

# SITE PLAN SET

## FOR

# PROPOSED SUBDIVISION

**PLAT MAP 7 LOT 24**  
**ZONING DISTRICT: A-4**  
**AGRICULTURAL-RESIDENTIAL**

**JACKSON SCHOOLHOUSE ROAD**  
**GLOCESTER, RHODE ISLAND**

**OWNER/ APPLICANT**

**BRUCE BARNES**  
**27 BARNES WAY**  
**CHEPACHET, RI 02814**

**ENGINEERS**



- Civil
- Transportation
- Environmental
- Site Planning
- Surveying
- Permitting
- Landscape Architecture

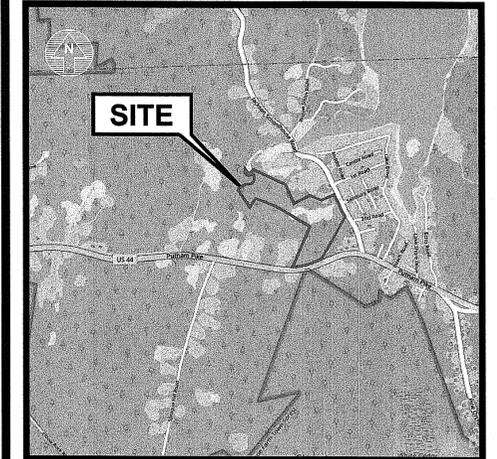
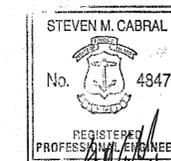
**Crossman Engineering**

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**DECEMBER 2022**  
**SHEET 1 of 13**



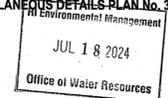
**LOCATION MAP**  
 NOT TO SCALE

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
 FRESHWATER WETLANDS PROGRAM  
 APPROVED WITH CONDITIONS AS  
 SPECIFIED IN THE LETTER OF APPROVAL  
 DATED: APR 16 2015 FILE #: 22-0318  
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

*Christopher D. Wenzel*

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**REVISIONS**

No.	DESCRIPTION	DATE
1	RIDEM COMMENTS	11/20/23
2	RIDEM COMMENTS	04/04/24

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**GENERAL NOTES**

1. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING DRAINAGE AND UTILITIES, BOTH UNDERGROUND AND OVERHEAD, BEFORE EXCAVATION BEGINS IN ACCORDANCE WITH "DIG SAFE PROGRAM LAW" ENACTED BY THE R.I. LEGISLATURE AND BY CONTACTING THE INDIVIDUAL UTILITY COMPANIES. EXCAVATION SHALL BE IN ACCORDANCE WITH ALL STATUTES, ORDINANCES, RULES AND REGULATIONS OF ANY MUNICIPALITY, STATE OR FEDERAL AGENCY THAT MAY APPLY. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
2. SPECIFICATIONS TO GOVERN THIS PROJECT ARE R.I.D.O.T. STANDARD SPECIFICATIONS AND DETAILS. FOR ALL EXCAVATION, PLACEMENT OF FILL, PIPE, BITUMINOUS PAVEMENT, CONCRETE AND SAWCUTTING, THE CONTRACTOR SHALL PERFORM THE WORK IN FULL COMPLIANCE WITH THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, MARCH 2018 EDITION, WITH LATEST REVISIONS UNLESS OTHERWISE SHOWN ON PLANS. THE "METHOD OF MEASUREMENT" AND "BASIS OF PAYMENT" ARE NOT APPLICABLE. THESE SPECIFICATIONS CAN BE OBTAINED ON-LINE AT:  
<http://www.dot.ri.gov/business/bluebook.php>
3. ALL WORK SHALL CONFORM TO RIDOT'S STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AMENDED 2018, AND THE RHODE ISLAND STANDARD DETAILS, JUNE 19, 2019, AND AS AMENDED.
4. THE CONTRACTOR MUST VERIFY PRIOR TO CONSTRUCTION THAT ALL REQUIRED AUTHORIZATION TO PERFORM WORK HAS BEEN OBTAINED. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION OPERATIONS INCLUDING ALL ACTIONS OR OMISSIONS OF ANY SUBCONTRACTORS, AGENTS OR EMPLOYEES. THE CONTRACTOR MUST ENSURE THAT THE CONDITIONS OF ALL PERMITS, SPECIFICATIONS AND FEDERAL, STATE AND LOCAL REGULATIONS ARE STRICTLY ENFORCED. THE CONTRACTOR IS ALSO RESPONSIBLE FOR ASPECTS OF ON-SITE SAFETY INCLUDING ANY DAMAGE TO EXISTING STRUCTURES.
5. WORK SHOWN ON THE PLANS FOR WHICH THERE ARE NO PARTICULAR DETAILS OR SPECIFICATIONS DOES NOT RELIEVE THE CONTRACTOR FROM FURNISHING AND INSTALLING THE WORK. THE CONTRACTOR SHALL THOROUGHLY EXAMINE THE CONTRACT DOCUMENTS AND PLANS AND INSPECT THE SITE, AND THE BID PRICE SHALL INCLUDE ALL SERVICES AND MATERIALS NECESSARY TO COMPLETE THE PROJECT. ANY CHANGES TO THE PROJECT OR THE INSTALLATION OF AN ITEM FOR WHICH NO PARTICULAR DETAIL OR SPECIFICATION WAS PROVIDED MUST BE REVIEWED BY AND MUST BE ACCEPTABLE TO THE ENGINEER.
6. CONTRACTOR IS RESPONSIBLE TO VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO ANY WORK. THE CONTRACTOR SHALL PERFORM TEST PITS TO LOCATE EXISTING UTILITY STUBS AT CONNECTION POINTS. THE CONTRACTOR SHALL COORDINATE WITH LOCAL UTILITY COMPANIES FOR NEW PIPES, CONDUITS AND SERVICES.
7. "APPROVED EQUAL" PRODUCTS MAY BE USED BY THE CONTRACTOR ONLY UPON APPROVAL BY THE DESIGN ENGINEER. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE SUBMITTALS TO THE DESIGN ENGINEER AND/OR OWNER FOR REVIEW.
8. THIS PROPOSED USE DOES NOT MEET THE RIDEM DEFINITION OF A LAND USE WITH HIGHER POTENTIAL POLLUTANT LOAD.

**LAYOUT NOTE**

THE LAYOUT SHOWN REPRESENTS A GRAPHICAL DESIGN, AND PRIOR TO THE CONSTRUCTION, THE CONTRACTOR SHALL ENGAGE A PROFESSIONAL LAND SURVEYOR (PLS) REGISTERED IN THE STATE OF RHODE ISLAND TO SET AND VERIFY ALL LINES AND GRADES. ALL EXISTING UTILITY LOCATIONS AND ELEVATIONS ARE TO BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY ITEM FOUND WHICH DOES NOT MATCH THE PLANS MUST BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO CONSTRUCTION FOR REVIEW. NO WORK SHALL PROCEED UNTIL AUTHORIZED BY THE ENGINEER.

**MAINTENANCE AND PROTECTION OF TRAFFIC NOTES**

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MAINTENANCE AND PROTECTION OF PEDESTRIAN AND VEHICULAR TRAFFIC INCLUDING POLICE PROTECTION. ALL TEMPORARY CONSTRUCTION SIGNS, BARRICADES AND LANE CLOSURES SHALL BE IN CONFORMANCE WITH THE LATEST REVISIONS OF MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.)
2. TEMPORARY CONSTRUCTION SIGNS AND ALL APPLICABLE TRAFFIC CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE START OF WORK IN ANY AREA OPEN TO TRAFFIC.
3. THE PRIVATE VEHICLES OF CONSTRUCTION WORKERS WILL NOT BE PARKED IN THE ROADWAY RIGHT-OF-WAY.
4. ALL MAINTENANCE AND PROTECTION OF TRAFFIC CONTROL SETUPS, SIGNS, CHANNELING DEVICES, ETC., SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 EDITION, LATEST REVISIONS.
5. SIGN MOUNTINGS SHALL BE IN ACCORDANCE WITH THE STATE D.O.T. SPECIFICATIONS FOR TEMPORARY CONSTRUCTION SIGNS.

**CONSTRUCTION NOTES**

1. THE CONTRACTOR IS REQUIRED TO OBTAIN AND REVIEW ALL ENGINEERING AND PERMIT DOCUMENTS COMPLETED FOR FINAL DESIGN, INCLUDING TOWN PLANNING BOARD APPROVALS AND RIDEM AND RIDOT PERMIT CONDITIONS.
2. THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO INSTALLATION OF UTILITIES ON SITE. THE COORDINATION IS NECESSARY FOR THE ENGINEER TO SCHEDULE SITE INSPECTIONS AS REQUIRED.
3. THE CONTRACTOR IS REQUIRED TO MAINTAIN DETAILED AS-BUILT INFORMATION FOR ALL UTILITY INSTALLATION. AS-BUILT INFORMATION INCLUDES MATERIAL LIST, PIPE DEPTH NOTATIONS AND SWING TIE LOCATIONS (2 MINIMUM) FROM NEW PIPE TO PERMANENT STRUCTURES.

**FLOOD ZONE NOTE**

THE SITE IS WITHIN FLOOD ZONE X, AREAS TO BE OUTSIDE THE 0.2% CHANCE FLOODPLAIN, AND FLOOD ZONE AE, SPECIAL FLOOD HAZARD AREA SUBJECT TO THE 1% ANNUAL CHANCE FLOOD WITH BASE FLOOD ELEVATION = 44B ACCORDING TO FLOOD INSURANCE RATE MAP, PROVIDENCE COUNTY, RHODE ISLAND, PANEL 140 OF 451, MAP NUMBER 44007C0140G, EFFECTIVE DATE MARCH 2, 2009.

**PERMITTING NOTES**

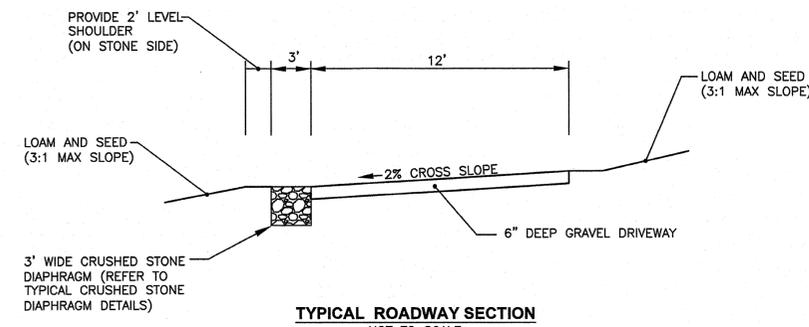
- REFERENCED BELOW ARE THE REQUIRED PERMITS:
1. TOWN OF GLOUCESTER MINOR SUBDIVISION APPROVAL.
  2. RIDEM PERMITS:
    - WETLANDS PERMIT
    - STORMWATER CONSTRUCTION PERMIT AND WATER QUALITY CERTIFICATION
    - SUBDIVISION SUITABILITY PERMIT
  3. RIDOT PERMIT:
    - PHYSICAL ALTERATION PERMIT (PAP) FOR PROPOSED LOT 3
  4. THE SITE IS WITHIN A WELLHEAD PROTECTION AREA (CWHPA).
  5. THE SITE IS NOT WITHIN A RIDEM NATURAL HERITAGE AREA OR WITHIN A TOWN OF GLOUCESTER HISTORIC DISTRICT.
  6. THE SITE IS WITHIN THE PASCOAG RESERVOIR AND TRIBUTARIES WATERSHED (R10001002L-03).
  7. THE SITE IS NOT WITHIN THE SCITUATE RESERVOIR.

**PROPOSED UTILITY NOTES**

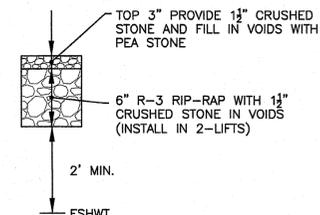
- REFERENCED BELOW IS THE PROPOSED UTILITIES FOR THIS SUBDIVISION:
- WATER = ONSITE PRIVATE WELL
  - SEWER = ONSITE WASTEWATER TREATMENT SYSTEM (OWTS)
  - HEAT = OIL (OR APPROVED EQUAL)
  - ELECTRIC = ABOVE AND BELOW GROUND ELECTRIC SERVICE WITHIN DRIVEWAY AREAS
  - DRAINAGE = DRIVEWAY ROOF RUNOFF SHALL BE MITIGATED USING THE RI STORMWATER MANAGEMENT GUIDANCE FOR INDIVIDUAL SINGLE-FAMILY RESIDENTIAL LOT DEVELOPMENT

**PLAN NOTES**

1. THE BOUNDARY LINES SHOWN ON THIS PLAN ARE APPROXIMATE. FINAL SURVEYS AND LOT SUBDIVISION WILL BE COMPLETED FOR THE MINOR SUBDIVISION PLAN RECORDING.
2. THE CONTOURS SHOWN ON THIS PLAN HAVE BEEN TAKEN FROM LIDAR TECHNOLOGY FROM THE RHODE ISLAND GEOGRAPHIC INFORMATION SYSTEM (RIGIS).
3. AFTER RECEIPT OF RIDEM SUBDIVISION SUITABILITY APPROVAL, EACH LOT WILL REQUIRE A FINAL OWTS DESIGN AND APPROVAL FROM RIDEM. FOR THE FINAL OWTS DESIGN, FIELD LOCATED CONTOURS WILL BE REQUIRED. BENCH MARKS WILL BE ESTABLISHED DURING THE FIELD SURVEY.
4. WETLAND FLAGS SHOWN HAVE BEEN DELINEATED BY NATURAL RESOURCE SERVICES IN MAY 2021 AND FIELD LOCATED BY CROSSMAN ENGINEERING.
5. SOIL EROSION AND SEDIMENT CONTROL MEASURES WILL BE REQUIRED FOR THE CONSTRUCTION ON EACH LOT. THESE MEASURES SHALL BE REFERENCED ON THE FINAL OWTS PLAN DESIGN.

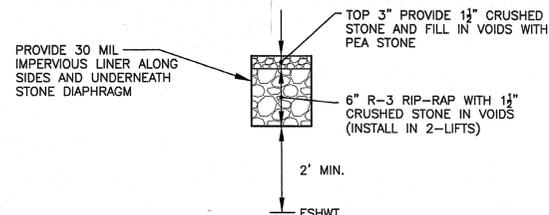


**TYPICAL ROADWAY SECTION**  
NOT TO SCALE



NOTE: TYPICAL DETAIL SITE WIDE, EXCLUDING AREA ALONG RETAINING WALL.

**CRUSHED STONE DIAPHRAGM TYPE A**

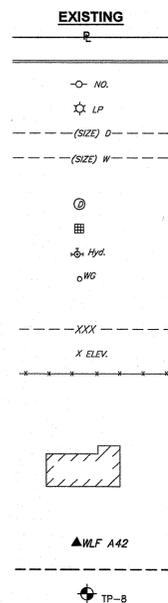


NOTE: THIS DETAIL IS FOR THE CRUSHED STONE DIAPHRAGM ALONG THE RETAINING WALL.

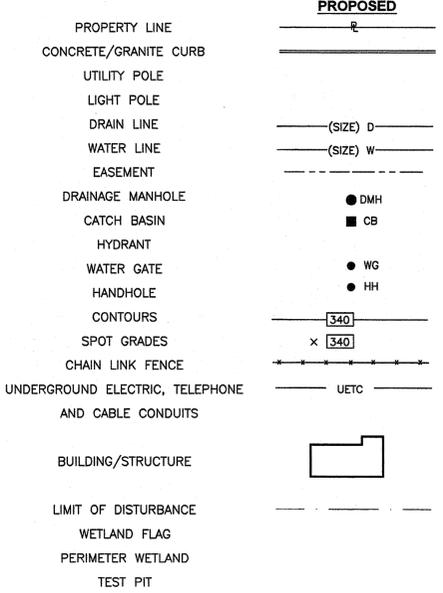
**CRUSHED STONE DIAPHRAGM TYPE B**

**TYPICAL CRUSHED STONE DIAPHRAGM DETAILS**

NOT TO SCALE

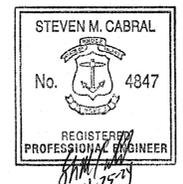


**LEGEND**



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**BARNES SUBDIVISION**  
 PLAT MAP 7 LOT 24  
 ZONING DISTRICT: A-4  
 AGRICULTURAL-RESIDENTIAL  
 JACKSON SCHOOLHOUSE ROAD  
 GLOUCESTER, RHODE ISLAND

**BRUCE BARNES**  
 27 BARNES WAY  
 CHEPACHET, RI 02814

**GENERAL NOTES AND LEGEND**

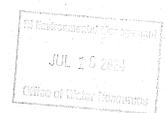
DATE: DECEMBER 2022 SCALE: AS NOTED

DWG. NAME: 2550-02-NOTE.dwg

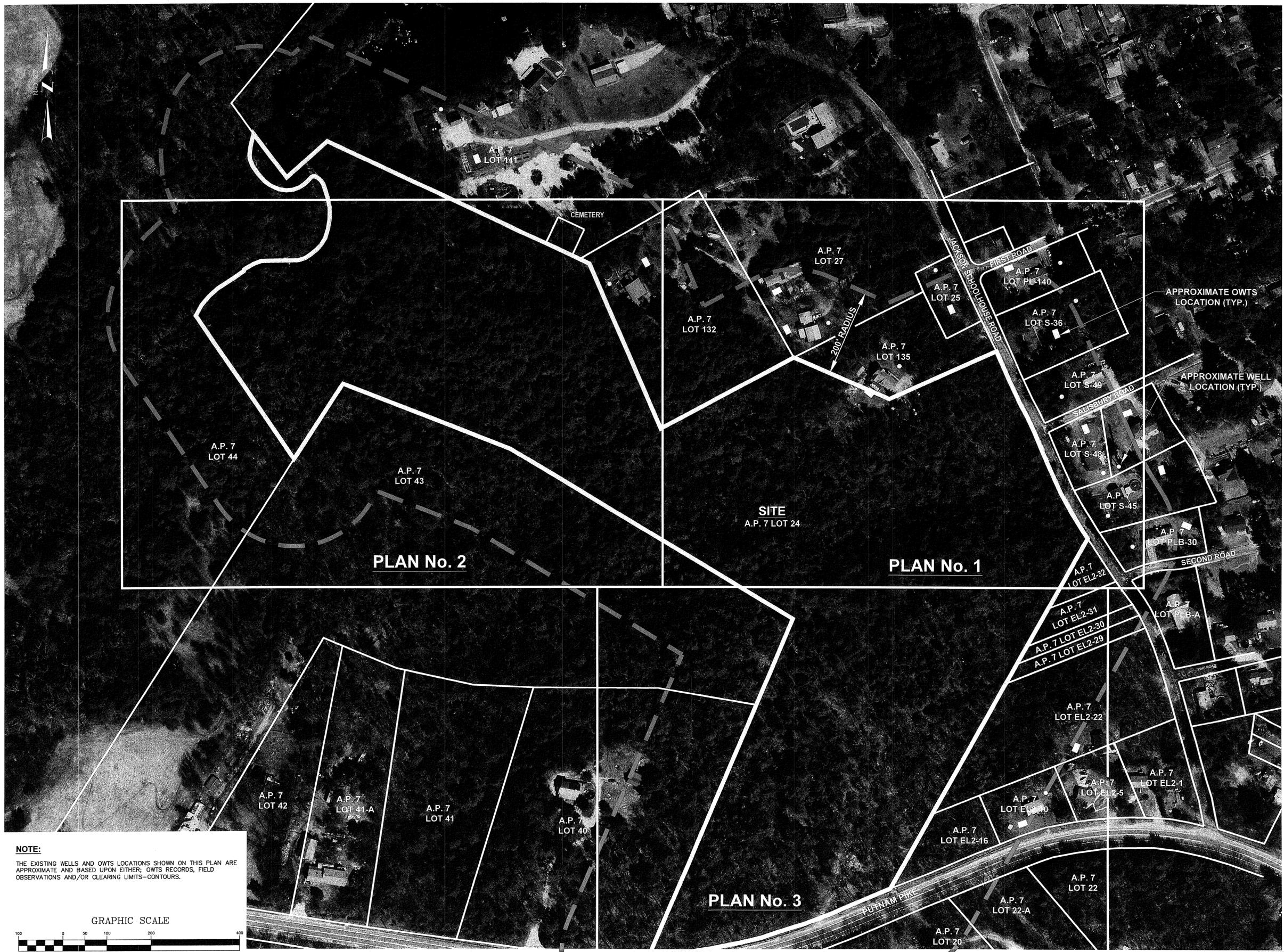
REVISIONS

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	11/20/23
2	RIDEM COMMENTS	04/04/24

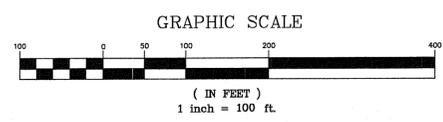
RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
 FRESHWATER WETLANDS PROGRAM  
 APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL  
 DATED: APR 16 2025 FILE #: 22-031R  
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE



DRAWING NUMBER  
**C1**  
 SHEET: 2 OF 13



**NOTE:**  
 THE EXISTING WELLS AND OWTS LOCATIONS SHOWN ON THIS PLAN ARE APPROXIMATE AND BASED UPON EITHER; OWTS RECORDS, FIELD OBSERVATIONS AND/OR CLEARING LIMITS-CONTOURS.



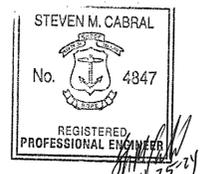
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PROJECT TITLE:

**BARNES SUBDIVISION**  
 PLAT MAP 7 LOT 24  
 ZONING DISTRICT: A-4  
 AGRICULTURAL-RESIDENTIAL  
 JACKSON SCHOOLHOUSE ROAD  
 GLOCESTER, RHODE ISLAND

PREPARED FOR:

**BRUCE BARNES**  
 27 BARNES WAY  
 CHEPACHET, RI 02814  
 APPROVED WITH CONDITIONS AS  
 SPECIFIED IN THE LETTER OF APPROVAL  
 DATED: APR 16 2023 FILE # 29-0315  
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

DRAWING TITLE:  
**AERIAL MAP  
 and KEY PLAN**

DATE: DECEMBER 2022 SCALE: 1"=100'

DWG. NAME: 2550-03-AERIAL.dwg

REVISIONS

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	11/20/23
2	RIDEM COMMENTS	04/04/24

DRAWING NUMBER

**C2**

SHEET: 3 OF 13



- Notes:**
- The horizontal datum is the Rhode Island state plane coordinate system (NAD83).
  - Abutters information taken from the town of Glocester, RI, tax assessors records in March of 2023. This information is not intended to be a certification of title or ownership for the properties shown. Parcels are subject to any easements, restrictions, or conditions of record.
  - Contours shown on this plan are Lidar Contours taken from the state of Rhode Island GIS website.

**Lot Zoning Information:**  
 Lot 24 is currently zoned A-4 Agricultural.  
 The minimum lot size in the A-4 zone is 4 Acres.  
 The minimum frontage in the A-4 zone is 350'.  
 The minimum structure setbacks in the A-4 zone are 75' front yard, 50' side yard, and 100' rear yard.

**Plan references:**  
 Plan Book 576 Page 203 (Locus)  
 Plan Book 785 Page 343  
 Plan Book 792 Page 319  
 Plan Book 911 Page 124  
 Plan Book 778 Page 29  
 Plan Book 701 Page 220  
 Plan Book 856 Page 326  
 Plan Book 874 Page 234  
 See Plan entitled "Boundary Plan A.P. 7 Lot 43, Putnam Pike, Glocester, Rhode Island, prepared for, John W. Barnes, December, 2006, Scale: 1"=100', by Crossman Engineering, Inc."

**Plat 7 Lot 44**  
 Mary R. Barnes  
 Book 576 Page 203

**Plat 7 Lot 141**  
 Jay P. & Debra J. Leonhardt  
 Book 864 Page 314

**Glocester Historical Cemetery #76**

**Plat 7 Lot 27**  
 Nicholas C. Shepherd & Angeline E. Cloutier  
 Book 814 Page 180

**Plat 7 Lot 132**  
 Peter R. & Barbara R. Guilbault  
 Book 911 Page 124

**Plat 7 Lot 135**  
 Paul R. & Jo Ann P. Jaiette  
 Book 778 Page 29

**Plat 7 Lot 24**  
 Bruce E. Barnes  
 Book 576 Page 203  
 Area=1,379,557± s.f.  
 or 31.67± Acres

**Plat 7 Lot 43**  
 John W. & Polly S. Barnes  
 Book 785 Page 343

**Plat 7 Lot 40**  
 Karen J. Timoteo  
 Book 792 Page 319

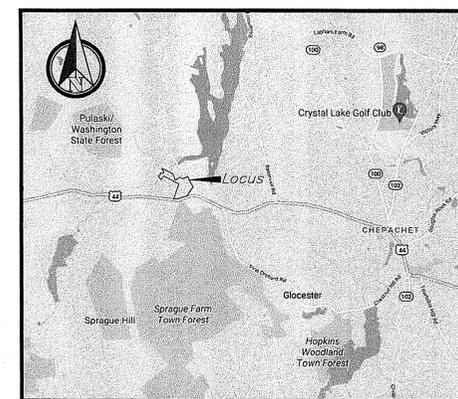
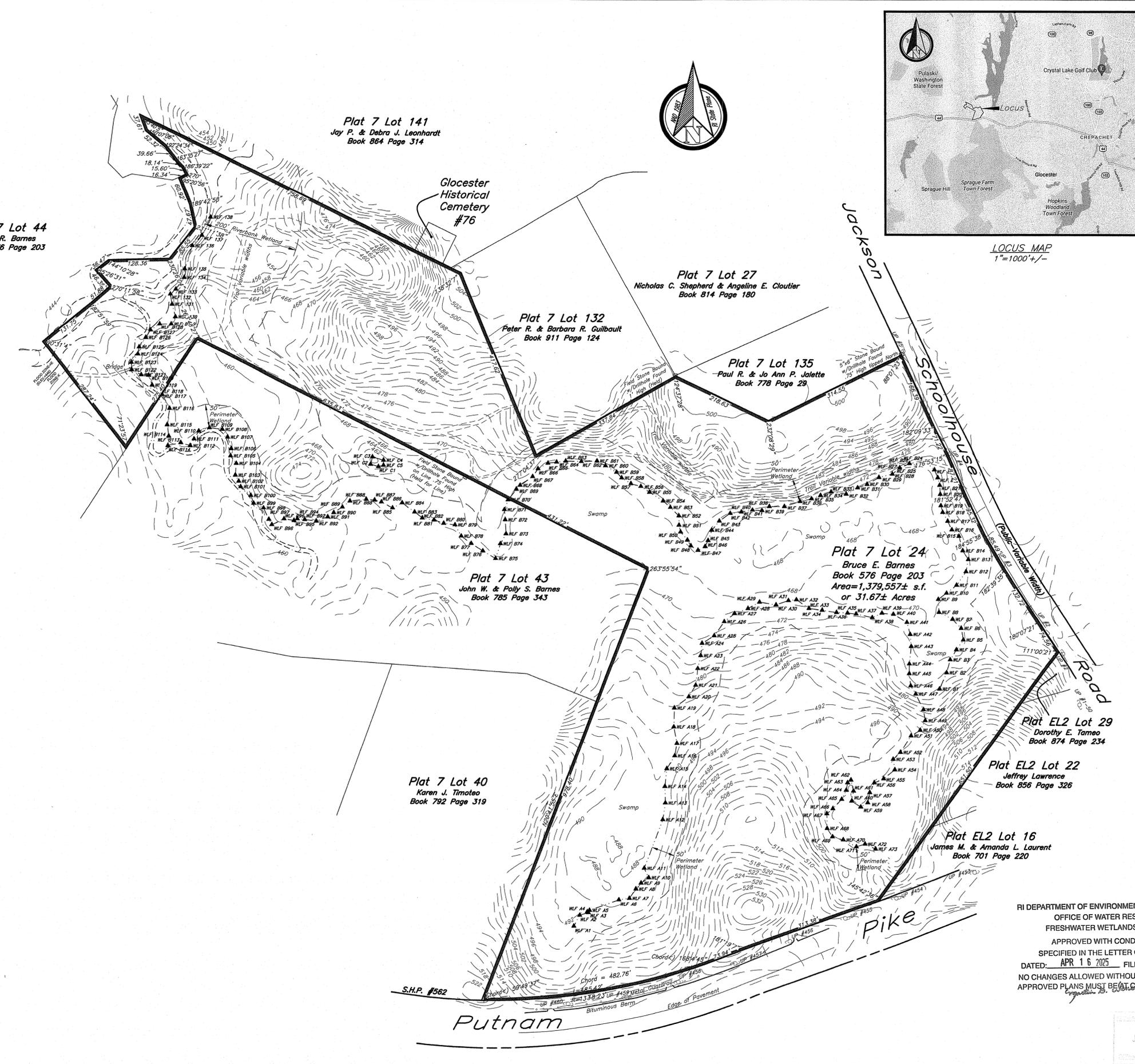
**Plat EL2 Lot 29**  
 Dorothy E. Tameo  
 Book 874 Page 234

**Plat EL2 Lot 22**  
 Jeffrey Lawrence  
 Book 856 Page 326

**Plat EL2 Lot 16**  
 James M. & Amanda L. Laurent  
 Book 701 Page 220

**Legend**

- Bollard
- Contour line
- xxX Spot Elevation
- Guard Rail
- Sign
- MB Mailbox
- LP Light Pole
- SP Signal Pole
- Drainage Catch Basin
- Drainage Curb Inlet
- Drainage Line
- Drainage Manhole
- FO Fiber Optic Line
- UP Utility Pole
- Guy Wire
- OHV Overhead lines
- UE Electric Lines (underground)
- Electric Manhole
- EM Electric Meter
- GV Gas Gate
- GL Gas Line
- GM Gas Manhole
- GS Gas Meter
- GS Gas Shutoff
- UT Telephone Line (underground)
- TB Telephone Box
- TH Telephone Handhole
- TM Telephone Manhole
- S Sewer Line
- SFM Sewer Force Main
- SM Sewer Manhole
- SC Sewer Cleanout
- FD Fire Hydrant
- W Water Line
- WG Water Gate
- WS Water Shutoff
- WM Water Manhole
- BWF Barbed Wire Fence
- CLF Chain Link Fence
- SF Stockade Fence
- PRF Post and Rail Fence
- SW Stone Wall
- RW Retaining Wall
- TH Tree / Hedge Line
- DT Deciduous Tree
- ET Evergreen Tree
- EW Edge of Water
- W Well
- MW Monitoring Well
- TH Test Hole
- WLF Wetland Flag



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**Certification**  
 This survey has been conducted and the plan has been prepared pursuant to 435-RICR-00-1.9 of the Rules and Regulations adopted by the Rhode Island State Board of Registration for Professional Land Surveyors on November 25, 2015 as follows:  
 Limited Content Boundary Survey Measurement Specification I  
 Data Accumulation Survey Measurement Specification III  
 The purpose for the conduct of the survey and for the preparation of the plan is to delineate the boundaries of the parcel.  
 Ronald N. Tufnau, PLS # 1939  
 Certificate of Authorization # A257



**PROJECT TITLE:**  
 BARNES SUBDIVISION  
 PLAT MAP 7 LOT 24  
 ZONING DISTRICT: A-4  
 AGRICULTURAL-RESIDENTIAL  
 JACKSON SCHOOLHOUSE ROAD  
 GLOCESTER, RHODE ISLAND

**PREPARED FOR:**  
 BRUCE BARNES  
 27 BARNES WAY  
 CHEPACHET, RI 02814

**DRAWING TITLE:**  
 EXISTING CONDITIONS  
 PLAN

**DATE:** DECEMBER 2022 **SCALE:** 1" = 100'

**DWG. NAME:** 2550 Working 20240109.dwg

**REVISIONS**

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	11/20/23
2	RIDEM COMMENTS	04/04/24

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**DRAWING NUMBER**  
**C4**  
 SHEET: 5 OF 13



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GLOCESTER, RHODE ISLAND**

PREPARED FOR:  
**BRUCE BARNES  
27 BARNES WAY  
CHEPACHET, RI 02814**

DRAWING TITLE:  
**SITE LAYOUT PLAN**

DATE: DECEMBER 2022 SCALE: 1"=100'

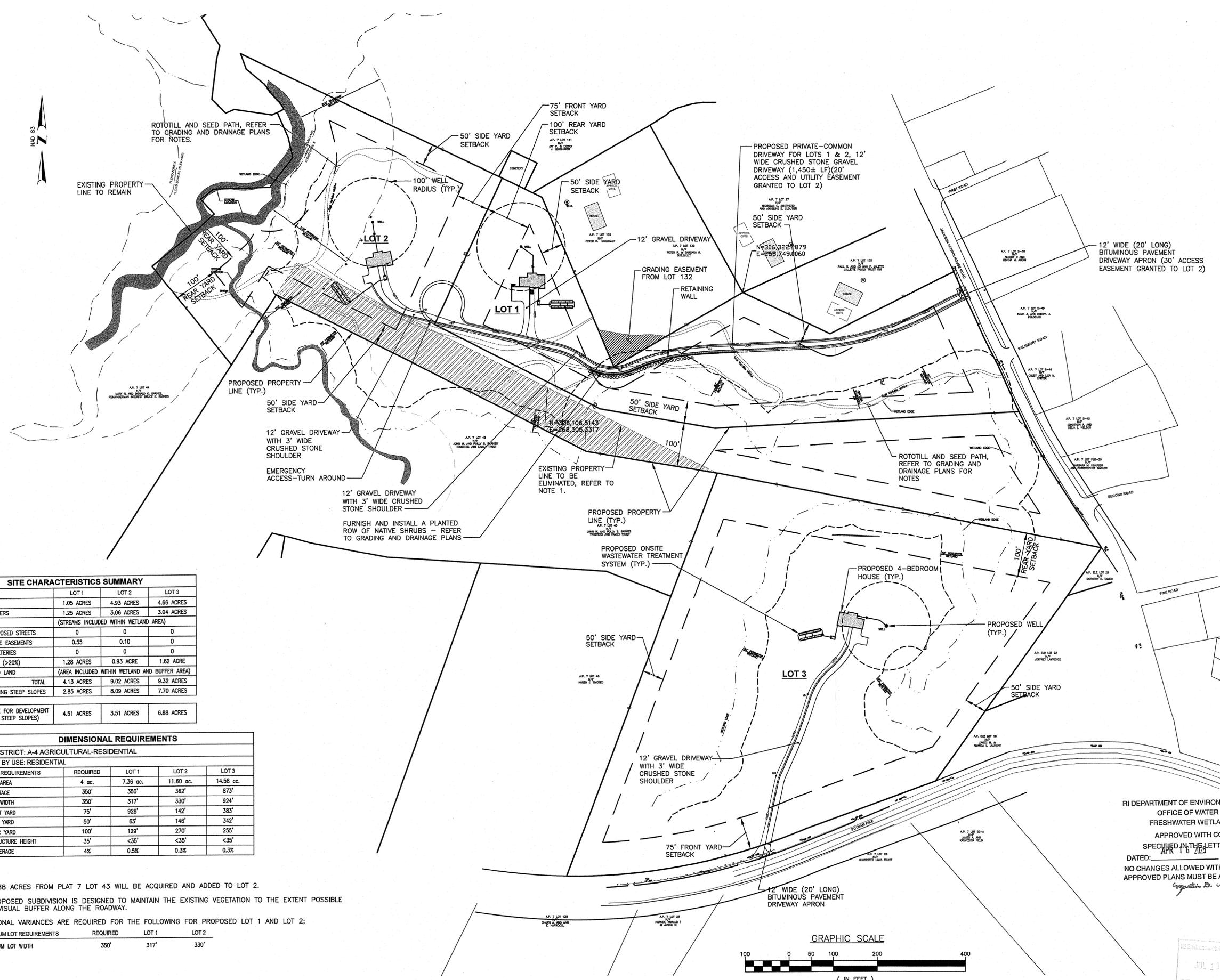
DWG. NAME: 2550-05-SITE.dwg

REVISIONS

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2	RIDEM COMMENTS	04/04/24

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DRAWING NUMBER  
**C5**  
SHEET: 6 OF 13



**SITE CHARACTERISTICS SUMMARY**

DESCRIPTION	LOT 1	LOT 2	LOT 3
WETLANDS	1.05 ACRES	4.93 ACRES	4.66 ACRES
WETLAND BUFFERS	1.25 ACRES	3.06 ACRES	3.04 ACRES
WATER BODIES (STREAMS INCLUDED WITHIN WETLAND AREA)			
EXISTING/PROPOSED STREETS	0	0	0
PUBLIC/PRIVATE EASEMENTS	0.55	0.10	0
HISTORIC CEMETERIES	0	0	0
STEEP SLOPES (>20%)	1.28 ACRES	0.93 ACRE	1.62 ACRE
FLOOD HAZARD LAND (AREA INCLUDED WITHIN WETLAND AND BUFFER AREA)			
TOTAL	4.13 ACRES	9.02 ACRES	9.32 ACRES
TOTAL EXCLUDING STEEP SLOPES	2.85 ACRES	8.09 ACRES	7.70 ACRES

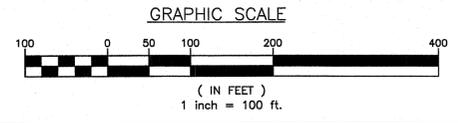
**DIMENSIONAL REQUIREMENTS**

ZONING DISTRICT: A-4 AGRICULTURAL-RESIDENTIAL  
PERMITTED BY USE: RESIDENTIAL

MINIMUM LOT REQUIREMENTS	REQUIRED	LOT 1	LOT 2	LOT 3
MINIMUM LOT AREA	4 ac.	7.36 ac.	11.60 ac.	14.58 ac.
MINIMUM FRONTAGE	350'	350'	362'	873'
MINIMUM LOT WIDTH	350'	317'	330'	924'
MINIMUM FRONT YARD	75'	928'	142'	383'
MINIMUM SIDE YARD	50'	63'	146'	342'
MINIMUM REAR YARD	100'	129'	270'	255'
MAXIMUM STRUCTURE HEIGHT	35'	<35'	<35'	<35'
BUILDING COVERAGE	4%	0.5%	0.3%	0.3%

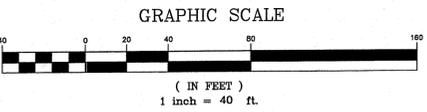
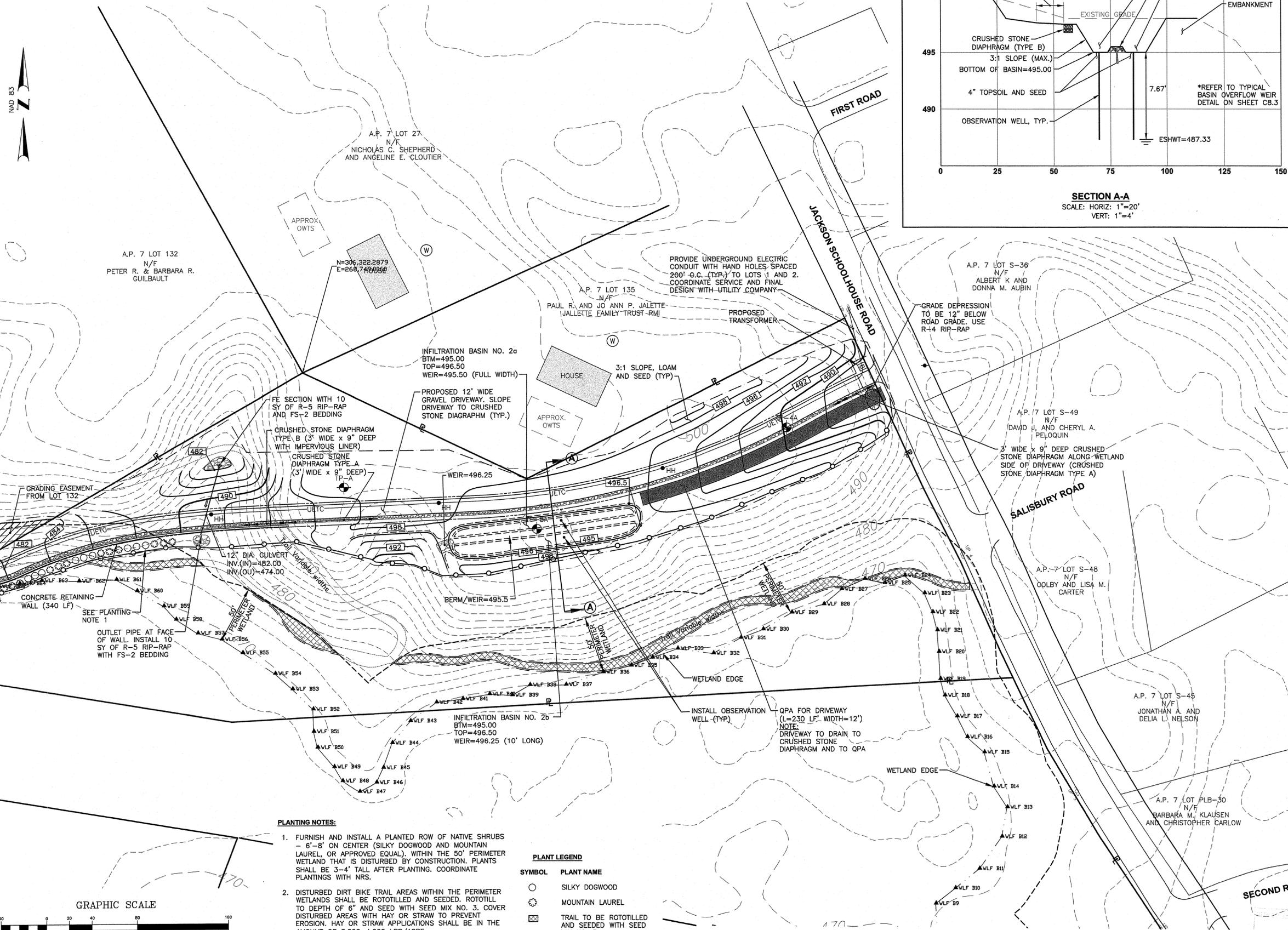
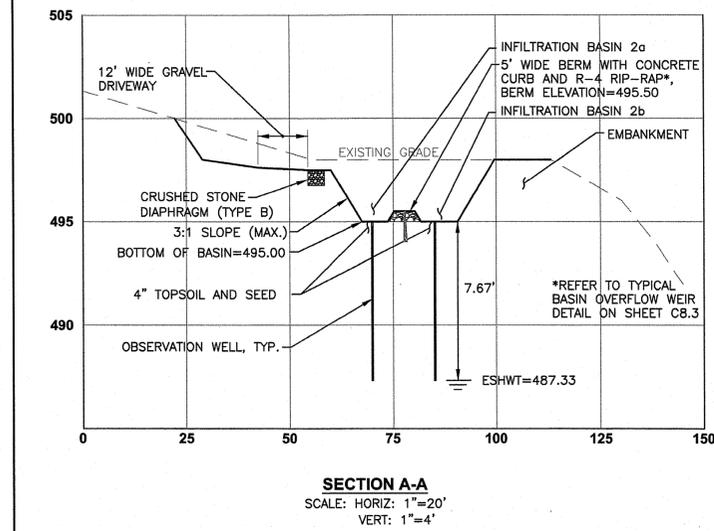
- NOTES:**
- 1.88 ACRES FROM PLAT 7 LOT 43 WILL BE ACQUIRED AND ADDED TO LOT 2.
  - THE PROPOSED SUBDIVISION IS DESIGNED TO MAINTAIN THE EXISTING VEGETATION TO THE EXTENT POSSIBLE FOR A VISUAL BUFFER ALONG THE ROADWAY.
  - DIMENSIONAL VARIANCES ARE REQUIRED FOR THE FOLLOWING FOR PROPOSED LOT 1 AND LOT 2:

MINIMUM LOT REQUIREMENTS	REQUIRED	LOT 1	LOT 2
MINIMUM LOT WIDTH	350'	317'	330'



**INFILTRATION BASIN SUMMARY**

LOCATION	TOP OF BERM	BOTTOM OF BASIN	OVERFLOW WEIR CREST ELEVATION	ESHWT	TP ID	PEAK WATER ELEVATION IN BASIN		
						1 YR STORM	10 YR STORM	100 YR STORM
2A	496.50	495.00	495.50	487.33	5A	495.00	495.00	495.51
2B	496.50	495.00	496.25	487.33	5A	495.00	495.00	495.02



- PLANTING NOTES:**
- FURNISH AND INSTALL A PLANTED ROW OF NATIVE SHRUBS - 6'-8' ON CENTER (SILKY DOGWOOD AND MOUNTAIN LAUREL, OR APPROVED EQUAL). WITHIN THE 50' PERIMETER WETLAND THAT IS DISTURBED BY CONSTRUCTION, PLANTS SHALL BE 3'-4' TALL AFTER PLANTING. COORDINATE PLANTINGS WITH NRS.
  - DISTURBED DIRT BIKE TRAIL AREAS WITHIN THE PERIMETER WETLANDS SHALL BE ROTOTILLED AND SEEDED. ROTOTILL TO DEPTH OF 6" AND SEED WITH SEED MIX NO. 3. COVER DISTURBED AREAS WITH HAY OR STRAW TO PREVENT EROSION. HAY OR STRAW APPLICATIONS SHALL BE IN THE AMOUNT OF 3,000-4,000 LBS/ACRE.
  - TRAILS THAT CROSS BIOLOGICAL SWAMP AND RIVERS SHALL BE LEFT TO RE-VEGETATE NATURALLY.

- PLANT LEGEND**
- |   |   |
|---|---|
| ○ | SILKY DOGWOOD   |
| ⊗ | MOUNTAIN LAUREL                                       |
| ⊠ | TRAIL TO BE ROTOTILLED AND SEEDED WITH SEED MIX NO. 3 |

**Crossman Engineering**  
 Rhode Island: 151 Centerville Road, Warwick, RI 02886, Phone (401) 738-5660  
 Massachusetts: 1 George Leven Drive, Suite 200, North Attleboro, MA 02760, Phone (508) 695-1700  
 Email: cel@crossmaneng.com

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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: APR 16 2025 FILE # 22-0318  
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Steven M. Cabral  
 No. 4847  
 REGISTERED PROFESSIONAL ENGINEER

**PROJECT TITLE:**  
**BARNES SUBDIVISION**  
 PLAT MAP 7 LOT 24  
 ZONING DISTRICT: A-4  
 AGRICULTURAL-RESIDENTIAL  
 JACKSON SCHOOLHOUSE ROAD  
 GLOCESTER, RHODE ISLAND

**PREPARED FOR:**  
**BRUCE BARNES**  
 27 BARNES WAY  
 CHEPACHET, RI 02814

**DRAWING TITLE:**  
**GRADING and DRAINAGE**  
**PLAN No. 1**

**DATE:** DECEMBER 2022 **SCALE:** 1"=40'

**DWG. NAME:** 2550-06-GRADE.dwg

**REVISIONS**

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	11/20/23
2	RIDEM COMMENTS	04/04/24

**DRAWING NUMBER**  
**C6.1**  
 SHEET: 7 OF 13



**Crossman Engineering**

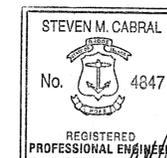
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DATED: APR 16 2025 FILE #: 22-0318  
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PROJECT TITLE:  
**BARNES SUBDIVISION**  
PLAT MAP 7 LOT 24  
ZONING DISTRICT: A-4  
AGRICULTURAL-RESIDENTIAL  
JACKSON SCHOOLHOUSE ROAD  
GLOCESTER, RHODE ISLAND

PREPARED FOR:  
**BRUCE BARNES**  
27 BARNES WAY  
CHEPACHET, RI 02814

DRAWING TITLE:  
**GRADING and DRAINAGE**  
PLAN No. 2

DATE: DECEMBER 2022 SCALE: 1"=40'

DWG. NAME: 2550-06-GRADE.dwg

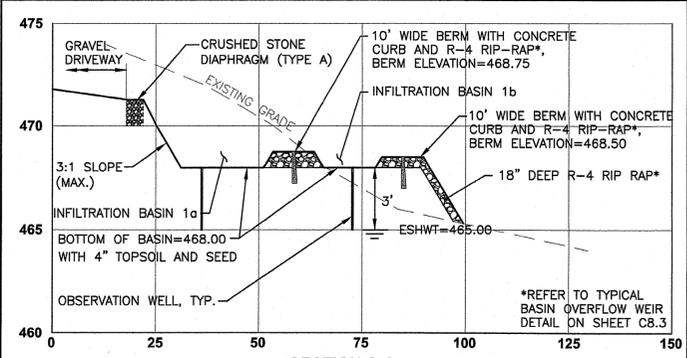
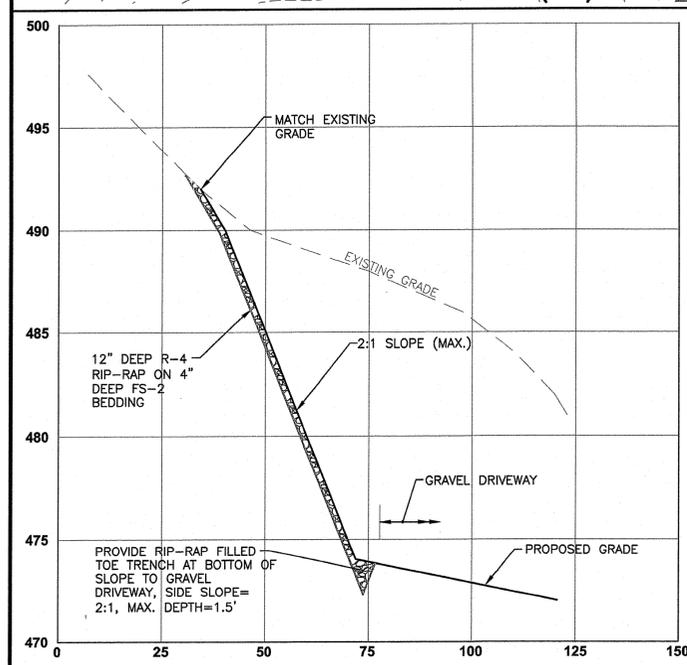
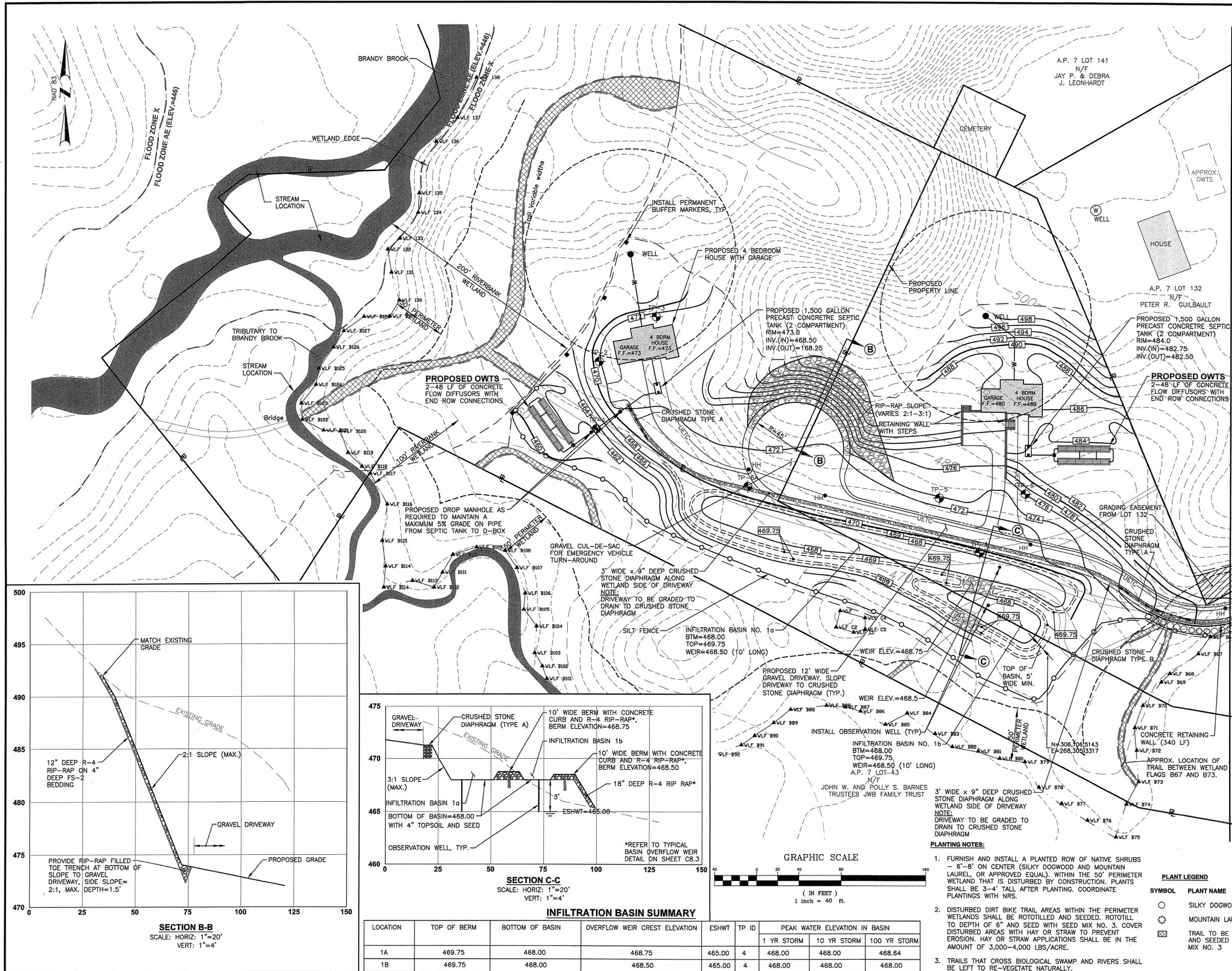
REVISIONS

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	11/20/23
2	RIDEM COMMENTS	04/04/24

DRAWING NUMBER

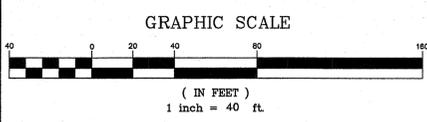
SYMBOL	PLANT NAME
○	SILKY DOGWOOD
⊗	MOUNTAIN LAUREL
⊠	TRAIL TO BE ROTOTILLED AND SEEDED WITH SEED MIX NO. 3

**C6.2**  
SHEET: 8 OF 13



**INFILTRATION BASIN SUMMARY**

LOCATION	TOP OF BERM	BOTTOM OF BASIN	OVERFLOW WEIR CREST ELEVATION	ESHWT	TP ID	PEAK WATER ELEVATION IN BASIN		
						1 YR STORM	10 YR STORM	100 YR STORM
1A	469.75	468.00	468.75	465.00	4	468.00	468.00	468.64
1B	469.75	468.00	468.50	465.00	4	468.00	468.00	468.00



- PLANTING NOTES:**
- FURNISH AND INSTALL A PLANTED ROW OF NATIVE SHRUBS - 6'-8" ON CENTER (SILKY DOGWOOD AND MOUNTAIN LAUREL, OR APPROVED EQUAL). WITHIN THE 50' PERIMETER WETLAND THAT IS DISTURBED BY CONSTRUCTION, PLANTS SHALL BE 3'-4' TALL AFTER PLANTING. COORDINATE PLANTINGS WITH NRS.
  - DISTURBED DIRT BIKE TRAIL AREAS WITHIN THE PERIMETER WETLANDS SHALL BE ROTOTILLED AND SEEDED. ROTOTILL TO DEPTH OF 6" AND SEED WITH SEED MIX NO. 3. COVER DISTURBED AREAS WITH HAY OR STRAW TO PREVENT EROSION. HAY OR STRAW APPLICATIONS SHALL BE IN THE AMOUNT OF 3,000-4,000 LBS/ACRE.
  - TRAILS THAT CROSS BIOLOGICAL SWAMP AND RIVERS SHALL BE LEFT TO RE-VEGETATE NATURALLY.



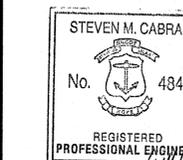
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PROJECT TITLE:

**BARNES SUBDIVISION**  
 PLAT MAP 7 LOT 24  
 ZONING DISTRICT: A-4  
 AGRICULTURAL-RESIDENTIAL  
 JACKSON SCHOOLHOUSE ROAD  
 GLOCESTER, RHODE ISLAND

PREPARED FOR:

**BRUCE BARNES**  
 27 BARNES WAY  
 CHEPACHET, RI 02814

DRAWING TITLE:

**GRADING and DRAINAGE**  
**PLAN No. 3**

DATE: DECEMBER 2022 SCALE: 1"=40'

DWG. NAME: 2550-06-GRADE.dwg

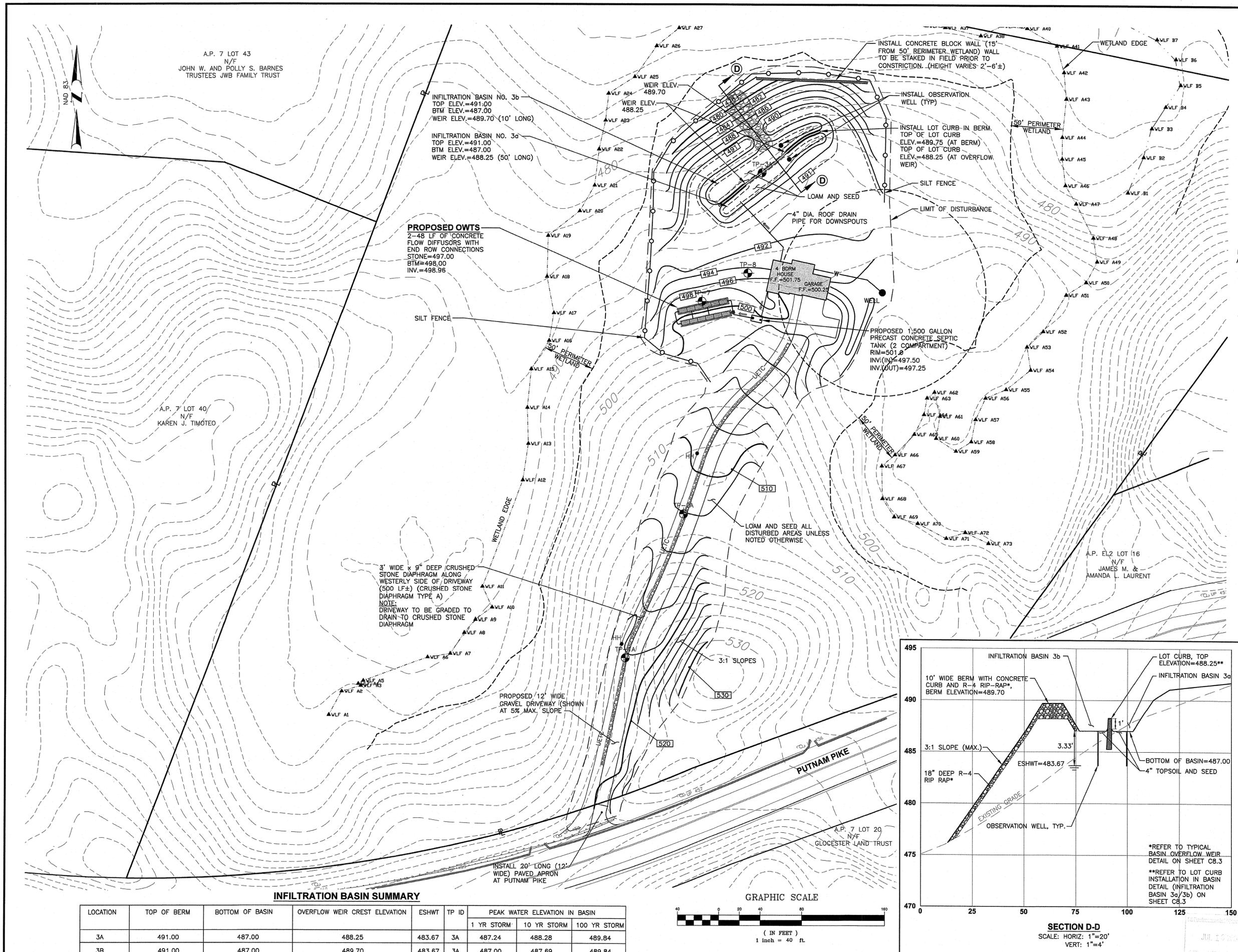
REVISIONS

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	11/20/23
2	RIDEM COMMENTS	04/04/24

DRAWING NUMBER

**C6.3**

SHEET: 9 OF 13



**SESC PLAN / O&M NOTE:**

THE SOIL EROSION AND SEDIMENT CONTROL PLAN (SESC) AND OPERATIONS AND MAINTENANCE PLAN (O&M) ARE REQUIRED DOCUMENTS WITH THIS PLAN SET AND MUST BE MAINTAINED ON-SITE BY THE CONTRACTOR. THE CONTRACTOR IS THE DESIGNATED OPERATOR FOR THE PROJECT.

RIDEM AT ITS DISCRETION, MAY INSPECT ANY PERMITTED CONSTRUCTION SITE. THE OPERATOR MUST COMPLY WITH ALL PERMIT CONDITIONS, INCLUDING, BUT NOT LIMITED TO: MAINTAINING ALL REQUIRED SIGNED SOIL EROSION AND SEDIMENT CONTROL PLANS ON-SITE; CONDUCTING REQUIRED INSPECTIONS AND MAINTAINING INSPECTION RECORDS ON-SITE; PROPERLY INSTALLING, MONITORING AND MAINTAINING EROSION AND SEDIMENT CONTROLS; AVOIDING ENVIRONMENTAL IMPACTS; AND KEEPING ALL CONSTRUCTION AND DISTURBANCE ACTIVITY WITHIN THE APPROVED LIMITS OF DISTURBANCE.

**EROSION CONTROL AND SOIL STABILIZATION PROGRAM**

1. EXTREME CARE SHALL BE EXERCISED SO AS TO PREVENT ANY UNSUITABLE MATERIAL FROM ENTERING THE ROADWAY DRAINAGE SYSTEM, ADJACENT PROPERTIES, AND OUTSIDE THE LIMIT OF WORK.
2. ALL PERIMETER EROSION CONTROLS SHALL BE INSTALLED PRIOR TO THE START OF CONSTRUCTION. PERIMETER EROSION CONTROLS ARE SILT FENCE.
3. DENUDE SLOPES SHALL NOT BE UNATTENDED OR EXPOSED FOR EXCESSIVE PERIODS OF TIME.
4. ALL DISTURBED SLOPES, EITHER NEWLY CREATED OR EXPOSED PRIOR TO OCTOBER 15, SHALL BE SEEDED OR PROTECTED BY THAT DATE, UNLESS CONSTRUCTION IS ONGOING AND EROSION CONTROLS ARE IN PLACE AND MAINTAINED.
5. TEMPORARY TREATMENTS SHALL CONSIST OF A HAY, STRAW OR FIBER MULCH OR PROTECTIVE COVERS, SUCH AS A MAT OR FIBER LINING (BURLAP), JUTE, FIBERGLASS NETTING, EXCELSIOR BLANKETS). THEY SHALL BE INCORPORATED INTO THE WORK AS WARRANTED OR AS ORDERED BY THE OWNER.
6. STOCKPILES SHALL BE SURROUNDED WITH FILTREX FILTER SOXX.
7. HAY OR STRAW APPLICATIONS SHALL BE IN THE AMOUNT OF 3,000-4,000 LBS/ACRE.
8. ALL FILTREX FILTER SOXX SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER IS ESTABLISHED AND POTENTIAL SEDIMENTATION SOURCES ARE REMOVED. ONCE THE AREAS HAVE AN ACCEPTABLE STAND OF GRASS OF APPROVED GROUND COVER, AND AFTER APPROVAL OF THE OWNER, THE CONTRACTOR SHALL REMOVE ALL FILTREX FILTER SOXX.
9. ADDITIONAL EROSION CONTROLS SHALL BE LOCATED AS CONDITIONS WARRANT OR AS DIRECTED BY THE ENGINEER, RIDEM, OWNER OR TOWN REPRESENTATIVES.
10. TEMPORARY DEWATERING BASINS SHALL BE UTILIZED AS REQUIRED. THE NUMBER AND SIZE OF DEWATERING BASINS REQUIRED WILL VARY DEPENDING ON SITE CONDITIONS.
11. THE "R.I. SOIL EROSION AND SEDIMENT CONTROL HANDBOOK" PREPARED BY THE R.I. STATE CONSERVATION COMMITTEE, REVISED 2014, UPDATED 2016, MUST BE UTILIZED BY THE CONTRACTOR AS A GUIDE.
12. THE CONTRACTOR MUST REFERENCE AND FOLLOW THE REQUIREMENTS AND RECOMMENDATIONS CONTAINED IN THE PROJECT'S SOIL EROSION AND SEDIMENT CONTROL PLAN (SESC). A COPY OF THE SESC PLAN SHALL BE KEPT ON-SITE AT ALL TIMES DURING CONSTRUCTION.

**INSPECTION/MAINTENANCE NOTES**

1. PRIOR TO COMMENCING CONSTRUCTION, GRUBBING OPERATIONS OR EARTHWORK, EROSION CONTROLS SHALL BE PLACED TO PREVENT SEDIMENT FROM ENTERING ADJACENT PROPERTIES, DRAINAGE SYSTEMS AND AREAS OUTSIDE THE LIMIT OF WORK.
2. ALL DISTURBED AREAS WHICH BECOME SUBJECT TO EROSION TENDENCIES WHETHER THEY BE NEWLY FILLED OR EXCAVATED SHALL RECEIVE SLOPE PROTECTION - SUCH AS RIP-RAP.
3. DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING DRAINAGE AND RUNOFF FLOW DURING PERIODS OF RAINFALL. THE CONTRACTOR IS REQUIRED TO PROTECT HIS/HER WORK FROM DAMAGE DURING ALL STORM EVENTS. THE CONTRACTOR IS RESPONSIBLE FOR THE COST OF REPAIRING ALL STORM DAMAGE.
4. GENERAL MAINTENANCE PROCEDURES ARE OUTLINED IN THE ACCOMPANYING SITE PLANS. IN ADDITION, THE OPERATOR AND CONTRACTOR ARE REQUIRED TO INSPECT ALL EROSION CONTROLS ON THE SITE AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN TWENTY-FOUR (24) HOURS AFTER A RAIN EVENT, WHICH GENERATES 0.25 INCHES OF RAIN IN A TWENTY-FOUR (24) HOUR PERIOD AND/OR AFTER A SIGNIFICANT AMOUNT OF RUNOFF.
5. THE CONTRACTOR IS RESPONSIBLE FOR ALL DUST CONTROL AND FOR THE ENTIRE PROJECT DURATION, INCLUDING TEMPORARY SHUT-DOWN PERIODS, MUST MONITOR AND REPAIR, AS NEEDED, ALL SLOPES TO ENSURE A STABLE PRODUCT.
6. AFTER CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE THE OWNER WITH THE INSPECTION REPORTS THAT WERE TAKEN DURING THE CONSTRUCTION ACTIVITIES. THE OWNER IS TO RETAIN THE INSPECTION REPORTS FOR FIVE (5) YEARS FROM THE DATE ON THE REPORT OR APPLICATION.

**GENERAL PROJECT WIDE NOTES**

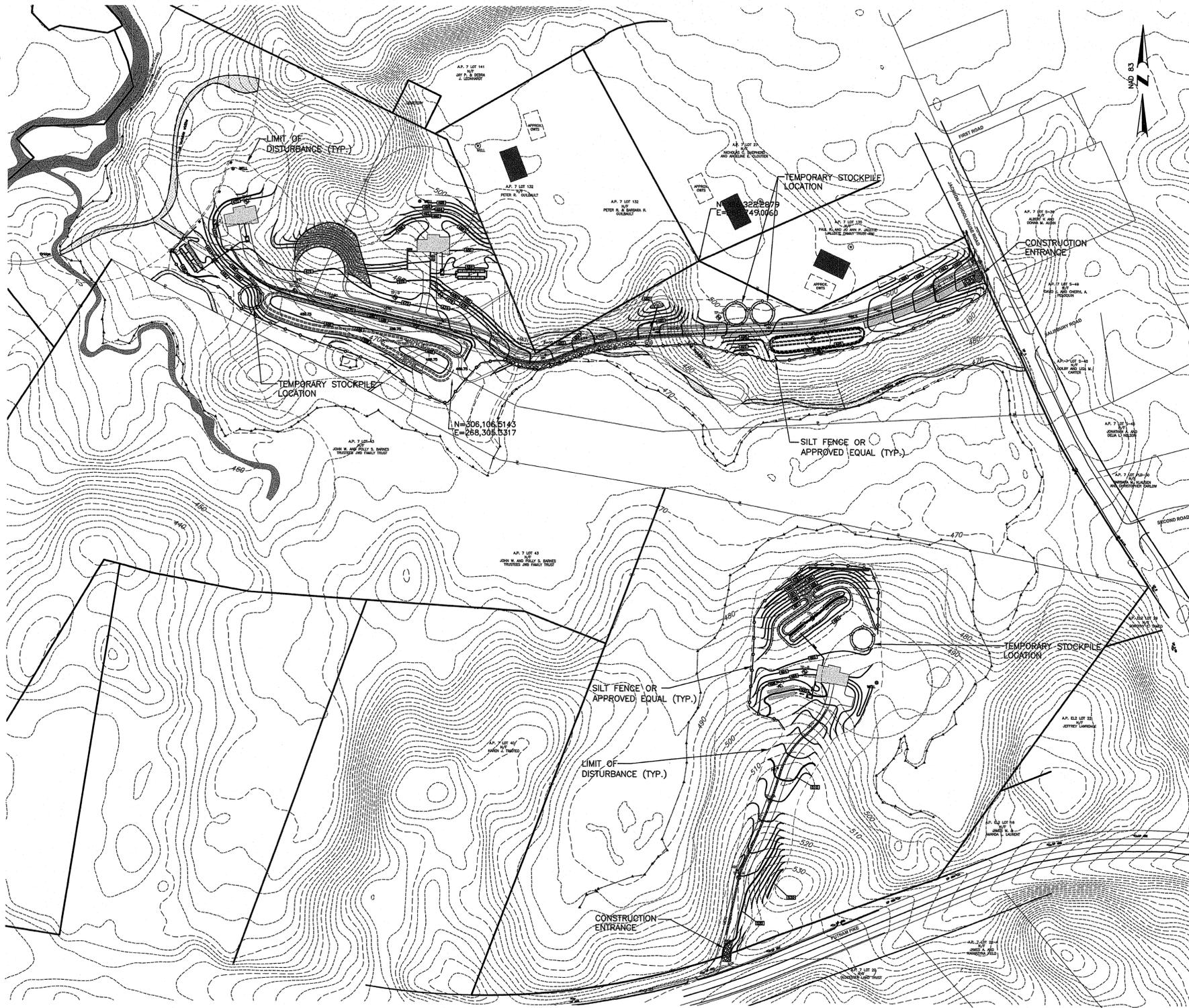
1. THE CONTRACTOR MUST REPLACE AND/OR RESEED ANY VEGETATION THAT DOES NOT DEVELOP/SURVIVE WITHIN THE PERIOD OF ONE (1) YEAR AND HE/SHE SHALL DO SO AT NO ADDITIONAL EXPENSE TO THE OWNER.
2. ALL EROSION CONTROLS OR TEMPORARY PROTECTION SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER IS ESTABLISHED AND POTENTIAL SEDIMENTATION SOURCES ARE REMOVED.
3. TREES AND OTHER EXISTING VEGETATION SHALL BE RETAINED WHENEVER FEASIBLE. TREE CUTTING SHALL ONLY OCCUR WITHIN THE LIMIT OF DISTURBANCE.
4. AREAS DAMAGED DURING CONSTRUCTION SHALL BE RESEEDING, RESEEDING, OR OTHERWISE RESTORED AT THE CONTRACTOR'S EXPENSE.
5. THE CONTRACTOR IS RESPONSIBLE TO KEEP THE SITE CLEAN OF TRASH. RECOMMENDED DAILY PATROL OF THE CONSTRUCTION SHOULD BE CONDUCTED TO PICK-UP TRASH. THE OPERATOR SHALL REQUIRE THE CONTRACTOR TO HAVE PORTABLE SANITARY FACILITIES ON SITE. ROUTINE CLEANING AND WASTE DISPOSAL OF THESE PORTABLE SANITARY FACILITIES IS REQUIRED.
6. IF EROSION OR EROSION TENDENCIES ARE APPARENT ON THE SITE, THE CONTRACTOR IS RESPONSIBLE TO INSTALL ADDITIONAL CONSTRUCTION BMP'S SUCH AS SAND BAGS AS DIRECTED BY THE OWNER, LOCAL MUNICIPALITY, STATE AGENCIES OR ENGINEER DURING CONSTRUCTION.
7. IF SEDIMENT OR DEBRIS IS TRACKED ONTO EXISTING ROADWAY AREAS ADJACENT TO THE CONSTRUCTION AREA, THE CONTRACTOR IS REQUIRED TO SWEEP THE PAVEMENT ON A DAILY BASIS. THE AREA SHALL BE INSPECTED DAILY.
8. ALL TYPES OF WASTE GENERATED AT THE SITE SHALL BE DISPOSED OF IN A MANNER CONSISTENT WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.
9. THE CONTRACTOR IS REQUIRED TO NOTIFY LOCAL AUTHORITIES AND THE RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT, OFFICE OF WASTE MANAGEMENT, OF ANY HAZARDOUS MATERIAL SPILL.
10. THE CONTRACTOR IS REQUIRED TO MAINTAIN THE SITE IN AN ORDERLY AND CLEAN STATE. ALL CONSTRUCTION WASTE SHALL BE STORED IN APPROPRIATE CONTAINERS PRIOR TO REMOVAL AND CONTACT WITH PRECIPITATION SHALL BE KEPT TO A MINIMUM.
11. CONCRETE WASHOUT SHALL BE PERFORMED USING ONE OF THE METHODS LISTED IN SECTION 3 OF THE R.I. SOIL EROSION AND SEDIMENT CONTROL HANDBOOK. THE WASHOUT AREAS SHALL BE LOCATED WITHIN THE PERIMETER EROSION CONTROLS.
12. VEHICLE AND EQUIPMENT WASHING ON-SITE DURING CONSTRUCTION IS NOT ALLOWED.
13. A SPILL RESPONSE KIT SHALL BE KEPT ON SITE AT ALL TIMES DURING CONSTRUCTION.

**DUST CONTROL NOTES**

ON AN AS-NEEDED BASIS OR AS DIRECTED BY THE OWNER OR ENGINEER, THE CONTRACTOR SHALL UTILIZE ONE OF THE FOLLOWING METHODS (AS RECOMMENDED BY THE "R.I. SOIL EROSION AND SEDIMENT CONTROL HANDBOOK", ISSUED 1989, UPDATED 2016) TO CONTROL DUST:

- A. THE EXPOSED SOIL SURFACE SHOULD BE MOISTENED PERIODICALLY WITH ADEQUATE WATER TO CONTROL DUST.
- B. CALCIUM CHLORIDE SHOULD BE EITHER LOOSE DRY GRANULES OR FLAKES FINE ENOUGH TO FEED THROUGH A SPREADER AT A RATE THAT WILL KEEP SURFACE MOIST BUT NOT CAUSE POLLUTION OR PLANT DAMAGE.

THE METHODS SHOULD BE REPEATED AS NEEDED, AND SPECIAL ATTENTION MUST BE GIVEN TO THE ACCESS DRIVES.

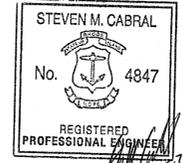


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 OFFICE OF WATER RESOURCES  
 FRESHWATER WETLANDS PROGRAM  
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 DATED: APR 16 2023 FILE # 22-038  
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE  
 Christopher D. Wronick



PROJECT TITLE:  
**BARNES SUBDIVISION**  
 PLAT MAP 7 LOT 24  
 ZONING DISTRICT: A-4  
 AGRICULTURAL-RESIDENTIAL  
 JACKSON SCHOOLHOUSE ROAD  
 GLOCESTER, RHODE ISLAND

PREPARED FOR:  
**BRUCE BARNES**  
 27 BARNES WAY  
 CHEPACHET, RI 02814

DRAWING TITLE:  
**SOIL EROSION and SEDIMENT CONTROL PLAN**

DATE: DECEMBER 2022 SCALE: 1"=100'

DWG. NAME: 2550-07-SOIL.dwg

REVISIONS

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	11/20/23
2	RIDEM COMMENTS	04/04/24

DRAWING NUMBER  
**C7**  
 SHEET: 10 OF 13

**ONSITE WASTEWATER TREATMENT SYSTEM NOTES - TYPICAL FOR EACH LOT:**

- ALL/EACH LOT WILL REQUIRE A FINAL OWTS DESIGN, AND SUBMITTED TO THE RIDEM OWTS DIVISION FOR REVIEW AND APPROVAL.
- REMOVE TOPSOIL, SUBSOIL, HTM BELOW AND 5' BEYOND THE FLOW DIFFUSER LEACH FIELD. REMOVE ALL TREES AND BRUSH AROUND SYSTEM PLUS (10) FEET.
- NO VEHICULAR TRAFFIC IS ALLOWED ON FLOW DIFFUSER LEACH FIELD.
- THERE ARE NO KNOWN EXISTING OR PROPOSED PRIVATE WELLS WITHIN 100' OF THE SYSTEM, AND THERE ARE NO KNOWN EXISTING OR PROPOSED PUBLIC WELLS WITHIN 500'.
- THE GRAVITY PVC PIPING AFTER THE D-BOX SHALL BE SDR 35 PVC PIPE.
- MINIMUM ELEVATION OF LEACHFIELD INVERT TO BE MAINTAINED WITHIN 10 FEET OF FLOW DIFFUSER TRENCHES.
- SURFACE RUNOFF TO BE DIVERTED FROM SYSTEM.
- THE LICENSED INSTALLER MUST FOLLOW THE R.I.D.E.M. 250-RICR-150-10-6 TITLE 250-DEPARTMENT OF ENVIRONMENTAL MANAGEMENT, CHAPTER 150-WATER RESOURCES, SUBCHAPTER 10-WASTEWATER AND STORMWATER, PART 6-RULES AND REGULATIONS ESTABLISHING MINIMUM STANDARDS RELATING TO LOCATION, DESIGN, CONSTRUCTION AND MAINTENANCE OF ONSITE WASTEWATER TREATMENT SYSTEMS, (EFFECTIVE DATE 12/28/2021).
- NO KNOWN DRAINS, PROPOSED DRAINS OR UNDERDRAINS DISCHARGING INTO A SURFACE WATER SUPPLY ARE WITHIN 100' OF LEACH FIELD.
- PROVIDE TEE AND EFFLUENT SCREEN (SECTION 6.27.G.2) FOR SEPTIC TANK OUTLET PIPE IN ACCORDANCE WITH SECTION 6.27.
- ALL DISTURBED AREAS ARE TO RECEIVE 4" OF LOAM & SEED, UNLESS OTHERWISE NOTED.
- ALL KNOWN WATERCOURSES, WETLANDS, DRAINS AND STORMWATER MANAGEMENT SYSTEMS WITHIN 200' OF THE PROPOSED OWTS ARE SHOWN.
- THE CONTRACTOR MUST ADHERE TO ALL CONSTRUCTION INSPECTION PROCEDURES AND REQUIREMENTS OF R.I.D.E.M. AND CROSSMAN ENGINEERING.
- NO GARBAGE DISPOSAL GRINDER IS ALLOWED TO BE USED.
- DISTRIBUTION BOX SHALL BE A JOLLEY PRECAST (DB-9), OR APPROVED EQUAL.
- THERE ARE NO PUBLIC SEWERS WITHIN 200' OF THE PARCEL.
- THE SITE IS NOT WITHIN A CRITICAL RESOURCE AREA AS DEFINED BY SECTION 6.42-6.45 OF THE OWTS RULES AND REGULATIONS.
- THE SITE IS NOT WITHIN THE WATERSHED OF THE PUBLIC WATER SUPPLY AS DEFINED IN SECTION 6.44.
- PIPE BENDS FOR THE SYSTEM DISTRIBUTION LINE SHALL BE 45° OR LESS.
- THE OWTS INSTALLER SHALL NOTIFY THE OWTS DESIGNER OF THE CONSTRUCTION START DATE AT LEAST THREE (3) WORKING DAYS IN ADVANCE.
- NO OWTS CONSTRUCTION SHALL BEGIN UNTIL AUTHORIZED BY R.I.D.E.M. AND THE OWTS DESIGNER.
- PRIOR TO PURCHASE/ORDER OF PRODUCTS, THE INSTALLER MUST PROVIDE "SHOP DRAWINGS" FOR ALL MATERIALS (PIPE, GRAVEL, STONE, PRECAST FLOW DIFFUSERS, TANKS, D-BOX, FILTER FABRIC ETC.) APPROVAL MUST BE GRANTED BY THE DESIGNER PRIOR TO CONSTRUCTION.
- AS REQUIRED, INSTALL PROPERLY COMPACTED GRAVEL THAT MEETS THE REQUIREMENTS OF SECTION 6.33(M) THROUGHOUT THE EXCAVATION AREA. REFER TO SECTION 6.34(F).
- PROVIDE AN 8" CRUSHED STONE BASE LAYER BENEATH THE SEPTIC TANK AND DISTRIBUTION BOX.
- THE INLET AND OUTLET OPENING ON THE SEPTIC TANK SHALL HAVE A WATERTIGHT MANUFACTURER INSTALLED RUBBER BOOT WITH A STAINLESS STEEL CLAMP.
- THE SEPTIC TANK AND D-BOX SHALL HAVE MANHOLE COVERS AND RISERS TO GRADE DESIGNED FOR H-20 LOADING.
- IF FOUNDATION DRAINS ARE PROPOSED ON THE FINAL OWTS DESIGN, ALL RIDEM SETBACKS AND/OR REQUIREMENTS SHALL BE INCORPORATED IN THE FINAL DESIGN.
- THE CONTRACTOR SHALL NOT COMMENCE WORK UNTIL AN INSTALLATION INSPECTION SCHEDULE IS COORDINATED WITH THE SYSTEM DESIGNER.
- CONTRACTOR IS RESPONSIBLE TO VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO ANY WORK.

**TYPICAL DESIGN FLOW**

USE	DESIGN UNITS	UNIT FLOW RATE (gpd/unit)	DESIGN FLOW (gpd)
4 BEDROOM HOUSE	PER BEDROOM	115 gpd	460 gpd

**SEPTIC SIZING WITH NO GARBAGE GRINDER**

REQUIRED SIZE: 1,250 GALLON TANK  
PROPOSED SIZE: 1,500 GALLON (TWO COMPARTMENT)

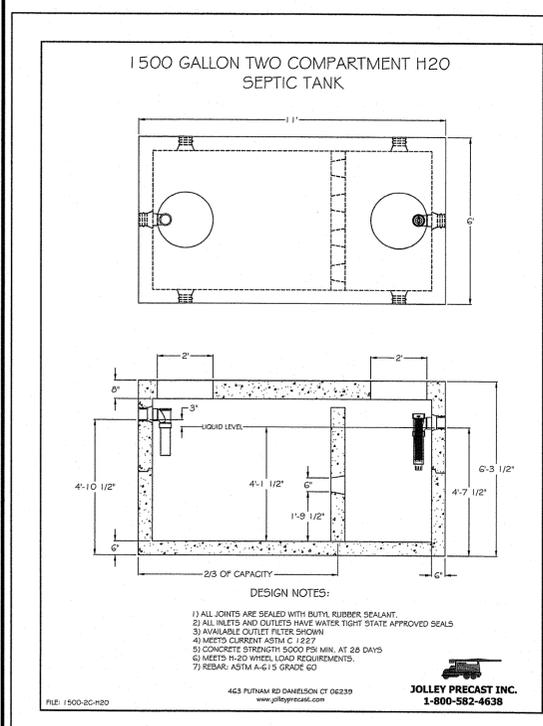
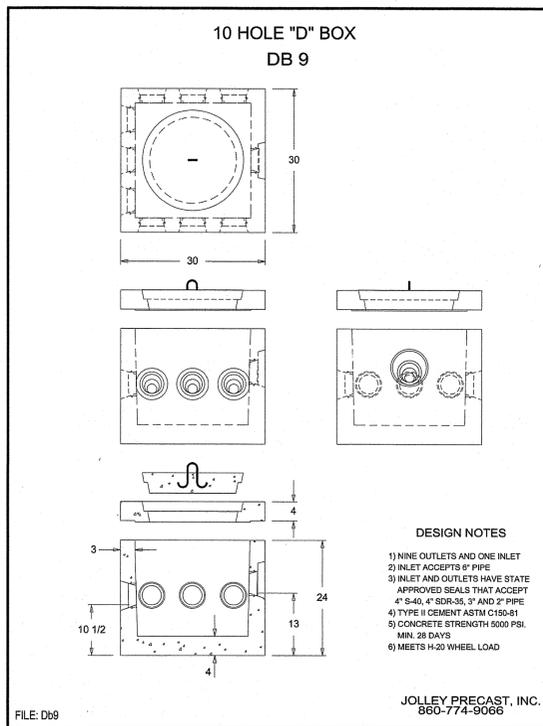
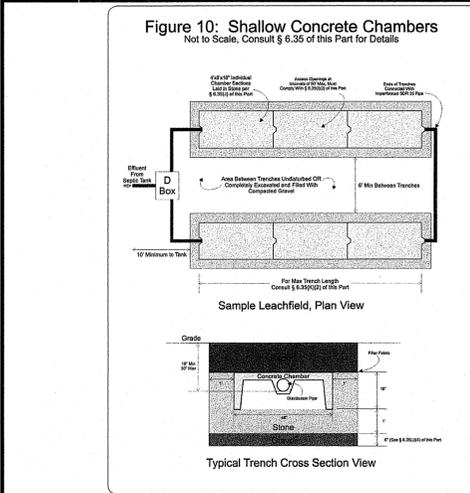
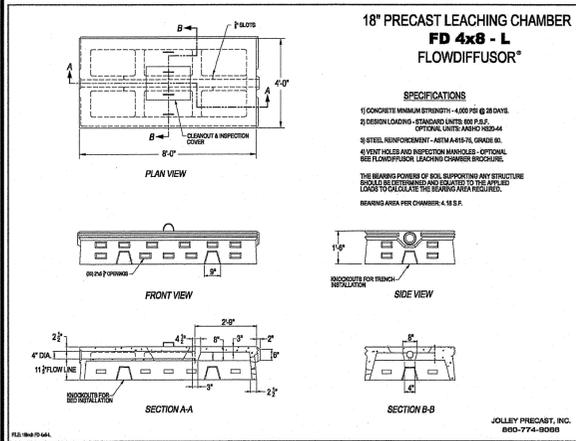
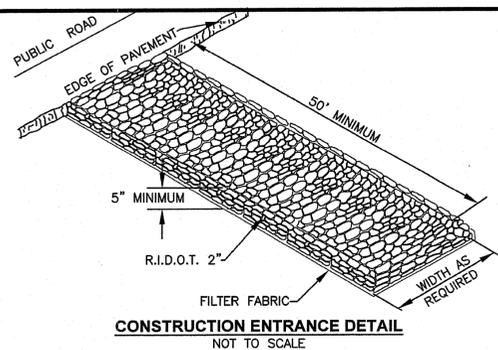
**LEACHING SYSTEM SIZING**

TYPE OF SYSTEM: FLOW DIFFUSERS (SHALLOW CONCRETE CHAMBERS) WITH 12" STONE

EFFECTIVE AREA PER END UNIT: 78 S.F./UNIT  
EFFECTIVE AREA PER INTERIOR UNIT: 64 S.F./UNIT

DESIGN LOADING RATE = 0.61 GAL/S.F./DAY (SOIL CATEGORY 1m & 7)  
MIN. LEACHING AREA REQUIRED = 460 GPD / (0.61 GAL/S.F./DAY) = 755 S.F.

USE 2 ROWS OF 6 FLOW DIFFUSER UNITS (2 END UNITS AND 4 INTERIOR UNITS) = 2 ROWS X (2 END UNITS X 78 S.F./UNIT + 4 INTERIOR UNITS X 64 S.F./UNIT) = LEACHING AREA PROVIDED = 824 S.F.



**SOIL EVALUATION DATA**  
SOIL EVALUATIONS WERE CONDUCTED BY CROSSMAN ENGINEERING ON  
MARCH 9, 2022 (TP 1 - TP 8 & TP A) & JULY 13, 2023 (TP 1A - TP 6A).  
TEST PITS 1-8 WERE WITNESSED BY RIDEM APPLIC. 2213-0028.

TEST PIT 1	TEST PIT 2	TEST PIT 3	TEST PIT 4	TEST PIT 5	TEST PIT 6	TEST PIT 7	TEST PIT 8
<p>OG±=461.5</p> <p>0" Very Dark Grayish Brown Sandy Loam Oe (Friable)</p> <p>12" Dark Yellowish Brown Sandy Loam Bw2 (Friable)</p> <p>22" Yellowish Brown Sandy Loam Bw1 (Friable)</p> <p>29" Light Olive Brown Gravelly Sand C1 (Loose)</p> <p>36" Light Yellowish Brown Sand C2 (Loose)</p> <p>66" Light Brownish Gray Fine Sand C3 (Loose)</p> <p>120" SOIL CLASS= OUTWASH TOTAL DEPTH= 120" LIMITING LAYER DEPTH= N/A GW SEEPAGE DEPTH= N/A ESHW=96" OWTS LOADING RATE= 0.61 g/d/d</p>	<p>OG±=467.0</p> <p>0" Very Dark Grayish Brown Sandy Loam Oe (Friable)</p> <p>9" Dark Yellowish Brown Sandy Loam Bw2 (Friable)</p> <p>15" Yellowish Brown Sandy Loam Bw1 (Friable)</p> <p>24" Light Olive Brown Gravelly Sand C1 (Loose)</p> <p>36" Light Yellowish Brown Sand C2 (Loose)</p> <p>72" Light Brownish Gray Fine Sand C3 (Loose)</p> <p>108" SOIL CLASS= OUTWASH TOTAL DEPTH= 120" LIMITING LAYER DEPTH= N/A GW SEEPAGE DEPTH= N/A ESHW=96" OWTS LOADING RATE= 0.61 g/d/d</p>	<p>OG±=468.5</p> <p>0" Very Dark Grayish Brown Sandy Loam Oe (Friable)</p> <p>9" Dark Yellowish Brown Sandy Loam Bw1 (Friable)</p> <p>15" Yellowish Brown Sandy Loam Bw2 (Friable)</p> <p>24" Light Olive Brown Gravelly Sand C1 (Loose)</p> <p>36" Light Yellowish Brown Sand C2 (Loose)</p> <p>72" Light Brownish Gray Fine Sand C3 (Loose)</p> <p>108" SOIL CLASS= OUTWASH TOTAL DEPTH= 120" LIMITING LAYER DEPTH= N/A GW SEEPAGE DEPTH= N/A ESHW=96" OWTS LOADING RATE= 0.61 g/d/d</p>	<p>OG±=473.0</p> <p>0" FOREST LITTER Oe</p> <p>3" Very Dark Grayish Brown Sandy Loam A (Friable)</p> <p>8" Dark Yellowish Brown Sandy Loam Bw1 (Friable)</p> <p>18" Yellowish Brown Sandy Loam Bw2 (Friable)</p> <p>27" Light Yellowish Brown Gravelly Sand C1 (Loose)</p> <p>36" Light Brownish Gray Sand C2 (Loose)</p> <p>120" SOIL CLASS= OUTWASH TOTAL DEPTH= 120" LIMITING LAYER DEPTH= N/A GW SEEPAGE DEPTH= N/A ESHW=96" OWTS LOADING RATE= 0.61 g/d/d</p>	<p>OG±=477.0</p> <p>0" FOREST LITTER Oe</p> <p>4" Very Dark Grayish Brown Sandy Loam A (Friable)</p> <p>14" Dark Yellowish Brown Sandy Loam Bw1 (Friable)</p> <p>20" Yellowish Brown Sandy Loam Bw2 (Friable)</p> <p>34" Light Yellowish Brown Fine Sand C1 (Loose)</p> <p>44" Light Brownish Gray Fine Sand C2 (Loose)</p> <p>120" SOIL CLASS= OUTWASH TOTAL DEPTH= 120" LIMITING LAYER DEPTH= N/A GW SEEPAGE DEPTH= N/A ESHW=96" OWTS LOADING RATE= 0.61 g/d/d</p>	<p>OG±=479.0</p> <p>0" FOREST LITTER Oe</p> <p>4" Very Dark Grayish Brown Sandy Loam A (Friable)</p> <p>9" Dark Yellowish Brown Sandy Loam Bw1 (Friable)</p> <p>26" Yellowish Brown Sandy Loam Bw2 (Friable)</p> <p>46" Light Olive Brown Gravelly Sand C (Loose)</p> <p>53" Light Brownish Gray Sand 2c (Loose)</p> <p>120" SOIL CLASS= OUTWASH TOTAL DEPTH= 120" LIMITING LAYER DEPTH= N/A GW SEEPAGE DEPTH= N/A ESHW=96" OWTS LOADING RATE= 0.61 g/d/d</p>	<p>OG±=495.0</p> <p>0" Dark Brown Sandy Loam Oe (Friable)</p> <p>7" Dark Yellowish Brown Sandy Loam Bw1 (Friable)</p> <p>15" Yellowish Brown Sandy Loam Bw2 (Friable)</p> <p>27" Light Brownish Gray Sand C (Loose)</p> <p>52" Grayish Brown Gravelly Loamy Sand with Boulders 2c1 (Firm in Place)</p> <p>90" Grayish Brown Stony Gravelly Loamy Sand with Boulders 2c2 (Firm in Place)</p> <p>108" SOIL CLASS= ABLATION TILL TOTAL DEPTH= 108" LIMITING LAYER DEPTH= N/A GW SEEPAGE DEPTH= N/A ESHW=48" OWTS LOADING RATE= 0.61 g/d/d</p>	<p>OG±=493.5</p> <p>0" FOREST LITTER Oe</p> <p>3" Dark Brown Sandy Loam A (Friable)</p> <p>7" Dark Yellowish Brown Sandy Loam Bw1 (Friable)</p> <p>14" Yellowish Brown Sandy Loam Bw2 (Friable)</p> <p>34" Light Olive Brown Sand C (Loose)</p> <p>45" Grayish Brown Stony Gravelly Loamy Sand with Boulders 2c1 (Firm in Place)</p> <p>108" SOIL CLASS= ABLATION TILL TOTAL DEPTH= 108" LIMITING LAYER DEPTH= N/A GW SEEPAGE DEPTH= N/A ESHW=48" OWTS LOADING RATE= 0.61 g/d/d</p>

TEST PIT A	TEST PIT 1A	TEST PIT 2A	TEST PIT 3A	TEST PIT 4A	TEST PIT 5A	TEST PIT 6A
<p>OG±=499.0</p> <p>0" Forest Litter Oe (N/A)</p> <p>2" Dark Brown Sandy Loam A (Friable)</p> <p>5" Dark Yellowish Brown Sandy Loam Bw1 (Friable)</p> <p>14" Yellowish Brown Sandy Loam Bw2 (Friable)</p> <p>29" Light Yellowish Brown Gravelly Loamy Sand C1 (Friable)</p> <p>104" SOIL CLASS= AB TILL TOTAL DEPTH= 102" LIMITING LAYER DEPTH= N/A GW SEEPAGE DEPTH= N/A ESHW=88"</p>	<p>0" Forest Litter Oe (N/A)</p> <p>2" Very Dark Grayish Brown Sandy Loam A (Friable)</p> <p>6" Dark Yellowish Brown Sandy Loam Bw1 (Friable)</p> <p>18" Yellowish Brown Sandy Loam Bw2 (Friable)</p> <p>28" Light Olive Brown Stony Gravelly Sand C1 (Friable)</p> <p>68" Light Brownish Gray Stony Gravelly Loamy Sand C2 (Firm/Friable)</p> <p>102" SOIL CLASS= AB TILL TOTAL DEPTH= 102" LIMITING LAYER DEPTH= N/A GW SEEPAGE DEPTH= N/A ESHW=88"</p>	<p>0" Forest Litter Oe (N/A)</p> <p>2" Very Dark Grayish Brown Sandy Loam A (Friable)</p> <p>8" Dark Yellowish Brown Sandy Loam Bw1 (Friable)</p> <p>18" Yellowish Brown Sandy Loam Bw2 (Friable)</p> <p>25" Light Olive Brown Stony Gravelly Sand C1 (Friable)</p> <p>64" Grayish Brown Stony Gravelly Loamy Sand C2 (Firm/Friable)</p> <p>104" SOIL CLASS= AB TILL TOTAL DEPTH= 104" LIMITING LAYER DEPTH= N/A GW SEEPAGE DEPTH= N/A ESHW=84"</p>	<p>0" Forest Litter Oe (N/A)</p> <p>2" Very Dark Grayish Brown Sandy Loam A (Friable)</p> <p>7" Dark Yellowish Brown Sandy Loam Bw1 (Friable)</p> <p>18" Yellowish Brown Sandy Loam Bw2 (Friable)</p> <p>28" Light Brownish Gray Stratified Sand &amp; Gravelly Sand C (Loose)</p> <p>130" SOIL CLASS= OUTWASH TOTAL DEPTH= 130" LIMITING LAYER DEPTH= N/A GW SEEPAGE DEPTH= N/A ESHW=130"</p>	<p>0" Forest Litter Oe (N/A)</p> <p>2" Very Dark Grayish Brown Sandy Loam A (Friable)</p> <p>5" Dark Yellowish Brown Sandy Loam Bw1 (Friable)</p> <p>16" Yellowish Brown Sandy Loam Bw2 (Friable)</p> <p>23" Light Brownish Gray Stratified Sand &amp; Gravelly Sand C (Loose)</p> <p>134" SOIL CLASS= OUTWASH TOTAL DEPTH= 134" LIMITING LAYER DEPTH= N/A GW SEEPAGE DEPTH= N/A ESHW=134"</p>	<p>0" Forest Litter Oe (N/A)</p> <p>2" Very Dark Grayish Brown Sandy Loam A (Friable)</p> <p>9" Dark Yellowish Brown Sandy Loam Bw1 (Friable)</p> <p>24" Yellowish Brown Sandy Loam Bw2 (Friable)</p> <p>60" Light Yellowish Brown Gravelly Sand C1 (Friable)</p> <p>98" Grayish Brown Gravelly Loamy Sand C2 (Firm/Friable)</p> <p>120" SOIL CLASS= AB TILL TOTAL DEPTH= 104" LIMITING LAYER DEPTH= N/A GW SEEPAGE DEPTH= N/A ESHW=104"</p>	

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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: APR 16 2025 FILE #: 22-0318  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

STEVEN M. CABRAL  
No. 4847  
REGISTERED PROFESSIONAL ENGINEER

PROJECT TITLE:  
**BARNES SUBDIVISION**  
PLAT MAP 7 LOT 24  
ZONING DISTRICT: A-4  
AGRICULTURAL-RESIDENTIAL  
JACKSON SCHOOLHOUSE ROAD  
GLOUCESTER, RHODE ISLAND

PREPARED FOR:  
**BRUCE BARNES**  
27 BARNES WAY  
CHEPACHET, RI 02814

DRAWING TITLE:  
**MISCELLANEOUS**  
DETAILS PLAN NO. 1

DATE: DECEMBER 2022 SCALE: AS NOTED

DWG. NAME: 2550-08-DETO1.dwg

REVISIONS

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	11/20/23
2	RIDEM COMMENTS	04/04/24

DRAWING NUMBER  
**C8.1**  
SHEET: 11 OF 13

**SEEDING NOTES**

- LOAM SHALL BE SPREAD TO A MINIMUM DEPTH OF 4" OVER ALL AREAS DESIGNATED ON PLANS.
- SHAPE AND SMOOTH THE SURFACE TO THE LINES AND GRADES AS SHOWN ON PLANS.
- FERTILIZE WITH 10-10-10 OR EQUIVALENT ANALYSIS, AT LEAST 40% OF THE FERTILIZER NITROGEN SHALL BE IN A SLOW RELEASE FORM. INCORPORATE THE FERTILIZER INTO THE TOP 3 TO 4 INCHES OF THE PLANTING SOIL. APPLY AT THE RATE OF 8 POUNDS PER 1,000 SQUARE FEET AT SEEDING.
- LIME: SPREAD EVENLY AND WORK INTO THE SOIL DURING PREPARATION OF SEED BED AT THE RATE OF ONE TON PER ACRE. INCORPORATE INTO THE SOIL BY DICING OR OTHER APPROVED METHOD. DISTRIBUTE LIME UNIFORMLY AND WORK INTO TOP 4 INCHES OF TOP SOIL (MINIMUM) AND UNIFORMLY BLEND BY DICING OR ROTOTILLING.
- APPLICATION OF SEED:
  - RATE OF APPLICATION OF SEED SHALL BE 8 POUNDS PER 1,000 SQUARE FEET OR AS INDICATED ON PLANS.
  - SEEDING SHALL BE DONE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND INSTRUCTIONS, AND ONLY DURING THE FOLLOWING DATES:  
 SPRING SEEDING: MARCH 15 TO MAY 31  
 FALL SEEDING: AUGUST 15 TO OCTOBER 15
  - THE CONTRACTOR SHALL KEEP ALL SEEDING AREAS WATERED AND IN GOOD CONDITION, RESEEDING IF AND WHEN NECESSARY FOR AN 8 WEEK PERIOD OR UNTIL A GOOD, HEALTHY, UNIFORM GROWTH IS ESTABLISHED OVER THE ENTIRE AREA. THE CONTRACTOR SHALL ALSO MAINTAIN THESE AREAS IN AN APPROVED CONDITION UNTIL PROVISIONAL ACCEPTANCE.
  - DURING THIS PERIOD, WATER TURF AS NECESSARY TO MAINTAIN AN ADEQUATE SUPPLY OF MOISTURE WITHIN THE ROOT ZONE. AN ADEQUATE SUPPLY OF MOISTURE IS EQUIVALENT OF ONE INCH OF ABSORBED WATER PER WEEK THAT IS DELIVERED AT WEEKLY INTERVALS IN THE FORM OF NATURAL RAIN OR IS AUGMENTED AS REQUIRED BY PERIODIC WATERING.
  - OVERSEED WHEN NECESSARY TO PROMOTE GRASS GROWTH.
  - REPLANT AREAS VOID OF TURF ONE SQUARE FOOT OR LARGER.
- SEED:
  - SEED ALL AREAS DESIGNATED ON PLAN AS WELL AS ALL DISTURBED EXISTING AREAS WITH THE FOLLOWING SEED MIX:

**SEED MIX No. 1**

TYPE (SLOPES)	% BY WEIGHT
CREeping RED FESCUE	70
ASTORIA BENTGRASS	5
BIRDSFOOT TREFOIL	15
PERENNIAL RYE GRASS	10

APPLICATION RATE = 200 lbs. / ACRE

**SEED MIX No. 2**

TYPE (MOWED/LAWN AREAS)	% BY WEIGHT
NASSAU KENT BLUE	60
JAMESTOWN CHEWINGS FESCUE	20
PALMER PERENNIAL RYE GRASS	20

APPLICATION RATE = 200 lbs. / ACRE

**SEED MIX No. 3**

TYPE (INFILTRATION AREAS AND RESTORED BIKE TRAILS)	% BY WEIGHT
CREeping RED FESCUE	25%
TALL FESCUE	24%
PERENNIAL RYE GRASS	18%
LITTLE BLUESTEM	15%
REDTOP	4%
NORTHEAST WILDFLOWER MIX	4%

APPLICATION RATE = 220 LBS. / ACRE OR 5 LBS PER 1,000 S.F

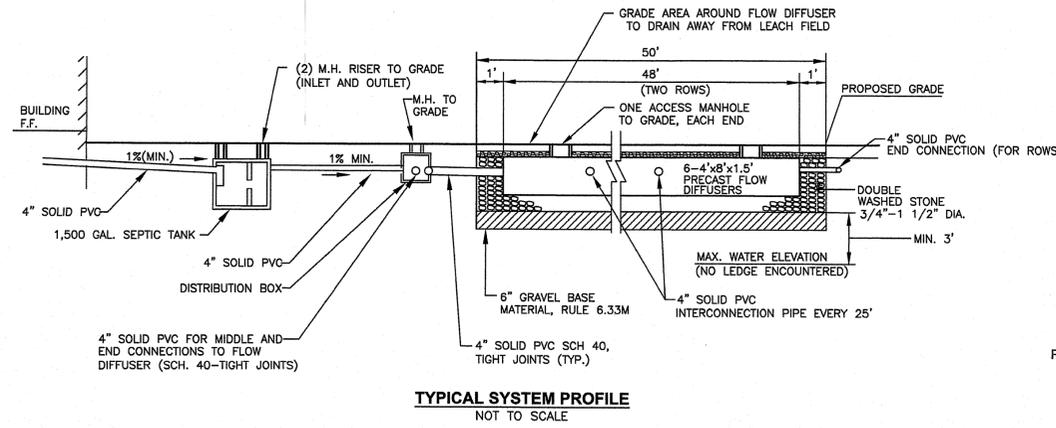
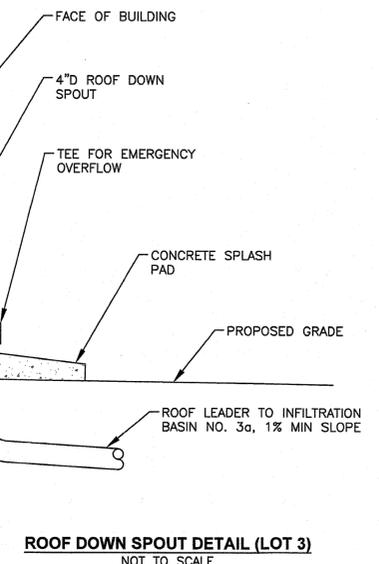
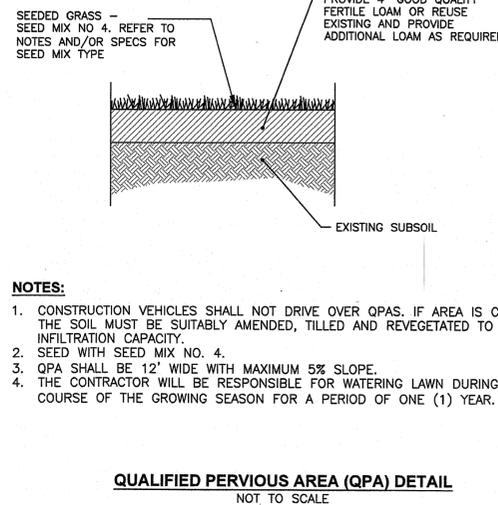
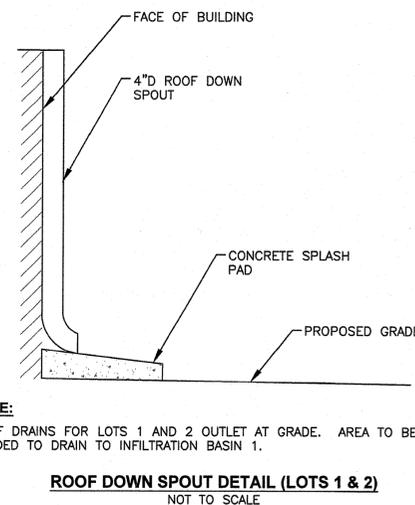
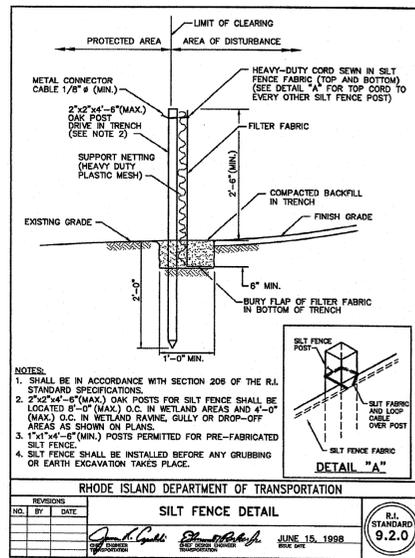
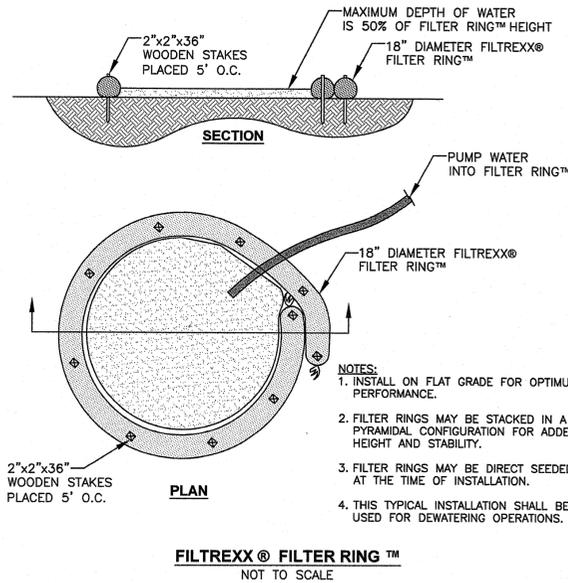
**SEED MIX No. 4**

TYPE (CONSERVATION MIX) (QPA)	% BY WEIGHT
PERENNIAL RYE	25
CREeping RED FESCUE	25
ANNUAL RYE	25
TALL FESCUE	17
KENTUCKY BLUE	5
COLONIAL BENTGRASS	1
RED TOP	1
WHITE CLOVER	1

APPLICATION RATE = 200 LBS. / ACRE

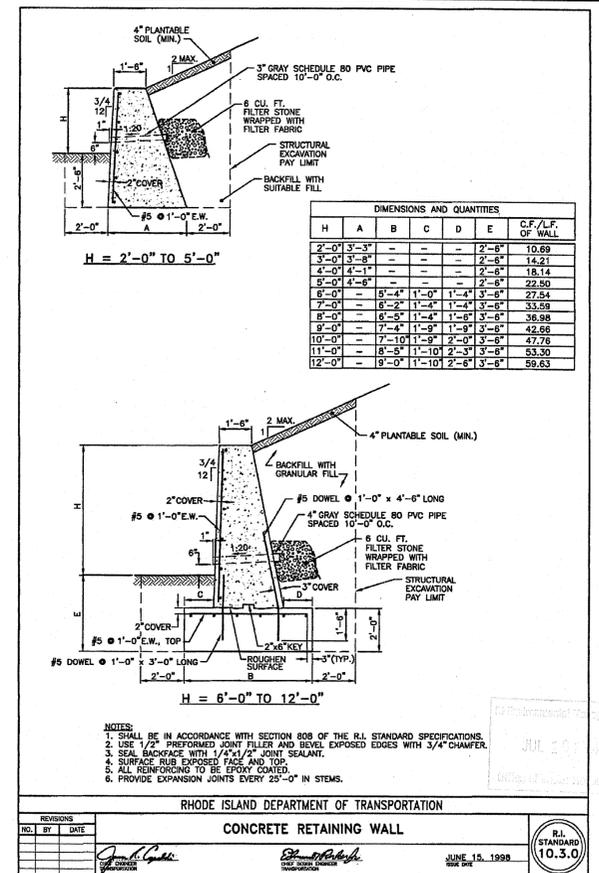
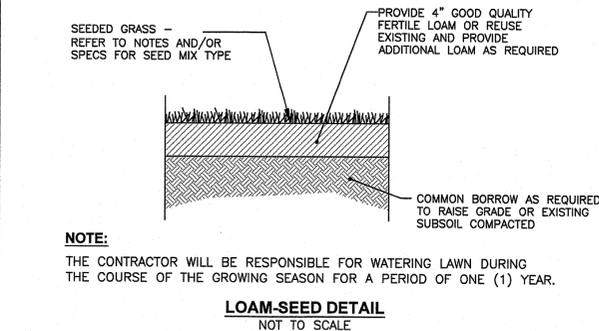
**LANDSCAPE CONSTRUCTION NOTES**

- FURNISH AND INSTALL ALL PLANTS SHOWN ON THE DRAWINGS SPECIFIED HEREIN, AND IN THE QUANTITIES LISTED ON THE PLANT LIST. NO SUBSTITUTIONS WILL BE PERMITTED, UNLESS APPROVED BY THE LANDSCAPE ARCHITECT.
- LOAM TO BE SCREENED, GOOD QUALITY, FERTILE, FREE OF WEEDS, STICKS, STONES OVER 3/4", AND ROOTS. SPREAD TO A MINIMUM OF 4" OVER ALL PLANTED AREAS.
- NURSERY STOCK SHALL MEET THE STANDARDS OF THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION AS TO GRADING AND QUALITY.
- ONLY NURSERY-GROWN PLANTS, GROWN IN ACCORDANCE WITH ACCEPTED HORTICULTURAL PRACTICES, AND GROWN UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT FOR AT LEAST TWO (2) YEARS, WILL BE ACCEPTED.
- SET PLANTS PLUMB AND AT A LEVEL THAT AFTER SETTLEMENT THEY BEAR THE SAME RELATION TO THE SURROUNDING GROUND AS THEY BORE TO THE GROUND FROM WHICH THEY WERE DUG. SETTLE BACKFILL MATERIAL FOR PLANTS, THOROUGHLY AND PROPERLY BY FIRING OR TAMPING. FORM SAUCERS, CAPABLE OF HOLDING WATER ABOUT INDIVIDUAL PLANTS, BY PLACING RIDGES OF PLANTING SOIL AROUND EACH.
- STAKE ALL TREES OVER 5 FEET AS SHOWN ON PLANS. REMOVE STAKES AT THE END OF THE GUARANTEE PERIOD.
- WATERING: WATER ALL PLANTS WITHIN 48 HOURS AFTER PLANTING. IF CONDITIONS WARRANT, AND AS MANY TIMES THEREAFTER TO SUSTAIN HEALTHY CONDITIONS UNTIL LANDSCAPE INSTALLATION IS COMPLETED. SATURATE THE SOIL AROUND EACH PLANT THOROUGHLY AT EACH WATERING.
- PRUNING: PRUNE PLANTS, AS DIRECTED BY OWNER, AT THE PROJECT SITE BEFORE OR IMMEDIATELY AFTER PLANTING IN ACCORDANCE WITH THE BEST HORTICULTURAL PRACTICE. CUT BROKEN, DEAD OR INJURED BRANCHES IMMEDIATELY ABOVE THE STEM COLLAR ON THE TRUNK OR LIMB. PRUNE ALL BROKEN ROOTS ON THE PLANT SIDE OF THE BREAK. PAINT CUTS OVER 3/4" IN DIAMETER WITH TREE WOUND PAINT. PRUNING SHALL NOT DEFORM OR OTHERWISE DESTROY THE TYPICAL SHAPE OR SYMMETRY OF THE PLANT, AND SHALL NOT REDUCE THE HEIGHT BY MORE THAN ONE-THIRD. DO NOT CUT BACK THE LEADER OF THE PLANT UNLESS DIRECTED BY THE LANDSCAPE ARCHITECT.
- FERTILIZING: FERTILIZE SHRUB BEDS WITH 10-6-4 FERTILIZER BROADCAST AT A RATE OF THREE POUNDS PER 100 SQUARE FEET OF SURFACE AREA BROADCAST. APPLY THE FERTILIZER UNIFORMLY TO THE SURFACE BEDS AND WORK INTO THE UPPER TWO INCHES OF SOIL. FERTILIZE INDIVIDUAL TREES AT A RATE OF ONE AGRIFORM PELLET PER INCH OF TRUNK DIAMETER (FOLLOW MANUFACTURER'S WRITTEN INSTRUCTIONS). APPLY A SECOND APPLICATION OF FERTILIZER TO ALL PLANT ITEMS AT THE SAME SPECIFIED RATES OVER THE MULCH AT THE END OF AN EIGHT WEEK PERIOD.
- LIMING: ADD POWDERED LIME EVERY SIX MONTHS - OR SLOW RELEASE GRANULAR LIME-AS PER MANUFACTURER'S INSTRUCTION.
- MULCHING: WITHIN A 72 HOUR PERIOD AFTER PLANTING, COVER ALL PLANTED AREAS WITH 3" DARK HEMLOCK MULCH. NO RED OR DYED MULCH IS TO BE USED. MULCH SHOULD BE PULLED ONE INCH AWAY FROM PLANT TRUNK OR STEM, AND NOT ALLOWED TO REST DIRECTLY AGAINST THE TRUNK OR STEM.
- GUARANTEE: ALL PLANTS FURNISHED BY THE CONTRACTOR SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER PRELIMINARY INSPECTION AND SHALL BE ALIVE AND IN SATISFACTORY GROWTH AT THE END OF THE GUARANTEE PERIOD. ALL DEAD OR DYING PLANT MATERIAL SHALL BE REPLACED AT ONCE BY THE CONTRACTOR, FREE OF CHARGE.



**OWTS TABLE**

LOT NO.	EX. GRADE	ESHW	BOTTOM OF STONE	CHAMBER BOTTOM	PIPE INVERT	ALLOWABLE GRADE (MIN-MAX)
1	485.00	477.00	480.00	481.00	481.96	483.46-484.46
2	462.00	454.00	457.50	458.50	459.46	460.96-461.96
3	498.00	494.00	497.00	498.00	498.96	500.46-501.46



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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  
 DATE: 10/16/2023 FILE #: 23-0318  
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

STEVEN M. CABRAL  
 No. 4847  
 REGISTERED PROFESSIONAL ENGINEER

PROJECT TITLE:  
**BARNES SUBDIVISION**  
 PLAT MAP 7 LOT 24  
 ZONING DISTRICT: A-4  
 AGRICULTURAL-RESIDENTIAL  
 JACKSON SCHOOLHOUSE ROAD  
 GLOCESTER, RHODE ISLAND

PREPARED FOR:  
**BRUCE BARNES**  
 27 BARNES WAY  
 CHEPACHET, RI 02814

DRAWING TITLE:  
**MISCELLANEOUS**  
**DETAILS PLAN NO. 2**

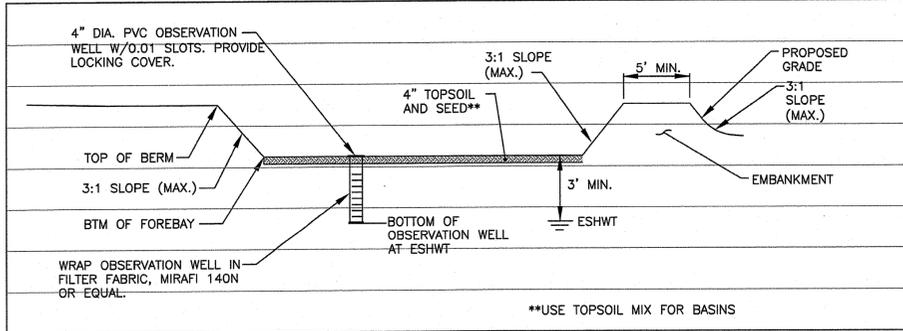
DATE: DECEMBER 2022  
 SCALE: AS NOTED  
 DWG. NAME: 2550-09-DET02.dwg

REVISIONS		
NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	11/20/23
2	RIDEM COMMENTS	04/04/24

DRAWING NUMBER  
**C8.2**  
 SHEET: 12 OF 13

**INFILTRATION BASIN SUMMARY**

LOCATION	TOP OF BERM	BOTTOM OF BASIN	OVERFLOW WEIR CREST ELEVATION	ESHWT	TP ID	PEAK WATER ELEVATION IN BASIN		
						1 YR STORM	10 YR STORM	100 YR STORM
1A	469.75	468.00	468.75	465.00	4	468.00	468.00	468.64
1B	469.75	468.00	468.50	465.00	4	468.00	468.00	468.00
2A	496.50	495.00	495.50	487.33	5A	495.00	495.00	495.51
2B	496.50	495.00	496.25	487.33	5A	495.00	495.00	495.02
3A	491.00	487.00	488.25	483.67	3A	487.24	488.28	489.84
3B	491.00	487.00	489.70	483.67	3A	487.00	487.69	489.84



**NOTE:**  
THIS IS A TYPICAL DETAIL. REFER TO THE GRADING AND DRAINAGE PLANS FOR CROSS SECTIONS FOR EACH INFILTRATION BASIN.

**INFILTRATION BASIN TYPICAL SECTION**  
NOT TO SCALE

**SEED MIX No. 3**

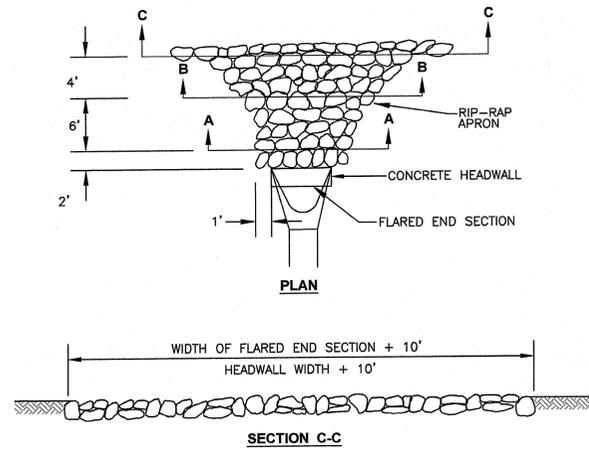
(INFILTRATION AREAS AND RESTORED BIKE TRAILS)

TYPE	% BY WEIGHT
CREeping RED FESCUE	28%
TALL FESCUE	24%
PERENNIAL RYE GRASS	18%
LITTLE BLUESTEM	15%
REDTOP	4%
NORTHEAST WILDFLOWER MIX	4%

APPLICATION RATE = 220 LBS. / ACRE  
OR 5 LBS PER 1,000 S.F.

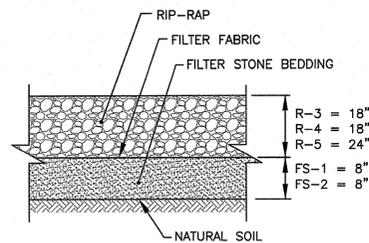
**TOPSOIL MIX FOR BASINS**

PLANTING SOIL SHALL MEET THE BELOW COMPOSITION;  
SAND: 85-88%  
SOIL FINES: 8-12% (NO MORE THAN 2% CLAY)  
ORGANIC MATTER: 3-5%

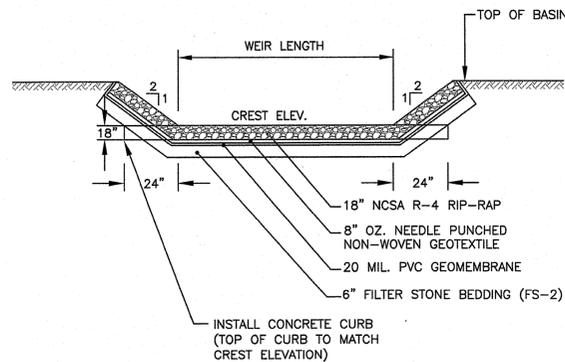


- NOTES:**
- UNLESS OTHERWISE SPECIFIED, DUMPED RIP-RAP SHALL BE USED.
  - DIMENSIONS MAY BE MODIFIED BY ENGINEER TO MEET FIELD CONDITIONS.
  - SEE "TYPICAL SECTION RIP RAP OUTLET PROTECTION" DETAIL FOR CONSTRUCTION MATERIAL SPECIFICATIONS.

**TYPICAL LAYOUT OF RIP RAP OUTLET PROTECTION AT FLARED END SECTIONS and CONCRETE HEADWALLS**  
NOT TO SCALE

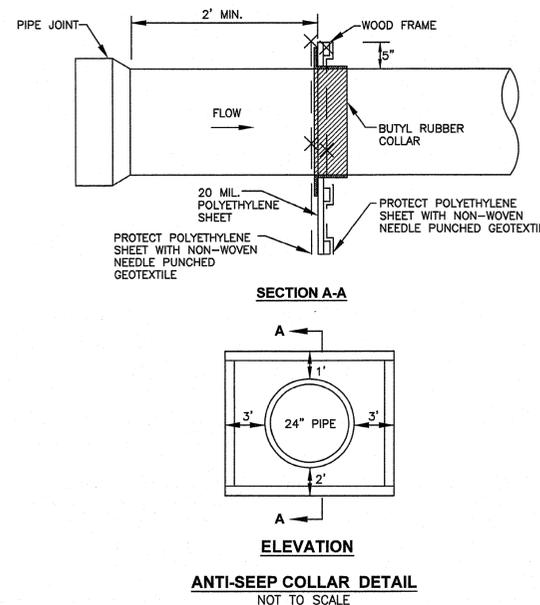


**TYPICAL RIP-RAP OUTLET PROTECTION DETAIL**  
NOT TO SCALE



**NOTE:**  
RIP RAP SHALL CONTINUE ON INSIDE AND OUTSIDE OF BASIN SLOPE AT OVERFLOW WEIR LOCATION.

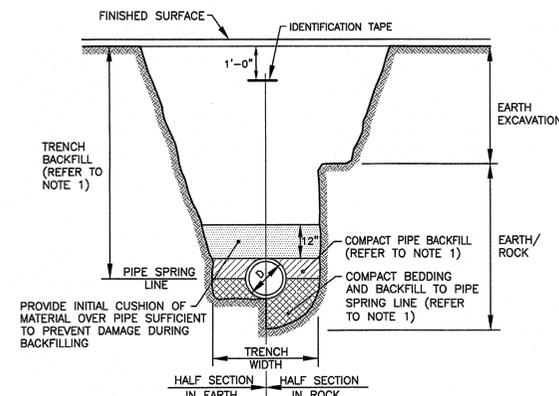
**TYPICAL BASIN OVERFLOW WEIR DETAIL**  
NOT TO SCALE



**ANTI-SEEP COLLAR DETAIL**  
NOT TO SCALE

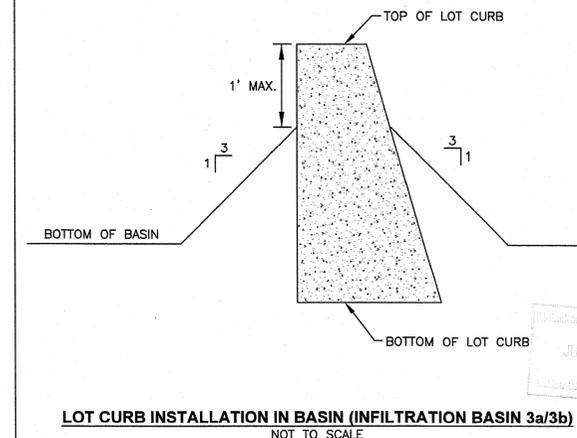
**EMBANKMENT NOTES:**

- THE INFILTRATION BASIN EMBANKMENTS ARE TO BE CONSTRUCTED WITH APPROVED COMMON BORROW. NO SOIL/ROCK GRATER THAN 2" SHALL BE UTILIZED. COMMON BORROW SHALL MEET OR EXCEED AN IN-PLACE DENSITY OF 100 lb./cf. ALL MATERIAL SHALL BE PLACED IN 8 TO 12 INCH LIFTS AND COMPACTED TO 95% MAXIMUM DENSITY. FILL MATERIAL WILL NOT CONTAIN FROZEN MATERIALS OR BE PLACED ON FROZEN SURFACES. COMMON BORROW SHALL MEET SPECIFICATION SECTION 202.20 IN THE RHODE ISLAND STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2018 EDITION.
- UPON COMPLETION OF CLEARING AND GRUBBING OPERATIONS, THE EMBANKMENT AREAS ARE TO BE EXCAVATED. IF ANY ORGANIC OR UNSUITABLE MATERIAL IS ENCOUNTERED, THE CONTRACTOR SHALL CONTACT THE ENGINEER FOR REVIEW OF EXCAVATION AREA. THE DEPTH OF EXCAVATION WILL BE DETERMINED BY THE ENGINEER BASED UPON THE LOCAL CONDITIONS. NO FILL MATERIAL SHALL BE PLACED UNTIL THE FOUNDATION PREPARATION HAS BEEN COMPLETED. ALL WATER SHALL BE REMOVED FROM THE FOUNDATION PRIOR TO PLACING THE EMBANKMENT.
- THE FILL MATERIAL MUST BE SPREAD IN UNIFORM LAYERS AND FALL WITHIN THE SPECIFIED OPTIMUM WATER CONTENT RANGE IN ORDER TO ACHIEVE THE REQUIRED COMPACTION. EACH LAYER IS TO BE COMPACTED PRIOR TO LAYING AN ADDITIONAL LAYER. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER HIS SELECTED METHOD OF COMPACTION, COMPACTION EQUIPMENT AND THE SEQUENCE OF OPERATIONS NECESSARY TO OBTAIN THE REQUIRED DENSITY. THE WATER CONTENT AT COMPACTION SHOULD BE IN THE RANGE BETWEEN ONE PERCENTAGE POINT BELOW AND TWO PERCENTAGE POINTS ABOVE STANDARD AASHTO OPTIMUM WATER CONTENT. THE MATERIAL SHALL BE PROCESSED TO A UNIFORM WATER CONTENT BY ADDING WATER TO THE MATERIAL IN ADVANCE OF THE FILL PLACEMENT.
- BACKFILL MATERIAL AROUND STRUCTURES AND PIPE IS TO BE PLACED TO PREVENT THE MOVEMENT OF WATER. THE OPTIMUM WATER CONTENT MUST BE MAINTAINED IN THE SAME RANGE AS IN THE EMBANKMENT. THE BACKFILL MUST BE PLACED IN LAYERS LESS THAN 4 INCHES IN THICKNESS AND DISTRIBUTED UNIFORMLY AROUND THE STRUCTURE/PIPE. ALL COMPACTION WILL BE TO 95% MAXIMUM DENSITY AND MAY REQUIRE HAND TAMPERS OR SMALL POWER EQUIPMENT.
- EMBANKMENT DAMAGE COMMONLY RESULTS FROM IMPROPER CONSTRUCTION OF CONDUIT AND STRUCTURAL BACKFILL WITHIN THE EMBANKMENT BECAUSE SEEPAGE WILL OCCUR WITH IMPROPER BACKFILL AND COMPACTION. THEREFORE, STRUCTURES AND PIPES ARE TO BE CONSTRUCTED AS THE EMBANKMENT CONSTRUCTION RISES TO THE RESPECTIVE PIPE OR STRUCTURE. THIS WILL PREVENT THE DISTURBANCE OF CONSTRUCTED EMBANKMENT MATERIAL. PIPES FROM THE OUTLET STRUCTURE TO THE OUTFALL SHALL HAVE AN ANTI-SEEP COLLAR.



**NOTES:**  
PIPE BEDDING AND BACKFILL TO SPRING LINE SHALL CONSIST OF CRUSHED STONE-3/4" MINUS. PIPE BACKFILL SHALL CONSIST OF CRUSHED STONE (WRAPPED IN FILTER FABRIC) OR GRAVEL (3" MINUS, WITH SIEVE ANALYSIS APPROVED BY ENGINEER), OR OTHER APPROVED MATERIAL. TRENCH BACKFILL SHALL CONSIST OF SUITABLE EXCAVATED MATERIAL OR OTHER APPROVED MATERIAL. ALL BEDDING/BACKFILL TO BE COMPACTED TO 95% DRY DENSITY, MODIFIED PROCTOR METHOD.  
ALL TRENCH EXCAVATION AND ANY SHEETING AND SHORING SHALL BE DONE IN ACCORDANCE WITH ALL STATE AND LOCAL CODES AND OSHA REGULATIONS.  
MINIMUM TRENCH WIDTH SHALL BE OUTSIDE DIAMETER OF PIPE AT BELL PLUS 12".  
MAXIMUM TRENCH WIDTH SHALL BE OUTSIDE DIAMETER OF PIPE AT BELL PLUS 24".

**CULVERT TRENCH DETAIL**  
NOT TO SCALE



**LOT CURB INSTALLATION IN BASIN (INFILTRATION BASIN 3a/3b)**  
NOT TO SCALE

**Crossman Engineering**  
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STEVEN M. CABRAL  
No. 4847  
REGISTERED PROFESSIONAL ENGINEER

**PROJECT TITLE:**  
BARNES SUBDIVISION  
PLAT MAP 7 LOT 24  
ZONING DISTRICT: A-4  
AGRICULTURAL-RESIDENTIAL  
JACKSON SCHOOLHOUSE ROAD  
GLOCESTER, RHODE ISLAND

**PREPARED FOR:**  
BRUCE BARNES  
27 BARNES WAY  
CHEPACHET, RI 02814

**DRAWING TITLE:**  
MISCELLANEOUS  
DETAILS PLAN NO. 3

**DATE:** DECEMBER 2022 **SCALE:** AS NOTED

**DWG. NAME:** 2550-10-DET03.dwg

**REVISIONS**

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	11/20/23
2	RIDEM COMMENTS	04/04/24

**DRAWING NUMBER**  
**C8.3**  
SHEET: 13 OF 13