

November 4, 2022

Melanie Bachman, Esq. Executive Director & Staff Attorney Connecticut Siting Council 10 Franklin Square New Britain, CT 06051

Re: Petition No. 1517 Connecticut Green Banke Solar Project Osborn Correctional Institution 335 Bilton Road, Somers, CT

Dear Attorney Bachman,

As you are aware, on August 18, 2022 the Connecticut Siting Council ruled that the proposal for the construction, maintenance, and operation of a 1.8-megawatt AC solar photovoltaic electric generating facility located at the Osborn Correctional Institution at 335 Bilton Road in Somers, Connecticut would not have a substantial adverse environmental effect and would not require Certificate of Environmental Compatibility. This ruling was based on petition materials, including Site Plans prepared by J.R. Russo & Associates, LLC dated April 21, 2022, that called for the use of the Trinasolar's Duomax Twin Bifacial Dual Glass 252 Layout Module (470 Watt). Subsequent to the ruling, based on supply chain issues and availability, a new module has been selected as a substitute for the Trinasolar module. The substitute module is the CSI Solar BiHiKu6 CS6W Module (535 Watt). The specifications for this module are attached. In addition, the TCLP testing results for this module are attached. As shown, the TCLP test results indicate that no compounds were detected over the applicable limits for toxicity.

Based on differences in physical size and output, the switch to the CSI module required minor changes to the solar array layout in order to provide the same 1.8-megawatt AC output. Revised Site Plans reflecting these minor changes are also attached. As shown, the change to the more efficient CSI panel actually results in a decrease in the overall footprint of the proposed array from 7.14 acres to 6.95 acres. Thus, if anything, the environmental impacts are reduced as a result of the module substitution.

In accordance with condition 1 of the Siting Council Ruling, on behalf of the Connecticut Green Bank and CEFIA Holdings, LLC, I do hereby request approval of the module substitution as a minor modification. As stated above, the substitution results in a reduction of the area impacted by the solar development. If you have any questions or require further information, please feel free to contact me at (860) 623-0569 or tcoon@jrrusso.com.

Sincerely,

Timothy A. Coon, P.E. J.R. Russo & Associates, LLC

Enclosures cc: Connecticut Green Bank P.O. Box 938, East Windsor, CT 06088 <u>www.jrrusso.com</u> CT 860.623.0569 MA 413.785.1158 SERVING CONNECTICUT & MASSACHUSETTS



Se CanadianSolar





MORE POWER



íШ

Module power up to 545 W Module efficiency up to 21.2 %

Up to 12.3 % lower LCOE Up to 5.2 % lower system cost



Compatible with mainstream trackers, cost effective product for utility power plant

Better shading tolerance

MORE RELIABLE



Minimizes micro-crack impacts

Heavy snow load up to 5400 Pa, wind load up to 2400 Pa*

* For detailed information, please refer to Installation Manual.

12 Years

Enhanced Product Warranty on Materials and Workmanship*



∕_dv_e

Linear Power Performance Warranty*

1st year power degradation no more than 2% Subsequent annual power degradation no more than 0.45%

*According to the applicable Canadian Solar Limited Warranty Statement.

MANAGEMENT SYSTEM CERTIFICATES*

ISO 9001:2015 / Quality management system ISO 14001:2015 / Standards for environmental management system ISO 45001: 2018 / International standards for occupational health & safety

PRODUCT CERTIFICATES*

IEC 61215 / IEC 61730 / CE / INMETRO / MCS / UKCA CEC listed (US California) UL 61730 / IEC 61701 / IEC 62716 / IEC 60068-2-68 Take-e-way



* The specific certificates applicable to different module types and markets will vary, and therefore not all of the certifications listed herein will simultaneously apply to the products you order or use. Please contact your local Canadian Solar sales representative to confirm the specific certificates available for your Product and applicable in the regions in which the products will be used.

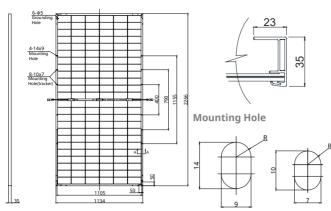
CSI SOLAR (USA) CO., LTD. is committed to providing high quality solar photovoltaic modules, solar energy and battery storage solutions to customers. The company was recognized as the No. 1 module supplier for quality and performance/price ratio in the IHS Module Customer Insight Survey. Over the past 20 years, it has successfully delivered over 63 GW of premium-quality solar modules across the world.

CSI SOLAR (USA) CO., LTD. 1350 Treat Blvd. Suite 500, Walnut Creek, CA 94598, USA | www.csisolar.com/na | service.ca@csisolar.com

ENGINEERING DRAWING (mm)



Frame Cross Section A-A



ELECTRICAL DATA | STC*

		Nominal Max. Power (Pmax)		Opt. Operating Current (Imp)		Short Circuit Current (Isc)	Module Efficiency
CS6W-520M	B-AG	520 W	40.5 V	12.84 A	48.4 V	13.70 A	20.2%
	5%	546 W	40.5 V	13.48 A	48.4 V	14.39 A	21.2%
Bifacial Gain**	10%	572 W	40.5 V	14.12 A	48.4 V	15.07 A	22.3%
Gam	20%	624 W	40.5 V	15.41 A	48.4 V	16.44 A	24.3%
CS6W-525M	B-AG	525 W	40.7 V	12.90 A	48.6 V	13.75 A	20.4%
	5%	551 W	40.7 V	13.55 A	48.6 V	14.44 A	21.4%
Bifacial Gain**	10%	578 W	40.7 V	14.21 A	48.6 V	15.13 A	22.5%
Gam	20%	630 W	40.7 V	15.48 A	48.6 V	16.50 A	24.5%
CS6W-530M	B-AG	530 W	40.9 V	12.96 A	48.8 V	13.80 A	20.6%
	5%	557 W	40.9 V	13.62 A	48.8 V	14.49 A	21.7%
Bifacial Gain**	10%	583 W	40.9 V	14.26 A	48.8 V	15.18 A	22.7%
Gam	20%	636 W	40.9 V	15.55 A	48.8 V	16.56 A	24.8%
CS6W-535M	B-AG	535 W	41.1 V	13.02 A	49.0 V	13.85 A	20.8%
	5%	562 W	41.1 V	13.68 A	49.0 V	14.54 A	21.9%
Bifacial Gain**	10%	589 W	41.1 V	14.34 A	49.0 V	15.24 A	22.9%
Gamas	20%	642 W	41.1 V	15.62 A	49.0 V	16.62 A	25.0%
CS6W-540M	B-AG	540 W	41.3 V	13.08 A	49.2 V	13.90 A	21.0%
	5%	567 W	41.3 V	13.73 A	49.2 V	14.60 A	22.1%
Bifacial Gain**	10%	594 W	41.3 V	14.39 A	49.2 V	15.29 A	23.1%
Gam	20%	648 W	41.3 V	15.70 A	49.2 V	16.68 A	25.2%
CS6W-545M	B-AG	545 W	41.5 V	13.14 A	49.4 V	13.95 A	21.2%
	5%	572 W	41.5 V	13.80 A	49.4 V	14.65 A	22.3%
Bifacial Gain**	10%	600 W	41.5 V	14.46 A	49.4 V	15.35 A	23.3%
Gaill	20%	654 W	41.5 V	15.77 A	49.4 V	16.74 A	25.5%
* Under Standar	d Tost C	anditions (CT	C) of irradiance	a of 1000 W/m	2 coostrue	0 AM 1 E am	d coll tomo

* Under Standard Test Conditions (STC) of irradiance of 1000 W/m², spectrum AM 1.5 and cell temperature of 25°C.
 ** Bifacial Gain: The additional gain from the back side compared to the power of the front side at

** Biracial Gain: The additional gain from the back side compared to the power of the front side at the standard test condition. It depends on mounting (structure, height, tilt angle etc.) and albedo of the ground.

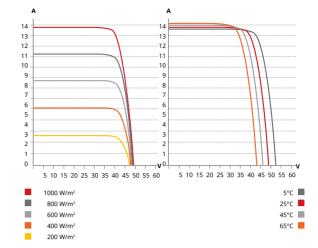
ELECTRICAL DATA

Operating Temperature	-40°C ~ +85°C
Max. System Voltage	1500 V (IEC/UL) or 1000 V (IEC/UL)
Module Fire Performance	TYPE 29 (UL 61730)
Module Fire Performance	or CLASS C (IEC61730)
Max. Series Fuse Rating	30 A
Application Classification	Class A
Power Tolerance	0 ~ + 10 W
Power Bifaciality*	70 %
* Power Bifaciality = Pmax _{rear} / Pm Tolerance: + 5 %	ax_{front} both $Pmax_{rear}$ and $Pmax_{front}$ are tested under STC, Bifaciality

* The specifications and key features contained in this datasheet may deviate slightly from our actual products due to the on-going innovation and product enhancement. CSI Solar Co., Ltd. reserves the right to make necessary adjustment to the information described herein at any time without further notice.

Please be kindly advised that PV modules should be handled and installed by qualified people who have professional skills and please carefully read the safety and installation instructions before using our PV modules.

CS6W-530MB-AG / I-V CURVES



ELECTRICAL DATA | NMOT*

	Nominal Max. Power (Pmax)	Opt. Operating Voltage (Vmp)	Opt. Operating Current (Imp)	Open Circuit Voltage (Voc)	Short Circuit Current (Isc)
CS6W-520MB-AG	390 W	38.0 V	10.27 A	45.7 V	11.05 A
CS6W-525MB-AG	394 W	38.2 V	10.32 A	45.9 V	11.09 A
CS6W-530MB-AG	397 W	38.3 V	10.38 A	46.1 V	11.13 A
CS6W-535MB-AG	401 W	38.5 V	10.42 A	46.3 V	11.17 A
CS6W-540MB-AG	405 W	38.7 V	10.47 A	46.5 V	11.21 A
CS6W-545MB-AG	409 W	38.9 V	10.52 A	46.7 V	11.25 A
* Under Nominal Modu	le Operating	Temperature	(NMOT), irradi	ance of 800) W/m ^{2,}

spectrum AM 1.5, ambient temperature 20°C, wind speed 1 m/s.

MECHANICAL DATA

Specification	Data
Cell Type	Mono-crystalline
Cell Arrangement	144 [2 x (12 x 6)]
Dimensions	2266 × 1134 × 35 mm (89.2 × 44.6 × 1.38 in)
Weight	32.2 kg (71.0 lbs)
Front Glass	2.0 mm heat strengthened glass with anti- reflective coating
Back Glass	2.0 mm heat strengthened glass
Frame	Anodized aluminium alloy
J-Box	IP68, 3 bypass diodes
Cable	4.0 mm² (IEC), 12 AWG (UL)
Cable Length (Inclu- ding Connector)	410 mm (16.1 in) (+) / 290 mm (11.4 in) (-) (supply additional jumper cable: 2 lines / Pallet) or customized length*
Connector	T4 or MC4 series
Per Pallet	30 pieces
Por Container (40' HC) 600 pieces or 540 pieces (only for LIS)

Per Container (40' HQ) 600 pieces or 540 pieces (only for US) * For detailed information, please contact your local Canadian Solar sales and technical representatives.

TEMPERATURE CHARACTERISTICS

Specification	Data
Temperature Coefficient (Pmax)	-0.34 % / °C
Temperature Coefficient (Voc)	-0.26 % / °C
Temperature Coefficient (Isc)	0.05 % / °C
Nominal Module Operating Temperature	41 ± 3°C

PARTNER SECTION



Test Report

REPORT No .:	SHE20-15388/1	DATE RECEIVED:	2020/12/30
ATTENTION:	-	ANALYSIS DATE :	2020/12/30~2021/01/25
CUSTOMER:	CSI Solar Co.,Ltd	DATE REPORTED:	2021/01/27
	199 Lushan Road,Suzhou New District Jiangsu,China	SAMPLE (S):	Solid waste (1)
REFERENCE:	-		

REFERENCE:

REMARKS

- 1. The results apply to the sample(s) as received
- 2. The report is translated from SHE20-15388.





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Statement

1. The test report is invalid without the official seal of the laboratory.

2. This test report cannot be reproduced in any way, except in full content, without prior approval in writing by the laboratory.

3. The test report is invalid without the signature of the compiler, the checker and the approver

4. The test report is invalid if altered.

5. The test report has been drafted in Chinese and translated into English (if applicable) for convenience only. In the event of discrepancy, the Chinese version shall prevail.

6. Should you have any queries or objection to the test report, please contact us within 10 days after receiving the report.

Legend

NA The sample was not analysed for this analyte

- † Detection limit raised
- ↓ Detection limit lowered
- ND Not Detected



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INORGANIC & ORGA	ANIC ANALYSIS		Lab ID		SHE20-15388.001
Report No.: SHE20-15388/1		С	ustomer ID		PV Module CS6W-MB- AG
Customer Reference: -			Model No.	Limit	12009999990042
		Order No.		CP20-068432GZ	
		Dat	e Received		2020/12/30
TCLP ITEM	METHOD	MDL	UNIT		Solid waste
Arsenic (As)	USEPA 200.8-1994	0.050	mg/L	≪5	<0.050
Barium (Ba)	USEPA 200.8-1994	0.010	mg/L	≤100	0.058
Cadmium (Cd)	USEPA 200.8-1994	0.001	mg/L	≤1	<0.001
Chromium (Cr)	USEPA 200.8-1994	0.010 mg/L		≪5	<0.010
Lead (Pb)	USEPA 200.8-1994	0.010 mg/L		≪5	3.34
Selenium (Se)	Selenium (Se) USEPA 200.8-1994 0.03		mg/L	≤1	<0.050
Silver (Ag)	USEPA 200.8-1994	0.010	mg/L	≪5	<0.010
Mercury (Hg)	USEPA 7473-2007	0.005	mg/L	≪0.2	<0.005
2,4-D	USEPA 8151A-1996	0.0005	mg/L	≤10	<0.0005
2,4,5-TP (Silvex, Fenopop)	USEPA 8151A-1996	0.0005	mg/L	≤1	<0.0005
Benzene	USEPA 8260D-2018	0.0005	mg/L	≪0.5	<0.0005
Carbon tetrachloride	USEPA 8260D-2018	0.0005	mg/L	≪0.5	<0.0005
Chlorobenzene	USEPA 8260D-2018	0.0005	mg/L	≤100	<0.0005
Chloroform	USEPA 8260D-2018	0.0005	mg/L	≪6	<0.0005
1,4-Dichlorobenzene	USEPA 8260D-2018	0.0005	mg/L	≤7.5	<0.0005
1,2-Dichloroethane	USEPA 8260D-2018	0.0005	mg/L	≪0.5	<0.0005
1,1-Dichloroethene	USEPA 8260D-2018	0.0005	mg/L	≪0.7	<0.0005
2-butanone(MEK)	USEPA 8260D-2018	0.020	mg/L	≤200	<0.020
Tetrachloroethene	USEPA 8260D-2018	0.0005	mg/L	≪0.7	<0.0005
Trichloroethene	USEPA 8260D-2018	0.0005	mg/L	≪0.5	<0.0005
Vinyl chloride	USEPA 8260D-2018	0.0005	mg/L	≪0.2	<0.0005
2,4-Dinitrotoluene	USEPA 8270E-2018	0.0005	mg/L	≪0.13	<0.0005
Hexachlorobenzene	USEPA 8270E-2018	0.0005	mg/L	≪0.13	<0.0005
Hexachlorobutadiene	USEPA 8270E-2018	0.0005	mg/L	≪0.5	<0.0005

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INORGANIC & ORGA	ANIC ANALYSIS		Lab ID		SHE20-15388.001	
Report No.: SHE20-15388/1		С	ustomer ID		PV Module CS6W-MB- AG	
Customer Reference: -			Model No.	Limit	12009999990042	
			Order No.		CP20-068432GZ	
_		Dat	e Received		2020/12/30	
TCLP ITEM	METHOD	MDL UNIT			Solid waste	
Hexachloroethane	USEPA 8270E-2018	0.0005 mg/L		≪3	<0.0005	
Nitrobenzene	USEPA 8270E-2018	0.0005 mg/L		≤2	<0.0005	
Pentachlorophenol	USEPA 8270E-2018	0.0025	mg/L	≤100	<0.0025	
Pyridine	USEPA 8270E-2018	0.002	mg/L	≤5.0	<0.002	
2,4,5-Trichlorophenol	USEPA 8270E-2018	0.0005	mg/L	≪400	<0.0005	
2,4,6-Trichlorophenol	USEPA 8270E-2018	0.0005	mg/L	≤2	<0.0005	
Methylphenol	USEPA 8270E-2018	0.001	mg/L	≤200	<0.001	
2-Methylphenol	USEPA 8270E-2018	0.0005	mg/L	≤200	<0.0005	
3&4-Methylphenol	USEPA 8270E-2018	0.0005	mg/L	≤200	<0.0005	
Endrin	USEPA 8270E-2018	0.0005	mg/L	≪0.02	<0.0005	
γ-BHC	USEPA 8270E-2018	0.0005	mg/L	≪0.4	<0.0005	
Toxaphene	USEPA 8270E-2018	0.050	mg/L	≪0.5	<0.050	
Methoxychlor	USEPA 8270E-2018	0.0005	mg/L	≪10	<0.0005	
Heptachlor	USEPA 8270E-2018	0.0005	mg/L	≪0.008	<0.0005	
Chlordane(Total)	USEPA 8270E-2018	0.001	mg/L	≤0.03	<0.001	

Remark:

1.Preparative method:USEPA1311-1992(Toxicity Characteristic Leaching Procedure)

2. The Limits comes from CFR(code of federal regulations) title 40 part 261.24.



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Method List

USEPA 200.8-1994 Metals ICP-MS USEPA 7473-2007 Metals-Hg USEPA 8151A-1996 Acid Herbicides in Water by GC-MS USEPA 8260D-2018 VOCs USEPA 8270E-2018 SVOCs

Equipment Information

Method:USEPA 200.8-1994

Equipment Name	Model	Equipment Numbe	r Serial Number
ICP-MS	Agilent 7900	CHEM-998	JP16311502
Method:USEPA 7473-2007			
Equipment Name	Model	Equipment Numbe	r Serial Number
Hg analyzer	Milestone DMA-80	CHEM-958	16041979
Method:USEPA 8151A-1996			
Equipment Name	Model	Equipment Numbe	r Serial Number
GC-MS	Agilent 7890A/5975C	CHEM-ENV085	CN12371032/US12362A17
Method:USEPA 8260D-2018			
Equipment Name	Model	Equipment Numbe	or Serial Number
Equipment Name PT-GC-MS	Model Atomx&Agilent7890B/5977B	Equipment Numbe	r Serial Number US17062008/CN17103162/US1711M 006
			US17062008/CN17103162/US1711M
PT-GC-MS			US17062008/CN17103162/US1711M 006
PT-GC-MS Method:USEPA 8270E-2018	Atomx&Agilent7890B/5977B	CHEM-1035	US17062008/CN17103162/US1711M 006
PT-GC-MS Method:USEPA 8270E-2018 Equipment Name	Atomx&Agilent7890B/5977B Model	CHEM-1035 Equipment Number	US17062008/CN17103162/US1711M 006 r Serial Number
PT-GC-MS Method:USEPA 8270E-2018 Equipment Name GC-MS	Atomx&Agilent7890B/5977B Model	CHEM-1035 Equipment Number	US17062008/CN17103162/US1711M 006 r Serial Number CN18053182/US1805M023



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APPENDIX 1

Report No.:SHE20-15388/1 Customer Reference: -



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APPENDIX 2

Report No.:SHE20-15388/1 Customer Reference: -



End of report



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CFP CFP Bank Department of Corrections Solar **Osborn** Correctional Institution 335 Bilton Road Somers, Connecticut



VICINITY MAP 1"=2,000'

LATITUDE: 42.0019375° LONGITUDE: -72.501380°

Applicant

CT Green Bank 75 Charter Oak Ave., Suite 1-103 Hartford, CT 06106

Owner

State of Connecticut Osborn Medium Security Prison 335 Bilton Road Somers, CT 06071

Prepared By



SHEET TITLE

<u>CIVIL</u> COVER OVERA SITE F SITE F EROSI DETAIL





PERMIT PLANS

DRAWING INDEX

SHEET NO. LATEST REVISION

R SHEET · · · · · · · · · · · · · · · · · ·	· C-000	10-06-22
ALL SITE PLAN	· C-100	10-06-22
PLAN (40-SCALE)	- C-101	10-06-22
PLAN (40-SCALE)	C-102	10-06-22
ION & SEDIMENT CONTROL NOTES	C-201	4-21-22
ILS · · · · · · · · · · · · · · · · · · ·	C-202	7-11-22

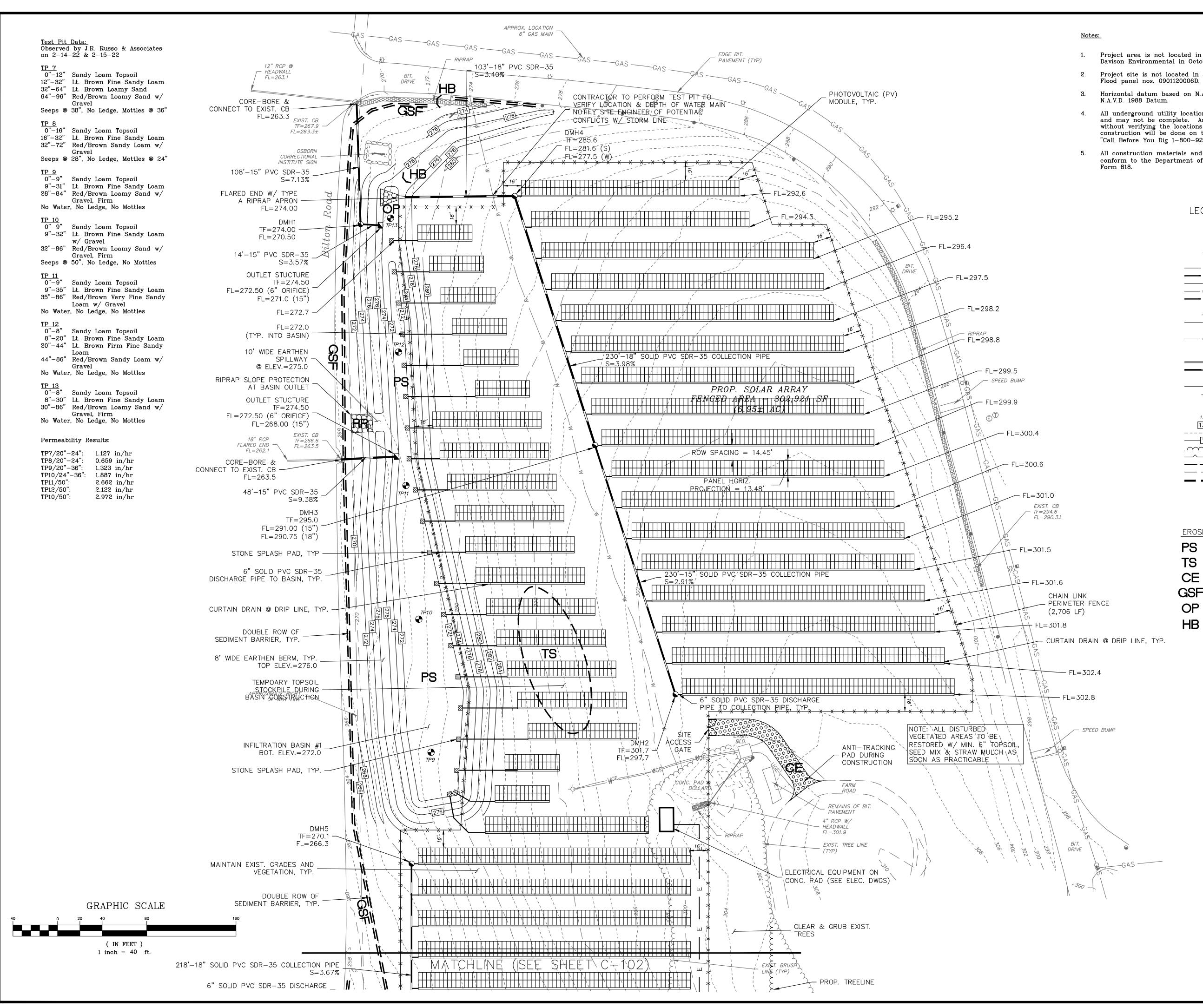
Alternative Power Generation Inc.



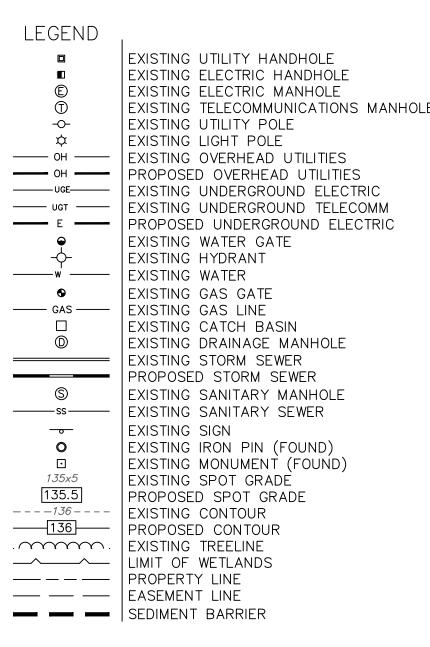
GRAPHIC SCALE	SOLAR SWITCHBOARD	BLOCK	# MC
100 0 50 100 200 400	SSP01	1	21
1 inch = 100 ft.	SSB01	2	20
		TOTAL	42

DULE	#STRING	KW (DC)	18 INPUT CB (W/ 14STR)	18 INPUT CB (W/ 14STR)	18 INPUT CB (W/ 12STR)	18 INPUT CB (W/ 11STR)	SHP_150_ US_20	KW (AC)	TILT (°)	GCR	CSI AZIMUTH (°)	SPWR AZIMUTH (°)	DC RUN (CB-INV)
58	83	1154.53	1	5		1	7	1050.00	- 25	0.50	180	0	175, 260, 345, 400, 485, 540
80	80	1112.8	Ţ	4	1		5	750.00	- 25	0.50	180	0	430, 320, 125, 180, 265, 325
38	163	2267.33	1	0	1	1	12	1800.00					

- S U	Ger NF		PEC ASSOCIATES, LLC 1. Russo & Associates, LLC 1. Shoham Rd East Windsor, CT 06088 • CT 860.623.0569 • MA 413.785.1158	wer				
THIS DO DISCLOSU	(510) 540-05		ion. The				
BY: L	RE F/TAC	VISION		10-06-22 SOLAR PANEL CHANGE, ADJUST LAYOUT				
	Connecticut Green Bank	Usborn Correctional Institution	Somers, Connecticut					
	Over	all F	'lan					
	DATE 4-21-22 <u>SCALE</u> 1"=100' <u>JOB NUMBER</u> 2021-040 <u>SHEET</u> C-100							



- Project area is not located in inland wetlands as delineated by Davison Environmental in October 2021.
- Project site is not located in a flood hazard zone per FEMA
- Horizontal datum based on N.A.D. 1983. Elevations based on
- 4. All underground utility locations on this plan are approximate and may not be complete. Anyone using this information without verifying the locations does so at their own risk. No construction will be done on this site prior to utility mark out. "Call Before You Dig 1-800-922-4455".
- 5. All construction materials and methods in the State ROW shall conform to the Department of Transportation's Specification



EROSION & SEDIMENT CONTROL PLAN KEY

PERMANENT SEEDING

TEMPORARY SEEDING

CONSTRUCTION ENTRANCE

GEOTEXTILE SILT FENCE

OUTLET PROTECTION

HAYBALE CHECKDAM

PS

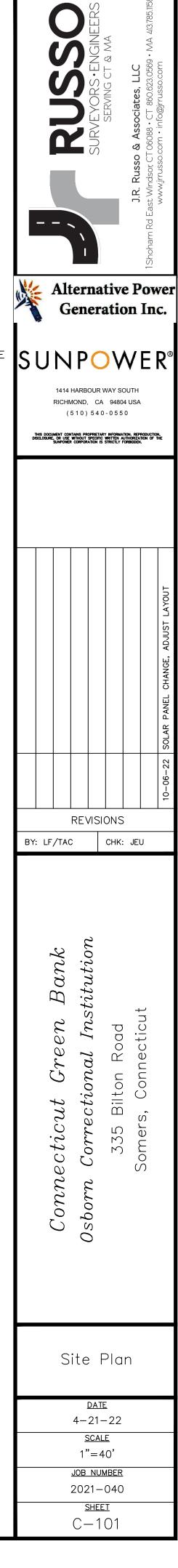
TS

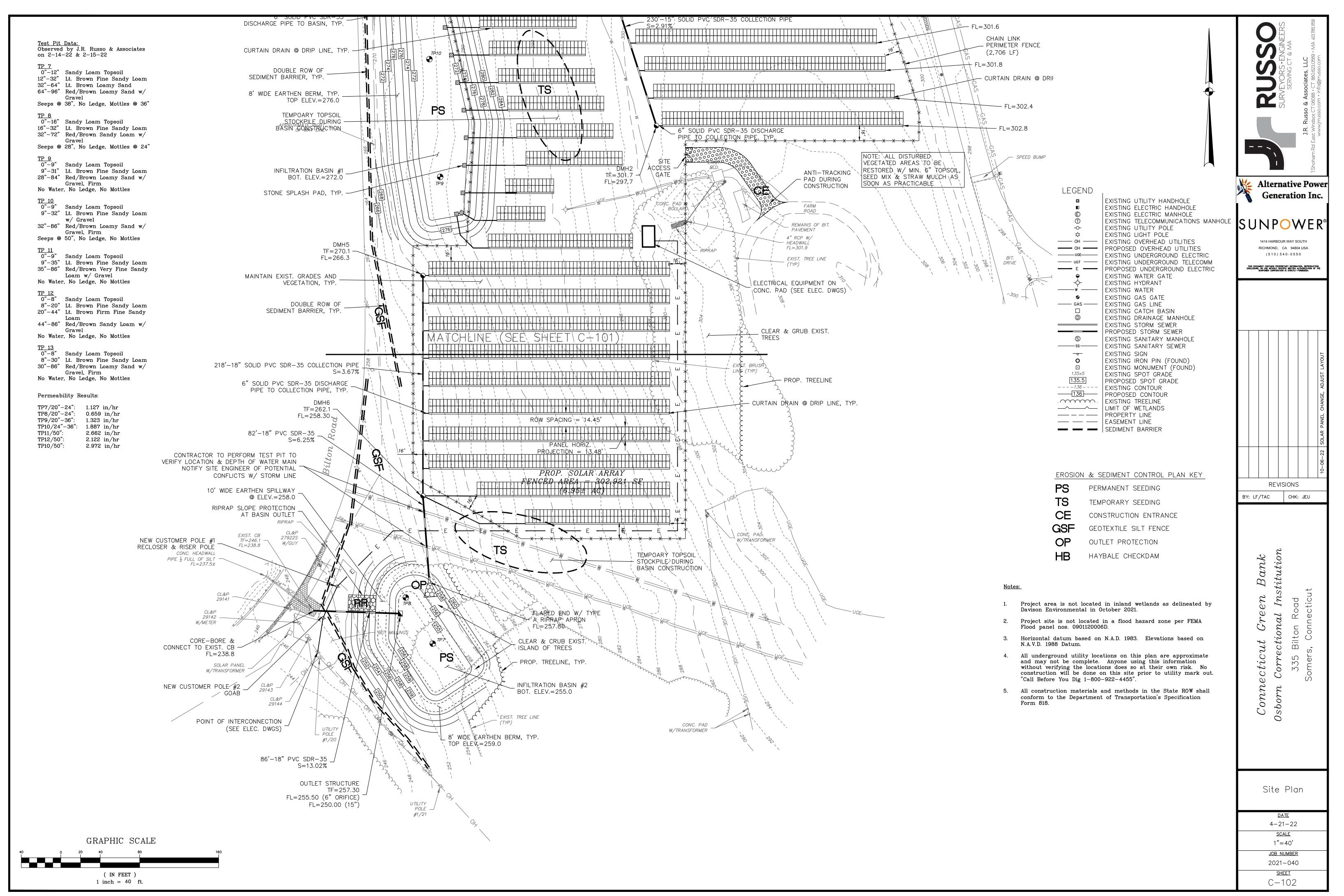
CE

GSF

OP

HB





cad\2021 Civil 3D\2021-040 APG CT Green Bank\Russo Drawings\2021-040 Enfield Site.dwc

PERMANENT SEEDING (PS)

SPECIFICATIONS

Time Of Year Seeding dates in Connecticut are normally April 1 through June 15 and August 15 through October 1. Spring seedings give the best results and spring seedings of all mixes with legumes is recommended. There are two exceptions to the above dates. The first exception is when seedings will be made in the areas of Connecticut known as the Coastal Slope and the Connecticut River Valley. The Coastal Slope includes the coastal towns of New London, Middlesex, New Haven, and Fairfield counties. In these areas, with the exception of crown vetch (when crown vetch is seeded in late summer, at least 35% of the seed should be hard seed (unscarified), the final fall seeding dates can be extended and additional 15 days. The second exception is frost crack or dormant seeding, the seed is applied during the time of year when no germination can be expected, normally November through February. Germination will take place when weather conditions improve, mulching is extremely important to protect the seed from wind and surface erosion and to provide erosion protection until the seeding becomes

established. Site Preparation

Grade in accordance with the Land Gradina measure which is in the Connecticut Guidelines For Soil Erosion and Sediment Control latest edition.

Install all necessary surface water controls.

For areas to be mowed remove all surface stones 2 inches or larger. Remove all other debris such as wire, cable tree roots, pieces of concrete, clods, lumps, or other unsuitable material.

Seed Selection

Lawn Areas: Premium Seed Mix for Sun and Shade. Field Areas: Companion Seed Mix by Kings Agricseed Inc. or approved equal.

Stormwater Basin: New England Erosion Control/Restoration Mix by New England Wetland Plants, Inc. or approved equal.

Seedbed Preparation

Apply topsoil, if necessary, in accordance with the Topsoiling measure which is in the Connecticut Guidelines For Soil Erosion and Sediment Control latest edition.

Apply ground limestone and fertilizer according to soil test recommendations (such as those offered by the University of Connecticut Soil Testing Laboratory or other reliable source).

Where soil testing is not feasible on small or variable sites, or where timing is critical, fertilizer may be applied at the rate of 300 pounds per acre or 7.5 pounds per 1,000 square feet of 10-10-10 or equivalent and limestone at 4 tons per acre or 200 pounds per 1,000 square feet.

Work lime and fertilizer into the soil to a depth of 3 to 4 inches with a disc or other suitable equipment.

Inspect seedbed just before seeding. If the soil is compacted, crusted or hardened, scarify the area prior to seeding.

Seed Application

Apply selected seed at rates per manufacturer's recommendations uniformly by hand, cyclone seeder, drill, cultipacker type seeder or hydroseeder (slurry including seed, fertilizer). Normal seeding depth is from 0.25 to 0.5 inch. Increase seeding rates by 10% when hydroseeding or frost crack seeding. Seed warm season grasses during the spring period

See guidelines in the Mulch For Seed measures.

MAINTENANCE

Inspect temporary soil protection area at least once a week and within 24 hours of the end of a storm with a rainfall amount of 0.5 inch or greater during the first growing season.

Where seed has been moved or where soil erosion has occurred, determine the cause of the failure and repair as needed. TEMPORARY SEEDING (TS)

SPECIFICATIONS

Site Preparation Install needed erosion control measures such as diversions. grade stabilization structures, sedimentation basins and grassed waterways in accordance with the approved plan.

Grade according to plans and allow for the use of appropriate equipment for seedbed preparation, seeding, mulch application and mulch anchoring.

Seedbed Preparation

Loosen the soil to a depth of 3–4 inches with a slightly roughened surface. If the area has been recently loosened or disturbed, no further roughening is required. Soil preparation can be accomplished by tracking with a bulldozer, discing harrowing, raking or dragging with a section of chain link fence.

Apply ground limestone and fertilizer according to soil test recommendations (such as those offered by the University of Connecticut Soil Testing Laboratory or other reliable source).

If soil testing is not feasible on small or variable sites, or where timing is critical, fertilizer may be applied at the rate of 300 pounds per acre or 7.5 pounds per 1,000 square feet of 10-10-10 or equivalent.

Apply seed uniformly by hand, cyclone seeder, drill, cultipacker type seeder or hydroseeder. The temporary seed shall be Rve (arain) applied at a rate of 120 pounds per acre. Increase seeding rates by 10% when hydroseeding.

See quidelines in the Mulch For Seed measures

MAINTENANCE

Inspect temporary seeding area at least once a week and within 24 hours of the end of a storm with a rainfall amount of 0.5 inch or greater for seed and mulch movement and rill erosion.

Where seed has been moved or where soil erosion has occurred. determine the cause of the failure and repair as needed.

MULCH FOR SEED (MS)

SPECIFICATIONS

Types of Mulches within this specification include, but are not limited to:

1. Hay: The dried stems and leafy parts of plants cut and harvested, such as alfalfa, clovers, other forage legumes and the finer stemmed, leafy grasses. The average stem length should not be less than 4 inches. Hay that can be windblown should be anchored to hold it in place.

2. Straw: Cut and dried stems of herbaceous plants, such as wheat, barley, cereal rye, or brome. The average stem length should not be less than 4 inches. Straw that can be windblown should be anchored to hold it in place.

3. Cellulose Fiber: Fiber origin is either virgin wood, post-industrial/pre-consumer wood or post consumer wood complying with materials specification (collectively referred to as "wood fiber"), newspaper, kraft paper, cardboard (collectively referred to as "paper fiber") or a combination of wood and paper fiber. Paper fiber, in particular, shall not contain boron, which inhibits seed germination. The cellulose fiber must be manufactured in such a manner that after the addition to and agitation in slurry tanks with water, the fibers in the slurry become uniformly suspended to form a homogeneous product. Subsequent to hydraulic spraving on the ground, the mulch shall allow for the absorption and percolation of moisture and shall not form a tough crust such that it interferes with seed germination or growth. Generally applied with tackifier and

fertilizer. Refer to manufacturer's specifications for application rates needed to attain 80%-95% coverage without interfering with seed germination or plant growth. Not recommended as a mulch for use when seeding occurs outside of the recommended seeding dates.

Tackifiers within this specification include, but are not limited to: Water soluble materials that cause mulch particles to adhere to one another, generally consisting of either a natural vegetable gum blended with gelling and hardening agents or a blend of hydrophilic polymers, resins, viscosifiers, sticking aids and aums. Good for areas intended to be mowed. Cellulose fiber mulch may be applied as a tackifier to other mulches, provided the application is sufficient to cause the other mulches to adhere to one another. Emulsified asphalts are specifically prohibited for use as tackifiers due to their potential for causing water pollution following its

Nettings within this specification include, but are not limited to: Prefabricated openwork fabrics made of cellulose cords, ropes, threads, or biodegradable synthetic material that is woven, knotted or molded in such a manner that it holds mulch in place until vegetation growth is sufficient to stabilize the soil. Generally used in areas where no mowing is planned.

Site Preparation

application.

Grade according to plans and allow for the use of appropriate equipment for seedbed preparation, seeding, mulch application and mulch anchoring.

Timing: Applied immediately following seeding. Some cellulose fiber may be applied with seed to assist in marking where seed has been sprayed, but expect to apply a second application of cellulose fiber to meet the requirements of Mulch For Seed in the Connecticut Guidelines For Soil Erosion and Sediment Control latest edition.

Spreading: Mulch material shall be spread uniformly by hand or machine resulting in 80%-95% coverage of the disturbed soil when seeding within the recommended seeding dates. Applications that are uneven can result in excessive mulch smothering the germinating seeds. For hay or straw anticipate an application rate of 2 tons per acre. For cellulose fiber follow manufacture's recommended application rates to provided 80%-95% coverage.

When seeding outside the recommended seeding dates, increase mulch application rate to provide between 95%-100% coverage of the disturbed soil. For hay or straw anticipate an application rate to 2.5 to 3 tons per acre.

When spreading hay mulch by hand, divide the area to be mulched into approximately 1.000 square feet and place 1.5-2 bales of hay in each section to facilitate uniform distribution.

For cellulose fiber mulch, expect several spray passes to attain adequate coverage, to eliminate shadowing, and to avoid slippage.

Anchoring: Expect the need for mulch anchoring along the shoulders of actively traveled roads, hill tops and long open slopes not protected by wind breaks.

When using netting, the most critical aspect is to ensure that the netting maintains substantial contact with the underlying mulch and the mulch, in turn, maintains continuos contact with the soil surface. Without such contact, the material is useless and erosion can be expected to occur.

MAINTENANCE

Inspect mulch for seed area at least once a week and within 24 hours of the end of a storm with a rainfall amount of 0.5 inch or greater until the grass has germinated to determine maintenance needs.

Where mulch has been moved or where soil erosion has occurred, determine the cause of the failure and repair as needed.

Site Preparation

Grade according to plans and allow for the use of appropriate equipment for seedbed preparation, seeding, mulch application and mulch anchoring.

Loosen the soil to a depth of 3-4 inches with a slightly roughened surface. If the area has been recently loosened or disturbed, no further roughening is required. Soil preparation can be accomplished by tracking with a bulldozer, discing harrowing, raking or dragging with a section of chain link fence.

Apply ground limestone and fertilizer according to soil test recommendations (such as those offered by the University of Connecticut Soil Testing Laboratory or other reliable source).

If soil testing is not feasible on small or variable sites, or where timing is critical, fertilizer may be applied at the rate of 300 pounds per acre or 7.5 pounds per 1,000 square feet of 10-10-10 or equivalent.

Apply seed uniformly by hand, cyclone seeder, drill, cultipacker type seeder or hydroseeder. The temporary seed shall be Rye (grain) applied at a rate of 120 pounds per acre. Increase seeding rates by 10% when hydroseeding.

2. Any additional erosion/sediment control deemed necessary by the engineer during construction, shall be installed by the developer. In addition, the developer shall be responsible for the repair/replacement and/or maintenance of all erosion control measures until all disturbed areas are stabilized to the satisfaction of the town staff.

3. All soil erosion and sediment control operations shall be in place prior to any grading operations and installation of proposed structures or utilities and shall be left in place until construction is completed and/or area is stabilized.

4. In all areas, removal of trees, bushes and other vegetation as well as disturbance of the soil is to be kept to an absolute minimum while allowing proper development of the site. During construction, expose as small an area of soil as possible for as short a time as possible.

5. The developer shall practice effective dust control per the soil conservation service handbook during construction and until all areas are stabilized or surface treated. The developer shall be responsible for the cleaning of nearby streets, as ordered by the town, of any debris from these construction activities.

6. All fill areas shall be compacted sufficiently for their intended purpose and as required to reduce slipping, erosion or excess saturation. Fill intended to support buildings, structures, conduits, etc., shall be compacted in accordance with local requirements or codes

7. Topsoil is to be stripped and stockpiled in amounts necessary to complete finished grading of all exposed areas requiring topsoil. The stockpiled topsoil is to be located as designated on the plans. Topsoil shall not be placed while in a frozen or muddy condition, when the subgrade is excessively wet, or in a condition that may otherwise be detrimental to proper grading or proposed sodding or seeding.

TEMPORARY SEEDING (TS)

SPECIFICATIONS

Install needed erosion control measures such as diversions. grade stabilization structures, sedimentation basins and grassed waterways in accordance with the approved plan.

Seedbed Preparation

See guidelines in the Mulch For Seed measures.

MAINTENANCE

Inspect temporary seeding area at least once a week and within 24 hours of the end of a storm with a rainfall amount of 0.5 inch or greater for seed and mulch movement and rill erosion.

Where seed has been moved or where soil erosion has occurred, determine the cause of the failure and repair as needed.

SOIL EROSION & SEDIMENT CONTROL NOTES

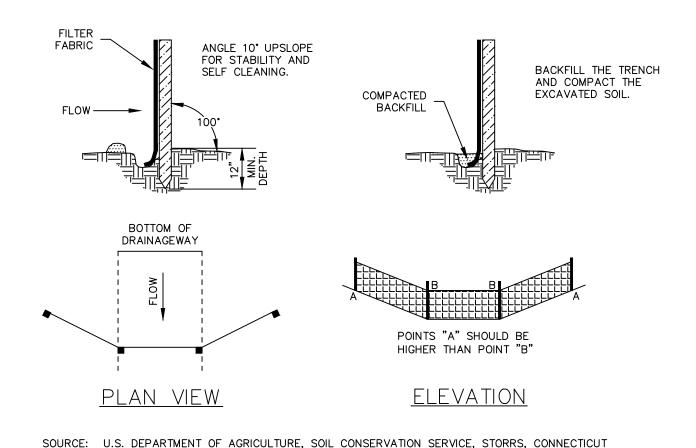
1. All soil erosion and sediment control work shall be done in strict accordance with the Connecticut Guidelines For Soil Erosion and Sediment Control latest edition.

8. Any and all fill material is to be free of brush, rubbish, timber, logs vegetative matter and stumps in amounts that will be detrimental to constructing stable fills. Maximum side slopes of exposed surfaces of earth to be 3:1 or as otherwise specified by local authorities.

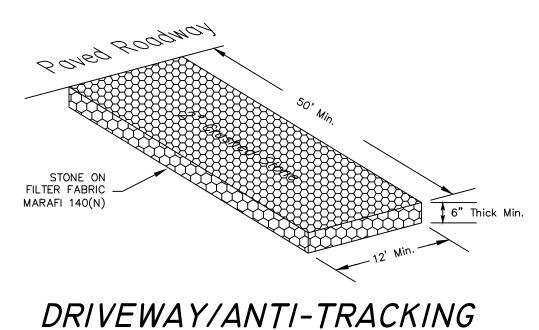
9. Soil stabilization should be completed within 5 days of clearing or inactivity in construction.

10. Waste Materials – All waste materials (including wastewater) shall be disposed of in accordance with local, state and federal law. Litter shall be picked up at the end of each work day.

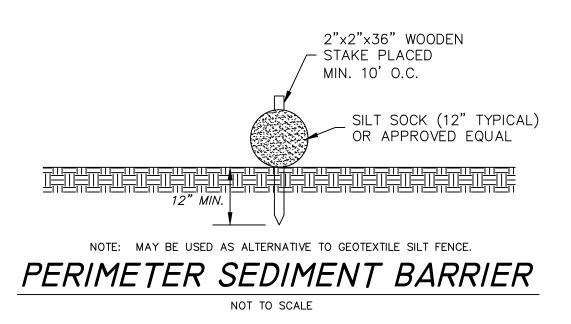
11. The Contractor shall maintain on-site additional erosion control materials as a contingency in the event of a failure or when required to shore up existing BMPs. At a minimum, the on-site contingency materials should include 30 feet of silt fence and 5 straw haybales with 10 stakes.

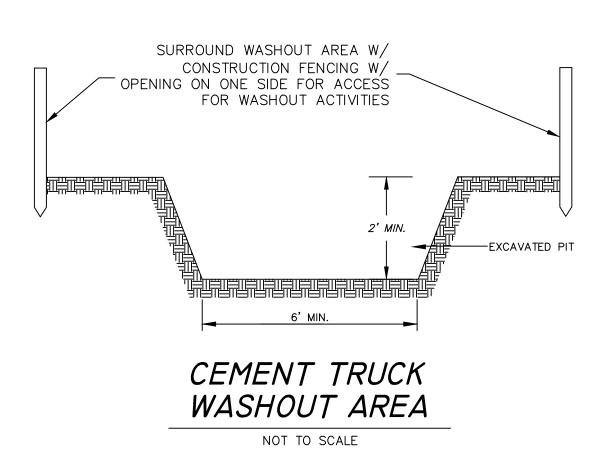


GEOTEXTILE SILT FENCE (GSF)









	CHECK	LIST FOR EROSIC	N CONTROL PLA	<u>N</u>	
PROJECT: CT Green Bo	ank Solar Osborn	Correctional Instit	ution		
OCATION: 335 Bilton F	Road, Somers, CT				
PROJECT DESCRIPTION:	Construction of	Photovoltaic Solar	Arrays		
PARCEL AREA: 405± c	lores				
		« Altornato Rowo	Concration Inc.	(100) 847-477	_7455
RESPONSIBLE PERSONN					-7455
EROSION AND SEDIMEN	T CONTROL PLAN	PREPARER: J.	R. Russo & Assoc	cidtes, LLC	
CHECKLIST:	· · ·		T · I · J		
Work Description Erosion & Sediment Control Measures	Location	Date Installed	Initials	Date Removed	Initials
Install construction entrance	As shown on plan.				
Install perimeter sediment barriers	As shown on plan.				
MAINTENANCE OF MEAS	SURES:				
Location Description or Number				Date	Initials

Project Dates:

Date of groundbreaking for project:

Date of final stabilization

PROJECT NARRATIVE AND CONSTRUCTION SEQUENCE

This project is located at the Connecticut Department of Corrections Osborn Correctional Institution at 335 Bilton Road in Somers, Connecticut. The proposed activity is the construction of photovoltaic solar array. The suggested schedule of construction is as follows:

- 1. Conduct a pre-construction meeting on-site with the contractor to review the design and requirements of the Stormwater Pollution Control Plan.
- Install anti-tracking pad (CE).
- Install sediment barriers (GSF) at project perimeters. 4. Clear trees & grub stumps in areas as shown on Plans. All debris to be removed from the 5. Strip topsoil in the vicinity of the proposed stormwater management basins. Stockpile
- suitable amount of topsoil for reuse on-site in areas shown. Stockpiles shall be surrounded by sediment barriers (GSF). Construct stormwater management basins. Seed and mulch to establish vegetation as soon
- as practicable. Install foundations and solar panels.
- Install curtain drains and stormwater collection/conveyance system.
- Install electrical equipment and distribution lines. 10. Install security fence.
- 11. Restore all disturbed areas with topsoil, seed mix and mulch as soon as practicable. 12. Remove sediment barriers after site is fully stabilized.
- Construction of this site is anticipated to begin in the spring of 2022 and be complete by

January 2023, pending approvals. Temporary erosion control measures shall be installed prior to any soil disturbance and maintained throughout construction until soils have been stabilized with permanent vegetation.

The Contractor shall keep the area of disturbance to a minimum and establish vegetative cover on exposed soils as soon as practical. All soil and erosion control measures shall be installed and maintained in accordance with these plans and the "Connecticut DEP Guidelines for Soil Erosion and Sediment Control", as amended. The Contractor shall verify all conditions noted on the plans and shall immediately notify the Engineer of any discrepancies.

The developer shall be responsible for the repair/replacement/maintenance of all erosion control measures until all disturbed areas are stabilized. Accumulated sediment shall be removed as required to keep silt fence functional. In all cases, deposits shall be removed when the accumulated sediment has reached one-half above the ground height of the silt fence. This material is to be spread and stabilized in areas not subject to erosion, or to be used in areas which are not to be paved or built on. Silt fence (GSF) is to be replaced as necessary to maintain proper filtering action. Silt fence (GSF) are to remain in place and shall be maintained to insure efficient sediment capture until all areas above the erosion checks are stabilized and vegetation has been established.

POST CONSTRUCTION MAINTENANCE NOTES:

The property owner shall be responsible for performing the following post construction maintenance schedule:

- Maintain lawn & landscape areas with minimal pesticides.
- Sweep parking lot and paved areas at least once per year in the spring. Inspect catch basins and storm manholes at least twice per year, including after sweeping.
- Clean at least once per year in April and as necessary to prevent the discharge of pollutants from structures. Remove accumulated oil, trash and excessive sediment with vac-truck. Check condition of hoods (if applicable).
- Inspect infiltration basin annually for evidence of hydrocarbons and remove by vac-truck. Repair eroded areas and replace riprap and vegetation as required. Dredge bottom to remove accumulated sediment every 10 years or when significant volume reduction is observed. Mow infiltration basin on a regular basis to maintain as lawn area for filtering of pollutants.

