LEGEND

EXISTING STONE WALL
EXISTING CONTOUR LINE
PROPOSED CONTOUR LINE
EXISTING TREE LINE
EXISTING BUILDING
EXISTING SEWER MANHOLE
EXISTING SEWER LINE
EXISTING DRAIN MANHOLE
EXISTING DRAIN LINE
EXISTING CATCH BASIN
EXISTING WATER LINE
EXISTING HYDRANT
WF-105 EXISTING WETLAND FLAG

EXISTING WATER GATE
EXISTING BOULDER/ROCK
EXISTING UTILITY POLE
PROPOSED WELL
PROPOSED CATCH BASIN
PROPOSED DRAIN MANHOLE
PROPOSED STORM DRAIN
PROPOSED WATER MAIN
PROPOSED RETAINING WALL
PROPOSED WATER GATE
× 123.4 PROPOSED FINISH GRADE
QPA QUALIFYING PERVIOUS AREA

FIELD STONE BOUND FOUND (HELD)
IRON ROD SET
NORTH SMITHFIELD
APPROXIMATE TOWN LINE
SMITHFIELD
Rf
ChC
CeC
WOODED SWAMP
50' PERIMETER WETLAND
FORESTED WETLAND (NO BUFFER)
AP 50 LOT 92 18 ACRES
AP 49A LOT 47 N/F NATACHA LEGEIN PAYNE
AP 49A LOT 46 N/F VICTOR SILVA
AP 49A LOT 44 N/F RICHARD COLAVECCHIO
AP 49A LOT 43 N/F ALAN CAFFERTY
AP 49A LOT 48 N/F KAYLA MILLS
AP 49A LOT 49 N/F DAVID W LAMANTIA
AP 49 LOT 006B N/F LEES FARM COMMON LLC.
CEDAR FOREST ROAD
LATHAM FARM ROAD
IRON ROD FOUND SEE DETAIL '3'
IRON ROD FOUND SEE DETAIL '2'
IRON PIPE FOUND SEE DETAIL '1'
DRILL HOLE FOUND
STONE BOUND FOUND
IRON ROD FOUND
IRON PIPE FOUND
DRAINAGE & UNDERGROUND UTILITY EASEMENT TAKEN FROM REFERENCE PLAN #3
EXISTING DRAINAGE CULVERT
EXISTING SEWER PUMP
PLAN NORTH

PLAN REFERENCE:
PLAN INFORMATION OBTAINED FROM PRELIMINARY SUBDIVISION PLANS FOR "CEDAR FOREST ESTATES" ASSESSORS MAP 49, LOT 24 ON CEDAR FOREST ROAD IN SMITHFIELD, RHODE ISLAND PREPARED BY COMMONWEALTH ENGINEERS & CONSULTANTS, INC., PROVIDENCE, RI REVISED JULY 11, 2018

GRAPHIC SCALE
80 0 40 80 160 320
(IN FEET)
1 inch = 80 ft.

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL
DATED: JUN 22 2022 FILE #: 22-0061
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Nancy L. Freeman

RI Environmental Management
JUN 02 2022
Office of Water Resources

EXISTING CONDITIONS PLAN

Thomas J. Principe, III
REGISTERED PROFESSIONAL ENGINEER

REVISIONS

No.	DATE	DRWN	CHKD
1.	05/26/22	KAB	TJP

PRINCIPE COMPANY, INC.
ENGINEERING DIVISION
PO BOX 298
TIVERTON, RI 02878
401.816.5385
WWW.PRINCIPEENGINEERING.COM

RIDEM PLAN
FOR
2-LOT DEVELOPMENT
CEDAR FOREST ROAD EXTENSION
IN
SMITHFIELD, RHODE ISLAND

SCALE: 1" = 80'		SHEET NO: 1 OF 6
DRAWN BY: KAB	DESIGN BY: RM	CHECKED BY: JAR
DATE: 01/31/22		PROJECT NO.: LD-2021-20

RI Environmental Management
JUN 0 2 2022
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: JUN 2 2 2022 FILE #: 22-0061
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Nancy L. Freeman

LEGEND

Symbol	Description	Symbol	Description
	EXISTING STONE WALL		EXISTING WATER GATE
130	EXISTING CONTOUR LINE		EXISTING BOULDER/ROCK
130	PROPOSED CONTOUR LINE		EXISTING UTILITY POLE
	EXISTING TREE LINE		PROPOSED WELL
	EXISTING BUILDING		PROPOSED CATCH BASIN
	EXISTING SEWER MANHOLE		PROPOSED DRAIN MANHOLE
S	EXISTING SEWER LINE	D	PROPOSED STORM DRAIN
	EXISTING DRAIN MANHOLE	W	PROPOSED WATER MAIN
D	EXISTING DRAIN LINE		PROPOSED RETAINING WALL
	EXISTING CATCH BASIN	WV	PROPOSED WATER GATE
W	EXISTING WATER LINE	x 123.4	PROPOSED FINISH GRADE
	EXISTING HYDRANT	QPA	QUALIFYING PERVIOUS AREA
WF-105	EXISTING WETLAND FLAG		

PLAN REFERENCE:
PLAN INFORMATION OBTAINED FROM PRELIMINARY SUBDIVISION PLANS FOR "CEDAR FOREST ESTATES" ASSESSORS MAP 49, LOT 24 ON CEDAR FOREST ROAD IN SMITHFIELD, RHODE ISLAND PREPARED BY COMMONWEALTH ENGINEERS & CONSULTANTS, INC., PROVIDENCE, RI REVISED JULY 11, 2018

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

Thomas J. Principe, III
REGISTERED PROFESSIONAL ENGINEER

REVISIONS

No.	DATE	DRWN	CHKD
1.	04/27/22	KAB	TJP
2.	05/26/22	KAB	TJP

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RIDEM PLAN
FOR
2-LOT DEVELOPMENT
CEDAR FOREST ROAD EXTENSION
IN
SMITHFIELD, RHODE ISLAND

SCALE: 1" = 40'	SHEET NO: 2 OF 6
DRAWN BY: KAB	DESIGN BY: RM
CHECKED BY: JAR	
DATE: 01/31/22	PROJECT NO.: LD-2021-20

LEGEND

EXISTING STONE WALL	EXISTING WATER GATE
EXISTING CONTOUR LINE	EXISTING BOULDER/ROCK
PROPOSED CONTOUR LINE	EXISTING UTILITY POLE
EXISTING TREE LINE	PROPOSED WELL
EXISTING BUILDING	PROPOSED CATCH BASIN
EXISTING SEWER MANHOLE	PROPOSED DRAIN MANHOLE
EXISTING SEWER LINE	PROPOSED STORM DRAIN
EXISTING DRAIN MANHOLE	PROPOSED WATER MAIN
EXISTING DRAIN LINE	PROPOSED RETAINING WALL
EXISTING CATCH BASIN	PROPOSED WATER GATE
EXISTING WATER LINE	x 123.4 PROPOSED FINISH GRADE
EXISTING HYDRANT	QPA QUALIFYING PERVIOUS AREA
WF-105 EXISTING WETLAND FLAG	

RI Environmental Management
JUN 0 2 2022
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: JUN 2 2 2022 FILE #: 22-0061
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
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GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

PLAN REFERENCE:
PLAN INFORMATION OBTAINED FROM PRELIMINARY SUBDIVISION PLANS FOR "CEDAR FOREST ESTATES" ASSESSORS MAP 49, LOT 24 ON CEDAR FOREST ROAD IN SMITHFIELD, RHODE ISLAND PREPARED BY COMMONWEALTH ENGINEERS & CONSULTANTS, INC., PROVIDENCE, RI REVISED JULY 11, 2018

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REVISIONS

No.	DATE	DRWN	CHKD
1.	05/26/22	KAB	TJP

RIDEM PLAN
FOR
4-LOT DEVELOPMENT
CEDAR FOREST ROAD EXTENSION
IN
SMITHFIELD, RHODE ISLAND

SCALE: 1" = 40'	SHEET NO: 3 OF 6	
DRAWN BY: KAB	DESIGN BY: RM	CHECKED BY: JAR
DATE: 01/31/22	PROJECT NO.: LD-2021-20	

GENERAL NOTES

1. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO OBTAIN ANY AND ALL PERMITS REQUIRED BY THE STATE OF RHODE ISLAND AND THE MUNICIPALITY PRIOR TO COMMENCING ANY WORK.
2. IT SHALL ALSO BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO MAINTAIN THE INTEGRITY OF ALL EXISTING UTILITIES, STRUCTURES, AND ABUTTING PROPERTIES. THE COST OF ANY REPAIR OR REPLACEMENT OF DAMAGED ITEMS SHALL BE BORNE BY THE CONTRACTOR.
3. BEFORE STARTING ANY CONSTRUCTION THE CONTRACTOR SHALL COORDINATE INSTALLATION OF ANY HYDRANTS, WATER MAINS, BLOWOFF ASSEMBLIES, FITTINGS, AND VALVES WITH THE LOCAL WATER DEPARTMENT AS TO TYPE AND MANUFACTURER.
4. THE CONTRACTOR SHALL COORDINATE ALL WORK WITH THE MUNICIPAL ENGINEERING DEPARTMENT AND ALL UTILITY INSTALLATIONS AND INSPECTIONS WITH THE APPROPRIATE UTILITY COMPANY. A 48 HOUR ADVANCE NOTICE IS REQUIRED BEFORE WORK COMMENCEMENT.
5. ALL WORK PERFORMED HEREIN SHALL BE GOVERNED BY THE "R.I. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (REVISION OF 1997)" WITH ALL CORRECTIONS AND ADDENDA AND THE 1974 R.I. STANDARD DETAILS WITH ALL CORRECTIONS AND ADDENDA AND THE TOWN OF WARREN STANDARD SPECIFICATIONS AND DETAILS.
6. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR QUANTITY TAKE-OFF IN COMPUTING ANY ESTIMATES.
7. EMBANKMENT SLOPES AND ALL DISTURBED AREAS ARE TO RECEIVE 4" OF TOPSOIL AND SEEDED, SEE EROSION CONTROL PROGRAM.
8. UNLESS OTHERWISE SPECIFIED, ALL STORM DRAINS SHALL BE REINFORCED CONCRETE CLASS III PIPE.
9. THE CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION INDICATED ON THESE PLANS. THAT INCLUDES ANY CONSTRUCTION TO BRING UTILITIES TO SITE, ANY REPAIRS, ANY TRENCHING REQUIRED, HYDRANTS, ANY AND ALL CONSTRUCTION FOR ACCEPTANCE OF ROADS AND EASEMENTS.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL TEMPORARY SEDIMENTATION AND EROSION CONTROLS.
11. THE LOCATION OF EXISTING UTILITIES AS SHOWN ARE APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR. "DIG SAFE" SHALL BE CONTACTED BY THE CONTRACTOR AS PART OF THIS VERIFICATION.
12. IN ALL EXCAVATION AND PLACEMENT OF FILL, THE CONTRACTOR SHALL PERFORM THE WORK IN FULL COMPLIANCE WITH THE R.I. STANDARD SPECIFICATION SECTION 202.
13. ALL WATER MAINS SHALL BE DEFLECTED ALONG A CURVE WITH A MINIMUM RADIUS OF 250' AT ANY LOCATION WHERE THIS IS NOT POSSIBLE, PROPER BENDS AND FITTINGS SHALL BE USED.
14. ALL EXCESS SOIL, STUMPS, TREES, ROCKS, BOULDERS, AND OTHER REFUSE SHALL BE DISCARDED OFF SITE, IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS.

EROSION CONTROL & SOIL STABILIZATION PROGRAM

1. DENUDED SLOPES SHALL NOT BE UNATTENDED OR EXPOSED FOR EXCESSIVE PERIODS OF TIME SUCH AS THE INACTIVE WINTER SEASON.
2. ALL DISTURBED SLOPES, EITHER NEWLY CREATED OR EXPOSED PRIOR TO OCTOBER 15, SHALL BE SEEDED OR PROTECTED BY THAT DATE, FOR ANY WORK COMPLETED DURING EACH CONSTRUCTION YEAR.
3. THE TOPSOIL SHALL HAVE A SANDY LOAM TEXTURE RELATIVELY FREE OF SUBSOIL MATERIAL, STONES, ROOTS, LUMPS OF SOIL, TREE LIMBS, TRASH OR CONSTRUCTION DEBRIS AND SHALL CONFORM WITH R.I. STD SPECIFICATION M 18.
4. THE SEED MIX SHALL BE INOCULATED WITHIN 24 HOURS, BEFORE MIXING AND PLANTING, WITH APPROPRIATE INOCOLUM FOR EACH VARIETY.
5. THE DESIGN MIX SHALL BE COMPRISED OF THE FOLLOWING PERMANENT SEEDING MIXTURES:

A. MOWED AREA (ALL FLATS OR SLOPES LESS THAN 3:1)

MIXTURE:	% BY WEIGHT:	SEEDING DATES:
RED FESCUE	75	APRIL 1 – JUNE 15
KENTUCKY BLUEGRASS	15	AUGUST 15 – OCTOBER 15
COLONIAL BENTGRASS	5	
PERENNIAL RYEGRASS	5	
TOTAL:	100 lbs/Ac.	

B. UNMOWED AREA OR INFREQUENTLY MOSED (ALL SLOPES GREATER THAN 3:1)

MIXTURE:	% BY WEIGHT:	SEEDING DATES:
RED FESCUE	75	APRIL 1 – JUNE 15
COLONIAL BENTGRASS	5	AUGUST 15 – OCTOBER 15
PERENNIAL RYEGRASS	5	
BIRDSFOOT TREFOIL	15	
TOTAL:	100 lbs/Ac.	

6. TEMPORARY TREATMENTS SHALL CONSIST OF A 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 ENGINEER.
7. STRAW APPLICATIONS SHOULD BE IN THE AMOUNT OF 3,000 – 4,000 lbs/Ac.
8. ALL STRAW BALES OR COMPOST FILTER SOCK SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER IS ESTABLISHED. IF NEEDED, TEMPORARY SEEDING CAN HELP MINIMIZE THE EROSION. A TEMPORARY SEEDING GUIDE MUST BE INCLUDED AS A REFERENCE. THE FOLLOWING SPECIES ARE RECOMMENDED:

MIXTURE:	lbs./1,000 S.F.	lbs/Ac.	SEEDING DATES:
ANNUAL RYEGRASS	1.0 – 1.5	40 – 60	3/1 – 6/1
PERENNIAL RYEGRASS	1.0 – 1.5	40 – 60	3/1 – 6/1
SUDAN GRASS	0.7 – 1.0	30 – 40	5/15 – 8/15
MILLET	0.7 – 1.0	30 – 40	5/15 – 8/15
WINTER RYE	3.0	120	4/15 – 6/15
OATS	0.5 – 5.0	86 – 120	3/1 – 6/15
WEEPING COVER GRASS	0.5 – 5.0	5 – 20	5/1 – 7/1

9. THE CONTRACTOR MUST REPAIR AND/OR RESEED ANY AREAS THAT DO NOT DEVELOP WITHIN THE PERIOD OF ONE YEAR AND HE SHALL DO SO AT NO ADDITIONAL EXPENSE.
10. ALL FILL SHALL BE THOROUGHLY COMPACTED UPON PLACEMENT IN STRICT CONFORMANCE WITH THE R.I.D.P.W. STD SPECIFICATIONS SECTION 202.
11. STABILIZATION OF ONE FORM OR ANOTHER AS DESCRIBED ABOVE SHALL BE ACHIEVED WITHIN 15 DAYS OF FINAL GRADING.
12. STOCKPILES OF TOPSOIL SHALL NOT BE LOCATED NEAR WATERWAYS, THEY SHALL HAVE SIDE SLOPES NO GREATER THAN 30% AND STOCKPILES SHALL ALSO BE SEEDED AND/OR STABILIZED.
13. ON BOTH STEEP AND LONG SLOPES CONSIDERATION SHALL BE GIVEN TO "CRIMPING" OR "TRACKING" TO TACK DOWN MULCH APPLICATIONS.
14. REFERENCE THE SEDIMENTATION CONTROL PROGRAM AND ORDER OF PROCEDURE FOR PROPER COORDINATION
15. THE DRAINAGE SYSTEM SHALL RECEIVE ONE FINAL CLEANING PRIOR TO ACCEPTANCE TO THE OVERALL PROJECT BY THE OWNER SEDIMENTS SHALL BE DISPOSED OF IN A PROPER MANNER.

ORDER OF PROCEDURE:

1. PRIOR TO ANY CLEARING AND GRUBBING OR ANY ROUGH GRADING, TEMPORARY STRAW BALES OR COMPOST FILTER SOCK SHALL BE PLACED OUTSIDE THE LIMITS OF CONSTRUCTION AS PER THE PLANS (I.E. ALONG ROADWAYS, STREAM BANKS, CRITICAL AREAS, ETC.).
2. ALL EROSION AND SEDIMENTATION CONTROL STRUCTURES SHALL BE PERIODICALLY MAINTAINED AS PER THE RESPECTIVE PROGRAMS FOR TEMPORARY CONTROL.
3. IF WORK PROGRESS IS TO BE INTERRUPTED AT ANY TIME, REFERENCE EROSION AND SEDIMENTATION PROGRAMS FOR TEMPORARY CONTROL.
4. TEMPORARY STRAW BALES OR COMPOST FILTER SOCK ALONG AND AT THE ENDS OF ROADWAYS MAY ALSO BE REMOVED AFTER FINAL SOIL STABILIZATION HAS BEEN ACHIEVED AND APPROVED.
5. HAYBALES LOCATED AT DRAINAGE OUTLETS MUST REMAIN UNTIL SUCH TIME THAT A DESIRABLE STAND OF GRASS OR COVER HAS BEEN ESTABLISHED AND THE PROJECT RECEIVES A FAVORABLE APPROVAL FOR FINAL ACCEPTANCE FROM THE ENGINEER.

SEDIMENTATION CONTROL PROGRAM:

1. RIP RAP SPLASH PADS SHALL BE INSTALLED AT THE OUTLETS FOR ALL CULVERTS DISCHARGING INTO A WATERWAY.
2. EXTREME CARE SHALL BE EXERCISED SO AS TO PREVENT ANY UNSUITABLE MATERIAL ENTERING THE WETLANDS.
3. ALL DISTURBED AREAS SUBJECT TO EROSIVE TENDENCIES WHETHER THEY BE NEWLY FILLED OR EXCAVATED SHALL BE SEEDED AND PROTECTED WITH A FIBER MULCH.
4. DURING CONSTRUCTION, THE CONTRACTOR AND/OR DEVELOPER SHALL BE RESPONSIBLE FOR MAINTAINING DRAINAGE AND RUNOFF FLOW DURING STORMS AND PERIODS OF RAINFALL.
5. SEDIMENTATION CONTROL DEVICES SHALL BE INSPECTED CLOSELY AND MAINTAINED PROMPTLY AFTER EACH RAINFALL.
6. CARE SHOULD BE TAKEN SO AS NOT TO PLACE "REMOVED SEDIMENTS" WITHIN THE PATH OF EXISTING, NEWLY CREATED (BOTH TEMPORARY AND PERMANENT) OR PROPOSED WATERCOURSES OR THOSE AREAS SUBJECTED TO STORM WATER FLOW.
7. ADDITIONAL STRAW BALES OF COMPOST FILTER SOCK SHALL BE LOCATED AS CONDITIONS WARRANT.
8. ALL SEDIMENTS SHALL BE REMOVED FROM THE DRAINAGE AND INFILTRATION FACILITIES AS SCHEDULED FOR EACH FACILITY (SEE INFILTRATION BASIN MAINTENANCE, THIS SHEET).
9. REFERENCE THE "R.I. SOIL EROSION AND SEDIMENT CONTROL HANDBOOK" PREPARED BY THE U.S. DEPT. OF AGRICULTURE, SOIL CONSERVATION SERVICE, 1988, AS A GUIDE.

VEGETATIVE COVER AND PLANTING

1. THE NORMAL ACCEPTABLE SEASONABLE SEEDING DATES ARE APRIL 1ST THROUGH OCTOBER 15TH.
2. TOP SOIL FOR PERMANENT OR LONG TERM TEMPORARY SEEDING SHOULD HAVE A SANDY LOAM TEXTURE, RELATIVELY FREE OF SUBSOIL MATERIAL, STONES, ROOTS, LUMPS OF SOIL, TREE LIMBS, TRASH OR CONSTRUCTION DEBRIS. TOP SOIL SHALL CONFORM WITH RHODE ISLAND SPECIFICATIONS M18.01.
3. THE DESIGN SEED MIX UTILIZED IN ALL DISTURBED AREAS TO BE SEEDED SHALL BE COMPRISED OF THE FOLLOWING:

TYPE	% BY WEIGHT	SEEDING DATE
CREEPING RED FESCUE	70	
ASTORIA BENTGRASS	5	APRIL 1 – JUNE 15
BIRDFOOT TREFOIL	15	AUG. 15 – OCT. 15
PERENNIAL RYE GRASS	10	

APPLICATION RATE – 100 LBS PER ACRE

SEED MIX SHALL BE INOCULATED WITHIN 24 – HOURS BEFORE MIXING AND PLANTING, WITH APPROPRIATE INOCULATION FOR EACH SEED VARIETY. ALTERNATE SEED TYPES DUE TO SITE SPECIFIC CONDITIONS AND SOILS ARE ACCEPTABLE WITH THE ENGINEER'S APPROVAL.

4. IN TOPSOIL SEEDING AREAS, THE CONTRACTOR WILL LIME AND FERTILIZE AS REQUIRED TO COMPLIMENT OR UPGRADE SOIL CONDITIONS.
5. THE CONTRACTOR MUST REPAIR AND/OR RESEED ANY PERMANENT VEGETATIVE COVER AREAS THAT DO NOT DEVELOP OR WHICH ERODE WITHIN A ONE (1) YEAR PERIOD.

EROSION CONTROL, SOIL STABILIZATION AND SEDIMENT CONTROL PLAN

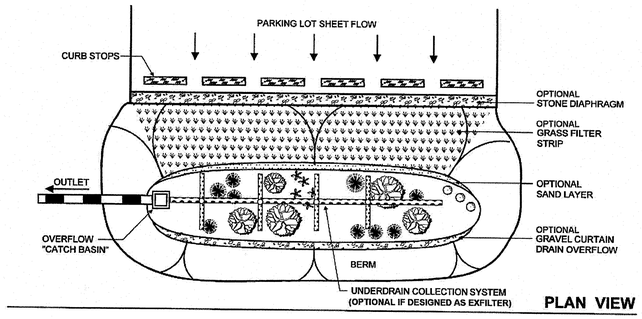
1. PRIOR TO THE COMMENCEMENT OF ANY CLEARING, GRUBBING, DEMOLITION OR EARTHWORK ACTIVITY, TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES AS INDICATED ON THE PLANS ARE TO BE INSTALLED BY THE CONTRACTOR.
2. CONSTRUCTION ACCESS STABILIZATION ENTRANCE PADS ARE TO BE INSTALLED PRIOR TO THE COMMENCEMENT OF SITE GRUBBING OR EARTHWORK ACTIVITY.
3. EXISTING CATCH BASINS ARE TO BE PROTECTED WITH HAY BALES AND/OR SILT SACS PRIOR TO THE START OF SITE GRUBBING, EARTHWORK OR UNDERGROUND UTILITY AND DRAINAGE INFRASTRUCTURE INSTALLATION TO SERVE THE DEVELOPMENT SITE.
4. THE PROJECT CONSTRUCTION SEQUENCE, TO THE EXTENT PRACTICAL, SHOULD REQUIRE THE INSTALLATION OF DOWN GRADE AND OFF SITE STORM DRAINAGE SYSTEM IMPROVEMENTS BEFORE THE START OF SITE GRUBBING AND EARTHWORK ACTIVITY.
5. TEMPORARY SITE SLOPE TREATMENTS FOR SOIL STABILIZATION SHALL CONSIST OF STRAW, FIBER MULCH, RIP RAP OR PROTECTIVE COVERS SUCH AS MAT OR FIBER LINING (BURLAP, JUTE, FIBERGLASS NETTING, AND EXCELSIOR OR EQUAL PRODUCTS). THESE AND OTHER ACCEPTABLE MEASURES SHALL BE INCORPORATED INTO THE SITE WORK AS WARRANTED OR AS ORDERED BY THE ENGINEER.
6. CONSTRUCTION SITES ARE DYNAMIC, THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION AND OR MOVEMENT AND MAINTENANCE OF EROSION CONTROLS, SOIL STABILIZATION AND SEDIMENT CONTROL MEASURES AS NEEDED TO MAXIMIZE THE INTENT OF THE PLAN FOR ALL SITE CONDITIONS THROUGHOUT THE CONSTRUCTION PERIOD.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERIODIC INSPECTION, MAINTENANCE, REPAIR, AND REPLACEMENT OF EROSION CONTROLS, SOIL STABILIZATION AND SEDIMENT CONTROL DEVICES UNTIL AN ACCEPTABLE PERMANENT VEGETATIVE GROWTH IS ESTABLISHED. THE CONTRACTOR SHALL MAINTAIN A DETAIL LOG OF ALL EROSION CONTROL INSPECTIONS, COMPLAINTS RELATED TO EROSION OR SEDIMENT, AND CORRECTIVE REMEDIAL MEASURES TAKEN THROUGHOUT THE COURSE OF THE PROJECT CONSTRUCTION.
8. SOIL EROSION AND SEDIMENT CONTROL IS NOT LIMITED TO DAMAGES CAUSED BY WATER BUT ALSO INCLUDES EROSION AND SEDIMENT RESULTING FROM WINDS. MEASURES, SUCH AS TEMPORARY GROUND COVERS, WATER AND CALCIUM APPLICATIONS ARE TO BE UNDERTAKEN AS NEEDED TO MINIMIZE WIND RELATED SOIL AND DUST CONTROL.
9. STOCK PILES OF EARTH MATERIALS SHALL NOT BE LOCATED NEAR WATERWAYS OR WETLANDS. STOCK PILES SHALL HAVE SIDE SLOPES NO GREATER THAN THIRTY PERCENT (30%). STOCK PILES SHALL BE SURROUNDED ON THE DOWN GRADIENT OF THE EXISTING GROUND SURFACE BY STRAWM BALES OR SILT FENCE. THE STOCK PILES SHALL ALSO BE SEEDED OR STABILIZED IN SOME MANOR TO PREVENT SOIL EROSION.
10. THE SMALLEST POSSIBLE SITE AREAS SHALL BE DISTURBED OR EXPOSED AT ONE TIME AND DENUDED SLOPES OR WORK AREAS SHALL NOT BE LEFT EXPOSED FOR EXCESSIVE PERIODS OF TIME, SUCH AS INACTIVE PERIODS OR SITE WORK SHUT DOWNS.
11. TO THE EXTENT POSSIBLE, ALL DISTURBED AREAS MUST BE SEEDED OR STABILIZED WITHIN THE CONSTRUCTION SEASON. STABILIZATION OF ONE FORM OR ANOTHER SHALL BE ACHIEVED WITHIN FIFTEEN (15) DAYS OF FINAL GRADING.
12. EXPOSED STEEP OR LONG SLOPES SHOULD BE TREATED WITH "CRIMPING" OR "TRACKING" TO REDUCE EROSION AND SEDIMENT AND TO TACK DOWN SEEDING OR MULCH APPLICATIONS.
13. IF CONCRETE IS TO BE USED ON SITE, THE CONTRACTOR MUST ESTABLISH AND MAINTAIN SPECIFIC WASHOUT AREAS FOR THE CONCRETE TRUCKS WITH APPROPRIATE PROTECTION CONTROLS.
14. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND MAINTAINING COLLECTION AND STORAGE LOCATIONS ON-SITE FOR ALL CONSTRUCTION DEBRIS AND TRASH SO THAT THIS MATERIAL DOES NOT BECOME A NEIGHBORHOOD NUISANCE.
15. EXISTING TREES AND VEGETATION WILL BE RETAINED WHENEVER FEASIBLE.
16. SITE SOIL EROSION AND SOIL STABILIZATION AND SEDIMENT CONTROLS MUST CONFORM TO ALL REQUIREMENTS OF THE APPLICABLE LOCAL COMMUNITY ORDINANCES AND STATE REGULATIONS.

STORM DRAINAGE SYSTEM MAINTENANCE PLAN:

THE FOLLOWING LIST OF MAINTENANCE TASKS AND FREQUENCIES MUST BE ADHERED TO IN ORDER TO INSURE A SUCCESSFUL LONG TERM OPERATION OF THE STORM DRAINAGE SYSTEM.

1. DURING CONSTRUCTION ACTIVITIES ALL EROSION CONTROLS ON THE SITE SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN TWENTY FOUR (24) HOURS AFTER AN EVENT WHICH GENERATES AT LEAST 0.25 INCHES OF RAIN IN A TWENTY FOUR (24) HOUR PERIOD.
2. SEDIMENTS SHALL BE REMOVED FROM ALL BASINS IMMEDIATELY AFTER SITE STABILIZATION.
3. ALL TRASH, LITTER AND OTHER DEBRIS SHALL BE REMOVED FROM ALL STORM WATER INLET AND OUTLET STRUCTURES A MINIMUM OF TWICE PER YEAR. THESE STRUCTURES SHALL ALSO BE INSPECTED TWICE PER YEAR. INSPECTIONS SHALL BE PERFORMED SEVERAL TIMES WITHIN THE FIRST SIX MONTHS OF OPERATION.
4. REPAIRS OR REPLACEMENT OF INLET/OUTLET STRUCTURES OR ANY ELEMENT OF THE FACILITY SHALL BE DONE WITHIN THIRTY (30) DAYS OF DEFICIENCY REPORTS. IF AN EMERGENCY SITUATION IS IMMINENT THEN REPAIR/REPLACEMENT SHALL BE DONE IMMEDIATELY TO AVERT FAILURE OR DANGER TO NEARBY RESIDENTS.
5. MAKE REPAIRS IMMEDIATELY USING APPROPRIATE STONE SIZES. DO NOT PLACE STONES ABOVE FINISHED GRADE.
6. ALL REMOVED SEDIMENTS AND DEBRIS SHALL BE DISPOSED OF OFF SITE IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS.
7. ALL OUTLET STRUCTURES AND OUTFLOW CHANNELS WILL BE INSPECTED ANNUALLY. INSPECTIONS WILL BE ACCOMPLISHED SEVERAL TIMES DURING THE FIRST SIX MONTHS OF OPERATION, ESPECIALLY AFTER RAINFALL EVENTS TO CHECK FOR CLOGGING OR, CONVERSELY, TOO RAPID OF A RELEASE.
8. REPAIRS OR REPLACEMENT OF INLET/OUTLET STRUCTURES, RIP-RAP CHANNELS, FENCES, OR OTHER ELEMENTS OF THE FACILITY WILL BE DONE WITHIN 30 DAYS OF DEFICIENCY REPORTS. IF AN EMERGENCY SITUATION IS IMMINENT THEN REPAIR/REPLACEMENT MUST BE DONE IMMEDIATELY TO AVERT FAILURE OR DANGER TO NEARBY RESIDENTS.
9. ALL SEDIMENT GENERATED DURING CONSTRUCTION AND AS A RESULT OF MAINTENANCE OF THE DRAINAGE SYSTEM MUST BE DISPOSED OF PROPERLY. SEDIMENT SHALL NOT BE DISPOSED OF IN OR NEAR STATE OR FEDERAL REGULATED WATERS.
10. ADDITIONAL BMP INSPECTION/MAINTENANCE MEASURES OUTLINED WITHIN THE PROJECT STORMWATER POLLUTION PRE VENTION PLAN SHALL BE ADHERED TO.

Figure 5-14 Bioretention



Adapted from MDE, 2000

RI Environmental Management
JUN 02 2022
Office of Water Resources

EROSION CONTROL NOTES

Thomas J. Principe III
No. 9155
REGISTERED PROFESSIONAL ENGINEER

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL
DATED: JUN 22 2022 FILE #: 22-0061
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Stanley L. Freeman

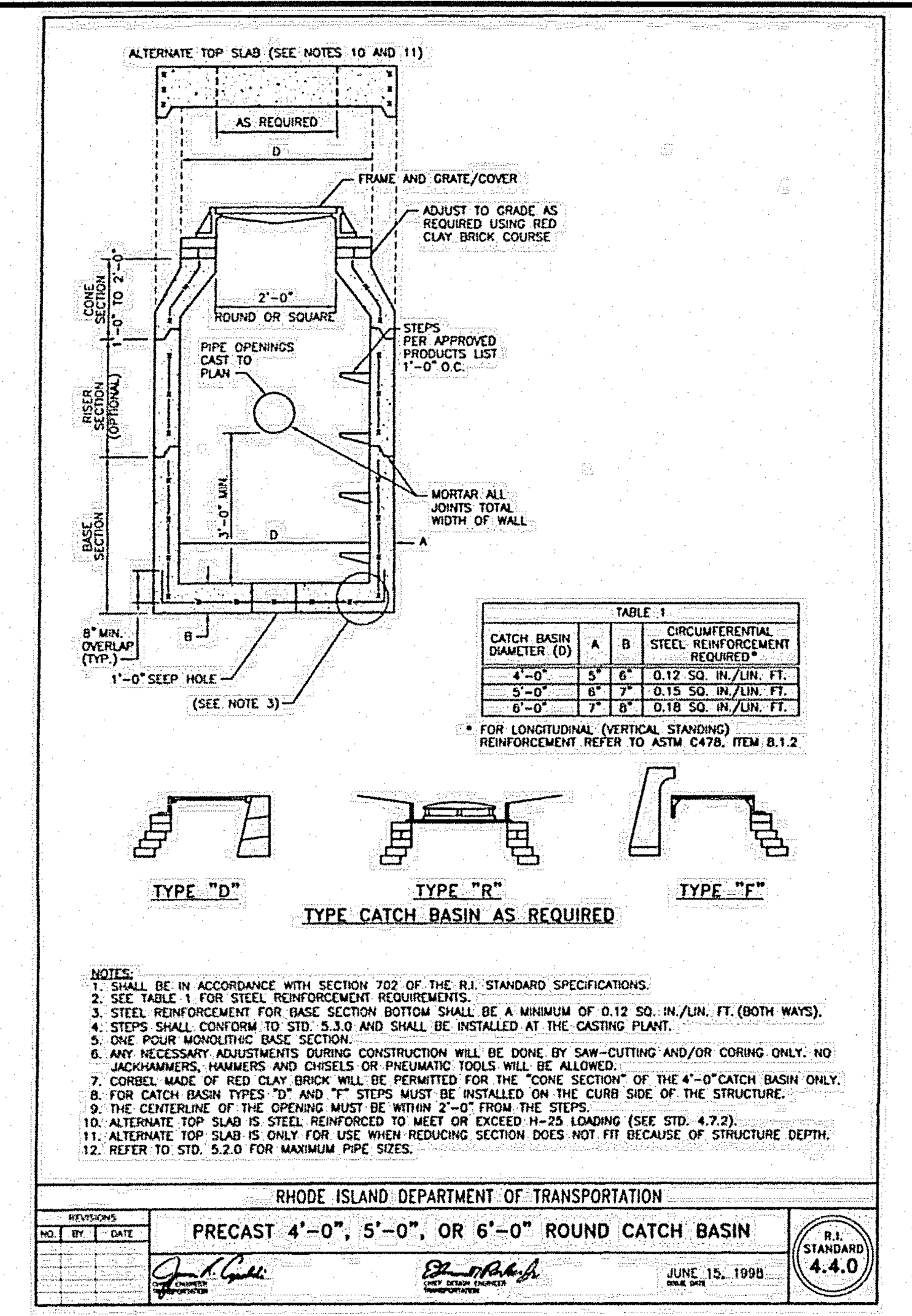
REVISIONS

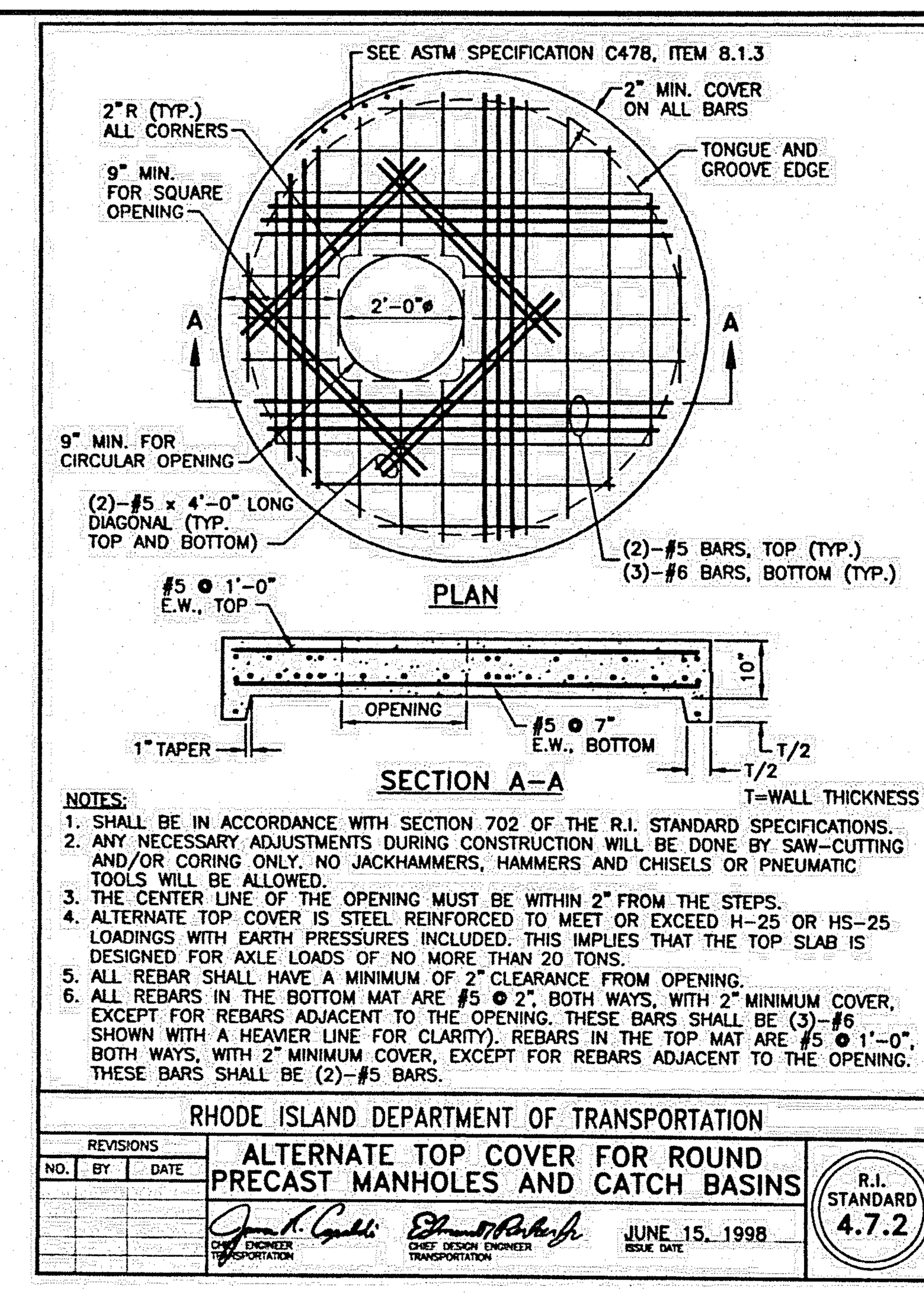
No.	DATE	DRWN	CHKD
1.	04/27/22	KAB	TJP
2.	05/26/22	KAB	TJP

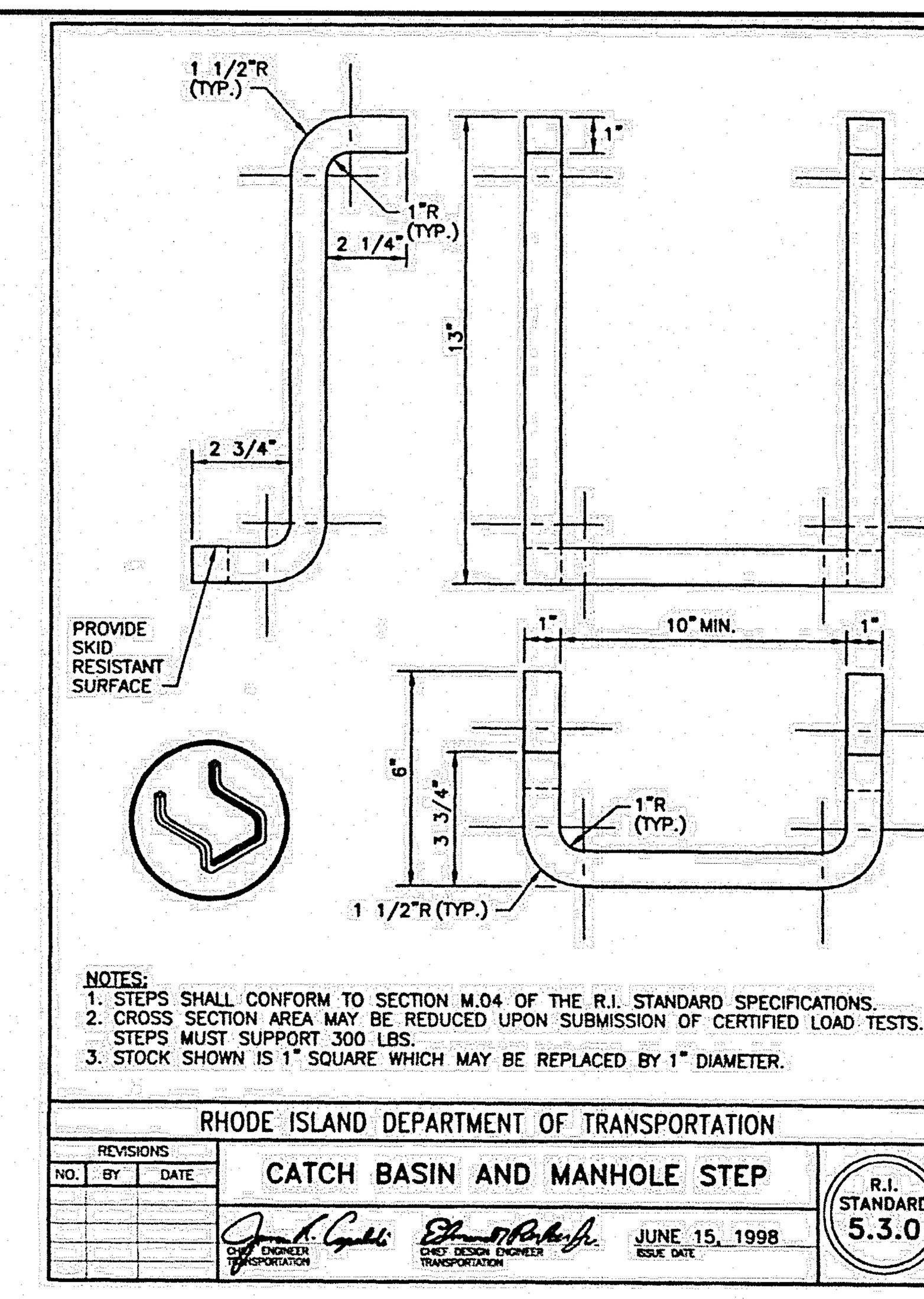
PRINCIPE COMPANY, INC.
ENGINEERING DIVISION
PO BOX 298
TIVERTON, RI 02878
401.816.5385
WWW.PRINCIPEENGINEERING.COM

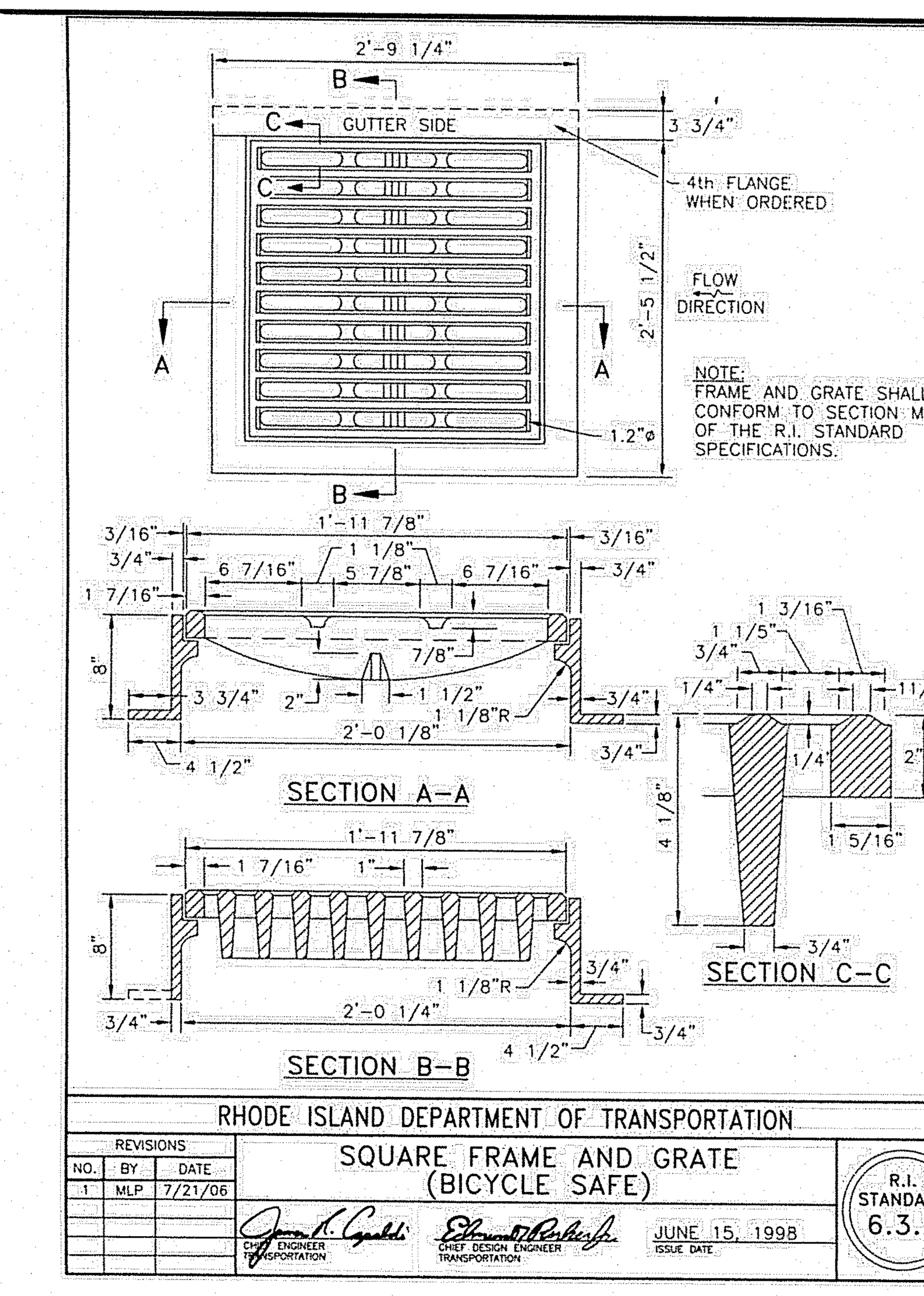
RIDEM PLAN
FOR
2-LOT DEVELOPMENT
CEDAR FOREST ROAD EXTENSION
IN
SMITHFIELD, RHODE ISLAND

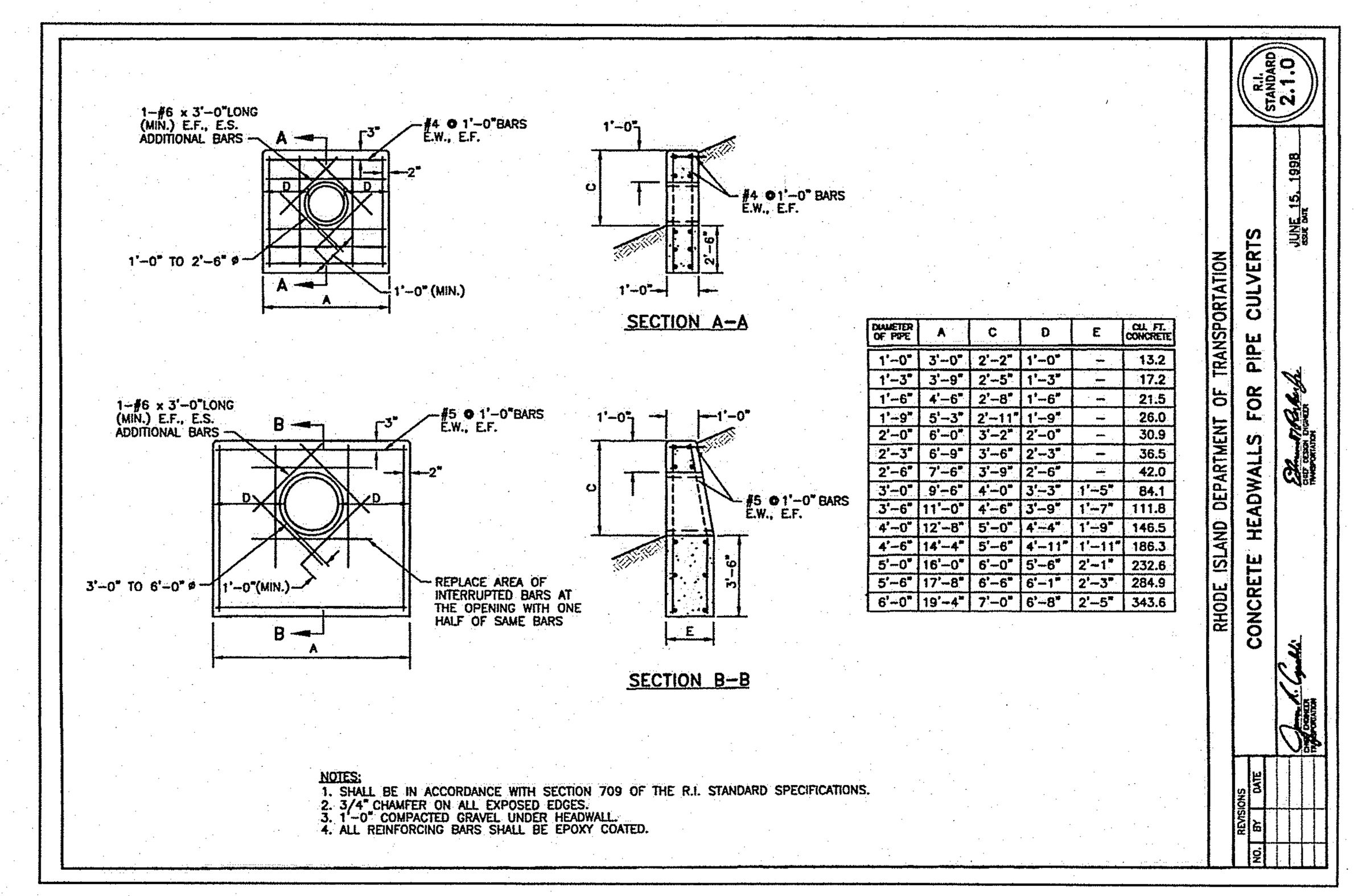
SCALE: AS NOTED	SHEET NO: 4 OF 6	
DRAWN BY: KAB	DESIGN BY: RM	CHECKED BY: JAR
DATE: 01/31/22	PROJECT NO.: LD-2021-20	

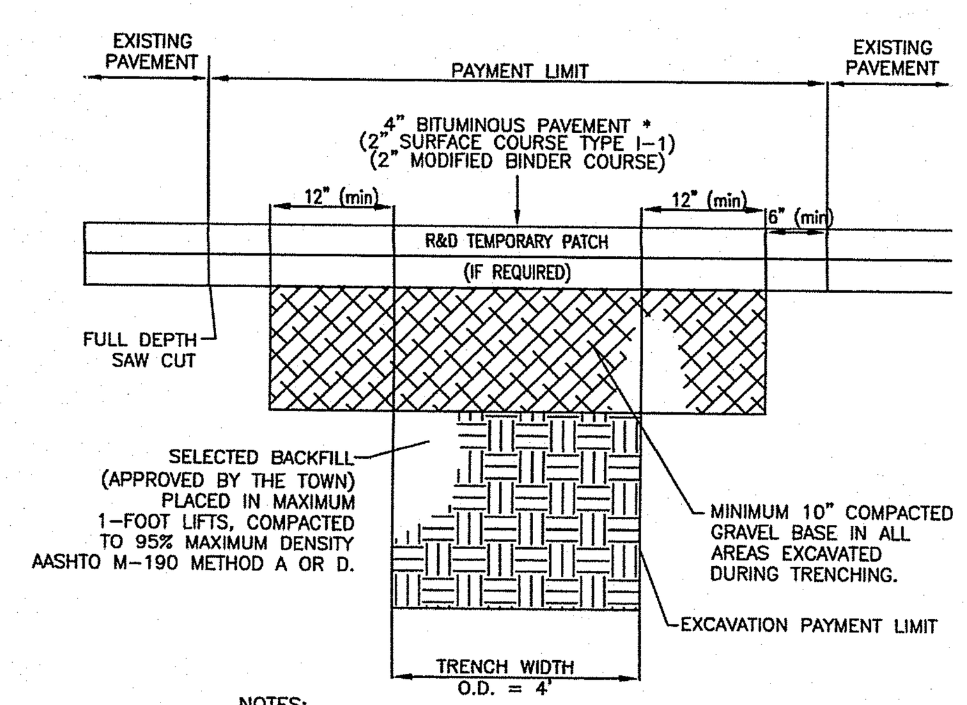












NOTES:

1. REMOVE AND DISPOSE OF TOP 10" OF SELECTED BACKFILL AND RE-COMPACT TOP OF TRENCH PRIOR TO SPREADING THE BASE COURSE.
2. EXISTING PAVEMENT SHALL BE SAW CUT BACK AN ADDITIONAL 6" TO PAYMENT LIMIT LINE OR UNDISTURBED PAVEMENT, WHICHEVER IS GREATER.
3. TEMPORARY BITUMINOUS PAVEMENT, SELECTED BACKFILL ANDUNSUITABLE MATERIAL SHALL BE REMOVED PRIOR TO PLACEMENT OF THE PERMANENT PAVEMENT.
4. ALL PREPARATION WORK SHALL BE APPROVED BY THE PUBLIC WORKS DEPARTMENT PRIOR TO PLACEMENT OF THE PERMANENT PAVEMENT.

* OR AS DIRECTED BY THE PUBLIC WORKS DIRECTOR.

SAWCUT AND PATCH DETAIL

N.T.S.

RI Environmental Management
JUN 0 2 2022
Office of Water Resources

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
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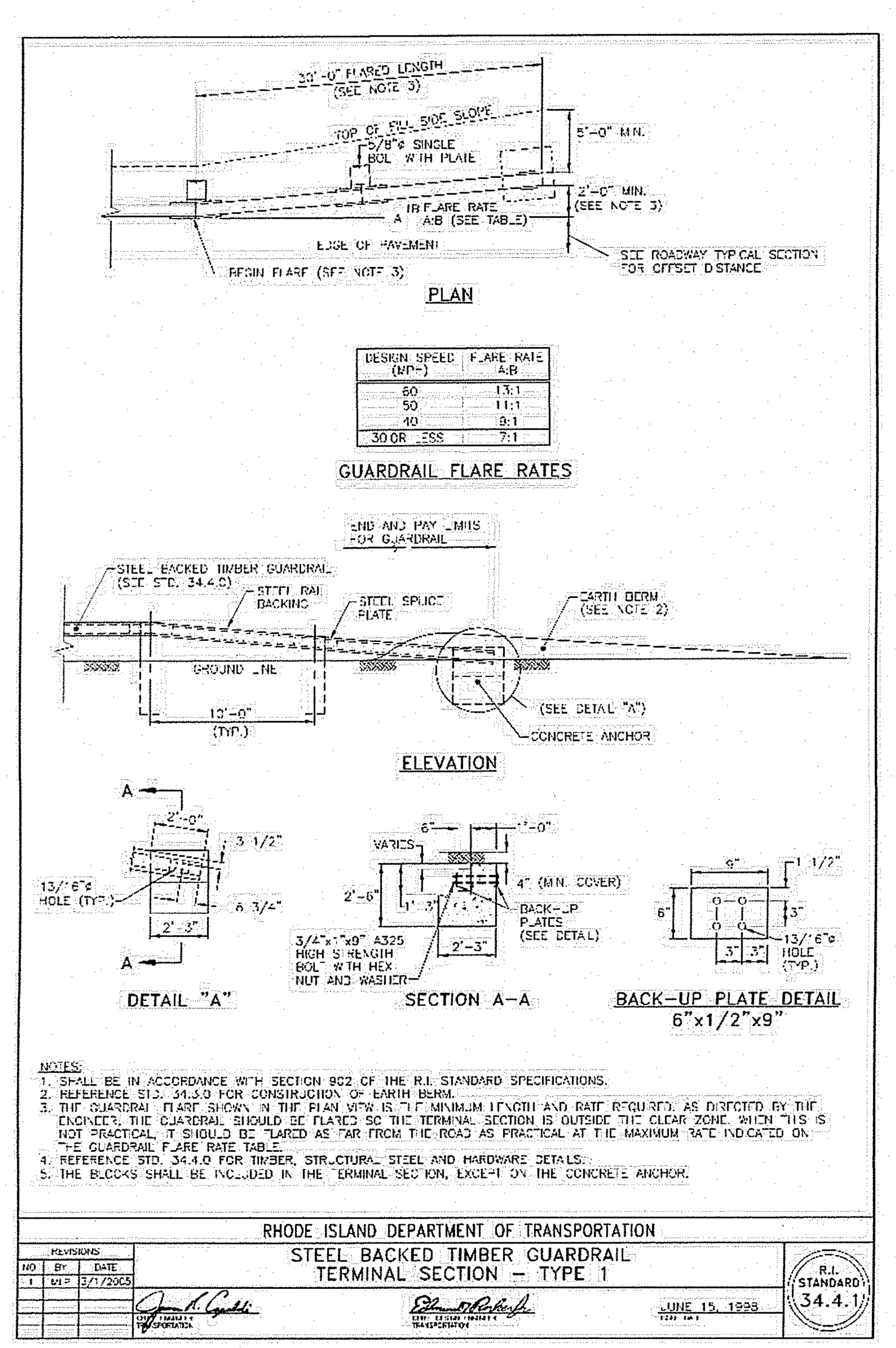
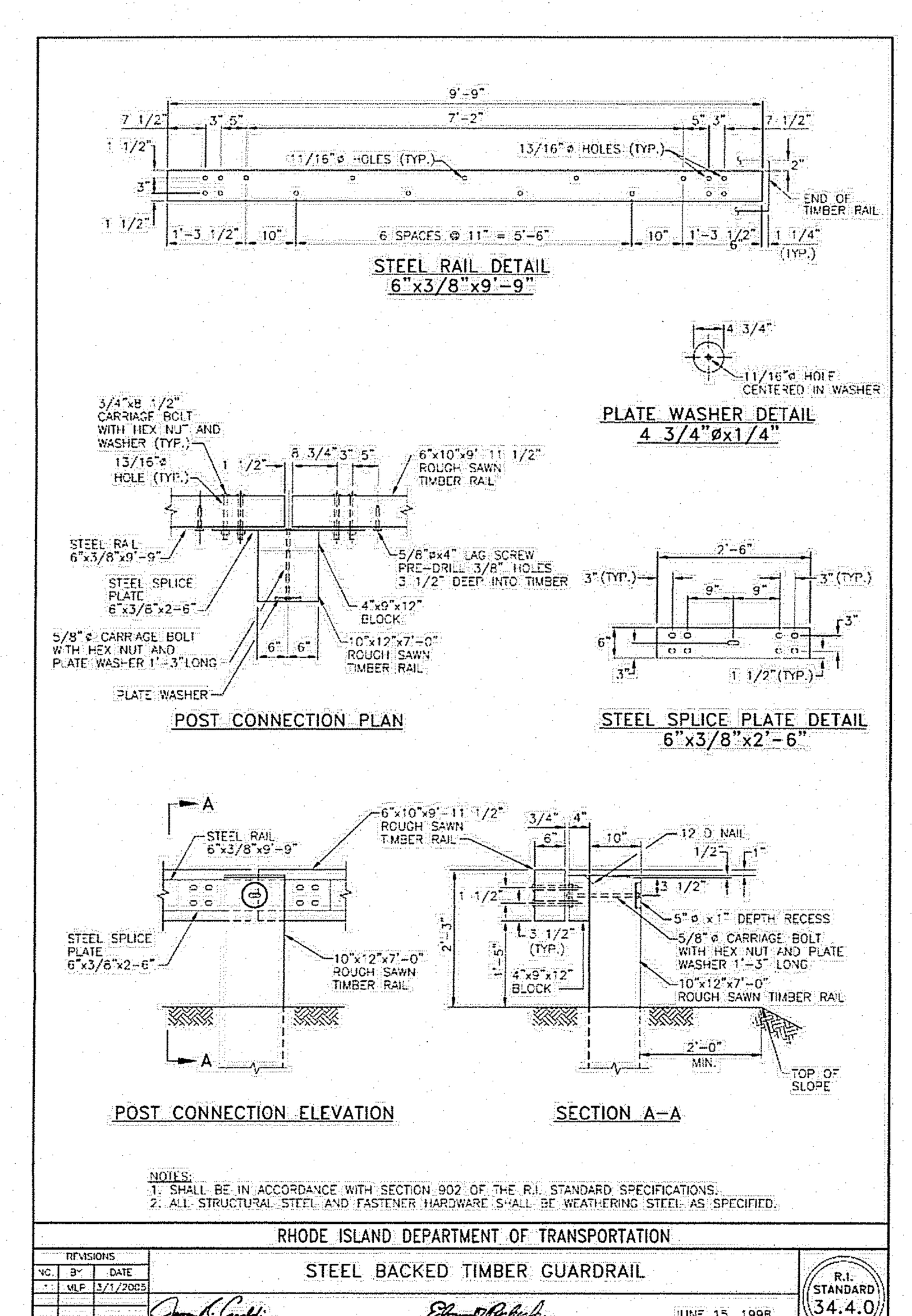
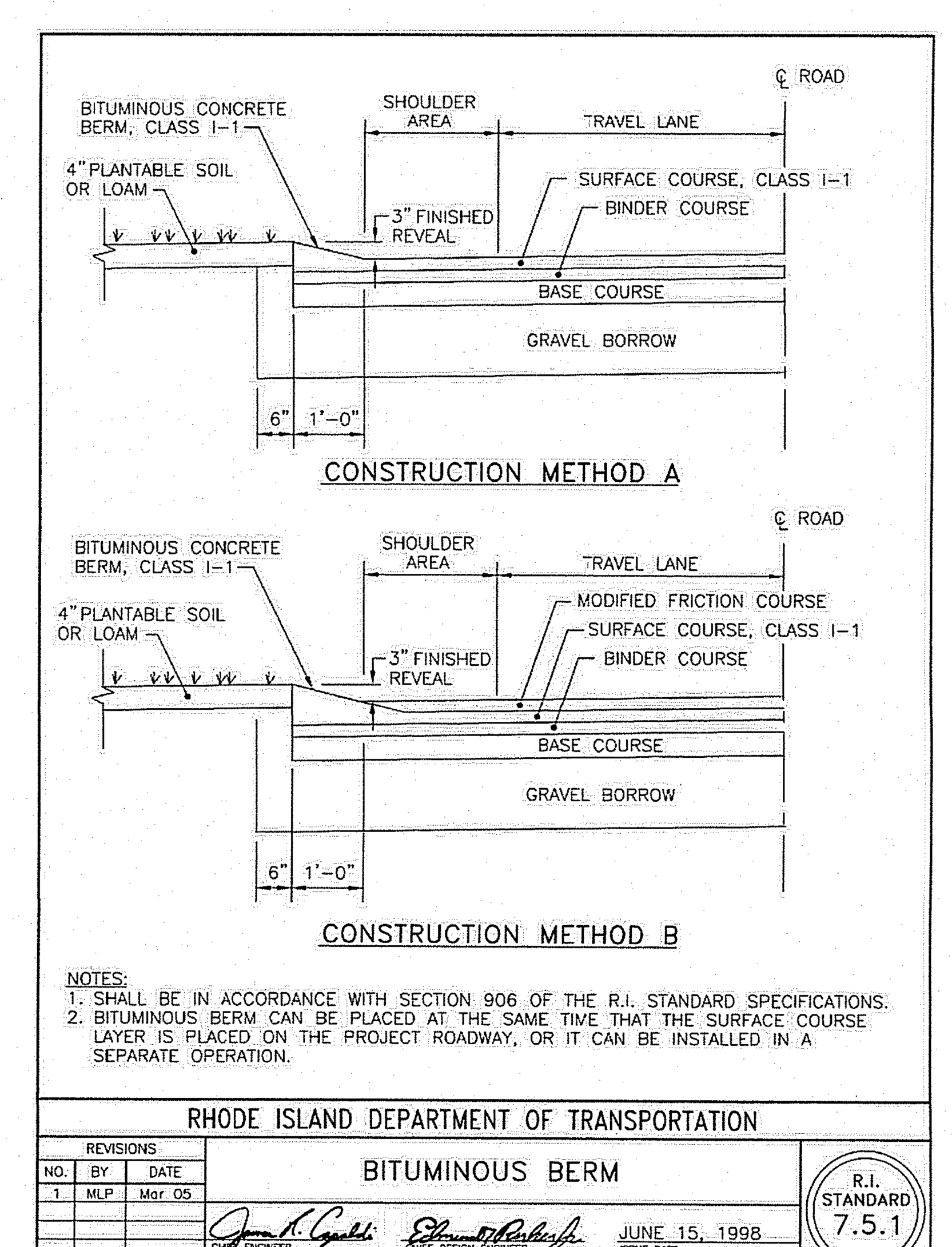
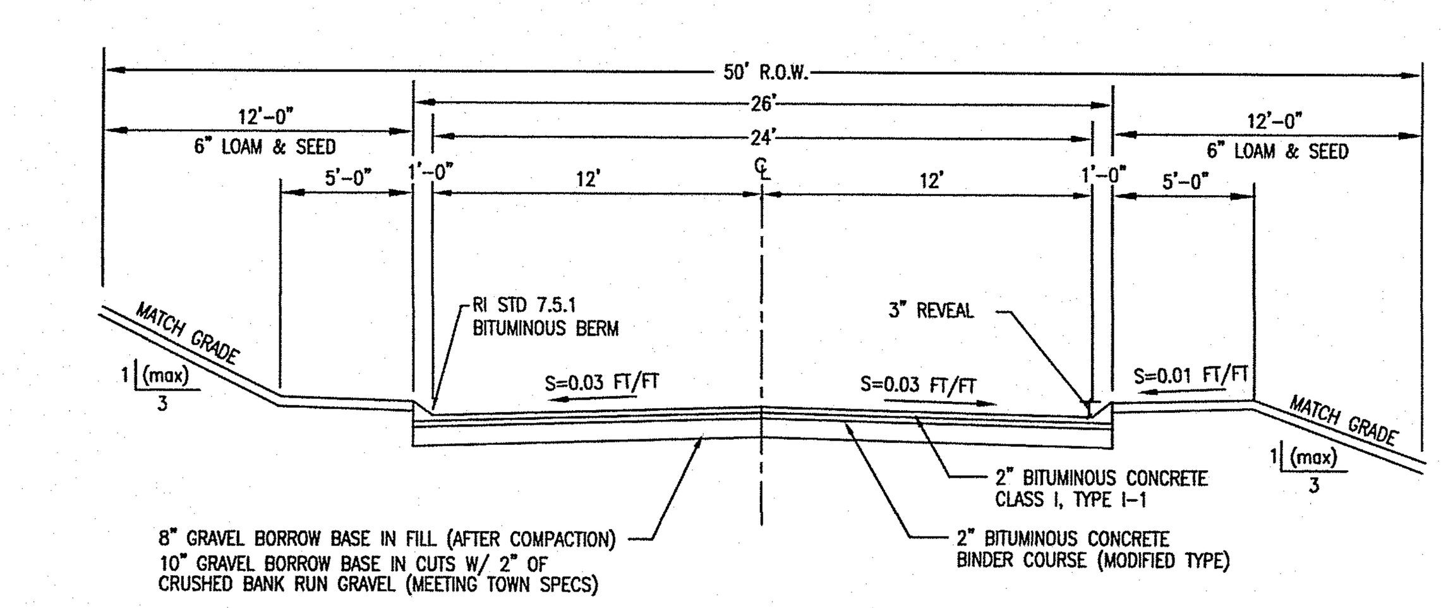


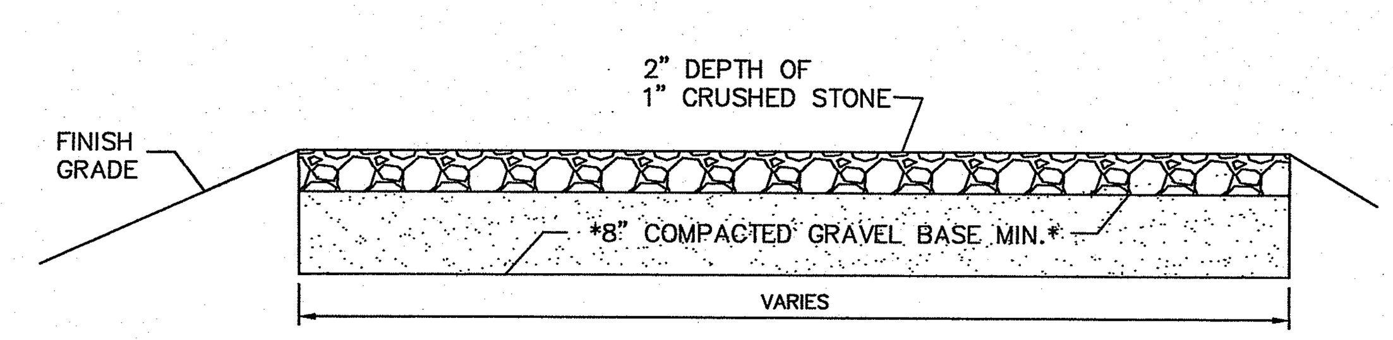






TYPICAL ROADWAY SECTION

N.T.S.



GRAVEL DRIVEWAY TYPICAL CROSS SECTION DETAIL

NOT TO SCALE

*GRAVEL BASE DEPTH TO BE COORDINATED WITH ENGINEER.

DETAILS-1

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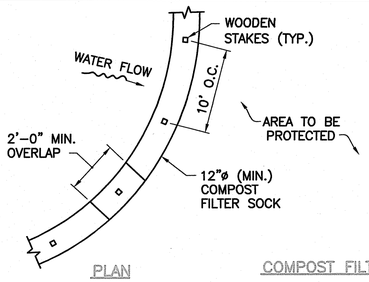
WWW.PRINCIPEENGINEERING.COM

REVISIONS

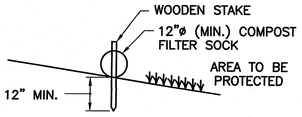
No.	DATE	DRWN	CHKD
1.	05/26/22	KAB	TJP

RIDEM PLAN
FOR
2-LOT DEVELOPMENT
CEDAR FOREST ROAD EXTENSION
IN
SMITHFIELD, RHODE ISLAND

SCALE: AS NOTED		SHEET NO: 5 OF 6
DRAWN BY: KAB	DESIGN BY: RM	CHECKED BY: JAR
DATE: 01/31/22		PROJECT NO.: LD-2021-20



PLAN

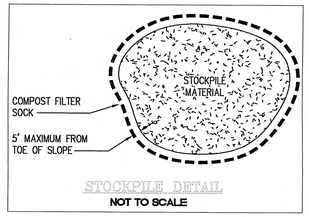


SECTION

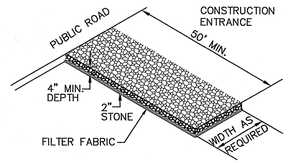
COMPOST FILTER SOCK

NOTES:
1. ALL MATERIAL TO MEET REQUIREMENTS OF SECTION 206 OF RI STANDARD SPECIFICATIONS.
2. COMPOST MATERIAL MUST BE ACCEPTED BY THE ENGINEER PRIOR TO PLACEMENT.

PERIMETER EROSION CONTROLS
NOT TO SCALE



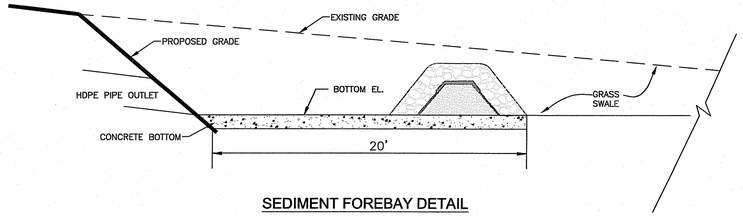
STOCKPILE DETAIL
NOT TO SCALE



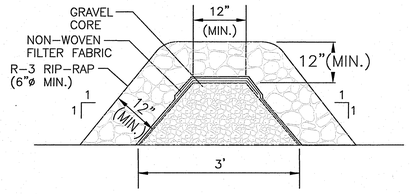
SQUARE MESH SIEVES	2"CRUSHED STONE OR GRAVEL	ASTM C-33 NO. 2	ASTM C-33 NO. 3
	% FINER	% FINER	% FINER
2-1/2 INCHES	100	90-100	100
2 INCHES	95-100	35-70	90-100
1-1/2 INCHES	30-55	0-15	35-70
1-1/4 INCHES	0-25	–	–
1 INCH	0-5	–	0-15
3/4 INCH	–	0-5	–
1/2 INCH	–	–	0-5
3/8 INCH	–	–	–

NOTE:
STABILIZATION PAD TO BE IN COMFORMANCE WITH STANDARDS SET FORTH IN THE "RHODE ISLAND GUIDELINES FOR SOIL & SEDIMENT CONTROL".

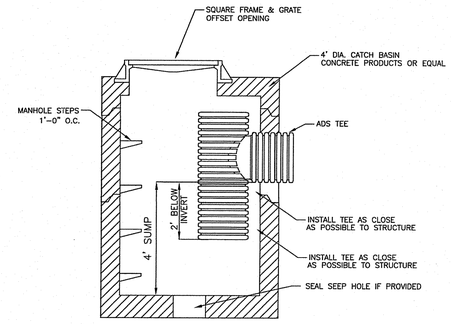
RIP-RAP STABILIZATION PAD @ CONSTRUCTION ENTRANCE
NOT TO SCALE



SEDIMENT FOREBAY DETAIL
NOT TO SCALE

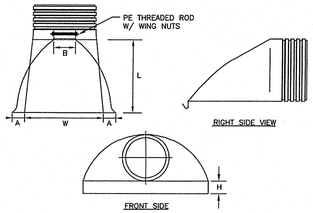


SEDIMENT FOREBAY BARRIER DETAIL
NOT TO SCALE



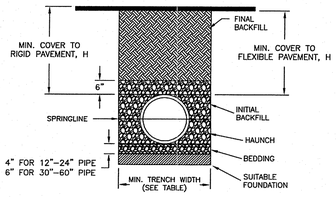
OIL/WATER SEPARATOR CATCH BASIN #2
N.T.S.

NOTE: THIS DETAIL IS ONLY APPLICABLE TO CB #2



PIPE DIA.	A	B (MAX)	H	L	W
12"	6.5"	10"	6.5"	25"	29"
15"	6.5"	10"	6.5"	25"	29"
18"	7.5"	15"	6.5"	32"	35"

ADS - FLARED END SECTION
N.T.S.



NOTES:

1. ALL PIPE 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 ADDITION
2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
3. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER, AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
4. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II OR III. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER, UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm); 6" (150mm) FOR 30"-60" (750mm-900mm).
5. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
6. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 54"-60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.

RECOMMENDED MINIMUM TRENCH WIDTHS

PIPE DIAM.	MIN. TRENCH WIDTH
4"	21"
6"	23"
8"	26"
10"	28"
12"	30"
15"	34"
18"	39"
24"	48"
30"	56"
36"	64"
42"	72"
48"	80"
54"	88"
60"	96"

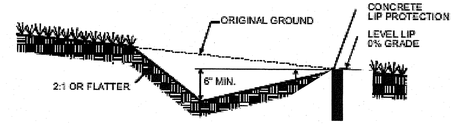
MINIMUM RECOMMENDED COVER BASED ON LOADING CONDITIONS

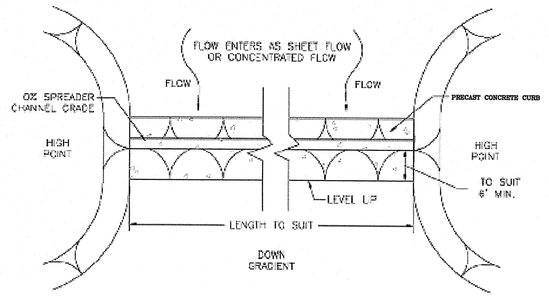
	SURFACE LIVE LOADING CONDITION	
PIPE DIAM.	H-25	HEAVY CONSTRUCTION (75T AXLE LOAD)*
12" - 48"	12"	48"
54" - 60"	24"	60"

* VEHICLES IN EXCESS OF 75T MAY REQUIRE ADDITIONAL COVER

ADS DRAIN PIPE TRENCH INSTALLATION
N.T.S.

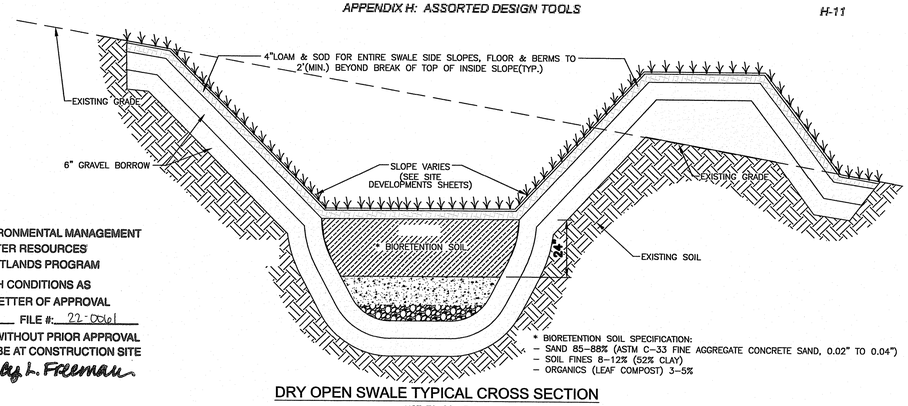
Figure H-7 Concrete Level Spreader - Profile and Plan Views





PLAN
NOT TO SCALE

RI Environmental Management
JUN 02 2022
Office of Water Resources



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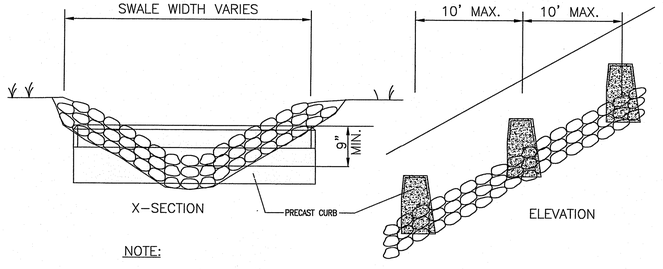
Nancy L. Freeman

* BIORETENTION SOIL SPECIFICATION:
- SAND 85-88% (ASTM C-33 FINE AGGREGATE CONCRETE SAND, 0.02" TO 0.04")
- SOIL FINES 8-12% (52% CLAY)
- ORGANICS (LEAF COMPOST) 3-5%

DRY OPEN SWALE TYPICAL CROSS SECTION
NOT TO SCALE



NOTE:
1. PRECAST CONCRETE CURB SHALL BE USED FOR CHECK DAMS WITHIN SWALES WITH SLOPES GREATER THAN 4%. CURB SECTIONS MAY BE NECESSARY TO SPAN SWALE WIDTH.

CHECK DAM DETAIL
NOT TO SCALE

DETAILS-2

Thomas J. Principe, III
No. 9107
REGISTERED PROFESSIONAL ENGINEER

REVISIONS

No.	DATE	DRWN	CHKD
1.	04/27/22	KAB	TJP
2.	05/26/22	KAB	TJP

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RIDEM PLAN
FOR
2-LOT DEVELOPMENT
CEDAR FOREST ROAD EXTENSION
IN
SMITHFIELD, RHODE ISLAND

SCALE: AS NOTED		SHEET NO: 6 OF 6
DRAWN BY: KAB	DESIGN BY: RM	CHECKED BY: JAR
DATE: 01/31/22		PROJECT NO.: LD-2021-20