

# BARTLET MALL FROG POND RESTORATION PROJECT

149 High Street, Newburyport, Massachusetts



Mayor Sean R. Reardon, City of Newburyport

Kim Turner, Mayor's Office  
 Manager of Special Projects  
 City of Newburyport, 60 Pleasant Street  
 Newburyport, MA 01950  
 Project Manager

Contract Drawings for Bid - August 2, 2023



**OWNER:**


City of Newburyport, Massachusetts  
 60 Pleasant Street  
 Newburyport, MA 01950

**ENGINEERS:**

GEI Consultants, Inc.  
 400 Unicorn Park Drive  
 Woburn, MA 01801  
 (781) 721-4000

Aqueous Consultants, Inc.  
 1 Dundee Park Drive, Suite 10  
 Andover, MA 01810  
 (978) 470-1695

**BID SET - NOT FOR CONSTRUCTION**

	CITY OF NEWBURYPORT				Designed By:	SCALE:	<b>BARTLET MALL FROG POND RESTORATION PROJECT</b>  <b>COVER PAGE</b>	Sheet No.  <b>COVER</b>	
	60 PLEASANT STREET NEWBURYPORT, MA 01950				Checked By:				
	REV 0	8/1/23	AEH	MI	BID SET				Date:
	Rev No	Date	Drawn	Chkd	Description				8-1-2023
					Revisions				

Sheet Name	Sheet Title	Responsible Firm
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C-107A	FINAL GRADING NEAR DOCK	AQUEOUS
C-200	SITE PREPARATION DETAILS	GEI
C-201	LINER SYSTEM SECTION AND DETAILS	GEI
C-202	CIVIL DETAILS - 1	AQUEOUS
C-203	CIVIL DETAILS - 2	AQUEOUS
C-204	CIVIL DETAILS - 3	AQUEOUS
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C-206	CIVIL DETAILS - 5	AQUEOUS
C-207	CIVIL DETAILS - 6	AQUEOUS
C-300	NPDES WATER TREATMENT SYSTEM PROCESS FLOW DIAGRAM	GEI
C-301	WATER QUALITY SYSTEM ONE LINE DIAGRAM	AQUEOUS
C-302	PUMP SYSTEM INTERIOR LAYOUT	AQUEOUS
C-303	FOUNTAIN AS-BUILTS	OWNER/AQUEOUS
C-400	PUMP SYSTEM EXTERIOR DELEGATED DESIGN	OWNER/AQUEOUS
L-100	PLANTING PLAN	OWNER

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CITY OF NEWBURYPORT  
60 PLEASANT STREET  
NEWBURYPORT, MA 01950

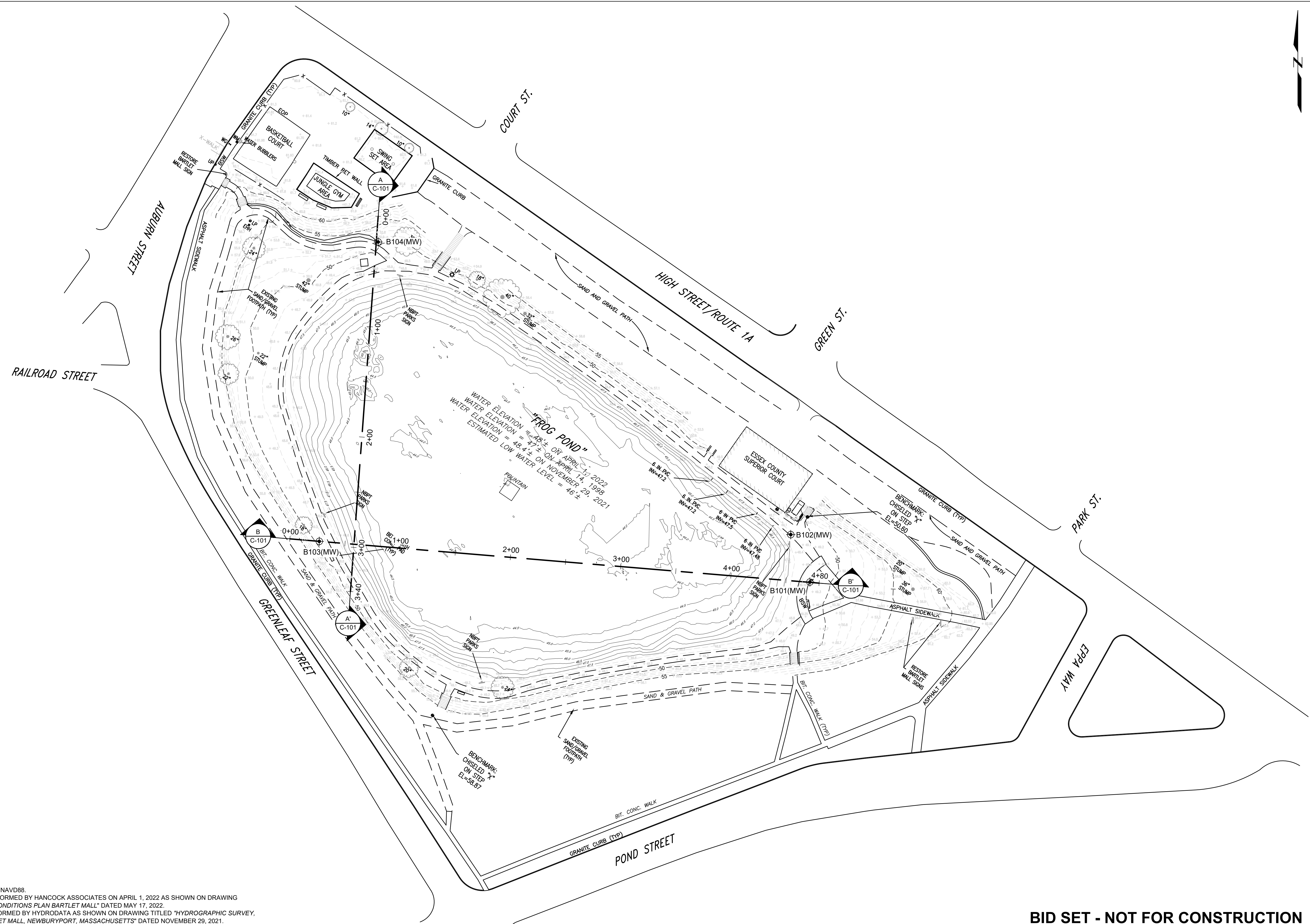
Rev No	Date	Drawn	Chkd	Description
REV 0	8/1/23	AEH	MI	BID SET
Revisions				

Designed By:  
Checked By:  
Date: 8-1-2023

SCALE:

**BARTLET MALL FROG POND  
RESTORATION PROJECT  
DRAWING INDEX**

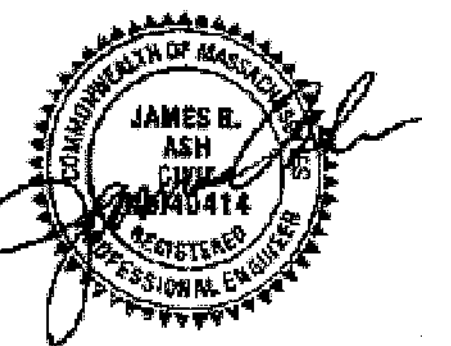
Sheet No.  
**G-001**



- LEGEND:**
- MONITORING WELL, GEI 2021
  - SEWER MANHOLE
  - DRAIN MANHOLE
  - CATCH BASIN
  - LIGHT POLE
  - UTILITY POLE
  - HYDRANT
  - SIGN
  - TRAFFIC SIGNAL
  - DRINKING FOUNTAIN
  - TOP OF CURB
  - BOTTOM OF CURB
  - BIT. BITUMINOUS
  - BSW BITUMINOUS SIDEWALK
  - CONC. CONCRETE
  - CLF CHAIN LINK FENCE
  - DECIDUOUS TREE
  - CHAIN LINK FENCE

**SOURCE:**

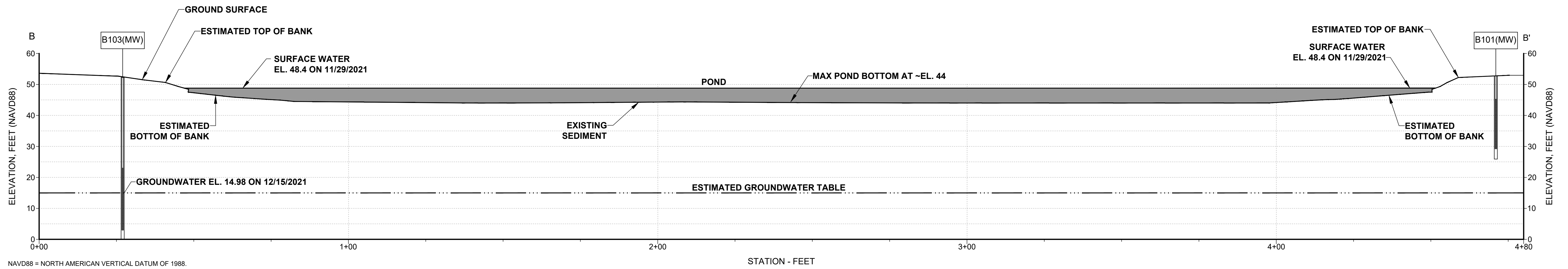
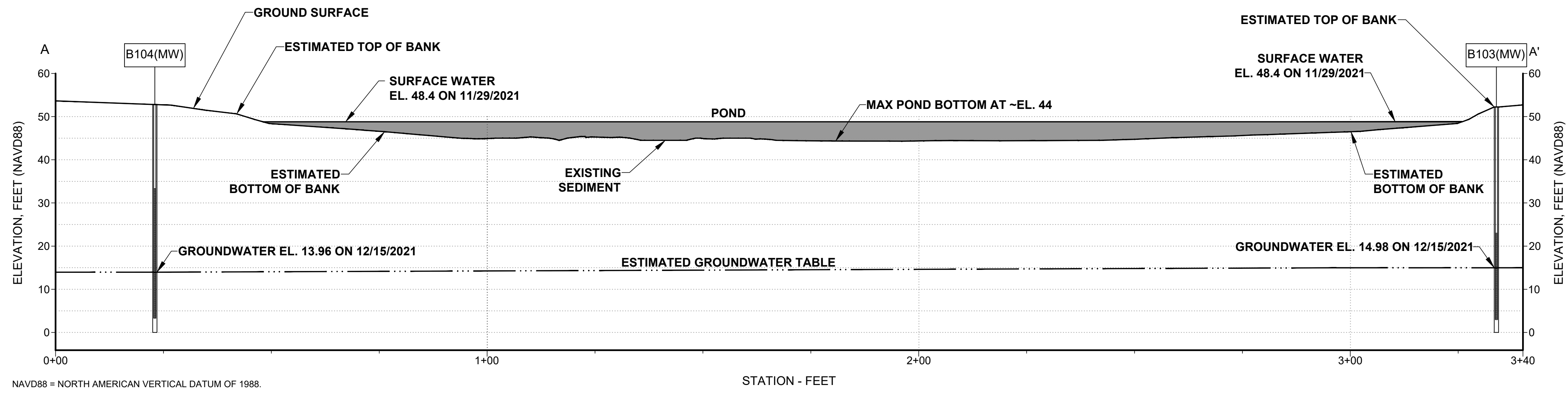
1. ELEVATION DATUM: NAVD88.
2. FIELD SURVEY PERFORMED BY HANCOCK ASSOCIATES ON APRIL 1, 2022 AS SHOWN ON DRAWING TITLED "EXISTING CONDITIONS PLAN BARTLET MALL" DATED MAY 17, 2022.
3. BATHYMETRY PERFORMED BY HYDRODATA AS SHOWN ON DRAWING TITLED "HYDROGRAPHIC SURVEY, FROG POND, BARTLET MALL, NEWBURYPORT, MASSACHUSETTS" DATED NOVEMBER 29, 2021.



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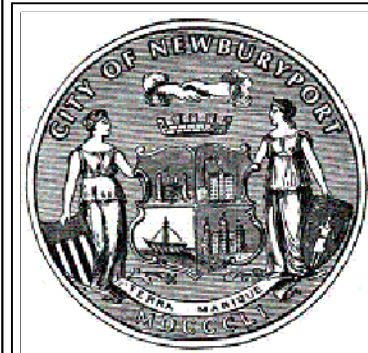
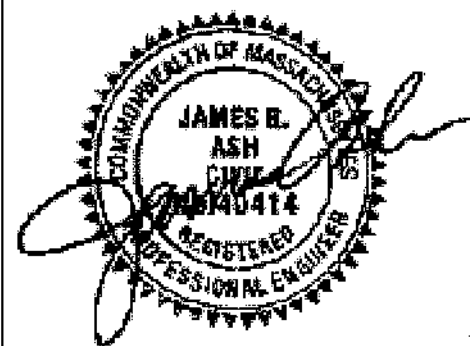
	CITY OF NEWBURYPORT 60 PLEASANT STREET NEWBURYPORT, MA 01950	 GEI CONSULTANTS, INC. 400 UNICORN PARK DRIVE WOBURN, MA 01801 (781)721-4000	REVO 08/01/23 K.W.	BID SET	Designed By: J.M.	SCALE: 1" = 40' 	<b>BARTLET MALL FROG POND          RESTORATION PROJECT          EXISTING CONDITIONS</b>	Sheet No.
	Rev No Date Drawn Chkd Description Revisions		Checked By: K.W.	Date: 08-01-2023	<b>C-100</b>			

MORIN, JOE B. Working\NEWBURYPORT, MA, CITY OF 2101333, Bartlett Mall Frog Pond\00\_CADD\Design\Civil\Bldg\Set\100\_2101333-EC.dwg - 7/26/2023



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MORIN, JOE B. Working\NEWBURYPORT MA, CITY OF\21013333\_Bartlett Mall Frog Pond\00\_CAD\Design\Civil\BID Set\C-101\_21013333-EC-Sections.dwg - 7/26/2023



CITY OF NEWBURYPORT  
60 PLEASANT STREET  
NEWBURYPORT, MA 01950

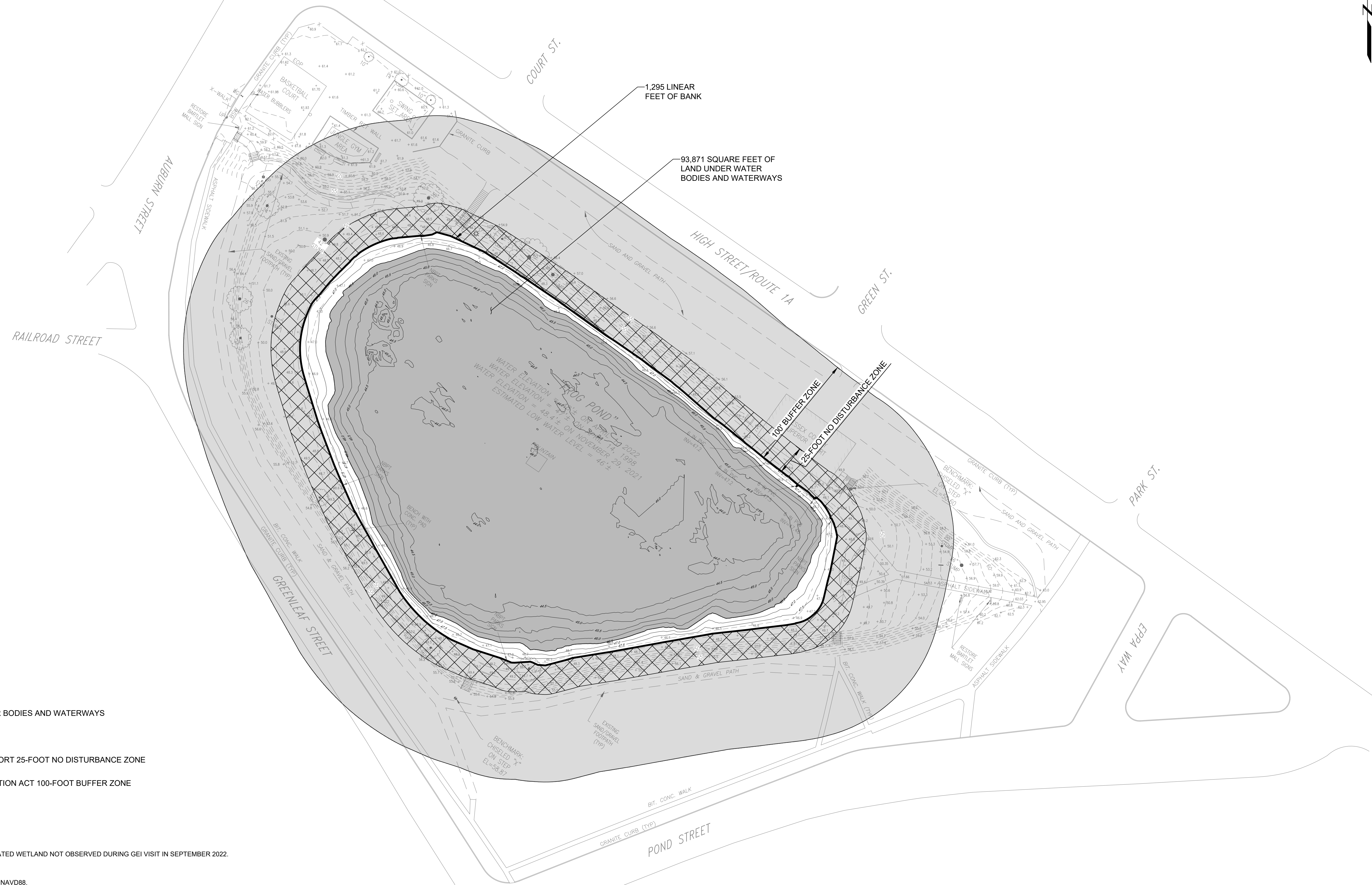






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REVO	08/01/23		K.W.	BID SET
				Revisions

Designed By:  
J.M.  
Checked By:  
K.W.  
Date:  
08-01-2023

**BARTLETT MALL FROG POND  
RESTORATION PROJECT**  
**EXISTING CONDITIONS SECTIONS**

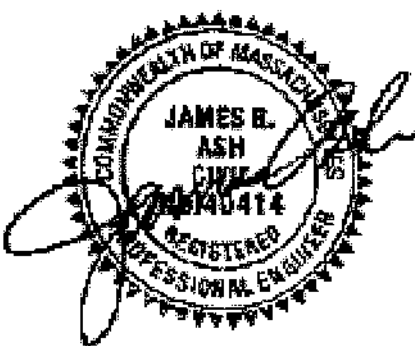
Sheet No.  
**C-101**



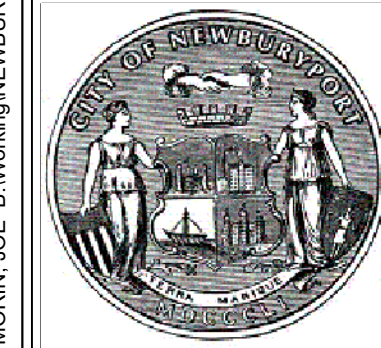
- LEGEND:**
-  APPROXIMATE LAND UNDER WATER BODIES AND WATERWAYS
  -  APPROXIMATE TOP OF BANK
  -  APPROXIMATE CITY OF NEWBURYPORT 25-FOOT NO DISTURBANCE ZONE
  -  APPROXIMATE WETLANDS PROTECTION ACT 100-FOOT BUFFER ZONE

**NOTES:**  
 1. BORDERING VEGETATED WETLAND NOT OBSERVED DURING GEI VISIT IN SEPTEMBER 2022.

**SOURCE:**  
 1. ELEVATION DATUM: NAVD88.  
 2. FIELD SURVEY PERFORMED BY HANCOCK ASSOCIATES ON APRIL 1, 2022 AS SHOWN ON DRAWING TITLED "EXISTING CONDITIONS PLAN BARTLET MALL" DATED MAY 17, 2022.  
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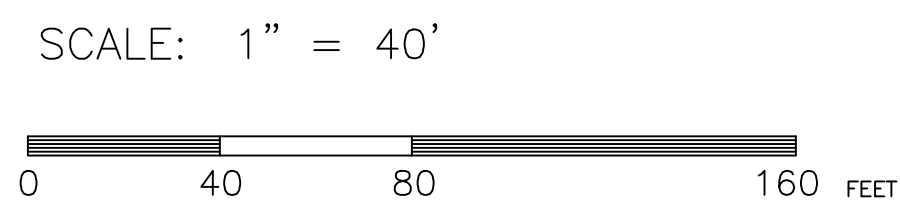


CITY OF NEWBURYPORT  
 60 PLEASANT STREET  
 NEWBURYPORT, MA 01950



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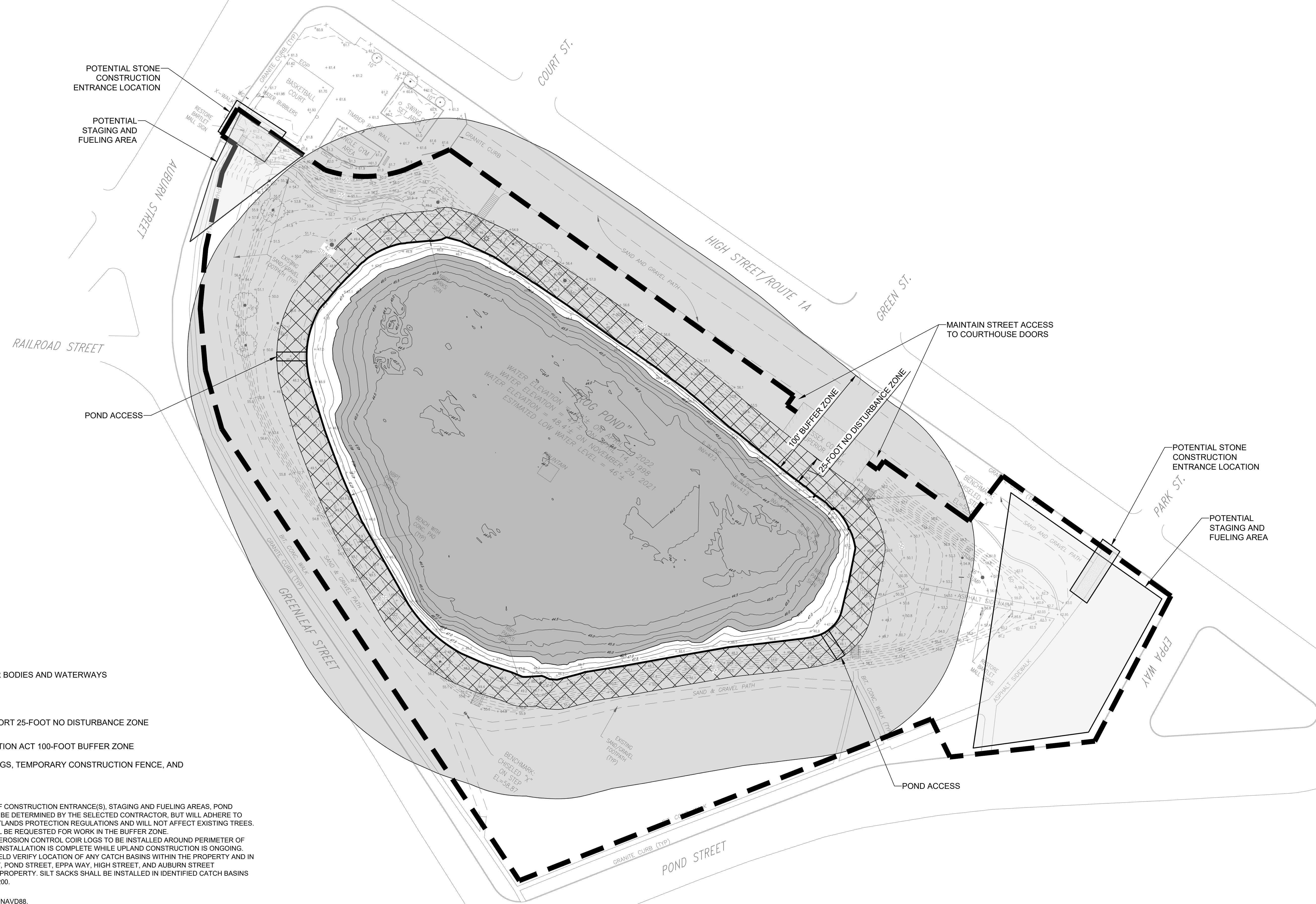
Designed By:  
J.M.  
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K.W.  
 Date:  
08-01-2023



**BARTLET MALL FROG POND  
 RESTORATION PROJECT  
 RESOURCE AREAS**

Sheet No.  
**C-102**

MORIN, JOE B. WorkingNEWBURYPORT.MA.CITY OF 2101333.Bartlett Mall Frog Pond00\_CADDesign\CH\102-2101333-Resource Areas.dwg - 7/28/2023



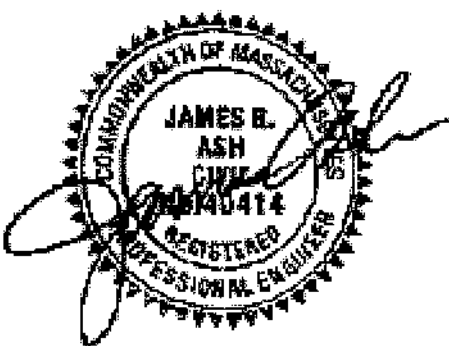
- LEGEND:**
- APPROXIMATE LAND UNDER WATER BODIES AND WATERWAYS
  - APPROXIMATE TOP OF BANK
  - APPROXIMATE CITY OF NEWBURYPORT 25-FOOT NO DISTURBANCE ZONE
  - APPROXIMATE WETLANDS PROTECTION ACT 100-FOOT BUFFER ZONE
  - 6-INCH EROSION CONTROL COIR LOGS, TEMPORARY CONSTRUCTION FENCE, AND LIMIT OF WORK (C-200)

**NOTES:**

- FINAL LOCATIONS OF CONSTRUCTION ENTRANCE(S), STAGING AND FUELING AREAS, POND ACCESSES, ETC. TO BE DETERMINED BY THE SELECTED CONTRACTOR, BUT WILL ADHERE TO NEWBURYPORT WETLANDS PROTECTION REGULATIONS AND WILL NOT AFFECT EXISTING TREES. LETTER PERMIT WILL BE REQUESTED FOR WORK IN THE BUFFER ZONE.
- ADDITIONAL 6-INCH EROSION CONTROL COIR LOGS TO BE INSTALLED AROUND PERIMETER OF POND AFTER LINER INSTALLATION IS COMPLETE WHILE UPLAND CONSTRUCTION IS ONGOING.
- CONTRACTOR TO FIELD VERIFY LOCATION OF ANY CATCH BASINS WITHIN THE PROPERTY AND IN GREENLEAF STREET, POND STREET, EPPA WAY, HIGH STREET, AND AUBURN STREET SURROUNDING THE PROPERTY. SILT SACKS SHALL BE INSTALLED IN IDENTIFIED CATCH BASINS PER DETAIL 2 ON C-200.

**SOURCE:**

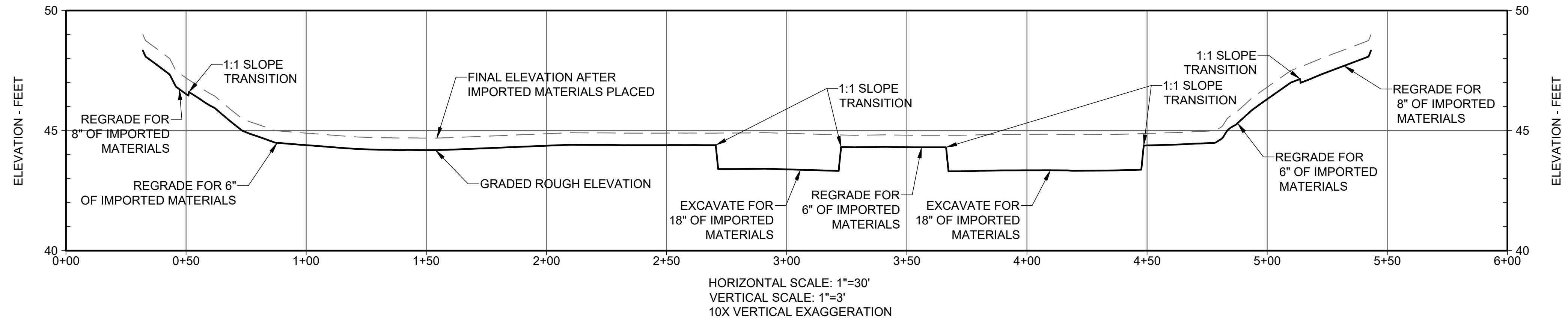
- ELEVATION DATUM: NAVD88.
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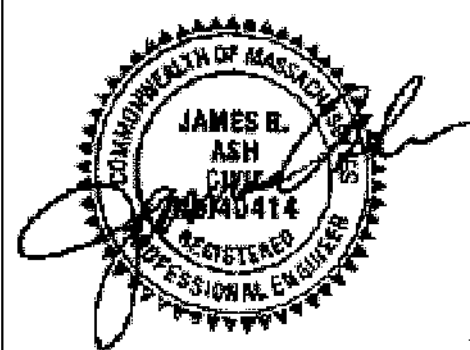
**BID SET - NOT FOR CONSTRUCTION**

	<b>CITY OF NEWBURYPORT</b> 60 PLEASANT STREET NEWBURYPORT, MA 01950	 <small>GEI CONSULTANTS, INC.          400 UNICORN PARK DRIVE          WOBURN, MA 01801          (781)721-4000</small>	REVO 08/01/23 K.W.	Description BID SET	Designed By: J.M.	SCALE: 1" = 40' 	<b>BARTLET MALL FROG POND          RESTORATION PROJECT          STAGING AND EROSION          CONTROL PLAN</b>	Checked By: K.W.	Date: 08-01-2023	Sheet No.  <b>C-103</b>
	Rev No Date Drawn Chkd		Revisions	Date: 08-01-2023						

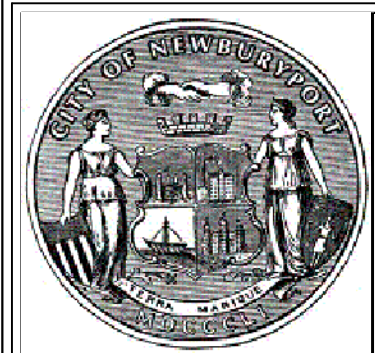
MORIN, JOE B. Working\NEWBURYPORT MA CITY OF2101333.Bartlett Mall Frog Pond\00\_CAD\Design\Civil\BID Set\C-103.2101333-Staging and Erosion Control Plan.dwg - 7/26/2023



- LEGEND:**
- REGRADE FOR 8" OF IMPORTED MATERIALS
  - REGRADE FOR 6" OF IMPORTED MATERIALS
  - EXCAVATE FOR 18" OF IMPORTED MATERIALS
  - 1:1 SLOPE TRANSITION BETWEEN EXCAVATION DEPTH AREAS



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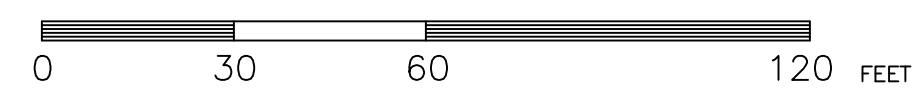
CITY OF NEWBURYPORT  
60 PLEASANT STREET  
NEWBURYPORT, MA 01950



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08-01-2023

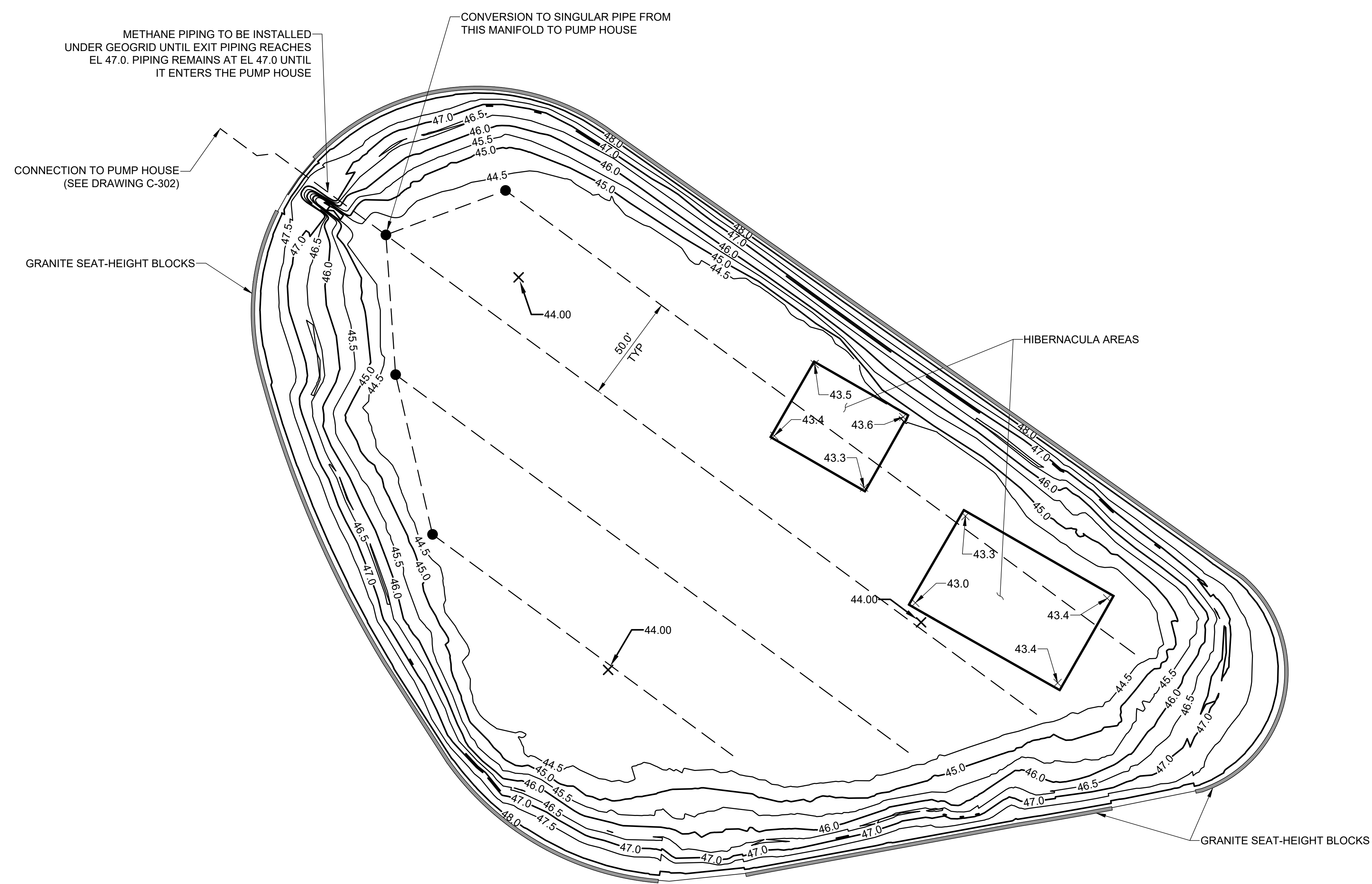
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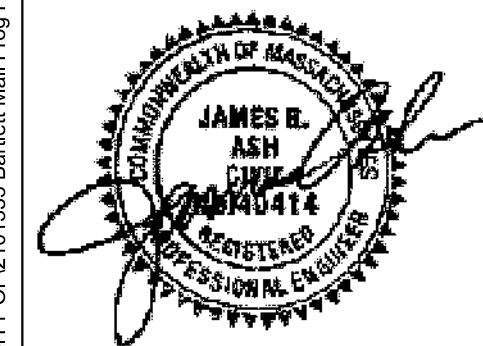
**BARTLET MALL FROG POND  
RESTORATION PROJECT  
POND ROUGH GRADING PLAN**

Sheet No.

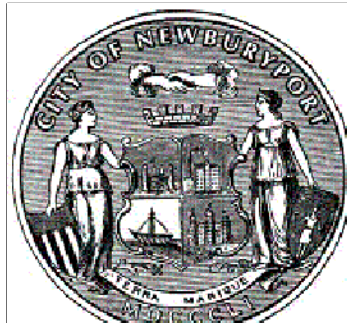

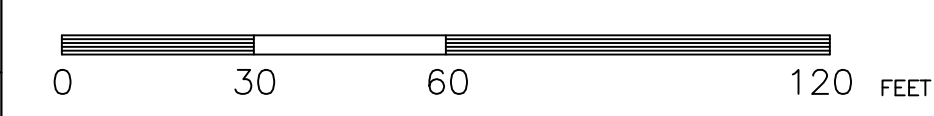
**C-104**



**LEGEND:**  
 --- METHANE SYSTEM CONSISTING OF MULTI-FLOW LEAK DETECTION AND VENTING SYSTEM OR ENGINEER APPROVED EQUIVALENT  
 ● MANIFOLD CONNECTION PER MANUFACTURE SPECIFICATION



















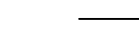

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 <p>CITY OF NEWBURYPORT 60 PLEASANT STREET NEWBURYPORT, MA 01950</p>	 <p>GEI Consultants GEI CONSULTANTS, INC. 400 UNICORN PARK DRIVE WOBURN, MA 01801 (781)721-4000</p>	REVO 08/01/23 K.W. BID SET Rev No Date Drawn Chkd Description Revisions	Designed By: J.M. Checked By: K.W. Date: 08-01-2023	SCALE: 1" = 30' 	<p><b>BARTLET MALL FROG POND RESTORATION PROJECT</b></p> <p><b>METHANE SYSTEM</b></p>	Sheet No.  <b>C-105</b>

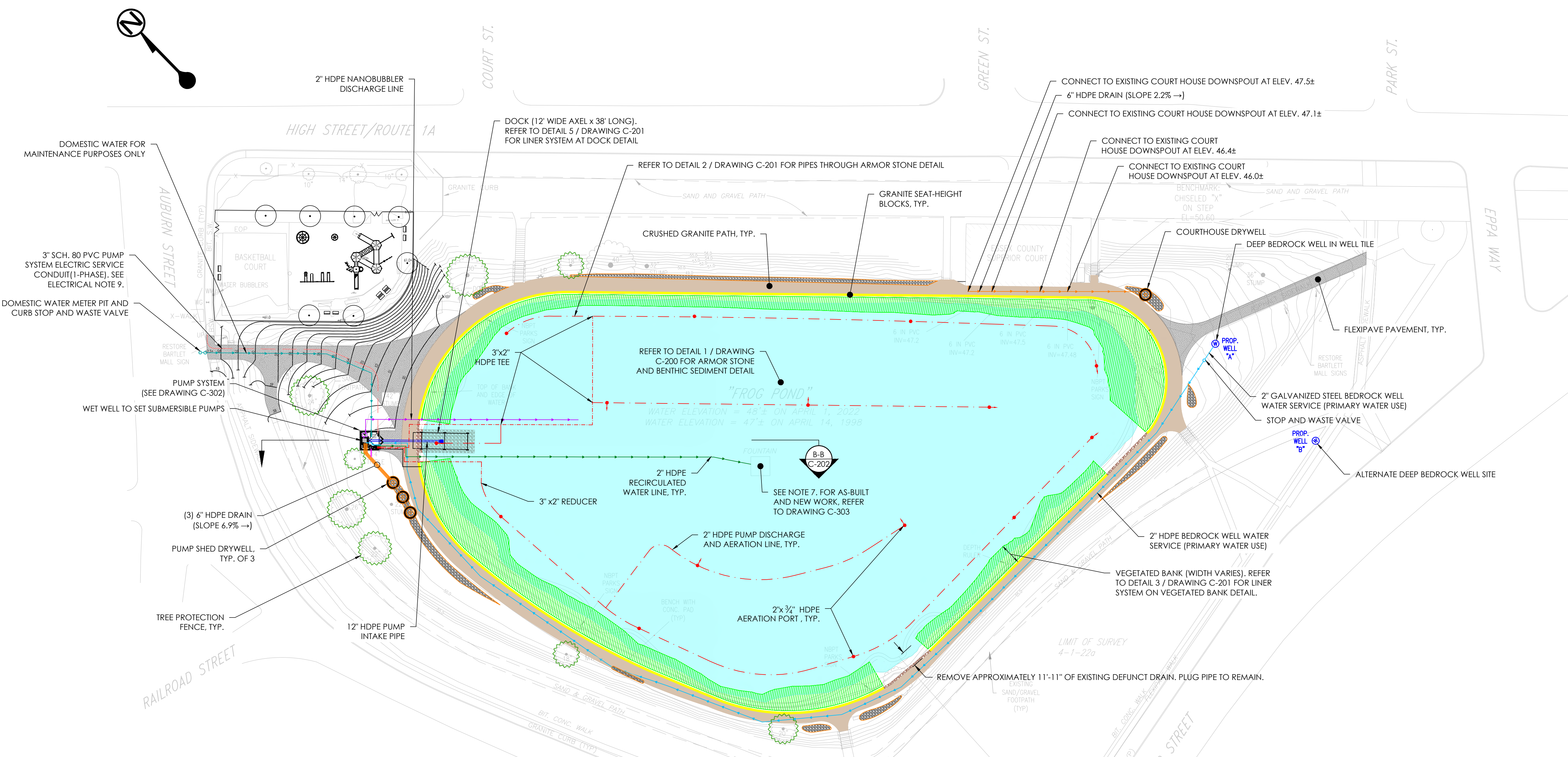
MORIN, JOE B:\Working\NEWBURYPORT MA, CITY OF\2101333\_Bartlett Mall Frog Pond\00\_CAD\Design\CH\030\Bid Set\C-105 2101333-Methane System.dwg - 7/26/2023



**LEGEND**

-  CRUSHED GRANITE PATH
-  POROUS FLEXIBLE PAVING / WALKWAY
-  VEGETATED BANK
-  GRANITE SEAT-HEIGHT BLOCKS
-  PROPOSED POND ACCESS POINT
-  BEDROCK WELL LINE
-  DOMESTIC WATER LINE
-  ELECTRICAL SERVICE
-  DISCHARGE AND AERATION LINE
-  RECIRCULATED WATER LINE
-  INTAKE PIPE
-  DRYWELL DRAIN PIPE
-  SURFACE WATER (APPROXIMATE)
-  AERATION OUTLET (WITH NOZZLE DIRECTION)
-  AERATION OUTLET (NOZZLE UP)
-  TREE PROTECTION FENCE
-  NANOBUBBLE PIPE
-  METHANE VENT PIPE

- GENERAL NOTES:**
1. THE LOCATIONS OF EXISTING SUBSURFACE UTILITIES SHOWN ON THE DRAWINGS WERE COMPILED FROM AVAILABLE RECORD DRAWINGS AND ARE NOT WARRANTED TO BE CORRECT. LOCATIONS ARE APPROXIMATE ONLY AND IN SOME CASES MAYBE INCOMPLETE. NOTIFY ALL AGENCIES REQUIRED AND VERIFY THE LOCATION OF EXISTING SUBSURFACE UTILITIES PRIOR TO PERFORMING WORK.
  2. VISIT THE SITE WITH THE CONTRACT DOCUMENTS AND INVESTIGATE ALL CONDITIONS AFFECTING THIS WORK. BE FAMILIAR WITH THE LOCATION AND SITE OF THE WORK, AND VERIFY DIMENSIONS, QUANTITIES AND ACTUAL INSTALLATION CONDITIONS, CONFLICTS, AND OPPORTUNITY FOR STORAGE FACILITIES.
  3. ALL INSTALLED EQUIPMENT AND MATERIALS SHALL BE UL LISTED, WHERE LISTED, FOR ITS INTENDED PURPOSE. PERFORM WORK IN A MANNER ACCEPTABLE TO THE ENGINEER SO THAT THE INTERFERENCE WITH, OR INCONVENIENCE TO ABUTTERS FROM CONSTRUCTION WORK IS KEPT TO A MINIMUM. MAINTAIN SAFE AND REASONABLE ACCESS TO AND EGRESS FROM ABUTTING PROPERTIES AT ALL TIMES.
  4. MAINTAIN AREAS IN AND AROUND THE WORK ZONE FREE AND CLEAR OF DEBRIS AT ALL TIMES. NO STOCKPILING OF EQUIPMENT OR MATERIALS SHALL BE PERMITTED OUTSIDE OF FIXED WORK ZONES.
  5. STRAP, CLAMP, EPOXY BOND, OR USE ENGINEER-APPROVED ALTERNATIVE, TO ATTACH THE HDPE/LDPE LINER TO EXISTING CONCRETE FOUNTAIN FOUNDATION. DRILLING INTO CONCRETE FOUNTAIN FOUNDATION SHALL NOT BE PERFORMED WITHOUT APPROVAL FROM OWNER AND ENGINEER.




- GENERAL NOTES:**
1. THE LOCATIONS OF EXISTING SUBSURFACE UTILITIES SHOWN ON THE DRAWINGS WERE COMPILED FROM AVAILABLE RECORD DRAWINGS (BY OTHERS) AND ARE NOT WARRANTED TO BE CORRECT. LOCATIONS ARE APPROXIMATE ONLY AND IN SOME CASES MAYBE INCOMPLETE. NOTIFY ALL AGENCIES REQUIRED AND VERIFY THE LOCATION OF EXISTING SUBSURFACE UTILITIES PRIOR TO PERFORMING WORK.
  2. VISIT THE SITE WITH THE CONTRACT DOCUMENTS AND INVESTIGATE ALL CONDITIONS AFFECTING THIS WORK. BE FAMILIAR WITH THE LOCATION AND SITE OF THE WORK, AND VERIFY DIMENSIONS, QUANTITIES AND ACTUAL INSTALLATION CONDITIONS, CONFLICTS, AND OPPORTUNITY FOR STORAGE FACILITIES.
  3. ALL INSTALLED EQUIPMENT AND MATERIALS SHALL BE UL LISTED, WHERE LISTED, FOR ITS INTENDED PURPOSE.
  4. PERFORM WORK IN A MANNER ACCEPTABLE TO THE ENGINEER SO THAT THE INTERFERENCE WITH, OR INCONVENIENCE TO ABUTTERS FROM CONSTRUCTION WORK IS KEPT TO A MINIMUM. REFER TO SECTION 00 1000 FOR ADDITIONAL REQUIREMENTS.
  5. MAINTAIN SAFE AND REASONABLE ACCESS TO AND EGRESS FROM ABUTTING PROPERTIES AT ALL TIMES.
  6. MAINTAIN AREAS IN AND AROUND THE WORK ZONE FREE AND CLEAR OF DEBRIS AT ALL TIMES. NO STOCKPILING OF EQUIPMENT OR MATERIALS SHALL BE PERMITTED OUTSIDE OF FIXED WORK ZONES.
  7. STRAP, CLAMP, EPOXY BOND, OR USE ENGINEER-APPROVED ALTERNATIVE, TO ATTACH THE HDPE/LDPE LINER TO EXISTING CONCRETE FOUNTAIN FOUNDATION. DRILLING INTO CONCRETE FOUNTAIN FOUNDATION SHALL NOT BE PERFORMED WITHOUT APPROVAL FROM OWNER AND ENGINEER.

- ELECTRICAL NOTES:**
1. CONDUIT RUNS SHOWN ARE APPROXIMATE. LOCATIONS MAY BE FIELD ADJUSTED TO MATCH EXISTING AND PROPOSED CONDITIONS AS REQUIRED BY THE ENGINEER.
  2. WIRING WITHIN DISTRIBUTION PANEL, CABINETS, AND/OR CONTROL PANELS SHALL BE LABELED AND INSTALLED NEATLY.
  3. ALL CONDUIT AND EQUIPMENT TO BE INSTALLED AND GROUNDED IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE, MASSACHUSETTS ELECTRICAL CODE, AND APPLICABLE LOCAL CODES.
  4. WIRE SIZES SHALL BE BASED ON AMERICAN WIRE GAGE (AWG). WIRE, CABLE, AND/OR CONDUITS FURNISHED AND INSTALLED SHALL BE NEW. WIRE AND CABLE SHALL BE PROTECTED FROM WEATHER AND DAMAGE DURING STORAGE AND HANDLING.
  5. NO WIRE SHALL BE DRAWN INTO ANY CONDUIT UNTIL ALL WORK WHICH MAY CAUSE DAMAGE TO SAID WIRE IS COMPLETE.
  6. ELECTRICAL SERVICE TO THE PUMP SYSTEM AND BEDROCK WELL TO BE PROVIDED BY A LICENSED ELECTRICAL CONTRACTOR. CONTRACTOR SHALL PROVIDE CONDUIT AND WIRE UP POLE(S) WITH ENOUGH SLACK FOR SERVICE CONNECTION. CONTRACTOR TO COORDINATE WITH ELECTRICAL SERVICE PROVIDER FOR SERVICE CONNECTION TO PUMP SYSTEM. CONTRACTOR IS RESPONSIBLE FOR ELECTRICAL SERVICE CONNECTIONS, COORDINATION WITH ELECTRICAL SERVICE PROVIDER, AND RELATED FEES FROM ELECTRICAL SERVICE PROVIDER.
  7. WIRE SHALL BE CONTINUOUS FROM HANDHOLE TO HANDHOLE WITHOUT RUNNING SPLICES IN CONDUITS.
  8. WIRE SPLICES SHALL BE IN ACCORDANCE WITH SECTION 813 FOR THE MASSACHUSETTS HIGHWAY DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, DATED 1988 AS AMENDED.
  9. ALL WIRE SHALL BE SIZED FOR AMPERAGE AND MINIMUM VOLTAGE DROP PER EACH ELECTRICAL DEVICE MANUFACTURER (SEE SECTION 26 0500).

DESIGN BY:



**AQUEOUS CONSULTANTS, LLC**  
 1 Dundee Park Drive, Suite 10  
 Andover, MA 01810  
 (978) 470-1695  
 www.aqueous.net



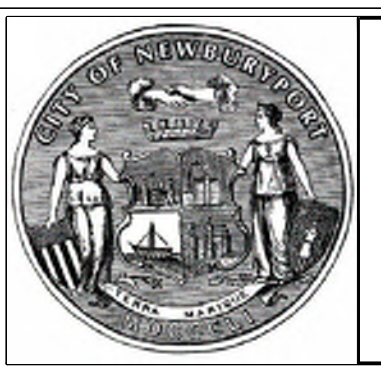
811  
 Know what's below.  
 Call before you dig.  
 Michael Igo  
 8/1/23

**BID SET - NOT FOR CONSTRUCTION**

**BARTLET MALL FROG POND RESTORATION PROJECT**  
**FINAL CONDITIONS**

Sheet No.

**C-106**



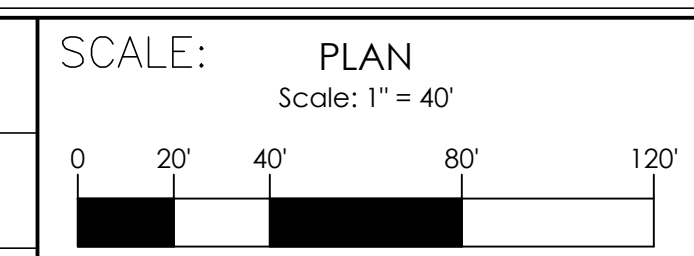
CITY OF NEWBURYPORT  
 60 PLEASANT STREET  
 NEWBURYPORT, MA 01950

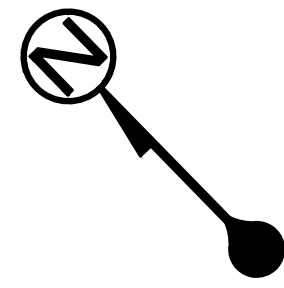
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Designed By:  
A. Hammond

Checked By:  
M. Igo

Date:  
8-1-2023



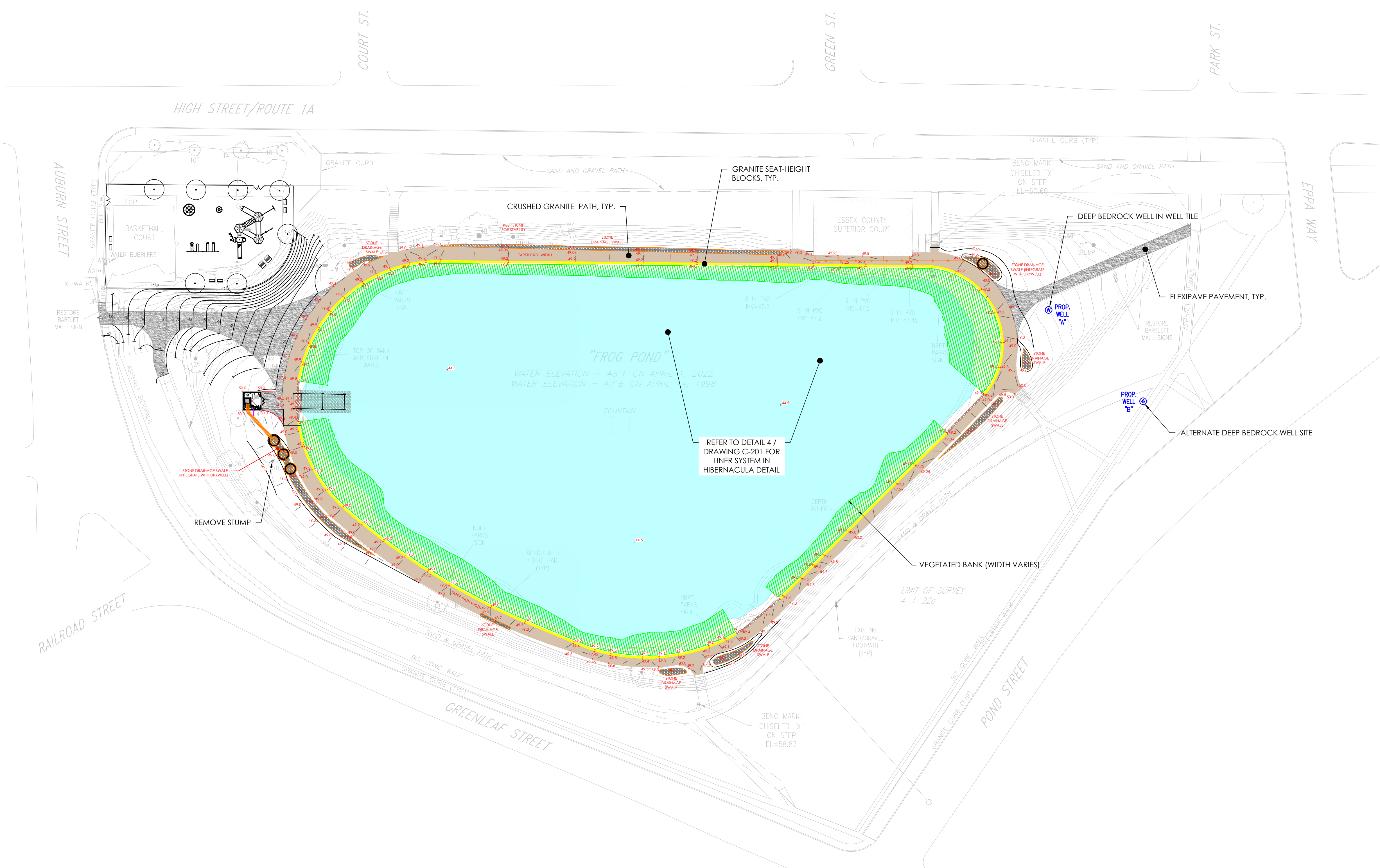


**LEGEND**

- CRUSHED GRANITE PATH
- POROUS FLEXIBLE PAVING / WALKWAY
- VEGETATED BANK
- GRANITE SEAT-HEIGHT BLOCKS
- PROPOSED POND ACCESS POINT
- SURFACE WATER (APPROXIMATE)
- 50.0 PROPOSED CONTOUR AND ELEVATION
- PROPOSED SURFACE DRAINAGE DIRECTION
- +50.0 PROPOSED SPOT GRADE

**GENERAL NOTES:**

1. THE LOCATIONS OF EXISTING SUBSURFACE UTILITIES SHOWN ON THE DRAWINGS WERE COMPILED FROM AVAILABLE RECORD DRAWINGS (BY OTHERS) AND ARE NOT WARRANTED TO BE CORRECT. LOCATIONS ARE APPROXIMATE ONLY AND IN SOME CASES MAYBE INCOMPLETE. NOTIFY ALL AGENCIES REQUIRED AND VERIFY THE LOCATION OF EXISTING SUBSURFACE UTILITIES PRIOR TO PERFORMING WORK. BE FAMILIAR WITH THE LOCATION AND SITE OF THE WORK, AND VERIFY DIMENSIONS, QUANTITIES AND ACTUAL INSTALLATION CONDITIONS, CONFLICTS, AND OPPORTUNITY FOR STORAGE FACILITIES.
2. VISIT THE SITE WITH THE CONTRACT DOCUMENTS AND INVESTIGATE ALL CONDITIONS AFFECTING THIS WORK.
3. ALL INSTALLED EQUIPMENT AND MATERIALS SHALL BE UL LISTED, WHERE LISTED, FOR ITS INTENDED PURPOSE.
4. PERFORM WORK IN A MANNER ACCEPTABLE TO THE ENGINEER SO THAT THE INTERFERENCE WITH, OR INCONVENIENCE TO ABUTTERS FROM CONSTRUCTION WORK IS KEPT TO A MINIMUM. REFER TO SECTION 00 1000 FOR ADDITIONAL REQUIREMENTS.
5. MAINTAIN SAFE AND REASONABLE ACCESS TO AND EGRESS FROM ABUTTING PROPERTIES AT ALL TIMES.
6. MAINTAIN AREAS IN AND AROUND THE WORK ZONE FREE AND CLEAR OF DEBRIS AT ALL TIMES. NO STOCKPILING OF EQUIPMENT OR MATERIALS SHALL BE PERMITTED OUTSIDE OF FIXED WORK ZONES.



DESIGN BY:

**AQUEOUS CONSULTANTS, LLC**  
 1 Dundee Park Drive, Suite 10  
 Andover, MA 01810  
 (978) 470-1695  
 www.aqueous.net

Know what's below.  
Call before you dig.

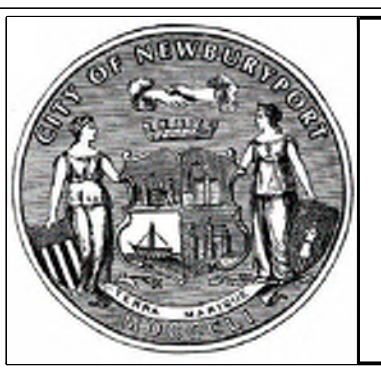
*Michael Igo*  
8/1/23

**BID SET - NOT FOR CONSTRUCTION**

**BARTLETT MALL FROG POND  
 RESTORATION PROJECT  
 FINAL GRADING**

Sheet No.

**C-107**



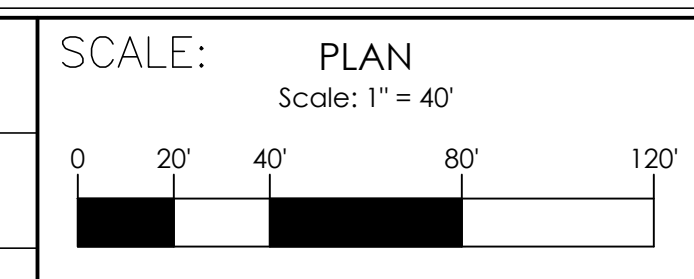
CITY OF NEWBURYPORT  
 60 PLEASANT STREET  
 NEWBURYPORT, MA 01950

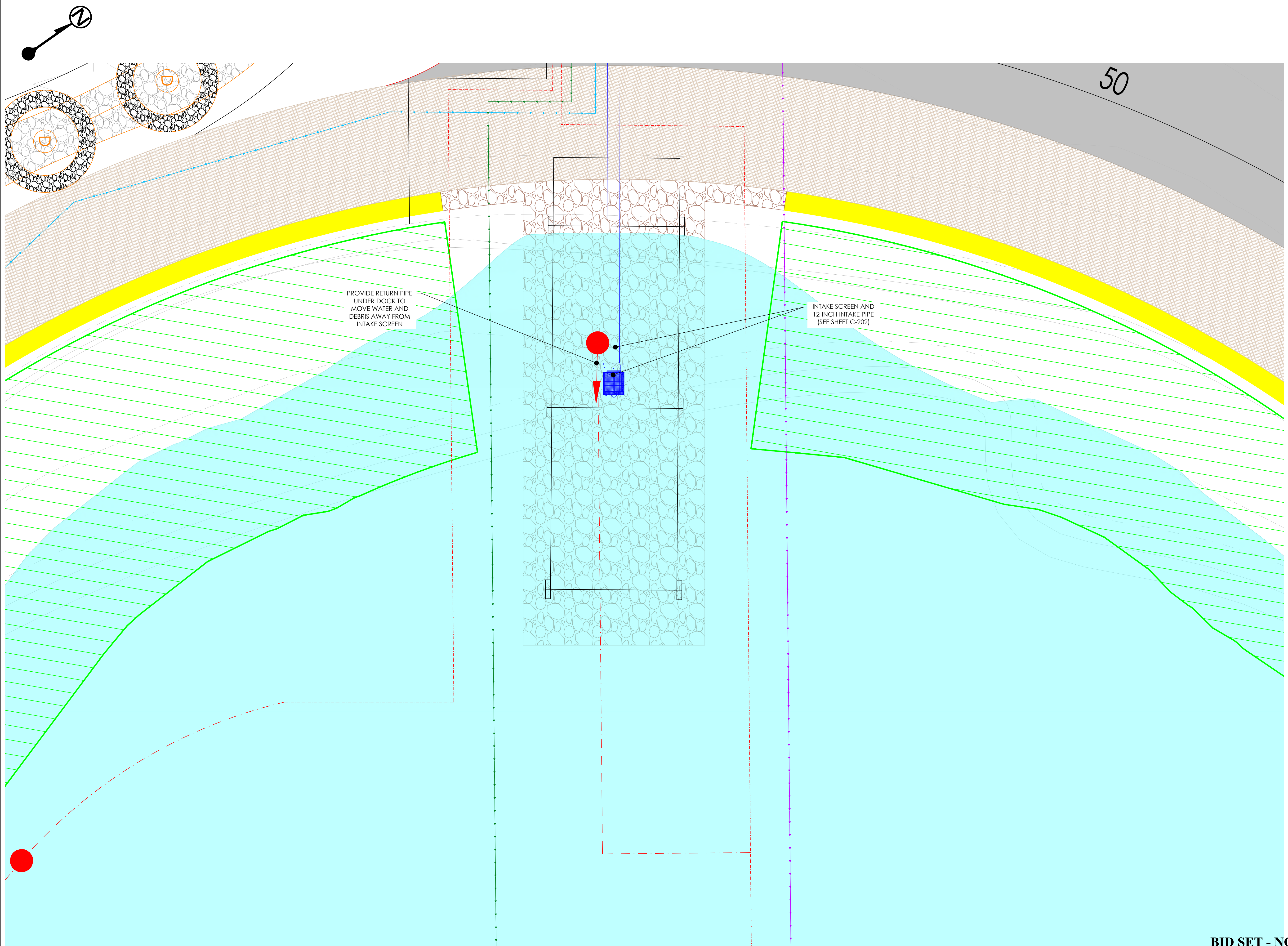
Rev No	Date	Drawn	Chkd	Description
REV 0	8/1/23	AEH	MI	BID SET
Revisions				

Designed By:  
A. Hammond

Checked By:  
M. Igo

Date:  
8-1-2023





**LEGEND**

- CRUSHED GRANITE PATH
- POROUS FLEXIBLE PAVING / WALKWAY
- VEGETATED BANK
- GRANITE SEAT-HEIGHT BLOCKS
- PROPOSED POND ACCESS POINT
- BEDROCK WELL LINE
- DOMESTIC WATER LINE
- ELECTRICAL SERVICE
- DISCHARGE AND AERATION LINE
- RECIRCULATED WATER LINE
- INTAKE PIPE
- DRYWELL DRAIN PIPE
- SURFACE WATER (APPROXIMATE)
- AERATION OUTLET (WITH NOZZLE DIRECTION)
- AERATION OUTLET (NOZZLE UP)
- TREE PROTECTION FENCE
- NANOBUBBLER PIPE
- METHANE VENT PIPE

PROVIDE RETURN PIPE UNDER DOCK TO MOVE WATER AND DEBRIS AWAY FROM INTAKE SCREEN

INTAKE SCREEN AND 12-INCH INTAKE PIPE (SEE SHEET C-202)

50

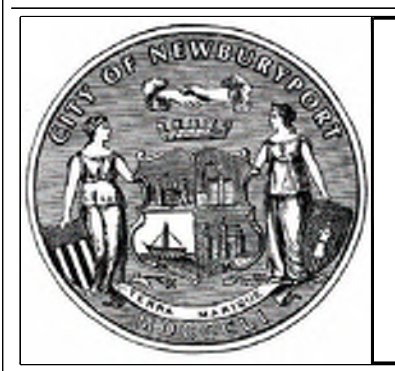
DESIGN BY:

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*Michael Igo*  
8/1/23

**BID SET - NOT FOR CONSTRUCTION**



CITY OF NEWBURYPORT  
 60 PLEASANT STREET  
 NEWBURYPORT, MA 01950

Rev No	Date	Drawn	Chkd	Description
REV 0	8/1/23	AEH	MI	BID SET
Revisions				

Designed By:  
A. Hammond

Checked By:  
M. Igo

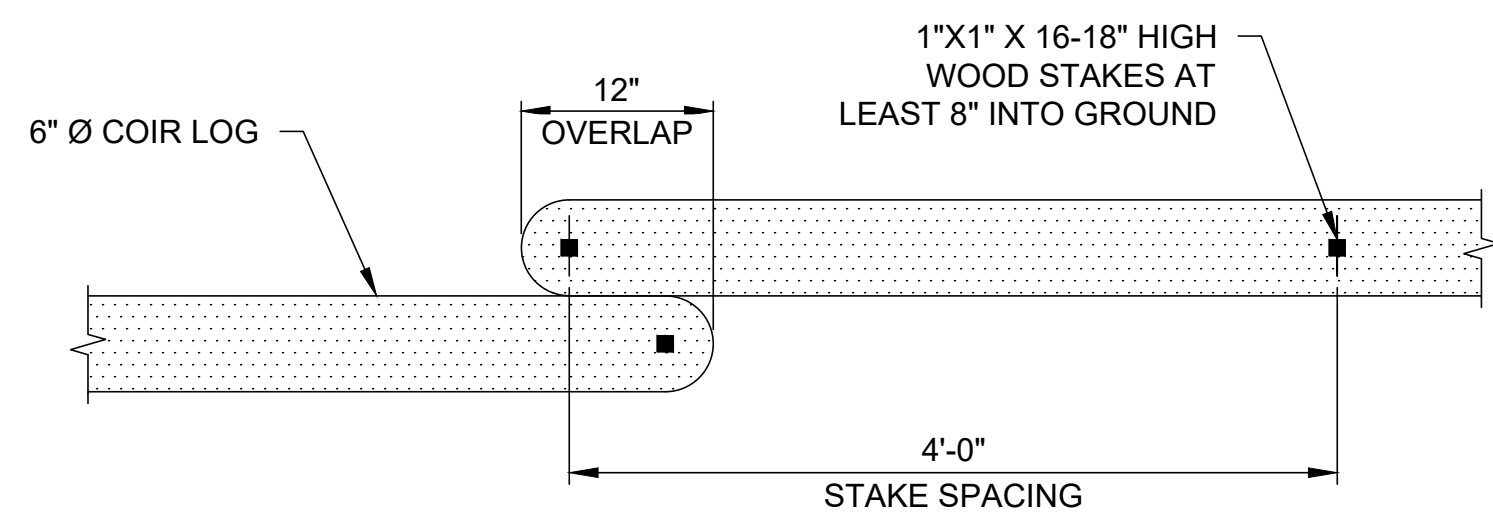
Date:  
8-1-2023

SCALE: PLAN  
Scale: 1" = 4'

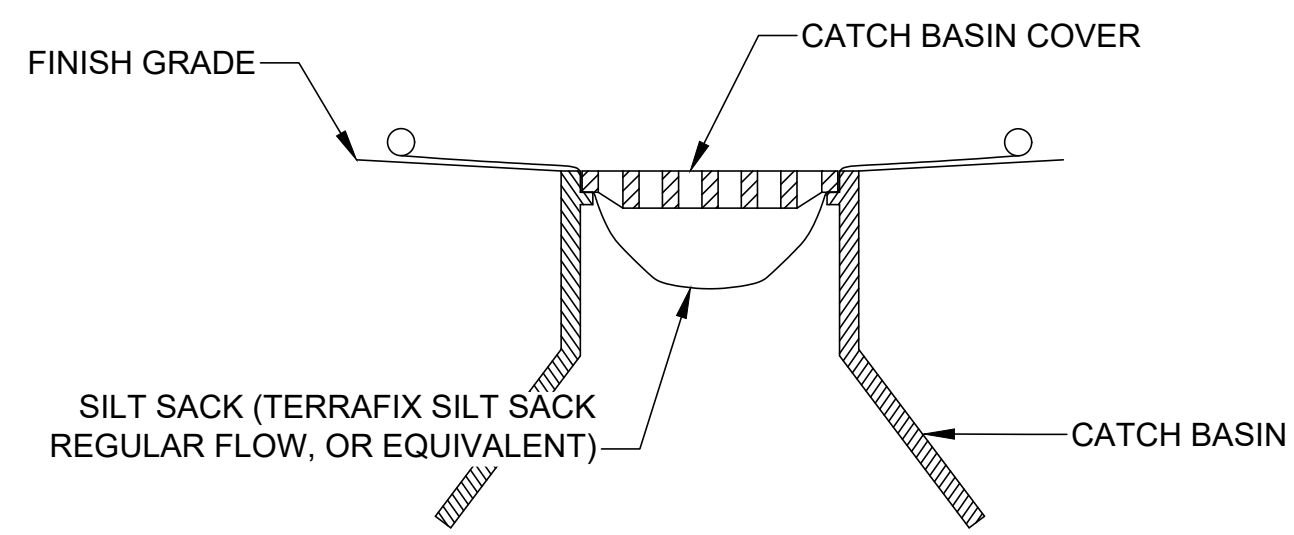
**BARTLET MALL FROG POND  
 RESTORATION PROJECT**

**FINAL GRADING NEAR DOCK**

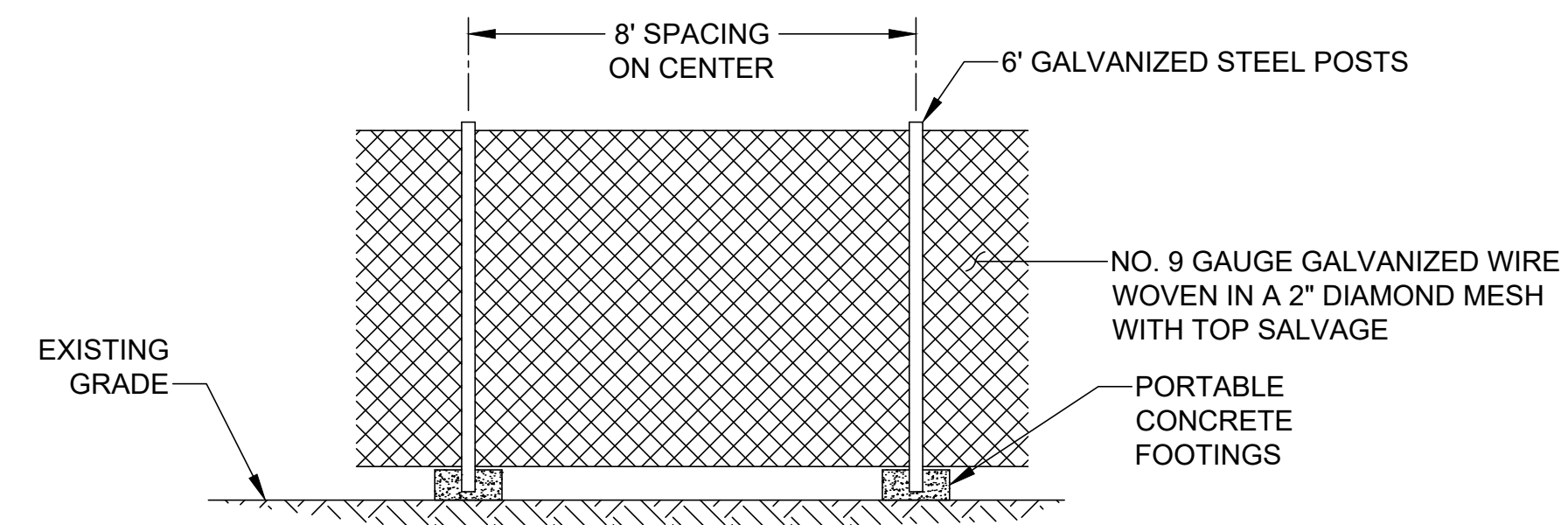
Sheet No.  
**C-107A**



1 TYPICAL DETAIL-PLAN  
 C-103 COIR LOG STAKING AND OVERLAP NO SCALE



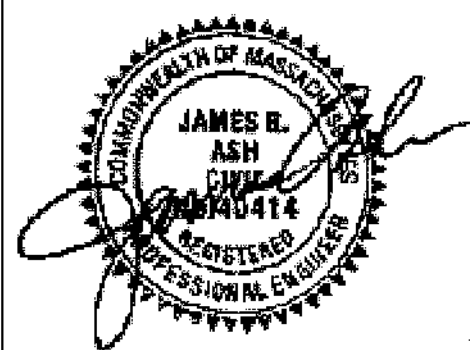
2 TYPICAL DETAIL  
 C-103 SILT SACK NO SCALE



3 TYPICAL DETAIL  
 C-103 TEMPORARY CONSTRUCTION FENCING NO SCALE

NOTE:  
 1. INCLUDE LOCKABLE DOUBLE SWING GATES AT CONSTRUCTION ENTRANCES.

MORIN, JOE B: Working\NEWBURYPORT MA, CITY OF 2101333, Barnhart Mall Frog Pond\00\_CAD\Design\Civil\Site\200 2101333-Site Prep Details.dwg - 7/26/2023



**BID SET - NOT FOR CONSTRUCTION**

	CITY OF NEWBURYPORT 60 PLEASANT STREET NEWBURYPORT, MA 01950	 <b>GEI</b> Consultants <small>GEI CONSULTANTS, INC.          400 UNICORN PARK DRIVE          WOBURN, MA 01801          (781)721-4000</small>									Designed By: J.M.	<b>BARTLET MALL FROG POND          RESTORATION PROJECT</b>  <b>SITE PREPARATION DETAILS</b>	Sheet No.		
													Checked By: K.W.		
														Date: 08-01-2023	
															<b>C-200</b>