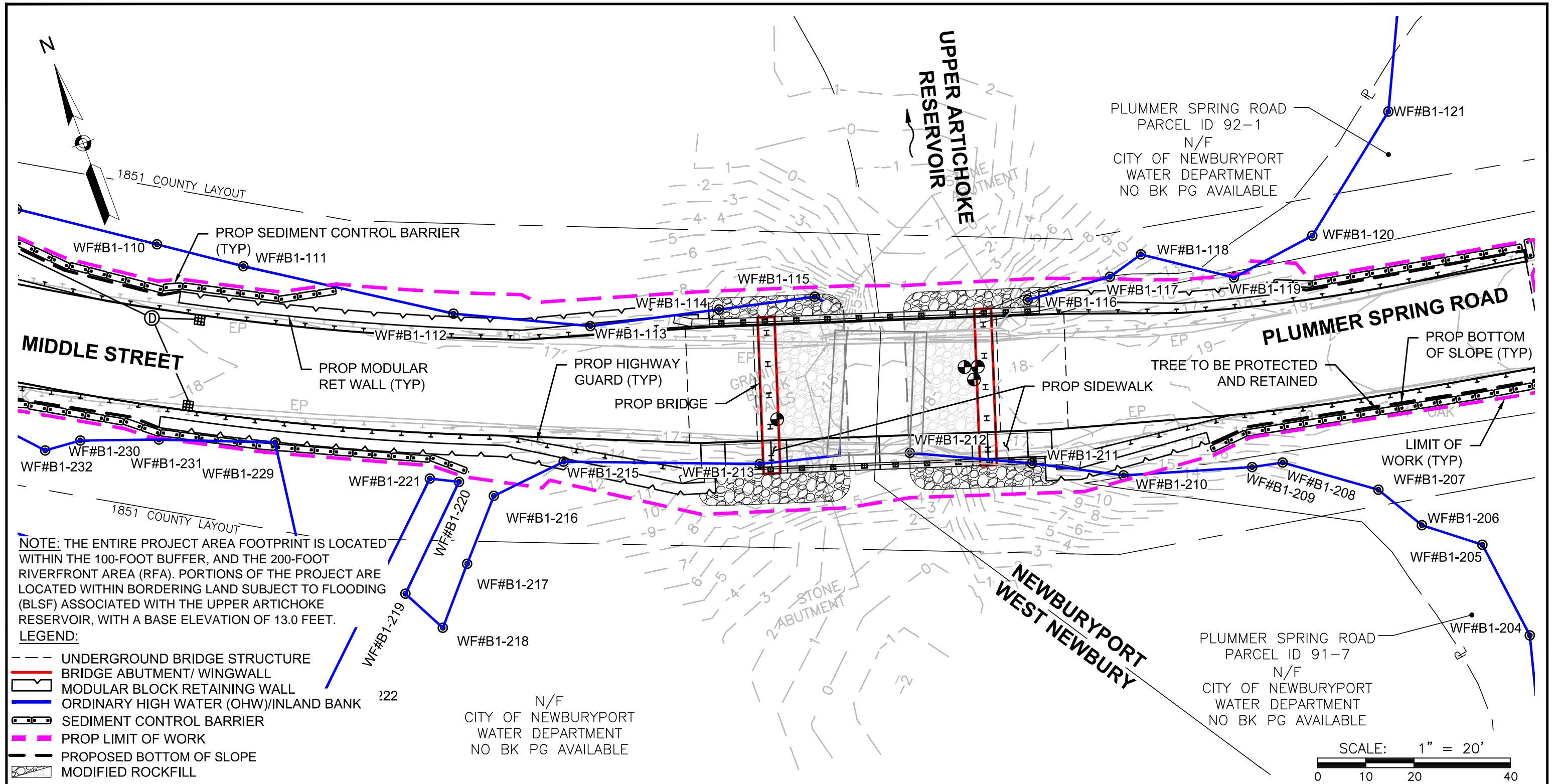
PLUMMER SPRING ROAD
 PARCEL ID 91-7
 N/F
 CITY OF NEWBURYPORT
 WATER DEPARTMENT
 NO BK PG AVAILABLE

PREPARED FOR:
 CITY OF NEWBURYPORT
 60 PLEASANT ST NEWBURYPORT,
 MA 01950
 TOWN OF WEST NEWBURY
 381 MAIN ST, WEST NEWBURY,
 MA 01985

Source:
EXISTING CONDITIONS
 BRIDGE REPLACEMENT PROJECT
 MIDDLE STREET/PLUMMER SPRING ROAD OVER
 UPPER ARTICHOKE RESERVOIR, WEST NEWBURY/NEWBURYPORT, MA
 ESSEX COUNTY

Job No.: 28395.00 Date: 12/21/2020
 Scale: 1" = 20' Revised: _____
 Description: EX COND Figure: 3 OF 15

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 02127
 617 896 4300



PREPARED FOR:
CITY OF NEWBURYPORT
 60 PLEASANT ST NEWBURYPORT,
 MA 01950
 TOWN OF WEST NEWBURY
 381 MAIN ST, WEST NEWBURY,
 MA 01985

PROPOSED CONDITIONS

Source:

BRIDGE REPLACEMENT PROJECT
 MIDDLE STREET/PLUMMER SPRING ROAD OVER
 UPPER ARTICHOKE RESERVOIR, WEST NEWBURY/NEWBURYPORT, MA
 ESSEX COUNTY

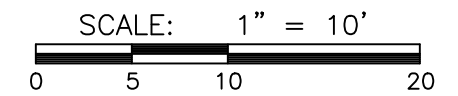
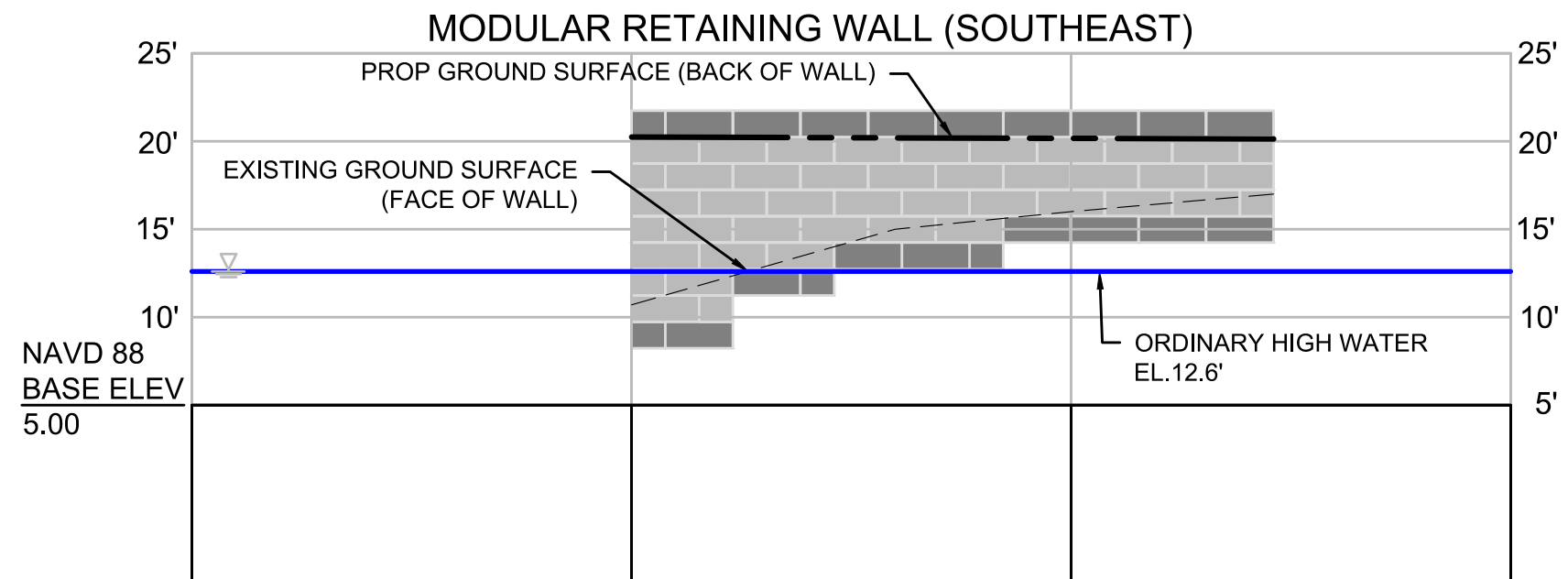
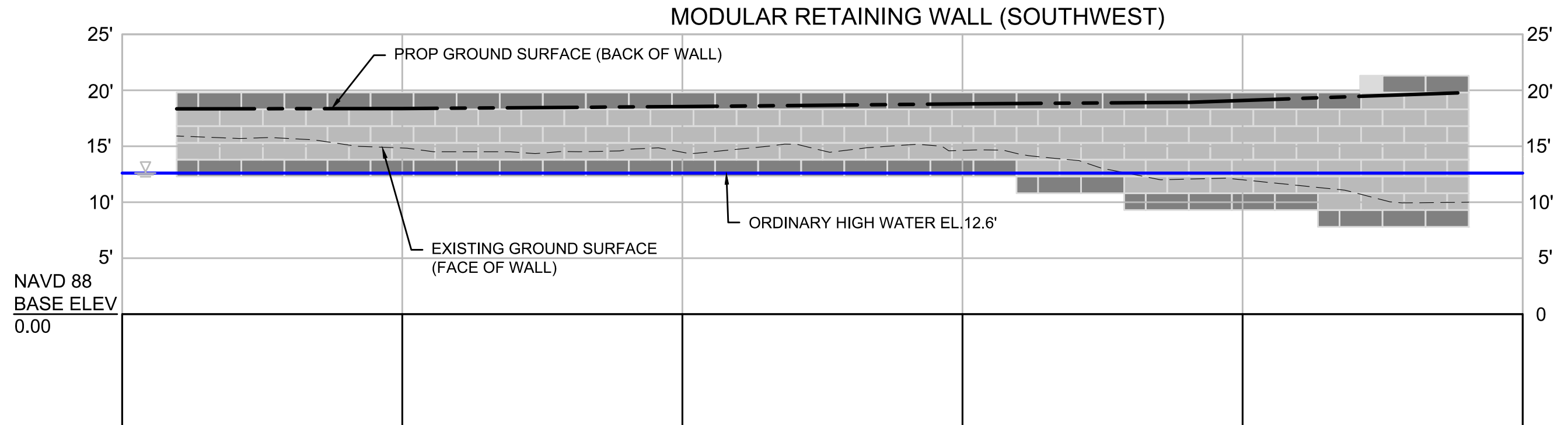
Job No.: 28395.00 Date: 12/21/2020

Scale: 1" = 20' Revised: _____

Description: PROP COND Figure: 4 OF 15

BSC GROUP

803 Summer Street
 Boston, Massachusetts
 02127
 617 896 4300



PREPARED FOR:
CITY OF NEWBURYPORT
 60 PLEASANT ST NEWBURYPORT,
 MA 01950
 TOWN OF WEST NEWBURY
 381 MAIN ST, WEST NEWBURY,
 MA 01985

PROPOSED WALL PROFILE

Source:

BRIDGE REPLACEMENT PROJECT
 MIDDLE STREET/PLUMMER SPRING ROAD OVER
 UPPER ARTICHOKE RESERVOIR, WEST NEWBURY/NEWBURYPORT, MA
 ESSEX COUNTY

Job No.: 28395.00 Date: 12/21/2020

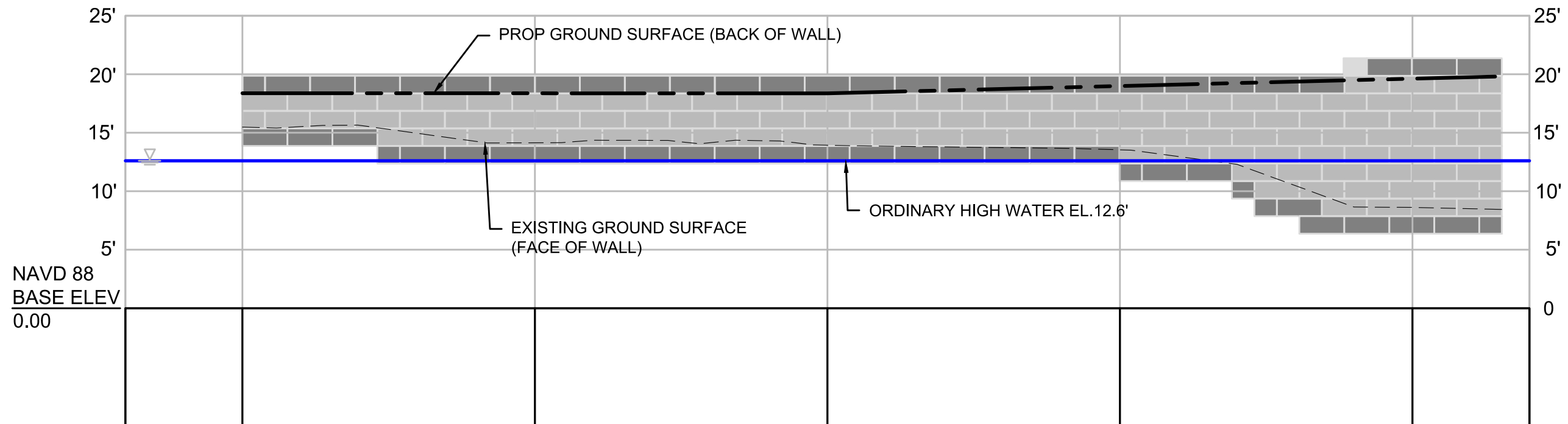
Scale: 1" = 10' Revised: _____

Description: PR WALL Figure: 5 OF 15

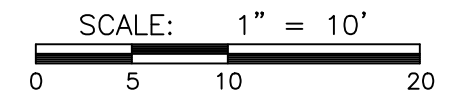
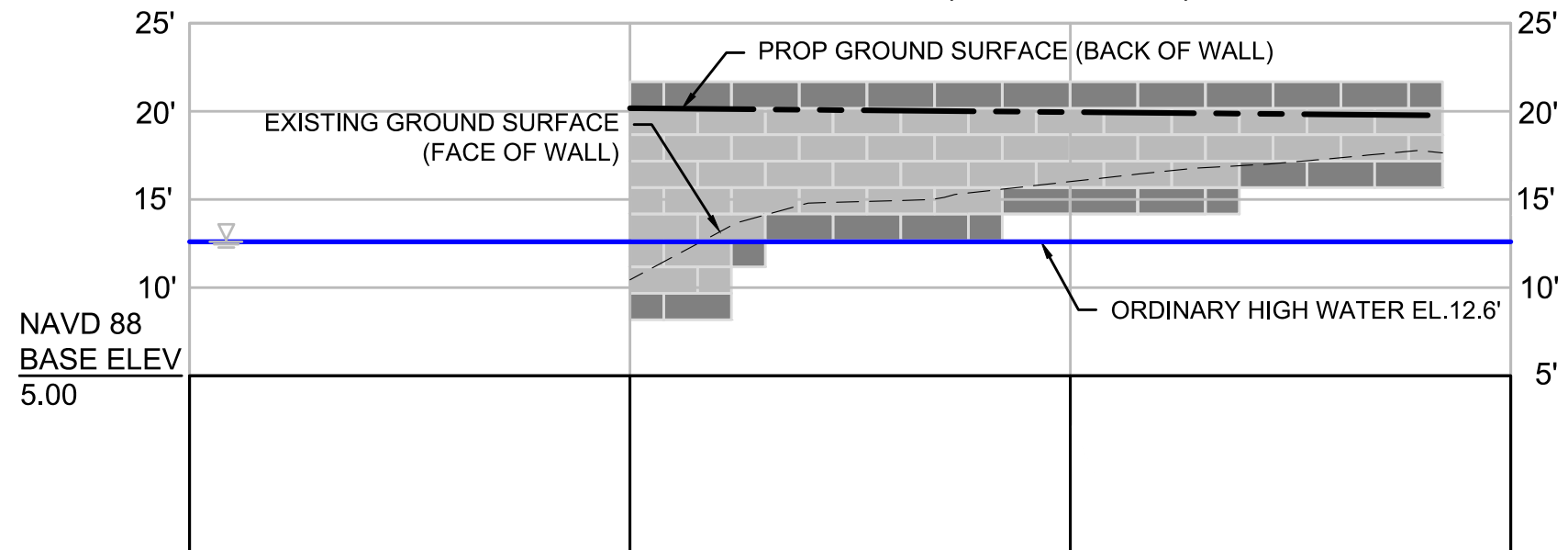
BSC GROUP

803 Summer Street
 Boston, Massachusetts
 02127
 617 896 4300

MODULAR RETAINING WALL (NORTHWEST)



MODULAR RETAINING WALL (NORTHEAST)

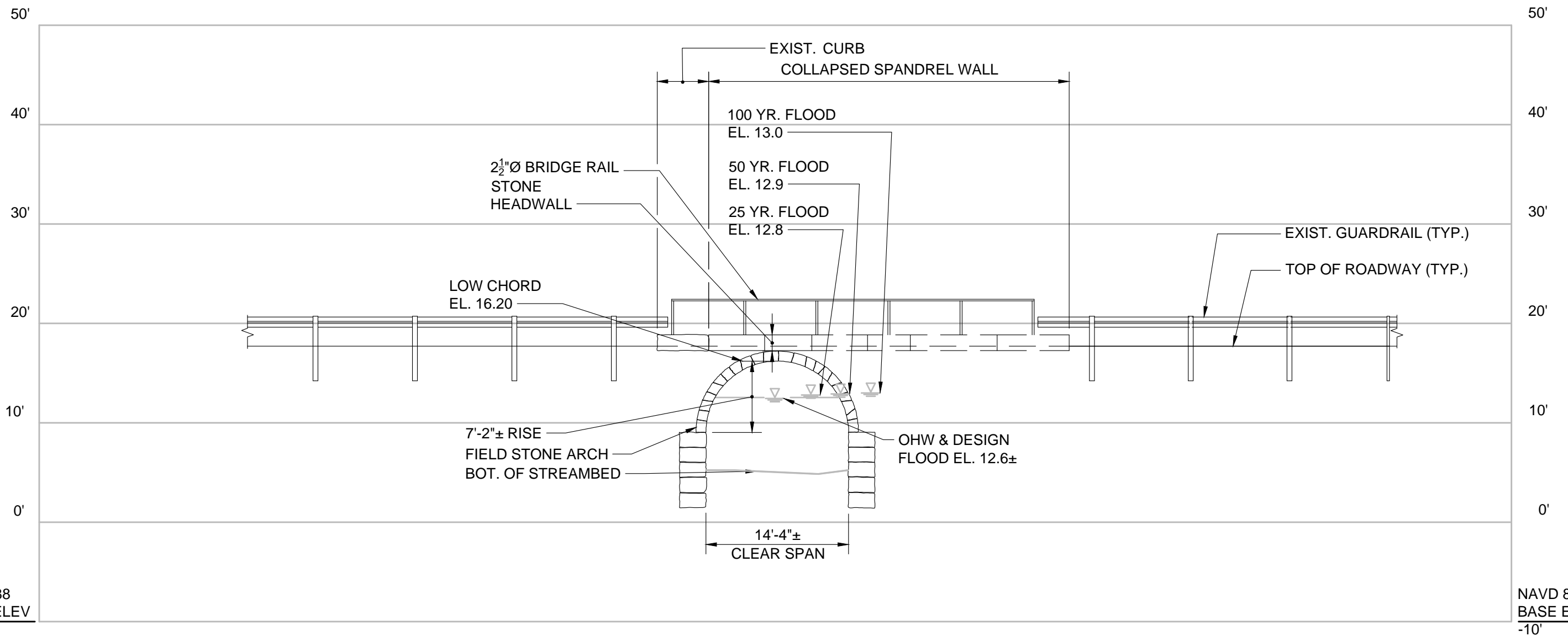


PREPARED FOR:
CITY OF NEWBURYPORT
60 PLEASANT ST NEWBURYPORT,
MA 01950
TOWN OF WEST NEWBURY
381 MAIN ST, WEST NEWBURY,
MA 01985

PROPOSED WALL PROFILE
Source:
BRIDGE REPLACEMENT PROJECT
MIDDLE STREET/PLUMMER SPRING ROAD OVER
UPPER ARTICHOKE RESERVOIR, WEST NEWBURY/NEWBURYPORT, MA
ESSEX COUNTY

Job No.: 28395.00 Date: 12/21/2020
Scale: 1" = 10' Revised: _____
Description: PR WALL Figure: 6 OF 15
PROF

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Boston, Massachusetts
02127
617 896 4300



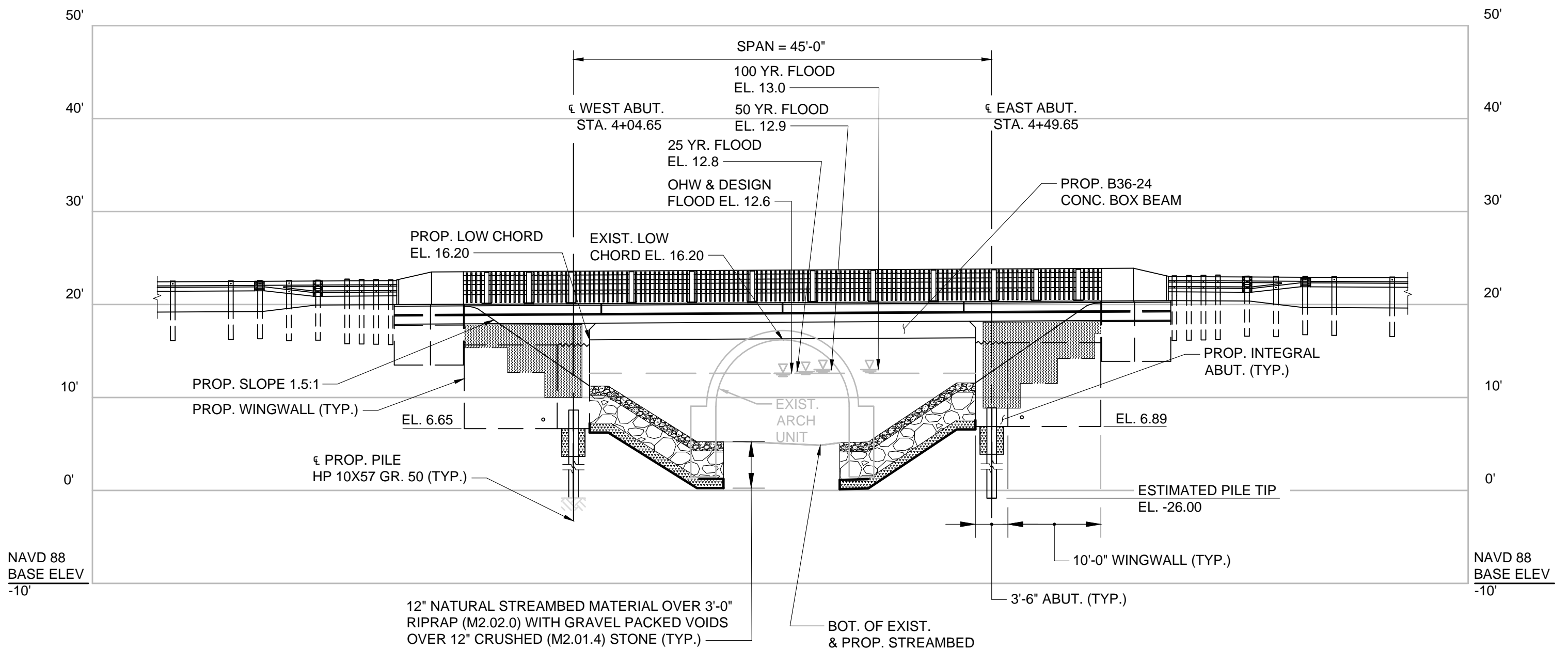
EXISTING ELEVATION
SCALE: 3/32" = 1'-0"

PREPARED FOR:
CITY OF NEWBURYPORT
60 PLEASANT ST NEWBURYPORT,
MA 01950
TOWN OF WEST NEWBURY
381 MAIN ST, WEST NEWBURY,
MA 01985

Source: **EXISTING - SOUTH ELEVATION**
BRIDGE REPLACEMENT PROJECT
MIDDLE STREET/PLUMMER SPRING ROAD OVER
UPPER ARTICHOKE RESERVOIR, WEST NEWBURY/NEWBURYPORT, MA
ESSEX COUNTY

Job No.: 28395.00 Date: 12/21/2020
Scale: 3/32" = 1'-0" Revised: _____
Description: EXIST. EL. Figure: 7 OF 15

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02127
617 896 4300



NAVD 88 BASE ELEV -10'

NOTE: EXISTING STRUCTURE TO BE REMOVED IN ITS ENTIRETY

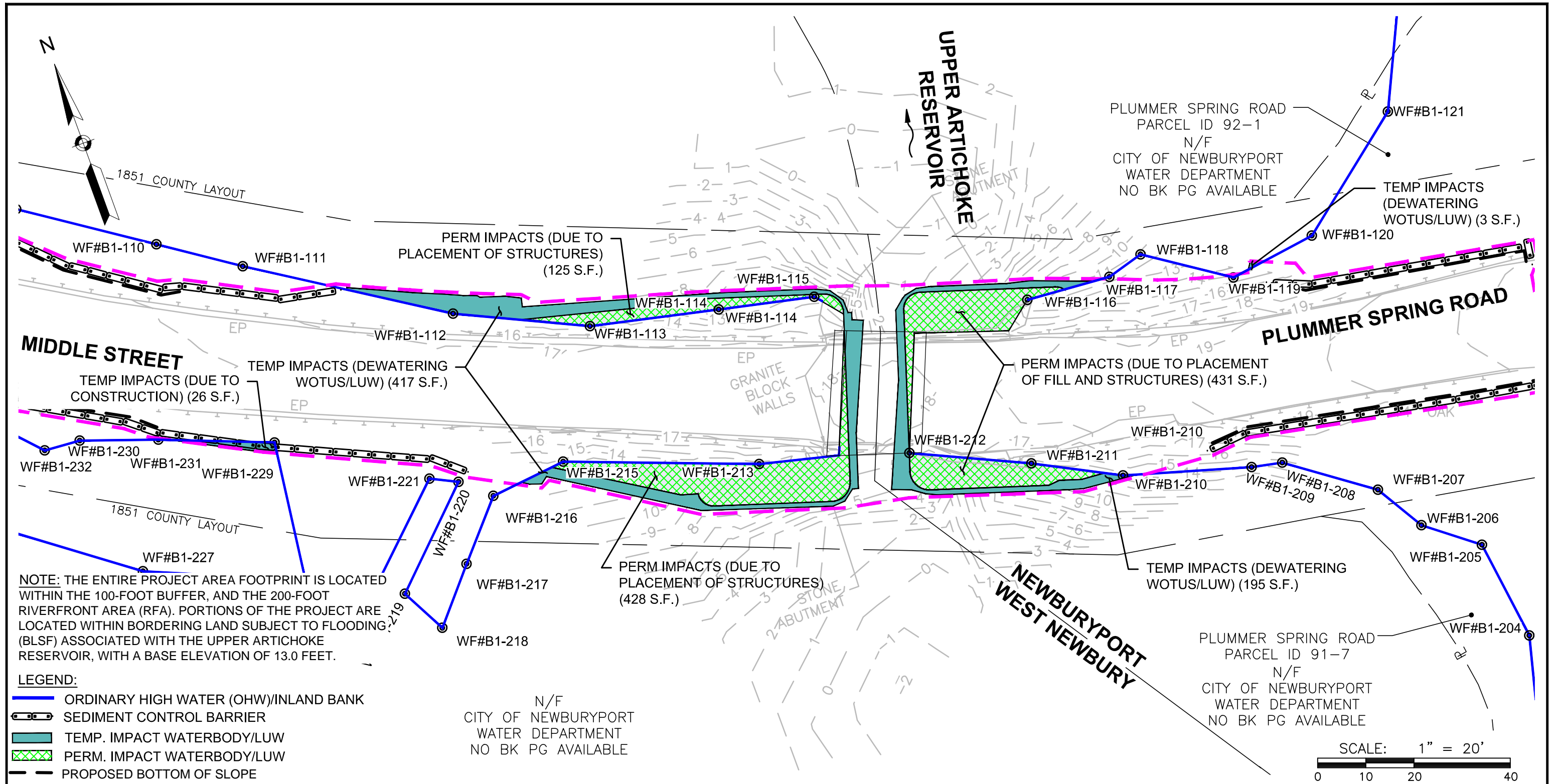
PROPOSED SOUTH ELEVATION
SCALE: 3/32" = 1'-0"

PREPARED FOR:
CITY OF NEWBURYPORT
60 PLEASANT ST NEWBURYPORT,
MA 01950
TOWN OF WEST NEWBURY
381 MAIN ST, WEST NEWBURY,
MA 01985

Source: **PROPOSED - SOUTH ELEVATION**
BRIDGE REPLACEMENT PROJECT
MIDDLE STREET/PLUMMER SPRING ROAD OVER
UPPER ARTICHOKE RESERVOIR, WEST NEWBURY/NEWBURYPORT, MA
ESSEX COUNTY

Job No.: 28395.00 Date: 12/21/2020
Scale: 3/32" = 1'-0" Revised: _____
Description: PROP. EL. Figure: 8 OF 15

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02127
617 896 4300



NOTE: THE ENTIRE PROJECT AREA FOOTPRINT IS LOCATED WITHIN THE 100-FOOT BUFFER, AND THE 200-FOOT RIVERFRONT AREA (RFA). PORTIONS OF THE PROJECT ARE LOCATED WITHIN BORDERING LAND SUBJECT TO FLOODING (BLSF) ASSOCIATED WITH THE UPPER ARTICHOKE RESERVOIR, WITH A BASE ELEVATION OF 13.0 FEET.

LEGEND:

- ORDINARY HIGH WATER (OHW)/INLAND BANK
- SEDIMENT CONTROL BARRIER
- TEMP. IMPACT WATERBODY/LUW
- PERM. IMPACT WATERBODY/LUW
- PROPOSED BOTTOM OF SLOPE

N/F
CITY OF NEWBURYPORT
WATER DEPARTMENT
NO BK PG AVAILABLE

PREPARED FOR:
CITY OF NEWBURYPORT
60 PLEASANT ST NEWBURYPORT,
MA 01950
TOWN OF WEST NEWBURY
381 MAIN ST, WEST NEWBURY,
MA 01985

IMPACTS

Source:
BRIDGE REPLACEMENT PROJECT
MIDDLE STREET/PLUMMER SPRING ROAD OVER
UPPER ARTICHOKE RESERVOIR, WEST NEWBURY/NEWBURYPORT, MA
ESSEX COUNTY

Job No.: 28395.00 Date: 12/21/2020
Scale: 1" = 20' Revised: _____
Description: IMPACTS Figure: 9 OF 15

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Boston, Massachusetts
02127
617 896 4300

FLOODPLAIN IMPACT AND MITIGATION SUMMARY							
ELEVATION (FT)	FLOODPLAIN IMPACT (CF)		FLOODPLAIN MITIGATION (CF)		FLOODPLAIN NET (CF)		
	WEST NEWBURY	NEWBURYPORT	WEST NEWBURY	NEWBURYPORT	WEST NEWBURY	NEWBURYPORT	TOTAL
3-4	-	-	-	10.1	NO CHANGE	+10.1	+10
4-5	-	-	6.1	46.5	+6.1	+46.5	+53
5-6	-	-	40.4	84.3	+40.4	+84.3	+125
6-7	-	-	78.3	122.2	+78.3	+122.2	+201
7-8	-	-	116.2	160.1	+116.2	+160.1	+276
8-9	0.8	-	154.0	198.0	+153.3	+198.0	+351
9-10	-	24.5	192.9	236.8	+192.9	+212.4	+405
10-11	165.5	43.0	234.3	278.3	+68.8	+235.3	+304
11-12	140.6	38.6	279.8	354.5	+139.2	+315.9	+455
12-13	85.6	25.5	334.3	365.6	+248.7	+340.1	+589
TOTAL	392	131	1,436	1,856	1,044	1,725	<u>2,769</u>

PREPARED FOR:
 CITY OF NEWBURYPORT
 60 PLEASANT ST NEWBURYPORT,
 MA 01950
 TOWN OF WEST NEWBURY
 381 MAIN ST, WEST NEWBURY,
 MA 01985

FLOODPLAIN IMPACT AND MITIGATION SUMMARY

Source:

BRIDGE REPLACEMENT PROJECT
 MIDDLE STREET/PLUMMER SPRING ROAD OVER
 UPPER ARTICHOKE RESERVOIR, WEST NEWBURY/NEWBURYPORT, MA
 ESSEX COUNTY

Job No.: 28395.00 Date: 12/21/2020

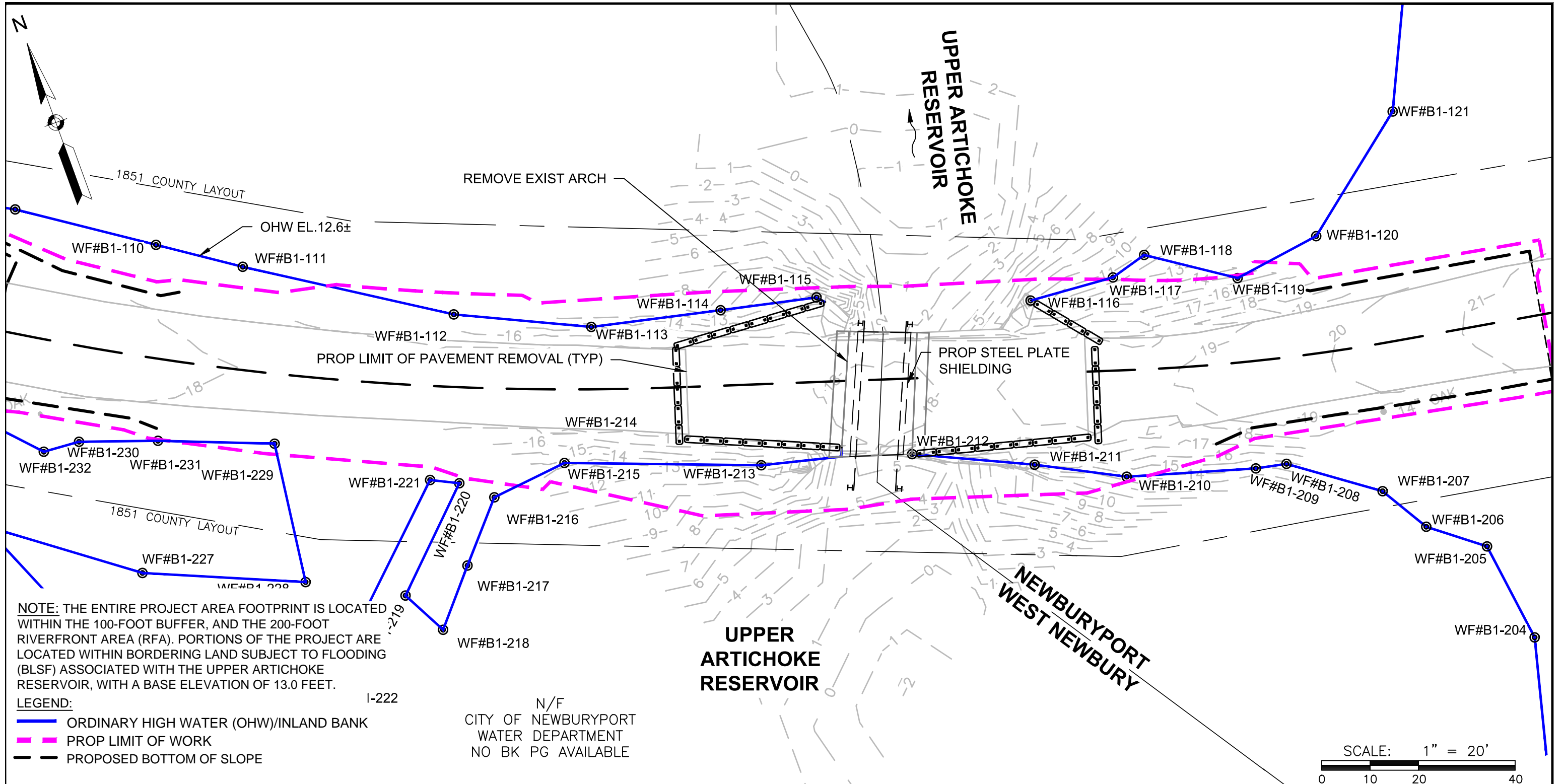
Scale: N/A Revised: _____

Description: BLSF TABLE Figure: 10 OF 15



803 Summer Street
 Boston, Massachusetts
 02127

617 896 4300



NOTE: THE ENTIRE PROJECT AREA FOOTPRINT IS LOCATED WITHIN THE 100-FOOT BUFFER, AND THE 200-FOOT RIVERFRONT AREA (RFA). PORTIONS OF THE PROJECT ARE LOCATED WITHIN BORDERING LAND SUBJECT TO FLOODING (BLSF) ASSOCIATED WITH THE UPPER ARTICHOKE RESERVOIR, WITH A BASE ELEVATION OF 13.0 FEET.

LEGEND:
 — ORDINARY HIGH WATER (OHW)/INLAND BANK
 — PROP LIMIT OF WORK
 - - - PROPOSED BOTTOM OF SLOPE

N/F
 CITY OF NEWBURYPORT
 WATER DEPARTMENT
 NO BK PG AVAILABLE

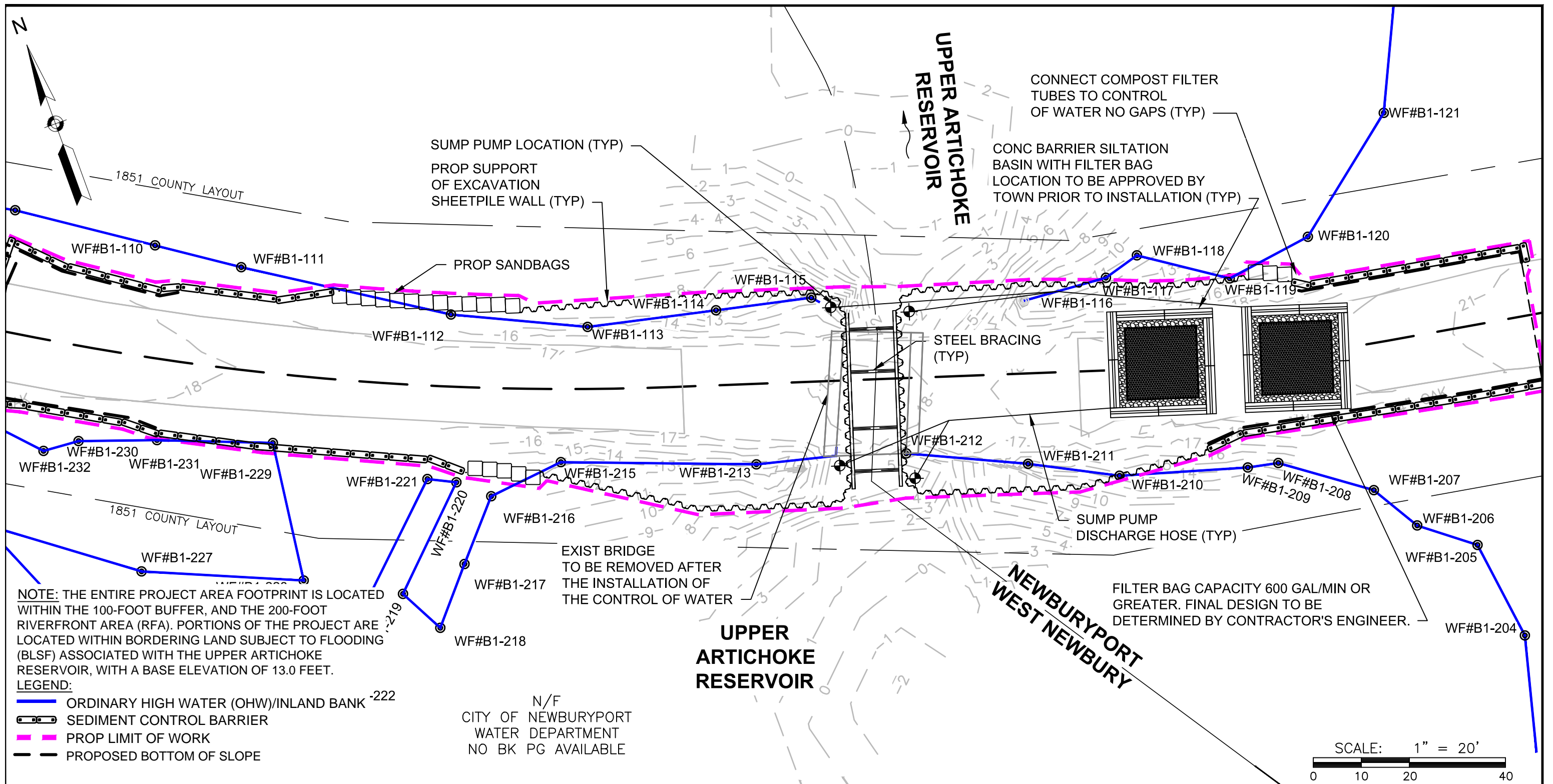
SCALE: 1" = 20'
 0 10 20 40

PREPARED FOR:
 CITY OF NEWBURYPORT
 60 PLEASANT ST NEWBURYPORT,
 MA 01950
 TOWN OF WEST NEWBURY
 381 MAIN ST, WEST NEWBURY,
 MA 01985

SHIELDING PLAN - UPPER ARCH REMOVAL
 BRIDGE REPLACEMENT PROJECT
 MIDDLE STREET/PLUMMER SPRING ROAD OVER
 UPPER ARTICHOKE RESERVOIR, WEST NEWBURY/NEWBURYPORT, MA
 ESSEX COUNTY

Job No.: 28395.00 Date: 12/21/2020
 Scale: 1" = 20' Revised: _____
 Description: COW Figure: 11 OF 15

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 Boston, Massachusetts
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 617 896 4300

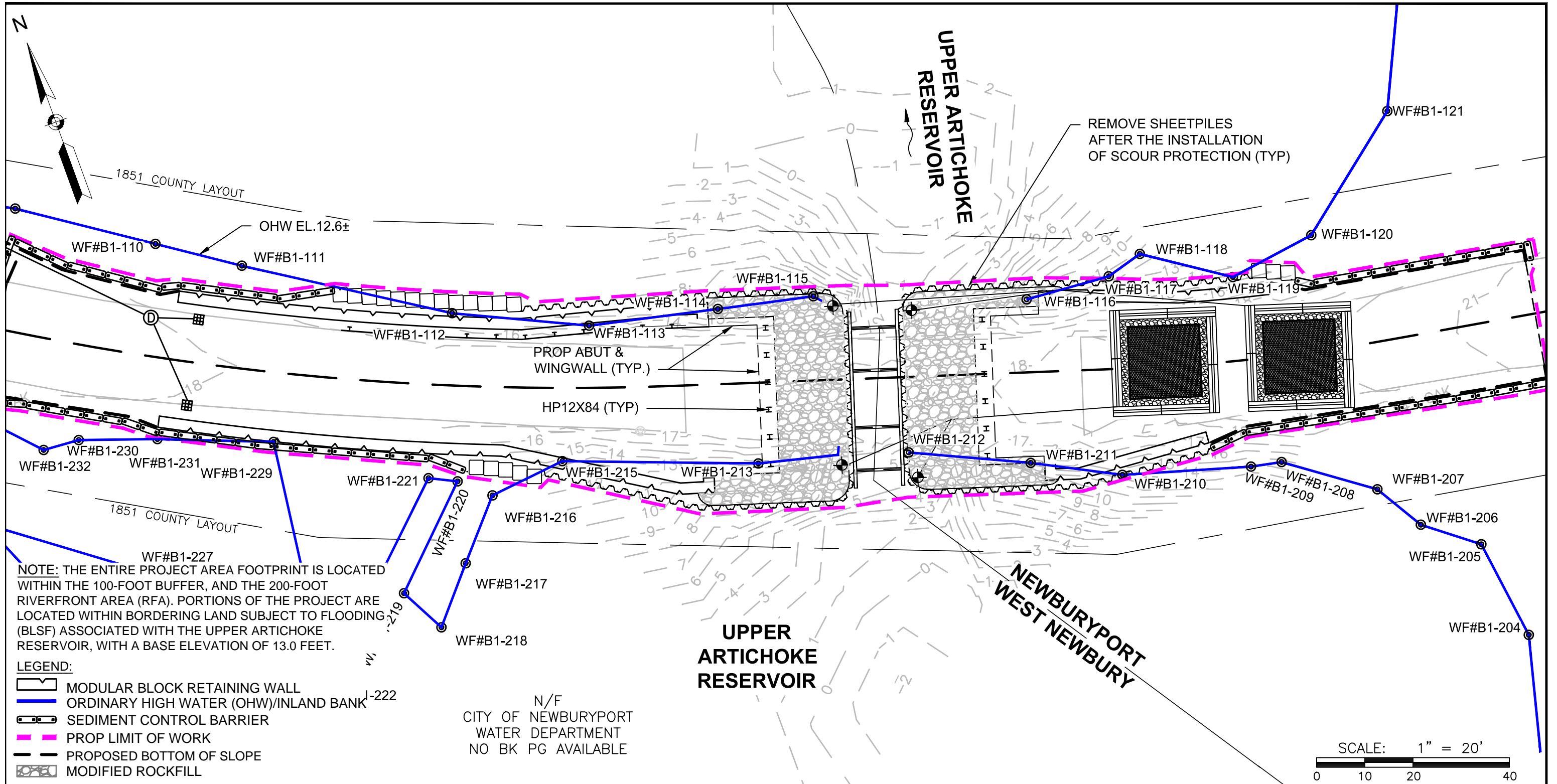


PREPARED FOR:
CITY OF NEWBURYPORT
 60 PLEASANT ST NEWBURYPORT,
 MA 01950
TOWN OF WEST NEWBURY
 381 MAIN ST, WEST NEWBURY,
 MA 01985

Source: **CONTROL OF WATER - PHASE 1 - PLAN**
 BRIDGE REPLACEMENT PROJECT
 MIDDLE STREET/PLUMMER SPRING ROAD OVER
 UPPER ARTICHOKE RESERVOIR, WEST NEWBURY/NEWBURYPORT, MA
 ESSEX COUNTY

Job No.: 28395.00 Date: 12/21/2020
 Scale: 1" = 20' Revised: _____
 Description: COW Figure: 12 OF 15

BSC GROUP
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 Boston, Massachusetts
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NOTE: THE ENTIRE PROJECT AREA FOOTPRINT IS LOCATED WITHIN THE 100-FOOT BUFFER, AND THE 200-FOOT RIVERFRONT AREA (RFA). PORTIONS OF THE PROJECT ARE LOCATED WITHIN BORDERING LAND SUBJECT TO FLOODING (BLSF) ASSOCIATED WITH THE UPPER ARTICHOKE RESERVOIR, WITH A BASE ELEVATION OF 13.0 FEET.

- LEGEND:
- MODULAR BLOCK RETAINING WALL
 - ORDINARY HIGH WATER (OHW)/INLAND BANK
 - SEDIMENT CONTROL BARRIER
 - PROP LIMIT OF WORK
 - PROPOSED BOTTOM OF SLOPE
 - MODIFIED ROCKFILL

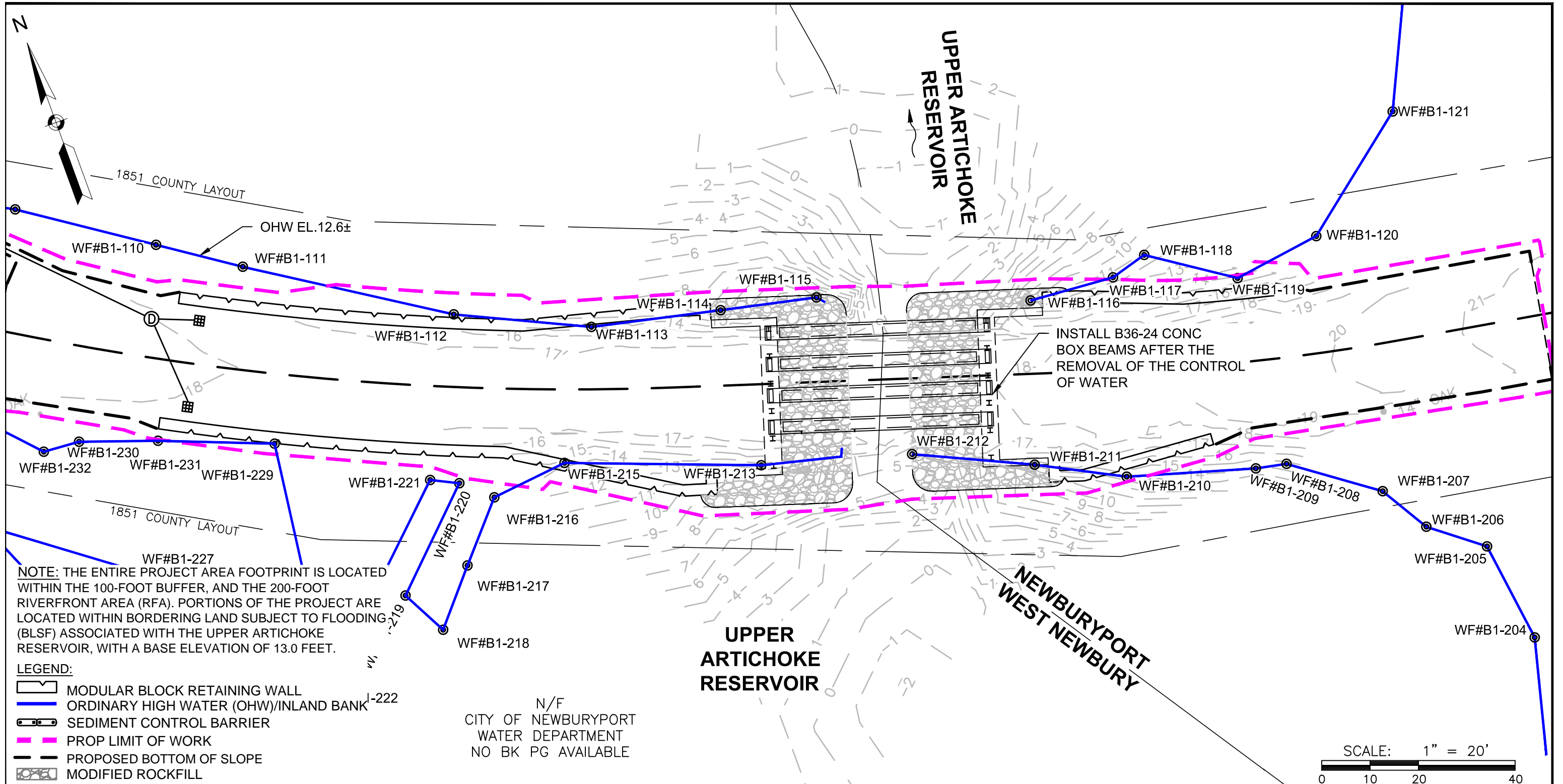
PREPARED FOR:
CITY OF NEWBURYPORT
 60 PLEASANT ST NEWBURYPORT,
 MA 01950
TOWN OF WEST NEWBURY
 381 MAIN ST, WEST NEWBURY,
 MA 01985

Source: **CONTROL OF WATER - PHASE 2 - PLAN**

BRIDGE REPLACEMENT PROJECT
 MIDDLE STREET/PLUMMER SPRING ROAD OVER
 UPPER ARTICHOKE RESERVOIR, WEST NEWBURY/NEWBURYPORT, MA
 ESSEX COUNTY

Job No.: 28395.00 Date: 12/21/2020
 Scale: 1" = 20' Revised: _____
 Description: COW Figure: 13 OF 15

BSC GROUP
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 Boston, Massachusetts
 02127
 617 896 4300



NOTE: THE ENTIRE PROJECT AREA FOOTPRINT IS LOCATED WITHIN THE 100-FOOT BUFFER, AND THE 200-FOOT RIVERFRONT AREA (RFA). PORTIONS OF THE PROJECT ARE LOCATED WITHIN BORDERING LAND SUBJECT TO FLOODING (BLSF) ASSOCIATED WITH THE UPPER ARTICHOKE RESERVOIR, WITH A BASE ELEVATION OF 13.0 FEET.

- LEGEND:
- MODULAR BLOCK RETAINING WALL
 - ORDINARY HIGH WATER (OHW)/INLAND BANK
 - SEDIMENT CONTROL BARRIER
 - PROP LIMIT OF WORK
 - PROPOSED BOTTOM OF SLOPE
 - MODIFIED ROCKFILL

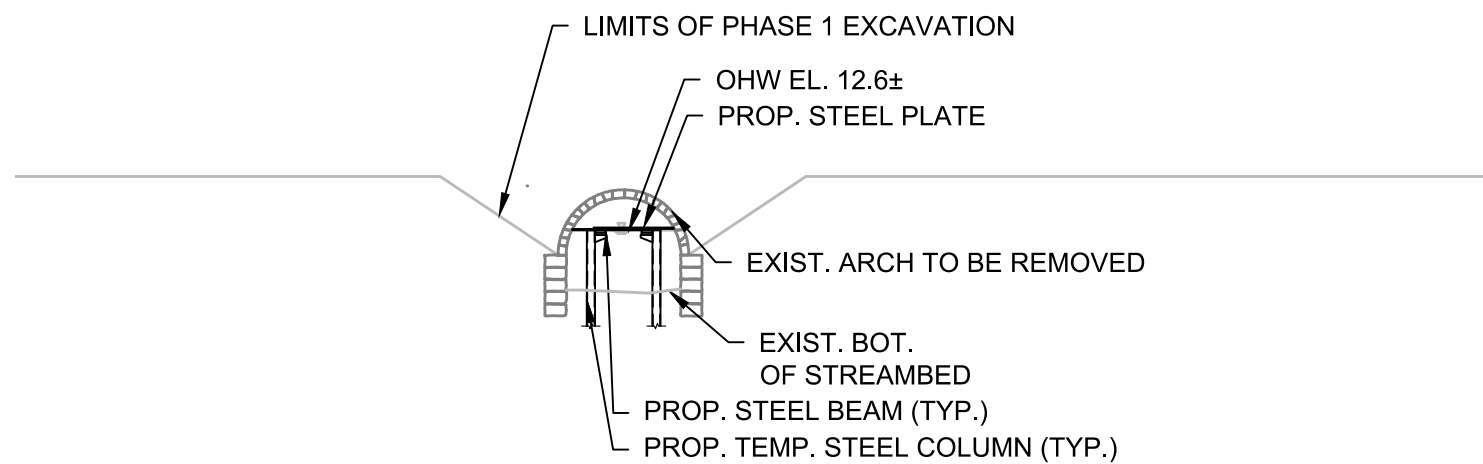
N/F
CITY OF NEWBURYPORT
WATER DEPARTMENT
NO BK PG AVAILABLE

PREPARED FOR:
CITY OF NEWBURYPORT
60 PLEASANT ST NEWBURYPORT,
MA 01950
TOWN OF WEST NEWBURY
381 MAIN ST, WEST NEWBURY,
MA 01985

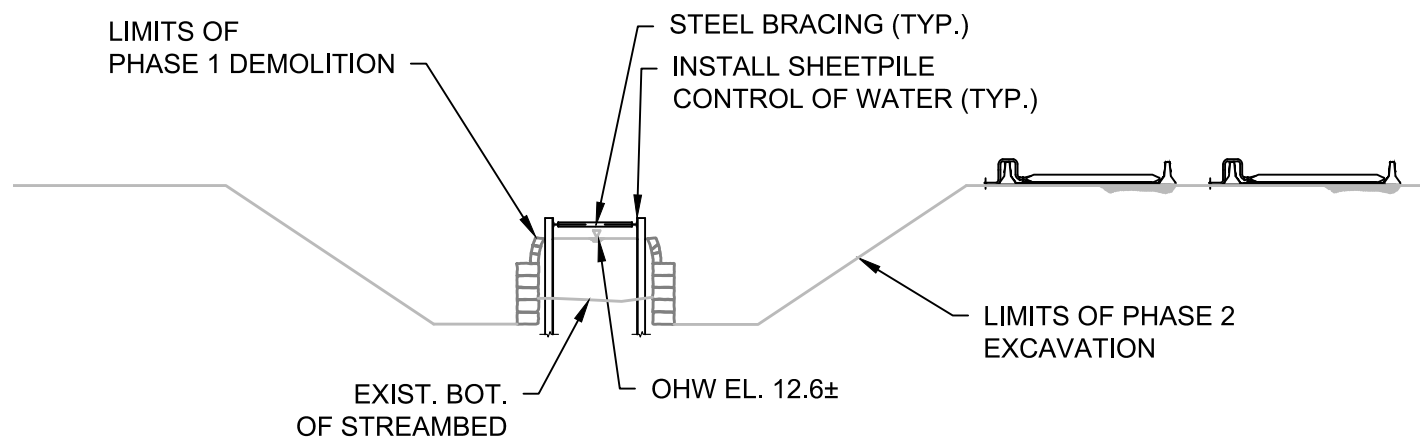
Source: **CONTROL OF WATER - PHASE 3 - PLAN**
BRIDGE REPLACEMENT PROJECT
MIDDLE STREET/PLUMMER SPRING ROAD OVER
UPPER ARTICHOKE RESERVOIR, WEST NEWBURY/NEWBURYPORT, MA
ESSEX COUNTY

Job No.: 28395.00 Date: 12/21/2020
Scale: 1" = 20' Revised: _____
Description: COW Figure: 14 OF 15

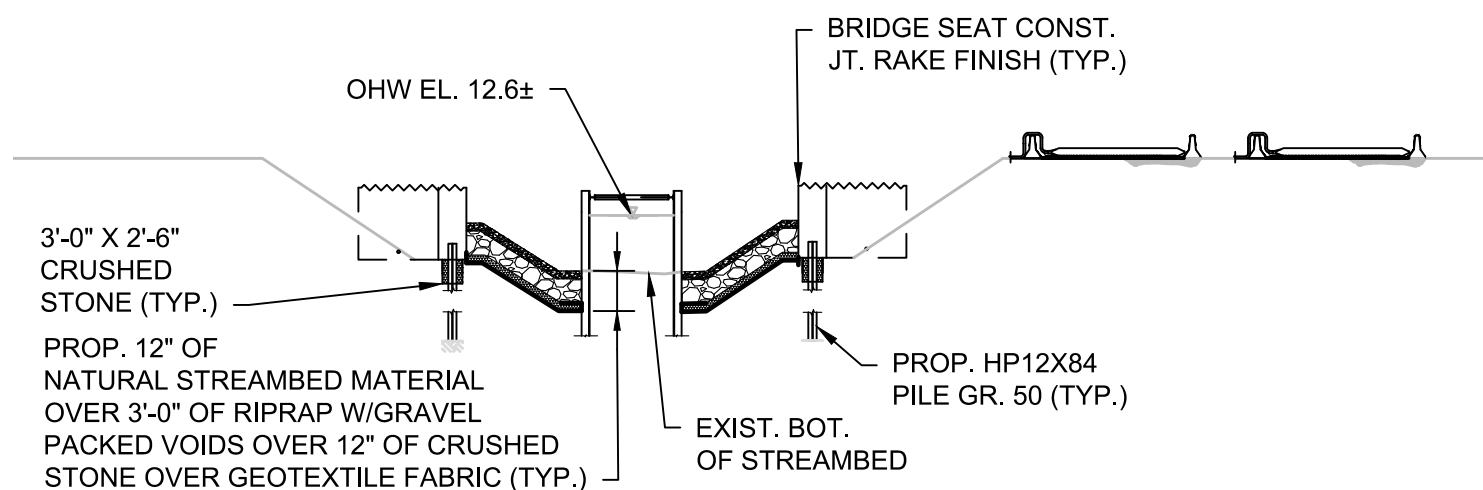
BSC GROUP
803 Summer Street
Boston, Massachusetts
02127
617 896 4300



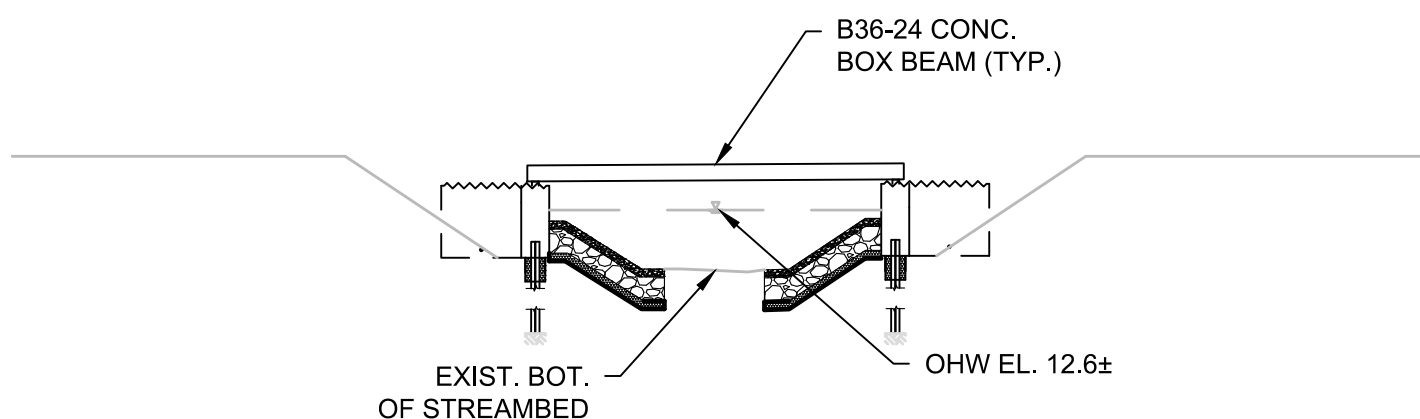
SHIELDING PLAN - UPPER ARCH REMOVAL
SCALE: 1/2" = 1'-0"



CONTROL OF WATER - PHASE 1 - ELEVATION
SCALE: 1/2" = 1'-0"



CONTROL OF WATER - PHASE 2 - ELEVATION
SCALE: 1/2" = 1'-0"



CONTROL OF WATER - PHASE 3 - ELEVATION
SCALE: 1/2" = 1'-0"

PREPARED FOR:
CITY OF NEWBURYPORT
60 PLEASANT ST NEWBURYPORT,
MA 01950
TOWN OF WEST NEWBURY
381 MAIN ST, WEST NEWBURY,
MA 01985

SHIELDING AND CONTROL OF WATER - ELEVATION

BRIDGE REPLACEMENT PROJECT
MIDDLE STREET/PLUMMER SPRING ROAD OVER
UPPER ARTICHOKE RESERVOIR, WEST NEWBURY/NEWBURYPORT, MA
ESSEX COUNTY

Job No.: 28395.00 Date: 12/21/2020
Scale: 1/2" = 1'-0" Revised: _____
Description: COW Figure: 15 OF 15

BSC GROUP
803 Summer Street
Boston, Massachusetts
02127
617 896 4300

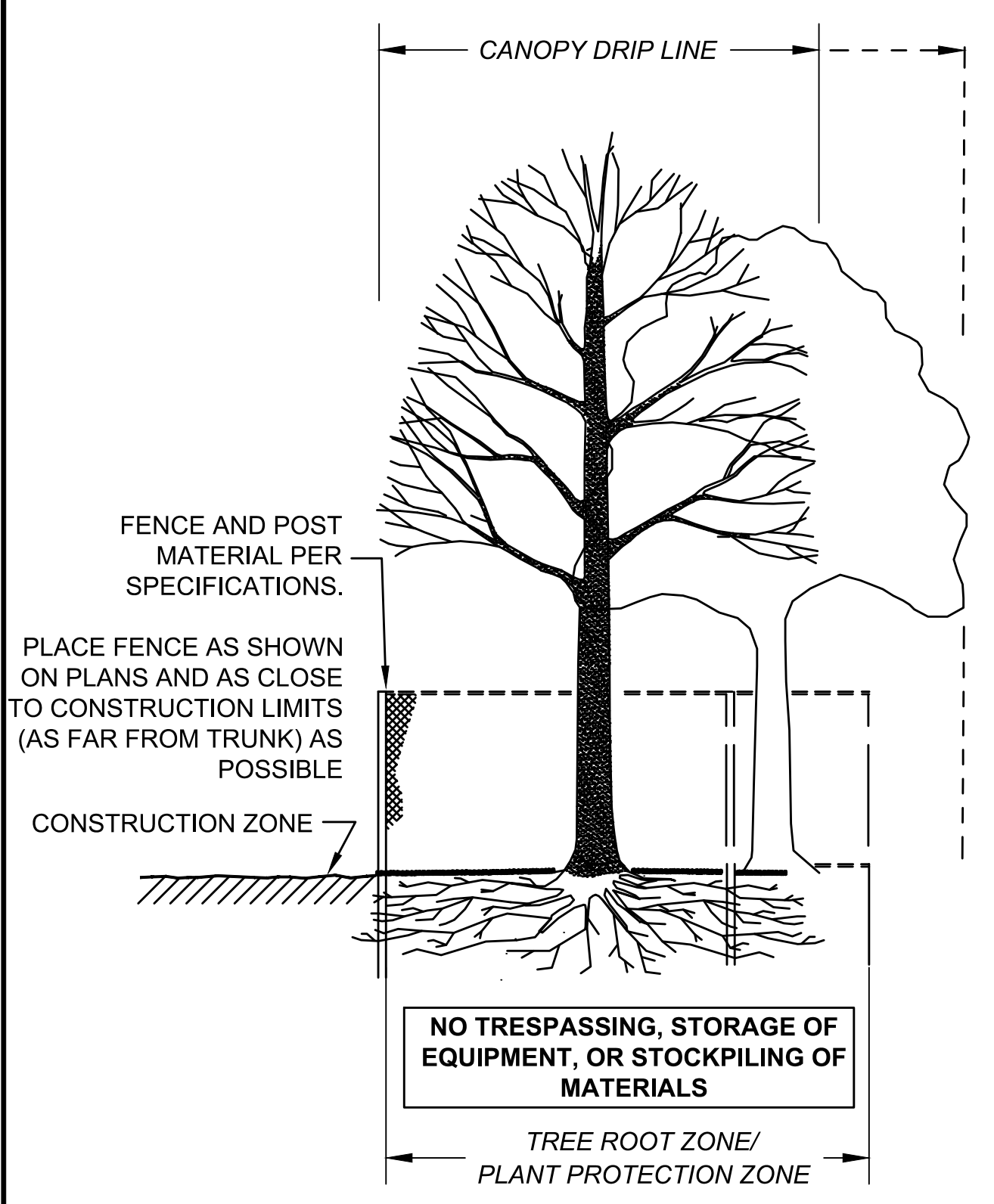
**SHEFFIELD
LIME KILN ROAD**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	9	25
PROJECT FILE NO.		-	

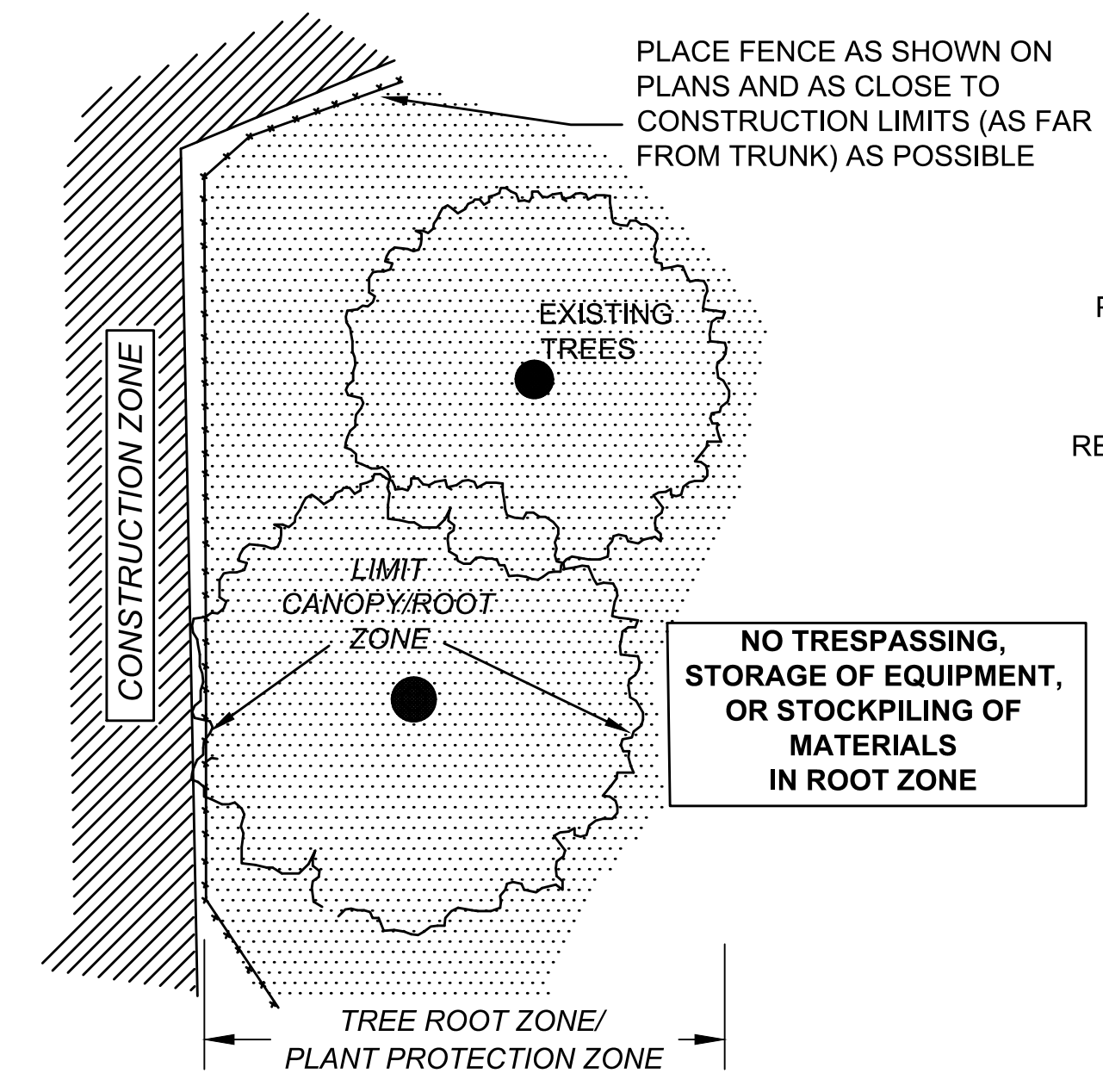
CONSTRUCTION DETAILS

PLACE TUBE AS CLOSE TO LIMIT OF SOIL DISTURBANCE AS POSSIBLE, ALONG CONTOURS, AND PERPENDICULAR TO FLOW.

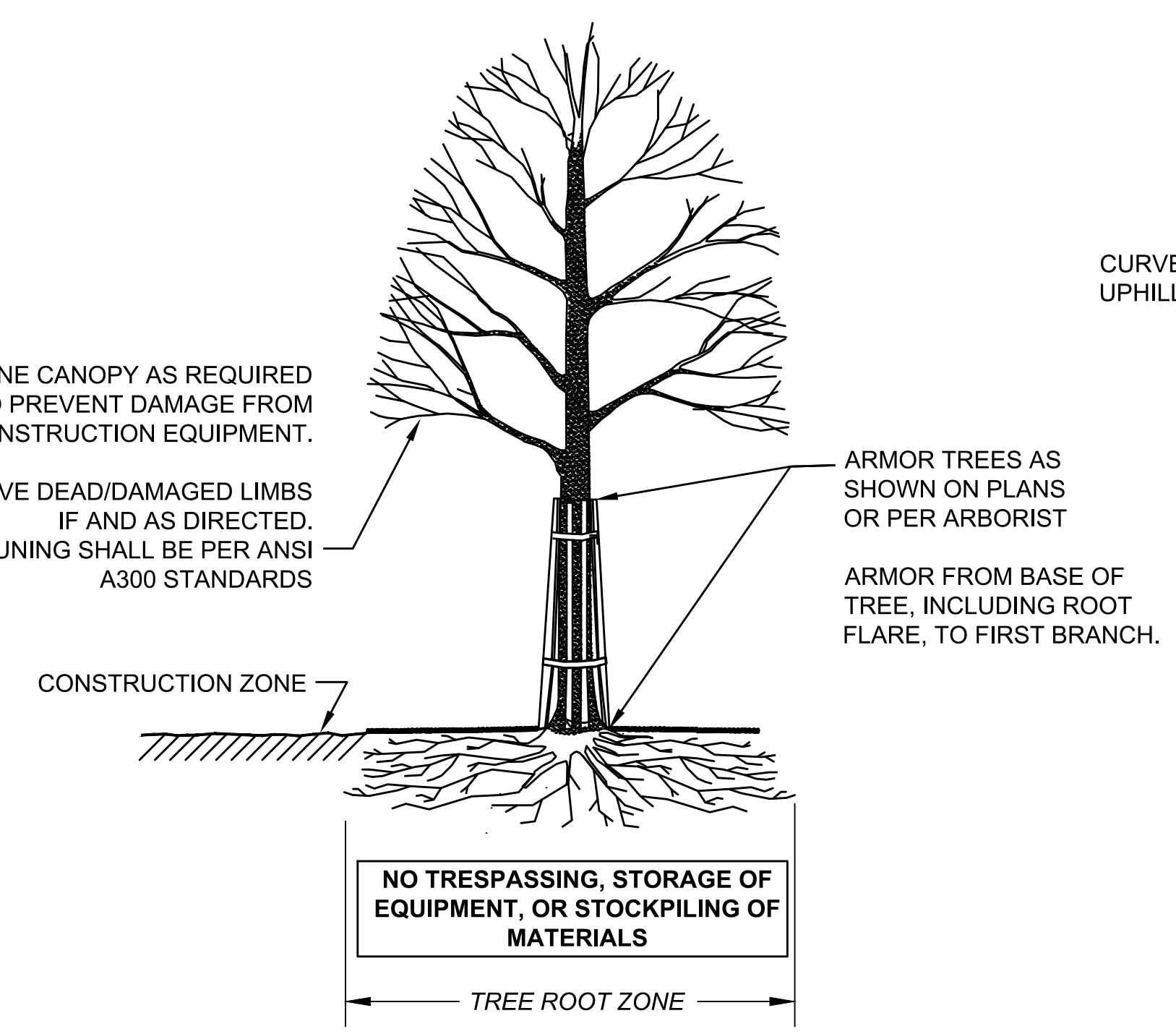
ADJUST LOCATION AS REQUIRED FOR OPTIMUM EFFECTIVENESS. DO NOT INSTALL IN WATERWAYS.



SECTION - FENCE PROTECTION OF ROOT ZONE

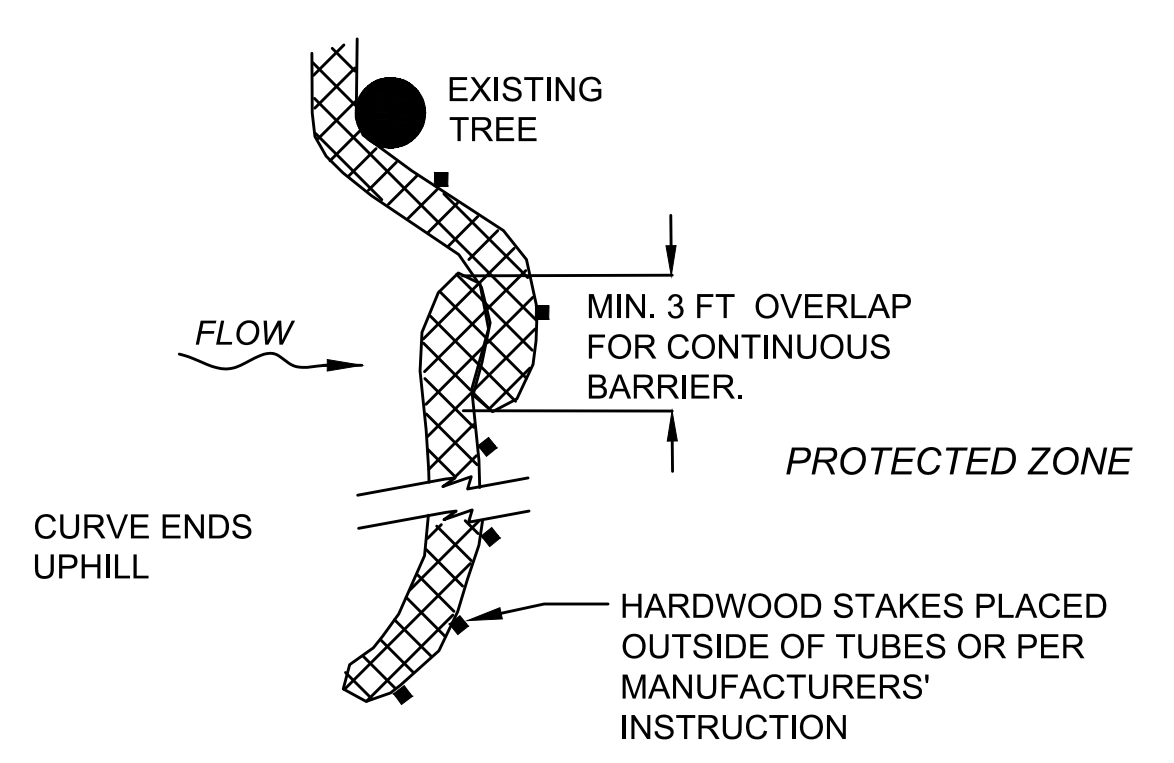


PLAN VIEW - FENCE PROTECTION OF ROOT ZONE

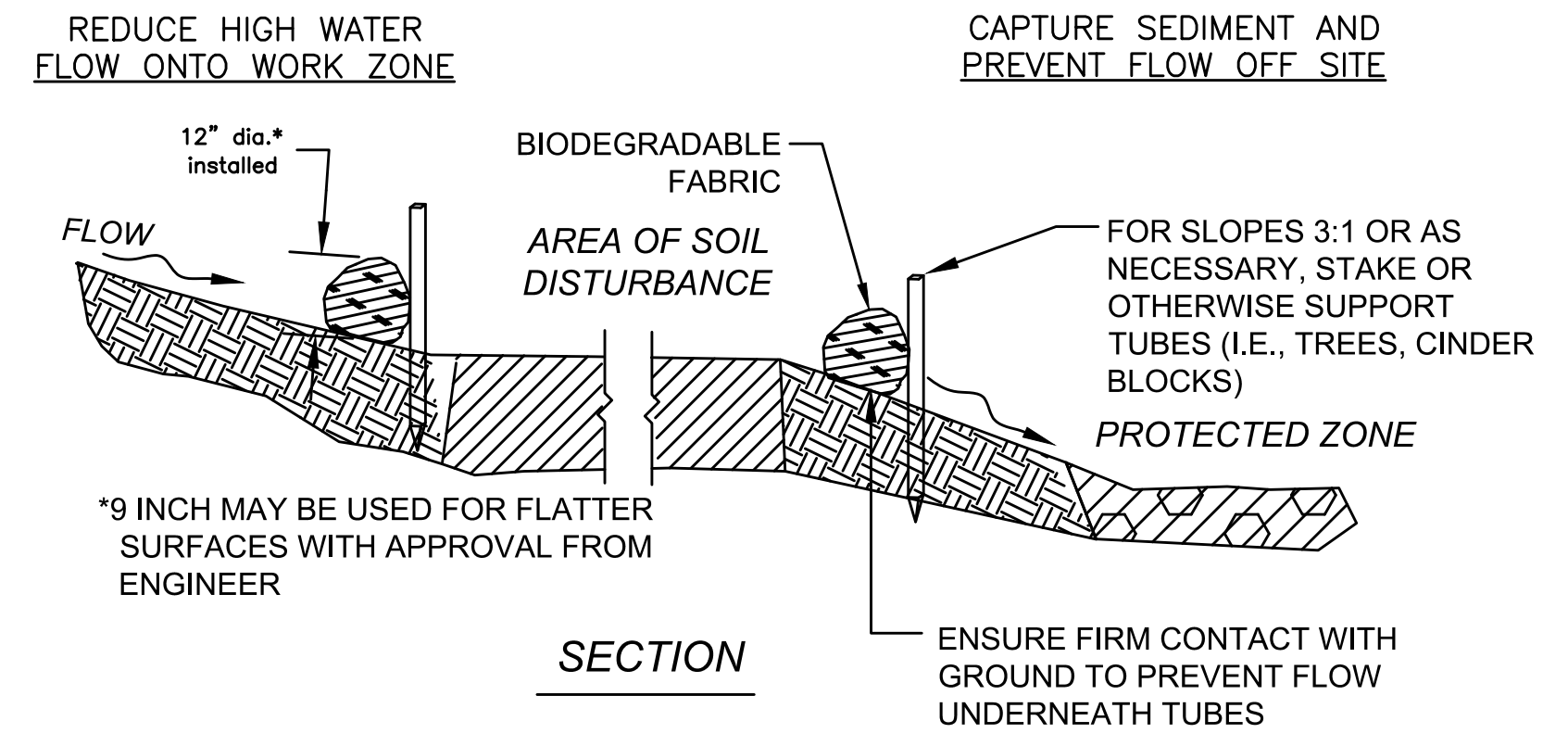


SECTION - TRUNK ARMORING & PRUNING

TREE PROTECTION - TRUNK



PLAN VIEW

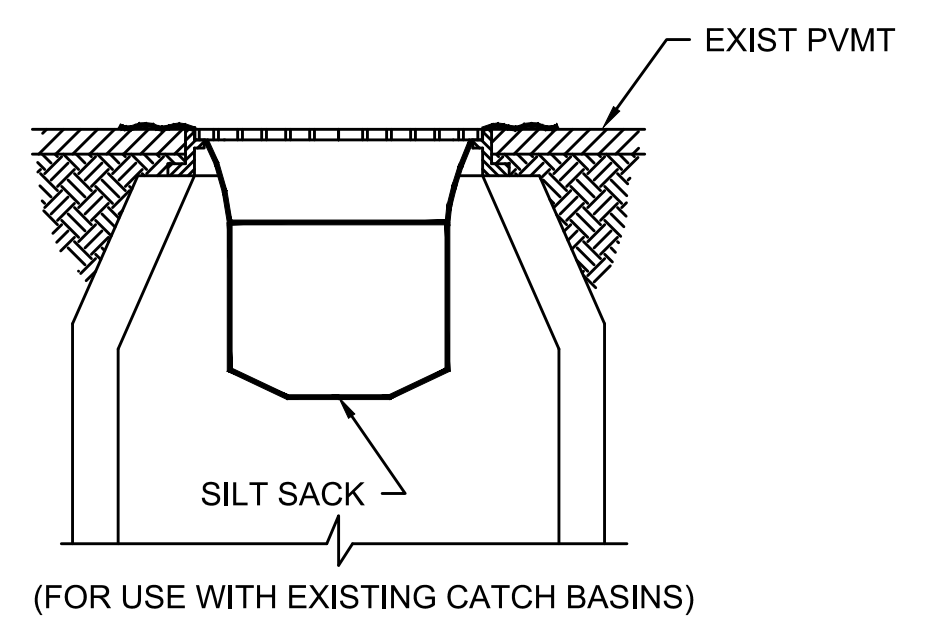


SECTION

SEDIMENT BARRIER - COMPOST FILTER TUBE

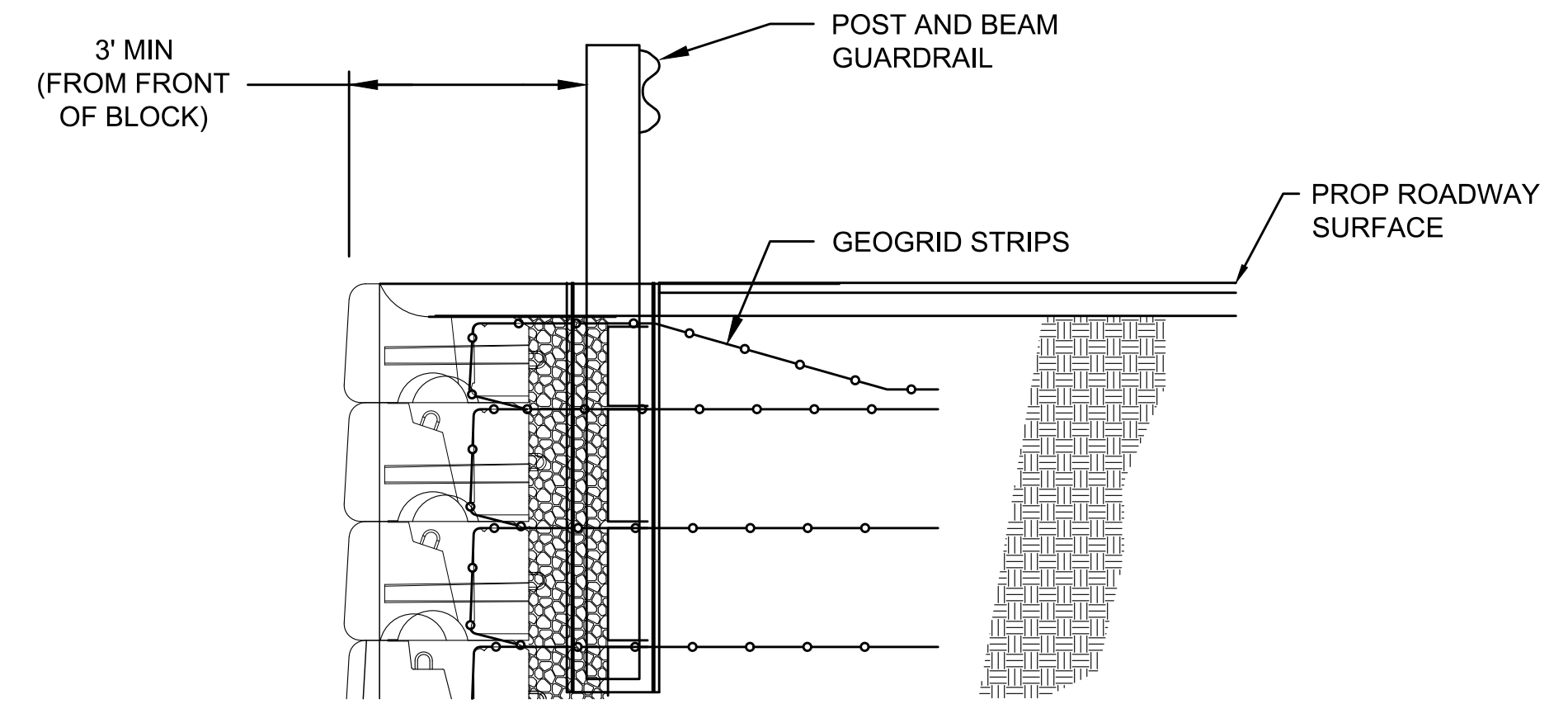
NOT TO SCALE

NOTES:
SILT SACKS SHALL BE PLACED IN ALL CATCH BASINS IN THE VICINITY OF NEW CONSTRUCTION. CATCH BASINS SHALL BE PROTECTED AS SHOWN, WITH MINIMUM WEEKLY MAINTENANCE, OR AS REQUIRED, AND REPLACED IF NECESSARY.



SILT SACK INLET PROTECTION

NOT TO SCALE



POST AND BEAM GUARDRAIL - SECTION VIEW

NOT TO SCALE

Attachment E

Bridge Replacement Project
Middle Street / Plummer Spring Road
over Upper Artichoke Reservoir,
West Newbury and Newburyport, MA

Chapter 91 License Application

401 WATER QUALITY CERTIFICATION
NOTICE OF IMMINENT ISSUANCE

Kreisel, Sara

From: Lally, Kyle (DEP) <kyle.lally@state.ma.us>
Sent: Wednesday, September 14, 2022 10:43 AM
To: Kreisel, Sara
Cc: Morrison, Micah; Walden, Diana L.
Subject: Re: X287261 Section 401 WQC Site Visit - Middle Street, West Newbury / Plummer Spring Road, Newburyport over Upper Artichoke Reservoir, Bridge Replacement Project

Good Morning Sara,

As we spoke about, so far in my review, I have no additional questions, nor do I need any additional information for the issuance of the 401 WQC.

I am anticipating having the 401 ready to go in Mid-October, hopefully sooner.

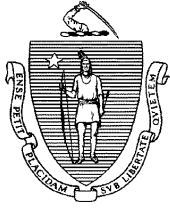
Thank you,
Kyle

Attachment F

Bridge Replacement Project
Middle Street / Plummer Spring Road
over Upper Artichoke Reservoir,
West Newbury and Newburyport, MA

Chapter 91 License Application

EOEEA CERTIFICATE
AGENCY COMMENTS



The Commonwealth of Massachusetts
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114

Charles D. Baker
GOVERNOR

Karyn E. Polito
LIEUTENANT GOVERNOR

Kathleen A. Theoharides
SECRETARY

Tel: (617) 626-1000
Fax: (617) 626-1081
<http://www.mass.gov/eea>

August 23, 2021

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
ON THE
ENVIRONMENTAL NOTIFICATION FORM

PROJECT NAME : Bridge Replacement Project-Middle Street and Plummer Spring
Road over the Upper Artichoke Reservoir
PROJECT MUNICIPALITY : Newburyport & West Newbury
PROJECT WATERSHED : Merrimack
EEA NUMBER : 16412
PROJECT PROPONENT : City of Newburyport & Town of West Newbury
DATE NOTICED IN MONITOR : July 23, 2021

Pursuant to the Massachusetts Environmental Policy Act (MEPA; M.G. L. c. 30, ss. 61-62I) and Section 11.06 of the MEPA regulations (301 CMR 11.00), I hereby determine that this project **does not require** an Environmental Impact Report (EIR).

Project Description

As described in the Environmental Notification Form (ENF), the project consists of the full replacement of Bridge No. N-11-007, which carries Middle Street/Plummer Spring Road over the Artichoke River/Upper Artichoke Reservoir in the City of Newburyport (City) and the Town of West Newbury (Town). The project is proposed jointly by the City and Town to restore vehicular traffic between Middle Street and Plummer Spring Road, which ceased in 2018 when the existing bridge was closed due to structural deficiencies associated with the undermining of the existing roadway foundation. The proposed bridge will be a high strength precast concrete structure that will follow a similar horizontal and vertical alignment as the existing bridge. The span of the bridge will increase from an existing 14 feet to a proposed 45 feet in order to eliminate the need for the bridge's substructure to be located in the reservoir and to increase the hydraulic opening, which is currently undersized. The overall width of the bridge will increase from 24.2 feet to 32.5 feet to accommodate safety

improvements, including the addition of a sidewalk. In order to accommodate the new bridge dimensions, slope stabilization/riprap scour protection will be constructed around the new bridge abutments and the approaches to the existing bridge will be widened, slopes reduced, and/or retaining walls constructed.

Project Site

The 0.49-acre project site includes the existing bridge and approaches. The bridge divides West Newbury (located on the northwestern side) and Newburyport (located on the eastern side). Middle Street, which originates in West Newbury, turns into Plummer Spring Road upon entering Newburyport; both roads are functionally classified as Rural Local roads. The bridge crosses over the Upper Artichoke Reservoir, which is classified as a public water supply. The land surrounding the bridge is held for water supply protection purposes in accordance with Article 97 of the amendments to the Constitution of the Commonwealth (Article 97). According to the ENF, the project will not require the conversion or disposition of Article 97 Land. The surrounding area consists of low-density residential development and forested land. As described in the ENF, the existing bridge (and roads) were constructed in 1891, prior to the creation of the Upper Artichoke Reservoir. The existing bridge is described as a 14.3-foot (span) by 13.2-foot (rise) by 24.2-foot (long) single-span, earth-filled, stone arch bridge set at an approximate slope of 0 percent. The paved roadway consists of two travel lanes that vary in width from 8.5 feet to 10 feet for a total roadway width of approximately 20 feet. There are no sidewalks on the bridge. As noted above, the bridge was closed in 2018 to vehicular traffic due to the collapse of portions of the bridge, stone headwall, and southeast approach, and is currently considered structurally deficient due to undermining of the paved roadway foundation.

There are several wetland resources within or surrounding the project site associated with the Upper Artichoke Reservoir/Artichoke River, including: Land Under Water (LUW), Bank, Riverfront Area, and Bordering Land Subject to Flooding (BLSF). The entirety of the project site is located within or adjacent to an Outstanding Resource Water (ORW). Portions of the project site are mapped as Flood Zone AE (an area inundated during a 100-year storm), with a Base Flood Elevation (BFE) of elevation (el.) 13 ft NAVD88 as delineated on Federal Emergency Management Agency (FEMA) map 25009C0116F (effective date July 3, 2012), although the ENF indicates the flow of water through the bridge is controlled by the downstream dam that impounds the Upper Artichoke Reservoir. The project site does not contain *Estimated and Priority Habitat of Rare Species* as delineated by the Natural Heritage and Endangered Species Program (NHESP) in the 14th Edition of the Massachusetts Natural Heritage Atlas or an Area of Critical Environmental Concern (ACEC). The site does not contain any structures listed in the State Register of Historic Places or the Massachusetts Historical Commission's (MHC) Inventory of Historic and Archaeological Assets of the Commonwealth, although comments received on the project note concern regarding the historic nature of the bridge.

Environmental Impacts and Mitigation

Potential environmental impacts associated with the project include the alteration of 0.05 acres of land, the creation of 0.05 acres of impervious surface (for a total of 0.21 acres within the project site), and the alteration of the following wetland resource areas: 243 linear feet (lf) of Bank, 2,510 sf of LUW (885 sf of which is associated with LUW that will be created by the project), 866 sf of BLSF, and

10,519 sf of Riverfront Area. The project will require dredging of 98 cubic yards (cy) of sediment and will result in 525 cubic feet (cf) of fill within BLSF.

Measures to avoid, minimize, and mitigate environmental impacts include the creation of 3,295 cf compensatory flood storage, stormwater improvements, the incorporation of retaining walls and removal of substructure supports in the reservoir, and the use of construction best management practices (BMPs) such as erosion and sedimentation controls.

Jurisdiction and Permitting

This project is subject to MEPA review and preparation of an ENF pursuant to 301 CMR 11.03(3)(b)(c) because it requires an Agency Action and will result in the alteration of 1,000 or more sf of outstanding resource waters. The project requires a 401 Water Quality Certification (WQC) from the Massachusetts Department of Environmental Protection (MassDEP). Comments from the MassDEP Waterways Regulation Program (MassDEP-WRP) indicate the project also requires a Chapter 91 (c.91) License. The project will require review by MHC acting as the State Historic Preservation Officer (SHPO) pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended (36 CFR 800).

The project received an Order of Conditions from the Newburyport Conservation Commission on June 7, 2021 and from the West Newbury Conservation Commission on June 29 2021, neither of which were appealed. The project requires Pre-Construction Notification to the U.S. Army Corps of Engineers (USACE) under the General Permits for Massachusetts as well as consultation and review from the U.S. Fish and Wildlife Services (USFWS) in accordance with Section 404 of the Federal Clean Water Act.

Because the project will receive Financial Assistance through the MassWorks Infrastructure Grant and Massachusetts Department of Transportation (MassDOT) Small Bridge Grant Programs, MEPA jurisdiction is broad in scope and extends to all aspects of the project that may cause Damage to the Environment, as defined in the MEPA regulations.

Review of the ENF

The ENF provided a description of existing and proposed conditions, preliminary project plans, correspondence with the West Newbury and Newburyport Conservation Commissions, stream crossing evaluation, streamlined stormwater report, results of hydrologic and hydraulic (H&H) modeling, correspondence with MHC, tribes, and the Massachusetts Board of Underwater Archaeological Resources (BUAR), and a copy of the 401 WQC application and USACE Authorization. The ENF identified measures to avoid, minimize and mitigate environmental impacts. The Proponent provided additional information to the MEPA Office regarding water control systems during project construction and a Repair/Rehabilitation of Existing Structure Alternative on August 6, 2021. For purposes of clarity, all supplemental materials are referred to herein as the "ENF" unless otherwise referenced.

Alternatives Analysis

The ENF included an alternatives analysis which considered a No-Build (Alternative 1), Three-sided Open Bottom Bridge with a Precast Concrete Rigid Frame (Alternative 2), Open Bottom Arch Bridge with Precast Concrete Arch (Alternative 3), Repair/Rehabilitation of Existing Structure (Alternative 4), and Three-sided Open Bottom Bridge with a Precast Concrete Beam Alternative (the Preferred Alternative). Alternatives were evaluated based on their ability to meet project goals while balancing reliability and cost, and minimizing environmental impacts.

Alternative 1 would leave the existing bridge in its current, deteriorated condition, which would not result in further alteration of environmental resources within the project site but would not restore vehicular connectivity; it would also lead to continued erosion of the surrounding area. For these reasons, it was dismissed. Alternative 4 would involve repairing/rehabilitating the existing bridge. According to the ENF, the viability of this alternative was discussed during a joint public meeting between the City and Town in August 2018, at which time the underlying cause of the wall displacement/collapse and the condition of the buried/submerged portions of the bridge was (and remains) unknown. As described at the MEPA remote consultation meeting for the project held on August 5, 2021, and confirmed in writing by the Proponent, repair/rehabilitation of the existing bridge is anticipated to result in greater and longer lasting impacts to wetland resource areas than the Preferred Alternative. This is because the replacement alternative would require additional dewatered working space/access, exposing wetland resource areas for a longer period of time, and would not remove the bridge substructure in the reservoir or increase the hydraulic opening of the structure (as is proposed in the Preferred Alternative). Additionally, a December 2019 geotechnical investigation found a layer of peat and clay below the bridge foundations. The ENF states that both layers include poor foundational soils and would further hinder the design progression of a repair/rehabilitation. For these reasons, the Repair/Rehabilitation of Existing Structure Alternative was not considered viable.

Alternatives 2 and 3 considered design changes to the Preferred Alternative. Alternative 2 would involve a three-sided open bottom bridge with a precast concrete 22-foot clear span rigid frame. The structure would include a 24-foot roadway with no sidewalks and continuous guardrail. It would have an overall width of 27.25 feet, include spread footing, with an estimated cost of \$2.4 million. Alternative 3 would involve an open bottom arch bridge with a precast concrete \pm 30.7-foot span arch. The structure would include a 24-foot roadway with no sidewalks and a bridge rail. It would have an overall width of 27.25 feet, include pile footings, and would cost an estimated \$2.3 million. The Preferred Alternative (described herein) proposes a three-sided open bottom bridge with a precast concrete 45-foot span, a 24-foot roadway with one sidewalk, and a bridge rail. The proposed bridge will have an overall width of 32.5 feet, involve integral abutments on piles, and is estimated to cost a total of \$2.6 million. As described in the ENF, the Preferred Alternative and Alternative 2 and 3 all provide similar outcomes regarding maintenance and protection of traffic, cross section and roadside safety, utilities and resource area impacts. All three alternatives would be designed to the same storm event, hydraulic opening, water depth and velocity, bank full width and FEMA requirements. The ENF states the Preferred Alternative was selected over Alternative 2 and 3 as it is the only alternative that provides safe pedestrian access and use (as the latter alternatives do not include sidewalks); it also provides the longest span, greater channel openness, and new areas of LUW and compensatory flood storage by removing the portions of the existing bridge embedded in the river and widening the streambed within the bridge opening. As described below, these aspects are expected to improve flow conditions, reduce bridge scour/erosive

conditions, and improve water quality. The ENF further states the Preferred Alternative was selected at the August 5, 2021 joint public meeting held by the Town and City to advance to construction.

Wetlands

The project will result in 243 lf of permanent alteration and 61 lf of temporary alteration to Bank. Approximately 10,519 sf of alteration will occur within Riverfront Area, of which 1,254 sf is described as temporary, 3,393 sf is described as permanent, and 5,872 sf is characterized as redevelopment, located within the existing roadway. Approximately 866 sf of BLSF will be permanently altered, 211 sf of which is associated with the placement of approximately 525 cf of fill and 655 sf of which is associated with the creation of 3,295 cf of compensatory flood storage. The project will alter 2,510 sf of LUW, of which: 984 sf is described as permanent, associated with the construction of the new bridge, retaining walls, and riprap; 641 sf is described as temporary, associated with the dewatering and construction activities; and 885 sf is proposed to be created through the removal of existing infrastructure and expansion of the hydraulic opening of the bridge. According to the ENF, erosion and sedimentation controls will be installed prior to construction, and all temporarily impacted wetland resource areas will be restored once construction is complete. As noted above, the Newburyport and West Newbury Conservation Commissions reviewed the project for its consistency with the Wetlands Protections Act (WPA), the Wetland Regulations (310 CMR 10.00), and associated performance standards, including the Stormwater Management Standards (SMS), and issued Order of Conditions which were not appealed.

The project requires a 401 WQC in accordance with 314 CMR 9.04(2) as it will involve dredging within an ORW. Approximately 98 cy of sediment will be dredged from the channel, 50 cy of which is described as temporary. Comments from MassDEP-WRP state the existing bridge and approach roadways were constructed in 1891, prior to the 1939 statutory change when c.91 jurisdiction was expanded to navigable rivers, but that the Upper Artichoke River is at present subject to c.91 jurisdiction; as such, the project requires a c.91 License. MassDEP-WRP further states the project (as described in the ENF) appears to substantively comply with the applicable provisions for water-dependent Public Service projects, specifically those at 310 CMR 9.35-9.37. I refer the Proponent to comments from MassDEP-WRP for more information on required permitting for the project.

As noted above, the span of the bridge is proposed to increase from 14 feet to 45 feet, which will remove the need for substructure within deep areas of the reservoir. The ENF states the increased hydraulic opening will improve flow conditions, reduce bridge scour/erosive conditions, and improve water quality. The removal of the existing bridge infrastructure and increase span of the proposed bridge will result in a wider natural streambed bottom and is expected to improve fish and wildlife habitat within the vicinity of the bridge as well as up and downgradient of the bridge. The increased span will require rip-rap scour protection to be placed in the streambed (LUW) to stabilize the roadway and bridge. The existing streambed material will be removed and stockpiled on-site for use during restoration to ensure appropriate sizing and arrangement of materials under pre- and post-construction conditions. Upon completion of the proposed bridge replacement activities, the streambed elevation will be similar to that of the existing streambed, with the riprap proposed to be covered by 6 inches of natural streambed material.

Stormwater and Drinking Water

The ENF described the existing stormwater system within the project site as a country drainage system, whereby runoff travels to the approach roadway and informally runs off down the side slopes. The proposed bridge replacement is considered a redevelopment project, and will result in an increase of 0.05 acres of impervious surface. Proposed stormwater improvements include the installation of two deep sump catch basins with water quality units on either side of the roadway, on both side of the bridge. The ENF states these improvements are anticipated to result in more than 80 percent of total suspended solids (TSS) removal from runoff.

As noted previously, the entirety of the project site is located within or adjacent to an ORW, and the bridge crosses a drinking water reservoir. The ENF states the demolition of the existing bridge and construction of the proposed bridge and retaining walls are required to be completed in-the-dry, which will be accomplished through the use of cofferdams. All dewatering and related earthwork shall be conducted in such a manner as to prevent siltation or contamination of the waterway and wetlands. No pumping discharge will be allowed to enter the Artichoke Reservoir or the wetland resource areas. As described in the ENF, water from the work areas will be pumped either to a filter bag, temporary settling tank, forebay basin, or other approved containment structure conforming to MassDOT's "*Guidelines for Soil Erosion & Sediment Control*" at a location approved by the respective Conservation Commissions. The filter bags will remove sediment from the water, which will then outflow over land to allow for infiltration. At the limits of the control of water system, compost filter tubes will be installed to prevent sediment from stormwater runoff from reaching the Reservoir. No direct discharge will be allowed into waterways, or the adjacent wetlands during the dewatering operations.

Climate Change, Adaptation, and Resiliency

Governor Baker's Executive Order 569: Establishing an Integrated Climate Change Strategy for the Commonwealth (EO 569; the Order) was issued on September 16, 2016. The Order recognizes the serious threat presented by climate change and direct Executive Branch agencies to develop and implement an integrated strategy that leverages state resources to combat climate change and prepare for its impacts. The Order seeks to ensure that Massachusetts will meet GHG emissions reduction limits established under the Global Warming Solution Act of 2008 (GWSA) and will work to prepare state government and cities and towns for the impacts of climate change. I note that the MEPA statute directs all State Agencies to consider reasonably foreseeable climate change impacts, including additional greenhouse gas emissions, and effects, such as predicted sea level rise, when issuing permits, licenses and other administrative approvals and decisions. M.G.L. c. 30, § 61.

As noted above, the Artichoke River and the Artichoke Reservoirs are located within the FEMA 100-year floodplain. The ENF states both the ordinary high water and 10-year design flood elevation are at 12.6-foot NAVD88, which is maintained by dams downstream of the project area at all times. According to the ENF, the existing bridge is designed to pass a 10-year storm event. The H&H analysis included in the ENF indicates the proposed bridge (and in wider hydraulic opening) will be able to accommodate the 100-year flood frequency storm event. The H&H analysis did not evaluate impacts from climate change on storm frequency and intensity; however, the ENF states that the impacts from the 10-year, 100-year, and 500-year storm events within the project site are not significantly different due to the stability and regulation of water levels provided by the dams. The ENF further states that the

project will create a more reliable, resilient road crossing, which will be less vulnerable to flooding or further deterioration in a storm event as compared to the existing bridge.

Historic Resources

As stated above, the project site does not contain any structures listed in MHC's Inventory; however, comments received on the ENF note concern with the characterization of the bridge (specifically, the original date of construction) and the lack of a repair/rehabilitate alternative included in the original ENF. The Proponent discussed the Repair/Rehabilitation of Existing Structure Alternative (Alternative 4) and associated increased environmental impacts (as compared to the Preferred Alternative) during the MEPA remote consultation meeting held on August 5, 2021, and provided supplemental information to the MEPA Office on August 6, 2021. As discussed above, repair of the existing bridge was dismissed due to the unknown condition of the substructures, poor foundation soils, narrow hydraulic opening and in turn streambed bottom, and lack of pedestrian accommodations. The ENF states a Project Notification Form (PNF) and request for comment was submitted to relevant tribes, MHC, and BUAR on January 14, 2021, and correspondence received from MHC in response to the PNF indicates the project is unlikely to affect significant historic or archaeological resources.

Construction

The project will take approximately 20 months to construct and is proposed to occur between October 2021 and June 2023. Before beginning construction, the ENF states boundaries of wetland resource areas and work areas will be clearly marked to prevent unauthorized encroachment into wetland resource areas. Proper erosion/sedimentation control devices, such as compost filter tubes will be installed. All construction and demolition activities should be managed in accordance with applicable MassDEP's regulations regarding Air Pollution Control (310 CMR 7.01, 7.09-7.10), and Solid Waste Facilities (310 CMR 16.00 and 310 CMR 19.00, including the waste ban provision at 310 CMR 19.017). The project should include measures to reduce construction period impacts (e.g., noise, dust, odor, solid waste management) and emissions of air pollutants from equipment, including anti-idling measures in accordance with the Air Quality regulations (310 CMR 7.11). I encourage the Proponent to require that its contractors use construction equipment with engines manufactured to Tier 4 federal emission standards, or select project contractors that have installed retrofit emissions control devices or vehicles that use alternative fuels to reduce emissions of volatile organic compounds (VOCs), carbon monoxide (CO) and particulate matter (PM) from diesel-powered equipment. Off-road vehicles are required to use ultra-low sulfur diesel fuel (ULSD). If oil and/or hazardous materials are found during construction, the Proponent should notify MassDEP in accordance with the Massachusetts Contingency Plan (310 CMR 40.00). All construction activities should be undertaken in compliance with the conditions of all State and local permits. I encourage the Proponent to reuse or recycle construction and demolition (C&D) debris to the maximum extent.

Conclusion

The ENF has adequately described and analyzed the project and its alternatives, and assessed its potential environmental impacts and mitigation measures. Based on review of the ENF and comments received on it, and in consultation with MassDEP, I have determined that an EIR is not required.

K. Theoharides

August 23, 2021

Date

Kathleen A. Theoharides

Comments received:

08/09/2021 Elisa J. Grammer

08/13/2021 Massachusetts Department of Environmental Protection Waterway Regulation Program
(MassDEP-WRP)

KAT/ELM/elm

Elisa J. Grammer
47 Coffin Street
West Newbury, MA 01985
August 9, 2021

Eva Murray, Environmental Analyst
Massachusetts Environmental Policy Act (MEPA) Office
100 Cambridge Street, 9th Floor
Boston, MA 02114
By email delivery Eva.Murry@mass.gov
And via the [MEPA Comment Portal](#)

Re: *Bridge Replacement Project- Middle Street and Plummer Spring Road over the Upper Artichoke Reservoir*,
EEA#/MEPA ID 16412

Dear Ms. Murray:

I write in my individual capacity as an interested West Newbury citizen, but would disclose that I am a member of the West Newbury [Historical Commission](#), which is not scheduled to meet to discuss the above-captioned matter until August 17, 2021. I respectfully request that the MEPA Office consider 1) the adequacy of the historical description of the bridge in the July 15, 2021 Environmental Notification Form and 2) the Form's failure to consider preserving and repairing/improving the existing bridge.

The Bridge's History

Cursory research (provided as Attachment 1) indicates that the Form's description of the bridge's history—"The road and stone arch bridge were constructed in 1891 before the Upper Artichoke Reservoir was built." (*Attachment A: Project Narrative*, at 2)—is neither entirely accurate nor complete. The bridge and road connecting West Newbury's Middle Street to what was once Newbury's Turkey Hill area was first proposed by John Plummer and other nearby property owners in 1850. This petition laid out the proposed route crossing the Artichoke River now in place. In 1853, West Newbury and Newburyport advertised for bids

For making and grading a road leading from Turkey Hill road to Artichoke River in Newburyport, it being about twenty one hundred feet

Also for making and grading a road near the Byfield road in West Newbury to Artichoke River, it being about twenty four hundred feet

Also to build a Stone Bridge fifteen feet span, across Artichoke River, according to profile, plans and specifications at the City Clerk's office, Newburyport

The roads and bridge were built by 1855, and are shown on a map dated 1856.

The stone bridge was the first public work of Jonathan Corliss, a farmer in West Newbury who became a stone mason. Corliss later built other stone bridges in the area.

In 1880, West Newbury's Annual Town Report contained a town meeting warrant article discussing the need to repair or rebuild "the bridge over Artichoke River on the Middle Road." In 1891 Newburyport determined "to expend the sum of \$1000 to build a bridge across the Artichoke river at Plummer's springs

if the town of West Newbury shall bear its part of the expense.” A stone bridge much like the 1850s original was put out to bid in 1891. It was complete by 1892, except for aspects of Newburyport’s adjacent road improvements.

A photo of and story about the bridge are included in Audrey Ladd’s history of West Newbury, *Contentious Citizens*. This is excerpted in Attachment 1 hereto. The Artichoke bridge is not currently in the MACRIS data base; whether it will be included in West Newbury’s upcoming Phase 3 [Historic Sites Survey](#) has not been determined.

Preservation and Repair Alternative

The existing bridge’s history dating to 1850 and its aesthetic appeal beg the question why repair/improvement of the existing bridge was not considered in the Form. The Form states the bridge is an “earth-filled stone arch” (*Attachment A: Project Narrative*, at 2) that is structurally deficient due to undermining of the existing roadway foundation (*Attachment A: Project Narrative*, at 1)

The Form offers no discussion of the alternative of strengthening and repairing the existing bridge’s roadway foundation, taking measures to mitigate erosion and scouring attributed (without elaboration) to the size of the existing bridge opening, and possibly improving the bridge deck to accommodate pedestrians. The Form identifies four alternatives, with precast concrete structures for all three of the construction options:

- a no-build alternative,
- a three-sided open bottom bridge with a precast concrete rigid frame,
- an open bottom arch bridge with precast concrete arch, and
- a three-sided open bottom bridge with a precast concrete beam (the Preferred Alternative / Proposed Project). (*Attachment A: Project Narrative*, at 6-8)

Logically, it would seem that repairing an existing bridge would also avoid a number of environmental impacts associated with demolishing the old one and constructing anew.

Accordingly, I respectfully request that the MEPA office consider the history of the existing bridge and the alternative of repairing/improving that bridge, short of full replacement.

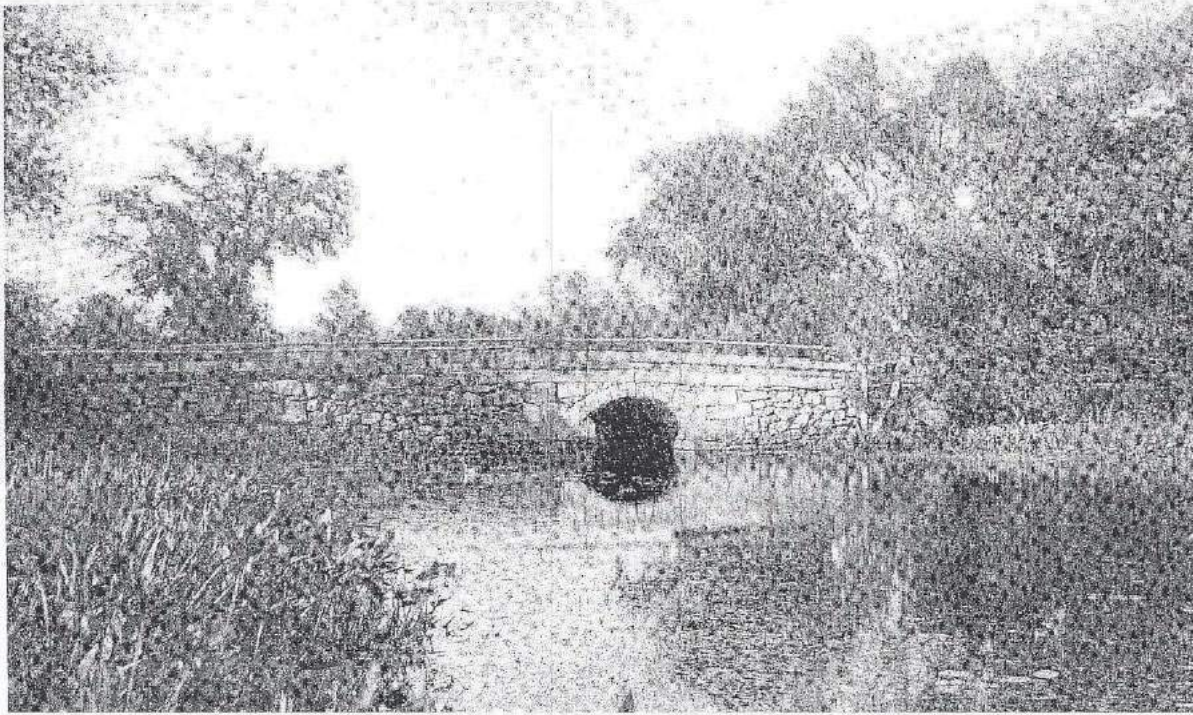
Respectfully submitted,



Elisa J. Grammer

Attachment 1: Initial research—Artichoke Bridge history

Contentious Citizens by Audrey Ladd p 195



ARTICHOKE BRIDGE

Walter Poore's milk team came to grief a few days since as he was starting for town. The horses became frightened when only a short distance from home and while he was out of the team. They ran for about a mile when upon reaching the Artichoke bridge one horse decided to go one side of the heavy railing that divides the bridge, and the other was just as determined to go on the other side. The consequence was though each had their own way the pung was left behind in a damaged condition. Only two cans of milk were spilt however. The horses stopped a little farther on and were driven home to be harnessed into the wagon.

[Map of the original town of Newbury, now divided into Newbury, Newburyport and West Newbury - Norman B. Leventhal Map & Education Center](#) 1830 map—no bridge shown at Middle St

1850: proposal for a new bridge over the Artichoke by Plummer property

http://newburyport.advantage-preservation.com/viewer/?k=artichoke%20bridge&i=f&d=01011850-01011860&m=between&ord=k1&fn=daily_herald_usa_massachusetts_newburyport_18500710_english_4&df=1&dt=10&cid=2710

meeting.

Second To act on an Order of Notice from the Hon: County Commissioners, founded on a petition of Moses H. Poor and others, to widen and locate anew a road from Crane-Neck School-House in West Newbury, by the house of Moses H. Poor, to some point near the house of Moses Little, Esq. in Newbury. Also, an Order of Notice on the petition of John L. Plummer and others, to widen and locate anew a road from some point near the house of Stephen C. Thurlow, in West Newbury, by the house of Edmund Knight to the New Road, so called, crossing Artichoke river at or near the new Log.

http://newburyport.advantage-preservation.com/viewer/?k=artichoke%20bridge&i=f&d=01011850-01011860&m=between&ord=k1&fn=daily_herald_usa_massachusetts_newburyport_18500620_english

To the Honorable County Commissioners to the
County of Essex

THE undersigned, inhabitants of said county, respectfully represent, That the road, as now travelled, through the central part of West Newbury to Newburyport, is in many places narrow, circuitous and otherwise inconvenient, and public convenience requires that certain alterations and new locations therein should be made, and also that a new road should be made as hereafter described, thereby opening a much shorter and more convenient way of travel, viz

Beginning in the town of West Newbury, where the two roads cross, between the house of Stephen C Thurlow and the house of Thomas Elliott, and widening, straightening and new locating by said Elliott's house, the house of Edmund Knight and others, to some point at or near the house of John L. Plumer, or some suitable place to the eastward thereof, and thence locating anew to the Turkey Hill road in Newbury, at or near the westerly end of the New Road, so called; crossing Artichoke river at or near the new bay, and also to make all such alterations in said new road as may be necessary to make the same conform to said new location

We therefore pray your Honors to view said road and proposed new locations, and after all due proceedings having been had thereon, to cause all such alterations and new locations to be made, as your wisdom may believe the public convenience to require And as in duty bound will ever pray

JOHN L. PLUMMER & others
West Newbury, June 8, 1851

[3&df=1&dt=10&cid=2710](#)

1853—new road & bridge put to bid http://newburyport.advantage-preservation.com/viewer/?k=artichoke%20bridge&i=f&d=01011850-01011860&m=between&ord=k1&fn=newburyport_herald_usa_massachusetts_newburyport_18530531

To Road Makers & Bridge Builders

SEPARATE proposals will be received by the City Clerk of Newburyport, until June 1st, for the making and grading a road leading from Turkey Hill road to Artichoke River in Newburyport, it being about twenty one hundred feet

Also for making and grading a road near the Byfield road in West Newbury to Artichoke River, it being about twenty four hundred feet

Also to build a Stone Bridge fifteen feet span, across Artichoke River, according to profile, plans and specifications at the City Clerk's office, Newburyport

Per order of the Committees of Newburyport and West Newbury

JOHN M COOPER, for Newburyport.

m13 MOSES NEWELL, for West Newbury

http://newburyport.advantage-preservation.com/viewer/?k=artichoke%20bridge&i=f&d=01011853-01011856&m=between&ord=k1&fn=daily_herald_usa_massachusetts_newburyport_18550730_english_7&df=1&dt=10&cid=2710 1855-mentions new bridge over the Artichoke River

http://newburyport.advantage-preservation.com/viewer/?k=artichoke%20bridge&i=f&d=01011870-01011880&m=between&ord=k1&fn=newburyport_daily_herald_usa_massachusetts_newburyport_18781115_english_3&df=51&dt=59&cid=2710 Jonathan Corliss built a stone arch bridge over the Artichoke River in Newbury—which was before Nbpt took over the Turkey Hill side

the previous afternoon.

SALISBURY.

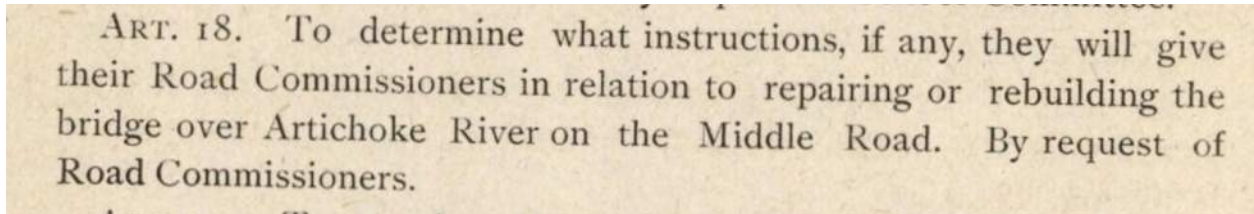
The Rev. Mr. Evans of Shelburne Falls has received a call to the pastorate of the Market street Baptist church in this village, and will enter upon his duties next Sabbath.

One by one the old citizens depart. This week we have to chronicle the death of Mr. Jonathan Corliss at the age of 79 years. Mr. Corliss was a native of Orange N. H., which place he left at the age of 18 years, and went to West Newbury, where he worked as a farmer. Later, he moved and came to Salisbury, living for a few years on the "Webster farm." He moved to the "village" and commenced the work of a stone mason, which business he has followed for upwards of thirty years. His first public work was the building of a stone arch bridge across the Artichoke river in Newbury. He also built the three stone bridges between Amesbury and Salisbury Mills, and has contracted and laid the foundation of two-thirds of all the houses built in this village during his business career. A quiet man of a few words, a good citizen, an honest man. His funeral was conducted by Rev. Mr. Noyes and Rev. Mr. Morton, at his residence on Market street, and attended by many of the prominent citizens of the town, who knew and appreciated the worth of the man. *Villager*

<https://iiif.lib.harvard.edu/manifests/view/ids:12909658> 1856 map—Middle St continues over the Artichoke

https://digitalcommons.salemstate.edu/maps_essexcounty/29/ 1871 map—Middle St continues over the Artichoke

1880 Annual Town Report



ART. 18. To determine what instructions, if any, they will give their Road Commissioners in relation to repairing or rebuilding the bridge over Artichoke River on the Middle Road. By request of Road Commissioners.

http://newburyport.advantage-preservation.com/viewer/?k=artichoke%20bridge&i=f&d=01011885-12311900&m=between&ord=k1&fn=newburyport_daily_news_usa_massachusetts_newburyport_1891_0421_english_1&df=1&dt=10&cid=2710 rebuilding bridge

incea.

Looking at Artichoke Bridge.

The local committee on bridges and culverts will visit the Artichoke bridge this afternoon, in company with a bridge builder, and will there meet the road commissioners of West Newbury and consider the rebuilding of the bridge.

http://newburyport.advantage-preservation.com/viewer/?k=artichoke%20bridge&i=f&d=01011885-12311900&m=between&ord=k1&fn=newburyport_daily_news_usa_massachusetts_newburyport_18910505_english_1&df=1&dt=10&cid=2710 Nbpt decides to build bridge at Plummers Springs if WN pays half

A New Bridge.

Councilman Merrill offered an order that the committee on bridges and culverts be authorized to expend the sum of \$1000 to build a bridge across Artichoke river at Plummer's springs if the town of West Newbury shall bear its part of the expense. Adopted,

To Connect With the River

http://newburyport.advantage-preservation.com/viewer/?k=artichoke&i=f&d=01011885-12311900&m=between&ord=k1&fn=newburyport_daily_news_usa_massachusetts_newburyport_18910331_english_1&df=11&dt=20&cid=2710

being improved.

ARTICHOKE BRIDGE.

**West Newbury and Newburyport Inter-
ested In It.**

The committee on bridges and culverts held a meeting last evening. The matter of Artichoke bridge was talked over, and it was finally decided to meet the road commissioners of West Newbury and see what is best to do in regard to rebuilding the bridge over the Artichoke, and whether it would be better to build of iron or stone. The monthly bills were all approved.

http://newburyport.advantage-preservation.com/viewer/?k=artichoke%20bridge&i=f&d=01011890-01011895&m=between&ord=k1&fn=newburyport_daily_news_usa_massachusetts_newburyport_1891_0808_english_3&df=11&dt=20&cid=2710 Sealed proposals for replacement stone bridge

Proposals for Building Stone Arch Bridge.



Sealed proposals will be received at the office of the City Clerk of Newburyport until 1 o'clock Saturday, August 13, inst., by the Committee on Bridges and Culverts of the City of Newburyport and the Road Commissioners of the town of West Newbury, to furnish all the material and labor required to construct a stone arch bridge over the Artichoke river, at Plummer's Spring, so-called, in accordance with plans and specifications to be seen at the office of the City Clerk of Newburyport.

The said Committee and Road Commissioners reserve the right to reject any or all proposals that may be offered.

Attest. GEO. H. STEVENS, City Clerk.

Newburyport Aug. 5, 1891. 858111

[http://newburyport.advantage-preservation.com/viewer/?k=artichoke%20bridge&i=f&d=01011890-01011895&m=between&ord=k1&fn=newburyport daily news usa massachusetts newburyport 18910822 english 4&df=1&dt=10&cid=2710](http://newburyport.advantage-preservation.com/viewer/?k=artichoke%20bridge&i=f&d=01011890-01011895&m=between&ord=k1&fn=newburyport%20daily%20news%20usa%20massachusetts%20newburyport%2018910822%20english%204&df=1&dt=10&cid=2710) Notice re traffic and new stone bridge construction

NOTICE.



Notice is hereby given that travel will be discontinued on that portion of Hale street between Turkey Hill street and the Artichoke river in the city of Newburyport on and after Monday the 24th day of August instart, until the completion of the new stone bridge over the Artichoke river at the point between the city of Newburyport and the town of West Newbury.

Per order chairman of committee on bridges and overts, Newburyport Aug 22, 1891. Attest, GEORGE H STEVENS, City Clerk

http://newburyport.advantage-preservation.com/viewer/?k=artichoke%20bridge&i=f&d=01011890-01011895&m=between&ord=k1&fn=newburyport_daily_news_usa_machusetts_newburyport_1892_0607_english_4&df=21&dt=30&cid=2710 A Hint to Nbpt's Hwy Dept—replacement Plummer Springs Bridge completed by 1892

known as Ward Hill was called by the same name.	
WEST NEWBURY	
A Hint to Newburyport's Highway Department—Short Notes.	
The superintendent of highways in Newburyport promised a number of farmers some time ago that he would gravel the top of the hill near the Artichoke bridge on Plummer Springs road. It has not yet been done, but still remains in the bad condition left when the new bridge was built. In rainy weather it is especially bad, and as there is considerable travel over this road it should be attended to at once. A few hours work and a few loads of gravel is all that is needed.	
An event looked forward to with much interest by war veterans and others in this town, is the annual reunion of the Nineteenth Massachusetts Regiment which occurs here next August.	
SEABROOK	

http://newburyport.advantage-preservation.com/viewer/?k=artichoke%20bridge%20plummer&i=f&d=01011920-01011940&m=between&ord=k1&fn=newburyport_daily_news_and_newburyport_herald_usa_machusetts_newburyport_19240819_english_1&df=11&dt=13&cid=2710 1924—Nbpt water pumping undermining the bridge

NEW PUMP FOR THE WATER WORKS

Commissioners Last Evening Contract for One With 3,000,000 Per Day Capacity.

The water commissioners last evening awarded a contract for a new pump at the Spring lane pumping station of the water works to the Allis-Chalmers Mfg. Co. of Milwaukee, whose bid was \$29,100. The pump has a capacity of 3,000,000 per day and it is driven by an engine of cross-compound type.

The company will require from six to seven months to install the pump, so it will be well into next year before the new equipment will be available.

There will be quite a little remodeling of the pumping station preparatory to the installation of the pump, which is to be put in a portion of the building used for storage of coal.

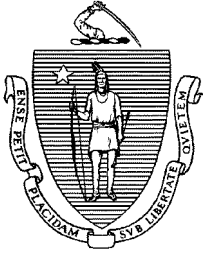
The commissioners considered ways and means to prevent further damage to the embankment at the Plummer

Springs, bridge at the Artichoke river which is being undermined by the action of the waves. It was decided to put in riprap work, which will be done by men regularly employed by the water works.

GARDEN FETE AT FINISTERE.

Finistere, the estate of John Clay, at the tip of Eastern Point, Gloucester, overlooking the ocean and one of the most beautiful places on the North Shore, will be the scene tomorrow of the fund for rebuilding the Chapel street Baptist church destroyed by fire last December.

Dr. Bullard has resumed practice.—
Adv.



The COMMONWEALTH OF MASSACHUSETTS
BOARD OF UNDERWATER ARCHAEOLOGICAL RESOURCES
EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS
251 Causeway Street, Suite 800, Boston, MA 02114-2136
Tel. (617) 626-1014 Fax (617) 626-1240
www.mass.gov/orgs/board-of-underwater-archaeological-resources

August 12, 2021

Kathleen A. Theoharides, Secretary
Executive Office of Energy and Environmental Affairs
Attention: Eva Murray, MEPA Unit (via email attachment)
100 Cambridge Street, Suite 900
Boston, MA 02114

RE: Bridge Replacement Project (EEA# 16412) - Middle Street and Plummer Spring Road over the Upper Artichoke Reservoir, West Newbury and Newburyport, MA

Dear Secretary Theoharides,

The staff of the Massachusetts Board of Underwater Archaeological Resources has reviewed the above-referenced proposed project as detailed in the *Environmental Monitor* of July 23, 2021 and offers the following comments.

The Board has conducted a preliminary review of its files and secondary literature sources to identify known and potential underwater archaeological resources within the proposed project area. No record of any underwater archaeological resources was found. Based on the results of this review, the Board considers this project unlikely to adversely impact submerged cultural resources.

Should heretofore-unknown underwater archaeological resources be encountered during the course of the project, the Board expects that the project's sponsor will take steps to limit adverse effects and notify the Board and the Massachusetts Historical Commission, as well as other appropriate agencies, immediately, in accordance with the Board's *Policy Guidance for the Discovery of Unanticipated Archaeological Resources*.

The Board appreciates the opportunity to provide these comments as part of the MEPA review process. Should you have any questions regarding this letter, please do not hesitate to contact me at the address above or by email at david.s.robinson@mass.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read "David S. Robinson".

David S. Robinson
Director

/dsr

Cc: Brona Simon, MHC
Bettina Washington, WTGH/A (via email attachment)
David Weeden, MWT (via email attachment)



Department of Environmental Protection

One Winter Street Boston, MA 02108 • 617-292-5500

Charles D. Baker
Governor

Karyn E. Polito
Lieutenant Governor

Kathleen A. Theoharides
Secretary

Martin Suuberg
Commissioner

Memorandum

To: Eva Murray, MEPA

From: MassDEP/Boston Waterways Regulation Program

Cc: Daniel Padien, MassDEP/Boston Waterways Regulation Program

Re: **Comments from the Chapter 91 Waterways Regulation Program - EEA #16412, ENF, Reconstruction of Bridge; Middle Street and Plummer Spring Road over the Upper Artichoke River, Newburyport and West Newbury, Essex County.**

Date: August 12, 2021

The Department of Environmental Protection Waterways Regulation Program (the “WRP”) has reviewed the above referenced ENF (EEA #16412) submitted by the BSC Group, on behalf of the City of Newburyport and the Town of West Newbury (the “Proponent”) for the proposed reconstruction of the bridge over the Upper Artichoke River on Middle Street and Plummer Spring Road in Newburyport and West Newbury, Essex County.

The project proposes to replace an existing bridge, which is an earth-filled fieldstone arch structure constructed in 1891. The bridge and approach roads have been determined to be structurally deficient due to undermining of the paved roadway foundation. The existing two-lane bridge is approximately 20’-0” in width with no sidewalks, with an earth-filled 24’-0” single span fieldstone arch. The proposed new bridge is a precast concrete structure that will utilize the same roadway horizontal and vertical alignment. The bridge opening will be expanded from 14’-0” to 45’-0”, and the width of the roadway crossing will expand from approximately 24’0’ to 32’-6”, in order to accommodate roadway safety requirements and a pedestrian sidewalk on the southbound side of the bridge. Rip-rap scour protection will be placed in the streambed to stabilize the roadway and bridge. The final elevation of the streambed will be similar to that of the existing streambed. The approach roadways will be widened on both sides of the bridge and stabilized by a combination of retaining walls and sloped rip-rap. In total, the project site encompasses approximately .49 acres and has an approximate horizontal length of 320-’0”.

Reconstruction of Middle Street and Plummer Spring Road Bridge Over the Upper Artichoke River, City of Newburyport and Town of West Newbury, Essex County.
EEA ENF #16414
MassDEP Chapter 91 Waterways Program Comments
August 12, 2021

The existing fieldstone arch bridge and approach roadways were constructed in 1891, prior to the 1939 statutory change when c.91 jurisdiction was expanded to navigable rivers. As a result, the proponent did not include any historic licensing documentation for the structures.

Water Dependency:

The WRP has determined that this proposal is a water-dependent project, pursuant to 310 CMR 9.12(1)(a) & (2)(d).

Chapter 91 Jurisdiction:

The project is located on the Upper Artichoke River, a nontidal waterway subject to Chapter 91 jurisdiction, pursuant to 310 CMR 9.04(1)(e).

Chapter 91 Comments:

The project, as described, appears to substantively comply with the applicable provisions for water-dependent Public Service projects, specifically those enumerated at 310 CMR 9.35-9.37.

The Department awaits the filing of a Waterways License Application which meets the minimum filing standards as set forth in 310 CMR 9.11(3)(a)-(c), and the Secretary's Certificate concluding the MEPA review process.

If you have any questions regarding the WRP's comments, please feel free to contact at DEPwaterways@mass.gov.

Environmental Notification Form

**Middle Street & Plummer Spring Road over the Upper Artichoke Reservoir
Bridge Replacement Project**
West Newbury & Newburyport, Massachusetts

July 2021

Filed in Accordance with the Massachusetts Environmental Policy Act 301 CMR 11.00

Prepared for:
TOWN OF WEST NEWBURY
381 MAIN STREET
WEST NEWBURY, MA 01985

CITY OF NEWBURYPORT
16 C PERRY WAY
NEWBURYPORT, MA 01950

Prepared by:

 **BSC GROUP**
803 SUMMER STREET
BOSTON, MA 02127
BSC PROJECT NUMBER 28395.00

Environmental Notification Form

For office Use Only

EEA#: _____

MEPA Analyst: _____

The information requested on this form must be completed in order to submit a document . . . electronically for review under the Massachusetts Environmental Policy Act, 301 CMR 11.00.

Project Name: Bridge Replacement Project - Middle Street and Plummer Spring Road over the Upper Artichoke Reservoir		
Street Address: Middle Street and Plummer Spring Road		
Municipality: West Newbury, and Newburyport	Watershed: Merrimack	
Universal Transverse Mercator Coordinates: 342105.36 m E, 4740743.77 m N	Latitude, Longitude: 42.802972° N, -70.930972° W	
Estimated commencement date: October 2021	Estimated completion date: June 2023	
Project Type: Transportation	Status of project design: 95% complete	
Proponent: Town of West Newbury and City of Newburyport		
Street Address: 16 C Perry Way		
Municipality: Newburyport	State: MA	Zip Code: 01950
Street Address: 381 Main Street		
Municipality: West Newbury	State: MA	Zip Code: 01985
Name of Contact Person: Sara Kreisel, PWS		
Firm/Agency: BSC Group, Inc.	Street Address: 803 Summer Street	
Municipality: Boston	State: MA	Zip Code: 02127
Phone: 617-896-4579	Fax: 617-896-4301	E-mail: skreisel@bscgroup.com
Does this project meet or exceed a mandatory EIR threshold (see 301 CMR 11.03)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
If this is an Expanded Environmental Notification Form (ENF) (see 301 CMR 11.05(7)) or a Notice of Project Change (NPC), are you requesting: [N/A]		
a Single EIR? (see 301 CMR 11.06(8))	<input type="checkbox"/> Yes	<input type="checkbox"/> No
a Special Review Procedure? (see 301CMR 11.09)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
a Waiver of mandatory EIR? (see 301 CMR 11.11)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
a Phase I Waiver? (see 301 CMR 11.11)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<i>(Note: Greenhouse Gas Emissions analysis must be included in the Expanded ENF.)</i>		
Which MEPA review threshold(s) does the project meet or exceed (see 301 CMR 11.03)?		
The Project meets or exceeds the following ENF review thresholds:		
<i>301 CMR 11.03 (3)(b)c. c. alteration of 1,000 or more sf of... outstanding resource waters;</i>		
Which State Agency Permits will the project require?		
MassDEP 401 Water Quality Certification		
Identify any financial assistance or land transfer from an Agency of the Commonwealth, including the Agency name and the amount of funding or land area in acres:		
West Newbury has secured a \$1M MassWorks Infrastructure Grant : replacement design/construction		
Newburyport has secured a \$500K MassDOT Small Bridge Grant : replacement design/construction		

Summary of Project Size & Environmental Impacts	Existing	Change	Total
LAND			
Total site acreage	21,379 sf (0.49 ac)		
New acres of land altered		2,099 sf (0.05ac) 1,895 (0.04)	
Acres of impervious area ¹	6,968 sf (0.16 ac)	2,099 sf (0.05 ac)	9,067 sf (0.21 ac)
Square feet of new bordering vegetated wetlands alteration		0 sf	
Square feet of new other wetland alteration		LUW	984 sf (Perm) 885 sf (Gain) 641 sf (Temp)
		RFA	3,393 sf (Perm) 5,872 (Redev) 1,254 (Temp)
		BLSF	211 sf (Alter) 655 sf (Gain)
Acres of new non-water dependent use of tidelands or waterways		N/A	
STRUCTURES			
Gross square footage	N/A	N/A	N/A
Number of housing units	N/A	N/A	N/A
Maximum height (feet)	N/A	N/A	N/A
TRANSPORTATION			
Vehicle trips per day	920 (per traffic counts, June 2017. Road Closed to Vehicles in 2018)	0	920
Parking spaces	N/A	N/A	N/A
WASTEWATER			
Water Use (Gallons per day)	N/A	N/A	N/A
Water withdrawal (GPD)	N/A	N/A	N/A
Wastewater generation/treatment (GPD)	N/A	N/A	N/A
Length of water mains (miles)	N/A	N/A	N/A
Length of sewer mains (miles)	N/A	N/A	N/A
Has this project been filed with MEPA before? <input type="checkbox"/> Yes (EEA # _____) <input checked="" type="checkbox"/> No			
Has any project on this site been filed with MEPA before? <input type="checkbox"/> Yes (EEA # _____) <input checked="" type="checkbox"/> No			

¹ The existing public roadway is a paved roadway with impervious area around the guardrail. A majority of the project area will be returned to preconstruction conditions. The new sidewalk, retaining walls, and slightly expanded roadway will increase impervious area.

GENERAL PROJECT INFORMATION – all proponents must fill out this section

PROJECT DESCRIPTION:

The Town of West Newbury and City of Newburyport (the Applicants) are planning to replace the structurally deficient, undersized bridge (Bridge No. N-11-007) which carries Middle Street and Plummer Spring Road, respectively, over the Artichoke River / Upper Artichoke Reservoir (hereby referred to as “the bridge”), in Newburyport and West Newbury, MA. The bridge is structurally deficient due to undermining of the existing roadway foundation. The

Applicant proposes to replace the bridge structure with a new bridge in a similar horizontal and vertical alignment with a slight increase in width to safely accommodate pedestrian use. The project involves mitigation measures intended to address existing structural and hydraulic deficiencies, while also minimizing disturbances to the surrounding environment and improving openness. The project is largely an in-kind replacement with a project footprint increase of just under 10%.

Describe the existing conditions and land uses on the project site:

West Newbury is located on the northwestern side of the bridge, and Newburyport is on the eastern side. Plummer Spring Road, Newburyport turns into Middle Street upon entering West Newbury. The project site is approximately 2,000 feet west of the intersection with Turkey Hill Road, Newburyport and approximately 0.7 mile east of the intersection with Garden Street, West Newbury. The crossing occurs within the Upper Artichoke Reservoir, a public water supply. The surrounding area is comprised of Article 97 lands, reserved for water supply protection. Beyond that, the area is generally characterized by low-density residential development. The bridge predates and divides the existing Upper Artichoke Reservoir, through which the Artichoke River flows. The Reservoir was originally formed by damming the Artichoke River which flows north to the Merrimack River. While the majority of the surrounding area consists of residential development and forested land, the project area is limited to previously disturbed Riverfront Area and other resource areas encumbered by the existing bridge. Please refer to Project Mapping (**Attachment B**) for additional details

Without the impediment of two dams, the Artichoke River generally flows in a south-to-north orientation from the Upper Artichoke Reservoir to the Lower Artichoke Reservoir, before discharging into the Merrimack River, 1.3 miles north of the project area. According to the USGS Stream Stats Report for this area, the drainage area at the bridge crossing is approximately 5.48 square miles.

The existing crossing structure consists of a 14.3-foot (span) by 13.2-foot (rise) by 24.2-foot (long) single span earth-filled stone arch, set at an approximate slope of 0%. Please refer to Project Site Plans (**Attachment B**) for additional details. The road and stone arch bridge were constructed in 1891 before the Upper Artichoke Reservoir was built. The low chord on the existing arch is set at an elevation of 16.20 feet. The paved roadway consists of two travel lanes that vary in width from 8.5 feet to 10-feet for a total roadway width of approximately 20-feet. There are no sidewalks on the bridge. The bridge was closed in 2018 to vehicular traffic due to the collapse of portions of the bridge, stone headwall, and southeast approach roadway, and is currently considered structurally deficient due to undermining of the paved roadway foundation. The project area consists of country drainage, whereby runoff travels to the approach roadway and informally runs off down the side slopes. Middle Street / Plummer Spring Road is functionally classified as a Rural Local road.

Based on a desktop review and preliminary field reconnaissance, the following resource areas, buffer zones, and environmental constraints are located within and in vicinity of the Project area:

- Land Under Water
- Bank
- 100-foot Buffer Zone to Bank
- 200-foot Riverfront Area
- Bordering Land Subject to Flooding
- Outstanding Resource Water

There are no other sensitive resource areas overlapping with the proposed Project area such as Natural Heritage and Endangered Species Program (NHESP) Priority or Estimated Habitat, NHESP Certified or Potential Vernal Pools (C/PVPs), or Areas of Critical Environmental Concern (ACEC). Please see the Project Narrative for further details of resource areas.

Describe the proposed project and its programmatic and physical elements:

The purpose of the project is to replace a structurally deficient, undersized bridge with a new bridge along a similar horizontal and vertical alignment. The project activities include the replacement of the bridge over the Upper Artichoke Reservoir in its entirety. The full sequence of project construction activities will take approximately 20 months to complete. The project involves mitigation measures intended to address existing structural deficiencies, while also minimizing disturbances to the surrounding environment and improving openness. The proposed replacement bridge will carry two lanes of traffic on Middle Street/Plummer Spring Road. The roadway width will increase by approximately 4 feet to include safety improvements to the existing alignment. A safety sidewalk will be added to the south side of the bridge. Approach roadway reconstruction of Middle Street will extend 160-feet to the west of the bridge and 115-feet to the east on Plummer Spring Road. The total length of the project is approximately 320-feet. The following project components detail the proposed project activities. Please refer to Project Site Plans (**Attachment B**) for additional details.

- **Proposed Bridge** – The proposed bridge is a high strength precast concrete structure that will follow a similar horizontal and vertical alignment as the existing bridge. The proposed span length will increase from the 14 feet to 45 feet. The overall width of the bridge will increase from 24.2 feet to 32.5 feet to accommodate safety improvements, including the sidewalk. In addition to substantially increasing the openness ratio, the increased span eliminates the need for the bridge’s substructure to be located in the deep portion of the reservoir. In accordance with the MassDOT Bridge Manual for a Rural Local road, the proposed bridge has been designed to meet the 10-year flood frequency storm event. Based on hydraulic analysis, the proposed bridge can also accommodate the 100-year flood frequency storm event since the reservoir dam system regulates the amount of flow in nearly all storms. The proposed bridge increases the hydraulic opening by a factor of two compared to the existing condition.
- **Riprap Scour Protection** –With the increased span, to achieve a 1:1.5 vertical: horizontal ratio from the elevation of the existing streambed to the elevation at the new bridge abutments, slope stabilization is required. The slope stabilization will consist of a 36-inch-deep layer of variable sized riprap (10- to 22-inch stones) placed below the natural streambed material. In addition, 6 inches of natural streambed material is proposed on top of the riprap. Prior to streambed excavation, natural streambed material will be removed and stockpiled on site for use during restoration to ensure the sizing and arrangement of materials under pre- and post-construction conditions. Upon completion of the proposed bridge replacement activities, the streambed elevation will be restored to its natural condition.
- **Roadway Reconstruction** – At the approaches of the existing bridge the roadway is narrow and the slopes adjacent to the roadway are steep making the existing guardrail ineffective. To meet current roadway geometric and safety requirements, portions of the road will be widened and the slopes reduced and/or retaining walls installed. To limit impacts to the reservoir, retaining walls will be installed where applicable. However, in areas where slopes with a 1:1.5 vertical: horizontal ratio or less exist, they will be regraded (without impacting the reservoir).
- **Installation of Guardrail and Repaving Activity** – Bridge replacement activities provide an opportunity to make safety improvements to existing conditions surrounding the bridge. The existing functional roadway width will expand from approximately 20-feet to 24-feet wide over the bridge. The widened roadway will meet the existing roadway width at the limits of the project. The approaches to the bridge will be repaved following the completion of project activities. Extended steel guardrail is proposed along the approaches to the bridge to replace existing non-functioning guardrail posts. While these activities will occur within the limits of RFA and BLSF, these areas are currently disturbed and the work within these areas will not adversely affect the resource areas.

Please see the **Project Narrative** for full details of the work.

The Project is anticipated to result in wetland resource area impacts as follows. Please refer to the **Project Narrative** for further information / description of the exact nature of these impacts:

Resource Area	Impact Type	West Newbury	Newburyport	TOTAL
Land Under Water (LUW)	Permanent	553 sf	431 sf	984 sf
	Permanent Dredge / Fill	39 cy / 17 cy	9 cy / 2 cy	48 cy / 19 cy
	Temporary	443 sf	198 sf	641 sf
	Temporary Dredge / Fill	28 cy / 0 cy	22 cy / 0 cy	50 cy / 0 cy
Bank	Permanent	128 lf	54 lf	182 lf
	Temporary	47 lf	14 lf	61 lf
200-foot Riverfront Area (RFA)	Redevelopment	3,203 sf	2,669 sf	5,872 sf
	Permanent	2,060 sf	1,333 sf	3,393 sf
	Temporary	552 sf	702 sf	1,254 sf
Bordering Land Subject to Flooding (BLSF)	Proposed Alteration (sf)	167 sf	44 sf	211 sf
	Proposed Replacement	311 sf	344 sf	655 sf
	Flood Storage Lost (cf)	393 cf	132 cf	525 cf
	Flood Storage Replaced	1,438 cf	1,857 cf	3,295 cf

The entire project area, 21,379 sf (0.49 ac), is located within/adjacent to an ORW. Impacts due to construction are temporary in nature. The bridge has been closed to vehicles since the middle of 2018 for safety so there will be no disruption to local traffic as a result of the project; however, some additional indirect impacts in the project area will include erosion/sedimentation, noise during construction, and possibly some fugitive dust. No significant long-term impacts are anticipated. The project will have many long-term benefits by creating a greater -bridge span, safe pedestrian facilities, greater openness, increased habitat connectivity and improved wildlife passage, and serving the public interest by fixing a road with a structurally deficient, undersized bridge that has been closed to public access, while minimizing environmental impacts to the extent practicable.

NOTE: The project description should summarize both the project's direct and indirect impacts (including construction period impacts) in terms of their magnitude, geographic extent, duration and frequency, and reversibility, as applicable. It should also discuss the infrastructure requirements of the project and the capacity of the municipal and/or regional infrastructure to sustain these requirements into the future.

Describe the on-site project alternatives (and alternative off-site locations, if applicable), considered by the proponent, including at least one feasible alternative that is allowed under current zoning, and the reasons(s) that they were not selected as the preferred alternative:

Please refer to **Section 2 Alternatives Analysis** in the **Project Narrative** and a Stream Crossing Evaluation / Alternatives Analysis in **Attachment E**, which includes additional information on the following alternatives:

- Alternative #1 – No-Build Alternative.
- Alternative #2 – Three-sided Open Bottom Bridge with a precast concrete rigid frame
- Alternative #3 – Open Bottom Arch Bridge with precast concrete arch.
- Alternative #4 – Three-sided Open Bottom Bridge with a precast concrete beam, Preferred Alternative

NOTE: The purpose of the alternatives analysis is to consider what effect changing the parameters and/or siting of a project, or components thereof, will have on the environment, keeping in mind that the objective of the MEPA review process is to avoid or minimize damage to the environment to the greatest extent feasible. Examples of alternative projects include alternative site locations, alternative site uses, and

alternative site configurations.

Summarize the mitigation measures proposed to offset the impacts of the preferred alternative:

Mitigation is discussed throughout the **Project Narrative** and presented comprehensively in **Section 6 Mitigation**. This section focuses on addressing the limited constructed-related impacts associated with removal and replacement of the new bridge and required riprap for the protection of the abutments/wingwalls. The proposed design incorporates retaining walls to minimize impacts to the surrounding Reservoir and proposes stormwater treatment for the roadway, as none currently occurs. As the purpose is to replace a failed bridge on a noticed evacuation route, no other viable option for the structure is possible.

BMPs will consistently be implemented and policies for access and construction to ensure that trained personnel work in a manner that minimizes potential impacts to the environment, adheres to permit conditions, and meets industry standards. Throughout the design and permitting process, the applicant will identify work procedures and indicate on Project drawings erosion and sediment control barriers, the dewatering locations, and restoration procedures following construction. Material stockpiling, where required, will only be implemented within the identified project area, and will in occur with industry standard BMPs. Implementation of mitigation measures and Best Management Practices (BMPs) will avoid and minimize potential temporary impacts associated with Project construction.

If the project is proposed to be constructed in phases, please describe each phase:

The construction phases are described in the attached **Project Narrative and Plans (Attachment B)**.

AREAS OF CRITICAL ENVIRONMENTAL CONCERN:

Is the project within or adjacent to an Area of Critical Environmental Concern?

Yes (Specify _____) No

if yes, does the ACEC have an approved Resource Management Plan? ___ Yes __ No;

If yes, describe how the project complies with this plan.

Will there be stormwater runoff or discharge to the designated ACEC? ___ Yes __ No;

If yes, describe and assess the potential impacts of such stormwater runoff/discharge to the designated ACEC.

RARE SPECIES:

Does the project site include Estimated and/or Priority Habitat of State-Listed Rare Species? (see

http://www.mass.gov/dfwele/dfw/nhosp/regulatory_review/priority_habitat/priority_habitat_home.htm)

Yes (Specify: _____) No

HISTORICAL /ARCHAEOLOGICAL RESOURCES:

Does the project site include any structure, site or district listed in the State Register of Historic Place or the inventory of Historic and Archaeological Assets of the Commonwealth?

Yes (Specify: See the **Historical and Archaeological Resources Section** of this ENF form) No

If yes, does the project involve any demolition or destruction of any listed or inventoried historic or archaeological resources? Yes (Specify: See the **Historical and Archaeological Resources Section** of this ENF form) No

Review of MACRIS identified that there are no historic or cultural resources within the project vicinity, and for over 0.4 miles from the existing bridge crossing. The Walter Drescher Farmhouse is approximately 0.4 miles west of the crossing. There are no proposed impacts to this site. Please see **Section 3 of the Project Narrative** for further details. Please also see **Attachment D** for a copy of the PNF form and cover letter.

WATER RESOURCES:

Is there an Outstanding Resource Water (ORW) on or within a half-mile radius of the project site? Yes No; if yes, identify the ORW and its location:

The proposed project is for the replacement of a roadway bridge over an existing reservoir; the Upper Artichoke Reservoir is classified as a Class A public water supply.

(NOTE: Outstanding Resource Waters include Class A public water supplies, their tributaries, and bordering wetlands; active and inactive reservoirs approved by MassDEP; certain waters within Areas of Critical Environmental Concern, and certified vernal pools. Outstanding resource waters are listed in the Surface Water Quality Standards, 314 CMR 4.00.)

Are there any impaired water bodies on or within a half-mile radius of the project site? Yes No; if yes, identify the water body and pollutant(s) causing the impairment: N/A

Is the project within a medium or high stress basin, as established by the Massachusetts Water Resources Commission? Yes No

STORMWATER MANAGEMENT:

Generally describe the project's stormwater impacts and measures that the project will take to comply with the standards found in MassDEP's Stormwater Management Regulations:

The Project area currently exhibits country drainage whereby runoff travels to the approach roadway and informally runs off down the side slopes. The proposed bridge replacement is considered a redevelopment project and impervious surfaces and run-off volumes will not increase significantly. The proposed design meets the stormwater standard to the maximum extent practicable. As such, a formal Stormwater Management Report has not been prepared for this project, but a streamlined one is included in **Attachment E**.

The lowest point of the project occurs within the roadway on the West Newbury side of the project area. To provide additional treatment, it is proposed that two deep sump catch basins be installed at the low point of the project on either side of the roadway and will flow to a 900-gallon water quality treatment unit. From there the runoff is directed northwest to a flared end section that discharges towards the reservoir onto a stone splash pad at the end of the pipe.

Two deep sump catch basins on either side of the roadway are also proposed in Newburyport, just before the ends of the retaining walls. The deep sump catch basins will flow to a 900-gallon water quality unit. From there runoff is directed south to a flared end section that discharges towards the reservoir onto a stone splash pad.

Roadway berms will direct stormwater to the catch basins, which will increase the amount of stormwater treated on-site before entering the Reservoir and will reduce the amount entering by country drainage. Between the deep sump catch basins and the water quality units, more than 80% of TSS will be removed from runoff captured by the catch basins across the entire project area. Additional information is in **Attachment E**, including specifications and typical details.

BMPs will be employed to minimize erosion and other potential impacts during construction as further described in **Section 5 Construction Procedures**. As a redevelopment project, the proposed design meets the stormwater standard to the maximum extent practicable. As such, a formal Stormwater Management Report has not been prepared for this project, but a streamlined Report is included in **Attachment E**.

MASSACHUSETTS CONTINGENCY PLAN:

Has the project site been, or is it currently being, regulated under M.G.L.c.21E or the Massachusetts Contingency Plan? Yes No ; if yes, please describe the current status of the site (including Release Tracking Number (RTN), cleanup phase, and Response Action Outcome classification): N/A

Closest sites are more than ¾ mile away in Newburyport, and more than 1.3 miles away in West Newbury.

Is there an Activity and Use Limitation (AUL) on any portion of the project site? Yes ___ No X;
if yes, describe which portion of the site and how the project will be consistent with the AUL: N/A

Are you aware of any Reportable Conditions at the property that have not yet been assigned an RTN?
Yes ___ No X; if yes, please describe: N/A, none for more than ¾ mile

SOLID AND HAZARDOUS WASTE:

If the project will generate solid waste during demolition or construction, describe alternatives considered for re-use, recycling, and disposal of, e.g., asphalt, brick, concrete, gypsum, metal, wood:

The Project involves excavation of material that may include metal, stone, and other fill material. Any materials that are determined to require off-site disposal will be disposed of or recycled in accordance with state and federal legal requirements. Refer to **Section 5 Construction Procedures**.

(NOTE: Asphalt pavement, brick, concrete and metal are banned from disposal at Massachusetts landfills and waste combustion facilities and wood is banned from disposal at Massachusetts landfills. See 310 CMR 19.017 for the complete list of banned materials.)

Will your project disturb asbestos containing materials? Yes ___ No X;
if yes, please consult state asbestos requirements at <http://mass.gov/MassDEP/air/asbhom01.htm>

The Project is not expected to disturb asbestos containing materials. However, should any material suspected of containing asbestos be encountered during the construction phase, a Licensed Site Professional (LSP) will conduct the appropriate assessment to ensure that all materials are handled and legally disposed of in accordance with state and federal legal requirements.

Describe anti-idling and other measures to limit emissions from construction equipment:

M.G.L. c. 90 § 16A and MassDEP regulations 310 CMR 7.11(1)(b) both limit vehicle idling to no more than five minutes. A vehicle may idle longer only if the activity falls into one of the three following categories: 1) vehicles being serviced; 2) vehicles where power is required (e.g., refrigeration trucks); and 3) vehicles that require power to operate accessories (e.g., power lifts). Contractors will be reminded to comply with the applicable regulations.

DESIGNATED WILD AND SCENIC RIVER:

Is this project site located wholly or partially within a defined river corridor of a federally designated Wild and Scenic River or a state designated Scenic River? Yes ___ No X;
if yes, specify name of river and designation: N/A

If yes, does the project have the potential to impact any of the “outstandingly remarkable” resources of a federally Wild and Scenic River or the stated purpose of a state designated Scenic River?
Yes ___ No ___; if yes, specify name of river and designation: _____;
if yes, will the project will result in any impacts to any of the designated “outstandingly remarkable” resources of the Wild and Scenic River or the stated purposes of a Scenic River. Yes ___ No ___;
if yes, describe the potential impacts to one or more of the “outstandingly remarkable” resources or stated purposes and mitigation measures proposed.

ATTACHMENTS:

1. List of all attachments to this document.

Attachment A: Project Narrative

Attachment B: Figures, Plans, and Specifications

USGS Site Location Map

Environmental Resources

FEMA Firm Map

Site Photographs

Construction Specifications

Project Plans

Project Details

Attachment C: ENF Circulation List

Attachment D: Agency Correspondence

Order of Conditions from Town of West Newbury Conservation Commission

Order of Conditions from City of Newburyport Conservation Commission

Historical Resources Coordination and related documentation:

Correspondence to the relevant tribes, the Massachusetts Historical Commission (MHC), and the Massachusetts Board of Underwater Archaeological Resources (MBUAR)

USACE Authorization

401 WQC Application - MassDEP Correspondence

Attachment E: Design Analyses

Stream Crossing Evaluation

Hydraulic Report

Streamlined Stormwater Report

2. U.S.G.S. map (good quality color copy, 8-½ x 11 inches or larger, at a scale of 1:24,000) indicating the project location and boundaries. **See Attachment B.**
3. Plan, at an appropriate scale, of existing conditions on the project site and its immediate environs, showing all known structures, roadways and parking lots, railroad rights-of-way, wetlands and water bodies, wooded areas, farmland, steep slopes, public open spaces, and major utilities. **See Attachment B.**
4. Plan, at an appropriate scale, depicting environmental constraints on or adjacent to the project site such as Priority and/or Estimated Habitat of state-listed rare species, Areas of Critical Environmental Concern, Chapter 91 jurisdictional areas, Article 97 lands, wetland resource area delineations, water supply protection areas, and historic resources and/or districts. **See Attachment B.**
5. Plan, at an appropriate scale, of proposed conditions upon completion of project (if construction of the project is proposed to be phased, there should be a site plan showing conditions upon the completion of each phase). **See Attachment B.**
6. List of all agencies and persons to whom the proponent circulated the ENF, in accordance with 301 CMR 11.16(2). **See Attachment C.**
7. List of municipal and federal permits and reviews required by the project, as applicable. **See Table 1-2 in the Project Narrative / Attachment A.**

LAND SECTION – all proponents must fill out this section

I. Thresholds / Permits

A. Does the project meet or exceed any review thresholds related to **land** (see 301 CMR 11.03(1)) ___ Yes X No; if yes, specify each threshold:

II. Impacts and Permits

A. Describe, in acres, the current and proposed character of the project site, as follows:

	Existing	Change	Total
Footprint of buildings	0	0	0
Internal roadways	0	0	0
Parking and other paved areas ¹	6,794 sf (0.16 acres)	+ 858 sf (0.02 acres)	7,652 sf (0.18 acres)
Other altered areas ²	174 sf (0.004 ac)	+ 1,241 sf (0.03 acres)	1,415 sf (0.03 acres)
Undeveloped areas ³	14,411 sf (0.33 acres)	- 2,099 sf (0.05 acres)	12,312 sf (0.28 acres)
Total: Project Site Acreage	21,379 sf (0.49 ac)		21,379 sf (0.49 ac)

¹ The existing roadway is paved within the project location. The proposed bridge, roadway, shoulders, and sidewalk will be paved to protect the new structures.

² The existing shoulders and riprap slopes make up the remaining altered portions of the existing project area. A portion of these areas will become paved, and a portion of the existing undeveloped channel of the Reservoir will be newly riprapped for scour protection with the widening of the bridge span. Additionally, some of the vegetated slopes, minor amounts of LUW will be replaced by retaining walls to provide road and bridge stability.

³ Existing undeveloped areas occur within the existing channel and within the Reservoir itself, and a portion of these areas will receive riprap for scour protection at the abutments and portions of the slope will be supported by retaining walls. Vegetated slopes will remain undisturbed to the extent practicable.

B. Has any part of the project site been in active agricultural use in the last five years? ___ Yes X No; if yes, how many acres of land in agricultural use (with prime state or locally important agricultural soils) will be converted to nonagricultural use? N/A

C. Is any part of the project site currently or proposed to be in active forestry use? ___ Yes X No; if yes, please describe current and proposed forestry activities and indicate whether any part of the site is the subject of a forest management plan approved by the Department of Conservation and Recreation: N/A

D. Does any part of the project involve conversion of land held for natural resources purposes in accordance with Article 97 of the Amendments to the Constitution of the Commonwealth to any purpose not in accordance with Article 97? ___ Yes X No; if yes, describe:

E. Is any part of the project site currently subject to a conservation restriction, preservation restriction, agricultural preservation restriction or watershed preservation restriction? X Yes ___ No; if yes, does the project involve the release or modification of such restriction? ___ Yes X No; if yes, describe:

The Project occurs entirely within the existing City/Town / transportation easement / right-of-way. However, the project occurs adjacent to open space and Article 97 lands, reserved for water supply protection. A small portion of which overlaps the existing roadway layout. The proposed project will

not impact or interfere in any way with the open space / Article 97 lands. Fixing the existing roadway will reduce erosion from the failing infrastructure and improve stormwater quality.

F. Does the project require approval of a new urban redevelopment project or a fundamental change in an existing urban redevelopment project under M.G.L.c.121A? ___ Yes X No; if yes, describe: N/A

G. Does the project require approval of a new urban renewal plan or a major modification of an existing urban renewal plan under M.G.L.c.121B? Yes ___ No X; if yes, describe: N/A

III. Consistency

A. Identify the current municipal comprehensive land use plan

Title: *Newburyport Master Plan*

Date: 2017

<https://www.cityofnewburyport.com/sites/g/files/vyhlf3521/f/uploads/2017-master-plan-final-printed-version-w-adoption-dates.pdf>

Title: *Town of West Newbury Comprehensive Plan*

Date: Sept 1999

https://www.wnewbury.org/sites/g/files/vyhlf1436/f/uploads/west_newbury_comprehensive_plan_1999.pdf

B. Describe the project's consistency with that plan with regard to:

1). economic development:

Infrastructure improvements provide for easier movements for goods and services around West Newbury and Newburyport and provide access for tourism / recreation / scenic viewing (birdwatching, eco-tourism such as scenic views of the Reservoir) where feasible. Specifically, Newburyport identified that infrastructure is high on the list of concerns for businesses, and so in turn, high on the list for the City. Infrastructure improvement has been identified as a top priority. West Newbury, a 96% residential tax base, aims to make strategic infrastructure investments for its community. Replacing the Reservoir bridge in its current state will enable later monies to be spent elsewhere and be more cost-efficient than regular repairs in perpetuity, by developing existing infrastructure in the town now.

2). adequacy of infrastructure:

The proposed project will replace a structurally deficient, undersized bridge that closed to vehicular traffic (2018) as a result. The City of Newburyport's Master Plan acknowledges that: "Improved safety, accessibility, connectivity, and environmental awareness are important transportation priorities." Additionally, the City is "making a concerted effort to expand its sidewalk network." West Newbury's Plan aims to "encourage connected streets wherever appropriate" and to "implement road design that makes neighborhoods more accessible to one another." The proposed project will take an approximately two-lane road which is used two-way travel by vehicles and which lacks any pedestrian facilities, and will add designated pedestrian facilities (safety sidewalk) along the bridge with an upgraded roadway design.

3). open space impacts:

The project is consistent with goals to protect and preserve natural resource areas and ensure no net loss of total wetlands. Compensation for permanent impacts to wetlands will occur on-site. The Middle Street / Plummer Spring Street bridge was constructed before the Artichoke Reservoir was ever built. The adjacent protected parcels, the Upper Artichoke Reservoir Conservation Area to the southwest (West Newbury) and the Artichoke River Watershed to the east (Newburyport), will not

be impacted by the proposed project. Construction impacts will only occur within the existing town roadway layout and will be returned to preconstruction conditions to the extent practicable. Construction will not impede the function of the open space area. The reservoir is a “major drinking-water source for Newburyport” (and West Newbury); and “with its forested and marshy banks, offers valuable wildlife habitat,” as well as wetlands and land for flood control, it represents important open space for the City and Town. Rebuilding the structurally deficient bridge will allow for continued passive recreational access and use, with safety in mind for pedestrians. Newburyport Master Plan goals include protecting lands used for water protection, flood control, heritage landscapes, and to “maintain and improve...[lands] so that the community is able to access and enjoy both active and passive recreational opportunities.” West Newbury’s Plan Goal and Objective is to “protect, preserve, and enhance views of open spaces from roadways.” The project will contribute to these goals.

4) compatibility with adjacent land uses

Plummer Spring Road and Middle Street are public roads that cross the Artichoke Reservoir. The adjacent open space parcels and project area itself will benefit from improvements in the openness and habitat connectivity provided by a new roadway bridge over the Reservoir, especially during flooding events which could increase siltation on the adjoining parcels. The parcels adjacent to the roadway layout are protected open space parcels (municipal Article 97 lands, for the expressed purpose of watershed / water supply protection) which will not be impacted directly by the construction. Work will occur entirely within the town roadway layout.

C. Identify the current Regional Policy Plan of the applicable Regional Planning Agency (RPA)

RPA: Merrimack Valley Regional Planning Commission

Title: 2018-2023 Merrimack Valley Comprehensive

Date: June 2018

Economic Development Strategy (CEDS)

Title: 2020 Merrimack Valley Regional Transportation Plan (RTP) Date: July 2019

D. Describe the project’s consistency with that plan with regard to:

1) economic development

The CEDS Report identified economic resiliency as a top priority. Shoring-up the road that bisects an important water source for multiple towns certainly falls into this category. As one of the only three crossings of the Artichoke River and Reservoir, this road that is currently closed to traffic necessitates lengthy detours for goods and services and adds to congestion on other roads.

2) adequacy of infrastructure

The CEDS report identifies goals to “increase the number of people who live and work in the Merrimack Valley” and to “improve existing transit infrastructure.” By replacing the bridge now, the town ensures productive infrastructure to support transportation, enhance Complete Streets on the bridge, and ensure safe water supplies for an increased population. As one of the only three crossings of the Artichoke River and Reservoir, this road that is currently closed to traffic necessitates lengthy detours for goods and services and adds to congestion on other roads.

3) open space impacts

The project is consistent with the plan’s goal to “protect open spaces for our natural and human environments to thrive.” The project aims to reduce congestion and air pollution by shortening detours should this bridge stay closed. Fixing the bridge and providing pedestrian facilities would allow the public to utilize the bridge once

again. The project also proposes to create a wider-bridge span, which will provide greater openness, increased habitat connectivity and improved wildlife passage for a net benefit to the existing open space.

RARE SPECIES SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **rare species or habitat** (see 301 CMR 11.03(2))? ___ Yes X No; if yes, specify, in quantitative terms:

(NOTE: If you are uncertain, it is recommended that you consult with the Natural Heritage and Endangered Species Program (NHESP) prior to submitting the ENF.)

B. Does the project require any state permits related to **rare species or habitat**? ___ Yes X No

C. Does the project site fall within mapped rare species habitat (Priority or Estimated Habitat?) in the current Massachusetts Natural Heritage Atlas (attach relevant page)? ___ Yes X No

D. If you answered "No" to all questions A, B and C, proceed to the **Wetlands, Waterways, and Tidelands Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Rare Species section below.

II. Impacts and Permits

A. Does the project site fall within Priority or Estimated Habitat in the current Massachusetts Natural Heritage Atlas (attach relevant page)? ___ Yes ___ No. If yes,

1. Have you consulted with the Division of Fisheries and Wildlife Natural Heritage and Endangered Species Program (NHESP)? ___ Yes ___ No; if yes, have you received a determination as to whether the project will result in the "take" of a rare species? ___ Yes ___ No; if yes, attach the letter of determination to this submission.

2. Will the project "take" an endangered, threatened, and/or species of special concern in accordance with M.G.L. c.131A (see also 321 CMR 10.04)? ___ Yes ___ No; if yes, provide a summary of proposed measures to minimize and mitigate rare species impacts

3. Which rare species are known to occur within the Priority or Estimated Habitat?

4. Has the site been surveyed for rare species in accordance with the Massachusetts Endangered Species Act? ___ Yes ___ No

5. If your project is within Estimated Habitat, have you filed a Notice of Intent or received an Order of Conditions for this project? ___ Yes ___ No; if yes, did you send a copy of the Notice of Intent to the Natural Heritage and Endangered Species Program, in accordance with the Wetlands Protection Act regulations? ___ Yes ___ No

B. Will the project "take" an endangered, threatened, and/or species of special concern in accordance with M.G.L. c.131A (see also 321 CMR 10.04)? ___ Yes ___ No; if yes, provide a summary of proposed measures to minimize and mitigate impacts to significant habitat:

WETLANDS, WATERWAYS, AND TIDELANDS SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **wetlands, waterways, and tidelands** (see 301 CMR 11.03(3))? Yes No; if yes, specify, in quantitative terms:

- 301 CMR 11.03 (3)(b)c. c. alteration of 1,000 or more sf of ... outstanding resource waters: 984 sf Permanent Impacts, 885 sf (gain through openness), 641 sf temporary impacts

B. Does the project require any state permits (or a local Order of Conditions) related to **wetlands, waterways, or tidelands**? Yes No; if yes, specify which permit:

- Individual 401 WQC for work within an ORW

C. If you answered "No" to both questions A and B, proceed to the **Water Supply Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Wetlands, Waterways, and Tidelands Section below.

II. Wetlands Impacts and Permits

A. Does the project require a new or amended Order of Conditions under the Wetlands Protection Act (M.G.L. c.131A)? Yes No; if yes, has a Notice of Intent been filed)? Yes No; if yes, list the date and MassDEP file number: West Newbury filed January 4, 2021 (MassDEP File Number 078-0724); Newburyport filed January 11, 2021 (MassDEP File Number 051-1047); if yes, has a local Order of Conditions been issued? Yes No; Was the Order of Conditions appealed? Yes No. Will the project require a Variance from the Wetlands regulations? Yes No.

B. Describe any proposed permanent or temporary impacts to wetland resource areas located on the project site:

Project-related activities will result in various temporary and permanent impacts to jurisdictional wetland resource areas (Bank, Land Under Water, 100-foot Buffer to Bank, 200-foot Riverfront Area, and Bordering Land Subject to Flooding). The work will occur within the limits of existing roadway right-of-way layout and will be limited to the minimum amount of in-water work required. Temporary impacts are generally associated with the installation of water control/dewatering and erosion control best management practices which will be restored to preconstruction conditions to the extent practicable. Permanent impacts are associated with the installation of the new bridge infrastructure and retaining walls and riprap for scour protection. These impacts are discussed in detail in **Section 4 Wetlands and Waterways**. Throughout Project construction activities, BMPs will be implemented to prevent inadvertent impacts to resource areas.

C. Estimate the extent and type of impact that the project will have on wetland resources, and indicate whether the impacts are temporary or permanent:

<u>Coastal Wetlands</u>	<u>Area (square feet) or Length (linear feet)</u>	<u>Temporary or Permanent Impact?</u>
Land Under the Ocean	<u>0</u>	<u>N/A</u>
Designated Port Areas	<u>0</u>	<u>N/A</u>
Coastal Beaches	<u>0</u>	<u>N/A</u>
Coastal Dunes	<u>0</u>	<u>N/A</u>
Barrier Beaches	<u>0</u>	<u>N/A</u>
Coastal Banks	<u>0</u>	<u>N/A</u>
Rocky Intertidal Shores	<u>0</u>	<u>N/A</u>

Salt Marshes	<u>0</u>	<u>N/A</u>
Land Under Salt Ponds	<u>0</u>	<u>N/A</u>
Land Containing Shellfish	<u>0</u>	<u>N/A</u>
Fish Runs	<u>0</u>	<u>N/A</u>
Land Subject to Coastal Storm Flowage	<u>0</u>	<u>N/A</u>
Tidal Flats	<u>0</u>	<u>N/A</u>

<u>Inland Wetlands</u>	<u>Area (square feet) or Length (linear feet)</u>	<u>Temporary or Permanent Impact?</u>
Bank (lf)	<u>182 LF</u>	<u>Permanent</u>
Bank (lf)	<u>61 LF</u>	<u>Temporary</u>
Bordering Vegetated Wetlands	<u>0</u>	<u>Permanent</u>
Bordering Vegetated Wetlands	<u>0</u>	<u>Temporary</u>
Isolated Vegetated Wetlands	<u>0</u>	<u>N/A</u>
Land under Water	<u>984 SF</u>	<u>Permanent</u>
Land under Water	<u>885 SF</u>	<u>GAIN</u>
Land under Water	<u>641 SF</u>	<u>Temporary</u>
Isolated Land Subject to Flooding	<u>0</u>	<u>N/A</u>
Bordering Land Subject to Flooding	<u>211 SF</u>	<u>Alteration</u>
Bordering Land Subject to Flooding	<u>655 SF</u>	<u>Replacement</u>
Riverfront Area	<u>5,872 SF</u>	<u>Redevelopment</u>
Riverfront Area	<u>3,393 SF</u>	<u>Permanent</u>
Riverfront Area	<u>1,254 SF</u>	<u>Temporary</u>

D. Is any part of the project:

1. proposed as a **limited project**? X Yes ___ No; if yes, what is the area (in sf)?

The entire Project area is eligible for limited project status in accordance with:
 --310 CMR 10.53(3)(i): maintenance, repair and improvement (but not substantial enlargement) of (in part) bridges which existed prior to April 1, 1983,
 --310 CMR 10.53(3)(l) construction, reconstruction, operation, or maintenance of water dependent uses.

310 CMR 10.58 (8) which allows for the replacement of an existing stream crossing while avoiding impacts where possible, and minimizing / mitigating impacts when not

The entire 21,379 sf (0.49 ac) project is proposed as a limited project.

2. the construction or alteration of a **dam**? ___ Yes X No; if yes, describe:

3. fill or structure in a **velocity zone** or **regulatory floodway**? ___ Yes X No

4. dredging or disposal of dredged material? X Yes ___ No; if yes, describe the volume of dredged material and the proposed disposal site:

Inland Wetlands

Land under Water	<u>48 CY</u>	<u>Permanent</u>
Land under Water	<u>50 CY</u>	<u>Temporary</u>

Excess material will be disposed of off-site at a location to be determined by the City of Newburyport and the Town of West Newbury.

5. a discharge to an Outstanding Resource Water (ORW) or an Area of Critical Environmental Concern (ACEC)? X Yes ___ No

The project occurs on Middle Street/Plummer Spring Road, on the Upper Artichoke Reservoir, a public water supply Reservoir and ORW. The project area is not within an ACEC. There is no BVW in the project vicinity. Approximately 984 sf of LUW will be permanently impacted with the new bridge, retaining walls for scour protection, and riprap which is required to protect the new bridge. A total of 641 sf of temporary impacts are proposed for dewatering and construction. The proposed openness of the new span will create 885 sf of LUW.

6. subject to a wetlands restriction order? ___ Yes X No; if yes, identify the area (in sf):

7. located in buffer zones? X Yes ___ No; if yes, how much (in sf) Approx. 13,672 sf

E. Will the project:

1. be subject to a local wetlands ordinance or bylaw? X Yes ___ No

While technically subject to Wetland Protection Ordinances by the City of Newburyport and Town of West Newbury, the Applicant has requested, and been granted waivers from each municipalities Bylaw/Ordinance.

2. alter any federally-protected wetlands not regulated under state law? ___ Yes X No; if yes, what is the area (sf)?

III. Waterways and Tidelands Impacts and Permits

A. Does the project site contain waterways or tidelands (including filled former tidelands) that are subject to the Waterways Act, M.G.L.c.91? ___ Yes X No; if yes, is there a current Chapter 91 License or Permit affecting the project site? ___ Yes ___ No; if yes, list the date and license or permit number and provide a copy of the historic map used to determine extent of filled tidelands:

B. Does the project require a new or modified license or permit under M.G.L.c.91? ___ Yes X No; if yes, how many acres of the project site subject to M.G.L.c.91 will be for non-water-dependent use? Current ___ Change ___ Total
If yes, how many square feet of solid fill or pile-supported structures (in sf)?

C. For non-water-dependent use projects, indicate the following: N/A

Area of filled tidelands on the site:

Area of filled tidelands covered by buildings:

Does the project include new non-water-dependent uses located over flowed tidelands?

Yes ___ No ___

Height of building on filled tidelands: _____.

Also show the following on a site plan: Mean High Water, Mean Low Water, Water-dependent Use Zone, location of uses within buildings on tidelands, and interior and exterior areas and facilities dedicated for public use, and historic high and historic low water marks.

D. Is the project located on landlocked tidelands? ___ Yes X No; if yes, describe the project's impact on the public's right to access, use and enjoy jurisdictional tidelands and describe measures the project will implement to avoid, minimize or mitigate any adverse impact:

E. Is the project located in an area where low groundwater levels have been identified by a municipality or by a state or federal agency as a threat to building foundations? ___ Yes X No; if yes, describe the project's impact on groundwater levels and describe measures the project will implement to avoid, minimize or mitigate any adverse impact:

F. Is the project non-water-dependent **and** located on landlocked tidelands **or** waterways or tidelands subject to the Waterways Act **and** subject to a mandatory EIR? ___ Yes X No;

(NOTE: If yes, then the project will be subject to Public Benefit Review and Determination.)

G. Does the project include dredging? Yes No; if yes, answer the following questions:

What type of dredging? Improvement Maintenance Both

What is the proposed dredge volume, in cubic yards (cys) _____

What is the proposed dredge footprint: _____

Will dredging impact the following resource areas?

Intertidal Yes No; if yes, _____ sq ft

Outstanding Resource Waters Yes No ; if yes, _____ sq ft

Other resource area (i.e. shellfish beds, eel grass beds) Yes No ; if yes, _____ sq ft

If no to any of the above, what information or documentation was used to support this determination?

Provide a comprehensive analysis of practicable alternatives for improvement dredging in accordance with 314 CMR 9.07(1)(b). Physical and chemical data of the sediment shall be included in the comprehensive analysis.

Sediment Characterization

Existing gradation analysis results? Yes No; if yes, provide results.

Existing chemical results for parameters listed in 314 CMR 9.07(2)(b)6? Yes No; if yes, provide results.

Do you have sufficient information to evaluate feasibility of the following management options for dredged sediment? If yes, check the appropriate option.

Beach Nourishment

Unconfined Ocean Disposal

Confined Disposal:

Confined Aquatic Disposal (CAD)

Confined Disposal Facility (CDF)

Landfill Reuse in accordance with COMM-97-001

Shoreline Placement

Upland Material Reuse

In-State landfill disposal

Out-of-state landfill disposal

(NOTE: This information is required for a 401 Water Quality Certification.)

IV. Consistency:

A. Does the project have effects on the coastal resources or uses, and/or is the project located within the Coastal Zone? Yes No; if yes, describe these effects and the projects consistency with the policies of the office of Coastal Zone Management:

B. Is the project located within an area subject to a Municipal Harbor Plan? Yes No; if yes, identify the Municipal Harbor Plan and describe the project's consistency with that plan:

WATER SUPPLY SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **water supply** (see 301 CMR 11.03(4))? ___ Yes X No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **water supply**? ___ Yes X No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Wastewater Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Water Supply Section below.

II. Impacts and Permits

A. Describe, in gallons per day (gpd), the volume and source of water use for existing and proposed activities at the project site:

	<u>Existing</u>	<u>Change</u>	<u>Total</u>
Municipal or regional water supply	_____	_____	_____
Withdrawal from groundwater	_____	_____	_____
Withdrawal from surface water	_____	_____	_____
Interbasin transfer	_____	_____	_____

(NOTE: Interbasin Transfer approval will be required if the basin and community where the proposed water supply source is located is different from the basin and community where the wastewater from the source will be discharged.)

B. If the source is a municipal or regional supply, has the municipality or region indicated that there is adequate capacity in the system to accommodate the project? ___ Yes ___ No

C. If the project involves a new or expanded withdrawal from a groundwater or surface water source, has a pumping test been conducted? ___ Yes ___ No; if yes, attach a map of the drilling sites and a summary of the alternatives considered and the results. _____

D. What is the currently permitted withdrawal at the proposed water supply source (in gallons per day)? ___ Will the project require an increase in that withdrawal? ___ Yes ___ No; if yes, then how much of an increase (gpd)? _____

E. Does the project site currently contain a water supply well, a drinking water treatment facility, water main, or other water supply facility, or will the project involve construction of a new facility? ___ Yes ___ No. If yes, describe existing and proposed water supply facilities at the project site:

	<u>Permitted Flow</u>	<u>Existing Avg Daily Flow</u>	<u>Project Flow</u>	<u>Total</u>
Capacity of water supply well(s) (gpd)	_____	_____	_____	_____
Capacity of water treatment plant (gpd)	_____	_____	_____	_____

F. If the project involves a new interbasin transfer of water, which basins are involved, what is the direction of the transfer, and is the interbasin transfer existing or proposed?

G. Does the project involve:

1. new water service by the Massachusetts Water Resources Authority or other agency of the Commonwealth to a municipality or water district? ___ Yes ___ No
2. a Watershed Protection Act variance? ___ Yes ___ No; if yes, how many acres of alteration?
3. a non-bridged stream crossing 1,000 or less feet upstream of a public surface drinking water supply for purpose of forest harvesting activities? ___ Yes ___ No

III. Consistency

Describe the project's consistency with water conservation plans or other plans to enhance water resources, quality, facilities and services:

WASTEWATER SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **wastewater** (see 301 CMR 11.03(5))? ___ Yes X No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **wastewater**? ___ Yes X No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Transportation -- Traffic Generation Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Wastewater Section below.

II. Impacts and Permits

A. Describe the volume (in gallons per day) and type of disposal of wastewater generation for existing and proposed activities at the project site (calculate according to 310 CMR 15.00 for septic systems or 314 CMR 7.00 for sewer systems):

	<u>Existing</u>	<u>Change</u>	<u>Total</u>
Discharge of sanitary wastewater	_____	_____	_____
Discharge of industrial wastewater	_____	_____	_____
TOTAL	_____	_____	_____
	<u>Existing</u>	<u>Change</u>	<u>Total</u>
Discharge to groundwater	_____	_____	_____
Discharge to outstanding resource water	_____	_____	_____
Discharge to surface water	_____	_____	_____
Discharge to municipal or regional wastewater facility	_____	_____	_____
TOTAL	_____	_____	_____

B. Is the existing collection system at or near its capacity? ___ Yes ___ No; if yes, then describe the measures to be undertaken to accommodate the project's wastewater flows:

C. Is the existing wastewater disposal facility at or near its permitted capacity? ___ Yes ___ No; if yes, then describe the measures to be undertaken to accommodate the project's wastewater flows:

D. Does the project site currently contain a wastewater treatment facility, sewer main, or other wastewater disposal facility, or will the project involve construction of a new facility? ___ Yes ___ No; if yes, describe as follows:

	<u>Permitted</u>	<u>Existing Avg Daily Flow</u>	<u>Project Flow</u>	<u>Total</u>
Wastewater treatment plant capacity (in gallons per day)	_____	_____	_____	_____

E. If the project requires an interbasin transfer of wastewater, which basins are involved, what is the direction of the transfer, and is the interbasin transfer existing or new?

(NOTE: Interbasin Transfer approval may be needed if the basin and community where wastewater will be discharged is different from the basin and community where the source of water supply is located.)

F. Does the project involve new sewer service by the Massachusetts Water Resources Authority (MWRA) or other Agency of the Commonwealth to a municipality or sewer district? ___ Yes ___ No

G. Is there an existing facility, or is a new facility proposed at the project site for the storage, treatment, processing, combustion or disposal of sewage sludge, sludge ash, grit, screenings, wastewater reuse (gray water) or other sewage residual materials? ___ Yes ___ No; if yes, what is the capacity (tons per day):

	<u>Existing</u>	<u>Change</u>	<u>Total</u>
Storage	_____	_____	_____
Treatment	_____	_____	_____
Processing	_____	_____	_____
Combustion	_____	_____	_____
Disposal	_____	_____	_____

H. Describe the water conservation measures to be undertaken by the project, and other wastewater mitigation, such as infiltration and inflow removal.

III. Consistency

A. Describe measures that the proponent will take to comply with applicable state, regional, and local plans and policies related to wastewater management:

B. If the project requires a sewer extension permit, is that extension included in a comprehensive wastewater management plan? ___ Yes ___ No; if yes, indicate the EEA number for the plan and whether the project site is within a sewer service area recommended or approved in that plan:

TRANSPORTATION SECTION (TRAFFIC GENERATION)

I. Thresholds / Permit

A. Will the project meet or exceed any review thresholds related to **traffic generation** (see 301 CMR 11.03(6))? ___ Yes X No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **state-controlled roadways**? ___ Yes X No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Roadways and Other Transportation Facilities Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Traffic Generation Section below.

II. Traffic Impacts and Permits

A. Describe existing and proposed vehicular traffic generated by activities at the project site:

	<u>Existing</u>	<u>Change</u>	<u>Total</u>
Number of parking spaces	_____	_____	_____
Number of vehicle trips per day	_____	_____	_____
ITE Land Use Code(s):	_____	_____	_____

B. What is the estimated average daily traffic on roadways serving the site?

<u>Roadway</u>	<u>Existing</u>	<u>Change</u>	<u>Total</u>
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____

C. If applicable, describe proposed mitigation measures on state-controlled roadways that the project proponent will implement:

D. How will the project implement and/or promote the use of transit, pedestrian and bicycle facilities and services to provide access to and from the project site?

C. Is there a Transportation Management Association (TMA) that provides transportation demand management (TDM) services in the area of the project site? ___ Yes ___ No; if yes, describe if and how will the project will participate in the TMA:

D. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation facilities? ___ Yes ___ No; if yes, generally describe:

E. If the project will penetrate approach airspace of a nearby airport, has the proponent filed a Massachusetts Aeronautics Commission Airspace Review Form (780 CMR 111.7) and a Notice of Proposed Construction or Alteration with the Federal Aviation Administration (FAA) (CFR Title 14 Part 77.13, forms 7460-1 and 7460-2)?

III. Consistency

Describe measures that the proponent will take to comply with municipal, regional, state, and federal plans and policies related to traffic, transit, pedestrian and bicycle transportation facilities and services:

TRANSPORTATION SECTION (ROADWAYS AND OTHER TRANSPORTATION FACILITIES)

I. Thresholds

A. Will the project meet or exceed any review thresholds related to **roadways or other transportation facilities** (see 301 CMR 11.03(6))? ___ Yes X No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **roadways or other transportation facilities**? ___ Yes X No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Energy Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Roadways Section below.

II. Transportation Facility Impacts

A. Describe existing and proposed transportation facilities in the immediate vicinity of the project site:

B. Will the project involve any

- 1. Alteration of bank or terrain (in linear feet)? _____
- 2. Cutting of living public shade trees (number)? _____
- 3. Elimination of stone wall (in linear feet)? _____

III. Consistency -- Describe the project's consistency with other federal, state, regional, and local plans and policies related to traffic, transit, pedestrian and bicycle transportation facilities and services, including consistency with the applicable regional transportation plan and the Transportation Improvements Plan (TIP), the State Bicycle Plan, and the State Pedestrian Plan:

ENERGY SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **energy** (see 301 CMR 11.03(7))?
___ Yes No X No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **energy**? ___ Yes X No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Air Quality Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Energy Section below.

II. Impacts and Permits

A. Describe existing and proposed energy generation and transmission facilities at the project site:

	<u>Existing</u>	<u>Change</u>	<u>Total</u>
Capacity of electric generating facility (megawatts)	_____	_____	_____
Length of fuel line (in miles)	_____	_____	_____
Length of transmission lines (in miles)	_____	_____	_____
Capacity of transmission lines (in kilovolts)	_____	_____	_____

B. If the project involves construction or expansion of an electric generating facility, what are:

1. the facility's current and proposed fuel source(s)?
2. the facility's current and proposed cooling source(s)?

C. If the project involves construction of an electrical transmission line, will it be located on a new, unused, or abandoned right of way? ___Yes ___ No; if yes, please describe:

D. Describe the project's other impacts on energy facilities and services:

III. Consistency

Describe the project's consistency with state, municipal, regional, and federal plans and policies for enhancing energy facilities and services:

AIR QUALITY SECTION

I. Thresholds

A. Will the project meet or exceed any review thresholds related to **air quality** (see 301 CMR 11.03(8))? ___ Yes X No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **air quality**? ___ Yes X No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Solid and Hazardous Waste Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Air Quality Section below.

II. Impacts and Permits

A. Does the project involve construction or modification of a major stationary source (see 310 CMR 7.00, Appendix A)? ___ Yes ___ No; if yes, describe existing and proposed emissions (in tons per day) of:

	<u>Existing</u>	<u>Change</u>	<u>Total</u>
Particulate matter	_____	_____	_____
Carbon monoxide	_____	_____	_____
Sulfur dioxide	_____	_____	_____
Volatile organic compounds	_____	_____	_____
Oxides of nitrogen	_____	_____	_____
Lead	_____	_____	_____
Any hazardous air pollutant	_____	_____	_____
Carbon dioxide	_____	_____	_____

B. Describe the project's other impacts on air resources and air quality, including noise impacts:

III. Consistency

A. Describe the project's consistency with the State Implementation Plan:

B. Describe measures that the proponent will take to comply with other federal, state, regional, and local plans and policies related to air resources and air quality:

SOLID AND HAZARDOUS WASTE SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **solid or hazardous waste** (see 301 CMR 11.03(9))? ___ Yes X No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **solid and hazardous waste**? ___ Yes X No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Historical and Archaeological Resources Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Solid and Hazardous Waste Section below.

II. Impacts and Permits

A. Is there any current or proposed facility at the project site for the storage, treatment, processing, combustion or disposal of solid waste? ___ Yes ___ No; if yes, what is the volume (in tons per day) of the capacity:

	<u>Existing</u>	<u>Change</u>	<u>Total</u>
Storage	_____	_____	_____
Treatment, processing	_____	_____	_____
Combustion	_____	_____	_____
Disposal	_____	_____	_____

B. Is there any current or proposed facility at the project site for the storage, recycling, treatment or disposal of hazardous waste? ___ Yes ___ No; if yes, what is the volume (in tons or gallons per day) of the capacity:

	<u>Existing</u>	<u>Change</u>	<u>Total</u>
Storage	_____	_____	_____
Recycling	_____	_____	_____
Treatment	_____	_____	_____
Disposal	_____	_____	_____

C. If the project will generate solid waste (for example, during demolition or construction), describe alternatives considered for re-use, recycling, and disposal:

D. If the project involves demolition, do any buildings to be demolished contain asbestos?
___ Yes ___ No

E. Describe the project's other solid and hazardous waste impacts (including indirect impacts):

III. Consistency

Describe measures that the proponent will take to comply with the State Solid Waste Master Plan:

HISTORICAL AND ARCHAEOLOGICAL RESOURCES SECTION

I. Thresholds / Impacts

A. Have you consulted with the Massachusetts Historical Commission? Yes No; if yes, attach correspondence. For project sites involving lands under water, have you consulted with the Massachusetts Board of Underwater Archaeological Resources? Yes No; if yes, attach correspondence

A PNF and request for comment were submitted to the relevant tribes, the Massachusetts Historical Commission (MHC), and the Massachusetts Board of Underwater Archaeological Resources (MBUAR) concurrently on January 14, 2021. The only response received was from the MHC, indicating that:

After review of MHC files and the materials you submitted, it has been determined that this project is unlikely to affect significant historic or archaeological resources.

Correspondence submitted to the tribes and agencies is included in **Attachment D: Agency Correspondence**.

B. Is any part of the project site a historic structure, or a structure within a historic district, in either case listed in the State Register of Historic Places or the Inventory of Historic and Archaeological Assets of the Commonwealth? Yes No; if yes, does the project involve the demolition of all or any exterior part of such historic structure? Yes No; if yes, please describe:

C. Is any part of the project site an archaeological site listed in the State Register of Historic Places or the Inventory of Historic and Archaeological Assets of the Commonwealth? Yes No; if yes, does the project involve the destruction of all or any part of such archaeological site? Yes No; if yes, please describe:

A review of the Massachusetts Cultural Resource Information System (MACRIS) and the National Registry of Historic Places in July 2020 did not identify any listed locations within the Project area. One home (WNB.156) exists approximately one-half mile west of the project area on private property. The proposed project will not have any impacts to properties outside of the existing roadway layout. No historical or archaeological resource areas will be impacted or destroyed by the proposed Project.

D. If you answered "No" to all parts of both questions A, B and C, proceed to the **Attachments and Certifications** Sections. If you answered "Yes" to any part of either question A or question B, fill out the remainder of the Historical and Archaeological Resources Section below.

II. Impacts

Describe and assess the project's impacts, direct and indirect, on listed or inventoried historical and archaeological resources:

III. Consistency

Describe measures that the proponent will take to comply with federal, state, regional, and local plans and policies related to preserving historical and archaeological resources:

This project will require coverage under the USACE Section 404 Program through Pre-Construction Notification written review as there are proposed impacts to waters of the U.S. (without meeting all stream crossing standards). This federal permit will trigger compliance with Section 106 of the National Historic Preservation Act. The Town of West Newbury, and City of Newburyport will consult and work with MHC as needed to complete the Section 106 process, and as part of the state permitting process. Pursuant to 950 CMR 71. M.G.L. c. 9, § 27C requires that projects that are permitted, licensed, funded, or requiring approval from state bodies be reviewed by the MHC to identify potential impacts to historic and archaeological resources included in the State Register of Historic Places (SRHP).

CERTIFICATIONS:



1. The Public Notice of Environmental Review has been/will be published in the following newspapers in accordance with 301 CMR 11.15(1):

(Name) The Daily News of Newburyport (Date) July 23, 2021

2. This form has been circulated to Agencies and Persons in accordance with 301 CMR 11.16(2).

The Circulation List is presented in **Attachment C**.

Signatures:

	July 15, 2021	
Date Signature of Responsible officer or Proponent	Date	Signature of person preparing ENF (if different from above)

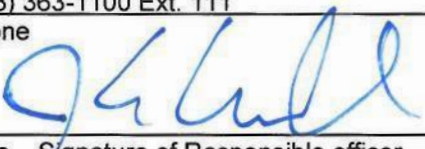
<u>Angus Jennings</u>	<u>Sara Kreisel</u>
Name (print or type)	Name (print or type)

<u>Town of West Newbury</u>	<u>BSC Group, Inc.</u>
Firm/Agency	Firm/Agency

<u>381 Main Street</u>	<u>803 Summer Street</u>
Street	Street

<u>West Newbury, MA 01985</u>	<u>Boston, MA 02127</u>
Municipality/State/Zip	Municipality/State/Zip

<u>(978) 363-1100 Ext. 111</u>	<u>(617) 896-4579</u>
Phone	Phone


Date Signature of Responsible officer or Proponent

<u>Jon-Eric White</u>
Name (print or type)

<u>City of Newburyport</u>
Firm/Agency

<u>16 C Perry Way</u>
Street

<u>Newburyport, MA 01950</u>
Municipality/State/Zip

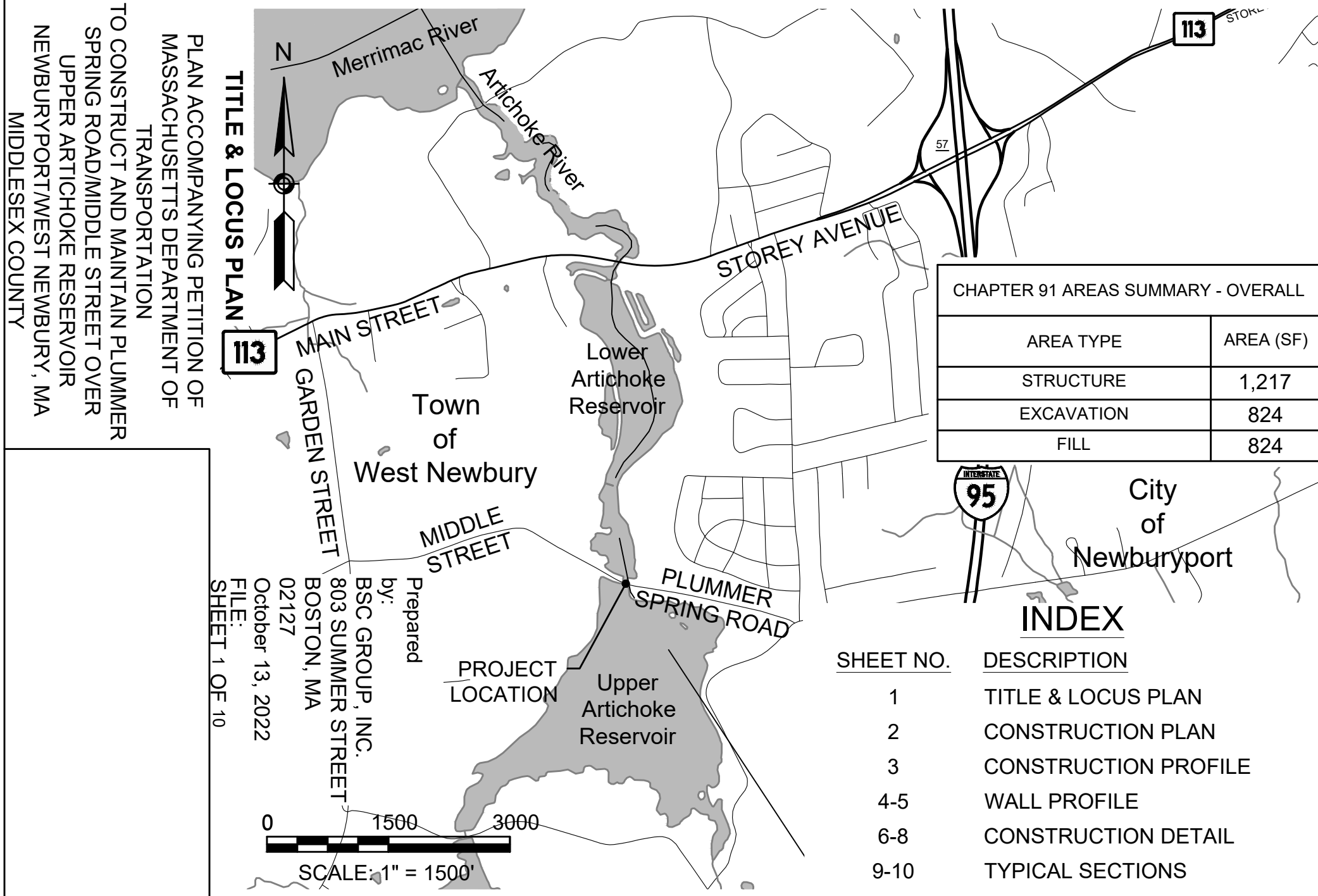
<u>978-465-4464 Ext. 1710</u>
Phone

Attachment G

Bridge Replacement Project
Middle Street / Plummer Spring Road
over Upper Artichoke Reservoir,
West Newbury and Newburyport, MA

Chapter 91 License Application

CHAPTER 91 LICENSE PLANS



TITLE & LOCUS PLAN
 PLAN ACCOMPANYING PETITION OF
 MASSACHUSETTS DEPARTMENT OF
 TRANSPORTATION
 TO CONSTRUCT AND MAINTAIN PLUMMER
 SPRING ROAD/MIDDLE STREET OVER
 UPPER ARTICHOKE RESERVOIR
 NEWBURYPORT/WEST NEWBURY, MA
 MIDDLESEX COUNTY

Prepared
 by:
 BSC GROUP, INC.
 803 SUMMER STREET
 BOSTON, MA
 02127
 October 13, 2022
 FILE:
 SHEET 1 OF 10

CHAPTER 91 AREAS SUMMARY - OVERALL

AREA TYPE	AREA (SF)
STRUCTURE	1,217
EXCAVATION	824
FILL	824

INDEX

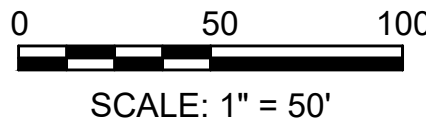
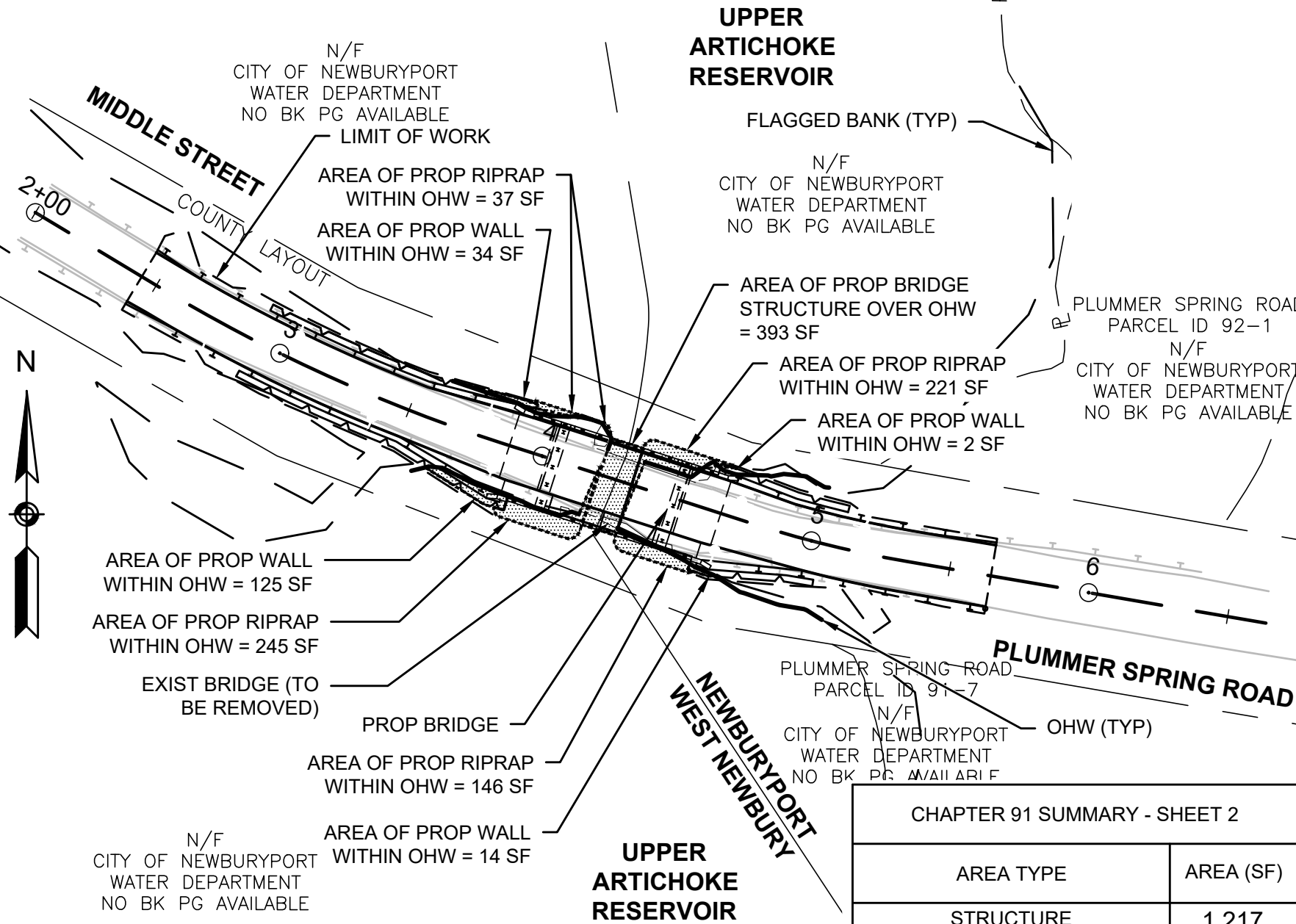
SHEET NO.	DESCRIPTION
1	TITLE & LOCUS PLAN
2	CONSTRUCTION PLAN
3	CONSTRUCTION PROFILE
4-5	WALL PROFILE
6-8	CONSTRUCTION DETAIL
9-10	TYPICAL SECTIONS

FOR REGISTRY USE ONLY

PLS _____
 DATE _____

I CERTIFY THAT THIS PLAN CONFORMS TO
 THE RULES AND REGULATIONS OF THE
 REGISTERS OF DEEDS

PLAN ACCOMPANYING PETITION OF MASSACHUSETTS DEPARTMENT OF TRANSPORTATION TO CONSTRUCT AND MAINTAIN PLUMMER SPRING ROAD/MIDDLE STREET OVER UPPER ARTICHOKE RESERVOIR NEWBURYPORT/WEST NEWBURY, MA MIDDLESEX COUNTY



CHAPTER 91 SUMMARY - SHEET 2	
AREA TYPE	AREA (SF)
STRUCTURE	1,217
EXCAVATION	824
FILL	824

FOR REGISTRY USE ONLY

PLS

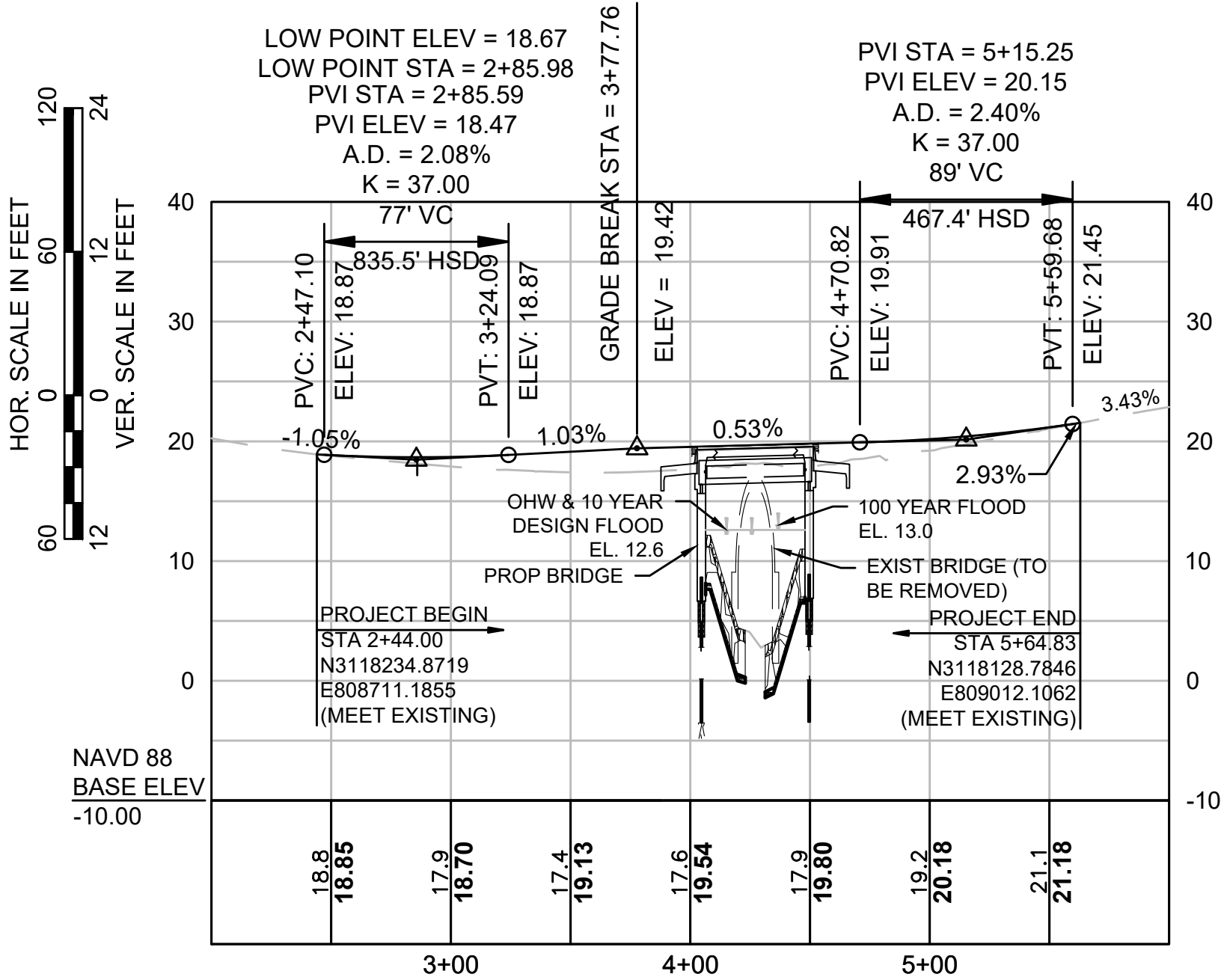
DATE

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CONSTRUCTION PLAN
FILE:
SHEET 2 OF 10

PLAN ACCOMPANYING PETITION OF
 MASSACHUSETTS DEPARTMENT OF
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 SPRING ROAD/MIDDLE STREET OVER
 UPPER ARTICHOKE RESERVOIR
 NEWBURYPORT/WEST NEWBURY, MA
 MIDDLESEX COUNTY

CONSTRUCTION PROFILE
 FILE:
 SHEET 3 OF 10



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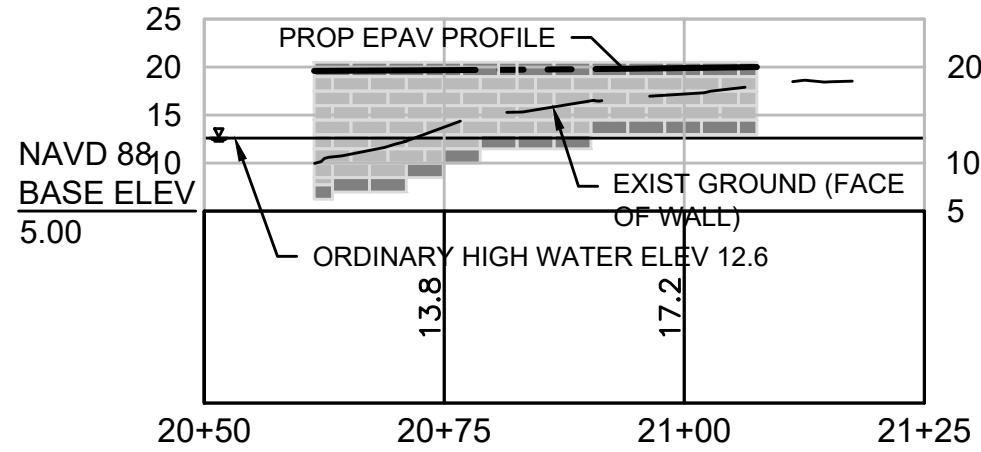
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DATE

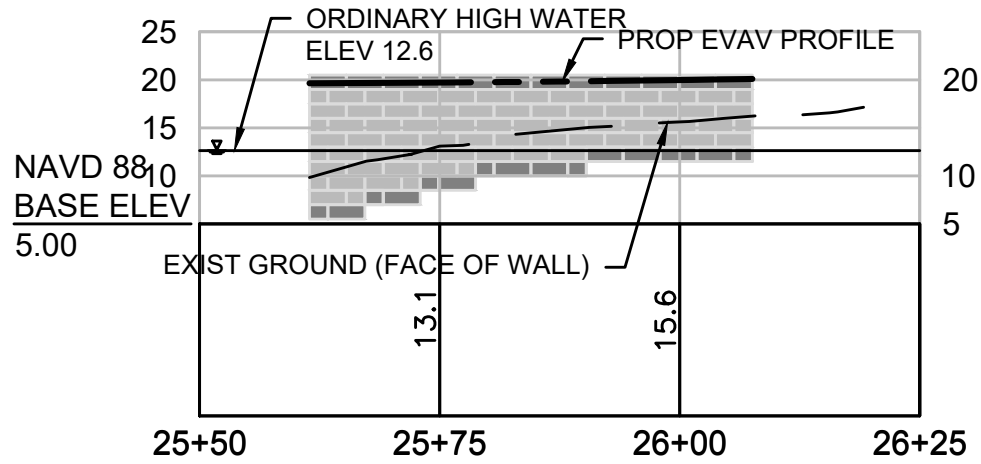
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 MIDDLESEX COUNTY

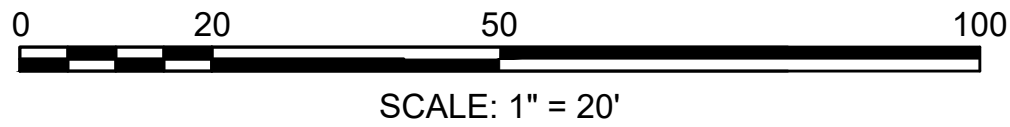
WALL PROFILE
 FILE:
 SHEET 4 OF 10



SOUTHEAST MODULAR BLOCK WALL - ELEVATION VIEW
 SCALE: 1" = 20' HORIZ.
 SCALE: 1" = 20' VERT.



NORTHEAST MODULAR BLOCK WALL - ELEVATION VIEW
 SCALE: 1" = 20' HORIZ.
 SCALE: 1" = 20' VERT.



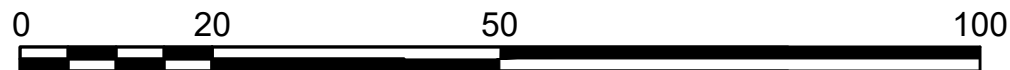
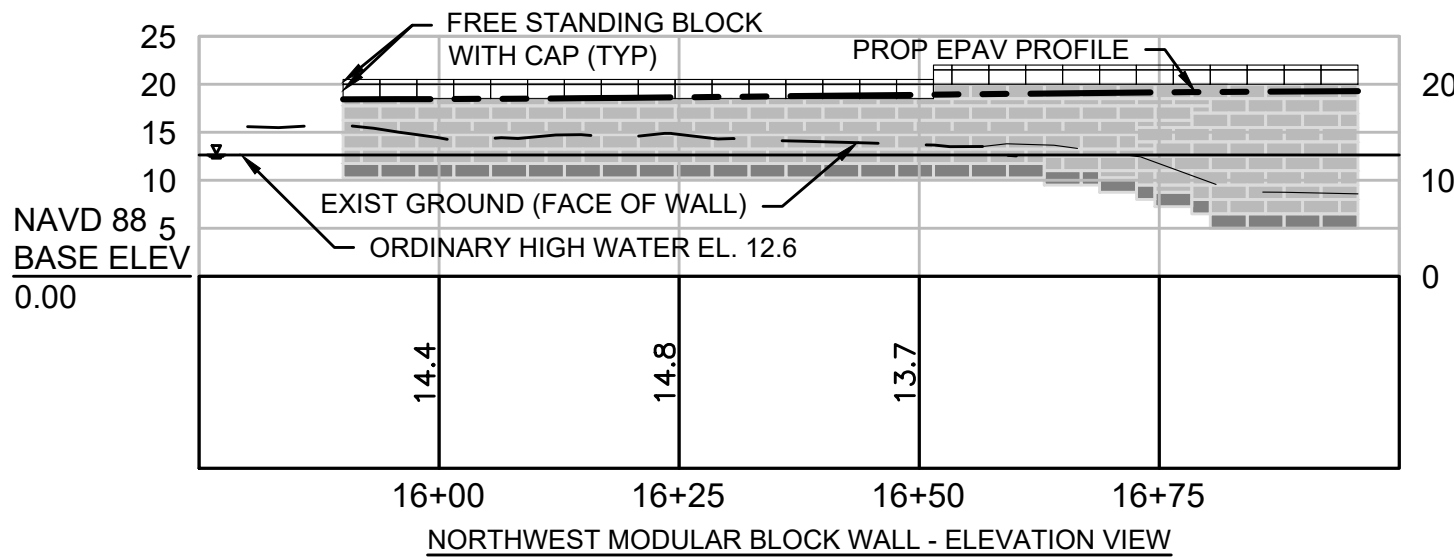
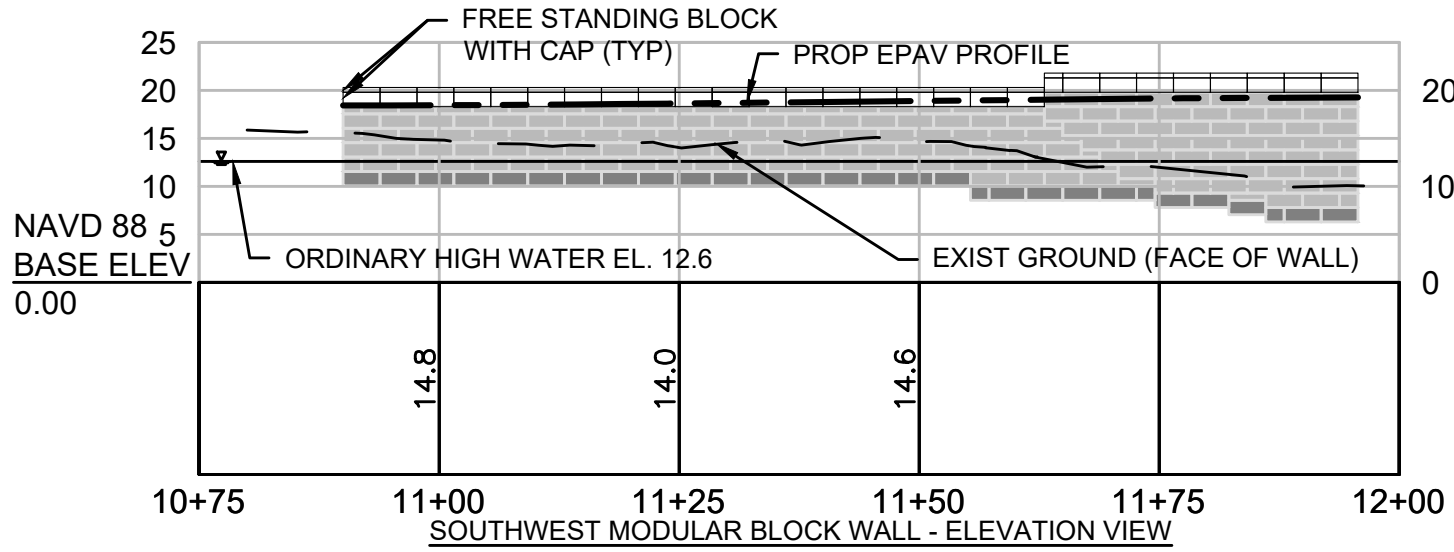
FOR REGISTRY USE ONLY

PLS

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PLAN ACCOMPANYING PETITION OF MASSACHUSETTS DEPARTMENT OF TRANSPORTATION TO CONSTRUCT AND MAINTAIN PLUMMER SPRING ROAD/MIDDLE STREET OVER UPPER ARTICHOKE RESERVOIR NEWBURYPORT/WEST NEWBURY, MA MIDDLESEX COUNTY



SCALE: 1" = 20'

FOR REGISTRY USE ONLY

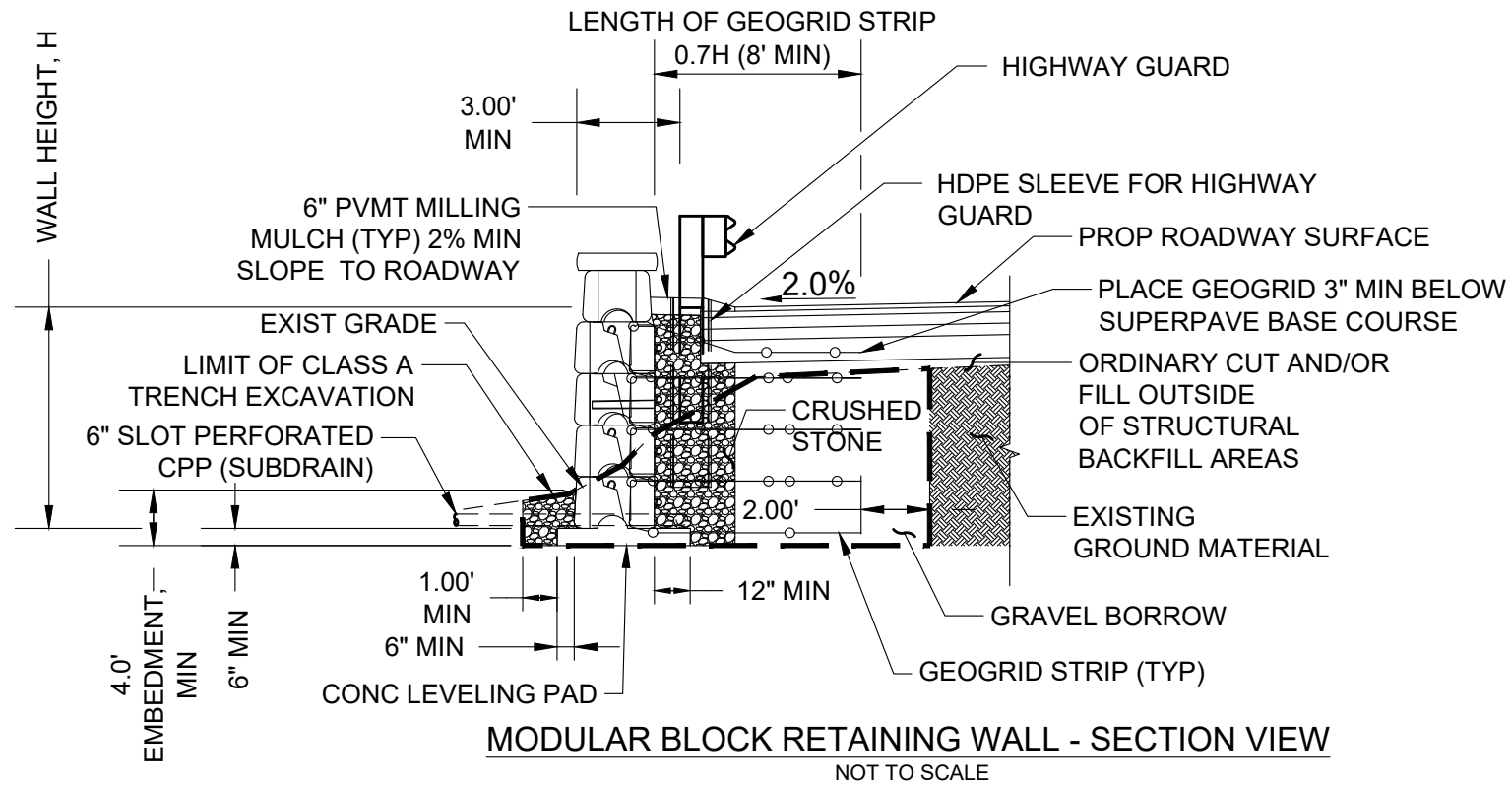
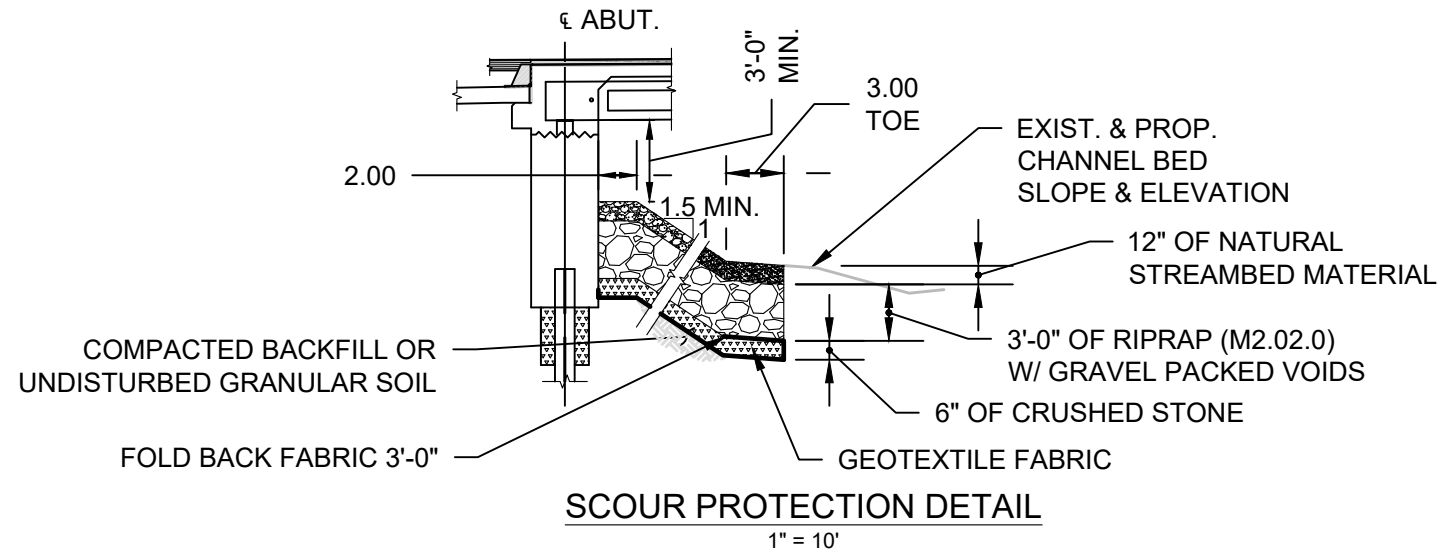
PLS

DATE

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PLAN ACCOMPANYING PETITION OF MASSACHUSETTS DEPARTMENT OF TRANSPORTATION TO CONSTRUCT AND MAINTAIN PLUMMER SPRING ROAD/MIDDLE STREET OVER UPPER ARTICHOKE RESERVOIR NEWBURYPORT/WEST NEWBURY, MA MIDDLESEX COUNTY

CONSTRUCTION DETAIL
FILE:
SHEET 6 OF 10



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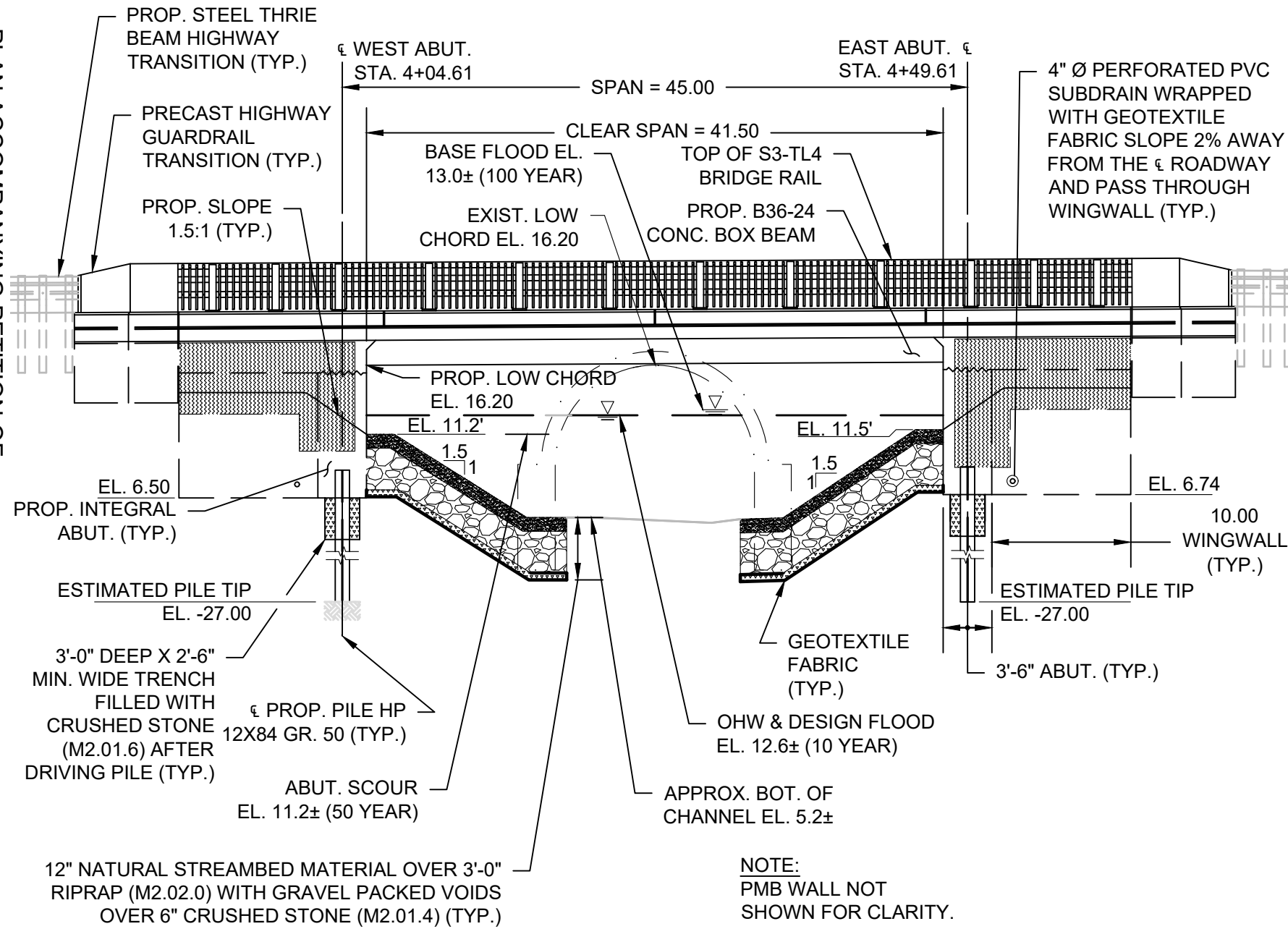
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DATE

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CONSTRUCTION DETAIL
FILE:
SHEET 7 OF 10



PROPOSED BRIDGE - SOUTH ELEVATION VIEW
1" = 10'

FOR REGISTRY USE ONLY

PLS

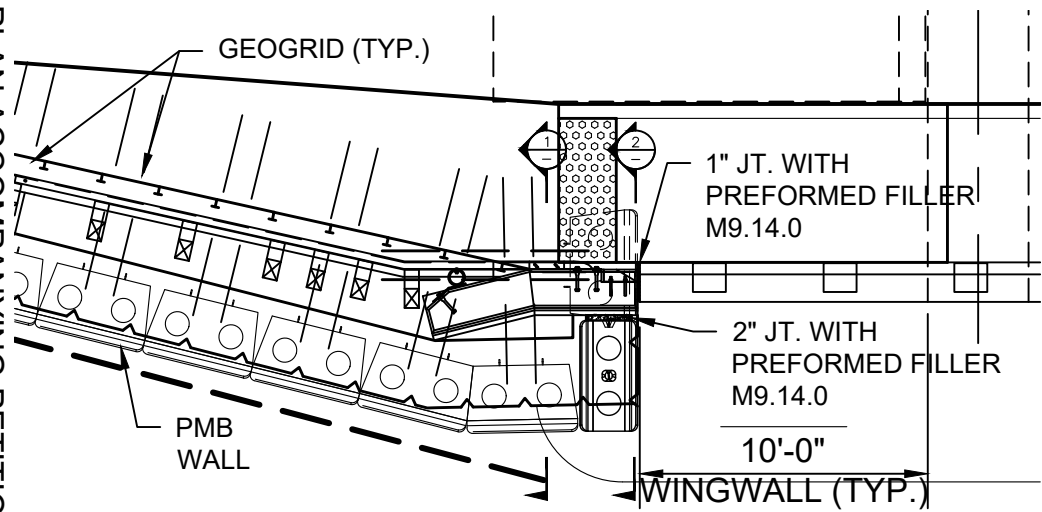
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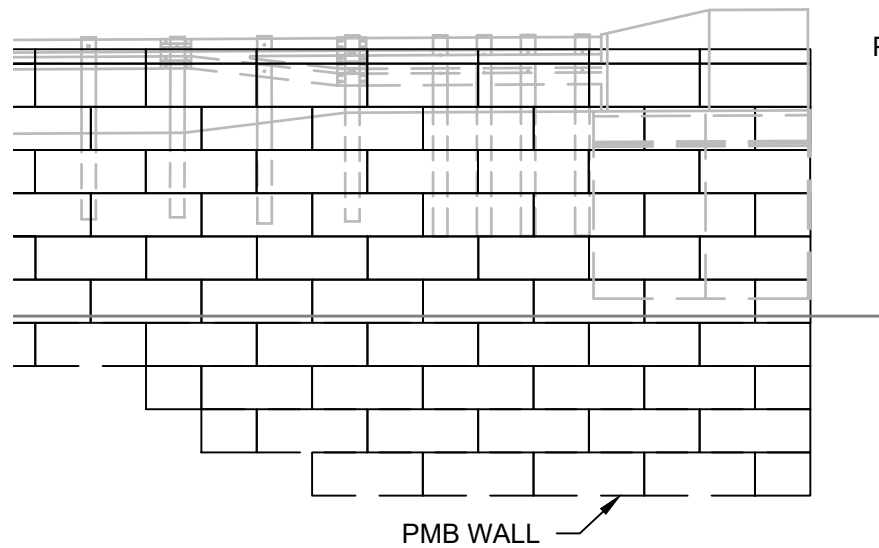
PLAN ACCOMPANYING PETITION OF MASSACHUSETTS DEPARTMENT OF TRANSPORTATION TO CONSTRUCT AND MAINTAIN PLUMMER SPRING ROAD/MIDDLE STREET OVER UPPER ARTICHOKE RESERVOIR NEWBURYPORT/WEST NEWBURY, MA MIDDLESEX COUNTY

CONSTRUCTION DETAIL

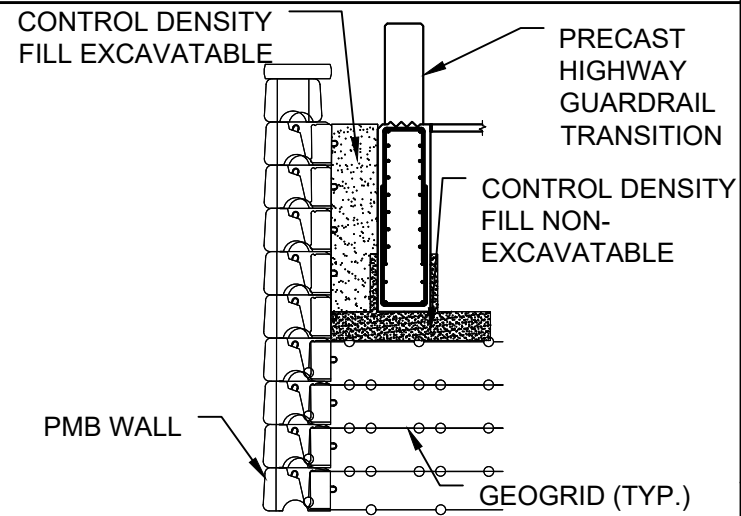
FILE: SHEET 8 OF 10



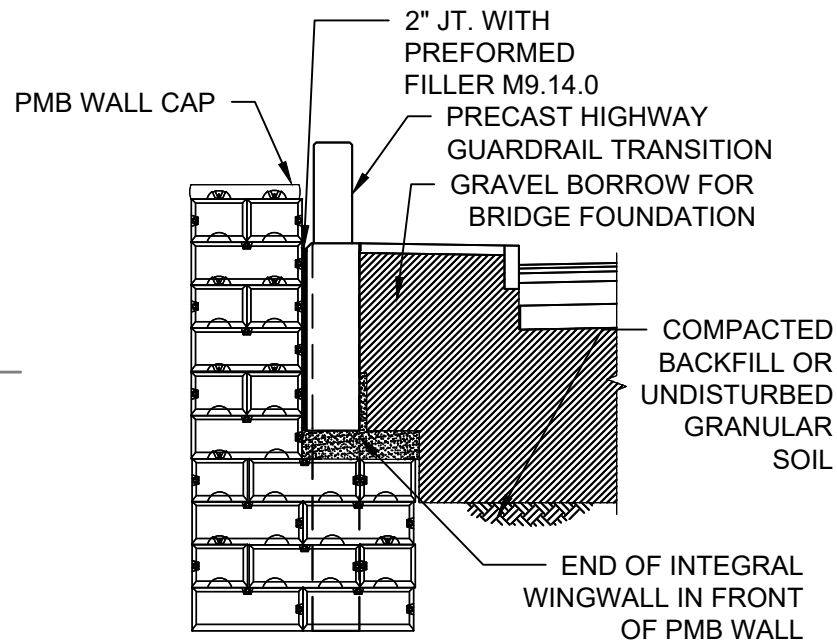
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ELEVATION - PMB WALL
NOT TO SCALE



SECTION 1 - PMB WALL
NOT TO SCALE



SECTION 2 - PMB WALL CORNER
NOT TO SCALE

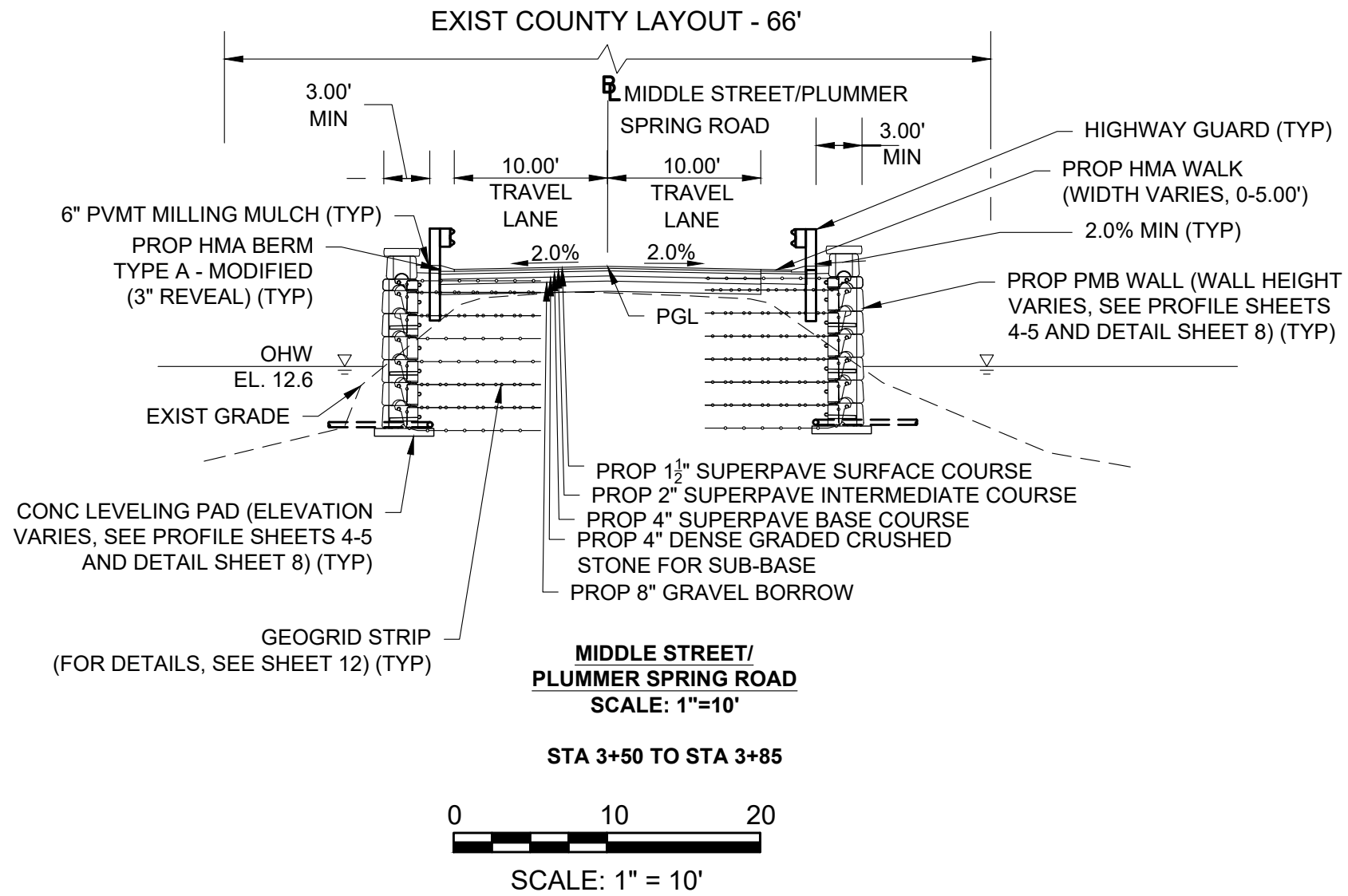
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 MASSACHUSETTS DEPARTMENT OF
 TRANSPORTATION
 TO CONSTRUCT AND MAINTAIN PLUMMER
 SPRING ROAD/MIDDLE STREET OVER
 UPPER ARTICHOKE RESERVOIR
 NEWBURYPORT/WEST NEWBURY, MA
 MIDDLESEX COUNTY



FOR REGISTRY USE ONLY

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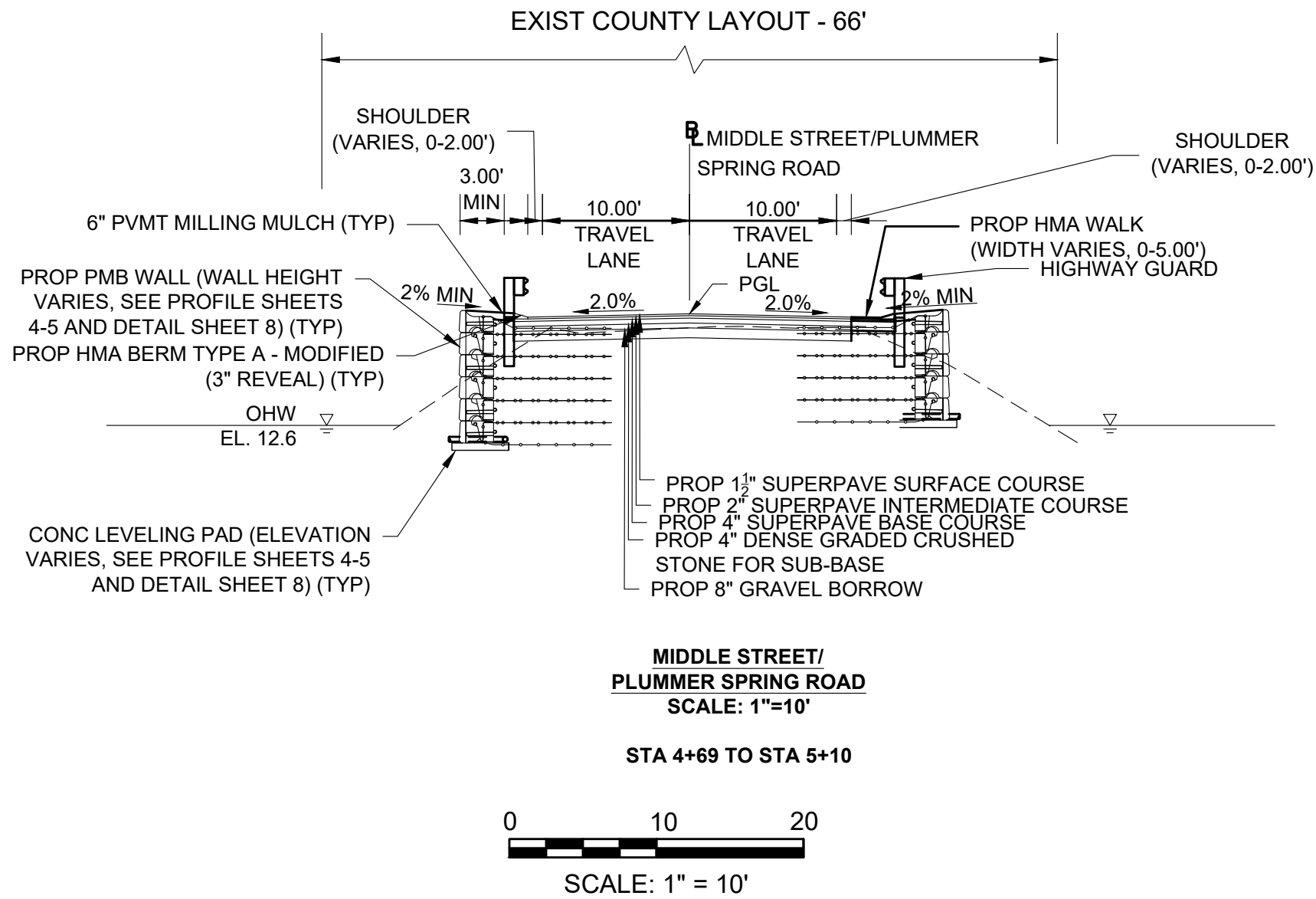
DATE

I CERTIFY THAT THIS PLAN CONFORMS TO
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 REGISTERS OF DEEDS

TYPICAL SECTIONS
 FILE:
 SHEET 9 OF 10

PLAN ACCOMPANYING PETITION OF MASSACHUSETTS DEPARTMENT OF TRANSPORTATION TO CONSTRUCT AND MAINTAIN PLUMMER SPRING ROAD/MIDDLE STREET OVER UPPER ARTICHOKE RESERVOIR NEWBURYPORT/WEST NEWBURY, MA MIDDLESEX COUNTY

TYPICAL SECTIONS
FILE:
SHEET 10 OF 10



FOR REGISTRY USE ONLY

PLS

DATE

I CERTIFY THAT THIS PLAN CONFORMS TO THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS



Department of Environmental Protection

One Winter Street Boston, MA 02108 • 617-292-5500

Charles D. Baker
Governor

Karyn E. Polito
Lieutenant Governor

Bethany A. Card
Secretary

Martin Suuberg
Commissioner

WW01 - Water-Dependent License/Permit Application

Permittee Information

Name: ANGUS JENNINGS
Phone: (978) 363-1100
Address: 381 MAIN STREET
WEST NEWBURY, MA 01985

Permittee Company Information

Name: TOWN OF WEST NEWBURY
Angus Jennings
Phone: (978) 363-1100
Address: 381 MAIN STREET
WEST NEWBURY, MA 01985

Application Submitter Information

Name: SARA KREISEL
Phone: (617) 896-4579
Address: 803 SUMMER STREET
BOSTON, MA 02127

Location Information

Artichoke River
0 N/A WEST NEWBURY, MA 01985
Latitude: 42.802999
Longitude: -70.931053

List of Abutters

Full Legal Name	Abutting Property Address
City Of Newburyport Water Department	16C Perry Way, Newburyport MA 01950
Middle Street Realty Trust Robert W Higgins Tr	45 Water Street, Newburyport MA 01950
443 Middle Street Re Trust C/O Bennett & Co	45 Water Street, Newburyport MA 01950
Town Of West Newbury Conservation Commission	381 Main Street, West Newbury, MA 01985

Additional Contacts Info

Please provide the Name of the Permittee(s) exactly as it should be listed in the license/permit that will be recorded at the Registry of Deeds (the name(s) listed here need to match the name(s) listed on the plans or the license may be rejected by the Registry of Deeds) Town of West Newbury / City of Newburyport

I hereby attest that I have listed all the Permittees in the Application Contacts section (each Permittee entered as a separate contact - do not list 2 names in 1 field) Yes

Is the project site within a right of way? Yes

Are you the sole owner of right of way? No

Are you submitting evidence of legal authority to apply in lieu of the Property Owner's Signature? If yes, please attach a document 'Evidence of Legal Authority' in the document section No

I hereby attest that I have listed all the Property Owners in the Application Contacts section Yes

I hereby attest that I have listed all the Abutters in the above Contact table section Yes

Application Type

Please select the application type you are applying for Other

Project Information

Brief Description of Project (e.g., dock, seawall, boat ramp, Harborwalk – if a longer narrative is to be provided, please upload a separate document)

The Town of West Newbury and the City of Newburyport propose to replace the structurally deficient, undersized bridge, Bridge No. N-11-007, which carries Middle Street, West Newbury/Plummer Spring Road, Newburyport, MA over the Artichoke River / Upper Artichoke Reservoir. Please see attachment for more information. Project occurs entirely within the Municipal ROW.

Brief Description of Project Location - Non-Traditional Address (e.g., 'west end Toronto Avenue right-of-way at Gloucester Harbor' DO NOT complete this field if your project has a traditional address - enter N/A)

Municipal Line: Middle Street / Plummer Spring Road, Town of West Newbury / City of Newburyport over the Upper Artichoke Reservoir. Project occurs entirely within the Municipal ROW.

Proposed Use/Activity description

Continued use of a public roadway requires replacement of the structurally deficient, undersized bridge, Bridge No. N-11-007, which carries Middle Street, West Newbury/Plummer Spring Road, Newburyport, MA over the Artichoke River / Upper Artichoke Reservoir. Please see attachment for more information.

Is this site subject to 21E?

No

Does the project exceed the MEPA review thresholds for Waterways standards?

Yes

If yes, please provide MEPA Certification number

16412

If yes, please provide the date of the secretary certificate

08/23/2021

Is the Project site in an Environmental Justice Community?

No

Which Wetlands Protection Act process document are you attaching?

WPA Order of Conditions

Has there ever been a waterways jurisdictional determination issued for this project site?

No

If yes, please provide JD Number

Does your project require a 401 water quality certificate? If yes, please attach if currently available, a copy of '401 Water Quality Certificate' in the document section.

Yes

Are you seeking a Variance? If yes, please attach a supporting evidence of compliance with 310 CMR 9.21, 'Variance Supplement' in the document section.

No

Is the project located within the Designated Port Area? If yes, please review the standards at 310 CMR 9.12 and 9.32.

No

Is the project located within an area subject to State Approved Municipal Harbor Plan? If yes, please attach supporting evidence of compliance with applicable MHP, 'MHP Supplement' in the document section.

No

Are you seeking a CWD (consolidated written determination) in accordance with 310 CMR 9.14(4)? If yes, please attach a document 'CWD Supplement' in the document section.	No
Does your project involve dredging?	Yes

Dredging Information

Please select the type	Improvement dredging
What is the volume of the material to be dredged? (cubic yards)	98
What is the area of the dredge foot print? (square feet)	824
What is the maximum dredge depth including over-dredge (referenced to Mean Low Water)?	4.5-feet
Describe dredge spoil disposal location/method	<p>Proposed dredging will occur mechanically. Dredge material will be stockpiled on-site to be reused on-site. The contract documents stipulate:</p> <p>Item 983.521 - Streambed/Bank Restoration – Due to the widening of the bridge there is limited existing natural streambed material that can be reused. Natural streambed material that is removed during excavation shall be stockpiled at a location approved by the TOWN/CITY for reuse in Item 983.521.</p> <p>The stockpiling of natural streambed material shall be considered incidental to Item 983.521.</p> <p>DISPOSAL OF EXCESS MATERIAL Surplus materials obtained from any type of excavation, and all existing and other materials not required to be removed and stacked or needed for use on the project, as determined by the Engineer, shall become the property of the Contractor and disposed of subject to the regulations and requirements of local authorities governing the disposal of such materials, at no additional compensation.</p>
Is the dredge spoil compatible for beach nourishment?	No

Dredging Method

Hydraulic	
Mechanical	Yes
Other	

Documents

Documents	<p>Required Documents:</p> <ol style="list-style-type: none"> 1. Chapter 91 Plans 2. List of Environmental Regulatory Programs 3. MEPA Certificate 4. WPA Order of Conditions
-----------	---

Special Fee Provision

Exemption Yes
 Exemption Type City/Town/County Government
 Exclusion (special agreement or policy)
 Substitution (ASP/IRP)
 Double Fee for Enforcement
 Hardship payment extension request

Attachments

Name	Description	Type	Latest Updated
_Newburyport_Final_OOC.pdf	Newburyport OOC	WPA Order of Conditions	10/21/2022
_WestNewbury_Final_OOC.pdf	West Newbury OOC	WPA Order of Conditions	10/21/2022
_NOI_EnvironmentalPlans_&_Details.pdf	NOI Plans	WPA Plans	11/07/2022
_UpperArtichokeRes_Ch91Plans.pdf	Chapter 91 Plans	Chapter 91 Plans	10/21/2022
_UpperArtichokeRes_MEPA Certificate.pdf	MEPA Certificate	MEPA Certificate	10/21/2022
_Ch91_App_WestNewburyNewburyport_Oct21.pdf	App. Supplementary Info (Narrative, etc)	Other	10/21/2022
_401WQC_KyleLally_Sept14_2022.pdf	Water Imminent Issuance-401WQC per Kyle	401 Water Quality Certificate	10/21/2022
_Environmental-regulatory-programs.docx	Envi Reg Programs	List of Environmental Regulatory Programs	10/21/2022
_UpperArtichokeRes_REV_Ch91Plans_Nov9.pdf	Chap 91 Plans_REV	Chapter 91 Plans	11/29/2022

Application Contacts

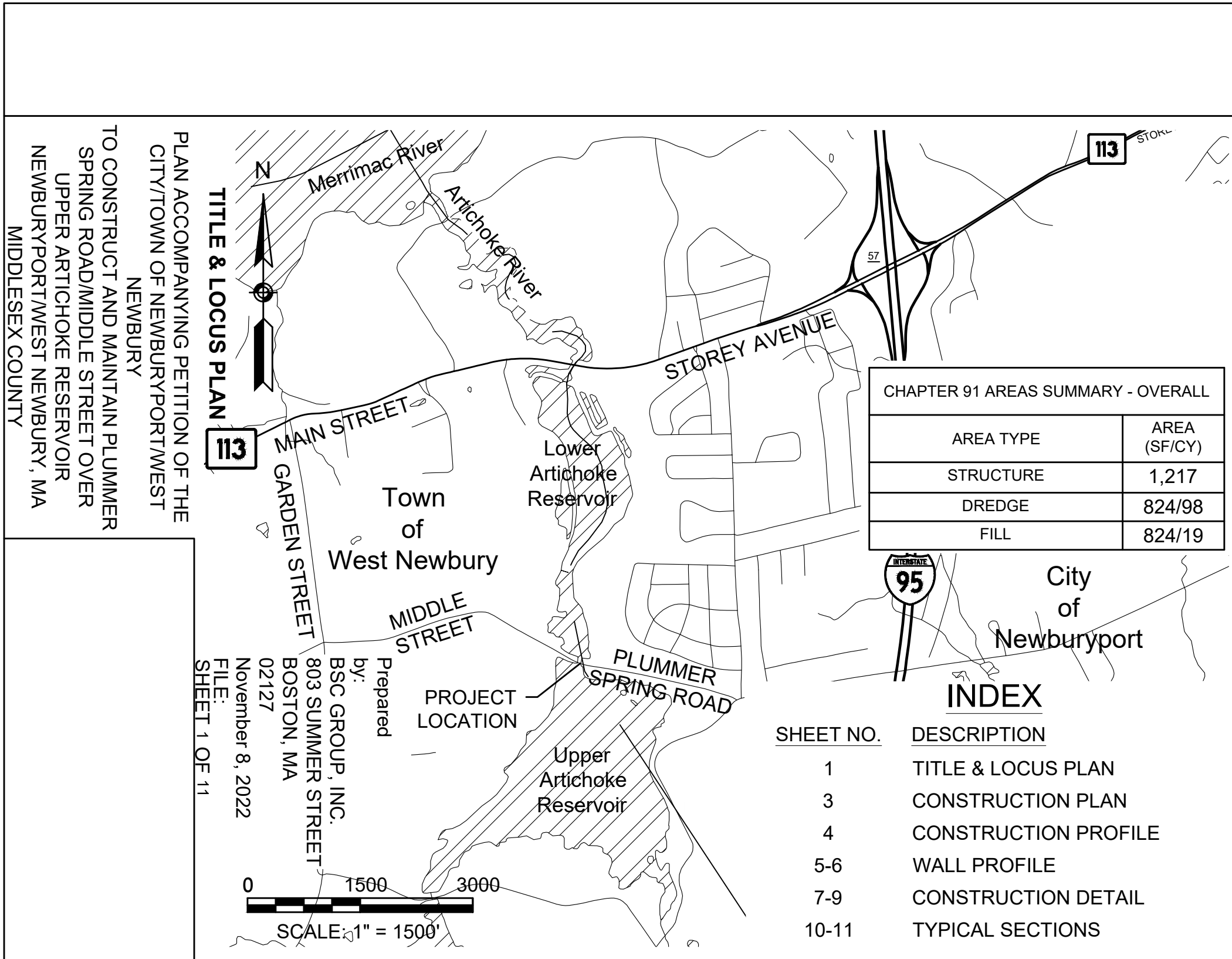
Name	Organization Name	Contact Person	Telephone #	Contact Type	Email
SARA, KREISEL	n/a	n/a	(617) 896-4579	Application Prepared By	skreisel@bscgroup.com
n/a	CITY OF NEWBURYPORT	JON-ERIC WHITE	(978) 465-4464	Additional Permittee	jewwhite@cityofnewburyport.com

Certification Information

Individual
SARA KREISEL
803 SUMMER STREET
BOSTON, MA 02127
United States

Telephone #: (617) 896-4579
E-mail: skreisel@bscgroup.com

I hereby certify that the information submitted in this application is true and accurate to the best of my knowledge. All applicants and property owners must sign the "Proof of Signature" which will be provided after initial review by the Department. All future application correspondence may be signed by the Application Submitter.



TITLE & LOCUS PLAN
 PLAN ACCOMPANYING PETITION OF THE
 CITY/TOWN OF NEWBURYPORT/WEST
 NEWBURY
 TO CONSTRUCT AND MAINTAIN PLUMMER
 SPRING ROAD/MIDDLE STREET OVER
 UPPER ARTICHOKE RESERVOIR
 NEWBURYPORT/WEST NEWBURY, MA
 MIDDLESEX COUNTY

Prepared
 by:
 BSC GROUP, INC.
 803 SUMMER STREET
 BOSTON, MA
 02127
 November 8, 2022
 FILE:
 SHEET 1 OF 11

CHAPTER 91 AREAS SUMMARY - OVERALL

AREA TYPE	AREA (SF/CY)
STRUCTURE	1,217
DREDGE	824/98
FILL	824/19

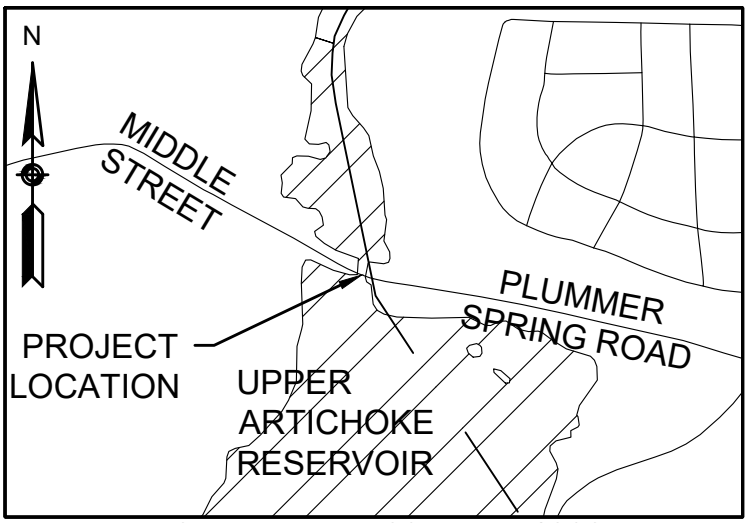
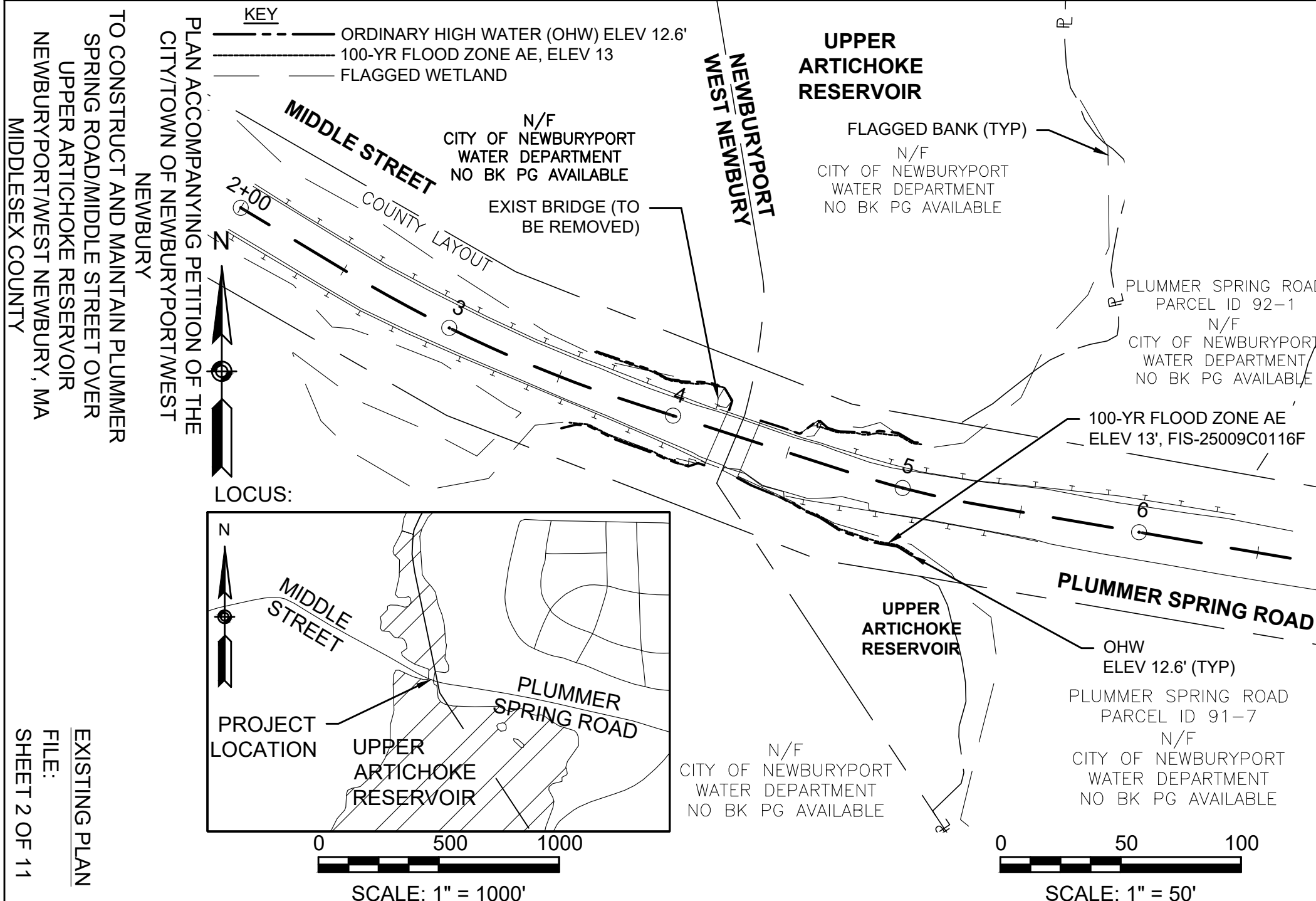
INDEX

SHEET NO.	DESCRIPTION
1	TITLE & LOCUS PLAN
3	CONSTRUCTION PLAN
4	CONSTRUCTION PROFILE
5-6	WALL PROFILE
7-9	CONSTRUCTION DETAIL
10-11	TYPICAL SECTIONS

FOR REGISTRY USE ONLY

PLS _____ DATE _____

I CERTIFY THAT THIS PLAN CONFORMS TO
 THE RULES AND REGULATIONS OF THE
 REGISTERS OF DEEDS



SCALE: 1" = 1000'

SCALE: 1" = 50'

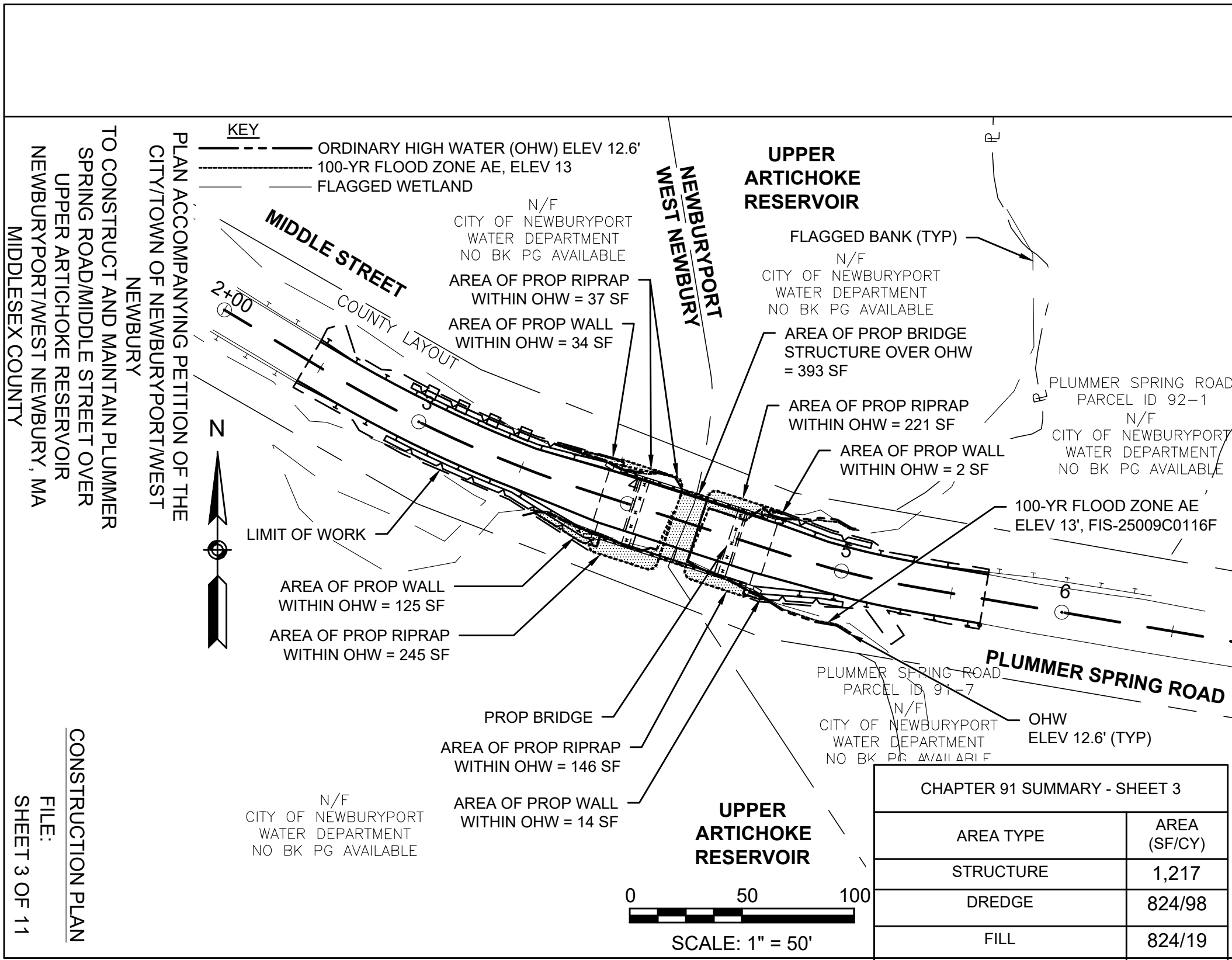
PLAN ACCOMPANYING PETITION OF THE CITY/TOWN OF NEWBURYPORT/WEST NEWBURY TO CONSTRUCT AND MAINTAIN PLUMMER SPRING ROAD/MIDDLE STREET OVER UPPER ARTICHOKE RESERVOIR NEWBURYPORT/WEST NEWBURY, MA MIDDLESEX COUNTY

EXISTING PLAN
FILE:
SHEET 2 OF 11

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PLS _____
DATE _____

I CERTIFY THAT THIS PLAN CONFORMS TO THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS



PLAN ACCOMPANYING PETITION OF THE CITY/TOWN OF NEWBURYPORT/WEST NEWBURY TO CONSTRUCT AND MAINTAIN PLUMMER SPRING ROAD/MIDDLE STREET OVER UPPER ARTICHOKE RESERVOIR NEWBURYPORT/WEST NEWBURY, MA MIDDLESEX COUNTY

CONSTRUCTION PLAN
FILE:
SHEET 3 OF 11

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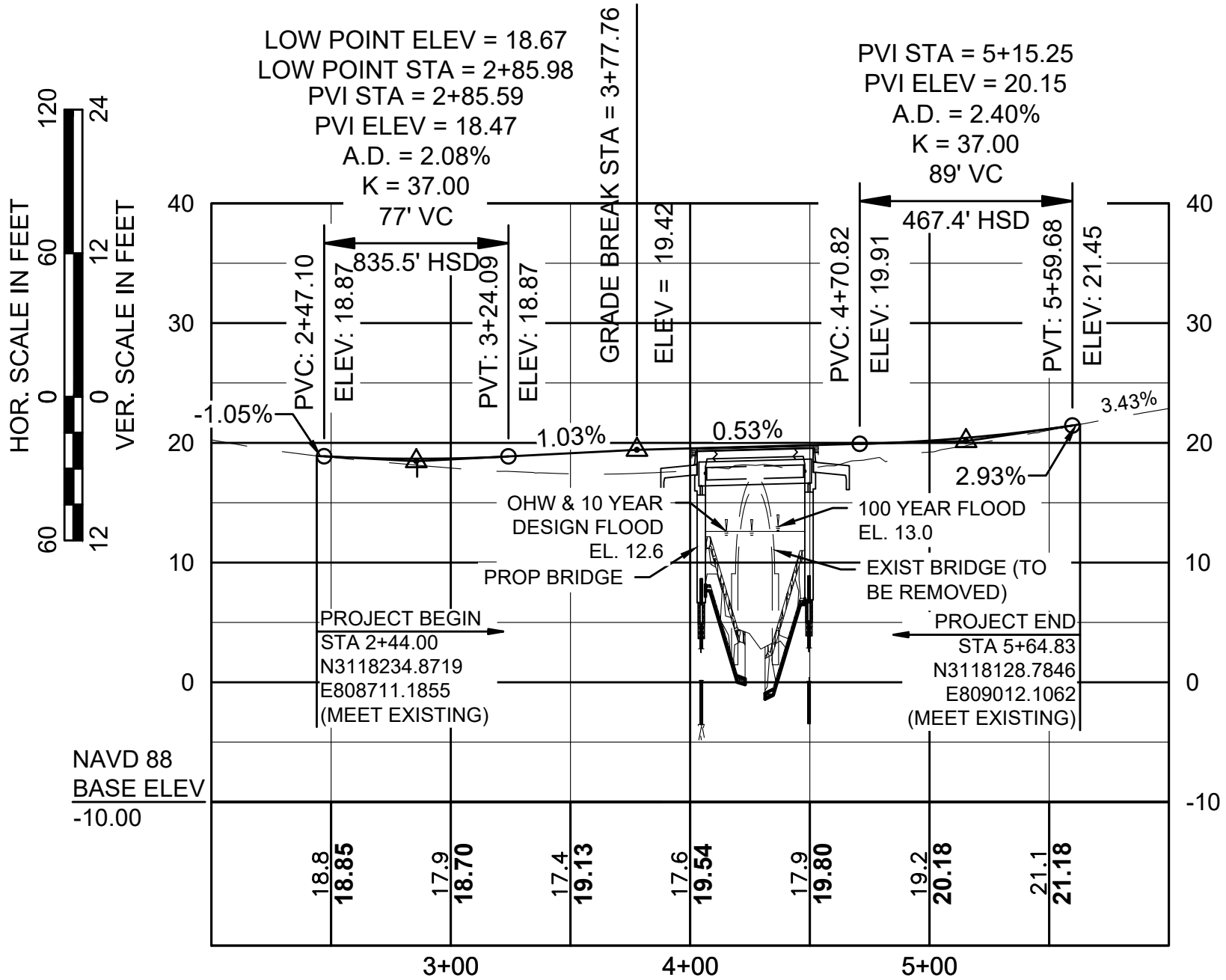
PLS _____
DATE _____

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PLAN ACCOMPANYING PETITION OF THE
CITY/TOWN OF NEWBURYPORT/WEST
NEWBURY
TO CONSTRUCT AND MAINTAIN PLUMMER
SPRING ROAD/MIDDLE STREET OVER
UPPER ARTICHOKE RESERVOIR
NEWBURYPORT/WEST NEWBURY, MA
MIDDLESEX COUNTY

CONSTRUCTION PROFILE

FILE:
SHEET 4 OF 11



FOR REGISTRY USE ONLY

PLS

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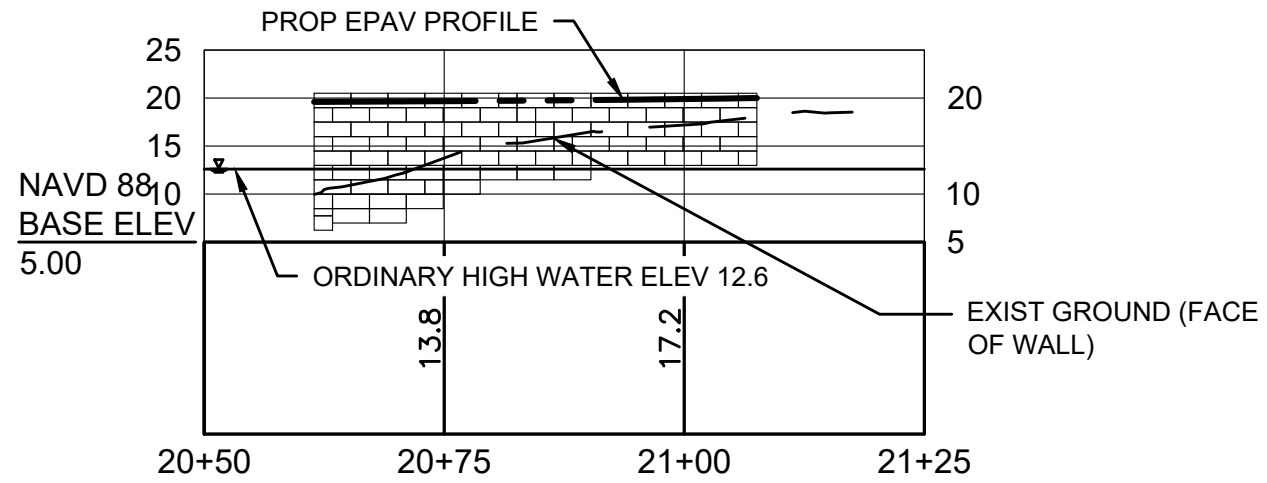
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FOR REGISTRY USE ONLY

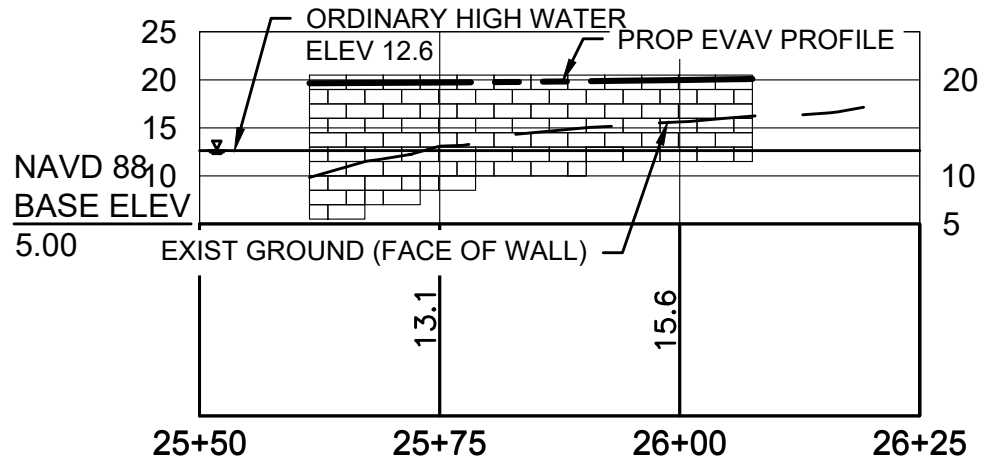
PLS _____

DATE _____

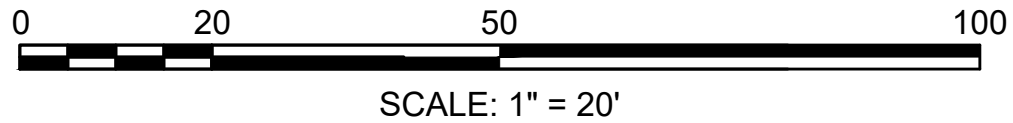
I CERTIFY THAT THIS PLAN CONFORMS TO THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS



SOUTHEAST MODULAR BLOCK WALL - ELEVATION VIEW
SCALE: 1" = 20' HORIZ.
SCALE: 1" = 20' VERT.



NORTHEAST MODULAR BLOCK WALL - ELEVATION VIEW
SCALE: 1" = 20' HORIZ.
SCALE: 1" = 20' VERT.



PLAN ACCOMPANYING PETITION OF THE CITY/TOWN OF NEWBURYPORT/WEST NEWBURY TO CONSTRUCT AND MAINTAIN PLUMMER SPRING ROAD/MIDDLE STREET OVER UPPER ARTICHOKE RESERVOIR NEWBURYPORT/WEST NEWBURY, MA MIDDLESEX COUNTY

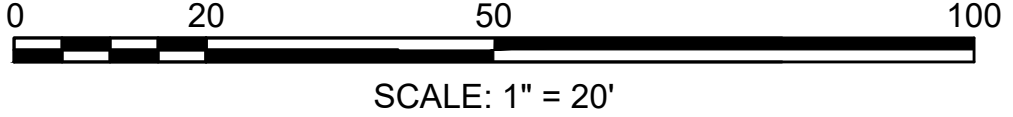
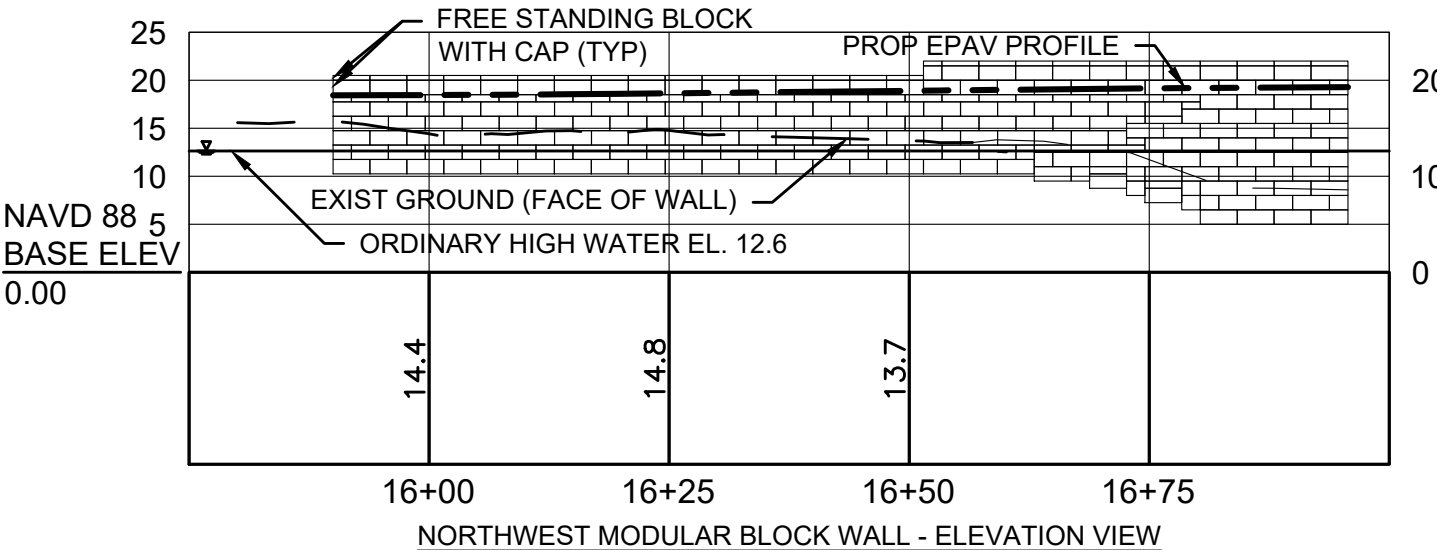
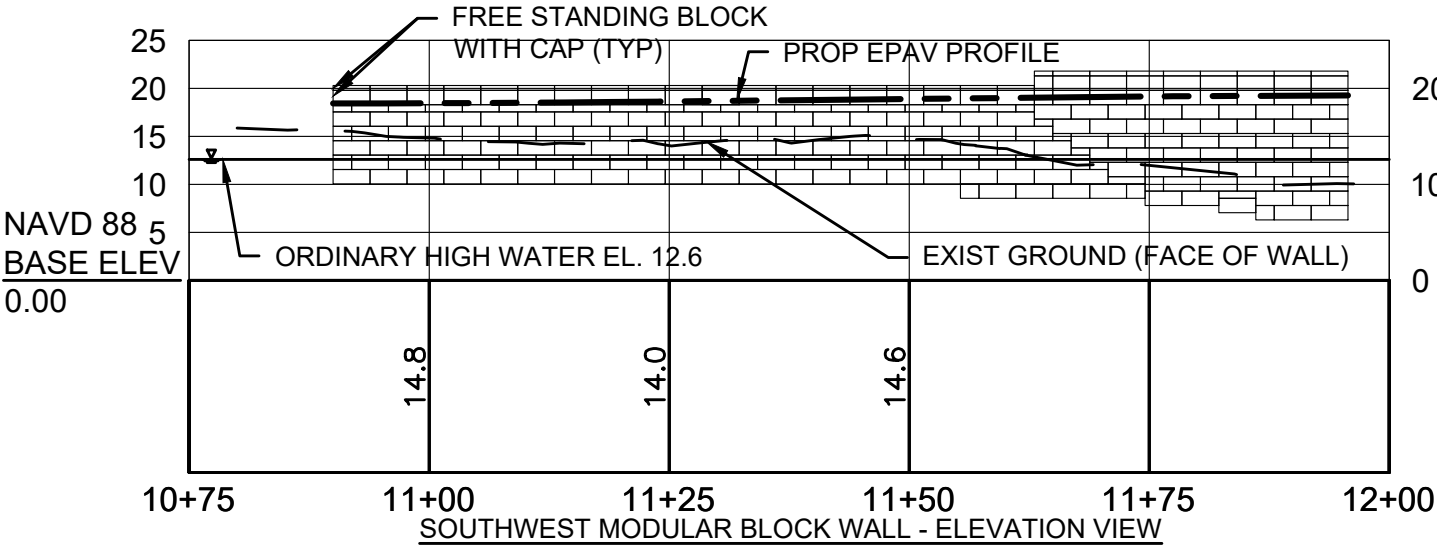
WALL PROFILE
FILE:
SHEET 5 OF 11

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PLS

DATE

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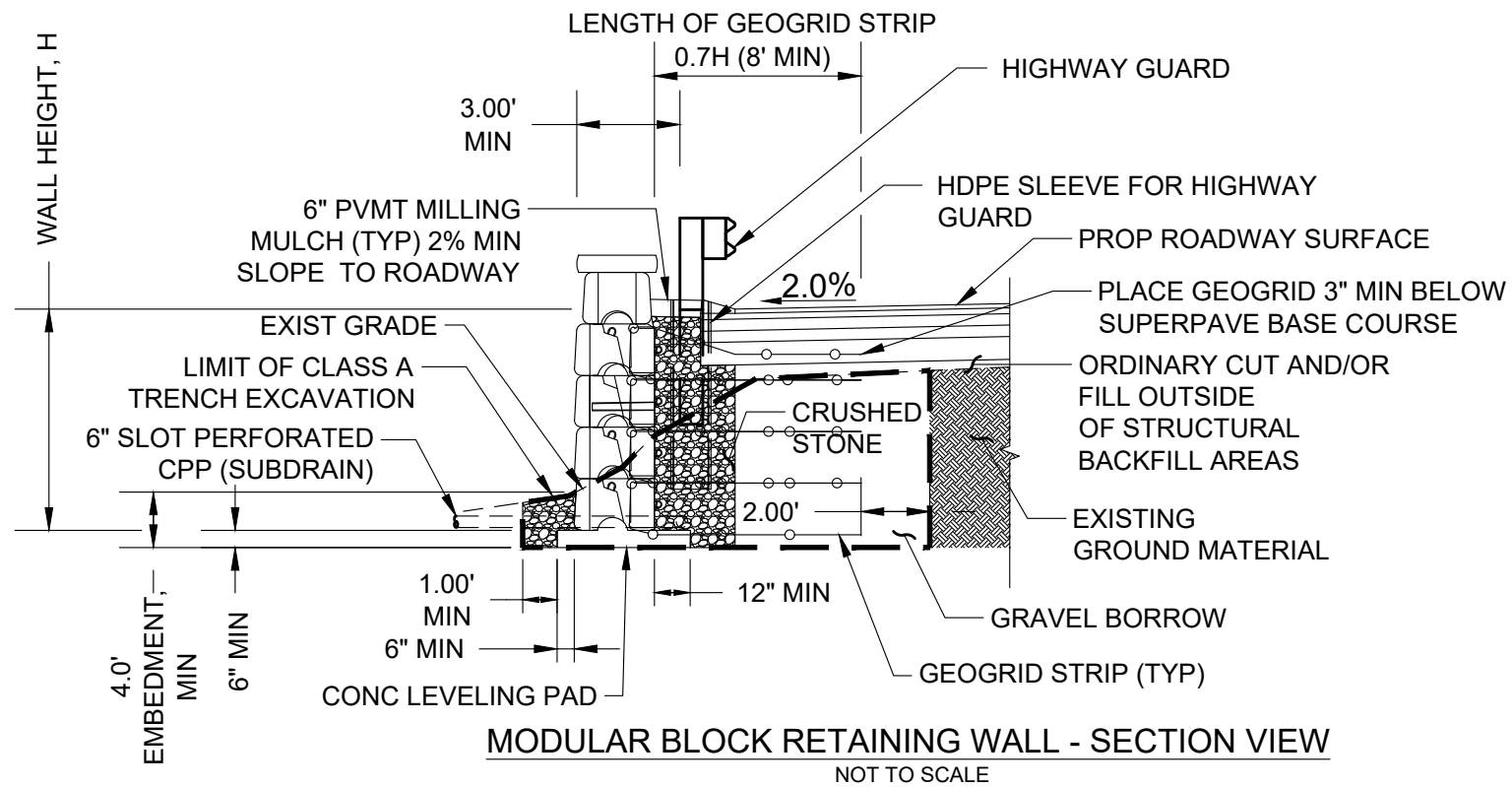
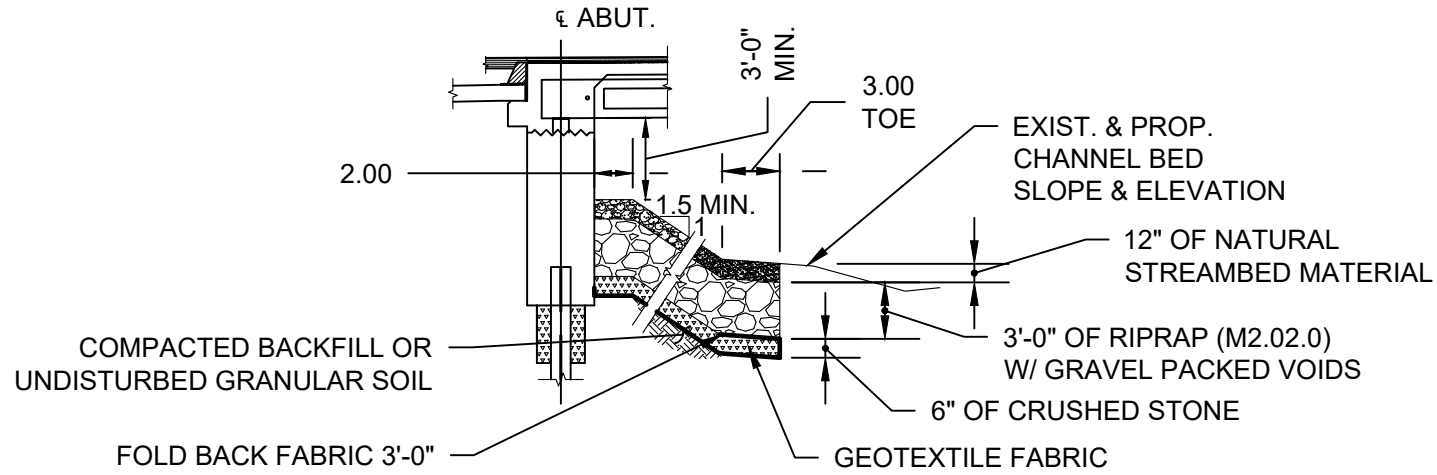


PLAN ACCOMPANYING PETITION OF THE CITY/TOWN OF NEWBURYPORT/WEST NEWBURY TO CONSTRUCT AND MAINTAIN PLUMMER SPRING ROAD/MIDDLE STREET OVER UPPER ARTICHOKE RESERVOIR NEWBURYPORT/WEST NEWBURY, MA MIDDLESEX COUNTY

WALL PROFILE
FILE:
SHEET 6 OF 11

PLAN ACCOMPANYING PETITION OF THE CITY/TOWN OF NEWBURYPORT/WEST NEWBURY TO CONSTRUCT AND MAINTAIN PLUMMER SPRING ROAD/MIDDLE STREET OVER UPPER ARTICHOKE RESERVOIR NEWBURYPORT/WEST NEWBURY, MA MIDDLESEX COUNTY

CONSTRUCTION DETAIL
FILE:
SHEET 7 OF 11



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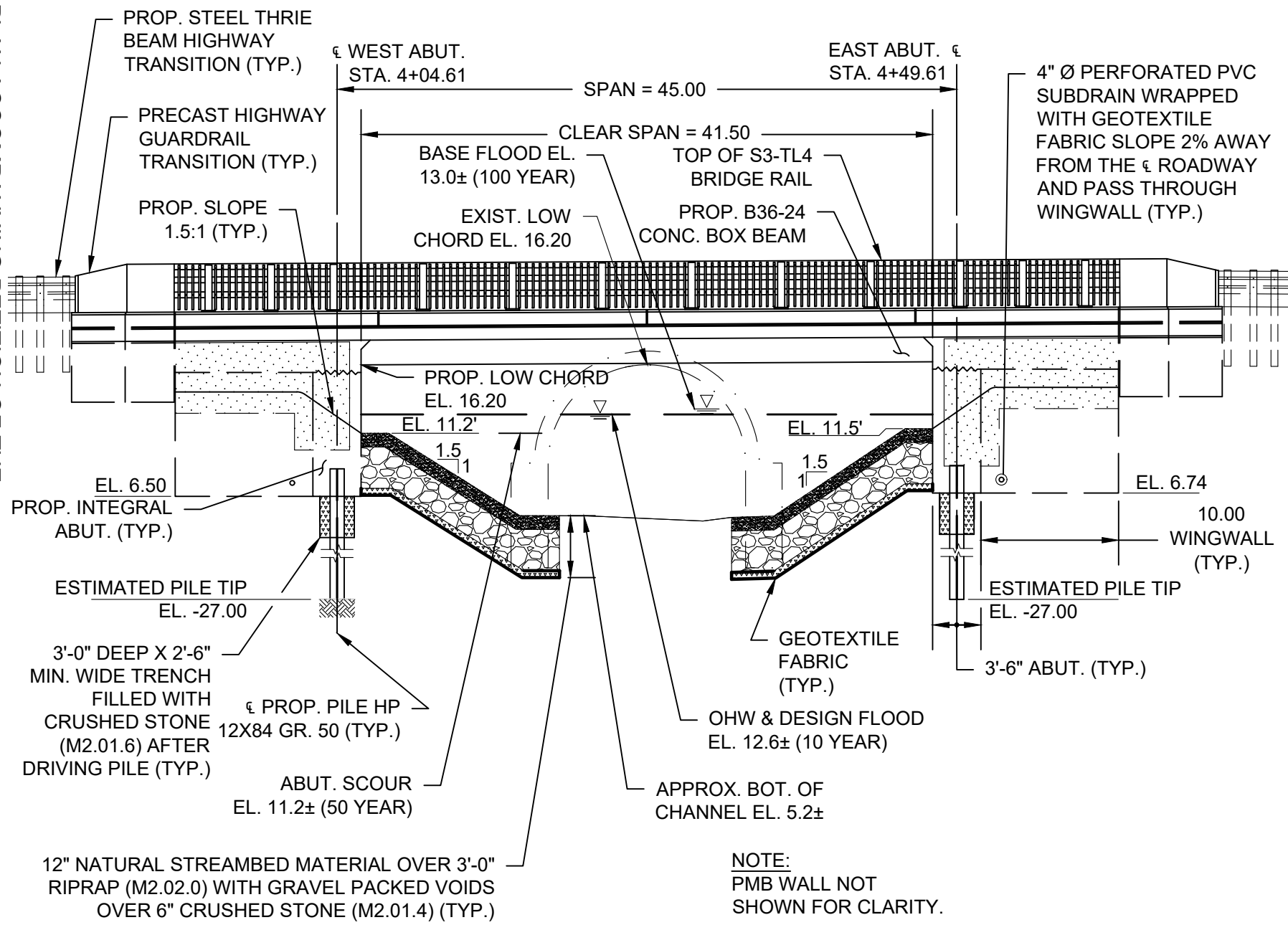
PLS

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CONSTRUCTION DETAIL
FILE:
SHEET 8 OF 11



PROPOSED BRIDGE - SOUTH ELEVATION VIEW
1" = 10'

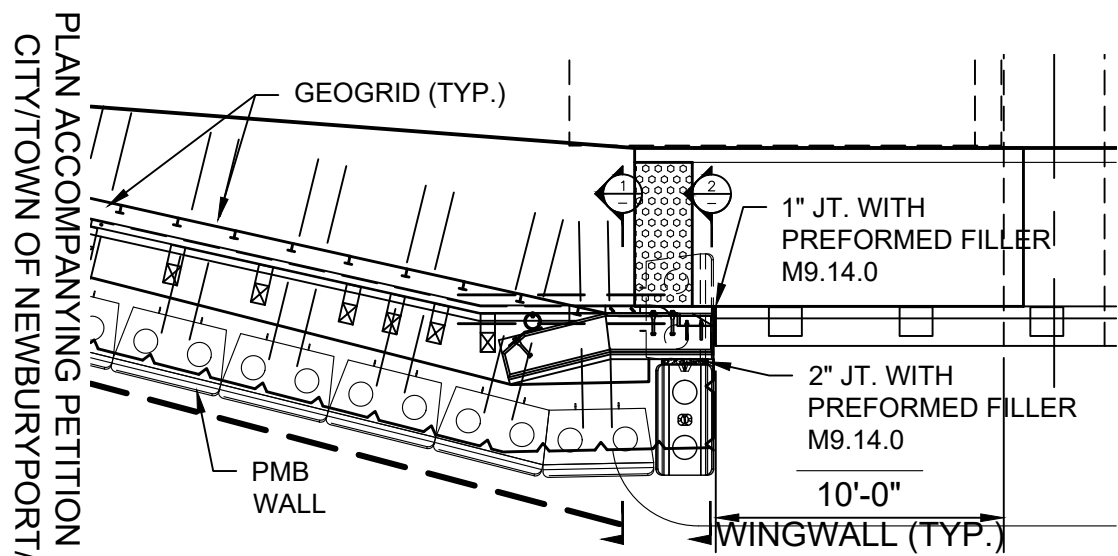
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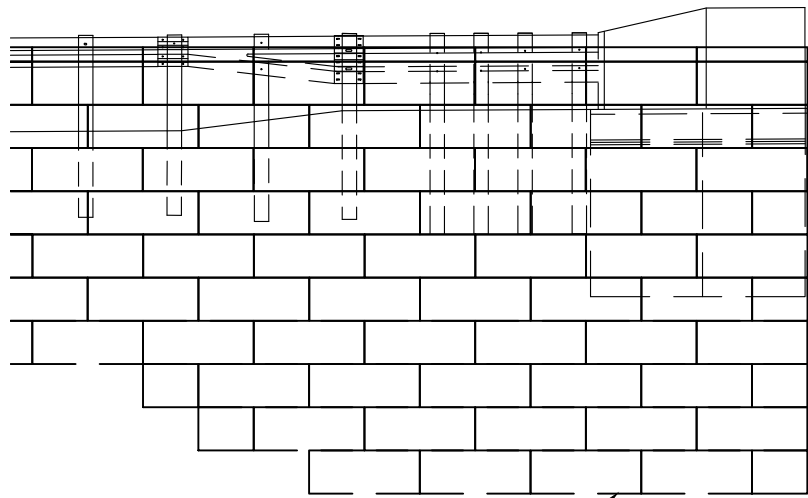
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TO CONSTRUCT AND MAINTAIN PLUMMER
 SPRING ROAD/MIDDLE STREET OVER
 UPPER ARTICHOKE RESERVOIR
 NEWBURYPORT/WEST NEWBURY, MA
 MIDDLESEX COUNTY
 NEWBURY

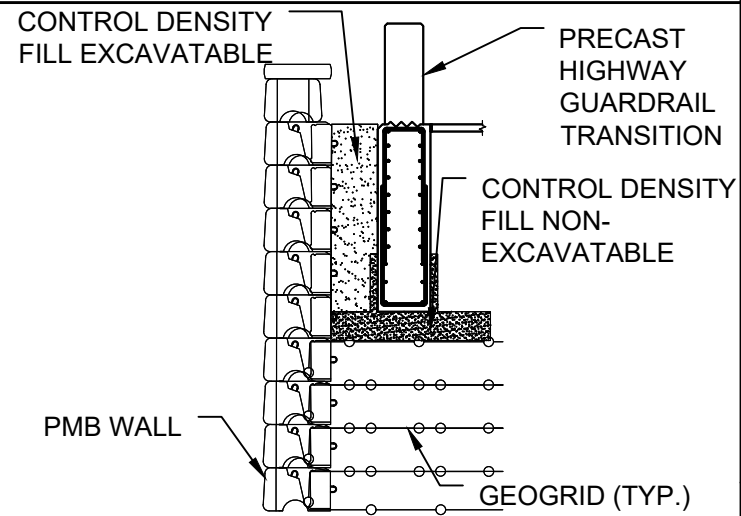
CONSTRUCTION DETAIL
 FILE:
 SHEET 9 OF 11



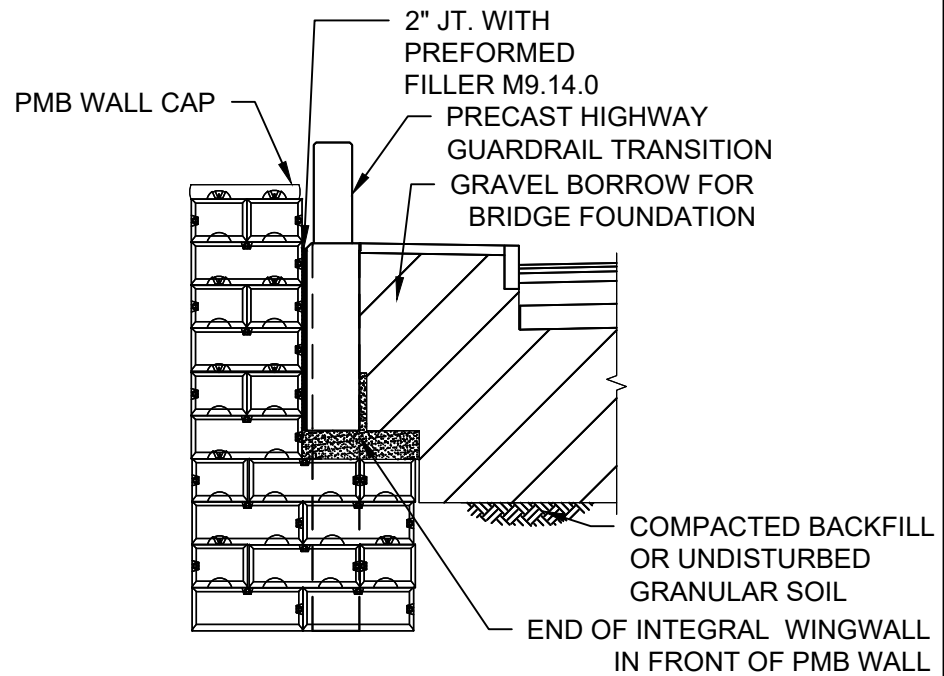
PLAN - PMB WALL
 NOT TO SCALE



ELEVATION - PMB WALL
 NOT TO SCALE



SECTION 1 - PMB WALL
 NOT TO SCALE



SECTION 2 - PMB WALL CORNER
 NOT TO SCALE

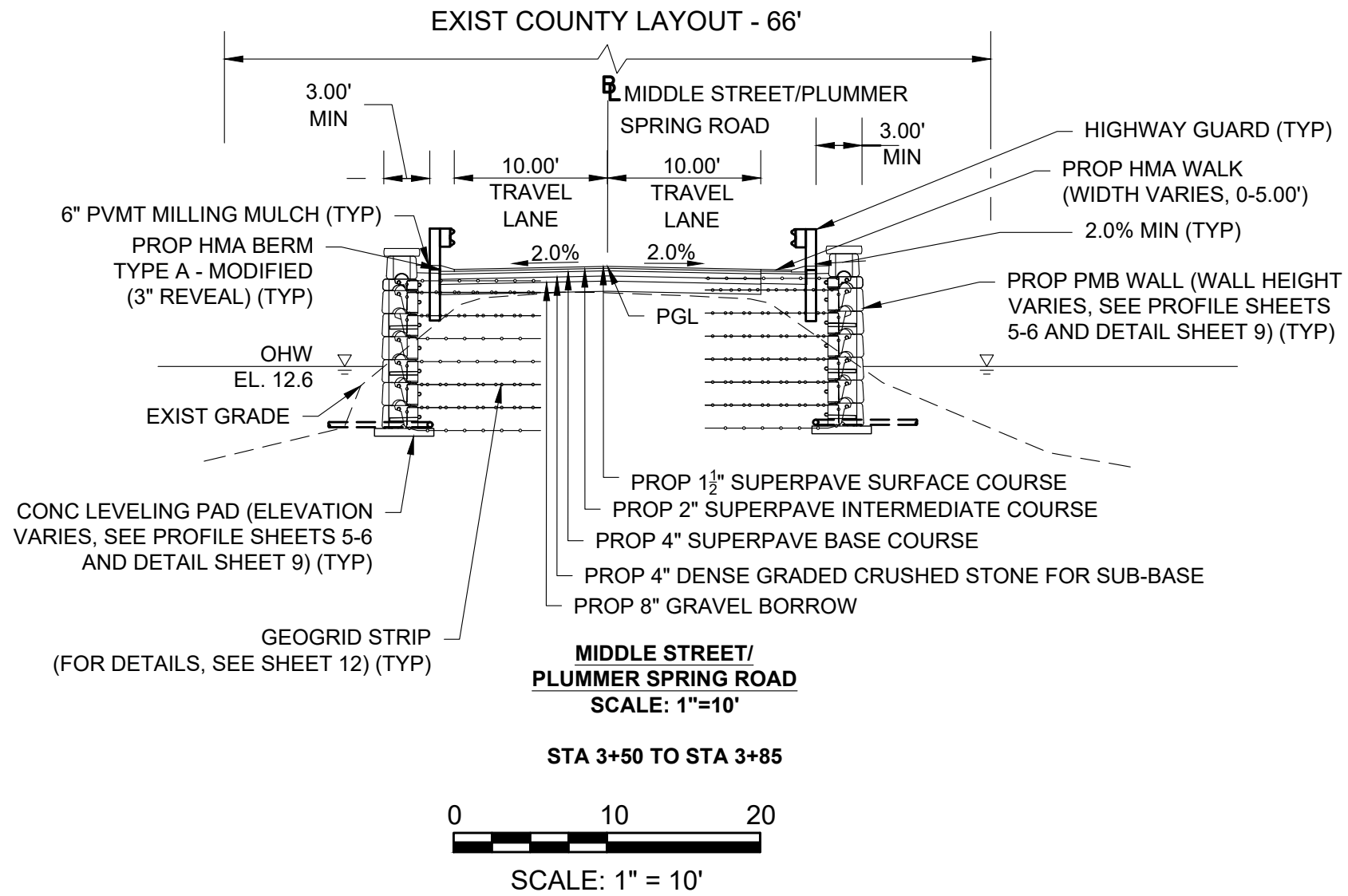
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TYPICAL SECTIONS
FILE:
SHEET 10 OF 11

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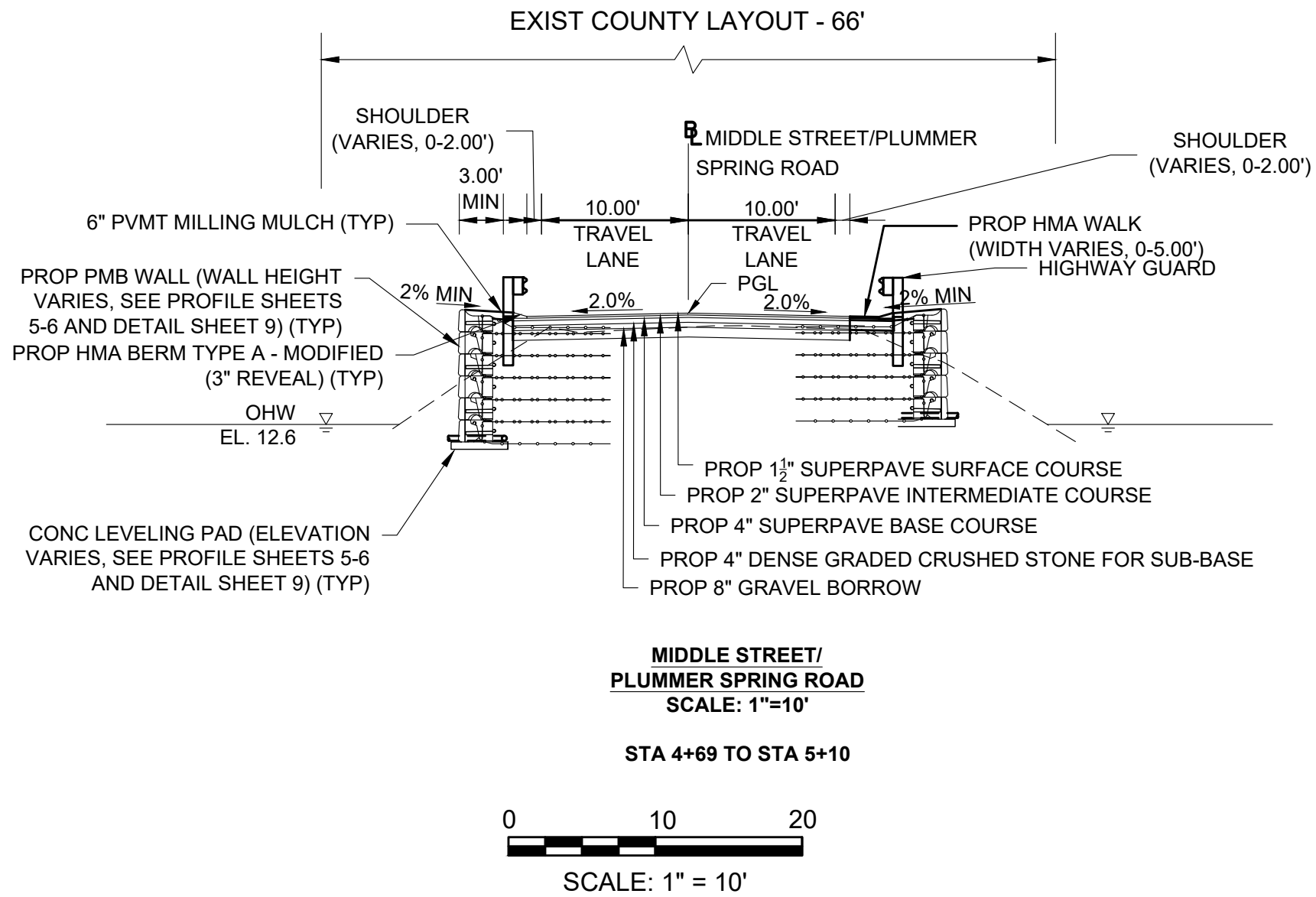
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TYPICAL SECTIONS
FILE:
SHEET 11 OF 11



FOR REGISTRY USE ONLY

PLS

DATE

I CERTIFY THAT THIS PLAN CONFORMS TO THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS



Massachusetts Department of Environmental Protection
 Chapter 91 Waterways Water-Dependent, Nonwater Dependent, Amendment Application
Municipal Planning Board Notification

Note to Permittee: This form should be submitted, with the top portion completed, to the municipal Planning Board along with the complete application and project plans.

Town of West Newbury and City of Newburyport
 Name of Permittee

Middle St / Plummer Spring Rd (Municipal ROW) Artichoke River / Upper
Artichoke Reservoir Town of West Newbury and City of Newburyport
 Project Address Name of Waterway City/Town

Description of project and use or change in use (this field is not limited to the one line shown).

The Town of West Newbury and the City of Newburyport propose to replace the structurally deficient, undersized bridge, Bridge No. N-11-007, which carries Middle Street, West Newbury/Plummer Spring Road, Newburyport, MA over the Artichoke River / Upper Artichoke Reservoir. Please see attachment for more information. Project occurs entirely within the Municipal ROW.

To be completed by the municipal Planning Board representative.

"I hereby certify that the project described above and more fully detailed in the Permittee's Waterways License application and plans have been submitted by the Permittee to the municipal Planning Board."

 Print Name of Municipal Planning Board Representative Date

 Signature of Municipal Planning Board Representative Title City/Town

Note: Any Planning Board recommendation shall be submitted in accordance with 310 CMR 9.13(5). Comments pertaining to this Application shall be submitted in accordance with 310 CMR 9.13(4); any comments submitted after the close of the public comment period shall not constitute a basis for standing in any appeal pursuant to 310 CMR 9.13(4) and/or 310 CMR 9.17.



Massachusetts Department of Environmental Protection
 Chapter 91 Waterways Water-Dependent, Nonwater Dependent, Amendment Application
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Susan Brown 12/19/2022
 Print Name of Municipal Planning Board Representative Date

Susan Brown Town Planner West Newbury
 Signature of Municipal Planning Board Representative Title City/Town

Note: Any Planning Board recommendation shall be submitted in accordance with 310 CMR 9.13(5). Comments pertaining to this Application shall be submitted in accordance with 310 CMR 9.13(4); any comments submitted after the close of the public comment period shall not constitute a basis for standing in any appeal pursuant to 310 CMR 9.13(4) and/or 310 CMR 9.17.

From: [MassPlanners](#) on behalf of [Ella Wise via MassPlanners](#)
To: massplanners@masscptc.org
Subject: Re: [Massplanners] How to convince voters to allow accessory apartments?
Date: Wednesday, October 20, 2021 11:56:22 AM
Attachments: [image001.png](#)
[ATT00001.txt](#)

Thanks for the question, Paige! Here are a few resources that I've come across to help with ADU reform:

- Abundant Housing MA just hosted a webinar on this question with a focus on Arlington's recent amendments. You can view the recording of "[Winning ADUs in Arlington & Prospects for State Action](#)" [here](#)
- Equitable Arlington provides a trove of communication materials. See the [website here](#), including a very [effective FAQ](#) authored by Barbara Thornton.
- AARP offers resources on ADUs, including [The ABCs of ADUs](#)
- Here is a summary of ADU benefits based on the materials I've reviewed:

1. Provide homeowners more options
 - o Downsize while staying on your property and live in the ADU
 - o House a caretaker on your property
 - o House your children or parents
 - o Gain an extra source of income by renting out an ADU
2. Provide less-expensive housing choices
 - o Cost less than a new single-family home on a separate lot, thus provide options for low- and moderate-income residents
 - o Help seniors stay in their community and "age in place" by renting out their ADU or downsizing the living in it themselves
 - o Provide smaller housing options to meet the growing needs of empty nesters, smaller families, and young adults
 - o Help make it easier for people who work in town to live in town, including teachers, firefighters, and nurses (to name a few)
3. Have a low impact on the environment and neighborhood
 - o No development of open space
 - o No large, new construction projects
 - o No new infrastructure needed
 - o Gentle density designed and maintained by homeowners
 - o More compact, infill development promotes more walkable, car-lite neighborhoods

On Mon, Oct 18, 2021 at 1:39 PM Carolyn Britt via MassPlanners
<massplanners@masscptc.org> wrote:

All,

I had to present an article to Town Meeting this past saturday on allowing a detached accessory dwelling unit in our downtown residential area on lots of a certain size, and a maximum sf area of 1000sf. An earlier article removed a density bonus in the same area, still allowing multi-family units but reducing additional density that could be applied for. By

doing this, we will give up some payment in lieu for affordable units, but we almost never got an actual unit from this.

We had nine articles on the warrant, and virtually all of them passed with a 90/10 vote, including all the zoning articles. The major article was to authorize money for a new public safety building, so the bulk of voters came out for that article.

You all had me quite concerned that the ADU would never pass without a lot more groundwork, but it was almost too easy. Maybe the answer is to assess the other articles to see what large interest group might attend. But I would not have guessed that supporters of a new public safety building would also support an ADU by-law.

In addition, we got the Town to commit to building the new building fully electric with ground source heat pumps and net zero. The tour of the new police station in Beverly that is also electric/ground source/net zero helped a great deal. Thanks Beverly!

Wishing you all well with your ADU efforts, and similar success.

Carolyn

Carolyn Britt, AICP
Community Investment Associates
P.O. Box 235
Ipswich, MA 01938
(978) 356-2164
(978) 317-2145 (cell)
(978) 356-9881

On 10/13/2021 11:35 AM, Rachel Nadkarni via MassPlanners wrote:

Hi Paige,

I was with the City of Newton during the adoption of the Accessory Dwelling Unit changes. Part of the discussion we had with the community then was that each aspect of an accessory dwelling unit was already allowed in another form.

- The ADU didn't allow for more square footage than was already allowed on a property
- By-right ADUs in accessory structures had to fit into existing by-right accessory structure sizes
- Renting rooms to unrelated individuals was already allowed, and the same limit would apply whether or not those individuals were in an ADU or not
- Having a second kitchen in a home was already possible, and not unprecedented

The focus then was on the flexibility this allowed families to layout their interiors as works for them, since the true distinguisher of an ADU would then be the key-locked door between the spaces. Without the locking door, everything else about the ADU would be compliant with zoning.

The other thing we discussed, was that the rights allowed to the accessory unit were limited compared to the second unit on a 2-family home. In the accessory unit, there was no possibility of condo-ization, whereas 2-family homes could

have two separate owners with each unit having all the related property rights. Under the pre-existing rules on renting rooms, in a 2-family condo, each unit could rent rooms to unrelated individuals, and that wouldn't be possible in an ADU.

Hopefully this is useful to Foxborough's discussion. We were able to build off of the existing renting of rooms allowance, and that may not be the case in some communities.

Best wishes,
Rachel

Rachel Nadkarni
Senior Planner - Urban Revitalization Specialist
City of Somerville, Office of Strategic Planning and Community Development

On Wed, Oct 13, 2021 at 10:33 AM Anthony Flint via MassPlanners
<massplanners@masscptc.org> wrote:

The experience of Durango, Colorado might be instructive:
<https://www.bloomberg.com/news/articles/2016-05-17/how-one-colorado-city-instantly-created-more-affordable-housing-by-relaxing-rules-on-accessory-dwelling-units>

Newton has also had some success in an environment of occasional skepticism: <https://steveworks.com/2019/05/everything-you-need-to-know-about-newton-accessory-apartments/>

[Anthony Flint](#)
Senior Fellow
[Lincoln Institute of Land Policy](#)
617-930-1044
[@landpolicy](#)
Finding answers in land

From: MassPlanners <massplanners-bounces@masscptc.org> **On Behalf Of** Kristina Johnson via MassPlanners
Sent: Wednesday, October 13, 2021 10:05 AM
To: Paige <paigeplanner@gmail.com>
Cc: massplanners@masscptc.org
Subject: Re: [Massplanners] How to convince voters to allow accessory apartments?

Hi Paige,

As Planning Board Chair for Framingham, I have been helping advance an ADU ordinance, and it's not easy! Here's what I have learned being on the other side of the table:

You have to engage the folks who would be positively affected by this by-law and have them tell the story for you whether it's at the hearing or through the local newspaper. All this chatter about "who's living next door," and "stranger danger" gets quelled when you have brave folks make a public plea about how an ADU By-law would help a family member age in place, or take care of a permanently disabled child. During a Zoom workshop hosted by the Planning Board early this summer, we had community members talk about how an ADU ordinance would allow them to take care of a disabled child without resorting to institutionalization, or keep "Nana and Fluffy" in the household with their grandchildren, saving on nursing home/assisted living and child care costs. Some of the testimony got me misty eyed and definitely quieted the relentless voices who kept insisting that an ADU ordinance will do nothing but create illegal apartments, etc. We are still in the ordinance drafting stage and have not started the official amendment process.

Does Foxborough have a local newspaper? Get an article posted! There must be elected officials, including the Planning Board, who are champions of this effort, and if there are, let them do the "selling."

Here's a link to the story the Framingham local paper ran, and it was blasted all over local social media.

<https://framingsource.com/index.php/2021/06/26/framingham-planning-board-takes-temperature-of-residents-on-in-law-apartment-ordinance/>

Good luck Paige!

Kristina

Ps. Planning Staff in Framingham has done an amazing job with this

effort,

Kristina Johnson, AICP

Director of Planning & Community Development


Town of Hudson, MA

President, Mass. Association of Planning Directors

Tel: 978-562-2989

Cell: 857-939-3427

Email: kjohnson@townofhudson.org

“Like” Hudson Planning and Community Development on Facebook 

From: MassPlanners <massplanners-bounces@masscptc.org> **On Behalf Of**
Paige via MassPlanners
Sent: Wednesday, October 13, 2021 8:48 AM
To: massplanners@masscptc.org
Subject: [Massplanners] How to convince voters to allow accessory
apartments?

Good morning all,

Here in Foxborough we are going to be voting on whether to expand the current inlaw apartment bylaw to allow non-relatives to rent an ADU. Sounds simple, right? NOT! Folks insist this is creating multi-family housing in a single family district.

We have been engaged in a conversation on housing for 2+ years now and I know we will get push back on this effort. I'm not sure we will get the required 2/3 vote (since we allow over 900 SF for our ADUs we don't qualify for the majority vote).

Does anyone have any outreach, PR or data that I could use at the public

hearing tomorrow night to inform residents on why allowing attached ADUs to be rented to non-relatives would be wise for Foxborough?

Any case studies on how many ADUs were created once a similar provision was adopted in another town?

I think the "selling" of housing solutions is the hardest part of all of this. Folks are so resistant, at least out here in the suburbs. Any information or handouts or anything to make residents less afraid of this change would be greatly appreciated.

Thank you.

Paige Duncan, AICP

Planning Director for the Town of Foxborough, MA

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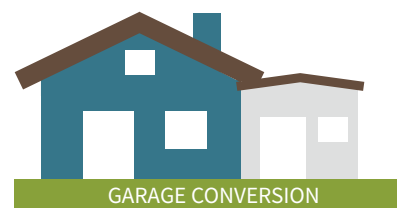
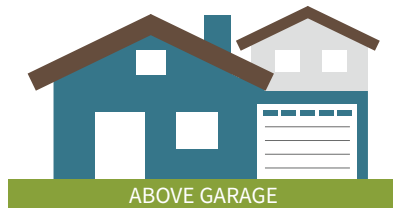
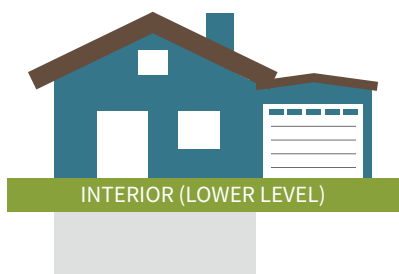
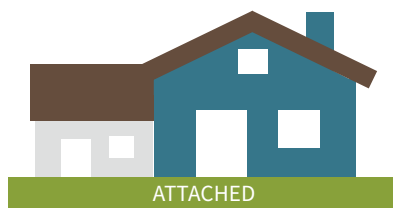
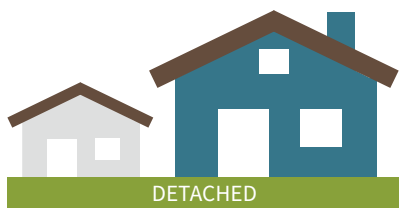
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▶ **A**CCESSORY **D**WELLING **U**NITS

Model State Act and Local Ordinance



CREATED FOR STATE AND LOCAL LEADERS BY
AARP Government Affairs



AARP is the nation's largest nonprofit, nonpartisan organization dedicated to empowering people 50 and older to choose how they live as they age. With a nationwide presence and nearly 38 million members, AARP strengthens communities and advocates for what matters most to families: health security, financial stability and personal fulfillment. AARP also produces the nation's largest circulation publications: *AARP The Magazine* and *AARP Bulletin*. To learn more, visit AARP.org, AARP.org/Espanol or follow @AARP, @AARPenEspanol, @AARPadvocates and @AliadosAdelante on social media.

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Accessory Dwelling Units: Model State Act and Local Ordinance

Created for state and local leaders by:

AARP Government Affairs

A part of the AARP Community, State and National Affairs (CSN) group, Government Affairs advances AARP's work on behalf of older adults and their families through legislative and regulatory advocacy with policymakers and elected officials at the federal, state and local levels, as well as through judicial advocacy.

Assistance provided by:

AARP Public Policy Institute

Founded in 1985 and part of the AARP Policy, Research and International Group, the AARP Public Policy Institute (PPI) promotes the development of sound, creative policies to address the common need for economic security, health care and quality of life. PPI's livability experts focus on policies that relate to issues including land use, housing, transportation and broadband — all of which facilitate aging in place. PPI also hosts the AARP Livability Index, a free, interactive, online tool that scores neighborhoods and communities throughout the United States based on the presence of the types of services and amenities that impact people's lives the most.

AARP Livable Communities

Also within the CSN group, the AARP Livable Communities initiative works nationwide to support the efforts of neighborhoods, towns, cities, counties and rural areas to be livable for people of *all* ages. The initiative's programs include the AARP Network of Age-Friendly States and Communities, the AARP Community Challenge "quick-action" grant program, livability training for local leaders and free educational resources — including the weekly, award-winning *AARP Livable Communities e-Newsletter* and several printed and downloadable publications.

See page 52 for contact information and links to the mentioned resources.

This report is available as a PDF download via AARP.org/ADUs.

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ACCESSORY DWELLING UNITS

Model State Act and Local Ordinance



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<p>AARP supports the wider availability of accessory dwelling units (ADUs) as an affordable, accessible housing option for people of all ages. That’s why, late in the last century, the AARP Public Policy Institute asked the American Planning Association to develop model legislation — specifically, a state statute and a local ordinance — as a resource to assist AARP volunteer leaders and other interested residents, planners and government officials in evaluating potential changes to state laws and local zoning codes. This publication is an update of that model legislation, which was released in the year 2000. This section provides an overview of what ADUs are and why they are so needed.</p>	
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<p>Two policies are presented in this section. The first is the “Optimal” state act, which limits local governments from prohibiting or discouraging the creation of ADUs. The second, referred to as the “Minimal” version, grants local governments the full range of authority to permit and regulate ADUs.</p>	
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I. ABOUT ACCESSORY DWELLING UNITS

An Introduction

Accessory dwelling units (ADUs) are independent housing units, typically (but not always) created on single-family lots through remodeling or expanding the existing home or constructed as a detached dwelling. Detached ADUs may be freestanding or incorporated into another structure, most often a garage.

ADUs have many other names, such as “secondary suites,” “granny flats,” “English basements,” “accessory apartments,” “laneway homes,” “ohana houses,” “casitas” and “backyard cottages.” To avoid confusion and in recognition of the term’s increasing prevalence, this document simply uses “ADU.”

ADUs serve multiple purposes for their owners, purposes that may change over time. They assist older homeowners in maintaining their independence by providing additional income to offset property taxes and maintenance and repair costs or by providing housing for a caregiver. ADUs can also become the residents’ home if they wish to downsize, allowing them to rent out the main house or to have family move into it.

As of the date of this publication, efforts are underway across the country to test the feasibility of using ADUs as a way of providing below-market housing through a variety of public and nonprofit investments and incentives. In this way, ADUs help realize equity objectives by increasing the economic diversity of neighborhoods that may be rich in opportunities and amenities. They help realize goals of compact growth found in many land use and transportation plans. In most places, ADUs do not require the construction of new infrastructure (roads, sewers, schools, etc.) to serve them.

Accessory dwelling units were relatively common before World War II. Many were created by middle-aged and older persons, often widows, seeking to take in boarders after their children moved out. During the war, ADUs housed the influx of workers in war industries. Following the war, the explosive growth of the suburbs was governed by suburban zoning ordinances that reserved land almost exclusively for single-family housing for the middle-class nuclear family. →

ADUs and Housing That’s Affordable

ADUs can be a cost-effective means of increasing the supply of market-affordable rental housing in a community and accommodating new growth without dramatic changes to the character of a neighborhood. The critical qualifying words at the time of this edition are *can* and *market-affordable*.

According to a 2018 survey of ADU occupants in the Canadian city of Vancouver, British Columbia, 15% of the ADU occupants reported incomes of less than \$40,000. Another 16% had incomes of \$40,000 to \$60,000, and another 6% had incomes of \$60,000 to \$80,000. The median household income in Vancouver in 2015 was \$65,327. The median household income in the Vancouver metropolitan region in 2018 was \$89,000.

A report on ADU production in California found that 20% of ADUs constructed from 2016 to 2019 were built in census tracts with a median household income of less than \$61,000, and another 24% were completed in census tracts with incomes of \$61,000 to \$84,000. The median household income in California from 2014 to 2018 was \$71,228.

SOURCES: City of Vancouver, *Laneway Housing Survey Summary*, 2019 | *Census Profile, 2016 Census* Vancouver, British Columbia. | Statistics Canada, Table 11-10-0009-01, Selected Income Characteristics of Census Families by Family Type | Chapple, Garcia, Valchuis, Tucker, *Reaching California’s ADU Potential: Progress to Date and the Need for ADU Finance*, Turner Center for Housing Innovation, University of California, Berkeley, August 2020 | U.S. Census Bureau Quick Facts, California “Income and Poverty,” table CA-PST04529 | *Accessory Dwelling Units as Low-Income Housing: California’s Faustian Bargain*, Ramsey-Musolf, *Urban Sci.* 2018, 2(3) 89

Some communities prohibited any and all types of multifamily housing and mandated large homes and large lot sizes for single-family homes.

These regulations often excluded Americans of modest means from significant portions of urban regions. Zoning combined with federal redlining, and other public and private practices enforced racial and ethnic as well as economic segregation. Zoning in many older cities was changed to prohibit ADUs along with town houses, duplexes and courtyard apartments — what is now commonly called “missing middle housing.”¹

At the same time, the size of single-family homes grew. In 1950 the average single-family home was 983 square feet. According to the U.S. Census the average size of a single-family home completed in 2019 was 2,301 square feet. From 1973 to 2016 the average square feet per resident of those homes increased from 551 to 1,058.² The United States has much more house per person but not nearly enough homes for people.

■ Changing Circumstances Have Strengthened the Case for ADUs

During the past 20 years, communities have been forced to reconsider postwar housing regulations due to:

- The aging of the U.S. population and the growing need for housing that serves people of all ages, including older adults
- The crisis of unaffordable rents and home prices, which has spread to many urban areas, large and small
- Out-of-pocket costs for care in residential settings may be out of reach for many who need long-term care and are looking for lower-cost housing alternatives to allow for family caregiving needs
- The COVID-19 pandemic, which has driven home the need for housing that allows for caregiving. The pandemic has also worsened socioeconomic disparities in housing affordability as well as substandard housing conditions, which impact many households, including ones in communities of color affected by discriminatory housing practices and residential segregation
- The lack of adequate retirement savings for many older adults
- A greater awareness of the significant fiscal and environmental benefits of infill and redevelopment, including as part of a strategy for combating climate change
- The rise of online, short-term rental services that compete for existing housing in high amenity locations
- An increase in the awareness of systemic racism and class division that is embedded in typical single-family zoning, which excludes people of color and of modest means from neighborhoods that offer advantages in schooling, amenities, transportation and jobs
- A modest shift back to larger, multigenerational households (partly a reflection of high home prices and rents), which are a more traditional form of households

The vast majority of older adults want to remain in their current homes and communities.



According to an AARP survey of people age 50 or older ...

- *77% want to live in their community for as long as possible*
- *76% want to continue living in their current residence*
- *59% anticipate they will be able to remain in their community, either in their current home (46%) or a different home (13%)*
- *About 1 in 3 would consider building an accessory dwelling unit on their property independent of a care need*
- *The most compelling reason for why older adults would consider living in an accessory dwelling unit is to live near others but still have their own space (67%), receive help with daily activities (63%) or for economic reasons (54%)*
- *7 in 10 respondents said they would consider building an ADU for a loved one who needs care*

AARP Home and Community Preferences National Survey of Adults Age 18-plus (August 2018)

■ Accumulating Experience with ADU Legislation and Ordinances

Since 2000, many more local governments have adopted or revised regulations authorizing the construction of accessory dwelling units.

- Los Angeles, California, issued permits for 4,171 ADUs in 2018, up from 117 in 2016. This volume is equivalent to 20% of all permitted housing units (including a substantial share of permits legalizing formerly illegal ADUs).³
- Portland, Oregon, authorized an average of about 450 ADUs per year from 2015 to 2018, equivalent to about 10% of all housing permits.⁴
- In Canada, Vancouver, British Columbia, approved about 550 ADUs per year from 2015 to 2019, accounting for slightly more than 8% of the new housing supply for 2017 to 2019.⁵

On the other hand, some changes to local land use regulations intended to authorize ADUs or make it easier to build them have not (yet) resulted in a significant increase in ADU construction. By 2015, four years after legalizing ADUs, the city of Minneapolis, Minnesota, had permitted only 137.⁶

Seattle, Washington, initiated a pilot program in 2006 allowing detached ADUs to be built in the southeast part of the city. It was considered a success, and the city expanded the program to include all of Seattle in 2009. Yet, as of 2016, only 221 ADUs had been built on the roughly 75,000 eligible single-family lots.

In response to the low ADU production numbers, during the 2010s the previously cited communities and others (such as Austin, Texas, and Montgomery County, Maryland) revised their ADU ordinances to reduce the regulatory barriers that seem to be obstacles to ADU construction.

In 2018, Minneapolis reformed its land use plan and followed up in 2019 by adopting sweeping changes to all of its residential zones. In 2019, Seattle adopted an ambitious round of reforms of ADU regulation.

When AARP issued its 2000 edition of the *Accessory Dwelling Units: Model State Act and Local Ordinance*, only Washington State had legislation requiring local governments to authorize ADUs.⁷ Since then, many states have adopted legislation preempting local prohibitions to one degree or another, usually for larger cities and towns. This legislation has been enacted in California (2016),⁸ New Hampshire (2017),⁹ Oregon (2017),¹⁰ Rhode Island (2017)¹¹ and Vermont (2005).¹² In parallel with local governments' continuing revisions to their ADU ordinances, California (2019),¹³ Oregon (2019)¹⁴ and Vermont (2020)¹⁵ passed many amendments to their initial ADU legislation, chipping away at various local regulatory barriers to ADU construction. Legislation authorizing or encouraging local governments to authorize ADUs was passed in Florida (allowing ADUs as affordable housing, 2004)¹⁶ and Maine (2019).¹⁷ Hawai'i has had legislation allowing counties to permit two dwellings on all single-family lots since 1981.¹⁸

The American Planning Association documented ADU legislation in many other states in the years immediately preceding the publication of this update.¹⁹ The continuing demand for, and evolving experience with, ADU legislation spurred AARP to prepare an updated version of *Accessory Dwelling Units: Model State Act and Local Ordinance*. AARP recognizes that the rapidly changing regulatory landscape and its intersection with changes in the housing market and the need to evaluate the results of recent changes means this edition is unlikely to be AARP's last effort on this topic.

■ Major Changes from the 2000 Edition

The 2000 edition included provisions for states to mandate local government authorization of ADUs. That was a far-sighted provision at the time. As noted previously, since 2000 several states have adopted legislation to override local regulatory barriers and require local governments to authorize ADUs, broadly following the AARP Model State ADU Act. This state-level legislation has informed the update of the Model State ADU Act. Similarly, local government amendments on the same topics have informed the update of the Model Local ADU Ordinance. Many of these regulatory changes reformed provisions that were identified as problematic in the 2000 edition. Such “poison pills” are:

- Owner occupancy requirements
- Parking requirements
- Conditional use permit review procedures and standards
- Discretionary standards related to design or “neighborhood character”

Several notes in the 2000 edition raised the question of the fairness and the logic of imposing limits and constraints on ADUs that were not applied to the primary single-family dwellings.

The 2020–2021 edition treats ADUs as a legitimate rather than a suspect and contingent type of housing. This change is the basis for not including several provisions from the 2000 Model Local ADU Ordinance that limited the purposes for which ADUs could be constructed, as well as the types of homes and lots that could be used for ADUs. →

■ Methodology of the 2020 Update

The 2000 (first) edition relied on an analysis of all state ADU legislation, 50 local ADU ordinances, a review of the existing literature on ADUs, a survey of planning agencies and consultants, and follow-up interviews. After an initial draft was prepared, several state and local officials interviewed earlier reviewed the draft model legislation to assess its utility and feasibility in light of actual administrative practice and community experience.

This edition — prepared in 2020 and released in early 2021 — shifted the methods used to reflect the intervening quarter-century of experience with ADU legislation and the implementation of that legislation. The update looks to those state and local governments that are experiencing a significant volume in ADU construction as models. In these locations there are other forces at play supporting the construction of ADUs: market factors (e.g., high rents), public education efforts by nonprofit organizations and governments, and the blossoming of professional services (in design, permitting and finance) to help homeowners take advantage of the opportunity to build an ADU. However, those influences would have no effect if ADU laws and regulations made the construction of ADUs impossible.

Continued on page 7 →

Continued from page 6

Methodology of the 2020 Update

The revision process began with the preparation of a heavily annotated version of the 2000 edition referencing the evolving state and local ADU legislation along with recent policy discussions. Working group members used the annotated version to provide more than 300 comments on the overall structure and audience for this edition. These were compiled into a spreadsheet for consideration by the entire working group and AARP leadership. A teleconference was used to confirm major areas of agreement. Summaries of relevant research on a few topics were prepared and additional model provisions were identified to help inform the drafting process.

Based on the working group's comments and direction from AARP leadership, a first draft of the 2020 edition was provided for another round of comments. A second draft was prepared and went through a similar review. During the preparation of the second draft additional examples and supporting information were identified. The second draft received a final technical editing review, leading to a third draft, which became this publication.

A few new topics have been added, including:

- ADUs in an expanded range of zones
- Development opportunities and fee waivers to incentivize meeting equity and environmental goals
- Appeal procedures
- Short-term rentals

Not all of these topics are associated with proposed statutory or ordinance language, either because provisions addressing them are not necessary or can be found in provisions of more general application. The update draws on some of the accumulating research on ADUs and the continuing legislative and administrative innovations by state and local governments adopted to promote their construction.

■ Organization of the 2020 Edition

Significant changes have been made from the 2000 edition. The most important is that, consistently with the idea of a “model” act and ordinance, only the best, model language is offered for each section; the “favorable” and “minimal” provisions have been deleted. In a few instances, different but equally favorable provisions are offered.

1. The **Model State Act on Accessory Dwelling Units**

The 2020 edition of the Model State ADU Act is organized differently from the 2000 edition in that it offers both an “optimal” and “minimal” version of the entire Model State ADU Act.

The **Optimal** version of the Model State ADU Act mandates the authorization of ADUs by local governments. It limits local governments’ discretion over procedures, regulations and conditions that may effectively block the construction of ADUs. It retains the prior version’s approach of including default standards that ADU applicants can use in the event local implementation regulations are rejected or delayed. As in the 2000 edition, the state plays a role in monitoring and enforcing these provisions.

With a very few exceptions, the 2020 version of the Model State ADU Act eliminates the optimal, favorable and minimal versions for various subsections; it specifies only the best, “model” language. The ordering and grouping of the subsections have been modified. The updated Model State ADU Act includes a new optional section related to private covenants, conditions and restrictions (CCRs) that bar the construction of ADUs.

The **Minimal** version of the Model State ADU Act removes any question about the authority of local governments to authorize ADUs in states where local government authority is limited to what the legislature has expressly authorized. In other words, it clears the way for action by local governments without obliging them to authorize ADUs or constraining how they regulate them. In this minimal state act, state governments’ role is limited to collecting and disseminating information about ADU production. A discussion of short-term rental issues has been added, but no suggested statutory language is offered, for reasons given in the commentary itself.

In the Optimal version, this includes commentary on the reasons for eliminating local authority to impose conditions and procedures that effectively block ADU construction.

2. The **Model Local Ordinance on Accessory Dwelling Units**

The Model Local ADU Ordinance is drafted for those local governments that have complete discretion over the regulation of ADUs, without any state legislative constraints. Of course, if there is state legislation constraining local discretion, as is found in the Model State ADU Act, then the local ordinance must conform to those requirements. The Model Local ADU Ordinance has been reorganized in parallel with the Model State ADU Act.

Commentary has been added identifying regulatory requirements common in local ADU ordinances that should not be retained, such as owner occupancy requirements. The commentary explains how these provisions inhibit or effectively prohibit ADU construction. New regulatory options for authorizing ADUs on multifamily properties and through remodeling units have been added. Also added is a commentary on possible building code revisions that may facilitate ADU construction.

A Note to Readers: The *italic* text that appears in the **Model State ADU Act** and the **Model Local ADU Ordinance** is used to provide an explanation or discussion of the recommended provisions.

II. MODEL STATE ADU ACT

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OPTIMAL MODEL STATE ADU ACT

Statutory Authorization of Accessory Dwelling Units (ADUs) in Residential Zones and Limits on Local Government Discretion That May Be Used to Prohibit or Discourage ADUs

I. Findings, Policy and Legislative Intent, Definitions

A. Findings

(1) The Legislature finds and declares:

- (a) Many communities in our state face a severe housing crisis, with home prices and rents unaffordable by families and households of middle and moderate incomes.
- (b) The State is falling far short of meeting current and future housing demand, with serious potential consequences for the state's economy and the well-being of our residents, particularly lower-income and middle-income earners.
- (c) The State can play an important role in reducing the barriers that prevent homeowners from building accessory dwelling units.
- (d) There are many benefits associated with the creation of legal accessory dwelling units on lots in single-family zones and other zoning districts. These benefits include:
 - (i) Increasing the supply of a more affordable and diverse type of housing not requiring government subsidies;
 - (ii) Helping older homeowners, single parents, young home buyers, and renters seeking a wider range of homes, prices, rents and locations;
 - (iii) Providing opportunities to reduce segregation of people by race, ethnicity, and income that resulted from decades of exclusionary zoning;
 - (iv) Providing homeowners with extra income to help meet rising ownership costs;
 - (v) Creating a convenient living arrangement that allows family members or other persons to provide care and support for someone in a semi-independent living arrangement while remaining in his or her community;
 - (vi) Increased security, home care and companionship for older or other homeowners;
 - (vii) Reducing burdens on taxpayers while enhancing the local property tax base by providing a cost-effective means of accommodating development without the cost of building, operating and maintaining new infrastructure;
 - (viii) Promoting more compact urban and suburban growth, which reduces the loss of farm and forest lands, as well as natural areas and resources, while limiting increases in pollution that contributes to climate instability; and
 - (ix) Enhancing job opportunities for individuals by providing housing nearer to employment centers and public transportation.

(2) Accessory dwelling units are, therefore, an essential component of the state's housing supply.

B. Policy and Intent

It is the policy of the State to promote and encourage the creation of accessory dwelling units in order to meet our residents' housing needs and to realize other benefits of ADUs.

It is the intent of the Legislature that accessory dwelling unit ordinances adopted by local governments allow the creation of such units and that these local ordinances not unreasonably restrict the ability of homeowners to create these units in zones in which they are authorized.

C. Definitions

There are many alternative terms for ADUs. Although the term "Accessory Dwelling Unit" may be awkward and technical, it is now in such widespread use that it would add to the confusion to propose a replacement term or terms. To further simplify the discussion, the Model State ADU Act and Model Local ADU Ordinance do not distinguish between the different forms and types of ADUs, such as detached "cottages" or "internal apartments," since the standards do not require that differentiation. The sole exception is the "Junior Accessory Dwelling Unit" (JADU), which is offered as an optional provision.

Three alternative definitions of ADUs are presented with the numeral "1." Choose one of the following options:

Limiting ADUs to parcels that are already the site of a single-family dwelling

1. **"Accessory Dwelling Unit"** (ADU) means a residential living unit on the same parcel as a single-family dwelling. The ADU provides complete independent living facilities for one or more persons. It may take various forms: a detached unit; a unit that is part of an accessory structure, such as a detached garage; or a unit that is part of an expanded or remodeled primary dwelling.

The ADU to be built before or concurrently with a single-family home

1. **"Accessory Dwelling Unit"** (ADU) means a residential living unit on the same parcel on which a single-family dwelling is present or may be constructed. It provides complete independent living facilities for one or more persons and may take various forms: a detached unit; a unit that is part of an accessory structure, such as a detached garage; or a unit that is part of an expanded or remodeled dwelling.

This definition allows for the construction of an ADU prior to or concurrent with that of the primary residence. Two common circumstances in which an ADU might be built before the primary residence are: (1) when a homeowner wishes to stage construction expenses and living arrangements and (2) when the homeowner owns an adjacent legal lot (typically used as a side or backyard) and would prefer to site an ADU there rather than on the lot with the primary residence. Suppose that an owner built a 600-square-foot detached dwelling on the second lot to serve as an ADU. If that lot was separately sold and the home on it was not identified as an ADU, then the new owner might find that regulations limiting the size of an ADU to 75% of the primary dwelling would treat the small home as the primary residence and limit the size of an official ADU to 400 square feet.

The ADU to be created is on a lot with a multifamily dwelling

1. **"Accessory Dwelling Unit"** (ADU) means a residential living unit on the same parcel as a single-family dwelling or a multifamily structure. It provides complete independent living facilities for one or more persons and may take various forms: a detached unit; a unit that is part of an accessory structure, such as a →

detached garage; a unit that is part of an expanded or remodeled single-family unit; or a unit in a multifamily dwelling.

This third alternative allows for building detached ADUs on properties with multifamily housing structures and through additions to or remodeling of those structures.

2. **“Default Provisions”** means the standards of Section XIII of this Act, which a community must apply if it has no local ADU ordinance.
3. **“Dwelling Unit”** means a residential living unit that provides complete independent living facilities for one or more persons. It shall include permanent provisions for living, sleeping, eating, cooking, and sanitation and a separate entrance.
4. **“Governing Document”** means articles of incorporation or bylaws or else a declaration, rule, regulation or resolution, any of which were properly adopted by a homeowners association, or else any other instrument or plat relating to common ownership or common maintenance of a portion of a planned community that is binding upon lots within the planned community.
5. **“Junior Accessory Dwelling Unit”** (JADU) is a separate living unit of less than 500 square feet, with a separate entrance. It may share sanitation facilities with another dwelling unit other than an ADU.

The definition and authorization of junior accessory dwelling units are based on California’s definition and authorization of this type of ADU. See California Government Code Section § 65852.22.

6. **“Living Area”** means the interior habitable area of a dwelling unit, including basements and attics, but does not include a garage or any accessory structure.
7. **“Local Government”** means a general-purpose local government created by general law or a charter. It exists in a city of any class or a county, borough, township or village.
8. **“Reasonable Local Regulations”** means regulations that do not unreasonably increase the cost to construct, effectively prohibit the construction of, or extinguish the ability to otherwise construct an accessory dwelling unit [or junior accessory dwelling unit] consistently with the provisions of this Act. “Reasonable local regulations” do not include owner occupancy requirements applied to either the primary or accessory dwelling unit; requirements to construct off-street parking beyond what is required by this Act; or restrictions on the terms of rentals that do not apply generally to other housing in the same district or zone.

For an explanation of the limits imposed on local government regulation of owner occupancy, parking and short-term rentals, see the notes under Section VII-A, “Authority to Adopt Reasonable Regulations and Impose Reasonable Conditions.”

9. **“Town House”** is a single-family dwelling constructed in a group of three or more attached units, with each unit extending from foundation to roof and with a yard or public way on not fewer than two sides.

This definition is included to enable implementation of provisions allowing ADUs in or with town houses. →

10. “Zoning Administrator” means the local official who is responsible for processing and approving or denying applications to develop or legalize ADUs.

II. Authorization of ADUs, Local Government Implementation

Local governments shall adopt ordinances, in conformity with this Act, authorizing accessory dwelling units in single-family zones or districts and on appropriate lots in other zones that allow housing (except as specifically exempted in Section B) and authorizing their use as rental housing.

This provision is written to require local governments to authorize ADUs in single-family residential zones and in a range of zones that authorize housing, such as zones that allow detached and attached housing, or in mixed-use zones that allow commercial, institutional and other uses along with housing. However, it does not limit the discretion of local governments to authorize ADUs only on certain lots within those zones, such as lots with a single-family residence or, more broadly, lots in residential use.

III. Health and Safety Exemptions

The [appropriate state agency] may grant an exemption from these provisions for those properties where new single-family homes have been prohibited because of limitations on safe drinking water or because of risks to public health due to limits on sewage disposal or because of the risk of fires, floods or landslides.

IV. Private Deed and Homeowner Association Restrictions on ADUs

Any covenant, restriction or condition contained in any deed, contract, security instrument or other instrument affecting the transfer or sale of any interest in a planned development, and any provision of a governing document that either effectively prohibits or unreasonably restricts the construction or use of an accessory dwelling unit [or junior accessory dwelling unit] as a rental unit, though the latter otherwise meets the requirements of this Act, is void and unenforceable.

This section does not apply to provisions that impose reasonable private restrictions on accessory dwelling units or junior accessory dwelling units. For purposes of this subdivision, “reasonable private restrictions” means restrictions that do not unreasonably increase the cost to construct, effectively prohibit the construction of, or →



“Neighborhood fears and misperceptions about ADUs can put political pressure on local elected officials to use their powers to veto homeowners’ plans to develop ADUs. A wide variety of local government actions and regulations can be used for this purpose. This section makes it illegal for them to do so.”

extinguish the ability to otherwise construct an accessory dwelling unit or junior accessory dwelling unit consistently with the provisions of this Act.

Based on California Civil Code Section 4751, which was added by Statutes 2019, Chapter 178, Section 2. [AB 670], effective January 1, 2020.

Covenants, Conditions and Restrictions (CCRs): These are private regulations incorporated into the deed of a property and administered by an association for a Common Interest Community, such as a homeowners association. They were used in the past to prevent ethnic and racial minorities from buying or renting homes in some neighborhoods. Judicial decisions invalidated those provisions many decades ago as violations of the U.S. Constitution. However, other provisions of these private restrictions are still valid and remain an important tool in maintaining economic, racial and ethnic segregation even in situations in which the underlying zoning has been reformed. In legislation adopted in 2019, California invalidated CCRs that directly or indirectly prohibit ADUs and junior ADUs.

There may be state constitutional or statutory limits on a legislature’s ability to invalidate existing CCRs. If so, a legislature should adopt a provision invalidating any future covenants, codes or restrictions that would preclude ADU construction. Two examples of prohibitions that operate only prospectively are Oregon Revised Statutes 94.776 and 27 Vermont Statutes Annotated § 545 as amended by Section X of Vermont Senate Bill 237, signed by the Governor and effective October 12, 2020.

V. Local Regulations and Interpretations May Not Be Used to Frustrate Purposes of the Act

Local governments may adopt only reasonable regulations to govern the review and operation of accessory dwelling units. No local government may develop, amend or interpret other codes or regulations, such as building codes or special taxing district provisions, in ways that interfere with the intent of this Act.

VI. Utility Connections and Building Codes

A. Utility Connections

A local agency, special district or water corporation shall not require the applicant to install new or separate water and sewer lines directly between the accessory dwelling unit and the trunk lines unless the accessory dwelling unit was constructed with a new single-family dwelling. Applicants may choose to use a shared water meter for the primary structure and the ADU or have a separate water meter installed for the ADU.²⁰

A best practice for municipalities is to not require new, dedicated lateral services from the utility/right-of-way to the property. These utilities include water, sewer, electric and gas connections. Commonly, water and sewer services are provided in part by governmental agencies, whereas electric and gas utilities are commonly provided by private energy providers. Ideally, energy providers do not require ADUs to have a dedicated lateral service connection from the right-of-way to an ADU, as new connections often cost several thousand dollars. When energy utilities are publicly owned, the same principle should apply.

B. Building Codes

- (1) Within one year of the effective date of this Act, the [State Building Codes Division] shall by rule establish building codes that local governments shall use to approve the conversion of single-family dwellings, →

[town houses] and accessory structures to create accessory dwelling units [and junior accessory dwelling units] for structures legally in existence prior to the effective date of this Act. The standards established under this subsection shall allow for revisions to local government building code standards governing ceiling heights, access and egress; energy efficiency; seismic safety; and other standards that may unnecessarily inhibit the construction of accessory dwelling units within, or primarily within, existing structures. These alternate standards shall describe the information that must be submitted before an application for conversion of a structure into an ADU will be deemed complete.

- (2) A building official must approve or deny an application to create an accessory dwelling unit under the accessory dwelling unit building codes adopted pursuant to subsection (1) of this section no later than 25 business days after receiving a complete application. A building official who denies an application for alternate approval under this subsection shall provide to the applicant a written explanation of the basis for the denial and a statement that describes the applicant’s appeal rights.

Based in part on Oregon Revised Statutes 455.610(8),(9)(2019).

Building codes can inhibit or facilitate the construction of ADUs, especially internal and garage conversions. Both state and local governments adopt building codes, often based on a variety of national and regional model codes. The degree of discretion allowed to local governments to deviate from state building codes varies between states.

Since many garages and basements weren’t built to today’s earthquake or frost line standards, requiring that a structure meet the current structural code will effectively require demolition and new construction, thereby eliminating a realistic or feasible option for a structural conversion.

Permitted, nonconforming structures should be allowed to change their use from a nonhabitable use to a habitable use without a conditional use permit or special exception from building code, even if the structure meets former but not current structural standards. This is commonly referred to as “grandfathering in” existing structures. This policy is critical to enable structural conversions.

There are several other key considerations for internal conversions related to existing ceiling heights and existing stairwells. In general, the goal should be to allow existing spaces to have reduced building code thresholds for numerous building code standards.²¹ The City of Portland’s guide “Converting Attics, Basements and Garages to Living Space” makes internal conversions of living space to ADUs more feasible by adjusting several elements of building codes:

- Ceiling heights
- Exceptions to ceiling heights for beams, heating ducts, pipes
- Sloped ceilings
- Existing stairs
- Noncompliant stairs
- Stair landings
- Firewall separation

Achieving higher energy efficiency in buildings is a critical strategy for reducing greenhouse gases. But it can increase the cost or reduce the design feasibility of ADUs created by conversions of existing space.

Conversions of basements and garages to ADUs are the most common type of ADU conversion. In the past homes and garages were built with 2"x 4" stud walls versus the 2"x 6" framing used today, which accommodates much thicker insulation. Requiring a conversion to meet today’s energy standards may require the replacement of all existing →

stud walls to create sufficient wall cavity space to accommodate the insulation required to meet modern energy codes. This interior stud wall, or additional 2" wall furring, or exterior rigid foam insulation, can add substantially (\$5,000 to \$20,000 in the Portland market in 2020) to construction costs and reduce the interior size of the living space of an already small dwelling. If the effect of these energy standards is that more large homes or new apartments are constructed, the net effect might be an increase in energy consumption due to higher heating and cooling costs of the larger spaces and because of the embedded energy in the materials used for new construction.

VII. Local Government ADU Authority, Density Limits and Other Matters

A. Authority to Adopt Reasonable Regulations and Impose Reasonable Conditions

Local governments may adopt reasonable local regulations governing ADUs, addressing height and bulk, setback, lot coverage, and regulations generally applicable to other residences in the same zones. Local governments may impose reasonable conditions of approval to ensure compliance with the regulations. Those regulations must be implemented using clear and objective standards and the procedures specified in this Act.

Owner Occupancy Requirements

The definition of authorized "reasonable" local regulations in I.C.(8) forbids the imposition of a requirement that the owner live on the same property (whether in the primary dwellings or the ADU), yet such requirements are pervasive. The 2000 edition of the Model State ADU Act provided for the imposition of owner occupancy requirements on the grounds that such requirements ensured better oversight of renters and better maintenance of the property. This restriction took the form of a covenant on the deed or other restrictions on the title of the property.

Owner occupancy covenants or conditions give pause to homeowners and institutions financing home purchases because of the limits they place on successive owners, who will not be able to rent out or lease their main house, which might be necessary as a result of a divorce, job transfer or death. They can also make financial institutions reluctant to provide financing for construction of an ADU, and because covenants or conditions serve as a restriction on a mortgage lender's security interest in a property, lenders may withhold consent to any owner occupancy requirement that takes the form of a covenant.²²

The 2020 Model State ADU Act prohibits any form of owner occupancy provision because the practical impact of this requirement is to inhibit construction of most ADUs. That conclusion is reflected in amendments to California's and Oregon's ADU legislation and in Seattle's 2019 local code revisions.

Aside from its effect on ADU production, there is a problem with the logic and fairness of applying an owner occupancy standard to ADUs if there is no such requirement with single-family homes generally. If single-family homes can be rented out (by a nonresident owner), then what is the policy basis for requiring occupancy when there is an ADU on the property?

One of the justifications for the owner occupancy requirement is the assertion that resident owners take better care of their property than nonresident owners. But there are certainly resident homeowners who do not take care of their property and nonresident owners who keep their property in excellent condition.

The 2020 Model State ADU Act treats ADUs as an equal and important type of housing that, in general, should be subject to the same set of rules that governs the use of other housing. ADUs should not be treated as an inferior form of housing that requires additional restrictions and policing. Authorizations of or prohibitions against renting out dwellings should be applied consistently to ADUs and other homes. If owner occupancy is required for the primary dwellings in a single-family zone, then that requirement can be easily extended to ADUs.

B. Short-Term Rentals

Many cities and residents are concerned about the use of houses, apartments and ADUs for short-term rentals, especially in regions, cities or districts that are tourist destinations. Use of these dwellings for short-term rentals can remove existing housing from the supply available for residents, worsening affordability and introducing commercial types of impacts into residential areas. Short-term rentals are often a major subject of debate in high-amenity areas, where the return on investment in ADUs used for short-term rentals is generally much higher than with those used for long-term housing.

But the exact same concerns apply to short-term rental use of the primary dwelling. If short-term rental regulations are adopted, they should apply to all housing in the jurisdiction or zone, not just ADUs. Many existing ordinances have such limitations or prohibitions built into the list of permitted uses authorized for all housing.

In legislation passed in 2020, Vermont amended its ADU legislation to allow for the regulation of short-term rentals, provided those regulations were not applicable to or did not inhibit the construction ADUs for longer-term rental use.²³

There is a counterargument in support of short-term rental use of ADUs. The high return spurs the construction of more ADUs than would otherwise occur and these ADUs typically, over time, convert into long-term rentals or other uses. If the goal of ADU authorization is wealth creation or allowing people to stay in their homes as they age, then the use of ADUs for short-term rentals should be encouraged because short-term rentals help realize those objectives.

C. Density Limitations

An ADU authorized under this Act shall not be considered to exceed the allowable density for the lot upon which it is located and shall be deemed a residential use consistent with the existing general plan and zoning designations for the lot.

D. Exemption from Local Growth-Limitation Measures

ADUs shall not be restricted by any local government ordinance, policy or program intended to limit residential growth in residential zones or residential planning districts or mixed commercial and residential zones.

Adapted from California Government Code Section 65852.2(a)(5).

This section is drafted to apply only to locally adopted growth limitations and not state-level farm, forest, or natural resource conservation zones or districts that are part of a growth management program.

E. Less Restrictive Provisions

This Act does not limit the authority of municipalities to adopt less restrictive requirements for the creation of ADUs.

Adapted from California Government Code Section 65852.2(e).

F. Fees and Incentives

Local governments charge permit processing fees, system development charges (for funding a share of capital improvements, such as water lines, sewage treatment capacity, schools and parks), utility connection upgrades, and fees for new residential development.

The average local government fee charged for development of an ADU in California in the late 2010s was \$9,250, →

according to a paper by the Turner Center at the University of California, Berkeley.²⁴ In established neighborhoods where ADUs are being added, system development charges designed to pay for capital improvements may not be appropriate if existing capital improvements are already adequate to handle a modest increase in residential population. Many older neighborhoods have lower population densities than they did when they were built and household sizes were larger.

The Model State ADU Act waives and reduces fees for smaller ADUs to incentivize construction or to encourage affordability, equity or environmental goals.

- (1) An accessory dwelling unit shall not be considered by a local government or agency, special district or water corporation to be a new residential use for the purposes of calculating connection fees or capacity charges for utilities, including water and sewer service.
- (2) A local government or agency, special district or water corporation shall not impose any impact fee upon the development of an accessory dwelling unit with less than 750 square feet. Any impact fees charged for an Accessory Dwelling Unit of 750 square feet or more shall be charged proportionately in relation to the square footage of the primary dwelling unit.
- (3) A local government or agency, special district or water corporation may require a new or separate utility connection directly between the accessory dwelling unit and the utility. The connection may be subject to a connection fee or capacity charge that shall be proportionate to the burden of the proposed accessory dwelling unit, based upon either its square footage or its drainage fixture unit (DFU) values, as defined in the Uniform Plumbing Code adopted and published by the International Association of Plumbing and Mechanical Officials, upon the water or sewer system. This fee or charge shall not exceed the reasonable cost of providing this service.

VIII. Standards Governing ADUs

A. Number of Units

In California (as of 2020) a single-family lot can have both an ADU and a junior accessory dwelling unit, which may be no larger than 500 square feet and must be part of the primary residence. In 2019 Seattle, Washington, authorized the creation of one detached ADU and one internal ADU per single-family lot; if green building or affordability requirements were met, a second detached unit is also allowed.

In 2020, Portland, Oregon, decided to allow two ADUs in any configuration on each single-family-zoned lot as part of broad reform of residential zoning. Since 2016, the Canadian city of Vancouver, British Columbia, has allowed a “secondary suite” (internal ADU) and a “laneway home” (detached ADU with alley access) on single-family lots on corner, double-fronted lots and lots with an alley.

There are many different ways to accommodate more than one ADU that are sensitive to concerns about neighborhood appearance. For example, two internal ADUs can be accommodated by remodeling a large home without increasing height or bulk. An internal unit can be allowed along with an ADU over an attached garage without increasing the area of the lot occupied by the structures. Discussions about allowing more than one ADU per lot in single-family zones may result in a challenging but beneficial community discussion about the purposes of single-family zoning. Minneapolis, Minnesota; Portland, Oregon; and the State of Oregon have reformed their residential zoning. →

The Model State ADU Act allows two ADUs per lot without specifying their form, leaving that to local government or homeowner discretion. This provision is written to allow for both concurrent and prior construction of ADUs. The timing of ADU construction relative to that of the primary dwelling is discussed in the alternate definitions of ADUs in I.C.(1).

Some ordinances, for example Seattle’s, have made additional ADUs conditional on achieving other community goals, such as affordability, accessibility and green building performance standards. This follows the precedents created by inclusionary zoning ordinances that allow for additional units in multifamily developments if the rents for those units meet an affordability standard for a specified period. It is too soon to know whether these incentives will be effective in creating additional ADUs. Provisions allowing these “Bonus ADUs” (BADUs) are presented here as options.

- (1) Any lot with, or zoned for, a principal single-family-dwelling unit may have up to two accessory dwelling units.

Bonus ADU Provisions

- (2) The Zoning Administrator may authorize an additional accessory dwelling if:
 - (a) The additional accessory dwelling unit is a rental unit affordable to and reserved solely for “income-eligible households,” as defined in this ordinance, and is subject to an agreement specifying the affordable housing requirements under this subsection to ensure that the housing shall serve only income-eligible households for a minimum of 50 years. The monthly rent, including basic utilities, shall not exceed 30% of the income limit for the unit, all as determined by the Director of Housing, and the housing owner shall submit a report to the Office of Housing annually that documents how the affordable housing meets the terms of the recorded agreement. Prior to issuance, and as a condition of issuance, of the first building permit for a project, the applicant shall execute and record a declaration in a form acceptable to the Director that shall commit the applicant to satisfying the conditions for establishing a second accessory dwelling unit as approved by the Director; or
 - (b) The applicant makes a commitment that the new principal structure or the new accessory structure containing a detached accessory dwelling unit will meet a green building standard, and the applicant shall demonstrate compliance with that commitment, all in accordance with this ordinance. A second accessory dwelling unit that is proposed within an existing structure does not require the structure to be updated to meet the green building standard; or
 - (c) The applicant designs at least one of the dwellings on the lot to meet visitability standards, including a no-step entry, [36"] wide doors and hallways, a bathroom that can be used by someone in a wheelchair, and at least [300 square feet] of living space on the main level.

Based on Seattle Municipal Code 23.44.041.A.1.a.(2).

B. Minimum Lot Size

A local government may not require a minimum lot size for ADUs that is larger than the minimum lot size for single-family houses [or town houses] in the same zone or district.

C. Size of ADUs

Accessory dwelling units may be any size, provided that the proposed ADU's total square footage is less than that of the primary dwelling's and other requirements are satisfied.

Many local governments have adopted minimum and maximum sizes for ADUs. The Model Local ADU Ordinance recommends eliminating minimum size since the basic requirements for a living space (kitchen, bathroom, living/sleeping area) and the housing market will establish a minimum size. In expensive housing markets the success of micro-apartments of less than 300 square feet and the proliferation of tiny homes on wheels demonstrates that there is demand for very small units. At the other end of the scale, limits on maximum size prevent the construction of ADUs that could be home for a family of three or more persons. For situations in which the existing residence is very small, local governments might consider authorizing ADUs up to 800 square feet when the primary dwelling is smaller than 800 square feet. Burlington, Vermont, takes a different approach to this issue. It allows accessory dwelling units to be 30% of the gross square footage of a house of 800 square feet, whichever is greater.²⁵

D. Parking Requirements

Many local governments have required one or more off-street parking spaces for each ADU. This is a serious inhibition to the construction of ADUs for two reasons. First, the cost of building off-street parking spaces.²⁶ Second, the lot size, location of the primary residence and topography may make the construction of one or more parking spaces impossible.²⁷

The impact of parking requirements on ADU production is suggested by the results of a 2018 survey of California cities with ADU regulations. Out of the 168 cities, 68% reported having minimum off-street-parking requirements for ADUs. Prior to the 2017, California legislation that eliminated off-street parking within a half-mile of transit, localities receiving frequent ADU applications were much more likely to lack off-street-parking requirements (31% versus 13%).²⁸ Given the general oversupply of parking²⁹ and its impacts on home prices and rents (and more generally urban development and redevelopment), minimum parking requirements are being reconsidered and reduced. Hartford, Connecticut;³⁰ Buffalo, New York;³¹ and Edmonton, Alberta, Canada,³² are among the cities that have eliminated most or all minimum parking requirements. Other cities have reduced or eliminated parking requirements for different types of housing.³³

No additional off-street parking is required for construction of an ADU. If the ADU removes one of the existing off-street parking spaces, the local government may require that the space be replaced on site if required by the underlying zoning. In lieu of an on-site parking space, an additional on-street parking space may be substituted if there is already sufficient curb area available along the frontage for a parking space or by removing the parking space access ramp and reinstalling the curb.

Based on Seattle Land Use Code 23.44.041 A.5.

E. Building Setbacks

No setback shall be required for an existing garage living area or accessory structure or for a structure constructed in the same location and to the same dimensions as an existing structure that is converted to an accessory dwelling unit or for a portion of an accessory dwelling unit. A setback of no more than four feet from the side and rear lot lines shall be required for an accessory dwelling unit that is not converted from an existing structure or for a new structure constructed in the same location and to the same dimensions as an existing structure.

Based on California Government Code 65852.2(a)(D)(vii).

XIII. Default Provisions Governing Applications for Accessory Dwelling Units in the Absence of a Certified Local Ordinance

A. Default Provisions

If a local government without an adopted state-certified ADU ordinance receives an application for a permit for an ADU on or after [the effective date of the Act], it shall accept the application and approve or disapprove the application pursuant to the default provisions of this section of the Act unless it adopts a certified ordinance in accordance with this Act within 120 days after receiving the application.

This provision governs how local governments are to process their applications to create an ADU if they do not have an ordinance that conforms to the Model State ADU Act. It also incentivizes local governments to adopt their own ordinance and secure state certification promptly rather than apply the Model State ADU Act's default provisions.

B. Only Basis for Denial

No local ordinance, policy or regulation shall be the basis for the denial of a building permit or a use permit under the default provisions of the Act.

Adapted from California Government Code Section 65852.2(b)(2).

C. Maximum Standards in Absence of Local Ordinance

The default provisions of this section establish the maximum standards that municipalities shall use to evaluate proposed ADUs on lots that are zoned for residential use and contain an existing single-family dwelling. No additional standards, other than those provided in this section, shall be used or imposed.

Adapted from California Government Code Section 65852.2(b)(2).

D. No Changes to Local Ordinances Necessary

No changes to zoning ordinances or other ordinances or any changes to the general plan shall be required to implement the default provisions of this Act. Any local government may amend its zoning ordinance or general plan to incorporate the policies, procedures or other provisions applicable to the creation of ADUs if these provisions are consistent with the limitations of the default provisions.

Adapted from California Government Code Section 65852.2(b)(4).

A community is subject to the default provisions of this Model State ADU Act if it does not have an ADU ordinance of its own. But if a community without an ADU ordinance wants to amend a comprehensive plan or other ordinance, this provision allows it to do so if the amendment is consistent with the default provisions.

E. Default Standards

- (1) **Zones Where ADUs Are Authorized:** The lot proposed to contain the ADU is in a zone in which single-family residences are authorized and is the current site of a primary dwelling or qualifies as the site for a future primary residence.

Many local governments have chosen to allow ADUs only in a limited number of residential zoning →

classifications. However, excluding ADUs from zones applicable to higher income neighborhoods will raise questions of fairness (for neighbors, property owners and prospective ADU tenants alike). Treating ADUs as a less desirable, inferior, type of housing — instead of a housing type that can benefit people of all incomes and backgrounds — will likely reinforce patterns of housing discrimination and class and residential segregation. In recent years many local governments have relaxed the stringency of residential zones, in some cases by authorizing different types of housing in the same zones as commercial uses and other times in zones with light industrial uses. There is no policy reason to exclude ADUs from these zones if single-family dwellings are allowed in them.

(2) **Time of Construction:** ADUs may be built concurrently with or before the primary residence.

Building an ADU concurrently with the construction of a new home has many advantages in cost savings, design consistency and logical siting. California’s 2019 legislative reforms included general authorization of ADUs built concurrently with new homes. The common circumstance in which the construction of an ADU might precede that of a primary residence was discussed above in I.C.(1) under the definitions of “Accessory Dwelling Unit.”

(3) **Detached ADUs:** Detached ADUs (including ADUs built as part of a garage or another accessory building) may be built before the primary residence. The location, scale and other aspects of the ADU must not preclude or constrain the construction of a primary dwelling in conformity with regulations governing those dwellings.

(4) **Unit Size:** The living area of an ADU shall be smaller than the living area of the primary residence. There is no minimum size, provided code requirements governing kitchen, sanitation and other relevant provisions are satisfied.

(5) **Separate Sale of ADUs:** Local governments may choose to limit or prohibit the separate sale of ADUs.

The separate sale of ADUs is discussed in Section II-M of the Model Local ADU Ordinance.

(6) **Other Matters:** Requirements related to height, setback, lot coverage, site plan review, fees, charges and other zoning requirements generally applicable to residential construction in the zone in which the property is located are applicable to any ADU, except when the provisions of this Act specify otherwise.

F. Local Government Review of Applications for ADUs

A permit application for an accessory dwelling unit shall be approved or denied ministerially without discretionary review or a hearing, notwithstanding any local ordinance regulating the issuance of variances or special use permits, within 90 days after receipt of a completed application.

If the permit application to create an accessory dwelling unit is submitted with a permit application to create a new single-family dwelling on the lot, the permitting agency may delay acting on the permit application for the accessory dwelling unit or a junior accessory dwelling unit until the permitting agency acts on the application to create the new single-family dwelling, but the application to create the accessory dwelling unit shall be considered without discretionary review or hearing. If the applicant requests a delay, the 90-day time period shall be tolled for the period of the delay. The ministerial decision on the ADU application shall be the final decision of the local government for purposes of judicial review.

Adapted from California Government Code 65852.2(a)(3). →

If judicial review of local ADU approvals proves to be a major inhibition to ADU (or other needed housing) construction, state legislators may wish to examine the model of a specialized state land use appeals board of the type Oregon has used since the 1980s, including provisions that limit review to an appellate review based on the local government record and require expedited review by that tribunal and the appellate courts.³⁴

XIV. State Oversight and Monitoring

A. State Certification of ADU Ordinances

- (1) **Submission for Certification:** A local government shall submit the zoning ordinance provisions implementing this Act 90 days prior to final approval of such an ordinance or amendment, seeking an opinion from the [state agency] on whether the ordinance conforms to this statute. This submission must include the local government’s date of planned final approval. The [state agency] may notify other relevant agencies so that they may also comment on whether the municipality’s draft ordinance conforms to the statute. The [state agency] shall notify the local government prior to the planned date of final approval of its opinion as to the conformity of the ordinance to this statute. If, in the opinion of the [state agency], the ordinance and/or amendments reviewed do not conform to this statute, the [state agency] shall notify the local jurisdiction of actions that must be taken to bring the ordinance(s) and/or amendments into conformity.
- (2) **Local Government Action on Deficiencies:** The local government shall bring its ordinance into conformity, as recommended by the [state agency], within 90 days of notification of nonconformance pursuant to the prior section. If the municipality has not brought its ordinance into conformity within the 90-day period, the [state agency] will notify the jurisdiction that it must automatically accept and process applications for ADUs under the default regulations of this Act until conformity is certified by the [state agency]. Prior to any certification by the [state agency], any applications submitted under the default regulations of this Act shall be processed fully and solely under those regulations.
- (3) **Amendments:** Changes to a municipality’s ordinance certified by the [state agency] must be submitted and certified in the same manner and procedure as the initial proposed ordinance pursuant to this section.

B. Local Government Annual Reports to State

- (1) Local governments shall report annually to the [state agency] the number of:
 - (a) Single-family structures in the jurisdiction;
 - (b) Single-family structures in single-family-residential zones and in multifamily residential zones in which accessory dwelling units are permitted;
 - (c) Illegal accessory dwelling units, attached and unattached, and known or estimated to be in the jurisdiction;
 - (d) Applications to legalize illegal accessory dwelling units submitted to the jurisdiction and the results of processing these applications;
 - (e) Legal accessory dwelling units in the jurisdiction;
 - (f) Applications for new accessory dwelling units accepted for processing; →

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- (g) New accessory dwelling units approved and permits issued by type of unit (internal, attached, detached integrated with another accessory structure and detached stand-alone), size, number of bedrooms, location and level of accessibility; and
 - (h) Applications disapproved, with reasons categorized by requirements not met.

C. State Annual Report

The [state agency] shall prepare an annual report to the Governor and the Legislature from the annual reports from local governments, including the installation rates of ADUs and recommendations, if any, for amending the Act or other implementation measures necessary for promoting the development of ADUs to increase housing supply generally or for particular residents or communities. The annual report shall include any recommendations on ADU policies from the State Advisory Board.

D. State Advisory Board on ADU Policies

- (1) **Creation:** The [state agency] shall establish an Advisory Board to monitor implementation of the Act and to recommend amendments to the Model ADU Act or Model Local Ordinance provisions to the [state agency].
- (2) **Composition:** The Advisory Board shall be appointed by the Director of the [state agency] in consultation with the Legislature and Governor and shall include one representative from each of the following groups: renters, remodelers, mortgage bankers, real estate agents, new home builders, nonprofit home builders, first-time home buyers, home health care agencies and local permitting agencies; organizations for the disabled, older persons and neighborhoods; and historically underrepresented communities and neighborhoods.
- (3) **Duties:** The Advisory Board's duties shall include, but not be limited to, preparing an annual commentary on the report prepared by the [state agency] on accessory dwelling units. The Board's commentary shall contain recommendations for furthering the purposes of the legislation and will be published and circulated with the [state agency's] annual report.

This section of the Model State ADU Act is optional. It gives the state the role of encouraging ADUs and reviewing local efforts to accommodate them.

The optional monitoring provision here would require communities to report specific ADU data to the responsible state agency and to obtain ADU policy recommendations from a State Advisory Board. With the benefit of the community data and the Advisory Board recommendations, the responsible agency would prepare an annual report proposing new or amended policies to the State Legislature and Governor. This optional monitoring mechanism would assist the state in assessing the law's effectiveness. Because it allows well-informed policy adjustment to be made, it should help ensure the ultimate success of the state's ADU policies.



MINIMAL MODEL STATE ADU ACT

Granting Local Governments the Full Range of Authority to Permit and Regulate Accessory Dwelling Units (ADUs)

A. Findings

- (1) The Legislature finds and declares:
 - (a) Many communities in our state face a severe housing crisis, with home prices and rents unaffordable by families and households of middle and moderate income.
 - (b) The State is falling far short of meeting current and future housing demand, with serious consequences for the state's economy and the well-being of our residents, particularly lower-income and middle-income earners.
 - (c) There are many benefits associated with the creation of legal accessory dwelling units [and junior accessory dwelling units] on lots in single-family zones and in other zoning districts. These benefits include:
 - (i) Increasing the supply of a more affordable type of housing not requiring government subsidies;
 - (ii) Helping older homeowners, single parents, young home buyers and renters seeking a wider range of homes, prices, rents and locations;
 - (iii) Increasing housing diversity and supply, thereby providing opportunities to reduce the segregation of people by race, ethnicity and income that resulted from decades of exclusionary zoning;
 - (iv) Providing homeowners with extra income to help meet rising homeownership costs;
 - (v) Creating a means for a family member or others to provide care and support to a family member in a semi-independent living arrangement while remaining in the community;
 - (vi) Providing an opportunity for increased security, home care and companionship for older or other homeowners;
 - (vii) Reducing burdens on taxpayers by providing a cost-effective means of accommodating development that can avoid the construction, operations and maintenance of new infrastructure while accommodating population growth and increasing the local tax base;
 - (viii) Promoting more compact urban and suburban growth, a pattern that reduces the loss of farm and forest lands and natural areas and resources and limits increases in pollution that contributes to climate instability; and
 - (ix) Enhancing job opportunities for individuals by providing housing nearer to employment centers and public transportation.
- (2) Therefore, accessory dwelling units [and junior accessory dwelling units] can be an essential component of the local housing supply.

B. Policy and Intent

It is the policy of the state to grant local governments the full range of authority needed to promote and encourage the creation of accessory dwelling units in order to meet their housing needs and to realize other benefits of accessory dwelling units.

C. Definitions

There are many alternative terms for ADUs. Although the term “Accessory Dwelling Unit” may be awkward and technical, it is now in such widespread use that it would add to the confusion to propose a replacement term or terms. To further simplify the discussion, the Model ADU Act and Model ADU Ordinance do not distinguish between the different forms and types of ADUs, such as detached “cottages” or “internal apartments,” since the standards do not require that differentiation. The sole exception is the junior accessory dwelling unit, which is offered as an optional provision.

Three alternative definitions of ADUs are presented with the numeral “1.” Choose one of the following options:

Limiting ADUs to parcels that already are the site of a single-family dwelling

1. **“Accessory Dwelling Unit”** (ADU) means a residential living unit on the same parcel as a single-family dwelling [or town house]. The ADU provides complete independent living facilities for one or more persons. It may take various forms: a detached unit; a unit that is part of an accessory structure, such as a detached garage; or a unit that is part of an expanded or remodeled dwelling.

The ADU to be built before or concurrently with a single-family home

1. **“Accessory Dwelling Unit”** (ADU) means a residential living unit on the same parcel as a single-family dwelling [or town house] or a parcel on which a single-family dwelling is present or may be constructed. It provides complete independent living facilities for one or more persons and may take various forms: a detached unit; a unit that is part of an accessory structure, such as a detached garage; or a unit that is part of an expanded or remodeled dwelling.

The ADU to be created on a lot with a multifamily dwelling

1. **“Accessory Dwelling Unit”** (ADU) means a residential living unit on the same parcel as a single-family dwelling, [a town house] or a multifamily structure. It provides complete independent living facilities for one or more persons. It may take various forms: a detached unit, a unit that is part of an accessory structure, such as a detached garage; or a unit that is part of an expanded or remodeled single-family unit or a unit in a multifamily dwelling.
2. **“Default Provisions”** means the standards of Section 4 of this Act, which a community must apply if it has no local ADU ordinance.
3. **“Dwelling Unit”** means a residential living unit that provides complete independent living facilities for one or more persons. It shall include permanent provisions for living, sleeping, eating, cooking and sanitation, as well as a separate entrance. →

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4. **“Governing Document”** means articles of incorporation or bylaws or else a declaration, rule, regulation or resolution, any of which were properly adopted by a homeowners association, or else any other instrument or plat relating to common ownership or common maintenance of a portion of a planned community that is binding upon lots within the planned community.
 5. **“Junior Accessory Dwelling Unit”** (JADU) is a separate living unit of less than 500 square feet, with a separate entrance. It may share sanitation facilities with another dwelling unit other than an ADU.

The provision of junior accessory dwelling units is based on California’s definition and authorization of this type of ADU. See California Government Code Section § 65852.22.

6. **“Living Area”** means the interior habitable area of a dwelling unit, including basements and attics, but does not include a garage or any accessory structure.
7. **“Local Government”** means a general-purpose local government created by general law or a charter, including a city of any class or a county, borough, township or village.
8. **“Reasonable Local Regulations”** means regulations that do not unreasonably increase the cost to construct, effectively prohibit the construction of, or extinguish the ability to otherwise construct an accessory dwelling unit or junior accessory dwelling unit consistently with the provisions of this Act. “Reasonable local regulations” do not include owner occupancy requirements for either the primary or accessory structure, requirements to construct off-street parking beyond what is required by this Act or restrictions on the term of rentals that do not apply generally to other housing in the same district or zone.

For an explanation of the limits imposed on local government regulation of owner occupancy, parking and short-term rentals, see notes under “Authority to Adopt Reasonable Regulations and Impose Reasonable Conditions” in the longer version of the Model State ADU Act.

9. **“Town House”** is a single-family-dwelling unit constructed in a group of three or more attached units in which each unit extends from foundation to roof and with a yard or public way on not fewer than two sides.
10. **“Zoning Administrator”** means the local official who is responsible for processing and approving or denying applications to develop or legalize ADUs.

D. Grant of Regulatory Authority

Notwithstanding any other statute, local governments are granted full authority to adopt ordinances in conformity with this Act authorizing and regulating accessory dwelling units and junior accessory dwelling units in any zones or districts that allow housing.

E. Local Government Authority to Prospectively Limit or Prohibit Private Agreements or Restrictions That Bar the Construction of ADUs

Notwithstanding any other statute, local governments are granted full authority to adopt ordinances that limit or prohibit future private agreements or restrictions that bar the construction of accessory dwelling units and junior accessory dwelling units within their jurisdictional boundaries.

III. MODEL LOCAL ADU ORDINANCE

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MODEL LOCAL ADU ORDINANCE

This Model Local ADU Ordinance is designed for communities in states where state law allows for local ordinances authorizing and governing ADUs but does not impose any constraints on local governments.

In states where local governments do not have the discretionary authority to approve ADUs (Dillon Rule states) state legislation giving them that authority must be adopted first. AARP's "Minimal Version" of the Model State ADU Act would give local governments that authority along with complete discretion over the content of their ADU ordinances. If there is a state ADU statute that limits local government discretion (as is proposed in the AARP Model State ADU Act) then the local ordinance will need to conform to those requirements.

Many provisions and notes related to standards and procedures for ADUs are duplicates, or near duplicates, of provisions and notes in the Model State ADU Act. Rather than referring readers back to those sections, which can be tiresome and confusing, this guide reproduces them as parts of the Model Local ADU Ordinance.

I. General Provisions

A. Purpose and Intent

In this section of the ordinance, a community states its purposes in adopting the ordinance. This information may help in defending the ordinance when informing residents of how the ordinance will benefit and protect their interests and in responding to legal challenges.

If a community has no purposes that differ from those of the Model State ADU Act, it may choose to reference that act's findings and its purposes and intent, but it is recommended that at a minimum the minutes of the meeting at which the ordinance is adopted include a discussion of those benefits and a statement that they are the basis for the local ordinance.

If a community has public purposes that are different from those in the Model State ADU Act, those purposes should be specified in the ordinance (after consulting legal counsel on whether they are inconsistent with any state ADU legislation).

- (1) The [local governing body] finds and declares:
 - (a) Our community faces a severe housing crisis, with home prices and rents unaffordable by families and households of middle and moderate incomes.
 - (b) The community is falling far short of meeting current and future housing demand with serious consequences for the state's economy and the well-being of our residents, particularly lower-income and middle-income earners.
 - (c) The [local government] can play an important role in reducing the barriers that prevent homeowners from building accessory dwellings. →

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- (d) There are many benefits associated with the creation of legal accessory dwellings on lots in single-family zones and in other zoning districts. These include:
- (i) Increasing the supply of a more affordable type of housing not requiring government subsidies;
 - (ii) Helping older homeowners, single parents, young home buyers, and renters seeking a wider range of homes, prices, rents and locations;
 - (iii) Increasing housing diversity and supply, providing opportunities to reduce the segregation of people by race, ethnicity and income that resulted from decades of exclusionary zoning;
 - (iv) Providing homeowners with extra income to help meet rising homeownership costs;
 - (v) Creating a convenient living arrangement that allows family members or other persons to provide care and support for someone in a semi-independent living situation without the latter leaving his or her community;
 - (vi) Providing an opportunity for increased security, home care and companionship for older and other homeowners;
 - (vii) Reducing burdens on taxpayers while enhancing the local property tax base by providing a cost-effective means of accommodating development without the cost of building, operating and maintaining new infrastructure;
 - (viii) Promoting more compact urban and suburban growth, a pattern that reduces the loss of farm and forest lands and natural areas and resources and limits increases in pollution that contributes to climate instability; and
 - (ix) Enhancing job opportunities for individuals by providing housing nearer to employment centers and public transportation.

(2) Accessory dwelling units are, therefore, an essential component of housing choices and supply in [local government name].

B. Definitions

Even if there are controlling definitions in state ADU legislation, it is preferable to incorporate them into a local ordinance for the convenience of the users, as has been done here. The same notes found in the Model State ADU Act are repeated here.

There are many alternative terms for “ADUs.” Although the term “Accessory Dwelling Unit” may be awkward and technical, it is now in such widespread use that it would add to the confusion to propose a replacement term or terms. To further simplify the discussion, the Model State ADU Act and Model Local ADU Ordinance do not distinguish between the different forms and types of ADUs, such as detached “cottages” or “internal apartments,” since the standards do not require that differentiation. The sole exception is the Junior Accessory Dwelling Unit, which is offered as an optional provision. →

Three alternative definitions of ADUs are presented with the numeral “1.” Choose one of the following options:

Limiting ADUs to parcels that are already the site of a single-family dwelling

1. **“Accessory Dwelling Unit”** (ADU) means a residential living unit on the same parcel as a single-family dwelling. The ADU provides complete independent living facilities for one or more persons. It may take various forms: a detached unit; a unit that is part of an accessory structure, such as a detached garage; or a unit that is part of an expanded or remodeled dwelling.

The ADU to be built before or concurrently with a single-family home

1. **“Accessory Dwelling Unit”** (ADU) means a residential living unit on the same parcel as a single-family dwelling or a parcel on which a single-family dwelling is present or may be constructed. The ADU provides complete independent living facilities for one or more persons. It may take various forms: a detached unit, a unit that is part of an accessory structure, such as a detached garage; or a unit that is part of an expanded or remodeled dwelling.

The preceding definition allows for the construction of an ADU prior to or concurrent with that of the primary residence. Two common circumstances in which an ADU might be built before the primary residence are (1) when a homeowner wishes to stage construction expenses and living arrangements; and (2) when the homeowner owns an adjacent legal lot (typically used as a side or backyard) and prefers to site an ADU there rather than on the lot with the primary residence. Suppose an owner built a 600 square foot detached dwelling on her second lot to serve as an ADU. If that lot was separately sold and the home on it was not identified as an ADU, the new owner might find that regulations limiting the size of ADUs to 75% of the primary dwelling’s size would treat the small home as the primary residence and limit the size of an official ADU to 400 square feet.

The ADU to be created on a lot with a multifamily dwelling

1. **“Accessory Dwelling Unit”** (ADU) means a residential living unit on the same parcel as a single-family dwelling or a multifamily structure. The ADU provides complete independent living facilities for one or more persons. It may take various forms: a detached unit; a unit that is part of an accessory structure, such as a detached garage; or a unit that is part of an expanded or remodeled single-family unit or a unit in a multifamily dwelling.
2. **“Junior Accessory Dwelling Unit”** (JADU) is a separate living unit of less than 500 square feet, with a separate entrance, that may share sanitation facilities with another dwelling unit other than an ADU.

The provision on junior accessory dwelling units is based on California’s definition and authorization of this type of ADU. See California Government Code Section § 65852.22.

3. **“Living Area”** means the interior habitable area of a dwelling unit, including basements and attics, but does not include a garage or any accessory structure.
4. **“Zoning Administrator”** means the local official who is responsible for processing and approving or denying applications to develop or legalize ADUs.

C. Authorization of ADUs by Zoning District

In the absence of state legislation addressing the issue, communities have wide discretion in permitting ADUs in many types of residential zoning districts. The merits of locating ADUs in the major types of residential zones is discussed below. As a general principle, in communities with high rents and home prices relative to incomes, the governing body should allow ADUs in the full range of zones where residences are authorized. Different zones and their suitability for ADUs are discussed below.

Mixed-Use Zones: *In the last few decades, governments and planning advocacy groups (including AARP) have recognized the many adverse consequences of strict single-use zoning. Across the country, zoning has been reformed to allow a greater mixture of uses along with residential uses, such as institutional uses, professional services and retail commercial uses. Because of the success over the last century in reducing the pollution and noise impacts from many types of urban land uses, some communities have gone further and allowed residential uses intermingled within a wide range of nonretail commercial and light industrial zones. ADUs may not be appropriate on a variety of lots in these mixed-use zones, but they make sense on lots that are the site of a detached single-family dwelling.*

Multifamily Zones: *These zones are distinguished by apartments or condominiums with multiple dwellings on the same lot, typically in multiunit and/or multistory structures. In recent years some cities with high housing costs have approved or are considering the authorization of ADUs on lots with multifamily structures.*

California requires jurisdictions to allow new ADU units to be created out of existing parts of multifamily buildings if those parts are not currently used as livable space, such as storage rooms, garages, or basements or through an addition to the building.³⁵ In May 2020 the Chicago City Council considered a draft ADU ordinance that would allow new ADUs equal in number to 33% of the existing units in a multifamily structure on the lot.

Town House Zones: *These zones contain single-family dwelling units that have common walls but are not atop one another, typically one dwelling per lot. Siting ADUs in these zones can have its challenges, given building orientation and lot coverage. On the other hand, Washington, D.C., is an example of a city where many historic townhouses included an “English basement” on the lowest floors of the building. Ordinances addressing the creation of ADUs in these districts will need to provide more flexibility regarding both siting requirements and some building code standards (flexibility that does not compromise health and safety).*

Single-Family Zones: *These zones contain one single-family dwelling unit per lot and provide the greatest opportunities for siting all types of ADUs. Some jurisdictions also allow clusters of small single-family homes, each on their own small lot or as condominium units with common space. Single-family zones also include detached single-family homes on their own lot and can be treated the same way as those homes are treated in single-family zones. Even in these single-family zones, however, neighbors’ concerns about property values, aesthetics and “neighborhood character” have often caused communities to ban detached ADUs or to allow them only on larger lots. Perversely, this can mean that ADUs are prohibited in single-family zones with large lots and bigger houses, where they can be more easily sited as detached units or created by remodeling existing space, but allowed on small lots where this is more challenging. This kind of policy choice reinforces rather than reduces the impact of exclusionary zoning.*

For reasons of equity and to realize the benefits described in the statement of purpose and intent, ADUs should be authorized in all single-family residential zones.

In adapting the model provisions to a local zoning ordinance, a community will substitute its zoning district →

names (or abbreviations) for the model provisions' descriptions of zoning districts.

Accessory dwelling units are allowed in all zoning districts that allow residential use, subject to the requirements of this ordinance.

Optional Provision: Accessory Dwelling Units on Town House Lots

Definition: “Town house” is a single-family dwelling unit constructed in a group of three or more attached units, with each unit extending from foundation to roof and having a yard or public way on not fewer than two sides.

A town house structure may be constructed or remodeled as a group of two or more attached two-family dwellings under the following conditions: (1) one of the two-family dwelling units shall conform to the requirements of the accessory dwelling unit standards and (2) each two-family dwelling within the town house structure shall meet the definition of an attached house, including that it be located on its own lot.

D. Number of ADUs Allowed Per Lot in Single-Family Zones

In California (as of 2020) a single-family lot can have both an ADU and a junior accessory dwelling unit that is no larger than 500 square feet and is part of the primary residence. In 2019, Seattle authorized that one detached ADU and one internal ADU can be located per single-family lot. If green building or affordability requirements are met, a second detached unit could be allowed. In 2020, Portland, Oregon, decided to allow two ADUs in any configuration on each single-family zoned lot as part of a broad reform of residential zoning. Since 2016, the Canadian city of Vancouver, British Columbia, has allowed a “secondary suite” (internal ADU) and a “laneway home” (detached ADU with alley access) on single-family corner lots, double-fronted lots and lots with alleys.

There are many ways to accommodate more than one ADU while being sensitive to concerns about neighborhood appearance. For example, two internal ADUs can be accommodated by remodeling a large home without increasing height or bulk. An internal unit can be allowed along with an ADU over an attached garage without increasing the area of the lot occupied by structures.

Discussions about allowing more than one ADU per lot in single-family zones may result in a challenging but beneficial community discussion about the purposes of single-family zoning. Minneapolis, Minnesota; Portland, Oregon; and the State of Oregon have reformed their residential zoning.

The Model State ADU Act allows two ADUs per lot without specifying their form, leaving that to local government or homeowner discretion. This provision is written to allow for both concurrent and prior construction of ADUs. (The issue of the timing of ADU construction relative to construction of the primary dwelling is discussed in the alternate definitions of ADUs in I.C.1.)

Some ordinances, for example Seattle's, have made the creation of additional ADUs conditional on achieving other community goals, such as affordability, accessibility and green building performance standards. This follows the precedents created by inclusionary zoning ordinances that allow for additional units in multifamily developments if the rents for those units meet an affordability standard for a specified period. It is too soon to know whether these incentives will be effective in spurring the creation of additional ADUs. Provisions allowing these “Bonus ADUs” (BADUs) are presented here as options.

- (1) Any lot with, or zoned for, a principal single-family dwelling unit may have up to two ADUs. →

Bonus ADU Provisions

- (2) The Zoning Administrator may authorize an additional accessory dwelling if:
- (a) The additional accessory dwelling unit is a rental unit affordable for and reserved solely for “income-eligible households,” as defined in this ordinance. It is subject to an agreement specifying the affordability requirements under this subsection in order to ensure that the housing shall serve only income-eligible households for a minimum period of 50 years. The monthly rent, including basic utilities, shall not exceed 30% of the income limit for the unit, all as determined by the Director of Housing, and the housing owner shall submit a report to the office of housing annually that documents how the affordable housing meets the terms of the recorded agreement. Prior to issuance of the first building permit for a project, and as a condition of that issuance, the applicant shall execute and record a declaration in a form acceptable to the Director that shall commit the applicant to satisfying the conditions for establishing a second accessory dwelling unit as approved by the Director; or
 - (b) The applicant makes a commitment, in the manner required by this ordinance, that the new principal structure or the new accessory structure shall contain a detached accessory dwelling unit will meet a green building standard. A second accessory dwelling unit that is proposed within an existing structure does not require the structure to be updated to meet the green building standard; or
 - (c) The applicant designs at least one of the dwellings on the lot to meet visitability standards including a no-step entry, [36"] wide doors and hallways, a bathroom that can be used by someone in a wheelchair, and at least [300 square feet] of living space on the main level.

Based on Seattle Municipal Code 23.44.041.A.1.a.(2).

“Income eligible” is not defined in the Model Local ADU Ordinance, since that can be a matter left to local discretion. Seattle has chosen to link its definition to a percentage of the U.S. Housing and Urban Development’s published Median Family Income data. See Seattle Municipal Code Section 23.84A.025.

This Model Local ADU Ordinance also does not incorporate a green building standard; a local government may rely on its existing standards or adopt new ones for this purpose. Seattle’s green building standard is rigorous, referencing the standards in Leadership in Energy and Environment Design (LEED), passive house and living building design standards, and other standards. The green building standard was adopted by the Director of Seattle’s Department of Construction as Rule 20-2017 and Inspections and can be found at Seattle.gov/dpd/codes/dr/DR2017-20.pdf.

Some other mechanisms to promote affordable ADUs are:

- *Letting the landlord charge market rate rent, but adopting no-fault eviction protection and/or a cap on the rate of rent increase over time.*
- *Requiring the landlord to accept Section 8 vouchers.*

Based on Philadelphia Fair Housing Ordinance [Chapter 9-800 of the Philadelphia Code]:

- *Adopting the Good Cause eviction regulations for short-term rental [less than 12 months]. →*

Provisions like these require a commitment to enforcement that is often a challenge for local planning and building departments, which are frequently underfunded. One simple mechanism for enforcement is to send a letter to the landlord every year that must be signed and returned attesting to his or her adherence to the income limit, a practice Santa Cruz adopted.

II. Standards

A. Minimum Lot Size in Single-Family (and Town House) Zones

This section addresses the lot sizes required for ADU installation. Local governments have often imposed excessive minimum lot sizes for ADUs, which greatly restricts the number of ADUs in a community. In a survey of 50 ordinances for the 2000 edition of the Model State ADU Act and Local Ordinance, the minimum lot size requirement varied from 4,500 square feet to 1 acre (APA 1996). One community allowed detached ADUs only on lots that were 1.5 times the minimum lot size of the zoning district (Orange County, Florida, Zoning Code Sec. 38-1426 (f)(4)). Some communities have the same minimum lot-size requirements for all ADUs.

As a policy matter, it should not be necessary to establish a separate qualifying lot size for ADUs if the purpose is to assure the retention of landscaping and privacy between homes, because the setback and lot coverage standards can achieve those objectives.

The language below requires that the minimum sized lot required for an ADU is the same as the minimum lot size for the primary dwelling.

There is one exception: ADUs may be created within or attached to an existing house on lots smaller than the minimum lot size if there is an existing house on the lot. It also allows ADUs to be built concurrently with or before the primary residence (for reasons discussed in notes to the alternative definitions for accessory dwelling units). This provision also addresses the issue of legally platted lots made nonconforming by the imposition of subsequent lower-density zoning, something that occurred in many cities in the middle of the 20th century.

Accessory Dwelling Units may be created on any lot that meets the minimum lot size required for a single-family dwelling (or town houses). Attached and internal accessory dwelling units may be built on any lot with a single-family dwelling (or town house) that is nonconforming solely because the lot is smaller than the minimum size, provided the accessory dwelling units would not increase the nonconformity of the residential use with respect to building height, bulk or lot coverage.

B. Types of Structures

Many off-site manufactured and modular ADUs have been and continue to be produced; old conceptions of what constitutes a manufactured or modular home have become outdated. The Model Local ADU Ordinance provision maximizes the opportunities for ADUs by allowing any type of structure to be an ADU if that structure is allowed as a principal unit in the zoning district.

A manufactured or modular dwelling unit may be used as an accessory dwelling unit in any zone in which accessory dwelling units are permitted.

C. Size of ADUs

Many local governments have adopted minimum and maximum sizes for ADUs. The Model Local ADU Ordinance recommends eliminating minimum-size limits since the basic requirements for a living space (kitchen, bathroom, living/sleeping space) and the housing market will establish a minimum size. In expensive housing markets the success of micro-apartments of less than 300 square feet and the proliferation of tiny homes on wheels demonstrate that there is demand for very small units. At the other end of the scale, limits on the maximum size prevent the construction of ADUs that could be home for families of three or more persons.

An accessory dwelling unit may be any size, provided the proposed unit's total square footage is less than the primary dwelling's and other requirements are satisfied.

For situations in which the existing residence is very small, local governments might consider authorizing ADUs up to 800 square feet when the primary dwelling is smaller than that size. Burlington, Vermont, takes a different approach to this issue; it allows accessory dwelling units to be 30% of the gross square footage of the house or 800 square feet, whichever is greater.³⁶

■ Introduction to Lot Coverage, Setbacks, Height, Bulk and Floor Area Ratios

Lot coverage, setbacks, height and bulk (floor area ratio) limits are adopted primarily to address the appearance (the "built character") of neighborhoods. (There are some fire safety aspects to setbacks.) Cities with steep terrain apply additional or modified requirements that address vertical proximity as well as structural safety.

Local governments use a number of methods to regulate the size and location of buildings (residences and other structures) to achieve aesthetic goals and assure a minimum amount of undeveloped land. These methods are limits on the proportion of a lot that is used as a site for permanent structures ("lot coverage"); the setback from the property lines; and height and floor area ratios that establish the maximum square footage of residential structures based on a percentage of the total lot area.

These limits are often used in various combinations, sometimes as alternative standards. For example, setbacks alone without a separate lot coverage limit can effectively create a lot coverage maximum. The failure of some ADU ordinances to result in the production of ADUs can be traced back, in part, to these requirements, especially the unintended interaction between those regulations.

Before adoption of these requirements for ADUs, local governments may benefit from analyzing the combined effect of these regulations on a representative set of lots in each zone. In addition to determining whether the effect is to make it physically impossible to build a detached (or attached) ADU on some lots, the local government should estimate the return on investment on that portion of the lots where ADU construction is allowed. This will provide some idea of the strength of the potential market incentive for ADU construction.

However, the analysis needs to reflect that the homeowners building ADUs are often considering both a market return and nonmarket returns. For example, assume the desired ADU is intended to meet the needs of an older relative with mobility limitations. A 500-square-foot structure would be small but sufficient. But if the overlapping regulations on lot coverage and setbacks mean the structure would need to have two stories in order to provide 500 square feet of living space, then this kind of structure might generate a good rental return but would not meet the needs of the intended resident.

D. Lot Coverage Limits

Coverage limits can be applied to all structures on a lot, combined (e.g., primary house, detached garage, garden shed, ADU); all accessory structures combined, including an ADU; or a separate lot coverage applicable just to detached ADUs that are not part of another accessory structure. Lot coverage allowances and limits intersect not only setbacks but floor area ratio limits and height limits. If detached or attached ADUs are significantly constrained by a lot coverage limit, then the possibility of having a two-story ADU may determine whether the investment in an ADU will generate a big enough return to justify its construction.

Steep slopes and impacts on stormwater runoff may require differences in lot coverage allowances for some sites.

Some communities are under consent decrees entered into with the U.S. Environmental Protection Agency to address stormwater discharges. These consent decrees, which set standards for the maximum proportion of a lot that can be covered with impermeable surfaces, must be incorporated into local standards. Requiring or allowing the use of permeable pavers, which can be exempted from lot coverage calculations, helps address those standards. These consent decrees are another good reason not to require on-site parking.

Whenever possible, limitations on lot coverage should be addressed at the planning stage (for example, through the use of overlay districts) rather than being determined and applied in the permitting process. Siting and design standards that help meet performance standards for building safety and stormwater runoff can be determined and adjusted at the permitting stage for these kinds of sites. That is preferable to a complete prohibition.

An accessory dwelling unit (detached, attached or built by expanding the footprint of an existing dwelling) on a lot of 4,000 square feet or larger shall not occupy more than 15% of the total lot area. For single family lots of less than 4,000 square feet, the combined lot coverage of the primary dwelling and the accessory dwelling shall not exceed 60%. Accessory dwelling units built within the footprint of existing, legal accessory structures are considered not to have changed existing lot coverage.

E. ADU Setbacks

- (1) A setback of no more than 4 feet from the side and rear lot lines shall be required for an accessory dwelling unit that is not converted from an existing structure or a new structure constructed in the same location and with the same dimensions as an existing structure.
- (2) No setback shall be required for an existing garage living area or accessory structure or a structure constructed in the same location and with the same dimensions as an existing structure and converted to an accessory dwelling unit or to a portion of an accessory dwelling unit.
- (3) A detached accessory dwelling unit is not permitted on the front half of a lot, except when located a minimum of 30 feet from the front line or if it falls within the provision of subsection (2).

Adapted from California Government Code 65852.2(a)(D)(vii) and Los Angeles Metropolitan Code 12.22 A.33(d)(3).

F. Floor Area Ratios

Floor area ratios (FARs) qualify the relationship between the size of a lot and the maximum square footage that can be built on the lot. A FAR can be written as, for instance, 0:75 to 1, 0.75 or 75. FARs are commonly used in commercial districts, like downtowns, but sometimes are applied to residential zones. For example, a FAR of 0.75 applied to a 5,000-square-foot lot would allow for a maximum of 3,750 square feet of residential living space. The most common substitute for FARs is a zonewide maximum square footage for homes.

FARs have advantages as a method for regulating ADUs because they provide more flexibility about the size of the ADU, whether internal, attached or detached. They also lend themselves to bonus provisions that allow for ADUs or types of ADUs that achieve goals concerning housing production, affordability and the like.

Many local governments do not include the area of a below ground basement in the FAR limitation. This exclusion makes sense when applied to basement ADUs. In the absence of this kind of provision, the design of basement ADUs can include strange elements, like a small storage area usable only by the upstairs primary dwelling, in order to reduce the square footage of the ADU in an effort to conform to the maximum-size regulation.

The Model Local ADU Ordinance does not propose provisions on the topic because of the wide variety of variations possible and potential complexity when combined with other siting standards. But readers interested in how FARs can be tailored to accommodate and promote a variety of housing types, may wish to consider the application of FARs developed through the residential infill project in Portland, Oregon (2016–2020). Portland sharply reduced the maximum size of single-family dwellings but allowed additional FAR for additional units.³⁷

G. ADU Height Limit

The maximum height of an Accessory Dwelling Unit is 25 feet or the height of the primary residence, based on the highest point of its roof compared with the lowest point of ground level at the foundation, whichever is less.

Adapted from Charlottesville, Virginia, Municipal Code Sec. 34-1171.(3).

H. Architectural Consistency and Design Review

Concern about the consistency of detached ADUs with the design of residential architecture in the neighborhood has translated into a variety of standards and procedures. Highly discretionary standards based on neighborhood “character” or “quality” can be serious obstacles to the construction of ADUs. Vague standards of that sort hamper homeowners and decisions-makers alike. They can become an avenue for channeling neighborhood objections to ADUs in general.

In some cases, the prescriptions for particular designs and materials can also add considerably to the cost of an ADU. A better approach is to reduce key design elements to a set of objective standards governing roof pitch, window orientation and siding. In some cases, design standards only apply in certain districts or when the ADU is larger than a specified height or taller than one story.

Some cities are experimenting with standardized, preapproved designs for ADUs that do not require the same level of regulatory review. This approach can be used to encourage the use of designs that fit comfortably within the prevailing aesthetic of neighborhoods.

As has been noted in other parts of the Model Local ADU Ordinance, with regard to design standards ADUs →

should be held to the same standards as primary dwellings. If bold new architectural designs are allowed for primary residences, then it does not make sense to require an ADU to look like a craftsman bungalow.

For this reason, the Model Local ADU Ordinance recommends against establishing separate architectural or design standards for ADUs.

I. Orientation of Entrance

Many ADU regulations limit the location and design of the entrance to the ADU.

While presented as a matter of aesthetics, an ADU entrance on the same side of the house as the main entrance may be considered objectionable because it advertises the existence of a second dwelling, which is taken as detrimental to the single-family-dwelling “character” of the neighborhood. This is evident in communities that allow direct access into different levels of the house (daylight basement or French doors for a bedroom) or stairs to outside decks but prohibit entrance doors and stairways accessing ADUs. Ironically, some of these places have policies promoting ADUs and requiring notice to the neighbors before an ADU can be built, yet also have a code provision intended to hide the entrance to the ADU. These requirements can compromise the design and increase the cost of the ADU, substituting a more awkward and expensive entrance.

Following the general principal of treating ADUs like the primary dwelling, the authorization and location of access doors and stairs for detached and attached ADUs should be the same as for primary dwellings.

Regulations governing the location, type and number of entrances into primary dwellings apply to ADUs.

J. ADU Screening, Landscaping and Orientation

Privacy is a major concern of neighbors, but ADU regulations addressing privacy were/are relatively rare. In some cases, the loss of privacy caused by an ADU is identical to the loss of privacy that would result from the construction or remodeling of an adjacent home. Sometimes the loss of privacy is caused by the removal of trees or shrubbery necessitated by the construction of the ADU. Again, this loss of screening vegetation for the primary dwelling is often not regulated. Thus, it should not be regulated with ADUs.

K. Parking Requirements

Many local governments require one or more off-street parking spaces for each ADU. This is a serious inhibition to the construction of ADUs for two reasons. First, the cost of creating off-street parking spaces.³⁸ Second, the lot size, location of the primary residence and topography may make the creation of a parking space impossible.³⁹

The impact of parking requirements on ADU production is suggested by the results of a 2018 survey of California cities with ADU regulations. Out of the 168 cities, 68% reported having minimum off-street parking requirements for ADUs. Prior to the 2017 California legislation that eliminated off-street parking within a half-mile of transit, localities receiving frequent ADU applications were much more likely to lack off-street parking requirements (31% versus 13%).⁴⁰

Given the general oversupply of parking⁴¹ and its impacts on home prices and rents (and more generally urban development and redevelopment) minimum parking requirements are being reconsidered and reduced. Hartford, Connecticut;⁴² Buffalo, New York;⁴³ and Edmonton, Alberta,⁴⁴ are among the cities that have eliminated most or all minimum parking requirements. Other cities have reduced or eliminated parking requirements for different types of housing.⁴⁵ →

No additional off-street parking is required for construction of an ADU. If the construction of the ADU necessitates the removal of an existing off-street parking space, it must be replaced on-site if required by the underlying zoning. In lieu of an on-site parking space, an additional on-street parking space may be substituted if there's already sufficient curb area available along the frontage for a parking space or by removing the parking space access ramp and reinstalling the curb.

Based on Seattle Land Use Code 23.44.041 A.5.

L. Short-Term Rentals

Many cities and residents are concerned about the use of homes, apartments and ADUs for short-term rentals, especially in regions, cities or districts that are tourist destinations. Use of these dwellings for short-term rentals can remove existing housing from the supply available for residents, worsening affordability and introducing commercial-use types of impacts in residential areas. Short-term rentals are often a major subject of debate in high-amenity areas where the return on investment in an ADU used for short-term rentals is much higher than from those used for long-term housing.

But the exact the same concerns apply to the short-term rental use of primary dwellings. If short-term rental regulations or prohibitions are adopted they should apply to all housing in the jurisdiction or zone, not just ADUs. Many ordinances already have such limitations or prohibitions on the use of homes as transient lodging in their land use regulations, and those could be extended to ADUs. However, the following are examples of counterarguments in support of the short-term rental use of ADUs (and primary dwellings):

- The high return from short-term rentals spurs the construction of more ADUs than would otherwise occur, and these ADUs will, over time, convert into long-term rentals or other uses.*
- The goals of ADU authorization are wealth creation and allowing seniors to stay in their homes, and the high return from short-term rentals helps realize those objectives.*
- Survey research shows that ADU owners value the flexibility of ADUs. If the owner loses a job, she may cope by turning her home office in the ADU into a short-term rental. If an elderly parent living in an ADU moves to a nursing home, the owners can then rent out the ADU as a short-term rental to pay the nursing home costs.*

M. Separate Sale of ADUs

Most accessory dwelling unit ordinances are silent on the separate sale of the units as condominiums. A few prohibit this practice. The policy basis for these restrictions seems to be a concern that allowing ADUs to be sold as condos will fuel speculative redevelopment of existing housing in high-cost neighborhoods.

In addition, neighbors and local officials fear the prospect of both units being rental units, which is the basis for the owner occupancy requirement. On the other hand, neighbors who have concerns about having rental units nearby might logically prefer an owned ADU to a rented ADU.

Property owners and developers in Austin, Texas, determined that state law authorizes the separate sale of ADUs as condominiums. Developers subsequently began to purchase single-family homes, build ADUs (called Auxiliary Dwelling Units) on the lots, then sell the ADU condominiums and primary residences separately. Only some lots and homes are appropriate, however — typically those with alley access, because of the requirements for separate access and parking. As of the writing of the second edition of the Model Local ADU Ordinance, builders in Austin are contacting homeowners about forming a condo association with them and buying backyards as sites for the second homes. →

Vancouver, British Columbia, allows the separate sale as “strata” (condominium) units alley-fronting “coach houses” on lots with “character” homes (certain ones built before 1940 that are not on a historic register) as a financial incentive to carry out major upgrades needed to bring homes up to current building codes.⁴⁶

“Condominium” refers not to a type of structure but a form of ownership in which an agreement among the parties defines separate and common areas and establishes standards and procedures governing the common areas. Allowing ADUs to become separately owned condominium units avoids the political reaction of authorizing land divisions to create separate lots for ADUs. But fee simple ownership is less complicated and easier to finance and sell than condominiums. As a matter of terminology and logic, it would be confusing to call a detached dwelling “accessory” to a principal dwelling if that dwelling is on a separate lot with separate ownership.

The Model Local ADU Ordinance leaves this policy question open, providing as alternatives the allowance of and prohibition of the separate sale of ADUs.

N. Owner Occupancy (Residency) Standards

Requirements that the owner live on the same property (whether in the primary dwellings or the ADU) are pervasive. The 2000 edition of the AARP Model Local ADU Ordinance noted: “Many communities monitor ADUs to ensure that the owner still lives on the premises. A variety of methods are used to do this monitoring including registration of occupants, certification of occupancy, and annual licensing of rental units with annual inspections. Other communities require ADU owners to record the requirements of the ADU ordinance as deed restrictions, particularly the owner-occupancy requirement. The deed restrictions accompany the title of the property and give notice to all subsequent buyers of the occupancy requirement.”

Owner occupancy covenants or conditions give pause to homeowners or institutions financing home purchases because of the limits they place on successive owners who will not be able to rent out or lease their main house, which might be necessary as a result of a divorce, job transfer or death. They can also make financial institutions reluctant to provide financing for construction of the ADU. Finally, because a covenant or condition serves as a restriction on a mortgage lender’s security interest in the property, the mortgage lender can withhold consent to any requirement that takes the form of a covenant, which means the local government would be required to deny the application to build an ADU.⁴⁷

The practical impact of the occupancy requirement is to inhibit construction of most ADUs. That conclusion is reflected in amendments to California’s and Oregon’s ADU legislation and in Seattle’s 2019 local code revisions.

Aside from its effect on ADU production, there is a problem with the logic and fairness of applying an occupancy standard to ADUs if there is no such requirement for single-family homes generally. If single-family homes can be rented out (by a nonresident owner), then what is the policy basis for requiring occupancy when there is an ADU on the property?

One of the justifications for the owner occupancy requirement is the assertion that owners take better care of their property than nonresident owners. But there are certainly resident homeowners who do not take care of their property and nonresident owners who keep their property in excellent condition.

The 2020 Model State ADU Act treats ADUs as an equal and important type of housing that, in general, should be subject to the same set of rules that governs the use of other housing. ADUs should not be treated as an inferior form of housing that requires additional restrictions and policing. Authorizations of or prohibitions on renting out →

dwelling should be applied consistently to ADUs and other homes; if there is no owner occupancy requirement for primary residences, there should be none for ADUs.

O. Other Common Standards Not Recommended for Application to ADUs

The following commonly used standards are no longer recommended for inclusion in ADU ordinances:

- *Density of ADUs in a zone or district*
- *Age of principal dwelling*
- *Size of principal dwelling*
- *Tenure of current owner*
- *Number, age, relationship and physical condition of persons who can live in the ADU*
- *Annual renewal and monitoring of permits*
- *Owner occupancy/residency on the same property*

III. Utility Connections and Building Codes

A. Utility Connections

New or separate water and sewer lines directly between the accessory dwelling unit and the trunk lines are not required unless the accessory dwelling unit is constructed before or in conjunction with a new single-family dwelling. Applicants may choose to use a shared water meter for the primary structure and the ADU or have a separate water meter installed for each.

A best practice for municipalities is to not require new, dedicated lateral services from the utility/right-of-way to the property. These utilities include water, sewer, electric, and gas connections.

Commonly, water and sewer services are provided in part by governmental agencies, whereas electric and gas utilities are commonly provided by private energy providers.

Ideally, energy providers do not require ADUs to have a dedicated lateral service connection from the right-of-way to an ADU, as new connections often cost several thousand dollars. However, when energy utilities are publicly owned, then the same principle should apply.

B. Local Building Codes

Since many garages and basements weren't built to today's earthquake or frost line standards, requiring that a structure meet current code may effectively require demolition and new construction, thereby eliminating a realistic or feasible option for a structural conversion.

Permitted, nonconforming structures should be allowed to change their use from a nonhabitable use to a habitable use without a conditional use permit or special exception from the building code, even if the structure does not meet current structural standards. This is commonly referred to as "grandfathering in" existing structures. This policy is critical in enabling structural conversions.

There are several other key considerations for internal conversions related to existing ceiling heights and →

existing stairwells. In general, the goals should be to allow existing spaces to have reduced building code thresholds for numerous building code standards.⁴⁸

The Portland, Oregon, guide to “Converting Attics, Basements and Garages to Living Space” makes internal conversions of living space to create ADUs more feasible by adjusting several elements of building codes:

- Ceiling heights
- Exceptions to ceiling heights for beams, heating ducts, pipes
- Sloped ceilings
- Existing stairs
- Noncompliant stairs
- Stair landings
- Firewall separation

Achieving higher energy efficiency in buildings is a critical strategy for reducing greenhouse gases. But it can increase the cost or reduce the design feasibility of ADUs created by conversions of existing space.

Conversions of basements and garages to ADUs are typically the most common type of ADU conversion. In the past, homes and garages were built with 2"x 4" stud walls versus the 2"x 6" framing used today, which accommodates much thicker insulation.

Requiring a conversion to meet today's energy standards may require the replacement of all of the existing stud walls to provide sufficient wall cavity space to accommodate sufficient insulation and meet modern energy code. This interior stud wall or additional 2" wall furring or exterior rigid foam insulation can add substantially (\$5,000 to \$20,000 in the Portland market in 2020) to construction costs and reduce the interior size of the living space of an already small dwelling.

If the effect of these energy standards is that more large homes or new apartments are constructed the net effect might be to increase energy consumption in order to heat and cool the larger spaces and because of the embedded energy in the materials used for new construction.

IV. ADU Application and Review Procedures

There are many potential procedural challenges facing ADU applicants: complex regulations, complicated application forms and procedures, vague and discretionary standards that must be addressed by the applications, the length and complexity of the procedures for acting upon an application, and appeals from the initial decision on the application.

A. Application Process

Zoning regulations, even in small jurisdictions, are almost inevitably complicated. Even in mid-sized cities they can run to hundreds of pages. Unlike developers and homebuilders, many applicants for ADUs don't have the resources to hire an attorney or consulting planner for more than a few hours to help them navigate the regulations and application process. In response, many local governments have developed simplified application forms, guidebooks, and online tools to determine whether and how an ADU can be sited on a property. This is a best practice recommended by AARP. See the Resources section for links to some examples. With the authorization and construction of more ADUs, more private sector specialists in ADU permitting are helping to fill this need.

B. Clear and Objective Versus Discretionary Standards

Vaguely worded standards contribute to the difficulty of securing ADU permits and may even inhibit homeowners from applying for a permit. Particularly problematic are standards that leave a great deal of discretion to the zoning administrator or require extensive interpretation. Even an apparently objective standard such as a 25-foot height limit requires the exercise of considerable discretion if the ADU roof has different elevations and the ground slopes in different directions.

AARP recommends using only clear and objective standards to govern ADUs.⁴⁹ A best practice is to use expert advice to prepare and test language to ensure that it is clear enough to be administered fairly and easily.

C. Review Procedures

The two basic options available to a community are to allow ADUs “by right” or to allow ADUs through conditional use permits (sometimes called special exception, special permit, or special land use).

“By right” means that the process involves filling out an application and presenting it to a local building official or zoning administrator, then checks to see that it meets the requirements of the ordinance. If the standards are clear and objective, no discretionary decision-making is involved and thus no hearing is necessary. This is also called a “ministerial” review.

This is the way building or remodeling a home or building an accessory structure is typically treated. By contrast a conditional use permit process typically involves the application of discretionary standards, public notice of the application and a public hearing.

Discretionary standards combined with a public hearing process create opportunities for obstruction by neighbors or organizations opposed to new housing in an established neighborhood. The cost of hiring attorneys or other experts and the delays associated with hearings and appeals can easily exhaust the budget and patience of even an affluent ADU applicant.

These obstacles have led many local and state governments to decide that ADUs should be a use allowed by right and subject only to ministerial review. Some have also imposed time limits for decisions on ADUs. (Some governments apply these requirements to other types of housing.)

The Model Local ADU Ordinance takes the position that building an ADU should be treated the same way as building or remodeling a home or building any accessory structure — it is a ministerial matter decided by a zoning administrator without notice or opportunity for a hearing.

D. Appeals of ADU Decisions

Many local zoning ordinances allow for initial decisions on ADU applications by a zoning administrator to be subject to internal appeals — to a hearing officer, the planning commission or a local governing body. Some local governments allow up to two internal appeals.

The final local government decision on an ADU, or other land use matter, may be followed by an appeal to the judicial system. There are many variations on internal appeal procedures, for example whether the scope of review is limited and who qualifies as a party to such an appeal. →

The Model Local ADU Ordinance obviates the need for detailing these provisions by making the ministerial decision the final local government decision, reviewable by the courts subject to the standards and procedures generally applicable to judicial review of local government decisions. This is consistent with the default procedural provisions in the Model State ADU Act.

The zoning administrator's decision on an application for an Accessory Dwelling Unit constitutes the final decision of [name of local government].

V. Fees

In addition to construction cost, regulatory standards and procedures, homeowners interested in building an ADU must consider permit processing fees, system development charges (to fund a share of capital improvements, such as water lines, sewage treatment capacity, schools and parks), and utility connection upgrades and charges.

The average local government fee for development of an ADU in California in the late 2010s was \$9,250.⁵⁰ In established neighborhoods where ADUs are being added, system development charges designed to pay for capital improvements may not be as appropriate if existing capital improvements are already adequate to handle a modest increase in residential population. Many older neighborhoods have a lower population density than when they were built and household sizes were larger.

Another approach is to offer fee processing waivers for homeowners who use preapproved ADU designs.

Waiving or reducing fees can incentivize ADU construction. Portland, Oregon, saw a surge in ADU applications when it offered to temporarily waive up to \$15,000 in system development charges that would have applied to ADUs; ADU permits tripled from about 200 per year to 600 per year.⁵¹

The Model Local ADU Ordinance follows the Model State ADU Act in limiting charges for ADUs to 30% of the charges applied to a single-family residence.

Permit application and review fees, utility hook-up fees and charges for public improvements for accessory dwelling units shall not be more than 30% of the application fees for a typical single-family dwelling unit of 2,000 square feet or greater than 10% of the estimated construction costs for the ADU, whichever is less. Additional amounts may be charged for a variance but subject to the overall maximum fee limit of 30% of the fees charged for a typical single-family residence of 2,000 square feet. The information required on applications for creating or legalizing ADUs shall be the same information required to construct a single-family-dwelling unit.

VI. Legalizing ADUs

An illegal ADU is one installed without obtaining the required permits from the local government.

Some ADUs existed prior to any ordinance that made them illegal. Local governments generally have the discretion to certify those ADUs as legal, nonconforming ADUs if they conformed to building codes in effect at the time of their construction. To this end, California has adopted legislation allowing that “the appropriate enforcement official may make a determination of when a residential unit was constructed and then apply the California Building Standards Code and other specified rules and regulations in effect when the residential unit was determined to be constructed for purposes of issuing a building permit for the residential unit.” →

Other ADUs that were nonconforming may be made conforming by subsequent code revisions, such as those proposed in the Model Local ADU Ordinance, and an application and receipt of a permit.

The continued existence of illegal ADUs may actually be encouraged by harsh regulations, excessive fees and tedious application procedures.

Many ADU owners strongly resist legalization out of a fear of higher (and possibly unaffordable) property taxes, fines, legal sanctions, income taxes on rental income, the costs of conforming to local codes and the possibility that code inspectors will discover a variety of code violations.

For these reasons, programs to accommodate illegal ADUs have not been very successful. In addition, most communities have limited budgets for enforcing ADU regulations, meaning that code enforcement relies on specific complaints. Thus, most communities simply ignore illegal ADUs.

Especially challenging are the large numbers of unpermitted units in working class and poor neighborhoods with high housing costs. The number of unpermitted units can be so great that they cannot be treated as a minor compliance problem that can be remedied quickly.

In these places, unlike in many other neighborhoods, water and sewer systems are overtaxed due to high population densities and low revenue from system development charges over time (given that most of the added units are unpermitted). A grant program or long-term investment strategy is needed to allow for infrastructure capacity and state-of-good-repair upgrades.

Regulations imposed on units applying for amnesty in these areas need to distinguish between matters of true health and safety (adequate egress, electrical wiring, light, ventilation, etc.) and other concerns (parking, setbacks, building heights, etc.).

Amnesty should not be an all-or-nothing process. There should be some sort of mechanism for graduated compliance over time (perhaps several years), with the most urgent life-and-death conditions being fixed first and others later.

Onerous utility-related requirements (such as fully separate water and sewer main connections) may be counterproductive. Many or most homeowners going through amnesty will need technical assistance and perhaps grant funding. Grant funding should be justified on the basis of an amnesty ADU typically costing far less than the city subsidies needed for a below market new construction housing unit.

There are many entities, such as nonprofits and university planning and architecture departments, with which a city can partner for technical assistance.

A city can also require affordable rent concessions as a condition of amnesty, at least for middle- and higher-income homeowners.

Some benefits accrue to communities that legalize illegal ADUs. If illegal units are tolerated, the risk increases that other people will be encouraged to have illegal units. In this instance, it can be quite important for community leaders to make the statement through ADU regulation that they are committed to the public interest, as demonstrated by requirements that owners of illegal ADUs come forward and legalize their units, coupled with a commitment to the kinds of funding and assistance programs for moderate- and low-income homeowners →

of the type described previously. Legalizing illegal ADUs provides the opportunity to correct safety hazards, such as inadequate electrical wiring.

We recommend against harsh regulations, lengthy application processes and high fees, which will lead to even more illegal ADUs. We recommend publicizing the opportunity for amnesty for ADUs made compliant as a result of amendments to local ordinances, nonpunitive safety inspections when public health is threatened, amnesty periods from enforcement, extended periods to comply with regulations, exemption from all but safety regulations, a comprehensive long-term approach to code compliance in moderate-income neighborhoods, and reliance on the threat of stiff penalties only after all else has failed.

Endnotes

- 1 See *MissingMiddleHousing.org*.
- 2 Find the average size of a single-family home, the square footage per person, the number of new homes that began construction and gross domestic product per person, starting in 1920. “Size of a Home the Year You Were Born,” Evan Comen, Michael B. Sauter, April 5, 2019, *247wallst.com*
- 3 “California ADU Growth by City from 2012–2019, Charted,” August 22, 2020, *BuildingAnADU.com*..
- 4 Kol Peterson, *AccessoryDwellings.org*.
- 5 “Housing Vancouver,” City of Vancouver, Progress Report and Data Book to Council (June 2020), pages 7, 8, 25. *Vancouver.ca*.
- 6 Jessica Lee, Greta Kaul, “ADUs Were Supposed to Help Minneapolis’ Housing Crunch. How’s That Working Out?” May 1, 2019, *MinnPost.com*.
- 7 Revised Code of Washington 43.63A.215.
- 8 California Government Code 65852.150.
- 9 New Hampshire RSA 674:71-73.
- 10 Oregon Revised Statutes 197.312(5).
- 11 § 45-24-37 (limited to use by persons over 62 or with disabilities).
- 12 24 Vermont Statutes Annotated Section 4412 (E).
- 13 The revisions made as the result of passage of one Senate and five Assembly bills are summarized in the California Department of Housing and Community Development’s *Accessory Dwelling Unit Handbook*, pages 4–7 (September 2020).
- 14 Oregon Revised Statutes 197.312(5)(b)(B), 455.610(8), (9) as amended or added by Oregon House Bill 2001 (2019), *HCD.ca.gov*.
- 15 Vermont Senate Bill 237 signed by the Governor and effective October 12, 2020, amending 24 Vermont Statutes Annotated §4412(1)(E), 24 Vermont Statutes Annotated § 2291(29) and 27 Vermont Statutes Annotated §545.
- 16 2019 Florida Statutes online §163.31771.
- 17 30-A Maine Revised Statutes Annotated §4301, sub-§1-B.
- 18 Hawai’i Revised Statutes §46-4(c).
- 19 *Accessory Dwelling Unit Legislation: An Overview of State Policy*, American Planning Association (APA) and AARP, 2021.
- 20 ADU Program Guide, City of Portland, Oregon, March 2019, *Portland.gov*..
- 21 City of Portland, Oregon, “Converting Attics, Basements and Garages to Living Space,” February 2019, *Portland.gov*
- 22 Here is an excerpt from a 2018 letter sent from a bank to a prospective borrower. It discusses an owner occupancy covenant on the property that would be required as a condition of approval for construction of an ADU: “I have reviewed the Accessory Dwelling Unit Covenant and as a lender I have a number of concerns: 1. The covenant does not provide the lender with protections in the case of a foreclosure or deed in lieu of foreclosure as the restriction will affect marketability of the property. The covenant requires at least one of the units be owner-occupied. In a market where there is a demand for investment property, this limits the pool of potential buyers thus affecting the sales price and marketability of the property. A potential homeowner or home purchaser may have a difficult time obtaining conventional financing with this deed restriction; 2. Your covenant states that the owner needs to occupy the residence, if the lender forecloses the lender can clearly not occupy the property and will be in violation of your proposed covenant.” Another example is provided by a reply to a request from homeowners asking their mortgage lender to consent to an owner occupancy covenant, which was required by the local government as a condition of approval of an ADU that the homeowners hoped to build. The mortgage lender replied: “The proposed Accessory Dwelling Unit Covenant would place certain limitations on this property, and as such could be construed as a transfer of interest in the property. [The bank] is not able to provide consent to such transfer at this time.”
- 23 24 Vermont Statutes Annotated § 4412 (1)(F)(2) and 24 Vermont Statutes Annotated § 2291(29) as amended by Sections 1 and 3 of Vermont Senate Bill 237, signed by the Governor and effective October 12, 2020.

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- 24 “Regulating ADUs in California: Local Approaches & Outcomes,” Deirdre Pfeiffer, University of California, Berkeley, Turner Center for Housing Innovation (2018), *CaliforniaLandUse.org*
- 25 “Accessory Dwelling Units,” City of Burlington, Vermont, *BurlingtonVT.gov*.
- 26 The cost to put in a new driveway averages \$4,421, with a typical range between \$2,379 and \$6,472. A customer can expect to pay \$2 to \$15 per square foot for materials and installation. (“How Much Does a Driveway Cost?” *HomeAdvisor.com*, checked December 21, 2020). A 10-foot-wide driveway 60 feet in length would cost between \$1,200 and \$9,000, using these cost-per-square-foot numbers. | Kol Peterson, author of *Backdoor Revolution: The Definitive Guide to Accessory Dwelling Unit Development*, estimates the cost range as \$2,500 to \$15,000, depending on whether the additional driveway requires excavating and pouring a new pad on a flat surface next to the street or if it calls for a new curb cut and new landscaping.
- 27 Research conducted for Oregon’s House Bill 2001 (2019), which mandates the authorization of middle housing in single-family residential zones), found “[o]n small lots, even requiring more than 1 parking space per development creates feasibility issues because it limits the potential building footprint.” *EcoNorthwest* (2020), *Summary of Triplex/Fourplex Financial Feasibility Sensitivity Testing for Middle Housing Model Code*, *Oregon.gov*.
- 28 “Regulating ADUs in California: Local Approaches & Outcomes,” Deirdre Pfeiffer, University of California, Berkeley, Turner Center for Housing Innovation (2018), *CaliforniaLandUse.org*.
- 29 Professor Donald Shoup of the University of California, Los Angeles (UCLA), calculates that the U.S. has 2 billion parking spaces for 250 million cars and light trucks and that more land has been set aside for housing cars than housing people. “Parking Is Sexy Now. Thank Donald Shoup,” Bloomberg News CityLab, May 20, 2018, *Bloomberg.com*.
- 30 City of Hartford, Connecticut, “Zone Hartford: Hartford Zoning Regulations,” Section 7.2 Parking Requirements, effective January 16, 2016, as amended June 5, 2020.
- 31 Daniel Baldwin Hess (2017) “Repealing Minimum Parking Requirements in Buffalo: New Directions for Land Use and Development,” *Journal of Urbanism: International Research on Placemaking and Urban Sustainability*, 10:4, 442-467.
- 32 Edmonton City Council Votes to Remove Minimum Parking Requirements: With the Change, Edmonton Becomes First Major City in Canada to Drop Parking Minimum,”CBC News, June 23, 2020, *CBC.ca*.
- 33 For example, City of Oakland, California, Oakland Planning Code (as amended through June 2020), 17.116.060, “Off-Street Parking: Residential Activities” (no parking required for single family and multifamily residences in many zones): City of Portland, for sites within 1,500 feet of a transit stop, “The minimum number of required parking spaces for a site with a Household Living use is: (1) Where there are up to 30 dwelling units on the site, no parking is required; (2) Where there are 31 to 40 dwelling units on the site, the minimum number of required parking spaces is 0.20 spaces per dwelling unit”; Portland City Code, Title 33, Planning and Zoning 33.266.110, “Minimum Required Parking Spaces,” as of October 2020.
- 34 Oregon Revised Statutes 197.805 – 197.860.
- 35 California Government Code 65852.2.(e)(1)(C), (D).
- 36 “Accessory Dwelling Units,” City of Burlington, Vermont, *BurlingtonVT.gov*.
- 37 As of November 2020, the City of Portland’s website includes links to Ordinance 190093 as amended to accommodate the reforms in single-family zoning, adopted August 12, 2020, and resulting from the residential infill document and various supporting documents, including staff reports and research that addresses height, bulk, set backs and floor area ratios, *Portland.gov*.
- 38 The cost to put in a new driveway averages \$4,421, with a typical range between \$2,379 and \$6,472. A customer can expect to pay \$2 to \$15 per square foot for materials and installation. (“How Much Does a Driveway Cost?” *HomeAdvisor.com*, checked December 21, 2020). A 10-foot-wide driveway 60 feet in length would cost between \$1,200 and \$9,000 using these cost-per-square-foot numbers. | Kol Peterson, author of *Backdoor Revolution: The Definitive Guide to Accessory Dwelling Unit Development*, estimates the cost range as \$2,500 to \$15,000, depending on whether the additional driveway requires excavating and pouring a new pad on a flat surface next to the street or if it calls for a new curb cut and new landscaping.
- 39 Research conducted for Oregon’s House Bill 2001 (2019), which mandates the authorization of missing middle housing in single-family residential zones, found “[o]n small lots, even requiring more than 1 parking space per development creates feasibility issues because it limits the potential building footprint.” *EcoNorthwest* (2020), “Summary of Triplex/Fourplex Financial Feasibility Sensitivity Testing for Middle Housing Model Code,” *Oregon.gov*.
- 40 “Regulating ADUs in California: Local Approaches & Outcomes,” Deirdre Pfeiffer, University of California, Berkeley, Turner Center for Housing Innovation (2018), *CaliforniaLandUse.org*.
-

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- 41 Professor Donald Shoup of the University of California, Los Angeles (UCLA), calculates that the U.S. has 2 billion parking spaces for 250 million cars and light trucks and that more land has been set aside for housing cars than housing people. “Parking Is Sexy Now. Thank Donald Shoup,” Bloomberg News CityLab, May 20, 2018, *Bloomberg.com*.
- 42 City of Hartford, Connecticut, “Zone Hartford: Hartford Zoning Regulations,” Section 7.2 Parking Requirements, effective January 16, 2016, as amended June 5, 2020.
- 43 Daniel Baldwin Hess (2017) “Repealing Minimum Parking Requirements in Buffalo: New Directions for Land Use and Development,” *Journal of Urbanism: International Research on Placemaking and Urban Sustainability*, 10:4, 442-467..
- 44 “Edmonton City Council Votes to Remove Minimum Parking Requirements: With the Change, Edmonton Becomes First Major City in Canada to Drop Parking Minimum,” CBC News, June 23, 2020, *CBC.ca*.
- 45 For example, City of Oakland, Oakland Planning Code (as amended through June 2020), 17.116.060, “Off-Street Parking: Residential Activities” (no parking required for single-family and multifamily residences in many zones): City of Portland, for sites within 1,500 feet of a transit stop, “[the] minimum number of required parking spaces for a site with a Household Living use is: (1) Where there are up to 30 dwelling units on the site, no parking is required; (2) Where there are 31 to 40 dwelling units on the site, the minimum number of required parking spaces is 0.20 spaces per dwelling unit,” Portland City Code, Title 33, Planning and Zoning 33.266.110, “Minimum Required Parking Spaces,” as of October 2020.
- 46 Details can be found at *Vancouver.ca/home-property-development/retain-your-character-house.aspx*.
- 47 Here is an excerpt from a 2018 letter sent from a bank to a prospective borrower. It discusses an owner occupancy covenant on the property that would be required as a condition of approval for construction of an ADU: *“I have reviewed the Accessory Dwelling Unit Covenant and as a lender I have a number of concerns: 1. The covenant does not provide the lender with protections in the case of a foreclosure or deed in lieu of foreclosure as the restriction will affect marketability of the property. The covenant requires at least one of the units be owner-occupied. In a market where there is a demand for investment property, this limits the pool of potential buyers thus affecting the sales price and marketability of the property. A potential homeowner or home purchaser may have a difficult time obtaining conventional financing with this deed restriction; 2. Your covenant states that the owner needs to occupy the residence, if the lender forecloses the lender can clearly not occupy the property and will be in violation of your proposed covenant.”* Another example is provided by a reply to a request from homeowners asking their mortgage lender to consent to an owner occupancy covenant, which was required by the local government as a condition of approval of an ADU that the homeowners hoped to build. The mortgage lender replied: *“The proposed Accessory Dwelling Unit Covenant would place certain limitations on this property, and as such could be construed as a transfer of interest in the property. [The bank] is not able to provide consent to such transfer at this time.”*
- 48 “Converting Attics, Basements and Garages to Living Space,” City of Portland, 2019, *Portland.gov*.
- 49 Because of the uncertainties created for approval of housing, Oregon has, since the 1980s, required local governments to use only clear and objective standards to review needed housing. Oregon Revised Statutes 197.307(4).
- 50 “Regulating ADUs in California: Local Approaches and Outcomes,” Deirdre Pfeiffer (2018), University of California, Berkeley, Turner Center for Housing Innovation, *CaliforniaLandUse.org*.
- 51 *When the waiver was made permanent for ADUs that were subject to a prohibition on short-term rentals the volume declined as the deadline was removed, but remained at more than 300 per year.*



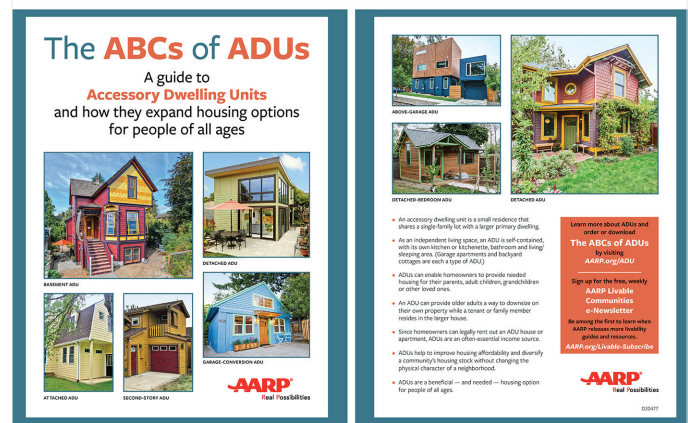
LEARN MORE

Two free publications about how ADUs expand housing options for people of *all* ages

■ *The ABCs of ADUs*

A Guide to Accessory Dwelling Units and How They Expand Housing Options for People of All Ages

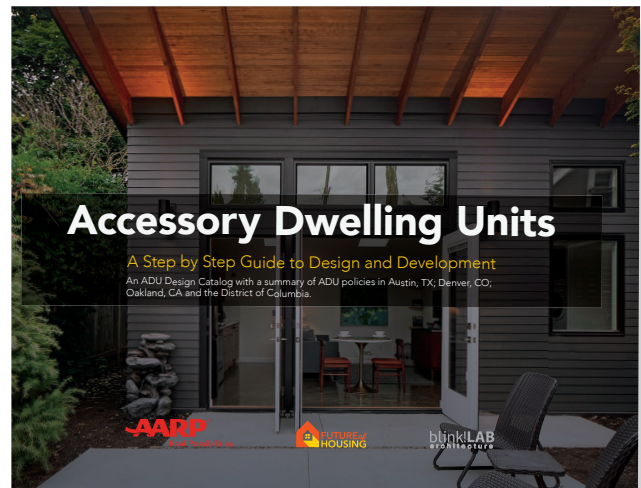
A primer for elected officials, policymakers, local leaders, homeowners, consumers and others, *The ABCs of ADUs* is an award-winning, 20-page introductory and best-practices guide for how towns, cities, counties and states can include ADUs in their mix of housing options.



■ *Accessory Dwelling Units*

A Step by Step Guide to Design and Development

Featuring ADU policies and projects from Austin, Texas; Denver, Colorado; Oakland, California; and Washington, D.C., this 113-page Accessory Dwelling Units design catalog contains information about financing and budgeting for an ADU project as well as visuals that show how ADUs can be easily designed to serve people of differing ages and abilities.



Visit [AARP.org/ADUs](https://www.aarp.org/ADUs) to download or order these free guides and find links to other ADU resources, including this publication.

AARP Livable Communities

Website: [AARP.org/Livable](https://www.aarp.org/Livable)

Email: Livable@AARP.org

Facebook: [@AARPLivableCommunities](https://www.facebook.com/AARPLivableCommunities)

Twitter: [@AARPLivable](https://twitter.com/AARPLivable)

Interactive Map: [AARP.org/LivableMap](https://www.aarp.org/LivableMap)

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AARP Public Policy Institute

Websites: [AARP.org/LivablePolicy](https://www.aarp.org/LivablePolicy)
[AARP.org/FutureOfHousing](https://www.aarp.org/FutureOfHousing)

Twitter: [@AARPPolicy](https://twitter.com/AARPPolicy)

Interactive Tool: [AARP.org/LivabilityIndex](https://www.aarp.org/LivabilityIndex)



ACKNOWLEDGMENTS

Late in the last century, the AARP Public Policy Institute asked the American Planning Association to develop model legislation (a state statute and a local ordinance) that would assist AARP volunteer leaders and other interested residents, planners and government officials in evaluating potential changes to state laws and local zoning ordinances in order to encourage the wider availability of ADUs.

This update of ***Accessory Dwelling Units: Model State Act and Local Ordinance*** was produced by members of the AARP State Advocacy & Strategy Integration group:

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▶ **A**CCESSORY **D**WELLING **U**NITS

Model State Act and Local Ordinance

Model State Act and
Local Ordinance



ADUs are an affordable, accessible housing option for people of all ages. This resource was created for use by state and local leaders and other interested citizens, planners and government officials to evaluate potential changes to state laws and local zoning codes.

Learn more and download this guide by visiting

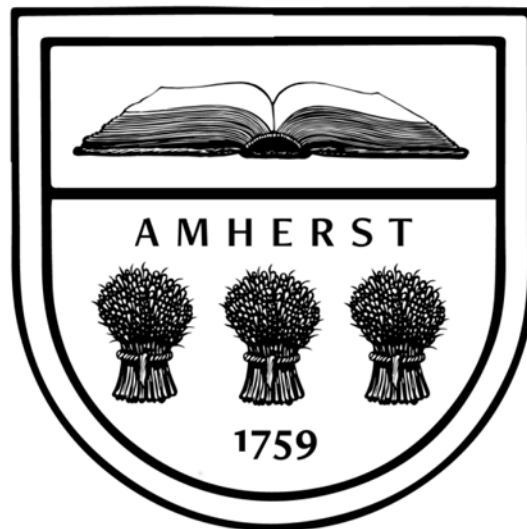
[AARP.org/ADUs](https://www.aarp.org/ADUs)

Illustration from *Accessory Dwelling Units: Model State Act and Local Ordinance*, published in 2000 by AARP and the American Planning Association.

See Section 5.011 "Accessory Dwelling Units"

ZONING BYLAW

AMHERST
MASSACHUSETTS



EFFECTIVE January 4, 2022

Available online at <http://www.amherstma.gov>

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ARTICLE 1 PURPOSE

This **Zoning Bylaw** is enacted pursuant to, and under the authority of, Chapter 40A of the General Laws as amended, for the purpose of promoting the health, safety, convenience and general welfare of the inhabitants of the Town of Amherst, and to encourage the most appropriate use of land throughout Amherst. This Zoning Bylaw is in accordance with the recommendations of the Master Plan adopted in accordance with the Amherst Home Rule Charter and is consistent with the comprehensive plan of the regional planning agency.

ARTICLE 2 ZONING DISTRICTS

- SECTION 2.0 ZONING DISTRICTS
- SECTION 2.1 ZONING MAP
- SECTION 2.2 BOUNDARY INTERPRETATIONS

SECTION 2.0 ZONING DISTRICTS

For the purpose of this Bylaw, the Town of Amherst is hereby divided into the following classes of zoning districts:

2.01 Residential Districts

The purpose of all residential zones is to promote a suitable environment for residential life through the provision of recreational, religious and educational facilities as basic elements of a balanced neighborhood, to stabilize and protect the essential characteristics of existing residential development, and to foster development that is compatible with the other natural and built characteristics of the area.

R-LD Low Density Residence

The purpose of the R-LD District is to provide for residential areas that allow limited development, while providing protection for environmentally sensitive areas, agricultural resources, and other similar lands. To this end, this is the lowest density residential district.

R-F Fraternity Residence

The purpose of the R-F District is to provide for residential areas dedicated to the specific residential requirements of fraternities, sororities and similar residential facilities associated with educational institutions. To this end, uses other than sororities, fraternities and the like are restricted in this district.

R-O Outlying Residence

The purpose of the R-O District is to provide for lower density residential areas. In general, the R-O District is intended to be a transitional area between the low density R-LD District and medium density R-N District.

R-N Neighborhood Residence

The purpose of the R-N District is to provide for residential areas of medium densities. In general, the R-N District is appropriate for lands adjacent to higher density residential districts, near arterial or primary residential streets, or in areas transitional between the lower density districts and other districts.

R-VC Village Center Residence

The purpose of the R-VC District is to provide for residential neighborhoods, within and adjacent to village centers, that are of medium densities and that allow a limited mix of residential and office uses. The R-VC is, in general, intended to provide for a transition between the Business Village Center District and surrounding residential districts.

R-G General Residence

The purpose of the R-G District is to provide for residential neighborhoods of medium to higher density in areas both near the Town Center and between the University and the Town Center. Such areas are convenient to the services, facilities, institutions and/or employment opportunities provided in the Town Center or by the University.

PURD Planned Unit Residential Development

The purpose of the PURD District is to provide for a mixture of housing types and open space, with variations in dimensional requirements, in appropriate areas within the Town, at greater densities than would otherwise be allowed by the underlying zoning. The PURD is an overlay district. The requirements of this District are intended to encourage design of creative development, protection of the natural resources, and compatibility with surrounding areas.

2.02 Business Districts

B-G General Business

The purpose of the B-G District is to provide for a mixed use area, of high density, containing a wide variety of commercial, office, residential, institutional, civic, and cultural uses. To this end, it is intended that this district be applied within the Town Center of Amherst.

B-VC Village Center Business

The purpose of the B-VC District is to provide areas within the village centers of Amherst that allow for a mix of uses, including retail, commercial, office and housing of moderate to high density.

B-N Neighborhood Business

The purpose of the B-N District is to provide for areas of mixed use and moderate density to serve as small centers providing goods and services within or near residential neighborhoods, or as a transitional zone between more densely-developed business areas and residential neighborhoods.

B-L Limited Business

The purpose of the B-L District is to provide areas for moderate density, office, commercial and multifamily developments. It is intended to be located in transitional areas between high density business districts and high density residential districts or in appropriate areas along arterial or primary roads.

OP Office Park

The purpose of the OP District is to provide areas for office and limited research activities. To this end, the standards and regulations are intended to limit the types of uses and to provide for a clean, open and quiet environment that will not adversely impact adjoining residential areas.

COM Commercial

The purpose of the COM District is to provide areas for a wide range of retail uses and services and commercial activities in appropriate locations along primary roads within the Town.

2.03 Industrial/Research Park Districts

PRP Professional and Research Park

The purpose of the PRP District is to provide an open and attractive environment for office, research and low intensity industrial activities. The standards and regulations are intended to limit development to those activities that are non-commercial in nature and that operate in a clean and quiet manner.

LI Light Industrial

The purpose of the LI District is to provide areas for certain light manufacturing, warehousing, wholesaling and similar activities.

R&D Research & Development

The R&D District is an overlay district intended to modify the regulations in underlying business and industrial/research park districts in order to facilitate research and development and testing uses and to provide specific additional regulations with regard to such uses.

2.04 Special Districts

ED Educational

ED zoning allows any use of land and buildings which may legally be carried on by, or under the auspices of, the college or university which owns or manages the property. It is intended that the Educational District only include land which is owned or managed by Amherst College, Hampshire College, or the University of Massachusetts.

MP Municipal Parking

The MP District is an overlay district intended to include selected areas of the downtown General Business (B-G) District and abutting General Residence (R-G) District. Within the MP District, a wide range of permitted retail, service, commercial and residential uses shall be exempted from the requirement to provide off-street parking spaces. It is the policy of the Town of Amherst to encourage dense multi-use development in its Town Center. Toward that end, provision of off-street parking is not required for selected uses within the MP District.

DR Design Review

The DR District is an overlay district intended to include the General Business (B-G) District, and the abutting Limited Business (B-L) districts. The purpose of the DR District is to support the success and vitality of Amherst's Town Center by assuring that the historic character, aesthetic character, and functional quality of the design of Town Center buildings and sites are protected and enhanced. The DR District corresponds to those areas where the exterior design of new development or alterations requiring permits is subject to review by the Design Review Board.

TCDR Town Common Design Review

The TCDR District is an overlay district intended to include the Amherst Town Common and sites within 150 feet of the Common greenspace, as measured from the outside edges of the curbs bordering the three sections of the Common, parking lots and interior roadways inclusive. The purpose of the TCDR District is to protect and enhance of the design of the historic Town Common and that of the surrounding buildings and landscapes. The TCDR District corresponds to those areas where the exterior design of new development or alteration on or within the vicinity of the Town Common is subject to review by the Design Review Board.

PFD Parking Facility District *(Adopted December 20, 2021; Effective January 3, 2022)*

The Parking Facility District is an overlay district that applies only to the municipally owned parcel 14A-33 on North Prospect Street as this property's location and size is an appropriate location for a parking facility.

2.05 Resource Protection Districts

FPC Flood-Prone Conservancy

The FPC District consists of those geographical areas which by virtue of their relationship to components of the natural hydrology of the Town of Amherst, have substantial importance to the protection of life and property against the hazards of floods, erosion, and pollution and in general are essential to the public health,

safety, and welfare. To this end, the number and types of uses allowed are restricted.

WP Watershed Protection

The WP District is an overlay district intended to provide additional protection to those lands which by virtue of their location, slope and soils, make up the watersheds of the public water supply.

ARP Aquifer Recharge Protection

The ARP District is an overlay district intended to provide additional protection to those lands, which by virtue of their location, slope, soils, subsurficial geology and water tables, constitute the recharge area for Zones I, II and III of the public water supply wells of the Town of Amherst within the Lawrence Swamp Aquifer.

FC Farmland Conservation

The FC District is an overlay district, configured to include, and intended to protect those lands which, by virtue of their soils, acreage, location adjacent to and contiguous with other farm land, and lack of protection under existing underlying zoning, comprise the critical farmland of the Town of Amherst.

SECTION 2.1 ZONING MAP

The location and boundaries of zoning districts shall be as delineated on the Town of Amherst Geographic Information Systems (GIS) map entitled 'Official Zoning Map, Amherst, Massachusetts, May, 2011,' as amended. This map, including overlay districts, shall be on file in the Town Clerk's Office in electronic and hard-copy (paper) format with copies available upon request. The "Official Zoning Map" shall also be available for viewing on the Town of Amherst website.

Said Zoning Map and amendments thereto as shall be duly adopted shall be considered an integral part of this Bylaw. Amendments to zoning district boundaries adopted by action of the Town Council shall be shown as amendments to this Map or shown on such other maps as may be incorporated as part of this Zoning Bylaw.

SECTION 2.2 BOUNDARY INTERPRETATION

For purposes of interpretation, it shall be assumed that:

- 2.21 Boundaries which appear to follow streets, railroads or streams shall coincide with the center line thereof.
- 2.22 Boundaries which appear to follow public or institutional property lines shall coincide with such property lines.
- 2.23 Boundaries which appear to run parallel to the side lines of streets or railroad rights-of-way shall be considered to be parallel to and a multiple of 50 feet distant from such lines (as determined by scaling the map unless a different distance is specifically indicated) or in specific instances shall run parallel to said streets, railroads or streams at the exact distance indicated on the Zoning Map.
- 2.24 Where a district boundary shall include a numerical figure followed by the letters MSL, it is at that number of feet above mean sea level. The basic source for determining such a line shall be the U.S. Geological Survey or subsequent field surveys, based on U.S.G.S. bench marks, or by Registered Land Surveyors.
- 2.25 For boundary interpretations in the Flood Prone Conservancy district, see also Section 3.223, 3.224, 3.225, and 3.227 of this Bylaw.
- 2.26 The Watershed Protection (WP) District is bounded by the topographic ridge on the upside, the fall lines (lines normal to actual topographic contours) on the lateral sides, and the Shutesbury town line by Atkins Reservoir.

ARTICLE 3 USE REGULATIONS

- SECTION 3.0 PROHIBITED USES - ALL DISTRICTS**
- SECTION 3.1 RESTRICTED USES - ALL DISTRICTS**
- SECTION 3.2 SPECIAL DISTRICTS**
- SECTION 3.3 USE CLASSIFICATION AND STANDARDS**

SECTION 3.0 PROHIBITED USES - ALL DISTRICTS

- 3.01 The development or operation on a single lot of more than one dwelling or more than one of the Principal Uses described in Section 3.3 is expressly prohibited except where the Principal Uses are clearly complementary to each other, or where otherwise provided by this Bylaw.
- 3.02 Trailer camps, billboards and all open air storage of junk, including inoperable automobiles and all uses which are excessively obnoxious or injurious to their neighborhood or to all property in the vicinity are expressly prohibited in all zoning districts in the Town. Inoperable automobiles and other materials related thereto stored in an auto salvage yard operating under an approved Special Permit shall not be considered junk under this Section.

SECTION 3.1 RESTRICTED USES - ALL DISTRICTS

3.11 Building Near Ponds

No permanent structure shall be located within 100 feet of any pond or Surface Water Impoundment of flood retention area without a Special Permit from the Zoning Board of Appeals permitting such structure within 100 feet. Such Permit shall not be issued unless the Zoning Board of Appeals takes into consideration the following in addition to the findings required by Section 3.22, if applicable, and by Article 10.

- 3.111 Elevation and placement of buildings
- 3.112 Drainage
- 3.113 Sewage disposal
- 3.114 Erosion and sedimentation control
- 3.115 Effect of fill, roadways, or other encroachments
- 3.116 Equipment location
- 3.117 Refuse disposal
- 3.118 Extent of paving

3.12 Earth Removal and Filling of Land

- 3.121 Any application to the Zoning Board of Appeals for a Special Permit, or to the Planning Board for Site Plan Review or Definitive Subdivision Plan Approval, as specified in Sections 3.1225, 3.1226, 3.374 and 5.10, shall include the following specific information:
 - 3.1211 The location of the proposed excavation or filling;
 - 3.1212 The legal name and address of the owner of the property;
 - 3.1213 The legal name and address of the petitioner;
 - 3.1214 Names and addresses of all abutting property owners including those on the opposite side of any streets;

- 3.1215 A plan of land involved prepared by a Registered Land Surveyor, showing all manmade features, property lines, vegetative cover, watercourse, drainage swales, soil characteristics and existing topography by two foot contours plus a strip 100' wide surrounding said land;
- 3.1216 A plan of land showing two foot contours of the finish grading and drainage of the site with clear identification of the top and toe slopes after the proposed completion of the excavation or filling project;
- 3.1217 The estimated quantity of material to be removed or added and topsoil to be stripped and replaced.
- 3.1218 The proposed form of bond to be used.
- 3.122 No Special Permit shall be required for the following:
 - 3.1221 Moving earth products within the limits of an individual property or land in single ownership.
 - 3.1222 Removal of earth products from an operating farm nursery, or cemetery to the extent that such removal is necessary to the operation of the same.
 - 3.1223 The moving and removal of earth products for any municipal purpose by, or on behalf of, any Department of the Town of Amherst;
 - 3.1224 The moving and removal of earth products when incidental to and in connection with the construction of a building or street or other activity authorized by this Bylaw.
 - 3.1225 Filling of land in conjunction with a development that requires a Special Permit. Any such filling of land, however, shall be approved as part of the Special Permit required for the development and shall meet the conditions of Section 3.12.
 - 3.1226 Filling of land in conjunction with a development that requires definitive subdivision plan approval. Any such filling of land, however, shall be approved as part of the subdivision plan and shall meet the conditions of Section 3.12.

3.13 Development in Floodways

All encroachments including fill, new construction, substantial improvements to existing structures and other developments are prohibited in the floodway, unless certification is provided demonstrating that such encroachment will not result in any increase in flood levels during the occurrence of a 100-year flood. Such certification shall be provided by a registered professional engineer or any other person, who, in the opinion of the Planning Board, is qualified to make such determination. Floodways are shown on the Floodway and Flood Boundary Map, as amended, produced by the Federal Emergency Management Agency. This section shall not supersede any of the requirements of the Flood Prone-Conservancy District.

3.14 Development Near Public Water Supply Sources

Notwithstanding any other provision of this Zoning Bylaw, in all zoning districts, any use of land located within Zones I, II, and III for a public water supply well, wellfield, or spring, or within Zones A, B, and C of a surface public water supply source shall be subject to the provisions of 310 CMR 22, including 310 CMR 22.20A-20G and 22.21, as amended, and all such Amherst board of Health regulations as may apply.

SECTION 3.2 SPECIAL DISTRICTS

3.20 Design Review Districts

3.200 General

The Design Review District (DR) and Town Common Design Review District (TCDR) are overlay districts and shall be superimposed on other districts established by this Bylaw. Restrictions and prohibitions of land use in the underlying district shall remain in full force, and shall not be modified by the conditions of the DR or TCDR Districts unless superseded by the restrictions and prohibitions of said districts.

3.2000 Establishment of Districts

The Design Review District (DR) and Town Common Design Review District (TCDR) shall consist of the geographic areas shown for these districts on the Official Zoning Map.

3.2001 Purpose

The purpose of this section and these districts is to preserve and enhance the Town's cultural, economic and historical resources by providing for a detailed review of all changes in land use, the appearance of structures and the appearance of sites which may affect these resources. The review procedures are intended to:

- 1) Enhance the social and economic viability of the Town by preserving property values and promoting the attractiveness of the Town as a place to live, visit and shop;
- 2) Encourage the conservation of buildings and groups of buildings that have aesthetic or historic significance;
- 3) Prevent alterations that are incompatible with the existing environment or that are of inferior quality or appearance; and
- 4) Encourage flexibility and variety in future development.

3.201 Design Review Board

In accordance with the provisions of Chapter 40A of the Massachusetts General Laws, a Design Review Board is hereby established. The Design Review Board shall review applications for all actions that are subject to the provisions of this section and shall make recommendations to the appropriate permit-granting authority concerning the conformance of the proposed action to the design review standards contained herein.

The Design Review Board shall consist of five members, two of whom are registered architects, landscape architects or persons with equivalent professional training, and one of whom operates a business or owns commercial property in the affected area. Staggered 3-year appointments to the Design Review Board shall be made by the Town Manager. Of the five Design Review Board members, one member shall represent the Planning Board and one member shall represent the Historical Commission. The Planning Board and Historical Commission shall vote to recommend their representatives and forward those recommendations to the Town Manager prior to appointment. These two representative members need not be members of the Planning Board or Historical Commission.

3.202 Reviewable Actions

The following types of actions shall be subject to review by the Design Review Board and shall be subject to the design standards herein.

3.2020 Actions in the DR Districts

All new structures, alterations or additions to existing structures, changes in outdoor land use or changes in site design which require a building permit, Site Plan Review, Special Permit or Variance and which affect the exterior architectural appearance of a building or site shall be subject to review by the Design Review Board, provided that the action occurs within the General Business (B-G) District or abutting Limited Business (B-L) zoning districts.

3.2021 Actions in the TCDR District

Any construction, alteration, demolition or removal that affects the exterior architectural appearance of a building or site shall be subject to review by the Design Review Board provided that the site is on or within 150 feet of the Amherst Town Common, as measured from the outside edges of the curbs bordering the three sections of the Common's greenspace, parking lots and interior road ways inclusive.

Exterior architectural appearance shall be defined as the architectural character and general composition of the exterior of a building, including but not limited to the kind, color and texture of building materials, including paint color, and the type, design and character of all windows, doors, light fixtures, signs, awnings, utility and ventilation structures and all other appurtenant elements.

The appearance of a site shall be defined as the character, layout and general composition of the site, including but not limited to the kind, color and texture of such materials as plantings, paving, benches, site lighting, free-standing signs, utility structures and all other appurtenant elements.

3.2022 Actions by Town Government

Any construction, alteration, demolition or removal of a structure or site by the Town of Amherst shall be subject to review by the Design Review Board. This includes all actions throughout the Town of Amherst, except for routine maintenance of existing structures or sites. Any repair, renovation or rehabilitation which will result in substantial alteration to the form or appearance of a structure or site shall not be considered routine maintenance. Where the status of such an action by the Town is in doubt, the department or agency responsible shall request a determination from the Zoning Enforcement Officer prior to beginning work.

3.203 Procedures for Review of Actions Subject to Design Review

3.2030 Applications for all actions subject to review by the Design Review Board shall be made by submitting a complete application form along with the required application materials and fee to the Planning Department where application forms may be obtained.

3.2031 All applications to the Design Review Board shall include all information required by the Rules and Regulations of the Design Review Board, as applicable, in addition to any other information that the Board may require, and any information that is required under this Bylaw as part of an application for a building permit, Site Plan Review, Special Permit or Variance. The Design Review Board may waive any and all of the requirements for design review submittal and approval.

3.2032 Upon receipt of an application for design review, the Planning Department shall immediately transmit a copy of the application to the Building Commissioner or the appropriate Town staff for the applicable permitting authorities. The Design Review Board shall review the application and transmit its recommendations in writing to the applicant and Building Commissioner or other appropriate Town staff within thirty-five (35) days of the receipt of the application. If the application for design review is associated with an application for a Variance or a Special Permit, the Building Commissioner shall immediately transmit the Design Review Board's recommendations to the Zoning Board of Appeals.

Failure by the Design Review Board to make and transmit its recommendation within the thirty-five (35) day period allocated shall be considered a recommendation for approval of the application submitted, unless the applicant has granted an extension in public meeting or in writing.

3.2033 No design review shall be required in those instances where the Design Review Board determines that specific actions subject to Section 3.202 do not constitute substantial alterations to the form or appearance of a building or site, and where no new or additional requirements of the Zoning Bylaw must be met for the proposed action.

3.204 Design Review Principles and Standards

The design review principles and standards described in this section are intended to guide the applicant in the development of site and building design and the Design Review Board in its review of proposed actions. These principles and standards shall not be regarded as inflexible requirements and they are not intended to discourage creativity, invention or innovation. The Design Review Board is specifically precluded from mandating any official aesthetic style for Amherst or for imposing the style of any particular historical period. The design review principles and standards shall apply to all actions reviewable under Section 3.202.

3.2040 General Principles

- 1) Every reasonable effort shall be made to preserve the distinguishing original qualities of a building, structure or site and its environment. The removal or alteration of any historic material or architectural features should be avoided when possible.
- 2) All buildings, structures and sites shall be recognized as products of their own time. Alterations that have no historical basis and that seek to create an earlier appearance shall be discouraged.
- 3) Stylistic features distinctive to the architecture of a specific building, structure or landscape, or examples of skilled craft which characterize a building, structure or site shall be conserved or preserved where feasible and appropriate, and may be considered for use as the basis for design of additions. Their removal or alteration should be avoided whenever possible.
- 4) Contemporary design for new structures or sites, alterations or additions to existing properties shall not be discouraged when such new development, alterations or additions do not destroy significant historical, architectural or cultural material, and when such design is compatible with the design character of the surrounding environment.
- 5) The design of alterations and additions shall, where reasonable and appropriate, strive to improve the quality, appearance and usability of existing buildings, structure and sites.

3.2041 Design Review Standards

The Design Review Board shall consider, at a minimum, the following standards in the course of the design review of a proposed action.

- 1) Height - The height of any proposed alteration should be compatible with the style and character of the building, structure or site being altered and that of the surroundings.
- 2) Proportions - The proportions and relationships of height to width between windows, doors, signs and other architectural elements should be compatible with the architectural style and character of the building or structure and that of the surroundings.
- 3) Relation of Structures and Spaces - The relation of a structure to the open space between it and adjoining structures should be compatible with such relations in the surroundings.

- 4) Shape - The shape of roofs, windows, doors and other design elements should be compatible with the architectural style and character of a building or site, and that of its surroundings.
- 5) Landscape - Any proposed landscape development or alteration should be compatible with the character and appearance of the surrounding area. Landscape and streetscape elements, including topography, plantings and paving patterns, should provide continuity and definition to the street, pedestrian areas and surrounding landscape.
- 6) Scale - The scale of a structure or landscape alteration should be compatible with its architectural or landscape design style and character and that of the surroundings. The scale of ground-level design elements such as building entryways, windows, porches, plazas, parks, pedestrian furniture, plantings and other street and site elements should be determined by and directed toward the use, comprehension and enjoyment of pedestrians.
- 7) Directional Expression - Building facades and other architectural and landscape design elements shall be compatible with those of others in the surrounding area with regard to the dominant vertical or horizontal expression or direction related to use and historical or cultural character, as appropriate.
- 8) Architectural and Site Details - Architectural and site details including signs, lighting, pedestrian furniture, planting and paving, along with materials, colors, textures and grade shall be treated so as to be compatible with the original architectural and landscape design style of the structure or site and to preserve and enhance the character of the surrounding area. In the downtown business districts, these details should blend with their surroundings to create a diverse, functional and unified streetscape.
- 9) Signs - The design of signs should reflect the scale and character of the structure or site and its surroundings. Signs should simply and clearly identify individual establishments, buildings, locations and uses, while remaining subordinate to the architecture and larger streetscape.

The choice of materials, color, size, method of illumination and character of symbolic representation on signs should be compatible with the architectural or landscape design style of the structure or site, and those of other signs in the surroundings.

3.21 Educational District (ED)

- 3.211 In an Educational District any use of land and buildings is permitted which may legally be carried on by, or under the auspices of the College or University which owns or manages the property in said District provided that the appropriate officials shall file with the Planning Board, for its information, plans of any new construction, significant site alterations, or significant change in use prior to initiation of said construction or change.
- 3.212 It is intended that the Zoning Map shall include in Educational Districts only land which is in fact owned or managed by Amherst College, Hampshire College, or the University of Massachusetts (but not all such land will necessarily be so zoned).
- 3.213 All setbacks, side and rear yards and heights within 50 feet of the boundary of an Educational District shall conform to the dimensional regulations applicable to the adjacent zoning district.
- 3.214 Within an Educational District, adequate off street parking shall be provided so that neither curb parking on public streets nor parking on property outside the Educational District shall be needed in connection with uses within the Educational District.
- 3.215 For wireless communications uses, the provisions of Section 3.340.2 shall apply and prevail.

3.22 Flood Prone - Conservancy (FPC) District

- 3.220 This section does not authorize any person to trespass, infringe upon or injure the property of another, and it does not excuse any person of the necessity of complying with other sections of this Bylaw or other applicable laws, regulations and bylaws.
- 3.221 The invalidity of any portion of the FPC District shall not invalidate any other portion or provision thereof.
- 3.222 The purposes of this District are:
 - 3.2220 To provide that lands in the Town of Amherst subject to seasonal or periodic flooding as described hereinafter shall not be used for residences or other purposes in such a manner as to endanger the health or safety of the occupants thereof.
 - 3.2221 To protect persons and property within the Town of Amherst from the hazards of flood inundation by assuring the continuation of natural flow patterns and the maintenance of adequate and safe floodwater storage capacity.
 - 3.2222 To protect the community against pollution and costs which may be incurred when unsuitable uses occur along water courses, wetlands, ponds and reservoirs, or in areas subject to flooding.
- 3.223 The FPC District shall consist of those geographical areas hereinafter delineated which by virtue of their relationship to components of the natural hydrology of the Town of Amherst, have substantial importance to the protection of life and property against the hazards of floods, erosion, and pollution, and in general are essential to the public health, safety, and welfare. Those geographical areas include flood prone areas, natural water storage areas adjacent to ponds, rivers, streams and wetlands as well as reservoirs.

The FPC District is considered to be:

- 3.2230 All areas designated as the FPC District on the Official Zoning Map on file in the Town Clerk's Office. The FPC District is determined by the following information: Department of Interior Map of Flood Prone Areas 1969; Soils Survey, 1965; Wetlands Map, 1973; Town of Amherst base map, 1972, as revised; historical flood information; hydrologic surveys; U.S.G.S. topographic maps; and other topographic surveys.
- 3.2231 All land within a minimum of 75 feet horizontally of the crest of the bank of the Mill River.
- 3.2232 All land within a minimum of 50 feet horizontally of the crest of the bank of Cushman Brook, Amethyst Brook, Adams Brook, Hearthstone Brook, Swamp Brook, and Hawley Brook downstream from North East Street.
- 3.2233 All land within a minimum of 25 feet horizontally of the crest of the bank of flowing and intermittent streams not otherwise specified in Section 3.2230, 3.2231, 3.2232, but designated on the Town Base Map, 1972 as revised.
- 3.224 The reference documents for the FPC District shall be the Official Zoning Map and the Town of Amherst base map, dated 1972, as revised, for determining the name and location of streams and other water bodies. The Town Base Map shall be on file in the Town Clerk's office.
- 3.225 Where an elevation above mean sea level (MSL) is a boundary for the FPC District, the planimetric representation of that elevation shall be determined by the most recent topographic survey of the area. The topographic survey must be done by a registered land surveyor, or other professional approved by the Planning Board.
- 3.226 If any portion of a lot falls within the FPC District, that portion may be used to meet the lot area and yard requirements for the district in which the remainder of the lot is situated.

- 3.227 Where a water body may be subject to more than one of the preceding designations, the more stringent shall apply. All water bodies or wetlands encircled by an area designated above are hereby included within the FPC District. The Building Commissioner shall determine the "crest of the banks" of streams when necessary.
- 3.228 In instances where the Planning Board is authorized to issue a Site Plan approval in the FPC District, the following factors shall be considered in assuring the protection from flood hazards:
- Drainage
 - Elevation of buildings
 - Adequacy of sewage and refuse disposal
 - Control of erosion and sedimentation
 - Location of equipment
 - Storage of buoyant material
 - Extent of paving
 - Effect of fill, roadways or other encroachments on flood runoff and flow
 - Storage of chemicals and other hazardous substances
- 3.229 In instances where the Special Permit Granting Authority issues a Special Permit in the FPC District said Authority must find that such factors as those listed in Section 3.228 above will not appreciably affect the water table or water quality, reduce flood storage capacity, or interfere with the natural flow and drainage pattern of the area.
- 3.230 No dumping, filling, channeling, or alteration of the natural course of a water body or stream shall be permitted within the FPC District except where it is demonstrated that such use is consistent with agricultural or conservation purposes and public health and safety. Such use shall not appreciably affect the water table, reduce flood storage capacity, or interfere with the natural flow and drainage pattern of the area.
- 3.231 Structures associated with the allowable uses indicated in Section 3.3, and accessory structures, shall not be located within the Flood Prone-Conservancy District without a Special Permit from the Zoning Board of Appeals.

3.23 Parking Facility District (PFD) (*Adopted December 20, 2021; Effective January 3, 2022*)

3.230 Purpose

To allow the development of a public and/or private parking facility in the Town center in proximity to uses—institutional, entertainment, commercial, retail, and residential—that generate demand for parking.

3.231 Applicability

This Parking Facility District (PFD) shall apply only to parcel 14A-33 along North Prospect Street. The provisions of this section shall only apply to uses authorized in the PFD identified below as Allowed Uses. The requirements of the underlying zone (General Residence) shall apply to all other uses. Unless specifically replaced or modified herein, the provisions of Article 6, Article 7, and Article 8 will apply to the proposed parking facility.

3.232 Allowed Uses

Parking facilities identified in Section 3.384 of the Zoning Bylaw, including sections 3.3840 (commercial parking lot or parking garage) and 3.3841 (public parking lot or garage) shall be permitted in the PFD by Site Plan Review in accordance with Article 11.

3.233 Dimensional Standards

The following dimensional standards shall apply and replace Section 6.17 and Table 3 in their entirety:

- 1) Basic Minimum lot area: 0
- 2) Basic Minimum Frontage: 0

- 3) Frontage zone: 15 feet between the property line along the right of way and closest point of any structure or parking space.
- 4) Side and rear setbacks: 5 feet from property line abutting a residential use in a residential district. Otherwise no setback is required.
- 5) Maximum Building Coverage: 90%
- 6) Maximum Lot Coverage: 95%
- 7) Height: maximum of 40 feet, measured as the vertical distance from the average finished grade on the street side of the structure to the highest point of the parking structure including the parapet wall or any wall, screening or vertical element extending from the uppermost parking level. The maximum height shall not apply to stair and elevator towers or mechanical equipment including solar panels.

3.234 Standards and Conditions

The Permit Granting Authority (PGA) shall apply the requirements of Sections 3.204 Design Review Principals and Standards, Section 7.1 Design Standards and Landscape Standards, 11.24 Site Plan Review Criteria and Design Guidelines, and the following additional standards:

- 3.2340 The maximum number of parking spaces within the proposed parking facility shall be approved by the PGA after analysis of current and future traffic conditions in the vicinity of the site. A thorough evaluation provided by the applicant's professional designer, subject to peer review at the request of the PGA and at the cost to the applicant, providing an analysis of the traffic and parking impacts of the proposed parking facility shall be submitted to the PGA.
- 3.2341 The parking structure shall be designed to be compatible with the adjacent neighborhood and downtown.
- 3.2342 The parking structure shall be designed and/or façade treatments shall be applied to minimize the visibility of cars parked inside the facility from North Prospect Street.
- 3.2343 Architectural details and materials shall be used to break down the scale of the parking structure façade.
- 3.2344 The grade and design of any driveway providing access or egress to a parking facility shall provide a clear view to the driver of any car exiting the facility of traffic on the street and of pedestrians on the sidewalk and shall: a) be a minimum of 12 feet wide for one-way use only; b) a minimum of 18 feet wide for two-way use; c) a maximum of 24 feet wide at the street lot line; d) designed to minimize curb cuts and access over sidewalks and; e) allow at least one vehicle to queue in the drive on the property without blocking the sidewalk.
- 3.2345 Sustainable design objectives shall be incorporated into the design of any parking facility.
- 3.2346 The Frontage Zone shall be heavily landscaped with plants having a height of at least one story above grade at the time of planting in addition to other low-level plantings and ground cover.
- 3.2347 Continuous sidewalks or walkways shall be provided to key areas served by the parking facility, including adjacent properties and sidewalks on North Prospect Street.
- 3.2348 Lighting shall be installed and shielded to prevent light disbursement onto adjacent properties.
- 3.2349 Additional free standing or projecting signs that do not exceed 50 square feet for each sign and a combined total of 100 square feet in area may be installed in accordance with all other standards of Article 8. The standards of Article 8 shall apply to all other signs.

3.235 Parking Management, Operations and Maintenance Plan

A parking management plan shall be required to be submitted to the PGA at the time of application that includes, but is not limited to, a description of:

- 1) Number of parking spaces available to different users such as the public, long term users, businesses and permit holders
- 2) Parking rates and fees
- 3) Hours of operation
- 4) Safety measures such as lighting, security cameras, signage, call box
- 5) Enforcement operations including ticketing and towing
- 6) Trash storage and removal
- 7) Snow management
- 8) Treatment and maintenance of interior surfaces
- 9) Storm water management

3.24 Watershed Protection (WP) District

3.240 General

The Watershed Protection District is an overlay district and shall be superimposed on other districts established by this Bylaw. Restrictions and prohibitions of land use in the underlying district shall remain in full force and shall not be modified by the conditions of the WP District unless superseded by the restrictions and prohibitions of the WP District.

3.241 Establishment of District

The Watershed Protection District shall consist of those geographic areas shown by the Official Zoning Map. This District is configured to include those lands, which by virtue of their natural slope and soils, relate directly to the public water supply system, insofar as being areas where water flows overland into the recharge areas as defined by the ARP District in Section 3.25 and into the Atkins Reservoir.

3.242 Purpose

The purpose of this district is to protect the public health by preventing contamination of the surface water flowing overland into Atkins Reservoir or into the aquifer of the Lawrence Swamp Basin.

3.243 Restrictions and Prohibitions

The following are restricted or prohibited, as the case may be, in the WP District, except as part of normal agricultural operations.

3.2430 The release upon or within any land or water in the WP District of any hazardous materials is prohibited, except otherwise provided in Section 3.24.

3.2431 Industrial or commercial uses which involve, as their primary business activity, hazardous material in amounts exceeding the minimum threshold amount requiring compliance with the Mass. Dept. of Environmental Quality Engineering Hazardous Waste Regulations, 310 CMR 30, as amended, are prohibited.

3.2432 Commercial uses which involve, as their primary business activity, hazardous materials, including but not limited to, truck or bus terminals, car washes, gasoline sales, motor vehicle service and repair shops, fuel oil storage and sales, and wood preserving, stripping and refinishing operations are prohibited.

3.2433 The use of septic system chemical cleaners which contain hazardous materials, including but not limited to methylene chloride and 1-1-1 trichlorethane is prohibited.

3.2434 Underground storage and/or transmission of oil or other petroleum products not in a containment structure approved by the Permit Granting Board, except for liquified

petroleum gases and gasoline which shall require a Special Permit in accordance with Section 3.244, is prohibited.

- 3.2435 Industrial or commercial storage of sodium chloride and other de-icing materials, pesticides, herbicides, fertilizers, and other hazardous lawn and garden chemicals is prohibited.

Sodium chloride, if used for ice control, shall be used at the minimum level consistent with public highway safety standards. The base ratio shall be 1 part salt to 10 parts sand, with higher levels of salt used only where necessary to maintain public safety.

Calcium chloride, chemically treated abrasives and other alternative de-icing materials shall be used to the maximum extent feasible for winter road maintenance. Municipal storage of all such snow and ice chemicals shall occur on a paved surface, with berms, within a covered structure designed to prevent the generation and escape of contamination run-off or leachate.

The outdoor storage of de-icing materials or pesticides, herbicides, fertilizers, and other hazardous lawn and garden chemicals for home use is prohibited.

- 3.2436 Industrial or commercial uses which involve the storage, use or presence of any oil, petrochemical product, pesticide, herbicide, fertilizer, or other hazardous leachable materials on any site within the WP District shall require a Special Permit from the Zoning Board of Appeals. A Special Permit shall be issued only upon a specific finding that the hazardous material(s) will be transported, stored, used and disposed of in a manner that will not constitute a threat to the Lawrence Swamp Aquifer or the Atkins Reservoir.
- 3.2437 Pesticides, herbicides, fertilizers and other leachable lawn and garden chemicals shall be used in accordance with Lawn Care Regulations of the Massachusetts Pesticide Board, 333 CMR 10.03 (30, 31), as amended.
- 3.2438 Runoff water shall not be diverted from land in this district into another watershed basin.
- 3.2439 Any uses of land or related activities specifically restricted or prohibited under 310 CMR 22, including 310 CMR 22. 20A-20G and 22.21, as amended, and all such Amherst Board of Health regulations as may apply.

3.244 Special Permits/Site Plan Review

- 3.2440 For all uses which require either a Special Permit or Site Plan Review in accordance with Section 3.3, and that are located in the WP District, the following information shall be required as part of the application submission:
1. A site plan which shall show, at a minimum:
 - a. Drainage plans, showing location of drainage facilities and direction in which surface water is to be drained
 - b. Erosion and sedimentation control measures
 - c. Measures to prevent contamination of surface drainage from any potential on-site pollutants
 2. a. In addition, for any commercial or industrial use involving hazardous materials, a written operating plan shall be filed which shall include physical and management provisions for:
 - i. Protecting hazardous materials from vandalism
 - ii. Prevention of corrosion of containers or piping and subsequent leakage of

hazardous materials

- iii. Indoor storage of all hazardous materials
 - iv. Storage area features such as impervious floor surfaces with no interior drains
 - v. Measures to prevent hazardous material spills during transport, transfer or use
 - vi. Notification, containment and clean-up in the event of hazardous materials spills
 - vii. Evidence of insurance, bonding or other financial security adequate to cover the cost containment and clean-up of any hazardous material spills
 - viii. The availability and feasibility of proposed disposal methods
 - ix. Safe storage, transfer, and disposal of accumulated hazardous waste materials
- b. The operating plan shall identify all chemicals, pesticides, fuels and other hazardous materials and estimates of the amounts of such materials to be used each month for the first two years of operation. Following approval of a permit, records shall thereafter be retained showing the actual amounts used each month.
 - c. Uses permitted by either a Special Permit or Site Plan Review shall submit two (2) copies of an annual report containing actual data for each month and describing any changes in the operation or physical conditions on the premises. The annual report shall also describe any changes in operations or conditions expected or proposed for the upcoming year. One copy of the annual report shall be forwarded to the Board of Health. Annual reports shall be due on the anniversary of the granting of the approval, or within fourteen (14) working days of that date.
3. The applicant shall file six (6) copies of the proposed operating plan with the Zoning Board of Appeals (Special Permit)/Planning Board (Site Plan Review). Copies shall be transmitted, within 7 days, to the ZBA/Planning Board, Conservation Commission, Board of Health, and Building Commissioner, for their review and recommendations.
- 3.2441 The Zoning Board of Appeals and Planning Board may require reasonable additional information it finds necessary for adequate assessment of the proposed use.
- 3.2442 The following findings shall be made for any approvals granted:
1. The permit granting Board shall find that the proposal either is in harmony or is not in harmony with the purposes and intent of this section and must specify reasons therefore.
 2. The permit granting Board shall find that the proposed use provides for adequate sewage disposal and water service systems.
 3. The permit granting Board shall find that the proposed use will not have an adverse environmental impact on any watershed, watercourse or waterbody in the WP District during construction.
 4. The permit granting Board shall find that the proposed use will not adversely affect the quality and quantity of water in the Lawrence Swamp Basin or the Atkins Reservoir.

3.245 Exemptions

In any instance where a property owner disputes the inclusion of their property in the WP District, the owner may engage a professional hydrogeologist, or engineer or geologist with experience in hydrogeology to determine if that property should be included in the WP District, based on the definition of and purposes of the district and on the characteristics of the property. Based on this determination, the property owner may apply to the Zoning Board of Appeals for a Special Permit for any use that would otherwise be permitted in the underlying zoning district but which is prohibited or constrained by the restrictions of the WP District. The Board shall find, based on Sections 3.241 and 3.242, that the property either is or is not exempt from the provisions of Section 3.24 and may, therefore, issue a Special Permit.

3.246 Residential Development

For all parcels of land which are located in that area of the WP Overlay District which is associated with the Lawrence Swamp Aquifer, the following requirements shall be met:

3.2460 Residential subdivisions requiring approval under M.G.L. Ch. 41, the Subdivision Control Law, shall be laid out as cluster developments in accordance with Section 4.3 of the Zoning Bylaw.

3.25 Aquifer Recharge Protection (ARP) District

3.250 General

The Aquifer Recharge Protection (ARP) District is an overlay district and shall be superimposed on other districts established by this Bylaw. Restrictions and prohibitions of land use in the underlying district shall remain in full force, and shall not be modified by the conditions of the ARP District unless superseded by the restrictions and prohibitions of the ARP District.

3.251 Establishment of District

The Aquifer Recharge Protection (ARP) District shall consist of those geographic areas shown on the Official Zoning Map. This District is configured to include all those lands which by virtue of their natural slope, soils, subsurficial geology and water tables relate directly to the recharge of groundwater into the large aquifer located in the Lawrence Swamp basin consisting of the Zones I, II and III aquifer recharge areas for the Town of Amherst's public wells.

3.252 Purpose

The purpose of this district is to protect the public health by preventing contamination of the ground and surface water flowing into the aquifer of the Lawrence Swamp Basin, which is the major water supply for the Town.

3.253 Prohibitions

The following uses are prohibited in the ARP District, except as part of normal agricultural operations.

3.2530 Business and industrial uses, including but not limited to metal plating, chemical manufacturing, wood preserving, furniture stripping, dry cleaning and auto body repair, which generate, treat, process, store or dispose of hazardous waste, except for the following:

1. Very small quantity generators of hazardous waste, as defined by 310 CMR 30.00, as amended, may be allowed by the Special Permit Granting Authority in accordance with Section 3.250 of this bylaw;
2. Household hazardous waste collection centers or events operated pursuant to 310 CMR 30.390, as amended;
3. Waste oil retention facilities required by M.G.L. Ch. 21, Sec. 52A, as amended, and;

4. Treatment works approved by the Massachusetts Department of Environmental Protection and designed in accordance with 314 CMR 5.00, as amended, for the treatment of contaminated ground or surface waters.
- 3.2531 Industrial or commercial uses which dispose of process waste waters on site.
 - 3.2532 Truck or bus terminals, car washes, gasoline sales, motor vehicle service and repair shops, commercial fuel oil storage and sales, solid waste landfills, dumps, auto recycling, auto graveyards, junk and salvage yards, landfilling or storage of sludge and septage, with the exception of the disposal of brush or stumps.
 - 3.2533 Underground storage of liquid petroleum products, except for the following:
 1. Storage for normal household use, outdoor maintenance, and heating of a structure;
 2. Waste oil facilities required by statute, rule or regulation;
 3. Emergency generators required by statute, rule or regulation;
 4. Treatment works approved under 315 CMR 5.00 for treatment of ground or surface waters;
 5. Underground storage tanks for gasoline which existed at the time of adoption of this bylaw may be replaced, provided that any such replacement tank is of no greater volume, and shall be provided with a secondary containment system in compliance with the Massachusetts Fire Safety Code (527 CMR); provided that such storage, listed in items 1. through 5. above, is in free-standing containers within buildings or above ground and in either case is provided with secondary containment facilities, impermeable and capable of holding a spill equal to 1.5 times the total volume of the primary container. The replacement of any underground storage tanks for heating oil which existed at the time of adoption of this bylaw shall meet the requirements of the Board of Health.
 - 3.2534 The outdoor storage of salt, de-icing materials, pesticides, herbicides, fertilizers and other hazardous lawn and garden chemicals for home use is also prohibited.
 - 3.2535 Dumping or disposal on the ground, in water bodies, or in residential septic systems of any toxic chemical including but not limited to septic system chemical cleaners which contain toxic chemicals such as methylene chloride and 1-1-1 trichlorethane, or other household hazardous waste.
 - 3.2536 Stockpiling and disposal of snow or ice removed from highways or streets located outside the ARP District that contains sodium chloride, calcium chloride, chemically treated abrasives or other chemicals used for snow and ice removal.
 - 3.2537 Wastewater treatment plants or works subject to a groundwater discharge permit under 310 CMR 5.00, except for the following:
 1. The replacement or repair of an existing system that will not result in any increase in the design capacity of said system;
 2. The replacement of an existing subsurface sewage disposal system with wastewater treatment works that will not result in any increase over the design capacity of the existing system, and;
 3. Treatment works designed for the treatment of contaminated ground or surface waters subject to 314 CMR 5.00, as amended.
 - 3.2538 Industrial or commercial storage of sodium chloride and other de-icing materials, pesticides, herbicides, fertilizers, and other hazardous lawn and garden chemicals is prohibited.

3.2539 Excavation of earth, sand, gravel and other soils or geologic materials shall not extend closer than ten (10) feet above the long-term (20 year) average annual high water table on the site, except to provide for structural foundations, utility conduits and public works. This prohibition also shall not apply to the installation or maintenance of on-site septic systems.

3.254 Restricted Uses

The following uses are restricted in the ARP District:

3.2540 Sodium chloride, if used for ice control, shall be used at the minimum level consistent with public highway safety standards. The base ratio shall be 1 part salt to 10 parts sand, with higher levels of salt used only where necessary to maintain public safety. Calcium chloride, chemically treated abrasives and other alternative de-icing materials shall be used to the maximum extent feasible for winter road maintenance. Municipal storage of all such snow and ice control chemicals shall occur on a paved surface, with berms, within a covered structure designed to prevent the generation and escape of contamination run-off or leachate.

3.2541 Fertilizers, pesticides, herbicides and other leachable lawn and garden chemicals shall be used in accordance with the Lawn Care Regulations of the Massachusetts Pesticide Board, 333 CMR 10.03 (30,31), as amended, with manufacturer's label instructions, and all other necessary precautions to minimize adverse impacts on surface and groundwater.

3.2542 Industrial or commercial uses which involve the storage, use or presence of any oil, petrochemical product, pesticide, herbicide, fertilizer, or other hazardous leachable materials on any site within the ARP District, shall require a Special Permit from the Zoning Board of Appeals. A Special Permit shall be issued only upon a specific finding that the hazardous material(s) will be transported, stored, used and disposed of in a manner that will not constitute a threat to the Lawrence Swamp Aquifer. Any facility for the storage of such materials shall have secondary containment and shall be covered.

3.255 Drainage

3.2550 To the extent possible, runoff from impervious surfaces shall be recharged on the site by being diverted to areas covered with vegetation for surface infiltration. No more than 15% of the net runoff from a lot, calculated after development, may be diverted out of the ARP District. All detention or retention basins, ponds and similar drainage structures shall be permanently maintained in full working order by the property owner, unless otherwise specified by the permit granting authority.

3.2551 The rendering impervious of more than 15% of the lot area or 2,500 square feet, whichever is greater, is permitted under a Special Permit, provided that a system for artificial recharge of precipitation to groundwater is developed which the Special Permit Granting Authority finds adequately protects against the degradation of groundwater quality. For non-residential uses, recharge shall be stormwater infiltration basins or similar systems covered with natural vegetation. Dry wells shall be used only when other methods are infeasible. For all non-residential uses, all such basins and wells shall be preceded by oil, grease and sediments traps to facilitate removal of contamination. Any and all recharge areas, basins, wells and traps shall be permanently maintained in full working order by the property owner.

3.256 Split Zoning

For any lot that is divided by the ARP District boundary, whose frontage is not located in the ARP District and for which a proposed use (allowed by the underlying zoning district) is restricted by either the location of the District boundary or the dimensional requirements of the ARP District, an owner may apply to the Zoning Board of Appeals, for a Special Permit for a waiver of the restrictions or dimensional requirements of the ARP District provided the Board makes the findings required in Section 3.2585.

3.257 Dimensional Regulations

3.2570 Lot Coverage

Maximum lot coverage for residentially zoned land--15%

Maximum lot coverage for PRP zoned land--50%

3.2571 Building Coverage

Maximum building coverage for residentially zoned land--10%

Maximum building coverage for PRP zoned land--25%

3.258 Special Permits/Site Plan Review in the ARP District

3.2580 For all uses which require either a Special Permit or Site Plan Review in accordance with Section 3.3, the following shall be required as part of the application submission:

3.2581 A site plan which shall show, at a minimum:

- a. Drainage recharge features and provisions to prevent loss of recharge.
- b. Erosion and sedimentation control measures.
- c. Provisions to prevent soil compaction.
- d. Measures to prevent contamination from petroleum products or hazardous chemicals.
- e. Provisions to prevent seepage from sewage disposal systems.

3.2582 a. In addition, for any commercial or industrial use involving hazardous materials, a written operating plan shall be filed which shall include physical and management provisions for:

- i. Protecting hazardous materials from vandalism.
- ii. Prevention of corrosion of containers or piping and subsequent leakage of hazardous materials.
- iii. Indoor storage of all hazardous materials.
- iv. Storage area features such as impervious floor surfaces with no interior drains.
- v. Measures to prevent hazardous materials spills during transport, transfer or use.
- vi. Notification, containment and clean-up in the event of hazardous materials spills.
- vii. Evidence of insurance, bonding, or other financial security adequate to cover the cost of containment and clean-up of hazardous materials spills.
- viii. The availability and feasibility of proposed disposal methods.
- ix. Safe storage, transfer, and disposal of accumulated hazardous waste materials.

b. The operating plan shall identify completely all chemicals, pesticides, fuels and other hazardous materials and estimates of the amounts of such materials to be used each month for the first two years of operation. Following approval of a permit, records shall thereafter be retained showing the actual amounts used each month.

c. Uses permitted by either a Special Permit or Site Plan Review shall submit two (2)

copies of an annual report containing actual data for each month and describing any changes in the operation or physical conditions on the premises.

The annual report shall also describe any changes in operations or conditions expected or proposed for the upcoming year. One copy of the annual report shall be forwarded to the Board of Health. Annual reports shall be due on the anniversary of the granting of the approval, or within fourteen (14) working days of that date.

- 3.2583 The applicant shall file six (6) copies of the proposed operating plan with the Zoning Board of Appeals (Special Permit)/Planning Board (Site Plan Review). Copies will be transmitted, within 7 days, to the ZBA/Planning Board, Conservation Commission, Aquifer Protection Committee, Department of Public Works, Board of Health, and Building Commissioner, for their review and recommendations.
- 3.2584 The Zoning Board of Appeals and Planning Board may require such additional information as they find necessary for adequate assessment of the proposed use. The Zoning Board of Appeals and Planning Board may, consistent with their regulations adopted pursuant to M.G.L. Ch. 44, 53G, employ outside consultants, including, but not limited to hydrogeologists, in the review of the proposed use.
- 3.2585 The following findings shall be made for any approvals granted:
1. The permit granting Board shall find that the proposal either is in harmony or is not in harmony with the purposes and intent of this section and must specify reasons therefore.
 2. The permit granting Board shall find that the proposed use provides for adequate sewage disposal and water service systems.
 3. The permit granting Board shall find that the proposed use will not have an adverse environmental impact on any watershed, watercourse or waterbody in the ARP District during construction.
 4. The permit granting Board shall find that the proposed use will not adversely affect the quality and quantity of water in the Lawrence Swamp basin.

3.259 Exemptions & Residential Development

3.2590 Exemptions

In any instance where a property owner disputes the inclusion of their property in the ARP District, the owner may engage a professional hydrogeologist or groundwater engineer to determine if that property should be included in the ARP District based on the definition and purposes of the district and on the characteristics of the property.

Based on this determination, the property owner may apply to the Zoning Board of Appeals for a Special Permit for any use that would otherwise be permitted in the underlying zoning district but which is prohibited or constrained by the restrictions in the ARP District. Sections 3.2583 and 3.2584 of this bylaw shall apply to all applications for exemption under this section. The Board shall find, based on Sections 3.251 and 3.252, that the property either is or is not exempt from the provisions of Section 3.25 and may therefore issue a Special Permit.

3.2591 Residential Development

For all parcels of land which are located in both the ARP District and the Low Density Residence District (R-LD), the following requirements shall be met:

Residential subdivisions requiring approval under M.G.L. Ch. 41, The Subdivision Control Law, shall be laid out as cluster developments in accordance with Section 4.3 of the Zoning Bylaw.

3.26 Municipal Parking District

See Section 7.4 of this Bylaw for Purpose and Requirements.

3.27 Planned Unit Residential Development (PURD) District.

3.270 This district is an overlay district and shall be superimposed on the other districts as indicated in Table 2 Development Methods in this Bylaw. See Section 4.4, Planned Unit Residential Development.

3.28 Farmland Conservation (FC) District

3.280 General

The Farmland Conservation District is an overlay district and shall be superimposed on other districts established by this Bylaw. Restrictions and prohibitions of land use in the underlying districts shall remain in full force and shall not be modified by the conditions of the FC District unless superseded by the restrictions and conditions of the FC District.

3.281 Establishment of District

The Farmland Conservation District shall consist of those geographic areas shown as FC District on the Official Zoning Map. This District is configured to include those lands which, by virtue of their soils, acreage, location adjacent to and contiguous with other farmland forming discrete blocks, and lack of protection under existing zoning, comprise the critical farmland areas of the Town of Amherst.

3.282 Purpose

The purposes of the Farmland Conservation District are to:

3.2820 Promote and protect the practice and continued economic viability of farming through conservation of those lands on which farming is most viable while allowing development of other portions of farm properties for residential and other non-farming use;

3.2821 Maintain an adequate base of agricultural land and activity in Amherst to help ensure the continued economic viability of local farming and thereby contribute to the continued availability of agricultural support services;

3.2822 Preserve the continued economic value of land for farmers and farmland owners by retaining portions of farm properties as developable for residential and other non-farm purposes, thereby supporting the continued economic viability of individual farms and farming in Amherst;

3.2823 Preserve the culture and landscape of farming, which help define the character of Amherst.

3.283 Residential Development

3.2830 Residential subdivisions requiring approval under M.G.L., Ch. 41, Subdivision Control Law, shall be laid out as cluster developments in accordance with the provisions of this section and Section 4.3, Cluster Development, or as open space community developments in accordance with Section 4.5, Open Space Community Development (OSCD), of the Zoning Bylaw.

3.2831 Cluster developments in the FC District shall conform to the provisions of Sections 3.284 and 3.285 of this bylaw.

3.2832 For flag lots with frontage located outside the FC District and a majority of lot area within the FC District, the lot area requirements for these lots are as follows:

Minimum lot area 20,000 sq.ft.
Maximum lot area 30,000 sq.ft.

All other dimensional requirements for these lots shall be the same as those specified in Section 4.324 for Cluster Development flag lots in the R-N District.

3.284 Standards for Planning Board Site Plan Review (SPR)

The Planning Board shall grant Site Plan Review (SPR) Approval for a cluster development in the FC District provided it finds that in addition to meeting the provisions of Section 11.2 and 11.3 of the Zoning Bylaw, the proposed use conforms to the provisions of Section 3.285, Farmland Conservation Development Standards and Section 4.38, Cluster Development Design Standards, of this Bylaw.

3.285 Farmland Conservation Development Standards

3.2850 To the maximum practical extent, all buildings and roads shall be located on that portion of the site with soils least suitable for the production of crops or livestock. This provision shall not apply to the location of on-site septic disposal facilities, which must be placed in soils meeting the Massachusetts Environmental Code.

1. To assist the permit granting board in making its determination, copies of the application and site plan shall be transmitted to the Farm Committee, which shall have thirty-five (35) days to report its findings. Upon notification by the permit granting board, the Farm Committee shall assemble an expert panel consisting of professional agronomists, soils scientists and other qualified professionals to evaluate and report on the suitability of soils, including but not limited to the historical uses thereof, and the overall agricultural viability of the farm property, consistent with the purposes of the bylaw. Failure to report in the allotted time shall constitute approval by the Farm Committee. The permit granting board may grant at least one extension of this time period in response to a written request from the Farm Committee for such an extension based on a need for additional time resulting from parcel size, project complexity, time of year, or other factors.
2. The permit granting board may, consistent with its regulations adopted pursuant to M.G.L., Ch. 44, 53G, engage the service of independent professional agronomists, soils scientists, or other qualified consultants at the cost of the applicant, to assist in evaluating a site or project.

3.2851 Individual or multi-unit community septic systems may be allowed in cluster developments in the FC District where public sanitary service is not reasonably available, subject to Board of Health approval, conditions and restrictions.

3.2852 Within the common land provided in the Cluster Development, a maximum of 5,000 square feet per dwelling unit shall be set aside as usable open space for active and passive recreation.

Upon request of the applicant, the Planning Board may waive this maximum, where such a change would be consistent with the purposes of this Bylaw. In making their decision, the Planning Board shall consider whether the maximum feasible amount of common land has been set aside as permanently preserved farmland, while maintaining adequate amounts of usable open space for active and passive recreation for the Cluster Development.

3.2853 Common land set aside as permanently preserved open farmland shall have appropriate contiguous acreage, configuration and access to enable continued viable farmland operations.

3.2854 All roadways, drainage systems and utilities shall be laid out in a manner so as to have the least possible impact on adjacent or on-site agricultural lands or uses.

3.2855 No building containing dwelling units shall intrude into a minimum 150 foot buffer strip

separating residential uses from adjacent or on-site farmland. Said buffer strip may include private property and Common Land. The permit granting board or authority may reduce this distance requirement where screening, substantial vegetation, land contour or other features of the site are deemed to provide sufficient buffering, and where such a change is consistent with the purposes of this Bylaw. An exception to this distance requirement shall be permitted for no more than one (1) dwelling unit associated with the management and operation of agricultural uses of the farmland. Said dwelling unit shall be included in the maximum number of lots provided for under Section 4.328.

- 3.2856 The permit granting board or authority may approve the use of portions of the 150 foot buffer strip between the residential and farmland portions of a cluster development as usable open space for the recreational use of cluster development residents, provided the board or authority determines such use will not impact adversely on adjacent farming activity and is consistent with Section 4.31 of the Zoning Bylaw.
- 3.2857 Every reasonable effort shall be made to maintain views of open agricultural lands from nearby public ways.
- 3.2858 Each dwelling unit and structure shall be integrated into the existing landscape through use of building placement, landform treatment and screening.
- 3.2859 Applicants are encouraged to site dwelling units and other structures:
 - 1. Within any woodland contained on the parcel;
 - 2. Into woodlands along the edges of fields;
 - 3. In locations where new construction can be visually screened or absorbed into natural vegetative or topographic features;
 - 4. In locations where the greatest number of units can take advantage of solar heating, summer breezes, vegetative wind screens, and other climatic site characteristics that can be utilized through siting and design.

3.29 Research & Development (RD) District

3.290 General

The Research & Development (R&D) District is an overlay district and shall be superimposed on other districts established by this Bylaw. Restrictions and prohibitions of land use in the underlying districts shall remain in full force and shall not be modified by the conditions of the R&D District unless superseded by the restrictions and conditions of the R&D District.

3.291 Establishment of District

The Research & Development (R&D) District shall consist of those geographic areas shown as R&D District on the Official Zoning Map. This District is configured to include those lands which, by virtue of their location with respect to institutions of higher learning, transportation corridors, utilities, village centers, services, and other factors, are appropriate for the siting of research, development, and testing businesses.

3.292 Purpose

The purposes of the Research & Development (R&D) District are to:

- 3.2920 Facilitate and promote the establishment, development, and expansion of information- and technology-intensive research and development businesses in Amherst.
- 3.2921 Provide opportunities for the establishment of research and development businesses, including but not limited to those derived from or associated with the research and testing activities of departments or agencies of the University of Massachusetts, Amherst College, and Hampshire College.

3.2922 Require that any research and development businesses established in Amherst are located, designed, and operated in conformance with all federal, state and local regulations regarding public health and safety.

3.2923 Expand employment opportunities for Amherst residents in the fields of research and development.

3.2924 Broaden and diversify the community's property tax base.

3.293 Permit Required

Within the R&D District, any uses under Sections 3.372.0 and 3.372.1 directly involved or associated with research, development and testing activities, including any associated accessory light manufacturing which would otherwise be regulated in the underlying zoning district under a Special Permit (SP) by the Zoning Board of Appeals shall instead be regulated under Site Plan Review (SPR) approval by the Planning Board. An exception shall be any accessory research or testing to be conducted outdoors, which shall require a Special Permit granted by the Special Permit Granting Authority authorized to act under the applicable section of the Bylaw.

3.294 Review Period

Notwithstanding the provisions of Sections 10.323 and 11.230, within the R&D District, the Fire Chief, Building Commissioner, Board of Health, Town Engineer, and Conservation Department shall have forty-five (45) days to report their findings on any application made under Sections 3.372.0 and 3.372.1 which involves the use, production or storage of materials identified as flammable, toxic, hazardous or explosive.

SECTION 3.3 USE CLASSIFICATION AND STANDARDS

For the purposes of this Bylaw, existing and future uses of land, buildings and other structures shall be allocated among the following categories. It is intended that every possible use be included in some category, and a use that does not readily fall into any category listed shall be included in the one to which it is most similar. Each use is assigned a number which is found in the left hand column of the following pages.

The Standards and Conditions column which is located to the right of the Use Classification column contains specific requirements which shall be met if the Use is to be permitted in any Zoning District by right, by Special Permit, or by Site Plan Review.

The column located to the right of the Standards and Conditions column indicates the Zoning Districts in which the specific Uses are permitted or prohibited. The following code is used in those columns:

- Y = Yes The Use is permitted by right in that Zoning District.
- N = No The Use is not permitted in that Zoning District.
- SPR = The Use is permitted with Site Plan Review (See Section 11.2)
- SP = The Use is permitted with a Special Permit, by the Zoning Board of Appeals (See Section 10.3)
- SPP = The Use is permitted with a Special Permit, by the Planning Board (See Section 10.3)
- () = The Use, if located within the Aquifer Recharge Protection District (ARP) shall be subject to the code designation within the parenthesis.

Bylaw Number	Land Use Classifications	Standards & Conditions	Zoning Districts														
			R-O	R-LD	R-N	R-VC	R-G	R-F	B-G	B-L	B-VC	B-N	COM	OP	LI	PRP	FPC
3.321	Two family detached dwelling (duplex)	<p>Except as may otherwise be authorized under this section, a two-family detached dwelling (duplex) shall have an external appearance and footprint compatible in terms of design with those of single family dwellings in the surrounding neighborhood. In all districts, the Special Permit Granting Authority or Permit Granting Board, as applicable, shall apply the provisions of Sections 3.2040 and 3.2041 to any construction, renovation, or expansion resulting in the creation of a new two-family detached dwelling or the addition of a single new dwelling unit to an existing single family residence such that a two-family detached dwelling (duplex) is created.</p> <p>Where the two dwelling units are arranged side by side, said units shall either: 1) share a significant portion of at least one common wall or floor abutting habitable space, or 2) the space, or 2) the Special Permit Granting Authority or Permit Granting Board, as applicable, may allow a duplex where the two units do not share a common wall abutting habitable space but are instead connected structurally and continuously by a shared foundation, walls and roof. The Special Permit Granting Authority or Permit Granting Board may make such an allowance only upon a determination that the design of the proposed duplex is compatible with the architecture and building and site layout of other residential buildings in the surrounding neighborhood.</p>															
3.3210	Owner occupied duplex		SP	SP	SP	SPR	SPR	N	N	N	N	SPR	N	N	N	N	N
3.3211	Non-owner occupied duplex	<p>For an owner occupied duplex, one (1) or both of the dwelling units serve as the principal residence of one or more owner(s) of the property.</p> <p>For a non-owner occupied duplex, one (1) or both dwelling units are rented and neither unit serves as the principal residence of one or more owner(s) of the property. No dwelling unit under this use category may be occupied by a total of more than four (4) unrelated persons.</p> <p>The Special Permit Granting Authority shall require the ongoing services of a qualified professional management company, the presence of an on-site manager, or similar provisions for proper management of the rental use as a condition of approval.</p> <ol style="list-style-type: none"> 1 Name(s) and contact information shall be provided for the owner, any responsible rental property management entity, and at least one on-site resident. 2 A management plan as defined in the Rules and Regulations adopted by the Special Permit Granting Authority, shall be included as an integral part of any application. Also included shall be a Response Plan describing the concrete steps to be taken by the property owner or management in response to complaints about the operation of the use or the conduct of the tenants. 3 In the R-G and R-VC Districts, a Special Permit granted under this section shall lapse upon any change in ownership of the subject property, and the Special Permit Granting Authority may impose a review of compliance with special Permit conditions at such intervals as it deems reasonable. <p>Each non-owner-occupied duplex in a cluster subdivision shall require a Special Permit in all zoning districts.</p>	SP	SP	SP	SP	SP	N	N	N	SP	N	N	N	N	N	N
3.3212	Affordable Duplex	<p>An affordable duplex shall be defined as a two family detached dwelling in which at least one (1) unit shall be affordable in perpetuity or to the greatest extent allowed by law, and eligible to be counted on the Commonwealth's 40B Subsidized Housing Inventory (SHI) under the provisions of 760 CMR 50.03 (2) (a) and (b) as amended. Affordable units as described above need not be owner-occupied.</p>	SPR	SPR	SPR	SPR	SPR	N	N	N	N	SPR	N	N	N	N	N
3.322	Town House	<p>Each building shall be separated from other such buildings by a minimum of twenty (20) feet, and have no more than ten (10) dwelling units.</p> <p>The building(s) shall be connected with the public sewer system prior to occupancy, and its lot, if in a Residence District, shall fall within one of the following areas: 1) areas close to heavily traveled streets, 2) areas close to business, commercial, and educational districts, or 3) areas already developed for multi-family use.</p> <p>A management plan, as defined in terms of form and content in the Rules and Regulations adopted by the Permit Granting Board or Special Permit Granting Authority, shall be included as an integral part of any application made under this section. All dimensional regulations in Article 6 shall be observed. In all districts, the Permit Granting Board or Special Permit Granting Authority shall apply the provisions of Sections 3.2040 and 3.2041 to any construction, renovation, or expansion resulting in the creation of new dwelling units under this section.</p>	N	N	N	SP	SP	N	N	SPR	SP	SP	N	N	N	N	N
3.323	Apartments	<p>(Amended October 18, 2021; Effective November 1, 2021)</p> <p>The site or lot upon which one or more apartment buildings are proposed shall be located: 1) close to a heavily traveled street or streets, 2) close to a business, commercial or educational district, or 3) in an area already developed for multi-family use.</p> <p>Each building shall have no fewer than 3, nor more than 24 dwelling units. Each building shall be connected to the public sewer system prior to occupancy. Dimensional regulations in Article 6 shall be observed. In addition, the following requirements shall apply:</p>	N	N	N	SPR	SP	N	N	SP	SP	SP	N	N	N	N	N

Bylaw Number	Land Use Classifications	Standards & Conditions	Zoning Districts										FPC									
			R-O	R-LD	R-N	R-VC	R-G	R-F	B-G	B-L	B-VC	B-N		COM	OP	LI	PRP					
3.324	Subdividable/Converted Dwellings	District	Add'l Side/Rear Yards per Floor	Floor Area Ratio	Minimum Landscape or Natural Open Space																	
		R-G	2 ft.																			
		B-L	2 ft.																			
		B-VC	2 ft.																			
		B-N	2 ft.	0.3	40%																	
		<p>NOTE: "Minimum Landscaped or Natural Open Space" shall include (a) those portions of the lot devoted to plantings, including lawns and grass areas (b) wooded land, and pedestrian-oriented paved or unpaved areas devoted to social or recreational use in common by the residents of the building or complex provided that such areas are kept essentially open to the out-of-doors and are at ground level. Specifically excluded from this definition are those areas devoted to parking, access, and service drives.</p> <p>No more than 50% of the total number of dwelling units shall be of any one size (i.e. # of bedrooms). For projects in which all dwelling units provided, other than those occupied by resident manager(s), are Affordable (see Article 12, Definitions), the Permit Granting Board or Special Permit Granting Authority authorized to act under the applicable section of the Bylaw for this use may waive or modify this requirement. A management plan, as defined in terms of form and content in the rules and Regulations adopted by the Permit Granting Board or Special Permit Granting Authority shall be included as an integral part of any application under this section. In all districts, the Permit Granting Board or Special Permit Granting Authority shall apply the provisions of Sections 3.2040 and 3.2041 to any construction, renovation, or expansion resulting in the creation of new dwelling units under this section.</p>																				
3.3240	Subdividable Dwelling (See Definition under Article 12)																					
		1	A subdividable dwelling shall contain provisions for a specified number of dwelling units not to exceed three in accordance with a Special Permit issued prior to its use as more than a single family dwelling. The total number of dwelling units at any given time may be fewer than, but shall never exceed the maximum number allowed under the Special Permit.																			
		2	A subdividable dwelling shall meet all zoning requirements applicable to a multi-family dwelling of the maximum number of units allowed under the Special Permit. All requirements of Table 3 (Dimensional Regulations) of Article 6 and parking requirements in Article 7 shall be met at the time of construction.																			
		3	At least one of the dwelling units shall be and shall remain owner-occupied, which requirement shall be made a condition of any Special Permit issued under this section.																			
		4	This use shall not be permitted in the Aquifer Recharge Protection (ARP) or Watershed Protection (WP) overlay districts.																			
		5	Prior to issuing a Special Permit for this use in the B-G, B-L, B-VC, and B-N districts, the Special Permit Granting Authority shall find that the proposed multiple dwelling use and the non-residential uses, both existing and permitted, in the district will be mutually compatible.																			
		6	A subdividable dwelling shall be connected to the public sewer. However, the Special Permit Granting Authority may authorize the construction of a two-family subdividable dwelling on a lot serviced by a septic system approved by the Board of Health for such a dwelling.																			
		7	A management plan as defined in the applicable regulations issued by the Special Permit Granting Authority shall be included as an integral part of any application under this section. The management plan shall be subject to review and reapproval at a public hearing held by said Authority prior to the issuance of a building permit to increase the number of dwelling units within a subdividable dwelling, which review shall be made a condition of any Special Permit issued under this section. The sole purpose of said review shall be the consideration of any changes in circumstances pertinent to said management plan that have occurred from the time of issuance of the Special Permit or any subsequent review pursuant to this requirement, and the extent to which the management plan should be modified as a result. Notice of hearing shall be provided in accordance with Mass. Gen. Laws, Chapter 40A. In addition to such notice, parties in interest as defined in Chapter 40A shall be provided with a summary of the approved management plan then in effect and any changes proposed thereto.																			
		8	A landscape plan appropriate for the project shall be included in the application.																			
		9	Subdividable dwellings in the R-O, R-LD, and R-N districts shall provide the following minimum areas of usable open space per dwelling unit on the same lot as said dwelling units, for the use of occupants: R-N 1,000 sq. ft. R-O, R-LD 2,000 sq. ft.																			

Bylaw Number	Land Use Classifications	Standards & Conditions	R-O	R-LD	R-N	R-VC	R-G	R-F	B-G	Zoning Districts			OP	LI	PRP	FPC
										B-L	B-VC	B-N				

10 Provided all other requirements are met, a subdividable dwelling shall be eligible for subsequent proceedings in accordance with Section 3.3241 (Converted Dwelling) of this bylaw.

11 For a subdividable dwelling proposed on a lot within a Definitive Subdivision Plan, or on a Subdivision Approval Not Required lot, the Special Permit Granting Authority shall be the Planning Board. For all other subdividable dwellings, the Special Permit Granting Authority shall be the Zoning Board of Appeals.

3.3241	Converted Dwelling (See Definition under Article 12)	10	SP	SP	SP	SP	SP	N	SPR	SP	SP	SP	N	N	N	N
			(N)	(N)												

1 An existing residence, a structure attached to an existing residence, or a detached structure, may be converted into a dwelling unit or units provided all other zoning requirements which would apply to converted dwellings are met.

2 A converted dwelling use may involve the conversion of one or more structures on a given property but shall not result in a total number of dwelling units on the lot exceeding what would otherwise be allowed under the provisions of Table 3, Dimensional Regulations, for the zoning district(s) in question. Further, the total number of dwelling units on a given property shall not exceed 4 in the R-G, R-VC, R-N, R-O, and R-LD districts and shall not exceed 6 in the B-G, B-L and B-VC districts. Conversion in the Aquifer Recharge Protection (ARP) or Watershed Protection (WP) overlay districts shall not be permitted.

3 In the B-L, B-VC and B-N districts, the Special Permit Granting Authority shall issue a Special Permit in accordance with the provisions of this section only after finding that the converted dwelling use would be mutually compatible with existing uses and structures, and with uses and structures permitted on adjacent parcels.

4 There shall be no significant change in the exterior of the building, except that the Special Permit Granting Authority or Permit Granting Board may authorize modification or alteration of a building if such modification or alteration does not substantially change the building's character or its effect on the neighborhood or on property in the vicinity.

5 Except as hereinafter provided, no converted dwelling use shall involve the demolition and removal of an existing structure proposed for conversion. Conversion may involve an entire residential structure, except that no more than twenty percent (20%) of the gross square footage of resulting habitable space in any converted dwelling use, whether in one or more buildings, may result from new building footprint as well as demolition and subsequent reconstruction of an existing structure, including structural elements or foundation. An exception shall be that up to forty percent (40%) of gross square footage of resulting habitable space may be permitted, including no more than 20% of new building footprint with the remainder being the result of demolition and reconstruction with salvaged and new building materials, when it is determined by the Special Permit Granting Authority or Permit granting Board that two (2) or more of the following criteria are met:

- a. The conversion addresses urgent and compelling issues of public safety or health.
- b. The conversion results in the creation of a minimum of one (1) dwelling unit that is fully handicapped accessible under the provisions of the AAB and ADA.
- c. The conversion results in the creation of a minimum of one (1) dwelling unit permanently affordable under the provisions of Sections 15.12 or 15.13, and is eligible to be counted on the Commonwealth's 40B Subsidized Housing Inventory (SHI) under the provisions of 760 CMR 50.03 (2) (a) and (b) as amended.
- d. The conversion is predominantly the result of sustainable construction practices, including but not limited to significant improvements in energy efficiency, retention or reuse of significant amounts of existing structural members and architectural elements, and solar orientation and design.
- e. If the conversion is proposed for one or more historic buildings which are: 1) on a property listed on, or 2) within area listed on, or 3) are eligible for listing on the National Register of Historic Places, or 4) have been determined by the Historical Commission to be historically significant under Section 13.4 of this Bylaw, then the proposed conversion of historic portions of the building(s) in question shall conform to the National Park Service standards and guidelines for rehabilitation of an historic building.

6 The proposed conversion shall be suitably located in the neighborhood in which it is proposed, as deemed appropriate by the Special Permit Granting Authority. The conversion, if in a residential district, shall either: a) be located in an area that is close to heavily traveled streets, close to business, commercial and educational districts, or already developed for multi-family use and shall require owner-occupancy or a Resident Manager (see definition) in one of the units; or b) be from one to two units, one unit of which shall be and shall remain owner-occupied, a requirement which shall be made a condition of any Special Permit issued in such an instance.

7 The dwelling units shall be connected to the public sewer. However, the Special Permit Granting Authority may authorize, with the approval of the Board of Health, the conversion of a structure to allow an increase from one dwelling unit to two dwelling units on a lot serviced by a septic system.

Bylaw Number	Land Use Classifications	Standards & Conditions	R-O		R-N	R-VC	R-G	R-F	B-G	Zoning Districts			LI	PRP	FPC			
			R-LD	R-L						B-L	B-VC	B-N				COM	OP	
3.325	Mixed-use building. (Amended December 20, 2021; Effective January 3, 2022)	8	The Special Permit Granting Authority may modify the dimensional requirements of Table 3, to, one time only for any parcel, allow a conversion under Section 3.3241 that would add one (1) additional unit, only if it finds the modification would be in accordance with the provisions of Section 9.22. In those zoning districts where two family detached (duplex) dwellings are not permitted, conversion of a non-conforming single family detached dwelling may result in two (2) or more dwelling units under the applicable permit.															
		9	No detached structure shall be converted under the provisions of Section 3.3241 unless it abides by the provisions of Condition 5, above and upon completion provides at least 350 square feet of habitable space. Conversion of a detached structure alone may qualify as a supplemental detached dwelling unit if it meets the requirements established under Section 5.011.															
		10	A management plan as defined in the <u>Rules and Regulations</u> adopted by the Special Permit Granting Authority, shall be included as an integral part of any application.															
		11	A landscape plan appropriate for the project shall be included in the application.															
		12	Converted dwellings in the R-O and the R-LD districts shall provide a minimum of 2,000 sq. ft. of usable open space per dwelling unit for the use of occupants. Converted dwellings in the R-N district shall provide a minimum of 1,000 sq. ft. of usable open space per dwelling unit.															
		No more than 70% of the Gross Floor Area of the first or ground floor shall be residential use, parking, or common areas shared by multiple uses, unless otherwise permitted below.																
		At least 30% of the Gross Floor Area of the first or ground floor shall be any permitted non-residential use, other than parking, including incidental spaces, except that the Permit Granting Authority may allow the required non-residential use(s) to be distributed on any floor, or in any building of a multiple building development on the same parcel, provided that the portion of the first or ground floor of any building facing the Street shall be occupied predominantly by such non-residential use(s).																
		For the purposes of this section, incidental spaces shall not include common areas shared by multiple uses, or other spaces not contiguous to the non-residential use unless the space is included in the description of the premises leased to the non-residential tenant.																
		Any dwelling unit(s) and enclosed parking on the first or ground floor shall be located at the rear of the building and designed to reduce visibility from the Street.																
		For sloping lots or lots with frontage on more than one Street, the permit granting authority shall determine which floor(s) of the building is subject to the split of uses and criteria as mentioned above.																
		Bedroom Count: No more than 50% of the total number of dwelling units shall have the same bedroom count, with the exception of a Mixed-use building containing less than ten units. The Permit Granting Authority may waive or modify this requirement for projects in which all dwelling units provided are Affordable (see Article 12, Affordable Housing).																
		3.326	Fraternity or Sorority building, social dormitory, or similar use related to Amherst College, Hampshire College, or the University of Massachusetts.	The building shall be connected to the public sewer system prior to occupancy. Its lot shall fall within one of the following areas: Areas close to heavily traveled streets; areas close to business, commercial, and educational districts; areas already developed for multifamily use.														
3.327	Overnight Lodging 3.327.0 Hotel or Motel	The building shall be connected with the public sewer system prior to occupancy. Its lot, if in a residence district, shall fall within one of the following areas: areas close to heavily traveled streets; areas close to business, commercial and educational districts; areas already developed for multifamily use. In the B-N District, only hotel or motel uses with lodging rooms on 2 or more floors shall be permitted.																
The Zoning Board of Appeals may allow a restaurant as a second Principal use, along with hotel/motel-related retail and consumer services as accessory uses, under a Special Permit for a hotel or motel.																		

Bylaw Number	Land Use Classifications	Standards & Conditions	R-O	R-LD	R-N	R-VC	R-G	R-F	B-G	B-L	Zoning Districts			LI	PRP	FPC
			R-VC	R-VC	R-VC	R-VC	R-VC	R-VC	R-VC	R-VC	B-L	B-VC	B-N			
	Commonwealth or any of its agencies, subdivisions, or bodies politic, or by a religious sect or denomination.	See Section 2.04 and 3.21														
3.330.1	Non-profit human service use.	Uses under this section may include administrative offices and human service facilities providing services directly to members of the community on or from the premises, including facilities used as staging areas for off-site service delivery and facilities reasonably necessary for the safe, secure, and appropriate operation of the use.	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP
	A use under this section may offer a wide range of services on or from the premises, including but not limited to, counseling and therapy, training for employment and other life skills, distribution of food and clothing, provision of meals, and/or restrooms/shower facilities. Other uses, such as retail sales, health services, personal care services, or similar uses, may be permitted, but shall be operated in a manner and during such limited hours as to render them clearly accessory and incidental to the principal non-profit human service use. Non-profit human service uses involving overnight shelter or other residential activity shall be regulated under Section 3.336.1.															
3.331	Kindergarten, day nursery or other agency for the day care of children.		SPR						SPR	SPR	SPR	SPR	SPR	SPR	SPR	SPR
3.332	For-profit trade, professional, or other educational institution.		N	N	SP	SP	N	N	SPR	SPR	SPR	SPR	SPR	N	SPR	N
3.333	Church or other place of worship, parish house, rectory, or convent.		SPR	SPR	SPR	SPR	SPR	SPR	SPR	SPR	SPR	SPR	SPR	SPR	SPR	SPR
3.334	Not for profit library or museum.		SPR	SPR	SPR	SPR	SPR	SPR	SPR	SPR	SPR	SPR	SPR	SPR	SPR	SPR
3.335	Public park, playground or other public recreation facility.		SPR	SPR	SPR	SPR	SPR	SPR	SPR	SPR	SPR	SPR	SPR	SPR	SPR	SPR
3.336	Medical or residential institutions.															
3.336.0	For-profit hospital, sanitarium, nursing, rest or convalescent home, living care community, or other medical or residential facility.		SP	SP	SP	SP	N	N	SP	SP	SP	SP	SP	N	N	N
3.336.1	Philanthropic or charitable medical or residential facility.		SPR	SPR	SPR	SPR	SPR	SPR	SPR	SPR	SPR	SPR	SPR	SPR	SPR	SPR
3.337	Cemetery		SP	SP	N	N	N	N	N	N	N	N	N	N	N	N
3.338	Private lodge or club	A club, civic, social, professional or fraternal organization that is non-profit and is operated for members or employees only, where the chief activity is one not customarily conducted as a gainful business. The organization shall be incorporated for service or charitable purposes under the regulations of the Commonwealth or other applicable authorities, and shall permit long-standing memberships. In the B-N District, if alcohol is served as part of any function conducted or permitted by the organization, the establishment shall be closed by 9:00 p.m.; otherwise, the establishment shall be closed by 11:30 p.m.	SP	SP	SP	SP	SP	SP	SPR	SPR	SPR	SPR	SP	N	N	N

Bylaw Number	Land Use Classifications	Standards & Conditions	Zoning Districts															
			R-O	R-LD	R-N	R-VC	R-G	R-F	B-G	B-L	B-VC	B-N	COM	OP	LI	PRP	FPC	
SECTION 3.34 GOVERNMENTAL & PUBLIC SERVICE																		
3.340	Utility Uses																	
3.340.0	Transformer station or other energy facility or use.	Excluding any office, storage, or repair use unless otherwise allowed by the regulations of the district.																
3.340.1	Telephone exchange, radio or TV station, broadcasting facility, recording studio or other communication use.	Excluding any office, storage, or repair use unless otherwise allowed by the regulations of the district.	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP
3.340.2	Wireless communications facility or other similar communications use.	Excluding any office, storage, or repair use unless otherwise allowed by the regulations of the district.	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP

- The following standards and conditions shall apply to commercial and public wireless communication uses and facilities:
1. **Setback & Height.** Towers, antenna support structures and other vertical elements of wireless communication facilities located in a residential district or upon a property abutting a residential use shall be set back from the nearest residential lot line a distance at least equal to their height. In all districts, the height of wireless communications towers shall not exceed 125 feet above the ground. In non-residential districts, the Permit Granting Authority may allow a lesser setback or greater height if such modification provides adequate safety, promotes co-location or improves design, and will not significantly impact the character and appearance of the neighborhood. In making a request for a lesser setback, the manufacturer or qualified licensed designer shall certify that the tower is designed to collapse upon itself in the event of failure. The Permit Granting Authority may also allow lesser setbacks necessary to allow for the use of an existing structure.
 2. Design provisions for such facilities shall include, but are not limited to:
 - a. No new tower shall be used which involves a lattice construction, requires three (3) or more legs and/or requires guy wire supports.
 - b. No tower or other facility structure shall contain any signs or other devices for the purpose of advertisement.
 - c. The visible portions of support facilities and structures such as vaults, equipment buildings or enclosures and utilities shall be constructed out of and/or finished with non-reflective materials.
 - d. All towers, antenna support structures and similar facilities shall be of neutral colors that are harmonious with, and blend with, the natural features, buildings and structures in the surroundings; provided, however, that such facilities located on the exterior of a building shall be of colors that match and/or blend with those of the building.
 - e. All building-mounted facilities shall be designed and located so as to appear to be an integral part of the existing architecture of the building.
 - f. All electronic and other related equipment and appurtenances necessary for the operation of any wireless communication facility shall, whenever possible, be located within a lawfully pre-existing structure or completely below grade. When a new structure is required to house such equipment, the siting, design and materials of said structure shall be harmonious with, and blend with, the natural features, buildings and structures in the surroundings.
 - g. All satellite dishes shall be of mesh construction, unless technical evidence is submitted demonstrating that this requirement is infeasible. Microwave dishes are exempted from this provision.
 - h. All wireless communication facilities shall be protected against unauthorized climbing or other access by the public.
 - i. Whenever feasible, design and siting of towers shall avoid the need for application of Federal Aviation Administration (FAA) lighting and painting requirements. Except as required by the FAA, towers shall not be artificially lighted.

Bylaw Number	Land Use Classifications	Standards & Conditions	Zoning Districts											
			R-O	R-LD	R-N	R-VC	R-G	R-F	B-G	B-L	B-VC	B-N	COM	OP

- j. Applicants shall submit eight (8) view lines shown in a one (1) mile radius from the site, beginning at true North and continuing clockwise at forty-five (45) degree intervals. Said view lines shall, to the extent feasible, be taken from existing vantage points commonly used by the public, such as public ways, buildings or facilities. The submittal shall include unaltered photographs taken from eye level (5 feet above grade) which show the existing condition of these view lines, as well as accurate scale perspective elevation drawings, computer-altered photographs or other accurate representations showing said view lines with the facility in place.
 - k. Landscape plans submitted with the application shall identify all existing vegetation, shall indicate which vegetation is to be retained on-site, and shall show all proposed new vegetation and other landscape treatments.
- 3
- Co-location.
 - a. All new wireless communication facilities shall be co-located, to the maximum extent practicable and technologically feasible, with one or more existing wireless communication facilities, towers, buildings or other structures whose height, location and characteristics meet the needs of the proposed facility.
 - b. All new wireless communication towers or support structures shall be designed, to the maximum extent practicable and technologically feasible, for co-location of antennas and other necessary facilities for at least three other wireless communication providers, shall offer space to all other providers at market rates, and shall provide for towers that can be expanded upward. Any Special Permit granted for a new facility under this section may be conditioned upon the written agreement of the facility operator to allow the co-location of other wireless communication providers on commercially reasonable terms.
 - c. Any applicant proposing not to co-locate their facility or proposing to locate their facility in a residential district shall provide written evidence and documentation demonstrating why it is not feasible for their facility to be co-located with existing facilities or sited in other, non-residential districts.
- 4
- Frequencies. All telecommunications facilities shall be operated only at Federal Communications Commission (FCC) designated frequencies, power levels and standards, including FCC Radio Frequency Emissions standards. The applicant shall provide certification demonstrating that the maximum allowable frequencies, power levels and standards will not be exceeded. Certifications shall include technical specifications, a written explanation of those specifications, and, if necessary, field verification. The Permit Granting Authority may condition any Special Permit granted under this section upon a periodic submittal of certification of compliance with said standards.
- 5
- Repair & Upkeep. All wireless communication facilities shall be maintained in good order and repair. Paint finishes shall be maintained and repaired when blemishes are visible from the property line. The applicant shall provide an inspection schedule, and shall file copies of inspections with the Building Commissioner.
- 6
- License & Permits. The operator of every wireless communication facility shall submit to the Building Commissioner copies of all licenses and permits required by other agencies and governments with jurisdiction over the design, construction, location and operation of said facility, and shall maintain such licenses and permits and provide evidence of renewal or extension thereof when granted.
- 7
- Removal. All structures associated with a wireless communications use shall be removed within one (1) year of the cessation of said use. If applicable, an annual certification demonstrating continued compliance with the standards of the Federal Communications Commission, Federal Aviation Administration and the American National Standards Institute, including provisions for required maintenance, shall be filed with the Building Commissioner by the permit holder. Prior to the issuance of a building permit for a wireless communications use, the applicant shall post and submit a bond or other financial surety acceptable to the Town in an amount sufficient to cover the cost of demolishing and/or removing the facility in the event the Building Commissioner condemns the property or deems it to have been abandoned or vacant for more than one year. Said amount shall be certified by an engineer, architect or other qualified professional registered to practice in the Commonwealth of Massachusetts. In the event the posted amount does not cover the cost of demolition and/or removal, the Town may place a lien upon the property covering the difference in cost.
- 8
- Modifications. The Permit Granting Authority may modify any provision of these standards and conditions if it can be demonstrated that it is technically infeasible to meet said standards or conditions, or that their effect is to prohibit the proposed use throughout the Town, or if such modification will promote use of existing buildings or structures, co-location of wireless communications uses, improve safety or design, or otherwise promote the purposes of this bylaw.

Bylaw Number	Land Use Classifications	Standards & Conditions	R-O		R-N	R-VC	R-G	R-F	B-G	Zoning Districts			LI	PRP	FPC	
			R-LD	N						B-L	B-VC	B-N				OP
3.358.2	Administrative business office or similar business or professional office not providing services to the general public in person on the premises.	<p>For the purposes of these sections, the public shall be defined as including all persons acting as customers or clients. Exceptions shall be affiliated professionals or consultants, salespersons, service contractors (delivery, maintenance, etc.), and the like. No office use under this section shall advertise its services as being available to customers and clients on the premises. Services shall be advertised as being available exclusively by telephone, mail, on-line, or other remote means.</p> <p>[For Sections 3.358.1 and 3.358.2, inclusive]</p> <p>In the B-N District, there shall be no more than six (6) employees on-site at any given time, and the establishment shall be closed by 7:00 p.m.</p> <p>In the PRP District, uses under these sections shall be located on parcels served by town water and sewer. Notwithstanding the provisions of footnote f, of Table 3, Dimensional Regulations, when a use under these sections is located on a property adjoining a residential district, a minimum 50-foot uninterrupted vegetated buffer shall be established and maintained between buildings associated with uses under this section and the nearest residential property boundaries. When the Special Permit Granting Authority or Permit Granting Board determine that an increased buffer is warranted and the subject property and site layout allow, a vegetated buffer of up to 100 feet in width may be required. Said buffer may include any drives or roadways.</p> <p>In the R-VC District, the Zoning Board of Appeals may grant a Special Permit for an office use under Sections 3.358.1 or 3.358.2, providing it finds that, in addition to meeting the provisions of Article 7 and Section 10.38, the proposed office use meets the following conditions:</p> <ol style="list-style-type: none"> 1. Is located on the ground floor only, and occupies no more than 50 percent of the gross floor area of the structure, exclusive of storage space. 2. Shall be allowed only as a second Principal use, where the first Principal use is a residential use. 3. Shares a property line with or is adjacent to another property with a similar use permitted under this section or a property in the B-L, B-VC or COM districts. 4. Employs no more than 3 persons (for a Section 3.358.1 office) or 5 persons (Section 3.358.2) who work on -site, other than residents of the property. 5. Where located in an existing dwelling, the residential character of the structure and site shall be maintained. 	N	N	SPR	SPR	SPR	SPR	SPR	SPR	SPR	SPR	SPR	SPR	N	
3.359	Medical or dental laboratory		N	N	N	N	N	N	SPR	SPR	SPR	SPR	SPR	SPR	SPR	(SP)
3.360	Medical Uses		N	N	N	N	N	N	SPR	SPR	SPR	SPR	SPR	SPR	SPR	N
3.360.0	Medical office		N	N	N	N	N	N	SPR	SPR	SPR	SPR	SPR	SPR	SPR	N
3.360.1	Medical group practice		N	N	N	N	N	N	SPR	SPR	SPR	SPR	SPR	SPR	SPR	N
3.360.2	Medical center		N	N	N	N	N	N	SPR	SPR	SPR	SPR	SPR	SPR	SPR	N
3.360.3	Clinic or emergency care facility		N	N	N	N	N	N	SPR	SPR	SPR	SPR	SPR	SPR	SPR	N

An outpatient public health clinic as defined under Article 12.

Bylaw Number	Land Use Classifications	Standards & Conditions	R-O		R-N	R-VC	R-G	R-F	B-G	Zoning Districts			LI	PRP	FPC
			R-LD	N						B-L	B-VC	B-N			
3.361	Auction gallery for exhibition, sale by auction, so-called "bag sales" and so-called "flea markets".		N	N	N	N	N	N	N	SPR	N	N	SPR	N	N
3.362	Shop of a potter, ceramist, sculptor, silversmith, jeweler, lapidary, weaver, clockmaker, musical instrument maker, wood carver, graphic artist, leather worker (not including tanning or processing), candlemaker, or similar craftserson.	All work and storage to be conducted within a building.	N	N	N	N	N	N	SPR	SPR	SPR	N	N	N	N
Marijuana Uses															
3.363.0	Medical Marijuana Treatment Center (MMTC)		N	N	N	N	N	N	SP	SP*	SP	N	SP	N	N
*Allowed only in those B-L districts which co-occur with the R&D overlay district. See definition under Article 12. Subject to the standards and conditions listed below.															
3.363.1	Off-Site Medical Marijuana Dispensary (OMMD)		N	N	N	N	N	N	SP	SP	SP	N	SP	N	N
See definition under Article 12. Subject to the standards and conditions listed below.															
3.363.2	Recreational Marijuana Retailer (RMIR)		N	N	N	N	N	N	SP	SP	SP	N	SP	N	N
See definition under Article 12. Subject to the standards and conditions listed below.															
3.363.3	Craft Marijuana Cultivator Cooperative & Marijuana Cultivator		N	N	N	N	N	N	SP	SP*	SP	N	SP	N	N
*Allowed only in those B-L districts which co-occur with the R&D overlay district. See definition under Article 12. Subject to the standards and conditions listed below.															
3.363.4	Independent Marijuana Testing Laboratory		N	N	N	N	N	N	SP	SP	SP	N	SP	SPR	N
*In those areas of the B-L district which coincide with the Research & Development (R&D) overlay district, Site Plan Review approval shall be required for uses regulated under this section. In all other areas of the B-L District, a Special Permit shall be required from the Zoning Board of Appeals. See definition under Article 12. Subject to the standards and conditions listed below.															
3.363.5	Marijuana Product Manufacturer & Marijuana Micro-business		N	N	N	N	N	N	SP	SP	SP	N	SP	SPR	N
*In those areas of the B-L district which coincide with the Research & Development (R&D) overlay district, Site Plan Review approval shall be required for uses regulated under this section. In all other areas of the B-L District, a Special Permit shall be required from the Zoning Board of Appeals. See definition under Article 12. Subject to the standards and conditions listed below.															
3.363.6	Marijuana Transporter		N	N	N	N	N	N	SP	SP	SP	N	SP	SP	N
See definition under Article 12. Subject to the standards and conditions listed below.															
3.363.7	Marijuana Research Facility		N	N	N	N	N	N	SP	SP	SP	N	SP	SPR	N
*In those areas of the B-L district which coincide with the Research & Development (R&D) overlay district, Site Plan Review approval shall be required for uses regulated under this section. In all other areas of the B-L District, a Special Permit shall be required from the Zoning Board of Appeals.															

Bylaw Number	Land Use Classifications	Standards & Conditions	R-O	R-LD	R-N	R-VC	R-G	R-F	B-G	Zoning Districts			PRP	FPC
			B-L	B-VC	B-N	COM	OP	LI						

- 1) All aspects of a Marijuana Establishment relative to the acquisition, cultivation, possession, processing, sales, distribution, dispensing, or administration of marijuana, products containing marijuana, related supplies, or educational materials must take place at a fixed location within an enclosed area as defined by 935 CMR 500.002 and shall not be visible from the exterior of the business.
- 2) No outside storage of marijuana, related supplies, or educational materials is permitted.
- 3) No OMMMD or RMR shall have a gross floor area accessible to patients or customers which is in excess of 2,500 square feet. Space in an OMMMD facility or RMR which is dedicated to administration or operations and is accessible only to employees of the facility shall not be included in this limitation.
- 4) Ventilation – all facilities shall be ventilated in such a manner that:
 - a) No pesticides, insecticides or other chemicals or products used in the cultivation or processing are dispersed into the outside atmosphere; and
 - b) No odor from marijuana or its processing can be detected by a person with an unimpaired and otherwise normal sense of smell at the exterior of a Marijuana Establishment or at any adjoining use or property.
- c. Reporting Requirements
 - 1) All Special Permit and Site Plan Review approval holders for uses under this section shall provide the Police Department, Fire Department, Building Commissioner, Board of Health, and Permit Granting Authority with the names, phone numbers, mailing and email addresses of all management staff and key-holders, including a minimum of two (2) operators or managers of the facilities identified as designated contact persons to whom notice should be made if there are operating problems associated with any use under this section. All such contact information shall be updated as needed to keep it current and accurate.
 - 2) One of the two designated contact persons shall notify the Police Department, Fire Department, Building Commissioner, Board of Health and Permit Granting Authority in writing a minimum of thirty (30) days prior to any change in management of a facility regulated under this section.
 - 3) The designated representatives of permitted facilities shall file an annual report with the Permit Granting Authority and shall appear before said Authority to present the report no later than 30 days following renewal of a state license or registration, providing a copy of all current applicable state licenses for the owners and facilities, to demonstrate continued compliance with the conditions of the Special Permit or Site Plan Review approval.
 - 4) The designated contact persons shall be required to respond by phone or email within twenty-four (24) hours of the time of contact and inquiry regarding operation of the facility by a town official to the telephone number or email address provided as the contact for the business.
- d. Transfer/Discontinuance of Use
 - 1) A Special Permit or Site Plan Review approval granted under this Section is non-transferable and shall have a term limited to the duration of the applicant’s ownership or leasing of the premises as an Marijuana Establishment.
 - 2) Any Marijuana Establishment permitted under this section shall be required to remove all material, plants, equipment and other paraphernalia in compliance with 105 CMR 725.105 (J), (O) immediately following the expiration, revocation or voiding of its DPH Registration or in compliance with 935 CMR 100.105(12) immediately following the expiration, revocation or voiding of its license issued by the Cannabis Control Commission.
- e. Prohibitions
 - 1) The proposed uses shall not be located:
 - a) Within five hundred (500) feet of a pre-existing public or private school providing education in kindergarten or any of grades 1 through 12. The distance under this section shall be measured in a straight line from the nearest point of the property line in question to the nearest point of the property line where the Marijuana Establishment is or will be located.
 - b) Within three hundred (300) feet of a building:
 - i. Containing another Marijuana Establishment, except for facilities that are owned or leased by the same operator; or
 - ii. In which children commonly congregate in an organized ongoing formal basis that is not a K-12 school; or
 - iii. Owned by and operated as part of the campus of any private or public institution of higher learning; or
 - iv. Housing a public library; or
 - v. Containing any residential use, excepting a mixed-use building under Section 3.325 of the Zoning Bylaw.

Bylaw Number	Land Use Classifications	Standards & Conditions	R-O		R-V-C		R-G		R-F		B-G		Zoning Districts			LI	PRP	FPC	
			R-LD	R-N	R-V-C	R-G	R-F	B-L	B-V-C	B-N	COM	OP							
		<p>c) Within, on the same lot as, or on a lot immediately adjacent to a licensed pharmacy, or</p> <p>d) Within buildings that contain any pharmacy, medical doctor offices or the offices of any other professional practitioner authorized to prescribe the use of medical marijuana. An exception shall be that the Permit Granting Authority may grant permission for palliative and therapeutic care uses in the same building in which a Marijuana Establishment is operated.</p> <p>2) For the purposes of 3.363.9(3)(e)(1)(b), the three hundred foot buffer shall be measured from the closest point of the building triggering the buffer to the closest point of the marijuana use.</p> <p>3) The proposed use shall not display on-premises signage or other marketing on the exterior of the building or in any manner visible from the public way, which, in the opinion of the Permit Granting Authority or the Code Enforcement Officer may promote or encourage the use of marijuana or other drugs by minors.</p> <p>4. Findings. In addition to the findings required under Section 10.38 and 11.24 of the Zoning Bylaw and meeting the provisions of Articles 7, 8 and all other applicable sections of this Bylaw, the Permit Granting Authority shall find that the proposed use:</p> <ol style="list-style-type: none"> Meets all of the permitting requirements of all applicable agencies within the Commonwealth of Massachusetts and will as proposed be in compliance with all applicable state laws and regulations. Will provide copies of registrations and licenses and a copy of a signed Host Community Agreement with the Town of Amherst, in accordance with M.G.L. Chapter 94G and subsequent regulations to the Building Commissioner prior to the issuance of a Certificate of Occupancy. Is designed to minimize adverse visual impacts on abutters and other parties in interest. Provides a secure waiting area, as required by state law or regulations. Provides adequate security measures to ensure that no individual or group will pose a direct threat to the health or safety of other individuals, and that the storage and/or location of cultivation of marijuana is adequately secured in enclosed, locked facilities. Adequately addresses issues of vehicular and pedestrian traffic, circulation, parking and queuing, especially during peak periods at the facility, and adequately mitigates the impacts of vehicular and pedestrian traffic on neighboring uses. <p>5. Limitation on number of RMR locations – No more than eight (8) Recreational Marijuana Retailer locations shall be permitted within the Town of Amherst.</p>																	
SECTION 3.37 RESEARCH AND INDUSTRIAL USES																			
3.370	Warehouse or other enclosed building for the storage, distribution or wholesale marketing of material, merchandise, products or equipment.	Such use not to be hazardous by reason of potential fire, explosion, or radiation.																	
3.371	Lumber yard, fuel storage plant, contractor's yard, or other open-air establishment for the primary storage, distribution, or sale at wholesale or retail of merchandise, products or equipment.	Salvage materials not included. See Section 3.02																	
3.372	3.372.0 Research and Development or Testing facility																		

* In those areas of the B-L District which coincide with the Research & Development (R&D) overlay district, Site Plan Review approval shall be required for uses regulated under this section. In all other areas of the B-L District, a Special Permit shall be required from the Zoning Board of Appeals.

Uses under this section shall include research, development and/or testing of innovative information, concepts, methods, processes, materials, or products. This shall include but not be limited to activities conducted in laboratory settings. The accessory development, fabrication, and light manufacturing of prototypes, or specialized machinery and devices integral to research or testing may be associated with these uses under the provisions of Section 5.07.

Bylaw Number	Land Use Classifications	Standards & Conditions												
		R-O	R-LD	R-N	R-VC	R-G	R-F	B-G	B-L	B-VC	B-N	COM	OP	LI

In the B-G, B-L, B-VC, B-N and R-VC districts, the Zoning Board of Appeals may grant a Special Permit for a research and development use, provided that it consists only of office or similar uses and meets the provisions of Section 3.359, Article 7 and Section 10.38. An exception shall be where the B-L District coincides with the R&D overlay district, in which case such a research and development use, similarly limited, shall be permitted through Site Plan Review approval.

In all zones, all outdoor storage of materials and equipment shall be screened from public view, from public ways and abutting residential districts. No operation shall create noise, vibration, dust, fumes, or odors that are a nuisance beyond the lot line, and further no operations shall be permitted which the Permit Granting Board or Special Permit Granting Authority, after consultation with the Board of Health, determines to be unduly hazardous by reasons of potential fire, explosion, radiation, or chemical or biological hazard, including hazards resulting from the use, production or storage of materials or waste identified as toxic or hazardous, flammable, or explosive. No research or testing shall be conducted outdoors unless a Special Permit is granted for this purpose by the Special Permit Granting Authority authorized to act under the applicable section of this bylaw.

3.372.1 Publishing, data processing, light manufacturing, light assembly including computer hardware and software, and scientific products with associated offices and distribution facilities.

N	N	N	SP	N	N	N	SP	SP	SP	SP	SP	SP	SP	SP	SP	N
								SP*								

* In those areas of the B-L District which coincide with the Research & Development (R&D) overlay district, Site Plan Review approval shall be required for uses regulated under this section. In all other areas of the B-L District, a Special Permit shall be required from the Zoning Board of Appeals.

Uses under this section shall include those which involve the limited light manufacture or production, principally from previously-prepared materials, of finished products or parts. This may include processing, fabrication, assembly, treatment, and packaging of such products as well as incidental storage and distribution of such products and associated offices. These uses may also include the on-site production within enclosed structures of custom goods fabricated principally by hand through the use of hand tools and small-scale mechanical equipment.

No mass manufacturing, processing, or fabrication normally conducted under Section 3.372.2 nor any on-premises sale of products shall be permitted in association with uses under this section, except that the on-premises sale of custom-made goods produced by hand manufacturing may be permitted under a Special Permit granted by the Special Permit Granting Authority authorized to act under the applicable section of the Bylaw.

In the R-VC District, the Zoning Board of Appeals may grant a Special Permit for a use under this section, provided that the proposed use consists only of offices or similar uses and meets the provisions of Sections 3.359, Article 7 and Section 10.38. In all zones, all outdoor storage of materials and equipment shall be screened from public view, from public ways and abutting residential districts. No operation shall create noise, vibration, dust, fumes, or odors, that are a nuisance beyond the lot line, and further, no operations shall be permitted which the Permit Granting Board or Special Permit Granting Authority, after consultation with the Board of Health, determines to be unduly hazardous by reason of potential fire, explosion, radiation, or chemical or biological hazard resulting from the use, production or storage of materials or waste identified as toxic or hazardous, flammable, or explosive. Where permitted, all operations involving such materials shall be conducted in a fully enclosed building in accordance with all applicable public health and safety regulations.

3.372.2 Manufacturing, assembly and processing, including associated offices and distribution facilities.

N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

Uses under this section shall include those involving the manufacture, assembly and/or processing, from extracted or raw materials or from previously-prepared materials, of finished materials, products, or parts. These uses may include processing, fabrication, assembly, treatment, and packaging of such products, as well as incidental storage and distribution of such products and associated offices. These uses may involve the production and/or storage of volumes of toxic or hazardous, flammable, or explosive materials under appropriate safeguards and conditions, as determined by the Special Permit Granting Authority under the requirements of this section. The on-premises sale of products shall not be permitted in association with any uses under this section.

In all zones, all outdoor storage of materials and equipment shall be screened from public view, from public ways and abutting residential districts. No operation shall create noise, vibration, dust, fumes or odors, that are a nuisance beyond the lot line, and further, no operations shall be permitted which the Permit Granting Board determines to be unduly hazardous by reason of potential fire, explosion, radiation, or chemical or biological hazard resulting from the use, production, or storage of materials or waste identified as toxic or hazardous, flammable, or explosive. Where permitted, all operations involving such materials shall be conducted in a fully enclosed building in accordance with all applicable public health and safety regulations.

3.373 Removal of soil, sod, loam, sand, gravel, rock, quarried stone, or other earth products.

SP	SP	SP	N	N	N	N	N	N	N	N	N	N	N	N	N	N
(N)	(N)															

Any Special Permit under this section issued by the Zoning Board of Appeals shall be subject to, but not limited by, the following conditions:

1. No excavation shall be permitted below the grade of a road bounding the property at any point nearer than 300' to such road.
2. No excavation below the natural grade of any property boundary shall be permitted nearer than fifty feet to such boundary.

Bylaw Number	Land Use Classifications	Standards & Conditions	R-O		R-N	R-VC	R-G	R-F	B-G	Zoning Districts			OP	LI	PRP	FPC
			R-LD	N						B-L	B-VC	B-N				
3.385	Establishment for repair of motor vehicles or farm equipment.	Not to include sale of fuel. Limited to minor repairs, unless conducted within the building.	N	N	N	N	N	N	N	SP	SP	SP	N	N	N	N
3.386	Motor vehicle sales, including trucks, boats, and farm equipment.	For the display and sale of such vehicles including warranty work and other repair and service conducted as an accessory use.	N	N	N	N	N	N	N	SP	SP	N	N	N	N	N
3.387	Sale of auto parts, excluding installation and repair services.	Inside sales only.	N	N	N	N	N	N	N	SPR	SPR	SPR	N	N	N	N
3.388	Sales of auto parts, including tires, batteries, mufflers, and the installation and service thereof.	Inside sales only. In the B-N District, there shall be no more than four (4) employees on-site at any time, and the establishment shall be closed by 9:00 p.m.	N	N	N	N	N	N	N	SP	SP	N	N	N	N	N
3.389	Truck terminal	Inside sales only.	N	N	N	N	N	N	N	N	N	N	N	SP	N	N

ARTICLE 4 DEVELOPMENT METHODS

SECTION 4.0 OVERVIEW

TABLE 2 DEVELOPMENT METHODS

SECTION 4.1 GENERAL DEVELOPMENT STANDARDS

SECTION 4.2 CONVENTIONAL RESIDENTIAL SUBDIVISION DEVELOPMENT

SECTION 4.3 CLUSTER DEVELOPMENT

SECTION 4.4 PLANNED UNIT RESIDENTIAL DEVELOPMENT

SECTION 4.5 OPEN SPACE COMMUNITY DEVELOPMENT

SECTION 4.0 OVERVIEW

This Bylaw permits four (4) methods which may be utilized to develop land for residential purposes where such Uses are permitted in Section 3.3. The four methods are:

Conventional Residential Subdivision Development;
Cluster Development;
Planned Unit Residential Development (PURD); and
Open Space Community Development (OSCD)

In order to ensure development which is compatible with the Purposes and Intent of this Bylaw, the four Development Methods shall comply with the General Development Standards set forth in Section 4.1, and the applicable Standards set forth in Sections 4.32 and 4.42.

The Zoning Districts in which the four Development Methods may be used are indicated in Table 2. Nonresidential zoning districts are not included in Table 2 because the four Development Methods described in this section apply only to residential development.

The abbreviations used in the Table are defined as follows:

Y	=	Yes	The Development Method is permitted by right.
N	=	No	The Development Method is not permitted in the zoning district.
SP	=	SPECIAL PERMIT	The Development Method is permitted if a special permit is issued by the Board of Appeals.
SPP	=	SPECIAL PERMIT PLANNING BOARD	The Development Method is permitted if a special PLANNING BOARD permit is issued by the Planning Board.

TABLE 2
DEVELOPMENT METHODS

BYLAW NUMBER	METHOD	ZONING DISTRICTS					
		<u>R-LD</u>	<u>R-O</u>	<u>R-N</u>	<u>R-VC</u>	<u>R-G</u>	<u>R-F</u>
4.2	CONVENTIONAL RESIDENTIAL SUBDIVISION DEVELOPMENT	Y	Y	Y	Y	Y	Y
4.3	CLUSTER DEVELOPMENT	SPR	SPR	SPR	SPR	SPR	N
4.4	PLANNED UNIT RESIDENTIAL DEVELOPMENT	N	SP*	SP*	SP	SP	N
4.5	OPEN SPACE COMMUNITY DEVELOPMENT	SPP	SPP	SPP	SPP	SPP	N

* Applies only to those areas included in an overlay district called "PURD DISTRICT" as shown on the Official Zoning Map; otherwise, not permitted.

SECTION 4.1 GENERAL DEVELOPMENT STANDARDS

The four Development Methods listed in Section 4.0, Overview, shall be undertaken in accordance with the following General Standards:

- 4.10 All Developments in the Town shall conform to the Design Standards and Required Improvements set forth in the Rules and Regulations Governing the Subdivision of Land, the Street and Site Work Construction Standards of the Town, and all other applicable Town roadway and utility policies and regulations, as amended.
- 4.11 Where building lots are required or proposed, lot frontage shall be on existing or proposed minor or secondary streets, whether public or private statutory ways, as such streets are defined by the Amherst Planning Board's Rules and Regulations Governing the Subdivision of Land.
- 4.12 If the calculation of maximum density of lots or units for any development method referencing this section results in a figure including a fraction equal to 0.5 or greater, then the figure shall be rounded up to the nearest whole number. If the fraction is less than 0.5, the figure shall be rounded down to the nearest whole number. Dimensional requirements established for building lots in the applicable zoning district(s) and under the applicable development method shall remain in full force and effect, and shall not be altered by the provisions of this section.

SECTION 4.2 CONVENTIONAL RESIDENTIAL SUBDIVISION DEVELOPMENT

Conventional Residential Subdivision Development includes any subdivision of land, as defined in the General Laws, Chapter 41, to be developed for residential purposes.

SECTION 4.3 CLUSTER DEVELOPMENT

4.30 General Description

A "Cluster Development" shall mean a residential development in which the building and accessory uses are clustered together with reduced lot sizes, into one or more groups. The land not included in the building lots shall be permanently preserved as open space.

4.31 Purpose

It is intended that a Cluster Development be developed as an entity by a landowner, or association of adjacent landowners, in which an alternative pattern of development may be permitted by which the following benefits are likely to be gained:

- 4.310 Economical and efficient street, utility, and public facility installation, construction, and maintenance.
- 4.311 Efficient allocation, distribution, and maintenance of common open space.
- 4.312 Land use harmonious with the natural features.
- 4.313 Compatibility with the character of the surrounding residential areas.
- 4.314 Efficient use of land to increase the options for affordable housing.
- 4.315 Housing development which allows for integration of a variety of housing types within one project.
- 4.316 Protection of natural resources, including but not limited to aquifers, wetlands and farmland.

4.32 Use and Dimensional Standards

- 4.320 A one-family detached dwelling, a zero lot line single family dwelling, a two-family detached dwelling (duplex), or attached dwellings, or other lawful accessory building may be constructed on certain lots in a Cluster Development (as herein defined and limited) although such lots have less area, frontage, and/or rear and side yard dimensions than normally required.

- 4.321 The total area of land included within the development shall be five (5) acres or more.
- 4.322 In all cluster developments, a minimum of 50 percent of the total lots shall be reduced at least 25 percent in area from the minimum standard lot size requirement of the zoning district in which the parcel is located.
- 4.323 In any zoning district, the maximum density of a cluster subdivision, except for an affordable cluster, shall not exceed the allowed density for a standard subdivision in that zoning district, said density to be calculated by taking the parcel area, subtracting 10% of that area and dividing that number by the minimum lot area of the zoning district in which the parcel is located. See Section 4.12. In addition, the applicant shall submit a Yield Plan. See Article 12.
- 4.324 For all cluster developments, the following Dimensional Regulations shall be substituted for those in Article 6, Table 3.

	R-LD	R-O	R-N	R-VC	R-G
Cluster Minimum Lot Area (sq. ft.)	25,000	15,000	10,000	7,500	6,000
Cluster Lot Frontage (ft.)*	100	100	80	60	50
Cluster Minimum Front Setback (ft.)*	20	20	15	10	10
Cluster Minimum Side and Rear Yards (ft.)*	15	15	15	10	10

*Requirements may be modified by the Permit Granting Board under a Site Plan Review approval granted for a cluster development, except that no such modification may result in a reduced requirement of less than eighty percent (80%) of the cluster requirement. Frontage requirements may be modified for not more than fifty percent (50%) of the lots in the subdivision.

- 4.325 Zero lot line units are allowed in accordance with Section 4.320. A side yard need not be provided on that side of a dwelling unit that shares a party wall or double wall with an adjacent dwelling unit.
- 4.326 The following building types shall be permitted in all cluster developments. Percentages refer to the total number of units in the development, not the number of lots or structures.
 - 4.3260 A minimum of 40% of the total dwelling units shall be single-family dwellings.
 - 4.3261 A minimum of 20% of the total dwelling units shall be non-zero lot line, single family dwellings.
 - 4.3262 A maximum of 60% of the total dwelling units may be owner-occupied or affordable two-family dwellings. See Section 3.3211 for non-owner occupied duplexes.
 - 4.3263 A maximum of 30% of the total dwelling units may be attached dwellings. There shall be no more than eight attached dwelling units allowed in one building.
- 4.327 The entire development shall be serviced with public sanitary sewer system, except in the ARP and WP districts associated with the Lawrence Swamp Aquifer, and in the FC District. In these districts, the Board of Health may, in accordance with state and local health regulations, authorize individual and/or shared septic systems in Cluster Developments where public sanitary sewer service is not reasonably available.
- 4.328 FC District

In the FC District, dimensional regulations for Cluster Developments shall be as follows:

- 4.3280 The maximum number of building lots shall be calculated as follows:
 1. Determine the Net Parcel Area by subtracting 50% of the area of all Unbuildable Land Area from the total parcel acreage. Unbuildable Land Area shall consist of the combined acreage of all wetlands, FPC District and 100-year floodplain areas. 100-year floodplain areas shall consist of those areas so identified on federal flood insurance maps.

2. Subtract 10 percent of the resulting Net Parcel Area for road allowance.

3. Divide the remaining 90 percent of the Net Parcel Area by the Basic Minimum Lot Area for the underlying zoning district. The resulting figure shall be the maximum number of building lots allowed in the Cluster Development.

4.3281 In the FC overlay district, the Basic Minimum Lot Area for the underlying zoning district shall be used only for determining the maximum number of building lots possible in a Cluster Development and for determining the amount of common land to be provided. Otherwise, all dimensional regulations for Cluster Developments in the FC District shall be the same as those specified in Section 4.324 for Cluster Developments in the R-N District, except as noted in Sections 4.3282 and 4.3283.

4.3282 In addition to the dimensional regulations specified in Section 4.324, there shall be a maximum lot area for cluster lots as follows:

Cluster Maximum lot area 20,000 sq. ft.
 Cluster flag lot max. 30,000 sq. ft.

4.3283 A 40 foot buffer zone of open space and/or common land shall be provided along any edge of the residential portion of a Cluster Development which abuts adjacent or on-site farmland.

4.33 Affordable Units

4.330 The Planning Board may authorize a greater number of building lots than would be allowed by the density requirements of Section 4.3231 or Section 4.328 only if a minimum of 10% of the total dwelling units in the development are affordable units as herein defined. In no event shall the Board authorize a greater number of building lots than 120% of the maximum number of lots otherwise allowed under the applicable development method. For the purpose of this calculation, 10% of the total parcel size shall be subtracted for road allowance prior to calculating the maximum density normally allowed. See Section 4.12.

4.331 Attached units shall only be allowed in cluster developments that include affordable units.

4.332 For all cluster developments containing a minimum of 10% affordable units, the following Dimensional Regulations shall be substituted for those in Table 3.

	<u>R-LD</u>		<u>R-O</u>		<u>R-N</u>		<u>R-VC</u>	
	SF	Duplex/ Attached	SF	Duplex/ Attached	SF	Duplex/ Attached	SF	Duplex/ Attached
Cluster Minimum Lot Areas (sq. ft.)	25,000	25,000	15,000	15,000	10,000	10,000	7,500	7,500
Additional Lot Area/Family (sq. ft.)		10,000		6,000		4,000		2,500
Lot Frontage (ft.)	100*	100*	100*	100*	80*	80*	60*	60*
Minimum Front Setback (ft.)	20*	20*	20*	20*	15*	15*	10*	10*
Minimum Side/Rear Setback (ft.)	15*	15*	15*	15*	15*	15*	10*	10*
Maximum Building Coverage (%)	10*	10*	15*	15*	20*	25*	25*	30*
Maximum Lot Coverage (%)	15*	15*	25*	25*	30*	35*	40*	45*

*May be modified by the Planning Board by Special Permit.

- 4.333 Affordable housing units are those which may be rented or purchased by those who meet the guidelines for maximum annual income for a low-income or moderate-income family or household. The income limit for "low income" shall be 80% of the median income for Amherst, and the income limit for "moderate income" shall be 120% of median income for Amherst. Median income for Amherst will be as calculated by the U.S. Department of Housing and Urban Development, or any successor agency, and shall be adjusted for family size.
 - 4.334 The applicant shall establish such restrictions, conditions, and/or limitations as are necessary to ensure that the units required for low-and moderate-income households will be permanently available for ownership, and available for a minimum of twenty years in the case of rental housing.
 - 4.335 Housing constructed by a public agency or non-profit corporation using a federal, state, or local housing assistance program may adhere to the requirements set forth by the funding agency provided that the intent of these regulations are met.
 - 4.336 Affordable housing units shall be geographically dispersed throughout the development.
- 4.34 Common Land Standards
- The total area of Common Land shall equal or exceed the sum of the following:
- 4.340 The area by which all single-family dwelling lots are reduced below the basic minimum lot area normally required in the zoning districts.
 - 4.341 The area by which all two-family dwelling lots are reduced below the minimum lot area normally required in the zoning districts for a two-family dwelling.
 - 4.342 Projects that contain attached dwellings shall provide common land in accordance with the following formula: Subtract from the total parcel area the sum of a) and b), with a) being the area devoted to roads or rights-of-way and b) being the total area of all building lots. The remaining area shall be common land.
 - 4.343 Land within the FPC District may be used to fulfill up to 60% of the Common Land requirements in Cluster Developments.
 - 4.344 Within the common land provided in the Cluster Development, at least 2000 square feet per dwelling unit must be usable open space for active and passive recreation. Such space shall not include parking space, roadway, sidewalk area, land within the FPC District or Wetlands as determined by the Conservation Commission. Usable open space shall be defined to include such facilities as contiguous open space available for play, tot lots, gardens, hiking/jogging trails, tennis courts, or similar facilities.
 - 4.345 In the FC District, all Common Land in a cluster development not set aside as usable open space for active and/or passive recreation shall be set aside as farmland as provided for under Section 4.351.
- 4.35 Common Land Ownership
- 4.350 Except in the WP, ARP and FC districts, all common land hereunder shall either (1) be conveyed to the Town of Amherst and be accepted by it for park or open space use, or (2) be conveyed to a non-profit organization, the principal purpose of which is the conservation of open space, (3) be conveyed to a corporation or trust owned or to be owned by the owners of the lots or residential units within the development, or (4) be conveyed to a private, non-profit or public entity for the purposes of farming, with a restriction enforceable by the Town of Amherst being recorded which provides that such land shall either be actively farmed or kept in an open and natural state, If such a corporation or trust is utilized, as indicated herein, ownership thereof shall pass with conveyances of the lots or residential units. Under the second and third ownership alternatives listed above, a restriction enforceable by the Town of Amherst shall be recorded providing that such land shall be kept in an open or natural state and not be built upon for residential use or developed for accessory uses such as parking or roadway.

- 4.351 In the WP, ARP and FC districts, the Common Land and all Unbuildable Land Area (hereinafter within this section collectively referred to as “Common Land”) in a residential development shall be preserved as open space. Said Common Land shall be kept in an open or natural state, or as active farmland, and shall be used and managed so as to protect public water supplies (in the WP and ARP districts) and/or to preserve farmland and related accessory resource-based land uses (in the FC District, and in the WP and ARP districts where appropriate). Common Land shall not be built upon for residential use or developed for accessory uses such as parking or roadway.
- 4.351.0 Title to this Common Land may remain with the original owner or another individual or entity (hereinafter “owner”), or may be conveyed to the Town of Amherst, the Commonwealth of Massachusetts, a corporation or trust functioning as a homeowners' association, or a non-profit trust or similar conservation organization whose principal purposes include the protection of water quality and/or the preservation of farmland and related accessory resource-based land uses, as appropriate.
- 4.351.1 The applicant shall submit a management plan detailing the future use and management of the Common Land. Review and approval of the management plan shall be a condition of the Site Plan Review approval.
- 4.352 The location, size, and shape of common land shall be subject to the approval of the Planning Board if such land is to be conveyed to the Town.
- 4.36 Review and Approval Process
- 4.360 Approval shall be by Site Plan Review by the Planning Board, in accordance with the standards set forth in Section 11.2 and 11.3, with the purposes of Cluster Development as set forth in Sections 3.28 and 4.31, as applicable, and with the design requirements of Section 3.285 and 4.38, as applicable.
- 4.361 Subsequent approval by the Planning Board of such portions of a Cluster Development as constitute a subdivision shall be required as set forth in the Subdivision Control Law, including approval of the streets and utility system. A favorable action which may be made by the Planning Board on a Site Plan Review application shall not, therefore, be deemed either to constitute subdivision approval under the Subdivision Control Law or the Rules and Regulations Governing the Subdivision of Land, nor to imply that such approval will be given.
- 4.37 Flood-Prone Conservancy
- Each application for a Cluster Development containing land within the Flood-Prone Conservancy district shall be accompanied by an additional set of plans and documents. Within ten days after receipt of the application the Planning Board shall transmit a copy thereof to the Conservation Commission which said Commission may, in its discretion, investigate the proposed development and report in writing its recommendation to the Board. The Planning Board shall not take final action on approval until it has received a report thereon from the Conservation Commission or until said Commission has allowed 35 days to elapse after receipt of such application without submission of a report.
- 4.38 Cluster Development Design Requirements
- 4.380 Vehicular and Pedestrian Circulation: primary routes shall be clearly differentiated from secondary routes and driveways; conflicts shall be minimized between vehicular routes and pedestrian routes and recreation areas.
- 4.381 Screening and Buffers: layout and design shall respond to needs for privacy between and around dwelling units; no structures shall be placed closer to the project property line than the front setback requirement for that zoning district.
- 4.382 Common Land: the majority of the common land shall consist of large blocks of contiguous areas easily accessible to most residents of the development from streets, cul-de-sacs and other open areas and links between different sections of common land shall be clearly shown; physical and visual access to the common land from the dwelling units shall be maximized, the preservation of the original landform and existing vegetation shall be maximized.

- 4.383 Utilities and Services: dumpsters shall be located in convenient locations, visually screened, and shall not impede pedestrian or vehicular circulation; the installation and location of drainage systems shall not impede access to common land.
- 4.384 Protection of Environmentally Sensitive Areas: the Board may reduce the number of lots otherwise allowed for the protection of aquifers, wetlands or other environmentally sensitive areas.
- 4.385 Building Siting: the Planning Board may review and approve the sites of all buildings, structures, driveways and parking areas for each lot and may establish building envelopes for all buildings within a cluster subdivision.

SECTION 4.4 PLANNED UNIT RESIDENTIAL DEVELOPMENT

4.40 General Description

Planned Unit Residential Development shall mean a mixed use development on a plot of land containing a minimum of 134,500 square feet in which a mixture of residential, open space, and such other uses, and a variety of building types, as may be permitted hereunder which are determined to be sufficiently advantageous to render it appropriate to grant special permission to depart from the normal requirements of the district to the extent authorized by this Bylaw.

4.41 Purpose

It is intended that a Planned Unit Residential Development be a subdivision to be developed as an entity by a landowner which does not correspond in lot size, bulk or type of dwelling, density, intensity of development, or required open space to the regulations in any one other district established by this Zoning Bylaw. The major purpose of the Planned Unit Residential Development, in addition to the purposes governing this Bylaw as stated in Article 1, is to provide for a mixture of housing types at certain locations and in certain districts in the Town at a greater density than would normally be allowed in each district without detracting from the livability and aesthetic qualities of the environment. A Planned Unit Residential Development should result in:

- 4.410 Economical and efficient street, utility, and public facility installation, construction, and maintenance,
- 4.411 A variety of housing types and characteristics appropriate to various social and economic groups,
- 4.412 Efficient allocation, distribution, and maintenance of common open space,
- 4.413 Land use harmonious with the natural features and,
- 4.414 The development of real property values for the long range future.

4.42 Use and Dimensional Standards

4.420 In a Planned Unit Residential Development the following uses shall be permitted:

- 4.4200 One-family dwelling
- 4.4201 Two-family or semi-detached dwelling
- 4.4202 Townhouses
- 4.4203 Multiple-family dwelling
- 4.4204 Nursery or Kindergarten
- 4.4205 Place of worship
- 4.4206 Public educational use

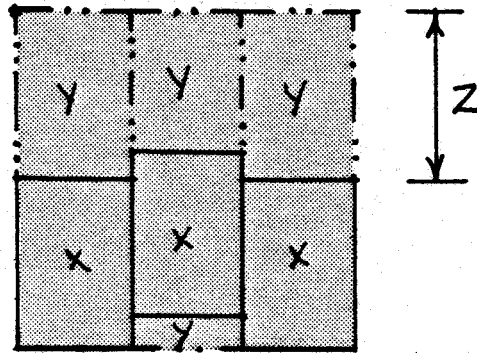
4.4207 Governmental use

4.421 In a Planned Unit Residential Development the following requirements relating to the density and intensity of land use shall be met:

4.4210 Separate lots for single family dwellings shall be permitted, but are not required. If provided, the lot area shall be three quarters of the minimum lot area required for the applicable Zoning District in Table 3. If not provided, the same calculation shall be used per lot to determine the maximum density allowed for the single family units.

4.4211 Separate lots for duplex dwelling units shall be permitted, but are not required. If provided, the lot area shall be three-quarters of the minimum lot area, plus the additional minimum area per family required for the applicable Zoning District. If not provided, the same calculation shall be used per lot to determine the maximum density allowed for the duplex dwelling units.

4.4212 Separate lots for townhouses shall be permitted but are not required. If provided, the lot area for each unit shall be not less than two times the footprint of the unit, and shall include the area of the footprint of the unit. In no case shall any property line of the lot extend further from the unit than a distance in linear feet, that is numerically equivalent to 10% of the area, in square feet, of the footprint of the unit.



x = Footprint of the townhouse

y = Lot area (2x) of the townhouse (includes footprint)

z = Distance of lot line from the townhouse (maximum 10%, in linear foot equivalent, of the area of the townhouse footprint)

4.4213 For townhouses, with or without separate lots, and for multi-family units, two times the minimum additional lot area per family for the applicable Zoning District shall be used to calculate the maximum density allowed in the PURD for these units.

4.4214 There shall be no frontage requirements in the PURD.

4.4215 Maximum height of structures: as regulated in Table 3.

4.4216 Minimum setback and rear/side yards pertaining only to the periphery of the Planned Unit Residential Development: equal to the requirements in each district as shown in Table 3. If separate full size lots are created, the minimum setback and side yards shown in Table 3 for the applicable Zoning District shall be provided. Dimensional regulations for all undersized single family and two family lots shall conform to the required regulations for the R-G District found in Table 3.

- 4.4217 Within the open space area provided in the PURD, at least 1,000 square feet per dwelling unit must be usable open space for active and passive recreation. Such space shall not include parking space, laundry drying area, required yards, land within the FPC District or wetlands as determined by the Conservation Commission. Usable open space shall be defined to include such facilities as contiguous open space available for play, tot lots, gardens, hiking/jogging trails, tennis courts, or similar facilities.
- 4.4218 Maximum percentage of dwelling units of any one type of permitted housing: 75%.
- 4.4219 Minimum parking requirements: as regulated in Article 7 of this By-Law.
- 4.4220 Not more than fifty percent of land within the FPC District and wetlands as determined by the Conservation Commission shall be used to fulfill the density requirements for the PURD notwithstanding Section 6.5.

4.43 Common Land Ownership

Open space or common land shall be assured and maintained in accordance with the procedures prescribed in Section 4.35 of this Bylaw.

4.44 Review and Approval Process

In addition to the requirements specified in Section 10.3, Special Permit, of this Bylaw and Section 9, Chapter 40A of the General Laws, the following procedures shall be required for the presentation of a Planned Unit Residential Development plan:

- 4.440 The proposed development shall be in harmony with the Master Plan of the community, if any, as prepared and amended by the Planning Board.
- 4.441 The development plan shall specify reasonable periods within which development of each section of the Planned Unit Residential Development may be started. Deviation from the required amount of usable open space per housing unit may be allowed, provided such deviation shall be adjusted for in other sections of the Planned Unit Residential Development.
- 4.442 Subsequent approval by the Planning Board of such portions of the development as constitute a subdivision will be required as set forth in the Subdivision Control Law, including approval of the street and utility systems. A favorable recommendation by the Planning Board that the Special Permit be issued shall not, therefore, be deemed to either constitute subdivision approval under the Subdivision Control Law or the Subdivision Rules and Regulations of the Planning Board, nor imply that such approval will be given.

4.45 Flood Prone-Conservancy

Each application for a PURD containing land zoned Flood Prone-Conservancy shall be accompanied by an additional set of plans. Within ten days after receipt of the plan, the Board of Appeals shall transmit a copy thereof to the Conservation Commission, which said Commission may, in its discretion, investigate the proposed development and report in writing its recommendations to the Board of Appeals.

- 4.46 The Board of Appeals shall not take final action on application for a Special Permit hereunder until it has received a report thereon from both the Planning Board and Conservation Commission, or until said Planning Board and Conservation Commission have allowed 35 days to elapse after receipt of such plan without submission of a report.

SECTION 4.5 OPEN SPACE COMMUNITY DEVELOPMENT

4.50 General Description & Purpose

An Open Space Community Development (OSCD) shall mean a principally residential development located on contiguous land and including dwelling units and accessory facilities owned individually and/or in common. In comparison to Conventional Residential Subdivision Development, an Open Space Community Development (OSCD) shall allow a mix of housing types and may allow the concurrent development of selected non-residential uses compatible with and supportive of the residential development. An OSCD may allow organized groups of households to construct dwelling units and common facilities for their collective and individual ownership and use. It is intended that an Open Space Community Development (OSCD) be a Development Method that is flexible in nature and allows for modification of lot size, bulk or type of dwelling, density, intensity of development, or required open space in the regulations of any district established by this Zoning Bylaw, so as to result in patterns of land use that are more compact and more efficiently laid out on a smaller area of a site, while preserving more open space and other natural and cultural features elsewhere.

Land not used for residential, approved non-residential or accessory purposes shall be permanently preserved as open space according to the methods hereinafter described.

It is expected that the following benefits may be gained through use of this Development Method:

- 4.500 Compact, economical and efficient layout, installation, construction and maintenance of buildings, streets, utilities and public facilities.
- 4.501 Efficient allocation, distribution and maintenance of common public and private open space.
- 4.502 Land development and uses that are harmonious with and which conserve, protect and enhance:
 - 4.502.0 Natural resources of the land, including critical resource areas such as wetlands, floodplains, wildlife habitat, greenbelts and farmland.
 - 4.502.1 Traditional resource-based land uses and practices, including farming, logging, aquaculture, and similar uses in order to preserve the cultural heritage of such uses in Amherst, as well as the traditional land development patterns and recreational opportunities resulting from and enabled by these traditional resource-based land uses.
 - 4.502.2 Historical and archeological resources, including buildings, structures, sites and materials.
- 4.503 Efficient use of land so as to increase the options for and the supply of affordable housing.
- 4.504 Housing development that allows for integration of a variety of housing types, including handicapped accessible housing, appropriate to various social and economic groups within any given development project.

4.51 Use Standards

- 4.510 The following Principal uses shall be permitted in an Open Space Community Development (OSCD):
 - 4.5100 One-family detached dwelling
 - 4.5101 Two-family or semi-detached dwelling
 - 4.5102 Subdividable dwelling

4.5103 Buildings or structures comprised of multiple dwelling units, as permitted under Section 4.534.

4.5104 Kindergarten, day nursery or other facility for the day care of children.

4.5105 If allowed in the underlying zoning district(s), buildings containing dwelling units in combination with stores or other permitted business or commercial uses (Section 3.325), where the Special Permit Granting Authority finds that, in addition to meeting the provisions of Section 10.38, the proposed use provides goods and/or services which will appropriately serve the households in the proposed residential development and the surrounding neighborhood.

4.511 The following aggregated accessory uses and facilities shall be permitted in an OSCD:

4.5110 Community building or common house including meeting rooms, kitchen and dining facilities for the use of residents and guests.

4.5111 Library

4.5112 Laundry

4.5113 Place of meditation or worship

4.5114 Office space

4.5115 Workshop/studio/trades building

4.5116 Other shared or common facilities for maintenance and other ancillary purposes serving the residential community.

4.52 Density Standards

4.520 The maximum density allowed in an Open Space Community Development shall be calculated as follows:

1. Determine the Net Parcel Area by subtracting 75% of the area of all Unbuildable Land Area from the total parcel acreage. Unbuildable Land Area shall consist of the combined acreage of all wetlands, FPC District and 100-year floodplain areas. 100-year floodplain areas shall consist of those areas so designated on federal flood insurance maps.
2. Subtract 8% of the Net Parcel Area for roadways, parking and utilities.
3. Divide the remaining buildable land area by the minimum lot area required in the applicable zoning district(s).
4. Multiply the resulting lot count by 1.2 (120%) to derive the maximum density. See Section 4.12.
5. Where no lots are to be provided in an OSCD, the maximum density resulting from this calculation shall serve as the total base dwelling unit count.

4.521 See Section 4.55 for density bonus provisions.

4.53 Dimensional Standards

4.530 Separate lots for residential dwellings shall be permitted, but are not required. If provided, the lots shall meet or exceed the minimum lot area requirements for cluster subdivisions for the applicable zoning district(s).

- 4.531 Where individual building lots are proposed, frontage need not be provided on an established way, nor shall the rear and side yard setbacks in Table 3 apply, except that non-zero lot line buildings shall be separated as required by applicable fire and building codes.
 - 4.532 For buildings containing no more than two dwelling units, zero lot lines shall be allowed in an OSCD, and side yards need not be provided on that side of a dwelling unit that shares a party wall or double wall with an adjacent dwelling unit. Where zero lot lines are proposed, maintenance easements and covenants shall be provided to ensure access for maintenance and utility repairs or replacement.
 - 4.533 Single-family dwelling units shall not comprise more than 50% of the total number of dwelling units.
 - 4.534 Up to four (4) dwelling units may be allowed in a single building in the R-N District. In other Residence districts, the number of units per building shall be as provided in the bylaw.
 - 4.535 Front setbacks shall be observed for the applicable zoning district(s), but the Special Permit Granting Authority may modify lot frontage and side and rear setback requirements to meet the needs of the development and public safety. Buildings shall be separated as required by applicable fire safety and building codes.
 - 4.536 A buffer zone of private property, common land and/or usable open space for active or passive recreation shall be provided along any edge of the residential portion of an OSCD that abuts adjacent or on-site farmland, in accordance with Sections 3.2855 and 3.2856.
- 4.54 Sanitary Sewer
- 4.540 The entire development shall be connected with the public sanitary sewer system, except that where such sewer connection is not reasonably available, the Board of Health may, in accordance with state and local health regulations, authorize development of and connection to a package sewage treatment plant, or individual or shared septic systems. The option of individual or shared septic systems shall not be available in the Aquifer Recharge Protection (ARP) or Watershed Protection (WP) overlay districts.
- 4.55 Density Bonuses
- It is the intention of this bylaw to encourage the provision of both affordable and handicapped accessible housing. Toward that end, where affordable and/or accessible units are proposed, additional housing units may be added to an OSCD above and beyond the maximum density provided for under Section 4.520.
- 4.550 Affordable Units
 - 4.550.0 In any OSCD that includes affordable dwelling units in accordance with Sections 4.333-4.334, the maximum density established under Section 4.520 may be increased by the number of affordable units proposed. Additional units allowed under this provision shall not exceed 20% of the maximum otherwise permitted under Section 4.520.
 - 4.550.1 Affordable units shall be geographically dispersed throughout the development, except that the Special Permit Granting Authority may, for compelling reasons of development function and site design consonant with the purposes of this Bylaw, allow such units to be clustered.

4.551 Accessible Units

4.551.0 In any OSCD that includes dwelling units fully handicapped accessible under the provisions of Massachusetts Architectural Access Board regulations (521 CMR), as amended, the maximum density established under Section 4.520 may be increased by the number of accessible units proposed, except that no accessible units may be counted as part of such a density bonus unless separate affordable dwelling units are also being provided. Additional accessible units allowed under this provision shall not exceed 10% of the maximum otherwise permitted under Section 4.520.

4.552 The combined additional number of affordable and accessible units allowed under this section shall not exceed 20% of the maximum otherwise permitted under Section 4.520.

4.553 Any dwelling unit which is both affordable and handicapped accessible shall, for purposes of calculating a density bonus under this section, be counted either as a single affordable unit or as a single accessible unit, but not both.

4.56 Common Land Standards

4.560 The following minimum percentages of total parcel area in an OSCD shall be retained as substantially undeveloped Common Land kept open and undeveloped for buildings, roadways and walkways, parking and utilities:

Zoning Districts

	<u>R-LD</u>	<u>R-O</u>	<u>R-N</u>	<u>R-VC</u>	<u>R-G</u>
Minimum % Open Space	75	65	60	50	50

4.561 A minimum of 50% of the Common Land in an OSCD shall be upland exclusive of wetlands, FPC District and 100-year-floodplain.

4.562 Common Land shall be laid out in large, contiguous areas as appropriate to its natural or cultural characteristics and its proposed use(s), as set forth under Sections 4.35, 4.38 and 4.502.

4.563 Common land ownership shall be as provided for under Section 4.35.

4.57 Open Space Community Development (OSCD) Design Requirements

4.570 Within an Open Space Community Development (OSCD), a minimum of 2,000 square feet per dwelling unit shall be usable open space for active and passive recreation. Usable open space shall be defined to include contiguous open space developed and available for play areas, tot lots, gardens, off-road trails (including but not limited to hiking, jogging, bridle and bicycle trails, as well as those paths and easements which provide access or connection to such trails, regardless of location), ball or playing fields, basketball or tennis courts or similar facilities as are appropriate to the needs of the development. Usable open space shall not include parking areas, roadways, sidewalks or land within wetlands as determined by the Conservation Commission (except as hereinafter provided). Up to 40 percent of total usable open space may be located in an FPC District and/or wetlands, as appropriate to the intended recreation use(s), in accordance with the provisions of Section 3.22, and as permitted by the Conservation Commission.

4.571 The design requirements of Section 4.38, Cluster Development Design Requirements, shall apply to an OSCD.

4.572 For an OSCD within the FC district, the design requirements of Section 3.285 shall apply. For an OSCD outside of the FC District, the provisions of Sections 3.2850, 3.2853, 3.2854, 3.2857-3.2859 shall apply.

4.573 Vehicular access, internal circulation and related parking shall be located and designed so as to minimize their impact on adjacent residential uses outside the OSCD.

4.58 Review and Approval Process

- 4.580 At the time of application for a Special Permit under this section, a minimum of thirty percent (30%) of the total dwelling units in an OSCD shall be under agreement for conveyance to parties who will occupy said dwelling units. At the time of occupancy of the first unit, and thereafter, a majority of the total dwelling units in an OSCD shall be owner-occupied, as defined under Article 12. Said requirement shall be enforced through covenants in homeowners or condominium association agreements, or similar documents, the review and approval of which documents shall be a condition of permit approval. The express intent of these provisions is to encourage the early and continuing involvement of residents in the design, development and management of an OSCD. These requirements shall be ongoing and shall be made a condition of the Special Permit.
- 4.581 The Special Permit Granting Authority for an Open Space Community Development (OSCD) shall be the Planning Board, in accordance with the provisions of Section 10.3, the purposes, standards and requirements of Section 4.5, and such other requirements of this bylaw as may be applicable.
- 4.582 Subsequent approval of such portion(s) of an OSCD as constitute a subdivision shall be required as set forth in the Subdivision Control Law, including approval of the streets and utility system. A favorable action which may be made by the Planning Board on a Special Permit application shall not, therefore, be deemed either to constitute subdivision approval under the Subdivision Control Law or the Rules and Regulations Governing the Subdivision of Land, nor to imply that subdivision approval will be granted.
- 4.583 Each application for an Open Space Community Development (OSCD) containing land within the Flood-Prone Conservancy (FPC) District shall be accompanied by an additional set of plans and documents for transmittal to the Conservation Commission. Within ten (10) days of receipt of the application, the Planning Board shall transmit a copy thereof to the Conservation Commission. The Commission shall, at its discretion, investigate the proposed development and report in writing its recommendations to the Planning Board within 35 days of the date of application. The Planning Board shall not take final action on approval of the application until it has received a written report from the Conservation Commission or until the 35 day period has passed without receipt of such a report.

ARTICLE 5 ACCESSORY USES

SECTION 5.00 GENERAL

SECTION 5.01 RESIDENTIAL

SECTION 5.02 LIGHT INDUSTRIAL DISTRICT

SECTION 5.03 OFFICE PARK & PROFESSIONAL RESEARCH PARK

SECTION 5.04 RETAIL BUSINESS/CONSUMER SERVICE USES

SECTION 5.05 SIGNS

SECTION 5.06 RECREATION

SECTION 5.07 SCIENTIFIC RESEARCH OR DEVELOPMENT

SECTION 5.08 CHILD CARE SERVICE

SECTION 5.09 FARM CONFERENCE CENTER

SECTION 5.10 FILLING OF LAND

SECTION 5.00 GENERAL

Any use which is, in Hampshire County, customarily accessory and incidental to a permitted Principal Use shall be permitted on the same lot with said Principal Use, or on a lot adjacent thereto in the same ownership, subject to the general limitation that it shall not be detrimental to the neighborhood or the property in the vicinity, and subject further to the following provision: Wherever a Principal Use is allowed by Special Permit from the Board of Appeals then Accessory Uses to the Principal Use shall be subject to a Special Permit, unless otherwise provided in this Article.

SECTION 5.01 RESIDENTIAL

5.010 Lodgers/Boarders/Roomers/Bed and Breakfast

5.0100 Lodgers/Boarders/Roomers/Bed and Breakfast - Maximum Three People. In any district, the taking of lodgers/boarders/roomers/bed and breakfast lodgers (maximum three people) shall be an accessory to the use of a dwelling unit, provided that:

5.01000 There shall be an owner who resides on the premises responsible for the operation.

5.01001 There shall be no separate cooking facilities. However, meals may be offered/provided to lodgers/boarders/roomers and breakfast may be provided to bed and breakfast lodgers.

5.01002 There shall be no substantial change to the exterior of the building.

5.01003 One parking space shall be provided for each room to be occupied by lodgers/boarders/roomers/bed and breakfast lodgers in addition to the parking required under Section 7.000.

5.0101 Lodgers/Boarders/Roomers/Bed and Breakfast - Four to Six People. In any district, the Zoning Board of Appeals may grant a Special Permit for the taking of lodgers/boarders/ roomers/bed and breakfast lodgers (four to six people) as a use accessory to the use of a dwelling unit, provided that:

5.01010 There shall be an owner who resides on the premises responsible for the operation.

5.01011 There shall be no separate cooking facilities. However, meals may be offered/provided to lodgers/ boarders/roomers, and breakfast may be provided to bed and breakfast lodgers.

5.01012 There shall be no substantial change to the exterior of the building.

5.01013 One parking space shall be provided for each room to be occupied by lodgers/boarders/roomers/bed and breakfast lodgers in addition to the parking required under Section 7.000.

5.01014 There shall be a maximum of five rooms available for rental to lodgers/boarders/roomers/bed and breakfast lodgers.

5.01015 A management plan, as defined in terms of form and content in the Rules and Regulations of the Zoning Board of Appeals, shall be included as part of any application made under this section. A register of all lodgers/boarders/ roomers/bed and breakfast lodgers shall be kept in accordance with the Rules and Regulations covering hotels and motels within the Commonwealth.

5.0102 Bed and Breakfast

In the R-VC District, the Zoning Board of Appeals may grant a Special Permit for the taking of bed and breakfast lodgers in up to 7 rooms as a use accessory to the use of a dwelling unit.

In the B-G, B-L, B-VC and B-N districts, the Zoning Board of Appeals may grant a Special Permit for the taking of bed and breakfast lodgers in up to 10 rooms as a use accessory to the use of a dwelling unit, and for limited bed and breakfast-related retail and consumer services as a second accessory use.

The Zoning Board of Appeals may grant a Special Permit for a use under this section, provided that, in addition to meeting the provisions of Article 7 and Section 10.38, the proposed use meets the following conditions:

5.01020 There shall be an owner who resides on the premises responsible for the operation.

5.01021 The building shall be connected to the public sewer prior to occupancy.

5.01022 There shall be no separate cooking facilities. However, breakfast may be provided to bed and breakfast lodgers.

5.01023 One parking space shall be provided for each room occupied by bed and breakfast lodgers in addition to the parking required under Section 7.000.

5.01024 Retail and consumer services shall be provided only to bed and breakfast lodgers, and shall be clearly secondary and incidental to the bed and breakfast use.

5.01025 A management plan, as defined in terms of form and content by the Rules and Regulations of the Zoning Board of Appeals, shall be part of any application made under this Section. Where retail and consumer services are proposed, such information as the Board of Appeals may require on those services shall be included in the management of this plan.

5.011 Accessory Dwelling Units (*Amended October 18, 2021; Effective November 1, 2021*)

Accessory dwelling units, as defined under this section, are intended to meet the changing housing needs of owner-occupied households, including housing for relatives and others associated with the household, and the provision of small, individual rental units. As accessory uses, accessory dwelling units are exempt from the additional lot area/family requirements of Table 3. Only one (1) accessory dwelling unit shall be permitted as accessory to a one-family detached dwelling.

5.0110 **Contained Accessory Dwelling Unit** - An accessory dwelling unit which is contained entirely within an existing or new one family detached dwelling and requires no significant external changes to the dwelling or site beyond entrances and windows required by the building code.

a. A Contained Accessory Dwelling Unit shall be permitted in the R-G, R-VC, R-N, R-O, and R-LD Districts, following review of the proposed accessory use by the Building Commissioner and verification that it meets the requirements of this Bylaw and the General Requirements found below in Section 5.0113.

5.0111 **Attached Accessory Dwelling Unit** – An accessory dwelling unit which is attached to and involves significant changes to the existing one-family detached dwelling, including but not limited to, external fire escape structures, exterior additions, and other similar changes which result in a significant alteration to the appearance and function of the building or site.

- a. An Attached Accessory Dwelling Unit shall be permitted in the R-G, R-VC, R-N, R-O, and R-LD Districts, following review of the proposed accessory use by the Building Commissioner and verification that it meets the requirements of this Bylaw and the General Requirements found below in Section 5.0113.

5.0112 **Detached Accessory Dwelling Unit** - A Detached Accessory Dwelling Unit shall be a small, freestanding, accessory, one-family, detached dwelling permitted to occur on a residential property as accessory and incidental to a one family detached dwelling. An accessory detached dwelling unit may be the result of new construction or rehabilitation of an existing structure resulting in a unit meeting the general requirements of this section.

- a. A Detached Accessory Dwelling Unit resulting from new construction with Habitable Space greater than 50% of the Habitable Space of the primary one-family dwelling, is allowed by a Special Permit from the Zoning Board of Appeals in the R-G, R-VC, R-N, R-O, and R-LD Districts.
- b. A Detached Accessory Dwelling Unit with Habitable Space less than 50% of the Habitable Space of the primary one-family dwelling, shall be permitted in the R-G, R-VC, R-N, R-O, and R-LD Districts, following review of the proposed accessory use by the Building Commissioner and verification that it meets the requirements of this Bylaw and the General Requirements found below in Section 5.0113.

5.0113 General Requirements. The following standards shall apply:

- a. Only one (1) accessory dwelling unit shall be permitted as accessory to a single-family detached dwelling.
- b. There shall be not more than 1,000 square feet of Habitable Space in any accessory dwelling unit.
- c. Either the principal one-family dwelling or the Accessory Dwelling Unit shall be occupied by the owner(s) of the principal one-family dwelling as their Principal Residence, which requirement shall be made a condition of any Special Permit approval or approval by the Building Commissioner, and restricted as such by a deed restriction filed with the Registry of Deeds.
- d. No one family detached dwelling may be used simultaneously for accessory lodging under any provision of Section 5.010, nor shall any accessory dwelling unit be so used.
- e. Notwithstanding the provisions of Section 12, an accessory dwelling unit shall be occupied by a total of no more than three (3) unrelated residents.
- f. The accessory dwelling unit shall meet the definition of a Dwelling Unit as defined in Section 12.
- g. The accessory dwelling unit and property shall be operated in accordance with a Management Plan submitted to and approved by the Building Commissioner. Upon any change in ownership, a new Management Plan shall be filed in a timely manner with the Building Commissioner for review and approval.
- h. Any dwelling unit on the property being rented shall be registered and permitted in accordance with the Residential Rental Property Bylaw.
- i. To the extent feasible, newly constructed Detached Accessory Dwelling Units shall be located behind the front building line of the primary structure.
- j. Parking shall be provided in accordance with Article 7.
- k. All exterior lighting shall be designed and installed so as to be shielded, downcast, and dark-

sky compliant to avoid light trespass onto adjacent properties.

- l. On-site storage and management of waste and recycling shall occur on the interior of the dwelling, within an attached garage or other accessory outbuilding, or screened appropriately from public view. There shall be no freestanding dumpster or storage unit associated with a property regulated under this section, except on a temporary basis in association with construction or similar temporary purposes.
- m. A reflective street address sign for each unit shall be installed at the street in a manner ensuring their visibility for public safety personnel from any approach.
- n. The accessory dwelling unit shall be designed so that the appearance and scale of the building is compatible with the primary single-family dwelling unit. Detached Accessory Dwelling Units shall be clearly accessory to the primary dwelling unit.
- o. The Building Commissioner or Permit Granting Authority shall determine the applicability of any provision of Section 10.38 when reviewing accessory dwelling unit applications.
- p. For Contained and Attached Accessory Dwelling Units, to the extent feasible, any new entrances shall be located on the side or rear of the building and any exterior changes must conform to the character of the neighborhood.
- q. The design review principles and standards established under Section 3.204 shall be applied to all accessory uses under this section, and the review and recommendation of the Design Review Board may be sought by the Building Commissioner, Permit Granting Board, or Special Permit Granting Authority.

5.012 Use of Residences for Business Purposes

The Town of Amherst encourages the responsible operation of accessory home business enterprises in appropriate locations, as a resource for employment and economic stability for Amherst residents. Such businesses must likewise be operated in a manner which preserves and protects the character and peaceful enjoyment of Amherst's existing residential neighborhoods.

It is the purpose of this section to appropriately regulate such uses, with the expectation that once a home business has grown to a size where its impacts are no longer appropriate in its original location, it will be moved to a more appropriate location in a business or industrial/research park district where it can be operated as a principal business use making a more significant contribution to the community's mix of goods and services and the local economy.

5.0120 The following categories of businesses (including professions and trades) may be conducted in or at a residence (dwelling) as an accessory use:

- 5.0120.1 Home Business — A business, profession, or trade conducted by a resident of the premises entirely within the residence or an accessory building on the same property, and involving only occasional business vehicular traffic to the property. Home businesses are permitted by right in all zoning districts subject to both the General Regulations (see below) and the following provisions:
 1. The business must be conducted entirely within the residence or an accessory building.
 2. Not more than two (2) persons other than residents shall be regularly employed in the business at the site.
 3. There shall be no exterior display, no exterior storage of materials or equipment, and no other variation from the residential appearance and character of the premises.

4. The business shall not generate traffic that is inconsistent with the traffic associated with the residence use, in either quantity or type.

5.0120.2 Customary Home Office or Occupation — A business, profession, or trade conducted by a resident of the premises and involving an increase in traffic resulting from clients, patients, associates, or employees.

Customary Home Offices or Occupations are permitted in all zoning districts by Special Permit from the Zoning Board of Appeals. However, if the proposed use is in compliance with both the General Regulations (see below) and the following provisions, a waiver may be granted by the Building Commissioner:

1. The business must be conducted entirely within the residence or an accessory building.
2. Not more than two (2) persons other than residents of the premises shall be regularly employed in the business at the site.
3. There shall be no exterior display, no exterior storage of materials or equipment, and no other variation from the residential character of the premises.
4. The business shall not necessitate more than (4) parking spaces for clients, patients, non-resident employees, or other business-related demands and is appropriately constructed in accordance with the provisions of this section and Article 7 of this Bylaw.

5.0120.3 Small Home-Based Contractor – A contracting business conducted by a resident of the premises and consisting of only an office and no external storage of materials. Small Home-Based Contractors shall be allowed without need for a Special Permit, subject to both the General Regulations (see below) and the following provisions:

1. The parcel on which the business is operated is within the RG, R-VC, R-N, R-O or R-LD districts.
2. Not more than two (2) vehicles associated with the business shall be parked at the site at any given time, excluding personal vehicles not typically used for the operation of the business.
3. Construction Vehicles shall not be stored or parked on-site, whether in a garage or out of doors.
4. The activities related to the business shall be conducted entirely within the residence or an accessory building.
5. The total footprint of buildings used for storage or garaging of vehicles or equipment associated with the business shall be no greater than 2,000 square feet.
6. The business shall not generate traffic that is inconsistent with the traffic associated with the residential use, in either quantity or type.
7. Any resident wishing to establish such a business shall submit a request to the Inspection Services Department on the Management Form provided, for review by the Building Commissioner. Special Permit approval will be required if the Building Commissioner determines that the proposed business does not meet the criteria of this category.

5.0120.4 Large Home-Based Contractor — A contracting business conducted by a resident of the premises who performs work off-site but uses the residence as a base of operations that may include an office and small-scale storage of materials. This

category is meant to serve the needs of contracting businesses with limited space needs, and to ensure that such accessory home business uses are located and operated in a manner that is reasonably compatible with the surrounding neighborhood. Large Home-Based Contractors are permitted by Special Permit from the Zoning Board of Appeals, in compliance with both the General Regulations (see below) and the following provisions:

1. The parcel on which the business is operated is within the R-N, R- O, or R-LD districts.
2. The parcel is a minimum of one (1) acre in area in the R-N District, or two (2) acres in area in the R-O and R-LD districts.
3. Not more than four (4) vehicles associated with the business, including a maximum of two (2) Construction Vehicles and including employee vehicles, shall be parked at the site at any given time, excluding personal vehicles not typically used for the operation of the business.
4. The activities related to the business may be conducted in part outdoors, but all such activities, equipment, and storage shall be permanently screened from the view of abutters and from public ways by buffers such as planting, fences, and/or topography.
5. Not more than one quarter (25%) of the total area of the subject parcel, exclusive of areas covered by buildings, shall be used for business activities, including outdoor storage or parking.
6. The total footprint of buildings used for storage or garaging of vehicles or equipment associated with the business shall be no greater than 2,000 square feet.
7. The Zoning Board of Appeals shall consider the capacity and condition of the road(s) serving the proposed business location with regard to the safety of residents in the vicinity, the types of vehicles to be used by the business, including delivery trucks, and the projected number of trips to and from the site.

5.0121 General Regulations. All categories of businesses are subject to the following requirements.

- 5.0121.0 The activity must be operated by residents of the dwelling unit.
- 5.0121.1 The activity must be clearly accessory to the primary use of the premises as a residence.
- 5.0121.2 The activity must not change the character of the premises or surrounding neighborhood. There shall be no window displays or other features not normally associated with a residential use.
- 5.0121.3 Required parking associated with the accessory business use shall be accommodated off-street and abide by the provisions of Section 7.1. To the greatest extent feasible, new or expanded parking areas shall be located at the side or rear of the residence or accessory buildings, and shall be screened from the view of abutters and from public ways (streets or pedestrian ways) utilizing plantings, fencing, and/or topography.
- 5.0121.4 Proof of compliance with all applicable environmental controls is required. This includes floodplain protection, aquifer protection, and the Wetlands Protection Act.
- 5.0121.5 All signage shall be installed in conformance with the sign regulations.

- 5.0121.6 Sound produced as a result of any activity associated with the accessory business use shall not generally exceed 70dB (A), as measured at any boundary of the subject property abutting another residential use.

5.0122 Waiver or Modification

As applicable, the Zoning Board of Appeals may waive or modify, any aspect of this section for compelling reasons of public safety, site design, or the public welfare consonant with the purposes of this section, this Article, and this Bylaw, including whether the applicant demonstrates to the satisfaction of the Commissioner or the Board that the use will not be detrimental to its surroundings, and the property's distance from adjacent dwellings and other uses, or other factors associated with the site, location, and proposal, will sufficiently prevent or mitigate potential impacts on the surrounding uses.

- 5.013 Livestock or Poultry - The raising or keeping of livestock or poultry for use by residents of the premises shall be considered as an accessory use to residential uses in selected residential districts in Amherst and shall not be permitted in other districts. All livestock and poultry raised and kept as an accessory use shall be raised and kept in a safe and humane manner consistent with best agricultural practices, and shall be subject to the regulations of this section and all applicable local and state laws. The accessory raising or keeping of livestock or poultry in residential districts:

- 5.0130 Shall be allowed by right in the Outlying Residence (R-O) and Low-Density Residence (R-LD) Districts;

- 5.0131 Shall be allowed in the General Residence (R-G), Village Center Residence (R-VC), and Neighborhood Residence (R-N) Districts under the following provisions:

- 5.0131.0 Only selected domesticated fowl (hens, ducks, pigeons, and doves) and domesticated rabbits (including domesticated hares) may be raised and kept as an accessory use. On such properties, no roosters, geese, swans, turkeys, pheasants, peacocks, guinea fowl, pygmy goats, potbellied pigs, or any other livestock or poultry shall be permitted, except under the provisions of a Special Permit granted by the Zoning Board of Appeals.

- 5.0131.1 No more than a combined total of twelve (12) total adult domesticated fowl and rabbits shall be kept on any property, regardless of the number of dwelling units. Only reproductively mature fowl and rabbits shall be considered adults counting toward this maximum.

- 5.0131.2 Domesticated fowl and rabbits shall be confined with fencing or other secure enclosure, which enclosure and any associated sheltering structure shall be set at least ten (10) feet from any property lines and twenty (20) feet from residential structures on any adjacent property. Within such an enclosure, a minimum of ten (10) square feet of open yard area shall be provided per adult animal. Upon receipt of a signed affidavit from all owners of property affected by a setback, in which said owners agree to a specific modification, the Building Commissioner may vary the setback from the property lines in question for enclosures, and for sheltering structures within the height and setback limitations established for accessory structures under Section 6.15.

- 5.0131.3 Within or attached to any such enclosure shall be provided a secure sheltering structure (e.g., coop, dovecote, hutch, or shed, as appropriate) of sufficient size to ensure the health and safety of the animals.

- 5.0132 In all cases, the accessory keeping and raising of livestock or poultry shall require registration of said livestock or poultry with the Amherst Health Department and shall permit regular inspections by the Animal Welfare Officer under applicable state and local law or regulations. All Special Permits issued under this section shall include as conditions of approval the submission of evidence of such registration.

- 5.0133 Any provision of Section 5.013, Livestock or Poultry, may be waived or modified under a Special Permit granted by the Zoning Board of Appeals for compelling reasons of public health, safety, and general public welfare.
- 5.0134 No provision of Section 5.013, Livestock or Poultry, shall apply to farm properties or agricultural operations recognized under MGL Ch. 40A, Section 3, as amended.
- 5.014 Garaging or Parking of Motor Vehicles
- 5.0141 Garaging or parking of one light panel, delivery or pick-up truck shall be considered to be a permitted accessory use in a residential district.
- 5.0142 Garaging or parking of larger commercial vehicles or more than one commercial vehicle may be allowed under a Special Permit, issued by the Board of Appeals.
- 5.015 Dwellings in Office, Research & Industrial Districts
- In any Office Park (OP), Professional Research Park (PRP) or Light Industrial (LI) District, dwelling units may be permitted as an accessory use on any lot where the dwelling unit or units are determined by the permit-granting authority to be necessary for the accommodation of a manager, custodian, security guard, or other employee essential to the operation of the principal non-residential use of the lot. This may include accommodation for such employee's immediate family or household. Not more than 10% of the gross floor area (GFA) of all buildings, as determined by the Building Commissioner, shall be devoted to such accessory residential use. A larger percentage of residential GFA may be allowed only if specifically authorized by the Board of Appeals under a Special Permit.
- 5.016 Trailer - A trailer or mobile home may be used on any lot for not more than 60 days in any twelve month period and shall be removed at the end of said 60 days, except as provided below:
- 5.0160 The owner or occupier of a residence which has been destroyed by fire or natural disaster may place a mobile home on the site of such residence and may, by right, reside in such mobile home for a period not to exceed twelve months while the residence is being built. Any such mobile home shall be subject to the provisions of the State Sanitary Code.
- 5.0161 The tenant of a commercial place of business which has been destroyed by fire or natural disaster may place a trailer on the site of such place of business and may, by right occupy such trailer for period not to exceed twelve months while the business premises are being built. Any such trailer shall be subject to the provisions of the Amherst Board of Health.
- 5.0162 In circumstances other than noted in Sections 5.170 and 5.171 above, the Board of Appeals may allow the use of a trailer or mobile home as a dwelling or commercial place of business for longer than 60 days, under Special Permit, provided that a time limit is imposed as part of such permit.
- 5.0163 A trailer may be used for a construction site office on a temporary basis, such trailer to be removed upon completion of the construction project.

SECTION 5.02 LIGHT INDUSTRIAL DISTRICT

Where clearly secondary and incidental to a manufacturing establishment or other Principal Use in a Light Industrial District, any of the following shall be considered as Accessory Uses:

- 5.020 Restaurant, company store, or similar facility for the convenience of and use by, employees on the premises;
- 5.021 Salesroom for selling at retail to the general public not more than 10% of any goods assembled, packaged, finished, processed or otherwise manufactured on the premises;
- 5.022 Regular open-air storage of materials, merchandise, products or equipment needed in connection with, or produced by, the Principal Use on the Premises, but only if such open storage is specifically authorized by a Special Permit from the Board of Appeals.

SECTION 5.03 OFFICE PARK & PROFESSIONAL AND RESEARCH PARK

A restaurant, company store, or similar facility for the convenience of, and use by, employees on the premises shall be considered an accessory use in the OP and PRP Districts.

SECTION 5.04 RETAIL BUSINESS AND CONSUMER SERVICE USES

- 5.040 The rental of automobiles, trucks, trailers and farm implements may be granted under a Special Permit as accessory to establishments selling motor vehicle fuel, related products and services.
- 5.041 Seasonal outdoor dining, including sidewalk cafes, courtyard or terrace dining and similar uses may be permitted in the B-G, B-L, B-VC, B-N and COM districts as an accessory use to: 1) a restaurant, café, lunchroom, cafeteria, refreshment stand, drive-up, fast-food eatery or similar eating establishment, or; 2) to a bakery, deli, or other similar establishment for the production and sale of food or beverage on the premises, or; 3) to a retail store or convenience store selling prepared and packed food or beverage on the premises, under a Special Permit or Site Plan Review approval, whichever is required for the principal use. In the case of a retail or convenience store selling prepared and packaged food on the premises, any unpackaged food or beverage such as ice cream or soft drinks sold in association with any accessory seasonal outdoor dining use shall be sold and served only through a limited-access walk-up window or similar facility, to be consumed out of doors.

In residential districts, seasonal outdoor dining may be permitted under a Special Permit as an accessory use to a farm stand restaurant. Where appropriate, health, fire and building permits have been obtained, seasonal outdoor dining uses may also include the outdoor preparation and cooking of food or beverages.

The following conditions shall apply to any seasonal outdoor dining permitted under this section:

- 5.0410 Except as may be specifically allowed under conditions attached to said Site Plan Review or Special Permit, no structure, framework, planter box, fence, wall or furnishing used in conjunction with the operation of an outdoor dining use shall be allowed to remain in the area so used between November 1 and the April 1 following thereafter. In the B-G District, such temporary structures and furnishings shall be exempt from the provisions of Sections 6.20 and 6.23. No such exemption shall apply to fixed or permanent structures or furnishings.
- 5.0411 Where a site for a proposed outdoor dining facility is partly or completely situated upon a sidewalk within the public way or upon other publicly-owned land, evidence of a lease and/or license allowing the use of the site by the applicant shall be provided prior to the issuance of an occupancy permit.
- 5.0412 The permit-granting authority shall receive from the Building Commissioner a statement that the outdoor dining use will not unduly hinder safe exit from or access to the establishment in the event of a fire or other emergency.
- 5.0413 Except as may be specifically allowed under conditions attached to said Site Plan Review or Special Permit, no wall or fence related to an outdoor dining facility shall have a height of more than four (4) feet. No such facility shall be equipped with free-standing heating and cooling devices or served by the HVAC system(s) of adjacent and associated buildings, except for fans.
- 5.042 Live or pre-recorded entertainment involving music and/or human voice, whether amplified or unamplified, may be permitted in the B-G, B-L, B-VC, B-N and COM districts as an accessory use to a restaurant, bar, inn or bed and breakfast (Section 5.0102 only) under a Special Permit or Site Plan Review, whichever is required for the principal use, except that a Special Permit shall be required whenever any accessory entertainment is proposed and any outside wall of that portion of the building occupied by the principal use is located 150 feet or less from a residential dwelling in a Residence district.

The following conditions shall apply to any entertainment permitted under this section:

- 5.0420 Such entertainment shall be clearly accessory and incidental to the principal use.

- 5.0421 Sound produced by the proposed entertainment shall not generally exceed 70 dB (A) as measured at any boundary of the property on which the establishment is located, as determined by the regulations adopted pursuant to Section 5.0422.
- 5.0422 In order to develop reasonable and effective conditions under this section, the Planning Board shall develop regulations for the measurement of sound undertaken under Section 5.0421, and may require such information as it may deem necessary. The permit granting board or authority may impose a probationary period involving one or more monitoring tests, including but not limited to sound measurements taken during live performances and/or use of sound systems. Permit conditions may include, but are not limited to, requirements for sound-proofing, limits on volume within rooms where entertainment occurs, and any other reasonable measures the permit granting board or authority may deem necessary.

5.043 Drive-Through Facilities

Any attached or free-standing structure designed or operated to provide goods or services for patrons who drive to the structure and remain in their vehicles while receiving said goods or services shall be considered a drive-through facility, and accessory to Principal Uses under this Bylaw. Stand-alone automated teller machines or similar unattended facilities shall be regulated under this section. Exceptions shall be drive-in restaurants (Section 3.352.2), automotive filling stations (Section 3.381) and car washes (Section 3.383), where associated drive-through facilities shall be considered part of the Principal Use and regulated accordingly. No drive-through facility shall be permitted in any zoning district except as hereinafter provided. Existing drive-through facilities accessory to any existing legal non-conforming use shall be regulated under the provisions of Section 9.2.

- 5.0430 No drive-through facility shall be permitted in the B-G, B-N, OP, PRP or LI Districts. Drive-through facilities may be permitted in those portions of the B-L District abutting the B-G District under a Special Permit issued by the Special Permit Granting Authority authorized to act under the applicable section of the Bylaw for the Principal Use.
- 5.0431 In the COM District and in those outlying B-L districts not abutting the B-G District, drive-through facilities may be permitted as accessory to any permitted retail or consumer service use, or motor vehicle related use under the applicable Site Plan Review approval or a Special Permit required for the associated Principal Use, either proposed or existing.
- 5.0432 A drive-through facility serving as the entrance/exit structure for the control of access, payment of access fees, and the like may be permitted as accessory to any extensive use, institutional use, governmental/public service use or public parking use in any zoning district under a Site Plan Review or Special Permit, whichever is required for the Principal Use. Where the associated Principal Use is permitted by right in the applicable zoning district, an accessory drive-through facility shall require Site Plan Review approval.

SECTION 5.05 SIGNS

Signs and advertising devices referring to the property itself, or to commodities or service customarily available on the premises, shall be considered Accessory Uses, subject to the restrictions set forth in Article 8, Sign Regulations.

SECTION 5.06 RECREATION

5.060 Swimming Pools

- 5.0600 Private Swimming Pools - In-ground or above-ground swimming pools, 24 inches deep or greater, may be considered accessory to the use of a dwelling unit provided such pool is used only by the residents of the premises and their guests, that no portion of the water area be closer than 20 feet to the front, any side or rear lot line, and that the pool be securely fenced to a height of not less than four feet, and that if such fence has a gate, it be a self-closing gate with a latch. No fence shall be required for above-ground pools if access to the pool, and any deck area surrounding the pool, is exclusively by means of ladders or stairs that are removable, retractable, or that may be secured in some other way so as to prevent access to the pool and the deck area surrounding the pool.

5.0601 Public and Semi-Public Swimming Pools - Refer to Massachusetts General Laws, Chapter 140, Section 206.

5.061 Recreation Ways - Specific provisions for transportation by bicycle, horseback and walking within the Flood-Prone Conservancy District shall be considered as an accessory use.

SECTION 5.07 SCIENTIFIC RESEARCH OR DEVELOPMENT

5.070 Uses accessory to and necessary in connection with scientific research, scientific development, or related production activities in districts where such activities are permitted under a Special Permit or Site Plan Review approval may be permitted as an amendment to the permit for the principal use provided that the Permit Granting Board or Special Permit Granting Authority finds that the proposed accessory use does not substantially derogate from the public good. Such an accessory use need not be located on the same parcel or parcels of land as the related principal use or activity permitted by right.

5.071 Limited manufacturing activity may be considered an allowed accessory use to a technical research and development office, laboratory, or research facility in the B-G, B-L, B-VC, COM, OP, PRP and LI districts, provided that the following requirements are satisfied:

5.0710 Such manufacturing activity shall be directly related to the research and development activities of the principal use.

5.0711 No manufacturing activity shall occur within two hundred (200) feet of a dwelling unit in a residential district, or within one hundred (100) feet of any dwelling unit in a non-residential district, including any accessory dwelling units under Section 5.015.

5.0712 No manufacturing, processing, or fabrication normally conducted under Sections 3.372.1 or 3.372.2, nor any on-premises sale of products shall be permitted in association with uses under this section.

5.0713 All manufacturing activity shall customarily occur inside of buildings; however, outdoor research work and incidental outdoor fabrication of equipment to conduct outdoor experimentation may be permitted under a Special Permit granted by the Special Permit Granting Authority authorized to act under the applicable section of the Bylaw and issued in conformance with the Standards and Conditions of the principal use and the provisions of Section 10.38.

5.0714 Manufacturing activity, excluding incidental fabrication of outdoor experiments, shall not occupy an area in excess of sixty (60) percent of the gross floor area of a building or group of associated buildings owned by the same establishment.

5.072 An airport or helipad shall not be considered an accessory use under this section.

SECTION 5.08 CHILD CARE SERVICE

5.080 A licensed family day care service for six (6) or fewer children shall be permitted as an accessory use, by right, in a one family dwelling, two family dwelling, converted dwelling, row house, and apartment. The adjacent tenants, adjacent neighbors and the property owner shall be notified by certified mail by the day care provider at least two (2) weeks prior to the establishment of the licensed family day care service. The Zoning Enforcement Officer shall be provided with a copy of the license to operate.

5.081 A licensed day care facility shall be permitted as an accessory use in the following zoning districts, provided that the Zoning Enforcement Officer is provided with a copy of the license to operate: R-F, B-G, B-L, B-VC, B-N, COM, OP, LI, PRP.

SECTION 5.09 FARMS

5.090 Farm Conference Center

The Board of Appeals may authorize, by issue of Special Permit, the use of a portion of a property as a Farm Conference Center, in the R-LD, R-O, and R-N Districts only, provided that:

- 5.0901 The use shall be located on a parcel of land of at least five acres in size, on which there is an existing principal use that is agricultural in nature.
- 5.0902 The Farm Conference Center uses shall be related to, and incidental to agricultural uses.
- 5.0903 The subject property shall have a lot frontage of at least 200 feet on a heavily travelled road and shall be located close to business, commercial and/or educational districts.
- 5.0904 All buildings associated with this use shall be connected to the public sewer system prior to occupancy.
- 5.0905 All buildings used for the conference center shall be located at least 100 feet from all property lines.
- 5.0906 The parking for such use shall be located at least fifty feet from all property lines and shall be screened from residential abutters.
- 5.0907 The Board of Appeals may authorize the provision of temporary accommodations in conjunction with the Farm Conference Center. However, no permanent or continuing residential occupancy shall be authorized under this section.
- 5.0908 Parking shall be provided in accordance with Section 7.002 of the Zoning Bylaw.

5.091 Farm Stand Restaurant

The Board of Appeals may authorize, by the issuance of a Special Permit, the use of a portion of a property as a farm stand restaurant in the R-LD, R-O and R-N districts only, provided that:

- 5.0910 The use shall be located on a parcel of land of at least five (5) acres in size on which there is an existing principal use that is agricultural in nature.
- 5.0911 The restaurant use shall be related to and incidental to the agricultural use and farm stand, and some of the food products served therein shall have been produced by the owner of the land on which the restaurant is located.
- 5.0912 The subject property shall have a frontage of at least 200 feet on a heavily travelled road and shall be located close to business and/or commercial districts.
- 5.0913 For the purposes of this section, the farm stand restaurant shall be deemed incidental to the principal use if the farm stand restaurant area accessible to the public does not exceed 40% of the total floor area in the building in which it is located which would not include any outside area eating accommodations as may be approved by the Special Permit Granting Authority.
- 5.0914 All buildings associated with this use shall be connected to the public sewer system prior to occupancy. The Board of Appeals may waive this requirement based upon a finding that public sanitary sewer is not reasonably available to the site, that such waiver is not detrimental to the neighborhood and that the existing or proposed septic system is in accordance with regulations of the Board of Health.

SECTION 5.10 FILLING OF LAND (See Sections 3.121 & 3.122)

Any filling of land accessory to the development of property, which raises the existing grade of any portion of a property 5,000 square feet or more in area by an average of two (2) feet or more, or any such filling which raises the existing grade of any portion of a property 2,000 square feet or more in an area by an average of five (5) feet or more shall require a Special Permit from the Special Permit Granting Authority authorized to act under the applicable section of the bylaw. Where no other permit is required under this bylaw for the proposed or existing principal use(s) of the property, such filling shall require a Special Permit from the Zoning Board of Appeals. In all cases, such filling shall be subject to the following conditions:

- 5.100 No slope created by the filling operation shall be finished at a grade in excess of the natural angle of repose of the materials.

- 5.101 All filled areas which are not to be built upon within one (1) year shall, upon completion of the operation, be covered with not less than four (4) inches of loam, brought to the finish grade, seeded and mulched in a satisfactory manner.
- 5.102 No permit for the filling of land shall be issued if such filling will: 1) endanger public health or safety; 2) constitute a nuisance; 3) result in a detriment to the normal use of the adjacent property; 4) cause significant erosion or sedimentation due to improper drainage design or management; or 5) result in traffic hazards in residential areas or excessive congestion, or physical damage on public ways.
- 5.103 In granting a permit for such an accessory use, Special Permit Granting Authority may impose reasonable requirements on grading, seeding and planting, barriers needed for public safety, control of erosion and drainage and other appropriate aspects of the use.
- 5.104 The Special Permit Granting Authority may require a suitable performance bond or other security adequate to ensure satisfactory compliance with provisions of this section.

ARTICLE 6 DIMENSIONAL REGULATIONS

- SECTION 6.0 OVERVIEW**
- SECTION 6.1 INTERPRETATION**
- SECTION 6.2 FENCES**
- SECTION 6.3 FLAG LOTS**
- SECTION 6.4 FRONTAGE LOTS**
- SECTION 6.5 LOTS WITHIN THE FLOOD PRONE-CONSERVATION DISTRICT**
- SECTION 6.6 EDUCATIONAL & RELIGIOUS USES**
- TABLE 3 DIMENSIONAL REGULATIONS**

SECTION 6.0 OVERVIEW

A lot may not be so reduced as to fail to satisfy any minimum dimension, area or yard required for a permitted principal use except as specified in Sections 4.3 and 4.4. Minimum lot area, frontage, setback and yard requirements, and maximum coverage and height limitations shall be prescribed in the following Table 3, "Dimensional Regulations."

Explanation of the column headings can be found in Section 6.1, Interpretation.

Dimensional regulations, shall be modified only as provided for under this Bylaw, including as indicated under Table 3 and its footnotes.

For non-conforming lots, see Section 9.1

For dimensional regulations in the Educational (ED) District, see Section 3.213

SECTION 6.1 INTERPRETATION

The following explanation shall apply to the column headings in Table 3.

6.10 Lot Area Requirements

- 6.100 A Buildable Lot shall contain either 90% of its total lot area, or 20,000 square feet, in contiguous upland acreage.
- 6.101 Basic Minimum Lot Area - Except as herein specified, no dwelling or other principal building shall be constructed or used on a lot having less than the prescribed basic minimum lot area in square feet.
- 6.102 Cluster Minimum Lot Area - No dwelling or other principal building in a Cluster Development shall be constructed or used on a lot having less than the prescribed cluster minimum lot area, in square feet.
- 6.103 Additional Lot Area Per Family - No dwelling for use by more than one family shall be constructed, converted, or occupied unless the lot contains at least the basic minimum area plus the prescribed additional area per family for each family in excess of one.

6.11 Standard Lot Frontage and Cluster Lot Frontage

- 6.110 Except as herein specified, no dwelling or other principal building shall be constructed or used on a lot having less frontage on a street than the prescribed minimum standard lot frontage, or cluster lot frontage in cluster development.
- 6.111 Such frontage shall be measured along a continuous street right-of-way line on which the lot abuts, except that the frontage of lots on the convex side of a curve in a street may be taken as the straight distance between the points on the side lot lines intersected by the prescribed minimum setback line. In the case of lots which have more than one-half of their frontage along the curve of a permanent turnaround (at the end of a dead end street) or of a similar curved street segment serving no more than six (6) dwelling structures, said straight distance between the points on the side lot lines need

not exceed seventy (70) percent of the prescribed minimum. On corner lots, where the included angle is less than 135 degrees, either street may be considered as the frontage street, but not both together. This requirement shall not apply to dwellings in a Planned Unit Residential Development.

6.112 In the General Business (B-G), Limited Business (B-L), Commercial (COM), Village Center Business (B-VC) and Neighborhood Business (B-N) districts, frontage requirements apply to Residence Uses only (Section 3.32).

6.12 Minimum or Maximum Front Setback

6.120 The minimum front setback shall be determined by a line parallel to the street right-of-way line extending from one side lot line to the other. No part of any building, except eaves, gutters, architectural elements, and uncovered steps, and no accessory structure (other than a sign) having a height of more than four (4) feet shall be placed within or protrude into the area between the setback line and the street line. In the case of corner lots, the setback line shall be observed for all bordering streets.

6.121 In the General Business (B-G) District, the 20 foot minimum front setback applies only to a part of a building which is within 200 feet of the side boundary of a Residence District abutting on the same street within the same block; otherwise, no setback is required.

6.13 Minimum Side Yard

6.130 The minimum side yard shall be the area between the side lot line and the side yard setback line, extending from the front yard to the rear lot line. No part of the body of any building or accessory structure, except eaves, gutters, architectural elements, and uncovered steps, shall be placed within or protrude into the area between the side lot line and the side yard setback line. An accessory structure may be located within the minimum side yard only if it is located behind the front building line.

6.131 An accessory structure having a height of six feet or less shall be set back a minimum of three feet from the side lot line. An accessory structure over six feet in height shall be setback a distance equal to its height.

6.132 In the General Business (B-G), Neighborhood Business (B-N), and Light Industrial (LI) districts, minimum side yards shall be at least 20 feet when adjoining a residence district. Otherwise, side yards are not required, but if provided, shall be at least 10 feet.

6.133 In the Office Park (OP) and Professional Research Park (PRP) districts, except as may be provided for specific uses, side yards shall be at least 50 feet when adjoining a residence district. Otherwise, side yards shall be at least 10 feet.

6.134 In the General Residence (R-G) District, a single-story garage, tool shed, gazebo or similar accessory structure may, under a Special Permit, be located within the side yard behind the frontline of the principal building if such use, location, and proposed dimensions are consistent with the prevailing pattern of existing development for such structures in the neighborhood.

6.135 In the General Residence (R-G), Neighborhood Residence (R-N), and Village Center Residence (R-VC) districts, a side yard need not be provided on one side of a single family dwelling if it shares a party wall or double wall with a single family dwelling on the next lot built at the same time.

6.136 For towers or other structures associated with commercial and public wireless communications uses, the provisions of Section 3.340.2 shall apply and prevail.

6.14 Minimum Rear Yard

6.140 The minimum rear yard shall be a similar unbroken area along the rear lot line, subject to the same provision regarding accessory buildings and structures as the rear portion of the required side yard. No part of the body of any building or accessory structure, except eaves, gutters, architectural

elements, and uncovered steps, shall be placed within or protrude into the area between the side lot line and the side yard setback line.

- 6.141 In the General Business (B-G), Neighborhood Business (B-N), and Light Industrial (LI) districts, minimum rear yards shall be at least 20 feet when adjoining a residence district. Otherwise, rear yards are not required, but if provided, shall be at least 10 feet.
- 6.142 In the Office Park (OP) and Professional Research Park (PRP) districts, except as may be provided for specific uses, rear yards shall be at least 50 feet when adjoining a residence district. Otherwise, rear yards shall be at least 10 feet.
- 6.143 For towers or other structures associated with commercial and public wireless communications uses, the provisions of Section 3.340.2 shall apply and prevail.

6.15 Maximum Building Coverage

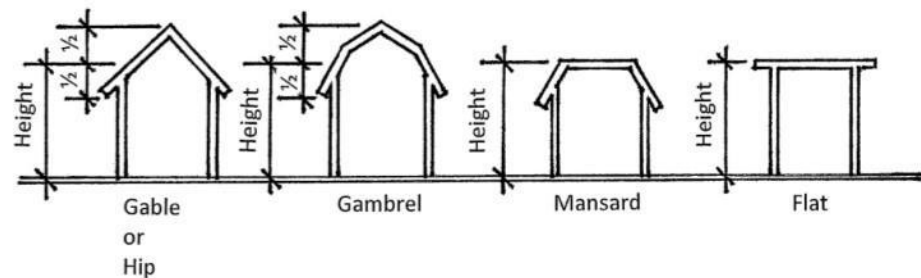
- 6.150 Maximum building coverage shall be computed as the percentage of the total lot area which may be covered by all principal and accessory buildings and structures. For the purposes of the subsection, a portion of a lot shall be considered as being covered by a structure if it is enclosed on at least three sides by a wall or other substantially sight-impervious fence more than six feet high (whether or not having a roof), or if it has any part of any structure above it in a vertical line.
- 6.151 In the case of a Cluster Development as defined in Section 4.3, building coverage shall be calculated as the percentage of the total area of the development which may be covered by all principal and accessory buildings and structures.

6.16 Maximum Lot Coverage

- 6.160 Maximum lot coverage shall include the percentage of a lot covered in the manner described in Section 6.17, Maximum Building Coverage, plus that portion of a lot covered by driveways, parking areas, walkways, tennis courts, swimming pools or other similar surfaces.
- 6.161 For the purposes of this Bylaw, all such surfaces, whether constructed of impermeable materials (i.e., concrete, bituminous asphalt, oil and stone and the like) or constructed of permeable materials (i.e., gravel, pea stone and the like) shall be included in the calculation of maximum lot coverage.
- 6.162 In the Watershed Protection (WP) overlay district, no use of land shall result in the rendering impermeable of more than 15% of the total area of any lot, or more than 20% with artificial recharge, or a total of 2,500 square feet, whichever is greater.

6.17 Minimum and Maximum Height

- 6.170 In all districts, the minimum or maximum height of a building shall be measured as the vertical distance from the average finished grade on the street side of the structure to the highest point of the roof for flats roofs, to the deck line for mansard roofs, and to the average height (midpoint) between the highest eaves and ridge of the main body of the roof for gable, hip, shed, saltbox, and gambrel roofs, or combinations thereof.



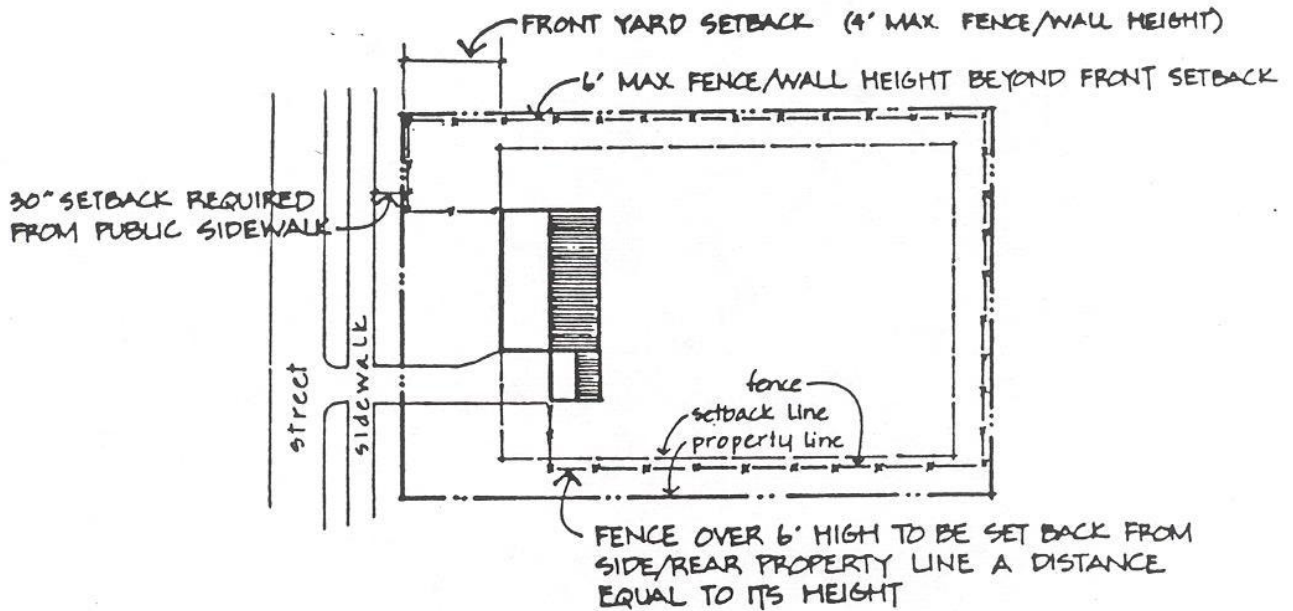
Section 6.17—Building Height

- 6.171 In the B-G, B-L, B-VC, B-N, COM, and R-VC districts, the maximum height of buildings may be modified under a Special Permit granted by the Special Permit Granting Authority authorized to act under the provisions of this bylaw for compelling reasons of building function, utility, or design, including but not limited to allowing construction of the full number of maximum floors under difficult site conditions such as steep grades, or with a pitched roof design, or similar conditions. In granting any such modification, the Special Permit Granting Authority shall consider the patterns of height and roof styles established by existing buildings, structures, and landscape features in the surrounding area, and provided that in no case shall the height of any exterior face of a building exceed the permitted height by more than ten (10) feet.
- 6.172 Height limitations shall not apply to chimneys, spires, cupolas, TV antennae and other parts of buildings or structures not intended for human occupancy. Towers, antennae, panels, dishes and other such structures attached to a building in association with commercial and public wireless communication uses shall not exceed the maximum height of said building, as above defined, by more than ten feet. Related electronic equipment and equipment structures shall not exceed the maximum height. For towers and other such free-standing structures associated with wireless communications uses, the provisions of Section 3.340.2 shall apply and prevail.
- 6.18 Minimum or Maximum Floors
- 6.180 A floor or story in a residential or non-residential building shall be considered to be that portion of a building, other than a half-story in a top floor (attic) or basement, between any floor and the ceiling or roof next above it, as measured under the Massachusetts Building Code.
- 6.181 A half-story in a top floor shall be a lawful habitable space with required means of access and egress and in which a minimum seven (7) foot floor-to-ceiling height exists in at least half of the habitable floor area but no less than one-third of the habitable floor area of the full story below.
- 6.182 A basement half story shall be any lawful habitable space with required means of access and egress and in which a minimum seven (7) foot floor-to-ceiling height exists in at least half of the habitable floor area but no less than one-third of the habitable floor area of the full story above, and where more than half of the habitable space is located above the average finished grade of the exterior of the building.

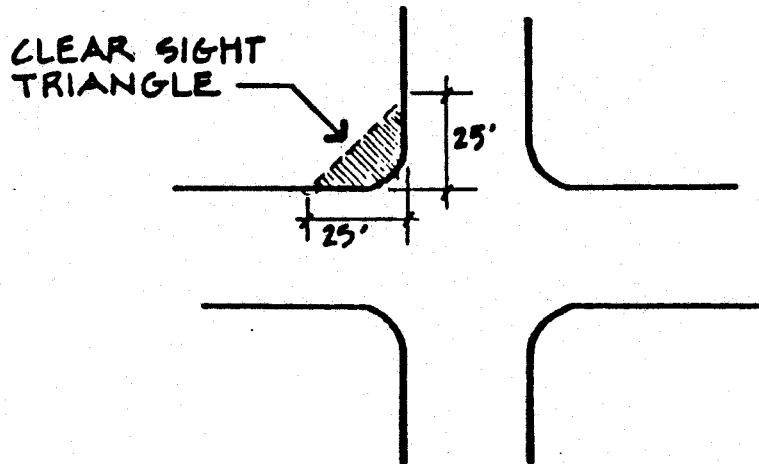
SECTION 6.2 FENCES

- 6.20 Fences – Fences, walls, or any similar structure, shall be considered accessory structures and shall be permitted within the required front, side, and rear yards subject to the conditions and requirements of Sections 6.22 through 6.29, except that fences in the B-G and abutting B-L Districts and in the B-VC and B-N Districts shall require approval of the Permit Granting Board or Special Permit Granting Authority with jurisdiction over the proposed or existing Principal or accessory use(s) for which the fence serves as an accessory structure.
- 6.21 Plantings/Shrubbery - Landscape plantings shall be permitted in the required yards subject to the conditions and requirements of Sections 6.23 and 6.27.
- 6.22 Fences associated with agricultural uses on parcels of land of five (5) acres or larger are exempt from the regulations of Sections 6.2. Razor fences are prohibited.
- 6.23 All privately owned fences or walls shall be erected on private property and shall be no closer to any public sidewalk than thirty (30) inches. No landscape plantings shall intrude into or over a public sidewalk for a height of eight feet above the sidewalk.
- 6.24 Fences and walls shall not exceed four (4) feet in height along the front lot line and that portion of the side lot lines between the front lot line and the minimum front setback line. Fences and walls shall not exceed six (6) feet in height along that portion of side lot lines between the minimum front setback line and rear lot line, and along the rear lot line.

- 6.25 Fences located within the side or rear yards and exceeding six feet in height shall be set back a distance equal to their height.



- 6.26 All fences, including temporary construction fences, but excepting agricultural fences as defined in Section 6.22, shall require a building permit.
- 6.27 On corner lots, no fence, wall or landscape/plantings shall be located within the clear sight triangle so as to obstruct visibility at the intersection in a manner that will jeopardize the safety of vehicles and pedestrians. The clear sight triangle is that area formed by the intersecting street lines and a straight line joining said street lines at a point twenty-five (25) feet distant from the point of intersection of street lines.



- 6.28 Temporary fences on construction sites may be a maximum height of eight (8) feet to protect the site, providing the fence meets the requirements of Section 6.27. The Building Commissioner, upon the issuance of a building permit, may set a limit as to the length of time the fence may remain erected.
- 6.29 Under the provisions of Section 10.38 or 11.24, as applicable, fence, wall, and planting requirements as found in Sections 6.23 through 6.28 may for compelling reasons of safety, aesthetics, or site design be modified by the Permit Granting Board or Special Permit Granting Authority with jurisdiction over the proposed or existing Principal or accessory use(s) for which the fence serves as an accessory structure.

SECTION 6.3 FLAG LOTS

In the Office Park (OP), General Residence (R-G), Village Center Residence (R-VC), Neighborhood Residence (R-N), Outlying Residence (R-O), and Low Density Residence (R-LD) Districts only, individual lots which do not have the required amount of street frontage may be permitted under the following conditions:

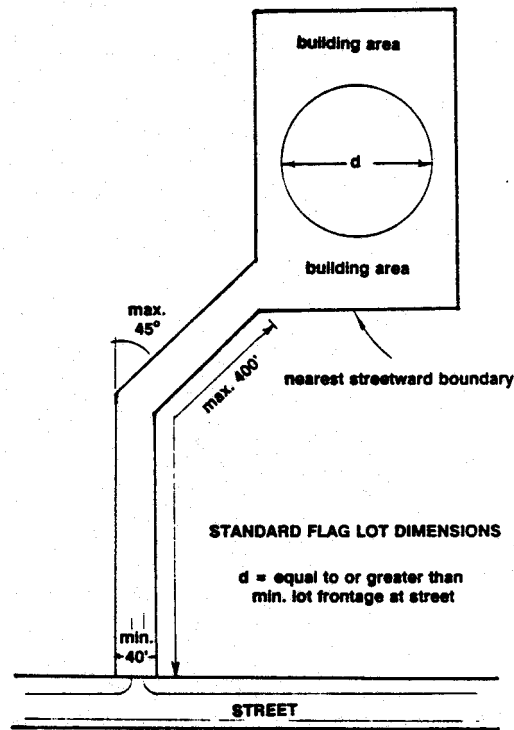
- 6.30 Any such lot which is included within a Definitive Subdivision Plan may be allowed by the Planning Board provided the lot meets all of the requirements of Section 6.32 through Section 6.37.
- 6.31 Any such lot which is not part of an Approved Definitive Subdivision Plan, may be allowed by the Zoning Board of Appeals by Special Permit provided that the lot meets all of the requirements of Section 6.32 through 6.37.
- 6.32 The area of each flag lot, exclusive of the access strip, shall be at least double the minimum lot area normally required for that district, except in a Cluster Subdivision, in which case it shall be at least double the minimum lot area required for a cluster lot in that district. In the FC District, the area of flag lots shall be as provided for in Sections 3.2832, 4.3281 and 4.3282.
- 6.33 Each lot shall have an access strip with a minimum street frontage of forty feet, a minimum width of forty feet at any point between the street and the principal building, and a maximum length of four hundred feet, after which distance the access strip shall end and the building area of the lot shall begin. Where driveway access to a principal building is achieved over the access strip of the lot, then said access strip shall have no change of direction greater than 45 degrees.

For any flag lot included within a Definitive Subdivision Plan, the Planning Board may allow an access strip in excess of 400 feet as part of its subdivision approval if it judges the proposed modification to be in conformance with the intent of Sections 6.330-6.335.

For any flag lot which is not part of a Definitive Subdivision Plan, the Zoning Board of Appeals, acting as the Special Permit Granting Authority, may allow an access strip in excess of 400 feet upon a finding that such a modification will:

- 6.330 Not have a substantial detrimental impact on the declared intent and purposes of any overlay district in which the land is situated.
 - 6.331 Not create an undue safety hazard.
 - 6.332 Not have a substantial adverse environmental impact on groundwater quality, wetlands, significant wildlife habitat, prime farmland or other environmentally sensitive resources.
 - 6.333 Not remove, destroy or obstruct prominent natural features and views.
 - 6.335 Not remove, destroy or irrevocably alter significant historical, archeological and/or cultural resources.
- 6.34 The width of that portion of the lot where the principal building is to be constructed, known as the building area, shall equal or exceed the distance normally required for street frontage in that district. Said width shall be measured along the nearest continuous streetward boundary of the building area of the lot. In a Cluster Subdivision, the width of the lot where the principal building is to be constructed shall equal or exceed the distance required for cluster lot frontage in that district.

- 6.35 That portion of a flag lot within which the principal building is to be located shall be considered the building area. The building area of a flag lot shall be capable of containing a circle whose diameter is equal to or greater than the minimum standard street frontage required in the district where the flag lot has its frontage, without any portion of said circle falling outside of the property.

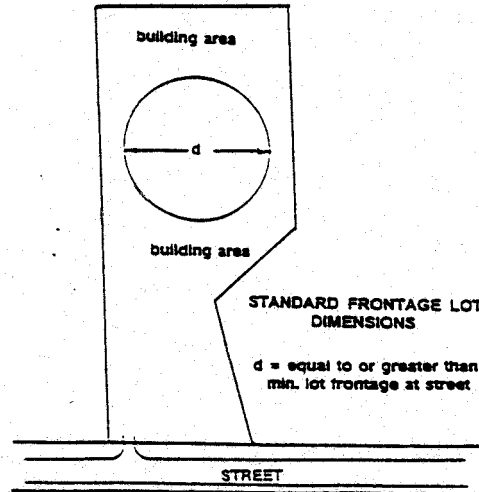


SECTION 6.35 - ILLUSTRATION
For Informational Purposes Only

- 6.36 There shall be no more than three flag lots adjacent to each other at the street line.
- 6.37 Access to the lot shall meet the requirements of Section 7.7.
- 6.38 There shall be no more than three (3) flag lots created from any land identified, according to the records of the Assessor's office, as a single parcel of land as of the effective date of this Section (11/9/87) unless such flag lots are proposed as part of the Definitive Subdivision.

SECTION 6.4 FRONTAGE LOTS

6.40 That portion of a frontage lot within which the principal building is to be located shall be considered the building area. The building area of a frontage lot shall be capable of containing a circle whose diameter is equal to or greater than the minimum standard street frontage required in the district where the lot has its frontage, without any portion of the circle falling outside of the property.



SECTION 6.40 - ILLUSTRATION
For Informational Purposes Only

SECTION 6.5 LOTS WITHIN THE FLOOD PRONE-CONSERVANCY DISTRICT

If any portion of a lot falls within the Flood Prone-Conservancy District, that portion may be used to meet the minimum lot area and yard requirements for the District in which the remainder of the lot is situated.

SECTION 6.6 EDUCATIONAL AND RELIGIOUS USES

The dimensional regulations shown in Table 3 shall apply to all educational and religious uses located in the zoning districts listed, except as provided for below:

6.60 All structures approved after January 1, 1994, by a permit granting authority for educational or religious uses shall have minimum front, side and rear setbacks twice the distance shown in Table 3 for that zoning district, except in the B-G District where the setbacks in Table 3 shall apply.

TABLE 3 - DIMENSIONAL REGULATIONS

Zoning District	R-LD	R-O	R-N	R-VC	R-G	R-F	B-G	B-L	COM	B-VC	B-N	OP	LI	PRP	FPC	ED
Basic Minimum Lot Area (sq. ft.)	80,000	30,000	20,000	15,000	12,000 ^m	20,000	12,000 ^b	20,000 ^b	20,000 ^b	12,000 ^b	15,000 ^{ab}	40,000 ^a	30,000 ^a	80,000		
Additional Lot Area/Family (sq. ft.)	10,000	10,000	6,000	4,000	2,500 ^{am}	1,250 ^{ab}	4,000	4,000	2,500 ^{ab}	1,500 ^{ab}						
Basic Minimum Lot Frontage (ft.)	200	150	120	120	100	100	40 ^b	125 ^b	125 ^b	60 ^b	100 ^b	100 ^a	100 ^a	200		
Basic Minimum/Maximum Front Setback (ft.) ^a	30	25	20	15	15	20	0/20	20	20	10/20	10	30	20	20	40	40
Basic Minimum Side and Rear Yards (ft.)	20	25	15	15	10	10	10 ^a	25 ^a	25 ^a	10 ^a	10 ^a	10	10	10	20	20
Maximum Building Coverage (%)	10	15	20	25 ^a	25 ^a	45 ^a	70 ^a	35	35	35 ^a	35 ^a	20	25	25	10	10
Maximum Lot Coverage (%)	15	25	30	40	40	65 ^a	95 ^a	85	70	70	65 ^a	70	65	70	15	15
Maximum Floors ^a	2 ½	2 ½	3	3	3	5	5	3	3	3	3	2 ½	3	3	3	1
Minimum/Maximum Height (ft.) ^a	35	35	35	35	40	55 ^a	55	35	35	16/40	40	35	50	35	20	20

See Section 3.213

TABLE 3 – DIMENSIONAL REGULATIONS
FOOTNOTES

- a. Requirement may be modified under a Special Permit, issued by the Special Permit Granting Authority authorized to act under the applicable section of this bylaw. In applying the criteria established in Section 10.395, the Special Permit Granting Authority shall consider the proposed modified dimensional requirement in the context of the pattern(s) of the same dimensions established by existing buildings and landscape features in the surrounding neighborhood.
- b. Applies to Residence Uses only (Section 3.32). In the B-G, B-VC and B-N districts, the Basic Minimum Lot Area shall apply only to the first dwelling unit on the ground floor of subdividable dwellings and converted dwellings. For townhouses, apartments, buildings containing dwelling units in combination with stores or other permitted commercial uses, and other permitted multi-unit residential uses in these districts, the Basic Minimum Lot Area, Additional Lot Area/Family, and Basic Minimum Lot Frontage requirements shall not apply.
- m. In addition to the areas required by this table for any existing dwelling units on the lot, the density for new town houses (Section 3.322) and apartments (Section 3.323) shall not exceed one dwelling unit per 4,000 sq. ft. of the remaining lot area, or in the case where there are no existing dwelling units, 4,000 sq. ft. for each new dwelling unit beyond the first unit.

ARTICLE 7 PARKING & ACCESS REGULATIONS

SECTION 7.0	GENERAL REQUIREMENTS
SECTION 7.1	DESIGN STANDARDS AND LANDSCAPE STANDARDS
SECTION 7.2	COMMON FACILITIES
SECTION 7.3	LOADING AREAS
SECTION 7.4	MUNICIPAL PARKING DISTRICT
SECTION 7.5	ACCESSORY PARKING
SECTION 7.6	HANDICAPPED PARKING
SECTION 7.7	ACCESS REQUIREMENTS & INDIVIDUAL DRIVEWAYS
SECTION 7.8	BICYCLE RACKS
SECTION 7.9	WAIVERS

SECTION 7.0 GENERAL REQUIREMENTS *(Amended December 6, 2021; Effective December 20, 2021)*

7.00 In all districts except Educational Districts and Municipal Parking (MP) Districts, off-street parking spaces shall be provided and maintained in connection with the construction, conversion or increase in dwelling units or dimensions of buildings, structures or use. The provisions of this section shall apply to parking spaces for cars, vans, light trucks, and similar vehicles used predominantly for personal transportation. Parking for commercial vehicles or vehicles used for private or public transit shall be governed under the provisions of Sections 7.1, 7.3 and 7.5. Except as may be required otherwise by the Permit Granting Board or Special Permit Granting Authority, as applicable, parking spaces shall be provided in the following amounts.

7.000 For dwellings, including apartments:

- 7.0000 Two (2) parking spaces for each dwelling unit shall be provided unless the Permit Granting Authority determines that an alternative ratio ensuring adequate parking for the proposed use will be provided. The Permit Granting Authority shall determine the adequate number of off-street parking spaces based on criteria such as:
 - bedroom count;
 - traffic impact, as identified in traffic reports;
 - parking utilization, as documented through surveys of parking, within 800 feet of the proposed use;
 - peak parking needs generated by on-site uses;
 - proximity to downtown;
 - proximity to public transit;
 - availability of alternative modes of transportation;
 - tenant lease restrictions relative to parking; and
 - shared or leased parking, as regulated in accordance with Section 7.2.

The Permit Granting Authority may require the applicant to hold sufficient land in reserve in order to provide additional parking spaces that might be required to be built at a later time (shadow parking/landscape parking reserve). All or portions of the said reserve shall be indicated on the approved site plan. As condition of the approved permit, the Permit Granting Authority shall specify the factors that would require the shadow parking to be built. As long as the additional parking is not required to be built, the reserve shall be designed and maintained as naturally vegetated open space.

The Permit Granting Authority may require the applicant to submit a Transportation Demand Management Plan for review and approval. The said plan shall include implementation measures to be imposed by the applicant in order to reduce parking utilization and vehicle trips of tenants and visitors associated with the approved permit.

Implementation measures may include:

- car and van pooling,
- offering subsidies for transit,
- furnishing bicycle facilities, and
- providing shuttle service to/from off-site parking facilities.

Periodic documentation of reductions in vehicle trips and parking utilization, as a result of the approved Transportation Demand Management Plan may be required as a condition of any permit granted under this section.

The Permit Granting Authority shall require the applicant to submit a parking management plan for review and approval. The said plan shall explain how parking will be managed and enforced by the applicant.

In addition, the amount of parking spaces provided for each dwelling unit shall satisfy the provisions of Section 10.38 and 11.24, as applicable.

- 7.0001 Parking spaces for cars or similar vehicles shall be on a paved surface such as concrete, bituminous asphalt, masonry pavers, oil and stone, gravel, trap rock, or a similar material (see Section 7.101).
- 7.0002 In any residential district, there shall be a maximum of two (2) cars or similar vehicles allowed to be parked in the front setback of any property. Parking in the front setback shall be on paved surfaces only. Where five (5) or more cars are regularly parked on a given property in association with a residential use, parking in the front setback shall be designed so as to ensure free passage at all times for regular users and unrestricted access for emergency vehicles.
- 7.001 For all other places with sleeping accommodations, including rooming houses, lodging or boarding houses, fraternity and sorority buildings, hotels, motels, inns, bed and breakfasts, hospitals, and nursing homes - one (1) parking space for each bedroom for single or double occupancy; or, where not divided into such rooms (as in a dormitory or ward) - one (1) space for every two beds. For hostels, one (1) parking space shall be provided for every five (5) beds.
- 7.002 For places of public assembly, including libraries, museums, clubs, restaurants, theaters, bowling alleys and other amusement centers, funeral establishments, trade schools and bus depots - one (1) parking space for each four (4) seats or, where benches are used, one (1) space for each eight (8) lineal feet of bench. Where no fixed seats are used (as in a museum), there shall be one (1) parking space provided for each 80 square feet of public floor area.
- 7.003 Religious and Educational Uses
 - 7.0030 For places of public assembly for educational or religious use, one (1) parking space for every four (4) seats, or where benches are used, one (1) space for each eight (8) lineal feet of bench. Where standing room and/or seating on the floor is to be used, there shall be one (1) parking space provided for each 80 square feet of public floor area.
 - 7.0031 For each meeting hall, social center or other similar place(s) of assembly used for religious purposes there shall be at least one (1) parking space for every four (4) seats. These parking spaces shall be in addition to the parking spaces required in Section only if there is substantial regular, concurrent use of the place(s) of assembly on the property.
 - 7.0032 Dwelling place of a religious community. For each convent, monastery, or like dwelling place of a religious community, there shall be at least one (1) parking space for every three (3) bedrooms for single or double occupancy, or for every three (3) beds in group sleeping quarters.
- 7.004 For all retail, office and similar uses:
 - 7.0040 In the B-G, B-VC, B-N and B-L (abutting B-G and B-VC only) districts, and on any lot within a COM District that abuts a B-VC or R-VC District or is within or abuts a National Historic Register District - 3.3 parking spaces per 1,000 square feet of gross first floor area, plus 2.5 spaces per 1000 square feet of GFA (gross floor area), exclusive of storage space, on all other floors.
 - 7.0041 In the B-L and COM Districts (exclusive of those areas cited in 7.0040) and the OP, PRP and LI Districts, the parking requirement shall be the sum of the following:
 - 3.3 spaces/1,000 sq. ft. for the first 10,000 sq. ft. of GFA; plus
 - 2.5 spaces/1,000 sq. ft. for GFA between 10,001-12,500 sq. ft.; plus
 - 2.0 spaces/1,000 sq. ft. for GFA over 12,500 sq. ft.

- 7.005 For all other permitted uses, including veterinary establishments, day nurseries, farm stands, open lots sales or storage yards, building trades establishments, storage or distribution plants, office uses under Section 3.360, and all other commercial uses, adequate parking spaces to accommodate under normal conditions the cars of occupants, employees, members, customers, clients, and visitors to the premises.
- 7.01 Except in the Office Park (OP), Professional Research Park (PRP) and Light Industrial (LI) Districts, off-street parking spaces required herein shall be provided either on the lot with the principal use, or on any other associated premises within 800 feet. In the OP, PRP and LI Districts, all required off-street parking shall be contained within said Districts.
- 7.02 Within an Educational District, adequate off-street parking shall be provided so that neither curb parking on public streets nor parking on property outside the Education District shall be needed in connection with uses within the Education District.

SECTION 7.1 DESIGN STANDARDS AND LANDSCAPE STANDARDS

The purposes of these design and landscaping requirements are to provide for: the safe and efficient flow of pedestrian and vehicular traffic; the separation of parking areas from abutting streets; visual relief from expanses of unbroken blacktop and vehicles; proper drainage and snow removal; and general visual enhancement of parking areas. Residential uses of four or fewer units shall be exempt from Sections 7.102 and 7.103.

7.10 Design Standards

- 7.100 For new or altered parking areas consisting of a total of five (5) or more parking spaces, where no Special Permit or Site Plan Review approval is required:
- 7.1000 Parking Plan Required: An accurate scaled site plan shall be submitted to the Building Commissioner demonstrating compliance of the proposed parking with this bylaw with respect to driveways, grading, slope, drainage, design, setbacks, layout, location on the site, circulation, lighting, landscaping, and other pertinent features.
- 7.1001 Waiver or Modification: Where not otherwise provided for under Section 7.90 or other sections of the Bylaw, any provision of Section 7.1 may be waived or modified by the Building Commissioner for compelling reasons of safety or design, except that no such administrative waiver or modification may be granted for maximum lot coverage.
- 7.101 Paving: For the purposes of this bylaw, a paved parking surface shall be considered to be one which has a prepared subgrade and compacted gravel base with a minimum total 12 inch depth, appropriate grading and drainage, and which is surfaced with a minimum 2 inch top coat of concrete, asphalt, masonry pavers, oil and stone, gravel, trap rock, or similar material, as approved or modified by the Town Engineer. To the extent feasible, permeable or porous paving shall be employed in new construction or site renovations or improvements.
- 7.102 Slope: Parking areas used for parking and vehicle maneuvering shall have grades not to exceed five percent slope.
- Driveways used exclusively for ingress or egress or interior parking lot circulation shall have slopes not exceeding 12 percent except within 30 feet of the road, in which case the slope shall not exceed 5 percent.
- 7.103 Set back from buildings: except for parking within an enclosed structure, no parking space shall be located within eight feet of a building wall. No access aisle, entrance or exit driveway shall be located within five feet of a building. Loading docks are exempt from this requirement.
- 7.104 Dimensions, Marking & Delineation

The area of all parking areas shall be included in the calculation of maximum lot coverage.

Parking areas shall be clearly delineated and shall be provided with a permanent dust-free surface and adequate drainage. Each parking space shall be at least 9 feet x 18 feet in size, and all parking areas must have adequate access and maneuvering areas. The Zoning Board of Appeals (SP) or the Planning Board

(SPR) may allow, upon application, small car parking spaces (8 feet x 16 feet) to be substituted for up to fifty percent of the standard parking spaces. Compact parking spaces shall be designated by clearly visible signs.

In all parking areas of five (5) or more parking spaces, individual spaces shall be painted, marked or otherwise delineated in a manner sufficient to visibly identify said spaces.

Curb radii, driveway width, and other such dimensions shall comply with the "Street and Site Work Construction Standards", adopted by the Town Council, as such standards may be amended, unless otherwise specified in Section 7.1, Design Standards and Landscape Standards.

Ramps between parking areas of different elevations shall not exceed 12 percent slope, with a maximum 5 percent transition slope for a minimum length of 20 feet at the upper and lower end of the ramp slope. All parking plans involving ramps shall be accompanied by profiles showing the ramp, ramp transitions, and overhead and wall clearances.

- 7.105 Lighting: adequate lighting shall be provided for all parking areas of 5 spaces or more if these areas are to be used at night. All exterior site lighting associated with parking areas shall be downcast and shall be directed or shielded to eliminate light trespass onto any street or abutting property and to eliminate direct or reflected glare perceptible to persons on any street or abutting property and sufficient to reduce a viewer's ability to see.

Adjacent properties shall be protected from light intrusion through the use of cut-off luminaries, light shields, lowered height of light poles, screening or similar solutions. All exterior site lighting shall be kept extinguished outside of normal hours of use, except for lighting necessary for site security and the safety of employees and visitors, which lighting shall be activated and controlled through motion sensors or similar technology.

- 7.106 Entrance and exit driveways: the minimum width of entrance and exit drives shall be 10 feet wide for one-way use and 18 feet wide for two-way use. The minimum curb radius shall be 15 feet. The maximum width of such driveways at the property line shall be 24 feet. The permit granting board may modify these width and radius limitations to facilitate traffic flow and safety.

Driveways shall be located and designed so as to minimize conflict with traffic and provide clear visibility and sight distances for the observation of approaching pedestrian and vehicular traffic. The design and layout of driveways and circulation serving parking areas of 5 or more spaces shall prevent vehicles from backing into a street in order to exit the site. Circulation design, layout, and signs associated with non-residential uses shall direct exiting vehicles in a safe and convenient manner toward main thoroughfares and away from secondary streets passing through adjacent residential neighborhoods. No portion of the driveway at the edge of the street pavement shall be closer than 75 feet from an intersection, unless allowed by the Special Permit Granting Authority or Permit Granting Board.

7.11 Landscape Standards

- 7.110 Parking areas of 10 or more spaces shall provide a minimum of 10 percent of the total parking area as landscaped open space (this may be included in the calculation of open space area under Table 3: Dimensional Regulation: Maximum Lot Coverage).
- 7.111 Parking areas of 25 or more spaces shall provide landscaped islands of a minimum width of four feet, with raised curbs, throughout the parking area for the purposes of: a) defining parking lot entrances, b) defining the ends of a portion of the parking aisles, c) defining the location and pattern of primary internal access drives, d) separating parking spaces within long rows of spaces, and e) separating some of the rows of parking spaces from other rows.
- 7.112 Screening: parking areas with 5 or more spaces shall provide effective screening of the parking area from adjacent streets or properties. Such screening may be accomplished by: depressions in grade 3 feet or more; a hedge or wall; or any type of appropriate natural or artificial permanent division. Any required screening barrier shall not be less than 3 feet high. Screening shall not be located to obstruct driver visions so as to impair safety at intersections or driveway entrances or exits.

SECTION 7.2 SHARED OR LEASED PARKING

7.20 Parking spaces required for one use shall not be considered as providing the required facilities for any other use, except as hereinafter provided. Any existing parking above 120% of parking otherwise required for all uses on a property may be shared or leased by right. Where existing parking spaces are more than 100% but less than 120% of parking otherwise required for all on-site uses, applicants for a Site Plan Review approval or Special Permit may request to share and/or lease the parking spaces, based on the following conditions:

7.200 Shared Parking: Where it has been demonstrated to the satisfaction of the permit granting authority that one or more of the following conditions is met:

7.2000 Parking spaces to be shared represent the difference between peak parking needs generated by on-site uses occurring at different times. This may include reductions in parking use resulting from employees, tenants, patrons or other parking users of the site being common to and shared by more than one different use on the site, and/or;

7.2001 Parking spaces to be shared represent the difference between current levels of peak parking utilization and anticipated lower future levels of peak parking utilization, said difference to be generated in whole or in part by a parking management plan approved by the permit granting authority. Said plan shall include and implement measures such as car and van pooling, bicycling and public transit. The permit granting authority may require periodic documentation of reductions in parking utilization realized as a result of the parking management plan.

7.201 Leased Parking: In the B-G, B-VC, B-N, B-L, COM and R-VC Districts the lease of spaces for on- or off-site uses shall be by Site Plan Review, unless otherwise required. In the R-G, R-N, R-F, R-O and R-LD districts, the lease of more than two existing parking spaces shall require a Special Permit, unless requested as part of a Site Plan Review application for an associated use on the property. Any lease of parking spaces for on- or off-site uses may only be permitted under the following conditions:

7.2010 The parking is suitably located in the neighborhood in which it is proposed, as deemed appropriate by the permit granting authority.

7.2011 Adequate and appropriate facilities, including but not limited to appropriate paving, landscaping, screening, lighting, curbing or wheel stops, are provided for the proper operation of the proposed leased parking. Special attention shall be paid to ensuring safe vehicular circulation on the site and at the intersection with abutting streets.

7.2012 The permit granting authority may require the preparation and submittal of a study to provide evidence of parking utilization levels.

SECTION 7.3 LOADING AREAS

Adequate off-street loading and receiving areas shall be provided for all business, commercial and industrial uses.

SECTION 7.4 MUNICIPAL PARKING (MP) DISTRICT

7.40 General

The Municipal Parking District is an overlay district and shall be superimposed on other districts established by this Bylaw. Restrictions and prohibitions of land use in the underlying district shall remain in full force and shall not be modified by the conditions of the MP District unless superseded by the restrictions and prohibitions of the MP District.

7.41 Establishment of District

The Municipal Parking District shall consist of those geographic areas shown for this district on the Official Zoning Map. This District is configured to include those lands which constitute the developed core of the downtown business area and immediately abutting residential areas.

7.42 Purpose

The purpose of this district is to encourage the dense development of mixed-use buildings and pedestrian spaces in

Amherst Town Center. Toward that end, provision of off-street parking is not required for selected uses within the MP District.

7.43 Regulation

Notwithstanding the other provisions of Section 7.0, off-street parking spaces need not be provided for any principal or related accessory uses under the following categories of Section 3.3, Use Chart: Residential Use (Section 3.32), Retail Business and Consumer Service Use (Section 3.35), and Research and Industrial Use (Section 3.37), located within the Municipal Parking District as herein defined. The following uses shall be required to meet the parking requirements of this Bylaw within the MP District: dormitory or similar college residence hall, hotel or motel, inn and all other principal and accessory uses under other categories of Section 3.3, Use Chart.

SECTION 7.5 PARKING FOR ACCESSORY USES

For regulations governing parking associated with accessory uses, see Section 5.014, Garaging or Parking of Motor Vehicles.

SECTION 7.6 HANDICAPPED PARKING

Parking spaces shall be provided for the physically handicapped according to the following table:

10-20 spaces	1 handicapped space
21-30 spaces	2 handicapped spaces
31-50 spaces	3 handicapped spaces
51-100 spaces	4 handicapped spaces
101 or more	refer to Rules and Regulations of Architectural Access Board.

Parking spaces for the physically handicapped shall be designed in accordance with the Rules and Regulations of the Architectural Access Board of the Commonwealth of Massachusetts Department of Public Service, as such standards may be amended. Handicapped spaces shall be clearly identified by a sign stating that such spaces are reserved for physically handicapped persons. The handicapped spaces shall be located in the portion of the parking lot nearest the entrance to the use or the structure which the parking lot serves. Adequate access for the handicapped from the parking area to the structure shall be provided.

SECTION 7.7 ACCESS REQUIREMENTS & DRIVEWAYS

7.70 Flag Lots

- 7.701 Unimpeded access shall be provided across either the access strip or an easement at least twenty (20) feet wide.
- 7.702 The driveway within the access strip or easement shall have adequate drainage and shall not exceed 5% grade within fifty (50) feet of the intersection of the driveway and the paved or otherwise improved section of the street.
- 7.703 In all instances where either two or three flag lots are created with their access strips adjacent to each other at the street line, access to the lots shall be provided by a single common driveway.
- 7.704 Flag lot common driveways shall meet the requirements of Section 7.71.

7.71 Common and Individual Driveways

- 7.710 Common driveways shall not be considered public ways and shall not provide lot frontage.
- 7.711 Common driveways shall not provide access to more than four frontage and/or flag lots.
- 7.712 Common driveways shall be not less than sixteen (16) feet in width and with all curve radii adequate for fire and other emergency vehicles; constructed with bituminous asphalt, concrete, oil & stone, compacted gravel, or other similar material according to accepted construction standards; and shall include two (2) foot wide shoulders on each side free of obstructions such as trees, fences, poles and bushes. An individual driveway shall be constructed in accordance with the same standards, but shall be not less than twelve (12) feet in width, and need not provide clear shoulders.

7.713 Driveway Lengths

- 7.7130 The maximum length of a common driveway shall be four hundred (400) feet. A common driveway shall be measured along its centerline from its point of intersection with the paved or otherwise improved section of the street to the most distant portion of its turnaround.
- 7.7131 The length of an individual driveway originating at a common driveway plus the length of the common driveway measured from the point of intersection of the center lines of the individual and common driveways to the paved or otherwise improved section of the street, shall not exceed twelve hundred (1200) feet. Measurement of the individual driveway shall be along its centerline from its point of intersection with the center line of the common driveway to its termination at the building it serves, or to the portion of the vehicle storage area closest to said building.
- 7.7132 Longer driveways may be allowed by the Planning Board in accordance with Section 7.722.
- 7.7133 The length of an individual driveway originating at a street shall not be limited.
- 7.714 Common driveways shall not exceed a 5% grade within fifty (50) feet of the intersection of the driveway and the paved or otherwise improved section of the street.
- 7.715 The maximum grade of any common or individual driveway shall be 10%. Short sections may exceed 10% with the approval of the Planning Board in accordance with Section 7.722, but in no event shall any section exceed 15%. Individual driveways not over two hundred (200) feet long, extending directly from a street, and not exceeding 15% grade are not subject to this requirement.
- 7.716 The intersection angle between a common driveway center line and the street center line shall not be less than sixty (60) degrees.
- 7.717 The curb radii of a driveway at its intersection with the streets shall be in accordance with the Regulations of the Amherst Department of Public Works.
- 7.718 There shall be a turnaround located at the end of the common driveway adequate for fire and other emergency vehicles.
- 7.719 Street addresses for all dwelling units on a common driveway shall be posted in a manner sufficient for public safety purposes both at the intersection of the common driveway and the street and at the intersection of the common driveway and each individual driveway.
- 7.720 An agreement providing access over the common driveway to all lots and making all lots served by the common driveway jointly responsible for its maintenance and repair, including snowplowing, shall be recorded at the Hampshire County Registry of Deeds. Evidence of the recording shall be submitted to the Building Commissioner prior to the issuance of a building permit for any lot served by the common driveway.
- 7.721 The Planning Board may require engineered plans for the driveways and drainage if it deems such plans necessary.
- 7.722 For any lot within a Definitive Subdivision Plan, the Planning Board may allow a driveway longer than specified in Section 7.713 or may allow a section of a driveway to exceed 10% grade provided that such modification meets the provision of Sections 6.330-6.335.

For Subdivision Approval Not Required lots, the Planning Board may grant a Special Permit to allow a driveway longer than specified in Section 7.713 or may allow a section of a driveway to exceed 10% grade provided that such modification meets the provisions of Sections 6.330-6.335.

SECTION 7.8 BICYCLE RACKS

For all uses classified under Section 3.3 that are required to provide, or do provide, 10 or more parking spaces, the installation of bicycle racks shall be required. The bike racks shall be designed to provide for the locking of the bicycles to the racks. The design, location and number of bike racks shall be approved by the permit granting board as part of an approval of the permit request.

SECTION 7.9 WAIVERS (*Amended December 6, 2021; Effective December 20, 2021*)

- 7.90 Any section or subsection of Article 7.0, Parking Regulations, may be waived or modified by the Permit Granting Board or Special Permit Granting Authority authorized to act under the applicable section of the Bylaw for compelling reasons of safety, aesthetics, or site design.
- 7.91 Parking space requirements under Section 7.001, 7.002, 7.003 and 7.004 may be modified when one or more of the following conditions are met to the satisfaction of the Permit Granting Board or Special Permit Granting Authority:
 - 7.910 Peak parking needs generated by on-site uses occur at different times.
 - 7.911 A significant number of employees, tenants, patrons or other parking users of the site are common to and shared by more than one use on the site.
 - 7.912 A parking management plan approved by the Permit Granting Board or Special Permit Granting Authority is implemented with occupancy of the building or buildings. Said plan shall include the implementation of such measures as car and van pooling, bicycling and public transit use sufficient to reduce the need for parking. Periodic documentation of reductions in vehicle trips and parking utilization as a result of the parking management plan may be required as a condition of any permit granted under this section.

ARTICLE 8 SIGN REGULATIONS

SECTION 8.0 GENERAL STANDARDS

SECTION 8.1 RESIDENTIAL DISTRICTS

SECTION 8.2 BUSINESS AND INDUSTRIAL/RESEARCH PARK DISTRICTS

SECTION 8.3 FLOOD PRONE-CONSERVANCY DISTRICTS

SECTION 8.4 NON-CONFORMING AND TEMPORARY SIGNS

SECTION 8.0 GENERAL STANDARDS

Any exterior sign or advertising device, or any permanent interior sign or advertising device situated, designed or intended to be viewed from the out of doors, which is hereafter erected or maintained shall, except as expressly provided, conform to the following restrictions. Any interior sign used only temporarily or not visible from the out of doors shall be exempt from the provisions of this section. No sign or advertising device shall, in any district:

8.00 Projecting Signs

8.000 Exceed 10 square feet in area.

8.001 If affixed to, suspended from, or incorporated as part of a building, project more than 36 inches from the building, except that such a sign may project up to 48 inches from the building provided it does not exceed 6 square feet in area.

8.002 If supported by or suspended from a pedestal or post, project more than 36 inches over or into any pedestrian way customarily used by the public, except that any such sign may project up to 48 inches over any such way provided it does not exceed 6 square feet in area.

8.003 Extend into a 24 inch setback from a vertical plane above the curb line of any adjacent street customarily used by the public.

8.01 Extend more than four feet above the eavesline or parapet of any building to which it is affixed.

8.02 Incorporate or be lighted by, flashing or blinking lights, or be designed to attract attention by a change in light intensity or direction, or by repeated mechanical or electrical motion. Fixed banners or electronic billboards using changeable lights to convey the time, temperature, or other public information shall be exempt from this prohibition.

8.03 If free standing, extend more than twelve feet above ground level.

8.04 Maximum Surface Area

8.040 No sign shall have a surface area greater than 80 square feet, except that this requirement may be modified under a Special Permit issued by the Special Permit Granting Authority authorized to act under the applicable section of the Bylaw. No sign receiving such a permit for a modification of total surface area shall exceed 125 square feet in area, except as may be permitted under the provisions of Section 8.4.

8.041 Maximum surface area for signs under this and following sections shall be calculated as follows:

- 1) The surface area of any sign, either freestanding or attached, shall be considered to be the full visual presentation of the sign's display, including all lettering, numerals, symbols, decorative borders, background surface, framing, or ornamental structure, whether open or enclosed.
- 2) The surface area of a sign shall not include the surface area of any incidental supporting poles, arms, structural framework, bracing, lighting fixtures, or any open areas contained within or framed by such incidental structures which are not an integral part of the design of the sign's display.

- 3) For a sign consisting of individual letters, numerals, designs, and symbols attached to or painted directly on the surface of a building, wall, window, awning, canopy or other approved surface with no other structure or background, the surface area of the sign shall be considered to be that of the smallest quadrangle which encompasses all of the letters, numerals, designs, colors and symbols constituting the sign's display.
- 4) For a sign with display areas or surfaces mounted on two surfaces of the same structure, or on parallel and back-to-back structures within 12" of one another, or where the interior angle formed by two display surfaces on a single structure is 60 degrees or less, the display area of a single side—the larger side when there is a difference—shall constitute the total surface area for the purposes of this Bylaw. Where the interior angle formed by the two display surfaces is greater than 60 degrees, the combined area of both display surfaces shall be considered one surface for the purpose of establishing maximum surface area.

SECTION 8.1 RESIDENTIAL DISTRICTS

In all Residence Districts, the following exterior signs are permitted on private property, and no others::

8.10 Numbers of Signs and Dimensions

8.100 In the case of a dwelling or use accessory thereto – one (1) sign not over two (2) square feet in area for each household residing on the premises, not to exceed a total of eight (8) square feet in area, indicating the address and/or names of the owners or occupants and one (1) sign not over eight square feet in area pertaining to the accessory use.

8.101 In the case of a permitted or authorized use other than a dwelling or use accessory thereto, or in the case of sale or lease of the premises – two (2) signs pertaining to such use, sale or lease provided that the combined total area of such signs clearly visible from any point off the premises shall exceed twelve (12) square feet only under a Special Permit issued by the Special Permit Granting Authority.

In the R-VC District only, the Special Permit Granting Authority may grant a Special Permit for two (2) signs pertaining to an accessory use, where the combined total area of such signs clearly visible from any point off the premises shall not exceed twelve (12) square feet, with any single sign not to exceed eight (8) square feet in area.

8.102 In the case of a fraternity or sorority – one (1) sign identifying the group residing on the premises and not to exceed twelve (12) square feet in area.

8.103 No sign allowed under this section shall exceed four feet (4') in height above grade, except that projecting signs with a total area of three square feet or less may be up to six feet (6') in height above grade.

8.104 There shall be no front setback requirement for signs allowed on private property under this section, except that no sign shall be set closer to any public sidewalk than 30 inches (30").

Signs shall be set back from any side or rear property boundary a distance equal to or greater than their height above grade. On corner lots, no sign or portion thereof shall be located within the clear sight triangle, as defined in Section 6.27.

8.11 No billboard, nor any sign on which the principal product or service advertised is not regularly produced or available on the premises, shall be erected or maintained in any Residence District.

8.12 In the case of a fraternity or sorority - one sign identifying the group residing on the premises and not to exceed twelve square feet.

8.13 Political Signs

8.130 Election Signs -- Election signs shall be those signs pertaining to a candidate for election or ballot question. Such signs shall be allowed except each sign shall be erected no earlier than sixty days prior to an election and shall be removed within three days after the election. No such sign shall be located in the clear sight triangle, as defined in Section 6.27.

8.131 Message Signs -- Message signs shall be those signs displaying a political, religious, or other non-commercial message other than that allowed under Sections 8.10 through 8.13 and 8.104. A maximum of two such signs per property shall be allowed. Each sign shall not exceed six square feet in size. No such sign shall be located in the clear sight triangle, as defined in Section 6.27.

SECTION 8.2 BUSINESS AND INDUSTRIAL/RESEARCH PARK DISTRICTS

In all Business and Industrial/Research Park Districts, the following exterior signs are permitted:

8.20 Signs affixed to, suspended from, or incorporated as part of a building, provided that the total area of the sign on a wall shall not exceed 10 percent of the area of that wall.

8.21 A marquee over the principal entrance to a place of public assembly, subject to the provisions of Article III, Section 5 of the Town By-Law.

8.22 Permanent signs identifying a business or facility may be allowed on cloth or fabric structures such as awnings or upon fixed banners under the permitting procedures required under this Bylaw for the use with which they are associated, and shall conform to the provisions of this section.

8.23 In the outlying B-L, the COM, OP, PRP and LI Districts, the following additional signs are permitted:

8.230 One free standing sign, or one monument sign, for each street frontage, subject to the following standards:

1) For any sign located a distance equal to or greater than the required building setback in that zone:

maximum 60 square feet in size
maximum 12 feet high

2) For any sign located half of the distance required for the building setback in that zone:

maximum 30 square feet
maximum 10 feet high;

3) For any sign located between the property line and half the distance required for a building setback in that zone:

Monument sign only

maximum 15 square feet
maximum 6 feet high

8.231 For any parcel with continuous frontage of 300 feet or more, one free standing sign or one monument sign, located the distance equal to or greater than the required building setback:

maximum 80 square feet
maximum 12 feet high

8.232 In the PRP, OP, and LI Districts, one additional monument sign, for identification purposes, subject to the following conditions:

1) The sign shall include the name of the research, office, or industrial park.

- 2) The sign shall be located at the principal street entrance to the park.
- 3) The sign shall only be allowed where the park was established through an approved subdivision plan.
- 4) The sign shall only be allowed where there are three (3) or more separate parcels included in the approved subdivision for the park.
- 5) The sign shall have a maximum height of 10 feet and maximum size of 60 square feet.
- 6) The sign shall be in accordance with an approved sign plan.

8.24 In the B-G, B-VC, B-N Districts and B-L District adjacent to B-G and B-N, the following additional signs are permitted:

8.240 One free standing sign, or one monument sign, for each street frontage, subject to the following standards:

maximum height - 10 feet
maximum size - 25 square feet

8.25 For any sign located on a property in a B-VC, B-N, B-L or COM district and also in a National Historic Register District or local historic district, the minimum front setback may be the same as established for business uses in the B-G District, subject to approval of the sign location and design by the permit-granting authority. The authority may approve the proposed sign(s) if it finds that:

8.250 The provisions of Section 8.28 have been met with regard to vehicular and pedestrian safety.

8.251 The proposed setbacks are consistent with the setbacks of existing signs in the vicinity and/or are consistent with historical precedent for sign locations in the vicinity.

8.252 The design of the proposed sign(s) is consistent with the design principles and standards in Section 3.2041, 9).

8.253 The sign(s) appropriately identify and reflect the character of the proposed uses of the property.

8.26 For properties located within a Business or Industrial/Research Park zone with a vehicular entrance to that property, located on a parcel of land not in the same ownership as the parcel of land on which the principal use is situated, the following signs are permitted:

8.260 One free standing or monument sign to be located at the vehicular entrance subject to the following conditions:

- 1) Maximum height - 10 feet.
- 2) Maximum size - 30 square feet.
- 3) Such sign shall meet the requirement of Section 8.28.
- 4) Such sign shall be located on a parcel of land that is immediately abutting the parcel of land of the principal use which is identified by the sign.
- 5) The sign owner shall submit to the permit granting authority proof of an easement. or other legal document that grants permission to use the subject property for a sign.

8.27 All free standing and monument signs shall be located within a landscaped area equal to 150% of the area of the sign.

8.28 No free standing or monument sign shall be located in such a manner that it will impair sight distances of pedestrians and/or vehicles at an intersection or at a vehicular or pedestrian entrance to a property.

8.29 All signs shall be located on the same parcel of land as the business, location, product or service identified on the sign, except as provided for in Section 8.26.

SECTION 8.3 FLOOD PRONE-CONSERVANCY DISTRICTS

In all Flood Prone-Conservancy Districts the following signs and no others are permitted:

- 8.30 Name plates of the type described in Section 8.10 herein.
- 8.31 Announcement: one or two signs not exceeding a total of twelve (12) square feet in area for the following purposes:
 - 8.310 Advertisement for the sale, rental or lease of the premises.
 - 8.311 Announcement or bulletin board for a public charitable or religious institution.
 - 8.312 Advertisement for a building contractor only while construction is occurring on the site.

SECTION 8.4 NON-CONFORMING AND TEMPORARY SIGNS

- 8.40 Signs legally existing at the time this Bylaw was adopted may continue as non-conforming uses, subject to the provisions of Article 9 hereof.

This provision shall not apply to billboards, signs and other advertising devices subject to the provisions of Sections 29 through 33, inclusive, of Chapter 93, and of Chapter 93D of the General Laws.

- 8.41 An off-site directional or identification sign may be erected and maintained in any district where the Permit Granting Board or Special Permit Granting Authority authorized to act under the applicable section of the Bylaw for the use(s) associated with the sign(s), finds that such signs will serve the public convenience, will not endanger the public safety, and will be of such size, location, and design as will not be detrimental to the neighborhood. Where an off-site directional or identification sign serves a geographic destination but not a specific land use, a Special Permit from the Zoning Board of Appeals shall be required.
- 8.42 Nothing herein shall affect provisions in existing Town By-Laws relating to temporary signs permitted by the Town Council, or posted by the Town or government, nor to the regulation by the Town Council under Article III, Section 5 of the Town By-Laws of signs which extend six inches or more into or over the limits of a public way.
- 8.43 The Building Commissioner may grant a temporary sign permit for temporary exterior signs made of cloth, fabric, vinyl, paper or other similar materials, including banners, pennants and flags, for such purposes as grand openings, going-out-of-business sales and seasonal promotions. A temporary sign permit shall not exceed 3 weeks in duration.

SECTION 8.5 MODIFICATION & WAIVERS

Any section or subsection of Article 8, Sign Regulations, may be waived or modified by the Permit Granting Board or Special Permit Granting Authority authorized to act under the applicable section of the Bylaw for compelling reasons of public convenience, public safety, aesthetics, or site design.

ARTICLE 9 NON-CONFORMING LOTS, USES AND STRUCTURES

SECTION 9.0 OVERVIEW

SECTION 9.1 NON-CONFORMING LOTS

SECTION 9.2 NON-CONFORMING USES AND STRUCTURES

SECTION 9.3 LOCATIONAL REQUIREMENTS IN MIXED USE CENTERS

SECTION 9.0 OVERVIEW

Non-conforming Lots, Uses, and Structures shall be regulated as provided in Chapter 40A, Section 6 of the General Laws and as provided in this Bylaw.

SECTION 9.1 NON-CONFORMING LOTS

- 9.10 Notwithstanding the area and frontage requirements hereof, a detached one-family or two-family residential use or lawful building other than a dwelling may be constructed and used on a lot having less than the prescribed basic minimum area and/or minimum frontage, width, yard or depth requirements (provided that all other regulations of this Bylaw are complied with) if said lot, prior to the date of the adoption of the requirements in question was otherwise exempt from such requirements by the provisions of Chapter 40A, Section 6.
- 9.11 Such a non-conforming lot shall not be further reduced in area or frontage, and if it is subsequently combined with other land in such a way as to reduce or eliminate the non-conformity, it shall not again be subdivided except in accord with this Bylaw.

SECTION 9.2 NON-CONFORMING USES AND STRUCTURES

- 9.20 Any lawful building or structure, or use of a building, structure or land, existing at the time of adoption of this Bylaw or any amendment thereto which does not conform to the regulations thereof may be continued. However, except as hereinafter set forth, a non-conforming building or structure shall not be structurally altered, enlarged, nor reconstructed so as to increase its non-conformity under this bylaw. For the purpose of this section, a structural alteration shall be any change to the exterior of a building or other structure which involves alteration, relocation, enlargement, or reconstruction of walls or other significant elements of the building or structure.
- 9.200 Under Section 11.1, the Building Commissioner may permit the repair, alteration, reconstruction, extension or structural alteration of a lawful, dimensionally non-conforming single family or two family dwelling in any zoning district or a lawful, dimensionally non-conforming building in the B-G, B-L, B-VC, B-N or COM districts, or in either circumstance, a portion thereof, or accessory structures thereto, provided the proposed change does not constitute a change of use under this Bylaw, and at least one of the following conditions is met:
- 9.2000 In the case of a building non-conforming solely because of insufficient lot frontage or lot area, or both, the proposed change shall meet all dimensional requirements for front setback, side and rear yards, building coverage, lot coverage, maximum floors and maximum height.
- 9.2001 In the case of a dimensionally non-conforming building with sufficient lot frontage and lot area, where said building, or a portion thereof, is non-conforming as to one or more of the dimensional requirements for front setback, side and rear yards, building coverage, lot coverage, maximum floors or maximum height, all dimensional requirements met by the building prior to the proposed change shall be met after completion of the proposed change.

- 9.2002 In the case of a building non-conforming as to lot frontage and/or lot area, and non-conforming as to one or more of the dimensional requirements for front setback, side and rear yards, building coverage, lot coverage, maximum floors or maximum height, all dimensional requirements met by the building prior to the proposed change shall be met after completion of the proposed change.
- 9.201 Where a new or expanded existing non-conforming use is proposed in an existing lawful dimensionally non-conforming building, and no exterior alteration, reconstruction, extension or structural alteration will occur, the permit requirements of Section 3.3 shall apply but no additional Special Permit under Section 9.22 shall be required for the proposed use.
- 9.21 For the purposes of this section a non-conforming use which has been discontinued for twenty four (24) consecutive months shall not be re-established and any future use shall conform to the regulations of this Bylaw.
- 9.22 The Special Permit Granting Authority authorized to act under the provisions of Section 3.3 of this bylaw may, under a Special Permit, allow a non-conforming use of a building, structure or land to be changed to a specified use not substantially different in character or in its effect on the neighborhood or on property in the vicinity. Said Authority may also authorize, under a Special Permit, a non-conforming use of a building, structure, or land to be extended, or a non-conforming building to be structurally altered, enlarged or reconstructed; provided that the Authority finds that such alteration, enlargement, or reconstruction shall not be substantially more detrimental to the neighborhood than the existing non-conforming use or non-conforming building.
- 9.23 A building or structure devoted to a non-conforming use (whether in whole or in part) or a building or structure non-conforming as to setback, yards, coverage or height, may, if damaged or destroyed by fire or other accidental cause, be repaired or reconstructed within the same portion of the lot and used as before, provided that such repair or reconstruction is substantially completed within twenty four (24) months of the date of the damage or destruction.

SECTION 9.3 LOCALATIONAL REQUIREMENTS IN MIXED USE CENTERS

9.30 Purpose

The purpose of this section is to establish regulations for the location of new additions or enlargements to non-conforming uses and structures, or the creation of separate buildings on the same lot as non-conforming uses and structures in the B-G, B-L, B-VC, B-N and COM Districts. These regulations are intended to promote sound design, enhance the creation of pedestrian-friendly streetscapes and spaces, and foster more functional and successful mixed use properties. Where the provisions of this section conflict with Section 9.1 and 9.2 of this Article, this section shall apply and prevail.

9.31 Non-conforming Structures

- 9.310 Enlargements, Repairs, or Alterations – Non-conforming structures may be permitted to be enlarged, extended, reconstructed, repaired or altered by the Permit Granting Board or Special Permit Granting Authority in conformance with the provisions of Section 9.2 provided, however, that any such enlargement, extension, reconstruction, repair or alteration shall conform to the locational regulations established herein.
- 9.311 Permitted Additions – Where a non-conforming structure is being expanded under Section 9.310, the addition shall abide by the following requirements:
- 9.3110 Front and Rear Additions – Any addition in front of an existing building shall be placed such that its front façade is set at or within the front setback area established by the minimum and maximum front setback. Rear additions may only be undertaken simultaneously with front or side additions, and only where the rear extension is not increasing the degree of existing nonconformity.

- 9.3111 Side Additions for Buildings Located Within the Front Setback Area – For an existing building located at the front setback, any side addition shall also be located at or within the front setback area.
- 9.3112 Side Additions for Buildings Located Outside of the Front Setback Area – For an existing building located at the rear edge or behind the front setback area, any side addition shall be extended forward such that its front façade is located at or within the front setback area.
- 9.312 Permitted New Buildings – The front facades of all separate new buildings being constructed on a site with an existing non-conforming structure shall be located at or within the front setback area.
- 9.313 Modification or Waiver – Any provision of this section may be modified or waived by the Special Permit Granting Authority authorized to act under the applicable section of this Bylaw for compelling reasons of safety, aesthetics, sustainable site design, or historic or environmental preservation needs which serve the purposes of this section.

ARTICLE 10 SPECIAL PERMIT GRANTING AUTHORITY

SECTION 10.0 APPOINTMENT

SECTION 10.1 APPEALS

SECTION 10.2 VARIANCES

SECTION 10.3 SPECIAL PERMITS

SECTION 10.4 CONDITIONS, SAFEGUARDS, AND LIMITATIONS

SECTION 10.5 NOTICE OF HEARING

SECTION 10.0 APPOINTMENT

- 10.01 The Zoning Board of Appeals shall consist of 5 members, all residents of the Town of Amherst, appointed by the Town Council, and serving for a term of 3 year and as otherwise set forth in Chapter 40A of the General Laws, as amended. The Zoning Board of Appeals may include up to 4 associate members, who shall be residents of the Town of Amherst, appointed by the Town Council, and serving for a term of 1 year. The term of each member and associate member shall conclude at the later of the expiration of such term or the qualification of a successor. Said Board shall have all of the powers and duties of Boards of Appeals under said Chapter, and, in addition, all the powers and duties herein prescribed. Copies of rules promulgated by the Board of Appeals may be obtained from the Town Clerk's Office.
- 10.02 The Planning Board shall consist of 7 regular members. Members shall be appointed by the Town Council and shall be appointed for a term of 3 years, except for appointments to fill an unexpired term. In addition, 2 associate members may be appointed by the Town Council and shall be appointed for a term of 1 year, except for appointments to fill an unexpired term.

Associate members may sit on the Board only for the purposes of hearing and voting upon decisions on Special Permit applications and only in the case of absence, inability to act, or conflict of interest on the part of a regular Board member, or in the event of a vacancy on the Board.

The Planning Board Chair shall designate the associate member to sit on the Board when necessary and in accordance with above circumstances.

SECTION 10.1 APPEALS

Appeals to the Board of Appeals may be taken by any persons aggrieved by reason of their inability to obtain a permit or enforcement action from any administration office under the provisions of said Chapter 40A, or by the regional planning agency, or by any person, including an officer or board of the Town or of an abutting Town aggrieved by an order or decision of the Building Commissioner, Local Inspector, or other administrative official, in violation of any provision of said Chapter or the Zoning Bylaw of the Town of Amherst.

Any such appeal shall be taken by the Board within thirty (30) days from the date of the order or decision which is being appealed, by filing a notice of appeal with the Town Clerk in accordance with the provisions of Chapter 40A.

SECTION 10.2 VARIANCES

Petitions of variances from the terms of the applicable zoning provisions shall be dealt with by the Board of Appeals in accordance with Chapter 40A of the General Laws, as amended. The Board shall grant no variances which would amount to an amendment of this Bylaw.

SECTION 10.3 SPECIAL PERMITS

10.30 Purpose

Special Permits are intended to provide detailed review of certain Uses and Structures which may have substantial impact upon traffic, utility systems, and the character of the Town, among other things. The Special Permit review process is intended to insure a harmonious relationship between proposed development and its surroundings, and insure that proposals are consistent with the purpose and intent of this Bylaw.

10.31 Authorization

10.310 This Bylaw authorizes the Board of Appeals and the Planning Board to be the Special Permit Granting Authority. A special permit may be required in situations wherein the issues of use or uses and/or location and design are deemed to warrant a process of review conducted by the Board of Appeals or Planning Board, and which includes a public hearing.

10.311 All uses for which a Special Permit is granted shall satisfy:

1. The Special District Requirement set forth in Section 3.2, if applicable;
2. The relevant Standards set forth in Section 3.3; and
3. All other applicable requirements and Standards of this Bylaw.

10.312 Nothing in this Bylaw shall require a change in the plan, construction or designated use of any structure on land for which a Special Permit is in effect at the time of adoption of this Bylaw, or on which a Building Permit has been issued; subject however, to any expiration term of such Special Permit or to Chapter 40A, Section 6, of the General Laws and to the requirement that construction or operations under a building or special permit shall conform to any subsequent amendment of the Bylaw unless the use or construction is commenced within a period of not more than six months after issuance of the permit, and on cases involving construction, unless such construction is continued through to completion as continuously and expeditiously as is reasonable. The Special Permit Granting Authority may require any such Special Permit to conform with some or all requirements of the Bylaw if it is amended, modified or transferred.

10.313 In all instances where a Special Permit is required by this Bylaw, no structure shall be erected or externally enlarged, altered, or used for activities or uses, nor shall land subject to such a permit be so used, nor shall any area for parking, loading, or vehicular service, including driveways giving access thereto, be established, used or changed, except in conformity with said Permit. All Special Permits granted by the Special Permit Granting Authority shall include an approved site plan bearing the endorsement of said Authority.

10.32 Application and Approval Procedures

10.320 The size, form, contents, and style of plans and specifications required as part of an application for a Special Permit are contained in the Rules and Regulations of the Special Permit Granting Authority, a copy of which is on file in the Town Clerk's Office.

10.321 The procedure for the submission and approval of Special Permits is prescribed in the Rules and Regulations of the Special Permit Granting Authority, a copy of which is on file in the Town Clerk's Office.

10.322 All plans and documents required by this Bylaw shall be considered integral parts of an application. Applications shall be subject to such Rules and Regulations relating to scale, dimensions, legend, form, fees, preparation and other information as may from time to time be promulgated by the Special Permit Granting Authority. The Special Permit Granting Authority may require additional information in order to review an application adequately and make a decision. Site Plans for Planned Unit Residential Developments shall be prepared in accordance with the specifications for Preliminary Subdivision plans set forth in the Rules and Regulations Governing the Subdivision of Land, as may be amended from time to time.

10.323 Upon receipt of an application for a Special Permit, the Special Permit Granting Authority shall transmit copies of the application and plans to appropriate Town boards and officials which may include: the Building Commissioner, Planning Director, Town Engineer, Fire Chief, Conservation Director, Board of Health, Historical Commission, Public Transportation Committee, Leisure Services Commission, and others as necessary. These boards and officials shall have thirty-five (35) days to report to the Special Permit Granting Authority their findings and recommendations. Failure to report in the allotted time shall constitute approval by that board or official of the application submitted.

10.33 Modification, Amendment or Renewal

The Special Permit Granting Authority shall have the authority to modify, amend, or renew its approval of a Special Permit upon written application of the owner, lessee, or mortgagee of the premise; provided however, that such action is consistent with the purposes and intent of this Bylaw, and a public hearing has been held.

10.34 Transfer

Where a Special Permit involving the construction of buildings has not been implemented by substantial construction, said Permit shall not pass to future owners of the property without a public hearing and approval by the Special Permit Granting Authority.

10.35 Document Distribution

Where the Special Permit Granting Authority grants a Special Permit, one (1) copy each of the decision, conditions, and approved plans shall be filed with the Planning Board, Building Commissioner, and the Town Clerk; one (1) copy shall be returned to the applicant, and one (1) copy of said document shall be kept on file in the Department of Inspection Services or Planning Department. The set of documents on file with the Town Clerk shall bear the endorsement of the Special Permit Granting Authority and certification by the Special Permit Granting Authority that copies of the decision and related plans have been filed in accordance with this section.

10.36 Time Schedule

A Special Permit shall only be issued following a public hearing held within 65 days after the Special Permit Granting Authority receives an application from the Town Clerk. The Special Permit Granting Authority shall act within 90 days following a public hearing. Failure to take final action upon an application for a Special Permit within said 90 days following the date of a public hearing shall be deemed to be a grant of the permit applied for.

10.37 Expiration

A Special Permit granted under this article shall lapse within two years of the date that it is filed with the Town Clerk by the Special Permit Granting Authority unless it has been both recorded at the Registry of Deeds and substantial construction or use thereunder has commenced within this period

10.38 Specific Findings Required

The Special Permit Granting Authority may grant a Special Permit authorized by this Bylaw if said Authority finds, when applicable, that:

10.380 The proposal is suitably located in the neighborhood in which it is proposed and/or the total Town, as deemed appropriate by the Special Permit Granting Authority.

10.381 The proposal is compatible with existing Uses and other Uses permitted by right in the same District.

10.382 The proposal would not constitute a nuisance due to air and water pollution, flood, noise, odor, dust, vibration, lights, or visually offensive structures or site features.

10.383 The proposal would not be a substantial inconvenience or hazard to abutters, vehicles or pedestrians.

10.384 Adequate and appropriate facilities would be provided for the proper operation of the proposed use.

10.385 The proposal reasonably protects the adjoining premises against detrimental or offensive uses on

- the site, including air and water pollution, flood, noise, odor, dust, vibration, lights or visually offensive structures or site features.
- 10.386 The proposal ensures that it is in conformance with the Parking and Sign regulations (Articles 7 and 8, respectively) of this Bylaw.
- 10.387 The proposal provides convenient and safe vehicular and pedestrian movement within the site, and in relation to adjacent streets, property or improvements. If the Special Permit Granting Authority deems the proposal likely to have a significantly adverse impact on traffic patterns, it shall be permitted to require a traffic impact report, and the proposal shall comply with Section 11.2437 of this Bylaw.
- 10.388 The proposal ensures adequate space for the off-street loading and unloading of vehicles, goods, products, materials and equipment incidental to the normal operation of the establishment or use.
- 10.389 The proposal provides adequate methods of disposal and/or storage for sewage, refuse, recyclables, and other wastes resulting from the uses permitted or permissible on the site, and methods of drainage for surface water.
- 10.390 The proposal ensures protection from flood hazards as stated in Section 3.228, considering such factors as: elevation of buildings; drainage; adequacy of sewage disposal; erosion and sedimentation control; equipment location; refuse disposal; storage of buoyant materials; extent of paving; effect of fill, roadways or other encroachments on flood runoff and flow; storage of chemicals and other hazardous substances.
- 10.391 The proposal protects, to the extent feasible, unique or important natural, historic or scenic features.
- 10.392 The proposal provides adequate landscaping, including the screening of adjacent residential uses, provision of street trees, landscape islands in the parking lot and a landscape buffer along the street frontage. When a non-residential use adjoins a residential district, an uninterrupted vegetated buffer shall, to the extent feasible, be established and maintained between buildings associated with uses under this section and the nearest residential property boundaries. Where natural, undisturbed vegetation already exists on-site prior to site preparation and clearing, the majority of that vegetation may be retained and included as part of the buffer, along with the addition of such new plantings, selective removals, and other management of site plantings as are determined to be necessary to maintaining an effective year-round visual screen. See Section 11.3.
- 10.393 The proposal provides protection of adjacent properties by minimizing the intrusion of lighting, including parking lot and exterior lighting, through use of cut-off luminaires, light shields, lowered height of light poles, screening, or similar solutions. Except for architectural and interior-lit signs, all exterior site lighting shall be downcast and shall be directed or shielded to eliminate light trespass onto any street or abutting property and to eliminate direct or reflected glare perceptible to persons on any street or abutting property and sufficient to reduce a viewer's ability to see. All site lighting, including architectural, sign, and parking lot lighting, shall be kept extinguished outside of those business hours established under an approved site management plan, except for lighting determined to be necessary for site security and the safety of employees and visitors.
- 10.394 The proposal avoids, to the extent feasible, impact on steep slopes, floodplains, scenic views, grade changes, and wetlands.
- 10.395 The proposal does not create disharmony with respect to the terrain and to the use, scale and architecture of existing buildings in the vicinity which have functional or visual relationship thereto. Within the B-L, B-VC, B-N, COM, OP, LI and PRP Districts, and any residential zoning district where the project in question occurs within the boundaries of a National Historic Register District, the Special Permit Granting Authority shall, if it deems the proposal likely to have a significant impact on its surroundings, be permitted to use the design principles and standards set forth in Sections 3.2040 and 3.2041, 1) through 9) to evaluate the design of the proposed architecture and landscape alterations. Within the B-G and abutting B-L districts, and for any

Town project within any district, the provisions of Section 3.20, Design Review, shall remain in effect.

- 10.396 The proposal provides screening for storage areas, loading docks, dumpsters, rooftop equipment, utility buildings and similar features.
- 10.397 The proposal provides adequate recreational facilities, open space and amenities for the proposed use.
- 10.398 The proposal is in harmony with the general purpose and intent of this Bylaw, and the goals of the Master Plan.

SECTION 10.4 CONDITIONS, SAFEGUARDS, AND LIMITATIONS

- 10.40 In granting a Variance, the Board of Appeals; or in granting a Special Permit, the Special Permit Granting Authority, in accordance with Sections 9 and 10 of Chapter 40A, may impose conditions, safeguards, and limitations which shall be in writing and shall be a part of any Variance or Special Permit granted. Such conditions, safeguards, and limitations may include, among other matters and subjects:
 - 10.400 Setback, Side and Rear Yards greater than the minimum required by this Bylaw;
 - 10.401 Screening of parking areas or other parts of the premises from adjoining premises or from the streets by specified walls, fences, plantings, or other such devices;
 - 10.402 Limitation of size, number of occupants, method or time of operation or extent of facilities;
 - 10.403 Modification of the exterior design or appearance of buildings, structures, signs, or landscape materials.
- 10.41 In granting a Variance, the Board of Appeals; or, in granting a Special Permit, the Special Permit Granting Authority, may require a bond or other security to insure compliance with the conditions and approved Site Plan.

SECTION 10.5 NOTICE OF HEARING

The Special Permit Granting Authority, for a Special Permit application, or the Board of Appeals, for a Variance or Appeal, shall fix a reasonable time for a public hearing. The notice, posting, and publication therefore shall be in accordance with the provisions of Section 11, Chapter 40A of the General Laws.

In addition to the notice requirements of M.G.L. Chapter 40A, the following requirements shall also apply:

In any instance where a Special Permit or Site Plan Review application is filed with the Town and there are tenants or lessees on the property which is the subject of the permit request, the applicant shall provide notice of the permit request to those tenants or lessees of the units by distributing a notice of the request, with the date, time and location of the public hearing, to those tenants or lessees, or by posting notice in one or more common areas such as will likely result in actual notice to tenants or lessees. The applicant shall submit a sworn and notarized letter to the Permit Granting Authority stating that this requirement has been met and by what means.

If said notification requirements have been met to the satisfaction of the Permit Granting Authority, a circumstance where individual tenants or lessees fail to receive notification shall not serve to invalidate the public hearing.

ARTICLE 11 ADMINISTRATION AND ENFORCEMENT

SECTION 11.0 AMENDMENT

SECTION 11.1 EXECUTION

SECTION 11.2 SITE PLAN REVIEW

SECTION 11.3 MAINTENANCE OF COMMON AREAS, LANDSCAPING AND IMPROVEMENTS

SECTION 11.4 ENFORCEMENT

SECTION 11.0 AMENDMENT

- 11.00 This Bylaw, and all the maps incorporated in it, may be amended as provided in Chapter 40A of the General Laws.
- 11.01 After a public hearing in accordance with Article III – Public Hearing, of the Planning Board Rules and Regulations, the Planning Board may request and the Town Clerk may make nonsubstantive corrections including the following: reordering, renumbering, and correcting cross reference numbering where needed throughout this Bylaw.

SECTION 11.1 EXECUTION

The Building Commissioner shall enforce the provisions of this Bylaw as hereinafter provided. No building shall be constructed, altered, moved, or changed in use in the Town without a permit from the Commissioner. Such permit shall be withheld unless such construction, alteration or proposed use is in conformity with all provisions of this Bylaw. Where a Special Permit or Site Plan Review approval is required (pursuant to the provisions of this Bylaw), or where an appeal or petition involving a variance is pending, the Building Commissioner shall issue no such permit except in accordance with the written decision of the appropriate Board.

SECTION 11.2 SITE PLAN REVIEW

11.20 PURPOSE

The purpose of this section is to protect the health, safety, convenience and general welfare of the inhabitants of the Town by providing for a review of plans for uses and structures which may have significant impacts, both within the site and in relation to adjacent properties and streets, on pedestrian and vehicular traffic; public services and infrastructure; environmental, unique and historic resources; abutting properties; and community needs.

11.21 APPLICABILITY

- 11.210 In all instances where Site Plan Review is required, no work shall commence to alter a site, no change of use shall occur, and no building permit shall be issued to construct, alter or relocate the exterior of a building until Site Plan Review has been granted by the Planning Board. Uses for which Site Plan Review is required are in accordance with Section 3.3, Table of Uses.
- 11.211 No Change to Building or Site: Site Plan Review shall not be required when no physical change will occur to the exterior of either a building or site.
- 11.212 Change of Use: In cases where a change of use is proposed and no physical changes to the exterior of a building or site will occur, Site Plan Review may be waived if the Building Commissioner determines that the change will not conflict with the purpose of this Bylaw and finds that the proposed use will not result in the need for further review under Section 11.243.
- 11.213 Signage: Site Plan Review shall not be required when the only change to the exterior of a building or site includes the installation of signs in compliance with Article 8 of this Bylaw.

11.214 Administrative Approval for Minor Alteration to Building Exterior or Site: The Building Commissioner may authorize work to proceed without Site Plan Review for minor alterations provided the following criteria are satisfied:

11.2140 The proposed alteration shall not violate any provision of this Bylaw.

11.2141 The proposed alteration does not result in an expansion of the building footprint other than those required by the building code related to means of egress or accessibility.

11.2142 The proposed alteration does not change the height or roof lines of any building.

11.2143 The proposal does not result in any substantial change in lot coverage.

11.2144 The applicant demonstrates that the proposal does not increase the volume or rate of storm water runoff.

11.2145 Measures are taken to avoid any excessive noise, odor, dust, vibration, flood, light pollution, or visual impact resulting from the proposed alteration.

11.215 Other Review: The Building Commissioner may seek guidance in reviewing the above criteria from other Town staff and may require application to the Design Review Board and/or Historical Commission.

11.216 Changes to Approved Site Plans and Buildings: Any revision or alteration to a previously approved site plan or building plan shall be submitted to the Building Commissioner to determine if the change is significant. The Building Commissioner shall either approve the alteration as minor or advise the applicant to make submission to the Planning Board for its review under Site Plan Review.

11.22 SUBMISSION PROCEDURE

11.220 An applicant for site plan review shall file with the Planning Department an application form, fee, the required number of copies the site plan, and any additional information as may be required, in the Planning Board's Rules and Regulations. A copy of the application shall be filed with the Town Clerk.

11.221 The following information shall be filed at the time of application: a site plan, which shall include landscape, utility and drainage information, building elevations, and a traffic study and plan. An application shall not be considered complete until all required information and fees are submitted.

11.222 The Planning Board may waive all or any of the requirements for site plan submittal review and approval.

11.223 The exact form and contents of the application, fees, plans and information shall be as required by the Rules and Regulations of the Planning Board. The Board shall adopt, and may periodically amend, after a public hearing, such Rules and Regulations relating to the procedures and administration of this section and such Rules and Regulations shall be on file at the Planning Department and Town Clerk's office.

11.23 REVIEW PROCEDURE

11.230 The Planning Board shall transmit copies of the application and site plan to appropriate Town Boards, and departments which may include: the Town Engineer, Fire Chief, Conservation Department, Building Commissioner, Board of Health, Historical Commission, Public Transportation Committee, Leisure Services Commission, and others as necessary. These Boards

and departments shall have thirty-five (35) days to report to the Planning Board their findings and recommendations. Failure to report in the allotted time shall constitute approval by that Board or Department of the application submitted.

- 11.231 Notice, including notice to parties of interest, and public hearing shall be done in accordance with the procedures required for Special Permits, as found in Chapter 40A. In addition to the notice requirements of M.G.L. Chapter 40A, the following requirements shall also apply:

In any instance where a Special Permit or Site Plan Review application is filed with the Town and there are tenants or lessees on the property which is the subject of the permit request, the applicant shall provide notice of the permit request to the tenants or lessees of the units by distributing a notice of the request, with the date, time and location of the public hearing, to those tenants or lessees, or by posting notice in one or more common areas such as will likely result in actual notice to tenants or lessees. The applicant shall submit a notarized letter to the permit granting authority stating that this requirement has been met and by what means.

If said notification requirements have been met to the satisfaction of the permit granting authority, a circumstance where individual tenants or lessees fail to receive notification shall not serve to invalidate the public hearing.

- 11.232 The Planning Board, or its designated subcommittee, shall schedule a viewing of the property for the purpose of making an informed decision, unless, pursuant to Section 11.222, the Board judges the change to be insignificant and does not require a visit.

11.24 REVIEW CRITERIA/DESIGN GUIDELINES

The following criteria and guidelines shall be used by the Board in evaluating the site plan and all information submitted as part of the application.

11.240 GENERAL

- 11.2400 Conformance with all appropriate provisions of the Zoning Bylaw and the goals of the Master Plan.
- 11.2401 Protection of Town amenities and abutting properties through minimizing detrimental or offensive actions.
- 11.2402 Protection of abutting properties from detrimental site characteristics resulting from the proposed use, including but not limited to air and water pollution, flood, noise, odor, dust vibration, lights or visually offensive structures or site features.
- 11.2403 Provision of adequate recreational facilities, open space and amenities.

11.241 ENVIRONMENTAL

- 11.2410 Protection of unique or important natural, historic or scenic features.
- 11.2411 Adequacy of proposed methods of refuse disposal
- 11.2412 Ability of proposed sewage disposal and water supply systems within and adjacent to the site to serve the proposed use.
- 11.2413 Adequacy of the proposed drainage system within and adjacent to the site to handle the increased runoff resulting from the development.
- 11.2414 Provision of adequate landscaping, including the screening of adjacent residential uses, provision of street trees, landscape islands in the parking lot and a landscape buffer along the street frontage. When a non-residential use adjoins a residential district, an uninterrupted vegetated buffer shall, to the extent feasible, be established and maintained between buildings associated with uses under this section and the nearest

residential property boundary. Where natural, undisturbed vegetation already exists on-site prior to site preparation and clearing, the majority of that vegetation may be retained and included as part of the buffer, along with the addition of such new plantings, selective removals, and other management of site plantings as are determined to be necessary to maintaining an effective year-round visual screen. See Section 11.3.

- 11.2415 Adequacy of the soil erosion plan and any plan for protection of steep slopes, both during and after construction.
 - 11.2416 Protection of adjacent properties by minimizing the intrusion of air and water pollution, flood, noise, odor, dust and vibration through appropriate site and structure design and the use of appropriate design and materials for containment, ventilation, filtering, screening, sound-proofing, sound-dampening and other similar solutions.
 - 11.2417 Protection of adjacent properties by minimizing the intrusion of lighting, including parking lot and building exterior lighting, through the use of cut-off luminaires, light shields, lowered height of light poles, screening or similar solutions. Except for architectural and interior-lit signs, all exterior site lighting shall be downcast and shall be directed or shielded to eliminate light trespass onto any street or abutting property and to eliminate direct or reflected glare perceptible to persons on any street or abutting property and sufficient to reduce a viewer's ability to see. All site lighting, including architectural, sign, and parking lot lighting, shall be kept extinguished outside of those business hours established under an approved site management plan, except for lighting determined to be necessary for site security and the safety of employees and visitors.
 - 11.2418 Protection from flood hazards as stated in Section 3.22, considering such factors as: elevation of buildings; drainage; adequacy of sewage disposal; erosion and sedimentation control; equipment location; refuse disposal; storage of buoyant material; extent of paving; effect of fill, roadways or other encroachment on floor runoff and flow; storage of chemicals and other hazardous substances.
 - 11.2419 Protection of wetlands by building in accordance with the provisions of the Wetlands Protection Act, Chapter 131, Section 40, and the Amherst Wetlands Bylaw.
- 11.242 DESIGN
- 11.2420 Within the B-L, B-VC, B-N, COM, OP, LI and PRP Districts, and any residential zoning district where the project in question occurs within the boundaries of a National Historic Register District, the Permit Granting Authority shall, if it deems the proposal likely to have a significant impact on its surroundings, be permitted to use the design principles and standards set forth in Sections 3.2040 and 3.2041, 1) through 9) to evaluate the design of the proposed architecture and landscape alterations. Within the B-G and abutting B-L districts, and for any Town project within any district, the provisions of Section 3.20, Design Review, shall remain in effect.
 - 11.2421 The development shall be reasonably consistent with respect to setbacks, placement of parking, landscaping and entrances and exits with surrounding buildings and development.
 - 11.2422 Building sites shall avoid, to the extent feasible, the impact on steep slopes, floodplains, scenic views, grade changes and wetlands.
 - 11.2423 If there is more than one building on the site, the buildings shall relate harmoniously to each other in architectural style, site location and building exits and entrances.
 - 11.2424 Screening shall be provided for storage areas, loading docks, dumpsters, rooftop equipment, utility buildings and similar features.

11.243 TRAFFIC/PARKING

- 11.2430 The site shall be designed to provide for the convenience and safety of vehicular and pedestrian movement both within the site and in relation to adjoining ways and properties.
- 11.2431 The location and number of curb cuts shall be such to minimize turning movements, and hazardous exits and entrances.
- 11.2432 The location and design of parking spaces, bicycle racks, drive aisles, loading areas and sidewalks shall be provided in a safe and convenient manner.
- 11.2433 Provision for access to adjoining properties shall be provided as appropriate.
- 11.2434 Where possible, driveways located in commercial and business districts shall be located opposite each other.
- 11.2435 Joint access driveways between adjoining properties shall be encouraged.
- 11.2436 A traffic impact report shall be required, unless waived under Section 11.222. Information required as part of this report shall be as set forth in the Rules and Regulations of the Planning Board.
- 11.2437 When a traffic impact report is required, the proposed development shall comply with the following standards:
1. Level of Service (LOS) at nearby intersections shall not be degraded more than one level as a result of traffic generated by the proposed development, nor shall any nearby intersection degrade below the Level of E.
 2. Adjacent streets shall not exceed design capacity at the peak hour as a result of traffic generated by the proposed development.
 3. Safety hazards shall not be created or added to as a result of traffic generated by the proposed development.
 4. If any of the standards in Section 11.2437 1 - 3 are violated, the applicant shall provide alternative proposals to meet the standards, including but not limited to; reduction in the size of the development, change in proposed uses on the site, contributions to off-site street and intersection improvements or construction of off-site street and intersection improvements.

11.25 PLANNING BOARD DECISION

- 11.250 The concurring vote of a majority of the members of the Board participating and voting shall be required for any decision on a site plan application (abstaining members being considered not to be voting). The Board's written decision shall consist of either:
- 11.2500 Approval of the site plan based on a determination that the proposed project meets all of the requirements of Section 11.2.
- 11.2501 Denial of the site plan based on a determination that either: a) insufficient information was submitted with the application in order for the Board to adequately review the proposal, or; b) a determination that the project does not meet the requirements of Section 11.2.
- 11.2502 Approval of the site plan subject to conditions, modifications and reasonable restrictions necessary to ensure compliance with the requirements of Section 11.2. Such conditions may include the following:

- 11.25020 Controls on location and type of access to the site.
- 11.25021 Requirements to reduce the traffic impact of the proposed development in accordance with Section 11.243.
- 11.25022 Requirements to minimize impacts on the capacities of infrastructure serving the site, including but not limited to, water, sewer, storm drains, and sidewalks.
- 11.25023 Requirements to minimize any environmental degradation during construction.
- 11.25024 Other conditions designed to ensure compliance with the criteria and guidelines of Section 11.24.
- 11.251 The Planning Board shall render a decision within ninety (90) days of the public hearing and shall file its written decision with the Town Clerk's office and other appropriate parties in accordance with the provisions of MGL Chapter 40A.
- 11.252 For the purpose of securing the performance of all proposed work, including landscaping and off-site improvements, the Board may require any of the following: a performance bond, deposit of money, bank passbook, or letter of credit in an amount determined by the Board to be sufficient to cover the cost of all or any part of improvements required.
- 11.253 Any site plan approval granted under this Section shall expire in two (2) years if substantial construction has not begun by such date.
- 11.254 Violations of the approved site plan or any conditions of approval shall be subject to the provisions of Section 11.45 of the Zoning Bylaw.

SECTION 11.3 MAINTENANCE OF COMMON AREAS, LANDSCAPING AND IMPROVEMENTS

- 11.30 The recipient of any permit under this Bylaw, or any successor, shall be responsible for maintaining all common areas, landscaping and other improvements or facilities required by this Bylaw or any permit issued in accordance with its provisions. Those areas, improvements, or facilities for which an offer of dedication to the public has been accepted by the appropriate public authority are excluded. Such improvements shall include, but are not limited to, private roads and parking areas, water and sewer lines, passive and active recreational facilities, and vegetation and trees used for screening and landscaping. Such improvements shall be properly maintained so that they can be used in the manner intended. Vegetation and trees indicated on approved site plans shall be replaced if they die or are destroyed.
- 11.31 The minimum planting size for landscape material shall be 1-1/2" caliper for trees and 5 gallon for shrubs. The Amherst Landscaping Guidelines should be used for reference in the preparation of landscape plans.

SECTION 11.4 ENFORCEMENT

- 11.40 If the Building Commissioner shall be informed or have reason to believe that any provision of this Bylaw or any permit or decision thereunder has been, is being, or is about to be violated, the Commissioner shall make an investigation of the facts, including the inspection of the premises where the violations may exist. Where written complaint is made to the Commissioner, the Commissioner shall take action upon such complaint within 14 days of receipt thereof and shall report such action in writing to the complainant.
- 11.41 If the Commissioner finds no violation or prospective violation, any person aggrieved by said decision, or any officer or Board of the Town, may within 30 days appeal to the Board of Appeals.
- 11.42 If the Commissioner finds a violation or prospective violation, the Commissioner shall give immediate notice in writing to the owner and to the occupant of the premises and shall order the person(s) in lawful control of the premises to cease and desist and refrain from such violation. Any person aggrieved by said decision or, any officer or Board of the Town, may within 30 days appeal to the Board of Appeals.

- 11.43 If after such order, such violation continues and no appeal to the Board of Appeals is taken within 30 days, and Town Manager shall, upon notice from the Building Commissioner forthwith make applications to the Superior Court for an injunction or order restraining the violation and shall take such other action as is necessary to enforce the provision of this Bylaw.
- 11.44 If after action by the Building Commissioner, appeal is taken to the Board of Appeals, and after a public hearing, the Board of Appeals finds that there has been a violation or prospective violation, the Commissioner shall issue an order to cease and desist and refrain from such violation unless such order has been previously issued. If such then continues, the Town Manager shall, upon notice from the Building Commissioner, forthwith make application to the Superior Court for an injunction or order restraining the violation and shall take such other action as may be necessary to enforce this Bylaw.
- 11.45 Any violation of the provisions of this Bylaw, the conditions of a permit granted under this Bylaw, or any decisions rendered by the Zoning Board of Appeals or Planning Board under this Bylaw, shall be liable to a fine of not more than one hundred dollars (\$100.00) for each violation. Each day such violation continues shall be deemed a separate offense.

In addition to the procedures for enforcement as described above, the provisions of this Bylaw, the conditions of a permit granted under this Bylaw, or any decisions rendered by the Zoning Board of Appeals or Planning Board under this Bylaw, may be enforced, by the Building Commissioner, by non-criminal complaint pursuant to the provisions of General Laws, Chapter 40, Section 21D. The fine for any violation disposed of through this procedure shall be one hundred dollars (\$100.00) for each offense. Each day such violation continues shall be deemed a separate offense.

- 11.46 Construction or operations under a building permit or special permit shall conform to any subsequent amendment of this Bylaw unless the use or construction is commenced within a period of six months after issuance of the permit; additionally, in cases involving construction begun within such six-month period, such construction shall be continued through to completion as continuously and expeditiously as is reasonable.

ARTICLE 12 DEFINITIONS

For the purposes of this Bylaw certain words and terms used herein shall be interpreted as follows:

- 12.00 Aggregated accessory uses: One or more uses customarily accessory to principal residential uses as allowed in this Zoning Bylaw, where such accessory use(s) are aggregated, used and shared in common by the occupants of more than one residential dwelling unit located on the same property or a different property from the accessory use(s).
- 12.01 Amusement device: Any mechanical or electronic game, amusement, sport or test of skill including, but not limited to, videogame machines, pinball machines, pool or billiard tables, or similar mechanical or electronic devices.
- 12.02 Apartment: A residential use consisting of one or more buildings, each building containing no fewer than three (3), nor more than twenty-four (24) dwelling units. Apartment dwelling units may share internal accessways and entrances and need not have separate exterior entrances on the ground level.
- 12.03 Aquifer: Geologic formation composed of rock or sand and gravel that contains significant amounts of potentially recoverable ground water.
- 12.04 Arcade: Premises, or portions of premises, where six or more amusement devices are maintained for public or private membership use.
- 12.05 Bar: A food and drink establishment or a part of such an establishment devoted primarily to the service and consumption of alcoholic beverages on the premises, and in which the service of food is only incidental.
- 12.06 Bed and Breakfast: A use accessory to a dwelling unit consisting of overnight lodging with breakfast. In a bed and breakfast no meals other than breakfast shall be served, and no breakfast shall be served nor shall any retail and consumer services be provided to any member of the public not lodged as an overnight guest.
- 12.07 Congregate Housing For the Elderly And Handicapped: A building or buildings, or a portion thereof, arranged or used for lodging by elderly and handicapped residents, as defined in Chapter 121B of the General Laws, wherein meals may be served in one or more group dining facilities.
- 12.08 Construction Vehicle: Any motor vehicle with a Gross Vehicle Weight (GVW) greater than 10,000 lbs; any heavy equipment or machinery used for business purposes, including for general or specialized construction or for tasks requiring mechanical power, whether wheeled or of restricted mobility; or any trailer used predominantly for business purposes.
- 12.09 Converted Dwelling: A use containing one or more dwelling units created predominantly through the conversion of existing residential or non-residential space, where said units are located in or attached to an existing residence of ten or more years of age, or a detached structure constructed prior to 1964, located on a lot where at least one dwelling unit lawfully existed prior to the conversion. A converted dwelling use may include portions of dwelling units created through new construction, but no new dwelling unit in a converted dwelling use may be created as a result of new construction alone. Proposed multi-unit residential uses not meeting the thresholds established for the conversion of existing space shall be considered to be the residential use category most closely corresponding to the total number of new dwelling units they include and the nature of the use, as determined by the Zoning Enforcement Officer or Special Permit Granting Authority or Permit Granting Board, as applicable.
- 12.10 Discharge Area: That portion of the surface area of an aquifer which, because of an overlying layer of impermeable material such as clay, tends to discharge more precipitation and stream flow out of the watershed as surface runoff than it allows to percolate into the ground and recharge the aquifer. Where an overlying layer is not completely impermeable as a result of natural conditions or human activity, a discharge area can be a potential location for the introduction of groundwater pollution.
- 12.11 Drive-up restaurant: A restaurant, refreshment stand, fast-food eatery, or other similar place for the service of food or beverages, some portion of which is served to persons remaining in their vehicles outside the building, via a drive-up window or other similar method.

- 12.12 Dwelling Unit: A single residential unit providing complete independent living facilities for a household of one or more persons, including permanent provisions for living, sleeping, eating, cooking and sanitation.
- 12.13 Dwelling Unit, Attached: A building containing three or more units, each unit having a separate entrance.
- 12.14 Dwelling Unit, Detached: A single family dwelling, containing one unit, which provides complete independent living facilities.
- 12.15 Dwelling Unit, Two Family Detached (Duplex): A single residential building containing two (2) dwelling units, arranged vertically one above the other, or horizontally side by side, each with a separate entrance.
- 12.16 Dwelling Unit, Zero Lot Line: A single family unit, sited on one or more lot lines, with no yard along these lot lines. A zero lot line unit may be attached to an adjoining zero lot line unit provided they are separated by a party wall, with no openings along the dividing lot line.
- 12.17 Family (Household):
- 12.170 An individual residing in one dwelling unit; or
- 12.171 A group of persons related by marriage, civil union, blood, adoption, guardianship, or other duly authorized custodial relationship residing together in one dwelling unit; or
- 12.172 A group of unrelated individuals, not to exceed 4, residing cooperatively in one dwelling unit. In this instance, an accessory use as described in Sections 5.010 and 5.011 is not permitted.
- 12.173 A group of individuals, regardless of relation, residing in congregate or similar group housing for the elderly or disabled, in half way houses, or in other group residential uses authorized and operated under state and federal law.
- 12.18 Farmland: Land under agricultural use as defined in MGL Ch. 128, Section 1A, and MGL Ch. 61A, Sections 1 and 2, inclusive, as amended, and, including for the purposes of this Bylaw, the lawful propagation and raising of wild or game species under applicable state and federal law, and, land under agricultural use whose soils are classified as prime, unique, or of state and local importance by the USDA Soil Conservation Service. The provision of MGL Ch. 40A, Section 3, shall apply.
- 12.19 Floor Area Ratio: The ratio of gross floor area of all buildings to the lot area.
- 12.20 Groundwater: All the water found beneath the surface of the ground. More specifically, the slowly moving subsurface water present in the aquifer and recharge areas.
- 12.21 Habitable Space: The gross square footage of the enclosed interior space of a residential building or dwelling, which space is used or intended to be used for living, sleeping, cooking, or eating purposes. Includes within any single dwelling unit any rooms containing toilets, bathtubs or showers, as well as any laundries, pantries, foyers, communicating corridors, closets and storage spaces, but excluding any such spaces where they are used in common with other dwelling units.
- 12.22 Hazardous Material: Any material or combination of materials, which because of its quantity, concentration or physical, chemical or infectious characteristics may cause or significantly contribute to a present or potential threat to human health, safety or welfare or to the environment when improperly stored, treated, transported, disposed of, used or otherwise managed. This definition includes all substances which are included in the definition of hazardous materials contained in M.G.L. Chapter 21C.
- 12.23 Hostel: An overnight lodging facility licensed by a recognized national or international hostelling organization, offering temporary lodging to members of such organizations and other travelers, as well as educational programs and other goods and services related to hostelling. Lodging for non-members shall not exceed fourteen (14) days in any four (4) month period, with a limit of no more than seven (7) consecutive days. Lodging for members shall not exceed thirty (30) days in any four (4) month period, with a limit of no more than fourteen (14) consecutive days.

- 12.24 Hotel or Motel: A structure used or designed for overnight lodging, and which may also provide a restaurant and hotel/motel-related retail and consumer services to lodgers and the public.
- 12.25 Housing, Affordable: Affordable housing units are units which may only be rented or purchased by families or households whose annual incomes, adjusted for family size, do not exceed the limits for the maximum annual income for low-income families or households (80% of the median income for Amherst, as calculated by the U. S. Department of Housing and Urban Development or any successor agency), and are eligible and countable for the purpose of the Commonwealth's 40B Subsidized Housing Inventory (SHI) or its successor.
- Median income for Amherst shall be as calculated by the U.S. Department of Housing & Urban Development, or any successor agency and shall be adjusted for family size.
- 12.26 Inn: A structure used or designed for overnight lodging, and which may also provide a restaurant and related retail and consumer services to lodgers and the public. An inn shall be located in a historic building 75 years or more in age.
- 12.27 Limousine: A livery vehicle primarily garaged or engaged for hire in the town of Amherst, which is used to carry passengers under pre-arranged contract for an agreed-upon hourly fare, or; operates as a charter, business courtesy, employee shuttle, customer shuttle, or; a motor vehicle on a regularly scheduled route without the use of a taximeter.
- 12.28 Livestock and Poultry: All domesticated mammals and birds that are raised and kept for agricultural purposes, including but not limited to horses, ponies, donkeys, mules, cattle, goats, llamas, alpacas, swine, sheep, rabbits, hares, and fowl, which shall be defined as including, but not limited to, chickens (hens and roosters), turkeys, pigeons, capons, ducks, geese, swans, pheasants, peacocks, guinea fowl, emus, and all wild mammals and game birds raised and kept in accordance with state and local law. Except as provided for under Section 5.013, livestock and poultry shall not include domesticated animals raised and kept as pets such as dogs, cats, rabbits, various species of rodents, exotic birds, reptiles, fish, amphibians or wild animals as provided for in accordance with state and local law.
- 12.29 Lodging or boarding house: A residential use housed in a single dwelling or in part of a dwelling where no fewer than six (6) but not more than ten (10) unrelated persons are let or sublet lodging in private rooms or quarters not constituting dwelling units for definite periods of time, and where there are no overnight stays by transient guests. The building shall be occupied by the owner of the property or the manager of the use. Meals may or may not be provided, but only one common kitchen facility shall exist and no meals shall be provided by the establishment to members of the general public not lodged in the establishment. Lodging or boarding houses shall not include hotels, motels, inns, sorority, fraternity and cooperative residences licensed or regulated by agencies of the Commonwealth. Lodging or boarding houses shall abide by all applicable state and local laws and regulations governing lodging houses, boarding houses, or rooming houses.
- 12.30 Lot, Buildable: Any lot meeting the minimum lot area and lot frontage requirements of the zoning district in which it is located and which contains either 90 percent of its total lot area, or 20,000 square feet, in contiguous upland acreage.
- 12.31 Marijuana Uses:
- 12.3100 Craft Marijuana Cooperative: a Marijuana Cultivator comprised of residents of the Commonwealth and organized as a limited liability company, limited liability partnership, or cooperative corporation under the laws of the Commonwealth. A cooperative is licensed to cultivate, obtain, manufacture, process, package and brand marijuana and marijuana products to transport marijuana to Marijuana Establishments, but not to consumers.
- 12.3101 Independent Marijuana Testing Laboratory: A laboratory that is licensed by the Cannabis Control Commission and is: (i) accredited to the most current International Organization for Standardization 17025 by a third-party accrediting body that is a signatory to the International Laboratory Accreditation Accrediting Cooperation mutual recognition arrangement or that is otherwise approved by the Cannabis Control Commission; (ii) independent financially from any medical marijuana treatment center, marijuana establishment, or marijuana licensee for which it conducts a test; and (iii) qualified to test marijuana in compliance with 935 CMR 500.160 and M.G.L c. 94C, Section 34.
- 12.3102 Marijuana Cultivator: An entity licensed to cultivate, process and package marijuana, and to transfer marijuana to other Marijuana Establishments, but not to consumers.

- 12.3103 Marijuana Delivery-Only Retailer: An entity that does not provide a retail location accessible to the public, but is authorized to deliver directly from a marijuana cultivator facility, craft marijuana cultivator cooperative facility, marijuana product manufacturer facility or microbusiness.
- 12.3104 Marijuana Establishment: A Marijuana Cultivator, Craft Marijuana Cooperative, Marijuana Product Manufacturer, Marijuana Retailer, Independent Testing Laboratory, Marijuana Research Facility, Marijuana Transporter, Medical Marijuana Treatment Center, Off-site Medical Marijuana Dispensary, or any other type of licensed marijuana-related business.
- 12.3105 Marijuana Product Manufacturer: An entity licensed to obtain, manufacture, process and package marijuana and marijuana products, to deliver marijuana and marijuana products to Marijuana Establishments and to transfer marijuana and marijuana products to other Marijuana Establishments, but not to consumers.
- 12.3106 Marijuana Transporter: An entity, not otherwise licensed by the Cannabis Control Commission, that is licensed to purchase, obtain, and possess marijuana and marijuana products solely for the purpose of transporting, temporary storage, sale and distribution to marijuana establishments, not for sale to consumers.
- 12.3107 Marijuana Microbusiness: A collocated Marijuana Establishment that can be either a Tier 1 Marijuana Cultivator [up to 5,000 square feet in accordance with 935 CMR 500.005, Cannabis Control Commission Regulations], or Product Manufacturer or both, in compliance with the operating procedures for each [Cannabis Control Commission] license. A Microbusiness that is a Marijuana Product manufacturer may purchase no more than 2,000 pounds of marijuana per year from other Marijuana Establishments.
- 12.3108 Marijuana Research Facility: An entity licensed to engage in research projects by the Massachusetts Cannabis Control Commission.
- 12.3109 Marijuana Social Club: An organization, club, lodge, business, or other private grounds allowing on-site consumption of marijuana or marijuana products where no sales of marijuana or marijuana products occurs.
- 12.3110 Marijuana Social Consumption Operation: An entity licensed to purchase or otherwise acquire marijuana from licensed marijuana establishments and sell single servings of marijuana to consumers for consumption or use on the premises, except as otherwise authorized herein.
- 12.3111 Marijuana Social Consumption Operator: A marijuana retailer licensed to purchase marijuana and marijuana products from a marijuana establishment and to sell marijuana and marijuana products on its premises only to consumers or allow consumers to consume marijuana and marijuana products on its premises only.
- 12.3112 Medical Marijuana Treatment Center (MMTC): A use operated by an entity registered and approved by the MA Department of Public Health in accordance with 105 CMR 725.000, and pursuant to all other applicable state laws and regulations, also to be known as a Registered Marijuana Dispensary (RMD), that acquires, cultivates, possesses, processes (including development of related products such as food, tinctures, aerosols, oils, or ointments), transfers, transports, sells, distributes, dispenses, or administers marijuana, products containing marijuana, related supplies, or educational materials to registered qualifying patients or their personal caregivers. An MMTC shall explicitly include facilities which cultivate and process medical marijuana, and which may also dispense and deliver medical marijuana and related products.
- 12.3133 Off-Site Medical Marijuana Dispensary (OMMD): A medical marijuana facility that is located off-site from any cultivation/processing facility that is controlled and operated by the same registered and approved entity which operates an affiliated MMTC but which serves only to dispense the processed marijuana, related supplies and educational materials to patients registered and qualified under the provisions of 105 CMR 725.00 or their personal caregivers.
- 12.3114 Recreational Marijuana Retailer (RMR): An entity licensed to purchase and transport cannabis or marijuana product from Marijuana Establishments and to sell or otherwise transfer this product to Marijuana Establishments and to consumers. Retailers are prohibited from delivering cannabis or marijuana products to consumers; and from offering cannabis or marijuana products for the purposes of on-site social consumption on the premises of a Marijuana Establishment.

12.32 Medical Care Providers:

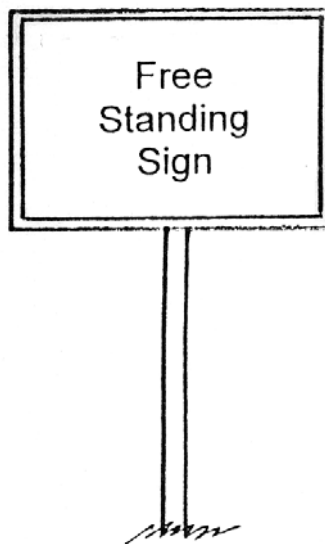
- 12.320 Other Medical or Dental Professionals: A health care professional who may provide patient care, patient support, or ancillary medical services under the supervision of a principal health care provider. For the purposes of this Bylaw, this shall include nurse practitioners, registered or licensed practical nurses, physicians' assistants, dental hygienists, sonographers, phlebotomists, and similar medical professionals.
- 12.321 Principal Health Care Provider: A health care professional licensed to operate as a physician dentist in the Commonwealth of Massachusetts, who provides care to patients and may refer patients or receive referrals for specific medical or dental services, particularly in an outpatient setting. For the purposes of this Bylaw, principal health care providers shall include physicians, dentists, and physician specialists such as psychiatrists, dermatologists, dental surgeons, and ophthalmologists.

12.33 Medical Uses:

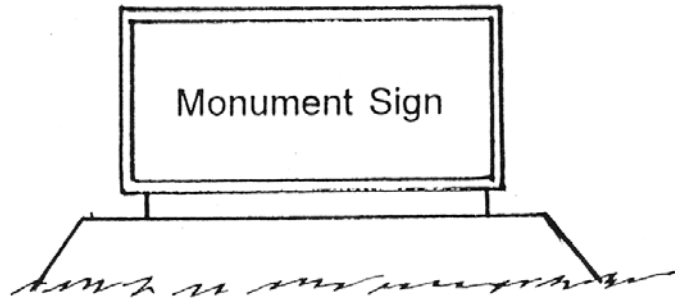
- 12.330 Clinic or emergency care facility: Any private or public health clinic, or other similar community health facility providing diagnosis and ambulatory emergency medical care to persons on an exclusively outpatient basis as a principal use. A clinic or emergency care facility may also be accessory to a medical center, hospital, or similar facility.
- 12.331 Medical center: Two (2) or more medical group practices, or medical offices, or combination thereof, operating in the same building or on the same property, which may also contain associated principal or accessory uses such as diagnostic testing facilities, physical therapy, therapeutic or counseling services, pharmacies, medical supply retailers, and similar uses. A medical center shall not include medical residential facilities.
- 12.332 Medical group practice: A Medical, dental, or psychiatric practice larger than a medical office, including principal health care providers, other medical or dental professionals, and administrative or clerical staff, providing services on the premises. A medical group practice and its principal health providers shall offer medical services within one area of medical practice (ex., general practice, orthopedics, cardiology, obstetrics and gynecology, oncology, etc.) or within a small number of closely related areas of medical practice, and may also contain in-house diagnostic testing facilities, medical counseling services, and similar services, or may be associated with other similar accessory or complementary principal uses in the same building.
- 12.333 Medical office: A Medical, dental, or psychiatric practice offering medical or dental services on an outpatient basis and including a total of no more than the full time equivalent of three (3) principal health care providers and two (2) other medical or dental professionals, exclusive of administrative or clerical staff, providing services on the premises. A medical or dental office may also contain associated in-house ancillary services such as in-house diagnostic testing facilities, medical counseling services, and similar services.
- 12.34 Mixed-use building: Mixed-use building is a building containing one (1) or more dwelling unit(s) in combination with permitted non-residential uses in accordance with Article 3. (*Adopted December 20, 2021; Effective January 3, 2022*)
- 12.35 Oil: Insoluble or partially soluble crude or fuel oils, lube oil, sludge, asphalt or partially insoluble derivatives of mineral, animal or vegetable oils.
- 12.36 Owner-Occupant(s): One or more natural persons who, in their individual capacity as distinct from any representative capacity, own(s) a whole or undivided interest in fee simple of certain real property and at least one of whom occupies a dwelling unit thereon as his or her principal residence (see definition).
- 12.37 Permit Granting Authority (PGA): The Planning Board or Zoning Board of Appeals, as the bylaw may designate, or, if no specific designation, the Building Commissioner/Zoning Enforcement Officer. (*Adopted December 20, 2021; Effective January 3, 2022*)
- 12.38 Permit Granting Board: That Board designated by the Zoning Bylaw to hear and decide Site Plan Review applications.
- 12.39 Pets: Domesticated animals such as dogs, cats, rabbits, selected exotic mammals (pot-bellied pigs, dwarf goats, etc.),

various species of rodents (rats, mice, guinea pigs, hamsters, ferrets, chinchillas, etc.), exotic birds, reptiles, fish or amphibians. The keeping of wild animals, exotic birds, fish, reptiles, and amphibians as pets is subject to the requirements of M.G.L. Ch. 131, Sections 23, 25 and 26A, as amended, and 321 CMR 2.12 and 9.01, as amended.

- 12.40 Principal Use: The primary and predominant land use or uses occurring on a given property.
- 12.39 Recharge Area: Areas composed of permeable stratified sand and gravel or till and certain wetlands that collect precipitation or surface water and carry it to the aquifer.
- 12.41 Residence, Principal: The primary residence of an individual, family (as defined in this Bylaw), or property owner, i.e., the home where an owner, and the owner's family if applicable, resides as the primary dwelling; provided however, that no person shall hold concurrent rights in more than one (1) principal residence, as set forth under MGL Ch. 188, Section 1, as amended. Regular or periodic interruptions in residency shall not be considered to change the status of principal residence where such interruptions are the result of illness, catastrophe, professional or academic scheduling, or other temporary reasons for absence which do not affect basic indices of residency. For the purposes of this Bylaw, principal residency shall be determined by the Zoning Enforcement Officer, or the Permit Granting Authority or Special Permit Granting Authority, as may be applicable, based upon a preponderance of evidence, including but not limited to the following indices of residency and address, as applicable: declaration of homestead, filing of state and federal income taxes, voter registration, annual street list, driver's license, motor vehicle registration, mortgage, mailing address, and telephone listing (if any).
- 12.42 Resident Manager: A live-in resident of a rental residential use qualified and responsible for implementation of the property management plan and for managing and coordinating the maintenance, housekeeping, and administrative duties for the rental units under their charge.
- 12.43 Restaurant: An establishment or part of an establishment devoted primarily to the service and consumption of food and beverages on the premises. Any such establishment shall be considered a restaurant if the service of food is its primary activity and the service of alcoholic beverages, if any, is incidental to the sale, service and consumption of food and non-alcoholic beverages.
- 12.44 Sign: Any fabricated or illuminated display structure, device or surface incorporating letters, numerals, figures, symbols or other graphic or design elements used for the visual attraction of the public to any place, subject, person, firm, corporation, public performance, article, machine, merchandise or event, where such sign is displayed in any manner out of doors, or displayed indoors for the purpose of being viewed from the out of doors.
- 12.45 Sign, free standing: A sign supported permanently upon the ground by poles.



- 12.46 Sign, monument: A sign mounted either directly on the ground or on a wall that is situated on the ground.



- 12.47 Sign, projecting: A sign affixed to and projecting laterally, in whole or in part, from the side of a building, wall, or structure for a distance of at least 12 inches.
- 12.48 Special Permit Granting Authority: The Zoning Board of Appeals and the Planning Board are designated as the Special Permit Granting Authorities, as provided within the Articles of this Bylaw.
- 12.49 Street: An accepted public way, or a way which the Town Clerk certifies is maintained and used as a public way, or a way shown on a plan which has been approved and endorsed in accordance with the Subdivision Control Law, or a way in existence when the Subdivision Control Law became effective in the Town of Amherst having, in the opinion of the Planning Board, sufficient width, suitable grades, and adequate construction to provide for the needs of vehicular traffic in relation to the proposed use of the land abutting on the way.
- 12.50 Subdividable Dwelling: A building constructed for potential multi-family residential purposes as its principal use and having an external appearance and footprint substantially consistent with those of a one family detached dwelling. The internal construction design of the building allows for ease of both conversion into more dwelling units, and consolidation into fewer dwelling units, all within the maximum number established under Section 3.324 of this Bylaw.
- 12.51 Taxicab: A vehicle for hire garaged in Amherst and used for the conveyance of persons from any point of origin within the town of Amherst to any other location for a fee, whether hourly or by a taximeter; except livery vehicles as previously defined or a vehicle operated in a manner and for the purposes stated in Massachusetts General Laws, Chapter 159A.
- 12.52 Town House: A residential use consisting of one or more buildings containing no fewer than three nor more than ten (10) attached dwelling units, each of which has a separate private entrance on the ground level and where no building is more than three stories in height. Individual town house dwelling units extend from foundation to roof, and may consist of more than one floor, with each unit having fully exposed walls on at least two sides for access, light, and ventilation.
- 12.53 Toxic or Hazardous Substance: Any chemical substance or mixture of substances in a gaseous, liquid or solid state which is listed in the Massachusetts toxic or hazardous substance list compiled and maintained by the commissioner of the Massachusetts Department of Public Health in compliance with the provisions of M.G.L. Ch. 111F, section four, as amended, and which is manufactured, processed, used or stored in the workplace, but which shall not include alcoholic beverages as defined in MGL Ch. 138, Section one, or articles intended for personal consumption by employees in the workplace, or consumer articles packaged for distribution to, and used by, the general public, or articles sold or used in retail food establishments and all other retail trade establishments, exclusive of articles used in processing and repair areas, or substances being transported in interstate commerce.
- 12.54 Truck Terminal: A building or area in which freight brought by truck is assembled and/or stored for routing and reshipment or in which semi-trailers, including tractor and/or trailer units, and other trucks are parked or stored.
- 12.55 Upland Acreage: Lot area, not including watercourses, waterbodies, vernal pools, banks, or bordering or isolated vegetated wetland as defined by the Massachusetts Wetlands Protection Act Regulations 310 CMR 10.00, or the Amherst Wetlands Bylaw.
- 12.56 Waste: Any discarded material, or any material otherwise generated or produced as a by-product of any activity which is not intended for further use by the generator or producer.

- 12.57 Wastewater Treatment Works Subject to 314 CMR 5.00: Any wastewater treatment plants or works, including community septic systems, which require a groundwater discharge permit from the Massachusetts Department of Environmental Protection (DEP).
- 12.58 Watershed: Lands lying adjacent to water courses and surface water bodies which create the catchment or drainage areas of such water courses and bodies.
- 12.59 Wetlands: those lands defined as wetlands by the provisions of the Massachusetts Wetlands Act, M.G.L. Chapter 31, Section 40, as amended, and by the provisions of the General Bylaws of the Town of Amherst Massachusetts, Article II, General Regulations, Wetlands Protection, as amended.
- 12.60 Wireless Communications Facilities: Facilities used for the principal purpose of commercial or public wireless communications uses, such as cellular telephone services, enhanced specialized mobile radio services, microwave communications, personal wireless communications services, paging services and the like, as defined in Section 704 of the Federal Telecommunications Act of 1996, as amended. Such facilities shall include towers, antennae, antennae support structures, panels, dishes and accessory structures. For the purposes of this bylaw, wireless communications facilities do not include the following accessory uses or structures: antennae or dishes used solely for residential household television and radio reception; antennae or dishes used for commercial or public purposes which are not visible from any neighboring property or public way, or as set forth in Section 3.340.2.j., or dishes for these purposes measuring two (2) meters or less in diameter; nor amateur radio facilities, including towers under sixty-five (65) feet above ground, actively used in accordance with the terms of any amateur radio service license issued by the Federal Communications Commission (FCC), provided that the tower is not used or licensed for any commercial use.
- 12.61 Yield Plan: A plan including a map and a summary of data depicting the potential maximum number of building lots and dwelling units that can be built on a given property under the conventional subdivision standards. The yield plan shall include a subdivision layout and design consisting of buildable lots as defined and described under Article 6 of this Bylaw, showing road layouts, property lines, and approximate building envelopes, where the said layout requires no modification or waiver from existing ordinances or regulations. The yield plan is meant to be conceptual in nature but shall be realistic in its response to existing topography, wetlands, floodplains, or where potential building lots or roads would not ordinarily be permitted by right in a conventional subdivision layout.
- 12.62 Zone I Recharge Area: That area encompassed by a circle extending around the wellhead of a public drinking water well, with the wellhead at its center and including all land within a 400 foot radius.
- 12.63 Zone II Recharge Area: That area of an aquifer which contributes water to a public drinking water well under the most severe pumping and recharge conditions that can be realistically anticipated (180 days of pumping at safe yield, with no recharge from precipitation). It is bounded by the groundwater divides which result from pumping the well and by the contact of the aquifer with less permeable materials such as till or bedrock. In some cases, streams or lakes may act as recharge boundaries. In all cases, Zone II shall extend up-gradient to its point of intersection with prevailing hydrogeologic boundaries (a groundwater flow divide, a contact with till or bedrock, or a recharge boundary).
- 12.64 Zone III Recharge Area: The land area beyond the area of Zone II from which surface water and groundwater drain into Zone II, as defined in 310 CMR 22.00, as amended.
- 12.65 Zoning Enforcement Officer: The Building Commissioner of the Town of Amherst.

ARTICLE 13 DEMOLITION DELAY FOR STRUCTURES OF HISTORICAL OR ARCHITECTURAL SIGNIFICANCE

SECTION 13.0 POLICY

SECTION 13.1 PURPOSES

SECTION 13.2 DEFINITIONS

SECTION 13.3 PROCEDURE

SECTION 13.4 STANDARDS FOR DESIGNATION AS A SIGNIFICANT STRUCTURE

SECTION 13.5 DEMOLITION

SECTION 13.6 EMERGENCY DEMOLITION

SECTION 13.7 ENFORCEMENT AND REMEDIES

SECTION 13.8 SEVERABILITY

SECTION 13.0 DECLARATION OF POLICY

Finding that the economic, cultural and aesthetic standing of the Town of Amherst can best be maintained and enhanced by due regard for the historical and architectural heritage of the Town and by striving to discourage the destruction of such cultural assets, it is hereby declared as a matter of public policy that the protection, enhancement, perpetuation and use of structures of historical and architectural significance, located within the Town of Amherst, is a public necessity, and is required in the interest of the prosperity, civic pride and general welfare of the people.

SECTION 13.1 PURPOSES

The purposes of this Bylaw are to:

- 13.10 Designate, preserve, protect, enhance and perpetuate those structures and sites within the Town that reflect outstanding elements of the Town's cultural, artistic, social, economic, political, architectural, historic or other heritage;
- 13.11 Foster civic pride in the vestiges and accomplishments of the past;
- 13.12 Stabilize or improve the aesthetic and economic vitality and values of such structures and sites;
- 13.13 Protect and enhance the Town's attraction to tourists and visitors;
- 13.14 Promote the use of historical or architectural structures and sites for the education and welfare of the people of the Town;
- 13.15 Promote good urban design including the perpetuation of related private open spaces;
- 13.16 Promote and encourage continued private ownership and utilization of such buildings and sites now so owned and used: and
- 13.17 Provide owners of significant structures with time to consider alternatives to demolition.

SECTION 13.2 DEFINITIONS

The provisions of this bylaw shall be liberally construed to effect the purposes expressed or implied in Section 13.1. Definitions of the following words and phrases shall be construed and understood according to their common and usual meaning unless the contrary is clearly indicated:

"Commission" - The Amherst Historical Commission.

"Demolition" - Any act of pulling down, destroying, removing or razing a structure or portion thereof, or commencing the work of total or substantial destruction with the intent of completing the same.

"Demolition Permit" - A permit issued by the Building Commissioner under the State Building Code for the demolition of a building or structure.

"Significant structure" - A structure or site found by the Amherst Historical Commission to contribute to the historical or architectural heritage or resources of the Town pursuant to Section 13.4 of this Bylaw.

"Structure" - Any edifice, object or building of any kind that is constructed or erected and requires more or less permanent location on the ground or attachment to an object with permanent location on the ground, not including wheels.

SECTION 13.3 PROCEDURE

- 13.30 No permit for demolition of a significant structure shall be issued except as provided in this bylaw.
- 13.31 Every application for a demolition permit shall be made upon a form provided by the Building Commissioner, and shall be signed by the owner or the owner's agent under the power of attorney. Every application shall include such locational information, plans and narrative description and justification of the proposed demolition as shall be required under Historical Commission rules and regulations for such applications. Notice to abutters and parties in interest shall be done in accordance with the procedures required for Special Permits, as found on M.G.L. Chapter 40A.
- 13.32 Upon receipt of any application for a demolition permit, the Building Commissioner shall within five (5) days transmit a copy thereof to the Amherst Historical Commission.
- 13.33 Within thirty-five (35) days of the Commission's receipt of a copy of the application for a demolition permit, the Commission shall hold a public hearing on such application, and shall make a determination as to whether the structure is a *significant structure* under one or more of the criteria set forth in Sections 13.40 and 13.41. The Commission shall give written notice of the time and place of the hearing, not less than seven (7) days prior to the hearing, to the owner by certified mail, to abutters and parties in interest by mail, and by posting and by publication once in a local newspaper. The Commission may conduct a site visit prior to the hearing.
- 13.34 If, within thirty-five (35) days of the Commission's receipt of a copy of an application for a demolition permit, no public hearing has been held, or if within fourteen (14) days following the close of the public hearing no finding by the Commission has been filed with the Building Commissioner, the Building Commissioner may, subject to the requirements of the State Building Code and any other applicable laws, bylaws, rules and regulations, issue the demolition permit.
- 13.35 If after holding a public hearing the Commission shall determine that the structure is not a *significant structure* because it fails to meet one or more of the criteria set forth in Section 13.4, or if the Commission shall determine that the structure is a *significant structure* meeting one or more of the criteria set forth in Section 13.4, but that the proposed demolition would not be detrimental to the historical or architectural heritage or resources of the Town, then the Commission shall notify the Building Commissioner in writing of its findings within fourteen (14) days of said determination. Upon receipt of such notification, or upon expiration of said fourteen (14) days without such notice, the Building Commissioner may issue a demolition permit, subject to the requirements of the State Building Code and any other applicable laws, bylaws, rules and regulations.
- 13.36 If, after such hearing, the Commission determines that the structure is a *significant structure* and that the proposed demolition would be detrimental to the historical or architectural heritage or resources of the Town, then it shall file written notice with findings, of its determination to the applicant and the Building Commissioner, and no demolition permit shall be issued until twelve (12) months after the date of such determination by the Commission.

SECTION 13.4 STANDARDS FOR DESIGNATION AS A SIGNIFICANT STRUCTURE

The Historical Commission shall determine that a structure be designated as a *significant structure* if it meets one or more of the following criteria:

- 13.40 It is listed on, or is within an area listed on, the National Register of Historic Places, or is the subject of a pending application for listing on said National Register, or;
- 13.41 The Commission determines that the structure meets one or more of the following three criteria:
 - 13.410 **Historical Importance.** The structure meets the criteria of historical importance if it:
 - 13.4100 Has character, interest or value as part of the development, heritage or cultural characteristics of the town of Amherst, the Commonwealth of Massachusetts or the nation, or;
 - 13.4101 Is the site of an historic event, or;
 - 13.4102 Is identified with a person or group of persons who had some influence on society, or;
 - 13.4103 Exemplifies the cultural, political, economic, social or historic heritage of the community.
 - 13.411 **Architectural Importance.** The structure meets the criteria of architectural importance if it:
 - 13.4110 Portrays the environment of a group of people in an era of history characterized by a distinctive architectural style, or;
 - 13.4111 Embodies those distinguishing characteristics of an architectural type, or;
 - 13.4112 Is the work of an architect, master builder or craftsman whose individual work has influenced the development of the Town, or;
 - 13.4113 Contains elements of architectural design, detail, materials or craftsmanship which represents a significant innovation.
 - 13.412 **Geographic Importance.** The structure meets the criteria of geographic importance if:
 - 13.4120 The site is part of, or related to, a square, park, or other distinctive area, or;
 - 13.4121 The structure, as to its unique location or its physical characteristics, represents an established and familiar visual feature of the neighborhood, village center, or the community as a whole.

SECTION 13.5 DEMOLITION

Notwithstanding the provisions of Section 13.36, the Building Commissioner may issue a demolition permit for a *significant structure* under any of the following circumstances:

- 13.50 If at any time, after inspection, the Building Commissioner shall determine that the structure poses an imminent threat to the public health or safety of the community under Section 13.63, and so advises the Commission in writing, or;
- 13.51 The Commission is satisfied that there is no reasonable likelihood that either the owner or some other person or group is or will be willing to purchase, preserve, rehabilitate or restore such building, and so advises the Building Commissioner in writing, or;

- 13.52 The Commission is satisfied that the owner has made continuing bona fide and reasonable efforts to locate a purchaser who would be willing to preserve, rehabilitate and restore the subject building but that such efforts have been and will continue to be unsuccessful, and so advises the Building Commissioner in writing.

SECTION 13.6 EMERGENCY DEMOLITION

- 13.60 If a building or structure poses an immediate threat to public health or safety due to its deteriorated condition, the owner of such building or structure may request issuance of an emergency demolition permit from the Building Commissioner.
- 13.61 Upon receipt of any application for an emergency demolition permit, the Building Commissioner shall within five (5) days transmit a copy thereof to the Amherst Historical Commission.
- 13.62 As soon as is practicable, but within 14 days after receipt of such an application, the Building Commissioner shall inspect the building or structure with a team consisting of the Commissioner, Town Engineer, Fire Chief, Historical Commission Chair and two (2) other members of the Commission selected by the Chair, or the designees of said officials.
- 13.63 Within 5 days after inspection of the building or structure, and after consultation with other members of the inspection team, the Building Commissioner shall determine: 1) whether the condition of the building or structure represents a serious and imminent threat to public health and safety, and; 2) whether there is any reasonable alternative to the immediate demolition of the building or structure which would protect public health and safety.
- 13.630 If the Building Commissioner finds: 1) that the condition of the building or structure poses a serious and imminent threat to public health and safety, and; 2) that there is no reasonable alternative to the immediate demolition of the building or structure, then the Commissioner may issue an emergency demolition permit to the owner of the building or structure.
- 13.631 If the Building Commissioner finds: 1) that the condition of the building or structure does not pose a serious and imminent threat to public health and safety, and/or; 2) that there are reasonable alternatives to the immediate demolition of the building or structure which would protect public health and safety, then the Commissioner may refuse to issue an emergency demolition permit to the owner of the building or structure.
- 13.64 Upon issuing an emergency demolition permit under the provisions of this section, the Building Commissioner shall submit a brief written report to the Commission describing the condition of the building or structure and the basis for his/her decision to issue an emergency demolition permit.

Nothing in this section shall be inconsistent with the procedure for the demolition and/or securing of buildings and structures established by M.G.L. Chapter 143, Sections 6-10.

SECTION 13.7 ENFORCEMENT AND REMEDIES

The following enforcement and remedies shall apply under this bylaw:

- 13.70 The Historical Commission is authorized to adopt rules and regulations to carry out its duties and functions under this bylaw.
- 13.71 The Commission and the Building Commissioner are each authorized to institute any and all proceedings in law or equity they shall deem necessary and appropriate to obtain compliance with the requirements of this bylaw, or to prevent a violation thereof.

- 13.710 Any owner of a building and/or structure subject to this Bylaw who knowingly acts to demolish said building and/or structure, or damage a portion of a building or structure in a way which increases its likelihood of total failure, without first obtaining a building permit for demolition in accordance with the provisions of this Bylaw, or who likewise by some causative action contributes to the deterioration of said building or structure during the demolition review period, shall be in violation of this Bylaw and subject to enforcement by a non-criminal complaint pursuant to the provisions of M.G.L. Chapter 40, Section 21D, as amended.
- 13.711 Notwithstanding the provisions of Section 11.45, the fine for any such violation shall be three hundred dollars (\$300.00) for each offense. Each day the violation exists shall constitute a separate offense until the demolished building is rebuilt or re-created as directed by the Historical Commission, or unless otherwise agreed to by the Commission.
- 13.712 Notwithstanding the above, this section does not create an affirmative obligation to maintain a property.
- 13.72 No building permit shall be issued with respect to any premises upon which a significant structure has been demolished in violation of this bylaw for a period of two (2) years from the date of the completion of such demolition.

SECTION 13.8 SEVERABILITY

If any section, paragraph or part of this bylaw be for any reason declared invalid or unconstitutional by any court, every other section, paragraph and part shall continue in full force and effect to the extent that the overall purposes of this article can still be met.

ARTICLE 14 TEMPORARY ZONING

Temporary Zoning regarding Permitting for Certain Uses during the COVID-19 Emergency and its Aftermath

For the purpose of encouraging and facilitating the re-opening of existing businesses and the opening of new businesses and to stimulate economic activity in the aftermath of the COVID-19 emergency, the following temporary zoning shall apply until December 31, 2022 (*Amended December 6, 2021; Effective December 20, 2021*).

Affected Uses:

For new and existing uses in the B-G, B-L, B-VC, B-N, COM, OP, and PRP zoning districts that are currently permitted by Site Plan Review or Special Permit, and for pre-existing nonconforming uses in any zoning district, this section shall apply to the following:

- Section 3.350 Retail Establishments
- Section 3.351 Personal Care Establishments
- Section 3.352 Food and Drink Establishments
- Section 3.360 Medical Uses

For Accessory Uses proposed to collocate with any of the uses listed above that are currently permitted by Site Plan Review, Special Permit, or proposed to collocate with pre-existing nonconforming uses in any zoning district, this section shall apply to the following:

- Section 5.00 General
- Section 5.041 Outdoor Dining
- Section 5.042 Live Entertainment
- Section 5.043 Drive-Through Facilities

For Temporary Use or changes in response to COVID-19 issues, including the placement of temporary structures, in any zoning district for the following uses:

- Section 3.312 Class I and Class II Farm Stand
- Section 3.330.0 Non-profit educational institution
- Section 3.333 Church or other place of worship, parish house, rectory or convent
- Section 3.334 Not for profit library or museum
- Section 3.336 Medical or residential institutions
- Section 3.342 Governmental Administration building, fire or police station
- Section 3.344 Other governmental use not specifically listed herein

Temporary Use: A use or alteration established for a fixed period of time with the intent to discontinue and return to the original condition upon expiration of the time period.

Waivers and Modifications:

The Building Commissioner, acting in place of the Permit Granting Board or Special Permit Granting Authority, may grant waivers and modifications in accordance with Sections 7.90 and 8.5.

Design Review Board:

The requirement for review by the Design Review Board under Section 3.20 shall be suspended during this temporary period for any signage, lighting, placement of outdoor furnishings and any other nonpermanent building or site alteration. The Building Commissioner in consultation with the Planning Director shall be authorized to review applications and apply any design review criteria normally reviewed by the Design Review Board.

Application Process:

The requirement for land use permits (i.e., SPR and SP) and their application and submission requirements of Section 10 and 11, by the Planning Board and the Zoning Board of Appeals, shall be temporarily suspended. Applications shall be filed with the Conservation and Development Department. The Conservation and Development Department will establish application submittal requirements which will include specific standards and criteria for the various types of requests. At the time of application and for no less than 10 days, applicant shall prominently place notice of its application, with contact information for the Building Inspector and Planning Director, at the main entrance of the building on a front window, door or siding.

The Building Commissioner, in consultation with the Planning Director, shall be authorized to review all applications under this section and may issue an administrative approval in lieu of the required land use permits for these establishments based on criteria listed in Sections 10.38 and 11.24 of the Zoning Bylaw. Prior to granting any approval, the Building Commissioner will solicit comments from the other applicable public officials and staff including the Fire Chief, Police Chief, Public Health Director, Superintendent of Public Works, or Town Manager.

Decision:

The Building Commissioner shall approve, approve with conditions, or deny any request within 10 business days of receipt of a complete application. Decisions shall be made in writing, filed with the Town Clerk and kept on record with the Conservation and Development Department. Any such decision issued under this section shall be deemed to satisfy the Zoning Bylaw requirements for Special Permit or Site Plan Review.

Appeals:

Any decision made by the Building Commissioner may be appealed to the Board of Appeals by any aggrieved person in accordance with Section 10.1.

ARTICLE 15 INCLUSIONARY ZONING

(Amended July 12, 2021; Effective July 26, 2021)

SECTION 15.0 INTENT & PURPOSE

The purpose of this Article is to promote the general public welfare, including but not limited to ensuring an economically integrated and diverse community, by maintaining and increasing the supply of affordable and accessible housing in the Town of Amherst. This purpose includes:

- 15.00 Ensuring that new residential development generates affordable housing as defined in Article 12.
- 15.01 Ensuring that affordable housing created under this section remains affordable over the long term, with the majority of such housing remaining affordable in perpetuity, except as may be otherwise required under state or federal programs.
- 15.02 Maintaining a full mix of housing types and unrestricted geographic distribution of affordable housing opportunities throughout Amherst.
- 15.03 To the extent allowed by law, ensuring that the Permit Granting Authority or the Special Permit Granting Authority consider offering local preference for new affordable housing as a condition of the Permit or Special Permit. Those eligible for local preference shall include an applicant who, in the initial lease-up: lives in the community; is a municipal employee; works at a business in the community; and/or has children in the schools of the community, or other category of local preference as defined by the state agency providing financing.

SECTION 15.1 REGULATIONS

To ensure the purposes of this section, the following regulations shall apply to residential development (including but not limited to town houses, apartments, mixed-use buildings, PURDs, and OSCDs) in Amherst that provide new dwelling units:

- 15.10 "New dwelling units" means any combination of units that have received or will receive a Certificate of Occupancy in any five-year period and are located in new buildings or additions to existing buildings, and any net increase in units resulting from reconstruction of existing buildings, except for units resulting from:
 - 15.100 Affordable housing developments under M.G.L. Chapter 40B.
 - 15.101 Conventional Residential Subdivision Developments under Section 4.2.
 - 15.102 Cluster Development under Section 4.3
 - 15.103 Any use permitted under Section 3.326 in the R-F District.
 - 15.104 Institutional Uses under Section 3.33 containing residential dwelling units.
 - 15.105 Housing constructed by a public agency or non-profit corporation using a federal, state, or local housing assistance program. Such housing may adhere to the requirements set forth by the funding agency provided that the purposes of these regulations are met.
 - 15.106 Replacement of units after damage or destruction by fire, water, or natural disaster.
- 15.11 All residential development resulting in new dwelling units above the number already existing in the development shall provide affordable housing units at the following minimum rates:

<u>Net Increase in Unit Count</u>	<u>Required Affordable Unit Provision</u>
1-9 units	None*
10-14 units	Minimum one (1) dwelling unit
15-20 units	Minimum two (2) dwelling units
21 units	Minimum 12% of total unit count**

* While provision of affordable units is not required for developments containing 1-9 units under this section, the Bylaw encourages affordability and provides for incentives. See Sections 4.33 (Cluster Development) and 4.55 (Open Space Community Development).

** When six (6) or more affordable rental units are required under this bylaw, twenty (20%) percent of the affordable units shall be affordable to households earning 60% Area Median Income (AMI) or less as calculated by the U. S. Department of Housing and Urban Development or any successor agency.

Calculation of the number of total affordable units shall, if the required percent of the total results in a fraction, be rounded up to the next whole number where the fractional portion is equal to 0.5 or greater, and shall be rounded down to the next whole number where the fractional portion is less than 0.5.

- 15.12 “Residential development” means “new dwelling units” on one or more adjacent properties developed at the same time or in phases, and that share aspects of the properties such as but not limited to shared utilities, a common driveway, shared parking or the use of the combined properties for lot or building coverage calculations.
- 15.13 Affordable and accessible dwelling units provided under Section 15.10 shall be counted as meeting the requirements for density bonuses under the provisions of Section 4.55, Density Bonuses, of this Bylaw.
- 15.14 The applicant shall establish such housing restrictions, conditions, and/or limitations as are necessary to ensure that the affordable housing units provided under this section will be available for purchase or rental by eligible buyers and tenants, in perpetuity or to the extent allowable under law.
- 15.15 Housing constructed by a public agency or non-profit corporation using a federal, state, or local housing assistance program may adhere to the requirements set forth by the funding agency provided that the purpose of these regulations are met.
- 15.16 In any residential development, affordable housing units provided shall be dispersed throughout the development, and shall be comparable to market rate units in terms of the quality of their design, materials, and general appearance of their architecture and landscape. Affordable units shall be comparable to market rate units in terms of size and bedroom count except as otherwise allowed by the Permit Granting Board or Special Permit Granting Authority.
- 15.17 The Permit Granting Board or Special Permit Granting Authority may grant a Special Permit for modifications as provided below, except that when six (6) or more affordable units are required under the provisions of Article 15 of this Bylaw, a minimum of 50% must be provided on-site.
 - 15.170 Off-site affordable units may be allowed for projects principally located in the B-G, B-VC, B-N, and those B-L districts abutting the B-G district. Off-site units shall be located within the same zoning district or within 500 feet of the premises of the development and shall comply with Sections 15.14-15.16.
 - 15.171 Payment of fees-in-lieu of affordable units may be allowed, payable prior to the granting of a Certificate of Occupancy for any dwelling units associated with the development, to the Town of Amherst Municipal Affordable Housing Trust. The fee-in-lieu value for each affordable unit not provided shall be four (4) times the current Median Family Income for Amherst as determined by the U.S. Department of Housing and Urban Development (HUD) or successor agency.

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*Note: This Index is not adopted as part of the **Official Zoning Bylaw**. It is provided for informational purposes only.

Amendment #439 to H5007

Legalization of accessory dwelling units

Mr. Vargas of Haverhill move to amend the bill by adding the following section:

"SECTION XXXX: Section 3 of chapter 40A of the General Laws, as so appearing, is hereby amended by inserting after the last paragraph the following 3 paragraphs:

No zoning ordinance or by-law shall prohibit or require a special permit for the use of land or structures for an accessory dwelling unit, or the rental thereof, in a single-family residential zoning district on a lot with 5,000 square feet or more or on a lot of sufficient area to meet the requirements of title 5 of the state environmental code established by section 13 of chapter 21A.

The use of land or structures for an accessory dwelling unit may be subject to reasonable regulations concerning dimensional setbacks and the bulk and height of structures. Not more than 1 additional parking space shall be required for an accessory dwelling unit. The Department of Housing and Community Development shall create and implement guidelines for which municipal regulations are permissible.

Nothing in this paragraph shall authorize an accessory dwelling unit to violate the building, fire, health or sanitary codes, historic or wetlands laws, or ordinances or by-laws."

Additional co-sponsor(s) added to Amendment #439 to H5007

Legalization of accessory dwelling units

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GL CH 40A s1A "Definitions"

"Accessory dwelling unit", a self-contained housing unit, inclusive of sleeping, cooking and sanitary facilities on the same lot as a principal dwelling, subject to otherwise applicable dimensional and parking requirements, that: (i) maintains a separate entrance, either directly from the outside or through an entry hall or corridor shared with the principal dwelling sufficient to meet the requirements of the state building code for safe egress; (ii) is not larger in floor area than 1/2 the floor area of the principal dwelling or 900 square feet, whichever is smaller; and (iii) is subject to such additional restrictions as may be imposed by a municipality, including but not limited to additional size restrictions, owner-occupancy requirements and restrictions or prohibitions on short-term rental of accessory dwelling units.

The State of Zoning for Accessory Dwelling Units

By Amy Dain



Pioneer's Mission

Pioneer Institute is an independent, non-partisan, privately funded research organization that seeks to improve the quality of life in Massachusetts through civic discourse and intellectually rigorous, data-driven public policy solutions based on free market principles, individual liberty and responsibility, and the ideal of effective, limited and accountable government.



This paper is a publication of Pioneer Opportunity, which seeks to keep Massachusetts competitive by promoting a healthy business climate, transparent regulation, small business creation in urban areas and sound environmental and development policy. Current initiatives promote market reforms to increase the supply of affordable housing, reduce the cost of doing business, and revitalize urban areas.



Pioneer Health seeks to refocus the Massachusetts conversation about health care costs away from government-imposed interventions, toward market-based reforms. Current initiatives include driving public discourse on Medicaid; presenting a strong consumer perspective as the state considers a dramatic overhaul of the health care payment process; and supporting thoughtful tort reforms.



Pioneer Public seeks limited, accountable government by promoting competitive delivery of public services, elimination of unnecessary regulation, and a focus on core government functions. Current initiatives promote reform of how the state builds, manages, repairs and finances its transportation assets as well as public employee benefit reform.



Pioneer Education seeks to increase the education options available to parents and students, drive system-wide reform, and ensure accountability in public education. The Center's work builds on Pioneer's legacy as a recognized leader in the charter public school movement, and as a champion of greater academic rigor in Massachusetts' elementary and secondary schools. Current initiatives promote choice and competition, school-based management, and enhanced academic performance in public schools.

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Even in the midst of a housing crisis, zoning laws prohibit most homeowners in cities and towns around Boston from adding accessory dwelling units (ADUs) to their single family houses. An ADU is an apartment within or behind an owner-occupied single family house that appears from the street to be a single-family as opposed to a two-family house.

Only 37 out of 100 cities and towns surrounding Boston allow for ADUs to be put in and rented out — and typically with significant restrictions on the houses that could qualify for gaining an ADU. Another 31 municipalities allow temporary ADUs for occupancy by relatives of the homeowner or caretakers. The remaining 32 municipalities have no zoning for ADUs.

Given the restrictive zoning, few ADUs are being created legally. This paper provides a detailed survey of the ADU regulations in the region, and argues that these regulations are overly restrictive, particularly in light of the housing crisis and recent demographic trends in Greater Boston.

Executive Summary

Of the 100 cities and towns in the Metropolitan Area Planning Council (MAPC) region outside the City of Boston, only 37 allow a homeowner to create an accessory apartment and rent it to persons other than family members or caregivers. However, only a fraction of the single-family homes in those municipalities are eligible for an ADU because of other restrictions.

For example, Manchester allows ADUs, but only on lots twice the minimum lot size for the district, and only in houses built before 1984. Most houses in the municipality do not qualify, and the town rarely gets any applications.

In Dedham, ADUs can be added to houses where the lot is 10 percent bigger than the minimum lot size, but most of the houses in Dedham are on non-conforming lots, smaller than the zoning requires. Dedham has more than 6,000 single family houses, but the town receives only a few applications per year to add ADUs.

As is the case in Manchester and Dedham, 16 of the 37 municipalities that allow ADUs limit them to houses on lots bigger than a certain size. In Duxbury and Wenham, the lot needs to be 20,000 square feet, or almost a half-acre.

In Medfield, ADUs are allowed in houses built before 1938 that have a minimum floor area of 2,000 square feet. In Burlington, they are allowed in houses that had at least 1,800 square feet of floor area, as of 1989. Before the 1990s, most new houses were not that big; the median size of new single family houses in the Northeast did not surpass 1,800 square feet until 1987, and did not top 2,000 square feet until 1992. In Weston, ADUs are only allowed in houses that have at least 3,000 square feet.

In Belmont, ADUs are only allowed in detached historic structures such as antique carriage houses. Most houses lack historic accessory buildings.

In addition to the 37 municipalities that allow ADUs, another 31 municipalities only allow them to be occupied by relatives of the homeowners or caretakers; the units are supposed to be removed when the relative moves out. Some apartments get removed, which is a terrible waste of housing capacity during a housing crisis. Other apartments are rented out illegally, without the safety inspections permitted apartments get.

Municipal planners and housing advocates have been working for decades to pass ADU bylaws and ordinances. In the last decade, almost half of the 100 Boston-area municipalities have adopted either a master plan or housing production plan that recommends allowing ADUs more liberally. At least one in five municipalities did revise zoning for ADUs in that same time period. Belmont, Swampscott, and Hudson voted to allow ADUs (unrestricted to relatives.) Ipswich, Middleton, and Milford revised their provisions to switch from allowing temporary family-apartments to allowing regular ADUs. Lexington, Newton, Carlisle, and a few other municipalities voted to allow ADUs in detached structures, and liberalized other aspects of their regulations. Hamilton used to allow ADUs only on lots 10 acres or bigger; now the town allows ADUs on any-sized lot.

Meanwhile, despite the significant efforts to revise the zoning, the majority of municipalities still do not allow ADUs as rentals, and most municipalities that permit them still over-restrict them. Progress across the region has been remarkably slow, in a time of rapidly increasing demand for housing.

Homeowner-voters can be reassured that new rental housing that could be added as ADUs would be highly dispersed and barely visible. The houses are owner-occupied; the landlord lives next to the ADU renters, so the risk of property-neglect or loud parties is minimal. The houses also have to look like single family houses. Since household sizes are shrinking, new residents in ADUs might maintain current neighborhood population densities, but are unlikely to increase them.

Moreover, ADUs are permitted at such low levels now — only 2.5 permits annually per municipality where they are allowed — that permitting levels could increase substantially without being at all noticeable in neighborhoods. If the region were to average five permits per municipality per year across 100 municipalities, over a decade, ADUs could provide 5,000 apartments, dispersed among 538,000 single family houses. Less than one in 100 houses would have an ADU, yet the new rentals would house thousands of people.

Every municipality should allow ADUs to be added to owner-occupied single family houses and to be rented out. The ADUs should not be restricted to large old houses on big lots,

or to antique accessory buildings. Most houses within walking distance of stores and public transportation are on smaller lots; it's good for both the region's traffic levels — and its people — to have more residents in walkable neighborhoods where cars aren't needed for every activity.

Cautious voters seeking to protect the character of their single-family neighborhoods should be reassured that they risk virtually nothing by allowing ADUs to provide much-needed housing, and they could potentially gain rental income.

Background On The Study

In 2017, the Massachusetts Smart Growth Alliance commissioned a study on local regulation of residential development in eastern Massachusetts. The study is funded by a coalition of organizations including the Smart Growth Alliance, Citizens' Housing and Planning Association, Home Builders & Remodelers Association of Massachusetts, Massachusetts Association of Realtors, Massachusetts Housing Partnership, MassHousing, and the Metropolitan Area Planning Council (MAPC). A committee that includes representatives of the funding organizations, as well as municipal planners and representatives of environmental organizations, provided input into the research design.

The research is designed to update a 2004 – 2006 study produced by Pioneer Institute and the Rappaport Institute. In the 2004 – 2006 study, researchers answered more than 100 questions about residential zoning, road design standards, local septic system requirements, and local wetlands regulations for the 187 cities and towns within 50 miles of Boston, but not including Boston itself (Zoning in the City of Boston is governed by a state statute different from the one that governs zoning in all other Massachusetts municipalities). The updated study asks many of the same questions and also includes new ones. The updated study covers the 100 cities and towns that are served by MAPC, but again not including Boston. The updated study covers zoning for ADUs, multi-family housing, and cluster development (where houses are clustered on a parcel and part of the land gets preserved as open space), as well as road design standards and local septic system regulations.

The research includes a survey of zoning bylaws and ordinances, along with the housing production plans and municipal master plans that have been produced in the last decade in the 100 cities and towns. This stage of the research is complete.

The research also includes survey questions sent to the local director of planning, or to the building inspector when a municipal planner is not available to answer questions. Planners and building inspectors from 53 of the 100 municipalities have provided answers so far, although in some cases, not to every question.

Regarding ADUs specifically, the study has included

the collection of the ADU bylaws and ordinances in the 100 municipalities and compared them on a number of metrics, explained below. The study also asked local planners and building inspectors the following questions:

- How many accessory dwelling units have been permitted in each of the last three years?
- Approximately how many accessory units have been permitted town-wide or city-wide, if that information is available?
- Have any permit applications for ADUs been rejected in the last five years? For what reasons?
- What have been the challenges, if any, of enforcing requirements for accessory dwelling units, after the units have been permitted?
- How much staff time is devoted in an average month to process applications for permits for accessory dwelling units — and to guide the process and enforce the rules?

Researchers have been collecting the data from September 2017 through July 2018. Once a municipality's zoning is surveyed for the research, it is not checked again for changes. So, for example, if a municipality did not allow ADUs in November of 2017 when its zoning was reviewed, but amended the zoning to allow ADUs at the annual Town Meeting in May of 2018, that change will not be reflected in the study.

Housing in Greater Boston

Even if nobody new were moving to Greater Boston, the region would need more housing due to demographic shifts. The baby boomers are now largely empty nesters, and their grown kids are forming new households, while delaying marriage. When household sizes shrink and the population does not, demand for residences increases. In addition, the region is attracting new people, as happens when hundreds of thousands of jobs get created.

Production of new housing has not been keeping up with escalating demand at least in part because local voters are highly cautious about allowing new housing in their cities and towns. Renters and homebuyers are bidding up the prices of the limited supply of residences, with the wealthiest winning the contest. People of all income levels should be able to live near centers of employment.

To stabilize prices and house the growing population, local and state lawmakers level will need to decide where new housing can go. Greater Boston does not have a lot of developable green space, such as farms, woods, or meadows, where neighborhoods might rise, and popular support for protecting green space is strong. New housing can generally be put in three kinds of places: A) business districts, including historic downtowns and newer strip malls, B) office or industrial districts, often on the edge of a municipality near a highway, or C) existing

residential neighborhoods. Much planning is now going into the residential development of the first two categories of places. Wellesley's 2018 Draft Unified Plan states: "Participants in the Unified Plan public meetings saw the commercial, office and industrial districts as the most acceptable locations to construct new housing that is not single-family housing." Three-fourths of the region's municipalities now have zoning for apartments and condos above stores, with many of these zoning provisions adopted in the last decade. Unfortunately, the projected buildout of currently planned growth districts is not nearly enough to satisfy projected demand for housing.

Concerns About Neighborhood Character

Homeowners are understandably cautious about allowing increases in housing density in their neighborhoods. They might be worried about more traffic, the paving over of grassy yards and gardens for parking, the aesthetics of new construction, the hassle of living next to construction, and a loss of privacy. They might worry that new renter-neighbors will be less invested in the neighborhood than homeowners. Furthermore, for most homeowners, their house is their single largest investment, and unlike a portfolio of stocks, it cannot be diversified against risk; voting against changes in the neighborhood is a way of protecting their investment.

Many municipal master plans emphasize that residents would like to protect the character of single family neighborhoods and the small-town feel of the community:

- **Medway's 2009 Master Plan:** "We enjoy a 'small town feel'... We are what other towns used to be, and we have challenges ahead in managing our growth so we can retain the character that we all cherish."
- **Dover's 2013 Master Plan:** "People choose to reside in Dover because it offers a more rural alternative to the suburban development patterns of most surrounding towns."
- **Arlington's 2015 Master Plan:** "Residents seem concerned that additional development will be out of scale or character with the qualities they value in their community."
- **Medfield's 2016 Housing Production Plan:** "The town's large preservation areas, historic downtown, and neighborhoods of single-family homes create a small-town character, despite being close to a major metropolitan area."
- **Randolph's 2017 Master Plan:** "The Town of Randolph and its residents have expressed a desire to protect and maintain the residential character of their single-family neighborhoods, and to enhance the quality of town services and amenities."
- **Sudbury's 2001 Master Plan,** mentions vision statement adopted by town meeting in 1998: "We value the town's essentially residential, low-density nature. A significant aspect of Sudbury's charm and character is derived from its rural/suburban feeling. Becoming more like towns nearer Boston would not be considered progress."
- **Newton's 2007 Comprehensive Plan:** "Those living in predominantly single-family areas generally wish them to stay that way. They wish those areas neither to be marginally blurred into resembling the mixed single and two family areas nor to be compromised by large-scale multifamily developments being plopped into their midst."
- **Wayland's 2016 Housing Production Plan:** "Within existing residential neighborhoods, new multi-family housing is generally not recommended because of concerns that it would alter the single-family character of most of Wayland's neighborhoods."
- **Wellesley's Draft Unified Plan 2018:** "Goals for policies for decision makers: Established single-family neighborhoods maintain a predominantly single family character."

Zoning to allow accessory apartments in single-family houses explicitly addresses public concerns about changing the character of single-family neighborhoods. First, to add an ADU, the homeowner must reside in the house. The owner occupancy requirement means the landlord will be on site, living in close proximity to the renters, perhaps making loud parties less likely, and reducing the risk of the property being neglected.

Second, the house needs to maintain the appearance of a single-family house. Bedford's requirements regarding the appearance of the house and ADU are typical:

"The accessory apartment shall be designed so that the appearance of the structure remains that of a one family dwelling, subject further to the following conditions and requirements: (i) All stairways to second or third stories shall be enclosed within the exterior walls of the dwelling. (ii) Any new entrance shall be located on the side or in the rear of the dwelling. (iii) Where there are two or more existing entrances on the front facade of a dwelling, if modifications are made to any entrance, the result shall be that one appears to be the principal entrance and the other entrances appear to be secondary."

Newton's regulations do allow for exterior staircases to be added because construction of new internal staircases could make projects too expensive or infeasible. Newton's regulations state:

"3. Exterior alterations are permitted provided they are in keeping with the architectural integrity of the structure and the residential character of the neighborhood, including, but not limited to, the following considerations:

- a. The exterior finish material should be the same or visually consistent in type, size, and placement, as the exterior finish material of the remainder of the building;
- b. The roof pitch should be consistent with the predominant roof pitch of the remainder of the building;
- c. Trim should be consistent in type, size, and location as the trim used on the remainder of the building;
- d. Windows should be consistent with those of the remainder of the building in proportion and orientation;

- e. Exterior staircases should be designed to minimize visual intrusion and be complementary to the existing building;
- f. The Commissioner of Inspectional Services shall seek advice and counsel from the Director of Planning and Development and/or the Urban Design Commission where there is a question in the application of the above rules.”

Baseline Findings from The 2004 – 2006 Study

According to the 2004 – 2006 study, only 50 of the 187 municipalities (27 percent) allowed homeowners to add accessory apartments and rent them out to any person, as opposed to allowing them for occupancy by relatives of the homeowner. While allowing ADUs, the regulations restricted their use in various ways. Some municipalities required, for example, that the house have existed for a certain number of years or have a certain amount of floor area. Hamilton’s 2002 Master Plan Phase 1 Report noted, “The regulations for this option significantly restrict the universe of eligible properties because in order to qualify for an accessory apartment, the property must have 10 acres of land.”

Another 46 of the municipalities (25 percent) allowed accessory apartments only when relatives of the owner reside in the apartment (or the primary dwelling if the owner is in the accessory dwelling). Eleven more municipalities (6 percent) restricted residence to certain categories of people (usually in addition to relatives): (1) elderly, (2) caretakers, and (3) low-income residents.

To prevent occupancy restriction violations, many of the regulations included extensive provisions about verification of occupancy, usually through regular re-certification or re-permitting of the units. After the relatives either move out or pass away, the kitchen must be removed and the apartment reintegrated. For example, Dover’s bylaw stated: “Within 6 months of the lapse of a Special Permit hereunder, the owner or owners of the building containing an apartment shall dismantle the cooking facilities of the apartment and restore the building to a single-family dwelling.” Two municipalities required that the homeowner put down a surety bond to ensure that the apartment will be reintegrated upon vacancy by the relatives or sale of the house.

Master Plans And Housing Production Plans

In the last decade, 47 municipalities in the study sample of 100 adopted either a housing production plan or municipal master plan that included recommendations regarding ADUs.

Carlisle’s 2015 Housing Production Plan recommends changing the requirements for ADUs, and in 2017 Carlisle revised the bylaw to allow ADUs more liberally. It appears

that several municipalities followed up on recommendations in the plans. Several planners mentioned that addressing the topic is on their agenda for the next year or two.

Recent Changes to Local Bylaws and Ordinances

The research identifies the years that the ADU provisions were either adopted or last revised. The data is still being collected from 22 of the 100 municipalities, but more than one in five have revised zoning for ADUs in the last decade, including:

2007: Gloucester, Hudson

2009: Belmont, Foxborough, Sudbury, Swampscott

2010: Wilmington

2012: Ipswich

2014: Brookline, Medfield

2015: Boxborough, Rockland

2016: Lexington, Medway

2017: Newton, Reading, Cambridge, Lincoln, Littleton, Westwood, Carlisle, Concord

Belmont, Swampscott, and Hudson voted to allow ADUs (unrestricted to relatives). They did not allow ADUs when the 2004 study was conducted. Ipswich, Littleton, and Milford revised their provisions to switch from allowing “family apartments” restricted to relatives of the homeowners to allowing ADUs that can be rented out without restricting who the residents can be.

Several planners mentioned that ADUs are on their agenda to address with the planning board in the next year or two. A few planners mentioned that they have had to prioritize issues to take to the planning board and town meeting, so, for example, they might address new zoning for mixed-use development in the downtown first, and then address ADUs.

The Regulation Of Accessory Dwelling Units Without Residency Restrictions

The research has involved collecting the 68 ADU bylaws and ordinances adopted in the 100 municipalities. The following analysis is about the requirements in the 37 cities and towns that allow ADUs without restricting occupancy to relatives of the homeowner, caretakers, or qualifying low-income residents.

Overall Restrictiveness

In the 37 municipalities that allow ADUs, the regulations typically limit the houses that would be eligible for an ADU. For example, Manchester allows ADUs, but only on lots twice the size of the minimum lot size for the district, and only in houses built before 1984. Most houses in the municipality do

not qualify, and the town rarely gets any applications. In Dedham, ADUs can be added to houses where the lot is 10 percent bigger than the minimum lot size, but most of the houses in town are on non-conforming lots, smaller than the zoning requires. Dedham has more than 6,000 single family houses, but the town receives only a few applications per year to add ADUs. Like Manchester and Dedham, 16 of the 37 municipalities that allow ADUs limit them to houses on lots bigger than a certain size. In Duxbury and Wenham, the lot needs to be 20,000 square feet, or almost a half-acre.

In Medfield, ADUs are allowed, but only in houses built before 1938 that have a minimum floor area of 2,000 square feet. In Burlington, ADUs are allowed in houses that had at least 1,800 square feet of floor area as of 1989. Before the 1990s, most new houses were not that big; the median size of new single family houses in the Northeast did not surpass 1,800 square feet until 1987, and didn't top 2,000 square feet until 1992. In Weston, ADUs are only allowed in houses that have at least 3,000 square feet.

Belmont allows ADUs only in detached historic structures such as antique carriage houses. Most houses lack historic accessory buildings.

Owner Occupancy

In general, ADU regulations specify that the single-family house must be occupied by the owner or owners. Many of the requirements include the language, "except for bona fide temporary absences." Some requirements get more specific about owners being absent. In Lexington, absences of up to two years are allowed:

An owner of a property containing an accessory apartment who is to be absent for a period of less than two years may rent the owner's unit as well as the second unit during the temporary absence provided: a. Written notice thereof shall be made to the Building Commissioner on a form prescribed by him. b. The owner shall be resident on the property for at least two years prior to and between such absences.

In Hudson, Bedford, and Burlington, the owner/s can be absent up to six months; in Manchester and Medfield, one year. In Wayland, the owner can be absent one or two years:

The owner may be absent for periods not exceeding one year, provided that no one occupies the owner's unit, except a house sitter paying no rent. The owner's unit may be rented for periods not exceeding two years, provided that prior written notice is given to the Building Commissioner, the owners have occupied their unit for the prior two years, and occupy for two years between rental periods, and the owners remain legal residents of the Town.

Some municipalities, such as Cambridge, require that owner/s submit a notarized letter that owner/s will live at the house as primary residence, to get a permit for the ADU.

In Westwood, the owners need to submit an affidavit every four years certifying owner occupancy. Owners in Sudbury are also supposed to certify compliance every four years. Canton, Waltham, Milford, and Dedham require re-permitting, renewal, or re-certification every three years. In Marshfield, the owner is supposed to recertify annually. Newton also requires annual certification.

Other municipalities have no requirements for re-certification, but specify that the special permit terminates upon sale or transfer of the property. New owners need to re-apply. Some regulations specify that the requirement for re-application upon sale shall not dispossess current tenants.

A planner in one small town, where ADUs are allowed by right with no requirements for permit renewal, said:

It is difficult to know for sure if units are being owner occupied. We don't inspect or review unless it's brought to our attention. In the four years that I have worked here, there was one incident where the residence was not owner-occupied. The building inspector contacted the owner to let them know that the accessory apartment could not be rented if the residence was not owner occupied.

In Lincoln, the Zoning Board of Appeals sends out renewal letter annually. Several planners and inspectors mentioned that it has been a challenge to establish a management system to reliably make re-permitting and recertification happen. In Dedham, homeowners are supposed to renew their ADU permits every three years, but "virtually nobody comes to renew," said the building inspector. The issue can come up during the sale, but the process to permit the unit might then take longer than the sellers have. The process can take six weeks to five months in Dedham.

Restrictions on houses that qualify

There are three common types of restrictions on the single family houses that could qualify for an ADU: 1) the age of the house, 2) the minimum floor area, and 3) the lot size.

Age of the house. Fourteen of the 37 municipalities that allow ADUs to be rented out (not just occupied by relatives of the homeowner), restrict the houses that qualify to have ADUs created based on the age of the house. Some restrictions on the age of the house significantly reduce the number of qualifying houses, while others principally prohibit ADUs in brand-new construction. For example, Wayland's and Concord's bylaws require that houses must have existed for at least two years; Marshfield's says three years; Newton's four. In other municipalities, like Duxbury, Hamilton, Lincoln, Cohasset, and

Weston, the house must have existed for 10 years. In Waltham and Dedham, it must have been in existence when the subsection of the ordinance or bylaw was adopted.

Others are more restrictive. In Stow, ADUs can be added to single-family houses or detached accessory structures that were built by 1991. In Dover, the house must have been built by 1985; In Manchester, 1984. In Medfield, the house must have been in existence prior to 1938.

Minimum floor area. Another way of restricting houses that qualify to have ADUs added is to require a minimum floor area for the house. In Cohasset, the house must be at least 1,200 square feet. In Bedford and Cambridge, it must have at least 1,800 square feet. In Burlington, the house must have been 1,800 square feet as of 1989. The median size of new single family houses in the Northeast did not become greater than 1,800 square feet until 1987.¹ In Medfield and Canton, the house must be at least 2,000 square feet. In Weston, the house must have 3,000 square feet of floor area.

Lot size. The third way municipalities restrict the properties that can qualify for ADUs relates to the size of the lot the house is on. Sixteen of the 37 municipalities have such restrictions.

- In all districts of Manchester except one, the lot size needs to be twice the minimum lot size listed for single-family houses in the zoning bylaw.
- In Dedham, the lot needs to be 10 percent greater than the minimum lot area of the district.
- In Ipswich, ADUs can be added to non-conforming lots (smaller than zoning requires for single family houses) if the lot is bigger than 15,000 square feet.
- In Medfield and Weston, the lot needs to meet the minimum lot area requirements.
- In Carlisle, the lot needs to be at least two acres, unless the ADU's occupancy gets restricted to low-income residents, in which case there is no listed minimum lot size.
- In Stow, ADUs are allowed by right if the lot is bigger than 1.5 acres, and by special permit for smaller lots.
- In Concord, the lot must be at least 10,000 square feet.
- In Canton, the lot must be at least 10,000 square feet, or the minimum lot size for the district, whichever is greater.
- In Duxbury, the lot must be 20,000 square feet.
- In Wenham, the lot must be 20,000 square feet excluding wetlands and floodplain, and for ADUs in a detached structure, the lot must be 40,000 square feet, excluding wetlands and floodplain.

1. Median and Average Square Feet of Floor Area in New Single-Family Houses Completed by Location <https://www.census.gov/const/C25Ann/sfttotalmedavgsqft.pdf>

Caps on ADU Production

Seven municipalities cap the number of ADUs that could be added, either in general or over a certain period of time:

- Hamilton: No more than 10 permits for ADUs can be issued in any 12-month period.
- Dover: No more than 10 percent of single-family homes can have ADUs.
- Cohasset: No more than 10 percent of single-family homes can have ADUs, and no more than 10 permits can be issued annually.
- Carlisle: No more than 75 permits for ADUs can be issued.
- Sudbury and Southborough: No more than 5 percent of single-family houses can have ADUs.
- Westwood: Permits for ADUs shall not exceed 2 percent of the number of single-family and two-family houses.

Restrictions that Relate to the Accessory Units Themselves (As Opposed to the Single-Family House or Lot or Location)

Parking. Most municipalities require one off-street parking space for an ADU. A few of the regulations vaguely specify that adequate off-street parking should be provided. Bedford, Burlington, Hudson, Manchester, Stow, and Waltham require two off-street spaces for the ADU. Cohasset requires one space per bedroom. Scituate requires two spaces, but the requirement can be waived to one space. Newton is the only municipality that specifically requires no additional off-street parking for the ADU.

Bedrooms. Fifteen of the municipalities regulate the number of bedrooms that can be in an ADU. The most frequent requirement is no more than two bedrooms. In Acton, ADUs included in the same building as the primary dwelling unit can have no more than two bedrooms, but ADUs in detached structures can have three bedrooms. In Carlisle, on lots less than three acres, the maximum number of bedrooms in an ADU is two. In Littleton, ADUs can have no more than two bedrooms, except by special permit. For ADUs attached to the primary dwelling in Hamilton and Ipswich, there can be no more than one bedroom.

Number of Occupants. Six municipalities limit the number of ADU occupants. Dedham and Waltham limit them to two occupants. Hudson, Reading, and Swampscott limit occupancy to three people. Sudbury limits occupancy to four people.

Newton does not limit the number of occupants in an ADU per se, but “the total combined number of individuals residing in the principal and accessory dwelling units may not exceed the number allowed in the principal dwelling unit alone.” Occupancy of single family houses in Newton is

limited to one family and three unrelated individuals. In theory, a single person might live in the primary house and rent the ADU to a large family.

Maximum Floor Area. More than half the municipalities limit the maximum floor area of accessory dwelling units. The most common limit is 900 square feet, in Cambridge, Cohasset, Dover, Hamilton, Hudson, Ipswich, and Westwood. The smallest limit is 700 square feet in Stow. Acton and Swampscott limit to 800 square feet, but Acton allows up to 2,000 square feet for ADUs in detached structures. Duxbury and Sudbury limit to 850 square feet. The second most common limit is 1,000 square feet, in Dedham, Newton, Lexington, Reading, and Wenham. Newton allows up to 1,200 square feet in ADUs within the house by special permit, and up to 1,500 square feet for ADUs in detached structures. Lexington also grants special permits for bigger ADUs, up to 40 percent of the house's floor area. Lincoln, Littleton, and Carlisle allow up to 1,200 square feet, and Wilmington allows 1,250.

Percent of Floor Area. Most municipalities also restrict the floor area of the ADU as a percent of floor area of the house. The most common requirements are in the range of 30-to-35 percent of the gross floor area. In Hamilton, an ADU cannot cover more than 15 percent of the gross floor area. In Cohasset, Dover, Hudson, Ipswich, Southborough, and Weston, the maximum is 25 percent. Littleton and Marshfield allow up to 40 percent. Acton allows for ADUs to take up half the floor area. Carlisle allows up to 50 percent only for ADUs that are restricted to low-income occupants; otherwise the ADU cannot be more than 35 percent of the house.

Expansion. Several municipalities restrict how much a house can be expanded to accommodate an ADU. In Reading, ADUs are permitted by right as long as there is no expansion of the house, but homeowners can apply for a special permit to expand the house for an ADU. In Duxbury, the house cannot be expanded for an ADU: "The accessory apartment does not require alteration or addition to the single family dwelling in such a manner that there is any exterior change to the dwelling, so that the accessory apartment is located wholly within the building footprint in existence at the time of the special permit application." In Ipswich, the house's footprint can only be expanded by 25 percent or 500 square feet, whichever is less, on non-conforming lots. In Manchester and Medfield, the house can be expanded up to 10 percent; in Wayland, 20 percent; in Littleton 15 percent.

Detached ADUs

Many municipal master plans have recommended that the city or town allow ADUs in detached structures, and several have recently amended zoning to allow ADUs in detached

structures. Carlisle and Newton, for example, revised zoning in 2017 to allow ADUs in detached structures.

Sixteen municipalities now allow ADUs in detached structures. Some, like Weston, allow detached ADUs only in a pre-existing structure such as a garage, barn, or gatehouse. Belmont does not allow ADUs within the single-family house, but allows them in historic structures. Municipalities such as Newton and Lexington allow new construction of detached ADUs. In Sudbury, the detached structure needs to have existed for at least five years.

Detached ADUs are allowed in Acton, Dedham, Hamilton, Newton, Scituate, Stow, Wenham, Canton, Belmont, Lexington, Littleton, Weston, Hudson, Sudbury, Ipswich, and Carlisle.

By Right Versus By Special Permit

Most municipalities require special permits for ADUs. Acton, Bolton, Burlington, Lexington, Littleton, Newton, Reading, Stow, Wilmington, and Bedford allow ADUs by right, at least in some circumstances. Some of those municipalities require special permits for detached ADUs, larger ADUs, or ADUs in certain districts. Rockport allows them by right in the downtown district, but otherwise by special permit.

Many the municipal master plans and housing production plans recommend that the municipality consider allowing ADUs by right, instead of by special permit. In general, special permits can create a barrier to development, where property owners decide not to risk time and money on a permitting process that might not yield a permit.

To assess how discretionary the special permits are, the researcher asked if any applications have been rejected in the last five years, and for what reasons. Many municipalities did not reject any. In every case except one, those that did said the application did not comply with written requirements. For example, the unit was detached from the main structure where that is not allowed, or it did not meet specified dimensional requirements. The only municipality where planners indicated any discretion in the process for special permits was Newton. Recently, Newton received two applications for detached units that met the written requirements, but one application was granted a special permit and the other was not. Neighbors showed up to oppose the ADU application that got rejected.

In Newton, the Special Permit Granting Authority is the City Council, so the process for approving special permits can be particularly political. According to the 2004 study, the special permit granting authority for ADUs is typically the Zoning Board of Appeals. In 2004, 81 municipalities had designated the ZBA as the SPGA, 14 designated the planning board, and Newton and Peabody designated City Council.

Another issue with special permits is that they take more staff time to process. If a municipality receives few applications, that time might not be a critical factor. But the special

permit process could become burdensome for those that receive a dozen or more. In Newton, by right permits for ADUs take approximately eight hours of staff time total to process, while special permits average about 25 hours of staff time.

In-Law Apartments

Thirty-one municipalities allow ADUs as long as residency is restricted to relatives, caregivers, or in a few cases, people with low incomes. It can be hard for the municipality to enforce the residency restrictions.

Some comments by planners and building inspectors:

“They are supposed to be for family members or for caregivers, and we don’t really have a process for keeping up certification that a family member is using the unit. We are discussing a process to register the information.”

“One of our internal challenges is that when you get the special permit it is for three years and it is renewable every three years. Many people don’t renew, and they don’t realize that they have to renew.”

“Inadvertently, I can guarantee, they turn into rentals. They are intended to be converted back to normal living space.”

Short Term Rentals (Like Airbnb)

In Bedford there was recently a case of an ADU listed on Airbnb or a similar site. The town bylaw reads “There shall be no boarders or lodgers within either unit of a dwelling with an accessory apartment.” The same wording is in Burlington and Canton’s bylaws. Newton’s ordinance requires a minimum occupancy or rental term of 30 days. A couple of planners mentioned that the planning board will simultaneously address reforms to the ADU regulation and regulation of short-term rentals.

Municipalities with No Zoning For Adus

Thirty-two municipalities have no provisions for ADUs. In Arlington, a bylaw was proposed to Town Meeting in 2012, but did not pass. Marblehead’s planning board is now considering the matter, and it will likely go to Town Meeting in 2019. In Somerville, the lowest-density residential districts allow two-family houses, but the city is thinking about allowing ADUs as well; they could be put on properties that do not meet the requirements for a two-family house. Some of the municipalities that do not allow ADUs do allow two-family houses, at least in some districts.

Some building inspectors in municipalities that do not allow ADUs mentioned that they permit ADUs as part of the single-family house, because a single family house can have multiple kitchens, per the building code.

Permitting Numbers

The survey of local planners and inspectors includes a question about how many ADUs their municipality has permitted in each of the last three years. Based on responses thus far, 2.5 units on average are permitted annually per municipality that allows ADUs (including those that are restricted to relatives). Three municipalities reported permitting as many as 12 or 15 in a single year.

The survey also asks the total number of ADUs that have been permitted town-wide, or city-wide. The answers are mostly in the range of 20 to 60. Scituate and Ipswich are each at 100 total and Marshfield might have 150.

The appendix includes a chart of permitting numbers reported in the survey.

Fourteen of the municipalities that provided annual permitting data allow ADUs with residency restrictions (such that only a relative of the homeowner or caretaker can live in the ADU), and 20 of the municipalities that provided annual permitting data allow ADUs without residency restrictions (such that the ADU can be rented out). The 14 municipalities with residency restrictions (“family dwelling units”) on average permitted five units per municipality for the three-year period. The 20 municipalities without residency restrictions averaged nine permitted units per municipality over three years. The difference in permitting levels holds when controlling for the number of single-family houses (both detached and attached because the U.S. Census includes townhouses in its single-family house definition). The municipalities with residency restrictions granted one permit for every 1,000 houses during the three-year period. The municipalities without residency restrictions granted 1.8 permits for every 1,000 houses during the three years. Across all municipalities that reported permitting ADUs, with or without residency restrictions, the rate was 1.4 permits granted per 1,000 single-family residences in those municipalities over the three-year period.

Carlisle saw an uptick in applications after a 2017 revision. Newton and Lexington also received more applications after revising their laws. Newton permitted eight units in the first five months of 2018.

If the region were to allow ADUs more liberally, how many rentals could be expected to be added? Could the region average five per municipality per year for the 100 municipalities? Over a decade, that would mean five thousand new rentals, on less than one in 100 properties with single family houses.

Recommendations

The adoption of less-restrictive municipal ADU bylaws and ordinances has proven to be a very slow process. Planners and housing advocates have been promoting ADUs as a solution to the region's housing crunch for decades. Almost half the local master plans and housing production plans adopted in the last decade have included recommendations to allow ADUs more liberally. Still, only 37 out of 100 municipalities allow ADUs to be added and rented out, and most of the municipalities significantly restrict the universe of properties that could qualify for an ADU.

Given how challenging it has proven to be to change local laws and allow ADUs more liberally, state legislators could consider allowing ADUs in single family houses, even where local bylaws and ordinances lack the provisions. Then local planners and housing advocates could focus on even more difficult challenges, such as zoning for multi-family housing.

In the absence of state legislation that would allow ADUs, voters in cities and towns can make many revisions to their local zoning bylaws and ordinances to allow more ADUs in the region. Some aspects of the zoning they might consider include:

By right versus special permit: Sometimes allowing ADUs only by special permit reassures local voters that each case will be carefully reviewed and there will be opportunities for neighbors to get involved when an ADU project appears inappropriate to them. If the choice is between allowing ADUs by special permit or prohibiting them, special permits are the better option. Special permits, however, might be seen by homeowners as too risky to bother with, even if in practice the permitting boards (typically the ZBA) grant permits to all projects that meet the regulatory requirements. Moreover, by-right permitting takes less staff time.

No residency restrictions: Occupancy of the ADUs should not be restricted to caretakers or relatives of the homeowner. It is hard to enforce the restriction, and the region needs rental housing. When units are legally rentable, the building inspectors can make sure the housing is safe. Secret apartments do not get the review that legal ones get.

Houses/properties that qualify: By restricting ADUs to large older houses on large lots, cities and towns reduce the universe of properties that qualify to have ADUs added. Requirements for large lots can mean that houses built in the era of new railroads and streetcars, when lots were narrow to maximize the number of people living within walking distance of transit, do not qualify. Ideally, many ADUs would be added in railroad and streetcar-era neighborhoods, because those are the neighborhoods where residents can still walk to shops and public transportation.

Detached ADUs: Many homeowners would prefer to put an accessory apartment above a garage or in a new detached structure, as opposed to adding it to the single-family house. To significantly increase production, it would be wise to allow detached ADUs more liberally.

Parking: Requiring two off-street parking spaces per ADU is excessive. It makes sense to have a flexible policy for parking, or not to require parking, as in Newton's case.

Dimensional requirements: Less onerous requirements around bedrooms, floor area, and other dimensional specifications translate to more ADUs being added, and more people housed in them.

Appendix

While some of the permitting numbers collected in the research are exact, others numbers provided represent vague estimates. (Note that “By Right” here means that at least some kinds of ADUs in some part of the municipality are allowed by right. For example, in one district the use might be by right, while it is by special permit in other districts.)

Municipality	By Right or Special Permit	Residency Restrictions?	Three Years of Permits (2017, 2016, 2015, unless otherwise specified)	Total Permitted	Comments
Acton	By Right	No	1 or 2 in 2016, other years not reported		
Ashland	By Right	Yes	0,1,0 (2016, 2015, 2014)	Not tracked	
Bedford	By Right	No	1,2,0	56	
Bellingham	By Special Permit	Yes	18*,4,3 (2016, 2015, 2014) *mostly renewals	60	
Belmont	By Special Permit	No	0,1,1 (2016, 2015, 2014)		
Beverly	By Special Permit	Yes	0,0,0	“I would guess fewer than 25”	
Boxborough	By Right	Yes	0,0,0	4	“Never reached the five-per-year limit.”
Carlisle	By Special Permit	No	8,1,1	24	“Probably in the last three years there have been ten. Most of those in the last year. Before that, we were averaging one per year, or less.”
Concord	By Special Permit	No	5,2,5 (2016, 2015, 2014)	Unknown	“The [total] number is believed to be fairly constant because the permits for accessory dwelling units are tied not to the property, but to the owner.”
Dedham	By Special Permit	No	Two to five per year	“If I were to make a guess”: 25 to 30	
Dover	By Special Permit	No	0,0,0 (2016, 2015, 2014)	“Very few”	
Foxborough	By Right	Yes	2,2,5 (2016, 2015, 2014)	45	
Franklin*	By Special Permit	Yes	5,5,5 (2016, 2015, 2014)	Estimates 45	*Franklin is a special case. It does not have an ADU bylaw, but ADUs restricted to relatives get permitted under provisions for two-family conversion.
Halifax*	By Special Permit	Yes	1,3,3 (2016, 2015, 2014)	Approximately 46	*Halifax is not in the MAPC region, but data collected from it
Hamilton	By Special Permit	No	2,0,0 (2016, 2015, 2014)		
Holliston	By Right	Yes	0,1,1	Not tracked; “Fewer than 30?” “Yes”	
Hopkinton	By Special Permit	Yes	1,3,2	More than 30	Researcher suggested ranges, 1–10, 11–30, 31–100, more than 100. “31–100”
Hudson	By Special Permit	No	3,1,0 (2016, 2015, 2014)	“Would take too much time to delve into”	

Ipswich	By Special Permit	No	6,12,5	101 (76 in single family houses, 25 in detached structures.)	
Lexington	By Right	No	3,5,6 (approximately)	Less than a hundred	Started tracking the permits in 2015. "Back in the day we did an amnesty program for illegal apartments." The amnesty program brought in about 90 apartments out of an estimated 200. Those apartments would not all qualify under the current provisions, but were permitted as "pre-existing." The town does not know how many of the 90 currently exist. Some have been decommissioned, but the homeowner is not required to report the removal of an ADU to the town.
Lincoln	By Special Permit	No	0,2,1 (2016, 2015, 2014)	Approximately 57 to 67	
Littleton	By Right	No	1,2,2	67 (31 expired)	
Manchester	By Special Permit	No	0,0,0	"Very rare"	"Unsure of the number without doing considerable research."
Marshfield	By Special Permit	No	"Average 15 per year."	"We are probably in the 150 range."	
Maynard	By Special Permit	Yes	Approximately two permits every three years.	"No current way of knowing"	
Medfield	By Special Permit	No	Maybe six units in the last three years, all family units		The town permits both family units and ADUs. ADUs are only allowed in pre-1938 buildings, bigger than a certain size. Nobody has applied to add an ADU, only family apartments.
Medway	By Special Permit	Yes	4,2,1	27	
Melrose	By Special Permit	Yes	2,2,1	20	
Milton	By Special Permit	Yes	"Not more than one per year"		
Newton	By Right	No	9,5,7	44 confirmed.	The permitting database goes back to 2005. They are scanning old files now.
Norwell	By Special Permit	Yes	"My guess is one or none."		
Scituate	By Right	No		98	
Stoneham	By Special Permit	Yes	6,5,1	50 to 60	There have been 50 – 60 approvals, but the special permit is no longer valid when the family member moves out, so not all of those units are currently permitted.
Swampscott	By Special Permit	No	0,0,1	5 to 10	
Wenham	By Special Permit	No	3,2,0	24 as of 2008	
Westwood	By Special Permit	No		At least 45.	
Wilmington	By Right	No	0,6,12		The 2001 Master Plan mentions 27 permitted ADUs.

The following lists are up-to-date as of the time the zoning was reviewed by the researcher during 2017 and 2018. In some cases, the zoning might have been amended in the time period between the data collection and publication of the paper. For example, municipalities surveyed in the fall of 2017 might have amended their zoning at Town Meeting in the spring of 2018, and the change would not be reflected here.

Municipalities that allow ADUs without restricting occupancy to relatives of the homeowner:

Acton	Manchester
Bedford	Marshfield
Belmont	Medfield
Bolton	Milford
Burlington	Newton
Cambridge	Reading
Canton	Rockport
Carlisle	Scituate
Cohasset	Southborough
Concord	Stow
Dedham	Sudbury
Dover	Swampscott
Duxbury	Waltham
Hamilton	Wayland
Hudson	Wenham
Ipswich	Weston
Lexington	Westwood
Lincoln	Wilmington
Littleton	

Municipalities that allow ADUs but restrict residency to relatives of the homeowner, caretakers, elderly people, or qualifying low-income households.

Ashland	Millis
Bellingham	Milton
Beverly	Norwell
Boxborough	Peabody
Brookline	Pembroke
Danvers	Randolph
Foxborough	Rockland
Gloucester	Sharon
Hanover	Sherborn
Holbrook	Stoneham
Holliston	Stoughton
Hopkinton	Topsfield
Lynnfield	Wakefield
Maynard	Walpole
Medway	Weymouth
Melrose	

Municipalities that lack zoning for ADUs (although in some of the municipalities, building inspectors do grant permits for ADUs):

Arlington
Braintree
Chelsea
Essex
Everett
Framingham
Franklin
Hingham
Hull
Lynn
Malden
Marblehead
Marlborough
Medford
Middleton
Nahant

Natick
Needham
Norfolk
North Reading
Norwood
Quincy
Revere
Salem
Saugus
Somerville
Watertown
Wellesley
Winchester
Winthrop
Woburn
Wrentham

About the Author

Amy Dain is currently conducting a study of residential zoning regulation in Greater Boston, commissioned by the Massachusetts Smart Growth Alliance. Previously she coordinated the StatNet initiative for the Collins Center for Public Management at UMass Boston, and managed Pioneer Institute's Housing and Middle Cities Initiatives. She earned her Master of Public Policy from the Harvard Kennedy School of Government and Bachelor of Arts in Russian Studies from Wesleyan University.

About Pioneer

Pioneer Institute is an independent, non-partisan, privately funded research organization that seeks to improve the quality of life in Massachusetts through civic discourse and intellectually rigorous, data-driven public policy solutions based on free market principles, individual liberty and responsibility, and the ideal of effective, limited and accountable government.



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npc22

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On the cover and top: Tidelands Park in Coronado in San Diego, California.
Above: Family-friendly drive-in event in Charlotte, North Carolina.

Contributors



Ariana Drehsler

Cover, "Temporary Paradise" to *Ambitious Future*, page 24

This San Diego-based photojournalist focuses on social and political issues. "What I loved about this shoot is that I was able to show different sides of San Diego," she says. From La Jolla's modern architecture to the art and food of Barrio Logan, "different areas have their own unique vibe, like most, if not all, cities. I love that *Planning* is showing that."



Patrick Sisson

"Temporary Paradise" to *Ambitious Future*, page 24

A Los Angeles-based writer, Sisson focuses on cities and the tech, developments, and policy shaping their future. "It's heartening, at a time when the housing market seems to continuously one-up itself, to see local advocates-turned-electeds in San Diego present a concerted, holistic solution to one of the city and state's defining crises," he says.



Michelle McCue

Is Tourism Still a Viable Economic Development Strategy?, page 38

This place-marketing specialist has helped destinations navigate crises for nearly two decades. "The pandemic hit global tourism like a power outage: all at once," she says. "But many people began traveling again the moment restrictions were lifted, which attests to the strength of the wanderlust impulse—and the staying power of this sector."

PLANNING

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FROM THE DESK OF APA'S PLANNING AND COMMUNITY HEALTH MANAGER

Upskilling Ourselves and the Planning Profession

HAVE BEEN a researcher at APA for five years; most of my work has been focused on grant-funded research at the intersection of planning and public health, with health equity as a focal point. Over the years, this has provided me with opportunities to interact with planning practitioners from around the country.

Lately, these meaningful conversations often center on a major challenge for our profession: We planners are often more caught up in reacting to the present than preparing for the future. This worries me. Planning for the future is integral to our profession, and while we can't predict what will happen, one thing is certain: There will be more changes. Unexpected occurrences like the pandemic, disruptors such as technology, and worsening existing challenges like climate change will keep coming. We need to meet them head on by understanding the dynamics of the change, preparing to evolve planning processes and approaches, and continuing to learn new skills.

That's where APA's just-launched Upskilling Initiative comes in. What is upskilling? In short, it's the process of teaching or learning new skills within someone's current job or profession that help them adapt to changing needs. The aim of the APA Upskilling Initiative is straightforward: We want to equip planners with the right skillsets to excel in dynamic environments.

This effort interconnects with another top APA priority: advancing equity, diversity, inclusion, and accessibility. That means that EDI-related skills gaps will receive a special focus in the Upskilling Initiative. An important part of upskilling is sometimes unlearning something, and that's especially true when it comes to EDI. Unlearning is not about forgetting what we know, but about changing our mindset to learn and use different methods to address a challenge.



'An important part of upskilling is sometimes unlearning something, and that's especially true when it comes to EDI. Unlearning is not about forgetting what we know, but about changing our mindset.'

—SAGAR SHAH, PH.D., AICP

In order for the planning profession to upskill—and for APA to provide learning opportunities to help—we first need to know where the gaps are. We are developing a skills gap analysis process that draws on insights from APA's Foresight practice, EDI-related expert groups, members, and other sources.

We also need your help. What are you facing in your work that's new, tricky, or even overwhelming? What shifts are happening in your communities? What skills do you need to rise to those challenges and grow professionally? In the future, we'll share ways APA members can help with the skills gap analysis, and we look forward to your perspective and expertise.

Once we know what the gaps are, APA researchers, the education team, and other content creators will work with subject matter experts to develop relevant resources for planners. This will be a continuous process of assessing planners' unmet needs and creating upskilling education and training to help us effectively manage change. Stay tuned for opportunities to upskill yourselves, and take advantage of existing APA resources, like the Knowledge Center (planning.org/knowledgecenter), Foresight practice (planning.org/foresight), and more.

As a planning researcher, learning new things is a main motivator in my work—and besides, it's necessary for helping me adapt to change. Right now, I am undergoing project management training to manage the Upskilling Initiative. (Project management is such an essential skill for planners, but it is typically absent from formal education; it certainly was from mine.) I hope you'll join me in identifying your own skills gaps and taking steps to upskill yourself.

Sagar Shah, PhD, AICP, is APA's planning and community health manager.

Around 100,000 public chargers like this one in San Francisco are currently in operation across the U.S., but experts say we could need a million more for a full switch to EVs. The Infrastructure Investment and Jobs Act could help state legislators narrow that gap.

KELSEY MCCLELLAN/THE NEW YORK TIMES



INTERSECTIONS

WHERE PLANNING AND THE WORLD MEET

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INFRASTRUCTURE

New Federal Funding Sparks Surge in EV Legislation

As the new infrastructure law prompts action, state lawmakers call 2022 a “turning point” for electric vehicles. By Alex Brown

AUTOMAKERS ARE planning to put nearly one million new electric vehicles on American roads in 2022. Lawmakers are trying to make sure their states are ready.

“We will see a lot more emphasis on electric vehicles in 2022 and 2023,” says Dylan McDowell, deputy director of the National Caucus of Environmental Legislators, a collaborative forum for state lawmakers. “This is the start of a really big turning point.”

Across the country, legislatures in blue and red states are considering bills to bolster charging infrastructure, expand consumer incentives, electrify state fleets, and mandate charging stations in new buildings. States also will be tasked with deploying billions in new federal funds for charging stations approved in the new infrastructure law, and some legislators say they plan to take an active role in that strategy.

“This is being taken seriously in a way it hasn’t been before, because the trajectory is very clear,” says Marc Geller, a board member and spokesperson for the

Electric Vehicle Association.

In the U.S., the transportation sector is the largest source of greenhouse gas emissions, making up nearly 30 percent of the national total. While many states have plans to switch to renewable electricity sources, reducing vehicle emissions is much more complicated. But as the private sector market for electric vehicles matures, many lawmakers see an opportunity.

Electric vehicle sales in the U.S. doubled in 2021 compared with 2020, and car buyers in 2022 will have twice as many electric models from which to choose. As the market grows quickly, state lawmakers say they’re focused on making sure infrastructure keeps up, and—in what is perhaps the greater challenge—ensuring that electric vehicle benefits aren’t just enjoyed by their wealthiest residents.

Local action

Hawaii ranks second in the nation behind California for electric vehicle adoption. “We’re just at the inflection point where we’re about to take off in a huge way,” says Hawaii state senator Chris



Infrastructure

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Lee, the Democrat who chairs the Transportation Committee. “Our charging capacity has been greatly outstripped by the number of EVs out there. We need a lot more capacity, and quickly.”

Hawaii legislators are looking to build more charging stations for rental cars, which make up a significant portion of the tourism-heavy state’s EVs. They’re planning to use federal funds to create charging hubs. Other proposals would put in place a requirement for charging stations in public parking lots and a new consumer rebate for electric vehicle purchases, with a focus on lower-income communities.

Meanwhile, Republican lawmakers in both Indiana and Wisconsin are backing bills that would allow the owners of charging stations to sell electricity by the kilowatt-hour, rather than by the minute. That would benefit drivers of slower-charging vehicles. Sponsors say the bills would allow businesses to play a greater role in providing charging infrastructure.

In California, Democratic governor Gavin Newsom is proposing more than \$6 billion in investments to speed up electric vehicle adoption. More than \$250 million would be targeted to assist low-income consumers, with another \$900 million to build chargers in underserved neighborhoods.

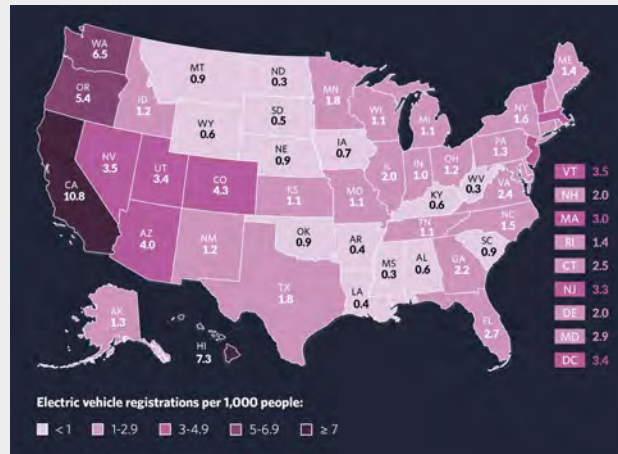
“In this clean transportation revolution, the next phase is making sure that low-income communities and communities of color are able to take

‘Our charging capacity has been greatly outstripped by the number of EVs out there. We need a lot more capacity, and quickly.’

—CHRIS LEE,
HAWAII STATE
SENATOR

WESTERN STATES TAKE LEAD ON ELECTRIC VEHICLES

Electric vehicle adoption varies widely across the country, and many lawmakers are pushing bills in 2022 that seek to speed their state’s transition.



SOURCE: U.S. DEPARTMENT OF ENERGY, U.S. CENSUS BUREAU.

advantage,” Jared Blumenfeld, secretary of the California Environmental Protection Agency, said in a press call.

Federal funds

The federal infrastructure package Congress passed in 2021 includes \$7.5 billion for electric vehicle charging stations, with \$5 billion given directly to the states. Some Republicans oppose the use of government funds to support electric vehicle adoption, but the funding has gotten the attention of conservative states that have otherwise shown little interest in climate policy.

Missouri, for instance, will receive \$99 million to expand electric vehicle charging over five years. Brian Quinn, a spokesperson for the Missouri Department of Natural Resources, says the agency plans to collaborate

with the Missouri Department of Transportation to deploy chargers along national highways.

Michigan expects to receive \$110 million of the charging funds. “This will get a lot of people over the hump in making the choice to have their next vehicle be an EV,” Lieutenant Governor Garlin Gilchrist, a Democrat, says. “This year is going to be the one that makes the difference.”

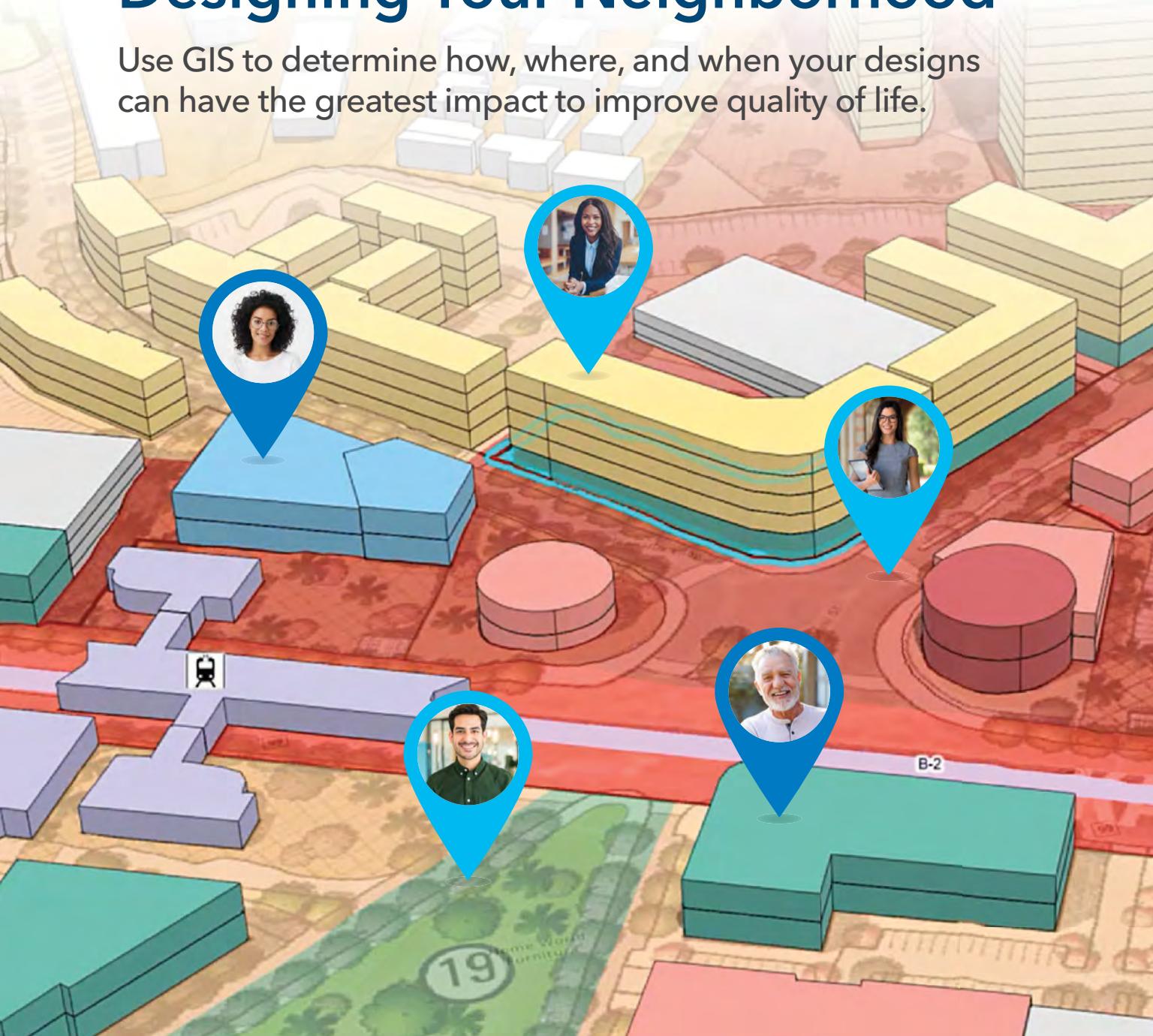
The state has partnered with its Midwestern neighbors to form a coalition focused on a regional network of charging stations, and it is also investing in a workforce development plan to ready residents for jobs in the electric vehicles industry.

In New York, state officials expect to receive \$175 million from the feds.

“As more EVs are on the road, the business case for

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installing charging stations gets better and better,” says Adam Ruder, assistant director for clean transportation with the New York State Energy Research and Development Authority. “We’re trying to get to that point where it becomes a self-sustaining market. This infrastructure money and the other investments we’re making can really help us get there.”

Some New York officials want mandates. State Senator Liz Krueger, a Democrat, has sponsored a bill that would require newly constructed buildings to include wiring for electric vehicle chargers in a certain percentage of their parking spaces.

But mandates have drawn pushback. Missouri state Representative Jim Murphy, a Republican, has proposed a bill that would block cities and counties from requiring businesses or buildings to install charging stations. Murphy says St. Louis County’s mandate requires any business that wants to resurface its parking lot to spend thousands on charging stations. His bill would require that mandating governments pay for them.

“There’s no feeling that we should stop the growth of EVs, that’s the future,” Murphy says. “But you can’t put it on the backs of small businesses and churches. If we’re going to make the little guy pay for it, I’m going to champion against it.”

Alex Brown is a staff writer for Stateline. This story was reprinted with permission from Stateline, an initiative of the Pew Charitable Trusts.

LGBTQ+ Stories Are American History

At local and national levels, context studies are honoring influential people and places—and driving planning efforts. By Tatiana Walk-Morris

AT LEAST seven percent of U.S. adults—or more than 20 million people—identify as lesbian, gay, bisexual, and/or transgender, a 2021 Gallup poll estimates. That proportion is up from 4.5 percent in 2017, in part due to Gen Z’s coming of age: one in five adults born between 1997 and 2003 currently identify as LGBT.

Despite making up a sizable and growing part of the population, the diverse LGBTQ+ community rarely sees targeted engagement from the urban design fields. But a building preservation movement is working to change that with a valuable tool: historical context studies.

A means of identifying historically significant places around a theme, these reports can guide vital planning work. The nation’s first LGBTQ+ historical survey was created by the group Friends of 1800 for San Francisco in 2004; the city built on that with a study in 2015 that helped advocates create the Compton’s Transgender Cultural District, which offers community services in the Tenderloin, where the country’s first transgender uprising occurred.

Elsewhere, the National Park Service, which keeps the National Register of Historic Places, released in 2016 *LGBTQ America: A Theme Study of Lesbian, Gay, Bisexual, Transgender, and Queer*

History, the first national effort of its kind in the world. And at the state level, two context studies are setting the curve: Kentucky’s in 2016, and most recently, Maryland’s in 2020. That project is taking on new life with a dynamic, soon-to-be released report aimed at the public.

“The statewide context, in my opinion, is one of the best ways to approach thematic history in planning,” says Meagan Baco, project manager of Mary-



The U.S. Naval Academy class of 1985. Maryland’s LGBTQ+ context study required searching for stories in overlooked places, including the state’s maritime and naval academies.

land’s study and the director of communications at Preservation Maryland when they launched the project. “The report definitely filled a vacuum. People were really looking for this type of comprehensive look that then allowed and empowered them to do local-facing projects that really have impact.”

Reflecting the community

Maryland’s LGBTQ+ survey identifies almost 400 sites with ties to important figures, community groups, businesses, AIDS and marriage advocacy, and more. As in Kentucky, much of this work was grant funded and required extensive local engagement and coordination.

It’s important to meet members of the LGBTQ+ community where they are, says Rebecca Ballo, historic preservation program supervisor with the Montgomery County Planning Department, which was closely engaged in the Maryland project. Part of that involved intersecting communities, she explains, like examining the state’s maritime and naval academy histories for overlooked LGBTQ+ stories.

Catherine Fosl, professor of women’s gender and sexuality studies at the University of Louisville and lead author of the *Kentucky LGBTQ Historic Context Narrative*, echoes Ballo’s advice. Teams should also reflect the LGBTQ+ community they’re working to highlight, Fosl says, while remembering that some may wish to keep their gender identities and sexualities discreet.

Fosl recommends reassuring participants that their materials will be handled with care, as much of this history comes from private items like letters and photographs. Local community groups, gay and lesbian bars, and oral history centers and archives at universities are also valuable resources, Fosl says.

Maryland plans to use the study to build out its register of historic places, among other efforts. Locally, it will influence master plans, Ballo says.

“What’s required of us as planners,” Ballo says, “[is making] sure that our plans are for the people who live here, all of the people here, and that they see themselves reflected in our work.”

Tatiana Walk-Morris is a Detroit-native and Chicago-based journalist.

PEOPLE BEHIND THE PLANS

Leslie Kern on Gender and the City

CITIES ARE NOT gender neutral. Much of the built environment has been designed by and for men, explains Leslie Kern. And even then, a narrow male subject: “Usually a white, middle-class father, breadwinner, worker, able bodied, heterosexual, and so on.”

From out-of-reach subway straps to train lines with inadequate routes for caretakers, “women are kind of reminded the city wasn’t really built for you,” says Kern, associate professor of geography and environment and director of women’s and gender studies at Mount Allison University.

Her latest book, *Feminist City: Claiming Space in a Man-Made World*, takes a critical look at the gender disparities inherent in the built environment—and how to address them. I recently spoke with her on an episode of APA’s podcast series *People Behind the Plans* to learn how planners can join the effort. This interview has been edited for length and clarity.

COURTNEY KASHIMA: What is a feminist city, and why is it important?

LESLIE KERN: For me, the feminist city is a vision, really—a set of values and principles that are dedicated to equity, to justice, to sustainability, and to reenvisioning what we really think the city is for. I think during the pandemic, it’s been a real key moment for this because so many



‘For me, a feminist city is about thinking beyond the city as an economic unit and instead as a place for people, for care work, for social relationships, for interacting with the environment, and as a vehicle for social change.’

—LESLIE KERN

Q&A

of us have been told over and over again that we have to look out for the economy. But what is the economy founded on? What other elements of the urban environment are important to us, and what other kinds of roles and work and relationships are really the foundational elements?

So for me, a feminist city is about thinking beyond the city as an economic unit and instead as a place for people, for care work, for social relationships, for interacting with the environment, and as a vehicle for social change.

KASHIMA: Are there any glimmers of hope?

KERN: I think one of the conversations [the pandemic] has sparked is around issues of care work in the home, gender in the workplace, and how those things interrelate together, because in many ways, we are recognizing that despite all of our pretensions to gender equality in the home and workplace, there’s still a disproportionate share of care labor that falls on women in the home. And in both Canada and the

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U.S., many thousands, if not hundreds of thousands, of women have lost their jobs. So what's the glimmer of hope in that?

Well, our government here in Canada, just like yours in the U.S., now has started to recognize that there can be no real economic recovery without some attention to these gender issues. So we've had renewed conversations about the possibility of a national childcare plan, which is something that comes up over and over again but very little action has been taken towards it.

And I think at the urban level, there's also been some interesting moments where people were saying, "Get outside, socialize outside, make use of outdoor public space, it's safer," and so on. But many of our cities have not really been well set up to encourage that socializing. So some cities took it upon themselves to do things that, again, they'd been dragging their feet on for a long time. They increased bicycle lanes and pedestrian access. They created more space for socializing in urban public space.

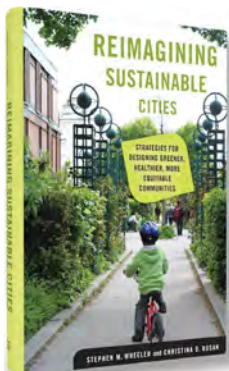
They limited car traffic. They created opportunities for other sorts of social engagements, whether that's through outdoor dining or outdoor public activities. So I think it's a moment where we could see perhaps some changes in how we use urban public space.

KASHIMA: Do improvements made using a feminist lens benefit all kinds of people?

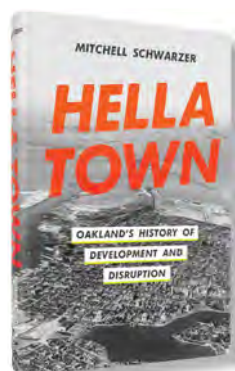
KERN: Absolutely. There's nothing that I would imagine as part of a feminist city that is about taking something away from somebody else or limiting another group's access to public spaces, workplaces, and so on. It's about imagining, how do we broaden that access, both in a physical sense in terms of the things that you were talking about, like physical accessibility and the built environment, but also social accessibility, safety, cultural norms, all of these different things that contribute to a person or a group's sense of being included as being part of the city, as belonging to the city.

And the more we can expand that, the more

NEW WAYS TO SEE OUR CITIES

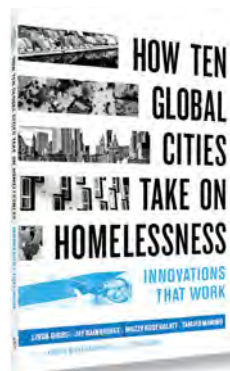


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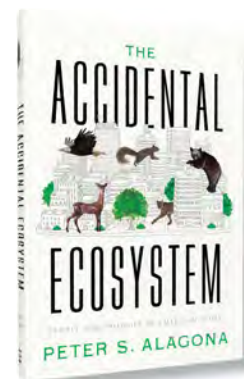
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—Eric W. Sanderson, author of *Mannahatta*

everyone will benefit. And a feminist lens, a gender equity lens, is just one way of opening that up. It's not the only way. And I would never advocate for it to replace other ways of looking at the city. But certainly, if we think about a feminist analysis of care work, for example, you know, who does the unpaid and paid labor that keeps human beings alive and cared for and nursed and educated and fed and clean? All of that kind of labor—how is that organized in the city? How could we reshape elements of city spaces to prioritize that care work?

That's not just something that benefits the women who do that work, but that's something that benefits everybody, all sorts of different groups in society.

KASHIMA: And what role do you think municipal urban planners can or should play?

KERN: Planners can engage in active listening with communities, really try to do that on-the-ground work of community engagement. They can also think about what an equity lens would mean for

their decision-making processes. So when you're thinking about where to put a new transit line or new park or even just a reorganization of a particular space, you can ask yourself: Does this enhance gender equity and other forms of equity? Does it leave it neutral, or might it have negative effects on that? And that can be a guidepost, kind of a compass, for some decision making as well.

And I think planners can also think about how to diversify the profession. I think in the U.S., from what I've looked into, the profession is still about 80 percent white. That's also an equity issue. So how can we have better representation amongst planners so that some of these questions are not, again, afterthoughts, but that the people already in the room might be saying, "Hey, what about stroller access? What about children? What about seniors? What about racial equity?"

Courtney Kashima is founder and principal of Muse Community + Design, a planning and public engagement studio in Chicago, and a frequent host of the APA podcast.

PODCAST

Listen to the full conversation on the APA podcast for ways to promote gender equity in your community.

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TO READ

UNFLINCHING CLIMATE REALITY

The next two decades could bring far more severe climate hazards if the planet warms another 2.7 degrees Fahrenheit, with already-vulnerable areas and populations the most at risk, finds *Climate Change 2022: Impacts, Adaptation and Vulnerability*. This latest report from the UN's Intergovernmental Panel on Climate Change offers an unflinching look at the impacts on the natural and built environments of every continent, along with policy recommendations for mitigation and adaptation. Read it now at ipcc.ch.

GAMING

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so on a Mac, PC, and Nintendo Switch. With each press of the button, users can create roads and add and expand buildings. Little surprises pop up

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Rachael Hoffman is APA's customer service associate.



NOW STREAMING

An Education Slam Dunk?

LeBron James in *I Promise*. Watch it for free at bit.ly/ipslebron.

EVERY 26 SECONDS, a student drops out of school in the U.S.

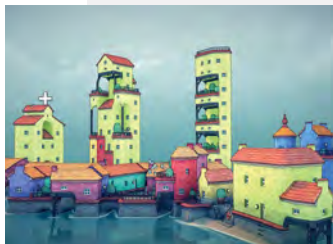
That's the opening message of *I Promise*, a new documentary from Marc Levin about an innovative school in Akron, Ohio. The result of a partnership between the city's public school system and the LeBron James Family Foundation, *I Promise* School launched in 2018 with 240 third and fourth graders.

Unlike many charter schools, these students were selected from the lower 25 percent of the district based on standardized test performance—according to the school's premise, they're the ones most at risk of falling behind, being held back, and dropping out. The approach to combatting these statistics is summed up in the school's slogan, emblazoned on nearly every T-shirt, banner, and sign: "We Are Family." This commitment extends beyond the classroom, to the students' parents, housing, healthcare, and neighborhoods.

Many of the resulting insights will be familiar to planners: How can students learn if they come to school hungry? If they don't feel safe? How can parents provide supportive environments without steady employment or housing? And so, even in its first years, the mission expands with mental health care, a food pantry, and plans for an "I Promise Village" with housing and other services.

Importantly, the school stresses building these systems and relationships over the long-term. (As LeBron James says, "this is not instant oatmeal, just add water.") The partners are honest about the need to learn as they grow, even through missteps and failures. Despite the challenges, the film ultimately offers an optimistic vision: If we don't give up on our young learners, they won't, either.

Ezra Haber Glenn, AICP, is Planning's regular film reviewer. He teaches at MIT's Department of Urban Studies & Planning and writes about cities and film. Follow him at urbanfilm.org and [@UrbanFilmOrg](https://twitter.com/UrbanFilmOrg).





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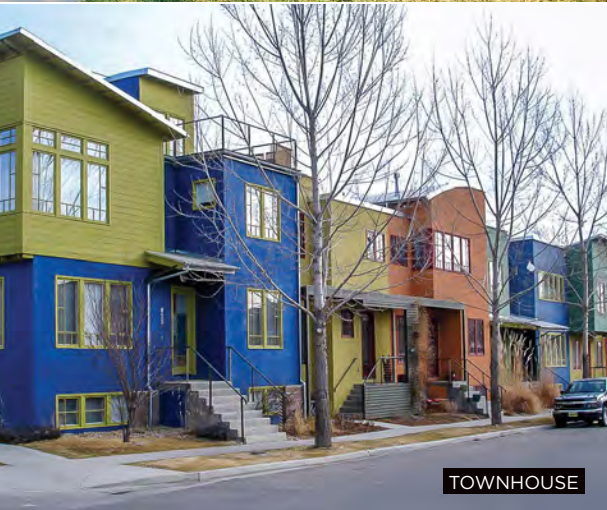


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9 ZONING HACKS FOR MISSING MIDDLE HOUSING

Thoughtful tweaks to your community’s code can have a big impact on housing diversity and density. *By Kati Woock*

ONE-THIRD OF AMERICAN households are made up of a single individual. Up to 85 percent of households will not include children by 2025. By 2030, one in five Americans will be over the age of 65.

These statistics add up to a simple fact: Demand is high for smaller homes, lower living costs, walkable neighborhoods, and places for people to age in place. Yet zoning across the U.S. largely discourages these features.

That’s because codes tend to be based on residential density, which is measured in dwelling units per acre, and most prioritize single-family housing. As of 2019, a *New York Times* report found that “it is illegal on 75 percent of the residential land in many American cities to build anything other than a detached single-family home.” Not only are large multifamily buildings banned from many neighborhoods, but so are smaller housing types that cost less than a single-family home: side-by-side and stacked duplexes, triplexes, townhouses. These constitute “missing middle housing”

or “house-scale buildings that just happen to have multiple units in them,” says Daniel Parolek of Opticos Design, who coined the term in 2010.

In the past few years, Oregon, Minneapolis, California, and other states and cities have launched zoning reform efforts to better promote housing affordability, diversity, and density. If your community lacks the political will to make these kinds of sweeping changes, a few thoughtful tweaks can still make a big impact. Adapted from Parolek’s APA Learn course (bit.ly/zhacks), these nine zoning hacks—and a bonus tip—can help planners increase local density.

1 REDUCE MINIMUM LOT SIZE.

Does your code require two lots to build a duplex or a fourplex? If a builder must aggregate multiple lots to build a small multiunit building, your minimum lot sizes are too big.

Instead, replace minimum lot sizes with minimum lot widths and tie types of buildings to the lot’s width, not its square footage.

2 REGULATE MAXIMUM WIDTH AND DEPTH. Replace rear setback requirements with maximum depths to ensure house-scale buildings and document existing building sizes to create a set of maximum widths and depths. These restrictions also discourage demolitions that might replace small single-family homes with very large ones.

3 INCREASE ALLOWED DENSITIES. Rather than applying a blanket density increase to all types, officials in Medford, Oregon, tested different building types on various lot sizes to find density numbers that compliment specific neighborhoods.

4 ALLOW FOR MORE HOUSING TYPES AND REVISIT STRUCTURE SIZES. As Joe Zehnder, chief planner for Portland, Oregon’s Bureau of Planning and Sustainability, says, “if the house size is the same, why do you care how many units are in there?” In Portland, zoning changes now allow someone building on a 5,000-square-foot lot to construct up to four units divided between a main building and detached accessory dwelling units. Five or six units are allowed if half of them are affordable to low-income residents.

5 LEVEL THE PLAYING FIELD FOR SMALLER UNITS. More density doesn’t always mean bigger buildings. In Santa Barbara, California, an average unit size ordinance provides for increased density as the average unit size decreases. This enables missing middle housing by allowing for greater density, even in smaller structures.

Respect the neighborhood context, but don’t be slavish to it—most neighborhoods are made of different building types.

6 REDUCE OR ELIMINATE PARKING MINIMUMS. “If you want missing middle [housing], you need to fix your parking standards,” says Parolek. “We’ve done a better job delivering houses for cars than we have delivering houses for people.” If you require more than one off-street parking space per unit, it’s not economically viable or physically possible to create missing middle housing on infill lots. Instead, opt for one parking space—or even none—per unit and no guest parking.

In suburban or rural areas, like Beaufort County, South Carolina, driving might be a fact of life. Try being creative about how you design parking so it can become an extra unit in the future, if factors like demand or public transit change.

7 RETHINK PRIVATE OPEN SPACE REQUIREMENTS. While the motivations behind private open space requirements are good, they typically result in unattractive balconies that are used primarily for storage. In a walkable, urban neighborhood, the amenity is the environment. Rather than delivering outdoor amenities on a unit-by-unit basis, focus on shared spaces like courtyards and vibrant streets.

8 ALLOW MISSING MIDDLE HOUSING EVERYWHERE (IF POSSIBLE). Is more than 20 percent of your land area zoned exclusively for single-family housing? Then you need to change the boundaries limiting missing middle housing to deliver it effectively and equitably. In Portland, Oregon, planners proposed allowing middle housing types in all districts across the city unless there is a physical limitation, like flooding or landslide hazards.

In response to displacement concerns, Zehnder says, “the more places where we allow this to happen, the less it’s going to overwhelm any individual place.” And development won’t happen all at once: Portland planners estimate an add of 4,000 new units over the next 15 years. But if a single house in a wealthy neighborhood is replaced with three units, that alone can help take the pressure off demolitions in an area with lower incomes, Zehnder says.

9 IMPROVE INFILL DESIGN. Respect the neighborhood context, but don’t be slavish to it—most neighborhoods are made of different building types. (Tuck-under townhouses that face away from the street, however, can quickly overwhelm available infill lots without enhancing neighborhoods, Parolek says.) Focus on a number of stories instead of a maximum height, and limit where parking is allowed. You can also limit curb cuts and garage frontage to preserve the street front.

Take the opportunity to increase accessibility, too. In Portland, new codes require lots with three or more units to ensure that at least one is “visitable,” with a no-step entry, ground-floor bathroom, and ground-floor living space.

BONUS: FRAME THE CONVERSATION. When you’re presenting your ideas to the community, it can be helpful to avoid terms that might have negative connotations to some, like “density,” “multifamily,” or “upzoning.” Present zoning changes as a way to offer new housing choices or options. Focus on form and scale, not density metrics. Imagery (missingmiddlehousing.com) can help community members understand how missing middle types could look in their neighborhoods.

Kati Woock is a freelance editor and writer based in Michigan.

LAUNCH A SUCCESSFUL DIVERSITY INITIATIVE

How to translate values into action. *By Bobbie Albrecht*

EQUITY, DIVERSITY, AND INCLUSION (EDI) initiatives are all about translating values into actions. In a recent APA Learning Circle, planners shared the steps their agencies and firms are taking to do just that.

In 2020, for example, Los Angeles mayor Eric Garcetti issued an executive directive on fairness, diversity, equal opportunity, and transparency in city government. In response, the LA city planning department hired its first chief equity officer, planner Faisal Roble, that same year.

And on the private side, as part of a recent reorganization, global engineering consulting firm WSP developed a three-year strategy to increase and support racial and gender diversity of staff. A significant part of that has been a new program to develop better leadership opportunities for people of color and women within the company.

Lee Pearce, the manager of talent management for WSP USA, says that a key driver for change has been the formation of a representative council, a diverse group of high-performing employees selected to act as a conduit

between employees and the executive team. Council members serve as mentors and role models, provide valuable insights on professional development skills that are needed, and suggest changes to the leadership pipeline.

A commitment to diversity and inclusion is a start, but to fully benefit from increased racial and gender diversity, organizations must be willing to change the culture and power structure. Organizations must not only have strong support from leadership to promote fairness and equal participation at all levels, but also a commitment to a frank analysis of the current culture, practices, and policies. And as in any area of work, employees need ongoing training and support to accomplish goals and evaluate progress.

To ensure EDI policies and initiatives produce their desired results, firms and planning departments must create a program with measurable outcomes. Below, find three ways to help get you started.

Bobbie Albrecht is APA's career services manager.

THREE STEPS TO MEASURABLE OUTCOMES FOR AN EDI PROGRAM



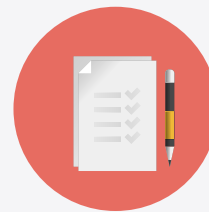
GATHER DATA

Review pertinent departmental functions, including but not limited to recruitment, hiring, training, retention, promotions, and contracting. Create a mechanism to hear from employees. The city of Los Angeles uses focus groups to do this, while WSP's representative council of employees both gathers information and makes recommendations. Analyze your office policies and practices to determine whether they are helping or hindering efforts.



SET GOALS

Create a list of equity indicators specific to a department or office and describe how the department can develop reliable data to track progress on equity, diversity, and inclusion efforts. Consider, too, training goals and retention as indicators of progress.



CREATE RECOMMENDATIONS FOR IMPLEMENTATION

The plans should identify any anticipated challenges, include a reporting and auditing component, and designate staff who will be principally charged with administering the proposed plan. Identify disparities in workforce outcomes, too. When LA measured hiring by gender, it discovered a gap and worked toward closing it. Today, 57 percent of the city staff are women.

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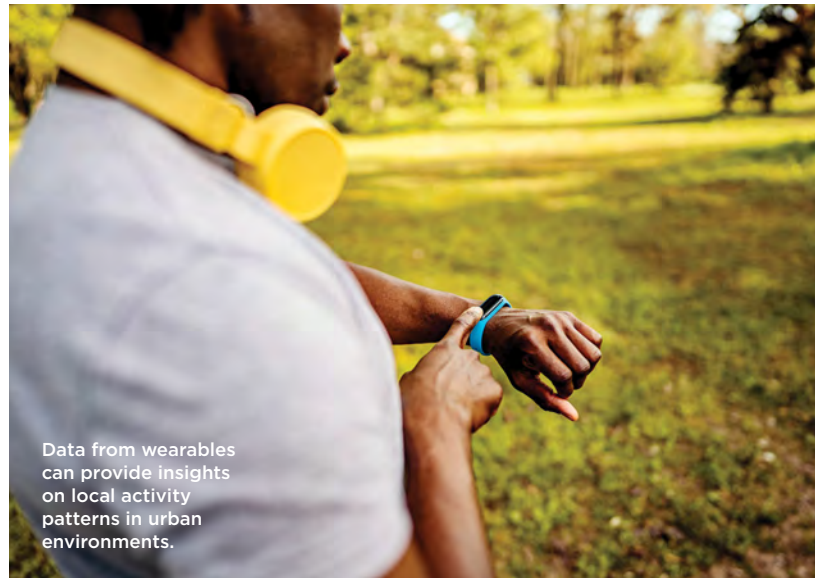
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Data from wearables can provide insights on local activity patterns in urban environments.

TECH

WHAT PLANNERS NEED TO KNOW ABOUT BIG DATA

Five applications and considerations to get started. *By Alexandra Gomez*

WITH DOZENS OF technological innovations on the horizon, now is the time for planners to prepare by gaining new skills and creating new policies.

In an ongoing partnership with the Lincoln Institute of Land Policy, APA's Foresight team recently released the *2022 Trend Report for Planners* (planning.org/foresight), an in-depth look at nearly 100 of the existing, emerging, and potential trends and innovations relevant to planning. Artificial intelligence, automated transportation, and data analytics are just some of the new tools and resources we need to understand—and be sure to use in inclusive, equitable ways.

Big data in particular holds much potential for planning. Vast improvements in data collection provide more access to higher-quality, real-time

information, while new approaches are being developed to better reflect the diverse experiences and identities of the communities we serve. Together, these advancements can give planners new ways to integrate data into decision-making processes, plans, and recommendations.

To gain a better understanding of big data in planning, start with these five applications and considerations:

1. The complexities of identity

Demographic and population data collection require new approaches to better reflect diversity within communities. Planning needs to reflect the fact that people exist at the intersection of multiple identities at once (like race, age, gender, ability, and religion). Planning also needs to avoid assuming people belong to homogenous groups

that have the same values or needs. More dynamic solutions are necessary to help planners adapt or tailor their efforts—especially when it comes to planning with groups that policies have historically underrepresented, underserved, and harmed.

An increasing number of local, state, and federal programs are mandating the creation and explicit measurement of equity, diversity, and inclusion efforts. The related data can be difficult to collect, however, and it can require asking for or inferring personal information, like religious beliefs or sexual orientation. To prepare for these requirements, planners need to reflect on their current approaches to data collection and project evaluation.

Importantly, as part of these efforts, planning education and the profession need to do a better job of recruiting people with a wider variety of identities and backgrounds to better reflect the communities we serve.

2. Scoring systems

Police, immigration officials, banks, universities, and other private institutions are increasingly using scoring systems—ways to measure different social attributes, qualities, and characteristics, often powered by artificial intelligence—to inform decisions, despite persistent issues with bias. If planners begin to use similar technical programs or scoring systems, it can further formalize harmful biases in planning and land-use decisions. For example, they can lead to maps that score neighborhoods based on social characteristics and miss other factors at play, essentially reproducing social “blight” maps, which could have harmful outcomes.

3. Crowdsourcing

A growing number of governments of all scales have adopted crowdsourcing, often to increase accessibility for

residents and reduce public participation costs. It can be a supplement—or even an alternative—to the use of big data in decision-making or scenario planning that promotes consensus building, learning from local knowledge, and mobilization of residents.

Crowdsourcing can also be a formal iteration of civic tech: Residents can use it to directly provide large amounts of data that reflect their preferences. Planners should prepare for both an increased interest in crowdsourcing from local governments and an influx of new information that could provide different findings than data collected through traditional methods.

4. Wearable tech

Through monitoring and location-based services, data from wearables—like smart watches or glasses—can provide insights on local activity patterns. This information is beginning to become widely available, and planners need to prepare to leverage it, potentially by partnering with data providers.

5. Data protection and privacy

As big data collection and use grows, so do privacy concerns. The result is a need for more regulation, stated ethical standards, and storage and ownership considerations. Currently, the European Union’s General Data Protection Regulation (gdpr.eu) is the strictest regulation globally. Some U.S. states have also started to implement data protection regulations; the California Consumer Privacy Act is the most comprehensive.

As planners gain more access to new kinds of data, they will also need to understand how these data protection regulations affect use. This will be particularly important when implementing smart city applications to mine data.

Alexandra Gomez is APA’s research associate.

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'TEMPORARY PARADISE' TO
**AMBITIOUS
FUTURE**

San Diego planning is shifting to denser, more sustainable development served by transit—and it's paying off.

By PATRICK SISSON Photographs by ARIANA DREHSLER



THE CRISIS GRIPPING COASTAL CALIFORNIA—EXPLOSIVE JOB GROWTH and opportunity souring due to a severe lack of housing—hasn't spared San Diego. Like other Golden State metros, it's incredibly unlikely to meet state-assigned housing goals, and prices have been skyrocketing.

There have been recent successes, like a 25 percent boost in housing starts and affordable housing production in 2020. Still, the region built just shy of half the homes mandated by the state over the previous decade. But trends and shifts by city and regional planners and policy makers in recent years suggest it may be tackling issues like affordability and transportation more effectively than Los Angeles and San Francisco.

Until the last couple of decades, "San Diego was seen as a sleepy town with the character of a beach community," says Professor Isaac Martin, chair of the Department of Urban Studies and Planning at the University of California, San Diego (UCSD). "The city's growing beyond its reputation from decades past as not being an innovator in this space, and in the last few years, everything seems to be coming together."

A series of significant political and policy shifts in recent years have helped the city and region adopt a more holistic approach to housing, transportation, and economic development. To name a few notable developments: A homegrown YIMBY movement and more forward-thinking city council have passed zoning and development policies accelerating denser development and new transit investments. The newly opened Mid-Coast Trolley extends the Blue Line another 10.9 miles; stretching from the Mexican border to University City near La Jolla, the full route is now the spine of a potential game-changing public transportation network. The life sciences and tech community, an economic powerhouse that gained strength during the pandemic, has exploded. And a new executive director for the San Diego Association of Governments (SANDAG), LA-transplant Hassan Ikhrata, oversaw the draft of an ambitious regional plan that, if fully funded

and adopted, would push the region towards meeting equity and environmental goals.

"We're a big city," says Martin. "This is a big shift culturally but also from a political and policy standpoint. We've connected at every level, from the municipal level to the federal level, and want people to stop thinking like a small town, because we're not."

BOTH DEMOGRAPHICS AND geography prodded San Diego planning to shift forward, placing the city at an inflection point. Hemmed in by natural limits like the Pacific Ocean, the Camp Pendleton Marine base, conservation land, and the border with Mexico, the city and region have little choice but to densify and build up, as space for standard issue master-planned communities has run out.

Then there is the self-fulfilling cycle of young knowledge and tech workers, as Martin and others explain. Especially focused in biotech, newcomers are arriving and seeking out dense urban environments in which to live, creating a market incentive for more such development and in turn, attracting more demographic change. (That certainly isn't the only important demographic shift: The city is also planning for a population where the number of adults over 65 will increase 106 percent by 2035, and the *Age-Friendly San Diego Action Plan* aims to add and expand recreation and transportation options while focusing on housing transition options and wellness.)

The area has radically changed from its 20th-century roots, a tangle of Spanish and Mexican design and cultural influences that shaped the northernmost city in Baja California, its role as an emerging resort town during the Hotel del Coronado era, and a massive post-World War II military buildup. In the 1970s, an influential planning document about the region dubbed it a "Temporary Paradise."

"Our 2020 mayoral race, the most recent election, basically boiled down to two candidates offering the YIMBY and NIMBY options," says Dike Anyiwo, a member of the YIMBY Democrats and vice chair of the Midway-Pacific Highway Community Planning Group, one of several



The UC San Diego Central Campus station is a stop on the newly opened Mid-Coast Trolley, which now stretches more than 26 miles from the Mexican border to La Jolla. See for yourself how the university is embracing the transit-oriented development model in the NPC22 mobile workshop UC San Diego's Transformational Development Plan.



The Fourth and Fifth Avenue bike lanes are a significant disruptor project, a part of San Diego's general rejection of its car-centric past in favor of an integrated, multimodal future. The city is also looking to maximize its parking inventory without adding substantial capital cost. Local planners will share those lessons in the NPC22 mobile workshop **Parking Meter Revenue: Big Changes from Small Change.**

citizen-led groups formally recognized by the city that make recommendations to the San Diego Planning Commission about land-use decisions. “Democrat Todd Gloria, the YIMBY, won, running on a platform of housing affordability, transit opportunity, and climate action.”

Perhaps the most optimistic vision of what this shift means can be found in the pages of the SANDAG 2021 *Regional Plan* proposal, a bold, \$172 billion vision for reworking the transportation network, an opportunity seized after previous plans didn’t meet the state’s emissions-reduction targets.

One key proposal eliminates highway expansion, opting to transform many existing lanes into managed lanes for carpools, rapid bus service, and those paying tolls. The plan includes “5 Big Moves” geared toward active transportation advancements, like a better bike network, micromobility and new transit tech, coastal rail trails, and a long-term proposal for a major light rail extension and towering central city mobility hub. It adds up to a blueprint for transit-centered density, connecting more workers to jobs and opportunity.

Colin Parent is a council member in La Mesa (one of the 18 cities in San Diego County) and the executive director of Circulate San Diego, a local transit- and urbanism-focused nonprofit. He argues that the plan is just a “big document with lots of ideas,” mainly speculative and uncertain. The political realities of securing funding, currently subject to as-yet-approved bonds and ballot measures set to be evaluated by voters beginning in November 2022, have dampened some of the enthusiasm. Nevertheless, many see the upcoming SANDAG 2023 *Regional Transportation Improvement Plan* as a solid first step towards following the larger, innovative roadmap.

SAN DIEGO’S CONTINUED EMBRACE of more aggressive zoning and development policy to encourage downtown growth and density around transit corridors (the downtown was first rezoned for higher densities in 2006) offers a significant reason for optimism.

In reaction to gridlock in localities that repeatedly fall short of housing production goals and an ever-spiraling affordability crisis (the San Diego countywide median home price is \$842,000, a 17 percent increase in the last year), California state leaders and legislators have in recent years been more aggressive in enforcing housing rules and have passed laws to prod cities to build. Two, passed in late 2021, particularly stand out: SB 9, which allows single-family lots to be split in two and permits duplexes on each of the new lots (effectively allowing for four homes where there was one) and SB 10, which allows local governments to rezone for developments of 10 units or fewer in urban infill or transit-adjacent parcels without additional environmental review.

San Diego has long had geographically focused community plans, both downtown and throughout the city. Many were updated recently to allow for significantly more housing growth than before, and in some cases, the zoning changes and other policies go further than state housing laws require. The State Density Bonus Law, for instance, offers a 35 percent bonus for developing on-site affordable units; San Diego bumped the bonus

to 50 percent. A citywide ballot measure in 2020 eliminated the region’s 1972 30-foot height limit, but in December 2021, a court blocked San Diego from putting the measure into effect. That ruling is being appealed.

The 2020 *Complete Communities* plan allows relief from some density- and height-limit restrictions for developments near transit with significant low- and middle-income housing. This policy was built upon California’s Sustainable and Affordable Housing Act from 2018, which also boosts residential density near transit and was authored by current San Diego mayor Todd Gloria when he was a California state assemblymember.

Another key shift was approving by-right development for projects that meet certain criteria around local design standards and proximity to transit. This shift from discretionary approval to ministerial approval avoids the state’s infamous California Environmental Quality Act review process, saving months and significant money for developers. These programmatic changes, in effect, add up to a new focus on transit-oriented development, says Parent.

“The city’s moves have really transformed what we can do on urban infill lots that were zoned very low density,” says Kelly Modén, president and CEO of infill and multifamily housing developer cREate Development, and a member of the city planning commission. She notes that a market-rate multifamily project she’s currently developing on a half-acre site in the Golden Hill neighborhood would have previously supported 14 units, not quite enough to pencil out, but the combination of provisions from *Complete Communities* (it’s inside a transit corridor and near downtown employers) and transit adjacency (a rapid bus stop is directly in front of the property) mean she can now fit 91 units on the same space.

“I don’t think any other jurisdiction within the state of California allows for such streamlining of a project,” she added.

As developers use these tools to their advantage, and the formerly sacrosanct single-family home neighborhood is being given all manner of means to get dense and go vertical, a new generation of megaprojects showcase the kinds of
Continued on page 32

SAN DIEGO COUNTY: BOLD AND READY FOR CHANGE

Its planners are going beyond state targets in housing and climate action. BY MEGHAN STROMBERG

Planners and policy makers in San Diego County are tackling familiar but tricky challenges. *Planning* sat down with Dahvia Lynch, AICP, the director of Planning & Development Services, to talk about the agency's approach and outcomes. Our interview has been edited for length and clarity, but you can listen to the whole conversation at planning.org/podcasts.

PLANNING: What makes San Diego County so unique?

DAHVIA LYNCH: It is such a diverse place in terms of people, climate, and ecosystems. We have small towns and urban areas, vast areas of incredibly rich natural land preserves, and a robust agricultural community. The unincorporated area is big: about 80 percent of the size of Connecticut.

PLANNING: How is the agency tackling its affordable housing shortfall?

LYNCH: The purpose of the housing element of the general plan, adopted in 2021, is to ensure that we are planning for and removing any barriers to the development of up to about 6,700 units.

How can we make the right kind of housing, in the right place, possible? Well, planning is just one piece of it. There's an economic development component, as well as market forces and environmental constraints to development, that have to be considered. We've been directed by the San Diego County Board of Supervisors to evaluate what it would take to do a parcel-by-parcel analysis of



DAHVIA LYNCH, AICP

certain areas and are asking: What are the barriers to implementing higher density, potentially affordable housing in these areas? Is it infrastructure? Is it a need to consolidate parcels? How can we streamline housing opportunities?

PLANNING: What is one of your most successful housing programs?

LYNCH: So far, we have over 60 programs related to housing. We've seen a huge uptick in ADUs. That is due to state regulations, in part, but I'm really proud of what the county has done to help facilitate that. We've committed over \$10 million over a period of five years to waive fees for ADUs.

And, boy, have we seen the impact of that: a 70 percent increase in ADUs in the past year! We have also created fully approved, predesigned plans, which actually went viral on TikTok.

Q&A

Those designs, along with the waivers, can save folks up to \$30,000 in fees.

PLANNING: Can you tell us about the 2018 *Climate Action Plan*?

LYNCH: Our CAP, and the update we're working on, is not aimed at just meeting our state targets. We're going much further: Our board's goal is to go carbon neutral. We know that some of that is within our authority and some of it is far outside of it, so it requires partnerships.

One effort that offers a lot of co-benefits is our purchase of agricultural conservation easements, which benefits the property owners by reducing their tax burden, permanently conserves the land for agricultural purposes, creates corridors for wildlife, and acts as a carbon sequestration tool. We've permanently preserved over 3,000 acres since 2011.

We also have an Electric Vehicle Roadmap, and we're working to reduce VMT (vehicle miles traveled). There are a lot of different state policy directives regarding climate change and net VMT reductions, along with housing, conservation, and agriculture. Without a really intentional thought process, these issues could conflict very readily. And, if vehicle miles traveled is the driver, so to speak, of land use, a whole lot of development in these distant, remote areas isn't viable. We must have a focused approach, and that means planning for about 5,000 new units in the more urban areas of the county.

Meghan Stromberg is APA's editor in chief.

San Diego is focusing on giving people access to public spaces, including in dense areas. The 14th Street Greenway Park, opened in 2021, replaces a travel lane and eight parking spots with trees, landscaping, a pedestrian path, and story panels highlighting the industrial roots of the East Village downtown neighborhood. At NPC22, *Downtown San Diego: Post-Pandemic Toolkit for Urban Communities* will delve into flexible regulations for central cities that offer solutions to common challenges.



Mujeres Brew House is one of two craft breweries with strong roots in Barrio Logan, a historic neighborhood just south of downtown San Diego that's home to a naval base, shipyard, and the iconic Chicano Park. Examine the intersectional state of business, art, historic preservation, and planning in Latino communities, including Barrio Logan, with the NPC22 mobile workshop *A Beginners Guide to Chicano Park*.



large-scale, transit-friendly, urban infill developments San Diego wants to champion.

As an example, in Mission Valley, the Riverwalk Golf Club is undergoing a transformation into a 4,000-unit mixed-use village adjacent to a transit stop. The massive Sports Arena redevelopment, which has stumbled after procedural issues with city proposals and the state's Surplus Land Act, is finally poised to move forward, with five competing bids and plans to add 4,000 units, 20 percent of which will be affordable, and a 12-acre park.

THE MOST IMPORTANT ADDITION—and most expensive, at \$2.17 billion—to the region's transit system is the extension of the Mid-Coast Trolley. It runs 26.3 miles north from the Mexican border through downtown to the labs and lecture halls of UCSD and the surrounding area, known as University City.

Its relevance lies not just in the scale of the expansion north, which added nine stations parallel to Highway 5, but the way its completion (in late 2021) created a backbone of transit access. It is a one-seat ride connecting downtown—as well as low-income communities—with high-paying job centers up north. With rezoning and neighborhood planning currently in the works in the University City district, the trolley's arrival can ideally catalyze more high-rise development.

It also provides a central node of the regional plan's ambitious transit expansion, a trunk line for branches of micromobility and rapid bus service investments. SANDAG also plans to create a large, central mobility hub—a San Diego Grand Central—that would link rail, bus, and multimodal alternatives, itself becoming a new node of transit-oriented development (sites downtown and a former Navy site have been debated for years).

“San Diego has one of the worst job-housing imbalances,” says Diego Velasco, AICP, founder and principal of Citythinkers, a planning, urban research, and design firm. “A lot of the high-paying jobs are up in the northern part of the county in Kearny Mesa, Mira Mesa, Sorrento Mesa, and the University-Torrey Pines area. And the majority of people live in the southern or eastern parts of the county where it's more affordable.”

The Trolley also serves as a down payment on the city's efforts to slash greenhouse gas emissions. Much more will need to be built—or in the case of highways, not built—but the city's draft *Our Climate, Our Future: Climate Action Plan* calls for 25 percent of residents who live near transit to become transit commuters by 2035, an achievable goal with already planned investments. Convincing the region's governments—not just SANDAG and San Diego—to fund the regional plan's transit vision will be the key challenge.

The combination of denser housing and transit links to UCSD can help bolster and build upon the region's success as a biotech center and the rabid demand for more lab space. (Arguably, biotech is the sexiest of the industries in San Diego, and it's getting a lot of attention. Other stalwarts of the region's economy include tourism, the military, and activities related to the border with Mexico.)

One of biotech's three biggest markets, San Diego's life sciences industry generates \$27.7 billion annually and employs 72,000 workers at a time

when new technological developments and a pandemic-era boost in interest has made this one of the nation's brightest sectors for start-up funding and real estate development.

The city's main research hubs all plan expensive and extensive expansions: the Salk Institute for Biological Studies is building a \$250 million Center for Science and Technology; Scripps Research is adding a new \$100 million laboratory facility; and UCSD has plans for both a new Herbert Wertheim School of Public Health and Human Longevity Science and another biomedical lab complex.

The University City rezoning, which carries the promise of adding more housing close to cutting-edge laboratories and research centers, hits at a central issue with industry expansion. It also requires the fruits of good planning, including more affordable housing options and transportation options. Expansion into downtown San Diego, including a massive redevelopment of the former Horton Plaza mall and waterfront development by homegrown developer IQHQ across from a potential transit hub, suggests that the biotech industry is racing to acquire space and attract workers.

“Firms that count on being able to recruit top talent from around the world to come work in life sciences in San Diego are losing the competition for talent in some cases because we can't pay people enough for them to find houses,” says Martin.

San Diego's success has come in large part from using smart growth policies to incentivize private development to meet public goals. As the city and region explore ways to fund transit expansion and boost housing production, meeting these lofty goals will depend on creating city- and region-wide regulations that can reverse steadily rising housing costs and emissions.

The real test will be whether the infrastructure and development that this new denser, transit-diverse region requires will be welcomed and used—or spark backlash from residents who, accustomed to a more car-centric past, feel threatened by a rapidly changing San Diego.

Patrick Sisson is an LA-based writer and reporter focused on the tech, trends, and policies that shape our cities.

6 Ways to Engage Youth in Comprehensive Planning

From Tik Tok challenges to movie screenings, use these tips to connect with your community's youngest residents.

By RACHEL GREENWALD

To seek input on a new comprehensive plan, Charlotte, North Carolina, hosted a series of drive-in community meetings that were capped off with a movie screening. The events drew hundreds.
GLYN A STANLEY PHOTOGRAPHY



O

f all the key constituents in planning projects, the group that can be most neglected *and* directly impacted by planning efforts is people under 18—despite making up 22 percent of the U.S. population.

“They’re a group we often overlook, but they often have the best feedback,” says Nepherterra Best, chief communications officer of Pride PR, a strategic communications firm focused on local government and nonprofits. “More planning teams need to be thoughtful about inviting the people that will be most impacted to share their lens[es] and experiences and thoughts.”

This was the challenge in Charlotte, North Carolina, as it embarked on the Charlotte Future 2040 comprehensive plan—the city’s first major long-range planning effort since the 1970s. Framed around a complete communities concept, the plan will guide growth in land use, investment, and infrastructure development for the next 20 years.

As part of the process, the project team laid out an equity engagement strategy identifying five underrepresented groups to intentionally connect with and seek input from: senior citizens, lower-income residents, Black and Latinx residents, and young people.

“Young people are the demographic and cohort where the decisions we make today will impact the most, so why not bring them to the table and help them shape the plan?” says Alysia Osborne, AICP, division manager of Long-Range and Strategic Planning for the city of Charlotte.

But bringing young people into the planning process is about more than just ticking a box—it’s an opportunity to cultivate diverse, imaginative, thoughtful, unexpected, and forward-thinking ideas. To find powerful ways to connect with this tough-to-reach group in the midst of a pandemic, Charlotte’s planning team brought on planning and consulting firms MIG and Pride PR as partners to build and implement an innovative and integrated youth engagement program.

According to Jay Renkens, AICP, MIG’s director of Planning and Design Services, the intention of the program was to meaningfully engage youth in the process of visioning, goal setting, policy and strategy development, and implementation. To do that, the program team developed specific tools and strategies and incorporated youth-focused engagement into broader community outreach. Their efforts offer a variety of lessons for planners seeking authentic ways to reach young people in their communities.

1 KEEP MESSAGING UNDERSTANDABLE AND APPROACHABLE.

Charlotte’s planning department brought on communications specialists as part of the core delivery team from the outset, enabling the team to identify the most effective approaches from the start. Pride PR worked with the planning department throughout the multi-year process to develop messaging that clears up the complex, often opaque comprehensive plan process in ways all residents, especially young people, can understand.

“We’re such technicians and practitioners, so it was helpful to have a team of people who would take these complicated ideas and simplify them to something that is understandable and resonates from a youth perspective,” says

Osborne. “They were able to translate really complicated ideas into messaging that resonates with young people.”

The core messages and themes centered on residents’ lived experiences, along with the implications and impacts of the plan on their own lives. “Our approach was ‘less is more’ in communicating in a way where they could make a connection to how this relates to them, where you’re allowing communities to process this information in terms of ‘how does this affect me’ and ‘why should I care,’ and being able to make that connection and find ways to connect those dots,” says Best.

They tried to communicate elements of the plan that would feel specific to young people and their lives, rather than focusing on wider, more abstract concepts. For example, instead of talking

about infrastructure broadly, they referred to sidewalks and bike lanes. And they positioned the plan through the lens of individual and community values, helping young people understand their role in shaping how the city will look 10 or 20 years from now.

The project team was careful to use messaging and storytelling not to talk at young people but rather as an opportunity to listen and engage in conversation to create a safe space where they could feel comfortable sharing their ideas.

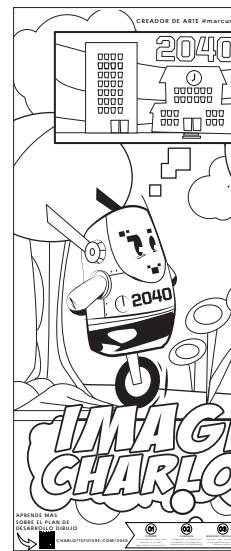
“Having these kinds of conversations with adults can be intimidating, but how do you create a safe space for them to share?” says Osborne. “We talked with kids a lot about retaining Charlotte’s identity, this city being their home, all the things they love about it, and how to keep what’s already great about the city.”



An entry in Charlotte's TikTok city recipe challenge.



Charlotte-themed board game and coloring pages.



2 EMBRACE DIGITAL PLATFORMS LIKE TIKTOK.

With the support of leadership open to innovating and venturing beyond their comfort zones, Charlotte's planning department challenged themselves to embrace nontraditional engagement methods to make sure they were meeting young people where they are—like on social media.

The planning team worked with Pride PR to host an #ImagineCLT TikTok challenge, capitalizing on the attention the platform has captured among young people during the pandemic. Riffing on viral cooking and recipe TikToks, the team came up with their own prompt: They encouraged Charlotte residents to identify ingredients for a recipe that would make a future Charlotte they want to see.

The submissions and posts garnered suggested improving transportation access, parks and sporting infrastructure, sidewalks, small business support, arts and culture access, economic mobility, affordability housing, equity and diversity, and neighborhood development.

3 BUT DON'T FORGET TO GET CREATIVE WITH ANALOG METHODS, TOO.

Keeping inequities related to internet access and technological proficiency in mind, the project team developed an integrated youth engagement program that combined digital interventions with analog activities like coloring sheets and board games.

The coloring sheets, which were created by local artist Marcus Kiser and provided in English and Spanish, show a futuristic version of Charlotte. The designs reflect characteristics of Afrofuturism to show young people of color their influence over the city's future, Kiser told *The Charlotte Post*. More than 1,000 sheets were distributed in lunchboxes at over 20 schools and available at Black-owned restaurants and local businesses.

Meanwhile, a city-building board game called *Growing Better Places: A More Equitable and Inclusive Charlotte* was developed and distributed online

and at in-person events to show young people and families the different building blocks of growth and development priorities. Upwards of 1,800 people played the game, giving them greater insight into the relationships between transit planning, mixed-use development, and displacement—and how that interplay results in different scenarios, each with its own trade-offs.

These activities aimed to not only solicit and encourage input, but to also do a better job of explaining the comprehensive planning process more generally to young residents.

4 THROW FUN, FAMILY-FRIENDLY EVENTS.

After the initial lockdown period of the pandemic, the planning team also started hosting outdoor gatherings and events, including a series of drive-in community meetings, which saw hundreds of attendees. The project team presented updates and developments on the plan while attendees listened through their car radios and used signals like horns, wipers, and lights to



An “Open Streets” pop-up.



Staff and youth engagement at a drive-through event.

respond to the presentation. The final meeting was followed by a drive-in screening of *Back to the Future*.

5 MAKE YOUNG PEOPLE PRIORITY STAKEHOLDERS.

Youth engagement is often treated as a prescriptive, one-time exercise, with planners or consultants visiting a school for an isolated 45-minute session. But as Renkens says, “Usually that first engagement and quick touch point is insufficient to get anything meaningful.” Too often in planning, he adds, not enough is done to raise awareness about the process in general, and instead planners often show up only when they want something.

He suggests elevating young people as a priority stakeholder group and building infrastructure and representation around that: identifying and appointing youth ambassadors and advisors, setting up steering committees to communicate back to decision makers throughout the process, and conducting regular focus groups. Osborne and Renkens both point to

the importance of bringing in younger team members, like entry-level employees and interns, as facilitators to help lead youth engagement efforts.

Through ongoing and consistent forums, planners can find fun and interactive ways to facilitate in-depth sessions that create time and space for context setting, explaining planning processes, and group deliberation and discussion. For *Charlotte Future 2040*, this took the form of a series of equity chats with local high students, delivered in partnership with youth civic engagement nonprofit GenerationNation. The series of conversations—led by college interns and younger staff from the planning department—covered challenges and opportunities around equity and access in Charlotte and how they inform the planning process. They also discussed what is most important to the student members of GenerationNation’s Youth Council, the official student advisory council of Charlotte and broader Mecklenburg County governments.

6 INSPIRE FUTURE PLANNERS.

After the equity chats, members of the Youth Council became much more vocal planning advocates among friends and family, says Amy Farrell, executive director of GenerationNation. “They feel more ownership around planning processes and have been able to talk to friends and people in their community about the plan and are proud of their role in that.”

Beyond incorporating input from the demographic, ongoing youth engagement efforts can be an important opportunity to help build a lifelong interest in and engagement with the city—and to introduce young people from diverse backgrounds to career pathways.

“A lot of planners like myself didn’t learn about planning as a career option growing up,” Osborne says. “But we’re asking ourselves: What if we start introducing people to the profession early on and building that into our curriculum as part of our department?”

Rebecca Greenwald is a researcher, strategist, and writer with a passion for cities, urban development, and arts and culture.

Is Tourism Still a Viable Economic Development Strategy?

By MICHELLE McCUE

YES,



In Palm Desert, new boutique hotels (top), a recently revitalized city center (above), and the proximity to the natural beauty of the desert (right), helped the city benefit from the “backyard travel” trend during the pandemic.

CHRIS MILLER (TOP); COURTESY CITY OF PALM DESERT (ABOVE, RIGHT)

OVER THE COURSE OF 2019, THE TRAVEL AND tourism industries generated \$1.9 trillion in economic output and supported 9.5 million American jobs, according to the U.S. Department of Commerce. That’s more than the agriculture, mining, and utility sectors each that same year.

And then came COVID-19.

Now, two years into the pandemic, the sector remains so unpredictable that the National Travel and Tourism Office of the Department of Commerce has indefinitely suspended its annual *Forecast for International Travel to the United States*.

That uncertainty is felt differently in communities across the country. On balance, the current outlook for tourism as an economic development strategy is closely linked to both geography and infrastructure. Those with favorable weather, proximity to major metro markets, and strong funding to support and promote tourism businesses are on the road to recovery. Some destinations are benefiting, too, from a renewed interest in “backyard travel.”

Others, however, continue to suffer significant revenue losses as international, events, and business travel recover at slower rates than domestic and leisure travel—and as virus variants continue to spark surges and cancellations across the country.





BUT

‘The same question is coming up now as after the Great Recession: Are all of our eggs in one basket here? Does this make us more vulnerable?’

—Thomas Soule, public affairs manager, Palm Desert, California

After two years of COVID chaos, communities are wondering: Is tourism still a viable economic development strategy?

For many, the answer still seems to be yes—but with some new considerations.

“The conversation here has shifted greatly to: How can we diversify our economy, and what would that look like?” says Thomas Soule, public affairs manager of Palm Desert, one of nine cities in Coachella Valley, a popular resort region in southern California.

With an eye on recovery and stability, communities with tourism-dependent economies are now looking for ways to stimulate new industries through tourism, take advantage of sector trends and local assets, and better support the people who live and work there year-round.

Shifting audiences and industries

With golf courses, major shopping centers, and extensive lodging options (resorts, hotels, and short-term rentals) that pay into the city’s transient occupancy tax (TOT), Palm Desert banks on tourism.

In upstate New York, the Finger Lakes Region benefitted from an interest in agritourism encompassing wine regions (below) and family farms (right). In rural communities, tourism is driving conversations around zoning and aesthetic regulations aimed at preserving the region’s appeal as a destination and its quality of life for residents.

“Sales tax is our number one revenue generator, followed closely by TOT—and tourism fuels both,” says Soule. He initially joined Palm Desert’s city staff as the first tourism and marketing manager; now, he continues to serve as the city’s tourism liaison while taking on a broader public affairs role. “We’re in an interesting moment right now with COVID. Just as we start to get our footing back, another wave will come up.”

That pattern has hit the Coachella Valley’s biggest moneymakers hard. Roughly equidistant from Palm Springs and Indio, Palm Desert’s tourism outlook is closely linked to the success of several major festivals and events, particularly the Coachella Valley Music and Arts Festival in Indio, which spans six days over two weekends and brings about 200,000 visitors to the region. Coachella, as it’s better known, was canceled in April 2020, rescheduled for that October, canceled, rescheduled for April 2021, canceled, rescheduled for October 2021, and





then canceled again. It's now scheduled to take place in April 2022. "We are waiting with bated breath," says Soule.

In the meantime, Palm Desert is making do with leisure travelers from southern California's major metropolitan "drive markets," including Los Angeles, Anaheim, and San Diego, which together amount to some 15 million potential tourists. According to data from Visit California, the state's official marketing organization, the Coachella Valley region has seen a 10 percent increase in in-state visitors.

That represents a significant shift in thinking from pre-COVID days, Soule says, when international travelers were key targets because of their longer stays. The international travel bans of the early pandemic forced the recalibration, but at the start of 2022, even with bans largely lifted for vaccinated travelers, some cities are wary of investing now-scarce resources in the global game. With the prospect of future pandemic-related travel bans, political uncertainty, and increasingly frequent extreme weather, some tourism researchers recommend keeping the focus closer to home.

To do so, Soule says the city and its partners in regional and county government are using a variety of techniques, including funding advertising campaigns and funneling federal, state,

and regional grant opportunities to local businesses to help them ramp up safety and marketing efforts. The city has also temporarily lifted zoning restrictions to entice city dwellers with the promise of al fresco dining.

While these efforts have managed to keep the local tourism industry afloat, the city is looking to the future with a more critical eye. "The same question is coming up now as after the Great Recession," Soule says. "Are all of our eggs in one basket here? Does this make us more vulnerable?"

Palm Desert also is taking major steps to diversify its economy, starting with the innovation sector. It recently opened a business incubator dubbed Palm Desert iHub, managed by the Coachella Valley Economic Partnership. "We're trying to encourage small businesses that are very tech focused, forward thinking, and set them up to help take our economy in new directions," Soule says. "But it's not an easy fix, and it's not a short-term fix."

One of the city's weaknesses, he explains, is broadband. While internet access is nearly ubiquitous across Palm Desert, the kind of superfast, super-reliable connection needed to attract major tech businesses is not yet available. The city also lacks robust housing options to support a diverse workforce. The median household income hovers around \$50,000, but according to Realtor.com, the median list price for a home in Palm Desert was nearly \$550,000 in early 2022, while RentCafe.com reports that 73 percent of rental payments exceed \$1,500 per month.

"As a resort destination, short-term rentals of course play a role, and we need them to satisfy some visitors' preferences for that kind of accommodation," Soule says. "But we also find ourselves thinking about affordable housing so that we have enough housing for our workforce."

At the end of 2020, Palm Desert voted to enact short-term rental (STR) regulations that prohibit properties in multiple districts zoned residential. In these areas, homes can only be listed on sites like Airbnb if hosts remain on-site during guests' stays, or if they're located in gated neighborhoods where homeowner associations permit STRs.

"This pandemic has driven home, with great drama, just how critical it is that we diversify our economy," Mayor Kathleen Kelly said in 2020 when the city council met to vote on the issue. "As that begins to happen, we're going to be attracting additional workers to Palm Desert, and a paramount policy of this city has been to house more of the workers who are employed in Palm Desert within the city. That is probably the single most significant thing we could do to have a positive impact on the environment, because housing more of the people who work in Palm Desert within the city reduces, or eliminates, commutes. To accomplish that, we have to, as a matter of policy, guard against the commercialization of traditional neighborhoods, which would reduce, rather than increase, available housing for working people who are part of Palm Desert."

The STR ban was challenged with a lawsuit in 2021 but remains in effect.

Agritourism and zoning

Nearly 3,000 miles from Palm Desert in the Finger Lakes region of New York, Brittany Gibson also cites drive-in markets as the community's saving grace during the pandemic.

‘Throughout COVID, we’ve really benefited from...the rediscovery of what’s in their backyard.’

—Brittany Gibson, executive director,
Seneca Lake Winery Association

“We are within a five-hour drive of 25 percent of the country’s population, so we have a really high potential audience,” says Gibson, executive director of the Seneca Lake Winery Association, a membership organization comprising dozens of wineries that collectively market the area as a tourism destination, in partnership with the regional Finger Lakes Tourism Alliance. Located in rural western New York, Seneca Lake and the Finger Lakes region are within a few hundred miles of New York City, Boston, Philadelphia, and Pittsburgh residents.

“Throughout COVID, we’ve really benefited from that proximity,” Gibson says. “We’ve been part of the rediscovery of what’s in their backyard.” They’ve also capitalized on a fast-growing segment of the tourism industry: agritourism. Encompassing tastings at vineyards, pick-your-own berry farms, oyster farm dinners, and the like, agritourism is increasingly seen as a way for farms to broaden their appeal and add to their bottom line.

According to the National Conference of State Legislatures, state policy makers are supporting these efforts, and interest in agritourism is growing across the country. However, supporting agritourism can be a less-than-straightforward proposition for planners in many communities. Zoning ordinances, for example, often consider farming and events like weddings or concerts to be incompatible uses—largely because of the traffic they generate on rural roads, but also because of issues that can impact rural neighbors, like exterior lighting, parking, and noise.

In some regions, the tension between supporting agritourism and upholding zoning restrictions has led to public battles between ag businesses and residents, with planners caught in the middle. In Sonoma

County, California, agritourism has expanded rapidly over the past two decades as hundreds of wineries, breweries, and orchards have sought to market their properties for tastings, tours, educational experiences, and private events. But many suffered pandemic-related revenue losses, including local farmers who supplied area restaurants. That only added to the pressure.

In response, Sonoma County planners drafted a Winery Events Ordinance aimed at balancing the interests of residents with the economic considerations of wine tourism. Presented in mid-2021, the ordinance is currently moving through the public process and, if adopted, could serve as a model for other cities and regions facing similar issues.

“Zoning is a hot topic in our area right now,” says Gibson, noting that some towns in the Finger Lakes region still have no zoning ordinance of any kind in place. In her rural community, tourism, aesthetic regulations, and preservation are currently driving the conversations. Issues related to siting solar farms, New York State’s recent legalization of recreational cannabis, and warehouse development along major thoroughfares all have the potential to impact the ways people perceive and experience the region, she says.

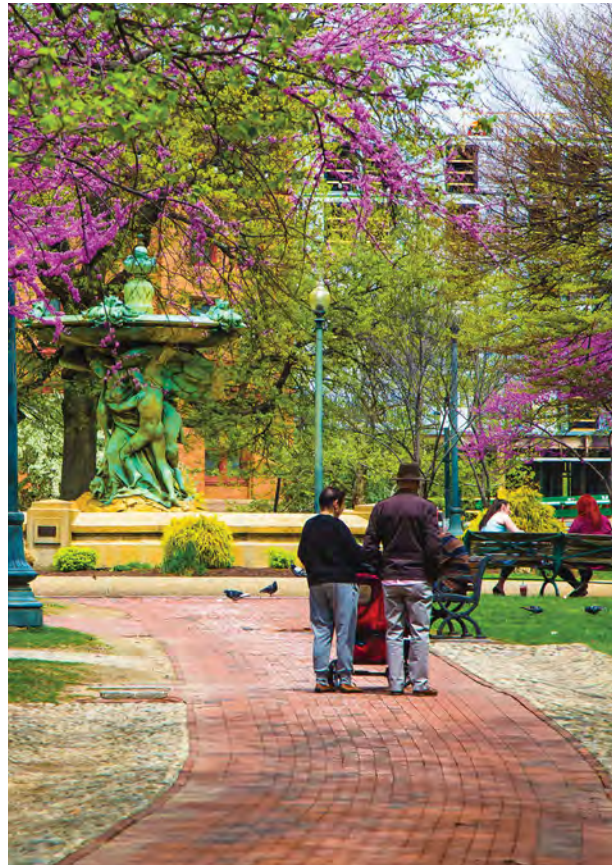
“Communication is what’s important. We have to break down the barriers between economic development and community management and political leadership and destination marketing organizations and chambers of commerce,” says Gibson. “We all have to be at the table together.”

Cultural tourism

Another fast-growing trend, cultural tourism, is guiding efforts in places like Providence, Rhode Island. Branded and marketed as “The Creative Capital,” Providence is advancing an economic development strategy that weaves tourism development with strengthening the city’s arts and cultural sectors.

In response to wineries and other properties offering tours, tastings, and private events, Sonoma County drafted a Winery Events Ordinance that may serve as a model for others.





Providence, Rhode Island, is advancing an economic development strategy that weaves tourism with strengthening the city's arts and cultural sectors. This includes highlighting (clockwise from top left) the summer celebration "Waterfire" on the Providence River, The Avenue Concept program (and the Arnold Building mural by artist Garden of Journey), city parks, and the Rhode Island School of Design museum.

TOP ROW: DAVID SANTILLI; BOTTOM ROW: COURTESY RHODE ISLAND VISITORS AND CONVENTION BUREAU

‘We see the recovery of tourism as integral to the overall vibrancy and vitality of the regional economy.’

—Martha Sheridan, president and CEO, Greater Boston Convention and Visitors Bureau

“[We have] a dual mission to integrate arts and culture into community life while showcasing Providence as an international cultural destination,” says Stephanie Fortunato, director of the city’s Department of Art, Culture, and Tourism. “We are always weighing the needs of residents and businesses with those of visitors to the city. This balancing act is certainly present as we think about the city’s recovery.”

As the home of Rhode Island School of Design, the Ivy League Brown University, and culinary arts powerhouse Johnson & Wales University, Providence leans hard into its cultural assets to attract tourists and create jobs for residents. In 2021, the city released a draft of its updated cultural plan, *PVDx2031: A Cultural Plan for Culture Shift*. The plan emphasizes the importance of partnerships between the city, cultural organizations, the tourism industry, and local creatives and designers. It also underscores the importance of elevating BIPOC (Black, Indigenous, and people of color) and LGBTQ+ voices in strategic planning efforts and leadership roles.

In Boston, Tourism Destination Marketing Districts impose fees on stays at hotels, like the Fairmont Copley Plaza Hotel (below), to generate funding to promote tourism. Another program, All Inclusive Boston, aims to attract a more diverse audience and promote cultural assets, including the Park Street Church and Freedom Trail at Boston Common (right).

Specifically, some of the plan’s key takeaways include calls for living-wage jobs for artists and investments in arts and culture to acknowledge and repair trauma stemming from the city’s historical ties to slavery and colonization of Indigenous lands.

PVDx2031 is likely to have some teeth as the city gets ready to deploy federal recovery funds. “Mayor [Jorge] Elorza’s proposed plan for using the city’s American Rescue Plan funding addresses not only the needs of art tourism and hospitality, but also considers how this fits in amidst all of the other areas of investment needed for Providence not just to recover, but to thrive,” says Fortunato.

The plan proposes \$7.7 million in art tourism and hospitality funding to support investment in the creative industries and partner sectors, aiming to create jobs in each of the city’s 25 neighborhoods. This investment also aims to shore up Providence’s position as a cultural





destination, earmarking more than \$4 million for expansion and improvement of cultural facilities, \$1.2 million to support development of cultural events, and nearly \$1 million to create public art aimed at encouraging tourism, among other arts-related investments.

Much is riding on this focus on cultural tourism. With the slow recovery of business travel and large group events, Providence hotels are still struggling.

“Occupancy has plummeted,” says Fortunato. “Providence has not fully recovered because meetings, conventions, and sports are the backbone of the tourism economy here.”

Destination marketing districts

While Boston has suffered from many of the same issues as Providence, some credit the pandemic with expediting a long-sought solution to the city’s need for a dedicated and dependable funding mechanism for destination marketing.

In January 2021, Governor Charlie Baker of Massachusetts signed an economic development bill with a provision enabling the formation of Tourism Destination Marketing Districts (TDMDs) in the state. These districts, elsewhere known as Tourism Improvement Districts

(TIDs), permit hotels to add a nominal assessment fee (typically between 1 and 10 percent) to guest bills that is then invested back into local development and marketing. In California, where the concept was first introduced in 1989, there are now more than 85 active TIDs that together generate approximately \$180 million in annual funding for tourism development and marketing, according to a white paper by tourism-research firm Tourism Economics.

Boston has struggled to gain tourism and convention market shares against well-funded competitors. The TDMD is projected to increase local tourism funding fivefold, from \$7.5 million in 2019 to \$40 million when hotel occupancy and rates return to pre-pandemic levels.

Martha Sheridan, president and CEO of the Greater Boston Convention and Visitors Bureau (GBCVB), describes the all-hands-on-deck effort to get the state and local legislation passed: “[We] worked with many partners and stakeholders to form the TDMD, including state and city officials. We operated on many parallel tracks as we sought to pass enabling legislation in the Massachusetts legislature while also socializing the concept with our hotels and educating them on why we desperately needed to create a district.”

The enabling legislation had been languishing in committee for nearly two years. GBCVB saw an opportunity to attach the TDMD bill as an amendment to a larger economic recovery bill aimed at pandemic relief. The local ordinance to form a district passed unanimously in August 2021.

A focus of their messaging throughout the process was the long-term positive outlook of the TDMD. They framed the passage as necessary to recovery of the travel and hospitality and the sectors’ diverse workforces, which comprise about 10 percent of the labor market in the state. Besides the provisions for hotels, the district plan—developed in collaboration with elected officials—also addresses community concerns, including sustainability and commitments to equity, diversity, and inclusion initiatives. An example is the recently launched marketing campaign All Inclusive Boston, which endeavors to both attract a more diverse tourism audience to the city and to promote cultural assets across all of Boston’s neighborhoods.

Ultimately, tourism has ripple effects in other key economic sectors, Sheridan says—which is why Boston is still betting on it as an economic recovery and development tool.

“So many of our innovation sectors—medical research, life sciences, smart manufacturing, and fintech—depend on recruitment and retention strategies that are directly linked to how we market the destination,” she says. “For example, the cultural, culinary, and commercial assets that we promote to draw visitors are often the same essential characteristics that make someone want to attend school here, or move here for work, or relocate a business.”

“We see the recovery of [tourism] as integral to the overall vibrancy and vitality of the regional economy,” Sheridan says.

Michelle McCue is the founder of McCue Marketing Communications, a consulting firm that helps build strong communities and place-based brands through strategic planning, branding, and communications. Specializing in tourism, food, and agriculture-based development, McCue combines practical planning knowledge with strategic outreach to help clients achieve sustainable growth.



“BEACON BLOOM” ROUNDABOUT

Carmel, Indiana

WHO WOULD HAVE THOUGHT the much beloved (or maligned?) roundabout would be a twofer: a safer design for intersections and a cleaner one, too? Officials in Carmel, Indiana, say roundabouts save 24,000 gallons of gas a year and are part of an overall community greening strategy that includes a hybrid and biofuels fleet. Just how much roundabouts reduce carbon emissions compared to traditional intersections is not so straightforward, but several studies note a 20 to 30 percent drop. And a representative from the Institute of Transportation Engineers told the *New York Times* in November that today’s roundabouts “are the most sustainable and resilient intersections around.” (Got a climate win-win that makes your Community Green? Tell us about it at mstromberg@planning.org.)

Carmel, Indiana’s rate of crashes with injuries has dropped 78 percent, thanks to roundabouts like the Beacon Bloom, which is one of 140 there. And, because cars don’t idle at stoplights, they burn less gas, which makes for cleaner air.



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