



CITY OF GLOUCESTER COMMUNITY PRESERVATION COMMITTEE PROJECT APPLICATION COVER SHEET

I: Project Information	
Project Title: Harbour Village Commuter Apartments	
Project Summary: To build a three-story apartment consisting of Thirty Six units and a shared laundry facility. A quarter of the building will be for income restricted households earning at or below 80% of area medium income. There will be 45 parking spaces. Located right next to MBTA train station. See project narrative and budget for additional details	
Estimated start date: Jan 2021	Estimated completion date: May 2021
CPA Program Area: <input type="checkbox"/> Open Space <input type="checkbox"/> Historic Preservation <input checked="" type="checkbox"/> Community Housing <input type="checkbox"/> Recreation	
II: Applicant/Developer Information	
Contact with primary responsibility for project: William Wheat	
Organization (if applicable):	
Mailing Address: 4 Seagull St Rockport MA 01966	
Daytime phone #: 817-637-2213	E-mail address: bwheat02@hotmail.com
Federal ID#:	
Secondary Contact: Lynne Sweet	
Organization (if applicable): LDS Consulting Group, LLC	
Mailing Address: 233 Needham Street, Newton, MA	
Daytime phone #: 617 454 1144	E-mail address: ldsweet@ldsconsultinggroup.com
III: Budget Summary	
Total budget for project:\$5,372,326	
CPA funding request: \$175,000	
CPA request as percentage of total budget: 3%	

Applicant's Signature: William Wheat



CPA APPLICATION INSTRUCTIONS

1. Please read the entire CPA Application & Project Review Information packet before beginning.

2. Complete the Application Cover Sheet.

3. Include the following information:

- **Narrative:** A description of the project and, when applicable, of the property involved and its proposed use. Include responses to the following questions:
 - **What is your organizational mission? Why is this the next logical step in the organization's progress towards its mission or the completion of this project? The developer is seeking CPA to further planning and permitting efforts to ensure that they can develop a quality 36 unit multi-family housing development. Since there are increasing their affordability level by 15%, they are seeking to fill the gap in lost debt service of more than \$250,000.**
 - **What Community Preservation criteria – both general and category specific – does this project meet?**
Affordable housing
 - **What community need(s) does this project serve? If the project serves multiple needs and populations, please describe them. If the project serves a population that is currently underserved, please describe.**
 - This building will serve Gloucester residents of low and moderate income who may not otherwise be able to quality afford hou ings that is not car dependent.
 - This development meets the needs identified in the City of Gloucester 2010 Community Preservation Plan, the 2013 Community Development Department Downtown Work Plan 2015 Consolidated Plan and 2017 City of Gloucester Housing production plan ,
 - This project will also add 36 housing units to the city's subsidized housing inventory
 - **What specific guarantees will assure the long-term preservation of the project?**
The nine affordable units will be affordable in perpetuity as documented by a regulatory agreement with DHCD and the City.
 - **Describe the nature and level of community support for the project.**
The Applicant is seeking both CPA and AHT as well as a special permit to support the project. The Applicant has spoken with abutters who are in support of the development as well as the mayors office.
 - **How will the success of this project be measured?**
We will hire MCO Housing Services to hold a housing lottery in accordance with an affirmative marketing and residential selection plan. A robust response to the lottery will ensure that all affordable units will be leased.

- Is ongoing maintenance and upkeep required? If yes, please explain how this will be accomplished.

Yes, we will hire a professional dedicated maintenance person to maintain the high standards of this building.

- How does this project contribute to the City's preparation for the celebration of the 400th Anniversary of the City's Founding in 2023? This question is informational and will not be used to determine the eligibility of your project.

This building will proudly add 36 more affordable units towards the city's Subsidized Housing Inventory. See attached narrative for additional detail.

- **Project Budget:** Please provide the total budget for this project, including detailed costs and specifically how CPA funds will be spent (See Budget Form). All items of expenditure must be clearly identified. Include project quotes, or show why this is not appropriate or feasible. List any additional funding sources, either committed or under consideration. Include commitment letters if available.

If the application submission is for a community housing project, please submit a development budget and a sources and uses budget. Also, community housing home ownership projects shall include an affordability analysis and community housing rental projects shall include a five-year operating budget.

- **Multi-Year Funding:** If the project is expected to continue over more than one year, or if bonding the project is anticipated, please provide annual funding requirements.
- **Project Timeline:** Explain the various steps of the project and when they will be completed. Complete the Project Schedule form provided.
- **Feasibility:** List and explain all further actions or steps that will be required for completion of the project, such as, environmental assessments, zoning or other permits and approvals, agreement on terms of any required conservation, affordability or historic preservation agreements, subordination agreements, and any known or potential barriers or impediments to project implementation.
- **Applicant Qualifications:** Explain your financial and organizational capacity to carry out the project.

4. Include the following attachments, if applicable and available:

- Record plans of the property
- Natural resource features (Please include resources subject to the Wetlands Protection Act)
- Zoning (district, dimensional and use regulations as applies to the land)
- Inspection reports
- 21E Reports and other environmental assessment reports

- Historic structure report or existing condition reports
- Names and addresses of project architects, contractors, and consultants
- Evidence that appropriate professional standards will be followed if construction, restoration, or rehabilitation is proposed
- Proof of specific site control, or plan to obtain site control, such as, Purchase and Sale Agreement, option, or deed
- Evidence that the proposed site is free of hazardous materials or that there is a remediation plan in place. CPA funds can be used for mitigation
- Maps: USGS topographical map, assessors map, or other map as appropriate, showing location of the project
- Visual materials: Photographs, renderings or design plans of the site, building, structure or other subject for which the application is made
- Letters of support sufficient to document clear endorsement by community members and groups, and where appropriate, by municipal boards, committees and commissions, and departments
- City of Gloucester Boards, Commissions, and Committees should provide a letter or meeting minutes demonstrating the majority of members support the application and proposed project
- Appropriate studies or consultant reports supporting proposed project methods
- Any other information useful for the Committee in considering the project

REQUIREMENTS FOR SUBMISSION

The following requirements should be followed in preparing an application for CPA funding:

- Application packages are available at the Community Development Department, Grants Office, 3 Pond Road, Gloucester, and online at www.gloucester-ma.gov then select "Government", then select "Boards & Commissions" then "Community Preservation Committee." If you need a copy in Word format contact Jaimie Corliss, Grants Manager at jcorliss@gloucester-ma.gov.
- All applicants must complete a **Project Eligibility Determination Form** no later than 45 days prior to the project application filing deadline.
- Project funding applications should specify the funding period, not to exceed three years.
- If submitting multiple applications, the applicant should indicate a priority ranking of the projects.
- An application for support of a project that requires preservation guarantees should specifically address how their guarantee will be secured. CPC is **NOT** available as a resource.

- For Historic Resources, documentation that the building, structure, vessel, real property, document, or artifact is listed on the state register of historic places or has been determined by the local Historical Commission to be significant in the history, archeology, architecture, or culture of Gloucester. You may contact: Jaimie Corliss for further information or questions.
- Applicants should include itemized project budgets with details describing each item and its estimated cost.
- Applicants should obtain at least two professionally prepared detailed quotes for project costs whenever possible. If such quotes are not available, detailed cost estimates prepared by a qualified professional may be used, provided the basis of the estimates is fully explained.
- The property owner, when applicable, should sign the application.
- If the funding application is part of a larger project, the applicant should include the total project cost.

Application Evaluation Criteria

GENERAL EVALUATION CRITERIA

All projects must be eligible for the Community Preservation Act (CPA) funding according to the requirements described in the CPA legislation (Chapter 44B of Massachusetts General Laws) (see Appendix III - Allowable Use Chart). The Gloucester Community Preservation Committee gives preference to proposals which address as many of the following general criteria as possible:

1. Consistent with various plans which are relevant to and utilized by the City regarding Open Space, Historic Resources, Affordable Housing, and Recreation.
2. Preserve and enhance the essential character of the City.
3. Protect resources that would otherwise be threatened.
4. Serve more than one CPA purpose or demonstrate why serving multiple needs is not feasible.
5. Demonstrate practicality, feasibility, and that the project can be implemented within budget and on schedule.
6. Produce an advantageous cost/benefit value.
7. Leverage additional public and/or private funds (e.g. qualify the project for additional grants from other sources) or receive partial funding from other sources and/or voluntary contributions of goods or services.
8. Preserve or improve use or intended purpose of City-owned assets.
9. Receive endorsement by other municipal boards, committees and commissions or departments and broad-based support from community members.

CATEGORY SPECIFIC CRITERIA

In addition to the general evaluation criteria outlined in the overview section, the Community Preservation Act funds the community preservation interests in Open Space, Historic Preservation, Affordable Housing and Recreation.

1. Open Space proposals will be evaluated according to the following specific criteria:

- Permanently protect important wildlife habitat, particularly areas that include:
 - locally significant biodiversity;
 - variety of habitats with a diversity of geologic features and types of native and noninvasive vegetation;
 - Threatened or endangered habitat or species of plant or animal.
- Preserve active agricultural use.
- Provide opportunities for passive recreation and environmental education.
- Protect or enhance wildlife corridors, promote connectivity of habitat or prevent fragmentation of habitats.
- Provide connections with existing trails or protected open space.
- Acquire land or easements for potential trail linkages.
- Preserve scenic views.
- Border a scenic road.
- Protect drinking water quantity and quality.
- Provide flood control/storage.
- Preserve and protect important surface water bodies, including streams, wetlands, vernal pools, riparian zones or Areas of Critical Environmental Concern (ACEC).
- Buffer for protected open space, or historic resources. Preserve and enhance the natural wildlife habitat functions and values of open space for wildlife.

2. Historic Preservation proposals which address as many of the following criteria as possible to receive preference for funding:

- Protect, preserve, enhance, restore and/or rehabilitate historic, cultural, architectural or archaeological resources of significance, especially those that are threatened.
- Protect, preserve, enhance, restore and/or rehabilitate city-owned properties, features or resources of historical significance.
- Protect, preserve, enhance, restore and/or rehabilitate the historical function of a property or site.
- Demonstrates a public benefit.
- Ability to provide permanent protection for the historic resource.

3. Affordable Housing proposals which address as many of the following criteria as possible will receive preference for funding:

- Contribute to the goal of 10% affordability as defined by chapter 40B of Massachusetts General Laws.
- Promote a socioeconomic environment that encourages a diversity of income.
- Provide housing that is harmonious in design and scale with the surrounding community.

- Intermingle affordable and market rate housing at levels that exceed state requirements for percentage of affordable units pursuant to chapter 40B.
- Ensure long-term affordability.
- Address the needs of a range of qualified households, including very low, low and low-to moderate income families and individuals.
- Provide for individuals with special needs and who require assisted living.
- Provide affordable rental and affordable ownership opportunities.
- Promote use of existing buildings or construction on previously-developed or city-owned sites.

4. Recreation proposals will be evaluated with the following criteria:

- Address a need or objective identified in a City Plan.
- Serve a significant number of residents.
- Preserve and expand the range of recreational opportunities available to city residents of all ages and abilities, including those at-risk of obesity as identified through the Get Fit Gloucester! Community Action Plan.
- Promote recreational activities.
- Maximize the use of land already owned by city.
- Promote the creative use of railway and other corridors to create safe and healthful non-motorized transportation opportunities.

Printed name and Position: William Wheat/Owner

Co-applicant/ City Official (if required): William Wheat

**CITY OF GLOUCESTER
COMMUNITY PRESERVATION COMMITTEE**

PROJECT SCHEDULE

Please provide a project timeline below, noting all project milestones. Please note that because the City Council must approve all appropriations, CPA funds may not be available until up to two months following Committee approval.

	Activity	Estimated Date
Project Start Date:	Permit Process	Jan 2021
Project Milestone:	Construction Start	March 2021
50% Completion Stage:		
Project Milestone:		
Project Completion Date:	Certificate of Occupancy	June 2021

Please note: If the project is approved, the recipient must provide progress reports to the Committee on a quarterly basis (by the 15th of January, April, July and October) depending on the length of the project. The recipient shall also provide an interim report at the 50% Completion Stage, along with budget documentation.

Please feel free to photocopy or re-create this form if more room is needed.

**CITY OF GLOUCESTER
COMMUNITY PRESERVATION COMMITTEE**

BUDGET FORM

Project Name: _Harbour Village Commuter Apartments_

Applicant: _William Wheat (See attached pro-forma)

SOURCES OF FUNDING

Please feel free to photocopy or re-create this form if more room is needed.

Income	Unit Type	Level	# Units	Sq. Ft.	Gross	UA	Net	Monthly	Annual	Income Required
	0	80%	3	420	\$ 1,100	100	\$ 1,000	\$ 3,000		\$ 33,000.0
	1	80%	5	672	\$ 1,350	134	\$ 1,216	\$ 6,080		\$ 40,500.0
	2	80%	1	788	\$ 1,550	176	\$ 1,374	\$ 1,374		\$ 46,500.0
	0	Market	10	420			\$ 1,200	\$ 12,000		\$ 39,000.0
	1	Market	15	672			\$ 1,450	\$ 21,750		\$ 43,500.0
	2	Market	2	788			\$ 1,650	\$ 3,300		\$ 49,500.0
			36			Income		\$ 47,504	\$ 570,048	
UA	GHA July 1,2020					Vacancy	5%	\$ 2,375	\$ 28,502	
	0	1	2			Net Income		\$ 45,129	\$ 541,546	
high rise heat*	40	54	74							
hot water*	26	37	44							
cooking	5	7	7							
electric	29	36	51							
Natural Gas										
*electric	100	134	176							

Operating Pro-Forma

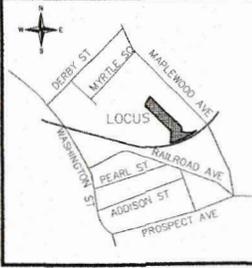
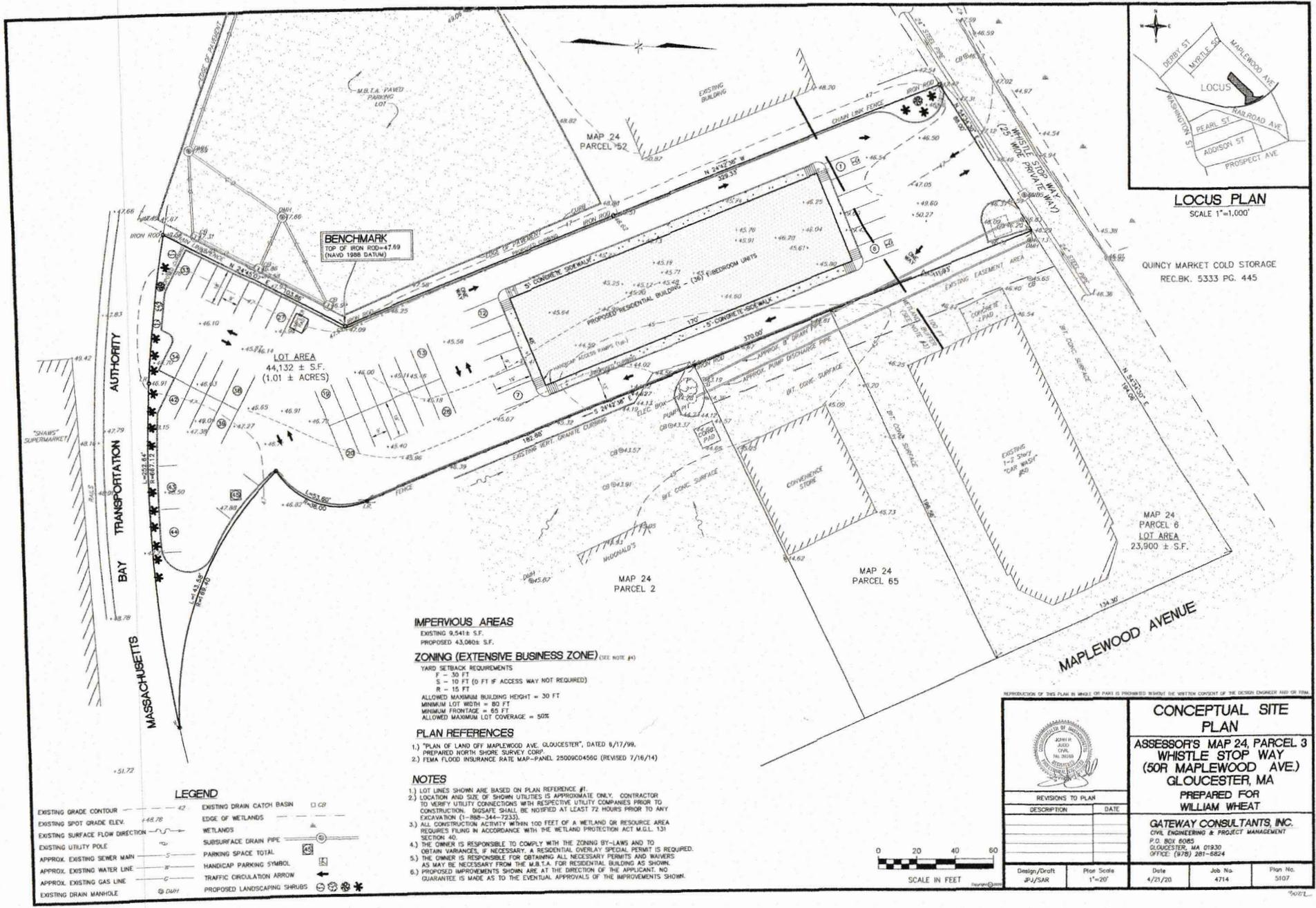
Management Fee			
	Management Fee	\$ 32,493	6% self manage
ADMINISTRATIVE			
	3/4 Time Manager/Marketer	\$ -	
	Advertising	\$ 2,000	
	DHCD Monitoring Fee- Inspect	\$ -	
	Lottery agent/recertification	\$ 3,150	
	Book keeping/Audit Fee	\$ 5,000	
	Professional Services legal & Accounting	\$ 2,000	
	Office expenses/computers	\$ 5,000	
Total Administrative		\$ 17,150	
REPAIRS & MAINTENANCE			
	On call Staff	\$ 18,000	
	ELEVATOR CONTRACT	\$ -	
	ELEVATOR TELEPHONE	\$ -	
	Security	\$ 2,700	
	OTHER		
	MAINTENANCE/Turnovers	\$ 9,000	1000 a unit
	EXTERMINATION	\$ 960	
	COMMON AREA CLEANING Weekly	\$ 2,600	
	TRASH REMOVAL	\$ 3,600	
	LANDSCAPE OTHER	\$ 1,500	
	SNOW REMOVAL	\$ 3,000	
Total Maintenance		\$ 41,360	
UTILITIES			
	Common ELECTRICITY	\$ 5,000	
	Water and Sewer	\$ 40,000	
	Heat Hallways	\$ 5,000	
	Total Utilities	\$ 50,000	
TAXES			
	REAL ESTATE TAXES - Residential	\$ 56,344	NOI x cap rate /1000*tax rate
	Total Taxes	\$ 56,344	
INSURANCE			
	PROPERTY & LIABILITY	\$ 15,000	
Replacement Reserves		\$ 12,600	
Total Operating costs		\$ 224,946	\$ 6,248.51
Income		\$ 541,546	

NOI	\$	316,599	25 amortization adjustable 4.5 =
Debt Service	\$	224,946	3,400,000
Cash Flow	\$	91,653	12 months construction interest only

Development Pro-Forma

Number of Units	36	
SOURCES & USES BUDGET		
USES - Development Budget		
Development Costs	<i>Per Unit</i>	<i>Total</i>
Acquisition	5,000	445,000
Hard Costs		
<u>Site Work</u>		100,000
Total Buildings		3,750,000
	5%	287,500
Total Hard Costs and builders profit and overhead		4,137,500
Soft Costs		
Civil Engineering/Geotech/Env/Sprinkler		150,000
FF+E Common Areas Interior		10,000
Traffic Study		0
Market Study/Financing Appraisal		2,000
Marketing/Initial Rent-up/Model Unit/Signage		20,000
Taxes		6,000
Utility Usage		1,000
Insurance		1,000
Security		3,000
Inspecting Engineer		1,200
Construction Loan Interest		144,000
Fees - construction		17,000
Fees - Permanent lender		17,000
Architecture/Engineering		20,000
Permits (Building)		41,385
Occupancy Permit		0
Connection Fees/Other permit fees		20,000
Clerk of the Works		0
Construction Manager		100000
Bond Premiums (P&P/Lien bond)		0
Legal		50,000
Title & Recording		15,000
Accounting		5,000
Monitoring Agent Fees		2,000
Development consultant		10,000

Lottery consultant/Advertising		15,000
Peer review consultants		10,000
Mitigation fees (I&I)		0
Soft Cost Contingency		15,318
Sub-Total Soft Costs		675,903
Developer Overhead/Fee		
Capitalized Reserves		
Initial Rent-Up Reserves		112,473
Initial Capital Reserves		12,600
Sub-Total Capitalized Reserves		125,073
TOTAL DEVELOPMENT COSTS		5,383,476
DEVELOPMENT SOURCES		
Permanent Loan		3,400,000
Equity Required		1,188,476
less Developer Overhead/Fee contributed		0
CPA		175,000
AHTF		175,000
Value of land contributed		445,000
TOTAL DEVELOPMENT SOURCES		5,383,476



LOCUS PLAN
SCALE 1"=1,000'

QUINCY MARKET COLD STORAGE
REC.BK. 5333 PG. 445

MAP 24
PARCEL 6
LOT AREA
23,900 ± S.F.

IMPERVIOUS AREAS
EXISTING 9,541± S.F.
PROPOSED 43,060± S.F.

ZONING (EXTENSIVE BUSINESS ZONE) (SEE NOTE #4)
YARD SETBACK REQUIREMENTS
F = 30 FT
S = 10 FT (0 FT IF ACCESS WAY NOT REQUIRED)
R = 15 FT
ALLOWED MAXIMUM BUILDING HEIGHT = 30 FT
MINIMUM LOT WIDTH = 80 FT
MINIMUM FRONTAGE = 65 FT
ALLOWED MAXIMUM LOT COVERAGE = 50%

PLAN REFERENCES

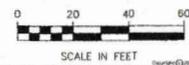
- "PLAN OF LAND OFF MAPLEWOOD AVE. GLOUCESTER", DATED 6/17/99, PREPARED NORTH SHORE SURVEY CORP.
- FEMA FLOOD INSURANCE RATE MAP-PANEL 25000C0456C (REVISED 7/16/14)

NOTES

- LOT LINES SHOWN ARE BASED ON PLAN REFERENCE #1.
- LOCATION AND SIZE OF SHOWN UTILITIES IS APPROXIMATE ONLY. CONTRACTOR TO VERIFY UTILITY CONNECTIONS WITH RESPECTIVE UTILITY COMPANIES PRIOR TO CONSTRUCTION. DIGSAFE SHALL BE NOTIFIED AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION (1-888-344-7233).
- ALL CONSTRUCTION ACTIVITY WITHIN 100 FEET OF A WETLAND OR RESOURCE AREA REQUIRES FILING IN ACCORDANCE WITH THE WETLAND PROTECTION ACT M.G.L. 131 SECTION 40.
- THE OWNER IS RESPONSIBLE TO COMPLY WITH THE ZONING BY-LAWS AND TO OBTAIN VARIANCES, IF NECESSARY. A RESIDENTIAL OVERLAY SPECIAL PERMIT IS REQUIRED.
- THE OWNER IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND WAIVERS AS MAY BE NECESSARY FROM THE M.B.T.A. FOR RESIDENTIAL BUILDING AS SHOWN.
- PROPOSED IMPROVEMENTS SHOWN ARE AT THE DIRECTION OF THE APPLICANT. NO GUARANTEE IS MADE AS TO THE EVENTUAL APPROVALS OF THE IMPROVEMENTS SHOWN.

LEGEND

EXISTING GRADE CONTOUR	42	EXISTING DRAIN CATCH BASIN	□ CB
EXISTING SPOT GRADE ELEV.	+48.78	EDGE OF WETLANDS	▭
EXISTING SURFACE FLOW DIRECTION	→	WETLANDS	▨
EXISTING UTILITY POLE	—	SUBSURFACE DRAIN PIPE	—
APPROX. EXISTING SEWER MAIN	S	PARKING SPACE TOTAL	⊞
APPROX. EXISTING WATER LINE	W	HANDICAP PARKING SYMBOL	♿
APPROX. EXISTING GAS LINE	G	TRAFFIC CIRCULATION ARROW	→
EXISTING DRAIN MANHOLE	⊙ DM#1	PROPOSED LANDSCAPING SHRUBS	⊗



REPRODUCTION OF THIS PLAN IN WHOLE OR PART IS PROHIBITED WITHOUT THE WRITTEN CONSENT OF THE DESIGN ENGINEER AND/OR FIRM.

	CONCEPTUAL SITE PLAN	
	ASSESSOR'S MAP 24, PARCEL 3 WHISTLE STOP WAY (50R MAPLEWOOD AVE.) GLOUCESTER, MA	
REVISIONS TO PLAN DESCRIPTION DATE		PREPARED FOR WILLIAM WHEAT
GATEWAY CONSULTANTS, INC. CIVIL ENGINEERING & PROJECT MANAGEMENT P.O. BOX 6005 GLOUCESTER, MA 01930 OFFICE: (978) 281-8824		Design/Draft #J/SAR Plot Scale 1"=20' Date 4/21/20 Job No. 4714 Plan No. 5107

50R MAPLEWOOD AV

Location 50R MAPLEWOOD AV

Mblu 24/ 3/ 11

Assessment \$210,500

PID 1404

Building Count 1

Current Value

Assessment			
Valuation Year	Improvements	Land	Total
2020	\$0	\$210,500	

Ownership History

Ownership History			
Owner	Sale Price	Book & Page	Sale Date
PSALIDAS CHARLES N ET AL TRS	\$145,000	15830/0002	07/23/11
BOSTON & MAINE RAILROAD CO	\$0	/0	

Building Information

Building 1 : Section 1

Year Built:

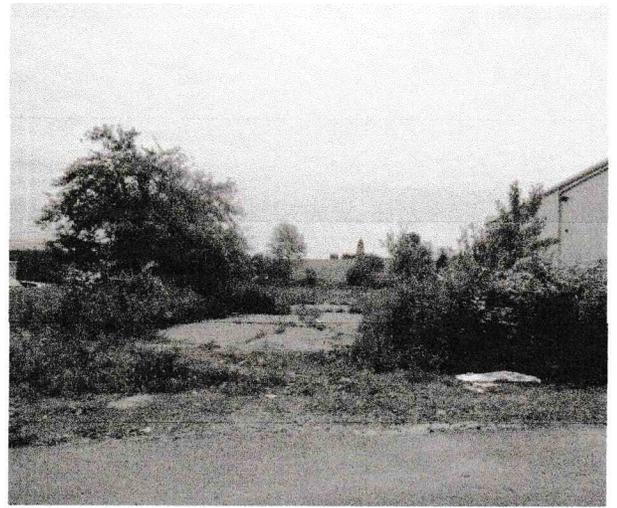
Living Area: 0

Building Percent Good:

Building Attributes	
Field	Description
Style	Vacant Land
Model	
Grade:	
Stories:	
Occupancy	
Exterior Wall 1	

Exterior Wall 2	
Roof Structure:	
Roof Cover	
Interior Wall 1	
Interior Wall 2	
Interior Flr 1	
Interior Flr 2	
Heat Fuel	
Heat Type:	
AC Type:	
Total Bedrooms:	
Total Bthrms:	
Total Half Baths:	
Total Xtra Fixtrs:	
Cndtn	
Usrflid 103	
Usrflid 104	
Usrflid 105	
Usrflid 106	
Usrflid 107	
Num Park	
Fireplaces	
Usrflid 108	
Usrflid 101	
Usrflid 102	
Usrflid 100	
Usrflid 300	
Usrflid 301	

Building Photo



(<http://images.vgsi.com/photos2/GloucesterMAPhotos/\00\02>)

Building Layout

(ParcelSketch.ashx?pid=1404&bid=1449)

Building Sub-Areas (sq ft)
No Data for Building Sub-Areas

Extra Features

Extra Features
No Data for Extra Features

Land

Land Use

Land Line Valuation

Use Code 3540
Description TRANSPORT
Zone EB
Neighborhood C07

Size (Acres) 0.98
Depth 0
Assessed Value \$210,500

Outbuildings

Outbuildings
No Data for Outbuildings

Valuation History

Assessment			
Valuation Year	Improvements	Land	Total
2019	\$0	\$210,500	
2018	\$0	\$210,500	
2017	\$0	\$200,400	

(c) 2020 Vision Government Solutions, Inc. All rights

April 22, 2020

via in-hand delivery to:

City of Gloucester City Council
c/o Joanne Senos, City Clerk
Nine Dale Avenue
Gloucester, MA 01930

and via email to:

jsenos@gloucester-ma.gov

**RE: REQUEST TO AMEND ZONING ORDINANCE
PROPOSED ADDITION OF COMMUTER RESIDENTIAL OVERLAY DISTRICT**

Dear Councilors:

This office represents William Wheat and Bigelow Real Estate, LLC, owners of 50R and 50 Maplewood Avenue, respectively. Pursuant to the City of Gloucester Zoning Ordinance ("GZO") § 1.11.2(b), I am hereby submitting a proposed amendment to the GZO, namely, the addition of an overlay district to be known as the Commuter Residential Overlay District ("CROD"), and a check for \$350.00.

The CROD is proposed to apply to all lots currently zoned EB (Extensive Business) in and around the Maplewood Avenue and Whistlestop Way area. As you may be aware, the EB District prohibits residential uses but does provide for a vast array of allowed commercial and industrial uses. The CROD is specifically designed to promote the construction of compact residential units on these EB properties while promoting existing and future commercial and industrial uses within the CROD and in neighboring properties consistent with the goals of the City.

If the proposed amendment is adopted by the Council, my clients will be seeking to immediately utilize it in order to construct 36 units of affordable commuter-oriented housing on what is currently a vacant lot known as 50R Maplewood Avenue. It is our hope that other property owners benefited by the CROD will follow suit and continue to add much needed commuter-oriented housing on their properties as well.

I look forward to discussing this proposal in detail with you all once you resume holding public hearings. In the meantime, I ask that this please be referred out to the Planning Board pursuant to GZO § 1.11.4(a) so that we can continue the process of vetting this proposal with city staff (Mr. Wheat and I met with the Planning Director and Community Director to discuss the general concept of this proposal in late January and the detailed draft being submitted today was submitted for initial review on April 1) as well as begin incorporating valuable feedback from the Planning Board. Thank you for your consideration.

Sincerely,


Joel Favazza

5. SPECIAL REGULATIONS

5.32. COMMUTER RESIDENTIAL OVERLAY DISTRICT

5.32.1. PURPOSE

It is the purpose of the Commuter Residential Overlay District ("CROD") to encourage the introduction of residential uses into the properties within the boundaries of the CROD to create Mixed Use Properties. The CROD is specifically designed to promote the construction of compact residential units while promoting existing and future commercial and industrial uses within the CROD and in neighboring properties consistent with the goals of the City of Gloucester (the "City").

5.32.2. OVERLAY DISTRICT

5.32.2.1. DEFINITIONS

For the purposes of the CROD, the definitions set forth in this Ordinance shall apply except as follows:

Grandfathered Lot: A lot within the CROD in existence at the time of enactment of this Section 5.32 as laid out on the map dated [Month ##, 2020,] and referenced in Section 5.32.2.2. Grandfathered Lots shall be considered conforming to all dimensional requirements of the GZO for a Lot. The alteration or adjustment of any property line of a Grandfathered Lot, except as part of a combination of two or more entire Grandfathered Lots into a single new lot, shall terminate the status of the resultant lot(s) as Grandfathered Lot(s) and shall terminate the status of any structures thereon as Grandfathered Structures.

Grandfathered Structure: A structure existing on a Grandfathered Lot at the time of enactment of this Section 5.32 in the location in which it existed at the time of enactment of this Section 5.32. A Grandfathered Structure shall be considered conforming to all dimensional requirements of the GZO for such a structure of its nature. The applicable dimensional requirements for all future alterations and additions (but not wholesale replacement) of Grandfathered Structures shall be those set forth in this Section 5.32 except for the elements of such structure that would be considered nonconforming thereunder in which case the applicable dimensional requirement for such element shall be the same value as exists at the time of enactment of this Section 5.32 (for example: the applicable dimensional requirements for a 42' high Grandfathered Structure built three feet from the right side property line would be a superseding maximum building height of 42' and superseding right side yard setback of three feet; all other dimensional requirements would remain as set forth in this Section 5.32).

Lot Area: horizontal area of a lot, exclusive of any area in a street or way open to public use. In calculating lot area for all residential, non-residential, and Mixed Use Properties, not more than fifty percent (50%) of the lot area required by Section 3.2 shall be a “resource area” as defined at Section 12-11 of the City of Gloucester Code of Ordinances. Notwithstanding the provisions of this section, any area denoted as FEMA "Special Flood Hazard Zone" or "Flood Zone X" shall be included in the lot area calculation without limitation.

Mixed Use Property: A building, structure, land, or combination thereof located on the same Lot to be used for more than one principal use, whether the uses are in separate buildings or in the same building either vertically or horizontally connected, all of which uses are allowed or permitted in the underlying zoning district or the CROD, none of which is accessory to one another, and one use of which being residential. The ratio of square footage of the portion of the building(s) and structure(s) on site used exclusively for residential purposes shall not exceed 300% of the square footage of the portion of the building(s) and structure(s) on site used for commercial purposes (the square footage of the portion of the building(s) and structure(s) used for both residential and commercial uses shall be considered “used for commercial purposes” for calculating this ratio). A Mixed Use Property shall have at least ten dwelling units or guest units.

5.32.2.2. MAP

The CROD is an overlay district that encompasses land shown on the City of Gloucester’s Assessors’ Map 24, Lots 1, 2, 3, 6, 51, 52, 62, and 65. Such land is also shown on the map entitled, “[map title],” dated [Month ##], 2020, which hereby incorporated by reference and made a part of the City’s official zoning map.

5.32.2.3. ESTABLISHMENT

The CROD is an overlay district superimposed on the underlying zoning districts. All underlying zoning shall remain in full force and effect. To the extent that any provision in this Section 5.32 is in contradiction or conflicts with any other provision of this ordinance, the provisions of this Section 5.32 shall control.

5.32.2.4. APPLICABILITY

The City of Gloucester Planning Board shall be the special permit granting authority (the “SPGA”) for any required special permits granted pursuant to this Section 5.32, and the issuance of such special permits shall satisfy the procedural criteria set forth in this Section 5.32 and other relevant sections of this Ordinance.

5.32.2.5. STANDARD TO BE APPLIED

Except as otherwise set forth herein, use special permits under this Section 5.32 shall be granted under the standards of Section 1.8 (Special Permits) and Section 5.7 (Major Projects) as applicable.

Except as otherwise set forth herein, all other special permits under this Section 5.32 shall be granted only upon making a finding that such relief will not endanger public health and safety or be substantially detrimental to the neighborhood.

5.32.3. USES

5.32.3.1. USES ALLOWED BY RIGHT

The following uses are allowed by right in the CROD:

- (a) Uses allowed by right in the underlying zoning districts.
- (b) Any continuation of the primary or accessory use of a Grandfathered Structure whether as-is or through an alteration, expansion, or replacement of such Grandfathered Structure provided that it complies with the dimensional regulations of the CROD.
- (c) New or conversion to a Mixed Use Property. A new or conversion to a Mixed Use Property shall not be deemed a Major Project under Section 5.7 of this Ordinance unless 80 or more residential units are proposed on a single lot.

5.32.3.2. USES ALLOWED BY SPECIAL PERMIT

The following uses are allowed by Special Permit granted pursuant to this Section 5.32:

- (a) All uses allowed by any type of special permit in the underlying zoning districts.

5.32.4. DIMENSIONAL REQUIREMENTS

Except as stated otherwise in this Section 5.32, all buildings and structures allowed or permitted pursuant to the CROD shall conform the following dimensional requirements:

For Principal Uses

Minimum lot area (sf)	15,000
Minimum lot area per dwelling unit (sf)	1,000
Minimum open space per dwelling unit (sf)	350
Minimum lot area per guest unit (sf)	1,250
Minimum open space per guest unit (sf)	500
Minimum lot width (ft)	65
Minimum frontage (ft)	50
Minimum front yard (ft)	10

Minimum side yards (ft each)	10
Minimum rear yard (ft)	0
Maximum building height (ft)	40

For Accessory Uses (other than signs)

Minimum distance from street (ft)	5
Minimum distance from side lot lines (ft)	5
Minimum distance from principal building (ft)	5
Maximum building height (ft)	20

In the CROD, maximum building height shall not include mechanicals and other non-habitable rooftop structures (including but not limited to elevator shafts and access doorways). The SPGA may authorize an increase in building height above the maximum stated herein only upon making a finding that such increase will not be substantially detrimental to the neighborhood because of obstruction of views, overshadowing of other properties, impairment of utilities, or other adverse impacts.

5.32.5. GENERAL REGULATIONS

Sections 4.1, 4.2, 4.3, 4.4, and 4.5 of this Ordinance shall apply except that:

For Mixed Use Properties, at least one off-street parking space shall be provided per every two dwelling or guest units in the residential portion thereof; for the commercial (all uses that are not residential shall be considered “commercial”) portions of Mixed Use Properties, at least one off-street parking space per every 3 employees on the largest shift (if multiple business are co-located on one lot, the “largest shift” shall be the largest number of employees across all businesses that are expected to be on site at the same time for at least two hours), at least one off-street parking space for every vehicle owned by the business(es) on site, and at least one off-street per every 4 persons serviced by the commercial portions of the Mixed Use Property.

A special permit for relief from the requirements of Sections 4.1, 4.2, 4.3, 4.4, or 4.5 shall be granted only upon the SPGA making a finding that such relief will not endanger public health and safety.

5.32.6. SUBMISSIONS

Any application for a special permit required within the CROD shall be submitted in accordance with Sections 1.5.1(c) and 1.5.2 of this Ordinance and shall, unless modified by this Section 5.32, include the application and information required by Sections 1.5.3, 1.5.4, or 1.5.5 dependent upon the type of special permit otherwise required in the underlying zoning districts (CC, CCS, Major Project, PB, SP, SPS, etc.). Any application for a special permit required within the CROD shall require submission of: one original and one full-size hard copy of the application and all required plans and accompanying documentation along with a digital submission via compact disc, USB flash drive, or email to planning@gloucester-ma.gov.

The notice requirements pursuant to Section 1.5.6 of this Ordinance shall apply for all special permits applied for within the CROD.

5.32.7. RELIEF BY SPECIAL PERMIT

In any instance where a lot or structure does not comply with any provision of this Section 5.32 or any other provision of this ordinance, the SPGA is authorized to issue zoning relief for such noncompliance by special permit(s) and not variance(s) pursuant to the standards set forth in this Section 5.32.

Wilcox & Barton INC.

CIVIL • ENVIRONMENTAL • GEOTECHNICAL

LIMITED SITE INVESTIGATION

**50 REAR MAPLEWOOD AVENUE
GLOUCESTER, MASSACHUSETTS**

Prepared for:

Bigelow Real Estate LLC
50 Maplewood Avenue
Gloucester, Massachusetts 01930
Contact: Mr. Bill Wheat, 978-308-8921

Prepared by:

Wilcox & Barton, Inc.
#1B Commons Drive, Unit 12B
Londonderry, New Hampshire 03053
Contact: Mrs. Amy Roth, P.G., LSP, 603-369-4190 x509

March 18, 2020

Wilcox & Barton, Inc. Project No. BREL0002

WWW.WILCOXANDBARTON.COM

1 (888) 777-5805

CERTIFICATION

The following personnel have prepared and/or reviewed this report for accuracy, content, and quality of presentation.

Document Title: Limited Site Investigation
50 Rear Maplewood Avenue, Gloucester, Massachusetts

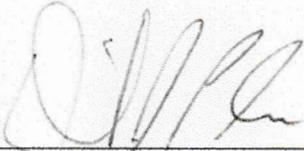
Date/Version: March 18, 2020



Christopher M. Montoya
Project Geologist



Amy A. Roth, PG, LSP
Associate Vice President



David JP Foss, CPG, LSP
Principal Hydrogeologist

TABLE OF CONTENTS

1.0	INTRODUCTION.....	1
2.0	SITE DESCRIPTION.....	2
3.0	SITE BACKGROUND.....	2
4.0	SUBSURFACE INVESTIGATION.....	4
4.1	Soil Boring Advancement and Monitoring Well Installation.....	4
4.2	Soil Sampling.....	4
4.3	Groundwater Gauging and Sampling.....	5
4.4	Soil and Groundwater Analytical Results.....	5
4.4.1	Soil Analytical Results.....	5
4.4.2	Groundwater Analytical Results.....	6
5.0	CONCLUSIONS AND RECOMMENDATIONS.....	6

Tables

Table 1	Soil Samples - Summary of Analytical Results
Table 2	Groundwater Samples – Summary of Analytical Results

Figures

Figure 1	Site Location Map
Figure 2	Site Plan

Appendices

Appendix A	MassDEP Phase I Site Assessment Map
Appendix B	<i>21E Site Assessment for 50 Rear Maplewood Avenue, Sommer Environmental Technologies, Inc., July 12, 1999</i>
Appendix C	Soil Boring Logs and Monitoring Well Completion Details
Appendix D	Wilcox & Barton, Inc. Field Protocols
Appendix E	Laboratory Reports



1.0 INTRODUCTION

Wilcox & Barton, Inc. was retained by Bigelow Real Estate LLC to perform a Phase II Environmental Site Assessment and Limited Site Investigation (LSI) for the property located at 50 Rear Maplewood Avenue in Gloucester, Massachusetts. The work was performed to evaluate certain *recognized environmental conditions* (RECs) and other environmental conditions identified by Wilcox & Barton, Inc., during initial due diligence assessment, as documented in the January 2020 *ASTM E1527-13 Phase I Environmental Site Assessment Report* (Phase I ESA). The conditions identified in the Phase I ESA that were the subject of this LSI included:

1. Historical underground storage of petroleum and site operations as a dry-cleaning facility at abutting properties.
2. Release of petroleum achieving regulatory closure with an Activity and Use Limitation (AUL or deed restriction) at a nearby upgradient property.
3. Historical filling of the subject property and presence of petroleum compounds in soil.
4. Storage of construction equipment, improper storage and disposal of solid waste, and outdoor storage of railroad ties at the subject property.

In addition to the RECs and other environmental concerns, one Historical REC (HREC) was identified associated with a historical release of petroleum at the subject and eastern abutting properties. This historical release achieved regulatory closure with no restrictions and was evaluated in a prior site investigation by others; as a result, this LSI did not include assessment of that HREC.

The purpose of the LSI was to evaluate shallow soil quality in two areas where improper storage of solid waste and railroad ties had been observed, and to evaluate the potential for vapor intrusion from soil and/or groundwater into the planned residential building. The LSI was conducted in conjunction with a geotechnical investigation conducted by Geotechnical Services, Inc. and included the following tasks:

- Advancement of soil borings B-1 through B-3 to a maximum depth of 37 feet below ground surface (bgs) with field screening and soil sample collection;
- Completion of soil borings B-2 and B-3 as groundwater monitoring wells MW-1 and MW-2, respectively, to evaluate groundwater quality;
- Collection of shallow soil samples in areas of improper storage;
- Collection of soil and groundwater samples for analysis of volatile organic compounds (VOCs), Resource Conservation and Recovery Act (RCRA) 8 Metals, and/or extractable petroleum hydrocarbons (EPH); and
- Preparation of this LSI Report.



2.0 SITE DESCRIPTION

The subject of this assessment is 1.01 acres of land identified by the City of Gloucester Assessor's Office as Map 24, Lot 3. The property is currently owned by Charles N Psalidas et al Trust (c/o Harding & Carbone). The subject property is undeveloped. The northeastern portion of the subject property is improved by an asphalt-paved driveway and parking area. The rest of the property consists of landscaped and vegetated areas and cleared areas covered in crushed stone.

The northeastern portion of the subject property is utilized as a portion of the driveway and a parking area for Maplewood Car Wash & Detail Center (50 Maplewood Avenue). The central portion is utilized for the storage of equipment and vehicles by New England Ground Solutions. The southern portion of the subject property is utilized by the Massachusetts Bay Transit Authority (MBTA) for storage of rail ties and equipment. The central and southern portion of the property is periodically utilized by the owner for excess snow storage from the Shaw's supermarket parking lot.

The location of the site is depicted on Figure 1 – *Site Location Map*, and general site features and boring locations are depicted on Figure 2 – *Site Plan*. Consistent with the MCP (310 CMR 40.0361), *Reportable Concentrations of Oil and Hazardous Materials in Soil*, reporting category RCS-1 is applicable to the subject property based upon the presence of residential dwellings within 500 feet.

According to the online Massachusetts Department of Environmental Protection (MassDEP) Phase I Environmental Site Assessment Map for the site, included in Appendix A, the site is not located within a current or potential drinking water source area. Consistent with 310 CMR 40.0362, *Reportable Concentrations of Oil and Hazardous Materials in Groundwater*, reporting category RCGW-2 is applicable at the subject property.

3.0 SITE BACKGROUND

As documented in the Phase I ESA, the subject property was originally undeveloped marshland or meadowland. Intermittent use of portions of the site by abutting lumber yards is apparent on historical maps from the late 1800's and early 1900's but the property appears to have been largely undeveloped between 1909 and 1960. According to a former owner, the railroad spur on the property was constructed in 1960 and used until approximately 1980 for the loading/delivery of lumber. Based on review of documents provided by the property owner during the Phase I ESA, two historical environmental investigations have been conducted at the site, as summarized below.

According to a *Response Action Outcome Statement (RAO)* prepared by Vertex Engineering Services, Inc. (Vertex), dated August 22, 1997, on December 11, 1996, approximately 40 gallons of diesel fuel were released from the ruptured saddle fuel tank of a truck after it crossed the railroad tracks at the site. The release primarily impacted abutting properties but also impacted an asphalt-paved area of 50R Maplewood Avenue. MassDEP assigned Release Tracking Number (RTN) 3-14617 to the release condition. Investigation and remediation activities were performed

between December 1996 and May 1997, including recovery of oil released to pavement using absorbents and excavation of visually impacted soil. The RAO indicated that total petroleum hydrocarbon concentrations in soil were below applicable soil quality standards following excavation, resulting in a condition of no significant risk and supporting permanent site closure. This historical release does not appear to have significantly impacted soil at the site.

According to the report entitled *21E Site Assessment for 50 Rear Maplewood Avenue*, prepared by Sommer Environmental Technologies, Inc. (Sommer) and dated July 12, 1999, a 21E site assessment and subsurface investigation was performed for Walsh Oil. The subsurface investigation was conducted to evaluate conditions of potential concern identified during that site assessment, including historical use of the property as a railroad spur, historical use of portions of the property as a lumber yard, and the historical release of petroleum described above. The investigation included the excavation of six test pits, field screening of soil samples, and laboratory analysis of soil and groundwater samples. Test pits TP-1 through TP-6 were excavated to depths between 6 and 14 feet bgs. Soils consisted of fill material (including wood ash) to depths of 1 to 6 feet bgs, underlain by a layer of brown peat material between 1 to 10 feet bgs, underlain by dense blue clay. Soil samples were field screened with a photoionization detector (PID); all headspace results were below the detection limits.

Although field screening did not indicate a release of oil and/or hazardous materials (OHM), selected soil samples were submitted for the laboratory analyses summarized below with the indicated findings (only compounds detected at concentrations exceeding the standards applicable at that time are noted):

- TP-1 – Arsenic – detected at 20.7 milligrams per kilogram (mg/kg)
- TP-3 – EPH and RCRA8 Metals – arsenic detected at 33 mg/kg
- TP-4 – EPH and RCRA8 Metals – indeno(1,2,3)pyrene detected at 1.5 mg/kg
- TP-5 – Arsenic – detected at 20.5 mg/kg

According to Sommer, the presence of indeno(1,2,3)pyrene without elevated levels of oil constituents was indicative of coal ash or wood ash (which was observed in the test pits) and was specifically exempt from the release notification condition in accordance with 310 CMR 40.0315(9). The detected concentration is below the current (2019 MCP) applicable reporting limit.

Elevated concentrations of arsenic were detected in test pits TP-1, TP-3, and TP-5, which Sommer determined was consistent with naturally occurring geology. Arsenic can also be associated with historical rail lines due to the use of coal and cinder along the tracks; however, test pits TP-1 and TP-5 were excavated away from the rail spurs, adjacent to the northeastern property boundary. Sommer observed wood ash in test pits at the property.

Groundwater was encountered in test pit TP-1 at 4 feet bgs and in TP-2 at 3.75 feet bgs but was not observed in the other test pits. Samples were collected for analysis of EPH and VOCs: no EPH or VOC analytes were detected in groundwater samples collected during the 1999 assessment.

Based on their investigation, Sommer determined that no further investigation, MassDEP notification, or remedial action was required. A copy of the Sommer 21E report is included as Appendix B.

4.0 SUBSURFACE INVESTIGATION

Wilcox & Barton, Inc. conducted an LSI in February 2020 to evaluate soil and groundwater quality at the property. The investigation included the collection of soil samples during advancement of three geotechnical soil borings, installation of two groundwater monitoring wells, collection of shallow soil samples, and laboratory analysis of soil and groundwater samples. Investigation activities and results are described below.

4.1 Soil Boring Advancement and Monitoring Well Installation

On February 19, 2020, Wilcox & Barton, Inc. conducted soil screening during the advancement of soil borings B-1 through B-3 at the locations depicted on Figure 2. Borings were advanced using rotary auger and direct-push drilling techniques to depths ranging between 24.9 and 37 feet bgs by Geosearch, Inc. of Sterling, Massachusetts.

Soil borings B-2 and B-3 were completed as monitoring wells MW-1 and MW-2, respectively, to evaluate groundwater quality in the area of the proposed building. Wells were constructed of 2-inch diameter polyvinyl chloride well materials with 0.010-slot well screen set to intersect the water table. The monitoring wells were developed until the groundwater flowed with a consistent clarity or until the well ran dry. Soil boring logs and monitoring well completion details are included in Appendix C.

4.2 Soil Sampling

During soil boring advancement, soil samples were collected, classified using a modified Burmister Classification System, and screened for total organic vapors (TOV) using a PID in accordance with the Wilcox & Barton, Inc. Standard Operating Procedure, included in Appendix D. The PID was calibrated to an isobutylene standard for measurement of organic vapors “as benzene” on a part-per-million by volume (ppmv) basis. PID field screening did not identify significant levels of TOVs, and no visual or olfactory evidence of contamination was identified during boring advancement. Subsurface materials generally consisted of fine to coarse sand with varying amounts of silt, gravel, and organic material, underlain by soft clay. Peat was observed in borings B-1 and B-2 at depths ranging between 4.25 and 12 feet bgs.

Composite shallow soil samples were collected from the area where landscaping/paving vehicles and materials were observed to be stored (SS-1) and the area where railroad ties were recently stored (SS-2). Sample location SS-2 is also in the location of a former rail spur. During the time period following the Phase I ESA performed in December 2019, the railroad ties and landscaping/paving equipment were removed from the site. Each shallow soil sample was composited from three aliquots collected from depths of 0 to 1-foot bgs.



Discrete soil samples collected from each of the borings at depths ranging between 0 to 6 feet bgs, along with composite surface soil samples SS-1 and SS-2, were submitted to Con-Test Analytical Laboratory (Con-Test) of East Longmeadow, Massachusetts, for analysis of one or more of the following methods: VOCs by EPA Method 8260, metals by EPA Methods 6010 and 7471, and EPH by the MassDEP Method.

Soil samples were handled under standard chain of custody protocols. Analytical results are discussed in Section 4.5.1 and summarized in Table 1 – *Soil Samples – Summary of Analytical Results*. The laboratory report is provided in Appendix E.

4.3 Groundwater Gauging and Sampling

On February 21, 2020, Wilcox & Barton, Inc. gauged the monitoring wells for depth to water using a water level meter capable of measuring the depth to water to the nearest 0.01 foot. Depth to water was measured at 2.92 feet bgs at monitoring well MW-1 and 1.30 feet bgs at MW-2.

Wilcox & Barton, Inc. sampled monitoring wells MW-1 and MW-2 using the low-flow sampling technique described in the Wilcox & Barton, Inc. Standard Operating Procedure FP-07, a copy of which is provided in Appendix D. Groundwater samples were collected following stabilization of groundwater chemistry parameters and submitted to Con-Test for analysis of VOCs by EPA Method 8260.

Analytical results are discussed in Section 4.5.2 and summarized in summarized in Table 2 – *Groundwater Samples – Summary of Analytical Results*. The laboratory report is presented in Appendix E.

4.4 Soil and Groundwater Analytical Results

4.4.1 Soil Analytical Results

The only analytes detected at concentrations exceeding the applicable MCP Reportable Concentrations for S-1 soil (RCS-1) were arsenic and lead in surface soil sample SS-2. Several metals (arsenic, barium, cadmium, total chromium, lead, and/or mercury) and EPH analytes were detected in soil samples at concentrations below the corresponding RCS-1 threshold values. No VOCs were detected in the soil samples at concentrations above the laboratory reporting limits.

Concentrations of arsenic exceeding the RCS-1 threshold were previously identified by Sommer, who determined that arsenic was naturally occurring at the site. Arsenic (and lead) can also be associated with rail lines due to the use of coal/cinder along the tracks, and with wood ash. Based on the low concentrations of chromium detected, it is inferred that the wood ash at the site was not derived from the combustion of wood treated with chromated arsenate. A total of ten soil samples have been collected at eight locations for arsenic analysis by Wilcox & Barton, Inc. and Sommer; four locations within the rail spur area and four outside the rail spur area. Concentrations of arsenic exceeding the current RCS-1 thresholds have been detected in two of four locations in each area, suggesting a distributed and likely natural source of arsenic, consistent with Sommer's original findings. Arsenic that is naturally occurring or attributable to

coal, coal ash, or wood ash, is exempt from reporting obligations under the MCP (310 CMR 40.0317). The concentrations of arsenic detected at the site, which range from 5.6 to 33 mg/kg, are below the concentration identified in the MCP (310 CMR 40.0321) as potentially posing an Imminent Hazard to human health.

A total of eight soil samples collected at six locations by Wilcox & Barton, Inc. and Sommer have been submitted for analysis of lead, including four locations in the rail spur area and two outside the rail spur. Of the eight samples, only SS-2 exceeded the RCS-1 threshold at a concentration of 610 mg/kg, which was collected above a former rail spur in a location where railroad ties were stored by MBTA. The concentrations of lead detected at the remaining sampling locations ranged from 4.9 to 45 mg/kg. Wilcox & Barton, Inc. did not observe surface staining or petroleum odors at location SS-2, and detected concentrations of EPH analytes were well below the RCS-1 thresholds. Based on historical use, field screening results, and analytical data, the most likely sources of lead at the property are wood ash (observed in site soil by Sommer and potentially associated with the former lumber yard) and coal/coal ash associated with the former rail line. These materials are exempt from MCP Reporting pursuant to 310 CMR 40.0317. The concentration of lead detected is consistent with MassDEP's 2002 Technical Update: *Background Levels of Polycyclic Aromatic Hydrocarbons and Metals in Soil*, for soil containing coal ash or wood ash (reported concentration of lead of 610 mg/kg, and a published background level of 600 mg/kg).

To confirm the presence of coal, coal ash, and/or wood ash in soil, Wilcox & Barton, Inc. submitted sample SS-2 to MicroVision Laboratories, Inc. (MicroVision) of Chelmsford, Massachusetts, for macroscopic inspection, Polarized Light Microscopy (PLM), and Scanning Electron Microscopy with Energy Dispersive X-ray Spectroscopy (SEM/EDS). MicroVision identified asphalt, coal, coal ash, and wood ash in the sample.

4.4.2 Groundwater Analytical Results

Groundwater samples were collected from monitoring wells MW-1 and MW-2 for laboratory analysis of VOCs by EPA Method 8260. No analytes were detected in groundwater above the laboratory reporting limits. As a result, groundwater is not likely to be a potential source of vapors to an occupied residential building.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Wilcox & Barton, Inc. completed an LSI to evaluate soil and groundwater conditions at the subject property. A prior site investigation completed in 1999 evaluated site conditions associated with the former use of a portion of the property as a rail spur and a historical release of petroleum that impacted a limited (paved) portion of the site. Since 1999, materials and equipment have been stored at the site that had the potential to result in release of OHM. In addition, a Phase I ESA identified historical use of a property to the south as a dry cleaner. Based on the planned redevelopment of the property for residential purposes, the LSI included advancement of soil borings, installation of groundwater monitoring wells, and collection of soil and groundwater samples for laboratory analysis.

Field screening and laboratory analytical data documented that VOCs were not detected in soil or groundwater samples collected at the site. Based on our observations and these data, vapor intrusion is not likely to be a concern for the proposed site redevelopment.

Arsenic and lead were detected in shallow soil at location SS-2 at concentrations exceeding the applicable MassDEP MCP RCS-1 threshold values. Arsenic was also detected in soil samples collected from various locations across the site during a previous investigation. Based on the concentrations detected and distribution of data across the site, arsenic appears to be naturally occurring, associated with the historical use of the property as a rail spur (coal/cinder along tracks), or associated with the former use of portions of the property by the abutting lumber yards (wood ash). Similarly, lead appears to be associated with the historical use of the property as a rail spur (coal/cinder along tracks). The presence of coal, coal ash, wood ash, and asphalt in soil sample SS-2 have been confirmed through laboratory analysis and wood ash was observed during previous site investigations. Based on site observations, the historical uses of the property, analytical data, and microscopy results, the detection of lead and arsenic at concentrations exceeding the RCS-1 thresholds is attributed to exempt materials (310 CMR 40.0317) and a reporting obligation under the MCP has not been identified.

Although not reportable under the MCP, the presence of arsenic and lead in shallow soil at concentrations exceeding RCS-1 thresholds can pose a risk to site users, particularly future residents. Wilcox & Barton, Inc. recommends that the potential for direct contact with soil exhibiting elevated levels of metals be reduced through the placement of buildings, pavement, or landscaped areas constructed using imported material. If geotechnically suitable, soil with elevated levels of metals can be used as sub-base under paved driveway or parking areas. If future construction requires the off-site disposal of excess soil, then characterization is recommended to address the requirements of an appropriate receiving facility.

Wilcox & Barton, Inc. recommends that this report be maintained on file as documentation of the LSI activities.

TABLES



TABLE 1
Soil Samples - Summary of Analytical Results
 50 Rear Maplewood Avenue, Gloucester, Massachusetts

Sample Identification Sample Depth Sample Date	MCP Reportable Concentrations in Soil ^x RCS-1	B-1		B-2		B-3		SS-1	SS-2
		(2-4')	(0-4')	(0-2')	(4-6')	(0-2')	(4-6')	(0-0.75')	(0-1')
		2/19/2020	2/19/2020	2/19/2020	2/19/20	2/19/2020	2/19/2020	2/19/2020	2/19/2020
Extractable Petroleum Hydrocarbons (EPH) by MassDEP Method EPH 04-1.1									
C9-C18 Aliphatic Hydrocarbons	1,000	--	--	--	--	--	--	63 U	14 U
C19-C36 Aliphatic Hydrocarbons	3,000	--	--	--	--	--	--	390 UJ	120
C11-C22 Aromatic Hydrocarbons	1,000	--	--	--	--	--	--	230	170
2-Methylnaphthalene	0.7	--	--	--	--	--	--	0.63 U	0.18
Naphthalene	4	--	--	--	--	--	--	0.63 U	0.20
Phenanthene	10	--	--	--	--	--	--	0.63 UJ	1.3
Total Metals by EPA Methods 6010 and 7471									
Arsenic	20	--	5.6	6.2	13 U	8.2	8.6	8.3	28
Barium	1,000	--	--	--	--	--	--	230	180
Cadmium	70	--	--	--	--	--	--	0.49	1.3
Chromium (Total)	100*	--	--	--	--	--	--	53	19
Lead	200	--	5.0	5.2	4.9	4.9	5.5	45	610
Mercury	20	--	--	--	--	--	--	0.032 U	1.3
Selenium	400	--	--	--	--	--	--	4.0 U	4.5 U
Silver	100	--	--	--	--	--	--	0.40 U	0.45 U
Volatile Organic Compounds (VOCs) by EPA Method 8260									
Benzene	2	0.0014 U	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	0.1	0.0014 U	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	1	0.0014 U	--	--	--	--	--	--	--
Ethylbenzene	40	0.0014 U	--	--	--	--	--	--	--
Naphthalene	4	0.0028 UJ	--	--	--	--	--	--	--
Tetrachloroethylene	1	0.0014 U	--	--	--	--	--	--	--
Toluene	30	0.0014 U	--	--	--	--	--	--	--
Trichloroethylene	0.3	0.0014 U	--	--	--	--	--	--	--
Total Xylenes	100	0.0042 U	--	--	--	--	--	--	--

All results in milligrams per kilogram (mg/kg) unless otherwise indicated.

Only detected and select analytes presented; all others were not detected.

- MCP Massachusetts Contingency Plan.
- U Not detected at or above the listed laboratory reporting limit.
- J Estimated concentration.
- Not analyzed or reported.
- * Standard is applicable to total chromium data only when hexavalent chromium data are not available.
- Bold shaded** Detected concentration exceeds MCP Reportable Concentration in Soil (RCS-1).
- ^y 310 CMR 40.1600, rev. 4/25/2014.



TABLE 2
Groundwater Samples - Summary of Analytical Results
 50 Rear Maplewood Avenue, Gloucester, Massachusetts

Sample Identification	MCP Reportable Concentrations*	MW-1		MW-2	
	RCGW-2	2/21/2020	2/21/2020	2/21/2020	2/21/2020
Sample Date					
Volatile Organic Compounds (VOCs) by EPA Method 8260B					
Benzene	1,000	1.0	U	1.0	U
cis-1,2-Dichloroethylene	20	1.0	U	1.0	U
trans-1,2-Dichloroethylene	80	1.0	U	1.0	U
Ethylbenzene	5,000	1.0	U	1.0	U
Naphthalene	700	5.0	U	5.0	U
Tetrachloroethylene	50	1.0	U	1.0	U
Toluene	40,000	1.0	U	1.0	U
Trichloroethylene	5	1.0	U	1.0	U
Xylenes (total)	3,000	3.0	U	3.0	U

All results in micrograms per liter (µg/L).

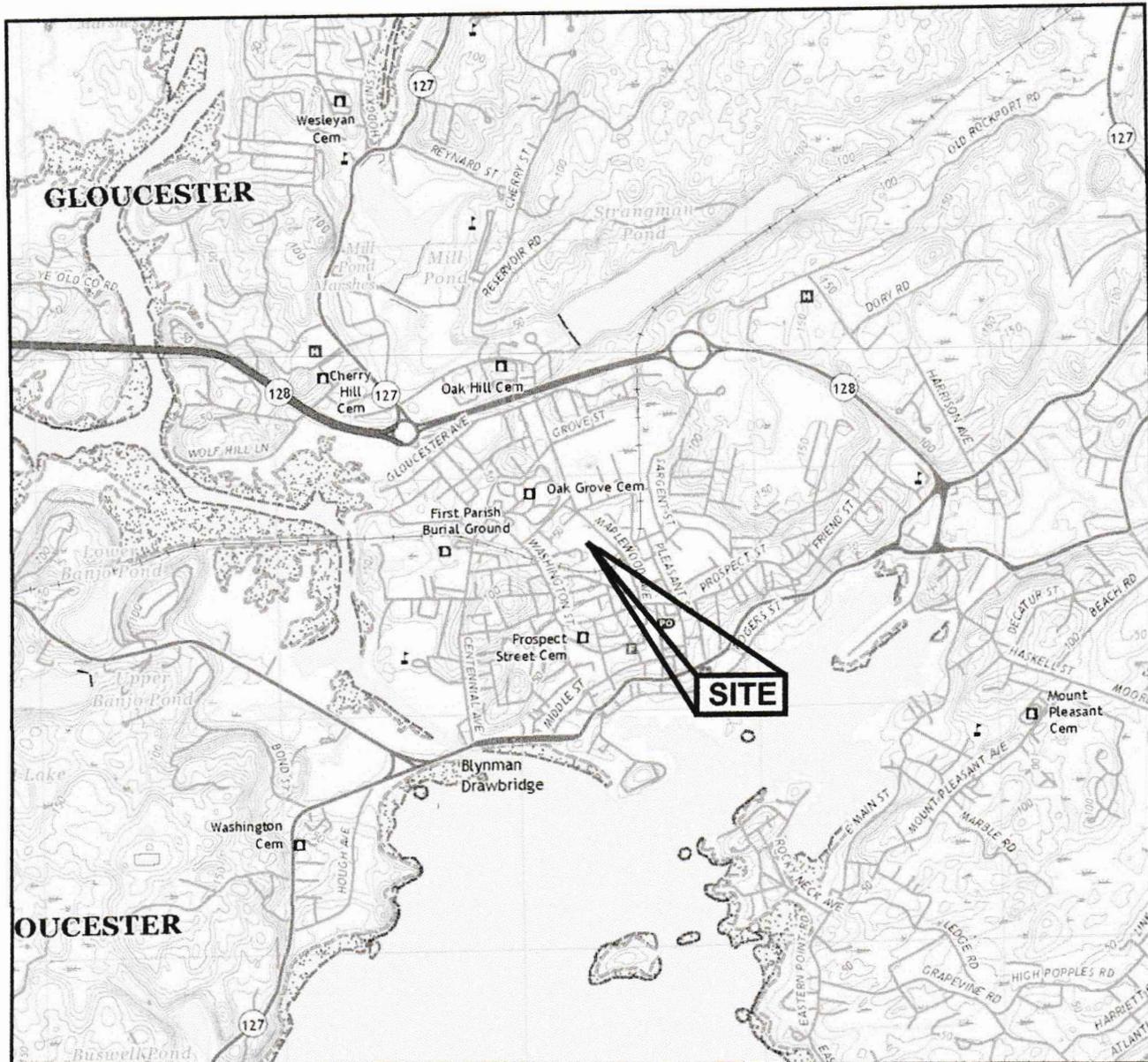
Only detected and select analytes presented; all others were not detected.

- MCP Massachusetts Contingency Plan.
- NS No standard established.
- U Not detected above indicated laboratory reporting limit.
- J Estimated concentration.
- * 310 CMR 40.1600 rev. 4/25/2014.

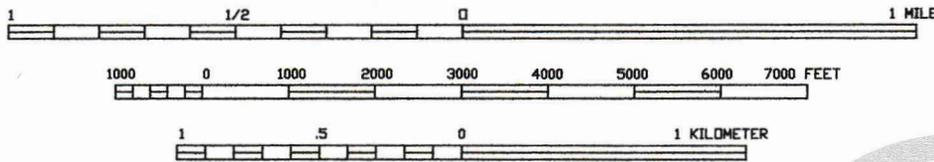


FIGURES

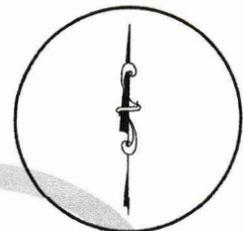




SCALE: 1:24,000



CONTOUR INTERVAL 10 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

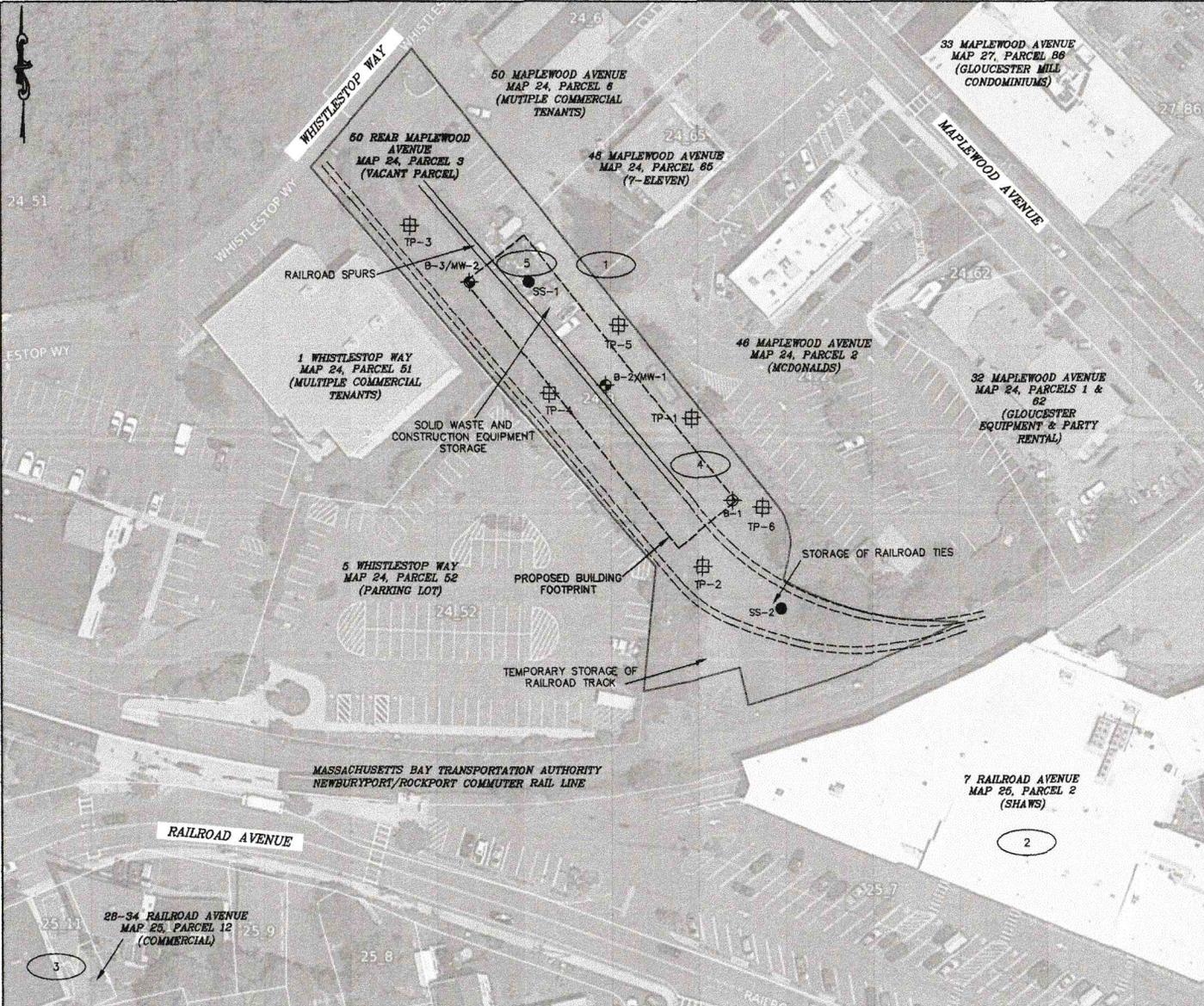


DATE January 3, 2020	SCALE As shown	FILE BRELO001_Site Location Map
APPROVED BY RWR	DRAWN BY CMM	REVISED
CLIENT Bigelow Real Estate, LLC	JOB NUMBER BRELO001	
LOCATION 50 Rear Maplewood Avenue Gloucester, Massachusetts	MAP SOURCE Gloucester, MA Gloucester OE, MA USGS QUADS 2018	

Wilcox & Barton INC.
CIVIL • ENVIRONMENTAL • GEOTECHNICAL

SITE LOCATION MAP

Figure 1



LEGEND

- APPROXIMATE PROPERTY BOUNDARY (SUBJECT PROPERTY)
- APPROXIMATE PROPERTY LINE (NEARBY PROPERTIES)
- FORMER RAIL SPURS ON SITE (REMOVED)
- TP-1 1999 TEST PIT LOCATIONS
- HREC: HISTORICAL RELEASE OF PETROLEUM ACHIEVING REGULATORY CLOSURE AT SUBJECT AND EASTERN ABUTTING PROPERTIES.
- OTHER: HISTORICAL UNDERGROUND STORAGE OF PETROLEUM AND HISTORICAL SITE OPERATIONS AS DRY-CLEANING FACILITY AT ABUTTING PROPERTY.
- OTHER: RELEASE OF PETROLEUM ACHIEVING REGULATORY CLOSURE WITH AN AUL AT NEARBY UPGRADIENT PROPERTY.
- OTHER: HISTORICAL FILLING OF SUBJECT PROPERTY.
- REC: IMPROPER STORAGE OF CONSTRUCTION EQUIPMENT, IMPROPER DISPOSAL AND STORAGE OF SOLID WASTE, AND OUTDOOR STORAGE OF RAILROAD TIES.
- B-1 SOIL BORING LOCATION
- B-2/MW-1 MONITORING WELL LOCATION
- SS-1 COMPOSITE SHALLOW SOIL SAMPLE LOCATION

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. PLAN BASED ON WILCOX & BARTON, INC. SITE VISIT AND CITY OF GLOUCESTER GIS INFORMATION

GRAPHIC SCALE

 (IN FEET)
 1 inch = 75 feet

Wilcox & Barton INC.
 CIVIL • ENVIRONMENTAL • GEOTECHNICAL

TITLE
SITE PLAN

DATE January 2, 2019	SCALE GRAPHIC	FILE BRELO001_Site Plan
APPROVED BY RWR	DRAWN BY CMM	REVISED March 9, 2020
CLIENT Bigelow Real Estate LLC	JOB NUMBER BRELO001	
LOCATION 50 Rear Maplewood Avenue Gloucester, Massachusetts	DRAWING NUMBER FIGURE 2	

APPENDIX A

MassDEP Phase I Site Assessment Map



MassDEP - Bureau of Waste Site Cleanup

Phase 1 Site Assessment Map: 500 feet & 0.5 Mile Radii

Site Information:

50R MAPLEWOOD AVENUE GLOUCESTER, MA

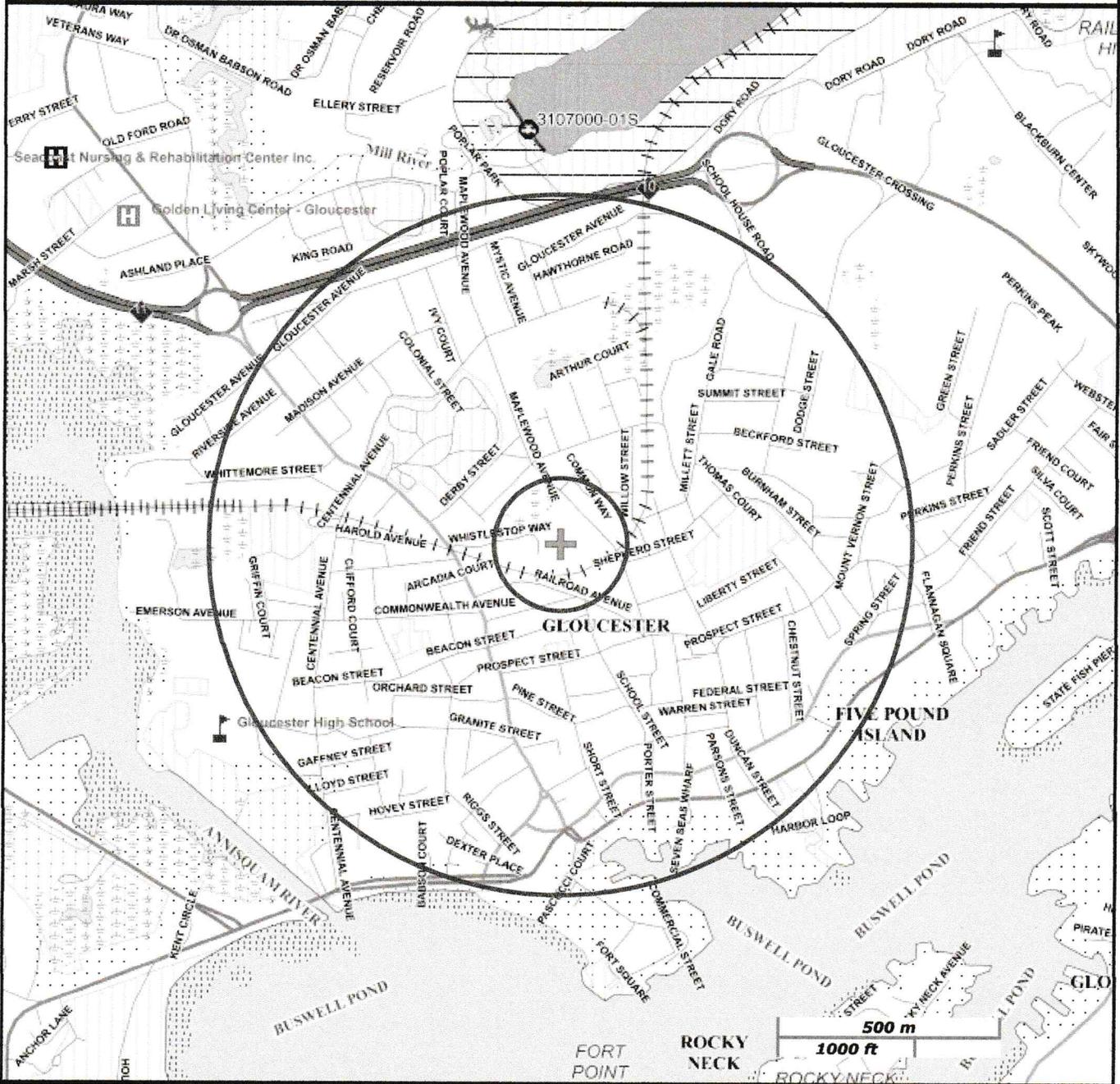
NAD83 UTM Meters:
4719656mN, 363319mE (Zone: 19)
December 18, 2019

The information shown is the best available at the date of printing. However, it may be incomplete. The responsible party and LSP are ultimately responsible for ascertaining the true conditions surrounding the site. Metadata for data layers shown on this map can be found at:
<https://www.mass.gov/orgs/massgis-bureau-of-geographic-information>.



MassDEP

Commonwealth of Massachusetts
Department of Environmental Protection



Roads: Limited Access, Divided, Other Hwy, Major Road, Minor Road, Track, Trail	PWS Protection Areas: Zone II, IWPA, Zone A			
Boundaries: Town, County, DEP Region; Train; Powerline; Pipeline; Aqueduct	Hydrography: Open Water, PWS Reservoir, Tidal Flat			
Basins: Major, PWS; Streams: Perennial, Intermittent, Man Made Shore, Dam	Wetlands: Freshwater, Saltwater, Cranberry Bog			
Aquifers: Medium Yield, High Yield, EPA Sole Source	FEMA 100yr Floodplain; Protected Open Space; ACEC			
Non Potential Drinking Water Source Area: Medium, High (Yield)	Est. Rare Wetland Wildlife Hab; Vernal Pool: Cert, Potential			
	Solid Waste Landfill; PWS: Com. GW, SW, Emerg., Non-Com.			



SO.ESSEX #450 Bk:38432 Pg:126
 04/17/2020 03:40 PM DEED Pg 1/3
 eRecorded

MASSACHUSETTS EXCISE TAX
 Southern Essex District ROD
 Date: 04/17/2020 03:40 PM
 ID: 1366174 Doc# 20200417004500
 Fee: \$1,983.60 Cons: \$435,000.00

PROPERTY ADDRESS: 50R Maplewood Avenue, Gloucester, MA 01930

We, **Charles N. Psalidas, Katherine Lamson and Elaine P. Tibbetts**, Trustees of the **137 Eastern Avenue Realty Trust** u/d/t dated April 19, 1999, and filed in the Southern Essex Registry District of the Land Court as Document 356277, for consideration paid of Four Hundred Thirty-Five Thousand Dollars (\$435,000.00), the receipt and sufficiency of which is hereby acknowledged, grant to William Wheat, a married individual with an address of 4 Seagull Street, Rockport, MA 01966, with QUITCLAIM COVENANTS,

The parcel of land situated in Gloucester, Essex County, Massachusetts, and bounded and described as follows:

Beginning at the northeasterly corner at a railroad spike being 194.06 feet southwesterly from a railroad spike on Maplewood Avenue on a 25' wide right of way; thence running

S 24° 42' 38" E three hundred and seventy and no hundredths (370.00) feet by land now or formerly of Works Chevrolet-Olds., Inc. to an iron rod; thence turning and running

by a curve to the right having a radius of thirty-eight and no hundredths (38.00) feet by land also of said Works an arc length of fifty-three and sixty hundredths (53.60) feet to an iron rod; thence turning and running

by a curve to the left having a radius of one hundred sixty nine and forty hundredths (169.40) feet by land also of said Works and an arc length of one hundred forty three and fifty eight hundredths (143.58) feet to a point; thence turning and running

by a curve to the right having a radius of six hundred and sixty seven and twelve hundredths (667.12) feet by land now or formerly of the Massachusetts Bay Transportation Authority and an arc length of two hundred fifty two and sixty four hundredths (252.64) feet to a point; thence turning and running

N 24° 45' 07" E a distance of one hundred three and eighty-six hundredths (103.86) feet by land now or formerly of Conopco, Inc., to an iron rod; thence turning and running

N 24° 42' 38" W a distance of three hundred twenty-nine and thirty-three hundredths (329.33) feet by land of said Conopco, Inc., and land now or formerly of Quincy Market Cold Storage to an iron rod; thence turning and running

N 54° 34' 30" E a distance of eighty-eight and no hundredths (88.00) feet by a 25' wide right of way to the point of beginning.

Said property contains 44,132 square feet, more or less.

Together with all rights granted in a deed from Myrtle Square Trust dated January 29, 1960 and recorded in Book 4640, Page 354.

This property is shown on a plan entitled, "Plan of Land, off Maplewood Avenue, Gloucester, property of Boston & Maine Corporation," dated June 17, 1999, drawn by North Shore Survey Corporation, and recorded in said on July 23, 1999, in Plan Book 336 as Plan No. 38.

This conveyance is subject to the reservations, conditions, covenants, and agreements set forth in a deed dated July 2, 1999, and recorded in Book 15830, Page 2. **See said deed (Book 15830, Page 2) for title.** See also documents 363776 363777 and 363778 as to the trustees appointment.

The Grantors state that the premises is only vacant land and was never homestead property.

[signature page follows]

WITNESS our hands and seals this 16th day of April, 2020.

Charles Psalidas

Charles N. Psalidas, Trustee of
137 Eastern Avenue Realty Trust

Katherine Lamson

Katherine Lamson, Trustee of
137 Eastern Avenue Realty Trust

Elaine Tibbetts

Elaine P. Tibbetts, Trustee of
137 Eastern Avenue Realty Trust

COMONWEALTH OF MASSACHUSETTS

Essex, ss.

On this 16 day of April, 2020, before me, the undersigned notary public, personally appeared Charles N. Psalidas, Katherine Lamson and Elaine P. Tibbetts, Trustees as aforesaid, proved to me through satisfactory evidence of identification, which were Driver's Licenses, to be the persons whose names are signed on the preceding or attached document, and who swore or affirmed to me that the contents of the document are truthful and accurate to the best of their knowledge and belief and acknowledged to me that they signed it voluntarily for its stated purpose.

Patricia Ivas

Notary Public



Patricia Ivas
NOTARY PUBLIC
Commonwealth of
Massachusetts
My Commission Expires
4/3/2026

NAMES AND CONTACT INFORMATION FOR CONTRACTORS AND ARCHITECTS

ARCHITECT

JOE TAORMINA

978-281-7264

joe@taormina-architects.com

STRUCTURAL ENGINEER

ZACK JENKINS

617-605-2034

zjenkins2355@gmail.com

HELICAL PILE INSTALLER

JEFFREY O'ROURKE

978-362-8900

JEFF@GOLIATHTECHNE.COM

MODULAR SALES REP – WESTCHESTER MODULAR

TONY MONTI

978-833-8614

Amonti@westchestermodular.com

LOTTERY COMPANY

MCO HOUSING SERVICES

MAUREEN O'HAGAN

978-456-8388

maureen@mcohousingervices.com

GENERAL CONTRACTOR

SCOTT BOUCHIE

978-423-2017

sbouchie@harvestmoonbuilders.com

AFFORDABILITY CONSULTANT/FINANCING

LYNNE D. SWEET

617-454-1144

LDSWEET@LDSCONSULTINGGROUP.COM

Jeffrey O'Rourke

389 Concord Road Billerica, MA 01821

jefforourke64@gmail.com

781-710-2042

GoliathTech New England - Owner / Operator **4/2014 – present**

- Purchased franchise rights for GoliathTech NE 28 territories & 3 states (largest franchisee in North America)
- Purchased & developed 30 plus vehicle fleet to serve NE territories
- Developed in-house design department
- Installed over 30,000 helical piles on numerous state and local private projects
- Completed construction of numerous large municipal and private boardwalks, complicated stair structures and maritime docking facilities
- Installed thousands of piles for ground mount solar projects
- Installed numerous whole house structures
- Installed numerous underpinning projects
- Currently developing new company headquarters and warehouse facilities
- Certified installation trainer
- Taught continuing education to numerous building officials

Terratec Construction and Engineering – Sr. Project Manager **3/2010 – 8/2013**

RESPONSIBILITIES

- Pre-planning and execution of 4 to 8 heavy civil site jobs at once in Boston & surrounding sites.
- Hire, maintain, and develop relationships with 40 plus employees, numerous subcontractors & vendors
- Sale and purchases of heavy equipment; develop auction vendor relationships
- Coordinate maintenance & repair for 50 plus fleet of trucks, heavy equipment, and maintenance facility
- Acquire permits and facilitate interaction with local inspectors, licensing boards, and police & fire details
- Maintain customer satisfaction, adherence to health and safety regulations under tight deadlines, long off hours, and high pressure
- Coordinate and execute all travel plans for out of region job sites

MAJOR PROJECTS

- Take over & construction of 20 unit luxury condominium project – Medford MA
- Demo & completion of 5 luxury condominiums – Somerville MA
- Demo, site work, & foundation for several 5000+ sq. ft. luxury homes – Weston MA
- Demo, ledge excavation, & site work for 6 luxury condominiums- Wayland MA

LICENSURE/TRAINING

Hoisting License

Forced Main & Pump System Installer Certification

Drain Layer License (various cities & towns including Boston)

OSHA Certification

Home Improvement Contractor License

Construction Supervisor License

Emergency Medical Technician

EDUCATION

Everblue Training Institute
LEED Associate Training, Fall 2009

Wentworth Institute of Technology, Boston, MA
Bachelor of Architecture, 1991
Associate in Architectural Engineering, 1987

PROFESSIONAL LICENSURE

- Architectural Registration, May 2001 – Massachusetts Registration No. 10692

EXPERIENCE

Architect
2012-Present
Taormina Architects, LLC
10b Riverview Way
Gloucester, MA 01930
978-281-7264
Residential & Light Commercial Design

Architect / G.C.
2003-2012
Taormina Architecture & Construction, LLC
81 Prospect Street
Gloucester, MA 01930
978-281-7264
Residential/ Light Commercial Design and General Contracting

Architect
1997-2003
Carpenter & MacNeille Inc., Architecture, Interiors & Construction
106 Western Avenue Essex, MA 01929
978-768-7900
Design & Construction Oversight for High-End Residential

Architect
1988-1997
Benjamin Nutter Associates, Architects
10 Central Street Topsfield, MA 01983
978-887-9836
Assistant Architect for Residential & Light Commercial Projects

COMPUTER SKILLS

- Microsoft Word, Excel, Outlook
- VectorWorks CAD
- Timberline Estimating
- Sketch-Up

References Available Upon Request

▪

Mr. Jenkins is a Structural Engineer with over ten years of experience in the structural evaluation, analysis, and design of bridges, building foundations systems, and marine facilities.

His focus has been on inspection, analysis, rehabilitation, and design of buildings, bridges, and waterfront structures, including timber, steel, and concrete construction.

Mr. Jenkins is proficient in AutoCAD, AutoCAD 3D, AutoCAD Civil, Mathcad, LLD, SAP, Risa, and STAAD.

RELEVANT PROJECT EXPERIENCE

Residential and Commercial Building Foundation Designs

- **Coopersmith Way LLC, Multi-Family Foundation Design, Boston, MA - Principal**
Project included the design of a helical pile and frost-protected shallow foundation system for supporting two multi-family buildings in Boston, MA. Design services for the two 4-story 3-unit structures included structural analysis, preparation of design drawings and specifications, and construction support services.
- **I-KANDA Architects, Multi-Family Rehabilitation Design, Charlestown, MA - Principal**
Project included the design of the structural framing and foundation system for a multi-family building reconstruction project in Charlestown, MA. Design services for the 4-story 3-unit structure included structural analysis, and preparation of design drawings and specifications.
- **NE Design-Build, Multi-Family Foundation Design, Brookline, MA - Principal**
Project included the design of a helical pile, foundation, and structural slab system for supporting a 4,000-sf multi-family new construction project in Brookline, MA. Design services included analysis, preparation of design drawings and specifications, and construction support services.
- **Seaver Construction, Single-Family Foundation Design, Melrose, MA - Principal**
Project included the design of a helical pile, foundation, and structural slab system for supporting a three-story single-family building reconstruction project in Melrose, MA. Design services included analysis, and preparation of design drawings and specifications.
- **MGD LLC, Single-Family Foundation Design, Newton, MA - Principal**
Project included the design of a helical pile, foundation, and structural slab system for supporting a 4,800-sf single-family new construction project in Newton, MA. Design services included analysis, preparation of design drawings and specifications, and construction support services.
- **SD Atelier, Single-Family Foundation Design, Saratoga Springs, NY - Principal**
Project included the design of a helical pile, foundation, and structural slab system for supporting a 2,400-sf single-family addition in Saratoga Springs, NY. Design services included analysis, preparation of design drawings and specifications, and construction support services.

- **Schafer Woodworking, Various Projects, Newton, MA - Principal**
SE Escher has provided construction engineering support for various residential construction projects completed by Schafer Woodworking. Engineering services include analysis and preparation of construction drawings and specifications for framing design, load bearing wall removal, steel and LVL beam specifications, and foundation designs.
- **Goliath Tech New England, Various Projects, MA/RI/NH - Principal**
SE Escher has provided construction engineering support for various residential buildings, pedestrian bridges and boardwalks, and deck construction projects utilizing helical pile supports provided and installed by Goliath Tech New England. Engineering services include structural analysis, preparation of construction drawings and specifications, and construction support services.
- **Archadeck Suburban Boston, Various Projects, MA - Principal**
SE Escher has provided construction engineering support for various deck construction projects throughout Massachusetts. Engineering services include structural analysis, preparation of construction drawings, and construction support services.

OTHER PROJECT EXPERIENCE (COMPLETED WITH OTHER FIRMS)

Marine/Waterfront Design

- **United States Coast Guard, MSD Lewes Rebuild, Lewes, DE – Project Engineer**
Project included an investigation, design, and coordination of the dredging, bulkhead wall repair, and floating dock replacement. Work included a site investigation; development of two concept designs for the replacement of the bulkhead at the facility and replacement of the floating pier, with associated utilities; development of biddable plans, specifications and cost estimate; oversight of topo survey, hydrographic survey, and dredge design (performed by subconsultant).
- **United States Coast Guard, Diligence Moorings, Wilmington, NC – Project Engineer**
Project included an above-water and underwater inspection of the waterfront facilities, which included 500 lineal feet of steel sheet pile bulkhead with a concrete cap and timber fender system, 23 feet by 476 feet of asphalt-covered wharf, concrete ramps on either ends. Thickness measurements were taken of the steel bulkhead at critical locations to assess the structural integrity of the wall to assess the integrity of penetrations through the bulkhead as well as wale line to identify missing and/or damaged bolts. Any exposed sheet pile handling holes were located and noted. Soundings were taken along the length of the bulkhead. An inspection was also performed of the concrete cap, adjacent cleats, bits, and bollards. Additionally, an acoustic scan of the submerged elements of the bulkhead was performed.
- **United States Coast Guard, Bulkhead Repairs, Algonac, MI – Project Manager**
Provided professional engineering services for the repair 200-lf of the existing waterfront steel sheet pile bulkhead at USCG Algonac Winter Moorings located in Algonac, MI. The repairs consisted of providing a new anchored steel sheet pile bulkhead outboard of the existing bulkhead, restoring the timber pedestrian walkway, providing mooring bollards and a fender system for the CG Ice Breaking Tugs utilizing the bulkhead, and replacing the utilities impacted by the bulkhead repairs. Services included initial site investigation, design, permitting, coordination, cost estimates, and development of bid documents.

- **Northeast Seawall Repairs, Various Towns, MA – Project Manager**

Was retained to perform professional engineering services related to seawall repairs and replacement for multiple residential seawalls along the northeast coastline of Massachusetts. The majority of the projects were associated with the damage caused by several Nor'easters that occurred in March of 2018. Project locations included Winthrop, Nahant, Salam, Marblehead, and Gloucester Massachusetts. Seawall types included timber bulkheads, cast-in-place concrete seawalls, precast concrete seawall, steel sheet pile bulkheads, and masonry seawalls. Services included site investigations, conceptual designs, regulatory local, state, and federal permitting, preparation of construction documents, and construction administration.

Bridge Load Ratings and Design

- **Rhode Island DOT, Load Rating Assignments #35-#43, Statewide, RI – Project Engineer**

As part of an IDIQ contract, was tasked to complete load ratings on multiple existing highway bridges located throughout Rhode Island. Approximately 40 bridges were included as part of Assignments 35-43, including steel and concrete girder bridges, concrete slab bridges, concrete arch bridges, and masonry arch bridges.

- **Massachusetts DOT, Load Rating Assignment #5-#9, Statewide, MA – Project Engineer**

As part of an IDIQ contract, was tasked to complete load ratings on multiple existing highway bridges located throughout Massachusetts. Approximately 35 bridges were included as part of Assignments 5 through 9, including steel and concrete girder bridges, concrete slab bridges, and concrete arch bridges.

- **Massachusetts DOT, Bridge S-10-005 Preservation, Sheffield, MA – Project Engineer**

Provided a field verification inspection, design calculations, plans, special provisions and construction phase services for the proposed superstructure rehabilitation of Bridge No S-10-005, BIN 09R, carrying US Route 7 over Hubbard Brook in the town of Sheffield.

- **Connecticut DOT, Middletown Swing Bridge Inspection and Load Rating, Middletown, CT – Project Engineer /Load Rater**

Provided engineering services as part of the preliminary design phase for the repairs to the Middletown Swing Bridge in Middletown, CT. The engineering services included the above and underwater inspection of the fender systems and an evaluation of isolated deteriorated floor beams. This scope also included a load rating analysis of the inspected floor beams based on Cooper E-80 railroad loading. A letter report was provided including the inspection findings, load rating results, recommendations, and conceptual repair alternatives.

CERTIFICATIONS

- Model Law Structural Engineer (NCEES)
- ADCI SSA Diver (#57217)
- DCBC Restricted Surface Supplied Diver Training (#20120309)

TRAINING

- FHWA-NHI Course 130078 – “Fracture Critical Inspection Techniques for Steel Bridges”, 2013
- FHWA-NHI Course 130055 – “Safety Inspection of In-Service Bridge”, 2013
- FHWA-NHI Course 130087 – “Inspection and Maintenance of Ancillary Highway Structures”, 2014
- FHWA-NHI Course 130091 – “Underwater Bridge Inspection”, 2015
- FHWA-NHI Course 130053 – “Bridge Inspection Refresher Training”, 2018
- Confined Space Entry, 2013
- Fall Protection Training, 2013
- First Aid, CPR, DAN Emergency Oxygen
- OSHA 30-hr Safety

PROFESSIONAL AFFILIATIONS

- American Society of Civil Engineers (ASCE)
- American Council of Engineering Companies (ACEC)
- Society of American Military Engineers (SAME)
- Propeller Club of the United States