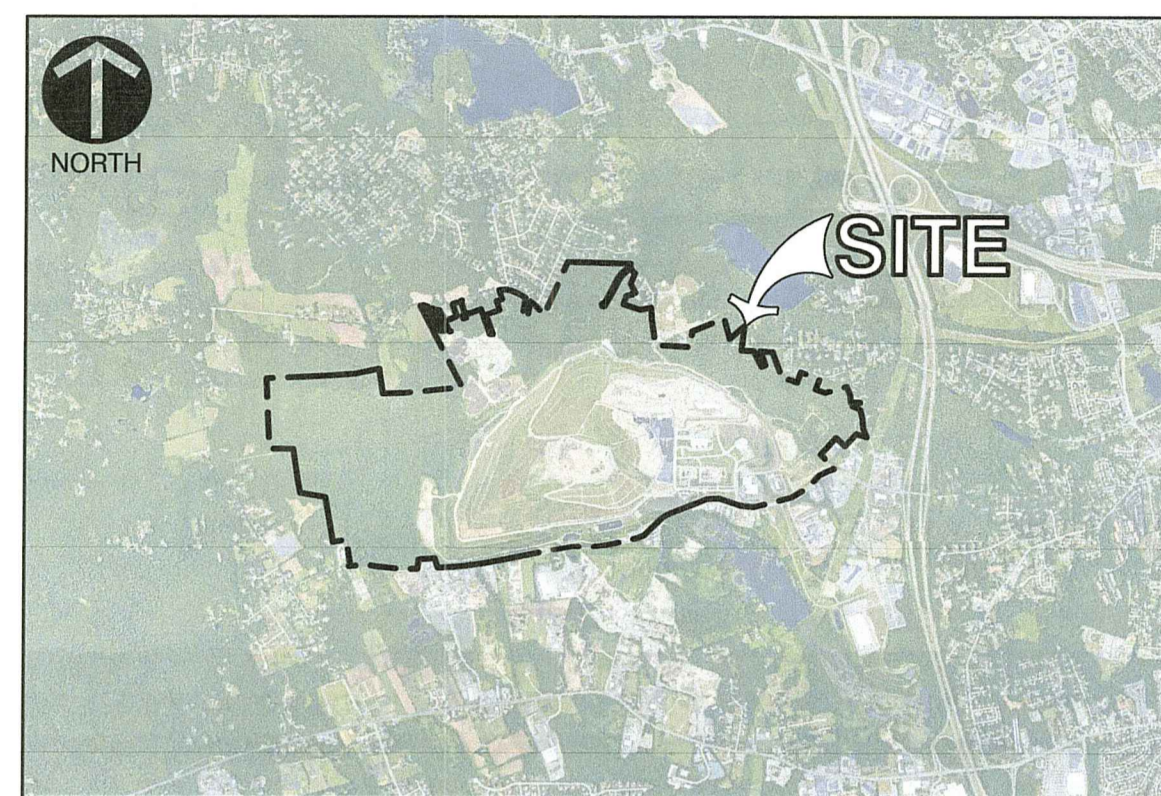




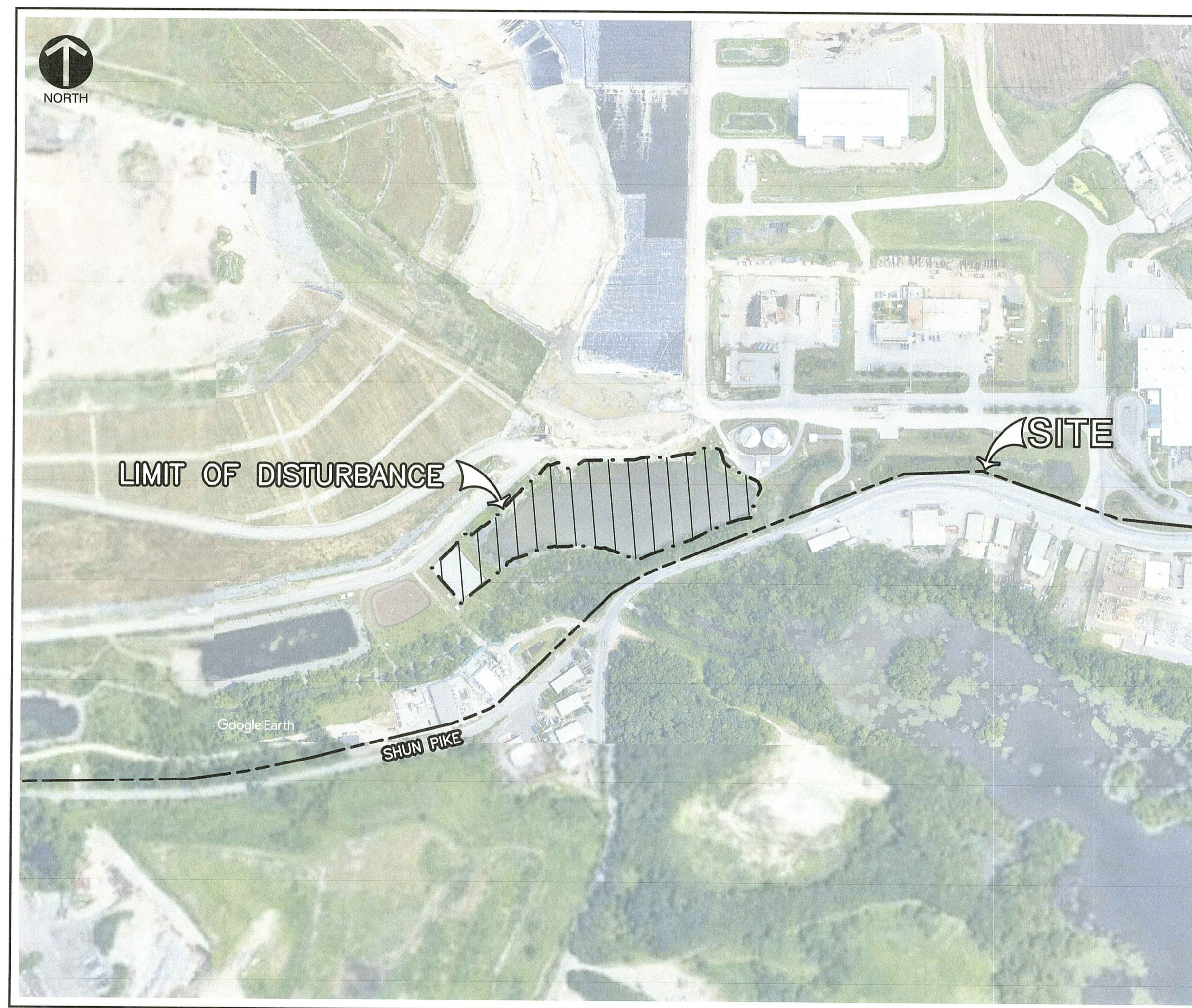
RHODE ISLAND RESOURCE RECOVERY CORPORATION STORMWATER POND 2 IMPROVEMENTS PROJECT

65 SHUN PIKE, JOHNSTON, RHODE ISLAND
PROVIDENCE COUNTY

PERMITTING PLAN SET
JUNE 2022
(REVISED JANUARY 2023)



VICINITY MAP
SCALE: 1"=4000'



SITE MAP
SCALE: 1"=300'

SOURCE: AERIAL ORTHOGRAPHIC IMAGERY PROVIDED BY GOOGLE EARTH, IMAGERY DATE, 6/29/2018. ACCESSED, 10/19/2019.

OWNER/TEAM INFORMATION

CIVIL ENGINEER

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
31 BELLOWS ROAD
RAYNHAM, MA 02767
PHONE: (774) 501-2176
CONTACT: PAUL J. SHAMOIAN, P.E.

APPLICANT/OWNER

RHODE ISLAND RESOURCE RECOVERY CORPORATION
65 SHUN PIKE
JOHNSTON, RI 02919
PHONE: (401) 942-1430
CONTACT: INGA LERMONTOV-HOIT

DRAWING INDEX		
SHEET NUMBER	DRAWING NUMBER	SHEET TITLE
1	C000	TITLE SHEET
2	C100	OVERALL SITE EXISTING CONDITIONS PLAN
3	C101	PROJECT AREA EXISTING CONDITIONS PLAN
4	C300	STORMWATER POND 2 MODIFIED GRADING PLAN (SUBGRADE)
5	C301	STORMWATER POND 2 PROPOSED BALLAST PLAN
6	C302	PROPOSED PHASING PLAN
7	C800	GEOSYNTHETIC AND BALLAST DETAILS
8	C801	POND 2 REVISED OUTLET DETAILS
9	C802	EROSION AND SEDIMENT CONTROL DETAILS

- △
- △
- △
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- △
- △

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM

NOTE PER DEM:

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM

APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL
DATED: MAR 02 2023 FILE #: 22-0415

NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Nancy L. Freeman

RI Environmental Management
FEB 10 2023
Office of Water Resources

BARRY VANLAARHOVEN
No. 11758
REGISTERED PROFESSIONAL ENGINEER

TITLE SHEET

DATE: JUNE 2022 DRAWN BY: AS SHOWN CHECKED BY: 305-513 PJS

DRAWING NO.: C000

SHEET 1 OF 9

NO.	DATE	DESCRIPTION
1	01/03/2023	PROJECT COMMENCE DATE 01/03/2023

Civil & Environmental Consultants, Inc.
31 Bellovs Road - Raynham, MA 02767
Ph: 774.501.2176 · 866.312.2024 · Fax: 774.501.2669
www.ccecinc.com

RHODE ISLAND RESOURCE RECOVERY CORPORATION
STORMWATER POND 2 IMPROVEMENTS PROJECT
CENTRAL LANDFILL
JOHNSTON, RHODE ISLAND



LEGEND

- LIMIT OF WETLANDS
- LIMIT OF RIVERBANK
- EXISTING CELL LIMIT
- PROPERTY BOUNDARY
- INTERIOR PROPERTY BOUNDARY
- EXISTING PAVED ACCESS ROAD
- EXISTING GRAVEL ACCESS ROAD

REVISION RECORD

NO.	DATE	DESCRIPTION
1	02/10/2023	ISSUED FOR PERMIT

Civil & Environmental Consultants, Inc.
 31 Bellows Road - Raynham, MA 02767
 Ph: 774.501.2176 - 866.312.2024 - Fax: 774.501.2669
 www.cecinc.com

**RHODE ISLAND RESOURCE RECOVERY CORPORATION STORMWATER POND 2 IMPROVEMENTS PROJECT
 CENTRAL LANDFILL
 JOHNSTON, RHODE ISLAND**

OVERALL SITE EXISTING CONDITIONS PLAN

DATE: JUNE 2022 DRAWN BY: A/JD
 DWG SCALE: 1" = 250' CHECKED BY: BVV
 PROJECT NO: 303-1513
 APPROVED BY: PJS

DRAWING NO: **C100**
 SHEET 2 OF 9

- GENERAL NOTES:**
- EXISTING CONDITIONS SHOWN ON THIS DRAWING WAS COMPILED FROM AERIAL SURVEY FROM AN ELECTRONIC PLAN, DATED JUNE 2019.
 - WETLAND FLAGS SHOWN IN BLUE WERE FLAGGED DURING A SITE WALK CONDUCTED BY LUCAS ENVIRONMENTAL, LLC ON AUGUST 2, 2020. WETLAND FLAGS WERE SURVEYED BY RHODE ISLAND RESOURCE RECOVERY CORPORATION IN AUGUST 2020, AND SUPPLEMENTED WITH ADDITIONAL SURVEY BY CEC IN APRIL 2020 FOR MISSING WETLAND FLAGS.
 - THE HORIZONTAL COORDINATES AND BEARING SYSTEM SHOWN HEREON IS BASED ON THE NORTH AMERICAN DATUM OF 1983 (RHODE ISLAND STATE PLANE) COORDINATE SYSTEM. THE VALUES SHOWN HEREON ARE IN U.S. SURVEY FEET.
 - THE ELEVATIONS SHOWN HEREON ARE BASED ON VERTICAL DATUM NAVD 88.
 - BENCHMARK MONUMENTS #'S 4, 7, 9, & 10 WERE COMPILED FROM A REPORT ENTITLED "MONUMENT REPORT PREPARED FOR THE RHODE ISLAND RESOURCE RECOVERY CORPORATION, DATED JULY 22, 2013, PREPARED BY WSP.
 - LIMIT OF DISTURBANCE (LOD) SHOWN IS FOR GENERAL GUIDANCE ONLY. SITE CONDITIONS MAY REQUIRE ADDITIONAL MEASURES OUTSIDE OF OR WITHIN LOD, OR REVISIONS TO THE LOD LIMIT.

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM

APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED: MAR 02 2023 FILE #: 22-0415

NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

11/20/2023

BARRY VANLAARHOVEN
 No. 11758
 REGISTERED PROFESSIONAL ENGINEER

Scale in Feet: 0 250 500

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM

NOTE PER DEM:
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P:\150-020\150-511-2400\DWG\2023 - Preliminary\Deliverables\150511-2400-010-000.dwg (1/16/2023 - dkkahm) - U: 1/20/2023 11:25 AM



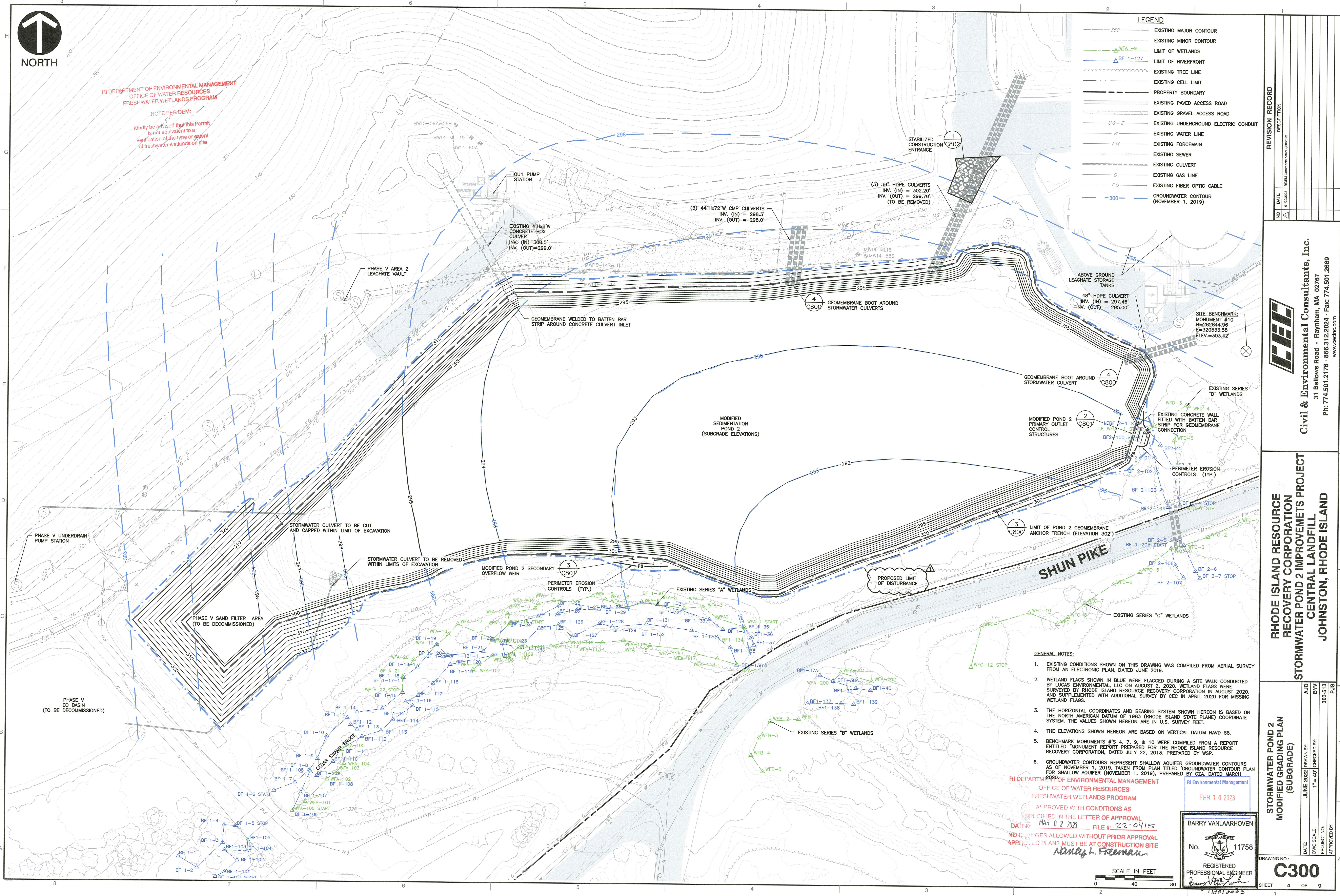
NORTH

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM

NOTE PER DEM:
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LEGEND

- 350 — EXISTING MAJOR CONTOUR
- 300 — EXISTING MINOR CONTOUR
- WFA-9 — LIMIT OF WETLANDS
- BF 1-127 — LIMIT OF RIVERFRONT
- — EXISTING TREE LINE
- — EXISTING CELL LIMIT
- — PROPERTY BOUNDARY
- — EXISTING PAVED ACCESS ROAD
- UG-E — EXISTING GRAVEL ACCESS ROAD
- UG-E — EXISTING UNDERGROUND ELECTRIC CONDUIT
- W — EXISTING WATER LINE
- FM — EXISTING FORCEMAIN
- — EXISTING SEWER
- — EXISTING CULVERT
- G — EXISTING GAS LINE
- FO — EXISTING FIBER OPTIC CABLE
- 300 — GROUNDWATER CONTOUR (NOVEMBER 1, 2019)



NO.	DATE	DESCRIPTION
1	01/20/2023	ISSUED FOR CONSTRUCTION

Civil & Environmental Consultants, Inc.
 31 Bellows Road - Raynham, MA 02767
 Ph: 774.501.2176 - 866.312.2024 - Fax: 774.501.2669
 www.cecinc.com

**RHODE ISLAND RESOURCE RECOVERY CORPORATION
 STORMWATER POND 2 IMPROVEMENTS PROJECT
 CENTRAL LANDFILL
 JOHNSTON, RHODE ISLAND**

**STORMWATER POND 2
 MODIFIED GRADING PLAN
 (SUBGRADE)**

- GENERAL NOTES:
- EXISTING CONDITIONS SHOWN ON THIS DRAWING WAS COMPILED FROM AERIAL SURVEY FROM AN ELECTRONIC PLAN, DATED JUNE 2019.
 - WETLAND FLAGS SHOWN IN BLUE WERE FLAGGED DURING A SITE WALK CONDUCTED BY LUCAS ENVIRONMENTAL, LLC ON AUGUST 2, 2020. WETLAND FLAGS WERE SURVEYED BY RHODE ISLAND RESOURCE RECOVERY CORPORATION IN AUGUST 2020, AND SUPPLEMENTED WITH ADDITIONAL SURVEY BY CEC IN APRIL 2020 FOR MISSING WETLAND FLAGS.
 - THE HORIZONTAL COORDINATES AND BEARING SYSTEM SHOWN HEREON IS BASED ON THE NORTH AMERICAN DATUM OF 1983 (RHODE ISLAND STATE PLANE) COORDINATE SYSTEM. THE VALUES SHOWN HEREON ARE IN U.S. SURVEY FEET.
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 - GROUNDWATER CONTOURS REPRESENT SHALLOW AQUIFER GROUNDWATER CONTOURS AS OF NOVEMBER 1, 2019, TAKEN FROM PLAN TITLED "GROUNDWATER CONTOUR PLAN FOR SHALLOW AQUIFER (NOVEMBER 1, 2019), PREPARED BY GZA, DATED MARCH 2020.

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS AS
 SPECIFIED IN THE LETTER OF APPROVAL
 DATED MAR 02 2023 FILE # 22-0415
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLAN MUST BE AT CONSTRUCTION SITE
 Nancy L. Freeman

BARRY VANLAARHOVEN
 No. 11758
 REGISTERED PROFESSIONAL ENGINEER
 Drawing No. 1301003

SCALE IN FEET
 0 20 40 80

DRAWING NO.: **C300**
 SHEET 4 OF 9

P:\1300-0001_300-513_0400(Dwg)\300-513_0400(Dwg) SPC22 - Preliminary Determination 13011-1-3002-C300-Proposed Pond 2 Subgrade.mxd(1/20/2023 - 08:49) - LP: 1/20/2023 11:20 AM



RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM

NOTE PER DEM:
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of freshwater wetlands on site

LEGEND

- 350 --- EXISTING MAJOR CONTOUR
- --- EXISTING MINOR CONTOUR
- - - - - LIMIT OF WETLANDS
- - - - - LIMIT OF RIVERFRONT
- - - - - EXISTING TREE LINE
- - - - - EXISTING CELL LIMIT
- - - - - PROPERTY BOUNDARY
- EXISTING PAVED ACCESS ROAD
- EXISTING GRAVEL ACCESS ROAD
- UG-E EXISTING UNDERGROUND ELECTRIC CONDUIT
- W EXISTING WATER LINE
- FM EXISTING FORECRAIN
- EXISTING SEWER
- EXISTING CULVERT
- G EXISTING GAS LINE
- FO EXISTING FIBER OPTIC CABLE
- △ BF 1-127 EXISTING RIVERBANK FLAG
- △ WFA -9 EXISTING WETLAND FLAG

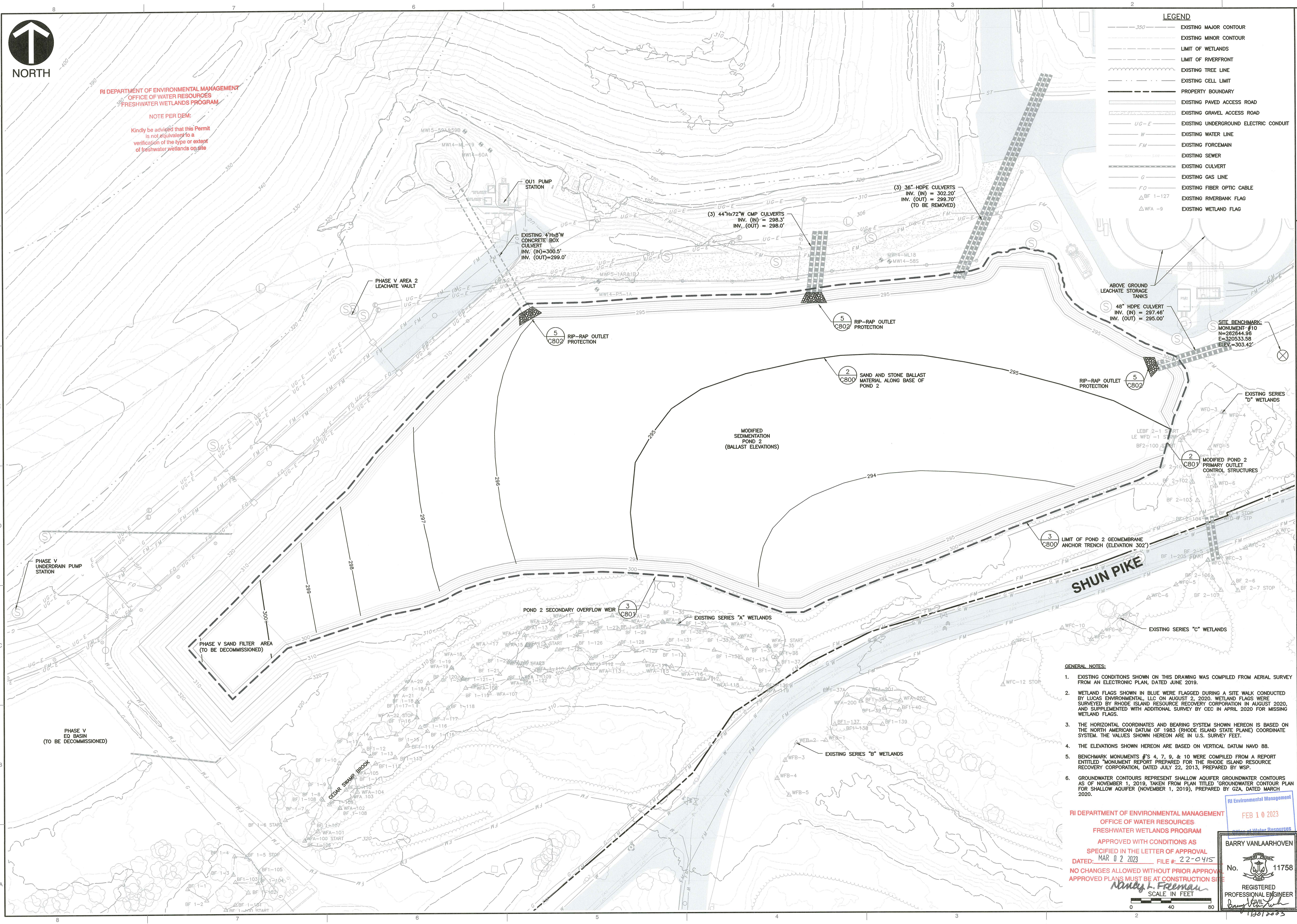
NO	DATE	DESCRIPTION

Civil & Environmental Consultants, Inc.
31 Belovos Road - Raynham, MA 02767
Ph: 774.501.2176 - 866.312.2024 - Fax: 774.501.2669
www.cecfinc.com

**RHODE ISLAND RESOURCE
RECOVERY CORPORATION
STORMWATER POND 2 IMPROVEMENTS PROJECT
CENTRAL LANDFILL
JOHNSTON, RHODE ISLAND**

**STORMWATER POND 2
PROPOSED BALLAST PLAN**

DRAWING NO. **C301**
SHEET 5 OF 9





RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM

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LEGEND

- 350- EXISTING MAJOR CONTOUR
- 300- EXISTING MINOR CONTOUR
- △ WFA-9 LIMIT OF WETLANDS
- △ BF 1-127 LIMIT OF RIVERFRONT
- - - EXISTING TREE LINE
- - - EXISTING CELL LIMIT
- - - PROPERTY BOUNDARY
- - - EXISTING PAVED ACCESS ROAD
- - - EXISTING GRAVEL ACCESS ROAD
- UG-E EXISTING UNDERGROUND ELECTRIC CONDUIT
- W EXISTING WATER LINE
- FM EXISTING FORCEMAIN
- - - EXISTING SEWER
- - - EXISTING CULVERT
- - - EXISTING GAS LINE
- - - EXISTING FIBER OPTIC CABLE
- 300- GROUNDWATER CONTOUR (NOVEMBER 1, 2019)

REVISION RECORD

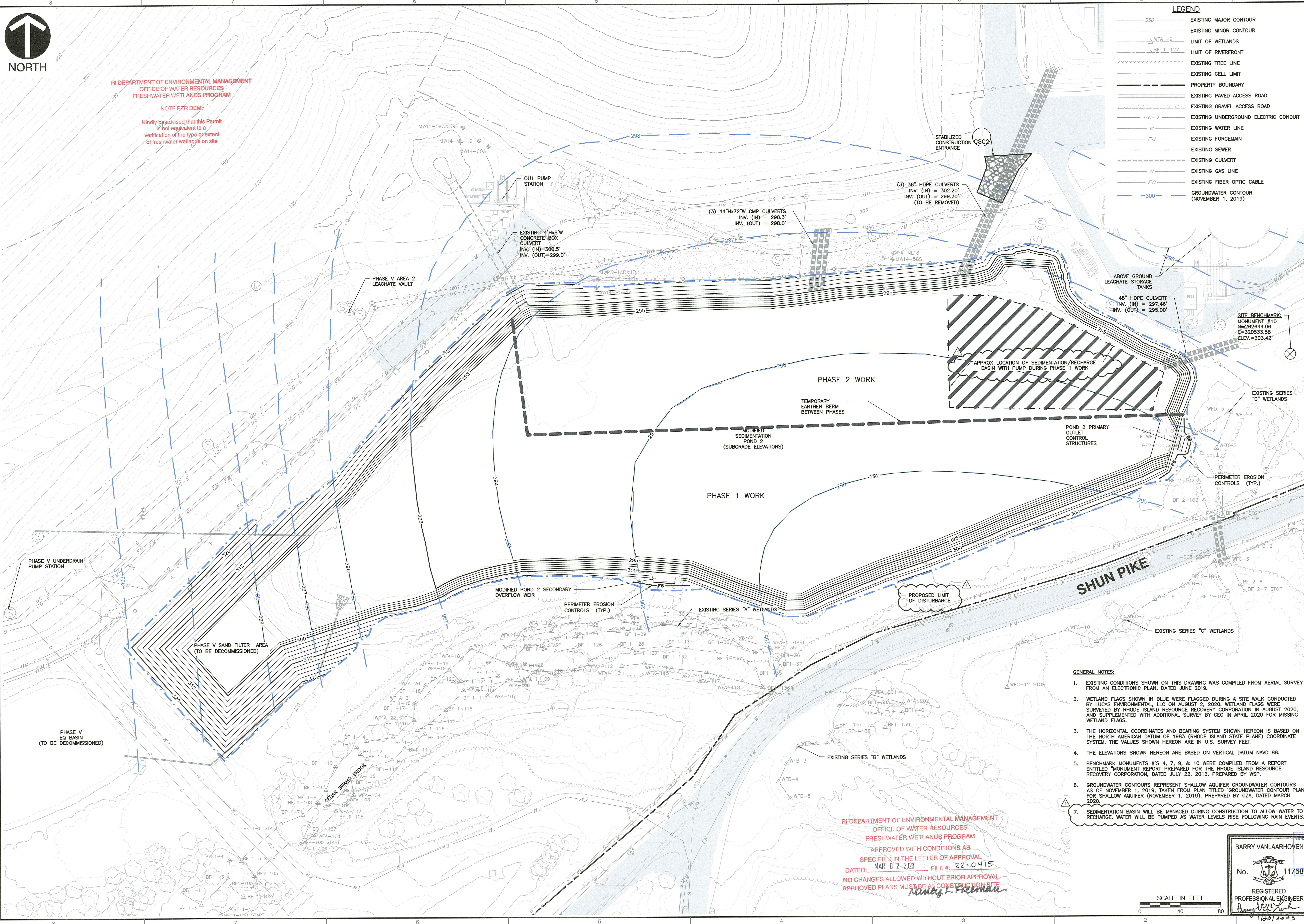
NO.	DATE	DESCRIPTION
1	07/22/2013	ISSUED
2	07/22/2013	ISSUED

Civil & Environmental Consultants, Inc.
31 Bellores Road - Raynham, MA 02767
Ph: 774.501.2176 - 866.312.2024 - Fax: 774.501.2668
www.cecinc.com

**RHODE ISLAND RESOURCE RECOVERY CORPORATION
STORMWATER POND 2 IMPROVEMENTS PROJECT
CENTRAL LANDFILL
JOHNSTON, RHODE ISLAND**

PROPOSED PHASING PLAN

DATE: JUNE 2022
DRAWN BY: JUNE 2022
CHECKED BY: JUNE 2022
DATE: FEB 10 2023
DRAWING SCALE: 1" = 40'
PROJECT NO.: 305-513
APPROVED BY: [Signature]



- GENERAL NOTES:**
- EXISTING CONDITIONS SHOWN ON THIS DRAWING WAS COMPILED FROM AERIAL SURVEY FROM AN ELECTRONIC PLAN, DATED JUNE 2019.
 - WETLAND FLAGS SHOWN IN BLUE WERE FLAGGED DURING A SITE WALK CONDUCTED BY LUCAS ENVIRONMENTAL, LLC ON AUGUST 2, 2020. WETLAND FLAGS WERE SURVEYED BY RHODE ISLAND RESOURCE RECOVERY CORPORATION IN AUGUST 2020, AND SUPPLEMENTED WITH ADDITIONAL SURVEY BY CEA IN APRIL 2020 FOR MISSING WETLAND FLAGS.
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 - SEDIMENTATION BASIN WILL BE MANAGED DURING CONSTRUCTION TO ALLOW WATER TO RECHARGE. WATER WILL BE PUMPED AS WATER LEVELS RISE FOLLOWING RAIN EVENTS.

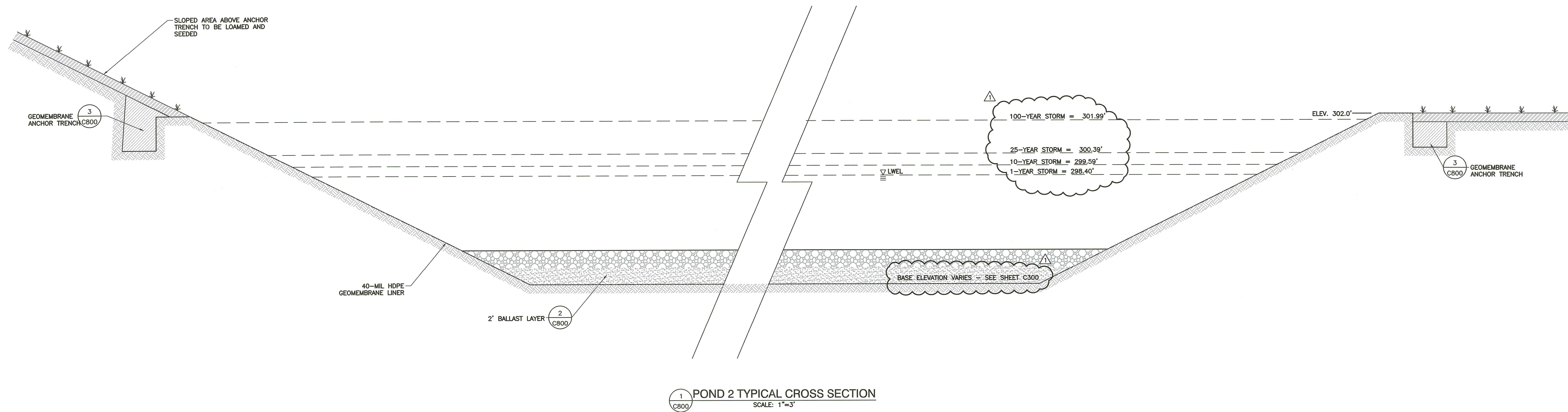
RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL
DATED: MAR 02 2023 FILE #: 22-0415
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Nancy L. Freeman

BARRY VANLAARHOVEN
No. 11758
REGISTERED PROFESSIONAL ENGINEER
DATE: FEB 10 2023
DRAWING SCALE: 1" = 40'
PROJECT NO.: 305-513
APPROVED BY: [Signature]

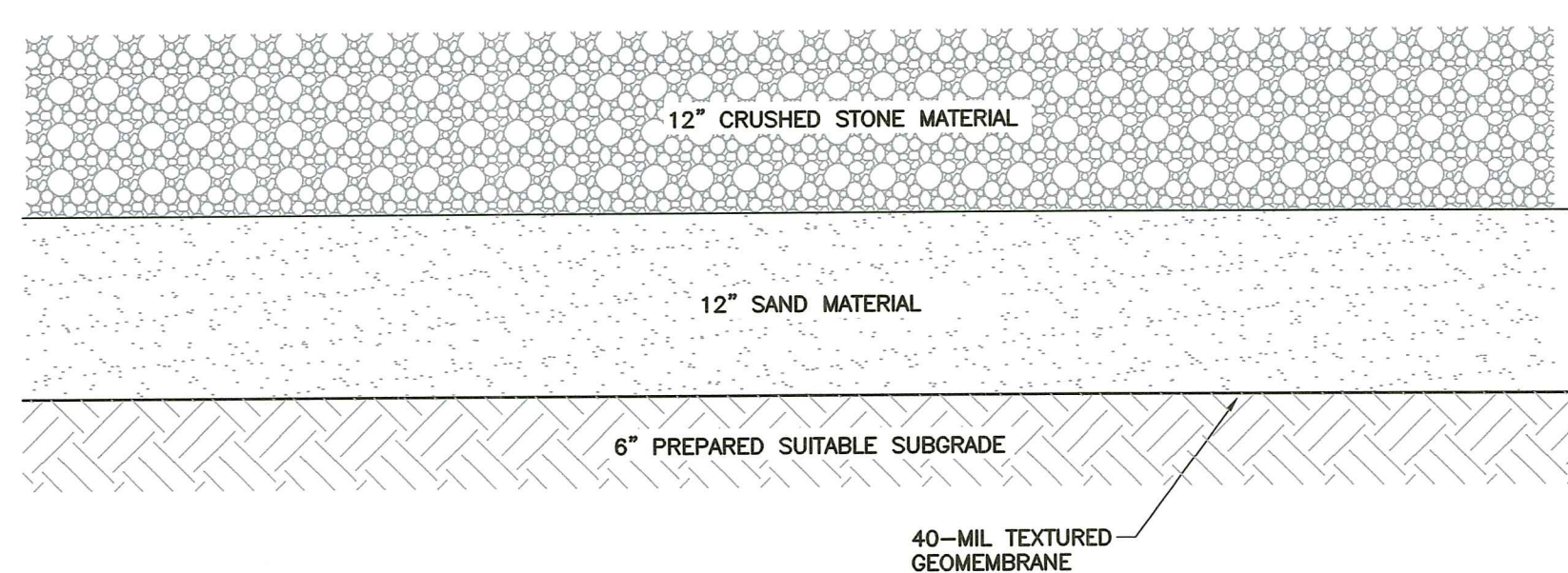
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DRAWING NO.: **C302**
SHEET 6 OF 9

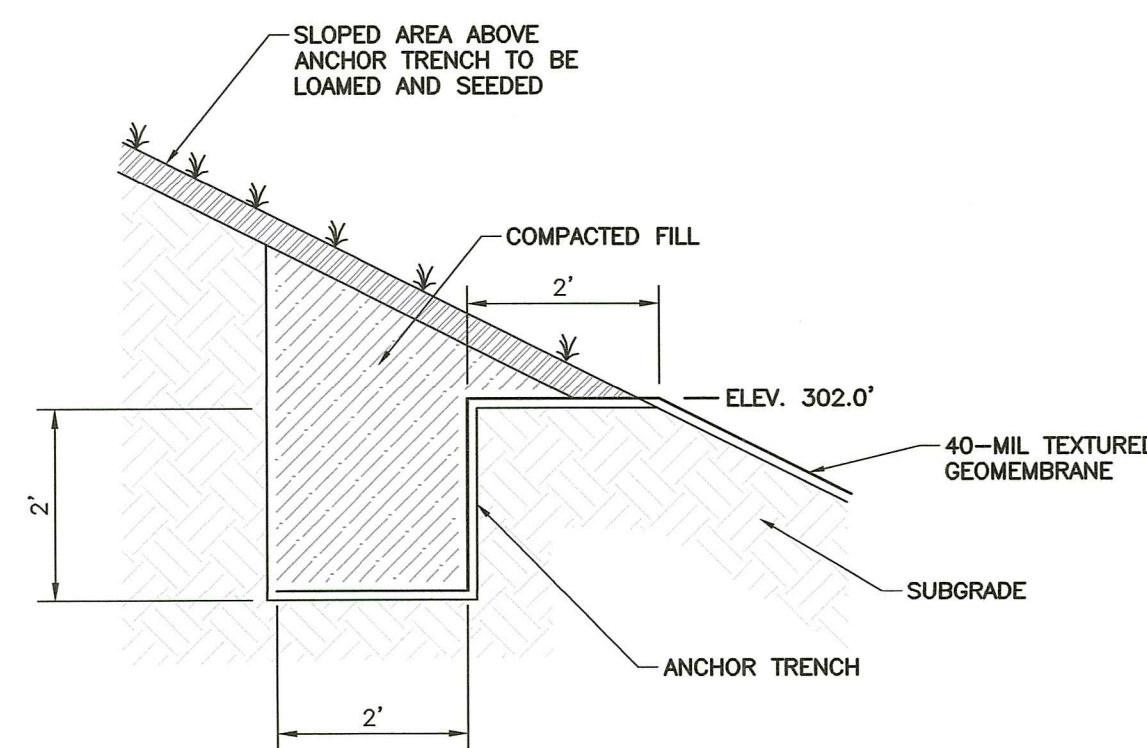
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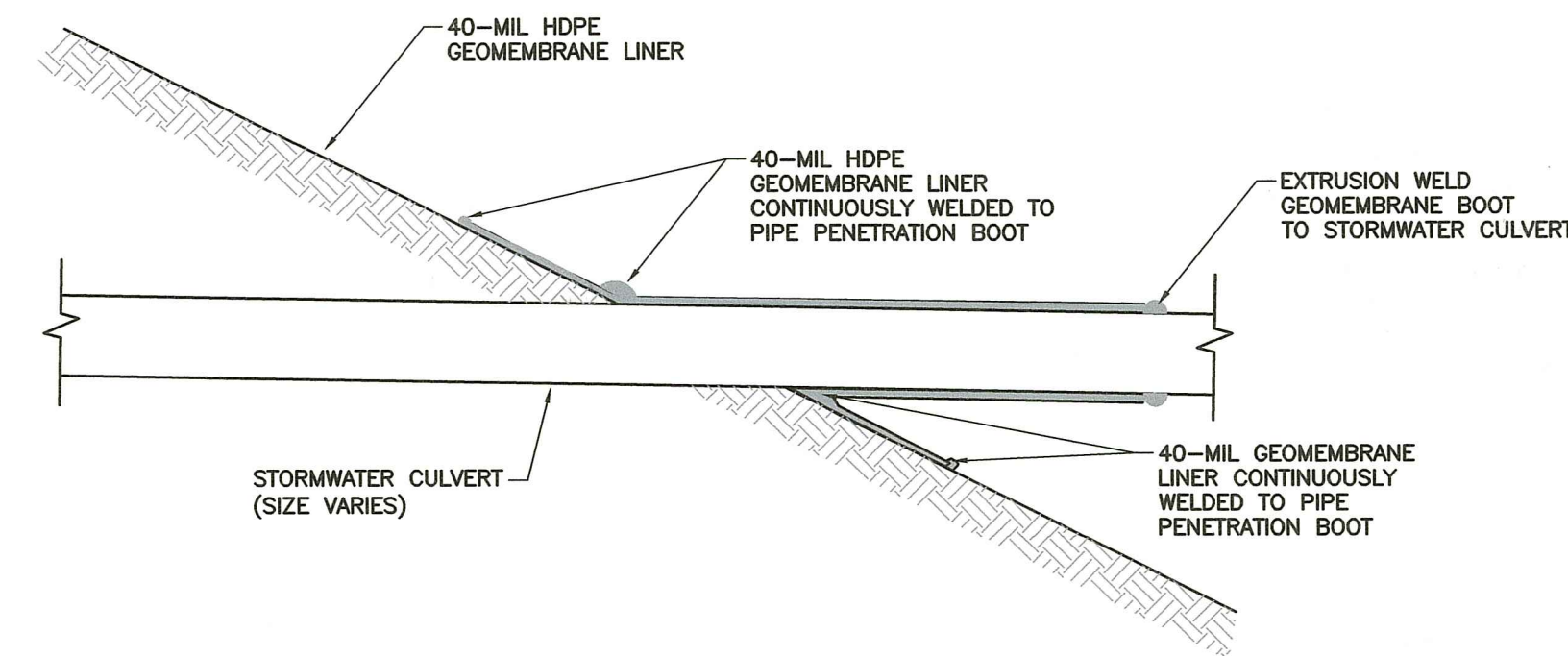
1 POND 2 TYPICAL CROSS SECTION
SCALE: 1"=3'



2 BALLAST DETAIL
SCALE: 1"=1'



3 POND 2 GEOMEMBRANE ANCHOR TRENCH
SCALE: 1"=2'



4 TYPICAL GEOMEMBRANE BOOT DETAIL
SCALE: 1"=2'

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM

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RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM

APPROVED WITH CONDITIONS AS
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DATED: MAR 02 2023 FILE #: 22-0415
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

RI Environmental Management
FEB 10 2023

BARRY VANLAARHOVEN
No. 11758
REGISTERED PROFESSIONAL ENGINEER
CIVIL

REVISION RECORD

NO.	DATE	DESCRIPTION
1	07/20/2022	Initial Comments dated 03/02/2022

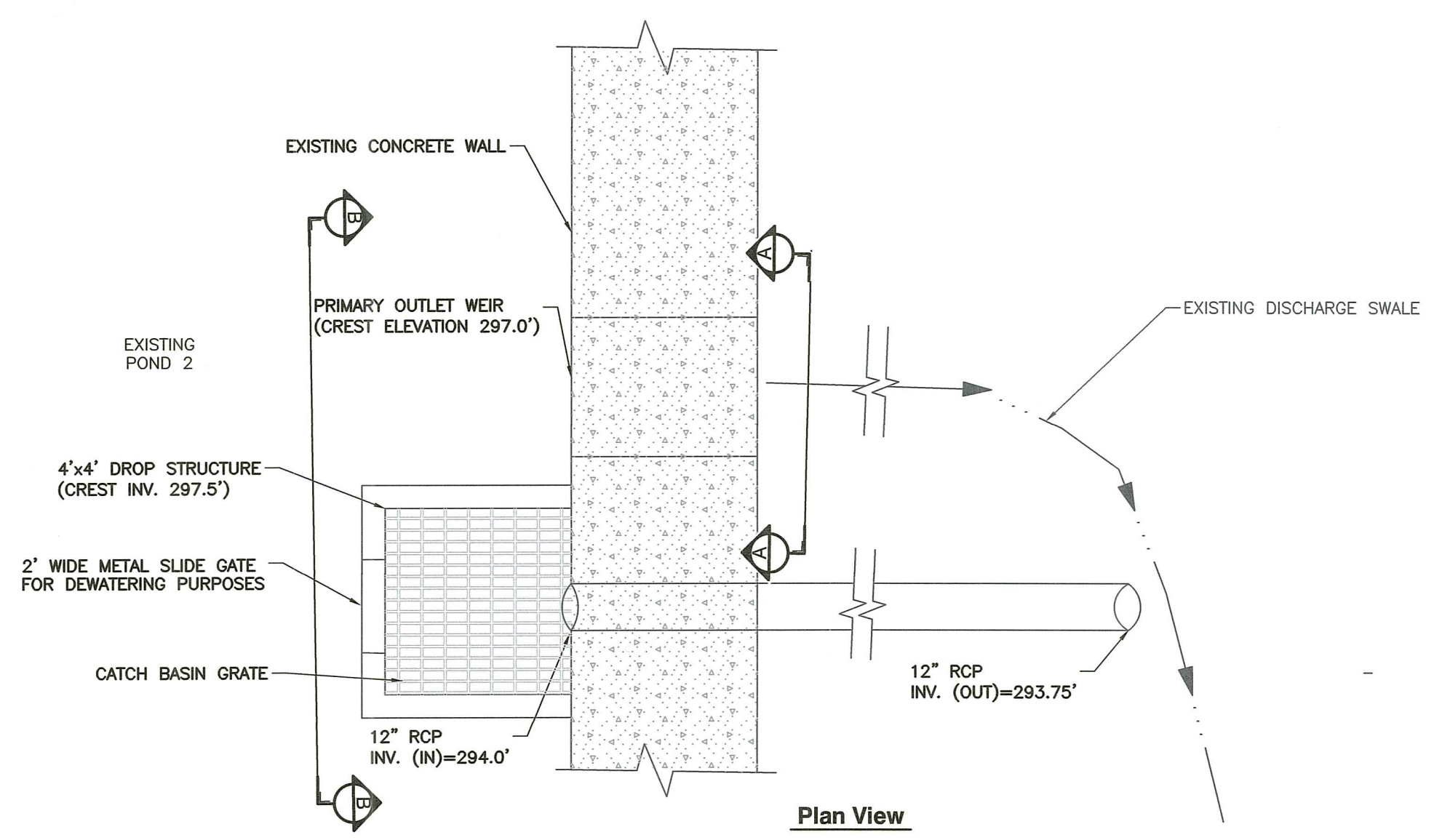
CEL
Civil & Environmental Consultants, Inc.
31 Bellows Road - Raynham, MA 02767
Ph: 774.501.2176 - 866.312.2024 - Fax: 774.501.2669
www.celinc.com

RHODE ISLAND RESOURCE
RECOVERY CORPORATION
STORMWATER POND 2 IMPROVEMENTS PROJECT
CENTRAL LANDFILL
JOHNSTON, RHODE ISLAND

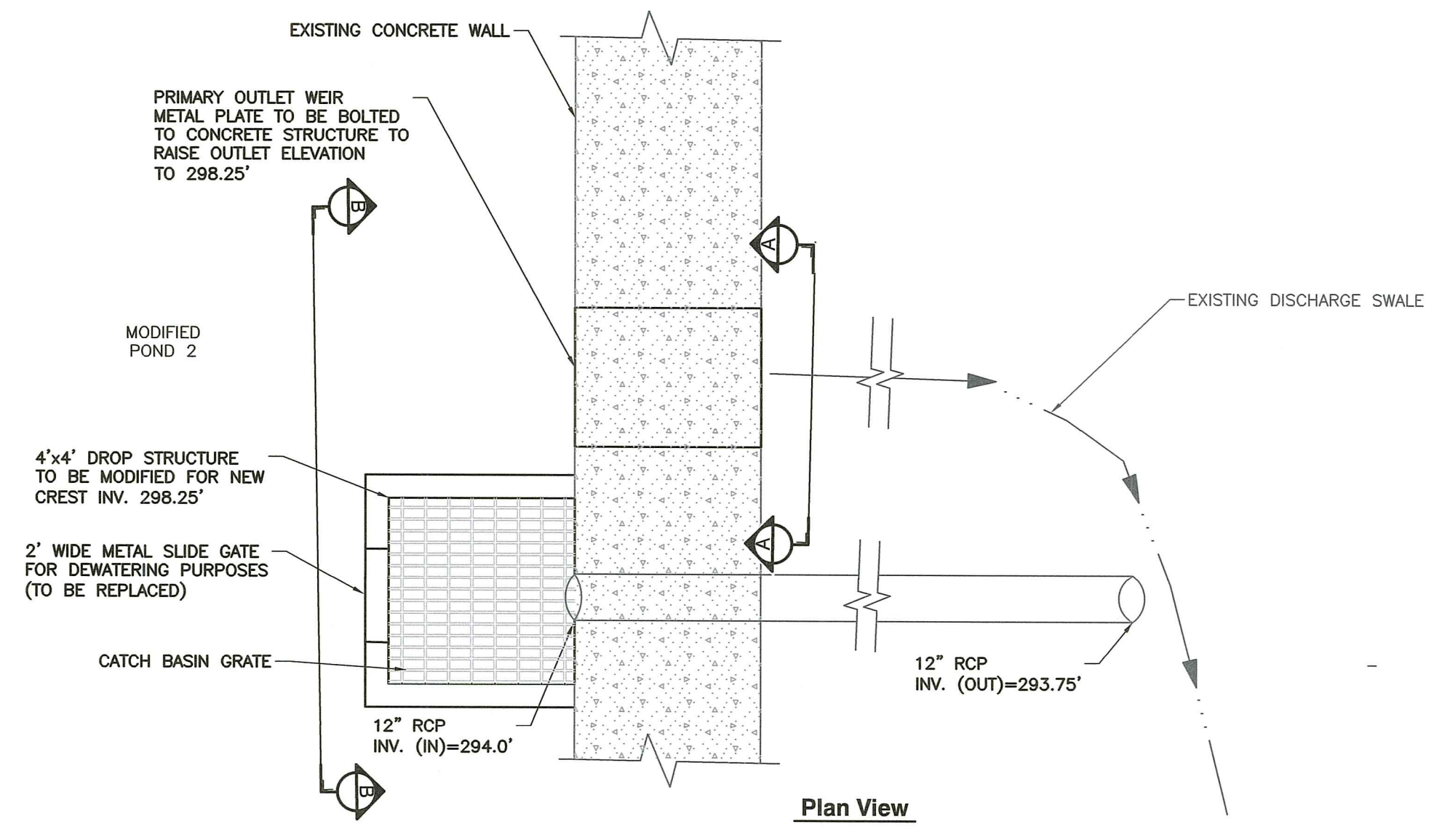
GEOSYNTHETIC AND BALLAST DETAILS
DRAWING NO.: C800
SHEET 7 OF 9

DATE	AJID	BY	PJS
JUNE 2022	DRAWN BY:	AS SHOWN	CHECKED BY:
	DWG SCALE:		PROJECT NO:
			APPROVED BY:

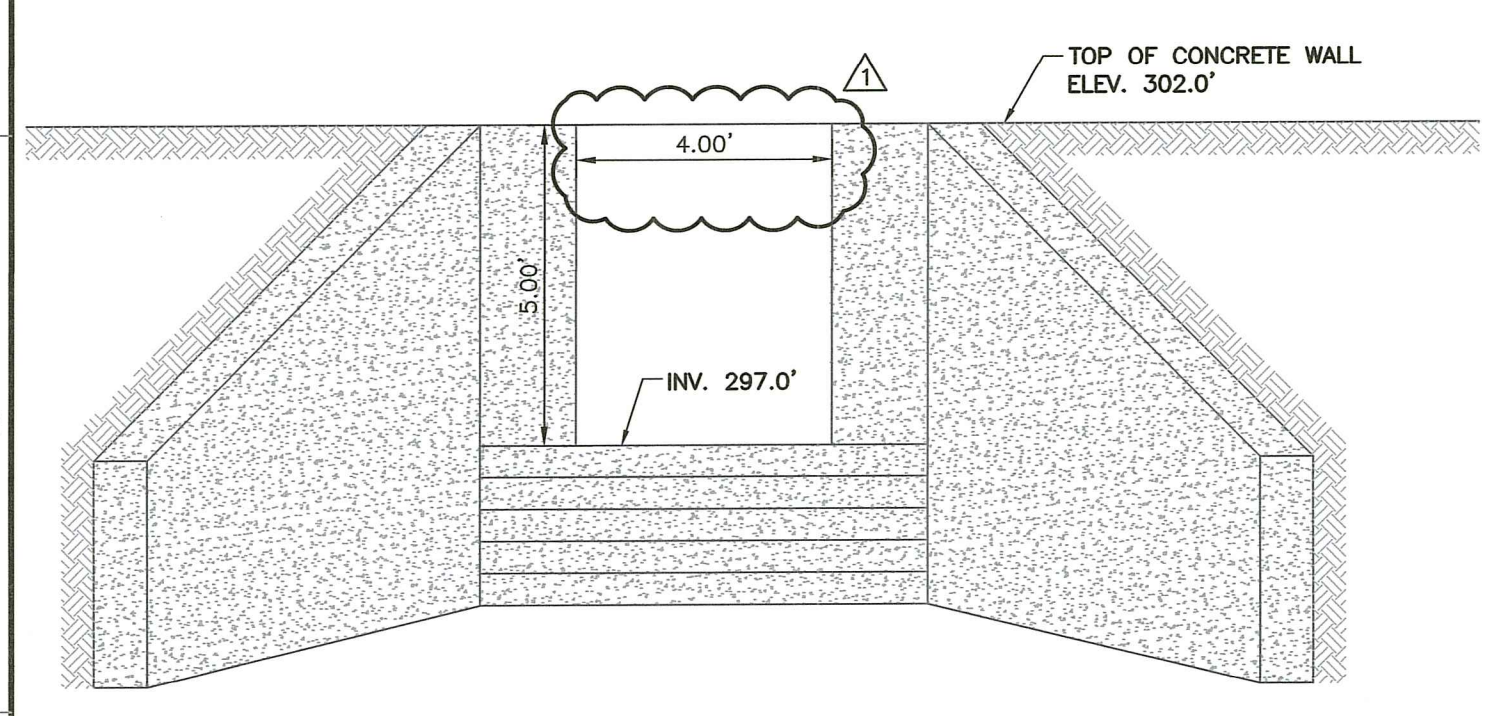
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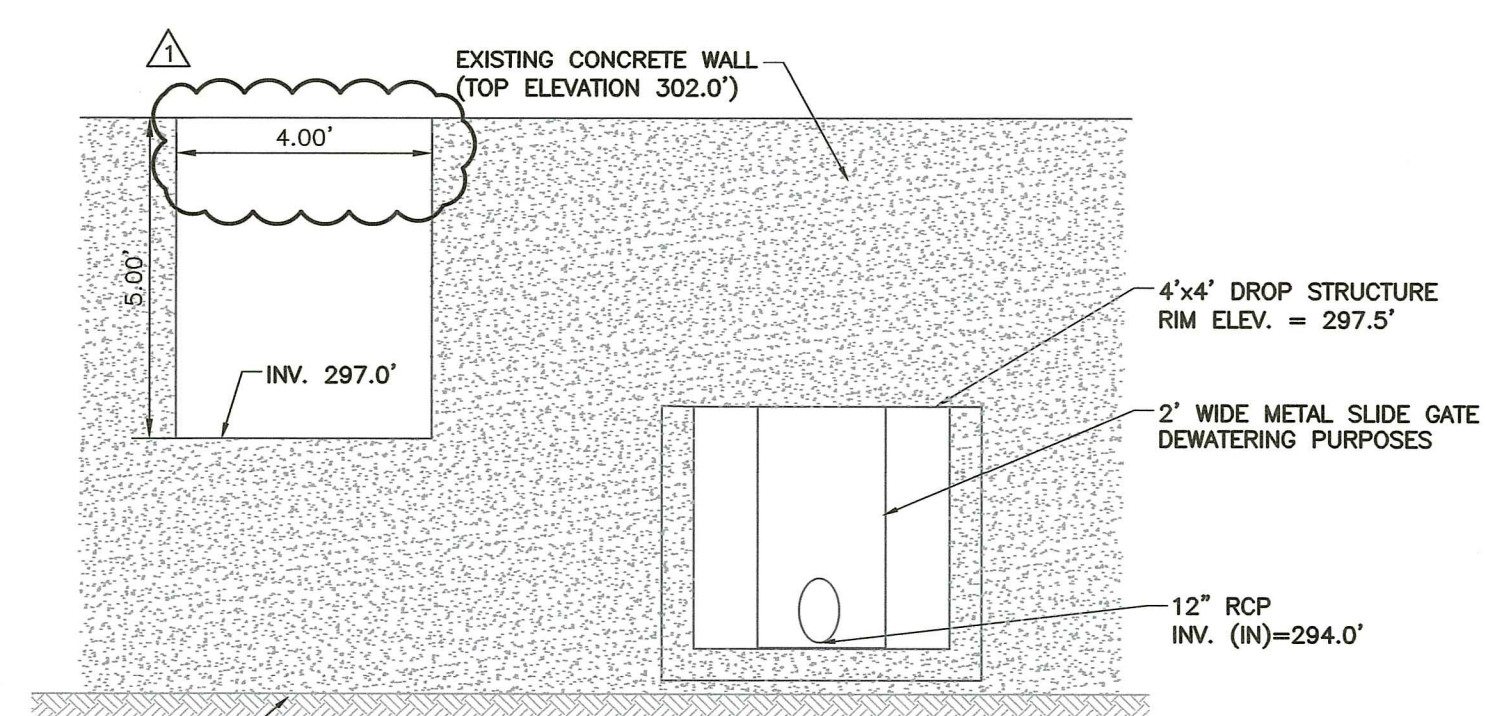
Plan View



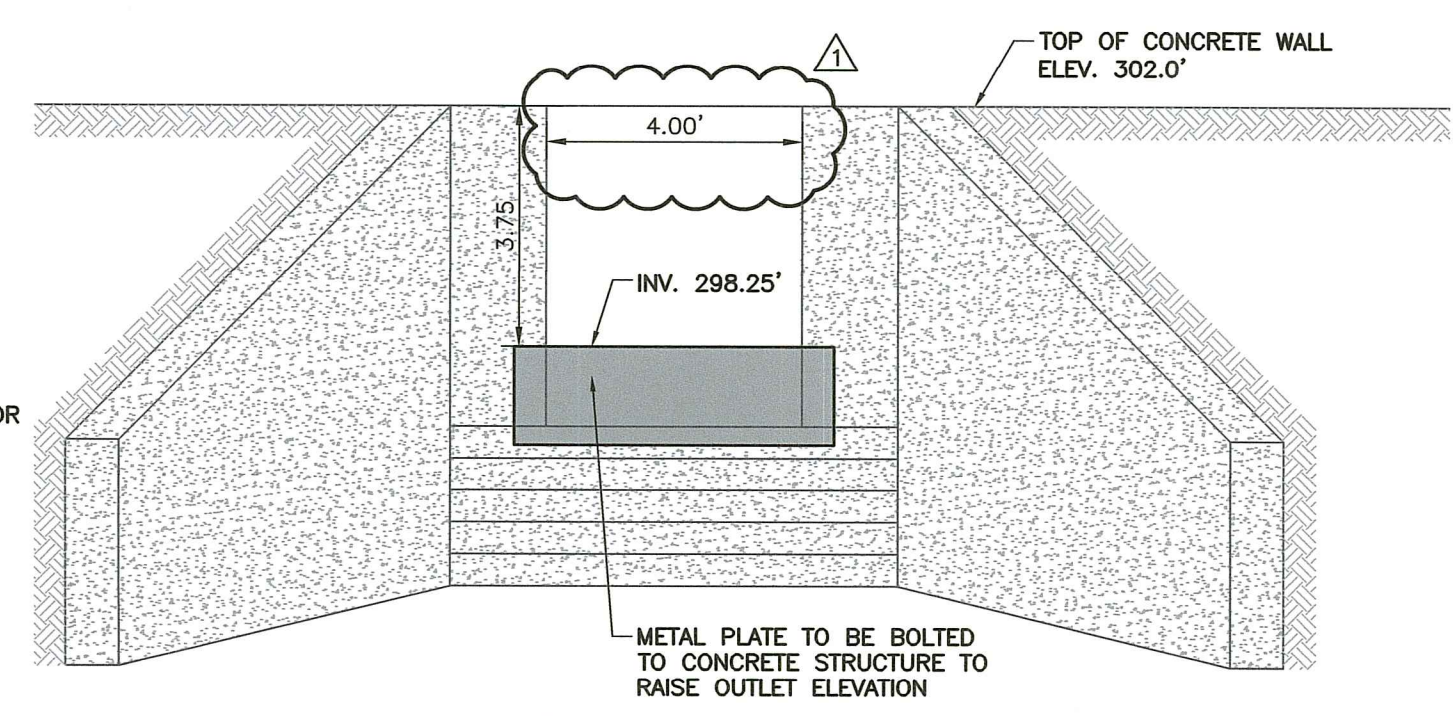
Plan View



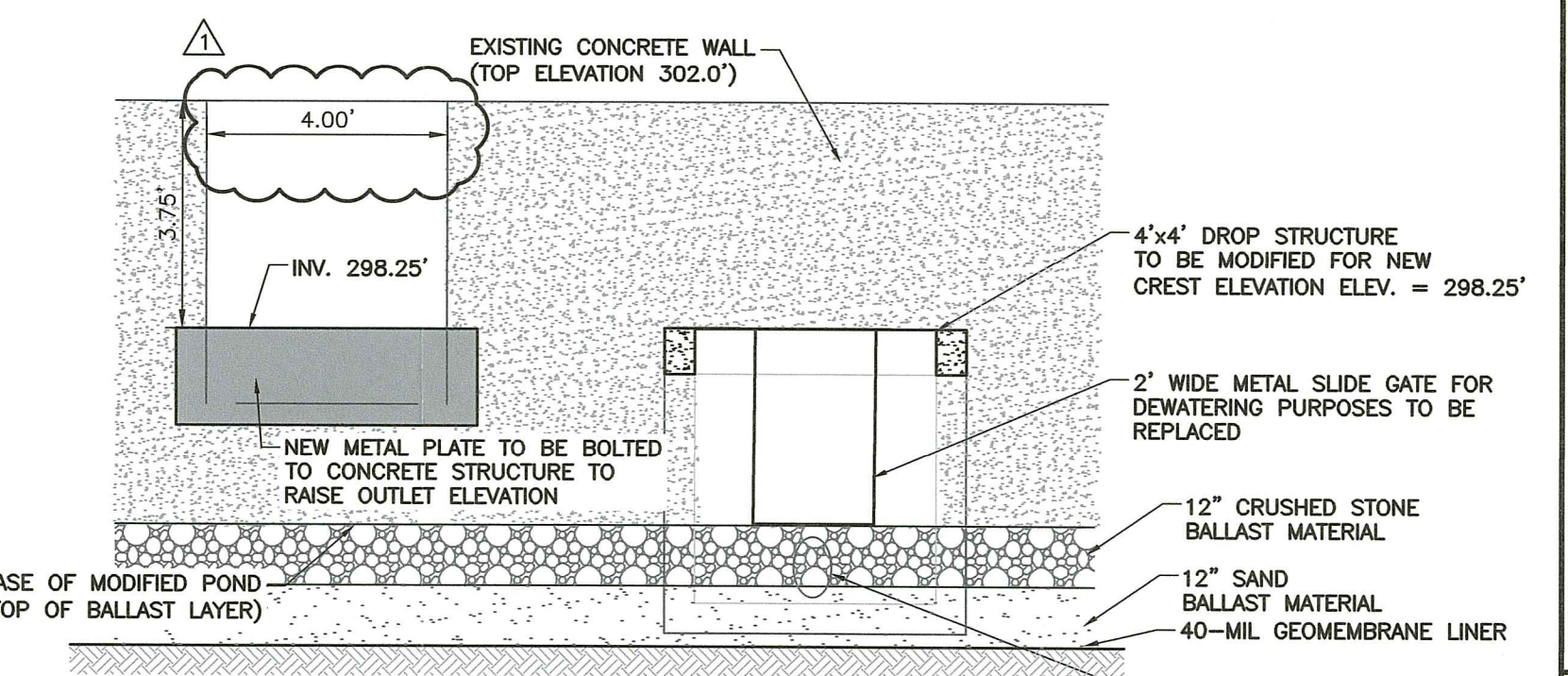
Section A-A



Section B-B



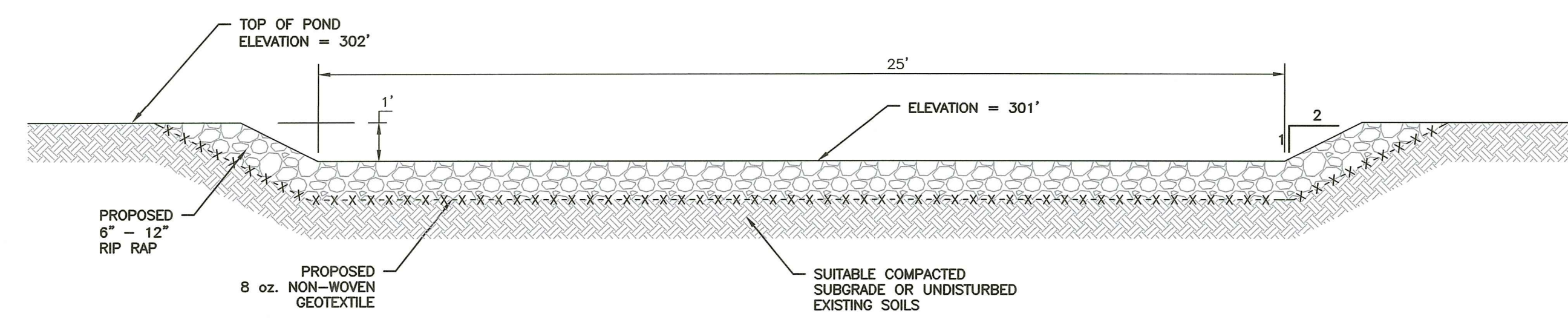
Section A-A



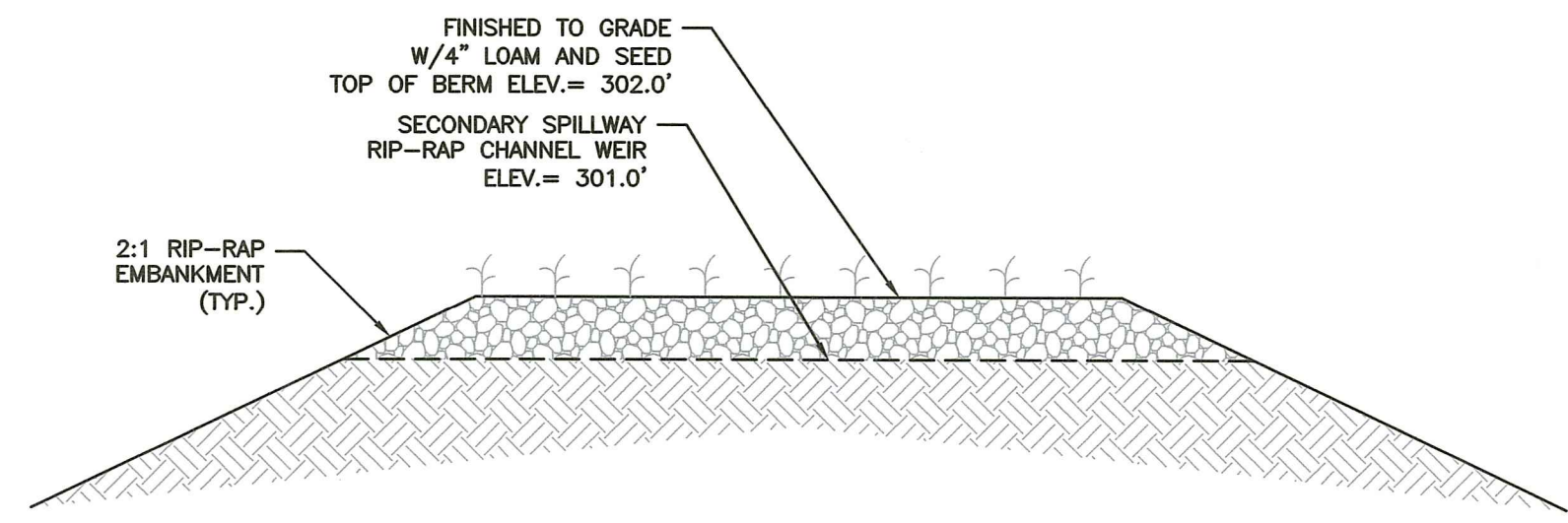
Section B-B

1 EXISTING PRIMARY OUTLET CONTROL STRUCTURE
SCALE: 1" = 3'

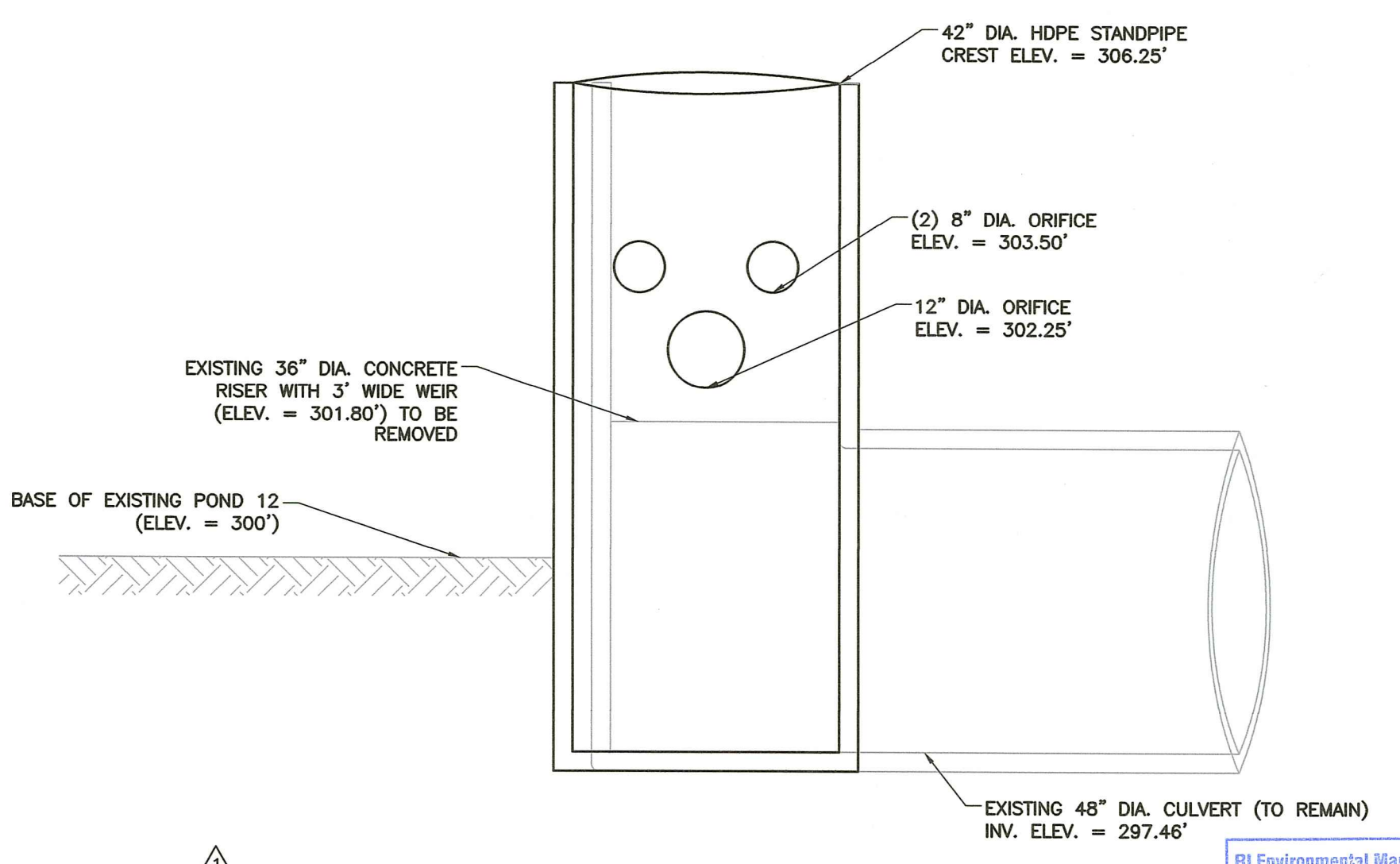
2 MODIFIED PRIMARY OUTLET CONTROL STRUCTURE
SCALE: 1" = 3'



3 RECONSTRUCTED RIP-RAP LINED SECONDARY WEIR DETAIL
SCALE: 1" = 3'



4 CROSS-SECTION AT POND 2 SECONDARY WEIR OUTLET
SCALE: 1" = 3'



5 PROPOSED POND 12 OUTLET MODIFICATION DETAIL
SCALE: 1" = 2'

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM

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RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM

APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL
DATED: MAR 02 2023 FILE #: 22-0415
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APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Mindy L. Freeman

BARRY VANLAARHOVEN
No. 11758
REGISTERED PROFESSIONAL ENGINEER

DATE: JUNE 2022 DRAWN BY: AID
DWS SCALE: AS SHOWN CHECKED BY: BYV
PROJECT NO: 303-513
APPROVED BY: PJS

POND 2 REVISED OUTLET DETAILS

DRAWING NO: C801
SHEET 8 OF 9

RHODE ISLAND RESOURCE RECOVERY CORPORATION
STORMWATER POND 2 IMPROVEMENTS PROJECT
CENTRAL LANDFILL
JOHNSTON, RHODE ISLAND

Civil & Environmental Consultants, Inc.
31 Bellows Road - Raynham, MA 02767
Ph: 774.501.2176 - Fax: 774.501.2669
www.cecinc.com

NO	DATE	DESCRIPTION
1	07/20/2023	REVISION RECORD

P:\300-001\303-513-C801\Drawings\303-513-SM2-C801-001-001.dwg (1/10/2023 11:02 AM) - LRF 1/20/2023 11:02 AM

