

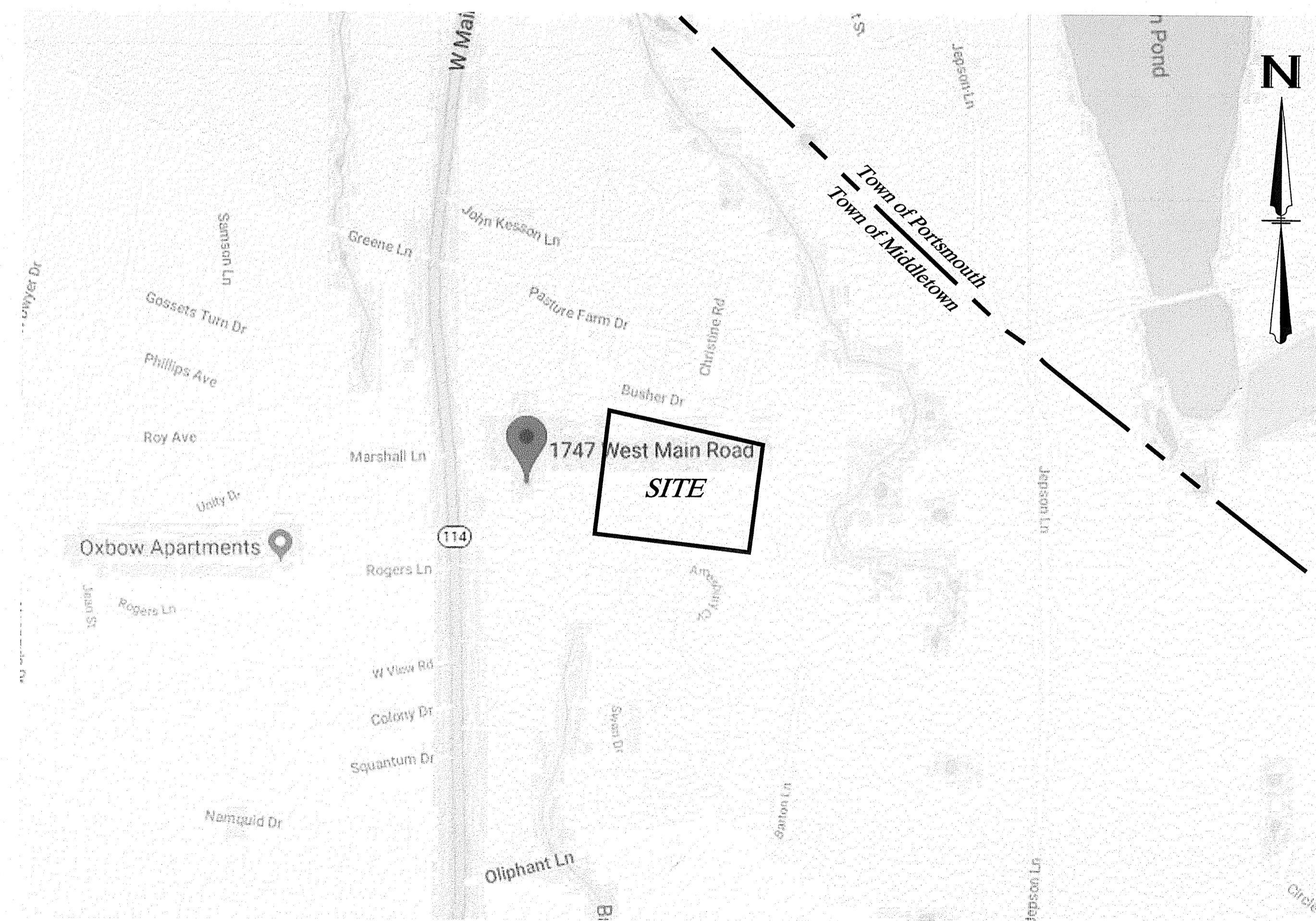
# RIDEM PRELIMINARY DETERMINATION

# GD Middletown West Main

Alternating Current (AC): 2.25 MW  
 1747 West Main Road  
 Middletown, Rhode Island 02842  
 Assessor's Plat 111 Lot 9A

### Sheet Index

Sheet Number	Sheet Title
C1.1	Cover Sheet
C1.2	Aerial & Map Sheet
C1.3	Existing Site Analysis Plan
C1.4	Proposed Site Plan
C1.5	Enlarged Site, Grading & Utility Plan
C1.6	Soil Erosion and Sediment Control Plan
C1.7	Detail Sheet

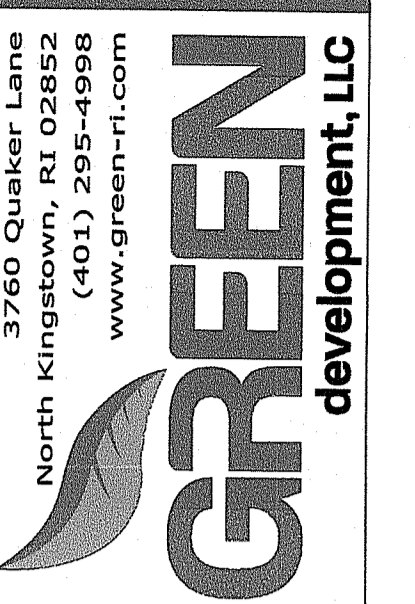


Vicinity Map (Scale: 1"=500')

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

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
 FRESHWATER WETLANDS PROGRAM  
 APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL  
 FILE # 18-0326 DATE MAY 21 2019  
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE  
 Charles A. Hester

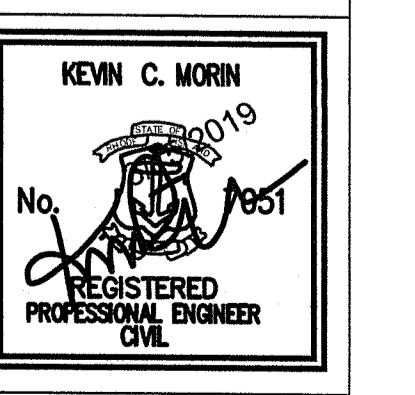
Environmental Management  
 MAR 20 2019  
 Office of Water Resources



APPLICANT INFO: GD Middletown West Main, LLC  
 3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852  
 OWNER INFO: Cenx Corp  
 4 FOX PLACE, PROVIDENCE, RI 02903  
 PREPARED BY: Green Development, LLC  
 3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852

NO.	DATE	REVISION
2	3/12/2019	ISSUE PRELIMINARY DETERMINATIONS RESUBMISSION
1	11/22/2018	ISSUE PRELIMINARY DETERMINATIONS

PRELIMINARY LAYOUT  
 Cover Sheet  
 PROJECT INFORMATION:  
**GD Middletown West Main**  
 ALTERNATING CURRENT(AC): 2.25 MW  
 1747 WEST MAIN ROAD, MIDDLETOWN, RI 02842  
 ASSESSOR'S PLAT 111 LOT 9A

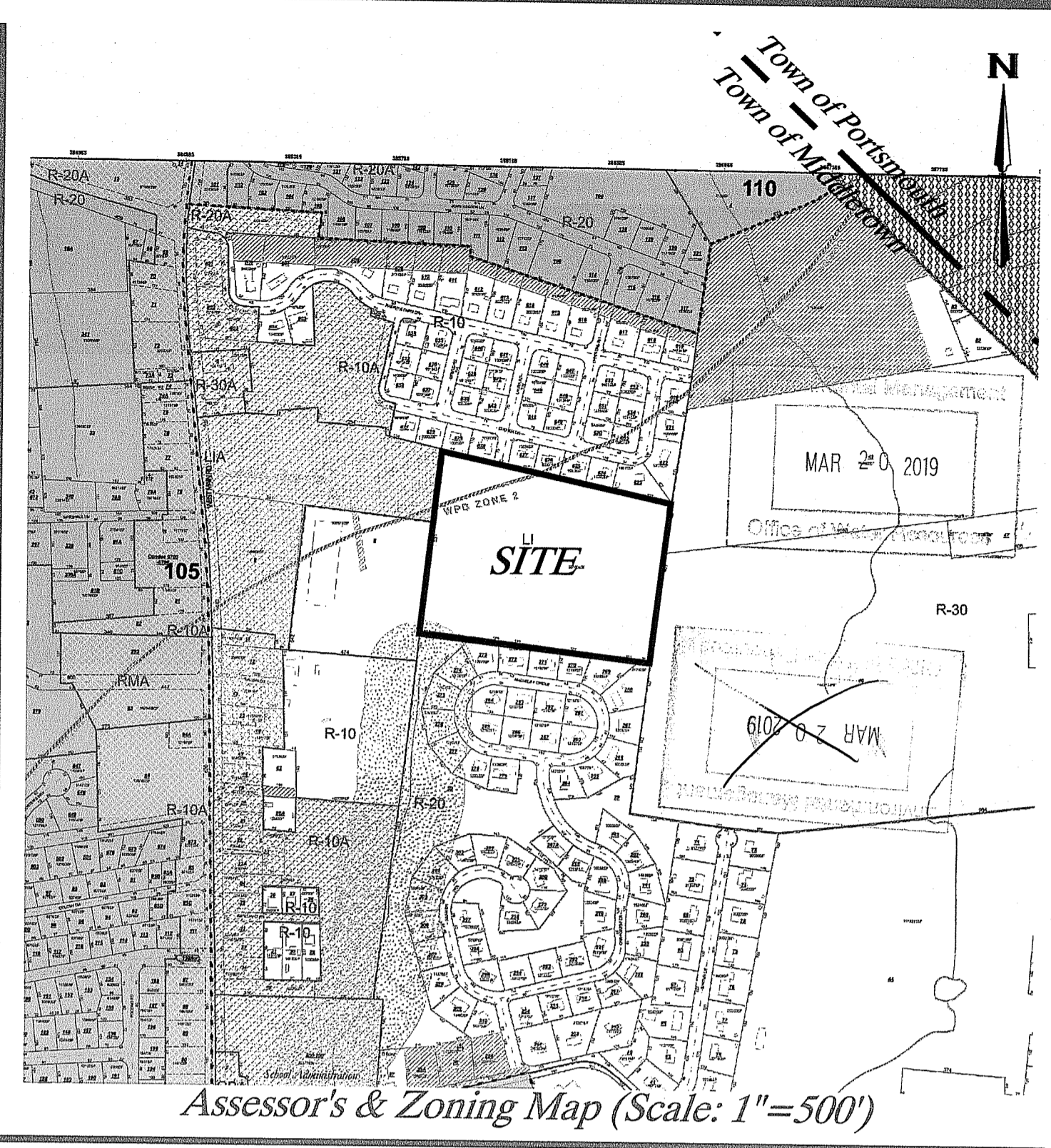


SHEET NO.:  
**C1.1 OF 7**

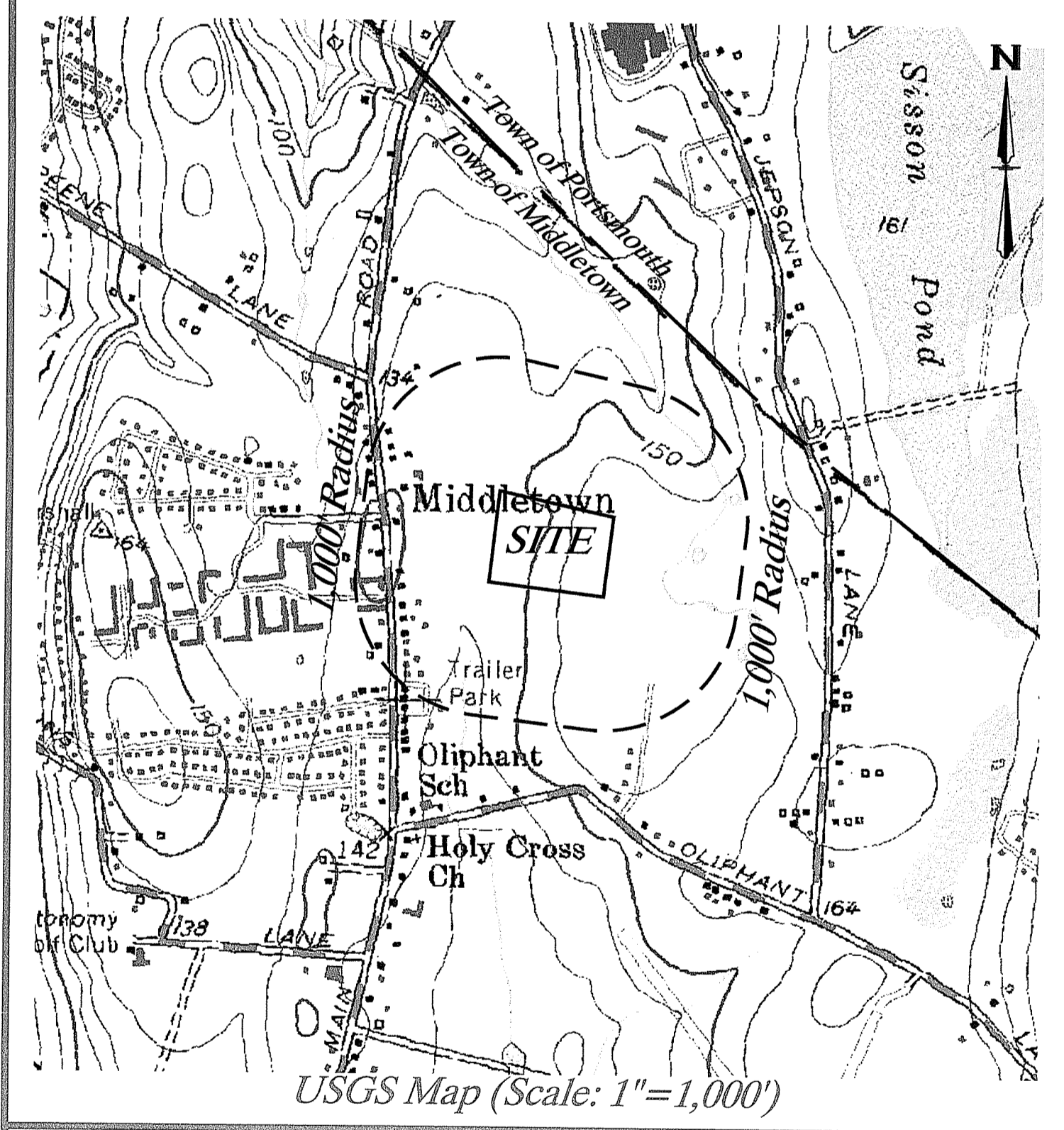
**SESC / O&M:**  
 THE ACCOMPANYING DOCUMENTS ARE CONSIDERED PART OF THIS PLAN SET. THE CONTRACTOR/OWNER SHALL MAINTAIN A COPY OF THE MOST CURRENT PLAN SET AND THE MOST CURRENT ACCOMPANYING DOCUMENTS ON SITE DURING CONSTRUCTION AT ALL TIMES. ACCOMPANYING DOCUMENTS ARE AS FOLLOWS:  
 SOIL EROSION AND SEDIMENT CONTROL PLAN (SESC) WHICH CONTAINS BUT NOT LIMITED TO THE FOLLOWING INFORMATION:  
 • SEQUENCE OF CONSTRUCTION  
 • EROSION CONTROL MEASURES  
 • ESTABLISHMENT OF VEGETATIVE COVER  
 • SHORT TERM MAINTENANCE  
 OPERATIONS AND MAINTENANCE PLAN (O&M) WHICH CONTAINS BUT NOT LIMITED TO THE FOLLOWING INFORMATION:  
 • LONG TERM MAINTENANCE



1/2 Mile Radius Map



Assessor's & Zoning Map (Scale: 1"=500')



USGS Map (Scale: 1"=1,000')

**Disclaimer:**

THIS PLAN IS NOT TO BE CONSTRUED AS AN ACCURATE BOUNDARY SURVEY AND IS SUBJECT TO SUCH CHANGES AS AN ACCURATE BOUNDARY SURVEY MAY DISCLOSE. INFORMATION AND IMAGES ON THIS PLAN ARE THOSE FOUND THROUGH ONLINE STATE AND CITY/TOWN GIS DATABASES. THE INFORMATION SHOWN IS ONLY AS ACCURATE AS THE INFORMATION FOUND THROUGH ONLINE SITE RESEARCH. AERIAL IMAGE DEPICTED IS FROM 2014 USGS DIGITAL TRUE COLOR ORTHOPHOTOGRAPHY. THE ASSESSOR'S AND ZONING MAP ABOVE IS TAKEN FROM PLAN TITLED 'TOWN OF MIDDLETOWN, RHODE ISLAND, PLAT 111', UPDATED FEBRUARY 1, 2018. FOR BEST CLARITY, THIS SHEET SHOULD BE REPRODUCED IN COLOR ONLY.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER QUALITY  
 FRESHWATER WATER QUALITY DIVISION  
 APPROVED AND  
 AS SPECIFIED IN THE  
 FILED 18-0326 DATE: MAY 21 2019  
 NO CHANGES ALLOWED WITHOUT APPROVED PLANS NUMBER

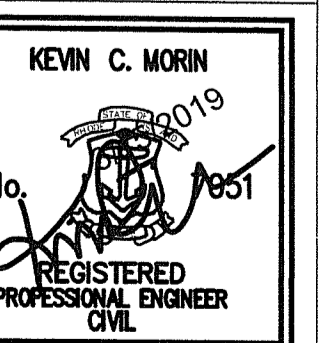
*James A. Herbert*

NO.	DATE	BY	REVISION
2	3/15/2019	REB	PRELIMINARY ESTIMATING SUBMISSION
1	11/02/2018	REB	PRELIMINARY ESTIMATING

PRELIMINARY LAYOUT  
**Aerial & Map Sheet**

**GD Middletown West Main**

ALTERNATING CURRENT(AC): 2.25 MW  
 1747 WEST MAIN ROAD, MIDDLETOWN, RI 02842  
 ASSESSOR'S PLAT 111 LOT 9A



**General Site Information:**

- APPLICANT INFORMATION: GD MIDDLETOWN WEST MAIN, LLC  
3760 QUAKER LANE  
NORTH KINGSTOWN, RHODE ISLAND 02852
- OWNER INFORMATION: CENZ CORP  
4 FOX PLACE  
PROVIDENCE, RHODE ISLAND 02903
- SITE INFORMATION: 1747 WEST MAIN ROAD  
MIDDLETOWN, RHODE ISLAND, 02842  
ASSESSOR'S PLAT 111, LOT 9A  
AREA: 12.67± ACRES  
ZONE: L1 (INDUSTRIAL DISTRICT)
- FEMA INFORMATION: MAP: 44005C0091J MAP REVISION DATE: SEPTEMBER 4, 2013  
ZONE DESCRIPTION: X (UNSHADED) AREAS WHERE THERE IS MINIMAL FLOODING.
- AREA INFORMATION:

SITE WITHIN	YES/NO
GROUNDWATER PROTECTION AREA (RIDEM)	NO
NATURAL HERITAGE AREAS (RIDEM)	NO
NARROW RIVER SPECIAL AREA MANAGEMENT PLAN (CRMC)	NO
SALT PONDS SPECIAL AREA MANAGEMENT PLAN (CRMC)	NO
HISTORIC CEMETERY AREA (CITY/TOWN)	NO
HISTORIC DISTRICT (CITY/TOWN)	NO
OVERLAY DISTRICT (CITY/TOWN)	NO
SURFACE WATER PROTECTION AREA (CITY/TOWN)	YES
WATER PROTECTION DISTRICT 1 (CITY/TOWN)	YES
WATER PROTECTION DISTRICT 2 (CITY/TOWN)	YES

**General Site Information (Continued):**

- SOIL INFORMATION:

SOIL NAME	HSG	DESCRIPTION
N6B*	C	NEWPORT SILT LOAM, 3 TO 8 PERCENT SLOPES
PmA*	C	PITTSVILLE SILT LOAM, 0 TO 3 PERCENT SLOPES
PmB*	C	PITTSVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES
Se*	D	STISSING SILT LOAM

\*PRIME AGRICULTURAL SOILS

THE SOIL ABBREVIATIONS REFERENCE THE SOIL SURVEY OF RHODE ISLAND PREPARED BY THE USDA SOIL CONSERVATION SERVICE INFORMATION FOUND THROUGH ONLINE RESEARCH FROM RIGIS DATA. THE ABBREVIATIONS CORRESPOND TO SOIL AREAS OUTLINED ON THE PLAN AND ARE TO BE CONSIDERED APPROXIMATE BASED ON RIGIS DATABASE
- ZONING INFORMATION:

EXISTING ZONE (SECTION 603)	ZONE L1 (INDUSTRIAL DISTRICT)
MINIMUM LOT AREA:	40,000 SF
MINIMUM FRONTAGE:	150'
MINIMUM FRONT YARD:	10'
MINIMUM FRONT YARD (SOLAR):	25'
MINIMUM SIDE YARD (MAIN STRUCTURE):	35'
MINIMUM SIDE YARD (ACCESSORY STRUCTURE):	25'
MINIMUM SIDE YARD (SOLAR):	25'
MINIMUM REAR YARD (MAIN STRUCTURE):	40'
MINIMUM REAR YARD (ACCESSORY STRUCTURE):	10'
MINIMUM REAR YARD (SOLAR):	25'
MINIMUM REAR YARD (SOLAR):	40'
MAXIMUM HEIGHT OF MAIN STRUCTURE:	20'
MAXIMUM HEIGHT OF ACCESSORY STRUCTURE:	12'
MAXIMUM BUILDING COVERAGE:	35%

REFER TO THE TOWN OF MIDDLETOWN'S GROUND-MOUNTED SOLAR PHOTOVOLTAIC INSTALLATION ZONING REQUIREMENTS FOUND IN CHAPTER 152 SECTION 725 OF THE TOWN'S ZONING CODE.

**General Site Information (Continued):**

- WETLANDS WERE DELINEATED BY OTHERS. REFERENCE RIDEM APPLICATION NO. 14-0028.
- EXISTING CONDITIONS WITHIN THE PROPERTY WERE DETERMINED BY ONLINE INFORMATION, AERIAL MAPPING, THE RIGIS DATABASE AND A SITE WALK PERFORMED ON JULY 9, 2018.
- ON SITE SOIL EVALUATIONS WERE PERFORMED BY DIPRETE ENGINEERING, 2 STAFFORD COURT, CRANSTON, RI 02920 ON AUGUST 9, 2018.
- TOPOGRAPHY SHOWN ON THE PLAN IS LIDAR AND WAS OBTAINED BY RIGIS DATABASE. ELEVATIONS IN U.S. SURVEY FEET ARE REFERENCED TO NAVD83 DATUM.
- THERE ARE NO HISTORICAL CEMETERIES LOCATED ON SITE BASED ON THE RHODE ISLAND HISTORICAL CEMETERY COMMISSION WEBSITE AND RESOURCES.
- THE FACILITY IS NOT LOCATED IN A CONSERVATION EASEMENT, PRESERVATION EASEMENT, OR HAS ANY DEED RESTRICTIONS.

**Certification Note:**

THE BOUNDARY LINE SHOWN ON THIS PLAN DEPICTS A CLASS I BOUNDARY PROVIDED BY LEDDY LAND SURVEYING COMPANY (SEE PLAN REFERENCE BELOW). THIS PLAN ITSELF IS NOT TO BE CONSTRUED AS AN ACCURATE BOUNDARY SURVEY AND IS SUBJECT TO SUCH CHANGES AS AN ACCURATE BOUNDARY SURVEY MAY DISCLOSE. ONLINE INFORMATION FROM RECORDED DATA AND EXISTING MAPS FROM THE TOWN AND STATE, AND RIGIS DATABASE WAS USED TO COMPLETE THIS PLAN. DUE TO THE ACCURACY LEVELS OF SAID DATA AND MAPS, THIS PLAN IS TO BE CONSIDERED APPROXIMATE UNLESS SPECIFIED THAT ACTUAL FIELD SURVEY AND DEED RESEARCH HAS BEEN CONDUCTED.

**Plan References:**

- REFERENCE PLAN TITLED "ADMINISTRATIVE SUBDIVISION 'OMNI ESTATES' A.P. 111 LOTS 8, 9, 9A & 10, WEST MAIN ROAD, MIDDLETOWN, RI FOR CVD011 LLC" PREPARED BY LEDDY LAND SURVEYING COMPANY, P.O. BOX 3512, ATTLEBORO, MA 02703, 508-801-2789, DATED JULY 2012.
- REFERENCE PLAN TITLED "EXISTING CONDITIONS PLAN - OWN DRIVE, AP 111, LOTS 8, 9, 9A, 10, WEST MAIN ROAD, MIDDLETOWN, RI 02842 DRAWING NUMBER E-1, SHEET 2 OF 8" PREPARED BY NORTHEAST ENGINEERS & CONSULTANTS, INC., 42 VALLEY ROAD, MIDDLETOWN, RI 02842, 401-849-0810, DATED MARCH 2004, RIDEM RECORDED AUGUST 3, 2005.
- RIDEM INSIGNIFICANT ALTERATION PANS PERMIT NO. 14-0028

**Existing Conditions Legend**

- PROPERTY LINE
- SETBACK LINE
- ASSESSOR LINE
- WETLAND HATCH
- WETLAND FLAG AND WETLAND LINE
- 50' PERIMETER WETLAND LINE
- EDGE OF PAVEMENT
- TEST HOLE LOCATION
- USDA SOIL LINE
- USDA SOIL TYPE
- FEMA LINE
- ZONE LINE
- ZONE CLASSIFICATION
- TREE LINE
- MAJOR CONTOURS AND LABELS
- MINOR CONTOURS AND LABELS
- EASEMENT LINE & HATCH
- STONE WALL
- UTILITY POLE
- OVERHEAD WIRE
- GAS LINE
- WATER LINE
- SEWER LINE
- DRAINAGE MANHOLE STRUCTURE
- DRAINAGE BASIN STRUCTURE
- SEWER MANHOLE STRUCTURE

Environmental Management  
MAR 20 2019  
Office of Water Resources



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS  
APPROVED WITH  
DATE: 12-03-2019 DATE: MAY 21 2019  
NO CHANGES ALLOWED WITHOUT APPROVAL  
APPROVED PLANS MUST BE AT  
[Signature]

W:\Wind Drive Org Template\2\_Sites\Middletown\GD Middletown West Main\3\_Development\2\_Engineering\DWG\Cenz\_West\_Main-Design.dwg Mar 15, 2019 - 12:49pm



3760 Quaker Lane  
North Kingstown, RI 02852  
(401) 293-4996  
www.green-ri.com

APPLICANT INFO: GD Middletown West Main, LLC  
3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852

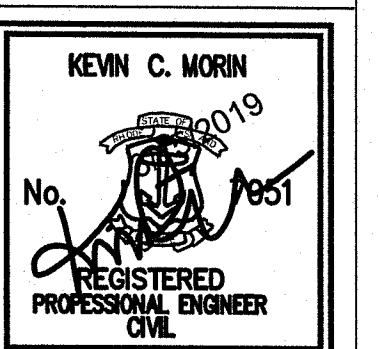
OWNER INFO: Cenz Corp  
4 FOX PLACE, PROVIDENCE, RI 02903

PREPARED BY: Green Development, LLC  
3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852

NO.	DATE	REVISION
2	3/15/2019	ISSUE PRELIMINARY DETERMINATIONS REDUBMISSION
1	1/17/2019	ISSUE PRELIMINARY DETERMINATIONS

PRELIMINARY LAYOUT

Existing Site Analysis Plan  
PROJECT INFORMATION:  
GD Middletown West Main  
1747 WEST MAIN ROAD, MIDDLETOWN, RI 02842  
ASSESSOR'S PLAT 111 LOT 9A



SHEET NO.: C1.3 OF 7

**General Site Information:**

- APPLICANT INFORMATION: GD MIDDLETOWN WEST MAIN, LLC  
3760 QUAKER LANE  
NORTH KINGSTOWN, RHODE ISLAND 02852
- OWNER INFORMATION: CENZ CORP  
4 FOX PLACE  
PROVIDENCE, RHODE ISLAND 02903
- SITE INFORMATION: 1747 WEST MAIN ROAD  
MIDDLETOWN, RHODE ISLAND, 02842  
ASSESSOR'S PLAT 111, LOT 9A  
AREA: 12.672 ACRES  
ZONE: L1 (INDUSTRIAL DISTRICT)
- REQUIRED PERMITS: SPECIAL USE PERMIT - ZONING (TOWN)  
DEVELOPMENT PLAN REVIEW - PLANNING (TOWN)  
FRESHWATER WETLANDS/RIPIDES - RIDEM (STATE)
- PANEL INFORMATION: MODEL: JA SOLAR (JAM72509-385/PR)  
CAPACITY (PER PANEL): 385 W  
DIMENSIONS (PER PANEL): 39.9 X 78.3 IN
- ARRAY INFORMATION: PANEL COUNT: 7,128  
TOTAL AREA (PANELS ONLY): 3,524 ACRES  
TOTAL AREA (SOLAR ARRAY): 6,604 ACRES  
TOTAL AREA (WITHIN FENCE): 7,742 ACRES  
TOTAL AREA (LOD): 8,486 ACRES  
ALTERNATING CURRENT(AC): 2.25 MW  
ARRAY TYPE: FIXED  
AZIMUTH (DEG): 180°  
TILT(DEG): 25°

**General Site Information (Continued):**

- TRANSFORMER INFORMATION: TOTAL TRANSFORMER COUNT: 2  
750KVA TRANSFORMER: 1  
500KVA TRANSFORMER: 1
- INVERTER INFORMATION: TOTAL INVERTER COUNT: 2  
SOLECTRIA XTM 500 INVERTER: 1  
SOLECTRIA XTM 750 INVERTER: 1
- FEMA INFORMATION: MAP: 44005C0091J  
MAP REVISION DATE: SEPTEMBER 4, 2013
- AREA INFORMATION: SITE WITHIN: YES/NO  
GROUNDWATER PROTECTION AREA (RIDEM) NO  
NATURAL HERITAGE AREAS (RIDEM) NO  
NARROW RIVER SPECIAL AREA MANAGEMENT PLAN (CRMC) NO  
SALT PONDS SPECIAL AREA MANAGEMENT PLAN (CRMC) NO  
HISTORIC DISTRICT (CITY/TOWN) NO  
OVERLAY DISTRICT (CITY/TOWN) NO  
SURFACE WATER PROTECTION AREA (CITY/TOWN) YES  
WATER PROTECTION DISTRICT 1 (CITY/TOWN) YES  
WATER PROTECTION DISTRICT 2 (CITY/TOWN) YES

SOIL NAME	HSG	DESCRIPTION
NbB	C	NEWPORT SILT LOAM, 3 TO 8 PERCENT SLOPES
PmA	C	PITTSBORO SILT LOAM, 0 TO 3 PERCENT SLOPES
PmB	C	PITTSBORO SILT LOAM, 3 TO 8 PERCENT SLOPES
Ss	D	STISSING SILT LOAM

\*PRIME AGRICULTURAL SOILS

THE SOIL ABBREVIATIONS REFERENCE THE SOIL SURVEY OF RHODE ISLAND, PREPARED BY THE USDA SOIL CONSERVATION SERVICE INFORMATION FOUND THROUGH ONLINE RESEARCH FROM RIGIS DATA. THE ABBREVIATIONS CORRESPOND TO SOIL AREAS OUTLINED ON THE PLAN AND ARE TO BE CONSIDERED APPROXIMATE BASED ON RIGIS DATABASE

**General Site Information (Continued):**

- ZONING INFORMATION: EXISTING ZONE (SECTION 803): ZONE L1 (INDUSTRIAL DISTRICT)  
MINIMUM LOT AREA: 40,000 SF  
MINIMUM FRONTAGE: 150'  
MINIMUM FRONT YARD: 10'  
MINIMUM FRONT YARD (SOLAR): 25'  
MINIMUM SIDE YARD (MAIN STRUCTURE): 35'  
MINIMUM SIDE YARD (ACCESSORY STRUCTURE): 25'  
MINIMUM SIDE YARD (SOLAR): 25'  
MINIMUM REAR YARD (MAIN STRUCTURE): 40'  
MINIMUM REAR YARD (ACCESSORY STRUCTURE): 10'  
MINIMUM REAR YARD (SOLAR): 25'  
MAXIMUM HEIGHT OF MAIN STRUCTURE: 40'  
MAXIMUM HEIGHT OF ACCESSORY STRUCTURE: 20'  
MAXIMUM HEIGHT OF SOLAR PANEL: 12'  
MAXIMUM BUILDING COVERAGE: 35%
- WETLANDS WERE DELINEATED BY OTHERS. REFERENCE RIDEM APPLICATION NO. 14-0028.
- EXISTING CONDITIONS WITHIN THE PROPERTY WERE DETERMINED BY ONLINE INFORMATION, AERIAL MAPPING, THE RIGIS DATABASE AND A SITE WALK PERFORMED ON JULY 9, 2018.
- ON SITE SOIL EVALUATIONS WERE PERFORMED BY DIPRETE ENGINEERING, 2 STAFFORD COURT, CRANSTON, RI 02920 ON AUGUST 9, 2018.
- TOPOGRAPHY SHOWN ON THE PLAN IS LIDAR AND WAS OBTAINED BY RIGIS DATABASE. ELEVATIONS IN U.S. SURVEY FEET ARE REFERENCED TO NAVD83 DATUM.
- THERE ARE NO HISTORICAL CEMETERIES LOCATED ON SITE BASED ON THE RHODE ISLAND HISTORICAL CEMETERY COMMISSION WEBSITE AND RESOURCES.
- THE FACILITY IS NOT LOCATED IN A CONSERVATION EASEMENT, PRESERVATION EASEMENT, OR HAS ANY DEED RESTRICTIONS.
- NO SIGNIFICANT SITE GRADING IS PROPOSED.

**General Site Information (Continued):**

- THIS PLAN SET REFERENCES RHODE ISLAND DEPARTMENT OF TRANSPORTATION (RIDOT) STANDARD DETAILS WHICH CAN BE FOUND ON THE RIDOT ONLINE DATABASE. DESIGNATED DETAILS ARE LABELED WITHIN THIS PLAN SET AS RIDOT STD X.X.X. REFERENCE LINK: [http://www.dot.ri.gov/documents/doingbusiness/ridot\\_std\\_details.pdf](http://www.dot.ri.gov/documents/doingbusiness/ridot_std_details.pdf)
- NO TOPSOIL OR PRIME AGRICULTURAL SOIL SHALL BE REMOVED FROM THE SITE FOR INSTALLATION OF THE FACILITY.
- THE SITE HAS MULTIPLE FUNCTIONS. ALL EXISTING STRUCTURES AND SUPPORTING UTILITIES ARE TO REMAIN AND PROTECTED DURING ALL DEMOLITION AND CONSTRUCTION ACTIVITIES.
- THIS PROJECT IS PROPOSED TO BE BUILT IN 1 PHASE.
- NO OUTDOOR LIGHTING IS PROPOSED FOR THIS PROJECT.
- NO SIGNAGE IS PROPOSED FOR THIS PROJECT EXCEPT REQUIRED WARNING SIGNAGE PER ELECTRIC CODE AND NATIONAL GRID REQUIREMENTS.

**Existing Conditions Legend**

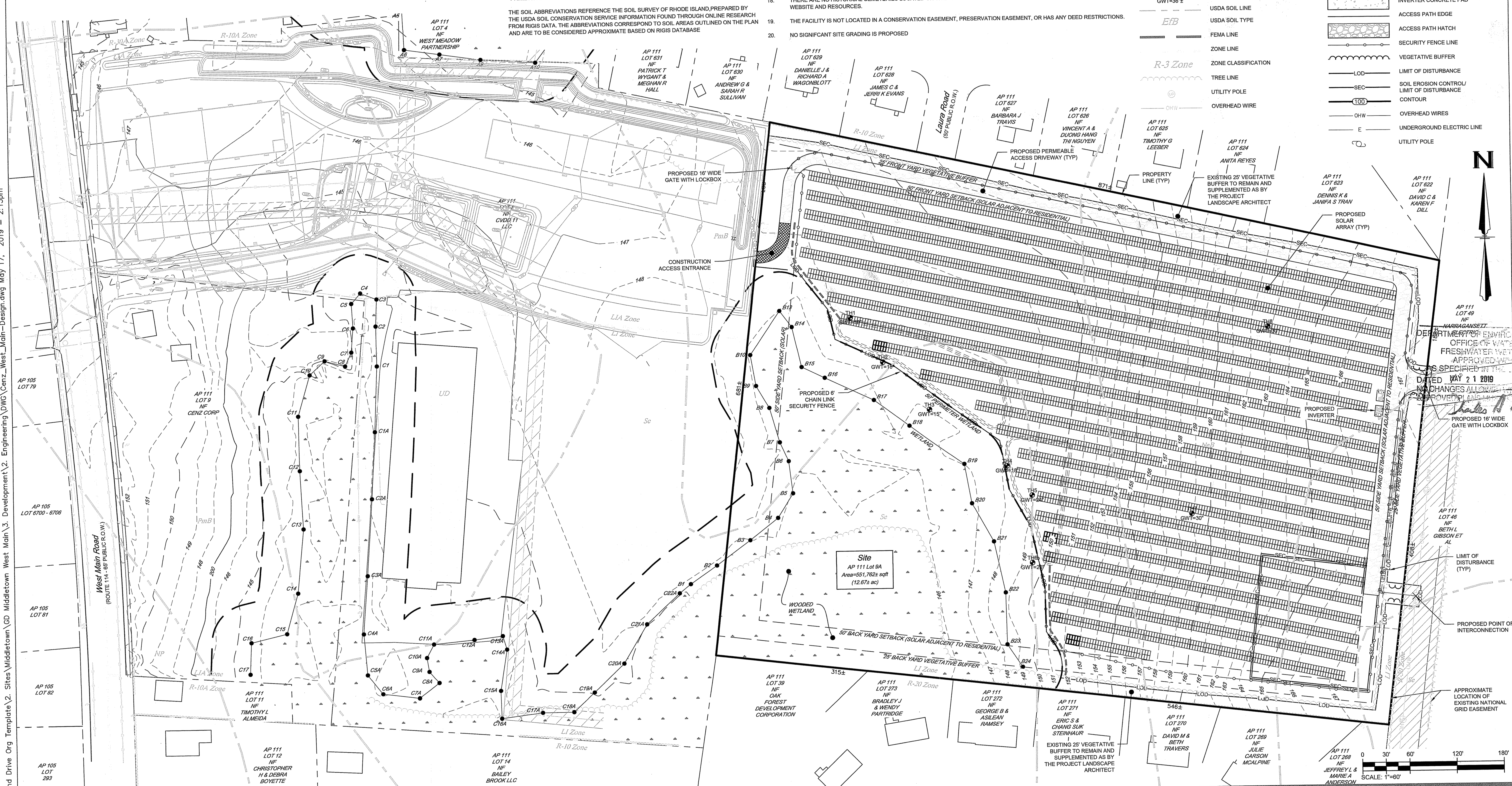
- PROPERTY LINE
- SETBACK LINE
- ASSESSOR LINE
- WETLAND HATCH
- WETLAND FLAG AND WETLAND LINE
- 50' PERIMETER WETLAND LINE
- EDGE OF PAVEMENT
- TEST HOLE LOCATION
- USDA SOIL LINE
- USDA SOIL TYPE
- FEMA LINE
- ZONE LINE
- ZONE CLASSIFICATION
- TREE LINE
- UTILITY POLE
- OVERHEAD WIRE

**Existing Conditions Legend**

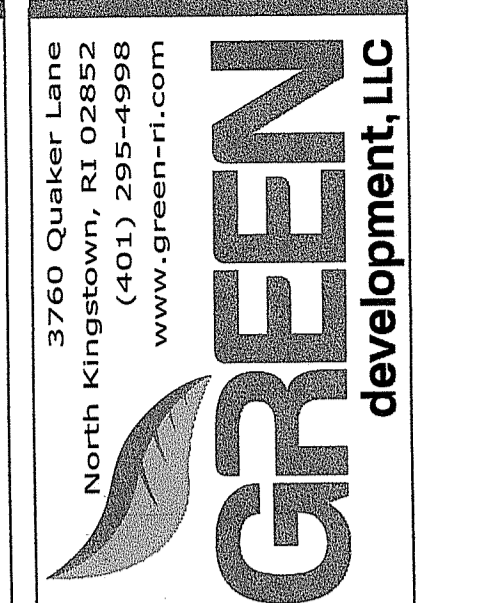
- MAJOR CONTOURS AND LABELS
- MINOR CONTOURS AND LABELS
- EASEMENT LINE & HATCH
- STONE WALL

**Proposed Development Legend**

- SOLAR PANELS
- INVERTER
- INVERTER CONCRETE PAD
- ACCESS PATH EDGE
- ACCESS PATH HATCH
- SECURITY FENCE LINE
- VEGETATIVE BUFFER
- LIMIT OF DISTURBANCE
- SOIL EROSION CONTROL/LIMIT OF DISTURBANCE
- CONTOUR
- OVERHEAD WIRES
- UTILITY POLE



W:\Wind Drive Org Template\2. Sites\Middletown\GD Middletown West Main\3. Development\West Main\2. Engineering\DWG\Cenz\_West\_Main-Design.dwg May 17, 2019 - 2:13pm



3760 Quaker Lane  
North Kingstown, RI 02852  
(401) 295-4998  
www.green-ri.com

APPLICANT INFO: GD Middletown West Main, LLC  
3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852

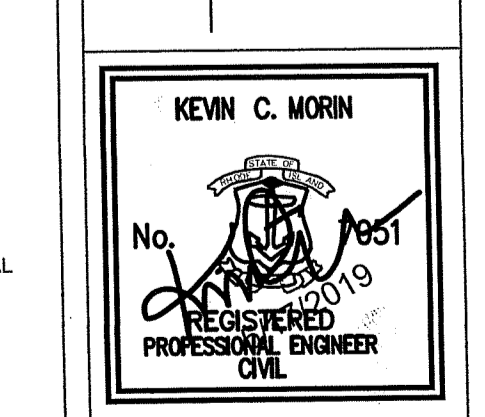
OWNER INFO: Cenz Corp  
4 FOX PLACE, PROVIDENCE, RI 02903

PREPARED BY: Green Development, LLC  
3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852

NO.	REVISION	DATE
1	ISSUE FOR PERMIT	5/17/2019
2	ISSUE FOR PERMIT	3/15/2019
3	ISSUE FOR PERMIT	11/09/2018

SHEET TITLE: Proposed Site Plan  
PROJECT INFORMATION:  
GD Middletown West Main  
ALTERNATING CURRENT(AC): 2.25 MW  
1747 WEST MAIN ROAD, MIDDLETOWN, RI 02842  
ASSESSOR'S PLAT 111 LOT 9A

APPROVED BY: [Signature]  
DATE: MAY 21 2019



SHEET NO.: C1.4 OF 7

W:\Wind Drive Org Template\2. Sites\Middletown West Main\3. Development\2. Engineering\DWG\Cenz\_West\_Main-Design.dwg, May 17, 2019 - 2:13pm

### Existing Conditions Legend

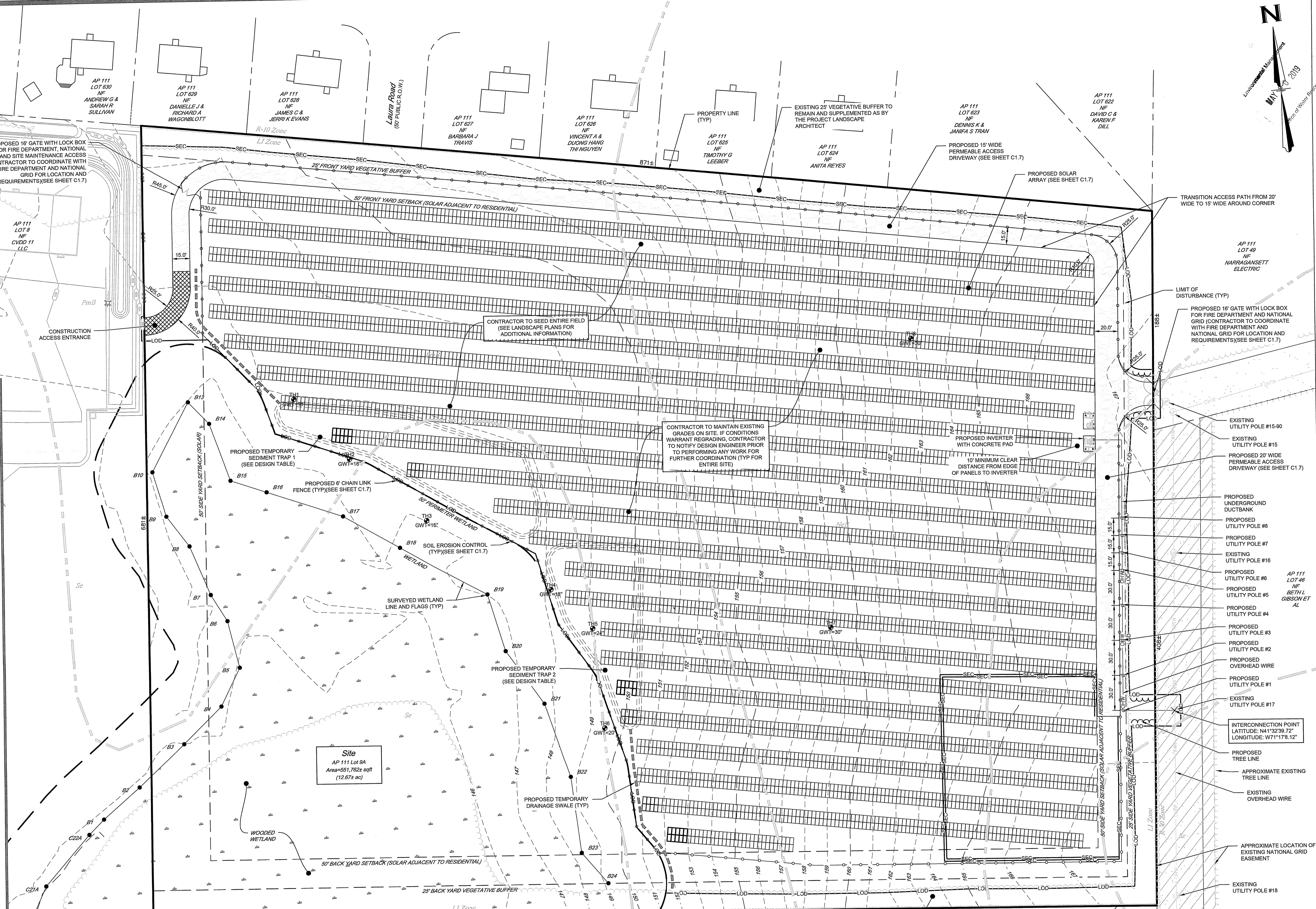
- PROPERTY LINE
- SETBACK LINE
- ASSESSOR LINE
- GIS WETLAND LINE
- WETLAND HATCH
- WETLAND FLAG AND WETLAND LINE
- 50' PERIMETER WETLAND LINE
- SURVEYED STREAM/RIVER LINE
- 200' RIVERBANK WETLAND LINE
- EDGE OF PAVEMENT
- TEST HOLE LOCATION
- USDA SOIL LINE
- USDA SOIL TYPE
- FEMA LINE
- ANALYZED FLOODPLAN LINE
- ZONE LINE
- ZONE CLASSIFICATION
- TREE LINE
- UTILITY POLE
- MAJOR CONTOURS AND LABELS
- MINOR CONTOURS AND LABELS
- EASEMENT LINE & HATCH

### Proposed Development Legend

- SOLAR PANELS
- INVERTER
- INVERTER CONCRETE PAD
- ACCESS PATH EDGE
- ACCESS PATH HATCH
- SECURITY FENCE LINE
- VEGETATIVE BUFFER
- LIMIT OF DISTURBANCE
- SOIL EROSION CONTROL/ LIMIT OF DISTURBANCE
- CONTOUR
- OVERHEAD WIRES
- UNDERGROUND ELECTRIC LINE
- UTILITY POLE

#### Temporary Sediment Trap Design Table:

TEMPORARY SEDIMENT TRAP	TRAP 1	TRAP 2
TRIBUTARY AREA (ACRES)	4.902	3.514
WET STORAGE DEPTH (FEET) (Dw)	1.00	1.00
DRY STORAGE DEPTH (FEET) (Dd)	1.00	1.00
TOTAL DEPTH (FEET) (D)	2.00	2.00
BOTTOM OF TRAP AREA (SQ FT) (Ab)	9,490	7,840
WETTED SURFACE AREA (SQ FT) (Aw)	10,860	7,840
SURFACE AREA AT OUTLET (SQ FT) (Ad)	11,680	8,660
DRY STORAGE VOLUME (CU FT) (Vd)	11,110	8,250
WET STORAGE VOLUME (CU FT) (Vw)	8,976	6,664



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER QUALITY  
FRESHWATER WETLANDS  
APPROVED WITH  
AS SPECIFIED IN THE  
DATED MAY 21 2019 #18-0326  
NO CHANGES ALLOWED WITHOUT THE  
APPROVED PLANS MUST BE USED

SCALE: 1"=40'

3760 Quaker Lane  
North Kingstown, RI 02852  
(401) 295-4998  
www.green-ri.com

APPLICANT INFO: **GD Middletown West, Main, LLC**  
3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852

OWNER INFO: **Cenz Corp**  
4 FOX PLACE, PROVIDENCE, RI 02903

PREPARED BY: **Green Development, LLC**  
3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852

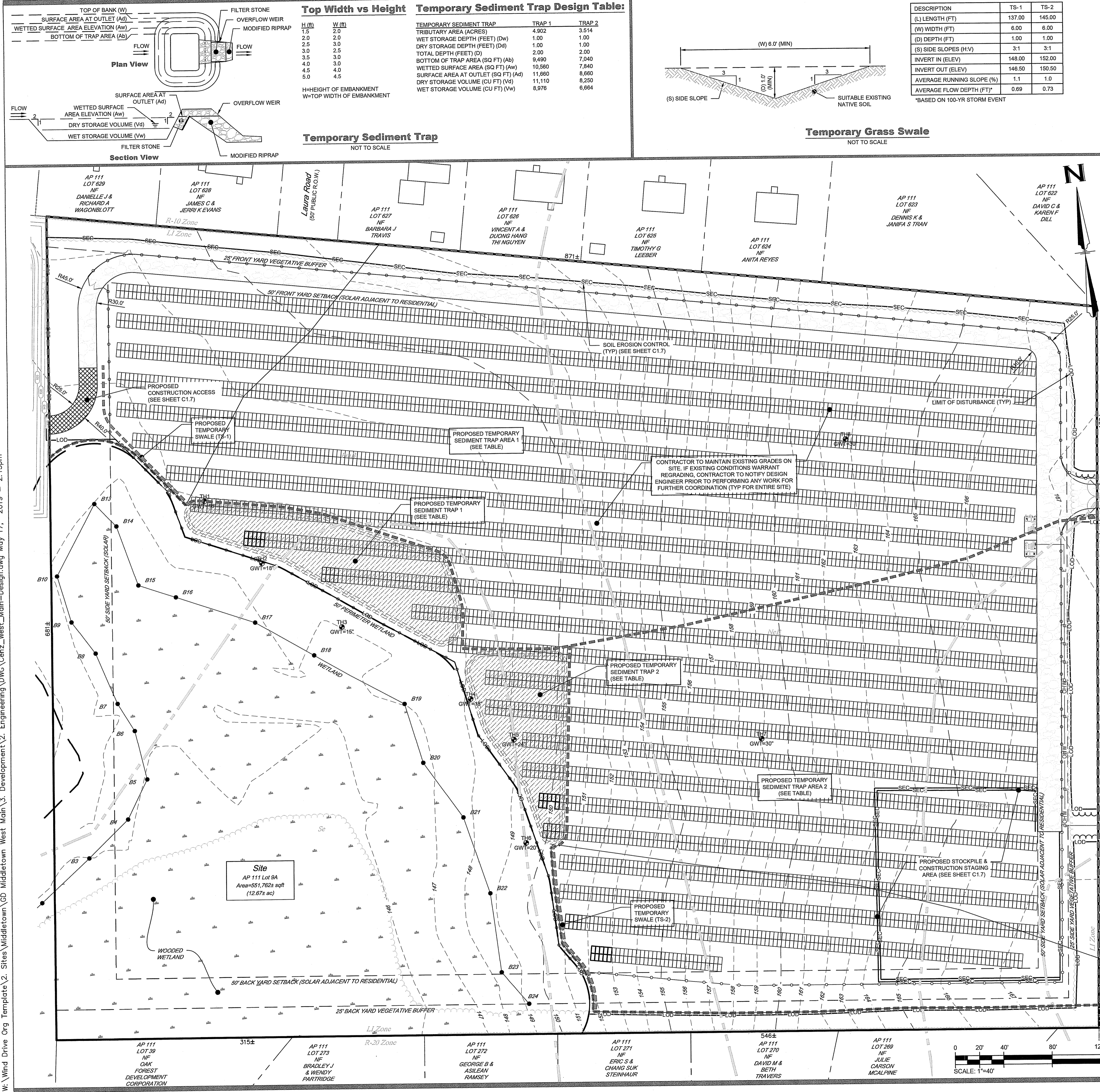
NO.	DATE	REVISION
1	5/17/2019	RDMA PRELIMINARY DETERMINATIONS RESUBMISSION
2	3/15/2019	RDMA PRELIMINARY DETERMINATIONS RESUBMISSION
3	11/20/2018	RDMA PRELIMINARY DETERMINATIONS

SHEET TITLE: **Enlarged Site, Grading & Utility Plan**  
PROJECT INFORMATION:  
**GD Middletown West Main**  
ALTERNATING CURRENT (AC): 2.25 MW  
1747 WEST MAIN ROAD, MIDDLETOWN, RI 02842  
ASSESSOR'S PLAT 111 LOT 9A

KEVIN C. MORIN  
No. 1051  
REGISTERED PROFESSIONAL ENGINEER  
CIVIL

SHEET NO.: **C1.5 OF 7**

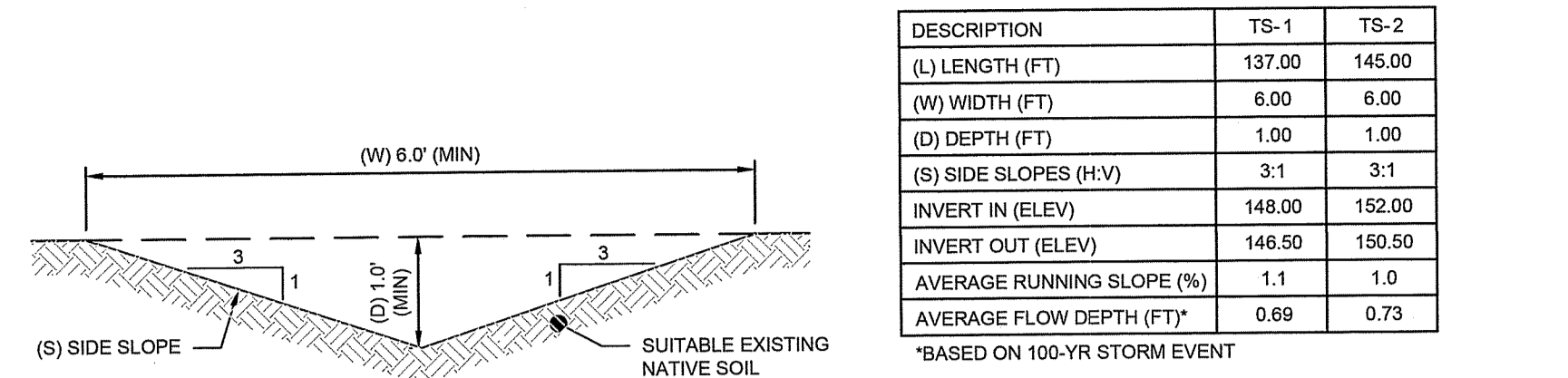
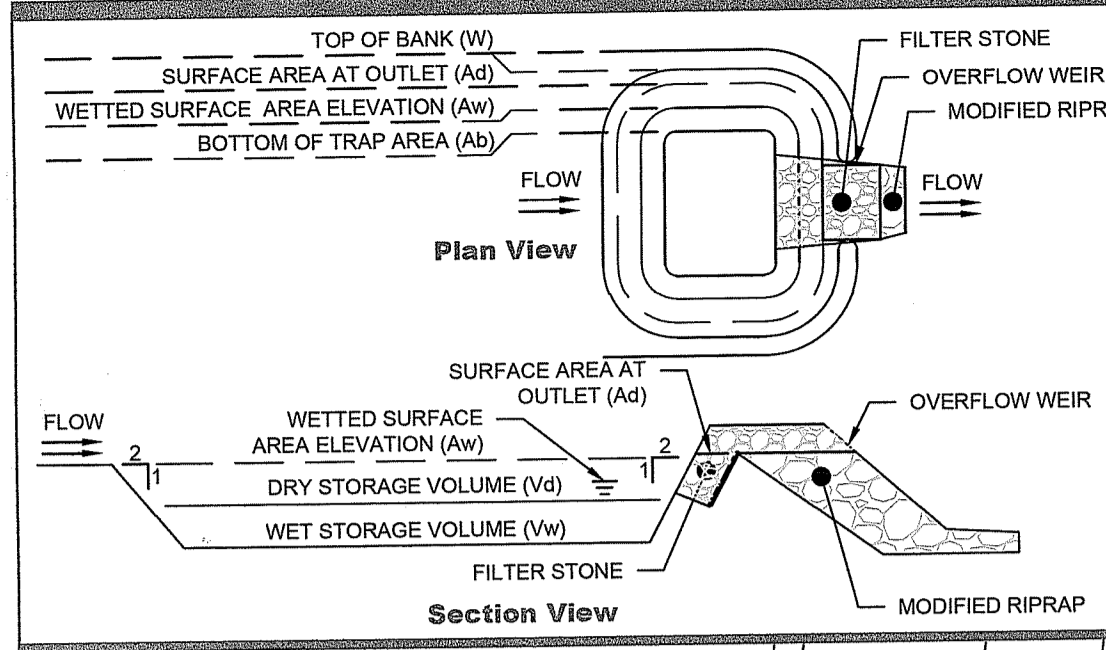
W:\Wind Drive Org Template\2\_Sites\Middletown\GD Middletown West Main\3\_Development\2\_Engineering\DWG\Cenz\_West\_Main-Design.dwg May 17, 2019 - 2:13pm



**Top Width vs Height Temporary Sediment Trap Design Table:**

H (ft)	W (ft)
1.5	2.0
2.0	2.0
2.5	3.0
3.0	3.0
3.5	3.0
4.0	3.0
4.5	4.0
5.0	4.5

H=HEIGHT OF EMBANKMENT  
W=TOP WIDTH OF EMBANKMENT



**Soil Erosion and Sediment Control Notes:**

DESCRIPTION	TS-1	TS-2
(L) LENGTH (FT)	137.00	145.00
(W) WIDTH (FT)	6.00	6.00
(D) DEPTH (FT)	1.00	1.00
(S) SIDE SLOPES (H:V)	3:1	3:1
INVERT IN (ELEV)	148.00	152.00
INVERT OUT (ELEV)	146.50	150.50
AVERAGE RUNNING SLOPE (%)	1.1	1.0
AVERAGE FLOW DEPTH (FT)	0.69	0.73

\*BASED ON 100-YR STORM EVENT

- Soil Erosion and Sediment Control Notes:**
- ACCOMPANYING DOCUMENTS: SOIL EROSION AND SEDIMENT CONTROL PLAN (SESC) WHICH CONTAINS THE FOLLOWING:
    - EROSION CONTROL MEASURES
    - SHORT TERM MAINTENANCE
    - ESTABLISHMENT OF VEGETATIVE COVER
    - CONSTRUCTION POLLUTION PREVENTION
    - SEQUENCE OF CONSTRUCTION
 OPERATIONS AND MAINTENANCE PLAN (O&M) WHICH CONTAINS THE FOLLOWING:
    - LONG TERM MAINTENANCE
    - LONG TERM POLLUTION PREVENTION
 THESE DOCUMENTS ARE TO BE CONSIDERED AS PART OF THE PROJECT PLANS AND THE CONTRACTOR AND OWNER MUST MAINTAIN CURRENT COPIES OF THE ABOVE DOCUMENTS AS PART OF A FULL PLAN SET.
  - CONTRACTOR TO REFER TO THE SESC FOR SEQUENCE OF CONSTRUCTION ACTIVITIES, PROJECT PHASING AND ADDITIONAL INFORMATION. CONTRACTOR MAY MODIFY SEQUENCE OF CONSTRUCTION WITH THE APPROVAL FROM THE DESIGN ENGINEER.
  - ALL EXISTING UTILITIES SHOWN ARE FROM VISIBLE INFORMATION, DRAWINGS FROM OTHERS, RIGIS DATA, SURVEYED INFORMATION AND/OR INFORMATION PROVIDED TO GREEN DEVELOPMENT AND IS SUBJECT TO CHANGE AND ARE TO BE CONSIDERED APPROXIMATE ONLY. PRIOR TO CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE TO CONTACT THE PROPER UTILITY ENGINEERING DEPARTMENTS AND COMPANIES TO LOCATE ALL EXISTING SUBSURFACE UTILITIES AND STRUCTURES IN AND AROUND THE LIMIT OF DISTURBANCE.
  - CONTRACTOR TO CALL THE DIG SAFE CENTER TOLL FREE AT 1-888-344-7233, 72 HOURS PRIOR TO ANY EXCAVATION WORK TAKES PLACE. CONTRACTOR TO NOTIFY THE DESIGN ENGINEER OF ANY DISCREPANCIES FOUND DURING UTILITY RESEARCH PRIOR TO EXCAVATION. ANY DAMAGE TO ANY EXISTING UTILITIES WHICH ARE SHOWN AND NOT SHOWN ON THE PLANS OR DETAILED BY DIG SAFE SHALL BE THE RESPONSIBILITY OF THE SITE CONTRACTOR.
  - CONTRACTOR IS LIABLE TO OBTAIN ALL MUNICIPAL, STATE AND FEDERAL APPROVALS AND PERMITS PRIOR TO THE START OF CONSTRUCTION.
  - DAILY SWEEPING AT CONSTRUCTION ENTRANCE DURING CONSTRUCTION IS REQUIRED TO MINIMIZE SEDIMENTS ON WEST MAIN ROAD ADJUTING PROPERTY TO THE WEST (AP 111 LOT 8). THE CONTRACTOR SHALL PROVIDE STORAGE FOR WATER AS NECESSARY TO ENSURE PROPER DUST CONTROL.
  - CONTRACTOR IS RESPONSIBLE FOR REMOVING AND DISPOSING (R&D) OF ALL MATERIALS LEGALLY AS INDICATED ON THE PLANS TO AN APPROVED OFF-SITE LOCATION.
  - CONTRACTOR'S STOCKPILE AND STAGING AREAS WITHIN THE LIMIT OF DISTURBANCE SHALL BE RESTORED TO MATCH PRIOR CONDITIONS OR PROPOSED CONDITIONS SHOWN ON THE PLANS.
  - THIS PLAN SET REFERENCES RHODE ISLAND DEPARTMENT OF TRANSPORTATION (RIDOT) STANDARD DETAILS WHICH CAN BE FOUND ON THE RIDOT ONLINE DATABASE. DESIGNATED DETAILS ARE LABELED WITHIN THIS PLAN SET AS RIDOT STD X.X.X.
  - NO TOPSOIL OR PRIME AGRICULTURAL SOIL SHALL BE REMOVED FROM THE SITE FOR INSTALLATION OF THE FACILITY.
  - THIS PROJECT IS PROPOSED TO BE BUILT IN 1 PHASE.

**Design Rules and Regulations:**

THE TEMPORARY SEDIMENT TRAPS SHALL BE INSTALLED AND CONFORM TO ALL RULES AND REGULATIONS SET FORTH BY THE RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT AND DESCRIBED WITHIN THOSE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST REVISION, UNDER SECTION SIX FOR TEMPORARY SEDIMENT TRAPS.

**APPLICABILITY:** BELOW DISTURBED AREAS WHERE THE CONTRIBUTING DRAINAGE AREA IS 5 ACRES OR LESS - FOR DRAINAGE AREAS GREATER THAN 5 ACRES USE A TEMPORARY SEDIMENT BASIN.

TEMPORARY SEDIMENT TRAPS SHALL ALSO BE USED WHERE THE INTENDED USE IS 6 MONTHS OR LESS. FOR USES EXTENDING BEYOND 6 MONTHS USE A TEMPORARY SEDIMENT BASIN.

**REQUIREMENTS:** THE TEMPORARY SEDIMENT TRAP HAS TWO STORAGE REQUIREMENTS AS FOLLOWS:

- WET STORAGE - CREATED BY EXCAVATION WITHIN A DRAINAGE WAY
- DRY STORAGE - CREATED BY THE CONSTRUCTION OF A PERVIOUS STONE DIKE ACROSS THE DRAINAGE WAY

SEDIMENT IS REQUIRED TO BE REMOVED FROM THE TRAP WHEN THE SEDIMENT ACCUMULATION EXCEEDS HALF OF THE WET STORAGE VOLUME OF THE TRAP.

ACCESS IS TO BE PROVIDED TO THE TRAP FOR SEDIMENT REMOVAL. EXCAVATED SEDIMENT WILL BE REMOVED AND DISPOSED OF AT AN APPROVED OFF-SITE LOCATION OR ON THE EXISTING SITE.

THE TRAPS ARE TO BE INSTALLED PRIOR TO CONDUCTING ANY GRADING ACTIVITIES IN THE CONTRIBUTING WATERSHED AREAS AS SHOWN ON THE PLAN.

**LOCATIONS:** NOT TO BE LOCATED IN CLOSE PROXIMITY TO EXISTING OR PROPOSED BUILDING FOUNDATIONS.

LOCATE TRAPS TO OBTAIN MAXIMUM STORAGE BENEFIT FROM THE TERRAIN, FOR EASE OF CLEAN OUT AND DISPOSAL OF THE TRAPPED SEDIMENT.

**TRAP CAPACITY:** THE TRAP SHALL HAVE AN INITIAL STORAGE VOLUME OF 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA, HALF OF WHICH SHALL BE IN THE FORM OF WET STORAGE TO PROVIDE A STABLE SETTLING MEDIUM. THE REMAINING STORAGE VOLUME SHALL BE IN THE FORM OF A DRAINAGE WAY (DRY STORAGE) WHICH WILL PROVIDE EXTENDED SETTLING TIME DURING LESS FREQUENT, LARGER STORM EVENTS.

WET STORAGE - VOLUME SHALL BE MEASURED FROM THE LOW POINT OF THE EXCAVATED AREA TO THE BASE OF THE STONE OUTLET STRUCTURE.

DRY STORAGE - VOLUME SHALL BE MEASURED FROM THE BASE OF THE STONE OUTLET TO THE TOP OF THE STONE OUTLET (OVERFLOW MECHANISM).

THE TRAP SHALL BE SIZED TO STORE 1 INCH OF RUNOFF FROM THE CONTRIBUTING AREA OR PER THE SEDIMENT VOLUME METHOD (SEE EQUATION TABLE) IN ACCORDANCE WITH STANDARD 10 OF THE 2010 RHODE ISLAND STORMWATER DESIGN AND INSTALLATION STANDARDS MANUAL.

**SLOPES:** ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER EXCEPT FOR THE EXCAVATED WET STORAGE AREA WHERE SLOPES SHALL NOT EXCEED 1.5:1. THE MAXIMUM DEPTH OF EXCAVATION WITHIN THE WET STORAGE AREA SHOULD NOT EXCEED THREE (3) FEET TO FACILITATE CLEAN-OUT AND FOR SITE SAFETY CONSIDERATIONS.

**INLETS/OUTLETS:** THE OUTLET SHALL BE LOCATED AT THE MOST DISTANT HYDRAULIC POINT FROM THE INLET.

THE OUTLET CONSISTS OF A PERVIOUS STONE DIKE WITH A CORE OF MODIFIED RIPRAP AND FACED ON THE UPSTREAM SIDE WITH STONE AND MUST OUTLET ONTO STABILIZED GROUND.

**EMBANKMENT:** THE MAXIMUM HEIGHT OF A TEMPORARY SEDIMENT TRAP EMBANKMENT IS LIMITED TO 5 FEET AS MEASURED VERTICALLY FROM THE CREST OF THE EMBANKMENT TO THE DOWN SLOPE BASE OF THE EMBANKMENT OR TOW OF THE STONE DIKE, WHICHEVER IS LOWER.

SIDE SLOPES OF THE EMBANKMENT SHALL BE 2:1 OR FLATTER.

**MODIFIED RIPRAP:** SHALL MEET THE REQUIREMENTS OF THE RIDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SUBSECTION M.10.03.2.

**FILTER STONE:** SHALL MEET THE REQUIREMENTS OF THE RIDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SUBSECTION M.10.03.3 TABLE I, COLUMN V FILTER STONE.

**Installation Requirements:**

CLEAR, GRUB AND STRIP ANY VEGETATION AND ROOT MAT FROM ANY PROPOSED EMBANKMENT AND OUTLET AREA. REMOVE STONES AND ROCKS WHOSE DIAMETER IS GREATER THAN THREE (3) INCHES AND OTHER DEBRIS.

EXCAVATE WET STORAGE AND CONSTRUCT THE EMBANKMENT AND/OR OUTLET AS NEEDED TO ATTAIN THE NECESSARY STORAGE REQUIREMENTS. USE ONLY FILL MATERIAL FOR THE EMBANKMENT THAT IS FREE FROM EXCESSIVE ORGANICS, DEBRIS, LARGE ROCKS (OVER SIX (6) INCHES) OR OTHER UNSUITABLE MATERIALS. COMPACT THE EMBANKMENT IN 9-INCH LAYERS BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED.

STABILIZE THE EARTHEN EMBANKMENT USING ANY OF THE FOLLOWING MEASURES: SEEDING FOR TEMPORARY VEGETATIVE COVER, SEEDING FOR PERMANENT VEGETATIVE COVER, OR SLOPE PROTECTION, IMMEDIATELY AFTER INSTALLATION.

CARRY OUT CONSTRUCTION OPERATIONS IN SUCH A MANNER THAT EROSION AND WATER POLLUTION ARE MINIMIZED.

**Inspection, Maintenance, and Removal Requirements:**

INSPECT THE TEMPORARY SEDIMENT TRAP AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM WITH A RAINFALL AMOUNT OF 0.25 INCH OR GREATER. CHECK THE OUTLET TO ENSURE THAT IT IS STRUCTURALLY SOUND AND HAS NOT BEEN DAMAGED BY EROSION OR CONSTRUCTION EQUIPMENT. THE HEIGHT OF THE STONE OUTLET OR WEIR CREST SHOULD BE MAINTAINED AT LEAST 1 FOOT BELOW THE CREST OF THE EMBANKMENT. ALSO CHECK FOR SEDIMENT ACCUMULATION AND FILTRATION PERFORMANCE.

WHEN SEDIMENTS HAVE ACCUMULATED TO ONE HALF THE MINIMUM REQUIRED VOLUME OF THE WET STORAGE, DEWATER THE TRAP AS NEEDED, REMOVE SEDIMENTS AND RESTORE THE TRAP TO ITS ORIGINAL DIMENSIONS. DISPOSE OF THE SEDIMENT REMOVED FROM THE BASIN IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE AND CAUSE SEDIMENTATION PROBLEMS.

THE TEMPORARY SEDIMENT TRAP MAY BE REMOVED AFTER THE CONTRIBUTING DRAINAGE AREA IS STABILIZED. IF IT IS TO BE REMOVED, THEN THE PLANS SHOULD SHOW HOW THE SITE OF THE TEMPORARY SEDIMENT TRAP IS TO BE GRADED AND STABILIZED AFTER REMOVAL.

**Soil Erosion & Sediment Control Legend**

LOD	LIMIT OF DISTURBANCE	TRIBUTARY AREA FOR TEMPORARY SEDIMENT TRAP
SEC	SOIL EROSION CONTROL/ LIMIT OF DISTURBANCE	TEMPORARY SEDIMENT TRAP
---	TEMPORARY DRAINAGE SWALE	CONSTRUCTION ACCESS

DEPARTMENT OF ENVIRONMENTAL OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS  
APPROVED WITH CORRECTIONS AS SPECIFIED IN THE LETTER DATED MAY 21 2019  
NO CHANGES ALLOWED WITHOUT APPROVED PLANS MUST BE AT ALL TIMES

KEVIN C. MORIN  
REGISTERED PROFESSIONAL ENGINEER  
CIVIL  
SHEET NO. C1.6 OF 7

3760 Quaker Lane  
North Kingstown, RI 02852  
(401) 295-4998  
www.green-ni.com

**GREEN development, LLC**

APPLICANT INFO: **GD Middletown West Main, LLC**  
3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852

OWNER INFO: **Cenz Corp**  
4 FOX PLACE, PROVIDENCE, RI 02903

PREPARED BY: **Green Development, LLC**  
3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852

REVISIONS:

NO.	DATE	REVISION
1	11/20/2019	ISSUE FOR PERMITS
2	3/7/2020	RIDOT PRELIMINARY DETERMINATIONS RESUBMISSION
3	3/7/2020	RIDOT PRELIMINARY DETERMINATIONS RESUBMISSION
4	5/15/2019	RIDOT PRELIMINARY DETERMINATIONS RESUBMISSION

SHEET TITLE: **Soil Erosion and Sediment Control Plan**

PROJECT INFORMATION:  
**GD Middletown West Main**  
ALTERNATING CURRENT (AC) 2.25 MW  
1747 WEST MAIN ROAD, MIDDLETOWN, RI 02842  
ASSESSOR'S PLAT 111 LOT 9A

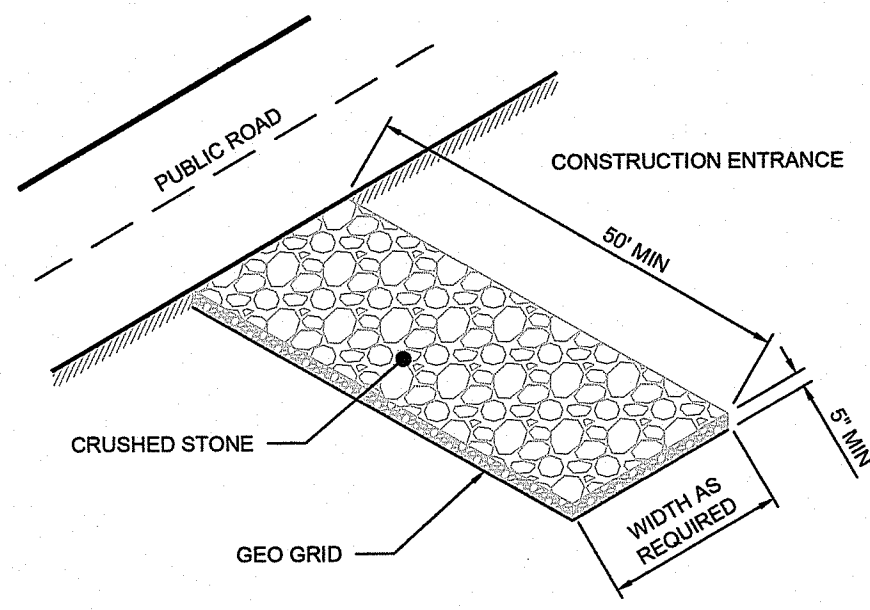
DATE: MAY 21 2019

NO CHANGES ALLOWED WITHOUT APPROVED PLANS MUST BE AT ALL TIMES

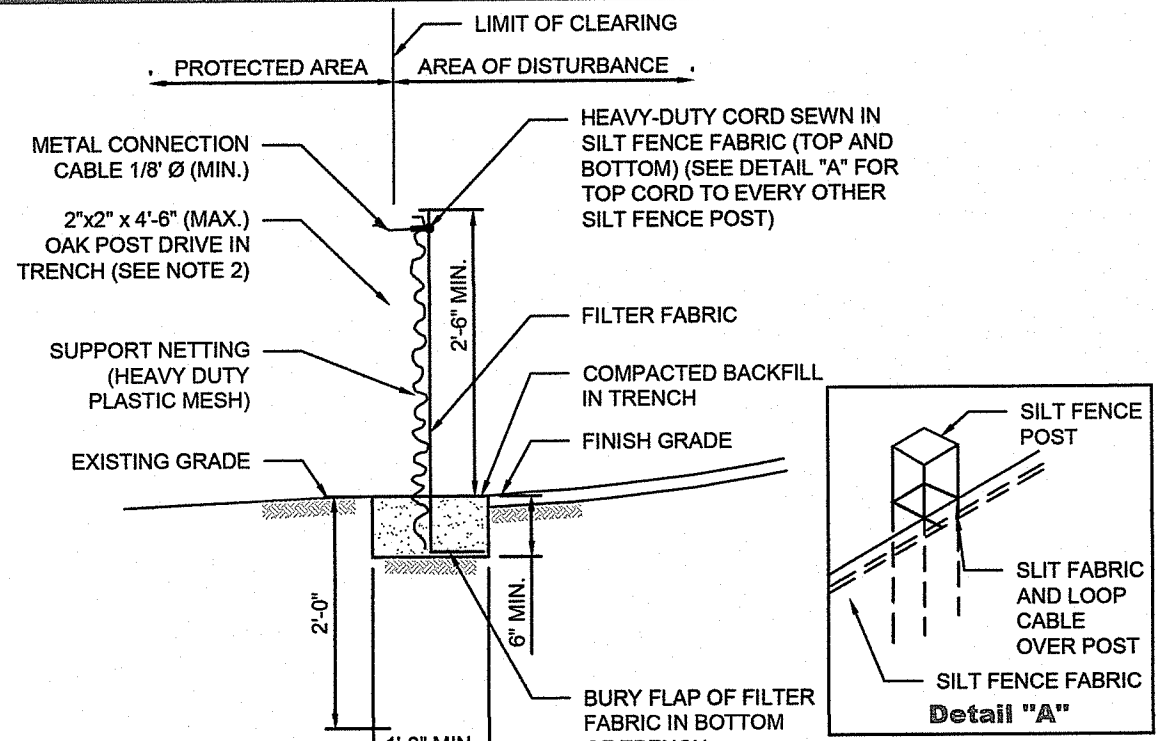
KEVIN C. MORIN  
REGISTERED PROFESSIONAL ENGINEER  
CIVIL

SHEET NO. **C1.6 OF 7**

W:\Wind Drive Org Template\2\_Sites\Middletown\GD Middletown West Main\3\_Development\2\_Engineering\DWG\Cenz\_West\_Main-Design.dwg Mar 15, 2019 - 12:49pm



**Construction Access**  
NOT TO SCALE



**Silt Fence Detail**  
NOT TO SCALE

**NOTES**

- CONCRETE WASHOUT AREA(S) SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE. THE CONCRETE WASHOUT AREA SHALL BE ENTIRELY SELF-CONTAINED.
- THE CONTRACTOR SHALL SUBMIT THE DESIGN, LOCATION AND SIZING OF THE CONCRETE WASHOUT AREA(S) WITH THE PROJECT'S SOIL EROSION AND SEDIMENTATION CONTROL PLAN AND SHALL BE APPROVED BY THE ENGINEER PRIOR TO PROCEEDING WITH ANY CONCRETE WORK.

LOCATION: WASHOUT AREA(S) ARE TO BE LOCATED AWAY FROM ANY STREAM, WETLAND, STORM DRAINS, OR OTHER SENSITIVE RESOURCE AREAS. WASH WATER SHALL NOT BE ALLOWED TO FLOW TO SURFACE WATER. THE FLOOD CONTINGENCY PLAN MUST ADDRESS THE CONCRETE WASHOUT IF THE WASHOUT IS TO BE LOCATED WITHIN THE FLOODPLAIN.

SIZE: THE WASHOUT MUST HAVE SUFFICIENT VOLUME TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS WITH A MINIMUM FLOORBOARD OF 12".

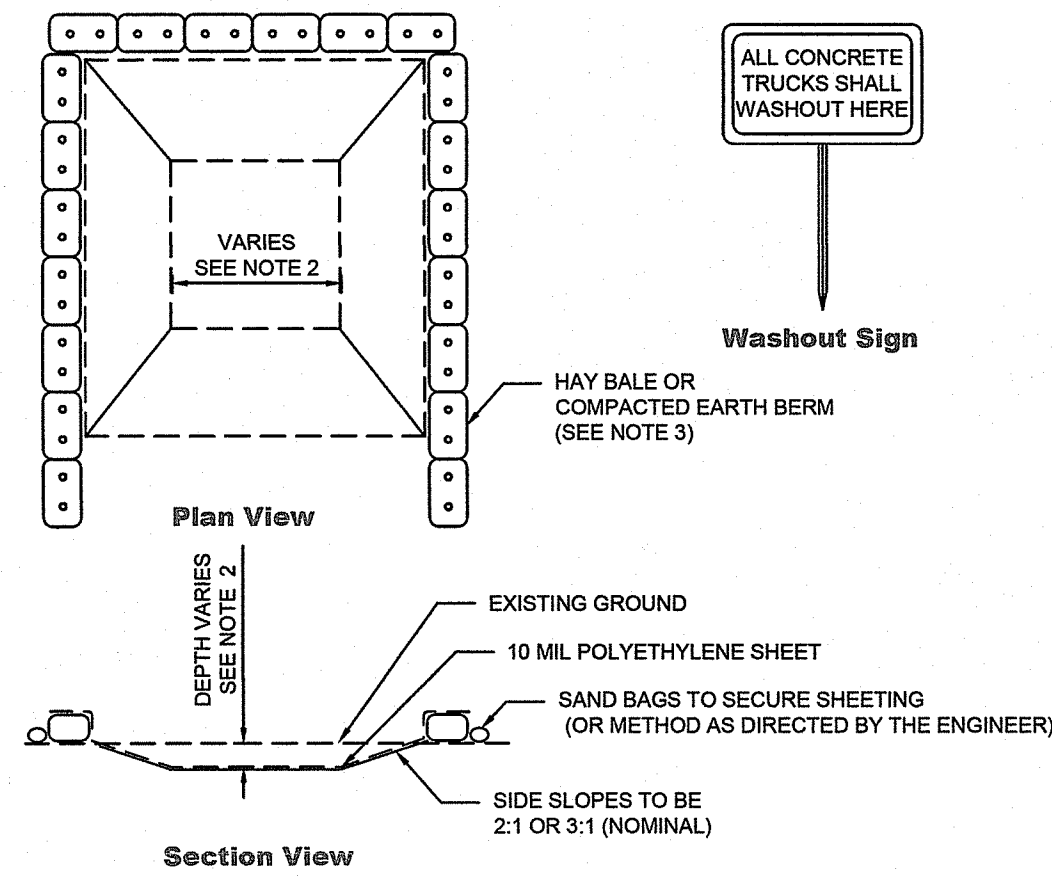
SURFACE DISCHARGE IS UNACCEPTABLE. THEREFORE, HAY BALES OR OTHER CONTROL MEASURES, AS APPROVED BY THE ENGINEER, SHOULD BE USED AROUND THE PERIMETER OF THE CONCRETE WASHOUT AREA FOR CONTAINMENT.

SIGNS SHOULD BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CONCRETE AREA(S) AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CONCRETE WASHOUT TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS. WASHOUT AREA(S) SHOULD BE FLAGGED WITH SAFETY FENCING OR OTHER APPROVED METHODS.

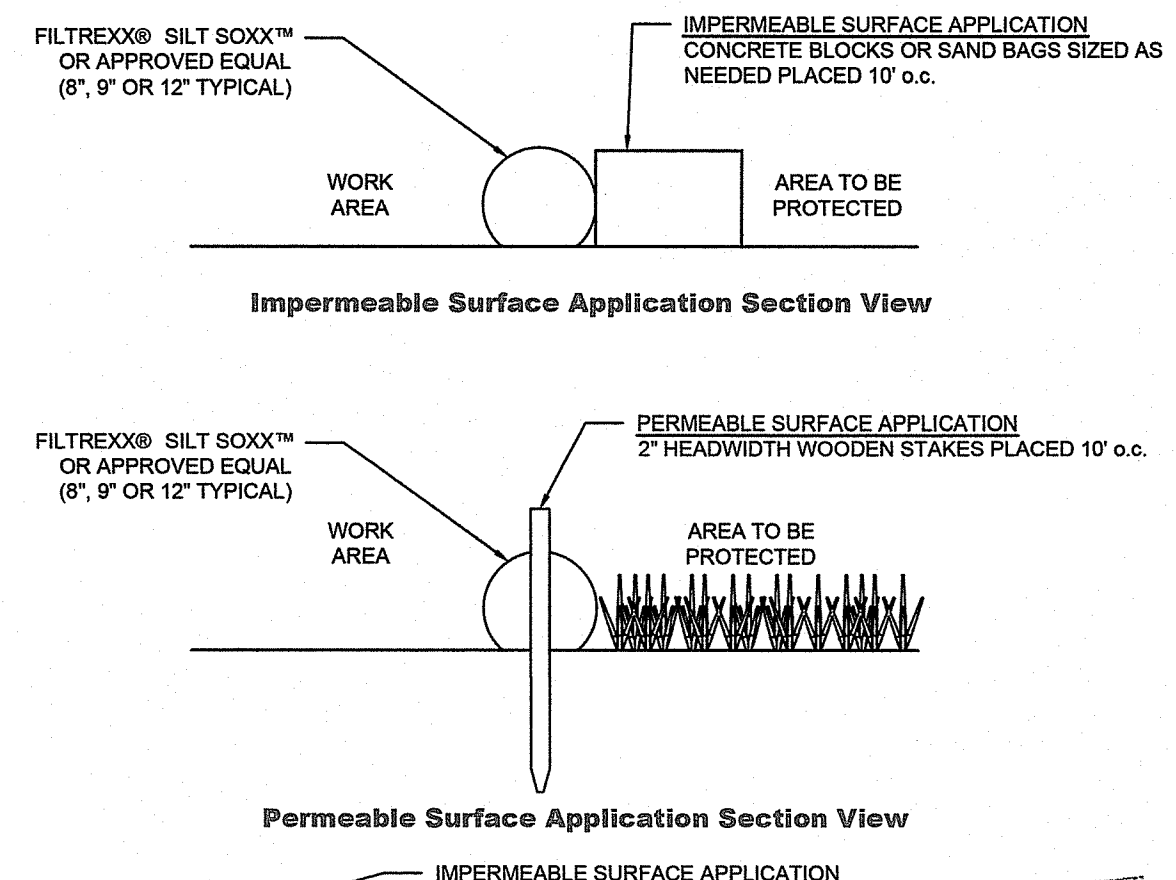
WASHOUT AREA(S) ARE TO BE INSPECTED AT LEAST ONCE A WEEK FOR STRUCTURAL INTEGRITY, ADEQUATE HOLDING CAPACITY AND CHECKED FOR LEAKS, TEARS, OR OVERFLOWS. (AS REQUIRED BY THE CONTRACTOR'S SITE ENVIRONMENTAL INSPECTION REPORT) WASHOUT AREA(S) SHOULD BE CHECKED AFTER HEAVY RAINS. WASHOUT AREA(S) SHALL NOT BE FILLED BEYOND 95% CAPACITY UNLESS A NEW WASHOUT AREA IS CONSTRUCTED.

HARDENED CONCRETE WASTE SHOULD BE REMOVED AND DISPOSED OF WHEN THE WASTE HAS ACCUMULATED TO HALF OF THE CONCRETE WASHOUT'S HEIGHT. THE WASTE CAN BE STORED AT AN UPLAND LOCATION, AS APPROVED BY THE ENGINEER. ALL CONCRETE WASTE SHALL BE DISPOSED OF IN A MANNER CONSISTENT WITH ALL APPLICABLE LAWS, REGULATIONS, AND GUIDELINES.

**Concrete Washout Area**  
NOT TO SCALE

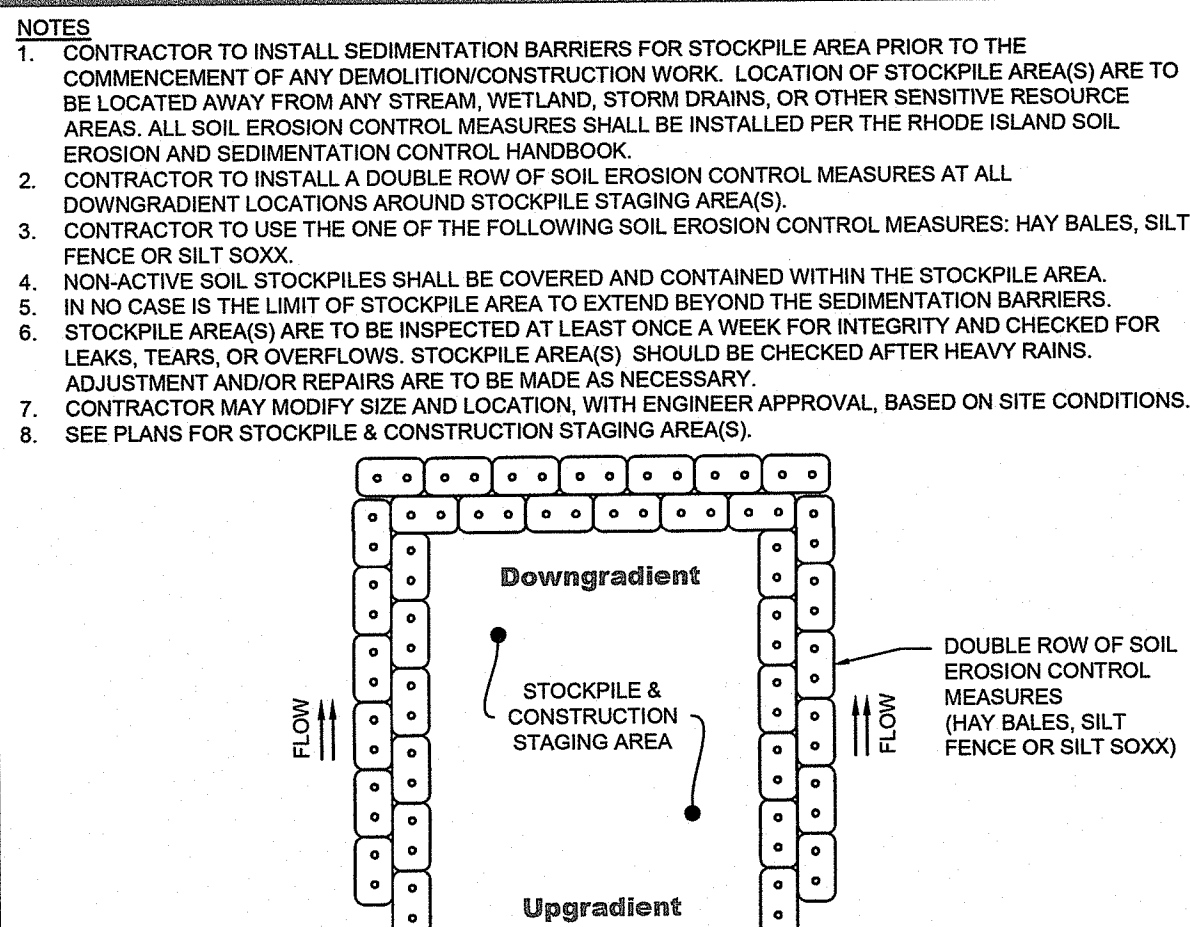


**Concrete Washout Area**  
NOT TO SCALE

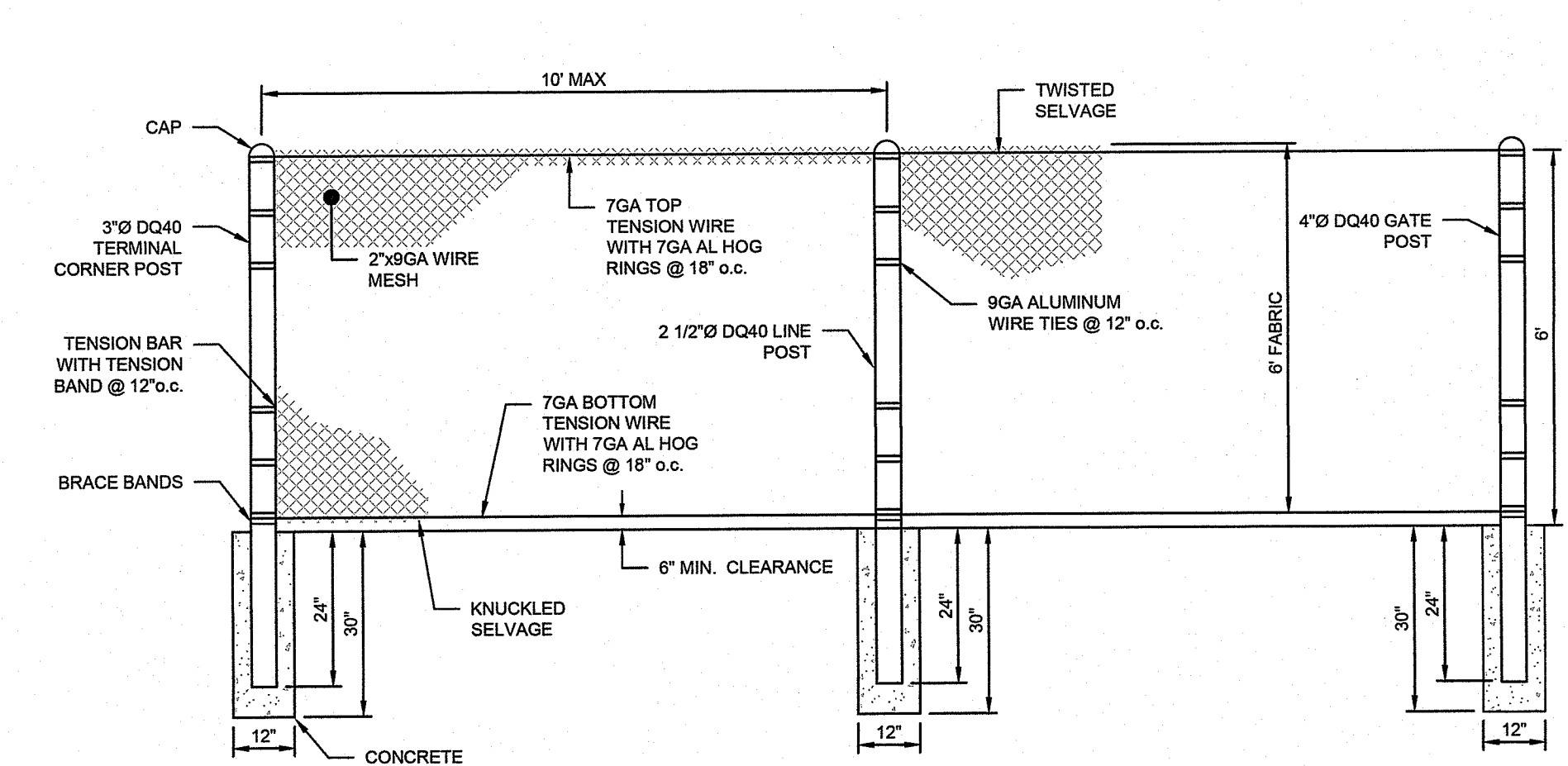


**Impermeable Surface Application Section View**

**Permeable Surface Application Section View**



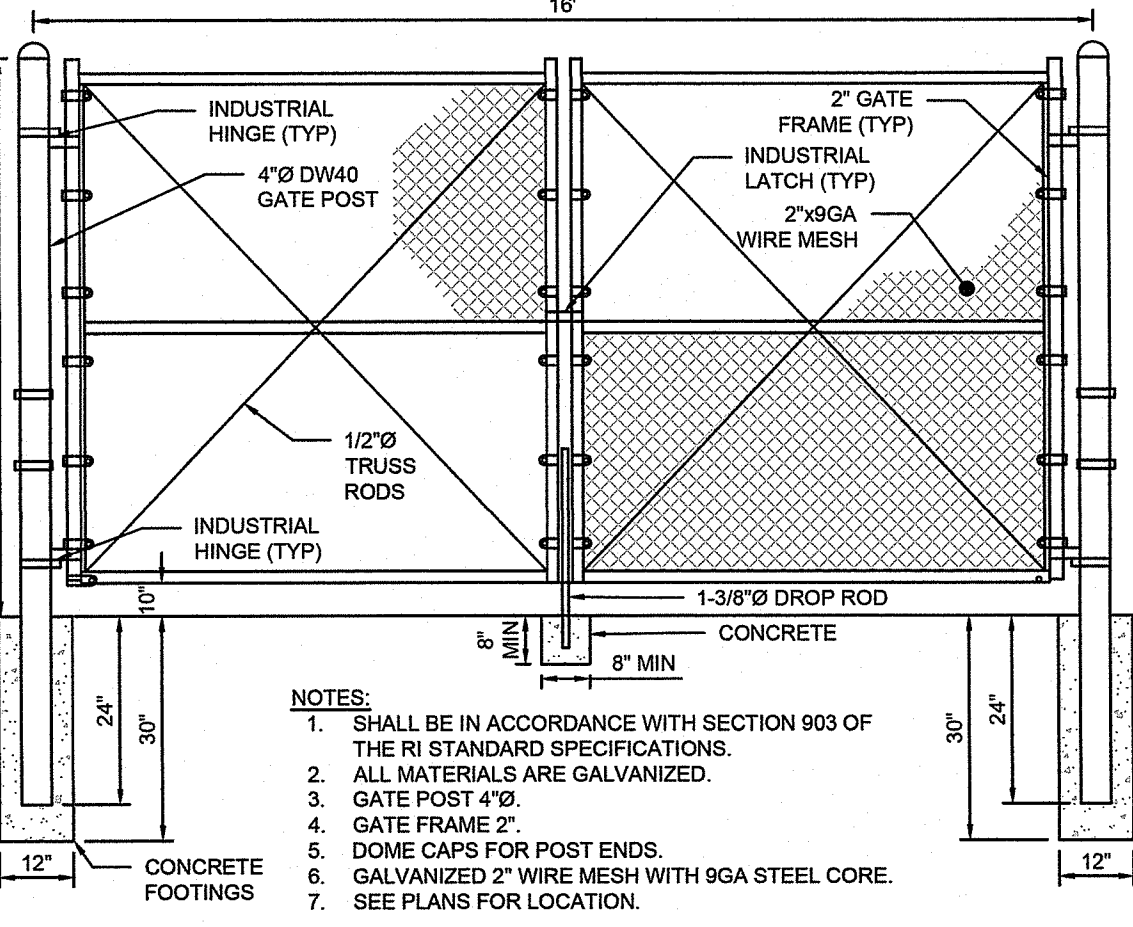
**Stockpile & Construction Staging Area**  
NOT TO SCALE



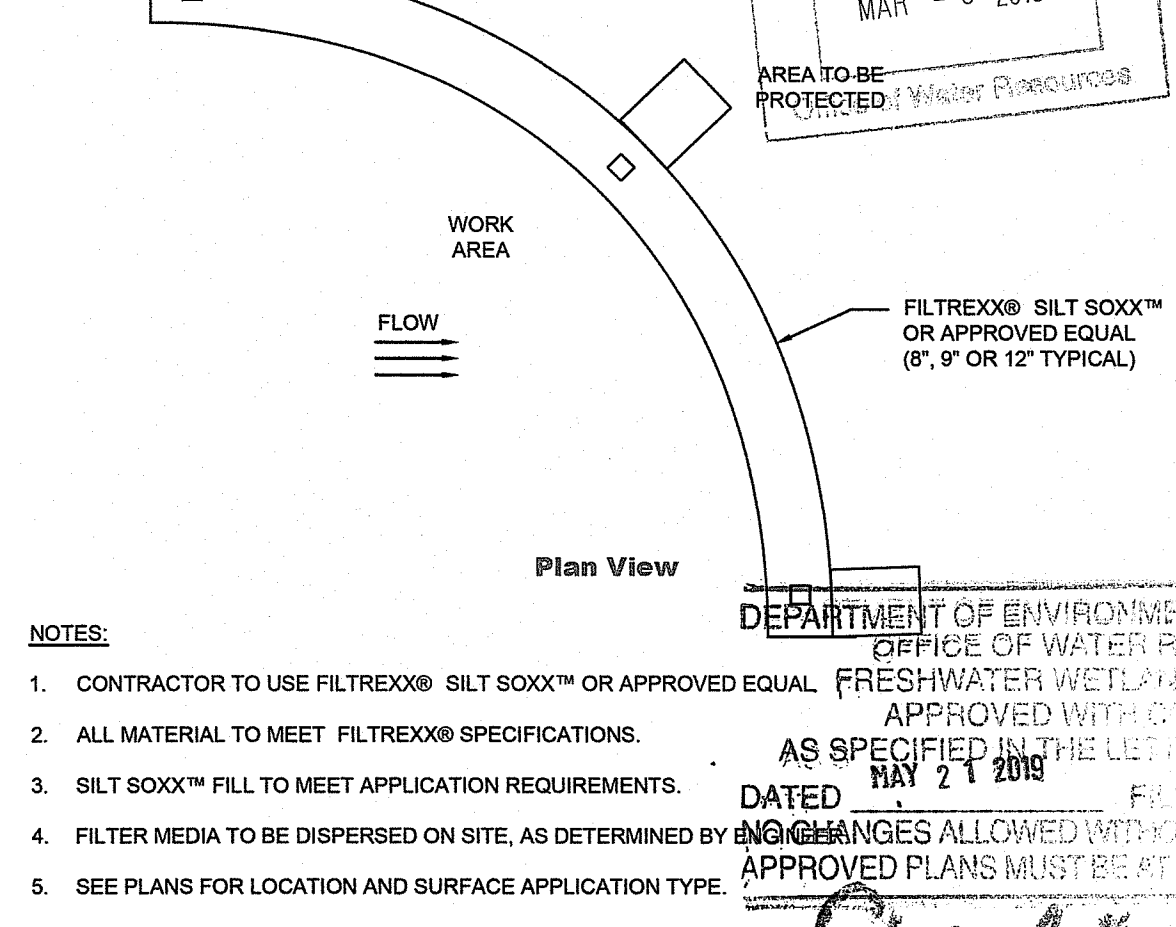
**Chain Link Fence**  
NOT TO SCALE

**NOTES**

- SHALL BE IN ACCORDANCE WITH SECTION 903 OF THE R.I. STANDARD SPECIFICATIONS.
- ALL MATERIALS ARE GALVANIZED.
- GATE POST 4"x4".
- TERMINAL POSTS 3"x3".
- GATE FRAME 2"x2".
- 7GA TOP AND BOTTOM TENSION WIRE TO MATCH FABRIC ATTACHED BY 7GA HOG RINGS WITH STEEL CORE.
- TENSION BARS WITH TENSION BANDS @ 12" o.c.
- DOME CAPS FOR POST ENDS.
- 9GA TIE WIRES WITH STEEL CORE ON LINE POSTS.
- 3" BRACE BANDS ON TERMINAL CORNER POSTS.
- GALVANIZED 2" WIRE MESH WITH 9GA STEEL CORE.
- CONTRACTOR TO PROVIDE A 6" MINIMUM OF GROUND CLEARANCE BELOW FENCE TO ALLOW FOR SMALL WILDLIFE PASSAGE.
- SEE PLANS FOR LOCATION.



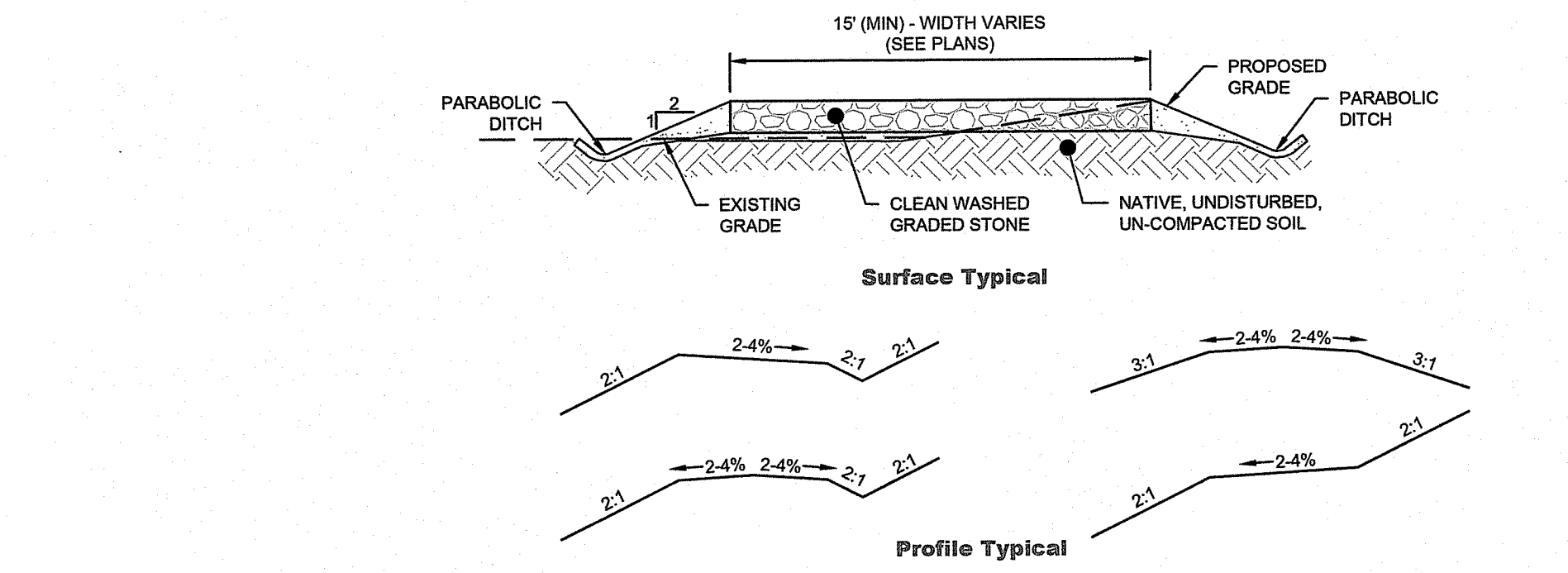
**Chain Link Double Leaf Swing Gate**  
NOT TO SCALE



**Silt Soxx Sediment Barrier**  
NOT TO SCALE

**Sequence of Construction**

- CONTRACTOR IS RESPONSIBLE FOR SOIL EROSION AND SEDIMENT CONTROL (SESC) ON SITE. SEQUENCE OF CONSTRUCTION PROVIDED MAY BE MODIFIED AS FIELD CONDITIONS WARRANT WITH PRIOR APPROVAL FROM THE OWNER OR THEIR REPRESENTATIVE.
- CONSTRUCTION TO BEGIN IN 2019 UPON RECEIPT OF ALL NECESSARY APPROVALS.
- SURVEY AND STAKE LIMIT OF SEDIMENTATION BARRIERS/LIMIT DISTURBANCE.
- INSTALL PERIMETER EROSION CONTROL BARRIERS AS SHOWN ON THE PLANS ALONG LIMIT OF DISTURBANCE AND AT DESIGNATED STOCKPILE AREAS. IN NO CASE IS THE LIMIT OF DISTURBANCE TO EXTEND BEYOND THE SEDIMENTATION BARRIERS.
- CLEAR BRUSH AND TREES ON SITE IF NECESSARY, WITHIN LIMIT OF DISTURBANCE.
- PRIOR TO REMOVAL OF STUMPS AND SOIL DISTURBANCE, INSTALL TEMPORARY SEDIMENT TRAPS AND SWALES AS PER PLANS. ALL TEMPORARY CONTROL DEVICES SHALL BE INSTALLED PER THE RHODE ISLAND SOIL EROSION AND SEDIMENTATION CONTROL HANDBOOK.
- GRUB AND REMOVE TREE STUMPS ON SITE IF NECESSARY. TOPSOIL IS NOT PROPOSED TO BE STRIPPED EXCEPT AS NEEDED FOR INSTALLATION OF THE ACCESS DRIVEWAY. NO GRADE CHANGES ARE OTHERWISE PROPOSED. STRIPPED LOAM WILL BE RE-UTILIZED ONSITE. NO REMOVAL OF MATERIALS FROM THE SITE ARE PROPOSED. NON-ACTIVE SOIL SHALL BE COVERED AND CONTAINED IN DESIGNATED STOCKPILE AREAS ON PLANS.
- CONTRACTOR TO INSTALL PROPOSED ACCESS DRIVEWAY, PERIMETER FENCE AND GATES, CONCRETE PADS, UNDERGROUND CONDUIT, UTILITY POLES AND ALL RACKING POSTS ON SITE.
- ONCE ITEMS FROM STEP 8 HAVE BEEN INSTALLED, DISTURBED AREAS SHALL BE LOAMED AND SEED TO RE-ESTABLISH VEGETATION AND THE SITE IS TO BE STABILIZED. EROSION CONTROL, BLANKETS, STRAW WATTLES, ETC. SHALL BE INSTALLED AS NECESSARY TO STABILIZE SOIL AND PROMOTE VEGETATION. TEMPORARY SEDIMENT TRAPS AND SWALES ARE TO BE MAINTAINED AND REMAIN UNTIL THE SITE IS STABILIZED.
- CONTRACTOR TO FILL IN TEMPORARY SEDIMENT TRAPS AND SWALES TO EXISTING GRADES FOLLOWING SITE STABILIZATION. STOCKPILE AREAS ARE TO BE REMOVED AND RETURNED TO THEIR ORIGINAL STATE PRIOR TO INSTALLATION.
- INSTALL SOLAR PANELS AND SOLAR EQUIPMENT AS REQUIRED BY APPROVED PLANS. CONTRACTOR TO PERIODICALLY INSPECT/MAINTAIN STABILIZED SITE.
- ONCE THE SOLAR PANELS/EQUIPMENT HAVE BEEN INSTALLED, ANY ADDITIONAL DISTURBED AREAS SHALL BE LOAMED AND SEED TO RE-ESTABLISH VEGETATION. EROSION CONTROL, BLANKETS, STRAW WATTLES, ETC. SHALL BE INSTALLED AS NECESSARY TO STABILIZE SOIL AND PROMOTE VEGETATION.
- IN THE EVENT THE DRIP EDGE AT PANELS RESULTS IN RILL EROSION, INSTALL PROTECTIVE MEASURES SUCH AS CRUSHED STONE, EROSION CONTROL BLANKETS, ETC. AS NEEDED.
- REMOVE ALL SEDIMENTATION CONTROL MEASURES FOLLOWING FINAL VEGETATIVE ESTABLISHMENT OF ALL DISTURBED AREAS.
- IMPLEMENT LONG TERM OPERATION AND MAINTENANCE PLAN.



**Surface Typical**

**Profile Typical**

CONDITION:	DRIVEWAY THICKNESS	STONE SIZE	FINES	CONSTRUCTION NOTES:
BASE LAYER WITH GEOTEXTILE FABRIC (NOT EXTENSIVELY WET)	4" MIN.	3-3/4"	0-6%	A. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER AS TO MINIMIZE POTENTIAL EROSION AND WATER QUALITY DEGRADATION. B. FIXED EROSION CONTROLS AND SITE STABILIZATION SHALL BE CONDUCTED IN ACCORDANCE WITH APPROVED BIMPS, OR PURSUANT TO PROJECT SPECIFIC PERMITS. C. TREES, STUMPS, ROOTS, BRUSH AND WEEDS SHALL BE REMOVED FROM THE WORK AREA IF DETERMINED NECESSARY TO SAFELY CONSTRUCT ROADWAYS. D. ON WEAK BEARING SOIL SUCH AS LOOSE ALLUVIAL, OR WETLANDS SOILS, SURFACE TREATMENT SHOULD BE UNDERLAIN WITH WOVEN GEOTEXTILES. E. AT MINIMUM, ROADSIDE DITCHES SHALL BE 1-FT BELOW ROAD SURFACE. F. DISCHARGE POINTS FOR DITCHES SHALL NOT BE NEAR WETLANDS OF STREAMS, AND OR BE LOCATED AT THE DIRECTION OF THE EPSCS.
<b>USED FOR THIS PROJECT</b> BASE LAYER WITH GEOTEXTILE FABRIC (WET CONDITIONS)	6" MIN.	3-3/4"	0-6%	

**Surfacing Specifications**

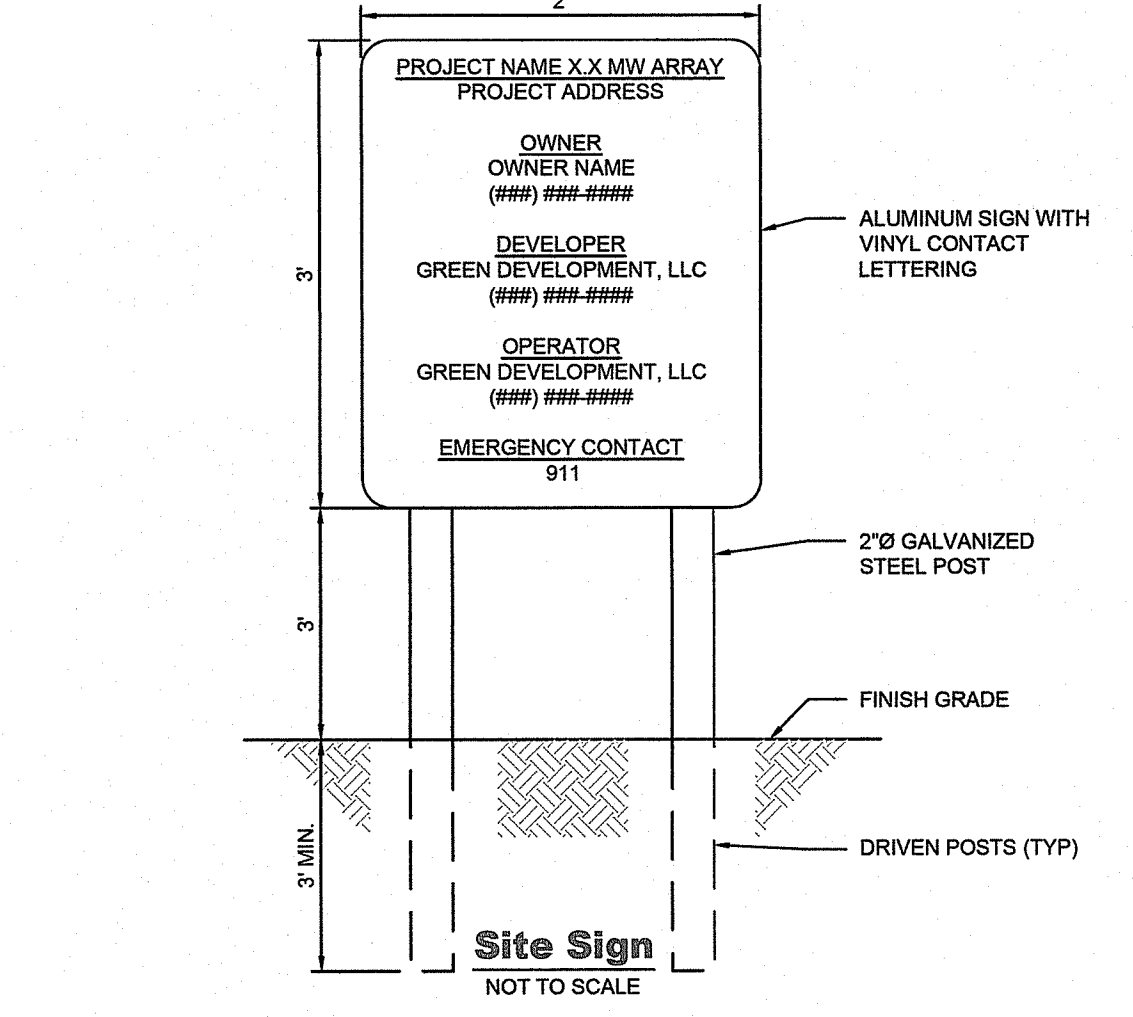
SIEVE DESIGNATION	PERCENTAGE BY MASS (WEIGHT) PASSING SQUARE MESH SIEVES	DENSE GRADED CRUSHED STONE FOR SUBBASE:
90 MM (3.5 INCH)	100	A. DENSE GRADED CRUSHED STONE FOR SUBBASE SHALL CONSIST OF CLEAN, HARD, UNIFORMLY GRADED, CRUSHED STONE. IT SHALL BE SUFFICIENTLY FREE FROM DIRT, DELETERIOUS MATERIAL, AND PIECES THAT ARE STRUCTURALLY WEAK AND SHALL MEET THE FOLLOWING REQUIREMENTS:
75 MM (3 INCH)	90-100	B. SOURCE OF MATERIALS SHALL BE OBTAINED FROM AREAS STRIPPED AND CLEANED OF SOIL AND DEBRIS BEFORE BLASTING.
50 MM (2 INCH)	75-100	C. MATERIAL COARSER THAN THE 4.75 MM (NO. 4) SIEVE SHALL NOT BE MORE THAN 30 PERCENT, BY MASS (WEIGHT), OF THIN AND/OR ELONGATED PIECES.
25 MM (1 INCH)	50-80	
12.5 MM (1/2 INCH)	30-60	
4.75 MM (NO. 4)	15-40	
75 UM (NO. 200)	0-6	

**Material Specifications**

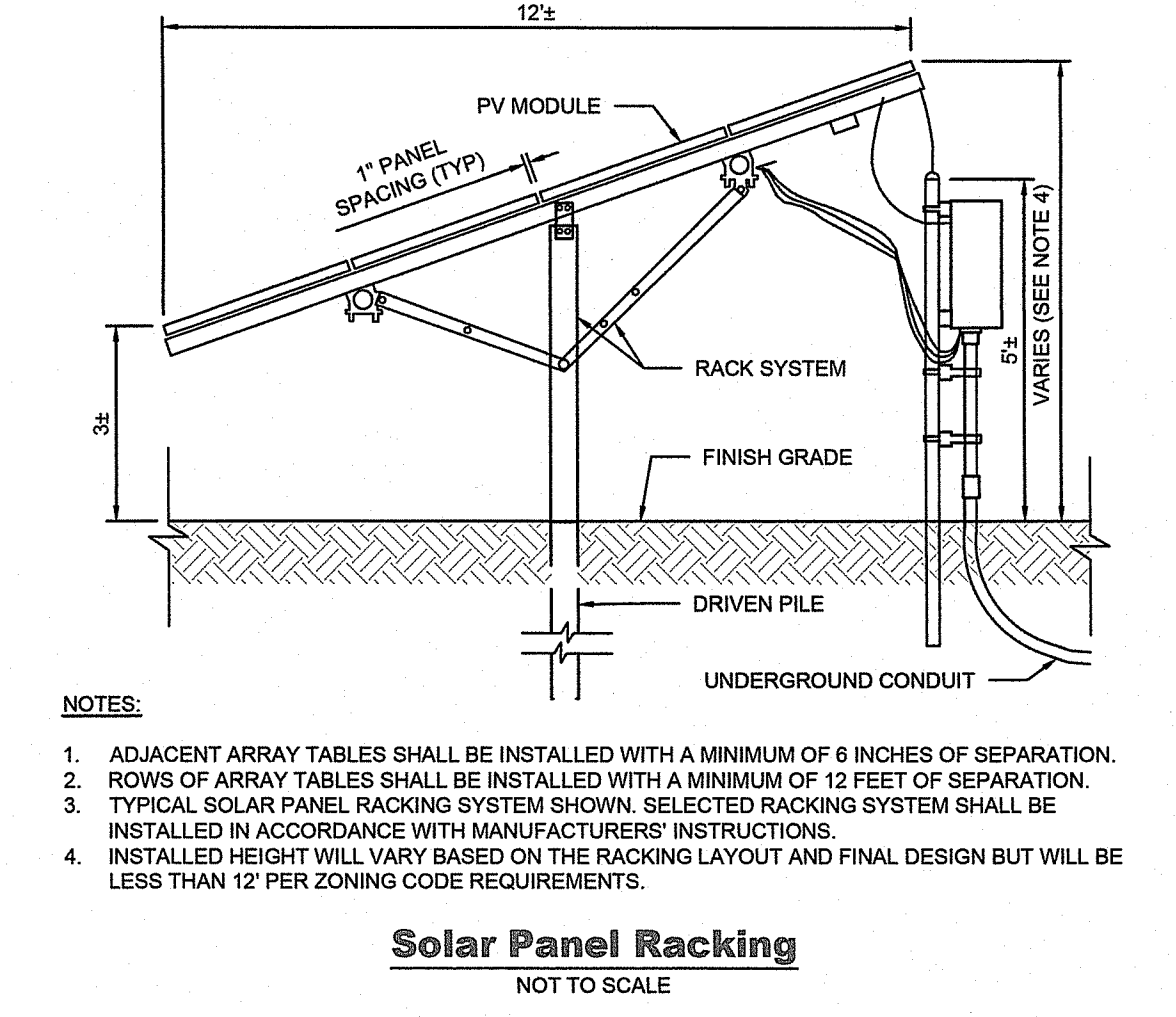
**SOURCES:**

- SURFACING TYPICAL AND SURFACING SPECS. DERIVED FROM USDA NRCS DRAWING "ACCESS ROAD, ME-ENG-AR1"
- PROFILE TYPICAL DERIVED FROM USDA FOREST SERVICE PUBLICATION "FOREST ROAD CONSTRUCTION AND MAINTENANCE"
- MATERIAL SPECS. DERIVED FROM VTTRANS 704.06 SUBBASE.

**Permeable Access Driveway**  
NOT TO SCALE



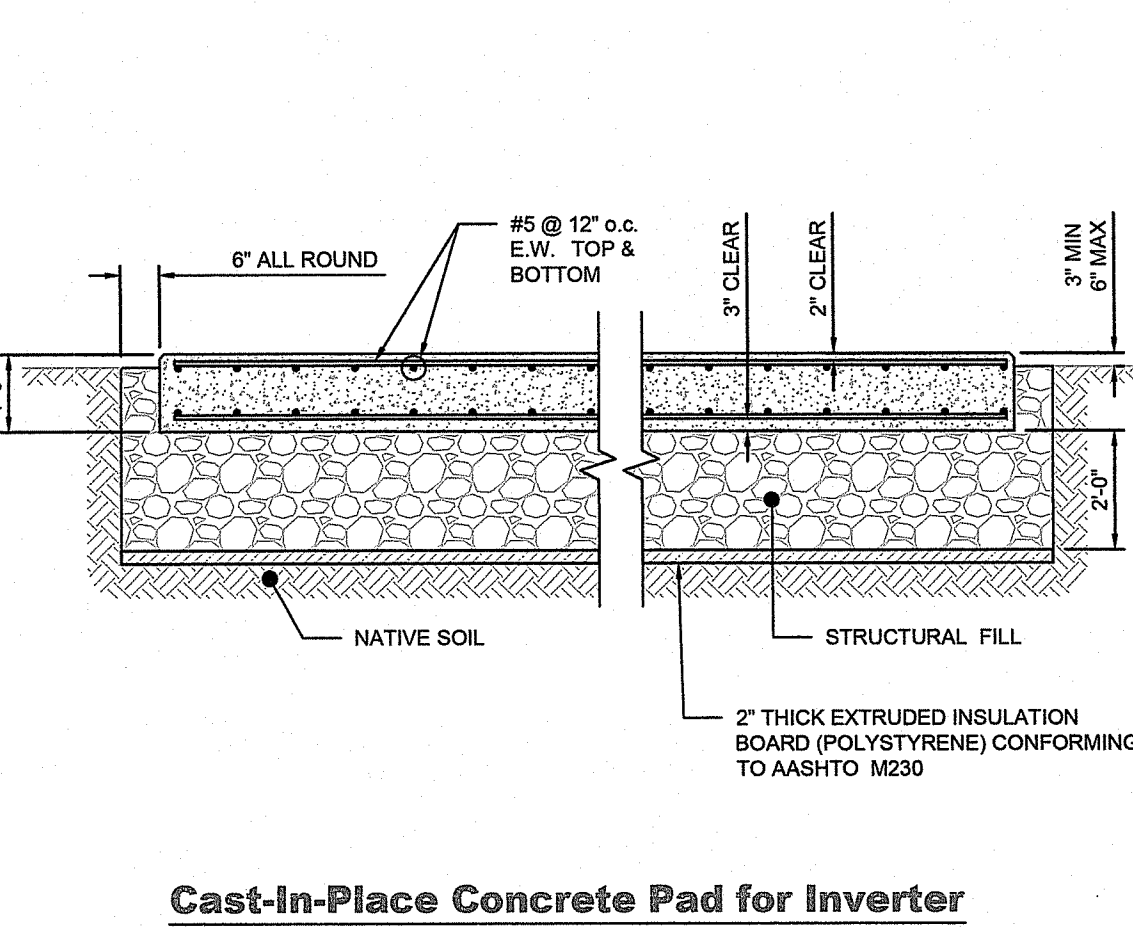
**Site Sign**  
NOT TO SCALE



**Solar Panel Racking**  
NOT TO SCALE

**NOTES:**

- ALL CONCRETE WORK SHALL CONFORM TO ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE BUILDINGS".
- ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615 GRADE 60 AND BE DETAILED IN ACCORDANCE WITH ACI 315 MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES.
- REBAR SHALL HAVE A MINIMUM CONCRETE COVER AS FOLLOWS:
  - CONCRETE DEPOSITED AGAINST GROUND.....3 IN.
  - CONCRETE EXPOSED TO WEATHER OR CONTACT WITH GROUND:
    - FOR BARS #5 AND LARGER.....2 IN.
    - FOR BARS SMALLER THAN #5.....1 1/2 IN.
  - CONCRETE NOT EXPOSED TO THE WEATHER OR THE GROUND SLABS AND WALLS.....3/4 IN.
- ALL REINFORCED BARS SHALL BE CONTINUOUS AND LAPPED A MINIMUM OF 48 BAR DIAMETERS AT ALL SPLICES, CORNERS AND INTERSECTIONS UNLESS NOTED OTHERWISE.
- ALL REINFORCEMENT SHALL BE SECURELY TIED IN ITS PROPOSED LOCATIONS PRIOR TO AND DURING PLACEMENT OF CONCRETE USING APPROVED CHAIRS, SPACERS AND THE WIRE AS REQUIRED. NO BARS SHALL BE CUT OR OMITTED IN THE FIELD WITHOUT THE APPROVAL OF THE ENGINEER.
- CONCRETE PROTECTION FOR REINFORCEMENT SHALL IN ALL CASES BE AT LEAST EQUAL TO THE DIAMETER OF THE BAR EXCEPT FOR CONCRETE.
- CONCRETE SHALL BE CAST-IN-PLACE, NORMAL WEIGHT CONCRETE AND SHALL DEVELOP A COMPRESSIVE STRENGTH OF 4,000 PSI IN 28 DAYS. CONCRETE SHALL HAVE A MAXIMUM AGGREGATE SIZE OF 3/4 INCH, MINIMUM CEMENT CONTENT OF 60 LBS/CU. YD., AND A MAXIMUM SLUMP OF 4 INCHES.
- ALL EXPOSED EDGES OF CONCRETE SHALL HAVE A 3/4 INCH CHAMFER UNLESS NOTED.
- ALL CONCRETE EXPOSED TO THE WEATHER SHALL BE AIR-ENTRAINED.
- SIZES AND LOCATIONS OF ALL REQUIRED EMBEDDED ITEMS FOR ALL TRADES SUCH AS ANCHOR BOLTS, PIPING SLEEVES HOLD DOWN ANCHORS, ETC. SHALL BE COORDINATED BY THE CONTRACTOR WITH OTHER TRADES.



**Cast-In-Place Concrete Pad for Inverter**  
NOT TO SCALE

3760 Quaker Lane  
 North Kingstown, RI 02885  
 (401) 295-4998  
 www.green-ri.com  
**GREEN** development, LLC

APPLICANT INFO: **GD Middletown West Main, LLC**  
 3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852

OWNER INFO: **Cenz Corp**  
 41 FOX PLACE, PROVIDENCE, RI 02903

PREPARED BY: **Green Development, LLC**  
 3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852

PRELIMINARY LAYOUT  
**Detail Sheet**  
 PROJECT INFORMATION:  
**GD Middletown West Main**  
 ALTERNATING CURRENT (AC): 225 MW  
 1747 WEST MAIN ROAD, MIDDLETOWN, RI 02842  
 ASSESSOR'S PLAT 111 LOT 9A

REVISIONS:  
 NO. DATE BY  
 2 3/12/2019 REDX PRELIMINARY DETERMINATIONS RESUBMISSION  
 1 11/20/2018 REDX PRELIMINARY DETERMINATIONS

KEVIN C. MORIN  
 No. 1051  
 REGISTERED PROFESSIONAL ENGINEER  
 CIVIL

SHEET NO.:  
**C1.7** OF 7