HALEY & ALDRICH, INC.
465 Medford St.
Suite 2200
Boston, MA 02129
617.886.7400

21 May 2020
File No. 29727-236

US Environmental Protection Agency
Office of Ecosystem Protection
5 Post Office Square - Suite 100 (OEP06-01)
Boston, MA 02109

Attention: Ms. Shelley Puleo
EPA/OEP RGP Applications Coordinator

Subject: Temporary Construction Dewatering
Fenway Center Phase II – Parcel 7 Development
Massachusetts Turnpike
Boston, Massachusetts

Dear Ms. Puleo:

On behalf of our client, MK Parcel 7 Development, LLC, Haley & Aldrich, Inc. (Haley & Aldrich) has prepared this submission for a National Pollutant Discharge Elimination System (NPDES) Remediation General Permit (RGP) to facilitate off-site discharge of dewatering effluent generated during construction activities for the proposed Fenway Center Phase II – Parcel 7 Development located over the Massachusetts Turnpike between the Brookline Avenue and Beacon Street bridges (the "site") in Boston, Massachusetts (see Figure 1). The information presented herein has been prepared to follow requirements of the 2017 US Environmental Protection Agency (EPA) NPDES RGP. A copy of the completed Notice of Intent (NOI) form is enclosed as Appendix A.

As this site is not a listed Massachusetts of Department of Environmental Protection (MassDEP) Massachusetts Contingency Plan (MCP) Disposal Site, a WM15 Transmittal Form and $500 fee have been submitted to MassDEP concurrently with this application; a copy of the WM15 Transmittal Form is included in Appendix A.

EXISTING SITE CONDITIONS

Main Site (MassDOT Air Rights Parcel 7)

The approximate site location is shown on Figure 2. The portion of the site identified as Massachusetts Department of Transportation (MassDOT) Air Rights Parcel 7 is bordered to the west by the Beacon Street Bridge, to the south by the Massachusetts Bay Transportation Authority (MBTA)/CSX Railroad corridor and Lansdowne Train Station. Beacon Street passes over the railroad corridor and the Massachusetts Turnpike as MassDOT Structure No. 50 (Beacon Street Bridge). The site is bordered to the east by the Brookline Avenue Bridge, which passes over the railroad corridor and the Massachusetts

Turnpike as MassDOT Structure No. 51 (Brookline Avenue Bridge). Immediately adjacent, and parallel, to the Brookline Avenue Bridge is an 8.5 feet (ft) wide utility bridge containing various utility lines and extends across the Turnpike and railroad corridor.

To the north, the site is bordered by six low-rise buildings of various sizes, ranging from one to four stories tall. The western most building is an MBTA Vent structure for the MBTA Greenline Tunnel. Adjacent to the MBTA Vent building are properties owned and operated by Eversource Energy.

The existing site grade of the Massachusetts Turnpike ranges from approximately El. 16.2[1] to 14.1 in the eastbound lane and from approximately El. 15.2 to 13.4 in the westbound lane.

Parcel B8-4

Parcel B8-4 is located northeast of the main site and is bordered by Massachusetts Turnpike to the south, Brookline Avenue to east, and a below grade parking lot to the north and east. The parcel is a grass lot at approximately El. 35, level with Brookline Avenue. Grades slope to approximately El. 12 to 15 on the south, east, and north sides of the parcel. The parcel is bordered by concrete retaining walls on three sides. The southern retaining wall is also the abutment for the utility bridge that spans the MBTA/CSX Railroad corridor and the Massachusetts Turnpike.

Parcel B61-1 and the 'Bowtie' Lot

Parcel B61-1 and the 'Bowtie' lot area are located southeast of the main site and are bordered by the MBTA/CSX Railroad corridor to the north and Brookline Avenue to the southeast. A one-story brick building with one floor of partial below grade space, occupied by Sal's Pizza, is located to the southwest of Parcel B61-1. The Bowtie area is bordered to the south and west by an asphalt parking lot and one-story brick building.

Parcel B61-1 is a grass lot at approximately El. 30, level with Brookline Avenue. To the north and west of the parcel, grades drop to approximately El. 13 to and El. 15, respectively. The parcel is bordered by concrete retaining walls. The eastern edge of the northern retaining wall is also the abutment for the utility bridge that spans the MBTA/CSX Railroad corridor and the Massachusetts Turnpike. The Bowtie is a paved area adjacent to Parcel B61-1 with site grades ranging from El. 13 to 15.

SITE HISTORY AND REGULATORY BACKGROUND

According to MassDEP, there are no known releases associated with the site. The main site has been the Massachusetts Turnpike since 1957. According to a Phase I Environmental Site Assessment report by Tetra Tech Rizzo, dated 24 July 2008, historic Sanborn Fire Insurance Maps between 1937 and 1951 indicate a gasoline station was located at 47 Brookline Avenue, on Parcel B61-1. The Sanborn Maps include three underground storage tanks (USTs) located on the eastern side of Parcel B61-1. It is not known if the USTs were removed or abandoned in place.

[1] Elevations reported herein are reported in feet and reference Boston City Base (BCB) datum.

PROPOSED CONSTRUCTION

The proposed construction includes the construction of a mixed-use development air rights project above the Boston Extension of the Massachusetts Turnpike (I-90), the MBTA/CSX rail alignment, Parcel B61-1, and Parcel B8-4. The development includes two towers: Building 3, located over the western portion of the site, towards Beacon Street, and Building 4, located over the eastern portion of the site towards Brookline Avenue. The towers will be connected at the lower levels by a five-level parking garage.

The top of the lowest level deck is planned at El. 35 over the Massachusetts Turnpike and MBTA/CSX Railroad Corridor and will include a garage entrance on Brookline Avenue and exit on Beacon Street. We understand the lowest level floor slab is located in the Parcel B61-1 area and is planned at approximately El. 19, with a lowered slab area for a tank at El. 14. A pedestrian deck will also be constructed over the outbound platform and outbound rail track to connect Beacon Street and Brookline Avenue.

CURRENT GROUNDWATER QUALITY DATA

To evaluate groundwater quality at the site, an observation well (HA20-101 (OW)) was installed at the site on 13 March 2020. The observation well was developed on 27 March 2020, and a groundwater sample was collected from the observation well on 31 March 2020. The sampling location is shown on Figure 2.

The sample was submitted to Alpha Analytical, Inc. of Westborough, Massachusetts (Alpha) for analysis of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), total petroleum hydrocarbons (TPH), total metals, dissolved hexavalent chromium, polychlorinated biphenyls (PCBs), ammonia, cyanide, total hardness, ethanol, total chloride, total residual chlorine, total phenols, and total suspended solids. pH and temperature readings were collected in the field. The results indicated concentrations of iron which exceed the draft site-specific NPDES RGP effluent criteria. The results are provided in Table I, and the laboratory data reports are included in Appendix B.

RECEIVING WATERS SAMPLING AND DILUTION FACTOR

On 8 May 2020, Haley & Aldrich collected one surface water sample designated 2020-0508-SW from upstream of the proposed outfall location into the Charles River, and the sample was submitted to Alpha for total metals, dissolved hexavalent chromium, ammonia, pH, and hardness. Temperature readings were collected in the field. The results of the surface water sampling are summarized in Table II, and a copy of the laboratory data report is included in Appendix B.

The seven-day-ten-year flow (7Q10) of the receiving water was established using the U.S. Geological Survey (USGS) StreamStats program and confirmed by Massachusetts Department of Environmental Protection (MassDEP) on 16 May 2020. We also confirmed with MassDEP that the dilution factor for the receiving waters is 111.4. The StreamStats Report, Dilution Factor calculations, and confirmation from MassDEP are included in Appendix C.

EFFLUENT CRITERIA DOCUMENTATION

Groundwater and Receiving Water data were input into the MALimitsBook calculation spreadsheet provided by EPA and used to calculate the effluent criteria for the site. A copy of the "EnterData" from the provided excel file are included in Appendix C. The technology based effluent limits (TBELs) are included for reference in Table I.

DEWATERING SYSTEM AND OFF-SITE DISCHARGE

During construction activities, it will be necessary to perform temporary dewatering to control surface water runoff from groundwater seepage to enable construction in-the-dry. Construction and construction dewatering activities are currently anticipated to be required for a period of approximately 18 months. On average, we estimate effluent discharge rates of about 50 to 100 gallons per minute (gpm) or less. Temporary dewatering will be conducted from sumps located in excavations.

Construction dewatering will include piping and discharging to the storm drains shown on Figure 3A. The proposed discharge route and outfall location is shown on Figures 3A through 3G. Prior to discharge, collected water will be routed through a fractionation tank and bag filters and other necessary treatment components, to remove suspended solids and undissolved chemical constituents, as shown on Figure 4. A Notice of Change (NOC) will be submitted to EPA if additional treatment components need to be mobilized at the site.

DOCUMENTATION OF NATIONAL HISTORIC PRESERVATION ACT ELIGIBILITY REQUIREMENTS

Based on a review of the resources provided by the U.S. National Register of Historic Places and a review of the Massachusetts Cultural Resource Information System (MACRIS), no historic properties have been established to be present at the project site, and discharges and discharge-related activities are not considered to have the potential to affect historic properties. The discharge is considered to meet Criterion A. Documentation is included in Appendix D.

DETERMINATION OF ENDANGERED SPECIES ACT ELIGIBILITY

According to the guidelines outlined in Appendix I of the 2017 NPDES RGP, a preliminary determination for the action area associated with this project was established using the U.S. Fish and Wildlife Service (FWS) Information for Planning and Consultation (IPaC) online system; a copy of the determination is attached in Appendix E. Based on the results of the determination, the project and action area are considered to meet FWS Criterion A as no listed species or critical habitat have been established to be present within the project action area.

SUPPLEMENTAL INFORMATION

Applications for temporary construction dewatering permit are being submitted concurrently to the Boston Water and Sewer Commission (BWSC) and MassDOT; copies of these applications are provided in Appendix F. Approval will be received prior to the start of discharge. A Best Management Practices Plan (BMPP), which outlines the proposed discharge operations covered under the RGP, will be available at the site and is included in Appendix G.

Owner and Operator Information

Owner:
MK Parcel 7 Development, LLC
One Boston Place
201 Washington Street, Suite 3920
Boston, Massachusetts 02108
Attn: David Surette

Operator:
J.F. White Contracting, Co., Inc.
10 Burr Street
Framingham, Massachusetts 01701
Attn: Jack Dugan

CLOSING

Thank you very much for your consideration. Please feel free to contact us should you wish to discuss the information contained herein or if you need additional information.

Sincerely yours,
HALEY & ALDRICH, INC.

Elizabeth J. Christmas, P.E.
Assistant Project Manager

Denis J. Bell, P.E.
Senior Engineer

Attachments:

Table I – Summary of Groundwater Quality Data
Table II – Summary of Receiving Water Data
Figure 1 – Project Locus
Figure 2 – Site and Subsurface Exploration Location Plan
Figures 3A to 3G – BWSC Maps
Figure 4 – Proposed Treatment System Schematic
Appendix A – Notice of Intent (NOI) and WM15 Transmittal
Appendix B – Laboratory Data Reports
Appendix C – Dilution Factor and Effluent Limit Calculations
Appendix D – National Register of Historic Places Documentation
Appendix E – Endangered Species Act Documentation
Appendix F – Copies of BWSC and MassDOT Permit Applications
Appendix G – Best Management Practices Plan (BMPP)

G:\29727\235-PhaseII\NPDES\text\2020-0521-HAI-Fenway Center Phase II-NPDES RGP_F.docx

TABLE I
SUMMARY OF GROUNDWATER QUALITY DATA
FENWAY CENTER PHASE II
BOSTON, MA
FILE NO. 29727-236

Location Name Sample Name Sample Date Lab Sample ID	NPDES RGP III Freshwater	HA20-101 HA20-101_2020-0331 03/31/2020 20040098-001 L2013945-01
Volatile Organic Compounds (ug/L)		
1,1,1-Trichloroethane	200	ND (2)
1,1,2-Trichloroethane	5	ND (1.5)
1,1-Dichloroethane	70	ND (1.5)
1,1-Dichloroethene	3.2	ND (1)
1,2-Dibromoethane (Ethylene Dibromide)	0.05	ND (0.01)
1,2-Dichlorobenzene	600	ND (5)
1,2-Dichloroethane	5	ND (1.5)
1,3-Dichlorobenzene	320	ND (5)
1,4-Dichlorobenzene	5	ND (5)
Acetone	7970	ND (10)
Benzene	5	ND (1)
Carbon tetrachloride	4.4	ND (1)
cis-1,2-Dichloroethene	70	ND (1)
Ethylbenzene	100	ND (1)
m,p-Xylenes	100	ND (2)
Methyl Tert Butyl Ether	70	ND (10)
Methylene chloride	4.6	ND (1)
o-Xylene	100	ND (1)
Tert-Amyl Methyl Ether (TAME)	90	ND (20)
Tert-Butyl Alcohol (tert-Butanol)	120	ND (100)
Tetrachloroethene	5	ND (1)
Toluene	100	ND (1)
Trichloroethene	5	ND (1)
Vinyl chloride	2	ND (1)
Xylene (total)	100	ND (1)
SUM of BTEX Compounds	100	ND
SUM of VOCs	NA	ND
Volatile Organic Compounds SIM (ug/L)		
1,4-Dioxane	200	ND (50)
Semi-Volatile Organic Compounds (ug/L)		
Benzo(a)anthracene	NA	ND (0.1)
Benzo(a)pyrene	NA	ND (0.1)
Benzo(b)fluoranthene	NA	ND (0.1)
Benzo(k)fluoranthene	NA	ND (0.1)
Chrysene	NA	ND (0.1)
Dibenz(a,h)anthracene	NA	ND (0.1)
Indeno(1,2,3-cd)pyrene	NA	ND (0.1)
Group I PAH	1	ND
Acenaphthene	100	0.22
Acenaphthylene	100	ND (0.1)
Anthracene	100	ND (0.1)
Fluorene	100	0.12
Naphthalene	20	0.12
Phenanthrene	100	ND (0.1)
Benzo(g,h,i)perylene	100	ND (0.1)
Fluoranthene	100	ND (0.1)
Pyrene	100	ND (0.1)
Group II PAH	100	0.46
bis(2-Ethylhexyl)phthalate	101	ND (2.2)
Butyl benzylphthalate	190	ND (5)
Diethyl phthalate	190	ND (5)
Dimethyl phthalate	190	ND (5)
Di-n-butylphthalate	190	ND (5)
Di-n-octyl phthalate	190	ND (5)
Pentachlorophenol	1	ND (1)
SUM of Semi-Volatile Organic Compounds	NA	0.46
Petroleum Hydrocarbons (mg/L)		
Total petroleum hydrocarbons	5	ND (4)
Ethanol	Report	ND (20)
Metals (mg/L)		
Antimony, Total	0.206	ND (0.004)
Arsenic, Total	0.104	ND (0.001)
Cadmium, Total	0.0102	ND (0.0002)
Chromium, Total	NA	ND (0.001)
Chromium III (Trivalent), Total	0.323	ND (0.01)
Chromium VI (Hexavalent), Dissolved	0.323	ND (0.01)
Copper, Total	0.242	0.0023
Iron, Total	5	**8.7**
Lead, Total	0.16	ND (0.001)
Mercury, Total	0.000739	ND (0.0002)
Nickel, Total	1.45	0.00421
Selenium, Total	0.2358	ND (0.005)
Silver, Total	0.0351	ND (0.0004)
Zinc, Total	0.42	0.01117
PCBs (ug/L)		
Aroclor-1016 (PCB-1016)	6.40E-05	ND (0.25)
Aroclor-1221 (PCB-1221)	6.40E-05	ND (0.25)
Aroclor-1232 (PCB-1232)	6.40E-05	ND (0.25)
Aroclor-1242 (PCB-1242)	6.40E-05	ND (0.25)
Aroclor-1248 (PCB-1248)	6.40E-05	ND (0.25)
Aroclor-1254 (PCB-1254)	6.40E-05	ND (0.25)
Aroclor-1260 (PCB-1260)	6.40E-05	ND (0.2)
Other		
Ammonia, Total (mg/L)	Report	1.3
Hardness (mg/L)	Report	212
Chloride, Total (mg/L)	Report	2980
Chlorine, residual, Total (mg/L)	0.2	ND (0.02)
Cyanide, Total (mg/L)	178	ND (0.005)
Total Phenols (mg/L)	1.08	ND (0.03)
Total Suspended Solids (TSS) (mg/L)	30	ND (5)

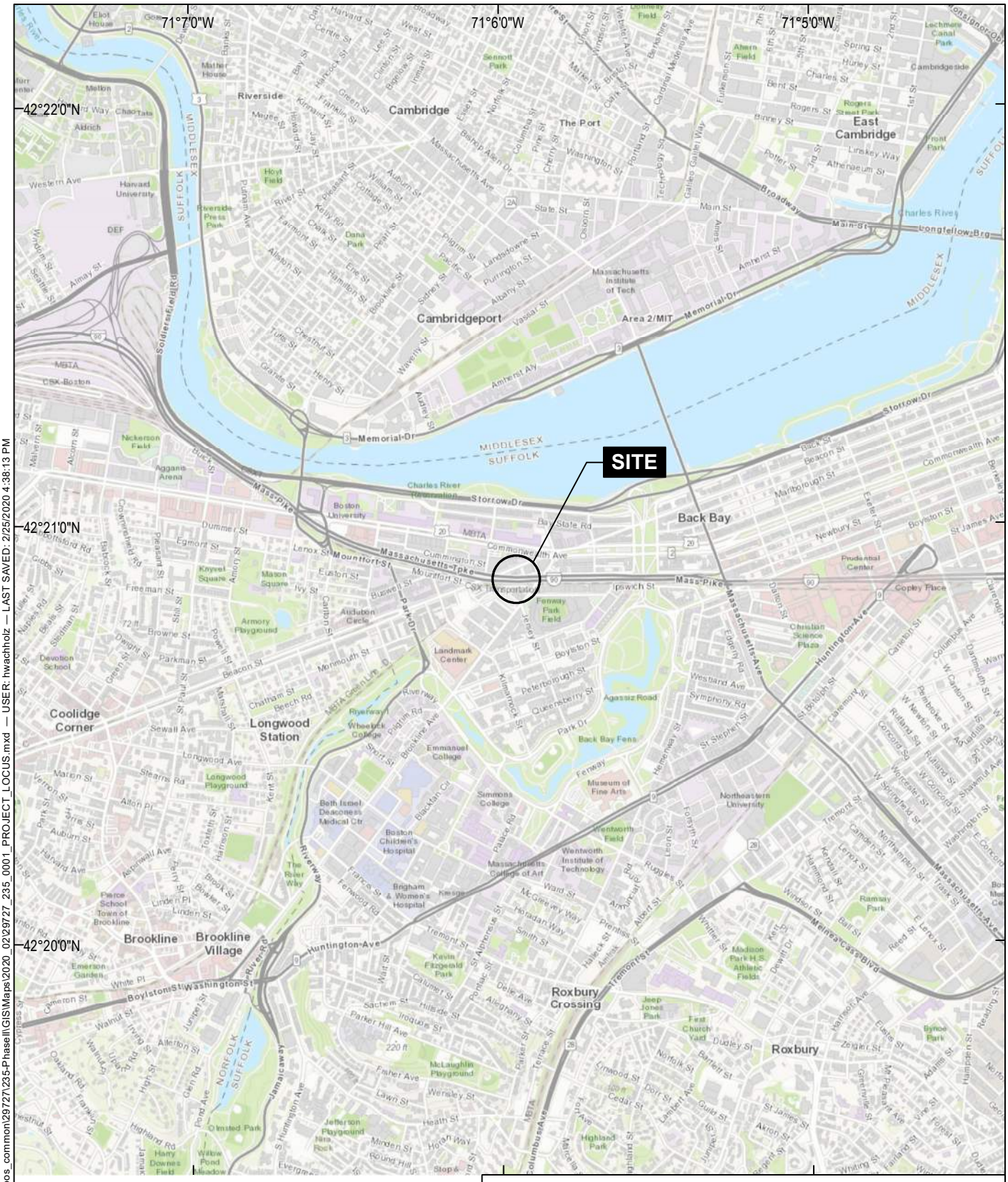
ABBREVIATIONS AND NOTES:
NA: Not Applicable
ND (2.5): Not detected, number in parentheses is the laboratory detection limit

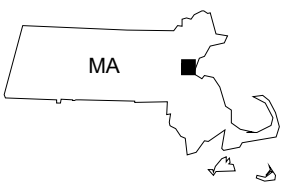
- **Bold** values indicate an exceedance of the NPDES RGP criteria.

TABLE II
SUMMARY OF RECEIVING WATER QUALITY DATA
FENWAY CENTER PHASE II
BOSTON, MA
FILE NO. 29727-236

Location Name	Charles River
Sample Name	2020-0508-SW
Sample Name	5/8/2020
Lab Sample ID	L2019143-01
Metals (mg/L)	
Antimony, Total	ND(0.004)
Arsenic, Total	ND(0.001)
Cadmium, Total	ND(0.0002)
Chromium, Total	ND(0.001)
Chromium, Trivalent	ND(0.01)
Chromium, Hexavalent	ND(0.01)
Copper, Total	0.00266
Iron, Total	0.606
Lead, Total	0.00254
Mercury, Total	ND(0.0002)
Nickel, Total	ND(0.002)
Selenium, Total	ND(0.005)
Silver, Total	ND(0.0004)
Zinc, Total	0.01302
Other	
Ammonia, Total (mg/L)	0.079
pH (SU)	7.9
Hardness (mg/L)	48.8

ABBREVIATIONS AND NOTES:
NA: Not Applicable
ND (2.5): Not detected, number in parentheses is the laboratory detection limit





MAP SOURCE: ESRI
SITE COORDINATES: 42°20'52"N, 71°5'57"W

HALEY ALDRICH

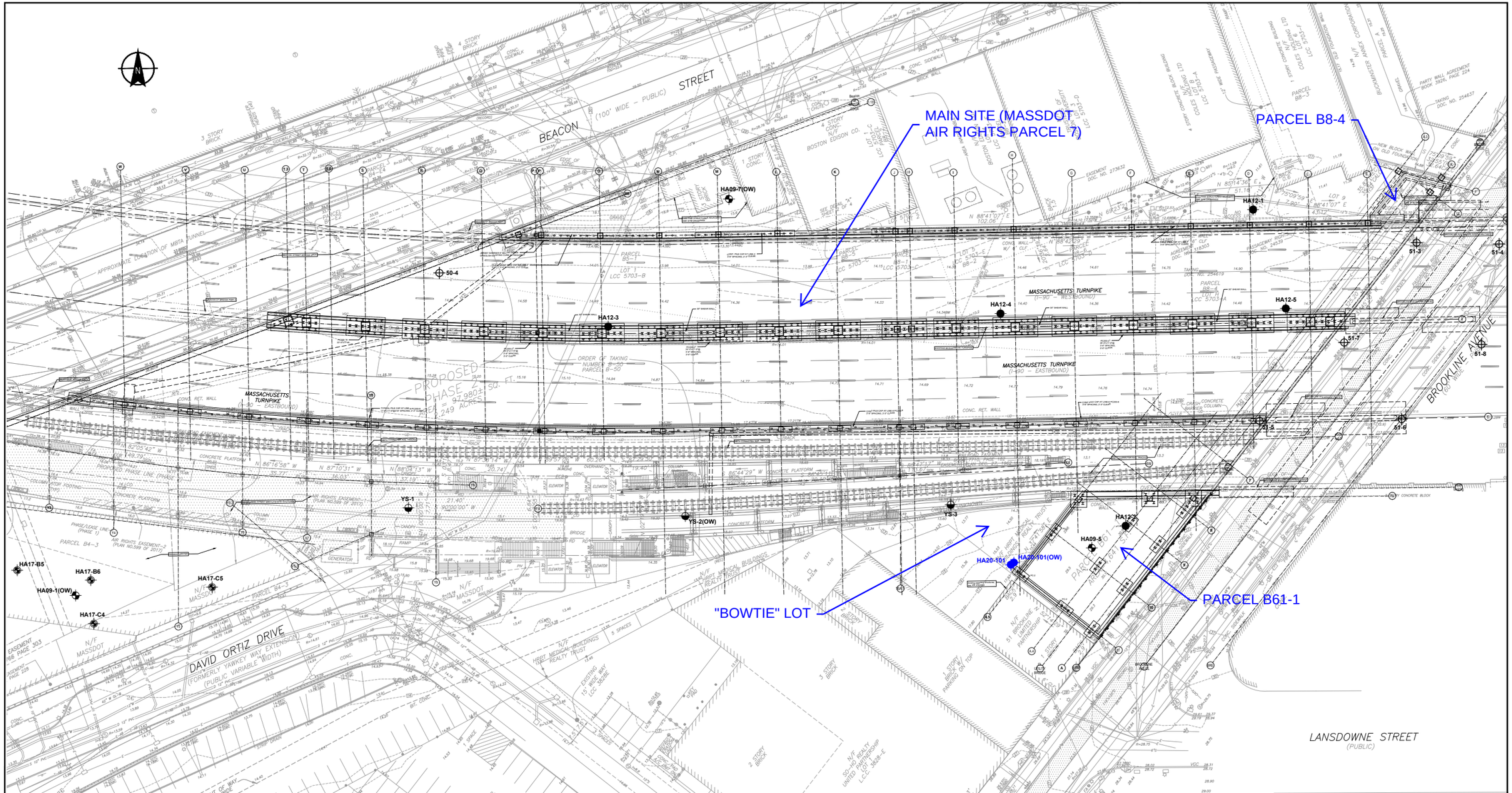
FENWAY CENTER PHASE 2 - PARCEL 7 DEVELOPMENT
MASSACHUSETTS TURNPIKE
BOSTON, MASSACHUSETTS

PROJECT LOCUS

APPROXIMATE SCALE: 1 IN = 2000 FT
MAY 2020

FIGURE 1

GIS FILE PATH: \\haleyaldrich.com\shared\bos_common\129727\235-Phase II\GIS\Maps\2020_02\29727_235_0001_PROJECT_LOCUS.mxd — USER: hwachholz — LAST SAVED: 2/25/2020 4:38:13 PM



LEGEND

- HA17-C5 — DESIGNATION AND APPROXIMATE LOCATION OF TEST BORING DRILLED BY NORTHERN DRILL SERVICE BETWEEN 10 AND 19 MAY 2017
- HA12-3 — DESIGNATION AND APPROXIMATE LOCATION OF TEST BORING DRILLED BY GEOLOGIC EARTH EXPLORATION BETWEEN 26 OCTOBER AND 9 NOVEMBER 2012
- HA09-1 — DESIGNATION AND APPROXIMATE LOCATION OF LANSDOWNE STATION TEST BORING DRILLED BY GEOLOGIC EARTH EXPLORATION BETWEEN 13 AND 15 OCTOBER 2009
- YS-2 — DESIGNATION AND APPROXIMATE LOCATION OF TEST BORING DRILLED BY GEOLOGIC EARTH EXPLORATION BETWEEN 17 FEBRUARY AND 11 MARCH 2009
- 51-6 — DESIGNATION AND APPROXIMATE LOCATION OF TEST BORING DRILLED BY RAYMOND CONCRETE PILE COMPANY BETWEEN 23 APRIL AND 5 JULY 1962
- (OW) — INDICATES OBSERVATION WELL INSTALLED IN COMPLETED BOREHOLE
- HA20-101 — DESIGNATION AND APPROXIMATE LOCATION OF TEST BORING DRILLED BY GEOLOGIC EARTH EXPLORATION BETWEEN 5 AND 12 MARCH 2020

NOTES

1. BASE PLAN TAKEN FROM DRAWING TITLED "17043-PHASE PLAN (SUBMIT 12-6-2019)" PREPARED BY FELDMAN LAND SURVEYORS OF BOSTON, MASSACHUSETTS, DATED 11 NOVEMBER, 2019.
2. PROPOSED FOUNDATION LOCATIONS TAKEN FROM DRAWING TITLED: "FENWAY CENTER PII, 30% FOUNDATION DESIGN PACKAGE" PREPARED BY LEMESSURIER CONSULTING ENGINEERS OF BOSTON, MASSACHUSETTS, DATED 10 DECEMBER 2019.
3. ELEVATIONS ARE IN FEET AND REFER TO BOSTON CITY DATUM (BCB).

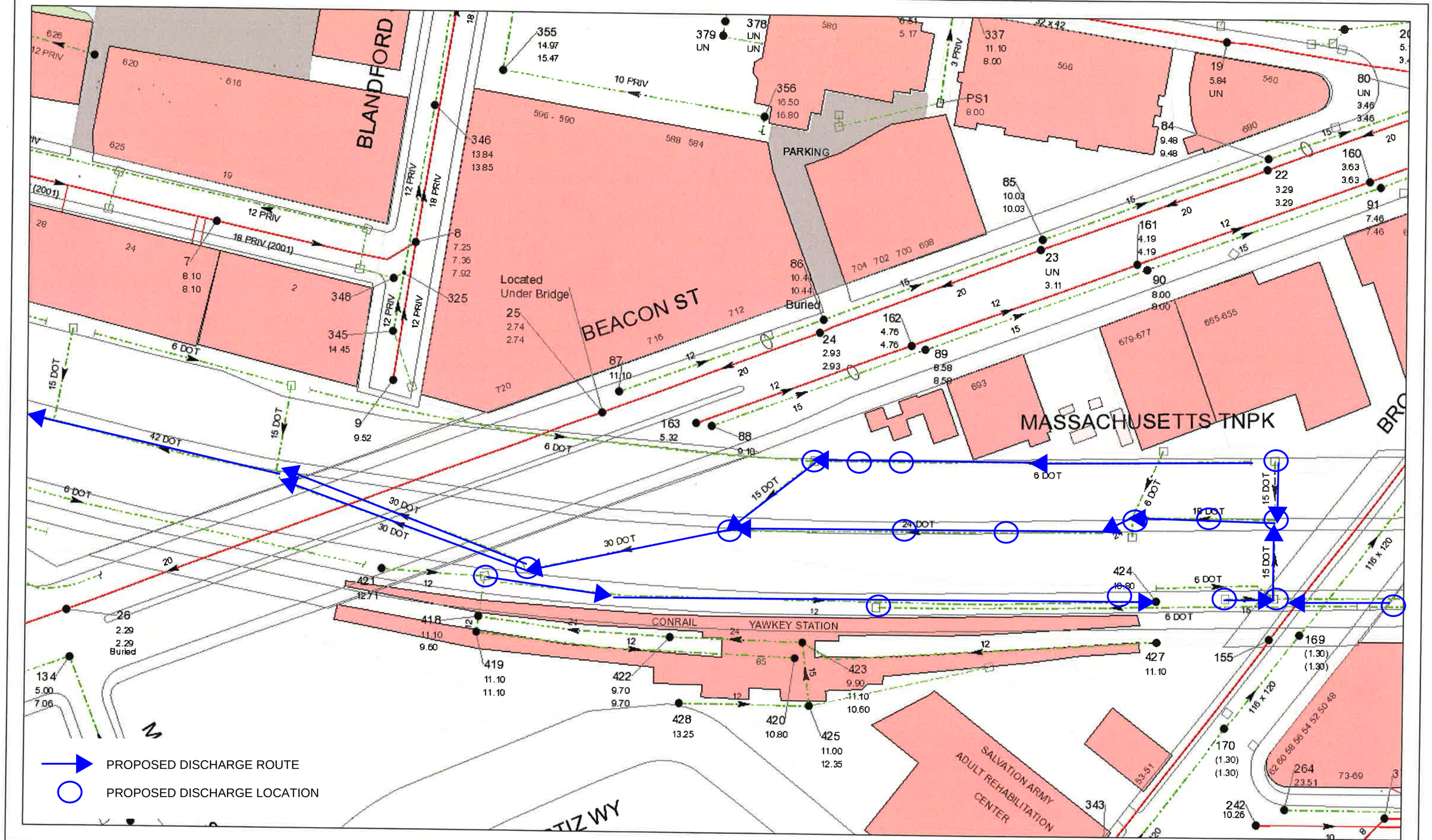
HALEY ALDRICH

FENWAY CENTER PHASE 2 - PARCEL 7 DEVELOPMENT
MASSACHUSETTS TURNPIKE
BOSTON, MASSACHUSETTS

SITE AND SUBSURFACE EXPLORATION PLAN

SCALE: AS SHOWN
MAY 2020

FIGURE 2



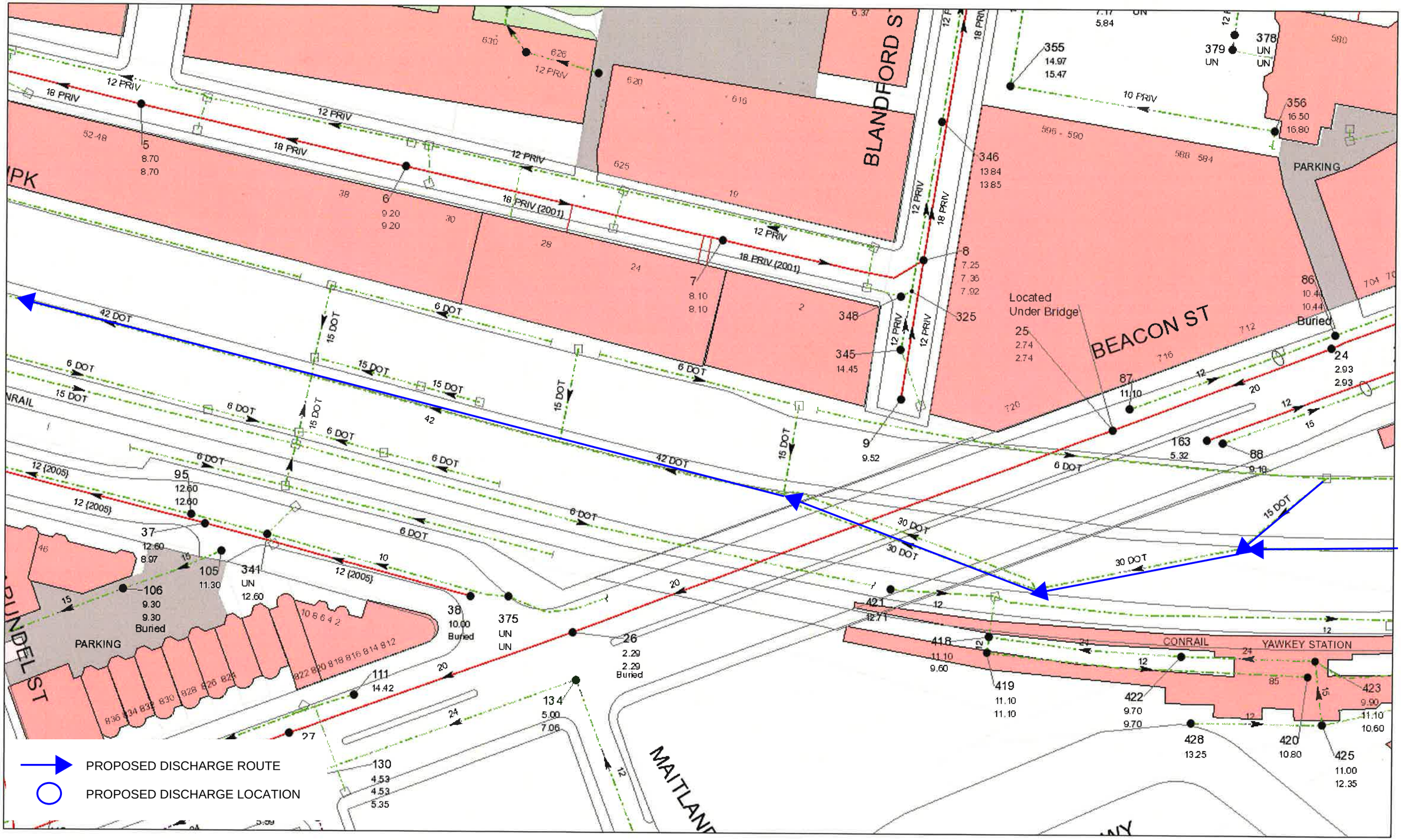
BOSTON WATER AND SEWER

N W E S

0 50 100
Feet

brookline ave at mass pike

FIGURE 3A



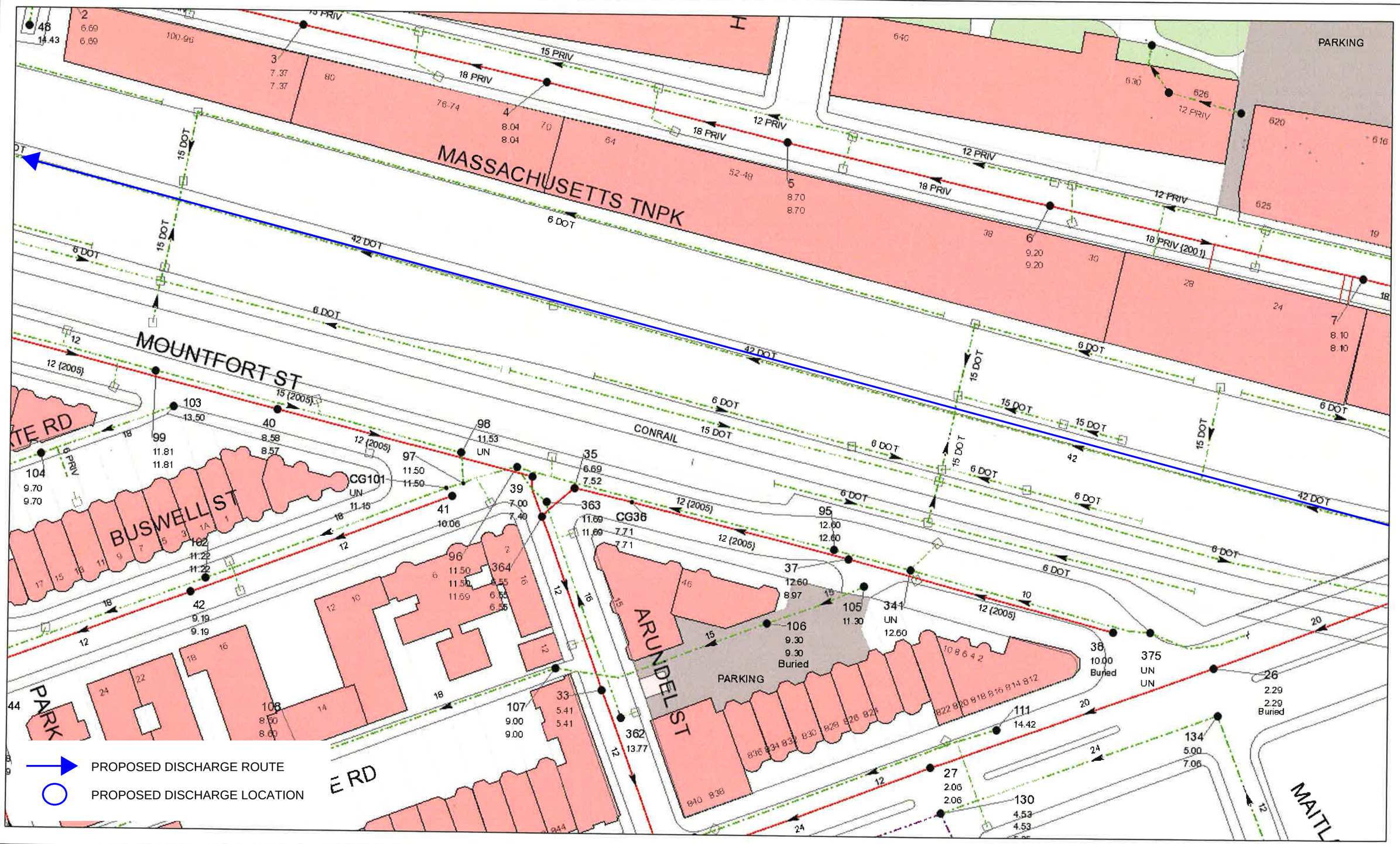
BOSTON WATER AND SEWER

N W E S

0 50 100 Feet

brookline ave at mass pike

FIGURE 3B



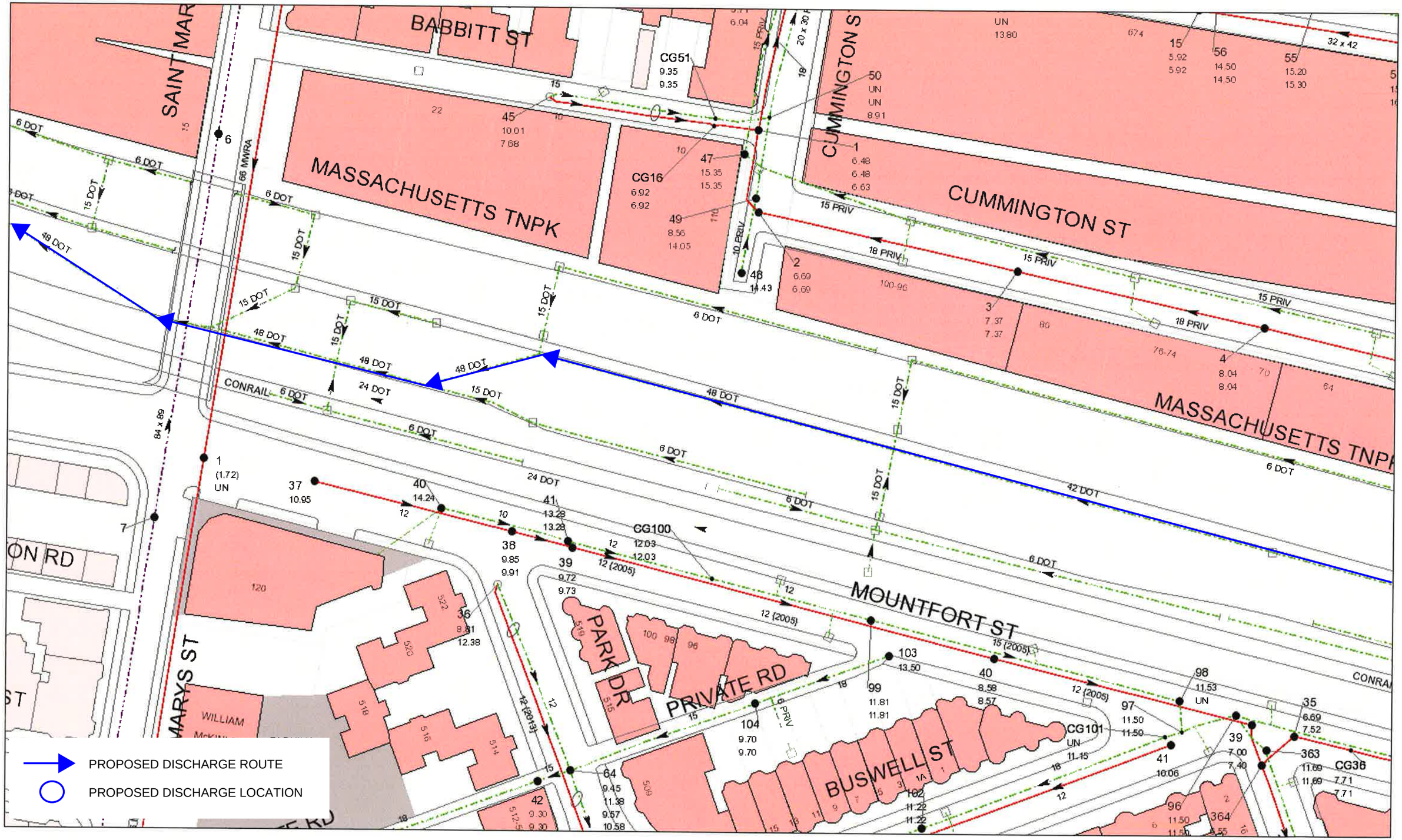
BOSTON WATER AND SEWER

N W E S

0 50 100
Feet

brookline ave at mass pike

FIGURE 3C



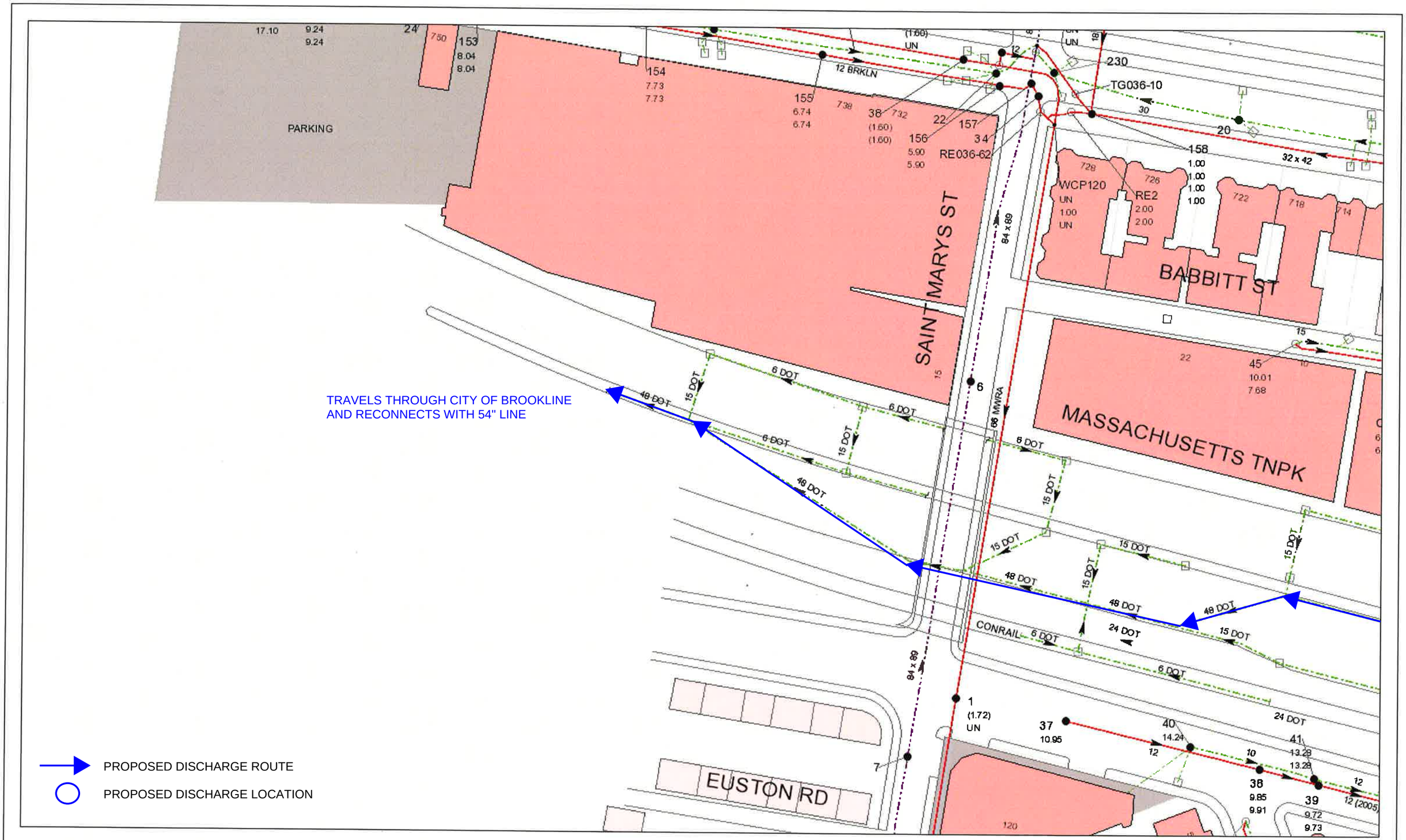
BOSTON WATER AND SEWER

N
W E
S

0 50 100
Feet

brookline ave at mass pike

FIGURE 3D



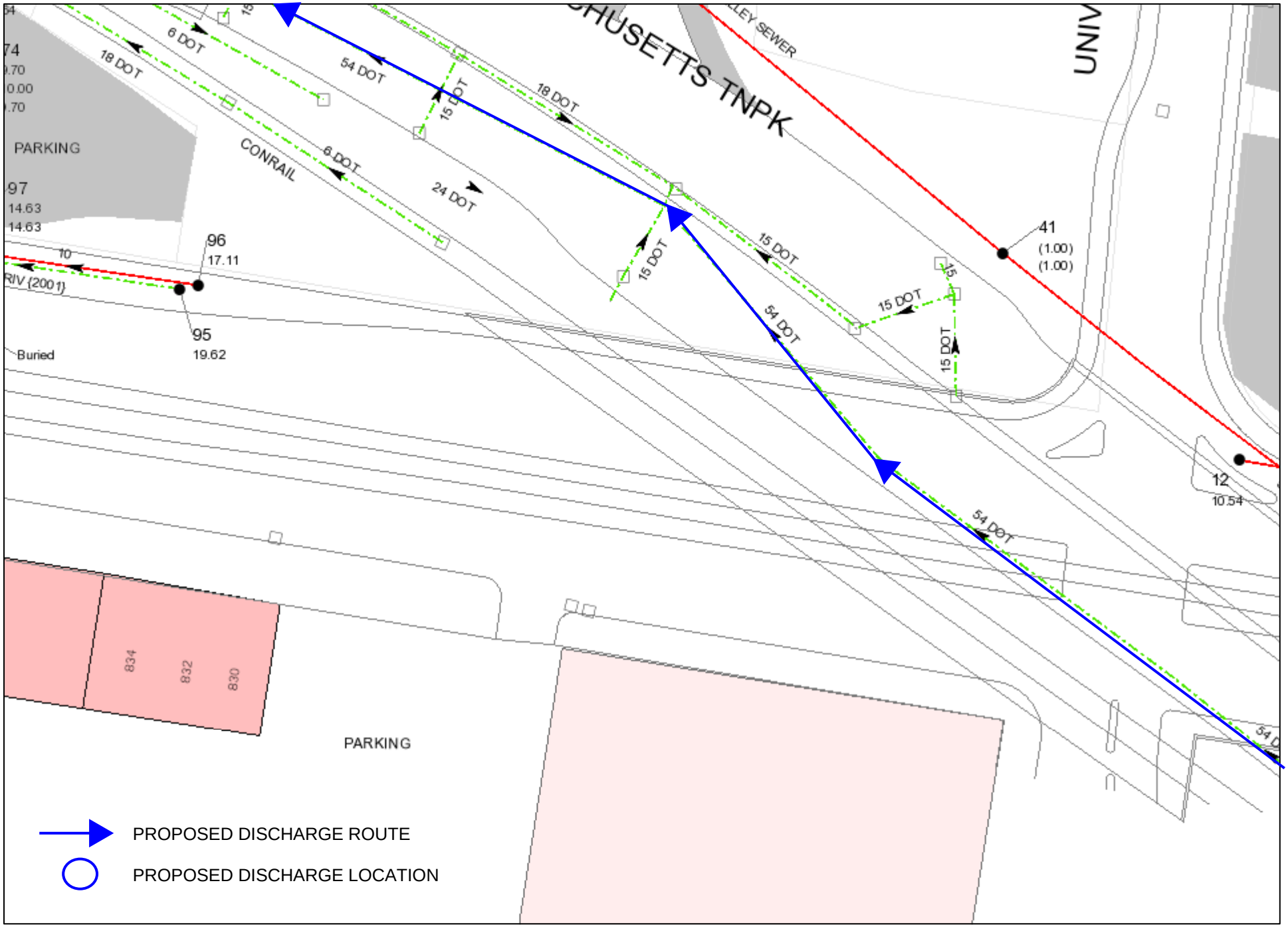
BOSTON WATER AND SEWER

N W E S

0 50 100
Feet

brookline ave at mass pike

FIGURE 3E

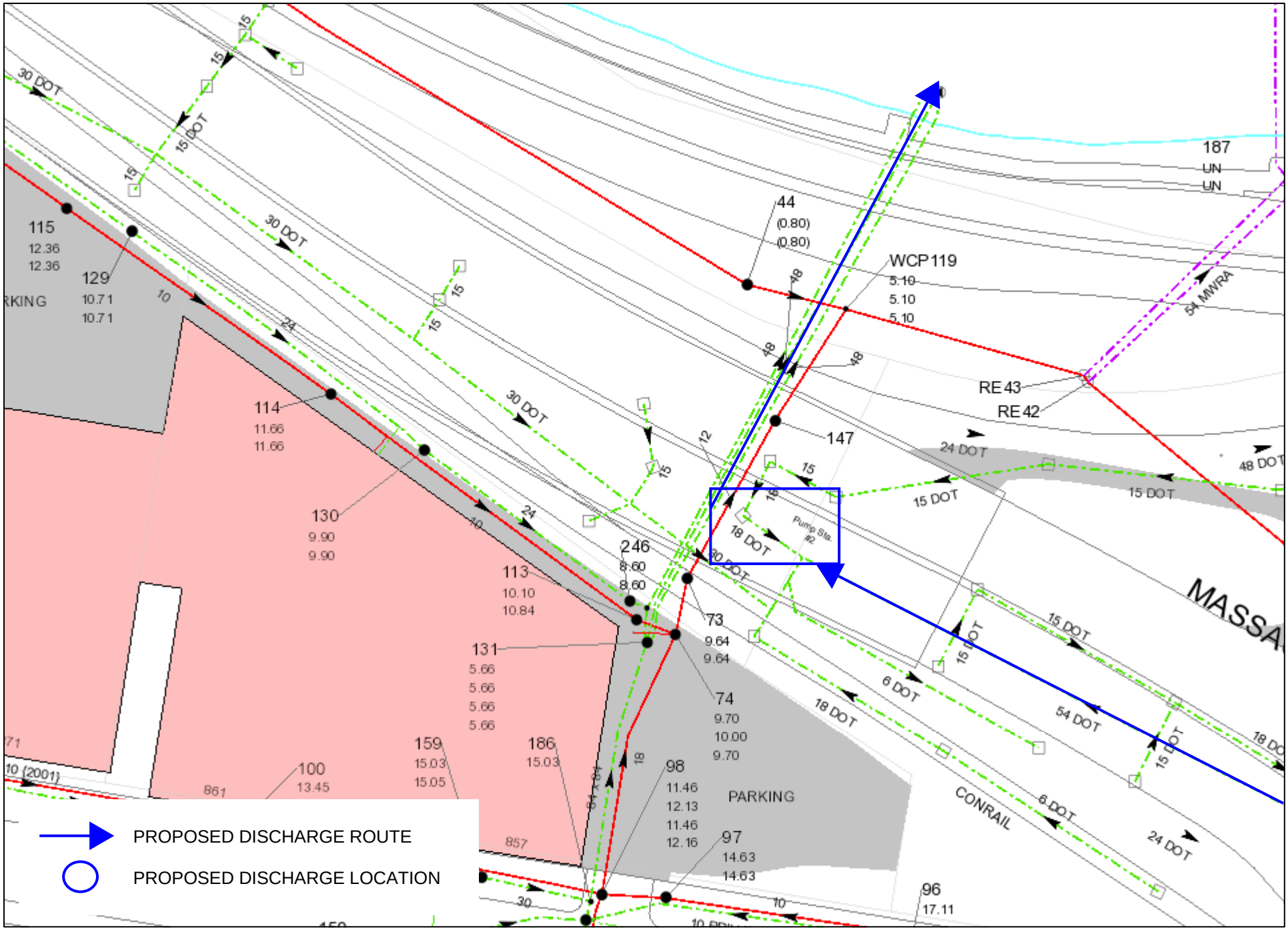


N
W E
S

0 50 100
Feet

s3

FIGURE 3F



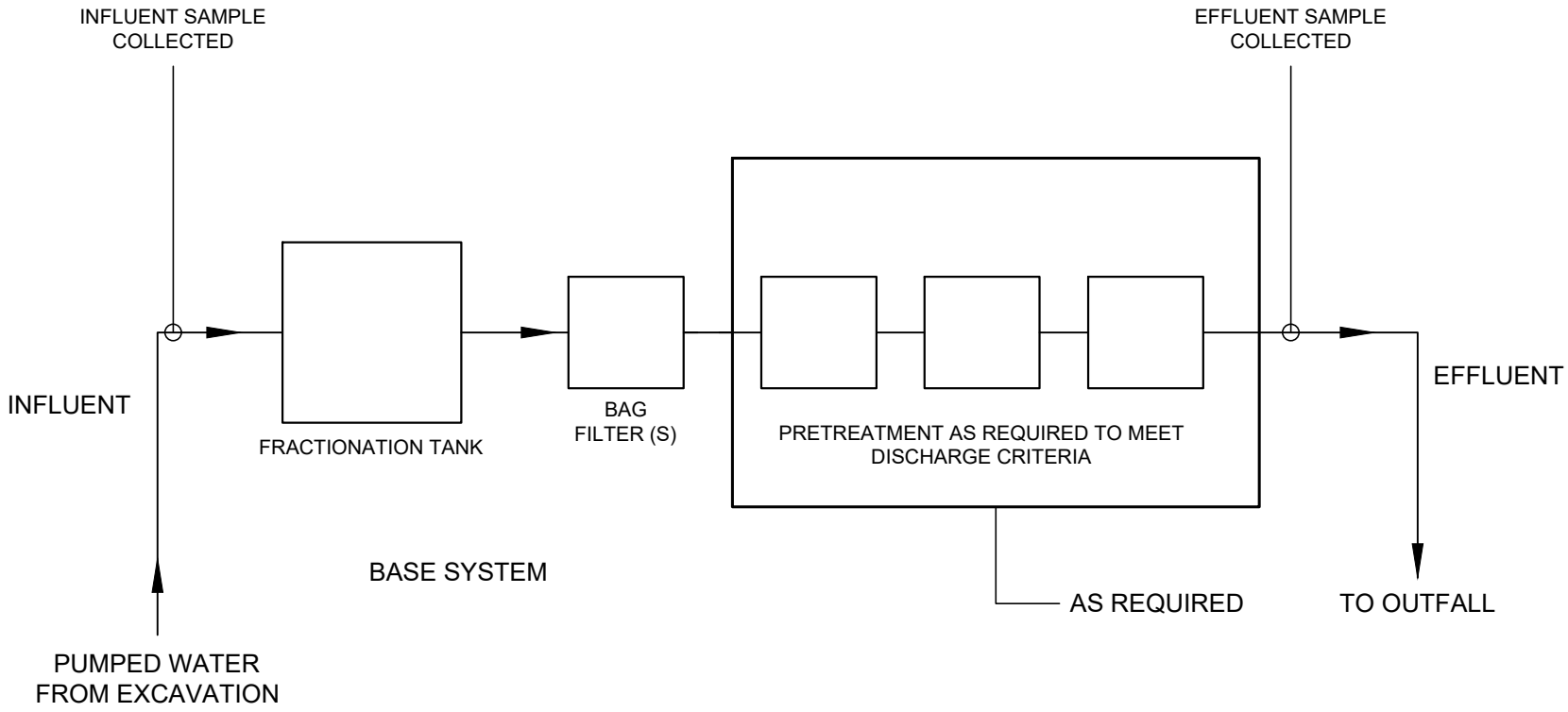
BOSTON WATER AND SEWER

N W E S

0 50 100 Feet

s4

FIGURE 3G



LEGEND:

DIRECTION OF FLOW

NOTE:

1. DETAILS OF TREATMENT SYSTEM MAY VARY FROM SYSTEM INDICATED ABOVE. SPECIFIC MEANS AND METHODS OF TREATMENT TO BE SELECTED BY CONTRACTOR. WATER WILL BE TREATED TO MEET REQUIRED EFFLUENT STANDARDS.

HALEY ALDRICH

FENWAY CENTER PHASE 2 - PARCEL 7 DEVELOPMENT
MASSACHUSETTS TURNPIKE
BOSTON, MASSACHUSETTS

PROJECT TREATMENT SYSTEM SCHEMATIC

SCALE: AS SHOWN
MAY 2020

FIGURE 4

APPENDIX A

Notice of Intent (NOI) and WM15 Transmittal

II. Suggested Format for the Remediation General Permit Notice of Intent (NOI)

A. General site information:

<table>
<tr><td rowspan="2">1. Name of site:
Fenway Center Phase II - Parcel 7 Development</td><td colspan="3">Site address: Massachusetts Turnpike, between Brookline Avenue and Beacon Street Bridges
Street:</td></tr>
<tr><td>City: Boston</td><td>State: MA</td><td>Zip: 02215</td></tr>
<tr><td rowspan="4">2. Site owner
MK Parcel 7 Development, LLC

Owner is (check one): ☐ Federal ☐ State/Tribal ■ Private
☐ Other; if so, specify:</td><td colspan="3">Contact Person: David Surette</td></tr>
<tr><td colspan="2">Telephone: 617-314-7906</td><td>Email: dsurette@iqhqreit.com</td></tr>
<tr><td colspan="3">Mailing address: One Boston Place
201 Washington Street, Suite 3920
Street:</td></tr>
<tr><td>City: Boston</td><td>State: MA</td><td>Zip: 02108</td></tr>
<tr><td rowspan="4">3. Site operator, if different than owner
J.F. White Contracting Co., Inc.</td><td colspan="3">Contact Person: Jack Dugan</td></tr>
<tr><td colspan="2">Telephone: 617-558-0491</td><td>Email: jdugan@jfwhite.com</td></tr>
<tr><td colspan="3">Mailing address:
10 Burr Street
Street:</td></tr>
<tr><td>City: Framingham</td><td>State: MA</td><td>Zip: 01701</td></tr>
<tr><td>4. NPDES permit number assigned by EPA:
Not applicable

NPDES permit is (check all that apply: ■ RGP ☐ DGP ☐ CGP
☐ MSGP ☐ Individual NPDES permit ☐ Other; if so, specify:</td><td colspan="3">5. Other regulatory program(s) that apply to the site (check all that apply):
☐ MA Chapter 21e; list RTN(s):
☐ NH Groundwater Management Permit or Groundwater Release Detection Permit:
☐ CERCLA
☐ UIC Program
☐ POTW Pretreatment
☐ CWA Section 404</td></tr>
</table>

B. Receiving water information:

1. Name of receiving water(s):	Waterbody identification of receiving water(s):	Classification of receiving water(s):
Charles River	MA72-38	Class B

Receiving water is (check any that apply): ☐ Outstanding Resource Water ☐ Ocean Sanctuary ☐ territorial sea ☐ Wild and Scenic River

2. Has the operator attached a location map in accordance with the instructions in B, above? (check one): ■ Yes ☐ No

Are sensitive receptors present near the site? (check one): ☐ Yes ■ No
If yes, specify:

3. Indicate if the receiving water(s) is listed in the State's Integrated List of Waters (i.e., CWA Section 303(d)). Include which designated uses are impaired, and any pollutants indicated. Also, indicate if a final TMDL is available for any of the indicated pollutants. For more information, contact the appropriate State as noted in Part 4.6 of the RGP. See attached page; TMDLs for pathogens (e. Coli) and nutrients

4. Indicate the seven day-ten-year low flow (7Q10) of the receiving water determined in accordance with the instructions in Appendix V for sites located in Massachusetts and Appendix VI for sites located in New Hampshire.	15.9 MGD
5. Indicate the requested dilution factor for the calculation of water quality-based effluent limitations (WQBELs) determined in accordance with the instructions in Appendix V for sites in Massachusetts and Appendix VI for sites in New Hampshire.	111.4

6. Has the operator received confirmation from the appropriate State for the 7Q10and dilution factor indicated? (check one): ■ Yes ☐ No
If yes, indicate date confirmation received: 5/16/2020

7. Has the operator attached a summary of receiving water sampling results as required in Part 4.2 of the RGP in accordance with the instruction in Appendix VIII? (check one): ■ Yes ☐ No

C. Source water information:

1. Source water(s) is (check any that apply):

■ Contaminated groundwater Has the operator attached a summary of influent sampling results as required in Part 4.2 of the RGP in accordance with the instruction in Appendix VIII? (check one): ■ Yes ☐ No	☐ Contaminated surface water Has the operator attached a summary of influent sampling results as required in Part 4.2 of the RGP in accordance with the instruction in Appendix VIII? (check one): ☐ Yes ☐ No	☐ The receiving water ☐ A surface water other than the receiving water; if so, indicate waterbody:	☐ Potable water; if so, indicate municipality or origin: ☐ Other; if so, specify:

2. Source water contaminants: acenaphthene, fluorene, naphthalene, copper, iron, nickel, zinc, ammonia, chloride	
a. For source waters that are contaminated groundwater or contaminated surface water, indicate are any contaminants present that are not included in the RGP? (check one): ☐ Yes ■ No If yes, indicate the contaminant(s) and the maximum concentration present in accordance with the instructions in Appendix VIII.	b. For a source water that is a surface water other than the receiving water, potable water or other, indicate any contaminants present at the maximum concentration in accordance with the instructions in Appendix VIII? (check one): ☐ Yes ☐ No
3. Has the source water been previously chlorinated or otherwise contains residual chlorine? (check one): ☐ Yes ■ No	

D. Discharge information

1.The discharge(s) is a(n) (check any that apply): ☐ Existing discharge ■ New discharge ☐ New source	
Outfall(s): 23G132	Outfall location(s): (Latitude, Longitude) N 42.352197, W 71.112845
Discharges enter the receiving water(s) via (check any that apply): ☐ Direct discharge to the receiving water ☐ Indirect discharge, if so, specify: ☐ A private storm sewer system ■ A municipal storm sewer system If the discharge enters the receiving water via a private or municipal storm sewer system: Has notification been provided to the owner of this system? (check one): ■ Yes ☐ No Has the operator has received permission from the owner to use such system for discharges? (check one): ☐ Yes ■ No, if so, explain, with an estimated timeframe for obtaining permission: BWSC and MassDOT permits are being submitted concurrently. Approval will be received prior to the start of discharge. Has the operator attached a summary of any additional requirements the owner of this system has specified? (check one): ☐ Yes ■ No	
Provide the expected start and end dates of discharge(s) (month/year): July 2020 to December 2021 Indicate if the discharge is expected to occur over a duration of: ☐ less than 12 months ■ 12 months or more ☐ is an emergency discharge	
Has the operator attached a site plan in accordance with the instructions in D, above? (check one): ■ Yes ☐ No	

Notice of Intent

B. Receiving Water Information
3. Indicate if the receiving water(s) is listed in the State's Integrate List of Waters (i.e., CWA Section 303(d)). Include which designated uses are impaired, and any pollutants indicated.

Charles River, Segment MA72-38

Impairment	EPA TMDL No.
Flow Regime Modification	TMDL not required (non-pollutant)
Cause Unknown (Sediment Screening Value Exceedance)	
Chlorophyll-a	33826
Combined Biota/Habitat Bioassessments	
DDT in Fish Tissue	
Dissolved Oxygen	
Dissolved Oxygen Supersaturation	33826
Escherichia Coli (e. Coli)	32371
Harmful Algae Blooms	33826
Nutrient/Eutrophication Biological Indicators	33826
Odor	33826
Oil and Grease	
PCBs in Fish Tissue	
Phosphorus, Total	33826
Salinity	
Temperature	
Transparency/Clarity	33826

Notes:
1. Source, "Final Massachusetts Year 2016 Integrated List of Waters, December 2019"
2. EPA TMDL No. 33826, "Total Maximum Daily Load for Nutrients in the Lower Charles River Basin, Massachusetts"

<table>
<tr><td>2. Activity Category: (check all that apply)</td><td colspan="2">3. Contamination Type Category: (check all that apply)</td></tr>
<tr><td rowspan="5">☐ I – Petroleum-Related Site Remediation
☐ II – Non-Petroleum-Related Site Remediation
■ III – Contaminated Site Dewatering
☐ IV – Dewatering of Pipelines and Tanks
☐ V – Aquifer Pump Testing
☐ VI – Well Development/Rehabilitation
☐ VII – Collection Structure Dewatering/Remediation
☐ VIII – Dredge-Related Dewatering</td><td colspan="2">a. If Activity Category I or II: (check all that apply)

☐ A. Inorganics
☐ B. Non-Halogenated Volatile Organic Compounds
☐ C. Halogenated Volatile Organic Compounds
☐ D. Non-Halogenated Semi-Volatile Organic Compounds
☐ E. Halogenated Semi-Volatile Organic Compounds
☐ F. Fuels Parameters</td></tr>
<tr><td colspan="2">b. If Activity Category III, IV, V, VI, VII or VIII: (check either G or H)</td></tr>
<tr><td>■ G. Sites with Known Contamination</td><td>☐ H. Sites with Unknown Contamination</td></tr>
<tr><td>c. If Category III-G, IV-G, V-G, VI-G, VII-G or VIII-G: (check all that apply)

■ A. Inorganics
■ B. Non-Halogenated Volatile Organic Compounds
■ C. Halogenated Volatile Organic Compounds
■ D. Non-Halogenated Semi-Volatile Organic Compounds
■ E. Halogenated Semi-Volatile Organic Compounds
■ F. Fuels Parameters</td><td>d. If Category III-H, IV-H, V-H, VI-H, VII-H or VIII-H Contamination Type Categories A through F apply</td></tr>
</table>

4. Influent and Effluent Characteristics

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
A. Inorganics									
Ammonia		✓	1	4500NH3	75	1300	1300	Report mg/L	---
Chloride		✓	1	300	50000	2980000	2980000	Report µg/l	---
Total Residual Chlorine	✓		1	4500CL	20	0	0	0.2 mg/L	
Total Suspended Solids	✓		1	2540D	5000	0	0	30 mg/L	---
Antimony	✓		1	200.8	4	0	0	206 µg/L	
Arsenic		✓	1	200.8	1	0	0	104 µg/L	
Cadmium		✓	1	200.8	0.2	0	0	10.2 µg/L	
Chromium III		✓	1	107	10	0	0	323 µg/L	
Chromium VI	✓		1	7196A	10	0	0	323 µg/L	
Copper		✓	1	200.8	1	2.3	2.3	242 µg/L	
Iron		✓	1	200.8	50	8700	8700	5,000 µg/L	
Lead		✓	1	200.8	1	0	0	160 µg/L	
Mercury		✓	1	245.1	0.2	0	0	0.739 µg/L	
Nickel		✓	1	200.8	2	4.21	4.21	1,450 µg/L	
Selenium	✓		1	200.8	5	0	0	235.8 µg/L	
Silver	✓		1	200.8	0.4	0	0	35.1 µg/L	
Zinc		✓	1	200.8	10	11.17	11.17	420 µg/L	
Cyanide	✓		1	4500CN	5	0	0	178 mg/L	
B. Non-Halogenated VOCs									
Total BTEX	✓		1	624.1	1	0	0	100 µg/L	---
Benzene	✓		1	624.1	1	0	0	5.0 µg/L	---
1,4 Dioxane	✓		1	624.1 SIM	50	0	0	200 µg/L	---
Acetone		✓	1	624.1	10	0	0	7.97 mg/L	---
Phenol	✓		1	420.1	0.03	0	0	1,080 µg/L	

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
C. Halogenated VOCs									
Carbon Tetrachloride	✓		1	624.1	1	0	0	4.4 µg/L	
1,2 Dichlorobenzene	✓		1	624.1	5	0	0	600 µg/L	---
1,3 Dichlorobenzene	✓		1	624.1	5	0	0	320 µg/L	---
1,4 Dichlorobenzene	✓		1	624.1	5	0	0	5.0 µg/L	---
Total dichlorobenzene	✓		1	624.1	5	0	0	763 µg/L in NH	---
1,1 Dichloroethane	✓		1	624.1	1.5	0	0	70 µg/L	---
1,2 Dichloroethane	✓		1	624.1	1.5	0	0	5.0 µg/L	---
1,1 Dichloroethylene	✓		1	624.1	1	0	0	3.2 µg/L	---
Ethylene Dibromide	✓		1	504.1	0.01	0	0	0.05 µg/L	---
Methylene Chloride	✓		1	624.1	1	0	0	4.6 µg/L	---
1,1,1 Trichloroethane	✓		1	624.1	2	0	0	200 µg/L	---
1,1,2 Trichloroethane	✓		1	624.1	1.5	0	0	5.0 µg/L	---
Trichloroethylene	✓		1	624.1	1	0	0	5.0 µg/L	---
Tetrachloroethylene	✓		1	624.1	1	0	0	5.0 µg/L	
cis-1,2 Dichloroethylene		✓	1	624.1	1	0	0	70 µg/L	---
Vinyl Chloride	✓		1	624.1	1	0	0	2.0 µg/L	---
D. Non-Halogenated SVOCs									
Total Phthalates	✓		1	625.1	5	0	0	190 µg/L	
Diethylhexyl phthalate	✓		1	625.1	2.2	0	0	101 µg/L	
Total Group I PAHs	✓		1	625.1 SIM	0.1	0	0	1.0 µg/L	---
Benzo(a)anthracene	✓		1	625.1 SIM	0.1	0	0	As Total PAHs	
Benzo(a)pyrene	✓		1	625.1 SIM	0.1	0	0		
Benzo(b)fluoranthene	✓		1	625.1 SIM	0.1	0	0		
Benzo(k)fluoranthene	✓		1	625.1 SIM	0.1	0	0		
Chrysene	✓		1	625.1 SIM	0.1	0	0		
Dibenzo(a,h)anthracene	✓		1	625.1 SIM	0.1	0	0		
Indeno(1,2,3-cd)pyrene	✓		1	625.1 SIM	0.1	0	0		

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
Total Group II PAHs		✔	1	625.1 SIM	0.1	0.46	0.46	100 µg/L	---
Naphthalene		✔	1	625.1 SIM	0.1	0.12	0.12	20 µg/L	---
E. Halogenated SVOCs									
Total PCBs		✔	1	608.3	0.25	0	0	0.000064 µg/L	---
Pentachlorophenol	✔		1	625.1 SIM	11	0	0	1.0 µg/L	---
F. Fuels Parameters									
Total Petroleum Hydrocarbons		✔	1	1664A	4000	0	0	5.0 mg/L	---
Ethanol	✔		1	1671A	20000	0	0	Report mg/L	---
Methyl-tert-Butyl Ether	✔		1	624.1	10	0	0	70 µg/L	
tert-Butyl Alcohol	✔		1	624.1	100	0	0	120 µg/L in MA 40 µg/L in NH	---
tert-Amyl Methyl Ether	✔		1	624.1	20	0	0	90 µg/L in MA 140 µg/L in NH	---
Other (i.e., pH, temperature, hardness, salinity, LC_{50}, additional pollutants present); if so, specify:									
pH		✔	1	Field	N/A	6.38	6.38		
Hardness		✔	1	200.7	660	212000	212000		
Temperature (C)		✔	1	Field	N/A	7.98	7.98		

E. Treatment system information

1. Indicate the type(s) of treatment that will be applied to effluent prior to discharge: (check all that apply)

☐ Adsorption/Absorption ☐ Advanced Oxidation Processes ☐ Air Stripping ☐ Granulated Activated Carbon ("GAC")/Liquid Phase Carbon Adsorption
☐ Ion Exchange ☐ Precipitation/Coagulation/Flocculation ■ Separation/Filtration ☐ Other; if so, specify:

2. Provide a written description of all treatment system(s) or processes that will be applied to the effluent prior to discharge.
Construction dewatering influent will be routed through a sedimentation tank followed by bag filters prior to discharge.

Identify each major treatment component (check any that apply):
■ Fractionation tanks☐ Equalization tank ☐ Oil/water separator ☐ Mechanical filter ☐ Media filter
☐ Chemical feed tank ☐ Air stripping unit ■ Bag filter ☐ Other; if so, specify:

Indicate if either of the following will occur (check any that apply):
☐ Chlorination ☐ De-chlorination

3. Provide the **design flow capacity** in gallons per minute (gpm) of the most limiting component. Indicate the most limiting component: Bag filters Is use of a flow meter feasible? (check one): ■ Yes ☐ No, if so, provide justification:	150
Provide the proposed maximum effluent flow in gpm.	100
Provide the average effluent flow in gpm.	50
If Activity Category IV applies, indicate the estimated total volume of water that will be discharged:	

4. Has the operator attached a schematic of flow in accordance with the instructions in E, above? (check one): ■ Yes ☐ No

F. Chemical and additive information

1. Indicate the type(s) of chemical or additive that will be applied to effluent prior to discharge or that may otherwise be present in the discharge(s): (check all that apply)

☐ Algaecides/biocides ☐ Antifoams ☐ Coagulants ☐ Corrosion/scale inhibitors ☐ Disinfectants ☐ Flocculants ☐ Neutralizing agents ☐ Oxidants ☐ Oxygen ☐ scavengers ☐ pH conditioners ☐ Bioremedial agents, including microbes ☐ Chlorine or chemicals containing chlorine ☐ Other; if so, specify:

2. Provide the following information for each chemical/additive, using attachments, if necessary:

a. Product name, chemical formula, and manufacturer of the chemical/additive;
b. Purpose or use of the chemical/additive or remedial agent;
c. Material Safety Data Sheet (MSDS) and Chemical Abstracts Service (CAS) Registry number for each chemical/additive;
d. The frequency (hourly, daily, etc.), duration (hours, days), quantity (maximum and average), and method of application for the chemical/additive;
e. Any material compatibility risks for storage and/or use including the control measures used to minimize such risks; and
f. If available, the vendor's reported aquatic toxicity (NOAEL and/or LC50 in percent for aquatic organism(s)).

3. Has the operator attached an explanation which demonstrates that the addition of such chemicals/additives may be authorized under this general permit in accordance with the instructions in F, above? (check one): ☐ Yes ☐ No; if no, has the operator attached data that demonstrates each of the 126 priority pollutants in CWA Section 307(a) and 40 CFR Part 423.15(j)(1) are non-detect in discharges with the addition of the proposed chemical/additive? (check one): ☐ Yes ☐ No

G. Endangered Species Act eligibility determination

1. Indicate under which criterion the discharge(s) is eligible for coverage under this general permit:

■ **FWS Criterion A**: No endangered or threatened species or critical habitat are in proximity to the discharges or related activities or come in contact with the "action area".

☐ **FWS Criterion B**: Formal or informal consultation with the FWS under section 7 of the ESA resulted in either a no jeopardy opinion (formal consultation) or a written concurrence by FWS on a finding that the discharges and related activities are "not likely to adversely affect" listed species or critical habitat (informal consultation). Has the operator completed consultation with FWS? (check one): ☐ Yes ☐ No; if no, is consultation underway? (check one): ☐ Yes ☐ No

☐ **FWS Criterion C**: Using the best scientific and commercial data available, the effect of the discharges and related activities on listed species and critical habitat have been evaluated. Based on those evaluations, a determination is made by EPA, or by the operator and affirmed by EPA, that the discharges and related activities will have "no effect" on any federally threatened or endangered listed species or designated critical habitat under the jurisdiction of the FWS. This determination was made by: (check one) ☐ the operator ☐ EPA ☐ Other; if so, specify:

☐ **NMFS Criterion**: A determination made by EPA is affirmed by the operator that the discharges and related activities will have "no effect" or are "not likely to adversely affect" any federally threatened or endangered listed species or critical habitat under the jurisdiction of NMFS and will not result in any take of listed species. Has the operator previously completed consultation with NMFS? (check one): ☐ Yes ☐ No

2. Has the operator attached supporting documentation of ESA eligibility in accordance with the instructions in Appendix I, and G, above? (check one): ■ Yes ☐ No

Does the supporting documentation include any written concurrence or finding provided by the Services? (check one): ☐ Yes ■ No; if yes, attach.

H. National Historic Preservation Act eligibility determination

1. Indicate under which criterion the discharge(s) is eligible for coverage under this general permit:

■ **Criterion A**: No historic properties are present. The discharges and discharge-related activities (e.g., BMPs) do not have the potential to cause effects on historic properties.

☐ **Criterion B**: Historic properties are present. Discharges and discharge related activities do not have the potential to cause effects on historic properties.

☐ **Criterion C**: Historic properties are present. The discharges and discharge-related activities have the potential to have an effect or will have an adverse effect on historic properties.

2. Has the operator attached supporting documentation of NHPA eligibility in accordance with the instructions in H, above? (check one): ■ Yes ☐ No

Does the supporting documentation include any written agreement with the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer (TPHO), or other tribal representative that outlines measures the operator will carry out to mitigate or prevent any adverse effects on historic properties? (check one): ☐ Yes ■ No

I. Supplemental information

Describe any supplemental information being provided with the NOI. Include attachments if required or otherwise necessary.

Refer to attached Haley & Aldrich letter.

Has the operator attached data, including any laboratory case narrative and chain of custody used to support the application? (check one): ■ Yes ☐ No

Has the operator attached the certification requirement for the Best Management Practices Plan (BMPP)? (check one): ■ Yes ☐ No

J. Certification requirement

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

BMPP certification statement: A BMPP meeting the requirements of this general permit will be implemented upon initiation of discharge.	
Notification provided to the appropriate State, including a copy of this NOI, if required.	Check one: Yes ■ No ☐
Notification provided to the municipality in which the discharge is located, including a copy of this NOI, if requested.	Check one: Yes ■ No ☐
Notification provided to the owner of a private or municipal storm sewer system, if such system is used for site discharges, including a copy of this NOI, if requested.	Check one: Yes ■ No ☐ NA ☐
Permission obtained from the owner of a private or municipal storm sewer system, if such system is used for site discharges. If yes, attach additional conditions. If no, attach explanation and timeframe for obtaining permission.	Check one: Yes ☐ No ■ NA ☐
Notification provided to the owner/operator of the area associated with activities covered by an additional discharge permit(s). Additional discharge permit is (check one): ☐ RGP ☐ DGP ☐ CGP ☐ MSGP ☐ Individual NPDES permit ☐ Other; if so, specify:	Check one: Yes ☐ No ☐ NA ■
Signature: Jack Dugan — Digitally signed by Jack Dugan DN: C=US, E=JDugan@jfwhite.com, O=JF White Contracting Co. Inc, CN=Jack Dugan Date: 2020.05.20 13:02:03-04'00'	Date: 5-20-2020
Print Name and Title: Jack Dugan, Project Manager	

Enter your transmittal number → X286162 (Transmittal Number)

Your unique Transmittal Number can be accessed online:
http://www.mass.gov/eea/agencies/massdep/service/approvals/transmittal-form-for-payment.html

Massachusetts Department of Environmental Protection

Transmittal Form for Permit Application and Payment

1. Please type or print. A separate Transmittal Form must be completed for each permit application.

2. Make your check payable to the Commonwealth of Massachusetts and mail it with a copy of this form to: MassDEP, P.O. Box 4062, Boston, MA 02211.

3. Three copies of this form will be needed.

Copy 1 - the original must accompany your permit application. **Copy 2** must accompany your fee payment. **Copy 3** should be retained for your records

4. Both fee-paying and exempt applicants must mail a copy of this transmittal form to:

MassDEP
P.O. Box 4062
Boston, MA
02211

*** Note:**
For BWSC Permits, enter the LSP.

A. Permit Information

1. Permit Code: 4 to 7 character code from permit instructions	2. Name of Permit Category
WM15	NPDES RGP

3. Type of Project or Activity: Construction dewatering associated with property redevelopment

B. Applicant Information – Firm or Individual

1. Name of Firm - Or, if party needing this approval is an individual enter name below: MK Parcel 7 Development, LLC

2. **Last Name** of Individual	3. **First Name** of Individual	4. MI
NA	NA	NA

5. Street Address: One Boston Place, 201 Washington Street, Suite 3920

6. City/Town	7. State	8. Zip Code	9. Telephone #	10. Ext. #
Boston	MA	02108	617-314-7906	NA

11. Contact Person	12. e-mail address
David Surette	dsurette@iqhqreit.com

C. Facility, Site or Individual Requiring Approval

1. Name of Facility, Site Or Individual: Fenway Center Phase II - Parcel 7 Development

2. Street Address: Massachusetts Turnpike between Beacon Street and Brookline Avenue Bridges

3. City/Town	4. State	5. Zip Code	6. Telephone #	7. Ext. #
Boston	MA	02215	NA	NA

8. DEP Facility Number (if Known)	9. Federal I.D. Number (if Known)	10. BWSC Tracking # (if Known)
NA	NA	NA

D. Application Prepared by (if different from Section B)*

1. Name of Firm Or Individual: Haley & Aldrich, Inc.

2. Address: 465 Medford Street, Suite 2200

3. City/Town	4. State	5. Zip Code	6. Telephone #	7. Ext. #
Boston	MA	02129	617-886-7400	NA

8. Contact Person	9. LSP Number (BWSC Permits only)
Jennifer L. Sweet, P.E., LSP	6156

E. Permit - Project Coordination

1. Is this project subject to MEPA review? ☐ yes ☒ no
   If yes, enter the project's EOEA file number - assigned when an Environmental Notification Form is submitted to the MEPA unit: NA (EOEA File Number)

F. Amount Due

DEP Use Only

Permit No:

Rec'd Date:

Reviewer:

Special Provisions:

1. ☐ **Fee** Exempt (city, town or municipal housing authority)(state agency if fee is $100 or less).
   There are no fee exemptions for BWSC permits, regardless of applicant status.
2. ☐ Hardship Request - payment extensions according to 310 CMR 4.04(3)(c).
3. ☐ Alternative Schedule Project (according to 310 CMR 4.05 and 4.10).
4. ☐ Homeowner (according to 310 CMR 4.02).

Check Number	Dollar Amount	Date
255000	$500.00	5/21/2020

APPENDIX B

Laboratory Data Reports

ANALYTICAL REPORT

Lab Number:	L2013945
Client:	Haley & Aldrich, Inc. 465 Medford Street, Suite 2200 Charlestown, MA 02129-1400
ATTN:	Denis Bell
Phone:	(617) 886-7300
Project Name:	FENWAY CENTER PHASE II
Project Number:	29727-236
Report Date:	05/18/20

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: FENWAY CENTER PHASE II
Project Number: 29727-236

Lab Number: L2013945
Report Date: 05/18/20

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2013945-01	HA20-101_2020-0331	WATER	BOSTON, MA	03/31/20 11:20	03/31/20

Project Name:	FENWAY CENTER PHASE II	**Lab Number:**	L2013945
Project Number:	29727-236	**Report Date:**	05/18/20

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	FENWAY CENTER PHASE II	**Lab Number:**	L2013945
Project Number:	29727-236	**Report Date:**	05/18/20

Case Narrative (continued)

Report Revision

May 18, 2020: This report includes the results of the Hardness analysis performed on L2013945-01 (HA20-101_2020-0331).

Report Submission

The analysis of Ethanol was subcontracted. A copy of the laboratory report is included as an addendum. Please note: This data is only available in PDF format and is not available on Data Merger.

Semivolatile Organics by Method 625

The WG1357120-2 LCS recoveries, associated with L2013945-01 (HA20-101_2020-0331), are above the acceptance criteria for di-n-butylphthalate (125%) and di-n-octylphthalate (141%); however, the associated sample is non-detect to the RL for these target analytes. The results of the original analysis are reported.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Melissa Sturgis Melissa Sturgis

Title: Technical Director/Representative Date: 05/18/20

ORGANICS

VOLATILES

Project Name: FENWAY CENTER PHASE II
Project Number: 29727-236
Lab Number: L2013945
Report Date: 05/18/20

SAMPLE RESULTS

Lab ID: L2013945-01
Client ID: HA20-101_2020-0331
Sample Location: BOSTON, MA

Date Collected: 03/31/20 11:20
Date Received: 03/31/20
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 128,624.1
Analytical Date: 03/31/20 20:48
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	1.0	--	1
1,1-Dichloroethane	ND		ug/l	1.5	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.5	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
1,2-Dichloroethane	ND		ug/l	1.5	--	1
1,1,1-Trichloroethane	ND		ug/l	2.0	--	1
Benzene	ND		ug/l	1.0	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	5.0	--	1
1,3-Dichlorobenzene	ND		ug/l	5.0	--	1
1,4-Dichlorobenzene	ND		ug/l	5.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-xylene	ND		ug/l	1.0	--	1
Xylenes, Total	ND		ug/l	1.0	--	1
Acetone	ND		ug/l	10	--	1
Methyl tert butyl ether	ND		ug/l	10	--	1
Tert-Butyl Alcohol	ND		ug/l	100	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	20	--	1

Project Name: FENWAY CENTER PHASE II **Lab Number:** L2013945

Project Number: 29727-236 **Report Date:** 05/18/20

SAMPLE RESULTS

Lab ID: L2013945-01 Date Collected: 03/31/20 11:20

Client ID: HA20-101_2020-0331 Date Received: 03/31/20

Sample Location: BOSTON, MA Field Prep: Refer to COC

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	106		60-140
Fluorobenzene	101		60-140
4-Bromofluorobenzene	95		60-140

Project Name: FENWAY CENTER PHASE II
Project Number: 29727-236
Lab Number: L2013945
Report Date: 05/18/20

SAMPLE RESULTS

Lab ID: L2013945-01
Client ID: HA20-101_2020-0331
Sample Location: BOSTON, MA

Date Collected: 03/31/20 11:20
Date Received: 03/31/20
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 128,624.1-SIM
Analytical Date: 03/31/20 20:48
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-SIM - Westborough Lab						
1,4-Dioxane	ND		ug/l	50	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Fluorobenzene	106		60-140
4-Bromofluorobenzene	114		60-140

Project Name: FENWAY CENTER PHASE II
Project Number: 29727-236
Lab Number: L2013945
Report Date: 05/18/20

SAMPLE RESULTS

Lab ID: L2013945-01
Client ID: HA20-101_2020-0331
Sample Location: BOSTON, MA

Date Collected: 03/31/20 11:20
Date Received: 03/31/20
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 14,504.1
Analytical Date: 04/02/20 13:45
Analyst: AMM

Extraction Method: EPA 504.1
Extraction Date: 04/02/20 11:27

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Microextractables by GC - Westborough Lab							
1,2-Dibromoethane	ND		ug/l	0.010	--	1	A

Project Name: FENWAY CENTER PHASE II
Project Number: 29727-236
Lab Number: L2013945
Report Date: 05/18/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1
Analytical Date: 03/31/20 19:42
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1356981-4					
Methylene chloride	ND		ug/l	1.0	--
1,1-Dichloroethane	ND		ug/l	1.5	--
Carbon tetrachloride	ND		ug/l	1.0	--
1,1,2-Trichloroethane	ND		ug/l	1.5	--
Tetrachloroethene	ND		ug/l	1.0	--
1,2-Dichloroethane	ND		ug/l	1.5	--
1,1,1-Trichloroethane	ND		ug/l	2.0	--
Benzene	ND		ug/l	1.0	--
Toluene	ND		ug/l	1.0	--
Ethylbenzene	ND		ug/l	1.0	--
Vinyl chloride	ND		ug/l	1.0	--
1,1-Dichloroethene	ND		ug/l	1.0	--
cis-1,2-Dichloroethene	ND		ug/l	1.0	--
Trichloroethene	ND		ug/l	1.0	--
1,2-Dichlorobenzene	ND		ug/l	5.0	--
1,3-Dichlorobenzene	ND		ug/l	5.0	--
1,4-Dichlorobenzene	ND		ug/l	5.0	--
p/m-Xylene	ND		ug/l	2.0	--
o-xylene	ND		ug/l	1.0	--
Xylenes, Total	ND		ug/l	1.0	--
Acetone	ND		ug/l	10	--
Methyl tert butyl ether	ND		ug/l	10	--
Tert-Butyl Alcohol	ND		ug/l	100	--
Tertiary-Amyl Methyl Ether	ND		ug/l	20	--

Project Name: FENWAY CENTER PHASE II
Project Number: 29727-236
Lab Number: L2013945
Report Date: 05/18/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1
Analytical Date: 03/31/20 19:42
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1356981-4					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	109		60-140
Fluorobenzene	101		60-140
4-Bromofluorobenzene	103		60-140

Project Name: FENWAY CENTER PHASE II
Project Number: 29727-236
Lab Number: L2013945
Report Date: 05/18/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1-SIM
Analytical Date: 03/31/20 19:42
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG1357300-4					
1,4-Dioxane	ND		ug/l	50	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Fluorobenzene	105		60-140
4-Bromofluorobenzene	124		60-140

Project Name: FENWAY CENTER PHASE II
Project Number: 29727-236
Lab Number: L2013945
Report Date: 05/18/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 14,504.1
Analytical Date: 04/02/20 12:55
Analyst: AMM

Extraction Method: EPA 504.1
Extraction Date: 04/02/20 11:27

Parameter	Result	Qualifier	Units	RL	MDL	
Microextractables by GC - Westborough Lab for sample(s): 01 Batch: WG1357655-1						
1,2-Dibromoethane	ND		ug/l	0.010	--	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: FENWAY CENTER PHASE II

Project Number: 29727-236

Lab Number: L2013945

Report Date: 05/18/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1356981-3								
Methylene chloride	90		-		60-140	-		28
1,1-Dichloroethane	90		-		50-150	-		49
Carbon tetrachloride	105		-		70-130	-		41
1,1,2-Trichloroethane	90		-		70-130	-		45
Tetrachloroethene	90		-		70-130	-		39
1,2-Dichloroethane	95		-		70-130	-		49
1,1,1-Trichloroethane	110		-		70-130	-		36
Benzene	95		-		65-135	-		61
Toluene	85		-		70-130	-		41
Ethylbenzene	75		-		60-140	-		63
Vinyl chloride	70		-		5-195	-		66
1,1-Dichloroethene	90		-		50-150	-		32
cis-1,2-Dichloroethene	95		-		60-140	-		30
Trichloroethene	100		-		65-135	-		48
1,2-Dichlorobenzene	90		-		65-135	-		57
1,3-Dichlorobenzene	75		-		70-130	-		43
1,4-Dichlorobenzene	80		-		65-135	-		57
p/m-Xylene	80		-		60-140	-		30
o-xylene	75		-		60-140	-		30
Acetone	96		-		40-160	-		30
Methyl tert butyl ether	100		-		60-140	-		30
Tert-Butyl Alcohol	120		-		60-140	-		30
Tertiary-Amyl Methyl Ether	110		-		60-140	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: FENWAY CENTER PHASE II

Project Number: 29727-236

Lab Number: L2013945

Report Date: 05/18/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1356981-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Pentafluorobenzene	113				60-140
Fluorobenzene	107				60-140
4-Bromofluorobenzene	100				60-140

Lab Control Sample Analysis

Batch Quality Control

Project Name: FENWAY CENTER PHASE II

Project Number: 29727-236

Lab Number: L2013945

Report Date: 05/18/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01 Batch: WG1357300-3								
1,4-Dioxane	120		-		60-140	-		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Fluorobenzene	109				60-140
4-Bromofluorobenzene	130				60-140

Lab Control Sample Analysis

Batch Quality Control

Project Name: FENWAY CENTER PHASE II

Project Number: 29727-236

Lab Number: L2013945

Report Date: 05/18/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Microextractables by GC - Westborough Lab	Associated sample(s): 01		Batch: WG1357655-2						
1,2-Dibromoethane	97		-		80-120	-			A

Matrix Spike Analysis

Batch Quality Control

Project Name: FENWAY CENTER PHASE II

Project Number: 29727-236

Lab Number: L2013945

Report Date: 05/18/20

Parameter	*Native Sample*	*MS Added*	*MS Found*	*MS %Recovery*	*Qual*	*MSD Found*	*MSD %Recovery*	*Qual*	*Recovery Limits*	*RPD*	*Qual*	*RPD Limits*	*Column*
Microextractables by GC - Westborough Lab	Associated sample(s): 01		QC Batch ID: WG1357655-3			QC Sample: L2013945-01			Client ID: HA20-101_2020-0331				
1,2-Dibromoethane	ND	0.25	0.230	92		-	-		80-120	-		20	A

SEMIVOLATILES

Project Name: FENWAY CENTER PHASE II
Project Number: 29727-236
Lab Number: L2013945
Report Date: 05/18/20

SAMPLE RESULTS

Lab ID: L2013945-01
Client ID: HA20-101_2020-0331
Sample Location: BOSTON, MA

Date Collected: 03/31/20 11:20
Date Received: 03/31/20
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 129,625.1
Analytical Date: 04/03/20 11:21
Analyst: SZ

Extraction Method: EPA 625.1
Extraction Date: 04/01/20 07:49

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Bis(2-ethylhexyl)phthalate	ND		ug/l	2.2	--	1
Butyl benzyl phthalate	ND		ug/l	5.0	--	1
Di-n-butylphthalate	ND		ug/l	5.0	--	1
Di-n-octylphthalate	ND		ug/l	5.0	--	1
Diethyl phthalate	ND		ug/l	5.0	--	1
Dimethyl phthalate	ND		ug/l	5.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	57		42-122
2-Fluorobiphenyl	63		46-121
4-Terphenyl-d14	98		47-138

Project Name: FENWAY CENTER PHASE II
Project Number: 29727-236
Lab Number: L2013945
Report Date: 05/18/20

SAMPLE RESULTS

Lab ID: L2013945-01
Client ID: HA20-101_2020-0331
Sample Location: BOSTON, MA

Date Collected: 03/31/20 11:20
Date Received: 03/31/20
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 129,625.1-SIM
Analytical Date: 04/03/20 14:17
Analyst: DV

Extraction Method: EPA 625.1
Extraction Date: 04/01/20 07:51

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	0.22		ug/l	0.10	--	1
Fluoranthene	ND		ug/l	0.10	--	1
Naphthalene	0.12		ug/l	0.10	--	1
Benzo(a)anthracene	ND		ug/l	0.10	--	1
Benzo(a)pyrene	ND		ug/l	0.10	--	1
Benzo(b)fluoranthene	ND		ug/l	0.10	--	1
Benzo(k)fluoranthene	ND		ug/l	0.10	--	1
Chrysene	ND		ug/l	0.10	--	1
Acenaphthylene	ND		ug/l	0.10	--	1
Anthracene	ND		ug/l	0.10	--	1
Benzo(ghi)perylene	ND		ug/l	0.10	--	1
Fluorene	0.12		ug/l	0.10	--	1
Phenanthrene	ND		ug/l	0.10	--	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	--	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	--	1
Pyrene	ND		ug/l	0.10	--	1
Pentachlorophenol	ND		ug/l	1.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	38		25-87
Phenol-d6	26		16-65
Nitrobenzene-d5	72		42-122
2-Fluorobiphenyl	70		46-121
2,4,6-Tribromophenol	84		45-128
4-Terphenyl-d14	103		47-138

Project Name: FENWAY CENTER PHASE II
Project Number: 29727-236
Lab Number: L2013945
Report Date: 05/18/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 129,625.1
Analytical Date: 04/03/20 10:54
Analyst: SZ

Extraction Method: EPA 625.1
Extraction Date: 04/01/20 07:49

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1357120-1					
Bis(2-ethylhexyl)phthalate	ND		ug/l	2.2	--
Butyl benzyl phthalate	ND		ug/l	5.0	--
Di-n-butylphthalate	ND		ug/l	5.0	--
Di-n-octylphthalate	ND		ug/l	5.0	--
Diethyl phthalate	ND		ug/l	5.0	--
Dimethyl phthalate	ND		ug/l	5.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	71		42-122
2-Fluorobiphenyl	71		46-121
4-Terphenyl-d14	99		47-138

Project Name: FENWAY CENTER PHASE II
Project Number: 29727-236
Lab Number: L2013945
Report Date: 05/18/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 129,625.1-SIM
Analytical Date: 04/03/20 12:34
Analyst: DV

Extraction Method: EPA 625.1
Extraction Date: 04/01/20 07:51

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG1357121-1					
Acenaphthene	ND		ug/l	0.10	--
Fluoranthene	ND		ug/l	0.10	--
Naphthalene	ND		ug/l	0.10	--
Benzo(a)anthracene	ND		ug/l	0.10	--
Benzo(a)pyrene	ND		ug/l	0.10	--
Benzo(b)fluoranthene	ND		ug/l	0.10	--
Benzo(k)fluoranthene	ND		ug/l	0.10	--
Chrysene	ND		ug/l	0.10	--
Acenaphthylene	ND		ug/l	0.10	--
Anthracene	ND		ug/l	0.10	--
Benzo(ghi)perylene	ND		ug/l	0.10	--
Fluorene	ND		ug/l	0.10	--
Phenanthrene	ND		ug/l	0.10	--
Dibenzo(a,h)anthracene	ND		ug/l	0.10	--
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	--
Pyrene	ND		ug/l	0.10	--
Pentachlorophenol	ND		ug/l	1.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	47		25-87
Phenol-d6	33		16-65
Nitrobenzene-d5	91		42-122
2-Fluorobiphenyl	83		46-121
2,4,6-Tribromophenol	84		45-128
4-Terphenyl-d14	119		47-138

Lab Control Sample Analysis

Batch Quality Control

Project Name: FENWAY CENTER PHASE II

Project Number: 29727-236

Lab Number: L2013945

Report Date: 05/18/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1357120-2								
Bis(2-ethylhexyl)phthalate	128		-		29-137	-		82
Butyl benzyl phthalate	123		-		1-140	-		60
Di-n-butylphthalate	**125**	Q	-		8-120	-		47
Di-n-octylphthalate	**141**	Q	-		19-132	-		69
Diethyl phthalate	103		-		1-120	-		100
Dimethyl phthalate	101		-		1-120	-		183

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Nitrobenzene-d5	94				42-122
2-Fluorobiphenyl	91				46-121
4-Terphenyl-d14	112				47-138

Lab Control Sample Analysis
Batch Quality Control

Project Name: FENWAY CENTER PHASE II
Project Number: 29727-236
Lab Number: L2013945
Report Date: 05/18/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01 Batch: WG1357121-2								
Acenaphthene	93		-		60-132	-		30
Fluoranthene	111		-		43-121	-		30
Naphthalene	88		-		36-120	-		30
Benzo(a)anthracene	98		-		42-133	-		30
Benzo(a)pyrene	102		-		32-148	-		30
Benzo(b)fluoranthene	105		-		42-140	-		30
Benzo(k)fluoranthene	100		-		25-146	-		30
Chrysene	100		-		44-140	-		30
Acenaphthylene	96		-		54-126	-		30
Anthracene	102		-		43-120	-		30
Benzo(ghi)perylene	107		-		1-195	-		30
Fluorene	98		-		70-120	-		30
Phenanthrene	100		-		65-120	-		30
Dibenzo(a,h)anthracene	109		-		1-200	-		30
Indeno(1,2,3-cd)pyrene	109		-		1-151	-		30
Pyrene	108		-		70-120	-		30
Pentachlorophenol	85		-		38-152	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: FENWAY CENTER PHASE II

Project Number: 29727-236

Lab Number: L2013945

Report Date: 05/18/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01 Batch: WG1357121-2								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	58				25-87
Phenol-d6	42				16-65
Nitrobenzene-d5	105				42-122
2-Fluorobiphenyl	92				46-121
2,4,6-Tribromophenol	98				45-128
4-Terphenyl-d14	131				47-138

PCBS

Project Name: FENWAY CENTER PHASE II
Project Number: 29727-236
Lab Number: L2013945
Report Date: 05/18/20

SAMPLE RESULTS

Lab ID: L2013945-01
Client ID: HA20-101_2020-0331
Sample Location: BOSTON, MA

Date Collected: 03/31/20 11:20
Date Received: 03/31/20
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 127,608.3
Analytical Date: 04/02/20 09:52
Analyst: CW

Extraction Method: EPA 608.3
Extraction Date: 04/02/20 00:08
Cleanup Method: EPA 3665A
Cleanup Date: 04/02/20
Cleanup Method: EPA 3660B
Cleanup Date: 04/02/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.250	--	1	A
Aroclor 1221	ND		ug/l	0.250	--	1	A
Aroclor 1232	ND		ug/l	0.250	--	1	A
Aroclor 1242	ND		ug/l	0.250	--	1	A
Aroclor 1248	ND		ug/l	0.250	--	1	A
Aroclor 1254	ND		ug/l	0.250	--	1	A
Aroclor 1260	ND		ug/l	0.200	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	68		37-123	B
Decachlorobiphenyl	45		38-114	B
2,4,5,6-Tetrachloro-m-xylene	71		37-123	A
Decachlorobiphenyl	50		38-114	A

Project Name: FENWAY CENTER PHASE II
Project Number: 29727-236
Lab Number: L2013945
Report Date: 05/18/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 127,608.3
Analytical Date: 04/02/20 08:41
Analyst: CW

Extraction Method: EPA 608.3
Extraction Date: 04/01/20 21:18
Cleanup Method: EPA 3665A
Cleanup Date: 04/02/20
Cleanup Method: EPA 3660B
Cleanup Date: 04/02/20

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01 Batch: WG1357419-1						
Aroclor 1016	ND		ug/l	0.250	--	A
Aroclor 1221	ND		ug/l	0.250	--	A
Aroclor 1232	ND		ug/l	0.250	--	A
Aroclor 1242	ND		ug/l	0.250	--	A
Aroclor 1248	ND		ug/l	0.250	--	A
Aroclor 1254	ND		ug/l	0.250	--	A
Aroclor 1260	ND		ug/l	0.200	--	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	64		37-123	B
Decachlorobiphenyl	61		38-114	B
2,4,5,6-Tetrachloro-m-xylene	65		37-123	A
Decachlorobiphenyl	65		38-114	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: FENWAY CENTER PHASE II

Project Number: 29727-236

Lab Number: L2013945

Report Date: 05/18/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01 Batch: WG1357419-2									
Aroclor 1016	62		-		50-140	-		36	A
Aroclor 1260	56		-		8-140	-		38	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	56				37-123	B
Decachlorobiphenyl	52				38-114	B
2,4,5,6-Tetrachloro-m-xylene	57				37-123	A
Decachlorobiphenyl	59				38-114	A

METALS

Project Name: FENWAY CENTER PHASE II
Lab Number: L2013945
Project Number: 29727-236
Report Date: 05/18/20

SAMPLE RESULTS

Lab ID: L2013945-01
Client ID: HA20-101_2020-0331
Sample Location: BOSTON, MA
Date Collected: 03/31/20 11:20
Date Received: 03/31/20
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Antimony, Total	ND		mg/l	0.00400	--	1	04/01/20 10:46	04/02/20 10:11	EPA 3005A	3,200.8	AM
Arsenic, Total	ND		mg/l	0.00100	--	1	04/01/20 10:46	04/02/20 10:11	EPA 3005A	3,200.8	AM
Cadmium, Total	ND		mg/l	0.00020	--	1	04/01/20 10:46	04/02/20 10:11	EPA 3005A	3,200.8	AM
Chromium, Total	ND		mg/l	0.00100	--	1	04/01/20 10:46	04/02/20 10:11	EPA 3005A	3,200.8	AM
Copper, Total	0.00230		mg/l	0.00100	--	1	04/01/20 10:46	04/02/20 10:11	EPA 3005A	3,200.8	AM
Iron, Total	8.70		mg/l	0.050	--	1	04/01/20 10:46	04/03/20 13:28	EPA 3005A	19,200.7	LC
Lead, Total	ND		mg/l	0.00100	--	1	04/01/20 10:46	04/02/20 10:11	EPA 3005A	3,200.8	AM
Mercury, Total	ND		mg/l	0.00020	--	1	04/01/20 12:07	04/01/20 15:50	EPA 245.1	3,245.1	AL
Nickel, Total	0.00421		mg/l	0.00200	--	1	04/01/20 10:46	04/02/20 10:11	EPA 3005A	3,200.8	AM
Selenium, Total	ND		mg/l	0.00500	--	1	04/01/20 10:46	04/02/20 10:11	EPA 3005A	3,200.8	AM
Silver, Total	ND		mg/l	0.00040	--	1	04/01/20 10:46	04/02/20 10:11	EPA 3005A	3,200.8	AM
Zinc, Total	0.01117		mg/l	0.01000	--	1	04/01/20 10:46	04/02/20 10:11	EPA 3005A	3,200.8	AM
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	212		mg/l	0.660	NA	1	04/01/20 10:46	04/03/20 13:28	EPA 3005A	19,200.7	LC
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	--	1		04/02/20 10:11	NA	107,-	

Project Name: FENWAY CENTER PHASE II **Lab Number:** L2013945

Project Number: 29727-236 **Report Date:** 05/18/20

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01 Batch: WG1357197-1										
Iron, Total	ND		mg/l	0.050	--	1	04/01/20 10:46	04/03/20 12:22	19,200.7	LC

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab for sample(s): 01 Batch: WG1357197-1										
Hardness	ND		mg/l	0.660	NA	1	04/01/20 10:46	04/03/20 12:22	19,200.7	LC

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01 Batch: WG1357200-1										
Antimony, Total	ND		mg/l	0.00400	--	1	04/01/20 10:46	04/02/20 09:46	3,200.8	AM
Arsenic, Total	ND		mg/l	0.0010	--	1	04/01/20 10:46	04/02/20 09:46	3,200.8	AM
Cadmium, Total	ND		mg/l	0.00020	--	1	04/01/20 10:46	04/02/20 09:46	3,200.8	AM
Chromium, Total	ND		mg/l	0.00100	--	1	04/01/20 10:46	04/02/20 09:46	3,200.8	AM
Copper, Total	ND		mg/l	0.00100	--	1	04/01/20 10:46	04/02/20 09:46	3,200.8	AM
Lead, Total	ND		mg/l	0.0010	--	1	04/01/20 10:46	04/02/20 09:46	3,200.8	AM
Nickel, Total	ND		mg/l	0.00200	--	1	04/01/20 10:46	04/02/20 09:46	3,200.8	AM
Selenium, Total	ND		mg/l	0.00500	--	1	04/01/20 10:46	04/02/20 09:46	3,200.8	AM
Silver, Total	ND		mg/l	0.00040	--	1	04/01/20 10:46	04/02/20 09:46	3,200.8	AM
Zinc, Total	ND		mg/l	0.01000	--	1	04/01/20 10:46	04/02/20 09:46	3,200.8	AM

Prep Information

Digestion Method: EPA 3005A

Project Name: FENWAY CENTER PHASE II
Project Number: 29727-236
Lab Number: L2013945
Report Date: 05/18/20

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01 Batch: WG1357265-1										
Mercury, Total	ND		mg/l	0.00020	--	1	04/01/20 12:07	04/01/20 15:46	3,245.1	AL

Prep Information

Digestion Method: EPA 245.1

Lab Control Sample Analysis

Batch Quality Control

Project Name: FENWAY CENTER PHASE II

Project Number: 29727-236

Lab Number: L2013945

Report Date: 05/18/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1357197-2								
Iron, Total	110		-		85-115	-		
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01 Batch: WG1357197-2								
Hardness	104		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1357200-2								
Antimony, Total	96		-		85-115	-		
Arsenic, Total	108		-		85-115	-		
Cadmium, Total	112		-		85-115	-		
Chromium, Total	108		-		85-115	-		
Copper, Total	103		-		85-115	-		
Lead, Total	110		-		85-115	-		
Nickel, Total	108		-		85-115	-		
Selenium, Total	115		-		85-115	-		
Silver, Total	109		-		85-115	-		
Zinc, Total	112		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1357265-2								
Mercury, Total	108		-		85-115	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: FENWAY CENTER PHASE II
Project Number: 29727-236

Lab Number: L2013945
Report Date: 05/18/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1357197-3 QC Sample: L2013905-01 Client ID: MS Sample												
Iron, Total	ND	1	1.11	111		-	-		75-125	-		20
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1357197-3 QC Sample: L2013905-01 Client ID: MS Sample												
Hardness	202	66.2	276	112		-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1357200-3 QC Sample: L2013905-01 Client ID: MS Sample												
Antimony, Total	ND	0.5	0.4872	97		-	-		70-130	-		20
Arsenic, Total	ND	0.12	0.1288	107		-	-		70-130	-		20
Cadmium, Total	ND	0.051	0.05881	115		-	-		70-130	-		20
Chromium, Total	0.0054	0.2	0.2186	106		-	-		70-130	-		20
Copper, Total	ND	0.25	0.2573	103		-	-		70-130	-		20
Lead, Total	ND	0.51	0.5644	111		-	-		70-130	-		20
Nickel, Total	ND	0.5	0.5387	108		-	-		70-130	-		20
Selenium, Total	ND	0.12	0.1308	109		-	-		70-130	-		20
Silver, Total	ND	0.05	0.05458	109		-	-		70-130	-		20
Zinc, Total	ND	0.5	0.5826	116		-	-		70-130	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1357265-3 QC Sample: L2013945-01 Client ID: HA20-101_2020-0331												
Mercury, Total	ND	0.005	0.00499	100		-	-		70-130	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: FENWAY CENTER PHASE II

Project Number: 29727-236

Lab Number: L2013945

Report Date: 05/18/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1357197-4 QC Sample: L2013905-01 Client ID: DUP Sample						
Iron, Total	ND	ND	mg/l	NC		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1357200-4 QC Sample: L2013905-01 Client ID: DUP Sample						
Copper, Total	ND	ND	mg/l	NC		20
Lead, Total	ND	ND	mg/l	NC		20
Nickel, Total	ND	ND	mg/l	NC		20
Silver, Total	ND	ND	mg/l	NC		20
Zinc, Total	ND	ND	mg/l	NC		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1357265-4 QC Sample: L2013945-01 Client ID: HA20-101_2020-0331						
Mercury, Total	ND	ND	mg/l	NC		20

INORGANICS
&
MISCELLANEOUS

Project Name: FENWAY CENTER PHASE II
Project Number: 29727-236
Lab Number: L2013945
Report Date: 05/18/20

SAMPLE RESULTS

Lab ID: L2013945-01
Client ID: HA20-101_2020-0331
Sample Location: BOSTON, MA
Sample Depth:
Matrix: Water

Date Collected: 03/31/20 11:20
Date Received: 03/31/20
Field Prep: Refer to COC

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	04/01/20 08:11	121,2540D	EM
Cyanide, Total	ND		mg/l	0.005	--	1	03/31/20 23:12	04/01/20 11:58	121,4500CN-CE	LH
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	03/31/20 22:51	121,4500CL-D	AS
Nitrogen, Ammonia	1.30		mg/l	0.075	--	1	04/01/20 11:52	04/01/20 20:57	121,4500NH3-BH	AT
TPH, SGT-HEM	ND		mg/l	4.00	--	1	03/31/20 16:00	03/31/20 21:21	74,1664A	ML
Phenolics, Total	ND		mg/l	0.030	--	1	04/01/20 05:00	04/01/20 08:12	4,420.1	MV
Chromium, Hexavalent	ND		mg/l	0.010	--	1	03/31/20 17:20	03/31/20 17:51	1,7196A	AS
Anions by Ion Chromatography - Westborough Lab										
Chloride	2980		mg/l	50.0	--	100	-	03/31/20 22:05	44,300.0	AT

Project Name: FENWAY CENTER PHASE II **Lab Number:** L2013945

Project Number: 29727-236 **Report Date:** 05/18/20

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1356912-1										
TPH, SGT-HEM	ND		mg/l	4.00	--	1	03/31/20 16:00	03/31/20 21:21	74,1664A	ML
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1356947-1										
Chromium, Hexavalent	ND		mg/l	0.010	--	1	03/31/20 17:20	03/31/20 17:50	1,7196A	AS
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1356991-1										
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	03/31/20 22:51	121,4500CL-D	AS
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1356993-1										
Cyanide, Total	ND		mg/l	0.005	--	1	03/31/20 23:12	04/01/20 11:52	121,4500CN-CE	LH
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1357058-1										
Phenolics, Total	ND		mg/l	0.030	--	1	04/01/20 05:00	04/01/20 08:10	4,420.1	MV
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1357100-1										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	04/01/20 08:11	121,2540D	EM
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1357167-1										
Nitrogen, Ammonia	ND		mg/l	0.075	--	1	04/01/20 11:52	04/01/20 20:51	121,4500NH3-BH	AT
Anions by Ion Chromatography - Westborough Lab for sample(s): 01 Batch: WG1357360-1										
Chloride	ND		mg/l	0.500	--	1	-	03/31/20 16:59	44,300.0	AT

Lab Control Sample Analysis

Batch Quality Control

Project Name: FENWAY CENTER PHASE II

Project Number: 29727-236

Lab Number: L2013945

Report Date: 05/18/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1356912-2								
TPH	93		-		64-132	-		34
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1356947-2								
Chromium, Hexavalent	102		-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1356991-2								
Chlorine, Total Residual	104		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1356993-2								
Cyanide, Total	95		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1357058-2								
Phenolics, Total	85		-		70-130	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1357167-2								
Nitrogen, Ammonia	102		-		80-120	-		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 Batch: WG1357360-2								
Chloride	100		-		90-110	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: FENWAY CENTER PHASE II
Project Number: 29727-236

Lab Number: L2013945
Report Date: 05/18/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1356912-4 QC Sample: L2013536-02 Client ID: MS Sample												
TPH	ND	19	16.8	88		-	-		64-132	-		34
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1356947-4 QC Sample: L2013945-01 Client ID: HA20-101_2020-0331												
Chromium, Hexavalent	ND	0.1	0.092	92		-	-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1356991-4 QC Sample: L2013945-01 Client ID: HA20-101_2020-0331												
Chlorine, Total Residual	ND	0.25	0.25	100		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1356993-4 QC Sample: L2013945-01 Client ID: HA20-101_2020-0331												
Cyanide, Total	ND	0.2	0.195	98		-	-		90-110	-		30
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1357058-4 QC Sample: L2013945-01 Client ID: HA20-101_2020-0331												
Phenolics, Total	ND	0.4	0.36	91		-	-		70-130	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1357167-4 QC Sample: L2013671-01 Client ID: MS Sample												
Nitrogen, Ammonia	91.5	4	89.3	**0**	Q	-	-		80-120	-		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1357360-3 QC Sample: L2013859-04 Client ID: MS Sample												
Chloride	13.6	4	17.3	93		-	-		90-110	-		18

Lab Duplicate Analysis

Batch Quality Control

Project Name: FENWAY CENTER PHASE II

Project Number: 29727-236

Lab Number: L2013945

Report Date: 05/18/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1356912-3 QC Sample: L2013536-01 Client ID: DUP Sample						
TPH	ND	ND	mg/l	NC		34
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1356947-3 QC Sample: L2013945-01 Client ID: HA20-101_2020-0331						
Chromium, Hexavalent	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1356991-3 QC Sample: L2013945-01 Client ID: HA20-101_2020-0331						
Chlorine, Total Residual	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1356993-3 QC Sample: L2013804-01 Client ID: DUP Sample						
Cyanide, Total	ND	ND	mg/l	NC		30
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1357058-3 QC Sample: L2013945-01 Client ID: HA20-101_2020-0331						
Phenolics, Total	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1357100-2 QC Sample: L2013990-01 Client ID: DUP Sample						
Solids, Total Suspended	8000	8200	mg/l	2		29
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1357167-3 QC Sample: L2013671-01 Client ID: DUP Sample						
Nitrogen, Ammonia	91.5	85.7	mg/l	7		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1357360-4 QC Sample: L2013859-04 Client ID: DUP Sample						
Chloride	13.6	13.6	mg/l	0		18

Project Name: FENWAY CENTER PHASE II
Project Number: 29727-236

Lab Number: L2013945
Report Date: 05/18/20

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2013945-01A	Vial Na2S2O3 preserved	A	NA		3.8	Y	Absent		624.1-SIM-RGP(7),624.1-RGP(7)
L2013945-01B	Vial Na2S2O3 preserved	A	NA		3.8	Y	Absent		624.1-SIM-RGP(7),624.1-RGP(7)
L2013945-01C	Vial Na2S2O3 preserved	A	NA		3.8	Y	Absent		624.1-SIM-RGP(7),624.1-RGP(7)
L2013945-01D	Vial Na2S2O3 preserved	A	NA		3.8	Y	Absent		624.1-SIM-RGP(7),624.1-RGP(7)
L2013945-01E	Vial Na2S2O3 preserved	A	NA		3.8	Y	Absent		504(14)
L2013945-01F	Vial Na2S2O3 preserved	A	NA		3.8	Y	Absent		504(14)
L2013945-01G	Vial Na2S2O3 preserved	A	NA		3.8	Y	Absent		504(14)
L2013945-01H	Vial Na2S2O3 preserved	A	NA		3.8	Y	Absent		504(14)
L2013945-01I	Vial unpreserved	A	NA		3.8	Y	Absent		SUB-ETHANOL(14)
L2013945-01J	Vial unpreserved	A	NA		3.8	Y	Absent		SUB-ETHANOL(14)
L2013945-01K	Vial unpreserved	A	NA		3.8	Y	Absent		SUB-ETHANOL(14)
L2013945-01L	Plastic 250ml NaOH preserved	A	>12	>12	3.8	Y	Absent		HOLD-WETCHEM()
L2013945-01M	Plastic 250ml NaOH preserved	A	>12	>12	3.8	Y	Absent		TCN-4500(14)
L2013945-01N	Plastic 250ml HNO3 preserved	A	<2	<2	3.8	Y	Absent		HOLD-METAL-DISSOLVED(180)
L2013945-01O	Plastic 250ml HNO3 preserved	A	<2	<2	3.8	Y	Absent		CD-2008T(180),NI-2008T(180),ZN-2008T(180),FE-UI(180),HARDU(180),CU-2008T(180),HG-U(28),AG-2008T(180),SE-2008T(180),AS-2008T(180),PB-2008T(180),CR-2008T(180),SB-2008T(180)
L2013945-01P	Plastic 500ml H2SO4 preserved	A	<2	<2	3.8	Y	Absent		NH3-4500(28)
L2013945-01Q	Plastic 950ml unpreserved	A	7	7	3.8	Y	Absent		CL-300(28),HEXCR-7196(1),TRC-4500(1)
L2013945-01R	Plastic 950ml unpreserved	A	7	7	3.8	Y	Absent		TSS-2540(7)
L2013945-01S	Amber 950ml H2SO4 preserved	A	<2	<2	3.8	Y	Absent		TPHENOL-420(28)
L2013945-01T	Amber 1000ml Na2S2O3	A	7	7	3.8	Y	Absent		PCB-608.3(7)
L2013945-01U	Amber 1000ml Na2S2O3	A	7	7	3.8	Y	Absent		PCB-608.3(7)

*Values in parentheses indicate holding time in days

Project Name: FENWAY CENTER PHASE II
Project Number: 29727-236

Lab Number: L2013945
Report Date: 05/18/20

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2013945-01V	Amber 1000ml Na2S2O3	A	7	7	3.8	Y	Absent		PCB-608.3(7)
L2013945-01W	Amber 1000ml Na2S2O3	A	7	7	3.8	Y	Absent		625.1-RGP(7),625.1-SIM-RGP(7)
L2013945-01X	Amber 1000ml Na2S2O3	A	7	7	3.8	Y	Absent		625.1-RGP(7),625.1-SIM-RGP(7)
L2013945-01Y	Amber 1000ml Na2S2O3	A	7	7	3.8	Y	Absent		625.1-RGP(7),625.1-SIM-RGP(7)
L2013945-01Z	Amber 1000ml HCl preserved	A	NA		3.8	Y	Absent		TPH-1664(28)
L2013945-01Z1	Amber 1000ml HCl preserved	A	NA		3.8	Y	Absent		TPH-1664(28)

*Values in parentheses indicate holding time in days

Project Name:	FENWAY CENTER PHASE II	**Lab Number:**	L2013945
Project Number:	29727-236	**Report Date:**	05/18/20

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

Report Format: Data Usability Report

Project Name:	FENWAY CENTER PHASE II	**Lab Number:**	L2013945
Project Number:	29727-236	**Report Date:**	05/18/20

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the reporting limit (RL) for the sample.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less

Project Name:	FENWAY CENTER PHASE II	**Lab Number:**	L2013945
Project Number:	29727-236	**Report Date:**	05/18/20

Data Qualifiers

than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Report Format: Data Usability Report

Project Name:	FENWAY CENTER PHASE II	**Lab Number:**	L2013945
Project Number:	29727-236	**Report Date:**	05/18/20

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

3 Methods for the Determination of Metals in Environmental Samples, Supplement I. EPA/600/R-94/111. May 1994.

4 Methods for Chemical Analysis of Water and Wastes. EPA 600/4-79-020. Revised March 1983.

14 Methods for the Determination of Organic Compounds in Finished Drinking Water and Raw Source Water. EPA/600/4-88/039, Revised July 1991.

19 Inductively Coupled Plasma Atomic Emission Spectrometric Method for Trace Element Analysis of Water and Wastes. Appendix C, Part 136, 40 CFR (Code of Federal Regulations). July 1, 1999 edition.

44 Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, August 1993.

74 Method 1664,Revision A: N-Hexane Extractable Material (HEM; Oil & Grease) and Silica Gel Treated N-Hexane Extractable Material (SGT-HEM; Non-polar Material) by Extraction and Gravimetry, EPA-821-R-98-002, February 1999.

107 Alpha Analytical - In-house calculation method.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

127 Method 608.3: Organochlorine Pesticides and PCBs by GC/HSD, EPA 821-R-16-009, December 2016.

128 Method 624.1: Purgeables by GC/MS, EPA 821-R-16-008, December 2016.

129 Method 625.1: Base/Neutrals and Acids by GC/MS, EPA 821-R-16-007, December 2016.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
EPA TO-12 Non-methane organics
EPA 3C Fixed gases
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

CHAIN OF CUSTODY

ALPHA ANALYTICAL

Service Centers
Brewer, ME 04412 Portsmouth, NH 03801 Mahwah, NJ 07430 Albany, NY 12205 Tonawanda, NY 14150 Holmes, PA 19043

Westborough, MA 01581, 8 Walkup Dr., TEL: 508-898-9220, FAX: 508-898-9193
Mansfield, MA 02048, 320 Forbes Blvd, TEL: 508-822-9300, FAX: 508-822-3288

Page 1 of 1

Date Rec'd in Lab: 3/31/20

ALPHA Job #: L2013945

Project Information	
Project Name:	Fenway Center Phase II
Project Location:	Boston, MA
Project #	29727-236
(Use Project name as Project #)	☐
Project Manager:	Denis Bell/Jen Sweet
ALPHAQuote #:	

H&A Information	
H&A Client:	Fenway Center
H&A Address	465 Medford St, Boston, MA 0212-1400
H&A Phone:	617-886-7400
H&A Fax:	echristmas@haleyaldrich.com
H&A Email:	kchatterton@haleyaldrich.com

Turn-Around Time
Standard ☑ Due Date:
(only if pre approved) ☐ # of Days: 5 Day

Deliverables
☑ Email ☐ Fax
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other:

Regulatory Requirements (Program/Criteria)
Note: Select State from menu & identify criteria.

Billing Information
☑ Same as Client Info
PO #

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:
3. HOLD PACN & ACN 13. Dissolved Metals ON HOLD (Field Filtered)
Please sample per EPA Approved 2017 RGP Permit methods

Please specify Metals or TAL.

ANALYSIS

Analysis columns:
1. TSS - 2540
2. TRC-4500
3. TCN-4500 HOLD PACN & ACN
4. 504
5. 624.1 & Dioxane, or applicable method
6. HEXCR-3500 & Trivalent Chromium
7. TPHENOL-420
8. 625.1 (including Diethylhexylphthalate)
9. 625.1-SIM, or applicable method
10. CL-300
11. Total Metals - Ag,As,Cd,Cr,III,Cr VI,Cu,Ni,Pb,Sb,Se,Zn,Fe,Hg
12. Ammonia
13. Diss. Metals-Ag,As,Cd,Cr,Cu,Ni,Pb,Sb,Se,Zn,Fe,Hg
14. A2-ALCOHOL (Ethanol)
15. TPH-1664
16. PCB-608

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Sample Specific Comments	Total Bottles
13945-1	HA20-101-2020-0331	3/31/20	11:20	AQ	CAS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		27
Container Type						P	P	P	V	V	P	A	A	A	P	P	P	P	V	A	A		
Preservative						A	A	E	H	H	A	D	H	H	A	C	D	C	A	B	H		

Sample Filtration
☑ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

Preservative Code:	Container Code
A = None	P = Plastic
B = HCl	A = Amber Glass
C = HNO_3	V = Vial
D = H_2SO_4	G = Glass
E = NaOH	B = Bacteria Cup
F = MeOH	C = Cube
G = $NaHSO_4$	O = Other
H = $Na_2S_2O_3$	E = Encore
K/E = Zn Ac/NaOH	D = BOD Bottle
O = Other	

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Relinquished By:	Date/Time	Received By:	Date/Time
Chris [signature]	3/31/2020 1345	[signature] AAL	3/31/20 1408

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. Alpha Analytical's services under this Chain of Custody shall be performed in accordance with terms and conditions within Blanket Service Agreement# 2015-18-Alpha Analytical by and between Haley & Aldrich, Inc., its subsidiaries and affiliates and Alpha Analytical.

Document ID: 20455 Rev 1 (1/28/2016)

Teklab, Inc.
Environmental Laboratory
http://www.teklabinc.com/

April 07, 2020

Melissa Gulli
Alpha Analytical
145 Flanders Road
Westborough, MA 01581
TEL: (603) 319-5010
FAX:

RE: L2013945 **WorkOrder:** 20040098

Dear Melissa Gulli:

TEKLAB, INC received 1 sample on 4/2/2020 10:00:00 AM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Marvin L. Darling II

Marvin L. Darling
Project Manager
(618)344-1004 ex 41
mdarling@teklabinc.com

Teklab, Inc.
Environmental Laboratory

Report Contents

http://www.teklabinc.com/

Client: Alpha Analytical
Client Project: L2013945

Work Order: 20040098
Report Date: 07-Apr-2020

This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	4
Accreditations	5
Laboratory Results	6
Quality Control Results	7
Receiving Check List	8
Chain of Custody	Appended

Teklab, Inc.
Environmental Laboratory

Definitions

http://www.teklabinc.com/

Client: Alpha Analytical
Work Order: 20040098
Client Project: L2013945
Report Date: 07-Apr-2020

Abbr Definition

*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Qualifiers

# - Unknown hydrocarbon	B - Analyte detected in associated Method Blank
C - RL shown is a Client Requested Quantitation Limit	E - Value above quantitation range
H - Holding times exceeded	I - Associated internal standard was outside method criteria
J - Analyte detected below quantitation limits	M - Manual Integration used to determine area response
ND - Not Detected at the Reporting Limit	R - RPD outside accepted recovery limits
S - Spike Recovery outside recovery limits	T - TIC(Tentatively identified compound)
X - Value exceeds Maximum Contaminant Level	

Teklab, Inc.
Environmental Laboratory

Case Narrative

http://www.teklabinc.com/

Client: Alpha Analytical
Client Project: L2013945

Work Order: 20040098
Report Date: 07-Apr-2020

Cooler Receipt Temp: 1.4 °C

Locations

Collinsville

Address	5445 Horseshoe Lake Road Collinsville, IL 62234-7425
Phone	(618) 344-1004
Fax	(618) 344-1005
Email	jhriley@teklabinc.com

Springfield

Address	3920 Pintail Dr Springfield, IL 62711-9415
Phone	(217) 698-1004
Fax	(217) 698-1005
Email	KKlostermann@teklabinc.com

Kansas City

Address	8421 Nieman Road Lenexa, KS 66214
Phone	(913) 541-1998
Fax	(913) 541-1998
Email	jhriley@teklabinc.com

Collinsville Air

Address	5445 Horseshoe Lake Road Collinsville, IL 62234-7425
Phone	(618) 344-1004
Fax	(618) 344-1005
Email	EHurley@teklabinc.com

Chicago

Address	1319 Butterfield Rd. Downers Grove, IL 60515
Phone	(630) 324-6855
Fax	
Email	arenner@teklabinc.com

Teklab, Inc.
Environmental Laboratory

Accreditations

http://www.teklabinc.com/

Client: Alpha Analytical
Work Order: 20040098
Client Project: L2013945
Report Date: 07-Apr-2020

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2021	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2020	Collinsville
Louisiana	LDEQ	166493	NELAP	6/30/2020	Collinsville
Louisiana	LDEQ	166578	NELAP	6/30/2020	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2020	Collinsville
Arkansas	ADEQ	88-0966		3/14/2021	Collinsville
Illinois	IDPH	17584		5/31/2021	Collinsville
Kentucky	UST	0073		1/31/2021	Collinsville
Missouri	MDNR	00930		5/31/2021	Collinsville
Missouri	MDNR	930		1/31/2022	Collinsville

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: Alpha Analytical
Work Order: 20040098
Client Project: L2013945
Report Date: 07-Apr-2020
Lab ID: 20040098-001
Client Sample ID: HA20-101_2020-0331
Matrix: AQUEOUS
Collection Date: 03/31/2020 11:20

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 600 1671A, PHARMACEUTICAL MANUFACTURING INDUSTRY NON-PURGEABLE VOLATILE ORGANICS								
Ethanol	*	20		**ND**	mg/L	1	04/03/2020 19:44	R275004

Teklab, Inc. Environmental Laboratory

Quality Control Results

http://www.teklabinc.com/

Client: Alpha Analytical
Work Order: 20040098
Client Project: L2013945
Report Date: 07-Apr-2020

EPA 600 1671A, PHARMACEUTICAL MANUFACTURING INDUSTRY NON-PURGEABLE VOLATILE ORG

Batch R275004 **SampType:** MBLK Units **mg/L**
SampID: MBLK-040220

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Ethanol	20		**ND**						04/03/2020

Batch R275004 **SampType:** LCS Units **mg/L**
SampID: LCS-040220

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Ethanol	20		**210**	250.0	0	83.2	70	132	04/03/2020

Batch R275004 **SampType:** MS Units **mg/L**
SampID: 20040011-003AMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Ethanol	20		**300**	250.0	84.71	84.5	70	132	04/03/2020

Batch R275004 **SampType:** MSD Units **mg/L** RPD Limit **30**
SampID: 20040011-003AMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Ethanol	20		**300**	250.0	84.71	84.8	295.9	0.31	04/03/2020

Teklab, Inc.
Environmental Laboratory

Receiving Check List

http://www.teklabinc.com/

Client: Alpha Analytical
Client Project: L2013945

Work Order: 20040098
Report Date: 07-Apr-2020

Carrier: UPS

Received By: KMT

Completed by: Amber M. Dilallo
On: 02-Apr-2020

Reviewed by: Elizabeth A. Hurley
On: 02-Apr-2020

Pages to follow: Chain of custody 1 Extra pages included 0

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 1.4
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☐	Lab ☐	NA ☑	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		

When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.

Water – at least one vial per sample has zero headspace?	Yes ☑	No ☐	No VOA vials ☐
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	NA ☐
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑

Any No responses must be detailed below or on the COC.

20040698

ALPHA ANALYTICAL
World Class Chemistry

Subcontract Chain of Custody

Tek Lab, Inc.
5445 Horsehoe Lake Road
Collinsville, IL 62234-7425

Alpha Job Number
L2013945

Client Information	Project Information	Regulatory Requirements/Report Limits
Client: Alpha Analytical Labs Address: Eight Walkup Drive Westborough, MA 01581-1019 Phone: 603.319.5010 Email: mgulli@alphalab.com	Project Location: MA Project Manager: Melissa Gulli **Turnaround & Deliverables Information** Due Date: 04/08/20 (RUSH) Deliverables:	State/Federal Program: Regulatory Criteria: RCS-1-14;S1/G1-14

Project Specific Requirements and/or Report Requirements

Reference following Alpha Job Number on final report/deliverables: L2013945

Report to include Method Blank, LCS/LCSD:

Additional Comments: Send all results/reports to subreports@alphalab.com

Lab ID	Client ID	Collection Date/Time	Sample Matrix	Analysis	Batch QC
20040698-001	HA20-101_2020-0331	03-31-20 11:20	WATER	Ethanol by EPA 1671 Revision A	

1.4°C LT63iu
pHsk 4/2/20

	Relinquished By:	Date/Time:	Received By:	Date/Time:
	[signature]	4/1/20	[signature] UPS	4/2/20 1000
Form No: AL_subcoc				

ANALYTICAL REPORT

Lab Number:	L2019143
Client:	Haley & Aldrich, Inc. 465 Medford Street, Suite 2200 Charlestown, MA 02129-1400
ATTN:	Denis Bell
Phone:	(617) 886-7300
Project Name:	FENWAY CENTER PHASE II
Project Number:	29727-236
Report Date:	05/14/20

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: FENWAY CENTER PHASE II
Project Number: 29727-236

Lab Number: L2019143
Report Date: 05/14/20

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2019143-01	2020-0508-SW	WATER	BOSTON, MA	05/08/20 11:45	05/08/20

Project Name:	FENWAY CENTER PHASE II	**Lab Number:**	L2019143
Project Number:	29727-236	**Report Date:**	05/14/20

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Tiffani Morrissey - Tiffani Morrissey

Title: Technical Director/Representative Date: 05/14/20

METALS

Project Name: FENWAY CENTER PHASE II
Project Number: 29727-236
Lab Number: L2019143
Report Date: 05/14/20

SAMPLE RESULTS

Lab ID: L2019143-01
Client ID: 2020-0508-SW
Sample Location: BOSTON, MA
Sample Depth:
Matrix: Water

Date Collected: 05/08/20 11:45
Date Received: 05/08/20
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Antimony, Total	ND		mg/l	0.00400	--	1	05/12/20 04:30	05/12/20 16:19	EPA 3005A	3,200.8	AM
Arsenic, Total	ND		mg/l	0.00100	--	1	05/12/20 04:30	05/12/20 16:19	EPA 3005A	3,200.8	AM
Cadmium, Total	ND		mg/l	0.00020	--	1	05/12/20 04:30	05/12/20 16:19	EPA 3005A	3,200.8	AM
Chromium, Total	ND		mg/l	0.00100	--	1	05/12/20 04:30	05/12/20 16:19	EPA 3005A	3,200.8	AM
Copper, Total	0.00266		mg/l	0.00100	--	1	05/12/20 04:30	05/12/20 16:19	EPA 3005A	3,200.8	AM
Iron, Total	0.606		mg/l	0.050	--	1	05/12/20 04:30	05/14/20 12:40	EPA 3005A	19,200.7	LC
Lead, Total	0.00254		mg/l	0.00100	--	1	05/12/20 04:30	05/12/20 16:19	EPA 3005A	3,200.8	AM
Mercury, Total	ND		mg/l	0.00020	--	1	05/12/20 07:49	05/12/20 13:59	EPA 245.1	3,245.1	GD
Nickel, Total	ND		mg/l	0.00200	--	1	05/12/20 04:30	05/12/20 16:19	EPA 3005A	3,200.8	AM
Selenium, Total	ND		mg/l	0.00500	--	1	05/12/20 04:30	05/12/20 16:19	EPA 3005A	3,200.8	AM
Silver, Total	ND		mg/l	0.00040	--	1	05/12/20 04:30	05/12/20 16:19	EPA 3005A	3,200.8	AM
Zinc, Total	0.01302		mg/l	0.01000	--	1	05/12/20 04:30	05/12/20 16:19	EPA 3005A	3,200.8	AM
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	48.8		mg/l	0.660	NA	1	05/12/20 04:30	05/14/20 12:40	EPA 3005A	19,200.7	LC
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	--	1		05/12/20 16:19	NA	107,-	

Project Name: FENWAY CENTER PHASE II **Lab Number:** L2019143

Project Number: 29727-236 **Report Date:** 05/14/20

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01 Batch: WG1369371-1										
Iron, Total	ND		mg/l	0.050	--	1	05/12/20 04:30	05/12/20 10:30	19,200.7	LC

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab for sample(s): 01 Batch: WG1369371-1										
Hardness	ND		mg/l	0.660	NA	1	05/12/20 04:30	05/14/20 09:48	19,200.7	LC

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01 Batch: WG1369376-1										
Antimony, Total	ND		mg/l	0.00400	--	1	05/12/20 04:30	05/12/20 14:09	3,200.8	AM
Arsenic, Total	ND		mg/l	0.00100	--	1	05/12/20 04:30	05/12/20 14:09	3,200.8	AM
Cadmium, Total	ND		mg/l	0.00020	--	1	05/12/20 04:30	05/12/20 14:09	3,200.8	AM
Chromium, Total	ND		mg/l	0.00100	--	1	05/12/20 04:30	05/12/20 14:09	3,200.8	AM
Copper, Total	ND		mg/l	0.00100	--	1	05/12/20 04:30	05/12/20 14:09	3,200.8	AM
Lead, Total	ND		mg/l	0.00100	--	1	05/12/20 04:30	05/12/20 14:09	3,200.8	AM
Nickel, Total	ND		mg/l	0.00200	--	1	05/12/20 04:30	05/12/20 14:09	3,200.8	AM
Selenium, Total	ND		mg/l	0.00500	--	1	05/12/20 04:30	05/12/20 14:09	3,200.8	AM
Silver, Total	ND		mg/l	0.00040	--	1	05/12/20 04:30	05/12/20 14:09	3,200.8	AM
Zinc, Total	ND		mg/l	0.01000	--	1	05/12/20 04:30	05/12/20 14:09	3,200.8	AM

Prep Information

Digestion Method: EPA 3005A

Project Name: FENWAY CENTER PHASE II
Project Number: 29727-236
Lab Number: L2019143
Report Date: 05/14/20

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01 Batch: WG1369378-1										
Mercury, Total	ND		mg/l	0.00020	--	1	05/12/20 07:49	05/12/20 13:23	3,245.1	GD

Prep Information

Digestion Method: EPA 245.1

Lab Control Sample Analysis

Batch Quality Control

Project Name: FENWAY CENTER PHASE II

Project Number: 29727-236

Lab Number: L2019143

Report Date: 05/14/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1369371-2								
Iron, Total	111		-		85-115	-		
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01 Batch: WG1369371-2								
Hardness	103		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1369376-2								
Antimony, Total	90		-		85-115	-		
Arsenic, Total	104		-		85-115	-		
Cadmium, Total	104		-		85-115	-		
Chromium, Total	99		-		85-115	-		
Copper, Total	92		-		85-115	-		
Lead, Total	104		-		85-115	-		
Nickel, Total	99		-		85-115	-		
Selenium, Total	100		-		85-115	-		
Silver, Total	98		-		85-115	-		
Zinc, Total	101		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1369378-2								
Mercury, Total	104		-		85-115	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: FENWAY CENTER PHASE II
Project Number: 29727-236

Lab Number: L2019143
Report Date: 05/14/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1369371-3 QC Sample: L2019403-01 Client ID: MS Sample												
Iron, Total	0.523	1	1.60	108		-	-		75-125	-		20
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1369371-3 QC Sample: L2019403-01 Client ID: MS Sample												
Hardness	424	66.2	474	76		-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1369371-7 QC Sample: L2019134-01 Client ID: MS Sample												
Iron, Total	7.00	1	7.83	83		-	-		75-125	-		20
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1369371-7 QC Sample: L2019134-01 Client ID: MS Sample												
Hardness	375	66.2	431	85		-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1369376-3 QC Sample: L2019134-01 Client ID: MS Sample												
Antimony, Total	ND	0.5	0.5445	109		-	-		70-130	-		20
Arsenic, Total	0.00737	0.12	0.1284	101		-	-		70-130	-		20
Cadmium, Total	ND	0.051	0.05416	106		-	-		70-130	-		20
Chromium, Total	0.00109	0.2	0.2102	104		-	-		70-130	-		20
Copper, Total	0.00270	0.25	0.2492	98		-	-		70-130	-		20
Lead, Total	0.00477	0.51	0.5503	107		-	-		70-130	-		20
Nickel, Total	ND	0.5	0.5103	102		-	-		70-130	-		20
Selenium, Total	ND	0.12	0.1231	102		-	-		70-130	-		20
Silver, Total	ND	0.05	0.04979	100		-	-		70-130	-		20
Zinc, Total	ND	0.5	0.5223	104		-	-		70-130	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1369378-3 QC Sample: L2018885-01 Client ID: MS Sample												
Mercury, Total	ND	0.005	0.00344	**69**	Q	-	-		70-130	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: FENWAY CENTER PHASE II

Project Number: 29727-236

Lab Number: L2019143

Report Date: 05/14/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1369371-8 QC Sample: L2019134-01 Client ID: DUP Sample						
Iron, Total	7.00	6.98	mg/l	0		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1369376-4 QC Sample: L2019134-01 Client ID: DUP Sample						
Antimony, Total	ND	ND	mg/l	NC		20
Arsenic, Total	0.00737	0.00761	mg/l	3		20
Cadmium, Total	ND	ND	mg/l	NC		20
Chromium, Total	0.00109	ND	mg/l	NC		20
Copper, Total	0.00270	0.00240	mg/l	12		20
Lead, Total	0.00477	0.00476	mg/l	0		20
Nickel, Total	ND	ND	mg/l	NC		20
Selenium, Total	ND	ND	mg/l	NC		20
Silver, Total	ND	ND	mg/l	NC		20
Zinc, Total	ND	ND	mg/l	NC		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1369378-4 QC Sample: L2018885-01 Client ID: DUP Sample						
Mercury, Total	ND	ND	mg/l	NC		20

INORGANICS
&
MISCELLANEOUS

Project Name: FENWAY CENTER PHASE II
Project Number: 29727-236
Lab Number: L2019143
Report Date: 05/14/20

SAMPLE RESULTS

Lab ID: L2019143-01
Client ID: 2020-0508-SW
Sample Location: BOSTON, MA
Sample Depth:
Matrix: Water

Date Collected: 05/08/20 11:45
Date Received: 05/08/20
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
pH (H)	7.9		SU	-	NA	1	-	05/09/20 06:00	121,4500H+-B	JA
Nitrogen, Ammonia	0.079		mg/l	0.075	--	1	05/11/20 16:50	05/11/20 21:02	121,4500NH3-BH	AT
Chromium, Hexavalent	ND		mg/l	0.010	--	1	05/09/20 06:20	05/09/20 07:03	1,7196A	JA

Project Name: FENWAY CENTER PHASE II
Project Number: 29727-236
Lab Number: L2019143
Report Date: 05/14/20

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1368948-1										
Chromium, Hexavalent	ND		mg/l	0.010	--	1	05/09/20 06:20	05/09/20 06:59	1,7196A	JA
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1369302-1										
Nitrogen, Ammonia	ND		mg/l	0.075	--	1	05/11/20 16:50	05/11/20 20:36	121,4500NH3-BH	AT

Lab Control Sample Analysis

Batch Quality Control

Project Name: FENWAY CENTER PHASE II

Project Number: 29727-236

Lab Number: L2019143

Report Date: 05/14/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1368932-1								
pH	100		-		99-101	-		5
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1368948-2								
Chromium, Hexavalent	97		-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1369302-2								
Nitrogen, Ammonia	98		-		80-120	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: FENWAY CENTER PHASE II
Project Number: 29727-236

Lab Number: L2019143
Report Date: 05/14/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1368948-4 QC Sample: L2019143-01 Client ID: 2020-0508-SW												
Chromium, Hexavalent	ND	0.1	0.092	92		-	-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1369302-4 QC Sample: L2018963-01 Client ID: MS Sample												
Nitrogen, Ammonia	0.321	4	3.89	89		-	-		80-120	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: FENWAY CENTER PHASE II

Project Number: 29727-236

Lab Number: L2019143

Report Date: 05/14/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1368932-2 QC Sample: L2019130-02 Client ID: DUP Sample						
pH	7.1	7.0	SU	1		5
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1368948-3 QC Sample: L2019143-01 Client ID: 2020-0508-SW						
Chromium, Hexavalent	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1369302-3 QC Sample: L2018963-01 Client ID: DUP Sample						
Nitrogen, Ammonia	0.321	0.319	mg/l	1		20

Project Name: FENWAY CENTER PHASE II
Project Number: 29727-236

Lab Number: L2019143
Report Date: 05/14/20

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2019143-01A	Plastic 250ml HNO3 preserved	A	<2	<2	5.6	Y	Absent		CD-2008T(180),NI-2008T(180),ZN-2008T(180),CU-2008T(180),FE-UI(180),HARDU(180),HG-U(28),AS-2008T(180),AG-2008T(180),SE-2008T(180),CR-2008T(180),PB-2008T(180),SB-2008T(180)
L2019143-01B	Plastic 500ml unpreserved	A	7	7	5.6	Y	Absent		HEXCR-7196(1),PH-4500(.01)
L2019143-01C	Plastic 500ml H2SO4 preserved	A	<2	<2	5.6	Y	Absent		NH3-4500(28)

*Values in parentheses indicate holding time in days

Project Name:	FENWAY CENTER PHASE II	**Lab Number:**	L2019143
Project Number:	29727-236	**Report Date:**	05/14/20

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

Report Format: Data Usability Report

Project Name:	FENWAY CENTER PHASE II	**Lab Number:**	L2019143
Project Number:	29727-236	**Report Date:**	05/14/20

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the reporting limit (RL) for the sample.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less

Report Format: Data Usability Report

Project Name:	FENWAY CENTER PHASE II	**Lab Number:**	L2019143
Project Number:	29727-236	**Report Date:**	05/14/20

Data Qualifiers

than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Report Format: Data Usability Report

Project Name:	FENWAY CENTER PHASE II	**Lab Number:**	L2019143
Project Number:	29727-236	**Report Date:**	05/14/20

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

3 Methods for the Determination of Metals in Environmental Samples, Supplement I. EPA/600/R-94/111. May 1994.

19 Inductively Coupled Plasma Atomic Emission Spectrometric Method for Trace Element Analysis of Water and Wastes. Appendix C, Part 136, 40 CFR (Code of Federal Regulations). July 1, 1999 edition.

107 Alpha Analytical - In-house calculation method.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
EPA TO-12 Non-methane organics
EPA 3C Fixed gases
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

CHAIN OF CUSTODY

ALPHA ANALYTICAL

Westborough, MA 01581 — 8 Walkup Dr. — TEL: 508-898-9220 — FAX: 508-898-9193

Mansfield, MA 02048 — 320 Forbes Blvd — TEL: 508-822-9300 — FAX: 508-822-3288

Service Centers: Brewer, ME 04412 — Portsmouth, NH 03801 Mahwah, NJ 07430 — Albany, NY 12205 — Tonawanda, NY 14150 — Holmes, PA 19043

Page 1 of 1

Date Rec'd in Lab: 5/8/20

ALPHA Job #: L2019143

H&A Information

H&A Client: Fenway Center

H&A Address: 465 Medford St

Boston, MA 02129-1400

H&A Phone: 617-886-7400

H&A Fax: kchatterton@haleyaldrich.com

H&A Email: echristmas@haleyaldrich.com

Project Information

Project Name: Fenway Center Phase II

Project Location: Boston, MA

Project #: 29727-236

(Use Project name as Project #)

Project Manager: Denis Bell/Jen Sweet

ALPHAQuote #:

Turn-Around Time

Standard ☑ — Due Date:

(only if pre approved) ☐ — # of Days: 5 Day

Deliverables

☑ Email ☐ Fax

☐ EQuIS (1 File) ☑ EQuIS (4 File)

☐ Other:

Regulatory Requirements (Program/Criteria)

MA NPDES RGP

Note: Select State from menu & identify criteria.

Billing Information

☑ Same as Client Info

PO #

Disposal Site Information

Please identify below location of applicable disposal facilities.

Disposal Facility:

☐ NJ ☐ NY

☐ Other:

These samples have been previously analyzed by Alpha

Other project specific requirements/comments:

Please sample per EPA Approved 2017 RGP Permit methods

Note 1: Total Metals - Ag.As.Cd.Cr III.Cr VI.Cu.Ni.Pb.Sb.Se.Zn.Fe.Hg

ANALYSIS

Sample Filtration

☐ Done

☐ Lab to do

Preservation

☐ Lab to do

(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	Ammonia	pH	Hardness	Total Metals (see note 1)	Sample Specific Comments	Total Bottles
19143-01	2020-0508-SW	5/8/2020	11:45	AQ	MSP	X	X	X	X		3

Preservative Code: A = None; B = HCl; C = HNO_3; D = H_2SO_4; E = NaOH; F = MeOH; G = $NaHSO_4$; H = $Na_2S_2O_3$; K/E = Zn Ac/NaOH; O = Other

Container Code: P = Plastic; A = Amber Glass; V = Vial; G = Glass; B = Bacteria Cup; C = Cube; O = Other; E = Encore; D = BOD Bottle

Westboro: Certification No: MA935

Mansfield: Certification No: MA015

Container Type

Preservative

Relinquished By:	Date/Time	Received By:	Date/Time
Matthew Plouffe	5/8/2020 12:45	AAL	5/8/20 12:45

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. Alpha Analytical's services under this Chain of Custody shall be performed in accordance with terms and conditions within Blanket Service Agreement# 2015-18-Alpha Analytical by and between Haley & Aldrich, Inc., its subsidiaries and affiliates and Alpha Analytical.

Document ID: 20455 Rev 1 (1/28/2016)

APPENDIX C

Dilution Factor and Effluent Limit Calculations

Enter number values in green boxes based on the instructions to the right

Enter values in the units specified

↓	
15.9	Q_R = Enter upstream flow in **MGD**
0.144	Q_P = Enter discharge flow in **MGD**
0	Downstream 7Q10

Enter a dilution factor for saltwater receiving water (this box does not apply to freshwater receiving waters)

↓
0

Enter values in the units specified

↓	
212	C_d = Enter influent hardness in **mg/L** $CaCO_3$
48.8	C_s = Enter receiving water hardness in **mg/L** $CaCO_3$

Enter **receiving water** concentrations in the units specified

↓		Impaired for metals? ↓
7.9	pH in **Standard Units**	
14	Temperature in **°C**	
0.079	Ammonia in **mg/L**	
48.8	Hardness in **mg/L** $CaCO_3$	
0	Salinity in **ppt**	
0	Antimony in **µg/L**	no
0	Arsenic in **µg/L**	no
0	Cadmium in **µg/L**	yes
0	Chromium III in **µg/L**	yes
0	Chromium VI in **µg/L**	yes
2.66	Copper in **µg/L**	yes
606	Iron in **µg/L**	yes
2.54	Lead in **µg/L**	yes
0	Mercury in **µg/L**	yes
0	Nickel in **µg/L**	yes
0	Selenium in **µg/L**	yes
0	Silver in **µg/L**	yes
13.02	Zinc in **µg/L**	yes

Enter **influent** concentrations in the units specified

↓	
0	TRC in **µg/L**
1.3	Ammonia in **mg/L**
0	Antimony in **µg/L**
0	Arsenic in **µg/L**
0	Cadmium in **µg/L**
0	Chromium III in **µg/L**
0	Chromium VI in **µg/L**
2.3	Copper in **µg/L**
8700	Iron in **µg/L**
0	Lead in **µg/L**
0	Mercury in **µg/L**
4.21	Nickel in **µg/L**
0	Selenium in **µg/L**
0	Silver in **µg/L**
11.17	Zinc in **µg/L**
0	Cyanide in **µg/L**
0	Phenol in **µg/L**
0	Carbon Tetrachloride in **µg/L**
0	Tetrachloroethylene in **µg/L**
0	Total Phthalates in **µg/L**
0	Diethylhexylphthalate in **µg/L**
0	Benzo(a)anthracene in **µg/L**
0	Benzo(a)pyrene in **µg/L**
0	Benzo(b)fluoranthene in **µg/L**
0	Benzo(k)fluoranthene in **µg/L**
0	Chrysene in **µg/L**
0	Dibenzo(a,h)anthracene in **µg/L**
0	Indeno(1,2,3-cd)pyrene in **µg/L**
0	Methyl-tert butyl ether in **µg/L**

Notes: Revised 1-24-20

Freshwater: leave 0 unless 7Q10 or alternate Q_R AND a dilution factor >1 approved by the State;
Saltwater (estuarine and marine): leave 0 unless QR approved by the State
Enter the design flow or 1 MGD, whichever is less (100 gpm design flow = 0.144 MGD and is entered by default)
Leave 0 unless Q_R approved by the State

Freshwater: leave 0
Saltwater (estuarine and marine): leave 0 unless DF approved by the State

Applies to freshwater receiving waters only

pH, temperature, and ammonia required for all discharges
Hardness required for freshwater
Salinity required for saltwater (estuarine and marine)
Metals required for all discharges if detected in the influent and if dilution factor approved by State
Enter 0 if non-detect or testing not required
If receiving water is not listed as impaired for metals in State 303(d) List, change to "no" using dropdown

if >1 sample, enter maximum influent measurement
if >10 samples, may enter 95th percentile of influent measurements using
EPA's *Technical Support Document for Water Quality-based Toxics Control*
Enter 0 if non-detect or testing not required

HALEY & ALDRICH, INC.		**CALCULATIONS**	FILE NO.	29727-236	
			SHEET	1 of 1	
CLIENT	Creative Sciences Properties		DATE	14 May 2020	
PROJECT	Fenway Center Phase II		COMPUTED BY	EJC	
SUBJECT	Dilution Factor Calculations				

PURPOSE: Calculate Dilution Factor (DF) for project based on 7 Day 10 Year (7Q10) Low Flow values.

APPROACH: Calculate DF based on EPA formula $(Q_S + Q_D)/Q_D$, where Q_S is 7Q10 in million gallons per day (MGD) and Q_D is discharge flow in MGD.

ASSUMPTIONS:
1. 7Q10 is 24.6 cfs (from StreamStats 4.0)
2. A conversion of 7.48 is used to convert cubic feet to gallons
3. A discharge flowrate of 100 gpm is assumed

CALCULATIONS:

7Q10 Low Flow Value (Q_S)

$$Q_S = \frac{24.6\ ft^3}{sec} \times \frac{7.48\ gallons}{ft^3} \times \frac{86{,}400\ sec}{day} \times \frac{1\ MG}{1{,}000{,}000\ gallons}$$

Q_S = 15.9 MGD

Discharge Flowrate (Q_D)

$$Q_D = \frac{100\ gallons}{min} \times \frac{1{,}440\ min}{day} \times \frac{1\ MG}{1{,}000{,}000\ gallons}$$

Q_D = 0.144 MGD

Dilution Factor (DF)

$$DF = \frac{Q_S + Q_D}{QD} = \frac{15.9\ MGD + 0.144\ MGD}{0.144\ MGD} = 111.4$$

CONCLUSION The dilution factor for this project is calculated to be 111.4 based on the provided 7Q10 low flow value and discharge flowrate.

Christmas, Elizabeth

From: Ruan, Xiaodan (DEP) <xiaodan.ruan@state.ma.us>
Sent: Saturday, May 16, 2020 10:57 AM
To: Christmas, Elizabeth
Cc: Vakalopoulos, Catherine (DEP)
Subject: Re: NPDES RGP Application - 7Q10 and Dilution Factor Confirmation

CAUTION: External Email

Hi Liz,

I can confirm your dilution factor 111.4 for this proposed discharge at the maximum flow rate 100 gpm, to the Charles River is correct.

Here is some information to use in the NOI:
Waterbody ID: MA72-38 (within Charles River Watershed)
Classification: B
Outstanding Resource Water?: no
State's most recent Integrated List is located here: https://www.epa.gov/sites/production/files/2020-01/documents/2016-ma-303d-list-report.pdf, search for "MA72-38" to see the causes of impairments.
TMDLs: there are two approved TMDLs (pathogen and nutrients) for this segment.

As you know, if this is not a *current* MCP site then in addition to submitting the NOI to EPA (and cc-ing Cathy electronically), you need to submit a transmittal form to MassDEP and submit a $500 fee (unless fee exempt, e.g. municipality). The instructions are located here: https://www.mass.gov/how-to/wm-15-npdes-general-permit-notice-of-intent. Please also send a copy of the transmittal form to Cathy, or include it in the NOI.

Please let me know if you have any questions.

Thanks,
Xiaodan

From: Christmas, Elizabeth <EChristmas@haleyaldrich.com>
Sent: Thursday, May 14, 2020 9:21 PM
To: Vakalopoulos, Catherine (DEP)
Cc: Ruan, Xiaodan (DEP)
Subject: NPDES RGP Application - 7Q10 and Dilution Factor Confirmation

Good evening Cathy,

In accordance with the NPDES RGP, I have attached to this email our StreamStats report and dilution factor for the below project for your review and confirmation.

Project:
Fenway Center Phase II – Parcel 7 Development
Massachusetts Turnpike between Brookline Avenue Bridge and Beacon Street Bridge
Boston, MA

7 Day 10 Year Low Flow value (from attached StreamStats report) = 24.6 cfs or 15.9 MGD

Dilution Factor (from attached calculations) = 111.4

Can you please confirm these values are appropriate for use for our project?

Thank you,
Liz

Elizabeth J. Christmas, P.E. (NH)
Assistant Project Manager

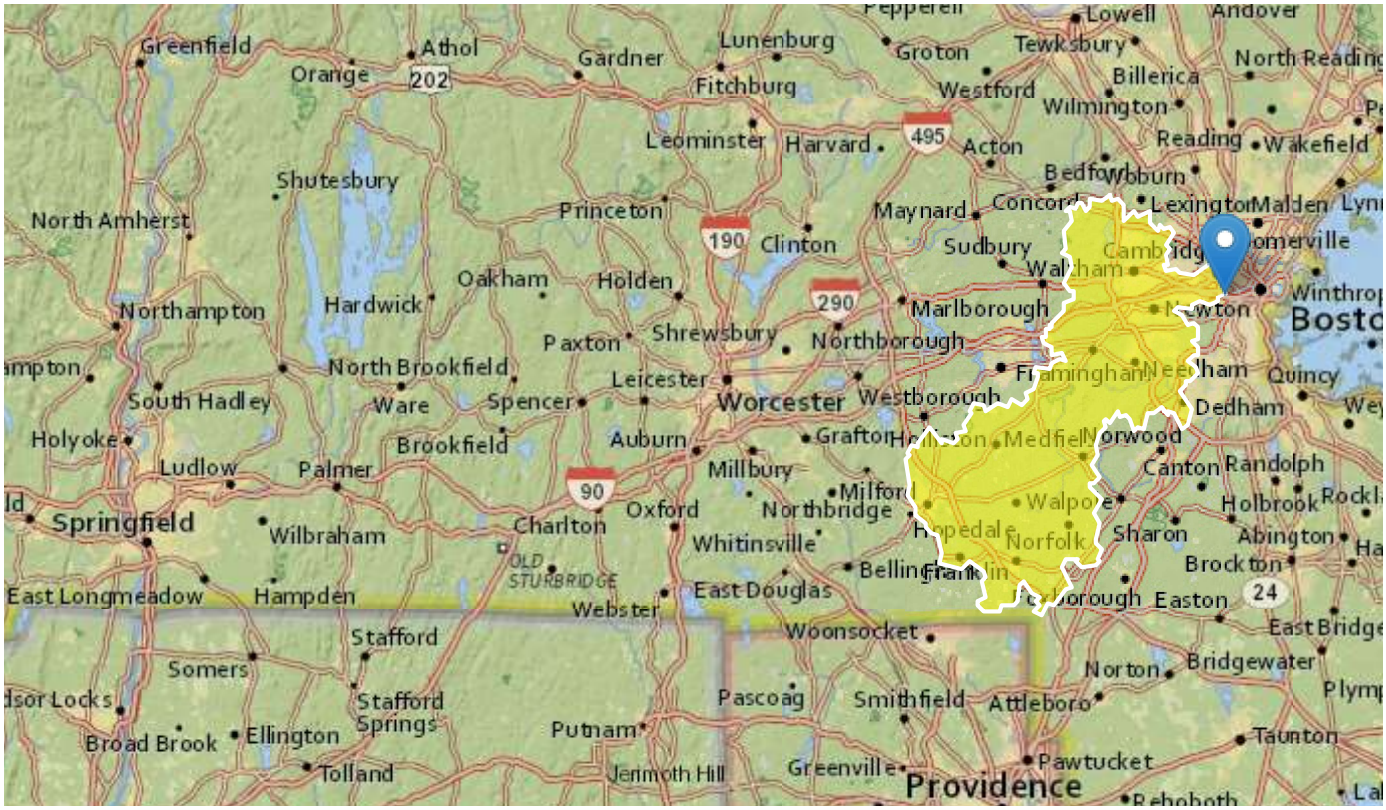
Haley & Aldrich, Inc.
465 Medford Street | Suite 2200
Boston, MA 02129-1400

T: (617) 886-7581
C: (978) 621-9611

www.haleyaldrich.com

StreamStats Report - Fenway Center Phase II

Region ID: MA
Workspace ID: MA20200515005800277000
Clicked Point (Latitude, Longitude): 42.35315, -71.11311
Time: 2020-05-14 20:58:34 -0400



StreamStats Report for Fenway Center Phase II NPDES RGP Application

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	282	square miles
BSLDEM250	Mean basin slope computed from 1:250K DEM	2.33	percent
DRFTPERSTR	Area of stratified drift per unit of stream length	0.23	square mile per mile
MAREGION	Region of Massachusetts 0 for Eastern 1 for Western	0	dimensionless

Low-Flow Statistics Parameters[Statewide Low Flow WRIR00 4135]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	282	square miles	1.61	149
BSLDEM250	Mean Basin Slope from 250K DEM	2.33	percent	0.32	24.6
DRFTPERSTR	Stratified Drift per Stream Length	0.23	square mile per mile	0	1.29
MAREGION	Massachusetts Region	0	dimensionless	0	1

Low-Flow Statistics Disclaimers[Statewide Low Flow WRIR00 4135]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

Low-Flow Statistics Flow Report[Statewide Low Flow WRIR00 4135]

Statistic	Value	Unit
7 Day 2 Year Low Flow	49.4	ft^3/s
7 Day 10 Year Low Flow	24.6	ft^3/s

Low-Flow Statistics Citations

Ries, K.G., III,2000, Methods for estimating low-flow statistics for Massachusetts streams: U.S. Geological Survey Water Resources Investigations Report 00-4135, 81 p. (http://pubs.usgs.gov/wri/wri004135/)

USGS Product Names Disclaimer: Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

Application Version: 4.3.11

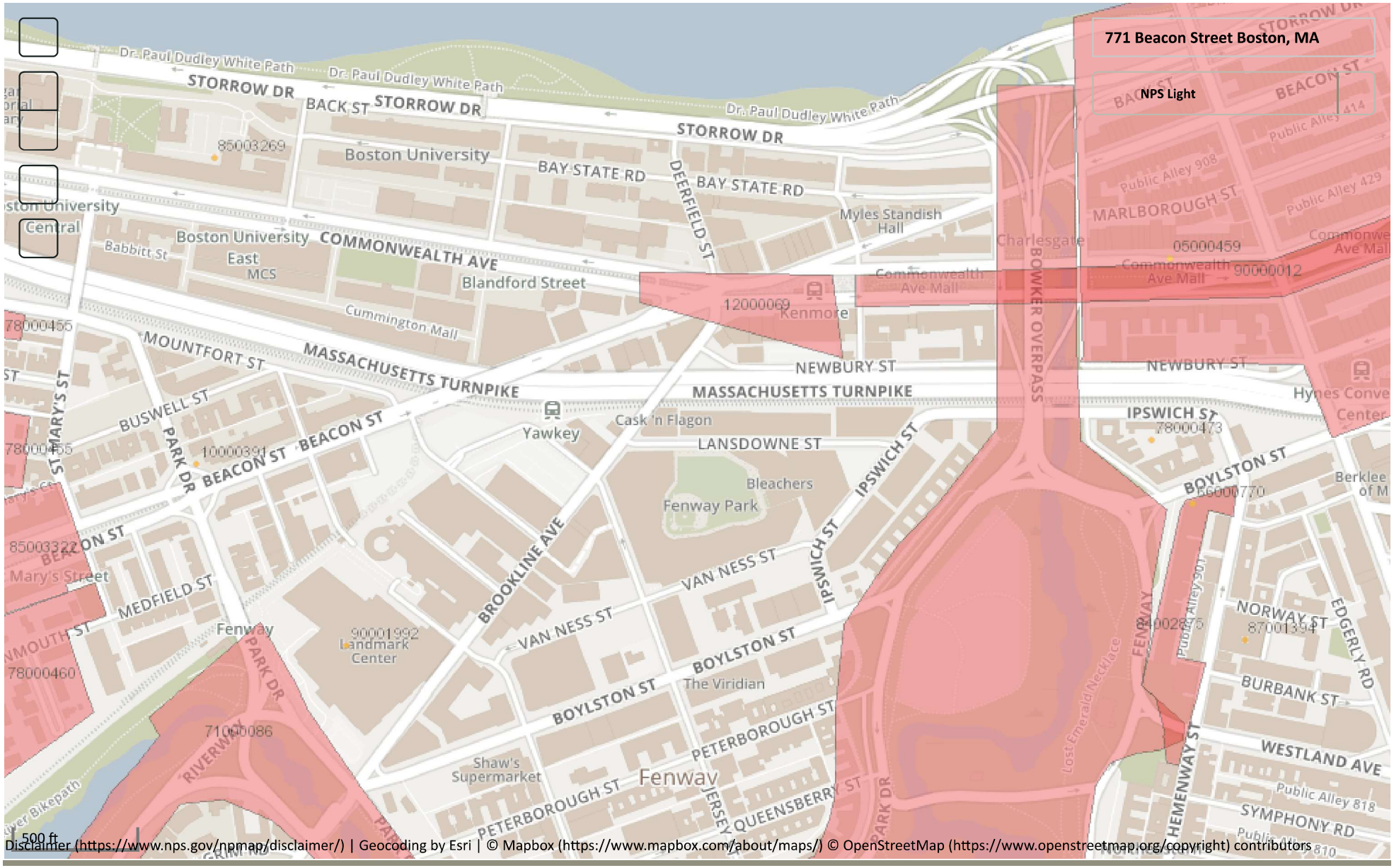
APPENDIX D

National Register of Historic Places Documentation

National Register of Historic Places

National Park Service
U.S. Department of the Interior

Public, non-restricted data depicting National Register spatial data processed by the Cultural Resources GIS facility. …



Contact Us (https://www.nps.gov/contacts.htm)

Massachusetts Cultural Resource Information System

MACRIS

MACRIS Search Results

Search Criteria: Town(s): Boston; Place: Fenway; Street Name: Massachusetts Tpk; Resource Type(s): Area, Building, Burial Ground, Object, Structure;

Inv. No.	Property Name	Street	Town	Year

Massachusetts Cultural Resource Information System

MACRIS

MACRIS Search Results

Search Criteria: Town(s): Boston; Place: Fenway; Street Name: I-90; Resource Type(s): Area, Building, Burial Ground, Object, Structure;

Inv. No.	Property Name	Street	Town	Year

APPENDIX E

Endangered Species Act Documentation

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104
http://www.fws.gov/newengland

In Reply Refer To: May 15, 2020
Consultation Code: 05E1NE00-2020-SLI-2603
Event Code: 05E1NE00-2020-E-07826
Project Name: Fenway Center Phase II

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
(603) 223-2541

Project Summary

Consultation Code: 05E1NE00-2020-SLI-2603

Event Code: 05E1NE00-2020-E-07826

Project Name: Fenway Center Phase II

Project Type: DEVELOPMENT

Project Description: Construction for new building located over the Massachusetts Turnpike between the Beacon Street and Brookline Avenue bridges.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/42.34767369036202N71.09928281214661W

Counties: Suffolk, MA

Endangered Species Act Species

There is a total of 0 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

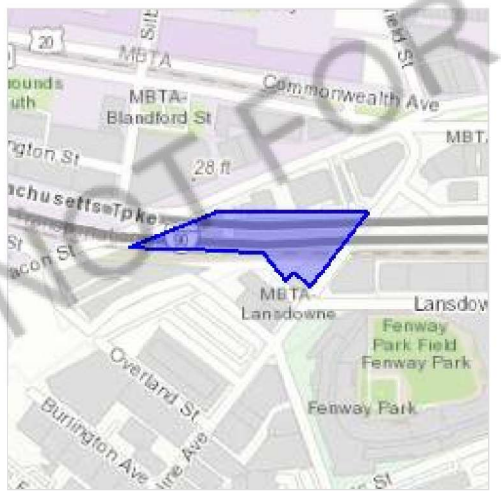
Project information

NAME

Fenway Center Phase II

LOCATION

Suffolk County, Massachusetts



DESCRIPTION

Construction for new building located over the Massachusetts Turnpike between the Beacon Street and Brookline Avenue bridges.

Local office

New England Ecological Services Field Office

(603) 223-2541

(603) 223-0104

70 Commercial Street, Suite 300
Concord, NH 03301-5094

http://www.fws.gov/newengland

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Log in to IPaC.
2. Go to your My Projects list.
3. Click PROJECT HOME for this project.
4. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

THERE ARE NO ENDANGERED SPECIES EXPECTED TO OCCUR AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE

BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

Bald Eagle Haliaeetus leucocephalus — Breeds Oct 15 to Aug 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1626

Black-billed Cuckoo Coccyzus erythropthalmus — Breeds May 15 to Oct 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9399

Bobolink Dolichonyx oryzivorus — Breeds May 20 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Canada Warbler Cardellina canadensis — Breeds May 20 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Cerulean Warbler Dendroica cerulea — Breeds Apr 29 to Jul 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/2974

Dunlin Calidris alpina arcticola — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Evening Grosbeak Coccothraustes vespertinus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Kentucky Warbler Oporornis formosus — Breeds Apr 20 to Aug 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Lesser Yellowlegs Tringa flavipes — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9679

Nelson's Sparrow Ammodramus nelsoni — Breeds May 15 to Sep 5
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Prairie Warbler Dendroica discolor This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Jul 31
Prothonotary Warbler Protonotaria citrea This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 1 to Jul 31
Red-headed Woodpecker Melanerpes erythrocephalus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10
Red-throated Loon Gavia stellata This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Rusty Blackbird Euphagus carolinus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Semipalmated Sandpiper Calidris pusilla This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Snowy Owl Bubo scandiacus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Wood Thrush Hylocichla mustelina This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

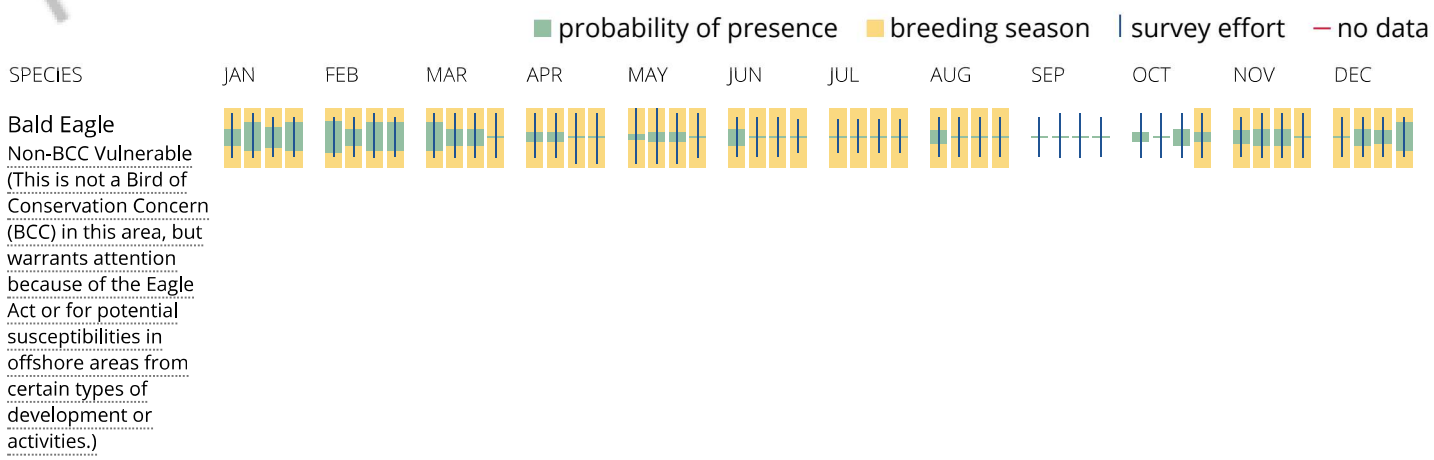
Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

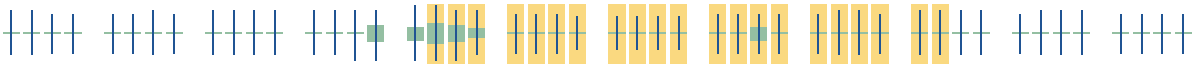
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

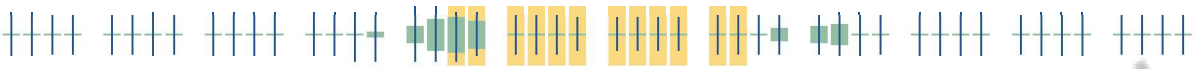


Black-billed Cuckoo
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

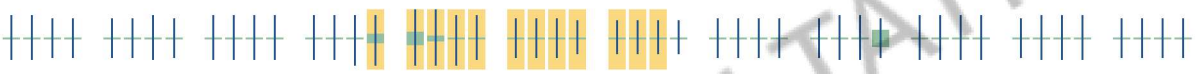


Bobolink
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Canada Warbler
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



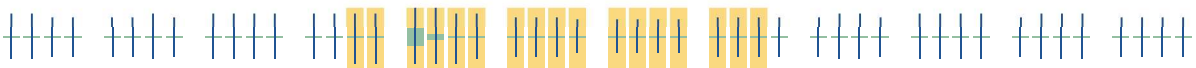
Cerulean Warbler
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Dunlin
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

Evening Grosbeak
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Kentucky Warbler
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Lesser Yellowlegs
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Nelson's Sparrow
BCC Rangewide (CON)
(This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Prairie Warbler
BCC Rangewide (CON)
(This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Prothonotary Warbler
BCC Rangewide (CON)
(This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

SPECIES JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

Red-headed Woodpecker
BCC Rangewide (CON)
(This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

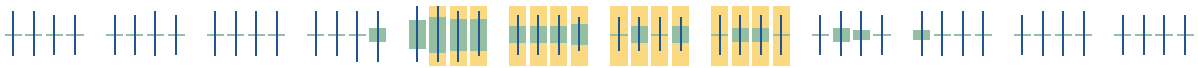
Red-throated Loon
BCC Rangewide (CON)
(This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Rusty Blackbird
BCC Rangewide (CON)
(This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Semipalmated Sandpiper
BCC Rangewide (CON)
(This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Snowy Owl
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Wood Thrush
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird

on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ “What does IPaC use to generate the migratory birds potentially occurring in my specified location”. Please be aware this report provides the “probability of presence” of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the “no data” indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ “Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds” at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

THERE ARE NO KNOWN WETLANDS AT THIS LOCATION.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some

deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

APPENDIX F

Copies of BWSC and MassDOT Permit Applications

Haley & Aldrich, Inc.
465 Medford St.
Suite 2200
Boston, MA 02129
617.886.7400

21 May 2020
File No. 29727-236

Boston Water and Sewer Commission
Engineering Customer Services
900 Harrison Avenue
Boston, MA 02119

Attention: Jodi Dobay

Subject: Request for Approval of Temporary Construction Dewatering
Fenway Center Phase II – Parcel 7 Development
Massachusetts Turnpike
Boston, Massachusetts

Dear Ms. Dobay:

On behalf of our client, MK Parcel 7 Development, LLC, this letter submits the Dewatering Discharge Permit Application in support of the planned Fenway Center Phase II – Parcel 7 Development located on the Massachusetts Turnpike between the Brookline Avenue and Beacon Street bridges in Boston.

Dewatering is necessary to enable construction in-the-dry and is anticipated to begin in July 2020 and continue for up to 18 months. Prior to discharge, collected water will be routed through a sedimentation tank and bag filters (5-micron) to remove suspended solids and undissolved chemical constituents. Other pre-treatment may be conducted as necessary to comply with National Pollutant Discharge Elimination System (NPDES) Remediation General Permit (RGP) discharge criteria. The site location is shown on Figures 1 and 2, and the proposed dewatering discharge route and BWSC outfall location are shown on Figures 3A through 3G.

A Notice of Intent to discharge under the 2017 NPDES RGP has been submitted to the Environmental Protection Agency (EPA). A copy of the submitted application is attached. If you have any questions, please feel free to contact the undersigned at 617-886-7477.

Sincerely yours,
HALEY & ALDRICH, INC.

Denis J. Bell, P.E.
Senior Engineer

Attachments:

- BWSC Dewatering Discharge Permit Application
- Figure 1 – Project Locus
- Figure 2 – Site and Subsurface Exploration Location Plan
- Figure 3A to 3G – BWSC Maps
- Copy of NPDES RGP Application

G:\29727\235-PhaseII\NPDES\Appendix F - MassDOT and BWSC Permits\2020-0521-HAI-Fenway-BWSC Letter_F.docx

Boston Water and Sewer Commission
980 Harrison Avenue
Boston, MA 02119-2540

DEWATERING DISCHARGE PERMIT APPLICATION

OWNER / AUTHORIZED APPLICANT PROVIDE INFORMATION HERE:

Company Name: MK Parcel 7 Development, LLC Address: One Boston Place, 201 Washington Street, Suite 3920

Phone Number: (617) 314-7906 Fax number: _____

Contact person name: David Surette Title: Vice President of Development

Cell number: _____ Email address: dsurette@iqhqreit.com

Permit Request (check one): ☑ New Application ☐ Permit Extension ☐ Other (Specify): _____

Owner's Information (if different from above):

Owner of property being dewatered: _____

Owner's mailing address: _____ Phone number: _____

Location of Discharge & Proposed Treatment System(s):

Street number and name: Massachusetts Turnpike Neighborhood Boston/Fenway

Discharge is to a: ☐ Sanitary Sewer ☐ Combined Sewer ☑ Storm Drain ☐ Other (specify): _____

Describe Proposed Pre-Treatment System(s): Sedimentation Tanks/Bag Filters

BWSC Outfall No. 23G132 Receiving Waters Charles River

Temporary Discharges (Provide Anticipated Dates of Discharge): From 07/07/2020 To 12/31/2021

- ☐ Groundwater Remediation
- ☐ Utility/Manhole Pumping
- ☐ Accumulated Surface Water
- ☐ Tank Removal/Installation
- ☐ Test Pipe
- ☐ Hydrogeologic Testing
- ☑ Foundation Excavation
- ☐ Trench Excavation
- ☐ Other _____

Permanent Discharges

- ☐ Foundation Drainage
- ☐ Accumulated Surface Water
- ☐ Non-contact/Uncontaminated Process
- ☐ Crawl Space/Footing Drain
- ☐ Non-contact/Uncontaminated Cooling
- ☐ Other; _____

---

1. Attach a Site Plan showing the source of the discharge and the location of the point of discharge (i.e. the sewer pipe or catch basin). Include meter type, meter number, size, make and start reading. Note. All discharges to the Commission's sewer system will be assessed current sewer charges.
2. If discharging to a sanitary or combined sewer, attach a copy of MWRA's Sewer Use Discharge permit or application.
3. If discharging to a separate storm drain, attach a copy of EPA's NPDES Permit or NOI application, or NPDES Permit exclusion letter for the discharge, as well as other relevant information.
4. Dewatering Drainage Permit will be denied or revoked if applicant fails to obtain the necessary permits from MWRA or EPA.

Submit Completed Application to: Boston Water and Sewer Commission
Engineering Customer Services
980 Harrison Avenue, Boston, MA 02119
Attn: Jodi Dobay, Engineering Customer Service
E-mail: beginj@bwsc.org
Phone: 617-989-7259 Fax: 617-989-7716

Signature of Authorized Representative for Property Owner: David Surette Date: 05/21/2020

Haley & Aldrich, Inc.
465 Medford St.
Suite 2200
Boston, MA 02129
617.886.7400

21 May 2020
File No. 297272-236

MassDOT – Highway Division
District 6
185 Kneeland St
Boston, MA 02111

Attention: Vivek Trivedi, PE

Subject: Request for Approval of Temporary Construction Dewatering
Fenway Center Phase II – Parcel 7 Development
Massachusetts Turnpike
Boston, Massachusetts

Dear Mr. Trivedi,

On behalf of our client, MK Parcel 7 Development, LLC, this letter submits the Application for Permit to Access State Highway (non-vehicular) for discharge of temporary construction dewatering during construction activities at the planned Fenway Center Phase II – Parcel 7 Development located on the Massachusetts Turnpike between the Brookline Avenue and Beacon Street bridges in Boston, Massachusetts, herein referred to as the "site". The site location is shown on Figures 1 and 2, and the proposed dewatering discharge route and outfall location are shown on Figures 3A through 3G.

The proposed construction includes the construction of a mixed-use development air rights project above the Boston Extension of the Massachusetts Turnpike (I-90), the MBTA/CSX rail alignment, Parcel B61-1, and Parcel B8-4. The development includes two towers: Building 3, located over the western portion of the site, towards Beacon Street, and Building 4, located over the eastern portion of the site towards Brookline Avenue. The towers will be connected at the lower levels by a five-level parking garage and will include a garage entrance on Brookline Avenue and exit on Beacon Street.

Dewatering is anticipated to be required for construction of the foundation elements, and it is anticipated to begin in July 2020 and continue for up to 18 months. Due to the project location, recharge of groundwater within the site is not feasible. Discharge to the MassDOT system is the only practicable option for effluent discharge in the vicinity of the planned building. Prior to discharge, collected water will be routed through at minimum a sedimentation tank and bag filter to remove suspended solids and un-dissolved chemical constituents.

A letter requesting permission to discharge under the National Pollutant Discharge Elimination System (NPDES) Remediation General Permit (RGP) has been submitted to the Environmental Protection Agency (EPA) and is attached. Discharge of the dewatering effluent is also currently under review by the Boston Water and Sewer Commission (BWSC); a copy of the submitted application is attached. If you have any questions, please feel free to contact the undersigned at 617-886-7442.

Sincerely yours,
HALEY & ALDRICH, INC.

Denis J. Bell

Denis J. Bell, P.E.
Senior Engineer

Attachments:

- Application for Permit to Access State Highway
- Figure 1 – Project Locus
- Figure 2 – Site and Subsurface Exploration Location Plan
- Figure 3A to 3G – BWSC Maps
- Copy of NPDES RGP Application

G:\29727\235-PhaseII\NPDES\Appendix F - MassDOT and BWSC Permits\2020-0521-HAI-Fenway-MassDOT letter_F.docx

MASS HIGHWAY

MASSACHUSETTS HIGHWAY DEPARTMENT

Application for Permit to Access State Highway

This Access Permit Application, including the attached Access Permit Submittal Checklist, must be completed in full by the Applicant. Instructions for this page are located on page 2. Descriptions of the two types of access permits and related categories are located on page 6. MassHighway will make the final determination regarding Access Permit Application type and category.

1. **Town/City:** Boston
2. **State Highway route number and/or name:** Massachusetts Turnpike, between Brookline Avenue and Beacon Street bridges
3. **Locus/Property Address:** Massachusetts Turnpike, between Brookline Avenue and Beacon Street bridges
4. **Description of property and/or facility for which access is sought** (attach additional sheets if necessary):
   See attached Haley & Aldrich letter; construction for mixed-use development air rights project
5. **Description of work to be performed within State Highway Layout** (attach additional sheets if necessary):
   See attached Haley & Aldrich letter; temporary construction-related dewatering.
6. **Dig Safe number:** N/A
7. **Applicant Information** [1] (See footnote below.)

   Name: MK Parcel 7 Development, LLC

   Mailing Address: One Boston Place, 201 Washington Street Suite 3920, Boston, MA 02108

   Telephone: 617-314-7906

   Fax: N/A

   Email: dsurette@iqhqreit.com

   Signature:

   Print Name: David Surette

   Date:

8. **Property Owner**

   Name: Same as applicant

   Mailing Address:

   Telephone:

   Fax:

   Email:

   Signature:

   Print Name:

   Date:

Return completed application, including Submittal Checklist, to the District Highway Director for your town/city. Refer to reverse side for appropriate address.

For office use only. Do not write below this line.

1. Application number:
2. Date received:
3. Fee amount (non-refundable):
4. Completeness Pre-Review date:
5. MEPA required (yes or no)

   ENF-EOEEA Cert. #

   EIR-EOEEA Cert. #

   Other-EOEEA Cert. #
6. Section 61 Finding date:
7. Mass. Historic Action (yes or no)
8. Plans returned to DHD:
9. Permit Type/Category:
10. Application complete date:
11. Permit written date:
12. Permit issued date:
13. Permit denied:
14. Permit Recording date at Registry of Deeds

[1] If an agent is representing an Applicant, the application must include a notarized letter from the Applicant outlining the specified duties and responsibilities of the agent. Where work is proposed on a utility, the utility department must sign the application as the Applicant(s).

Instructions for completing
Application for Permit to Access State Highway

GENERAL INSTRUCTIONS

MassHighway is granted authority to issue **State Highway Access Permits** by M.G.L. Chapter 81, Section 21. MassHighway adopted 720 CMR 13.00 under the authority of M.G.L. c.81, §21 and M.G.L. c.85 §2. 720 CMR 13.00 supersedes the Standard Operating Procedures for Review of State Highway Access Permits dated November 30, 1971 and board vote of September 17, 1991.

ACCESS is generally defined but not limited to:
Any physical work performed within the State Highway Layout.

This application governs issuance of the two types of access permit Applications, Non-Vehicular and Vehicular, which are issued under three categories:

Category I	Minor Vehicle Access Permits
Category II	Major Vehicular Access Permits
Category III	Complex Vehicular Access Permits

Please refer to the **MassHighway Access Permit Submittal Checklist** for details regarding permit types and submittals required.

FEES:
A check payable to the Commonwealth of Massachusetts for the appropriate permit application fee must accompany the permit application. Fees are non-refundable.

Fee schedule for Access and Utility Payments:

Residential Access Permits

5 units or less	$25.00
From 6 to 49 units	$100.00
Greater than 49 units	$2000.00

Non-Residential Access Permits

Less than 25,000 square feet	$500.00
From 25,000 to 300,000 square feet	$1000.00
From 300,000 to 750,000 square feet	$2000.00
Greater than 750,000 square feet.	$3000.00

Non-Municipal Utility Permits not in conjunction with Access Permits:

Annual blanket utility permit	$500.00
Capital improvements to a utility	$500.00

SPECIFIC INSTRUCTIONS (print or type)

Line 1:
List Name of municipality in which access is sought.

Line 2:
List name or number of State Highway Route(s) to which access is sought.

Line 3:
List Locus/Property address.

Line 4:
Describe property and/or facility. If access is sought under Category II above, briefly describe facility for which access is sought.

> ***Example 1:*** Private single family residence at 100 State Road. Approximate size of proposed building 2500 s.f. Approximate lot size 0.75 acres.
>
> ***Example 2:*** 500,000 s.f. enclosed shopping mall adjacent to State Route I-290 and Route 20. Approx lot size 67 acres.

Line 5:
Briefly describe the proposed work to be performed within the State Highway Layout.

> ***Example 1:*** Remove 50 feet of existing granite curb on south side of highway in order to construct driveway access and modify the roadway geometry to accommodate left-hand turn.
>
> ***Example 2:*** Excavate 10 foot x 10 foot section of roadway at Station 100+00 in westbound lane in order to install water service to residence at 100 State Street.

Line 6:
A Dig Safe number must be provided if the work will commence within 30 days of the filing of the permit. **NOTE:** A Dig Safe number must be obtained by calling **1-888-DIG-SAFE** (1-888-344-7233). If construction within the State Highway Layout does not commence within the period allowed by Dig Safe, a new number must be obtained prior to beginning construction. (www.digsafe.com)

Line 7:
Individual or business making application must complete the required information, including application date and signature.

Line 8:
Complete this section only if the individual or business making application is other than the property owner of the land for which the permit applies.

Return completed application, submittal checklist and fee to appropriate District Office listed below. Please contact the Permit Engineer at this address if additional information is required.

District One
270 Pittsfield Road
Lenox, MA 01201
Tel. (413) 637-5700
Fax (413) 637-0309

District Two
811 North King Street
Northampton, MA 01060
Tel. (413) 582-0599
Fax (413) 582-0596

District Three
403 Belmont Street
Worcester, MA 01604
Tel. (508) 929-3800
Fax (508) 799-9763

District Four
519 Appleton Street
Arlington, MA 02174
Tel. (781) 641-8300
Fax (781) 646-5115

District Five
1000 County Street
Taunton, MA 02780
Tel. (508) 824-6633
Fax (508) 880-6102

MassHighway Website:
www.mhd.state.ma.us

MASSACHUSETTS HIGHWAY DEPARTMENT

Access Permit Submittal Checklist

GREY: MHD USE ONLY

This checklist provides the Applicant with a list of required submittals to obtain an Access Permit. However, additional submittals may be required to issue an Access Permit. All Applicants must fill out Part A and one additional part that correlates to the selected application type. To help identify the application type, please see the descriptions on page 6. Check each box that pertains to your application. MassHighway will make the final determination regarding Access Permit Application type and category.

PART A: ALL APPLICANTS MUST FILL OUT

1. APPLICATION TYPE - CHECK ONE

☒ **NON-VEHICULAR:**

- ☒ Non-Vehicular - Fill out Part B

☐ **VEHICULAR:**

- ☐ **Category I** – Minor Vehicle Access Permits: Fill out Part C-I
- ☐ **Category II** – Major Vehicle Access Permits: Fill out Part C-I and Part C-II
- ☐ **Category III** – Complex Vehicle Access Permits: Fill out Part C-I and Part C-III

2. APPLICATION TYPE (Check all applicable boxes.)

- ☐ Application complete
- ☐ Permit corresponds to appropriate MassHighway District
- ☐ Non-refundable check or money order in correct amount payable to: *Commonwealth of Massachusetts*
- ☐ Evidence certifying property owner(s) consent
- ☐ Notarized Applicant Letter outlining agent's duties and responsibilities (if applicable)
- ☐ Municipal utility department application sign-off as the Applicant(s) (if applicable)

PART B: NON-VEHICULAR PERMITS

☐ **IF NO PHYSICAL MODIFICATION** ***to state highway layout*** *– i.e. parade, road race, traffic counts, etc.*

Required Submittals:

- ☐ Map of route
- ☐ Traffic Management Plan (designed in accordance with the Road Flagger & Police Regulations: 701 CMR 7.00)
- ☐ Detour Plan(s) with municipal approval (if applicable)

☒ **IF DRAINAGE:**

- ☒ If requesting connection or discharge to any MassHighway drainage system, contact District Personnel for additional information regarding required submittals.

☐ **IF CONSTRUCTION, RELOCATION OR REPAIR OF UTILITIES:**

Required Submittals:

- ☐ **EXISTING PROJECT:** reference(s) to the documents and plans already filed with MassHighway for the affected project
- ☐ **NEW PROJECT/UTILITY WORK:**

Required Submittals:

- ☐ Engineered Plan(s) including method of crossing Highway
- ☐ Traffic Management Plan (if applicable)
  (Designed in accordance with the Road Flagger & Police Regulations: 701 CMR 7.00)
- ☐ Detour Plan(s) with municipal approval (if applicable)
- ☐ Tree Cutting or Landscaping Plan (if applicable)
- ☐ Vegetative Plan including plant species and maturity size (if applicable)
- ☐ Blasting Plan (contact District Personnel for additional information)

GREY: MHD USE ONLY

PART C-I : VEHICULAR PERMITS

CATEGORY I – Minor Vehicular Access Permits

Required Submittals:

- ❑ Engineering Plans
- ❑ ENF - (Environmental Notification Form) Certificate (if applicable)

IF RESIDENTIAL DRIVEWAY:

- ❑ Detailed plan/sketch showing the drive location in relation to the property lines, MassHighway baselines, distance from nearest mile marker, and an easily identifiable fixed object (distance from telephone poles, mail boxes, other drives, etc.).
- ❑ If severe topographic conditions exist, an engineered plan showing the driveway layout, profile and storm water management may be necessary to show that the edge of the proposed drive is protected during and after construction to prevent sediment and debris from entering upon the State Highway Layout (SHLO).

IF COMMERCIAL DRIVEWAY: (where no MEPA review is required)

Required Submittals:

- ❑ **Two (2) 40 scale plans that include:**
  - ❑ A. Route Number, Road Name, Property Address
  - ❑ B. Property Corners and Bounds
  - ❑ C. Lot Line Dimensions, Bearings and Distances
  - ❑ D. State Highway Layout Lines (both sides) and Nearest Massachusetts Highway Bounds (if found).
  - ❑ E. State Highway Baseline and both edges of roadway including any sidewalks and type of edging, if any, and shoulder information (grass, gravel etc.).
  - ❑ F. Any existing drive to be altered or closed shall be indicated. Existing and proposed dimensions should be included for altered drives.
  - ❑ G. Information on all proposed drives including radii, widths, handicap ramps, etc. must be shown.
  - ❑ H. All existing and proposed buildings, utilities, trees, stonewalls, fences etc., should be labeled and shown in their correct location.
  - ❑ I. It is required that all stands, buildings, gasoline pumps and structures of any kind be placed at least 12 feet back from the State Highway Layout Line, since conducting of business within a State Highway Layout is forbidden.
  - ❑ J. Complete detail on drainage; all drives should be constructed on a downgrade from the edge of the highway surface or shoulder to the State Highway Layout Line.
  - ❑ K. Engineered plans will be required to show that storm flows are not directed into the SHLO, using contour lines, where applicant/owner property elevations are raised from the edge of the highway.
  - ❑ L. The plans should identify measures to protect the edge of the proposed drive during and after construction to prevent sediment and debris from entering upon the SHLO.

IF NEW STREET/SUBDIVISION ROAD:

Minor Intersection and Roadway Reconstruction (where no MEPA review is required)

Required Submittals:

- ❑ All Commercial Driveway requirements (above) apply in addition to the following: Evidence of acceptance, including its line, grade and proposed drainage, by a local planning board, or other City or Town official with such authority.
- ❑ A street/road profile from its nearest high point and plan of drainage.

  Please be advised:

  - It will be required that all such future street approaches be constructed on a downgrade, where possible, from the edge of highway surface or shoulder to the State Highway Layout Line.
  - Common driveway criteria may apply and must be shown on plans as mentioned above.

GREY: MHD USE ONLY

PART C-II : VEHICULAR PERMITS

CATEGORY II – Major Vehicular Access Permits

Required Submittals:

- ❑ ❑ Engineering Plans based on the standards in the Manual On Uniform Traffic Control Devices (MUTCD), MassHighway's Project Development & Design Guide or its successor, MassHighway's Standard Specifications for Highway and Bridges, and any current technical policies or engineering directives issued by MassHighway. All PS&E design submissions must be both in hard copy (one set) and electronic format. Electronic format includes PDF files transmitted to DHD or designee via USB Flash Drive, DVD or posted to a FTP site.
- ❑ ❑ In cases where a proposed access is to be shared by multiple development sites, the Applicant(s) will provide evidence of the rights of access between the parties involved prior to the issuance of the Access Permit.
- ❑ ❑ MEPA Certificate
- ❑ ❑ Section 61 Finding

PART C-III : VEHICULAR PERMITS

CATEGORY III – Complex Vehicular Permits

Required Submittals:

- ❑ ❑ Engineering Plans based on the standards in the Manual On Uniform Traffic Control Devices (MUTCD), MassHighway's Project Development & Design Guide or its successor, MassHighway's Standard Specifications for Highway and Bridges, and any current technical policies or engineering directives issued by MassHighway. All PS&E design submissions must be both in hard copy (one set) and electronic format. Electronic format includes PDF files transmitted to DHD or designee via USB Flash Drive, DVD or posted to a FTP site.
- ❑ ❑ In cases where a proposed access is to be shared by multiple development sites, the Applicant(s) will provide evidence of the rights of access between the parties involved prior to the issuance of the Access Permit.
- ❑ ❑ MEPA Certificate
- ❑ ❑ Section 61 Finding

Recording of Access Permits

Applicants must record any Vehicular Access Permit and plans or any Non-vehicular Access Permit and plans involving drainage at the appropriate registry of deeds. Any Permit issued by MassHighway that requires recording will not be effective until recorded at the appropriate Registry of Deeds and a notice of recording is submitted to the District Highway Director (DHD). Changes may require the re-recording of permits and related documents. In those cases, permits will not be effective until re-recorded at the Registry of Deeds and a notice of recording is submitted to the DHD.

THERE ARE TWO TYPES OF ACCESS PERMIT APPLICATIONS: VEHICULAR, ISSUES UNDER THREE CATEGORIES and NON-VEHICULAR:

1. VEHICULAR ACCESS PERMITS:

Category I - Minor Vehicular Access Permits:
Access Permits for Projects that require entry to the state highway layout (SHLO), require little to no non-signalized modifications, and do not significantly alter the operating characteristics of traffic. These Projects ordinarily do not exceed the Massachusetts Environmental Policy Act (MEPA) transportation thresholds beyond the filing of an Environmental Notification Form (ENF).

Category II - Major Vehicular Access Permits:
Access Permits for Projects that require significant non-signalized modification that may alter the operating characteristics of traffic at a residential or commercial driveway intersecting with the SHLO; that require significant non-signalized modifications that may alter the operating characteristics of traffic at or upon any other intersection or roadway under the jurisdiction of MassHighway; that require installation of a new traffic signal at a residential or commercial driveway intersecting with the SHLO or at any other intersection or roadway under the jurisdiction of MassHighway; or that require modification of structures, equipment, or hardware at an existing traffic signal at a residential or commercial driveway and its intersection with the SHLO or at any other intersection or roadway under the jurisdiction of MassHighway.

Category III - Complex Vehicular Permits
Access Permits for Complex Projects requiring actions similar to major Projects, but which require a new or altered SHLO; that require significant non-signalized and/or signalized modifications within the SHLO over an extended distance or at a number of intersections that significantly alters the operating characteristics of traffic along a corridor; or that require the construction of a new, or modifications to an existing, bridge. These Projects generally require MEPA review and may require Federal review.

2. NON-VEHICULAR ACCESS PERMITS:

Access Permit for Projects that require access to the SHLO that do not involve physical modifications such as a parade or road race; construction, relocation or repair of utilities within the SHLO; tree cutting or landscaping within the SHLO; the use of explosives to remove material from within 250 feet of the SHLO; or connection to or discharge to any MassHighway drainage system (in cases where it can be shown that no practical alternative exists).

CONDITIONS REQUIRING AN ACCESS PERMIT

Vehicular Access Permits are required for:

- New residential or commercial driveways or streets intersecting the SHLO; or,
- Physical modifications to existing residential or commercial driveways or streets at their intersection with the SHLO; or,
- Change in use of an existing residential or commercial driveway onto SHLO that results in a **Substantial Increase in or Impact on Traffic** (as defined below) over the current use. or,
- Construction of new, or change in use of existing, residential or commercial driveway from properties that abut the SHLO to serve a building or facility, or expansion of a building or facility, that generates a Substantial Increase in or Impact on Traffic.

Substantial Increase in, or Impact on, Traffic as referenced above is defined as:
A Project that meets or exceeds any of the following thresholds:

(i) Generation of 2,000 or more new ADT on roadways providing access to a single location; or

(ii) Generation of 1,000 or more new ADT on roadways providing access to a single location and construction of 150 or more new parking spaces at a single location; or

(iii) Construction of 300 or more new parking spaces at a single location; or

(iv) Creation of a change in the type, pattern, or timing of traffic that is determined by MassHighway to generate a significant impact on traffic flow and safety.

Non-vehicular Access Permits are required for:

- Access to the SHLO for Projects that do not involve physical modifications; or
- Connection to or discharge to any MassHighway drainage system (in cases where it can be shown that no practical alternative exists); or
- Construction, relocation or repair of utilities within the SHLO; or
- Tree cutting or landscaping within the SHLO; or
- The use of explosives to remove material from within 250 feet of the SHLO.

In cases where a particular Project or activity may seek both vehicular and non-vehicular access, separate and distinct Permit Applications must be filed.

APPENDIX G

Best Management Practices Plan (BMPP)

APPENDIX G – BEST MANAGEMENT PRACTICES PLAN
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
REMEDIATION GENERAL PERMIT
FENWAY CENTER PHASE II – PARCEL 7 DEVELOPMENT
BOSTON, MASSACHUSETTS

Best Management Practices Plan

A Notice of Intent for a Remediation General Permit (RGP) under the National Pollutant Discharge Elimination System (NPDES) has been submitted to the US Environmental Protection Agency (EPA) in anticipation of temporary construction dewatering planned to occur during the construction of the proposed Fenway Center Phase II – Parcel 7 Development located over the Massachusetts Turnpike between the Brookline Avenue and Beacon Street bridges (the "site") in Boston, Massachusetts. This Best Management Practices Plan (BMPP) has been prepared as an Appendix to the RGP and will be posted at the site during the time that temporary construction dewatering is occurring at the site.

Water Treatment and Management

Construction dewatering will be conducted using a combination of sumps located inside the excavations. The treatment system has been designed by the Contractor. Prior to discharge, collected water will be routed through a sedimentation tank and bag filters, as required, to remove suspended solids and undissolved chemical constituents. The Proposed Treatment System Schematic is shown on Figure 4. Construction dewatering under this RGP NOI will include piping and discharging to storm drains located in and alongside the Massachusetts Turnpike and directly into open MassDOT stormwater conveyance lines. The MassDOT stormwater conveyance lines travel west along the Massachusetts Turnpike through Boston, Brighton, and then Allston to Pump Chamber #2, where it is discharged into the Charles River, as shown on Figures 3A through 3G.

Discharge Monitoring and Compliance

Regular sampling and testing will be conducted by the Contractor of the treated effluent as required by the RGP. This includes chemical testing required within the first month of discharging and the monthly testing to be conducted through the end of the scheduled discharge.

Monitoring will include checking the condition of the treatment system, assessing the need for treatment system adjustments based on monitoring data, observing, and recording daily flow rates and discharge quantities, and verifying the flow path of the discharged effluent.

The total monthly flow will be monitored by checking and documenting the flow through the flow meter to be installed on the system. Flow will be maintained below the "system design flow" by regularly monitoring flow and adjusting the amount of construction dewatering as needed.

Monthly monitoring reports will be compiled and maintained at the site.

System Maintenance

A number of methods will be used to minimize the potential for violations for the term of this permit. Scheduled regular maintenance of the treatment system will be conducted to verify proper operation. Regular maintenance will include checking the condition of the treatment system equipment such as the sedimentation tanks, filters, hoses, pumps, and flow meters. Equipment will be monitored daily for potential issues or unscheduled maintenance requirements.

Employees who have direct or indirect responsibility for ensuring compliance with the RGP will be trained by the Operator.

Miscellaneous Items

It is anticipated that the excavation support system, erosion control measures, and the nature of the site and surrounding infrastructure will minimize potential runoff to or from the site. The project specifications also include requirements for erosion control.

Site security for the treatment system will be covered within the overall site security plan.

No adverse effects of designated water use of surrounding surface water bodies is anticipated. The Charles River is the nearest surface water body to the site. Dewatering effluent will be pumped to a sedimentation tank, bag filters, and any other treatment components (as required), prior to discharge to the storm drains.

Management of Treatment System Materials

Dewatering effluent will be pumped directly to the treatment system from the excavation with use of hoses and sumps to minimize handling. The Contractor will establish staging areas on the site for any equipment or materials storage which may be possible sources of pollution away from any dewatering activities.

Sediment from the sedimentation tank used in the treatment system will be characterized and disposed of as soil at an appropriate receiving facility in accordance with applicable laws and regulations.