September 18, 2019

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATION
DEPARTMENT OF ADMINISTRATION

DIVISION OF PURCHASES BID NO. 7598948

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

RHODE ISLAND CONTRACT NO.2019-CH-032

FEDERAL-AID PROJECT NO. FAP Nos: STP-RESF(406)

Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)

East of Pawtucket Ave. to the Massachusetts State Line

CITY/TOWN OF East Providence

COUNTY OF PROVIDENCE

NOTICE TO PROSPECTIVE BIDDERS

ADDENDUM NO. 2 Prospective bidders and all concerned are hereby notified of the following changes in the Plans, Specifications, Proposal and Distribution of Quantities for this contract. These changes shall be incorporated in the Plans, Specifications, Proposal and Distribution of Quantities, and shall become an integral part of the Contract Documents.

A. Other Contract Changes

1. DOQ

   For Item 202.9918, Unit of Measure has been updated to "EA".

B. Plans

1. Plans

1. Sheet No. 6 Job Specific Plan Symbols Legend and Notes
Delete Sheet No. 6 in its entirety and replace with the revised Sheet No. 6 (R-1), attached to this Addendum No. 2. The Job Specific Legend has been revised.

2. Sheet No. 8 Typical Sections - 2
Delete Sheet No. 8 in its entirety and replace with the revised Sheet No. 8 (R-1), attached to this Addendum No. 2. The Typical Section for proposed Park and Ride has been revised.

3. Sheet No. 15 General Plan - 2
Delete Sheet No. 15 in its entirety and replace with the revised Sheet No. 15 (R-1), attached to this Addendum No. 2. Proposed sidewalk limits and callouts have been revised.

4. Sheet No. 16 General Plan - 3
Delete Sheet No. 16 in its entirety and replace with the revised Sheet No. 16 (R-1), attached to this Addendum No. 2. Proposed sidewalk limits, full depth pavement limits, ramp curbs, and callouts have been revised.

5. Sheet No. 17 General Plan - 4
Delete Sheet No. 17 in its entirety and replace with the revised Sheet No. 17 (R-1), attached to this Addendum No. 2. Proposed sidewalk limits, full depth pavement limits, ramp curbs, and callouts have been revised, and a note has been added.

6. Sheet No. 18 General Plan - 5
Delete Sheet No. 16 in its entirety and replace with the revised Sheet No. 16 (R-1), attached to this Addendum No. 2. Proposed sidewalk limits, ramp curbs, callouts, and project information has been revised.

7. Sheet No. 21 Grading and Location Plan - 1
Delete Sheet No. 21 in its entirety and replace with the revised Sheet No. 21 (R-1), attached to this Addendum No. 2. Pedestrian ramps, layout information, curb information, curve tables, and callouts have been revised.

8. Sheet No. 24 Drainage and Utility Plans - 2
Delete Sheet No. 24 in its entirety and replace with the revised Sheet No. 24 (R-1), attached to this Addendum No. 2. Callouts have been added for utility adjustments.

9. Sheet No. 25 Drainage and Utility Plans - 3
Delete Sheet No. 25 in its entirety and replace with the revised Sheet No. 25 (R-1), attached to this Addendum No. 2. Callouts have been added for utility adjustments.

10. Sheet No. 26 Drainage and Utility Plans - 4
Delete Sheet No. 26 in its entirety and replace with the revised Sheet No. 26 (R-1), attached to this Addendum No. 2. Proposed drainage structures, callouts, and project information have been revised, and a note has been added.

11. Sheet No. 27 Drainage and Utility Plans - 5
Delete Sheet No. 27 in its entirety and replace with the revised Sheet No. 27 (R-1), attached to this Addendum No. 2. Proposed drainage structures, callouts, and project information have been revised.

12. Sheet No. 31 Sign and Striping Plans - 1
Delete Sheet No. 31 in its entirety and replace with the revised Sheet No. 31 (R-1), attached to this Addendum No. 2. Proposed sign S1-10 has been relocated, and project information has been revised.

13. Sheet No. 38 Lighting Plan - 1
Delete Sheet No. 38 in its entirety and replace with the revised Sheet No. 38 (R-1), attached to this Addendum No. 2. Callouts have been added, and notes have been revised and added.

ATTACHMENTS

C. Contract Documents

1. Specifications - Contract Specific

   a. Delete Pages CS-7 to CS-8 in their entirety and replace with revised pages CS-7 (R-1) to CS-8 (R-1) attached to this Addendum No. 2. Paragraph Q has been revised.

   b. Delete Page CS-14 in its entirety and replace with revised page CS-14 (R-1) attached to this Addendum No. 2. Section 30. Excavation and Soil Management has been revised.

   c. Appendix H – Soil Management Plan
   Include Appendix H – Soil Management Plan attached to this Addendum No. 2. The soil management plan has been included in the contract.

2. Specifications - Job Specific

   a. JS-i to JS-ii – Job Specific Index
   Delete Page JS-ii in its entirety and replace with revised JS-i (R-1) to JS-ii (R-1), attached to this Addendum No. 2. The Index has been revised.

   b. Page JS-1
   Delete Page JS-1 in its entirety and replace with revised JS-1 (R-1), attached to this Addendum No. 2. Section 101.71 has been revised.

   c. Page JS-4
   Delete Page JS-4 in its entirety and replace with revised JS-4 (R-1), attached to this Addendum No. 2. Substantial Completion date has been corrected.

   d. Pages JS-5 to JS-9
   Delete Pages JS-5 to JS-9 in their entirety and replace with revised JS-5 (R-1) to JS-9 (R-1), attached to this Addendum No. 2. Item 202.9910 has been replaced with Item 202.9911.

   e. Pages JS-10 to JS-16
   Delete Pages JS-10 to JS-16 in their entirety and replace with revised JS-10 (R-1) to JS-16 (R-1), attached to this Addendum No. 2. Items 202.9914 - 202.9919 have been revised.

   f. Page JS-49
   Delete Page JS-49 in its entirety and replace with revised JS-49 (R-1), attached to this Addendum No. 2. Base prices have been revised.

   g. Page JS-59
   Include page JS-59 attached to this Addendum No. 2. Item T09.9901 has been included in the contract.

D. Distribution of Quantities

1. Distribution of Quantities

ATTACHMENTS

1. Distribution of Quantities
Delete the Distribution of Quantities in its entirety and replace with the revised Distribution of Quantities attached to this Addendum No. 2 due to global pagination. The following revisions listed below have been made.

2. Assembly Summary
Delete Assembly Summary in its entirety and replace with revised Assembly Summary (R-1). Assemblies 2GRCC, CB4FT, and GRANC have been added, and quantities have been revised for assemblies CBG38, CCSWK, FDRPD, and RASTC.

3. Index Pages 1-4
Index Pages 1-4 have been replaced with revised Index Pages 1-4 (R-1), attached to this Addendum No. 2. The Index Pages have been revised.

4. Pages 2-3a
Pages 2-3 have been replaced with revised pages 2 (R-1) to 3 (R-1) and page 3a due to pagination. Item Code 201.0403 has been revised.

5. Pages 4-5a
Pages 4-5 have been replaced with revised pages 4 (R-1) to 5 (R-1) and page 5a due to pagination. Item Codes 201.0407 and 201.0409 have been revised.

6. Pages 10-13a
Pages 10-13 have been replaced with revised pages 10 (R-1) to 13 (R-1) and page 13a due to pagination. Item Codes 202.0100, 202.9918, and 204.0100 have been revised and Item 202.9910 has been deleted.

7. Pages 15-15a
Page 15 has been replaced with revised pages 15 (R-1) and page 15a due to pagination. Item Code 204.0100 has been revised.

8. Pages 16-16a
Page 16 has been replaced with revised pages 16 (R-1) and page 16a due to pagination. Item Code 204.0100 has been revised.

9. Pages 17-17a
Page 17 has been replaced with revised pages page 17 (R-1) and page 17a due to pagination. Item Code 204.0100 has been revised.

10. Pages 18-20
Pages 18-20 have been replaced with revised pages 18 (R-1) to 20 (R-1). Item Codes 204.0100 and 206.0301 have been revised.

11. Pages 23-23a
Page 23 has been replaced with revised pages 23 (R-1) and page 23a due to pagination. Item Code 302.0100 has been revised.

12. Pages 25-25a
Page 25 has been replaced with revised pages 25 (R-1) and page 25a due to pagination. Item Code 302.0100 has been revised.

13. Pages 26-26a
Page 26 has been replaced with revised pages 26 (R-1) and page 26a due to pagination. Item Code 302.0100 has been revised.

14. Pages 27-27a
Page 27 has been replaced with revised pages 27 (R-1) and page 27a due to pagination. Item Code 302.0100 has been revised.

15. Pages 28-28a
Page 28 has been replaced with revised pages 28 (R-1) and page 28a due to pagination. Item Codes

ATTACHMENTS

302.0100, and 401.1000 have been revised.

16. Pages 29-29a
Page 29 has been replaced with revised pages 29 (R-1) and page 29a due to pagination. Item Code 401.3100 has been revised.

17. Pages 30-30a
Page 30 has been replaced with revised pages 30 (R-1) and page 30a due to pagination. Item Codes 401.3100 and 401.4003 have been revised.

18. Pages 31-33a
Pages 31-33 have been replaced with revised pages 31 (R-1) to 33 (R-1) and page 33a due to pagination. Item Codes 401.4003 and 403.0300 have been revised.

19. Pages 34-34a
Page 34 has been replaced with revised pages 34 (R-1) and page 34a due to pagination. Item Codes 403.0300 and 603.1000 have been revised.

20. Pages 36-36a
Page 36 has been replaced with revised pages 36 (R-1) and page 36a due to pagination. Item Code 603.1000 has been revised.

21. Page 37
Page 37 has been replaced with revised page 37 (R-1). Item Code 603.1000 has been revised.

22. Pages 41-41a
Page 41 has been replaced with revised pages 41 (R-1) and page 41a due to pagination. Item Code 701.8003 has been revised.

23. Pages 42-42a
Page 42 has been replaced with revised pages 42 (R-1) and page 42a due to pagination. Item Codes 701.8003 and 702.0516 have been revised.

24. Page 43
Page 43 has been replaced with revised page 43 (R-1). Item Code 702.0516 has been revised.

25. Pages 45-46a
Pages 45-46 have been replaced with revised pages 45 (R-1) to 46 (R-1) and page 46a due to pagination. Item Codes 702.0541 and 702.0605 have been revised.

26. Pages 54-54a
Page 54 has been replaced with revised pages 54 (R-1) and page 54a due to pagination. Item Codes 713.8268 and 713.8300 have been revised.

27. Pages 55-56a
Pages 55-56 have been replaced with revised pages 55 (R-1) to 56 (R-1) and page 56a due to pagination. Item Code 905.0110 has been revised.

28. Pages 57-57a
Page 57 has been replaced with revised pages 57 (R-1) and page 57a due to pagination. Item Code 905.0115 has been revised.

29. Page 58
Page 58 has been replaced with revised page 58 (R-1). Item Code 905.0115 has been revised.

30. Pages 60-61
Pages 60-61 have been replaced with revised pages 60 (R-1) to 61 (R-1). Item Codes 906.0130 and 906.0131 have been revised.

31. Pages 67-67a
Page 67 has been replaced with revised pages 67 (R-1) and page 67a due to pagination. Item Code

ATTACHMENTS

932.0210 has been revised.

32. Page 69
Page 69 has been replaced with revised pages 69 (R-1) and page 69a due to pagination. Item Code 942.0200 has been revised.

33. Page 70
Page 70 has been replaced with revised page 70 (R-1). Item Code 942.0200 has been revised.

34. Pages 78-80
Pages 78-79 have been replaced with revised pages 78 (R-1) to 79 (R-1) and page 80. Item Codes 202.9911, 701.8100, 906.0111, 906.0116, 906.0120, and T09.9901 have been added.

RI Department of Transportation

Manager of Project Management

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI	STP–RESF(406)	2019	6	47

R–1

JOB SPECIFIC GENERAL NOTES:

1. EXISTING CONDITIONS TOPOGRAPHY FEATURES SHOWN ON THE BASEMAP ARE BASED ON ACTUAL FIELD INVESTIGATIONS CONDUCTED BY GREEN INTERNATIONAL AFFILIATES, INC. SOME SUPPLEMENTAL UTILITY INFORMATION IS BASED OFF A 2001 SURVEY CONDUCTED BY BRYANT ASSOCIATES, INC.
2. ALL ITEMS NOT REFERENCED FOR MODIFICATION WILL BE "EXISTING TO REMAIN" UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
3. DAMAGE TO STATE OR PRIVATE PROPERTY CAUSED BY THE CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE STATE OR OWNER.
4. THE CONTRACTOR SHALL INSTALL TEMPORARY CONSTRUCTION FENCE FOR PEDESTRIAN PROTECTION AROUND THE WORK AREAS WHEN DIRECTED BY THE ENGINEER OR WHERE THERE IS AN ELEVATION DIFFERENCE OF 6" OR MORE FROM EXISTING GRADE TO BOTTOM OF ANY EXCAVATION WORK. TEMPORARY CONSTRUCTION FENCE WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
5. THE RIGHT–OF–WAY LINES SHOWN ON THE PLANS ARE DEVELOPED FROM RECORD PLANS PROVIDED BY RHODE ISLAND DEPARTMENT OF TRANSPORTATION AND SHALL BE CONSIDERED APPROXIMATE.
6. CONTRACTOR SHALL NOT PARK OR STORE CONSTRUCTION VEHICLES OR EQUIPMENT UNDER THE DRIPLINE OF TREES.
7. RI STD 43.5.0 DRIVEWAY PAVEMENT SHALL BE EXTENDED ACROSS THE DRIVEWAY TRANSITION SECTIONS.

JOB SPECIFIC DRAINAGE, UTILITY AND EROSION CONTROL NOTES:

1. ALL INVERTS AND CONNECTIONS TO EXISTING STRUCTURES SHALL BE FIELD VERIFIED AND COORDINATED WITH THE RESIDENT ENGINEER BEFORE COMMENCING WORK.
2. THE COST OF REMOVING AND DISPOSING INLET STONES AND APRON STONES SHALL BE PAID FOR UNDER THE BID ITEM FOR CURB REMOVAL
3. SANITARY SEWER, GAS, WATER, AND OTHER UTILITY SERVICES SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.
4. ALL EXISTING MANHOLES, CATCH BASINS AND ROADWAY BOXES FOR ALL UTILITIES WITHIN THE PROJECT LIMITS SHALL BE ADJUSTED TO GRADE AS REQUIRED EXCEPT WHERE REPLACEMENT OR REMOVAL IS CALLED FOR ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
5. SUPPORT OF EXCAVATION FOR INSTALLATION OF ALL DRAINAGE LINES AND STRUCTURES SHALL BE INCIDENTAL. THE COSTS SHALL BE INCLUDED IN WITH VARIOUS PAY ITEMS.
6. THE CONTRACTOR IS HEREBY MADE AWARE THAT EXISTING UTILITIES, INCLUDING BUT NOT LIMITED TO EXISTING WATER AND DRAIN PIPES; DRAINAGE AND SEWER STRUCTURES; GAS LINES AND UTILITY POLES, SHALL BE PROTECTED AND/OR SHORED UP DURING THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS UNDER THIS PROJECT. THE COST OF THE ADDITIONAL WORK REQUIRED FOR THE PROTECTION, MAINTENANCE AND SUPPORT OF THESE OR OTHER EXISTING ABOVEGROUND OR UNDERGROUND UTILITIES IN THE VICINITY OF THE PROPOSED WORK SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCIDENTAL TO THE WORK UNDER THIS CONTRACT.
7. THE CONTRACTOR SHALL NOTE THE PRESENCE OF MULTIPLE HIGH PRESSURE GAS LINES IN THE CONTRACT LIMITS.
8. DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EROSION CONTROL MAINTENANCE AND SHALL INSPECT/REPLACE ALL CONTROLS AS NEEDED OR DIRECTED. MAINTENANCE SHALL BE CARRIED OUT IN ACCORDANCE WITH SECTION 212 OF THE RIDOT STANDARD SPECIFICATIONS, AND THE SWPPP PLAN INCLUDED IN THE CONTRACT. THE CONTRACTOR IS RESPONSIBLE FOR CARRYING OUT ALL NECESSARY MAINTENANCE DURING ALL PHASES OF PROJECT CONSTRUCTION INCLUDING PERIODS OF "WINTER SHUTDOWN".
9. ALL EXISTING DRAINAGE STRUCTURES AND PIPES WITHIN THE LIMIT OF WORK SHALL BE CLEANED AND FLUSHED AS SHOWN ON THE PLANS AND/OR AS DIRECTED BY THE ENGINEER UNLESS OTHERWISE NOTED TO BE REMOVED.
10. EXISTING CONDITIONS UTILITY INFORMATION IS SHOWN AT UTILITY QUALITY LEVEL C (EXCEPT WHERE OTHERWISE INDICATED AS QUALITY LEVEL B) AND IS BASED ON THE BEST AVAILABLE INFORMATION OF RECORD PROVIDED BY THE UTILITY OWNERS AND FIELD INVESTIGATION. THE EXISTENCE, LOCATION, SIZE, MATERIAL IS NOT WARRANTED TO BE EXACT.

    UTILITY QUALITY LEVEL B
    INFORMATION OBTAINED THROUGH THE APPLICATION OF APPROPRIATE SURFACE GEOPHYSICAL METHODS TO DETERMINE THE EXISTENCE AND APPROXIMATE HORIZONTAL POSITION OF SUBSURFACE UTILITIES, USUALLY AT A SPECIFIC POINT.

    UTILITY QUALITY LEVEL C
    INFORMATION OBTAINED BY SURVEY AND PLOTTING VISIBLE ABOVE–GROUND UTILITY FEATURES AND BY USING PROFESSIONAL JUDGEMENT IN CORRELATING THIS INFORMATION TO QUALITY LEVEL D INFORMATION.

    UTILITY QUALITY LEVEL D
    INFORMATION DERIVED FROM EXISTING RECORDS OR ORAL RECOLLECTIONS.
11. ALL PROPOSED CATCHBASINS (RI STD. 3.4.1, 3.5.2, AND 4.4.0) SHALL INCLUDE A DEEP SUMP (4 FEET) AND A HOOD. SEE ITEM CODE 702.9900. COSTS SHALL BE INCIDENTAL TO THE STANDARD CATCHBASIN PAY ITEMS.

JOB SPECIFIC WHEELCHAIR RAMP GENERAL NOTES:

1. ALL WORK SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. LOCATION OF WHEELCHAIR RAMPS SHALL BE AS SHOWN ON PLANS.
3. ALL REQUIRED CUTTING OF CURB PIECES SHALL BE INCLUDED IN THE COST OF THE CURB.
4. WHERE THE ROAD PROFILE EXCEEDS 5% THE TRANSITION LENGTH (T) SHALL BE EIGHTEEN FEET (18'–0") AS INDICATED ON THE STANDARDS 43.3.0 AND 43.3.1.
5. THE ENTRANCE OF THE WHEELCHAIR RAMP SHALL BE FLUSH WITH THE ROADWAY.
6. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR FILLER PIECES TO BE 3'–0" (LONGER LENGTHS PREFERRED).

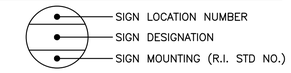
JOB SPECIFIC TRAFFIC NOTES:

1. THE SYMBOLS SHOWN IN THE PLANS FOR PROPOSED SIGNS ARE ILLUSTRATIVE ONLY. THE CONTRACTOR SHALL PROVIDE THE ACTUAL NUMBER OF POSTS REQUIRED FOR EACH SIGN ASSEMBLY BASED ON RI STD. 24.2.0.

EXISTING FEATURES LEGEND

CBCI □	CATCH BASIN WITH CURB INLET
CB	CATCH BASIN
C–X	PAVEMENT CORE
SMH	SANITARY MANHOLE
TH–X	SOIL/GROUNDWATER TEST HOLE
TMH	TELEPHONE MANHOLE
TP–X	UTILITY TEST PIT
—OHW—	OVERHEAD WIRES
(REC)	TAKEN FROM INFORMATION OF RECORD NOT OBSERVED IN THE FIELD
SH ○ XX–XX	SPRINKLER HEAD NUMBER XX–XX

TYPICAL SIGN DESIGNATION SYMBOL



PROPOSED FEATURES LEGEND

BOL X	BOLLARD (QUANTITY INDICATED BY X)
BSS	BUS SHELTER SLAB
CB X"	COMMON BORROW (DEPTH INDICATED BY X")
CS	CRUSHED STONE
DCBG	REMOVE AND DISPOSE CATCH BASIN AND GUTTER INLET
DGC	REMOVE AND DISPOSE GRANITE CURB CORNERS
ECP	EROSION CONTROL PRODUCT
FDP	PAVEMENT FOR FULL DEPTH RECONSTRUCTION 3" MODIFIED CLASS 9.5 HMA SURFACE COURSE (2 LIFTS) OVER 8" CLASS 19.0 HMA BASE OVER 12" GRAVEL BASE COURSE
FDR	FULL DEPTH RECONSTRUCTION (SEE DETAIL)
FS	COMPOST FILTER SOCK (12" DIAMETER)
FSTR	FILTER STRIP
GSS	SIDEWALK ADJACENT TO GAS STATION, SEE DETAIL
INPR	INLET PROTECTION FOR CATCH BASIN
ISN X"	INVERTED SIPHON
JFF	JELLYFISH FILTER
LDA	LANE DROP ARROW
LS	4" LOAM AND SEED
ME	MUCK EXCAVATION
MM	MICRO MILLING, 3"
PO	3" MODIFIED CLASS 9.5 HMA (2 LIFTS)
PRP	PARK AND RIDE PAVING 3" MODIFIED CLASS 9.5 HMA (2 LIFTS) OVER 6" GRAVEL BORROW
RBS	REMOVE AND REPLACE BUS SHELTER
RCC	RECONSTRUCT CORBEL CONE
RSBS	REMOVE AND STOCKPILE BUS SHELTER
RRCS	REMOVE AND RELOCATE CURB STOP
RET	RETAIN
REM	REMOVE
RSW	REINFORCED SIDEWALK (SEE DETAIL)
WS	WETLAND SEEDING
4.2.0 X'	PRECAST 4'–0" ROUND MANHOLE – DEEP SUMP (DEPTH INDICATED BY X')
4.4.0 X'	PRECAST 4'–0", 5'–0", OR 6'–0" ROUND CATCH BASIN – DEEP SUMP (DEPTH INDICATED BY X')
6DSW	INTERSECTION WHITE GUIDE LINE MARKING – 6" WHITE EPOXY RESIN PAVEMENT MARKING (SKIP STRIPES – 2 FOOT LINE SEGMENTS WITH 4 FOOT GAP LENGTHS)
6WS	6" EPOXY RESIN PAVEMENT MARKING – WHITE (SKIP STRIPES – 10 FOOT LINE SEGMENTS WITH 30 FOOT GAP LENGTHS)
7.3.3C X'	GRANITE WHEELCHAIR RAMP TRANSITION CURB – CIRCULAR (LENGTH INDICATED BY X')
7.3.3S X'	GRANITE WHEELCHAIR RAMP TRANSITION CURB – STRAIGHT (LENGTH INDICATED BY X')
7.3.9C X'	GRANITE RAMP STONE – CIRCULAR (LENGTH INDICATED BY X')
7.3.9S X'	GRANITE RAMP STONE – STRAIGHT (LENGTH INDICATED BY X')
12Y	12" EPOXY RESIN PAVEMENT MARKINGS – YELLOW
20.1.0	PAVEMENT MARKINGS ARROWS AND ONLY, R.I. STD 20.1.0
43.3.2	RAMP–LANDING FOR NARROW SIDEWALK
SHLDR.	SHOULDER

PROPOSED FEATURES LEGEND (CONT'D)

1

43.3.0M	WHEELCHAIR RAMP – SIMILAR TO STANDARD 43.3.0, BUT WITH LOW SIDE TRANSITION OMITTED; SEE GRADING AND LOCATION PLAN 1 (SHEET 21).

1

GREEN INTERNATIONAL AFFILIATES, INC.
Civil and Structural Engineers

REVISIONS		
NO.	DATE	BY
1	9/9/19	CL

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

IMPROVEMENTS TO
TAUNTON AVENUE

EAST PROVIDENCE, RHODE ISLAND

JOB SPECIFIC PLAN SYMBOLS
LEGEND AND NOTES

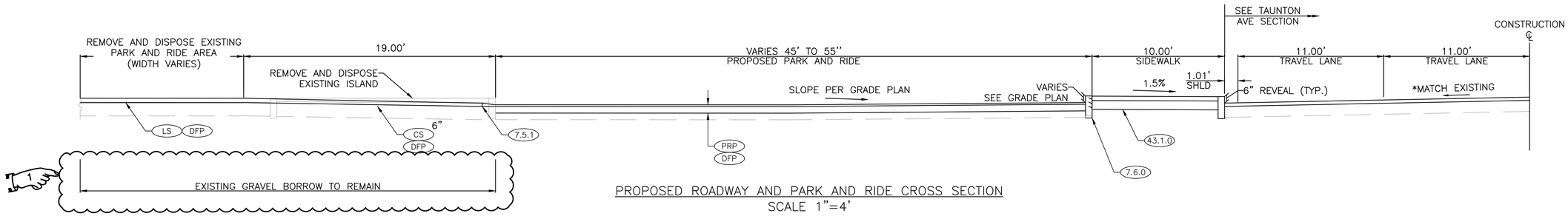
CHECKED BY DATE SCALE 1"=20'

ADDENDUM NO. 2

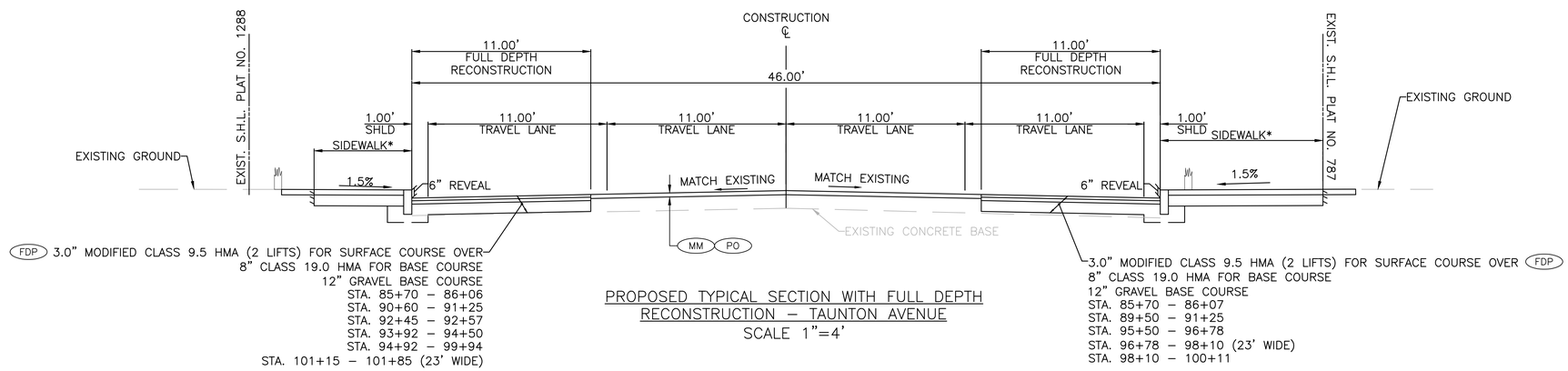
0076R_V1_006_JSNOTES

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI	STP-RESF(406)	2019	8	48

R-1



PROPOSED ROADWAY AND PARK AND RIDE CROSS SECTION
SCALE 1"=4'



PROPOSED TYPICAL SECTION WITH FULL DEPTH RECONSTRUCTION – TAUNTON AVENUE
SCALE 1"=4'

*FOR SIDEWALK WIDTHS SEE TYPICAL SECTIONS SHEET 1

REVISIONS		
NO.	DATE	BY
1	9/16/19	CL

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

IMPROVEMENTS TO TAUNTON AVENUE

EAST PROVIDENCE, RHODE ISLAND

TYPICAL SECTIONS - 2

GREEN INTERNATIONAL AFFILIATES, INC.
Civil and Structural Engineers

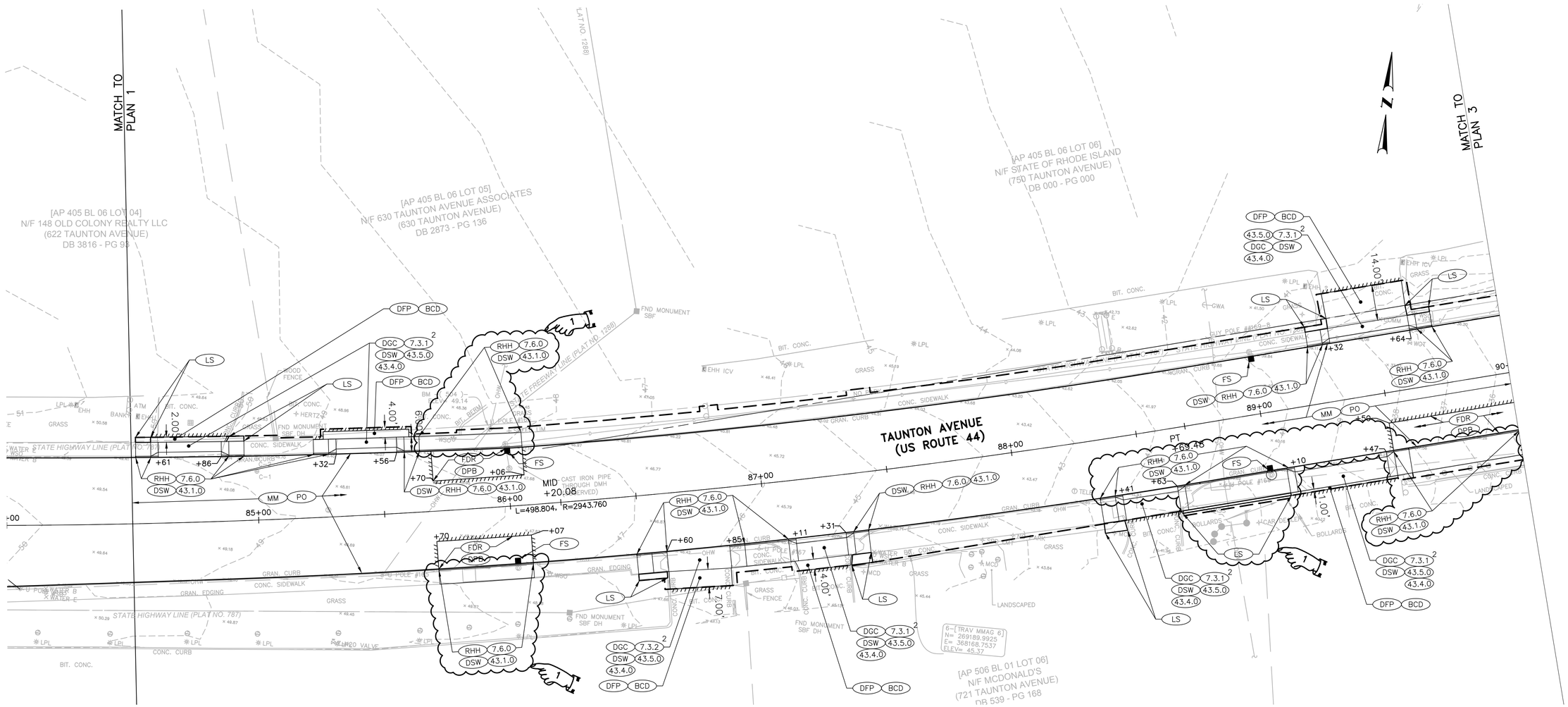
CHECKED BY DATE SCALE 1"=20'

ADDENDUM NO. 2

0076R_V1_008_TYPICAL

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI	STP-RESF(406)	2019	15	47

R-1



SCALE IN FEET

0 20 50 100 FEET

HORZ. 1"=20'

GREEN INTERNATIONAL AFFILIATES, INC.
Civil and Structural Engineers

REVISIONS		
NO.	DATE	BY
1	9/13/19	CL

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

IMPROVEMENTS TO
TAUNTON AVENUE

EAST PROVIDENCE, RHODE ISLAND

GENERAL PLAN - 2

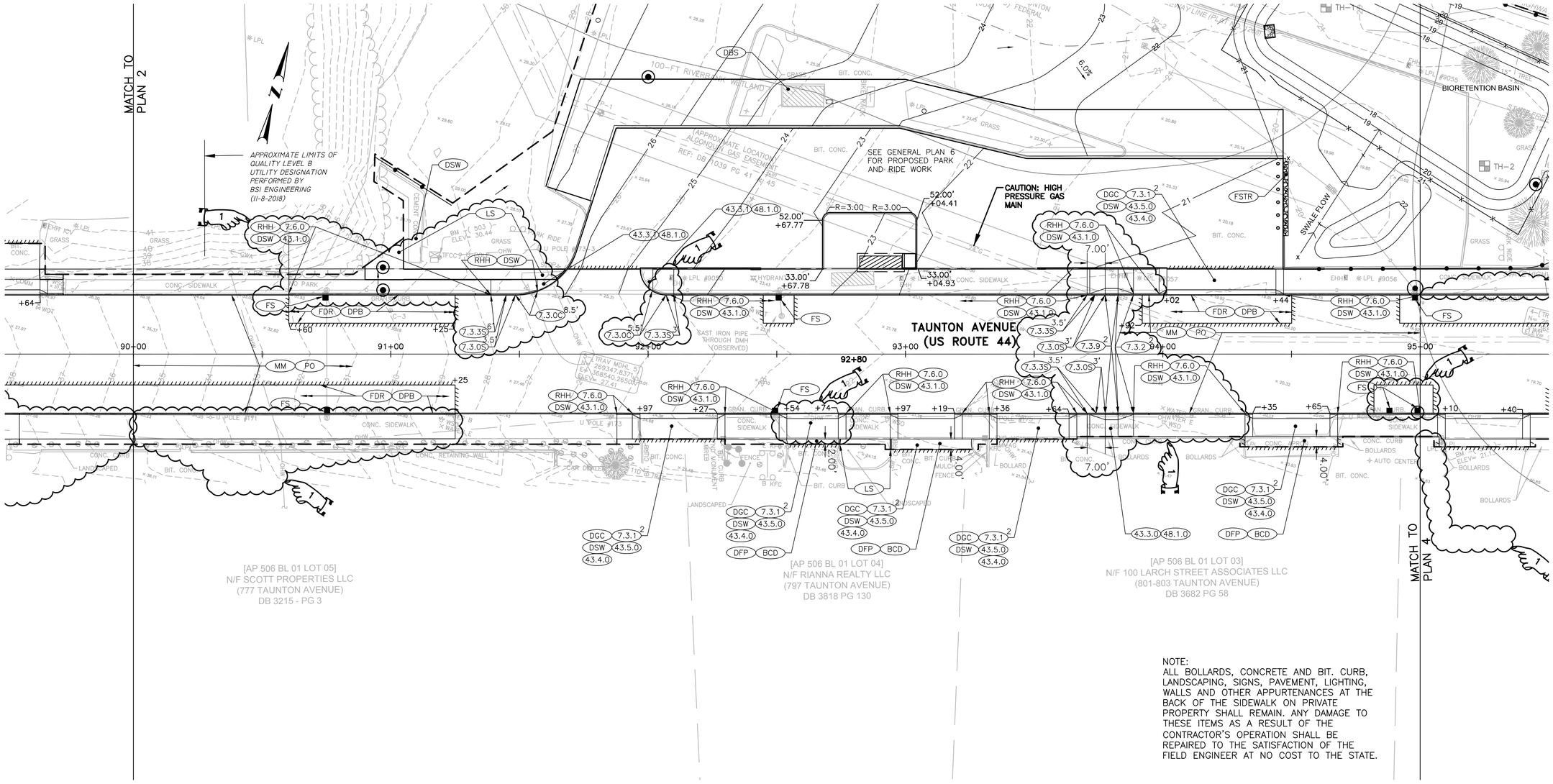
CHECKED BY _____ DATE _____ SCALE 1"=20'

ADDENDUM NO. 2

0076R_V1_015_GENERAL

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI	STP–RESF(406)	2019	16	47

R–1



NOTE:
ALL BOLLARDS, CONCRETE AND BIT. CURB, LANDSCAPING, SIGNS, PAVEMENT, LIGHTING, WALLS AND OTHER APPURTENANCES AT THE BACK OF THE SIDEWALK ON PRIVATE PROPERTY SHALL REMAIN. ANY DAMAGE TO THESE ITEMS AS A RESULT OF THE CONTRACTOR'S OPERATION SHALL BE REPAIRED TO THE SATISFACTION OF THE FIELD ENGINEER AT NO COST TO THE STATE.

SCALE IN FEET
0 20 50 100 FEET
HORZ. 1"=20'

REVISIONS		
NO.	DATE	BY
1	9/9/19	CL

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

IMPROVEMENTS TO TAUNTON AVENUE

EAST PROVIDENCE, RHODE ISLAND

GENERAL PLAN - 3

GREEN INTERNATIONAL AFFILIATES, INC.
Civil and Structural Engineers

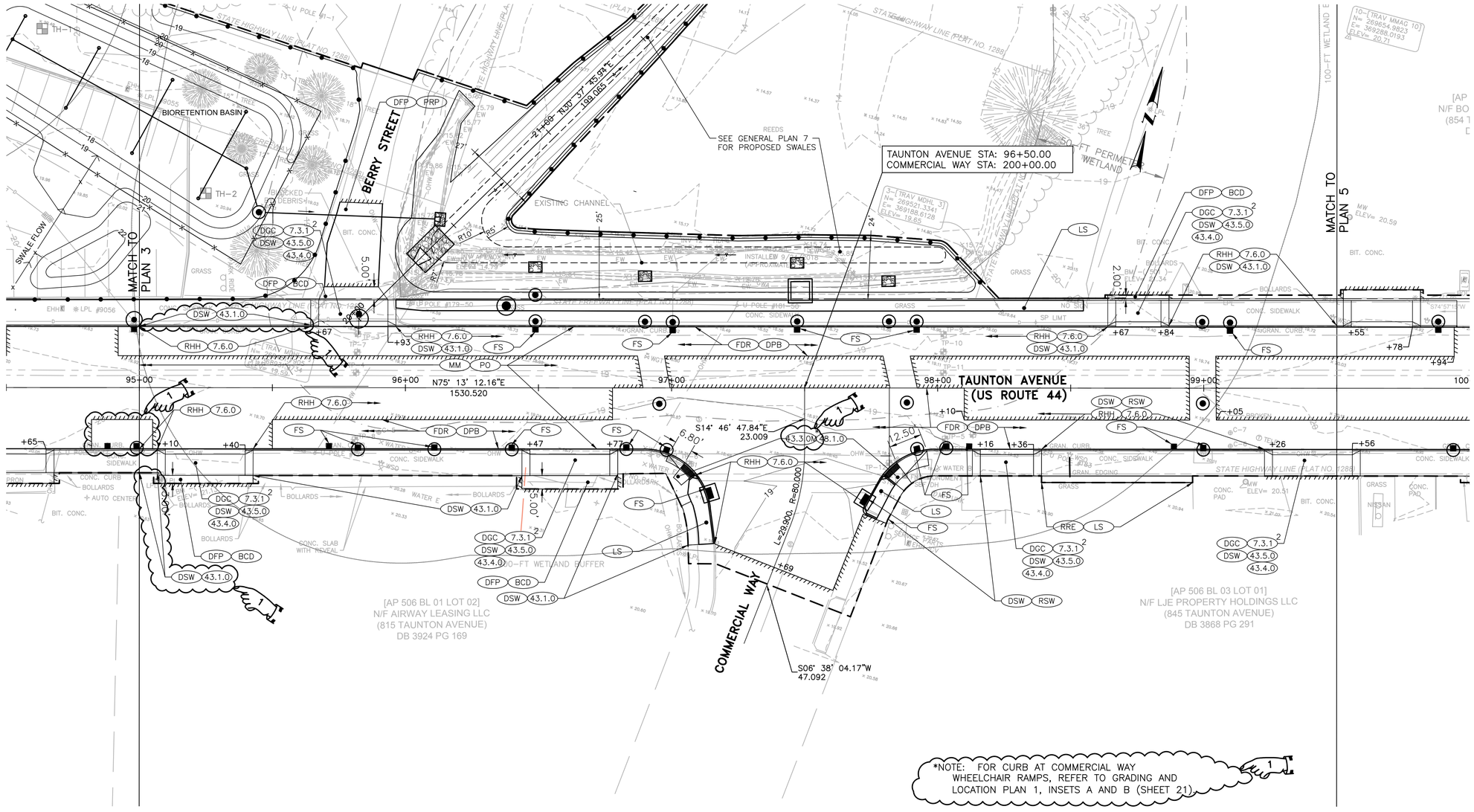
CHECKED BY _____ DATE _____ SCALE 1"=20'

ADDENDUM NO. 2

0076R_V1_016_GENERAL

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI	STP-RESF(406)	2019	17	47

R-1



*NOTE: FOR CURB AT COMMERCIAL WAY WHEELCHAIR RAMPS, REFER TO GRADING AND LOCATION PLAN 1, INSETS A AND B (SHEET 21).

NOTE:
ALL BOLLARDS, CONCRETE AND BIT. CURB, LANDSCAPING, SIGNS, PAVEMENT, LIGHTING, WALLS AND OTHER APPURTENANCES AT THE BACK OF THE SIDEWALK ON PRIVATE PROPERTY SHALL REMAIN. ANY DAMAGE TO THESE ITEMS AS A RESULT OF THE CONTRACTOR'S OPERATION SHALL BE REPAIRED TO THE SATISFACTION OF THE FIELD ENGINEER AT NO COST TO THE STATE.

SCALE IN FEET
0 20 50 100 FEET
HORZ. 1"=20'

GREEN INTERNATIONAL AFFILIATES, INC.
Civil and Structural Engineers

REVISIONS		
NO.	DATE	BY
1	9/9/19	CL

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

IMPROVEMENTS TO TAUNTON AVENUE

EAST PROVIDENCE, RHODE ISLAND

GENERAL PLAN - 4

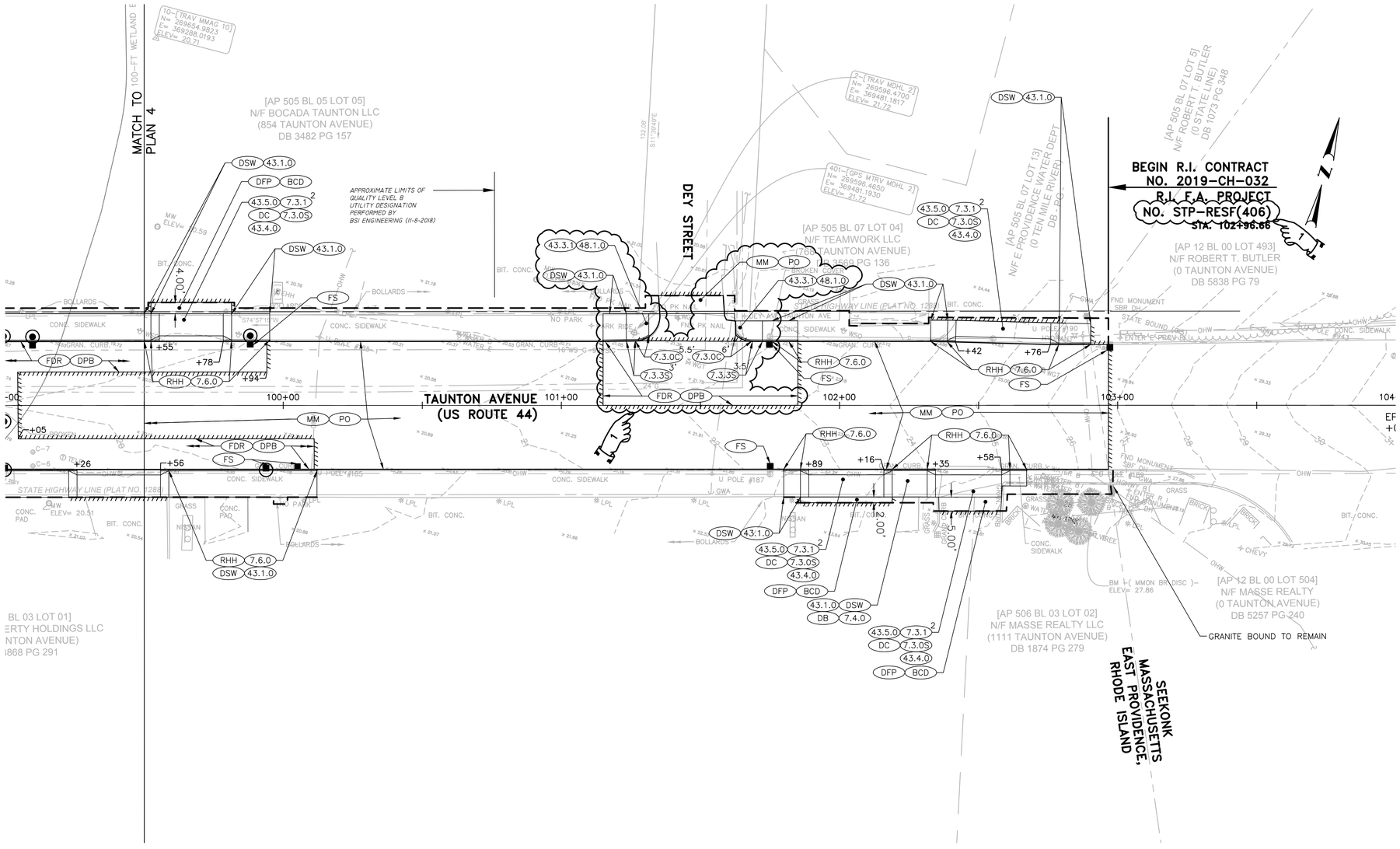
CHECKED BY _____ DATE _____ SCALE 1"=20'

ADDENDUM NO. 2

0076R_V1_017_GENERAL

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI	STP-RESF(406)	2019	18	47

R-1



NOTE:
ALL BOLLARDS, CONCRETE AND BIT. CURB, LANDSCAPING, SIGNS, PAVEMENT, LIGHTING, WALLS AND OTHER APPURTENANCES AT THE BACK OF THE SIDEWALK ON PRIVATE PROPERTY SHALL REMAIN. ANY DAMAGE TO THESE ITEMS AS A RESULT OF THE CONTRACTOR'S OPERATION SHALL BE REPAIRED TO THE SATISFACTION OF THE FIELD ENGINEER AT NO COST TO THE STATE.

SCALE IN FEET
0 20 50 100 FEET
HORZ. 1"=20'

GREEN INTERNATIONAL AFFILIATES, INC.
Civil and Structural Engineers

REVISIONS		
NO.	DATE	BY
1	9/16/19	CL

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

IMPROVEMENTS TO
TAUNTON AVENUE

EAST PROVIDENCE, RHODE ISLAND

GENERAL PLAN - 5

CHECKED BY _____ DATE _____ SCALE 1"=20'

ADDENDUM NO. 2

0076R_V1_018_GENERAL

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
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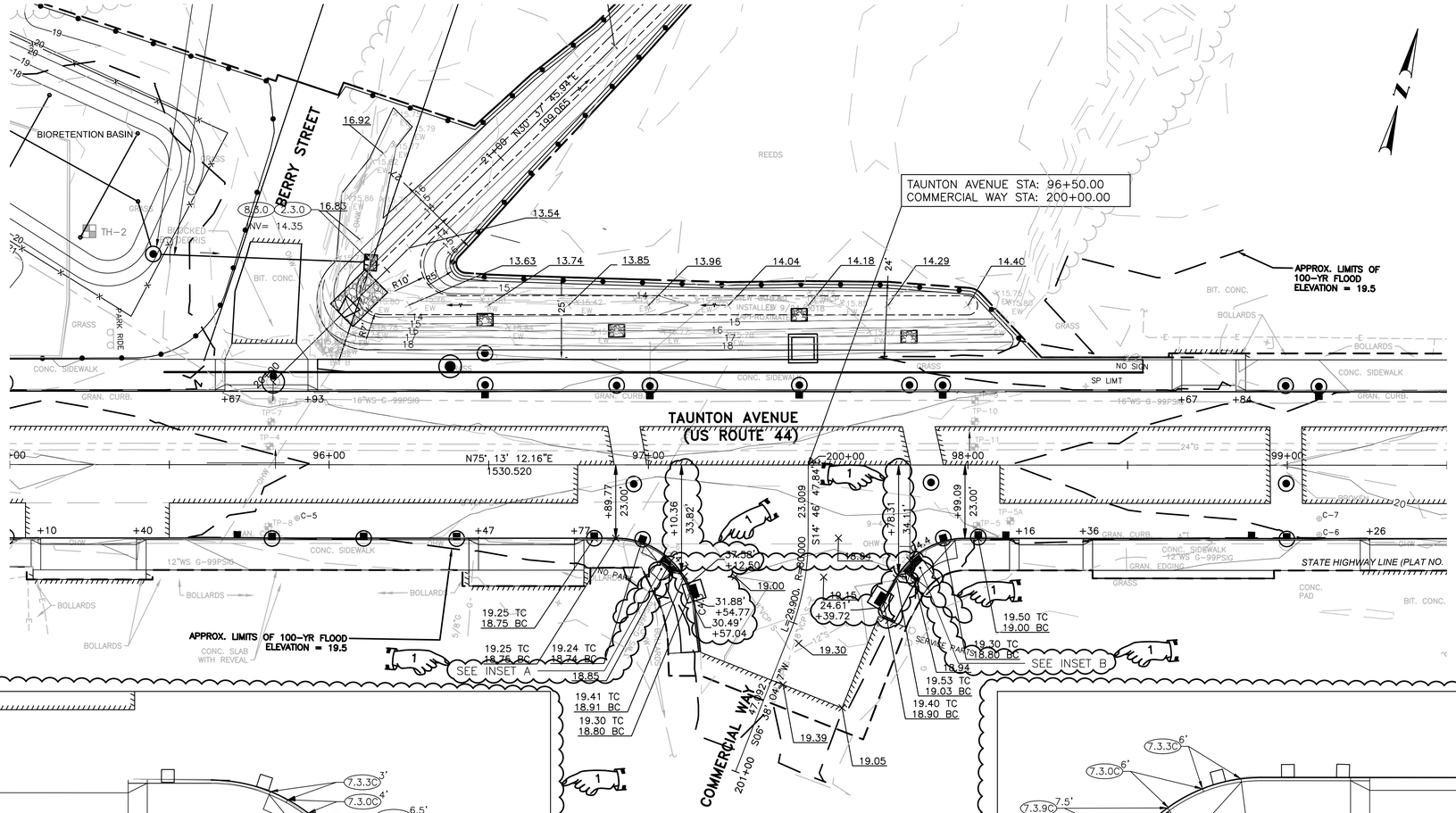
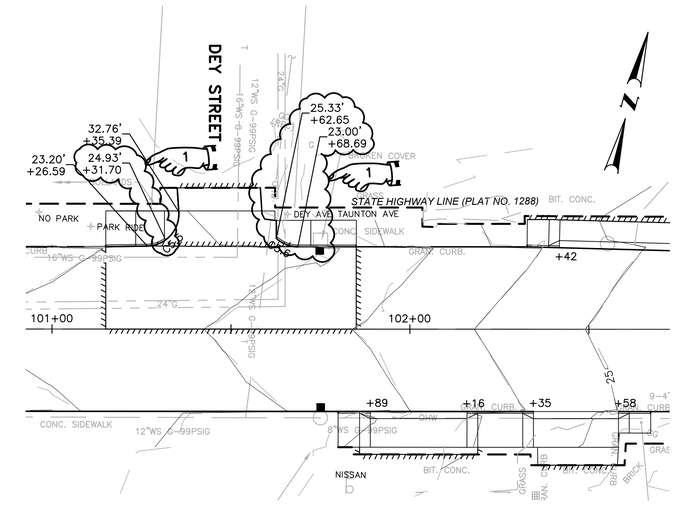
R–1





Curve Table				
Curve #	Length	Radius	Delta	Tangent
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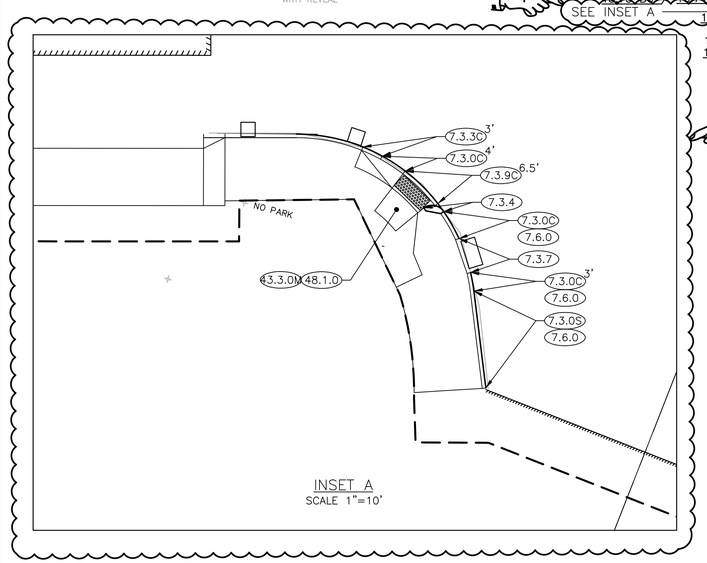
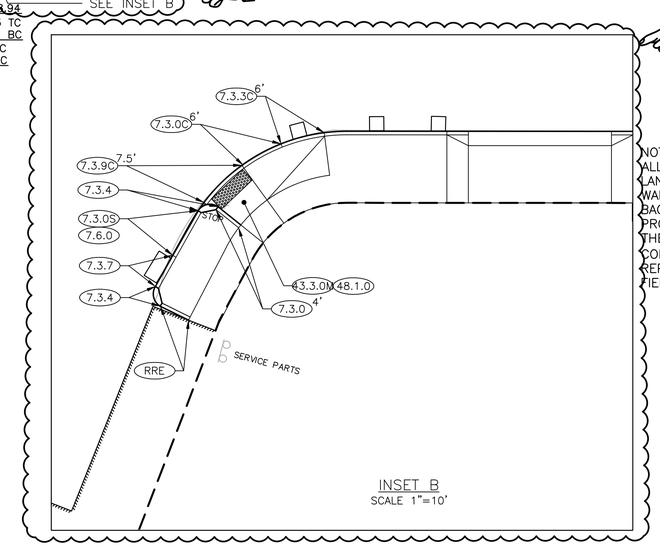
C5.6	7'	9'	041°02'40"	6.5'



Curve Table				
Curve #	Length	Radius	Delta	Tangent
C4.3	3'	25'	006°04'59"	2.7'
C4.4	27'	25'	061°01'13"	25.4'
C4.7	29'	25'	065°22'39"	27.0'



NOTE:
ALL BOLLARDS, CONCRETE AND BIT. CURB, LANDSCAPING, SIGNS, PAVEMENT, LIGHTING, WALLS AND OTHER APPURTENANCES AT THE BACK OF THE SIDEWALK ON PRIVATE PROPERTY SHALL REMAIN. ANY DAMAGE TO THESE ITEMS AS A RESULT OF THE CONTRACTOR'S OPERATION SHALL BE REPAIRED TO THE SATISFACTION OF THE FIELD ENGINEER AT NO COST TO THE STATE.

SCALE IN FEET

0 20 50 100 FEET

HORZ. 1"=20'

GREEN INTERNATIONAL AFFILIATES, INC.
Civil and Structural Engineers

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RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

IMPROVEMENTS TO
TAUNTON AVENUE

EAST PROVIDENCE, RHODE ISLAND

GRADING AND LOCATION
PLAN - 1

CHECKED BY _____ DATE _____ SCALE 1"=20'

ADDENDUM NO. 2

0076R_V1_021_GRADING_LOCATION

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
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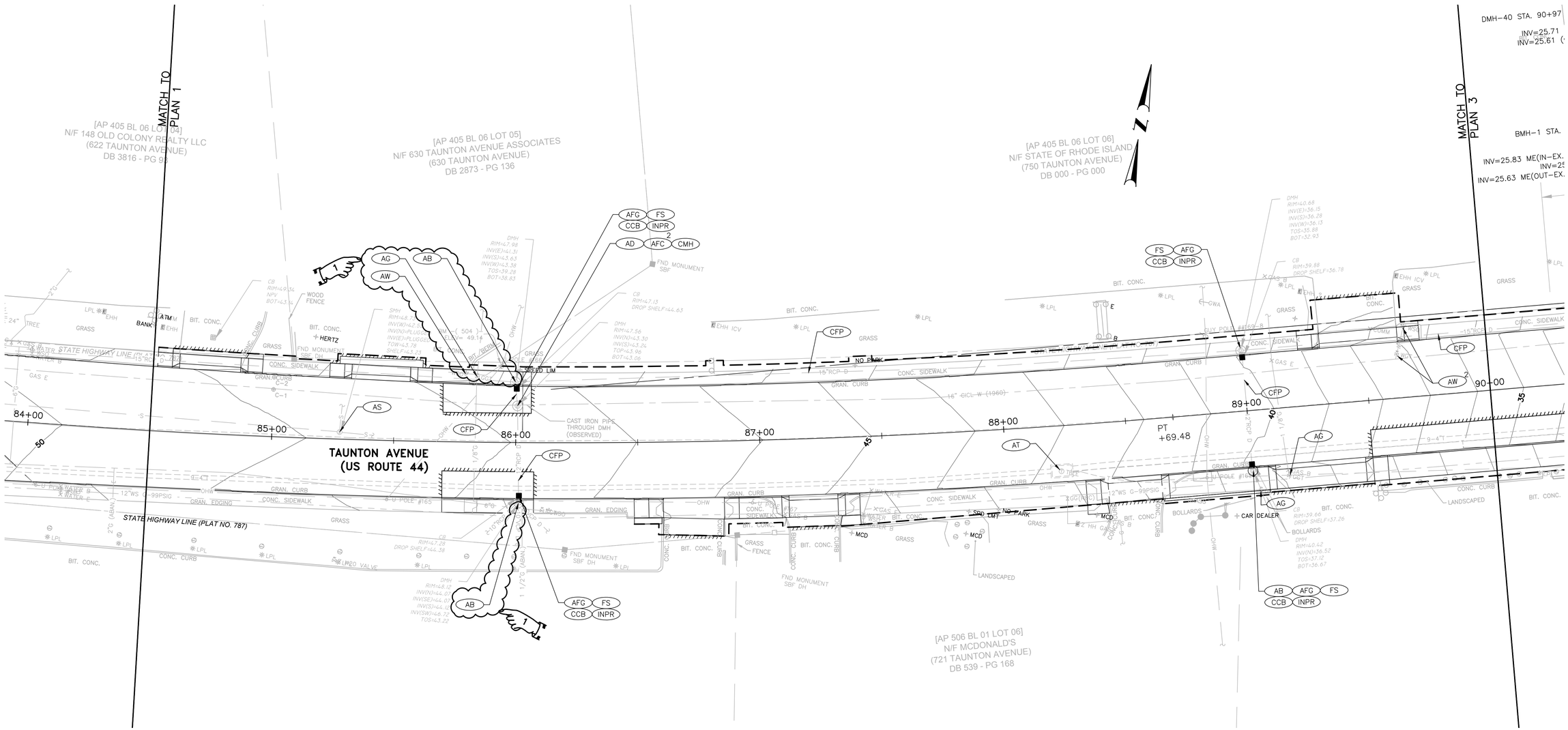
R-1



SCALE IN FEET

0 20 50 100 FEET

HORZ. 1"=20'

GREEN INTERNATIONAL AFFILIATES, INC.
Civil and Structural Engineers

REVISIONS		
NO.	DATE	BY
1	9/16/19	CL

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

IMPROVEMENTS TO
TAUNTON AVENUE

EAST PROVIDENCE, RHODE ISLAND

DRAINAGE AND
UTILITY PLANS - 2

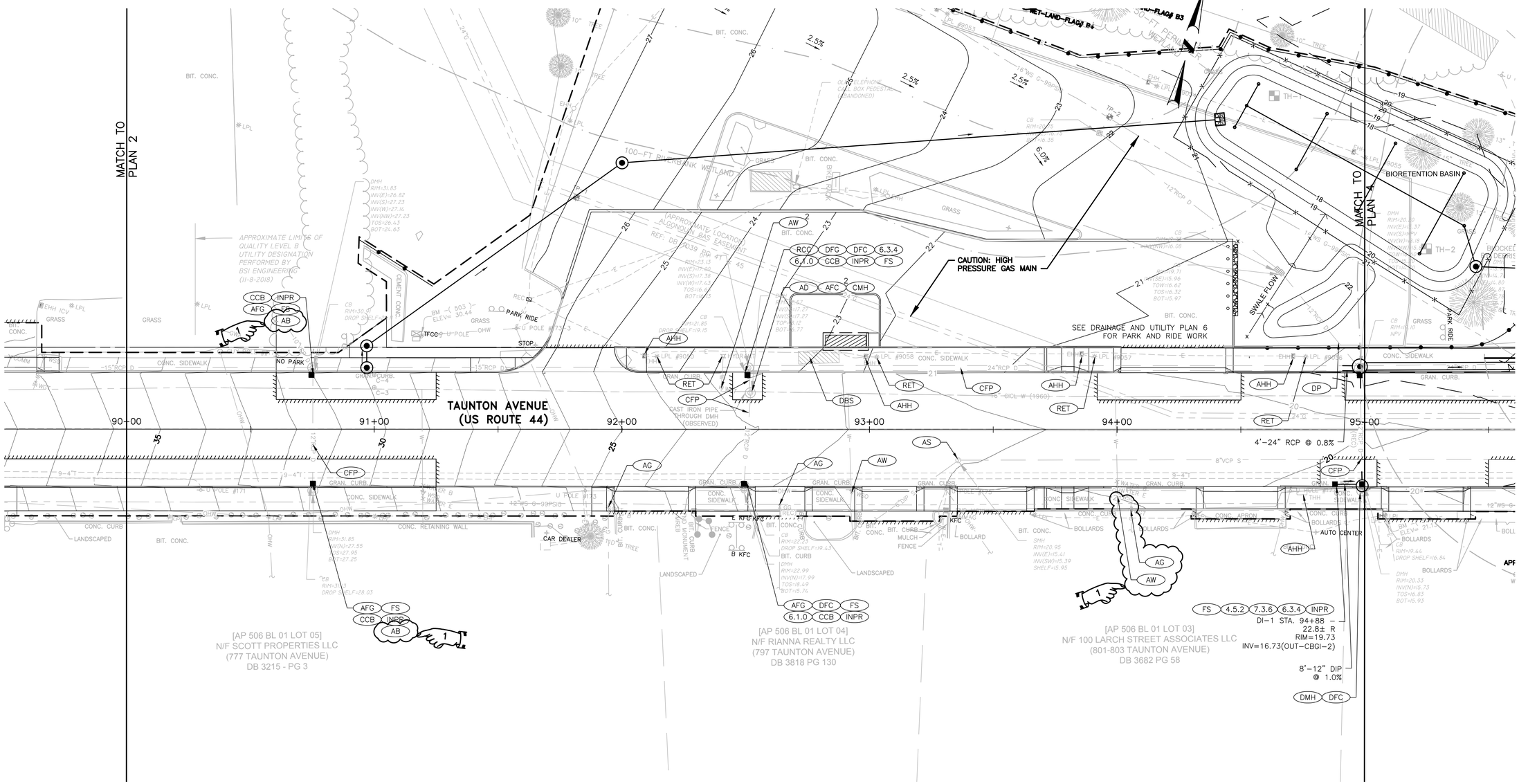
CHECKED BY _____ DATE _____ SCALE 1"=20'

ADDENDUM NO. 2

0076R_V1_024_DRAINUTIL

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI	STP-RESF(406)		25	47

R-1



SCALE IN FEET

0 20 50 100 FEET

HORZ. 1"=20'

GREEN INTERNATIONAL AFFILIATES, INC.
Civil and Structural Engineers

REVISIONS		
NO.	DATE	BY
1	9/16/19	CL

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

IMPROVEMENTS TO
TAUNTON AVENUE

EAST PROVIDENCE, RHODE ISLAND

DRAINAGE AND
UTILITY PLANS - 3

CHECKED BY _____ DATE _____ SCALE 1"=20'

ADDENDUM NO. 2

0076R_V1_025_DRAINUTIL

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
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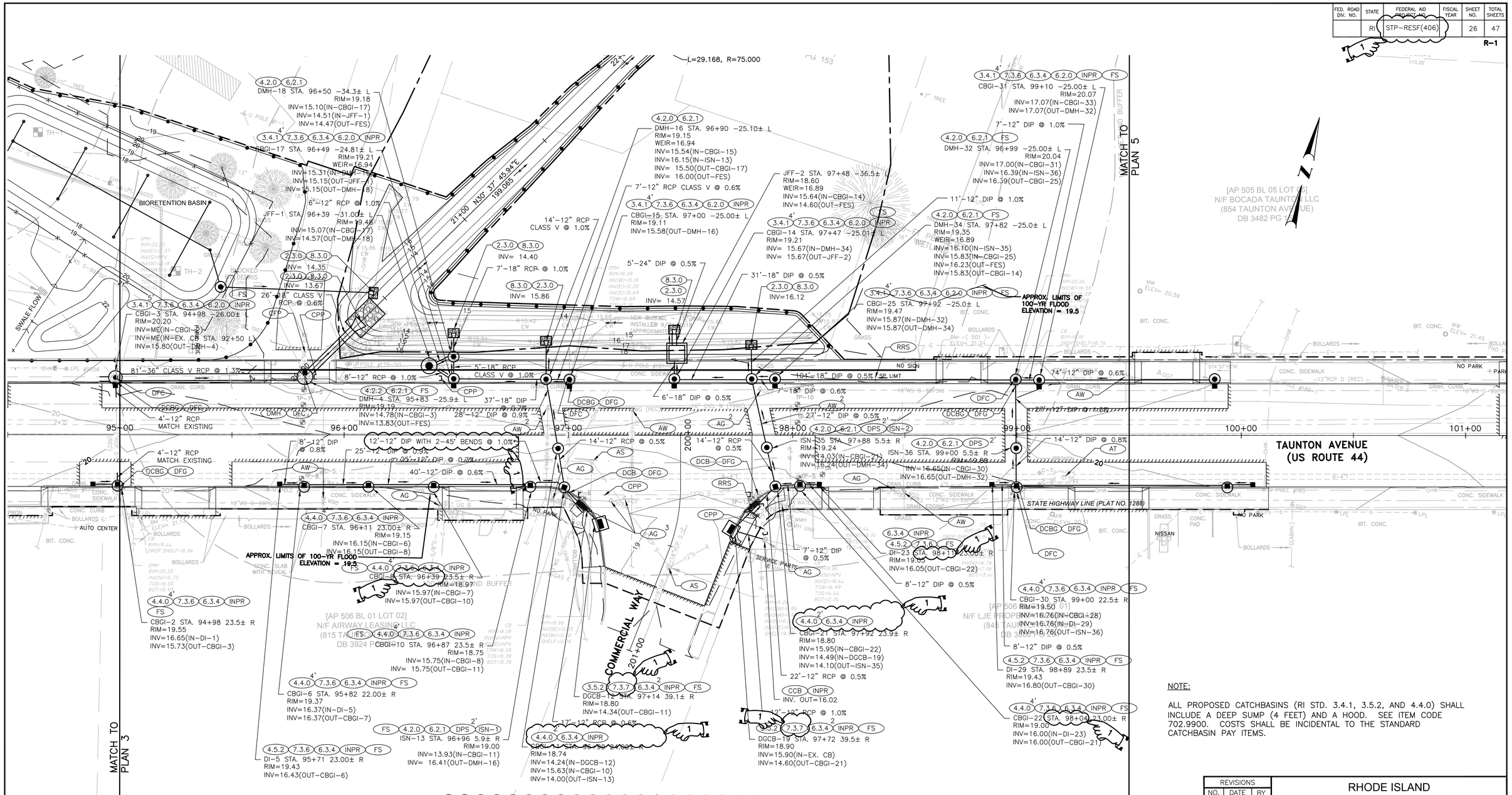
R-1



*NOTE: ALIGN PIPE AND FITTINGS TO AVOID CONFLICT WITH EXISTING UTILITY POLE.

SCALE IN FEET

0 20 50 100 FEET

HORZ. 1"=20'

NOTE:

ALL PROPOSED CATCHBASINS (RI STD. 3.4.1, 3.5.2, AND 4.4.0) SHALL INCLUDE A DEEP SUMP (4 FEET) AND A HOOD. SEE ITEM CODE 702.9900. COSTS SHALL BE INCIDENTAL TO THE STANDARD CATCHBASIN PAY ITEMS.

REVISIONS		
NO.	DATE	BY
1	9/9/19	CL

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

IMPROVEMENTS TO
TAUNTON AVENUE

EAST PROVIDENCE, RHODE ISLAND

DRAINAGE AND
UTILITY PLANS - 4

CHECKED BY _____ DATE _____ SCALE 1"=20'

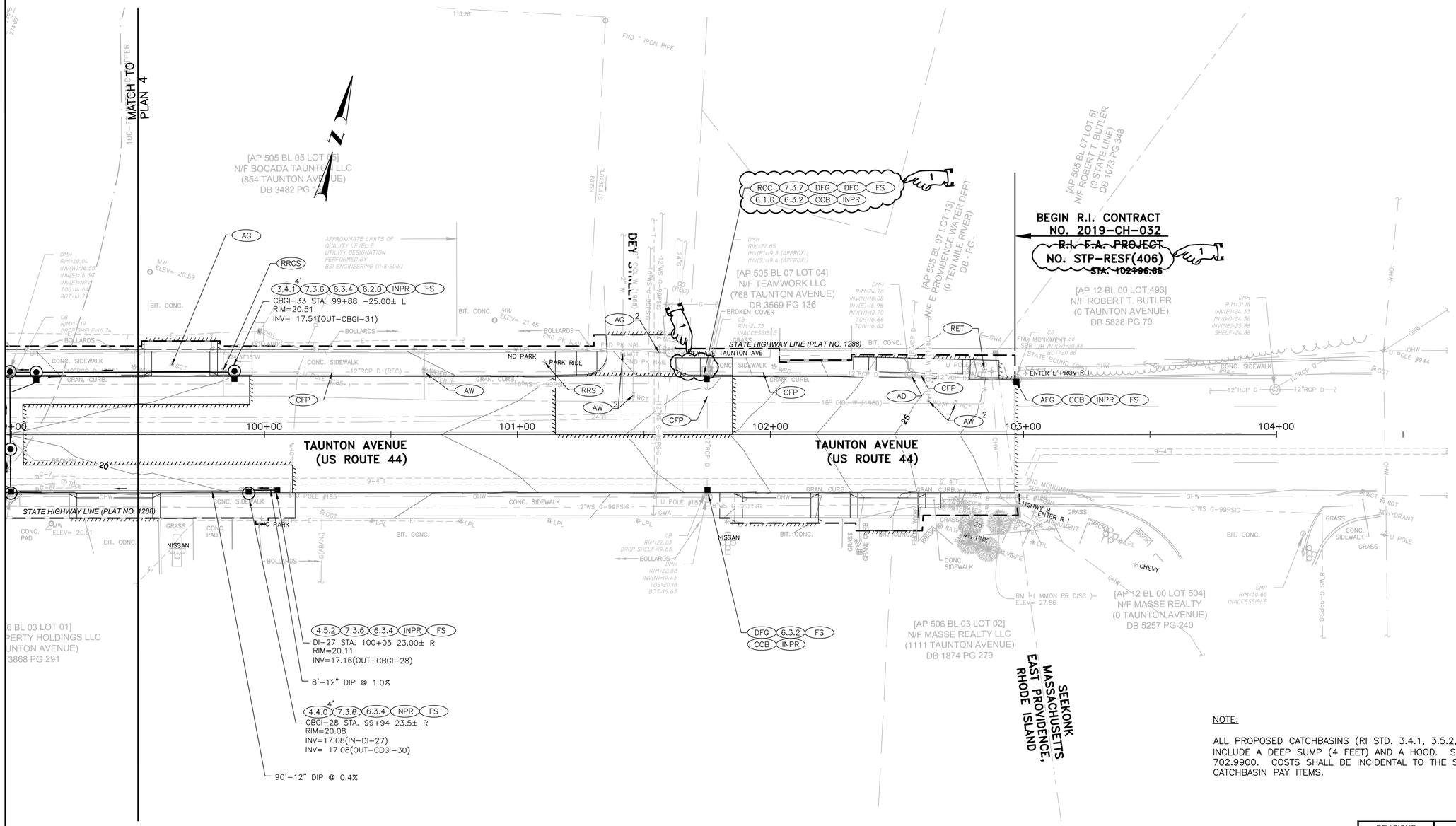
GREEN INTERNATIONAL AFFILIATES, INC.
Civil and Structural Engineers

ADDENDUM NO. 2

0076R_V1_026_DRAINUTIL

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI	STP-RESF(406)		27	47

R-1



NOTE:

ALL PROPOSED CATCHBASINS (RI STD. 3.4.1, 3.5.2, AND 4.4.0) SHALL INCLUDE A DEEP SUMP (4 FEET) AND A HOOD. SEE ITEM CODE 702.9900. COSTS SHALL BE INCIDENTAL TO THE STANDARD CATCHBASIN PAY ITEMS.

SCALE IN FEET

0 20 50 100 FEET

HORZ. 1"=20'

GREEN INTERNATIONAL AFFILIATES, INC.
Civil and Structural Engineers

REVISIONS		
NO.	DATE	BY
1	9/12/19	CL

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

IMPROVEMENTS TO
TAUNTON AVENUE

EAST PROVIDENCE, RHODE ISLAND

DRAINAGE AND
UTILITY PLANS - 5

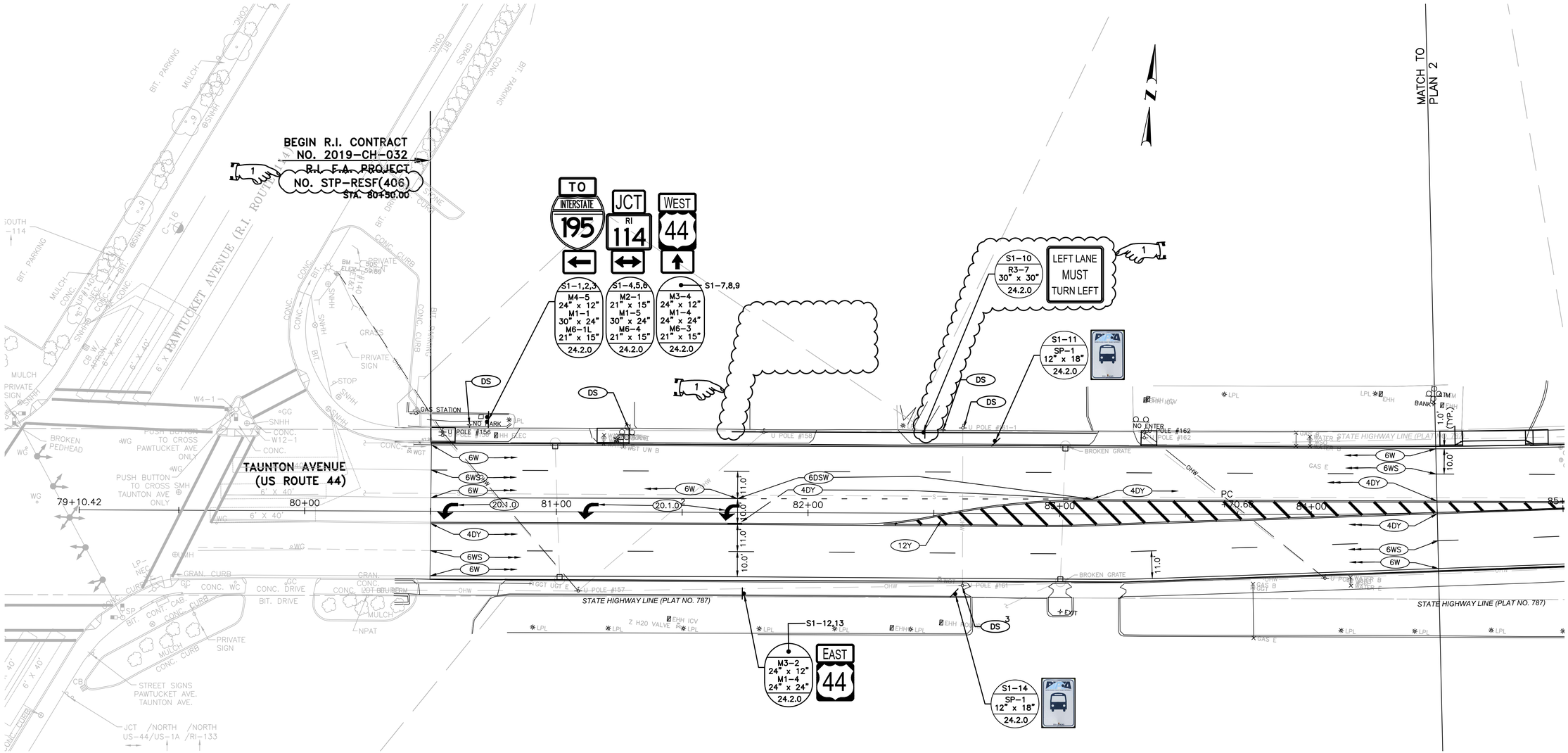
CHECKED BY _____ DATE _____ SCALE 1"=20'

ADDENDUM NO. 2

0076R_V1_027_DRAINUTIL

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI	STP-RESF(406)	2019	31	47

R-1



SCALE IN FEET

0 20 50 100 FEET

HORZ. 1"=20'

GREEN INTERNATIONAL AFFILIATES, INC.
Civil and Structural Engineers

REVISIONS		
NO.	DATE	BY
1	9/12/19	CL

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

IMPROVEMENTS TO
TAUNTON AVENUE

EAST PROVIDENCE, RHODE ISLAND

SIGN AND STRIPING
PLANS - 1

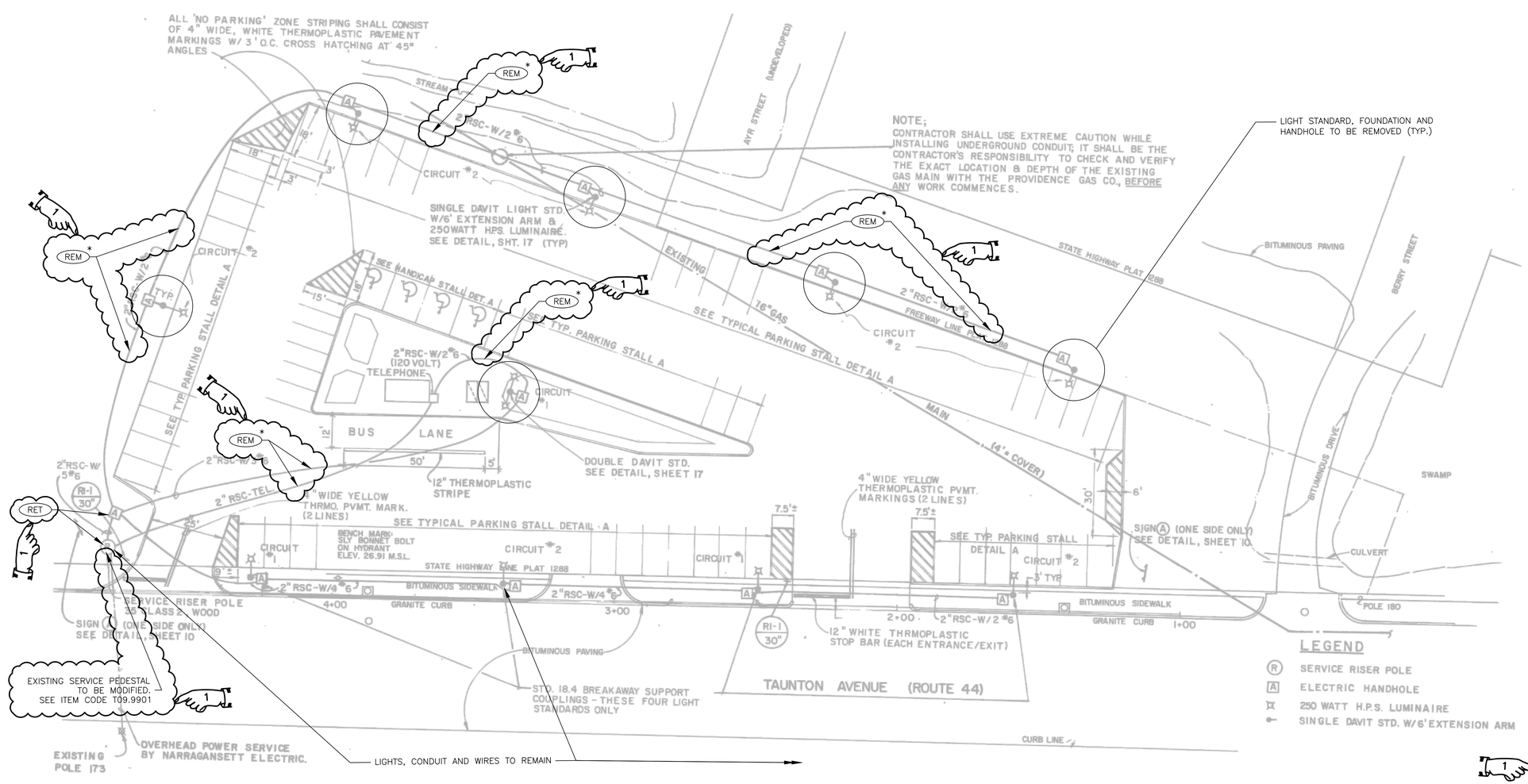
CHECKED BY YC DATE 08/16/2019 SCALE 1"=20'

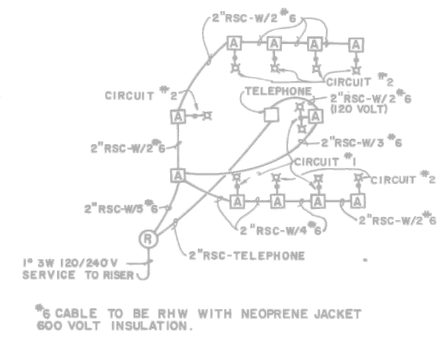
ADDENDUM NO. 2

0076R_V1_031_SIGNSTPE001

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI	STP–RESF(406)	2019	38	47

R–1





#6 CABLE TO BE RHW WITH NEOPRENE JACKET 600 VOLT INSULATION.

#10 CABLE TO RUN FROM ELECTRIC HANDHOLE TO LUMINAIRE

SINGLE LINE WIRING DIAGRAMS

ABBREVIATIONS

RSC RIGID STEEL CONDUIT
HPS HIGH PRESSURE SODIUM
W/ WITH
STD. STANDARD
TYP. TYPICAL
RI-1 30" RHODE ISLAND STANDARD SIGN

LEGEND

(R) SERVICE RISER POLE
(A) ELECTRIC HANDHOLE
250 WATT H.P.S. LUMINAIRE
SINGLE DAVIT STD. W/6' EXTENSION ARM

*ALL ABANDONED WIRE TO BE REMOVED FROM CONDUIT.

NOTE:

REFERENCED RECORD PLAN: "TRAFFIC CONTROL & LIGHTING – PARK & RIDE LOT – TAUNTON AVENUE, ROUTE 44"
BY RONALD M. ASH & ASSOCIATES, INC.,
DATED 1983,
FEDERAL AID PROJECT NUMBER: F–7777(004)
RHODE ISLAND CONTRACT NUMBER: 8306

PROPOSED WORK SHOWN IN DARK BLACK PRINT.

SCALE IN FEET
0 20 50 100 FEET
HORZ. 1"=20'

REVISIONS		
NO.	DATE	BY
1	9/11/19	CL

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

IMPROVEMENTS TO TAUNTON AVENUE

EAST PROVIDENCE, RHODE ISLAND

LIGHTING PLAN -1

GREEN INTERNATIONAL AFFILIATES, INC.
Civil and Structural Engineers

CHECKED BY _____ DATE _____ SCALE 1"=20'

ADDENDUM NO. 2

0076R_V1_038_LIGHTING

accordance with Section T.22 of the Standard Specifications for Road and Bridge Construction amended March 2018. No separate payment will be made for lighting of the work zone during any nighttime operation.

H. To minimize impacts to traffic and local businesses, micromilling, final paving operations and pavement marking installation shall be performed at night. During pavement removal operations, no over breakage into existing operational travel lanes will be allowed.

I. In cases of emergency and/or as directed by the Engineer, the Contractor shall move equipment to allow for the passage of emergency vehicles and/or open closed lanes to maintain traffic flow.

J. The Contractor shall not commence work that impacts vehicular and pedestrian traffic until fabrication of materials required to complete such work is finished and on site.

K. The Contractor shall backfill or place steel plates, as approved by the Engineer, capable of supporting HS-25 wheel loading over all trenches and excavations at the end of work each day except when otherwise directed by the Engineer. Additionally, all excavations in travel lanes shall be temporarily paved if steel plates are not used. There shall be no additional compensation for backfilling, re-excavating and/or plating these trenches and excavations.

L. Drainage installations, full depth pavement replacement, and curb installation operations shall only be conducted on one side of the road at a time. All pavement drop-offs in excess of four (4) inches shall be protected by a 4:1 wedge of compacted gravel during non-working hours. New full depth pavement shall be placed only after new drainage (in the same area) is placed. Full depth pavement shall include the surface course(s). The surface course(s) shall subsequently be milled off with the adjacent existing pavement.

M. Some of the full depth pavement replacement and drainage work will require the Contractor to work over night on extended shifts. The Contractor shall plan the work and adjust the unit prices accordingly in the bid.

N. All requirements set forth in the various Rhode Island Department of Environmental Management permits and approvals. See section 26 for a list of the permits. Erosion and Sediment controls shall be installed within 30 days prior to the start of construction at a particular location.

O. The Contractor shall not start construction before April 15, 2020 (end of winter shutdown).

P. The Contractor shall be responsible for coordinating with the City of East Providence. The Contractor shall coordinate requirements for Uniformed Traffic Control Persons with the Engineer.

Q. Park and Ride Lot: The proposed park and ride area shall remain in service at all times subject to the following: One driveway for the park and ride lot shall be open for the public at all times. A minimum of 14 standard and 2 accessible spaces (new or existing) shall

remain in service at any given time. No more than one-half of the sidewalk and curbline (new or existing) in front of the park and ride lot shall be out of service at any time. ADA access shall be maintained at all times.

8. TRANSPORTATION MANAGEMENT PLAN

All work shall be completed in accordance with the Traffic-Related Work Restrictions indicated in the Transportation Management Plan.

Included as Appendix A to these Contract Specific General Provisions is the Transportation Management Plan (TMP) for this project. The TMP lays out the set of coordinated transportation management strategies that will be used to manage the work zone safety and mobility impacts of this project. In the event of a discrepancy between information in the TMP and information elsewhere in the Contract Documents, the former shall govern.

The Contractor's attention is called to **SECTION 103 – AWARD AND EXECUTION OF THE CONTRACT**, which describes the requirements for the Contractor's designation of a TMP Implementation Manager for the Contract.

The Contractor's attention is called to **SECTION 105 – CONTROL OF WORK,** which describes the requirements for the training of all Contractor and Subcontractor personnel involved in the work zone design, implementation, operation, inspection, management, and/or enforcement.

The Department's latest Training Guidelines for Personnel Responsible for Work Zone Safety & Mobility are available under the "Training" section at http://www.dot.ri.gov/humanresources/index.asp.

9. GROUNDWATER

The Contractor shall note that groundwater levels are high at this site. All costs for dewatering and unwatering excavations of all types shall be included in item code 203.0530. Dewatering surface water, seepage from adjacent utilites and utility tranches shall be included in item code 203.0530.

10. CONTRACTOR'S RESPONSIBILITY FOR DAMAGED STORM DRAINS

The Contractor shall use care when working within or in the vicinity of existing drainage structures. All drainage structures, pipes or culverts damaged during the disposal of, cleaning of, installation of, or while making repairs to drainage structures, pipes or culverts, or carrying out all other work on this contract, shall be the Contractor's responsibility. All pipe/culvert damaged by the Contractor while carrying out this contract shall be replaced or repaired by the Contractor to the satisfaction of the Engineer at no additional charge to the State.

RIDOT Plat 787

These record plans are included in Appendix G.

The Contractor shall note the base mapping was developed by survey. Bench marks and location plan data is included in the Plan Set.

29. ENVIRONMENTAL PERMITS

The following environmental permit has been issued for this project:

- Rhode Island Department of Environmental Management (RIDEM) Alteration Permit from Freshwater Wetlands (See Appendix F). The Contractor shall adhere to the requirements of this permit.
- Rhode Island Department of Environmental Management (RIDEM) Soil Management Plan

30. EXCAVATION AND SOIL MANAGEMENT:

A Soil Management Plan (SMP) has been developed for this contract and approved by RIDEM. The SMP is attached in appendix H. Contaminated soil has been identified at sites within the project limits (bioretention basin and drainage swales). All soils excavated from these sites shall be managed and handled as specified in the SMP (See section 2.1 of the SMP) and per item codes 202.9910 through 202.9919.

Note that all excavated soil taken off the site (except that referred to in the paragraph above) shall be taken for reuse at an industrial/commercial property, or road and bridge project if it meets the project requirements, or should the Contractor be unable to locate a site that can reuse the soil, it shall be legally disposed of. It shall not be reused in a residential or recreational setting. All costs for compliance with the SMP shall be incidental to the contract items. No additional payment shall be made for hauling and disposal of soil not regulated by the SMP.

F:\Projects\2016\16062\16062.01X_0076R Taunton Ave\SPECS\00_Current Design\CS Pages\CS Pages.docx

APPENDIX H – SOIL MANAGEMENT PLAN

Proactive by Design

CONTRACTOR'S SOIL MANAGEMENT PLAN

RIDOT TAUNTON AVENUE IMPROVEMENTS PROJECT

East Providence, Rhode Island

RIDEM File No. SR-10-1960

September 2019
File No. 03.0034632.00

PREPARED FOR:
Rhode Island Department of Transportation
Providence, Rhode Island

GZA GeoEnvironmental, Inc.
188 Valley Street | Suite 300 | Providence, RI 02909
401-421-4140

32 Offices Nationwide
www.gza.com

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1.0 INTRODUCTION

This *Contractor's Soil Management Plan* (SMP) has been prepared by GZA GeoEnvironmental, Inc. (GZA) on behalf of The Rhode Island Department of Transportation (RIDOT) for completing development/construction activities (including earthwork and landscaping) associated with the above-referenced Taunton Avenue Improvements Project (the "Project"). This SMP is based on information provided in RIDOT Specification RIC No. 2019-CH-032, Codes 202.9910, 202.9914 to 202.9919,[1] and the Rhode Island Department of Environmental Management (RIDEM) Soil Management Plan template. This SMP is subject to the Limitations presented in Section 5 and Appendix A.

1.1 BACKGROUND

The Taunton Avenue Improvements Project is located along Taunton Avenue (US Route 44) beginning to the east of Pawtucket Avenue (US Route 1) and ending on the Rhode Island side of the East Providence/Seekonk Massachusetts boundary (the "Site"), refer to the Locus Plan attached as Figure 1. The Project includes the installation of a storm water management system consisting of a bioretention basin, approximately 500-foot vegetated drainage channel, and miscellaneous storm drain improvements along a portion of Taunton Avenue. Refer to attached Green Environmental, Inc. (Green) *Key Plan* for Site layout (Figure 3).

Based on environmental investigations completed at the Site by GZA in June-July 2019, arsenic, lead, total petroleum hydrocarbons (TPH) and certain polycyclic aromatic hydrocarbons (PAHs) were detected in soils at concentrations above the Method 1 Residential Direct Exposure Criteria (R-DEC) as outlined in the Rules and Regulations for the Investigation and Remediation of Hazardous Materials Releases (Remediation Regulations-250-RICR-140-30-1, as amended). Due to the presence of these findings, the Site is listed with the RIDEM Office of Waste Management as an active site, RIDEM ID No. SR-10-1960. In addition, it is located in the vicinity of Cook's Landfill, a US EPA CERCLIS/RIDEM Solid Waste Landfill site. Based on this information, the Contractor will assume that all soils within the Project area are impacted, and as such, must be handled as "contaminated."

1.2 ENVIRONMENTAL BACKGROUND

To evaluate whether soil contamination was present at the site, GZA completed a soil evaluation program to include three (3) test pit explorations (TP-1 to TP-3) and the completion of shallow hand auger explorations (SS-1 to SS-13) on June 20 and July 1, 2019. As part of the program, temporary groundwater monitoring wells were installed in test pits TP-1 and TP-3 and in shallow hand auger explorations SS-3 and SS-13. The wells were comprised of 5-foot sections of 2-inch diameter pre-packed PVC well screens connected to solid PVC riser pipe and capped with an expandable rubber plug. The locations of the test pits, hand auger explorations and the temporary groundwater monitoring wells are depicted on Figure 2. Test pit logs from TP-1, TP-2, and TP-3, which describe the subsurface conditions, are provided in Appendix B.

1.2.1 Soil

A total of three (3) composite soil samples, identified as S-1, Comp-1 and Comp-2 were collected from within the planned excavation depths in the channel and the detention basins. Soil samples Comp-1 and Comp -2 were collected from hand augered borings completed within the relief channel, and soil sample S-1 collected from test pits excavated within the detention basin, refer to Figure 2 for sample locations. The samples were collected in laboratory-provided containers, packed in ice and transported under chain-of-custody protocol to ESS Laboratory in Cranston, Rhode Island for a suite of laboratory analysis including volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), TPH, RCRA 8 metals, polychlorinated biphenyls (PCBs) and hazardous waste characteristics to identify impacts (if any) from historical releases and/or urban fill. Results were used to evaluate

[1] Handling, Hauling, Stockpiling and Management of Contaminated Soils.

compliance under the RIDEM Remediation Regulations, and to evaluate off-site reuse/disposal alternatives for excess excavated soil generated as part of earthwork activities for the detention basin/relief channel improvements. Results are summarized in Table 1, a copy of the laboratory report is provided in Appendix C. An interpretation of the resultant data is presented below.

- With the exception of acetone, VOC results were below the method reporting limits (RL) for all three samples. The acetone concentrations detected Comp-1 and Comp-2 (0.307 mg/kg and 0.571 mg/kg, respectively) were well below the RIDEM Method 1 Residential Direct Exposure Criteria (R-DEC) of 7,800 mg/kg. We further note that acetone is a common laboratory contaminant.

- Certain PAHs (a subset of SVOCs), identified as Benzo(a)pyrene, Benzo(b)fluoranthene and Chrysene were detected in samples Comp-1 and S-1, at concentrations above the RIDEM R-DEC. Remaining SVOC results were below the RL and/or the R-DEC.

- TPH concentrations detected in samples Comp-1 and Comp-2 at 694 mg/kg and 784 mg/kg, above the 500 mg/kg R-DEC.

- Arsenic concentrations in Comp-1 and Comp-2 (15.6 mg/kg and 17.2 mg/kg, respectively) exceeded the RDEC and the Industrial/Commercial Direct Exposure Criteria (I/C-DEC) of 7 mg/kg. Lead concentrations in sample Comp-1 (571 mg/kg) exceeded the R-DEC (150 mg/kg) and the I/DE C (500 mg/kg). The lead concentration in Comp-2 (269 mg/kg) exceeded the R-DEC. Remaining metals results ere below the RL and/or the R-DEC and I/C-DEC.

- None of the samples exhibited characteristics of hazardous waste.

- The material meets the acceptance criteria for re-use as alternate cover material (ACM) at the Rhode Island Resource Recovery Corporation (RIRRC) Central Landfill Facility (CLF) in Johnston, Rhode Island.

Based on the analytical data, RIDEM was notified of the exceedances on DATE and Case No. SR- SR-10-1960 was subsequently assigned.

1.2.2 Groundwater

Groundwater samples were collected from the four (4) temporary groundwater monitoring wells (TP-1, TP-3, SS-3, and SS-13) on July 2, 2019 using USEPA's Low Stress (low flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells (EPA SOP GW4), September 19, 2017. The groundwater samples were placed in 40 ml hydrochloric acid-preserved vials and 1-liter non-preserved amber glass jars, packed in ice and transported under chain-of-custody protocol to the testing laboratory for volatile organic compound (VOC) analysis by EPA Method 8260B and total petroleum hydrocarbons (TPH) using Modified Method 8100. The laboratory report is provided in Appendix C and the analytical test results are summarized in Table 2.

Elevated levels of TPH (1.2 to 4.0 mg/L) and low but detectable levels of naphthalene and acetone (less than 0.015 mg/L) were observed in the water samples. RIDEM has not promulgated standards for acetone, naphthalene and TPH is GB-designated groundwater. We further note that consistent with the low levels detected in soil, acetone is a common laboratory contaminant and may not be present in the groundwater.

2.0 SOIL MANAGEMENT

This section of the *Contractor's Soil Management Plan* has been prepared to establish procedures that will be followed during construction activities to manage excavated soils.

2.1 SOIL MANAGEMENT GUIDELINES

The following soil management guidelines were developed for activities involving soil excavation at the Site. The procedures will apply to soil stockpiling, management, characterization and disposal during construction. The off-site reuse/disposal procedures detailed below apply only to excess soil which will not be reused as backfill on-site.

2.1.1 Soil Excavation

Prior to the initiation of soil excavation, the Contractor or any other personnel performing subsurface work at the Site will contact DigSafe® and appropriate utility companies to identify and mark the location of below grade utilities. Sediment and erosion controls consisting of filter socks, silt fencing, staked hay bales or similar effective measures will be installed by the Contractor at the Site. Refer to the Soil Erosion and Sediment Control Plan for the project.

2.1.2 Soil Storage

Excavated soils that cannot be reused on-site may be staged and temporarily stored in a designated area approved by RIDOT. Excavated soils to be taken off-site for reuse/disposal will be staged and temporarily stored in a RIDOT-approved designated area for no more than 60 days. Within reason, the storage location will be selected to limit the unauthorized access to the materials (*i.e.,* away from public roadways/walkways). The Contractor will notify RIDOT of the proposed receiving facility. No soil will leave the Site without RIDOT approval.

Stockpiled soils will be stored by being placing on two layers of minimum 6 mil polyethylene sheeting and covered with the same. The polyethylene sheets should overlap by a minimum of 4-feet. Stockpiled materials will be maintained with appropriate controls to limit the loss of the cover and protect against stormwater erosion. The stockpiles shall be surrounded by staked hay bales or straw wattles. Soil stockpiles shall be inspected at the end of each work day. Any tears or punctures observed in either the polyethylene sheeting covering or underlying the piles will be repaired immediately.

Depending on the volume of material involved in the Project, soils may also be temporarily stockpiled in roll-offs. Containers will be covered at the end of the day with a tarp(s) secured in place.

Contractor may opt to pre-characterize through additional laboratory analysis or using the existing data (if still viable) and subject to facility approval and RIDOT approval, live load the excavated material for off-site reuse/disposal.

2.1.3 Soil Sampling and Characterization

Representative samples will be collected from the soils by the Contractor's Environmental Professional and placed in laboratory-provided containers, preserved as appropriate. Samples will be packed in ice and transported under chain-of-custody protocol to the laboratory for analysis.

The testing program for off-site reuse/disposal of excavated excess soils will be adequate to support the data requirements of the anticipated disposal facility, but typically includes the following testing parameters.

Analyte/Parameter	Test Method
Petroleum Hydrocarbons	EPA Method 8100M
Volatile Organic Compounds	EPA Method 8260
Semi-volatile Organic Compounds	EPA Method 8270
Polychlorinated Biphenyls	EPA Method 8081
Total RCRA Metals	EPA Method 6010 & 7471A
Flashpoint	EPA Method 1010M
Corrosivity (pH)	EPA Method 9045C
Cyanide/Sulfide Reactivity	EPA Methods SW-846 7.3.3.2/9014 and SW-846 7.3.4.2/376.2

The Contractor will provide RIDOT with copies of all analytical results and proof of acceptance by the receiving facility no less than 2- weeks before initiating excavation of soils that have been pre-characterized and will be live-loaded and transported to the selected receiving facility, and at least 1-week prior to loading and transportation of stockpiled soils to the selected receiving facility.

2.1.4 Soil Transportation

Soil to be removed off-site will be loaded onto trucks/trailers and covered. No soil will be transported on public roadways without being securely covered. Trucks/trailers will be brushed down to remove residual soils in a designated area prior to leaving the Site in accordance with the heavy equipment decontamination procedures described in Section 2.2.2 and Appendix D. The Contractor will take necessary actions to ensure soil leaving the Site will be dry enough not to generate water in the truck bed during transit.

Copies of the material shipping records associated with the disposal/recycling of the materials will be provided to the RIDOT Resident Engineer.

2.1.5 Site Restoration/Capping

At the completion of Site work, all exposed soils are required to be capped with the engineered controls as summarized below.

- **Asphalt pavement** – A minimum 4-inches of pavement (concrete or asphalt) underlain by six inches of clean base material.
- **Bioretention Basin**: Impermeable liner overlain by 12-inches of crushed stone, overlain by 4-inches of pea gravel, overlain by 24-inches of bioretention soil, overlain by mulch.
- **Relief Swale and Ancillary Disturbed Landscape Areas**: 4-inches of plantable soil and seed.

Caps to be installed within the detention basin and the swale are provided on the details sheets provided in the attached figures (refer to Appendix G)

Soil brought on-Site for use as capping material (i.e., borrow, subbase, loam, fill, etc.) must meet the criteria described below in Section 2.1.9. Installation of engineered caps will be observed and photo-documented by GZA. The Contractor will provide the RIDOT Resident Engineer and GZA no less than 48-hours' notice prior to the installation of the engineered caps.

All clean fill, including sub-grade material and loam from native sources, imported to the site must meet the RIDEM R-DEC. No soil will be brought on-site without RIDOT Resident Engineer and/or GZA's approval.

2.1.6 Imported Fill/Loam to be used as Capping Material

It will be the assigned responsibility of the Contractor to provide assurances (through quantitative laboratory testing) that off-site soil used for backfill, grading and/or landscaping does not contain contaminants at concentrations above the RIDEM Method R-DEC. Soil samples will be collected at the proposed source(s) for quantitative laboratory analysis. The Contractor's Environmental Professional will collect, analyze and provide soil test results to RIDOT's Resident Engineer.

Samples representative of the off-Site soil supply (collected as discrete grab samples or multi-aliquot composites from the source) will be required to be tested for the analyte groups described below.

Analyte	EPA Test Method
Total Petroleum Hydrocarbons	8100M
Volatile Organic Compounds	8260
Semi-Volatile Organic Compounds	8270
Priority Pollutant Metals (PP-13)	6010 & 7471A

The frequency of sampling and testing (for both topsoil and each sub-grade material, if required) will be:

- Full suite of analysis for up to 2,000 cubic yards; and
- Arsenic each 500 cubic yards of material.

Demonstration that the soil supply meets the R-DEC must be made prior to the delivery of the material to the Site. Imported fill, with the exception of quarry run aggregate materials (i.e., riprap, washed crushed stone, etc.) will be sampled prior to delivery and placement, regardless of the source of the material. Prior to the import of any imported fill (included quarry run aggregate materials) to the Site, the Contractor performing the work will be required to provide a certification from the source that the fill is from a clean virgin source.

At least 2 weeks prior to delivery of imported material to the Site, Contractor must provide results of analytical testing of imported material to the RIDOT Resident Engineer and GZA for review and approval. Import of unapproved material to the Site is at the risk of the Contractor. Laboratory samples of the imported soil will be collected by the Contractor's Environmental Professional, submitted to a qualified testing laboratory and analyzed for the parameters outlined above at no additional cost to the State. Resultant data will be compared to the RIDEM Method 1 R-DEC. Soils not meeting the RIDEM Method 1 criteria will be rejected for use at the Site. Laboratory testing results of the selected soil source will be provided to the RIDOT Resident Engineer to be included with the *Remedial Action Closure Report* to be completed by GZA and submitted to RIDEM

2.2 GROUNDWATER MANAGEMENT

Water generated from dewatering activities will be managed in accordance with applicable federal, state and city regulations.

Management of dewatered groundwater is outside the scope of this SMP and should be performed in accordance with the RIDOT-approved Groundwater Management Plan provide under separate cover.

2.3 BEST MANAGEMENT PRACTICES

During Site development, the Contractor will be responsible for limiting access to the Site during excavation and construction, and for the implementation of standard construction best management practices as appropriate, to reduce the likelihood of the release of impacted media from the Site.

Contractor will take measures to protect off-Site areas from the storm water run-off containing impacted soils; these controls include, but are not limited to, the establishment of siltation fences and staked hay bales in areas of the Site susceptible to erosion and minimizing storm water run-on to active work areas.

2.3.1 Dust Control

Work at the Site and stockpile staging area(s) must comply with applicable federal, state and local regulations, including Section 5 of the RIDEM Air Pollution Regulations (refer to Appendix E). During sitework/earthwork, dust suppression techniques must be initiated and maintained during periods when visible windblown dusts are generated at the Work Site or at the soil stockpile staging area. All reasonable precautions must be taken to prevent the excessive generation of dust during soil excavation, stockpiling, loading, trucking and other soil handling activities. If excessive dust generation occurs, Contractor shall mitigate the dust emissions through appropriate means, such as the application of water, or covering soil stockpiles with sheeting.

2.3.2 Decontamination

All non-disposable equipment used during the soil disturbance activities will be properly decontaminated as appropriate prior to removal from the Site by dry-brushing. All disposable equipment used during the soil disturbance activities will be properly containerized and disposed of following completion of the work. All vehicles utilized during the work shall be properly decontaminated as appropriate (e.g., remove visible soil from tires using dry brushing techniques) prior to leaving the Site. Refer to GZA's SOP No. 6.10 (Appendix D).

At the completion of work, workers should wash their hands with soap and water before leaving the Site. All workers safety boots are recommended to be brushed with a stiff bristle brush or similar instrument (not by hand) to remove residual soil. Disposable personal protective equipment (PPE) should be disposed of according to applicable regulations.

2.3.3 Unexpected Observations/Situation

In the event that unexpected observations or situations involving hazardous materials, hazardous wastes or similar conditions of environmental concern arise during Site work, all work activities will immediately stop. Workers will not attempt to handle the situation themselves, but will contact the RIDOT Representative for further direction.

2.3.4 OPERATING LOG

An Operating Log will be maintained by the Contractor and be readily available at the Site during the period of construction. Copies of the Operating Log will be provided to RIDOT at the completion of the project. A copy of the Operator's Log is presented as Appendix F.

3.0 HEALTH AND SAFETY GUIDELINES

The health and safety recommendations outlined below should be implemented while performing earthwork at the Site. The procedures are intended as a general guideline for basic, excavation and maintenance activities. The Contractor conducting the work is required to follow a project-specific health and safety plan developed for their specific activities and personnel in accordance with the OSHA requirements contained in 29 CFR Part 1910.120. A copy of the Site-Specific Health and Safety Plan prepared on behalf of the Contractor and signed by a Certified Industrial Hygienist will be provided to RIDOT prior to initiation of any field activities at the Site.

Based on the documented Site conditions, the potential routes of exposure to on-site excavation or utility installation workers include dermal contact (absorption), accidental ingestion of impacted soil and groundwater, or dust inhalation. Utilization of the appropriate personal protective equipment (PPE) and the general safety guidelines provided below will minimize the potential for worker exposure while performing construction on the Site.

3.1 PERSONAL PROTECTIVE EQUIPMENT (PPE)

In general, the level of protection that will be used by workers will be determined by the task that the person is performing; however, at a minimum Level D PPE will be worn at all times while performing excavation activities on the property. Level D PPE will, at a minimum, consist of the following PPE:

1. Steel-toe work boots;
2. Reflective/colored safety vests;
3. Work gloves;
4. Hard hat; and
5. Work clothing.

Workers are also required to wash their hands with soap and water prior to eating, drinking, smoking or leaving the site.

3.2 SITE OPERATING PROCEDURES/SAFETY GUIDELINES

Regardless of the level of PPE necessary to complete work at the Site, the following general health and safety guidelines should be followed during the performance of any excavation activities conducted at the Site. Adherence to these guidelines will reduce the potential for worker exposure to impacted media.

As noted above, the Contractor conducting the work is required to follow a health and safety plan developed for their specific activities and personnel in accordance with the OSHA requirements contained in 29 CFR Part 1910.120.

1. All work conducted onsite shall be coordinated through a designated RIDOT employee/Project Manager and/or agent responsible for the implementation of the requirements of this plan (including all health and safety procedures).
2. The location of all utilities in the vicinity of the excavation will be established prior to beginning work.
3. All spectators will remain outside the designated zone (established by the Contractor to the extent possible beyond the area of excavation).
4. A pre-work safety meeting should be conducted at the beginning of each day to discuss the health and safety procedures.
5. Practice contamination avoidance: never sit down or kneel in an excavation; never lay equipment on the ground; avoid obvious sources of contamination such as puddles; and avoid unnecessary contact with objects in an excavation.
6. Be alert to any unusual changes in your physical condition; never ignore warning signs. Notify the responsible RIDOT employee/Project Manager or their designee as to suspected exposures.
7. All equipment used in an excavation will be properly cleaned and maintained in good working order. Equipment will be inspected for signs of defect and/or contamination before use and prior to demobilization from the Property.
8. Eating, drinking, chewing gum and smoking are prohibited in active excavation areas;
9. The discovery of any condition that would suggest the existence of a situation more hazardous than anticipated shall result in the evacuation of site personnel from the excavation, the notification of the personnel listed in the table below (refer to Section 6.4), who will be responsible for the evaluation of the hazard and the level of required protection.

3.3 IN CASE OF SERIOUS EXPOSURE OR INJURY

In the event of serious chemical exposure or worker injury, the Resident Engineer will immediately be alerted. This person will follow the steps indicated below:

1. Summon appropriate emergency response agency by using the emergency phone numbers provided below. Convey the following information:

   a. Nature of emergency,
   b. Location of victim,
   c. Specific information about exposure or accident (gases, chemical, asphyxiation, *etc.*),
   d. Length of exposure, and
   e. Hazards which may be involved in rescue or treatment;

2. If taken to a hospital, notify the hospital of the following:

   a. Potential for hospital contamination,
   b. Any contaminated items and the nature of the contamination, and
   c. Estimated arrival time.

3.4 EMERGENCY PHONE NUMBERS

Emergency telephone numbers are included below. User is cautioned that this information should be checked and updated, if necessary.

Response Agency	**Phone Number**
Ambulance	911
Police	911
Fire	911
Mary Bertrand/RIDOT	(401) 222-2053 Ext. 4291
Resident Engineer/RIDOT	TBD
RIDEM/Office of Compliance & Inspection/Emergency Response Program	(401) 222-1360 or (401) 222-3070 (non-business hours)
USEPA/Hazardous Materials Spills	(800) 424-8802
Poison Control Center	(800) 222-1222
Dig Safe (Utility Clearance)	1-888-DIGSAFE
Hospital	
Rhode Island Hospital 593 Eddy Street Providence, RI 02903	(401) 444-4000

In the event of an emergency related to a release of hazardous materials or oil the following steps will be taken:

1. **In the event of a spill/release** - extinguish all sources of ignition and isolate/block/cover all potential environmental receptors including drains, sumps, soil, etc., and determine if the spill/release is incidental[2] or non-incidental[3].

[2] **"Incidental"** spill/release is defined as a spill/release which meets ALL of the following criteria: 1) **DOES NOT** reach the environment directly (e.g., to a ground surface other than concrete or asphalt surfaces in contained areas of the facility) or indirectly (e.g., sump, sink, floor drain); 2) a small quantity (less than 25 gallons and/or below the RQ) of material is spilled/released which **DOES NOT** pose potential or actual health hazards; 3) personnel in the immediate area are familiar with the hazards associated with the spilled material and can readily absorb, neutralize, or otherwise control the spilled material at the time of release; and 4) containment/clean-up does not pose or create potential or actual health and safety hazards (e.g. fire, explosion, chemical exposure, etc.).

[3] **"Non-incidental"** spills generally include one or more of the following: 1) greater than 25 gallons of spilled/released Oil and/or Hazardous Materials that **DOES** reach the environment (i.e., discharges to a floor drain, discharges to a storm drain, enters a water body, discharges to the ground surface outside the facility containment

2. **Non-incidental spills/releases** - Stop/contain the spill/release at the source without endangering yourself and others.

   a. First isolate all potential environmental receptors including drains, sumps, soil, etc.
   b. Try to contain spilled material.
   c. First notify the RIDOT Resident Engineer, then Project Manager _____. at (401) 222- 2053, ext. _____ . RIDOT will conduct necessary reporting to outside agencies if:

      1. A spill/release has entered the environment - (RIDEM).
      2. A spill/release migrates off the property and/or results in personal injury - (Fire and Police Departments).
      3. A spill/release enters a stormwater drain system - (Fire and Police Departments and the National Response Center (NRC)).
      4. A spill/release causes a sheen or discoloration of navigable waters or adjoining shorelines - (NRC).

   d. RIDOT will conduct follow-up written notifications to applicable agencies.
   e. RIDOT will ensure proper follow-up, corrective action and planning to prevent recurrence.

3. **Incidental spills/releases** - Immediately report the spill/release to RIDOT and conduct the following activities.

   a. Isolate all potential environmental receptors including drains, sumps, soil, etc.
   b. Recover material spilled and clean-up spill area, decontaminate tools and equipment, and collect all rinseate and debris.

4. RIDOT will ensure proper waste disposal, follow-up, corrective action and planning to prevent recurrence.

4.0 REPORTING

Subsequent to completion of the activities described herein, a *Remedial Action Closure Report* will be prepared by GZA in accordance with Rule 6.09 of the Remediation Regulations and submitted to RIDEM. The report will summarize field activities and document the completion of the work described herein. The report will include the following receipts/documentation to be provided by the Contractor, including, but not limited to:

- Material Shipping Records for the off-site removal of excess excavated soil;
- Facility weight slips/receipts for off-site reuse/disposal of excess excavated soil;
- Volume receipts and analytical test data for imported fill/loam; and
- As-built drawing showing final surfaces and engineered barriers

The report will also include photographic documentation (provided by GZA) demonstrating that the engineered caps were installed in accordance with this SMP.

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areas, etc.); 2) major spills/releases (e.g., equal to or above the reportable quantity (RQ) that cannot be readily absorbed, neutralize, or otherwise controlled at the time of release; 3) any quantity of spilled/released Oil and Hazardous Materials which personnel **are not familiar with or are unaware** of the potential or actual health and safety hazards; and 4) an injury (actual or suspected) has occurred as a result of the spill/release.

5.0 LIMITATIONS

GZA's work was performed in accordance with generally accepted practices of other consultants undertaking similar studies at the same time and in the same geographical area, and GZA observed that degree of care and skill generally exercised by other consultants under similar circumstances and conditions. This Soil Management Plan (SMP) is subject to the following specific limitations.

This SMP was designed to provide an appropriate level of remediation given our current understanding of site conditions and proposed development objectives for the property. If development plans or property use changes significantly, or if additional data is obtained during the course of development, GZA reserves the right to modify any or all of the criteria specified in this plan. This study and report have been prepared on behalf of and for the exclusive use of Green International Affiliates, Inc. This SMP shall not, in whole or in part, be disseminated or conveyed to any other party, nor used by any other party in whole or in part, without the prior written consent of GZA.

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TABLES

TABLE 1
SOIL SAMPLE RESULTS

RIDOT Taunton Avenue Improvement Project
East Providence, Rhode Island

				Sample ID:	Comp-1	Comp-2	S-1
				Sample Depth			
				Sample Date	7/1/2019	7/1/2019	6/20/2019
	R-DEC	I/C-DEC	LF Criteria	Units			
Volatile Organic Compounds (VOCs)							
Acetone	7800	10000		mg/kg dry	**0.307**	**0.571**	<0.0379
All Other Targeted VOCS					ND	ND	ND
Total VOCS			10	mg/kg	**0.3**	**0.6**	ND
Semi-Volatile Organic Compounds (SVOCs)							
Benzo(a)pyrene	0.4	0.8	4	mg/kg	**0.734**	<0.368	**0.442**
Benzo(b)fluoranthene	0.9	7.8		mg/kg	**0.928**	<0.734	**0.466**
Chrysene	0.4	780		mg/kg	**0.796**	<0.368	**0.428**
Fluoranthene	20	10000		mg/kg	**1.45**	<0.368	**1.02**
Indeno(1,2,3-cd)Pyrene	0.9	7.8		mg/kg	**0.624**	<0.734	<0.392
Phenanthrene	40	10000		mg/kg	<0.595	<0.734	**0.525**
Pyrene	13	10000		mg/kg	**1.13**	<0.734	**0.63**
All Other Targeted SVOCS					ND	ND	ND
Total SVOCS			100	mg/kg	**5.66**	ND	**3.51**
Total Petroleum Hydrocarbons (TPH)							
Total Petroleum Hydrocarbons	500	2500		mg/kg	**694**	**784**	**51.9**
Total Metals							
Arsenic	7	7	19	mg/kg	**15.6**	**17.2**	**4.12**
Barium	5500	10000	10000	mg/kg	**142**	**235**	**30.1**
Cadmium	39	1000	1000	mg/kg	**6.66**	**1.61**	<0.45
Chromium	1400	10000	10000	mg/kg	**87.1**	**89.1**	**7.58**
Lead	150	500	2000	mg/kg	**571**	**269**	**71.4**
Mercury	23	610	610	mg/kg	**0.381**	**0.191**	**0.093**
Selenium	390	10000	10000	mg/kg	<12.6	<7.34	<4.55
Silver	200	10000	10000	mg/kg	<1.26	<1.47	<0.45
Toxicity Characteristic Leaching Procedure (TCLP)							
TCLP Lead	-	-	5	mg/L	**0.16**	<0.05	-
Polychlorinated Biphenyls (PCBs)							
Aroclor 1016				mg/kg	<0.1	<0.1	<0.06
Aroclor 1221				mg/kg	<0.1	<0.1	<0.06
Aroclor 1232				mg/kg	<0.1	<0.1	<0.06
Aroclor 1242				mg/kg	**0.4**	<0.1	<0.06
Aroclor 1248				mg/kg	<0.1	<0.1	<0.06
Aroclor 1254				mg/kg	**0.7**	**0.2**	<0.06
Aroclor 1260				mg/kg	**0.2**	<0.1	<0.06
Aroclor 1262				mg/kg	<0.1	<0.1	<0.06
Aroclor 1268				mg/kg	<0.1	<0.1	<0.06
Total PCBs	10	10	10	mg/kg	**1.3**	**0.2**	ND
Classical Chemistry							
Corrosivity (pH)			2.0< & <12	S.U.	**6.69**	**6.67**	**7.45**
Flashpoint			>140°	°F	>200	>200	>200
Reactive Cyanide			non-reactive	mg/kg	<2	<2	<2
Reactive Sulfide			non-reactive	mg/kg	<2	<2	<2

Notes:

Bold - concentration detected above the method reporting limit (RL)
Red results indicate concentration detected exceeds the Residential Direct Exposure Criteria
Highlighted results indicate concentration detected exceeds the Industrial/Commercial Direct Exposure Criteria
ND - Not detected

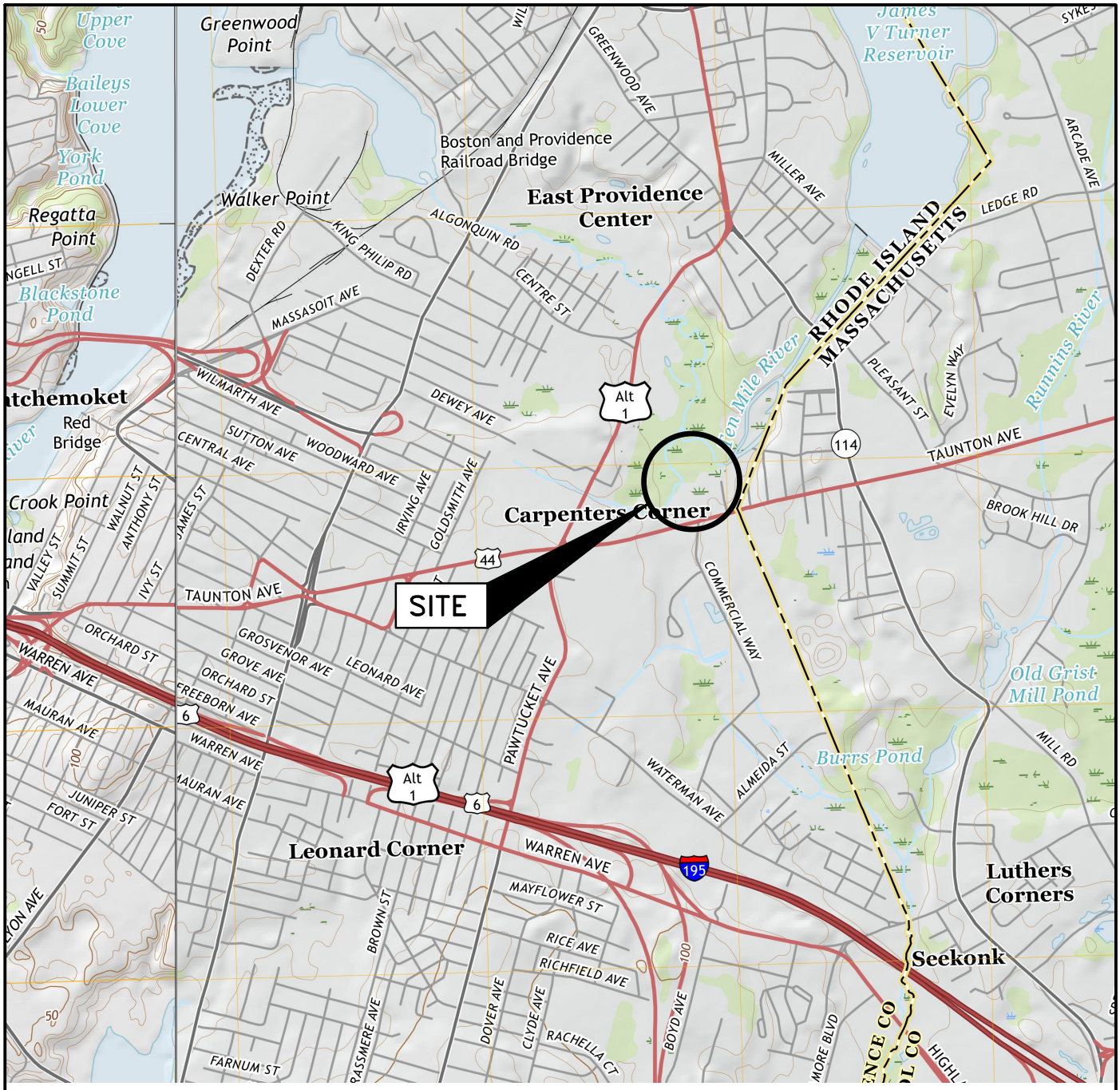
TABLE 2
GROUNDWATER SAMPLE DATA

RIDOT Taunton Avenue Improvement Project
East Providence, Rhode Island

	Sample ID **Sample Date** **GB Groundwater Obj.**	TP-1 7/2/2019	TP-3 7/2/2019	SS-3 7/2/2019	SS-13 7/2/2019
VOCs (mg/L)				-	
Acetone	NE	<0.01	<0.01	<0.01	**0.0143**
Naphthalene	NE	**0.0014**	<0.001	<0.001	<0.001
All other targeted VOCs		ND	ND	ND	ND
TPH (mg/L)	NE	<0.19	**1.19**	**3.99**	**0.31**

Notes:
1. ND - Not detected.
2. NE - RIDEM has not promulgated a GB Groundwater Objective for this parameter

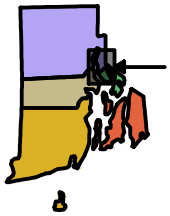
FIGURES



0 1000' 2000' 4000'

SCALE IN FEET 1" = 2000'

RHODE ISLAND



QUADRANGLE LOCATION

SOURCE:

BASE MAP FROM THE FOLLOWING USGS QUADRANGLE MAP: EAST PROVIDENCE AND PROVIDENCE, RHODE ISLAND (2018)

DIGITAL TOPOGRAPHIC MAPS PROVIDED BY USGSSTORE.GOV.

CONTOUR ELEVATIONS REFERENCE NAVD 88,

CONTOURS ARE SHOWN IN FEET AT 10' INTERVALS

N W E S

UNLESS SPECIFICALLY STATED BY WRITTEN AGREEMENT, THIS DRAWING IS THE SOLE PROPERTY OF GZA GEOENVIRONMENTAL, INC. (GZA). THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR USE BY GZA'S CLIENT OR THE CLIENT'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY THE CLIENT OR OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA.

RIDOT TAUNTON AVENUE IMPROVEMENTS

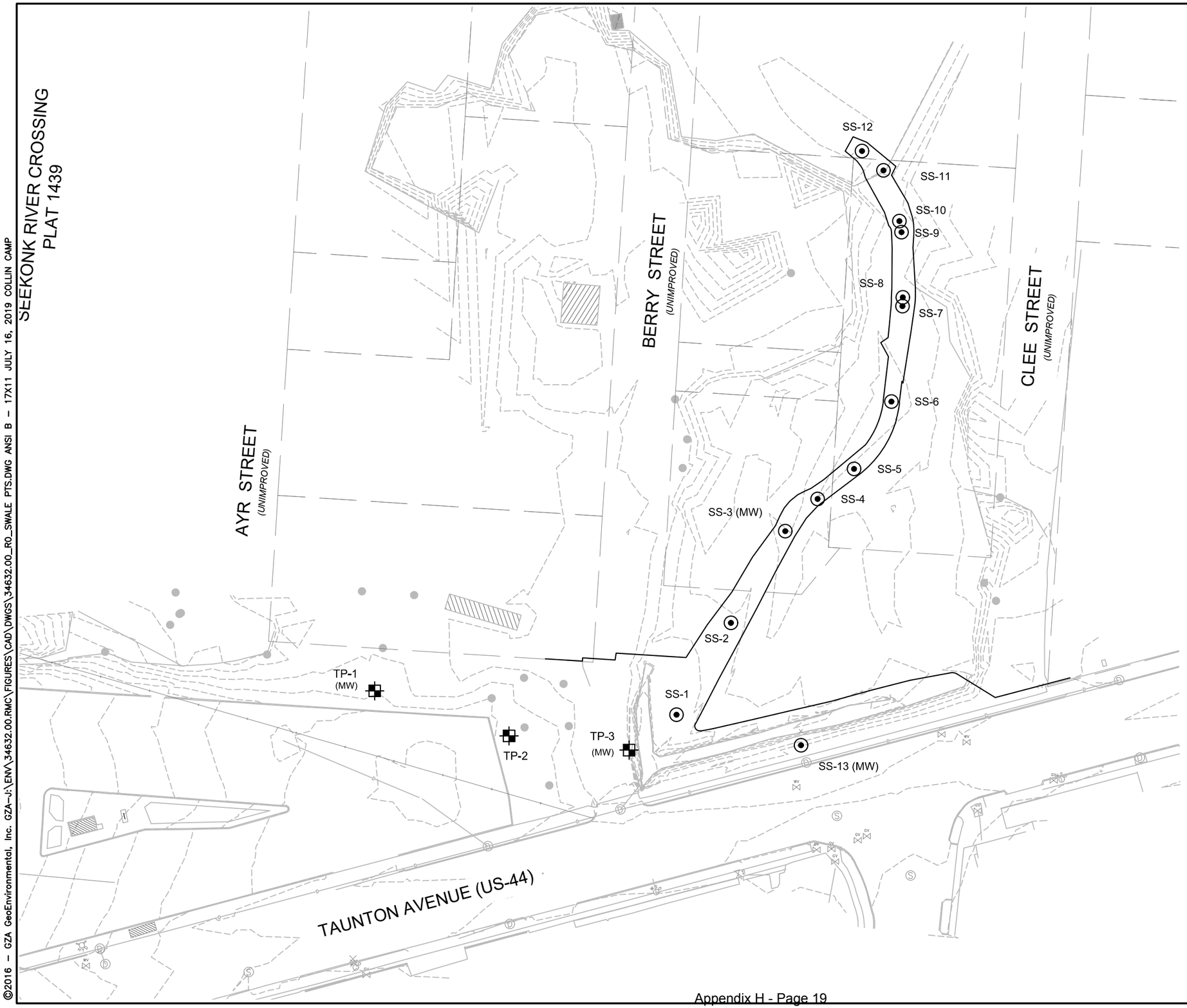
PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com

PREPARED FOR: RIDOT

LOCUS

PROJ MGR: RMC	REVIEWED BY: EB	CHECKED BY: MEA	FIGURE 1
DESIGNED BY: EB	DRAWN BY: CMC	SCALE: AS NOTED	
DATE: JULY, 2019	PROJECT NO. 34632.00	REVISION NO.	SHEET NO. 1 of 2

© 2016 – GZA GeoEnvironmental, Inc. GZA–J:\ENV\34632.00.RMC\FIGURES\CAD\DWGS\34632.00_R0_SWALE PTS.DWG 8.5X11–QUAD JUNE 12, 2014 COLLIN CAMP



REFERENCE NOTES:

1. BASE MAP DEVELOPED FROM ELECTRONIC DRAWING FILE 16062_SURVEYBASEPLAN.DWG. PREPARED BY GREEN INTERNATIONAL AFFILIATES AND TRANSMITTED TO GZA ON JUNE 28,2019.
2. THE LOCATION OF THE EXPLORATIONS WERE APPROXIMATELY DETERMINED USING A LEICA ZEN020 HANDHELD & AS-12 ANTENNA (MAST MOUNTED) WITH RTK CORRECTION ACCURACY OF 1 CM HORIZONTAL & 2 CM VERTICAL BY GZA PERSONNEL DURING A SITE VISIT ON JUNE 20, 2019.
3. TP-1 AND TP-2 COMPRISE COMPOSITE SOIL SAMPLE "S-1" COLLECTED JUNE 20, 2019.
4. SS-1 THROUGH SS-6 COMPRISE SOIL SAMPLE "COMP 1" AND SS-7 THROUGH SS-12 COMPRISE SOIL SAMPLE "COMP 2" BOTH COLLECTED JULY 1, 2019.

LEGEND:

TP-1 — APPROXIMATE LOCATION OF TEST PITS EXCAVATED BY HOFFMAN ENVIRONMENTAL SERVICES AND OBSERVED BY GZA ON JUNE 20, 2019. (SEE NOTE 3)

SS-1 — APPROXIMATE LOCATION OF SHALLOW HAND AUGURED SOIL BORINGS EXCAVATED BY GZA ON JULY 1, 2019. (SEE NOTE 4)

(MW) — INDICATES TEMPORARY GROUNDWATER MONITORING WELLS INSTALLED BY GZA

N W E S

0 25' 50' 100'
SCALE IN FEET

NO.	ISSUE/DESCRIPTION	BY	DATE

UNLESS SPECIFICALLY STATED BY WRITTEN AGREEMENT, THIS DRAWING IS THE SOLE PROPERTY OF GZA GEOENVIRONMENTAL, INC. (GZA). THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR USE BY GZA'S CLIENT OR THE CLIENT'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY THE CLIENT OR OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA.

RIDOT TAUNTON AVENUE IMPROVEMENTS
EAST PROVIDENCE, RI

EXPLORATION LOCATION PLAN

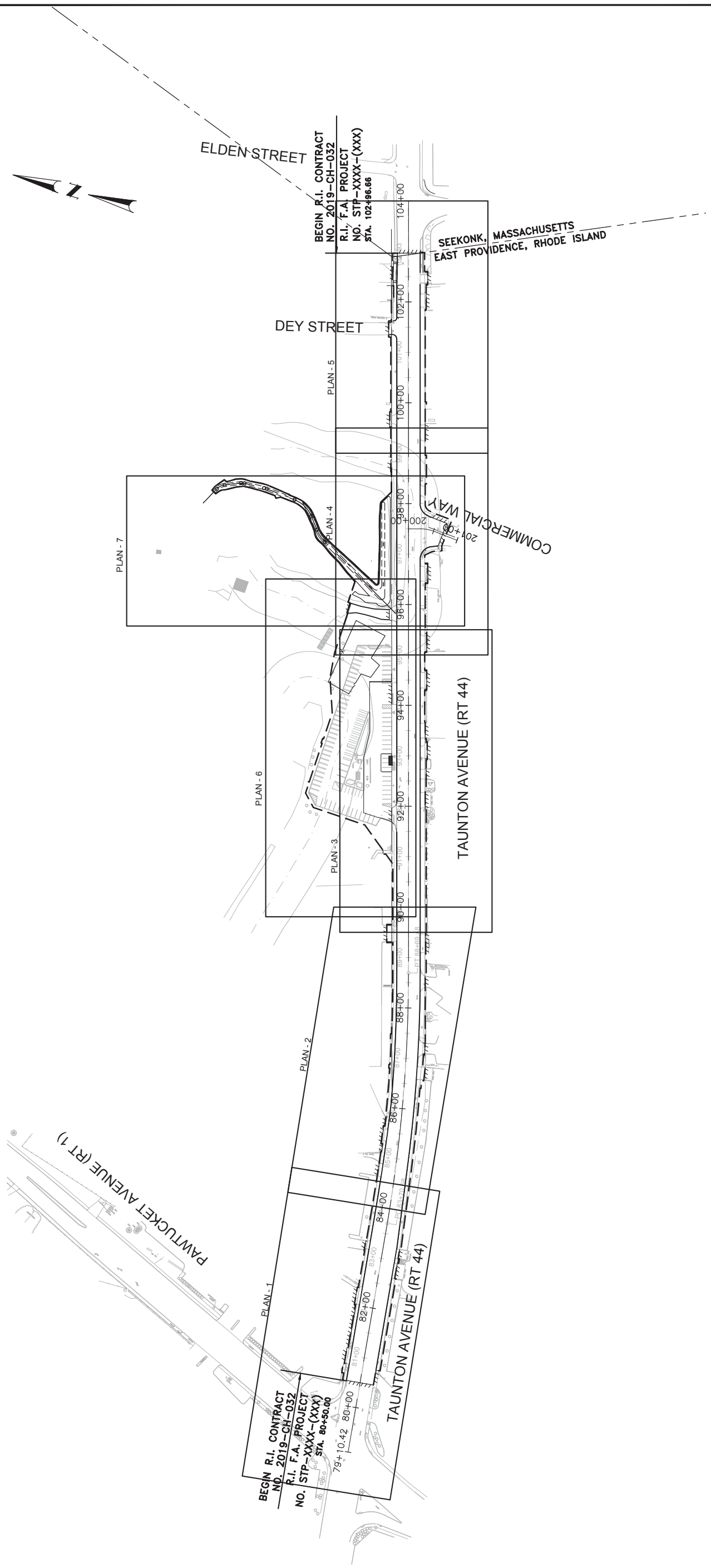
PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com

PREPARED FOR: RIDOT

PROJ MGR: RMC	REVIEWED BY: EB	CHECKED BY: MEA	FIGURE 2
DESIGNED BY: EB	DRAWN BY: CMC	SCALE: AS NOTED	
DATE: JULY, 2019	PROJECT NO. 34632.00	REVISION NO.	SHEET NO. 2 OF 2

©2016 – GZA GeoEnvironmental, Inc. GZA–J:\ENV\34632.00.RMC\FIGURES\CAD\DWGS\34632.00_R0_SWALE PTS.DWG ANSI B – 17X11 JULY 16, 2019 COLLIN CAMP

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI		2019	2	46



RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

IMPROVEMENTS TO
TAUNTON AVENUE

EAST PROVIDENCE, RHODE ISLAND

KEY PLAN

REVISIONS		
NO.	DATE	BY

GREEN INTERNATIONAL AFFILIATES, INC.
Civil and Structural Engineers

CHECKED BY _____ DATE _____ SCALE 1"=20'

0076R_V1_002_KEYPLAN

APPENDIX A

LIMITATIONS

GEOHYDROLOGICAL LIMITATIONS

Use of Report

1. GZA GeoEnvironmental, Inc. (GZA) prepared this report on behalf of, and for the exclusive use of our Client for the stated purpose(s) and location(s) identified in the Proposal for Services and/or Report. Use of this report, in whole or in part, at other locations, or for other purposes, may lead to inappropriate conclusions; and we do not accept any responsibility for the consequences of such use(s). Further, reliance by any party not expressly identified in the agreement, for any use, without our prior written permission, shall be at that party's sole risk, and without any liability to GZA.

Standard of Care

2. GZA's findings and conclusions are based on the work conducted as part of the Scope of Services set forth in the Proposal for Services and/or Report and reflect our professional judgment. These findings and conclusions must be considered not as scientific or engineering certainties, but rather as our professional opinions concerning the limited data gathered during the course of our work. Conditions other than described in this report may be found at the subject location(s).

3. GZA's services were performed using the degree of skill and care ordinarily exercised by qualified professionals performing the same type of services, at the same time, under similar conditions, at the same or a similar property. No warranty, expressed or implied, is made. Specifically, GZA does not and cannot represent that the Site contains no hazardous material, oil, or other latent condition beyond that observed by GZA during its study. Additionally, GZA makes no warranty that any response action or recommended action will achieve all of its objectives or that the findings of this study will be upheld by a local, state or federal agency.

4. In conducting our work, GZA relied upon certain information made available by public agencies, Client and/or others. GZA did not attempt to independently verify the accuracy or completeness of that information. Inconsistencies in this information which we have noted, if any, are discussed in the Report.

Subsurface Conditions

5. The generalized soil profile(s) provided in our Report are based on widely-spaced subsurface explorations and are intended only to convey trends in subsurface conditions. The boundaries between strata are approximate and idealized, and were based on our assessment of subsurface conditions. The composition of strata, and the transitions between strata, may be more variable and more complex than indicated. For more specific information on soil conditions at a specific location refer to the exploration logs. The nature and extent of variations between these explorations may not become evident until further exploration or construction. If variations or other latent conditions then become evident, it will be necessary to reevaluate the conclusions and recommendations of this report.

6. Water level readings have been made, as described in this Report, in and monitoring wells at the specified times and under the stated conditions. These data have been reviewed and interpretations have been made in this report. Fluctuations in the level of the groundwater however occur due to temporal or spatial variations in areal recharge rates, soil heterogeneities, the presence

of subsurface utilities, and/or natural or artificially induced perturbations. The observed water table may be other than indicated in the Report.

Compliance with Codes and Regulations

7. We used reasonable care in identifying and interpreting applicable codes and regulations necessary to execute our scope of work. These codes and regulations are subject to various, and possibly contradictory, interpretations. Interpretations and compliance with codes and regulations by other parties is beyond our control.

Screening and Analytical Testing

8. GZA collected environmental samples at the locations identified in the Report. These samples were analyzed for the specific parameters identified in the report. Additional constituents, for which analyses were not conducted, may be present in soil, groundwater, surface water, sediment and/or air. Future Site activities and uses may result in a requirement for additional testing.

9. Our interpretation of field screening and laboratory data is presented in the Report. Unless otherwise noted, we relied upon the laboratory's QA/QC program to validate these data.

10. Variations in the types and concentrations of contaminants observed at a given location or time may occur due to release mechanisms, disposal practices, changes in flow paths, and/or the influence of various physical, chemical, biological or radiological processes. Subsequently observed concentrations may be other than indicated in the Report.

Interpretation of Data

11. Our opinions are based on available information as described in the Report, and on our professional judgment. Additional observations made over time, and/or space, may not support the opinions provided in the Report.

Additional Information

12. In the event that the Client or others authorized to use this report obtain additional information on environmental or hazardous waste issues at the Site not contained in this report, such information shall be brought to GZA's attention forthwith. GZA will evaluate such information and, on the basis of this evaluation, may modify the conclusions stated in this report.

Additional Services

13. GZA recommends that we be retained to provide services during any future investigations, design, implementation activities, construction, and/or property development/ redevelopment at the Site. This will allow us the opportunity to: i) observe conditions and compliance with our design concepts and opinions; ii) allow for changes in the event that conditions are other than anticipated; iii) provide modifications to our design; and iv) assess the consequences of changes in technologies

APPENDIX B

TEST PIT LOGS

TEST PIT LOG

GZA GeoEnvironmental, Inc. *Engineers and Scientists*	**RIDOT** **RIDOT Taunton Avenue Improvement Project** **Taunton Avenue** **East Providence, Rhode Island**	**EXPLORATION NO.:** TP-1 **SHEET:** 1 of 1 **PROJECT NO:** 34632 **REVIEWED BY:** Tony Urbano
Logged By: Erik Beloff **Contractor:** Hoffman Environmental Services **Foreman:** Kevin Lacaillate	**Boring Location:** See Plan **Ground Surface Elev. (ft.):** **Date Start:** 6/20/2019 **Date Finish:** 6/20/2019	**H. Datum:** **V. Datum:**
Equipment: Caterpillar **Model:** 303.5 E **Reach (ft.):** **Capacity (cu.yd.):**	**Weather:** Rainy 60's **Time Start:** 09:30 **Time Finish:** 10:00	

Groundwater Depth (ft.)

Date	Time	Depth (ft.)	Symbol
6/20/2019		3.5	▽ ▼ ▽

Depth (ft)	Stratum Description (Modified Burmister Classification)	Elev. (ft.)	Excavation Effort	Boulder Count Qty./Class	Remark
	Grass/ Root				
1	Brown, fine to medium SAND and SILT, trace Gravel, trace glass, brick		E		
2	Light brown/ orange, fine to medium SAND, trace Gravel, trace cobbles		E	3A	
3			E	1A	1
4	▼ Brown/ black, fine to medium SAND, some Gravel, little Silt, trace cobble, ash, C/O debris, glass, plastic, wood, brick		E	2A, 1B	2
5			M	2A	
6					3
	End of exploration at 6 feet.			3A, 1B	
7					
8					
9					
10					
11					
12					
13					
14					
15					

Test Pit Plan: **North**

ft. ____ ft.

Volume = _____ cu.yd.

LEGEND: ▼ Observed Water Level

Proportions Used:

Trace (Tr)	0-10%
Little (Li)	10-20%
Some (So)	20-35%
And	35-50%

Excavation Effort:

Easy	E
Moderate	M
Difficult	D

Boulder Size Range Designation:

Diameter	Letter Designation
6 to 16 in.	A
16 to 36 in.	B
> 36 in.	C

REMARKS

1 - Composite soil sample "S-1" combined TP-1 and TP-2, 0-4' Bgs.
2 - Water rapidly entering excavation at 4 feet.
3 - 2" temporary monitoring well installed ±6' bgs. 5' of pre-packed screen 1' of riser.

See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Exploration No.: TP-1

GZA TEMPLATE TEST PIT; 8/7/2019; 9:14:44 AM

TEST PIT LOG

GZA GeoEnvironmental, Inc.
Engineers and Scientists

RIDOT
RIDOT Taunton Avenue Improvement Project
Taunton Avenue
East Providence, Rhode Island

EXPLORATION NO.: TP-2
SHEET: 1 of 1
PROJECT NO: 34632
REVIEWED BY: Tony Urbano

Logged By: Erik Beloff
Contractor: Hoffman Environmental Services
Foreman: Kevin Lacaillate

Boring Location: See Plan
Ground Surface Elev. (ft.):
Date Start: 6/20/2019
Date Finish: 6/20/2019

H. Datum:
V. Datum:

Equipment: Caterpillar
Model: 303.5 E
Reach (ft.):
Capacity (cu.yd.):

Weather: Rainy 60's
Time Start: 08:45
Time Finish: 09:15

Groundwater Depth (ft.)			
Date	Time	Depth (ft.)	Symbol
6/20/2019	30 Min	6	▽ ▼ ▽

Depth (ft)	Stratum Description (Modified Burmister Classification)	Elev. (ft.)	Excavation Effort	Boulder Count Qty./Class	Remark
	Grass/ root, Brown, fine to medium SAND and SILT, little Gravel				
1	Black fine to medium SAND and ASH changing to brown fine to medium SAND, some Gravel, trace Silt, trace (-) brick, glass, plastic		E		
2			E	2A	
3			E	1A	
4			E	3A	
5	Gray fine to medium SAND, some Silt, little Gravel, organic odor, trace (-) glass, brick		E		1
6 ▼			E	2A	2
7	Gray fine to medium SAND and SILT, some Gravel, trace (-) brick, glass		E		
8			E	1A	
9	End of exploration at 8.5 feet.				
10					
11					
12					
13					
14					
15					

Test Pit Plan: **North**

ft.

ft.

Volume = _____ cu.yd.

LEGEND:
▼ Observed Water Level

Proportions Used:
Trace (Tr) 0-10%
Little (Li) 10-20%
Some (So) 20-35%
And 35-50%

Excavation Effort:
Easy E
Moderate M
Difficult D

Boulder Size Range Designation:

Diameter	Letter Designation
6 to 16 in.	A
16 to 36 in.	B
> 36 in.	C

REMARKS

1 - Composite soil sample "S-1" combined for TP-1 and TP-2, 0-4' bgs.
2 - Possibly unstabilized water level.

See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Exploration No.: TP-2

GZA TEMPLATE TEST PIT; 8/7/2019; 9:14:44 AM

TEST PIT LOG

GZA GeoEnvironmental, Inc. *Engineers and Scientists*	**RIDOT** **RIDOT Taunton Avenue Improvement Project** **Taunton Avenue** **East Providence, Rhode Island**	**EXPLORATION NO.:** TP-3 **SHEET:** 1 of 1 **PROJECT NO:** 34632 **REVIEWED BY:** Tony Urbano
Logged By: Erik Beloff **Contractor:** Hoffman Environmental Services **Foreman:** Kevin Lacaillate	**Boring Location:** See Plan **Ground Surface Elev. (ft.):** **Date Start:** 6/20/2019 **Date Finish:** 6/20/2019	**H. Datum:** **V. Datum:**
Equipment: Caterpillar **Model:** 303.5 E **Reach (ft.):** **Capacity (cu.yd.):**	**Weather:** Rainy 60's **Time Start:** 10:30 **Time Finish:** 11:00	

Groundwater Depth (ft.)

Date	Time	Depth (ft.)	Symbol
6/20/2019		3	▽ ▼ ▽

Depth (ft)	Stratum Description (Modified Burmister Classification)	Elev. (ft.)	Excavation Effort	Boulder Count Qty./Class	Remark
1	Dark brown, fine to medium SAND, crushed Asphalt, concrete, brick, ash, plastic, glass		E	1A	
2			E	3A	
3	▼		M	2A	
4			M	2A	
5	End of exploration at 5 feet.		M	1A	1
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

Test Pit Plan: **North**

ft.

ft.

Volume = _____ cu.yd.

LEGEND: ▼ Observed Water Level

Proportions Used:

Trace (Tr)	0-10%
Little (Li)	10-20%
Some (So)	20-35%
And	35-50%

Excavation Effort:

Easy	E
Moderate	M
Difficult	D

Boulder Size Range Designation:

Diameter	Letter Designation
6 to 16 in.	A
16 to 36 in.	B
> 36 in.	C

REMARKS

1 - 2" temporary monitoring well installed 5' bgs. 5' of pre-packed screen 0-5' bgs, 2' of PVC-stickup.

See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Exploration No.: TP-3

GZA TEMPLATE TEST PIT; 8/7/2019; 9:14:45 AM

APPENDIX C

LABORATORY REPORTS

CERTIFICATE OF ANALYSIS

Mike Clark
GZA GeoEnvironmental, Inc.
188 Valley Street
Providence, RI 02909

RE: RIDOT - Taunton Avenue (03.0034632.00)
ESS Laboratory Work Order Number: 19F0691

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED
By ESS Laboratory at 5:05 pm, Jun 27, 2019

Analytical Summary
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue

ESS Laboratory Work Order: 19F0691

SAMPLE RECEIPT

The following samples were received on June 20, 2019 for the analyses specified on the enclosed Chain of Custody Record.

Low Level VOA vials were frozen by ESS Laboratory on June 20, 2019 at 15:13.

Lab Number	Sample Name	Matrix	Analysis
19F0691-01	S-1	Soil	1010, 6010C, 7.3.3.2, 7.3.4.1, 7471B, 8082A, 8100M, 8260B Low, 8270D, 9045, 9050A

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue

ESS Laboratory Work Order: 19F0691

PROJECT NARRATIVE

5035/8260B Volatile Organic Compounds / Low Level

CF92443-BSD1 **Blank Spike recovery is above upper control limit (B+).**
Acetone (136% @ 70-130%)

CF92443-BSD1 **Relative percent difference for duplicate is outside of criteria (D+).**
Acetone (29% @ 25%)

8270D Semi-Volatile Organic Compounds

C9F0340-CCV1 **Calibration required quadratic regression (Q).**
2,4-Dinitrophenol (85% @ 80-120%), 4,6-Dinitro-2-Methylphenol (93% @ 80-120%), Benzoic Acid (104% @ 80-120%), Pentachlorophenol (104% @ 80-120%)

C9F0340-CCV1 **Continuing Calibration %Diff/Drift is below control limit (CD-).**
Azobenzene (23% @ 20%), Benzo(g,h,i)perylene (27% @ 20%), Hexachlorocyclopentadiene (44% @ 20%), Isophorone (23% @ 20%), N-Nitrosodimethylamine (22% @ 20%), Pyridine (21% @ 20%)

C9F0368-CCV1 **Calibration required quadratic regression (Q).**
2,4-Dinitrophenol (87% @ 80-120%), 4,6-Dinitro-2-Methylphenol (95% @ 80-120%), Benzoic Acid (76% @ 80-120%)

C9F0368-CCV1 **Continuing Calibration %Diff/Drift is above control limit (CD+).**
Di-n-butylphthalate (21% @ 20%)

C9F0368-CCV1 **Continuing Calibration %Diff/Drift is below control limit (CD-).**
Benzoic Acid (24% @ 20%)

No other observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue

ESS Laboratory Work Order: 19F0691

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
Client Sample ID: S-1
Date Sampled: 06/20/19 11:00
Percent Solids: 86

ESS Laboratory Work Order: 19F0691
ESS Laboratory Sample ID: 19F0691-01
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**4.12** (2.27)		6010C		1	NAR	06/23/19 18:27	2.57	100	CF92139
Barium	**30.1** (2.27)		6010C		1	NAR	06/23/19 18:27	2.57	100	CF92139
Cadmium	ND (0.45)		6010C		1	NAR	06/23/19 18:27	2.57	100	CF92139
Chromium	**7.58** (0.91)		6010C		1	NAR	06/23/19 18:27	2.57	100	CF92139
Lead	**71.4** (4.55)		6010C		1	NAR	06/23/19 18:27	2.57	100	CF92139
Mercury	**0.093** (0.027)		7471B		1	MKS	06/24/19 9:25	0.87	40	CF92140
Selenium	ND (4.55)		6010C		1	NAR	06/23/19 18:27	2.57	100	CF92139
Silver	ND (0.45)		6010C		1	NAR	06/23/19 18:27	2.57	100	CF92139

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
Client Sample ID: S-1
Date Sampled: 06/20/19 11:00
Percent Solids: 86
Initial Volume: 7.7
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 19F0691
ESS Laboratory Sample ID: 19F0691-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
1,1,1-Trichloroethane	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
1,1,2,2-Tetrachloroethane	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
1,1,2-Trichloroethane	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
1,1-Dichloroethane	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
1,1-Dichloroethene	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
1,1-Dichloropropene	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
1,2,3-Trichlorobenzene	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
1,2,3-Trichloropropane	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
1,2,4-Trichlorobenzene	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
1,2,4-Trimethylbenzene	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
1,2-Dibromo-3-Chloropropane	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
1,2-Dibromoethane	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
1,2-Dichlorobenzene	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
1,2-Dichloroethane	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
1,2-Dichloropropane	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
1,3,5-Trimethylbenzene	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
1,3-Dichlorobenzene	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
1,3-Dichloropropane	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
1,4-Dichlorobenzene	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
1,4-Dioxane	ND (0.0759)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
1-Chlorohexane	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
2,2-Dichloropropane	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
2-Butanone	ND (0.0379)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
2-Chlorotoluene	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
2-Hexanone	ND (0.0379)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
4-Chlorotoluene	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
4-Isopropyltoluene	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
4-Methyl-2-Pentanone	ND (0.0379)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
Acetone	ND (0.0379)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
Benzene	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
Bromobenzene	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
Client Sample ID: S-1
Date Sampled: 06/20/19 11:00
Percent Solids: 86
Initial Volume: 7.7
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 19F0691
ESS Laboratory Sample ID: 19F0691-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
Bromodichloromethane	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
Bromoform	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
Bromomethane	ND (0.0076)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
Carbon Disulfide	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
Carbon Tetrachloride	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
Chlorobenzene	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
Chloroethane	ND (0.0076)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
Chloroform	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
Chloromethane	ND (0.0076)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
cis-1,2-Dichloroethene	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
cis-1,3-Dichloropropene	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
Dibromochloromethane	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
Dibromomethane	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
Dichlorodifluoromethane	ND (0.0076)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
Diethyl Ether	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
Di-isopropyl ether	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
Ethyl tertiary-butyl ether	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
Ethylbenzene	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
Hexachlorobutadiene	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
Isopropylbenzene	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
Methyl tert-Butyl Ether	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
Methylene Chloride	ND (0.0190)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
Naphthalene	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
n-Butylbenzene	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
n-Propylbenzene	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
sec-Butylbenzene	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
Styrene	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
tert-Butylbenzene	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
Tertiary-amyl methyl ether	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
Tetrachloroethene	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
Tetrahydrofuran	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
Client Sample ID: S-1
Date Sampled: 06/20/19 11:00
Percent Solids: 86
Initial Volume: 7.7
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 19F0691
ESS Laboratory Sample ID: 19F0691-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Toluene	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
trans-1,2-Dichloroethene	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
trans-1,3-Dichloropropene	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
Trichloroethene	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
Trichlorofluoromethane	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
Vinyl Acetate	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
Vinyl Chloride	ND (0.0076)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
Xylene O	ND (0.0038)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
Xylene P,M	ND (0.0076)		8260B Low		1	06/24/19 17:42	C9F0395	CF92443
Xylenes (Total)	ND (0.00759)		8260B Low		1	06/24/19 17:42		[CALC]

	%Recovery	*Qualifier*	*Limits*
Surrogate: 1,2-Dichloroethane-d4	*112 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*90 %*		*70-130*
Surrogate: Dibromofluoromethane	*107 %*		*70-130*
Surrogate: Toluene-d8	*101 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
Client Sample ID: S-1
Date Sampled: 06/20/19 11:00
Percent Solids: 86
Initial Volume: 19.2
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 19F0691
ESS Laboratory Sample ID: 19F0691-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MJV
Prepared: 6/21/19 15:05

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.06)		8082A		1	06/24/19 16:15		CF92001
Aroclor 1221	ND (0.06)		8082A		1	06/24/19 16:15		CF92001
Aroclor 1232	ND (0.06)		8082A		1	06/24/19 16:15		CF92001
Aroclor 1242	ND (0.06)		8082A		1	06/24/19 16:15		CF92001
Aroclor 1248	ND (0.06)		8082A		1	06/24/19 16:15		CF92001
Aroclor 1254	ND (0.06)		8082A		1	06/24/19 16:15		CF92001
Aroclor 1260	ND (0.06)		8082A		1	06/24/19 16:15		CF92001
Aroclor 1262	ND (0.06)		8082A		1	06/24/19 16:15		CF92001
Aroclor 1268	ND (0.06)		8082A		1	06/24/19 16:15		CF92001

	%Recovery	*Qualifier*	*Limits*
Surrogate: Decachlorobiphenyl	*73 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*88 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*66 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*77 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
Client Sample ID: S-1
Date Sampled: 06/20/19 11:00
Percent Solids: 86
Initial Volume: 19.3
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 19F0691
ESS Laboratory Sample ID: 19F0691-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: CAD
Prepared: 6/20/19 17:21

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**51.9** (45.4)		8100M		1	06/21/19 18:21	C9F0353	CF92015

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*89 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
Client Sample ID: S-1
Date Sampled: 06/20/19 11:00
Percent Solids: 86
Initial Volume: 14.9
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 19F0691
ESS Laboratory Sample ID: 19F0691-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 6/21/19 9:23

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1-Biphenyl	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
1,2,4-Trichlorobenzene	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
1,2-Dichlorobenzene	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
1,3-Dichlorobenzene	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
1,4-Dichlorobenzene	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
2,3,4,6-Tetrachlorophenol	ND (1.97)		8270D		1	06/24/19 18:10	C9F0368	CF92101
2,4,5-Trichlorophenol	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
2,4,6-Trichlorophenol	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
2,4-Dichlorophenol	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
2,4-Dimethylphenol	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
2,4-Dinitrophenol	ND (1.97)		8270D		1	06/24/19 18:10	C9F0368	CF92101
2,4-Dinitrotoluene	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
2,6-Dinitrotoluene	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
2-Chloronaphthalene	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
2-Chlorophenol	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
2-Methylnaphthalene	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
2-Methylphenol	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
2-Nitroaniline	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
2-Nitrophenol	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
3,3´-Dichlorobenzidine	ND (0.785)		8270D		1	06/24/19 18:10	C9F0368	CF92101
3+4-Methylphenol	ND (0.785)		8270D		1	06/24/19 18:10	C9F0368	CF92101
3-Nitroaniline	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
4,6-Dinitro-2-Methylphenol	ND (1.97)		8270D		1	06/24/19 18:10	C9F0368	CF92101
4-Bromophenyl-phenylether	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
4-Chloro-3-Methylphenol	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
4-Chloroaniline	ND (0.785)		8270D		1	06/24/19 18:10	C9F0368	CF92101
4-Chloro-phenyl-phenyl ether	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
4-Nitroaniline	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
4-Nitrophenol	ND (1.97)		8270D		1	06/24/19 18:10	C9F0368	CF92101
Acenaphthene	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
Acenaphthylene	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
Acetophenone	ND (0.785)		8270D		1	06/24/19 18:10	C9F0368	CF92101

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
Client Sample ID: S-1
Date Sampled: 06/20/19 11:00
Percent Solids: 86
Initial Volume: 14.9
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 19F0691
ESS Laboratory Sample ID: 19F0691-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 6/21/19 9:23

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aniline	ND (0.785)		8270D		1	06/24/19 18:10	C9F0368	CF92101
Anthracene	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
Azobenzene	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
Benzo(a)anthracene	**0.466** (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
Benzo(a)pyrene	**0.442** (0.197)		8270D		1	06/24/19 18:10	C9F0368	CF92101
Benzo(b)fluoranthene	**0.466** (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
Benzo(g,h,i)perylene	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
Benzo(k)fluoranthene	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
Benzoic Acid	ND (1.97)		8270D		1	06/24/19 18:10	C9F0368	CF92101
Benzyl Alcohol	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
bis(2-Chloroethoxy)methane	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
bis(2-Chloroethyl)ether	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
bis(2-chloroisopropyl)Ether	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
bis(2-Ethylhexyl)phthalate	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
Butylbenzylphthalate	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
Carbazole	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
Chrysene	**0.428** (0.197)		8270D		1	06/24/19 18:10	C9F0368	CF92101
Dibenzo(a,h)Anthracene	ND (0.197)		8270D		1	06/24/19 18:10	C9F0368	CF92101
Dibenzofuran	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
Diethylphthalate	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
Dimethylphthalate	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
Di-n-butylphthalate	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
Di-n-octylphthalate	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
Fluoranthene	**1.02** (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
Fluorene	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
Hexachlorobenzene	ND (0.197)		8270D		1	06/24/19 18:10	C9F0368	CF92101
Hexachlorobutadiene	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
Hexachlorocyclopentadiene	ND (1.97)		8270D		1	06/24/19 18:10	C9F0368	CF92101
Hexachloroethane	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
Indeno(1,2,3-cd)Pyrene	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
Isophorone	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
Naphthalene	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
Client Sample ID: S-1
Date Sampled: 06/20/19 11:00
Percent Solids: 86
Initial Volume: 14.9
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 19F0691
ESS Laboratory Sample ID: 19F0691-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 6/21/19 9:23

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Nitrobenzene	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
N-Nitrosodimethylamine	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
N-Nitroso-Di-n-Propylamine	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
N-nitrosodiphenylamine	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
Pentachlorophenol	ND (1.97)		8270D		1	06/24/19 18:10	C9F0368	CF92101
Phenanthrene	**0.525** (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
Phenol	ND (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
Pyrene	**0.630** (0.392)		8270D		1	06/24/19 18:10	C9F0368	CF92101
Pyridine	ND (1.97)		8270D		1	06/24/19 18:10	C9F0368	CF92101

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*76 %*		*30-130*
Surrogate: 2,4,6-Tribromophenol	*101 %*		*30-130*
Surrogate: 2-Chlorophenol-d4	*78 %*		*30-130*
Surrogate: 2-Fluorobiphenyl	*74 %*		*30-130*
Surrogate: 2-Fluorophenol	*73 %*		*30-130*
Surrogate: Nitrobenzene-d5	*81 %*		*30-130*
Surrogate: Phenol-d6	*83 %*		*30-130*
Surrogate: p-Terphenyl-d14	*75 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
Client Sample ID: S-1
Date Sampled: 06/20/19 11:00
Percent Solids: 86

ESS Laboratory Work Order: 19F0691
ESS Laboratory Sample ID: 19F0691-01
Sample Matrix: Soil

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Conductivity	**WL 48** (5)		9050A		1	PMH	06/20/19 20:59	umhos/cm	CF92037
Corrosivity (pH)	**7.45** (N/A)		9045		1	PMH	06/20/19 21:58	S.U.	CF92040
Corrosivity (pH) Sample Temp	**Soil pH measured in water at 20.9 ºC.**								
Flashpoint	**> 200** (N/A)		1010		1	CCP	06/24/19 17:00	°F	CF92429
Reactive Cyanide	ND (2.0)		7.3.3.2		1	JLK	06/24/19 22:13	mg/kg	CF92431
Reactive Sulfide	ND (2.0)		7.3.4.1		1	JLK	06/24/19 22:13	mg/kg	CF92431

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue

ESS Laboratory Work Order: 19F0691

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Total Metals										
Batch CF92139 - 3050B										
Blank										
Arsenic	ND	2.50	mg/kg wet							
Barium	ND	2.50	mg/kg wet							
Cadmium	ND	0.50	mg/kg wet							
Chromium	ND	1.00	mg/kg wet							
Lead	ND	5.00	mg/kg wet							
Selenium	ND	5.00	mg/kg wet							
Silver	ND	0.50	mg/kg wet							
LCS										
Arsenic	119	9.09	mg/kg wet	128.0		93	80-120			
Barium	574	9.09	mg/kg wet	536.0		107	80-120			
Cadmium	89.4	1.82	mg/kg wet	99.00		90	80-120			
Chromium	115	3.64	mg/kg wet	116.0		99	80-120			
Lead	282	18.2	mg/kg wet	277.0		102	80-120			
Selenium	227	18.2	mg/kg wet	242.0		94	80-120			
Silver	63.3	1.82	mg/kg wet	64.30		98	80-120			
LCS Dup										
Arsenic	122	9.62	mg/kg wet	128.0		95	80-120	2	20	
Barium	556	9.62	mg/kg wet	536.0		104	80-120	3	20	
Cadmium	92.7	1.92	mg/kg wet	99.00		94	80-120	4	20	
Chromium	120	3.85	mg/kg wet	116.0		104	80-120	4	20	
Lead	292	19.2	mg/kg wet	277.0		106	80-120	3	20	
Selenium	232	19.2	mg/kg wet	242.0		96	80-120	2	20	
Silver	65.7	1.92	mg/kg wet	64.30		102	80-120	4	20	
Batch CF92140 - 7471B										
Blank										
Mercury	ND	0.033	mg/kg wet							
LCS										
Mercury	11.9	0.934	mg/kg wet	16.80		71	51-105			
LCS Dup										
Mercury	14.1	0.900	mg/kg wet	16.80		84	51-105	17	20	
5035/8260B Volatile Organic Compounds / Low Level										
Batch CF92443 - 5035										
Blank										
1,1,1,2-Tetrachloroethane	ND	0.0050	mg/kg wet							
1,1,1-Trichloroethane	ND	0.0050	mg/kg wet							
1,1,2,2-Tetrachloroethane	ND	0.0050	mg/kg wet							
1,1,2-Trichloroethane	ND	0.0050	mg/kg wet							
1,1-Dichloroethane	ND	0.0050	mg/kg wet							
1,1-Dichloroethene	ND	0.0050	mg/kg wet							
1,1-Dichloropropene	ND	0.0050	mg/kg wet							
1,2,3-Trichlorobenzene	ND	0.0050	mg/kg wet							

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue

ESS Laboratory Work Order: 19F0691

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CF92443 - 5035										
1,2,3-Trichloropropane	ND	0.0050	mg/kg wet							
1,2,4-Trichlorobenzene	ND	0.0050	mg/kg wet							
1,2,4-Trimethylbenzene	ND	0.0050	mg/kg wet							
1,2-Dibromo-3-Chloropropane	ND	0.0050	mg/kg wet							
1,2-Dibromoethane	ND	0.0050	mg/kg wet							
1,2-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,2-Dichloroethane	ND	0.0050	mg/kg wet							
1,2-Dichloropropane	ND	0.0050	mg/kg wet							
1,3,5-Trimethylbenzene	ND	0.0050	mg/kg wet							
1,3-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,3-Dichloropropane	ND	0.0050	mg/kg wet							
1,4-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,4-Dioxane	ND	0.100	mg/kg wet							
1-Chlorohexane	ND	0.0050	mg/kg wet							
2,2-Dichloropropane	ND	0.0050	mg/kg wet							
2-Butanone	ND	0.0500	mg/kg wet							
2-Chlorotoluene	ND	0.0050	mg/kg wet							
2-Hexanone	ND	0.0500	mg/kg wet							
4-Chlorotoluene	ND	0.0050	mg/kg wet							
4-Isopropyltoluene	ND	0.0050	mg/kg wet							
4-Methyl-2-Pentanone	ND	0.0500	mg/kg wet							
Acetone	ND	0.0500	mg/kg wet							
Benzene	ND	0.0050	mg/kg wet							
Bromobenzene	ND	0.0050	mg/kg wet							
Bromochloromethane	ND	0.0050	mg/kg wet							
Bromodichloromethane	ND	0.0050	mg/kg wet							
Bromoform	ND	0.0050	mg/kg wet							
Bromomethane	ND	0.0100	mg/kg wet							
Carbon Disulfide	ND	0.0050	mg/kg wet							
Carbon Tetrachloride	ND	0.0050	mg/kg wet							
Chlorobenzene	ND	0.0050	mg/kg wet							
Chloroethane	ND	0.0100	mg/kg wet							
Chloroform	ND	0.0050	mg/kg wet							
Chloromethane	ND	0.0100	mg/kg wet							
cis-1,2-Dichloroethene	ND	0.0050	mg/kg wet							
cis-1,3-Dichloropropene	ND	0.0050	mg/kg wet							
Dibromochloromethane	ND	0.0050	mg/kg wet							
Dibromomethane	ND	0.0050	mg/kg wet							
Dichlorodifluoromethane	ND	0.0100	mg/kg wet							
Diethyl Ether	ND	0.0050	mg/kg wet							
Di-isopropyl ether	ND	0.0050	mg/kg wet							
Ethyl tertiary-butyl ether	ND	0.0050	mg/kg wet							
Ethylbenzene	ND	0.0050	mg/kg wet							
Hexachlorobutadiene	ND	0.0050	mg/kg wet							
Isopropylbenzene	ND	0.0050	mg/kg wet							

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue

ESS Laboratory Work Order: 19F0691

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CF92443 - 5035										
Methyl tert-Butyl Ether	ND	0.0050	mg/kg wet							
Methylene Chloride	ND	0.0250	mg/kg wet							
Naphthalene	ND	0.0050	mg/kg wet							
n-Butylbenzene	ND	0.0050	mg/kg wet							
n-Propylbenzene	ND	0.0050	mg/kg wet							
sec-Butylbenzene	ND	0.0050	mg/kg wet							
Styrene	ND	0.0050	mg/kg wet							
tert-Butylbenzene	ND	0.0050	mg/kg wet							
Tertiary-amyl methyl ether	ND	0.0050	mg/kg wet							
Tetrachloroethene	ND	0.0050	mg/kg wet							
Tetrahydrofuran	ND	0.0050	mg/kg wet							
Toluene	ND	0.0050	mg/kg wet							
trans-1,2-Dichloroethene	ND	0.0050	mg/kg wet							
trans-1,3-Dichloropropene	ND	0.0050	mg/kg wet							
Trichloroethene	ND	0.0050	mg/kg wet							
Trichlorofluoromethane	ND	0.0050	mg/kg wet							
Vinyl Acetate	ND	0.0050	mg/kg wet							
Vinyl Chloride	ND	0.0100	mg/kg wet							
Xylene O	ND	0.0050	mg/kg wet							
Xylene P,M	ND	0.0100	mg/kg wet							
Surrogate: 1,2-Dichloroethane-d4	*0.0513*		mg/kg wet	*0.05000*		*103*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0453*		mg/kg wet	*0.05000*		*91*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0511*		mg/kg wet	*0.05000*		*102*	*70-130*			
Surrogate: Toluene-d8	*0.0493*		mg/kg wet	*0.05000*		*99*	*70-130*			
LCS										
1,1,1,2-Tetrachloroethane	0.0527	0.0050	mg/kg wet	0.05000		105	70-130			
1,1,1-Trichloroethane	0.0593	0.0050	mg/kg wet	0.05000		119	70-130			
1,1,2,2-Tetrachloroethane	0.0481	0.0050	mg/kg wet	0.05000		96	70-130			
1,1,2-Trichloroethane	0.0553	0.0050	mg/kg wet	0.05000		111	70-130			
1,1-Dichloroethane	0.0569	0.0050	mg/kg wet	0.05000		114	70-130			
1,1-Dichloroethene	0.0550	0.0050	mg/kg wet	0.05000		110	70-130			
1,1-Dichloropropene	0.0552	0.0050	mg/kg wet	0.05000		110	70-130			
1,2,3-Trichlorobenzene	0.0498	0.0050	mg/kg wet	0.05000		100	70-130			
1,2,3-Trichloropropane	0.0504	0.0050	mg/kg wet	0.05000		101	70-130			
1,2,4-Trichlorobenzene	0.0505	0.0050	mg/kg wet	0.05000		101	70-130			
1,2,4-Trimethylbenzene	0.0525	0.0050	mg/kg wet	0.05000		105	70-130			
1,2-Dibromo-3-Chloropropane	0.0509	0.0050	mg/kg wet	0.05000		102	70-130			
1,2-Dibromoethane	0.0539	0.0050	mg/kg wet	0.05000		108	70-130			
1,2-Dichlorobenzene	0.0494	0.0050	mg/kg wet	0.05000		99	70-130			
1,2-Dichloroethane	0.0577	0.0050	mg/kg wet	0.05000		115	70-130			
1,2-Dichloropropane	0.0546	0.0050	mg/kg wet	0.05000		109	70-130			
1,3,5-Trimethylbenzene	0.0509	0.0050	mg/kg wet	0.05000		102	70-130			
1,3-Dichlorobenzene	0.0491	0.0050	mg/kg wet	0.05000		98	70-130			
1,3-Dichloropropane	0.0554	0.0050	mg/kg wet	0.05000		111	70-130			
1,4-Dichlorobenzene	0.0489	0.0050	mg/kg wet	0.05000		98	70-130			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue

ESS Laboratory Work Order: 19F0691

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CF92443 - 5035										
1,4-Dioxane	0.893	0.100	mg/kg wet	1.000		89	70-130			
1-Chlorohexane	0.0491	0.0050	mg/kg wet	0.05000		98	70-130			
2,2-Dichloropropane	0.0586	0.0050	mg/kg wet	0.05000		117	70-130			
2-Butanone	0.272	0.0500	mg/kg wet	0.2500		109	70-130			
2-Chlorotoluene	0.0491	0.0050	mg/kg wet	0.05000		98	70-130			
2-Hexanone	0.261	0.0500	mg/kg wet	0.2500		104	70-130			
4-Chlorotoluene	0.0498	0.0050	mg/kg wet	0.05000		100	70-130			
4-Isopropyltoluene	0.0501	0.0050	mg/kg wet	0.05000		100	70-130			
4-Methyl-2-Pentanone	0.256	0.0500	mg/kg wet	0.2500		102	70-130			
Acetone	0.254	0.0500	mg/kg wet	0.2500		102	70-130			
Benzene	0.0530	0.0050	mg/kg wet	0.05000		106	70-130			
Bromobenzene	0.0503	0.0050	mg/kg wet	0.05000		101	70-130			
Bromochloromethane	0.0539	0.0050	mg/kg wet	0.05000		108	70-130			
Bromodichloromethane	0.0544	0.0050	mg/kg wet	0.05000		109	70-130			
Bromoform	0.0503	0.0050	mg/kg wet	0.05000		101	70-130			
Bromomethane	0.0544	0.0100	mg/kg wet	0.05000		109	70-130			
Carbon Disulfide	0.0580	0.0050	mg/kg wet	0.05000		116	70-130			
Carbon Tetrachloride	0.0551	0.0050	mg/kg wet	0.05000		110	70-130			
Chlorobenzene	0.0513	0.0050	mg/kg wet	0.05000		103	70-130			
Chloroethane	0.0534	0.0100	mg/kg wet	0.05000		107	70-130			
Chloroform	0.0561	0.0050	mg/kg wet	0.05000		112	70-130			
Chloromethane	0.0575	0.0100	mg/kg wet	0.05000		115	70-130			
cis-1,2-Dichloroethene	0.0562	0.0050	mg/kg wet	0.05000		112	70-130			
cis-1,3-Dichloropropene	0.0527	0.0050	mg/kg wet	0.05000		105	70-130			
Dibromochloromethane	0.0501	0.0050	mg/kg wet	0.05000		100	70-130			
Dibromomethane	0.0556	0.0050	mg/kg wet	0.05000		111	70-130			
Dichlorodifluoromethane	0.0577	0.0100	mg/kg wet	0.05000		115	70-130			
Diethyl Ether	0.0518	0.0050	mg/kg wet	0.05000		104	70-130			
Di-isopropyl ether	0.0538	0.0050	mg/kg wet	0.05000		108	70-130			
Ethyl tertiary-butyl ether	0.0505	0.0050	mg/kg wet	0.05000		101	70-130			
Ethylbenzene	0.0527	0.0050	mg/kg wet	0.05000		105	70-130			
Hexachlorobutadiene	0.0524	0.0050	mg/kg wet	0.05000		105	70-130			
Isopropylbenzene	0.0499	0.0050	mg/kg wet	0.05000		100	70-130			
Methyl tert-Butyl Ether	0.0551	0.0050	mg/kg wet	0.05000		110	70-130			
Methylene Chloride	0.0505	0.0250	mg/kg wet	0.05000		101	70-130			
Naphthalene	0.0487	0.0050	mg/kg wet	0.05000		97	70-130			
n-Butylbenzene	0.0511	0.0050	mg/kg wet	0.05000		102	70-130			
n-Propylbenzene	0.0502	0.0050	mg/kg wet	0.05000		100	70-130			
sec-Butylbenzene	0.0491	0.0050	mg/kg wet	0.05000		98	70-130			
Styrene	0.0547	0.0050	mg/kg wet	0.05000		109	70-130			
tert-Butylbenzene	0.0502	0.0050	mg/kg wet	0.05000		100	70-130			
Tertiary-amyl methyl ether	0.0533	0.0050	mg/kg wet	0.05000		107	70-130			
Tetrachloroethene	0.0519	0.0050	mg/kg wet	0.05000		104	70-130			
Tetrahydrofuran	0.0496	0.0050	mg/kg wet	0.05000		99	70-130			
Toluene	0.0528	0.0050	mg/kg wet	0.05000		106	70-130			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue

ESS Laboratory Work Order: 19F0691

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CF92443 - 5035										
trans-1,2-Dichloroethene	0.0544	0.0050	mg/kg wet	0.05000		109	70-130			
trans-1,3-Dichloropropene	0.0513	0.0050	mg/kg wet	0.05000		103	70-130			
Trichloroethene	0.0546	0.0050	mg/kg wet	0.05000		109	70-130			
Trichlorofluoromethane	0.0581	0.0050	mg/kg wet	0.05000		116	70-130			
Vinyl Acetate	0.0470	0.0050	mg/kg wet	0.05000		94	70-130			
Vinyl Chloride	0.0566	0.0100	mg/kg wet	0.05000		113	70-130			
Xylene O	0.0528	0.0050	mg/kg wet	0.05000		106	70-130			
Xylene P,M	0.105	0.0100	mg/kg wet	0.1000		105	70-130			
Surrogate: 1,2-Dichloroethane-d4	*0.0496*		mg/kg wet	*0.05000*		*99*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0489*		mg/kg wet	*0.05000*		*98*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0507*		mg/kg wet	*0.05000*		*101*	*70-130*			
Surrogate: Toluene-d8	*0.0500*		mg/kg wet	*0.05000*		*100*	*70-130*			
LCS Dup										
1,1,1,2-Tetrachloroethane	0.0533	0.0050	mg/kg wet	0.05000		107	70-130	1	25	
1,1,1-Trichloroethane	0.0617	0.0050	mg/kg wet	0.05000		123	70-130	4	25	
1,1,2,2-Tetrachloroethane	0.0518	0.0050	mg/kg wet	0.05000		104	70-130	7	25	
1,1,2-Trichloroethane	0.0569	0.0050	mg/kg wet	0.05000		114	70-130	3	25	
1,1-Dichloroethane	0.0590	0.0050	mg/kg wet	0.05000		118	70-130	4	25	
1,1-Dichloroethene	0.0581	0.0050	mg/kg wet	0.05000		116	70-130	5	25	
1,1-Dichloropropene	0.0581	0.0050	mg/kg wet	0.05000		116	70-130	5	25	
1,2,3-Trichlorobenzene	0.0535	0.0050	mg/kg wet	0.05000		107	70-130	7	25	
1,2,3-Trichloropropane	0.0538	0.0050	mg/kg wet	0.05000		108	70-130	7	25	
1,2,4-Trichlorobenzene	0.0544	0.0050	mg/kg wet	0.05000		109	70-130	7	25	
1,2,4-Trimethylbenzene	0.0558	0.0050	mg/kg wet	0.05000		112	70-130	6	25	
1,2-Dibromo-3-Chloropropane	0.0550	0.0050	mg/kg wet	0.05000		110	70-130	8	25	
1,2-Dibromoethane	0.0551	0.0050	mg/kg wet	0.05000		110	70-130	2	25	
1,2-Dichlorobenzene	0.0522	0.0050	mg/kg wet	0.05000		104	70-130	6	25	
1,2-Dichloroethane	0.0587	0.0050	mg/kg wet	0.05000		117	70-130	2	25	
1,2-Dichloropropane	0.0557	0.0050	mg/kg wet	0.05000		111	70-130	2	25	
1,3,5-Trimethylbenzene	0.0546	0.0050	mg/kg wet	0.05000		109	70-130	7	25	
1,3-Dichlorobenzene	0.0525	0.0050	mg/kg wet	0.05000		105	70-130	7	25	
1,3-Dichloropropane	0.0564	0.0050	mg/kg wet	0.05000		113	70-130	2	25	
1,4-Dichlorobenzene	0.0516	0.0050	mg/kg wet	0.05000		103	70-130	5	25	
1,4-Dioxane	0.998	0.100	mg/kg wet	1.000		100	70-130	11	20	
1-Chlorohexane	0.0519	0.0050	mg/kg wet	0.05000		104	70-130	5	25	
2,2-Dichloropropane	0.0604	0.0050	mg/kg wet	0.05000		121	70-130	3	25	
2-Butanone	0.300	0.0500	mg/kg wet	0.2500		120	70-130	10	25	
2-Chlorotoluene	0.0528	0.0050	mg/kg wet	0.05000		106	70-130	7	25	
2-Hexanone	0.288	0.0500	mg/kg wet	0.2500		115	70-130	10	25	
4-Chlorotoluene	0.0527	0.0050	mg/kg wet	0.05000		105	70-130	6	25	
4-Isopropyltoluene	0.0537	0.0050	mg/kg wet	0.05000		107	70-130	7	25	
4-Methyl-2-Pentanone	0.267	0.0500	mg/kg wet	0.2500		107	70-130	4	25	
Acetone	0.340	0.0500	mg/kg wet	0.2500		136	70-130	29	25	B+, D+
Benzene	0.0549	0.0050	mg/kg wet	0.05000		110	70-130	4	25	
Bromobenzene	0.0535	0.0050	mg/kg wet	0.05000		107	70-130	6	25	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue

ESS Laboratory Work Order: 19F0691

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CF92443 - 5035										
Bromochloromethane	0.0555	0.0050	mg/kg wet	0.05000		111	70-130	3	25	
Bromodichloromethane	0.0554	0.0050	mg/kg wet	0.05000		111	70-130	2	25	
Bromoform	0.0517	0.0050	mg/kg wet	0.05000		103	70-130	3	25	
Bromomethane	0.0545	0.0100	mg/kg wet	0.05000		109	70-130	0.07	25	
Carbon Disulfide	0.0603	0.0050	mg/kg wet	0.05000		121	70-130	4	25	
Carbon Tetrachloride	0.0565	0.0050	mg/kg wet	0.05000		113	70-130	3	25	
Chlorobenzene	0.0526	0.0050	mg/kg wet	0.05000		105	70-130	3	25	
Chloroethane	0.0555	0.0100	mg/kg wet	0.05000		111	70-130	4	25	
Chloroform	0.0568	0.0050	mg/kg wet	0.05000		114	70-130	1	25	
Chloromethane	0.0589	0.0100	mg/kg wet	0.05000		118	70-130	3	25	
cis-1,2-Dichloroethene	0.0578	0.0050	mg/kg wet	0.05000		116	70-130	3	25	
cis-1,3-Dichloropropene	0.0544	0.0050	mg/kg wet	0.05000		109	70-130	3	25	
Dibromochloromethane	0.0511	0.0050	mg/kg wet	0.05000		102	70-130	2	25	
Dibromomethane	0.0570	0.0050	mg/kg wet	0.05000		114	70-130	3	25	
Dichlorodifluoromethane	0.0586	0.0100	mg/kg wet	0.05000		117	70-130	1	25	
Diethyl Ether	0.0541	0.0050	mg/kg wet	0.05000		108	70-130	4	25	
Di-isopropyl ether	0.0555	0.0050	mg/kg wet	0.05000		111	70-130	3	25	
Ethyl tertiary-butyl ether	0.0519	0.0050	mg/kg wet	0.05000		104	70-130	3	25	
Ethylbenzene	0.0545	0.0050	mg/kg wet	0.05000		109	70-130	3	25	
Hexachlorobutadiene	0.0552	0.0050	mg/kg wet	0.05000		110	70-130	5	25	
Isopropylbenzene	0.0539	0.0050	mg/kg wet	0.05000		108	70-130	8	25	
Methyl tert-Butyl Ether	0.0573	0.0050	mg/kg wet	0.05000		115	70-130	4	25	
Methylene Chloride	0.0510	0.0250	mg/kg wet	0.05000		102	70-130	1	25	
Naphthalene	0.0538	0.0050	mg/kg wet	0.05000		108	70-130	10	25	
n-Butylbenzene	0.0548	0.0050	mg/kg wet	0.05000		110	70-130	7	25	
n-Propylbenzene	0.0541	0.0050	mg/kg wet	0.05000		108	70-130	7	25	
sec-Butylbenzene	0.0524	0.0050	mg/kg wet	0.05000		105	70-130	6	25	
Styrene	0.0555	0.0050	mg/kg wet	0.05000		111	70-130	1	25	
tert-Butylbenzene	0.0540	0.0050	mg/kg wet	0.05000		108	70-130	7	25	
Tertiary-amyl methyl ether	0.0549	0.0050	mg/kg wet	0.05000		110	70-130	3	25	
Tetrachloroethene	0.0558	0.0050	mg/kg wet	0.05000		112	70-130	7	25	
Tetrahydrofuran	0.0517	0.0050	mg/kg wet	0.05000		103	70-130	4	25	
Toluene	0.0548	0.0050	mg/kg wet	0.05000		110	70-130	4	25	
trans-1,2-Dichloroethene	0.0568	0.0050	mg/kg wet	0.05000		114	70-130	4	25	
trans-1,3-Dichloropropene	0.0524	0.0050	mg/kg wet	0.05000		105	70-130	2	25	
Trichloroethene	0.0565	0.0050	mg/kg wet	0.05000		113	70-130	3	25	
Trichlorofluoromethane	0.0603	0.0050	mg/kg wet	0.05000		121	70-130	4	25	
Vinyl Acetate	0.0492	0.0050	mg/kg wet	0.05000		98	70-130	5	25	
Vinyl Chloride	0.0587	0.0100	mg/kg wet	0.05000		117	70-130	4	25	
Xylene O	0.0540	0.0050	mg/kg wet	0.05000		108	70-130	2	25	
Xylene P,M	0.109	0.0100	mg/kg wet	0.1000		109	70-130	4	25	
Surrogate: 1,2-Dichloroethane-d4	*0.0477*		mg/kg wet	*0.05000*		*95*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0466*		mg/kg wet	*0.05000*		*93*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0490*		mg/kg wet	*0.05000*		*98*	*70-130*			
Surrogate: Toluene-d8	*0.0486*		mg/kg wet	*0.05000*		*97*	*70-130*			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue

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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8082A Polychlorinated Biphenyls (PCB)										
Batch CF92001 - 3540C										
Blank										
Aroclor 1016	ND	0.02	mg/kg wet							
Aroclor 1016 [2C]	ND	0.02	mg/kg wet							
Aroclor 1221	ND	0.02	mg/kg wet							
Aroclor 1221 [2C]	ND	0.02	mg/kg wet							
Aroclor 1232	ND	0.02	mg/kg wet							
Aroclor 1232 [2C]	ND	0.02	mg/kg wet							
Aroclor 1242	ND	0.02	mg/kg wet							
Aroclor 1242 [2C]	ND	0.02	mg/kg wet							
Aroclor 1248	ND	0.02	mg/kg wet							
Aroclor 1248 [2C]	ND	0.02	mg/kg wet							
Aroclor 1254	ND	0.02	mg/kg wet							
Aroclor 1254 [2C]	ND	0.02	mg/kg wet							
Aroclor 1260	ND	0.02	mg/kg wet							
Aroclor 1260 [2C]	ND	0.02	mg/kg wet							
Aroclor 1262	ND	0.02	mg/kg wet							
Aroclor 1262 [2C]	ND	0.02	mg/kg wet							
Aroclor 1268	ND	0.02	mg/kg wet							
Aroclor 1268 [2C]	ND	0.02	mg/kg wet							
Surrogate: Decachlorobiphenyl	*0.0223*		mg/kg wet	*0.02500*		*89*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0205*		mg/kg wet	*0.02500*		*82*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0190*		mg/kg wet	*0.02500*		*76*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0192*		mg/kg wet	*0.02500*		*77*	*30-150*			
LCS										
Aroclor 1016	0.5	0.05	mg/kg wet	0.5000		102	40-140			
Aroclor 1016 [2C]	0.5	0.05	mg/kg wet	0.5000		102	40-140			
Aroclor 1260	0.5	0.05	mg/kg wet	0.5000		102	40-140			
Aroclor 1260 [2C]	0.5	0.05	mg/kg wet	0.5000		100	40-140			
Surrogate: Decachlorobiphenyl	*0.0237*		mg/kg wet	*0.02500*		*95*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0220*		mg/kg wet	*0.02500*		*88*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0199*		mg/kg wet	*0.02500*		*80*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0205*		mg/kg wet	*0.02500*		*82*	*30-150*			
LCS Dup										
Aroclor 1016	0.5	0.05	mg/kg wet	0.5000		107	40-140	5	30	
Aroclor 1016 [2C]	0.5	0.05	mg/kg wet	0.5000		107	40-140	5	30	
Aroclor 1260	0.5	0.05	mg/kg wet	0.5000		107	40-140	5	30	
Aroclor 1260 [2C]	0.5	0.05	mg/kg wet	0.5000		106	40-140	5	30	
Surrogate: Decachlorobiphenyl	*0.0241*		mg/kg wet	*0.02500*		*97*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0226*		mg/kg wet	*0.02500*		*90*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0205*		mg/kg wet	*0.02500*		*82*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0214*		mg/kg wet	*0.02500*		*85*	*30-150*			
8100M Total Petroleum Hydrocarbons										

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Client Name: GZA GeoEnvironmental, Inc.
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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8100M Total Petroleum Hydrocarbons										
Batch CF92015 - 3546										
Blank										
Decane (C10)	ND	0.2	mg/kg wet							
Docosane (C22)	ND	0.2	mg/kg wet							
Dodecane (C12)	ND	0.2	mg/kg wet							
Eicosane (C20)	ND	0.2	mg/kg wet							
Hexacosane (C26)	ND	0.2	mg/kg wet							
Hexadecane (C16)	ND	0.2	mg/kg wet							
Nonadecane (C19)	ND	0.2	mg/kg wet							
Nonane (C9)	ND	0.2	mg/kg wet							
Octacosane (C28)	ND	0.2	mg/kg wet							
Octadecane (C18)	ND	0.2	mg/kg wet							
Tetracosane (C24)	ND	0.2	mg/kg wet							
Tetradecane (C14)	ND	0.2	mg/kg wet							
Total Petroleum Hydrocarbons	ND	37.5	mg/kg wet							
Triacontane (C30)	ND	0.2	mg/kg wet							
Surrogate: O-Terphenyl	*4.34*		mg/kg wet	*5.000*		*87*	*40-140*			
LCS										
Decane (C10)	2.0	0.2	mg/kg wet	2.500		81	40-140			
Docosane (C22)	2.1	0.2	mg/kg wet	2.500		85	40-140			
Dodecane (C12)	2.1	0.2	mg/kg wet	2.500		83	40-140			
Eicosane (C20)	2.1	0.2	mg/kg wet	2.500		85	40-140			
Hexacosane (C26)	2.1	0.2	mg/kg wet	2.500		84	40-140			
Hexadecane (C16)	2.1	0.2	mg/kg wet	2.500		83	40-140			
Nonadecane (C19)	2.2	0.2	mg/kg wet	2.500		86	40-140			
Nonane (C9)	1.8	0.2	mg/kg wet	2.500		73	30-140			
Octacosane (C28)	2.1	0.2	mg/kg wet	2.500		85	40-140			
Octadecane (C18)	2.1	0.2	mg/kg wet	2.500		84	40-140			
Tetracosane (C24)	2.1	0.2	mg/kg wet	2.500		85	40-140			
Tetradecane (C14)	2.1	0.2	mg/kg wet	2.500		84	40-140			
Total Petroleum Hydrocarbons	29.3	37.5	mg/kg wet	35.00		84	40-140			
Triacontane (C30)	2.1	0.2	mg/kg wet	2.500		85	40-140			
Surrogate: O-Terphenyl	*4.30*		mg/kg wet	*5.000*		*86*	*40-140*			
LCS Dup										
Decane (C10)	2.0	0.2	mg/kg wet	2.500		80	40-140	0.9	25	
Docosane (C22)	2.1	0.2	mg/kg wet	2.500		84	40-140	2	25	
Dodecane (C12)	2.0	0.2	mg/kg wet	2.500		82	40-140	2	25	
Eicosane (C20)	2.1	0.2	mg/kg wet	2.500		83	40-140	2	25	
Hexacosane (C26)	2.1	0.2	mg/kg wet	2.500		83	40-140	2	25	
Hexadecane (C16)	2.0	0.2	mg/kg wet	2.500		81	40-140	3	25	
Nonadecane (C19)	2.1	0.2	mg/kg wet	2.500		84	40-140	2	25	
Nonane (C9)	1.8	0.2	mg/kg wet	2.500		73	30-140	0.8	25	
Octacosane (C28)	2.1	0.2	mg/kg wet	2.500		83	40-140	2	25	
Octadecane (C18)	2.1	0.2	mg/kg wet	2.500		82	40-140	2	25	

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Client Name: GZA GeoEnvironmental, Inc.
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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8100M Total Petroleum Hydrocarbons										
Batch CF92015 - 3546										
Tetracosane (C24)	2.1	0.2	mg/kg wet	2.500		83	40-140	2	25	
Tetradecane (C14)	2.0	0.2	mg/kg wet	2.500		81	40-140	3	25	
Total Petroleum Hydrocarbons	28.7	37.5	mg/kg wet	35.00		82	40-140	2	25	
Triacontane (C30)	2.1	0.2	mg/kg wet	2.500		83	40-140	2	25	
Surrogate: O-Terphenyl	*4.17*		mg/kg wet	*5.000*		*83*	*40-140*			
8270D Semi-Volatile Organic Compounds										
Batch CF92101 - 3546										
Blank										
1,1-Biphenyl	ND	0.333	mg/kg wet							
1,2,4-Trichlorobenzene	ND	0.333	mg/kg wet							
1,2-Dichlorobenzene	ND	0.333	mg/kg wet							
1,3-Dichlorobenzene	ND	0.333	mg/kg wet							
1,4-Dichlorobenzene	ND	0.333	mg/kg wet							
2,3,4,6-Tetrachlorophenol	ND	1.67	mg/kg wet							
2,4,5-Trichlorophenol	ND	0.333	mg/kg wet							
2,4,6-Trichlorophenol	ND	0.333	mg/kg wet							
2,4-Dichlorophenol	ND	0.333	mg/kg wet							
2,4-Dimethylphenol	ND	0.333	mg/kg wet							
2,4-Dinitrophenol	ND	1.67	mg/kg wet							
2,4-Dinitrotoluene	ND	0.333	mg/kg wet							
2,6-Dinitrotoluene	ND	0.333	mg/kg wet							
2-Chloronaphthalene	ND	0.333	mg/kg wet							
2-Chlorophenol	ND	0.333	mg/kg wet							
2-Methylnaphthalene	ND	0.333	mg/kg wet							
2-Methylphenol	ND	0.333	mg/kg wet							
2-Nitroaniline	ND	0.333	mg/kg wet							
2-Nitrophenol	ND	0.333	mg/kg wet							
3,3´-Dichlorobenzidine	ND	0.667	mg/kg wet							
3+4-Methylphenol	ND	0.667	mg/kg wet							
3-Nitroaniline	ND	0.333	mg/kg wet							
4,6-Dinitro-2-Methylphenol	ND	1.67	mg/kg wet							
4-Bromophenyl-phenylether	ND	0.333	mg/kg wet							
4-Chloro-3-Methylphenol	ND	0.333	mg/kg wet							
4-Chloroaniline	ND	0.667	mg/kg wet							
4-Chloro-phenyl-phenyl ether	ND	0.333	mg/kg wet							
4-Nitroaniline	ND	0.333	mg/kg wet							
4-Nitrophenol	ND	1.67	mg/kg wet							
Acenaphthene	ND	0.333	mg/kg wet							
Acenaphthylene	ND	0.333	mg/kg wet							
Acetophenone	ND	0.667	mg/kg wet							
Aniline	ND	0.667	mg/kg wet							
Anthracene	ND	0.333	mg/kg wet							
Azobenzene	ND	0.333	mg/kg wet							

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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D Semi-Volatile Organic Compounds										
Batch CF92101 - 3546										
Benzo(a)anthracene	ND	0.333	mg/kg wet							
Benzo(a)pyrene	ND	0.167	mg/kg wet							
Benzo(b)fluoranthene	ND	0.333	mg/kg wet							
Benzo(g,h,i)perylene	ND	0.333	mg/kg wet							
Benzo(k)fluoranthene	ND	0.333	mg/kg wet							
Benzoic Acid	ND	1.67	mg/kg wet							
Benzyl Alcohol	ND	0.333	mg/kg wet							
bis(2-Chloroethoxy)methane	ND	0.333	mg/kg wet							
bis(2-Chloroethyl)ether	ND	0.333	mg/kg wet							
bis(2-chloroisopropyl)Ether	ND	0.333	mg/kg wet							
bis(2-Ethylhexyl)phthalate	ND	0.333	mg/kg wet							
Butylbenzylphthalate	ND	0.333	mg/kg wet							
Carbazole	ND	0.333	mg/kg wet							
Chrysene	ND	0.167	mg/kg wet							
Dibenzo(a,h)Anthracene	ND	0.167	mg/kg wet							
Dibenzofuran	ND	0.333	mg/kg wet							
Diethylphthalate	ND	0.333	mg/kg wet							
Dimethylphthalate	ND	0.333	mg/kg wet							
Di-n-butylphthalate	ND	0.333	mg/kg wet							
Di-n-octylphthalate	ND	0.333	mg/kg wet							
Fluoranthene	ND	0.333	mg/kg wet							
Fluorene	ND	0.333	mg/kg wet							
Hexachlorobenzene	ND	0.167	mg/kg wet							
Hexachlorobutadiene	ND	0.333	mg/kg wet							
Hexachlorocyclopentadiene	ND	1.67	mg/kg wet							
Hexachloroethane	ND	0.333	mg/kg wet							
Indeno(1,2,3-cd)Pyrene	ND	0.333	mg/kg wet							
Isophorone	ND	0.333	mg/kg wet							
Naphthalene	ND	0.333	mg/kg wet							
Nitrobenzene	ND	0.333	mg/kg wet							
N-Nitrosodimethylamine	ND	0.333	mg/kg wet							
N-Nitroso-Di-n-Propylamine	ND	0.333	mg/kg wet							
N-nitrosodiphenylamine	ND	0.333	mg/kg wet							
Pentachlorophenol	ND	1.67	mg/kg wet							
Phenanthrene	ND	0.333	mg/kg wet							
Phenol	ND	0.333	mg/kg wet							
Pyrene	ND	0.333	mg/kg wet							
Pyridine	ND	1.67	mg/kg wet							
Surrogate: 1,2-Dichlorobenzene-d4	*2.22*		mg/kg wet	*3.333*		*67*	*30-130*			
Surrogate: 2,4,6-Tribromophenol	*2.97*		mg/kg wet	*5.000*		*59*	*30-130*			
Surrogate: 2-Chlorophenol-d4	*3.39*		mg/kg wet	*5.000*		*68*	*30-130*			
Surrogate: 2-Fluorobiphenyl	*2.20*		mg/kg wet	*3.333*		*66*	*30-130*			
Surrogate: 2-Fluorophenol	*3.22*		mg/kg wet	*5.000*		*64*	*30-130*			
Surrogate: Nitrobenzene-d5	*2.03*		mg/kg wet	*3.333*		*61*	*30-130*			
Surrogate: Phenol-d6	*3.40*		mg/kg wet	*5.000*		*68*	*30-130*			
Surrogate: p-Terphenyl-d14	*2.83*		mg/kg wet	*3.333*		*85*	*30-130*			

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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D Semi-Volatile Organic Compounds										
Batch CF92101 - 3546										
LCS										
1,1-Biphenyl	2.03	0.333	mg/kg wet	3.333		61	40-140			
1,2,4-Trichlorobenzene	1.92	0.333	mg/kg wet	3.333		58	40-140			
1,2-Dichlorobenzene	1.79	0.333	mg/kg wet	3.333		54	40-140			
1,3-Dichlorobenzene	1.75	0.333	mg/kg wet	3.333		52	40-140			
1,4-Dichlorobenzene	1.79	0.333	mg/kg wet	3.333		54	40-140			
2,3,4,6-Tetrachlorophenol	2.36	1.67	mg/kg wet	3.333		71	30-130			
2,4,5-Trichlorophenol	2.34	0.333	mg/kg wet	3.333		70	30-130			
2,4,6-Trichlorophenol	2.19	0.333	mg/kg wet	3.333		66	30-130			
2,4-Dichlorophenol	2.27	0.333	mg/kg wet	3.333		68	30-130			
2,4-Dimethylphenol	2.14	0.333	mg/kg wet	3.333		64	30-130			
2,4-Dinitrophenol	2.16	1.67	mg/kg wet	3.333		65	30-130			
2,4-Dinitrotoluene	2.69	0.333	mg/kg wet	3.333		81	40-140			
2,6-Dinitrotoluene	2.36	0.333	mg/kg wet	3.333		71	40-140			
2-Chloronaphthalene	2.17	0.333	mg/kg wet	3.333		65	40-140			
2-Chlorophenol	1.95	0.333	mg/kg wet	3.333		59	30-130			
2-Methylnaphthalene	1.94	0.333	mg/kg wet	3.333		58	40-140			
2-Methylphenol	2.11	0.333	mg/kg wet	3.333		63	30-130			
2-Nitroaniline	1.81	0.333	mg/kg wet	3.333		54	40-140			
2-Nitrophenol	2.06	0.333	mg/kg wet	3.333		62	30-130			
3,3´-Dichlorobenzidine	2.05	0.667	mg/kg wet	3.333		61	40-140			
3+4-Methylphenol	4.62	0.667	mg/kg wet	6.667		69	30-130			
3-Nitroaniline	2.26	0.333	mg/kg wet	3.333		68	40-140			
4,6-Dinitro-2-Methylphenol	2.41	1.67	mg/kg wet	3.333		72	30-130			
4-Bromophenyl-phenylether	2.20	0.333	mg/kg wet	3.333		66	40-140			
4-Chloro-3-Methylphenol	2.47	0.333	mg/kg wet	3.333		74	30-130			
4-Chloroaniline	2.15	0.667	mg/kg wet	3.333		65	40-140			
4-Chloro-phenyl-phenyl ether	2.56	0.333	mg/kg wet	3.333		77	40-140			
4-Nitroaniline	2.17	0.333	mg/kg wet	3.333		65	40-140			
4-Nitrophenol	2.40	1.67	mg/kg wet	3.333		72	30-130			
Acenaphthene	2.13	0.333	mg/kg wet	3.333		64	40-140			
Acenaphthylene	2.09	0.333	mg/kg wet	3.333		63	40-140			
Acetophenone	1.98	0.667	mg/kg wet	3.333		59	40-140			
Aniline	1.88	0.667	mg/kg wet	3.333		56	40-140			
Anthracene	2.30	0.333	mg/kg wet	3.333		69	40-140			
Azobenzene	1.76	0.333	mg/kg wet	3.333		53	40-140			
Benzo(a)anthracene	2.40	0.333	mg/kg wet	3.333		72	40-140			
Benzo(a)pyrene	2.33	0.167	mg/kg wet	3.333		70	40-140			
Benzo(b)fluoranthene	2.46	0.333	mg/kg wet	3.333		74	40-140			
Benzo(g,h,i)perylene	1.90	0.333	mg/kg wet	3.333		57	40-140			
Benzo(k)fluoranthene	2.46	0.333	mg/kg wet	3.333		74	40-140			
Benzoic Acid	2.63	1.67	mg/kg wet	3.333		79	40-140			
Benzyl Alcohol	1.86	0.333	mg/kg wet	3.333		56	40-140			
bis(2-Chloroethoxy)methane	1.90	0.333	mg/kg wet	3.333		57	40-140			
bis(2-Chloroethyl)ether	1.73	0.333	mg/kg wet	3.333		52	40-140			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue

ESS Laboratory Work Order: 19F0691

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D Semi-Volatile Organic Compounds										
Batch CF92101 - 3546										
bis(2-chloroisopropyl)Ether	1.65	0.333	mg/kg wet	3.333		49	40-140			
bis(2-Ethylhexyl)phthalate	2.39	0.333	mg/kg wet	3.333		72	40-140			
Butylbenzylphthalate	2.27	0.333	mg/kg wet	3.333		68	40-140			
Carbazole	2.29	0.333	mg/kg wet	3.333		69	40-140			
Chrysene	2.36	0.167	mg/kg wet	3.333		71	40-140			
Dibenzo(a,h)Anthracene	2.05	0.167	mg/kg wet	3.333		61	40-140			
Dibenzofuran	2.21	0.333	mg/kg wet	3.333		66	40-140			
Diethylphthalate	2.48	0.333	mg/kg wet	3.333		74	40-140			
Dimethylphthalate	2.39	0.333	mg/kg wet	3.333		72	40-140			
Di-n-butylphthalate	2.42	0.333	mg/kg wet	3.333		73	40-140			
Di-n-octylphthalate	2.73	0.333	mg/kg wet	3.333		82	40-140			
Fluoranthene	2.46	0.333	mg/kg wet	3.333		74	40-140			
Fluorene	2.27	0.333	mg/kg wet	3.333		68	40-140			
Hexachlorobenzene	2.26	0.167	mg/kg wet	3.333		68	40-140			
Hexachlorobutadiene	1.91	0.333	mg/kg wet	3.333		57	40-140			
Hexachlorocyclopentadiene	1.67	1.67	mg/kg wet	3.333		50	40-140			
Hexachloroethane	1.70	0.333	mg/kg wet	3.333		51	40-140			
Indeno(1,2,3-cd)Pyrene	1.89	0.333	mg/kg wet	3.333		57	40-140			
Isophorone	1.92	0.333	mg/kg wet	3.333		58	40-140			
Naphthalene	1.85	0.333	mg/kg wet	3.333		56	40-140			
Nitrobenzene	1.81	0.333	mg/kg wet	3.333		54	40-140			
N-Nitrosodimethylamine	1.41	0.333	mg/kg wet	3.333		42	40-140			
N-Nitroso-Di-n-Propylamine	2.04	0.333	mg/kg wet	3.333		61	40-140			
N-nitrosodiphenylamine	1.64	0.333	mg/kg wet	3.333		49	40-140			
Pentachlorophenol	2.53	1.67	mg/kg wet	3.333		76	30-130			
Phenanthrene	2.23	0.333	mg/kg wet	3.333		67	40-140			
Phenol	2.06	0.333	mg/kg wet	3.333		62	30-130			
Pyrene	2.29	0.333	mg/kg wet	3.333		69	40-140			
Pyridine	1.45	1.67	mg/kg wet	3.333		44	40-140			
Surrogate: 1,2-Dichlorobenzene-d4	*2.04*		mg/kg wet	*3.333*		*61*	*30-130*			
Surrogate: 2,4,6-Tribromophenol	*3.56*		mg/kg wet	*5.000*		*71*	*30-130*			
Surrogate: 2-Chlorophenol-d4	*3.37*		mg/kg wet	*5.000*		*67*	*30-130*			
Surrogate: 2-Fluorobiphenyl	*2.35*		mg/kg wet	*3.333*		*70*	*30-130*			
Surrogate: 2-Fluorophenol	*3.01*		mg/kg wet	*5.000*		*60*	*30-130*			
Surrogate: Nitrobenzene-d5	*1.99*		mg/kg wet	*3.333*		*60*	*30-130*			
Surrogate: Phenol-d6	*3.52*		mg/kg wet	*5.000*		*70*	*30-130*			
Surrogate: p-Terphenyl-d14	*2.76*		mg/kg wet	*3.333*		*83*	*30-130*			
LCS Dup										
1,1-Biphenyl	1.89	0.333	mg/kg wet	3.333		57	40-140	7	30	
1,2,4-Trichlorobenzene	1.73	0.333	mg/kg wet	3.333		52	40-140	10	30	
1,2-Dichlorobenzene	1.71	0.333	mg/kg wet	3.333		51	40-140	4	30	
1,3-Dichlorobenzene	1.70	0.333	mg/kg wet	3.333		51	40-140	3	30	
1,4-Dichlorobenzene	1.71	0.333	mg/kg wet	3.333		51	40-140	5	30	
2,3,4,6-Tetrachlorophenol	2.38	1.67	mg/kg wet	3.333		71	30-130	0.9	30	
2,4,5-Trichlorophenol	2.29	0.333	mg/kg wet	3.333		69	30-130	2	30	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
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ESS Laboratory Work Order: 19F0691

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D Semi-Volatile Organic Compounds										
Batch CF92101 - 3546										
2,4,6-Trichlorophenol	2.08	0.333	mg/kg wet	3.333		62	30-130	5	30	
2,4-Dichlorophenol	2.01	0.333	mg/kg wet	3.333		60	30-130	12	30	
2,4-Dimethylphenol	1.96	0.333	mg/kg wet	3.333		59	30-130	9	30	
2,4-Dinitrophenol	2.16	1.67	mg/kg wet	3.333		65	30-130	0.2	30	
2,4-Dinitrotoluene	2.74	0.333	mg/kg wet	3.333		82	40-140	2	30	
2,6-Dinitrotoluene	2.47	0.333	mg/kg wet	3.333		74	40-140	5	30	
2-Chloronaphthalene	2.00	0.333	mg/kg wet	3.333		60	40-140	8	30	
2-Chlorophenol	1.78	0.333	mg/kg wet	3.333		53	30-130	9	30	
2-Methylnaphthalene	1.74	0.333	mg/kg wet	3.333		52	40-140	10	30	
2-Methylphenol	1.87	0.333	mg/kg wet	3.333		56	30-130	12	30	
2-Nitroaniline	1.80	0.333	mg/kg wet	3.333		54	40-140	0.6	30	
2-Nitrophenol	1.89	0.333	mg/kg wet	3.333		57	30-130	9	30	
3,3´-Dichlorobenzidine	1.98	0.667	mg/kg wet	3.333		59	40-140	4	30	
3+4-Methylphenol	4.06	0.667	mg/kg wet	6.667		61	30-130	13	30	
3-Nitroaniline	2.13	0.333	mg/kg wet	3.333		64	40-140	6	30	
4,6-Dinitro-2-Methylphenol	2.41	1.67	mg/kg wet	3.333		72	30-130	0.3	30	
4-Bromophenyl-phenylether	2.12	0.333	mg/kg wet	3.333		64	40-140	4	30	
4-Chloro-3-Methylphenol	2.40	0.333	mg/kg wet	3.333		72	30-130	3	30	
4-Chloroaniline	1.95	0.667	mg/kg wet	3.333		59	40-140	10	30	
4-Chloro-phenyl-phenyl ether	2.37	0.333	mg/kg wet	3.333		71	40-140	8	30	
4-Nitroaniline	2.04	0.333	mg/kg wet	3.333		61	40-140	6	30	
4-Nitrophenol	2.36	1.67	mg/kg wet	3.333		71	30-130	2	30	
Acenaphthene	2.08	0.333	mg/kg wet	3.333		62	40-140	3	30	
Acenaphthylene	2.03	0.333	mg/kg wet	3.333		61	40-140	3	30	
Acetophenone	1.75	0.667	mg/kg wet	3.333		53	40-140	12	30	
Aniline	1.69	0.667	mg/kg wet	3.333		51	40-140	11	30	
Anthracene	2.26	0.333	mg/kg wet	3.333		68	40-140	2	30	
Azobenzene	1.79	0.333	mg/kg wet	3.333		54	40-140	2	30	
Benzo(a)anthracene	2.31	0.333	mg/kg wet	3.333		69	40-140	4	30	
Benzo(a)pyrene	2.17	0.167	mg/kg wet	3.333		65	40-140	7	30	
Benzo(b)fluoranthene	2.16	0.333	mg/kg wet	3.333		65	40-140	13	30	
Benzo(g,h,i)perylene	1.75	0.333	mg/kg wet	3.333		52	40-140	8	30	
Benzo(k)fluoranthene	2.41	0.333	mg/kg wet	3.333		72	40-140	2	30	
Benzoic Acid	2.46	1.67	mg/kg wet	3.333		74	40-140	6	30	
Benzyl Alcohol	1.66	0.333	mg/kg wet	3.333		50	40-140	12	30	
bis(2-Chloroethoxy)methane	1.61	0.333	mg/kg wet	3.333		48	40-140	16	30	
bis(2-Chloroethyl)ether	1.59	0.333	mg/kg wet	3.333		48	40-140	8	30	
bis(2-chloroisopropyl)Ether	1.44	0.333	mg/kg wet	3.333		43	40-140	14	30	
bis(2-Ethylhexyl)phthalate	2.15	0.333	mg/kg wet	3.333		65	40-140	11	30	
Butylbenzylphthalate	2.12	0.333	mg/kg wet	3.333		64	40-140	7	30	
Carbazole	2.26	0.333	mg/kg wet	3.333		68	40-140	1	30	
Chrysene	2.28	0.167	mg/kg wet	3.333		68	40-140	4	30	
Dibenzo(a,h)Anthracene	1.90	0.167	mg/kg wet	3.333		57	40-140	7	30	
Dibenzofuran	2.16	0.333	mg/kg wet	3.333		65	40-140	2	30	
Diethylphthalate	2.49	0.333	mg/kg wet	3.333		75	40-140	0.5	30	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue

ESS Laboratory Work Order: 19F0691

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D Semi-Volatile Organic Compounds										
Batch CF92101 - 3546										
Dimethylphthalate	2.31	0.333	mg/kg wet	3.333		69	40-140	4	30	
Di-n-butylphthalate	2.33	0.333	mg/kg wet	3.333		70	40-140	4	30	
Di-n-octylphthalate	2.40	0.333	mg/kg wet	3.333		72	40-140	13	30	
Fluoranthene	2.45	0.333	mg/kg wet	3.333		74	40-140	0.2	30	
Fluorene	2.26	0.333	mg/kg wet	3.333		68	40-140	0.2	30	
Hexachlorobenzene	2.20	0.167	mg/kg wet	3.333		66	40-140	3	30	
Hexachlorobutadiene	1.73	0.333	mg/kg wet	3.333		52	40-140	10	30	
Hexachlorocyclopentadiene	1.45	1.67	mg/kg wet	3.333		43	40-140	14	30	
Hexachloroethane	1.61	0.333	mg/kg wet	3.333		48	40-140	5	30	
Indeno(1,2,3-cd)Pyrene	1.76	0.333	mg/kg wet	3.333		53	40-140	7	30	
Isophorone	1.74	0.333	mg/kg wet	3.333		52	40-140	10	30	
Naphthalene	1.66	0.333	mg/kg wet	3.333		50	40-140	11	30	
Nitrobenzene	1.64	0.333	mg/kg wet	3.333		49	40-140	10	30	
N-Nitrosodimethylamine	1.42	0.333	mg/kg wet	3.333		43	40-140	0.3	30	
N-Nitroso-Di-n-Propylamine	1.81	0.333	mg/kg wet	3.333		54	40-140	12	30	
N-nitrosodiphenylamine	1.67	0.333	mg/kg wet	3.333		50	40-140	2	30	
Pentachlorophenol	2.53	1.67	mg/kg wet	3.333		76	30-130	0.09	30	
Phenanthrene	2.16	0.333	mg/kg wet	3.333		65	40-140	3	30	
Phenol	1.85	0.333	mg/kg wet	3.333		56	30-130	11	30	
Pyrene	2.24	0.333	mg/kg wet	3.333		67	40-140	2	30	
Pyridine	1.49	1.67	mg/kg wet	3.333		45	40-140	3	30	
Surrogate: 1,2-Dichlorobenzene-d4	*1.89*		mg/kg wet	*3.333*		*57*	*30-130*			
Surrogate: 2,4,6-Tribromophenol	*3.61*		mg/kg wet	*5.000*		*72*	*30-130*			
Surrogate: 2-Chlorophenol-d4	*3.01*		mg/kg wet	*5.000*		*60*	*30-130*			
Surrogate: 2-Fluorobiphenyl	*2.21*		mg/kg wet	*3.333*		*66*	*30-130*			
Surrogate: 2-Fluorophenol	*2.80*		mg/kg wet	*5.000*		*56*	*30-130*			
Surrogate: Nitrobenzene-d5	*1.82*		mg/kg wet	*3.333*		*55*	*30-130*			
Surrogate: Phenol-d6	*3.14*		mg/kg wet	*5.000*		*63*	*30-130*			
Surrogate: p-Terphenyl-d14	*2.51*		mg/kg wet	*3.333*		*75*	*30-130*			
Classical Chemistry										
Batch CF92037 - General Preparation										
Blank										
Conductivity	ND	5	umhos/cm							
LCS										
Conductivity	1310		umhos/cm	1411		93	90-110			
Batch CF92429 - General Preparation										
Reference										
Flashpoint	80		°F	81.00		99	97.9-102.1			
Batch CF92431 - General Preparation										
Blank										
Reactive Cyanide	ND	2.0	mg/kg							
Reactive Sulfide	ND	2.0	mg/kg							

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue

ESS Laboratory Work Order: 19F0691

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Classical Chemistry										
Batch CF92431 - General Preparation										
LCS										
Reactive Cyanide	3.9	2.0	mg/kg	100.3		4	0.68-5.41			
Reactive Sulfide	ND	2.0	mg/kg	10.00		0	0-44			

CERTIFICATE OF ANALYSIS

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Notes and Definitions

Z-10	Soil pH measured in water at 20.9 ºC.
WL	Results obtained from a deionized water leach of the sample.
U	Analyte included in the analysis, but not detected
Q	Calibration required quadratic regression (Q).
D+	Relative percent difference for duplicate is outside of criteria (D+).
D	Diluted.
CD+	Continuing Calibration %Diff/Drift is above control limit (CD+).
CD-	Continuing Calibration %Diff/Drift is below control limit (CD-).
B+	Blank Spike recovery is above upper control limit (B+).
>	Greater than.
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit
MF	Membrane Filtration
MPN	Most Probably Number
TNTC	Too numerous to Count
CFU	Colony Forming Units

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
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ESS Laboratory Work Order: 19F0691

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

ESS Laboratory Sample and Cooler Receipt Checklist

Client: GZA - Providence, RI - GZA/HDM

Shipped/Delivered Via: ~~ESS Courier~~ Client

ESS Project ID: 19F0691
Date Received: 6/20/2019
Project Due Date: 6/27/2019
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 0.9 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / NA
10. Were any analyses received outside of hold time? Yes / No

11. Any Subcontracting needed? ~~Yes~~ / No
    ESS Sample IDs: ~~C.1for~~
    Analysis: ~~n 6/20/19~~
    TAT: ~~STD~~
12. Were VOAs received? Yes / No
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA

13. Are the samples properly preserved? Yes / No
    a. If metals preserved upon receipt: Date: Time: By:
    b. Low Level VOA vials frozen: Date: 6/20/19 Time: 1513 By: [illegible]

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / No
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
~~01~~	~~358556~~	~~Yes~~	~~NA~~	~~Yes~~	~~VOA Vial - Methanol~~	~~MeOH~~ → 6/20	
01	358557	Yes	NA	Yes	VOA Vial - Other	Other	
01	358558	Yes	NA	Yes	VOA Vial - Other	Other	
01	358559	Yes	NA	Yes	8 oz. Jar - Unpres	NP	
01	358560	Yes	NA	Yes	8 oz. Jar - Unpres	NP	
01	358561	Yes	NA	Yes	4 oz. Jar - Unpres	NP	

2nd Review
Were all containers scanned into storage/lab? Initials
Are barcode labels on correct containers? Yes / No
Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA
Are all Hex Chrome stickers attached? Yes / No / NA
Are all QC stickers attached? Yes / No / NA
Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed By: Date & Time: 6/20/19 14:30
Reviewed By: Date & Time: 6/20/19 1513
Delivered By: 6/20/19 1513

ESS Laboratory

Division of Thielsch Engineering, Inc.
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

CHAIN OF CUSTODY

ESS Lab # 19F0691

Turn Time: 5 Days
Regulatory State: RI
Reporting Limits:
Is this project for any of the following?: ○ CT RCP ○ MA MCP ○ RGP
Electonic Deliverables: ☐ Data Checker ☒ Excel ☒ Other (Please Specify) PDF

Company Name: GZA
Contact Person: Mike Clark
Project # 34632.00
Project Name: RIDOT Taunton Ave.
Address: 188 Valley St., Suite 300
City: Providence
State: RI
Zip Code: 02909
PO #:
Telephone Number: 401-421-4140
FAX Number:
Email Address:

ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID	VOC's (LL)	SVOC's	RCRA 8	TPH	PCB	Specific Conductance	Flashpoint	Reactivity (CN & Sulfide)	pH
1	6-20-19	1100	C	Soil	S-1	X	X	X	X	X	X	X	X	X

Analysis

Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial
Container Volume: 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other*
Preservation Code: 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other*
Number of Containers per Sample:

Laboratory Use Only
Cooler Present: ✓ ○ Drop Off
Seals Intact: N/A ○ Pickup
Cooler Temperature: 0.9 °C

Sampled by: EMB
Comments: Please specify "Other" preservative and containers types in this space
- EPA 20X Rule
- "Mike Clark agreed to pricing".

Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)	Received By: (Signature, Date & Time)
6-20-19 (1214)	6/20/19 1215		
Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)	Received By: (Signature, Date & Time)

CERTIFICATE OF ANALYSIS

Mike Clark
GZA GeoEnvironmental, Inc.
188 Valley Street
Providence, RI 02909

RE: RIDOT - Taunton Avenue (03.0034632.00)
ESS Laboratory Work Order Number: 19G0023

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED
By ESS Laboratory at 4:52 pm, Jul 09, 2019

Analytical Summary
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue

ESS Laboratory Work Order: 19G0023

SAMPLE RECEIPT

The following samples were received on July 01, 2019 for the analyses specified on the enclosed Chain of Custody Record.

Low Level VOA vials were frozen by ESS Laboratory on July 01, 2019 at 16:50.

Lab Number	Sample Name	Matrix	Analysis
19G0023-01	Comp-1	Soil	1010, 1311, 1311/6010C, 6010C, 7.3.3.2, 7.3.4.1, 7471B, 8100M, 8260B Low, 8270D, 9045
19G0023-02	Comp-2	Soil	1010, 1311, 1311/6010C, 6010C, 7.3.3.2, 7.3.4.1, 7471B, 8100M, 8260B Low, 8270D, 9045
19G0023-03	Comp-1 Air Dried	Soil	8082A
19G0023-04	Comp-2 Air Dried	Soil	8082A

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue

ESS Laboratory Work Order: 19G0023

PROJECT NARRATIVE

5035/8260B Volatile Organic Compounds / Low Level

19G0023-01 **Internal Standard(s) outside of criteria. Sample was reanalyzed to confirm (IC).**
1,4-Dichlorobenzene-D4 (39% @ 50-200%)

8270D Semi-Volatile Organic Compounds

C9G0030-CCV1 **Calibration required quadratic regression (Q).**
2,4-Dinitrophenol (103% @ 80-120%), 4,6-Dinitro-2-Methylphenol (111% @ 80-120%), Benzoic Acid (89% @ 80-120%)

C9G0030-CCV1 **Continuing Calibration %Diff/Drift is above control limit (CD+).**
2,4-Dinitrotoluene (30% @ 20%), Di-n-butylphthalate (32% @ 20%)

C9G0030-CCV1 **Continuing Calibration %Diff/Drift is below control limit (CD-).**
Hexachlorocyclopentadiene (22% @ 20%)

C9G0053-CCV1 **Calibration required quadratic regression (Q).**
2,4-Dinitrophenol (114% @ 80-120%), 4,6-Dinitro-2-Methylphenol (124% @ 80-120%), Benzoic Acid (105% @ 80-120%)

C9G0053-CCV1 **Continuing Calibration %Diff/Drift is above control limit (CD+).**
2,4-Dinitrotoluene (29% @ 20%), 4,6-Dinitro-2-Methylphenol (24% @ 20%)

C9G0053-CCV1 **Continuing Calibration %Diff/Drift is below control limit (CD-).**
Hexachlorocyclopentadiene (25% @ 20%), N-Nitrosodimethylamine (23% @ 20%)

C9G0079-CCV1 **Calibration required quadratic regression (Q).**
2,4-Dinitrophenol (112% @ 80-120%), 4,6-Dinitro-2-Methylphenol (120% @ 80-120%), Benzoic Acid (99% @ 80-120%)

C9G0079-CCV1 **Continuing Calibration %Diff/Drift is above control limit (CD+).**
2,4-Dinitrotoluene (28% @ 20%), Di-n-butylphthalate (24% @ 20%)

C9G0079-CCV1 **Continuing Calibration %Diff/Drift is below control limit (CD-).**
N-Nitrosodimethylamine (25% @ 20%)

No other observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue

ESS Laboratory Work Order: 19G0023

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
Client Sample ID: Comp-1
Date Sampled: 07/01/19 12:00
Percent Solids: 27

ESS Laboratory Work Order: 19G0023
ESS Laboratory Sample ID: 19G0023-01
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**15.6** (6.28)		6010C		2	KJK	07/03/19 16:06	5.85	100	CG90243
Barium	**142** (6.28)		6010C		2	KJK	07/03/19 16:06	5.85	100	CG90243
Cadmium	**6.66** (1.26)		6010C		2	KJK	07/03/19 16:06	5.85	100	CG90243
Chromium	**87.1** (2.51)		6010C		2	KJK	07/03/19 16:06	5.85	100	CG90243
Lead	**571** (12.6)		6010C		2	KJK	07/03/19 16:06	5.85	100	CG90243
Mercury	**0.381** (0.029)		7471B		1	MKS	07/03/19 11:13	2.49	40	CG90244
Selenium	ND (12.6)		6010C		2	KJK	07/03/19 16:06	5.85	100	CG90243
Silver	ND (1.26)		6010C		2	KJK	07/03/19 16:06	5.85	100	CG90243

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
Client Sample ID: Comp-1
Date Sampled: 07/01/19 12:00
Percent Solids: 27

ESS Laboratory Work Order: 19G0023
ESS Laboratory Sample ID: 19G0023-01
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

1311 TCLP Metals

Analyte	Results (MRL)	MDL	Method	TCLP Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Lead	**0.160** (0.050)		1311/6010C		1	KJK	07/04/19 0:23	50	50	CG90338

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
Client Sample ID: Comp-1
Date Sampled: 07/01/19 12:00
Percent Solids: 27
Initial Volume: 7.9
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 19G0023
ESS Laboratory Sample ID: 19G0023-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
1,1,1-Trichloroethane	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
1,1,2,2-Tetrachloroethane	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
1,1,2-Trichloroethane	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
1,1-Dichloroethane	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
1,1-Dichloroethene	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
1,1-Dichloropropene	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
1,2,3-Trichlorobenzene	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
1,2,3-Trichloropropane	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
1,2,4-Trichlorobenzene	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
1,2,4-Trimethylbenzene	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
1,2-Dibromo-3-Chloropropane	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
1,2-Dibromoethane	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
1,2-Dichlorobenzene	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
1,2-Dichloroethane	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
1,2-Dichloropropane	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
1,3,5-Trimethylbenzene	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
1,3-Dichlorobenzene	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
1,3-Dichloropropane	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
1,4-Dichlorobenzene	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
1,4-Dioxane	ND (0.232)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
1-Chlorohexane	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
2,2-Dichloropropane	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
2-Butanone	ND (0.116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
2-Chlorotoluene	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
2-Hexanone	ND (0.116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
4-Chlorotoluene	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
4-Isopropyltoluene	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
4-Methyl-2-Pentanone	ND (0.116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
Acetone	**0.307** (0.116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
Benzene	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
Bromobenzene	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
Client Sample ID: Comp-1
Date Sampled: 07/01/19 12:00
Percent Solids: 27
Initial Volume: 7.9
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 19G0023
ESS Laboratory Sample ID: 19G0023-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
Bromodichloromethane	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
Bromoform	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
Bromomethane	ND (0.0232)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
Carbon Disulfide	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
Carbon Tetrachloride	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
Chlorobenzene	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
Chloroethane	ND (0.0232)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
Chloroform	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
Chloromethane	ND (0.0232)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
cis-1,2-Dichloroethene	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
cis-1,3-Dichloropropene	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
Dibromochloromethane	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
Dibromomethane	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
Dichlorodifluoromethane	ND (0.0232)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
Diethyl Ether	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
Di-isopropyl ether	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
Ethyl tertiary-butyl ether	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
Ethylbenzene	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
Hexachlorobutadiene	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
Isopropylbenzene	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
Methyl tert-Butyl Ether	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
Methylene Chloride	ND (0.0581)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
Naphthalene	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
n-Butylbenzene	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
n-Propylbenzene	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
sec-Butylbenzene	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
Styrene	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
tert-Butylbenzene	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
Tertiary-amyl methyl ether	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
Tetrachloroethene	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
Tetrahydrofuran	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
Client Sample ID: Comp-1
Date Sampled: 07/01/19 12:00
Percent Solids: 27
Initial Volume: 7.9
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 19G0023
ESS Laboratory Sample ID: 19G0023-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Toluene	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
trans-1,2-Dichloroethene	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
trans-1,3-Dichloropropene	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
Trichloroethene	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
Trichlorofluoromethane	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
Vinyl Acetate	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
Vinyl Chloride	ND (0.0232)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
Xylene O	ND (0.0116)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
Xylene P,M	ND (0.0232)		8260B Low		1	07/03/19 18:04	C9G0067	CG90311
Xylenes (Total)	ND (0.0232)		8260B Low		1	07/03/19 18:04		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*124 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*88 %*		*70-130*
Surrogate: Dibromofluoromethane	*116 %*		*70-130*
Surrogate: Toluene-d8	*115 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
Client Sample ID: Comp-1
Date Sampled: 07/01/19 12:00
Percent Solids: 27
Initial Volume: 19.8
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 19G0023
ESS Laboratory Sample ID: 19G0023-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: CAD
Prepared: 7/2/19 11:55

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**694** (139)		8100M		1	07/03/19 8:39	C9G0039	CG90110

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*66 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
Client Sample ID: Comp-1
Date Sampled: 07/01/19 12:00
Percent Solids: 27
Initial Volume: 30.8
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 19G0023
ESS Laboratory Sample ID: 19G0023-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/2/19 10:55

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1-Biphenyl	ND (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
1,2,4-Trichlorobenzene	ND (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
1,2-Dichlorobenzene	ND (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
1,3-Dichlorobenzene	ND (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
1,4-Dichlorobenzene	ND (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
2,3,4,6-Tetrachlorophenol	ND (2.99)		8270D		1	07/03/19 1:30	C9G0053	CG90122
2,4,5-Trichlorophenol	ND (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
2,4,6-Trichlorophenol	ND (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
2,4-Dichlorophenol	ND (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
2,4-Dimethylphenol	ND (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
2,4-Dinitrophenol	ND (2.99)		8270D		1	07/03/19 1:30	C9G0053	CG90122
2,4-Dinitrotoluene	ND (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
2,6-Dinitrotoluene	ND (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
2-Chloronaphthalene	ND (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
2-Chlorophenol	ND (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
2-Methylnaphthalene	ND (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
2-Methylphenol	ND (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
2-Nitroaniline	ND (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
2-Nitrophenol	ND (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
3,3´-Dichlorobenzidine	ND (1.19)		8270D		1	07/03/19 1:30	C9G0053	CG90122
3+4-Methylphenol	ND (1.19)		8270D		1	07/03/19 1:30	C9G0053	CG90122
3-Nitroaniline	ND (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
4,6-Dinitro-2-Methylphenol	ND (2.99)		8270D		1	07/03/19 1:30	C9G0053	CG90122
4-Bromophenyl-phenylether	ND (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
4-Chloro-3-Methylphenol	ND (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
4-Chloroaniline	ND (1.19)		8270D		1	07/03/19 1:30	C9G0053	CG90122
4-Chloro-phenyl-phenyl ether	ND (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
4-Nitroaniline	ND (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
4-Nitrophenol	ND (2.99)		8270D		1	07/03/19 1:30	C9G0053	CG90122
Acenaphthene	ND (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
Acenaphthylene	ND (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
Acetophenone	ND (1.19)		8270D		1	07/03/19 1:30	C9G0053	CG90122

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
Client Sample ID: Comp-1
Date Sampled: 07/01/19 12:00
Percent Solids: 27
Initial Volume: 30.8
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 19G0023
ESS Laboratory Sample ID: 19G0023-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/2/19 10:55

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aniline	ND (1.19)		8270D		1	07/03/19 1:30	C9G0053	CG90122
Anthracene	ND (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
Azobenzene	ND (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
Benzo(a)anthracene	ND (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
Benzo(a)pyrene	**0.734** (0.299)		8270D		1	07/03/19 1:30	C9G0053	CG90122
Benzo(b)fluoranthene	**0.928** (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
Benzo(g,h,i)perylene	**0.712** (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
Benzo(k)fluoranthene	**0.632** (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
Benzoic Acid	ND (2.99)		8270D		1	07/03/19 1:30	C9G0053	CG90122
Benzyl Alcohol	ND (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
bis(2-Chloroethoxy)methane	ND (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
bis(2-Chloroethyl)ether	ND (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
bis(2-chloroisopropyl)Ether	ND (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
bis(2-Ethylhexyl)phthalate	ND (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
Butylbenzylphthalate	ND (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
Carbazole	ND (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
Chrysene	**0.796** (0.299)		8270D		1	07/03/19 1:30	C9G0053	CG90122
Dibenzo(a,h)Anthracene	ND (0.299)		8270D		1	07/03/19 1:30	C9G0053	CG90122
Dibenzofuran	ND (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
Diethylphthalate	ND (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
Dimethylphthalate	ND (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
Di-n-butylphthalate	ND (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
Di-n-octylphthalate	ND (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
Fluoranthene	**1.45** (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
Fluorene	ND (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
Hexachlorobenzene	ND (0.299)		8270D		1	07/03/19 1:30	C9G0053	CG90122
Hexachlorobutadiene	ND (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
Hexachlorocyclopentadiene	ND (2.99)		8270D		1	07/03/19 1:30	C9G0053	CG90122
Hexachloroethane	ND (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
Indeno(1,2,3-cd)Pyrene	**0.624** (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
Isophorone	ND (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
Naphthalene	ND (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
Client Sample ID: Comp-1
Date Sampled: 07/01/19 12:00
Percent Solids: 27
Initial Volume: 30.8
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 19G0023
ESS Laboratory Sample ID: 19G0023-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/2/19 10:55

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Nitrobenzene	ND (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
N-Nitrosodimethylamine	ND (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
N-Nitroso-Di-n-Propylamine	ND (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
N-nitrosodiphenylamine	ND (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
Pentachlorophenol	ND (2.99)		8270D		1	07/03/19 1:30	C9G0053	CG90122
Phenanthrene	ND (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
Phenol	ND (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
Pyrene	**1.13** (0.595)		8270D		1	07/03/19 1:30	C9G0053	CG90122
Pyridine	ND (2.99)		8270D		1	07/03/19 1:30	C9G0053	CG90122

	%Recovery	*Qualifier*	*Limits*
Surrogate: 1,2-Dichlorobenzene-d4	*60 %*		*30-130*
Surrogate: 2,4,6-Tribromophenol	*81 %*		*30-130*
Surrogate: 2-Chlorophenol-d4	*65 %*		*30-130*
Surrogate: 2-Fluorobiphenyl	*61 %*		*30-130*
Surrogate: 2-Fluorophenol	*56 %*		*30-130*
Surrogate: Nitrobenzene-d5	*60 %*		*30-130*
Surrogate: Phenol-d6	*70 %*		*30-130*
Surrogate: p-Terphenyl-d14	*76 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
Client Sample ID: Comp-1
Date Sampled: 07/01/19 12:00
Percent Solids: 27

ESS Laboratory Work Order: 19G0023
ESS Laboratory Sample ID: 19G0023-01
Sample Matrix: Soil

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Corrosivity (pH)	**6.69** (N/A)		9045		1	CCP	07/01/19 21:03	S.U.	CG90155
Corrosivity (pH) Sample Temp	**Soil pH measured in water at 20.9 ºC.**								
Flashpoint	**> 200** (N/A)		1010		1	CCP	07/02/19 12:30	°F	CG90228
Reactive Cyanide	ND (2.0)		7.3.3.2		1	JLK	07/03/19 15:37	mg/kg	CG90329
Reactive Sulfide	ND (2.0)		7.3.4.1		1	JLK	07/03/19 15:37	mg/kg	CG90329

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
Client Sample ID: Comp-1
Date Sampled: 07/01/19 12:00
Percent Solids: 27
Initial Volume: 100
Final Volume: 2000
Extraction Method: 1311

ESS Laboratory Work Order: 19G0023
ESS Laboratory Sample ID: 19G0023-01
Sample Matrix: Soil
Units: °C
Analyst: BJV
Prepared: 7/2/19 16:30

TCLP Extraction by 1311

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Batch
Temperature (Min C)	**20.6** (N/A)		1311		1	BJV	07/03/19 10:03	CG90246
Temperature (Max C)	**21.4** (N/A)		1311		1	BJV	07/03/19 10:03	CG90246
Temperature (Range)	**Temperature is not within 23 +/-2 ºC.** (N/A)							

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
Client Sample ID: Comp-2
Date Sampled: 07/01/19 14:30
Percent Solids: 22

ESS Laboratory Work Order: 19G0023
ESS Laboratory Sample ID: 19G0023-02
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**17.2** (3.67)		6010C		1	KJK	07/03/19 16:16	6.11	100	CG90243
Barium	**235** (3.67)		6010C		1	KJK	07/03/19 16:16	6.11	100	CG90243
Cadmium	**1.61** (0.73)		6010C		1	KJK	07/03/19 16:16	6.11	100	CG90243
Chromium	**89.1** (1.47)		6010C		1	KJK	07/03/19 16:16	6.11	100	CG90243
Lead	**269** (7.34)		6010C		1	KJK	07/03/19 16:16	6.11	100	CG90243
Mercury	**0.191** (0.037)		7471B		1	MKS	07/03/19 11:15	2.41	40	CG90244
Selenium	ND (7.34)		6010C		1	KJK	07/03/19 16:16	6.11	100	CG90243
Silver	ND (1.47)		6010C		2	KJK	07/03/19 16:10	6.11	100	CG90243

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
Client Sample ID: Comp-2
Date Sampled: 07/01/19 14:30
Percent Solids: 22

ESS Laboratory Work Order: 19G0023
ESS Laboratory Sample ID: 19G0023-02
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

1311 TCLP Metals

Analyte	Results (MRL)	MDL	Method	TCLP Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Lead	ND (0.050)		1311/6010C		1	KJK	07/04/19 0:27	50	50	CG90338

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
Client Sample ID: Comp-2
Date Sampled: 07/01/19 14:30
Percent Solids: 22
Initial Volume: 5.7
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 19G0023
ESS Laboratory Sample ID: 19G0023-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
1,1,1-Trichloroethane	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
1,1,2,2-Tetrachloroethane	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
1,1,2-Trichloroethane	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
1,1-Dichloroethane	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
1,1-Dichloroethene	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
1,1-Dichloropropene	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
1,2,3-Trichlorobenzene	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
1,2,3-Trichloropropane	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
1,2,4-Trichlorobenzene	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
1,2,4-Trimethylbenzene	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
1,2-Dibromo-3-Chloropropane	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
1,2-Dibromoethane	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
1,2-Dichlorobenzene	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
1,2-Dichloroethane	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
1,2-Dichloropropane	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
1,3,5-Trimethylbenzene	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
1,3-Dichlorobenzene	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
1,3-Dichloropropane	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
1,4-Dichlorobenzene	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
1,4-Dioxane	ND (0.393)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
1-Chlorohexane	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
2,2-Dichloropropane	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
2-Butanone	ND (0.197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
2-Chlorotoluene	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
2-Hexanone	ND (0.197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
4-Chlorotoluene	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
4-Isopropyltoluene	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
4-Methyl-2-Pentanone	ND (0.197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
Acetone	**0.571** (0.197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
Benzene	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
Bromobenzene	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
Client Sample ID: Comp-2
Date Sampled: 07/01/19 14:30
Percent Solids: 22
Initial Volume: 5.7
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 19G0023
ESS Laboratory Sample ID: 19G0023-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
Bromodichloromethane	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
Bromoform	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
Bromomethane	ND (0.0393)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
Carbon Disulfide	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
Carbon Tetrachloride	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
Chlorobenzene	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
Chloroethane	ND (0.0393)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
Chloroform	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
Chloromethane	ND (0.0393)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
cis-1,2-Dichloroethene	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
cis-1,3-Dichloropropene	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
Dibromochloromethane	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
Dibromomethane	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
Dichlorodifluoromethane	ND (0.0393)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
Diethyl Ether	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
Di-isopropyl ether	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
Ethyl tertiary-butyl ether	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
Ethylbenzene	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
Hexachlorobutadiene	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
Isopropylbenzene	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
Methyl tert-Butyl Ether	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
Methylene Chloride	ND (0.0983)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
Naphthalene	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
n-Butylbenzene	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
n-Propylbenzene	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
sec-Butylbenzene	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
Styrene	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
tert-Butylbenzene	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
Tertiary-amyl methyl ether	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
Tetrachloroethene	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
Tetrahydrofuran	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
Client Sample ID: Comp-2
Date Sampled: 07/01/19 14:30
Percent Solids: 22
Initial Volume: 5.7
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 19G0023
ESS Laboratory Sample ID: 19G0023-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Toluene	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
trans-1,2-Dichloroethene	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
trans-1,3-Dichloropropene	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
Trichloroethene	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
Trichlorofluoromethane	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
Vinyl Acetate	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
Vinyl Chloride	ND (0.0393)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
Xylene O	ND (0.0197)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
Xylene P,M	ND (0.0393)		8260B Low		1	07/03/19 18:30	C9G0067	CG90311
Xylenes (Total)	ND (0.0393)		8260B Low		1	07/03/19 18:30		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*118 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*88 %*		*70-130*
Surrogate: Dibromofluoromethane	*109 %*		*70-130*
Surrogate: Toluene-d8	*106 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
Client Sample ID: Comp-2
Date Sampled: 07/01/19 14:30
Percent Solids: 22
Initial Volume: 19.6
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 19G0023
ESS Laboratory Sample ID: 19G0023-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: CAD
Prepared: 7/2/19 13:15

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**784** (172)		8100M		1	07/03/19 9:11	C9G0039	CG90210

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*77 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
Client Sample ID: Comp-2
Date Sampled: 07/01/19 14:30
Percent Solids: 22
Initial Volume: 30.5
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 19G0023
ESS Laboratory Sample ID: 19G0023-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/2/19 10:55

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1-Biphenyl	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
1,2,4-Trichlorobenzene	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
1,2-Dichlorobenzene	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
1,3-Dichlorobenzene	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
1,4-Dichlorobenzene	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
2,3,4,6-Tetrachlorophenol	ND (3.68)		8270D		1	07/03/19 20:56	C9G0079	CG90122
2,4,5-Trichlorophenol	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
2,4,6-Trichlorophenol	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
2,4-Dichlorophenol	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
2,4-Dimethylphenol	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
2,4-Dinitrophenol	ND (3.68)		8270D		1	07/03/19 20:56	C9G0079	CG90122
2,4-Dinitrotoluene	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
2,6-Dinitrotoluene	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
2-Chloronaphthalene	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
2-Chlorophenol	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
2-Methylnaphthalene	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
2-Methylphenol	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
2-Nitroaniline	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
2-Nitrophenol	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
3,3´-Dichlorobenzidine	ND (1.47)		8270D		1	07/03/19 20:56	C9G0079	CG90122
3+4-Methylphenol	ND (1.47)		8270D		1	07/03/19 20:56	C9G0079	CG90122
3-Nitroaniline	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
4,6-Dinitro-2-Methylphenol	ND (3.68)		8270D		1	07/03/19 20:56	C9G0079	CG90122
4-Bromophenyl-phenylether	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
4-Chloro-3-Methylphenol	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
4-Chloroaniline	ND (1.47)		8270D		1	07/03/19 20:56	C9G0079	CG90122
4-Chloro-phenyl-phenyl ether	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
4-Nitroaniline	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
4-Nitrophenol	ND (3.68)		8270D		1	07/03/19 20:56	C9G0079	CG90122
Acenaphthene	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
Acenaphthylene	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
Acetophenone	ND (1.47)		8270D		1	07/03/19 20:56	C9G0079	CG90122

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
Client Sample ID: Comp-2
Date Sampled: 07/01/19 14:30
Percent Solids: 22
Initial Volume: 30.5
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 19G0023
ESS Laboratory Sample ID: 19G0023-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/2/19 10:55

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aniline	ND (1.47)		8270D		1	07/03/19 20:56	C9G0079	CG90122
Anthracene	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
Azobenzene	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
Benzo(a)anthracene	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
Benzo(a)pyrene	ND (0.368)		8270D		1	07/03/19 20:56	C9G0079	CG90122
Benzo(b)fluoranthene	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
Benzo(g,h,i)perylene	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
Benzo(k)fluoranthene	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
Benzoic Acid	ND (3.68)		8270D		1	07/03/19 20:56	C9G0079	CG90122
Benzyl Alcohol	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
bis(2-Chloroethoxy)methane	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
bis(2-Chloroethyl)ether	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
bis(2-chloroisopropyl)Ether	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
bis(2-Ethylhexyl)phthalate	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
Butylbenzylphthalate	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
Carbazole	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
Chrysene	ND (0.368)		8270D		1	07/03/19 20:56	C9G0079	CG90122
Dibenzo(a,h)Anthracene	ND (0.368)		8270D		1	07/03/19 20:56	C9G0079	CG90122
Dibenzofuran	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
Diethylphthalate	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
Dimethylphthalate	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
Di-n-butylphthalate	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
Di-n-octylphthalate	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
Fluoranthene	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
Fluorene	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
Hexachlorobenzene	ND (0.368)		8270D		1	07/03/19 20:56	C9G0079	CG90122
Hexachlorobutadiene	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
Hexachlorocyclopentadiene	ND (3.68)		8270D		1	07/03/19 20:56	C9G0079	CG90122
Hexachloroethane	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
Indeno(1,2,3-cd)Pyrene	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
Isophorone	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
Naphthalene	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
Client Sample ID: Comp-2
Date Sampled: 07/01/19 14:30
Percent Solids: 22
Initial Volume: 30.5
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 19G0023
ESS Laboratory Sample ID: 19G0023-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/2/19 10:55

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Nitrobenzene	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
N-Nitrosodimethylamine	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
N-Nitroso-Di-n-Propylamine	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
N-nitrosodiphenylamine	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
Pentachlorophenol	ND (3.68)		8270D		1	07/03/19 20:56	C9G0079	CG90122
Phenanthrene	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
Phenol	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
Pyrene	ND (0.734)		8270D		1	07/03/19 20:56	C9G0079	CG90122
Pyridine	ND (3.68)		8270D		1	07/03/19 20:56	C9G0079	CG90122

	%Recovery	*Qualifier*	*Limits*
Surrogate: 1,2-Dichlorobenzene-d4	*72 %*		*30-130*
Surrogate: 2,4,6-Tribromophenol	*86 %*		*30-130*
Surrogate: 2-Chlorophenol-d4	*78 %*		*30-130*
Surrogate: 2-Fluorobiphenyl	*68 %*		*30-130*
Surrogate: 2-Fluorophenol	*66 %*		*30-130*
Surrogate: Nitrobenzene-d5	*71 %*		*30-130*
Surrogate: Phenol-d6	*85 %*		*30-130*
Surrogate: p-Terphenyl-d14	*86 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
Client Sample ID: Comp-2
Date Sampled: 07/01/19 14:30
Percent Solids: 22

ESS Laboratory Work Order: 19G0023
ESS Laboratory Sample ID: 19G0023-02
Sample Matrix: Soil

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Corrosivity (pH)	**6.67** (N/A)		9045		1	CCP	07/01/19 21:03	S.U.	CG90155
Corrosivity (pH) Sample Temp	**Soil pH measured in water at 20.9 ºC.**								
Flashpoint	**> 200** (N/A)		1010		1	CCP	07/02/19 12:30	°F	CG90228
Reactive Cyanide	ND (2.0)		7.3.3.2		1	JLK	07/03/19 15:37	mg/kg	CG90329
Reactive Sulfide	ND (2.0)		7.3.4.1		1	JLK	07/03/19 15:37	mg/kg	CG90329

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
Client Sample ID: Comp-2
Date Sampled: 07/01/19 14:30
Percent Solids: 22
Initial Volume: 100
Final Volume: 2000
Extraction Method: 1311

ESS Laboratory Work Order: 19G0023
ESS Laboratory Sample ID: 19G0023-02
Sample Matrix: Soil
Units: °C
Analyst: BJV
Prepared: 7/2/19 16:30

TCLP Extraction by 1311

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Batch
Temperature (Min C)	**20.6** (N/A)		1311		1	BJV	07/03/19 10:03	CG90246
Temperature (Max C)	**21.4** (N/A)		1311		1	BJV	07/03/19 10:03	CG90246
Temperature (Range)	**Temperature is not within 23 +/-2 ºC.** (N/A)							

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
Client Sample ID: Comp-1 Air Dried
Date Sampled: 07/01/19 12:00
Percent Solids: 49
Initial Volume: 20.4
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 19G0023
ESS Laboratory Sample ID: 19G0023-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MJV
Prepared: 7/3/19 10:55

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.1)		8082A		1	07/08/19 10:29		CG90206
Aroclor 1221	ND (0.1)		8082A		1	07/08/19 10:29		CG90206
Aroclor 1232	ND (0.1)		8082A		1	07/08/19 10:29		CG90206
Aroclor 1242	**0.4** (0.1)		8082A		1	07/08/19 10:29		CG90206
Aroclor 1248	ND (0.1)		8082A		1	07/08/19 10:29		CG90206
Aroclor 1254 [2C]	**0.7** (0.1)		8082A		1	07/08/19 10:29		CG90206
Aroclor 1260 [2C]	**0.2** (0.1)		8082A		1	07/08/19 10:29		CG90206
Aroclor 1262	ND (0.1)		8082A		1	07/08/19 10:29		CG90206
Aroclor 1268	ND (0.1)		8082A		1	07/08/19 10:29		CG90206

	%Recovery	*Qualifier*	*Limits*
Surrogate: Decachlorobiphenyl	*54 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*77 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*57 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*72 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
Client Sample ID: Comp-2 Air Dried
Date Sampled: 07/01/19 14:30
Percent Solids: 48
Initial Volume: 20
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 19G0023
ESS Laboratory Sample ID: 19G0023-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MJV
Prepared: 7/3/19 10:55

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.1)		8082A		1	07/08/19 10:47		CG90206
Aroclor 1221	ND (0.1)		8082A		1	07/08/19 10:47		CG90206
Aroclor 1232	ND (0.1)		8082A		1	07/08/19 10:47		CG90206
Aroclor 1242 [2C]	ND (0.1)		8082A		1	07/08/19 10:47		CG90206
Aroclor 1248	ND (0.1)		8082A		1	07/08/19 10:47		CG90206
Aroclor 1254 [2C]	**0.2** (0.1)		8082A		1	07/08/19 10:47		CG90206
Aroclor 1260 [2C]	ND (0.1)		8082A		1	07/08/19 10:47		CG90206
Aroclor 1262	ND (0.1)		8082A		1	07/08/19 10:47		CG90206
Aroclor 1268	ND (0.1)		8082A		1	07/08/19 10:47		CG90206

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*55 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*75 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*55 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*69 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue

ESS Laboratory Work Order: 19G0023

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Total Metals										
Batch CG90243 - 3050B										
Blank										
Arsenic	ND	2.50	mg/kg wet							
Barium	ND	2.50	mg/kg wet							
Cadmium	ND	0.50	mg/kg wet							
Chromium	ND	1.00	mg/kg wet							
Lead	ND	5.00	mg/kg wet							
Selenium	ND	5.00	mg/kg wet							
Silver	ND	0.50	mg/kg wet							
LCS										
Arsenic	114	8.47	mg/kg wet	128.0		89	85-114			
Barium	544	8.47	mg/kg wet	536.0		101	82-118			
Cadmium	90.5	1.69	mg/kg wet	99.00		91	87-113			
Chromium	115	3.39	mg/kg wet	116.0		99	82-118			
Lead	278	16.9	mg/kg wet	277.0		100	84-116			
Selenium	222	16.9	mg/kg wet	242.0		92	80-120			
Silver	65.0	1.69	mg/kg wet	64.30		101	86-114			
LCS Dup										
Arsenic	115	8.33	mg/kg wet	128.0		90	85-114	0.9	20	
Barium	520	8.33	mg/kg wet	536.0		97	82-118	4	20	
Cadmium	89.9	1.67	mg/kg wet	99.00		91	87-113	0.7	20	
Chromium	110	3.33	mg/kg wet	116.0		95	82-118	5	20	
Lead	272	16.7	mg/kg wet	277.0		98	84-116	2	20	
Selenium	220	16.7	mg/kg wet	242.0		91	80-120	1	20	
Silver	62.9	1.67	mg/kg wet	64.30		98	86-114	3	20	
Batch CG90244 - 7471B										
Blank										
Mercury	ND	0.033	mg/kg wet							
LCS										
Mercury	12.5	0.884	mg/kg wet	16.80		75	51-105			
LCS Dup										
Mercury	12.4	0.900	mg/kg wet	16.80		74	51-105	1	20	
1311 TCLP Metals										
Batch CG90338 - 3005A_TCLP										
Blank										
Lead	ND	0.050	mg/L							
LCS										
Lead	0.474	0.050	mg/L	0.5000		95	80-120			
LCS Dup										
Lead	0.482	0.050	mg/L	0.5000		96	80-120	2	20	
5035/8260B Volatile Organic Compounds / Low Level										

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue

ESS Laboratory Work Order: 19G0023

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CG90311 - 5035										
Blank										
1,1,1,2-Tetrachloroethane	ND	0.0050	mg/kg wet							
1,1,1-Trichloroethane	ND	0.0050	mg/kg wet							
1,1,2,2-Tetrachloroethane	ND	0.0050	mg/kg wet							
1,1,2-Trichloroethane	ND	0.0050	mg/kg wet							
1,1-Dichloroethane	ND	0.0050	mg/kg wet							
1,1-Dichloroethene	ND	0.0050	mg/kg wet							
1,1-Dichloropropene	ND	0.0050	mg/kg wet							
1,2,3-Trichlorobenzene	ND	0.0050	mg/kg wet							
1,2,3-Trichloropropane	ND	0.0050	mg/kg wet							
1,2,4-Trichlorobenzene	ND	0.0050	mg/kg wet							
1,2,4-Trimethylbenzene	ND	0.0050	mg/kg wet							
1,2-Dibromo-3-Chloropropane	ND	0.0050	mg/kg wet							
1,2-Dibromoethane	ND	0.0050	mg/kg wet							
1,2-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,2-Dichloroethane	ND	0.0050	mg/kg wet							
1,2-Dichloropropane	ND	0.0050	mg/kg wet							
1,3,5-Trimethylbenzene	ND	0.0050	mg/kg wet							
1,3-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,3-Dichloropropane	ND	0.0050	mg/kg wet							
1,4-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,4-Dioxane	ND	0.100	mg/kg wet							
1-Chlorohexane	ND	0.0050	mg/kg wet							
2,2-Dichloropropane	ND	0.0050	mg/kg wet							
2-Butanone	ND	0.0500	mg/kg wet							
2-Chlorotoluene	ND	0.0050	mg/kg wet							
2-Hexanone	ND	0.0500	mg/kg wet							
4-Chlorotoluene	ND	0.0050	mg/kg wet							
4-Isopropyltoluene	ND	0.0050	mg/kg wet							
4-Methyl-2-Pentanone	ND	0.0500	mg/kg wet							
Acetone	ND	0.0500	mg/kg wet							
Benzene	ND	0.0050	mg/kg wet							
Bromobenzene	ND	0.0050	mg/kg wet							
Bromochloromethane	ND	0.0050	mg/kg wet							
Bromodichloromethane	ND	0.0050	mg/kg wet							
Bromoform	ND	0.0050	mg/kg wet							
Bromomethane	ND	0.0100	mg/kg wet							
Carbon Disulfide	ND	0.0050	mg/kg wet							
Carbon Tetrachloride	ND	0.0050	mg/kg wet							
Chlorobenzene	ND	0.0050	mg/kg wet							
Chloroethane	ND	0.0100	mg/kg wet							
Chloroform	ND	0.0050	mg/kg wet							
Chloromethane	ND	0.0100	mg/kg wet							
cis-1,2-Dichloroethene	ND	0.0050	mg/kg wet							
cis-1,3-Dichloropropene	ND	0.0050	mg/kg wet							

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue

ESS Laboratory Work Order: 19G0023

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CG90311 - 5035										
Dibromochloromethane	ND	0.0050	mg/kg wet							
Dibromomethane	ND	0.0050	mg/kg wet							
Dichlorodifluoromethane	ND	0.0100	mg/kg wet							
Diethyl Ether	ND	0.0050	mg/kg wet							
Di-isopropyl ether	ND	0.0050	mg/kg wet							
Ethyl tertiary-butyl ether	ND	0.0050	mg/kg wet							
Ethylbenzene	ND	0.0050	mg/kg wet							
Hexachlorobutadiene	ND	0.0050	mg/kg wet							
Isopropylbenzene	ND	0.0050	mg/kg wet							
Methyl tert-Butyl Ether	ND	0.0050	mg/kg wet							
Methylene Chloride	ND	0.0250	mg/kg wet							
Naphthalene	ND	0.0050	mg/kg wet							
n-Butylbenzene	ND	0.0050	mg/kg wet							
n-Propylbenzene	ND	0.0050	mg/kg wet							
sec-Butylbenzene	ND	0.0050	mg/kg wet							
Styrene	ND	0.0050	mg/kg wet							
tert-Butylbenzene	ND	0.0050	mg/kg wet							
Tertiary-amyl methyl ether	ND	0.0050	mg/kg wet							
Tetrachloroethene	ND	0.0050	mg/kg wet							
Tetrahydrofuran	ND	0.0050	mg/kg wet							
Toluene	ND	0.0050	mg/kg wet							
trans-1,2-Dichloroethene	ND	0.0050	mg/kg wet							
trans-1,3-Dichloropropene	ND	0.0050	mg/kg wet							
Trichloroethene	ND	0.0050	mg/kg wet							
Trichlorofluoromethane	ND	0.0050	mg/kg wet							
Vinyl Acetate	ND	0.0050	mg/kg wet							
Vinyl Chloride	ND	0.0100	mg/kg wet							
Xylene O	ND	0.0050	mg/kg wet							
Xylene P,M	ND	0.0100	mg/kg wet							
Surrogate: 1,2-Dichloroethane-d4	*0.0549*		mg/kg wet	*0.05000*		*110*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0475*		mg/kg wet	*0.05000*		*95*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0508*		mg/kg wet	*0.05000*		*102*	*70-130*			
Surrogate: Toluene-d8	*0.0499*		mg/kg wet	*0.05000*		*100*	*70-130*			
LCS										
1,1,1,2-Tetrachloroethane	0.0530	0.0050	mg/kg wet	0.05000		106	70-130			
1,1,1-Trichloroethane	0.0573	0.0050	mg/kg wet	0.05000		115	70-130			
1,1,2,2-Tetrachloroethane	0.0474	0.0050	mg/kg wet	0.05000		95	70-130			
1,1,2-Trichloroethane	0.0523	0.0050	mg/kg wet	0.05000		105	70-130			
1,1-Dichloroethane	0.0566	0.0050	mg/kg wet	0.05000		113	70-130			
1,1-Dichloroethene	0.0557	0.0050	mg/kg wet	0.05000		111	70-130			
1,1-Dichloropropene	0.0563	0.0050	mg/kg wet	0.05000		113	70-130			
1,2,3-Trichlorobenzene	0.0527	0.0050	mg/kg wet	0.05000		105	70-130			
1,2,3-Trichloropropane	0.0464	0.0050	mg/kg wet	0.05000		93	70-130			
1,2,4-Trichlorobenzene	0.0536	0.0050	mg/kg wet	0.05000		107	70-130			
1,2,4-Trimethylbenzene	0.0556	0.0050	mg/kg wet	0.05000		111	70-130			

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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CG90311 - 5035										
1,2-Dibromo-3-Chloropropane	0.0420	0.0050	mg/kg wet	0.05000		84	70-130			
1,2-Dibromoethane	0.0493	0.0050	mg/kg wet	0.05000		99	70-130			
1,2-Dichlorobenzene	0.0509	0.0050	mg/kg wet	0.05000		102	70-130			
1,2-Dichloroethane	0.0543	0.0050	mg/kg wet	0.05000		109	70-130			
1,2-Dichloropropane	0.0533	0.0050	mg/kg wet	0.05000		107	70-130			
1,3,5-Trimethylbenzene	0.0545	0.0050	mg/kg wet	0.05000		109	70-130			
1,3-Dichlorobenzene	0.0515	0.0050	mg/kg wet	0.05000		103	70-130			
1,3-Dichloropropane	0.0512	0.0050	mg/kg wet	0.05000		102	70-130			
1,4-Dichlorobenzene	0.0503	0.0050	mg/kg wet	0.05000		101	70-130			
1,4-Dioxane	0.814	0.100	mg/kg wet	1.000		81	70-130			
1-Chlorohexane	0.0450	0.0050	mg/kg wet	0.05000		90	70-130			
2,2-Dichloropropane	0.0566	0.0050	mg/kg wet	0.05000		113	70-130			
2-Butanone	0.255	0.0500	mg/kg wet	0.2500		102	70-130			
2-Chlorotoluene	0.0518	0.0050	mg/kg wet	0.05000		104	70-130			
2-Hexanone	0.210	0.0500	mg/kg wet	0.2500		84	70-130			
4-Chlorotoluene	0.0523	0.0050	mg/kg wet	0.05000		105	70-130			
4-Isopropyltoluene	0.0525	0.0050	mg/kg wet	0.05000		105	70-130			
4-Methyl-2-Pentanone	0.217	0.0500	mg/kg wet	0.2500		87	70-130			
Acetone	0.220	0.0500	mg/kg wet	0.2500		88	70-130			
Benzene	0.0532	0.0050	mg/kg wet	0.05000		106	70-130			
Bromobenzene	0.0516	0.0050	mg/kg wet	0.05000		103	70-130			
Bromochloromethane	0.0516	0.0050	mg/kg wet	0.05000		103	70-130			
Bromodichloromethane	0.0515	0.0050	mg/kg wet	0.05000		103	70-130			
Bromoform	0.0423	0.0050	mg/kg wet	0.05000		85	70-130			
Bromomethane	0.0472	0.0100	mg/kg wet	0.05000		94	70-130			
Carbon Disulfide	0.0581	0.0050	mg/kg wet	0.05000		116	70-130			
Carbon Tetrachloride	0.0556	0.0050	mg/kg wet	0.05000		111	70-130			
Chlorobenzene	0.0497	0.0050	mg/kg wet	0.05000		99	70-130			
Chloroethane	0.0503	0.0100	mg/kg wet	0.05000		101	70-130			
Chloroform	0.0541	0.0050	mg/kg wet	0.05000		108	70-130			
Chloromethane	0.0550	0.0100	mg/kg wet	0.05000		110	70-130			
cis-1,2-Dichloroethene	0.0547	0.0050	mg/kg wet	0.05000		109	70-130			
cis-1,3-Dichloropropene	0.0504	0.0050	mg/kg wet	0.05000		101	70-130			
Dibromochloromethane	0.0440	0.0050	mg/kg wet	0.05000		88	70-130			
Dibromomethane	0.0532	0.0050	mg/kg wet	0.05000		106	70-130			
Dichlorodifluoromethane	0.0484	0.0100	mg/kg wet	0.05000		97	70-130			
Diethyl Ether	0.0547	0.0050	mg/kg wet	0.05000		109	70-130			
Di-isopropyl ether	0.0512	0.0050	mg/kg wet	0.05000		102	70-130			
Ethyl tertiary-butyl ether	0.0484	0.0050	mg/kg wet	0.05000		97	70-130			
Ethylbenzene	0.0530	0.0050	mg/kg wet	0.05000		106	70-130			
Hexachlorobutadiene	0.0539	0.0050	mg/kg wet	0.05000		108	70-130			
Isopropylbenzene	0.0530	0.0050	mg/kg wet	0.05000		106	70-130			
Methyl tert-Butyl Ether	0.0525	0.0050	mg/kg wet	0.05000		105	70-130			
Methylene Chloride	0.0508	0.0250	mg/kg wet	0.05000		102	70-130			
Naphthalene	0.0445	0.0050	mg/kg wet	0.05000		89	70-130			

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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CG90311 - 5035										
n-Butylbenzene	0.0552	0.0050	mg/kg wet	0.05000		110	70-130			
n-Propylbenzene	0.0531	0.0050	mg/kg wet	0.05000		106	70-130			
sec-Butylbenzene	0.0524	0.0050	mg/kg wet	0.05000		105	70-130			
Styrene	0.0485	0.0050	mg/kg wet	0.05000		97	70-130			
tert-Butylbenzene	0.0531	0.0050	mg/kg wet	0.05000		106	70-130			
Tertiary-amyl methyl ether	0.0450	0.0050	mg/kg wet	0.05000		90	70-130			
Tetrachloroethene	0.0508	0.0050	mg/kg wet	0.05000		102	70-130			
Tetrahydrofuran	0.0413	0.0050	mg/kg wet	0.05000		83	70-130			
Toluene	0.0535	0.0050	mg/kg wet	0.05000		107	70-130			
trans-1,2-Dichloroethene	0.0540	0.0050	mg/kg wet	0.05000		108	70-130			
trans-1,3-Dichloropropene	0.0470	0.0050	mg/kg wet	0.05000		94	70-130			
Trichloroethene	0.0541	0.0050	mg/kg wet	0.05000		108	70-130			
Trichlorofluoromethane	0.0570	0.0050	mg/kg wet	0.05000		114	70-130			
Vinyl Acetate	0.0432	0.0050	mg/kg wet	0.05000		86	70-130			
Vinyl Chloride	0.0548	0.0100	mg/kg wet	0.05000		110	70-130			
Xylene O	0.0538	0.0050	mg/kg wet	0.05000		108	70-130			
Xylene P,M	0.107	0.0100	mg/kg wet	0.1000		107	70-130			
Surrogate: 1,2-Dichloroethane-d4	*0.0514*		mg/kg wet	*0.05000*		*103*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0507*		mg/kg wet	*0.05000*		*101*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0507*		mg/kg wet	*0.05000*		*101*	*70-130*			
Surrogate: Toluene-d8	*0.0483*		mg/kg wet	*0.05000*		*97*	*70-130*			
LCS Dup										
1,1,1,2-Tetrachloroethane	0.0579	0.0050	mg/kg wet	0.05000		116	70-130	9	25	
1,1,1-Trichloroethane	0.0608	0.0050	mg/kg wet	0.05000		122	70-130	6	25	
1,1,2,2-Tetrachloroethane	0.0532	0.0050	mg/kg wet	0.05000		106	70-130	12	25	
1,1,2-Trichloroethane	0.0565	0.0050	mg/kg wet	0.05000		113	70-130	8	25	
1,1-Dichloroethane	0.0600	0.0050	mg/kg wet	0.05000		120	70-130	6	25	
1,1-Dichloroethene	0.0618	0.0050	mg/kg wet	0.05000		124	70-130	10	25	
1,1-Dichloropropene	0.0605	0.0050	mg/kg wet	0.05000		121	70-130	7	25	
1,2,3-Trichlorobenzene	0.0569	0.0050	mg/kg wet	0.05000		114	70-130	8	25	
1,2,3-Trichloropropane	0.0529	0.0050	mg/kg wet	0.05000		106	70-130	13	25	
1,2,4-Trichlorobenzene	0.0581	0.0050	mg/kg wet	0.05000		116	70-130	8	25	
1,2,4-Trimethylbenzene	0.0598	0.0050	mg/kg wet	0.05000		120	70-130	7	25	
1,2-Dibromo-3-Chloropropane	0.0493	0.0050	mg/kg wet	0.05000		99	70-130	16	25	
1,2-Dibromoethane	0.0563	0.0050	mg/kg wet	0.05000		113	70-130	13	25	
1,2-Dichlorobenzene	0.0547	0.0050	mg/kg wet	0.05000		109	70-130	7	25	
1,2-Dichloroethane	0.0571	0.0050	mg/kg wet	0.05000		114	70-130	5	25	
1,2-Dichloropropane	0.0569	0.0050	mg/kg wet	0.05000		114	70-130	6	25	
1,3,5-Trimethylbenzene	0.0593	0.0050	mg/kg wet	0.05000		119	70-130	8	25	
1,3-Dichlorobenzene	0.0546	0.0050	mg/kg wet	0.05000		109	70-130	6	25	
1,3-Dichloropropane	0.0579	0.0050	mg/kg wet	0.05000		116	70-130	12	25	
1,4-Dichlorobenzene	0.0539	0.0050	mg/kg wet	0.05000		108	70-130	7	25	
1,4-Dioxane	0.987	0.100	mg/kg wet	1.000		99	70-130	19	20	
1-Chlorohexane	0.0511	0.0050	mg/kg wet	0.05000		102	70-130	13	25	
2,2-Dichloropropane	0.0601	0.0050	mg/kg wet	0.05000		120	70-130	6	25	

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Quality Control Data

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch CG90311 - 5035										
2-Butanone	0.280	0.0500	mg/kg wet	0.2500		112	70-130	9	25	
2-Chlorotoluene	0.0560	0.0050	mg/kg wet	0.05000		112	70-130	8	25	
2-Hexanone	0.255	0.0500	mg/kg wet	0.2500		102	70-130	20	25	
4-Chlorotoluene	0.0562	0.0050	mg/kg wet	0.05000		112	70-130	7	25	
4-Isopropyltoluene	0.0572	0.0050	mg/kg wet	0.05000		114	70-130	8	25	
4-Methyl-2-Pentanone	0.249	0.0500	mg/kg wet	0.2500		100	70-130	14	25	
Acetone	0.251	0.0500	mg/kg wet	0.2500		101	70-130	13	25	
Benzene	0.0568	0.0050	mg/kg wet	0.05000		114	70-130	6	25	
Bromobenzene	0.0557	0.0050	mg/kg wet	0.05000		111	70-130	7	25	
Bromochloromethane	0.0555	0.0050	mg/kg wet	0.05000		111	70-130	7	25	
Bromodichloromethane	0.0541	0.0050	mg/kg wet	0.05000		108	70-130	5	25	
Bromoform	0.0476	0.0050	mg/kg wet	0.05000		95	70-130	12	25	
Bromomethane	0.0490	0.0100	mg/kg wet	0.05000		98	70-130	4	25	
Carbon Disulfide	0.0633	0.0050	mg/kg wet	0.05000		127	70-130	9	25	
Carbon Tetrachloride	0.0598	0.0050	mg/kg wet	0.05000		120	70-130	7	25	
Chlorobenzene	0.0554	0.0050	mg/kg wet	0.05000		111	70-130	11	25	
Chloroethane	0.0548	0.0100	mg/kg wet	0.05000		110	70-130	9	25	
Chloroform	0.0572	0.0050	mg/kg wet	0.05000		114	70-130	6	25	
Chloromethane	0.0590	0.0100	mg/kg wet	0.05000		118	70-130	7	25	
cis-1,2-Dichloroethene	0.0584	0.0050	mg/kg wet	0.05000		117	70-130	7	25	
cis-1,3-Dichloropropene	0.0535	0.0050	mg/kg wet	0.05000		107	70-130	6	25	
Dibromochloromethane	0.0495	0.0050	mg/kg wet	0.05000		99	70-130	12	25	
Dibromomethane	0.0569	0.0050	mg/kg wet	0.05000		114	70-130	7	25	
Dichlorodifluoromethane	0.0512	0.0100	mg/kg wet	0.05000		102	70-130	6	25	
Diethyl Ether	0.0588	0.0050	mg/kg wet	0.05000		118	70-130	7	25	
Di-isopropyl ether	0.0554	0.0050	mg/kg wet	0.05000		111	70-130	8	25	
Ethyl tertiary-butyl ether	0.0515	0.0050	mg/kg wet	0.05000		103	70-130	6	25	
Ethylbenzene	0.0590	0.0050	mg/kg wet	0.05000		118	70-130	11	25	
Hexachlorobutadiene	0.0584	0.0050	mg/kg wet	0.05000		117	70-130	8	25	
Isopropylbenzene	0.0580	0.0050	mg/kg wet	0.05000		116	70-130	9	25	
Methyl tert-Butyl Ether	0.0572	0.0050	mg/kg wet	0.05000		114	70-130	9	25	
Methylene Chloride	0.0543	0.0250	mg/kg wet	0.05000		109	70-130	7	25	
Naphthalene	0.0503	0.0050	mg/kg wet	0.05000		101	70-130	12	25	
n-Butylbenzene	0.0597	0.0050	mg/kg wet	0.05000		119	70-130	8	25	
n-Propylbenzene	0.0583	0.0050	mg/kg wet	0.05000		117	70-130	9	25	
sec-Butylbenzene	0.0568	0.0050	mg/kg wet	0.05000		114	70-130	8	25	
Styrene	0.0541	0.0050	mg/kg wet	0.05000		108	70-130	11	25	
tert-Butylbenzene	0.0583	0.0050	mg/kg wet	0.05000		117	70-130	9	25	
Tertiary-amyl methyl ether	0.0491	0.0050	mg/kg wet	0.05000		98	70-130	9	25	
Tetrachloroethene	0.0569	0.0050	mg/kg wet	0.05000		114	70-130	11	25	
Tetrahydrofuran	0.0499	0.0050	mg/kg wet	0.05000		100	70-130	19	25	
Toluene	0.0567	0.0050	mg/kg wet	0.05000		113	70-130	6	25	
trans-1,2-Dichloroethene	0.0599	0.0050	mg/kg wet	0.05000		120	70-130	10	25	
trans-1,3-Dichloropropene	0.0506	0.0050	mg/kg wet	0.05000		101	70-130	7	25	
Trichloroethene	0.0576	0.0050	mg/kg wet	0.05000		115	70-130	6	25	

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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CG90311 - 5035										
Trichlorofluoromethane	0.0611	0.0050	mg/kg wet	0.05000		122	70-130	7	25	
Vinyl Acetate	0.0481	0.0050	mg/kg wet	0.05000		96	70-130	11	25	
Vinyl Chloride	0.0591	0.0100	mg/kg wet	0.05000		118	70-130	8	25	
Xylene O	0.0591	0.0050	mg/kg wet	0.05000		118	70-130	9	25	
Xylene P,M	0.120	0.0100	mg/kg wet	0.1000		120	70-130	11	25	
Surrogate: 1,2-Dichloroethane-d4	*0.0504*		mg/kg wet	*0.05000*		*101*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0510*		mg/kg wet	*0.05000*		*102*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0503*		mg/kg wet	*0.05000*		*101*	*70-130*			
Surrogate: Toluene-d8	*0.0503*		mg/kg wet	*0.05000*		*101*	*70-130*			
8082A Polychlorinated Biphenyls (PCB)										
Batch CG90206 - 3540C										
Blank										
Aroclor 1016	ND	0.05	mg/kg wet							
Aroclor 1016 [2C]	ND	0.05	mg/kg wet							
Aroclor 1221	ND	0.05	mg/kg wet							
Aroclor 1221 [2C]	ND	0.05	mg/kg wet							
Aroclor 1232	ND	0.05	mg/kg wet							
Aroclor 1232 [2C]	ND	0.05	mg/kg wet							
Aroclor 1242	ND	0.05	mg/kg wet							
Aroclor 1242 [2C]	ND	0.05	mg/kg wet							
Aroclor 1248	ND	0.05	mg/kg wet							
Aroclor 1248 [2C]	ND	0.05	mg/kg wet							
Aroclor 1254	ND	0.05	mg/kg wet							
Aroclor 1254 [2C]	ND	0.05	mg/kg wet							
Aroclor 1260	ND	0.05	mg/kg wet							
Aroclor 1260 [2C]	ND	0.05	mg/kg wet							
Aroclor 1262	ND	0.05	mg/kg wet							
Aroclor 1262 [2C]	ND	0.05	mg/kg wet							
Aroclor 1268	ND	0.05	mg/kg wet							
Aroclor 1268 [2C]	ND	0.05	mg/kg wet							
Surrogate: Decachlorobiphenyl	*0.0233*		mg/kg wet	*0.02500*		*93*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0214*		mg/kg wet	*0.02500*		*86*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0182*		mg/kg wet	*0.02500*		*73*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0197*		mg/kg wet	*0.02500*		*79*	*30-150*			
LCS										
Aroclor 1016	0.4	0.05	mg/kg wet	0.5000		90	40-140			
Aroclor 1016 [2C]	0.4	0.05	mg/kg wet	0.5000		88	40-140			
Aroclor 1260	0.4	0.05	mg/kg wet	0.5000		88	40-140			
Aroclor 1260 [2C]	0.4	0.05	mg/kg wet	0.5000		86	40-140			
Surrogate: Decachlorobiphenyl	*0.0227*		mg/kg wet	*0.02500*		*91*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0210*		mg/kg wet	*0.02500*		*84*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0190*		mg/kg wet	*0.02500*		*76*	*30-150*			

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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8082A Polychlorinated Biphenyls (PCB)										
Batch CG90206 - 3540C										
Surrogate: Tetrachloro-m-xylene [2C]	*0.0194*		mg/kg wet	*0.02500*		*78*	*30-150*			
LCS Dup										
Aroclor 1016	0.4	0.05	mg/kg wet	0.5000		90	40-140	0.05	30	
Aroclor 1016 [2C]	0.4	0.05	mg/kg wet	0.5000		86	40-140	3	30	
Aroclor 1260	0.4	0.05	mg/kg wet	0.5000		87	40-140	0.8	30	
Aroclor 1260 [2C]	0.4	0.05	mg/kg wet	0.5000		84	40-140	2	30	
Surrogate: Decachlorobiphenyl	*0.0225*		mg/kg wet	*0.02500*		*90*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0209*		mg/kg wet	*0.02500*		*83*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0189*		mg/kg wet	*0.02500*		*75*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0195*		mg/kg wet	*0.02500*		*78*	*30-150*			
8100M Total Petroleum Hydrocarbons										
Batch CG90110 - 3546										
Blank										
Decane (C10)	ND	0.2	mg/kg wet							
Docosane (C22)	ND	0.2	mg/kg wet							
Dodecane (C12)	ND	0.2	mg/kg wet							
Eicosane (C20)	ND	0.2	mg/kg wet							
Hexacosane (C26)	ND	0.2	mg/kg wet							
Hexadecane (C16)	ND	0.2	mg/kg wet							
Nonadecane (C19)	ND	0.2	mg/kg wet							
Nonane (C9)	ND	0.2	mg/kg wet							
Octacosane (C28)	ND	0.2	mg/kg wet							
Octadecane (C18)	ND	0.2	mg/kg wet							
Tetracosane (C24)	ND	0.2	mg/kg wet							
Tetradecane (C14)	ND	0.2	mg/kg wet							
Total Petroleum Hydrocarbons	ND	37.5	mg/kg wet							
Triacontane (C30)	ND	0.2	mg/kg wet							
Surrogate: O-Terphenyl	*4.17*		mg/kg wet	*5.000*		*83*	*40-140*			
LCS										
Decane (C10)	1.9	0.2	mg/kg wet	2.500		74	40-140			
Docosane (C22)	2.0	0.2	mg/kg wet	2.500		80	40-140			
Dodecane (C12)	1.9	0.2	mg/kg wet	2.500		77	40-140			
Eicosane (C20)	2.0	0.2	mg/kg wet	2.500		80	40-140			
Hexacosane (C26)	2.0	0.2	mg/kg wet	2.500		78	40-140			
Hexadecane (C16)	1.9	0.2	mg/kg wet	2.500		77	40-140			
Nonadecane (C19)	2.0	0.2	mg/kg wet	2.500		81	40-140			
Nonane (C9)	1.6	0.2	mg/kg wet	2.500		66	30-140			
Octacosane (C28)	2.0	0.2	mg/kg wet	2.500		79	40-140			
Octadecane (C18)	2.0	0.2	mg/kg wet	2.500		79	40-140			
Tetracosane (C24)	2.0	0.2	mg/kg wet	2.500		80	40-140			
Tetradecane (C14)	1.9	0.2	mg/kg wet	2.500		77	40-140			

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Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8100M Total Petroleum Hydrocarbons										
Batch CG90110 - 3546										
Total Petroleum Hydrocarbons	27.1	37.5	mg/kg wet	35.00		77	40-140			
Triacontane (C30)	1.9	0.2	mg/kg wet	2.500		78	40-140			
Surrogate: O-Terphenyl	*4.14*		mg/kg wet	*5.000*		*83*	*40-140*			
LCS Dup										
Decane (C10)	2.0	0.2	mg/kg wet	2.500		79	40-140	6	25	
Docosane (C22)	2.0	0.2	mg/kg wet	2.500		81	40-140	0.9	25	
Dodecane (C12)	2.0	0.2	mg/kg wet	2.500		81	40-140	4	25	
Eicosane (C20)	2.0	0.2	mg/kg wet	2.500		81	40-140	2	25	
Hexacosane (C26)	1.9	0.2	mg/kg wet	2.500		78	40-140	0.9	25	
Hexadecane (C16)	2.0	0.2	mg/kg wet	2.500		80	40-140	4	25	
Nonadecane (C19)	2.1	0.2	mg/kg wet	2.500		83	40-140	2	25	
Nonane (C9)	1.8	0.2	mg/kg wet	2.500		71	30-140	7	25	
Octacosane (C28)	1.9	0.2	mg/kg wet	2.500		77	40-140	2	25	
Octadecane (C18)	2.0	0.2	mg/kg wet	2.500		81	40-140	3	25	
Tetracosane (C24)	2.0	0.2	mg/kg wet	2.500		80	40-140	0.1	25	
Tetradecane (C14)	2.0	0.2	mg/kg wet	2.500		80	40-140	4	25	
Total Petroleum Hydrocarbons	27.6	37.5	mg/kg wet	35.00		79	40-140	2	25	
Triacontane (C30)	1.9	0.2	mg/kg wet	2.500		76	40-140	2	25	
Surrogate: O-Terphenyl	*4.18*		mg/kg wet	*5.000*		*84*	*40-140*			
Batch CG90210 - 3546										
Blank										
Decane (C10)	ND	0.2	mg/kg wet							
Docosane (C22)	ND	0.2	mg/kg wet							
Dodecane (C12)	ND	0.2	mg/kg wet							
Eicosane (C20)	ND	0.2	mg/kg wet							
Hexacosane (C26)	ND	0.2	mg/kg wet							
Hexadecane (C16)	ND	0.2	mg/kg wet							
Nonadecane (C19)	ND	0.2	mg/kg wet							
Nonane (C9)	ND	0.2	mg/kg wet							
Octacosane (C28)	ND	0.2	mg/kg wet							
Octadecane (C18)	ND	0.2	mg/kg wet							
Tetracosane (C24)	ND	0.2	mg/kg wet							
Tetradecane (C14)	ND	0.2	mg/kg wet							
Total Petroleum Hydrocarbons	ND	37.5	mg/kg wet							
Triacontane (C30)	ND	0.2	mg/kg wet							
Surrogate: O-Terphenyl	*4.50*		mg/kg wet	*5.000*		*90*	*40-140*			
LCS										
Decane (C10)	1.7	0.2	mg/kg wet	2.500		68	40-140			
Docosane (C22)	2.1	0.2	mg/kg wet	2.500		85	40-140			
Dodecane (C12)	1.9	0.2	mg/kg wet	2.500		74	40-140			
Eicosane (C20)	2.1	0.2	mg/kg wet	2.500		84	40-140			
Hexacosane (C26)	2.1	0.2	mg/kg wet	2.500		85	40-140			

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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8100M Total Petroleum Hydrocarbons										
Batch CG90210 - 3546										
Hexadecane (C16)	1.9	0.2	mg/kg wet	2.500		78	40-140			
Nonadecane (C19)	3.1	0.2	mg/kg wet	2.500		125	40-140			
Nonane (C9)	1.4	0.2	mg/kg wet	2.500		57	30-140			
Octacosane (C28)	2.2	0.2	mg/kg wet	2.500		86	40-140			
Octadecane (C18)	2.0	0.2	mg/kg wet	2.500		80	40-140			
Tetracosane (C24)	2.1	0.2	mg/kg wet	2.500		85	40-140			
Tetradecane (C14)	1.9	0.2	mg/kg wet	2.500		76	40-140			
Total Petroleum Hydrocarbons	29.8	37.5	mg/kg wet	35.00		85	40-140			
Triacontane (C30)	2.2	0.2	mg/kg wet	2.500		86	40-140			
Surrogate: O-Terphenyl	*3.49*		mg/kg wet	*5.000*		*70*	*40-140*			
LCS Dup										
Decane (C10)	1.7	0.2	mg/kg wet	2.500		67	40-140	1	25	
Docosane (C22)	2.1	0.2	mg/kg wet	2.500		86	40-140	1	25	
Dodecane (C12)	1.8	0.2	mg/kg wet	2.500		71	40-140	4	25	
Eicosane (C20)	2.1	0.2	mg/kg wet	2.500		85	40-140	1	25	
Hexacosane (C26)	2.2	0.2	mg/kg wet	2.500		86	40-140	0.8	25	
Hexadecane (C16)	2.0	0.2	mg/kg wet	2.500		78	40-140	0.1	25	
Nonadecane (C19)	3.1	0.2	mg/kg wet	2.500		124	40-140	0.4	25	
Nonane (C9)	1.3	0.2	mg/kg wet	2.500		53	30-140	6	25	
Octacosane (C28)	2.2	0.2	mg/kg wet	2.500		87	40-140	0.9	25	
Octadecane (C18)	2.0	0.2	mg/kg wet	2.500		81	40-140	0.8	25	
Tetracosane (C24)	2.2	0.2	mg/kg wet	2.500		87	40-140	2	25	
Tetradecane (C14)	1.9	0.2	mg/kg wet	2.500		75	40-140	0.4	25	
Total Petroleum Hydrocarbons	29.6	37.5	mg/kg wet	35.00		85	40-140	0.8	25	
Triacontane (C30)	2.2	0.2	mg/kg wet	2.500		87	40-140	0.9	25	
Surrogate: O-Terphenyl	*3.52*		mg/kg wet	*5.000*		*70*	*40-140*			
8270D Semi-Volatile Organic Compounds										
Batch CG90122 - 3546										
Blank										
1,1-Biphenyl	ND	0.333	mg/kg wet							
1,2,4-Trichlorobenzene	ND	0.333	mg/kg wet							
1,2-Dichlorobenzene	ND	0.333	mg/kg wet							
1,3-Dichlorobenzene	ND	0.333	mg/kg wet							
1,4-Dichlorobenzene	ND	0.333	mg/kg wet							
2,3,4,6-Tetrachlorophenol	ND	1.67	mg/kg wet							
2,4,5-Trichlorophenol	ND	0.333	mg/kg wet							
2,4,6-Trichlorophenol	ND	0.333	mg/kg wet							
2,4-Dichlorophenol	ND	0.333	mg/kg wet							
2,4-Dimethylphenol	ND	0.333	mg/kg wet							
2,4-Dinitrophenol	ND	1.67	mg/kg wet							
2,4-Dinitrotoluene	ND	0.333	mg/kg wet							
2,6-Dinitrotoluene	ND	0.333	mg/kg wet							

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Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D Semi-Volatile Organic Compounds										
Batch CG90122 - 3546										
2-Chloronaphthalene	ND	0.333	mg/kg wet							
2-Chlorophenol	ND	0.333	mg/kg wet							
2-Methylnaphthalene	ND	0.333	mg/kg wet							
2-Methylphenol	ND	0.333	mg/kg wet							
2-Nitroaniline	ND	0.333	mg/kg wet							
2-Nitrophenol	ND	0.333	mg/kg wet							
3,3´-Dichlorobenzidine	ND	0.667	mg/kg wet							
3+4-Methylphenol	ND	0.667	mg/kg wet							
3-Nitroaniline	ND	0.333	mg/kg wet							
4,6-Dinitro-2-Methylphenol	ND	1.67	mg/kg wet							
4-Bromophenyl-phenylether	ND	0.333	mg/kg wet							
4-Chloro-3-Methylphenol	ND	0.333	mg/kg wet							
4-Chloroaniline	ND	0.667	mg/kg wet							
4-Chloro-phenyl-phenyl ether	ND	0.333	mg/kg wet							
4-Nitroaniline	ND	0.333	mg/kg wet							
4-Nitrophenol	ND	1.67	mg/kg wet							
Acenaphthene	ND	0.333	mg/kg wet							
Acenaphthylene	ND	0.333	mg/kg wet							
Acetophenone	ND	0.667	mg/kg wet							
Aniline	ND	0.667	mg/kg wet							
Anthracene	ND	0.333	mg/kg wet							
Azobenzene	ND	0.333	mg/kg wet							
Benzo(a)anthracene	ND	0.333	mg/kg wet							
Benzo(a)pyrene	ND	0.167	mg/kg wet							
Benzo(b)fluoranthene	ND	0.333	mg/kg wet							
Benzo(g,h,i)perylene	ND	0.333	mg/kg wet							
Benzo(k)fluoranthene	ND	0.333	mg/kg wet							
Benzoic Acid	ND	1.67	mg/kg wet							
Benzyl Alcohol	ND	0.333	mg/kg wet							
bis(2-Chloroethoxy)methane	ND	0.333	mg/kg wet							
bis(2-Chloroethyl)ether	ND	0.333	mg/kg wet							
bis(2-chloroisopropyl)Ether	ND	0.333	mg/kg wet							
bis(2-Ethylhexyl)phthalate	ND	0.333	mg/kg wet							
Butylbenzylphthalate	ND	0.333	mg/kg wet							
Carbazole	ND	0.333	mg/kg wet							
Chrysene	ND	0.167	mg/kg wet							
Dibenzo(a,h)Anthracene	ND	0.167	mg/kg wet							
Dibenzofuran	ND	0.333	mg/kg wet							
Diethylphthalate	ND	0.333	mg/kg wet							
Dimethylphthalate	ND	0.333	mg/kg wet							
Di-n-butylphthalate	ND	0.333	mg/kg wet							
Di-n-octylphthalate	ND	0.333	mg/kg wet							
Fluoranthene	ND	0.333	mg/kg wet							
Fluorene	ND	0.333	mg/kg wet							
Hexachlorobenzene	ND	0.167	mg/kg wet							

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Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D Semi-Volatile Organic Compounds										
Batch CG90122 - 3546										
Hexachlorobutadiene	ND	0.333	mg/kg wet							
Hexachlorocyclopentadiene	ND	1.67	mg/kg wet							
Hexachloroethane	ND	0.333	mg/kg wet							
Indeno(1,2,3-cd)Pyrene	ND	0.333	mg/kg wet							
Isophorone	ND	0.333	mg/kg wet							
Naphthalene	ND	0.333	mg/kg wet							
Nitrobenzene	ND	0.333	mg/kg wet							
N-Nitrosodimethylamine	ND	0.333	mg/kg wet							
N-Nitroso-Di-n-Propylamine	ND	0.333	mg/kg wet							
N-nitrosodiphenylamine	ND	0.333	mg/kg wet							
Pentachlorophenol	ND	1.67	mg/kg wet							
Phenanthrene	ND	0.333	mg/kg wet							
Phenol	ND	0.333	mg/kg wet							
Pyrene	ND	0.333	mg/kg wet							
Pyridine	ND	1.67	mg/kg wet							
Surrogate: 1,2-Dichlorobenzene-d4	*2.56*		mg/kg wet	*3.333*		*77*	*30-130*			
Surrogate: 2,4,6-Tribromophenol	*4.40*		mg/kg wet	*5.000*		*88*	*30-130*			
Surrogate: 2-Chlorophenol-d4	*4.15*		mg/kg wet	*5.000*		*83*	*30-130*			
Surrogate: 2-Fluorobiphenyl	*2.36*		mg/kg wet	*3.333*		*71*	*30-130*			
Surrogate: 2-Fluorophenol	*3.84*		mg/kg wet	*5.000*		*77*	*30-130*			
Surrogate: Nitrobenzene-d5	*2.95*		mg/kg wet	*3.333*		*89*	*30-130*			
Surrogate: Phenol-d6	*4.60*		mg/kg wet	*5.000*		*92*	*30-130*			
Surrogate: p-Terphenyl-d14	*2.70*		mg/kg wet	*3.333*		*81*	*30-130*			
LCS										
1,1-Biphenyl	2.14	0.333	mg/kg wet	3.333		64	40-140			
1,2,4-Trichlorobenzene	1.84	0.333	mg/kg wet	3.333		55	40-140			
1,2-Dichlorobenzene	2.30	0.333	mg/kg wet	3.333		69	40-140			
1,3-Dichlorobenzene	2.12	0.333	mg/kg wet	3.333		64	40-140			
1,4-Dichlorobenzene	2.28	0.333	mg/kg wet	3.333		68	40-140			
2,3,4,6-Tetrachlorophenol	2.81	1.67	mg/kg wet	3.333		84	30-130			
2,4,5-Trichlorophenol	2.62	0.333	mg/kg wet	3.333		78	30-130			
2,4,6-Trichlorophenol	2.46	0.333	mg/kg wet	3.333		74	30-130			
2,4-Dichlorophenol	2.12	0.333	mg/kg wet	3.333		64	30-130			
2,4-Dimethylphenol	2.12	0.333	mg/kg wet	3.333		64	30-130			
2,4-Dinitrophenol	2.64	1.67	mg/kg wet	3.333		79	30-130			
2,4-Dinitrotoluene	3.31	0.333	mg/kg wet	3.333		99	40-140			
2,6-Dinitrotoluene	2.54	0.333	mg/kg wet	3.333		76	40-140			
2-Chloronaphthalene	2.27	0.333	mg/kg wet	3.333		68	40-140			
2-Chlorophenol	2.52	0.333	mg/kg wet	3.333		76	30-130			
2-Methylnaphthalene	1.77	0.333	mg/kg wet	3.333		53	40-140			
2-Methylphenol	2.62	0.333	mg/kg wet	3.333		79	30-130			
2-Nitroaniline	1.98	0.333	mg/kg wet	3.333		59	40-140			
2-Nitrophenol	2.05	0.333	mg/kg wet	3.333		62	30-130			
3,3´-Dichlorobenzidine	2.46	0.667	mg/kg wet	3.333		74	40-140			
3+4-Methylphenol	5.36	0.667	mg/kg wet	6.667		80	30-130			

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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D Semi-Volatile Organic Compounds										
Batch CG90122 - 3546										
3-Nitroaniline	2.33	0.333	mg/kg wet	3.333		70	40-140			
4,6-Dinitro-2-Methylphenol	2.83	1.67	mg/kg wet	3.333		85	30-130			
4-Bromophenyl-phenylether	2.42	0.333	mg/kg wet	3.333		73	40-140			
4-Chloro-3-Methylphenol	2.34	0.333	mg/kg wet	3.333		70	30-130			
4-Chloroaniline	1.97	0.667	mg/kg wet	3.333		59	40-140			
4-Chloro-phenyl-phenyl ether	2.53	0.333	mg/kg wet	3.333		76	40-140			
4-Nitroaniline	2.43	0.333	mg/kg wet	3.333		73	40-140			
4-Nitrophenol	2.43	1.67	mg/kg wet	3.333		73	30-130			
Acenaphthene	2.30	0.333	mg/kg wet	3.333		69	40-140			
Acenaphthylene	2.35	0.333	mg/kg wet	3.333		71	40-140			
Acetophenone	2.33	0.667	mg/kg wet	3.333		70	40-140			
Aniline	2.16	0.667	mg/kg wet	3.333		65	40-140			
Anthracene	2.56	0.333	mg/kg wet	3.333		77	40-140			
Azobenzene	2.08	0.333	mg/kg wet	3.333		62	40-140			
Benzo(a)anthracene	2.63	0.333	mg/kg wet	3.333		79	40-140			
Benzo(a)pyrene	2.55	0.167	mg/kg wet	3.333		76	40-140			
Benzo(b)fluoranthene	2.65	0.333	mg/kg wet	3.333		80	40-140			
Benzo(g,h,i)perylene	2.63	0.333	mg/kg wet	3.333		79	40-140			
Benzo(k)fluoranthene	2.18	0.333	mg/kg wet	3.333		65	40-140			
Benzoic Acid	2.03	1.67	mg/kg wet	3.333		61	40-140			
Benzyl Alcohol	2.26	0.333	mg/kg wet	3.333		68	40-140			
bis(2-Chloroethoxy)methane	1.99	0.333	mg/kg wet	3.333		60	40-140			
bis(2-Chloroethyl)ether	2.52	0.333	mg/kg wet	3.333		76	40-140			
bis(2-chloroisopropyl)Ether	2.03	0.333	mg/kg wet	3.333		61	40-140			
bis(2-Ethylhexyl)phthalate	2.57	0.333	mg/kg wet	3.333		77	40-140			
Butylbenzylphthalate	2.58	0.333	mg/kg wet	3.333		77	40-140			
Carbazole	2.72	0.333	mg/kg wet	3.333		81	40-140			
Chrysene	2.41	0.167	mg/kg wet	3.333		72	40-140			
Dibenzo(a,h)Anthracene	2.75	0.167	mg/kg wet	3.333		82	40-140			
Dibenzofuran	2.25	0.333	mg/kg wet	3.333		67	40-140			
Diethylphthalate	2.63	0.333	mg/kg wet	3.333		79	40-140			
Dimethylphthalate	2.58	0.333	mg/kg wet	3.333		77	40-140			
Di-n-butylphthalate	3.03	0.333	mg/kg wet	3.333		91	40-140			
Di-n-octylphthalate	2.53	0.333	mg/kg wet	3.333		76	40-140			
Fluoranthene	2.81	0.333	mg/kg wet	3.333		84	40-140			
Fluorene	2.44	0.333	mg/kg wet	3.333		73	40-140			
Hexachlorobenzene	2.44	0.167	mg/kg wet	3.333		73	40-140			
Hexachlorobutadiene	1.96	0.333	mg/kg wet	3.333		59	40-140			
Hexachlorocyclopentadiene	2.46	1.67	mg/kg wet	3.333		74	40-140			
Hexachloroethane	2.27	0.333	mg/kg wet	3.333		68	40-140			
Indeno(1,2,3-cd)Pyrene	2.54	0.333	mg/kg wet	3.333		76	40-140			
Isophorone	1.98	0.333	mg/kg wet	3.333		59	40-140			
Naphthalene	1.82	0.333	mg/kg wet	3.333		55	40-140			
Nitrobenzene	2.07	0.333	mg/kg wet	3.333		62	40-140			
N-Nitrosodimethylamine	1.97	0.333	mg/kg wet	3.333		59	40-140			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue

ESS Laboratory Work Order: 19G0023

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D Semi-Volatile Organic Compounds										
Batch CG90122 - 3546										
N-Nitroso-Di-n-Propylamine	2.71	0.333	mg/kg wet	3.333		81	40-140			
N-nitrosodiphenylamine	1.90	0.333	mg/kg wet	3.333		57	40-140			
Pentachlorophenol	2.82	1.67	mg/kg wet	3.333		85	30-130			
Phenanthrene	2.32	0.333	mg/kg wet	3.333		70	40-140			
Phenol	2.70	0.333	mg/kg wet	3.333		81	30-130			
Pyrene	2.36	0.333	mg/kg wet	3.333		71	40-140			
Pyridine	1.95	1.67	mg/kg wet	3.333		59	40-140			
Surrogate: 1,2-Dichlorobenzene-d4	*2.40*		mg/kg wet	*3.333*		*72*	*30-130*			
Surrogate: 2,4,6-Tribromophenol	*4.29*		mg/kg wet	*5.000*		*86*	*30-130*			
Surrogate: 2-Chlorophenol-d4	*4.05*		mg/kg wet	*5.000*		*81*	*30-130*			
Surrogate: 2-Fluorobiphenyl	*2.34*		mg/kg wet	*3.333*		*70*	*30-130*			
Surrogate: 2-Fluorophenol	*3.85*		mg/kg wet	*5.000*		*77*	*30-130*			
Surrogate: Nitrobenzene-d5	*2.30*		mg/kg wet	*3.333*		*69*	*30-130*			
Surrogate: Phenol-d6	*4.43*		mg/kg wet	*5.000*		*89*	*30-130*			
Surrogate: p-Terphenyl-d14	*2.66*		mg/kg wet	*3.333*		*80*	*30-130*			
LCS Dup										
1,1-Biphenyl	2.27	0.333	mg/kg wet	3.333		68	40-140	6	30	
1,2,4-Trichlorobenzene	1.90	0.333	mg/kg wet	3.333		57	40-140	3	30	
1,2-Dichlorobenzene	2.31	0.333	mg/kg wet	3.333		69	40-140	0.5	30	
1,3-Dichlorobenzene	2.12	0.333	mg/kg wet	3.333		64	40-140	0.06	30	
1,4-Dichlorobenzene	2.27	0.333	mg/kg wet	3.333		68	40-140	0.2	30	
2,3,4,6-Tetrachlorophenol	2.78	1.67	mg/kg wet	3.333		83	30-130	1	30	
2,4,5-Trichlorophenol	2.66	0.333	mg/kg wet	3.333		80	30-130	2	30	
2,4,6-Trichlorophenol	2.46	0.333	mg/kg wet	3.333		74	30-130	0.4	30	
2,4-Dichlorophenol	2.16	0.333	mg/kg wet	3.333		65	30-130	2	30	
2,4-Dimethylphenol	2.10	0.333	mg/kg wet	3.333		63	30-130	1	30	
2,4-Dinitrophenol	2.62	1.67	mg/kg wet	3.333		79	30-130	0.5	30	
2,4-Dinitrotoluene	3.46	0.333	mg/kg wet	3.333		104	40-140	4	30	
2,6-Dinitrotoluene	2.63	0.333	mg/kg wet	3.333		79	40-140	4	30	
2-Chloronaphthalene	2.39	0.333	mg/kg wet	3.333		72	40-140	5	30	
2-Chlorophenol	2.45	0.333	mg/kg wet	3.333		74	30-130	3	30	
2-Methylnaphthalene	1.93	0.333	mg/kg wet	3.333		58	40-140	9	30	
2-Methylphenol	2.49	0.333	mg/kg wet	3.333		75	30-130	5	30	
2-Nitroaniline	2.35	0.333	mg/kg wet	3.333		70	40-140	17	30	
2-Nitrophenol	2.07	0.333	mg/kg wet	3.333		62	30-130	1	30	
3,3´-Dichlorobenzidine	2.58	0.667	mg/kg wet	3.333		77	40-140	5	30	
3+4-Methylphenol	5.12	0.667	mg/kg wet	6.667		77	30-130	4	30	
3-Nitroaniline	2.61	0.333	mg/kg wet	3.333		78	40-140	11	30	
4,6-Dinitro-2-Methylphenol	2.87	1.67	mg/kg wet	3.333		86	30-130	1	30	
4-Bromophenyl-phenylether	2.43	0.333	mg/kg wet	3.333		73	40-140	0.3	30	
4-Chloro-3-Methylphenol	2.57	0.333	mg/kg wet	3.333		77	30-130	9	30	
4-Chloroaniline	2.00	0.667	mg/kg wet	3.333		60	40-140	2	30	
4-Chloro-phenyl-phenyl ether	2.53	0.333	mg/kg wet	3.333		76	40-140	0.1	30	
4-Nitroaniline	2.58	0.333	mg/kg wet	3.333		77	40-140	6	30	
4-Nitrophenol	2.81	1.67	mg/kg wet	3.333		84	30-130	14	30	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue

ESS Laboratory Work Order: 19G0023

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D Semi-Volatile Organic Compounds										
Batch CG90122 - 3546										
Acenaphthene	2.38	0.333	mg/kg wet	3.333		72	40-140	4	30	
Acenaphthylene	2.46	0.333	mg/kg wet	3.333		74	40-140	4	30	
Acetophenone	2.29	0.667	mg/kg wet	3.333		69	40-140	2	30	
Aniline	1.99	0.667	mg/kg wet	3.333		60	40-140	8	30	
Anthracene	2.68	0.333	mg/kg wet	3.333		80	40-140	4	30	
Azobenzene	2.35	0.333	mg/kg wet	3.333		71	40-140	12	30	
Benzo(a)anthracene	2.74	0.333	mg/kg wet	3.333		82	40-140	4	30	
Benzo(a)pyrene	2.66	0.167	mg/kg wet	3.333		80	40-140	4	30	
Benzo(b)fluoranthene	2.43	0.333	mg/kg wet	3.333		73	40-140	9	30	
Benzo(g,h,i)perylene	2.81	0.333	mg/kg wet	3.333		84	40-140	7	30	
Benzo(k)fluoranthene	2.62	0.333	mg/kg wet	3.333		79	40-140	18	30	
Benzoic Acid	2.00	1.67	mg/kg wet	3.333		60	40-140	1	30	
Benzyl Alcohol	2.08	0.333	mg/kg wet	3.333		63	40-140	8	30	
bis(2-Chloroethoxy)methane	1.94	0.333	mg/kg wet	3.333		58	40-140	2	30	
bis(2-Chloroethyl)ether	2.50	0.333	mg/kg wet	3.333		75	40-140	1	30	
bis(2-chloroisopropyl)Ether	1.99	0.333	mg/kg wet	3.333		60	40-140	2	30	
bis(2-Ethylhexyl)phthalate	2.73	0.333	mg/kg wet	3.333		82	40-140	6	30	
Butylbenzylphthalate	2.70	0.333	mg/kg wet	3.333		81	40-140	5	30	
Carbazole	2.83	0.333	mg/kg wet	3.333		85	40-140	4	30	
Chrysene	2.56	0.167	mg/kg wet	3.333		77	40-140	6	30	
Dibenzo(a,h)Anthracene	2.94	0.167	mg/kg wet	3.333		88	40-140	7	30	
Dibenzofuran	2.31	0.333	mg/kg wet	3.333		69	40-140	3	30	
Diethylphthalate	2.79	0.333	mg/kg wet	3.333		84	40-140	6	30	
Dimethylphthalate	2.67	0.333	mg/kg wet	3.333		80	40-140	3	30	
Di-n-butylphthalate	3.29	0.333	mg/kg wet	3.333		99	40-140	8	30	
Di-n-octylphthalate	2.65	0.333	mg/kg wet	3.333		80	40-140	5	30	
Fluoranthene	2.84	0.333	mg/kg wet	3.333		85	40-140	1	30	
Fluorene	2.51	0.333	mg/kg wet	3.333		75	40-140	3	30	
Hexachlorobenzene	2.44	0.167	mg/kg wet	3.333		73	40-140	0.04	30	
Hexachlorobutadiene	2.08	0.333	mg/kg wet	3.333		62	40-140	6	30	
Hexachlorocyclopentadiene	2.43	1.67	mg/kg wet	3.333		73	40-140	1	30	
Hexachloroethane	2.23	0.333	mg/kg wet	3.333		67	40-140	2	30	
Indeno(1,2,3-cd)Pyrene	2.72	0.333	mg/kg wet	3.333		82	40-140	7	30	
Isophorone	1.92	0.333	mg/kg wet	3.333		58	40-140	3	30	
Naphthalene	1.83	0.333	mg/kg wet	3.333		55	40-140	0.5	30	
Nitrobenzene	1.93	0.333	mg/kg wet	3.333		58	40-140	7	30	
N-Nitrosodimethylamine	2.10	0.333	mg/kg wet	3.333		63	40-140	7	30	
N-Nitroso-Di-n-Propylamine	2.50	0.333	mg/kg wet	3.333		75	40-140	8	30	
N-nitrosodiphenylamine	1.97	0.333	mg/kg wet	3.333		59	40-140	4	30	
Pentachlorophenol	2.75	1.67	mg/kg wet	3.333		83	30-130	3	30	
Phenanthrene	2.40	0.333	mg/kg wet	3.333		72	40-140	3	30	
Phenol	2.57	0.333	mg/kg wet	3.333		77	30-130	5	30	
Pyrene	2.47	0.333	mg/kg wet	3.333		74	40-140	4	30	
Pyridine	2.09	1.67	mg/kg wet	3.333		63	40-140	7	30	
Surrogate: 1,2-Dichlorobenzene-d4	*2.35*		mg/kg wet	*3.333*		*70*	*30-130*			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue

ESS Laboratory Work Order: 19G0023

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D Semi-Volatile Organic Compounds										
Batch CG90122 - 3546										
Surrogate: 2,4,6-Tribromophenol	*4.07*		mg/kg wet	*5.000*		*81*	*30-130*			
Surrogate: 2-Chlorophenol-d4	*3.80*		mg/kg wet	*5.000*		*76*	*30-130*			
Surrogate: 2-Fluorobiphenyl	*2.37*		mg/kg wet	*3.333*		*71*	*30-130*			
Surrogate: 2-Fluorophenol	*3.81*		mg/kg wet	*5.000*		*76*	*30-130*			
Surrogate: Nitrobenzene-d5	*2.11*		mg/kg wet	*3.333*		*63*	*30-130*			
Surrogate: Phenol-d6	*4.10*		mg/kg wet	*5.000*		*82*	*30-130*			
Surrogate: p-Terphenyl-d14	*2.72*		mg/kg wet	*3.333*		*82*	*30-130*			
Classical Chemistry										
Batch CG90228 - General Preparation										
Reference										
Flashpoint	80		°F	81.00		99	97.9-102.1			
Batch CG90329 - General Preparation										
Blank										
Reactive Cyanide	ND	2.0	mg/kg							
Reactive Sulfide	ND	2.0	mg/kg							
LCS										
Reactive Cyanide	3.9	2.0	mg/kg	100.3		4	0.68-5.41			
Reactive Sulfide	ND	2.0	mg/kg	10.00		0	0-44			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
ESS Laboratory Work Order: 19G0023

Notes and Definitions

Z18	Temperature is not within 23 +/-2 ºC.
Z-10	Soil pH measured in water at 20.9 ºC.
U	Analyte included in the analysis, but not detected
Q	Calibration required quadratic regression (Q).
IC	Internal Standard(s) outside of criteria. Sample was reanalyzed to confirm (IC).
D	Diluted.
CD+	Continuing Calibration %Diff/Drift is above control limit (CD+).
CD-	Continuing Calibration %Diff/Drift is below control limit (CD-).
>	Greater than.
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit
MF	Membrane Filtration
MPN	Most Probably Number
TNTC	Too numerous to Count
CFU	Colony Forming Units

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue

ESS Laboratory Work Order: 19G0023

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

ESS Laboratory Sample and Cooler Receipt Checklist

Client: GZA - Providence, RI - GZA/HDM

Shipped/Delivered Via: Client

ESS Project ID: 19G0023
Date Received: 7/1/2019
Project Due Date: 7/9/2019
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 5.1 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / NA
10. Were any analyses received outside of hold time? Yes / No

11. Any Subcontracting needed? Yes / No
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / No
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA

13. Are the samples properly preserved? Yes / No
    a. If metals preserved upon receipt: Date: Time: By:
    b. Low Level VOA vials frozen: Date: 7/1/19 Time: 1650 By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / No
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
01	361091	Yes	NA	Yes	VOA Vial - Other	Other	
01	361092	Yes	NA	Yes	VOA Vial - Other	Other	
01	361147	Yes	NA	Yes	8 oz. Jar - Unpres	NP	
01	361148	Yes	NA	Yes	8 oz. Jar - Unpres	NP	
01	361149	Yes	NA	Yes	8 oz. Jar - Unpres	NP	
01	361151	Yes	NA	Yes	4 oz. Jar - Unpres	NP	
02	361089	Yes	NA	Yes	VOA Vial - Other	Other	
02	361090	Yes	NA	Yes	VOA Vial - Other	Other	
02	361144	Yes	NA	Yes	8 oz. Jar - Unpres	NP	
02	361145	Yes	NA	Yes	8 oz. Jar - Unpres	NP	
02	361146	Yes	NA	Yes	4 oz. Jar - Unpres	NP	
02	361150	Yes	NA	Yes	4 oz. Jar - Unpres	NP	

2nd Review
Were all containers scanned into storage/lab? Initials
Are barcode labels on correct containers? Yes / No
Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA
Are all Hex Chrome stickers attached? Yes / No / NA
Are all QC stickers attached? Yes / No / NA
Are VOA stickers attached if bubbles noted? Yes / No / NA

ESS Laboratory Sample and Cooler Receipt Checklist

Client: GZA - Providence, RI - GZA/HDM

ESS Project ID: 19G0023
Date Received: 7/1/2019

Completed By: [signature] Date & Time: 7/1/19 1607

Reviewed By: [signature] Date & Time: 7/1/19 1650

Delivered By: [signature] 7/1/19 1650

ESS Laboratory
Division of Thielsch Engineering, Inc.
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

CHAIN OF CUSTODY

ESS Lab # 1960023

Turn Time	5	Days
Regulatory State	RI	

Is this project for any of the following?: ○ CT RCP ○ MA MCP ○ RGP

Reporting Limits

Electonic Deliverables: ☐ Data Checker ☐ Excel ☑ Other (Please Specify →) PDF / Sat [illegible]

Company Name	GZA
Contact Person	Mike Clark
City	Providence
State	RI
Zip Code	02909
Telephone Number	401-421-4140
FAX Number	
Email Address	
Project #	34632
Project Name	RIDOT Taunton Ave
Address	188 Valley St, Suite 300
PO #	

Analysis: VOC's (LL), TPH, SVOC's, PCBs, RCRA 8, ~~TCLP Metals~~, Corrosivity (pH), Flashpoint, Reactivity (CN & Sulfide)

ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID	VOC's (LL)	TPH	SVOC's	PCBs	RCRA 8	~~TCLP Metals~~	Corrosivity (pH)	Flashpoint	Reactivity (CN & Sulfide)
1	7-1-19	1200	C	Soil	Comp-1	X	X	X	~~X~~	X	~~X~~	X	X	X
2	7-1-19	1430	C	Soil	Comp-2	X	X	X	~~X~~	X	~~X~~	X	X	X
3	7/1/19	1200	C	Soil	Comp-1 Air Dried				X					
4	7/1/19	1430	C	Soil	Comp-2 Air Dried				X					

Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial

Container Volume: 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other*

Preservation Code: 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other*

Number of Containers per Sample:

Laboratory Use Only

Cooler Present: [signature]
Seals Intact:
Cooler Temperature: 5.1 °C
○ Drop Off ○ Pickup

Sampled by: EMB

Comments:
- EPA 20x Rule
- Mike Clark agreed to pricing

Please specify "Other" preservative and containers types in this space
TCLP analysis removed, reffering to 20x rule
PRB 7/2/19

Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)	Received By: (Signature, Date & Time)
[signature] 7-1-19 1508	[signature] 7/1/19 1508		
Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)	Received By: (Signature, Date & Time)

Air Dried samples added 7/2/19 - PRB

ESS Laboratory

Division of Thielsch Engineering, Inc.
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

CHAIN OF CUSTODY

ESS Lab # 1960023

Turn Time: 5 Days

Regulatory State: RI

Is this project for any of the following?: ○ CT RCP ○ MA MCP ○ RGP

Reporting Limits

Electonic Deliverables: ☐ Data Checker ☐ Excel ☑ Other (Please Specify →) PDF

Company Name: GZA

Contact Person: Mike Clark

Project # 34632 Project Name: RIDOT Taunton Ave.

Address: 188 Valley St, Suite 300

City: Providence State: RI Zip Code: 02909 PO #

Telephone Number: 401-421-4140 FAX Number: Email Address:

ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID	VOCs (LL)	TPH	SVOCs	PCBs	RCRA 8	TCLP Metals	Corrosivity (pH)	Flashpoint	Reactivity (CN & S)
1	7-1-19	1200	C	Soil	Comp-1	X	X	X	X	X	X	X	X	X
2	7-1-19	1430	C	Soil	Comp-2	X	X	X	X	X	X	X	X	X

Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial

Container Volume: 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other*

Preservation Code: 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other*

Number of Containers per Sample:

Laboratory Use Only

Cooler Present: Y ○ Drop Off

Seals Intact: N/A ○ Pickup

Cooler Temperature: 5.1 °C

Sampled by: EMB

Comments: Please specify "Other" preservative and containers types in this space

- EPA 20x Rule TCLP analysis removed, reffering to 20x rule
- Mike Clark agreed to pricing PRB 7/2/19

Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)	Received By: (Signature, Date & Time)
7-1-19 1508	7/1/19 1500		
Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)	Received By: (Signature, Date & Time)

ESS Laboratory

Division of Thielsch Engineering, Inc.
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

CHAIN OF CUSTODY

ESS Lab # 1960023

Turn Time: 5 Days
Regulatory State: RI
Reporting Limits:
Is this project for any of the following?: ○ CT RCP ○ MA MCP ○ RGP
Electonic Deliverables: ☐ Data Checker ☐ Excel ☑ Other (Please Specify →) PDF

Company Name: GZA
Contact Person: Mike Clark
Project #: 34632
Project Name: RIDOT Taunton Ave.
Address: 188 Valley St, Suite 300
City: Providence
State: RI
Zip Code: 02909
PO #:
Telephone Number: 401-421-4140
FAX Number:
Email Address:

ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID	VOCs (LL)	TPH	SVOCs	PCBs	RCRA 8	TCLP Metals	Corrosivity (pH)	Flashpoint	Reactivity (CN & S)
1	7-1-19	1200	C	Soil	Comp-1	X	X	X	X	X	X	X	X	X
2	7-1-19	1430	C	Soil	Comp-2	X	X	X	X	X	X	X	X	X

Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial
Container Volume: 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other*
Preservation Code: 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other*
Number of Containers per Sample:

Laboratory Use Only
Cooler Present: Y
Seals Intact: NA
Cooler Temperature: 5.1 °C
○ Drop Off
○ Pickup

Sampled by: EMB
Comments: Please specify "Other" preservative and containers types in this space
- EPA 20x Rule
- Mike Clark agreed to pricing

Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)	Received By: (Signature, Date & Time)
7-1-19 1508	7/1/19 1500		
Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)	Received By: (Signature, Date & Time)

CERTIFICATE OF ANALYSIS

Mike Clark
GZA GeoEnvironmental, Inc.
188 Valley Street
Providence, RI 02909

RE: RIDOT - Taunton Avenue (03.0034632.00)
ESS Laboratory Work Order Number: 19G0059

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED
By ESS Laboratory at 1:33 pm, Jul 10, 2019

Analytical Summary
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue

ESS Laboratory Work Order: 19G0059

SAMPLE RECEIPT

The following samples were received on July 02, 2019 for the analyses specified on the enclosed Chain of Custody Record.

The cooler temperature was not within the acceptance limit of <6°C, however, samples were delivered on ice and therefore meet regulatory criteria.

Lab Number	Sample Name	Matrix	Analysis
19G0059-01	TP-1	Ground Water	8100M, 8260B
19G0059-02	TP-3	Ground Water	8100M, 8260B
19G0059-03	SS-3	Ground Water	8100M, 8260B
19G0059-04	SS-13	Ground Water	8100M, 8260B

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
ESS Laboratory Work Order: 19G0059

PROJECT NARRATIVE

8260B Volatile Organic Compounds

C9G0043-CCV1 **Continuing Calibration %Diff/Drift is above control limit (CD+).**
2,2-Dichloropropane (54% @ 30%)

CG90223-BS1 **Blank Spike recovery is above upper control limit (B+).**
2,2-Dichloropropane (153% @ 70-130%)

CG90223-BSD1 **Blank Spike recovery is above upper control limit (B+).**
2,2-Dichloropropane (154% @ 70-130%)

No other observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue

ESS Laboratory Work Order: 19G0059

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
Client Sample ID: TP-1
Date Sampled: 07/02/19 10:00
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 1
Extraction Method: 3510C

ESS Laboratory Work Order: 19G0059
ESS Laboratory Sample ID: 19G0059-01
Sample Matrix: Ground Water
Units: mg/L
Analyst: CAD
Prepared: 7/3/19 9:47

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	ND (0.19)		8100M		1	07/04/19 3:19	C9G0078	CG90203

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*76 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
Client Sample ID: TP-1
Date Sampled: 07/02/19 10:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19G0059
ESS Laboratory Sample ID: 19G0059-01
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	07/03/19 13:27	C9G0074	CG90318
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
1,1-Dichloroethane	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
1,1-Dichloroethene	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
1,1-Dichloropropene	ND (0.0020)		8260B		1	07/03/19 13:27	C9G0074	CG90318
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	07/03/19 13:27	C9G0074	CG90318
1,2-Dibromoethane	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
1,2-Dichloroethane	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
1,2-Dichloropropane	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
1,3-Dichloropropane	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
1,4-Dioxane - Screen	ND (0.500)		8260B		1	07/03/19 13:27	C9G0074	CG90318
1-Chlorohexane	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
2,2-Dichloropropane	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
2-Butanone	ND (0.0100)		8260B		1	07/03/19 13:27	C9G0074	CG90318
2-Chlorotoluene	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
2-Hexanone	ND (0.0100)		8260B		1	07/03/19 13:27	C9G0074	CG90318
4-Chlorotoluene	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
4-Isopropyltoluene	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	07/03/19 13:27	C9G0074	CG90318
Acetone	ND (0.0100)		8260B		1	07/03/19 13:27	C9G0074	CG90318
Benzene	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
Bromobenzene	ND (0.0020)		8260B		1	07/03/19 13:27	C9G0074	CG90318

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
Client Sample ID: TP-1
Date Sampled: 07/02/19 10:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19G0059
ESS Laboratory Sample ID: 19G0059-01
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
Bromodichloromethane	ND (0.0006)		8260B		1	07/03/19 13:27	C9G0074	CG90318
Bromoform	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
Bromomethane	ND (0.0020)		8260B		1	07/03/19 13:27	C9G0074	CG90318
Carbon Disulfide	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
Carbon Tetrachloride	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
Chlorobenzene	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
Chloroethane	ND (0.0020)		8260B		1	07/03/19 13:27	C9G0074	CG90318
Chloroform	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
Chloromethane	ND (0.0020)		8260B		1	07/03/19 13:27	C9G0074	CG90318
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	07/03/19 13:27	C9G0074	CG90318
Dibromochloromethane	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
Dibromomethane	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
Dichlorodifluoromethane	ND (0.0020)		8260B		1	07/03/19 13:27	C9G0074	CG90318
Diethyl Ether	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
Di-isopropyl ether	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
Ethylbenzene	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
Hexachlorobutadiene	ND (0.0006)		8260B		1	07/03/19 13:27	C9G0074	CG90318
Hexachloroethane	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
Isopropylbenzene	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
Methylene Chloride	ND (0.0020)		8260B		1	07/03/19 13:27	C9G0074	CG90318
Naphthalene	**0.0014** (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
n-Butylbenzene	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
n-Propylbenzene	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
sec-Butylbenzene	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
Styrene	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
tert-Butylbenzene	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
Tetrachloroethene	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
Client Sample ID: TP-1
Date Sampled: 07/02/19 10:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19G0059
ESS Laboratory Sample ID: 19G0059-01
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	07/03/19 13:27	C9G0074	CG90318
Toluene	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	07/03/19 13:27	C9G0074	CG90318
Trichloroethene	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
Trichlorofluoromethane	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
Vinyl Acetate	ND (0.0050)		8260B		1	07/03/19 13:27	C9G0074	CG90318
Vinyl Chloride	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
Xylene O	ND (0.0010)		8260B		1	07/03/19 13:27	C9G0074	CG90318
Xylene P,M	ND (0.0020)		8260B		1	07/03/19 13:27	C9G0074	CG90318
Xylenes (Total)	ND (0.00200)		8260B		1	07/03/19 13:27		[CALC]

	%Recovery	*Qualifier*	*Limits*
Surrogate: 1,2-Dichloroethane-d4	*101 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*96 %*		*70-130*
Surrogate: Dibromofluoromethane	*101 %*		*70-130*
Surrogate: Toluene-d8	*95 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
Client Sample ID: TP-3
Date Sampled: 07/02/19 10:15
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 1
Extraction Method: 3510C

ESS Laboratory Work Order: 19G0059
ESS Laboratory Sample ID: 19G0059-02
Sample Matrix: Ground Water
Units: mg/L
Analyst: CAD
Prepared: 7/3/19 9:47

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**1.19** (0.93)		8100M		5	07/04/19 10:52	C9G0078	CG90203

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*76 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
Client Sample ID: TP-3
Date Sampled: 07/02/19 10:15
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19G0059
ESS Laboratory Sample ID: 19G0059-02
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	07/02/19 17:42	C9G0043	CG90223
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
1,1-Dichloroethane	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
1,1-Dichloroethene	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
1,1-Dichloropropene	ND (0.0020)		8260B		1	07/02/19 17:42	C9G0043	CG90223
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	07/02/19 17:42	C9G0043	CG90223
1,2-Dibromoethane	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
1,2-Dichloroethane	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
1,2-Dichloropropane	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
1,3-Dichloropropane	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
1,4-Dioxane - Screen	ND (0.500)		8260B		1	07/02/19 17:42	C9G0043	CG90223
1-Chlorohexane	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
2,2-Dichloropropane	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
2-Butanone	ND (0.0100)		8260B		1	07/02/19 17:42	C9G0043	CG90223
2-Chlorotoluene	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
2-Hexanone	ND (0.0100)		8260B		1	07/02/19 17:42	C9G0043	CG90223
4-Chlorotoluene	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
4-Isopropyltoluene	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	07/02/19 17:42	C9G0043	CG90223
Acetone	ND (0.0100)		8260B		1	07/02/19 17:42	C9G0043	CG90223
Benzene	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
Bromobenzene	ND (0.0020)		8260B		1	07/02/19 17:42	C9G0043	CG90223

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
Client Sample ID: TP-3
Date Sampled: 07/02/19 10:15
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19G0059
ESS Laboratory Sample ID: 19G0059-02
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
Bromodichloromethane	ND (0.0006)		8260B		1	07/02/19 17:42	C9G0043	CG90223
Bromoform	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
Bromomethane	ND (0.0020)		8260B		1	07/02/19 17:42	C9G0043	CG90223
Carbon Disulfide	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
Carbon Tetrachloride	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
Chlorobenzene	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
Chloroethane	ND (0.0020)		8260B		1	07/02/19 17:42	C9G0043	CG90223
Chloroform	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
Chloromethane	ND (0.0020)		8260B		1	07/02/19 17:42	C9G0043	CG90223
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	07/02/19 17:42	C9G0043	CG90223
Dibromochloromethane	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
Dibromomethane	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
Dichlorodifluoromethane	ND (0.0020)		8260B		1	07/02/19 17:42	C9G0043	CG90223
Diethyl Ether	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
Di-isopropyl ether	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
Ethylbenzene	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
Hexachlorobutadiene	ND (0.0006)		8260B		1	07/02/19 17:42	C9G0043	CG90223
Hexachloroethane	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
Isopropylbenzene	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
Methylene Chloride	ND (0.0020)		8260B		1	07/02/19 17:42	C9G0043	CG90223
Naphthalene	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
n-Butylbenzene	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
n-Propylbenzene	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
sec-Butylbenzene	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
Styrene	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
tert-Butylbenzene	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
Tetrachloroethene	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
Client Sample ID: TP-3
Date Sampled: 07/02/19 10:15
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19G0059
ESS Laboratory Sample ID: 19G0059-02
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	07/02/19 17:42	C9G0043	CG90223
Toluene	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	07/02/19 17:42	C9G0043	CG90223
Trichloroethene	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
Trichlorofluoromethane	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
Vinyl Acetate	ND (0.0050)		8260B		1	07/02/19 17:42	C9G0043	CG90223
Vinyl Chloride	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
Xylene O	ND (0.0010)		8260B		1	07/02/19 17:42	C9G0043	CG90223
Xylene P,M	ND (0.0020)		8260B		1	07/02/19 17:42	C9G0043	CG90223
Xylenes (Total)	ND (0.00200)		8260B		1	07/02/19 17:42		[CALC]

	%Recovery	*Qualifier*	*Limits*
Surrogate: 1,2-Dichloroethane-d4	*80 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*98 %*		*70-130*
Surrogate: Dibromofluoromethane	*82 %*		*70-130*
Surrogate: Toluene-d8	*104 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
Client Sample ID: SS-3
Date Sampled: 07/02/19 11:00
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 1
Extraction Method: 3510C

ESS Laboratory Work Order: 19G0059
ESS Laboratory Sample ID: 19G0059-03
Sample Matrix: Ground Water
Units: mg/L
Analyst: CAD
Prepared: 7/3/19 9:47

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**3.99** (1.87)		8100M		10	07/04/19 11:25	C9G0078	CG90203

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*74 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
Client Sample ID: SS-3
Date Sampled: 07/02/19 11:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19G0059
ESS Laboratory Sample ID: 19G0059-03
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	07/02/19 18:07	C9G0043	CG90223
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
1,1-Dichloroethane	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
1,1-Dichloroethene	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
1,1-Dichloropropene	ND (0.0020)		8260B		1	07/02/19 18:07	C9G0043	CG90223
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	07/02/19 18:07	C9G0043	CG90223
1,2-Dibromoethane	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
1,2-Dichloroethane	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
1,2-Dichloropropane	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
1,3-Dichloropropane	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
1,4-Dioxane - Screen	ND (0.500)		8260B		1	07/02/19 18:07	C9G0043	CG90223
1-Chlorohexane	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
2,2-Dichloropropane	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
2-Butanone	ND (0.0100)		8260B		1	07/02/19 18:07	C9G0043	CG90223
2-Chlorotoluene	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
2-Hexanone	ND (0.0100)		8260B		1	07/02/19 18:07	C9G0043	CG90223
4-Chlorotoluene	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
4-Isopropyltoluene	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	07/02/19 18:07	C9G0043	CG90223
Acetone	ND (0.0100)		8260B		1	07/02/19 18:07	C9G0043	CG90223
Benzene	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
Bromobenzene	ND (0.0020)		8260B		1	07/02/19 18:07	C9G0043	CG90223

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
Client Sample ID: SS-3
Date Sampled: 07/02/19 11:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19G0059
ESS Laboratory Sample ID: 19G0059-03
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
Bromodichloromethane	ND (0.0006)		8260B		1	07/02/19 18:07	C9G0043	CG90223
Bromoform	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
Bromomethane	ND (0.0020)		8260B		1	07/02/19 18:07	C9G0043	CG90223
Carbon Disulfide	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
Carbon Tetrachloride	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
Chlorobenzene	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
Chloroethane	ND (0.0020)		8260B		1	07/02/19 18:07	C9G0043	CG90223
Chloroform	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
Chloromethane	ND (0.0020)		8260B		1	07/02/19 18:07	C9G0043	CG90223
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	07/02/19 18:07	C9G0043	CG90223
Dibromochloromethane	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
Dibromomethane	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
Dichlorodifluoromethane	ND (0.0020)		8260B		1	07/02/19 18:07	C9G0043	CG90223
Diethyl Ether	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
Di-isopropyl ether	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
Ethylbenzene	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
Hexachlorobutadiene	ND (0.0006)		8260B		1	07/02/19 18:07	C9G0043	CG90223
Hexachloroethane	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
Isopropylbenzene	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
Methylene Chloride	ND (0.0020)		8260B		1	07/02/19 18:07	C9G0043	CG90223
Naphthalene	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
n-Butylbenzene	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
n-Propylbenzene	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
sec-Butylbenzene	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
Styrene	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
tert-Butylbenzene	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
Tetrachloroethene	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
Client Sample ID: SS-3
Date Sampled: 07/02/19 11:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19G0059
ESS Laboratory Sample ID: 19G0059-03
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	07/02/19 18:07	C9G0043	CG90223
Toluene	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	07/02/19 18:07	C9G0043	CG90223
Trichloroethene	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
Trichlorofluoromethane	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
Vinyl Acetate	ND (0.0050)		8260B		1	07/02/19 18:07	C9G0043	CG90223
Vinyl Chloride	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
Xylene O	ND (0.0010)		8260B		1	07/02/19 18:07	C9G0043	CG90223
Xylene P,M	ND (0.0020)		8260B		1	07/02/19 18:07	C9G0043	CG90223
Xylenes (Total)	ND (0.00200)		8260B		1	07/02/19 18:07		[CALC]

	%Recovery	*Qualifier*	*Limits*
Surrogate: 1,2-Dichloroethane-d4	*79 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*97 %*		*70-130*
Surrogate: Dibromofluoromethane	*83 %*		*70-130*
Surrogate: Toluene-d8	*104 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
Client Sample ID: SS-13
Date Sampled: 07/02/19 11:30
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 1
Extraction Method: 3510C

ESS Laboratory Work Order: 19G0059
ESS Laboratory Sample ID: 19G0059-04
Sample Matrix: Ground Water
Units: mg/L
Analyst: CAD
Prepared: 7/3/19 9:47

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**0.31** (0.19)		8100M		1	07/04/19 3:51	C9G0078	CG90203

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*77 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
Client Sample ID: SS-13
Date Sampled: 07/02/19 11:30
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19G0059
ESS Laboratory Sample ID: 19G0059-04
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	07/02/19 18:33	C9G0043	CG90223
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
1,1-Dichloroethane	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
1,1-Dichloroethene	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
1,1-Dichloropropene	ND (0.0020)		8260B		1	07/02/19 18:33	C9G0043	CG90223
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	07/02/19 18:33	C9G0043	CG90223
1,2-Dibromoethane	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
1,2-Dichloroethane	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
1,2-Dichloropropane	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
1,3-Dichloropropane	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
1,4-Dioxane - Screen	ND (0.500)		8260B		1	07/02/19 18:33	C9G0043	CG90223
1-Chlorohexane	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
2,2-Dichloropropane	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
2-Butanone	ND (0.0100)		8260B		1	07/02/19 18:33	C9G0043	CG90223
2-Chlorotoluene	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
2-Hexanone	ND (0.0100)		8260B		1	07/02/19 18:33	C9G0043	CG90223
4-Chlorotoluene	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
4-Isopropyltoluene	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	07/02/19 18:33	C9G0043	CG90223
Acetone	**0.0143** (0.0100)		8260B		1	07/02/19 18:33	C9G0043	CG90223
Benzene	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
Bromobenzene	ND (0.0020)		8260B		1	07/02/19 18:33	C9G0043	CG90223

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
Client Sample ID: SS-13
Date Sampled: 07/02/19 11:30
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19G0059
ESS Laboratory Sample ID: 19G0059-04
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
Bromodichloromethane	ND (0.0006)		8260B		1	07/02/19 18:33	C9G0043	CG90223
Bromoform	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
Bromomethane	ND (0.0020)		8260B		1	07/02/19 18:33	C9G0043	CG90223
Carbon Disulfide	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
Carbon Tetrachloride	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
Chlorobenzene	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
Chloroethane	ND (0.0020)		8260B		1	07/02/19 18:33	C9G0043	CG90223
Chloroform	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
Chloromethane	ND (0.0020)		8260B		1	07/02/19 18:33	C9G0043	CG90223
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	07/02/19 18:33	C9G0043	CG90223
Dibromochloromethane	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
Dibromomethane	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
Dichlorodifluoromethane	ND (0.0020)		8260B		1	07/02/19 18:33	C9G0043	CG90223
Diethyl Ether	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
Di-isopropyl ether	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
Ethylbenzene	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
Hexachlorobutadiene	ND (0.0006)		8260B		1	07/02/19 18:33	C9G0043	CG90223
Hexachloroethane	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
Isopropylbenzene	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
Methylene Chloride	ND (0.0020)		8260B		1	07/02/19 18:33	C9G0043	CG90223
Naphthalene	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
n-Butylbenzene	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
n-Propylbenzene	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
sec-Butylbenzene	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
Styrene	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
tert-Butylbenzene	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
Tetrachloroethene	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
Client Sample ID: SS-13
Date Sampled: 07/02/19 11:30
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19G0059
ESS Laboratory Sample ID: 19G0059-04
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	07/02/19 18:33	C9G0043	CG90223
Toluene	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	07/02/19 18:33	C9G0043	CG90223
Trichloroethene	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
Trichlorofluoromethane	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
Vinyl Acetate	ND (0.0050)		8260B		1	07/02/19 18:33	C9G0043	CG90223
Vinyl Chloride	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
Xylene O	ND (0.0010)		8260B		1	07/02/19 18:33	C9G0043	CG90223
Xylene P,M	ND (0.0020)		8260B		1	07/02/19 18:33	C9G0043	CG90223
Xylenes (Total)	ND (0.00200)		8260B		1	07/02/19 18:33		[CALC]

	%Recovery	*Qualifier*	*Limits*
Surrogate: 1,2-Dichloroethane-d4	*80 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*96 %*		*70-130*
Surrogate: Dibromofluoromethane	*83 %*		*70-130*
Surrogate: Toluene-d8	*103 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue

ESS Laboratory Work Order: 19G0059

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8100M Total Petroleum Hydrocarbons										
Batch CG90203 - 3510C										
Blank										
Decane (C10)	ND	0.01	mg/L							
Docosane (C22)	ND	0.01	mg/L							
Dodecane (C12)	ND	0.01	mg/L							
Eicosane (C20)	ND	0.01	mg/L							
Hexacosane (C26)	ND	0.01	mg/L							
Hexadecane (C16)	ND	0.01	mg/L							
Nonadecane (C19)	ND	0.01	mg/L							
Nonane (C9)	ND	0.01	mg/L							
Octacosane (C28)	ND	0.01	mg/L							
Octadecane (C18)	ND	0.01	mg/L							
Tetracosane (C24)	ND	0.01	mg/L							
Tetradecane (C14)	ND	0.01	mg/L							
Total Petroleum Hydrocarbons	ND	0.40	mg/L							
Triacontane (C30)	ND	0.01	mg/L							
Surrogate: O-Terphenyl	*0.0848*		mg/L	*0.1000*		*85*	*40-140*			
LCS										
Decane (C10)	0.027	0.01	mg/L	0.05000		55	40-140			
Docosane (C22)	0.043	0.01	mg/L	0.05000		85	40-140			
Dodecane (C12)	0.036	0.01	mg/L	0.05000		72	40-140			
Eicosane (C20)	0.042	0.01	mg/L	0.05000		83	40-140			
Hexacosane (C26)	0.043	0.01	mg/L	0.05000		86	40-140			
Hexadecane (C16)	0.040	0.01	mg/L	0.05000		79	40-140			
Nonadecane (C19)	0.041	0.01	mg/L	0.05000		82	40-140			
Nonane (C9)	0.023	0.01	mg/L	0.05000		46	30-140			
Octacosane (C28)	0.043	0.01	mg/L	0.05000		87	40-140			
Octadecane (C18)	0.040	0.01	mg/L	0.05000		81	40-140			
Tetracosane (C24)	0.043	0.01	mg/L	0.05000		86	40-140			
Tetradecane (C14)	0.038	0.01	mg/L	0.05000		77	40-140			
Total Petroleum Hydrocarbons	0.591	0.40	mg/L	0.7000		84	40-140			
Triacontane (C30)	0.043	0.01	mg/L	0.05000		86	40-140			
Surrogate: O-Terphenyl	*0.0566*		mg/L	*0.1000*		*57*	*40-140*			
LCS Dup										
Decane (C10)	0.026	0.01	mg/L	0.05000		53	40-140	4	25	
Docosane (C22)	0.042	0.01	mg/L	0.05000		84	40-140	0.9	25	
Dodecane (C12)	0.034	0.01	mg/L	0.05000		68	40-140	6	25	
Eicosane (C20)	0.041	0.01	mg/L	0.05000		83	40-140	0.3	25	
Hexacosane (C26)	0.042	0.01	mg/L	0.05000		85	40-140	0.8	25	
Hexadecane (C16)	0.039	0.01	mg/L	0.05000		78	40-140	1	25	
Nonadecane (C19)	0.040	0.01	mg/L	0.05000		79	40-140	3	25	
Nonane (C9)	0.022	0.01	mg/L	0.05000		45	30-140	2	25	
Octacosane (C28)	0.043	0.01	mg/L	0.05000		86	40-140	0.9	25	
Octadecane (C18)	0.040	0.01	mg/L	0.05000		80	40-140	2	25	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue

ESS Laboratory Work Order: 19G0059

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8100M Total Petroleum Hydrocarbons										
Batch CG90203 - 3510C										
Tetracosane (C24)	0.043	0.01	mg/L	0.05000		85	40-140	0.9	25	
Tetradecane (C14)	0.038	0.01	mg/L	0.05000		76	40-140	1	25	
Total Petroleum Hydrocarbons	0.582	0.40	mg/L	0.7000		83	40-140	2	25	
Triacontane (C30)	0.043	0.01	mg/L	0.05000		85	40-140	0.7	25	
Surrogate: O-Terphenyl	*0.0529*		mg/L	*0.1000*		*53*	*40-140*			
8260B Volatile Organic Compounds										
Batch CG90223 - 5030B										
Blank										
1,1,1,2-Tetrachloroethane	ND	0.0010	mg/L							
1,1,1-Trichloroethane	ND	0.0010	mg/L							
1,1,2,2-Tetrachloroethane	ND	0.0005	mg/L							
1,1,2-Trichloroethane	ND	0.0010	mg/L							
1,1-Dichloroethane	ND	0.0010	mg/L							
1,1-Dichloroethene	ND	0.0010	mg/L							
1,1-Dichloropropene	ND	0.0020	mg/L							
1,2,3-Trichlorobenzene	ND	0.0010	mg/L							
1,2,3-Trichloropropane	ND	0.0010	mg/L							
1,2,4-Trichlorobenzene	ND	0.0010	mg/L							
1,2,4-Trimethylbenzene	ND	0.0010	mg/L							
1,2-Dibromo-3-Chloropropane	ND	0.0050	mg/L							
1,2-Dibromoethane	ND	0.0010	mg/L							
1,2-Dichlorobenzene	ND	0.0010	mg/L							
1,2-Dichloroethane	ND	0.0010	mg/L							
1,2-Dichloropropane	ND	0.0010	mg/L							
1,3,5-Trimethylbenzene	ND	0.0010	mg/L							
1,3-Dichlorobenzene	ND	0.0010	mg/L							
1,3-Dichloropropane	ND	0.0010	mg/L							
1,4-Dichlorobenzene	ND	0.0010	mg/L							
1,4-Dioxane - Screen	ND	0.500	mg/L							
1-Chlorohexane	ND	0.0010	mg/L							
2,2-Dichloropropane	ND	0.0010	mg/L							
2-Butanone	ND	0.0100	mg/L							
2-Chlorotoluene	ND	0.0010	mg/L							
2-Hexanone	ND	0.0100	mg/L							
4-Chlorotoluene	ND	0.0010	mg/L							
4-Isopropyltoluene	ND	0.0010	mg/L							
4-Methyl-2-Pentanone	ND	0.0250	mg/L							
Acetone	ND	0.0100	mg/L							
Benzene	ND	0.0010	mg/L							
Bromobenzene	ND	0.0020	mg/L							
Bromochloromethane	ND	0.0010	mg/L							
Bromodichloromethane	ND	0.0006	mg/L							
Bromoform	ND	0.0010	mg/L							

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue

ESS Laboratory Work Order: 19G0059

Quality Control Data

8260B Volatile Organic Compounds

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch CG90223 - 5030B										
Bromomethane	ND	0.0020	mg/L							
Carbon Disulfide	ND	0.0010	mg/L							
Carbon Tetrachloride	ND	0.0010	mg/L							
Chlorobenzene	ND	0.0010	mg/L							
Chloroethane	ND	0.0020	mg/L							
Chloroform	ND	0.0010	mg/L							
Chloromethane	ND	0.0020	mg/L							
cis-1,2-Dichloroethene	ND	0.0010	mg/L							
cis-1,3-Dichloropropene	ND	0.0004	mg/L							
Dibromochloromethane	ND	0.0010	mg/L							
Dibromomethane	ND	0.0010	mg/L							
Dichlorodifluoromethane	ND	0.0020	mg/L							
Diethyl Ether	ND	0.0010	mg/L							
Di-isopropyl ether	ND	0.0010	mg/L							
Ethyl tertiary-butyl ether	ND	0.0010	mg/L							
Ethylbenzene	ND	0.0010	mg/L							
Hexachlorobutadiene	ND	0.0006	mg/L							
Hexachloroethane	ND	0.0010	mg/L							
Isopropylbenzene	ND	0.0010	mg/L							
Methyl tert-Butyl Ether	ND	0.0010	mg/L							
Methylene Chloride	ND	0.0020	mg/L							
Naphthalene	ND	0.0010	mg/L							
n-Butylbenzene	ND	0.0010	mg/L							
n-Propylbenzene	ND	0.0010	mg/L							
sec-Butylbenzene	ND	0.0010	mg/L							
Styrene	ND	0.0010	mg/L							
tert-Butylbenzene	ND	0.0010	mg/L							
Tertiary-amyl methyl ether	ND	0.0010	mg/L							
Tetrachloroethene	ND	0.0010	mg/L							
Tetrahydrofuran	ND	0.0050	mg/L							
Toluene	ND	0.0010	mg/L							
trans-1,2-Dichloroethene	ND	0.0010	mg/L							
trans-1,3-Dichloropropene	ND	0.0004	mg/L							
Trichloroethene	ND	0.0010	mg/L							
Trichlorofluoromethane	ND	0.0010	mg/L							
Vinyl Acetate	ND	0.0050	mg/L							
Vinyl Chloride	ND	0.0010	mg/L							
Xylene O	ND	0.0010	mg/L							
Xylene P,M	ND	0.0020	mg/L							
Surrogate: 1,2-Dichloroethane-d4	*0.0291*		mg/L	*0.02500*		*116*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0234*		mg/L	*0.02500*		*94*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0256*		mg/L	*0.02500*		*103*	*70-130*			
Surrogate: Toluene-d8	*0.0254*		mg/L	*0.02500*		*102*	*70-130*			
LCS										
1,1,1,2-Tetrachloroethane	10.4		ug/L	10.00		104	70-130			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue

ESS Laboratory Work Order: 19G0059

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CG90223 - 5030B										
1,1,1-Trichloroethane	12.3		ug/L	10.00		123	70-130			
1,1,2,2-Tetrachloroethane	10.1		ug/L	10.00		101	70-130			
1,1,2-Trichloroethane	10.6		ug/L	10.00		106	70-130			
1,1-Dichloroethane	11.4		ug/L	10.00		114	70-130			
1,1-Dichloroethene	10.4		ug/L	10.00		104	70-130			
1,1-Dichloropropene	11.6		ug/L	10.00		116	70-130			
1,2,3-Trichlorobenzene	9.71		ug/L	10.00		97	70-130			
1,2,3-Trichloropropane	10.6		ug/L	10.00		106	70-130			
1,2,4-Trichlorobenzene	9.38		ug/L	10.00		94	70-130			
1,2,4-Trimethylbenzene	11.6		ug/L	10.00		116	70-130			
1,2-Dibromo-3-Chloropropane	10.0		ug/L	10.00		100	70-130			
1,2-Dibromoethane	11.0		ug/L	10.00		110	70-130			
1,2-Dichlorobenzene	10.1		ug/L	10.00		101	70-130			
1,2-Dichloroethane	11.3		ug/L	10.00		113	70-130			
1,2-Dichloropropane	10.6		ug/L	10.00		106	70-130			
1,3,5-Trimethylbenzene	11.2		ug/L	10.00		112	70-130			
1,3-Dichlorobenzene	10.4		ug/L	10.00		104	70-130			
1,3-Dichloropropane	10.8		ug/L	10.00		108	70-130			
1,4-Dichlorobenzene	10.4		ug/L	10.00		104	70-130			
1,4-Dioxane - Screen	196		ug/L	200.0		98	0-332			
1-Chlorohexane	8.84		ug/L	10.00		88	70-130			
2,2-Dichloropropane	15.3		ug/L	10.00		153	70-130			B+
2-Butanone	55.2		ug/L	50.00		110	70-130			
2-Chlorotoluene	10.8		ug/L	10.00		108	70-130			
2-Hexanone	54.4		ug/L	50.00		109	70-130			
4-Chlorotoluene	10.8		ug/L	10.00		108	70-130			
4-Isopropyltoluene	10.7		ug/L	10.00		107	70-130			
4-Methyl-2-Pentanone	59.1		ug/L	50.00		118	70-130			
Acetone	55.1		ug/L	50.00		110	70-130			
Benzene	10.7		ug/L	10.00		107	70-130			
Bromobenzene	9.97		ug/L	10.00		100	70-130			
Bromochloromethane	10.3		ug/L	10.00		103	70-130			
Bromodichloromethane	10.4		ug/L	10.00		104	70-130			
Bromoform	9.67		ug/L	10.00		97	70-130			
Bromomethane	11.0		ug/L	10.00		110	70-130			
Carbon Disulfide	10.7		ug/L	10.00		107	70-130			
Carbon Tetrachloride	11.6		ug/L	10.00		116	70-130			
Chlorobenzene	10.0		ug/L	10.00		100	70-130			
Chloroethane	10.8		ug/L	10.00		108	70-130			
Chloroform	10.9		ug/L	10.00		109	70-130			
Chloromethane	12.4		ug/L	10.00		124	70-130			
cis-1,2-Dichloroethene	10.6		ug/L	10.00		106	70-130			
cis-1,3-Dichloropropene	9.79		ug/L	10.00		98	70-130			
Dibromochloromethane	8.23		ug/L	10.00		82	70-130			
Dibromomethane	10.7		ug/L	10.00		107	70-130			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue

ESS Laboratory Work Order: 19G0059

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CG90223 - 5030B										
Dichlorodifluoromethane	9.57		ug/L	10.00		96	70-130			
Diethyl Ether	10.8		ug/L	10.00		108	70-130			
Di-isopropyl ether	10.6		ug/L	10.00		106	70-130			
Ethyl tertiary-butyl ether	10.6		ug/L	10.00		106	70-130			
Ethylbenzene	10.6		ug/L	10.00		106	70-130			
Hexachlorobutadiene	11.3		ug/L	10.00		113	70-130			
Hexachloroethane	10.5		ug/L	10.00		105	70-130			
Isopropylbenzene	10.7		ug/L	10.00		107	70-130			
Methyl tert-Butyl Ether	11.7		ug/L	10.00		117	70-130			
Methylene Chloride	10.7		ug/L	10.00		107	70-130			
Naphthalene	10.6		ug/L	10.00		106	70-130			
n-Butylbenzene	11.7		ug/L	10.00		117	70-130			
n-Propylbenzene	10.7		ug/L	10.00		107	70-130			
sec-Butylbenzene	11.1		ug/L	10.00		111	70-130			
Styrene	9.01		ug/L	10.00		90	70-130			
tert-Butylbenzene	11.0		ug/L	10.00		110	70-130			
Tertiary-amyl methyl ether	10.5		ug/L	10.00		105	70-130			
Tetrachloroethene	7.24		ug/L	10.00		72	70-130			
Tetrahydrofuran	10.6		ug/L	10.00		106	70-130			
Toluene	10.5		ug/L	10.00		105	70-130			
trans-1,2-Dichloroethene	10.7		ug/L	10.00		107	70-130			
trans-1,3-Dichloropropene	11.6		ug/L	10.00		116	70-130			
Trichloroethene	10.4		ug/L	10.00		104	70-130			
Trichlorofluoromethane	11.6		ug/L	10.00		116	70-130			
Vinyl Acetate	11.5		ug/L	10.00		115	70-130			
Vinyl Chloride	10.6		ug/L	10.00		106	70-130			
Xylene O	10.6		ug/L	10.00		106	70-130			
Xylene P,M	21.7		ug/L	20.00		108	70-130			
Surrogate: 1,2-Dichloroethane-d4	*0.0270*		mg/L	*0.02500*		*108*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0254*		mg/L	*0.02500*		*102*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0264*		mg/L	*0.02500*		*106*	*70-130*			
Surrogate: Toluene-d8	*0.0246*		mg/L	*0.02500*		*98*	*70-130*			
LCS Dup										
1,1,1,2-Tetrachloroethane	10.7		ug/L	10.00		107	70-130	2	25	
1,1,1-Trichloroethane	12.3		ug/L	10.00		123	70-130	0.08	25	
1,1,2,2-Tetrachloroethane	10.2		ug/L	10.00		102	70-130	0.4	25	
1,1,2-Trichloroethane	10.4		ug/L	10.00		104	70-130	2	25	
1,1-Dichloroethane	11.8		ug/L	10.00		118	70-130	4	25	
1,1-Dichloroethene	10.6		ug/L	10.00		106	70-130	2	25	
1,1-Dichloropropene	11.8		ug/L	10.00		118	70-130	1	25	
1,2,3-Trichlorobenzene	9.68		ug/L	10.00		97	70-130	0.3	25	
1,2,3-Trichloropropane	10.8		ug/L	10.00		108	70-130	2	25	
1,2,4-Trichlorobenzene	9.22		ug/L	10.00		92	70-130	2	25	
1,2,4-Trimethylbenzene	11.6		ug/L	10.00		116	70-130	0.5	25	
1,2-Dibromo-3-Chloropropane	9.43		ug/L	10.00		94	70-130	6	25	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue

ESS Laboratory Work Order: 19G0059

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CG90223 - 5030B										
1,2-Dibromoethane	11.0		ug/L	10.00		110	70-130	0.2	25	
1,2-Dichlorobenzene	10.3		ug/L	10.00		103	70-130	1	25	
1,2-Dichloroethane	11.2		ug/L	10.00		112	70-130	1	25	
1,2-Dichloropropane	10.5		ug/L	10.00		105	70-130	1	25	
1,3,5-Trimethylbenzene	11.2		ug/L	10.00		112	70-130	0	25	
1,3-Dichlorobenzene	10.5		ug/L	10.00		105	70-130	1	25	
1,3-Dichloropropane	10.5		ug/L	10.00		105	70-130	2	25	
1,4-Dichlorobenzene	10.3		ug/L	10.00		103	70-130	0.3	25	
1,4-Dioxane - Screen	206		ug/L	200.0		103	0-332	5	200	
1-Chlorohexane	9.19		ug/L	10.00		92	70-130	4	25	
2,2-Dichloropropane	15.4		ug/L	10.00		154	70-130	0.7	25	B+
2-Butanone	54.3		ug/L	50.00		109	70-130	2	25	
2-Chlorotoluene	10.9		ug/L	10.00		109	70-130	2	25	
2-Hexanone	52.8		ug/L	50.00		106	70-130	3	25	
4-Chlorotoluene	11.0		ug/L	10.00		110	70-130	1	25	
4-Isopropyltoluene	10.7		ug/L	10.00		107	70-130	0.7	25	
4-Methyl-2-Pentanone	57.9		ug/L	50.00		116	70-130	2	25	
Acetone	52.3		ug/L	50.00		105	70-130	5	25	
Benzene	10.8		ug/L	10.00		108	70-130	0.7	25	
Bromobenzene	10.4		ug/L	10.00		104	70-130	4	25	
Bromochloromethane	10.2		ug/L	10.00		102	70-130	1	25	
Bromodichloromethane	10.4		ug/L	10.00		104	70-130	0.3	25	
Bromoform	9.66		ug/L	10.00		97	70-130	0.1	25	
Bromomethane	11.5		ug/L	10.00		115	70-130	4	25	
Carbon Disulfide	11.1		ug/L	10.00		111	70-130	4	25	
Carbon Tetrachloride	11.9		ug/L	10.00		119	70-130	2	25	
Chlorobenzene	10.1		ug/L	10.00		101	70-130	1	25	
Chloroethane	10.7		ug/L	10.00		107	70-130	1	25	
Chloroform	10.9		ug/L	10.00		109	70-130	0.09	25	
Chloromethane	12.9		ug/L	10.00		129	70-130	4	25	
cis-1,2-Dichloroethene	11.0		ug/L	10.00		110	70-130	3	25	
cis-1,3-Dichloropropene	10.2		ug/L	10.00		102	70-130	4	25	
Dibromochloromethane	8.47		ug/L	10.00		85	70-130	3	25	
Dibromomethane	11.0		ug/L	10.00		110	70-130	2	25	
Dichlorodifluoromethane	9.51		ug/L	10.00		95	70-130	0.6	25	
Diethyl Ether	11.5		ug/L	10.00		115	70-130	7	25	
Di-isopropyl ether	10.7		ug/L	10.00		107	70-130	0.6	25	
Ethyl tertiary-butyl ether	10.6		ug/L	10.00		106	70-130	0.9	25	
Ethylbenzene	10.8		ug/L	10.00		108	70-130	2	25	
Hexachlorobutadiene	10.6		ug/L	10.00		106	70-130	6	25	
Hexachloroethane	10.7		ug/L	10.00		107	70-130	2	25	
Isopropylbenzene	11.0		ug/L	10.00		110	70-130	3	25	
Methyl tert-Butyl Ether	11.8		ug/L	10.00		118	70-130	1	25	
Methylene Chloride	10.7		ug/L	10.00		107	70-130	0.5	25	
Naphthalene	10.3		ug/L	10.00		103	70-130	3	25	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue

ESS Laboratory Work Order: 19G0059

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CG90223 - 5030B										
n-Butylbenzene	11.5		ug/L	10.00		115	70-130	2	25	
n-Propylbenzene	11.0		ug/L	10.00		110	70-130	3	25	
sec-Butylbenzene	11.1		ug/L	10.00		111	70-130	0.09	25	
Styrene	9.36		ug/L	10.00		94	70-130	4	25	
tert-Butylbenzene	11.0		ug/L	10.00		110	70-130	0.5	25	
Tertiary-amyl methyl ether	10.5		ug/L	10.00		105	70-130	0	25	
Tetrachloroethene	7.62		ug/L	10.00		76	70-130	5	25	
Tetrahydrofuran	10.6		ug/L	10.00		106	70-130	0.6	25	
Toluene	10.8		ug/L	10.00		108	70-130	3	25	
trans-1,2-Dichloroethene	11.1		ug/L	10.00		111	70-130	3	25	
trans-1,3-Dichloropropene	11.6		ug/L	10.00		116	70-130	0	25	
Trichloroethene	10.6		ug/L	10.00		106	70-130	2	25	
Trichlorofluoromethane	11.7		ug/L	10.00		117	70-130	1	25	
Vinyl Acetate	11.4		ug/L	10.00		114	70-130	1	25	
Vinyl Chloride	10.7		ug/L	10.00		107	70-130	0.5	25	
Xylene O	11.1		ug/L	10.00		111	70-130	4	25	
Xylene P,M	22.3		ug/L	20.00		112	70-130	3	25	
Surrogate: 1,2-Dichloroethane-d4	*0.0266*		mg/L	*0.02500*		*106*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0253*		mg/L	*0.02500*		*101*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0254*		mg/L	*0.02500*		*101*	*70-130*			
Surrogate: Toluene-d8	*0.0245*		mg/L	*0.02500*		*98*	*70-130*			
Batch CG90318 - 5030B										
Blank										
1,1,1,2-Tetrachloroethane	ND	0.0010	mg/L							
1,1,1-Trichloroethane	ND	0.0010	mg/L							
1,1,2,2-Tetrachloroethane	ND	0.0005	mg/L							
1,1,2-Trichloroethane	ND	0.0010	mg/L							
1,1-Dichloroethane	ND	0.0010	mg/L							
1,1-Dichloroethene	ND	0.0010	mg/L							
1,1-Dichloropropene	ND	0.0020	mg/L							
1,2,3-Trichlorobenzene	ND	0.0010	mg/L							
1,2,3-Trichloropropane	ND	0.0010	mg/L							
1,2,4-Trichlorobenzene	ND	0.0010	mg/L							
1,2,4-Trimethylbenzene	ND	0.0010	mg/L							
1,2-Dibromo-3-Chloropropane	ND	0.0050	mg/L							
1,2-Dibromoethane	ND	0.0010	mg/L							
1,2-Dichlorobenzene	ND	0.0010	mg/L							
1,2-Dichloroethane	ND	0.0010	mg/L							
1,2-Dichloropropane	ND	0.0010	mg/L							
1,3,5-Trimethylbenzene	ND	0.0010	mg/L							
1,3-Dichlorobenzene	ND	0.0010	mg/L							
1,3-Dichloropropane	ND	0.0010	mg/L							
1,4-Dichlorobenzene	ND	0.0010	mg/L							
1,4-Dioxane - Screen	ND	0.500	mg/L							
1-Chlorohexane	ND	0.0010	mg/L							

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue

ESS Laboratory Work Order: 19G0059

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CG90318 - 5030B										
2,2-Dichloropropane	ND	0.0010	mg/L							
2-Butanone	ND	0.0100	mg/L							
2-Chlorotoluene	ND	0.0010	mg/L							
2-Hexanone	ND	0.0100	mg/L							
4-Chlorotoluene	ND	0.0010	mg/L							
4-Isopropyltoluene	ND	0.0010	mg/L							
4-Methyl-2-Pentanone	ND	0.0250	mg/L							
Acetone	ND	0.0100	mg/L							
Benzene	ND	0.0010	mg/L							
Bromobenzene	ND	0.0020	mg/L							
Bromochloromethane	ND	0.0010	mg/L							
Bromodichloromethane	ND	0.0006	mg/L							
Bromoform	ND	0.0010	mg/L							
Bromomethane	ND	0.0020	mg/L							
Carbon Disulfide	ND	0.0010	mg/L							
Carbon Tetrachloride	ND	0.0010	mg/L							
Chlorobenzene	ND	0.0010	mg/L							
Chloroethane	ND	0.0020	mg/L							
Chloroform	ND	0.0010	mg/L							
Chloromethane	ND	0.0020	mg/L							
cis-1,2-Dichloroethene	ND	0.0010	mg/L							
cis-1,3-Dichloropropene	ND	0.0004	mg/L							
Dibromochloromethane	ND	0.0010	mg/L							
Dibromomethane	ND	0.0010	mg/L							
Dichlorodifluoromethane	ND	0.0020	mg/L							
Diethyl Ether	ND	0.0010	mg/L							
Di-isopropyl ether	ND	0.0010	mg/L							
Ethyl tertiary-butyl ether	ND	0.0010	mg/L							
Ethylbenzene	ND	0.0010	mg/L							
Hexachlorobutadiene	ND	0.0006	mg/L							
Hexachloroethane	ND	0.0010	mg/L							
Isopropylbenzene	ND	0.0010	mg/L							
Methyl tert-Butyl Ether	ND	0.0010	mg/L							
Methylene Chloride	ND	0.0020	mg/L							
Naphthalene	ND	0.0010	mg/L							
n-Butylbenzene	ND	0.0010	mg/L							
n-Propylbenzene	ND	0.0010	mg/L							
sec-Butylbenzene	ND	0.0010	mg/L							
Styrene	ND	0.0010	mg/L							
tert-Butylbenzene	ND	0.0010	mg/L							
Tertiary-amyl methyl ether	ND	0.0010	mg/L							
Tetrachloroethene	ND	0.0010	mg/L							
Tetrahydrofuran	ND	0.0050	mg/L							
Toluene	ND	0.0010	mg/L							
trans-1,2-Dichloroethene	ND	0.0010	mg/L							

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue

ESS Laboratory Work Order: 19G0059

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CG90318 - 5030B										
trans-1,3-Dichloropropene	ND	0.0004	mg/L							
Trichloroethene	ND	0.0010	mg/L							
Trichlorofluoromethane	ND	0.0010	mg/L							
Vinyl Acetate	ND	0.0050	mg/L							
Vinyl Chloride	ND	0.0010	mg/L							
Xylene O	ND	0.0010	mg/L							
Xylene P,M	ND	0.0020	mg/L							
Surrogate: 1,2-Dichloroethane-d4	*0.0256*		mg/L	*0.02500*		*102*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0237*		mg/L	*0.02500*		*95*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0253*		mg/L	*0.02500*		*101*	*70-130*			
Surrogate: Toluene-d8	*0.0240*		mg/L	*0.02500*		*96*	*70-130*			
LCS										
1,1,1,2-Tetrachloroethane	9.87		ug/L	10.00		99	70-130			
1,1,1-Trichloroethane	9.86		ug/L	10.00		99	70-130			
1,1,2,2-Tetrachloroethane	9.35		ug/L	10.00		94	70-130			
1,1,2-Trichloroethane	10.5		ug/L	10.00		105	70-130			
1,1-Dichloroethane	10.8		ug/L	10.00		108	70-130			
1,1-Dichloroethene	11.0		ug/L	10.00		110	70-130			
1,1-Dichloropropene	10.3		ug/L	10.00		103	70-130			
1,2,3-Trichlorobenzene	9.53		ug/L	10.00		95	70-130			
1,2,3-Trichloropropane	9.24		ug/L	10.00		92	70-130			
1,2,4-Trichlorobenzene	10.4		ug/L	10.00		104	70-130			
1,2,4-Trimethylbenzene	9.96		ug/L	10.00		100	70-130			
1,2-Dibromo-3-Chloropropane	9.04		ug/L	10.00		90	70-130			
1,2-Dibromoethane	10.2		ug/L	10.00		102	70-130			
1,2-Dichlorobenzene	9.61		ug/L	10.00		96	70-130			
1,2-Dichloroethane	10.4		ug/L	10.00		104	70-130			
1,2-Dichloropropane	9.46		ug/L	10.00		95	70-130			
1,3,5-Trimethylbenzene	9.54		ug/L	10.00		95	70-130			
1,3-Dichlorobenzene	9.27		ug/L	10.00		93	70-130			
1,3-Dichloropropane	10.1		ug/L	10.00		101	70-130			
1,4-Dichlorobenzene	9.94		ug/L	10.00		99	70-130			
1,4-Dioxane - Screen	352		ug/L	200.0		176	0-332			
1-Chlorohexane	9.13		ug/L	10.00		91	70-130			
2,2-Dichloropropane	10.8		ug/L	10.00		108	70-130			
2-Butanone	52.3		ug/L	50.00		105	70-130			
2-Chlorotoluene	9.59		ug/L	10.00		96	70-130			
2-Hexanone	46.9		ug/L	50.00		94	70-130			
4-Chlorotoluene	9.81		ug/L	10.00		98	70-130			
4-Isopropyltoluene	9.74		ug/L	10.00		97	70-130			
4-Methyl-2-Pentanone	47.4		ug/L	50.00		95	70-130			
Acetone	49.4		ug/L	50.00		99	70-130			
Benzene	10.5		ug/L	10.00		105	70-130			
Bromobenzene	9.52		ug/L	10.00		95	70-130			
Bromochloromethane	10.6		ug/L	10.00		106	70-130			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue

ESS Laboratory Work Order: 19G0059

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CG90318 - 5030B										
Bromodichloromethane	11.0		ug/L	10.00		110	70-130			
Bromoform	9.23		ug/L	10.00		92	70-130			
Bromomethane	9.20		ug/L	10.00		92	70-130			
Carbon Disulfide	11.2		ug/L	10.00		112	70-130			
Carbon Tetrachloride	10.2		ug/L	10.00		102	70-130			
Chlorobenzene	9.77		ug/L	10.00		98	70-130			
Chloroethane	9.22		ug/L	10.00		92	70-130			
Chloroform	10.0		ug/L	10.00		100	70-130			
Chloromethane	10.5		ug/L	10.00		105	70-130			
cis-1,2-Dichloroethene	11.0		ug/L	10.00		110	70-130			
cis-1,3-Dichloropropene	10.7		ug/L	10.00		107	70-130			
Dibromochloromethane	9.50		ug/L	10.00		95	70-130			
Dibromomethane	10.2		ug/L	10.00		102	70-130			
Dichlorodifluoromethane	9.07		ug/L	10.00		91	70-130			
Diethyl Ether	9.66		ug/L	10.00		97	70-130			
Di-isopropyl ether	10.4		ug/L	10.00		104	70-130			
Ethyl tertiary-butyl ether	9.39		ug/L	10.00		94	70-130			
Ethylbenzene	9.90		ug/L	10.00		99	70-130			
Hexachlorobutadiene	10.9		ug/L	10.00		109	70-130			
Hexachloroethane	9.04		ug/L	10.00		90	70-130			
Isopropylbenzene	9.70		ug/L	10.00		97	70-130			
Methyl tert-Butyl Ether	10.7		ug/L	10.00		107	70-130			
Methylene Chloride	10.7		ug/L	10.00		107	70-130			
Naphthalene	10.0		ug/L	10.00		100	70-130			
n-Butylbenzene	10.3		ug/L	10.00		103	70-130			
n-Propylbenzene	10.3		ug/L	10.00		103	70-130			
sec-Butylbenzene	9.35		ug/L	10.00		94	70-130			
Styrene	10.0		ug/L	10.00		100	70-130			
tert-Butylbenzene	9.87		ug/L	10.00		99	70-130			
Tertiary-amyl methyl ether	9.81		ug/L	10.00		98	70-130			
Tetrachloroethene	8.33		ug/L	10.00		83	70-130			
Tetrahydrofuran	9.53		ug/L	10.00		95	70-130			
Toluene	10.2		ug/L	10.00		102	70-130			
trans-1,2-Dichloroethene	10.2		ug/L	10.00		102	70-130			
trans-1,3-Dichloropropene	10.4		ug/L	10.00		104	70-130			
Trichloroethene	9.90		ug/L	10.00		99	70-130			
Trichlorofluoromethane	10.6		ug/L	10.00		106	70-130			
Vinyl Acetate	9.97		ug/L	10.00		100	70-130			
Vinyl Chloride	9.25		ug/L	10.00		92	70-130			
Xylene O	9.58		ug/L	10.00		96	70-130			
Xylene P,M	19.7		ug/L	20.00		98	70-130			
Surrogate: 1,2-Dichloroethane-d4	*0.0250*		mg/L	*0.02500*		*100*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0248*		mg/L	*0.02500*		*99*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0253*		mg/L	*0.02500*		*101*	*70-130*			
Surrogate: Toluene-d8	*0.0249*		mg/L	*0.02500*		*99*	*70-130*			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue

ESS Laboratory Work Order: 19G0059

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CG90318 - 5030B										
LCS Dup										
1,1,1,2-Tetrachloroethane	10.0		ug/L	10.00		100	70-130	2	25	
1,1,1-Trichloroethane	10.3		ug/L	10.00		103	70-130	4	25	
1,1,2,2-Tetrachloroethane	9.80		ug/L	10.00		98	70-130	5	25	
1,1,2-Trichloroethane	10.2		ug/L	10.00		102	70-130	3	25	
1,1-Dichloroethane	11.2		ug/L	10.00		112	70-130	4	25	
1,1-Dichloroethene	11.6		ug/L	10.00		116	70-130	5	25	
1,1-Dichloropropene	11.1		ug/L	10.00		111	70-130	7	25	
1,2,3-Trichlorobenzene	9.76		ug/L	10.00		98	70-130	2	25	
1,2,3-Trichloropropane	9.76		ug/L	10.00		98	70-130	5	25	
1,2,4-Trichlorobenzene	10.3		ug/L	10.00		103	70-130	1	25	
1,2,4-Trimethylbenzene	10.7		ug/L	10.00		107	70-130	7	25	
1,2-Dibromo-3-Chloropropane	9.80		ug/L	10.00		98	70-130	8	25	
1,2-Dibromoethane	10.6		ug/L	10.00		106	70-130	3	25	
1,2-Dichlorobenzene	9.96		ug/L	10.00		100	70-130	4	25	
1,2-Dichloroethane	10.1		ug/L	10.00		101	70-130	3	25	
1,2-Dichloropropane	10.3		ug/L	10.00		103	70-130	8	25	
1,3,5-Trimethylbenzene	9.99		ug/L	10.00		100	70-130	5	25	
1,3-Dichlorobenzene	9.59		ug/L	10.00		96	70-130	3	25	
1,3-Dichloropropane	10.8		ug/L	10.00		108	70-130	6	25	
1,4-Dichlorobenzene	10.2		ug/L	10.00		102	70-130	2	25	
1,4-Dioxane - Screen	299		ug/L	200.0		150	0-332	16	200	
1-Chlorohexane	9.91		ug/L	10.00		99	70-130	8	25	
2,2-Dichloropropane	10.7		ug/L	10.00		107	70-130	0.3	25	
2-Butanone	50.8		ug/L	50.00		102	70-130	3	25	
2-Chlorotoluene	10.2		ug/L	10.00		102	70-130	6	25	
2-Hexanone	49.8		ug/L	50.00		100	70-130	6	25	
4-Chlorotoluene	10.1		ug/L	10.00		101	70-130	3	25	
4-Isopropyltoluene	10.2		ug/L	10.00		102	70-130	4	25	
4-Methyl-2-Pentanone	49.2		ug/L	50.00		98	70-130	4	25	
Acetone	49.1		ug/L	50.00		98	70-130	0.6	25	
Benzene	10.6		ug/L	10.00		106	70-130	0.7	25	
Bromobenzene	9.66		ug/L	10.00		97	70-130	1	25	
Bromochloromethane	10.6		ug/L	10.00		106	70-130	0.5	25	
Bromodichloromethane	10.4		ug/L	10.00		104	70-130	6	25	
Bromoform	9.60		ug/L	10.00		96	70-130	4	25	
Bromomethane	9.78		ug/L	10.00		98	70-130	6	25	
Carbon Disulfide	11.2		ug/L	10.00		112	70-130	0	25	
Carbon Tetrachloride	10.1		ug/L	10.00		101	70-130	1	25	
Chlorobenzene	10.5		ug/L	10.00		105	70-130	7	25	
Chloroethane	9.40		ug/L	10.00		94	70-130	2	25	
Chloroform	10.5		ug/L	10.00		105	70-130	5	25	
Chloromethane	10.5		ug/L	10.00		105	70-130	0.2	25	
cis-1,2-Dichloroethene	11.1		ug/L	10.00		111	70-130	0.6	25	
cis-1,3-Dichloropropene	10.5		ug/L	10.00		105	70-130	2	25	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue

ESS Laboratory Work Order: 19G0059

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CG90318 - 5030B										
Dibromochloromethane	9.31		ug/L	10.00		93	70-130	2	25	
Dibromomethane	10.4		ug/L	10.00		104	70-130	1	25	
Dichlorodifluoromethane	9.11		ug/L	10.00		91	70-130	0.4	25	
Diethyl Ether	9.79		ug/L	10.00		98	70-130	1	25	
Di-isopropyl ether	10.3		ug/L	10.00		103	70-130	0.8	25	
Ethyl tertiary-butyl ether	9.68		ug/L	10.00		97	70-130	3	25	
Ethylbenzene	10.5		ug/L	10.00		105	70-130	6	25	
Hexachlorobutadiene	11.0		ug/L	10.00		110	70-130	0.9	25	
Hexachloroethane	9.63		ug/L	10.00		96	70-130	6	25	
Isopropylbenzene	9.69		ug/L	10.00		97	70-130	0.1	25	
Methyl tert-Butyl Ether	10.5		ug/L	10.00		105	70-130	1	25	
Methylene Chloride	10.9		ug/L	10.00		109	70-130	2	25	
Naphthalene	9.75		ug/L	10.00		98	70-130	3	25	
n-Butylbenzene	10.9		ug/L	10.00		109	70-130	6	25	
n-Propylbenzene	10.8		ug/L	10.00		108	70-130	4	25	
sec-Butylbenzene	10.2		ug/L	10.00		102	70-130	9	25	
Styrene	10.4		ug/L	10.00		104	70-130	4	25	
tert-Butylbenzene	10.3		ug/L	10.00		103	70-130	5	25	
Tertiary-amyl methyl ether	9.59		ug/L	10.00		96	70-130	2	25	
Tetrachloroethene	8.67		ug/L	10.00		87	70-130	4	25	
Tetrahydrofuran	10.4		ug/L	10.00		104	70-130	9	25	
Toluene	10.6		ug/L	10.00		106	70-130	4	25	
trans-1,2-Dichloroethene	10.8		ug/L	10.00		108	70-130	5	25	
trans-1,3-Dichloropropene	10.1		ug/L	10.00		101	70-130	3	25	
Trichloroethene	10.2		ug/L	10.00		102	70-130	3	25	
Trichlorofluoromethane	11.0		ug/L	10.00		110	70-130	4	25	
Vinyl Acetate	10.4		ug/L	10.00		104	70-130	4	25	
Vinyl Chloride	9.98		ug/L	10.00		100	70-130	8	25	
Xylene O	10.1		ug/L	10.00		101	70-130	5	25	
Xylene P,M	21.5		ug/L	20.00		107	70-130	9	25	
Surrogate: 1,2-Dichloroethane-d4	*0.0253*		mg/L	*0.02500*		*101*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0260*		mg/L	*0.02500*		*104*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0260*		mg/L	*0.02500*		*104*	*70-130*			
Surrogate: Toluene-d8	*0.0253*		mg/L	*0.02500*		*101*	*70-130*			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue
ESS Laboratory Work Order: 19G0059

Notes and Definitions

U	Analyte included in the analysis, but not detected
D	Diluted.
CD+	Continuing Calibration %Diff/Drift is above control limit (CD+).
B+	Blank Spike recovery is above upper control limit (B+).
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit
MF	Membrane Filtration
MPN	Most Probably Number
TNTC	Too numerous to Count
CFU	Colony Forming Units

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: RIDOT - Taunton Avenue

ESS Laboratory Work Order: 19G0059

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

ESS Laboratory Sample and Cooler Receipt Checklist

Client: GZA - Providence, RI - GZA/HDM

Shipped/Delivered Via: Client

ESS Project ID: 19G0059
Date Received: 7/2/2019
Project Due Date: 7/10/2019
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 18.6 Iced with: Ice Pack
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / NA
10. Were any analyses received outside of hold time? Yes / No

11. Any Subcontracting needed? Yes / No
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / No
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA

13. Are the samples properly preserved? Yes / No
    a. If metals preserved upon receipt: Date: Time: By:
    b. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

1 1 of Sample 4's tPh bottles Rec'd half full

14. Was there a need to contact Project Manager? Yes / No
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
01	361381	Yes	No	Yes	VOA Vial - HCl	HCl	
01	361382	Yes	No	Yes	VOA Vial - HCl	HCl	
01	361383	Yes	No	Yes	VOA Vial - HCl	HCl	
01	361446	Yes	NA	Yes	1L Amber - HCl	HCl	
01	361447	Yes	NA	Yes	1L Amber - HCl	HCl	
02	361378	Yes	No	Yes	VOA Vial - HCl	HCl	
02	361379	Yes	No	Yes	VOA Vial - HCl	HCl	
02	361380	Yes	No	Yes	VOA Vial - HCl	HCl	
02	361444	Yes	NA	Yes	1L Amber - HCl	HCl	
02	361445	Yes	NA	Yes	1L Amber - HCl	HCl	
03	361375	Yes	No	Yes	VOA Vial - HCl	HCl	
03	361376	Yes	No	Yes	VOA Vial - HCl	HCl	
03	361377	Yes	No	Yes	VOA Vial - HCl	HCl	
03	361442	Yes	NA	Yes	1L Amber - HCl	HCl	
03	361443	Yes	NA	Yes	1L Amber - HCl	HCl	
04	361372	Yes	No	Yes	VOA Vial - HCl	HCl	
04	361373	Yes	No	Yes	VOA Vial - HCl	HCl	
04	361374	Yes	No	Yes	VOA Vial - HCl	HCl	
04	361440	Yes	NA	Yes	1L Amber - HCl	HCl	
04	361441	Yes	NA	Yes	1L Amber - HCl	HCl	

2nd Review

ESS Laboratory Sample and Cooler Receipt Checklist

Client: GZA - Providence, RI - GZA/HDM

ESS Project ID: 19G0059
Date Received: 7/2/2019

Were all containers scanned into storage/lab? Initials ____ Yes / No
Are barcode labels on correct containers? Yes / No / NA
Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA
Are all Hex Chrome stickers attached? Yes / No / NA
Are all QC stickers attached? Yes / No / NA
Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed By: ____ Date & Time: 7/2/19 1413
Reviewed By: ____ Date & Time: 7/2/19 1506
Delivered By: ____ 7/2/19 1506

ESS Laboratory

Division of Thielsch Engineering, Inc.
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

CHAIN OF CUSTODY

ESS Lab # 19G0059

Turn Time: 5 Days

Reporting Limits

Regulatory State: RI

Is this project for any of the following?: ○ CT RCP ○ MA MCP ○ RGP

Electonic Deliverables: ☐ Data Checker ☒ Excel ☒ Other (Please Specify →) PDF

Company Name: GZA

Project #: 34632

Project Name: RIDOT - Taunton Ave.

Contact Person: Mike Clark

Address: 188 Valley St. Suite 300

City: Providence

State: RI

Zip Code: 02909

PO #:

Telephone Number: 401-421-4140

FAX Number:

Email Address:

Analysis: VOCs, TPH

ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID	VOCs	TPH
1	7-2-19	1000	G	GW	TP-1	X	X
2	↓	1015	↓	↓	TP-3	X	X
3		1100			SS-3	X	X
4	↓	1130	↓	↓	SS-13	X	X

Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial	V	AG
Container Volume: 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other*	7	6
Preservation Code: 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other*	2	1
Number of Containers per Sample:	3	2

Laboratory Use Only

Cooler Present: ✓ ⊗ Drop Off

Seals Intact: — ○ Pickup

Cooler Temperature: 18.6 °C ice chem

Sampled by: EMR

Comments: Please specify "Other" preservative and containers types in this space

Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)	Received By: (Signature, Date & Time)
7-2-19 (1151)	HMalle 7/2/19 1154		
Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)	Received By: (Signature, Date & Time)

APPENDIX D

DECONTAMINATION OF EQUIPMENT – HEAVY EQUIPMENT

DECONTAMINATION OF EQUIPMENT - HEAVY EQUIPMENT

PURPOSE

Decontamination of heavy equipment (including dump trucks and excavators), tools and equipment to mitigate the risk of spreading potentially-contaminated soil away from work areas or off-Site.

EQUIPMENT AND MATERIALS

Long-handled brushes, rods and shovels - for general exterior cleaning and dislodging contaminated soil caught in tires and the undersides of vehicles and equipment.

PROCEDURES

Decontamination of trucks, heavy equipment, tools and equipment will be necessary when the equipment is moved off site.

Cleaning of trucks, heavy equipment, tools and equipment will be performed using "dry decon" methods, i.e. use of brushes and brooms to remove the soil without the use of water. All trucks and/or heavy equipment will be decontaminated using this method before leaving the Site.

After soil excavation, on-site management and/or loading work is completed, field personnel will remove gross contamination from the excavator, loader and/or other heavy equipment used during the soil treatment and management process by aggressively scrubbing using a long-handled brush, rod, shovel or other appropriate tool. Trucks used to transport the soil off-Site will also be decontaminated in this manner, with special attention paid to loosen soils on the tires, body and bed. No trucks will be allowed to leave the site unless the load is covered.

All decontamination will be performed on the Site, in the immediate vicinity of the soil excavation areas.

Brushed soil generated from decontamination of trucks, heavy equipment, tools, etc. will be returned to stockpile area or containerized, as appropriate for the material type and stage of construction. The containerized material will be sampled by the Environmental Professional and analyzed for the parameters established in the applicable regulations and/or permit requirements for proper off-Site disposal at a permitted receiving facility. The soil may also be mixed with excavated soil that will be leaving the Site and transported to a permitted receiving facility for disposal.

All containerized soil leaving the Site will be transported under bill of lading to a RIDEM-approved permitted receiving facility for disposal.

Construction entrances/stone stabilization pads will be placed at the construction boundary zone to facilitate the removal of excess soil from vehicle tires for those vehicles which need to leave the work zone on a routine basis.

APPENDIX E

RIDEM AIR POLLUTION CONTROL REGULATION NO. 5

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR RESOURCES

AIR POLLUTION CONTROL REGULATION NO. 5

FUGITIVE DUST

Effective: 2 August 1967

Last Amended: 19 July 2007

AUTHORITY: These regulations are authorized pursuant to R.I. Gen. Laws § 42-17.1-2(s) and 23-23, as amended, and have been promulgated pursuant to the procedures set forth in the R.I. Administrative Procedures Act, R.I. Gen. Laws Chapter 42-35.

RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR RESOURCES
AIR POLLUTION CONTROL REGULATION NO. 5

FUGITIVE DUST

5.1 Definitions

Unless otherwise expressly defined in this section, the terms used in this regulation shall be defined by reference to the Rhode Island Air Pollution Control General Definitions Regulation.

5.2 Applicability

This regulation shall apply, but not be limited to, the generation of airborne particulate matter from the following activities:

(a) The demolition, construction or renovation of buildings, bridges or other structures;

(b) Material stockpiles, including solid waste management facilities, and earth moving activities, including the clearing of land and other operations which cause airborne particulate matter;

(c) Stationary sources, as defined in the Air Pollution Control Regulations, whose activities involve the handling of materials which cause airborne particulate matter;

(d) Exterior surface preparation/resurfacing operations conducted on buildings, bridges, or other structures that are not regulated by the requirements of Air Pollution Control Regulation No. 24 entitled, "Removal of Lead Based Paint from Exterior Surfaces", as well as surface preparation/resurfacing operations conducted on vehicles, vessels, or any other surfaces which cause airborne particulate matter;

(e) Vehicles transporting materials which cause airborne particulate matter;

(f) Paved roads onto which earth or other material has been deposited by trucking or earth-moving equipment, by erosion by water, by the sanding and/or salting of roadways, or by other means;

(g) Commercial mining and/or quarrying operations including the construction, maintenance, and operation of a commercial mining and/or quarrying

facility, as well as activities which involve the use of explosive materials which cause airborne particulate matter; and

(h) Any other activities or operations which the Director may determine cause airborne particulate matter.

5.3 Requirements

No person shall cause or permit any materials, including but not limited to sand, gravel, soil, aggregate and any other organic or inorganic solid matter capable of releasing dust, to be handled, transported, mined, quarried, stored or otherwise utilized in any way so as to cause airborne particulate matter to travel beyond the property line of the emission source without taking adequate precautions to prevent particulate matter from becoming airborne. Such precautions shall be in accordance with good industrial practice as determined by the Director and/or shall be other reasonable fugitive dust prevention measures as determined by the Director.

5.4 General Provisions

5.4.1 Purpose

The purpose of this regulation is to limit the release of fugitive dust.

5.4.2 Authority

These regulations are authorized pursuant to R.I. Gen. Laws § 42-17.1-2(s) and 23-23, as amended, and have been promulgated pursuant to the procedures set forth in the R.I. Administrative Procedures Act, R.I. Gen. Laws Chapter 42-35

5.4.3 Application

The terms and provisions of this regulation shall be liberally construed to permit the Department to effectuate the purposes of state law, goals and policies.

5.4.4 Severability

If any provision of this regulation or the application thereof to any person or circumstance, is held invalid by a court of competent jurisdiction, the validity of the remainder of the regulation shall not be affected thereby.

5.4.5 Effective Date

The foregoing regulation, "Fugitive Dust", as amended, after due notice, is hereby adopted and filed with the Secretary of State this _____ day of _____, 20___ to become effective twenty (20) days thereafter, in accordance with the provisions of Chapters 23-23, 42-35, 42-17.1, 42-17.6, of the General Laws of Rhode Island of 1956, as amended.

W. Michael Sullivan, PhD., Director
Department of Environmental Management

Notice Given on: February 21, 2007

Public Hearing held: March 23, 2007

Filing Date: June 29, 2007

Effective Date: July 19, 2007

APPENDIX F

DAILY OPERATIONS LOG

Log # _____

CONTRACTOR'S DAILY OPERATIONS LOG

Taunton Avenue Improvements Project East Providence, Rhode Island		
Client: RI Department of Transportation		
Date/Time:	Weather:	Wind:
Inspector (Print Name):	Signature:	

DAILY ACTIVITIES CHECKLIST				
ARRIVAL ON SITE				
Was Site secure upon arrival?	☐ Yes	☐ No	☐ NA	☐ Comments_____
Was any evidence of trespass noted?	☐ Yes	☐ No	☐ NA	☐ Comments_____
Was any evidence of a release of potentially hazardous materials to the environment observed?	☐ Yes	☐ No	☐ NA	☐ Comments_____
Was daily safety briefing performed?	☐ Yes	☐ No	☐ NA	☐ Comments_____
Were erosion control measures (e.g., hay bales, silt fencing, catch basin protection, etc.) inspected and cleaned/repaired if required?	☐ Yes	☐ No	☐ NA	☐ Comments_____
OPERATIONS				
Did any accidents/incidents occur on-Site?	☐ Yes	☐ No	☐ NA	☐ Comments_____
If yes were accidents/ incidents reported to the Site Safety Officer?	☐ Yes	☐ No	☐ NA	☐ Comments_____
Were jurisdictional materials (e.g. impacted soils) segregated from non-jurisdictional materials (i.e., imported fill)?	☐ Yes	☐ No	☐ NA	☐ Comments_____
Were jurisdictional materials placed on polyethylene sheeting if required?	☐ Yes	☐ No	☐ NA	☐ Comments_____
Was approval obtained from Client's Rep prior to transporting any materials (soils, waste materials, wastewater, etc.) off-Site?	☐ Yes	☐ No	☐ NA	☐ Comments_____
Were appropriate equipment decon measures completed?	☐ Yes	☐ No	☐ NA	☐ Comments_____
END OF DAY				
Were all excavations backfilled, barricaded or otherwise secured?	☐ Yes	☐ No	☐ NA	☐ Comments_____
Were jurisdictional materials (e.g. impacted soils) covered with polyethylene sheeting if required?	☐ Yes	☐ No	☐ NA	☐ Comments_____
Was Site secured upon departure?	☐ Yes	☐ No	☐ NA	☐ Comments_____
Please provide additional information as indicated on Page 2.				

CONTRACTOR'S DAILY OPERATIONS LOG

EARTHWORK ACTIVITIES/LOCATION:

EQUIPMENT OPERATING:

EXCAVATION (type, quantity of material, etc.):

OBSERVATIONS (visual, odors, dust, etc.):

DATE AND TIME OF SAMPLING:

ESTIMATED VOLUME OF SOIL TAKEN OFF -SITE:

SOIL TAKEN TO:

HEALTH AND SAFETY MONITORING:

CONVERSATION NOTES:

APPENDIX G

SELECT CONTRACT PLANS SHOWING DETENTION BASIN AND RELIEF SWALE CAP TYPES

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI		2019	1	46

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET AND INDEX
2	KEY PLAN
3	STANDARD PLAN SYMBOLS & STANDARD LEGEND
4	STANDARD NOTES - 1
5	STANDARD NOTES - 2
6	JOB SPECIFIC PLAN SYMBOLS LEGEND AND NOTES
7	TYPICAL SECTIONS - 1
8	TYPICAL SECTIONS - 2
9	CRITICAL DRAINAGE SECTIONS
10	TYPICAL SWALE SECTIONS
11 - 13	TYPICAL DETAILS
14 - 20	GENERAL PLANS
21 - 22	GRADING AND LOCATION PLANS
23 - 28	DRAINAGE AND UTILITY PLANS
29 - 30	BIORETENTION BASIN DETAILS
31 - 35	SIGN AND STRIPING PLANS
36 - 37	TEMPORARY TRAFFIC CONTROL PLANS
38 - 44	CROSS SECTIONS
45 - 46	UTILITY TEST PIT LOGS

STATE OF RHODE ISLAND

DEPARTMENT OF TRANSPORTATION

PLAN, PROFILE AND SECTIONS OF PROPOSED

STATE HIGHWAY

IMPROVEMENTS TO TAUNTON AVENUE (U.S. ROUTE 44)

EAST OF PAWTUCKET AVE TO MASSACHUSETTS STATE LINE

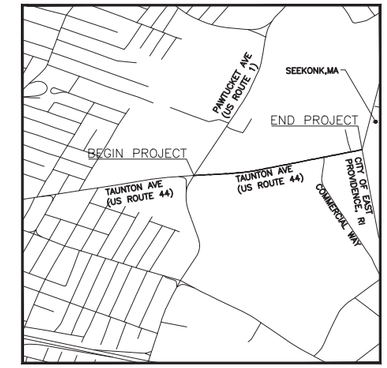
CITY OF EAST PROVIDENCE
COUNTY OF PROVIDENCE

R.I. CONTRACT NO. 2019-CH-032 F.A. PROJECT NO.

PAVEMENT STRUCTURE

OVERLAY AREAS:	FULL DEPTH RECONSTRUCTION:	PARK AND RIDE:
3" DEPTH MICROMILL	3" CLASS 9.5 HMA SURFACE (2 LIFTS) OVER	3" 9.5 HMA (2 LIFTS) OVER
3" CLASS 9.5 HMA (2 LIFTS)	8" CLASS 19.0 HMA BASE	6" GRAVEL BORROW

0.42 MILES

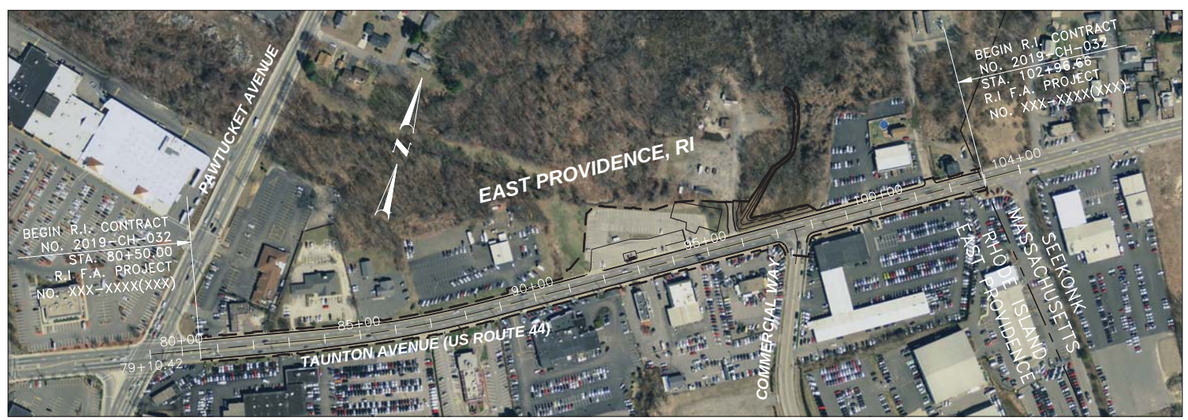


LOCATION MAP
NOT TO SCALE

R.I. STANDARD SPECIFICATIONS AND STANDARD DETAILS

SPECIFICATIONS TO GOVERN THIS PROJECT ARE THE R.I. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2004 EDITION (AMENDED MARCH 2018 WITH ALL REVISIONS), AND THE STATE AND FEDERAL SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS. STANDARD DETAILS FOR THIS PROJECT ARE R.I. STANDARD DETAILS, 1998 EDITION, WITH ALL REVISIONS.

DESIGN	DESIGNATION
2017 AADT	18,000 V.P.D.
D	51% EB /49% WB
K	10%
T	4% ESTIMATED
DDHV	900 V.P.H.
DHV	1780 V.P.H.
DESIGN SPEED	35 M.P.H.



LAYOUT PLAN
1"=200'

JULY 3, 2019
90% SUBMISSION

SCALES OF DRAWINGS

Plans	1 inch = 20 feet
Profiles	1 inch = 20 feet Horizontal
Profiles	1 inch = 4 feet Vertical
Cross Sections	1 inch = 4 feet Horizontal
Cross Sections	1 inch = 4 feet Vertical

BASE OF LEVELS
NGVD 29

GREEN INTERNATIONAL AFFILIATES, INC.
Civil and Structural Engineers

Contract Number _____
Number of Sheet 1
Total Sheets 46

R.I. DEPARTMENT OF TRANSPORTATION

APPROVED

ADMINISTRATOR OF PROJECT MANAGEMENT DATE

APPROVED

CHIEF ENGINEER OF INFRASTRUCTURE DATE

APPROVED

DIRECTOR DATE

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED

DIVISION ADMINISTRATOR DATE

0076R_V1_001_COVER

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	RI		2019	3	46

EXISTING / NEW

EXISTING		NEW
	EDGE OF PAVEMENT	
	BERM	
	CURB	
	GUARDRAIL	
MB	MAILBOX	
NO.	UTILITY POLE	NO.
	POLE GUY	GUY
	LUMINARE	
SIGN	SIGN	
(SIZE)SD	SUBDRAIN	N(SIZE)SD
(SIZE)D	STORMDRAIN	(Length → Size)
(SIZE)S	SANITARY SEWER	(Length → Size)
(SIZE)W	WATER MAIN	N(SIZE)W
(SIZE)G	GAS MAIN	N(SIZE)G
(SIZE)T	TELEPHONE DUCT	N–#(SIZE)T
(SIZE)E	ELECTRIC DUCT	N–#(SIZE)E
	PLUG AND CAP PIPE	
	ABANDONED UTILITY	
	FLARED END SECTION	
	HEADWALL	
WG OR GG	WATER OR GAS GATE	
CB	CATCH BASIN	
MH	MANHOLE	
HYD	HYDRANT	
1+00	BASELINE OR CENTERLINE	1+00
EXIST. S.H.L. PLAT NO. XX	STATE HIGHWAY LINE	NEW S.H.L. PLAT NO. XX
EXIST. S.F.L. PLAT NO. XX	STATE FREEWAY LINE	NEW S.F.L. PLAT NO. XX
EXIST. P.E.B.	PERMANENT EASEMENT LINE	NEW P.E.B.
EXIST. T.E.B.	TEMPORARY EASEMENT LINE	NEW T.E.B.
P	PROPERTY LINE	
CITY NAME	CITY OR TOWN LINE	
TOWN NAME		
PWW	PAVED WATERWAY	
ELEV.	CONTOUR LINE	ELEV.
	OPEN DITCH	
R.I.H.B.	R.I. HIGHWAY BOUND	
S.B.	STONE BOUND	
	RETAINING WALL	
	FIELD STONE WALL	
NO.	BORINGS	NO.
TYPE	FENCE	
	WOOD OR BRUSH LINE	
	TREES	
(NAME)	RIVER OR STREAM	
	WETLAND AREA	
NO. TYPE MATERIAL	BUILDING	
	FOUNDATION	
	BUILDING TO BE REMOVED	
	RAILROAD TRACKS	
	CUT AND MATCH	
	RIP–RAP	
	CUT SLOPE	ROADWAY / TOP OF SLOPE
	FILL SLOPE	ROADWAY / TOE OF SLOPE
	ROCK CUT	ROCK SHELF / ROCK / CUT
00x00	SPOT GRADE	00.00
	AREA GRADED TO DRAIN	ELEV.
	BALED HAY RI STD 9.1.0	
	BALED HAY & SILT FENCE RI STD. 9.3.0	
123 124 125	EDGE OF WETLAND	
	WETLAND PERIMETER	
ASSF	AREA SUBJECT TO STORM FLOW	
100 YR. FLOOD BOUNDARY	100–YEAR FLOOD PLAIN	
	LIMIT OF DISTURBANCE	LIMIT OF DISTURBANCE
	LIMIT OF CLEARING	LIMIT OF CLEARING

1.1.0	UNDERDRAIN
1.3.0	CONCRETE CONNECTING COLLAR
2.1.0	CONCRETE HEADWALLS FOR PIPE CULVERTS
2.2.0	STANDARD HEADWALLS FOR MULTIPLE 3'–6" TO 7'–0' PIPE CULVERTS
2.3.0 (DIA.)	PRECAST CONCRETE FLARED END SECTION
3.2.0	BRICK/SOLID BLOCK 4'–0" ROUND MANHOLE
3.2.1 (DIA.)	BRICK/SOLID BLOCK 5'–0" OR 6'–0" ROUND MANHOLE
3.3.0	BRICK/SOLID BLOCK TYPE "D" SQUARE CATCH BASIN
3.3.2	BRICK/SOLID BLOCK TYPE "F" SQUARE CATCH BASIN
3.3.3	SOLID BLOCK FLUSH SQUARE CATCH BASIN
3.4.0	BRICK/SOLID BLOCK TYPE "D" ROUND CATCH BASIN
3.4.1	BRICK/SOLID BLOCK ROUND CATCH BASIN WITH GUTTER INLET
3.4.2	BRICK/SOLID BLOCK TYPE "F" ROUND CATCH BASIN
3.4.3	BRICK/SOLID BLOCK TYPE "R" CATCH BASIN
3.4.4	SOLID BLOCK FLUSH ROUND CATCH BASIN
3.4.5 (DIA.)	BRICK/SOLID BLOCK 5'–0" OR 6'–0" ROUND CATCH BASIN
3.5.0	SOLID BLOCK SHALLOW TYPE "F" SQUARE CATCH BASIN
3.5.1 (SIZE)	SOLID BLOCK SHALLOW 5'–0" OR 6'–0" SQUARE CATCH BASIN
3.6.0	BRICK/SOLID BLOCK DROP INLET
3.7.0 (DIA.)	BRICK/SOLID BLOCK ROUND MANHOLE OR CATCH BASIN GREATER THAN 12'–0"
4.2.0	PRECAST 4'–0" ROUND MANHOLE
4.2.1	PRECAST 5'–0" ROUND MANHOLE
4.2.2	PRECAST 6'–0" ROUND MANHOLE
4.3.0 (SIZE)	PRECAST 4'–0" OR 6'–0" SQUARE MANHOLE OR CATCH BASIN
4.4.0 (DIA.)	PRECAST 4'–0", 5'–0", OR 6'–0" ROUND CATCH BASIN
4.5.0	PRECAST CONCRETE DROP INLET
4.5.1	PRECAST CONCRETE DROP INLET LATERAL OUTLET
4.5.2	PRECAST CONCRETE DROP INLET LONGITUDINAL OUTLET
5.3.0	CATCH BASIN AND MANHOLE STEP
5.4.0	CONCRETE COLLARS
6.1.0	LIGHT–DUTY SQUARE FRAME AND ROUND COVER
6.1.1	HEAVY DUTY SQUARE FRAME AND ROUND COVER
6.2.0	LIGHT–DUTY ROUND FRAME AND COVER
6.2.1	HEAVY–DUTY ROUND FRAME AND COVER
6.3.0	SQUARE FRAME AND GRATE
6.3.1	SQUARE FRAME AND GRATE
6.3.2	SQUARE FRAME AND GRATE (BICYCLE SAFE)
6.3.3	HIGH CAPACITY FRAME AND GRATE
6.3.4	HIGH CAPACITY FRAME AND GRATE (BICYCLE SAFE)
6.4.0	ROUND FRAME AND GRATE
7.1.0S	PRECAST CONCRETE CURB (STRAIGHT)
7.1.0C	PRECAST CONCRETE CURB (CIRCULAR)
7.1.1	3'–0' PRECAST CONCRETE TRANSITION CURB
7.1.2	6'–0" PRECAST CONCRETE TRANSITION CURB
7.1.4	PRECAST 2'–0" RADIUS CORNER
7.1.5	PRECAST CONCRETE INLET STONE (FOR SQUARE CATCH BASIN)
7.1.6	PRECAST CONCRETE INLET STONE (FOR ROUND CATCH BASIN)
7.1.7	PRECAST CONCRETE APRON STONE (FOR SQUARE CATCH BASIN)
7.1.8	PRECAST CONCRETE APRON STONE (FOR ROUND CATCH BASIN)
7.2.0S	PRECAST CONCRETE SLOPED FACE CURB (STRAIGHT)
7.2.0C	PRECAST CONCRETE SLOPED FACE CURB (CIRCULAR)
7.2.1	PRECAST CONCRETE SLOPED FACE TRANSITION CURB
7.2.2	PRECAST CONCRETE TRANSITION CURB (VERTICAL FACE TO SLOPED FACE)
7.3.0S	GRANITE CURB (STRAIGHT)
7.3.0C	GRANITE CURB (CIRCULAR)
7.3.1	3'–0" GRANITE TRANSITION CURB
7.3.2	6'–0" GRANITE TRANSITION CURB
7.3.3	GRANITE WHEELCHAIR RAMP TRANSITION CURB
7.3.4	GRANITE 2'–0" RADIUS CORNER
7.3.5	GRANITE INLET STONE (FOR SQUARE CATCH BASIN)
7.3.6	GRANITE INLET STONE (FOR ROUND CATCH BASIN)
7.3.7	GRANITE APRON STONE (FOR SQUARE CATCH BASIN)
7.3.8	GRANITE APRON STONE (FOR ROUND CATCH BASIN)
7.4.0	GRANITE SLOPED FACE CURB
7.4.1	GRANITE SLOPED FACE TRANSITION CURB
7.4.2	GRANITE TRANSITION CURB (VERTICAL FACE TO SLOPE FACE)
7.5.0	BITUMINOUS CONCRETE LIP CURB
7.5.1A	BITUMINOUS BERM (CONSTRUCTION METHOD A)
7.5.1B	BITUMINOUS BERM (CONSTRUCTION METHOD B)
7.6.0	CURB SETTING DETAIL
8.2.0	BITUMINOUS CONCRETE DITCH
8.3.0	RIP–RAP DITCH
8.4.0	PAVED WATERWAY
9.1.0	BALED HAY EROSION CHECK
9.2.0	SILT FENCE DETAIL
9.3.0	BALED HAY DITCH EROSION CHECK AND SILT FENCE COMBINED
9.4.0	BALED HAY DITCH AND SWALE EROSION CHECK
9.5.0	LOG AND HAY CHECK DAM
9.7.0	DEWATERING BASIN
9.8.0	BALED HAY CATCH BASIN INLET PROTECTION
9.9.0	CONSTRUCTION ACCESS
10.1.0	WET STONE MASONRY RETAINING WALL
10.2.0	RUBBLE MASONRY WALL
10.3.0	CONCRETE RETAINING WALL
10.4.0	STONE MASONRY STEPS
14.1.0	CONCRETE HIGHWAY BOUND
15.1.0	POST AND MOUNTINGS FOR RURAL MAILBOX
15.2.0 (NO.)	POST AND MULTIPLE MOUNTINGS FOR RURAL MAILBOXES
18.2.0	PRECAST TYPE "A" HANDHOLE
18.2.2	HEAVY DUTY TYPE "H" HANDHOLE
18.3.0	ALUMINUM LIGHTING STANDARDS
20.2.0	BI–DIRECTIONAL CONTROL DEVICE
24.6.1	STREET SIGN MOUNTING DETAIL
26.2.0	POLYETHYLENE DRUM WITH MARKINGS
26.3.0	PVC PLASTIC PIPE TYPE III BARRICADE
31.1.0	CHAIN LINK FENCE 3'–0" TO 4'–0"
31.2.0	CHAIN LINK FENCE 5'–0" TO 6'–0"
31.2.1	CHAIN LINK FENCE 5'–0" TO 6'–0" INTERMEDIATE POST
31.3.0	WOVEN WIRE RIGHT–OF–WAY FENCE (STEEL POST)
34.1.0	TYPICAL GUARDRAIL INSTALLATION
34.2.0	STEEL BEAM GUARDRAIL
34.2.1	STEEL BEAM GUARDRAIL DETAILS
34.2.2	STEEL BEAM GUARDRAIL DOUBLE FACED ASSEMBLY
34.2.3	STEEL BEAM GUARDRAIL FIXTURES
34.2.5	STEEL BEAM GUARDRAIL REFLECTORIZED TRIANGULAR DELINEATOR
34.3.1	GUARDRAIL END SECTION
34.3.2	TERMINAL END SECTION (SINGLE FACE)
34.3.3	ANCHORAGE DETAILS APPROACH END SECTION
34.3.4	ANCHORAGE DETAILS TRAILING END SECTION
34.4.0	STEEL BACKED TIMBER GUARDRAIL
34.4.1	STEEL BACKED TIMBER GUARDRAIL TERMINAL SECTION–TYPE 1
40.1.0	DOUBLE–FACED PRECAST MEDIAN BARRIER
40.2.0	SINGLE–FACED PRECAST MEDIAN BARRIER
40.2.1	SINGLE–FACED PRECAST MEDIAN BARRIER
40.3.0	PRECAST MEDIAN BARRIER TRANSITION UNIT
40.5.0	PRECAST MEDIAN BARRIER FOR TEMPORARY TRAFFIC CONTROL
43.1.0	CEMENT CONCRETE SIDEWALK
43.2.0	BITUMINOUS CONCRETE SIDEWALK
43.3.0	WHEELCHAIR RAMP
43.3.1	WHEELCHAIR RAMP FOR LIMITED RIGHT–OF–WAY AREAS
43.4.0	DRIVEWAY DEVELOPMENT FOR 3'–0" TRANSITION CURB
43.4.1	DRIVEWAY DEVELOPMENT FOR 6'–0" TRANSITION CURB
43.5.0	CEMENT CONCRETE DRIVEWAYS
48.1.0	DETECTABLE WARNING SYSTEM
51.1.0	TREE PROTECTION DEVICE
51.1.1	DRIP LINE TREE PROTECTION DEVICE FOR EXISTING TREES
51.2.0	SHRUB PROTECTION DEVICE
51.3.0	TREE WELL
51.4.0	TREE WALL

AB	ADJUST CATCH BASIN TO GRADE
ABM	ADJUST CATCH BASIN TO MANHOLE
AC	ADJUST CURB STOP TO GRADE
AD	ADJUST DRAINAGE MANHOLE TO GRADE
AE	ADJUST ELECTRIC MANHOLE TO GRADE
AFC	ADJUST FRAME AND COVER TO GRADE
AFG	ADJUST FRAME AND GRATE TO GRADE
AG	ADJUST GAS GATE BOX TO GRADE
AHH	ADJUST HANDHOLE TO GRADE
AS	ADJUST SANITARY SEWER MANHOLE TO GRADE
AT	ADJUST TELEPHONE MANHOLE TO GRADE
AW	ADJUST WATER GATE BOX TO GRADE
BCD	BITUMINOUS CONCRETE DRIVEWAY 3" BITUMINOUS CONCRETE TYPE I–2 8" GRAVEL BORROW SUBBASE COURSE
BPS	BUILD NEW STRUCTURE OVER EXISTING PIPE
CCB	CLEAN CATCH BASIN
CCP	CUT AND CAP PIPE WITH RESTRAINT (ALL SIZES)
CFP	CLEAN AND FLUSH PIPE
CG	CLEARING AND GRUBBING
CMH	CLEAN MANHOLE
CP (DEPTH)	COLD PLANE
CPP	CUT AND PLUG PIPE (ALL TYPES, ALL SIZES)
DB	REMOVE AND DISPOSE BITUMINOUS CURB
DC	REMOVE AND DISPOSE CONCRETE CURB
DCB	REMOVE AND DISPOSE CATCH BASIN
DDI	REMOVE AND DISPOSE DROP INLET
DF	REMOVE AND DISPOSE FENCE
DFC	REMOVE AND DISPOSE FRAME AND COVER
DFE	REMOVE AND DISPOSE FLARED END SECTION
DFG	REMOVE AND DISPOSE FRAME AND GRATE
DFH	REMOVE AND DISPOSE FIRE HYDRANT
DFP	REMOVE AND DISPOSE FLEXIBLE PAVEMENT
DG	REMOVE AND DISPOSE GUARDRAIL
DH	REMOVE AND DISPOSE HEADWALL
DHB	REMOVE AND DISPOSE HIGHWAY BOUND
DHH	REMOVE AND DISPOSE HANDHOLE
DL	REMOVE AND DISPOSE LIGHT AND FOUNDATION
DMB	REMOVE AND DISPOSE MEDIAN BARRIER
DMH	REMOVE AND DISPOSE MANHOLE
DMM	REMOVE AND DISPOSE MEDIAN MARKER
DOW	REMOVE AND DISPOSE OBSERVATION WELL
DP	REMOVE AND DISPOSE PIPE
DPB	REMOVE AND DISPOSE PAVEMENT AND RIGID BASE
DRB	REMOVE AND DISPOSE RIGID BASE
DS	REMOVE AND DISPOSE SIGN
DSS	REMOVE AND DISPOSE TRAFFIC SIGNAL SYSTEM
DSW	REMOVE AND DISPOSE SIDEWALK
DTD	REMOVE AND DISPOSE TELEPHONE DUCT BANKS
DUP	REMOVE AND DISPOSE UTILITY POLE
DWW	REMOVE AND DISPOSE PAVED WATERWAY
FF	FILTER FABRIC RIPRAP FLARED END UNDERLAYMENT
GET	FLARED GUARDRAIL END TREATMENT
IA	IMPACT ATTENUATOR
IDL	IMPERVIOUS DITCH LINER
LOD	LIMIT OF DISTURBANCE
LOR	LIMIT OF REGRADING
LS	4" LOAM AND SEED

NFH	NEW FIRE HYDRANT WITH GATE VALVE
NIC	NOT IN THIS CONSTRUCTION CONTRACT
NWB	FURNISH AND INSTALL NEW WATER GATE VALVE BOX
NWVB	FURNISH AND INSTALL NEW WATER GATE VALVE AND BOX
NWCB	FURNISH AND INSTALL NEW WATER CURB STOP BOX
NWSB	FURNISH AND INSTALL NEW WATER CURB STOP AND BOX
PCD	PERMANENT CHECK DAM
PS	4" PLANTABLE SOIL AND SEED
RCB	RECONSTRUCT TYPE "D" CATCH BASIN, TO CATCH BASIN WITH GUTTER INLET
RCM	R.I.D.O.T. COMMUNICATIONS MANHOLE
RHH	REMOVE, HANDLE, HAUL, TRIM, RESET CURB EDGING, STRAIGHT, CIRCULAR (ALL TYPES)
RLP	RELOCATE LAMP POST
RMB	RELOCATE MAILBOX (BY OTHERS)
RPM	REMOVE PAVEMENT MARKINGS
RRP	RIP–RAP PAD (SEE DETAIL)
RRS	REMOVE AND RELOCATE SIGN
RUP	RELOCATE UTILITY POLE (BY OTHERS)
SB	STONE BAFFLE
SBAE	STEEL BEAM BRIDGE CONNECTION APPROACH END (W/O NESTED RAIL)
SBTE	STEEL BEAM BRIDGE CONNECTION TRAILING END (W/NESTED RAIL)
SD–	STRUCTURAL DISPOSITION – SEE CS PAGES OF SPECIFICATION
SF	REMOVE AND STOCKPILE FENCE
SGA	SPECIAL GRADED AGGREGATE
SGC	REMOVE AND STOCKPILE GRANITE CURB
SGR	REMOVE AND STOCKPILE GUARDRAIL
SH	REMOVE AND STOCKPILE HYDRANT
SS	REMOVE AND STOCKPILE SIGN
STS	REMOVE AND STOCKPILE TRAFFIC SIGNAL SYSTEM
TB	CONCRETE THRUST BLOCK
TEP	TIE EXISTING PIPE INTO NEW STRUCTURE
TNP	TIE NEW PIPE INTO EXISTING STRUCTURE
TBT	THRIE BEAM TRANSITION
TBBC	THRIE BEAM BRIDGE CONNECTION
TT	TREE TRIMMING
WCM	4" WOOD CHIP MULCH
4DY	4" EPOXY RESIN PAVEMENT MARKINGS – DOUBLE YELLOW
6W	6" EPOXY RESIN PAVEMENT MARKINGS – WHITE
12W	12" EPOXY RESIN PAVEMENT MARKINGS – WHITE
6WT	6" PREFORMED PATTERNED MARKING (HIGH PERFORMANCE TAPE)
4Y	4" EPOXY RESIN PAVEMENT MARKINGS – YELLOW
6Y	6" EPOXY RESIN PAVEMENT MARKINGS – YELLOW
P.G.L.	PROFILE GRADE LINE

THIS PLAN SHALL NOT BE ALTERED

REVISIONS		
NO.	DATE	BY

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

IMPROVEMENTS TO
TAUNTON AVENUE

EAST PROVIDENCE, RHODE ISLAND

STANDARD PLAN SYMBOLS &
STANDARD LEGEND

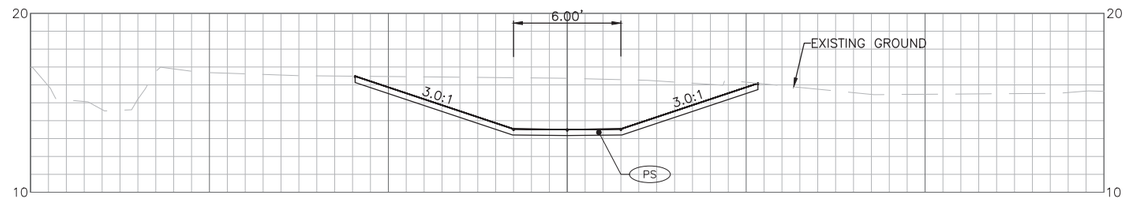
GREEN INTERNATIONAL AFFILIATES, INC.
Civil and Structural Engineers

CHECKED BY _____ DATE _____ SCALE NO SCALE

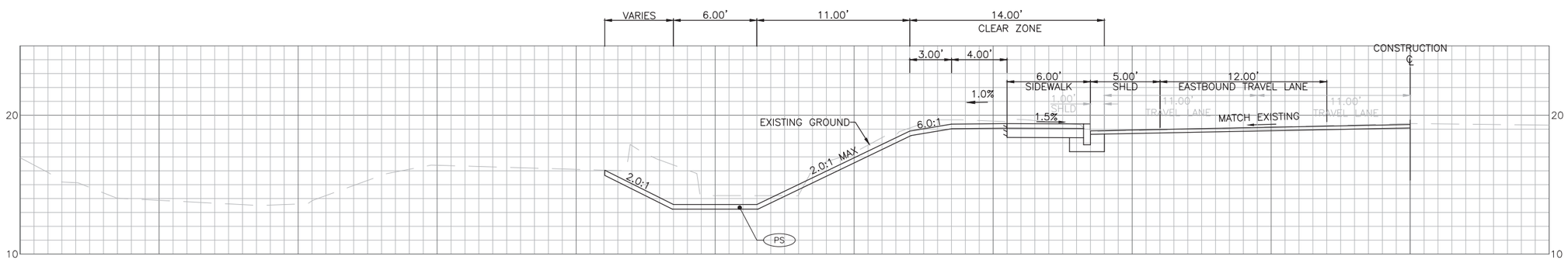
0076R_V1_003_STDSYM

F:\Projects\2016\16062\16062.01x_0076r Taunton Ave\DWG\0076R_V1_003_STDSYM.dwg Printed: 7/2/2019 9:02 AM

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI		2019	10	46



TYPICAL RELIEF SWALE SECTION
STA. 20+68 – 24+75
SCALE: 1"=4'



TYPICAL SWALE SECTION – TAUNTON AVE (US ROUTE 44)
STA. 96+15 LT TO 98+00 LT
SCALE: 1"=4'

REVISIONS		
NO.	DATE	BY

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

IMPROVEMENTS TO
TAUNTON AVENUE

EAST PROVIDENCE, RHODE ISLAND

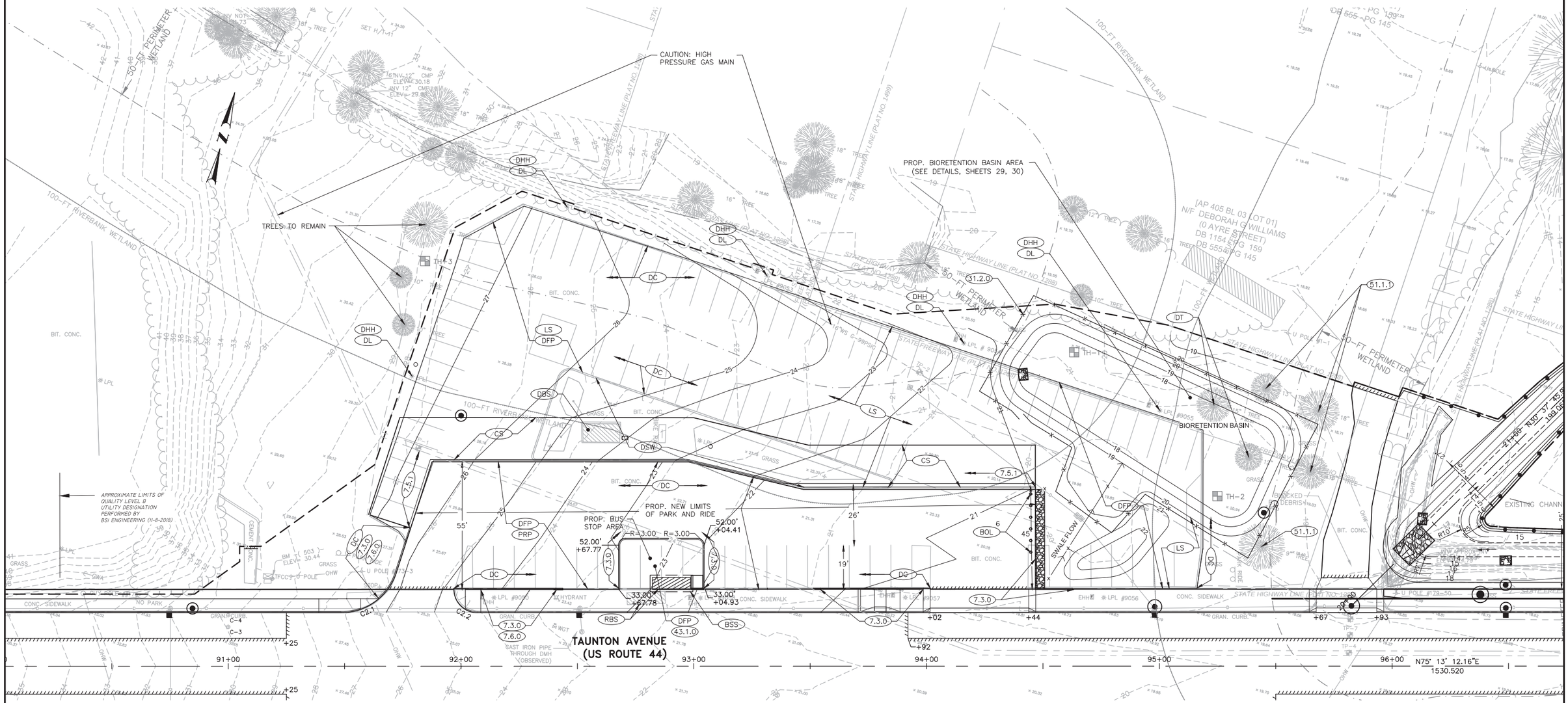
TYPICAL SWALE SECTIONS

GREEN INTERNATIONAL AFFILIATES, INC.
Civil and Structural Engineers

CHECKED BY DATE SCALE 1"=20'

0076R_V1_007_TYPICAL

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI		2019	19	46



SCALE IN FEET

0 20 50 100 FEET

HORZ. 1"=20'

REVISIONS		
NO.	DATE	BY

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

IMPROVEMENTS TO
TAUNTON AVENUE

EAST PROVIDENCE, RHODE ISLAND

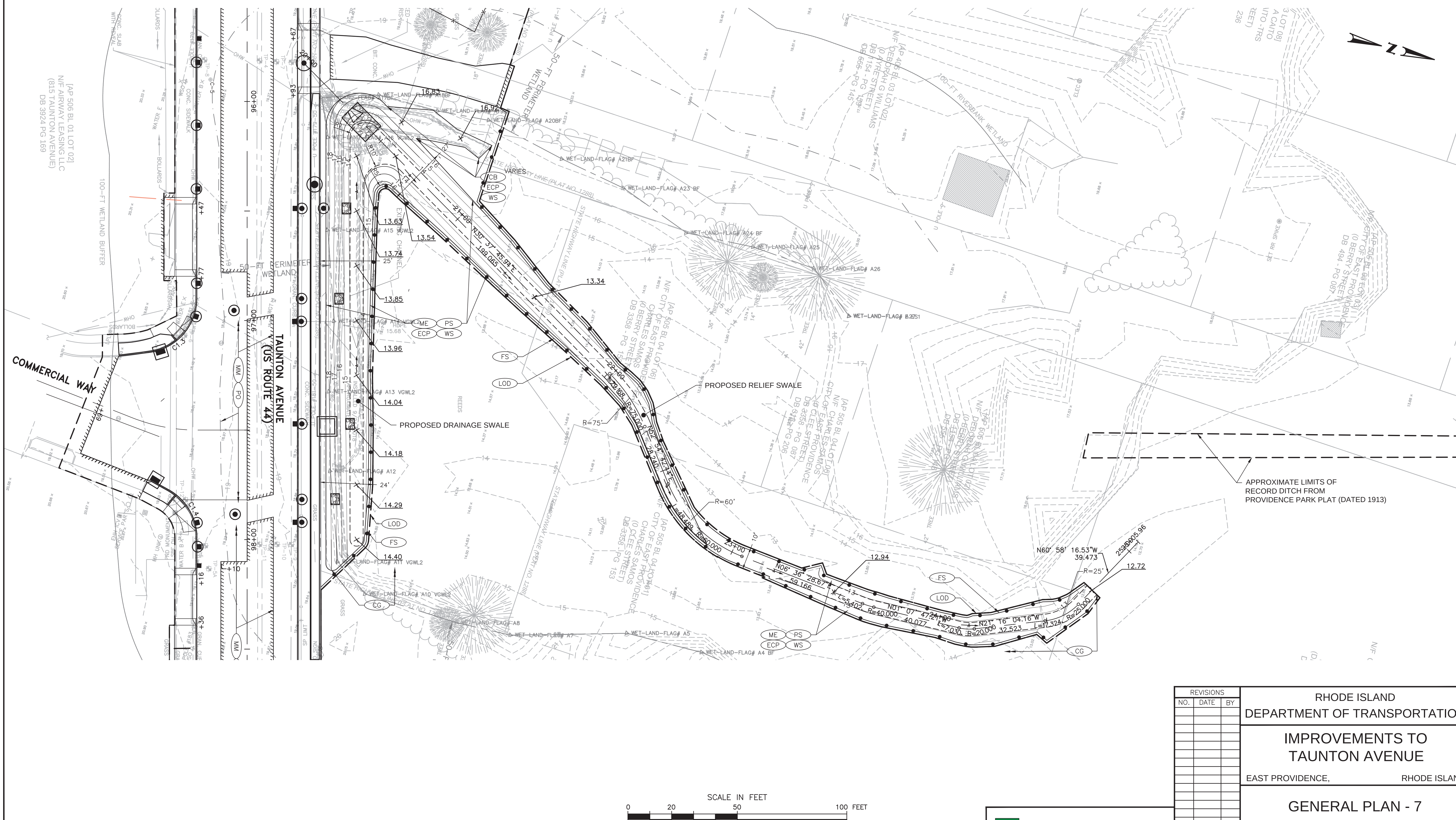
GENERAL PLAN - 6

GREEN INTERNATIONAL AFFILIATES, INC.
Civil and Structural Engineers

CHECKED BY _____ DATE _____ SCALE 1"=20'

0076R_V1_013_GENERAL

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI		2019	20	46



GREEN INTERNATIONAL AFFILIATES, INC.
Civil and Structural Engineers

REVISIONS		
NO.	DATE	BY

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

IMPROVEMENTS TO TAUNTON AVENUE

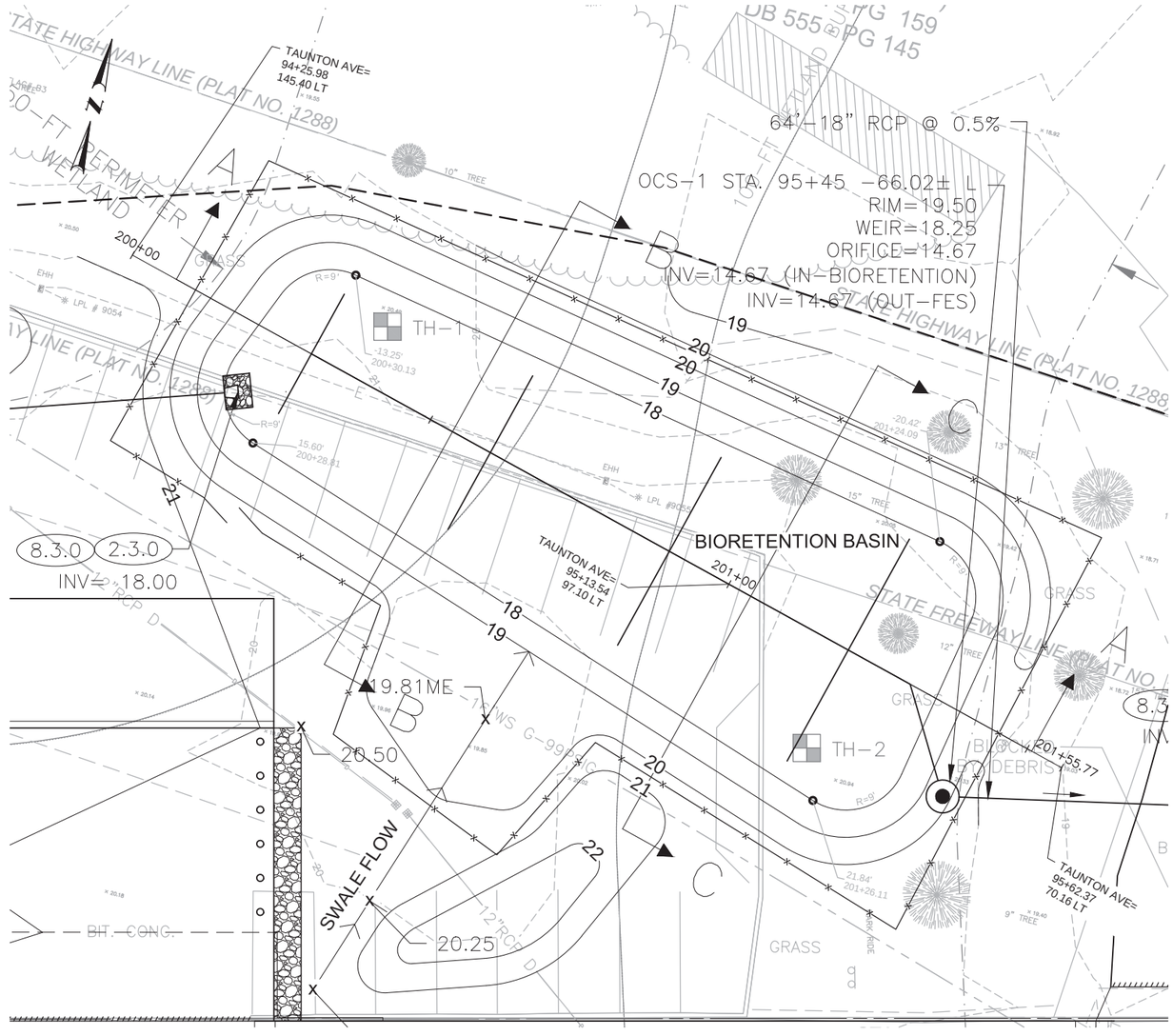
EAST PROVIDENCE, RHODE ISLAND

GENERAL PLAN - 7

CHECKED BY ________ DATE ________ SCALE 1"=20'

0076R_V1_013_GENERAL

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI		2019	29	46



BIORETENTION BASIN PLAN

FOR SECTIONS, SEE NEXT SHEET

SCALE IN FEET

0 10 25 50 FEET

HORZ. 1"=10'

REVISIONS		
NO.	DATE	BY

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

IMPROVEMENTS TO
TAUNTON AVENUE

EAST PROVIDENCE, RHODE ISLAND

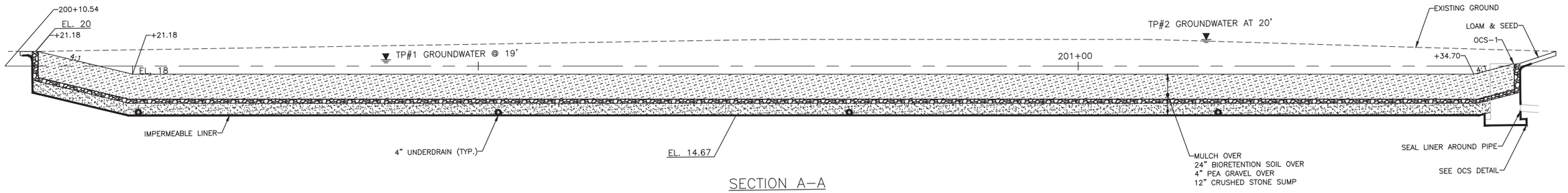
BIORETENTION DETAIL - 1

GREEN INTERNATIONAL AFFILIATES, INC.
Civil and Structural Engineers

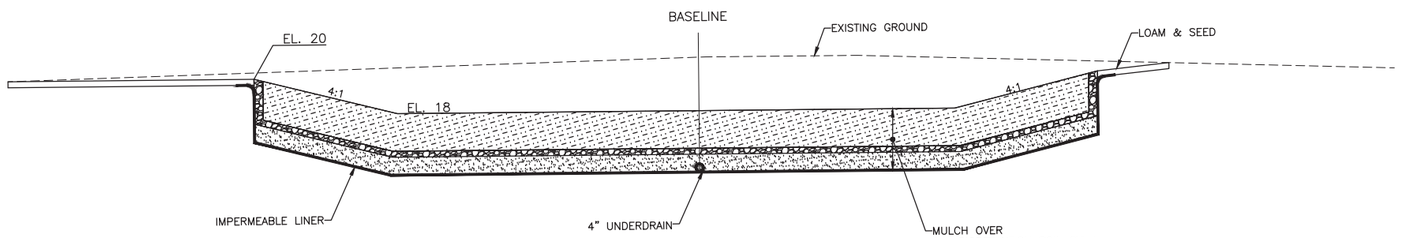
CHECKED BY _____ DATE _____ SCALE N/A

0076R_V1_013_GENERAL

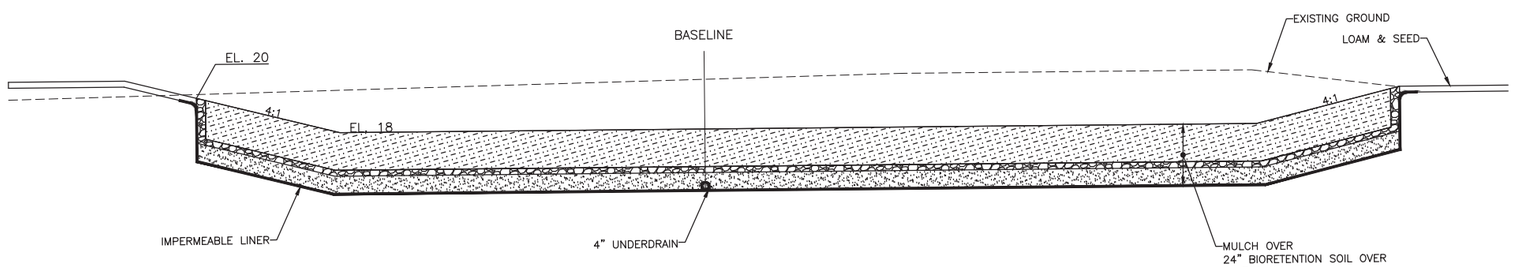
FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI		2019	30	46



SECTION A–A



SECTION B–B



SECTION C–C

BIORETENTION BASIN TYPICAL SECTIONS

FOR PLAN VIEW, SEE PREVIOUS SHEET

SCALE IN FEET

0 4 10 20 FEET

HORZ. 1"=4'

REVISIONS		
NO.	DATE	BY

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

IMPROVEMENTS TO
TAUNTON AVENUE

EAST PROVIDENCE, RHODE ISLAND

BIORETENTION DETAIL - 2

GREEN INTERNATIONAL AFFILIATES, INC.
Civil and Structural Engineers

CHECKED BY _____ DATE _____ SCALE N/A

0076R_V1_013_GENERAL

GZA GeoEnvironmental, Inc.

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JOB SPECIFIC
R.I. CONTRACT NO. 2019-CH-032

ITEM CODE 101.71
SUBSTANTIAL COMPLETION

101.71 SUBSTANTIAL COMPLETION. Substantial completion is when the Work is completed so it can be safely and effectively used by the public. This may include the entire Project or a unit, or portion of the Work such as a structure, an interchange, or section of road or pavement

Except as provided by other provisions in the Contract, after notice by the Contractor, Substantial Completion occurs at the point when the Engineer determines that the following Work has been finished:

1) All courses of pavement are completed;

2) All project drainage is completed;

3) Final pavement markings are completed;

4) Regulatory and warning signs are installed;

5) All Sidewalk is completed

6) The park and ride is paved and available for use by the public

The parties may agree that any incomplete contract Work, including but not limited to landscaping, erosion control measures, or Final Cleanup, not listed in 1-6 above shall be completed on the Punch List, which is defined in Section 101 in the Specifications.

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Date: 8/08/2019
Page 1 of 1

JOB SPECIFIC
R.I. CONTRACT NO. 2019-CH-032

CODE 108.1000
PROSECUTION AND PROGRESS AND SUBSTANTIAL COMPLETION DATES

In accordance with Section 108.08, Failure to Complete on Time, Para. a., Phased Completion, Interim Completion and Substantial Completion the following defines the Interim and Substantial Completion Dates and Associated Liquidated Damages:

Substantial Completion: July 15, 2021

All Contract work shall be completed, as defined by Section 101.71, by the date listed above.

Liquidated Damages for Substantial Completion: $1,500.00 per calendar day.

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JOB SPECIFIC

CODE 202.9911
HANDLING AND STOCKPILING CONTAMINATED SOILS

DESCRIPTION: This item includes requirements for the handling and stockpiling of contaminated subsurface soils. During the course of the project construction, contaminated soils have the potential to be located in the following areas (Bioretention pond and drainage swales, See the Soil Management Plan (SMP) in Appendix H of the CS Pages):

Excavated contaminated soil management shall be completed in accordance with the Soil Management Plan (SMP). The work shall be performed in accordance with all appropriate sections of the Rhode Island Department of Transportation Standard Specifications for Road and Bridge Construction, 2018 Edition, the CSMP and in compliance with all applicable permits.

Loading, hauling, and off-site recycling/disposal shall be paid for in accordance with Codes 202.9914 through 202.9917 Load, Haul, and Dispose of Type 1 and/or Type 2 Soils.

SUBMITTALS: The Soil Management Plan (SMP) is attached to the Contract Specific pages – Appendix H. The SMP outlines the contaminated soil management requirements for this project.

The Contractor shall prepare and submit two copies of his Soil Management Plan (SMP) to the RIDOT for review and approval. The Contractor's SMP shall describe how the Contractor will comply with the SMP requirements. The SMP shall include a list of all equipment, including sizes and capacities the sequencing of all soil removal activities, all proposed on-site and off-site stockpile locations and their respective capacities, contaminated soil loading and hauling methodologies, and off-site recycling/disposal facilities. The sequence shall identify specific excavations, proposed stockpile locations and capacities. The Contractor shall be required to sequence excavation operations so as not to exceed the stockpile location capacity. The Contractor's SMP shall include an operation log that will be used to document daily contaminated soil excavation activities.

HEALTH AND SAFETY PLAN: The Contractor shall produce and maintain a site-specific Health and Safety Plan (HASP). The site-specific HASP shall be implemented as part of this work. The Contractor shall provide three copies of the OSHA 40-hour health and safety training and the 8-hour refresher training certificates, if applicable to the RIDOT for the persons that will be performing the contaminated soil excavation work.

If visible dust is generated, the level of dermal and respiratory protection shall be determined based upon periodic air monitoring to be performed by the Contractor and the requirements of the Site-specific HASP. The RIDOT may conduct duplicate air monitoring for quality assurance purposes. Level D protection shall be the minimum personal protective level for all on-site personnel.

APPLICABLE LAWS AND REGULATIONS: The excavation, removal, stockpiling, and transportation of contaminated soil shall be conducted in accordance with the Environmental Protection Agency (EPA) and the Rhode Island Department of Environmental Management (RIDEM) regulations, the CSMP, and in compliance with all applicable permits.

MATERIALS: The Contractor shall supply and utilize all required materials to adequately complete contaminated soil excavation. Personal protective equipment shall be as specified in the Contractor's site-specific Health and Safety Plan.

CONTAMINATED SOIL EXCAVATION: The Contractor may choose and implement any effective and lawful method for excavating contaminated soil encountered in the work area provided they perform the required excavation subject to the RIDOT approved SMP. The Contractor shall assume all responsibility for the adequacy of the methods, materials, documentation, and equipment employed.

The Contractor shall ensure that compliance with applicable regulations is maintained during all contaminated soil earthwork operations. The Contractor shall maintain copies of the SMP on-site. The Contractor shall be required to maintain an operation log during the contaminated soil earthwork activities to include, but not be limited to, dates of earthwork activities, dates and times of field sampling, soil management observations, and tracking related to stockpile generation. The operation log shall be submitted to the RIDOT Resident Engineer daily to document the operations associated with contaminated soil earthwork activities. The Contractor and Resident Engineer shall sign the operating log at the completion of contaminated soil excavation activities. The Contractor shall not resume contaminated soil excavation activities until the daily log for the previous day has been signed by the Contractor and the RIDOT Resident Engineer.

In addition to the above, the Contractor is responsible for erosion and pollution controls in accordance with local, State and Federal regulations as well as what is included in the Contract Documents.

During excavation of contaminated soil, the Contractor shall be required to control dust and sedimentation erosion. Erosion control devices shall be installed as shown on the Plans or as directed by the RIDOT. All excavated soils, deemed non-compliant by the RIDOT Inspector and field screen results, shall immediately be placed into trucks, covered, and hauled to be stockpiled in the appropriate dry contaminated soil stockpile or wet contaminated soil stockpile or hauled to an off-site disposal site. Stockpile areas shall be selected by the Contractor at no additional cost to the State, and are subject to the approval of the RIDOT.

While engaged in contaminated soil excavation work, the Contractor shall be subject to on-site inspection by the RIDOT Inspector. If the work is in violation of the requirements of this specification, RIDOT will issue a stop work order to be in effect immediately and until the violation is resolved. Standby time and expenses required to resolve the violation shall be at the Contractor's expense.

The Contractor shall coordinate contaminated soil excavation with the Engineer. The Contractor shall provide notification to the Engineer 72-hours in advance of all contaminated soil excavation work.

The Contractor shall notify RIDOT within 24 hours if an unexpected change of conditions related to the presence of hazardous wastes or material is encountered at the site. The Contractor shall not proceed with work in the areas where an unexpected change of conditions related to the presence of hazardous wastes or material is encountered until authorized to do so by the RIDOT.

During contaminated soil excavation, loading, hauling, and/or stockpiling, the Contractor shall minimize odors by methods including the use of odor suppressant shell material where necessary.

CONTAMINATED SOIL HANDLING: The Contractor shall supply and utilize all required equipment and material to handle, haul, and stockpile excavated contaminated soil within approved dry and wet contaminated soil stockpile areas.

Subject to the approval of the Engineer, the Contractor may choose to implement any effective and lawful methods for handling, hauling, and stockpiling contaminated soil encountered in the work area, provided the required handling, hauling, and stockpiling methods are performed in accordance with the SMP. The Contractor shall assume all responsibility for the adequacy of the methods, materials, documentation, and equipment employed.

The Contractor shall load, haul, and place contaminated soils into the contaminated stockpile locations identified by the Contractor and approved by the RIDOT. The Contractor shall comply with the Soil Management Plan requirements during all contaminated soil management activities.

CONTAMINATED SOIL STOCKPILE:

MATERIALS: All materials used, including but not limited to, hay bales, compost filter socks, and concrete barrier, shall conform to the standard specifications for the applicable items. The liners shall be 6-mil polyethylene in accordance with the Soil Management Plan.

SUBMITTALS: The Contractor shall submit a shop drawing for the contaminated soil stockpile bottom liner demonstrating that it is compliant with the Soil Management Plan.

CONSTRUCTION METHODS: The Contractor shall determine the size of the stockpile based on the anticipated excavation operations. Prior to constructing the stockpile, the Contractor shall submit a plan to the RIDOT for approval showing the location, size and limits of the proposed stockpile. The Contractor shall submit a soil stockpile construction detail to RIDOT for approval. The Contractor shall construct the soil stockpile in accordance with the RIDOT approved detail and only at the location approved by the RIDOT. Alternate locations for stockpiles shall be submitted to RIDOT for approval before any such stockpile shall be utilized. The stockpile shall be complete and ready to accept excavated soils prior to initiating any excavation operations.

The actual dimensions of the stockpile shall be determined by the Contractor. The soil stockpile shall be large enough to contain the amount of excavated soils anticipated at any one period and still provide ample operating room for turning the excavated material to facilitate drying if required, loading, and unloading within the confines of the stockpile.

The material shall be thoroughly dried and turned over as necessary to facilitate the drying process. The stockpile shall be constructed in a manner that allows the contractor to collect water that drains form the stockpile.

Water collected in the contaminated soil stockpile areas shall be collected and characterized for disposal by the Contractor. The Contractor shall provide copies of the disposal characterization laboratory analytical data to the RIDOT prior to off-site disposal. The Contractor shall be responsible

for the transportation and off-site disposal of the collected water at a disposal facility approved by the RIDOT.

The Contractor shall inspect the soil stockpile weekly and perform all work required to maintain the soil stockpile. The bottom liner shall be repaired in accordance with the manufacturer's specifications or replaced when the bottom liner is damaged and is no longer impermeable. The top liner shall be replaced when it is ripped. Stockpiled contaminated soils shall be covered and the cover secured at the end of each workday. The Contractor shall maintain an inventory of stockpile maintenance items including but not limited to 6-mil polyethylene sheeting, weights to secure the contaminated soil stockpile covers, hay bales, composite filter socks, or other erosion control devices required to contain the contaminated soil, and any other items required for the stockpile maintenance.

Upon completion of excavation operations, and after all excavated soils are removed from the stockpile location the Contractor shall restore the site to the final condition in accordance with the Plans. All materials used to construct the contaminated soil stockpile, including but not limited to HDPE alloy sheeting, polyethylene sheeting, geotextiles, hay bales, compost filter socks, and concrete barrier, shall remain the property of the Contractor and shall be disposed of legally.

The Contractor shall be responsible for obtaining all necessary permits, manifests, and bill of lading documentation in conjunction with contaminated soil and shall provide timely notification of such actions as may be required by applicable federal, state regional, and/or local authorities. Contaminated soil loading, hauling, and disposal shall be completed in accordance with Codes 202.9914 through 202.9917.

METHOD OF MEASUREMENT: Item 202.9911 "Handling and Stockpiling Contaminated Soils**"** will be measured for payment by the "Cubic Yard" actually excavated in accordance with the Contract Documents and/or as directed by the RIDOT.

BASIS OF PAYMENT: Item 202.9911 "Handling and Stockpiling Contaminated Soils**"** will be paid for at its respective contract unit price per "Cubic Yard" as listed in the Proposal. The price so stated shall constitute full and complete compensation for all handling, stockpiling, stockpile materials, labor, materials, tools and equipment, and all other incidentals required to complete the work as described in these Special Provisions and elsewhere in the Contract Documents, complete in place and accepted by the RIDOT.

Initial excavation of contaminated soil shall be paid for under the appropriate excavation items listed in the contract documents.

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JOB SPECIFIC

CODE 202.9914 - LOAD AND HAUL CONTAMINATED SOIL, TYPE 1
CODE 202.9915 - DISPOSAL OF CONTAMINATED SOIL, TYPE 1
CODE 202.9916 - LOAD AND HAUL CONTAMINATED SOIL, TYPE 2
CODE 202.9917 -DISPOSAL OF CONTAMINATED SOIL, TYPE 2
CODE 202.9918 - LOAD, HAUL, AND DISPOSE CONTAMINATED SOIL, TYPE 3
CODE 202.9919 – SOIL SAMPLING

DESCRIPTION: These items of work includes soil management, sampling and testing, special handling, loading and hauling of contaminated or hazardous soil (Meeting the requirements of the Soil Management Plan (SMP) found in Appendix H of the CS pages, and disposal at an off-site recycling or disposal facility of these materials in accordance with RIDEM regulations for recycling/disposal, and the SMP and as directed by the RIDOT.

APPLICABLE LAWS AND REGULATIONS: The loading, hauling, and disposal of contaminated soil shall be conducted in accordance with the Environmental Protection Agency (EPA) and the Rhode Island Department of Environmental Management (RIDEM) regulations, the CSMP, and RIDOT approved Soil Management Plan (SMP), and in compliance with all applicable permits.

The Contractor shall ensure that compliance with applicable regulations is maintained during all loading, hauling, and disposal operations. The Contractor shall be required to maintain an operations log during the loading, hauling, and disposal activities to include, but not be limited to, dates of activities, soil management observations, estimated volumes loaded and hauled for offsite recycling/disposal, the recycling/disposal facility the contaminated soil was transported to and paperwork documenting lawful off-site disposition. In addition to the above, the Contractor is responsible for erosion and pollution controls in accordance with local, State and Federal regulations as well as what is included in the Contract Documents. The Contractor shall submit a summary report to the RIDOT on a daily basis to document the operations associated with loading, hauling, and transportation activities.

SUBMITTALS:
Prior to the commencement of any on-site activities, the Contractor shall submit to RIDOT a list of proposed contaminated soil receiving facilities, along with copies of each facility's license and permit. RIDOT approval of the proposed contaminated soil receiving facilities shall be required prior to any contaminated soil disposal.

Prior to the commencement of any on-site activities, the Contractor shall submit to RIDOT a list of proposed contaminated soil transporters, along with copies of each transporter's license and permit. RIDOT approval of the proposed transporter shall be required prior to any contaminated soil transportation.

The Contractor shall provide two copies of the receiving facility approval for the disposal of contaminated soil at the facility to the RIDOT a minimum of three days prior to the loading, hauling, and disposal of contaminated soil at the facility.

The Contractor shall provide two copies of contaminated soil manifest/bill of lading that require RIDOT signature as the waste generator to the RIDOT a minimum of three days prior to the hazardous waste being loaded, hauled and transported for off-site disposal. The RIDOT shall sign and return the contaminated soil manifest/bill of lading to the Contractor one day prior to the contaminated soil being transported for disposal.

The Contractor shall maintain copies of the contaminated soil operational log. The operational log shall be submitted to the RIDOT daily.

Hauling Slips: The Contractor shall prepare slips to document the transportation of the soil from the project to the final disposal site. The slips shall, as a minimum, list the following information: date, truck identification, truck driver's name, approximate quantity of soil hauled, weight, disposal location, and the RIDOT's representative's signature. These slips will be prepared in duplicate. The Contractor shall retain one copy, and the second copy will be given to the RIDOT at the end of each day in which soil is hauled.

Copies of all Bill of Ladings, manifests, disposal facility weight slips and any other disposal related documents shall be provided to the RIDOT within 5 days of the disposal work being completed.

EQUIPMENT/MATERIALS: The Contractor shall supply and utilize all required equipment to adequately complete the contaminated soil excavation. During contaminated soil excavation, erosion and sedimentation control best management practices shall be installed around the excavation and the stockpiles to minimize the effects of erosion and surface run-off. Contaminated soil, if stockpiled, shall be placed on and covered with polyethylene sheeting, as described in the Contractor's SMP and the RIDOT approved SMP.

The Contractor is required to have the necessary personal protective equipment available as specified in the Contractor's site-specific Health and Safety Plan and shall have access to an inventory of personal protection equipment in the event that the level of personal protection equipment needs to be upgraded.

During excavation or stockpiling, the Contractor shall minimize odors by methods including the use of odor suppressant shell material where necessary.

CONTAMINATED SOIL LOADING, HAULING, AND DISPOSAL: The Contractor may choose and implement any effective and lawful method for loading, hauling, and disposing of contaminated soil encountered excavated and stockpiled in the work area provided they perform the required work subject to the approval of the RIDOT. The Contractor shall assume all responsibility for the adequacy of the methods, materials, documentation, and equipment employed.

During loading and hauling of contaminated soil the Contractor shall be required to control dust and sedimentation erosion. Erosion control devices shall be installed as shown on the Plans or as directed by the RIDOT.

Free liquids shall not be present in the contaminated soil transported for off-site disposal. The Contractor shall be responsible for confirming that free liquids are not present in contaminated soils transported for off-site recycling/disposal. The Contractor shall be responsible for all costs related to off-site impact from free liquids present in contaminated soil being transported for off-site disposal including, but not limited to, regulatory compliance, fines and penalties, and response actions.

While engaged in contamination/hazardous soil loading and hauling the Contractor shall be subject to on-site inspection by the RIDOT Inspector. If the work is in violation of the requirements of this specification, RIDOT will issue a stop work order to be in effect immediately and until the violation is resolved. Standby time and expenses required to resolve the violation shall be at the Contractor's expense.

The Contractor shall be responsible for obtaining all necessary permits, manifests, and bill of lading documentation in conjunction with contaminated/hazardous material loading, hauling and disposal; and shall provide timely notification of such actions as may be required by applicable federal, state regional, and/or local authorities. RIDEM shall be notified within 24 hours if an unexpected change of conditions is encountered related to the presence of hazardous wastes or material encountered at the site.

All contaminated soil shall be disposed of at an off-site recycling or disposal facility in accordance with RIDEM regulations for recycling/disposal of these materials. Profiling for disposal of contaminated material shall be the responsibility of the Contractor. All testing and characterization required by the off-site receiving facility shall be the responsibility of the Contractor to perform at no additional cost to the State. All handling and disposal of these materials shall conform to the applicable

RIDEM requirements for handling, storage, transporting, and disposal of contaminated /hazardous waste material. The Contractor shall be responsible for the submittal of material profiling data and any additional data obtained by the Contractor to the receiving facility and to RIDEM prior to the removal and final disposal of contaminated material from the site or the interim stockpile area. Where specifications, requirements, and reference documents vary, the more stringent requirements shall apply.

Stockpiled soils shall be sampled and analyzed in accordance with the SMP by the Contractor for profiling for disposal. It shall be the Contractor's responsibility to provide all data required by the recycling/disposal facility for disposal facility characterization. Disposal of material shall not be allowed at any facility that currently maintains a listing as a State or Federal waste site. The Contractor shall retain a Rhode Island Certified Laboratory to perform all characterization sampling and testing needed to fulfill the disposal facility requirements. Copies of the testing results shall be provided to the Engineer. Testing shall be completed in a timely manner to allow

for disposal within the required timeframe given below. The Contractor shall coordinate with the disposal facility to determine the frequency of testing.

Contaminated soil classifications under this Contract shall be as follows:

Type 1 Excavated project soil in which levels of TPH, VOCs, SVOCs (PAHs only), and Priority Pollutant Metals are found to be above the RIDEM R-DEC, but within the limits of the Industrial/Commercial Direct Exposure Criteria (I/C-DEC). This soil shall be disposed at a licensed facility. Concentrations are within disposal parameter limits allowed by the Rhode Island Resource Recovery Corporation for materials disposition at the Central Landfill as landfill cover.

Type 2 Excavated project soil in which levels of TPH, VOCs, SVOCs (PAHs only), and Priority Pollutant Metals have been observed above the RIDEM I/C-DEC but are within parameters such that the material can be accepted for out-of-state landfill cover or landfilling without pretreatment or that are suitable for asphalt batching.

Type 3 Concentrations exceed the EPA hazardous waste characteristics (see Type 3 Soil Criteria attachment) necessitating disposal as a hazardous waste.

METHOD OF MEASUREMENT: Item 202.9914 "Load and Haul Contaminated Soil, Type 1" and Item 202.9915 "Disposal of Contaminated Soil, Type 1", Item 202.9916 "Load and Haul Contaminated Soil, Type 2" and Item 202.9917 "Disposal of Contaminated Soil, Type 2" will be measured for payment by the "Ton" actually loaded and hauled or disposed in accordance with the Contract Documents and/or as directed by the RIDOT. The number of tons will be determined from weight slips generated by the receiving disposal facility or other Contractor provided scale approved by the RIDOT.

Item 202.9918 - Load, Haul, and Dispose Contaminated Soil, Type 3 will be calculated for payment by the actual cost, verified by the force account records for facility profiling, loading, transporting, disposing, and invoices from the disposal facility per soil type referenced herein.

Item 202.9919 – "Soil Sampling" shall be paid for by the unit "each" for each soil sample tested for all of the parameters required by the disposal facility.

BASIS OF PAYMENT:
The accepted quantity of item 202.9914 "Load and Haul Contaminated Soil, Type 1" will be paid for at its respective contract unit price per "Ton" as listed in the Proposal. The price so stated shall constitute full and complete compensation for all labor, materials, tools, and equipment and all other incidentals required to complete the work as described in these Special Provisions and elsewhere in the Contract Documents, complete in place and accepted by the RIDOT.

The accepted quantity of item 202.9915 "Disposal of Contaminated Soil, Type 1" will be paid for at its respective contract unit price per "Ton" as listed in the Proposal. The price so stated shall constitute full and complete compensation for all labor, materials, tools, and equipment and all other incidentals required to complete the work as described in these Special Provisions and elsewhere in the Contract Documents, complete in place and accepted by the RIDOT. The only acceptable bid price for item 202.9915 shall be $50.00 (fifty dollars) per ton. If the direct cost of disposing of this material actually paid to the receiving facility, as documented by paid invoices or cancelled checks, is different (higher or lower) than $50.00/ton, then the price paid per ton for this item will be adjusted (higher or lower) by that difference in Dollars/Ton.

The accepted quantity of item 202.9916 "Load and Haul Contaminated Soil, Type 2" will be paid for at its respective contract unit price per "Ton" as listed in the Proposal. The price so stated shall constitute full and complete compensation for all labor, materials, tools, and equipment and all other incidentals required to complete the work as described in these Special Provisions and elsewhere in the Contract Documents, complete in place and accepted by the RIDOT.

The accepted quantity of item 202.9917 "Disposal of Contaminated Soil, Type 2" will be paid for at its respective contract unit price per "Ton" as listed in the Proposal. The price so stated shall constitute full and complete compensation for all labor, materials, tools, and equipment and all other incidentals required to complete the work as described in these Special Provisions and elsewhere in the Contract Documents, complete in place and accepted by the RIDOT. The only acceptable bid price for item 202.9917 shall be $50.00 (fifty dollars) per ton. If the direct cost of disposing of this material actually paid to the receiving facility, as documented by paid invoices or cancelled checks, is different (higher or lower) than $50.00/Ton, then the price paid per ton for this item will be adjusted (higher or lower) by that difference in Dollars/Ton.

Item 202.9918 - Load, Haul, and Dispose Contaminated Soil, Type 3: Handling, paperwork, loading, transportation and disposal will be paid for at the actual amount expended to handle, load, transport, and dispose of the types of soil. The estimated dollar figure for this item of work is established by the Department at 15,000 units at $1.00 each and is inserted in the proposal as an authorized lump sum amount from which payments will be drawn.

Item 202.9919 – "Soil Sampling" will be paid for at the contract bid price per each for each soil sample tested for all of the parameters required by the disposal facility. The price shall include sampling, testing, lab fees, transportation, reporting, storage, and disposal of the samples and all other incidentals required to complete the work to the satisfaction of the Engineer.

TYPE 1 SOIL CRITERIA ATTACHMENT

a. Estimated quantitation limits
b. Direct exposure criteria for PCBs consistent with the Toxic Substance Control Act (TSCA)
c. Background Levels of Priority Pollutant Metals in Rhode Island Soils, T. O'Connor, RIDEM
d. Direct exposure criteria for Lead consistent with the Rhode Island Department of Health Rules and Regulations for Lead Poisoning Prevention [R23-24.6PB], as amended

Contaminant	I/C-DEC (mg/kg)	Contaminant	I/C-DEC (mg/kg)
Volatiles			
Acetone	10,000	Ethylene dibromide	0.07
Benzene	200	Isopropyl benzene	10,000
Bromodichloromethane	92	Methyl ethyl ketone	10,000
Bromoform	720	Methyl isobutyl Ketone	10,000
Bromomethane	2,900	Methyl tertiary-butyl ether (MTBE)	10,000
Carbon tetrachloride	44	Methylene chloride	760
Chlorobenzene	10,000	Styrene	190
Chloroform	940	1,1,1,2-Tetrachloroethane	220
Dibromochloromethane	68	1,1,2,2-Tetrachloroethane	29
1,2- Dibromo-3-chloropropane (DBCP)	41	Tetrachloroethene	110
1,1-Dichloroethane	10,000	Toluene	10,000
1,2-Dichloroethane	63	Trichloroethane	10,000
1,1-Dichloroethene	9.5	1,1,2-Trichloroethane	100
cis-1,2-Dichloroethene	10,000	Trichloroethene	520
Trans-1,2-Dichloroethene	10,000	Vinyl chloride	3.0
1,2-Dichloropropane	84	Xylenes (Total)	10,000
Ethylbenzene	10,000		
Semi-Volatiles			
Acenaphthene	10,000	Diethyl phthalate	10,000
Acenaphthylene	10,000	2,4-Dimethyl phenol	10,000
Anthracene	10,000	Dimethyl phthalate	10,000
Benzo(a)anthracene	7.8	2,4-Dinitrophenol	4,100
Benzo(a)pyrene	0.8	2,4-Dinitrotoluene	8.4
Benzo(b)fluoranthene	7.8	Fluoranthene	10,000
Benzo(g,h,i)perylene	10,000	Fluorene	10,000
Benzo(k)fluoranthene	7.8	Hexachlorobenzene	3.6
1,1-Biphenyl	10,000	Hexachlorobutadiene	73
Bis(2-ethylhexyl)phthalate	410	Hexachloroethane	410
Bis(2-chloroethyl)ether	5.2	Indeno(1,2,3-cd)pyrene	7.8
Bis(2-chloroisopropyl)ether	82	2-Methyl naphthalene	10,000
4-Chloroaniline (p-)	8,200	Naphthalene	10,000
2-Chlorophenol	10,000	Pentachlorophenol	48
Chrysene	780	Phenanthrene	10,000
Dibenz(a,h)anthracene[a]	0.8	Phenol	10,000
1,2-Dichlorobenzene (o-DCB)	10,000	Pyrene	10,000
1,3-Dichlorobenzene (m-DCB)	10,000	Trichlorobenzene	10,000
1,4-Dichlorobenzene (p-DCB)	240	2,4,5-Trichlorophenol	10,000
3,3-Dichlorobenzidine	13	2,4,6-Trichlorophenol	520
2,4-Dichlorophenol	6,100		
Pesticides/PCBs			
Chlordane	4.4	Polychlorinated Biphenyls (PCBs)[b]	10
Dieldrin	0.4		
Organics			
Antimony	820	Lead[d]	500
Arsenic[c]	7.0	Manganese	10,000
Barium	10,000	Mercury	610
Beryllium[c]	1.3	Nickel	10,000
Cadmium	1,000	Selenium	10,000
Chromium III (Trivalent)	10,000	Silver	10,000
Chromium VI (Hexavalent)	10,000	Thallium	140
Copper	10,000	Vanadium	10,000
Cyanide	10,000	Zinc	10,000

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JOB SPECIFIC
R.I. CONTRACT NO. 2019-CH-032

CODE 938.1000
PRICE ADJUSTMENTS

DESCRIPTION.

a. Liquid Asphalt Cement.* The Base Price of Liquid Asphalt Cement as required to implement **Subsection 938.03.1** of the Standard Specifications is $545.00 per ton as of 8/29/2019.

* In the case of modified asphalt binder, this price adjustment provision shall only apply to the neat liquid asphalt component. This provision shall not apply to the modifier component, manufacture, storage, transportation or other associated costs.

b. Diesel Fuel. The Base Price of Diesel Fuel as required to implement **Subsection 938.03.2** of the Standard Specifications is $1.8647 per gallon as of 8/29/2019.

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JOB SPECIFIC

CODE T09.9901
SERVICE PEDESTAL AND LIGHTING SYSTEM MODIFICATIONS

DESCRIPTION: This work shall consist of furnishing all labor, equipment, tools and materials to modify the existing lighting service pedestal and decommission a portion of the existing lighting system. The work shall conform to Part T of the Rhode Island Standard Specifications for Road and Bridge Construction, Amended March 2018 and all revisions.

CONSTRUCTION MATERIALS: All materials shall conform to Part T of the Rhode Island Standard Specifications for Road and Bridge Construction, Amended March 2018 and all revisions.

CONSTRUCTION METHODS: The work shall conform to the relevant portions of Sections T.01 and T.02 of the Rhode Island Standard Specifications for Road and Bridge Construction, Amended March 2018 and all revisions.

The circuits and equipment associated with the existing lighting system to be decommissioned shall be taken out of service in a workman like manner by appropriately qualified personnel and according to industry best practices. Circuits and equipment for the lighting system to remain in service shall be maintained and secured in the cabinet.

Incidental hardware and parts shall be replaced as needed. The work shall include testing the existing system to confirm that it is in good working order.

Wire(s) from the abandoned portion of the lighting system shall be removed from the conduits and legally disposed of.

METHODS OF MEASUREMENT: Item Code T09.9901 "Service Pedestal and Lighting System Modifications" shall be measured for payment as a lump sum.

BASIS OF PAYMENT: Item Code T09.9901 "Service Pedestal and Lighting System Modifications" shall be paid for by the lump sum as listed in the proposal. Said price shall include full and complete compensation for work in the service pedestal, testing, removal and legal disposal of wire, decommissioning of portions of the system to be removed, and all materials, labor, tools, equipment, and all other incidentals necessary to complete the work and accepted by the Engineer.

Removal of light standards, foundations, and handholes shall be paid for separately.

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R-1

Assembly Summary

Project Name: Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)

Estimate Name: Addendum 2

R.I. Contract No.: 2019-CH-032

FAP Nos.:STP-RESF(406)

Item Code	Description	Depth	Factor	Qty
Assembly: 2' GRANITE CURB CORNER STD 7.3.4 (2GRCC) (Unit: EACH Default Quantity: 3.00)				
204.0100	TRIMMING AND FINE GRADING		0.26556	
302.0100	GRAVEL BORROW SUBBASE COURSE	6"	0.04426	
401.4003	CLASS 4.75 HMA FOR PATCHING	2"	0.02874	
603.1000	CONTROLLED LOW STRENGTH MATERIAL	10"	0.06185	
906.0116	GRANITE CURB, QUARRY SPLIT 2 FOOT CORNERS, STANDARD 7.3.4		1.00000	
	TAUNTON AVE (2GRCC)			
	97+10 RT (2GRCC)			1.00
	200+40 LT (2GRCC)			1.00
	97+79 RT (2GRCC)			1.00
Assembly: 3' GRANITE TRANSITION CURB STD 7.3.1 (3GRTC) (Unit: EACH Default Quantity: 44.00)				
204.0100	TRIMMING AND FINE GRADING		0.16667	
302.0100	GRAVEL BORROW SUBBASE COURSE	6 INCHES	0.05556	
401.4003	CLASS 4.75 HMA FOR PATCHING	2 INCHES	0.04310	
603.1000	CONTROLLED LOW STRENGTH MATERIAL	10 INCHES	0.09259	
906.0119	3' GRANITE TRANSITION CURB STANDARD 7.3.1		1.00000	
	TAUNTON AVE (3GRTC)			
	84+59 LT (3GRTC)			1.00
	84+87 LT (3GRTC)			1.00
	85+30 LT (3GRTC)			1.00
	85+58 LT (3GRTC)			1.00
	87+10 RT (3GRTC)			1.00
	87+33 RT (3GRTC)			1.00
	88+40 RT (3GRTC)			1.00
	88+64 RT (3GRTC)			1.00
	89+08 RT (3GRTC)			1.00
	89+48 RT (3GRTC)			1.00
	89+30 LT (3GRTC)			1.00
	89+65 LT (3GRTC)			1.00
	91+95 RT (3GRTC)			1.00
	92+28 RT (3GRTC)			1.00
	92+52 RT (3GRTC)			1.00
	92+75 RT (3GRTC)			1.00
	92+96 RT (3GRTC)			1.00

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Assembly Summary

Project Name:

Estimate Name:

R.I. Contract No.:

FAP Nos.:

Item Code	Description	Depth	Factor	Qty
	93+20 RT (3GRTC)			1.00
	93+34 RT (3GRTC)			1.00
	93+65 RT (3GRTC)			1.00
	94+33 RT (3GRTC)			1.00
	94+66 RT (3GRTC)			1.00
	95+08 RT (3GRTC)			1.00
	95+41 RT (3GRTC)			1.00
	95+66 LT (3GRTC)			1.00
	95+95 LT (3GRTC)			1.00
	98+65 LT (3GRTC)			1.00
	98+85 LT (3GRTC)			1.00
	99+24 RT (3GRTC)			1.00
	99+57 RT (3GRTC)			1.00
	99+54 LT (3GRTC)			1.00
	99+80 LT (3GRTC)			1.00
	101+87 RT (3GRTC)			1.00
	102+17 RT (3GRTC)			1.00
	102+33 RT (3GRTC)			1.00
	102+60 RT (3GRTC)			1.00
	102+40 LT (3GRTC)			1.00
	102+77 LT (3GRTC)			1.00
	91+87 LT (3GRTC)			1.00
	92+01 LT (3GRTC)			1.00
	92+11 LT (3GRTC)			1.00
	93+51 LT (3GRTC)			1.00
	94+01 LT (3GRTC)			1.00
	94+58 LT (3GRTC)			1.00

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Assembly Summary

Project Name:

Estimate Name:

R.I. Contract No.:

FAP Nos.:

Item Code	Description	Depth	Factor	Qty
Assembly: 4 FOOT DRAINAGE MANHOLE STRUCTURE (4DMHS) (Unit: EACH Default Quantity: 8.00)				
701.8003	PIPE BEDDING CLASS C	12 INCHES	0.68000	
702.0522	FRAME AND COVER STANDARD 6.2.1		1.00000	
702.0630	PRECAST MANHOLE 4' DIAMETER STANDARD 4.2.0		1.00000	
708.9042	CLEANING MANHOLES ALL TYPES AND SIZES		1.00000	
	TAUNTON AVE (4DMHS)			
	96+49 LT (4DMHS)			1.00
	96+95 RT (4DMHS)			1.00
	96+90 LT (4DMHS)			1.00
	97+82 LT (4DMHS)			1.00
	97+88 RT (4DMHS)			1.00
	99+00 RT (4DMHS)			1.00
	98+99 LT (4DMHS)			1.00
	90+97 LT (4DMHS)			1.00
Assembly: 4' DRAIN MANHOLE W WEIR (4MHWE) (Unit: EACH Default Quantity: 4.00)				
701.8003	PIPE BEDDING CLASS C	12 INCHES	0.68000	
702.0522	FRAME AND COVER STANDARD 6.2.1		1.00000	
702.9905	PRECAST MANHOLE 4’ DIAMETER STANDARD 4.2.0 WITH WEIR		1.00000	
708.9042	CLEANING MANHOLES ALL TYPES AND SIZES		1.00000	
	TAUNTON AVE (4MHWE)			
	96+90 LT (4MHWE)			1.00
	97+82 LT (4MHWE)			1.00
	95+45 LT (4MHWE)			1.00
	90+97 LT (4MHWE)			1.00
Assembly: 6 FOOT DRAINAGE MANHOLE STRUCTURE (6DMHS) (Unit: EACH Default Quantity: 1.00)				
701.8003	PIPE BEDDING CLASS C	12 INCHES	1.49000	
702.0522	FRAME AND COVER STANDARD 6.2.1		1.00000	
702.0640	PRECAST MANHOLE 6' DIAMETER STANDARD 4.2.2		1.00000	
708.9042	CLEANING MANHOLES ALL TYPES AND SIZES		1.00000	
	TAUNTON AVE (6DMHS)			
	95+83 LT (ECCENTRIC) (6DMHS)			1.00

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Assembly Summary

Project Name:

Estimate Name:

R.I. Contract No.:

FAP Nos.:

Item Code	Description	Depth	Factor	Qty
Assembly: 6' GRANITE TRANSITION CURB STD 7.3.2 (6GRTC) (Unit: EACH Default Quantity: 2.00)				
204.0100	TRIMMING AND FINE GRADING		0.33333	
302.0100	GRAVEL BORROW SUBBASE COURSE	6 INCHES	0.11111	
401.4003	CLASS 4.75 HMA FOR PATCHING		0.08620	
603.1000	CONTROLLED LOW STRENGTH MATERIAL	10 INCHES	0.18519	
906.0118	6' GRANITE TRANSITION CURB, QUARRY SPLIT SPECIAL TRANSITION STANDARD 7.3.2		1.00000	
	TAUNTON AVE (6GRTC)			
	86+57 RT (6GRTC)			1.00
	86+88 RT (6GRTC)			1.00
Assembly: ADJUST BASIN, FRAME AND GRATE TO GRADE (ABFGG) (Unit: EACH Default Quantity: 10.00)				
206.0301	COMPOST FILTER SOCK		5.00000	
707.1100	ADJUST CATCH BASINS		1.00000	
707.2000	ADJUST FRAME AND GRATE TO GRADE		1.00000	
708.9041	CLEANING CATCH BASINS ALL TYPES AND SIZES		1.00000	
	TAUNTON AVE (ABFGG)			
	81+00 LT (ABFGG)			1.00
	81+02 RT (ABFGG)			1.00
	83+02 LT (ABFGG)			1.00
	86+00 LT (ABFGG)			1.00
	86+01 RT (ABFGG)			1.00
	89+00 LT (ABFGG)			1.00
	89+00 RT (ABFGG)			1.00
	90+75 LT (ABFGG)			1.00
	90+75 RT (ABFGG)			1.00
	92+49 RT (ABFGG)			1.00
Assembly: ADJUST MANHOLE TO GRADE (ADMHG) (Unit: EACH Default Quantity: 2.00)				
707.0900	ADJUST MANHOLES TO GRADE		2.00000	
707.1900	ADJUST FRAME & COVER TO GRADE		2.00000	
708.9042	CLEANING MANHOLES ALL TYPES AND SIZES		1.00000	
	TAUNTON AVE (ADMHG)			
	86+00 LT (ADMHG)			1.00
	92+52 LT (ADMHG)			1.00

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Assembly Summary

Project Name:

Estimate Name:

R.I. Contract No.:

FAP Nos.:

Item Code	Description	Depth	Factor	Qty
Assembly: BITUMINOUS PAVEMENT APRON (APRON) (Unit: SY Default Quantity: 215.89)				
201.0409	REMOVE AND DISPOSE FLEXIBLE PAVEMENT		1.00000	
204.0100	TRIMMING AND FINE GRADING		1.00000	
302.0100	GRAVEL BORROW SUBBASE COURSE	8 INCHES	0.22222	
401.3100	MODIFIED CLASS 9.5 HMA	4 INCHES	0.24425	
	TAUNTON AVE (APRON)			
	84+60 - 84+89 LT (APRON)			9.38
	85+27 - 85+61 LT (APRON)			11.33
	86+60 - 86+84 RT (APRON)			19.12
	87+10 - 87+32 RT (APRON)			9.48
	89+31 - 89+64 LT (APRON)			49.94
	92+54 - 92+74 RT (APRON)			4.47
	92+95 - 93+26 RT (APRON)			13.80
	94+32 - 94+68 RT (APRON)			16.00
	95+07 - 95+43 RT (APRON)			11.80
	95+67 - 95+93 LT (APRON)			12.83
	96+44 - 96+80 RT (APRON)			20.00
	98+64 - 98+87 LT (APRON)			5.11
	99+52 - 99+81 LT (APRON)			12.89
	101+86 - 102+19 RT (APRON)			7.33
	102+36 - 102+58 RT (APRON)			12.41
Assembly: BUS SHELTER SLAB (BSLAB) (Unit: SY Default Quantity: 14.00)				
204.0100	TRIMMING AND FINE GRADING		1.00000	
302.0100	GRAVEL BORROW SUBBASE COURSE	8 INCHES	0.22222	
905.9901	BUS SHELTER SLAB	12 INCHES	0.33333	
	TAUNTON AVE (BSLAB)			
	PARK AND RIDE (BSLAB)			14.00
Assembly: PRECAST CATCH BASIN 4' DIAMETER (CB4FT) (Unit: EACH Default Quantity: 2.00)				
701.8003	PIPE BEDDING CLASS C	12"	0.68000	
702.0516	FRAME AND GRATE, HIGH CAPACITY, STANDARD 6.3.4		1.00000	
702.0605	PRECAST CATCH BASIN 4' DIAMETER STANDARD 4.4.0		1.00000	
	TAUNTON AVE (CB4FT)			
	96+99 RT (CB4FT)			1.00
	97+92 RT (CB4FT)			1.00

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Assembly Summary

Project Name:

Estimate Name:

R.I. Contract No.:

FAP Nos.:

Item Code	Description	Depth	Factor	Qty
Assembly: PRECAST CATCH BASIN 4' DIAMETER WITH GRANITE INLET STONE 38" (CBG38) (Unit: EACH Default Quantity: 8.00)				
206.0301	COMPOST FILTER SOCK		5.00000	
701.8003	PIPE BEDDING CLASS C	12 INCHES	0.68000	
702.0516	FRAME AND GRATE, HIGH CAPACITY, STANDARD 6.3.4		1.00000	
702.0541	GRANITE INLET STONE 38" STANDARD 7.3.6		1.00000	
702.0605	PRECAST CATCH BASIN 4' DIAMETER STANDARD 4.4.0		1.00000	
	TAUNTON AVE (CBG38)			
	94+98 RT (CBG38)			1.00
	96+40 RT (CBG38)			1.00
	95+82 RT (CBG38)			1.00
	96+87 RT (CBG38)			1.00
	96+11 RT (CBG38)			1.00
	98+03 RT (CBG38)			1.00
	99+00 RT (CBG38)			1.00
	99+94 RT (CBG38)			1.00
Assembly: CATCH BASIN WITH GRANITE GUTTER INLET STRUCTURE (CBGGI) (Unit: EACH Default Quantity: 7.00)				
206.0301	COMPOST FILTER SOCK		5.00000	
701.8003	PIPE BEDDING CLASS C	12 INCHES	0.73000	
702.0516	FRAME AND GRATE, HIGH CAPACITY, STANDARD 6.3.4		1.00000	
702.0521	FRAME AND COVER STANDARD 6.2.0		1.00000	
702.0541	GRANITE INLET STONE 38" STANDARD 7.3.6		1.00000	
702.0705	CATCH BASIN W/GUTTER INLET STANDARD 3.4.1		1.00000	
	TAUNTON AVE (CBGGI)			
	97+92 LT (CBGGI)			1.00
	96+49 LT (CBGGI)			1.00
	94+98 LT (CBGGI)			1.00
	97+00 LT (CBGGI)			1.00
	99+88 LT (CBGGI)			1.00
	97+47 LT (CBGGI)			1.00
	99+10 LT (CBGGI)			1.00
Assembly: PORTLAND CEMENT SIDEWALK STD 43.1.0 (CCSWK) (Unit: SY Default Quantity: 1459.83)				
201.0403	REMOVE AND DISPOSE SIDEWALKS		1.00000	
204.0100	TRIMMING AND FINE GRADING		1.00000	

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Assembly Summary

Project Name:

Estimate Name:

R.I. Contract No.:

FAP Nos.:

Item Code	Description	Depth	Factor	Qty
302.0100	GRAVEL BORROW SUBBASE COURSE	8 INCHES	0.22222	
905.0110	PORTLAND CEMENT SIDEWALK MONOLITHIC STANDARD 43.1.0	4 INCHES	0.11111	
	TAUNTON AVE (CCSWK)			
	86+91 - 87+08 RT (CCSWK)			16.55
	92+30 - 92+51 RT (CCSWK)			22.22
	92+77 - 92+94 RT (CCSWK)			17.89
	95+43 - 96+44 RT (CCSWK)			106.61
	PARK AND RIDE (CCSWK)			82.83
	84+32 - 84+58 LT (CCSWK)			3.70
	84+89 - 84+95 LT (CCSWK)			3.70
	85+23 - 85+29 LT (CCSWK)			3.70
	85+59 - 85+65 LT (CCSWK)			3.70
	86+48 - 86+54 RT (CCSWK)			5.00
	87+34 - 87+40 RT (CCSWK)			5.70
	88+32 - 88+38 RT (CCSWK)			6.40
	88+66 - 88+72 RT (CCSWK)			6.30
	89+01 - 89+07 RT (CCSWK)			6.30
	89+22 - 89+29 LT (CCSWK)			3.70
	89+50 - 89+56 RT (CCSWK)			6.30
	89+67 - 89+73 LT (CCSWK)			3.67
	91+33 - 91+39 LT (CCSWK)			3.70
	91+88 - 91+94 RT (CCSWK)			6.30
	92+08 - 93+72 LT (CCSWK)			172.10
	93+22 - 93+33 RT (CCSWK)			11.10
	93+67 - 93+72 RT (CCSWK)			4.80
	93+89 - 93+99 LT (CCSWK)			10.50
	93+89 - 93+95 RT (CCSWK)			2.80
	94+26 - 94+32 RT (CCSWK)			5.70
	94+47 - 95+64 LT (CCSWK)			124.00
	94+68 - 95+07 RT (CCSWK)			36.70
	95+96 - 98+64 LT (CCSWK)			168.10
	96+80 - 97+09 RT (CCSWK)			37.20
	98+87 - 99+52 LT (CCSWK)			69.20
	99+59 - 100+12 RT (CCSWK)			56.30

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Assembly Summary

Project Name:

Estimate Name:

R.I. Contract No.:

FAP Nos.:

Item Code	Description	Depth	Factor	Qty
	99+81 - 99+95 LT (CCSWK)			14.40
	101+15 - 101+22 LT (CCSWK)			8.86
	101+76 - 101+85 LT (CCSWK)			7.16
	101+80 - 101+86 RT (CCSWK)			6.30
	102+19 - 102+31 RT (CCSWK)			13.30
	102+33 - 102+39 LT (CCSWK)			4.80
	102+61 - 102+67 RT (CCSWK)			3.70
	102+79 - 102+90 LT (CCSWK)			9.00
	93+72 - 93+90 RT (CCSWK)			17.00
	93+72 - 93+90 LT (CCSWK)			19.00
	80+50 - 80+60 LT (CCSWK)			6.20
	81+16 - 81+29 LT (CCSWK)			8.10
	83+32 - 83+38 LT (CCSWK)			3.90
	85+65 - 86+11 LT (CCSWK)			24.78
	85+68 - 86+12 RT (CCSWK)			23.00
	88+72 - 89+01 RT (CCSWK)			30.56
	89+56 - 91+25 RT (CCSWK)			178.11
	90+60 - 91+25 LT (CCSWK)			39.33
	93+95 - 94+26 RT (CCSWK)			29.56

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Assembly Summary

Project Name:

Estimate Name:

R.I. Contract No.:

FAP Nos.:

Item Code	Description	Depth	Factor	Qty
Assembly: PORTLAND CEMENT DRIVEWAY STD 43.5.0 (CEMDW) (Unit: SY Default Quantity: 717.64)				
201.0403	REMOVE AND DISPOSE SIDEWALKS		1.00000	
204.0100	TRIMMING AND FINE GRADING		1.00000	
302.0100	GRAVEL BORROW SUBBASE COURSE	8 INCHES	0.22222	
905.0115	PORTLAND CEMENT CONCRETE DRIVEWAY STANDARD 43.5.0	8 INCHES	0.22222	
	TAUNTON AVE (CEMDW)			
	84+58 - 84+89 LT (CEMDW)			20.33
	85+29 - 85+59 LT (CEMDW)			19.67
	86+54 - 86+91 RT (CEMDW)			34.32
	87+08 - 87+34 RT (CEMDW)			25.67
	88+38 - 88+66 RT (CEMDW)			31.00
	89+07 - 89+50 RT (CEMDW)			47.44
	89+29 - 89+67 LT (CEMDW)			25.00
	91+94 - 92+30 RT (CEMDW)			39.67
	92+51 - 92+77 RT (CEMDW)			28.56
	92+94 - 93+22 RT (CEMDW)			30.78
	93+33 - 93+67 RT (CEMDW)			37.44
	94+32 - 94+68 RT (CEMDW)			35.67
	95+07 - 95+42 RT (CEMDW)			39.60
	95+64 - 95+96 LT (CEMDW)			35.22
	96+44 - 96+80 RT (CEMDW)			39.66
	98+13 - 98+39 RT (CEMDW)			28.56
	98+64 - 98+87 LT (CEMDW)			25.22
	99+23 - 99+59 RT (CEMDW)			39.68
	99+52 - 99+81 LT (CEMDW)			31.87
	101+86 - 102+19 RT (CEMDW)			36.37
	102+32 - 102+61 RT (CEMDW)			31.52
	102+39 - 102+79 LT (CEMDW)			34.39

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Assembly Summary

Project Name:

Estimate Name:

R.I. Contract No.:

FAP Nos.:

Item Code	Description	Depth	Factor	Qty
Assembly: DOUBLE GRATE CATCH BASIN INSTALLATION (DGCBI) (Unit: EACH Default Quantity: 2.00)				
206.0301	COMPOST FILTER SOCK		7.00000	
701.8003	PIPE BEDDING CLASS C	12 INCHES	0.55000	
702.0516	FRAME AND GRATE, HIGH CAPACITY, STANDARD 6.3.4		2.00000	
702.0542	GRANITE APRON STONE 5FT. STANDARD 7.3.7		1.00000	
702.0725	SOLID BLOCK SHALLOW DOUBLE GRATE CATCH BASIN STANDARD 3.5.2		1.00000	
	COMMERCIAL WAY (DGCBI)			
	200+51 LT (DGCBI)			1.00
	200+37 RT (DGCBI)			1.00
Assembly: DROP INLET STRUCTURE WITH GRANITE INLET STONE (DISGI) (Unit: EACH Default Quantity: 5.00)				
206.0301	COMPOST FILTER SOCK		5.00000	
701.8003	PIPE BEDDING CLASS C	12 INCHES	0.34000	
702.0516	FRAME AND GRATE, HIGH CAPACITY, STANDARD 6.3.4		1.00000	
702.0541	GRANITE INLET STONE 38" STANDARD 7.3.6		1.00000	
702.0714	PRECAST CONCRETE DROP INLET WITH APRON STONE STANDARD 4.5.2		1.00000	
	TAUNTON AVE (DISGI)			
	95+71 RT (DISGI)			1.00
	98+12 RT (DISGI)			1.00
	100+05 RT (DISGI)			1.00
	98+89 RT (DISGI)			1.00
	99+88 RT (DISGI)			1.00

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Assembly Summary

Project Name:

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FAP Nos.:

Item Code	Description	Depth	Factor	Qty
Assembly: FULL DEPTH RECONSTRUCTION (FDRPD) (Unit: SY Default Quantity: 1988.24)				
201.0407	REMOVE AND DISPOSE PAVEMENT AND RIGID BASE		1.00000	
202.0100	EARTH EXCAVATION	8 INCHES	0.22222	
204.0100	TRIMMING AND FINE GRADING		1.00000	
302.0100	GRAVEL BORROW SUBBASE COURSE	8 INCHES	0.22222	
401.1000	CLASS 19.0 HMA	8 INCHES	0.48850	
401.3100	MODIFIED CLASS 9.5 HMA	3 INCHES (2 LIFTS)	0.18678	
403.0300	ASPHALT EMULSION TACK COAT	2 COATS	2.00000	
	TAUNTON AVE (FDRPD)			
	85+70 - 86+06 LT (FDRPD)			45.99
	85+70 - 86+07 RT (FDRPD)			46.10
	90+60 - 91+25 LT (FDRPD)			78.90
	89+50 - 91+25 RT (FDRPD)			214.20
	94+92 - 99+94 LT (FDRPD)			613.90
	95+50 - 100+11 RT (FDRPD)			612.90
	96+87 - 97+01 (FDRPD)			27.04
	97+79 - 97+95 (FDRPD)			27.32
	98+94 - 99+04 (FDRPD)			26.66
	92+45 - 92+57 LT (FDRPD)			14.67
	93+92 - 94+50 LT (FDRPD)			71.00
	101+15 - 101+85 LT (FDRPD)			179.00
	94+82 - 95+07 RT (FDRPD)			30.56

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Assembly Summary

Project Name:

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FAP Nos.:

Item Code	Description	Depth	Factor	Qty
Assembly: GRANITE CURB, CIRCULAR STANDARD 7.3.0 (GRANC) (Unit: LF Default Quantity: 55.00)				
204.0100	TRIMMING AND FINE GRADING		0.27800	
302.0100	GRAVEL BORROW SUBBASE COURSE	6"	0.04600	
603.1000	CONTROLLED LOW STRENGTH MATERIAL		0.03700	
906.0111	GRANITE CURB, QUARRY SPLIT CIRCULAR, STANDARD 7.3.0		1.00000	
	TAUNTON AVE (GRANC)			
	101+27 - 101+32 LT (GRANC)			5.50
	101+63 - 101+69 LT (GRANC)			6.00
	200+44 - 200+49 RT (GRANC)			4.00
	200+55 - 200+57 RT (GRANC)			3.00
	91+49 - 91+57 LT (GRANC)			8.50
	92+02 - 92+07 LT (GRANC)			5.50
	96+90 - 96+99 RT (GRANC)			9.50
	97+00 - 97+05 RT (GRANC)			4.00
	97+82 - 97+90 RT (GRANC)			6.00
	97+96 - 97+99 RT (GRANC)			3.00

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Assembly Summary

Project Name:

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FAP Nos.:

Item Code	Description	Depth	Factor	Qty
Assembly: LOAM AND SEED AREA (LMSDA) (Unit: SY Default Quantity: 2689.10)				
204.0100	TRIMMING AND FINE GRADING		1.00000	
L01.0102	LOAM BORROW 4 INCHES DEEP		1.00000	
L02.0102	RESIDENTIAL SEEDING (TYPE 2)		1.00000	
	TAUNTON AVE (LMSDA)			
	PARK AND RIDE (LMSDA)			2500.00
	84+52 - 84+60 LT (LMSDA)			1.30
	84+88 - 84+95 LT (LMSDA)			1.40
	86+48 - 86+60 RT (LMSDA)			3.10
	87+33 - 87+40 RT (LMSDA)			3.50
	88+32 - 88+40 RT (LMSDA)			3.90
	88+64 - 88+72 RT (LMSDA)			1.90
	89+00 - 89+07 RT (LMSDA)			1.30
	89+23 - 89+32 LT (LMSDA)			2.50
	89+64 - 89+73 LT (LMSDA)			2.50
	91+33 - 91+68 LT (LMSDA)			14.70
	95+96 - 98+55 LT (LMSDA)			116.30
	98+39 - 98+96 RT (LMSDA)			15.80
	86+85 - 87+11 RT (LMSDA)			6.20
	89+50 - 89+56 RT (LMSDA)			1.30
	91+88 - 91+97 RT (LMSDA)			1.90
	92+30 - 92+54 RT (LMSDA)			5.20
	92+74 - 92+94 RT (LMSDA)			4.80
	93+27 - 93+32 RT (LMSDA)			1.50

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Assembly Summary

Project Name:

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FAP Nos.:

Item Code	Description	Depth	Factor	Qty
Assembly: MICRO MILLING AND PAVEMENT OVERLAY (MMPOL) (Unit: SY Default Quantity: 12188.63)				
401.3100	MODIFIED CLASS 9.5 HMA	3 INCHES (2 LIFTS)	0.18678	
403.0300	ASPHALT EMULSION TACK COAT		1.00000	
931.0110	CLEANING AND SWEEPING PAVEMENT		0.02000	
935.0400	REMOVING BITUMINOUS PAVEMENT BY MICRO MILLING		1.00000	
	TAUNTON AVE (MMPOL)			
	80+50 - 85+50 (MMPOL)			2905.18
	85+50 - 90+50 (MMPOL)			2559.81
	90+50 - 95+50 (MMPOL)			2555.56
	95+50 - 103+00 (MMPOL)			3861.10
	COMMERCIAL WAY (MMPOL)			
	200+26 - 200+69 (MMPOL)			306.98
Assembly: PAVING PARK & RIDE (POPKR) (Unit: SY Default Quantity: 1441.90)				
202.0100	EARTH EXCAVATION	6 INCHES	0.16667	
204.0100	TRIMMING AND FINE GRADING		1.00000	
302.0100	GRAVEL BORROW SUBBASE COURSE	6 INCHES	0.16667	
401.3100	MODIFIED CLASS 9.5 HMA	3 INCHES (2 LIFTS)	0.18678	
	TAUNTON AVE (POPKR)			
	PARK AND RIDE (POPKR)			1375.00
	BERRY STREET (POPKR)			66.90
Assembly: GRANITE WHEELCHAIR RAMP STONE CIRCULAR 7.3.9 (RASTC) (Unit: EACH Default Quantity: 4.00)				
204.0100	TRIMMING AND FINE GRADING		0.27778	
302.0100	GRAVEL BORROW SUBBASE COURSE	6 INCHES	0.04630	
401.4003	CLASS 4.75 HMA FOR PATCHING		0.07184	
603.1000	CONTROLLED LOW STRENGTH MATERIAL	10 INCHES	0.15432	
906.0131	GRANITE RAMP STONE CIRCULAR STANDARD 7.3.9		1.00000	
942.0200	DETECTABLE WARNING PANEL STANDARD 48.1.0		8.00000	
	TAUNTON AVE (RASTC)			
	97+07 RT (RASTC)			2.00
	97+82 RT (RASTC)			2.00

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Assembly Summary

Project Name:

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FAP Nos.:

Item Code	Description	Depth	Factor	Qty
Assembly: GRANITE WHEELCHAIR RAMP STONE STRAIGHT 7.3.9 (RASTS) (Unit: EACH Default Quantity: 4.00)				
204.0100	TRIMMING AND FINE GRADING		0.27778	
302.0100	GRAVEL BORROW SUBBASE COURSE	6 INCHES	0.04630	
401.4003	CLASS 4.75 HMA FOR PATCHING		0.07184	
603.1000	CONTROLLED LOW STRENGTH MATERIAL	10 INCHES	0.15432	
906.0130	GRANITE RAMP STONE STRAIGHT STANDARD 7.3.9		1.00000	
942.0200	DETECTABLE WARNING PANEL STANDARD 48.1.0		8.00000	
	TAUNTON AVE (RASTS)			
	93+77 RT (RASTS)			2.00
	93+77 LT (RASTS)			2.00
Assembly: RECONSTRUCT CATCH BASIN/CORBEL CONE AND NEW FRAME AND GRATE, HIGH CAPACITY, STANDARD 6.3.4 (RCNFG) (Unit: EACH Default Quantity: 2.00)				
201.0428	REMOVE AND DISPOSE FRAME AND GRATE OR FRAME AND COVER		1.00000	
206.0301	COMPOST FILTER SOCK		5.00000	
702.0516	FRAME AND GRATE, HIGH CAPACITY, STANDARD 6.3.4		1.00000	
704.0100	RECONSTRUCT CATCH BASIN/CORBEL CONES		1.00000	
708.9041	CLEANING CATCH BASINS ALL TYPES AND SIZES		1.00000	
	TAUNTON AVE (RCNFG)			
	83+01 RT (RCNFG)			1.00
	92+51 LT (RCNFG)			1.00
Assembly: REMOVE AND DISPOSE CATCH BASIN W/ GUTTER INLET (RDCBG) (Unit: EACH Default Quantity: 5.00)				
201.0411	REMOVE AND DISPOSE CATCH BASIN AND GUTTER INLETS		1.00000	
201.0428	REMOVE AND DISPOSE FRAME AND GRATE OR FRAME AND COVER		1.00000	
	TAUNTON AVE (RDCBG)			
	94+98 RT (RDCBG)			1.00
	94+98 LT (RDCBG)			1.00
	97+00 LT (RDCBG)			1.00
	98+99 LT (RDCBG)			1.00
	99+00 RT (RDCBG)			1.00

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Assembly Summary

Project Name:

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Item Code	Description	Depth	Factor	Qty
Assembly: REMOVE AND DISPOSE CATCH BASIN (RDSCB) (Unit: EACH Default Quantity: 5.00)				
201.0410	REMOVE AND DISPOSE CATCH BASINS		1.00000	
201.0428	REMOVE AND DISPOSE FRAME AND GRATE OR FRAME AND COVER		1.00000	
	TAUNTON AVE (RDSCB)			
	96+99 RT (RDSCB)			1.00
	97+85 RT (RDSCB)			1.00
	94+66 LT (RDSCB)			2.00
	93+93 LT (RDSCB)			1.00
Assembly: REMOVE AND DISPOSE MANHOLE (RDSMH) (Unit: EACH Default Quantity: 2.00)				
201.0412	REMOVE AND DISPOSE MANHOLE		1.00000	
201.0428	REMOVE AND DISPOSE FRAME AND GRATE OR FRAME AND COVER		1.00000	
	TAUNTON AVE (RDSMH)			
	94+99 RT (RDSMH)			1.00
	95+83 LT (RDSMH)			1.00
Assembly: REINFORCED PORTLAND CEMENT SIDEWALK (RECSW) (Unit: SY Default Quantity: 127.90)				
201.0403	REMOVE AND DISPOSE SIDEWALKS		1.00000	
204.0100	TRIMMING AND FINE GRADING		1.00000	
302.0100	GRAVEL BORROW SUBBASE COURSE	8 INCHES	0.22222	
905.0115	PORTLAND CEMENT CONCRETE DRIVEWAY STANDARD 43.5.0	8 INCHES	0.22222	
	TAUNTON AVE (RECSW)			
	97+78 -98+16 RT (RECSW)			39.40
	98+39 - 99+23 RT (RECSW)			88.50
Assembly: REMOVE, HANDLE, HAUL, TRIM, RESET CURB (RHHGC) (Unit: LF Default Quantity: 1207.00)				
401.4003	CLASS 4.75 HMA FOR PATCHING	2 INCHES	0.01437	
603.1000	CONTROLLED LOW STRENGTH MATERIAL	10 INCHES	0.03087	
906.0700	REMOVE, HANDLE, HAUL TRIM RESET CURB EDGING, STRAIGHT, CIRCULAR ALL TYPES		1.00000	
	TAUNTON AVE (RHHGC)			
	84+52 - 84+58 LT (RHHGC)			6.00
	84+89 - 84+95 LT (RHHGC)			6.00
	85+23 - 85+29 LT (RHHGC)			6.00
	85+59 - 85+65 LT (RHHGC)			6.00
	86+48 - 86+54 RT (RHHGC)			6.00
	86+91 - 87+08 RT (RHHGC)			17.50

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Assembly Summary

Project Name:

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FAP Nos.:

Item Code	Description	Depth	Factor	Qty
	87+34 - 87+40 RT (RHHGC)			6.00
	88+32 - 88+38 RT (RHHGC)			6.00
	88+66 - 88+72 RT (RHHGC)			6.00
	89+01 - 89+07 RT (RHHGC)			6.00
	89+23 - 89+29 LT (RHHGC)			6.00
	89+50 - 89+56 RT (RHHGC)			6.00
	89+67 - 89+73 LT (RHHGC)			6.00
	91+33 - 91+39 LT (RHHGC)			6.00
	91+88 - 91+94 RT (RHHGC)			6.00
	92+09 - 93+72 LT (RHHGC)			162.00
	92+30 - 92+50 RT (RHHGC)			20.50
	92+76 - 92+94 RT (RHHGC)			18.00
	93+22 - 93+33 RT (RHHGC)			10.50
	93+67 - 93+71 RT (RHHGC)			4.00
	93+89 - 93+98 LT (RHHGC)			10.00
	93+89 - 93+95 RT (RHHGC)			6.00
	94+26 - 94+32 RT (RHHGC)			6.00
	94+68 - 95+07 RT (RHHGC)			38.00
	94+47 - 95+64 LT (RHHGC)			117.50
	95+43 - 96+44 RT (RHHGC)			101.00
	95+96 - 98+64 LT (RHHGC)			267.50
	97+96 - 98+13 RT (RHHGC)			17.00
	98+39 - 99+23 RT (RHHGC)			84.00
	98+87 - 99+52 LT (RHHGC)			65.50
	99+59 - 100+12 RT (RHHGC)			53.00
	99+81 - 99+95 LT (RHHGC)			14.00
	101+17 - 101+23 LT (RHHGC)			6.00
	101+76 - 101+82 LT (RHHGC)			6.00
	101+80 - 101+86 RT (RHHGC)			6.00
	102+19 - 102+32 RT (RHHGC)			12.50
	102+33 - 102+39 LT (RHHGC)			6.00
	102+61 - 102+67 RT (RHHGC)			6.00
	97+09 - 97+16 RT (RHHGC)			28.00
	102+79 - 102+90 LT (RHHGC)			11.50

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Assembly Summary

Project Name:

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FAP Nos.:

Item Code	Description	Depth	Factor	Qty
	80+50 - 80+60 LT (RHHGC)			10.00
	81+16 - 81+29 LT (RHHGC)			13.00
	83+32 - 83+38 LT (RHHGC)			6.00
Assembly: RIP RAP BEDDING STD 8.3.0 (RIPRP) (Unit: SY Default Quantity: 30.04)				
920.0070	DUMPED STONE RIPRAP R-3, R-4, 4-5 STANDARD 8.3.0	12 INCHES	0.33333	
920.0150	BEDDING FOR RIPRAP FS-2 STANDARD 8.3.0	8 INCHES	0.22222	
	TAUNTON AVE (RIPRP)			
	94+40 - 94+44 LT (RIPRP)			2.19
	96+00 - 96+18 LT (RIPRP)			16.90
	96+11 - 96+15 LT (RIPRP)			2.19
	96+46 - 96+51 LT (RIPRP)			2.19
	96+87 - 96+93 LT (RIPRP)			2.19
	97+43 - 97+50 LT (RIPRP)			2.19
	97+79 - 97+84 LT (RIPRP)			2.19

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201.0305	COMPLETE REMOVAL AND DISPOSAL OF ISOLATED STUMPS (6'' TO 24'')	1
201.0321	CLEARING AND GRUBBING	1
201.0401	REMOVE AND DISPOSE GRANITE CURB	1
201.0402	REMOVE AND DISPOSE CONCRETE CURB	2
201.0403	**REMOVE AND DISPOSE SIDEWALKS**	**2**
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201.0411	REMOVE AND DISPOSE CATCH BASIN AND GUTTER INLETS	6
201.0412	REMOVE AND DISPOSE MANHOLE	6
201.0414	REMOVE AND DISPOSE PIPE - ALL SIZES	6
201.0418	REMOVE AND DISPOSE HYDRANT	7
201.0423	REMOVE AND DISPOSE HANDHOLE	7
201.0428	REMOVE AND DISPOSE FRAME AND GRATE OR FRAME AND COVER	7
201.0610	REMOVE AND DISPOSE DIRECTIONAL, WARNING, REGULATORY, SERVICE, AND STREET SIGNS	8
201.0613	REMOVE AND STOCKPILE LIGHT STANDARDS	9
201.0616	REMOVE AND DISPOSE LIGHT STANDARD FOUNDATIONS	9
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202.0800	GRAVEL BORROW	11
202.9910	**** ITEM DELETED ****	**11**
202.9914	LOAD AND HAUL CONTAMINATED SOIL, TYPE 1	11
202.9915	DISPOSAL OF CONTAMINATED SOIL, TYPE 1	12
202.9916	LOAD AND HAUL CONTAMINATED SOIL, TYPE 2	12
202.9917	DISPOSAL OF CONTAMINATED SOIL, TYPE 2	12
202.9918	**LOAD, HAUL, AND DISPOSE CONTAMINATED SOIL, TYPE 3**	**12**
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303.9901	CRUSHED STONE PARKING APRON	28
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401.3100	**MODIFIED CLASS 9.5 HMA**	**29**
401.4003	**CLASS 4.75 HMA FOR PATCHING**	**30**
403.0300	**ASPHALT EMULSION TACK COAT**	**33**
502.1000	FULL DEPTH CLEANING AND SEALING OF JOINTS AND CRACKS 2-1/2" NOM. WIDTH OR LESS IN PCC PAVEMENT	34
603.1000	**CONTROLLED LOW STRENGTH MATERIAL**	**34**
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702.0542	GRANITE APRON STONE 5FT. STANDARD 7.3.7	45
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702.0705	CATCH BASIN W/GUTTER INLET STANDARD 3.4.1	47
702.0714	PRECAST CONCRETE DROP INLET WITH APRON STONE STANDARD 4.5.2	47
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001	**201.0301**	**CUTTING AND DISPOSING ISOLATED TREES AND STUMPS (4"- 24")**	**EACH**			
		TAUNTON AVE				
		95+27 LT		1.00	0004	01
		95+42 LT		1.00	0004	01
		Item 201.0301 Total:		**2.00**		
002	**201.0305**	**COMPLETE REMOVAL AND DISPOSAL OF ISOLATED STUMPS (6'' TO 24'')**	**EACH**			
		TAUNTON AVE				
		CONTINGENCY		5.00	0004	01
		Item 201.0305 Total:		**5.00**		
003	**201.0321**	**CLEARING AND GRUBBING**	**SY**			
		TAUNTON AVE				
		96+04 - 96+17 LT		46.00	0004	01
		SWALE		1,019.00	0004	01
		Item 201.0321 Total:		**1,065.00**		
004	**201.0401**	**REMOVE AND DISPOSE GRANITE CURB**	**LF**			
		TAUNTON AVE				
		101+86 - 102+19 RT		4.00	0004	01
		102+32 - 102+61 RT		4.00	0004	01
		102+39 - 102+79 LT		4.00	0004	01
		84+58 - 84+89 LT		4.00	0004	01
		85+29 - 85+59 LT		4.00	0004	01
		86+54 - 86+91 RT		4.00	0004	01
		87+08 - 87+34 RT		4.00	0004	01
		88+38 - 88+66 RT		4.00	0004	01
		89+07 - 89+50 RT		4.00	0004	01
		89+29 - 89+67 LT		4.00	0004	01
		91+94 - 92+30 RT		4.00	0004	01
		92+50 - 92+76 RT		4.00	0004	01

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004	**201.0401 Cont.**	92+94 - 93+22 RT		4.00	0004	01
		93+33 - 93+67 RT		4.00	0004	01
		94+32 - 94+68 RT		4.00	0004	01
		95+07 - 95+42 RT		4.00	0004	01
		95+64 - 95+96 LT		4.00	0004	01
		96+44 - 96+80 RT		4.00	0004	01
		98+13 - 98+39 RT		4.00	0004	01
		98+64 - 98+87 LT		4.00	0004	01
		99+23 - 99+59 RT		4.00	0004	01
		99+52 - 99+81 LT		4.00	0004	01
		Item 201.0401 Total:		**88.00**		
005	**201.0402**	**REMOVE AND DISPOSE CONCRETE CURB**	**LF**			
		TAUNTON AVE				
		PARK AND RIDE		1,120.00	0004	01
		Item 201.0402 Total:		**1,120.00**		
006	**201.0403**	**REMOVE AND DISPOSE SIDEWALKS**	**SY**			
		TAUNTON AVE				
		PARK AND RIDE		357.10	0004	01
		ROUND UP		0.99	0004	01
		TAUNTON AVE (CCSWK)				
		101+15 - 101+22 LT (CCSWK)		8.86	0004	01
		101+76 - 101+85 LT (CCSWK)		7.16	0004	01
		101+80 - 101+86 RT (CCSWK)		6.30	0004	01
		102+19 - 102+31 RT (CCSWK)		13.30	0004	01
		102+33 - 102+39 LT (CCSWK)		4.80	0004	01
		102+61 - 102+67 RT (CCSWK)		3.70	0004	01
		102+79 - 102+90 LT (CCSWK)		9.00	0004	01
		80+50 - 80+60 LT (CCSWK)		6.20	0004	01
		81+16 - 81+29 LT (CCSWK)		8.10	0004	01
		83+32 - 83+38 LT (CCSWK)		3.90	0004	01
		84+32 - 84+58 LT (CCSWK)		3.70	0004	01

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006	**201.0403 Cont.**	84+89 - 84+95 LT (CCSWK)		3.70	0004	01
		85+23 - 85+29 LT (CCSWK)		3.70	0004	01
		85+59 - 85+65 LT (CCSWK)		3.70	0004	01
		85+65 - 86+11 LT (CCSWK)		24.78	0004	01
		85+68 - 86+12 RT (CCSWK)		23.00	0004	01
		86+48 - 86+54 RT (CCSWK)		5.00	0004	01
		86+91 - 87+08 RT (CCSWK)		16.55	0004	01
		87+34 - 87+40 RT (CCSWK)		5.70	0004	01
		88+32 - 88+38 RT (CCSWK)		6.40	0004	01
		88+66 - 88+72 RT (CCSWK)		6.30	0004	01
		88+72 - 89+01 RT (CCSWK)		30.56	0004	01
		89+01 - 89+07 RT (CCSWK)		6.30	0004	01
		89+22 - 89+29 LT (CCSWK)		3.70	0004	01
		89+50 - 89+56 RT (CCSWK)		6.30	0004	01
		89+56 - 91+25 RT (CCSWK)		178.11	0004	01
		89+67 - 89+73 LT (CCSWK)		3.67	0004	01
		90+60 - 91+25 LT (CCSWK)		39.33	0004	01
		91+33 - 91+39 LT (CCSWK)		3.70	0004	01
		91+88 - 91+94 RT (CCSWK)		6.30	0004	01
		92+08 - 93+72 LT (CCSWK)		172.10	0004	01
		92+30 - 92+51 RT (CCSWK)		22.22	0004	01
		92+77 - 92+94 RT (CCSWK)		17.89	0004	01
		93+22 - 93+33 RT (CCSWK)		11.10	0004	01
		93+67 - 93+72 RT (CCSWK)		4.80	0004	01
		93+72 - 93+90 LT (CCSWK)		19.00	0004	01
		93+72 - 93+90 RT (CCSWK)		17.00	0004	01
		93+89 - 93+95 RT (CCSWK)		2.80	0004	01
		93+89 - 93+99 LT (CCSWK)		10.50	0004	01
		93+95 - 94+26 RT (CCSWK)		29.56	0004	01
		94+26 - 94+32 RT (CCSWK)		5.70	0004	01
		94+47 - 95+64 LT (CCSWK)		124.00	0004	01
		94+68 - 95+07 RT (CCSWK)		36.70	0004	01
		95+43 - 96+44 RT (CCSWK)		106.61	0004	01

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006	**201.0403 Cont.**	95+96 - 98+64 LT (CCSWK)		168.10	0004	01
		96+80 - 97+09 RT (CCSWK)		37.20	0004	01
		98+87 - 99+52 LT (CCSWK)		69.20	0004	01
		99+59 - 100+12 RT (CCSWK)		56.30	0004	01
		99+81 - 99+95 LT (CCSWK)		14.40	0004	01
		PARK AND RIDE (CCSWK)		82.83	0004	01

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006	**201.0403 Cont.**	TAUNTON AVE (CEMDW)				
		101+86 - 102+19 RT (CEMDW)		36.37	0004	01
		102+32 - 102+61 RT (CEMDW)		31.52	0004	01
		102+39 - 102+79 LT (CEMDW)		34.39	0004	01
		84+58 - 84+89 LT (CEMDW)		20.33	0004	01
		85+29 - 85+59 LT (CEMDW)		19.67	0004	01
		86+54 - 86+91 RT (CEMDW)		34.32	0004	01
		87+08 - 87+34 RT (CEMDW)		25.67	0004	01
		88+38 - 88+66 RT (CEMDW)		31.00	0004	01
		89+07 - 89+50 RT (CEMDW)		47.44	0004	01
		89+29 - 89+67 LT (CEMDW)		25.00	0004	01
		91+94 - 92+30 RT (CEMDW)		39.67	0004	01
		92+51 - 92+77 RT (CEMDW)		28.56	0004	01
		92+94 - 93+22 RT (CEMDW)		30.78	0004	01
		93+33 - 93+67 RT (CEMDW)		37.44	0004	01
		94+32 - 94+68 RT (CEMDW)		35.67	0004	01
		95+07 - 95+42 RT (CEMDW)		39.60	0004	01
		95+64 - 95+96 LT (CEMDW)		35.22	0004	01
		96+44 - 96+80 RT (CEMDW)		39.66	0004	01
		98+13 - 98+39 RT (CEMDW)		28.56	0004	01
		98+64 - 98+87 LT (CEMDW)		25.22	0004	01
		99+23 - 99+59 RT (CEMDW)		39.68	0004	01
		99+52 - 99+81 LT (CEMDW)		31.87	0004	01
		TAUNTON AVE (RECSW)				
		97+78 -98+16 RT (RECSW)		39.40	0004	01
		98+39 - 99+23 RT (RECSW)		88.50	0004	01
		Item 201.0403 Total:		**2,663.46**		
007	**201.0407**	**REMOVE AND DISPOSE PAVEMENT AND RIGID BASE**	**SY**			
		TAUNTON AVE				
		ROUND UP		0.32	0004	01
		TAUNTON AVE (FDRPD)				

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007	**201.0407 Cont.**	101+15 - 101+85 LT (FDRPD)		179.00	0004	01
		85+70 - 86+06 LT (FDRPD)		45.99	0004	01
		85+70 - 86+07 RT (FDRPD)		46.10	0004	01
		89+50 - 91+25 RT (FDRPD)		214.20	0004	01
		90+60 - 91+25 LT (FDRPD)		78.90	0004	01
		92+45 - 92+57 LT (FDRPD)		14.67	0004	01
		93+92 - 94+50 LT (FDRPD)		71.00	0004	01
		94+82 - 95+07 RT (FDRPD)		30.56	0004	01
		94+92 - 99+94 LT (FDRPD)		613.90	0004	01
		95+50 - 100+11 RT (FDRPD)		612.90	0004	01
		96+87 - 97+01 (FDRPD)		27.04	0004	01
		97+79 - 97+95 (FDRPD)		27.32	0004	01
		98+94 - 99+04 (FDRPD)		26.66	0004	01
		Item 201.0407 Total:		**1,988.56**		
008	**201.0409**	**REMOVE AND DISPOSE FLEXIBLE PAVEMENT**	**SY**			
		TAUNTON AVE				
		PARK AND RIDE		4,593.50	0004	01
		ROUND UP		0.61	0004	01
		TAUNTON AVE (APRON)				
		101+86 - 102+19 RT (APRON)		7.33	0004	01
		102+36 - 102+58 RT (APRON)		12.41	0004	01
		84+60 - 84+89 LT (APRON)		9.38	0004	01
		85+27 - 85+61 LT (APRON)		11.33	0004	01
		86+60 - 86+84 RT (APRON)		19.12	0004	01
		87+10 - 87+32 RT (APRON)		9.48	0004	01
		89+31 - 89+64 LT (APRON)		49.94	0004	01
		92+54 - 92+74 RT (APRON)		4.47	0004	01
		92+95 - 93+26 RT (APRON)		13.80	0004	01
		94+32 - 94+68 RT (APRON)		16.00	0004	01
		95+07 - 95+43 RT (APRON)		11.80	0004	01
		95+67 - 95+93 LT (APRON)		12.83	0004	01

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008	**201.0409 Cont.**	96+44 - 96+80 RT (APRON)		20.00	0004	01

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008	**201.0409 Cont.**	98+64 - 98+87 LT (APRON)		5.11	0004	01
		99+52 - 99+81 LT (APRON)		12.89	0004	01
		Item 201.0409 Total:		**4,810.00**		
009	**201.0410**	**REMOVE AND DISPOSE CATCH BASINS**	**EACH**			
		TAUNTON AVE (RDSCB)				
		93+93 LT (RDSCB)		1.00	0004	01
		94+66 LT (RDSCB)		2.00	0004	01
		96+99 RT (RDSCB)		1.00	0004	01
		97+85 RT (RDSCB)		1.00	0004	01
		Item 201.0410 Total:		**5.00**		
010	**201.0411**	**REMOVE AND DISPOSE CATCH BASIN AND GUTTER INLETS**	**EACH**			
		TAUNTON AVE (RDCBG)				
		94+98 LT (RDCBG)		1.00	0004	01
		94+98 RT (RDCBG)		1.00	0004	01
		97+00 LT (RDCBG)		1.00	0004	01
		98+99 LT (RDCBG)		1.00	0004	01
		99+00 RT (RDCBG)		1.00	0004	01
		Item 201.0411 Total:		**5.00**		
011	**201.0412**	**REMOVE AND DISPOSE MANHOLE**	**EACH**			
		TAUNTON AVE (RDSMH)				
		94+99 RT (RDSMH)		1.00	0004	01
		95+83 LT (RDSMH)		1.00	0004	01
		Item 201.0412 Total:		**2.00**		
012	**201.0414**	**REMOVE AND DISPOSE PIPE - ALL SIZES**	**LF**			
		TAUNTON AVE				
		93+94 - 94+64 LT		88.40	0004	01
		94+67 - 94+98 LT		47.80	0004	01
		ROUND UP		0.80	0004	01

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012	**201.0414 Cont.**	**Item 201.0414 Total:**		**137.00**		
013	**201.0418**	**REMOVE AND DISPOSE HYDRANT**	**EACH**			
		TAUNTON AVE				
		81+24 LT		1.00	0004	01
		Item 201.0418 Total:		**1.00**		
014	**201.0423**	**REMOVE AND DISPOSE HANDHOLE**	**EACH**			
		TAUNTON AVE (PARK AND RIDE)				
		91+83 LT		1.00	0004	01
		92+49 LT		1.00	0004	01
		93+36 LT		1.00	0004	01
		94+20 LT		1.00	0004	01
		95+04 LT		1.00	0004	01
		Item 201.0423 Total:		**5.00**		
015	**201.0428**	**REMOVE AND DISPOSE FRAME AND GRATE OR FRAME AND COVER**	**EACH**			
		TAUNTON AVE				
		101+75 LT		2.00	0004	01
		101+75 RT		2.00	0004	01
		TAUNTON AVE (RCNFG)				
		83+01 RT (RCNFG)		1.00	0004	01
		92+51 LT (RCNFG)		1.00	0004	01
		TAUNTON AVE (RDCBG)				
		94+98 LT (RDCBG)		1.00	0004	01
		94+98 RT (RDCBG)		1.00	0004	01
		97+00 LT (RDCBG)		1.00	0004	01
		98+99 LT (RDCBG)		1.00	0004	01
		99+00 RT (RDCBG)		1.00	0004	01
		TAUNTON AVE (RDSCB)				
		93+93 LT (RDSCB)		1.00	0004	01
		94+66 LT (RDSCB)		2.00	0004	01

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
015	**201.0428 Cont.**	96+99 RT (RDSCB)		1.00	0004	01
		97+85 RT (RDSCB)		1.00	0004	01
		TAUNTON AVE (RDSMH)				
		94+99 RT (RDSMH)		1.00	0004	01
		95+83 LT (RDSMH)		1.00	0004	01
		Item 201.0428 Total:		**18.00**		
016	**201.0610**	**REMOVE AND DISPOSE DIRECTIONAL, WARNING, REGULATORY, SERVICE, AND STREET SIGNS**	**EACH**			
		TAUNTON AVE				
		100+96 LT		1.00	0004	01
		101+11 LT		1.00	0004	01
		101+66 LT		2.00	0004	01
		103+01 LT		1.00	0004	01
		80+65 LT		1.00	0004	01
		81+29 LT		1.00	0004	01
		82+54 LT		1.00	0004	01
		82+60 RT		3.00	0004	01
		82+62 LT		1.00	0004	01
		86+02 LT		1.00	0004	01
		86+82 LT		9.00	0004	01
		87+40 LT		1.00	0004	01
		87+84 RT		1.00	0004	01
		87+96 RT		1.00	0004	01
		90+63 LT		1.00	0004	01
		91+50 LT		1.00	0004	01
		91+65 LT		1.00	0004	01
		91+85 RT		2.00	0004	01
		93+03 LT		2.00	0004	01
		93+91 LT		1.00	0004	01
		95+32 LT		1.00	0004	01
		96+83 RT		1.00	0004	01

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
016	**201.0610 Cont.**	96+92 RT		1.00	0004	01
		97+82 RT		1.00	0004	01
		99+99 RT		1.00	0004	01
		PARK AND RIDE		2.00	0004	01
		Item 201.0610 Total:		**40.00**		
017	**201.0613**	**REMOVE AND STOCKPILE LIGHT STANDARDS**	**EACH**			
		TAUNTON AVE				
		91+79 LT		1.00	0004	01
		92+45 LT		1.00	0004	01
		93+31 LT		1.00	0004	01
		94+16 LT		1.00	0004	01
		95+00 LT		1.00	0004	01
		Item 201.0613 Total:		**5.00**		
018	**201.0616**	**REMOVE AND DISPOSE LIGHT STANDARD FOUNDATIONS**	**EACH**			
		TAUNTON AVE (PARK AND RIDE)				
		91+83 LT		1.00	0004	01
		92+49 LT		1.00	0004	01
		93+36 LT		1.00	0004	01
		94+20 LT		1.00	0004	01
		95+04 LT		1.00	0004	01
		Item 201.0616 Total:		**5.00**		
019	**201.0720**	**LOAD AND HAUL SOLID WASTE**	**TON**			
		TAUNTON AVE				
		CONTINGENCY		3.00	0004	01
		Item 201.0720 Total:		**3.00**		
020	**201.0730**	**DISPOSE SOLID WASTE**	**TON**			
		TAUNTON AVE				

Distribution of Quantities

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Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
020	**201.0730 Cont.**	CONTINGENCY		3.00	0004	01
		Item 201.0730 Total:		**3.00**		
021	**202.0100**	**EARTH EXCAVATION**	**CY**			
		BIORETENTION BASIN				
		BIORETENTION BASIN		1,113.00	0004	01
		ROUND UP		0.67	0004	01
		TAUNTON AVE (FDRPD)				
		101+15 - 101+85 LT (FDRPD)		39.78	0004	01
		85+70 - 86+06 LT (FDRPD)		10.22	0004	01
		85+70 - 86+07 RT (FDRPD)		10.24	0004	01
		89+50 - 91+25 RT (FDRPD)		47.59	0004	01
		90+60 - 91+25 LT (FDRPD)		17.53	0004	01
		92+45 - 92+57 LT (FDRPD)		3.26	0004	01
		93+92 - 94+50 LT (FDRPD)		15.78	0004	01
		94+82 - 95+07 RT (FDRPD)		6.79	0004	01
		94+92 - 99+94 LT (FDRPD)		136.42	0004	01
		95+50 - 100+11 RT (FDRPD)		136.19	0004	01
		96+87 - 97+01 (FDRPD)		6.01	0004	01
		97+79 - 97+95 (FDRPD)		6.07	0004	01
		98+94 - 99+04 (FDRPD)		5.92	0004	01
		TAUNTON AVE (POPKR)				
		BERRY STREET (POPKR)		11.15	0004	01
		PARK AND RIDE (POPKR)		229.17	0004	01
		Item 202.0100 Total:		**1,795.79**		
022	**202.0400**	**MUCK EXCAVATION**	**CY**			
		RELIEF SWALE				
		20+75 - 25+00		141.88	0004	01
		TAUNTON AVE				
		96+00 - 98+75		104.83	0004	01
		ROUND UP		0.29	0004	01
		Item 202.0400 Total:		**247.00**		

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
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R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
023	**202.0700**	**COMMON BORROW**	**CY**			
		TAUNTON AVE				
		20+50 - 20+75 LT (EXIST SWALE)		655.00	0004	01
		PARK AND RIDE		552.00	0004	01
		Item 202.0700 Total:		**1,207.00**		
024	**202.0800**	**GRAVEL BORROW**	**CY**			
		TAUNTON AVE				
		96+00 - 98+75 LT (SWALE)		75.10	0004	01
		ROUND UP		0.90	0004	01
		Item 202.0800 Total:		**76.00**		
025	**202.9910**	**EXCAVATION, HANDLING, AND STOCKPILING CONTAMINATED SOILS**	**CY**			
		BIORETENTION BASIN				
		BIORETENTION BASIN			0004	01
		RELIEF SWALE				
		20+75 - 25+00			0004	01
		TAUNTON AVE				
		96+00 - 98+75			0004	01
		ROUND UP			0004	01
		Item 202.9910 Total:		****DELETED****		
026	**202.9914**	**LOAD AND HAUL CONTAMINATED SOIL, TYPE 1**	**TON**			
		BIORETENTION BASIN				
		BIO RETENTION BASIN		1,503.00	0004	01
		DRAINAGE SWALE				
		20+75-25+00		190.00	0004	01
		TAUNTON AVE				
		96+00-98+75		142.00	0004	01
		ROUND UP		1.00	0004	01

Distribution of Quantities

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Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
026	**202.9914 Cont.**	**Item 202.9914 Total:**		**1,836.00**		
027	**202.9915**	**DISPOSAL OF CONTAMINATED SOIL, TYPE 1**	**TON**			
		BIORETENTION BASIN				
		BIO RETENTION BASIN		1,503.00	0004	01
		DRAINAGE SWALE				
		20+75-25+00		190.00	0004	01
		96+00-98+75		142.00	0004	01
		TAUNTON AVE				
		ROUND UP		1.00	0004	01
		Item 202.9915 Total:		**1,836.00**		
028	**202.9916**	**LOAD AND HAUL CONTAMINATED SOIL, TYPE 2**	**TON**			
		BIORETENTION BASIn				
		BIO RETENTION BASIn		50.00	0004	01
		Item 202.9916 Total:		**50.00**		
029	**202.9917**	**DISPOSAL OF CONTAMINATED SOIL, TYPE 2**	**TON**			
		BIORETENTION BASIn				
		BIO RETENTION BASIn		50.00	0004	01
		Item 202.9917 Total:		**50.00**		
030	**202.9918**	**LOAD, HAUL, AND DISPOSE CONTAMINATED SOIL, TYPE 3**	**EA**			
		PROJECT WIDE				
		PROJECT WIDE		15,000.00	0004	01
		Item 202.9918 Total:		**15,000.00**		
031	**202.9919**	**SOIL SAMPLING**	**EACH**			
		PROJECT WIDE				

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
031	202.9919 Cont.	PROJECT WIDE		4.00	0004	01
		Item 202.9919 Total:		**4.00**		
032	203.0530	**DEWATERING**	**LS**			
		TAUNTON AVE				
		PROJECT LIMITS		1.00	0004	01
		Item 203.0530 Total:		**1.00**		
033	204.0100	**TRIMMING AND FINE GRADING**	**SY**			
		TAUNTON AVE				
		ROUND UP		0.70	0004	01
		TAUNTON AVE (2GRCC)				
		200+40 LT (2GRCC)		0.27	0004	01
		97+10 RT (2GRCC)		0.27	0004	01
		97+79 RT (2GRCC)		0.27	0004	01
		TAUNTON AVE (3GRTC)				
		101+87 RT (3GRTC)		0.17	0004	01
		102+17 RT (3GRTC)		0.17	0004	01
		102+33 RT (3GRTC)		0.17	0004	01
		102+40 LT (3GRTC)		0.17	0004	01
		102+60 RT (3GRTC)		0.17	0004	01
		102+77 LT (3GRTC)		0.17	0004	01
		84+59 LT (3GRTC)		0.17	0004	01
		84+87 LT (3GRTC)		0.17	0004	01
		85+30 LT (3GRTC)		0.17	0004	01
		85+58 LT (3GRTC)		0.17	0004	01
		87+10 RT (3GRTC)		0.17	0004	01
		87+33 RT (3GRTC)		0.17	0004	01
		88+40 RT (3GRTC)		0.17	0004	01
		88+64 RT (3GRTC)		0.17	0004	01
		89+08 RT (3GRTC)		0.17	0004	01
		89+30 LT (3GRTC)		0.17	0004	01
		89+48 RT (3GRTC)		0.17	0004	01

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
033	**204.0100 Cont.**	89+65 LT (3GRTC)		0.17	0004	01
		91+87 LT (3GRTC)		0.17	0004	01
		91+95 RT (3GRTC)		0.17	0004	01
		92+01 LT (3GRTC)		0.17	0004	01

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
033	204.0100 Cont.	92+11 LT (3GRTC)		0.17	0004	01
		92+28 RT (3GRTC)		0.17	0004	01
		92+52 RT (3GRTC)		0.17	0004	01
		92+75 RT (3GRTC)		0.17	0004	01
		92+96 RT (3GRTC)		0.17	0004	01
		93+20 RT (3GRTC)		0.17	0004	01
		93+34 RT (3GRTC)		0.17	0004	01
		93+51 LT (3GRTC)		0.17	0004	01
		93+65 RT (3GRTC)		0.17	0004	01
		94+01 LT (3GRTC)		0.17	0004	01
		94+33 RT (3GRTC)		0.17	0004	01
		94+58 LT (3GRTC)		0.17	0004	01
		94+66 RT (3GRTC)		0.17	0004	01
		95+08 RT (3GRTC)		0.17	0004	01
		95+41 RT (3GRTC)		0.17	0004	01
		95+66 LT (3GRTC)		0.17	0004	01
		95+95 LT (3GRTC)		0.17	0004	01
		98+65 LT (3GRTC)		0.17	0004	01
		98+85 LT (3GRTC)		0.17	0004	01
		99+24 RT (3GRTC)		0.17	0004	01
		99+54 LT (3GRTC)		0.17	0004	01
		99+57 RT (3GRTC)		0.17	0004	01
		99+80 LT (3GRTC)		0.17	0004	01
		TAUNTON AVE (6GRTC)				
		86+57 RT (6GRTC)		0.33	0004	01
		86+88 RT (6GRTC)		0.33	0004	01
		TAUNTON AVE (APRON)				
		101+86 - 102+19 RT (APRON)		7.33	0004	01
		102+36 - 102+58 RT (APRON)		12.41	0004	01
		84+60 - 84+89 LT (APRON)		9.38	0004	01
		85+27 - 85+61 LT (APRON)		11.33	0004	01
		86+60 - 86+84 RT (APRON)		19.12	0004	01
		87+10 - 87+32 RT (APRON)		9.48	0004	01

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
033	204.0100 Cont.	89+31 - 89+64 LT (APRON)		49.94	0004	01
		92+54 - 92+74 RT (APRON)		4.47	0004	01
		92+95 - 93+26 RT (APRON)		13.80	0004	01
		94+32 - 94+68 RT (APRON)		16.00	0004	01
		95+07 - 95+43 RT (APRON)		11.80	0004	01
		95+67 - 95+93 LT (APRON)		12.83	0004	01
		96+44 - 96+80 RT (APRON)		20.00	0004	01
		98+64 - 98+87 LT (APRON)		5.11	0004	01
		99+52 - 99+81 LT (APRON)		12.89	0004	01
		TAUNTON AVE (BSLAB)				
		PARK AND RIDE (BSLAB)		14.00	0004	01
		TAUNTON AVE (CCSWK)				
		101+15 - 101+22 LT (CCSWK)		8.86	0004	01
		101+76 - 101+85 LT (CCSWK)		7.16	0004	01
		101+80 - 101+86 RT (CCSWK)		6.30	0004	01
		102+19 - 102+31 RT (CCSWK)		13.30	0004	01
		102+33 - 102+39 LT (CCSWK)		4.80	0004	01
		102+61 - 102+67 RT (CCSWK)		3.70	0004	01
		102+79 - 102+90 LT (CCSWK)		9.00	0004	01
		80+50 - 80+60 LT (CCSWK)		6.20	0004	01
		81+16 - 81+29 LT (CCSWK)		8.10	0004	01
		83+32 - 83+38 LT (CCSWK)		3.90	0004	01
		84+32 - 84+58 LT (CCSWK)		3.70	0004	01
		84+89 - 84+95 LT (CCSWK)		3.70	0004	01
		85+23 - 85+29 LT (CCSWK)		3.70	0004	01
		85+59 - 85+65 LT (CCSWK)		3.70	0004	01
		85+65 - 86+11 LT (CCSWK)		24.78	0004	01
		85+68 - 86+12 RT (CCSWK)		23.00	0004	01
		86+48 - 86+54 RT (CCSWK)		5.00	0004	01
		86+91 - 87+08 RT (CCSWK)		16.55	0004	01
		87+34 - 87+40 RT (CCSWK)		5.70	0004	01
		88+32 - 88+38 RT (CCSWK)		6.40	0004	01
		88+66 - 88+72 RT (CCSWK)		6.30	0004	01

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
033	**204.0100 Cont.**	88+72 - 89+01 RT (CCSWK)		30.56	0004	01
		89+01 - 89+07 RT (CCSWK)		6.30	0004	01
		89+22 - 89+29 LT (CCSWK)		3.70	0004	01

Distribution of Quantities

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Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
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Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
033	**204.0100 Cont.**	89+50 - 89+56 RT (CCSWK)		6.30	0004	01
		89+56 - 91+25 RT (CCSWK)		178.11	0004	01
		89+67 - 89+73 LT (CCSWK)		3.67	0004	01
		90+60 - 91+25 LT (CCSWK)		39.33	0004	01
		91+33 - 91+39 LT (CCSWK)		3.70	0004	01
		91+88 - 91+94 RT (CCSWK)		6.30	0004	01
		92+08 - 93+72 LT (CCSWK)		172.10	0004	01
		92+30 - 92+51 RT (CCSWK)		22.22	0004	01
		92+77 - 92+94 RT (CCSWK)		17.89	0004	01
		93+22 - 93+33 RT (CCSWK)		11.10	0004	01
		93+67 - 93+72 RT (CCSWK)		4.80	0004	01
		93+72 - 93+90 LT (CCSWK)		19.00	0004	01
		93+72 - 93+90 RT (CCSWK)		17.00	0004	01
		93+89 - 93+95 RT (CCSWK)		2.80	0004	01
		93+89 - 93+99 LT (CCSWK)		10.50	0004	01
		93+95 - 94+26 RT (CCSWK)		29.56	0004	01
		94+26 - 94+32 RT (CCSWK)		5.70	0004	01
		94+47 - 95+64 LT (CCSWK)		124.00	0004	01
		94+68 - 95+07 RT (CCSWK)		36.70	0004	01
		95+43 - 96+44 RT (CCSWK)		106.61	0004	01
		95+96 - 98+64 LT (CCSWK)		168.10	0004	01
		96+80 - 97+09 RT (CCSWK)		37.20	0004	01
		98+87 - 99+52 LT (CCSWK)		69.20	0004	01
		99+59 - 100+12 RT (CCSWK)		56.30	0004	01
		99+81 - 99+95 LT (CCSWK)		14.40	0004	01
		PARK AND RIDE (CCSWK)		82.83	0004	01
		TAUNTON AVE (CEMDW)				
		101+86 - 102+19 RT (CEMDW)		36.37	0004	01
		102+32 - 102+61 RT (CEMDW)		31.52	0004	01
		102+39 - 102+79 LT (CEMDW)		34.39	0004	01
		84+58 - 84+89 LT (CEMDW)		20.33	0004	01
		85+29 - 85+59 LT (CEMDW)		19.67	0004	01
		86+54 - 86+91 RT (CEMDW)		34.32	0004	01

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
033	**204.0100 Cont.**	87+08 - 87+34 RT (CEMDW)		25.67	0004	01
		88+38 - 88+66 RT (CEMDW)		31.00	0004	01
		89+07 - 89+50 RT (CEMDW)		47.44	0004	01

Distribution of Quantities

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Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
033	204.0100 Cont.	89+29 - 89+67 LT (CEMDW)		25.00	0004	01
		91+94 - 92+30 RT (CEMDW)		39.67	0004	01
		92+51 - 92+77 RT (CEMDW)		28.56	0004	01
		92+94 - 93+22 RT (CEMDW)		30.78	0004	01
		93+33 - 93+67 RT (CEMDW)		37.44	0004	01
		94+32 - 94+68 RT (CEMDW)		35.67	0004	01
		95+07 - 95+42 RT (CEMDW)		39.60	0004	01
		95+64 - 95+96 LT (CEMDW)		35.22	0004	01
		96+44 - 96+80 RT (CEMDW)		39.66	0004	01
		98+13 - 98+39 RT (CEMDW)		28.56	0004	01
		98+64 - 98+87 LT (CEMDW)		25.22	0004	01
		99+23 - 99+59 RT (CEMDW)		39.68	0004	01
		99+52 - 99+81 LT (CEMDW)		31.87	0004	01
		TAUNTON AVE (FDRPD)				
		101+15 - 101+85 LT (FDRPD)		179.00	0004	01
		85+70 - 86+06 LT (FDRPD)		45.99	0004	01
		85+70 - 86+07 RT (FDRPD)		46.10	0004	01
		89+50 - 91+25 RT (FDRPD)		214.20	0004	01
		90+60 - 91+25 LT (FDRPD)		78.90	0004	01
		92+45 - 92+57 LT (FDRPD)		14.67	0004	01
		93+92 - 94+50 LT (FDRPD)		71.00	0004	01
		94+82 - 95+07 RT (FDRPD)		30.56	0004	01
		94+92 - 99+94 LT (FDRPD)		613.90	0004	01
		95+50 - 100+11 RT (FDRPD)		612.90	0004	01
		96+87 - 97+01 (FDRPD)		27.04	0004	01
		97+79 - 97+95 (FDRPD)		27.32	0004	01
		98+94 - 99+04 (FDRPD)		26.66	0004	01
		TAUNTON AVE (GRANC)				
		101+27 - 101+32 LT (GRANC)		1.53	0004	01
		101+63 - 101+69 LT (GRANC)		1.67	0004	01
		200+44 - 200+49 RT (GRANC)		1.11	0004	01
		200+55 - 200+57 RT (GRANC)		0.83	0004	01
		91+49 - 91+57 LT (GRANC)		2.36	0004	01

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
033	**204.0100 Cont.**	92+02 - 92+07 LT (GRANC)		1.53	0004	01
		96+90 - 96+99 RT (GRANC)		2.64	0004	01
		97+00 - 97+05 RT (GRANC)		1.11	0004	01
		97+82 - 97+90 RT (GRANC)		1.67	0004	01
		97+96 - 97+99 RT (GRANC)		0.83	0004	01
		TAUNTON AVE (LMSDA)				
		84+52 - 84+60 LT (LMSDA)		1.30	0004	01
		84+88 - 84+95 LT (LMSDA)		1.40	0004	01
		86+48 - 86+60 RT (LMSDA)		3.10	0004	01
		86+85 - 87+11 RT (LMSDA)		6.20	0004	01
		87+33 - 87+40 RT (LMSDA)		3.50	0004	01
		88+32 - 88+40 RT (LMSDA)		3.90	0004	01

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
033	**204.0100 Cont.**	88+64 - 88+72 RT (LMSDA)		1.90	0004	01
		89+00 - 89+07 RT (LMSDA)		1.30	0004	01
		89+23 - 89+32 LT (LMSDA)		2.50	0004	01
		89+50 - 89+56 RT (LMSDA)		1.30	0004	01
		89+64 - 89+73 LT (LMSDA)		2.50	0004	01
		91+33 - 91+68 LT (LMSDA)		14.70	0004	01
		91+88 - 91+97 RT (LMSDA)		1.90	0004	01
		92+30 - 92+54 RT (LMSDA)		5.20	0004	01
		92+74 - 92+94 RT (LMSDA)		4.80	0004	01
		93+27 - 93+32 RT (LMSDA)		1.50	0004	01
		95+96 - 98+55 LT (LMSDA)		116.30	0004	01
		98+39 - 98+96 RT (LMSDA)		15.80	0004	01
		PARK AND RIDE (LMSDA)		2,500.00	0004	01
		TAUNTON AVE (POPKR)				
		BERRY STREET (POPKR)		66.90	0004	01
		PARK AND RIDE (POPKR)		1,375.00	0004	01
		TAUNTON AVE (RASTC)				
		97+07 RT (RASTC)		0.55	0004	01
		97+82 RT (RASTC)		0.55	0004	01
		TAUNTON AVE (RASTS)				
		101+35 LT (RASTS)			0004	01
		101+63 LT (RASTS)			0004	01
		93+77 LT (RASTS)		0.55	0004	01
		93+77 RT (RASTS)		0.55	0004	01
		TAUNTON AVE (RECSW)				
		97+78 -98+16 RT (RECSW)		39.40	0004	01
		98+39 - 99+23 RT (RECSW)		88.50	0004	01
		Item 204.0100 Total:		**8,681.63**		
034	**206.0220**	**SILT FENCE STANDARD 9.2.0**	**LF**			
		TAUNTON AVE				
		20+84 - 24+76 LT		407.00	0004	01
		21+76 - 24+75 RT		600.00	0004	01

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
034	206.0220 Cont.	24+75		8.00	0004	01
		Item 206.0220 Total:		**1,015.00**		
035	206.0301	**COMPOST FILTER SOCK**	**LF**			
		COMMERCIAL WAY (DGCBI)				
		200+37 RT (DGCBI)		7.00	0004	01
		200+51 LT (DGCBI)		7.00	0004	01
		TAUNTON AVE				
		92+26 - 94+59 LT (PARK AND RIDE + BIORETENTION)		568.40	0004	01
		96+03 - 96+12 LT		11.30	0004	01
		98+12 - 98+22 LT		13.30	0004	01
		TAUNTON AVE (ABFGG)				
		81+00 LT (ABFGG)		5.00	0004	01
		81+02 RT (ABFGG)		5.00	0004	01
		83+02 LT (ABFGG)		5.00	0004	01
		86+00 LT (ABFGG)		5.00	0004	01
		86+01 RT (ABFGG)		5.00	0004	01
		89+00 LT (ABFGG)		5.00	0004	01
		89+00 RT (ABFGG)		5.00	0004	01
		90+75 LT (ABFGG)		5.00	0004	01
		90+75 RT (ABFGG)		5.00	0004	01
		92+49 RT (ABFGG)		5.00	0004	01
		TAUNTON AVE (CBG38)				
		94+98 RT (CBG38)		5.00	0004	01
		95+82 RT (CBG38)		5.00	0004	01
		96+11 RT (CBG38)		5.00	0004	01
		96+40 RT (CBG38)		5.00	0004	01
		96+87 RT (CBG38)		5.00	0004	01
		96+99 RT (CBG38)			0004	01
		97+92 RT (CBG38)			0004	01
		98+03 RT (CBG38)		5.00	0004	01
		99+00 RT (CBG38)		5.00	0004	01

Distribution of Quantities

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R.I. Contract No. - 2019-CH-032
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Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
035	**206.0301 Cont.**	99+94 RT (CBG38)		5.00	0004	01
		TAUNTON AVE (CBGGI)				
		94+98 LT (CBGGI)		5.00	0004	01
		96+49 LT (CBGGI)		5.00	0004	01
		97+00 LT (CBGGI)		5.00	0004	01
		97+47 LT (CBGGI)		5.00	0004	01
		97+92 LT (CBGGI)		5.00	0004	01
		99+10 LT (CBGGI)		5.00	0004	01
		99+88 LT (CBGGI)		5.00	0004	01
		TAUNTON AVE (DISGI)				
		100+05 RT (DISGI)		5.00	0004	01
		95+71 RT (DISGI)		5.00	0004	01
		98+12 RT (DISGI)		5.00	0004	01
		98+89 RT (DISGI)		5.00	0004	01
		99+88 RT (DISGI)		5.00	0004	01
		TAUNTON AVE (RCNFG)				
		83+01 RT (RCNFG)		5.00	0004	01
		92+51 LT (RCNFG)		5.00	0004	01
		Item 206.0301 Total:		**767.00**		
036	**206.9901**	**ROLLED EROSION CONTROL PRODUCT**	**SF**			
		TAUNTON AVE				
		SWALE		9,200.00	0004	01
		Item 206.9901 Total:		**9,200.00**		
037	**207.0300**	**COMPOST FILTER SOCK DITCH AND SWALE EROSION CHECK**	**LF**			
		RELIEF SWALE				
		22+70		10.00	0004	01
		24+75		10.00	0004	01
		Item 207.0300 Total:		**20.00**		
038	**208.0100**	**DEWATERING BASIN STANDARD 9.7.0**	**SF**			

Distribution of Quantities

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Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
038	**208.0100 Cont.**	TAUNTON AVE				
		AS DIRECTED BY ENGINEER		500.00	0004	01
		Item 208.0100 Total:		**500.00**		
039	**209.0200**	**SACK INSERT CATCH BASIN INLET PROTECTION**	**EACH**			
		COMMERCIAL WAY (DGCBI)				
		200+37 RT (DGCBI)		2.00	0004	01
		200+51 LT (DGCBI)		2.00	0004	01
		TAUNTON AVE				
		101+75 LT		1.00	0004	01
		101+75 RT		1.00	0004	01
		102+97 LT		1.00	0004	01
		97+88 RT		1.00	0004	01
		TAUNTON AVE (4DMHS)				
		96+49 LT (4DMHS)		1.00	0004	01
		96+90 LT (4DMHS)		1.00	0004	01
		96+95 RT (4DMHS)		1.00	0004	01
		97+82 LT (4DMHS)		1.00	0004	01
		97+88 RT (4DMHS)		1.00	0004	01
		98+99 LT (4DMHS)		1.00	0004	01
		99+00 RT (4DMHS)		1.00	0004	01
		TAUNTON AVE (6DMHS)				
		95+82 LT (6DMHS)		1.00	0004	01
		TAUNTON AVE (ABNFG)				
		81+00 LT (ABNFG)		1.00	0004	01
		81+02 RT (ABNFG)		1.00	0004	01
		83+01 RT (ABNFG)		1.00	0004	01
		83+02 LT (ABNFG)		1.00	0004	01
		86+00 LT (ABNFG)		1.00	0004	01
		86+01 RT (ABNFG)		1.00	0004	01
		89+00 LT (ABNFG)		1.00	0004	01
		89+00 RT (ABNFG)		1.00	0004	01

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Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
039	**209.0200 Cont.**	90+75 LT (ABNFG)		1.00	0004	01
		90+75 RT (ABNFG)		1.00	0004	01
		92+49 RT (ABNFG)		1.00	0004	01
		92+51 LT (ABNFG)		1.00	0004	01
		TAUNTON AVE (CBCIS)				
		94+99 RT (CBCIS)		1.00	0004	01
		95+82 RT (CBCIS)		1.00	0004	01
		96+11 RT (CBCIS)		1.00	0004	01
		96+40 RT (CBCIS)		1.00	0004	01
		96+83 RT (CBCIS)		1.00	0004	01
		96+98 RT (CBCIS)		1.00	0004	01
		97+92 RT (CBCIS)		1.00	0004	01
		98+03 RT (CBCIS)		1.00	0004	01
		99+00 RT (CBCIS)		1.00	0004	01
		99+94 RT (CBCIS)		1.00	0004	01
		TAUNTON AVE (CBGIS)				
		94+98 LT (CBGIS)		1.00	0004	01
		96+49 LT (CBGIS)		1.00	0004	01
		97+00 RT (CBGIS)		1.00	0004	01
		97+47 LT (CBGIS)		1.00	0004	01
		97+92 LT (CBGIS)		1.00	0004	01
		99+10 LT (CBGIS)		1.00	0004	01
		99+88 LT (CBGIS)		1.00	0004	01
		TAUNTON AVE (DISIS)				
		100+15 RT (DISIS)		1.00	0004	01
		94+88 RT (DISIS)		1.00	0004	01
		95+17 RT (DISIS)		1.00	0004	01
		98+12 RT (DISIS)		1.00	0004	01
		98+89 RT (DISIS)		1.00	0004	01
		Item 209.0200 Total:		**50.00**		
040	**211.0100**	**CONSTRUCTION ACCESSES STANDARD**	**SY**			
		9.9.0				

Distribution of Quantities

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R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
040	**211.0100 Cont.**	TAUNTON AVE				
		AS DIRECTED BY ENGINEER		125.00	0004	01
		Item 211.0100 Total:		**125.00**		
041	**212.2100**	**MAINTENANCE AND CLEANING OF EROSION AND POLLUTION CONTROLS**	**LS**			
		TAUNTON AVE				
		PROJECT LIMITS		1.00	0004	01
		Item 212.2100 Total:		**1.00**		
042	**302.0100**	**GRAVEL BORROW SUBBASE COURSE**	**CY**			
		TAUNTON AVE				
		ROUND UP		11.53	0004	01
		TAUNTON AVE (2GRCC)				
		200+40 LT (2GRCC)		0.04	0004	01
		97+10 RT (2GRCC)		0.04	0004	01
		97+79 RT (2GRCC)		0.04	0004	01
		TAUNTON AVE (3GRTC)				
		101+87 RT (3GRTC)		0.06	0004	01
		102+17 RT (3GRTC)		0.06	0004	01
		102+33 RT (3GRTC)		0.06	0004	01
		102+40 LT (3GRTC)		0.06	0004	01
		102+60 RT (3GRTC)		0.06	0004	01
		102+77 LT (3GRTC)		0.06	0004	01
		84+59 LT (3GRTC)		0.06	0004	01
		84+87 LT (3GRTC)		0.06	0004	01
		85+30 LT (3GRTC)		0.06	0004	01
		85+58 LT (3GRTC)		0.06	0004	01
		87+10 RT (3GRTC)		0.06	0004	01
		87+33 RT (3GRTC)		0.06	0004	01
		88+40 RT (3GRTC)		0.06	0004	01
		88+64 RT (3GRTC)		0.06	0004	01
		89+08 RT (3GRTC)		0.06	0004	01

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
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Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
042	**302.0100 Cont.**	89+30 LT (3GRTC)		0.06	0004	01
		89+48 RT (3GRTC)		0.06	0004	01
		89+65 LT (3GRTC)		0.06	0004	01
		91+87 LT (3GRTC)		0.06	0004	01

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
042	302.0100 Cont.	91+95 RT (3GRTC)		0.06	0004	01
		92+01 LT (3GRTC)		0.06	0004	01
		92+11 LT (3GRTC)		0.06	0004	01
		92+28 RT (3GRTC)		0.06	0004	01
		92+52 RT (3GRTC)		0.06	0004	01
		92+75 RT (3GRTC)		0.06	0004	01
		92+96 RT (3GRTC)		0.06	0004	01
		93+20 RT (3GRTC)		0.06	0004	01
		93+34 RT (3GRTC)		0.06	0004	01
		93+51 LT (3GRTC)		0.06	0004	01
		93+65 RT (3GRTC)		0.06	0004	01
		94+01 LT (3GRTC)		0.06	0004	01
		94+33 RT (3GRTC)		0.06	0004	01
		94+58 LT (3GRTC)		0.06	0004	01
		94+66 RT (3GRTC)		0.06	0004	01
		95+08 RT (3GRTC)		0.06	0004	01
		95+41 RT (3GRTC)		0.06	0004	01
		95+66 LT (3GRTC)		0.06	0004	01
		95+95 LT (3GRTC)		0.06	0004	01
		98+65 LT (3GRTC)		0.06	0004	01
		98+85 LT (3GRTC)		0.06	0004	01
		99+24 RT (3GRTC)		0.06	0004	01
		99+54 LT (3GRTC)		0.06	0004	01
		99+57 RT (3GRTC)		0.06	0004	01
		99+80 LT (3GRTC)		0.06	0004	01
		TAUNTON AVE (6GRTC)				
		86+57 RT (6GRTC)		0.11	0004	01
		86+88 RT (6GRTC)		0.11	0004	01
		TAUNTON AVE (APRON)				
		101+86 - 102+19 RT (APRON)		1.63	0004	01
		102+36 - 102+58 RT (APRON)		2.76	0004	01
		84+60 - 84+89 LT (APRON)		2.08	0004	01
		85+27 - 85+61 LT (APRON)		2.52	0004	01

Distribution of Quantities

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Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
042	**302.0100 Cont.**	86+60 - 86+84 RT (APRON)		4.25	0004	01
		87+10 - 87+32 RT (APRON)		2.11	0004	01
		89+31 - 89+64 LT (APRON)		11.10	0004	01
		92+54 - 92+74 RT (APRON)		0.99	0004	01
		92+95 - 93+26 RT (APRON)		3.07	0004	01
		94+32 - 94+68 RT (APRON)		3.56	0004	01
		95+07 - 95+43 RT (APRON)		2.62	0004	01
		95+67 - 95+93 LT (APRON)		2.85	0004	01
		96+44 - 96+80 RT (APRON)		4.44	0004	01
		98+64 - 98+87 LT (APRON)		1.14	0004	01
		99+52 - 99+81 LT (APRON)		2.86	0004	01
		TAUNTON AVE (BSLAB)				
		PARK AND RIDE (BSLAB)		3.11	0004	01
		TAUNTON AVE (CCSWK)				
		101+15 - 101+22 LT (CCSWK)		1.96	0004	01
		101+76 - 101+85 LT (CCSWK)		1.59	0004	01
		101+80 - 101+86 RT (CCSWK)		1.40	0004	01
		102+19 - 102+31 RT (CCSWK)		2.96	0004	01
		102+33 - 102+39 LT (CCSWK)		1.07	0004	01
		102+61 - 102+67 RT (CCSWK)		0.82	0004	01
		102+79 - 102+90 LT (CCSWK)		2.00	0004	01
		80+50 - 80+60 LT (CCSWK)		1.38	0004	01
		81+16 - 81+29 LT (CCSWK)		1.80	0004	01
		83+32 - 83+38 LT (CCSWK)		0.87	0004	01
		84+32 - 84+58 LT (CCSWK)		0.82	0004	01
		84+89 - 84+95 LT (CCSWK)		0.82	0004	01
		85+23 - 85+29 LT (CCSWK)		0.82	0004	01
		85+59 - 85+65 LT (CCSWK)		0.82	0004	01
		85+65 - 86+11 LT (CCSWK)		5.50	0004	01
		85+68 - 86+12 RT (CCSWK)		5.11	0004	01
		86+48 - 86+54 RT (CCSWK)		1.11	0004	01
		86+91 - 87+08 RT (CCSWK)		3.68	0004	01
		87+34 - 87+40 RT (CCSWK)		1.27	0004	01

Distribution of Quantities

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Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
042	**302.0100 Cont.**	88+32 - 88+38 RT (CCSWK)		1.42	0004	01
		88+66 - 88+72 RT (CCSWK)		1.40	0004	01
		88+72 - 89+01 RT (CCSWK)		6.79	0004	01

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Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
042	**302.0100 Cont.**	89+01 - 89+07 RT (CCSWK)		1.40	0004	01
		89+22 - 89+29 LT (CCSWK)		0.82	0004	01
		89+50 - 89+56 RT (CCSWK)		1.40	0004	01
		89+56 - 91+25 RT (CCSWK)		39.57	0004	01
		89+67 - 89+73 LT (CCSWK)		0.82	0004	01
		90+60 - 91+25 LT (CCSWK)		8.73	0004	01
		91+33 - 91+39 LT (CCSWK)		0.82	0004	01
		91+88 - 91+94 RT (CCSWK)		1.40	0004	01
		92+08 - 93+72 LT (CCSWK)		38.24	0004	01
		92+30 - 92+51 RT (CCSWK)		4.93	0004	01
		92+77 - 92+94 RT (CCSWK)		3.97	0004	01
		93+22 - 93+33 RT (CCSWK)		2.47	0004	01
		93+67 - 93+72 RT (CCSWK)		1.07	0004	01
		93+72 - 93+90 LT (CCSWK)		4.22	0004	01
		93+72 - 93+90 RT (CCSWK)		3.78	0004	01
		93+89 - 93+95 RT (CCSWK)		0.62	0004	01
		93+89 - 93+99 LT (CCSWK)		2.33	0004	01
		93+95 - 94+26 RT (CCSWK)		6.57	0004	01
		94+26 - 94+32 RT (CCSWK)		1.27	0004	01
		94+47 - 95+64 LT (CCSWK)		27.56	0004	01
		94+68 - 95+07 RT (CCSWK)		8.15	0004	01
		95+43 - 96+44 RT (CCSWK)		23.69	0004	01
		95+96 - 98+64 LT (CCSWK)		37.36	0004	01
		96+80 - 97+09 RT (CCSWK)		8.27	0004	01
		98+87 - 99+52 LT (CCSWK)		15.38	0004	01
		99+59 - 100+12 RT (CCSWK)		12.51	0004	01
		99+81 - 99+95 LT (CCSWK)		3.20	0004	01
		PARK AND RIDE (CCSWK)		18.41	0004	01
		TAUNTON AVE (CEMDW)				
		101+86 - 102+19 RT (CEMDW)		8.08	0004	01
		102+32 - 102+61 RT (CEMDW)		7.00	0004	01
		102+39 - 102+79 LT (CEMDW)		7.64	0004	01
		84+58 - 84+89 LT (CEMDW)		4.52	0004	01

Distribution of Quantities

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Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
042	**302.0100 Cont.**	85+29 - 85+59 LT (CEMDW)		4.37	0004	01
		86+54 - 86+91 RT (CEMDW)		7.63	0004	01
		87+08 - 87+34 RT (CEMDW)		5.70	0004	01

Distribution of Quantities

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R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
042	**302.0100 Cont.**	88+38 - 88+66 RT (CEMDW)		6.89	0004	01
		89+07 - 89+50 RT (CEMDW)		10.54	0004	01
		89+29 - 89+67 LT (CEMDW)		5.56	0004	01
		91+94 - 92+30 RT (CEMDW)		8.82	0004	01
		92+51 - 92+77 RT (CEMDW)		6.35	0004	01
		92+94 - 93+22 RT (CEMDW)		6.84	0004	01
		93+33 - 93+67 RT (CEMDW)		8.32	0004	01
		94+32 - 94+68 RT (CEMDW)		7.93	0004	01
		95+07 - 95+42 RT (CEMDW)		8.80	0004	01
		95+64 - 95+96 LT (CEMDW)		7.83	0004	01
		96+44 - 96+80 RT (CEMDW)		8.81	0004	01
		98+13 - 98+39 RT (CEMDW)		6.35	0004	01
		98+64 - 98+87 LT (CEMDW)		5.60	0004	01
		99+23 - 99+59 RT (CEMDW)		8.82	0004	01
		99+52 - 99+81 LT (CEMDW)		7.08	0004	01
		TAUNTON AVE (FDRPD)				
		101+15 - 101+85 LT (FDRPD)		39.78	0004	01
		85+70 - 86+06 LT (FDRPD)		10.22	0004	01
		85+70 - 86+07 RT (FDRPD)		10.24	0004	01
		89+50 - 91+25 RT (FDRPD)		47.59	0004	01
		90+60 - 91+25 LT (FDRPD)		17.53	0004	01
		92+45 - 92+57 LT (FDRPD)		3.26	0004	01
		93+92 - 94+50 LT (FDRPD)		15.78	0004	01
		94+82 - 95+07 RT (FDRPD)		6.79	0004	01
		94+92 - 99+94 LT (FDRPD)		136.42	0004	01
		95+50 - 100+11 RT (FDRPD)		136.19	0004	01
		96+87 - 97+01 (FDRPD)		6.01	0004	01
		97+79 - 97+95 (FDRPD)		6.07	0004	01
		98+94 - 99+04 (FDRPD)		5.92	0004	01
		TAUNTON AVE (GRANC)				
		101+27 - 101+32 LT (GRANC)		0.25	0004	01
		101+63 - 101+69 LT (GRANC)		0.28	0004	01
		200+44 - 200+49 RT (GRANC)		0.18	0004	01

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
042	**302.0100 Cont.**	200+55 - 200+57 RT (GRANC)		0.14	0004	01
		91+49 - 91+57 LT (GRANC)		0.39	0004	01
		92+02 - 92+07 LT (GRANC)		0.25	0004	01
		96+90 - 96+99 RT (GRANC)		0.44	0004	01
		97+00 - 97+05 RT (GRANC)		0.18	0004	01
		97+82 - 97+90 RT (GRANC)		0.28	0004	01
		97+96 - 97+99 RT (GRANC)		0.14	0004	01
		TAUNTON AVE (POPKR)				
		BERRY STREET (POPKR)		11.15	0004	01
		PARK AND RIDE (POPKR)		229.17	0004	01
		TAUNTON AVE (RASTC)				
		97+07 RT (RASTC)		0.09	0004	01

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
042	302.0100 Cont.	97+82 RT (RASTC)		0.09	0004	01
		TAUNTON AVE (RASTS)				
		101+35 LT (RASTS)			0004	01
		101+63 LT (RASTS)			0004	01
		93+77 LT (RASTS)		0.09	0004	01
		93+77 RT (RASTS)		0.09	0004	01
		TAUNTON AVE (RECSW)				
		97+78 -98+16 RT (RECSW)		8.76	0004	01
		98+39 - 99+23 RT (RECSW)		19.67	0004	01
		Item 302.0100 Total:		**1,262.89**		
043	303.9901	**CRUSHED STONE PARKING APRON**	**CY**			
		TAUNTON AVE				
		PARK AND RIDE		102.00	0004	01
		Item 303.9901 Total:		**102.00**		
044	401.1000	**CLASS 19.0 HMA**	**TON**			
		TAUNTON AVE				
		ROUND UP		0.68	0004	01
		TAUNTON AVE (FDRPD)				
		101+15 - 101+85 LT (FDRPD)		87.44	0004	01
		85+70 - 86+06 LT (FDRPD)		22.47	0004	01
		85+70 - 86+07 RT (FDRPD)		22.52	0004	01
		89+50 - 91+25 RT (FDRPD)		104.63	0004	01
		90+60 - 91+25 LT (FDRPD)		38.54	0004	01
		92+45 - 92+57 LT (FDRPD)		7.17	0004	01
		93+92 - 94+50 LT (FDRPD)		34.68	0004	01
		94+82 - 95+07 RT (FDRPD)		14.93	0004	01
		94+92 - 99+94 LT (FDRPD)		299.89	0004	01
		95+50 - 100+11 RT (FDRPD)		299.40	0004	01
		96+87 - 97+01 (FDRPD)		13.21	0004	01
		97+79 - 97+95 (FDRPD)		13.35	0004	01
		98+94 - 99+04 (FDRPD)		13.02	0004	01

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
044	**401.1000 Cont.**	**Item 401.1000 Total:**		**971.93**		

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
045	**401.3100**	**MODIFIED CLASS 9.5 HMA**	**TON**			
		COMMERCIAL WAY (MMPOL)				
		200+26 - 200+69 (MMPOL)		57.34	0004	01
		TAUNTON AVE				
		ROUND UP		0.72	0004	01
		TAUNTON AVE (APRON)				
		101+86 - 102+19 RT (APRON)		1.79	0004	01
		102+36 - 102+58 RT (APRON)		3.03	0004	01
		84+60 - 84+89 LT (APRON)		2.29	0004	01
		85+27 - 85+61 LT (APRON)		2.77	0004	01
		86+60 - 86+84 RT (APRON)		4.67	0004	01
		87+10 - 87+32 RT (APRON)		2.32	0004	01
		89+31 - 89+64 LT (APRON)		12.20	0004	01
		92+54 - 92+74 RT (APRON)		1.09	0004	01
		92+95 - 93+26 RT (APRON)		3.37	0004	01
		94+32 - 94+68 RT (APRON)		3.91	0004	01
		95+07 - 95+43 RT (APRON)		2.88	0004	01
		95+67 - 95+93 LT (APRON)		3.13	0004	01
		96+44 - 96+80 RT (APRON)		4.89	0004	01
		98+64 - 98+87 LT (APRON)		1.25	0004	01
		99+52 - 99+81 LT (APRON)		3.15	0004	01
		TAUNTON AVE (FDRPD)				
		101+15 - 101+85 LT (FDRPD)		33.43	0004	01
		85+70 - 86+06 LT (FDRPD)		8.59	0004	01
		85+70 - 86+07 RT (FDRPD)		8.61	0004	01
		89+50 - 91+25 RT (FDRPD)		40.00	0004	01
		90+60 - 91+25 LT (FDRPD)		14.73	0004	01
		92+45 - 92+57 LT (FDRPD)		2.74	0004	01
		93+92 - 94+50 LT (FDRPD)		13.26	0004	01
		94+82 - 95+07 RT (FDRPD)		5.71	0004	01
		94+92 - 99+94 LT (FDRPD)		114.66	0004	01
		95+50 - 100+11 RT (FDRPD)		114.47	0004	01
		96+87 - 97+01 (FDRPD)		5.05	0004	01

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
045	**401.3100 Cont.**	97+79 - 97+95 (FDRPD)		5.10	0004	01

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
045	**401.3100 Cont.**	98+94 - 99+04 (FDRPD)		4.98	0004	01
		TAUNTON AVE (MMPOL)				
		80+50 - 85+50 (MMPOL)		542.63	0004	01
		85+50 - 90+50 (MMPOL)		478.12	0004	01
		90+50 - 95+50 (MMPOL)		477.33	0004	01
		95+50 - 103+00 (MMPOL)		721.18	0004	01
		TAUNTON AVE (POPKR)				
		BERRY STREET (POPKR)		12.50	0004	01
		PARK AND RIDE (POPKR)		256.82	0004	01
		Item 401.3100 Total:		**2,970.71**		
046	**401.4003**	**CLASS 4.75 HMA FOR PATCHING**	**TON**			
		TAUNTON AVE				
		ROUND		0.23	0004	01
		TAUNTON AVE (2GRCC)				
		200+40 LT (2GRCC)		0.03	0004	01
		97+10 RT (2GRCC)		0.03	0004	01
		97+79 RT (2GRCC)		0.03	0004	01
		TAUNTON AVE (3GRTC)				
		101+87 RT (3GRTC)		0.04	0004	01
		102+17 RT (3GRTC)		0.04	0004	01
		102+33 RT (3GRTC)		0.04	0004	01
		102+40 LT (3GRTC)		0.04	0004	01
		102+60 RT (3GRTC)		0.04	0004	01
		102+77 LT (3GRTC)		0.04	0004	01
		84+59 LT (3GRTC)		0.04	0004	01
		84+87 LT (3GRTC)		0.04	0004	01
		85+30 LT (3GRTC)		0.04	0004	01
		85+58 LT (3GRTC)		0.04	0004	01
		87+10 RT (3GRTC)		0.04	0004	01
		87+33 RT (3GRTC)		0.04	0004	01
		88+40 RT (3GRTC)		0.04	0004	01
		88+64 RT (3GRTC)		0.04	0004	01

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
046	**401.4003 Cont.**	89+08 RT (3GRTC)		0.04	0004	01
		89+30 LT (3GRTC)		0.04	0004	01
		89+48 RT (3GRTC)		0.04	0004	01
		89+65 LT (3GRTC)		0.04	0004	01

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
046	**401.4003 Cont.**	91+87 LT (3GRTC)		0.04	0004	01
		91+95 RT (3GRTC)		0.04	0004	01
		92+01 LT (3GRTC)		0.04	0004	01
		92+11 LT (3GRTC)		0.04	0004	01
		92+28 RT (3GRTC)		0.04	0004	01
		92+52 RT (3GRTC)		0.04	0004	01
		92+75 RT (3GRTC)		0.04	0004	01
		92+96 RT (3GRTC)		0.04	0004	01
		93+20 RT (3GRTC)		0.04	0004	01
		93+34 RT (3GRTC)		0.04	0004	01
		93+51 LT (3GRTC)		0.04	0004	01
		93+65 RT (3GRTC)		0.04	0004	01
		94+01 LT (3GRTC)		0.04	0004	01
		94+33 RT (3GRTC)		0.04	0004	01
		94+58 LT (3GRTC)		0.04	0004	01
		94+66 RT (3GRTC)		0.04	0004	01
		95+08 RT (3GRTC)		0.04	0004	01
		95+41 RT (3GRTC)		0.04	0004	01
		95+66 LT (3GRTC)		0.04	0004	01
		95+95 LT (3GRTC)		0.04	0004	01
		98+65 LT (3GRTC)		0.04	0004	01
		98+85 LT (3GRTC)		0.04	0004	01
		99+24 RT (3GRTC)		0.04	0004	01
		99+54 LT (3GRTC)		0.04	0004	01
		99+57 RT (3GRTC)		0.04	0004	01
		99+80 LT (3GRTC)		0.04	0004	01
		TAUNTON AVE (6GRTC)				
		86+57 RT (6GRTC)		0.09	0004	01
		86+88 RT (6GRTC)		0.09	0004	01
		TAUNTON AVE (RASTC)				
		97+07 RT (RASTC)		0.14	0004	01
		97+82 RT (RASTC)		0.14	0004	01
		TAUNTON AVE (RASTS)				

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
046	401.4003 Cont.	101+35 LT (RASTS)			0004	01
		101+63 LT (RASTS)			0004	01
		93+77 LT (RASTS)		0.14	0004	01
		93+77 RT (RASTS)		0.14	0004	01
		TAUNTON AVE (RHHGC)				
		101+17 - 101+23 LT (RHHGC)		0.09	0004	01
		101+76 - 101+82 LT (RHHGC)		0.09	0004	01
		101+80 - 101+86 RT (RHHGC)		0.09	0004	01
		102+19 - 102+32 RT (RHHGC)		0.18	0004	01
		102+33 - 102+39 LT (RHHGC)		0.09	0004	01
		102+61 - 102+67 RT (RHHGC)		0.09	0004	01
		102+79 - 102+90 LT (RHHGC)		0.17	0004	01
		80+50 - 80+60 LT (RHHGC)		0.14	0004	01
		81+16 - 81+29 LT (RHHGC)		0.19	0004	01
		83+32 - 83+38 LT (RHHGC)		0.09	0004	01
		84+52 - 84+58 LT (RHHGC)		0.09	0004	01
		84+89 - 84+95 LT (RHHGC)		0.09	0004	01
		85+23 - 85+29 LT (RHHGC)		0.09	0004	01
		85+59 - 85+65 LT (RHHGC)		0.09	0004	01
		86+48 - 86+54 RT (RHHGC)		0.09	0004	01
		86+91 - 87+08 RT (RHHGC)		0.25	0004	01
		87+34 - 87+40 RT (RHHGC)		0.09	0004	01
		88+32 - 88+38 RT (RHHGC)		0.09	0004	01
		88+66 - 88+72 RT (RHHGC)		0.09	0004	01
		89+01 - 89+07 RT (RHHGC)		0.09	0004	01
		89+23 - 89+29 LT (RHHGC)		0.09	0004	01
		89+50 - 89+56 RT (RHHGC)		0.09	0004	01
		89+67 - 89+73 LT (RHHGC)		0.09	0004	01
		91+33 - 91+39 LT (RHHGC)		0.09	0004	01
		91+88 - 91+94 RT (RHHGC)		0.09	0004	01
		92+09 - 93+72 LT (RHHGC)		2.33	0004	01
		92+30 - 92+50 RT (RHHGC)		0.29	0004	01
		92+76 - 92+94 RT (RHHGC)		0.26	0004	01

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
046	**401.4003 Cont.**	93+22 - 93+33 RT (RHHGC)		0.15	0004	01
		93+67 - 93+71 RT (RHHGC)		0.06	0004	01
		93+89 - 93+95 RT (RHHGC)		0.09	0004	01
		93+89 - 93+98 LT (RHHGC)		0.14	0004	01
		94+26 - 94+32 RT (RHHGC)		0.09	0004	01
		94+47 - 95+64 LT (RHHGC)		1.69	0004	01
		94+68 - 95+07 RT (RHHGC)		0.54	0004	01
		95+43 - 96+44 RT (RHHGC)		1.45	0004	01
		95+96 - 98+64 LT (RHHGC)		3.84	0004	01
		97+09 - 97+16 RT (RHHGC)		0.40	0004	01
		97+96 - 98+13 RT (RHHGC)		0.24	0004	01
		98+39 - 99+23 RT (RHHGC)		1.21	0004	01
		98+87 - 99+52 LT (RHHGC)		0.94	0004	01
		99+59 - 100+12 RT (RHHGC)		0.76	0004	01
		99+81 - 99+95 LT (RHHGC)		0.20	0004	01
		Item 401.4003 Total:		**20.23**		
047	**403.0300**	**ASPHALT EMULSION TACK COAT**	**SY**			
		COMMERCIAL WAY (MMPOL)				
		200+26 - 200+69 (MMPOL)		306.98	0004	01
		TAUNTON AVE				
		ROUND UP		0.01	0004	01
		TAUNTON AVE (FDRPD)				
		101+15 - 101+85 LT (FDRPD)		358.00	0004	01
		85+70 - 86+06 LT (FDRPD)		91.98	0004	01
		85+70 - 86+07 RT (FDRPD)		92.20	0004	01
		89+50 - 91+25 RT (FDRPD)		428.40	0004	01
		90+60 - 91+25 LT (FDRPD)		157.80	0004	01
		92+45 - 92+57 LT (FDRPD)		29.34	0004	01
		93+92 - 94+50 LT (FDRPD)		142.00	0004	01
		94+82 - 95+07 RT (FDRPD)		61.12	0004	01
		94+92 - 99+94 LT (FDRPD)		1,227.80	0004	01
		95+50 - 100+11 RT (FDRPD)		1,225.80	0004	01

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
047	**403.0300 Cont.**	96+87 - 97+01 (FDRPD)		54.08	0004	01

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
047	**403.0300 Cont.**	97+79 - 97+95 (FDRPD)		54.64	0004	01
		98+94 - 99+04 (FDRPD)		53.32	0004	01
		TAUNTON AVE (MMPOL)				
		80+50 - 85+50 (MMPOL)		2,905.18	0004	01
		85+50 - 90+50 (MMPOL)		2,559.81	0004	01
		90+50 - 95+50 (MMPOL)		2,555.56	0004	01
		95+50 - 103+00 (MMPOL)		3,861.10	0004	01
		Item 403.0300 Total:		**16,165.12**		
048	**502.1000**	**FULL DEPTH CLEANING AND SEALING OF JOINTS AND CRACKS 2-1/2" NOM. WIDTH OR LESS IN PCC PAVEMENT**	**LF**			
		COMMERCIAL WAY				
		200+69		47.70	0004	01
		TAUNTON AVE				
		102+97		44.90	0004	01
		80+50		54.40	0004	01
		Item 502.1000 Total:		**147.00**		
049	**603.1000**	**CONTROLLED LOW STRENGTH MATERIAL**	**CY**			
		TAUNTON AVE				
		PIPE TRENCHES		93.30	0004	01
		ROUND UP		0.10	0004	01
		TAUNTON AVE (2GRCC)				
		200+40 LT (2GRCC)		0.06	0004	01
		97+10 RT (2GRCC)		0.06	0004	01
		97+79 RT (2GRCC)		0.06	0004	01
		TAUNTON AVE (3GRTC)				
		101+87 RT (3GRTC)		0.09	0004	01
		102+17 RT (3GRTC)		0.09	0004	01
		102+33 RT (3GRTC)		0.09	0004	01
		102+40 LT (3GRTC)		0.09	0004	01
		102+60 RT (3GRTC)		0.09	0004	01

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
049	**603.1000 Cont.**	102+77 LT (3GRTC)		0.09	0004	01
		84+59 LT (3GRTC)		0.09	0004	01
		84+87 LT (3GRTC)		0.09	0004	01
		85+30 LT (3GRTC)		0.09	0004	01

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
049	**603.1000 Cont.**	85+58 LT (3GRTC)		0.09	0004	01
		87+10 RT (3GRTC)		0.09	0004	01
		87+33 RT (3GRTC)		0.09	0004	01
		88+40 RT (3GRTC)		0.09	0004	01
		88+64 RT (3GRTC)		0.09	0004	01
		89+08 RT (3GRTC)		0.09	0004	01
		89+30 LT (3GRTC)		0.09	0004	01
		89+48 RT (3GRTC)		0.09	0004	01
		89+65 LT (3GRTC)		0.09	0004	01
		91+87 LT (3GRTC)		0.09	0004	01
		91+95 RT (3GRTC)		0.09	0004	01
		92+01 LT (3GRTC)		0.09	0004	01
		92+11 LT (3GRTC)		0.09	0004	01
		92+28 RT (3GRTC)		0.09	0004	01
		92+52 RT (3GRTC)		0.09	0004	01
		92+75 RT (3GRTC)		0.09	0004	01
		92+96 RT (3GRTC)		0.09	0004	01
		93+20 RT (3GRTC)		0.09	0004	01
		93+34 RT (3GRTC)		0.09	0004	01
		93+51 LT (3GRTC)		0.09	0004	01
		93+65 RT (3GRTC)		0.09	0004	01
		94+01 LT (3GRTC)		0.09	0004	01
		94+33 RT (3GRTC)		0.09	0004	01
		94+58 LT (3GRTC)		0.09	0004	01
		94+66 RT (3GRTC)		0.09	0004	01
		95+08 RT (3GRTC)		0.09	0004	01
		95+41 RT (3GRTC)		0.09	0004	01
		95+66 LT (3GRTC)		0.09	0004	01
		95+95 LT (3GRTC)		0.09	0004	01
		98+65 LT (3GRTC)		0.09	0004	01
		98+85 LT (3GRTC)		0.09	0004	01
		99+24 RT (3GRTC)		0.09	0004	01
		99+54 LT (3GRTC)		0.09	0004	01

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
049	603.1000 Cont.	99+57 RT (3GRTC)		0.09	0004	01
		99+80 LT (3GRTC)		0.09	0004	01
		TAUNTON AVE (6GRTC)				
		86+57 RT (6GRTC)		0.19	0004	01
		86+88 RT (6GRTC)		0.19	0004	01
		TAUNTON AVE (GRANC)				
		101+27 - 101+32 LT (GRANC)		0.20	0004	01
		101+63 - 101+69 LT (GRANC)		0.22	0004	01
		200+44 - 200+49 RT (GRANC)		0.15	0004	01
		200+55 - 200+57 RT (GRANC)		0.11	0004	01
		91+49 - 91+57 LT (GRANC)		0.31	0004	01
		92+02 - 92+07 LT (GRANC)		0.20	0004	01
		96+90 - 96+99 RT (GRANC)		0.35	0004	01
		97+00 - 97+05 RT (GRANC)		0.15	0004	01
		97+82 - 97+90 RT (GRANC)		0.22	0004	01
		97+96 - 97+99 RT (GRANC)		0.11	0004	01
		TAUNTON AVE (RASTC)				
		97+07 RT (RASTC)		0.30	0004	01
		97+82 RT (RASTC)		0.30	0004	01
		TAUNTON AVE (RASTS)				
		101+35 LT (RASTS)			0004	01
		101+63 LT (RASTS)			0004	01
		93+77 LT (RASTS)		0.30	0004	01
		93+77 RT (RASTS)		0.30	0004	01
		TAUNTON AVE (RHHGC)				
		101+17 - 101+23 LT (RHHGC)		0.19	0004	01
		101+76 - 101+82 LT (RHHGC)		0.19	0004	01
		101+80 - 101+86 RT (RHHGC)		0.19	0004	01
		102+19 - 102+32 RT (RHHGC)		0.39	0004	01
		102+33 - 102+39 LT (RHHGC)		0.19	0004	01
		102+61 - 102+67 RT (RHHGC)		0.19	0004	01
		102+79 - 102+90 LT (RHHGC)		0.36	0004	01
		80+50 - 80+60 LT (RHHGC)		0.31	0004	01

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
049	**603.1000 Cont.**	81+16 - 81+29 LT (RHHGC)		0.40	0004	01
		83+32 - 83+38 LT (RHHGC)		0.19	0004	01
		84+52 - 84+58 LT (RHHGC)		0.19	0004	01
		84+89 - 84+95 LT (RHHGC)		0.19	0004	01
		85+23 - 85+29 LT (RHHGC)		0.19	0004	01
		85+59 - 85+65 LT (RHHGC)		0.19	0004	01
		86+48 - 86+54 RT (RHHGC)		0.19	0004	01
		86+91 - 87+08 RT (RHHGC)		0.54	0004	01
		87+34 - 87+40 RT (RHHGC)		0.19	0004	01
		88+32 - 88+38 RT (RHHGC)		0.19	0004	01
		88+66 - 88+72 RT (RHHGC)		0.19	0004	01

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
049	**603.1000 Cont.**	89+01 - 89+07 RT (RHHGC)		0.19	0004	01
		89+23 - 89+29 LT (RHHGC)		0.19	0004	01
		89+50 - 89+56 RT (RHHGC)		0.19	0004	01
		89+67 - 89+73 LT (RHHGC)		0.19	0004	01
		91+33 - 91+39 LT (RHHGC)		0.19	0004	01
		91+88 - 91+94 RT (RHHGC)		0.19	0004	01
		92+09 - 93+72 LT (RHHGC)		5.00	0004	01
		92+30 - 92+50 RT (RHHGC)		0.63	0004	01
		92+76 - 92+94 RT (RHHGC)		0.56	0004	01
		93+22 - 93+33 RT (RHHGC)		0.32	0004	01
		93+67 - 93+71 RT (RHHGC)		0.12	0004	01
		93+89 - 93+95 RT (RHHGC)		0.19	0004	01
		93+89 - 93+98 LT (RHHGC)		0.31	0004	01
		94+26 - 94+32 RT (RHHGC)		0.19	0004	01
		94+47 - 95+64 LT (RHHGC)		3.63	0004	01
		94+68 - 95+07 RT (RHHGC)		1.17	0004	01
		95+43 - 96+44 RT (RHHGC)		3.12	0004	01
		95+96 - 98+64 LT (RHHGC)		8.26	0004	01
		97+09 - 97+16 RT (RHHGC)		0.86	0004	01
		97+96 - 98+13 RT (RHHGC)		0.52	0004	01
		98+39 - 99+23 RT (RHHGC)		2.59	0004	01
		98+87 - 99+52 LT (RHHGC)		2.02	0004	01
		99+59 - 100+12 RT (RHHGC)		1.64	0004	01
		99+81 - 99+95 LT (RHHGC)		0.43	0004	01
		Item 603.1000 Total:		**138.50**		
050	**701.0412**	**REINFORCED CONCRETE PIPE M 170**	**LF**			
		CLASS III 12 INCH				
		TAUNTON AVE				
		90+87 - 91+98 LT		137.20	0004	01
		92+02 - 94+39 LT		224.80	0004	01
		94+98 LT		4.00	0004	01
		94+99 RT		4.00	0004	01

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
050	**701.0412 Cont.**	96+41 - 96+46 LT		6.00	0004	01
		96+41 - 96+47 LT		8.00	0004	01
		96+96 - 96+98 RT		14.00	0004	01
		97+00 - 97+12 RT		17.00	0004	01
		97+75 - 97+87 RT		12.00	0004	01
		97+75 - 97+91 RT		22.00	0004	01
		97+89 - 97+92 RT		14.00	0004	01
		Item 701.0412 Total:		**463.00**		
051	**701.0424**	**REINFORCED CONCRETE PIPE M 170**	**LF**			
		CLASS III 24 INCH				
		TAUNTON AVE				
		94+91 - 94+95 LT		4.00	0004	01
		97+47 LT		5.00	0004	01
		Item 701.0424 Total:		**9.00**		
052	**701.0612**	**REINFORCED CONCRETE PIPE M 170**	**LF**			
		CLASS V 12 INCH				
		TAUNTON AVE				
		96+90 LT		14.00	0004	01
		96+92 - 96+98 LT		7.00	0004	01
		Item 701.0612 Total:		**21.00**		
053	**701.0618**	**REINFORCED CONCRETE PIPE M 170**	**LF**			
		CLASS V 18 INCH				
		TAUNTON AVE				
		95+84 - 96+03 LT		26.00	0004	01
		96+49 LT		5.00	0004	01
		Item 701.0618 Total:		**31.00**		
054	**701.0636**	**REINFORCED CONCRETE PIPE M 170**	**LF**			
		CLASS V 36 INCH				
		TAUNTON AVE				

Distribution of Quantities

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Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
054	**701.0636 Cont.**	95+01 - 95+79 LT		81.00	0004	01
		Item 701.0636 Total:		**81.00**		
055	**701.6012**	**12 INCH DUCTILE IRON SEWER SAFE PIPE CLASS 52**	**LF**			
		TAUNTON AVE				
		94+89 - 94+97 RT		8.00	0004	01
		95+72 - 95+80 RT		8.00	0004	01
		95+84 - 96+09 RT		25.00	0004	01
		96+13 - 96+38 RT		25.00	0004	01
		96+42 - 96+81 RT		40.00	0004	01
		96+85 - 96+96 RT		12.00	0004	01
		96+90 - 96+95 RT		28.00	0004	01
		97+82 LT		11.00	0004	01
		97+82 LT - 97+88 RT		27.00	0004	01
		97+94 - 98+01 RT		7.00	0004	01
		98+05 - 98+11 RT		8.00	0004	01
		98+90 - 98+98 RT		8.00	0004	01
		98+99 - 99+00 LT		27.00	0004	01
		99+00 RT		14.00	0004	01
		99+02 - 99+08 LT		7.00	0004	01
		99+02 - 99+92 RT		90.00	0004	01
		99+12 - 99+86 LT		74.00	0004	01
		99+96 - 100+04 RT		8.00	0004	01
		Item 701.6012 Total:		**427.00**		
056	**701.6018**	**18 INCH DUCTILE IRON SEWER SAFE PIPE CLASS 52**	**LF**			
		TAUNTON AVE				
		96+51 - 96+88 LT		37.00	0004	01
		97+47 LT		6.00	0004	01
		97+49 - 97+79 LT		31.00	0004	01
		97+84 - 97+80 LT		7.00	0004	01

Distribution of Quantities

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Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
056	701.6018 Cont.	97+94 - 98+97 LT		104.00	0004	01
		Item 701.6018 Total:		**185.00**		
057	701.6024	**24 INCH DUCTILE IRON SEWER SAFE PIPE CLASS 52**	**LF**			
		TAUNTON AVE				
		97+47 LT		5.00	0004	01
		Item 701.6024 Total:		**5.00**		
058	701.7712	**12 INCH REINFORCED CONCRETE PIPE END SECTION STANDARD 2.3.0**	**EACH**			
		TAUNTON AVE				
		94+39 LT		1.00	0004	01
		96+49 LT		1.00	0004	01
		96+90 LT		1.00	0004	01
		97+82 LT		1.00	0004	01
		Item 701.7712 Total:		**4.00**		
059	701.7718	**18 INCH REINFORCED CONCRETE PIPE END SECTION STANDARD 2.3.0**	**EACH**			
		TAUNTON AVE				
		96+11 LT		1.00	0004	01
		Item 701.7718 Total:		**1.00**		
060	701.7724	**24 INCH REINFORCED CONCRETE PIPE END SECTION STANDARD 2.3.0**	**EACH**			
		TAUNTON AVE				
		97+47 LT		1.00	0004	01
		Item 701.7724 Total:		**1.00**		
061	701.7736	**36 INCH REINFORCED CONCRETE PIPE END SECTION STANDARD 2.3.0**	**EACH**			
		TAUNTON AVE				

Distribution of Quantities

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Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
061	701.7736 Cont.	96+00 LT		1.00	0004	01
		Item 701.7736 Total:		**1.00**		
062	701.8003	**PIPE BEDDING CLASS C**	**CY**			
		COMMERCIAL WAY (DGCBI)				
		200+37 RT (DGCBI)		0.55	0004	01
		200+51 LT (DGCBI)		0.55	0004	01
		PROJECT WIDE				
		ROUND UP		0.64	0004	01
		TAUNTON AVE		100.00	0004	01
		TAUNTON AVE (4DMHS)				
		90+97 LT (4DMHS)		0.68	0004	01
		96+49 LT (4DMHS)		0.68	0004	01
		96+90 LT (4DMHS)		0.68	0004	01
		96+95 RT (4DMHS)		0.68	0004	01
		97+82 LT (4DMHS)		0.68	0004	01
		97+88 RT (4DMHS)		0.68	0004	01
		98+99 LT (4DMHS)		0.68	0004	01
		99+00 RT (4DMHS)		0.68	0004	01
		TAUNTON AVE (4MHWE)				
		90+97 LT (4MHWE)		0.68	0004	01
		95+45 LT (4MHWE)		0.68	0004	01
		96+90 LT (4MHWE)		0.68	0004	01
		97+82 LT (4MHWE)		0.68	0004	01
		TAUNTON AVE (6DMHS)				
		95+83 LT (ECCENTRIC) (6DMHS)		1.49	0004	01
		TAUNTON AVE (CB4FT)				
		96+99 RT (CB4FT)		0.68	0004	01
		97+92 RT (CB4FT)		0.68	0004	01
		TAUNTON AVE (CBG38)				
		94+98 RT (CBG38)		0.68	0004	01
		95+82 RT (CBG38)		0.68	0004	01
		96+11 RT (CBG38)		0.68	0004	01

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
062	**701.8003 Cont.**	96+40 RT (CBG38)		0.68	0004	01
		96+87 RT (CBG38)		0.68	0004	01
		96+99 RT (CBG38)			0004	01

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
062	701.8003 Cont.	97+92 RT (CBG38)			0004	01
		98+03 RT (CBG38)		0.68	0004	01
		99+00 RT (CBG38)		0.68	0004	01
		99+94 RT (CBG38)		0.68	0004	01
		TAUNTON AVE (CBGGI)				
		94+98 LT (CBGGI)		0.73	0004	01
		96+49 LT (CBGGI)		0.73	0004	01
		97+00 LT (CBGGI)		0.73	0004	01
		97+47 LT (CBGGI)		0.73	0004	01
		97+92 LT (CBGGI)		0.73	0004	01
		99+10 LT (CBGGI)		0.73	0004	01
		99+88 LT (CBGGI)		0.73	0004	01
		TAUNTON AVE (DISGI)				
		100+05 RT (DISGI)		0.34	0004	01
		95+71 RT (DISGI)		0.34	0004	01
		98+12 RT (DISGI)		0.34	0004	01
		98+89 RT (DISGI)		0.34	0004	01
		99+88 RT (DISGI)		0.34	0004	01
		Item 701.8003 Total:		**125.00**		
063	**702.0511**	**FRAME AND COVER STANDARD 6.1.0**	**EACH**			
		TAUNTON AVE				
		101+75 LT		1.00	0004	01
		92+49 RT		1.00	0004	01
		92+51 LT		1.00	0004	01
		Item 702.0511 Total:		**3.00**		
064	**702.0516**	**FRAME AND GRATE, HIGH CAPACITY, STANDARD 6.3.4**	**EACH**			
		COMMERCIAL WAY (DGCBI)				
		200+37 RT (DGCBI)		2.00	0004	01
		200+51 LT (DGCBI)		2.00	0004	01
		TAUNTON AVE (CB4FT)				

Distribution of Quantities

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Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
064	**702.0516 Cont.**	96+99 RT (CB4FT)		1.00	0004	01
		97+92 RT (CB4FT)		1.00	0004	01
		TAUNTON AVE (CBG38)				

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
064	**702.0516 Cont.**	94+98 RT (CBG38)		1.00	0004	01
		95+82 RT (CBG38)		1.00	0004	01
		96+11 RT (CBG38)		1.00	0004	01
		96+40 RT (CBG38)		1.00	0004	01
		96+87 RT (CBG38)		1.00	0004	01
		96+99 RT (CBG38)			0004	01
		97+92 RT (CBG38)			0004	01
		98+03 RT (CBG38)		1.00	0004	01
		99+00 RT (CBG38)		1.00	0004	01
		99+94 RT (CBG38)		1.00	0004	01
		TAUNTON AVE (CBGGI)				
		94+98 LT (CBGGI)		1.00	0004	01
		96+49 LT (CBGGI)		1.00	0004	01
		97+00 LT (CBGGI)		1.00	0004	01
		97+47 LT (CBGGI)		1.00	0004	01
		97+92 LT (CBGGI)		1.00	0004	01
		99+10 LT (CBGGI)		1.00	0004	01
		99+88 LT (CBGGI)		1.00	0004	01
		TAUNTON AVE (DISGI)				
		100+05 RT (DISGI)		1.00	0004	01
		95+71 RT (DISGI)		1.00	0004	01
		98+12 RT (DISGI)		1.00	0004	01
		98+89 RT (DISGI)		1.00	0004	01
		99+88 RT (DISGI)		1.00	0004	01
		TAUNTON AVE (RCNFG)				
		83+01 RT (RCNFG)		1.00	0004	01
		92+51 LT (RCNFG)		1.00	0004	01
		Item 702.0516 Total:		**28.00**		
065	**702.0517**	**FRAME AND GRATE, STANDARD 6.3.2**	**EACH**			
		TAUNTON AVE				
		101+75 LT		1.00	0004	01
		101+75 RT		1.00	0004	01

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
065	**702.0517 Cont.**	**Item 702.0517 Total:**		**2.00**		
066	**702.0521**	**FRAME AND COVER STANDARD 6.2.0**	**EACH**			
		TAUNTON AVE (CBGGI)				
		94+98 LT (CBGGI)		1.00	0004	01
		96+49 LT (CBGGI)		1.00	0004	01
		97+00 LT (CBGGI)		1.00	0004	01
		97+47 LT (CBGGI)		1.00	0004	01
		97+92 LT (CBGGI)		1.00	0004	01
		99+10 LT (CBGGI)		1.00	0004	01
		99+88 LT (CBGGI)		1.00	0004	01
		Item 702.0521 Total:		**7.00**		
067	**702.0522**	**FRAME AND COVER STANDARD 6.2.1**	**EACH**			
		TAUNTON AVE (4DMHS)				
		90+97 LT (4DMHS)		1.00	0004	01
		96+49 LT (4DMHS)		1.00	0004	01
		96+90 LT (4DMHS)		1.00	0004	01
		96+95 RT (4DMHS)		1.00	0004	01
		97+82 LT (4DMHS)		1.00	0004	01
		97+88 RT (4DMHS)		1.00	0004	01
		98+99 LT (4DMHS)		1.00	0004	01
		99+00 RT (4DMHS)		1.00	0004	01
		TAUNTON AVE (4MHWE)				
		90+97 LT (4MHWE)		1.00	0004	01
		95+45 LT (4MHWE)		1.00	0004	01
		96+90 LT (4MHWE)		1.00	0004	01
		97+82 LT (4MHWE)		1.00	0004	01
		TAUNTON AVE (6DMHS)				
		95+83 LT (ECCENTRIC) (6DMHS)		1.00	0004	01
		Item 702.0522 Total:		**13.00**		
068	**702.0541**	**GRANITE INLET STONE 38'' STANDARD**	**EACH**			

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
068	**702.0541 Cont.**	**7.3.6**				
		TAUNTON AVE (CBG38)				
		94+98 RT (CBG38)		1.00	0004	01
		95+82 RT (CBG38)		1.00	0004	01
		96+11 RT (CBG38)		1.00	0004	01
		96+40 RT (CBG38)		1.00	0004	01
		96+87 RT (CBG38)		1.00	0004	01
		96+99 RT (CBG38)			0004	01
		97+92 RT (CBG38)			0004	01
		98+03 RT (CBG38)		1.00	0004	01
		99+00 RT (CBG38)		1.00	0004	01
		99+94 RT (CBG38)		1.00	0004	01
		TAUNTON AVE (CBGGI)				
		94+98 LT (CBGGI)		1.00	0004	01
		96+49 LT (CBGGI)		1.00	0004	01
		97+00 LT (CBGGI)		1.00	0004	01
		97+47 LT (CBGGI)		1.00	0004	01
		97+92 LT (CBGGI)		1.00	0004	01
		99+10 LT (CBGGI)		1.00	0004	01
		99+88 LT (CBGGI)		1.00	0004	01
		TAUNTON AVE (DISGI)				
		100+05 RT (DISGI)		1.00	0004	01
		95+71 RT (DISGI)		1.00	0004	01
		98+12 RT (DISGI)		1.00	0004	01
		98+89 RT (DISGI)		1.00	0004	01
		99+88 RT (DISGI)		1.00	0004	01
		Item 702.0541 Total:		**20.00**		
069	**702.0542**	**GRANITE APRON STONE 5FT. STANDARD**	**EACH**			
		7.3.7				
		COMMERCIAL WAY (DGCBI)				
		200+37 RT (DGCBI)		1.00	0004	01
		200+51 LT (DGCBI)		1.00	0004	01

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
069	**702.0542 Cont.**	**Item 702.0542 Total:**		**2.00**		
070	**702.0605**	**PRECAST CATCH BASIN 4' DIAMETER**	**EACH**			
		STANDARD 4.4.0				
		TAUNTON AVE (CB4FT)				
		96+99 RT (CB4FT)		1.00	0004	01
		97+92 RT (CB4FT)		1.00	0004	01
		TAUNTON AVE (CBG38)				
		94+98 RT (CBG38)		1.00	0004	01
		95+82 RT (CBG38)		1.00	0004	01
		96+11 RT (CBG38)		1.00	0004	01
		96+40 RT (CBG38)		1.00	0004	01
		96+87 RT (CBG38)		1.00	0004	01
		96+99 RT (CBG38)			0004	01
		97+92 RT (CBG38)			0004	01
		98+03 RT (CBG38)		1.00	0004	01
		99+00 RT (CBG38)		1.00	0004	01
		99+94 RT (CBG38)		1.00	0004	01
		Item 702.0605 Total:		**10.00**		
071	**702.0630**	**PRECAST MANHOLE 4' DIAMETER**	**EACH**			
		STANDARD 4.2.0				
		TAUNTON AVE (4DMHS)				
		90+97 LT (4DMHS)		1.00	0004	01
		96+49 LT (4DMHS)		1.00	0004	01
		96+90 LT (4DMHS)		1.00	0004	01
		96+95 RT (4DMHS)		1.00	0004	01
		97+82 LT (4DMHS)		1.00	0004	01
		97+88 RT (4DMHS)		1.00	0004	01
		98+99 LT (4DMHS)		1.00	0004	01
		99+00 RT (4DMHS)		1.00	0004	01
		Item 702.0630 Total:		**8.00**		

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
072	**702.0640**	**PRECAST MANHOLE 6' DIAMETER**	**EACH**			
		STANDARD 4.2.2				
		TAUNTON AVE (6DMHS)				

Distribution of Quantities

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Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
072	**702.0640 Cont.**	95+83 LT (ECCENTRIC) (6DMHS)		1.00	0004	01
		Item 702.0640 Total:		**1.00**		
073	**702.0705**	**CATCH BASIN W/GUTTER INLET STANDARD 3.4.1**	**EACH**			
		TAUNTON AVE (CBGGI)				
		94+98 LT (CBGGI)		1.00	0004	01
		96+49 LT (CBGGI)		1.00	0004	01
		97+00 LT (CBGGI)		1.00	0004	01
		97+47 LT (CBGGI)		1.00	0004	01
		97+92 LT (CBGGI)		1.00	0004	01
		99+10 LT (CBGGI)		1.00	0004	01
		99+88 LT (CBGGI)		1.00	0004	01
		Item 702.0705 Total:		**7.00**		
074	**702.0714**	**PRECAST CONCRETE DROP INLET WITH APRON STONE STANDARD 4.5.2**	**EACH**			
		TAUNTON AVE (DISGI)				
		100+05 RT (DISGI)		1.00	0004	01
		95+71 RT (DISGI)		1.00	0004	01
		98+12 RT (DISGI)		1.00	0004	01
		98+89 RT (DISGI)		1.00	0004	01
		99+88 RT (DISGI)		1.00	0004	01
		Item 702.0714 Total:		**5.00**		
075	**702.0725**	**SOLID BLOCK SHALLOW DOUBLE GRATE CATCH BASIN STANDARD 3.5.2**	**EACH**			
		COMMERCIAL WAY (DGCBI)				
		200+37 RT (DGCBI)		1.00	0004	01
		200+51 LT (DGCBI)		1.00	0004	01
		Item 702.0725 Total:		**2.00**		
076	**702.9901**	**STORMWATER TREATMENT UNIT (JFF-1)**	**EACH**			

Distribution of Quantities

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R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
076	**702.9901 Cont.**	TAUNTON AVE				
		96+39 Lt		1.00	0004	01
		Item 702.9901 Total:		**1.00**		
077	**702.9902**	**STORMWATER TREATMENT UNIT (JFF-2)**	**EACH**			
		TAUNTON AVE				
		97+48 Lt		1.00	0004	01
		Item 702.9902 Total:		**1.00**		
078	**702.9903**	**WATER QUALITY STRUCTURE (CDS)**	**EACH**			
		TAUNTON AVE				
		92+00 Lt		1.00	0004	01
		Item 702.9903 Total:		**1.00**		
079	**702.9905**	**PRECAST MANHOLE 4′ DIAMETER STANDARD 4.2.0 WITH WEIR**	**EACH**			
		TAUNTON AVE (4MHWE)				
		90+97 LT (4MHWE)		1.00	0004	01
		95+45 LT (4MHWE)		1.00	0004	01
		96+90 LT (4MHWE)		1.00	0004	01
		97+82 LT (4MHWE)		1.00	0004	01
		Item 702.9905 Total:		**4.00**		
080	**702.9999**	**MISCELLANEOUS DRAINAGE REPAIRS**	**LS**			
		PROJECT WIDE				
		PROJECT WIDE		1.00	0004	01
		Item 702.9999 Total:		**1.00**		
081	**704.0100**	**RECONSTRUCT CATCH BASIN/CORBEL CONES**	**EACH**			
		TAUNTON AVE				
		101+75 LT		1.00	0004	01
		CONTINGENCY		2.00	0004	01

Distribution of Quantities

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R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
081	**704.0100 Cont.**	TAUNTON AVE (RCNFG)				
		83+01 RT (RCNFG)		1.00	0004	01
		92+51 LT (RCNFG)		1.00	0004	01
		Item 704.0100 Total:		**5.00**		
082	**704.0300**	**RECONSTRUCT CATCH BASIN/VERTICAL WALLS**	**VLF**			
		TAUNTON AVE				
		CONTINGENCY		5.00	0004	01
		Item 704.0300 Total:		**5.00**		
083	**704.0400**	**RECONSTRUCT MANHOLE/VERTICAL WALLS**	**VLF**			
		TAUNTON AVE				
		CONTINGENCY		5.00	0004	01
		Item 704.0400 Total:		**5.00**		
084	**706.9000**	**PLUG AND CAP PIPE ALL SIZES**	**EACH**			
		TAUNTON AVE				
		95+86 LT		1.00	0004	01
		96+45 LT		1.00	0004	01
		97+05 RT		1.00	0004	01
		97+86 RT		1.00	0004	01
		Item 706.9000 Total:		**4.00**		
085	**707.0900**	**ADJUST MANHOLES TO GRADE**	**EACH**			
		TAUNTON AVE				
		101+75 LT		1.00	0004	01
		102+55 LT		1.00	0004	01
		TAUNTON AVE (ADMHG)				
		86+00 LT (ADMHG)		2.00	0004	01
		92+52 LT (ADMHG)		2.00	0004	01
		Item 707.0900 Total:		**6.00**		

Distribution of Quantities

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R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
086	**707.1000**	**ADJUST SANITARY MANHOLE**	**EACH**			
		COMMERCIAL WAY				
		200+57 RT		2.00	0004	01
		TAUNTON AVE				
		82+67 LT		2.00	0004	01
		85+28 LT		2.00	0004	01
		91+10 RT		2.00	0004	01
		93+36 RT		2.00	0004	01
		97+10 RT		2.00	0004	01
		Item 707.1000 Total:		**12.00**		
087	**707.1100**	**ADJUST CATCH BASINS**	**EACH**			
		TAUNTON AVE				
		101+75 RT		1.00	0004	01
		102+97 LT		1.00	0004	01
		TAUNTON AVE (ABFGG)				
		81+00 LT (ABFGG)		1.00	0004	01
		81+02 RT (ABFGG)		1.00	0004	01
		83+02 LT (ABFGG)		1.00	0004	01
		86+00 LT (ABFGG)		1.00	0004	01
		86+01 RT (ABFGG)		1.00	0004	01
		89+00 LT (ABFGG)		1.00	0004	01
		89+00 RT (ABFGG)		1.00	0004	01
		90+75 LT (ABFGG)		1.00	0004	01
		90+75 RT (ABFGG)		1.00	0004	01
		92+49 RT (ABFGG)		1.00	0004	01
		Item 707.1100 Total:		**12.00**		
088	**707.1900**	**ADJUST FRAME & COVER TO GRADE**	**EACH**			
		TAUNTON AVE (ADMHG)				
		86+00 LT (ADMHG)		2.00	0004	01
		92+52 LT (ADMHG)		2.00	0004	01
		Item 707.1900 Total:		**4.00**		

Distribution of Quantities

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FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
089	**707.2000**	**ADJUST FRAME AND GRATE TO GRADE**	**EACH**			
		TAUNTON AVE (ABFGG)				
		81+00 LT (ABFGG)		1.00	0004	01
		81+02 RT (ABFGG)		1.00	0004	01
		83+02 LT (ABFGG)		1.00	0004	01
		86+00 LT (ABFGG)		1.00	0004	01
		86+01 RT (ABFGG)		1.00	0004	01
		89+00 LT (ABFGG)		1.00	0004	01
		89+00 RT (ABFGG)		1.00	0004	01
		90+75 LT (ABFGG)		1.00	0004	01
		90+75 RT (ABFGG)		1.00	0004	01
		92+49 RT (ABFGG)		1.00	0004	01
		Item 707.2000 Total:		**10.00**		
090	**708.9040**	**CLEANING AND FLUSHING PIPE ALL SIZES**	**LF**			
		TAUNTON AVE				
		101+74 - 101+75		47.70	0004	01
		101+75 - 102+54 LT		79.20	0004	01
		101+75 - 102+96 LT		40.10	0004	01
		80+99 - 81+01		52.30	0004	01
		81+00 - 83+01 LT		200.70	0004	01
		83+00 - 83+02		51.90	0004	01
		83+03 - 85+99 LT		293.50	0004	01
		85+99 - 86+00 LT		7.90	0004	01
		86+01 - 88+98 LT		295.30	0004	01
		86+01 RT		37.70	0004	01
		89+00 - 89+01		47.70	0004	01
		89+00 - 90+74 LT		173.80	0004	01
		90+75		47.80	0004	01
		92+49 - 92+52 RT		37.70	0004	01
		92+51 - 92+52 LT		8.20	0004	01
		92+52 - 94+97 LT		244.90	0004	01

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R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
090	**708.9040 Cont.**	94+98 - 94+99		47.70	0004	01
		95+81 - 95+82 LT		18.20	0004	01
		99+84 - 100+63 LT		78.90	0004	01
		ROUND UP		0.80	0004	01
		Item 708.9040 Total:		**1,812.00**		
091	**708.9041**	**CLEANING CATCH BASINS ALL TYPES AND SIZES**	**EACH**			
		TAUNTON AVE				
		101+75 LT		1.00	0004	01
		101+75 RT		1.00	0004	01
		97+88 RT		1.00	0004	01
		TAUNTON AVE (ABFGG)				
		81+00 LT (ABFGG)		1.00	0004	01
		81+02 RT (ABFGG)		1.00	0004	01
		83+02 LT (ABFGG)		1.00	0004	01
		86+00 LT (ABFGG)		1.00	0004	01
		86+01 RT (ABFGG)		1.00	0004	01
		89+00 LT (ABFGG)		1.00	0004	01
		89+00 RT (ABFGG)		1.00	0004	01
		90+75 LT (ABFGG)		1.00	0004	01
		90+75 RT (ABFGG)		1.00	0004	01
		92+49 RT (ABFGG)		1.00	0004	01
		TAUNTON AVE (RCNFG)				
		83+01 RT (RCNFG)		1.00	0004	01
		92+51 LT (RCNFG)		1.00	0004	01
		Item 708.9041 Total:		**15.00**		
092	**708.9042**	**CLEANING MANHOLES ALL TYPES AND SIZES**	**EACH**			
		TAUNTON AVE				
		102+97 LT		1.00	0004	01
		TAUNTON AVE (4DMHS)				

Distribution of Quantities

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R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
092	**708.9042 Cont.**	90+97 LT (4DMHS)		1.00	0004	01
		96+49 LT (4DMHS)		1.00	0004	01
		96+90 LT (4DMHS)		1.00	0004	01
		96+95 RT (4DMHS)		1.00	0004	01
		97+82 LT (4DMHS)		1.00	0004	01
		97+88 RT (4DMHS)		1.00	0004	01
		98+99 LT (4DMHS)		1.00	0004	01
		99+00 RT (4DMHS)		1.00	0004	01
		TAUNTON AVE (4MHWE)				
		90+97 LT (4MHWE)		1.00	0004	01
		95+45 LT (4MHWE)		1.00	0004	01
		96+90 LT (4MHWE)		1.00	0004	01
		97+82 LT (4MHWE)		1.00	0004	01
		TAUNTON AVE (6DMHS)				
		95+83 LT (ECCENTRIC) (6DMHS)		1.00	0004	01
		TAUNTON AVE (ADMHG)				
		86+00 LT (ADMHG)		1.00	0004	01
		92+52 LT (ADMHG)		1.00	0004	01
		Item 708.9042 Total:		**16.00**		
093	**712.0100**	**WATER GATE BOX**	**EACH**			
		TAUNTON AVE				
		101+50 LT		1.00	0004	01
		89+67 LT		1.00	0004	01
		96+95 LT		1.00	0004	01
		CONTINGENCY		7.00	0004	01
		Item 712.0100 Total:		**10.00**		
094	**712.0200**	**GAS GATE BOX**	**EACH**			
		TAUNTON AVE				
		97+90 LT		1.00	0004	01
		CONTINGENCY		4.00	0004	01
		Item 712.0200 Total:		**5.00**		

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Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
095	**713.8268**	**ADJUST CURB STOP BOX TO GRADE**	**EACH**			
		TAUNTON AVE				
		85+80 LT		1.00	0004	01
		91+20 RT		1.00	0004	01
		94+00 RT		1.00	0004	01
		99+84 LT		1.00	0004	01
		Item 713.8268 Total:		**4.00**		
096	**713.8269**	**ADJUST WATER GATE BOXES TO GRADE**	**EACH**			
		TAUNTON AVE				
		100+63 LT		2.00	0004	01
		101+42 LT		2.00	0004	01
		101+46 LT		2.00	0004	01
		102+63 LT		2.00	0004	01
		102+74 LT		2.00	0004	01
		81+27 LT		2.00	0004	01
		82+52 RT		2.00	0004	01
		89+63 LT		2.00	0004	01
		89+67 LT		2.00	0004	01
		92+40 LT		2.00	0004	01
		92+93 RT		1.00	0004	01
		95+91 RT		1.00	0004	01
		96+91 LT		2.00	0004	01
		97+28 LT		1.00	0004	01
		97+99 LT		2.00	0004	01
		98+50 RT		1.00	0004	01
		99+48 LT		1.00	0004	01
		Item 713.8269 Total:		**29.00**		
097	**713.8300**	**ADJUST GAS GATE BOXES TO GRADE**	**EACH**			
		TAUNTON AVE				
		101+56 LT		2.00	0004	01
		85+84 LT		1.00	0004	01

Distribution of Quantities

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R.I. Contract No. - 2019-CH-032
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Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
097	**713.8300 Cont.**	89+03 RT		1.00	0004	01
		89+15 RT		1.00	0004	01
		91+94 RT		1.00	0004	01
		92+64 RT		1.00	0004	01
		94+05 RT		1.00	0004	01

Distribution of Quantities

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Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
097	**713.8300 Cont.**	96+42 RT		1.00	0004	01
		96+93 RT		1.00	0004	01
		97+02 RT		1.00	0004	01
		97+19 RT		1.00	0004	01
		97+25 RT		2.00	0004	01
		97+85 LT		2.00	0004	01
		97+95 RT		1.00	0004	01
		98+45 RT		1.00	0004	01
		99+63 LT		1.00	0004	01
		Item 713.8300 Total:		**19.00**		
098	**714.8163**	**POST TYPE HYDRANT**	**EACH**			
		TAUNTON AVE				
		81+24 LT		1.00	0004	01
		Item 714.8163 Total:		**1.00**		
099	**902.9901**	**STEEL BOLLARD**	**EACH**			
		TAUNTON AVE				
		PARK AND RIDE		6.00	0004	01
		Item 902.9901 Total:		**6.00**		
100	**903.0206**	**CHAIN LINK FENCE 6' STD 31.2.0**	**LF**			
		BIORETENTION BASIN				
		BIORETENTION BASIN		407.00	0004	01
		Item 903.0206 Total:		**407.00**		
101	**903.0231**	**DOUBLE GATE, CHAIN LINK 6' STANDARD 31.2.0**	**EACH**			
		TAUNTON AVE				
		BIORETENTION BASIN		1.00	0004	01
		Item 903.0231 Total:		**1.00**		
102	**905.0110**	**PORTLAND CEMENT SIDEWALK**	**CY**			

Distribution of Quantities

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Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
102	**905.0110 Cont.**	**MONOLITHIC STANDARD 43.1.0**				
		TAUNTON AVE				
		ROUND UP		0.53	0004	01
		TAUNTON AVE (CCSWK)				
		101+15 - 101+22 LT (CCSWK)		0.98	0004	01
		101+76 - 101+85 LT (CCSWK)		0.79	0004	01
		101+80 - 101+86 RT (CCSWK)		0.70	0004	01
		102+19 - 102+31 RT (CCSWK)		1.48	0004	01
		102+33 - 102+39 LT (CCSWK)		0.53	0004	01
		102+61 - 102+67 RT (CCSWK)		0.41	0004	01
		102+79 - 102+90 LT (CCSWK)		1.00	0004	01
		80+50 - 80+60 LT (CCSWK)		0.69	0004	01
		81+16 - 81+29 LT (CCSWK)		0.90	0004	01
		83+32 - 83+38 LT (CCSWK)		0.43	0004	01
		84+32 - 84+58 LT (CCSWK)		0.41	0004	01
		84+89 - 84+95 LT (CCSWK)		0.41	0004	01
		85+23 - 85+29 LT (CCSWK)		0.41	0004	01
		85+59 - 85+65 LT (CCSWK)		0.41	0004	01
		85+65 - 86+11 LT (CCSWK)		2.75	0004	01
		85+68 - 86+12 RT (CCSWK)		2.55	0004	01
		86+48 - 86+54 RT (CCSWK)		0.56	0004	01
		86+91 - 87+08 RT (CCSWK)		1.84	0004	01
		87+34 - 87+40 RT (CCSWK)		0.63	0004	01
		88+32 - 88+38 RT (CCSWK)		0.71	0004	01
		88+66 - 88+72 RT (CCSWK)		0.70	0004	01
		88+72 - 89+01 RT (CCSWK)		3.39	0004	01
		89+01 - 89+07 RT (CCSWK)		0.70	0004	01
		89+22 - 89+29 LT (CCSWK)		0.41	0004	01
		89+50 - 89+56 RT (CCSWK)		0.70	0004	01
		89+56 - 91+25 RT (CCSWK)		19.78	0004	01
		89+67 - 89+73 LT (CCSWK)		0.41	0004	01
		90+60 - 91+25 LT (CCSWK)		4.36	0004	01
		91+33 - 91+39 LT (CCSWK)		0.41	0004	01

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
102	**905.0110 Cont.**	91+88 - 91+94 RT (CCSWK)		0.70	0004	01
		92+08 - 93+72 LT (CCSWK)		19.12	0004	01
		92+30 - 92+51 RT (CCSWK)		2.46	0004	01
		92+77 - 92+94 RT (CCSWK)		1.98	0004	01
		93+22 - 93+33 RT (CCSWK)		1.23	0004	01

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
102	**905.0110 Cont.**	93+67 - 93+72 RT (CCSWK)		0.53	0004	01
		93+72 - 93+90 LT (CCSWK)		2.11	0004	01
		93+72 - 93+90 RT (CCSWK)		1.89	0004	01
		93+89 - 93+95 RT (CCSWK)		0.31	0004	01
		93+89 - 93+99 LT (CCSWK)		1.17	0004	01
		93+95 - 94+26 RT (CCSWK)		3.28	0004	01
		94+26 - 94+32 RT (CCSWK)		0.63	0004	01
		94+47 - 95+64 LT (CCSWK)		13.78	0004	01
		94+68 - 95+07 RT (CCSWK)		4.07	0004	01
		95+43 - 96+44 RT (CCSWK)		11.85	0004	01
		95+96 - 98+64 LT (CCSWK)		18.68	0004	01
		96+80 - 97+09 RT (CCSWK)		4.13	0004	01
		98+87 - 99+52 LT (CCSWK)		7.69	0004	01
		99+59 - 100+12 RT (CCSWK)		6.26	0004	01
		99+81 - 99+95 LT (CCSWK)		1.60	0004	01
		PARK AND RIDE (CCSWK)		9.20	0004	01
		Item 905.0110 Total:		**162.65**		
103	**905.0115**	**PORTLAND CEMENT CONCRETE DRIVEWAY**	**CY**			
		STANDARD 43.5.0				
		TAUNTON AVE				
		ROUND UP		0.09	0004	01
		TAUNTON AVE (CEMDW)				
		101+86 - 102+19 RT (CEMDW)		8.08	0004	01
		102+32 - 102+61 RT (CEMDW)		7.00	0004	01
		102+39 - 102+79 LT (CEMDW)		7.64	0004	01
		84+58 - 84+89 LT (CEMDW)		4.52	0004	01
		85+29 - 85+59 LT (CEMDW)		4.37	0004	01
		86+54 - 86+91 RT (CEMDW)		7.63	0004	01
		87+08 - 87+34 RT (CEMDW)		5.70	0004	01
		88+38 - 88+66 RT (CEMDW)		6.89	0004	01
		89+07 - 89+50 RT (CEMDW)		10.54	0004	01
		89+29 - 89+67 LT (CEMDW)		5.56	0004	01

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
103	**905.0115 Cont.**	91+94 - 92+30 RT (CEMDW)		8.82	0004	01

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
103	**905.0115 Cont.**	92+51 - 92+77 RT (CEMDW)		6.35	0004	01
		92+94 - 93+22 RT (CEMDW)		6.84	0004	01
		93+33 - 93+67 RT (CEMDW)		8.32	0004	01
		94+32 - 94+68 RT (CEMDW)		7.93	0004	01
		95+07 - 95+42 RT (CEMDW)		8.80	0004	01
		95+64 - 95+96 LT (CEMDW)		7.83	0004	01
		96+44 - 96+80 RT (CEMDW)		8.81	0004	01
		98+13 - 98+39 RT (CEMDW)		6.35	0004	01
		98+64 - 98+87 LT (CEMDW)		5.60	0004	01
		99+23 - 99+59 RT (CEMDW)		8.82	0004	01
		99+52 - 99+81 LT (CEMDW)		7.08	0004	01
		TAUNTON AVE (RECSW)				
		97+78 -98+16 RT (RECSW)		8.76	0004	01
		98+39 - 99+23 RT (RECSW)		19.67	0004	01
		Item 905.0115 Total:		**188.00**		
104	**905.9901**	**BUS SHELTER SLAB**	**CY**			
		TAUNTON AVE				
		ROUNDING		0.33	0004	01
		TAUNTON AVE (BSLAB)				
		PARK AND RIDE (BSLAB)		4.67	0004	01
		Item 905.9901 Total:		**5.00**		
105	**906.0110**	**GRANITE CURB, QUARRY SPLIT STRAIGHT, STANDARD 7.3.0**	**LF**			
		TAUNTON AVE				
		CONTINGENCY		330.00	0004	01
		Item 906.0110 Total:		**330.00**		
106	**906.0118**	**6' GRANITE TRANSITION CURB, QUARRY SPLIT SPECIAL TRANSITION STANDARD 7.3.2**	**EACH**			
		TAUNTON AVE (6GRTC)				

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
106	**906.0118 Cont.**	86+57 RT (6GRTC)		1.00	0004	01
		86+88 RT (6GRTC)		1.00	0004	01
		Item 906.0118 Total:		**2.00**		
107	**906.0119**	**3' GRANITE TRANSITION CURB**	**EACH**			
		STANDARD 7.3.1				
		TAUNTON AVE (3GRTC)				
		101+87 RT (3GRTC)		1.00	0004	01
		102+17 RT (3GRTC)		1.00	0004	01
		102+33 RT (3GRTC)		1.00	0004	01
		102+40 LT (3GRTC)		1.00	0004	01
		102+60 RT (3GRTC)		1.00	0004	01
		102+77 LT (3GRTC)		1.00	0004	01
		84+59 LT (3GRTC)		1.00	0004	01
		84+87 LT (3GRTC)		1.00	0004	01
		85+30 LT (3GRTC)		1.00	0004	01
		85+58 LT (3GRTC)		1.00	0004	01
		87+10 RT (3GRTC)		1.00	0004	01
		87+33 RT (3GRTC)		1.00	0004	01
		88+40 RT (3GRTC)		1.00	0004	01
		88+64 RT (3GRTC)		1.00	0004	01
		89+08 RT (3GRTC)		1.00	0004	01
		89+30 LT (3GRTC)		1.00	0004	01
		89+48 RT (3GRTC)		1.00	0004	01
		89+65 LT (3GRTC)		1.00	0004	01
		91+87 LT (3GRTC)		1.00	0004	01
		91+95 RT (3GRTC)		1.00	0004	01
		92+01 LT (3GRTC)		1.00	0004	01
		92+11 LT (3GRTC)		1.00	0004	01
		92+28 RT (3GRTC)		1.00	0004	01
		92+52 RT (3GRTC)		1.00	0004	01
		92+75 RT (3GRTC)		1.00	0004	01
		92+96 RT (3GRTC)		1.00	0004	01

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
107	**906.0119 Cont.**	93+20 RT (3GRTC)		1.00	0004	01
		93+34 RT (3GRTC)		1.00	0004	01
		93+51 LT (3GRTC)		1.00	0004	01
		93+65 RT (3GRTC)		1.00	0004	01
		94+01 LT (3GRTC)		1.00	0004	01
		94+33 RT (3GRTC)		1.00	0004	01
		94+58 LT (3GRTC)		1.00	0004	01
		94+66 RT (3GRTC)		1.00	0004	01
		95+08 RT (3GRTC)		1.00	0004	01
		95+41 RT (3GRTC)		1.00	0004	01
		95+66 LT (3GRTC)		1.00	0004	01
		95+95 LT (3GRTC)		1.00	0004	01
		98+65 LT (3GRTC)		1.00	0004	01
		98+85 LT (3GRTC)		1.00	0004	01
		99+24 RT (3GRTC)		1.00	0004	01
		99+54 LT (3GRTC)		1.00	0004	01
		99+57 RT (3GRTC)		1.00	0004	01
		99+80 LT (3GRTC)		1.00	0004	01
		Item 906.0119 Total:		**44.00**		
108	**906.0130**	**GRANITE RAMP STONE STRAIGHT**	**EACH**			
		STANDARD 7.3.9				
		TAUNTON AVE (RASTS)				
		101+35 LT (RASTS)			0004	01
		101+63 LT (RASTS)			0004	01
		93+77 LT (RASTS)		2.00	0004	01
		93+77 RT (RASTS)		2.00	0004	01
		Item 906.0130 Total:		**4.00**		
109	**906.0131**	**GRANITE RAMP STONE CIRCULAR**	**EACH**			
		STANDARD 7.3.9				
		TAUNTON AVE (RASTC)				
		97+07 RT (RASTC)		2.00	0004	01

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
109	**906.0131 Cont.**	97+82 RT (RASTC)		2.00	0004	01
		Item 906.0131 Total:		**4.00**		
110	**906.0602**	**BITUMINOUS BERM STANDARD 7.5.1**	**LF**			
		TAUNTON AVE				
		PARK AND RIDE		300.00	0004	01
		Item 906.0602 Total:		**300.00**		
111	**906.0700**	**REMOVE, HANDLE, HAUL TRIM RESET CURB EDGING, STRAIGHT, CIRCULAR ALL TYPES**	**LF**			
		TAUNTON AVE				
		90+39 - 98+96 RT		57.00	0004	01
		TAUNTON AVE (RHHGC)				
		101+17 - 101+23 LT (RHHGC)		6.00	0004	01
		101+76 - 101+82 LT (RHHGC)		6.00	0004	01
		101+80 - 101+86 RT (RHHGC)		6.00	0004	01
		102+19 - 102+32 RT (RHHGC)		12.50	0004	01
		102+33 - 102+39 LT (RHHGC)		6.00	0004	01
		102+61 - 102+67 RT (RHHGC)		6.00	0004	01
		102+79 - 102+90 LT (RHHGC)		11.50	0004	01
		80+50 - 80+60 LT (RHHGC)		10.00	0004	01
		81+16 - 81+29 LT (RHHGC)		13.00	0004	01
		83+32 - 83+38 LT (RHHGC)		6.00	0004	01
		84+52 - 84+58 LT (RHHGC)		6.00	0004	01
		84+89 - 84+95 LT (RHHGC)		6.00	0004	01
		85+23 - 85+29 LT (RHHGC)		6.00	0004	01
		85+59 - 85+65 LT (RHHGC)		6.00	0004	01
		86+48 - 86+54 RT (RHHGC)		6.00	0004	01
		86+91 - 87+08 RT (RHHGC)		17.50	0004	01
		87+34 - 87+40 RT (RHHGC)		6.00	0004	01
		88+32 - 88+38 RT (RHHGC)		6.00	0004	01
		88+66 - 88+72 RT (RHHGC)		6.00	0004	01

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
111	**906.0700 Cont.**	89+01 - 89+07 RT (RHHGC)		6.00	0004	01
		89+23 - 89+29 LT (RHHGC)		6.00	0004	01
		89+50 - 89+56 RT (RHHGC)		6.00	0004	01
		89+67 - 89+73 LT (RHHGC)		6.00	0004	01
		91+33 - 91+39 LT (RHHGC)		6.00	0004	01
		91+88 - 91+94 RT (RHHGC)		6.00	0004	01
		92+09 - 93+72 LT (RHHGC)		162.00	0004	01
		92+30 - 92+50 RT (RHHGC)		20.50	0004	01
		92+76 - 92+94 RT (RHHGC)		18.00	0004	01
		93+22 - 93+33 RT (RHHGC)		10.50	0004	01
		93+67 - 93+71 RT (RHHGC)		4.00	0004	01
		93+89 - 93+95 RT (RHHGC)		6.00	0004	01
		93+89 - 93+98 LT (RHHGC)		10.00	0004	01
		94+26 - 94+32 RT (RHHGC)		6.00	0004	01
		94+47 - 95+64 LT (RHHGC)		117.50	0004	01
		94+68 - 95+07 RT (RHHGC)		38.00	0004	01
		95+43 - 96+44 RT (RHHGC)		101.00	0004	01
		95+96 - 98+64 LT (RHHGC)		267.50	0004	01
		97+09 - 97+16 RT (RHHGC)		28.00	0004	01
		97+96 - 98+13 RT (RHHGC)		17.00	0004	01
		98+39 - 99+23 RT (RHHGC)		84.00	0004	01
		98+87 - 99+52 LT (RHHGC)		65.50	0004	01
		99+59 - 100+12 RT (RHHGC)		53.00	0004	01
		99+81 - 99+95 LT (RHHGC)		14.00	0004	01
		Item 906.0700 Total:		**1,264.00**		
112	**907.0100**	**WATER FOR DUST CONTROL**	**MGAL**			
		TAUNTON AVE				
		PROJECT WIDE		50.00	0004	01
		Item 907.0100 Total:		**50.00**		
113	**907.0200**	**CALCIUM CHLORIDE FOR DUST CONTROL (PROJECT WIDE)**	**TON**			

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
113	**907.0200 Cont.**	TAUNTON AVE				
		PROJECT WIDE		25.00	0004	01
		Item 907.0200 Total:		**25.00**		
114	**914.5010**	**FLAGPERSONS**	**MHRS**			
		TAUNTON AVE				
		PROJECT LIMITS		1,440.00	0004	01
		Item 914.5010 Total:		**1,440.00**		
115	**914.5020**	**FLAGPERSONS - OVERTIME**	**MHRS**			
		TAUNTON AVE				
		TAUNTON AVE		300.00	0004	01
		Item 914.5020 Total:		**300.00**		
116	**919.0101**	**TEST PITS**	**EACH**			
		PROJECT LIMITS				
		PROJECT LIMITS		10.00	0004	01
		Item 919.0101 Total:		**10.00**		
117	**919.9901**	**TEST PITS - EXCAVATION**	**EACH**			
		PROJECT LIMITS				
		PROJECT LIMITS		10.00	0004	01
		Item 919.9901 Total:		**10.00**		
118	**920.0070**	**DUMPED STONE RIPRAP R-3, R-4, 4-5**	**CY**			
		STANDARD 8.3.0				
		TAUNTON AVE				
		ROUND UP		0.99	0004	01
		TAUNTON AVE (RIPRP)				
		94+40 - 94+44 LT (RIPRP)		0.73	0004	01
		96+00 - 96+18 LT (RIPRP)		5.63	0004	01
		96+11 - 96+15 LT (RIPRP)		0.73	0004	01
		96+46 - 96+51 LT (RIPRP)		0.73	0004	01

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
118	**920.0070 Cont.**	96+87 - 96+93 LT (RIPRP)		0.73	0004	01
		97+43 - 97+50 LT (RIPRP)		0.73	0004	01
		97+79 - 97+84 LT (RIPRP)		0.73	0004	01
		Item 920.0070 Total:		**11.00**		
119	**920.0150**	**BEDDING FOR RIPRAP FS-2 STANDARD 8.3.0**	**CY**			
		TAUNTON AVE				
		ROUND UP		0.30	0004	01
		TAUNTON AVE (RIPRP)				
		94+40 - 94+44 LT (RIPRP)		0.49	0004	01
		96+00 - 96+18 LT (RIPRP)		3.76	0004	01
		96+11 - 96+15 LT (RIPRP)		0.49	0004	01
		96+46 - 96+51 LT (RIPRP)		0.49	0004	01
		96+87 - 96+93 LT (RIPRP)		0.49	0004	01
		97+43 - 97+50 LT (RIPRP)		0.49	0004	01
		97+79 - 97+84 LT (RIPRP)		0.49	0004	01
		Item 920.0150 Total:		**7.00**		
120	**920.9901**	**FILTER STRIP**	**SY**			
		TAUNTON AVE				
		94+48 LT		7.00	0004	01
		Item 920.9901 Total:		**7.00**		
121	**922.0100**	**TEMPORARY CONSTRUCTION SIGNS STANDARD 29.1.0 AND 27.1.1**	**SF**			
		TAUNTON AVE				
		G20-2 (8)		36.00	0004	01
		R3-7R (1)		9.00	0004	01
		RI STD 27.1.1 (6)		36.00	0004	01
		W1-4 (2)		18.00	0004	01
		W20-1 (8)		72.00	0004	01
		W20-5L (2)		18.00	0004	01

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
121	922.0100 Cont.	W20-5R (4)		36.00	0004	01
		W20-7A (3)		27.00	0004	01
		W4-2R (4)		36.00	0004	01
		W5-1 (3)		27.00	0004	01
		W9-2 (1)		9.00	0004	01
		Item 922.0100 Total:		**324.00**		
122	923.0105	**DRUM BARRICADE STANDARD 26.2.0**	**BDAY**			
		TAUNTON AVE				
		PROJECT LIMITS		40,320.00	0004	01
		Item 923.0105 Total:		**40,320.00**		
123	923.0125	**PLASTIC PIPE TYPE III BARRICADE STANDARD 26.3.1**	**EACH**			
		TAUNTON AVE				
		PROJECT WIDE		4.00	0004	01
		Item 923.0125 Total:		**4.00**		
124	923.0200	**FLUORESCENT TRAFFIC CONES STANDARD 26.1.0**	**EACH**			
		TAUNTON AVE				
		PROJECT LIMITS		100.00	0004	01
		Item 923.0200 Total:		**100.00**		
125	924.0113	**ADVANCE WARNING ARROW PANEL**	**PDAY**			
		TAUNTON AVE				
		PROJECT WIDE		720.00	0004	01
		Item 924.0113 Total:		**720.00**		
126	925.0112	**PORTABLE CHANGEABLE MESSAGE SIGN**	**PDAY**			
		TAUNTON AVE				
		PROJECT WIDE		720.00	0004	01
		Item 925.0112 Total:		**720.00**		

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
127	**929.0110**	**FIELD OFFICE**	**PMO**			
		TAUNTON AVE				
		PROJECT LIMITS		15.00	0004	01
		Item 929.0110 Total:		**15.00**		
128	**931.0110**	**CLEANING AND SWEEPING PAVEMENT**	**HSY**			
		COMMERCIAL WAY (MMPOL)				
		200+26 - 200+69 (MMPOL)		6.14	0004	01
		TAUNTON AVE				
		ROUND UP		0.23	0004	01
		TAUNTON AVE (MMPOL)				
		80+50 - 85+50 (MMPOL)		58.10	0004	01
		85+50 - 90+50 (MMPOL)		51.20	0004	01
		90+50 - 95+50 (MMPOL)		51.11	0004	01
		95+50 - 103+00 (MMPOL)		77.22	0004	01
		Item 931.0110 Total:		**244.00**		
129	**932.0200**	**FULL-DEPTH SAWCUT OF BITUMINOUS PAVEMENT**	**LF**			
		TAUNTON AVE				
		101+86 - 102+19 RT		37.00	0004	01
		102+32 - 102+81 LT		49.20	0004	01
		102+36 - 102+58 RT		22.20	0004	01
		102+90 - 102+97		58.60	0004	01
		84+61 - 84+89 LT		27.60	0004	01
		86+60 - 86+84 RT		24.80	0004	01
		87+11 - 87+31 RT		20.30	0004	01
		88+41 - 88+63 RT		22.40	0004	01
		89+07 - 89+50 RT		45.00	0004	01
		89+31 - 89+64 RT		32.10	0004	01
		91+68 - 91+97 LT		28.50	0004	01
		91+94 - 92+30 RT		36.00	0004	01
		92+54 - 92+74 RT		19.70	0004	01

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
129	**932.0200 Cont.**	92+95 - 93+26 RT		31.40	0004	01
		93+32 - 93+66 RT		34.20	0004	01
		94+02 - 94+44 LT		42.30	0004	01
		94+32 - 94+68 RT		44.00	0004	01
		95+07 - 95+43 RT		41.40	0004	01
		95+70 - 95+90 LT		20.20	0004	01
		96+44 - 96+80 RT		46.00	0004	01
		97+16 - 97+73 RT		80.80	0004	01
		98+64 - 98+87 LT		27.00	0004	01
		99+23 - 99+59 RT		36.00	0004	01
		99+52 - 99+81 LT		37.00	0004	01
		ROUND UP		11.30	0004	01
		Item 932.0200 Total:		**875.00**		
130	**932.0210**	**FULL DEPTH SAWCUT OF BITUMINOUS PAVEMENT AND RIGID BASE**	**LF**			
		TAUNTON AVE				
		101+15 - 101+85 LT		114.00	0004	01
		85+70 - 86+06 LT		59.20	0004	01
		85+70 - 86+07 RT		59.60	0004	01
		88+19 - 91+25 RT		252.80	0004	01
		88+94 - 91+25 LT		253.20	0004	01
		92+45 - 92+57 LT		34.00	0004	01
		93+94 - 96+87 LT		306.20	0004	01
		94+82 - 95+07 RT		47.00	0004	01
		95+50 - 96+78 RT		138.80	0004	01
		96+68 LT - 96+87 RT		35.70	0004	01
		96+97 - 97+79 LT		189.30	0004	01
		97+80 - 98+94 LT		146.80	0004	01
		98+10 - 98+95 RT		108.70	0004	01
		99+05 - 101+80 LT		298.30	0004	01
		99+05 - 102+97 RT		403.90	0004	01
		ROUND UP		0.50	0004	01

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
130	**932.0210 Cont.**	**Item 932.0210 Total:**		**2,448.00**		

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
131	**932.0230**	**FULL DEPTH SAWCUT OF PORTLAND**	**LF**			
		CEMENT CONCRETE SIDEWALK/DRIVEWAY				
		COMMERCIAL WAY				
		200+42 RT		4.00	0004	01
		200+74 LT		4.00	0004	01
		TAUNTON AVE				
		100+12 RT		9.50	0004	01
		101+17 LT		9.50	0004	01
		101+80 RT		9.50	0004	01
		101+82 LT		7.00	0004	01
		102+33 LT		7.00	0004	01
		102+67 RT		5.50	0004	01
		102+90 LT		5.50	0004	01
		80+50 LT		6.00	0004	01
		80+60 LT		6.00	0004	01
		81+16 LT		6.00	0004	01
		81+29 LT		6.00	0004	01
		83+32 LT		6.00	0004	01
		83+38 LT		6.00	0004	01
		84+52 LT		5.50	0004	01
		84+85 LT		5.50	0004	01
		85+23 LT		5.50	0004	01
		85+65 LT		5.50	0004	01
		86+48 RT		7.50	0004	01
		87+40 LT		8.50	0004	01
		88+32 RT		9.50	0004	01
		88+72 RT		9.50	0004	01
		89+01 RT		9.50	0004	01
		89+23 LT		5.50	0004	01
		89+56 RT		9.50	0004	01
		89+73 LT		5.50	0004	01
		91+33 LT		5.50	0004	01
		91+88 RT		9.50	0004	01

Distribution of Quantities

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Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
131	**932.0230 Cont.**	93+95 RT		8.50	0004	01
		94+26 RT		8.50	0004	01
		99+95 LT		9.50	0004	01
		Item 932.0230 Total:		**226.00**		
132	**935.0400**	**REMOVING BITUMINOUS PAVEMENT BY MICRO MILLING**	**SY**			
		COMMERCIAL WAY (MMPOL)				
		200+26 - 200+69 (MMPOL)		306.98	0004	01
		TAUNTON AVE				
		ROUND UP		0.37	0004	01
		TAUNTON AVE (MMPOL)				
		80+50 - 85+50 (MMPOL)		2,905.18	0004	01
		85+50 - 90+50 (MMPOL)		2,559.81	0004	01
		90+50 - 95+50 (MMPOL)		2,555.56	0004	01
		95+50 - 103+00 (MMPOL)		3,861.10	0004	01
		Item 935.0400 Total:		**12,189.00**		
133	**936.0100**	**MOBILIZATION AND DEMOBILIZATION**	**LS**			
		TAUNTON AVE				
		PROJECT LIMITS		1.00	0004	01
		Item 936.0100 Total:		**1.00**		
134	**937.0200**	**MAINTENANCE AND MOVEMENT TRAFFIC PROTECTION**	**LS**			
		TAUNTON AVE				
		PROJECT LIMITS		1.00	0004	01
		Item 937.0200 Total:		**1.00**		
135	**942.0200**	**DETECTABLE WARNING PANEL STANDARD 48.1.0**	**SF**			
		TAUNTON AVE				
		101+35 LT		8.00	0004	01

Distribution of Quantities

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R.I. Contract No. - 2019-CH-032
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Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
135	**942.0200 Cont.**	101+63 LT		8.00	0004	01
		TAUNTON AVE (RASTC)				
		97+07 RT (RASTC)		16.00	0004	01

Distribution of Quantities

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Estimate Name - Addendum 2
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FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
135	**942.0200 Cont.**	97+82 RT (RASTC)		16.00	0004	01
		TAUNTON AVE (RASTS)				
		101+35 LT (RASTS)			0004	01
		101+63 LT (RASTS)			0004	01
		93+77 LT (RASTS)		16.00	0004	01
		93+77 RT (RASTS)		16.00	0004	01
		Item 942.0200 Total:		**80.00**		
136	**999.9901**	**REMOVE AND STOCKPILE BUS SHELTER (PARK AND RIDE)**	**EACH**			
		TAUNTON AVE				
		92+60 LT		1.00	0004	01
		Item 999.9901 Total:		**1.00**		
137	**999.9902**	**REMOVE AND REPLACE BUS SHELTER (SIDEWALK)**	**EACH**			
		TAUNTON AVE				
		92+60 LT		1.00	0004	01
		Item 999.9902 Total:		**1.00**		
138	**L01.0102**	**LOAM BORROW 4 INCHES DEEP**	**SY**			
		TAUNTON AVE				
		ROUND UP		0.90	0004	01
		TAUNTON AVE (LMSDA)				
		84+52 - 84+60 LT (LMSDA)		1.30	0004	01
		84+88 - 84+95 LT (LMSDA)		1.40	0004	01
		86+48 - 86+60 RT (LMSDA)		3.10	0004	01
		86+85 - 87+11 RT (LMSDA)		6.20	0004	01
		87+33 - 87+40 RT (LMSDA)		3.50	0004	01
		88+32 - 88+40 RT (LMSDA)		3.90	0004	01
		88+64 - 88+72 RT (LMSDA)		1.90	0004	01
		89+00 - 89+07 RT (LMSDA)		1.30	0004	01
		89+23 - 89+32 LT (LMSDA)		2.50	0004	01

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
138	**L01.0102 Cont.**	89+50 - 89+56 RT (LMSDA)		1.30	0004	01
		89+64 - 89+73 LT (LMSDA)		2.50	0004	01
		91+33 - 91+68 LT (LMSDA)		14.70	0004	01
		91+88 - 91+97 RT (LMSDA)		1.90	0004	01
		92+30 - 92+54 RT (LMSDA)		5.20	0004	01
		92+74 - 92+94 RT (LMSDA)		4.80	0004	01
		93+27 - 93+32 RT (LMSDA)		1.50	0004	01
		95+96 - 98+55 LT (LMSDA)		116.30	0004	01
		98+39 - 98+96 RT (LMSDA)		15.80	0004	01
		PARK AND RIDE (LMSDA)		2,500.00	0004	01
		Item L01.0102 Total:		**2,690.00**		
139	**L01.0104**	**PLANTABLE SOIL 4 INCHES DEEP**	**SY**			
		SWALES				
		20+75 - 25+00		660.90	0004	01
		96+12 - 98+15 LT		402.90	0004	01
		TAUNTON AVE				
		ROUND UP		0.20	0004	01
		Item L01.0104 Total:		**1,064.00**		
140	**L01.9901**	**BIORETENTION BASIN**	**LS**			
		TAUNTON AVE				
		BIORETENTION BASIN		1.00	0004	01
		Item L01.9901 Total:		**1.00**		
141	**L02.0102**	**RESIDENTIAL SEEDING (TYPE 2)**	**SY**			
		TAUNTON AVE				
		ROUND UP		75.90	0004	01
		TAUNTON AVE (LMSDA)				
		84+52 - 84+60 LT (LMSDA)		1.30	0004	01
		84+88 - 84+95 LT (LMSDA)		1.40	0004	01
		86+48 - 86+60 RT (LMSDA)		3.10	0004	01
		86+85 - 87+11 RT (LMSDA)		6.20	0004	01

Distribution of Quantities

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Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
141	**L02.0102 Cont.**	87+33 - 87+40 RT (LMSDA)		3.50	0004	01
		88+32 - 88+40 RT (LMSDA)		3.90	0004	01
		88+64 - 88+72 RT (LMSDA)		1.90	0004	01
		89+00 - 89+07 RT (LMSDA)		1.30	0004	01
		89+23 - 89+32 LT (LMSDA)		2.50	0004	01
		89+50 - 89+56 RT (LMSDA)		1.30	0004	01
		89+64 - 89+73 LT (LMSDA)		2.50	0004	01
		91+33 - 91+68 LT (LMSDA)		14.70	0004	01
		91+88 - 91+97 RT (LMSDA)		1.90	0004	01
		92+30 - 92+54 RT (LMSDA)		5.20	0004	01
		92+74 - 92+94 RT (LMSDA)		4.80	0004	01
		93+27 - 93+32 RT (LMSDA)		1.50	0004	01
		95+96 - 98+55 LT (LMSDA)		116.30	0004	01
		98+39 - 98+96 RT (LMSDA)		15.80	0004	01
		PARK AND RIDE (LMSDA)		2,500.00	0004	01
		Item L02.0102 Total:		**2,765.00**		
142	**L02.0105**	**WETLAND SEED MIX (TYPE 5)**	**SY**			
		SWALES				
		20+75 - 25+00		660.90	0004	01
		96+12 - 98+15 LT		402.90	0004	01
		TAUNTON AVE				
		ROUND UP		46.20	0004	01
		Item L02.0105 Total:		**1,110.00**		
143	**L11.0104**	**DRIP-LINE TREE PROTECTION DEVICE**	**LF**			
		STANDARD 51.1.1				
		TAUNTON AVE				
		95+40 LT		65.00	0004	01
		95+43 LT		82.00	0004	01
		95+62 LT		94.00	0004	01
		95+67 LT		114.00	0004	01
		Item L11.0104 Total:		**355.00**		

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Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
144	**T05.1030**	**ADJUST HANDHOLE TO GRADE**	**EACH**			
		TAUNTON AVE				
		80+76 LT		1.00	0004	01
		92+09 LT		1.00	0004	01
		92+99 LT		1.00	0004	01
		93+86 LT		1.00	0004	01
		94+71 LT		1.00	0004	01
		94+75 RT		1.00	0004	01
		Item T05.1030 Total:		**6.00**		
145	**T15.0100**	**DIRECTIONAL REGULATORY AND WARNING SIGNS**	**SF**			
		TAUNTON AVE				
		ROUND UP		0.23	0004	01
		S1-01/M4-5 (24" X 12")		2.00	0004	01
		S1-02/M1-1 (30" X 24")		5.00	0004	01
		S1-03/M6-1L (21" X 15")		2.19	0004	01
		S1-04/M2-1 (21" X 15")		2.19	0004	01
		S1-05/M1-5 (30" X 24")		5.00	0004	01
		S1-06/M6-4 (21" X 15")		2.19	0004	01
		S1-07/M3-4 (24" X 12")		2.00	0004	01
		S1-08/M1-4 (24" X 24")		2.00	0004	01
		S1-09/M6-3 (21" X 15")		2.19	0004	01
		S1-10/R3-7 (30" X 30")		6.25	0004	01
		S1-11/SP-1 (12" X 18")		1.50	0004	01
		S1-12/M3-2 (24" X 12")		2.00	0004	01
		S1-13/M1-4 (24" X 24")		4.00	0004	01
		S1-14/SP-1 (12" X 18")		1.50	0004	01
		S2-01/R2-1 (30" X 36")		7.50	0004	01
		S2-02/M4-5 (24" X 12")		2.00	0004	01
		S2-03/M1-1 (30" X 24")		5.00	0004	01
		S2-04/M5-1L (21" X 15")		2.19	0004	01
		S2-05/M2-1 (21" X 15")		2.19	0004	01

Distribution of Quantities

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Estimate Name - Addendum 2
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Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
145	**T15.0100 Cont.**	S2-06/M1-5 (30" X 24")		5.00	0004	01
		S2-07/M6-4 (21" X 15")		2.19	0004	01
		S2-08/M3-4 (24" X 12")		2.00	0004	01
		S2-09/M1-4 (24" X 24")		4.00	0004	01
		S2-10/M6-3 (21" X 15")		2.19	0004	01
		S2-11/R2-1 (30" X 36")		7.50	0004	01
		S3-01/R1-1 (30" X 30")		6.25	0004	01
		S3-02/SP-1 (12" X 18")		1.50	0004	01
		S3-03/W11-2 (36" X 36")		9.00	0004	01
		S3-04/W16-7P (24" X 12")		2.00	0004	01
		S3-05/R1-1 (30" X 30")		6.25	0004	01
		S3-06/D4-2 (30" X 36")		7.50	0004	01
		S3-07/W11-2 (36" X 36")		9.00	0004	01
		S3-08/W16-9P (24" X 12")		2.00	0004	01
		S3-09/SP-1 (12" X 18")		1.50	0004	01
		S3-10/D4-2 (30" X 36")		7.50	0004	01
		S3-11/W11-2 (36" X 36")		9.00	0004	01
		S3-12/W16-7P (24" X 12")		2.00	0004	01
		S3-13/W2-2 (30" X 30")		6.25	0004	01
		S4-01/W11-2 (36" X 36")		9.00	0004	01
		S4-02/W16-7P (24" X 12")		2.00	0004	01
		S4-05/R1-1 (30" X 30")		6.25	0004	01
		S5-01/D4-2 (30" X 36")		7.50	0004	01
		S5-02/W2-2 (30" X 30")		6.25	0004	01
		S5-03/R1-1 (30" X 30")		6.25	0004	01
		S5-04/SP-2 (48" X 24")		8.00	0004	01
		Item T15.0100 Total:		**197.00**		
146	**T15.1000**	**STREET SIGN ASSEMBLY STD. 24.6.1**	**EACH**			
		TAUNTON AVE				
		101+65 LT - S5-4/D3-1		1.00	0004	01
		101+65 LT - S5-5/D3-1		1.00	0004	01
		96+96 RT - S4-3/D3-1		1.00	0004	01

Distribution of Quantities

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Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
146	**T15.1000 Cont.**	96+96 RT - S4-4/D3-1		1.00	0004	01
		Item T15.1000 Total:		**4.00**		
147	**T20.0704**	**4 INCH WHITE WATERBORNE PAINT PAVEMENT MARKINGS**	**LF**			
		TAUNTON AVE				
		PARK AND RIDE		216.00	0004	01
		Item T20.0704 Total:		**216.00**		
148	**T20.0706**	**6 INCH WHITE WATERBORNE PAINT PAVEMENT MARKINGS**	**LF**			
		TAUNTON AVE				
		80+50 - 81+72 LT		72.00	0004	01
		80+50 - 83+34 LT		71.00	0004	01
		80+50 - 93+75 RT		1,656.25	0004	01
		81+72 - 93+75 LT		1,656.25	0004	01
		93+75 - 102+96.66 LT		1,111.00	0004	01
		93+75 - 102+96.66 RT		231.00	0004	01
		93+75 - 97+20 RT		310.00	0004	01
		97+55 - 102+96.66 RT		542.00	0004	01
		ROUND UP		0.50	0004	01
		Item T20.0706 Total:		**5,650.00**		
149	**T20.0712**	**12 INCH WHITE WATERBORNE PAINT PAVEMENT MARKINGS**	**LF**			
		TAUNTON AVE				
		101+40 LT (STOP LINE)		12.00	0004	01
		101+50 LT (CROSSWALK)		76.00	0004	01
		91+70 LT (STOP LINE)		15.00	0004	01
		93+76 (CROSSWALK)		222.00	0004	01
		94+10 LT (STOP LINE)		20.00	0004	01
		97+50 RT (CROSSWALK)		215.00	0004	01
		97+57 RT (STOP LINE)		17.00	0004	01

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Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
149	**T20.0712 Cont.**	**Item T20.0712 Total:**		**577.00**		
150	**T20.0904**	**4 INCH YELLOW WATERBORNE PAINT PAVEMENT MARKINGS**	**LF**			
		COMMERCIAL WAY				
		200+40 - 200+70 LT		60.00	0004	01
		TAUNTON AVE				
		101+60 - 102+96.66 LT & RT		274.00	0004	01
		80+50 - 81+72 LT & RT		244.00	0004	01
		81+72 - 85+80 LT & RT		1,632.00	0004	01
		85+80 - 93+75 LT & RT		1,590.00	0004	01
		93+75 - 97+17 LT & RT		684.00	0004	01
		97+80 - 100+33 LT & RT		706.00	0004	01
		ROUND UP		210.00	0004	01
		Item T20.0904 Total:		**5,400.00**		
151	**T20.0912**	**12 INCH YELLOW WATERBORNE PAINT PAVEMENT MARKINGS**	**LF**			
		TAUNTON AVE				
		81+72 - 86+75 LT & RT		326.00	0004	01
		Item T20.0912 Total:		**326.00**		
152	**T20.1401**	**WATERBORNE PAINT PAVEMENT MARKING SYMBOL - ARROW (STRAIGHT, LEFT, RIGHT OR COMBINED) STANDARD 20.1.0**	**EACH**			
		TAUNTON AVE				
		80+55		1.00	0004	01
		81+15		1.00	0004	01
		81+70		1.00	0004	01
		Item T20.1401 Total:		**3.00**		
153	**T20.2404**	**4 INCH WHITE FINAL EPOXY RESIN PAVEMENT MARKINGS**	**LF**			

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Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
153	**T20.2404 Cont.**	TAUNTON AVE				
		PARK AND RIDE		216.00	0004	01
		Item T20.2404 Total:		**216.00**		
154	**T20.2406**	**6 INCH WHITE FINAL EPOXY RESIN PAVEMENT MARKINGS**	**LF**			
		TAUNTON AVE				
		80+50 - 81+72 LT		72.00	0004	01
		80+50 - 83+34 LT		71.00	0004	01
		80+50 - 93+75 RT		1,656.25	0004	01
		81+72 - 93+75 LT		1,656.25	0004	01
		93+75 - 102+96.66 LT		1,111.00	0004	01
		93+75 - 102+96.66 RT		231.00	0004	01
		93+75 - 97+20 RT		310.00	0004	01
		97+55 - 102+96.66 RT		542.00	0004	01
		ROUND UP		0.50	0004	01
		Item T20.2406 Total:		**5,650.00**		
155	**T20.2412**	**12 INCH WHITE FINAL EPOXY RESIN PAVEMENT MARKINGS**	**LF**			
		TAUNTON AVE				
		101+40 LT (STOP LINE)		12.00	0004	01
		101+50 LT (CROSSWALK)		76.00	0004	01
		91+70 LT (STOP LINE)		15.00	0004	01
		93+76 (CROSSWALK)		222.00	0004	01
		94+10 LT (STOP LINE)		20.00	0004	01
		97+50 RT (CROSSWALK)		215.00	0004	01
		97+57 RT (STOP LINE)		17.00	0004	01
		Item T20.2412 Total:		**577.00**		
156	**T20.2804**	**4 INCH YELLOW FINAL EPOXY RESIN PAVEMENT MARKINGS**	**LF**			
		COMMERCIAL WAY				

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
156	**T20.2804 Cont.**	200+40 - 200+70 LT		60.00	0004	01
		TAUNTON AVE				
		101+60 - 102+96.66 LT & RT		274.00	0004	01
		80+50 - 81+72 LT & RT		244.00	0004	01
		81+72 - 85+80 LT & RT		1,632.00	0004	01
		85+80 - 93+75 LT & RT		1,590.00	0004	01
		93+75 - 97+17 LT & RT		684.00	0004	01
		97+80 - 100+33 LT & RT		706.00	0004	01
		Item T20.2804 Total:		**5,190.00**		
157	**T20.2812**	**12 INCH YELLOW FINAL EPOXY RESIN PAVEMENT MARKINGS**	**LF**			
		TAUNTON AVE				
		81+72 - 86+75 LT & RT		326.00	0004	01
		Item T20.2812 Total:		**326.00**		
158	**T20.4506**	**REMOVE PAVEMENT MARKING LINE - LESS THAN OR EQUAL TO 6 INCHES WIDE**	**LF**			
		TAUNTON AVE				
		80+50 - 102+96.66		10,110.00	0004	01
		Item T20.4506 Total:		**10,110.00**		
159	**T20.4508**	**REMOVE PAVEMENT MARKING LINE - GREATER THAN 6 INCHES WIDE**	**LF**			
		TAUNTON AVE				
		101+40 LT		12.00	0004	01
		91+70 LT		15.00	0004	01
		94+10 LT		20.00	0004	01
		97+50 RT		184.00	0004	01
		97+57 RT		17.00	0004	01
		Item T20.4508 Total:		**248.00**		

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
160	**202.9911**	**HANDLING AND STOCKPILING CONTAMINATED SOILS**	**CY**			
		BIORETENTION BASIN				
		BIORETENTION BASIN		1,113.00	0004	01
		RELIEF SWALE				
		20+75 - 25+00		141.88	0004	01
		TAUNTON AVE				
		96+00 - 98+75		105.12	0004	01
		Item 202.9911 Total:		**1,360.00**		
161	**701.8100**	**FURNISH AND INSTALL DUCTILE IRON FITTINGS**	**LBS**			
		TAUNTON AVE				
		96+86 - 96+96 RT		500.00	0004	01
		Item 701.8100 Total:		**500.00**		
162	**906.0111**	**GRANITE CURB, QUARRY SPLIT CIRCULAR, STANDARD 7.3.0**	**LF**			
		TAUNTON AVE (GRANC)				
		101+27 - 101+32 LT (GRANC)		5.50	0004	01
		101+63 - 101+69 LT (GRANC)		6.00	0004	01
		200+44 - 200+49 RT (GRANC)		4.00	0004	01
		200+55 - 200+57 RT (GRANC)		3.00	0004	01
		91+49 - 91+57 LT (GRANC)		8.50	0004	01
		92+02 - 92+07 LT (GRANC)		5.50	0004	01
		96+90 - 96+99 RT (GRANC)		9.50	0004	01
		97+00 - 97+05 RT (GRANC)		4.00	0004	01
		97+82 - 97+90 RT (GRANC)		6.00	0004	01
		97+96 - 97+99 RT (GRANC)		3.00	0004	01
		Item 906.0111 Total:		**55.00**		
163	**906.0116**	**GRANITE CURB, QUARRY SPLIT 2 FOOT CORNERS, STANDARD 7.3.4**	**EACH**			

Distribution of Quantities

Project Name - Rt 44 - Taunton Ave (Rt 1A/114 - Mass S/L)
Estimate Name - Addendum 2
R.I. Contract No. - 2019-CH-032
FAP Nos: STP-RESF(406)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
163	**906.0116 Cont.**	TAUNTON AVE (2GRCC)				
		200+40 LT (2GRCC)		1.00	0004	01
		97+10 RT (2GRCC)		1.00	0004	01
		97+79 RT (2GRCC)		1.00	0004	01
		Item 906.0116 Total:		**3.00**		
164	**906.0120**	**GRANITE WHEELCHAIR RAMP CURB**	**EACH**			
		STANDARDS 7.3.3, 43.3.0 AND 43.3.1				
		TAUNTON AVE				
		101+23 - 101+27 RT		1.00	0004	01
		101+69 - 101+72 RT		1.00	0004	01
		91+39 - 91+45 RT		1.00	0004	01
		92+07 - 92+10 RT		1.00	0004	01
		93+71 - 93+75 LT		1.00	0004	01
		93+71 -93+75 RT		1.00	0004	01
		97+00 - 97+03 RT		1.00	0004	01
		97+90 - 97+96 RT		1.00	0004	01
		Item 906.0120 Total:		**8.00**		
165	**T09.9901**	**SERVICE PEDESTAL AND LIGHTING**	**LS**			
		SYSTEM MODIFICATIONS				
		TAUNTON AVE				
		PARK AND RIDE		1.00	0004	01
		Item T09.9901 Total:		**1.00**		