

PERMIT DOCUMENTS FOR
 MAJOR LAND DEVELOPMENT/UNIFIED DEVELOPMENT REVIEW: MASTER PLAN

FOR A PROPOSED

**234.0 - kW DC / 167.3 kW AC GROUND-MOUNTED
 MEDIUM SOLAR ENERGY SYSTEM**

127 MENDON ROAD
 CUMBERLAND, RHODE ISLAND
 AP 11, LOT 64

ZONE: GENERAL COMMERCIAL (C-2)

FILINGS:

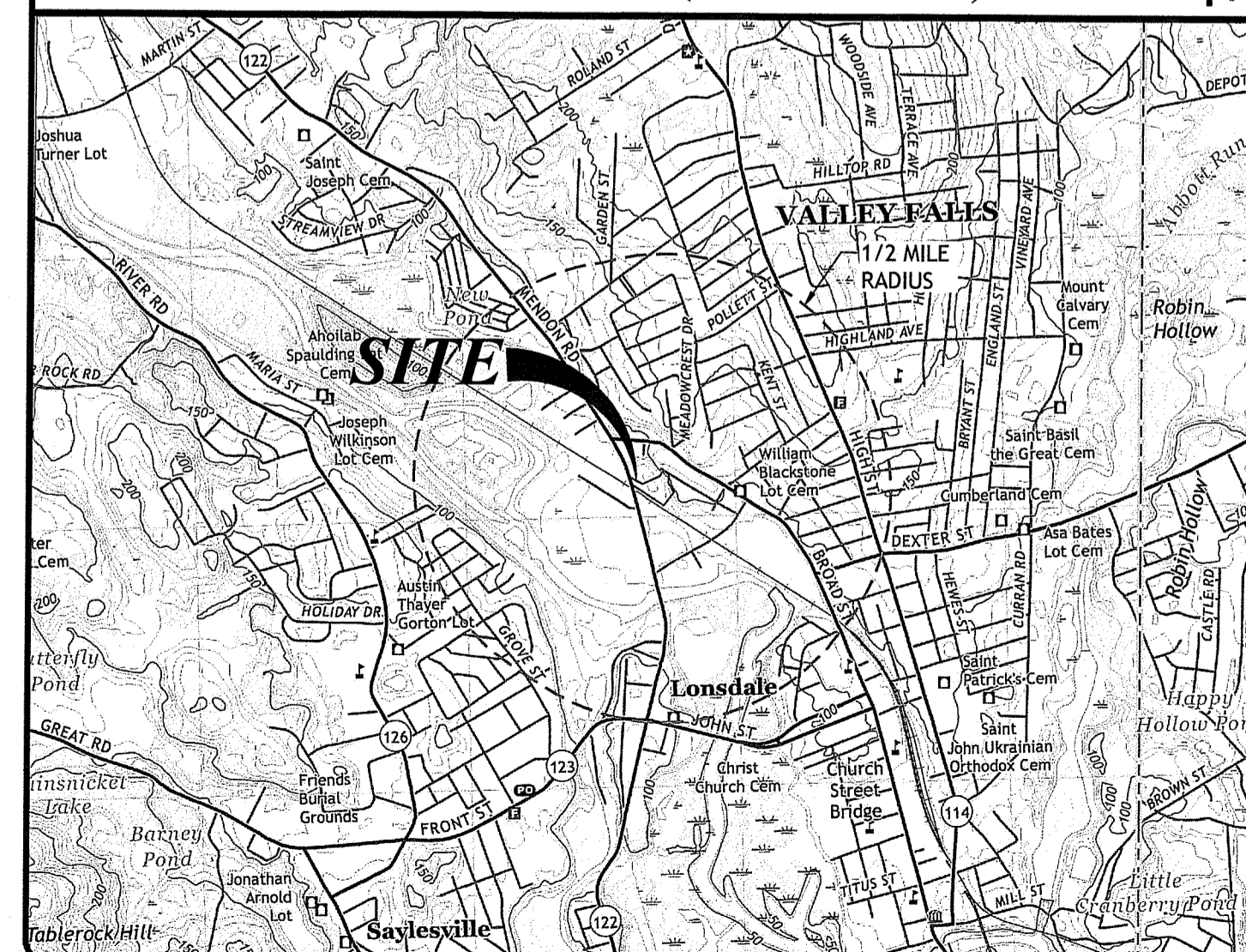
CUMBERLAND PLANNING DEPARTMENT - MAJOR LAND DEVELOPMENT/UNIFIED DEVELOPMENT REVIEW: MASTER PLAN
 RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT - FRESHWATER WETLANDS PERMIT APPLICATION

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS AS
 SPECIFIED IN THE LETTER OF APPROVAL
 DATED: FEB 07 2025 FILE #: 24-0250-078
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Nancy L. Freeman

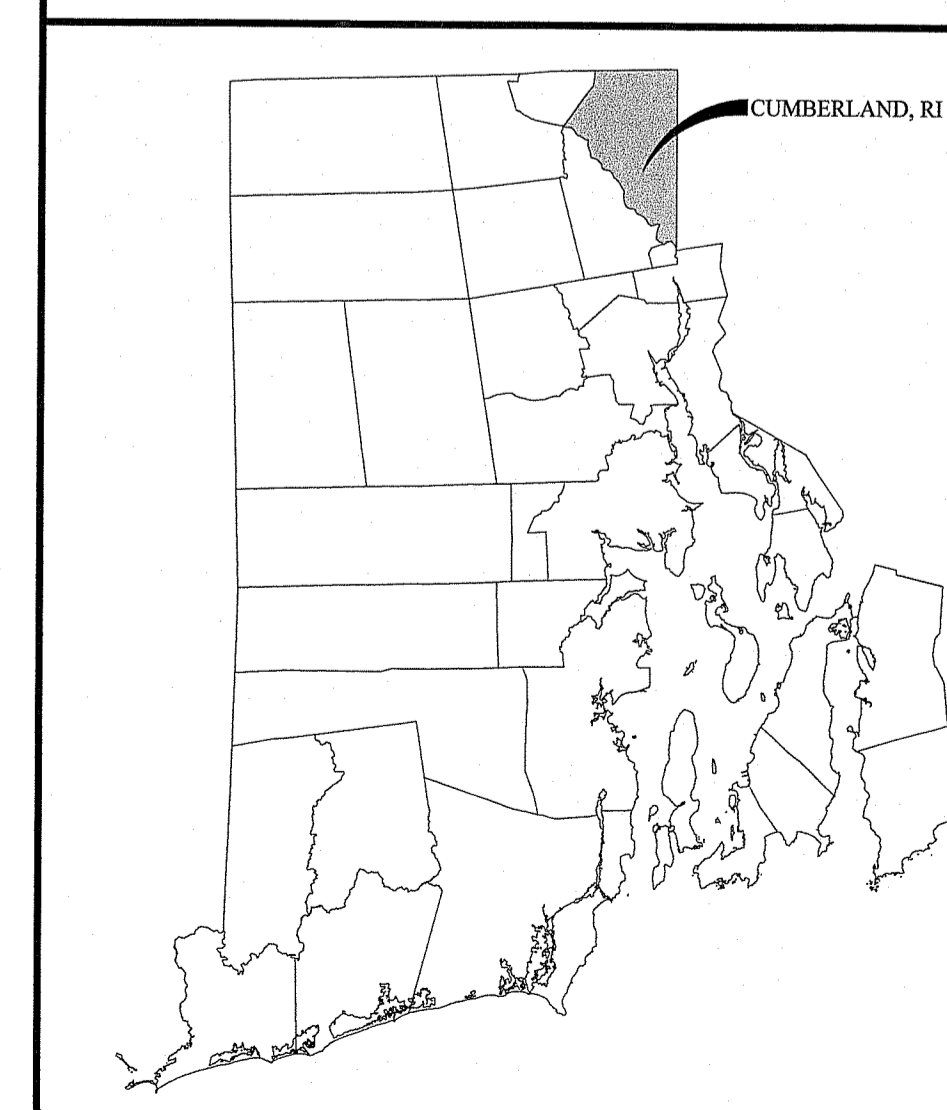
PROJECT TEAM

OWNER/ APPLICANT:	WPA ASSOCIATES, LLC 127 MENDON ROAD CUMBERLAND, RI 02864	LAND SURVEYOR:	DOUGLAS DESIGN GROUP BAY TOWER; LOWER LEVEL; STE C PROVIDENCE, RI 02903 PHONE: 508-821-8728
CIVIL ENGINEER:	JOE CASALI ENGINEERING, INC. 300 POST ROAD WARWICK, RI 02888 PHONE: 401-944-1300 FAX: 401-944-1313 JOECASALI.COM	WETLAND BIOLOGIST:	NATURAL RESOURCE SERVICES 875 HILL ROAD PASCOAG, RI 02859 PHONE: 401-568-7390
SOLAR CONSULTANT:	INFESION ENERGY STRATEGY 409 NORTH MAIN STREET ELMER, NJ 08318 PHONE: 856-712-2166		

LOCUS MAP (NOT TO SCALE)



STATE WIDE MAP

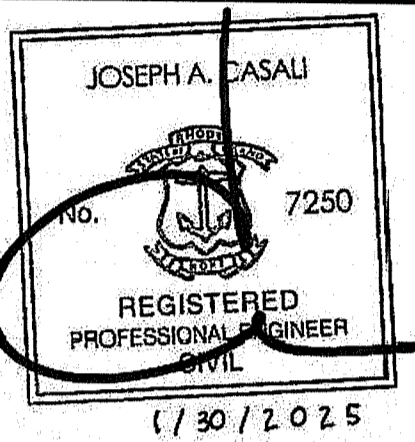
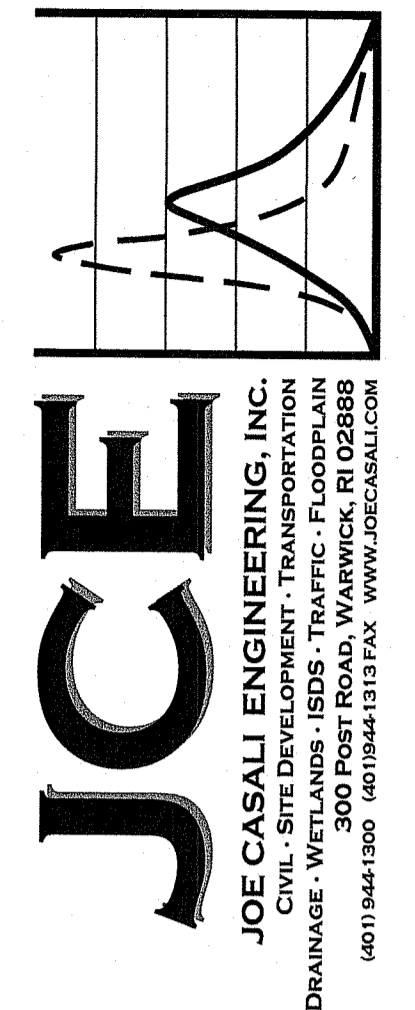


INDEX OF DRAWINGS

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1	COVER SHEET
2	GENERAL NOTES & LEGEND
3	EXISTING CONDITIONS & SITE PREP. PLAN
4	SITE PLAN
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REFERENCE PLAN:
 COMPREHENSIVE BOUNDARY AND TOPOGRAPHIC SURVEY OF
 LAND PREPARED BY: DOUGLAS DESIGN GROUP OF PROVIDENCE,
 RHODE ISLAND, DATED JUNE 7, 2024,

JAN 30 2025



**MEDIUM GROUND-MOUNTED
 SOLAR ENERGY SYSTEM
 127 MENDON ROAD
 CUMBERLAND, RHODE ISLAND
 AP 11, LOT 64**

REVISIONS:

NO.	DATE	DESCRIPTION
1	11/22/24	PLANNING RTC
2	1/30/25	RIDEM RTC

DESIGNED BY: WMLR
 DRAWN BY: MCGSP/SPD
 CHECKED BY: JAC
 DATE: OCT. 2024
 PROJECT NO: 24-29

PRELIMINARY, NOT FOR CONSTRUCTION

COVER SHEET

SHEET 1 OF 56

GENERAL NOTES:

- 1. CONTRACTOR SHALL NOTIFY "DIGSAFE" (811) AT LEAST 72 HOURS BEFORE EXCAVATING.
2. THESE PLANS ARE BASED ON A CLASS I COMPREHENSIVE BOUNDARY SURVEY AND CLASS III EXISTING CONDITIONS AND TOPOGRAPHIC SURVEY, PERFORMED BY DOUGLAS DESIGN GROUP, PROVIDENCE, RI IN JUNE 2024.
3. THE LOCATION AND DEPTH OF EXISTING UTILITIES ARE APPROXIMATE AND HAVE BEEN PLOTTED FROM THE LATEST AND BEST AVAILABLE INFORMATION. THE UTILITY LOCATIONS ARE APPROXIMATE AND MAY NOT BE ALL INCLUSIVE. THE CONTRACTOR SHALL CHECK AND VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES, BOTH OVERHEAD AND UNDERGROUND, AND "DIG-SAFE" MUST BE NOTIFIED PRIOR TO COMMENCING ANY CONSTRUCTION OPERATIONS. RESTORATION AND REPAIR OF DAMAGE TO EXISTING UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR WITH NO ADDITIONAL COST TO THE OWNER. NO EXCAVATION SHALL COMMENCE UNTIL ALL INVOLVED UTILITY COMPANIES AND/OR TOWN WHOSE FACILITIES MIGHT BE AFFECTED BY ANY WORK TO BE PERFORMED BY THE CONTRACTOR ARE NOTIFIED AT LEAST 72 HOURS IN ADVANCE.
4. THE SITE LIES WITHIN ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) AS SHOWN ON THE FIRM MAP FOR THE TOWN OF CUMBERLAND, RHODE ISLAND, MAP NUMBER 44007C0192G, EFFECTIVE DATE MARCH 2, 2009.
5. WETLANDS ON THE SITE WERE FIELD DELINEATED BY NATURAL RESOURCE SERVICES, INC IN JUNE 2024.
6. THE ENTIRE SITE LIES WITHIN THE PETERS RIVER-BLACKSTONE RIVER WATERSHED (RIDEM INVENTORY #010900030208).
7. EXISTING SOILS ON THE SITE HAVE BEEN CLASSIFIED AS MERRIMAC FINE SANDY LOAMS, 3 TO 8% SLOPES, (MmB), AND UDORTHERTS-URBAN LAND COMPLEX. SOIL EVALUATION TEST HOLES WERE PERFORMED BY JOE CASALI ENGINEERING, INC. IN AUGUST 2024.
8. THERE ARE NO CEMETERIES WITHIN OR IMMEDIATELY ADJACENT TO THE SUBJECT PARCEL.
9. THERE ARE NO KNOWN SOIL CONTAMINANTS PRESENT WITHIN SUBJECT PARCEL.

SITE NOTES:

- 1. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND LEGALLY DISPOSING (R&D) OF ALL MATERIALS INDICATED ON THE PLANS.
2. STOCKPILES OF EARTH MATERIALS SHALL NOT BE LOCATED ADJACENT TO DRAINAGE STRUCTURES.
3. ALL DISTURBED AREAS OUTSIDE OF THE PAVED AREAS WILL RECEIVE A MINIMUM OF 6" OF LOAM AND SEED.
4. THE LAYOUT SHOWN REPRESENTS A GRAPHICAL DESIGN, AND PRIOR TO THE CONSTRUCTION, THE CONTRACTOR SHALL ENGAGE A PROFESSIONAL LAND SURVEYOR (PLS) REGISTERED IN THE STATE OF RHODE ISLAND TO SET AND VERIFY ALL LINES AND GRADES. ALL EXISTING UTILITY LOCATIONS AND ELEVATIONS ARE TO BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY ITEMS FOUND WHICH DO NOT MATCH THE PLANS MUST BE BROUGHT TO THE ENGINEERS ATTENTION PRIOR TO CONSTRUCTION FOR REVIEW. NO WORK SHALL PROCEED UNTIL AUTHORIZED BY THE ENGINEER.
5. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN SURVEY LAYOUT SERVICES FOR THE WORK AND SHALL SUBMIT "AS-BUILT" DRAWINGS OF ALL WORK, WHICH SHALL BE STAMPED AND CERTIFIED BY A RHODE ISLAND REGISTERED PROFESSIONAL LAND SURVEYOR.
6. ANY ITEM OF WORK NOT SPECIFICALLY INDICATED ON THE PLANS BUT IS REQUIRED FOR THE COMPLETE CONSTRUCTION OF THE PROJECT WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND INCLUDED IN THE CONTRACT BID PRICE. IT WILL BE THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL EXISTING SITE CONDITIONS.
7. REFER TO ELECTRICAL PLANS FOR WORK ASSOCIATED WITH PROPOSED PHOTOVOLTAIC SYSTEM.
8. WHERE NECESSARY TO REMOVE CURBS, CATCH BASINS OR DRAINS TO COMPLETE WORK, THE CONTRACTOR SHALL REPLACE SUCH ITEMS TO THE SATISFACTION OF THE OWNER AT NO ADDITIONAL COST TO THE OWNER.
9. ANY EXISTING PIPE OR UTILITY DAMAGED BY THE CONTRACTORS OPERATIONS SHALL BE REPAIRED IMMEDIATELY BY THE CONTRACTOR AT NO COST TO THE OWNER.
10. THE CONTRACTOR SHALL RESTORE TO ITS ORIGINAL CONDITION OR REPLACE TREES, SHRUBS, FENCES, SIGNS, GUARDRAILS, DRIVEWAYS, SIDEWALKS AND ANY OTHER OBJECT AFFECTED BY THIS OPERATION, UNLESS OTHERWISE NOTED ON THE SITE PLANS.
11. THE TOPS OF ALL VALVE BOXES AND CURB BOXES SHALL BE FLUSH WITH GROUND OR PAVEMENT SURFACE LEVEL AND PLUMB, UNLESS OTHERWISE DIRECTED.
12. ROADWAYS SHALL BE LEFT PASSABLE AT ALL TIMES. CLOSURE OF ROADWAY IS NOT PERMITTED.
13. LEDGE TO BE REMOVED BY MECHANICAL MEANS OR BY BLASTING. REFER TO BLASTING NOTES BELOW, IF BLASTING IS DETERMINED TO BE REQUIRED.
14. ALL CONSTRUCTION WORK SHALL BE PERFORMED IN THE DRY. THE CONTRACTOR SHALL PROVIDE, OPERATE AND MAINTAIN ALL PUMPS, DRAINS, WET POINTS, SCREENS, OR OTHER FACILITIES NECESSARY TO CONTROL, COLLECT AND DISPOSE OF ALL SURFACE AND SUBSURFACE WATER ENCOUNTERED IN THE PERFORMANCE OF THE WORK.
15. ALL SITE WORK, INCLUDING BUT NOT LIMITED TO, BITUMINOUS PAVEMENT, ROADWAY CONSTRUCTION, AGGREGATE MATERIALS, DRAINAGE STRUCTURES, CURBING, SIDEWALK, LANDSCAPING, SAW CUTTING, ETC. SHALL CONFORM TO THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADWAY AND BRIDGE CONSTRUCTION, AMENDED DECEMBER 2010 (WITH LATEST ADDENDA) AND THE RIDOT STANDARD DETAILS, 1998 EDITION (WITH LATEST ADDENDA).

MAINTENANCE AND PROTECTION OF TRAFFIC NOTES:

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

DRAINAGE SYSTEM NOTES:

- 1. THE PROPOSED DRAINAGE LINES SHALL BE ADS N-12 HDPE PIPE OR AN APPROVED EQUAL UNLESS OTHERWISE NOTED ON THE SITE PLANS.
2. ALL RIM ELEVATIONS SHOWN ARE APPROXIMATE AND ARE TO BE SET FLUSH WITH FINAL GRADES.

SOIL EROSION AND SEDIMENTATION CONTROL NOTES:

- 1. THE SILT FENCE LINE ILLUSTRATED ON THESE PLANS SHALL SERVE AS THE STRICT LIMIT OF DISTURBANCE FOR THE PROJECT WITHIN OR ADJACENT TO REGULATED FRESHWATER WETLAND AREAS.
2. THE LIMITS OF CLEARING, GRADING, AND DISTURBANCE SHALL BE KEPT TO A MINIMUM WITHIN THE PROPOSED AREA OF CONSTRUCTION. ALL AREAS OUTSIDE OF THESE LIMITS, AS DEPICTED ON THE PLAN SHALL BE TOTALLY UNDISTURBED, TO REMAIN IN NATURAL CONDITION.
3. ALL CATCH BASINS AND CULVERTS SHALL BE PROTECTED WITH STAKED SILT FENCES OR SILT SACL SEDIMENT AREAS SHALL BE LINED WITH A RIPRAP SPLASH PAD AND PROTECTED WITH STAKED HAYBALE OUTLET PROTECTION (R.I. STD. 9.1.0), OR STAKED SILT FENCE (R.I. STD. 9.2.0) OUTLET PROTECTION (STAKED HAYBALE OR STAKED HAYBALE WITH SILT FENCE) SHALL ALSO BE INSTALLED AT ALL EXISTING STORMWATER DISCHARGE LOCATIONS WHERE DISTRIBUTING PIPES, CATCH BASINS, AND MANHOLES ARE TO BE CLEANED AND FLUSHED.
4. ALL DISTURBED SLOPES EITHER NEWLY CREATED OR CURRENTLY EXPOSED SHALL BE SEEDED, PROTECTED AND MAINTAINED BY THE CONTRACTOR. THE CONTRACTOR SHALL REGULARLY CHECK ALL SEEDED AREAS TO ENSURE THAT A GOOD STAND IS MAINTAINED.
5. ALL SILT FENCE, TEMPORARY TREATMENT (HAY, STRAW, ETC.) AND TEMPORARY EROSION PROTECTION SHALL BE MAINTAINED BY THE CONTRACTOR THROUGHOUT CONSTRUCTION AND SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER IS ESTABLISHED.
6. STOCKPILES OF TOPSOIL SHALL NOT BE LOCATED NEAR WATERWAYS. THEY SHALL HAVE SIDE SLOPES OF NO GREATER THAN 2:1 AND SHALL BE TEMPORARILY SEEDED AND/OR STABILIZED PER CONTRACT SPECIFICATIONS.
7. THE SILT FENCE SHALL BE CHECKED BY THE CONTRACTOR ON A WEEKLY BASIS AND AFTER EACH STORM FOR UNDERMINING OR DETERIORATION. THE CONTRACTOR SHALL REPAIR OR REPLACE THE SILT FENCE AS NEEDED. THE CONTRACTOR SHALL CLEAN THE ACCUMULATED SEDIMENT IF HALF OF THE ORIGINAL HEIGHT OF THE SILT FENCE BECOMES FILLED WITH SEDIMENTS.
8. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ALL SOIL EROSION AND SEDIMENT CONTROLS ON THE PROJECT SITE FOR THE ENTIRE DURATION OF THE CONSTRUCTION PERIOD. THE CONTRACTOR SHALL FOLLOW THE DIRECTION OF THE RESIDENT ENGINEER WITH REGARD TO INSTALLATION, MAINTENANCE, AND REPAIR OF ALL SOIL EROSION AND SEDIMENTATION CONTROLS ON THE PROJECT SITE. TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROLS (HAYBALES, SILT FENCE, ETC.) SHALL BE MAINTAINED UNTIL ALL EXPOSED SOILS ARE SATISFACTORILY STABILIZED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING AND/OR RESEEDING ALL AREAS THAT DO NOT DEVELOP WITHIN ONE YEAR FROM THE COMPLETION OF CONSTRUCTION.
9. ALL REFERENCED SOIL EROSION AND SEDIMENTATION CONTROLS INCLUDING MATERIALS USED, APPLICATION RATES AND THE INSTALLATION PROCEDURES SHALL BE PERFORMED PER THE "RHODE ISLAND EROSION AND SEDIMENTATION HANDBOOK", UPDATED 2016.
10. ALL STUMPS ARE TO BE GROUND AND THE MATERIAL REUSED ON SITE, OR REMOVED AND DISPOSED OF OFF SITE. NO PERMANENT STUMP DUMPS ARE PERMITTED.
11. IN THE EVENT THAT A SIGNIFICANT STORM IS FORECASTED, CONTRACTOR SHALL HAVE THE NECESSARY SEDIMENT BARRIERS ON SITE, IN A READY-TO-USE CONDITION, TO BE PLACED ON ALL STEEP SLOPES ON SITE TO PREVENT EROSION FROM OCCURRING.

BMP MAINTENANCE SCHEDULE:

- 1. ALL MAINTENANCE (INCLUDING CLEANING) REQUIRED DURING THE CONSTRUCTION PHASE OF THE PROJECT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL INCLUDE:
A. MEASURES NEEDED TO ENSURE THE PROPER OPERATION OF THE STORMWATER RUNOFF (DRAINAGE) AND WATER QUALITY CONTROL SYSTEMS TO INCLUDE INSPECTION, CLEANING AND REPAIRS ALL PIPES, INTAKE AND DISCHARGE STRUCTURES, CATCH BASIN SUMPS, AND MANHOLES.
B. INSPECTION OF ALL SLOPES, BERMS, AND OTHER CONTROL STRUCTURES FOR STRUCTURAL INTEGRITY/STABILITY AND EVIDENCE OF SOIL EROSION PROCESSES, AND MAINTENANCE OF THESE STRUCTURES IF NECESSARY. INSPECTIONS SHALL BE PERFORMED FOLLOWING ALL RAIN EVENTS OF 1/2 INCH RAINFALL OR MORE IN A 24-HOUR PERIOD, OR BI-MONTHLY IF NO RAINFALL EVENT OCCURS.
2. UPON COMPLETION OF THE PROJECT CONSTRUCTION, AND PRIOR TO VACATING THE SITE, THE CONTRACTOR SHALL CONDUCT A FINAL INSPECTION AND CLEANING OF THE DRAINAGE SYSTEM AND ALL ASSOCIATED STRUCTURES.
3. ALL INSTALLATION, CLEANING, AND MAINTENANCE OF THE STORMWATER DRAINAGE SYSTEM SHALL FOLLOW AT LEAST THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION MINIMUM STANDARDS, SECTION 212 AND SECTION 708. WHERE APPROPRIATE, PROCEDURES REGARDING THE DRAINAGE INSTALLATION, CLEANING, INSPECTION, AND MAINTENANCE OF THE STORMWATER DRAINAGE SYSTEM SHALL BE FOLLOWED AS OUTLINED IN THE "RHODE ISLAND STORMWATER DESIGN AND INSTALLATION STANDARDS MANUAL" (RIDEM/RICRMC, AMENDED 2015).
4. AFTER CONSTRUCTION, STORMWATER BMPS SHALL BE INSPECTED AND MAINTAINED BY THE OWNER AS FOLLOWS:

INFILTRATION BASIN

- DURING THE SIX MONTHS IMMEDIATELY AFTER CONSTRUCTION, THE INFILTRATION BASIN SHALL BE INSPECTED AFTER THE FIRST TWO RAINFALL EVENTS OF AT LEAST 1.0 INCH TO ENSURE THE SYSTEM IS FUNCTIONING PROPERLY. THEREAFTER INSPECTIONS SHALL BE CONDUCTED ON AN ANNUAL BASIS AND AFTER STORM EVENTS OF GREATER THAN OR EQUAL TO 2.0 INCHES.
• SILT AND SEDIMENT SHALL BE REMOVED FROM THE SEDIMENT BASIN WHEN THE ACCUMULATION EXCEEDS SIX INCHES, OR WHEN WATER PONDS ON THE SURFACE OF THE INFILTRATION BASIN FOR MORE THAN 48 HOURS.
• SOIL EROSION GULLIES SHALL BE REPAIRED WHEN THEY OCCUR.
• THE OUTLET DEVICES SHALL BE CLEANED/REPAIRED WHEN NECESSARY.
• TRASH AND DEBRIS SHALL BE REMOVED WHEN NECESSARY.
• THE OVERFLOW WEIR SHOULD BE INSPECTED ANNUALLY TO ENSURE THAT IT IS FUNCTIONING PROPERLY.
• THE BACKUP UNDERDRAINS FOR THE INFILTRATION BASINS ARE INTENDED FOR EMERGENCY USE ONLY. IT IS THE RESPONSIBILITY OF THE OWNER TO NOTIFY THE RIDEM (OFFICE OF WATER RESOURCES, FRESHWATER WETLANDS PROGRAM) IMMEDIATELY IF INSPECTION OF THE UNDERDRAINS INDICATES EMERGENCY USE. TYPICALLY, SUCH USE WILL NEED TO BE FOLLOWED BY INITIATION OF NECESSARY REJUVENATION PRACTICES.

MISCELLANEOUS UTILITY NOTES:

- 1. PRIOR TO CONSTRUCTION ALL POTENTIAL UTILITY/DRAINAGE CONFLICTS MUST BE IDENTIFIED BY THE CONTRACTOR. ANY MODIFICATIONS TO THE PROPOSED UTILITIES TO AVOID CONFLICTS MUST BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.
2. THE CONTRACTOR SHALL AT ALL TIMES PROVIDE A SUFFICIENT NUMBER OF WORKMEN AND GUARDS AS MAY BE NECESSARY TO PROPERLY SAFEGUARD THE PUBLIC FROM THEIR OPERATIONS.
3. THE CONTRACTOR SHALL TAKE PRECAUTIONS AGAINST DAMAGING OF PAVING, SIDEWALKS, UTILITIES, OR PRIVATE PROPERTIES AND SHALL PROMPTLY REPAIR AT HIS OWN EXPENSE ANY DAMAGE TO SUCH PAVING, SIDEWALKS, UTILITIES, OR PRIVATE PROPERTIES TO THE SATISFACTION OF THE OWNER OR TOWN.

LOADING & SEEDING

SEEDING ACTIVITIES SHALL BE PERFORMED IN ACCORDANCE WITH SECTION L.02 SEEDING OF THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADWAY AND BRIDGE CONSTRUCTION, 2010 EDITION (WITH LATEST ADDENDA), AND SHALL ALSO CONFORM TO THE FOLLOWING:

- 1. AFTER ROUGH GRADING IS COMPLETED, ALL DISTURBED AREAS AND AREAS LABELED AS 'LOAM AND SEED' ARE TO BE BROUGHT TO AN ELEVATION OF 6" BELOW THE PROPOSED FINISHED GRADE. SCARIFY THE SUBGRADE TO A DEPTH OF 12" WITH THE TEETH OF A BACKHOE OR A POWER RAKE TO RESULT IN AN UNCOMPACTED SUBSOIL. 6" OF GOOD QUALITY TOPSOIL IS TO BE APPLIED AND RAKED TO FINISHED GRADE.
2. THE TOPSOIL IS TO BE GOOD QUALITY LOAM, FERTILE AND FREE OF WEEDS, STICKS AND STONES OVER 3/4" IN SIZE AND OTHERWISE COMPLYING WITH SECTION M.18.01 OF THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADWAY AND BRIDGE CONSTRUCTION, 2010 EDITION (WITH LATEST ADDENDA).
3. PRIOR TO SEEDING OR SODDING, FERTILIZER WITH 10-10-10 OR EQUIVALENT ANALYSIS, AT LEAST 40% OF THE FERTILIZER NITROGEN SHALL BE IN SLOW RELEASE FORM. INCORPORATE THE FERTILIZER INTO THE TOP 1-2" OF THE PLANTING SOIL. APPLY AT A RATE OF 8 LBS. PER 1000 SQUARE FEET.
4. APPLY LIME AT A RATE OF ONE TON PER ACRE AND UNIFORMLY INCORPORATE INTO THE TOP 1-2" OF TOPSOIL.
5. SEEDING
AFTER THE SEED BED IS PREPARED, SEED IS TO BE BROADCAST EVENLY OVER THE SURFACE AND WORKED INTO THE TOP 1" OF SOIL. APPLY AT A RATE OF 4-5 LBS. PER 1000 SQUARE FEET OR AS OTHERWISE DIRECTED BY THE MANUFACTURER.

GRASS SEED MIX, % BY WEIGHT:

- 10% RED TOP
30% RED FESCUE
25% REGULAR BLUEGRASS
25% PERENNIAL RYEGRASS
10% ANNUAL RYEGRASS

RECOMMENDED SEEDING DATES ARE MARCH 15 TO JUNE 15 AND SEPTEMBER 15 TO NOVEMBER 15. AT THE CONTRACTORS DISCRETION, SEED MAY BE APPLIED BY HYDROSEEDING RATHER THAN THE METHOD DESCRIBED ABOVE.

SEED MIX SHALL BE "NEW ENGLAND EROSION CONTROL/RESTORATION MIX FOR DETENTION BASINS AND MOIST" BY NEW ENGLAND WETLAND PLANTS, INC. FOR THE SIDE SLOPES OF THE INFILTRATION BASINS AND "NEW ENGLAND WETMIX (WETLAND SEED MIX)" FOR THE BOTTOM OF THE INFILTRATION BASINS.

LEGEND:

- EXISTING PROPERTY LINE
ABUTTING PROPERTY LINE
BUILDING SETBACK LINE
163.8x EXISTING SPOT ELEVATION
100 EXISTING CONTOUR
100 PROPOSED CONTOUR
EXISTING STONE WALL
EXISTING CURB
PROPOSED CURB
X-X-X EXISTING FENCE
X-X-X PROPOSED FENCE
D EXISTING DRAIN LINE
D PROPOSED DRAIN LINE
EXISTING DRAINAGE MANHOLE
PROPOSED DRAINAGE MANHOLE
EXISTING CATCH BASIN
PROPOSED CATCH BASIN
EXISTING UTILITY POLE
PROPOSED UTILITY POLE
EXISTING TELECOM DUCTBANK
EXISTING ELECTRIC DUCTBANK
RELOCATED ELECTRIC DUCTBANK
EXISTING GAS LINE
PROPOSED GAS LINE
EXISTING WATER LINE
PROPOSED WATER LINE
WATER GATE
WATER VALVE
EXISTING SEWER LINE
PROPOSED SEWER LINE
EXISTING SEWER MANHOLE
PROPOSED SEWER MANHOLE
NOW OR FORMERLY
TREELINE
SILT FENCE
LOD LIMIT OF DISTURBANCE
TEST HOLE
BOLLARD
CONDUIT
HYDRANT
LAMP POLE
FIRE DEPARTMENT CONTROL
EXISTING HANDICAP
PROPOSED HANDICAP
EMERGENCY PHONE BOX
EXISTING TREE
T LOD TEMPORARY LIMIT OF DISTURBANCE

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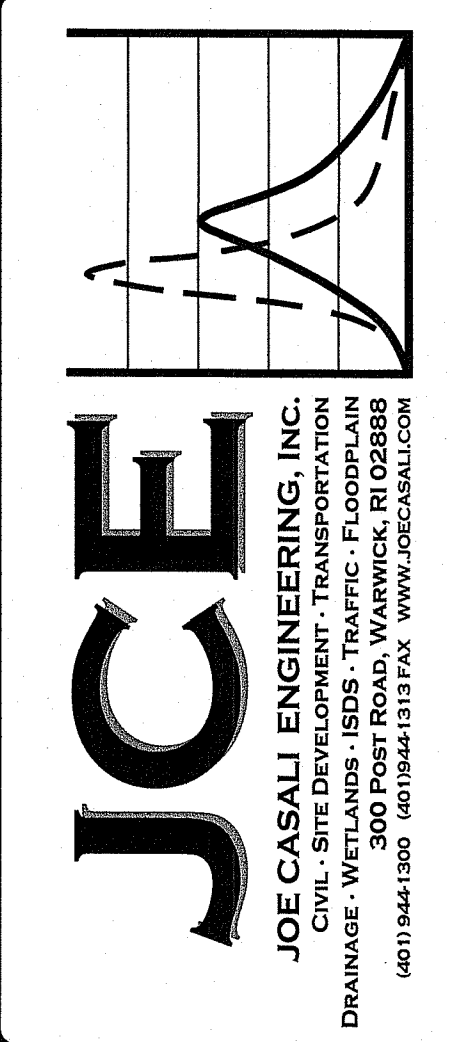
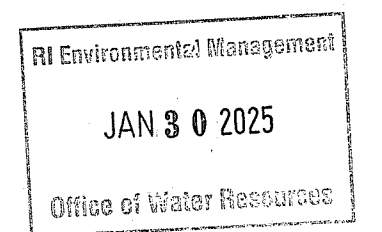
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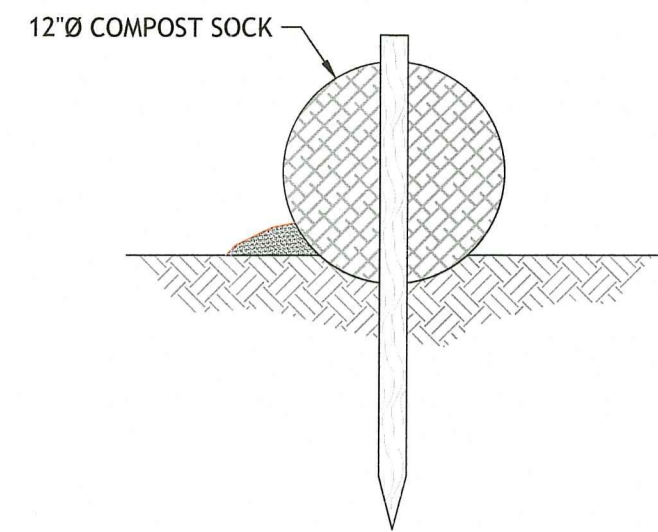
DESIGNED BY: WMLR
DRAWN BY: MCG/SP/SD
CHECKED BY: JAC
DATE: OCT. 2024
PROJECT NO: 24-29

PRELIMINARY, NOT FOR CONSTRUCTION

GENERAL NOTES & LEGEND

SHEET 2 OF 6

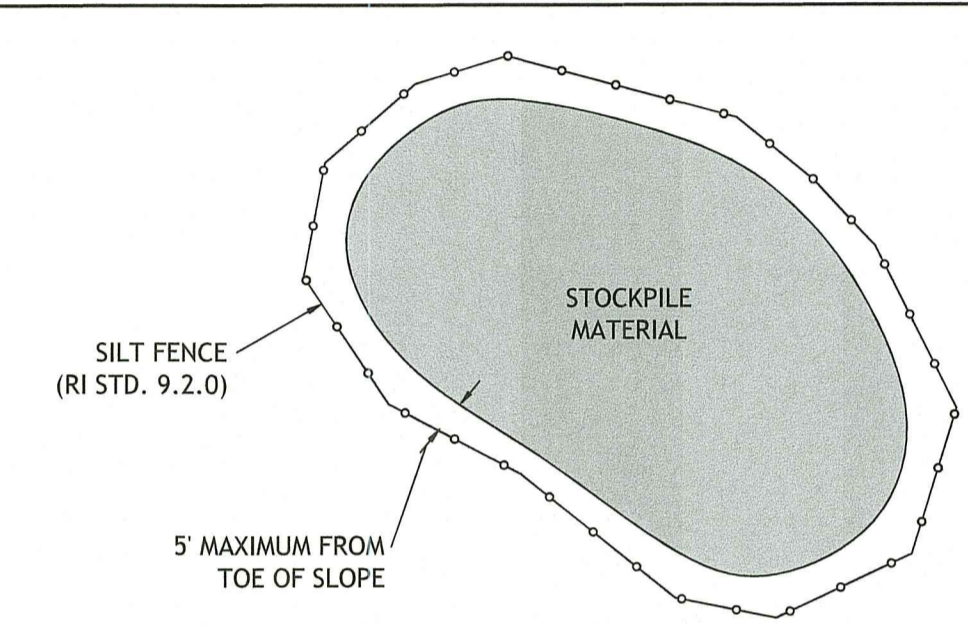




Slope %	Diameter of compost filter sock required			
	8-inch (200-mm)	12-inch (300-mm)	18-inch (450-mm)	24-inch (600-mm)
2 (or less)	900 (90)	375 (110)	500 (150)	650 (200)
5	900 (90)	250 (75)	275 (85)	325 (100)
10	100 (30)	125 (35)	150 (45)	200 (60)
15	70 (20)	85 (25)	100 (30)	150 (50)
20	50 (15)	65 (20)	70 (20)	130 (40)
25	40 (12)	50 (15)	55 (16)	100 (30)
30	30 (9)	40 (12)	45 (13)	65 (20)
35	30 (9)	40 (12)	45 (13)	55 (18)
40	30 (9)	40 (12)	45 (13)	50 (15)
45	20 (6)	25 (8)	30 (9)	40 (12)
50	20 (6)	25 (8)	30 (9)	35 (10)

FIGURE 2: RECOMMENDED SPACING AND DIAMETER REQUIREMENTS FOR COMPOST FILTER SOCKS

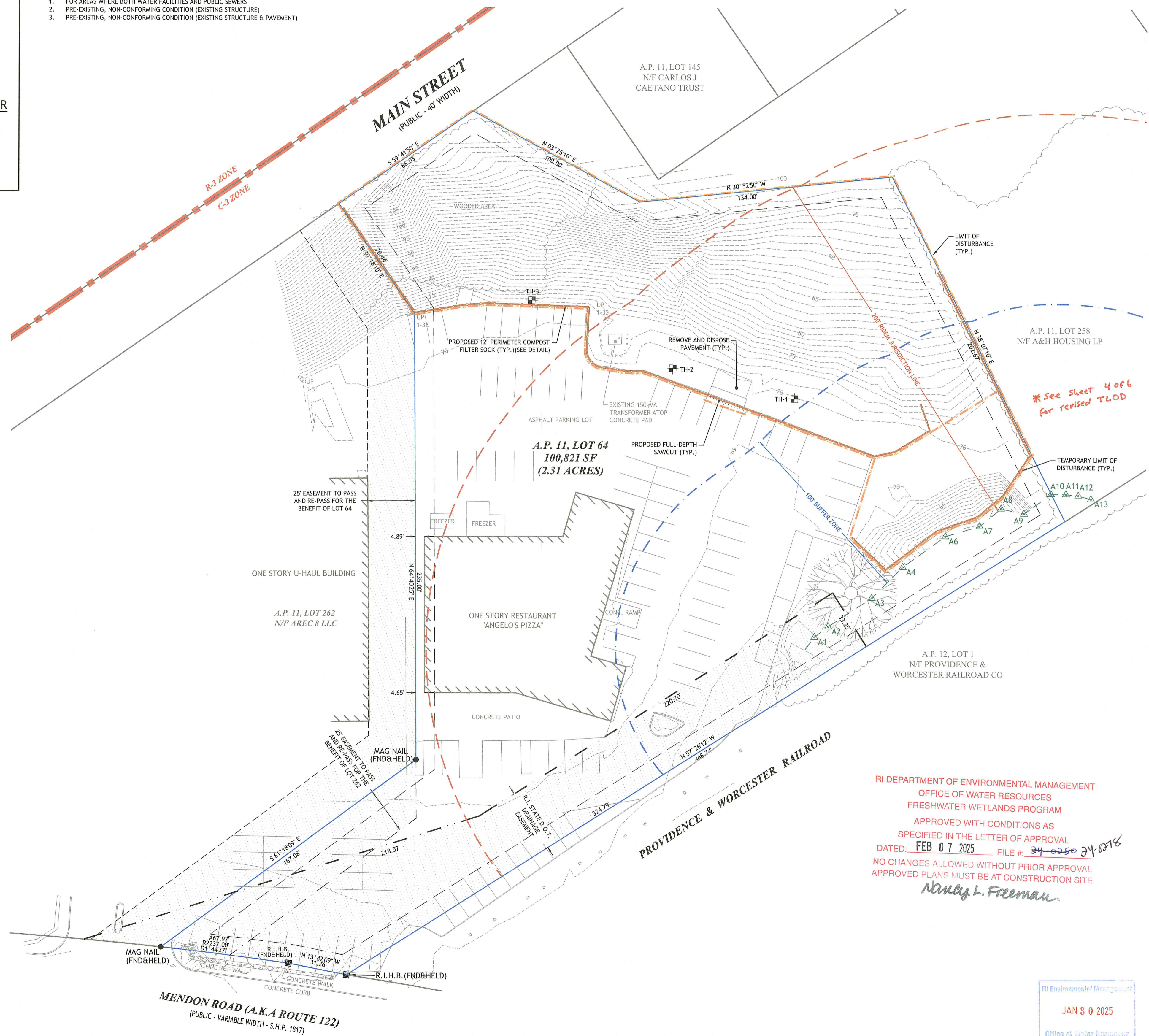
1 COMPOST FILTER SOCK NOT TO SCALE



2 STOCKPILE DETAIL NOT TO SCALE

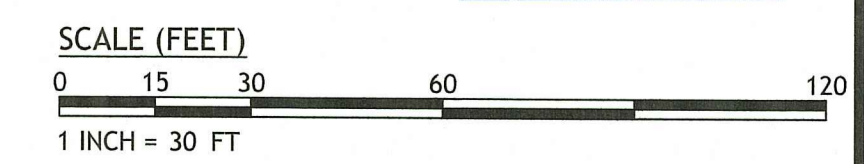
ZONING CRITERIA	REQUIRED	EXISTING
ZONING DISTRICT	C-2 ¹	C-2
MINIMUM LOT AREA	5,000 SF	100,821 SF
MINIMUM LOT WIDTH	25 FT	99.83 FT
MINIMUM LOT FRONTAGE	25 FT	99.23 FT
MINIMUM FRONT YARD	10 FT	>10 FT
MINIMUM SIDE YARD DEPTH	10 FT	4.65 FT ²
MINIMUM REAR YARD DEPTH	10 FT	>10 FT
MAXIMUM LOT COVERAGE	50%	57%
MAXIMUM BUILDING HEIGHT	45 FT	<45 FT

- NOTES:
- FOR AREAS WHERE BOTH WATER FACILITIES AND PUBLIC SEWERS
 - PRE-EXISTING, NON-CONFORMING CONDITION (EXISTING STRUCTURE)
 - PRE-EXISTING, NON-CONFORMING CONDITION (EXISTING STRUCTURE & PAVEMENT)



RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED: FEB 07 2025 FILE #: 24-0250-24-0215
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Nancy L. Freeman

RI Environmental Management
 JAN 30 2025
 Office of Water Resources



JOSEPH A. CASALI
 No. 7250
 REGISTERED PROFESSIONAL ENGINEER
 CIVIL
 1/30/2025

MEDIUM GROUND-MOUNTED SOLAR ENERGY SYSTEM
 127 MENDON ROAD
 CUMBERLAND, RHODE ISLAND
 AP 11, LOT 64

REVISIONS:

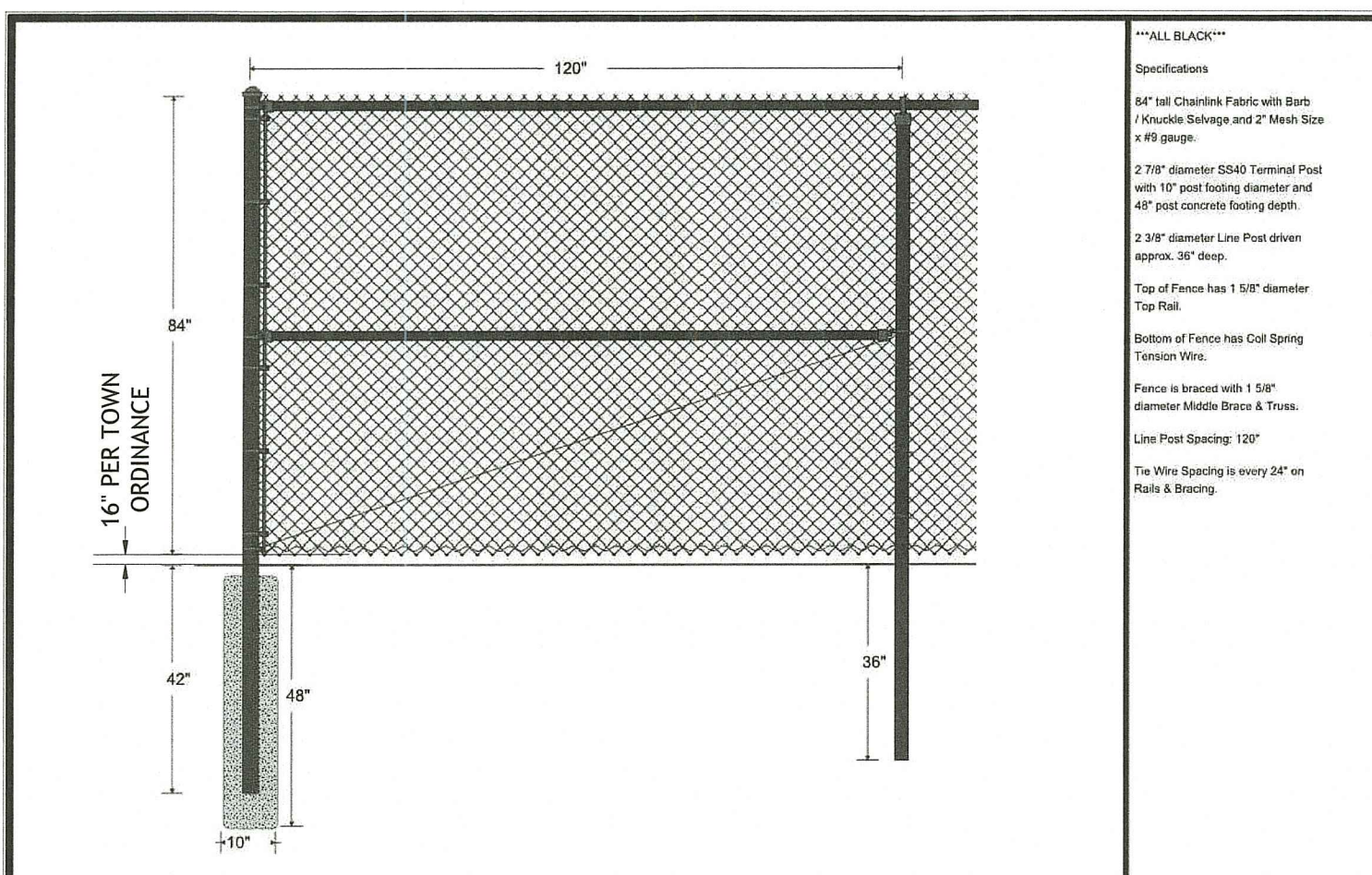
NO.	DATE	DESCRIPTION
1	11/22/24	PLANNING RTC
2	1/30/25	RIDEM RTC

DESIGNED BY:	WMLJR
DRAWN BY:	MCG/SP/SD
CHECKED BY:	JAC
DATE:	OCT. 2024
PROJECT NO.:	24-29

PRELIMINARY, NOT FOR CONSTRUCTION

EXISTING CONDITIONS & SITE PREP. PLAN

SHEET 3 OF 56



"ALL BLACK"
 Specifications:
 1/2" x 1/2" Chain Link Fence with Dark
 Finish
 2 3/8" diameter L90 Turned Post
 with 1/2" post spacing
 2 3/8" diameter L90 Post
 with 1/2" post spacing
 Top of Fence has 1 1/2" diameter
 Turned Post
 Bottom of Fence has 1 1/2" diameter
 Turned Post
 Fence is braced with 1 1/2"
 diameter Middle Drive & Truss
 Line Post Spacing: 120'
 Top Wire Spacing to every 24" on
 Posts & Bracing

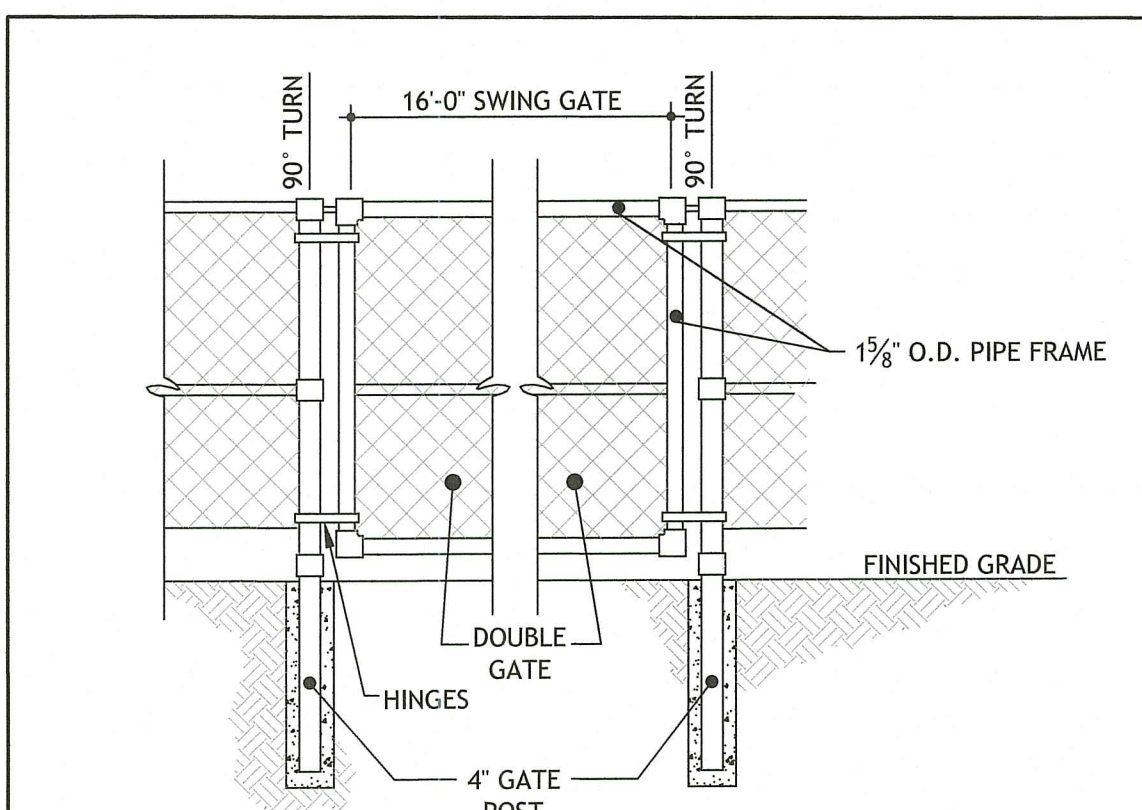
GMH Fence Co. Inc.
 PO Box 851
 East Longmeadow, MA 01123
 413-526-3361
 Drawn: 2/14/2020
 File:

3 CHAIN-LINK FENCE DETAIL
 NOT TO SCALE

ZONING CRITERIA	REQUIRED	EXISTING	PROPOSED ¹
ZONING DISTRICT	C-2 ¹	C-2	C-2 ²
MINIMUM LOT AREA	5,000 SF	100,821 SF	100,821 SF
MINIMUM LOT WIDTH	25 FT	99.83 FT	99.83 FT
MINIMUM LOT FRONTAGE	25 FT	99.23 FT	99.23 FT
MINIMUM FRONT YARD	10 FT	>10 FT	>10 FT
MINIMUM SIDE YARD DEPTH	10 FT	4.65 FT ²	4.65 FT ²
MINIMUM REAR YARD DEPTH	10 FT	>10 FT	>10 FT
MAXIMUM LOT COVERAGE	50%	57%	57%
MAXIMUM BUILDING HEIGHT	45 FT	<45 FT	<45 FT

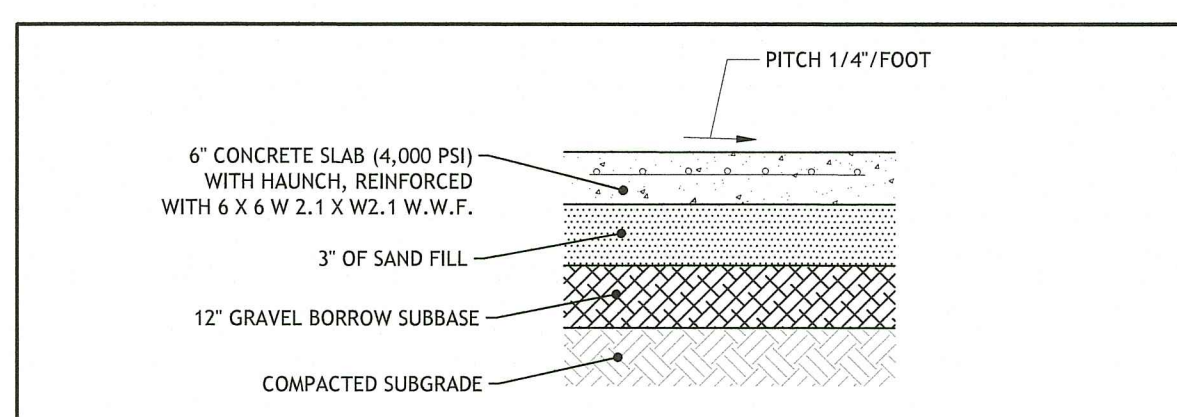
NOTES:
 1. FOR AREAS WHERE BOTH WATER FACILITIES AND PUBLIC SEWERS
 2. PRE-EXISTING, NON-CONFORMING CONDITION (EXISTING STRUCTURE)
 3. PRE-EXISTING, NON-CONFORMING CONDITION (EXISTING STRUCTURE & PAVEMENT)
 4. PROPOSED MEDIUM-SCALE GROUND-MOUNTED SOLAR INSTALLATION
 (EXISTING USE TO REMAIN)
 5. MEDIUM GROUND-MOUNTED SOLAR INSTALLATIONS SHALL COVER NO GREATER THAN
 20% OF A LOT; SOLAR ENERGY SYSTEMS WITH GRASS OR ANOTHER PERVIOUS
 SURFACE UNDER THEM ARE EXEMPT FROM IMPERVIOUS SURFACE CALCULATIONS.

RELIEF REQUESTED
 SPECIAL USE PERMIT REQUESTED:
 PER ATTACHMENT 1 - TABLE 1: USE TABLE
 USE CODE: 91(A); GROUND-MOUNTED MEDIUM-SCALE
 SOLAR ENERGY SYSTEM (PRINCIPAL USE) REQUIRES A
 SPECIAL USE PERMIT IN THE UNDERLYING C-2 ZONE



NOTES:
 1. DOUBLE GATE SHALL HAVE A LOCKING MECHANISM, DROP ROD, AND TRUSS ROD.
 2. ALL FENCING MATERIALS SHALL BE IN ACCORDANCE WITH SECTION 902 OF THE
 RHODE ISLAND STANDARD SPECIFICATIONS.
 3. FENCE SHALL BE INSTALLED SUCH THAT THE BOTTOM OF THE FENCE MESH IS NOT
 LESS THAN EIGHT (8) INCHES HIGH OFF THE GROUND ON EACH SIDE OF THE
 SOLAR PROJECT (I.E. NORTH, WEST, EAST AND SOUTH).

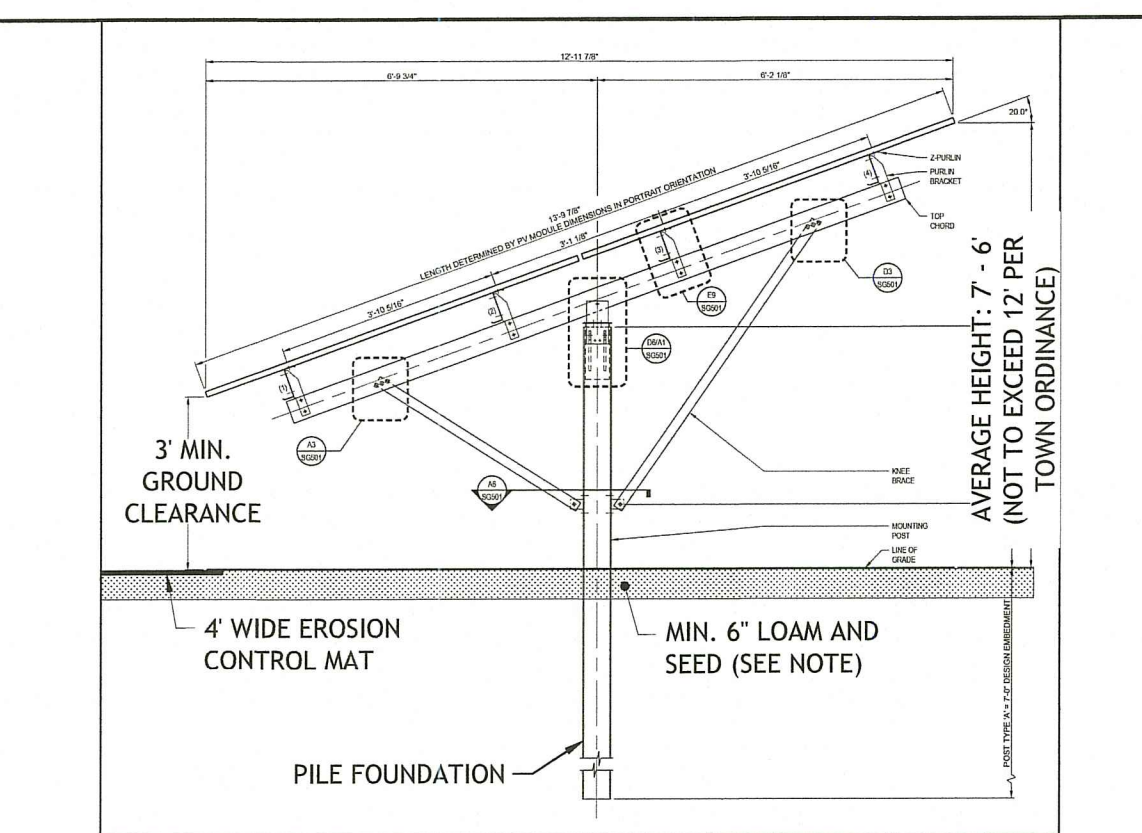
4 DOUBLE GATE DETAIL
 NOT TO SCALE



NOTES:
 1. EQUIPMENT PAD AND TRANSFORMER DETAILS BY ELECTRICAL
 ENGINEER OR SOLAR ENGINEER SUPERSEDE THIS DETAIL.

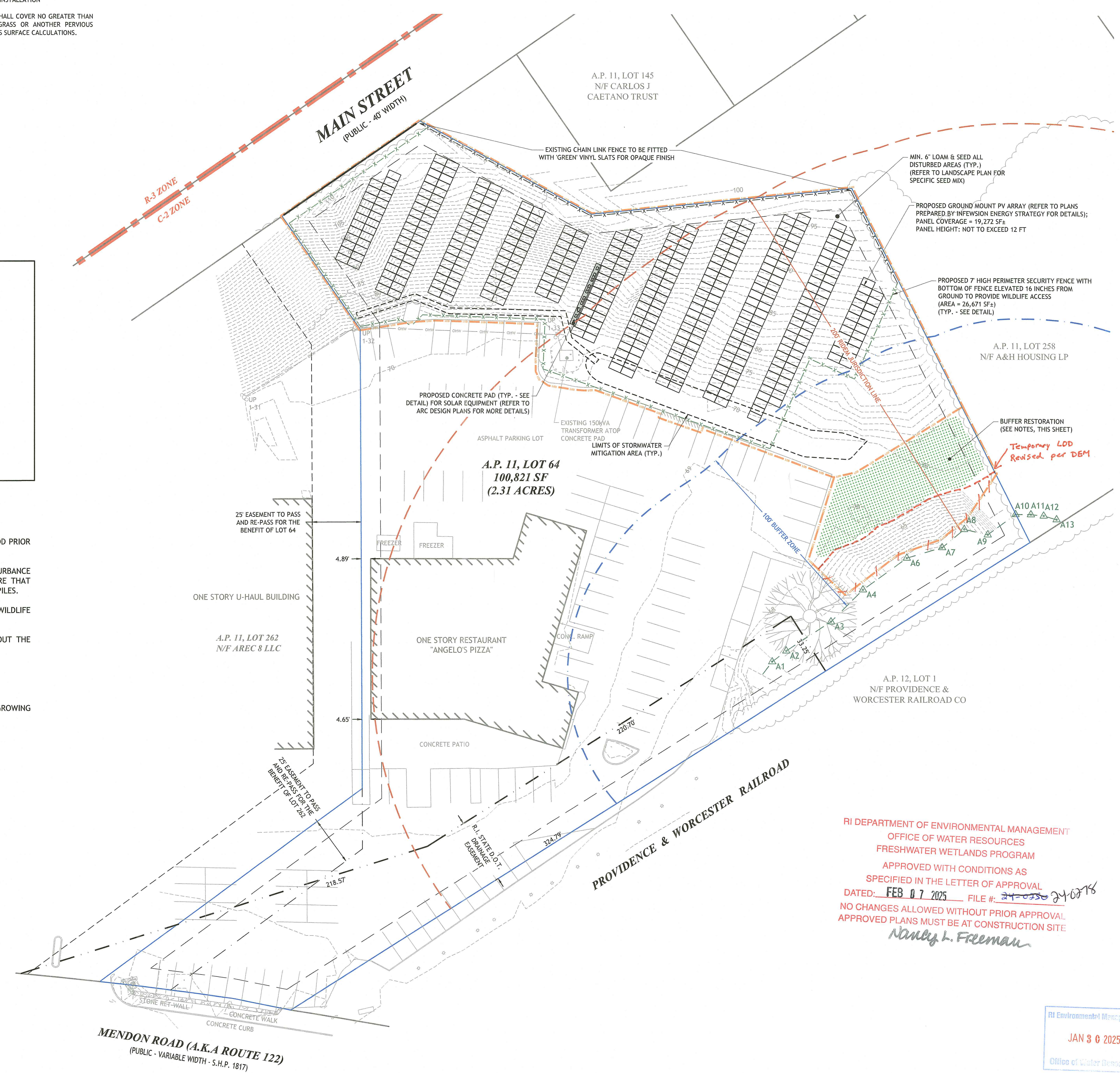
5 TYPICAL UTILITY PAD DETAIL
 NOT TO SCALE

NOTES FOR WETLAND BUFFER RESTORATION:
 1. EROSION CONTROLS SHALL BE ESTABLISHED ALONG THE IDENTIFIED TEMPORARY LOD PRIOR
 TO INITIATING ANY RESTORATION WORK.
 2. ALL FILL PILES WITHIN THE RESTORATION AREA SHALL BE REMOVED ANY ANY DISTURBANCE
 GRADED TO MATCH THE EXISTING SLOPE. CARE SHALL BE EXERCISED TO ENSURE THAT
 EXISTING STUMPS AND SHRUBS ARE NOT DISTURBED DURING THE REMOVAL OF FILL PILES.
 3. AREAS OF SOIL DISTURBANCE SHALL BE SEEDED WITH A NORTHEAST WILDLIFE
 CONSERVATION MIX THEN MULCHED WITH LOOSE STRAW.
 4. THE FOLLOWING SHRUB PLANTINGS SHALL BE MANUALLY INSTALLED THROUGHOUT THE
 RESTORATION AREA:
 • 20 EASTERN SHADBUSH (*Amelanchier canadensis*)
 • 20 INKBERY (*Ilex glabra*)
 SHRUBS SHALL BE 3 - 4 FEET TALL AFTER PLANTING
 SPACING SHALL BE 8-10 FEET ON-CENTER
 5. INSTALLED SHRUBS AND SEEDED AREAS SHALL BE WATERED DURING THE FIRST GROWING
 SEASON TO SURVIVAL.
 6. THE AREA SHALL BE ALLOWED TO REVERT TO A WILD CONDITION.



NOTES:
 1. MIN. 6" LOAM AND SEED TO BE APPLIED TO ALL DISTURBED AREAS WITHIN THE
 SOLAR PANEL FIELD. REFER TO LOAMING AND SEEDING NOTES, SHEET 2.
 2. TYPICAL SPACING BETWEEN SOLAR PANEL ROWS IS 12 FEET.
 3. EROSION CONTROL MAT SHALL BE NORTH AMERICAN GREENS' ERONET P300
 PERMANENT EROSION CONTROL BLANKET. THE EROSION MAT SHALL BE
 INSTALLED AT THE LOWER DRIP EDGE OF THE SOLAR PANELS TO ADDRESS
 POTENTIAL SCOURING ISSUES. IF SCOURING IS OBSERVED AT THE LOWER DRIP
 EDGE OF THE SOLAR PANELS, RIPRAP SHALL BE INSTALLED AS AN ALTERNATIVE
 TO THE EROSION CONTROL MAT.

6 PANEL DETAIL
 NOT TO SCALE



RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
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 Nancy L. Freeman

JCE
 JOE CASALI ENGINEERING, INC.
 CIVIL ENGINEER
 300 POST ROAD, WARWICK, RI 02888
 (401) 844-1300 (401) 844-1313 FAX WWW.JOECASALI.COM

JOSEPH A. CASALI
 No. 7250
 REGISTERED PROFESSIONAL ENGINEER
 CIVIL
 1/30/2025

**MEDIUM GROUND-MOUNTED
 SOLAR ENERGY SYSTEM**
127 MENDON ROAD
CUMBERLAND, RHODE ISLAND
AP 11, LOT 64

REVISIONS:

NO.	DATE	DESCRIPTION
1	11/22/24	PLANNING RTC
2	1/30/25	RIDEM RTC

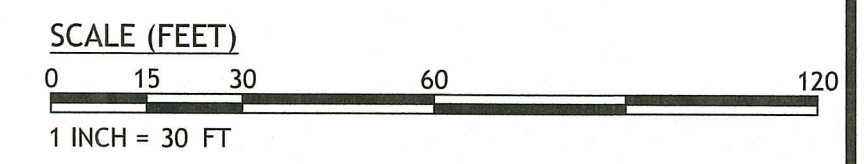
DESIGNED BY: WMLJR
 DRAWN BY: MCG/SP/SD
 CHECKED BY: JAC
 DATE: OCT. 2024
 PROJECT NO: 24-29

PRELIMINARY, NOT FOR CONSTRUCTION

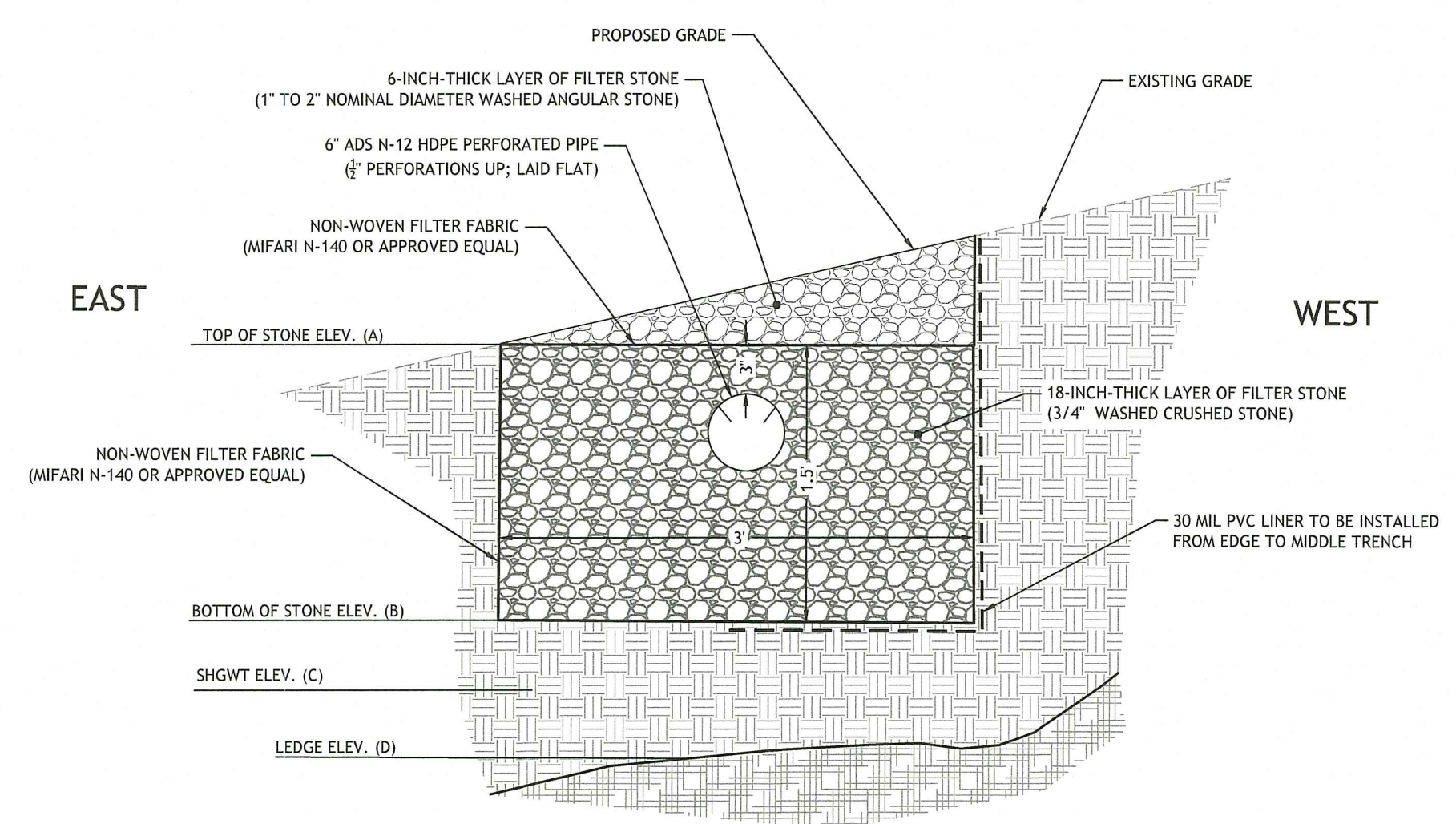
SITE PLAN

SHEET 4 OF 6

Q:\24-29 Bill Kistilis\ACAD\127 Mendon Rd [Preliminary Plan] - R2 [RTCDM].dwg Jan. 30, 2025 1:42pm



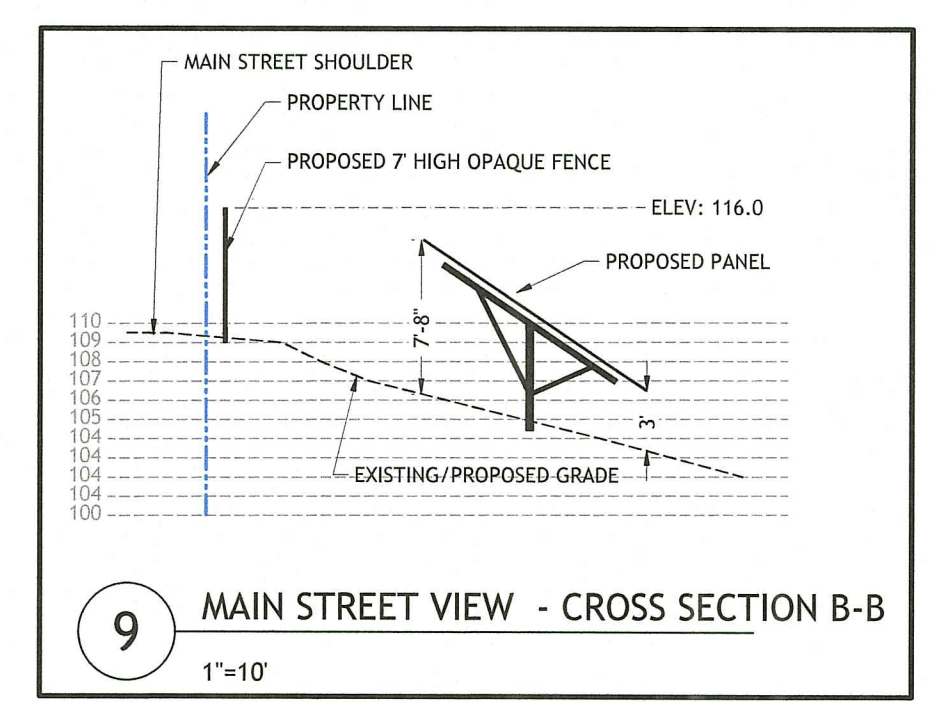
RI Environmental Management
 JAN 30 2025
 Office of Water Resources



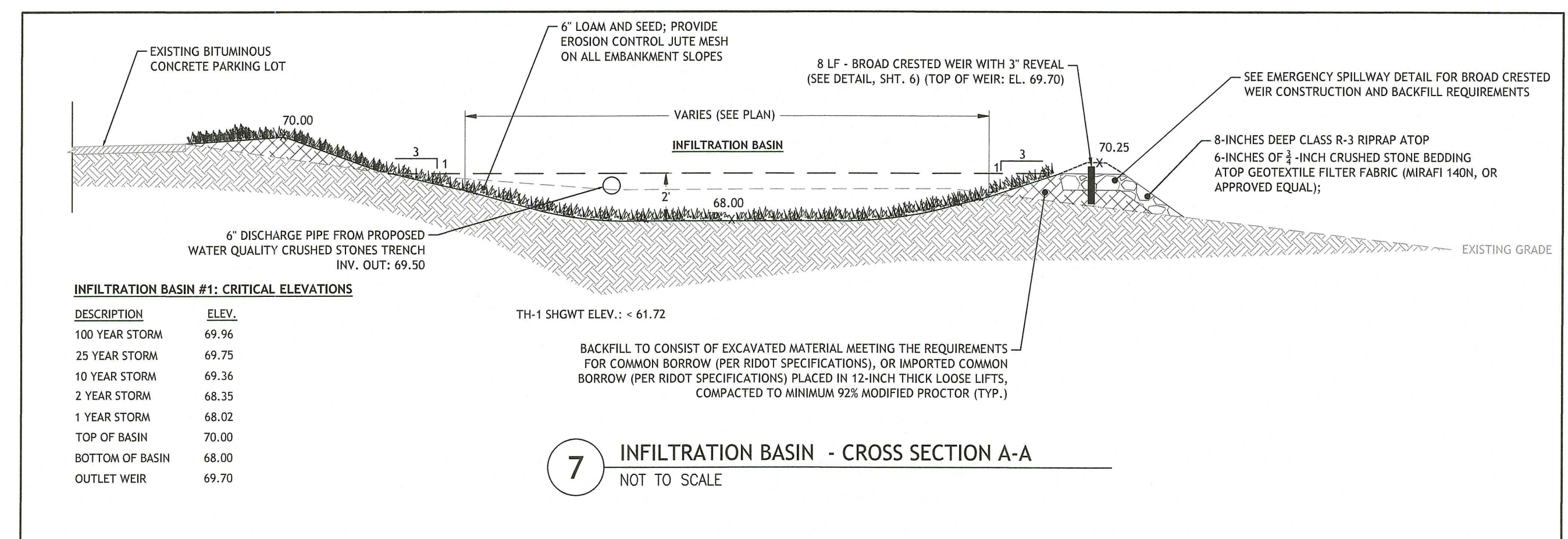
ELEVATIONS TABLE

DESCRIPTION	ELEV. A	ELEV. B	ELEV. C	ELEV. D
WQ CRUSHED STONE TRENCH - SECTION A	72.00	70.50	N/A	66.58
WQ CRUSHED STONE TRENCH - SECTION B	71.00	69.50	N/A	64.61
WQ CRUSHED STONE TRENCH - SECTION C	71.00	69.50	N/A	64.61

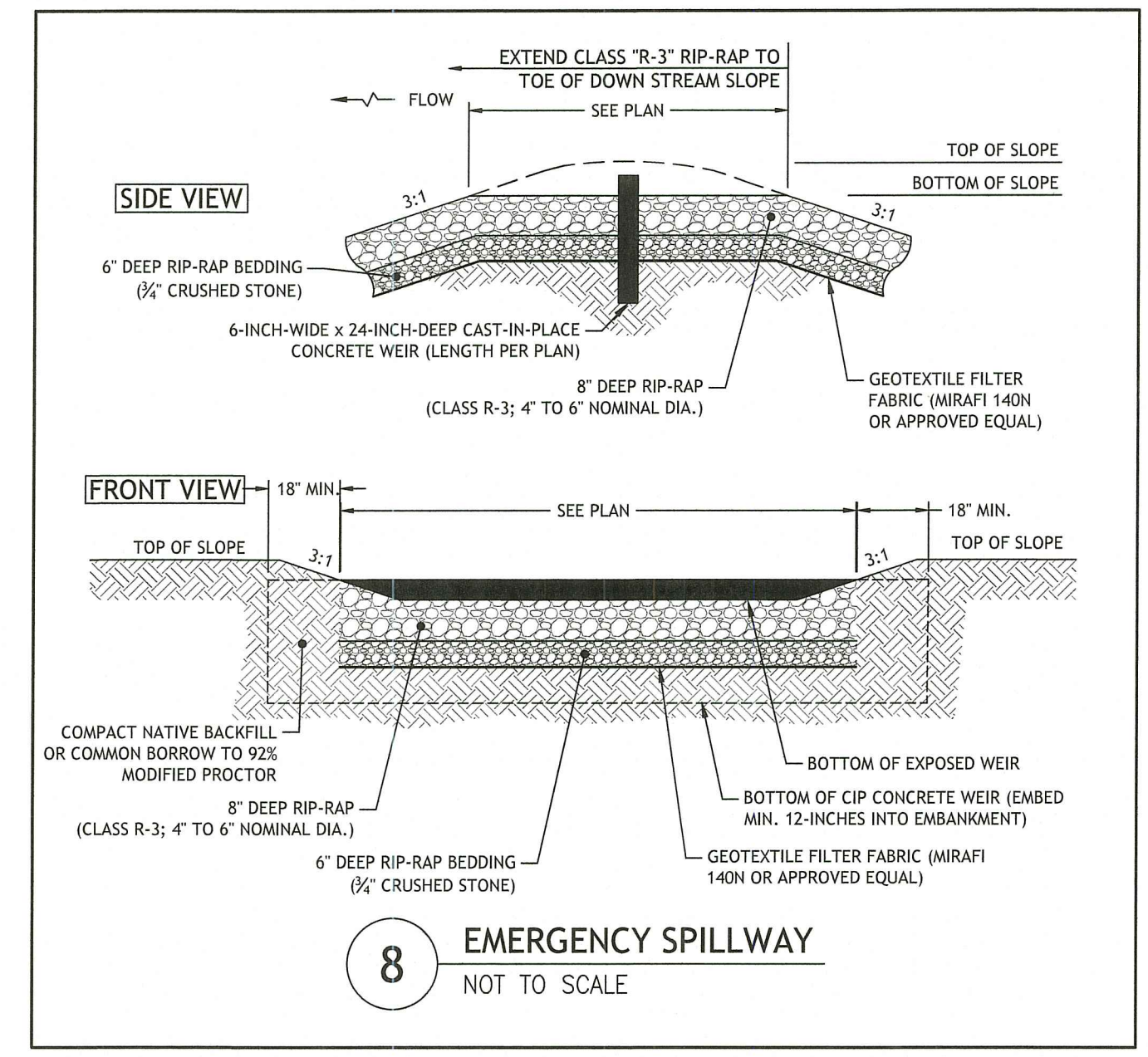
6 WATER QUALITY CRUSHED STONE TRENCH DETAIL
NOT TO SCALE



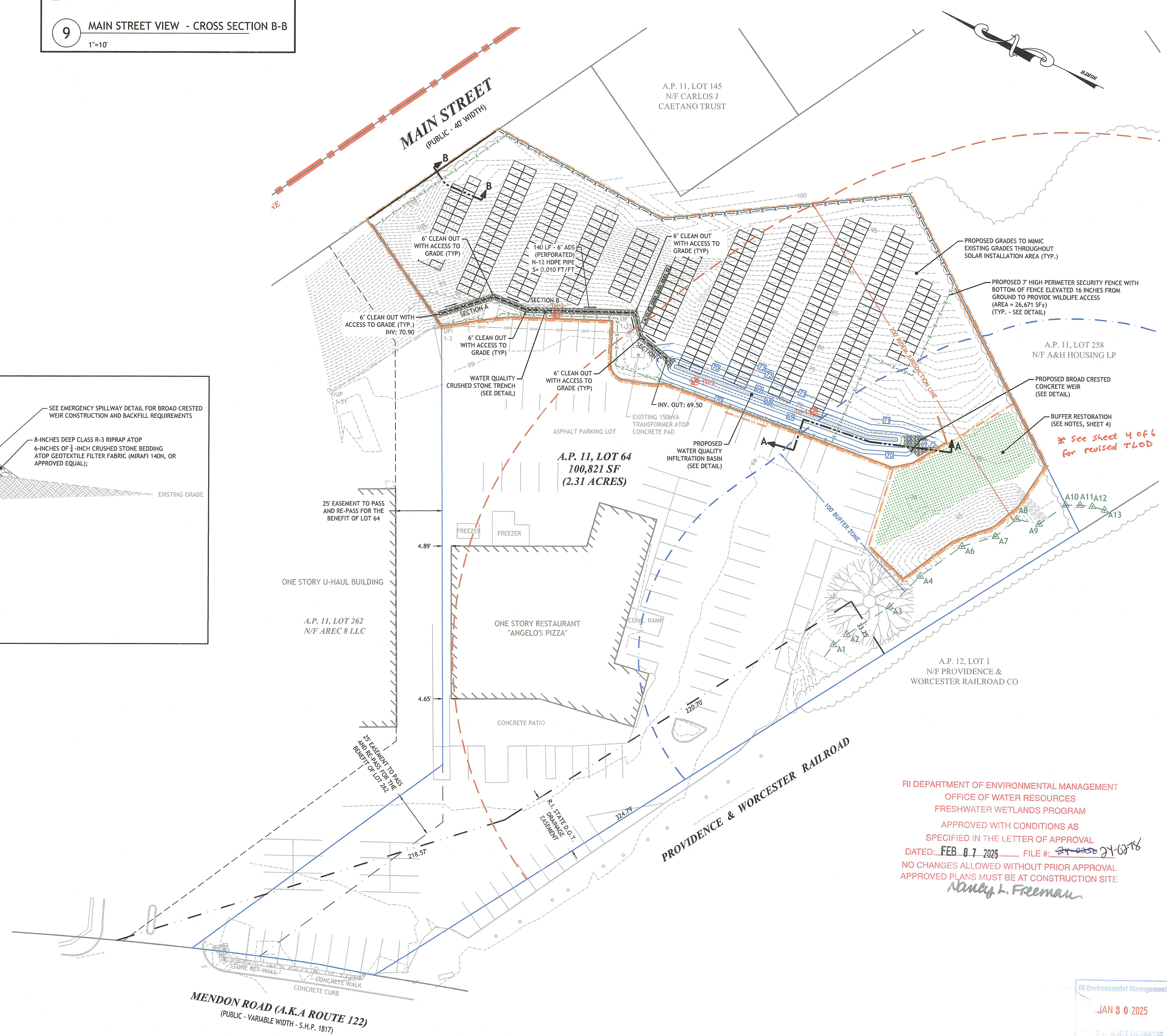
9 MAIN STREET VIEW - CROSS SECTION B-B
1"=10'



7 INFILTRATION BASIN - CROSS SECTION A-A
NOT TO SCALE



8 EMERGENCY SPILLWAY
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: FEB 07 2025 FILE #: 24-050 21-0316
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Nancy L. Freeman

JOE CASALI ENGINEERING, INC.
CIVIL - SITE DEVELOPMENT - FLOODPLAIN DRAINAGE - WETLANDS - ISSS - TRAFFIC - FLOORPLAN
300 POST ROAD, WARWICK, RI 02888
(401) 944-1300 (401) 944-1313 FAX WWW.JOECSA.COM

JOSEPH A. CASALI
No. 7250
REGISTERED PROFESSIONAL ENGINEER
1/30/2025

MEDIUM GROUND-MOUNTED SOLAR ENERGY SYSTEM
127 MENDON ROAD
CUMBERLAND, RHODE ISLAND
AP 11, LOT 64

REVISIONS:

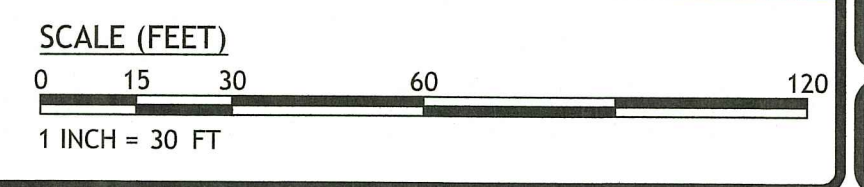
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2	1/30/25	RIDEM RTC

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PROJECT NO.: 24-29

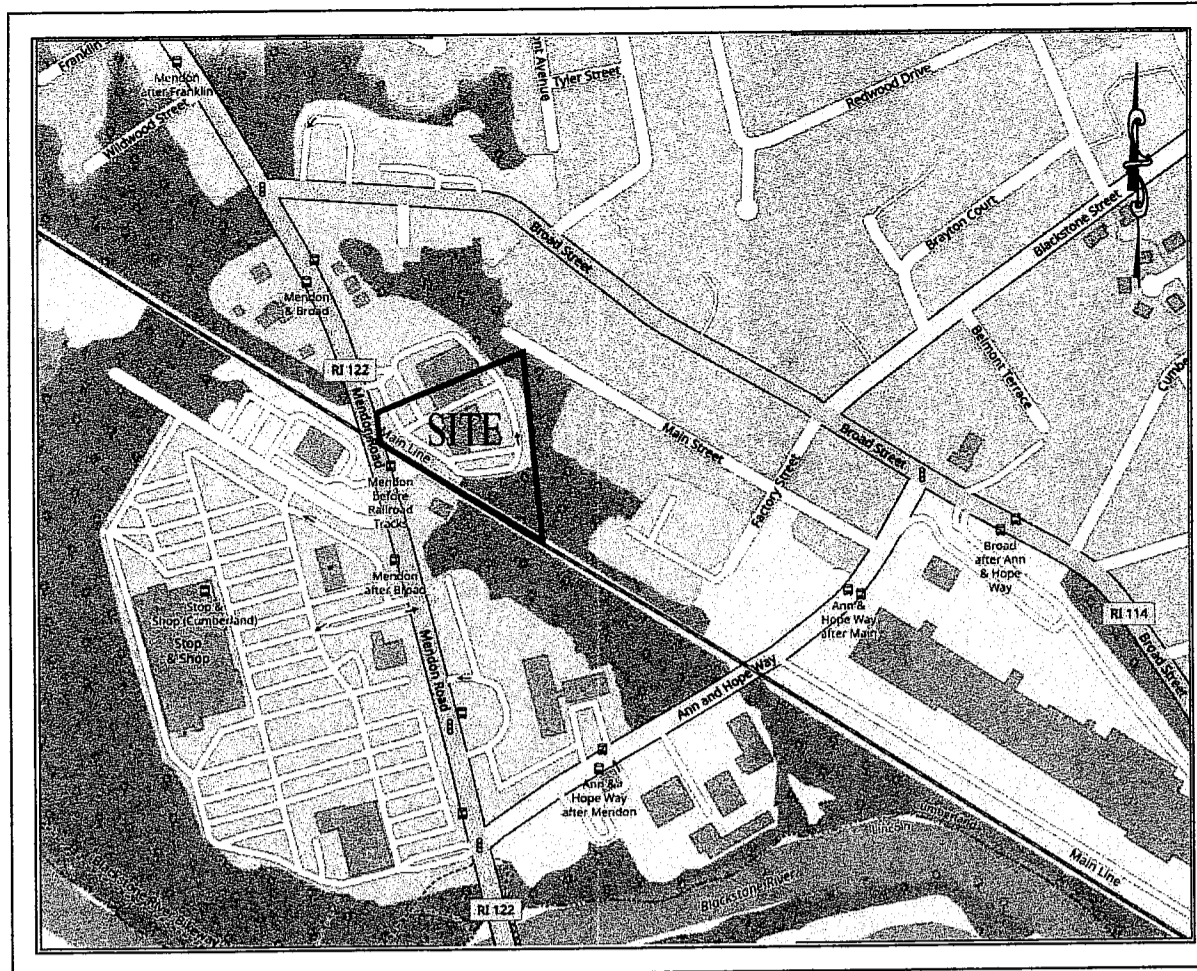
PRELIMINARY, NOT FOR CONSTRUCTION

GRADING & DRAINAGE PLAN

SHEET 5 OF 56



Q:\24-29 Bill\2401127 Mendon Rd (Preliminary Plan) - R2 (RTCDEN).dwg Jan. 30, 2025 12:07pm



LOCUS MAP
(NOT TO SCALE)

SURVEY REFERENCES

DEEDS

LOT 64: DEED BOOK 1976, PAGE 478
 LOT 262: DEED BOOK 1287, PAGE 55
 LOT 258: DEED BOOK 1954, PAGE 813

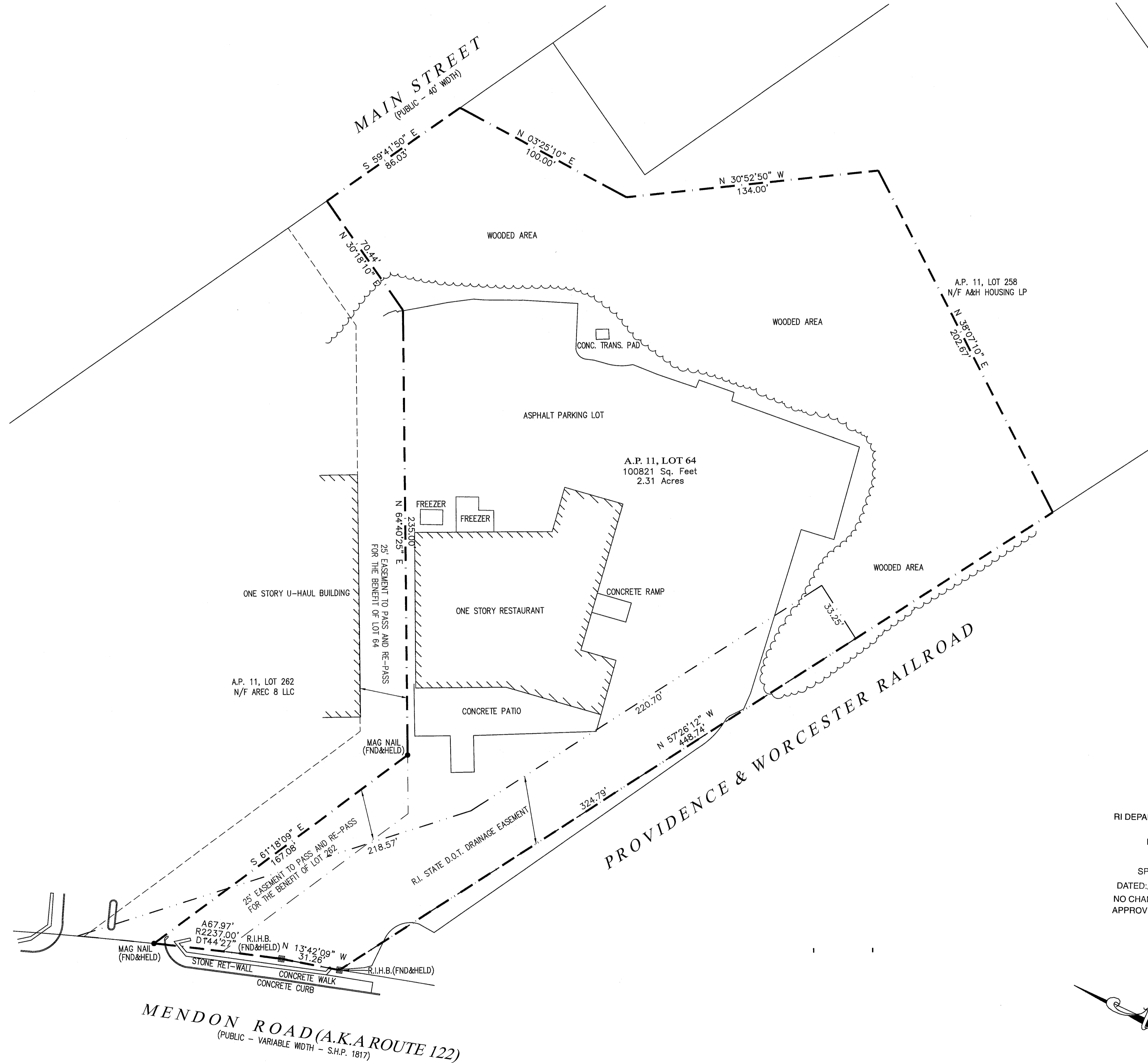
PLANS

RHODE ISLAND STATE D.O.T. HIGHWAY PLATS NUMBERS 179, 1817 AND 1821.

ZONING DISTRICT: C-2 (WITH WATER & SEWER)

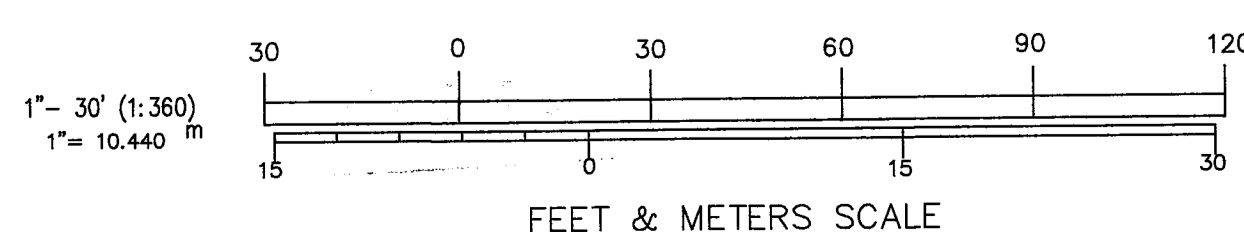
ZONING SETBACKS:

Min. Lot Area: 5,000 s.f.
 Min. Lot Width: 25 feet
 Min. Lot Frontage: 25 feet
 Front Yard Setbacks: 10 feet
 Min. Rear Yard: 10 feet
 Side Yard Setback: 10 feet
 Max Lot Coverage: 50%
 Max Height: 45 feet



- LEGEND**
- POLE # UTILITY POLE
 - ✕ FENCE
 - ▬ STONEWALL
 - ▬▬▬ PROPERTY LINE (EXISTING OR NEW)
 - GB ■ GRANITE BOUND W/ DRILL HOLE
 - PROPERTY CORNER W/ MONUMENT
 - RE-BAR ○ PROPERTY CORNER / PROPOSED MONUMENT
 - 🌳 TREE
 - 🌲 PINE TREE

NOTE: SYMBOLS ARE TYPICAL AND SOME MAY NOT BE FOUND ON THIS PLAN.



CERTIFICATION

THIS SURVEY HAS BEEN CONDUCTED AND THE PLAN HAS BEEN PREPARED TO SECTION 9 OF THE RULES AND REGULATIONS ADOPTED BY THE RHODE ISLAND STATE BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS ON JANUARY 1, 2016, AS FOLLOWS:

TYPE OF BOUNDARY SURVEY	MEASUREMENT / ACCURACY SPECIFICATIONS
COMPREHENSIVE BOUNDARY SURVEY	I
OTHER TYPE OF SURVEY	III
DATA ACCUMULATION SURVEY	N/A
TOPOGRAPHIC SURVEY	N/A

THE PURPOSE FOR THE CONDUCT OF THE SURVEY AND FOR THE PREPARATION OF THE PLAN IS AS FOLLOWS:
 BOUNDARY SURVEY TO ESTABLISH THE LOCATION OF THE PROPERTY LINES IN RELATION TO THE EXISTING IMPROVEMENTS

BY: *Braden Andrews* 06/07/24
 BRADEN ANDREWS, P.L.S. REG. NO. DATE
 DOUGLAS DESIGN GROUP (L.S.000A354-COA)

REVISIONS:

REV	DATE	COMMENT
1		
2		

DRAWN BY: BSA
 CHECK BY: JDA

SEAL: TO THE BEST OF MY KNOWLEDGE & BELIEF THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON

BRADEN ANDREWS, P.L.S.#2531

PREPARED FOR:

COMPREHENSIVE BOUNDARY AND TOPOGRAPHIC SURVEY OF LAND

PREPARED FOR

A.P. 11, LOT 64

127
 MENDON ROAD
 HIGHWAY ROUTE 122
 CUMBERLAND
 RHODE ISLAND

Date: JUNE 7, 2024
 Scale: 1" = 30'

R.I. DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM

APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL

DATED: FEB 07 2025 FILE #: 2025-00818

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Nancy L. Freeman

PREPARED BY:

Douglas Design Group
 LAND SURVEYING • CONSULTING

BAY TOWER - LOWER LEVEL - SUITE C
 PROVIDENCE, RHODE ISLAND 02903
 508-821-8728 774-284-0085
 douglasdesigngroup@gmail.com

SHEET: 1 OF 1

PROPERTY SURVEY PLAN

DDG PROJECT #: 05.24.1969

DATE: 06/07/24

JAN 8 0 2025