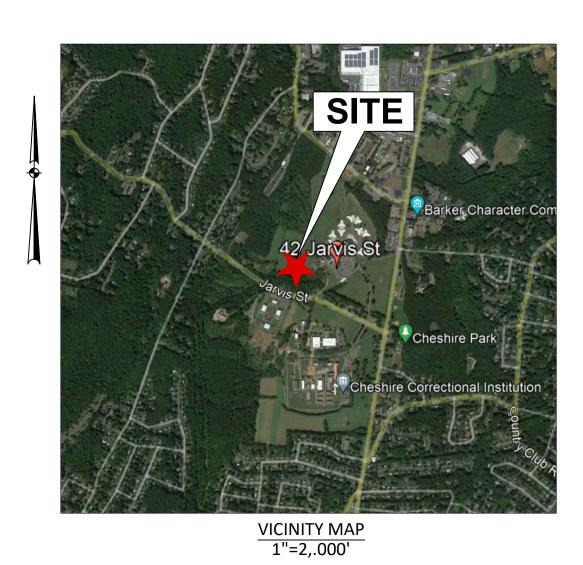
# CT Green Bank Department of Corrections Solar

Manson Youth Institution 42 Jarvis Street Cheshire, Connecticut



LATITUDE: 41.528684° LONGITUDE: -72.902051°

# Applicant

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

# Owner

State of Connecticut
Manson Youth Institution
42 Jarvis Street
Cheshire, CT 06410

Prepared By



# PERMIT PLANS

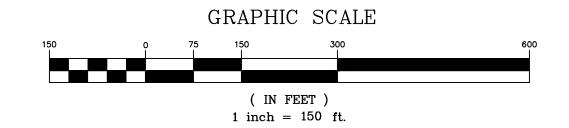
DRAWING INDEX		
SHEET TITLE	SHEET NO.	LATEST REVISION
<u>CIVIL</u>		
COVER SHEET	C-000	4-27-22
OVERALL SITE PLAN	C-100	4-27-22
SITE PLAN (40-SCALE)	C-101	4-27-22
SITE PLAN (40-SCALE)	C-102	4-27-22
EROSION & SEDIMENT CONTROL NOTES	C-201	4-27-22
DETAILS	- C-202	4-27-22





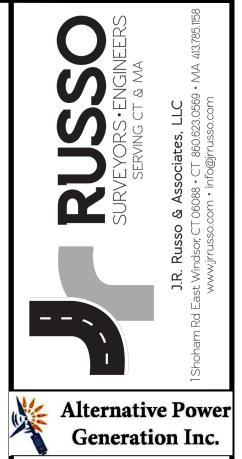
RICHMOND, CA 94804 USA

(510)540-0550



BLOCK	# MODULE	#STRING	KW (DC)	18 INPUT CB (W/ 12 STR)	SHP_150_US_20	KW (AC)	TILT (°)	GCR	CSI AZIMUTH (°)	SPWR AZIMUTH (°)	DC RUN (CB-INV)							
1	2880	96	1353.6	8	8	1200	25	0.50	180	0	90, 35, 230, 170, 140, 110, 80, 50							
2	1800	60	846	5	5	750	25	0.50	0.50	0.50	0.50	25   0.50	25   0.30	25 0.50	25 0.50	180	U	165, 140, 80, 50, 30
TOTAL	4680	156	2199.6	13	13	1950												





-		G	en	eı	18	tic	n	In	C.
S		1414 RICHN (	HARBO MOND, 5 1 0 )	OUF C 5 4	R W CA	VAY S0 9480 - 0 5 5	OUTH 4 USA 0		
BY:	LF	 /TAC	RE\	/IS				 J	
				- 1					

Connecticut Green Bank
Manson Youth Institution
42 Jarvis Street

Overall Plan

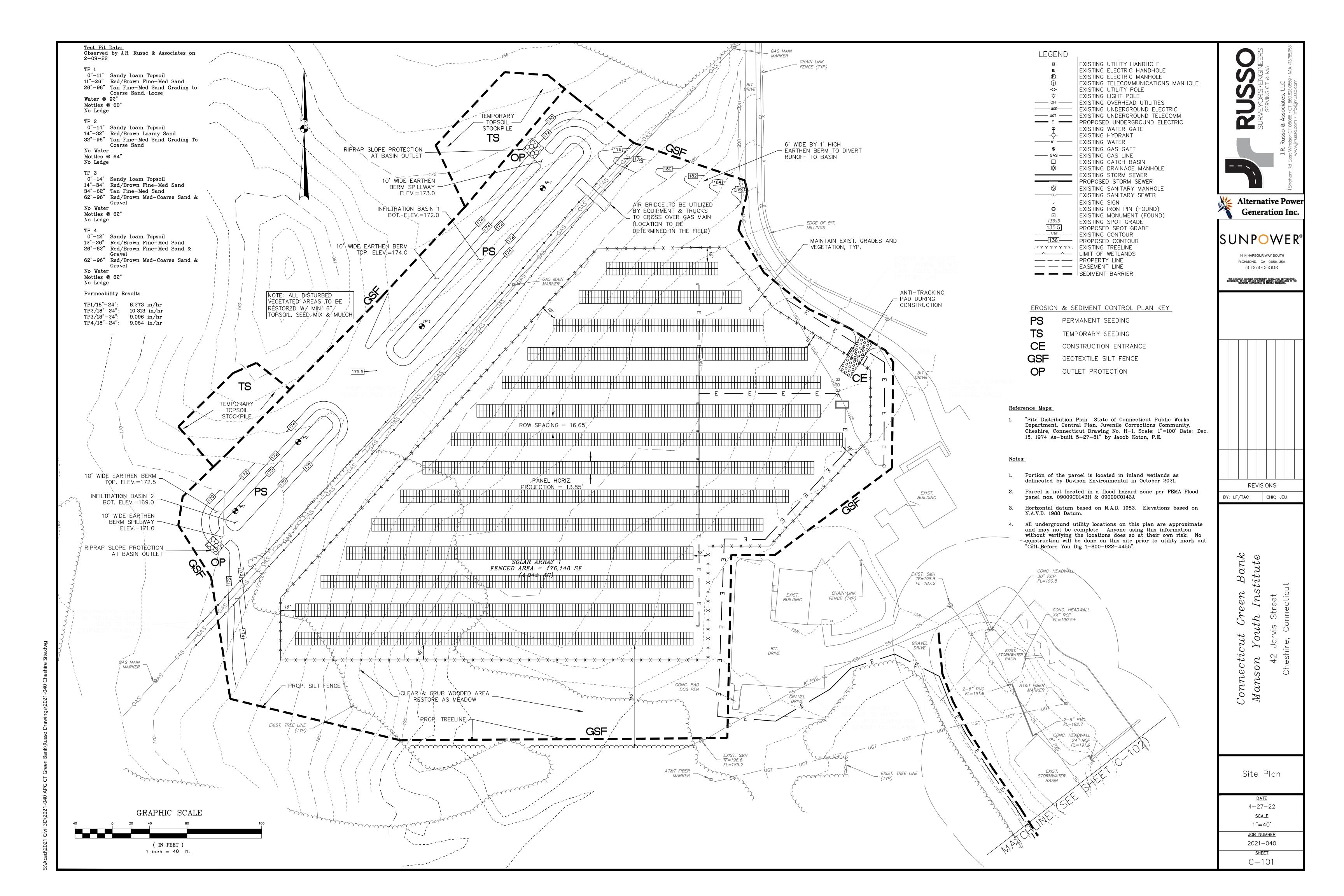
DATE
4-27-22

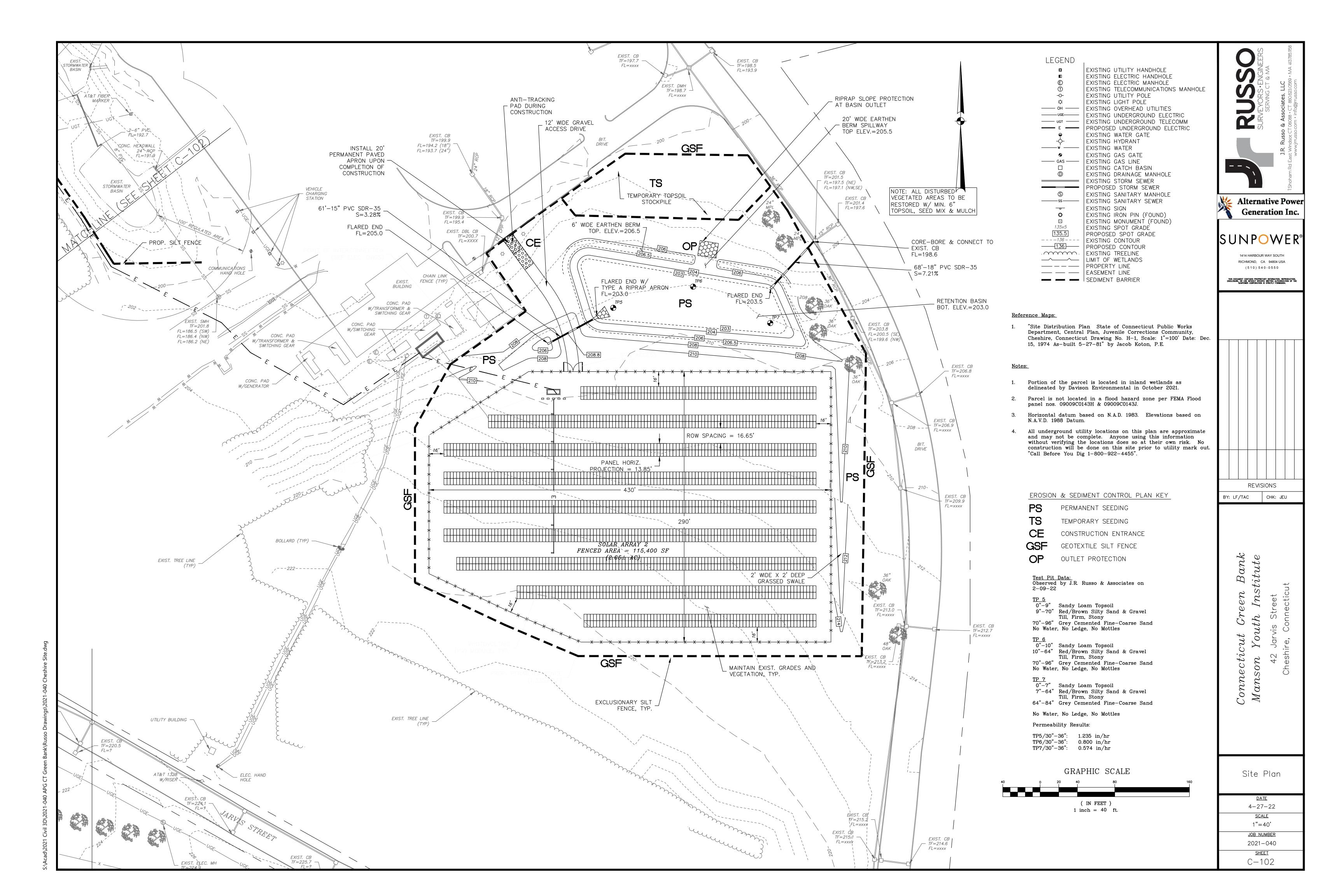
SCALE
1"=150'

JOB NUMBER
2021-040

SHEET
C-100

(2021 Civil 3D\2021-040 APG CT Green Bank\Russo Drawings\2021-040 Cheshire





# Site Preparation

Grade in accordance with the Land Grading 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 moved 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.

Lawn Areas: Premium Seed Mix for Sun and Shade. Field Areas: Companion Seed Mix by Kinas Agricseed Inc. or Stormwater Basin: New England Erosion Control/Restoration Mix by New England Wetland Plants, Inc. or approved equal.

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.

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

<u>Mulching</u>
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 Rye (grain) applied at a rate of 120 pounds per acre. Increase seeding rates by 10% when hydroseeding.

<u>Mulching</u>
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.

# MULCH FOR SEED (MS)

# **SPECIFICATIONS**

Types of Mulches within this specification include. but are not

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 lenath 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 aermination. 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 spraying 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 gums. Good for areas intended to be moved. 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.

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

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

# 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 anchorina.

# 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 Rye (grain) applied at a rate of 120 pounds per acre. Increase seeding rates by 10% when hydroseeding.

See guidelines in the Mulch For Seed measures.

# **MAINTENANCE**

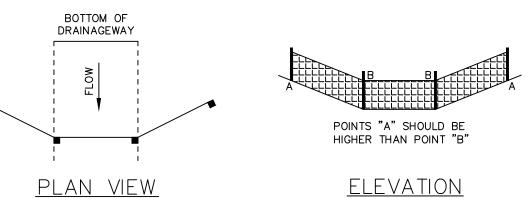
Inspect temporary seeding area at least once a week and within 24 hours of the end of a storm with a rainfall amount of 0.5 inch or greater for seed and mulch movement and rill erosion.

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

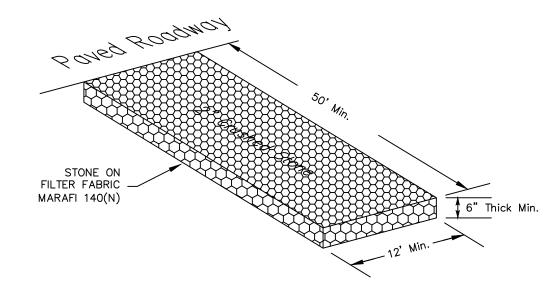
- 1. All soil erosion and sediment control work shall be done in strict accordance with the Connecticut Guidelines For Soil Erosion and Sediment Control latest edition.
- 2. Any additional erosion/sediment control deemed necessary by the engineer during construction, shall be installed by the developer. 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
- 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
- 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
- 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
- 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.

# ANGLE 10° UPSLOPE FOR STABILITY AND BACKFILL THE TRENCH SELF CLEANING. AND COMPACT THE EXCAVATED SOIL. COMPACTED FLOW —

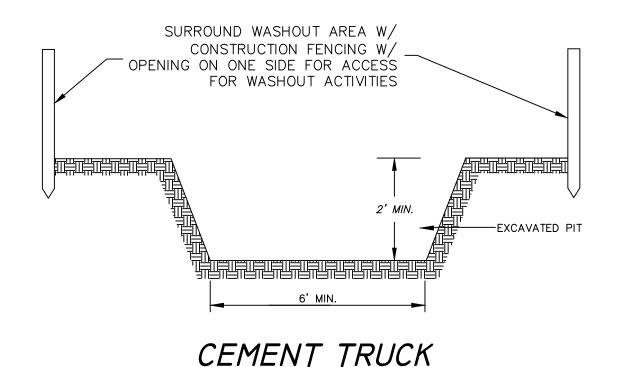


SOURCE: U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE, STORRS, CONNECTICUT

# GEOTEXTILE SILT FENCE (GSF)



DRIVEWAY/ANTI-TRACKING PAD DETAIL (CE)



WASHOUT AREA

NOT TO SCALE

# CHECKLIST FOR EROSION CONTROL PLAN

PROJECT: CT Green Bank Solar Manson Youth Correctional Institute

LOCATION: 42 Jarvis Street, Cheshire, CT

PROJECT DESCRIPTION: Construction of Photovoltaic Solar Arrays

PARCEL AREA: 244.6 acres

RESPONSIBLE PERSONNEL: Ed Pastulnik, Alternate Power Generation, Inc. (APG); 847-477-7455 EROSION AND SEDIMENT CONTROL PLAN PREPARER: J.R. Russo & Associates, LLC

		1		1	
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 MEASURES: Description or Number Date

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 Manson Youth Correctional Institution located at 42 Jarvis Street in Cheshire, Connecticut. The proposed activity is the construction of a 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. In addition, the gualified biologist shall make a presentation to educate the Contractor and on—site personnel on how to identify the eastern box turtle, and measures to be taken if encountered.
- 2. Install perimeter exclusionary silt fence (GSF) around the construction envelope as shown on the project plans.
- Contractor to perform an initial sweep for turtles within the construction envelope and remove turtles found outside of the envelope. Similar sweeps along the perimeter fence shall be conducted by the contractor each day prior to the start of work. 4. Install anti-tracking pad (CE).
- Clear trees & grub stumps in areas as shown on Plans. All debris to be removed from the
- 6. 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). 7. Construct stormwater management basin. Seed and mulch to establish vegetation as soon
- as practicable. Install foundations and solar panels.
- 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 silt fence 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:

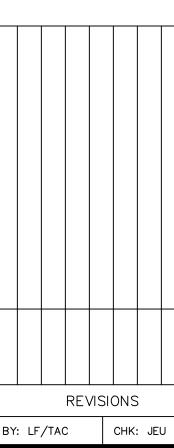
The property owner shall be responsible for performing the following post construction maintenance schedule:

- 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).
- 4. 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



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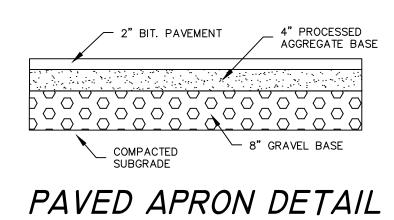
Erosion & Sediment Control

4-27-22 SCALE AS SHOWN JOB NUMBER 2021-040 SHEET

C - 201

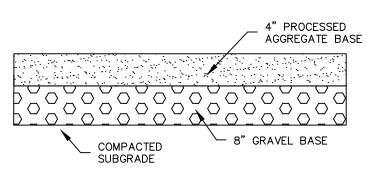
Notes & Details

# EARTHEN SPILLWAY NOT TO SCALE

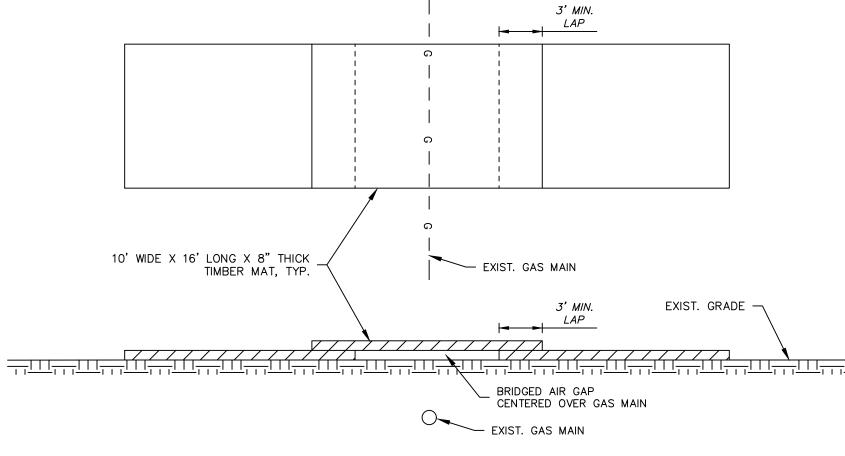


NOT TO SCALE

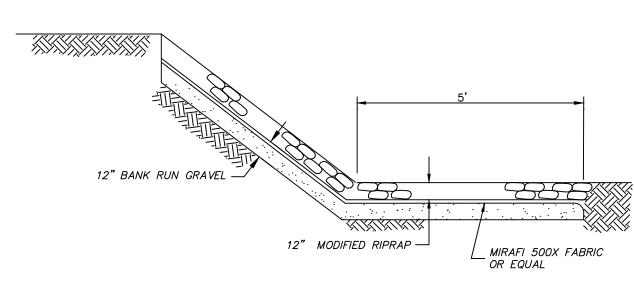
FINISH GRADE -



# GRAVEL ACCESS DRIVE NOT TO SCALE



# AIR BRIDGE OVER GAS MAIN NOT TO SCALE



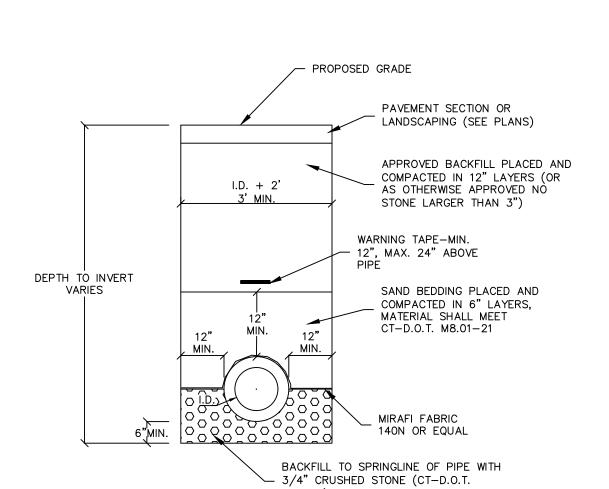
RIPRAP SLOPE PROTECTION AT SPILLWAY

# - FLARED END

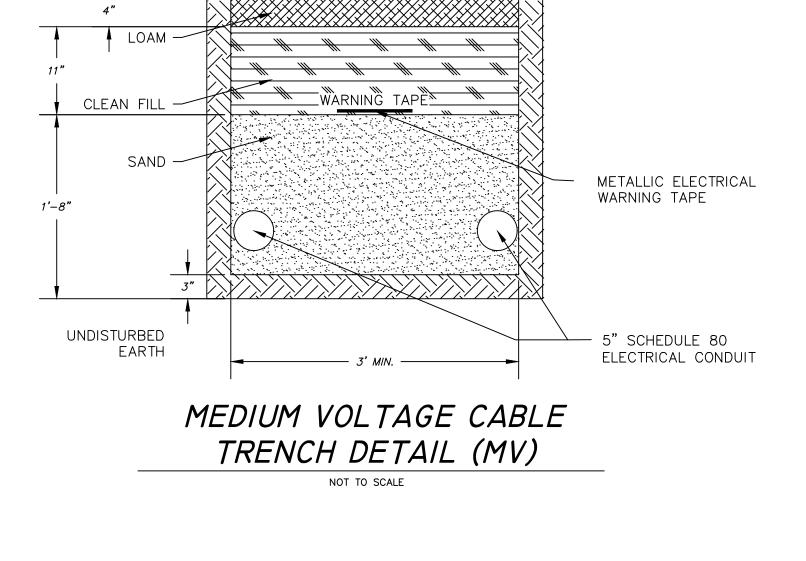
NOTE: MODIFIED RIPRAP APRON (12" THICK) ON 6" GRANULAR BASE (M.02.01) ON MIRAFI 140N FABRIC OR EQUAL

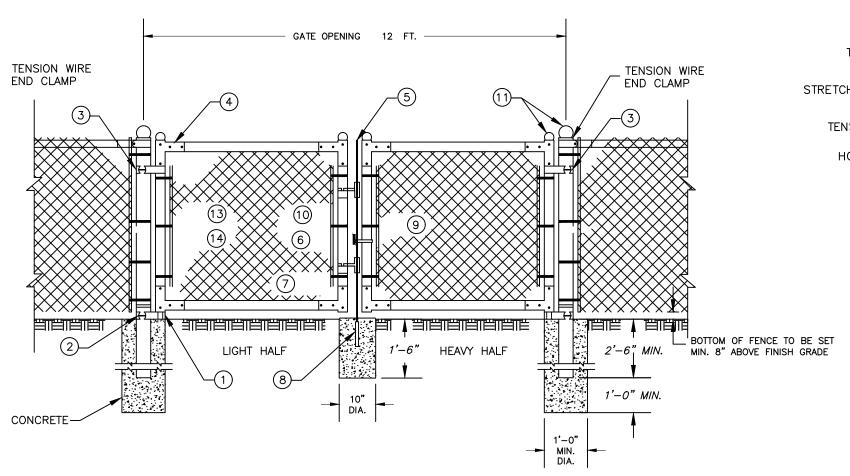
# TYPE A RIPRAP APRON (OP)

N.T.S.



STANDARD STORM DRAIN DETAIL NOT TO SCALE

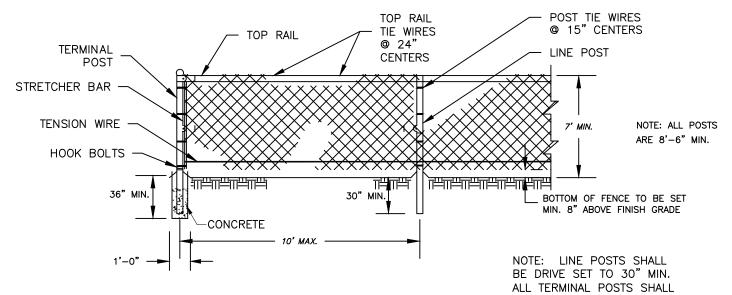




THE FENCING SHALL BE #9 GAGE FENCE FABRIC, STANDARD 2-INCH

CHAIN LINK DIAMOND MESH.

		GATE DETAIL
	<u>LEGEND</u>	
PART NO.	DESCRIPTION	QUANTITY
1	STRAIGHT PLUG	2
2	BOTTOM HINGE	2
3	TOP HINGE	2
4	CORNER ELBOW	8
5	PLUNGER ROD	1 1
6	LATCH FORK	2
7	FORK CATCH	2
8	PLUNGER ROD CATCH	1
9	LOCK KEEPER GUIDE	1
10	LOCK KEEPER	1 1
11	ORNAMENTAL TOPS	6
12	TRUSS RODS	4
13	STRETCHER BAR	4
14	HOOK BOLTS	12



			FENCE DETAILS		
SHAPE, SIZE AND WEIGHT REQUIREMENTS FOR FENCE POSTS AND RAILS					
ITEM	SHAPE	OUTSIDE DIMENSIONS INCHES	WEIGHT LBS./LIN. FT.		
**					
TERMINAL	ROUND	2.375	3.65		
POSTS	*ROUND 2.375		3.12		
LINE ROUND		1.90	2.72		
POSTS	*ROUND	1.90	2.28		
TOP & BRACE	ROUND	1.66	2.27		
RAILS	*ROUND	1.66	1.84		
* GRADE B HIGH STRENGTH STEEL					
** INCLUDES END, CORNER, ANGLE, INTERSECTION AND					
INTERME	DIATE BRACED P	OSTS			

G	GATE POST SIZE AND WEIGHT					
GATE L	.EAF	OUTSIDE	WEIGHT			
WIDTH	OF	DIMENSIONS	LBS./LIN. FT.			
6 FT. OR	LESS	INCHES				
ROUN	D	2.875	5.79			
*ROUN	D	2.875	4.64			
* GRA	DE B	HIGH STRENGT	H STEEL			

BE SET IN CONCRETE

GATE FRAME

ROUND \*ROUND

GATE FRAME MEMBERS

SIZE AND WEIGHT OUTSIDE

INCHES

1.66 1.66

\* GRADE B HIGH STRENGTH STEEL

DIMENSIONS LBS./LIN. FT.

2.27 1.84

# CONSTRUCTION NOTES

- 1. MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE MANUFACTURER'S SPECIFICATIONS.
- 2. ALL POSTS SHALL BE INSTALLED VERTICALLY. WHERE POSTS ARE INSTALLED ON AN INCLINED SURFACE, THE ANGLE OF THE POST SHALL BE ADJUSTED SO THAT THE POST WILL
- BE VERTICAL. 3. THE FENCING SHALL BE #9 GAGE FENCE FABRIC, STANDARD 2-INCH CHAIN LINK DIAMOND MESH.

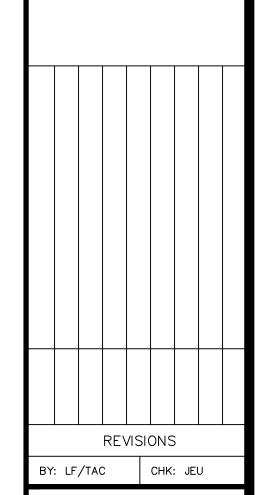
# CHAIN LINK FENCE DETAIL



	1Sho
Alternativ Generati	

U	NPOWER <sup>®</sup>
	1414 HARBOUR WAY SOUTH
	RICHMOND, CA 94804 USA
	(510)540-0550

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ut Gi	uth	42 Jarvis Street	
cticn	r $Yc$	42	
Connecticut Green Bank	Manson Youth Institution		

Details	
Details	
<u>DATE</u>	•
4-27-22	
<u>SCALE</u>	
AS SHOWN	