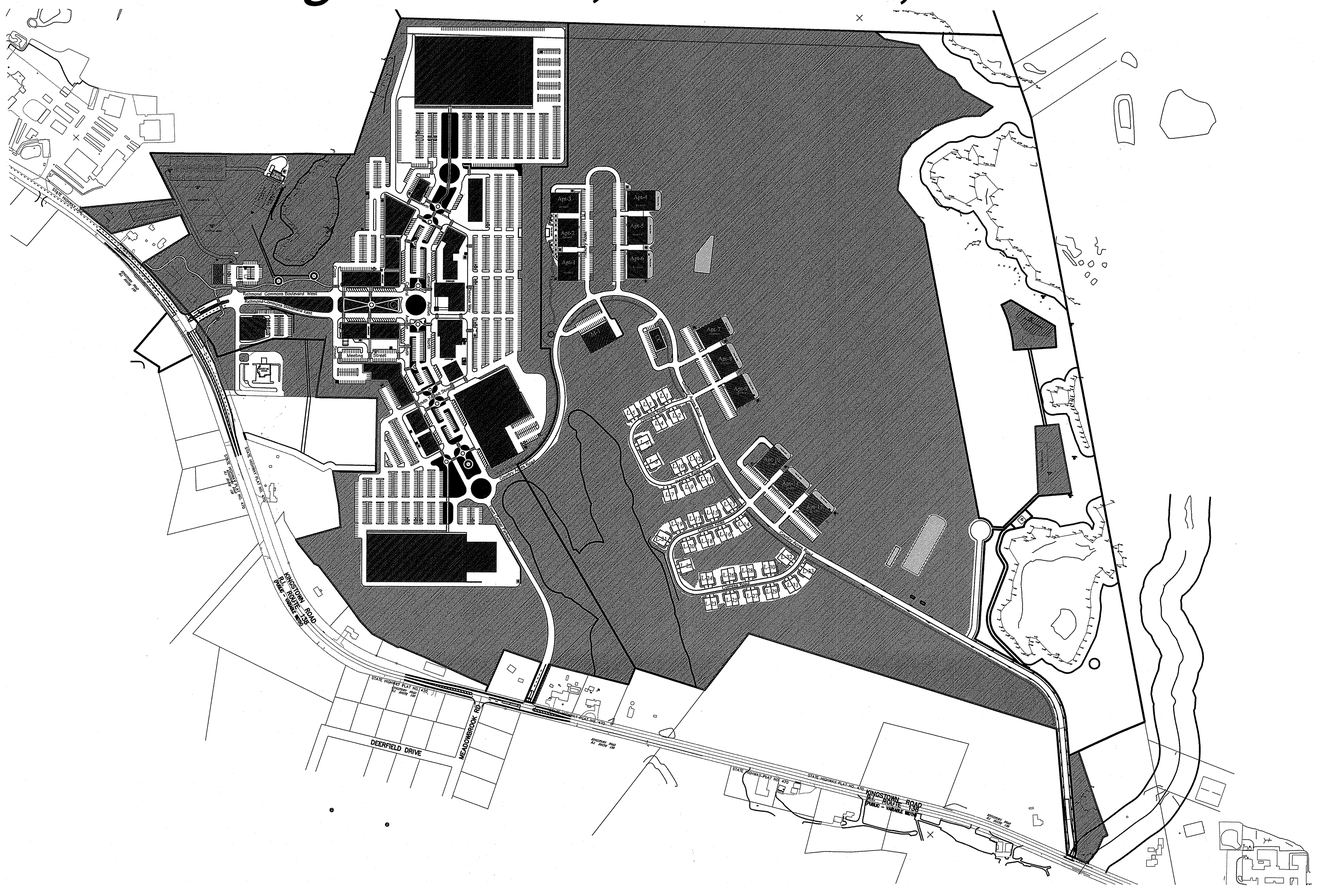
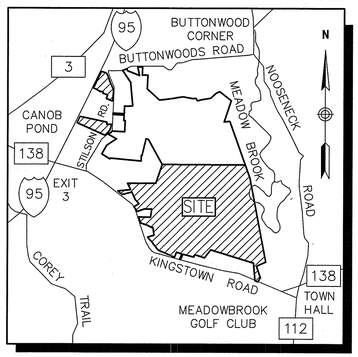
RICHMOND COMMONS
VILLAGE CENTER & RESIDENTIAL COMMUNITY
A.P. 05B Lot 065 & A.P. 05C Lot 005
58 Kingstown Rd, Richmond, RI 02898

LOT DATA

A.P.	LOT	ACRES
5B	065-000	96.90 ±
5C	005-000	148.00 ±
TOTAL AREA =		244.90 ±





LOCATION MAP

NOT TO SCALE

PREPARED BY:

verdantas
PEOPLE FOCUSED FUTURE

1005 MAIN STREET, SUITE 8120
PAWTUCKET, RI 02860
TEL. 401.728.6860

PAWLOWSKI ASSOCIATES, INC.
* LANDSCAPING SCHEMATICS

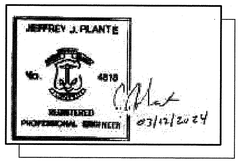
GZA GEOENVIRONMENTAL INC.
* GEOTECHNICAL ENGINEERS

VANASSE HANGEN BRUSTLIN, INC.
* WETLAND DELINEATION
* PROPERTY SURVEY

S. SHAMOON
* FINANCIAL ANALYST

APPLIED BIO-SYSTEMS, INC.
* ENVIRONMENTAL CONSULTANT

GORDON ARCHIBALD INC.
* TRAFFIC CONSULTANT



ENGINEERS STAMP

PREPARED FOR:

RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE
NORTH PROVIDENCE, RI 02904

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

RICHMOND COMMONS
VILLAGE CENTER
RESIDENTIAL COMMUNITY
INDEX OF DRAWINGS

Sheet No.	Description
CS	Cover Sheet
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4	General Notes
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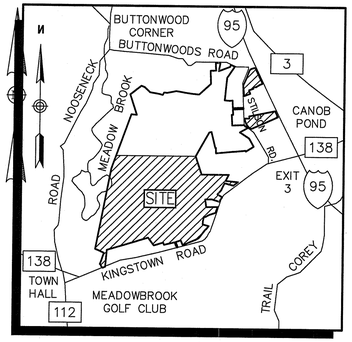
6-8	RC General Plans 1, 2, & 3
9	RC Typical sections
10	Erosion Control Limits
11	RC Index of Grading & Drainage Plan
12-26	RC Grading & Drainage Plans
27-28	VC General Plans 1 & 2
29	VC Typical Sections
30	VC Index of Grading & Drainage Plan
31-38	VC Grading & Drainage Plans
39-49	Site Details
50	Construction Phasing Key Plan
51-58	Construction Phasing Plans

RIDEM REVISED SUBMISSION MARCH 2024

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL
DATED: MAY 06 2024 FILE #: 23-0073
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

RI Environmental Management
MAR 15 2024
Office of Water Resources

Project No. 18071



LOCATION MAP

NOT TO SCALE

A.P. 5C
LOT 005-001

A.P. 5C
LOT 005-000
N/F RICHMOND REALTY & AIELLO REALTY ASSOC.

ZONING DISTRICT: PUDVC

PROPERTY LINE

APPROXIMATE FEMA 100 YR FLOOD LINE

A.P. 5B LOT 52
N/F RICHMOND REALTY ASSOCIATES, LLC.
PUDVC

A.P. 5B LOT 65
N/F AIELLO REALTY ASSOCIATES, LLC.
PUDVC

PD

PUDVC

A.P. 5B LOT 50
N/F RICHMOND REALTY ASSOCIATES, LLC.

A.P. 5B LOT 49
N/F RICHMOND REALTY ASSOCIATES, LLC.

A.P. 5B
LOT 065-000

STATE HIGHWAY PLAT NO. 470

STATE HIGHWAY PLAT NO. 470

STATE HIGHWAY PLAT NO. 470

KINGSTOWN ROAD R.I. ROUTE 138

KINGSTOWN ROAD R.I. ROUTE 138

N

NAD-83 RHODE ISLAND MAINLAND STATE PLANE GRID NORTH

SCALE IN FEET

0 100 200 400 800

SCALE : 1"= 200'

LOT DATA

A.P.	LOT	ACRES
5B	065-000	96.90 ±
5C	005-000	148.00 ±
TOTAL AREA = 244.90 ±		

PLAN REFRENCES

PROPERTY AND TOPOGRAPHICAL INFORMATION TAKEN FROM PLAN TITLED "RECORDING" DATED MARCH 2002. PREPARED FOR "RICHMOND SAND & GRAVEL, INC. 35 STILSON ROAD P.O. BOX 389 WYOMING, RHODE ISLAND 02898. PREPARED BY "VANASSE HANGEN BRUSTLIN, INC. TRANSPORTATION, LAND DEVELOPMENT, ENVIRONMENTAL SERVICES. 530 BROADWAY PROVIDENCE, RHODE ISLAND 02909. SURVEY MEETS CLASS 1 SURVEY.

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
SPECIFIED IN THE LETTER OF APPROVAL
DATED: MAY 06 2024 FILE #: 21-0093
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

NO	DESCRIPTION	DATE	AUTHOR
1	RIDEM COMMENT REVISION	11/2021	EMD

verdantas
PEOPLE FOCUSED FUTURE
1005 MAIN STREET, SUITE 8120
PAWTUCKET, RI 02860
TEL. 401.728.6660

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

RIDEM SUBMITTAL
MARCH 2024
RI Environmental Management
MAR 15 2024
Office of Water Resources

JEFFREY J. PLANTE
No. 4218
REGISTERED PROFESSIONAL ENGINEER
03/12/2024

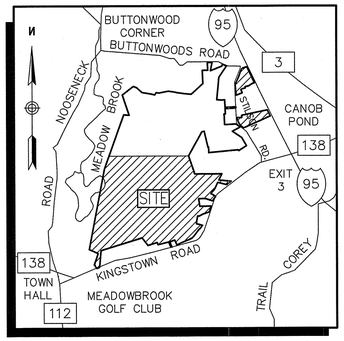
SHEET TITLE: PROPERTY LAYOUT

A.P. 05B LOT 065 & A.P. 05C LOT 005
58 KINGSTOWN ROAD
RICHMOND, RI 02898

Project No.: 18071
Designed By: RGM
Drawn By: EMD
Checked By: JJP
Date: MARCH 2024
Scale: AS SHOWN

SHEET 2

SHEET 2 OF 58



LOCATION MAP

NOT TO SCALE

SCALE IN FEET

0 100 200 400 800

SCALE : 1"= 200'

= PROPERTY LIMITS (PUDVC)

TOTAL AREA OF PHASE 1 = 294.08 ACRES ±

294.08 AC - 40 AC = 254.08 AC DEVELOPABLE LAND

TOTAL WETLAND AREA (INCLUDING DEM SETBACKS) = 40 ACRES ±

APPROXIMATE FEMA 100 YR FLOOD LINE

ROCK / DISTURBED AREA

WOODED AREA

NATURAL HERITAGE AREA

CELL TOWER

GRASS AREA

STATE HIGHWAY PLAT NO. 470

KINGSTOWN ROAD R.I. ROUTE 138

RIDEM
SUBMITTAL
MARCH 2024

RI Environmental Management
MAR 15 2024
Office of Water Resources

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
SPECIFIED IN THE LETTER OF APPROVAL
DATED: MAY 06 2024 FILE #: 24-0053
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

NO	DESCRIPTION	DATE	AUTHOR
1	RIDEM COMMENT REVISION	1/2021	EMD

verdantas
PEOPLE FOCUSED FUTURE
1005 MAIN STREET, SUITE 8120
PAWTUCKET, RI 02860
TEL 401.728.8840

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

SHEET TITLE:
EXISTING CONDITIONS
A.P. 05B LOT 065 & A.P. 05C LOT 005
58 KINGSTOWN ROAD
RICHMOND, RI 02898

Project No.: 18071
Designed By: RGM
Drawn By: EMD
Checked By: JJP
Date: MARCH 2024
Scale: AS SHOWN

SHEET
3

SHEET 3 OF 59

GENERAL NOTES

1. EXISTING UTILITIES HAVE BEEN PLOTTED FROM BEST AVAILABLE DATA AND ARE APPROXIMATE ONLY, THE CONTRACTOR SHALL VARIFY LOCATION OF ALL EXISTING UTILITIES AND NOTIFY THE APPROPRIATE UTILITY AUTHORITY OR COMPANY, EXTREME CAUTION SHALL BE USED WHEN WORKING IN THE VICINITY OF EXISTING UTILITIES.
2. LOCATIONS AND DEPTHS OF EXISTING UNDERGROUND PIPES, CONDUITS, AND STRUCTURES, AS SHOWN, ARE APPROXIMATE ONLY, BASED ON FIELD SURVEYS AND THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL MAKE, AT HIS EXPENSE, SUCH SUPPLEMENTAL INVESTIGATIONS, INCLUDING BORINGS AND TEST PITS, AS HE DEEMS NECESSARY TO DETERMINE THE EXACT LOCATION OF UTILITIES AND STRUCTURES. ANY EXPENSE AND/OR DELAY OCCASIONED BY UTILITIES AND STRUCTURES, OR DAMAGED THERETO INCLUDING THOSE NOT SHOWN, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.
3. BEFORE PROCEEDING WITH CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL NOTIFY THE STATE OF RHODE ISLAND UTILITIES UNDERGROUND PLANT DAMAGE PREVENTION SYSTEM (DIG SAFE) AT 1-800-225-4977.
4. ELEVATIONS SHOWN ARE BASED ON NATIONAL GEODETIC VERTICAL DATUM OF 1929, MSL=0.00
5. THE DRAWING INDICATES THE APPROXIMATE LOCATION OF BORINGS TAKEN FOR PURPOSES OF THIS PROJECT. THEY INDICATE THE SUBSURFACE CONDITIONS AT THE LOCATIONS OF THE BORINGS ONLY. SUBSURFACE CONDITIONS ENCOUNTERED DURING CONSTRUCTION MAY VARY FROM THOSE SHOWN IN THE BORING LOGS. GROUNDWATER LEVELS INDICATED ON THE BORING LOGS ARE THOSE EXISTING AT THE TIME SUBSURFACE INVESTIGATIONS WERE MADE AND DO NOT NECESSARILY REPRESENT PERMANENT GROUNDWATER LEVELS.
6. THE CONTRACTOR SHALL CONFINE HIS OPERATIONS AND ACTIVITIES FOR CONSTRUCTION PURPOSES TO WITHIN THE PROJECT LIMITS AS SHOWN ON THE SITE PLAN. (PROJECT LIMIT LINE IS THE PROPERTY LINE)
7. THE CONTRACTOR SHALL MAINTAIN ALL EXCAVATIONS IN A DRY CONDITION.
8. NO SEPARATE PAYMENT OR ALLOWANCE SHALL BE MADE FOR DEWATERING, BUT THE COST SHALL BE INCLUDED IN THE APPROPRIATE ITEMS OF WORK AS LISTED IN THE BID.
9. ALL GRASSED AREAS DISTURBED BY THE CONTRACTOR SHALL BE LOAMED AND SEEDED, AND RETURNED TO THEIR ORIGINAL CONDITION.
10. ALL PAVEMENT DISTURBED SHALL BE REPAIRED WITH PERMANENT PAVEMENT.
11. ALL GRASS, AND PAVEMENT AREAS DISTURBED OUTSIDE OF THE PROJECT LIMITS BY CONSTRUCTION OPERATIONS SHALL BE REPLACED AND RESTORED, IN KIND, AT NO ADDITIONAL EXPENSE TO THE OWNER.
12. WHERE EXISTING MATERIALS ARE ENCOUNTERED WHICH, IN THE OPINION OF THE ENGINEER, ARE UNSUITABLE FOR BEDDING OR OTHER INTENDED USE, SUCH MATERIALS SHALL BE REMOVED AND REPLACED WITH SUITABLE MATERIAL, AS SPECIFIED, OR AS OTHERWISE DIRECTED.
13. UPON EXCAVATION, WHERE EXISTING MATERIALS ARE FOUND TO BE SATISFACTORY FOR PIPEBEDDING, THE ENGINEER MAY ORDER THE DELETION OF GRAVEL BEDDING.
14. ALL EXISTING PIPE, SUBSURFACE STRUCTURES, PAVEMENTS, EXCESS EXCAVATED MATERIALS, AND MISCELLANEOUS MATERIALS REMOVED DURING THE INSTALLATION OF ALL PROPOSED PIPING, AND STRUCTURES, EXCEPT SALVAGEABLE ITEMS, SHALL BE PROPERLY DISPOSED OF, OFF THE PROJECT SITE, AT NO ADDITIONAL COST TO THE OWNER
15. THE CONTRACTOR SHALL INSTALL AND MAINTAIN SHEETING AND BRACING, AS NECESSARY, TO PROTECT WORKMEN AND THE PUBLIC ON OR NEAR THE SITE, PREVENT INJURIOUS CAVE-INS OR EROSION, LOSS OF GROUND AND MAINTAIN ALL ADJACENT STRUCTURES AT ALL TIMES.
16. DUST CONTROL, USING CALCIUM CHLORIDE OR OTHER APPROVED METHOD, SHALL BE PROVIDED FOR ALL EARTH STOCKPILES, EARTH PILED ALONG EXCAVATIONS, AND SURFACES OF BACKFILL TRENCHES, AS DIRECTED AND SPECIFIED.
17. MINIMUM WATER PIPE COVER SHALL BE FIVE FEET ZERO INCHES (5'-0") UNLESS OTHERWISE INDICATED OR DIRECTED BY THE ENGINEER.
18. PROVIDE CONCRETE THRUST BLOCK RESTRAINTS AND/OR ANCHORAGE AT ALL PUSH-ON OR MECHANICAL JOINT BENDS, TEES, REDUCERS, AND OTHER FITTING LOCATIONS AS SHOWN ON THE DRAWINGS, OR AS DIRECTED BY THE ENGINEER. THRUST BLOCK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAILS ON THE DRAWINGS. IF ADEQUATE SUPPORT AGAINST UNDISTURBED EARTH CAN NOT BE OBTAINED, OR PHYSICAL SPACE LIMITATIONS EXIST, RESTRAINED JOINT FITTINGS, JOINT HARNESSES OR OTHER APPROVED MEANS OF PREVENTING PIPE MOVEMENT SHALL BE PROVIDED.
19. ALL BUILDING SERVICE POTABLE WATER PIPING CONNECTIONS SHALL BE TYPE "K" COPPER TUBING.
20. THE GENERAL CONTRACTOR SHALL COORDINATE THE MECHANICAL AND ELECTRICAL WORK REQUIRED FOR THE CONSTRUCTION PHASES FOR SMOOTH TRANSITION OF WORK AND SYSTEM SHUT-DOWNS. THE PHASES OF WORK FOR THE SUGGESTED SEQUENCES MAY BE PERFORMED BY THE CONTRACTOR CONCURRENTLY, IN AN APPROVED MANNER, SO AS NOT TO ADVERSELY EFFECT THE EXISTING SYSTEM OPERATION.
21. THE PROJECT IS WITHIN ZONE-A; AREAS OF 100-YEAR FLOOD; BASE FLOOD ELEVATIONS AND FLOOD HAZARD FACTORS NOT DETERMINED; AND ZONE C: AREAS OF MINIMAL FLOODING; AS SHOWN ON THE FLOOD INSURANCE RATE MAP FOR THE TOWN OF RICHMOND, RHODE ISLAND, WASHINGTON COUNTY, COMMUNITY PANEL NO. 440031 0004 B, PANEL 4 OF 20, EFFECTIVE DATE: NOVEMBER 5, 1980 AND COMMUNITY PANEL NO. 440031 0010 B; PANEL 10 OF 20, EFFECTIVE DATE: NOVEMBER 5, 1980.
22. EXTERIOR ROAD SALT STORAGE IS NOT ALLOWED ON SITE. ROAD SALTS SHALL ONLY BE APPLIED TO MAINTAIN SAFE DRIVING CONDITIONS: NO MORE THAN 400 LBS. OF SAND & SALT SHALL BE APPILIED PER ONE MILE OF ROAD PER STORM.

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 AND ADJACENT PROPERTY.
2. STAKED HAY BALES OR SILT FENCES SHALL BE INSTALLED WHERE SHOWN AND AS REQUIRED TO PREVENT SEDIMENTATION ONTO ADJACENT PROPERTIES.
3. PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES, SILT FENCING AND HAY BALES SHALL BE INSTALLED IN LOCATIONS SHOWN ON THE PLANS AND MAINTAINED IN EFFECTIVE CONDITION UNTIL DISTURBED AREAS HAVE BEEN STABILIZED WITH VEGETATION. FOLLOWING SUCCESSFUL STABILIZATION OF DISTURBED AREAS, ALL SILT FENCING AND HAY BALES SHALL BE REMOVED. PRIOR TO REMOVAL OF THE SILT FENCING AND HAY BALES, ALL ACCUMULATED TRAPPED SEDIMENT MUST BE REMOVED AND DISPOSED BY THE CONTRACTOR.
4. UNTIL VEGETATIVE COVER IS ESTABLISHED AND DISTURBED AREAS ARE STABILIZED, ACCUMULATED SEDIMENTS SHALL BE REMOVED AS SOON AS SEDIMENTS HAVE ACCUMULATED TO A DEPTH OF 6 INCHES.
5. CONSTRUCTION ACTIVITIES AND DISTURBANCE SHALL BE KEPT TO WITHIN THE LIMIT OF DISTURBANCE (LOD). AREAS OUTSIDE THE LOD SHALL REMAIN UNDISTURBED.
6. THE CONTRACTOR SHALL INITIATE APPROPRIATES VEGETATIVE PRACTICES, TEMPORARY OR PERMANENT, ON ALL DISTURBED AREAS AS SOON AS POSSIBLE BUT NO MORE THAN (14) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT AREA HAS TEMPORARILY OR PERMANENTLY CEASED, UNLESS THE ACTIVITY IS TO RESUME WITHIN (21) DAYS.
7. ALL DISTURBED SLOPES, EITHER NEWLY CREATED OR EXPOSED PRIOR TO OCTOBER 15, SHALL BE SEEDED OR PROTECTED BY THAT DATE.
8. TEMPORARY TREATMENTS SHALL CONSIST OF 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.
9. HAY OR STRAW APPLICATIONS SHALL BE IN THE AMOUNT OF 3,000-4,000 LBS/ACRE.
10. ALL HAY BALES 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.
11. STOCKPILES SHALL HAVE NO SLOPE STEEPER THAN 2:1 AND SHALL BE SURROUNDED BY STAKED HAY BALES.
12. STOCKPILES EXPOSED FOR EXCESSIVE PERIODS SHALL RECEIVE TEMPORARY TREATMENT CONSISTING OF HAY, STRAW OR FIBER MATTING.
13. PIPE INLETS AND OUTFALLS SHALL BE PROTECTED BY HAY-BALE FILTERS OR SILT FENCE UNTIL DISTURBED AREAS ARE PERMANENTLY STABILIZED WITH VEGETATION.
14. TEMPORARY SOIL STOCKPILES AND DEPOSITION AREAS FOR CONSTRUCTION MATERIAL SHALL BE LOCATED OUTSIDE WETLANDS AREAS AND ASSOCIATED BUFFERS AND SHALL BE SURROUNDED BY STAKED HAY BALES.
15. TEMPORARY VEGETATION AND/OR HAY MULCHING SHALL BE USED TO PROTECT BARE AREAS AND STOCKPILES FROM EROSION. BARE EARTH SLOPES AND SOIL STOCKPILES SHALL BE KEPT TO A MINIMUM AT ALL TIMES. TEMPORARY SEEDING OR MULCHING SHALL BE INSTALLED ON ALL BARE EARTH PRIOR TO ENDING CONSTRUCTION FOR WINTER OR AS OTHERWISE NECESSARY. THE RECOMMENDED SEEDING DATES FOR TEMPORARY SEEDING ARE: MARCH 1 THRU JUNE 15 AND AUGUST 15 THRU OCTOBER 1, IN ACCORDANCE WITH THE RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK.
16. AS SOON AS WEATHER PERMITS AFTER THE COMPLETION OF FINE GRADING. ALL DISTURBED AREAS SHALL BE PERMANENTLY STABILIZED WITH LOAM AND THE SPECIFIED GRASS SEED MIXTURE AND ADHESIVE MULCH STABILIZER. THE RECOMMENDED SEEDING DATES ARE: APRIL 1 THRU JUNE 15 AND AUGUST 15 THRU SEPTEMBER 30, IN ACCORDANCE WITH THE RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK.
17. OUTLET PROTECTION DURING THE CLEANING AND FLUSHING OF PIPES IS REQUIRED. IF OUTLET PROTECTION AT AN OUTFALL IS NOT FEASIBLE, THEN THE OUTLET OF THE LAST STRUCTURE TO BE CLEANED SHALL BE PLUGGED TO CAPTURE ALL MATERIALS FLUSHED FROM THE PIPES. AFTER THE MATERIALS ARE REMOVED FROM THE DRAINAGE STRUCTURE, THE OUTLET MAY BE UNPLUGGED TO RESUME NORMAL FUNCTIONING.
18. ALL HAY BALES AND SILT FENCE SHALL BE INSTALLED WITH THE LOWER 6 INCHES BURIED AND BACKFILLED WITH COMPACTED SOIL MATERIAL. WHEN USED IN COMBINATION, A SUFFICIENT AMOUNT OF THE SILT FENCE SHALL BE PLACED IN THE TRENCH SO THAT THE HAY BALE STAKES ARE DRIVEN THROUGH THE FABRIC OF THE FENCE.
19. THE TOE OF ANY FILL SLOPE IS TO REMAIN AT LEAST ONE FOOT INSIDE OF EROSION CONTROLS. UNDER NO CIRCUMSTANCE SHALL THE CONTRACTOR COVER ANY PORTION OF THE EROSION CONTROL MATERIAL. ANY MATERIAL THAT IS PLACED ON ANY EROSION CONTROLS BY THE CONTRACTOR, OR ANY AGENT OF THE CONTRACTOR, SHALL BE IMMEDIATELY REMOVED BY THE CONTRACTOR, AND ANY NECESSARY REPAIRS TO THE EROSION CONTROLS ACCOMPLISHED, AT NO COST TO THE STATE.
20. DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EROSION CONTROL MAINTENANCE AND SHALL INSPECT/REPLACE ALL CONTROLS AS NEEDED. THE CONTRACTOR IS RESPONSIBLE FOR CARRYING OUT NECESSARY MAINTENANCE DURING ALL PHASES OF PROJECT CONSTRUCTION.
21. ADDITIONAL HAY BALES OR SANDBAGS SHALL BE LOCATED AS CONDITIONS WARRANT OR AS DIRECTED BY THE ENGINEER, OWNER, CITY REPRESENTATIVES OR R.I.D.E.M.
22. THE CONTRACTOR SHALL REFERENCE THE "R.I. EROSION AND SEDIMENT CONTROL HANDBOOK" PREPARED BY THE U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE, LATEST EDITION, AS A GUIDE.
23. ALL TEMPORARY EROSION CONTROLS SUCH AS CHECK DAMS, CB INLET PROTECTION, ETC. SHALL BE MAINTAINED IN PROPER WORKING CONDITION BY THE CONTRACTOR DURING CONSTRUCTION. MAINTENANCE IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL CONSTRUCTION IS COMPLETED OR UNTIL MAINTENANCE IS ACCEPTED BY THE OWNER.
24. FERTILIZER SHALL BE USED AT AN APPLICATION RATE OF NO MORE THAN 2 POUNDS PER 1,000 S.F. PER YEAR.
25. SEDIMENT DEPOSITS SHOULD BE REMOVED FROM PERIMETER SEDIMENT CONTROLS AND CHECK DAMS WHEN SEDIMENT REACHES A DEPTH OF APPROXIMATLEY 1/2 THE HEIGHT OF THE BARRIER. TEMPORARY CONSTRUCTION ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS.

DRAINAGE & MAINTENANCE SCHEDULE

1. GENERAL: THE CONTRACTOR SHALL CLEAN AND FLUSH ALL DRAINAGE DEVICES, PIPES, CATCH BASINS, SWALES, ETC. AT THE END OF CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE FOR MAINTENANCE AND REPAIRS TO ALL DRAINAGE STRUCTURES ON SITE UNTIL THE COMPLETED PROJECT IS ACCEPTED BY THE TOWN OF RICHMOND. THE OWNERSHIP ORGANIZATION OF RICHMOND COMMONS IS RESPONSIBLE THEREAFTER FOR THE LONG TERM MAINTENANCE AND REPAIR OF DRAINAGE STRUCTURES. INCLUDING WATER QUALITY UNITS AND UNDERGROUND STORMWATER SYSTEM. ANY STORMWATER MANAGEMENT SYSTEMS WHICH FAILS TO FUNCTION PROPERLY SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

2. CATCH BASINS: INSPECT AT SIX (6) MONTH INTERVALS, CLEAN AT TWELVE (12) MONTH INTERVALS, OR AFTER PERIODS OF HEAVY RAIN. REMOVE ALL SAND, SILT AND DEBRIS FROM SUMPS.

3. MANHOLES: INSPECT AT SIX (6) MONTH INTERVALS. CLEAN AS REQUIRED AND/OR AFTER PERIODS OF HEAVY RAIN.

4. WATER QUALITY UNITS: INSPECT AT SIX (6) MONTH INTERVALS, CLEAN AT TWELVE (12) MONTH INTERVALS, OR AFTER PERIODS OF HEAVY RAIN. REMOVE ALL SAND, SILT AND DEBRIS FROM SUMPS.

5. SWALES & DETENTION BASINS: BEGINNING OF SPRING, REMOVE ALL SAND, SILT AND DEBRIS. SWALES & DETENTION BASINS SHOULD TO BE MOWED (NO SHORTER THAN 4 INCHES) AND KEPT CLEAR OF DEBRIS AND SEDIMENT. BRUSH AND TREES SHOULD NOT BE PERMITTED TO GROW IN THE FLOWPATH. MAINTAIN VIGOROUS VEGETATION BY APPLYING LIME AND FERTILIZER AS NEEDED, (FERTILIZER SHALL BE USED AT AN APPLICATION RATE OF NO MORE THAN 2 POUNDS PER 1,000 S.F. PER YEAR).
. THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE AND INSPECTION UNTIL CONSTRUCTION IS COMPLETED OR UNTIL IT IS ACCEPTED BY THE TOWN OF RICHMOND. THE OWNERSHIP ORGANIZATION OF RICHMOND COMMONS IS RESPONSIBLE THEREAFTER. INSPECT AT (6) SIX MONTH INTERVALS AT WHICH TIME ALL TRASH AND LITTER SHALL BE DISPOSED OF PROPERLY. ACCUMULATED SEDIMENTS MUST BE REMOVED MANUALLY TO PREVENT DAMAGE. ALL ERODED AREAS/BARE SPOTS SHALL BE RESEEDED IMMEDIATELY UPON OBSERVATION.

6. OUTLET STRUCTURES/OVERFLOW ORIFICES: INSPECT TWICE PER YEAR. INSPECTIONS WILL BE ACCOMPLISHED SEVERAL TIMES DURING THE FIRST (6) SIX MONTHS OF OPERATION (ESPECIALLY AFTER RAINFALL EVENTS) TO CHECK FOR CLOGGING OR TO RAPID A RELEASE. THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE AND INSPECTION UNTIL CONSTRUCTION IS COMPLETED OR UNTIL IT IS ACCEPTED BY THE TOWN OF RICHMOND. THE OWNERSHIP ORGANIZATION OF RICHMOND COMMONS IS RESPONSIBLE THEREAFTER.

7. UNDERGROUND STORMTECH CHAMBERS: INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS. CONDUCT JETTING AND VACUMMING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY. WHEN JETTING BLOCK SYSTEM OUTLET.

8. UNDERGROUND STORMTECH CHAMBERS MAINTENANCE PROCEDURE:
STEP 1) INSPECT ISOLATOR ROW FOR SEDIMENT
A) INSPECTION PORTS (IF PRESENT)
   I. REMOVE LID FROM FLOOR BOX FRAME
   II. REMOVE CAP FROM INSPECTION RISER
   III. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD RESULTS ON MAINTENANCE LOG.
   IV. IF SEDIMENT IS AT, OR ABOVE, 3 INCH DEPTH PROCEED TO STEP 2. IF NOT PROCEED TO STEP 3.
B) ALL ISOLATOR ROWS
   I. REMOVE COVER FROM MANHOLE AT UPSTREAM END OF ISOLATOR ROW
   II. USING A FLASHLIGHT, INSPECT DOWN ISOLATOR ROW THROUGH OUTLET PIPE
      1. MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
      2. FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
   III. IF A SEDIMENT LAYER IS VISIBLE PROCEED TO STEP 2. IF NOT PROCEED TO STEP 3.

STEP 2) CLEAN OUT ISOLATOR ROW USING THE JETVAC PROCESS
A) A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING NOZZLE SPREAD OF 45 INCHES OR MORE IS PREFERABLE
B) APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
C) VACUUM MANHOLE SUMP AS REQUIRED

STEP 3) REPLACE ALL CAPS, LIDS AND COVERS, RECORD OBSERVATIONS AND ACTIONS

STEP 4) INSPECT & CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM

DRAINAGE AND UTILITY NOTES

1. LOCATION OF EXISTING UTILITIES ARE APPROXIMATE AND HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL CHECK AND VERIFY LOCATIONS OF ALL EXISTING UTILITIES, BOTH UNDERGROUND AND OVERHEAD. ANY DAMAGE TO EXISTING UTILITIES SHALL BE BORNE BY THE CONTRACTOR. NO EXCAVATION SHALL BE DONE UNTIL ALL INVOLVED COMPANIES ARE NOTIFIED.
2. DURING CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING DRAINAGE AND RUNOFF FLOW DURING PERIODS OF RAINFALL.
3. THE CONTRACTOR SHALL CHECK AND VERIFY THE LOCATION OF ALL EXISTING UTILITIES, BOTH UNDERGROUND AND OVERHEAD, IN ACCORDANCE WITH THE "DIG SAFE PROGRAM LAW" ENACTED BY RHODE ISLAND LEGISLATURE BILL NO. 79S-391, WHICH BECAME EFFECTIVE JULY 1, 1979. ANY DAMAGE TO EXISTING UTILITIES WHICH ARE SHOWN ON THE PLANS OR DESIGNATED BY DIG SAFE SHALL BE THE CONTRACTOR'S RESPONSIBILITY.

SANITARY SEWER PIPELINE NOTES:

1. LOCATIONS AND DEPTHS OF EXISTING UTILITIES ARE APPROXIMATE AND HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL VERIFY LOCATIONS OF ALL EXISTING UTILITIES AND NOTIFY THE APPROPRIATE UTILITY AUTHORITIES INCLUDING "DIG-SAFE" PRIOR TO STARTING WORK. ANY DAMAGE TO UTILITIES CAUSED BY THE CONTRACTOR'S OPERATIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND THE COST OF REPAIRS SHALL BE BORNE BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
2. WHENEVER POSSIBLE THE SEWER SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM AN EXISTING WATER MAIN. WHENEVER SEWERS MUST CROSS UNDER WATER MAINS THE SEWER SHALL BE LAID AT SUCH AN ELEVATION THAT THE TOP OF THE SEWER IS AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN. WHEN THE ELEVATION OF THE SEWER CANNOT BE VARIED TO MEET THE ABOVE REQUIREMENT, THE WATER MAIN SHALL BE RELOCATED TO PROVIDE THIS SEPARATION OR RECONSTRUCTED WITH MECHANICAL JOINT PIPE FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE SEWER. ONE FULL LENGTH OF WATER MAIN SHOULD BE CENTERED OVER THE SEWER SO THAT BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE.
3. THE CONTRACTOR SHALL CONFINE HIS OPERATIONS AND ACTIVITIES FOR CONSTRUCTION PURPOSES WITHIN THE STREET LINES, EASEMENTS AND/OR RIGTHS-OF-WAY ACROSS PRIVATE PROPERTY AS SHOWN ON THE DRAWINGS.
4. ALL AREAS DISTURBED BY THE CONTRACTOR OUTSIDE OF THE PAYMENT LINES INDICATED SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AT NO EXTRA COST TO THE OWNER.
5. WATER, GAS, SEWER AND OTHER UTILITIES SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.
6. ALL GRASSED AREAS DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE LOAMED AND SEEDED.
7. ALL CURBING DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED AND RESTORED AT NO ADDITIONAL EXPENSE TO THE OWNER.
8. ALL PIPES UNDER THIS CONTRACT ARE DESIGNED USING TRENCH WIDTHS AS SHOWN ON THE DRAWINGS. DEVIATION FROM THESE WIDTHS BY THE CONTRACTOR MAY NECESSITATE CHANGES IN PIPE CLASSIFICATION. SUCH CHANGE SHALL BE MADE AT NO ADDITIONAL COST TO THE OWNER. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF THE DESIGN TRENCH WIDTHS ARE EXCEEDED OR PLANNED TO BE EXCEEDED.
9. THE PAYMENT LINES FOR CLEARING, GRUBBING, STRIPPING, STOCKPILING, AND REPLACING TOPSOIL, LOAMING AND SEEDING SHALL BE 10' BOTH SIDES OF PIPE CENTERLINE.
10. DEPTHS OF EXISTING WATER PIPE LINES ARE UNKNOWN-ASSUME 5' COVER.
11. ALL RIM ELEVATIONS FOR PROPOSED SEWER MANHOLES SHALL MATCH EXISTING GRADES UNLESS OTHERWISE NOTED OR DIRECTED BY THE ENGINEER.
12. WHENEVER SOIL IS ENCOUNTERED, WHERE, IN THE OPINION OF THE ENGINEER, IT IS UNSUITABLE FOR PIPE BEDDING OR OTHER INTENDED USE, THE CONTRACTOR SHALL REMOVE SUCH MATERIAL AND REPLACE IT WITH COMPACTED GRAVEL.
13. ALL SEWERMAINS SHALL BE 8" PVC UNLESS OTHERWISE NOTED. SERVICES SHALL BE 6" PVC UNLESS OTHERWISE NOTED.
14. ALL ELEVATIONS LABELED ON THE PROPOSED PROFILE OF THE SEWERLINE SHALL INDICATE THE INVERT OF THE PIPE.
15. CATCHBASINS SHALL BE PROTECTED FROM SEDIMENTATION AS SHOWN ON THE DETAIL SHEET.
16. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING DRAINAGE & 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 CITY, STATE OR FEDERAL AGENCY THAT MAY BE APPLICABLE. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
17. 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 M.U.T.C.D.
18. ALL REQUIRED AUTHORIZATION TO PERFORM WORK MUST BE OBTAINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
19. ALL EXISTING UTILITIES HAVE BEEN PLOTTED BASED UPON BEST AVAILABLE INFORMATION AND REPRESENT APPROXIMATE LOCATIONS.
20. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ANY 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 ALL ASPECTS OF ON-SITE SAFETY INCLUDING ANY DAMAGE TO EXISTING STRUCTURES.
21. 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.
22. ALL BURIED GATE VALVES SHOWN ON PIPELINES SHALL BE SOLID WEDGE TYPE WITH ADJUSTABLE CAST IRON VALVE BOXES TO FINISHED GRADE. COVERS SHALL READ "SEWER". OPERATING EXTENSION RODS SHALL BE BROUGHT TO WITHIN 6" FROM FINISHED GRADE WHEN VALVES EXCEED A DEPTH OF 5 FEET.

RIDEM PERMIT

ALL WORK SHALL BE IN FULL CONFORMITY WITH THE PERMIT ISSUED BY RIDEM FOR THE PROJECT.

LEGEND

SYMBOL	DESCRIPTION
52	EXIST. CONTOUR
52	PROP. CONTOUR
PL	PROPERTY LINE
	EDGE OF TREES
	EXIST. LINE TO BE CAPPED
E	EXIST. ELECRIC
D	EXIST. DRAIN
S	EXIST. SEWER
S	PROP. SEWER
FM	PROP. SEWER FORCEMAIN
W	EXIST. WATER LINE
12"W	PROP. 12" WATER LINE
	GATE VALVE OR CURB STOP
X	EXIST. CHAIN LINK FENCE
	PROPOSED CHAINLINK FENCE
	STEEL SHEETING
DMH	EXIST. DRAIN MANHOLE
SMH	EXIST. SEWER MANHOLE
P-1	EXIST. UTILITY POLE
3 / M-1	SECTION OR DETAIL NUMBER / SHEET LOCATION OF SECTION OR DETAIL
	LINE OF BALED HAY, SILT FENCE
	LIMIT OF DISTURBANCE
	TEST PIT
5-206	WETLAND FLAG
AC	ASBESTOS CEMENT
ALUM.	ALUMINATION
BIT.	BITUMINOUS CONCRETE
BLDG.	BUILDING
C.	COPPER
CEM.	CEMENT
C.O.	CLEAN OUT TO GRADE
CONC.	CONCRETE
CONT.	CONTINOUS
COP.	COPPER
C.S.	CURB STOP
D.I.	DUCTILE IRON PIPE
DIA.	DIAMETER
DW.	DOWN
EL.	ELEVATION
EST.	ESTIMATE
E.O.P.	EDGE OF PAVEMENT
EW	EACH WAY
FT/FT	FEET PER FOOT
G.V.	GATE VALVE
HT	HEIGHT
H.W.A.	HIGH WATER ALARM
INV.	INVERT
L.F.	LINEAR FEET
L.W.A.	LOW WATER ALARM
MAX.	MAXIMUM
MIN.	MINIMUM
MON.	MONITORING
N/F	NOW OR FORMALLY

SPECIAL CONDITIONS

1. ANY OF THE FOLLOWING CHANGES TO THE APPROVED FINAL PLAN SHALL BE CONSIDERED A MAJOR CHANGE TO AN APPROVED AND RECORDED LAND DEVELOPMENT PROJECT, AND MUST BE APPROVED BY THE PLANNING BOARD PURSUANT TO SECTION 6.2.2 OF THE LAND DEVELOPMENT & SUBDIVISION REGULATIONS:
   A) CHANGE OF GRADE ON THE NORTHERN PROPERTY LINE THAT WOULD INCREASE THE APPROVED ELEVATION OF 184; ANY CHANGE THAT WOULD CAUSE SURFACE WATER RUNOFF FROM THE DEVELOPMENT TO THE PROPERTY TO THE NORTH; PROPOSED CONSTRUCTION OF A COMMERCIAL BUILDING CLOSER THAN 75 FEET TO THE NORTHERN PROPERTY LINE; AND PROPOSED CONSTRUCTION OF A RESIDENTIAL BUILDING CLOSER TO THE NORTHERN PROPERTY LINE THAN SHOWN ON THE APPROVED PLAN.

   B) ANY ADDITIONAL RESIDENTIAL OR NON-RESIDENTIAL CONSTRUCTION THAT INCREASES THE BUILDING AREA SHOWN ON THE APPROVED PLAN.

2. POTABLE WATER FROM THE RICHMOND WATER SYSTEM SHALL NOT BE USED FOR IRRIGATION.

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL
DATED: MAY 06 2024 FILE #: 24-0057
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

| NO | DES

PARKING REQUIREMENTS:
2 PARKING SPACES PER DWELLING UNIT
DUPLEX (66 UNITS): 2 SPACES PER DRIVEWAY PROVIDED
APARTMENTS (333 UNITS): 279 SPACES PROVIDED OUTSIDE & 106 SPACES IN BASEMENT LEVEL OF 3 BLDGS

COMMUNITY CENTER PARKING COMPUTATION:
ZONING SECTION 18.28.010 C: OTHER PLACES OF PUBLIC ASSEMBLY 1 SPACE PER 4 PERSONS OF CAPACITY
IBC 2003 TABLE 1004.1.2 RESIDENTIAL 1 OCCUPANT PER 200 G.F.A.
C.C. BUILDING: 14,000 S.F. / 200 = 70 OCCUPANTS / 4 = 18 SPACES REQUIRED

MEDICAL BUILDING PARKING COMPUTATION:
ZONING SECTION 18.28.010 D: 1 SPACE PER 2-BEDS
15,000 S.F. / 250 S.F PER BED (EXAM ROOM)= 60 BEDS/2 = 30 SPACES REQUIRED

DUPLEX LOCATION	BUILDINGS	UNITS
HEMLOCK ROAD	12	24
CYPRESS ROAD	21	42
TOTAL:	33	66

APARTMENTS		
HICKORY ROAD	6	156
COUNTRY ACRES ROAD	7	177
TOTAL:	12	333
GRAND TOTAL	45	399

TYP. RESIDENTIAL UNIT: 32' x 62' = 1,984 S.F.
TYP. APARTMENT UNIT: 100' x 140' = 14,000 S.F.

VILLAGE CENTER RESIDENTIAL COMMUNITY

TOWN PROPERTY

LIMIT OF DISTURBANCE

150'

TOWN PROPERTY

KINGSTOWN ROAD
RT. ROUTE 138
PUBLIC - VARIABLE WIDTH

BROOK RD

VILLAGE CENTER RESIDENTIAL COMMUNITY

SCALE IN FEET
0 100 200 400 800
SCALE : 1"= 200'

=LIMITS OF RESIDENTIAL COMMUNITY
=PROPOSED WALKING PATH

RESIDENTIAL COMMUNITY AREA WITHIN PUD-VC DISTRICT
(INCLUDING ROADWAYS) = 152.4 ACRES +/-

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
SPECIFIED IN THE LETTER OF APPROVAL
DATED: MAY 06 2024 FILE #: 21-0093
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

NO	DESCRIPTION	DATE	AUTHOR
1	RIDEM COMMENT REVISION	11/2021	EMD

verdantas
PEOPLE FOCUSED FUTURE
1005 MAIN STREET, SUITE 8120
PAWTUCKET, RI 02860
TEL. 401.728.6860

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

RIDEM
SUBMITTAL
MARCH 2024

RI Environmental Management
MAR 15 2024
Office of Water Resources

JEFFREY J. PLANTE
No. 4918
REGISTERED PROFESSIONAL ENGINEER
03/12/2024

SHEET TITLE:
RESIDENTIAL COMMUNITY PLAN

A.P. 058 LOT 065 & A.P. 05C LOT 005
58 KINGSTOWN ROAD
RICHMOND, RI 02898

Project No.: 18071
Designed By: RGM
Drawn By: EMD
Checked By: JJP
Date: MARCH 2024
Scale: AS SHOWN

SHEET
5
SHEET 5 OF 58

PROPERTY LINE

PROPERTY LINE

75'

75' SETBACK

PROPERTY LINE

MATCH SHEET GENERAL PLAN 27

Hickory Road

Apt-1
TOF: 260
Slab: 252
EL=260.0

Apt-2
TOF: 260
Slab: 252
EL=260.0

Apt-3
TOF: 260
Slab: 252
EL=260.0

Apt-4
TOF: 271
Slab: 263
EL=260.0

Apt-5
TOF: 271
Slab: 263
EL=271.0

Apt-6
TOF: 262
Slab: 254
EL=262.0

Apt-7
EL=256.0

M-1
Medical Building
Day-care Area
15,000 s.f.

CC

PC: 6+89.11
PT: 6+59.40
PT: 7+86.52
PC: 5+62.03
PC: 13+21.42
PT: 13+41.22
PI: 15+43.53

WALKING PATH TYP.

BITUMINOUS BERM TYP.

INFILTRATION BASIN

CONSERVATION LAND

RECREATION LAND

50'

APPROXIMATE FEMA 100-YEAR FL.

305'±

LEACHFIELD AREA

SCALE IN FEET

0 40 80 160 320

SCALE : 1" = 80'

MATCH SHEET GENERAL PLAN 7

CURVE DATA

COUNTRY ACRES ROAD		
CURVE	LENGTH	RADIUS
C1	548.57	400.00
C2	1031.16	300.00
C3	196.11	300.00
C4	178.38	576.00
C5	883.17	1199.00
C6	294.86	301.00
C7	73.01	151.00

HICKORY ROAD		
CURVE	LENGTH	RADIUS
C17	19.80	52.00
C18	97.41	62.00
C19	97.37	62.00

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
SPECIFIED IN THE LETTER OF APPROVAL
DATED: MAY 06 2024 FILE #: 21-0067
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

NO	DESCRIPTION	DATE	AUTHOR
1	RIDEM COMMENT REVISION	11/2021	EMD

verdantas
PEOPLE FOCUSED FUTURE
1005 MAIN STREET, SUITE 8120
PAWTUCKET, RI 02860
TEL. 401.728.6860

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

RIDEM SUBMITTAL
MARCH 2024

RI Environmental Management
MAR 15 2024
Office of Water Resources

JEFFREY J. PLANTE
No. 4818
REGISTERED PROFESSIONAL ENGINEER
03/12/24

SHEET TITLE:
AGE RESTRICTED RESIDENTIAL
GENERAL PLAN 1

A.P. 09B LOT 085 & A.P. 05C LOT 005
58 KINGSTOWN ROAD
RICHMOND, RI 02898

Project No.: 18071
Designed By: RGM
Drawn By: EMD
Checked By: JJP
Date: MARCH 2024
Scale: AS SHOWN

SHEET
6
SHEET 6 OF 58

MATCH SHEET GENERAL PLAN 6

MATCH SHEET GENERAL PLAN 28

MATCH SHEET GENERAL PLAN 8

Country Acres Road

Hemlock Road

Cypress Road

Apt-8 EL.-255.0

Apt-9 EL.-250.0

Apt-10 EL.-262.0

Apt-11 EL.-262.0

Apt-12 EL. 262.0

L-1 L-2 L-3 L-4 L-5 L-6 L-7 L-8 L-9 L-10 L-11 L-12 L-13 L-14 L-15 L-16 L-17 L-19 L-20 L-21 L-22 L-23 L-24 L-25 L-26 L-27 L-28 L-29 L-30 L-31 L-32 L-33

PC: 7+36.42

PT: 7+00.87

PRC: 17+67.57

PRC: 19+63.68

PRC: 21+42.06

PC: 7+73.88

PT: 4+99.44

PC: 5+73.78

PT: 5+11.39

PC: 6+23.36

PT: 5+28.76

PRC: 30+23.23

PT: 33+14.54

BIT. BERM TYP.

VERSA-LOK RETAINING WALL

PAVED WATERWAY TYP.

WALKING PATH (TYP)

WASTE WATER PUMP STATION

WATER BOOSTER PUMP STATION

EXTENDED DETENTION POND

PROPERTY LINE

RECREATION LAND

26' WIDE GRAVEL ACCESS ROAD

R50'

100'

50'

26'

16'

EASTLINE EASEMENT

LEACHFIELD AREA (TYP.)

SEPTIC

WELL

CURVE DATA

COUNTRY ACRES ROAD		
CURVE	LENGTH	RADIUS
C1	548.57	400.00
C2	1031.16	300.00
C3	196.11	300.00
C4	178.38	576.00
C5	883.17	1199.00
C6	294.86	301.00
C7	73.01	151.00

HEMLOCK ROAD		
CURVE	LENGTH	RADIUS
C8	77.88	306.30
C9	34.91	200.00
C10	155.56	100.00
C11	141.20	100.00
C12	277.34	951.90

CYPRESS ROAD		
CURVE	LENGTH	RADIUS
C13	189.11	350.00
C14	155.74	100.00
C15	143.74	100.00
C16	178.76	200.00

RECEIVED FOR RECORD
DATE:_____
AT_____M.
MAP#_____ SLIDE#_____

Tracy N. Hay
Town Clerk

APPROVED BY THE PLANNING BOARD

Chairperson Date

SCALE IN FEET
0 40 80 160 320
SCALE : 1"= 80'

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
SPECIFIED IN THE LETTER OF APPROVAL
DATE: MAY 06 2024 FILE #: 21-0067
NO CHANGES REMOVED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

NO	DESCRIPTION	DATE	AUTHOR
1	RIDEM COMMENT REVISION	11/2021	EMD

verdantas
PEOPLE FOCUSED FUTURE
100S MAIN STREET, SUITE B120
PAWTUCKET, RI 02860
TEL. 401.728.6860

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

RIDEM
SUBMITTAL
MARCH 2024

RI Environmental Management
MAR 15 2024
Office of Water Resources

JEFFREY J. PLANTE
No. 4318
REGISTERED PROFESSIONAL ENGINEER
3/15/2024

SHEET TITLE:
AGE RESTRICTED RESIDENTIAL GENERAL PLAN 2
A.P. 05B LOT 065 & A.P. 05C LOT 005
58 KINGSTOWN ROAD
RICHMOND, RI 02898

Project No.: 18071
Designed By: RGM
Drawn By: EMD
Checked By: JJP
Date: MARCH 2024
Scale: AS SHOWN

SHEET 7
SHEET 7 OF 58

MATCH SHEET GENERAL PLAN 7

L-23 L-24 L-25 L-26 L-27 L-28 L-29 L-30 L-31 L-33

Cypress Road

WASTE WATER PUMP STATION

WATER BOOSTER PUMP STATION

26' WIDE GRAVEL ACCESS ROAD

16' EXISTING EASEMENT

50'

CONSERVATION OPEN SPACE

EXISTING TOWN WATER TANK

4' WIDE WALKING PATH (TYP)

PROPERTY LINE

RECREATION LAND

PC: 42+48.58

PT: 45+65.01

100'

STATE HIGHWAY PLAT NO. 470

KINGSTOWN ROAD R.I. ROUTE 138

PC: 51+75.50

PT: 52+48.58

CURVE DATA

COUNTRY ACRES ROAD		
CURVE	LENGTH	RADIUS
C1	548.57	400.00
C2	1031.16	300.00
C3	196.11	300.00
C4	178.38	576.00
C5	883.17	1199.00
C6	294.86	301.00
C7	73.01	151.00

HEMLOCK ROAD		
CURVE	LENGTH	RADIUS
C8	77.88	306.30
C9	34.91	200.00
C10	155.56	100.00
C11	141.20	100.00
C12	277.34	951.90

CYPRESS ROAD		
CURVE	LENGTH	RADIUS
C13	189.11	350.00
C14	155.74	100.00
C15	143.74	100.00
C16	178.76	200.00

SCALE IN FEET

0 40 80 160 320

SCALE : 1"= 80'

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
SPECIFIED IN THE LETTER OF APPROVAL
DATED: MAY 06 2024 FILE #: 2120093
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

NO	DESCRIPTION	DATE	AUTHOR
1	RIDEM COMMENT REVISION	11/2021	EMD

verdantas
PEOPLE FOCUSED FUTURE

1005 MAIN STREET, SUITE 8120
PAWTUCKET, RI 02860
TEL. 401.728.6860

PREPARED FOR:

RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

RIDEM
SUBMITTAL
MARCH 2024

RI Environmental Management
MAR 15 2024
Office of Water Resources

JEFFREY J. PLANTE
No. 4018
REGISTERED PROFESSIONAL ENGINEER
03/13/2024

SHEET TITLE:
AGE RESTRICTED RESIDENTIAL
GENERAL PLAN 3

A.P. 059 LOT 005 & A.P. 050 LOT 005
58 KINGSTOWN ROAD
RICHMOND, RI 02898

Project No.: 18071
Designed By: RGM
Drawn By: EMD
Checked By: JJP
Date: MARCH 2024
Scale: AS SHOWN

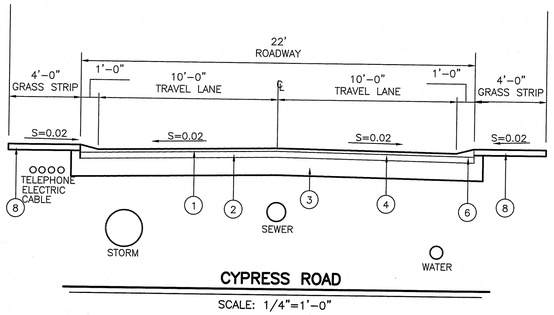
SHEET
8
SHEET 8 OF 58

PAVEMENT LEGEND

1. 2" BITUMINOUS CONCRETE SURFACE COURSE TYPE I-1
2. 4" MODIFIED BITUMINOUS CONCRETE BASE COURSE
3. 12" GRAVEL BORROW SUBBASE COURSE
4. ASPHALT EMULSION TACK COAT
5. R.I. STD. 7.1.0 PRECAST CONCRETE CURB
6. R.I. STD. 7.5.1 BITUMINOUS BERM
7. R.I. STD. 43.1.0 CEMENT CONCRETE SIDEWALK (*)
8. 4" PLANTABLE SOIL & SEEDING TYPE 1
9. R.I. STD. 8.1.0 SEEDED DITCH (USED WHERE ROADWAY SLOPE LESS THAN 5.0%)

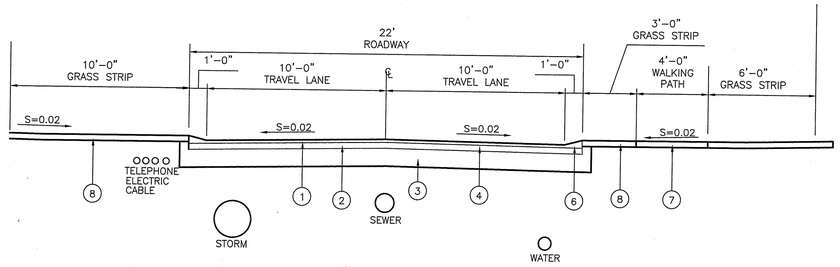
* ONE SIDE ONLY FOR SIDE STREETS. PART OF PEDESTRIAN WALKING PATH FOR COLLECTOR STREETS.

PEDESTRIAN WALKING PATHS ARE CONSTRUCTED WITH STABILIZED SOIL SURFACE.



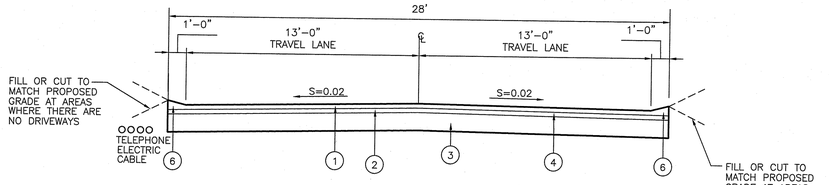
CYPRESS ROAD

SCALE: 1/4"=1'-0"



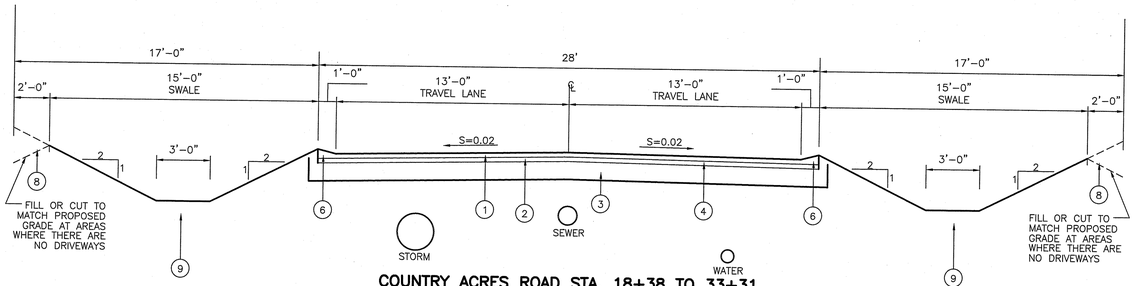
HEMLOCK ROAD

SCALE: 1/4"=1'-0"



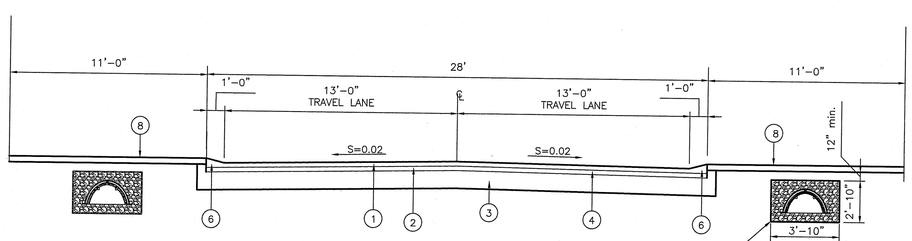
COUNTRY ACRES ROAD STA. 0+00 TO 18+38

SCALE: 1/4"=1'-0"



COUNTRY ACRES ROAD STA. 18+38 TO 33+31

SCALE: 1/4"=1'-0"



COUNTRY ACRES ROAD STA. 33+31 TO 52+39

SCALE: 1/4"=1'-0"

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
SPECIFIED IN THE LETTER OF APPROVAL
DATED: MAY 0 6 2024 FILE #: 2-1-88-23
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

NO	DESCRIPTION	DATE	AUTHOR
1	RIDEM COMMENT REVISION	11/2021	EMD

verdantas
PEOPLE FOCUSED FUTURE
1005 MAIN STREET, SUITE B120
PAWTUCKET, RI 02860
TEL. 401.728.0860

PREPARED FOR:

RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE
NORTH PROVIDENCE, RI 02904

RIDEM
SUBMITTAL
MARCH 2024

RI Environmental Management
MAR 15 2024
Office of Water Resources
MARSH ST PLANT B

REGISTERED PROFESSIONAL ENGINEER No. 4918
3/13/2024

SHEET TITLE:
RESIDENTIAL COMMUNITY
TYPICAL SECTIONS

A.P. 05B LOT 005 & A.P. 05C LOT 005
58 KINGSTOWN ROAD
RICHMOND, RI 02898

Project No.:	18071
Designed By:	RGM
Drawn By:	EMD
Checked By:	JJP
Date:	MARCH 2024
Scale:	AS SHOWN

SHEET
9
SHEET 9 OF 58

SUBWATERSHED AREA 12
PROPOSED TEMPORARY
SEDIMENT TRAP #12
(25'x55'x3')

9S FORESTED WETLAND

SUBWATERSHED AREA 10
PROPOSED TEMPORARY
SEDIMENT TRAP #10
(100'x230'x5')

SUBWATERSHED AREA 11
PROPOSED TEMPORARY
SEDIMENT TRAP #11
(50'x130'x3')

TEMPORARY CONSTRUCTION ENTRANCE
(SEE DETAILS)

SUBWATERSHED AREA 9
PROPOSED TEMPORARY
SEDIMENT TRAP #9
(60'x150'x3')

SUBWATERSHED AREA 7
PROPOSED TEMPORARY
SEDIMENT TRAP #7
(105'x125'x5')

SUBWATERSHED AREA 8
PROPOSED TEMPORARY
SEDIMENT TRAP #8
(90'x100'x5')

A.S.S.F.

ISOLATED EMERGING
PLANT COMMUNITY WETLAND

3 SWAMP WETLAND

11 SWAMP WETLAND

1N SHRUB WETLAND

SUBWATERSHED AREA 6
PROPOSED TEMPORARY
SEDIMENT TRAP #6A
(60'x180'x5')

1 SWAMP WETLAND

SUBWATERSHED AREA 6
PROPOSED TEMPORARY
SEDIMENT TRAP #6B
(60'x180'x5')

SUBWATERSHED AREA 5
PROPOSED TEMPORARY
SEDIMENT TRAP #5
(30'x50'x3')

2 SWAMP WETLAND

SUBWATERSHED AREA 3
PROPOSED TEMPORARY
SEDIMENT TRAP #3
(100'x100'x5')

INTERMITTENT STREAMS
100' RIVERBANK WETLANDS
(ABS 100, 200, 400, 500)

TEMPORARY CONSTRUCTION
ENTRANCE (SEE DETAILS)

SUBWATERSHED AREA 1
PROPOSED TEMPORARY
SEDIMENT TRAP #1
(55'x200'x3')

SUBWATERSHED AREA 2
PROPOSED TEMPORARY
SEDIMENT TRAP #2
(75'x150'x5')

TEMPORARY
CONSTRUCTION
ENTRANCE
(SEE DETAILS)

NOTE:
–CONTRACTOR SHALL PROVIDE TEMPORARY CONSTRUCTION ENTRANCE. (SEE SITE DETAILS)

–CONTRACTOR SHALL PROVIDE TEMPORARY CB INLET PROTECTION DURING CONSTRUCTION (SEE SITE DETAILS).

–CONTRACTOR SHALL INSTALL TEMPORARY CHECK DAMS ALONG SWALES (SEE SITE DETAILS) TEMPORARY CHECK DAMS TO BE USED IN SWALE LOCATIONS. MAXIMUM SPACING BETWEEN DAMS SHOULD BE SUCH THAT THE TOE OF THE UPSTREAM DAM IS SAME ELEVATION AS TOP OF DOWNSTREAM DAM.

Richmond Commons Boulevard West
Richmond Commons Boulevard East
Country Acres Road
Meadowbrook Road
Deerfield Drive
KINGSTOWN ROAD
Route 138
STATE HIGHWAY PLAT NO. 470
STATE HIGHWAY PLAT NO. 435
MEADOWBROOK RD
DEERFIELD DRIVE

LINE OF BALED HAY, SILT FENCE
LIMIT OF DISTURBANCE

Stone Per RIDEM

SCALE IN FEET
0 100 200 400 800
SCALE : 1"= 200'

RIDEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
SPECIFIED IN THE LETTER OF APPROVAL
DATED: MAY 0 6 2024 FILE #: 21-0073
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

NO	DESCRIPTION	DATE	AUTHOR
1	RIDEM COMMENT REVISION	11/2021	EMD

verdantas
PEOPLE FOCUSED FUTURE
1005 MAIN STREET, SUITE 8120
PAWTUCKET, RI 02860
TEL. 401.728.6860

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

RIDEM
SUBMITTAL
MARCH 2024
RI Environmental Management
MAR 1 5 2024
Office of Water Resources

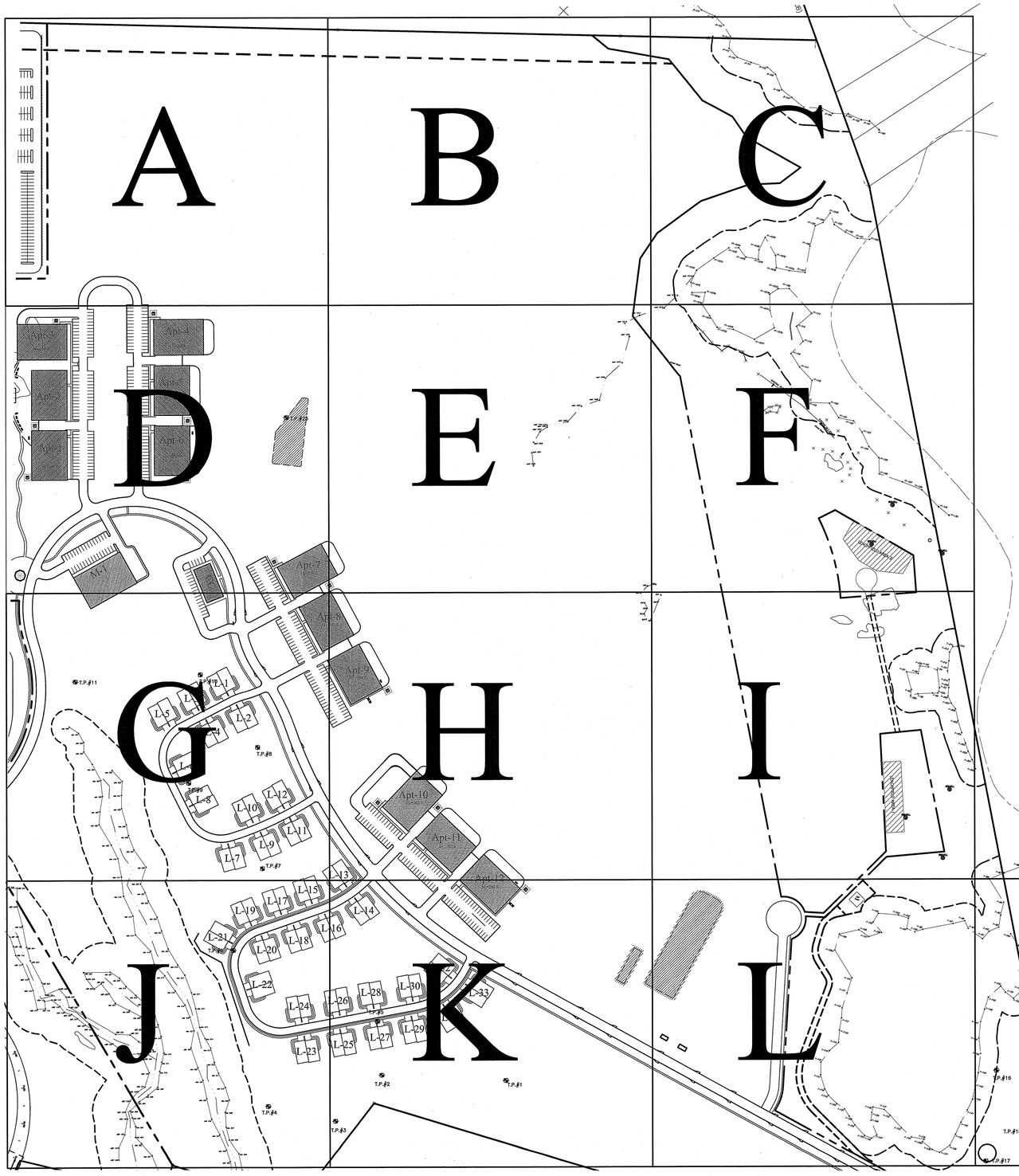
JEFFREY J. PLANTE
No. 4818
REGISTERED PROFESSIONAL ENGINEER
3/13/2024

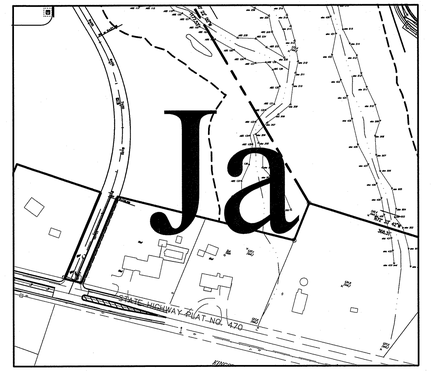
SHEET TITLE:
EROSION CONTROL
LIMIT

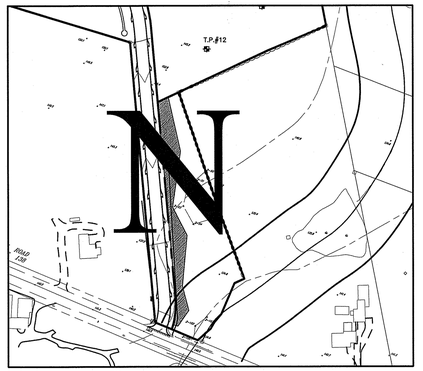
A.P. 05B LOT 065 & A.P. 05C LOT 005
58 KINGSTOWN ROAD
RICHMOND, RI 02898

Project No.: 18071
Designed By: RGM
Drawn By: EMD
Checked By: JJP
Date: MARCH 2024
Scale: AS SHOWN

SHEET
10
SHEET 10 OF 58







RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
SPECIFIED IN THE LETTER OF APPROVAL
DATED: MAY 06 2024 FILE #: 2100673
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

NO	DESCRIPTION	DATE	AUTHOR
1	RIDEM COMMENT REVISION	11/2021	EMD

verdantas
PEOPLE FOCUSED FUTURE
1005 MAIN STREET, SUITE 8120
PAWTUCKET, RI 02860
TEL. 401.728.6560

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

RIDEM
SUBMITTAL
MARCH 2024

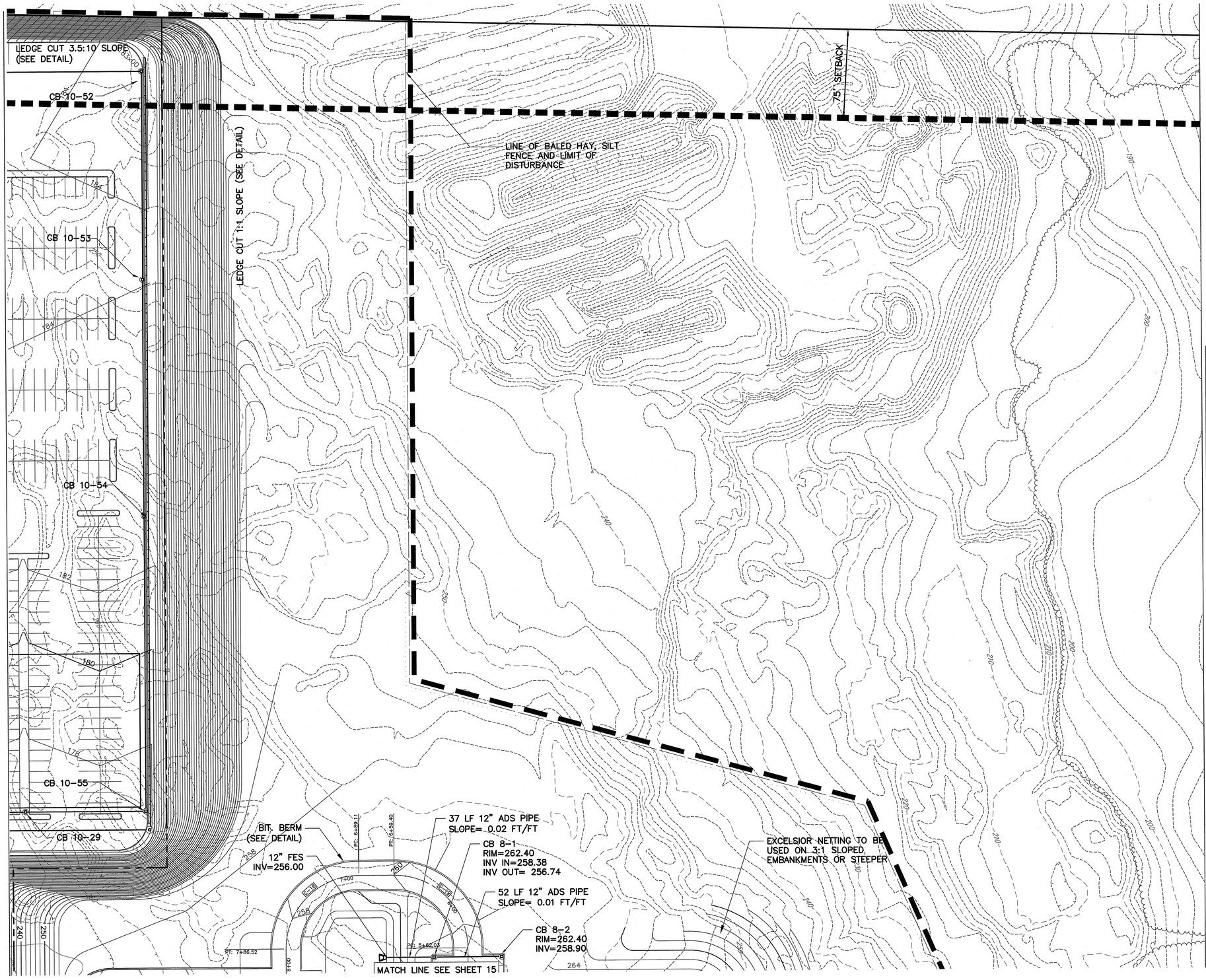
RI Environmental Management
MAR 15 2024
Office of Water Resources

SHEET TITLE:
RESIDENTIAL COMMUNITY
INDEX OF GRADING &
DRAINAGE PLAN

A.P. 05B LOT 095 & A.P. 05C LOT 005
58 KINGSTOWN ROAD
RICHMOND, RI 02898

Project No.: 18071
Designed By: RGM
Drawn By: EMD
Checked By: JJP
Date: MARCH 2024
Scale: AS SHOWN

SHEET
11
SHEET 11 OF 58



A	B	C	
D	E	F	
G	H	I	
J	K	L	M
Ja			N

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
SPECIFIED IN THE LETTER OF APPROVAL
DATED: MAY 0 6 2024 FILE #: 21-0053
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

SCALE IN FEET

0 20 40 80 160

SCALE : 1"= 40'

NO	DESCRIPTION	DATE	AUTHOR
1	RIDEM COMMENT REVISION	11/2021	EMD

verdantas
PEOPLE FOCUSED FUTURE
1095 MAIN STREET, SUITE 9120
PAWTUCKET, RI 02860
TEL. 401.728.8840

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

RIDEM
SUBMITTAL
MARCH 2024

RI Environmental Management
MAR 15 2024
Office of Water Resources

JEFFREY J. PLANTE
No. 6010
REGISTERED PROFESSIONAL ENGINEER
03/13/2024

SHEET TITLE:
RESIDENTIAL COMMUNITY
GRADING & DRAINAGE PLAN
SHEET 1 (A)

A.P. 05B LOT 065 & A.P. 05C LOT 005
58 KINGSTOWN ROAD
RICHMOND, RI 02898

Project No.: 18071
Designed By: RGM
Drawn By: EMD
Checked By: JJP
Date: MARCH 2024
Scale: AS SHOWN

SHEET
12
SHEET 12 OF 58

PROPERTY LINE

75' SETBACK

MATCH LINE SEE SHEET 12

MATCH LINE SEE SHEET 16

MATCH LINE SEE SHEET 14

A	B	C	
D	E	F	
G	H	I	
J	K	L	M
Ja			N

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
SPECIFIED IN THE LETTER OF APPROVAL
DATED: MAY 06 2024 FILE #: 21-0083
NOTICE: ALL WORK WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

SCALE IN FEET

0 20 40 80 160

SCALE : 1"= 40'

NO	DESCRIPTION	DATE	AUTHOR
1	RIDEM COMMENT REVISION	11/2021	EMD

verdantas
PEOPLE FOCUSED FUTURE
100S MAIN STREET, SUITE B120
PAWTUCKET, RI 02860
TEL. 401.728.6860

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

RIDEM
SUBMITTAL
MARCH 2024

RI Environmental Management
MAR 15 2024
Office of Water Resources

JEFFREY J. PLANTE
No. 4918
REGISTERED PROFESSIONAL ENGINEER
03/13/2024

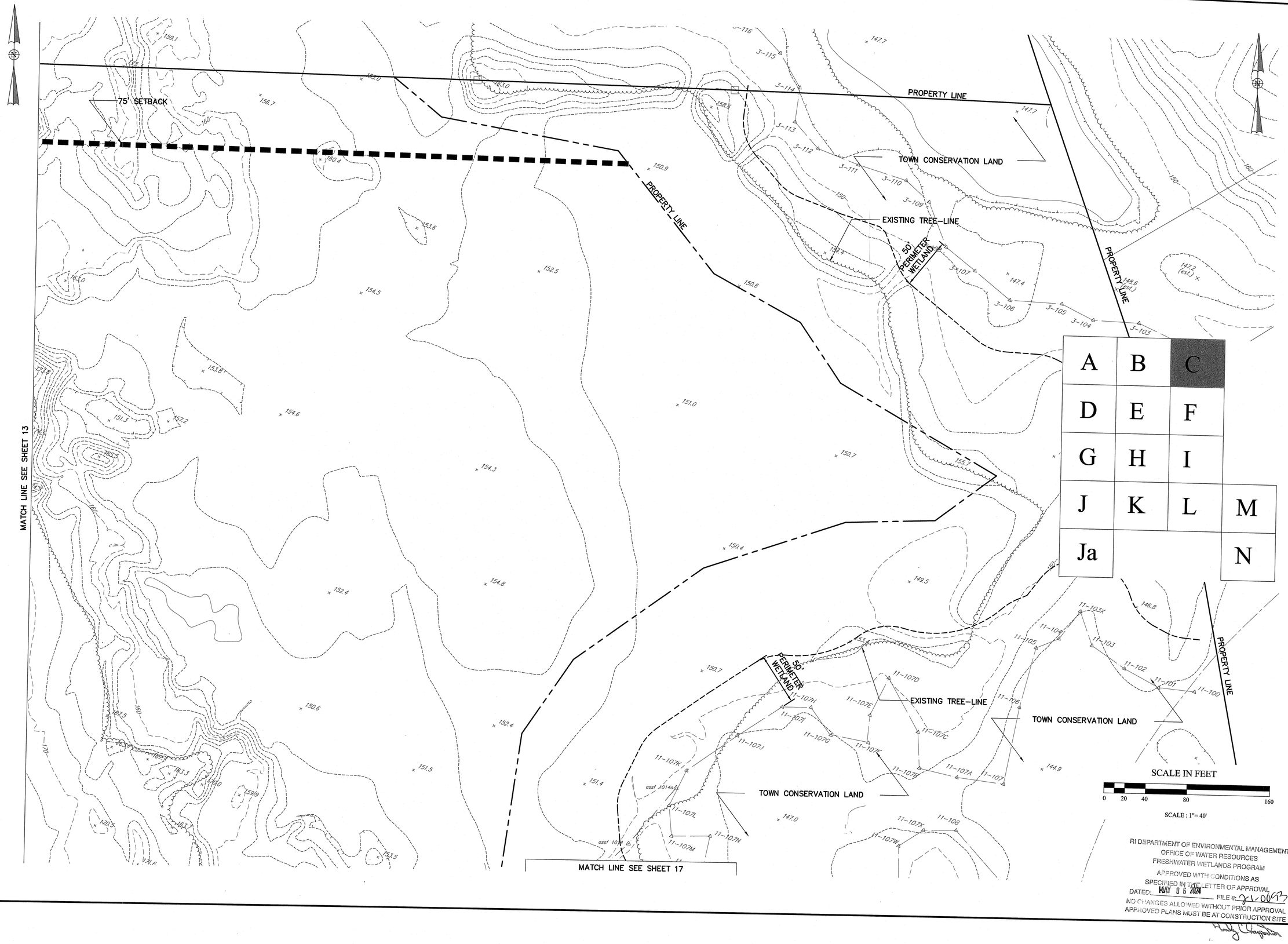
SHEET TITLE:
RESIDENTIAL COMMUNITY
GRADING & DRAINAGE PLAN
SHEET 2 (B)

A.P. 05B LOT 065 & A.P. 05C LOT 005
58 KINGSTOWN ROAD
RICHMOND, RI 02898

Project No.:	18071
Designed By:	RCM
Drawn By:	EMD
Checked By:	JJP
Date:	MARCH 2024
Scale:	AS SHOWN

SHEET
13

SHEET 13 OF 58



RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
SPECIFIED IN THE LETTER OF APPROVAL
DATED: MAY 06 2024 FILE #: 2120073
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

NO	DESCRIPTION	DATE	AUTHOR
1	RIDEM COMMENT REVISION	11/2021	EMD

verdantas
PEOPLE FOCUSED FUTURE

100S MAIN STREET, SUITE 8120
PAWTUCKET, RI 02860
TEL. 401.726.6860

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

RIDEM SUBMITTAL
MARCH 2024

RI Environmental Management
MAR 15 2024
Office of Water Resources

JEFFREY J. PLANTE
No. 4818
REGISTERED PROFESSIONAL ENGINEER
03/13/2024

SHEET TITLE:
RESIDENTIAL COMMUNITY
GRADING & DRAINAGE PLAN
SHEET 3 (C)

A.P. 05B LOT 065 & A.P. 06C LOT 005
55 KINGSTOWN ROAD
RICHMOND, RI 02898

Project No.: 18071
Designed By: RGM
Drawn By: EMD
Checked By: JJP
Date: MARCH 2024
Scale: AS SHOWN

SHEET
14

SHEET 14 OF 58

A	B	C	
D	E	F	
G	H	I	
J	K	L	M
Ja			N

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
SPECIFIED IN THE LETTER OF APPROVAL
DATED: MAY 15 2024 FILE #: 2100913
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

SCALE IN FEET
0 20 40 80 160
SCALE : 1"= 40'

NO	DESCRIPTION	DATE	AUTHOR
1	RIDEM COMMENT REVISION	11/2021	EMD

verdantas
PEOPLE FOCUSED FUTURE
1005 MAIN STREET, SUITE 8120
PAWTUCKET, RI 02860
TEL: 401.728.0660

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

RIDEM
SUBMITTAL
MARCH 2024

RI Environmental Management
MAR 15 2024
Office of Water Resources

JEFFREY J. PLANTE
No. 4918
REGISTERED PROFESSIONAL ENGINEER
03/12/24

SHEET TITLE:
RESIDENTIAL COMMUNITY
GRADING & DRAINAGE PLAN
SHEET 4 (D)
A.P. 05B LOT 065 & A.P. 05C LOT 005
58 KINGSTOWN ROAD
RICHMOND, RI 02898

Project No.: 18071
Designed By: RCM
Drawn By: EMD
Checked By: JJP
Date: MARCH 2024
Scale: AS SHOWN

SHEET
15
SHEET 15 OF 58

MATCH LINE SEE SHEET 13

MATCH LINE SEE SHEET 15

MATCH LINE SEE SHEET 17

MATCH LINE SEE SHEET 19

TOWN CONSERVATION LAND

Gravel Road

25' WIDE EMERGENCY SPILLWAY
w/STABILIZED CHANNEL
2' DEEP R-4 RIPRAP OVER 6"
DEEP F-2 FILTER STONE
W/FILTER FABRIC EXTENDED TO
TOE OF SLOPE

EXCELSIOR NETTING TO BE
USED ON 3:1 SLOPED
EMBANKMENTS

PERMANENT STONE
CHECK DAM TYP.
(SEE DETAILS)

LINE OF BALED HAY, SILT FECTE AND
LIMIT OF DISTURBANCE

GRASS SWALE

GRASS SWALE

assf 1013
assf 1012
assf 1011a
assf 1011
assf 1010
assf 1009
assf 1008
assf 1007
assf 1006
assf 1004 o/a
assf 1004
assf 1003
assf 1002
assf 1001
assf 1000
908
909

A	B	C	
D	E	F	
G	H	I	
J	K	L	M
Ja			N

SCALE IN FEET

0 20 40 80 160

SCALE : 1"= 40'

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
SPECIFIED IN THE LETTER OF APPROVAL
DATED: MAY 06 2024 FILE #: 2120073
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

NO	DESCRIPTION	DATE	AUTHOR
1	RIDEM COMMENT REVISION	11/2021	EMD

verdantas
PEOPLE FOCUSED FUTURE
1005 MAIN STREET, SUITE 8120
PAWTUCKET, RI 02860
TEL. 401.728.8660

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

RIDEM
SUBMITTAL
MARCH 2024

Environmental Management
MAR 15 2024
Office of Water Resources

SHEET TITLE:
RESIDENTIAL COMMUNITY
GRADING & DRAINAGE PLAN
SHEET 5 (E)

A.P. 05B LOT 065 & A.P. 05C LOT 005
58 KINGSTOWN ROAD
RICHMOND, RI 02898

Project No.: 18071
Designed By: RGM
Drawn By: EMD
Checked By: JJP
Date: MARCH 2024
Scale: AS SHOWN

SHEET
16

SHEET 16 OF 58

MATCH LINE SEE SHEET 14

MATCH LINE SEE SHEET 16

MATCH LINE SEE SHEET 20

50' PERIMETER WETLAND

EXISTING SILT FENCE

EXISTING TREE-LINE

PROPERTY LINE

TOWN CONSERVATION LAND

TOWN LAND

CONSERVATION EASEMENT

LEACHFIELD AREA 2

MON.WELL

3" SDR: 21 PVC PRESSURE INFLUENT LINE WHICH WILL BE CAPPED FOR FUTURE USE TO LEACHFIELD 2

A	B	C	
D	E	F	
G	H	I	
J	K	L	M
Ja			N

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
SPECIFIED IN THE LETTER OF APPROVAL
DATED: MAY 06 2024 FILE #: 21-0013
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

SCALE IN FEET

0 20 40 80 160

SCALE : 1"= 40'

NO	DESCRIPTION	DATE	AUTHOR
1	RIDEM COMMENT REVISION	1/2/2021	EMD

verdantas
PEOPLE FOCUSED FUTURE
1005 MAIN STREET, SUITE 8120
PAWTUCKET, RI 02860
TEL 401.728.8860

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

RIDEM SUBMITTAL MARCH 2024

RI Environmental Management
MAR 15 2024
Office of Water Resources

JEFFREY J. PLANTE
No. 4316
REGISTERED PROFESSIONAL ENGINEER
3/15/2024

SHEET TITLE:
RESIDENTIAL COMMUNITY
GRADING & DRAINAGE PLAN
SHEET 6 (F)

A.P. 05B LOT 065 & A.P. 05C LOT 005
58 KINGSTOWN ROAD
RICHMOND, RI 02898

Project No.: 18071
Designed By: RCM
Drawn By: EMD
Checked By: JJP
Date: MARCH 2024
Scale: AS SHOWN

SHEET
17

SHEET 17 OF 58

MATCH LINE SEE SHEET 15

PEDESTRIAN WALKING-PATH (SEE DETAILS)

DMH 2-2

BIT. BERM (TYP)

DMH 2-3

CB 2-5, 2-6

6" FORCEMAIN FROM LEACHFIELD PUMPCHAMBER

DMH 2-4

LINE OF BALED HAY, SILT FENCE AND LIMIT OF DISTURBANCE

LINE OF BALED HAY, SILT FENCE AND LIMIT OF DISTURBANCE

EXISTING TREE-LINE

CB 2-7, 2-8

60'x50'x4' SUBSURFACE INFILTRATION SYSTEM 3A (Roof Only)

CB 3-11
RIM=257.00
INV=251.73

CB 3-12
RIM=254.76
INV=251.10

70'x60'x4' SUBSURFACE INFILTRATION SYSTEM 3B

CB 3-13
RIM=254.76
INV=250.80

30'x50'x2.25' SUBSURFACE INFILTRATION SYSTEM TYP. FOR DUPLEX UNITS

T.P.#11

T.P.#10

T.P.#9

T.P.#8

T.P.#7

DMH 3-1

CB 3-1, 3-2

CB 3-3, 3-4

CB 3-5, 3-6

CB 3-7, 3-8

DMH 3-2

DMH 3-4
RIM=234.00
INV=229.25

WATER QUALITY UNIT 3-B

100' RIVERBANK WETLAND

100' RIVERBANK WETLAND

INTERMITTENT STREAM

40'x80'x4.5' SUBSURFACE INFILTRATION SYSTEM 3C

52 LF 12" ADS PIPE
SLOPE= 0.04 FT/FT

CB 6-20
RIM=253.60
INV=246.14

CB 6-21
RIM=253.5
INV=248.22

18" FES
INV.= 253.50

CB 6-19
RIM=245.50
INV=242.34

78 LF 12" ADS PIPE
SLOPE= 0.04 FT/FT

DMH 6-6
RIM=252.00
INV=244.46

CB 6-17
RIM=249.00
INV=239.17

18" FES
INV.= 252.50

CB 6-18
RIM=249.00
INV=241.25

PAVED WATERWAY TYP. (SEE DETAILS)

SMH 35

18" FES
INV.= 246.50

18" FES
INV.= 245.50

4" FORCEMAIN FROM P.S. TO SMH 34

6" FORCEMAIN FROM LEACHFIELD 3 PUMP CHAMBER TO P.S. FOR FUTURE USE

86 LF
12" ADS PIPE
S= 0.01 FT/FT

80 LF 12" ADS PIPE
SLOPE= 0.04 FT/FT

DMH 6-5
RIM=248.50
INV=238.73

MATCH LINE SEE SHEET 19

MATCH LINE SEE SHEET 21

A	B	C	
D	E	F	
G	H	I	
J	K	L	M
Ja			N

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL
DATED: MAY 06 2024 FILE #: 21-0073
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

SCALE IN FEET

0 20 40 80 160

SCALE : 1"= 40'

NO	DESCRIPTION	DATE	AUTHOR
1	RIDEM COMMENT REVISION	11/2021	EMD

verdantas
PEOPLE FOCUSED FUTURE
1005 MAIN STREET, SUITE 8120
PAWTUCKET, RI 02860
TEL. 401.728.6860

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

RIDEM SUBMITTAL
MARCH 2024
RI Environmental Management
MAR 15 2024
Office of Water Resources

JEFFREY J. PLANTE
No. 4918
REGISTERED PROFESSIONAL ENGINEER
3/13/2024

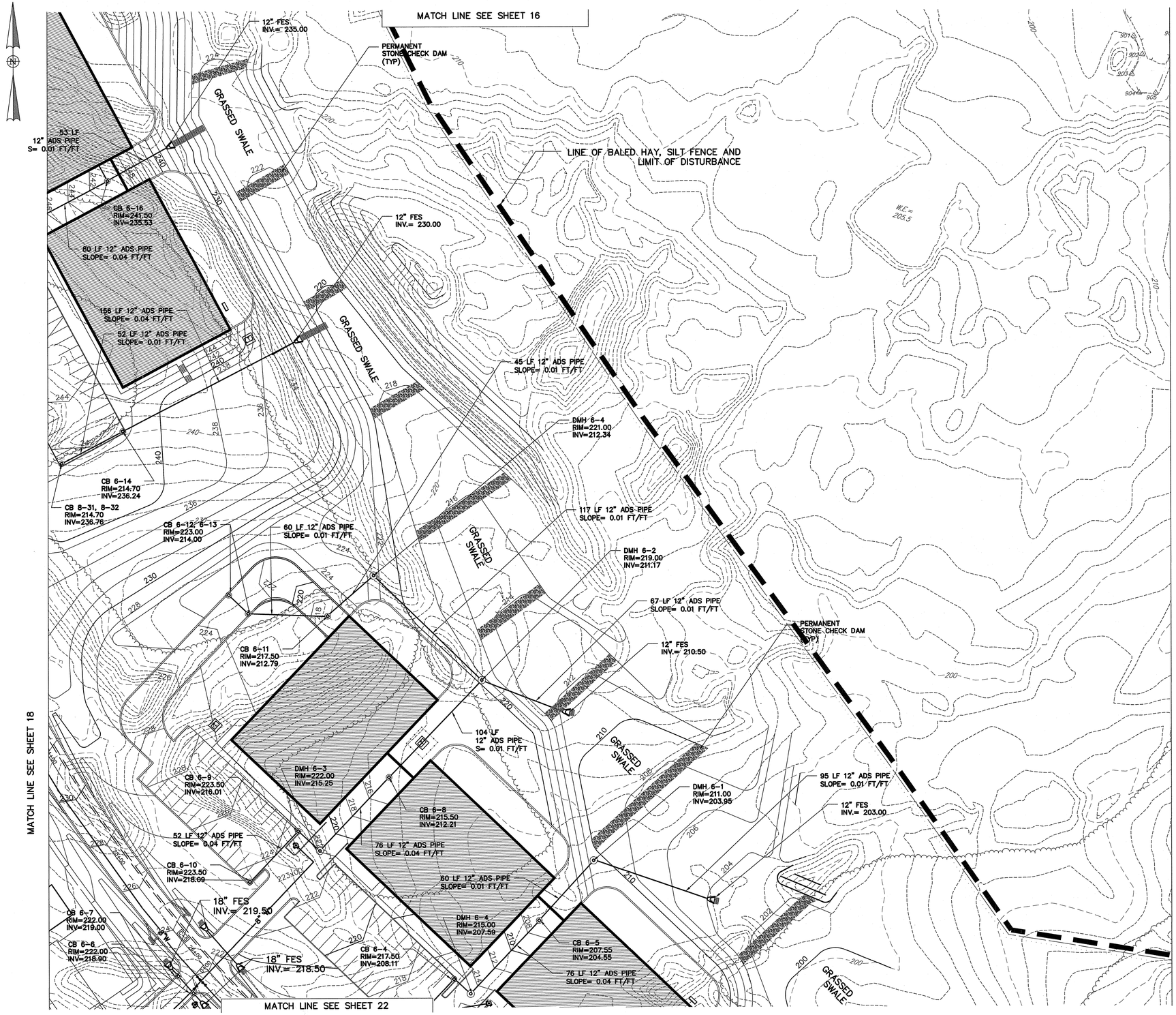
SHEET TITLE:
RESIDENTIAL COMMUNITY
GRADING & DRAINAGE PLAN
SHEET 7 (G)

A.P. 06B LOT 065 & A.P. 05C LOT 005
58 KINGSTOWN ROAD
RICHMOND, RI 02898

Project No.: 18071
Designed By: RGM
Drawn By: EMD
Checked By: JJP
Date: MARCH 2024
Scale: AS SHOWN

SHEET
18

SHEET 18 OF 58



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J	K	L	M
Ja			N

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
SPECIFIED IN THE LETTER OF APPROVAL
DATED: ~~MAY 0 6 2024~~ FILE #: 21-0013
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

SCALE IN FEET

0 20 40 80 160

SCALE : 1"= 40'

NO	DESCRIPTION	DATE	AUTHOR
1	RIDEM COMMENT REVISION	11/2021	EMD

verdantas
PEOPLE FOCUSED FUTURE
1005 MAIN STREET, SUITE B120
PAWTUCKET, RI 02860
TEL. 401.728.0860

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

RIDEM SUBMITTAL
~~MARCH 2024~~
RI Environmental Management
MAR 15 2024
Office of Water Resources

JEFFREY J. PLANTE
No. 4618
REGISTERED PROFESSIONAL ENGINEER
03/13/2024

SHEET TITLE:
RESIDENTIAL COMMUNITY
GRADING & DRAINAGE PLAN
SHEET 8 (H)
A.P. 05B LOT 005 & A.P. 05C LOT 005
58 KINGSTOWN ROAD
RICHMOND, RI 02898

Project No.: 18071
Designed By: RGM
Drawn By: EMD
Checked By: JJP
Date: MARCH 2024
Scale: AS SHOWN

SHEET
19
SHEET 19 OF 58

MATCH LINE SEE SHEET 19

MATCH LINE SEE SHEET 17

PROPERTY LINE

12' WIDE EASEMENT ACCESS

TOWN RECREATION LAND

LINE OF BALED HAY, SILT FENCE AND LIMIT OF DISTURBANCE

EXISTING TREE-LINE

LEACHFIELD AREA 1

MON.WELL

CONSERVATION EASEMENT PROPERTY LINE

3" SDR. 21 PVC PRESSURE INFLUENT LINE WHICH WILL BE CAPPED FOR FUTURE USE TO LEACHFIELD 1

3" SDR. 21 PVC PRESSURE INFLUENT LINE WHICH WILL BE CAPPED FOR FUTURE USE TO LEACHFIELD 2

12' WIDE ACCESS

MATCH LINE SEE SHEET 23

A	B	C	
D	E	F	
G	H	I	
J	K	L	M
Ja			N

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
SPECIFIED IN THE LETTER OF APPROVAL
DATED: MAY 06 2024 FILE #: 2210073
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

SCALE IN FEET

0 20 40 80 160

SCALE : 1"= 40'

NO	DESCRIPTION	DATE	AUTHOR
1	RIDEM COMMENT REVISION	11/2021	EMD

verdantas
PEOPLE FOCUSED FUTURE
1005 MAIN STREET, SUITE 6120
PAWTUCKET, RI 02860
TEL. 401.728.8840

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

RIDEM
SUBMITTAL
MARCH 2024

RI Environmental Management
MAR 15 2024
Office of Water Resources

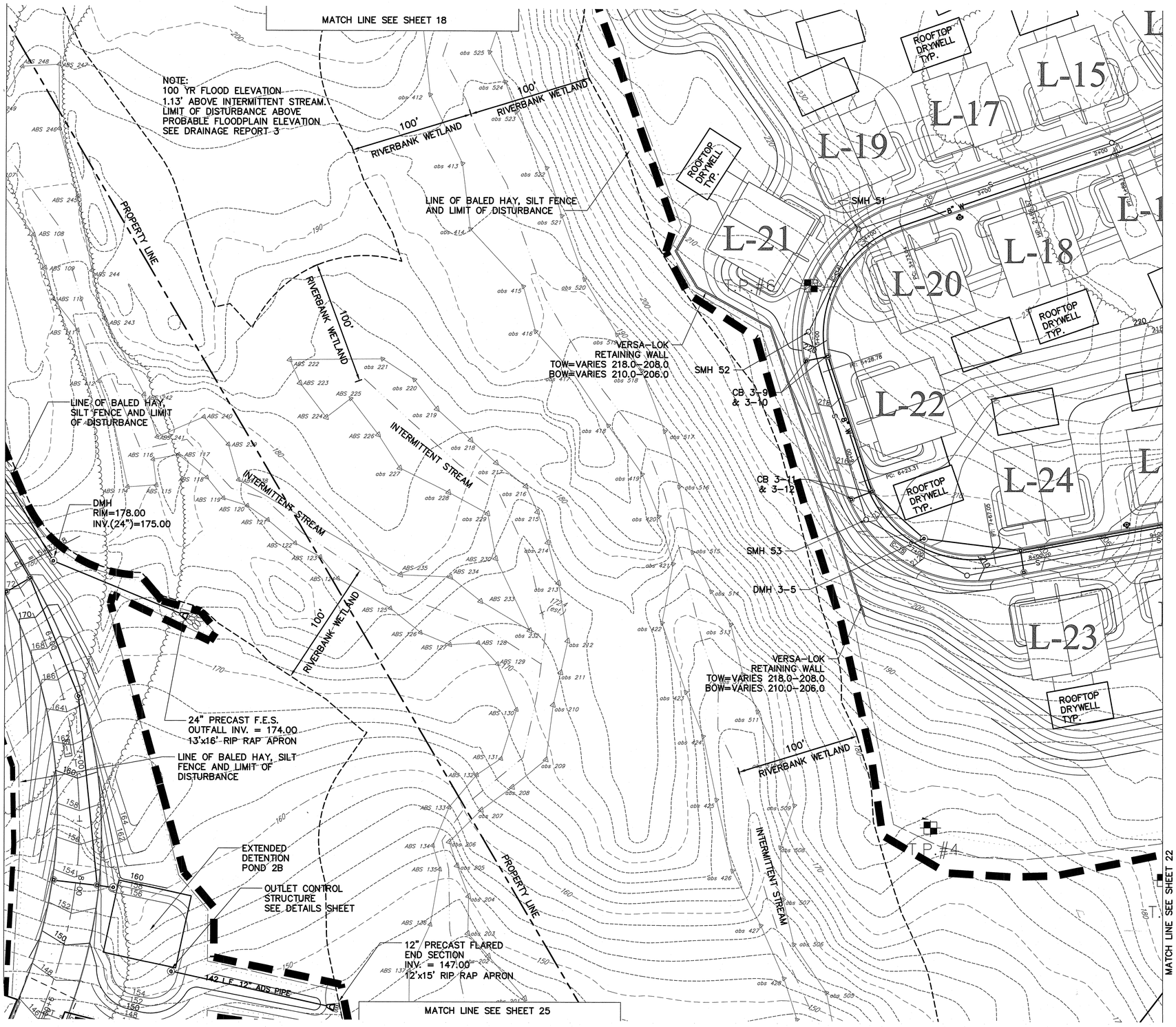
REGISTERED PROFESSIONAL ENGINEER No. 4818 03/15/2024

SHEET TITLE:
RESIDENTIAL COMMUNITY
GRADING & DRAINAGE PLAN
SHEET 9 (I)

A.P. 05B LOT 065 & A.P. 05C LOT 005
56 KINGSTOWN ROAD
RICHMOND, RI 02898

Project No.: 18071
Designed By: RGM
Drawn By: EMD
Checked By: JJP
Date: MARCH 2024
Scale: AS SHOWN

SHEET
20
SHEET 20 OF 58



A	B	C	
D	E	F	
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J	K	L	M
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NO	DESCRIPTION	DATE	AUTHOR
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verdantas
PEOPLE FOCUSED FUTURE
1005 MAIN STREET, SUITE 8120
PAWTUCKET, RI 02860
TEL 401.728.6860

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

RIDEM
SUBMITTAL
MARCH 2024

RI Environmental Management
MAR 15 2024
Office of Water Resources

JEFFREY J. PLANTE
No. 4216
REGISTERED PROFESSIONAL ENGINEER
3/13/2024

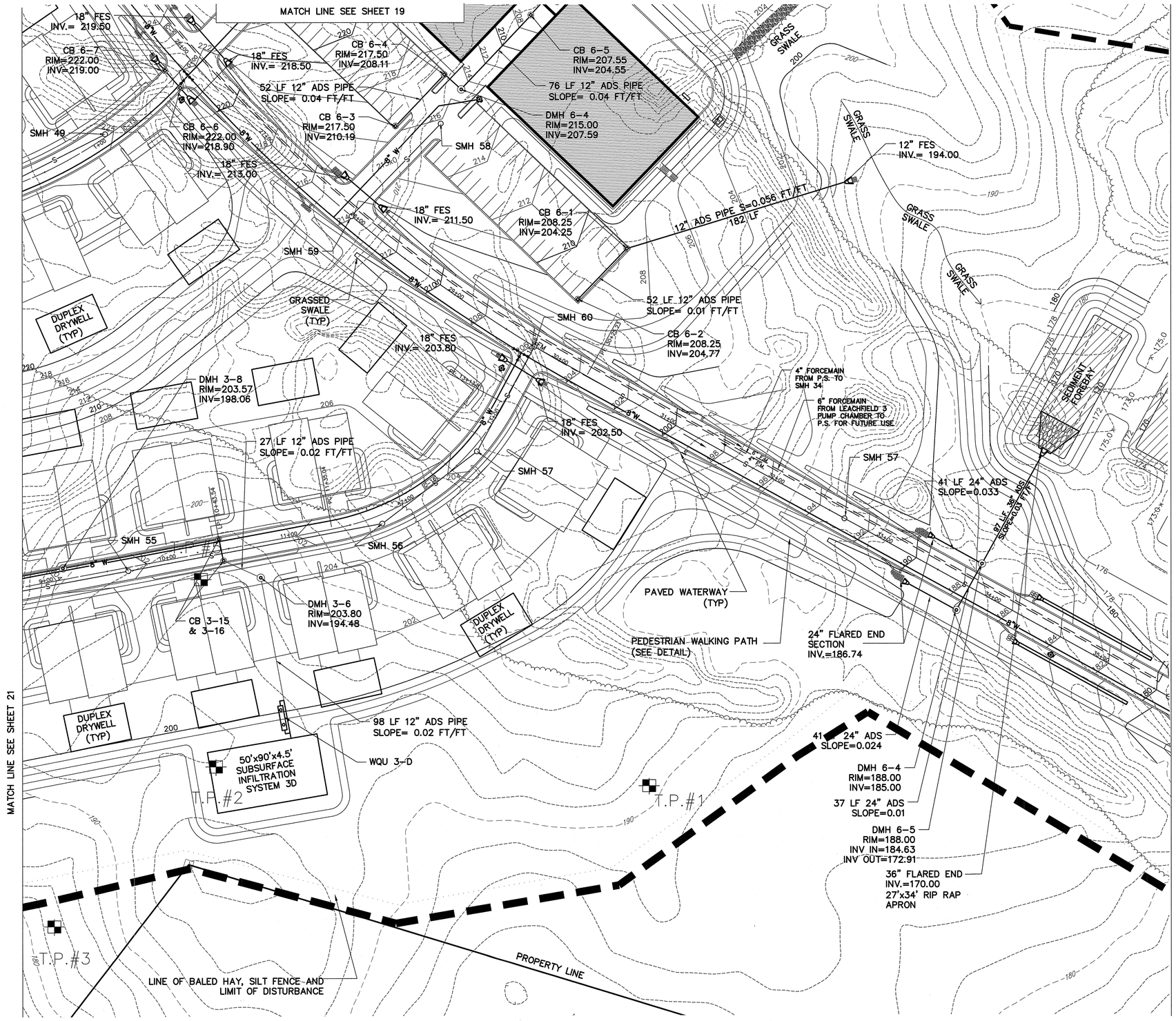
RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
SPECIFIED IN THE LETTER OF APPROVAL
DATED: MAY 06 2024 FILE #: 21-0093
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

SCALE IN FEET
0 20 40 80 160
SCALE : 1"= 40'

SHEET TITLE:
RESIDENTIAL COMMUNITY
GRADING & DRAINAGE PLAN
SHEET 10 (J)
A.P. 05B LOT 065 & A.P. 05C LOT 005
58 KINGSTOWN ROAD
RICHMOND, RI 02898

Project No.: 18071	
Designed By: RGM	
Drawn By: EMD	
Checked By: JJP	
Date: MARCH 2024	
Scale: AS SHOWN	

SHEET
21
SHEET 21 OF 58



A	B	C	
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J	K	L	M
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RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
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DATED: MAY 06 2024 FILE #: 21-0093
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SCALE IN FEET

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SCALE : 1"= 40'

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verdantas
PEOPLE FOCUSED FUTURE
1005 MAIN STREET, SUITE 8120
PAWTUCKET, RI 02860
TEL. 401.728.6840

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

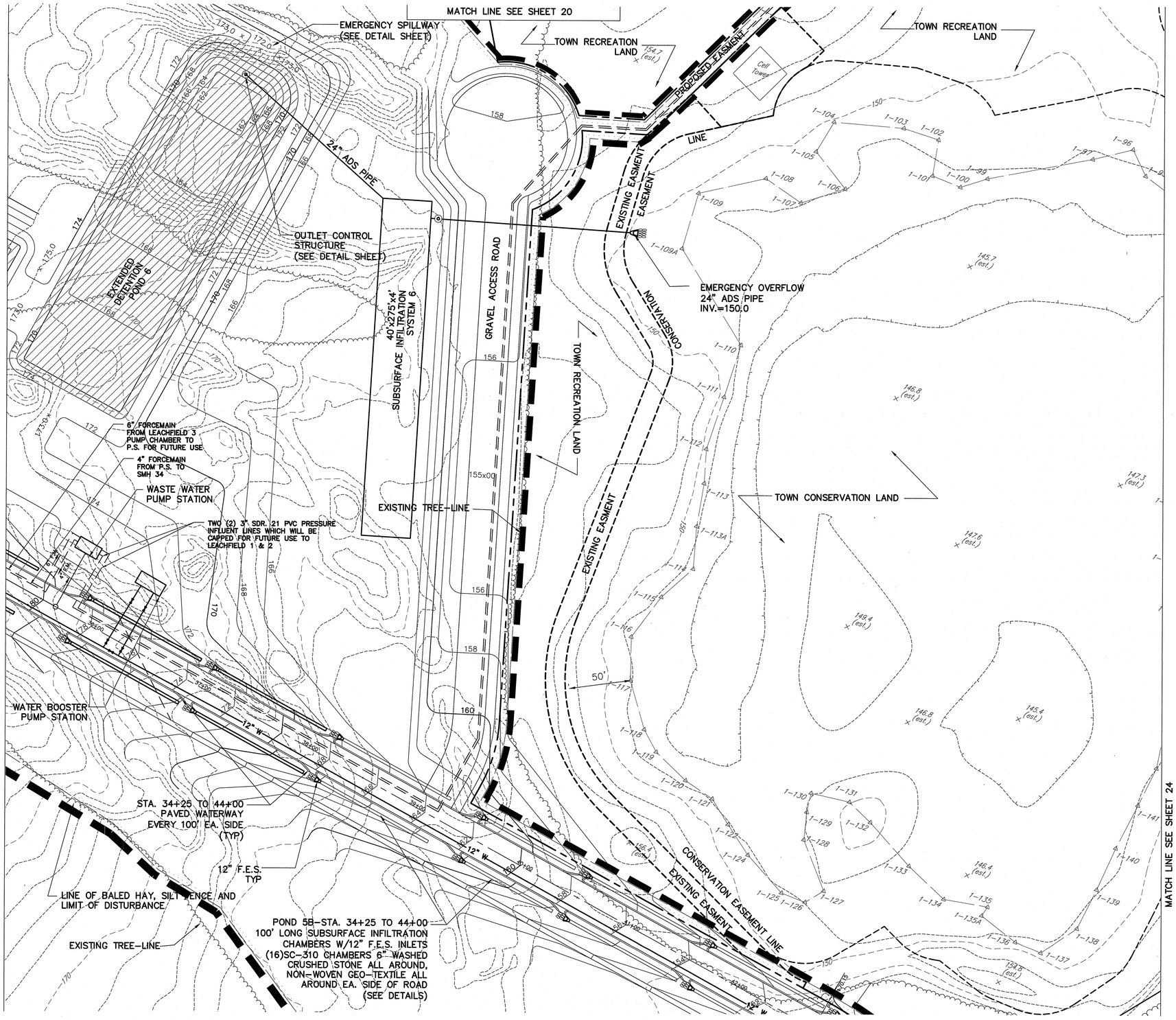
RIDEM SUBMITTAL
MARCH 2024
RI Environmental Management
MAR 15 2024
Office of Water Resources

JEFFREY J. PLANTE No. 4918 REGISTERED PROFESSIONAL ENGINEER
03/15/2024

SHEET TITLE:
RESIDENTIAL COMMUNITY
GRADING & DRAINAGE PLAN
SHEET 11 (K)
A.P. 058 LOT 065 & A.P. 06C LOT 005
56 KINGSTOWN ROAD
RICHMOND, RI 02898

Project No.: 18071
Designed By: RGM
Drawn By: EMD
Checked By: JJP
Date: MARCH 2024
Scale: AS SHOWN

SHEET
22
SHEET 22 OF 58



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RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
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SPECIFIED IN THE LETTER OF APPROVAL
DATED: MAY 06 2024 FILE #: 24-0073
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APPROVED PLANS MUST BE AT CONSTRUCTION SITE

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SCALE : 1"= 40'

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verdantas
PEOPLE FOCUSED FUTURE
1005 MAIN STREET, SUITE B120
PAWTUCKET, RI 02860
TEL. 401.728.8660

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

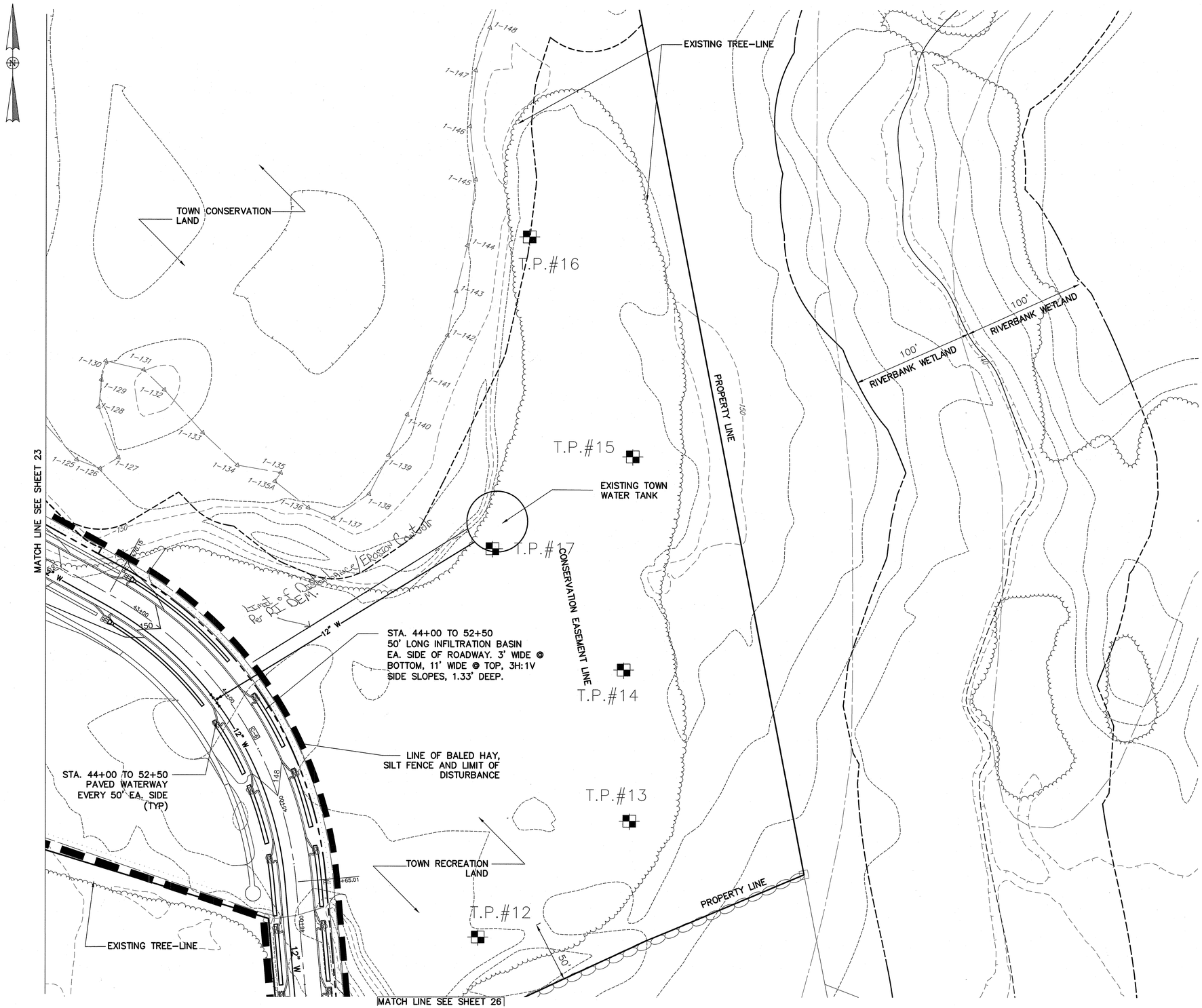
RIDEM SUBMITTAL MARCH 2024
RI Environmental Management
MAR 15 2024
Office of Water Resources

JEFFREY J. PLANTE
No. 4218
REGISTERED PROFESSIONAL ENGINEER
03/12/2024

SHEET TITLE:
RESIDENTIAL COMMUNITY
GRADING & DRAINAGE PLAN
SHEET 12 (L)
A.P. 65B LOT 065 & A.P. 65C LOT 005
58 KINGSTOWN ROAD
RICHMOND, RI 02898

Project No.: 18071
Designed By: RGM
Drawn By: EMD
Checked By: JJP
Date: MARCH 2024
Scale: AS SHOWN

SHEET
23
SHEET 23 OF 58



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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: MAY 06 2024 FILE #: 24-0073
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SCALE IN FEET

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SCALE : 1"= 40'

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PEOPLE FOCUSED FUTURE
1005 MAIN STREET, SUITE 8120
PAWTUCKET, RI 02860
TEL. 401.728.6860

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

RIDEM SUBMITTAL
~~MARCH 2024~~
RI Environmental Management
MAR 15 2024
Office of Water Resources

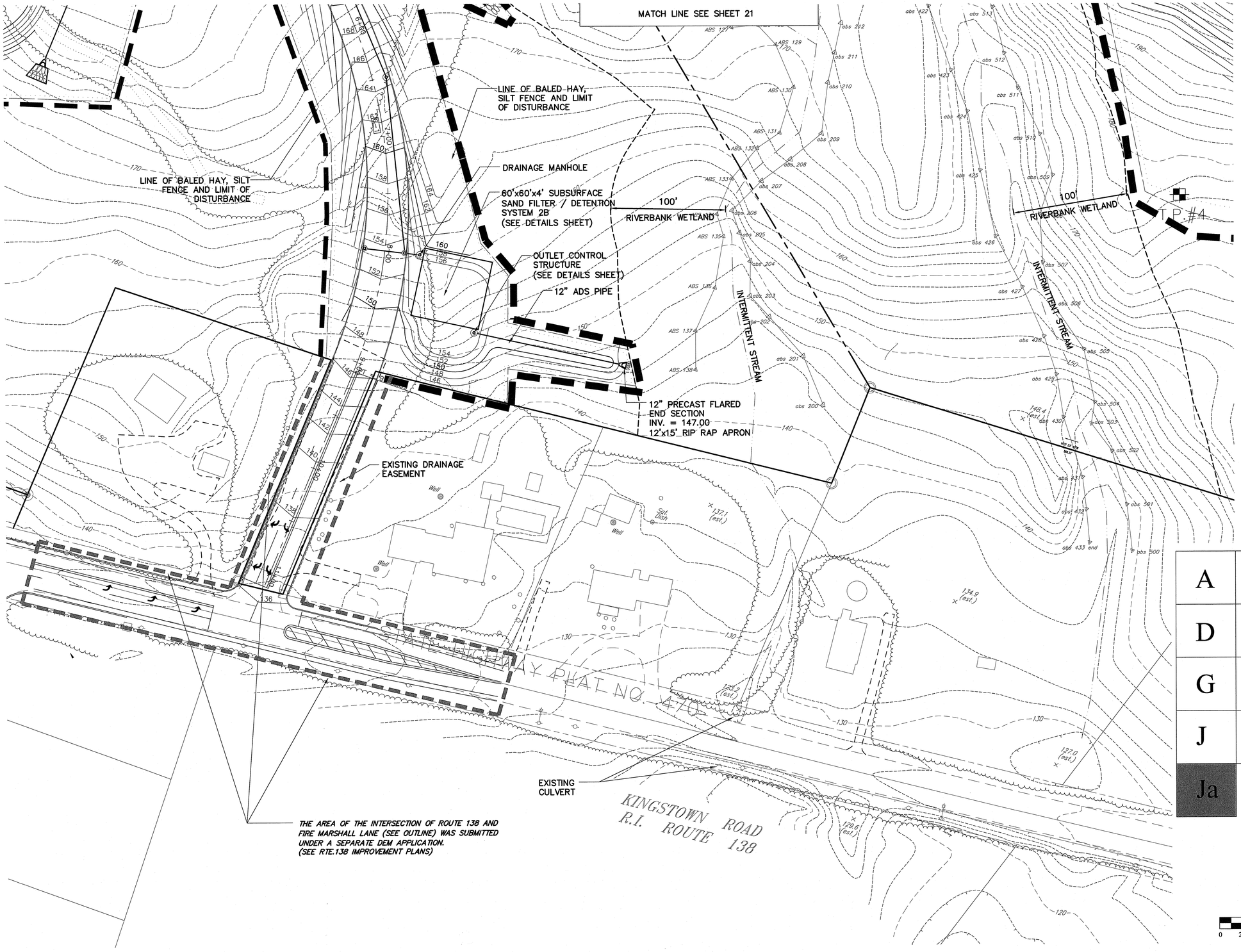
JEFFREY J. PLANTE
No. 4818
REGISTERED PROFESSIONAL ENGINEER
03/15/2024

SHEET TITLE:
RESIDENTIAL COMMUNITY
GRADING & DRAINAGE PLAN
SHEET 13 (M)

A.P. 05B LOT 065 & A.P. 05C LOT 005
58 KINGSTOWN ROAD
RICHMOND, RI 02898

Project No.:	18071
Designed By:	RGM
Drawn By:	EMD
Checked By:	JJP
Date:	MARCH 2024
Scale:	AS SHOWN

SHEET
24
SHEET 24 OF 58



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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: MAY 06 2024 FILE #: 21-0073
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SCALE IN FEET
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SCALE : 1"= 40'

NO	DESCRIPTION	DATE	AUTHOR
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verdantas
PEOPLE FOCUSED FUTURE
1005 MAIN STREET, SUITE 8120
PAWTUCKET, RI 02860
TEL. 401.728.8360

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

RIDEM SUBMITTAL MARCH 2024

RI Environmental Management
MAR 15 2024
Office of Water Resources

SHEET TITLE:
RESIDENTIAL COMMUNITY
GRADING & DRAINAGE PLAN
SHEET 14 (Ja)

A.P. 05B LOT 065 & A.P. 05C LOT 005
SB LAWSON FARM ROAD
RICHMOND, RI 02898

Project No.: 18071
Designed By: RGM
Drawn By: EMD
Checked By: JJP
Date: MARCH 2024
Scale: AS SHOWN

SHEET 25
SHEET 25 OF 58

MATCH LINE SEE SHEET 24

LINE OF BALED HAY, SILT FENCE AND LIMIT OF DISTURBANCE

EXISTING TREE-LINE

RECREATION LAND T.P.#12

PROPERTY LINE

CONSERVATION LAND

100' RIVERBANK WETLAND 100' RIVERBANK WETLAND

LINE OF BALED HAY, SILT FENCE AND LIMIT OF DISTURBANCE

APPROXIMATE FEMA 100-YR FLOOD LINE

POND 5-D STA. 44+00 TO 52+50
50' LONG INFILTRATION BASIN
EA. SIDE OF ROADWAY. 3' WIDE @ BOTTOM, 11' WIDE @ TOP, 3H:1V SIDE SLOPES, 1.33' DEEP.

STA. 44+00 TO 52+50
PAVED WATERWAY
EVERY 50' EA. SIDE
(TYP)

SHADED AREA INDICATES AREA ALONG EDGE OF EXISTING TREE LINE TO BE PLANTED WITH WHITE PINE (PINUS STROBUS) @ 6' O.C. STAGGERED, MIN. 4' HIGH

COUNTRY ACRES RD

MEADOW BROOK

EXISTING TREE-LINE

KINGSTOWN ROAD
R.I. ROUTE 138

EXISTING TREE-LINE

APPROXIMATE FEMA 100-YR FLOOD LINE

EXISTING CULVERT

A	B	C	
D	E	F	
G	H	I	
J	K	L	M
Ja			N

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
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PEOPLE FOCUSED FUTURE
1005 MAIN STREET, SUITE 8120
PAWTUCKET, RI 02860
TEL. 401.728.6860

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

RIDEM SUBMITTAL
MARCH 2024
RI Environmental Management
MAR 15 2024
Office of Water Resources

JEFFREY J. PLANTE 4918 REGISTERED PROFESSIONAL ENGINEER 03/12/24

SHEET TITLE:
RESIDENTIAL COMMUNITY
GRADING & DRAINAGE PLAN
SHEET 15 (N)

A.P. 05B LOT 065 & A.P. 05C LOT 005
58 KINGSTOWN ROAD
RICHMOND, RI 02898

Project No.: 18071
Designed By: RGM
Drawn By: EMD
Checked By: JJP
Date: MARCH 2024
Scale: AS SHOWN

SHEET
26

SHEET 26 OF 58

FUTURE INTERCONNECTION BETWEEN FLEX-TECH AND VILLAGE CENTER

CONCRETE CURB (TYP) SEE DETAIL

VERSA-LOK RETAINING WALL B.O.W.=160.0 T.O.W.=170.0

CONCRETE CURB (TYP) SEE DETAIL

NOTE: ROUNDABOUTS SHALL BE CONSTRUCTED WITH SLOPED FACE CONC. CURB RI STD 7.2.0

OVERFLOW EMPLOYEE PARKING AREA CRUSHED STONE

CONTROL BUILDING 1,750 s.f.

SUBSURFACE WASTE DISP. SYSTEM

LEACHFIELD AREA 3

OVERFLOW EMPLOYEE 60 PARKING AREA CRUSHED STONE

WELL LOCATION FOR VILLAGE CENTER IRRIGATION

RESERVE AREA

VERSA-LOK RETAINING WALL B.O.W.=154.0 T.O.W.=150.0

CONCRETE CURB (TYP) SEE DETAIL

CONCRETE CURB (TYP) SEE DETAIL

CONCRETE CURB (TYP) SEE DETAIL

EXISTING BANK

RHODE ISLAND RT. 138 KINGSTOWN ROAD

H EL.=184.0 200,000 s.f.

M 5,000 s.f. EL.=142.0

K 12,500 s.f. EL.=138.75

S 5,000 EL.=174.0

R 14,800 s.f. EL.=179.0

F-1 19,166 s.f. El.=172.00

N 10,500 s.f. El.=171.50

A-5 A-4 A-3 A-2 A-1

B-5 B-4 B-2 B-1

G-5 15030 G-3

C-1a 6955

C-1b

C-1c 3997

D-3 2710

D-2

C-2

G-4 11,200

D-4 8220

D-1

Apt-3 TOP: 260 SMH: 232 EL=260.0

Apt-2 TOP: 260 SMH: 229 EL=260.0

Apt-1 TOP: 262 SMH: 233 EL=260.0

M-1 Medical Bldg. Day-care 15,000

Richmond Commons Boulevard West

Richmond Commons Boulevard East

North Kingstown Street

Meeting Street

Cypress Avenue

Spruce Way

Hickory Road

LEDGE CUT 1H:1V

B.O.W.=186.0 RETAINING WALL T.O.W.=190.0 VERSA-LOK

B.O.W.=186.0 RETAINING WALL T.O.W.=190.0 VERSA-LOK

MATCH SHEET GENERAL PLAN 28

MATCH SHEET GENERAL PLAN 6

CURVE DATA

RICHMOND COMMONS BLVD WEST		
CURVE	LENGTH	RADIUS
C1	285.27'	500.00

RICHMOND COMMONS BLVD EAST		
CURVE	LENGTH	RADIUS
C1	419.85'	462.00
C2	236.76'	700.00

CENTRAL AVE. SOUTH		
CURVE	LENGTH	RADIUS
C1	33.66'	70.0
C2	29.81'	62.0
C3	29.77'	62.0

CENTRAL AVE. NORTH		
CURVE	LENGTH	RADIUS
C1	35.08'	73.0
C2	27.85'	58.0
C3	27.85'	58.0

TOWN CENTER PARKWAY		
CURVE	LENGTH	RADIUS
C1	371.31'	400.00

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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SCALE IN FEET

0 50 100 200 400

SCALE : 1"= 100'

NO	DESCRIPTION	DATE	AUTHOR
1	RIDEM COMMENT REVISION	11/2021	EMD

verdantas PEOPLE FOCUSED FUTURE
1005 MAIN STREET, SUITE 8120
PAWTUCKET, RI 02860
TEL. 401.728.6860

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

RIDEM SUBMITTAL MARCH 2024

RI Environmental Management
MAR 15 2024
Office of Water Resources

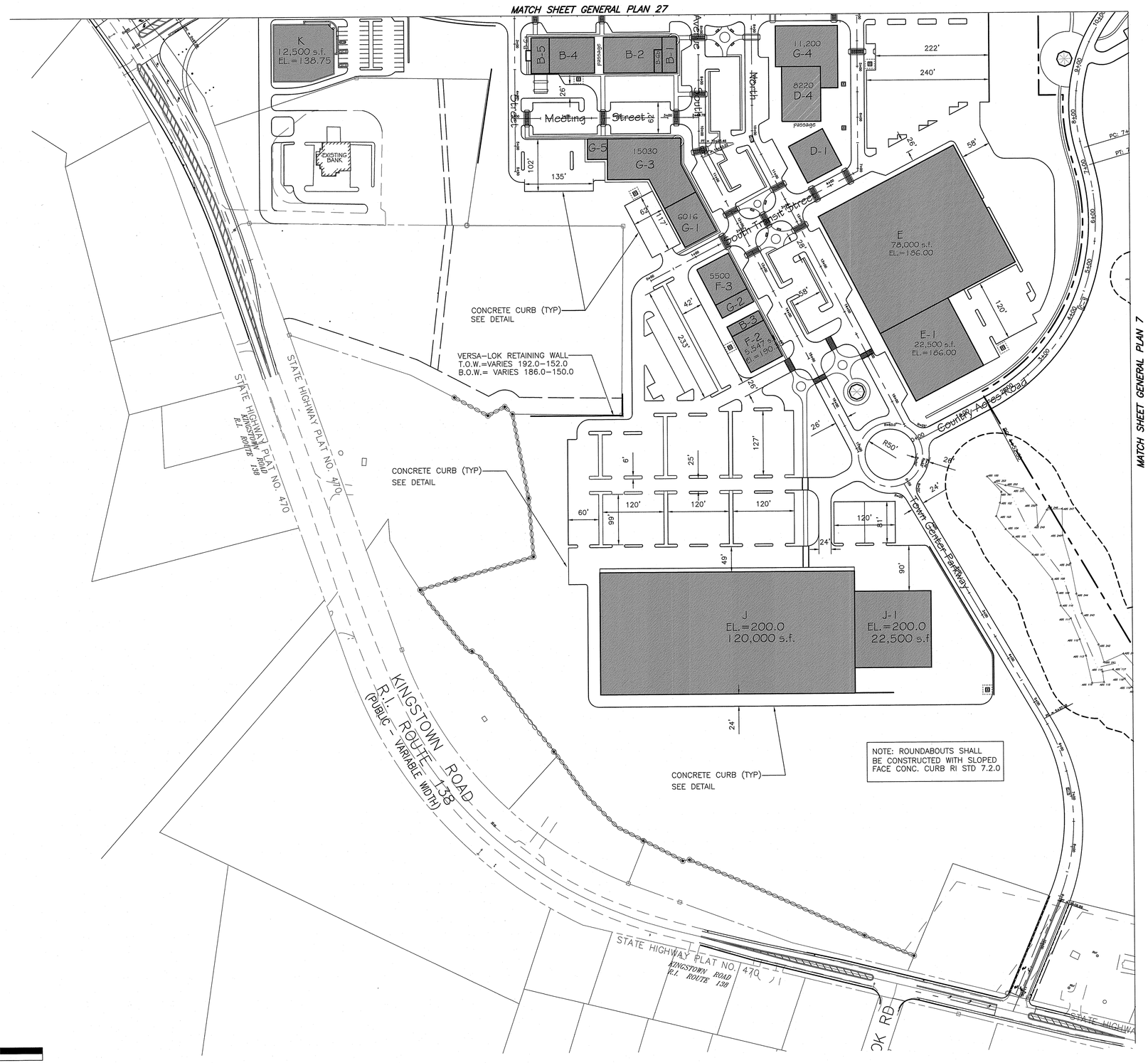
JEFFREY J. PLANTE 4218 REGISTERED PROFESSIONAL ENGINEER 03/13/2024

SHEET TITLE:
VILLAGE CENTER GENERAL PLAN 1

A.P. 06B LOT 065 & A.P. 06C LOT 005
58 KINGSTOWN ROAD
RICHMOND, RI 02898

Project No.: 18071
Designed By: RGM
Drawn By: EMD
Checked By: JJP
Date: MARCH 2024
Scale: AS SHOWN

SHEET
27
SHEET 27 OF 58



SCALE IN FEET

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SCALE : 1"= 100'

CURVE DATA

RICHMOND COMMONS BLVD WEST		
CURVE	LENGTH	RADIUS
C1	285.27'	500.00

RICHMOND COMMONS BLVD EAST		
CURVE	LENGTH	RADIUS
C1	419.85'	462.00
C2	236.76'	700.00

CENTRAL AVE. SOUTH		
CURVE	LENGTH	RADIUS
C1	33.66'	70.0
C2	29.81'	62.0
C3	29.77'	62.0

CENTRAL AVE. NORTH		
CURVE	LENGTH	RADIUS
C1	35.08'	73.0
C2	27.85'	58.0
C3	27.85'	58.0

TOWN CENTER PARKWAY		
CURVE	LENGTH	RADIUS
C1	371.31'	400.00

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
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DATED: MAY 0 5 2024 FILE #: 21-0063
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NO	DESCRIPTION	DATE	AUTHOR
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verdantas
PEOPLE FOCUSED FUTURE
1006 MAIN STREET, SUITE 8120
PAWTUCKET, RI 02860
TEL. 401.728.6860

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

RIDEM
SUBMITTAL
MARCH 2024

RI Environmental Management
MAR 1 5 2024
Office of Water Resources

JEFFREY J. PLANTE
No. 4318
REGISTERED PROFESSIONAL ENGINEER
03/13/24

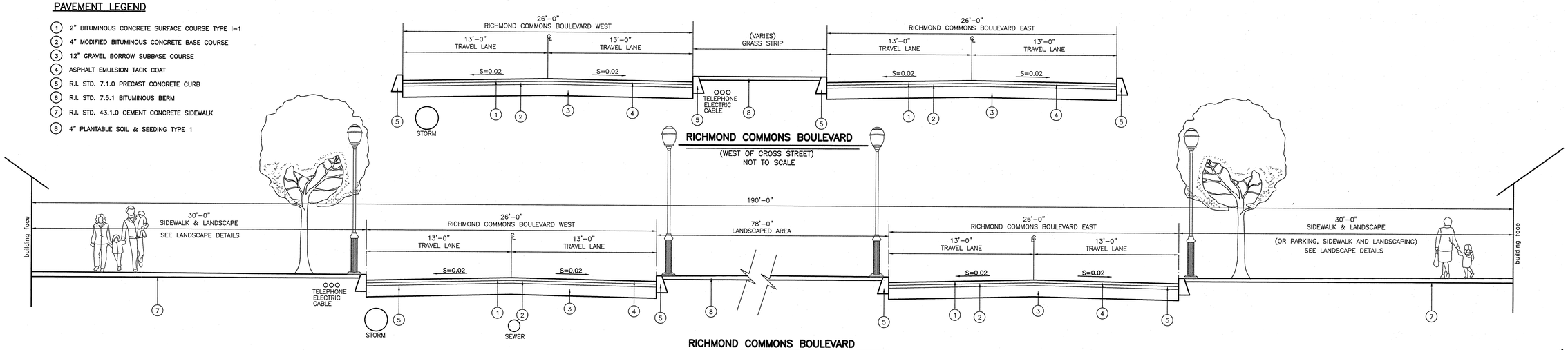
SHEET TITLE:
VILLAGE CENTER
GENERAL PLAN 1
A.P. 059, LOT 065 & A.P. 050, LOT 005
59 KINGSTOWN ROAD
RICHMOND, RI 02898

Project No.: 18071
Designed By: RGM
Drawn By: EMD
Checked By: JJP
Date: MARCH 2024
Scale: AS SHOWN

SHEET
28
SHEET 28 OF 58

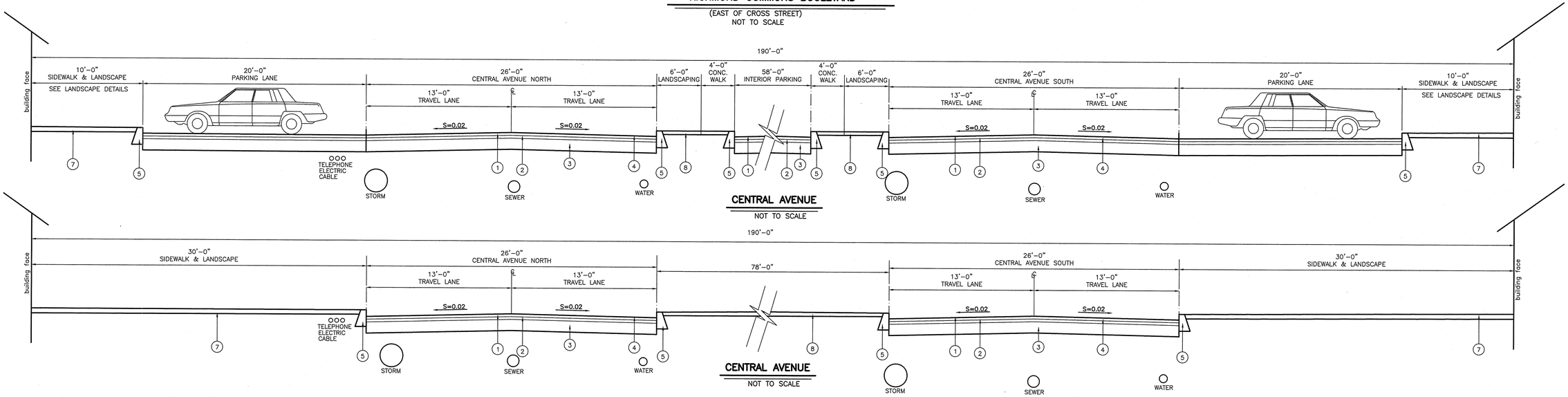
PAVEMENT LEGEND

1. 2" BITUMINOUS CONCRETE SURFACE COURSE TYPE I-1
2. 4" MODIFIED BITUMINOUS CONCRETE BASE COURSE
3. 12" GRAVEL BORROW SUBBASE COURSE
4. ASPHALT EMULSION TACK COAT
5. R.I. STD. 7.1.0 PRECAST CONCRETE CURB
6. R.I. STD. 7.5.1 BITUMINOUS BERM
7. R.I. STD. 43.1.0 CEMENT CONCRETE SIDEWALK
8. 4" PLANTABLE SOIL & SEEDING TYPE 1



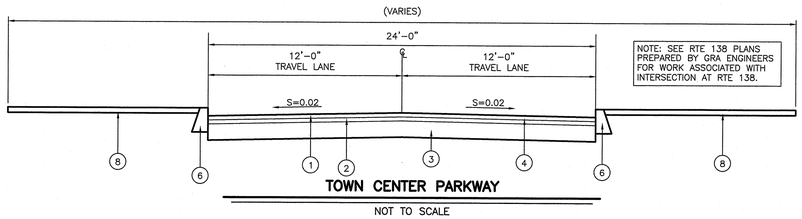
RICHMOND COMMONS BOULEVARD
(WEST OF CROSS STREET)
NOT TO SCALE

RICHMOND COMMONS BOULEVARD
(EAST OF CROSS STREET)
NOT TO SCALE

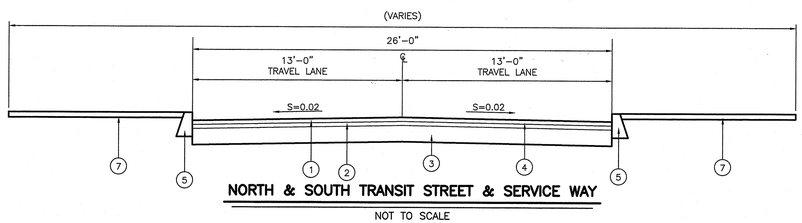


CENTRAL AVENUE
NOT TO SCALE

CENTRAL AVENUE
NOT TO SCALE



TOWN CENTER PARKWAY
NOT TO SCALE



NORTH & SOUTH TRANSIT STREET & SERVICE WAY
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: MAY 06 2024 FILE #: 21-0093

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

NO	DESCRIPTION	DATE	AUTHOR
1	RIDEM COMMENT REVISION	11/2021	EMD

verdantas
PEOPLE FOCUSED FUTURE
1005 MAIN STREET, SUITE 8120
PAWTUCKET, RI 02860
TEL. 401.728.6860

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

RIDEM
SUBMITTAL
MARCH 2024

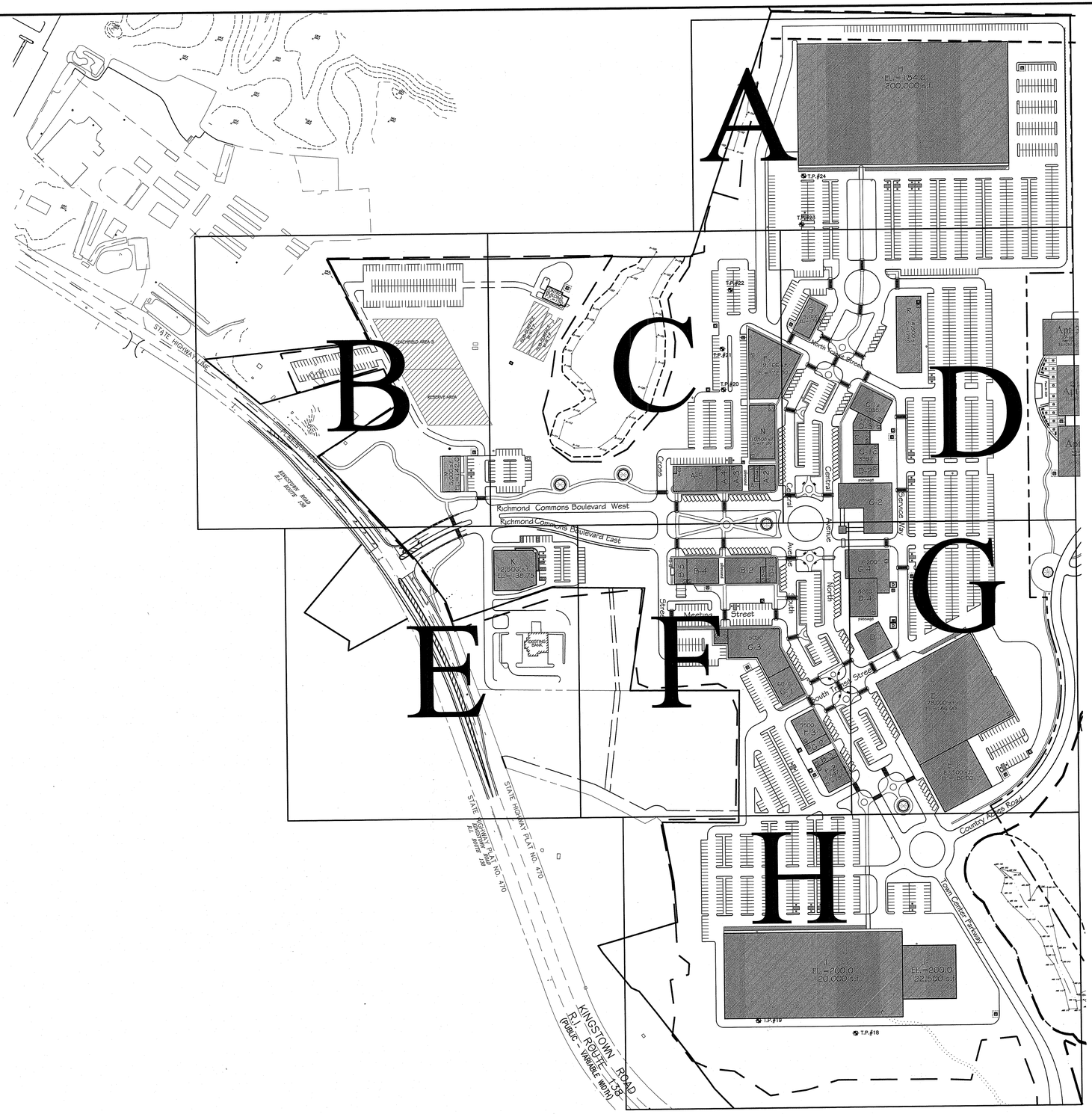
RI Environmental Management
MAR 15 2024
Office of Water Resources

JEFFREY J. PLANTE
No. 4918
REGISTERED PROFESSIONAL ENGINEER
03/13/2024

SHEET TITLE:
VILLAGE CENTER
TYPICAL CROSS SECTIONS
A.P. 09B LOT 065 & A.P. 09C LOT 005
58 KINGSTOWN ROAD
RICHMOND, RI 02898

Project No.: 18071
Designed By: RGM
Drawn By: EMD
Checked By: JJP
Date: MARCH 2024
Scale: AS SHOWN

SHEET
29
SHEET 29 OF 58



RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
SPECIFIED IN THE LETTER OF APPROVAL
DATED: MAY 06 2024 FILE #: 21-0073
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

SCALE IN FEET

0 75 150 300 600

SCALE : 1"= 150'

NO	DESCRIPTION	DATE	AUTHOR
1	RIDEM COMMENT REVISION	11/2021	EMD

verdantas
PEOPLE FOCUSED FUTURE
100S MAIN STREET, SUITE 8120
PAWTUCKET, RI 02860
TEL. 401.728.0840

PREPARED FOR:

RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

RIDEM
SUBMITTAL
MARCH 2024

RI Environmental Management
MAR 15 2024
Office of Water Resources

JEFFREY J. PLANTE
No. 4518
REGISTERED PROFESSIONAL ENGINEER
03/15/2024

SHEET TITLE:
VILLAGE CENTER
INDEX OF GRADING &
DRAINAGE PLAN

A.P. 06B LOT 065 & A.P. 05C LOT 005
58 KINGSTOWN ROAD
RICHMOND, RI 02898

Project No.: 18071
Designed By: RGM
Drawn By: EMD
Checked By: JJP
Date: MARCH 2024
Scale: AS SHOWN

SHEET
30
SHEET 30 OF 58

FUTURE INTERCONNECTION BETWEEN FLEX-TECH AND VILLAGE CENTER.

CB 10-26
RIM=185.81
INV=182.75

CB 10-26B
RIM=185.81
INV=183.00

EMBANKMENT SLOPE 2H:1V

VERSA-LOCK
T.O.W.(VARIES)=170.0-166.00
B.O.W.(VARIES)=164.0-160.0
SEE DETAIL

EXCELSIOR NETTING TO BE USED ON SLOPED EMBANKMENTS

LINE OF BALED HAY, SILT FENCE AND LIMIT OF DISTURBANCE

PROPERTY LINE

CB 10-25
RIM=182.48
INV=178.75

CB 10-25B
RIM=182.48
INV=179.00

DMH
RIM=178.00
INV.=160.80 (IN)
INV.=158.10 (IN)
INV.=158.00 (OUT)

20' L.F.
36" ADS PIPE

36" PRECAST FLARED END SECTION
OUTFALL INV. = 158.00
24'x30' RIP RAP APRON

12" ADS PIPE

W.Q.U. 10F

DMH 10-3

DMH 10-4

CB 10-24A
RIM=179.55
INV=176.85

140'x240'x6' SUBSURFACE INFILTRATION SYSTEM 10F
BLDG H ROOF

420' 36" ADS PIPE

WATER QUALITY UNIT 10B

DOUBLE GRATE
CB 10-26
RIM=176.55
INV=170.25

DOUBLE GRATE
CB 10-23
RIM=176.55
INV=171.75

CB 10-32
RIM=175.75
INV.=172.25

CB 10-24
RIM=179.55
INV=177.05

CB 10-25
RIM=175.95
INV=172.75

CB 10-21
RIM=174.56
INV=172.95

CB 10-31
RIM=175.75
INV.=172.50

18" ADS PIPE

CB 10-30

DMH
RIM=173.40
INV=160.00

24" ADS PIPE
CB 10-36

H
EL.=184.0
200,000 s.f.

LEDGE CUT 1H:3.5V
SEE DETAIL

LIMITS OF GUARDRAIL AT LEDGE CUT (SEE DETAIL)

CB 10-52B
RIM=186.00
INV.=183.00

12" ADS PIPE

CB 10-52
RIM=183.00
INV.=180.50

170 L.F. 12" ADS PIPE

LEDGE CUT 1H:1V
SEE DETAIL

CB 10-53
RIM=184.25
INV=178.80

CURB (TYP.)
SEE DETAIL

LEDGE CUT
SEE DETAIL

200 L.F. 24" ADS PIPE

CB 10-54
RIM=182.50
INV.=176.80

PARKING ISLAND SWALE
SEE DETAIL (TYP)

OUTLET STRUCTURE
INV.=165.00

450'x130'x5' SUBSURFACE SAND FILTER / DETENTION SYSTEM 10B
T.O.S.=173.00
B.O.S.=166.50

DMH 10-5

DOUBLE GRATE
CB 10-27
RIM=176.55
INV=170.78

DOUBLE GRATE
CB 10-28
RIM=176.55
INV=171.98

DOUBLE GRATE
CB 10-29
RIM=176.55
INV=173.18

30" ADS PIPE

24" ADS PIPE

CB 10-55
RIM=177.55
INV=174.20

LIMITS OF GUARDRAIL AT LEDGE CUT (SEE DETAIL)

DMH
RIM=178.00
INV=173.00

LEDGE CUT
SEE DETAIL

DMH 10-6
RIM=177.55
INV=170.00

CB 10-80
RIM=177.80
INV=173.80

CB 10-81
RIM=177.80
INV=173.80

DMH
RIM=176.95
INV=162.65

DMH
RIM=177.45
INV=170.30

12" ADS UNDERDRAIN PIPE

VERSA-LOCK
T.O.W.=184.00
B.O.W.=178.00
SEE DETAIL

DMH 10-8

CB 10-35

DMH 10-7

OUTLET STRUCTURE

MATCH LINE SEE SHEET 34

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
SPECIFIED IN THE LETTER OF APPROVAL
DATED MAY 06 2024 FILE #: 2000-3
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

SCALE IN FEET
0 20 40 80 160
SCALE : 1"= 40'

NO	DESCRIPTION	DATE	AUTHOR
1	RIDEM COMMENT REVISION	11/2021	EMD

verdantas
PEOPLE FOCUSED FUTURE
1005 MAIN STREET, SUITE 8120
PAWTUCKET, RI 02860
TEL. 401.728.6860

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

RIDEM
SUBMITTAL
MARCH 2024
RI Environmental Management
MAR 15 2024
Office of Water Resources

JEFFREY J. PLANTE
No. 4218
REGISTERED PROFESSIONAL ENGINEER
03/15/2024

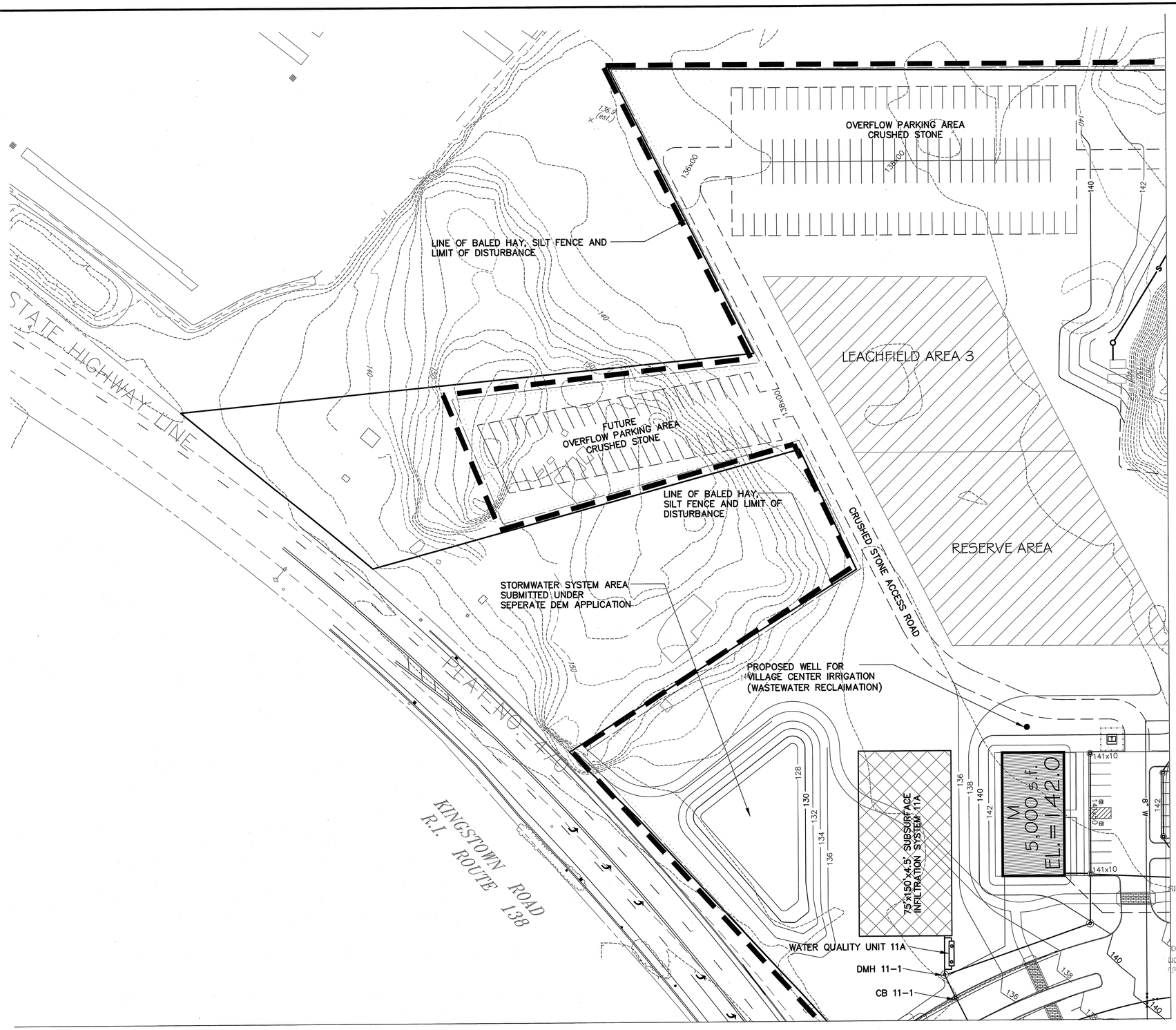
SHEET TITLE:
VILLAGE CENTER
GRADING & DRAINAGE PLAN
SHEET 1 (A)

A.P. 05B LOT 065 & A.P. 05C LOT 005
58 KINGSTOWN ROAD
RICHMOND, RI 02898

Project No.: 18071
Designed By: RGM
Drawn By: EMD
Checked By: JJP
Date: MARCH 2024
Scale: AS SHOWN

SHEET
31
SHEET 31 OF 58

A
B C D
E F G
H



RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
SPECIFIED IN THE LETTER OF APPROVAL
DATED MAY 0 5 2024 FILE #: 2210093
NO CHANGES AUTHORIZED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

SCALE IN FEET

0 20 40 80 160

SCALE : 1"= 40'

	A	
B	C	D
E	F	G
	H	

NOTE:
FOR THE AREA OF THE INTERSECTION OF ROUTE 138 AND RICHMOND COMMONS BOULEVARD A SEPERATE D.E.M. APPLICATION WAS SUBMITTED.

NO	DESCRIPTION	DATE	AUTHOR
1	RIDEM COMMENT REVISION	11/2021	EMD

verdantas
PEOPLE FOCUSED FUTURE

1005 MAIN STREET, SUITE 8120
PAWTUCKET, RI 02840
TEL. 401.728.6840

PREPARED FOR:

RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

RIDEM
SUBMITTAL
MARCH 2024

RI Environmental Management
MAR 1 5 2024
Office of Water Resources

JEFFREY J. PEARTE
No. 4918
REGISTERED PROFESSIONAL ENGINEER
03/13/2024

SHEET TITLE:
VILLAGE CENTER
GRADING & DRAINAGE PLAN
SHEET 2 (B)

A.P. 05B LOT 065 & A.P. 05C LOT 005
58 KINGSTOWN ROAD
RICHMOND, RI 02898

Project No.: 18071
Designed By: RGM
Drawn By: EMD
Checked By: JJP
Date: MARCH 2024
Scale: AS SHOWN

SHEET
32
SHEET 32 OF 58

MATCH LINE SEE SHEET 31

MATCH LINE SEE SHEET 32

MATCH LINE SEE SHEET 34

MATCH LINE SEE SHEET 36

40'x40'x5' SUBSURFACE INFILTRATION SYSTEM 12A

CB 12-1

CONTROL BUILDING F.F.=150.67

DUAL ALTERNATING SIPHON CHAMBER TO LEACHFIELD 3

3,000 GAL. PRECAST CONC. PUMP-CHAMBER TO LEACHFIELD 1 & 2

6" SDR. 21 PVC PIPE FORCE-MAIN TO WASTE WATER PUMP STATION WHICH WILL BE CAPPED FOR FUTURE USE TO LEACHFIELD 1 & 2

SUB-SURFACE W.W.T.P.

SUB-SURFACE W.W.T.P.

PUMPED DISTRIBUTION CHAMBER

SMH 5

LINE OF BALED HAY, SILT FENCE AND LIMIT OF DISTURBANCE

VERSA-LOCK T.O.W.=154.00 B.O.W.=150.00 SEE DETAIL

EXCELSIOR NETTING TO BE USED ON SLOPED EMBANKMENTS

CB 10-30 RIM=167.70 INV.=164.70

CB 10-43 RIM=167.12 INV.=163.32

CONCRETE CURB (TYP.) SEE DETAIL

CB 10-44

CB 10-16

CB 10-17

CB 10-42 RIM=167.12 INV.=162.95

ROOF LEADER

CB 10-41 RIM=167.12 INV.=161.80

DMH 10-10 RIM=164.00 INV.=161.46

DMH 10-11 RIM=166.00 INV.=161.40

3H:1V SLOPED EMBANKMENT

12" ADS

18" ADS

T.P.#22

T.P.#21

T.P.#20

F-1 19,166 s.f. El.=172.00

25'

WATER QUALITY UNIT

CB 10-40 RIM=164.10 INV.=161.50

DMH 10-9 RIM=167.00 INV.=161.00

170'x135'x5' SUBSURFACE INFILTRATION SYSTEM 10G

CB 10-37 RIM=163.80 INV.=161.75

CB 10-39 RIM=164.10 INV.=161.60

ROOF LEADER

CB, 10-38 RIM=163.80 INV.=161.80

N 10,500 s.f. El.=171.50

CB 10-6

CB 10-5

CB RIM=142.00 INV.=134.81

CB RIM=141.94 INV.=134.47

CB RIM=141.10 INV.=133.74

CB RIM=141.10 INV.=132.84

DMH RIM=140.00 INV.=132.50

EL.=142.0

CB RIM=141.94 INV.=133.93

CB RIM=142.00 INV.=133.59

60'x240'x5' SUBSURFACE INFILTRATION SYSTEM 9A

WATER QUALITY UNIT 9A

CB 11-4

CB 11-8

CB 11-7

CB 9-2

CB 9-1

CB 9-10

CB 9-9

Richmond Commons Boulevard West

Richmond Commons Boulevard East

A-5

A-4

A-3

A-2

A-1

passage

CB 9-3

CB 9-4

CB 9-11

CB 10-1

CB 10-2

CB 9-5

CB 9-6

CB 7-2

CB 7-1

CB 9-13

	A	
B	C	D
E	F	G
	H	

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL
DATED: MAY 06 2024 FILE #:
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

SCALE IN FEET

0 20 40 80 160

SCALE : 1"= 40'

NO	DESCRIPTION	DATE	AUTHOR
1	RIDEM COMMENT REVISION	11/2021	EMD

verdantas
PEOPLE FOCUSED FUTURE
1005 MAIN STREET, SUITE 8120
PAWTUCKET, RI 02860
TEL. 401.728.8860

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

RIDEM SUBMITTAL MARCH 2024

RI Environmental Management
MAR 15 2024
Office of Water Resources

JEFFREY J. PLANTE No. 4215 REGISTERED PROFESSIONAL ENGINEER 03/13/2024

SHEET TITLE:
VILLAGE CENTER
GRADING & DRAINAGE PLAN
SHEET 3 (C)
A.P. 05B LOT 065 & A.P. 05C LOT 005
58 KINGSTOWN ROAD
RICHMOND, RI 02898

Project No.:	18071
Designed By:	RCM
Drawn By:	EMD
Checked By:	JJP
Date:	MARCH 2024
Scale:	AS SHOWN

SHEET 33

SHEET 33 OF 58

MATCH LINE SEE SHEET 31

MATCH LINE SEE SHEET 33

MATCH LINE SEE SHEET 15

MATCH LINE SEE SHEET 37

CB 10-23
CB 10-22
CB 10-31
CB 10-26
DMH 10-6
CB 10-33
CB 10-28
CB 10-29
CB 10-55
CB 10-27
CB 10-34
12" W
24" ADS PIPE
DMH
RIM=177.00
INV=160.50
WATER QUALITY UNIT
CB 10-36B
RIM=171.56
INV=163.72
CB 10-36C
RIM=171.56
INV=164.14
CB 10-36A
RIM=173.25
INV=164.54
12" ADS PIPE
CB 10-36
RIM=173.50
INV=166.14
CB 10-36D
RIM=172.59
INV=165.10
CB 10-15
CB 10-16
CB 10-17
OUTLET CONTROL
STRUCTURE
SEE DETAIL
200'x80'x4.5'
SUBSURFACE SAND
FILTER / DETENTION
SYSTEM 10E
S
5,000
EL.=174.0
R
14,800 s.f.
EL.=179.0
CB 10-35
RIM=181.00
INV=177.00
200'x100'x4' SUBSURFACE
SAND FILTER / DETENTION
SYSTEM 10D
DMH
RIM=183.80
INV=164.42
2H : 1V SLOPED
EMBANKMENT
LEDGE CUT
VERSA-LOCK
T.O.W.=190.00
B.O.W.=186.00
SEE DETAIL
Apt-
TOF 260
Slab 252
EL.=260.0
CB 10-49
RIM=181.00
INV.=177.50
CB 10-48
RIM=181.00
INV=178.50
DMH
RIM=184.00
INV=166.62
OUTLET CONTROL
STRUCTURE
SEE DETAIL
CB 10-18
CB 10-7
F-1
19,166 s.f.
El.=172.00
WQU 10-E
Central Transit Street
CB 10-10
CB 10-9
CB 10-45
CB 10-8
W.Q.U.-10C
DMH 10-9
CB 10-46
CB 10-47
RIM=179.25
INV=173.10
OUTLET CONTROL
STRUCTURE
SEE DETAIL
DMH
RIM=183.77
INV=167.72
CB 10-6
CB 10-5
N
10,500 s.f.
El.=171.50
CB 10-12
CB 10-11
C-1a
6955
2710
D-3
C-1b
C-1c
3997
D-2
CB 10-19
RIM=177.50
INV=174.50
CB 10-20
RIM=177.50
INV=174.35
ROOF LEADER
18"
250'x100'x4' SUBSURFACE
SAND FILTER / DETENTION
SYSTEM 10C
CB 10-50
RIM=179.25
INV=174.10
CB 10-51
RIM=179.25
INV=175.75
CB 10-13
CB 10-14
passage
A-6
A-2
A-
CB 10-1
CB 10-2
CB 9-5
CB 9-9
CB 7-2
CB 7-16
CB 7-1
CB 7-17
CB 9-13
CB 7-23
C-2
Central Avenue
Service Way
DMH 7-4
CB 7-29
300'x100'x4'
SUBSURFACE SAND
FILTER / DETENTION
SYSTEM 7A
2H : 1V SLOPED EMBANKMENT
EXCELSIOR NETTING TO BE
USED ON SLOPED
EMBANKMENTS
VERSA-LOCK
T.O.W.=190.00
B.O.W.=186.00
SEE DETAIL

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
SPECIFIED IN THE LETTER OF APPROVAL
DATED: MAY 06 2024 FILE #: 21-0078
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

SCALE IN FEET
0 20 40 80 160
SCALE : 1"= 40'

NO	DESCRIPTION	DATE	AUTHOR
1	RIDEM COMMENT REVISION	11/2021	EMD

verdantas
PEOPLE FOCUSED FUTURE
100S MAIN STREET, SUITE 8120
PAWTUCKET, RI 02860
TEL. 401.728.8660

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

RIDEM
SUBMITTAL
MARCH 2024

RI Environmental Management
MAR 15 2024

Office of Water Resources
JEFFREY J. PLANTE
No. 4918
REGISTERED PROFESSIONAL ENGINEER
03/12/2024

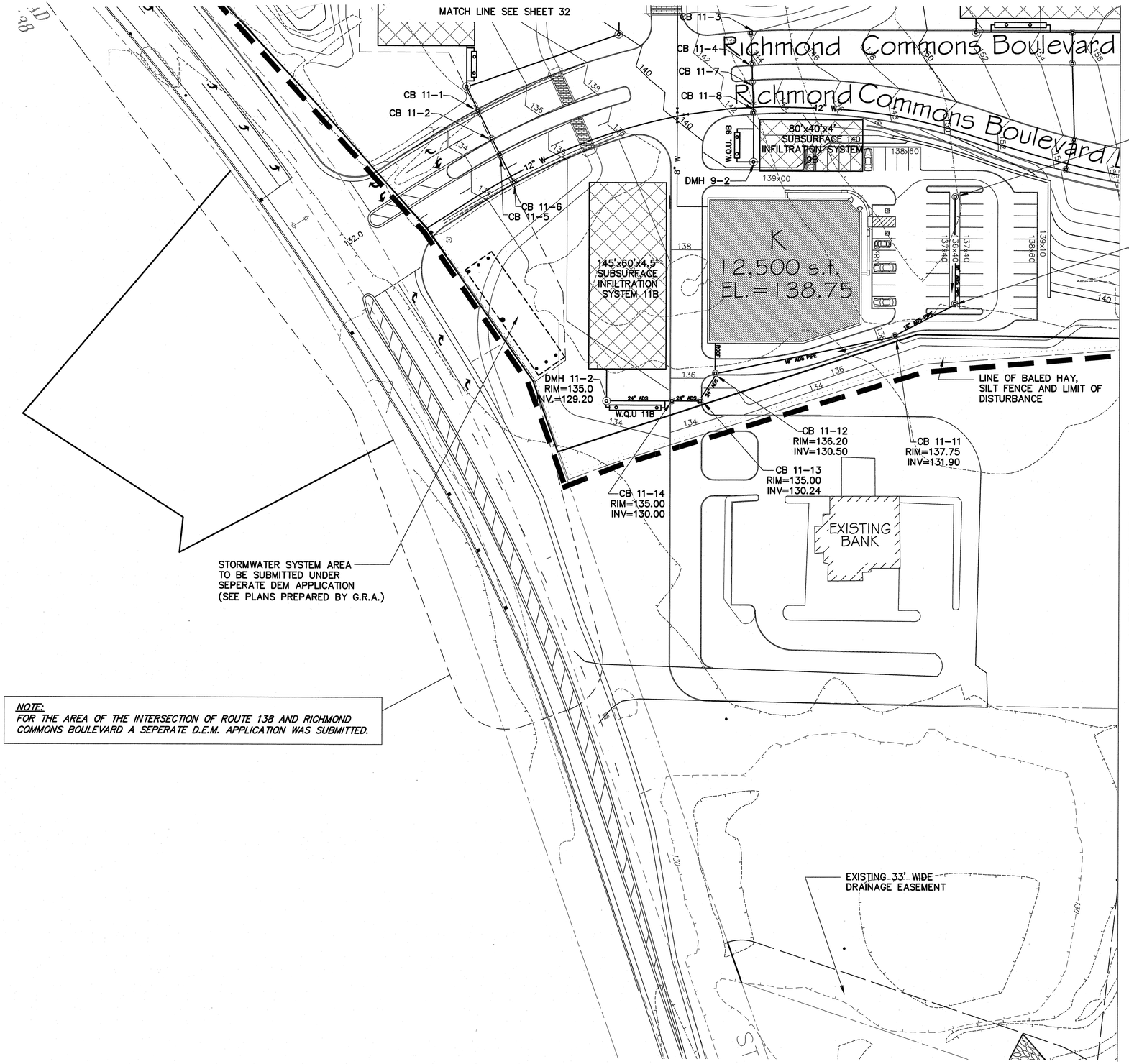
SHEET TITLE:
VILLAGE CENTER
GRADING & DRAINAGE PLAN
SHEET 4 (D)

A.P. 058 LOT 065 & A.P. 05C LOT 005
58 KINGSTOWN ROAD
RICHMOND, RI 02898

Project No.: 18071
Designed By: RGM
Drawn By: EMD
Checked By: JJP
Date: MARCH 2024
Scale: AS SHOWN

SHEET
34
SHEET 34 OF 58

	A	
B	C	D
E	F	G
	H	



NOTE:
FOR THE AREA OF THE INTERSECTION OF ROUTE 138 AND RICHMOND COMMONS BOULEVARD A SEPERATE D.E.M. APPLICATION WAS SUBMITTED.

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
SPECIFIED IN THE LETTER OF APPROVAL
DATED: MAY 06 2024 FILE #: 24-0093
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

SCALE IN FEET
0 20 40 80 160
SCALE : 1"= 40'

NO	DESCRIPTION	DATE	AUTHOR
1	RIDEM COMMENT REVISION	11/2021	EMD

verdantas
PEOPLE FOCUSED FUTURE
100S MAIN STREET, SUITE 8120
PAWTUCKET, RI 02860
TEL. 401.728.8660

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

RIDEM
SUBMITTAL
MARCH 2024
RI Environmental Management
MAR 15 2024
Office of Water Resources

JEFFREY J. PLANTE
No. 4918
REGISTERED PROFESSIONAL ENGINEER
03/15/2024

SHEET TITLE:
VILLAGE CENTER
GRADING & DRAINAGE PLAN
SHEET 5 (E)
A.P. 05B LOT 065 & A.P. 05C LOT 005
58 KINGSTOWN ROAD
RICHMOND, RI 02898

Project No.: 18071
Designed By: RGM
Drawn By: EMD
Checked By: JJP
Date: MARCH 2024
Scale: AS SHOWN

SHEET
35
SHEET 35 OF 58

	A	
B	C	D
E	F	G
	H	

MATCH LINE SEE SHEET 33

MATCH LINE SEE SHEET 35

MATCH LINE SEE SHEET 37

MATCH LINE SEE SHEET 38

CB 9-12
CB 9-15
CB 9-16
CB 9-14
CB 7-3
CB 7-4
WATER QUALITY UNIT 7B
CB 7-16
CB 7-17
DMH 7-10
DMH 7-11
CB 7-37
180'x60'x4' SUBSURFACE SAND FILTER / DETENTION SYSTEM 7B
CB 9-22
CB 9-18
CB 9-17
W.Q.U. 9C
CONCRETE CURB (TYP.)
DMH 9-4
CB 7-38
CB 7-9
CB 7-8
CB 7-39
24" ADS
CB 9-19
CB 7-19
CB 7-18
RETAINING WALL
CB 9-20
RIM=169.33
INV.=165.36
EXCELSIOR NETTING TO BE USED ON SLOPED EMBANKMENTS
150'x80'x4' SUBSURFACE INFILTRATION SYSTEM 9C
CB 7-33
RIM=179.50
INV.=177.00
CB 9-21
RIM=169.33
INV.=166.33
DMH 7-10
DMH 7-9
CB 7-32
RIM=179.50
INV.=176.40
DMH 7-6A
RIM=183.53
INV.=174.00 (12")
INV.=163.22 (24")
INV.=163.20 (30")
CB 7-24
RIM=183.24
INV=181.24
CB 7-23
RIM=183.85
INV.=181.20
CB 7-22
RIM=183.85
INV.=181.10
LINE OF BALED HAY, SILT FENCE AND LIMIT OF DISTURBANCE
CB 7-31
RIM=183.30
INV.=181.00
DMH 7-5
RIM=184.25
INV=180.80
DMH 7-6
RIM=185.00
INV=162.20
CB 7-34
RIM=185.00
INV=181.50
WATER QUALITY UNIT 7C
CB 7-30
RIM=186.00
INV=182.00
EXISTING 33' WIDE DRAINAGE EASEMENT
PRECAST FLARED END SECTION
OUTFALL 24" INV. = 132.00
27'x33' RIP RAP APRON
Limit of Disturbance/Erosion Control Per RI DEM
DMH 7-8
RIM=145.00
INV=134.00
30" ADS PIPE
DMH 7-7
RIM=189.00
INV=160.20
OUTLET CONTROL STRUCTURE
PARKING ISLAND GRASS SWALE
200'x80'x4' SUBSURFACE SAND FILTER / DETENTION SYSTEM 7C
GRASSED SWALE
CB 7-52
CB 7-50
CB 7-11
CB 7-12
RETAINING WALL
MATCH LINE SEE SHEET 38
Passage
Avenue
North
South
Street
Meeting
B-5
B-4
B-2
B-1
B-6a
B-6b
G-5
15030
G-3
G-1
6016
5500
F-3
G-2
B-3
F-2
5,547 s.f.
El.=190.50
ROOF
ROOF LEADER (TYP.)
12" ADS
24" ADS
30" ADS PIPE
12" W
S

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
SPECIFIED IN THE LETTER OF APPROVAL
DATED MAY 06 2024 FILE #: 24-0023
NOTICE: SEE ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

SCALE IN FEET
0 20 40 80 160
SCALE : 1"= 40'

NO	DESCRIPTION	DATE	AUTHOR
1	RIDEM COMMENT REVISION	11/2021	EMD

verdantas
PEOPLE FOCUSED FUTURE
1005 MAIN STREET, SUITE 8120
PAWTUCKET, RI 02860
TEL. 401.728.6860

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

RIDEM SUBMITTAL
RI Environmental Management
MARCH 2024
MAR 15 2024
Office of Water Resources

JEFFREY J. PLANTE
NO. 4218
REGISTERED PROFESSIONAL ENGINEER
03/15/2024

SHEET TITLE:
VILLAGE CENTER
GRADING & DRAINAGE PLAN
SHEET 6 (F)
A.P. 05B, LOT 005 & A.P. 06C, LOT 005
KNOWN AS 30 RIVERVIEW DRIVE
RICHMOND, RI 02898

Project No.: 18071
Designed By: RGM
Drawn By: EMD
Checked By: JJP
Date: MARCH 2024
Scale: AS SHOWN

SHEET
36
SHEET 36 OF 58

A
B C D
E F G
H

MATCH LINE SEE SHEET 34

MATCH LINE SEE SHEET 36

MATCH LINE SEE SHEET 18

MATCH LINE SEE SHEET 38

CB 9-14
CB 7-3
CB 7-4
CB 7-9
CB 7-8
CB 7-23
CB 7-22
CB 7-25
CB 7-26
CB 7-16
CB 7-17
CB 7-18
CB 7-19
CB 7-20
CB 7-21
CB 7-11
CB 2-12
CB 2-11
CB 2-13
CB 2-14
CB 7-40
RIM=179.75
INV=176.75
CB 7-41
RIM=181.75
INV=177.25
CB 7-41A
RIM=184.25
INV=177.64
CB 7-42
RIM=184.75
INV=177.80
CB 7-43
RIM=184.75
INV=178.00
CB 7-45
RIM=185.45
INV=180.80
CB 7-46
RIM=185.45
INV=181.60
CB 7-46A
RIM=185.45
INV=183.45
CB 7-46B
RIM=185.45
INV=183.40
CB 7-46C
RIM=185.45
INV=182.40
CB 3-16
CB 3-15
CB 2-6
CB 2-5
CB 2-8
CB 2-9
DMH 7-12
RIM=185.75
INV=180.00
DMH
RIM=184.88
INV=165.58
DMH
RIM=185.40
INV=172.00
DMH 2B
RIM=191.75
INV=184.40
DMH 2A
RIM=192.00
INV=185.40
W.Q.U.
24" ADS PIPE
18" ADS PIPE
12" ADS PIPE
12" PIPE FROM ROOF
300'x100'x4' SUBSURFACE SAND FILTER / DETENTION SYSTEM 7A
180'x60'x4' SUBSURFACE SAND FILTER / DETENTION SYSTEM 7B
300'x80'x4' SUBSURFACE SAND FILTER / DETENTION SYSTEM 7C
OUTLET CONTROL STRUCTURE
OUTLET CONTROL STRUCTURE
LEDGE CUT SEE DETAIL
LEDGE CUT SEE DETAIL
ROOF
Roof
11,200 G-4
8220 D-4
D-1
6016 G-1
E 78,000 s.f. EL.=186.00
E-1 22,500 s.f. EL.=186.00
5500 F-3
G-2
B-3
F-2 5,547 s.f. EL.=190.33
B-1
passage
Avenue
South Main Street
Bowles Road
LINE OF BALED HAY SILT FENCE AND LIMIT OF DISTURBANCE

	A	
B	C	D
E	F	G
	H	

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
SPECIFIED IN THE LETTER OF APPROVAL
DATED: MAY 06 2024 FILE #: 24-0083
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

SCALE IN FEET
0 20 40 80 160
SCALE : 1"= 40'

NO	DESCRIPTION	DATE	AUTHOR
1	RIDEM COMMENT REVISION	11/2021	EMD

verdantas
PEOPLE FOCUSED FUTURE
100S MAIN STREET, SUITE 8120
PAWTUCKET, RI 02860
TEL. 401.728.6860

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

RIDEM SUBMITTAL
MARCH 2024
RI Environmental Management
MAR 15 2024
Office of Water Resources

JEFFREY J. PLANTE
No. 4218
REGISTERED PROFESSIONAL ENGINEER
03/13/2024

SHEET TITLE:
VILLAGE CENTER
GRADING & DRAINAGE PLAN
SHEET 7 (G)
A.P. 05B LOT 065 & A.P. 05C LOT 005
58 KINGSTOWN ROAD
RICHMOND, RI 02898

Project No.: 18071
Designed By: RCM
Drawn By: EMD
Checked By: JJP
Date: MARCH 2024
Scale: AS SHOWN

SHEET
37
SHEET 37 OF 58

MATCH LINE SEE SHEET 36, 37

W.Q.U. 2A

CB 2-16
RIM 194.13
INV 190.13

WATER QUALITY UNIT 7D

CB 7-52
RIM 193.21
INV 189.21

CB 2-17
RIM 194.5
INV 190.5

24" ADS

12" ADS

300'x120'x4' SUBSURFACE SAND FILTER / DETENTION SYSTEM 2A

CB 7-47
RIM 192.62
INV 188.62

CB 7-48
RIM 192.00
INV 188.00

PARKING ISLAND GRASS SWALE TYP.

OUTLET CONTROL STRUCTURE INV=180.50

24" ADS PIPE

CB 7-53
RIM 194.75
INV 190.75

CB 7-51
RIM 194.75
INV 190.75

12" ADS PIPE

CB 7-49
RIM 194.75
INV 192.00

CB 2-18
RIM 195.75
INV 192.75

CB 2-19
RIM 196.6
INV 192.6

CB 2-20
RIM 197.9
INV 193.38

240'x100'x4' SUBSURFACE INFILTRATION SYSTEM 7D

450'x80'x5' SUBSURFACE SAND FILTER / DETENTION SYSTEM 1B

OUTLET CONTROL STRUCTURE

CB 2-9

CB 2-10

6" SDR. 21 PVC PIPE FORCE-MAIN TO WASTE WATER PUMP STATION WHICH WILL BE CAPPED FOR FUTURE USE TO LEACHFIELD 1 & 2

Country Acres Road

Town Center Parkway

DMH
RIM=200.0
INV=178.56

DMH
RIM=196.0
INV=176.06

250 LF. 24" RCP PIPE

CB 1-1
RIM 198.00
INV 194.00

CB 1-2
RIM 199.50
INV 193.40

460' LONG, 12' WIDE, 4' DEEP INFILTRATION TRENCH

J
EL.=200.0
120,000 s.f.

J-1
EL.=200.0
22,500 s.f

CB 1-3
RIM 199.45
INV 191.45

CB 1-4
RIM 199.50
INV 191.20

CB 1-5
RIM 199.50
INV 189.70

WATER QUALITY UNIT 1A

DMH
RIM=199.75
INV=187.50
INV.(OUT)=190.00

CB 1-9
RIM 196.80
INV 193.80

CB 1-6
RIM 196.00
INV 192.00

CB 1-7
RIM 195.23
INV 191.23

RIP RAP LIMIT

RIP RAP

T.P.#19

T.P.#18

420'x42'x4' SUBSURFACE INFILTRATION SYSTEM 1A

CB 1-8
RIM 199.50
INV 195.50

460' LONG, 12' WIDE, 4' DEEP INFILTRATION TRENCH

LINE OF BALED HAY, SILT FENCE AND LIMIT OF DISTURBANCE

EXCELSIOR BLANKET TO BE USED ON SLOPED EMBANKMENT

12" PRECAST FLARED END SECTION
OUTFALL INV. = 178.00
12'x15' RIP RAP APRON

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
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SCALE IN FEET
0 20 40 80 160
SCALE : 1"= 40'

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verdantas
PEOPLE FOCUSED FUTURE
100E MAIN STREET, SUITE 8120
PAWTUCKET, RI 02860
TEL. 401.728.4860

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

RIDEM
SUBMITTAL
MARCH 2024
RI Department of Environmental Management
MAR 15 2024
Office of Water Resources

JEFFREY J. PLANTE
No. 4918
REGISTERED PROFESSIONAL ENGINEER
03/15/2024

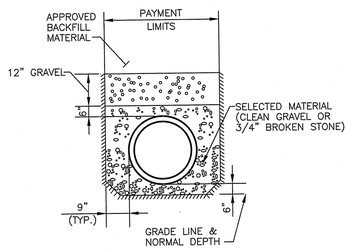
SHEET TITLE:
VILLAGE CENTER
GRADING & DRAINAGE PLAN
SHEET 8 (H)

A.P. 05B LOT 065 & A.P. 05C LOT 005
85 & 95 COUNTRY ACRES ROAD
RICHMOND, RI 02898

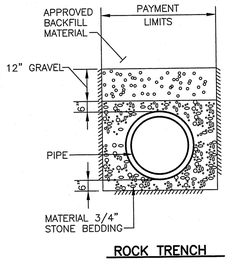
Project No.:	18071
Designed By:	RGM
Drawn By:	EMD
Checked By:	JJP
Date:	MARCH 2024
Scale:	AS SHOWN

SHEET
38
SHEET 38 OF 58

	A	
B	C	D
E	F	G
	H	



EARTH TRENCH

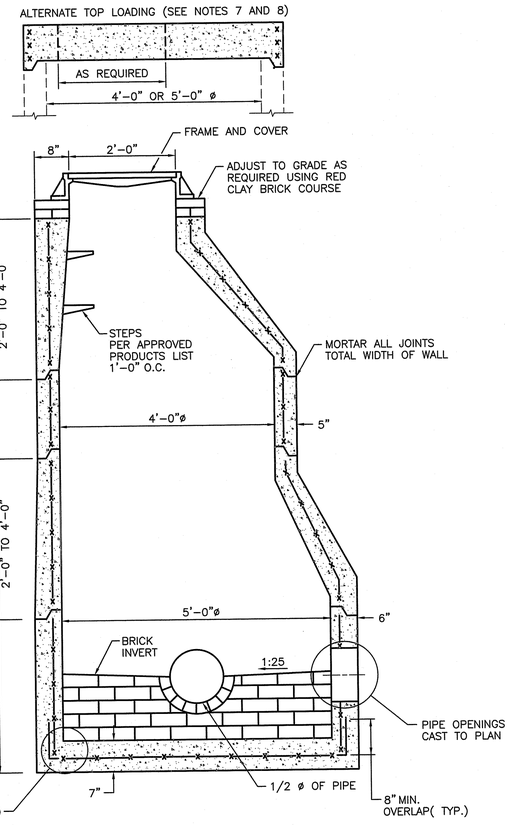


ROCK TRENCH

PIPE (I.D.)	TRENCH WIDTH
4" – 12"	3' – 0"
15" – 24"	DIA. + 2'–0"
27" – 36"	DIA. + 2'–6"
OVER 36"	DIA. + 3'–0"

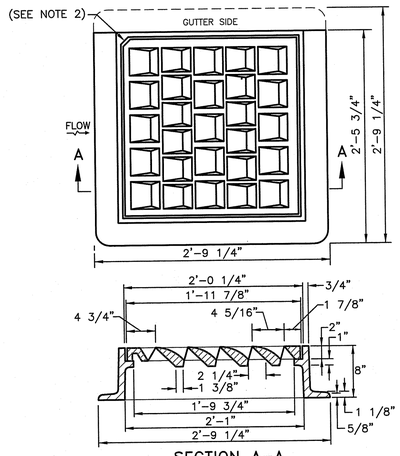
TYPICAL PIPE BEDDING & TRENCH DETAILS

NOT TO SCALE



NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. CIRCUMFERENTIAL STEEL REINFORCEMENT REQUIRED = 0.15 SQ. IN./LIN. FT. MINIMUM.
3. STEEL REINFORCEMENT FOR BASE SECTION BOTTOM SHALL BE A MINIMUM OF 0.12 SQ. IN./LIN. FT. (BOTH WAYS).
4. ONE POUR MONOLITHIC BASE SECTION.
5. ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW–CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.
6. STEPS SHALL CONFORM TO STD. 5.3.0 AND SHALL BE INSTALLED AT THE CASTING PLANT.
7. ALTERNATE TOP SLAB IS STEEL REINFORCED TO MEET OR EXCEED H–25 LOADING (SEE STD. 4.7.0).
8. ALTERNATE TOP SLAB IS ONLY FOR USE WHEN REDUCING SECTION DOES NOT FIT BECAUSE OF STRUCTURE DEPTH.
9. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

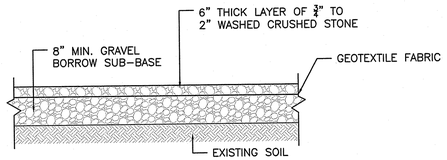
PRECAST 5'–0" ROUND MANHOLE — R.I. STANDARD 4.2.1



SECTION A–A

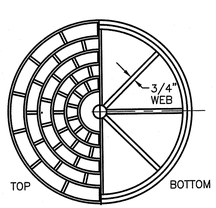
NOTES:
1. FRAME AND COVER SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.
2. THIS CORNER LEFT FOR "LEFT" GRATE, DIAGONALLY OPPOSITE CORNER FOR "RIGHT" GRATE TO FIT IN KEYED FRAME.

HIGH CAPACITY FRAME AND GRATE (BICYCLE SAFE) — R.I. STANDARD 6.3.4

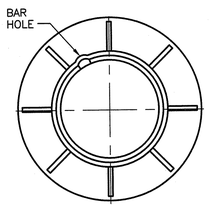


STONE OVERFLOW PARKING DETAIL

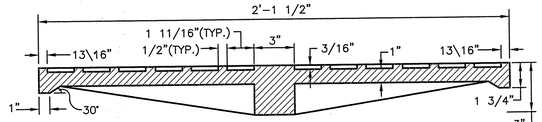
NOT TO SCALE



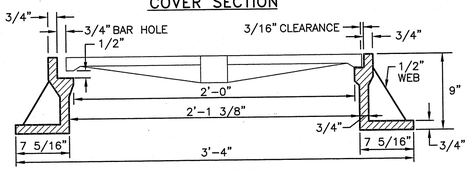
COVER



FRAME



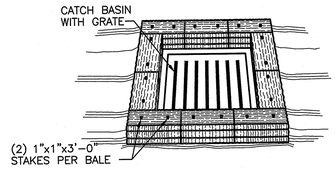
COVER SECTION

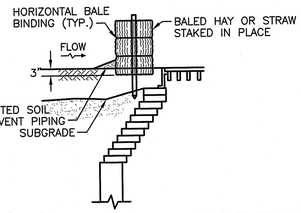


FRAME SECTION

NOTES:
1. FRAME AND GRATE SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.
2. FRAME AND COVER SEATS MUST HAVE MACHINE FINISH.

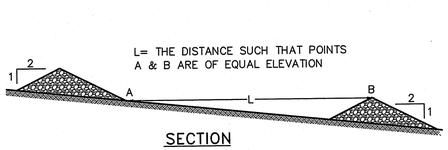
HEAVY–DUTY ROUND FRAME AND COVER — R.I. STANDARD 6.2.1



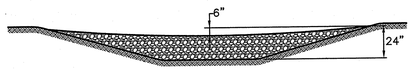


NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 209 OF THE R.I. STANDARD SPECIFICATIONS.
2. THIS INLET PROTECTION CAN ALSO BE USED WHEN CONSTRUCTION SEQUENCING REQUIRES A CATCH BASIN TO BE EXPOSED TO SEDIMENT FROM THE SUBGRADE. THIS WILL BE ACHIEVED BY INSTALLING THE BALED HAY AS SHOWN ON THIS DETAIL INTO THE SUBGRADE.
3. THE PERIMETER CONFIGURATION OF THE BALED HAY WILL VARY DEPENDING ON THE PARTICULAR TYPE OF CATCH BASIN INLET BEING CONSTRUCTED. THE ENGINEER WILL PROVIDE SPECIFIC DIRECTION IN SUCH CASES.

BALED HAY CATCH BASIN INLET PROTECTION — R.I. STANDARD 9.8.0



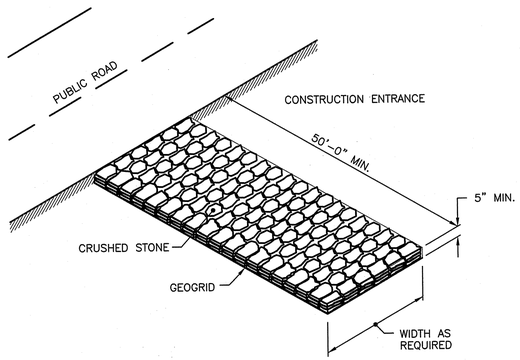
SECTION



ELEVATION

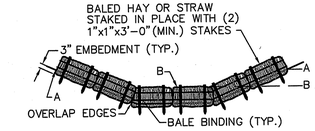
NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 207 OF THE R.I. STANDARD SPECIFICATIONS.
2. TO BE USED IN SWALE LOCATIONS. MAXIMUM SPACING BETWEEN DAMS SHOULD BE SUCH THAT THE TOE OF THE UPSTREAM DAM IS SAME ELEVATION AS TOP OF DOWNSTREAM DAM.
3. STONE SHOULD BE CONSTRUCTED OF RI DOT CRUSHED STONE.

STONE PERMANENT CHECK DAMS

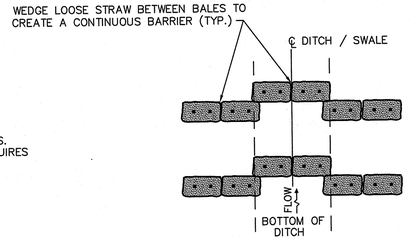


NOTE:
SHALL BE IN ACCORDANCE WITH SECTION 211 OF THE R.I. STANDARD SPECIFICATIONS.

CONSTRUCTION ACCESS — R.I. STANDARD 9.9.0



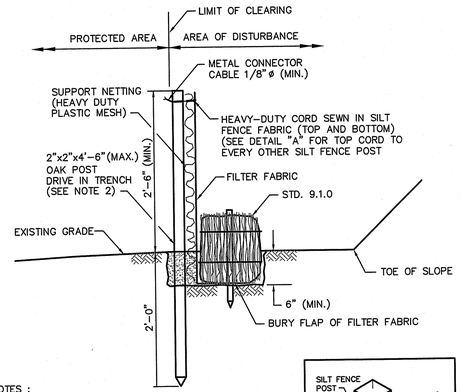
ELEVATION



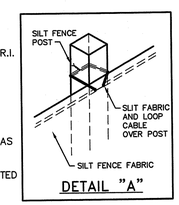
PLAN

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 207 OF THE R.I. STANDARD SPECIFICATIONS.
2. TO BE USED IN SWALE LOCATIONS. MAXIMUM SPACING BETWEEN DAMS SHOULD BE SUCH THAT THE TOE OF THE UPSTREAM DAM IS SAME ELEVATION AS TOP OF DOWNSTREAM DAM.
3. THE BALES ARE TO BE EMBEDDED A MINIMUM OF 3" INTO THE EXISTING GROUND, HIGHWAY SLOPE OR DITCH SECTION.
4. POINTS "A" SHOULD BE AT A HIGHER ELEVATION THAN POINTS "B".

BALED HAY TEMPORARY CHECK DAMS



NOTES :
1. SHALL BE IN ACCORDANCE WITH SECTION 206 OF THE R.I. STANDARD SPECIFICATIONS.
2. STD. 9.1.0 IS INSTALLED "TIGHT" AGAINST SILT FENCE. THOROUGHLY COMPACT EXCAVATED SOILS BACK INTO TRENCH AFTER INSTALLATION OF EROSION CONTROL DEVICE. SILT FENCE FABRIC SHALL NOT BE SLIT. STD. 9.1.0 POST SHALL BE DRIVEN THROUGH SILT FENCE FABRIC. 2"x2"x4'–6"(MAX.) OAK POST FOR SILT FENCE SHALL BE LOCATED 8'–0"(MAX.) O.C. IN WETLAND AREAS AND 4'–0"(MAX.) O.C. IN WETLAND RAVINE, GULLY OR DROP–OFF AREAS AS SHOWN ON PLANS.
3. 1"x1"x4'–6"(MIN.) POSTS PERMITTED FOR PRE–FABRICATED SILT FENCE.
4. SILT FENCE AND BALED HAY SHALL BE INSTALLED BEFORE ANY GRUBBING OR EARTH EXCAVATION TAKES PLACE.



DETAIL "A"

BALED HAY EROSION CHECK AND SILT FENCE COMBINED — R.I. STANDARD 9.3.0

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL
DATED: MAY 06 2024 FILE #:
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

NO	DESCRIPTION	DATE	AUTHOR
1	RIDEM COMMENT REVISION	11/2021	EMD

verdantas
PEOPLE FOCUSED FUTURE
1005 MAIN STREET, SUITE 8120
PAWTUCKET, RI 02860
TEL. 401.728.6860

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

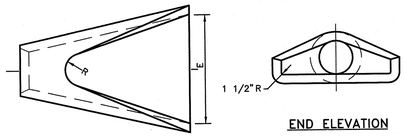
RIDEM SUBMITTAL
MARCH 2024
RI Environmental Management
MAR 15 2024
Office of Water Resources

JEFFREY J. PLANTE — No. 4818 — REGISTERED PROFESSIONAL ENGINEER — 03/12/24

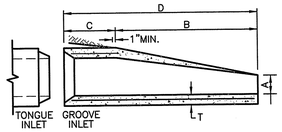
SHEET TITLE:
SITE DETAILS
SHEET 1
A.P. 05B LOT 065 & A.P. 05C LOT 005
58 KINGSTOWN ROAD
RICHMOND, RI 02898

Project No.: 18071
Designed By: RGM
Drawn By: EMD
Checked By: JJP
Date: MARCH 2024
Scale: AS SHOWN

SHEET
39
SHEET 39 OF 59



END ELEVATION



SECTION A–A

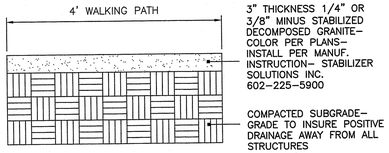
DIMENSIONS								REINFORCEMENT
DIA.	A	B	C	D	E	R	T	ONE LAYER REINFORCEMENT IN CENTER OF WALL MIN. AREA OF EACH WAY (SQ. IN./FT.)
1'–0"	4"	2'–0"	4'–0 7/8"	6'–0 7/8"	2'–0"	9"	2"	0.048
1'–3"	6"	2'–3"	3'–10"	6'–1"	2'–6"	11"	2 1/4"	0.054
1'–6"	9"	2'–3"	3'–10"	6'–1"	3'–0"	12"	2 1/2"	0.060
2'–0"	9 1/2"	3'–7 1/2"	2'–6"	6'–1 1/2"	4'–0"	1'–2"	3"	0.072
2'–6"	1'–0"	4'–6"	1'–7 3/4"	6'–1 3/4"	5'–0"	1'–3"	3 1/2"	0.084
3'–0"	1'–3"	5'–3"	2'–10 3/4"	8'–1 3/4"	6'–0"	1'–8"	4"	0.096
3'–6"	1'–9"	5'–3"	2'–11"	8'–2"	6'–6"	1'–10"	4 1/2"	0.108
4'–0"	2'–0"	6'–0"	2'–2"	8'–2"	7'–0"	1'–10"	5"	0.120
4'–6"	2'–3"	5'–5"	2'–11"	8'–4"	7'–6"	2'–0"	5 1/2"	0.132
5'–0"	2'–6"	5'–0"	3'–3"	8'–3"	8'–0"	2'–0"	6"	0.144

NOTE:
SHALL BE IN ACCORDANCE WITH SECTION 701 OF THE R.I. STANDARD SPECIFICATIONS.

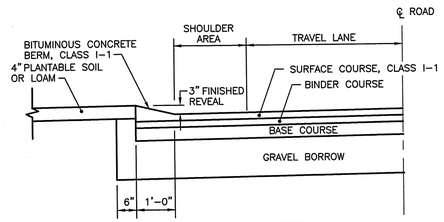
PRECAST CONCRETE FLARED END SECTION — R.I. STANDARD 2.3.0

STABILIZER NOTES:
APPLICATION USED FOR RESIDENTIAL PATHWAYS AND PATIOS.
SUPPLY AND INSTALL STABILIZER MIXTURE OVER 3" THICKNESS OF 3/8" OR 1/4" MINUS DECOMPOSED GRANITE OVER COMPACTED SUBGRADE PER MANUFACTURER'S SPECIFICATIONS– INSURE POSITIVE DRAINAGE AWAY FROM ALL STRUCTURES.

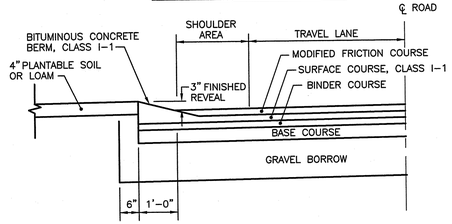
Stabilizer Solutions, Inc. 205 South 28th St., Phoenix, AZ 85034; phone (602) 225–5900, (800) 336–2468; fax (602) 225–5902; website stabilizersolutions.com; email lphubbs@stabilizersolutions.com



WALKING PATH STABILIZER SURFACE
NOT TO SCALE



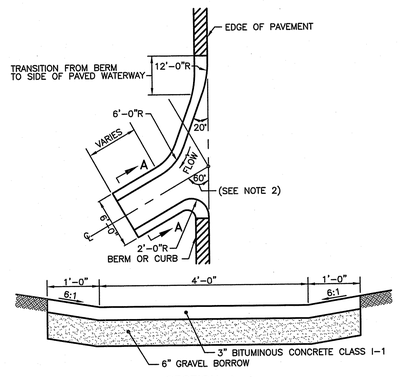
CONSTRUCTION METHOD A



CONSTRUCTION METHOD B

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. BITUMINOUS BERM CAN BE PLACED AT THE SAME TIME THAT THE SURFACE COURSE LAYER IS PLACED ON THE PROJECT ROADWAY, OR IT CAN BE INSTALLED IN A SEPARATE OPERATION.

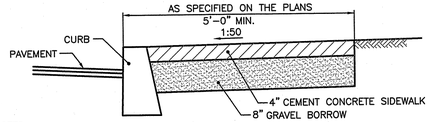
BITUMINOUS BERM — R.I. STANDARD 7.5.1



SECTION A–A

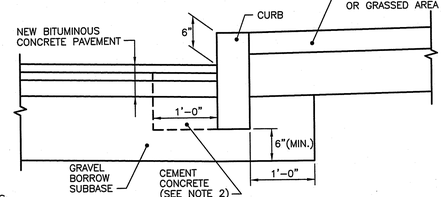
NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 711 OF THE R.I. STANDARD SPECIFICATIONS.
2. WHEN PAVED WATERWAY IS USED AT A LOW POINT THIS ANGLE SHALL BE 90°.

PAVED WATERWAY — R.I. STANDARD 8.4.0



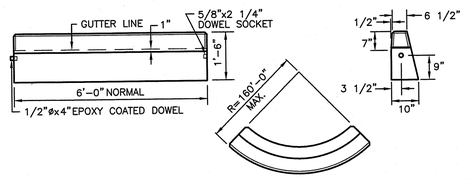
NOTES
1. SHALL BE IN ACCORDANCE WITH SECTION 904 OF THE R.I. STANDARD SPECIFICATIONS.
2. FOR CURB SETTING DETAIL REFERENCE STD. 7.6.0.

CEMENT CONCRETE SIDEWALK — R.I. STANDARD 43.1.0



NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. CEMENT CONCRETE SHALL BE USED ONLY WHEN THE CURB IS SET AFTER THE BASE AND/OR BINDER COURSES ARE IN PLACE, OTHERWISE THE CEMENT CONCRETE WILL BE ELIMINATED AND THE GRAVEL BROUGHT UP TO BOTTOM OF THE BASE COURSE.

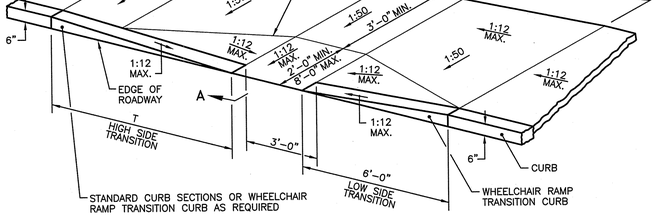
CURB SETTING DETAIL — R.I. STANDARD 7.6.0



CIRCULAR CURB

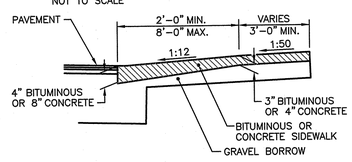
NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR FILLER PIECES TO BE 3'–0".
3. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
4. CIRCULAR CURB IS REQUIRED ON CURVES WITH RADII OF 160'–0" OR LESS. STRAIGHT CURB TO BE USED ON CURVES OF MORE THAN 160'–0"RADIUS.
5. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.

PRECAST CONCRETE CURB — R.I. STANDARD 7.1.0



ISOMETRIC VIEW
NOT TO SCALE

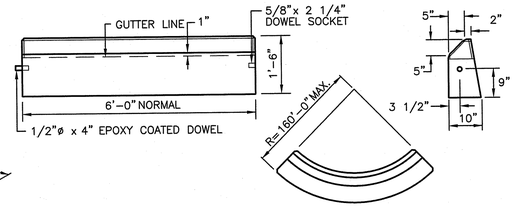
ROADWAY PROFILE GRADE	T (FT.)
0.00	6.0
0.01	7.0
0.02	8.0
0.03	9.5
0.04	11.5
0.05	15.0



SECTION A–A

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 904 OF THE R.I. STANDARD SPECIFICATIONS.
2. WHEN ANY OBSTRUCTION LOCATED IN THE SIDEWALK FALLS WITHIN A CROSSWALK AREA, THE WHEELCHAIR RAMP WILL BE PLACED SUCH THAT THE OBSTRUCTION FALLS OUTSIDE OF THE RAMP.
3. AT NO TIME IS ANY PART OF THE WHEELCHAIR RAMP TO BE LOCATED OUTSIDE OF THE CROSSWALK, AND IT IS TO BE CENTERED WHENEVER POSSIBLE.
4. DRAINAGE FACILITIES ARE TO BE LOCATED UP–GRADE OF ALL WHEELCHAIR RAMPS.
5. LOCATION OF WHEELCHAIR RAMPS IS AS SHOWN ON CONTRACT DRAWINGS.
6. IN NO INSTANCE SHALL THE SIDEWALK CROSS SLOPE EXCEED 1:50 EXCEPT WITHIN THE RAMP AREA.
7. AN UNOBSTRUCTED PATH OF TRAVEL WITH A MINIMUM WIDTH OF 3'–0" SHALL BE MAINTAINED.
8. THE WHEELCHAIR RAMP SLOPE AND SIDE SLOPES (TRANSITIONS), MUST NOT EXCEED 1:12. HOWEVER, THESE SLOPES MAY BE FLATTER THAN 1:12 WHEN WARRANTED BY SURROUNDING CONDITIONS.
9. WHERE THE ROAD PROFILE EXCEEDS 5% THE HIGH SIDE TRANSITION LENGTH (T) SHALL BE EIGHTEEN FEET (18'–0").
10. IN NO CASE, WHERE A STOP LINE IS WARRANTED, SHALL A RAMP BE PLACED BEHIND THE STOP LINE.
11. THE ENTRANCE OF THE WHEELCHAIR RAMP SHALL BE FLUSH WITH THE ROADWAY.
12. THE WHEELCHAIR RAMP SHALL BE CENTERED RADIALLY, OPPOSITE THE RADIUS POINT WHEN POSSIBLE.
13. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR FILLER PIECES TO BE 3'–0" (GREATER LENGTHS PREFERRED).
14. ALL REQUIRED CUTTING OF CURB PIECES TO BE PAID FOR UNDER COST OF CURB.

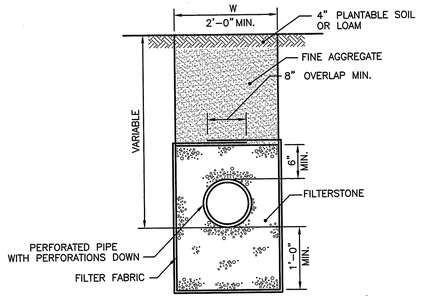
WHEELCHAIR RAMP — R.I. STANDARD 43.3.0



CIRCULAR CURB

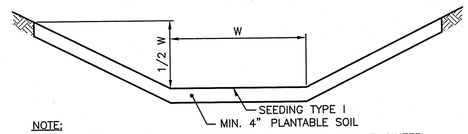
NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR FILLER PIECES TO BE 3'–0".
3. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
4. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.
5. CIRCULAR CURB IS REQUIRED ON CURVES WITH RADII OF 160'–0" OR LESS. STRAIGHT CURB TO BE USED ON CURVES OF MORE THAN 160'–0" RADIUS.

PRECAST CONCRETE SLOPED FACE CURB — R.I. STANDARD 7.2.0



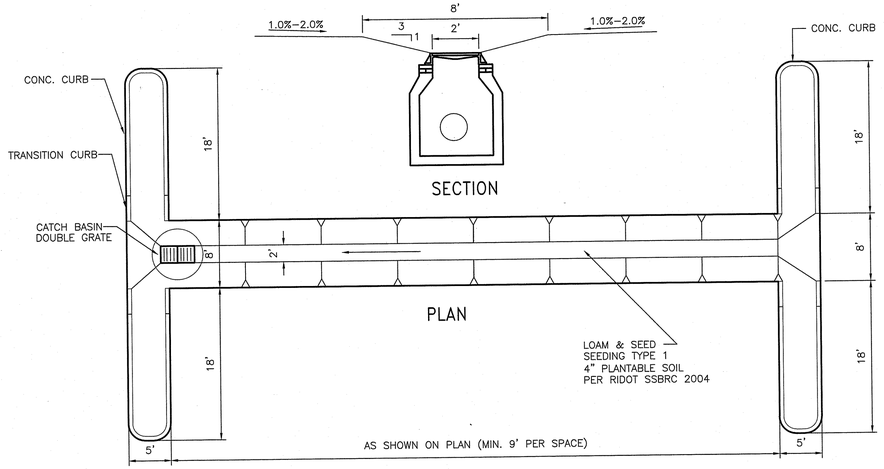
NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 703 OF THE R.I. STANDARD SPECIFICATIONS.
2. WIDTH (W) OF TRENCH = INSIDE DIAMETER OF PIPE + 1'–0" OR 2'–0" WHICH EVER IS GREATER.
3. MINIMUM PIPE DIAMETER 8".
4. DISTANCE DIMENSIONS ARE GIVEN TO THE OUTSIDE DIAMETER OF PIPE.

UNDERDRAIN — R.I. STANDARD 1.1.0



NOTE:
SLOPES MAY VARY TO SUIT CONDITIONS AS PER PLANS OR ENGINEER.

SEEDED DITCH — R.I. STANDARD 8.1.0



TYPICAL PARKING ISLAND SWALE
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: MAY 0 6 2024 FILE #: 2120073
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

NO	DESCRIPTION	DATE	AUTHOR
1	RIDEM COMMENT REVISION	11/2021	EMD

verdantas — PEOPLE FOCUSED FUTURE
1005 MAIN STREET, SUITE 8120
PAWTUCKET, RI 02860
TEL. 401.728.6860

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

RIDEM SUBMITTAL
~~MARCH 2024~~
RI Environmental Management
MAR 15 2024
Office of Water Resources

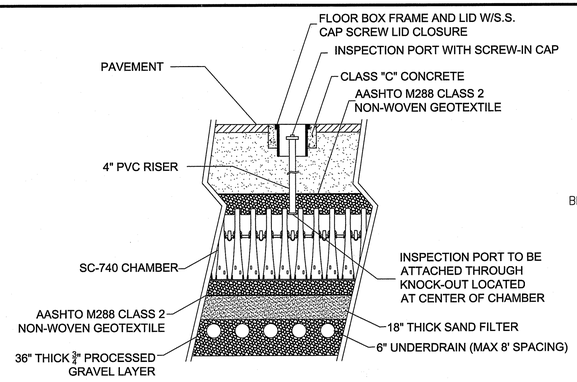
JEFFREY J. PLANTE — No. 4318 — REGISTERED PROFESSIONAL ENGINEER — 03/13/2024

SHEET TITLE:
SITE DETAILS
SHEET 2

A.P. 058 LOT 065 & A.P. 05C LOT 005
58 KINGSTOWN ROAD
RICHMOND, RI 02898

Project No.: 18071
Designed By: RGM
Drawn By: EMD
Checked By: JJP
Date: MARCH 2024
Scale: AS SHOWN

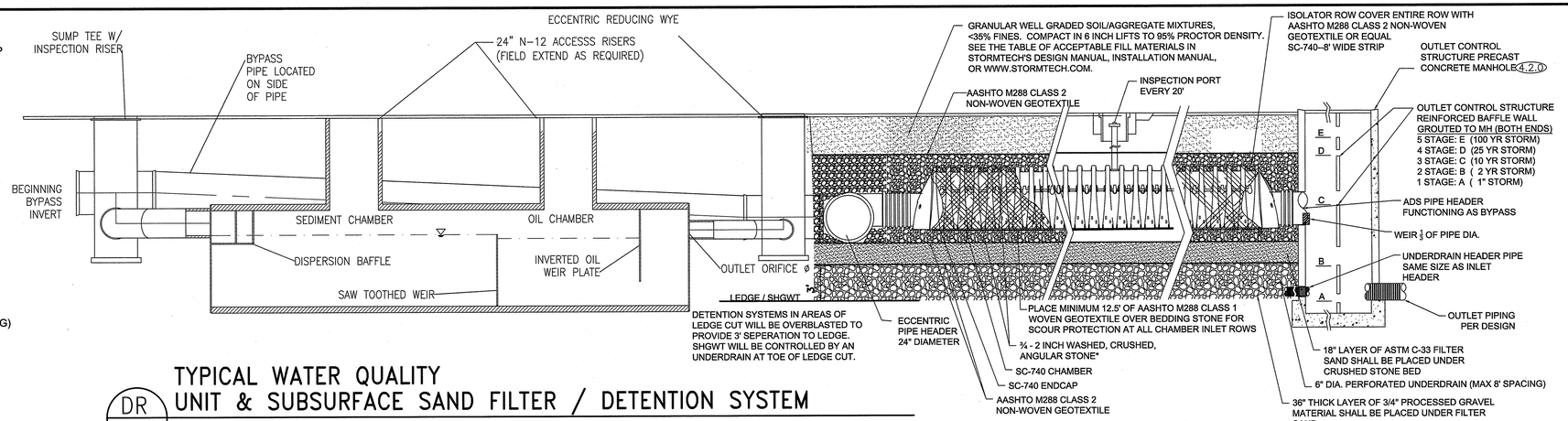
SHEET
40
SHEET 40 OF 58



DR 4

TYPICAL INSPECTION PORT DETAIL

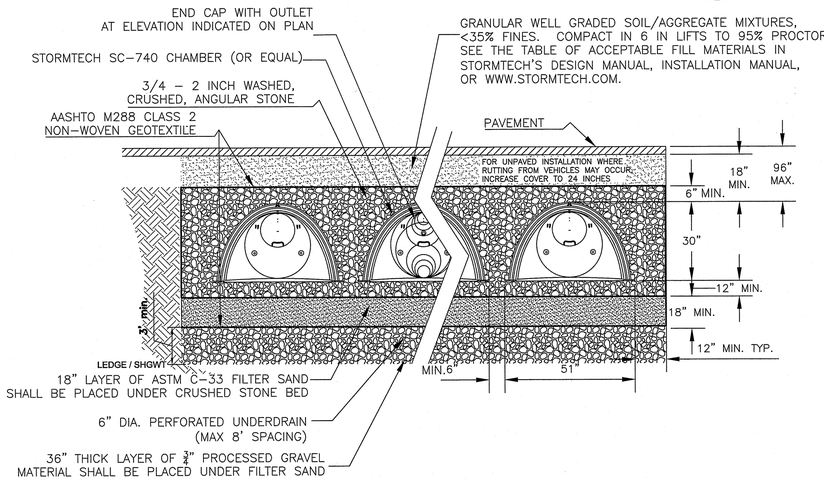
NOT TO SCALE



DR 5

TYPICAL WATER QUALITY UNIT & SUBSURFACE SAND FILTER / DETENTION SYSTEM

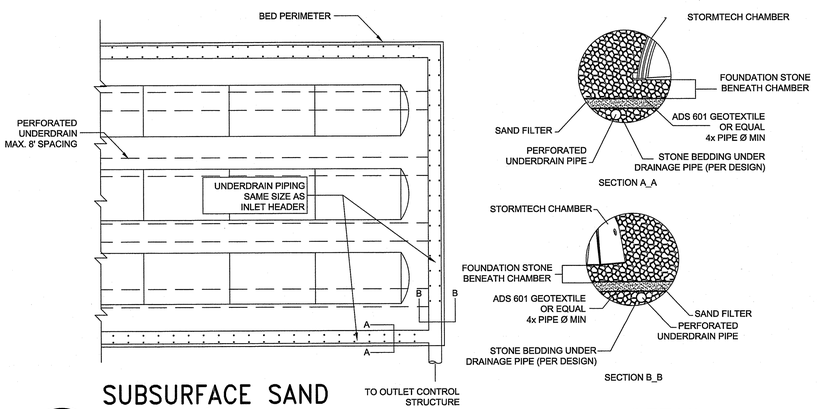
NOT TO SCALE



DR 1

TYPICAL SUBSURFACE SAND FILTER / DETENTION SYSTEM CROSS SECTION

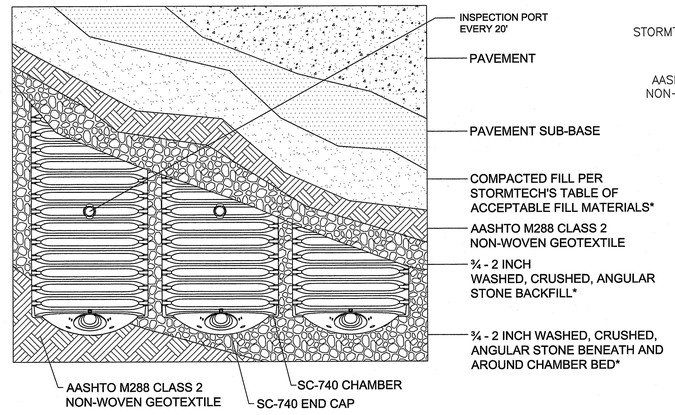
STORMTECH SC-740 CHAMBERSYSTEM (OR EQUAL) NOT TO SCALE



DR 7

SUBSURFACE SAND FILTER / DETENTION SYSTEM UNDERDRAIN DETAIL

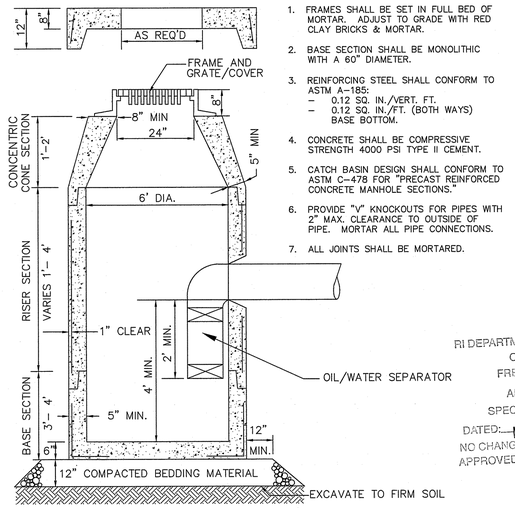
NOT TO SCALE



DR 3

TYPICAL SUBSURFACE SYSTEM PLAN

NOT TO SCALE



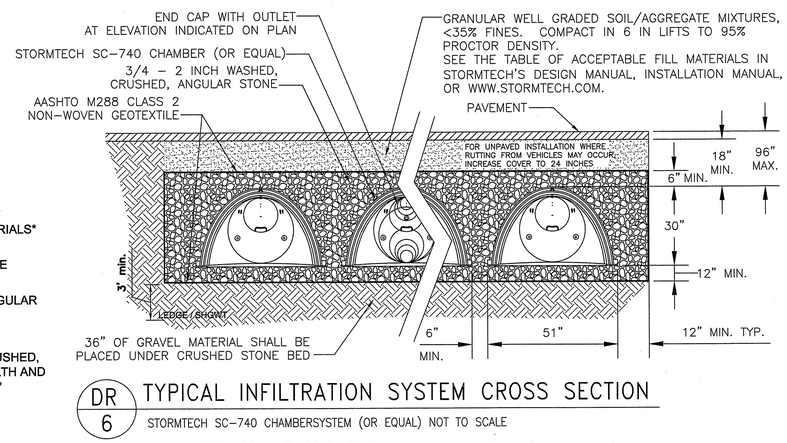
NOTES:

1. FRAMES SHALL BE SET IN FULL BED OF MORTAR. ADJUST TO GRADE WITH RED CLAY BRICKS & MORTAR.
2. BASE SECTION SHALL BE MONOLITHIC WITH A 60" DIAMETER.
3. REINFORCING STEEL SHALL CONFORM TO ASTM A-185:
   - 0.12 SQ. IN./VERT. FT.
   - 0.12 SQ. IN./FT. (BOTH WAYS) BASE BOTTOM.
4. CONCRETE SHALL BE COMPRESSIVE STRENGTH 4000 PSI TYPE II CEMENT.
5. CATCH BASIN DESIGN SHALL CONFORM TO ASTM C-478 FOR "PRECAST REINFORCED CONCRETE MANHOLE SECTIONS."
6. PROVIDE "V" KNOCKOUTS FOR PIPES WITH 2" MAX. CLEARANCE TO OUTSIDE OF PIPE. MORTAR ALL PIPE CONNECTIONS.
7. ALL JOINTS SHALL BE MORTARED.

DR 2

6' DIA. CATCHBASIN W/OIL-WATER SEPEARTOR

NOT TO SCALE

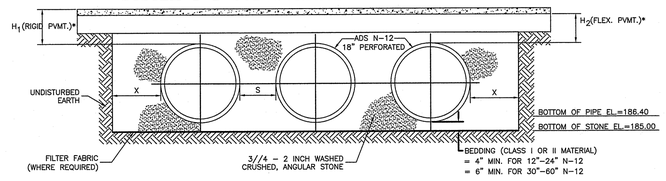


DR 6

TYPICAL INFILTRATION SYSTEM CROSS SECTION

STORMTECH SC-740 CHAMBERSYSTEM (OR EQUAL) NOT TO SCALE

SYSTEM 1-B SUB-SURFACE DETENTION SYSTEM



* H_1, H_2 = 12" FOR UP TO AND INCLUDING 48" N-12
= 24" FOR 60" N-12
* FOR LIVE LOAD INSTALLATIONS PROVIDE 24" COVER FOR 42"-60" N-12

NOMINAL DIAMETER	MINIMUM X	MINIMUM S
12"	0.69'	1.04'
15"	0.68'	1.12'
18"	0.74'	1.36'
24"	0.84'	1.36'
30"	1.5'	1.86'
36"	1.5'	2.21'
42"	1.5'	2.08'
48"	1.5'	2.10'
60"	1.5'	2.46'

NOTES

1. ALL RETENTION AND DETENTION SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST EDITION.
2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL WHEN REQUIRED.
3. FOR MORE DETAILED INFORMATION, SEE ADS TECHNICAL NOTE 2.120, "STORM WATER DETENTION/RETENTION SYSTEM DESIGN".

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
SPECIFIED IN THE LETTER OF APPROVAL
DATED: ~~MAY 0 6 2024~~ FILE #: 2120
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

ACCEPTABLE FILL MATERIALS STORMTECH SC-740 CHAMBER SYSTEMS

MATERIAL LOCATION	DESCRIPTION	AASHTO M43 DESIGNATION	AASHTO M145 DESIGNATION	COMPACTION/DENSITY REQUIREMENT
FILL MATERIAL FROM 18" TO GRADE ABOVE CHAMBERS	ANY SOIL/ROCK MATERIALS, NATIVE SOILS OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	N/A	PREPARE PER ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
ⓒ FILL MATERIAL FOR 6" TO 18" ELEVATION ABOVE CHAMBERS (AND FOR UNPAVED INSTALLATIONS)	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES.	3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	A-1 A-2 A-3	COMPACT IN 6" LIFTS TO A MINIMUM 95% STANDARD PROCTOR DENSITY. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 LBS. DYNAMIC FORCE NOT TO EXCEED 20,000 LBS.
Ⓑ EMBEDMENT STONE SURROUNDING AND TO A 6" ELEVATION ABOVE CHAMBERS	WASHED ANGULAR STONE WITH THE MAJORITY OF PARTICLES BETWEEN ¾ - 2 INCH	3, 357, 4, 467, 5, 56, 57	N/A	NO COMPACTION REQUIRED
Ⓐ FOUNDATION STONE BELOW CHAMBERS	WASHED ANGULAR STONE WITH THE MAJORITY OF PARTICLES BETWEEN ¾ - 2 INCH	3, 357, 4, 467, 5, 56, 57	N/A	PLATE COMPACT OR ROLL TO ACHIEVE A 95% STANDARD PROCTOR DENSITY

PLEASE NOTE: THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE WASHED CRUSHED ANGULAR. FOR EXAMPLE, THE STONE MUST BE SPECIFIED AS WASHED, CRUSHED, ANGULAR NO. 4 STONE.

NO	DESCRIPTION	DATE	AUTHOR
1	RIDEM COMMENT REVISION	11/2021	EMD

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PEOPLE FOCUSED FUTURE
1005 MAIN STREET, SUITE 8120
PAWTUCKET, RI 02860
TEL. 401.728.6860

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

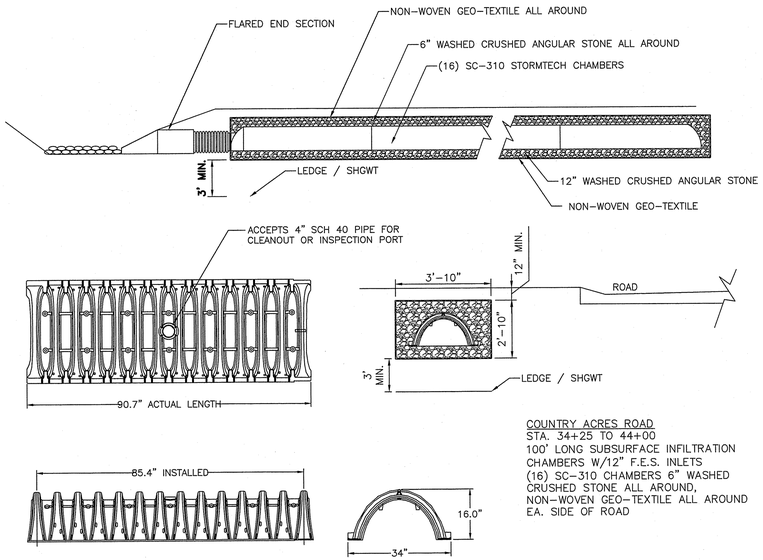
RIDEM
SUBMITTAL
~~MARCH 2024~~
RI Environmental Management
MAR 15 2024
Office of Water Resources

JEFFREY J. PLANTE
No. 4318
REGISTERED PROFESSIONAL ENGINEER
03/13/2024

SHEET TITLE:
SITE DETAILS
SHEET 3
A.P. 059 LOT 065 & A.P. 05C LOT 005
58 KINGSTOWN ROAD
RICHMOND, RI 02898

Project No.: 18071
Designed By: RCM
Drawn By: EMD
Checked By: JJP
Date: MARCH 2024
Scale: AS SHOWN

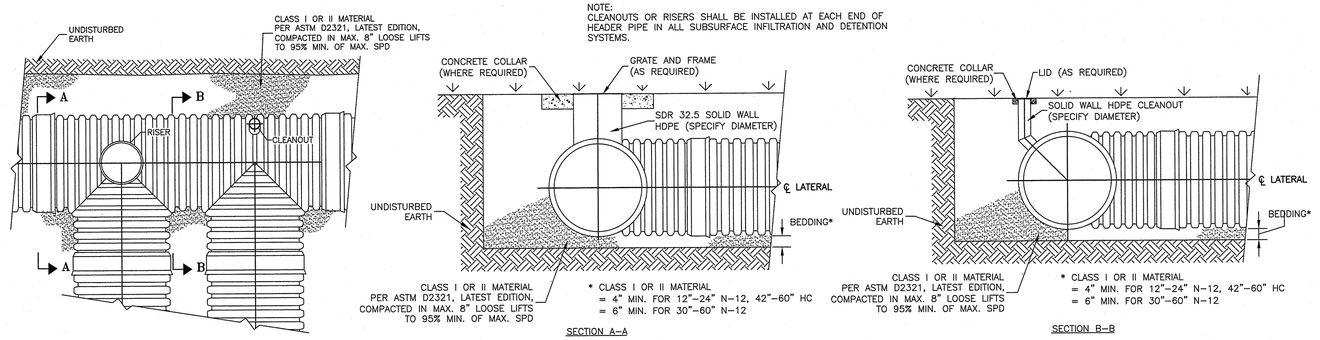
SHEET
41
SHEET 41 OF 58



COUNTRY ACRES ROAD
STA. 34+25 TO 44+00
100' LONG SUBSURFACE INFILTRATION CHAMBERS W/12" F.E.S. INLETS
(16) SC-310 CHAMBERS 6" WASHED CRUSHED STONE ALL AROUND,
NON-WOVEN GEO-TEXTILE ALL AROUND EA. SIDE OF ROAD

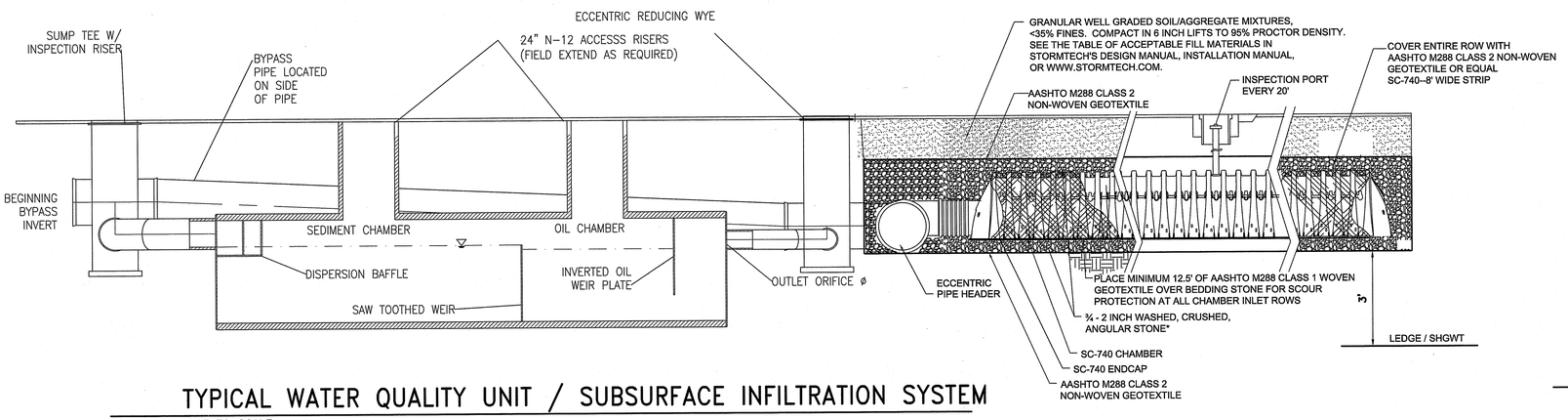
SUBSURFACE INFILTRATION 5-B DETAIL (COUNRTY ACRES RD.)

NOT TO SCALE



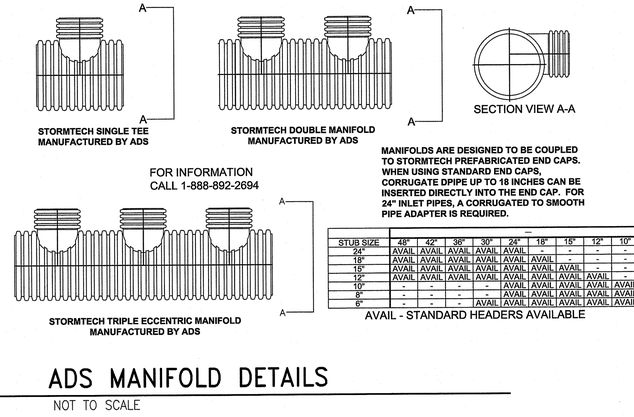
ADS RISER AND CLEANOUT DETAILS

NOT TO SCALE



TYPICAL WATER QUALITY UNIT / SUBSURFACE INFILTRATION SYSTEM

NOT TO SCALE



STUB SIZE	48"	42"	36"	30"	24"	18"	15"	12"	10"	8"
24"	AVAIL	AVAIL	AVAIL	AVAIL	AVAIL	-	-	-	-	-
18"	AVAIL	AVAIL	AVAIL	AVAIL	AVAIL	AVAIL	-	-	-	-
15"	AVAIL	AVAIL	AVAIL	AVAIL	AVAIL	AVAIL	AVAIL	-	-	-
12"	AVAIL	AVAIL	AVAIL	AVAIL	AVAIL	AVAIL	AVAIL	AVAIL	-	-
10"	-	-	-	-	AVAIL	AVAIL	AVAIL	AVAIL	AVAIL	-
8"	-	-	-	-	AVAIL	AVAIL	AVAIL	AVAIL	AVAIL	AVAIL
6"	-	-	-	AVAIL	AVAIL	AVAIL	AVAIL	AVAIL	AVAIL	AVAIL

AVAIL - STANDARD HEADERS AVAILABLE

ADS MANIFOLD DETAILS

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: MAY 06 2024 FILE #: 24-0093
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

NO	DESCRIPTION	DATE	AUTHOR
1	RIDEM COMMENT REVISION	11/2021	EMD

verdantas
PEOPLE FOCUSED FUTURE
1005 MAIN STREET, SUITE 8120
PAWTUCKET, RI 02860
TEL. 401.728.8860

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

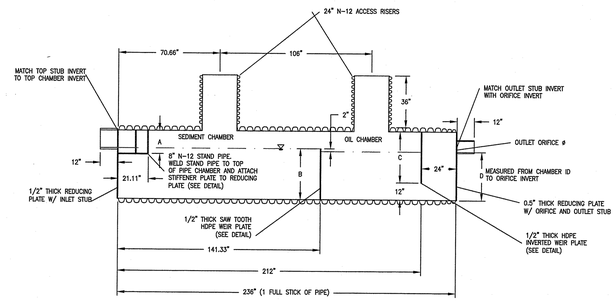
RIDEM SUBMITTAL
MARCH 2024
RI Environmental Management
MAR 15 2024
Office of Water Resources

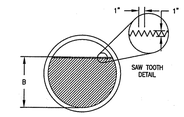
JEFFREY J. PLANTE
No. 4918
REGISTERED PROFESSIONAL ENGINEER
3/15/2024

SHEET TITLE:
SITE DETAILS
SHEET 4
A.P. 05B LOT 065 & A.P. 05C LOT 005
58 KINGSTOWN ROAD
RICHMOND, RI 02898

Project No.: 18071
Designed By: RGM
Drawn By: EMD
Checked By: JJP
Date: MARCH 2024
Scale: AS SHOWN

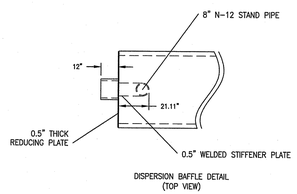
SHEET
42
SHEET 42 OF 58





ADS MODEL #	MAIN PIPE DIA.	INLET STUB DIA.	OUTLET STUB DIA.	ORIFICE DIA.	A	B	C	D
3620WQAXX	36"	10"	8"	6.56"	13.9"	26.1"	24"	24.1"
3620WQBXX	36"	10"	6"	4.48"	13.9"	26.1"	24"	24.1"
4220WQAXX	42"	12"	8"	6.75"	16.1"	29.3"	29.4"	27.3"
4220WQBXX	42"	12"	6"	4.76"	16.1"	29.3"	29.4"	27.3"
4820WQAXX	48"	12"	8"	7.71"	16.1"	35.4"	35.6"	33.4"
4820WQBXX	48"	12"	6"	5.45"	16.1"	35.4"	35.6"	33.4"
6020WQAXX	60"	15"	10"	8.42"	18.9"	44.5"	47.5"	42.5"
6020WQBXX	60"	15"	8"	5.94"	18.9"	44.5"	47.5"	42.5"

XX DENOTES A BY-PASS SIZE OF 15", 18", 24", 30", 36", 42", 48", OR 60"
XX=OO DENOTES UNITS W/OUT A BY-PASS. UNITS W/OUT A BY-PASS DO NOT HAVE ORIFICE HOLES ON THE OUTLET. THE OUTLET PIPE ø WILL MATCH THE INLET PIPE ø.



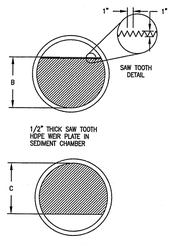
NOTES:

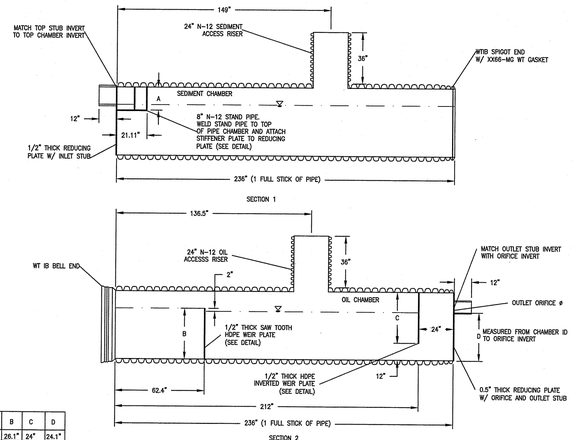
1. ALL DIMENSIONS ARE NOMINAL

2. ALL FITTING CONNECTIONS WILL BE MADE USING A STANDARD BELL/BELL OR SPLIT COUPLER

WQ 1 TYPICAL 20' WATER QUALITY UNIT DETAIL

ADS WATER QUALITY UNIT (OR EQUAL) NOT TO SCALE





DISPERSION BAFFLE DETAIL (TOP VIEW)

ADS MODEL #	MAIN PIPE DIA.	INLET STUB DIA.	OUTLET STUB DIA.	ORIFICE DIA.	A	B	C	D
3640WQAXX	36"	10"	10"	9.58"	13.9"	26.1"	24"	24.1"
3640WQBXX	36"	10"	8"	6.77"	13.9"	26.1"	24"	24.1"
4240WQAXX	42"	12"	12"	9.81"	16.1"	29.2"	29.4"	27.2"
4240WQBXX	42"	12"	8"	6.94"	16.1"	29.2"	29.4"	27.2"
4840WQAXX	48"	12"	12"	11.21"	16.1"	35.4"	35.6"	33.4"
4840WQBXX	48"	12"	8"	7.93"	16.1"	35.4"	35.6"	33.4"
6040WQAXX	60"	15"	15"	12.23"	18.9"	44.5"	47.5"	42.5"
6040WQBXX	60"	15"	10"	8.65"	18.9"	44.5"	47.5"	42.5"

XX DENOTES A BY-PASS SIZE OF 15", 18", 24", 30", 36", 42", 48", OR 60"
XX=OO DENOTES UNITS W/OUT A BY-PASS. UNITS W/OUT A BY-PASS DO NOT HAVE ORIFICE HOLES ON THE OUTLET. THE OUTLET PIPE ø WILL MATCH THE INLET PIPE ø.

WQ 2 TYPICAL 40' WATER QUALITY UNIT DETAIL

ADS WATER QUALITY UNIT (OR EQUAL) NOT TO SCALE

NOTES:

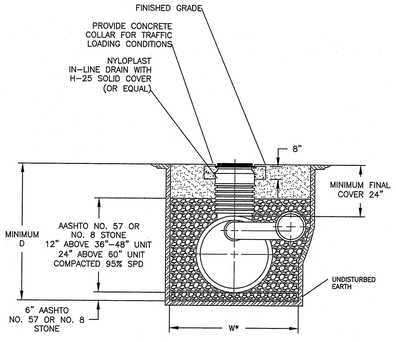
1. THE UNIT WILL BE SHIPPED AS 2 PIECES. SECTION 1 AND SECTION 2 WILL BE FIELD CONNECTED

2. ALL DIMENSIONS ARE NOMINAL

3. ALL FITTING CONNECTIONS WILL BE MADE USING A STANDARD BELL/BELL OR SPLIT COUPLER

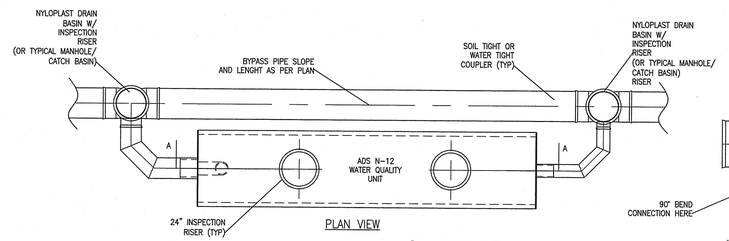
ADS UNIT SIZE	MINIMUM D	MINIMUM W*
36"	4.5'	6.5'
42"	5.0'	7.0'
48"	5.5'	7.5'
60"	7.5'	8.5'

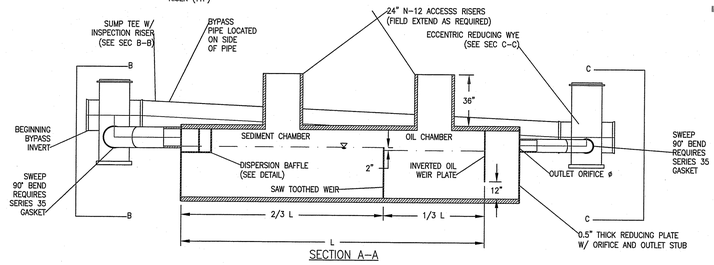
* TRENCH WIDTH DOES NOT ACCOUNT FOR BY-PASS PIPE, THIS ESTIMATE IS FOR THE MAIN UNIT ONLY

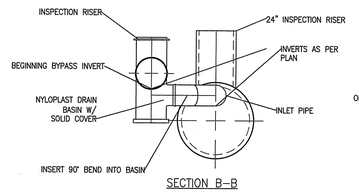


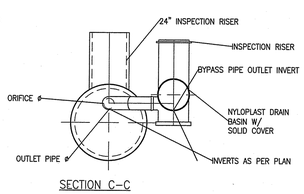
WQ 4 TYPICAL WATER QUALITY UNIT TRENCH DETAIL

ADS WATER QUALITY UNIT (OR EQUAL) NOT TO SCALE



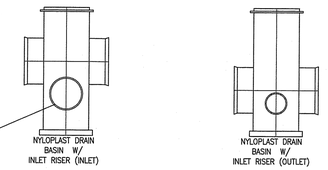


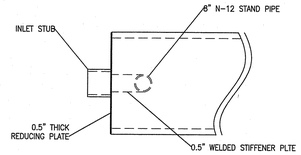




(*) FITTING DIMENSIONS VARY WITH UNIT DESIGN, DIMENSIONS CAN BE PROVIDED ONCE DESIGN IS EVALUATED.

BYPASS FITTINGS *





NOTES:

1. PLEASE ACCOUNT FOR FALL FROM THE BEGINNING BY-PASS INLET INVERT TO BY-PASS OUTLET INVERT. CONSULT YOUR ADS REPRESENTATIVE FOR THE SLOPE IN THE BY-PASS.

2. NYLOPLAST IN-LINE DRAIN AND GRATE MAY BE USED FOR SURFACE INLETS.

3. BY-PASS FITTINGS COUPLER CONNECTION SHALL UTILIZE THE SAME COUPLERS AS THE STORM SEWER LINE.

4. UNITS GREATER THAN 20 FEET WILL BE FIELD CONNECTED USING AN INLINE WT BELL AND SPIGOT JOINT. PROPERLY LUBE THE BELL AND SPIGOT GASKET PRIOR TO ASSEMBLY.

WQ 3 TYPICAL WATER QUALITY UNIT BYPASS INSTALLATION DETAIL

ADS WATER QUALITY UNIT (OR EQUAL) NOT TO SCALE

ADS WATER QUALITY UNIT SCHEDULE:

IDENTIFICATION #	DIAMETER	LENGTH	OUTLET ORIFICE DIAMETER	SEDIMENT STORAGE
ADS WQU 1-1	60"	40'	10.8"	385 CF
ADS WQU 2-1	60"	44'	11.4"	385 CF
ADS WQU 3-C	42"	10'	4.0"	83 CF
ADS WQU 3-D	42"	10'	4.7"	83 CF
ADS WQU 7-A	60"	20'	9.3"	385 CF
ADS WQU 7-B	48"	15'	6.6"	245 CF
ADS WQU 7-C	48"	15'	7.2"	245 CF
ADS WQU 7-D	48"	15'	7.5"	245 CF
ADS WQU 9-A	42"	15'	6.4"	175 CF
ADS WQU 9-B	36"	10'	3.5"	65 CF
ADS WQU 9-C	42"	20'	7.0"	175 CF
ADS WQU 10-B	60"	60'	16.5"	770 CF
ADS WQU 10-C	48"	30'	10.5"	245 CF
ADS WQU 10-D	48"	20'	8.2"	245 CF
ADS WQU 10-E	48"	10'	4.1"	245 CF
ADS WQU 10-F	60"	40'	13.5"	770 CF
ADS WQU 10-G	48"	30'	11.0"	245 CF
ADS WQU 11-A	48"	15'	7.0"	116 CF
ADS WQU 11-B	48"	15'	8.0"	245 CF

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL
DATED: MAY 06 2024 FILE #: 2-1-0093
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

NO	DESCRIPTION	DATE	AUTHOR
1	RIDEM COMMENT REVISION	11/2021	EMD

verdantas
PEOPLE FOCUSED FUTURE
1005 MAIN STREET, SUITE 8120
PAWTUCKET, RI 02860
TEL. 401.728.6860

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

RIDEM
SUBMITTAL
RI Environmental Management
MARCH 2024
MAR 15 2024
Office of Water Resources

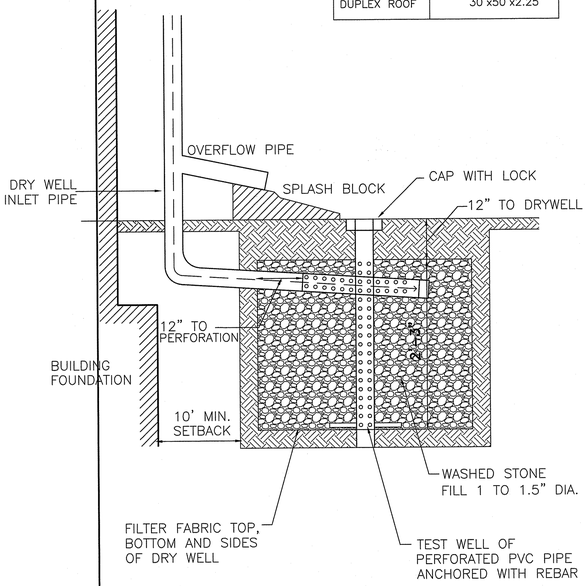
JEFFREY J. PLANTE
No. 4618
REGISTERED PROFESSIONAL ENGINEER
03/13/2024

SHEET TITLE:
SITE DETAILS
SHEET 5
A.P. 05B LOT 065 & A.P. 05C LOT 005
56 KINGSTOWN ROAD
RICHMOND, RI 02898

Project No.: 18071
Designed By: RCM
Drawn By: EMD
Checked By: JJP
Date: MARCH 2024
Scale: AS SHOWN

SHEET
43
SHEET 43 OF 58

SUBSURFACE SYSTEM	CRUSHED STONE BED
DUPLEX ROOF	30'x50'x2.25'

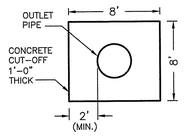


NOTE: 1. USE 6" DIA. SDR35 PVC OR SCH40 PVC FOR UNDERGROUND PIPING

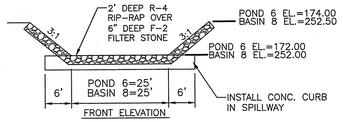
DUPLEX ROOFTOP SUBSURFACE INFILTRATION SYSTEM

NOT TO SCALE

EXTENDED DETENTION POND	OUTLET CONTROL STRUCTURE											
	ORIFICES											
	W.Q.		2 YR.		10 YR.		25 YR.		100 YR.		EMERGENCY OVERFLOW	
	SIZE	ELEV.	SIZE	ELEV.	SIZE	ELEV.	SIZE	ELEV.	SIZE	ELEV.	SIZE	ELEV.
6	2.3"	162.00	8"	164.40	12"	166.40	8"	168.40	C.B. GRATE	170.50	25' SPILLWAY	171.00



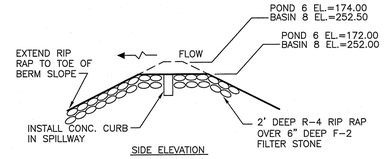
ELEVATION



FRONT ELEVATION

EMERGENCY SPILLWAY

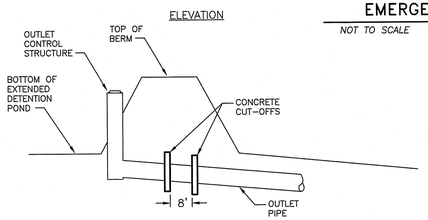
NOT TO SCALE



SIDE ELEVATION

EMERGENCY SPILLWAY

NOT TO SCALE

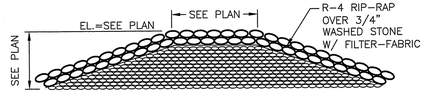


SECTION

NOTE: USE A WELL GRADED, FINE TEXTURED GRAVEL BEDDING AROUND PIPE FOR 10' IN EACH DIRECTION OF CONCRETE CUT-OFF.

CONCRETE CUT-OFF DETAIL

NOT TO SCALE



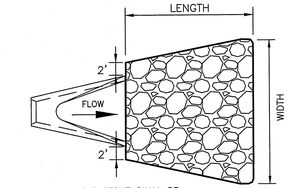
ALL RIP RAP STONE SHALL BE:

R-4 RIP RAP:
100% PASS – 14"
0–50% PASS – 7"
0–15% PASS – 4"

DEPTH SHALL BE A MINIMUM OF 1.0 FEET

STONE & RIP RAP BERM BETWEEN SEDIMENT FOREBAY AND EXTENDED DETENTION POND

NOT TO SCALE



ALL RIP RAP STONE SHALL BE:

FS–2 FILTER STONE:
100% PASS – 2"
0–50% PASS – NO.4
0–15% PASS – NO.16

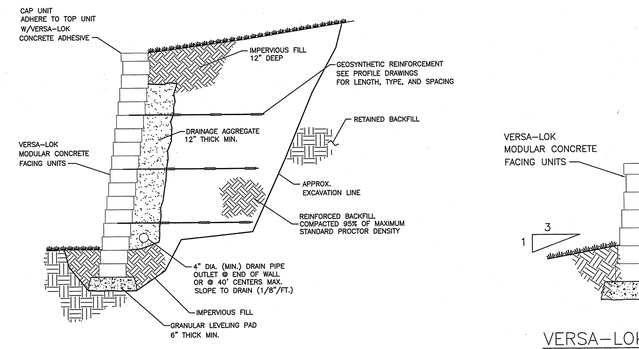
R–4 RIP RAP:
100% PASS – 14"
0–50% PASS – 7"
0–15% PASS – 4"

DEPTH SHALL BE A MINIMUM OF 1.0 FEET

LOCATION OF RIP RAP OUTLET	LENGTH	WIDTH
SYSTEM 1–B 12" F.E.S. DISCHARGE INV.=178.00	12'	15'
SYSTEM 2–A 24" F.E.S. DISCHARGE INV.=178.25	13'	16'
SYSTEM 6–A 36" F.E.S. DISCHARGE INV.=170.00	27'	34'
SYSTEM 6–A 24" F.E.S. EMERGENCY OVERFLOW INV.=156.00	27'	34'
SYSTEM 7–A,B,C, 24" F.E.S. DISCHARGE INV.=132.00	27'	33'
SYSTEM 8–A 24" F.E.S. DISCHARGE INV.=248.00	32'	38'
SYSTEM 10–B,C,D,E 24" F.E.S. DISCHARGE INV.=158.46	24'	30'

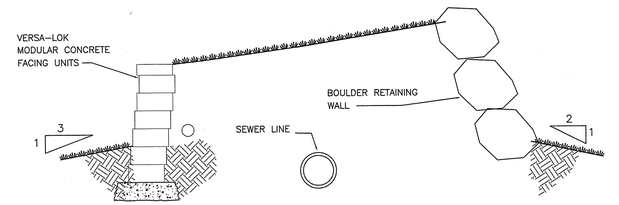
FLARED END OUTLET RIP RAP DETAIL

NOT TO SCALE



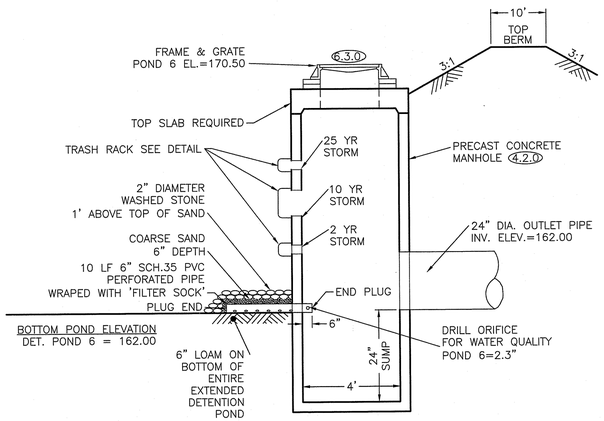
TYPICAL SECTION–REINFORCED RETAINING WALL

MODULAR CONCRETE UNIT
SCALE: NONE



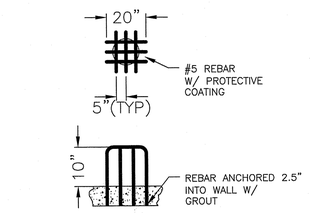
VERSA–LOKRETAINING WALL SECTION @ SEWER LINE

SCALE: NONE



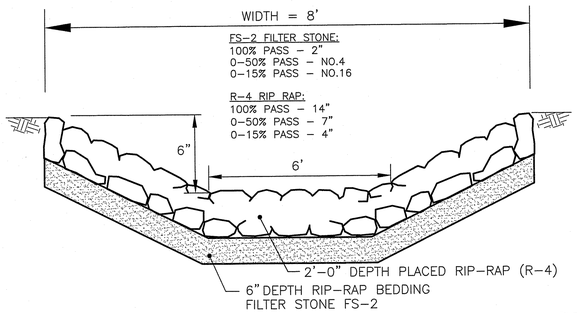
EXTENDED DETENTION POND OUTLET CONTROL STRUCTURE

NOT TO SCALE



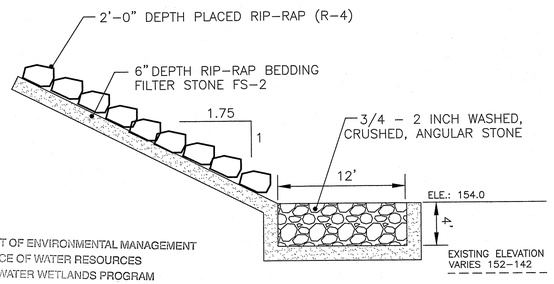
DETENTION BASIN TRASH RACK DETAIL 1

NOT TO SCALE



DETENTION BASIN RIP–RAP DETAIL LOW FLOW CHANNEL FROM SEDIMENT FOREBAY TO BOTTOM OF DETENTION POND

NOT TO SCALE



INFILTRATION TRENCH

NOT TO SCALE

NOTE: IF LEDGE IS ENCOUNTERED DURING GRADING/INSTALLATION OF THE INFILTRATION TRENCH. LEDGE SHALL BE OVERBLASTED TO PROVIDE 3' SEPERATION TO LEDGE.

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL
DATED: MAY 0 6 2024 FILE #: 2020037
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL. APPROVED PLANS MUST BE AT CONSTRUCTION SITE.

NO	DESCRIPTION	DATE	AUTHOR
1	RIDEM COMMENT REVISION	11/2021	EMD

verdantas
PEOPLE FOCUSED FUTURE
1005 MAIN STREET, SUITE 8120
PAWTUCKET, RI 02860
TEL. 401.728.6860

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

RIDEM SUBMITTAL MARCH 2024

RI Environmental Management
MAR 15 2024
Office of Water Resources

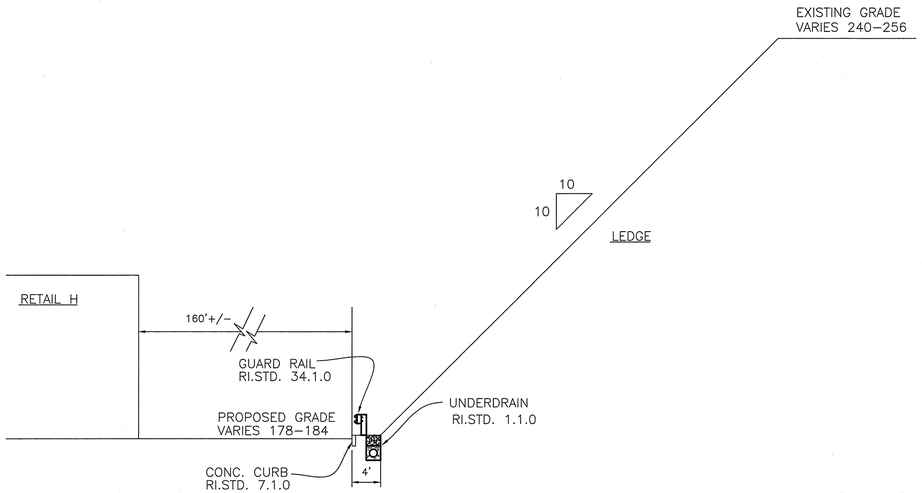
JEFFREY J. PONTE
No. 4918
REGISTERED PROFESSIONAL ENGINEER
3/15/2024

SHEET TITLE:
SITE DETAILS SHEET 6

A.P. 05B LOT 065 & A.P. 05C LOT 005
38 KINGSTOWN ROAD
RICHMOND, RI 02898

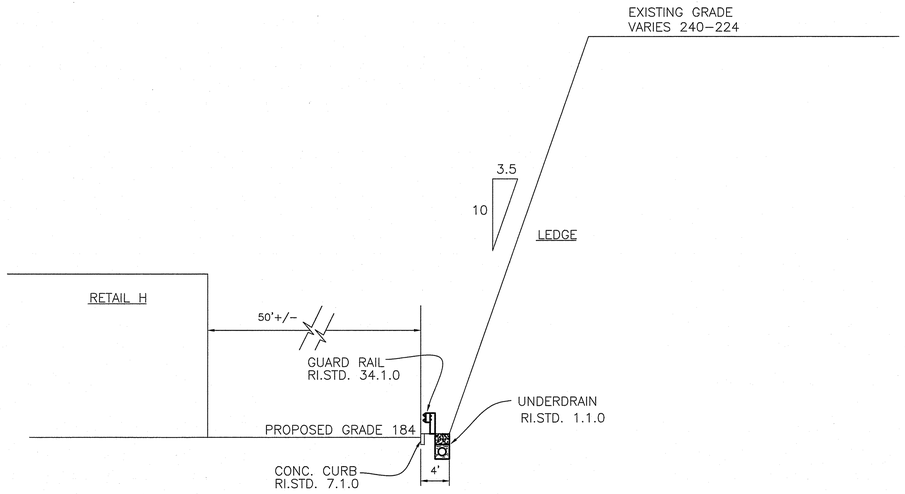
Project No.: 18071
Designed By: RGM
Drawn By: EMD
Checked By: JJP
Date: MARCH 2024
Scale: AS SHOWN

SHEET
44
SHEET 44 OF 58



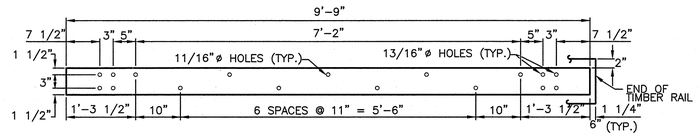
LEDGE CUT DETAIL (Side of Bldg)

NOT TO SCALE



LEDGE CUT DETAIL (Rear of Bldg)

NOT TO SCALE



STEEL RAIL DETAIL
6"x3/8"x9'–9"

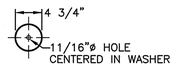
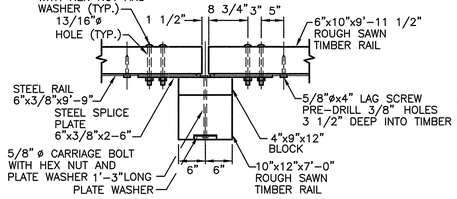
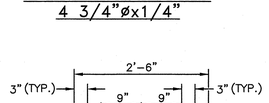


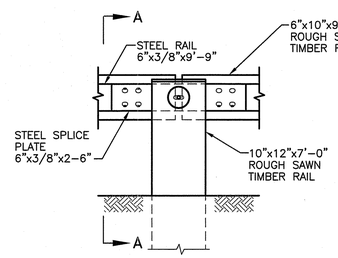
PLATE WASHER DETAIL
4 3/4"øx1/4"



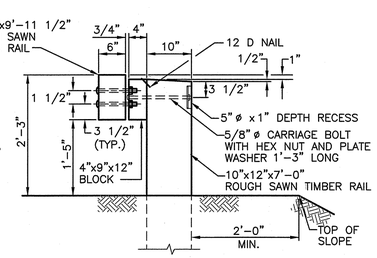
POST CONNECTION PLAN



STEEL SPLICE PLATE DETAIL
6"x3/8"x2'–6"



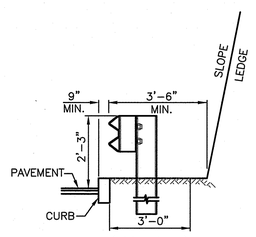
POST CONNECTION ELEVATION



SECTION A–A

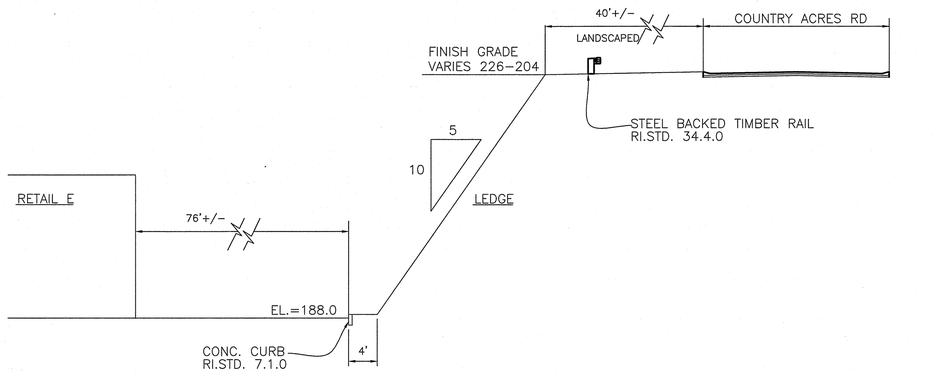
NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 900 OF THE R.I. STANDARD SPECIFICATIONS.
2. ALL STRUCTURAL STEEL AND FASTENER HARDWARE SHALL BE WEATHERING STEEL AS SPECIFIED.

STEEL BACKED TIMBER GUARDRAIL — R.I. STANDARD 34.4.0



NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.
2. TREAT THIS AREA WITH HERBICIDE AFTER THE GUARD RAIL INSTALLATION AS REQUIRED.

TYPICAL GUARDRAIL INSTALLATION — R.I. STANDARD 34.1.0



LEDGE CUT DETAIL

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: MAY 6 2024 FILE #: 2100693
NO CHANGES ARE VALID WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

NO	DESCRIPTION	DATE	AUTHOR
1	RIDEM COMMENT REVISION	11/2021	EMD

verdantas
PEOPLE FOCUSED FUTURE

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PAWTUCKET, RI 02860
TEL. 401.728.6860

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

RIDEM
SUBMITTAL
RI Department of Environmental Management
MAR 15 2024
Office of Water Resources

JEFFREY J. PLANTE
No. 4016
REGISTERED PROFESSIONAL ENGINEER
3/13/2024

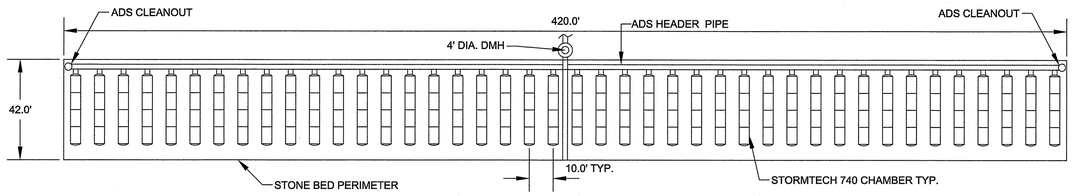
SHEET TITLE:
SITE DETAILS
SHEET 7

A.P. 059 LOT 065 & A.P. 05C LOT 005
58 KINGSTOWN ROAD
RICHMOND, RI 02898

Project No.:	18071
Designed By:	RGM
Drawn By:	EMD
Checked By:	JJP
Date:	MARCH 2024
Scale:	AS SHOWN

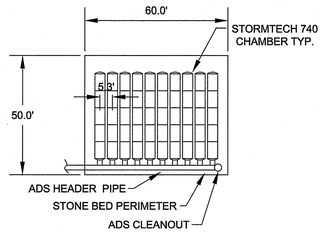
SHEET
45

SHEET 45 OF 58



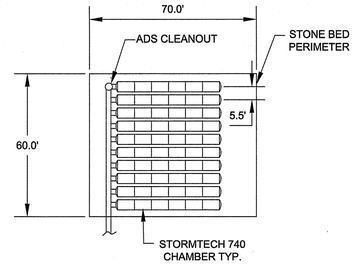
SYSTEM 1A – SUBSURFACE INFILTRATION LAYOUT

NOT TO SCALE



SYSTEM 3A SUBSURFACE INFILTRATION LAYOUT

NOT TO SCALE



SYSTEM 3B SUBSURFACE INFILTRATION LAYOUT

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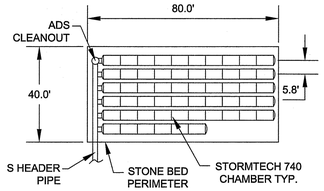
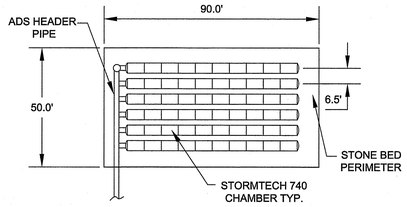


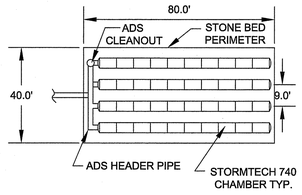
SYSTEM 3C SUBSURFACE INFILTRATION LAYOUT

NOT TO SCALE



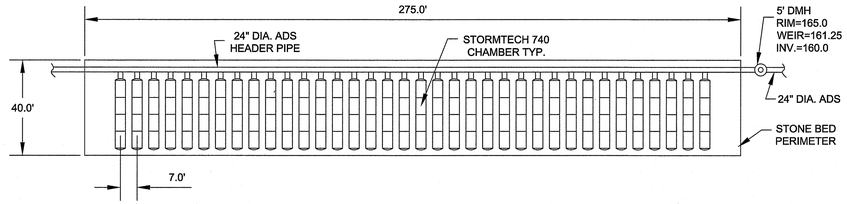
SYSTEM 3D SUBSURFACE INFILTRATION LAYOUT

NOT TO SCALE



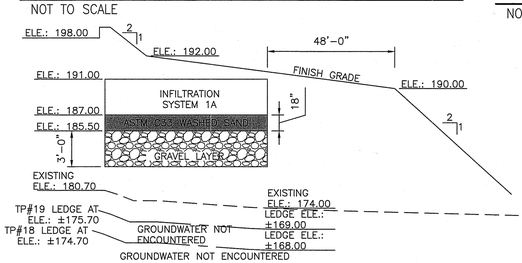
SYSTEM 9B SUBSURFACE INFILTRATION LAYOUT

NOT TO SCALE



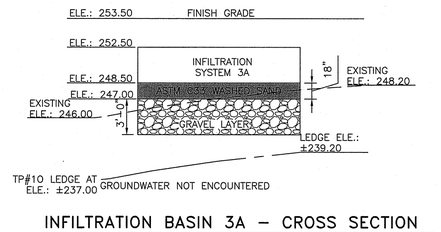
SYSTEM 6A – SUBSURFACE INFILTRATION LAYOUT

NOT TO SCALE



INFILTRATION BASIN 1A – CROSS SECTION

NOT TO SCALE



INFILTRATION BASIN 3A – CROSS SECTION

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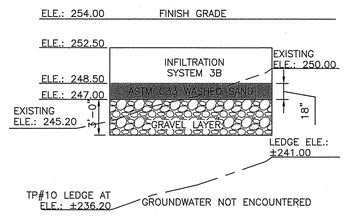
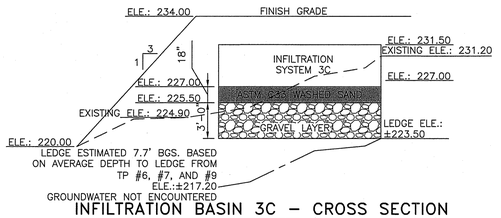


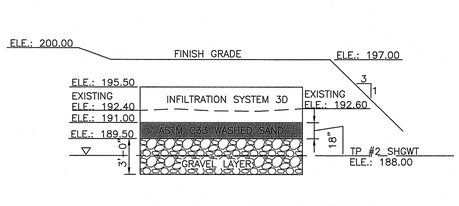
INFILTRATION BASIN 3B – CROSS SECTION

NOT TO SCALE



INFILTRATION BASIN 3C – CROSS SECTION

NOT TO SCALE



INFILTRATION BASIN 3D – CROSS SECTION

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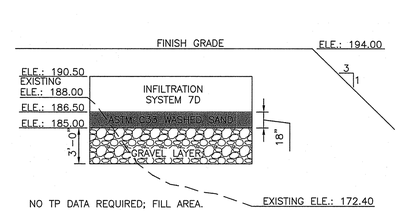
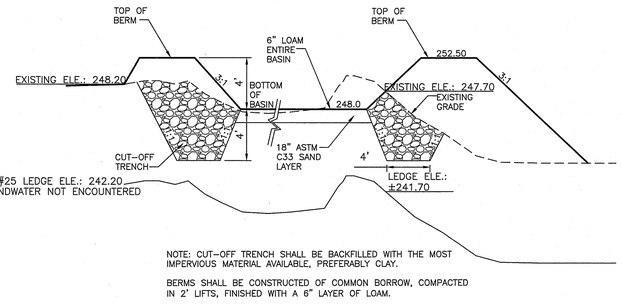


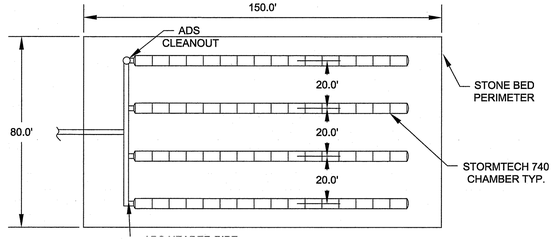
INFILTRATION BASIN 7D – CROSS SECTION

NOT TO SCALE



INFILTRATION BASIN 8A – CROSS SECTION

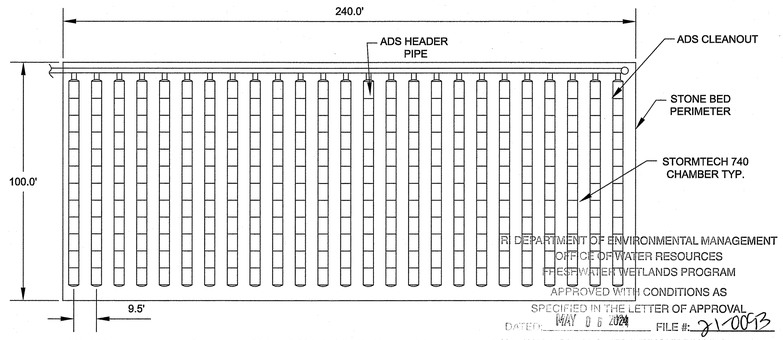
NOT TO SCALE



SYSTEM 9C – SUBSURFACE INFILTRATION LAYOUT

NOT TO SCALE

SYSTEM 7D



SYSTEM 7D – SUBSURFACE INFILTRATION LAYOUT

NOT TO SCALE

SUBSURFACE INFILTRATION SYSTEM DATA

SUBSURFACE SYSTEM	CRUSHED STONE BED	NUMBER OF CHAMBERS	INVERT OF CHAMBERS	INVERT OF STONE BED	LEDGE/SHGWT ELEVATION	HYDRO GROUP	HEADER PIPE SIZE	WATER QUALITY UNIT
1–A	42'x420'x4'	168	188.00	187.00	169.00–175.70	B	30"	1–I
3–A	50'x60'x4'	50	249.50	248.50	237.00–239.20	B	24"	NONE
3–B	70'x60'x4'	60	249.50	248.50	236.20–241.00	B	24"	NONE
3–C	40'x80'x4.5'	56	228.00	227.00	217.20–223.50	B	24"	3–B
3–D	90'x50'x4.5'	60	192.00	191.00	188.00 (SHGWT)	B	24"	3–C
6–A	40'x275'x4'	144	160.50	159.50	N/A FILL AREA	B	24"	NONE
7–D	100'X240'x4'	300	187.50	186.50	N/A FILL AREA	B	24"	7–D
9–A	60'X240'X5'	224	144.50	143.00	N/A FILL AREA	B	24"	9–A
9–B	40'x80'x4'	40	136.00	135.00	N/A FILL AREA	B	24"	9–B
9–C	80'x150'x4'	64	162.50	161.50	N/A FILL AREA	B	24"	9–C
10–F	140'x240'x6'	320	173.00	170.00	162.30–170.30	B	36"	10–F
10–G	170'135'x5'	400	161.00	160.00	147.30–156.00	B	24"	10–G
11–A	75'x150'x4.5'	60	131.00	130.00	119.00 (SHGWT)	B	24"	11–A
11–B	60'x145'x4.5'	80	129.00	128.00	119.00 (SHGWT)	B	24"	11–B
12–A	40'x40'x5'	24	143.00	142.00	137.00 (SHGWT)	B	18"	NONE

NOTE: CHAMBERS TO BE SPACED EVENLY THROUGHOUT CRUSHED STONE BED. STONE SHALL BE 3/4"–2" WASHED, ANGULAR.
INFILTRATION SYSTEMS SHALL HAVE AN ADDITIONAL 3' LAYER OF 3/4" PROCESSED GRAVEL PLACED UNDER 18" LAYER OF ASTM C–33 FILTER SAND

NO	DESCRIPTION	DATE	AUTHOR
1	RIDEM COMMENT REVISION	11/2021	EMD

verdantas
PEOPLE FOCUSED FUTURE
1005 MAIN STREET, SUITE 8120
PAWTUCKET, RI 02860
TEL. 401.728.8860

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

RIDEM SUBMITTAL
MARCH 2024
RI Environmental Management
MAR 15 2024
Office of Water Resources

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL
DATED: MAY 06 2024 FILE #: 21-0073
NO WORK SHALL COMMENCE WITHOUT PRIOR APPROVAL OF THE RIDEM AT CONSTRUCTION SITE

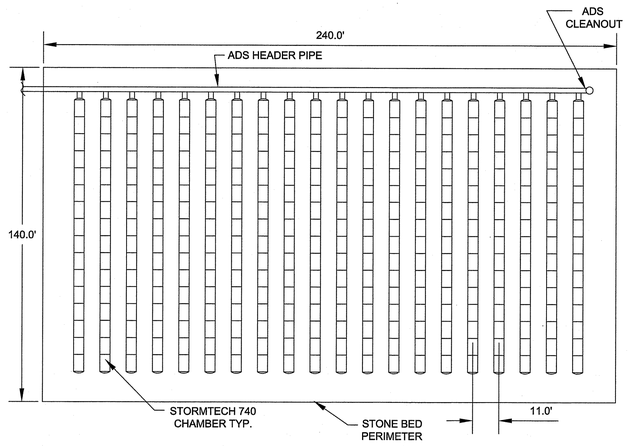
JEFFREY J. PLANTE
No. 4318
REGISTERED PROFESSIONAL ENGINEER
03/15/24

SHEET TITLE:
SITE DETAILS
SHEET 8

A.P. 05B LOT 065 & A.P. 05C LOT 005
58 KINGSTOWN ROAD
RICHMOND, RI 02898

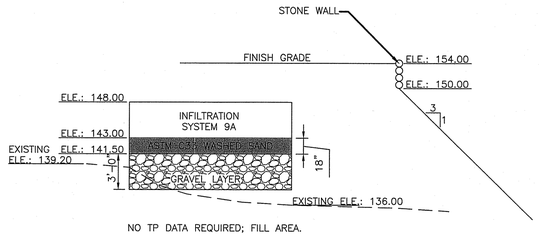
Project No.: 18071
Designed By: RGM
Drawn By: EMD
Checked By: JJP
Date: MARCH 2024
Scale: AS SHOWN

SHEET
46
SHEET 46 OF 58



SYSTEM 10F – SUBSURFACE INFILTRATION LAYOUT

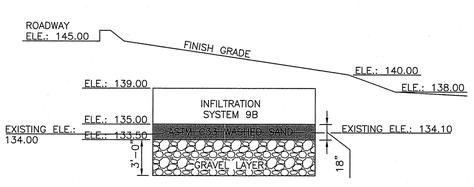
NOT TO SCALE



NO TP DATA REQUIRED; FILL AREA.

INFILTRATION BASIN 9A – CROSS SECTION

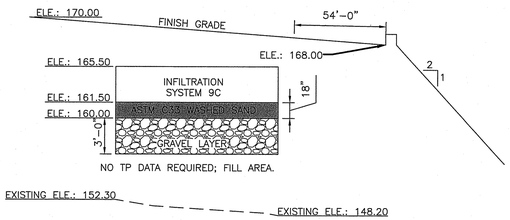
NOT TO SCALE



NO TP DATA REQUIRED; FILL AREA.

INFILTRATION BASIN 9B – CROSS SECTION

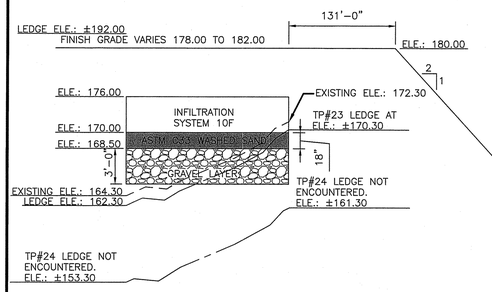
NOT TO SCALE



NO TP DATA REQUIRED; FILL AREA.

INFILTRATION BASIN 9C – CROSS SECTION

NOT TO SCALE



INFILTRATION BASIN 10F – CROSS SECTION

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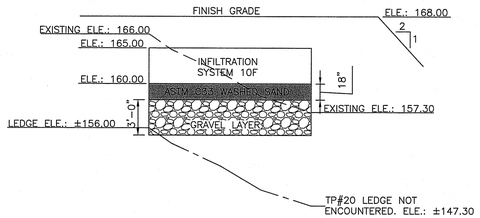
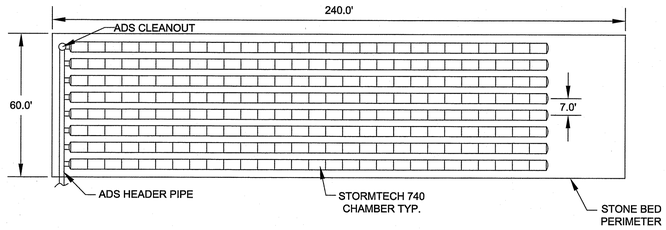


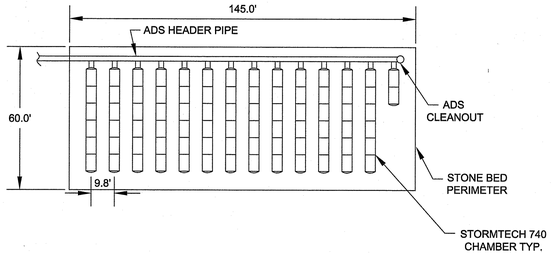
INFILTRATION BASIN 10G – CROSS SECTION

NOT TO SCALE



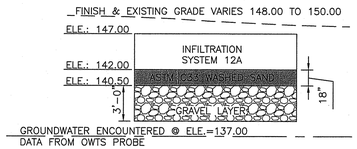
SYSTEM 9A – SUBSURFACE INFILTRATION LAYOUT

NOT TO SCALE



SYSTEM 11B – SUBSURFACE INFILTRATION LAYOUT

NOT TO SCALE



INFILTRATION BASIN 12A – CROSS SECTION

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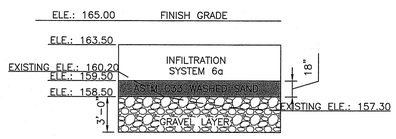

INFILTRATION BASIN 6A – CROSS SECTION

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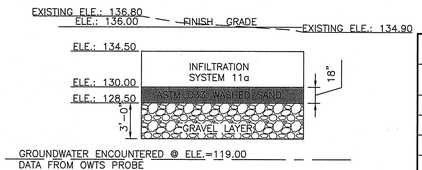
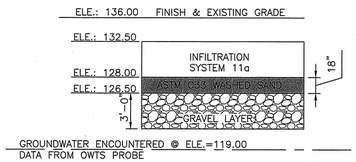


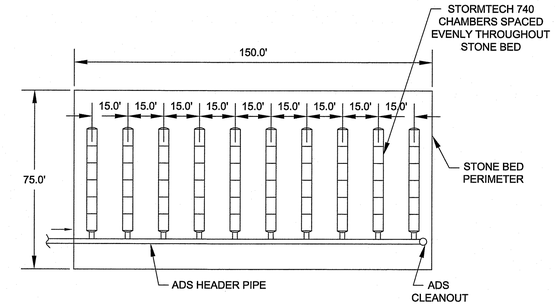
INFILTRATION BASIN 11A – CROSS SECTION

NOT TO SCALE



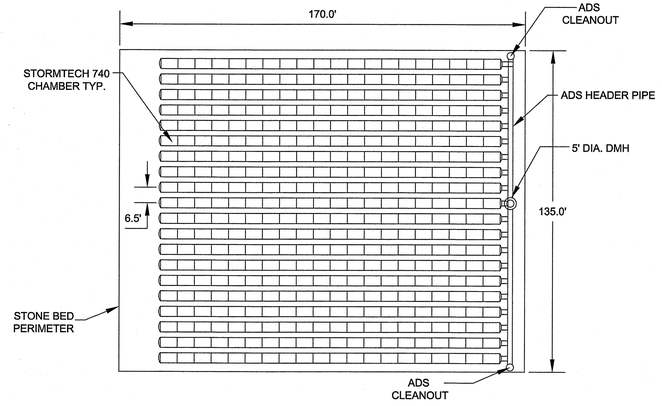
INFILTRATION BASIN 11B – CROSS SECTION

NOT TO SCALE



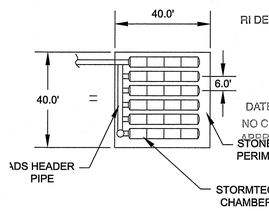
SYSTEM 11A – SUBSURFACE INFILTRATION LAYOUT

NOT TO SCALE



SYSTEM 10G – SUBSURFACE INFILTRATION LAYOUT

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: MAY 06 2024 FILE #: 21-0093
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

SYSTEM 12A SUBSURFACE INFILTRATION LAYOUT

NOT TO SCALE

SUBSURFACE INFILTRATION SYSTEM DATA

SUBSURFACE SYSTEM	CRUSHED STONE BED	NUMBER OF CHAMBERS	INVERT OF CHAMBERS	INVERT OF STONE BED	LEDGE/SHGWT ELEVATION	HYDRO GROUP	HEADER PIPE SIZE	WATER QUALITY UNIT
1–A	42'x420'x4'	168	188.00	187.00	169.00–175.70	B	30"	1–1
3–A	50'x60'x4'	50	249.50	248.50	237.00–239.20	B	24"	NONE
3–B	70'x60'x4'	60	249.50	248.50	236.20–241.00	B	24"	NONE
3–C	40'x80'x4.5'	56	228.00	227.00	217.20–223.50	B	24"	3–B
3–D	90'x50'x4.5'	60	192.00	191.00	188.00 (SHGWT)	B	24"	3–C
6–A	40'x275'x4'	144	160.50	159.50	N/A FILL AREA	B	24"	NONE
7–D	100'X240'x4'	300	187.50	186.50	N/A FILL AREA	B	24"	7–D
9–A	60'X240'X5'	224	144.50	143.00	N/A FILL AREA	B	24"	9–A
9–B	40'x80'x4'	40	136.00	135.00	N/A FILL AREA	B	24"	9–B
9–C	80'x150'x4'	64	162.50	161.50	N/A FILL AREA	B	24"	9–C
10–F	140'x240'x6'	320	173.00	170.00	162.30–170.30	B	36"	10–F
10–G	170'135'x5'	400	161.00	160.00	147.30–156.00	B	24"	10–G
11–A	75'x150'x4.5'	60	131.00	130.00	119.00 (SHGWT)	B	24"	11–A
11–B	60'x145'x4.5'	80	129.00	128.00	119.00 (SHGWT)	B	24"	11–B
12–A	40'x40'x5'	24	143.00	142.00	137.00 (SHGWT)	B	18"	NONE

NOTE: CHAMBERS TO BE SPACED EVENLY THROUGHOUT CRUSHED STONE BED. STONE SHALL BE 3/4"–2" WASHED, ANGULAR.
INFILTRATION SYSTEMS SHALL HAVE AN ADDITIONAL 3' LAYER OF 3/4" PROCESSED GRAVEL PLACED UNDER 18" LAYER OF ASTM C–33 FILTER SAND

NO	DESCRIPTION	DATE	AUTHOR
1	RIDEM COMMENT REVISION	11/2021	EMD

verdantas
PEOPLE FOCUSED FUTURE
1005 MAIN STREET, SUITE 8120
PAWTUCKET, RI 02860
TEL. 401.728.6860

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

RIDEM SUBMITTAL MARCH 2024

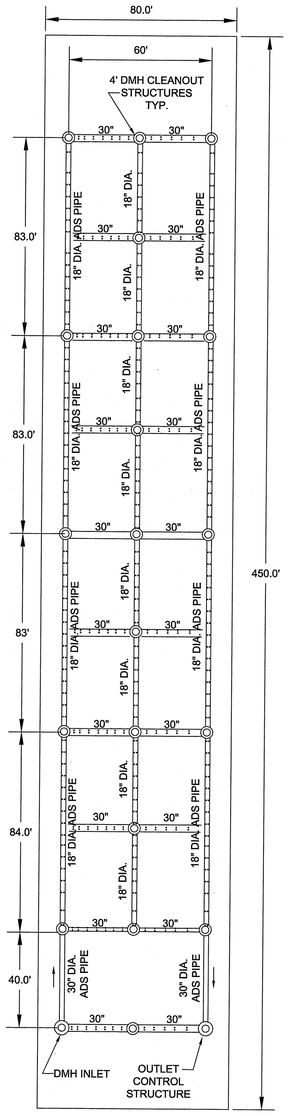
RI Environmental Management
MAR 15 2024
Office of Water Resources

SHEET TITLE:
SITE DETAILS
SHEET 9

A.P. 05B LOT 065 & A.P. 05C LOT 005
58 KINGSTOWN ROAD
RICHMOND, RI 02898

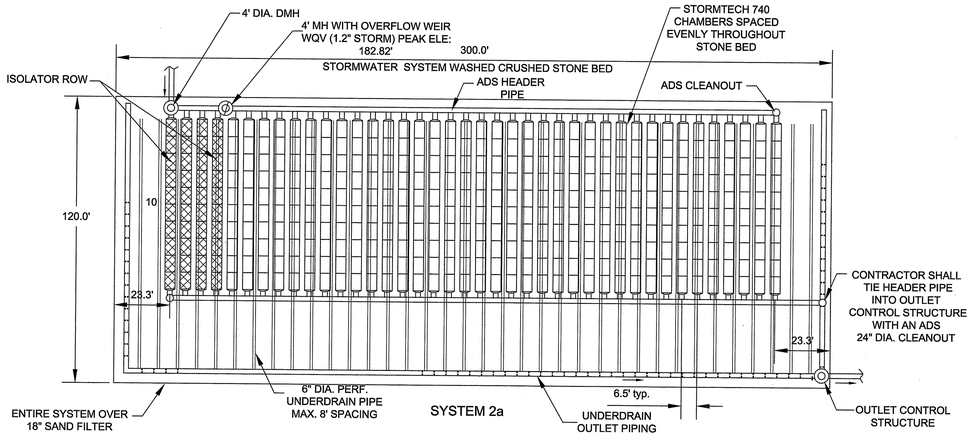
Project No.: 18071
Designed By: RGM
Drawn By: EMD
Checked By: JJP
Date: MARCH 2024
Scale: AS SHOWN

SHEET
47
SHEET 47 OF 58



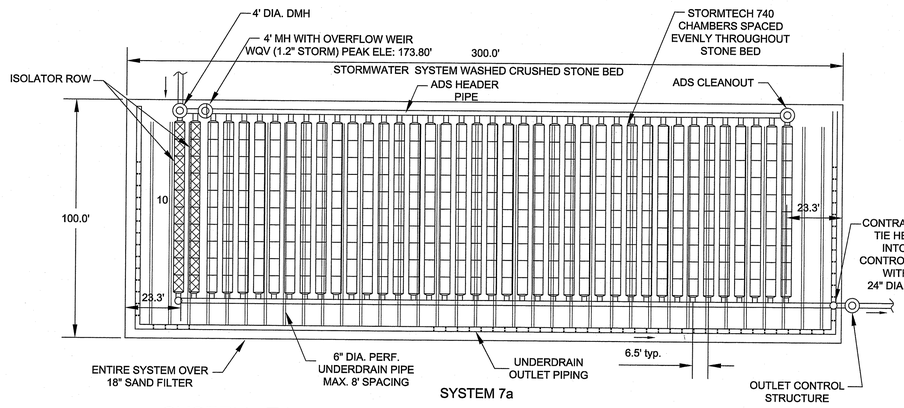
SYSTEM 1B – SUBSURFACE SAND FILTER / DETENTION SYSTEM LAYOUT

NOT TO SCALE



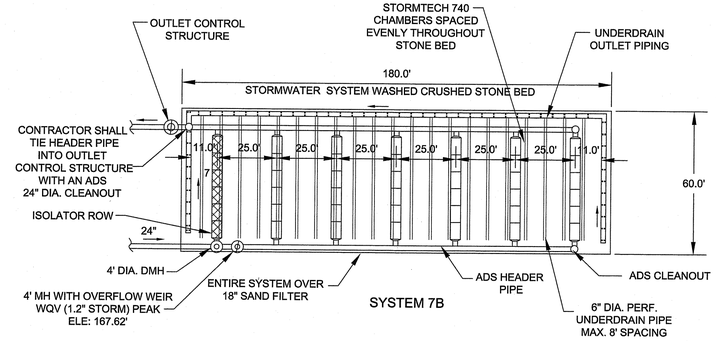
SYSTEM 2A – SUBSURFACE SAND FILTER / DETENTION SYSTEM LAYOUT

NOT TO SCALE



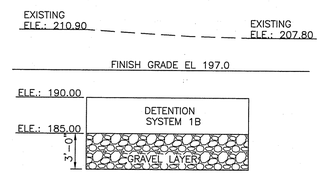
SYSTEM 7A – SUBSURFACE SAND FILTER / DETENTION SYSTEM LAYOUT

NOT TO SCALE



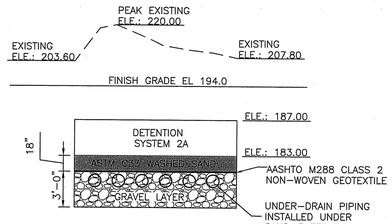
SYSTEM 7B – SUBSURFACE SAND FILTER / DETENTION SYSTEM LAYOUT

NOT TO SCALE



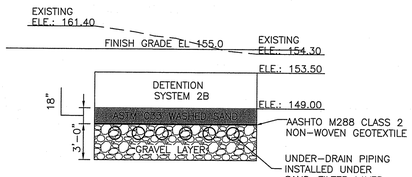
SUBSURFACE SAND FILTER / DETENTION SYSTEM 1-B – CROSS SECTION

NOT TO SCALE



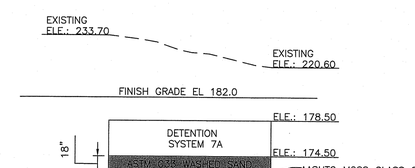
SUBSURFACE SAND FILTER / DETENTION SYSTEM 2-A – CROSS SECTION

NOT TO SCALE



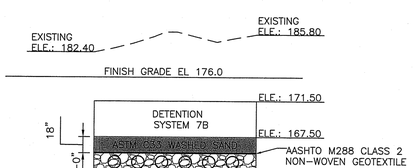
SUBSURFACE SAND FILTER / DETENTION SYSTEM 2-B – CROSS SECTION

NOT TO SCALE



SUBSURFACE SAND FILTER / DETENTION SYSTEM 7-A – CROSS SECTION

NOT TO SCALE



SUBSURFACE SAND FILTER / DETENTION SYSTEM 7-B – CROSS SECTION

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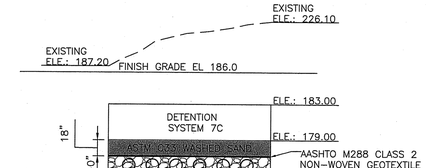
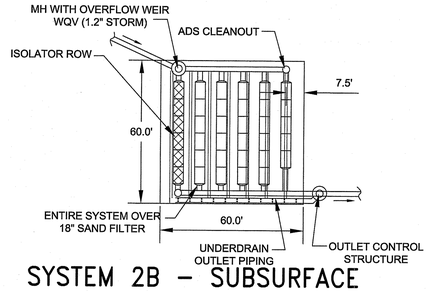


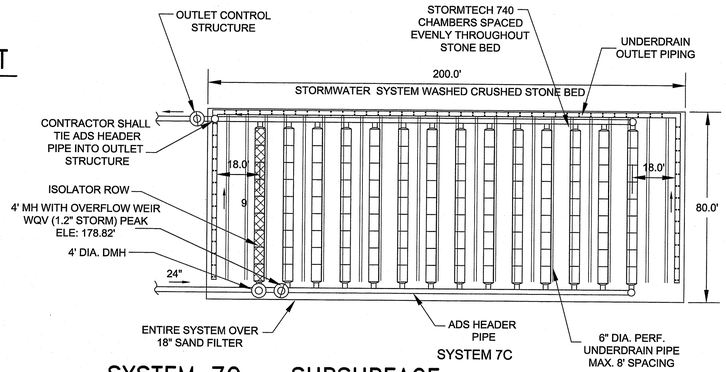
SUBSURFACE SAND FILTER / DETENTION SYSTEM 7-C – CROSS SECTION

NOT TO SCALE



SYSTEM 2B – SUBSURFACE SAND FILTER / DETENTION SYSTEM LAYOUT

NOT TO SCALE



SYSTEM 7C – SUBSURFACE SAND FILTER / DETENTION SYSTEM LAYOUT

NOT TO SCALE

NOTE: DETENTION SYSTEMS IN AREAS OF LEDGE CUT WILL BE OVERBLASTED TO PROVIDE MINIMUM 3' SEPERATION TO LEDGE.
CHAMBERS TO BE SPACED EVENLY THROUGHOUT CRUSHED STONE BED. STONE SHALL BE 3/4"–2" WASHED, ANGULAR.
DETENTION SYSTEMS SHALL HAVE AN ADDITIONAL 3' LAYER OF 3/4" PROCESSED GRAVEL PLACED UNDER 18" LAYER OF ASTM C-33 FILTER SAND

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
SPECIFIED IN THIS LETTER OF APPROVAL
DATED: MAY 0 6 2024 FILE #: 2-0093
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

NO	DESCRIPTION	DATE	AUTHOR
1	RIDEM COMMENT REVISION	11/2021	EMD

verdantas
PEOPLE FOCUSED FUTURE
1005 MAIN STREET, SUITE 8120
PAWTUCKET, RI 02860
TEL. 401.728.6860

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

RIDEM SUBMITTAL MARCH 2024

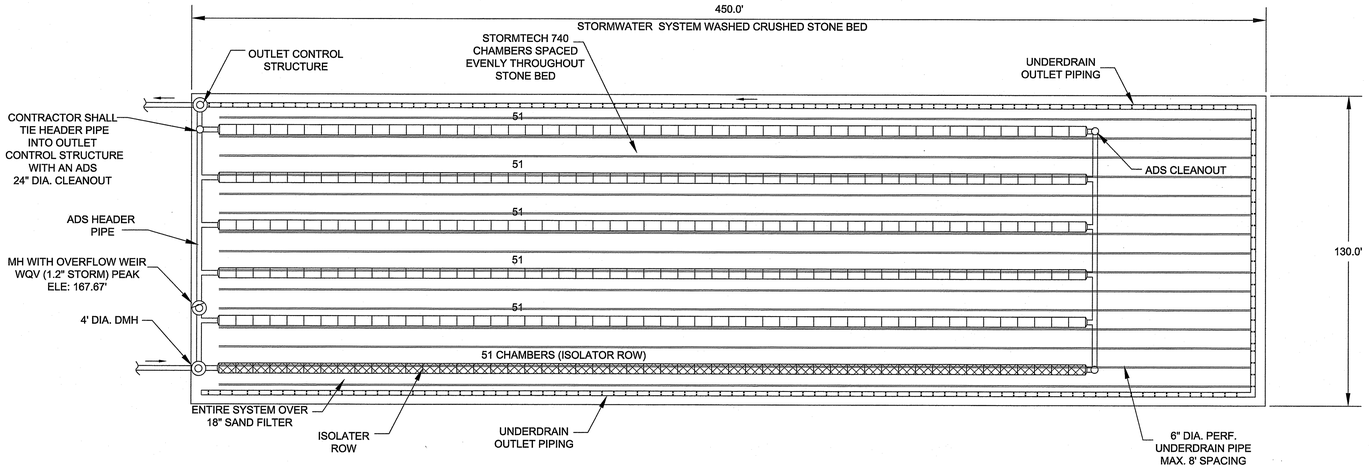
RI Department of Environmental Management
MAR 1 5 2024
Division of Water Resources

REGISTERED PROFESSIONAL ENGINEER 4318 03/13/2024

SHEET TITLE:
SITE DETAILS
SHEET 10
A.P. 05B LOT 065 & A.P. 05C LOT 005
58 KINGSTOWN ROAD
RICHMOND, RI 02898

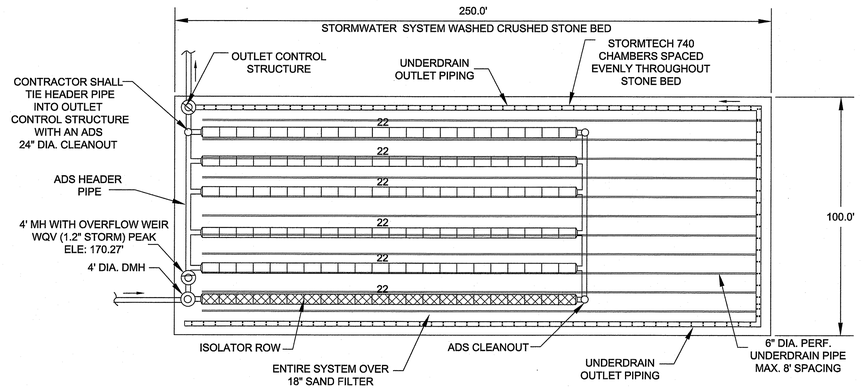
Project No.: 18071
Designed By: RGM
Drawn By: EMD
Checked By: JJP
Date: MARCH 2024
Scale: AS SHOWN

SHEET
48
SHEET 48 OF 58



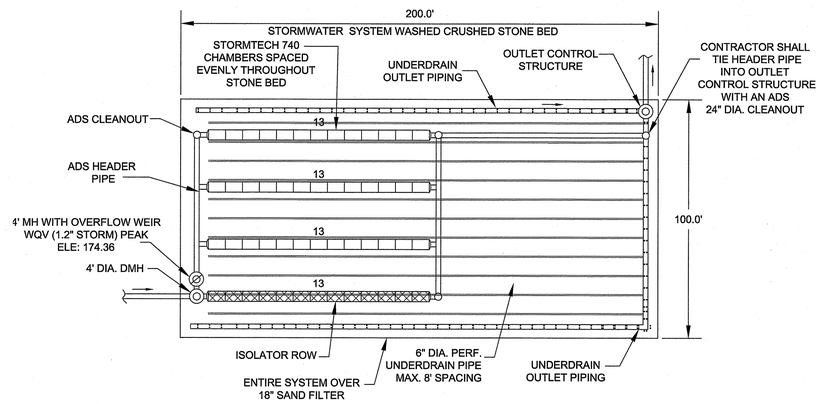
SYSTEM 10B – SUBSURFACE SAND FILTER / DETENTION SYSTEM LAYOUT

NOT TO SCALE



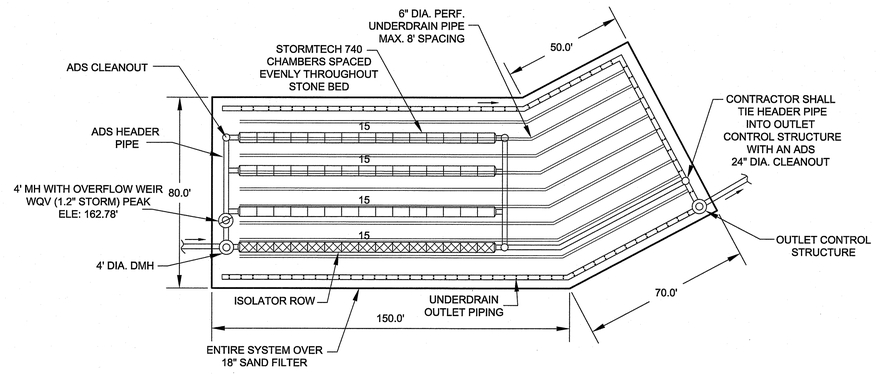
SYSTEM 10C – SUBSURFACE SAND FILTER / DETENTION SYSTEM LAYOUT

NOT TO SCALE



SYSTEM 10D – SUBSURFACE SAND FILTER / DETENTION SYSTEM LAYOUT

NOT TO SCALE



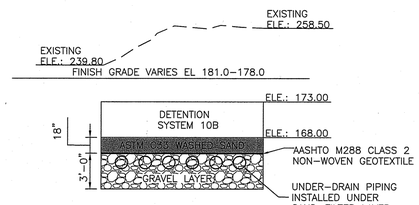
SYSTEM 10E – SUBSURFACE SAND FILTER / DETENTION SYSTEM LAYOUT

NOT TO SCALE

SUBSURFACE SAND FILTER / DETENTION SYSTEM

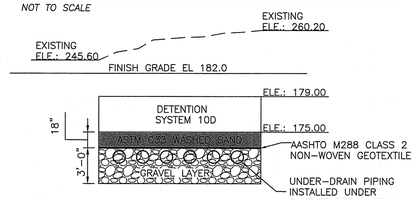
SUBSURFACE SYSTEM	CRUSHED STONE BED	INVERT OF STONE BED	INVERT OF SAND FILTER	INVERT OF UNDER-DRAIN	NUMBER OF CHAMBERS	INVERT OF CHAMBERS	HEADER PIPE SIZE	UNDERDRAIN OUTLET HEADER PIPE SIZE	WATER QUALITY UNIT	OUTLET CONTROL STRUCTURE									
										A		B		C		D		E	
										SIZE	ELEV.	SIZE	ELEV.	SIZE	ELEV.	SIZE	ELEV.	SIZE	ELEV.
1–B	80'x450'X5'	185.00	N/A	N/A	1000' 18" DIA PIPE	186.40	30"	30"	1–1	—	—	—	—	2.0"	184.00	5.0"	185.75	5.0"	187.20
2–A	120'x300'x4'	183.00	181.50	180.50	400	184.00	24"	24"	2–1	3.5"	181.25	2.0"	183.60	9.0"	184.25	9.0"	184.90	12"	185.60
2–B	60'x60'x4.5'	149.00	147.50	146.50	35	150.00	24"	24"	NA	1.0"	147.25	1.0"	150.53	2.0"	151.51	3.0"	151.93	3.0"	153.00
7–A	100'x300'x4'	174.50	173.00	172.00	400	175.50	24"	24"	7–A	3.0"	172.75	3.0"	175.00	6.0"	176.00	12"	176.60	18"	176.85
7–B	60'x180'x4'	167.50	166.00	165.00	49	168.50	24"	24"	7–B	2.5"	165.75	4.0"	168.50	6.0"	168.75	12"	170.00	15"	170.25
7–C	80'x200'X4'	179.00	177.50	176.50	126	180.00	24"	24"	7–C	2.5"	177.25	1.5"	179.75	8.0"	179.85	6.0"	180.00	9.0"	180.75
10–B	130'x450'x5'	168.00	166.50	165.50	306	169.50	36"	36"	10–B	4.5"	166.25	4.0"	169.50	6.0"	170.00	6.0"	171.50	12"	171.50
10–C	100'x250'x4'	171.00	169.50	168.50	132	172.00	24"	24"	10–C	2.5"	169.25	2.0"	172.75	6.0"	173.00	4.0"	173.50	6.0"	174.00
10–D	100'x200'x4'	175.00	173.50	172.50	52	176.00	24"	24"	10–D	2.3"	173.25	4.0"	175.50	6.0"	176.00	3.0"	176.50	6.0"	177.00
10–E	80'x200'x4.5'	163.00	161.50	160.50	60	164.00	24"	24"	10–E	2.5"	161.25	4.0"	164.10	10"	164.75	15"	165.00	12"	166.00

NOTE: DETENTION SYSTEMS IN AREAS OF LEDGE CUT WILL BE OVERBLASTED TO PROVIDE MINIMUM 3' SEPERATION TO LEDGE.
CHAMBERS TO BE SPACED EVENLY THROUGHOUT CRUSHED STONE BED. STONE SHALL BE 3/4"–2" WASHED, ANGULAR.
DETENTION SYSTEMS SHALL HAVE AN ADDITIONAL 3' LAYER OF 3/4" PROCESSED GRAVEL PLACED UNDER 18" LAYER OF ASTM C–33 FILTER SAND



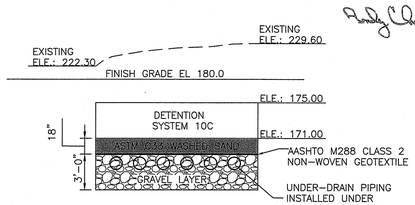
SUBSURFACE SAND FILTER / DETENTION SYSTEM 10–B – CROSS SECTION

NOT TO SCALE



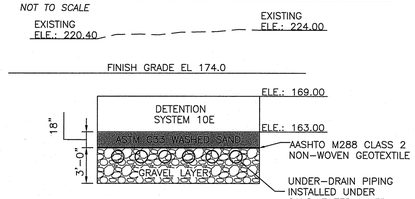
SUBSURFACE SAND FILTER / DETENTION SYSTEM 10–D – CROSS SECTION

NOT TO SCALE



SUBSURFACE SAND FILTER / DETENTION SYSTEM 10–C – CROSS SECTION

NOT TO SCALE



SUBSURFACE SAND FILTER / DETENTION SYSTEM 10–E – CROSS SECTION

NOT TO SCALE

NO	DESCRIPTION	DATE	AUTHOR
1	RIDEM COMMENT REVISION	11/2021	EMD

verdantas
PEOPLE FOCUSED FUTURE
1005 MAIN STREET, SUITE 8120
PAWTUCKET, RI 02860
TEL: 401.728.4840

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

RI Environmental Management
MAR 15 2024
RIDEM
Office of Water Resources
SUBMITTAL
MARCH 2024

STATE OF RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
NOTED IN LETTER OF APPROVAL
DATE: MAY 06 2024 FILE #: 21-0093
THIS APPROVAL IS WITHOUT PRIOR APPROVAL
OF ANY CHANGES. SEE AT CONSTRUCTION SITE

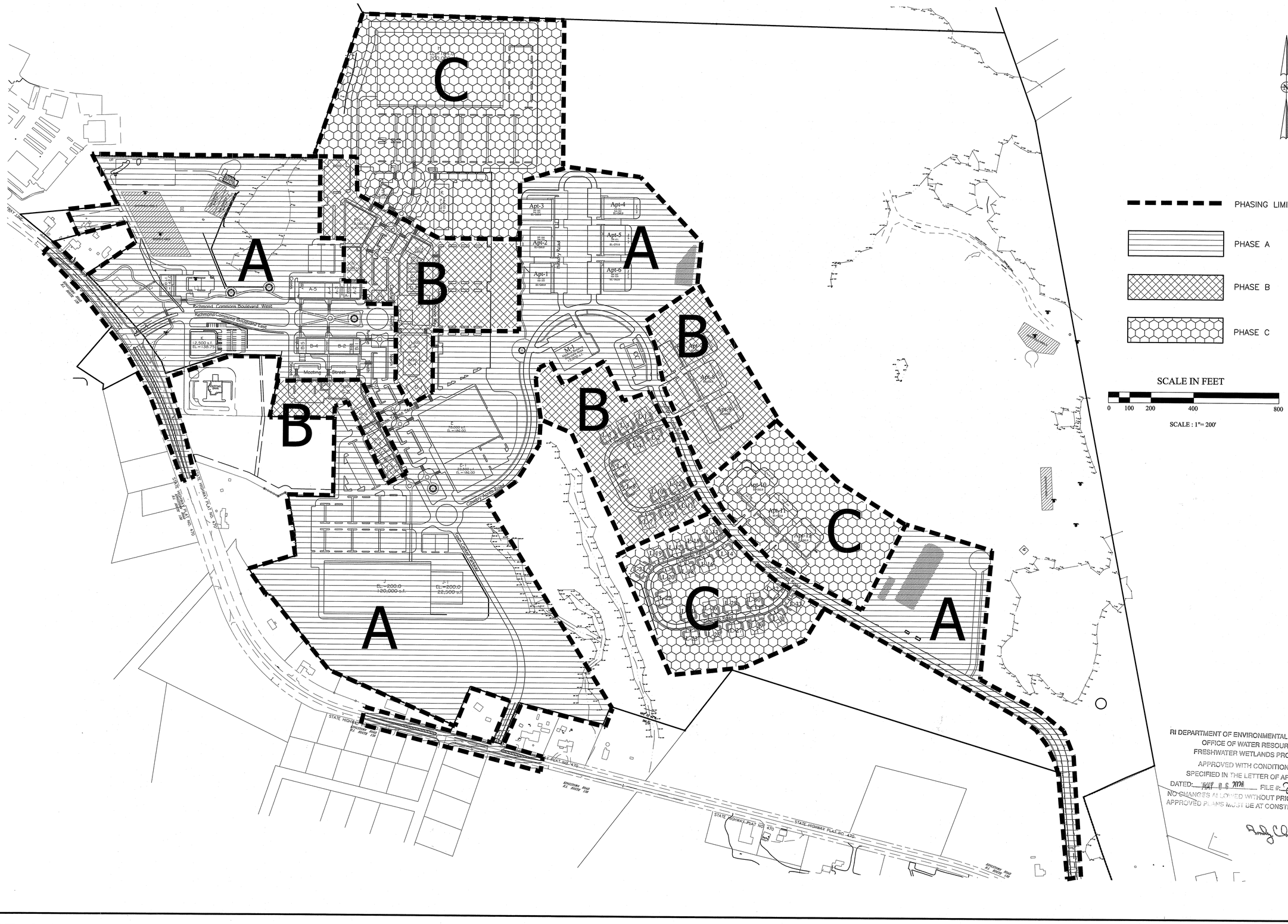
JEFFREY J. PLANTE
No. 4318
REGISTERED PROFESSIONAL ENGINEER
03/12/24

SHEET TITLE:
SITE DETAILS
SHEET 11

A.P. 059, LOT 065 & A.P. 05C, LOT 005
58 KINGSTOWN ROAD
RICHMOND, RI 02898

Project No.: 18071
Designed By: RGM
Drawn By: EMD
Checked By: JJP
Date: MARCH 2024
Scale: AS SHOWN

SHEET
49
SHEET 49 OF 58



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

APPROVED WITH CONDITIONS AS
SPECIFIED IN THE LETTER OF APPROVAL
DATED: MAY 0 8 2024 FILE #: 21-0093
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APPROVED PLANS MUST BE AT CONSTRUCTION SITE

NO	DESCRIPTION	DATE	AUTHOR
1	RIDEM COMMENT REVISION	11/2021	EMD

verdantas
PEOPLE FOCUSED FUTURE
1005 MAIN STREET, SUITE 8120
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PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

Environmental Management
MAR 15 2024
Office of Water Resources
RIDEM

SUBMITTAL
MARCH 2024

JEFFREY J. PLANTE
No. 4918
REGISTERED PROFESSIONAL ENGINEER
03/12/24

SHEET TITLE:
RICHMOND COMMONS
PHASING KEY PLAN

A.P. 09B LOT 065 & A.P. 09C LOT 005
58 KINGSTOWN ROAD
RICHMOND, RI 02898

Project No.: 18071
Designed By: RGM
Drawn By: EMD
Checked By: JJP
Date: MARCH 2024
Scale: AS SHOWN

SHEET
50
SHEET 50 OF 59

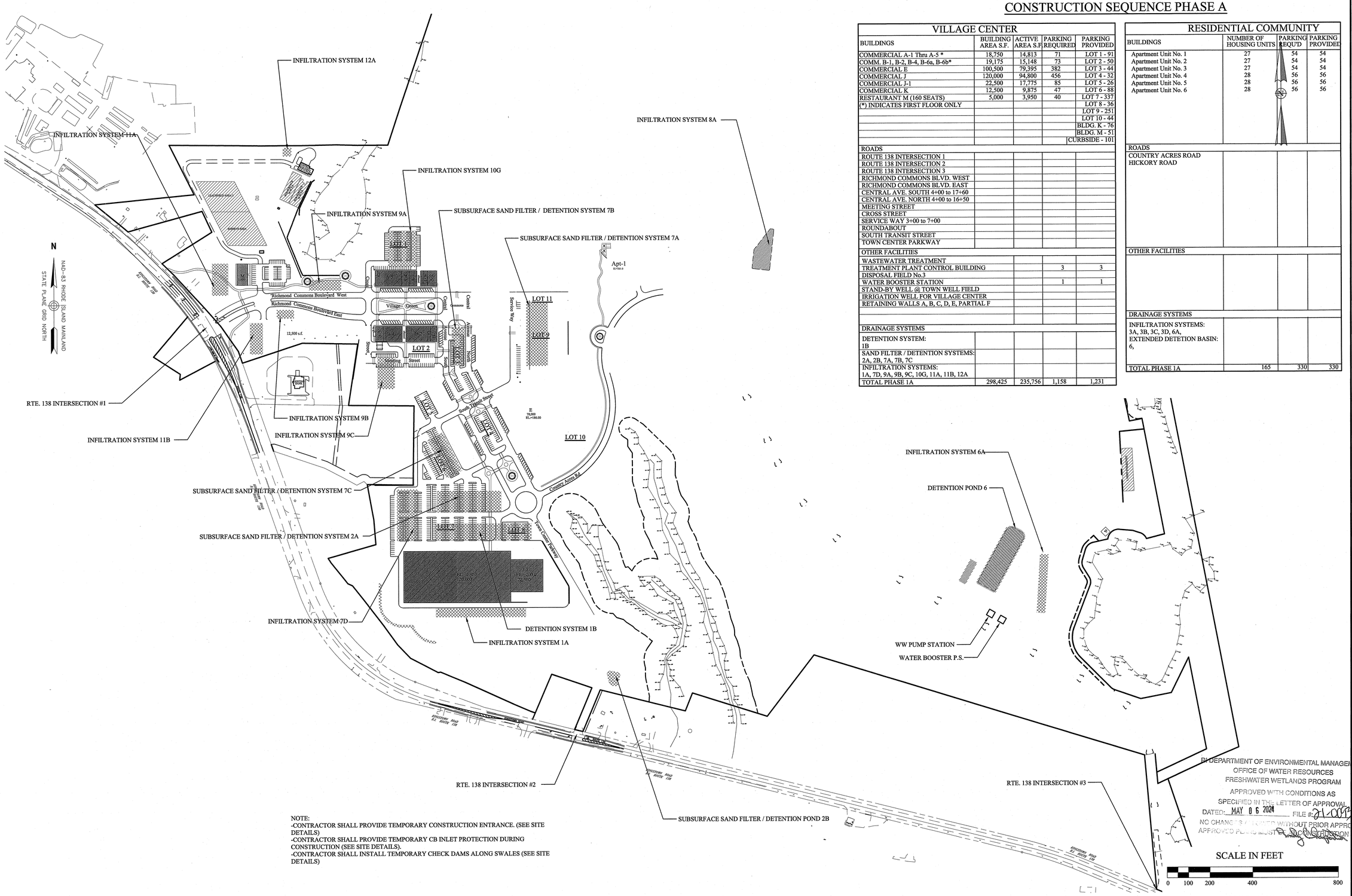
CONSTRUCTION SEQUENCE PHASE A

VILLAGE CENTER

BUILDINGS	BUILDING AREA S.F.	ACTIVE AREA S.F.	PARKING REQUIRED	PARKING PROVIDED
COMMERCIAL A-1 Thru A-5 *	18,750	14,813	71	LOT 1 - 91
COMM. B-1, B-2, B-4, B-6a, B-6b*	19,175	15,148	73	LOT 2 - 50
COMMERCIAL E	100,500	79,395	382	LOT 3 - 44
COMMERCIAL J	120,000	94,800	456	LOT 4 - 32
COMMERCIAL J-1	22,500	17,775	85	LOT 5 - 26
COMMERCIAL K	12,500	9,875	47	LOT 6 - 88
RESTAURANT M (160 SEATS)	5,000	3,950	40	LOT 7 - 337
(*) INDICATES FIRST FLOOR ONLY				LOT 8 - 36
				LOT 9 - 251
				LOT 10 - 44
				BLDG. K - 76
				BLDG. M - 51
				CURBSIDE - 101
ROADS				
ROUTE 138 INTERSECTION 1				
ROUTE 138 INTERSECTION 2				
ROUTE 138 INTERSECTION 3				
RICHMOND COMMONS BLVD. WEST				
RICHMOND COMMONS BLVD. EAST				
CENTRAL AVE. SOUTH 4+00 to 17+60				
CENTRAL AVE. NORTH 4+00 to 16+50				
MEETING STREET				
CROSS STREET				
SERVICE WAY 3+00 to 7+00				
ROUNDABOUT				
SOUTH TRANSIT STREET				
TOWN CENTER PARKWAY				
OTHER FACILITIES				
WASTEWATER TREATMENT				
TREATMENT PLANT CONTROL BUILDING			3	3
DISPOSAL FIELD No.3				
WATER BOOSTER STATION			1	1
STAND-BY WELL @ TOWN WELL FIELD				
IRRIGATION WELL FOR VILLAGE CENTER				
RETAINING WALLS A, B, C, D, E, PARTIAL F				
DRAINAGE SYSTEMS				
DETENTION SYSTEM: 1B				
SAND FILTER / DETENTION SYSTEMS: 2A, 2B, 7A, 7B, 7C				
INFILTRATION SYSTEMS: 1A, 7D, 9A, 9B, 9C, 10G, 11A, 11B, 12A				
TOTAL PHASE 1A	298,425	235,756	1,158	1,231

RESIDENTIAL COMMUNITY

BUILDINGS	NUMBER OF HOUSING UNITS	PARKING REQU'D	PARKING PROVIDED
Apartment Unit No. 1	27	54	54
Apartment Unit No. 2	27	54	54
Apartment Unit No. 3	27	54	54
Apartment Unit No. 4	28	56	56
Apartment Unit No. 5	28	56	56
Apartment Unit No. 6	28	56	56
ROADS			
COUNTRY ACRES ROAD HICKORY ROAD			
OTHER FACILITIES			
DRAINAGE SYSTEMS			
INFILTRATION SYSTEMS: 3A, 3B, 3C, 3D, 6A, EXTENDED DETETION BASIN: 6,			
TOTAL PHASE 1A	165	330	330



NOTE:
-CONTRACTOR SHALL PROVIDE TEMPORARY CONSTRUCTION ENTRANCE. (SEE SITE DETAILS)
-CONTRACTOR SHALL PROVIDE TEMPORARY CB INLET PROTECTION DURING CONSTRUCTION (SEE SITE DETAILS).
-CONTRACTOR SHALL INSTALL TEMPORARY CHECK DAMS ALONG SWALES (SEE SITE DETAILS)

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
SPECIFIED IN THE LETTER OF APPROVAL
DATED: MAY 06 2024 FILE #: 21-0077
NO CHANGES ARE PERMITTED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE ON CONSTRUCTION SITE

NO	DESCRIPTION	DATE	AUTHOR
1	RIDEM COMMENT REVISION	11/2021	EMD

verdantas
PEOPLE FOCUSED FUTURE
1005 MAIN STREET, SUITE 8120
PAWTUCKET, RI 02860
TEL. 401.728.6860

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

RI Environmental Management
MAR 15 2024
Office of RIDEM Resources

SUBMITTAL
MARCH 2024

JEFFREY J. PLANTE
No. 4918
REGISTERED PROFESSIONAL ENGINEER
03/14/2024

SHEET TITLE:
RICHMOND COMMONS
CONSTRUCTION SEQUENCE
PHASE A

A.P. 05B LOT 005 & A.P. 05C LOT 005
58 KINGSTOWN ROAD
RICHMOND, RI 02898

Project No.: 18071
Designed By: RGM
Drawn By: EMD
Checked By: JJP
Date: MARCH 2024
Scale: AS SHOWN

SHEET
51
SHEET 51 OF 58

MATCH LINE SEE SHEET 53

18" ADS STUB & CAP

SUBSURFACE INFILTRATION SYSTEM 10G

8" WATER STUB & CAP

SMH-15 8" STUB & CAP

SMH-19 8" STUB & CAP

8" WATER STUB & CAP

AREA TO BE EXCAVATED AND ROUGH GRADED DURING PHASE A AND CONSTRUCTED AS PART OF PHASE B CONSTRUCTION

EMBANKMENT SLOPE 2'H:1'V EXCELSIOR NETTING TO BE USED ON SLOPED EMBANKMENTS

A-5 | A-4 | A-3 | passage | A-6a | A-1 | A-2

B-4 | passage | B-2 | B-6b | B-1

Village Green

Central Commons

Central Avenue

Service Way

SUBSURFACE SAND FILTER / DETENTION SYSTEM 7A

Apt-1
El.=261.0

12" W

8" W

SCALE IN FEET
0 20 40 80 160

SCALE : 1"= 40'

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL
DATED: MAY 17 2024 FILE #: 178
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

NO	DESCRIPTION	DATE	AUTHOR
1	RIDEM COMMENT REVISION	11/2021	EMD

verdantas
PEOPLE FOCUSED FUTURE
1005 MAIN STREET, SUITE B120
PAWTUCKET, RI 02860
TEL. 401.728.0860

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE
NORTH PROVIDENCE, RI 02904

RI Environmental Management
MAR 15 2024
RIDEM
Office of Water Resources
SUBMITTED
MARCH 2024

JEFFREY J. PLANTE
No. 4318
REGISTERED PROFESSIONAL ENGINEER
5/13/2024

SHEET TITLE:
RICHMOND COMMONS
CONSTRUCTION SEQUENCE
PHASE A

A.P. 05B LOT 065 & A.P. 05C LOT 005
58 KINGSTOWN ROAD
RICHMOND, RI 02898

Project No.: 18071
Designed By: RGM
Drawn By: EMD
Checked By: JJP
Date: MARCH 2024
Scale: AS SHOWN

SHEET
52
SHEET 52 OF 58

PROPERTY LINE

AREA TO BE CONSTRUCTED AS PART OF PHASE 1C CONSTRUCTION

EMBANKMENT SLOPE 2'H:1'V
EXCELSIOR NETTING TO BE USED
ON SLOPED EMBANKMENTS

MATCH LINE SEE SHEET 52

SCALE IN FEET

0 20 40 80 160

SCALE : 1"= 40'

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
SPECIFIED IN THE LETTER OF APPROVAL
DATED: MAY 0 6 2024 FILE #: 24-0053
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

NO	DESCRIPTION	DATE	AUTHOR
1	RIDEM COMMENT REVISION	11/2021	EMD

verdantas
PEOPLE FOCUSED FUTURE
1005 MAIN STREET, SUITE 8120
PAWTUCKET, RI 02860
TEL. 401.728.8860

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

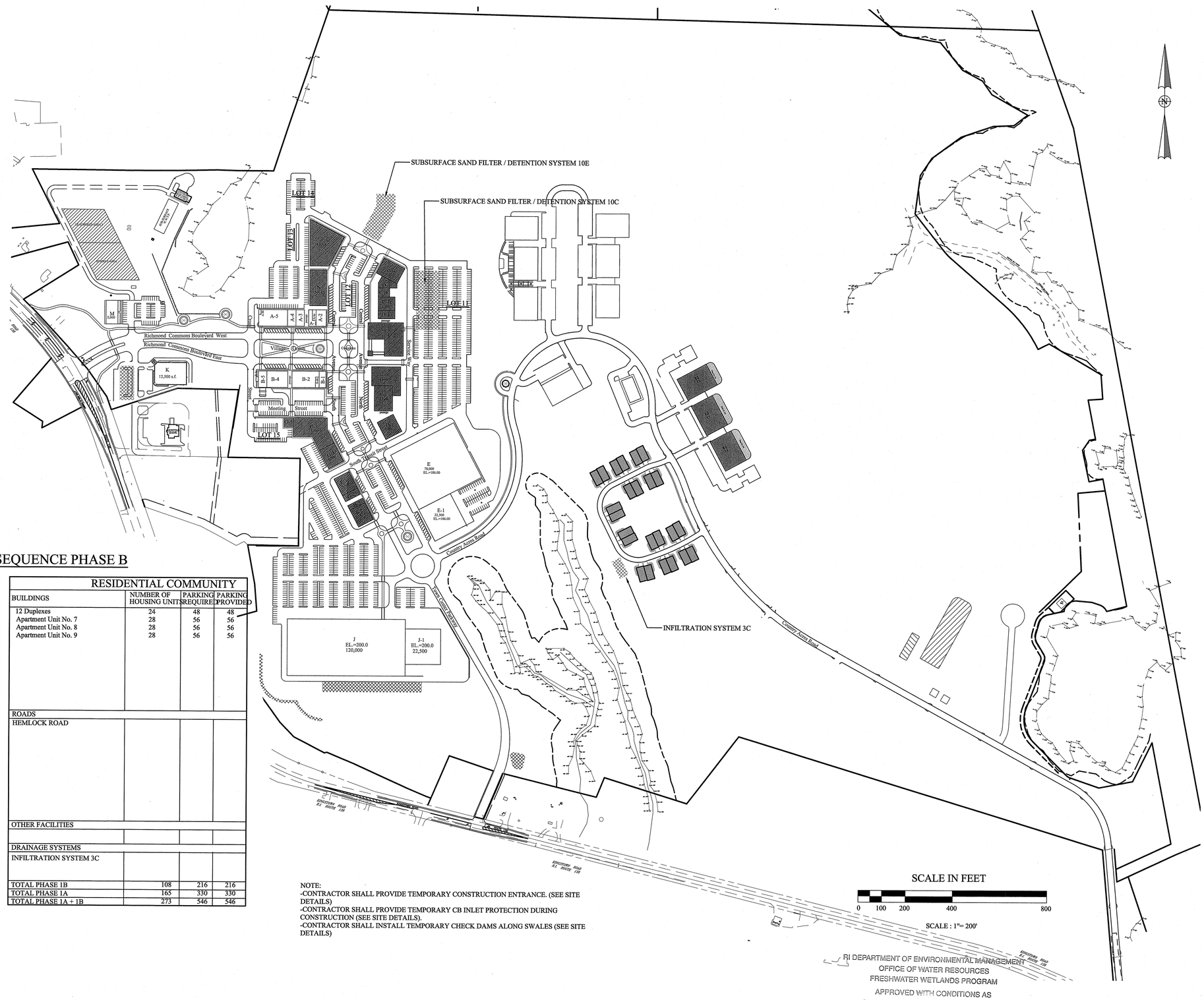
RI Environmental Management
MAR 15 2024
Office of Water Resources
SUBMITTAL
MARCH 2024

JEFFREY J. PLANTE
No. 4318
REGISTERED PROFESSIONAL ENGINEER
3/13/2024

SHEET TITLE:
RICHMOND COMMONS
CONSTRUCTION SEQUENCE
PHASE A
A.P. 06B LOT 005 & A.P. 06C LOT 005
58 KINGSTOWN ROAD
RICHMOND, RI 02898

Project No.: 18071
Designed By: RGM
Drawn By: EMD
Checked By: JJP
Date: MARCH 2024
Scale: AS SHOWN

SHEET
53
SHEET 53 OF 58



CONSTRUCTION SEQUENCE PHASE B

VILLAGE CENTER				
BUILDINGS	BUILDING AREA S.F.	ACTIVE AREA S.F.	PARKING REQUIRED	PARKING PROVIDED
COMMERCIAL B-3	1,500	1,185	6	LOT 11 - 232
COMMERCIAL C-1a	7,000	5,530	27	LOT 12 - 44
COMMERCIAL C-1b	1,800	1,422	7	LOT 13 - 36
COMMERCIAL C-1c	4,000	3,160	15	LOT 14 - 54
COMMERCIAL C-2	16,000	12,640	61	LOT 15 - 39
COMMERCIAL D-1	6,000	4,740	23	CURBSIDE -
COMMERCIAL D-2	2,300	1,817	9	42
COMMERCIAL D-3	2,700	2,133	10	
COMMERCIAL D-4	8,200	6,478	31	
COMMERCIAL F-1	19,200	15,168	73	
COMMERCIAL F-2	5,500	4,345	21	
COMMERCIAL F-3	5,500	4,345	21	
COMMERCIAL G-1	6,000	4,740	23	
COMMERCIAL G-2	2,000	1,580	8	
COMMERCIAL G-3	15,000	11,850	57	
COMMERCIAL G-4	11,200	8,848	43	
COMMERCIAL G-5	1,560	1,232	6	
COMMERCIAL N	10,500	8,295	40	
ROADS				
ROUTE 138 IMPROVEMENTS (EAST BOUND)				
CENTRAL AVE. SOUTH 0+00 to 4+00				
CENTRAL AVE. NORTH 0+00 to 4+00				
NORTH TRANSIT STREET				
SERVICE WAY 0+00 to 3+00				
OTHER FACILITIES				
RETAINING WALLS PARTIAL F				
DRAINAGE SYSTEMS				
SUBSURFACE SAND FILTER / DETENTION SYSTEMS: 10C, 10E				
TOTAL PHASE 1B	125,960	99,508	481	447
TOTAL PHASE 1A	298,425	235,756	1,158	1,231
TOTAL PHASE 1A + 1B	424,385	335,264	1,639	1,678

RESIDENTIAL COMMUNITY			
BUILDINGS	NUMBER OF HOUSING UNITS	PARKING REQUIRED	PARKING PROVIDED
12 Duplexes	24	48	48
Apartment Unit No. 7	28	56	56
Apartment Unit No. 8	28	56	56
Apartment Unit No. 9	28	56	56
ROADS			
HEMLOCK ROAD			
OTHER FACILITIES			
DRAINAGE SYSTEMS			
INFILTRATION SYSTEM 3C			
TOTAL PHASE 1B	108	216	216
TOTAL PHASE 1A	165	330	330
TOTAL PHASE 1A + 1B	273	546	546

NOTE:
-CONTRACTOR SHALL PROVIDE TEMPORARY CONSTRUCTION ENTRANCE. (SEE SITE DETAILS)
-CONTRACTOR SHALL PROVIDE TEMPORARY CB INLET PROTECTION DURING CONSTRUCTION (SEE SITE DETAILS).
-CONTRACTOR SHALL INSTALL TEMPORARY CHECK DAMS ALONG SWALES (SEE SITE DETAILS)

SCALE IN FEET

0 100 200 400 800

SCALE : 1"= 200'

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
SPECIFIED IN THE LETTER OF APPROVAL
DATED: MAY 0 6 2024 FILE #: 24-0007
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

NO	DESCRIPTION	DATE	AUTHOR
1	RIDEM COMMENT REVISION	11/2021	EMD

verdantas
PEOPLE FOCUSED FUTURE
100S MAIN STREET, SUITE 8120
PAWTUCKET, RI 02860
TEL. 401.728.6860

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

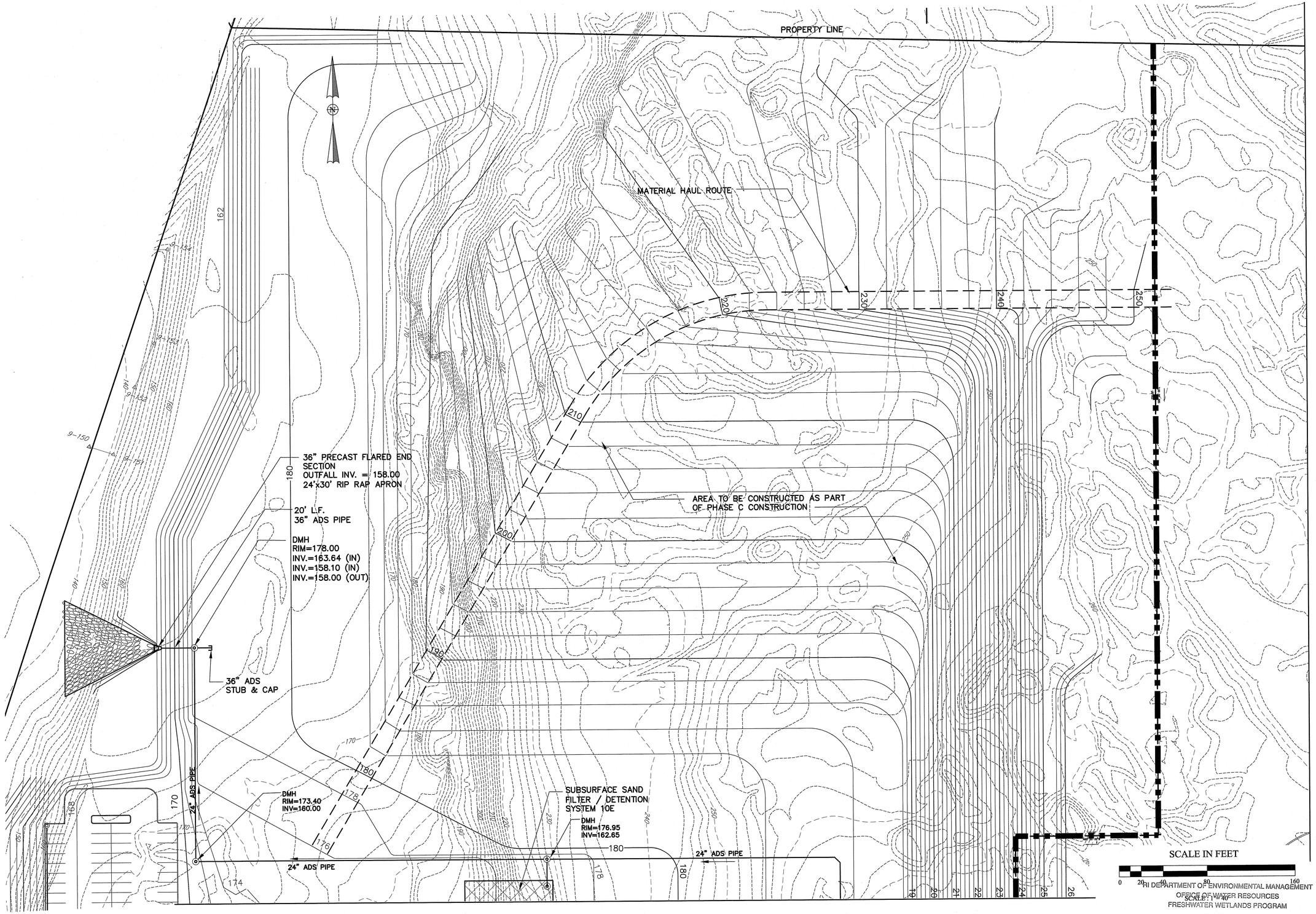
RI Environmental Management
MAR 15 2024
Office of RIDEM Resources
SUBMITTAL
MARCH 2024

JEFFREY J. PLANTE
No. 4918
REGISTERED PROFESSIONAL ENGINEER
03/13/2024

SHEET TITLE:
RICHMOND COMMONS
CONSTRUCTION SEQUENCE
PHASE B
A.P. 09B LOT 065 & A.P. 09C LOT 005
58 KINGSTOWN ROAD
RICHMOND, RI 02898

Project No.: 18071
Designed By: RGM
Drawn By: EMD
Checked By: JJP
Date: MARCH 2024
Scale: AS SHOWN

SHEET
54
SHEET 54 OF 58



NO	DESCRIPTION	DATE	AUTHOR
1	RIDEM COMMENT REVISION	11/2021	EMD

verdantas
PEOPLE FOCUSED FUTURE
1005 MAIN STREET, SUITE 8120
PAWTUCKET, RI 02860
TEL 401.728.8600

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

RI Environmental Management
MAR 15 2024
Office of Water Resources
RIDEM
SUBMITTAL
MARCH 2024

JEFFREY J. PLANTE
No. 4310
REGISTERED PROFESSIONAL ENGINEER
03/13/2024

SHEET TITLE:
RICHMOND COMMONS
CONSTRUCTION SEQUENCE
PHASE B
A.P. 059, LOT 065 & A.P. 05C, LOT 005
58 KINGSTOWN ROAD
RICHMOND, RI 02898

Project No.:	18071
Designed By:	RGM
Drawn By:	EMD
Checked By:	JJP
Date:	MARCH 2024
Scale:	AS SHOWN

SHEET
55
SHEET 55 OF 58

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
SPECIFIED IN THE LETTER OF APPROVAL
DATED: MAY 15 2024 FILE #: 2-13-0073
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

SMH-17
8" STUB & CAP

SMH-21

12" WATER
STUB & CAP

24" ADS
STUB & CAP

EMBANKMENT SLOPE 2'H:1'V
EXCELSIOR NETTING TO BE USED
ON SLOPED EMBANKMENTS

SUBSURFACE SAND
FILTER / DETENTION
SYSTEM 10E

SUBSURFACE INFILTRATION
SYSTEM 10G

SUBSURFACE SAND
FILTER / DETENTION
SYSTEM 10C

SUBSURFACE DETENTION
SYSTEM 7A

F-1
19,200 s.f.

N
10,500 s.f.
El.=171.50

C-1a
6,955

2,710
D-3

C-1b

C-1c
3,997

D-2

C-2

11,200
G-4

A-5 | A-4 | A-3 | passage | A-6a | A-2 | A-6b | A-1

B-2 | B-1 | B-6b

Village Green

Commons

Central Avenue

Service Way

24" ADS

12" W

8" W

257x20

257x50

257x60

SCALE IN FEET
0 20 40 80 160
SCALE : 1"= 40'

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
SPECIFIED IN THE LETTER OF APPROVAL
DATED: MAY 06 2024 FILE #: 24-0073
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

NO	DESCRIPTION	DATE	AUTHOR
1	RIDEM COMMENT REVISION	11/2021	EMD

verdantas
PEOPLE FOCUSED FUTURE
1005 MAIN STREET, SUITE B120
PAWTUCKET, RI 02860
TEL. 401.728.8600

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

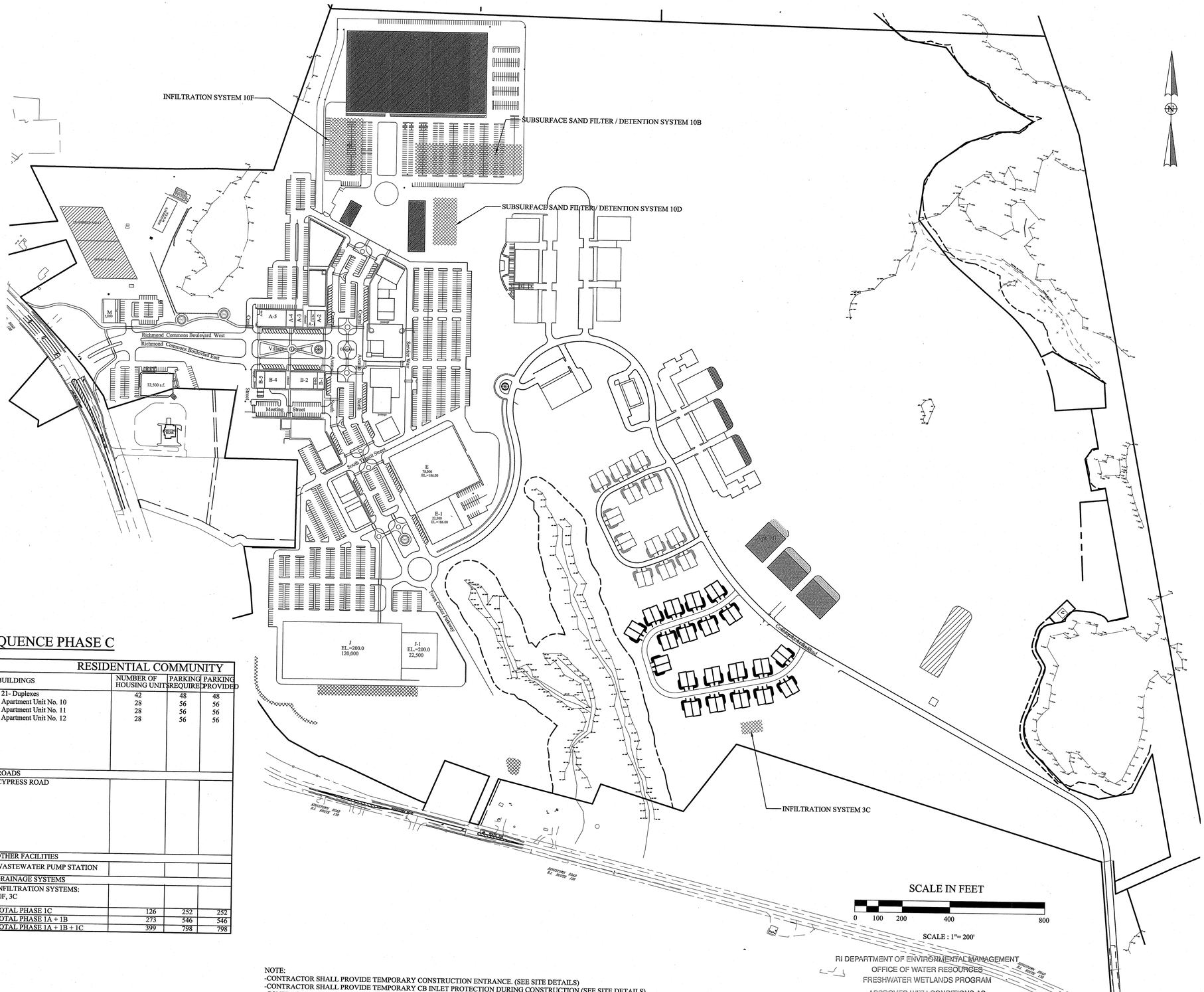
RI Environmental Management
MAR 15 2024
RIDEM
Office of Water Resources
SUBMITTAL
MARCH 2024

JEFFREY J. PLANTE
No. 4316
REGISTERED
PROFESSIONAL ENGINEER
3/15/24

SHEET TITLE:
RICHMOND COMMONS
CONSTRUCTION SEQUENCE
PHASE B
A.P. 09B1 LOT 065 & A.P. 05C1 LOT 005
58 KINGSTOWN ROAD
RICHMOND, RI 02898

Project No.:	18071
Designed By:	RGM
Drawn By:	EMD
Checked By:	JJP
Date:	MARCH 2024
Scale:	AS SHOWN

SHEET
56
SHEET 56 OF 58



CONSTRUCTION SEQUENCE PHASE C

VILLAGE CENTER

BUILDINGS	BUILDING AREA S.F.	ACTIVE AREA S.F.	PARKING REQUIRED	PARKING PROVIDED
COMMERCIAL H	200,000	158,000	759	LOT 16 - 174
COMMERCIAL H-1	10,000	7,900	38	LOT 17 - 22
COMMERCIAL R	14,800	11,692	56	LOT 18 - 665
COMMERCIAL S	5,000	3,950	19	CURBSIDE -
COMMERCIAL A-6 (SECOND FLOOR)*	22,000	17,380	84	12
COMMERCIAL B-6 (SECOND FLOOR)*	22,000	17,380	84	OVERFLOW -
(*) INDICATES OFFICE SPACE				112
ROADS				
CENTRAL AVE. NORTH				
CENTRAL AVE. SOUTH				
OTHER FACILITIES				
DRAINAGE SYSTEMS				
SUBSURFACE SAND FILTER / DETENTION SYSTEMS: 10B, 10D				
TOTAL PHASE 1C	273,800	216,302	1,040	985
TOTAL PHASE 1A + 1B	424,385	335,264	1,612	1,678
TOTAL PHASE 1A + 1B + 1C	698,185	551,566	2,652	2,663

RESIDENTIAL COMMUNITY

BUILDINGS	NUMBER OF HOUSING UNITS	PARKING REQUIRED	PARKING PROVIDED
21- Duplexes	42	48	48
Apartment Unit No. 10	28	56	56
Apartment Unit No. 11	28	56	56
Apartment Unit No. 12	28	56	56
ROADS			
CYPRESS ROAD			
OTHER FACILITIES			
WASTEWATER PUMP STATION			
DRAINAGE SYSTEMS			
INFILTRATION SYSTEMS: 10F, 3C			
TOTAL PHASE 1C	126	252	252
TOTAL PHASE 1A + 1B	273	546	546
TOTAL PHASE 1A + 1B + 1C	399	798	798

NOTE:
-CONTRACTOR SHALL PROVIDE TEMPORARY CONSTRUCTION ENTRANCE. (SEE SITE DETAILS)
-CONTRACTOR SHALL PROVIDE TEMPORARY CB INLET PROTECTION DURING CONSTRUCTION (SEE SITE DETAILS).
-CONTRACTOR SHALL INSTALL TEMPORARY CHECK DAMS ALONG SWALES (SEE SITE DETAILS)

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
SPECIFIED IN THE LETTER OF APPROVAL
DATED: MAY 0 6 2024 FILE #: 23-0073
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

NO	DESCRIPTION	DATE	AUTHOR

verdantas
PEOPLE FOCUSED FUTURE
5400 LIMESTONE ROAD
WILMINGTON, DE 19808-1232
TEL 302.239.6434
FAX 302.239.8485

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

RI Environmental Management
MAR 1 5 2024
Office of Water Resources
RIDEM

SUBMITTAL
MARCH 2024

JEFFREY J. PLANTE
No. 4818
REGISTERED PROFESSIONAL ENGINEER
3/13/2024

SHEET TITLE:
RICHMOND COMMONS
CONSTRUCTION SEQUENCE
PHASE C

A.P. 05B LOT 065 & A.P. 05C LOT 005
58 KINGSTOWN ROAD
RICHMOND, RI 02898

Project No.: 18071
Designed By: RGM
Drawn By: EMD
Checked By: JJP
Date: MARCH 2024
Scale: AS SHOWN

SHEET
57
SHEET 57 OF 58

SCALE IN FEET

0 20 40 80 160

SCALE : 1"= 40'

RIDEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
SPECIFIED IN THE LETTER OF APPROVAL
DATED: MAY 06 2024 FILE #: 21-0077
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

NO	DESCRIPTION	DATE	AUTHOR

verdantas
PEOPLE FOCUSED FUTURE
5400 LIMESTONE ROAD
WILMINGTON, DE 19808-1222
TEL 302.239.4434
FAX 302.239.8485

PREPARED FOR:
RICHMOND REALTY ASSOCIATES
30 RIVERVIEW DRIVE,
NORTH PROVIDENCE, RI 02904

RIDEPARTMENT OF ENVIRONMENTAL MANAGEMENT
MAR 15 2024
Office of Water Resources
RIDEM
SUBMITTAL
MARCH 2024

JEFFREY J. PLANTE
No. 4918
REGISTERED PROFESSIONAL ENGINEER
03/13/2024

SHEET TITLE:
RICHMOND COMMONS
CONSTRUCTION SEQUENCE
PHASE C
A.P. 05B LOT 005 & A.P. 05C LOT 005
58 KINGSTOWN ROAD
RICHMOND, RI 02898

Project No.:	18071
Designed By:	RGM
Drawn By:	EMD
Checked By:	JJP
Date:	MARCH 2024
Scale:	AS SHOWN

SHEET
58
SHEET 58 OF 58