

CITY HALL PONDS MAINTENANCE DREDGING PROJECT

NEWTON CENTRE, MASSACHUSETTS

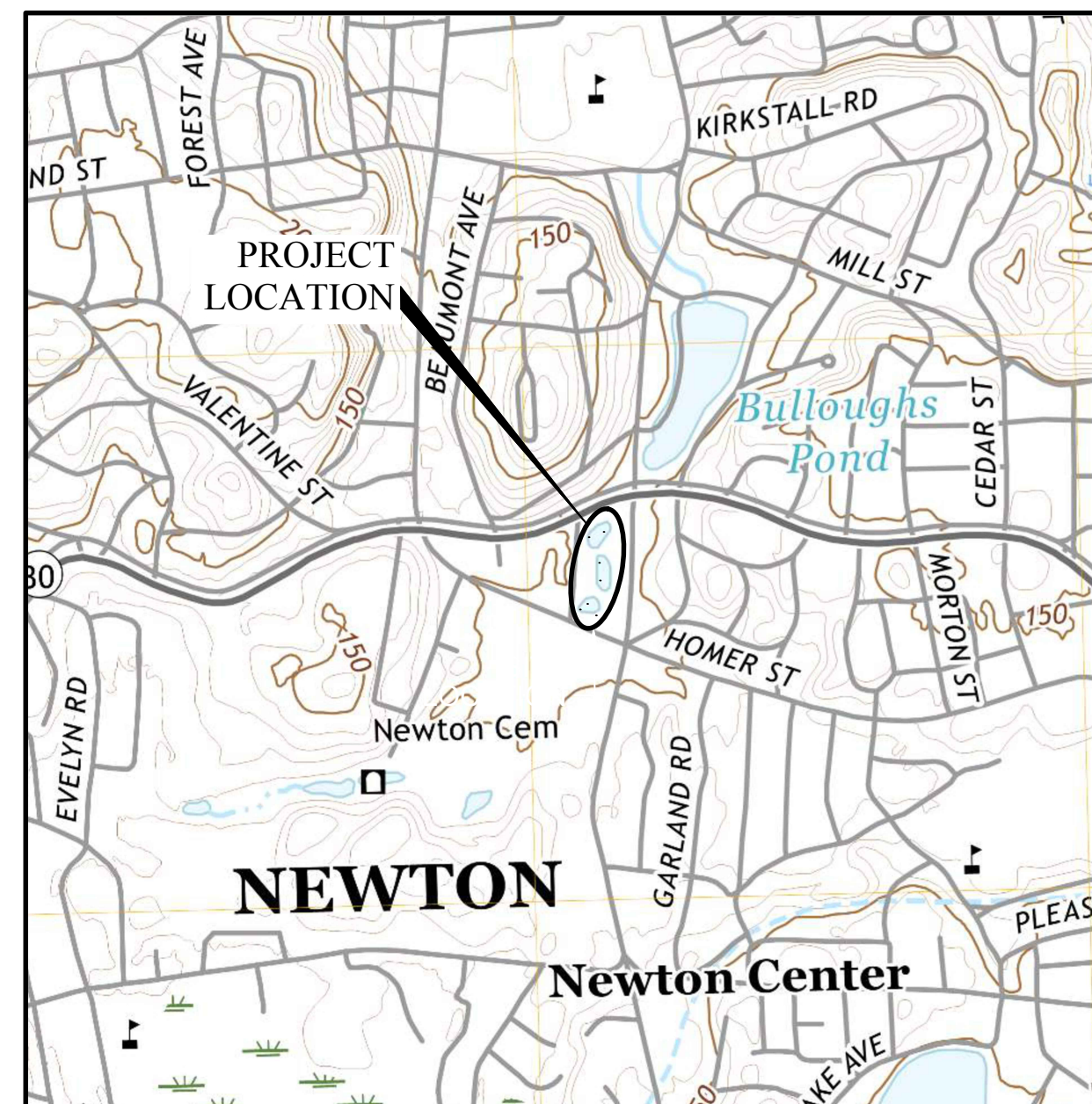
September, 2020

Revised March, 2021

ISSUED FOR BIDDING OCTOBER 13, 2022

DRAWING LIST:

- COVER SHEET
- C-1 EXISTING CONDITIONS
- C-2 EXISTING POND BOTTOM CONTOURS AND SEDIMENT SAMPLING LOCATIONS
- C-3 ESTIMATED BOTTOM OF SEDIMENT CONTOURS
- C-4 REPRESENTATIVE POND CROSS SECTIONS
- C-5 POND PROFILES
- C-6 EROSION AND SEDIMENT CONTROL & CONTROL OF WATER PLAN
- C-7 POND RESTORATION
- C-8 CULVERT CLEANING PLAN AND DETAILS
- S-1 EXISTING BRIDGE ABUTMENT CONDITIONS
- S-2 EXISTING ARCH BRIDGE ELEVATION AND SECTION
- S-3 BRIDGE ABUTMENT REPAIR DETAILS
- S-4 ARCH BRIDGE ABUTMENT/FOOTING REPAIR ELEVATION



N
 LOCUS PLAN
 CITY HALL PONDS
 NEWTON, MASSACHUSETTS
 U.S.G.S. Newton Quad
 1" = 1000'

CITY OF NEWTON
DEPARTMENT OF PUBLIC WORKS

RUTHANNE FULLER, MAYOR

JAMES MCGONAGLE, COMMISSIONER OF PUBLIC WORKS



PREPARED FOR:

City of Newton Dept. of Public Works
 1000 Commonwealth Avenue
 Newton Centre, MA 02459

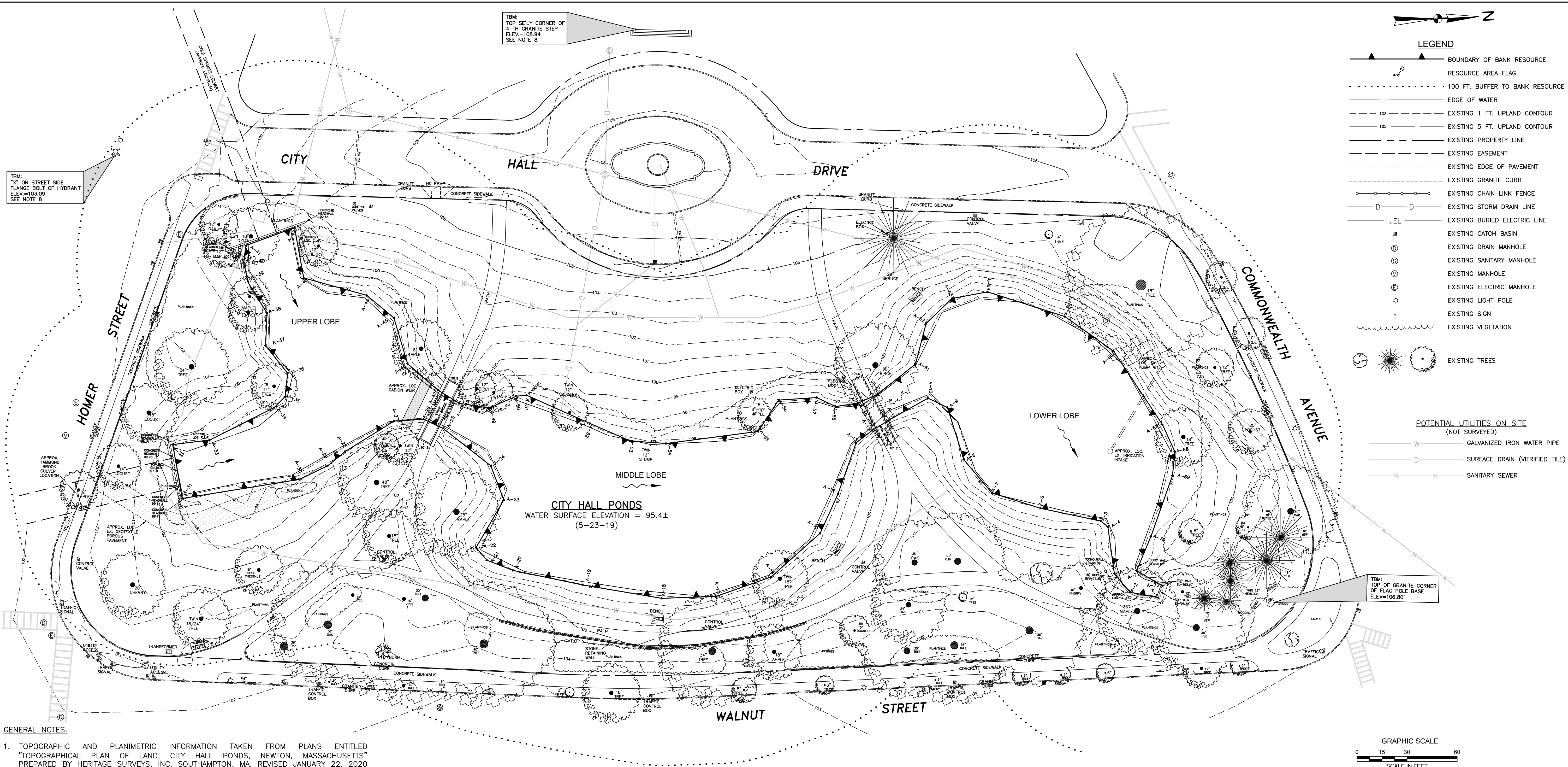
DESIGNER:

**GZA GeoEnvironmental, Inc.
 Engineers and Scientists**

ONE FINANCIAL PLAZA
 1350 Main Street, Suite 1400
 Springfield, MA 01103
 413-726-2100



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TBM: *X ON STREET SIDE FLANGE BOLT OF HYDRANT ELEV.=103.09 SEE NOTE 8

TBM: TOP SE'LY CORNER OF 4 TH GRANITE STEP ELEV.=108.94 SEE NOTE 6

LEGEND	
	BOUNDARY OF BANK RESOURCE
	RESOURCE AREA FLAG
	100 FT. BUFFER TO BANK RESOURCE
	EDGE OF WATER
	EXISTING 1 FT. UPLAND CONTOUR
	EXISTING 5 FT. UPLAND CONTOUR
	EXISTING PROPERTY LINE
	EXISTING EASEMENT
	EXISTING EDGE OF PAVEMENT
	EXISTING GRANITE CURB
	EXISTING CHAIN LINK FENCE
	EXISTING STORM DRAIN LINE
	EXISTING BURIED ELECTRIC LINE
	EXISTING CATCH BASIN
	EXISTING DRAIN MANHOLE
	EXISTING SANITARY MANHOLE
	EXISTING MANHOLE
	EXISTING ELECTRIC MANHOLE
	EXISTING LIGHT POLE
	EXISTING SIGN
	EXISTING VEGETATION
	EXISTING TREES

POTENTIAL UTILITIES ON SITE (NOT SURVEYED)	
	GALVANIZED IRON WATER PIPE
	SURFACE DRAIN (VITRIFIED TILE)
	SANITARY SEWER

TBM: TOP OF GRANITE CORNER OF FLAG POLE BASE ELEV.=106.80'

- GENERAL NOTES:**
1. TOPOGRAPHIC AND PLANIMETRIC INFORMATION TAKEN FROM PLANS ENTITLED "TOPOGRAPHICAL PLAN OF LAND, CITY HALL PONDS, NEWTON, MASSACHUSETTS" PREPARED BY HERITAGE SURVEYS, INC. SOUTHAMPTON, MA, REVISED JANUARY 22, 2020 (2 SHEETS).
 2. BENCHMARK FOR SITE IS TOP OF GRANITE CORNER OF FLAG POLE BASE, AS SHOWN ON PLAN.
 3. BATHYMETRIC SURVEY OF POND BOTTOM COMPLETED BY GZA GEOENVIRONMENTAL, INC. (GZA) MAY 2019. PROBINGS USED TO ESTIMATE DEPTH TO BOTTOM OF SEDIMENT FROM SURVEY COMPLETED DECEMBER 2010 BY GZA.
 4. WETLAND RESOURCE DELINEATION CONDUCTED BY GZA ON DECEMBER 10, 2019.
 5. ESTIMATED IRRIGATION INTAKE PUMP PIT, GABION, CULVERT AND GEOGRID LOCATIONS TAKEN FROM "PLANS FOR THE RESTORATION OF LAUNDRY BROOK DRAINAGE SYSTEM INCLUDING BULLOUGH'S POND AND CITY HALL PONDS AND COLD SPRING & HAMMOND BROOK CULVERTS" BY BEC, INC. DATED JANUARY 1992 (AVAILABLE UPON REQUEST).
 6. POTENTIAL SEWER, STORM AND IRRIGATION SYSTEM LOCATIONS (NOT VERIFIED) TAKEN FROM PLAN ENTITLED "CITY OF NEWTON, MASSACHUSETTS", DATED OCTOBER 14, 1932, BY OLMSTED BROTHERS LANDSCAPE ARCHITECTS, BROOKLINE, MA (AVAILABLE UPON REQUEST).
 7. SITE LOCATION: 1000 COMMONWEALTH AVE. MBL#: 64001 001.
 8. THE CITY SURVEYOR HAS INDICATED THAT TBM ELEVATION OF 106.80 IS EQUIVALENT TO ELEVATION 106.66 ON NEWTON CITY BASE.
 9. HORIZONTAL DATUM IS NAD83 MASSACHUSETTS STATE PLANE MASS MAINLAND COORDINATE SYSTEM.

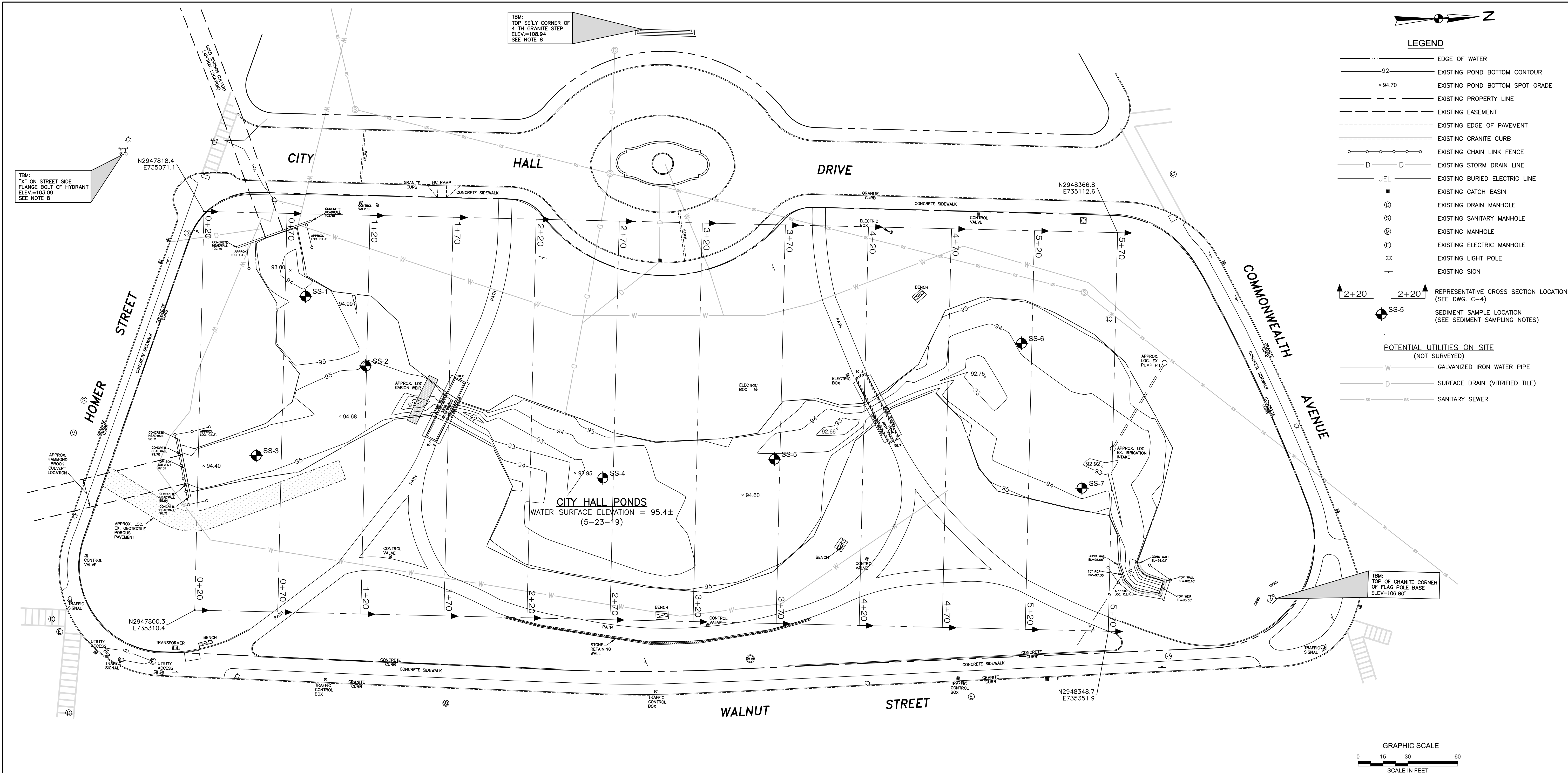
NO.	ISSUE/DESCRIPTION	BY	DATE
3	ISSUED FOR BIDDING	JRB	10/13/22
2	ISSUED FOR WOC APPLICATION	JRB	3/23/21
1	MISC. NOTE CHANGES - REISSUED FOR NOI PERMITTING	JRB	11/17/20
0	ISSUED FOR PERMITTING	JRB	9/11/20

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**CITY HALL PONDS MAINTENANCE DREDGING PROJECT
NEWTON CENTRE, MASSACHUSETTS**

EXISTING CONDITIONS			
PREPARED BY:	GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com	PREPARED FOR:	CITY OF NEWTON DEPARTMENT OF PUBLIC WORKS 1000 COMMONWEALTH AVENUE NEWTON CENTRE, MA 02459
PROJ MGR:	JRB	REVIEWED BY:	TEJ
DESIGNED BY:	JRB	DRAWN BY:	EDM
DATE:	SEPTEMBER, 2020	PROJECT NO.:	15.0166758.00
		CHECKED BY:	SLL
		SCALE:	1"=30'
		REVISION NO.:	3
		DRAWING	C-1

© 2022 - GZA GeoEnvironmental, Inc. GZA--\A.0.166758.00 CITY HALL PONDS DREDGING-NEWTOWN, MA\15.0166758.00 CAD\DWG\758.00-CZA-BASE.DWG POND BOTTOM OCTOBER 12, 2022 11:30AM EDWARD MULLIN



LEGEND

- EDGE OF WATER
 - 92- EXISTING POND BOTTOM CONTOUR
 - × 94.70 EXISTING POND BOTTOM SPOT GRADE
 - EXISTING PROPERTY LINE
 - EXISTING EASEMENT
 - EXISTING EDGE OF PAVEMENT
 - EXISTING GRANITE CURB
 - EXISTING CHAIN LINK FENCE
 - EXISTING STORM DRAIN LINE
 - UEL EXISTING BURIED ELECTRIC LINE
 - EXISTING CATCH BASIN
 - EXISTING DRAIN MANHOLE
 - ⊙ EXISTING SANITARY MANHOLE
 - ⊙ EXISTING MANHOLE
 - ⊙ EXISTING ELECTRIC MANHOLE
 - ⊙ EXISTING LIGHT POLE
 - ⊙ EXISTING SIGN
 - ↑ 2+20 2+20 REPRESENTATIVE CROSS SECTION LOCATION (SEE DWG. C-4)
 - ⊙ SS-5 SEDIMENT SAMPLE LOCATION (SEE SEDIMENT SAMPLING NOTES)
- POTENTIAL UTILITIES ON SITE (NOT SURVEYED)**
- W GALVANIZED IRON WATER PIPE
 - D SURFACE DRAIN (VITRIFIED TILE)
 - SS SANITARY SEWER

TBM:
TOP OF STREET SIDE
FLANGE BOLT OF HYDRANT
ELEV.=103.09
SEE NOTE 8

TBM:
TOP SE'LY CORNER OF
4 TH GRANITE STEP
ELEV.=108.94
SEE NOTE 6

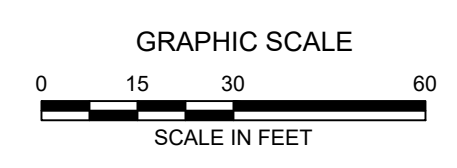
TBM:
TOP OF GRANITE CORNER
OF FLAG POLE BASE
ELEV.=106.80'

SEDIMENT SAMPLING NOTES:

1. SEDIMENT SAMPLES SS-1 THROUGH SS-7 COLLECTED BY GZA GEOENVIRONMENTAL, INC. ON NOVEMBER 15, 2019.
2. SEDIMENT SAMPLES SS-4 AND SS-5 WERE COMPOSITED INTO SAMPLE SS-4/5. SEDIMENT SAMPLES SS-6 AND SS-7 WERE COMPOSITED INTO SAMPLE SS-6/7.

GENERAL NOTES:

1. POND BOTTOM CONTOURS BASED ON TOP OF SEDIMENT DURING 2019 BATHYMETRY SURVEY.
2. ADDITIONAL SEDIMENT INFILL MAY HAVE OCCURRED SINCE 2019.



2	ISSUED FOR BIDDING	JRB	10/13/22
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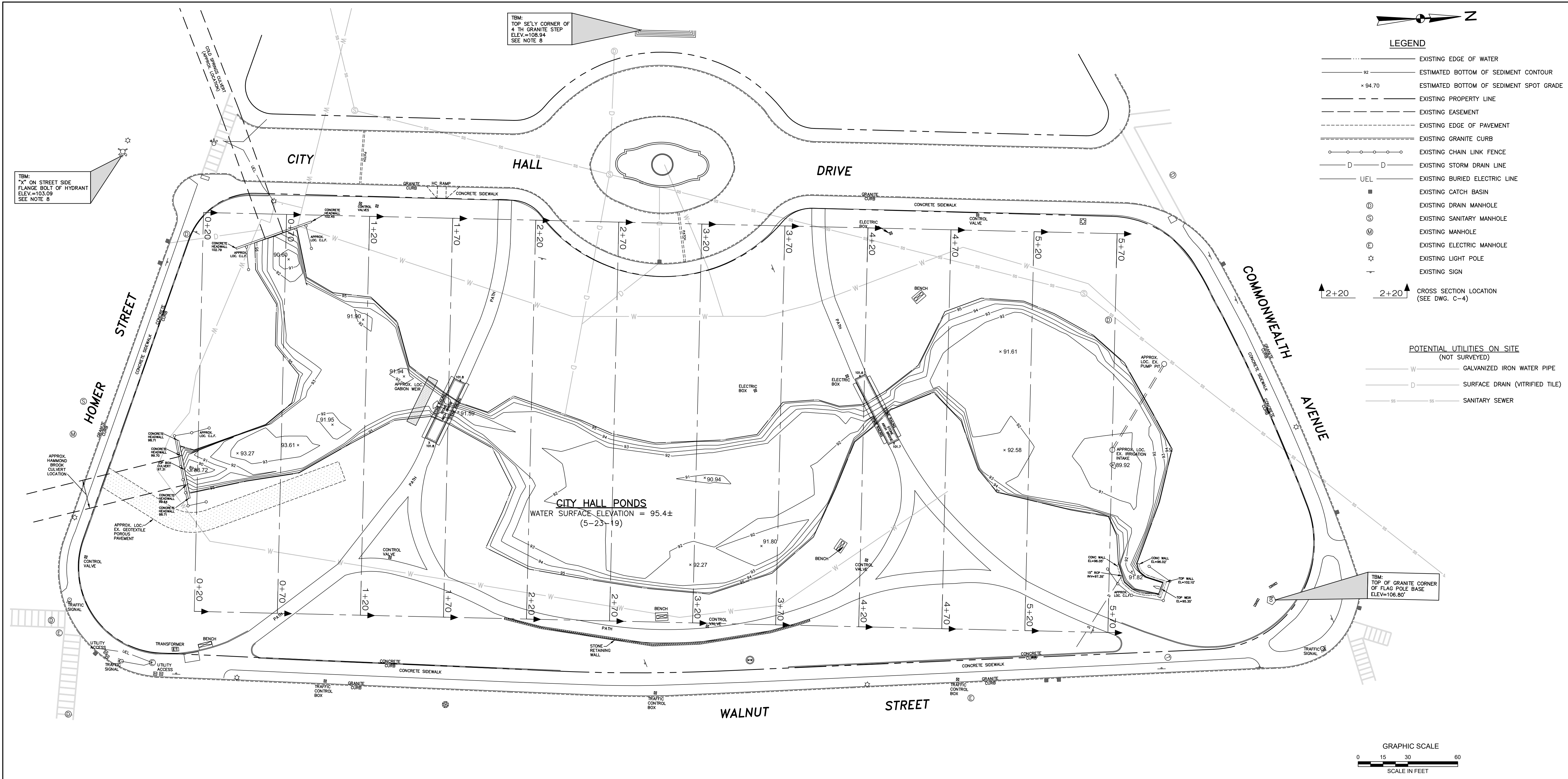
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**CITY HALL PONDS MAINTENANCE DREDGING PROJECT
NEWTON CENTRE, MASSACHUSETTS**

**EXISTING POND BOTTOM CONTOURS
AND SEDIMENT SAMPLING LOCATIONS**

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com	PREPARED FOR: CITY OF NEWTON DEPARTMENT OF PUBLIC WORKS 1000 COMMONWEALTH AVENUE NEWTON CENTRE, MA 02459			
PROJ MGR: JRB	DESIGNED BY: JRB	REVIEWED BY: TEJ	CHECKED BY: SLL	DRAWING C-2
DATE: SEPTEMBER, 2020	PROJECT NO. 15.0166758.00	SCALE: 1"=30'	REVISION NO. 2	

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2	ISSUED FOR BIDDING	JRB	10/13/22
1	ISSUED FOR WQC APPLICATION	JRB	3/23/21
0	ISSUED FOR PERMITTING	JRB	9/11/20
NO.	ISSUE/DESCRIPTION	BY	DATE

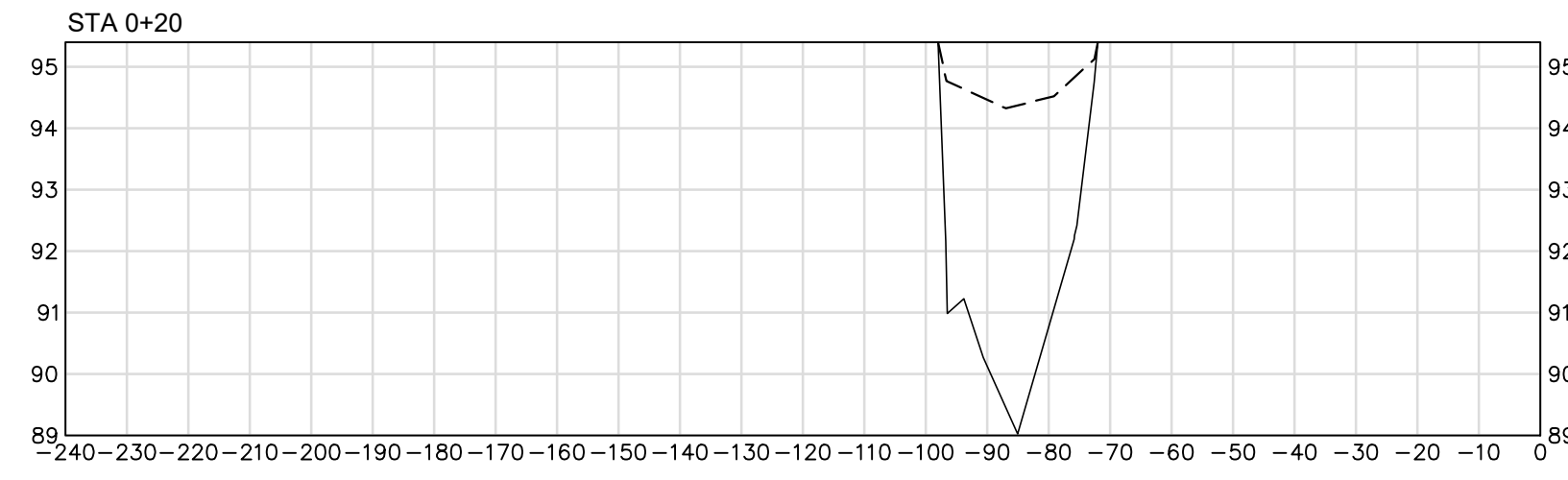
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NEWTON CENTRE, MASSACHUSETTS**

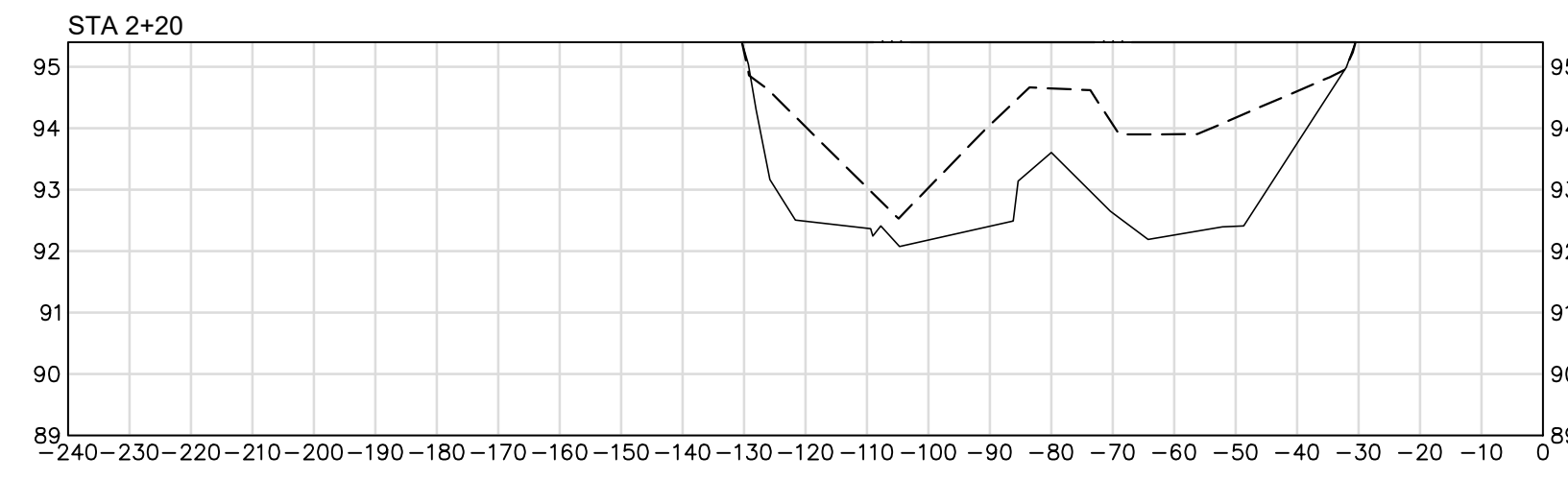
ESTIMATED BOTTOM OF SEDIMENT CONTOURS

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com	PREPARED FOR: CITY OF NEWTON DEPARTMENT OF PUBLIC WORKS 1000 COMMONWEALTH AVENUE NEWTON CENTRE, MA 02459
PROJ MGR: JRB DESIGNED BY: JRB DATE: SEPTEMBER, 2020	REVIEWED BY: TEJ DRAWN BY: EDM PROJECT NO. 15.0166758.00
CHECKED BY: SLL SCALE: 1"=30' REVISION NO. 2	DRAWING C-3

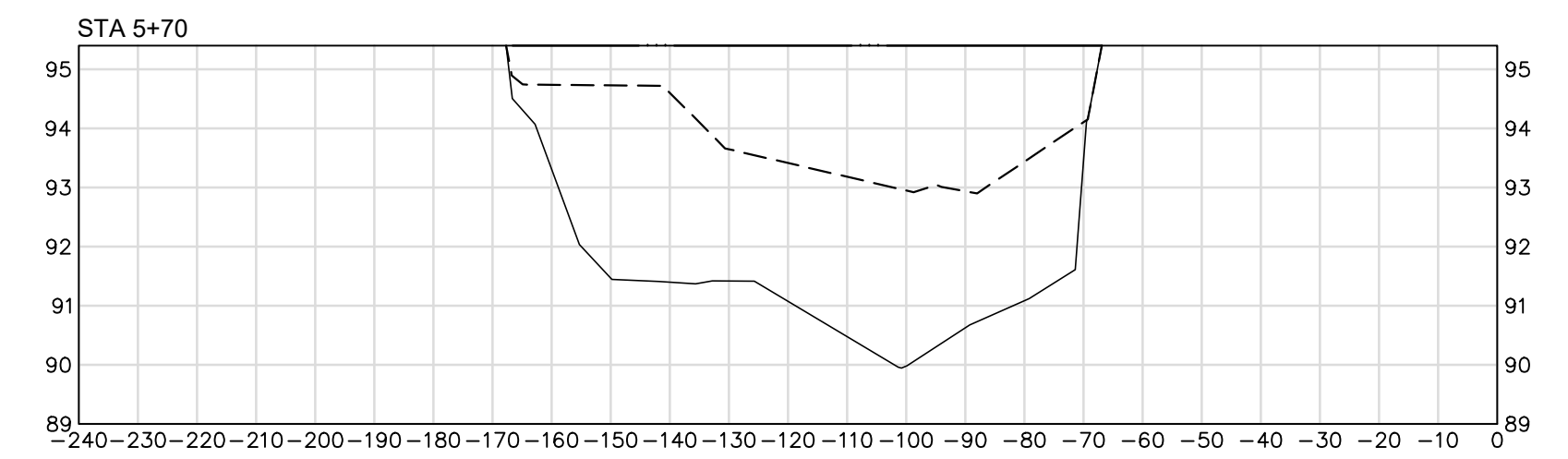
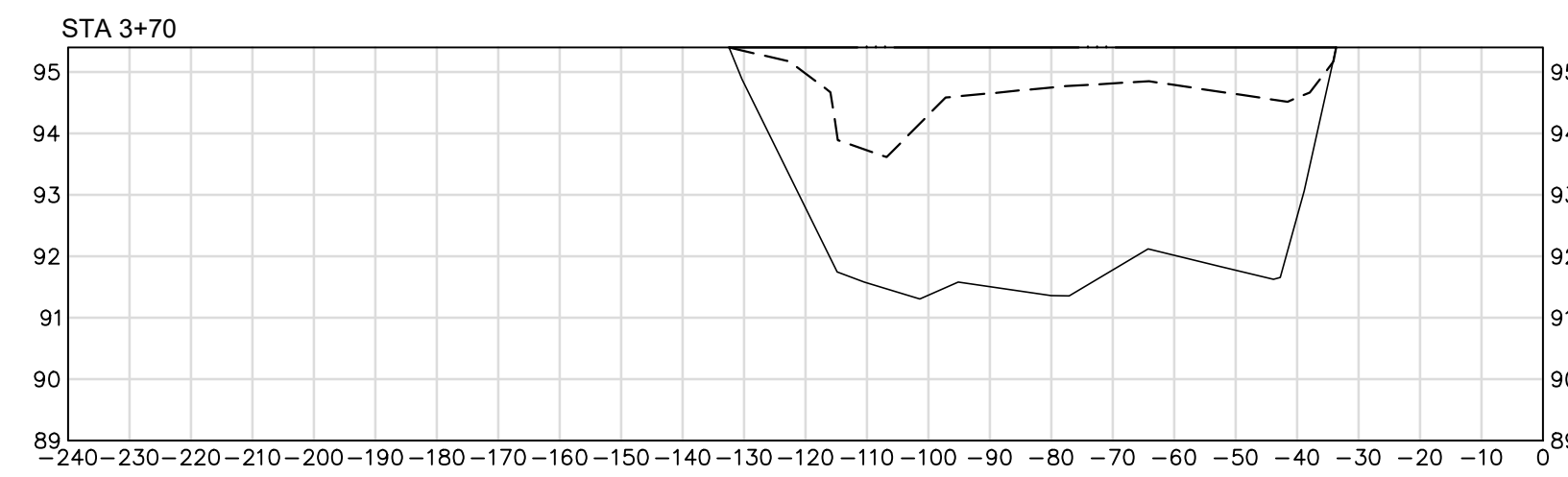
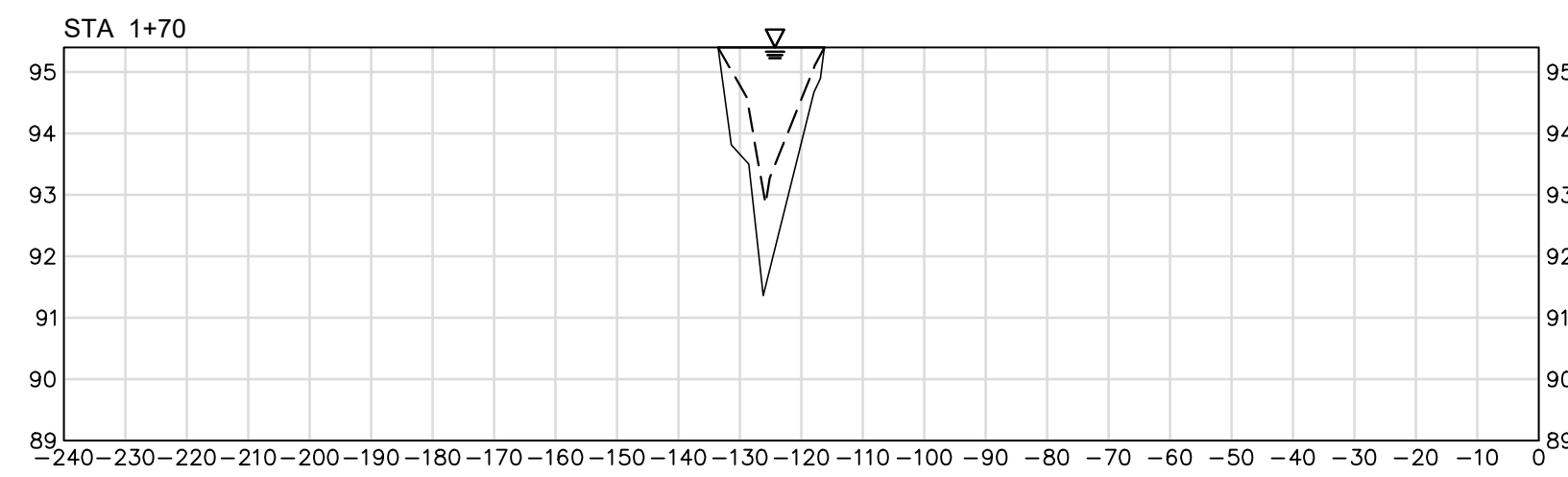
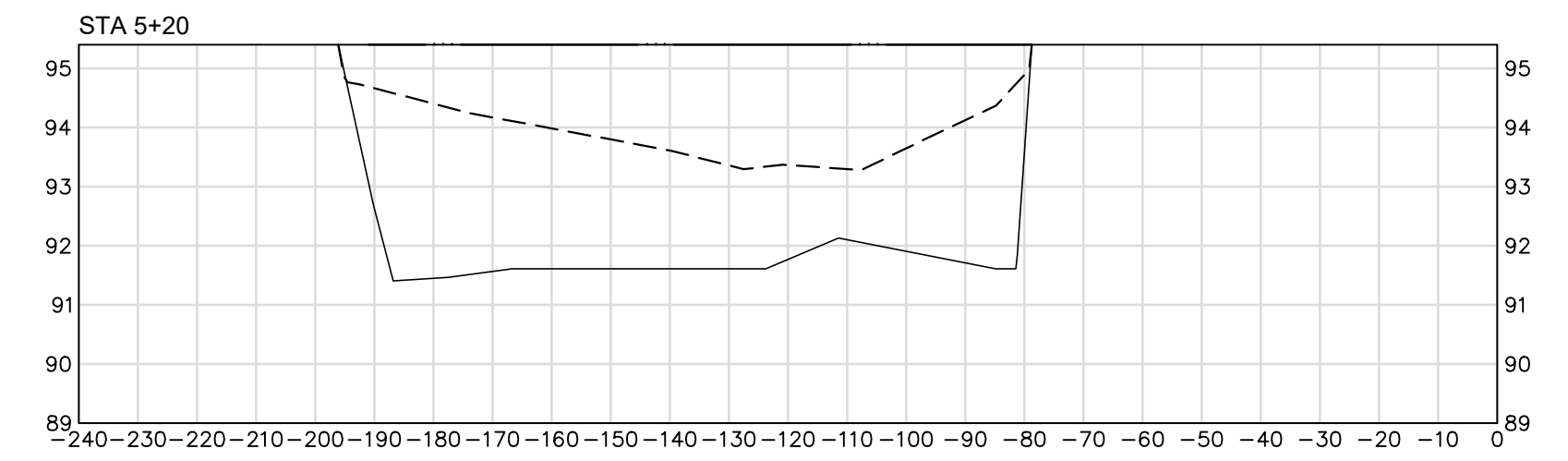
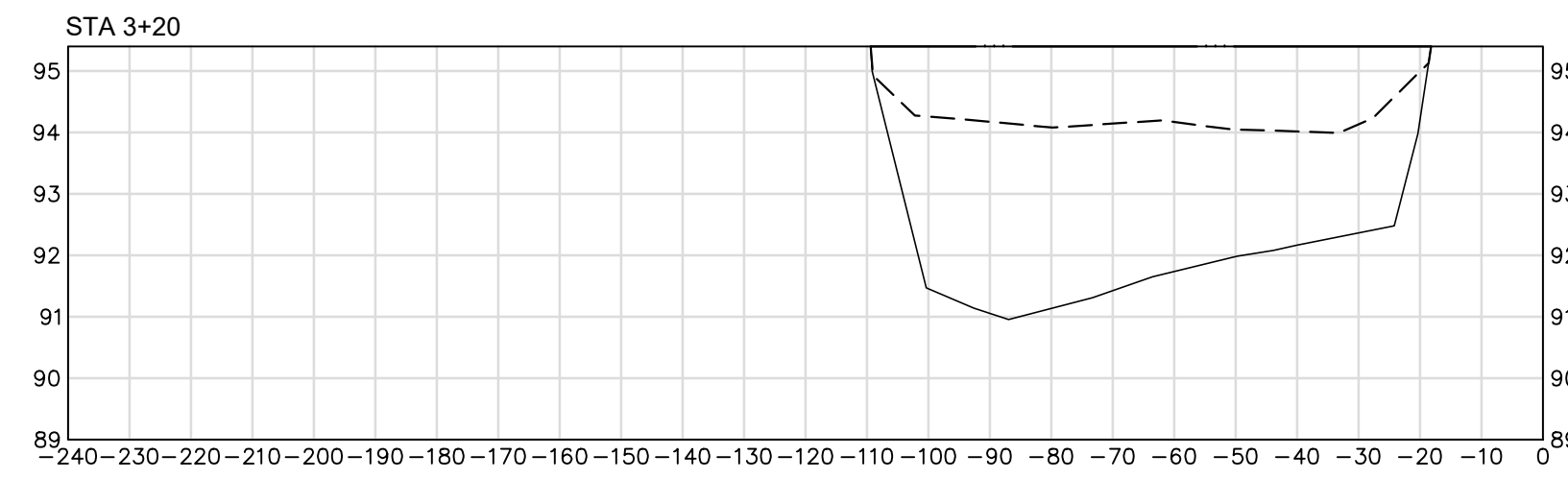
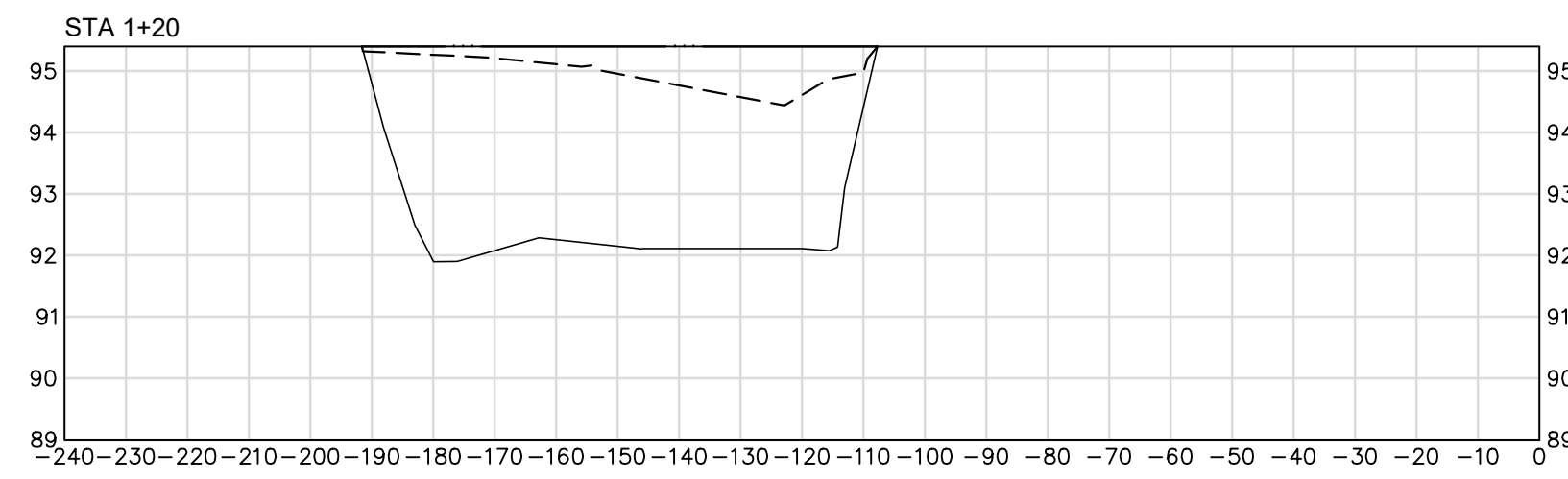
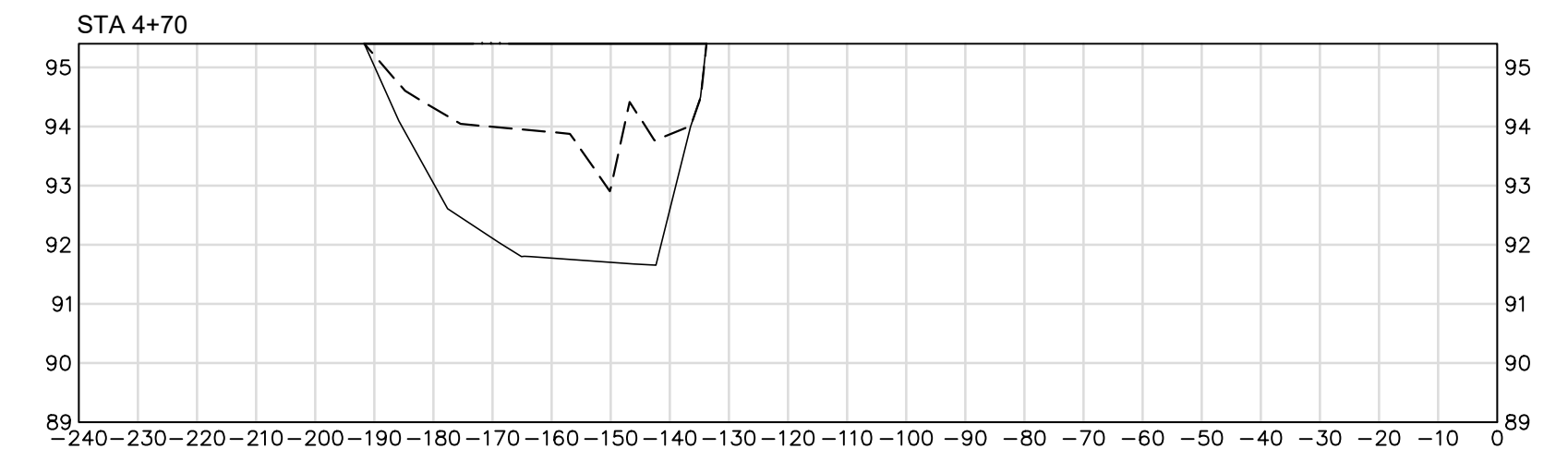
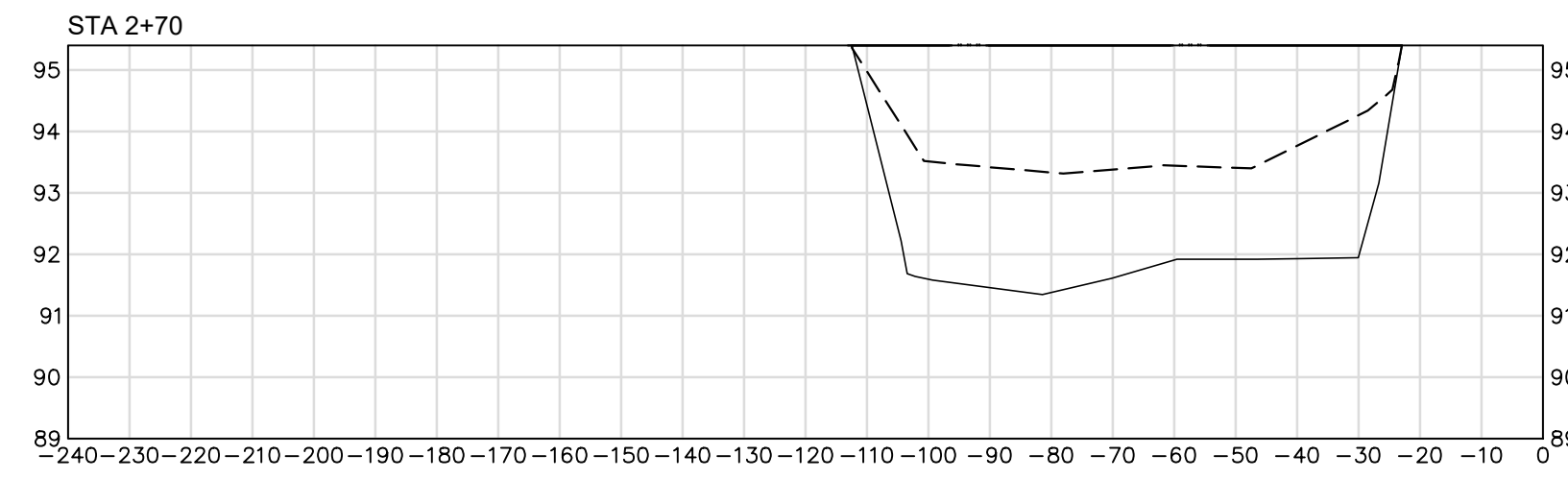
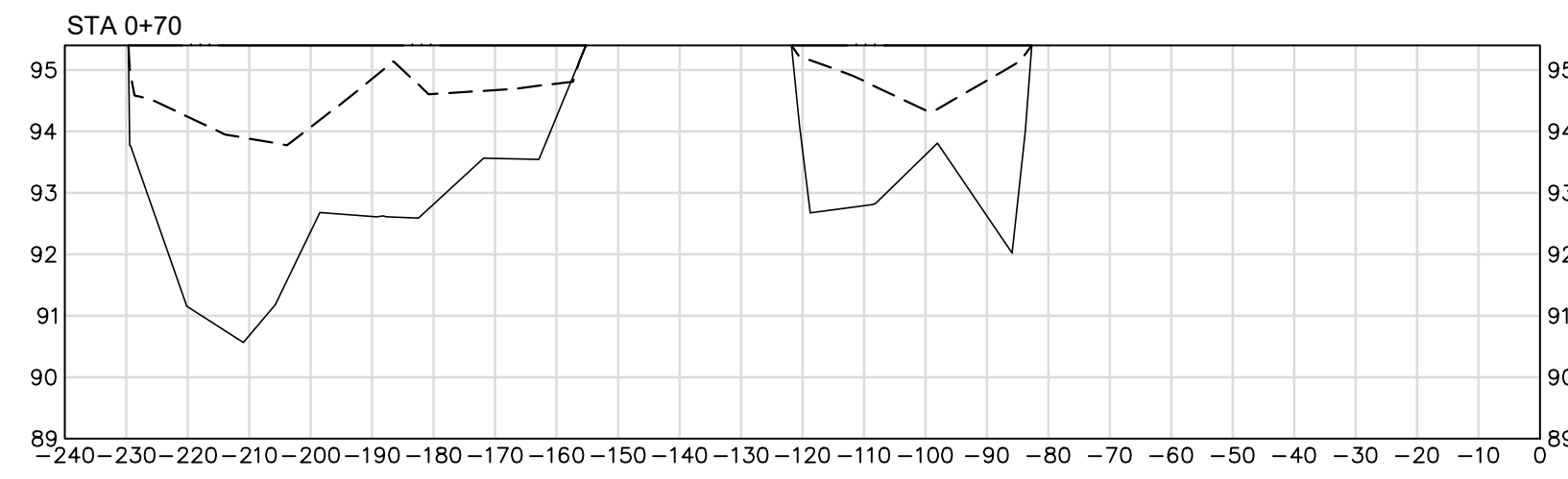
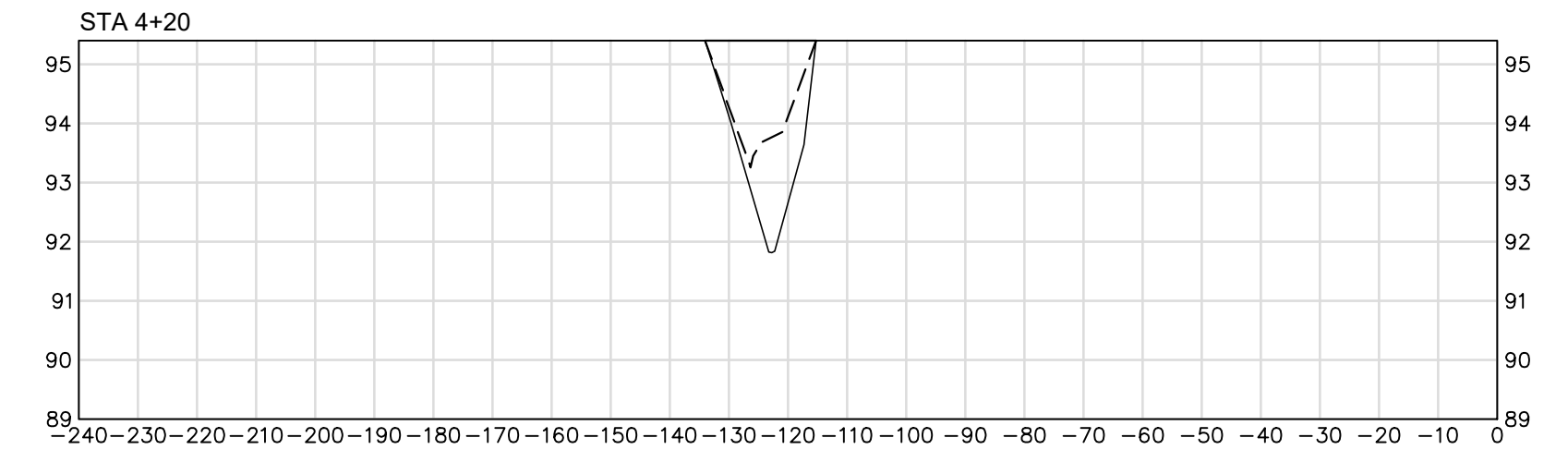
UPPER LOBE



MIDDLE LOBE



LOWER LOBE



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APPROXIMATE SEDIMENT VOLUMES: 800 CY

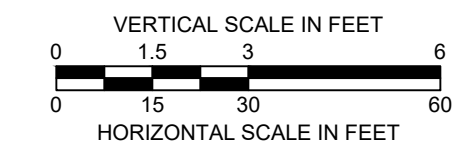
1,370 CY

1,100 CY

APPROXIMATE TOTAL SEDIMENT VOLUME: 3,600 CY
(INCLUDING 330 CY IN INLET CULVERTS)

LEGEND

- W.S.E.=95.4± WATER SURFACE ELEVATION (5/23/19)
- EXISTING POND BOTTOM (5/2019)
- PROPOSED/ORIGINAL POND BOTTOM (12/2010)



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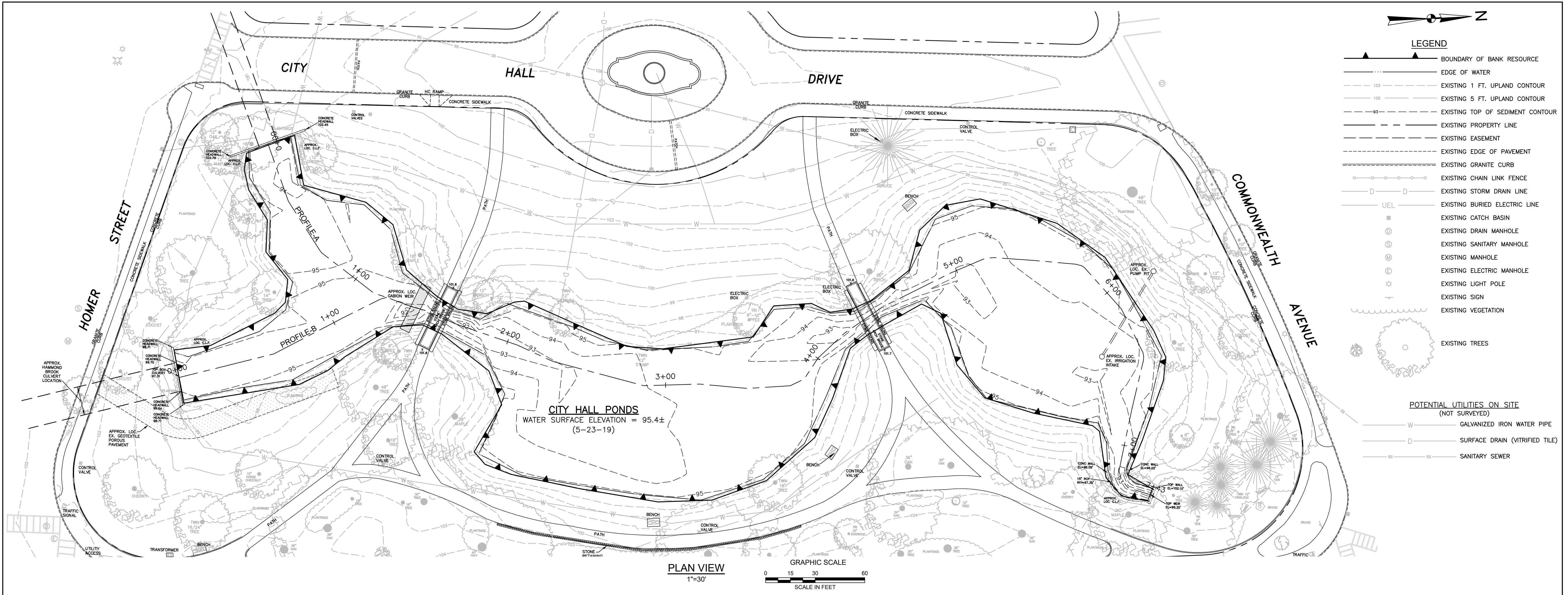
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**CITY HALL PONDS MAINTENANCE DREDGING PROJECT
NEWTON CENTRE, MASSACHUSETTS**

REPRESENTATIVE POND CROSS SECTIONS

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PROJ MGR: JRB	REVIEWED BY: TEJ	CHECKED BY: SLL	DRAWING C-4
DESIGNED BY: JRB	DRAWN BY: EDM	SCALE: 1"=30'	
DATE: SEPTEMBER, 2020	PROJECT NO. 15.0166758.00	REVISION NO. 2	

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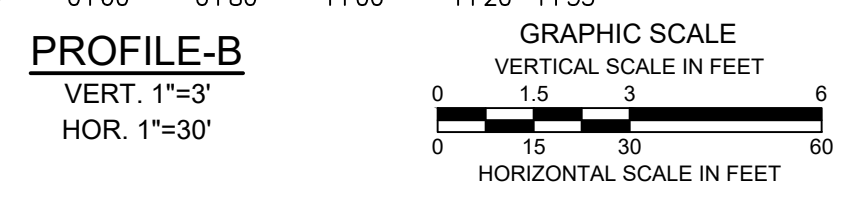
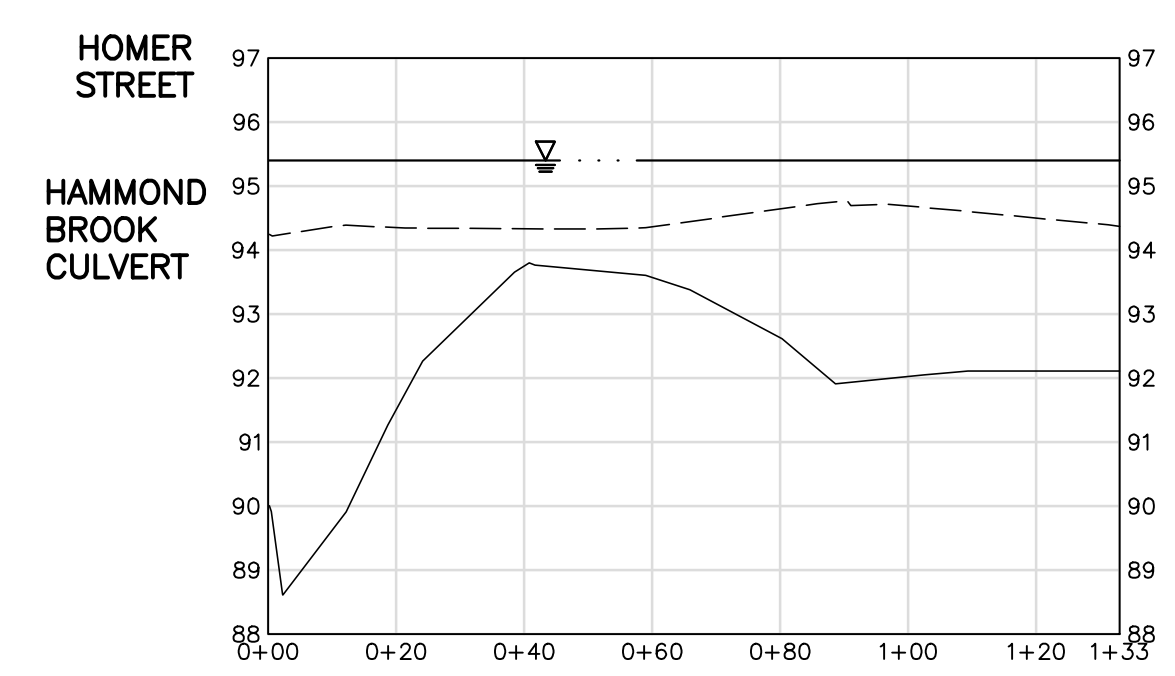
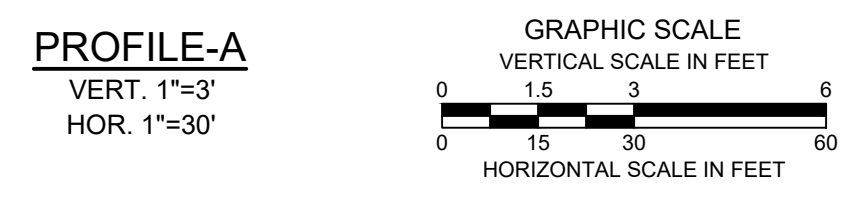
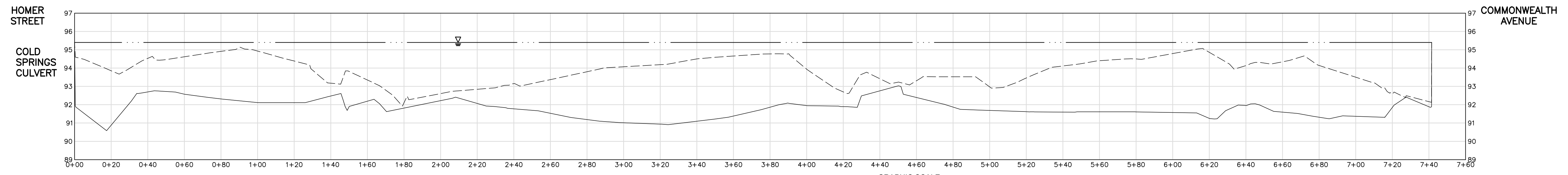


LEGEND

- BOUNDARY OF BANK RESOURCE
- EDGE OF WATER
- EXISTING 1 FT. UPLAND CONTOUR
- EXISTING 5 FT. UPLAND CONTOUR
- EXISTING TOP OF SEDIMENT CONTOUR
- EXISTING PROPERTY LINE
- EXISTING EASEMENT
- EXISTING EDGE OF PAVEMENT
- EXISTING GRANITE CURB
- EXISTING CHAIN LINK FENCE
- EXISTING STORM DRAIN LINE
- UEL
- EXISTING BURIED ELECTRIC LINE
- EXISTING CATCH BASIN
- EXISTING DRAIN MANHOLE
- EXISTING SANITARY MANHOLE
- EXISTING MANHOLE
- EXISTING ELECTRIC MANHOLE
- EXISTING LIGHT POLE
- EXISTING SIGN
- EXISTING VEGETATION
- EXISTING TREES

POTENTIAL UTILITIES ON SITE (NOT SURVEYED)

- GALVANIZED IRON WATER PIPE
- SURFACE DRAIN (VITRIFIED TILE)
- SANITARY SEWER



LEGEND

- W.S.E.=95.4± (5-23-19) WATER SURFACE ELEVATION
- TOP OF SEDIMENT
- BOTTOM OF SEDIMENT

NOTE:

- BATHYMETRIC SURVEY OF POND BOTTOM COMPLETED BY GZA GEOENVIRONMENTAL, INC. (GZA) MAY 2019. PROBINGS USED TO ESTIMATE DEPTH TO BOTTOM OF SEDIMENT FROM SURVEY COMPLETED DECEMBER 2010 BY GZA.

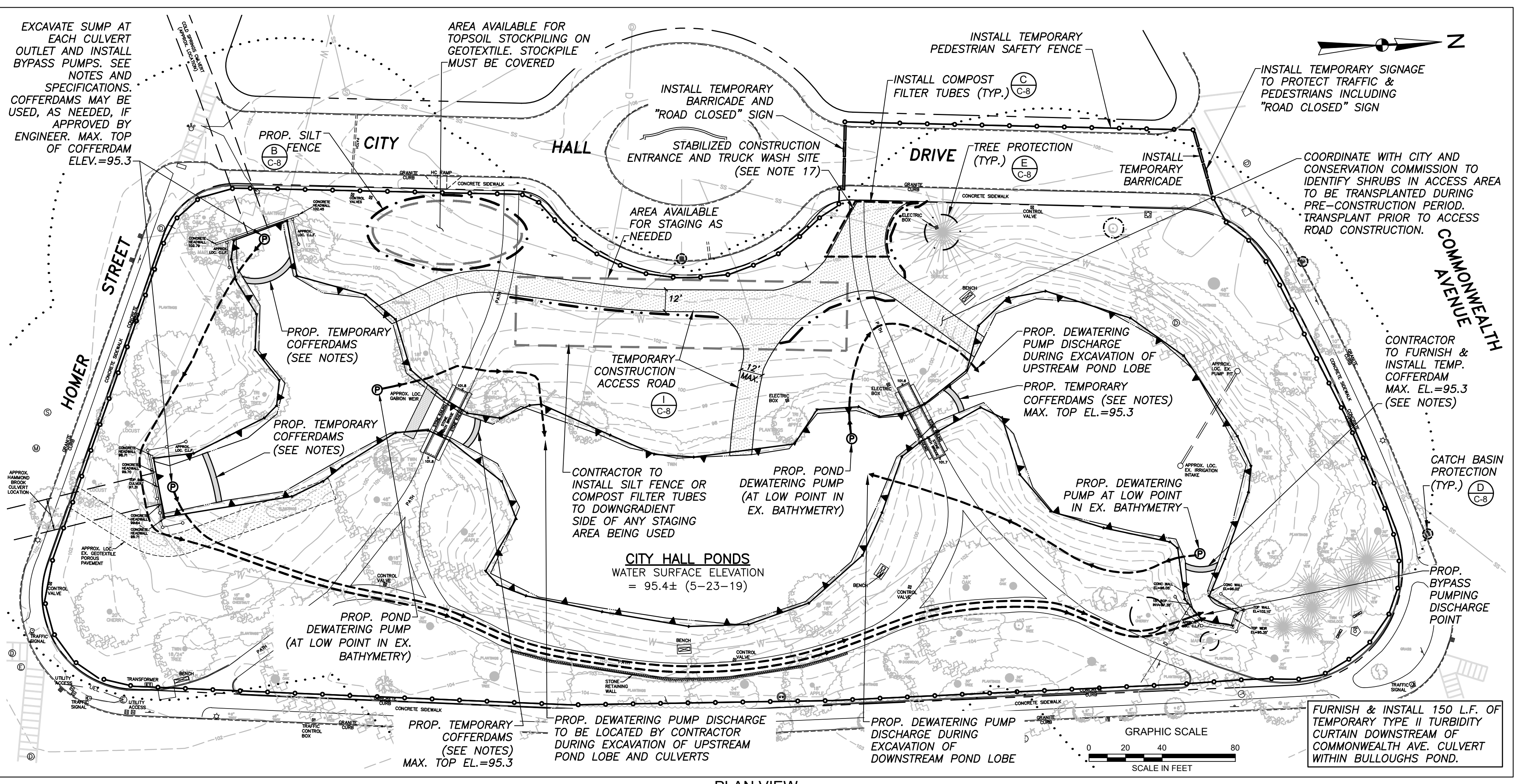
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NEWTOWN CENTRE, MASSACHUSETTS**

POND PROFILES

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com	PREPARED FOR: CITY OF NEWTON DEPARTMENT OF PUBLIC WORKS 1000 COMMONWEALTH AVENUE NEWTOWN CENTRE, MA 02459
PROJ MGR: JRB DESIGNED BY: JRB DATE: SEPTEMBER, 2020	REVIEWED BY: TEJ DRAWN BY: EDM PROJECT NO. 15.0166758.00
CHECKED BY: SLL SCALE: 1"=30' REVISION NO. 2	DRAWING C-5



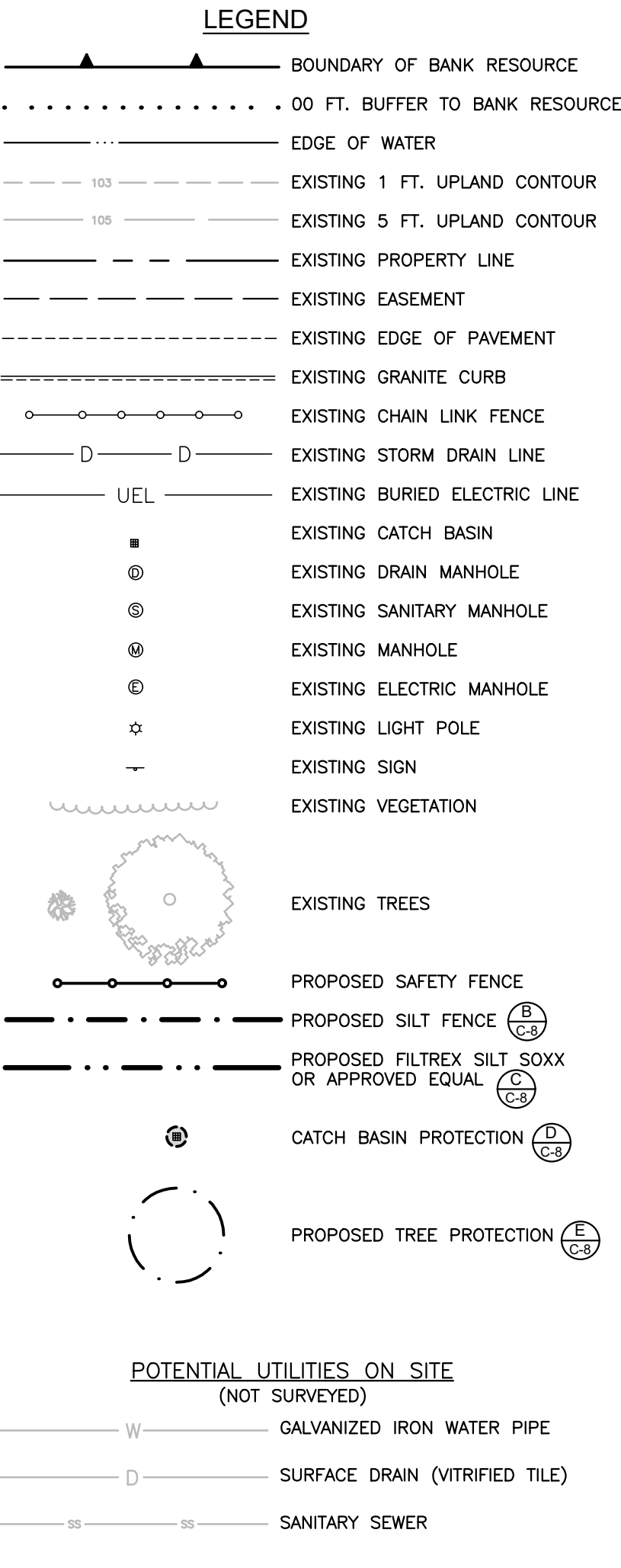
PLAN VIEW
1"=40'

SEDIMENT AND EROSION CONTROL NOTES:

- 1. SEDIMENT BASINS AND TRAPS, PERIMETER BERMS, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT (TURBIDITY CURTAIN) SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE.
- 2. THE CONTRACTOR SHALL CONSTRUCT ALL EROSION AND SEDIMENT CONTROL MEASURES PER THE SEDIMENT AND EROSION CONTROL PLAN PRIOR TO BEGINNING ANY OTHER LAND DISTURBANCES...
- 3. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE CONTRACTOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES (BMPs) TO ELIMINATE THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION...
- 4. ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH APPLICABLE PUBLISHED STANDARDS AND SPECIFICATIONS AND THE "MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS: A GUIDE FOR PLANNERS, DESIGNERS, AND MUNICIPAL OFFICIALS" (MA DEP, MAY 2003).
- 5. A CONSTRUCTION ENTRANCE FOR THIS PROJECT IS MANDATORY TO PREVENT TRACKING OF SEDIMENT ONTO PUBLIC THOROUGHFARES. THE CONTRACTOR SHALL PROTECT ALL POINTS OF CONSTRUCTION INGRESS AND EGRESS TO PREVENT THE DEPOSITION OF MATERIALS ONTO TRAVERSED PUBLIC THOROUGHFARES...
- 6. ALL SEDIMENT BASINS, TRAP EMBANKMENTS, SWALES, PERIMETER DIKES, AND PERMANENT SLOPES STEEPER OR EQUAL TO 3:1 SHALL BE STABILIZED WITH LOAM AND SOD, OR OTHER APPROVED STABILIZATION MEASURES...
- 7. THE CONTRACTOR SHALL APPLY LOAM AND SOD, OR OTHER APPROVED STABILIZATION MEASURES TO ALL UPLAND LAWN DISTURBED AREAS IMMEDIATELY UPON CESSATION OF ACTIVITY AND SHALL COMPLETE THE EFFORT WITHIN 14 CALENDAR DAYS AFTER STRIPPING AND GRADING ACTIVITIES HAVE CEASED ON THAT AREA...
- 8. TEMPORARY STOCKPILES WHICH HAVE NOT BEEN USED FOR 14 CALENDAR DAYS, SHALL BE TEMPORARILY STABILIZED THROUGH THE APPLICATION OF SEED AND MULCH, OR OTHER APPROVED STABILIZATION MEASURES.
- 9. ALL CATCH BASINS OR OTHER DRAIN INLETS WHICH MAY RECEIVE STORMWATER FROM DISTURBED AREAS SHALL BE PROVIDED WITH SUITABLE INLET PROTECTION CONSISTING OF AN OPEN-TOP FILTER FABRIC THAT IS DESIGNED TO HANG UNDERNEATH A STORM GRATE TO FILTER SEDIMENT-LADEN STORMWATER.
- 10. EFFLUENT FROM DEWATERING OPERATIONS SHALL BE DIRECTED TO FIBER MATS, NETTING, RIPRAP, OR NATURALLY OCCURRING COVER TO MINIMIZE EROSION FROM DISCHARGE VELOCITY DURING WORK IN ALL THREE POND LOBES...
- 11. TEMPORARY SEDIMENT TRAP(S) SHALL BE CLEANED OUT AND RESTORED TO ORIGINAL DIMENSIONS WHEN SEDIMENT HAS ACCUMULATED TO A POINT ONE HALF (1/2) THE DEPTH BETWEEN THE OUTLET CREST AND THE BOTTOM OF THE TRAP.
- 12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF DUST AND DIRT RISING AND SCATTERING IN THE AIR DURING CONSTRUCTION AND SHALL PROVIDE WATER SPRINKLING, CALCIUM CHLORIDE, OR OTHER EFFECTIVE MEANS OF CONTROL.
- 13. ALL WASTE MATERIALS GENERATED AT THE SITE SHALL BE IMMEDIATELY REMOVED AND DISPOSED OF OR STORED IN A SECURELY COVERED CONTAINER IN ACCORDANCE WITH LOCAL AND STATE REGULATIONS.
- 14. FOR FINISHED GRADING, THE CONTRACTOR SHALL PROVIDE ADEQUATE GRADIENTS SO AS TO PREVENT WATER FROM STANDING ON THE SURFACE OF LAWNS MORE THAN 24 HOURS AFTER THE END OF A RAINFALL, EXCEPT IN DESIGNATED DRAINAGE COURSES AND SWALE FLOW AREAS WHICH MAY DRAIN AS LONG AS 48 HOURS AFTER THE END OF A RAINFALL...
- 15. PRIOR TO REMOVAL OF SEDIMENT DRAINAGE MEASURES THE CONTRACTOR SHALL STABILIZE ALL CONTRIBUTORY DISTURBED LAWN AREAS USING LOAM AND SOD. AREAS BROUGHT TO FINISHED GRADE DURING THE GROWING SEASON SHALL BE PERMANENTLY STABILIZED IMMEDIATELY WITH EFFORTS COMPLETED WITHIN 14 CALENDAR DAYS OF ESTABLISHMENT UNLESS MORE STRINGENT STABILIZATION DEADLINES APPLY TO THE SITE...
- 16. TEMPORARY SEDIMENT CONTROL DEVICES SHALL BE REMOVED WITHIN (30) CALENDAR DAYS FOLLOWING ESTABLISHMENT OF PERMANENT STABILIZATION IN ALL CONTRIBUTORY DRAINAGE AREAS...
- 17. CONTRACTOR SHALL ESTABLISH "TRUCK WASH SITES" TO PROVIDE LOCATIONS FOR TRUCK TIRE RINSING TO PREVENT/REDUCE SEDIMENT TRACKING ONTO PAVED ROADWAYS.

PROPOSED POND DEWATERING METHODS AND SEQUENCE:

- PHASE I
STEP IA. CONDUCT INITIAL DEWATERING OF CITY HALL PONDS BY INSTALLATION OF PUMP IN LOWER LOBE OF CITY HALL PONDS AND DECANTING CLEAN WATER FROM ABOVE LEVEL OF SEDIMENTS IN ALL THREE LOBES.
- STEP IB. EXCAVATE SUMPS AT THE TWO CULVERT OUTLETS INTO THE POND. SUMPS SHALL BE LINED WITH GEOTEXTILE FABRIC AND WASHED STONE.
- STEP IC. INSTALL COFFERDAM AT DOWNSTREAM END OF POND, IN APPROXIMATE LOCATION SHOWN ON PLANS.
- PHASE II
STEP IIA. DURING A DRY WEATHER PERIOD, EXCAVATE SEDIMENTS FROM WITHIN THE HAMMOND BROOK AND COLD SPRINGS CULVERTS.
- STEP IIB. WITH BYPASS PUMPS AND DOWNSTREAM COFFERDAM IN PLACE, CONTRACTOR SHALL CONTINUE TO DEWATER THE POND LOBES AS NEEDED THROUGH THE CONSTRUCTION PERIOD BY INSTALLING POND DEWATERING PUMPS IN THE THREE LOBES AS EXCAVATION PROGRESSES.
- STEP IIC. DURING THE PERIOD OF EXCAVATION OF SEDIMENTS FROM THE MOST DOWNSTREAM POND LOBE, DEWATERING PUMP DISCHARGES SHOULD BE DIRECTED UPGRADIENT TO THE MIDDLE POND LOBE AND PROVIDED WITH SEDIMENT CONTROLS (DEWATERING BAG ETC) TO PREVENT SEDIMENT FROM ENTERING PREVIOUSLY DREGDED AREA.
- PHASE III
STEP IIIA. DURING THE PERIOD OF EXCAVATION OF SEDIMENTS FROM THE UPPER POND LOBE, DEWATERING PUMP DISCHARGES SHOULD BE DIRECTED TO THE NEXT DOWNSTREAM POND LOBE (THE MIDDLE LOBE) FOR SETTLING.
- STEP IIIB. DURING THE PERIOD OF EXCAVATION OF SEDIMENTS FROM THE MIDDLE POND LOBE, DEWATERING PUMP DISCHARGES SHOULD BE DIRECTED TO THE MOST DOWNSTREAM POND LOBE FOR SETTLING.
- STEP IIIC. DURING THE PERIOD OF EXCAVATION OF SEDIMENTS FROM THE MOST DOWNSTREAM POND LOBE, DEWATERING PUMP DISCHARGES SHOULD BE DIRECTED UPGRADIENT TO THE MIDDLE POND LOBE AND PROVIDED WITH SEDIMENT CONTROLS (DEWATERING BAG ETC) TO PREVENT SEDIMENT FROM ENTERING PREVIOUSLY DREGDED AREA.
- PHASE IV
STEP IVA. CONTINUE DEWATERING USING THE POND DEWATERING PUMPS AND BYPASS PUMPS THROUGHOUT THE PROJECT.
- STEP IVB. DURING DRY WEATHER, INFLOW TO THE POND WILL BE BYPASSED BY THE TWO BYPASS PUMPS.
- STEP IVC. DURING WET WEATHER, THE CONTRACTOR SHALL MINIMIZE THE RISE OF WATER WITHIN THE POND BY CONTINUING TO BYPASS PUMP AND BY USING THE DEWATERING PUMPS.
- STEP IVD. ALL MATERIALS USED IN THE CONSTRUCTION OF COFFERDAMS SHALL BE REMOVED AT THE END OF THE PROJECT.



- 1. THIS PROJECT IS REGULATED UNDER THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY'S (EPA'S) NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT FOR DISCHARGES FROM CONSTRUCTION ACTIVITIES.
- 2. UNDER THE CONTRACT FOR THE CONSTRUCTION OF THIS PROJECT, THE CONTRACTOR SHALL BE THE OWNER'S FULL AGENT IN THE IMPLEMENTATION AND MAINTENANCE OF THE SWPPP.
- 3. TO OBTAIN COVERAGE UNDER THE CONSTRUCTION GENERAL PERMIT (CGP), A COMPLETE AND ACCURATE NOTICE OF INTENT (NOI) SHALL BE PREPARED ONLINE USING THE NET SYSTEM AND SUBMITTED TO THE ENVIRONMENTAL PROTECTION AGENCY (EPA) BY THE OWNER, THE CONTRACTOR, AND ANY APPLICABLE SUBCONTRACTORS.
- 4. THE OWNER, CONTRACTOR, AND ALL APPLICABLE SUBCONTRACTORS ARE EQUALLY RESPONSIBLE FOR COMPLYING WITH THE TERMS OF THE CGP AND FOR THE EFFECTIVE IMPLEMENTATION OF THE SWPPP.
- 5. EACH CONTRACTOR AND SUBCONTRACTOR THAT HAS OPERATIONAL CONTROL OVER THE CONSTRUCTION PLANS AND/OR SPECIFICATIONS MUST SIGN THE CONTRACTOR'S CERTIFICATION FORM INCLUDED IN THE SWPPP.
- 6. IMPLEMENTATION OF THE SWPPP MUST BEGIN AT THE COMMENCEMENT OF CONSTRUCTION ACTIVITY AND MUST BE FULLY AND CONTINUOUSLY DOCUMENTED UNTIL FINAL STABILIZATION OF THE SITE IS COMPLETE AND A NOI IS FILED.
- 7. A SIGN MUST BE VISIBLY POSTED AT THE SITE WHICH PROVIDES NOTICE OF THE CGP, THE NPDES PERMIT ID(S), A CONTACT NAME AND PHONE NUMBER FOR OBTAINING ADDITIONAL INFORMATION, AND THE ONSITE LOCATION WHERE THE SWPPP IS STORED, AS WELL AS THE URL FOR THE SWPPP IF POSTED ONLINE.
- 8. IT IS THE RESPONSIBILITY OF THE OWNER, CONTRACTOR AND ALL APPLICABLE SUBCONTRACTORS TO INDICATE CONSTRUCTION ACTIVITY SEQUENCING AND TIMING IN THE SWPPP.
- 9. INSPECTION AND MAINTENANCE MUST BE PERFORMED REGULARLY FOR PERMIT COMPLIANCE, AND DOCUMENTATION OF INSPECTIONS AND MAINTENANCE MUST BE APPENDED TO THE SWPPP BY THE CONTRACTOR.
- 10. WHENEVER THERE IS A CHANGE IN DESIGN, CONSTRUCTION OPERATION, OR MAINTENANCE AT THE CONSTRUCTION SITE THAT HAS, OR COULD HAVE, A SIGNIFICANT EFFECT ON THE DISCHARGE OF STORMWATER POLLUTANTS, THE SWPPP MUST BE AMENDED BY THE CONTRACTOR.
- 11. CONTRACTOR SHALL IDENTIFY THE LOCATIONS OF THE FOLLOWING ON THE SEDIMENT AND EROSION CONTROL (S&E) PLANS AS WELL AS ANY OTHER REQUIRED PERMIT ELEMENTS NOT SHOWN ON THE PLANS AT THE TIME OF THEIR PREPARATION (SEE CGP PERMIT SECTION):
 - CONCRETE TRUCK WASHOUT AREAS (SEE SWPPP)
 - PORTABLE SANITARY UNITS (TOILETS)
 - FUEL TANKS
 - LIMITS OF STAGING AREAS & SOIL DISTURBANCE AREAS
 - WASTE CONTAINER LOCATIONS (E.G., DUMPSTERS)
 - CHEMICAL, MATERIAL, EQUIPMENT, & VEHICLE STORAGE AREAS
 - SOIL STOCKPILES & CONTROLS.
- 12. IF ADDITIONAL CONTROLS OR BMPs ARE ADDED, THESE SHALL BE DEPICTED ON THE S&E PLANS AND A DESCRIPTION ADDED TO THE SWPPP BY THE CONTRACTOR.
- 13. UPON FINAL STABILIZATION, A NOTICE OF TERMINATION (NOT) MUST BE ELECTRONICALLY PREPARED AND SUBMITTED TO THE EPA BY ALL PARTIES WHO COMPLETED A NOI USING THE ONLINE NET SYSTEM.

NOTES:

- 1. CONTRACTOR SHALL SUBMIT DETAILED DEWATERING PLAN, CONSTRUCTION SEQUENCE, AND SHOP DRAWINGS AND NARRATIVE DESCRIPTION OF ALL COFFERDAMS FOR ACCEPTANCE BY THE ENGINEER AND CONSERVATION COMMISSION PRIOR TO INITIATING ANY WORK ONSITE.
- 2. TEMPORARY COFFERDAMS TO BE INSTALLED BY CONTRACTOR. COFFERDAMS MAY BE CONSTRUCTED OF SUPER SACKS (OR EQUAL), EARTHEN MATERIALS, SANDBAGS, OR OTHER MATERIALS ACCEPTED BY THE ENGINEER AND CONSERVATION COMMISSION.

NO.	ISSUE/DESCRIPTION	BY	DATE
4	NOTE MODIFICATIONS, ISSUED FOR BIDDING	JRB	10/13/22
3	ISSUED FOR WOC APPLICATION	JRB	3/23/21
2	CONSTRUCTION ACCESS ROAD MODIFICATIONS	JRB	11/18/20
1	MISC. NOTE CHANGES -- REISSUED FOR NOI PERMITTING	JRB	11/17/20
0	ISSUED FOR PERMITTING	JRB	9/11/20

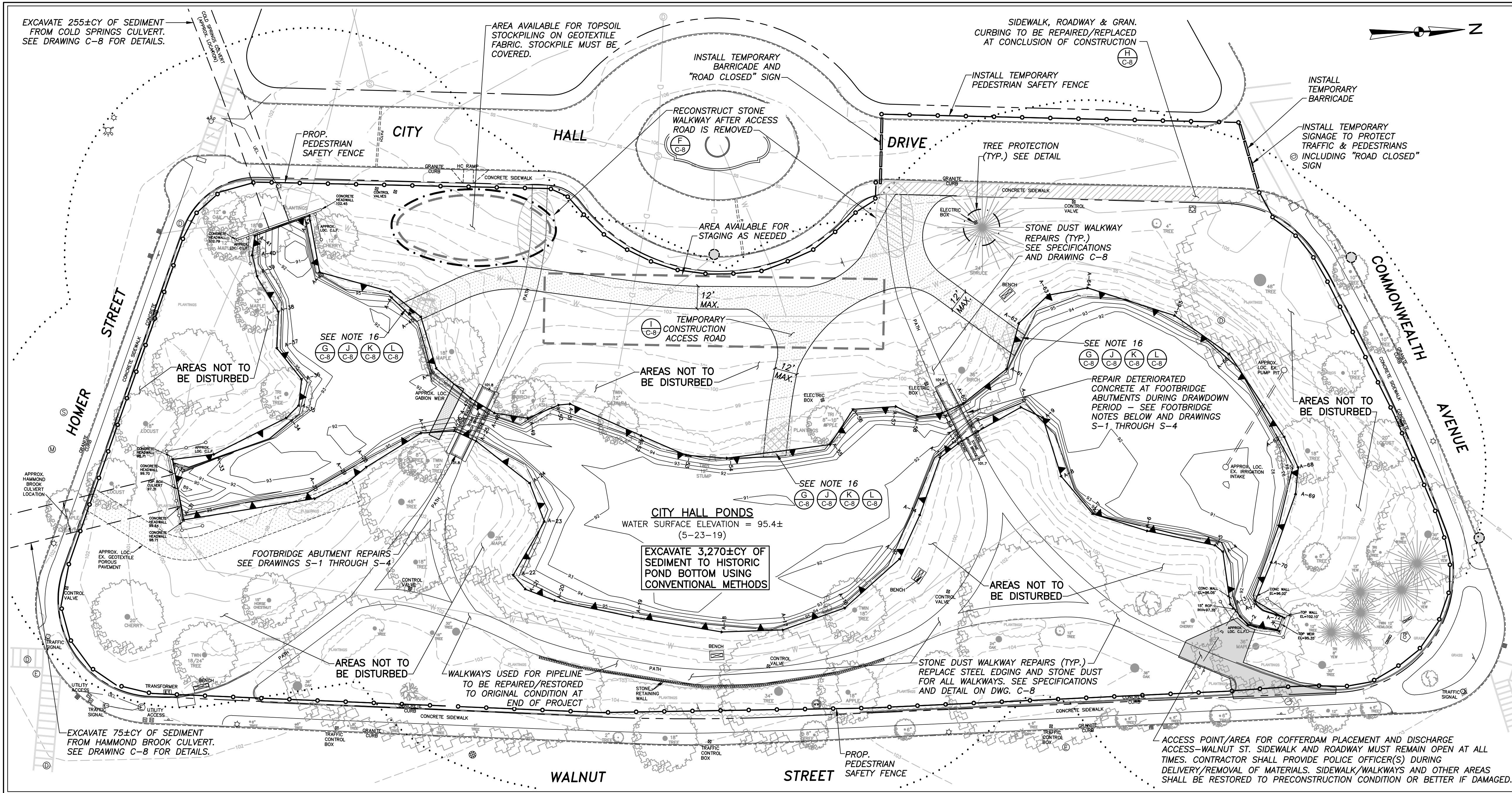
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CITY HALL PONDS MAINTENANCE DREDGING PROJECT
NEWTON CENTRE, MASSACHUSETTS

EROSION AND SEDIMENT CONTROL & CONTROL OF WATER PLAN

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com	PREPARED FOR: CITY OF NEWTON DEPARTMENT OF PUBLIC WORKS 1000 COMMONWEALTH AVENUE NEWTON CENTRE, MA 02459		
PROJ MGR: JRB	REVIEWED BY: TEJ	CHECKED BY: SLL	DRAWING
DESIGNED BY: JRB	DRAWN BY: EDM	SCALE: 1"=40'	C-6
DATE: SEPTEMBER, 2020	PROJECT NO. 15.0166758.00	REVISION NO. 4	

© 2022 - GZA GeoEnvironmental, Inc. GZA-10 166700 - 0 166799\15.0166758.00 CITY HALL PONDS DREDGING-NEWTOWN, MA\15.0166758.00 CAD\DWG\758.00-C7A BASE.DWG RESTORATION OCTOBER 12, 2022 11:33AM EDWARD MULLIN



LEGEND

- ▲ BOUNDARY OF BANK RESOURCE
- RESOURCE AREA FLAG
- 100 FT. BUFFER TO BANK RESOURCE
- 103 --- EXISTING 1 FT. UPLAND CONTOUR
- 105 --- EXISTING 5 FT. UPLAND CONTOUR
- 92 --- PROPOSED POND BOTTOM CONTOUR
- --- EXISTING PROPERTY LINE
- --- EXISTING EASEMENT
- --- EXISTING EDGE OF PAVEMENT
- --- EXISTING GRANITE CURB
- --- EXISTING CHAIN LINK FENCE
- --- EXISTING STORM DRAIN LINE
- --- EXISTING BURIED ELECTRIC LINE
- --- EXISTING CATCH BASIN
- --- EXISTING DRAIN MANHOLE
- --- EXISTING SANITARY MANHOLE
- --- EXISTING MANHOLE
- --- EXISTING ELECTRIC MANHOLE
- --- EXISTING LIGHT POLE
- --- EXISTING SIGN
- --- EXISTING VEGETATION
- --- EXISTING TREES
- --- PROPOSED PEDESTIAN SAFETY FENCE
- --- PROPOSED SILT FENCE (B) (C-8)
- --- PROPOSED FILTRIX SILT SOXX OR APPROVED EQUAL (C) (C-8)
- --- CATCH BASIN PROTECTION (D) (C-8)
- --- PROPOSED TREE PROTECTION (E) (C-8)
- --- SEE NOTE 16

POTENTIAL HISTORIC UTILITIES ON SITE (NOT SURVEYED)

- W GALVANIZED IRON WATER PIPE
- D SURFACE DRAIN (VITRIFIED TILE)
- SS SANITARY SEWER

CONSTRUCTION NOTES - SEDIMENT REMOVAL AND MAINTENANCE OF CITY HALL PONDS

1. PLANS DO NOT PURPORT TO SHOW ALL EXISTING UTILITIES. CONTACT DIG SAFE (1-888-344-7233) 72 HOURS PRIOR TO BEGINNING EXCAVATION ACTIVITIES.
2. ALL WORK SHALL COMPLY WITH ENVIRONMENTAL PERMITS ISSUED FOR THE PROJECT. CONTRACTOR SHALL PROVIDE AND ERECT REQUIRED SIGN FOR DISPLAYING DEP FILE NUMBER (SEE SPECIFICATIONS).
3. TREES AND PERMANENT STRUCTURES ARE TO BE PROTECTED. VEGETATION REMOVAL SHALL BE LIMITED ALONG POND BANKS AS PER ENVIRONMENTAL PERMITS AND PROJECT PLANS AND SPECIFICATIONS.
4. SITE ACCESS SHALL BE AS SHOWN ON THE PLANS AND DETAILED IN THE PROJECT SPECIFICATIONS. CONTRACTOR MAY MAKE MINOR ADJUSTMENTS TO LOCATION AND ALIGNMENT OF ACCESS DRIVE ONLY WITH ACCEPTANCE OF OWNER.
5. EXCAVATION SHALL CONFORM TO THE REQUIREMENTS OF THE SPECIFICATIONS.
6. SEQUENCE OF EXCAVATION OPERATIONS SHALL INSURE THE EFFICIENT REMOVAL OF MATERIALS IN A TIMELY MANNER. SEQUENCE OF OPERATIONS MUST COMPLY WITH THE TERMS OF ANY ENVIRONMENTAL PERMITS ISSUED FOR THE PROJECT AND THE PROJECT SPECIFICATIONS.
7. NOTIFY THE ENGINEER IF ANY UTILITIES ARE DISCOVERED DURING THE DRAWDOWN OF THE POND OR EXCAVATION OPERATIONS. UTILITIES DETERMINED TO BE ABANDONED SHALL BE REMOVED WITHIN THE GRADES SHOWN IN THE PLANS AT THE ENGINEER'S DIRECTION. ACTIVE UTILITIES SHALL NOT BE DISTURBED UNLESS DIRECTED BY THE ENGINEER. IRRIGATION SYSTEM IS ACTIVE. CONTRACTOR SHALL PROTECT ALL UTILITIES THROUGHOUT COURSE OF PROJECT. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR/REPLACEMENT OF ALL DAMAGED UTILITIES/IRRIGATION SYSTEMS AT NO ADDITIONAL EXPENSE TO OWNER.
8. GABION WEIR IN POND MUST BE PROTECTED FROM DAMAGE DURING THE CONSTRUCTION PERIOD AND REPAIRED/RESET IF DAMAGE OR MOVEMENT OCCURS.
9. OVEREXCAVATION BEYOND THE AREA OF WORK AND CONTOURS INDICATED ON THE PLANS AND THE ELEVATIONS INDICATED ON THE CROSS SECTIONS WILL NOT BE PERMITTED OR PAID FOR BY THE OWNER. THE POND REPORTEDLY HAS A CLAY LINER. THE HISTORIC POND BOTTOM/LINER SHALL NOT BE DISTURBED DURING THE PROJECT.
10. BEDROCK IS NOT TO BE EXCAVATED IF ENCOUNTERED.
11. UNSUITABLE MATERIALS INCLUDING ALL MANMADE OR NATURAL OBJECTS NOT CLASSIFIED AS SEDIMENTS SHALL BECOME THE PROPERTY OF THE CONTRACTOR, INCLUDING BUT NOT LIMITED TO TIRES, CAR PARTS, APPLIANCES, TREE STUMPS OR LIMBS, VEGETATION, ETC. THESE MATERIALS MUST BE DISPOSED OF AT AN APPROPRIATE LOCATION OFFSITE CONSISTENT WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS.
12. EQUIPMENT AND MATERIALS STORAGE SHALL BE CONFINED TO THE STAGING AREA. EXCAVATION EQUIPMENT MAY BE PARKED ON THE CONSTRUCTION ACCESS OUTSIDE OF THE POND DURING PERIODS OF INACTIVITY.
13. REFUELING OF EQUIPMENT MUST TAKE PLACE OUTSIDE OF THE POND AND THE 100 FT BUFFER TO RESOURCE AREAS. TEMPORARY FUEL STORAGE TANKS SHALL NOT BE PERMITTED AT THE PROJECT SITE. REFUELING ON SITE MAY ONLY OCCUR IN AREAS APPROVED BY THE OWNER.
14. THE POTENTIAL EXISTS FOR MAJOR FLOOD EVENTS DURING THE CONSTRUCTION PERIOD. THE CONTRACTOR SHALL NOT LEAVE EQUIPMENT IN THE POND AREA DURING PERIODS WHEN PERSONNEL ARE NOT ONSITE TO MOVE IT.
15. AT THE COMPLETION OF EXCAVATION OPERATIONS, THE CONTRACTOR SHALL REMOVE ALL EROSION CONTROL BARRIERS, GEOTEXTILE FABRICS, STONE, TIMBERS, AND OTHER MATERIALS USED FOR TEMPORARY ACCESS OR CONTROLS ON THE POND BOTTOM.
16. CONTRACTOR TO REMOVE AND RESET CHAIN LINK FENCE (IF PRESENT) AND BOULDERS AT THREE POND ACCESS POINTS. EACH OF THREE POND ACCESS POINTS SHALL INCLUDE VEGETATION REMOVAL ALONG NO MORE THAN 15 FT. OF BANK. TOPSOIL FROM ACCESS AREAS (HATCHED ON PLAN) SHALL BE STOCKPILED SEPARATELY AND RESET AT PROJECT END. RESTORATION OF AREAS SHALL COMMENCE WITHIN 14 DAYS OF THE END OF WORK WITHIN A POND LOBE AND ACCESS ROAD REMOVAL. 12" DIA. COMPOST FILTER TUBE EQUAL SHALL BE PLACED AROUND AREA UNTIL VEGETATION IS ESTABLISHED. SEE RESTORATION OF DISTURBED AREA NOTES ON THIS SHEET FOR ADDITIONAL RESTORATION INFORMATION.

PLAN VIEW
1"=30'

SEDIMENT EXCAVATION AND DISPOSAL NOTES:

1. PROPOSED CONTOURS APPROXIMATE THE ORIGINAL POND BOTTOM BENEATH THE ACCUMULATED SEDIMENTS AS ESTIMATED BY PROBING DATA OBTAINED BY GZA GEOENVIRONMENTAL, INC. IN DECEMBER 2010.
2. SEDIMENT EXCAVATION SHALL PROCEED TO THE LINES AND GRADES AS INDICATED ON THESE PLANS AND CROSS SECTIONS OR TO THE FIRM CLAY BOTTOM APPROVED BY THE ENGINEER, WHICHEVER IS FIRST ATTAINED.
3. OVEREXCAVATION BEYOND THE LINES AND GRADES AS INDICATED ON THESE PLANS A DISTURBANCE OF THE CLAY ORIGINAL POND BOTTOM WILL NOT BE PERMITTED OR PAID FOR BY THE OWNER.
4. DREDGED SLOPES SHALL HAVE A MAXIMUM STEEPNESS OF 3 HORIZONTAL TO 1 VERTICAL (3H:1V).
5. SEDIMENTS SHALL BE TRANSPORTED BY THE CONTRACTOR FOR REUSE/DISPOSAL OFF SITE. SEE SPECIFICATIONS FOR DETAILS.

FOOTBRIDGE REPAIR NOTES - SEE DRAWINGS S-1 THROUGH S-4:

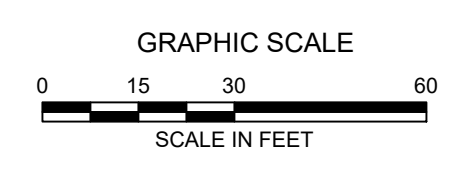
1. ALL FOOTBRIDGE REPAIR WORK SHALL BE CONDUCTED IN DRY WEATHER CONDITIONS, WITH THE POND DRAWN DOWN IN THE AREA OF THE WORK.
2. THE STONE FACES OF THE FOOTBRIDGE SHALL BE PROTECTED FROM THE REPAIR ACTIVITIES. ANY DAMAGE SHALL BE REPAIRED IN COORDINATION WITH APPLICABLE HISTORICAL REPAIR CONSULTANTS.
3. REPAIR WORK SHALL BE LIMITED TO AREAS OF DETERIORATED CONCRETE AT THE NORMAL WATER LINE AND SHALL BE CONDUCTED PER PROJECT DRAWINGS AND SPECIFICATIONS.
4. IN GENERAL, REPAIR WORK WILL CONSIST OF REMOVING DETERIORATED CONCRETE IN THE AREA OF THE NORMAL WATER LINE, PREPARATION OF THE SUBSTRATE, FORMING AND POURING CONCRETE REPAIRS, AND RUBBING AND FINISHING THE FORMED CONCRETE SURFACES.
5. IF WORK IS CONDUCTED IN COLD WEATHER, HEATED ENCLOSURES WILL BE NEEDED PER DRAWINGS AND SPECIFICATIONS.

RESTORATION OF DISTURBED AREA NOTES:

1. ANY DAMAGE TO SIDEWALKS MUST BE REPAIRED PER DETAIL IN PLAN SET.
2. EXISTING WALKWAYS TO BE RESTORED TO ORIGINAL CONDITION OR BETTER AFTER TEMPORARY ACCESS ROUTES HAVE BEEN REMOVED.
3. CONTRACTOR TO REMOVE ALL STONE AND FILTER FABRIC FROM TEMPORARY ACCESS AREAS AT END OF CONSTRUCTION.
4. DISTURBED AREAS WHICH WERE TURF GRASS PRIOR TO CONSTRUCTION SHALL BE RESTORED TO PRECONSTRUCTION GRADES WITH ORDINARY BORROW, DRESSED WITH 6 INCHES OF TOPSOIL SET ASIDE FROM THE BANK AREA AT THE START OF CONSTRUCTION, AND PLANTED WITH SHRUBS PER DETAILS ON DRAWING C-8, WITH AREAS ADJACENT TO SHRUBS SEEDED PER DETAIL ON DRAWING C-8.
5. DISTURBED AREAS WHICH WERE VEGETATED BUFFER AREAS ADJACENT TO THE POND (SHOWN IN HATCHING ON THIS SHEET) SHALL BE RESTORED TO PRECONSTRUCTION SUBGRADES WITH ORDINARY BORROW, DRESSED WITH 6 INCHES OF TOPSOIL SET ASIDE FROM THE BANK AREA AT THE START OF CONSTRUCTION, AND PLANTED WITH SHRUBS PER DETAILS ON DRAWING C-8, WITH AREAS ADJACENT TO SHRUBS SEEDED PER DETAIL ON DRAWING C-8.

OPERATION & MAINTENANCE (O&M) NOTES:

1. POST CONSTRUCTION, THE CITY OF NEWTON DEPARTMENT OF PUBLIC WORKS WILL OPERATE & MAINTAIN THE POND IN ACCORDANCE WITH THE O&M PLAN DEVELOPED FOR THE SITE.



NO.	ISSUE/DESCRIPTION	BY	DATE
4	NOTE MODIFICATIONS, ISSUED FOR BIDDING	JRB	10/13/22
3	ISSUED FOR WQC APPLICATION	JRB	3/23/21
2	CONSTRUCTION ACCESS ROAD MODIFICATIONS	JRB	11/18/20
1	MISC. NOTE CHANGES - REISSUED FOR NOI PERMITTING	JRB	11/17/20
0	ISSUED FOR PERMITTING	JRB	9/11/20

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**CITY HALL PONDS MAINTENANCE DREDGING PROJECT
NEWTON CENTRE, MASSACHUSETTS**

POND RESTORATION PLAN

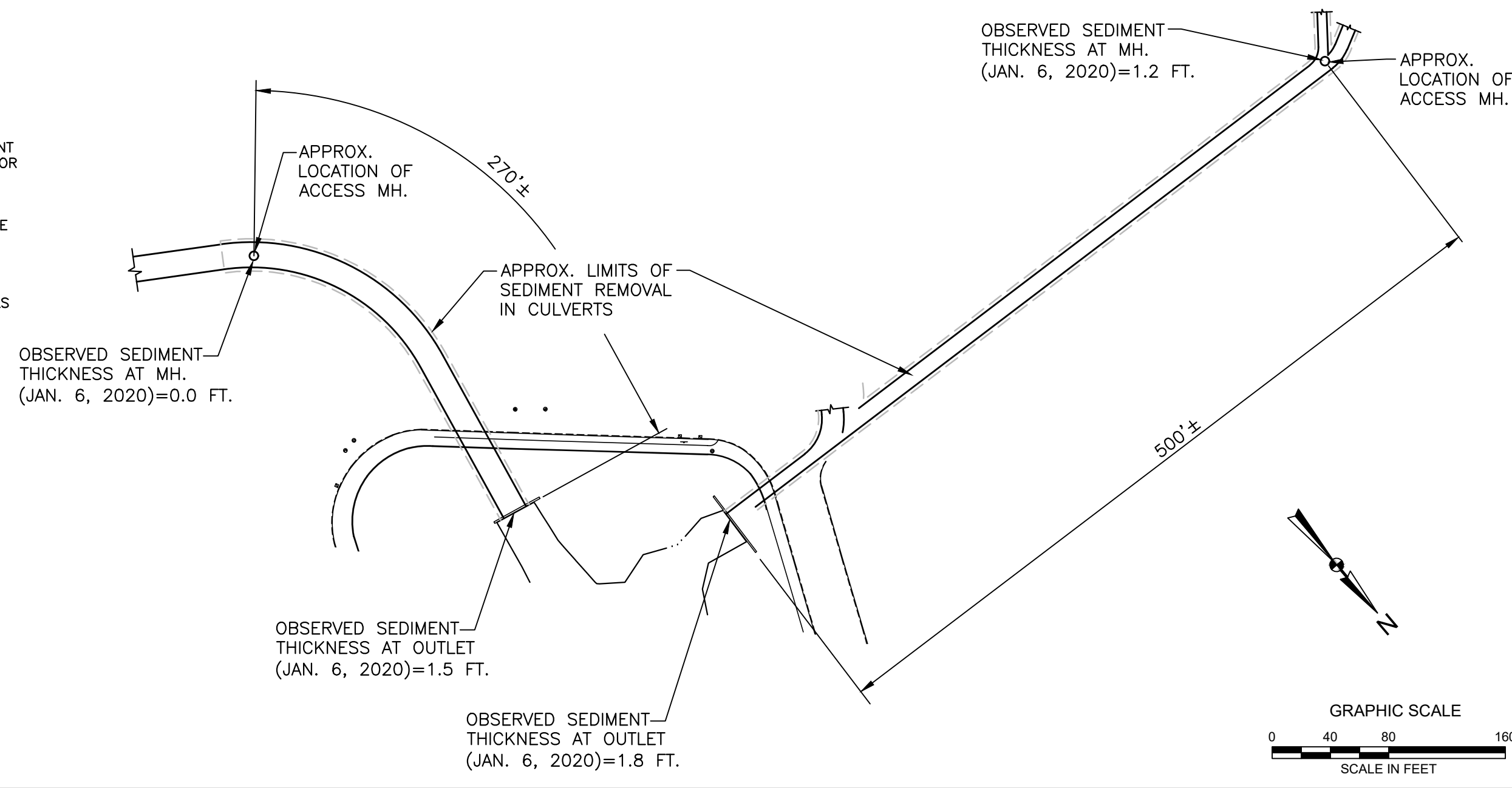
PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com	PREPARED FOR: CITY OF NEWTON DEPARTMENT OF PUBLIC WORKS 1000 COMMONWEALTH AVENUE NEWTON CENTRE, MA 02459
PROJ MGR: JRB DESIGNED BY: JRB DATE: SEPTEMBER, 2020	REVIEWED BY: TEJ DRAWN BY: EDM PROJECT NO. 15.0166758.00
CHECKED BY: SLL SCALE: 1"=30' REVISION NO. 4	DRAWING C-7

CULVERT CLEANING NOTES:

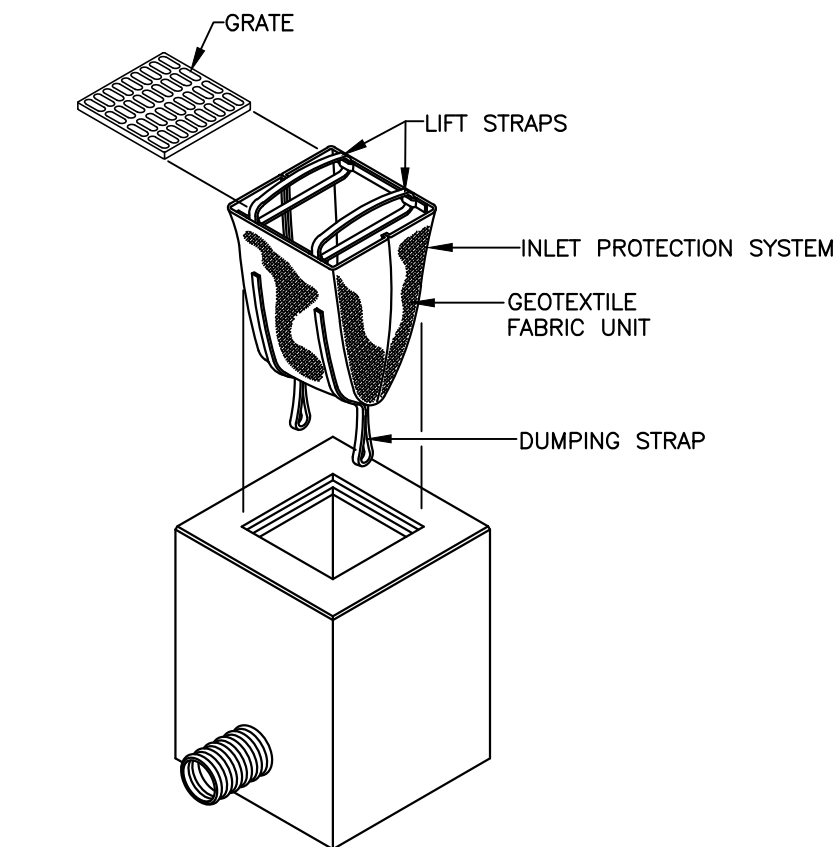
1. SEDIMENT MAY BE REMOVED FROM THE CULVERTS BY USE OF MECHANICAL EQUIPMENT, HAND LABOR, OR VACUUMING AS PROPOSED BY THE CONTRACTOR AND ACCEPTED.
2. CONTRACTOR SHALL CONDUCT A PRE-CONSTRUCTION EXISTING CONDITIONS SURVEY TO DETERMINE THE AMOUNT OF SEDIMENT PRESENT IN EACH CULVERT AND EXISTING CONDITIONS OF CULVERTS. CONTRACTOR SHALL ALSO REPORT ANY INCOMING STORM SEWERS OR DAMAGED SECTIONS OF THE CULVERTS.
3. CONSTRUCTION ACTIVITIES SHALL NOT DAMAGE THE INTERIOR OF THE CULVERTS. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY DAMAGE TO CULVERT AT NO ADDITIONAL COST TO THE OWNER.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROLLING FLOWS WITHIN THE CULVERTS DURING CONSTRUCTION ACTIVITIES. NO MATERIALS OR EQUIPMENT MAY REMAIN IN THE CULVERTS OVERNIGHT OR WHEN CONTRACTOR IS NOT ON SITE. ALL CULVERT WORK SHALL TAKE PLACE DURING DRY WEATHER PERIODS.

DATA SOURCES:

1. CULVERT LOCATION INFORMATION AND SLOPES TAKEN FROM PLANS ENTITLED "PROPOSED STREAM IMPROVEMENTS PIPE CONDUIT & CONCRETE CULVERT COLD SPRING & HAMMOND BROOK, NEWTON CENTER, NEWTON" PREPARED BY DEPARTMENT OF PUBLIC WORKS OF MASSACHUSETTS DIVISION OF WATERWAYS, DATED MARCH 1958.
2. APPROXIMATE ACCESS MANHOLE (MH) LOCATIONAL INFORMATION TAKEN FROM PLANS ENTITLED "PLANS FOR THE RESTORATION OF LAUNDRY BROOK DRAINAGE SYSTEM INCLUDING BULLOUGH'S AND CITY HALL PONDS AND COLD SPRING & HAMMOND BROOK CULVERTS" BY BEC, INC. DATED JANUARY 1992.
3. APPROXIMATE CULVERT SEDIMENT THICKNESSES MEASURED BY GZA, INC. ON JANUARY 6, 2020.



A CULVERT CLEANING PLAN
C-8
1"=80'

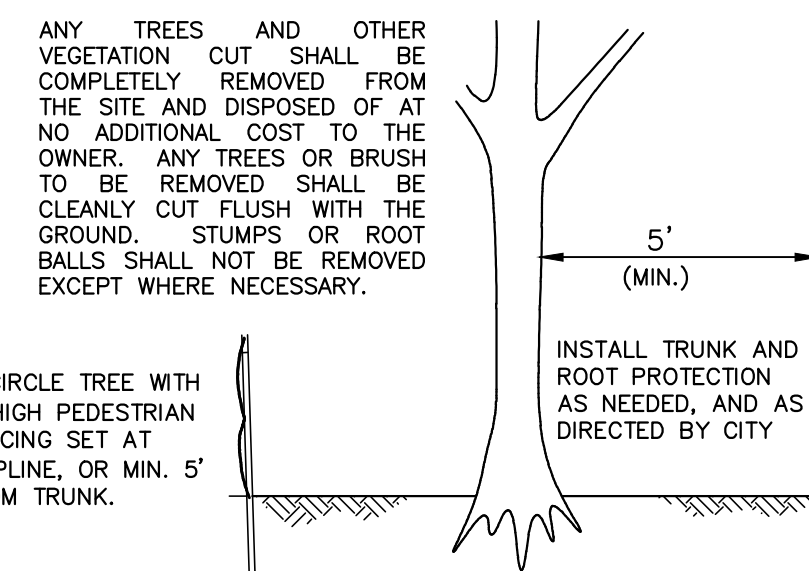


INSTALLATION AND MAINTENANCE GUIDELINES

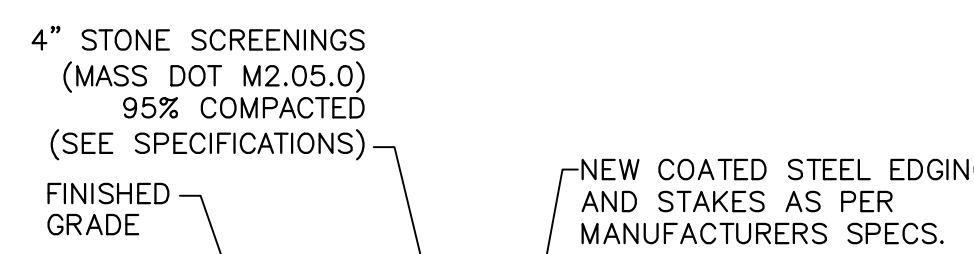
INSTALLATION: REMOVE THE GRATE FROM CATCH BASIN. IF USING OPTIONAL OIL ABSORBENTS, PLACE ABSORBENT PILLOW IN UNIT. STAND THE GRATE ON END. MOVE THE TOP LIFTING STRAPS OUT OF THE WAY AND PLACE THE GRATE INTO THE GEOTEXTILE FABRIC UNIT SO THAT THE GRATE IS BELOW THE TOP STRAPS AND ABOVE THE LOWER STRAPS. HOLDING THE LIFTING DEVICES, INSERT THE GRATE INTO THE INLET.

MAINTENANCE: REMOVE ALL ACCUMULATED SEDIMENT AND DEBRIS FROM VICINITY OF UNIT AFTER EACH STORM EVENT. AFTER EACH STORM EVENT AND AT REGULAR INTERVALS, LOOK INTO THE GEOTEXTILE FABRIC UNIT. IF THE CONTAINMENT AREA IS MORE THAN 1/3 FULL OF SEDIMENT, THE UNIT MUST BE EMPTIED. TO EMPTY UNIT, LIFT THE UNIT OUT OF THE INLET USING THE LIFTING STRAPS AND REMOVE THE GRATE. IF USING OPTIONAL OIL ABSORBENTS, REPLACE ABSORBENT WHEN NEAR SATURATION.

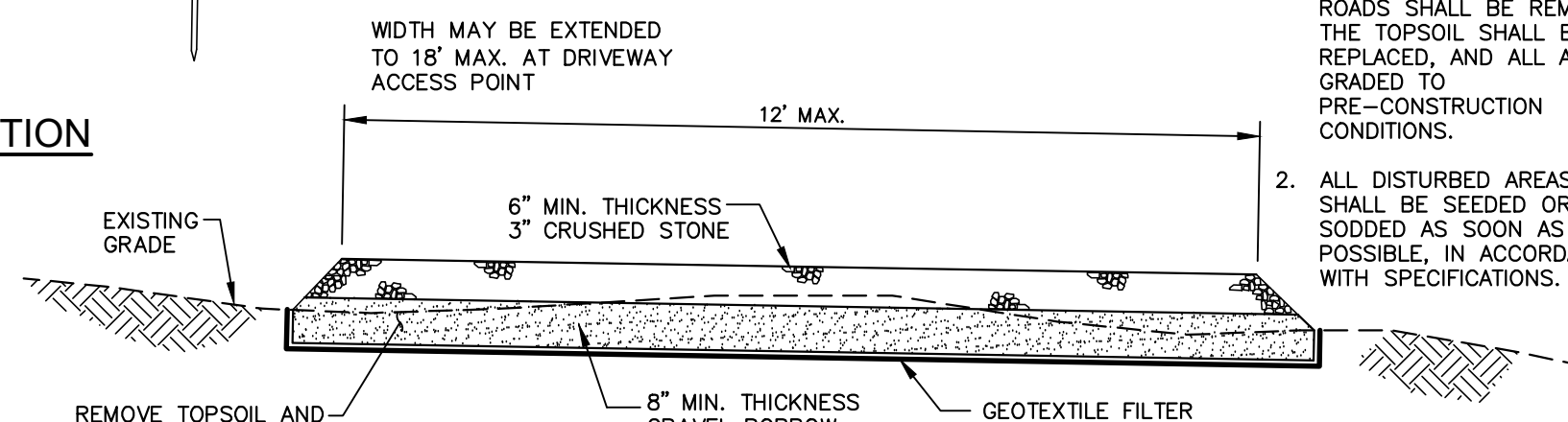
D CATCH BASIN SEDIMENT PROTECTION
C-8
NTS



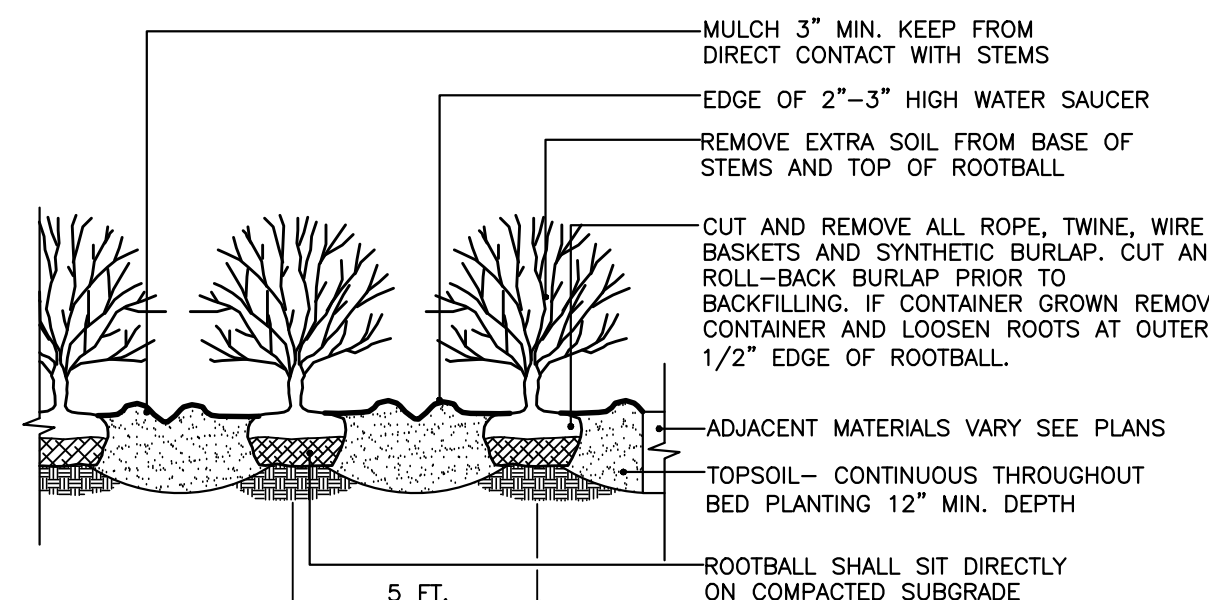
E TREE PROTECTION
C-8
NTS



F STONE DUST WALK
C-8
NTS



I CONSTRUCTION ACCESS ROAD TYPICAL SECTION
C-8
NTS

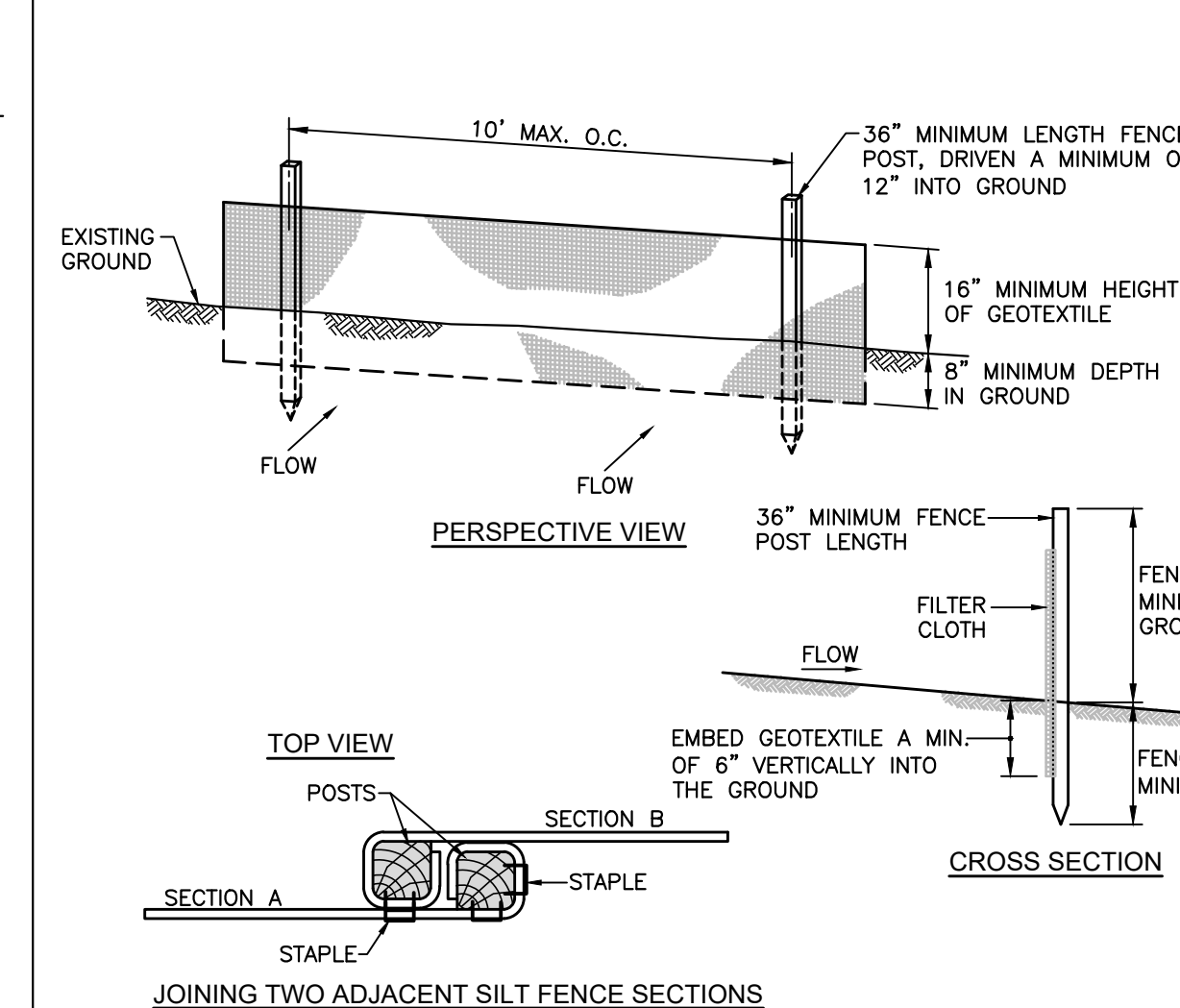


K SHRUB PLANTING DETAIL
C-8
NTS

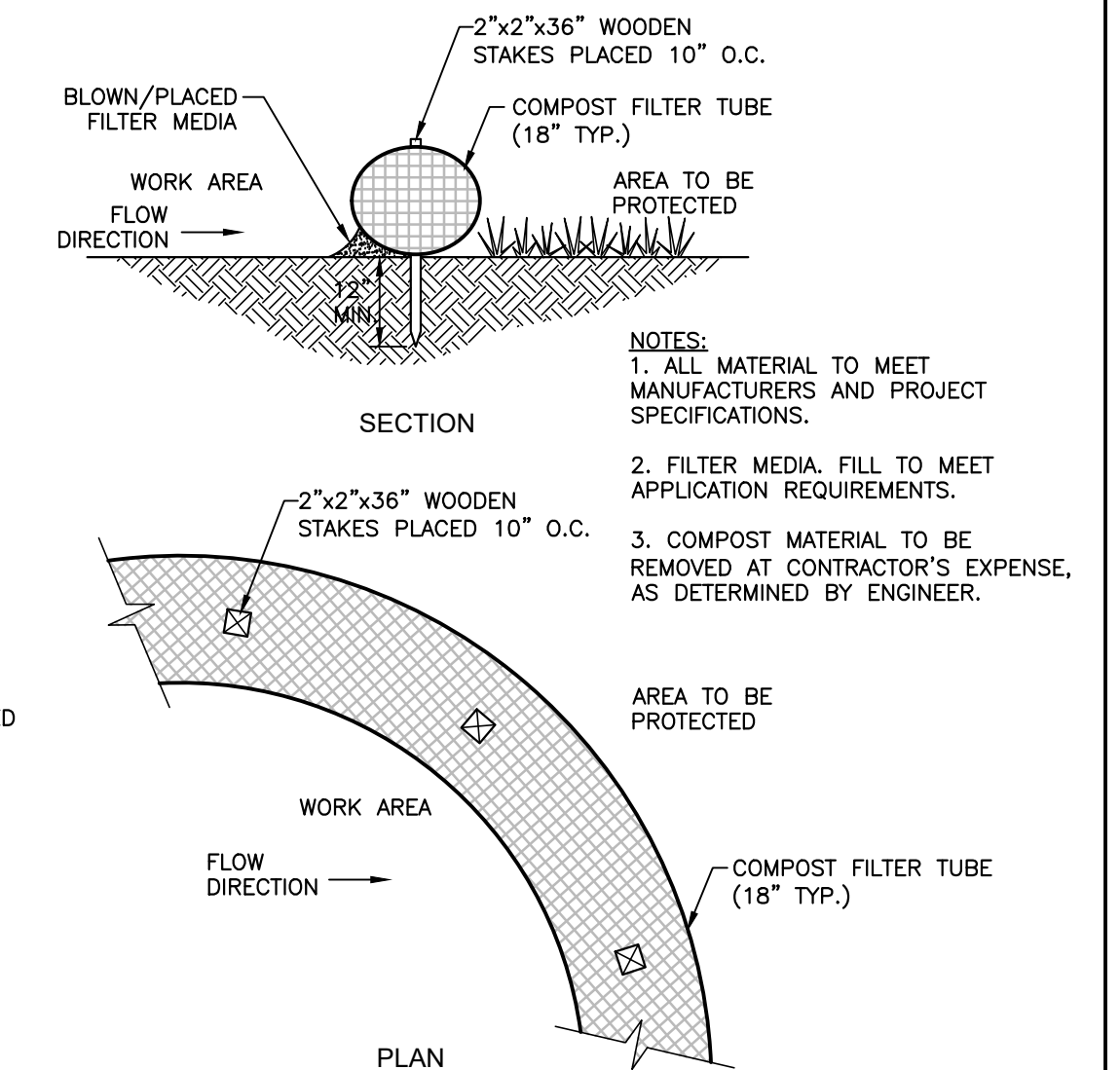
COMMON NAME	BOTANICAL NAME	SIZE	QUANTITY	NOTES
Serviceberry	Amelanchier canadensis	#3	5	Container grown, plant 5' apart, random placement
Fragrant sumac	Rhus aromatica 'Gro-Low'	#2	7	Container grown, plant 5' apart, random placement
Winterberry	Ilex verticillata	#3	5	Container grown, plant 5' apart, random placement
Black chokeberry	Aronia melanocarpa	#5	5	Container grown, plant 5' apart, random placement
Red Twig Dogwood	Cornus sericea	#5	5	Container grown, plant 5' apart, random placement

NOTE: BANK RESTORATION AREAS NOT RECEIVING SHRUBS SHOULD BE SEEDDED WITH NEW ENGLAND EROSION/RESTORATION MIX FOR DETENTION BASINS AND MOIST SITES (BY NEW ENGLAND WETLAND PLANTS, INC. OR APPROVED EQUAL). APPLICATION RATE: 35lbs/ac.

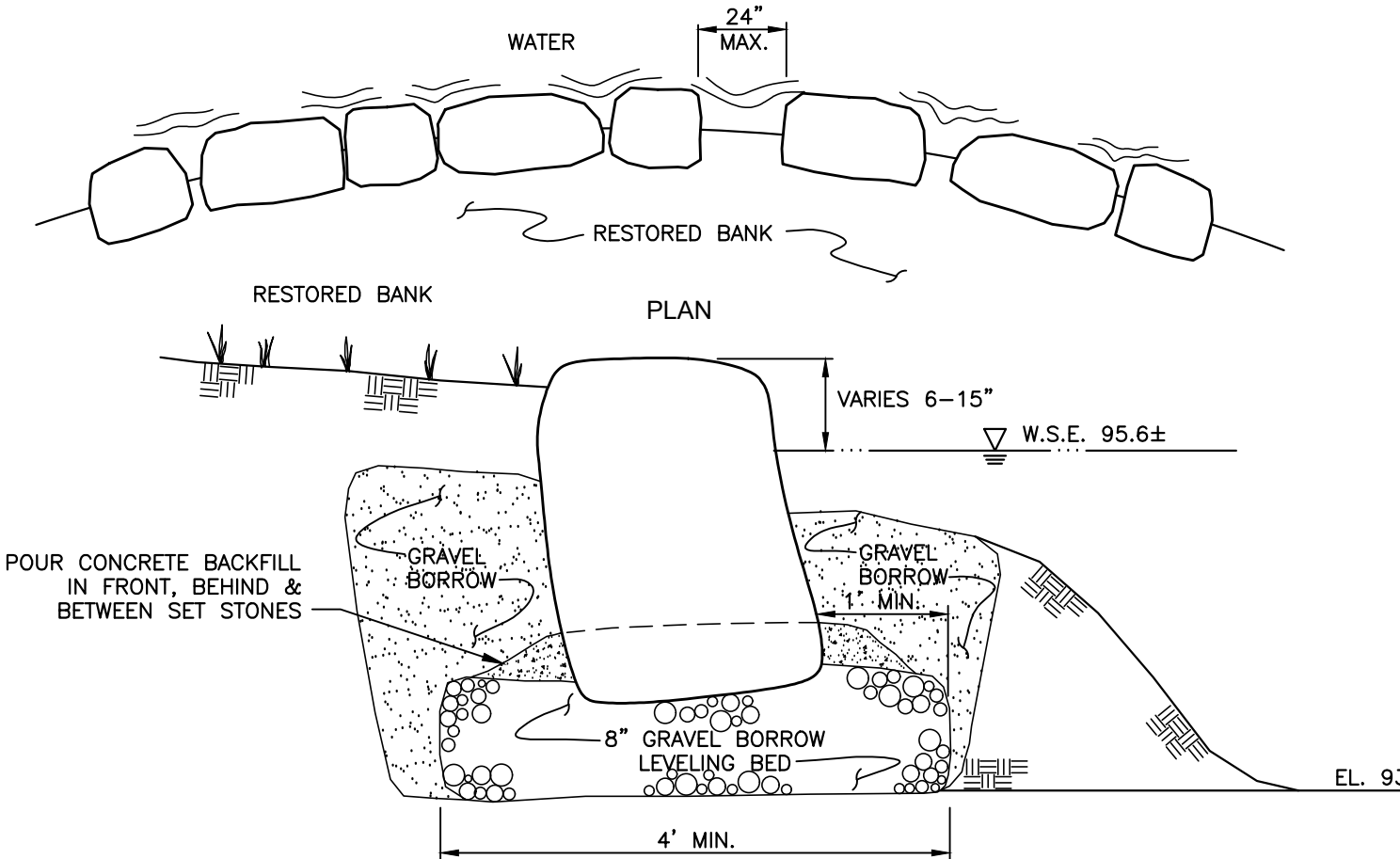
L PLANT LIST
C-8



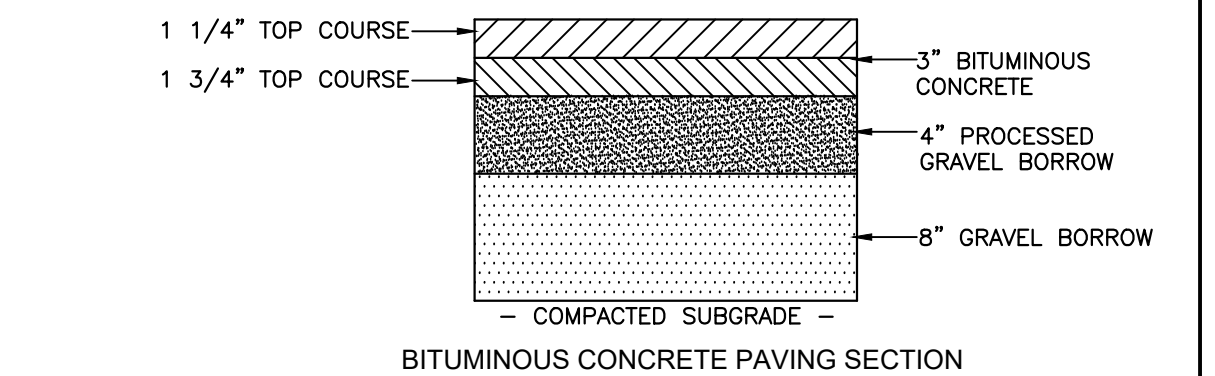
B SILT FENCE
C-8
NTS



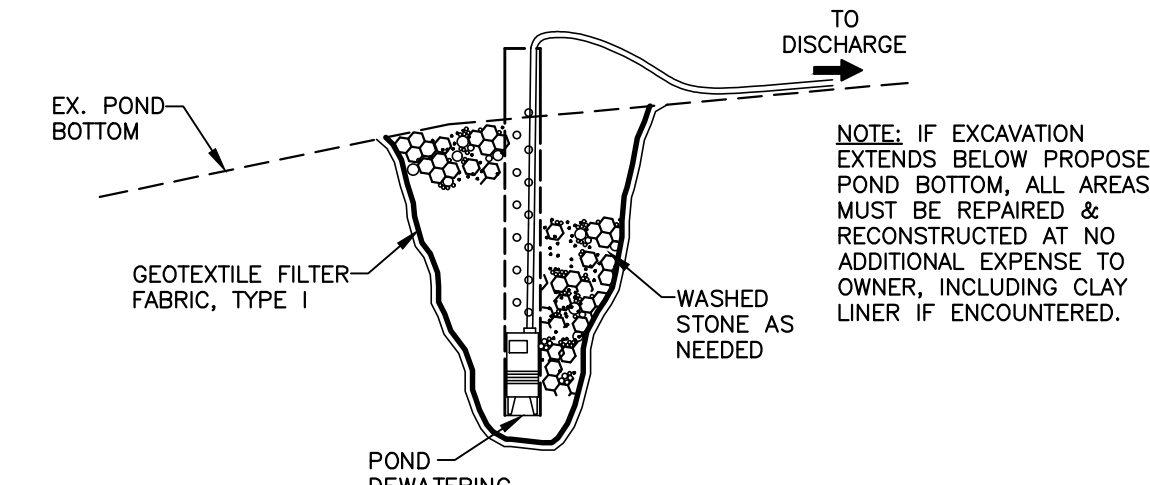
C COMPOST FILTER TUBES
C-8
NTS



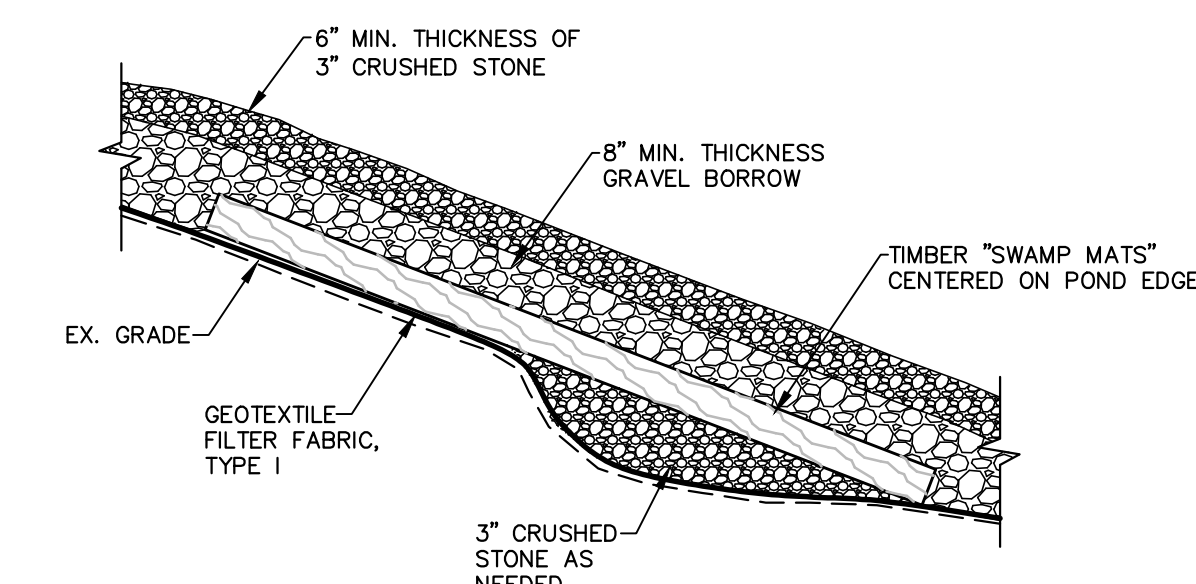
G STONE BANK STABILIZATION DETAIL FOR DISTURBED ACCESS AREA TO POND
C-8
NTS



H PAVEMENT RESTORATION DETAIL
C-8
NTS



M DEWATERING SUMP CONCEPT
C-8
NTS



J CONSTRUCTION ACCESS ROAD AT POND EDGE TYPICAL SECTION
C-1
NTS

NO.	ISSUE/DESCRIPTION	BY	DATE
4	DETAIL MODIFICATIONS, ISSUED FOR BIDDING	JRB	10/13/22
3	ISSUED FOR WQC APPLICATION	JRB	3/23/21
2	REVISED PLANT LIST - REISSUED FOR NOI PERMITTING	JRB	11/23/20
1	MISC. NOTE CHANGES - REISSUED FOR NOI PERMITTING	JRB	11/17/20
0	ISSUED FOR PERMITTING	JRB	9/11/20

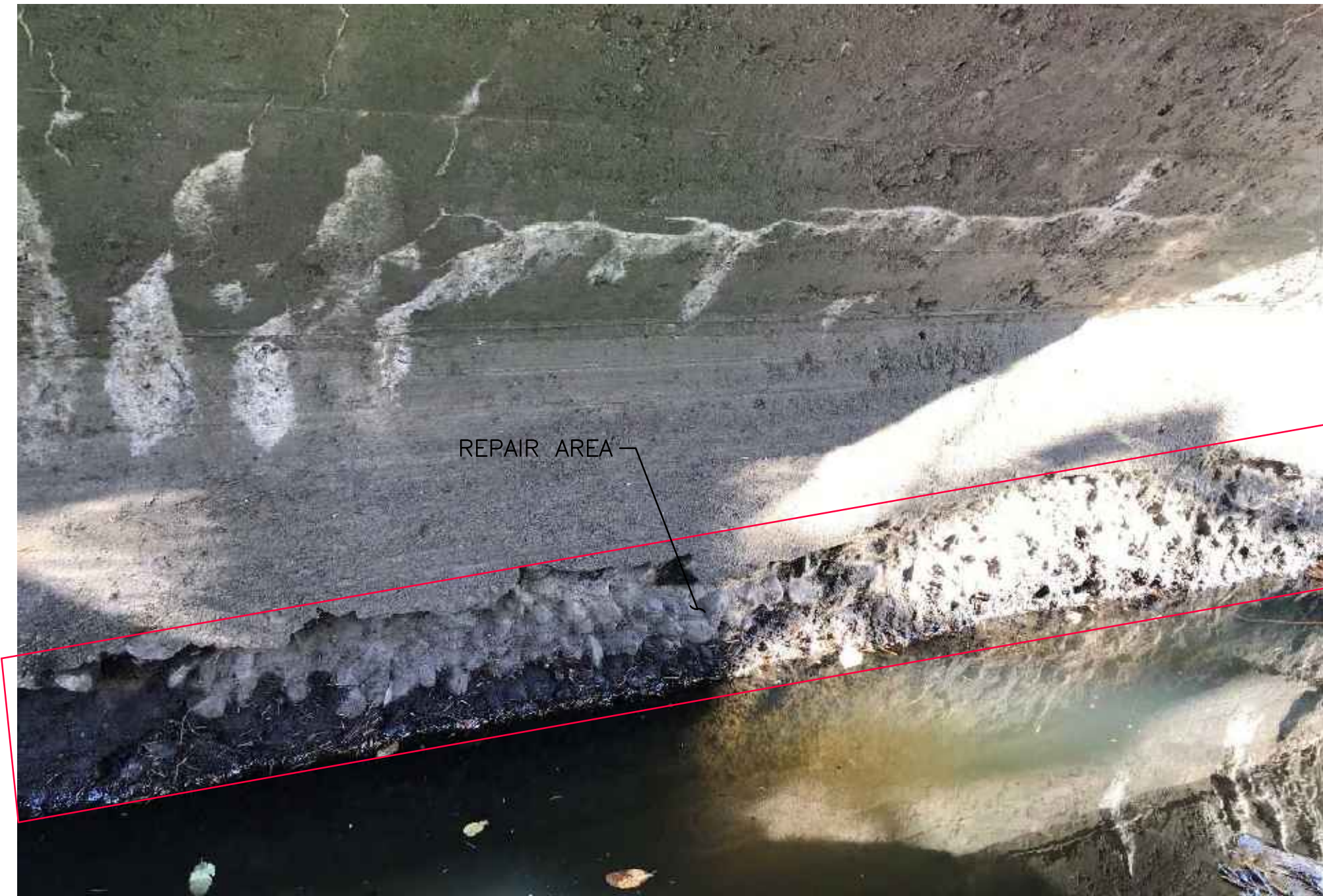
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**CITY HALL PONDS MAINTENANCE DREDGING PROJECT
NEWTON CENTRE, MASSACHUSETTS**

**CULVERT CLEANING PLAN
AND DETAILS**

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com	PREPARED FOR: CITY OF NEWTON DEPARTMENT OF PUBLIC WORKS 1000 COMMONWEALTH AVENUE NEWTON CENTRE, MA 02459
PROJ MGR: JRB DESIGNED BY: JRB DATE: SEPTEMBER, 2020	REVIEWED BY: TEJ DRAWN BY: EDM PROJECT NO. 15.0166758.00
CHECKED BY: SLL SCALE: AS NOTED REVISION NO. 4	DRAWING C-8

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DOWNSTREAM BRIDGE – EAST ABUTMENT
N.T.S.

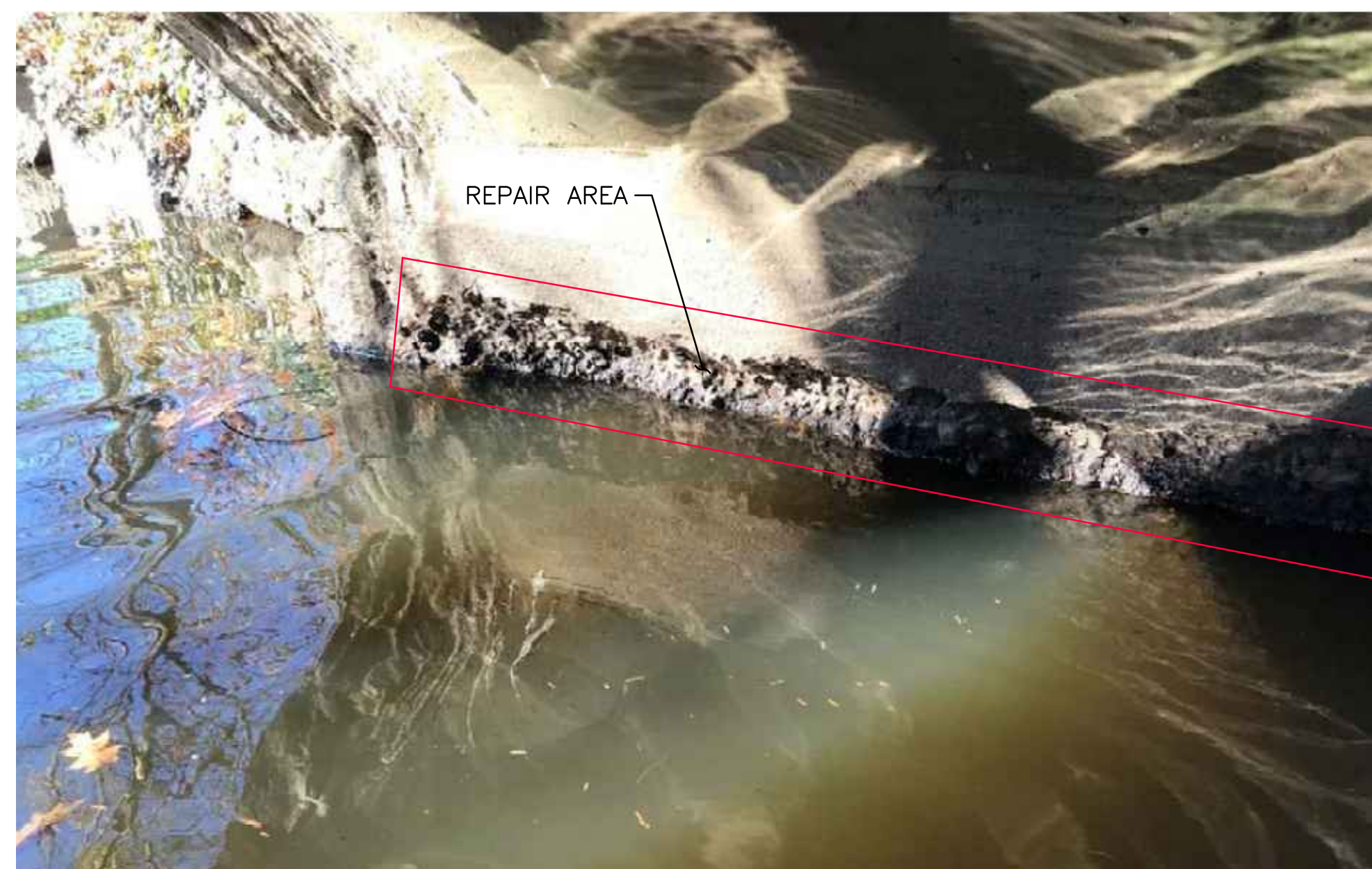


DOWNSTREAM BRIDGE – WEST ABUTMENT
N.T.S.

NOTE: EAST AND WEST ABUTMENTS ON BOTH THE DOWNSTREAM AND UPSTREAM BRIDGE ARE TO BE REPAIRED.



UPSTREAM BRIDGE – EAST ABUTMENT
N.T.S.



UPSTREAM BRIDGE – WEST ABUTMENT
N.T.S.

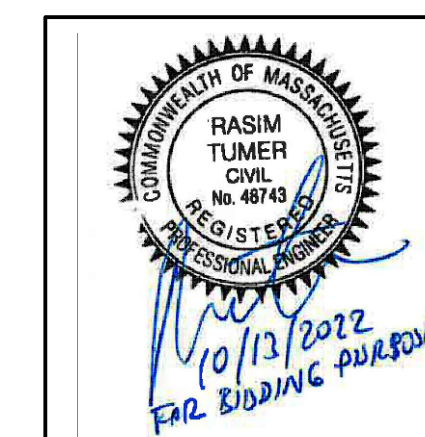
2	ISSUED FOR BIDDING	PDZ	10/13/22
1	CITY OF NEWTON REVIEW	BDW	9/14/22
0	ISSUED FOR PERMITTING	JRB	9/11/20
NO.	ISSUE/DESCRIPTION	BY	DATE

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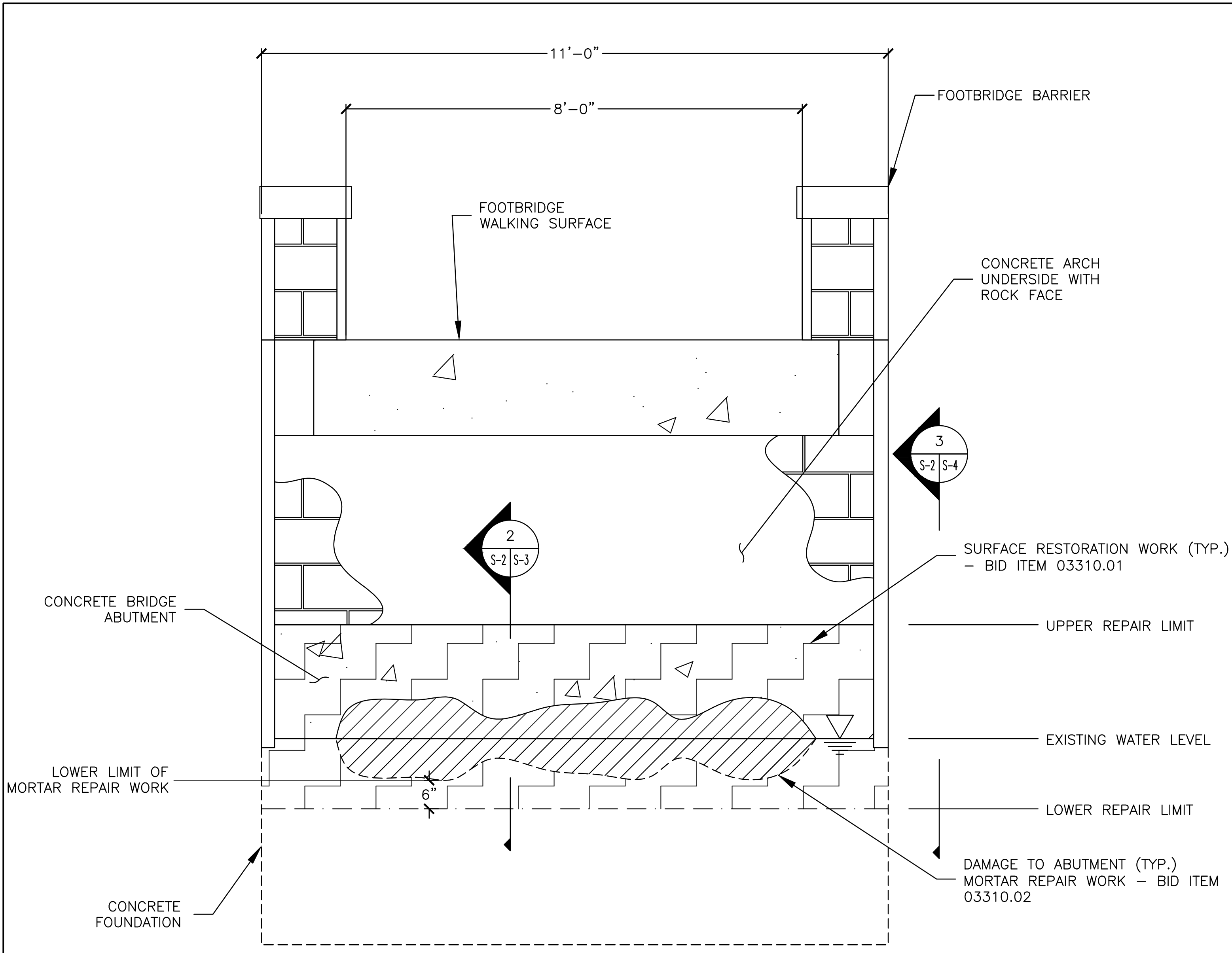
CITY HALL PONDS MAINTENANCE DREDGING PROJECT
NEWTON CENTRE, MASSACHUSETTS

BRIDGE ABUTMENT REPAIR DETAILS

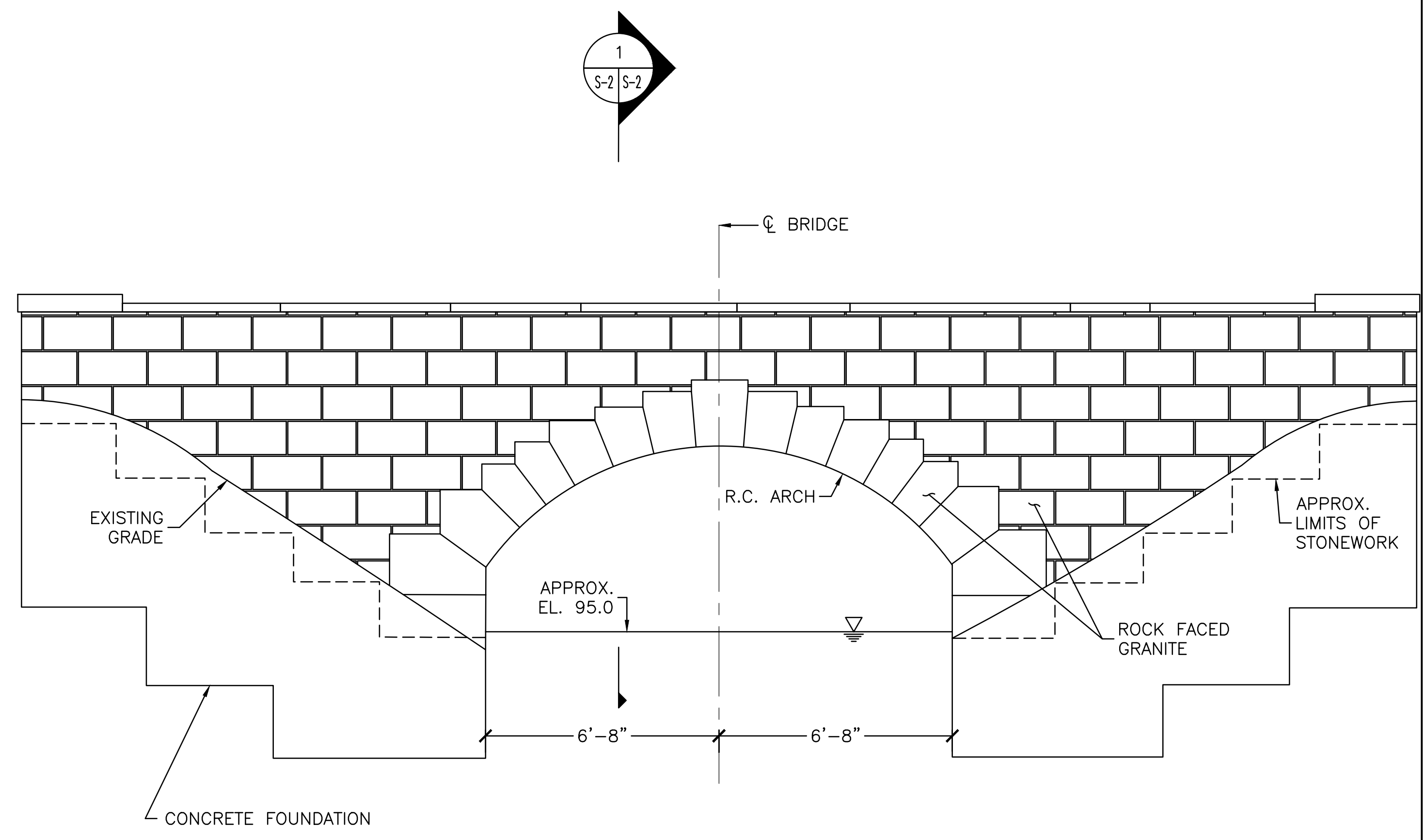
PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: CITY OF NEWTON DEPARTMENT OF PUBLIC WORKS 1000 COMMONWEALTH AVENUE NEWTON CENTRE, MA 02459	
PROJ MGR: JRB DESIGNED BY: PDZ DATE: SEPTEMBER, 2022	REVIEWED BY: JAA DRAWN BY: PDZ PROJECT NO.: 15.0166756.00	CHECKED BY: CLG SCALE: AS NOTED REVISION NO.: 2	DRAWING S-1



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1 TYPICAL FOOTBRIDGE SECTION
 SCALE: 3/4" = 1'-0"



TYPICAL FOOTBRIDGE ELEVATION
 N.T.S.

NOTE: THE SKETCHES ON THIS SHEET ARE DERIVED FROM THE 1931 "PRELIMINARY CONSTRUCTION PLAN FOR FOOTBRIDGES" BY OLMSTEAD BROTHER LANDSCAPE ARCHITECTS. THE BRIDGE IS SHOWN SCHEMATICALLY.

LEGEND:

	SURFACE RESTORATION WORK - BID ITEM 03310.01
	DAMAGE TO ABUTMENT. MORTAR REPAIR WORK - BID ITEM 03310.02
	LOWER REPAIR LIMIT
	EXISTING WATER LEVEL

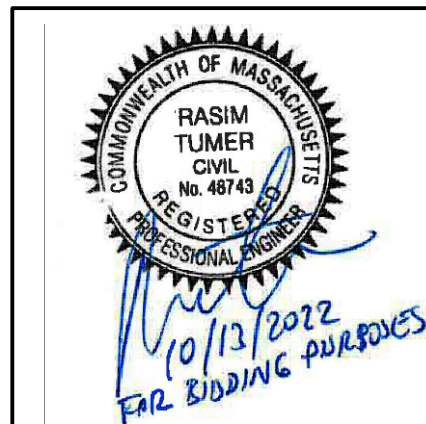
2	ISSUED FOR BIDDING	PDZ	10/13/22
1	CITY OF NEWTON REVIEW	BDW	9/14/22
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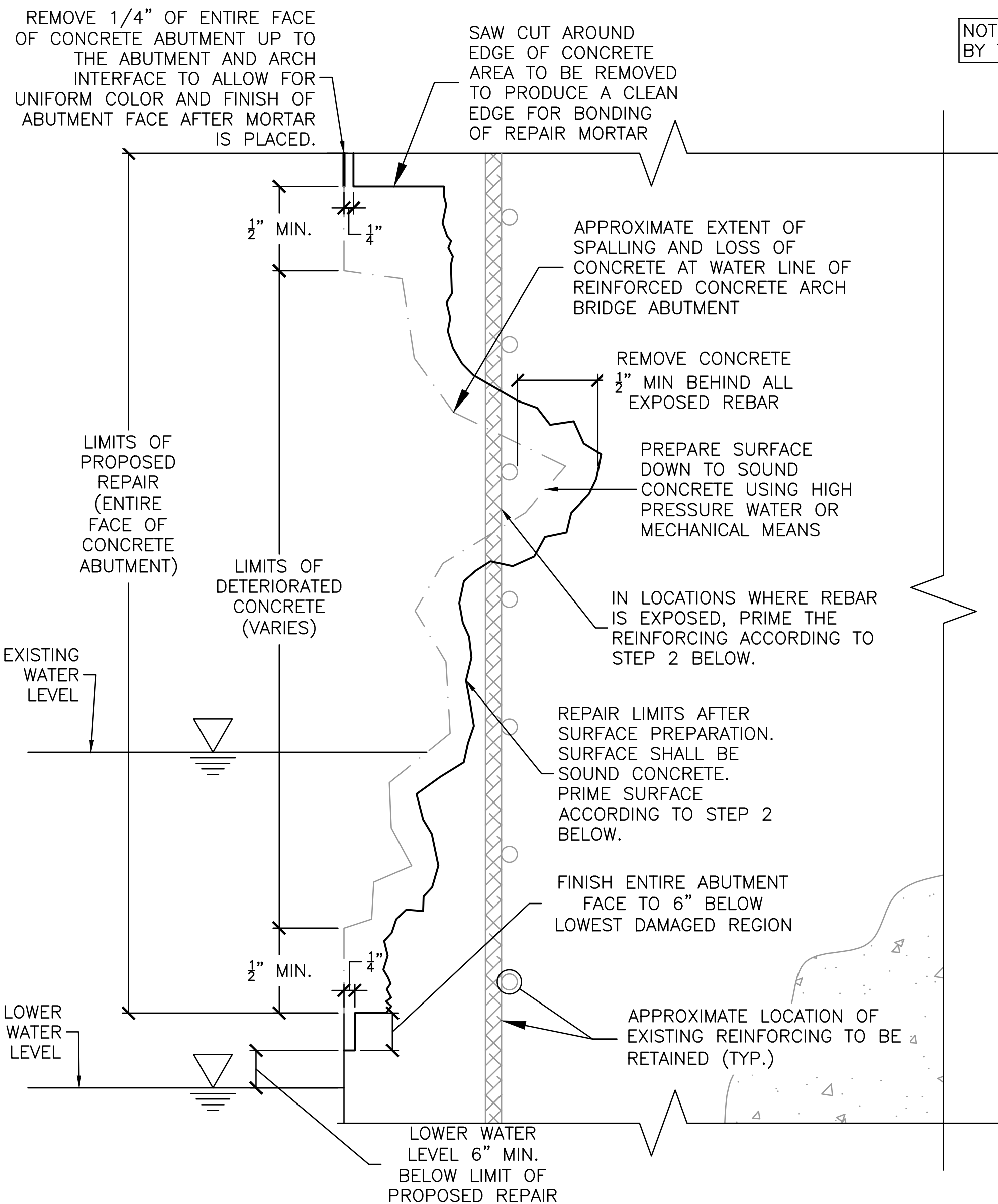
**CITY HALL PONDS MAINTENANCE DREDGING PROJECT
 NEWTON CENTRE, MASSACHUSETTS**

EXISTING ARCH BRIDGE ELEVATION AND SECTION

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com	PREPARED FOR: CITY OF NEWTON DEPARTMENT OF PUBLIC WORKS 1000 COMMONWEALTH AVENUE NEWTON CENTRE, MA 02459
PROJ MGR: JRB DESIGNED BY: PDZ DATE: SEPTEMBER, 2022	REVIEWED BY: JAA DRAWN BY: PDZ PROJECT NO. 15.0166758.00
CHECKED BY: CLG SCALE: AS NOTED REVISION NO. 2	DRAWING S-2



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2A TYPICAL ABUTMENT REPAIR SECTION - STEP 1 & 2
S2/S3 N.T.S.

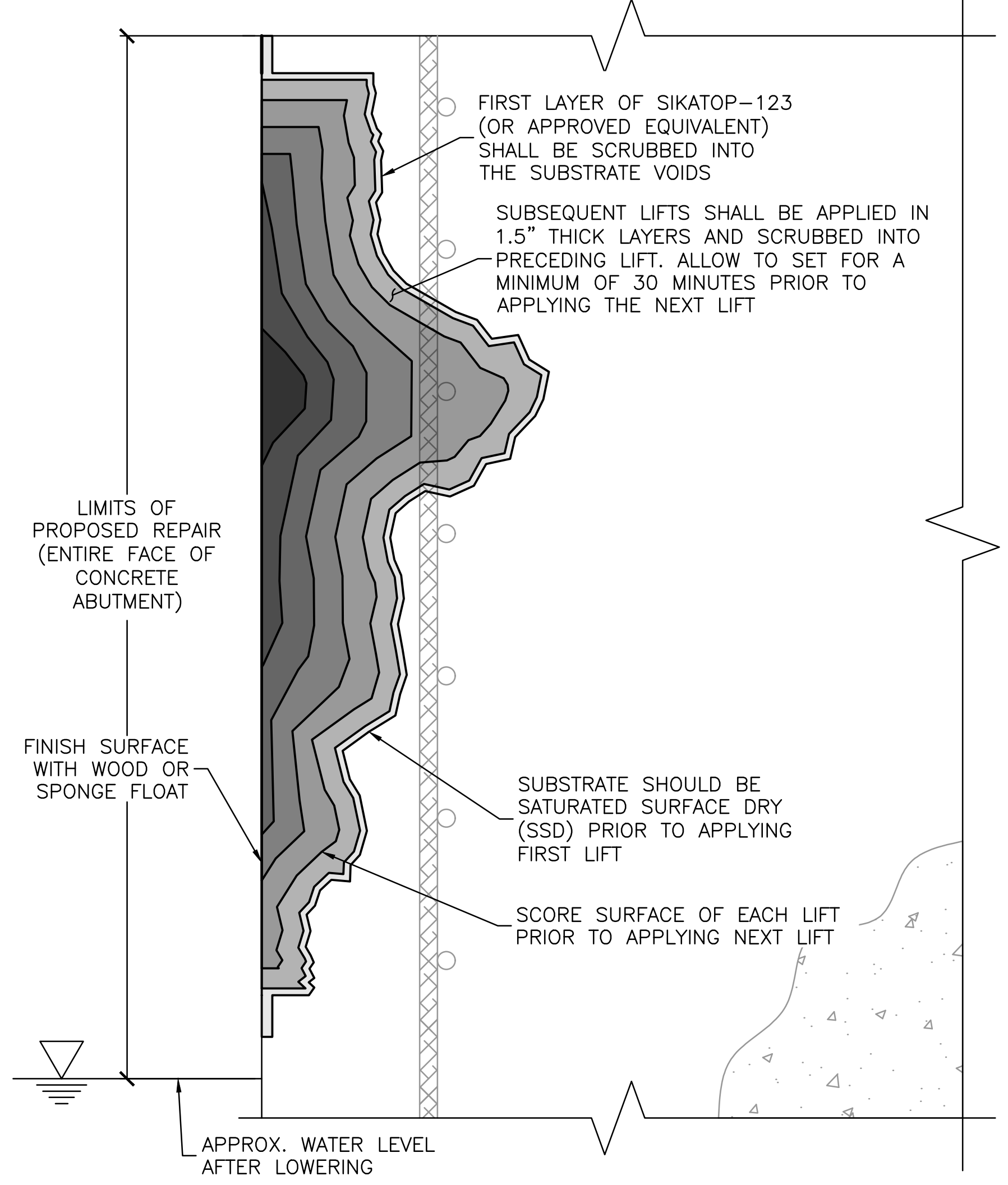
STEP 1: PREPARATION

- LOWER WATER LEVEL BELOW THE DEPTH OF THE DETERIORATED CONCRETE TO BE REPAIRED.
- REMOVE ALL DETERIORATED CONCRETE, DIRT, OIL, GREASE, AND OTHER BOND-INHIBITING MATERIALS FROM THE AREA TO BE REPAIRED.
- PREPARATION WORK SHALL BE DONE BY HIGH PRESSURE WATER BLAST, SCABBLER OR OTHER APPROPRIATE MECHANICAL MEANS TO OBTAIN AN EXPOSED AGGREGATE SURFACE PROFILE OF $\pm 1/8"$.
- TO ENSURE OPTIMUM REPAIR RESULTS, THE EFFECTIVENESS OF DECONTAMINATION AND PREPARATION SHOULD BE ASSESSED BY A PULL-OFF TEST.
- SAW CUTTING OF EDGES IS PREFERRED AND A DOVETAIL IS RECOMMENDED.
- SUBSTRATE SHOULD BE SATURATED SURFACE DRY (SSD) WITH CLEAN WATER PRIOR TO APPLICATION. NO STANDING WATER SHOULD REMAIN DURING APPLICATION.
- REPAIR AREA SHALL NOT BE LESS THAN $1/8"$ IN DEPTH.

STEP 2: PRIMING

- **REINFORCING STEEL:** STEEL REINFORCEMENT SHOULD BE THOROUGHLY PREPARED BY MECHANICAL CLEANING TO REMOVE ALL TRACES OF RUST. WHERE CORROSION HAS OCCURRED DUE TO THE PRESENCE OF CHLORIDES, THE STEEL SHOULD BE HIGH PRESSURE WASHED WITH CLEAN WATER AFTER MECHANICAL CLEANING. FOR PRIMING OF REINFORCING STEEL USE SIKA ARMATEC 110 EPOCEM (OR APPROVED EQUIVALENT).
- **CONCRETE SUBSTRATE:**
 - PRIME THE PREPARED SUBSTRATE WITH A BRUSH OR SPRAYED APPLIED COAT OF SIKA ARMATEC 110 EPOCEM (OR APPROVED EQUIVALENT)
 - ALTERNATELY, A SCRUB COAT OF SIKATOP-123 PLUS (OR APPROVED EQUIVALENT) CAN BE APPLIED PRIOR TO PLACEMENT OF THE MORTAR. THE REPAIR MORTAR HAS TO BE APPLIED INTO THE WET SCRUB COAT BEFORE IT DRIES.

NOTE: THE TYPICAL CONCRETE ABUTMENT REPAIR PROCEDURE, AS OUTLINED BELOW, APPLIES ONLY TO THE USE OF SIKATOP-123 PLUS REPAIR MORTAR. EQUIVALENT REPAIR MORTAR MAY BE USED IF APPROVED BY THE ENGINEER RESPONSIBLE FOR THIS REPAIR PROCEDURE. NOTE THAT THE USE OF AN ALTERNATE MORTAR MATERIAL MAY ALTER THE INSTALLATION PROCEDURE.



2B TYPICAL ABUTMENT REPAIR SECTION - STEP 3 & 4
S2/S3 N.T.S.

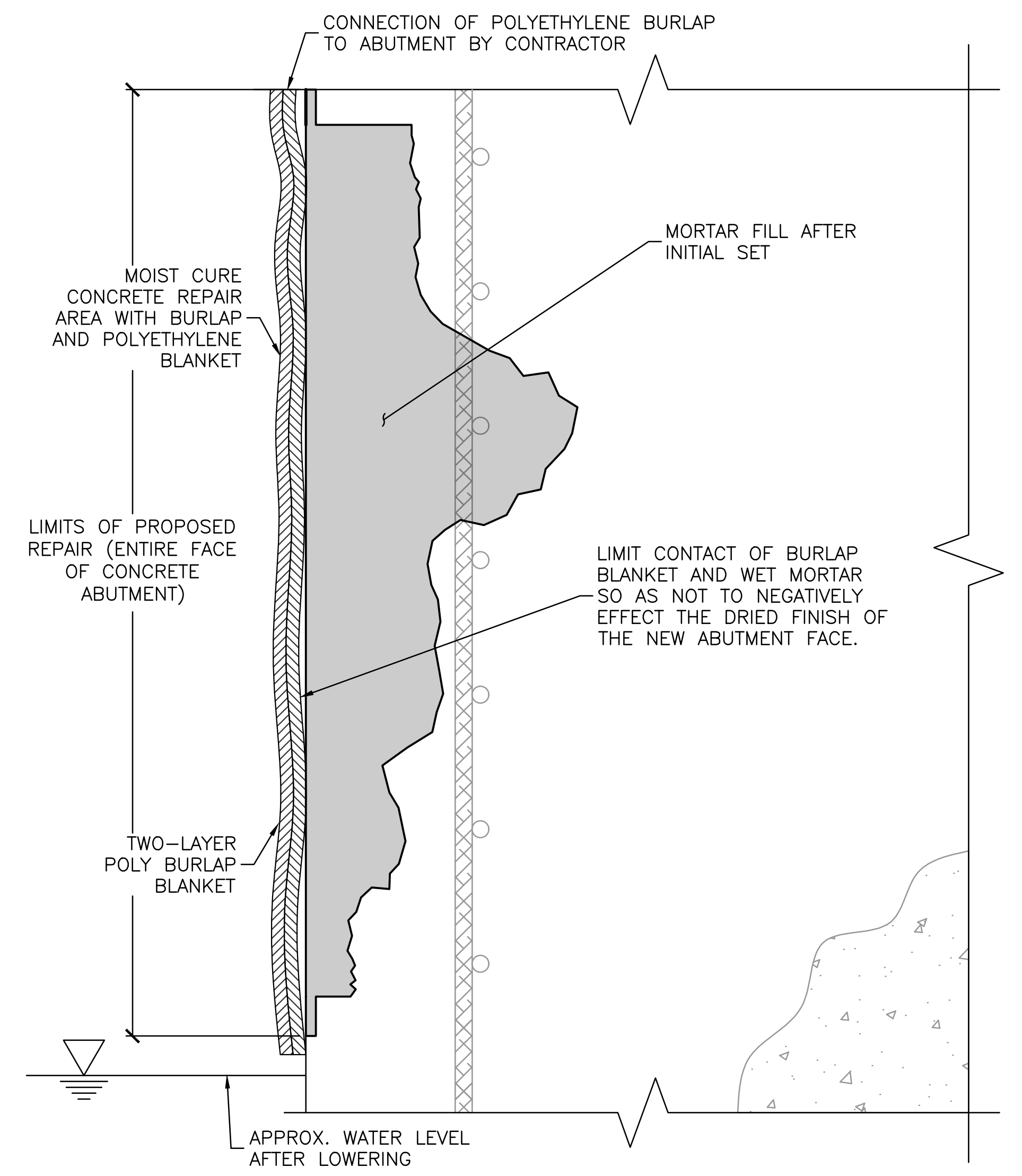
STEP 3: MIXING

- MIX THE SIKATOP-123 PLUS (OR APPROVED EQUIVALENT) COMPONENTS ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.

STEP 4: APPLICATION

- SIKATOP-123 PLUS (OR APPROVED EQUIVALENT) MUST BE SCRUBBED INTO THE SUBSTRATE, FILLING ALL PORES AND VOIDS.
- FORCE MATERIAL AGAINST THE EDGE OF REPAIR, WORKING TOWARD THE CENTER.
- AFTER FILLING REPAIR, CONSOLIDATE, THEN SCREED.
- WHERE MULTIPLE LIFTS ARE REQUIRED, SCORE TOP OF SURFACE OF EACH LIFT TO PRODUCE A ROUGHENED SURFACE FOR NEXT LIFT.
- ALLOW PRECEDING LIFT TO REACH INITIAL SET, 30 MINUTES MINIMUM, BEFORE APPLYING FRESH MATERIAL.
- SUBSTRATE SHOULD BE SATURATED SURFACE DRY (SSD) WITH CLEAN WATER PRIOR TO APPLICATION. NO STANDING WATER SHOULD REMAIN DURING APPLICATION.
- SCRUB FRESH MORTAR INTO PRECEDING LIFT.
- ALLOW MORTAR OR CONCRETE TO SET TO DESIRED STIFFNESS, THEN FINISH WITH WOOD OR SPONGE FLOAT FOR A SMOOTH SURFACE.

NOTE: SIKATOP-123 PLUS MUST BE APPLIED AT A MIN. AMBIENT AIR TEMPERATURE OF 45°F. TO ACHIEVE THIS CONDITION A HEATED ENCLOSURE MAY NEED TO BE PROVIDED TO REACH THE DESIRED TEMPERATURE.



2C TYPICAL ABUTMENT REPAIR SECTION - STEP 5
S2/S3 N.T.S.

STEP 5: CURING

- AS PER ACI RECOMMENDATIONS FOR PORTLAND CEMENT CONCRETE, CURING IS REQUIRED.
- MOIST CURE WITH WET BURLAP AND POLYETHYLENE, A FINE MIST OF WATER OR WATER BASED COMPATIBLE CURING COMPOUND (ASTM C-309).
- MOIST CURING SHOULD COMMENCE IMMEDIATELY AFTER FINISHING. PROTECT FRESHLY APPLIED MORTAR FROM DIRECT SUNLIGHT, WIND, WATER AND FROST.

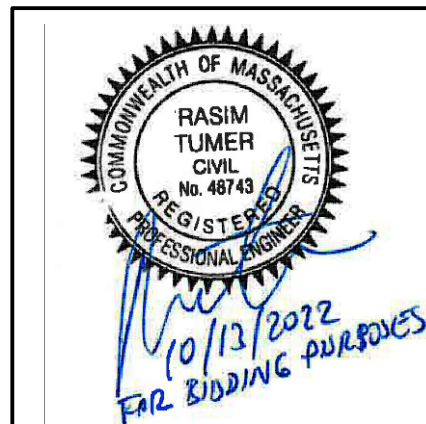
2	ISSUED FOR BIDDING	PDZ	10/13/22
1	CITY OF NEWTON REVIEW	BDW	9/14/22
0	ISSUED FOR PERMITTING	JRB	9/11/20
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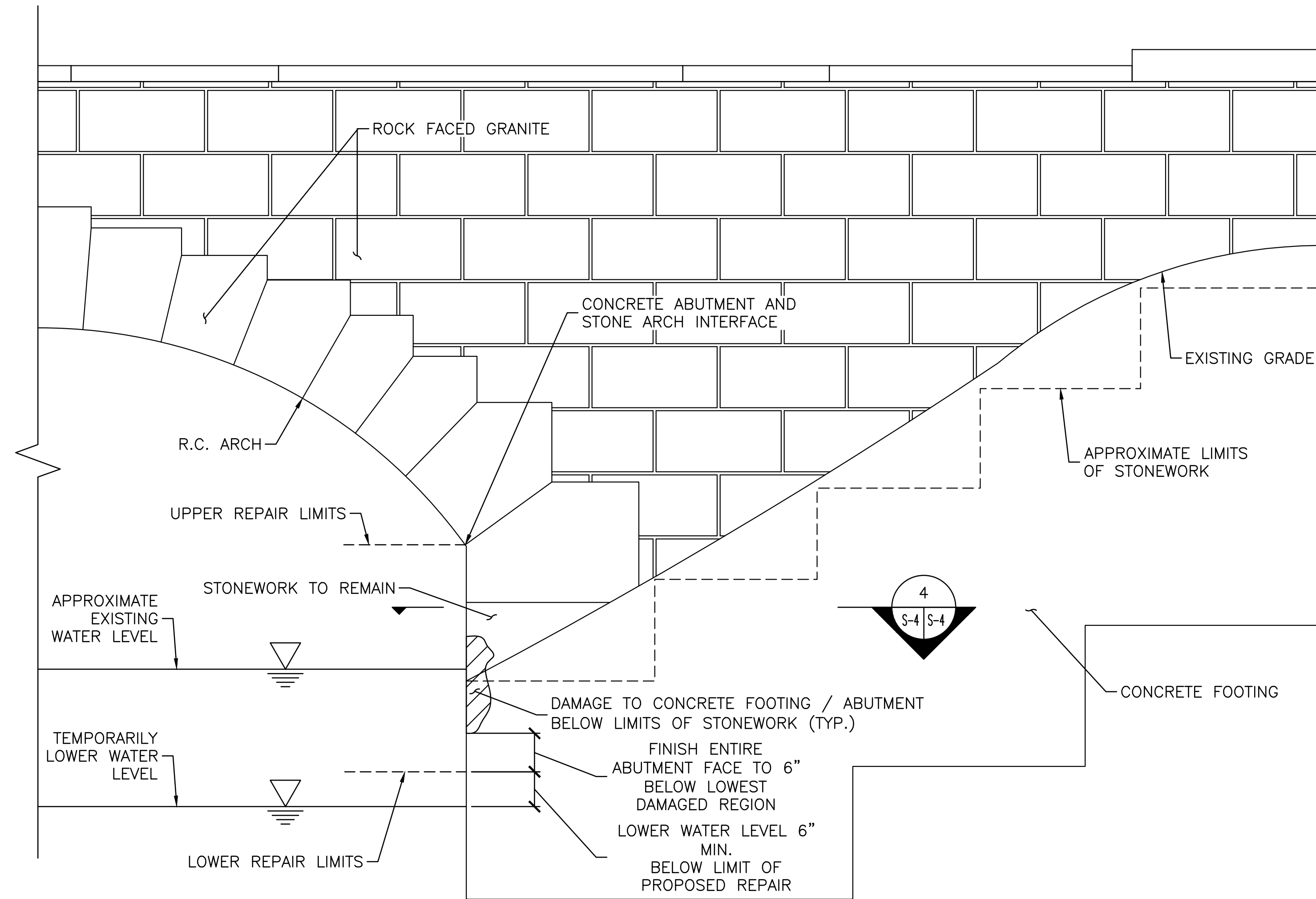
**CITY HALL PONDS MAINTENANCE DREDGING PROJECT
NEWTON CENTRE, MASSACHUSETTS**

BRIDGE ABUTMENT REPAIR DETAILS

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: CITY OF NEWTON DEPARTMENT OF PUBLIC WORKS 1000 COMMONWEALTH AVENUE NEWTON CENTRE, MA 02459	
PROJ MGR: JRB	DESIGNED BY: PDZ	REVIEWED BY: JAA	CHECKED BY: CLG
DATE: SEPTEMBER, 2022	PROJECT NO: 15.0166756.00	DRAWN BY: PDZ	SCALE: AS NOTED
		REVISION NO: 2	DRAWING NO: S-3

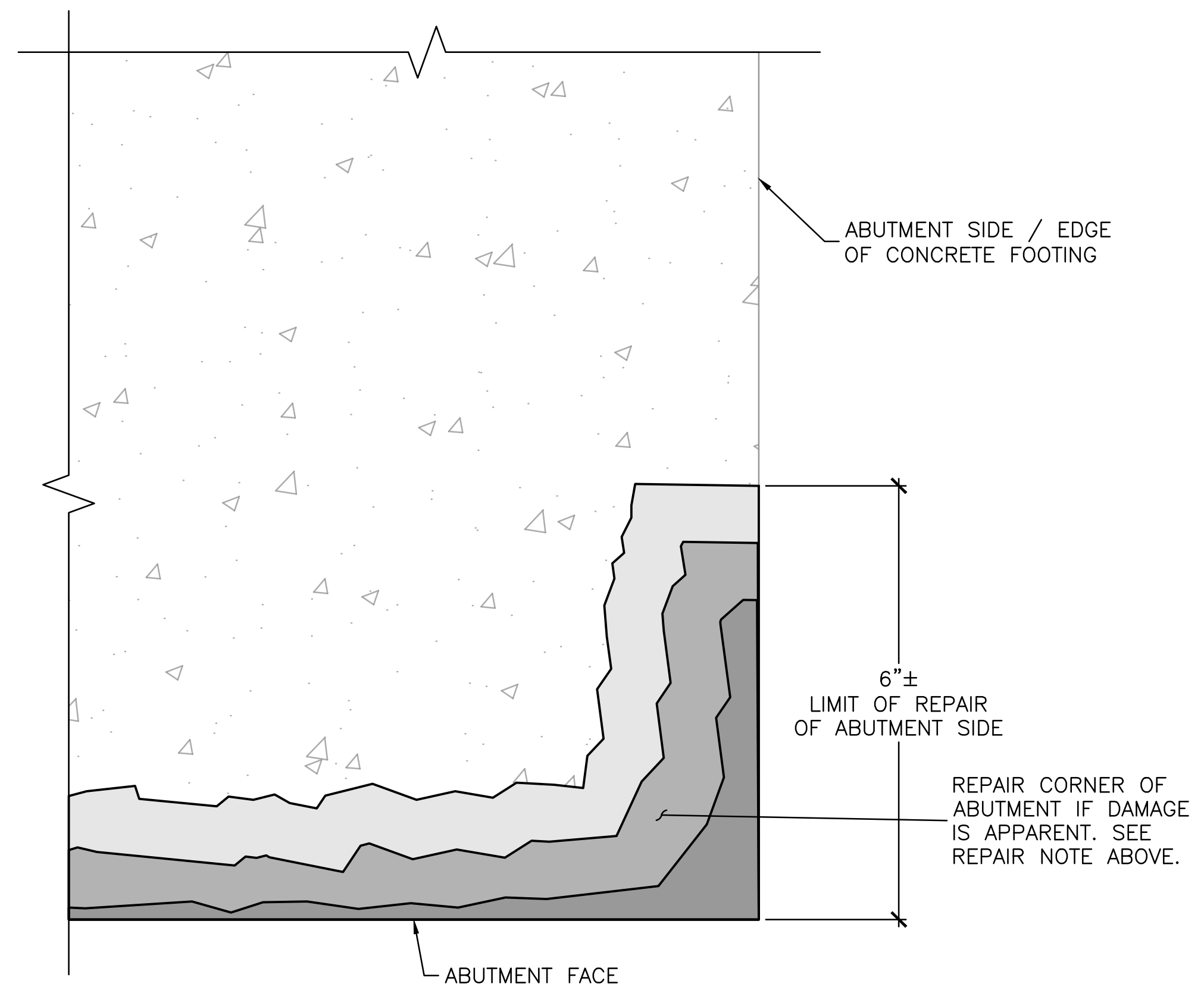


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3 TYPICAL ABUTMENT / FOOTING REPAIR ELEVATION
S2/S4 N.T.S.

REPAIR NOTES:
IN ADDITION TO THE DAMAGE TO THE ABUTMENT FACE, THERE MAY BE DAMAGE TO THE CORNER AND SIDE OF THE ABUTMENT OR THE CONCRETE FOOTING BELOW THE LIMITS OF STONEWORK, AS SHOWN IN THIS PLAN VIEW. ONCE THE WATER LEVEL HAS BEEN DROPPED TO THE APPROPRIATE LEVEL, GZA WILL DETERMINE REPAIR EXTENT OF CORNER AND SIDE OF ABUTMENT. THESE AREAS SHALL BE REPAIRED USING SIKATOP-123 PLUS REPAIR MORTAR (OR APPROVED EQUIVALENT) FOLLOWING A SIMILAR PROCEDURE TO THAT SHOWN ON SHEET S-3 IF DETERMINED TO BE NEEDED.



4 TYPICAL ABUTMENT / FOOTING CORNER REPAIR
S-4/S-4 N.T.S.

2	ISSUED FOR BIDDING	PDZ	10/13/22
1	CITY OF NEWTON REVIEW	BDW	9/14/22
0	ISSUED FOR PERMITTING	JRB	9/11/20
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CITY HALL PONDS MAINTENANCE DREDGING PROJECT
NEWTON CENTRE, MASSACHUSETTS

ARCH BRIDGE ABUTMENT / FOOTING REPAIR ELEVATION	
PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com	PREPARED FOR: CITY OF NEWTON DEPARTMENT OF PUBLIC WORKS 1000 COMMONWEALTH AVENUE NEWTON CENTRE, MA 02459
PROJ MGR: JRB	REVIEWED BY: JAA
DESIGNED BY: PDZ	DRAWN BY: PDZ
DATE: SEPTEMBER, 2022	PROJECT NO. 15.0166756.00
CHECKED BY: CLG	SCALE: AS NOTED
REVISION NO. 2	DRAWING S-4

