Richard Fon
Chairman

Matthew J. Slater
Town Supervisor

TOWN OF YORKTOWN
PLANNING BOARD

Albert. A. Capellini Community and Cultural Center, 1974 Commerce Street, Yorktown Heights, New York 10598, Phone: (914) 962-6565, Fax: (914) 962-3986

PUBLIC MEETING AGENDA
YORKTOWN TOWN HALL BOARD ROOM
363 Underhill Avenue, Yorktown Heights, NY 10598

August 16, 2021
7:00 PM

1. **Correspondence**

WORK SESSION

2. **Granite Knolls Park Solar Project**
   Pre-Preliminary Application
   Location: 26.09-1-22; 2975 Stony Street
   Contact: Bergmann PC
   Description: Proposed 1.3 MW-AC community solar project including ground mounted solar panels, solar carport system, and a battery storage system at Granite Knolls Park.

3. **Crystal Court Subdivision**
   Discussion Subdivision
   Location: 27.11-2-43; Crystal Court
   Contact: Panbar Realty
   Description: Proposed 3-lot subdivision on 5.07 acres in the R1-20 zone.

4. **3666 Old Yorktown Road**
   Discussion Fence
   Location: 16.11-1-60; 3666 Old Yorktown Road
   Contact: Carmella Pervizzi
   Description: Proposed 6 ft fence across the front yard of the property in the residential existing development located in the C-2 zone.

5. **Bird Bus Sales & Service**
   Pre-Preliminary Discussion
   Location: 35.08-1-21 & 22; 3805 Crompond Road
   Contact: JMC
   Description: Proposed Bird Bus facility at former car dealership site on 2.71 acres in the C-4 zone.

6. **Northern Westchester Executive Park aka GHP Strang, LLC**
   Discussion Site Plan
   Location: 26.19-1-2; 2651 Strang Boulevard
   Contact: Kellard Sessions Consulting
   Description: Proposed expansion of parking lot to provide flexibility for lower level tenant(s).

7. **Par 3 Golf Course**
   Discussion Site Plan
   Location: 16.07-1-38; 795 Route 6
   Contact: James Martorano Jr.
   Description: Proposed Par 3 golf course on Town owned Parkland.

8. **Kitchawan Farm Solar Farm**
   Discussion Solar Project
   Location: 70.06-1-2 & 3; 716 Kitchawan Road
   Contact: Ecogy Kitchawan Community Solar Farm, LLC
   Description: Proposed 2 MW ground mounted large-scale solar energy system.

9. **Arcadia Farm Solar Farm**
   Discussion Solar Project
   Location: 47.11-1-4; 1300 Baptist Church Road
   Contact: Croton Energy Group
   Description: Proposed 800 kW ground mounted large-scale solar energy system.

10. **Old Hill Farm Solar Farm**
    Discussion Solar Project
    Location: 16.08-1-4 & 17; 571 East Main Street, Jefferson Valley
    Contact: Hillside Solar LLC
    Description: Proposed 3.75 MW ground mounted solar panels disturbing 15 acres on a 19.4 acres in the R1-20 zone.

11. **Strawberry Road Solar aka Ciuffetelli CDG Solar Project**
    Discussion Solar Project
    Location: 15.12-1-12, 14, & 30; 1696-1700 Route 6 and 1645 Strawberry Road
    Contact: Green Street Power Partners
    Description: Proposed 2.4 MW-DC ground mounted solar panels disturbing 9.10 acres on 21 acres in the R1-20 zone.

Last Revised – August 16, 2021

Granite Knolls Park Solar Project

BERGMANN
ARCHITECTS ENGINEERS PLANNERS

July 28, 2021

Mr. John A. Tegeder, Director of Planning
Albert A. Capellini Community & Cultural Center
1974 Commerce Street
(Top Floor, Room 222)
Yorktown Heights, NY 10598
(914) 962-6565

RECEIVED
PLANNING DEPARTMENT
JUL 28 2021
TOWN OF YORKTOWN

RE: Granite Knolls Park Solar Project
Pre-Preliminary Application

Dear Mr. Tegeder;

On behalf of HESP Solar LLC, please find enclosed a complete Pre-Preliminary Application for the Granite Knolls Park Solar Project. By submission of this application, we are requesting to be placed on the agenda for the August 9th, 2021 Planning Board meeting to review the proposed solar project. The project involves the installation of ground and carport mounted photovoltaic panels at Granite Knolls Park.

Please find the enclosed items for your review:

- Eight (8) copies of the Pre-Preliminary Application
- Eight (8) copies of the Site Plans
- $100 Application Fee (provided under separate cover)

Should you have any questions or require additional information, do not hesitate to contact me at (518) 556-3631 or by email at eredding@bergmannpc.com.

Sincerely,

Eric Redding

Eric Redding, PE, LEED AP
DISCIPLINE LEADER, BERGMANN

2 Winners Circle, Suite 102
Albany, NY 12205
TEL: 518.862.0325
www.bergmannpc.com

TOWN OF YORKTOWN
PLANNING BOARD

Albert A. Capellini Community and Cultural Center, 1974 Commerce Street, Yorktown Heights, New York 10598, Phone (914) 962-6565, Fax (914) 962-3986

PRE-PRELIMINARY APPLICATION

Date 7/27/2021

1. **Tax Map Designation:** Section 26.09 Block 1 Lot 22

2. **Zone:** R1-160 **Acreage:** 19.40

3. **Type of Development:** ☑ Site Plan ☐ Subdivision

4. **If subdividing, how many total lots are proposed?** _____

5. **A brief description of the proposed development:**

The proposed development consists of a 1.3± MW-AC community solar project (Granite Knolls Park Solar Project). It includes ground mounted solar panels, solar carport system, and a battery system. It will involve the installation of the photovoltaic panels, battery system, electric utility upgrades and perimeter fencing.

6. **Applicant:**

Name	Daniel Grohman
Firm	HESP Solar LLC
Address	1 Paragon, Suite 255
	Montvale, NJ 07645
Phone	(845) 405-0600
Fax	N/A
Email	dgrohman@hespsolar.com

7. **Owner of Record:**

Name	Town of Yorktown Parkland
Address	2975 Stony Street
	Yorktown Heights, NY 10598
Phone	(914) 962-5722
Fax	N/A
Email	N/A

8. **Designated contact person for this application:**

Name	Bergmann c/o Eric Redding, PE
Fax #	N/A
Email	eredding@bergmannpc.com

Applicant	Owner of Record
SIGNATURE	SIGNATURE
Daniel Grohman	
PRINT NAME	PRINT NAME
7/27/21	
DATE	DATE

Note: By signing this document the owner of the subject property grants permission for Town Officials to enter the property for the purpose of reviewing this application.

ARCH D 24x36

SYSTEM INFORMATION	
SYSTEM SIZE, STC	1.4MW-DC, 1.3MW-AC
MODULES	Q.CELL, 410, 410W, 3420 UNITS
INVERTERS	SOLECTRIA, XGI 1500-166/166, 166kW, 8 UNITS
STRINGS	GROUND MOUNT: 50 STRINGS OF 18 MODULES CANOPY: 126 STRINGS OF 20 MODULES
BATTERY	DYNAPOWER, 4432KWH, 1MW WITH 4 HR DURATION
ORIENTATION	GROUND MOUNT: 25° TILT, 180° AZIMUTH CANOPY: 7° TILT, 174° AZIMUTH

LEGEND

- SOLAR MODULES
- TRANSFORMER & SWITCHGEAR PAD
- PROPOSED CONDUCTORS
- EXISTING UTILITY OVERHEAD CONDUCTORS
- PROPOSED ELECTRICAL POLE
- EXISTING ELECTRICAL POLE
- BATTERY SYSTEM
- FENCE LINE

N

0 40 80 120 FT

1" = 40' SCALE BAR

BERGMANN
ARCHITECTS ENGINEERS PLANNERS

2 Winners Circle, Suite 102
Albany, NY 12205

www.bergmannpc.com
office: 518.862.0325
fax: 518.862.0326

HESP SOLAR

YORKTOWN GRANITE KNOLLS

2975 STONEY STREET
MOHEGAN LAKE, NY 10547

Date Revised	Description

STATE OF NEW YORK
BRETT C. ELIASZ
089980-1
LICENSED PROFESSIONAL ENGINEER

NOT FOR CONSTRUCTION
30 % SUBMISSION

Project Manager	Discipline Lead
E REDDING	E REDDING
Designer	Reviewer
K CONNOLLY	B ELIASZ
Date Issued	Project Number
06/10/21	015111.00

Sheet Name

OVERALL SITE LAYOUT

Drawing Number

E101

6/9/2021 8:38 AM

Crystal Court

Letter of Transmission

To: Robyn Steinberg, A.I.C.P., Town Planner

From: Paul J. Jaehnig
Tel. 203 438 9993
Cell 203 241 3515
e-mail pjaehnig76@gmail.com

Date: June 19, 2021

Re: Crystal Court Site / Town of Yorktown

Dear Robyn:

I believe John Barile e-mailed the enclosed documents for the proposed project on Crystal Court. I have enclosed a hard copy of EC-1 and MP-1 for your use in case you are not able to printout a full sized drawing. Should you have any questions or need extra copies just let me know.

I look forward to hearing from you.

Sincerely,

Paul J. Jaehnig PJJ

Paul J. Jaehnig- Wetlands and Soils Consulting
P.O. Box 1071
Ridgefield, CT 06877
e-mail pjaehnig76@gmail.com
cell 203 241 3515

GENERAL NOTES TO MAP

1. WETLAND BOUNDARY DELINEATED BY TED KOZLOWSKI.
2. SURVY LOCATED OF TREES AND PROPERTY LINE BY LINK LAND SURVEYING.
3. IDENTIFICATION OF TREES, VEGETATIVE COVERS, AND MAN-MADE DEBRIS BY PAUL J. JAEHNIG- WETLANDS AND SOILS CONSULTING.

N

SWAMPLAND
RED MAPLE TREE CANOPY
COMMON MULTIFLORA ROSE
SHRUB UNDERSTORY

FIELDSTONE WALL

PROPERTY LINE

12 IN.
14 IN. RM
14 IN. RM
8 IN. RM
14 IN. RM
8 IN. RM
8 IN. RM
12 IN. RM
16 IN. RM
8 IN. RM
12 IN. RM
10 IN. RM
14 IN. RM
12 IN. RM
8 IN. RM
8 IN. RM
14 IN. RM
12 IN. RM
22 IN. RM
18 IN. RM
10 IN. RM
10 IN. RM
22 IN. RM
12 IN. RM
16 IN. RM
10 IN. RM
8 IN. RM
10 IN. RM
12, 10, 8 IN. RM

NO TREE CANOPY
DENSE MULTIFLORA ROSE
SHRUB COVER WITH FEW
CUT-THROUGHS MADE BY DEER

FIELDSTONE WALL

PILE OF MULCH

NO TREE CANOPY
DENSE MULTIFLORA ROSE
SHRUB COVER WITH FEW
CUT-THROUGHS MADE BY DEER

EDGE OF PAVEMENT

DRIVE PAD CONSISTING OF
COMPACTED GRAVEL AND
PROCESSED STONE

SCARIFIED GROUND

CRYSTAL COURT

MEADOW WITH DENSE COVER
OF MUGWORT, FEW RAGWEED,
FEW FOX SEDGE

12 IN. SM
8 IN. BC
18 IN. TWN RM
12 IN. SM
12 IN. SM
12 IN. SM
12, 6 IN. TWN RM
10 IN. SM
16 IN. SM

EDGE OF WOODLANDS

WOODLANDS WITH OPEN UNDERSTORY
EXCEPT FOR FEW WINGED EUONYMUS
SHRUBS; SCATTERED HERBACEOUS GROWTH
OF GARLIC MUSTARD; AND VIRGINIA
CREEPER GOUNDCOVER.

PILE OF BELGIAN BLOCKS

16, 12 IN. SM
10 IN. SM
8 IN. SM
8 IN. SM
14 IN. SM
18 IN. RM
16 IN. SM
14 IN. SM
12 IN. SM
14 IN. ASH
16 IN. ASH
8 IN. SM
12 IN. SM
14 IN. ASH
16, 6 IN. SM
8 IN. SM
10 IN. SM
14 IN. SM
10 IN. ASH
8 IN. ASH
8 IN. SM
12 IN. SM
8 IN. SM
12 IN. SM
16 IN. SM
28 IN. BC
12 IN. HK
8 IN..
6 IN. SM
18 IN. SM
14 IN. ASH
18 IN. SM
26 IN. SM

WOODLANDS
OPEN UNDERSTORY
GARLIC MUSTARD, MUGWORT,
VIRGINIA CREEPER, AND POISON IVY

EXISTING CONDITIONS MAP
1 IN. = 30 FT.

PROPERTY LINE

12 IN. SM
10 IN. RM
14, 12, 10 IN. ASH
10 IN. BC
10 IN. BC
14 IN. BC
14, 12, 10 IN. SM
14 IN. BC

WOODLANDS
THIN SHRUB UNDERSTORY
OF PRIVET AND WINGED EUONYMUS;
GROUNDCOVER OF SCATTERED
POISON IVY AND VIRGINIA CREEPER

GOLENROD, FEW FOX SEDGE,

14 IN. SM
10 IN. SM
22 IN. SM
8 IN. SM
16 IN. SM
PILE OF PROCESSED STONE
12 IN. SM
12 IN. BC
12, 10, 8 IN. RM
14 IN. SM
10 IN. BC
8 IN. SM
18 IN. SM
16 IN. BC
12 IN. SM
8 IN. SM
8 IN. SM
12 IN. SM
16 IN. SM
6 IN. SM
18 IN. SM
18 IN. SM
14 IN. ASH

KEY TO MAP

FLAGGED WETLAND BOUNDARY

12 IN. RM — TREE DIAMETER IN INCHES AT BREAST HEIGHT; TREE TYPE

ASH	ASH
BC	BLACK CHERRY
HK	HICKORY
RM	RED MAPLE
SM	SUGAR MAPLE

No.	DATE				
5	11-5-19	COMMENTS			
4	10-15-19	COMMENTS			
3	10-5-18	COMMENTS			
2	5-3-18	TREE REPLACEMENT LAYOUT			
1	5-31-17	PROPOSED HOUSE REVISED	7	2-23-21	ADDITIONAL DRAINAGE IN CRYSTAL CT.
			6	11-22-19	COMMENTS FROM PLANNING BOARD

JOHN KARELL, JR. P.E.
121 CUSHMAN ROAD
PATTERSON, NEW YORK 12563
845-878-7894 phone
845-878-4939 fax
jack4911@yahoo.com

STATE OF NEW YORK — JOHN KARELL, JR. — No. 53277 — LICENSED PROFESSIONAL ENGINEER

OWNER:
PANBAR REALTY, LLC
LOUIS PANNY, PRESIDENT
CRYSTAL COURT, YORKTOWN (T)

SCALE: AS SHOWN

LATEST REVISION:

DATED: MAY 3, 2021

SHEET No. EC-1

CHECKED:

EXISTING CONDITIONS MAP
DEPICTING LOCATION, TYPE, AND SIZE OF TREES IN PROPOSED DEVELOPMENT AREA

PROPOSED MIGTIGATION PLANTING PLAN

1 IN. = 30 FT.

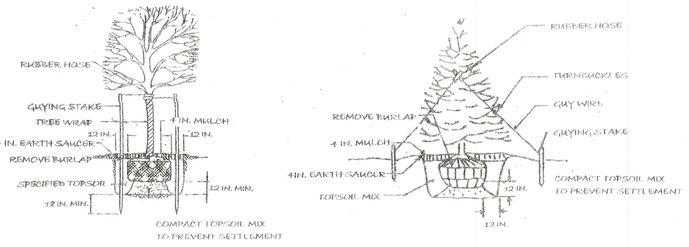
SHRUB PLANTING DETAIL

N.T.S.

NOTE: AT REMOVAL OF SILT FENCE THE CONTRACTOR SHALL RESTORE THE GROUND TO THE ORIGINAL CONDITION.

SILT FENCE DETAIL

N.T.S.



DECIDUOUS TREE EVERGREEN TREE

TREE PLANTING DETAILS

N.T.S.

KEY TO PROPOSED MITIGATION PLANTING PLAN

PLAN LOCATION	COMMON NAME	BOTANICAL NAME	FORM	SIZE	QUANT.
TREES: 18					
GB	GRAY BIRCH	BETULA POPULIFOLIA	B & B*	2 IN. **	2
PO	PIN OAK	QUERCUS PALANTU	B & B*	2 IN. **	3
RM	RED MAPLE	ACER RUBRUM	B & B*	2 IN. **	6
WP	WHITE PINE	PINUS STROBUS	B & B*	2 IN. **	8

* B & B = BALLED AND BURLAPPED
** TRUNK DIAMETER IN INCHES AT BREAST HEIGHT

ET	EXISTING TREE				
SHRUBS: 102					
ARW	ARROWWOOD	VIBURNUM DENTATUM	2 GAL. CONT.	24-30 IN. HT.	48
HB	HOBBLEBUSH	VIBURNUM ALNIFOLIUM	2 GAL. CONT.	24-30 IN. HT.	24
BYB	BAYBERRY	MYRICA PENSYLVANICA	2 GAL. CONT.	24-30 IN. HT.	30
HERBACEOUS: 340					
BES	BLACK-EYED SUSAN	RUDBECKIA HIRTA	1 QUART CONT.	N/A	60
CLC	CUT-LEAVED CONEFLOWER	RUDBECKIA LACINIATA	1 QUART CONT.	N/A	60
CF	CINNAMON FERN	OSMUNDA CINNAMOMEA	1 QUART CONT.	N/A	60
JPW	JOE-PYE WEED	EUPATORIUM MACULATUM	1 QUART CONT.	N/A	60
HSF	HAY-SCENTED FERN	DENNSTAEDTIA PUNCTILOBUTA	1 QUART CONT.	N/A	100

GENERAL PLANTING NOTES:

1. VERIFY ANY BURIED UTILITIES.

2. PLANTING TO BE CARRIED-OUT BETWEEN APRIL 15 TO JUNE 1 AND AUG. 15 TO NOV.1 (UNLESS OTHERWISE DIRECTED BY THE TOWN OF YORKTOWN ENV. CONSULTANT).

3. MARK-OUT LIMITS OF GROUND IN THE FIELD TO BE CLEARED IN MITIGATION PLANTING AREA (MP) AND VERIFY LIMITS WITH TOWN. INSTALL EROSION & SEDIMENT CONTROL FENCE ALONG CONTOUR AT LOWESTELEVATION CONTOUR POSITION OF MITIGATION PLANTING AREA; PROVIDE TREE PROTECTION AROUND EXISTING TREES TO REMAIN.

4. REMOVE INVASIVE MULTIFLORA ROSE SHRUB UNDERSTORY, MAKING SURE TO REMOVE ROOTS. MACHINE METHODS OR USE OF GOATS TO REMOVE MAY BE USED, BUT CHEMICAL APPLICATIONS TO BE USED. USE HAND-HELD MACHINES AND OR CAB OPERATED MACHINE WITH LOW IMPACT TRACKING.

5. PLANTS ARE TO BE INSTALLED AS DEPICTED ON THE PLAN, AS IS FEASIBLE.

6. POTTED PLANT HOLES AND GROUND PREPARATION TO BE CARRIED-OUT AS DEPICTED IN DETAILS. HOLES FOR PLANTINGS SHOULD BE EXCAVATED TO AT LEAST 4 INCHES CLEARANCE AROUND THE SOIL BALL AND BELOW ROOT SYSTEM. THE SOIL IN THE BOTTOM OF THE HOLE SHALL BE LOOSENED TO A DEPTH OF 4 INCHES.

7. THE POTTED PLANTS WILL BE PLACED IN AN UPRIGHT POSITION IN THE HOLES ON A PEDESTAL OF COMPACTED TOPSOIL MIX TO A DEPTH SUCH THAT THE ROOT "COLLAR" IS COINCIDENT WITH THE ESTABLISHED GROUND LEVEL.

8. EACH HOLE WILL BE BACKFILLED WITH TOP SOIL HAVING A TWO TO TWENTY PERCENT ORGANIC CONTENT. INSTALL TEMPORARY DEER FENCING AROUND YOUNG TREES & SHRUBS BASED ON SITE CONDITONS.

9. FINE RAKE DISTURBED BARE SOIL AREAS TO BE SEEDED. APPLY TOP SOIL AMENDMENT TO GROUND SURFACE, AS NEEDED.

10. APPLY SEED GROUNDCOVER TO BARE SOIL AREAS. WORK SEEDS INTO TOP SOIL. APPLY WEED-FREE STRAW MULCH COVER (ANCHORED) OVER SEEDED AREAS.

11. ALL PLANTS WILL BE THOROUGHLY WATERED ON THE DAY OF PLANTING, AS IS WARRANTED. WATER PLANTS DAILY FOR TWO WEEKS AFTER PLANTING, IF NEEDED. CONTINUE WATERING PLANTS EVERY TWO WEEKS, IF NEEDED, DURING DRY PERIODS THAT EXCEED THREE WEEKS WITHOUT A GOOD SOAKING.

12. ALL AREAS DISTURBED BY PLANTING MITIGATION WORK, INCLUDING ACCESS ROUTE, WILL BE RESTORED TO EXISTING OR BETTER CONDITIONS.

13. NOTIFY TOWN OF YORKTOWN ENVIRONMENTAL CONSULTANT ONCE PLANTINGS ARE INSTALLED SO THAT THE TOWN CAN MAKE A SITE VISIT TO INSPECT SITE.

NOTES REGARDING REMOVAL OF INVASIVE MULTIFLORA ROSE SHRUBS:

1. REMOVAL OF SHRUBS TO BE CARRIED-OUT BY MECHANICAL MEANS, I.E., USING HAND-HELD TOOLS OR CAB OPERATED MACHINE WITH LOW IMPACT TRACKING OR GOATS.

2. REMOVAL TIME IS RECOMMENDED IN EARLY SPRING (U.S. FOREST SERVICE GUIDELINE) MULTIFLORA ROSE SHRUBS LEAF OUT AND SOIL IS MOIST FOR EASIER REMOVAL.

4. REMOVAL TO INVOLVE CUTTING, PULLING, OR DIGGING METHODS AND USING A HOE, WEED WRENCH, OR MATTOCK TO UPROOT THE BARBERRY AND ALL CONNECTED PARTS.

5. SHRUBS TO BE STOCKPILED FOR PICK-UP AND REMOVAL FROM SITE.

6. MONITOR AREAS OF SHRUB REMOVAL TO DETERMINE IF A FOLLOW-UP PROGRAM OF SHRUB REMOVAL IS REQUIRED.

GENERAL NOTES RELATED TO PREPARATION SEED BEDS IN MITIGATION AREA:

1. REMOVE EXISTING MULTIFLORA ROSE SHRUBS IN PLANTING MITIGATION AREA BY MECHANICAL METHODS ONLY AND NOT CHEMICAL METHODS.

2. RAKE SMOOTH DISTURBED BARE SOILS AREAS, MAKING THEM FREE OF RUTS, ROOTS, AND MAN-MADE DEBRIS.

3. APPLY, IF NEEDED, A 4 TO 6 IN. COVER OF TOP-SOIL TO AMEND THE SOIL FOR SEEDING.

4. APPLY SEED MIX, BY HAND, OVER SOIL SURFACE AND IN A UNIFORM APPLICATION RATE. FINE RAKE SEED APPROX. 1/4 IN. DEPTH INTO THE SOIL SURFACE.

5. APPLY A THIN COVER OF WEED-FREE STRAW MULCH OVER THE SEEDED SOIL SURFACE. LIGHTLY PUNCH MULCH INTO THE SOIL IN ORDER TO ANCHOR IT.

6. GENTLY WATER SEEDED AREAS THE DAY OF SEEDING TO INSURE A GOOD SOAKING.

7. ROUTINELY WATER THE SEEDED AREAS, AS NEEDED, UNTIL THE VEGETATIVE COVER IS FIRMLY ESTABLISHED.

SEED MIXES:

MMSM — MOIST MEADOW SEED MIX
APPLICATION RATE OF 1 LB. / 300 SQ. FT.

COMPOSED OF:

BEE BALM	MONARDA DIDYMA
CANADA LILY	LILIUM CANADENSE
FIREWEED	EPILOBIUM AUGUSTIFOLIA
IRONWEED	VERNONIA NOVEBORACENSIS
JOE-PYE WEED	EUPATORIUM PURPUREUM
QUEEN-OF-THE-PRARIE	FILIPENDULA RUBRA

WNWFM — WETLAND NATIVE WILDFLOWER MIX
APPLICATION RATE OF 1 LB. / 300 SQ. FT.

COMPOSED OF:

BONESET	EUPATORIUM PERFOLIATUM
BLUE VERVAIN	VERBANA HASTATA
SMOOTH PANIC-GRASS	PANICUM DICHOTOMIFLORUM
WRINKLED GOLDENROD	SOLIDAGO RUGOSA
JOE-PYE WEED	EUPATORIUM MACULATUM
GRASS LEAF GOLDENROD	EUTHAMIA GRAMINIFOLIA
PENNSYLVANIA SMARTWEED	POLYGONUM PENSYLVANICUM
N.E. ASTER	ASTER NOVAE-ANGLIAE
NODDING BEGGAR'S TICK	BIDENS CERNUA
SWAMP MILKWEED	ASCELEPIAS INCARNATA

NIWREM — NORTHEAST UPLAND WILFLOWER / RESTORATION EROSION MIX
NON-WETLAND AREAS
APPLICATION RATE OF 1 LB / 300 SQ. FT.
COMPOSED OF:

GRASS PORTION (42 LBS.)

REDTOP	AGROSTIS ALBA
RED FESCUE	FESTUCA RUBRA
ANNUAL RYEGRASS	LOLIUM MULTIFLORUM

LEGUME PORTION (4 LBS.)

BIRDSFOOT TREFOIL	LOTUS CORNICULATUS

WILDFLOWER PORTION (1 LB.)

COMMON YARROW	ACHILEA MILLEFOLIUM
BLACK-EYED-SUSAN	RUDBECKIA HIRTA
OX-EYE DAISY	CHRYSANTHEMUM LEUCANTHEM
NE. ASTER	ASTER NOVAE-ANGLIAE
DAME'S ROCKET	HESPERIS MATRONALIS
QUEEN ANNE'S LACE	DAUCUS CAROTA
PENNSYLVANIA SMARTWEED	POLYGONUM PENSYLVANICUM

OTS — OATS SEEDING TO ESTABLISH GROUNDCOVER IN NON-WETLAND AND WETLAND AREAS

APPLICATION RATE OF 100 LBS. / ACRE

COMPOSED OF:

OATS	AVENA SATIVA

GENERAL NOTES TO PLAN

1. WETLAND BOUNDARY DELINEATED BY TED KOZLOWSKI
2. SURVEY LOCATION OF TREES AND PROPERTY LINE BY LINK LAND SURVEYING.
3. PROPOSED SITE PLAN DEVELOPMENT INFORMATION FROM JOHN KARELL, P.E.
4. PROPOSED MITIGATION PLAN BY PAUL J. JAEHNIG WETLANDS AND SOILS CONSULTING.

SURVEY AND TOPO PREPARED BY LINK LAND SURVEYORS, P.C. FOR PANBAR REALTY LLC

ALTERATION OF THIS DRAWING EXCEPT BY A LICENSED P.E. OR ARCHITECT OR LICENSED LAND SURVEYOR IS ILLEGAL. ANY ALTERATION BY A P.E. OR ARCHITECT OR SURVEYOR MUST BE INDICATED AND BEAR HIS SEAL, SIGNATURE AND DATE OF ALTERATION.

No.	DATE				
5	11-5-19	COMMENTS			
4	10-15-19	COMMENTS			
3	10-5-18	COMMENTS			
2	5-3-18	TREE REPLACEMENT LAYOUT			
1	5-31-17	PROPOSED HOUSE REVISED	7	2-23-21	ADDITIONAL DRAINAGE IN CRYSTAL CT.
			6	11-22-19	COMMENTS FROM PLANNING BOARD

JOHN KARELL, JR. P.E.
121 CUSHMAN ROAD
PATTERSON, NEW YORK 12563
845-878-7894 phone
845-878-4928 fax
jack911@yahoo.com

STATE OF NEW YORK — JOHN KARELL JR. — LICENSED PROFESSIONAL ENGINEER — No. 53277

OWNER: PANBAR REALTY, LLC LOUIS PANNY, PRESIDENT CRYSTAL COURT, YORKTOWN (T)	SCALE: AS SHOWN	LATEST REVISION:	
	DATED: MAY 3, 2021	SHEET No MP-1	
MITIGATION PLANTING PLAN	CHECKED:		

Diane Dreier Co-Chair
Phyllis Bock Co-Chair

Matthew Slater
Town Supervisor

TOWN OF YORKTOWN
CONSERVATION BOARD

Town of Yorktown Town Hall, 363 Underhill Avenue, Yorktown Heights, New York 10598, Phone (914) 962-5722

MEMORANDUM

To: **Planning Board**

From: **Conservation Board**

Date: **July 9, 2021**

Re: **Crystal Court Subdivision**

The Conservation Board at its July 7, 2021 meeting discussed Crystal Court a proposed three lot Subdivision SBL: 27.11-2-43 with Panbar Realty. The applicant will be removing a large area of multiflora rose, and replanting with native trees, shrubs and perennial wildflowers. The applicant also proposes to move an existing stone wall to demarcate the proposed conservation easement on the property. The Conservation Board is in favor of these actions and advises that the project move forward.

Respectfully submitted:

Phyllis Bock

For the Conservation Board

CC: Town Board
Planning Board
Supervisors Office
Engineering Dept.
Applicant

To: Yorktown Planning Board
From: Yorktown Tree Conservation Advisory Commission (TCAC)
Date: July 11, 2021

RE: Crystal Court Subdivision Mitigation Plan

Chairman Fon and members of the Planning Board,

The TCAC received the mitigation Plans for Crystal Court subdivision and have the following comments.

1. The existing conditions map lists names of trees and their sizes. Hickory tree species need to be identified to complete the requirement of 270-8.C(1)c.

2. Tree removals on lots 2 and 3 appear to be excessive; a number of trees slated for removal could be retained.

3. The tree sizes in the proposed mitigation planting plan are noted in inches at breast height. Nursery stock of trees are measured in caliper.

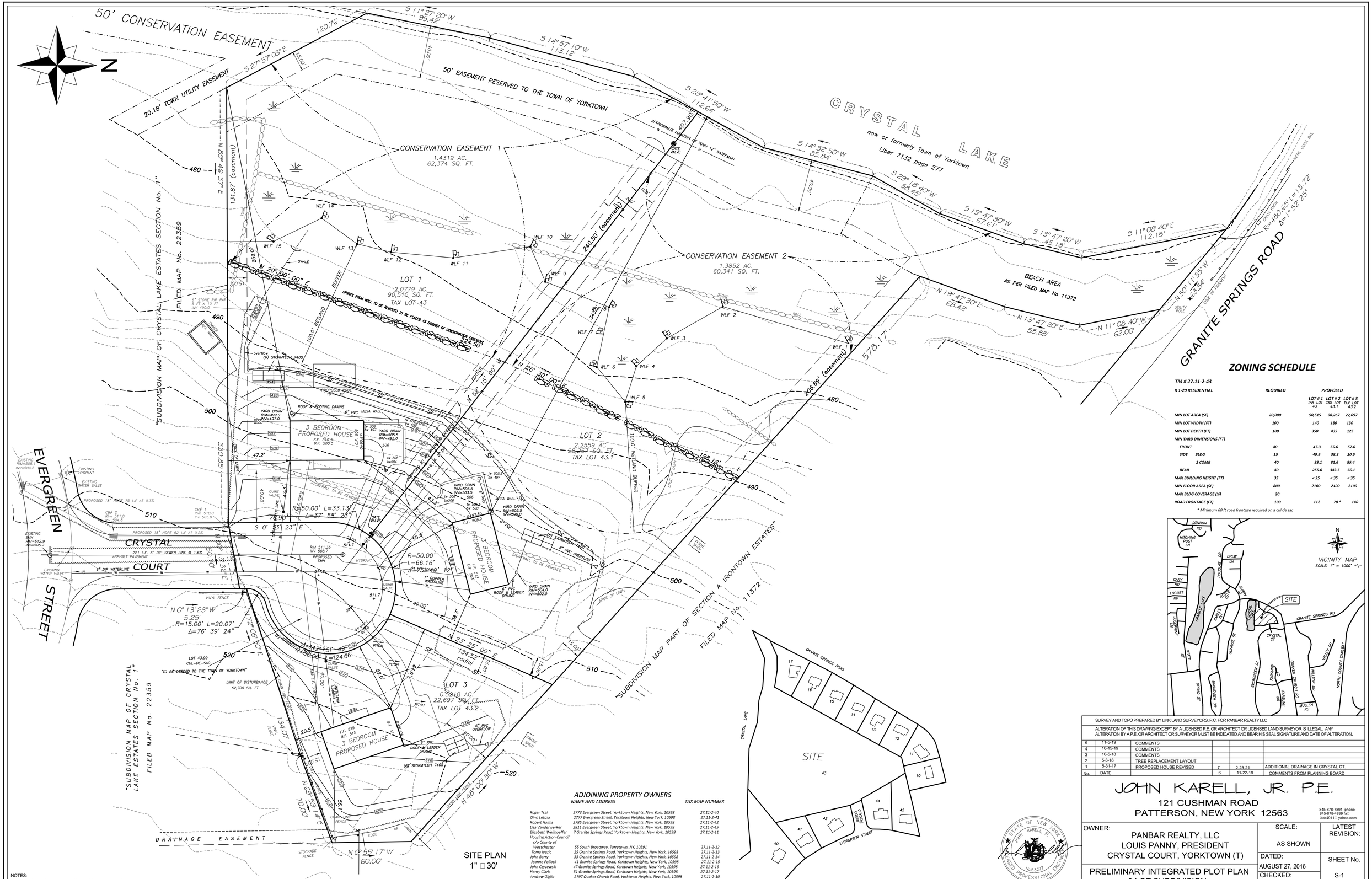
4. Cornell University has identified Arrowwood - Viburnum Dentatum highly susceptible to Viburnum Leaf Beetle. Hobblebush - Viburnum Alnifolium is moderately susceptible.

5. TCAC suggests the planting of native species.Chapter 270 - 10.C(4)
Winterberry - Ilex Verticillata and Spice Bush - Lindera Benzoin

6. Mitigation Planting Plan has notes listed regarding removal of Multi-Flora Rose.
#6 monitor areas to determine follow up does not specify time period.

7. The Mitigation Plan is not sufficient in equaling the total disturbance of the existing ecosystem. A $500 contribution to the Yorktown Tree Fund should be levied.

Lawrence W.Klein, PE,Member
Tom Schmitt, Member
Keith Schepart ISA, Member



SITE PLAN
1" □ 30'

NOTES:
WETLAND FLAGGED BY TED KOWSLOWSKI, JUNE 22, 2016
AND LOCATED BY LINK LAND SURVEYORS AUGUST 27, 2016

ZONING SCHEDULE

TM # 27.11-2-43

R 1-20 RESIDENTIAL	REQUIRED	PROPOSED		
		LOT # 1 TAX LOT 43	LOT # 2 TAX LOT 43.1	LOT # 3 TAX LOT 43.2
MIN LOT AREA (SF)	20,000	90,515	98,267	22,697
MIN LOT WIDTH (FT)	100	140	180	130
MIN LOT DEPTH (FT)	100	350	435	125
MIN YARD DIMENSIONS (FT)				
FRONT	40	47.3	55.6	52.0
SIDE BLDG	15	40.9	38.3	20.5
SIDE 2 COMB	40	88.1	81.6	85.4
REAR	40	255.0	343.5	56.1
MAX BUILDING HEIGHT (FT)	35	< 35	< 35	< 35
MIN FLOOR AREA (SF)	800	2100	2100	2100
MAX BLDG COVERAGE (%)	20			
ROAD FRONTAGE (FT)	100	112	70 *	140

* Minimum 60 ft road frontage required on a cul de sac

ADJOINING PROPERTY OWNERS

NAME AND ADDRESS		TAX MAP NUMBER
Roger Tsai	2773 Evergreen Street, Yorktown Heights, New York, 10598	27.11-2-40
Gino Letizia	2777 Evergreen Street, Yorktown Heights, New York, 10598	27.11-2-41
Robert Haims	2785 Evergreen Street, Yorktown Heights, New York, 10598	27.11-2-42
Lisa Vanderwerker	2811 Evergreen Street, Yorktown Heights, New York, 10598	27.11-2-45
Elizabeth Weilhoeffer Housing Action Council c/o County of Westchester	7 Granite Springs Road, Yorktown Heights, New York, 10598 55 South Broadway, Tarrytown, NY, 10591	27.11-2-11 27.11-2-12
Toma Ivezic	25 Granite Springs Road, Yorktown Heights, New York, 10598	27.11-2-13
John Barry	33 Granite Springs Road, Yorktown Heights, New York, 10598	27.11-2-14
Jeanne Pollock	41 Granite Springs Road, Yorktown Heights, New York, 10598	27.11-2-15
John Czyzewski	47 Granite Springs Road, Yorktown Heights, New York, 10598	27.11-2-16
Henry Clark	51 Granite Springs Road, Yorktown Heights, New York, 10598	27.11-2-17
Andrew Giglio	2797 Quaker Church Road, Yorktown Heights, New York, 10598	27.11-2-10

SURVEY AND TOPO PREPARED BY LINK LAND SURVEYORS, P.C. FOR PANBAR REALTY LLC

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5	11-5-19	COMMENTS			
4	10-15-19	COMMENTS			
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2	5-3-18	TREE REPLACEMENT LAYOUT			
1	5-31-17	PROPOSED HOUSE REVISED	7	2-23-21	ADDITIONAL DRAINAGE IN CRYSTAL CT.
			6	11-22-19	COMMENTS FROM PLANNING BOARD

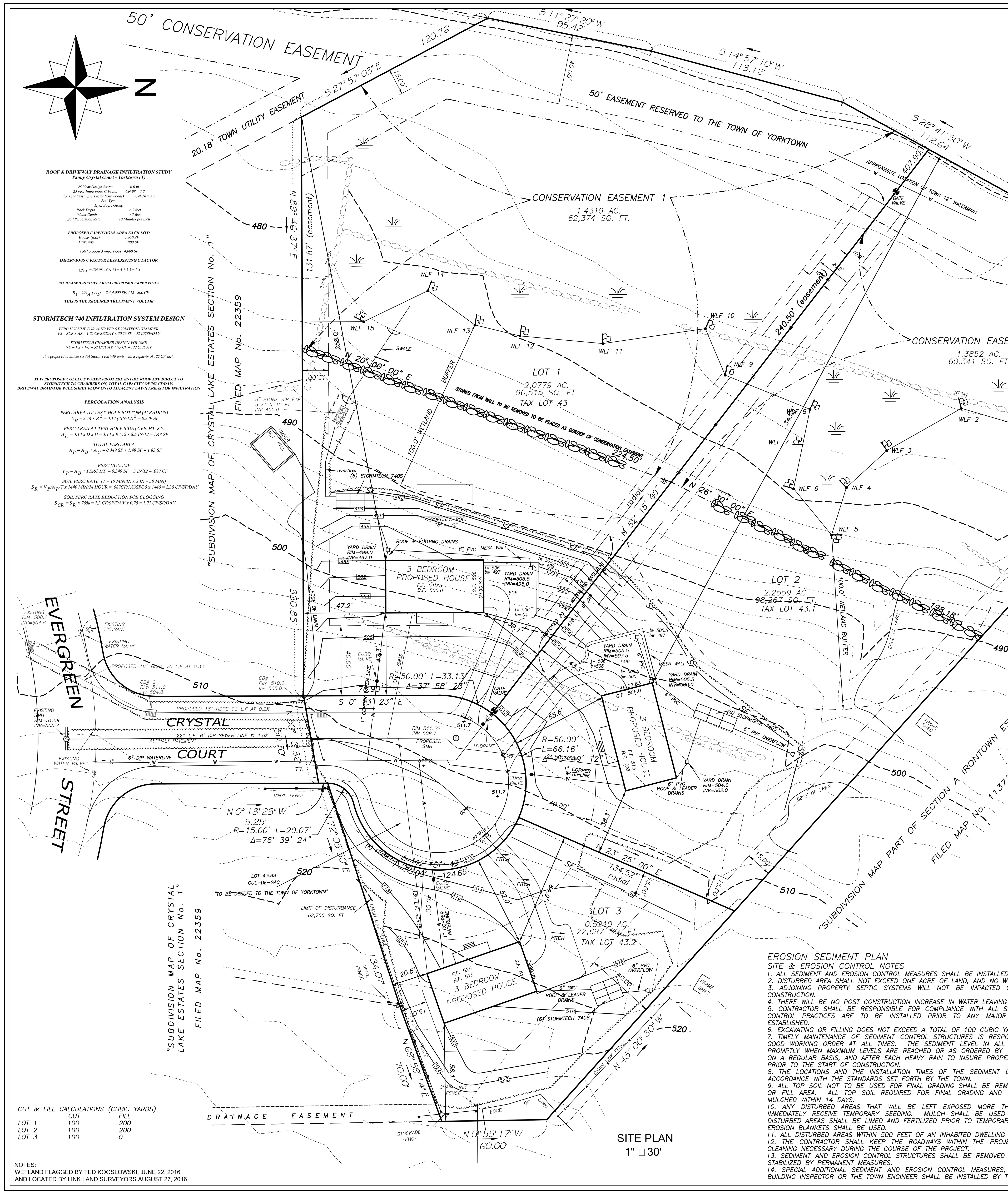
JOHN KARELL, JR. P.E.
121 CUSHMAN ROAD
PATTERSON, NEW YORK 12563
845-878-7894 phone
845-878-4939 fa.:
jack4911@yahoo.com

STATE OF NEW YORK
JOHN KARELL JR.
No. 53977
LICENSED PROFESSIONAL ENGINEER

OWNER:
PANBAR REALTY, LLC
LOUIS PANNY, PRESIDENT
CRYSTAL COURT, YORKTOWN (T)

PRELIMINARY INTEGRATED PLOT PLAN
3 LOT SUBDIVISION

SCALE: AS SHOWN
LATEST REVISION:
DATED: AUGUST 27, 2016
CHECKED:
SHEET No. S-1

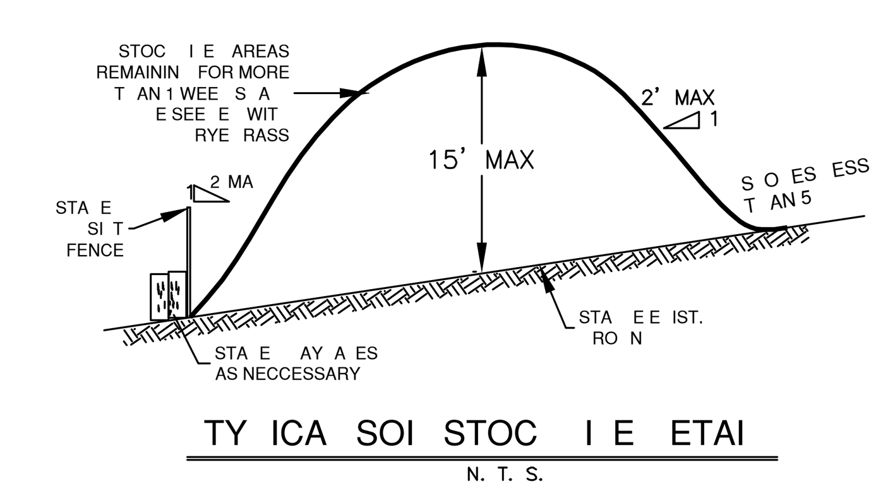


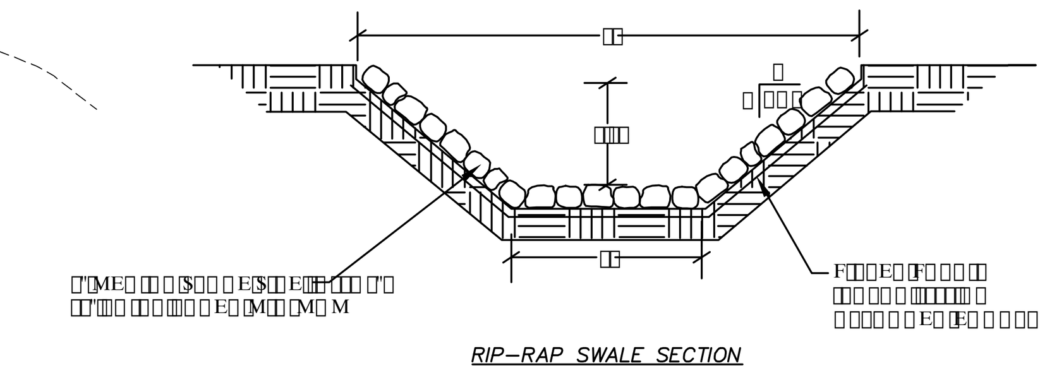
50' CONSERVATION EASEMENT
50' EASEMENT RESERVED TO THE TOWN OF YORKTOWN
20.18' TOWN UTILITY EASEMENT
CRYSTAL LAKE
now or formerly Town of Yorktown
Liber 7132 page 277
CONSERVATION EASEMENT 1
1.4319 AC.
62,374 SQ. FT.
CONSERVATION EASEMENT 2
1.3852 AC.
60,341 SQ. FT.
LOT 1
2.0779 AC.
90,515 SQ. FT.
TAX LOT 43
LOT 2
2.2559 AC.
TAX LOT 43.1
LOT 3
0.5210 AC.
22,697 SQ. FT.
TAX LOT 43.2
3 BEDROOM PROPOSED HOUSE
BEACH AREA
AS PER FILED MAP No 11372
GRANITE SPRINGS ROAD
EVERGREEN STREET
CRYSTAL COURT
"SUBDIVISION MAP OF CRYSTAL LAKE ESTATES SECTION No. 1"
FILED MAP No. 22359
"SUBDIVISION MAP PART OF SECTION A IRONTOWN ESTATES"
FILED MAP No. 11372
STONES FROM WALL TO BE REMOVED TO BE PLACED AS BORDER OF CONSERVATION EASEMENT
100.0' WETLAND BUFFER
DRAINAGE EASEMENT
LIMIT OF DISTURBANCE
62,700 SQ. FT
LOT 43.99
CUL-DE-SAC
"TO BE CEDED TO THE TOWN OF YORKTOWN"
SITE PLAN
1" = 30'

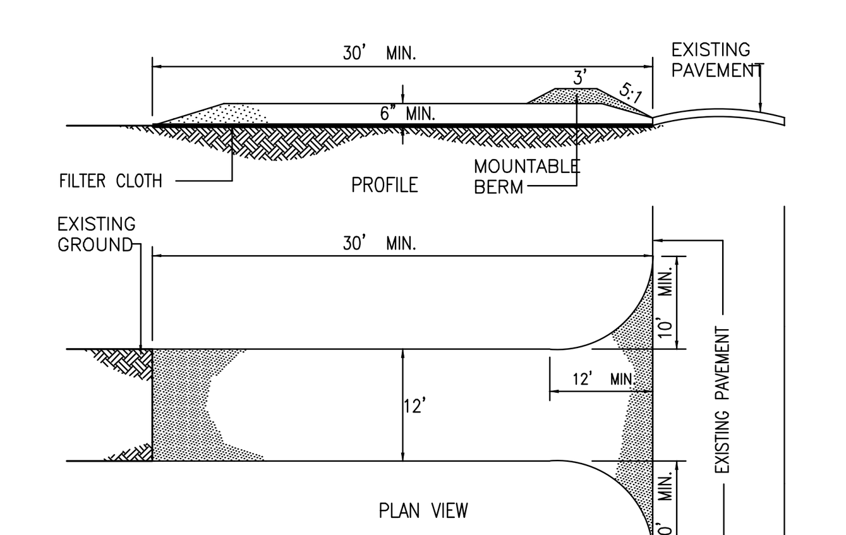
ROOF & DRIVEWAY DRAINAGE INFILTRATION STUDY

STORMTECH 740 INFILTRATION SYSTEM DESIGN

PERCOLATION ANALYSIS







CONSTRUCTION SPECIFICATIONS:

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4. WIDTH – TWELVE (12) FEET MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS AND EGRESS OCCUR.
5. FILTER CLOTH – WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE. "MIRAFI" 700X, OR APPROVED EQUAL.
6. SURFACE WATER – ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
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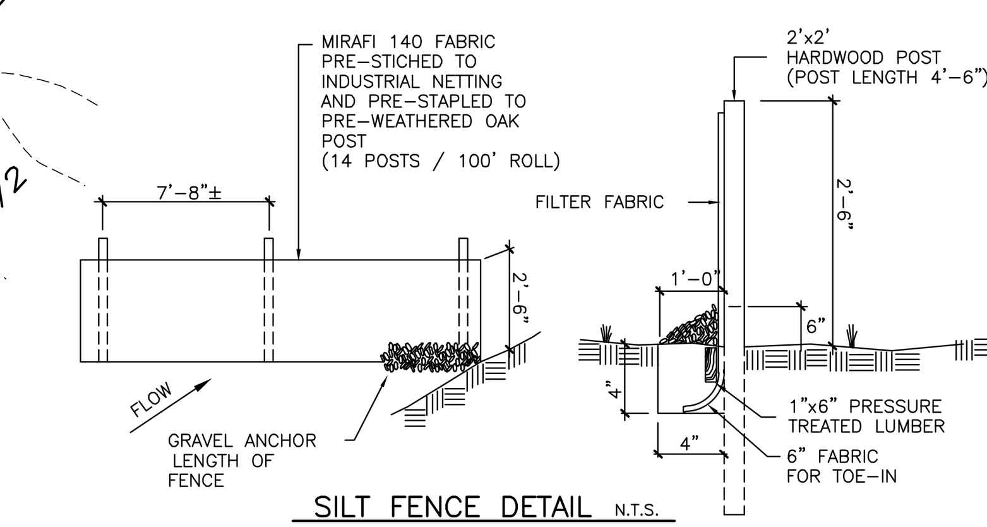
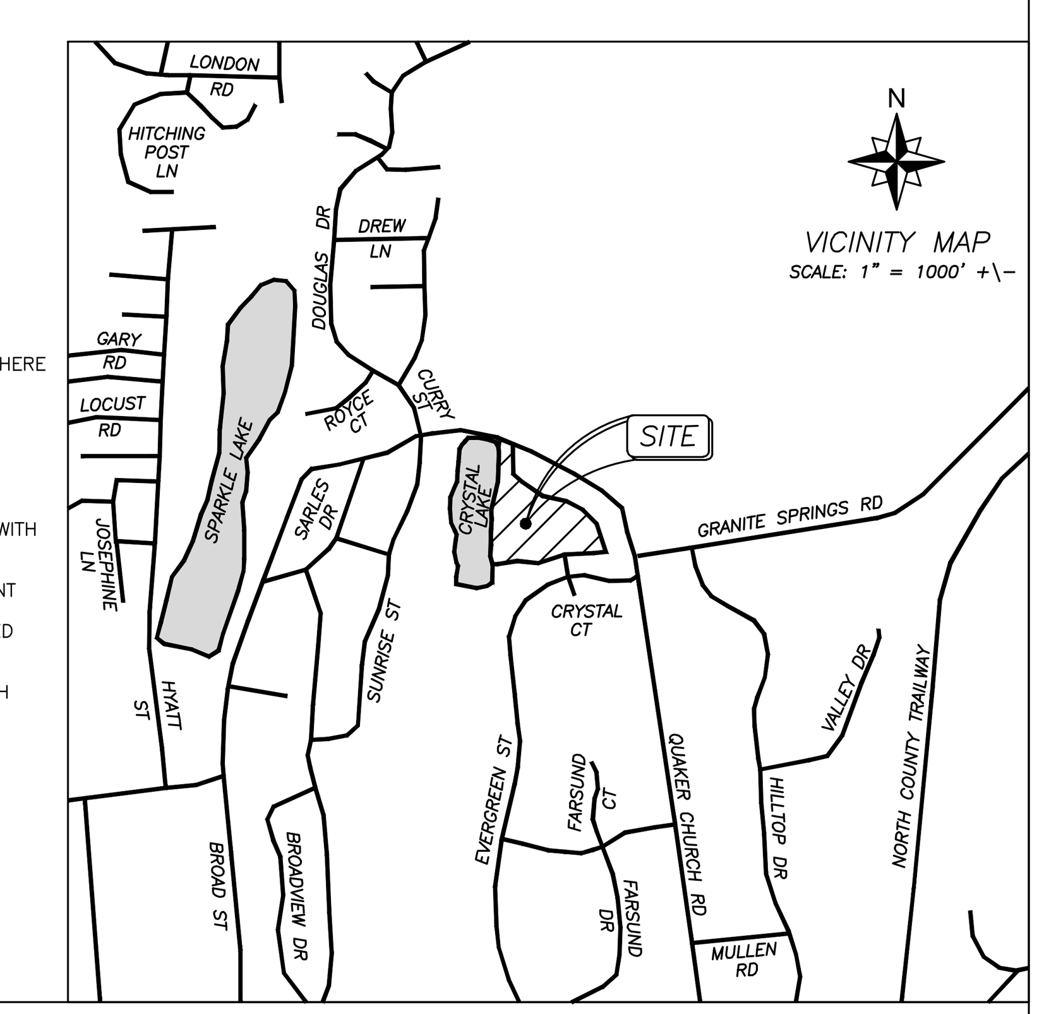
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.



SILT FENCE DETAIL N.T.S.

CONSTRUCTION SPECIFICATIONS:

1. FILTER FABRIC TO BE EMBEDDED IN SOIL A MIN. OF 6".
2. INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
3. SILT FENCE TO BE REMOVED AT END OF CONSTRUCTION BUT NOT BEFORE ALL DISTURBED AREAS ARE STABILIZED AND VEGITATED.



EROSION SEDIMENT PLAN

SITE & EROSION CONTROL NOTES

1. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH THE TOWN.
2. DISTURBED AREA SHALL NOT EXCEED ONE ACRE OF LAND, AND NO WORK SHALL BE DONE WITHIN 100 FEET OF A WETLAND OR WATERCOURSE.
3. ADJOINING PROPERTY SEPTIC SYSTEMS WILL NOT BE IMPACTED OR DISTURBED BY CONSTRUCTION, ACCESS TO CONSTRUCTION, OR POST CONSTRUCTION.
4. THERE WILL BE NO POST CONSTRUCTION INCREASE IN WATER LEAVING THE SITE.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH ALL SEDIMENT AND EROSION CONTROL PRACTICES. THE SEDIMENT AND EROSION CONTROL PRACTICES ARE TO BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCE, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
6. EXCAVATING OR FILLING DOES NOT EXCEED A TOTAL OF 100 CUBIC YARDS OF MATERIAL; CUT AND FILL WILL BE UNDER 80 CUBIC YARDS.
7. TIMELY MAINTENANCE OF SEDIMENT CONTROL STRUCTURES IS RESPONSIBILITY OF THE CONTRACTOR. ALL STRUCTURES SHALL BE MAINTAINED IN GOOD WORKING ORDER AT ALL TIMES. THE SEDIMENT LEVEL IN ALL SEDIMENT TRAPS SHALL BE CLOSELY MONITORED AND SEDIMENT REMOVED PROMPTLY WHEN MAXIMUM LEVELS ARE REACHED OR AS ORDERED BY THE ENGINEER. ALL SEDIMENT CONTROL STRUCTURES SHALL BE INSPECTED ON A REGULAR BASIS, AND AFTER EACH HEAVY RAIN TO INSURE PROPER OPERATIONS DESIGNED. AN INSPECTION SCHEDULE SHALE BE SET FORTH PRIOR TO THE START OF CONSTRUCTION.
8. THE LOCATIONS AND THE INSTALLATION TIMES OF THE SEDIMENT CAPTURING STANDARDS SHALL BE AS ORDERED BY THE ENGINEER, AND IN ACCORDANCE WITH THE STANDARDS SET FORTH BY THE TOWN.
9. ALL TOP SOIL NOT TO BE USED FOR FINAL GRADING SHALL BE REMOVED FROM THE SITE IMMEDIATELY AND PLACED IN A STABILIZED STOCKPILE OR FILL AREA. ALL TOP SOIL REQUIRED FOR FINAL GRADING AND STORED O SITE SHALL BE LIMED, FERTILIZED, TEMPORARILY SEEDED AND MULCHED WITHIN 14 DAYS.
10. ANY DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN 21 DAYS AND NOT SUBJECT TO CONSTRUCTION TRAFFIC, SHALL BE IMMEDIATELY RECEIVE TEMPORARY SEEDING. MULCH SHALL BE USED IF THE SEASON PREVENTS THE ESTABLISHMENT OF A TEMPORARY COVER. DISTURBED AREAS SHALL BE LIMED AND FERTILIZED PRIOR TO TEMPORARY SEEDING. IF THE SLOPE OF THE DISTURBED AREA IS GREATER THEN 1:3 EROSION BLANKETS SHALL BE USED.
11. ALL DISTURBED AREAS WITHIN 500 FEET OF AN INHABITED DWELLING SHALL BE WETTED AS NECESSARY TO PROVIDE DUST CONTROL.
12. THE CONTRACTOR SHALL KEEP THE ROADWAYS WITHIN THE PROJECT CLEAR OF SOIL AND DEBRIS AND IS RESPONSIBLE FOR ANY STREET CLEANING NECESSARY DURING THE COURSE OF THE PROJECT.
13. SEDIMENT AND EROSION CONTROL STRUCTURES SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED BY PERMANENT MEASURES.
14. SPECIAL ADDITIONAL SEDIMENT AND EROSION CONTROL MEASURES, AS WARRANTED BY FIELD CONDITIONS, AND AS SPECIFIED BY THE TOWN BUILDING INSPECTOR OR THE TOWN ENGINEER SHALL BE INSTALLED BY THE CONTRACTOR WHEN SO DIRECTED.

CUT & FILL CALCULATIONS (CUBIC YARDS)

	CUT	FILL
LOT 1	100	200
LOT 2	100	200
LOT 3	100	0

NOTES:
WETLAND FLAGGED BY TED KOOSLOWSKI, JUNE 22, 2016
AND LOCATED BY LINK LAND SURVEYORS AUGUST 27, 2016

SURVEY AND TOPO PREPARED BY LINK LAND SURVEYORS, P.C. FOR PANBAR REALTY LLC

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1	5-31-17	PROPOSED HOUSE REVISED	7	2-23-21	ADDITIONAL DRAINAGE IN CRYSTAL CT.
			6	11-22-19	COMMENTS FROM PLANNING BOARD

JOHN KARELL, JR. P.E.

121 CUSHMAN ROAD
PATTERSON, NEW YORK 12563

845-878-7894 phone
845-878-4939 fax
ack4911@yahoo.com

OWNER:
PANBAR REALTY, LLC
LOUIS PANNY, PRESIDENT
CRYSTAL COURT, YORKTOWN (T)

SCALE: AS SHOWN

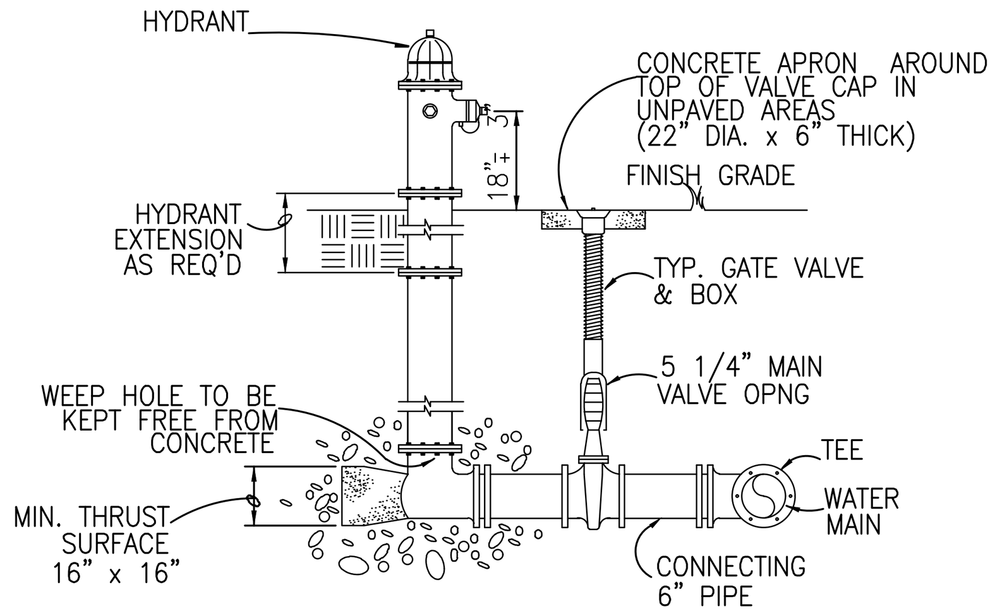
LATEST REVISION:

DATED: DECEMBER 29, 2016

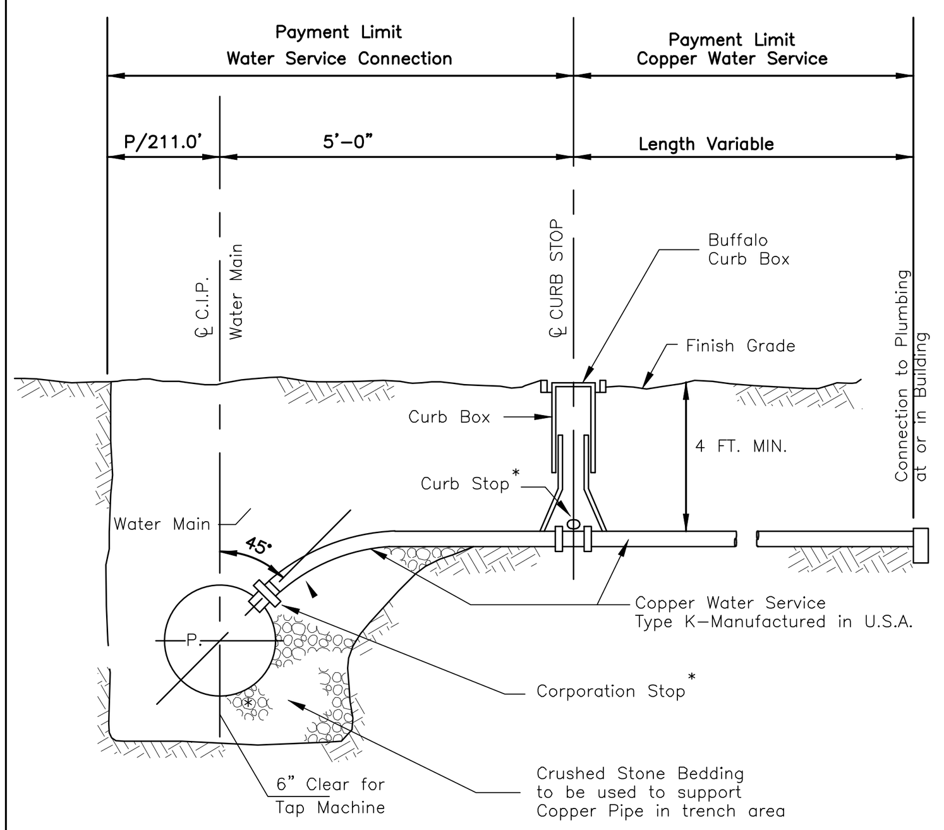
CHECKED:

SHEET No. E-1

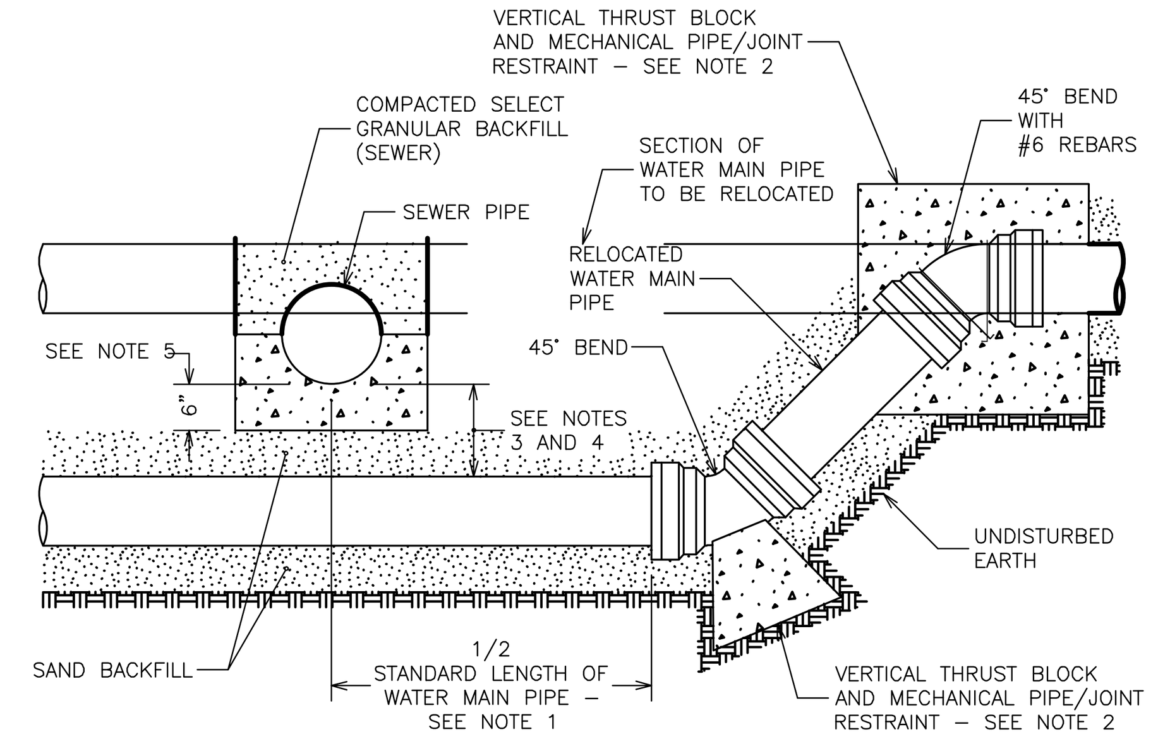
EROSION & SEDIMENT CONTROL PLAN



FIRE HYDRANT DETAIL
NTS

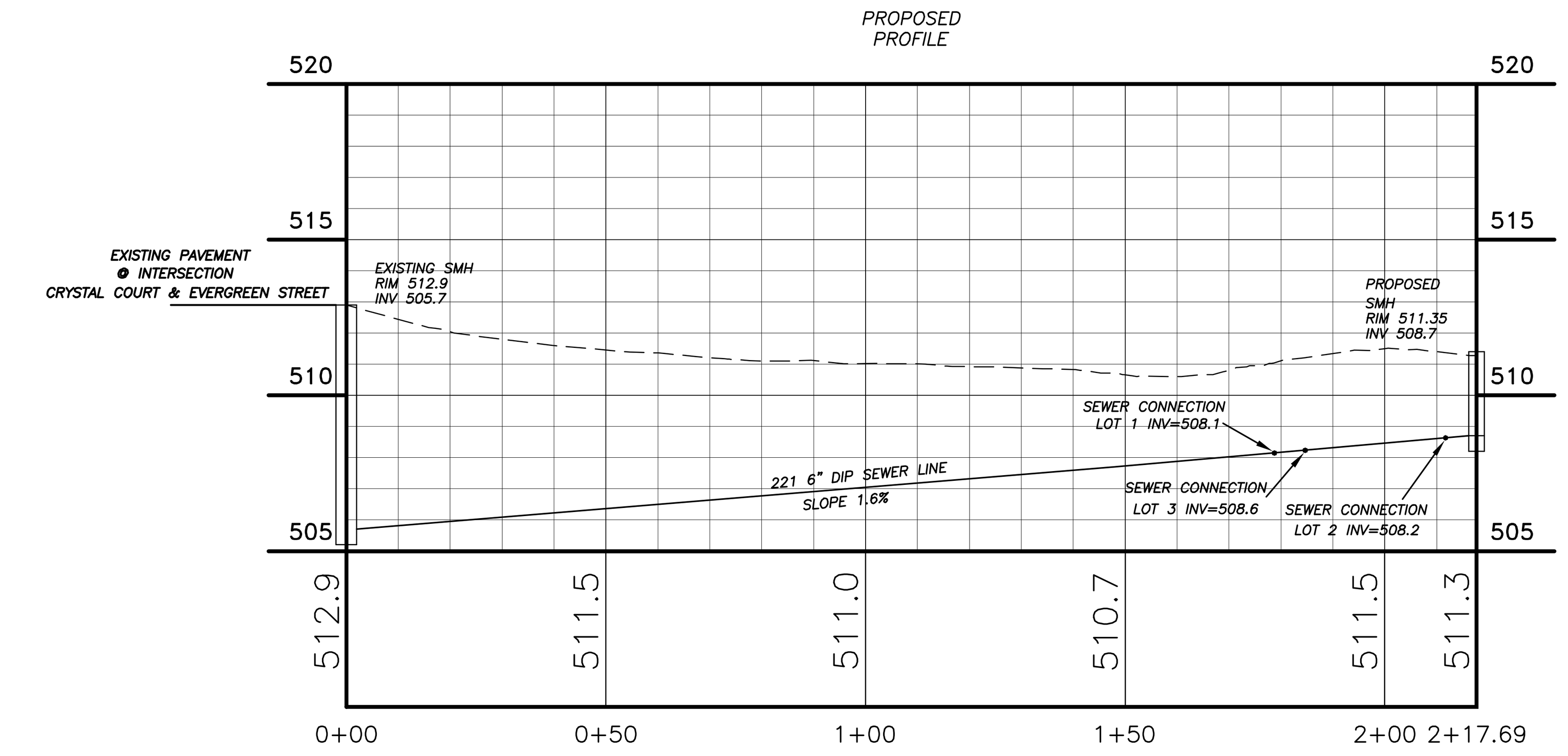


NOTE: Curb Stop and Corporation Stop to be Mueller or equal.

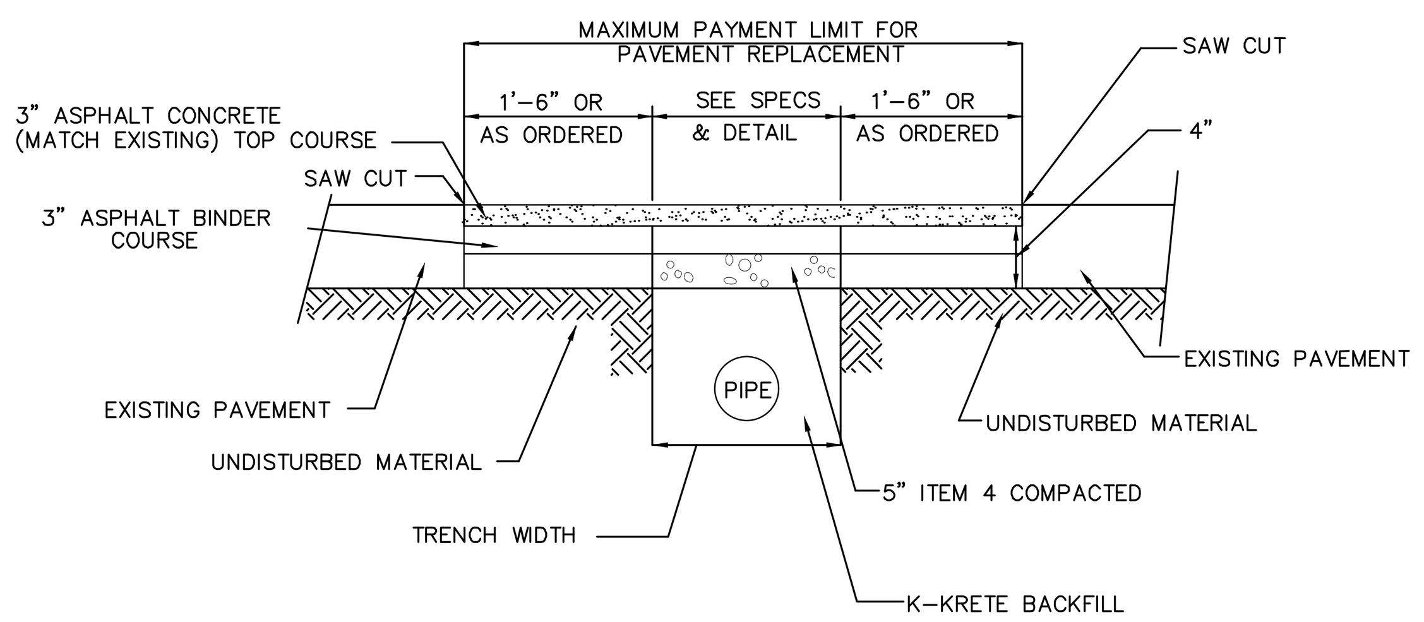


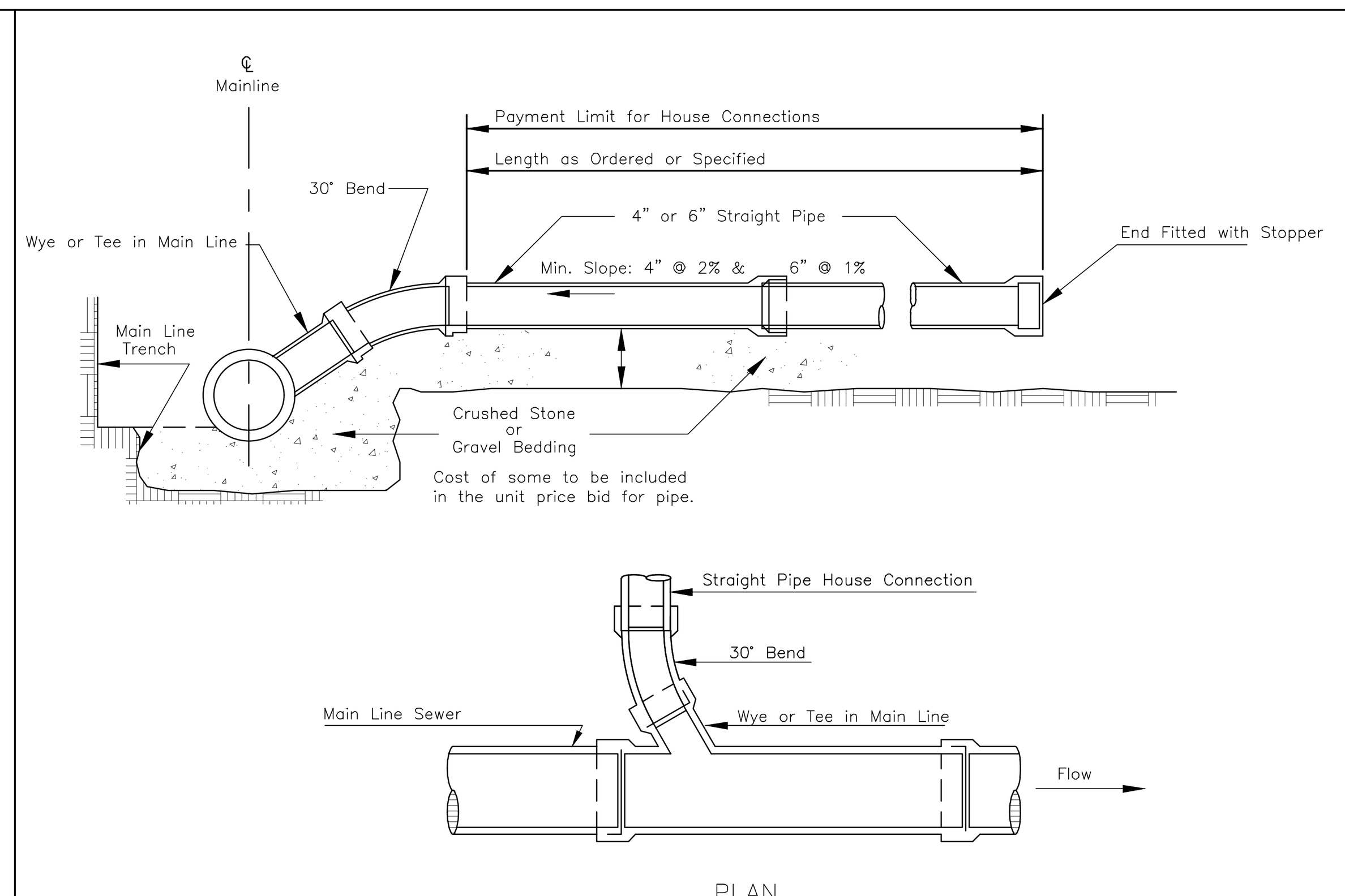
NOTES:

1. ONE STANDARD FULL LENGTH OF WATER MAIN PIPE IS TO BE CENTERED ON SEWER PIPE SO THAT BOTH JOINTS OF WATER MAIN PIPE WILL BE AS FAR FROM SEWER PIPE AS POSSIBLE.
2. THRUST BLOCKS AND PIPE/JOINT RESTRAINTS ARE TO BE PROVIDED AT ALL BENDS, SEE DETAILS S900–5, S900–7, S900–8 AND S900–10.
3. WHERE WATER MAIN PIPE PASSES UNDER SEWER PIPE THERE IS TO BE MINIMUM 18 INCHES OF VERTICAL SEPARATION BETWEEN WATER MAIN PIPE AND SEWER PIPE.
4. WHERE VERTICAL SEPARATION IS LESS THAN 18 INCHES, WATER MAIN PIPE JOINTS LOCATED WITHIN 18 FEET OF BOTH SIDES OF SEWER PIPE MUST BE ENCASED WITHIN CONTROLLED DENSITY FILL MATERIAL, OR SEWER PIPE CONSTRUCTED WITH WATER MAIN STANDARD PIPE AND TESTED TO 150 PSI.
5. WHERE WATER MAIN PIPE PASSES UNDER SEWER PIPE THERE IS TO BE MINIMUM OF 6 INCHES OF CLASS K CONCRETE OR CRUSHED STONE BEDDING MATERIAL FOR SEWER PIPE.

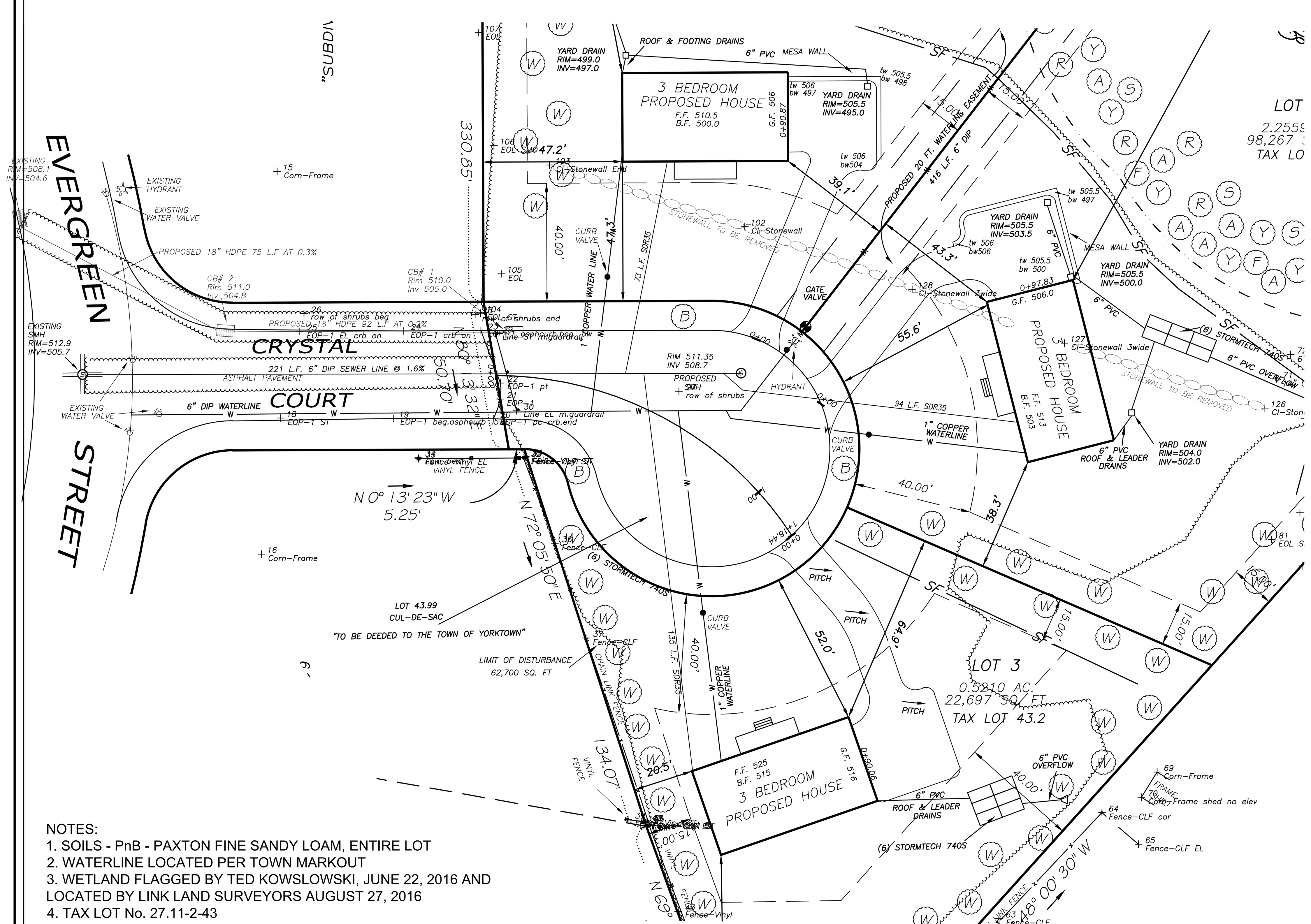


PROFILE SCALE:
HORIZ: 1"=30'
VERT: 1"=5'



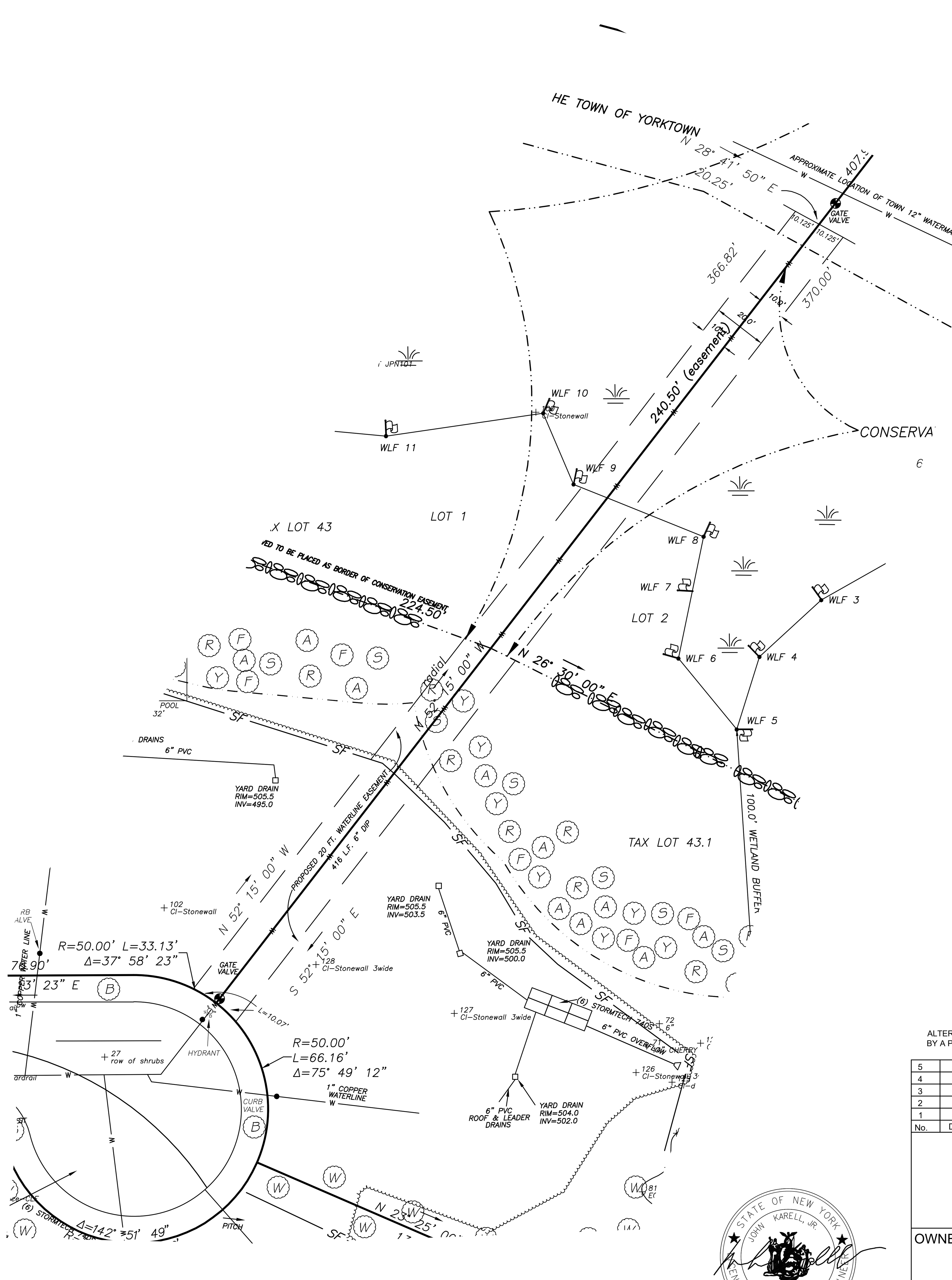


PLAN
N.T.S.
SEWER CONNECTION

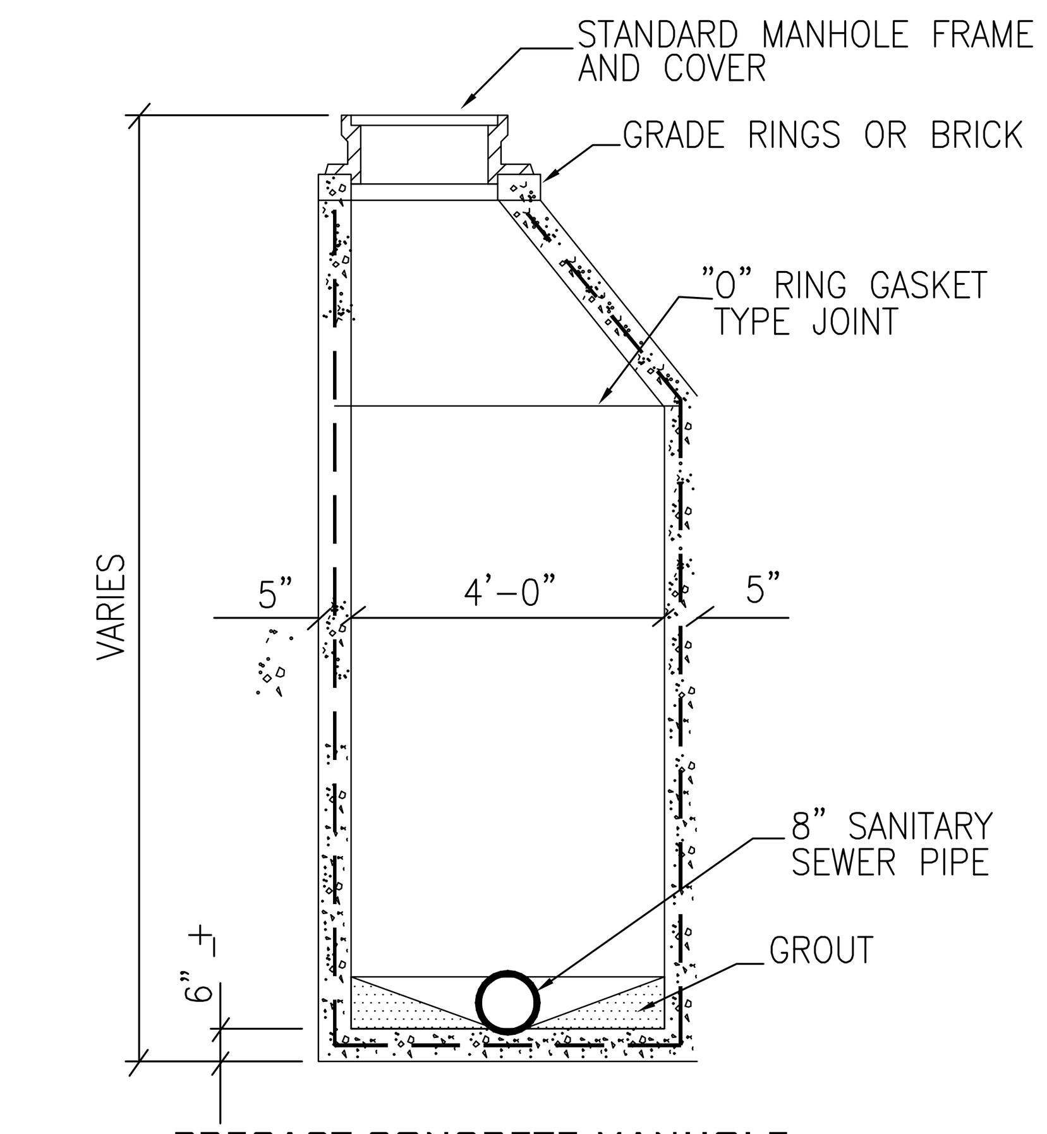


NOTES:
1. SOILS - PnB - PAXTON FINE SANDY LOAM, ENTIRE LOT
2. WATERLINE LOCATED PER TOWN MARKOUT
3. WETLAND FLAGGED BY TED KOWSLOWSKI, JUNE 22, 2016 AND LOCATED BY LINK LAND SURVEYORS AUGUST 27, 2016
4. TAX LOT No. 27.11-2-43
5. 5.0743 ACRES
6. ZONE R1-20

PLAN SCALE:
1" = 30'



WATERLINE EASEMENT PLAN
1" = 30'



PRECAST CONCRETE MANHOLE
nts

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STATE OF NEW YORK · JOHN KARELL, JR. · No.53277 · LICENSED PROFESSIONAL ENGINEER

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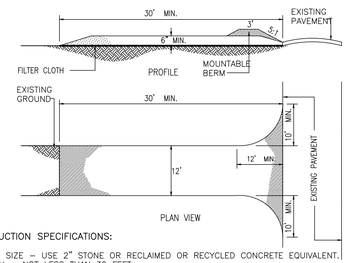
LOUIS PANNY, PRESIDENT
CRYSTAL COURT, YORKTOWN (T)

SCALE: AS SHOWN
LATEST REVISION:
DATED: AUGUST 27, 2016
CHECKED:
SHEET No. WS-1

WATER & SEWER PLAN



CONSTRUCTION SPECIFICATIONS:

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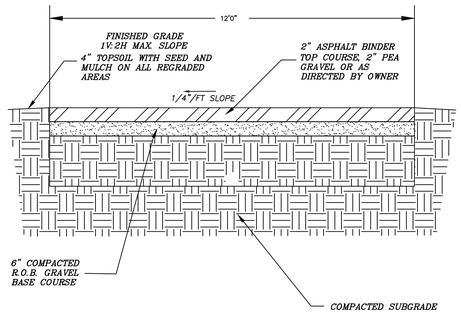
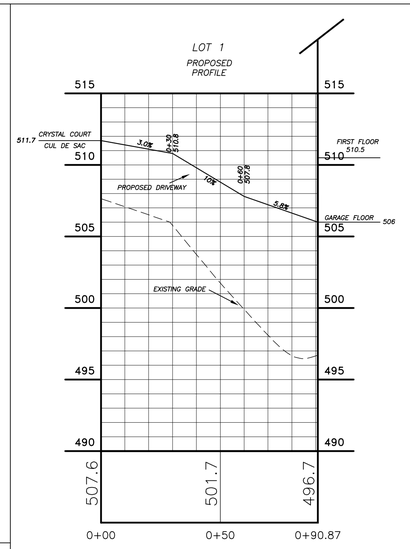
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

STABILIZED CONSTRUCTION ENTRANCE
N.T.S.



DRIVEWAY DETAIL (N.T.S.)



PROFILE SCALE:
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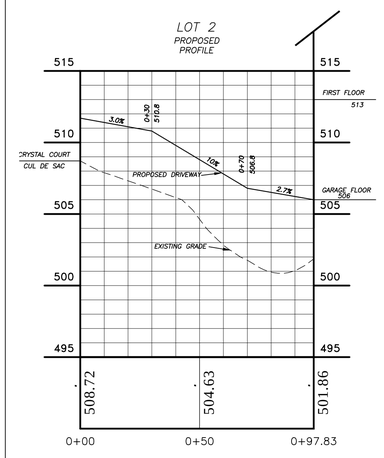

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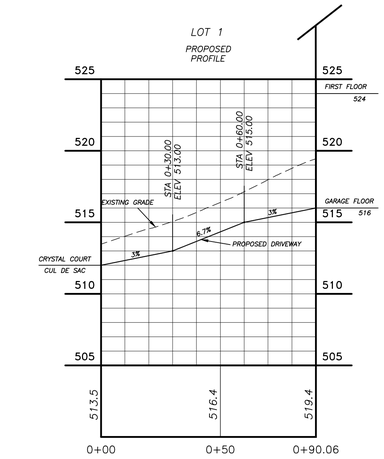

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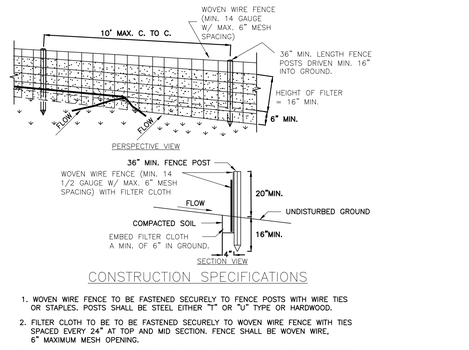
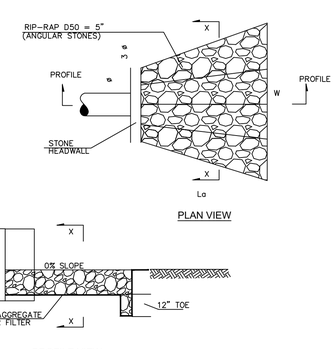
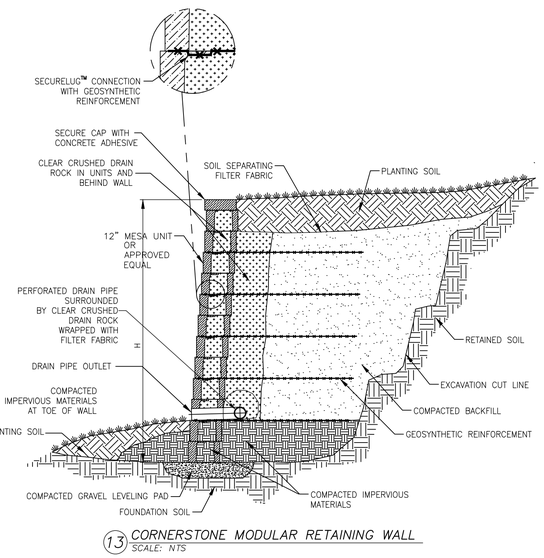


CONSTRUCTION SPECIFICATIONS

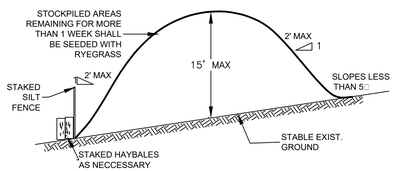
1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER "T" OR "U" TYPE OR HARDWOOD.
2. FILTER CLOTH TO BE TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 6" MAXIMUM MESH OPENING.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER–LAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
4. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT.
5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

SILT FENCE





13 CORNERSTONE MODULAR RETAINING WALL
SCALE: NTS

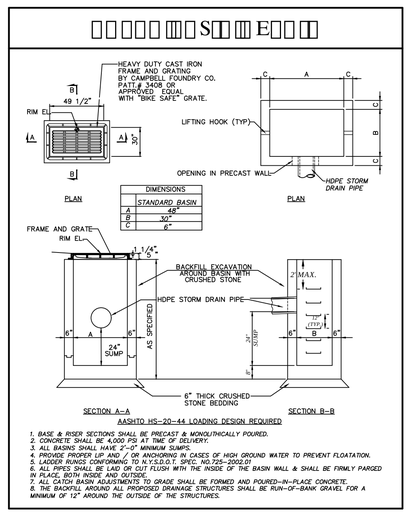


TYPICAL SOIL STOCKPILE DETAIL
N. T. S.

EROSION SEDIMENT PLAN
SITE & EROSION CONTROL NOTES

1. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH THE TOWN.
2. DISTURBED AREA SHALL NOT EXCEED ONE ACRE OF LAND, AND NO WORK SHALL BE DONE WITHIN 100 FEET OF A WETLAND OR WATERCOURSE.
3. ADJOINING PROPERTY SEPTIC SYSTEMS WILL NOT BE IMPACTED OR DISTURBED BY CONSTRUCTION, ACCESS TO CONSTRUCTION, OR POST CONSTRUCTION.
4. THERE WILL BE NO POST CONSTRUCTION INCREASE IN WATER LEAVING THE SITE.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH ALL SEDIMENT AND EROSION CONTROL PRACTICES. THE SEDIMENT AND EROSION CONTROL PRACTICES ARE TO BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCE, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
6. EXCAVATING OR FILLING DOES NOT EXCEED A TOTAL OF 100 CUBIC YARDS OF MATERIAL; CUT AND FILL WILL BE UNDER 80 CUBIC YARDS.
7. TIMELY MAINTENANCE OF SEDIMENT CONTROL STRUCTURES IS RESPONSIBILITY OF THE CONTRACTOR. ALL STRUCTURES SHALL BE MAINTAINED IN GOOD WORKING ORDER AT ALL TIMES. THE SEDIMENT LEVEL IN ALL SEDIMENT TRAPS SHALL BE CLOSELY MONITORED AND SEDIMENT REMOVED PROMPTLY WHEN MAXIMUM LEVELS ARE REACHED OR AS ORDERED BY THE ENGINEER. ALL SEDIMENT CONTROL STRUCTURES SHALL BE INSPECTED ON A REGULAR BASIS, AND AFTER EACH HEAVY RAIN TO INSURE PROPER OPERATIONS DESIGNED. AN INSPECTION SCHEDULE SHALE BE SET FORTH PRIOR TO THE START OF CONSTRUCTION.
8. THE LOCATIONS AND THE INSTALLATION TIMES OF THE SEDIMENT CAPTURING STANDARDS SHALL BE AS ORDERED BY THE ENGINEER, AND IN ACCORDANCE WITH THE STANDARDS SET FORTH BY THE TOWN.
9. ALL TOP SOIL NOT TO BE USED FOR FINAL GRADING SHALL BE REMOVED FROM THE SITE IMMEDIATELY AND PLACED IN A STABILIZED STOCKPILE OR FILL AREA. ALL TOP SOIL REQUIRED FOR FINAL GRADING AND STORED O SITE SHALL BE LIMED, FERTILIZED, TEMPORARILY SEEDED AND MULCHED WITHIN 14 DAYS.
10. ANY DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN 21 DAYS AND NOT SUBJECT TO CONSTRUCTION TRAFFIC, SHALL BE IMMEDIATELY RECEIVE TEMPORARY SEEDING. MULCH SHALL BE USED IF THE SEASON PREVENTS THE ESTABLISHMENT OF A TEMPORARY COVER. DISTURBED AREAS SHALL BE LIMED AND FERTILIZED PRIOR TO TEMPORARY SEEDING. IF THE SLOPE OF THE DISTURBED AREA IS GREATER THEN 1:3 EROSION BLANKETS SHALL BE USED.
11. ALL DISTURBED AREAS WITHIN 500 FEET OF AN INHABITED DWELLING SHALL BE WETTED AS NECESSARY TO PROVIDE DUST CONTROL.
12. THE CONTRACTOR SHALL KEEP THE ROADWAYS WITHIN THE PROJECT CLEAR OF SOIL AND DEBRIS AND IS RESPONSIBLE FOR ANY STREET CLEANING NECESSARY DURING THE COURSE OF THE PROJECT.
13. SEDIMENT AND EROSION CONTROL STRUCTURES SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED BY PERMANENT MEASURES.
14. SPECIAL ADDITIONAL SEDIMENT AND EROSION CONTROL MEASURES, AS WARRANTED BY FIELD CONDITIONS, AND AS SPECIFIED BY THE TOWN BUILDING INSPECTOR OR THE TOWN ENGINEER SHALL BE INSTALLED BY THE CONTRACTOR WHEN SO DIRECTED.

[illegible] S[illegible] E[illegible]



1. BASE & RISER SECTIONS SHALL BE PRECAST & MONOLITHICALLY POURED.
2. CONCRETE SHALL BE 4,000 PSI AT TIME OF DELIVERY.
3. ALL BASINS SHALL HAVE 2'–0" MINIMUM SUMPS.
4. PROVIDE PROPER LIP AND / OR ANCHORING IN CASES OF HIGH GROUND WATER TO PREVENT FLOATATION.
5. LADDER RUNGS CONFORMING TO N.Y.S.D.O.T. SPEC. NO.725–2002.01
6. ALL PIPES SHALL BE LAID OR CUT FLUSH WITH THE INSIDE OF THE BASIN WALL & SHALL BE FIRMLY PARGED IN PLACE, BOTH INSIDE AND OUTSIDE.
7. ALL CATCH BASIN ADJUSTMENTS TO GRADE SHALL BE FORMED AND POURED–IN–PLACE CONCRETE.
8. THE BACKFILL AROUND ALL PROPOSED DRAINAGE STRUCTURES SHALL BE RUN–OF–BANK GRAVEL FOR A MINIMUM OF 12" AROUND THE OUTSIDE OF THE STRUCTURES.

NOTES:
1. SOILS - PnB - PAXTON FINE SANDY LOAM, ENTIRE LOT
2. WATERLINE LOCATED PER TOWN MARKOUT
3. WETLAND FLAGGED BY TED KOWSLOWSKI, JUNE 22, 2016 AND LOCATED BY LINK LAND SURVEYORS AUGUST 27, 2016
4. TAX LOT No. 27.11-2-43
5. 5.0743 ACRES
6. ZONE R1-20

No.	DATE				
5	11-5-19	COMMENTS			
4	10-15-19	COMMENTS			
3	10-5-18	COMMENTS			
2	5-3-18	TREE REPLACEMENT LAYOUT			
1	5-31-17	PROPOSED HOUSE REVISED	7	2-23-21	ADDITIONAL DRAINAGE IN CRYSTAL CT.
			6	11-22-19	COMMENTS FROM PLANNING BOARD

JOHN KARELL, JR. P.E.
121 CUSHMAN ROAD
PATTERSON, NEW YORK 12563
845-878-7894 phone
845-878-4939 fa□
jck4911□ yahoo.com

STATE OF NEW YORK JOHN KARELL JR. LICENSED PROFESSIONAL ENGINEER No.53277

OWNER:
PANBAR REALTY, LLC
LOUIS PANNY, PRESIDENT
CRYSTAL COURT, YORKTOWN (T)

SCALE: AS SHOWN
LATEST REVISION:
DATED: AUGUST 27, 2016
SHEET No. D-1
CHECKED:

DETAILS
3 LOT SUBDIVISION

3666 Old Yorktown Road Fence Request

John A. Tegeder, R.A.
Director of Planning

Matthew J. Slater
Town Supervisor

TOWN OF YORKTOWN
PLANNING DEPARTMENT

Albert A. Capellini Community and Cultural Center, 1974 Commerce Street, Yorktown Heights, New York 10598, Phone (914) 962-6565, Fax (914) 962-3986

To: Planning Board
From: Planning Department
Date: July 8, 2021
Subject: 3666 Old Yorktown Road
Request for Fence
SBL: 16.11-1-60

The Building Department received a permit application to install a fence along the front property line at 3666 Old Yorktown Road. The subject lot is located in two zones C-2 and R1-20, with the lot frontage in the C-2 zone. Usually the installation of fences on commercial properties are approved during the site plan approval process however this property is a pre-existing non-conforming residence.

The property owner is requesting a 6 ft high dark colored vinyl fence along the frontage of the property with an iron gate that would be approximately 8 ft high. There is a 4½ ft height restriction on fences in the front yard on residential properties. There is no height restriction on fences on commercial properties. The Building Department is therefore requesting guidance on how to proceed.

JULY 5, 2021

To Building Dept and Town Board:

I Carmella Pervizi am requesting an approval for a variance to install a six foot privacy fence for the front of my property at 3666 Old Yorktown Road . Due to the following conditions of the area there are many reasons why I am requesting this variance for my property. Since I owned this property there have been numerous car accidents in front of my property and near Barger street. The speeding and traffic on this main road 132 has caused many vehicle accidents and the hit and run of one of my cats, also knocking and breaking into a pole and my fence. My home is close to the road and is dangerous. The cars don't even give me a chance to get into my own driveway as they are always on my tail beeping and speeding. At times I have guest with children and I am worried if I car speeds by my house loses control and can hit someone. I also have elderly and disabled people living at my home which puts them at risk too. There are no stop signs or traffic lights on this side of the Taconic and this is causing a hazard and liability . In fact I would like to request the town to put a stop sign or traffic light on this side to help prevent the flow of traffic and constant speeders. Besides all these safety issues people are constantly throwing things and debri , hyperdermic needles over my fence in my yard. They have also entered my property numerous times to backup, turn around or come fish on my property as a fish app was sending them to this location. People tend to think this is a park or fishing hole not a private property. This request is for safety issues. So I think this is a reasonable request that should be granted so I can maintain , protect, keep my family and guests safe and keep my property private from intruders. My phone number is 347 821-6385 if you wish to speak to me or have any further questions.

Thank You,

Carmella Pervizi

Alteration of this map by anyone other the surveyor whose signature and embossed seal appears hereon, including any erasures, notations, additions or changes for building department or "survey inspection/ affidavit" purposes, is an unauthorized and unintended use of this surveyor's work. The use of any such altered map, particularly for purposes of obtaining building permits, variances, certificates of occupancy, or for any use related to purchasing property and obtaining title insurance, is at the user's own risk and is not covered under any certification appearing hereon.

now or formerly
ROC-SHRUB OAK ASSOCIATES
(Liber 7432, Page 551)

now or formerly
ROC-SHRUB OAK ASSOCIATES
(Liber 7448, Page 106)

now or formerly
ROC-SHRUB OAK ASSOCIATES
(Liber 7432, Page 551)

POND

BARGER STREET

(N.Y. ROUTE 132)

EAST MAIN STREET

OLD YORKTOWN ROAD (N.Y. ROUTE 132)

UNION ROAD

TACONIC STATE PARKWAY

MAP 1053, PARCEL 1068

MAP 1052, PARCEL 1067

LANDS APPROPRIATED BY THE STATE OF NEW YORK ~ SEE CONTROL NO. 402310203

ORIGINAL PARKWAY BOUNDARY

12 FT. COUNTY SEWER EASEMENT
see map entitled "PROPERTY MAP FOR RIGHT OF WAY, SHRUB OAK INTERCEPTOR," filed April 29, 1981 as Map No. 20563

AREA = 4.4005 ACRES
(191,687 SQ. FT.)

N.

The premises shown hereon being lands described in a deed having Control No. 542803058.

The premises shown hereon may be affected by easements, rights of way, covenants, restrictions and conveyances not specifically referenced or recited in documents furnished to this surveyor and, therefore, not reflected hereon. It is hereby advised that any parties with a current or potential interest in this property obtain proper assurances as to quality of title and access, permitted uses and pertinent environmental factors, if any, affecting this property prior to conveyance.

Only copies of the original of this survey map marked with both this surveyor's embossed seal and his signature in red ink shall be considered as valid true copies.

Underground improvements, structures, utilities or encroachments, and any easements related thereto, are not shown hereon unless otherwise noted.

Unauthorized alteration or addition to a survey map bearing a licensed land surveyor's seal is a violation of Section 7209, Sub-Division 2 of the New York State Education Law.

Certified, as noted and limited below, only to:
- DANIEL PERVIZI
- CARMELLA PERVIZI

The surveyor's seal, signature and any certification appearing hereon signify that, to the best of his knowledge and belief, this survey was prepared in accordance with the minimum standards for land surveys as set forth in the Code of Practice adopted by the New York State Association of Professional Land Surveyors, Inc.

Certifications shall run only to the person for whom this survey was prepared, and on his behalf, to the title company, lending institution and governmental agency listed hereon; said certifications are not intended to run to additional title companies, lending institutions, subsequent owners or future contract vendees.

Prepared by:
Baxter Land Surveying, P.C.
855 Peekskill Hollow Road
Putnam Valley, New York 10579
Phone: (845) 621-8562 / (914) 962-2689

ROBERT E. BAXTER, P.L.S.
N.Y.S. Lic. No. 49434

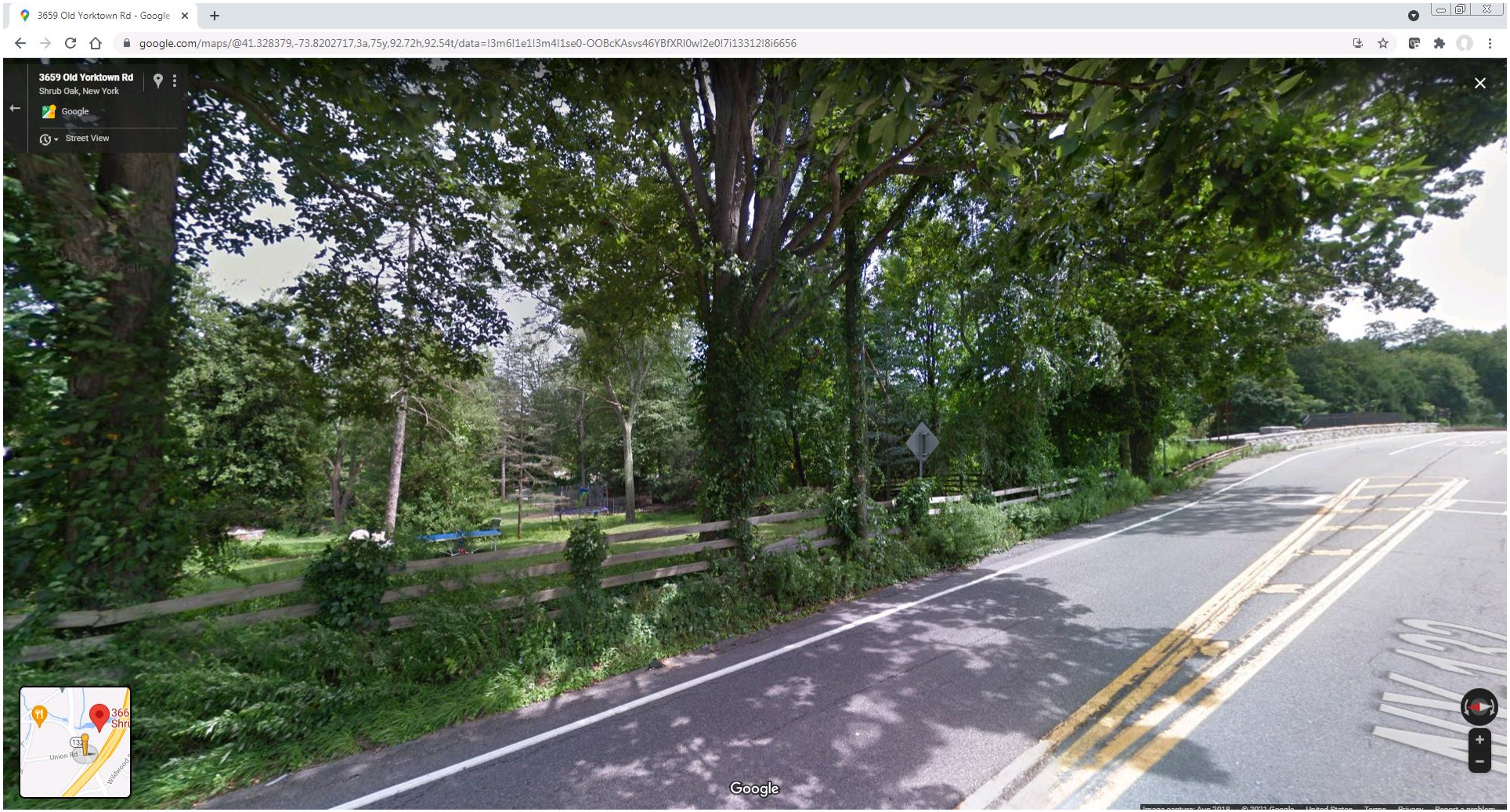
SURVEY OF PROPERTY
PREPARED FOR
CARMELLA PERVIZI
&
DANIEL PERVIZI
PROPERTY SITUATE IN
TOWN OF YORKTOWN
COUNTY OF WESTCHESTER
STATE OF NEW YORK

SCALE: 1" = 30'

DATE: JUNE 9, 2021

File No. W6-552


google.com/maps/@41.3279678,-73.8199313,3a,75y,324.27h,90t/data=!3m6!1e1!3m4!1sLJoNLkto2RTYHzzI5U9aUA!2e0!7i13312!8i6656
3658 Old Yorktown Rd
Shrub Oak, New York
Google
Street View
ONE WAY
Old Yorktown Rd
Google
Image capture: Aug 2018 © 2021 Google United States Terms Privacy Report a problem


3659 Old Yorktown Rd - Google
google.com/maps/@41.328379,-73.8202717,3a,75y,92.72h,92.54t/data=!3m6!1e1!3m4!1se0-OOBcKAsvs46YBfXRl0w!2e0!7i13312!8i6656
3659 Old Yorktown Rd
Shrub Oak, New York
Google
Street View
Union Rd
Google


3666 Old Yorktown Rd - Google
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3666 Old Yorktown Rd
Shrub Oak, New York
Google
Street View
Union Rd
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Image capture: Aug 2018
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United States
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Privacy
Report a problem


3665 Old Yorktown Rd - Google
google.com/maps/@41.3290642,-73.8208338,3a,75y,38.85h,94.7t/data=!3m6!1e1!3m4!1snpSpAnz7zoknls28k334EA!2e0!7i13312!8i6656
3665 Old Yorktown Rd
Shrub Oak, New York
Google
Street View
Union Rd
Google
Image capture: Aug 2018
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United States
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Privacy
Report a problem

Northern Westchester Executive Park


FOX
MEADOW
COURT
GRIGGS
RAMPA
MELAGRANO
STR

KELLARD SESSIONS

John Kellard, P.E.
David Sessions, RLA, AICP
Joseph M. Cermele, P.E., CFM
Jan K. Johannessen, AICP

August 12, 2021

Planning Board
Town of Yorktown
1974 Commerce Street, Room 222
Yorktown Heights, New York 10598

Attn: Mr. John A. Tegeder, R.A.
Director Planning

RE: Public Informational Hearing Response
Parking Lot Expansion
GHP Strang, LLC
2649-2651 Strang Blvd

Dear Mr. Tedeger:

On behalf of our client, GHP Strang, LLC, please accept this letter as a follow up to conversations had with the Planning Board during the Public Informational Hearing of August 9, 2021 for the above-referenced project. The purpose of this letter is to provide clarification to the Planning Board related to comments provided by a noticed neighbor expressing concerns and questions related to the project, as it relates to the proposed parking lot, temporary access road, soil stockpiling, and existing or proposed vegetation, as well as to clarify ongoing activities at the site.

Please note that various construction aspects associated with the overall building renovations and existing utilities are underway and are all being performed with current, valid permits as required by the Town. While this office is not directly involved with the current building renovations, at the request of the Planning Board, we have performed a site inspection and prepared the enclosed Construction Inspection Report, dated August 11, 2021, for your information. The report identifies current activities taking place at the site and provides our professional opinion with regard to erosion and sediment controls.

The noticed neighbor questioned the need for the proposed parking lot expansion. As was explained to the Board, the owner has experienced difficulty in recent years in finding tenants to occupy the lower level of the northernmost portion of the building. As expressed by potential tenants, this is largely due to the limited available parking in this area of the site and the lack of ADA accessible access to the lower level. Aside from the approximately 60 parking spaces provided at the north end of the site, tenants utilizing this space would be required to park on the south end of the site and walk approximately 600 feet to gain access to the lower level of the building. The project proposes a lower parking area, including 25 parking spaces and a loading dock. The loading dock has been designed to accommodate vans and typical delivery

trucks (i.e., FEDEX and UPS). In addition, the plan proposes two (2) ADA compliant access ramps; one at the existing upper-level entry and a second at the proposed lower parking lot.

With regard to the "road" referenced by the noticed neighbor, please note that this is a temporary construction access road and is required to provide adequate access for the lower-level building demolition and renovations. A temporary construction access road has been constructed, connecting the existing upper parking lot to the lower level. The temporary access road is stable, and all downgradient areas are protected by temporary silt fence which is in good working order. No erosion was noted at the time of our inspection, nor were any corrective actions required.

With regard to concerns for soil stockpiles, please note that the material in question is directly related to the removal of an existing 20,000 gallon underground fuel-oil storage tank. The tank removal and environmental remediation is being conducted by a Licensed Contractor under current permits from the Town. At the time of our inspection, excavated material was being stockpiled within the existing paved parking lot and is covered daily with plastic tarps to prevent erosion. The parking lot is swept daily at the end of the contractor's workday. Upon removal of the underground storage tank the clean fill is to be used for backfill material in the excavated area and any disturbed areas will be stabilized with topsoil and seed. No erosion was noted at the time of our inspection nor were any corrective actions required.

Finally with regard to existing vegetation, as was noted by the neighboring property owner, the existing wooded area to the north is located within properties owned by the adjacent neighbors and not controlled by my client. No improvements or activities are proposed within these areas. The wooded area, as was noted during our presentation to the Planning Board, consists largely of deciduous trees. The property owner agreed and added that much of the wooded area on his property has been overtaken by vines. In an effort to mitigate any potential visual impact from the project resulting from the proposed short retaining wall and the potential for any off-site light-shed from vehicle headlights, as shown on the current site plan, our client proposes to plant an evergreen screening buffer along the full length of the proposed driveway that shares the common property line between the project site and the adjacent property owners. It is proposed to plant Green Giant Arborvitae with a planting height of six (6) to eight (8) feet. As was discussed at the Public Informational Hearing, the selected species are appropriate for this area due to the limited space on site for the plantings and the rapid growth for nearly immediate screening.

We would like to request that the Planning Board conduct a site visit at their convenience to witness the current activities and get a better understanding of the project, as proposed. We will make ourselves available at a time that is convenient for the Planning Board. We also request that the Planning Board consider scheduling a public hearing for this matter for your September 13 Planning Board Agenda.

We trust the above clarification and attached inspection report satisfy any concerns or questions the Planning Board and adjacent property owners may have expressed. We look forward to discussing this matter further with the Board. Should you have any questions or require any additional information please do not hesitate to contact me.

Very truly yours,

Joseph M. Cermele

Joseph M. Cermele, P.E., CFM
Kellard Sessions Consulting

JMC/dc

cc: Michael Cinicolo

Https://kellardsessionsconsulti.sharepoint.com/sites/Kellard/Project Docs P/YRGHP600/KSC Correspondence/2021-08-12_YRGHP600_Tegeder_PB Followup_Ltr.docx

CONSTRUCTION INSPECTION REPORT

Date: 08-11-2021	**Permit #:**
Day: ☐ S ☐ M ☐ T ☑ W ☐ Th ☐ F ☐ S	**Weather:** ☑ Clear ☐ Overcast ☐ Rain ☐ Snow 70 °F
Property Owner: GHP Strang LLC, Mike Cinicolo	**Town Contact Person:** John Tegeder
Property Address: 2649-2651 Strang Blvd	**Phone:**
Property SBL:	**Email:**
Email: mcinicolo@ghpoffice.com	
Contractor: Innovative Environmental Services Inc	**KSC Inspector Name:** Joseph Cermele, PE
Phone: 914-449-6608	**Phone:** 914-273-2323
Email:	**Email:** jcermele@kelses.com
	Address: 500 Main St, Armonk, NY 10504

INSPECTION CONDUCTED FOR:

☑ **Photos/Sketch Attached**

☐ **Erosion and Sediment Control** ☐ **Rough Grading** ☑ **Follow-Up**
☐ **Grading/Drainage** ☐ **Final Inspection** ☐ **Other:**

Inspection Report Distributed To: ☑ **Owner** ☐ **Contractor** ☑ **Town** ☐ **Other:**

CONSTRUCTION ACTIVITIES

At the request of the Planning Board, as discussed at the 8/9/21 Public Informational Hearing, this office conducted an inspection of recent site activities related to excavation and soil stockpiling. At the time of the inspection, the contractor was excavating and exposing the existing 20,000 gal underground storage tank (fuel oil) proposed to be removed. It was reported by the owner that the removal is being conducted under a current Building Permit. In addition, demolition activities were taking place within the lower level of the existing building, also in accordance with current Building Permits. A temporary construction access road had been constructed.

COMMENTS / REMARKS

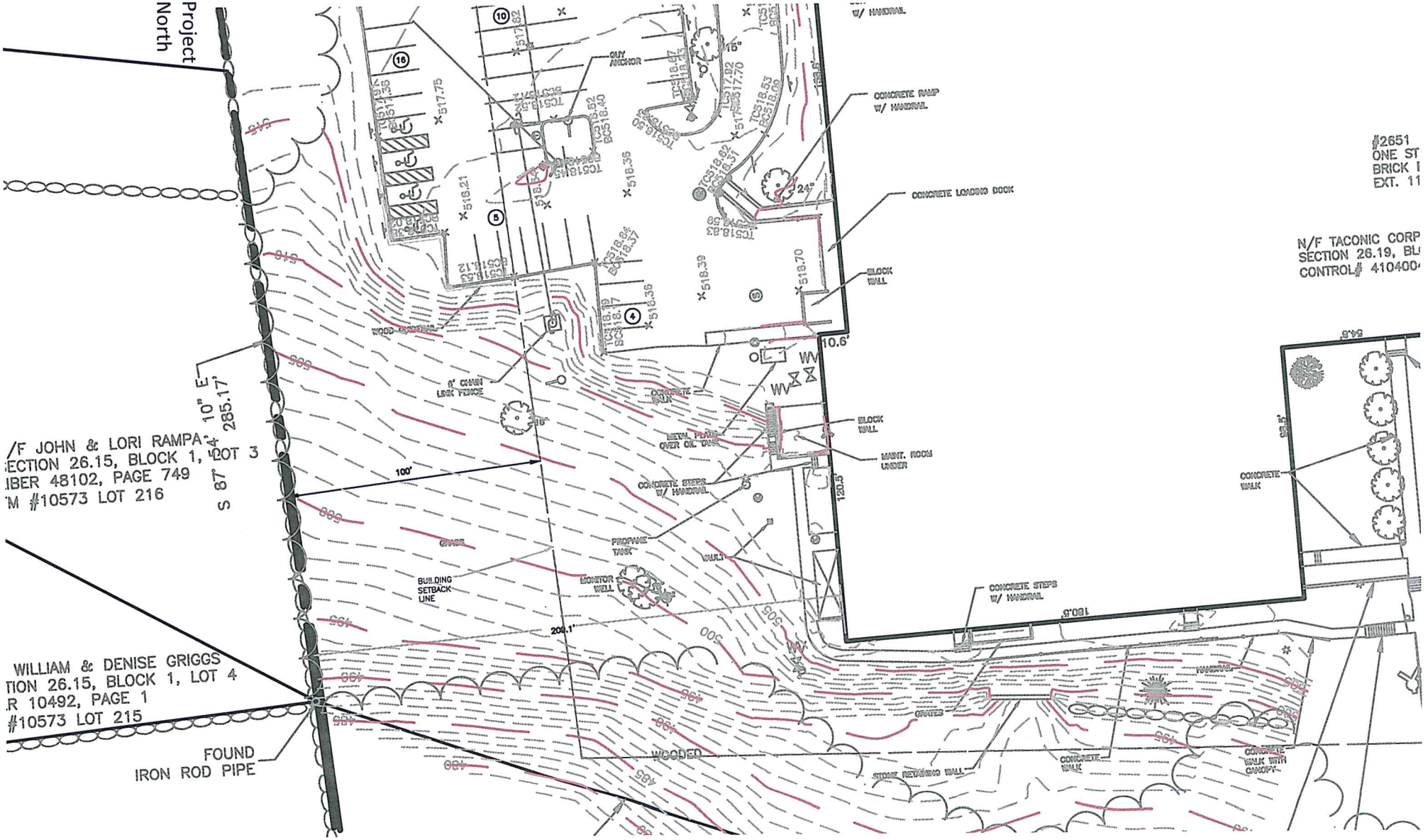
- Excavated material associated with the ongoing tank removal is being separated and temporarily stockpiled in the existing parking lot. The clean soil stockpile is covered with plastic tarps daily to prevent erosion. The contaminated soil stockpile is placed on two layers of poly-liner and then covered with plastic tarps daily to prevent erosion. The contaminated soil will be removed and disposed off site. The clean soil will be used to backfill the excavation once the tank is removed.
- The internal building demolition activities continue at the lower level. The downgrade area of the temporary access road is protected by silt fence.
- No erosion was observed at the time of the inspection and all controls appeared to be installed correctly.
- The contractor is sweeping the parking lot daily to prevent off-site sediment transport.
- No corrective actions were required at the time of the inspection.

Joseph M. Cermele, PE
Inspector (print name)

Inspector (signature)

RECEIVED
PLANNING DEPARTMENT
AUG 12 2021
TOWN OF YORKTOWN

KELLARD SESSIONS


Project North
/F JOHN & LORI RAMPA
ECTION 26.15, BLOCK 1, LOT 3
IBER 48102, PAGE 749
'M #10573 LOT 216
S 87° 54' 10" E
285.17'
WILLIAM & DENISE GRIGGS
TION 26.15, BLOCK 1, LOT 4
R 10492, PAGE 1
#10573 LOT 215
FOUND
IRON ROD PIPE
GUY ANCHOR
CONCRETE RAMP
W/ HANDRAIL
CONCRETE LOADING DOCK
BLOCK WALL
MAINT. ROOM UNDER
CONCRETE STEPS
W/ HANDRAIL
PROPANE TANK
MONITOR WELL
BUILDING SETBACK LINE
6' CHAIN LINK FENCE
WOOD FENCE
METAL PANEL OVER OIL TANK
CONCRETE WALK
GRATES
STONE RETAINING WALL
WOODED
CONCRETE WALK WITH CANOPY
#2651
ONE ST
BRICK
EXT. 11
N/F TACONIC CORP
SECTION 26.19, BL
CONTROL# 410400
100'
209.1'
180.3'
120.3'
10.6'

GHP Strang, LLC
2649-2651 Strang Blvd, Yorktown

Existing Oil Tank Removal and Lower Level Demolition

Photo 1 – Cut Material Stockpiles

Photo 2 – Cut Material Stockpile – Clean Fill

KELLARD SESSIONS

GHP Strang, LLC
2649-2651 Strang Blvd, Yorktown

Existing Oil Tank Removal and Lower Level Demolition

Photo 3 – Contaminated Soil Stockpile

Photo 4 – Oil Tank Removal

KELLARD SESSIONS

GHP Strang, LLC
2649-2651 Strang Blvd, Yorktown

Existing Oil Tank Removal and Lower Level Demolition

Photo 5 – 20,000 gal UST

Photo 6 – Lower Level Demo

KELLARD SESSIONS

GHP Strang, LLC
2649-2651 Strang Blvd, Yorktown

Existing Oil Tank Removal and Lower Level Demolition

Photo 7 – Lower Level Demo and Temporary Construction Access Road

Photo 8 – Temporary Construction Access Road

KELLARD SESSIONS

GHP Strang, LLC
2649-2651 Strang Blvd, Yorktown

Existing Oil Tank Removal and Lower Level Demolition

Photo 9 - Temporary Construction Access Road

KELLARD SESSIONS

PARKING LOT EXPANSION PLANS

PREPARED FOR

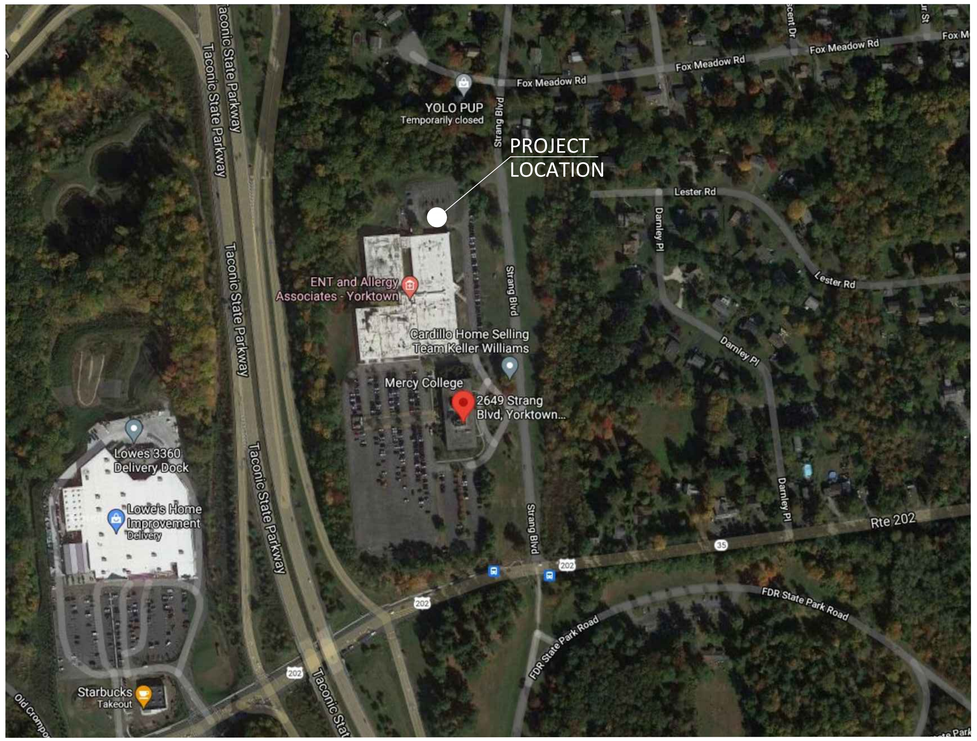
2649 - 2651 STRANG BOULEVARD

TOWN OF YORKTOWN HEIGHTS, WESTCHESTER COUNTY, NEW YORK

DATE: JUNE 18, 2021

SITE DATA:

OWNER:	GHP STRANG LLC 4 WEST RED OAK WHITE PLAINS, NY 10604
PROJECT SITE:	2649-2651 STRANG BOULEVARD YORKTOWN HEIGHTS
TAX MAP ID NUMBER:	SECTION 26.19, BLOCK 1, LOT 2
LOT AREA:	± 18.62 AC
ZONING DISTRICT:	OB - RESEARCH LABORATORY AND OFFICE
FIRE DISTRICT:	YORKTOWN HEIGHTS FIRE DISTRICT
SCHOOL DISTRICT:	YORKTOWN SCHOOL DISTRICT
WATER SUPPLY:	YORKTOWN CONSOLIDATED WATER DISTRICT



VICINITY MAP
SCALE: N.T.S.

SHEET INDEX

SITE CIVIL DRAWINGS

FOR ARCHITECTURAL DRAWINGS REFER TO PLAN SET DEVELOPED BY CARDARELLI DESIGN AND ARCHITECTURE, P.C. DATED MAY 17, 2021.

KELLARD SESSIONS

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500 MAIN STREET, ARMONK, NY 10549
T: (914) 273-2323 | F: (914) 273-2329
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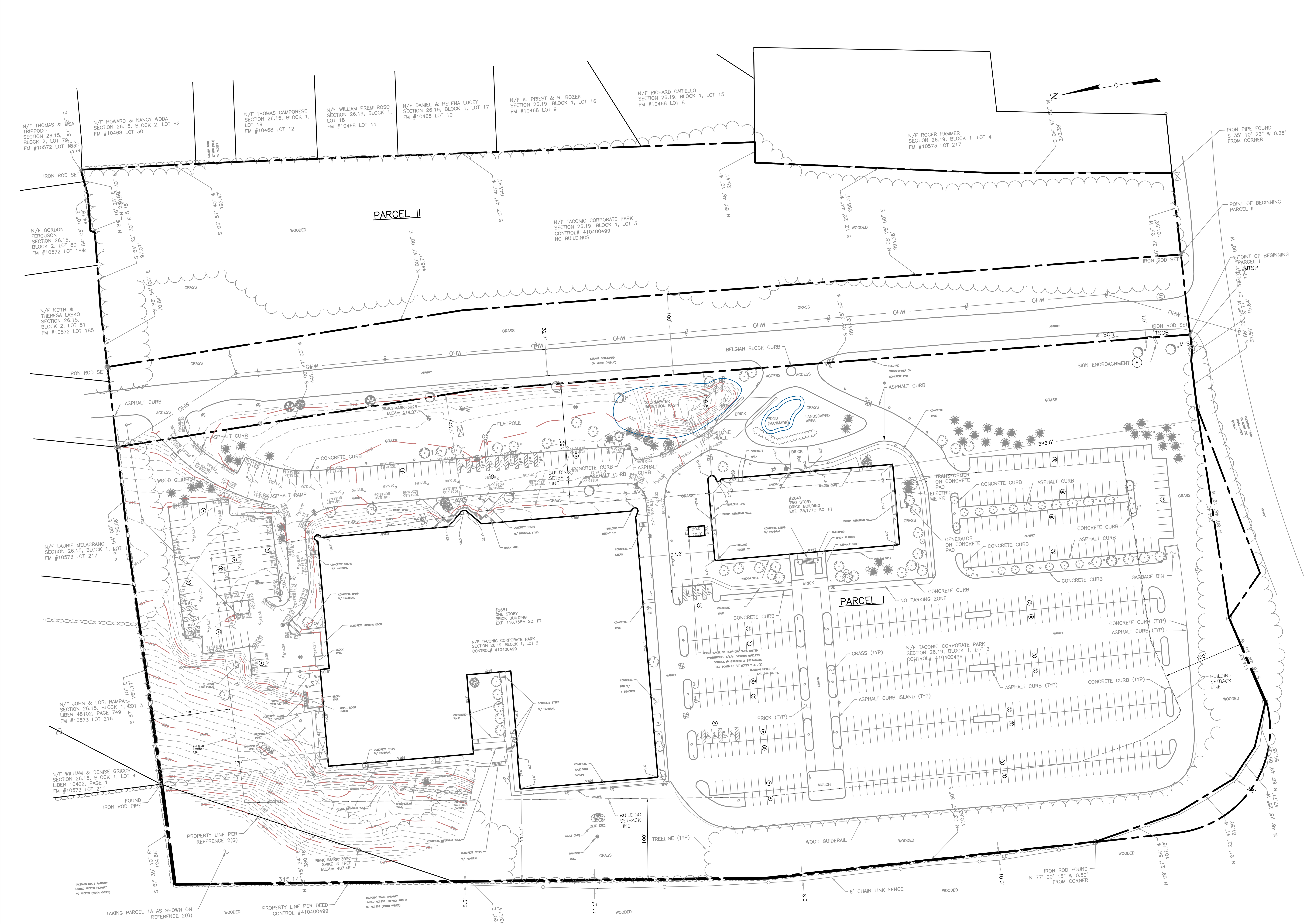

LEGEND

- EXISTING PROPERTY LINE
- EXISTING TREE TO REMAIN
- EXISTING BUILDING
- EXISTING BUILDING SETBACK LINE
- EXISTING 5 FT CONTOUR
- EXISTING 1 FT CONTOUR

60 0 30 60 120 160
FEET

GENERAL NOTES:

1. SURVEY INFORMATION AND TOPOGRAPHY IS BASED UPON THE MAP ENTITLED "TOPOGRAPHIC SURVEY" PREPARED BY TECTONIC ENGINEERING CONSULTANTS, GEOLOGISTS, AND LAND SURVEYORS, D.P.C., LAST DATED, APRIL 20, 2021.
2. AERIAL IMAGERY OBTAINED FROM AVAILABLE WESTCHESTER COUNTY GIS DATA, 2016 / CONNECTEXPLORER™, PICTOMETRY BY EAGLE VIEW TECHNOLOGIES, INC., DATED 2019.
3. THERE ARE NO LOCAL OR STATE REGULATED WETLANDS WITHIN 100 FT OF THE PROJECT SITE.
4. THE PROPERTY IS NOT LOCATED WITHIN A FEMA 100-YR FLOODPLAIN.
5. THE PROJECT SITE IS LOCATED WITHIN THE CROTON RIVER RESERVOIR BASIN, AND BECAUSE LAND DISTURBANCE IS LESS THAN 2 ACRES, IT IS NOT SUBJECT TO NYCDEP REGULATIONS.

Call 811

THE CONTRACTOR SHALL CALL FOR A UTILITY MARK-OUT AT LEAST 2 DAYS BUT NO MORE THAN 10 DAYS PRIOR TO ANY EXCAVATION.

OVERALL EXISTING CONDITIONS PLAN

2649-2651 STRANG BOULEVARD

TOWN OF YORKTOWN HEIGHTS | WESTCHESTER COUNTY, NEW YORK

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1 / 8

PROJECT I.D.: YRGHP600

DATE: JUNE 18, 2021

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BULK ZONING SUMMARY-OB-1, LAB, OFFICE

BULK REGULATION	REQUIRED	EXISTING	PROPOSED
MINIMUM PARKING SETBACK	50 FT	50 FT	NO CHANGE
MINIMUM COMMERCIAL VEHICLE PARKING SETBACK	100 FT	100 FT	NO CHANGE

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GENERAL NOTES:

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OVERALL SITE PLAN

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2 / 8

PROJECT I.D.: YRGHP600

DATE: JUNE 18, 2021

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LEGEND
EXISTING PROPERTY LINE
EXISTING TREE TO REMAIN
EXISTING TREE TO BE REMOVED
EXISTING BUILDING
EXISTING SETBACK LINE
EXISTING SETBACK LINE
PROPOSED DRIVEWAY
PROPOSED EVERGREEN
PROPOSED RETAINING WALL
PROPOSED PARKING COUNT
WOOD GUIDERAIL
ASPHALT RAMP
ASPHALT
GRASS
BRICK WALL
WATER VAULT
LAURIE MELAGRANO
TION 26.15, BLOCK 1, LOT 1
#10573 LOT 217
S 86° 54' 00" E 136.56'
CONCRETE STEPS W/ HANDRAIL
PROPOSED CURB ISLAND
CONCRETE RAMP W/ HANDRAIL
GUY ANCHOR
CONCRETE LOADING DOCK
EXISTING BLOCK WALL TO BE REMOVED
BLOCK WALL
PROPOSED LOADING DOCK EXTENSION
TRUCK TURNING AISLE
PROPOSED SIDEWALK
REMOVE AND REPLACE STAIRS
EXISTING PROPANE TANK TO BE REMOVED AND RELOCATED BY OWNER (TYP.)
MAINT. ROOM UNDER
10'x35' LOADING AREA
EXISTING WALKWAY TO BE REMOVED
UNDERGROUND ELECTRIC FROM EXISTING POWER SUPPLY
PROPOSED ACCESSIBLE WALK AND RAMP
CONCRETE STEPS W/ HANDRAIL
EXISTING WALKWAY TO REMAIN
N/F TACO SECTION CONTROL
CONCRETE WALK
RELOCATE EXISTING ACCESSIBLE PARKING SPACES
WOOD GUIDERAIL
6' CHAIN LINK FENCE
CONCRETE WALK
OVER OIL TANK
CONCRETE STEPS W/ HANDRAIL
PROPANE TANK
MONITOR WELL
BUILDING SETBACK LINE
PROPOSED EVERGREEN SCREENING
N/F JOHN & LORI RAMPA
SECTION 26.15, BLOCK 1, LOT 3
LIBER 48102, PAGE 749
FM #10573 LOT 216
S 87° 54' 10" E 285.1'
PROPOSED RETAINING WALL BY OTHERS (TYP.)
PROPOSED PARKING AREA (25 SPACES)
PROPOSED SITE LIGHT (TYP.)
PROPOSED TREE TO BE REMOVED (TYP.)
PROPOSED BOULDER WALL 4 FT HIGH MAX
EXISTING MONITORING WELL TO BE PROTECTED
"ACCESSIBLE PARKING" AND "NO PARKING" SIGNS (TYP.)
GRATES
HANDRAIL
CONCRETE WALK
CONCRETE WALK WITH CANOPY
STONE RETAINING WALL
WOODED
N/F WILLIAM & DENISE GRIGGS
SECTION 26.15, BLOCK 1, LOT 4
LIBER 10492, PAGE 1
FM #10573 LOT 215
FOUND IRON ROD PIPE
50 FT PARKING SETBACK
100 FT COMMERCIAL VEHICLE PARKING SETBACK
209.1'
158.8'
120.5'
98.5'
24'
32'
17'
30'
100'
8.0' (TYP)
8.5' (TYP)
18.5' (TYP)
20 0 10 20 40 80
FEET
THE CONTRACTOR SHALL CALL FOR A UTILITY MARK-OUT AT LEAST 2 DAYS BUT NO MORE THAN 10 DAYS PRIOR TO ANY EXCAVATION.

ENLARGED SITE PLAN

2649-2651 STRANG BOULEVARD

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3 / 8

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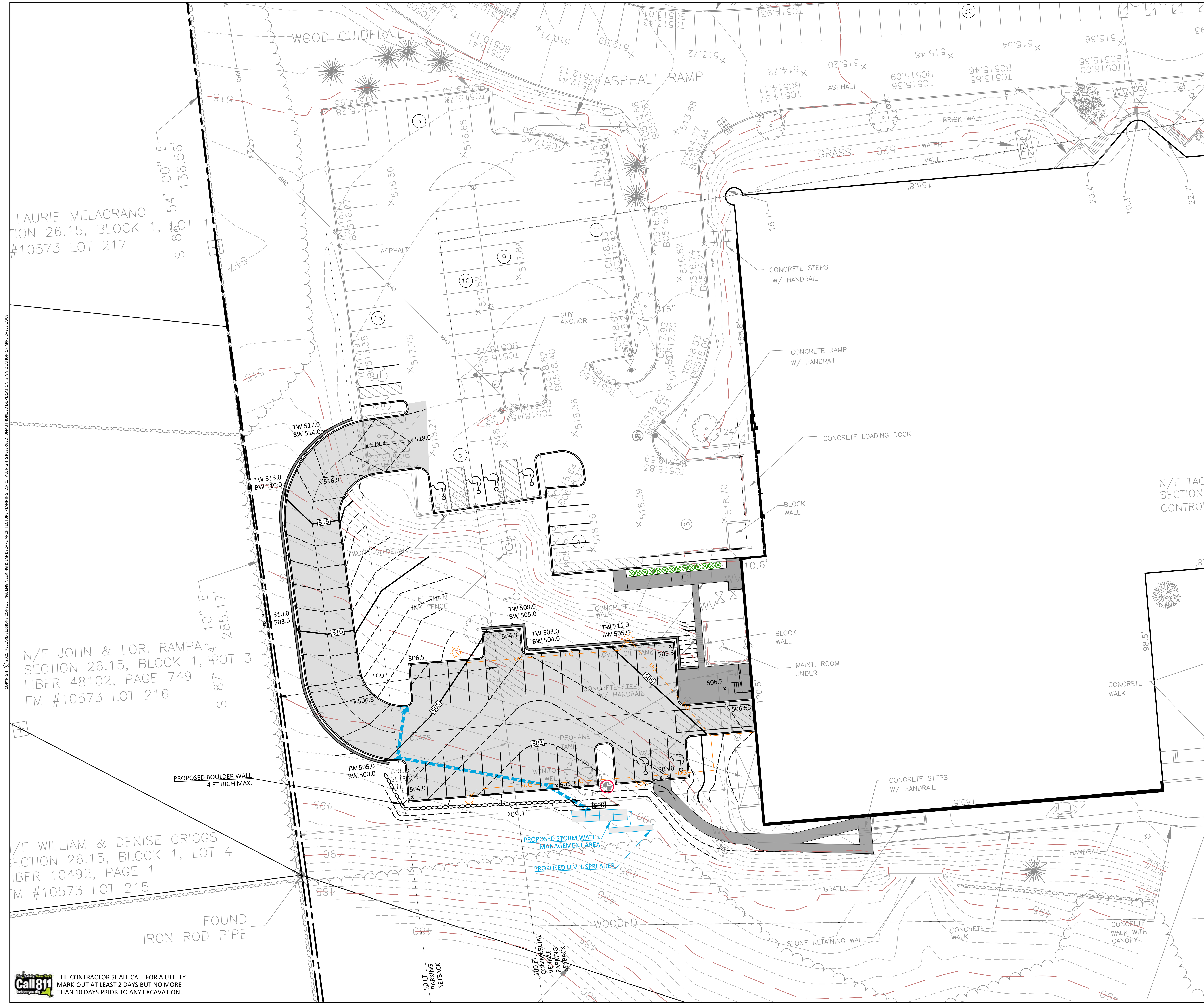

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LEGEND

	EXISTING PROPERTY LINE
	EXISTING TREE TO REMAIN
	EXISTING BUILDING
	EXISTING 5 FT CONTOUR
	EXISTING 1 FT CONTOUR
	EXISTING SETBACK LINE
	PROPOSED DRIVEWAY
500	PROPOSED 5 FT CONTOUR
501	PROPOSED 1 FT CONTOUR
	PROPOSED DRAINAGE LINE
	PROPOSED STORMWATER MITIGATION SYSTEM
	PROPOSED CATCH BASIN
	PROPOSED LEVEL SPREADER
	PROPOSED SITE LIGHTING
UG	PROPOSED UNDERGROUND ELECTRIC

20 0 10 20 40 80
FEET

ENLARGED GRADING AND UTILITIES PLAN

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4 / 8

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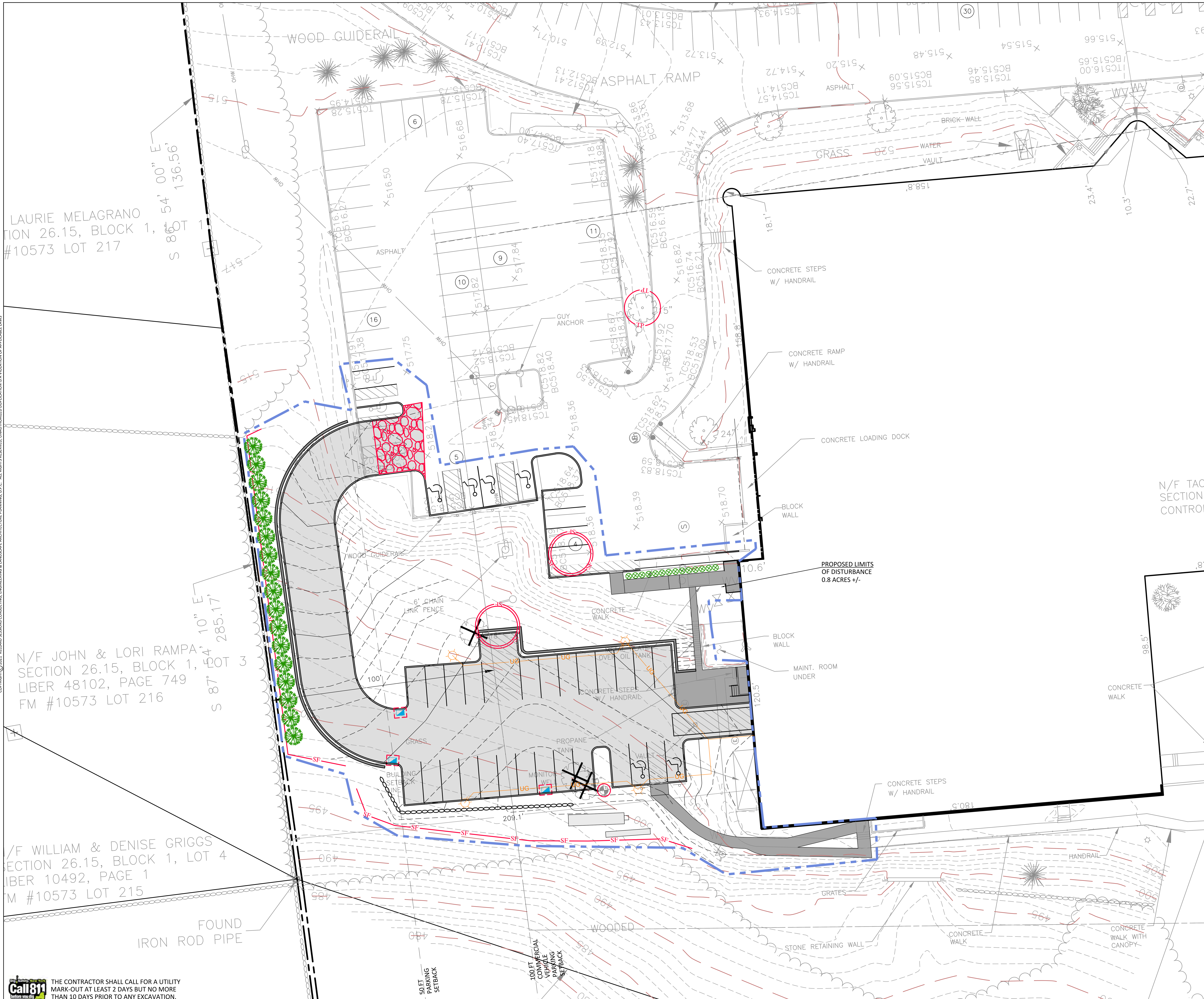

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- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED
- EXISTING BUILDING
- EXISTING 5 FT CONTOUR
- EXISTING 1 FT CONTOUR
- EXISTING SETBACK LINE
- PROPOSED DRIVEWAY
- PROPOSED 10 FT CONTOUR
- PROPOSED 1 FT CONTOUR
- PROPOSED EVERGREEN
- LIMIT OF DISTURBANCE
- PROPOSED STABILIZED CONSTRUCTION ENTRANCE
- PROPOSED SILT FENCE
- PROPOSED INLET PROTECTION
- PROPOSED SOIL STOCKPILE

20 0 10 20 40 80
FEET

ENLARGED EROSION AND SEDIMENT CONTROL PLAN

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5 / 8

PROJECT I.D.: YRGHP600

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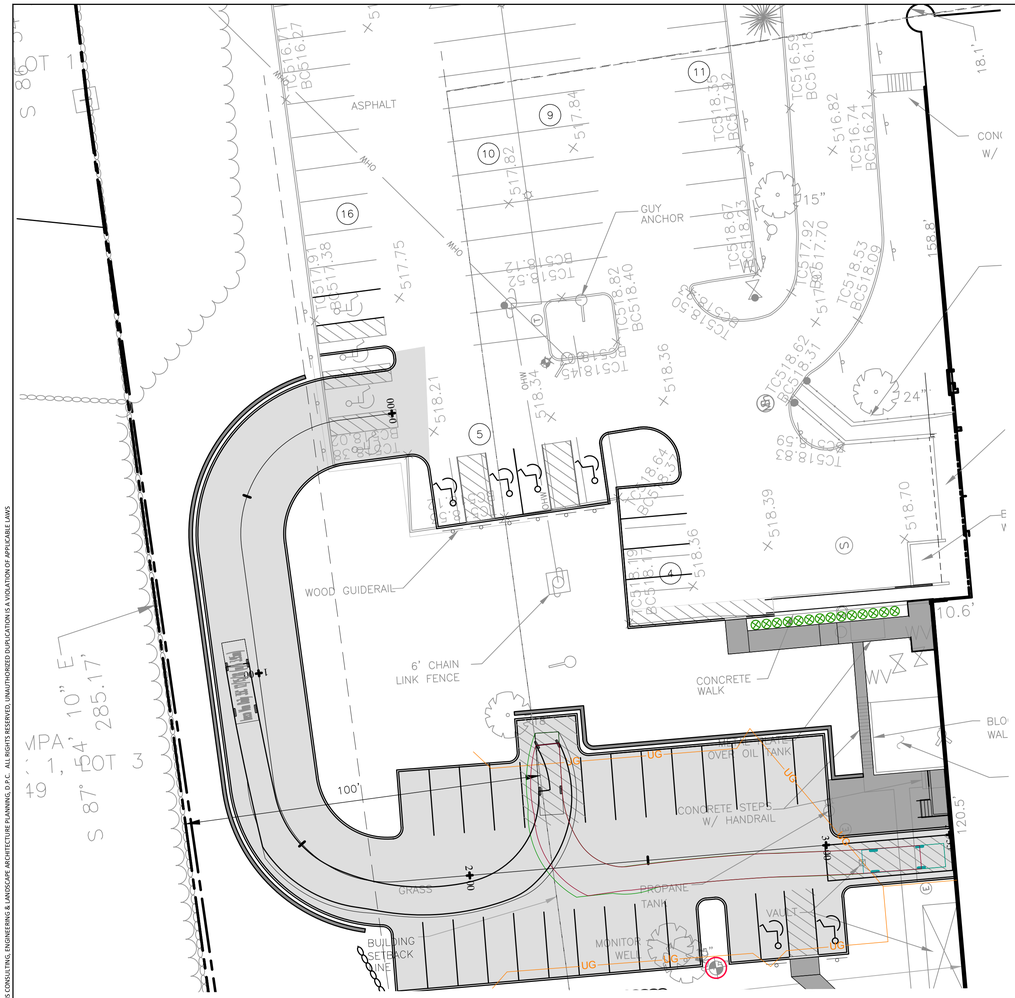
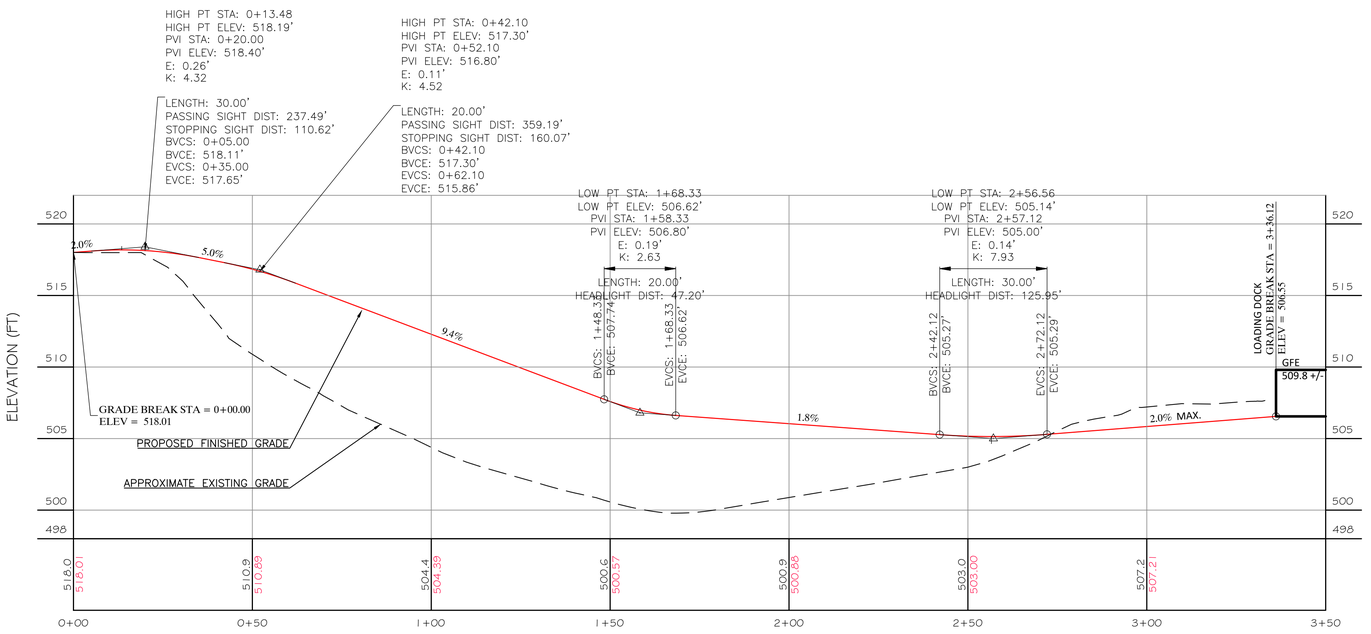


TRUCK TURNING ANALYSIS

NOTE: TRUCK MANEUVER SHOWN FOR TYPICAL DELIVERY TRUCK (30 FT.)



PROPOSED DRIVEWAY

PROFILE SCALE:
HORIZ: 1"=20'
VERT: 1"=5'

20 0 10 20 40 80
FEET

DRIVEWAY PROFILES

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6 / 8

PROJECT I.D.:	YRGHP600
DATE:	JUNE 18, 2021

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Jun 18, 2021 - 12:31pm G:\YRGHP600\CAD\Dwg\YRGHP600 - DETAILS.dwg - kbyrne

EROSION AND SEDIMENT CONTROL PLAN

All proposed soil erosion and sediment control practices have been designed in accordance with the following publications:

- New York Standards and Specifications for Erosion and Sediment Control, latest edition
- New York State SPDES General Permit for Stormwater Runoff from Construction Activity(GP-0-20-001)
- Town Code of Yorktown Chapter 248 "Stormwater Management"

The primary aim of the soil erosion and sediment control plan is to reduce soil erosion from areas stripped of vegetation during and after construction and to prevent silt from reaching the drainage structures, Cultec infiltration systems, wetland systems, watercourses, waterbodies and downstream properties. The Cultec infiltration systems will not be put into service until the contributing drainage areas to the system have been stabilized. As outlined in the construction sequencing notes below and on the Sediment & Erosion Control Plans, the Sediment & Erosion Control Plan is an integral component of the construction phasing and sequencing and will be implemented to control sediment and re-establish vegetation as soon as practicable. The plan will be implemented prior to the commencement of any earthmoving activities and will be maintained though the duration of the project.

A copy of the contractor certification form is provided in Stormwater Pollution Prevention Plan Report. This form will be signed by the contractor prior to the commencement of construction activity. Each contractor and subcontractor shall identify at least one (1) person from their company that will be responsible for implementation of the SWPPP. This person shall be known as the *trained contractor*. The *trained contractor* shall be on site on a daily basis when soil disturbance activities are being performed. The *trained contractor* must receive four (4) hours of NYSDEC endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other NYSDEC endorsed entity. The *trained contractor* must receive four (4) hours of training every three (3) years.

The owner/operator shall maintain at the construction site a copy of the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activities, GP-0-20-001, the Notice of Intent (NOI), the NOI acknowledgment letter, the Stormwater Pollution Prevention Plan Report for American Capital Energy Corporation, the MS4 SWPPP Acceptance Form and inspection reports from the qualified inspector until all disturbed areas have achieved final stabilization and the Notice of Termination (NOT) has been filed with the NYSDEC.

The applicant or developer or their representative shall be on site at all times when construction or grading activity takes place. A *qualified inspector* shall conduct site inspections a minimum of once every seven (7) calendar days. The qualified inspector shall inspect and document the effectiveness of all erosion and sediment control practices. The *qualified inspector* shall prepare an inspection report subsequent to each and every inspection. The reports shall be forwarded to the Town's Stormwater Management Officer and also copied to the site logbook. The *qualified inspector* must be a licensed Professional Engineer, a Certified Professional in Erosion and Sediment Control (CPESC), a Registered Landscape Architect or someone working under the direct supervision of, and at the same company as, the Licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of NYSDEC endorsed training in proper erosion and sediment control principles from a soil and water conservation district.

The proposed soil erosion and sediment control devices include the planned erosion control practices outlined below. Maintenance procedures for each erosion control practice are also provided herein. The owner or operator must ensure that all erosion and sediment control practices identified herein are maintained in effective operating condition at all times.

- **STABILIZED CONSTRUCTION ENTRANCE**
  A stabilized construction entrance shall be installed at the project entrance as indicated on the plans. The purpose of the stabilized construction entrance is to prevent vehicles leaving the site from tracking sediment, mud or any other construction-related materials from the site onto Strang Boulevard.

  Maintenance/Inspection
  Stabilized construction entrance shall be inspected a minimum of twice every seven (7) calendar days. The Contractor shall maintain the construction entrance in a manner which prevents or significantly reduces the tracking of sediment/soil onto Strang Boulevard. The Contractor shall inspect the construction entrance daily and after each rain event for displacement or loss of aggregate. The Contractor shall top-dress the construction entrance when displacement/loss of aggregate occurs, or if the aggregate becomes clogged or silted to the extent that the entrance can no longer perform its intended function. The Contractor shall inspect the vicinity of the construction entrance several times a day and immediately remove any sediment dropped or washed onto Strang Boulevard.

- **SILT FENCE**
  Silt fence (geotextile filter cloth) shall be placed in locations depicted on the approved plans. The purpose of the silt fence is to reduce the velocity of sediment-laden stormwater from small drainage areas and to intercept the transported sediment load. In general, silt fence shall be used at the down-gradient perimeter of disturbed areas, toe of slopes or intermediately within slopes where obvious channel concentration of stormwater is not present. Silt fence shall always be installed parallel to the contours in order to prevent concentrated flows from developing along the silt fence.

  Maintenance/Inspection
  Silt fencing shall be inspected a minimum of twice every seven (7) calendar days. Inspections shall include ensuring that the fence material is tightly secured to the wood posts. In addition, overlapping filter fabric shall be secure and the fabric shall be maintained a minimum of six (6) inches below grade. In the event that any "bulges" develop in the fence, that section of fence shall be replaced immediately with a new fence section. Any visible sediment build-up against the fence shall be removed immediately and deposited on-site a minimum of 100 feet outside of any wetland area.

- **INLET PROTECTION**
  After the drain inlets have been installed and the site is completely stabilized, these drain inlets will receive stormwater from the driveways and overland watersheds. During construction, a filter fabric drop inlet barrier shall be placed around the drain inlets to allow stormwater to be filtered prior to the stormwater being discharged to the drainage system.

  Maintenance/Inspection
  Inlet protection devices shall be inspected a minimum of twice every seven (7) calendar days. Care shall be taken to ensure that all inlet protection devices are properly located and secure and do not become displaced. Upon stabilization of the drainage areas, remove all materials and sediment and dispose of properly. Any accumulated sediments shall be removed from the device and deposited not less than 100 feet from a wetland area.

- **TREE PROTECTION**
  All significant trees to be preserved located within the limits of disturbance and on the perimeter of the disturbance limits shall be protected from harm by erecting a three (3) feet high (minimum) snow fence completely surrounding the tree. Snow fence should extend to the drip-line of the tree to be preserved. Trees designated to be protected/saved are illustrated on the construction drawings and will be identified in the field prior to construction.

  Maintenance/Inspection
  The snow fence shall remain at the drip-line of the tree to be preserved. The snow fence shall be inspected a minimum of twice every seven (7) calendar days. Any damaged portions of the fence shall be repaired or replaced. Care shall also be taken to ensure that no construction equipment is driven or parked within the drip-line of the tree to be preserved.

- **RIP-RAP OUTLET PROTECTION**
  The outlets of all stormwater discharge areas will be protected from erosion by the placement of stone rip-rap at the culvert outlet. The purpose of the stone outlet protection is to reduce the velocities of the discharged water such that flows will not erode the receiving area.

  Maintenance/Inspection
  Maintenance of the outlet protection devices shall be inspected twice every seven (7) calendar days to determine if any scouring beneath the rip-rap has occurred and/or if any rip-rap has been displaced. All displaced rip-rap shall be re-positioned or replaced with new rip-rap. In addition, all leaves, twigs and brush shall be removed in the vicinity of the culvert/swale outlet to ensure that stormwater is flowing unobstructed.

- **SOIL/MATERIAL STOCKPILING**
  All soil/material stripped from the construction area during grubbing and grading shall be stockpiled in locations illustrated on the approved plans, or in practical locations on-site.

  Maintenance/Inspection
  All stockpiles shall be inspected a minimum of twice every seven (7) calendar days for signs of erosion or problems with seed establishment. Soil stockpiles shall be protected from erosion by vegetating the stockpile with a rapidly-germinating grass seed and surrounded with either silt fence or staked haybales. If the project is ongoing during the non-growing season, the stockpiles shall be protected by a tarpaulin covering the entire stockpile.

- **SURFACE STABILIZATION**
  All disturbed areas will be protected from erosion with the use of vegetative measures (e.g., grass seed mix, sod), hydromulch, hay or erosion control blankets.

  Erosion control barriers consisting of silt fencing shall be placed around exposed areas during construction. Any areas stripped of vegetation during construction will be vegetated and/or mulched immediately to prevent erosion of the exposed soils. In areas where significant erosion potential exists (steep slopes) and/or where specifically directed, Curlex Excelsior erosion control blankets (manufactured by American Excelsior or approved equal) shall be installed.
  Materials that may be used for mulching include straw, hay, salt hay, wood fiber, synthetic soil stabilizers, mulch netting, erosion control blankets or sod. A permanent vegetative cover will be established upon completion of construction of those areas which have been brought to finish grade and to remain undisturbed.

- **GENERAL LAND GRADING**
  The applicant/developer or their representatives shall be on-site at all times when construction or grading activity takes place and shall inspect and document the effectiveness of all sediment and erosion control practices. No more than five (5) acres of disturbed land will be exposed without stabilization at any one time.

  The intent of the erosion controls is to control all disturbed areas, such that soils are protected from erosion by temporary methods and, ultimately by permanent vegetation.

- **DUST CONTROL**
  Where vegetative or mulch cover is not practicable in disturbed areas of the site, dust shall be controlled by the use of water sprinkling. The surface shall be sprayed until wet. Dust control shall continue until such time as the entire site is adequately stabilized with permanent vegetative cover.

- **POLLUTION PREVENTION MEASURES FOR CONSTRUCTION RELATED ACTIVITIES**
  Pollution prevention practices for preventing litter, construction chemicals (if applicable) and construction debris from becoming a pollutant source in stormwater discharge include daily pickup of construction debris, inspection, and physical controls such as silt fencing. Inspections will also be conducted to insure that dust control measures are utilized as necessary. During construction, maintenance, construction and waste materials will be stored within suitable areas/dumpsters, as appropriate, to minimize the exposure of the materials to stormwater and spill prevention. All maintenance and construction waste will be disposed of in a safe manner in accordance with all applicable regulations.

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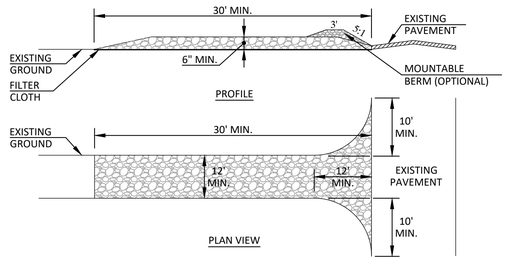
STABILIZED CONSTRUCTION ENTRANCE DETAIL (N.T.S.)



CONSTRUCTION SPECIFICATIONS

1. STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - NOT LESS THAN 30 FEET
3. THICKNESS - NOT LESS THAN SIX (6) INCHES.
4. WIDTH - TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.
5. FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CON- STRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY, ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACTED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON A AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

SILT FENCE DETAIL (N.T.S.)

CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

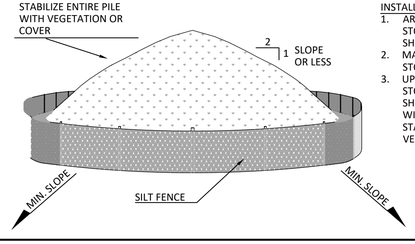
1. FILTER CLOTH TO BE FASTENED SECURELY TO POSTS AT TOP AND MID SECTION.
2. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
3. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

POSTS: STEEL EITHER T OR U TYPE OR 2" HARDWOOD

FILTER CLOTH: FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUAL

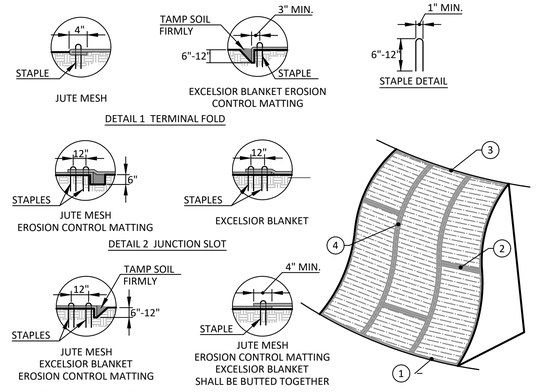
PREFABRICATED UNIT: GEOFAB, ENVIROFENCE, OR APPROVED EQUAL

TEMPORARY SOIL STOCKPILE DETAIL (N.T.S.)



INSTALLATION NOTES
1. AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 1:2.
3. UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH SILT FENCING, THEN STABILIZED WITH VEGETATION OR COVERED.

EROSION CONTROL BLANKET DETAIL (N.T.S.)



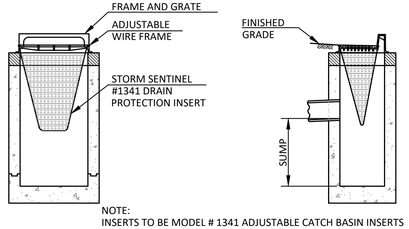
CONSTRUCTION SPECIFICATIONS

1. APPLY TO SLOPES GREATER THAN 3H:1V OR WHERE NECESSARY TO AID IN ESTABLISHING VEGETATION.
2. APPLY FERTILIZER, LIME AND SEED PRIOR TO PLACING MATTING.
3. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 4' X 225' ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4' X 150' ROLL OF MATERIAL.
4. DISTURBED AREAS SHALL BE SMOOTHLY GRADED. EROSION CONTROL MATERIAL SHALL BE PLACED LOOSELY OVER GROUND SURFACE. DO NOT STRETCH.
5. ALL TERMINAL ENDS AND TRANSVERSE LAPS SHALL BE STAPLED AT APPROXIMATELY 12" INTERVALS.

TREE PROTECTION DETAIL (N.T.S.)

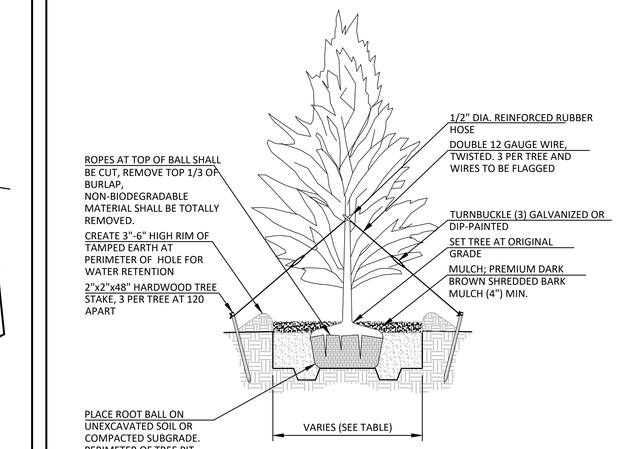
TREE PROTECTION SHALL BE PROVIDED FOR SPECIMEN TREES TO BE SAVED WHICH ARE LOCATED IMMEDIATELY ADJACENT TO CONSTRUCTION AREAS OR AS DIRECTED BY THE FORESTRY OFFICER OR DESIGNEE.

CATCH BASIN FILTERS - INLET PROTECTION DETAIL (N.T.S.)



NOTE:
INSERTS TO BE MODEL # 1341 ADJUSTABLE CATCH BASIN INSERTS BY ENPAC OR APPROVED EQUAL.

EVERGREEN TREE PLANTING DETAIL (N.T.S.)



NOTE:
PLANTED TREES SHALL BE PROTECTED AGAINST DEER BROWSE/DAMAGE BY REGULAR APPLICATION OF DEER REPELLANT OR USE OF PLASTIC NETTING OR WIRE MESH, TREE GUARDS, ETC. OR OTHER MEASURES.

HOLE DIAMETER TABLE	
ROOT BALL SIZE	HOLE DIAMETER
LESS THAN 4'Ø	2X BALL Ø
4'-5'Ø	1 3/4X BALL Ø
GREATER THAN 5'Ø	1 1/2X BALL Ø

DETAILS

2649-2651 STRANG BOULEVARD

TOWN OF YORKTOWN HEIGHTS — WESTCHESTER COUNTY, NEW YORK

KELLARD SESSIONS
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STATE OF NEW YORK — MATTHEW J. SESSIONS — 076802 — LICENSED PROFESSIONAL ENGINEER

REVISIONS	
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PROJECT I.D.: YRGHP600

DATE: JUNE 18, 2021

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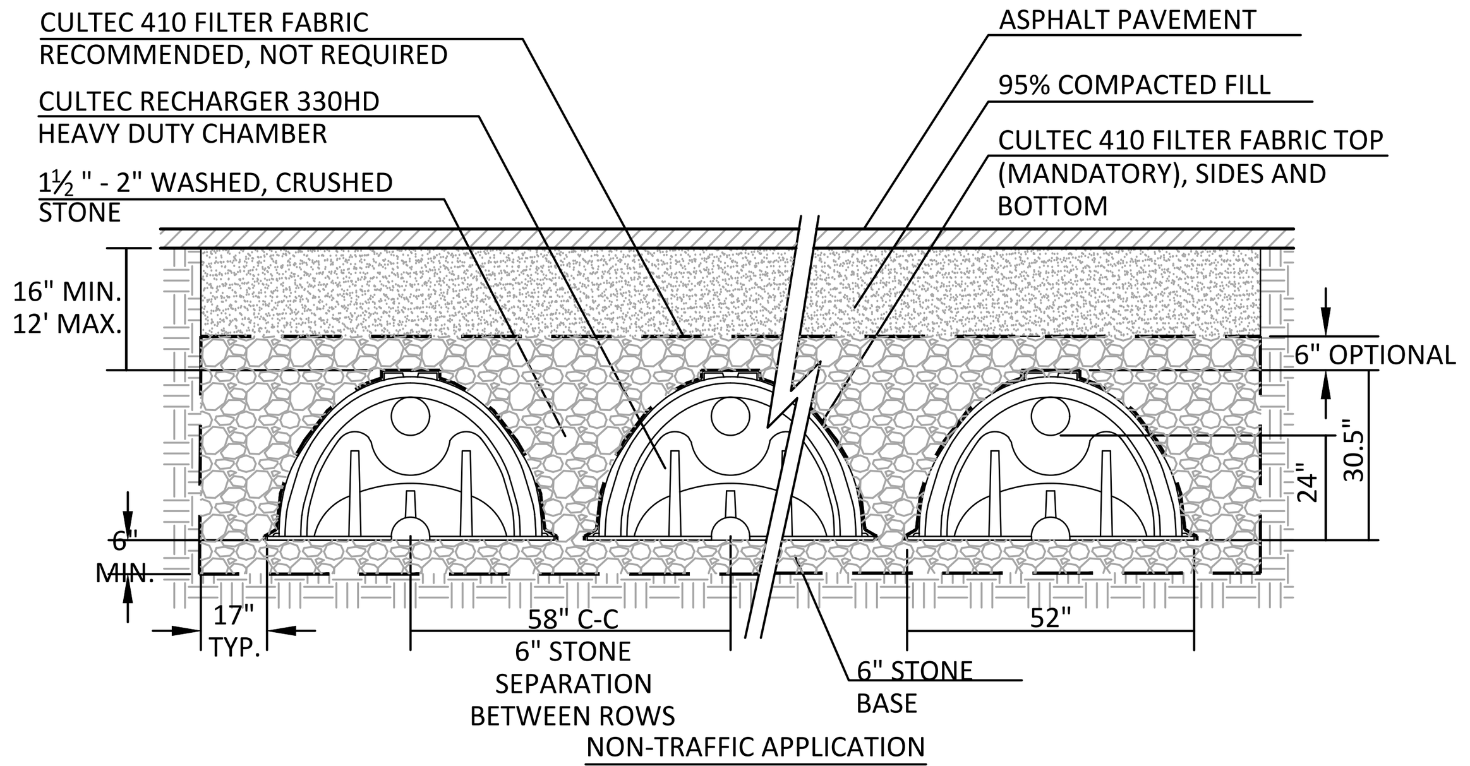
330 HD CULTEC RECHARGER CHAMBER SYSTEM DETAIL (N.T.S.)



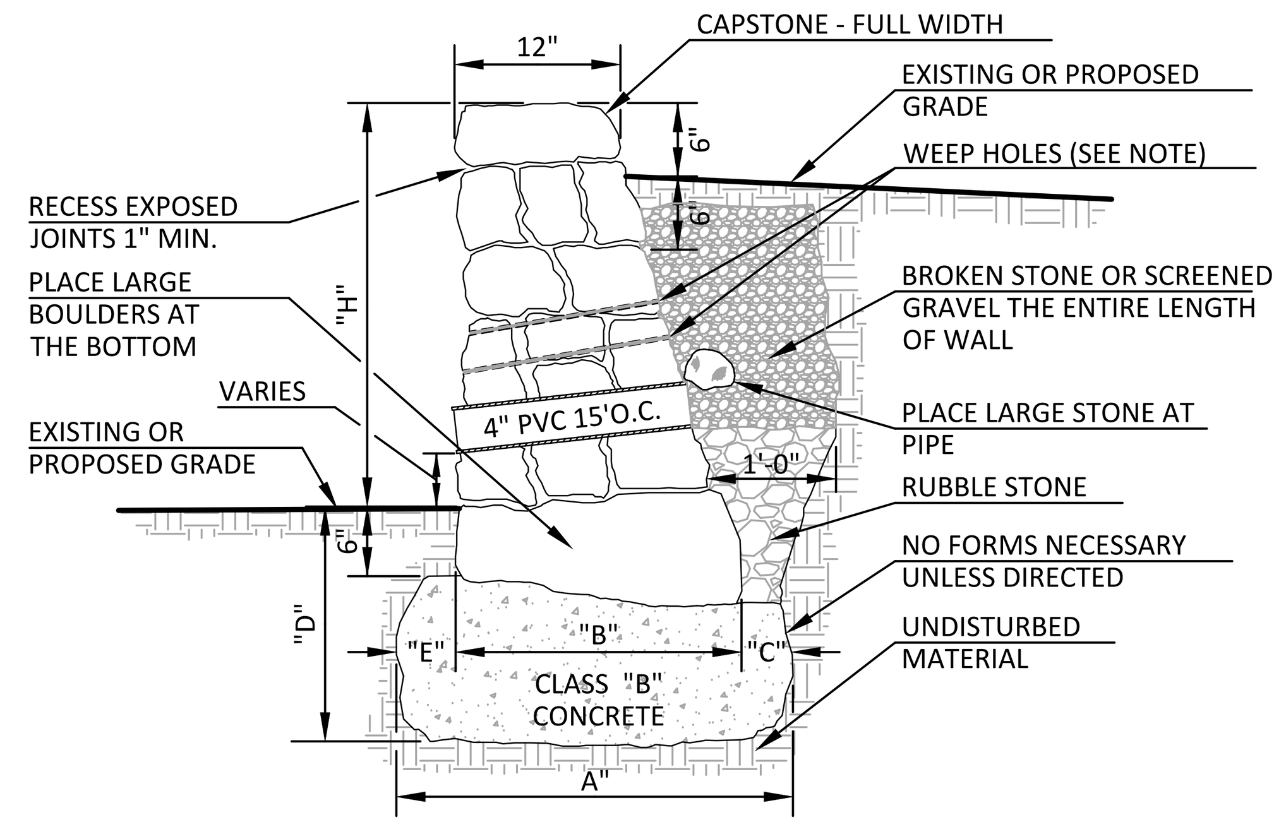
NON-TRAFFIC APPLICATION
TYPICAL CROSS SECTION DETAIL

TYPICAL CROSS SECTION RECHARGER 330
(10.35 CF./ LF.)

CALCULATIONS BASED ON 40%
STONE VOID

GENERAL NOTES
RECHARGER™ 330 BY CULTEC, INC. OF BROOKFIELD, CT. ALL RECHARGER™ 330 CHAMBERS MUST BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS. REFER TO MANUFACTURER, CULTEC, INC.'S RECOMMENDED INSTALLATION GUIDELINES. ALL RECHARGER™ 330HD HEAVY DUTY UNITS ARE MARKED WITH A 4" STRIPE ALONG THE LENGTH OF THE CHAMBER. 6" STONE ABOVE THE CHAMBER IS OPTIONAL FOR ADDITIONAL STORAGE.

RUBBLE STONE MASONRY RETAINING WALL DETAIL (N.T.S.)

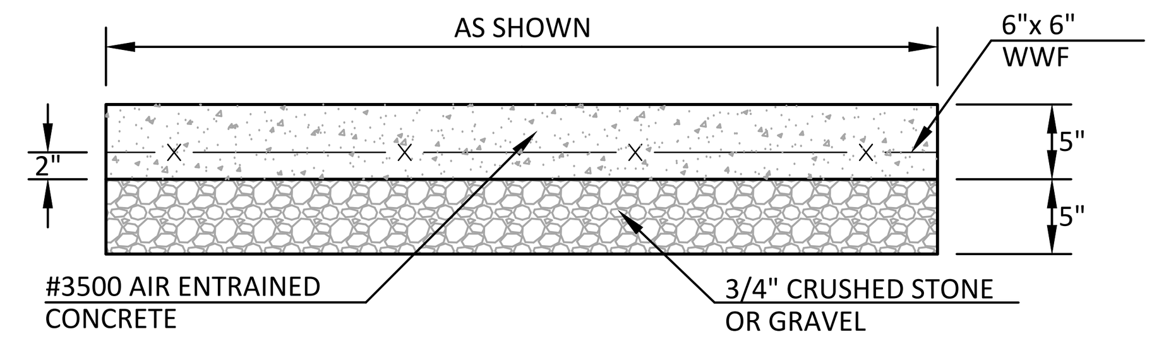


SECTION

DIMENSIONS					
H(Ft)	"A"	"B"	"C"	"D"	"E"
1	2'-0"	1'-6"	3"	2'-0"	3"
2	2'-6"	2'-0"	3"	2'-0"	3"
3	3'-2"	2'-6"	4"	3'-0"	4"
4	3'-8"	3'-0"	4"	3'-0"	4"
5	4'-6"	3'-6"	6"	3'-0"	6"
6	5'-0"	4'-0"	6"	3'-0"	6"

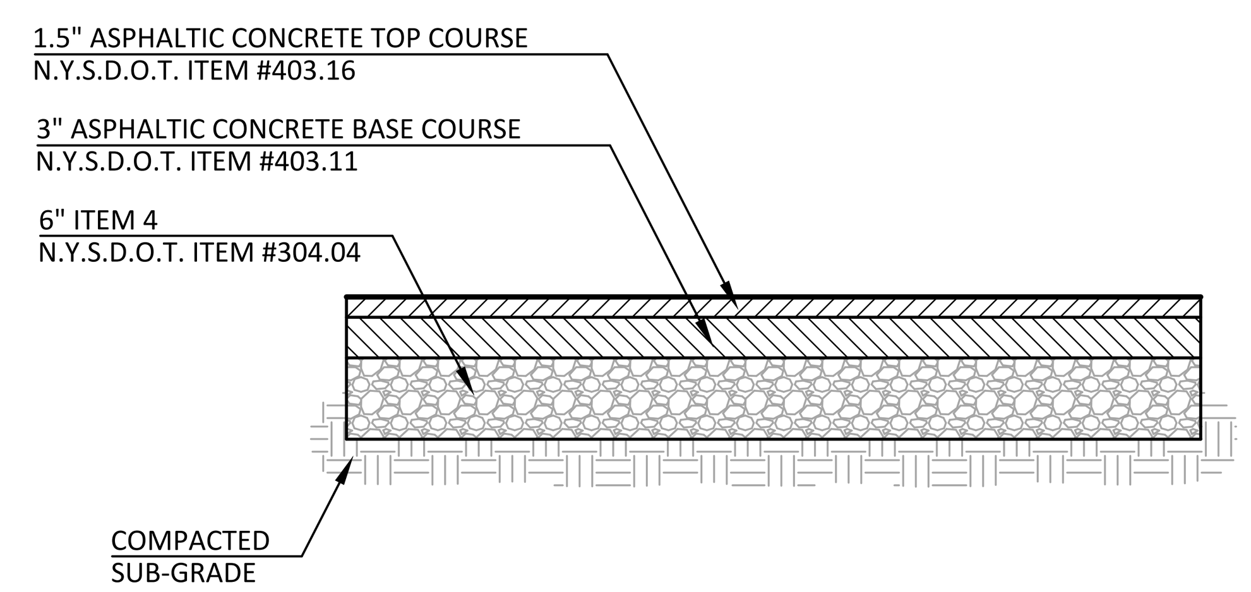
NOTES:
1. RETAINING WALLS OVER 6FT. IN HEIGHT SHALL BE ENGINEERED OR IN CASE OF ROCK OCCURANCE; 8 ON 1 ROCK CUT SHALL BE UTILIZED.
2. STAGGER WEEP HOLES 18" O.C. VERTICALLY.
3. IN ROCK CUT AREAS; ALL ROCK CUTS SHALL BE STABILIZED TO THE SATISFACTION OF THE TOWN'S REPRESENTIVE.

CONCRETE SIDEWALK DETAIL (N.T.S.)

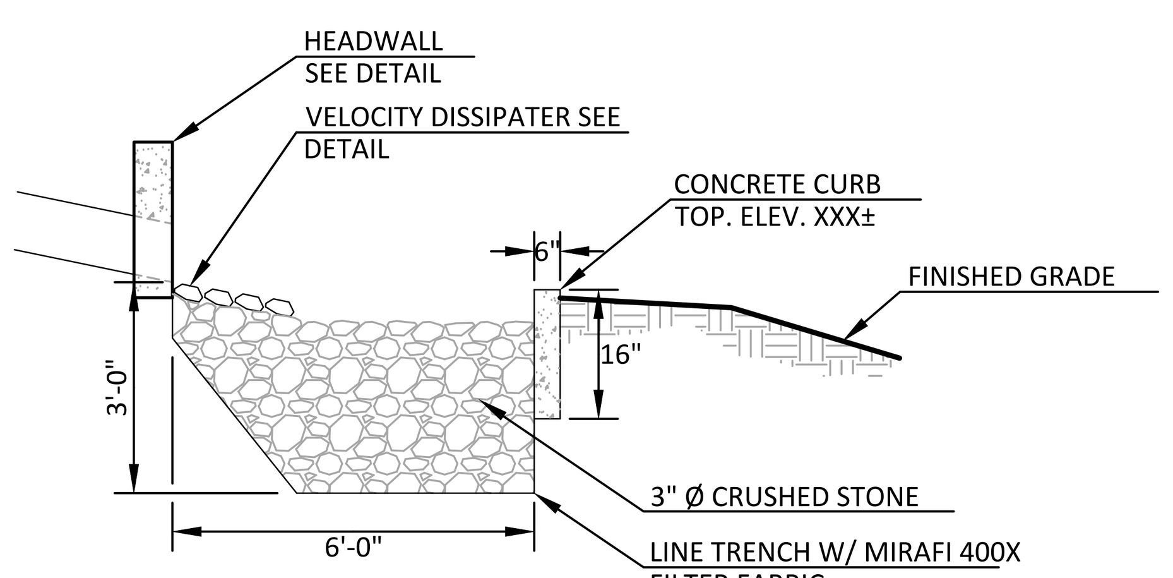


NOTES:
1. SIDEWALK TO BE CONSTRUCTED WITH SLOPE OF 1/4" PER FOOT AND PITCHED TOWARDS DRIVEWAY.
2. BITUMINOUS EXPANSION JOINTS @ 40' O.C.
3. CONTRACTION JOINTS @ 5" O.C.

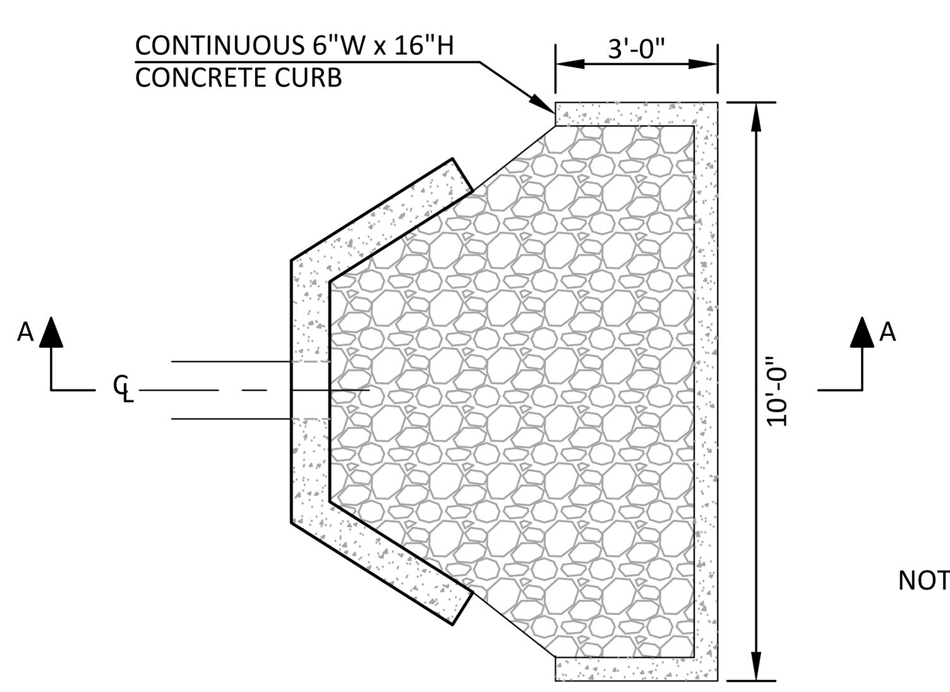
CONCRETE PAVEMENT DETAIL (N.T.S.)



LEVEL SPREADER/VELOCITY DISSIPATER DETAIL (N.T.S.)



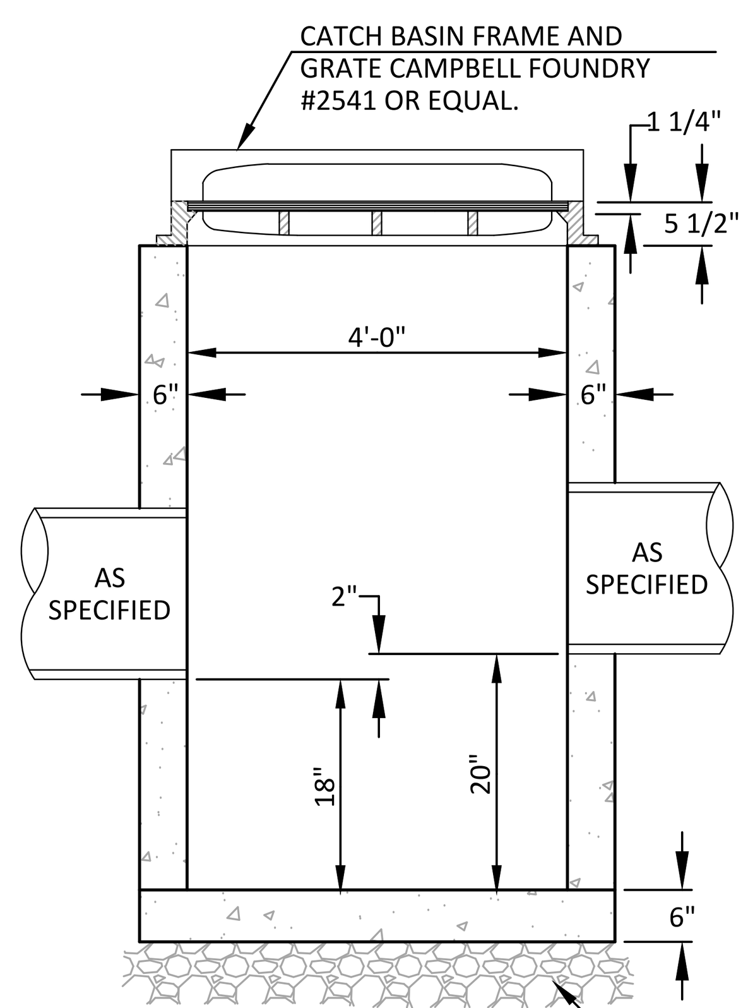
SECTION A-A



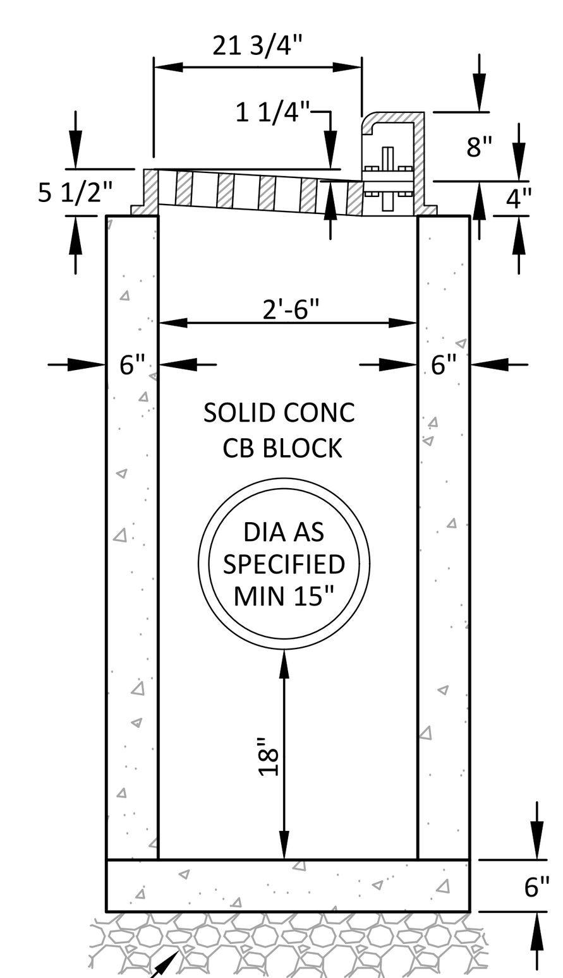
PLAN

NOTE:
CONCRETE CURB LEVEL SPREADER TO BE CONSTRUCTED SO THAT SPILLWAY ELEV. IS 258.0 FOR ITS ENTIRE LENGTH.

CATCH BASIN DETAIL (N.T.S.)



FRONT VIEW

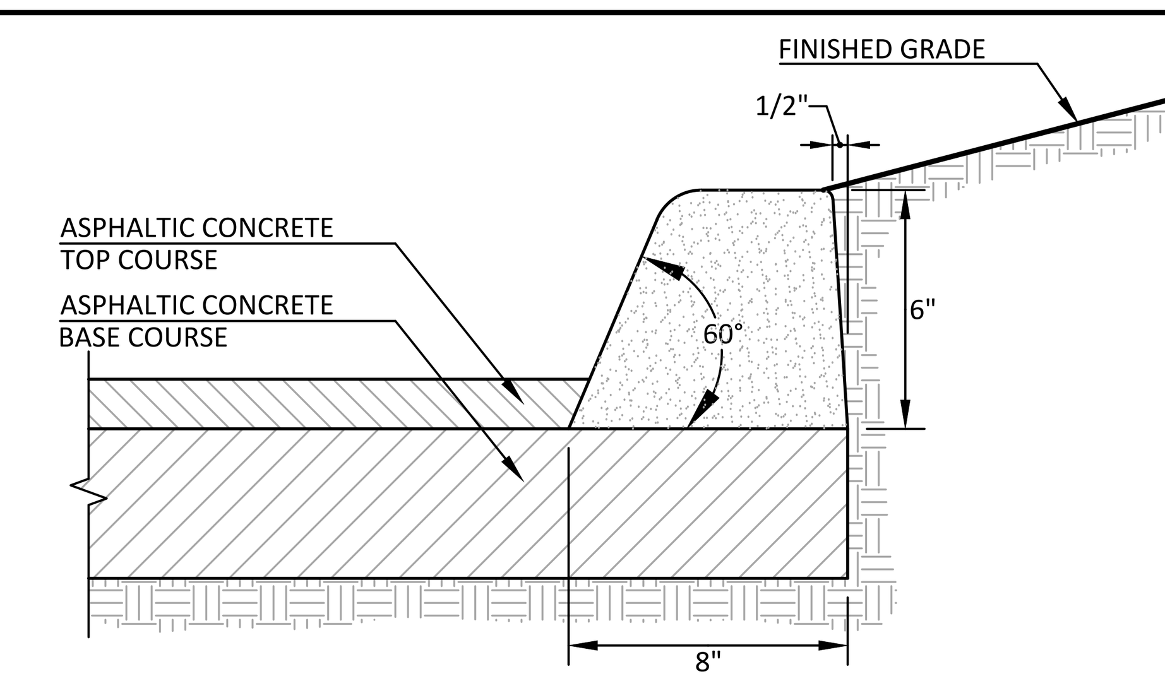


SIDE VIEW

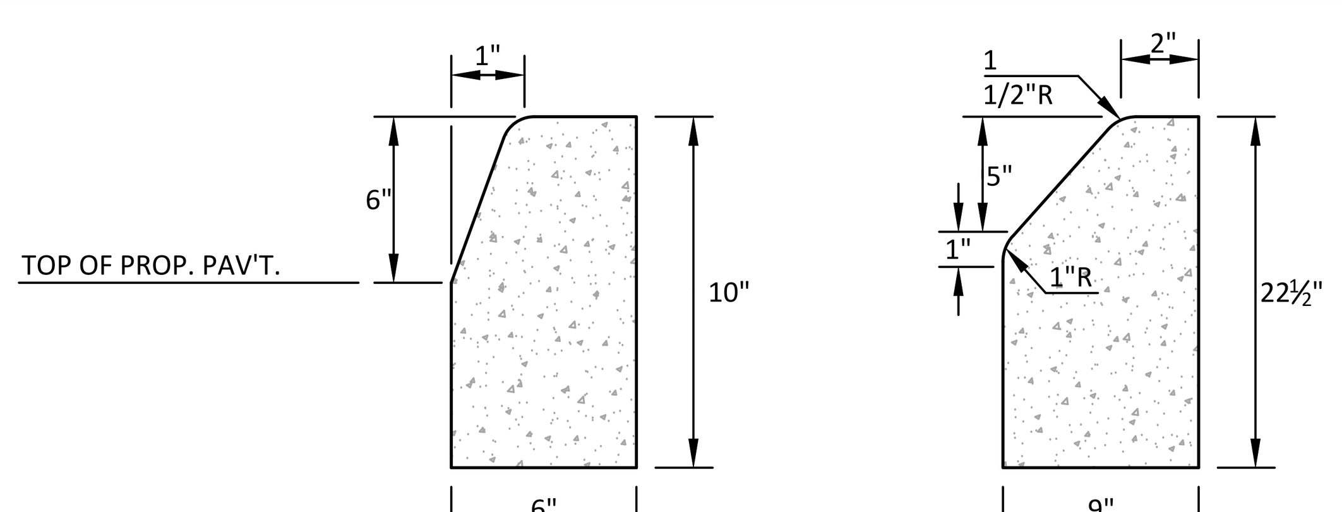
6" CRUSHED STONE OR GRAVEL BEDDING

NOTE:
TYPE A CATCH BASIN AS SHOWN HERE ON WILL BE UTILIZED WHERE THE NEED FOR A DROP INLET EXISTS. THE CURB TYPE CASTING SHALL BE SUBSTITUTED WITH CAMPBELL FOUNDRY FRAME AND GRATE # 3433 OR EQUAL.

ASPHALTIC CONCRETE CURB DETAIL (N.T.S.)



CONCRETE CURB DETAIL (N.T.S.)

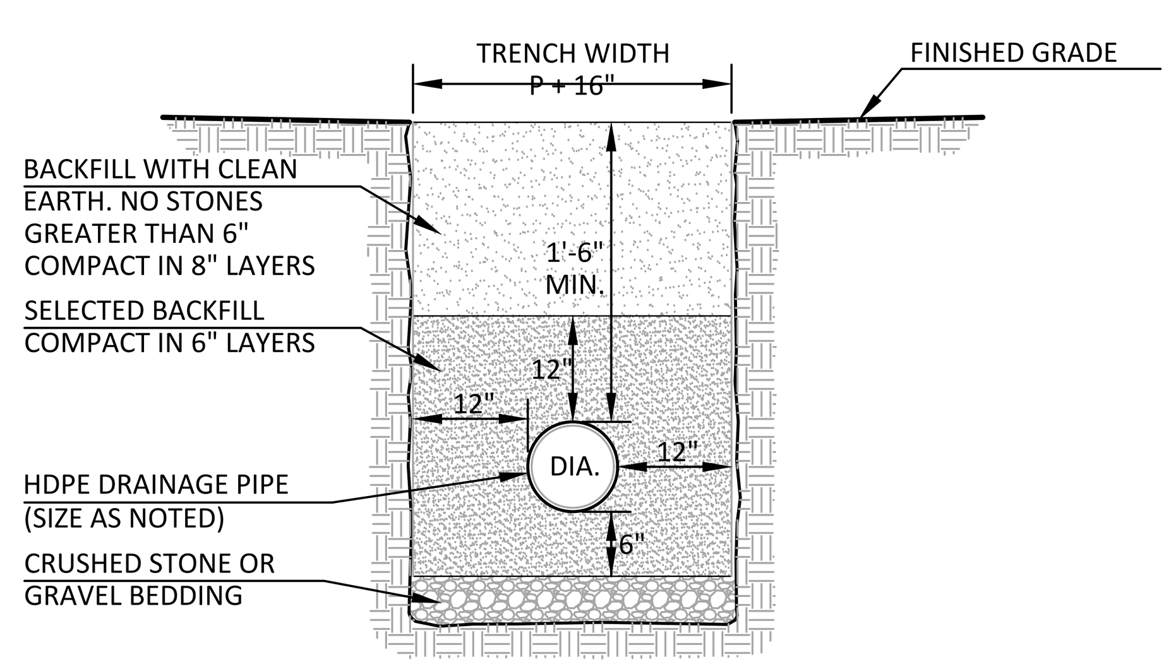


TYPE "A"

TYPE "B"

THE CONTRACTOR SHALL CALL FOR A UTILITY MARK-OUT AT LEAST 2 DAYS BUT NO MORE THAN 10 DAYS PRIOR TO ANY EXCAVATION.

TRENCH DETAIL (N.T.S.)



DETAILS

2649-2651 STRANG BOULEVARD

TOWN OF YORKTOWN HEIGHTS | WESTCHESTER COUNTY, NEW YORK

KELLARD SESSIONS
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STATE OF NEW YORK
MATTHEW CERMELE
076802
LICENSED PROFESSIONAL ENGINEER
[illegible]

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REVISIONS	

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PROJECT I.D.: YRGHP600

DATE: JUNE 18, 2021

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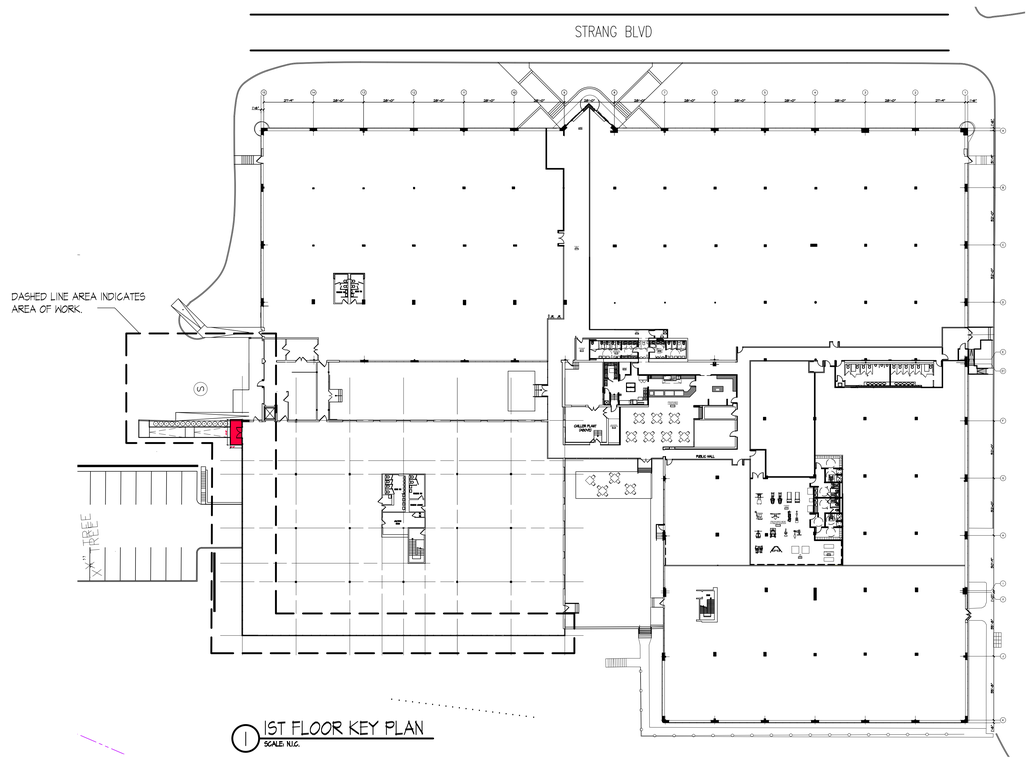
PROPOSED EXTERIOR BUILDING RENOVATIONS

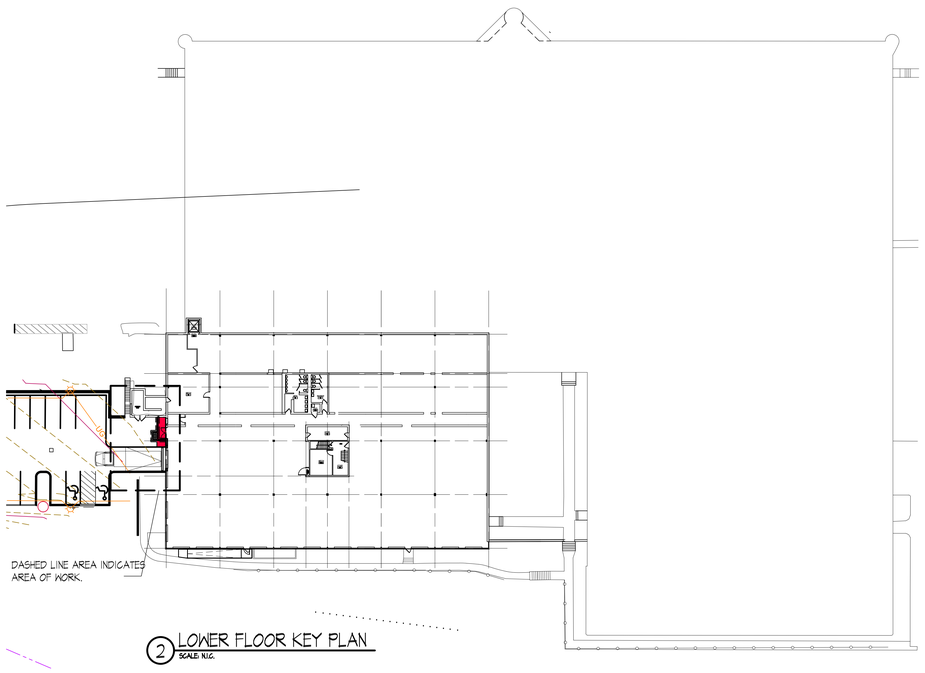
2651 STRANG BOULEVARD

YORKTOWN HEIGHTS, NEW YORK 10598

ZONE DISTRICT: OB / SECTION: 26.19 / BLOCK: 1 / LOT: 2



1 1ST FLOOR KEY PLAN
SCALE: N.T.S.



2 LOWER FLOOR KEY PLAN
SCALE: N.T.S.

DRAWING LIST	
ARCHITECTURAL DRAWINGS	
COVER SHEET	A0
DEMOLITION PLAN	DM1
CONSTRUCTION PLAN	A1
FOUNDATION PLAN	A2
ELEVATIONS	A3
ELEVATIONS	A4
WALL SECTIONS	A5

CARDARELLI
DESIGN & ARCHITECTURE, P.C.
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WHITE PLAINS, NY 10607
PHONE: 914-437-9554 / FAX: 914-437-9555

GHP

PROJECT:
PROPOSED EXTERIOR BUILDING RENOVATIONS
2651 STRANG BOULEVARD
YORKTOWN HEIGHTS, NEW YORK 10598
GROUND FLOOR
ZONE DISTRICT: OB / SECTION: 26.19 / BLOCK: 1 / LOT: 2

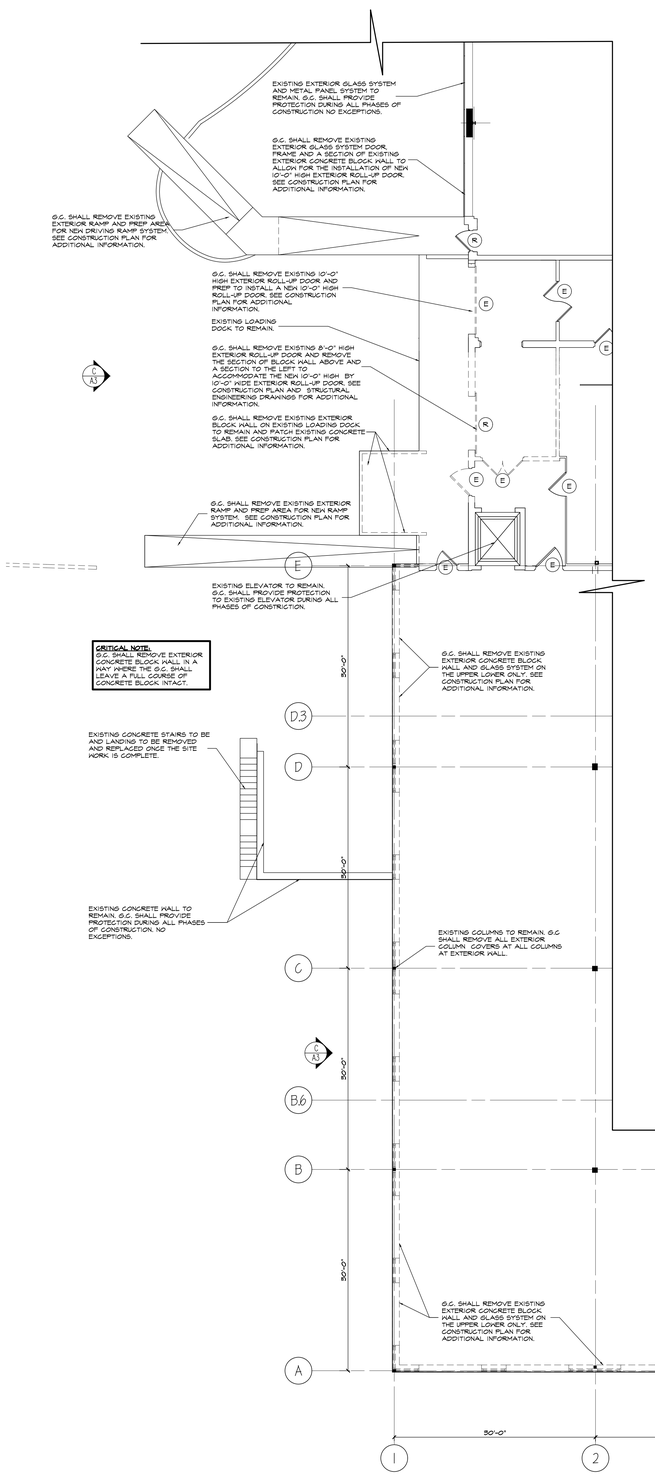
NO.	ISSUE	DATE
1.	ISSUE FOR PLANNING BOARD REVIEW	06/18/21
2.	ISSUE FOR PLANNING BOARD REVIEW	07/26/21

SEAL
REGISTERED ARCHITECT STEFANO CARDARELLI 026818 STATE OF NEW YORK

SCALE:	DATE:	PROJECT NO.:
AS NOTED	05/17/21	21-000-00
DRAWN BY: A.M.	CHECKED BY:	APPROVED BY:

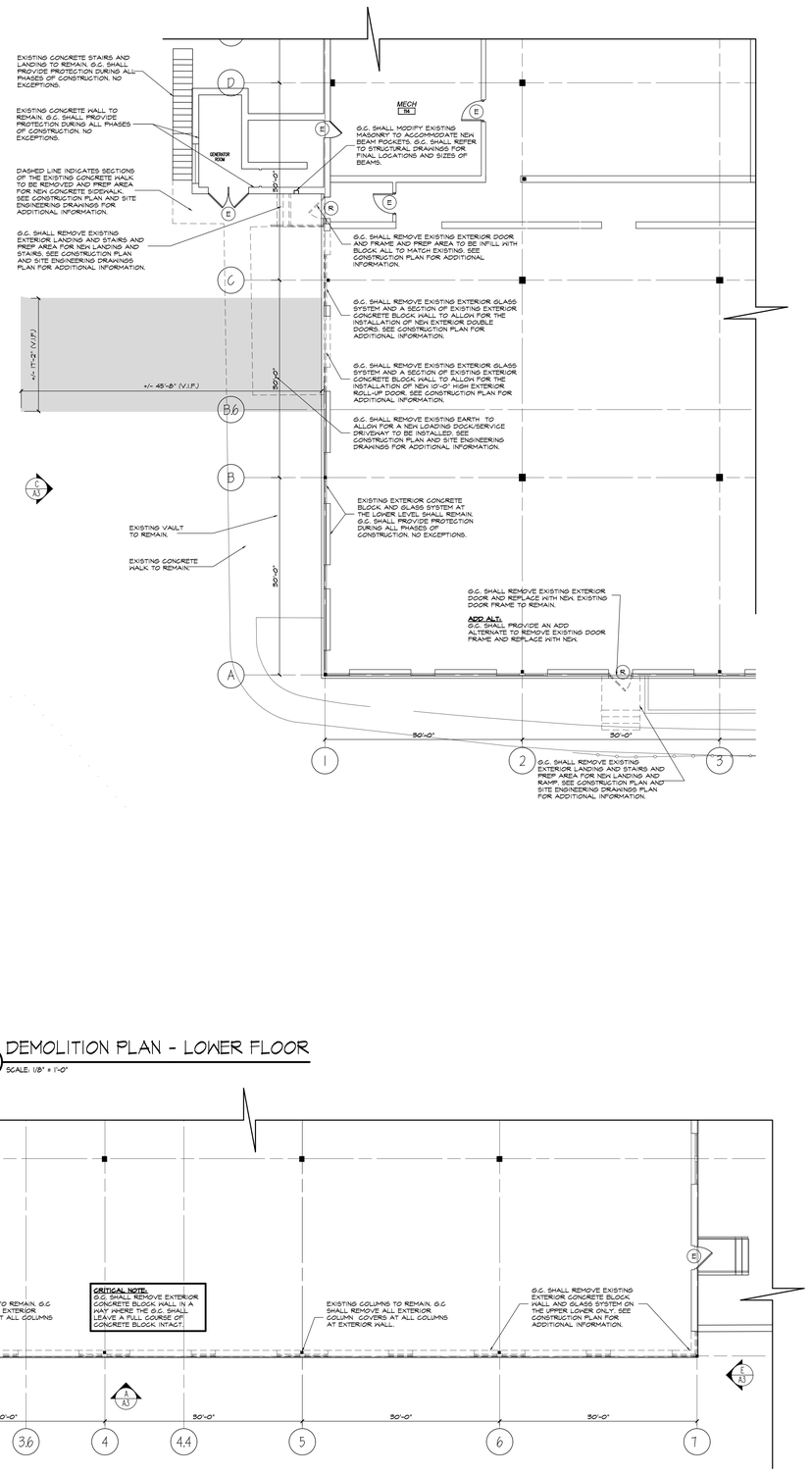
DRAWING TITLE:
COVER SHEET

DRAWING NO:
A0



2 DEMOLITION PLAN - UPPER FLOOR

SCALE: 1/8" = 1'-0"



1 DEMOLITION PLAN - LOWER FLOOR

SCALE: 1/8" = 1'-0"

EXISTING PARTITION TO REMAIN.

EXISTING PARTITION TO BE REMOVED.

EXISTING DOORS, FRAMES AND HARDWARE TO BE REMOVED. COORDINATE WITH CLIENT FOR STORAGE.

EXISTING DOORS, FRAMES AND HARDWARE TO BE REMOVED. COORDINATE WITH CLIENT FOR STORAGE.

DEMOLITION GENERAL NOTES

1. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS AND EQUIPMENT AS REQUIRED TO COMPLETE DEMOLITION AND REMOVAL OF ALL ITEMS SHOWN ON DRAWINGS.

2. ALL DEMOLITION DEBRIS SHALL BE REMOVED FROM THE PREMISES EXCEPT THOSE ITEMS TO BE REUSED, RETURNED TO THE LANDLORD / OWNER, OR AS OTHERWISE DIRECTED.

3. THE CONTRACTOR SHALL CAREFULLY REMOVE, PROTECT AND STORE ALL CONSTRUCTION ELEMENTS TO BE REUSED OR RETURNED TO THE LANDLORD / OWNER.

4. UPON COMPLETION OF THE DEMOLITION WORK, ALL AREAS SHALL BE BROOM CLEAN.

5. ALL CORE AREAS, ELEVATOR, LOBBIES, TOILETS, STAIRWELLS AND EXISTING ELEMENTS TO REMAIN SHALL BE CAREFULLY SEALED AND PROTECTED FROM DAMAGE AND DIRT.

6. ALL PERIMETER FAN COIL AND EQUIPMENT, RADIATOR ENCLOSURE AND WINDOWS SHALL BE CAREFULLY COVERED AND PROTECTED FROM GRIT, RUBBISH AND DAMAGE.

7. WHERE EXISTING SWITCHES, OUTLETS AND PHONE / DATA OUTLETS ARE REMOVED, G.C. SHALL PATCH SPACKLE AND SAND SMOOTH WALL FOR PAINT. NO COVER PLATES SHALL BE USED.

8. ALL ELECTRICAL AND LIGHTING TO BE DEMOLISHED AND ASSOCIATED WIRING SHALL BE PULLED BACK TO THE ELECTRICAL PANELS AND REMOVED COMPLETELY.

9. ALL DEMOLITION WORK SHALL BE PERFORMED BEFORE OR AFTER BUSINESS HOURS, UNLESS OTHERWISE PERMITTED BY THE BUILDING MANAGER AND / OR THE CLIENT.

10. IN ALL AREAS WHERE DEMOLITION OR CUTS AND PATCHES CAUSE A UNEVENNESS IN THE SLAB, THE CONTRACTOR SHALL FLASH PATCH AS REQUIRED TO RECEIVE THE NEW FLOOR FINISH. COORDINATE WITH FLOORING CONTRACTOR.

11. THE GENERAL CONTRACTOR SHALL ERECT A PLASTIC DUST PARTITION TO PROTECT AREAS NOT INCLUDED IN THE SCOPE OF WORK.

12. PRIOR TO DEMOLITION, THE CONSTRUCTION AREA SHALL BE INSPECTED FOR PRESENCE OF ASBESTOS. IF PRESENT IT SHALL BE REMOVED IN COMPLIANCE WITH THE STATE OF NEW YORK REQUIREMENTS AND FEDERAL NESHAP (NATIONAL EMISSION STANDARD FOR HAZARDOUS AIR POLLUTANTS) REGULATION. (NESHAP - PHONE: 1-212-637-4050

13. WHERE REMOVALS ARE NOT POSSIBLE WITHOUT DAMAGE OF EXISTING TO REMAIN, G.C. SHALL REPAIR OR REPLACE DAMAGED ITEMS AS REQUIRED.

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WHITE PLAINS, NY 10607
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GHP

PROJECT:
PROPOSED EXTERIOR BUILDING RENOVATIONS
2651 STRANG BOULEVARD
YORKTOWN HEIGHTS, NEW YORK 10598
GROUND FLOOR
ZONE DISTRICT: OB / SECTION: 26.19 / BLOCK: 1 / LOT: 2

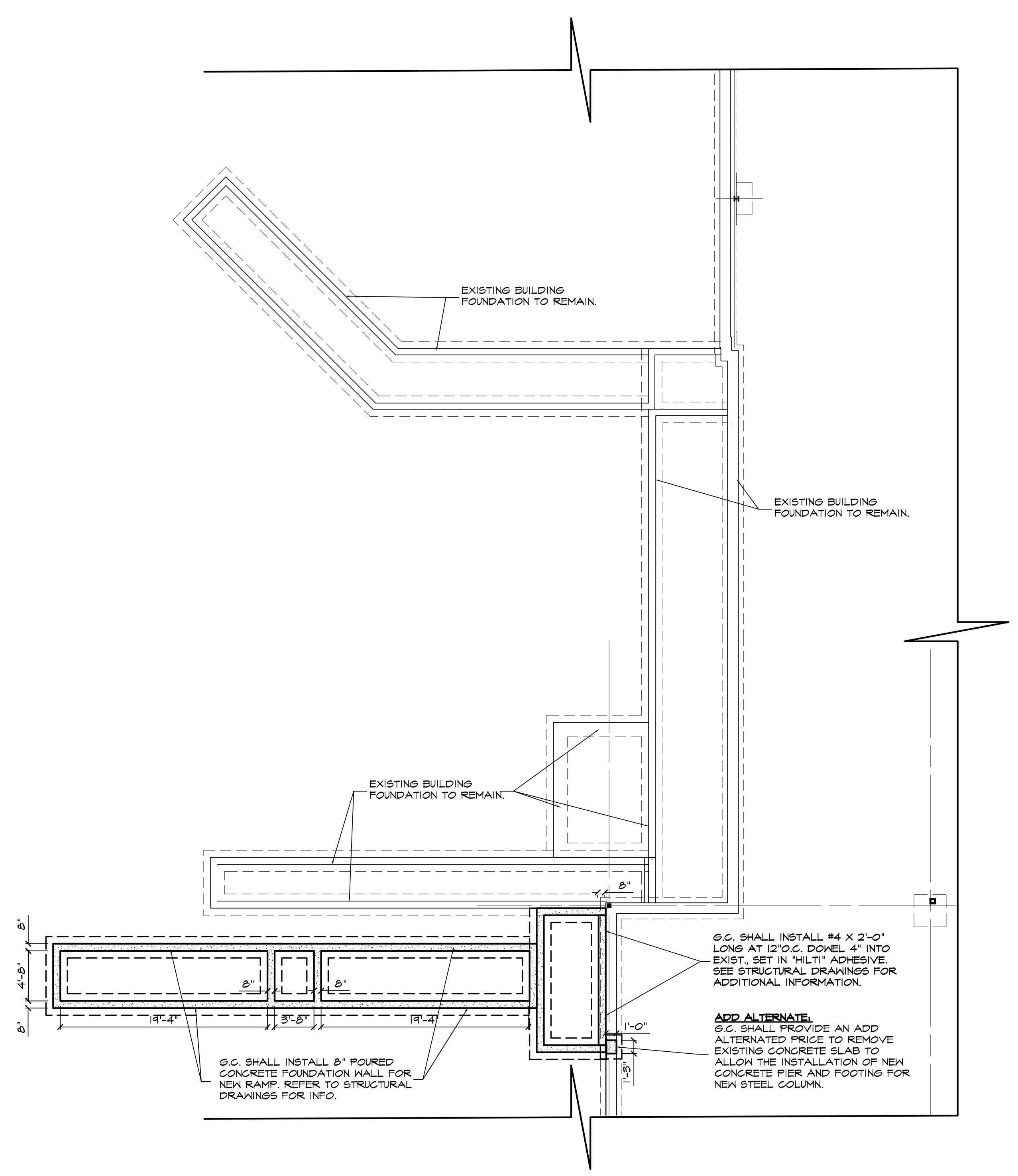
NO.	ISSUE	DATE
1.	ISSUE FOR PLANNING BOARD REVIEW.	06/18/21
2.	ISSUE FOR PLANNING BOARD REVIEW.	07/16/21

SEAL
REGISTERED ARCHITECT
STEFANO CARDARELLI
026818
STATE OF NEW YORK

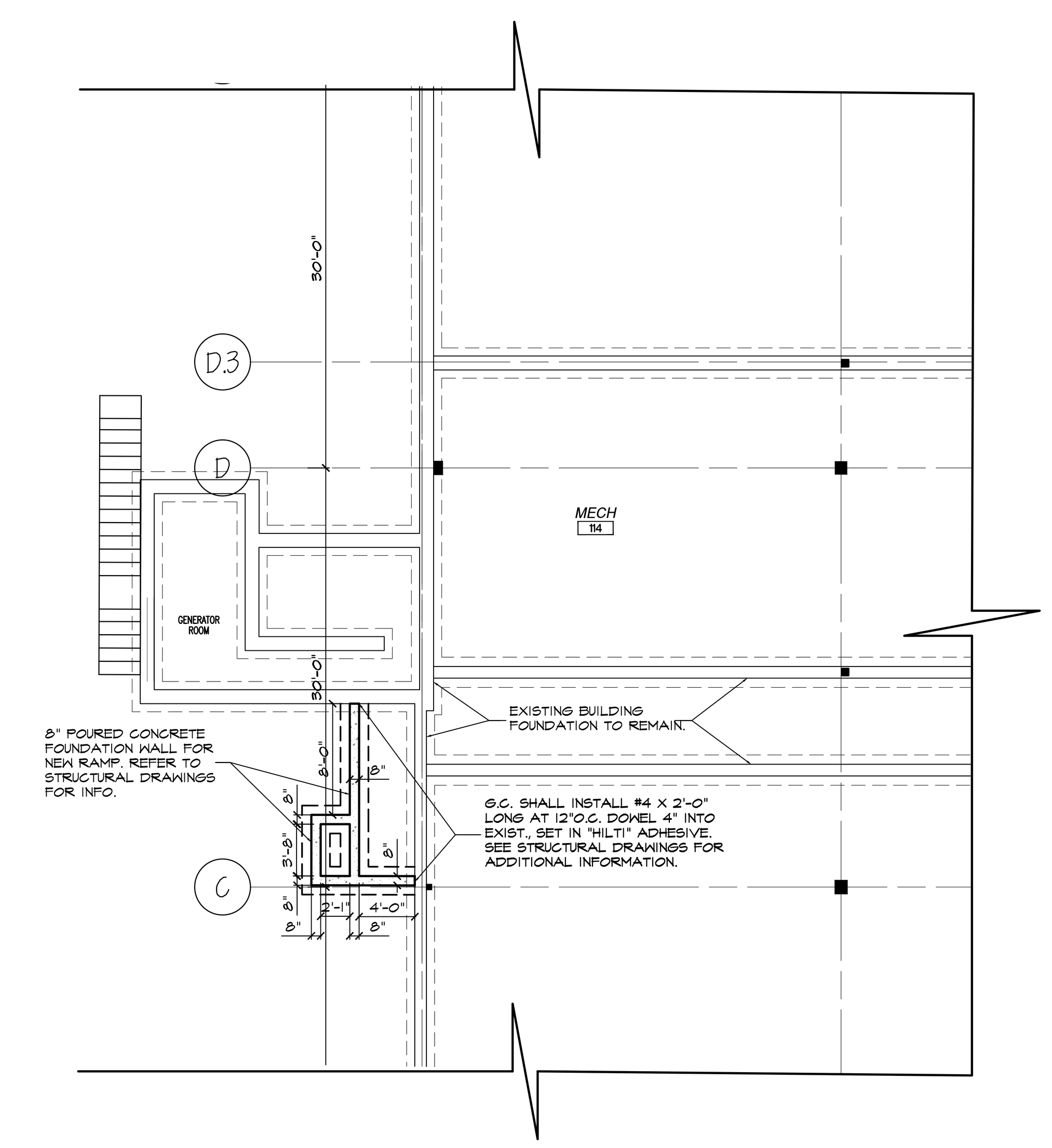
SCALE:	DATE:	PROJECT NO.:
AS NOTED	05/17/21	21-000-00
DRAWN BY: A.M.	CHECKED BY:	APPROVED BY:

DRAWING TITLE:
DEMOLITION PLAN

DRAWING NO:
DM1



2 FOUNDATION PLAN - UPPER FLOOR
SCALE: 1/8" = 1'-0"



1 FOUNDATION PLAN - LOWER FLOOR
SCALE: 1/8" = 1'-0"

CARDARELLI
DESIGN & ARCHITECTURE, P.C.
297 KNOLLWOOD ROAD, SUITE 202
WHITE PLAINS, NY 10607
PHONE: 914-437-9554 / FAX: 914-437-9555

GHP

PROJECT:
PROPOSED EXTERIOR BUILDING RENOVATIONS
2651 STRANG BOULEVARD
YORKTOWN HEIGHTS, NEW YORK 10598
GROUND FLOOR
ZONE DISTRICT: OB / SECTION: 26.19 / BLOCK: 1 / LOT: 2

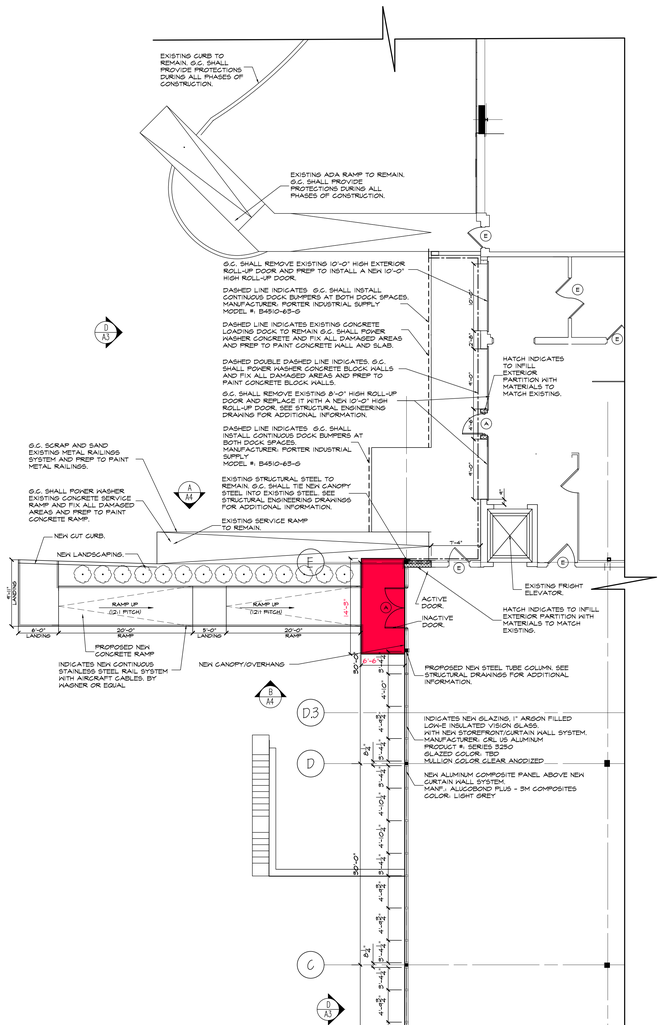
NO.	ISSUE	DATE
1.	ISSUE FOR PLANNING BOARD REVIEW.	06/18/21
2.	ISSUE FOR PLANNING BOARD REVIEW.	07/26/21

SEAL
REGISTERED ARCHITECT STEFANO CARDARELLI 028818 STATE OF NEW YORK

SCALE: AS NOTED	DATE: 05/17/21	PROJECT NO.: 21-000-00
DRAWN BY: A.M.	CHECKED BY:	APPROVED BY:

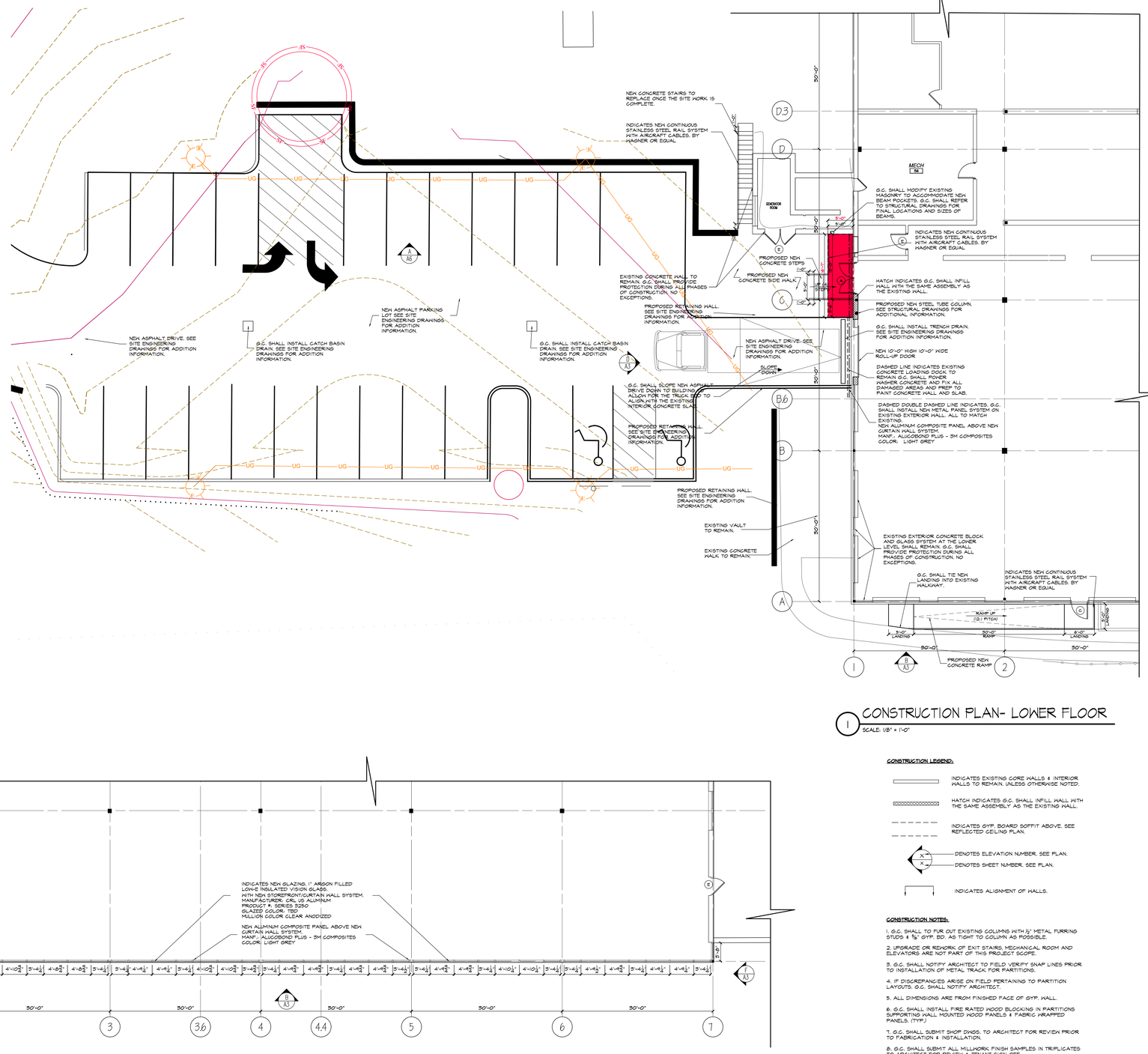
DRAWING TITLE:
FOUNDATION PLAN

DRAWING NO: A1



2 CONSTRUCTION PLAN - UPPER FLOOR

SCALE: 1/8" = 1'-0"



1 CONSTRUCTION PLAN- LOWER FLOOR

SCALE: 1/8" = 1'-0"

CONSTRUCTION LEGEND:

- INDICATES EXISTING CORE WALLS & INTERIOR WALLS TO REMAIN, UNLESS OTHERWISE NOTED.
- HATCH INDICATES G.C. SHALL INFILL WALL WITH THE SAME ASSEMBLY AS THE EXISTING WALL.
- INDICATES GYP. BOARD SOFFIT ABOVE. SEE REFLECTED CEILING PLAN.
- DENOTES ELEVATION NUMBER. SEE PLAN.
- DENOTES SHEET NUMBER. SEE PLAN.
- INDICATES ALIGNMENT OF WALLS.

CONSTRUCTION NOTES:

1. G.C. SHALL TO FUR OUT EXISTING COLUMNS WITH ½" METAL FURRING STUDS & ⅝" GYP. BD. AS TIGHT TO COLUMN AS POSSIBLE.
2. UPGRADE OR REWORK OF EXIT STAIRS, MECHANICAL ROOM AND ELEVATORS ARE NOT PART OF THIS PROJECT SCOPE.
3. G.C. SHALL NOTIFY ARCHITECT TO FIELD VERIFY SNAP LINES PRIOR TO INSTALLATION OF METAL TRACK FOR PARTITIONS.
4. IF DISCREPANCIES ARISE ON FIELD PERTAINING TO PARTITION LAYOUTS, G.C. SHALL NOTIFY ARCHITECT.
5. ALL DIMENSIONS ARE FROM FINISHED FACE OF GYP. WALL.
6. G.C. SHALL INSTALL FIRE RATED WOOD BLOCKING IN PARTITIONS SUPPORTING WALL MOUNTED WOOD PANELS & FABRIC WRAPPED PANELS. (TYP.)
7. G.C. SHALL SUBMIT SHOP DWGS. TO ARCHITECT FOR REVIEW PRIOR TO FABRICATION & INSTALLATION.
8. G.C. SHALL SUBMIT ALL MILLWORK FINISH SAMPLES IN TRIPLICATES TO ARCHITECT FOR REVIEW & TENANT SIGN-OFF.
9. G.C. SHALL PATCH AND SKIM COAT ALL EXISTING CORE WALLS AND PREP TO RECEIVE NEW FINISHES.
10. EXISTING CORE WALLS TO BE SKIM COAT WALLS TO LEVEL 5 FINISH AND PREP TO RECEIVE NEW FINISHES.

DOOR, FRAME AND HARDWARE SCHEDULE:

(A) **DOOR AND FRAME TYPE:**
INDICATES (1) PAIR 3'-0" X 7'-0" X 1 3/4 " KAWNEER FLUSHLINE ENTRANCES. ALUMINUM FRAMED VISION LITES. TYPE AVG-4, 6" X 32" LOCK SIDE PLACEMENT 1" FROM TOP OF DOOR AND JAMB. PLAIN ALUM. SHEET EXTERIOR AND INTERIOR, COLOR AND FINISH TO MATCH STOREFRONT FRAMING.

HARDWARE TYPE:
PAIR AND HALF BUTT HINGE, KAWNEER STANDARD.
KAWNEER STANDARD EXIT DEVICE, DUR-O-MATIC/ FALCON 1790 EXTERIOR PULL STYLE CO-9
KAWNEER STANDARD KEYED RIM CYLINDER
SURFACE CLOSER: 1260
ALUMINUM THRESHOLD
GASKETING & SWEEP (PEMKO)

G.C. TO INSTALL METAL ASTRAGAL TO MATCH DOOR FINISH ONTO ACTIVE DOOR.

DOOR CLOSER: ARROW LOCK MODEL #1604 SERIES. MEETS (ADA) BARRIER FREE REQUIREMENTS OF 5 LBS. MAXIMUM DOORS. G.C. SHALL INSTALL DOOR CLOSERS ON BOTH DOORS.

IVES FLOOR MOUNTED DOOR STOP. IVES FS436 - SATIN CHROME

HARDWARE FINISH. 626-SATIN CHROMIUM PLATED.

(B) **DOOR AND FRAME TYPE:**
3'-0" X 7'-0" EXTERIOR SOLID CORE METAL DOORS WITH 2" HOLLOW METAL WELDED DOOR FRAME. THE DOOR FRAME ASSEMBLY WILL BE FACTORY PRIMED 16 GAUGE METAL. (DOOR FINISH TO MATCH EXISTING DOORS)

HARDWARE TYPE:
MATCH EXISTING EXTERIOR DOOR HARDWARE

DOOR CLOSER: ARROW LOCK MODEL #1604 SERIES. MEETS (ADA) BARRIER FREE REQUIREMENTS OF 5 LBS. MAXIMUM DOORS.

IVES DOOR STOP. #436

HARDWARE FINISH. MATCH EXISTING EXTERIOR DOOR SYSTEM.

(C) **DOOR AND FRAME TYPE:**
INDICATES 3'-0" X 7'-0" X 1 3/4 " KAWNEER FLUSHLINE ENTRANCES. ALUMINUM FRAMED VISION LITES. TYPE AVG-4, 6" X 32" LOCK SIDE PLACEMENT 1" FROM TOP OF DOOR AND JAMB. PLAIN ALUM. SHEET EXTERIOR AND INTERIOR, COLOR AND FINISH TO MATCH STOREFRONT FRAMING.

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KAWNEER STANDARD KEYED RIM CYLINDER
SURFACE CLOSER: 1260
ALUMINUM THRESHOLD
GASKETING & SWEEP (PEMKO)

DOOR CLOSER: ARROW LOCK MODEL #1604 SERIES. MEETS (ADA) BARRIER FREE REQUIREMENTS OF 5 LBS. MAXIMUM DOORS. G.C. SHALL INSTALL DOOR CLOSERS ON BOTH DOORS.

IVES FLOOR MOUNTED DOOR STOP. IVES FS436 - SATIN CHROME

HARDWARE FINISH. 626-SATIN CHROMIUM PLATED.

(E) **INDICATES EXISTING DOOR FRAME AND HARDWARE:**
INDICATES EXISTING DOOR FRAME AND HARDWARE SHALL REMAIN. G.C. SHALL PROTECT DURING ALL PHASES OF CONSTRUCTION.

CRITICAL NOTE:
1. G.C. SHALL ASSURE ALL HARDWARE ARE FULLY FUNCTIONAL UPON COMPLETION OF CONSTRUCTION. G.C. SHALL ASSURE ALL HARDWARE FUNCTIONS ARE COORDINATE WITH TENANT PRIOR TO INSTALLING.
2. ALL DOORS IN THE AREA OF WORK SHALL BE PREP. TO RECEIVE NEW PAINT. SEE PAINT AND FINISH PLAN FOR ADDITIONAL INFORMATION

(CR) INDICATES CARD KEY DEVICES TO ACTIVATE ELECTRIC STRIKES. CARD READER SYSTEM WILL BE PROVIDED AND INSTALLED BY TENANT VENDOR. G.C. SHALL INSTALL 3/4" DIA. CONDUIT UP TO 6" ABOVE FINISHED CEILING AND J-BOX IN PARTITION. G.C. TO COORDINATE WITH CARD READER SECURITY SYSTEM VENDOR FOR J-BOX REQUIREMENTS. CARD READER SYSTEM SHALL BE WIRED BACK TO BUILDING FIRE ALARM SYSTEM TO ALLOW FOR FAIL SAFE OPERATION. NO EXCEPTIONS.

DOOR SCHEDULE NOTES:

1. ALL HARDWARE FINISH SHALL BE: SATIN CHROMIUM PLATED #626
2. G.C. SHALL PROVIDE ALL MISCELLANEOUS DOOR HARDWARE REQUIRED FOR PROPER OPERATION OR TO MEET CODE REQUIREMENTS.
3. ALL DOORS SHALL BE UNDERCUT AS REQUIRED TO ALLOW FOR PROPER CLEARANCE FOR FLOOR FINISH.
4. G.C. SHALL PROVIDE TO ARCHITECT HARDWARE SPECIFICATION AND SHOP DWGS. FOR REVIEW PRIOR TO ORDERING OR FABRICATING.
5. OWNER SHALL BE RESPONSIBLE FOR MASTER KEYING DOOR HARDWARE / LOCKSETS.
6. G.C. SHALL INSTALL DOOR SILENCERS AT ALL DOOR FRAMES.
7. PER FEDERAL REGISTER, RULES AND REGULATIONS SECTION SECTION 4.13.9 DOOR HARDWARE. HANDLES, PULLS, LOCKS, AND OTHER OPERATING DEVICES ON ACCESSIBLE DOORS SHALL HAVE A SHAPE THAT IS EASY TO GRASP WITH ONE HAND AND DOES NOT REQUIRE TIGHT GRASPING, TIGHT PINCHING, OR TWISTING OF THE WRIST TO OPERATE. LEVER-OPERATED MECHANISM, PUSH TYPE MECHANISMS, AND U-SHAPED HANDLES ARE ACCEPTABLE DESIGNS. WHEN SLIDING DOORS ARE FULLY OPEN, OPERATING HARDWARE SHALL BE EXPOSED AND USABLE FROM BOTH SIDES. HARDWARE USED ON ACCESSIBLE DOOR PASSAGE SHALL BE MOUNTED NO HIGHER THAN 48" ABOVE FINISHED FLOOR.
8. PER FEDERAL REGISTER, RULES AND REGULATIONS SECTION 4.13.10 DOOR CLOSERS. IF THE DOOR HAS A CLOSER, THEN THE SWEEP PERIOD OF THE CLOSER SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 70 DEGREES, THE DOOR WILL TAKE AT LEAST 5 SECONDS TO MOVE TO A POINT 5" FROM THE LATCH, MEASURED TO THE LEADING EDGE OF THE DOOR.
9. PER FEDERAL REGISTER, RULES AND REGULATIONS SECTION SECTION 4.13.11 DOOR OPENING FORCE. THE MAXIMUM FORCE FOR PUSHING OR PULLING OPEN A DOOR SHALL BE AS FOLLOWS:
   (1) FIRE DOORS SHALL HAVE THE MINIMUM OPEN FORCE ALLOWABLE BY THE APPROPRIATE ADMINISTRATIVE AUTHORITY.
   (2) OTHER DOORS.
      (a) EXTERIOR HINGED DOORS: (RESERVED)
      (b) INTERIOR HINGED DOORS: 5 lbf (22.2N)
      (c) SLIDING OR FOLDING DOORS: 5 lbf (22.2N)
   THESE FORCES DO NOT APPLY TO THE FORCE REQUIRED TO RETRACT LATCH BOLTS OR DISENGAGE OTHER DEVICES THAT MAY HOLD THE DOOR IN A CLOSED POSITION
10. G.C. SHALL SUBMIT TO ARCHITECT (3) SAMPLES OF DOOR STAIN/FINISH FOR REVIEW PRIOR TO DOOR FABRICATION/ORDERING AND FINAL FINISH APPLICATION.
11. G.C. SHALL SUPPLY MASTER KEY TO TENANT TO OPERATE ALL DOORS.

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DESIGN & ARCHITECTURE, P.C.
297 KNOLLWOOD ROAD, SUITE 202
WHITE PLAINS, NY 10607
PHONE: 914-437-9554 / FAX: 914-437-9555

GHP

PROJECT:
PROPOSED EXTERIOR BUILDING RENOVATIONS
2651 STRANG BOULEVARD
YORKTOWN HEIGHTS, NEW YORK 10598
GROUND FLOOR
ZONE DISTRICT: OB / SECTION: 26.19 / BLOCK: 1 / LOT: 2

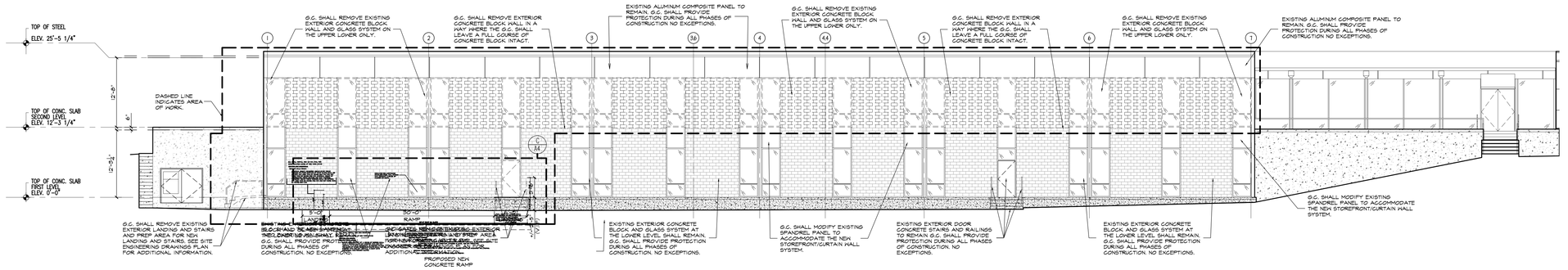
NO.	ISSUE	DATE
1.	ISSUE FOR PLANNING BOARD REVIEW.	06/18/21
2.	ISSUE FOR PLANNING BOARD REVIEW.	07/30/21

SEAL
REGISTERED ARCHITECT STEFANO CARDARELLI 028818 STATE OF NEW YORK

SCALE:	DATE:	PROJECT NO.:
AS NOTED	05/17/21	21-000-00
DRAWN BY: A.M.	CHECKED BY:	APPROVED BY:

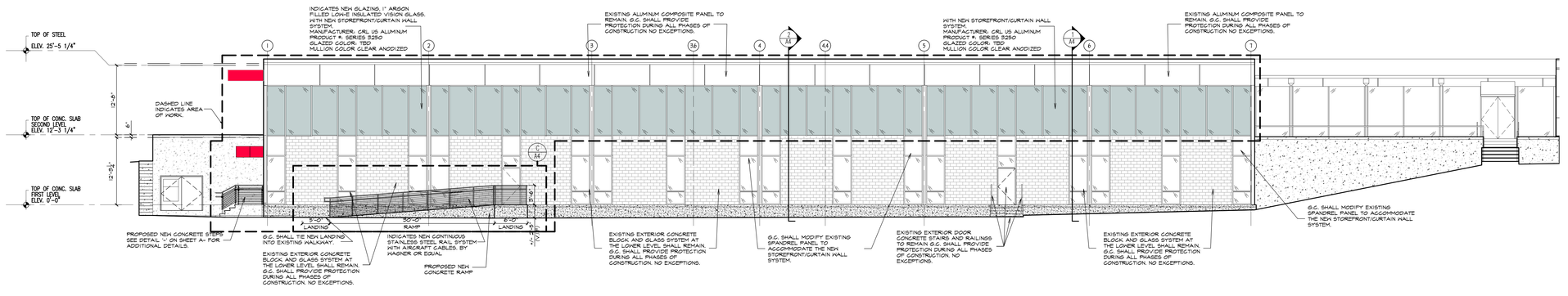
DRAWING TITLE:
CONSTRUCTION PLAN

DRAWING NO:
A2



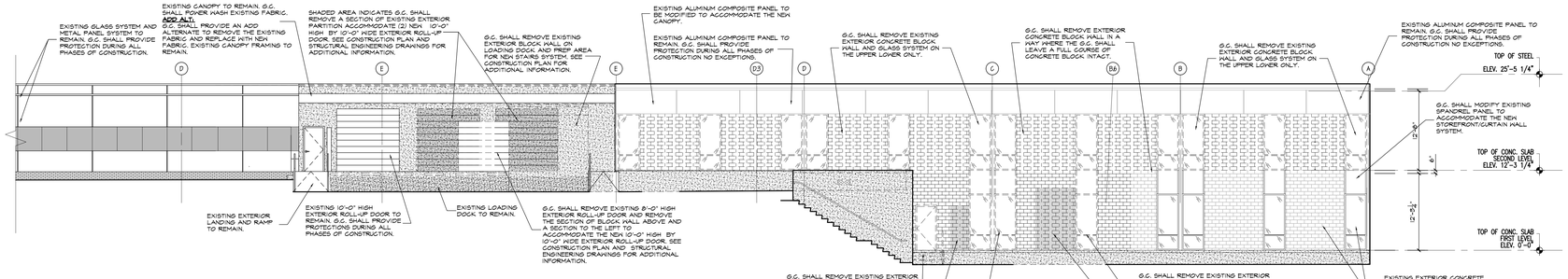
A PROPOSED DEMOLITION OF REAR ELEVATION

SCALE: 1/8"=1'-0"



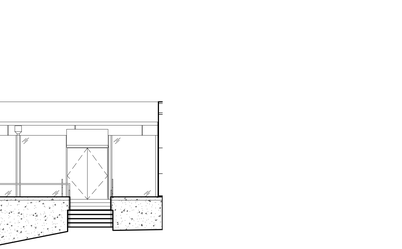
B PROPOSED NEW REAR ELEVATION

SCALE: 1/8"=1'-0"



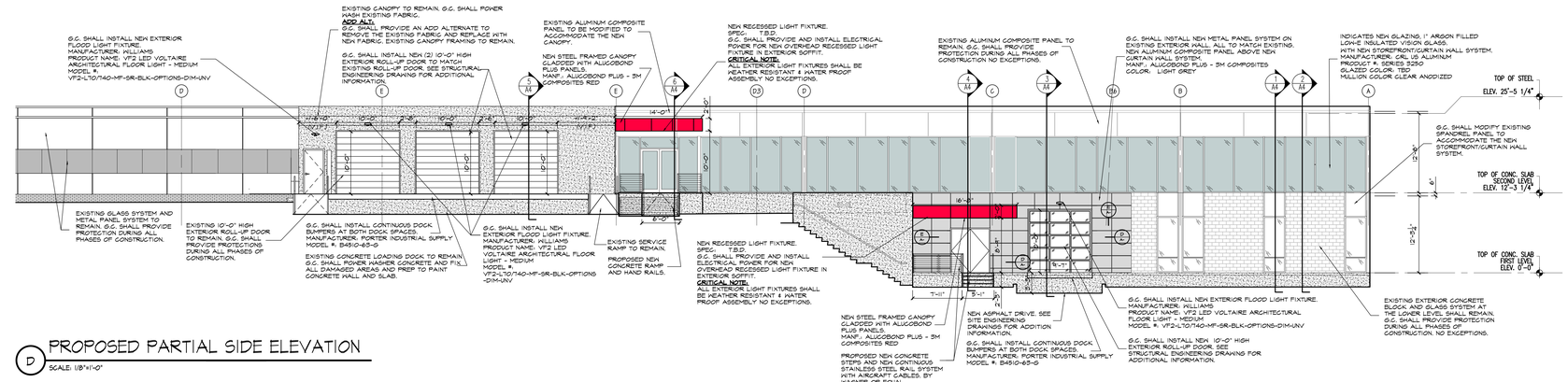
C PROPOSED DEMOLITION OF SIDE ELEVATION

SCALE: 1/8"=1'-0"



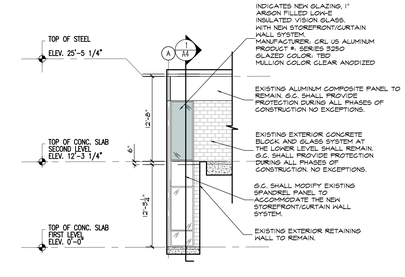
E PROPOSED DEMOLITION OF SIDE ELEVATION

SCALE: 1/8"=1'-0"



D PROPOSED PARTIAL SIDE ELEVATION

SCALE: 1/8"=1'-0"



F PROPOSED PARTIAL SIDE ELEVATION

SCALE: 1/8"=1'-0"

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GHP

PROJECT:

PROPOSED EXTERIOR BUILDING RENOVATIONS
2651 STRANG BOULEVARD
YORKTOWN HEIGHTS, NEW YORK 10598
GROUND FLOOR
ZONE DISTRICT: OB / SECTION: 26.19 / BLOCK: 1 / LOT: 2

NO.	ISSUE	DATE
1.	ISSUE FOR PLANNING BOARD REVIEW	06/18/21
2.	ISSUE FOR PLANNING BOARD REVIEW	07/26/21

SEAL

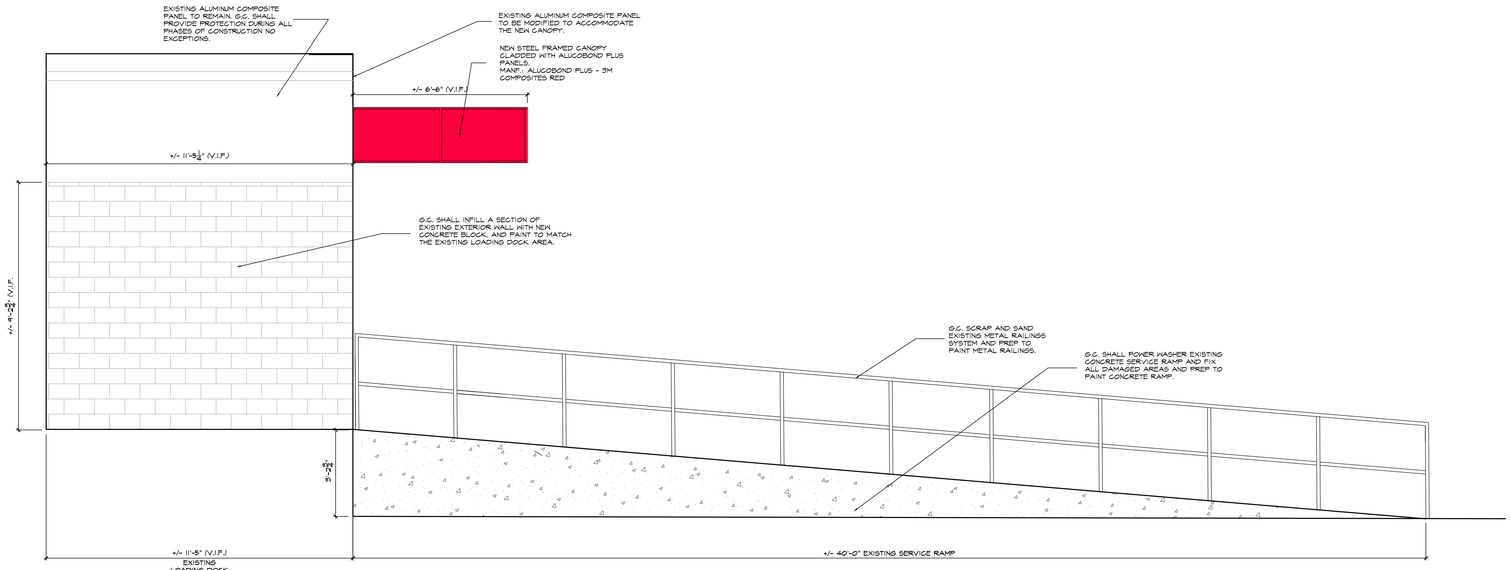
REGISTERED ARCHITECT
STEFANO CARDARELLI
028818
STATE OF NEW YORK

SCALE:	DATE:	PROJECT NO.:
AS NOTED	05/17/21	21-000-00
DRAWN BY: A.M.	CHECKED BY:	APPROVED BY:

DRAWING TITLE:

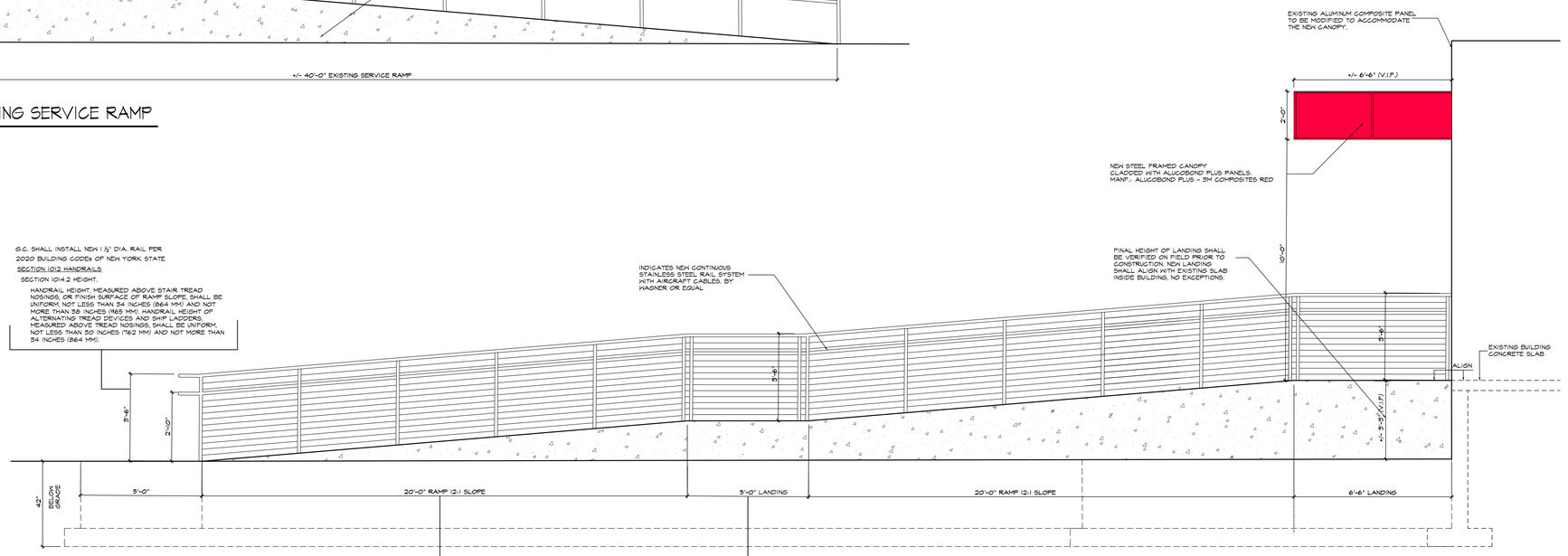
ELEVATIONS

DRAWING NO: A3



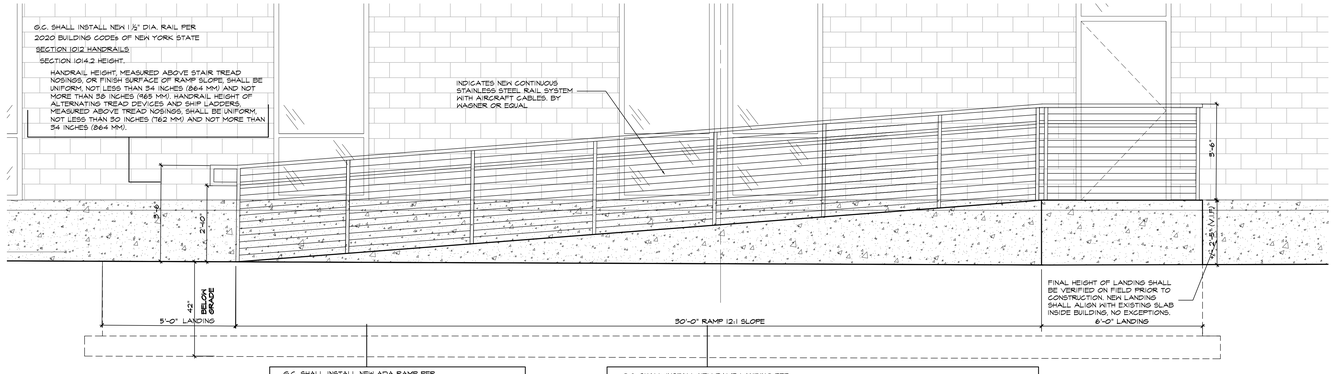
A PROPOSED BUILDING ENCLOSURE AND EXISTING SERVICE RAMP

SCALE: 1/2"=1'-0"



B PROPOSED ADA RAMP AND CANOPY

SCALE: 1/2"=1'-0"



C PROPOSED ADA RAMP AND CANOPY

SCALE: 1/2"=1'-0"

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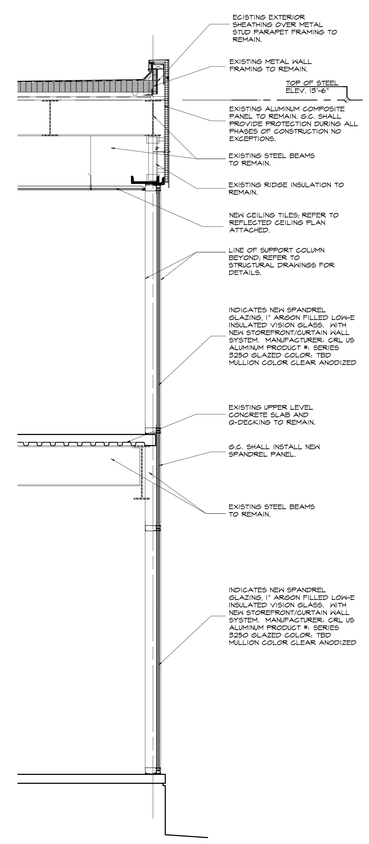
SEAL

REGISTERED ARCHITECT STEFANO CARDARELLI 028818 STATE OF NEW YORK

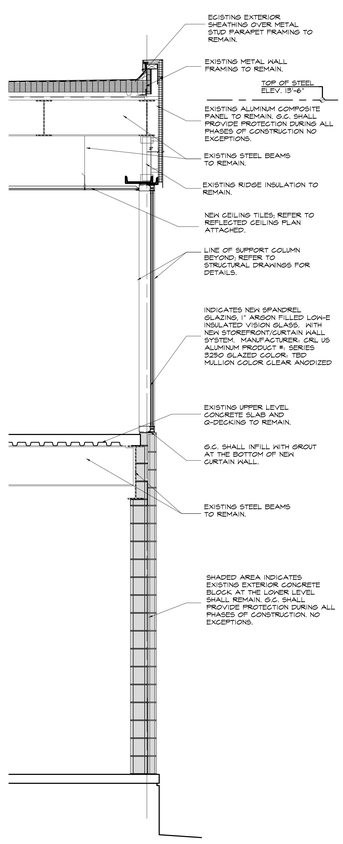
SCALE:	DATE:	PROJECT NO.:
AS NOTED	05/17/21	21-000-00
DRAWN BY: A.M.	CHECKED BY:	APPROVED BY:

DRAWING TITLE:
WALL SECTIONS

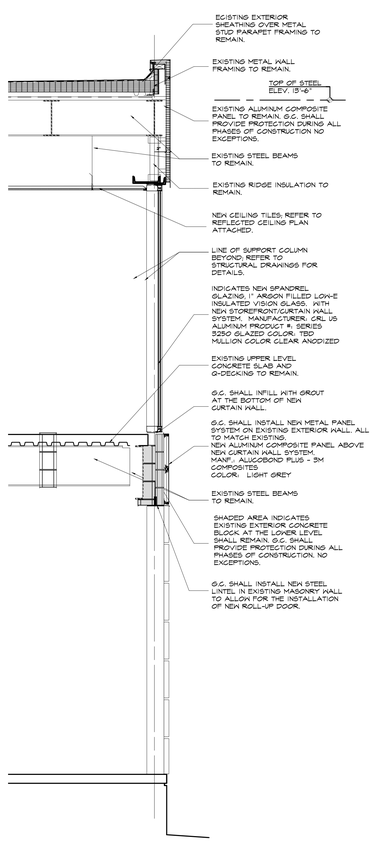
DRAWING NO:
A4



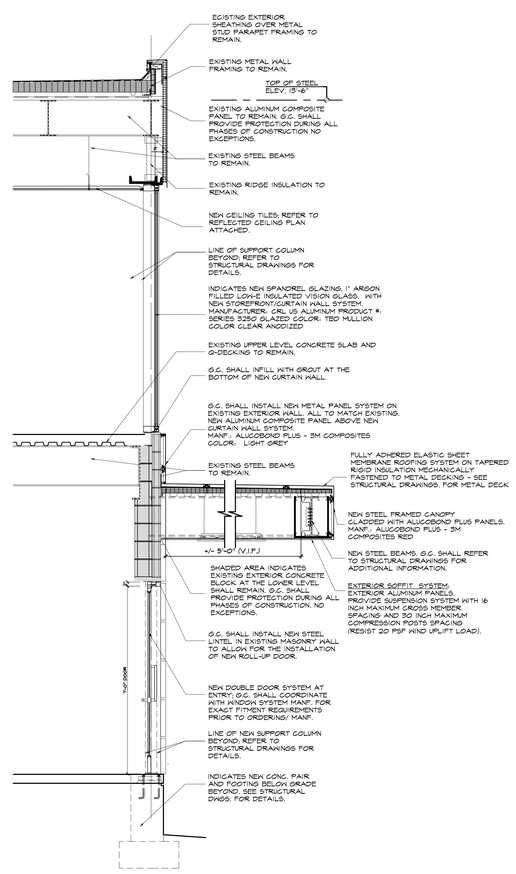
1 WALL SECTION
SCALE: 1/2" = 1'-0"



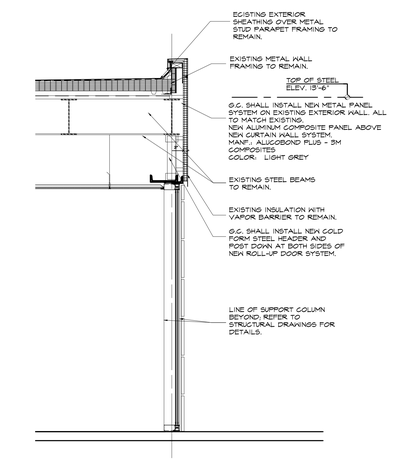
2 WALL SECTION
SCALE: 1/2" = 1'-0"



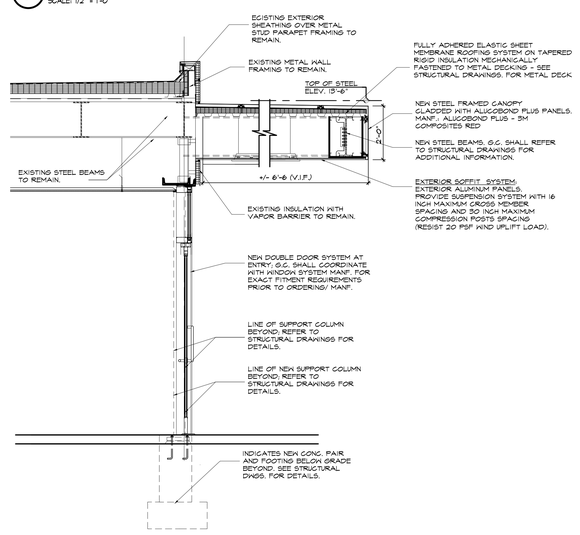
3 WALL SECTION
SCALE: 1/2" = 1'-0"



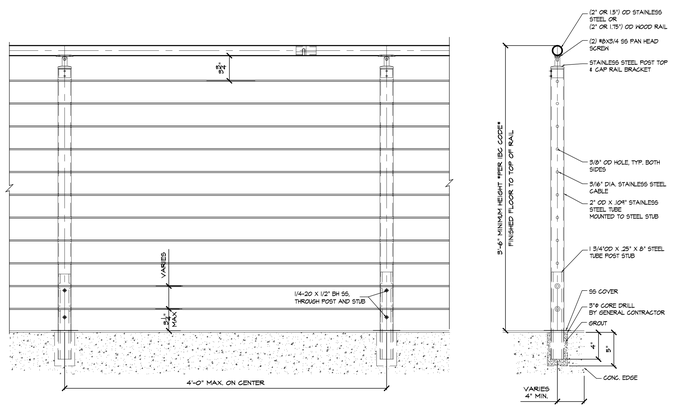
4 WALL SECTION
SCALE: 1/2" = 1'-0"



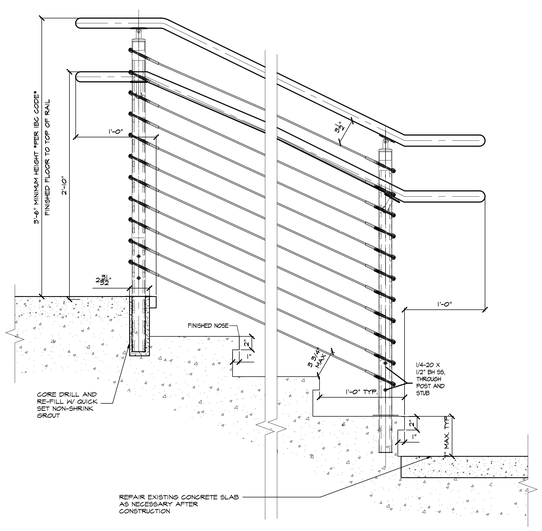
5 WALL SECTION
SCALE: 1/2" = 1'-0"



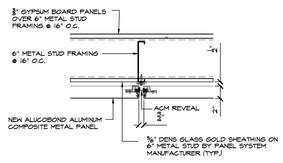
6 WALL SECTION
SCALE: 1/2" = 1'-0"



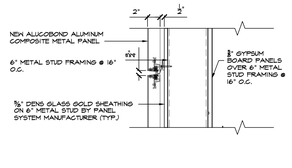
A ELEVATION @ STAIR/ RAMP RAIL - TYP
SCALE: 1 1/2"=1'-0"



B TYP. SECTION @ STAIR TREADS
SCALE: 1 1/2"=1'-0"



D DETAIL @ WALL VERTICAL JOINT
SCALE: 1 1/2"=1'-0"



E DETAIL @ WALL HORIZONTAL
SCALE: 1 1/2"=1'-0"

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GROUND FLOOR
ZONE DISTRICT: OB / SECTION: 26.19 / BLOCK: 1 / LOT: 2

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SEAL
REGISTERED ARCHITECT STEFANO CARDARELLI 028818 STATE OF NEW YORK

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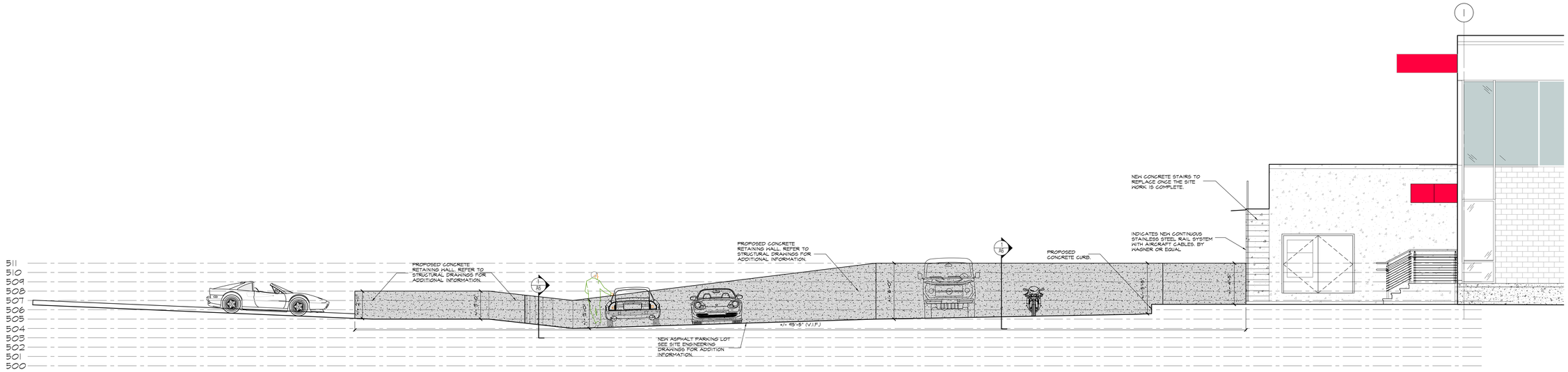
AS NOTED	05/17/21	21-000-00
DRAWN BY: A.M.	CHECKED BY:	APPROVED BY:

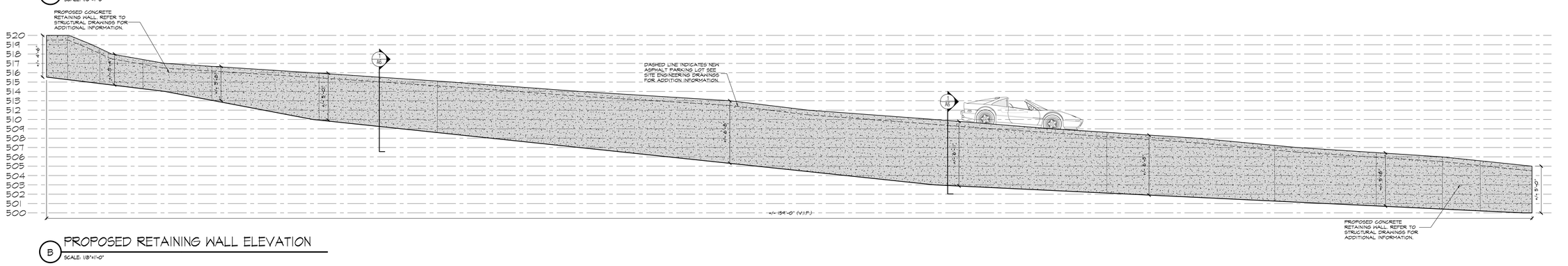
DRAWING TITLE:
WALL SECTIONS

DRAWING NO:
A5



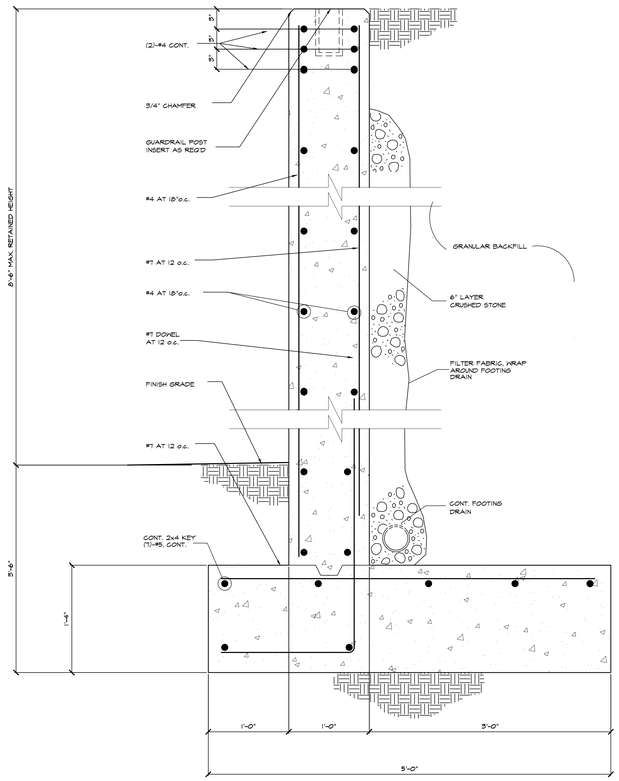
A PROPOSED RETAINING WALL ELEVATION

SCALE: 1/8"=1'-0"



B PROPOSED RETAINING WALL ELEVATION

SCALE: 1/8"=1'-0"



1 RETAINING WALL DETAIL

SCALE: 1-1/2"=1'-0"

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GHP

PROJECT:

PROPOSED EXTERIOR BUILDING RENOVATIONS
2651 STRANG BOULEVARD
YORKTOWN HEIGHTS, NEW YORK 10598
GROUND FLOOR
ZONE DISTRICT: OB / SECTION: 26.19 / BLOCK: 1 / LOT: 2

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SEAL

REGISTERED ARCHITECT STEFANO CARDARELLI 028818 STATE OF NEW YORK

SCALE:	DATE:	PROJECT NO.:
AS NOTED	05/17/21	21-000-00
DRAWN BY: A.M.	CHECKED BY:	APPROVED BY:

DRAWING TITLE:

RETAINING WALL DETAILS

DRAWING NO: A6

Par 3 Golf Course

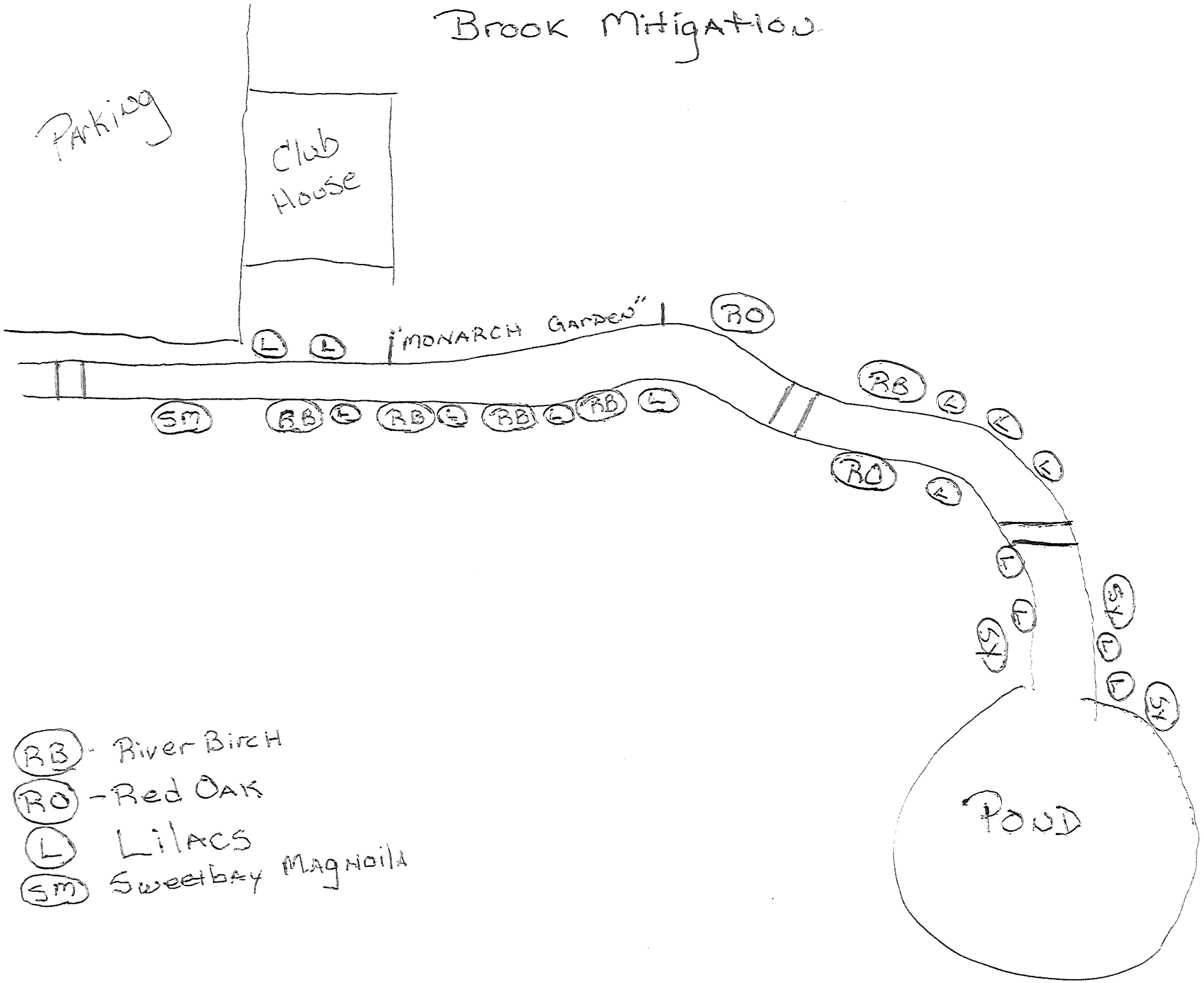
Mitigation plan for Par 3 Golf Course

Enclosed is a narrative for the Mitigation plan for the Par 3 Golf Course, we will describe what we intend to do over the next few years on the south side of the property between the fringe of the golf course and the brook. The distance between the fringe and the brook varies between 10ft.-25ft. and goes the whole length of the southern border of the property. Although we will be describing what our intentions are for this particular part of the property, we will also be enhancing the entire property "as it is a Golf Course" thru out years to come. On the south side of the property between the fringe and the brook we will be removing all *invasive* plants. For example some *invasive* plants that are present now; Japanese Barberry, Bittersweet, Winged Euonymus. Any other *invasive* species that we may come across will also be removed. We will be eradicating these *invasive* species by removing them by digging them up by hand and removing them by their roots so that these plants will not return. We will not be using any pesticides and this will only be done by hand. By hand this will allow minimal disturbance and no worries about pesticides. We will also be planting low lying scrubs native plants and flowers that will beautify, and will enhance that area of the property. Also we will be planting trees and scrubs (north side) of the property. They will be either Hemlocks or White Eastern Pine and low lying plants, Lilacs, Hollys etc. to fill in the gaps along Rt.6. This will be done for the mitigation, safety and for the beauty of the golf course. With what was described above there will also be an ongoing progress of the golf course to see where we need to plant for the safety for the beauty and for the best interest of the course which is going to take few years to tweak this out. Our Team plans on making this "Yorktown's Little Gem".

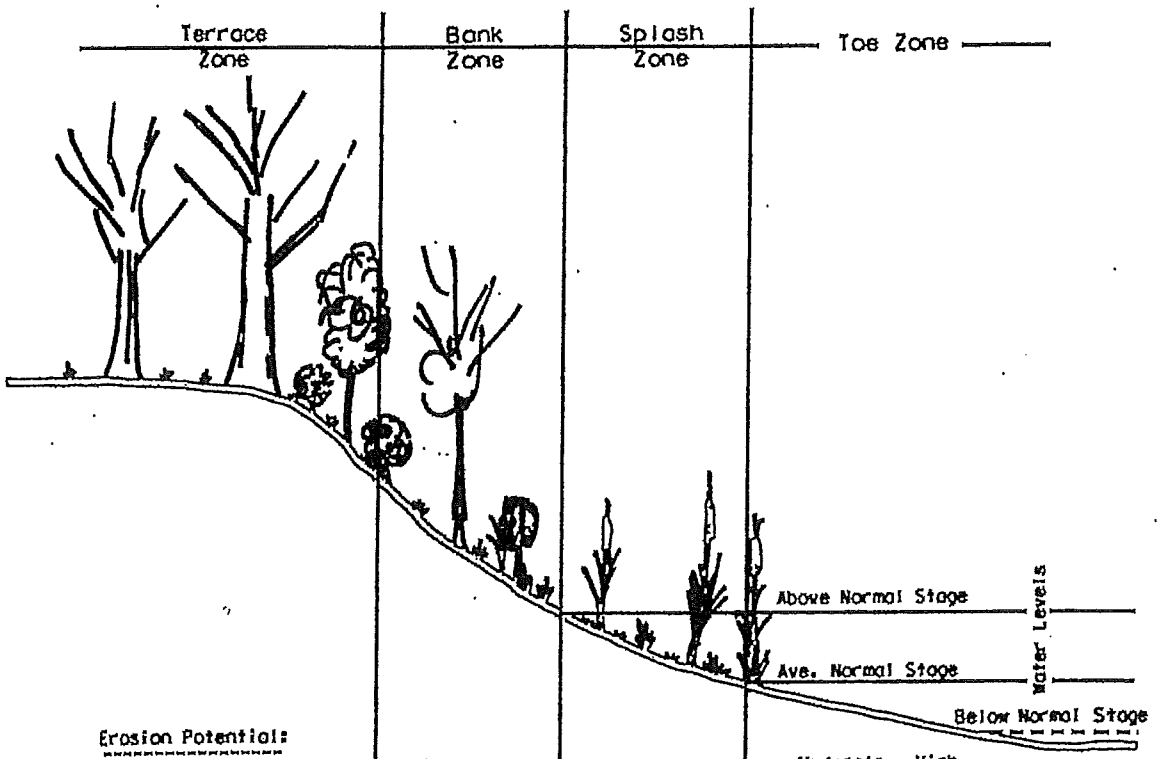
Along with those plans for mitigation we will also be doing mitigation for the brook that runs directly thru the center of the golf course. To remind everybody that there was nothing growing along the brook but tall grass. To maintain the ecosystems we will be planting appriotate Brook bank vegetation. This vegetation will be a valuable part of the brook system. This vegetation will hold the banks of the brook together and contribute shade the water in the Brook keeping down algae and enhance the ecosystem. We are planning to make a portion along the Brook a flower garden for "Monarch Butterflies" The plantings will provide floral diversity, nectar, pollen and three seasons of blooms. On the Floodplain "Terrace Zone" we will be planting River Birch "batula nigra",Sweetbay Magnolia "Magnoila vigrinana" Red Oak"Quercus shuordil" and Sycamore "platanus accidentalis". These trees will provide shade, filtration of water and stabilize the area for prevention of erosion. On our Riparian edge "Bank Zone" we will be planting Winterberry "ilex vert", Swamp Milkweed "Asclepias incarnate" Sawtooth Sunflowers "helianthus grossesrratus" and Common Mountain Mint "Pycnanthemum virginianum". And in "Splash Zone we will be planting Cottontail "typho Sop" and Common Reed Sage. With all the above that is going to take place it sure to enhance the ecosystem of the Brook and the surrounding areas.

Circled Area for mitigation

Brook Mitigation



RB - River Birch
RO - Red Oak
L - Lilacs
SM - Sweetbay Magnolia



Vegetation	Vegetation	Vegetation
River Birch	Winterberry	Common Reed
Red oak	Swamp Milkweed	Sage
Sycamore	Sawtooth Sunflowers	Cottontails
Sweetbay Magnolia	Common Mountain Mint	

Kitchawan Farm Solar Farm

TO: Town of Yorktown Planning Board

FROM: Ecogy Energy

DATE: July 28, 2021

RE: Example Ground-Mounted Solar Array and Spec Sheets for Equipment for Ecogy Kitchawan Farm Solar Farm

Example Ground-Mounted Solar Array by Ecogy at Longwood Gardens in Kennett Square, PA
Ecogy Longwood is a 1.57 MW ground-mount system installed in 2011-2012 for Longwood Gardens, the largest botanical garden in the U.S. Using a special mounting system, we were able to avoid stripping the land, altering the topography, or affecting Longwood's storm water plan. Partnering with Longwood allowed for the development of a special meadow seed mix that was planted between rows to minimize storm water runoff, maximize biodiversity, and create aesthetic appeal.

As shown in these images, the array was installed to follow the contours of the existing topography, which avoided the need for grading. The proposed solar farm will be similar in installation type and aesthetic quality.

ECOGY ENERGY

Spec Sheets

Spec Sheets for Major Equipment are included on the following pages. To address some comments previously received, please note:

1. The solar panels have anti-reflective coatings. See the below spec sheet for confirmation (anti-reflective is abbreviated AR).
2. The access road shown on the site plan shall be gravel or Item 4. A spec sheet is not included for this detail as it is still being designed.
3. There will be minimal or no grading on site.
4. Details of the wildlife-friendly fencing are included separately in a drawing.

INVERTERS

Three Phase Inverter with Synergy Technology

for the 277/480V Grid for North America

SE66.6KUS / SE100KUS

Specifically designed to work with power optimizers

- Easy two-person installation – each unit mounted separately, equipped with cables for simple connection between units
- Balance of System and labor reduction compared to using multiple smaller string inverters
- Independent operation of each unit enables higher uptime and easy serviceability
- No wasted ground area: wall/rail mounted, or horizontally mounted under the modules (10˚ inclination)
- Integrated arc fault protection and rapid shutdown for NEC 2014, NEC 2017 and NEC 2020, per article 690.11 and 690.12
- Built-in module-level monitoring with Ethernet or cellular GSM
- Fixed voltage inverter for superior efficiency (98.5%) and longer strings
- Integrated DC Safety Switch
- Built-in RS485 Surge Protection, to better withstand surges caused by lightning or other events
- 150% DC oversizing, enabling higher energy production

solaredge

/ Three Phase Inverter with Synergy Technology

for the 277/480V Grid for North America

SE66.6KUS / SE100KUS

	SE66.6KUS	SE100KUS	
OUTPUT			
Rated AC Power Output	66600	100000	VA
Maximum AC Power Output	66600	100000	VA
AC Output Line Connections	4-wire WYE (L1-L2-L3-N) plus PE		
AC Output Voltage Minimum-Nominal-Maximum(1) (L-N)	244 - 277 - 305		Vac
AC Output Voltage Minimum-Nominal-Maximum(1) (L-L)	422.5 - 480 - 529		Vac
AC Frequency Min-Nom-Max(1)	59.3 - 60 - 60.5		Hz
Maximum Continuous Output Current (per Phase) @277V	80	120	A
GFDI Threshold	1		A
Utility Monitoring, Islanding Protection, Configurable Power Factor, Country Configurable Thresholds	Yes		
INPUT			
Maximum DC Power (Module STC) / Unit	100000 / 50000	150000 / 50000	W
Transformer-less, Ungrounded	Yes		
Maximum Input Voltage DC to Gnd	500		Vdc
Maximum Input Voltage DC+ to DC-	1000		Vdc
Nominal Input Voltage DC to Gnd	425		Vdc
Nominal Input Voltage DC+ to DC-	850		Vdc
Maximum Input Current	2 x 40	3 x 40	Adc
Maximum Input Short Circuit Current	120		Adc
Reverse-Polarity Protection	Yes		
Ground-Fault Isolation Detection	350kΩ Sensitivity per Unit		
CEC Weighted Efficiency	98.5		%
Nighttime Power Consumption	< 12		W
ADDITIONAL FEATURES			
Supported Communication Interfaces	RS485, Ethernet, Cellular GSM (optional)		
Rapid Shutdown	NEC2014, NEC2017 and NEC2020 compliant/certified, upon AC Grid Disconnect		
RS485 Surge Protection	Built-in		
DC SAFETY SWITCH			
DC Disconnect	1000V / 2 x 40A	1000V / 3 x 40A	
STANDARD COMPLIANCE			
Safety	UL1741, UL1741 SA, UL1699B, UL1998, CSA 2.22		
Grid Connection Standards	IEEE 1547, Rule 21, Rule 14 (HI)		
Emissions	FCC part15 class A		
INSTALLATION SPECIFICATIONS			
Number of units	2	3	
AC Output Conduit Size / Max AWG / Max PE AWG	1.5" / 2/0 / 6	2" / 4/0 / 4	
DC Output Conduit Size / Terminal Block AWG Range / Number of Strings(2)	2 x 1.25" / 6-14 / 6 strings	2 x 1.25" / 6-14 / 9 strings	
Dimensions (H x W x D)	Primary Unit: 37 x 12.5 x 10.5 / 940 x 315 x 260; Secondary Unit: 21 x 12.5 x 10.5 / 540 x 315 x 260		in / mm
Weight	Primary Unit: 105.8 / 48; Secondary Unit 99.2 / 45		lb / kg
Operating Temperature Range	-40 to +140 / -40 to +60(3)		°F / °C
Cooling	Fan (user replaceable)		
Noise	< 60		dBA
Protection Rating	NEMA 3R		
Mounting	Brackets provided		

(1) For other regional settings please contact SolarEdge support
(2) Single input option per unit (up to 3AWG) available
(3) De-rating from 50℃

CE RoHS

Power Optimizer

For North America

P801 / P850 / P950 / P1100

POWER OPTIMIZER

PV power optimization at the module-level

The most cost-effective solution for commercial and large field installations

- Specifically designed to work with SolarEdge inverters
- Up to 25% more energy
- Superior efficiency (99.5%)
- Balance of System cost reduction; 50% less cables, fuses and combiner boxes, over 2x longer string lengths possible
- Fast installation with a single bolt
- Advanced maintenance with module-level monitoring
- Module-level voltage shutdown for installer and firefighter safety
- Meets NEC requirements for arc fault protection (AFCI), Photovoltaic Rapid Shutdown System (PVRSS)
- Use with two PV modules connected in series or in parallel

solaredge

/ Power Optimizer For North America

P801 / P850 / P950 / P1100

Power Optimizer Model (Typical Module Compatibility)	P801 (for up to 2 x 72-cell PV modules)	P850 (for up to 2 x high power or bi-facial modules)	P950 (for up to 2 x high power or bi-facial modules)	P1100 (for up to 2 x high power or bi-facial modules)	
INPUT					
Rated Input DC Power(1)	800	850	950	1100	W
Connection Method	Single input for series connected modules				
Absolute Maximum Input Voltage (Voc at lowest temperature)	125				Vdc
MPPT Operating Range	12.5 - 105				Vdc
Maximum Short Circuit Current per input (Isc)	11.75	14.1*		14.1	Adc
Maximum Efficiency	99.5				%
Weighted Efficiency	98.6				%
Overvoltage Category	II				
OUTPUT DURING OPERATION (POWER OPTIMIZER CONNECTED TO OPERATING SOLAREDGE INVERTER)					
Maximum Output Current	15	18			Adc
Maximum Output Voltage	80				Vdc
OUTPUT DURING STANDBY (POWER OPTIMIZER DISCONNECTED FROM SOLAREDGE INVERTER OR SOLAREDGE INVERTER OFF)					
Safety Output Voltage per Power Optimizer	1 ± 0.1				Vdc
STANDARD COMPLIANCE					
Photovoltaic Rapid Shutdown System	NEC 2014				
EMC	FCC Part 15 Class A, IEC61000-6-2, IEC61000-6-3				
Safety	IEC62109-1 (class II safety), UL1741			IEC62109-1 (class II safety), UL1741, UL3741	
Material	UL94 V-0, UV Resistant				
RoHS	Yes				
INSTALLATION SPECIFICATIONS					
Compatible SolarEdge Inverters	SE9K & larger		SE20K & larger	SE30K & larger	
Maximum Allowed System Voltage	1000				Vdc
Dimensions (W x L x H)	129 x 153 x 49.5 / 5.1 x 6 x 1.9	129 x 162 x 59 / 5.1 x 6.4 x 2.3			mm / in
Weight	933 / 2.05	1064 / 2.34			gr / lb
Input Connector	MC4(2)				
Input Wire Length	0.16 / 0.52 / 1.3 / 4.27	0.16 / 0.52 / 1.6 / 5.24	1.3 / 4.27	1.6 / 5.24	m / ft
Output Wire Length	2.2 / 7.2	2.1 / 6.9 / 2.2 / 7.2	2.2 / 7.2	2.4 / 7.8	m / ft
Output Wire Type / Connector	Double Insulated / MC4				
Operating Temperature Range(3)	-40 to +85 / -40 to +185				°C / °F
Protection Rating	IP68 / NEMA6P				
Relative Humidity	0 - 100				%

* For P850/P950 models manufactured in work week 06/2020 or earlier, the maximum Isc per input is 12.5A. The manufacture code is indicated in the Power Optimizer's serial number example: S/N SJ0620A-xxxxxxxx (work week 06 in 2020)

(1) Rated power of the module at STC will not exceed the Power Optimizer "Rated Input DC Power". Modules with up to +5% power tolerance are allowed

(2) For other connector types please refer to: https://www.solaredge.com/sites/default/files/optimizer-input-connector-compatibility.pdf

(3) For ambient temperature above +70°C / +158°F power de-rating is applied. Refer to https://www.solaredge.com/sites/default/files/se-temperature-derating-note-na.pdf for more

PV System Design Using a SolarEdge Inverter(4)(5)(6)		208V Grid SE14.4K*		208V Grid SE17.3K*		277/480V Grid SE20K, SE30K, SE33.3K*, SE40K*	277/480V Grid SE20K, SE30K	277/480V Grid SE33.3K*, SE40K*	
Compatible Power Optimizers		P801	P850, P950, P1100	P801	P850, P950, P1100	P801	P850, P950, P1100	P850, P950, P1100	
Minimum String Length	Power Optimizers	8	8	9	9	14	14	14	
	PV Modules	15	15	17	17	27	27	27	
Maximum String Length	Power Optimizers	30	30	30	30	30	30	30	
	PV Modules	60	60	60	60	60	60	60	
Maximum Continuous Power per String		6000	7200	7275	8730	12750	15300	15300	W
Maximum Allowed Connected Power per String(7) (Permitted only when the difference in connected power between strings is up to 2,000W for the 277/480V grid, or 1,000W for the 208V grid)		2 strings or less - 7200	1 string - 8400	2 strings or less - 8475	1 string - 9930	15000	1 string 17550	2 strings or less - 17550	W
		3 strings or more - 7800	2 strings or more - 9000	3 strings or more - 9075	2 strings or more - 10530		2 strings or more - 20300	3 strings or more - 20300	
Parallel Strings of Different Lengths or Orientations		Yes							

* The same rules apply for Synergy units of equivalent power ratings, that are part of the modular Synergy Technology inverter

(4) P850/P950/P1100 can be mixed in one string only with P850/P950/P1100. P801 cannot be mixed with any other Power Optimizer in the same string

(5) For each string, a Power Optimizer may be connected to a single PV module if 1) each Power Optimizer is connected to a single PV module or 2) it is the only Power Optimizer connected to a single PV module in the string

(6) Design with three phase 208V inverters is limited. Use the SolarEdge Designer for verification

(7) To connect more STC power per string, design your project using SolarEdge Designer

RoHS

Intertek

BOVIET SOLAR USA

Advancing the Power of the Sun

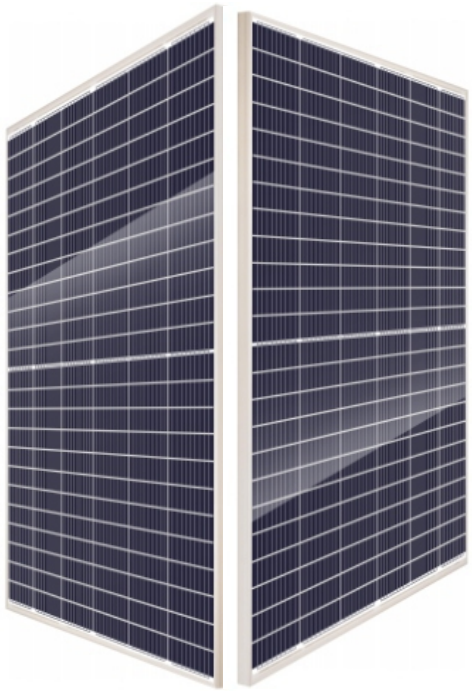
144 Cell Mono 440-450W

BVM6612M(S)-HC-BF-DG

0~+5W
Power Tolerance

20.2%
Maximum Efficiency

440-450W
Power Output Range



41.19 x 84.06 Inches

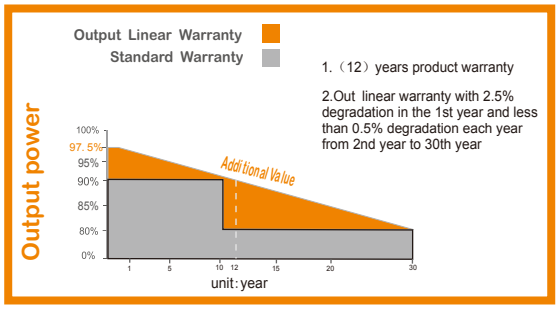
Silver Frame / Double-sided glass

High Quality and Reliable Modules

- Double-sided glass technology, more power generation
- Withstand up to 5400 Pa snow load and 2400 Pa wind load
- 2 EL inspections per cell/module for defect-free consistency
- High salt and ammonia resistance certified
- 0~+5 W guaranteed positive tolerance
- Rugged design for long-term durability; passed extended reliability tests

Warranty

- 12-year product warranty
- 30-year linear power output warranty



Comprehensive Certificates for Products and Management

- UL 61730, IEC 61215, IEC 61730, CEC listed, MCS and CE
- ISO 9001 for Quality Management Systems
- ISO 14001 for Environmental Management Systems
- OHSAS 18001 Occupational Health and Safety Systems

Listed in Bloomberg New Energy Finance's tier 1 list as of 1Q 2018

TÜVRheinland · Intertek · MCS · GO solar CALIFORNIA · 2019 TOP PERFORMER PVEL DNV·GL PV MODULE RELIABILITY SCORECARD

2107 N 1st Street Suite 550 San Jose, CA 95131

BOVIETSOLARUSA.COM ◆ 877.253.2858 ◆ SALES@BOVIETSOLARUSA.COM

Electrical Characteristics STC

	BVM6612M-440S-H-HC-BF-DG	BVM6612M-445S-H-HC-BF-DG	BVM6612M-450S-H-HC-BF-DG
Maximum Power (Pmax)	440W	445W	450W
Maximum Power Current (Imp)	10.92A	10.99A	11.06A
Maximum Power Voltage (Vmp)	40.37V	40.57V	40.76V
Short Circuit Current (Isc)	11.48A	11.55A	11.60A
Open Circuit Voltage (Voc)	48.60V	48.80V	49.05V
Module Efficiency	19.7%	19.9%	20.2%
Power Tolerance	0~+5W	0~+5W	0~+5W

STC: AM1.5, Irradiance 1000W/㎡, 25°C

Electrical Characteristics NOCT

	BVM6612M-440S-H-HC-BF-DG	BVM6612M-445S-H-HC-BF-DG	BVM6612M-450S-H-HC-BF-DG
Maximum Power (Pmax)	324W	342W	361W
Maximum Power Current (Imp)	8.46A	8.65A	8.84A
Maximum Power Voltage (Vmp)	38.29V	39.54V	40.8V
Short Circuit Current (Isc)	8.87A	9.08A	9.28A
Open Circuit Voltage (Voc)	47.8V	48.2V	48.6V

NOCT: AM1.5, Irradiance 800W/㎡, 20°C, Wind speed 1m/s

Mechanical Characteristics

Solar Cell	Bifacial-Monocrystalline 6.54 x 3.27 inch, 144 (6 x 24) pcs. in series
Double glass	2.0mm AR coating tempered glass+2.0mm Semi-tempered glass,low iron
Frame	Anodized aluminum alloy
Junction Box	IP68 rated, with 3 bypass diode
Output Cable	4 mm² (EU)/12 AWG (US), 39.38 inch
Connector	MC4 compatible
Dimension	84.06x 41.19 x 1.38 inch
Weight	68.34 lb

Thermal Characteristics

Pmax Temperature Coefficient	-0.37%/K
Voc Temperature Coefficient	-0.30%/K
Isc Temperature Coefficient	+0.06%/K
NOCT	113±35.6°F

Maximum Ratings

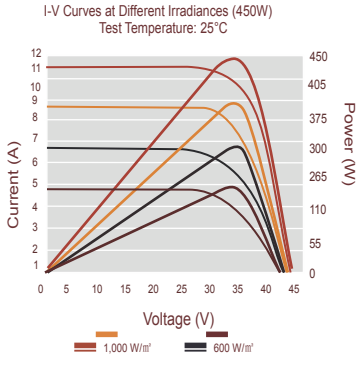
Operating Temperature	-40°F~185°F
Maximum Series Fuse Rating	20A
Maximum System Voltage	1000/1500V DC

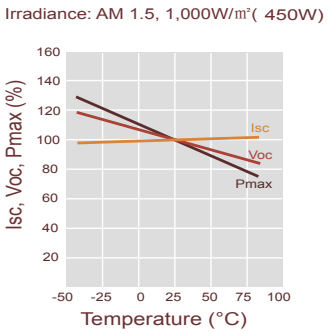
Packing Information

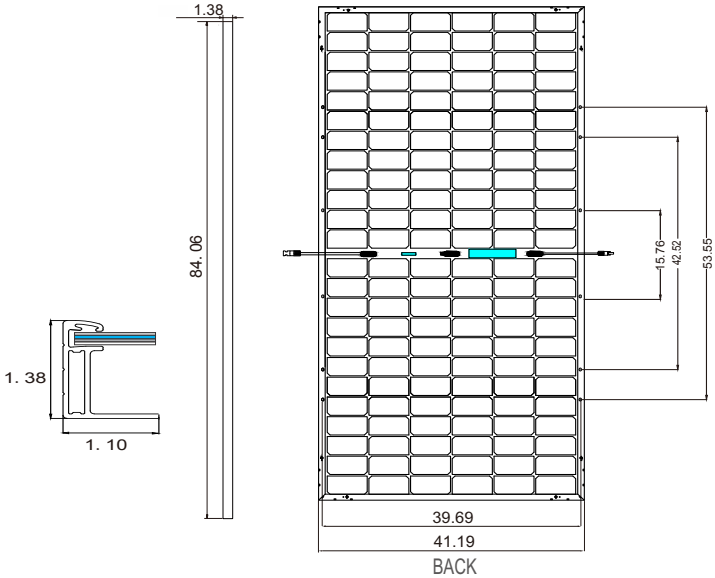
Pieces per pallet	30
Pallets per container (40HQ)	22
Pieces per container (40HQ)	660
Pallet weight/size	2162 lb/ 85.23 x 46.85 x 45.08 inch

Bifacial Output-Backside Power Gain

10%	Pmax (W)	484	489	495
	Module efficiency (%)	21.67	21.89	22.17
20%	Pmax (W)	528	534	540
	Module efficiency (%)	23.64	23.91	24.18







RBI SOLAR

Fixed-Tilt Ground Mount Solution | GM-2

When EPCs and project developers across the USA need dependable, low-maintenance ground mount racking, they turn to RBI Solar. As a single-source provider, we take responsibility for the Design, Engineering, Manufacturing, and Installation of PV mounting solutions. When you choose RBI Solar for your next ground mount, you're choosing peace of mind that your project is in the hands of the most trusted solar racking team in the industry.

Why choose RBI Solar?

- Professional Engineers licensed in all 50 states
- Quick response & efficient communication
- National installation capabilities
- Our in-house team members are an extension of your staff
- 85+ years manufacturing experience
- Complete turn-key process, reduction in your vendor coordination
- Company owned post driving equipment
- National project management capabilites with roaming site service personnel
- More time to focus on your business

www.rbisolar.com

GM-2 Solution Features

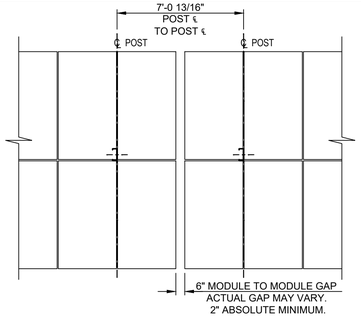
Foundation and racking design	Site wind speeds 170+ mph and ground snow loads 90+ psf
Signed and sealed drawings	Available in all 50 states
Proprietary on-site testing	Pull testing & corrosion testing - no geotechnical report required
Pre-assembled parts	Reduction in installation time
Variable slope	Accommodates slopes up to 30% (with topographic site map)
20-yr standard warranty	Proven rack reliability and bankability
G115 minimum galvanized coating	Exceeds ASTM and UL standards for 30% extended life
Driven posts	Cost-effective cee channel or I-beam post options available
Up to 24’ long post driving	Ability to address challenging soils or elevate array structure
Module configurations	Portrait, landscape (all module types)
Raised purlins	Integrated bonding and grounding to UL 2703
Corrosion class	System available for all corrosion classes
Wire management and electrical	Integrated wire management solution and inverter mounting

Contact us at info@rbisolar.com or (513) 242-2051

DESIGN • ENGINEERING • MANUFACTURING • INSTALLATION

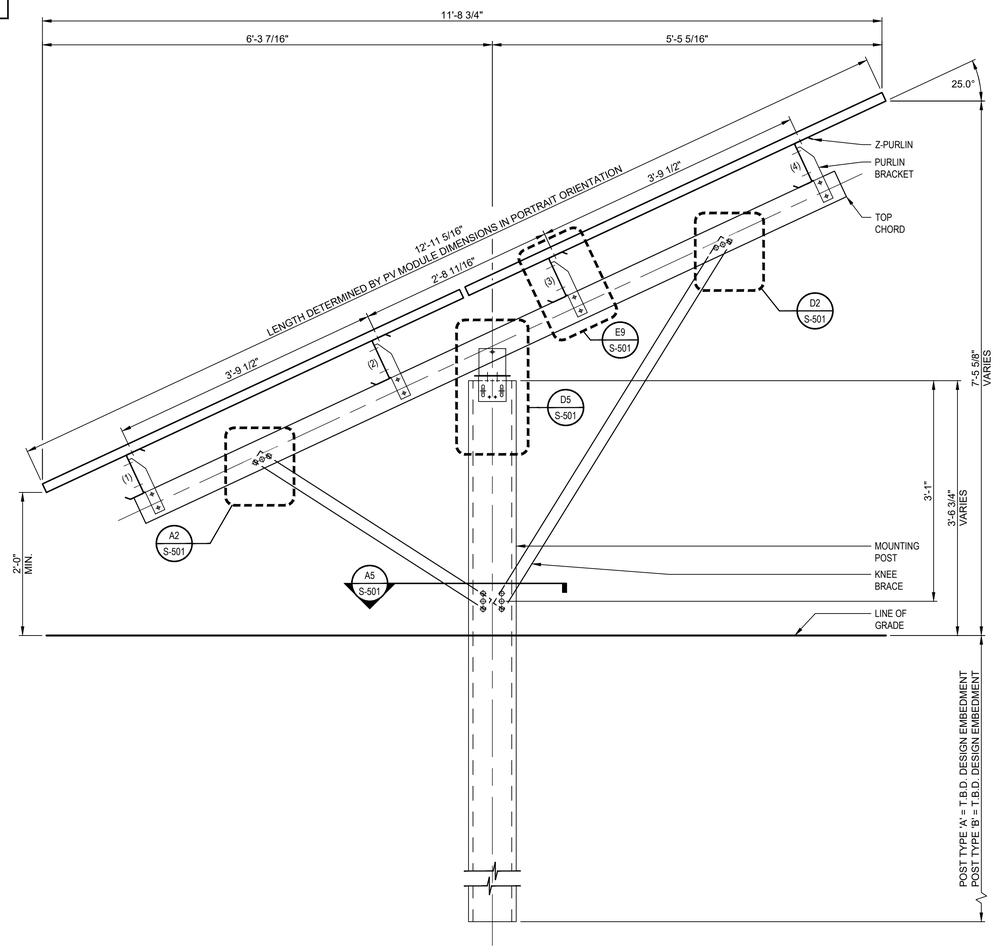
6715 Steger Drive, Cincinnati, OH 45237 | 513-242-2051 | info@rbisolar.com | **www.rbisolar.com**

RBI SOLAR



NOTE: COMPONENTS SHOWN MAY VARY FROM ACTUAL CONFIGURATION.
SEE INDIVIDUAL BAY PLANS THIS SHEET FOR MORE DETAILED PLANS.

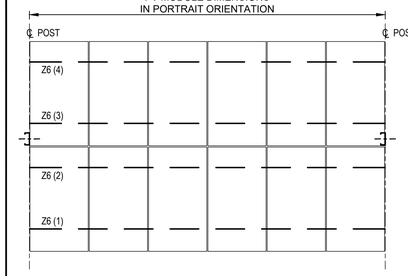
G1 SCALE: NONE
TYPICAL ROW BREAK DETAIL



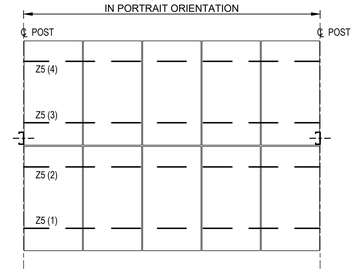
NOTE:
IF DESIGN EMBEDMENT IS NOT ACHIEVED, REFERENCE DRIVEN POST EMBEDMENT NOTES ON SHEET G-002 .

NOTE:
1. Z-PURLINS #1 & #4 HAVE RAISED MODULE MOUNTING SLOTS. (REF. E7/S-501)
2. Z-PURLINS #2 & #3 HAVE FLAT MODULE MOUNTING SLOTS. (REF. E7/S-501)

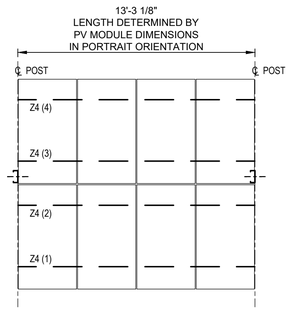
A1 SCALE: 1" = 1'-0"
DESIGN RACK SECTION



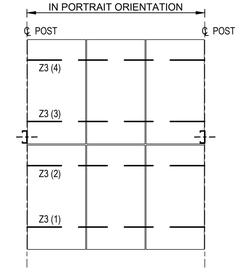
G10 SCALE: 1/4" = 1'-0"
6P2 BAY PLAN VIEW



E10 SCALE: 1/4" = 1'-0"
5P2 BAY PLAN VIEW



C10 SCALE: 1/4" = 1'-0"
4P2 BAY PLAN VIEW



A10 SCALE: 1/4" = 1'-0"
3P2 BAY PLAN VIEW

RBI SOLAR
Total Solar Service: Design * Fabrication
Installation * Parts * Repair Service
5513 VINE STREET
CINCINNATI, OH 45217
513.242.2051
FAX: 513.242.0816

PROFESSIONAL SEAL

ENGINEER'S SEAL APPLIES TO DESIGN OF STRUCTURAL COMPONENTS ONLY

NOT FOR CONSTRUCTION

RBI SOLAR IS NOT RESPONSIBLE FOR CONSTRUCTION THAT IS BUILT FROM SET LABELED "NOT FOR CONSTRUCTION"

GROUND MOUNT FOR CUSTOMER

RELEASE RECORD

MARK	DATE	DESCRIPTION
01		GENERIC 2HP LAYOUT

PROJECT INFORMATION

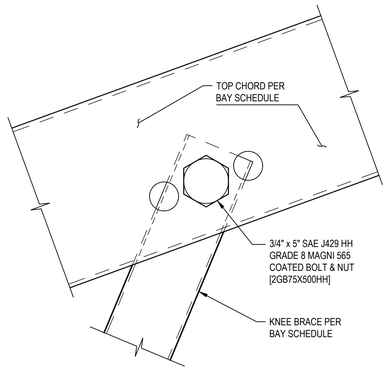
TITLE & ADDRESS:
GENERIC 2HP LAYOUT
ADDRESS

RBI SOLAR PROJECT No.:
183

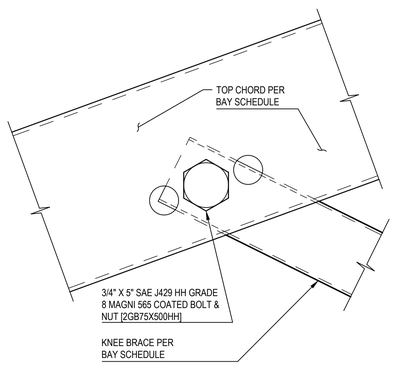
DRAWN BY: KEJ
REVIEWED BY: -

SHEET TITLE:
RACK SECTION & BAY PLAN VIEWS

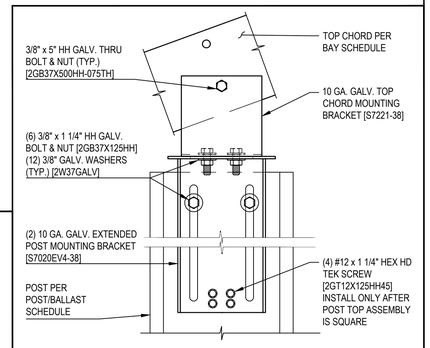
SHEET No.:
S-301



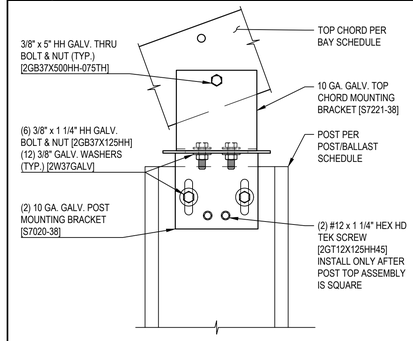
D2 SCALE: 6" = 1'-0" — **UPPER KNEE BRACE TO TOP CHORD CONNECTION DETAIL**



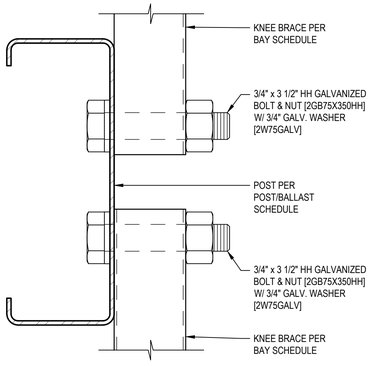
A2 SCALE: 6" = 1'-0" — **LOWER KNEE BRACE TO TOP CHORD CONNECTION DETAIL**



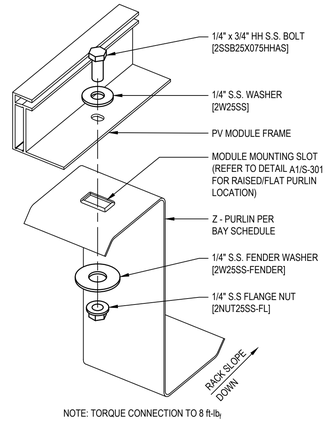
F5 SCALE: 3" = 1'-0" — **TOP CHORD TO POST CONNECTION DETAIL**



D5 SCALE: 3" = 1'-0" — **TOP CHORD TO POST CONNECTION DETAIL**

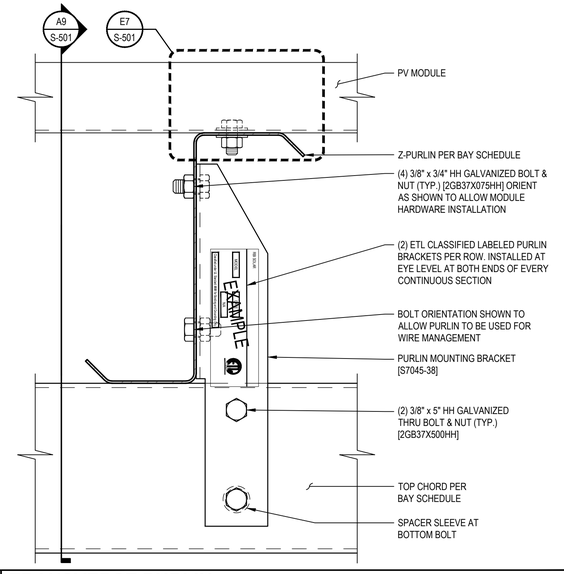


A5 SCALE: 6" = 1'-0" — **KNEE BRACE TO POST CONNECTION DETAIL**

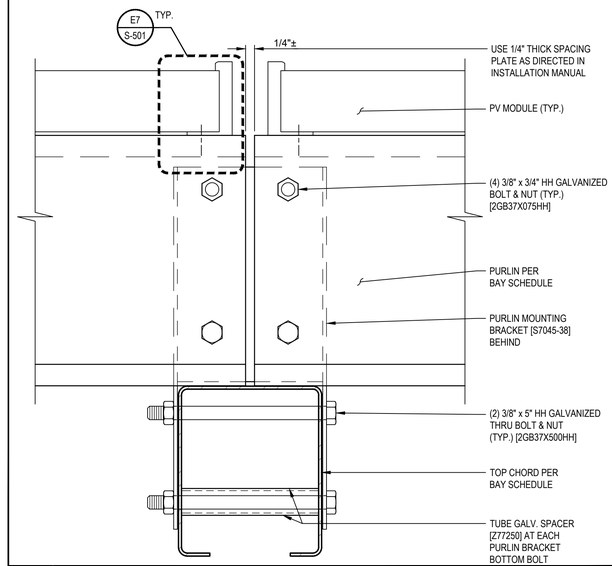


NOTE: TORQUE CONNECTION TO 8 ft-lb

E7 SCALE: NONE — **PV MODULE TO PURLIN CONNECTION DETAIL**



E9 SCALE: 6" = 1'-0" — **TRANSVERSE PURLIN CONNECTION DETAIL**



A9 SCALE: 6" = 1'-0" — **LONGITUDINAL PURLIN CONNECTION DETAIL**

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5513 VINE STREET
CINCINNATI, OH 45217
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FAX: 513.242.0816

PROFESSIONAL SEAL

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GROUND MOUNT FOR CUSTOMER

RELEASE RECORD

MARK	DATE	DESCRIPTION
01		GENERIC 2HP LAYOUT

PROJECT INFORMATION

TITLE & ADDRESS:
GENERIC 2HP LAYOUT
ADDRESS

RBI SOLAR PROJECT No.:
183

DRAWN BY: KEJ
REVIEWED BY: -

SHEET TITLE:
DETAILS

SHEET No.:
S-501

USER: KEJOHNSON PLOTTED: 7/26/2018 - 11:05 AM C:\Users\kejohnson\appdata\local\temp\AcPublish_1740\Generic 2HP Layout.dwg LAYOUT: S-501

KITCHAWAN
GROUND MOUNT PV SYSTEM

2,581.2 KW-DC SOLAR PV SYSTEM
716 KITCHAWAN ROAD
OSSINING, NEW YORK 10562

SCOPE OF WORK:

TO INSTALL A GROUND MOUNTED SOLAR PHOTOVOLTAIC (PV) SYSTEM.
THE POWER GENERATED BY THE PV SYSTEM WILL BE INTERCONNECTED WITH THE UTILITY GRID

THE PV SYSTEM DOES NOT INCLUDE STORAGE BATTERIES

CODES & STANDARDS:

2017 NATIONAL ELECTRICAL CODE
2015 INTERNATIONAL BUILDING CODE
2018 INTERNATIONAL FIRE CODE
UL 1741

LOT INFORMATION:

11 +/- ACRES
PARCEL ID # 70.06-1-2 & 70.06-1-3
ZONING DISTRICT - R1-200 - ONE FAMILY RESIDENTIAL

RECORD OWNER:

VAN BRUNT COCHRAN, LLC
716 KITCHAWAN ROAD
OSSINING, NY 10562

RECORD APPPLICANT:

ECOGY NEW YORK XIII, LLC
315 FLATBUSH AVENUE #393
BROOKLYN, NEW YORK 11217

SYSTEM SUMMARY:

2,581.2 kW DC
2000.0 kW-AC

TILT ANGLE = 25 °
AZIMUTH = 190 °

EQUIPMENT:

MODULE:
(2,186) BOVIET 450W MODULE

INVERTER:
SOLAREDGE 100K-US INVERTER

RACKING:
RBI SOLAR

DAS:
ECOGY ECONODE

UTILITY:

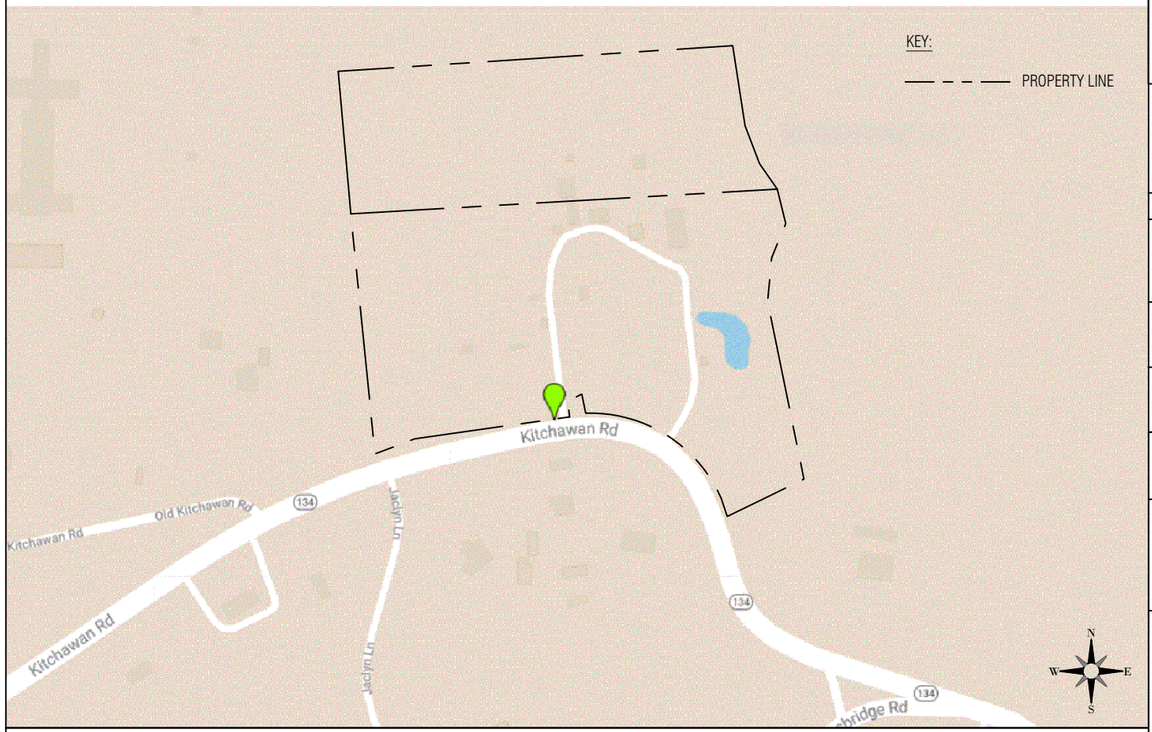
CON ED

DRAWING LIST	
DWG. NO.	DRAWING TITLE
G-001	TITLE SHEET
PV-101	SITE PLAN
PV-101.1	PARTIAL SITE PLAN
PV-200	GROUND MOUNT ELEVATION
PV-507	MISCELLANEOUS DETAILS

REVIEW PLAN SET
ISSUE DATE: 07/28/2020

LOCATION MAP

SCALE: NTS



SATELLITE MAP

SCALE: NTS

ECOGY ENERGY

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315 FLATBUSH AVENUE, SUITE 393
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projectmanagement@ecogyenergy.com
(718)-304-0945

Ecogy New York XI LLC

Project Name:
KITCHAWAN
2581.2 kW-DC PV SYSTEM
GROUND MOUNT

Project Site:
716 KITCHAWAN ROAD, OSSINING, NY, 10562

Account No: xxxxx
New Service Case #: xxxxx

#	REVISION DESCRIPTION	DATE	BY

Professional Stamp

SHEET NAME:
TITLE SHEET

PROJECT NUMBER:	DRAWN BY:	CHECKED BY:
---	DQP	
DATE: 07/28/21	DWG. NUMBER: G-001	
SHEET NUMBER: X of X		

UTILITY EQUIPMENT KEY:

1. NEW UTILITY OWNED 2000 kVA TXFMR
   13.2 KV WYE PRIMARY, 480 V WYE SECONDARY
2. UTILITY OWNED RECLOSER POLE AND DISCONNECT
3. EXISTING UTILITY POLE #W.55

CUSTOMER EQUIPMENT KEY:

A. AC DISCONNECT SWITCH (PV SYSTEM)
   SOLAREDGE INVERTERS
   AC COMBINER PANEL
   PV SYSTEM UTILITY METER
   DAS

B. (NEW) CUSTOMER OWNED RISER POLE WITH UTILITY SUPPLIED KYLE SWITCH TO BE INSTALLED BY CUSTOMER

NOTE:

1. MEADOW SEED MIXTURE TO BE PLANTED BETWEEN PV ARRAY ROWS
2. FENCING AROUND THE ARRAY WILL BE WILDLIFE FRIENDLY

SYMBOLS LEGEND:

- EXISTING UTILITY POLE
- PROPOSED UTILITY POLE

LINETYPE LEGEND:

- APPROXIMATE PROPERTY LINE
- PROPERTY LINE SETBACK
- PROPOSED CHAINLINK FENCE
- OVERHEAD ELECTRIC
- UNDERGROUND ELECTRIC
- APPROXIMATE WETLAND BOUNDARY GIS
- 10' ARRAY SETBACK

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Ecogy New York XI LLC

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KITCHAWAN
2581.2 kW-DC PV SYSTEM
GROUND MOUNT

Project Site:
716 KITCHAWAN ROAD, OSSINING, NY, 10562

Account No: xxxxx
New Service Case #: xxxxx

#	REVISION DESCRIPTION	DATE	BY
1	UPDATED ARRAY LAYOUT AND MISC NOTES	7/8/2021	SCG

Professional Stamp

PRELIMINARY

SHEET NAME:
SITE PLAN

PROJECT NUMBER:	DRAWN BY:	CHECKED BY:
---	SCG	JLA
DATE: 07/28/21	DWG. NUMBER: PV-100	
SHEET NUMBER: X of X		

UTILITY EQUIPMENT KEY:

1. NEW UTILITY OWNED 2000 kVA TXFMR
   13.2 KV WYE PRIMARY, 480 V WYE SECONDARY
2. UTILITY OWNED RECLOSER POLE AND DISCONNECT
3. EXISTING UTILITY POLE #W.55

CUSTOMER EQUIPMENT KEY:

A. AC DISCONNECT SWITCH (PV SYSTEM)
   SOLAREDGE INVERTERS
   AC COMBINER PANEL
   PV SYSTEM UTILITY METER
   DAS

B. (NEW) CUSTOMER OWNED RISER POLE WITH UTILITY SUPPLIED KYLE SWITCH TO BE INSTALLED BY CUSTOMER

NOTE:

1. MEADOW SEED MIXTURE TO BE PLANTED BETWEEN PV ARRAY ROWS
2. FENCING AROUND THE ARRAY WILL BE WILDLIFE FRIENDLY

SYMBOLS LEGEND:

- EXISTING UTILITY POLE
- PROPOSED UTILITY POLE

LINETYPE LEGEND:

- APPROXIMATE PROPERTY LINE
- PROPERTY LINE SETBACK
- PROPOSED CHAINLINK FENCE
- OVERHEAD ELECTRIC
- UNDERGROUND ELECTRIC
- APPROXIMATE WETLAND BOUNDARY GIS
- 10' ARRAY SETBACK

ECOGY ENERGY

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Ecogy New York XI LLC

Project Name:
KITCHAWAN
2581.2 kW-DC PV SYSTEM
GROUND MOUNT

Project Site:
716 KITCHAWAN ROAD, OSSINING, NY, 10562

Account No: xxxxx
New Service Case #: xxxxx

#	REVISION DESCRIPTION	DATE	BY

Professional Stamp

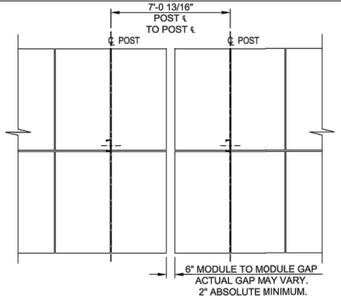
PRELIMINARY

SHEET NAME:
PARTIAL SITE PLAN

PROJECT NUMBER:	DRAWN BY:	CHECKED BY:
---	SCG	---

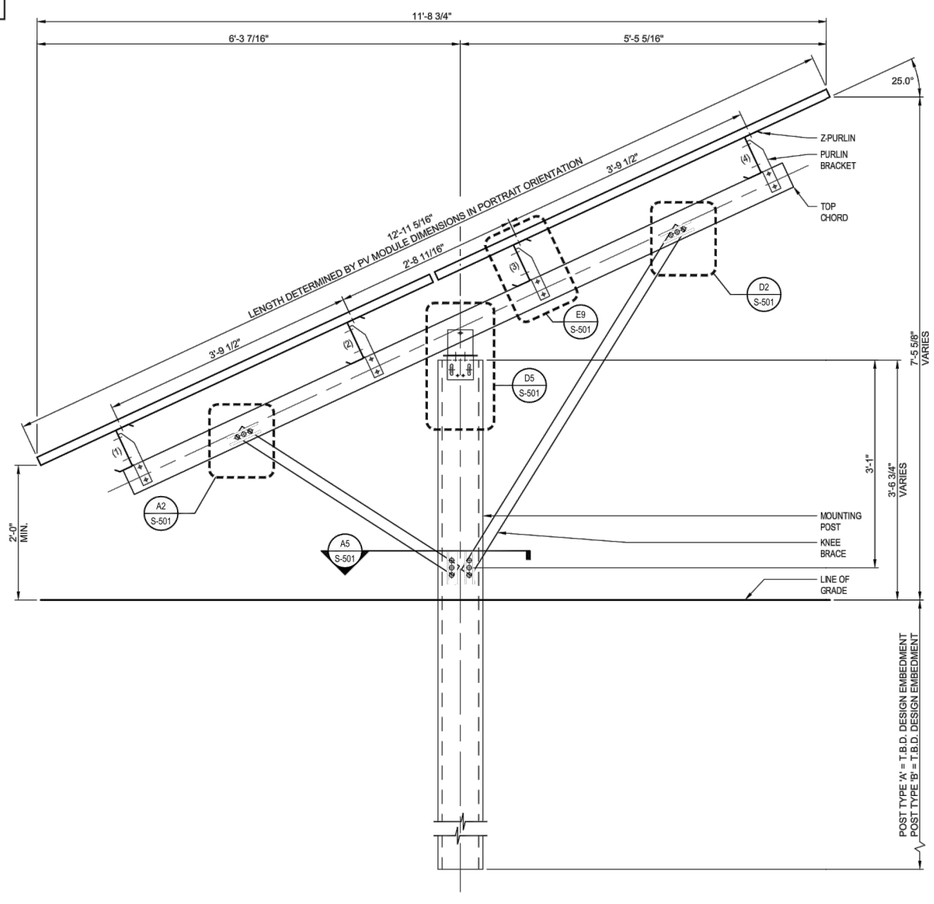
DATE:	DWG. NUMBER:
07/28/21	PV-100

SHEET NUMBER: X of X



NOTE: COMPONENTS SHOWN MAY VARY FROM ACTUAL CONFIGURATION.
SEE INDIVIDUAL BAY PLANS THIS SHEET FOR MORE DETAILED PLANS.

G1 SCALE: NONE — **TYPICAL ROW BREAK DETAIL**

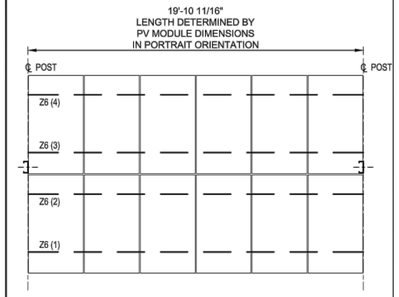


NOTE:
IF DESIGN EMBEDMENT IS NOT ACHIEVED, REFERENCE DRIVEN POST EMBEDMENT NOTES ON SHEET G-002 .

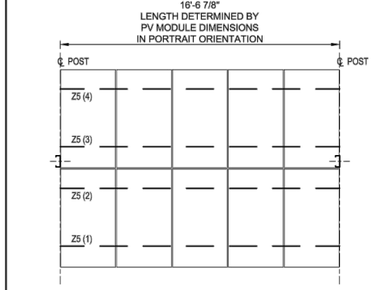
NOTE:
1. Z-PURLINS #1 & #4 HAVE RAISED MODULE MOUNTING SLOTS. (REF. E7/S-501)
2. Z-PURLINS #2 & #3 HAVE FLAT MODULE MOUNTING SLOTS. (REF. E7/S-501)

NOTE:
FULLY DRIVEN PILE.

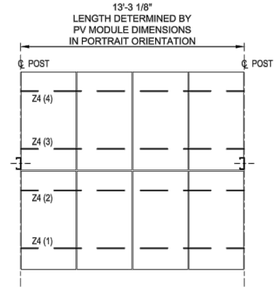
A1 SCALE: 1" = 1'-0" — **DESIGN RACK SECTION**



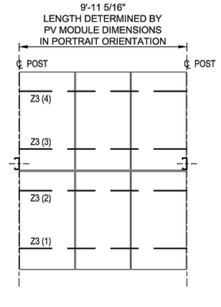
G10 SCALE: 1/4" = 1'-0" — **6P2 BAY PLAN VIEW**



E10 SCALE: 1/4" = 1'-0" — **5P2 BAY PLAN VIEW**



C10 SCALE: 1/4" = 1'-0" — **4P2 BAY PLAN VIEW**



A10 SCALE: 1/4" = 1'-0" — **3P2 BAY PLAN VIEW**

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Ecogy New York XI LLC

Project Name:
KITCHAWAN
2581.2 kW-DC PV SYSTEM
GROUND MOUNT

Project Site:
716 KITCHAWAN ROAD, OSSINING, NY, 10562

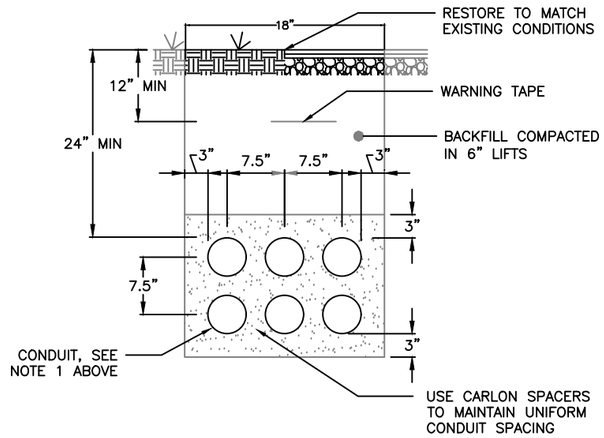
Account No: xxxxx
New Service Case #: xxxxx

#	DATE	BY	REVISION DESCRIPTION

Professional Stamp

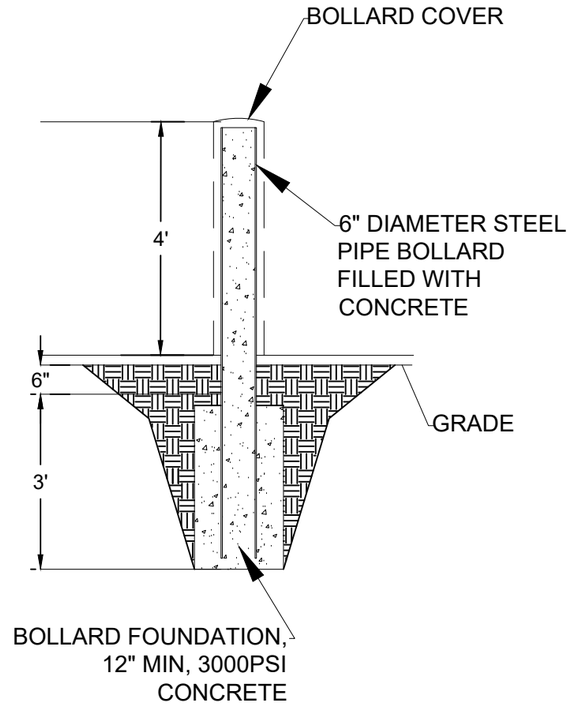
SHEET NAME:
GROUND MOUNT ELEVATION

PROJECT NUMBER:	DRAWN BY:	CHECKED BY:
---	DQP	
DATE: 07/28/21	DWG. NUMBER: PV-200	
SHEET NUMBER: X of X		

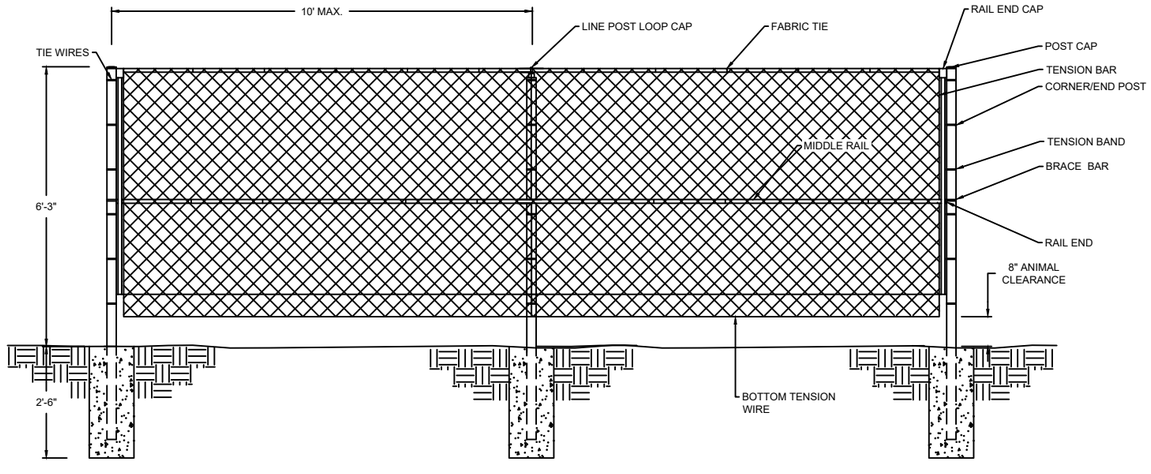


NOTE:
1. ALL UNDEGROUND CONDUIT SHALL BE PVC AND TRANSITION TO RMC FOR ELBOW. RMC ELBOW DOES NOT NEED TO BE BONDED IF ANY PART OF THE ELBOW IS 18" DEEP (NEC 250.86 EXCEPTION 3)
2. UNDER ROADS AND PARKING AREAS ENCASEMENT SHALL BE 3000 PSI CONCRETE. UNDER GRASSY AREAS ENCASEMENT SHALL BE SAND
3. COORDINATE WITH DIG SAFE AND LOCAL UTILITIES PRIOR TO EXCAVATING

TRENCH DETAIL
N.T.S.



BOLLARD DETAIL
N.T.S.



FENCE DETAIL
N.T.S.

NOTE:
1. FENCING TO BE ANIMAL FRIENDLY WITH AN 8" MIN. CLEARANCE FROM BOTTOM OF FENCE TO THE GROUND.

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Ecogy New York XI LLC

Project Name:
KITCHAWAN
2581.2 kW-DC PV SYSTEM
GROUND MOUNT

Project Site:
716 KITCHAWAN ROAD, OSSINING, NY, 10562

Account No: xxxxx
New Service Case #: xxxxx

#	REVISION DESCRIPTION	DATE	BY

Professional Stamp

SHEET NAME:
MISC. MECHANICAL DETAILS

PROJECT NUMBER:	DRAWN BY:	CHECKED BY:
---	DQP	---

DATE: 07/28/21
SHEET NUMBER: X of X
DWG. NUMBER: PV-507

Nancy Calicchia

From: Julia Magliozzo <julia.magliozzo@ecogyenergy.com>
Sent: Thursday, July 1, 2021 10:53 AM
To: Robyn Steinberg; John Tegeder; Kim Hughes; Planning Department; Diana Quast
Cc: Brittany Friese
Subject: Clarification of Tree Removal for Kitchawan Solar Farm

Good morning,

Upon review of the memorandum sent from the Conservation Board to the Planning Board on May 6, 2021 for the Kitchawan Farm Solar Farm project, we noticed discrepancies regarding the tree removal that I would like to clarify. On the site plan submitted for review, we had marked an 80ft wide area of trees to be removed to the south of the proposed solar array. That area is referenced in the memorandum. However, the actual area of tree removal is larger and includes trees that will be removed within the array area. The total area of tree removal on the south of the property is approximately 150ft wide, 75,000 sq ft. We want to be fully transparent and ensure our site plan was not misleading so let me know if there are any questions about this.

Another note is that the tree area on the south is not a mature natural forest as mentioned in the memorandum. In actuality, those trees are mostly unmanaged magnolias which used to be part of a nursery that is no longer used. The trees in that area were deliberately planted but are now an overgrown nursery area of overcrowded trees with an understory of predominantly invasive species.

Finally, a concern was raised by our team about the time period in which tree removal is allowed. One of our contractors noted that the area may be considered important for an endangered American bat which roosts in trees during a certain time of year. As far as we know, the typical rule is to only allow tree removal between October and March, but this is left up to local jurisdictions to decide. Is this something that Yorktown is aware of or enforces? Please let us know so we can plan accordingly.

Best regards,

Julia Magliozzo
Director of Operations
Ecogy Energy
www.ecogyenergy.com
Brooklyn, NY
Office: 718-304-0945 ext 2
Mobile: 347-410-1198

Diane Dreier Co-Chair
Phyllis Bock Co-Chair

Matthew Slater
Town Supervisor

TOWN OF YORKTOWN
CONSERVATION BOARD

Town of Yorktown Town Hall, 363 Underhill Avenue, Yorktown Heights, New York 10598, Phone (914) 962-5722

MEMORANDUM

To: **Planning Board**

From: **Conservation Board**

Date: **May 6, 2021**

Re: **Ecogy Kitchawan Community Solar Farm 716 Kitchawan Road**

The Conservation Board, at its May 5th 2021 meeting discussed Ecogy Kitchawan Community Solar Farm located at 716 Kitchawan Road with Julia Magliozzo. The Conservation Board has the following comments:

- This array will be placed on a mostly open field. However, the development will have an impact on the southern section of the site. Applicant is retaining a wooden buffer for screening but there will be extensive removal of natural forest to accommodate the arrays. An eighty-foot wide band of mature natural forest will be removed. The Conservation Board recommends reducing the amount of arrays along the southern part of the site to limit the removal of the trees and disturbance to the natural area.

- The Board requests to review the planting plan when it comes available and encourages the use of native material when developing the plan.

- The Conservation Board looks forward to a site visit as soon as possible.

Respectfully submitted:

Diane Dreier

For the Conservation Board

PAUL COWIE AND ASSOCIATES
consulting arborists / urban foresters

11 N. Beverwyck Road
Lake Hiawatha, New Jersey 07034

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e. pcowie@paulcowieandassociates.com

March 24, 2021

Julia Magliozzo
Director of Operations
Ecogy Energy
315 Flatbush Avenue #393
Brooklyn, NY 11217

Re: Kitchawan Farm, Yorktown, NY
Recommended Tree + Shrub Species for Planting

Dear Julia:

As requested, we have listed in the attached table several tree and shrub species in various mature size classes that are appropriate for planting at Kitchawan Farm.

All are native or non-invasive naturalized species that can be expected to grow well with proper maintenance.

These recommendations are based on our evaluation of the relative performance and condition of the various tree species currently growing on the property, and review of relevant site conditions including local climate, exposures, soil conditions, drainage, and other factors.

In general, Kitchawan Farm appeared to pose few constraints that would significantly limit the species that can be planted. As such, this list could be expanded significantly. The primary exception would be in certain low-lying areas or areas with compacted soil where soil drainage and aeration may be limited. In those cases, planting should be with species that are inherently tolerant and naturally found in bottomlands, floodplains, and similar areas.

Most of the species that Alex indicated in his preliminary planting plan should be suitable as well. I would only caution against relying on American arborvitae *(Thuja occidentalis)* as a large screening species. As it ages and reaches 25-feet or so in height, it tends to "flop" resulting severely leaning stems and large openings in the hedge. Green Giant Arborvitae *(Thuja x 'Green Giant')* would be a be a more reliable, and faster growing, choice for this purpose.

Please don't hesitate to call if you have any questions or need any additional information.

Sincerely,
PAUL COWIE + ASSOCIATES

Paul F. Cowie
President

PFC:pc
Encl.

Kitchawan Farm, Yorktown, NY
Recommended Tree + Shrub Species for Planting
March 24, 2021

MATURE HEIGHT CLASS	COMMON NAME	BOTANICAL NAME	NAMED CULTIVARS	SHADE PREFERENCE	COMMENTS
Compact (8'-12')	American cranberry-bush	*Viburnum opulus* var. *americanum*	'Bailey Compact' 'Compactum' 'Hahs' 'J.N. Select'	Full to partial sun	
Compact (8')	Bayberry	*Myrica pensylvanica*	Winter fruit supports bird species.	Full to partial sun	Winter fruit supports bird species.
Compact (8')	Common winterberry	*Ilex verticillata*	'Spravy' (female) 'Jim Dandy' (male) 'Winter Red' (female) 'Southern Gentleman' (male)	Full to partial sun	Supports bird and butterfly populations. Both male and female specimens required to fruit.
Compact (8')	Oak-leaved hydrangea	*Hydrangea quercifolia*	'Alice' 'Ruby Slippers' 'Snowflake'	Full to partial sun	Beautiful, long lasting flowers in summer.
Compact (8'-15')	Common witch-hazel	*Hamamelis virginiana*	'Harvest moon' 'Little Suzie' 'Pendula'	Full sun to full shade	Unique, subtle flowers in fall.
Small (12'-20')	Fringe tree	*Chionanthus virginicus*		Full to partial sun	Unique, fragrant white flowers in late spring
Small (15'-30')	Eastern redbud	*Cercis canadensis*	'Appalachian Red' 'Morton' 'Ace of Hearts' (dwarf form)	Full to partial sun	Small magenta flowers before leaves in early spring.
Small (20'-25')	Serviceberry	*Amelanchier x laevis* and others	'Cumulus' 'Rogers'	Partial sun to shade	Subtle white flowers before leaves in early spring; Yellow to orange red fall color; Several other suitable species and cultivars of *Amelanchier* exist.
Small (10'-20')	Sweetbay magnolia	*Magnolia virginiana*	'Jim Wilson'	Full to partial sun	Semi-evergreen; Best in wind protected areas to ensure hardiness.
Medium (20'-30')	American hornbeam	*Carpinus caroliniana*	---	Full sun to full shade	---

MATURE HEIGHT CLASS	COMMON NAME	BOTANICAL NAME	NAMED CULTIVARS	SHADE PREFERENCE	COMMENTS
Medium (40'-50')	Eastern red cedar	*Juniperus virginiana*	Several available of various mature heights.	Full sun	---
Medium (25'-40')	Hophornbeam	*Ostrya virginiana*		Full sun to partial shade	
Medium (30'-40')	River birch	*Betula nigra*	'Heritage' 'Dura-Heat' 'Little King' (dwarf form) 'Cully'	Full sun	Appropriate for the proposed birch grove; More resilient than the white-bark birches, which are prone to severe damage from bronze birch borer and birch leafminer infestations; The cultivars have attractive peeling white bark with undertones of salmon and brown.
Medium (30'-40')	Silverbell	*Helesia carolina*	'Uconn Wedding Bells' 'Rosea' 'Rosy Ridge'	Full sun to full shade	Attractive white flowers; Cultivars have pink flowers; The Brooklyn Botanical Gardens breeding nursery at Kitchawan contained numerous silverbells.
Medium (20'-35')	Yellow-flower magnolia	*Magnolia 'Elizabeth'*	'Elizabeth' and others	Full to partial sun	Brooklyn Botanical Gardens breeding nursery at Kitchawan was, in part, where the yellow flowering magnolias were originally developed.
Large (40'-60')	Black gum (aka Tupelo)	*Nyssa sylvatica*	'Wildfire'	Full to partial sun	Brilliant red fall color.
Large (60'-80')	White oak	*Quercus alba*	---	Full sun	---
Large (60'-80')	Swamp white oak	*Quercus bicolor*	---	Full sun	---
Large (50'-70')	Red maple	*Acer rubrum*	'Red Sunset' and 'October Glory' are common; many other are available	Full sun to partial sun	Will tolerate somewhat wet and compacted soils.
Large (60'-80')	Norway spruce	*Picea abies*	---	Full sun	Densely branched evergreen; Good choice for a staggered-row buffer planting along Kitchawan Road if kept far enough back from the utility wires – specimens currently on the property are growing very well.
Large (60'-80')	Eastern white pine	*Pinus strobus*	---	Full sun	Suitable for evergreen buffer plantings; Do not plant in areas with poorly drained or compacted soils.
Large (40'-60')	Green Giant Arborvitae	*Thuja 'Green Giant'*	---	Full sun to partial shade	Fast growing; Creates dense hedges; Can be sheared or left to grow naturally.

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March 6, 2021

Julia Magliozzo
Director of Operations
Ecogy Energy
315 Flatbush Avenue #393
Brooklyn, NY 11217

Re: 716 Kitchawan Road, Yorktown, NY
Tree Inventory + Evaluation Results

Dear Julia:

As requested, Paul Cowie + Associates (PC+A) inventoried and evaluated the condition of existing trees at Farm on February 24 – 25 and March 3 – 4, 2021.

The goals of this study were to:

1. Identify, measure, and evaluate the current health and structural condition of existing 'Protected Trees' within the designated tree removal areas;
2. Estimate carbon storage and sequestration benefits provided by these inventoried trees;
3. Develop a shortlist of tree species suitable for mitigation plantings based on existing site conditions and species performance.

The data collected and the recommendations made for each inventoried tree are presented in the attached spreadsheet. The following is an explanation of the data parameters included and an overview of our general finding and recommendations.

Tree Included

This tree inventory and evaluation was limited to trees within the proposed tree removal areas, as indicated with hatched lines on the attached aerial image. Shrubs, vines, and other vegetation within these areas were not inventoried and evaluated. No other trees in any other portions of the property, or on adjacent properties, were inventoried and evaluated.

Within the designated tree removal areas, trees were included based on whether they met the definition of a 'Protected Tree,' as per Chapter 270 of the Yorktown Town Code, *Trees*. Specifically, trees rooted on the subject private property were included if they possessed at least one stem measuring at least 8.0-inches in diameter (DBH). 'Street Trees' (defined by Town Code as trees with their base at least 50-percent within the public right-of-way) were included regardless of size.

A temporary aluminum tag hand-embossed with the corresponding tree ID number was attached to each of the trees inventoried. Tag numbers ranged from #1 to #166. Please note that tags #2.1, #2.2, and #139.1 were used for trees that were initially missed and then added on a second pass through to maintain sequence with other tag numbers in the area. Tag #120 was not used.

The approximate location of the tag number series are indicated on the attached aerial image map.

A total of 168 trees were individually inventoried and evaluated. This included 130 trees in the former nursery area near Kitchawan Road and 38 trees in areas scattered elsewhere on the farm.

Tree Species + Exotic Invasive Status

Each tree is identified in the attached data table by both its regionally accepted common name and its botanical name.

The invasive status of each species is indicated based on species index information published by the Lower Hudson Partnership for Regional Invasive Species Management and accessed via https://www.lhprism.org/species-information on February 26, 2021.

Tree Size + Age Classification

The diameter of each inventoried tree was measured with a diameter tape to the nearest one-tenth inch at a point 4.5-feet above ground level (DBH), or at the height indicated when branching or abnormal swellings at 4.5-feet would produce an inaccurate measurement.

In the case of multiple-stem trees, the diameter of each stem was measured and recorded, and the root sum squared of the stems (RSS = SQRT($D1^2$+$D2^2$+$D3^2$…)) was calculated to provide a single-stem equivalence for the purpose of determining critical root zone radii.

Total tree height, crown height, and crown width were measured using a Leica Disto D810 Touch laser distance meter.

- Total tree height was measured to the nearest whole foot from the ground to the highest main body foliage.
- Crown height was measured from the ground to the bottom of main body foliage at the outer edge of the crown and/or lowest scaffold branch (whichever came first); individual low hanging small branches were excluded.
- Crown spread was measured at the widest point of the main body drip line; individual extended small branches were excluded. For asymmetrical crowns, the crown was measured in two opposing directions and the average of the two measurements was recorded.

The age class of each individually inventoried tree was recorded based on apparent age relative to the normal life expectancy of the species. Age was classified as 'Young' if the tree had exhausted up to 20% of the species' typical life expectancy, 'Mature' if it had exhausted 20% to 80% of the species' life expectancy, or 'Over-Mature' if it had exhausted more than 80% of the species' life expectancy.

Critical Root Zone (CRZ)

Critical root zone radius (CRZ) is the ground area around a tree which, if fully protected from soil compaction, grade changes, excavation, and other soil and root-damaging impacts, will ensure that tree health and structural integrity will not be compromised by construction activity. This information is provided to assist designers in locating grading, pavement, underground utilities, and other proposed improvements in a manner that minimizes impacts to any trees that may be retained.

Tree Condition

The condition of each inventoried tree was systematically evaluated and rated with consideration given to both the health and vigor and the structural integrity of the root system, primary stems, scaffold branching, small branches and twigs, and foliage.

A rating of 'Good', 'Fair', or 'Poor' was assigned separately to the health and vigor as well as to the structure and form of each inventoried tree. An 'Overall Condition' rating was then assigned, as follows:

- *Good:* The tree had no more than one or two minor health disorders and/or structural defects and was growing with normal vigor;

- *Fair:* The tree had 2 – 4 minor, or one major, health disorders and/or structural defects, and/or was growing with below-normal vigor or other limitations.
- *Poor:* The tree had several minor, or two or more major, health disorders and/or structural defects, and/or was declining in vigor.
- *Dead:* 75% or more of the crown was dead and any remaining live portions were deteriorating in health.

For the purpose of carbon benefits modeling, health and vigor ratings were converted to corresponding percentages (i.e. Good = 75% - 100%, Fair = 50% - 75%, Poor = 25% - 50%, Dead/Dying = 0% - 25%) and percent crown dieback and percent missing crown were recorded.

Please note that inspection of the inventoried trees was limited to visual observations from the ground and did not include climbing, aerial inspections, subsurface exploration, wood strength testing, or other advanced diagnostic techniques, which may be necessary to fully identify and evaluate the severity of certain health disorders and structural defects. Therefore, certain health disorders and/or structural defects may have not been noted or their extent may not have been fully determined.

Observations

The 'Disorders + Defects, Comments, Additional Recommendations' column contains various comments regarding the nature and severity of disorders and defects noted, particularly where they resulted in reduced condition ratings and/or recommendations for tree removal.

Additionally, this column contains additional treatment recommendations not included in the subsequent recommendation columns.

Maintenance Recommendations

It is PC+A's understanding that all existing trees within the designated areas are proposed for removal. Nevertheless, where appropriate, recommendations for pruning to remove dead, dying, damaged, and/or diseased limbs, pruning to improve branch architecture, cabling to reduce the risk of failure at certain branch defects, or other treatments were made based on conditions observed at the time each tree was evaluated.

This information is provided to further characterize the trees' current condition and provide guidance in the event that decisions are made to preserve any of the trees.

Terminology for various pruning types (e.g. 'Clean Crown', 'Raise Crown', 'Reduce Crown', 'Structural prune', etc.) correspond to ANSI A300 *American National Standard for Tree Care Operations.*

Each recommendation was prioritized based on the severity of potential safety risks first (e.g. large dead trees versus small dead trees, trees containing large dead limbs versus small dead branches, etc.) and addressing tree health and appearance second. The priority of each recommendation was ranked as High ('H'), Medium ('M'), or Low ('L'). These recommendations should be implemented in order of decreasing priority.

Tree Removal Recommendations

Definitive recommendations for tree removal were made for trees that were dead, had substantial dieback and/or limited remaining life expectancy, or possessed severe, irreparable structural defects that pose potential safety risks.

It is PC+A's opinion that those trees for which a specific removal recommendation was made should be removed whether or not the project proceeds. Further, it is PC+A's that those trees satisfy the 'Permit Not Required' exemptions provided in Section 270-5 of the Yorktown Town Code.

At this time, 15 trees are recommended for removal due to their deteriorated and irreparable condition and/or limited remaining life expectancy (trees #21, #28, #34, #43, #53, #97, #101, #127, #150, #151, #152, #153, #155, #156, #157).

Tree Inventory Summary

Count of Protected Trees by Lower Hudson PRISM invasive status and current condition (Viable Trees = trees to be removed for design reasons only; Non-Viable Trees = trees requiring removal regardless of the design because they are dead, dying, diseased, or in an otherwise deteriorated and irreparable health or structural condition and, therefore, exempt from permit requirements.

INVASIVE STATUS	VIABLE TREES TO BE REMOVED	NON-VIABLE TREES REQUIRING REMOVAL DUE TO CONDITION	TOTAL
Invasive	13	7	20
Non-Invasive	140	8	148
TOTAL	**153**	**15**	**168**

Carbon Benefits Estimation via iTree Eco

The *Eco* module of the *iTree* software suite was used to calculate current carbon storage and annual sequestration rates for the inventoried trees.

iTree was developed and is under active review and constant improvement by a consortium of industry organizations and experts led by the U.S. Forest Service. It is widely considered to be the current state of the art and is the most widely used tool for calculating the level and value of a variety of ecosystem services that trees provide in urban and rural settings.

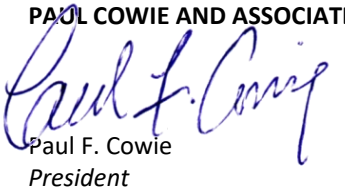
iTree Eco requires specific inputs to run its models. PC+A used the following data derived from the measurements described above to run the carbon models:

- Weather: 2018 weather data from the Westchester County Airport weather station in White Plains, NY.
- Species
- DBH: Diameter at breast height (4.5-feet above the ground), or the single-stem equivalent for multi-stem trees.
- Total Tree Height
- Crown Height
- Crown Width
- Crown Condition
- Crown Dieback / Missing Crown

The carbon storage and carbon sequestration models were run twice – once with the full dataset including all of the inventoried trees, and once with the invasive species and trees recommended for removal omitted. Reports produced by *iTree Eco* for the two datasets are attached.

Please do not hesitate to contact me if you have any questions or require any additional information.

Sincerely,
PAUL COWIE AND ASSOCIATES



Paul F. Cowie
President

PFC:pc
Encl.

INSERT SITE PLAN

#	SITE TYPE (SIZE)	SPECIES	LOWER HUDSON PRISM TIER 1-4 INVASIVE SPECIES	DIAMETER (in) (dead stems)	SINGLE-STEM EQUIVELENT (RSS)	TREE HEIGHT (ft)	CROWN HEIGHT (ft)	CROWN WIDTH (ft)	AGE CLASS	CRZ (ft radius)	HEALTH + VIGOR (%)	STRUCTURE + FORM	DIEBACK / MISSING CROWN (%)	OVERALL CONDITION	DISORDERS + DEFECTS, COMMENTS, ADDITIONAL RECOMMENDATIONS	CLEAN CROWN	RAISE CROWN	REDUCE CROWN	STRUCTURAL PRUNE	CABLE	CLEAR VINES	INSPECT	REMOVE (CONDITION)
1	Former tree nursery	Sugar maple *Acer saccharum*	---	16.9	16.9	67	25	35	Mature	21.1	80	Fair	5	Fair	Fence embedded in lower trunk (severe).	M							
2	Former tree nursery	Sugar maple *Acer saccharum*	---	12.8	12.8	75	30	32	Mature	16.0	85	Fair	10	Fair	---								
2.1	Former tree nursery	Sugar maple *Acer saccharum*	---	10.7	10.7	79	31	19	Young	10.7	85	Fair	10	Fair	---	M							
2.2	Former tree nursery	Sugar maple *Acer saccharum*	---	10.7	10.7	53	13	31	Young	10.7	60	Fair	10	Fair	---								
3	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	13.0	13.0	81	57	18	Mature	13.0	65	Fair	10	Fair	---	M							
4	Former tree nursery	Sugar maple *Acer saccharum*	---	9.4	9.4	72	33	20	Young	9.4	80	Fair	15	Fair	Fence embedded in lower trunk (severe).								
5	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	13.0	13.0	67	42	20	Mature	13.0	85	Fair	10	Good	---	M							
6	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	12.1	12.1	78	54	16	Mature	12.1	60	Fair	10	Fair	---	M							
7	Former tree nursery	Sugar maple *Acer saccharum*	---	8.0, 6.2	10.2	55	22	27	Young	10.2	85	Fair	10	Fair	---								
8	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	19.8	19.8	94	33	43	Mature	19.8	65	Good	10	Fair	---	H							
9	Former tree nursery	Sugar maple *Acer saccharum*	---	8.5	8.5	49	11	27	Young	8.5	85	Good	0	Good	---								
10	Former tree nursery	Black locust *Robinia pseudoacacia*	Tier 4	10.9, 7.8	13.4	72	37	24	Mature	10.1	60	Fair	15	Fair	Fence embedded in lower trunk (severe).	H							
11	Former tree nursery	Star magnolia *Magnolia stellata* or similar	---	8.0, 6.0, 4.2	10.9	26	7	28	Mature	13.6	85	Fair	10	Good	---								
12	Former tree nursery	Black birch *Betula lenta*	---	13.5	13.5	61	16	37	Mature	13.5	85	Fair	10	Fair	---	M							
13	Former tree nursery	Black locust *Robinia pseudoacacia*	Tier 4	8.4	8.4	64	27	23	Young	4.2	85	Fair	10	Fair	---								
14	Former tree nursery	Star magnolia *Magnolia stellata* or similar	---	9.0, 7.2, 7.1, 4.1	14.1	24	8	35	Mature	17.7	80	Fair	10	Fair	Decay in 9" trunk (severe).				M				
15	Former tree nursery	Red maple *Acer rubrum*	---	12.0	12.0	55	11	24	Mature	12.0	85	Fair	10	Good	---								
16	Former tree nursery	Star magnolia *Magnolia stellata* or similar	---	8.2, 7.2, 5.8	12.4	32	7	28	Mature	15.5	85	Good	10	Good	---								
17	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	10.2	10.2	51	31	15	Young	7.7	60	Poor	20	Fair	Suppressed by adjacent trees (moderate).								
18	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	16.2	16.2	81	39	22	Mature	16.2	85	Fair	10	Good	---								
19	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	8.5	8.5	61	30	8	Young	6.4	40	Fair	20	Poor	Suppressed by adjacent trees (moderately severe).								
20	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	18.0	18.0	82	40	23	Mature	18.0	85	Fair	10	Fair	---	M							

#	SITE TYPE (SIZE)	SPECIES	LOWER HUDSON PRISM TIER 1-4 INVASIVE SPECIES	DIAMETER (in) (dead stems)	SINGLE-STEM EQUIVELENT (RSS)	TREE HEIGHT (ft)	CROWN HEIGHT (ft)	CROWN WIDTH (ft)	AGE CLASS	CRZ (ft radius)	HEALTH + VIGOR (%)	STRUCTURE + FORM	DIEBACK / MISSING CROWN (%)	OVERALL CONDITION	DISORDERS + DEFECTS, COMMENTS, ADDITIONAL RECOMMENDATIONS	CLEAN CROWN	RAISE CROWN	REDUCE CROWN	STRUCTURAL PRUNE	CABLE	CLEAR VINES	INSPECT	REMOVE (CONDITION)
21	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	12.7	12.7	68	43	18	Mature	12.7	60	Poor	10	Poor	Decay and crack in lower trunk (moderately severe).								H
22	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	12.3	12.3	80	47	19	Mature	12.3	60	Fair	10	Fair	---	M							
23	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	11.4	11.4	76	56	9	Mature	11.4	30	Fair	10	Poor	Dieback in scaffold limbs (moderate). Limited remaining life expectancy.	H							
24	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	12.4	12.4	80	65	12	Mature	12.4	60	Fair	10	Fair	---	M							
25	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	10.1	10.1	80	53	13	Mature	10.1	60	Fair	10	Fair	---	M							
26	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	9.6	9.6	82	56	12	Young	7.2	60	Fair	10	Fair	---								
27	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	11.5	11.5	74	50	12	Mature	11.5	60	Fair	10	Fair	---	H							
28	Former tree nursery	Sugar maple *Acer saccharum*	---	16.5	16.5	95	34	36	Mature	20.6	85	Poor	40	Poor	Split in main trunk (severe).								H
29	Former tree nursery	Sugar maple *Acer saccharum*	---	10.1	10.1	83	37	22	Young	10.1	85	Fair	10	Good	---								
30	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	13.3	13.3	84	57	20	Mature	13.3	60	Fair	10	Fair	---	H							
31	Former tree nursery	Sugar maple *Acer saccharum*	---	8.0	8.0	66	32	20	Young	8.0	60	Fair	10	Fair	---								
32	Former tree nursery	Sugar maple *Acer saccharum*	---	15.9	15.9	90	27	37	Mature	19.9	85	Fair	10	Fair	---	M							
33	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	14.7	14.7	85	53	21	Mature	14.7	85	Fair	10	Fair	---	M							
34	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	16.3	16.3	74	51	22	Mature	16.3	55	Poor	10	Poor	Decay in lower trunk and buttress roots (severe).								H
35	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	9.0	9.0	66	47	12	Mature	9.0	30	Fair	20	Poor	Dieback in upper trunk (moderate). Suppressed by adjacent trees (moderately severe). Limited remaining life expectancy.								
36	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	13.0	13.0	81	45	19	Mature	13.0	85	Fair	10	Good	---								
37	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	10.3	10.3	84	63	8	Mature	10.3	50	Poor	10	Fair	---	M							
38	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	11.5 (6.7)	11.5	82	60	17	Mature	11.5	60	Fair	10	Fair	---	H							
39	Former tree nursery	Sugar maple *Acer saccharum*	---	13.5	13.5	80	42	22	Mature	16.9	60	Poor	50	Fair	Storm damage to main scaffold limbs (moderately severe).	M							
40	Former tree nursery	Sugar maple *Acer saccharum*	---	12.8	12.8	92	32	32	Mature	16.0	85	Fair	10	Fair	---	M							
41	Former tree nursery	Sugar maple *Acer saccharum*	---	20.1	20.1	88	12	55	Mature	25.1	65	Fair	25	Fair	Split wound in 1 upper trunk (severe).	M							
42	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	10.4	10.4	72	48	12	Mature	10.4	60	Fair	10	Fair	---	M							
43	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	12.3	12.3	57	45	15	Mature	12.3	60	Poor	10	Poor	Decay in lower trunk and root collar (severe).								H

#	SITE TYPE (SIZE)	SPECIES	LOWER HUDSON PRISM TIER 1-4 INVASIVE SPECIES	DIAMETER (in) (dead stems)	SINGLE-STEM EQUIVELENT (RSS)	TREE HEIGHT (ft)	CROWN HEIGHT (ft)	CROWN WIDTH (ft)	AGE CLASS	CRZ (ft radius)	HEALTH + VIGOR (%)	STRUCTURE + FORM	DIEBACK / MISSING CROWN (%)	OVERALL CONDITION	DISORDERS + DEFECTS, COMMENTS, ADDITIONAL RECOMMENDATIONS	CLEAN CROWN	RAISE CROWN	REDUCE CROWN	STRUCTURAL PRUNE	CABLE	CLEAR VINES	INSPECT	REMOVE (CONDITION)
44	Former tree nursery	Northern red oak *Quercus rubra*	---	15.8	15.8	54	12	38	Mature	15.8	85	Good	0	Good	---	M							
45	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	11.3, 7.4	13.5	58	25	22	Mature	13.5	85	Fair	10	Good	---	M							
46	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	13.8, 10.9, 9.4	19.9	71	34	27	Mature	19.9	85	Fair	10	Fair	---	M							
47	Former tree nursery	Tulip *Liriodendron tulipifera*	---	14.8	14.8	67	27	28	Mature	14.8	85	Fair	0	Good	---								
48	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	8.3, 6.6	14.2	54	19	15	Young	10.6	55	Fair	10	Fair	Vine competition (moderately severe).	M							
49	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	15.5	15.5	72	37	25	Mature	15.5	85	Fair	10	Fair	---	M							
50	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	10.4	10.4	66	38	22	Mature	10.4	85	Fair	0	Good	---								
51	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	17.5	17.5	77	38	28	Mature	17.5	85	Good	5	Good	---	H							
52	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	14.7	14.7	75	38	24	Mature	14.7	60	Fair	10	Fair	---	M							
53	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	9.2	9.2	52	39	9	Mature	9.2	20	Poor	60	Poor	Decay in lower trunk (moderately severe). Dieback in scaffold limbs (severe). Limited remaining life expectancy.								M
54	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	12.1, 12.1	17.1	70	40	25	Mature	17.1	85	Fair	10	Fair	---	M							
55	Former tree nursery	Carolina silverbell *Halesia carolina*	---	12.1 @ 3.5'	12.1	57	19	30	Mature	12.1	85	Fair	10	Fair	---				M				
56	Former tree nursery	Black cherry *Prunus serotina*	---	10.0	10.0	52	15	31	Young	7.5	85	Fair	10	Fair	---								
57	Former tree nursery	Carolina silverbell *Halesia carolina*	---	14.2	14.2	59	28	28	Mature	14.2	60	Good	0	Fair	---	M							
58	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	8.7, 7.0	11.2	65	40	15	Young	8.4	60	Fair	10	Fair	---	M							
59	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	13.8	13.8	77	31	25	Mature	13.8	85	Good	0	Good	---								
60	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	13.4	13.4	72	36	27	Mature	13.4	85	Fair	10	Good	---	M							
61	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	11.4, 11.1	15.9	69	35	21	Mature	15.9	85	Fair	10	Fair	---	M							
62	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	12.4, 11.2	16.71	65	31	26	Mature	16.7	75	Fair	15	Fair	1 weak crotch in lower trunk (moderately severe). Vine competition (moderately severe).	M							
63	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	14.3	14.3	57	33	20	Mature	14.3	75	Good	15	Good	Vine competition (moderately severe).	M							
64	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	16.3	16.3	69	36	22	Mature	16.3	75	Fair	15	Good	Vine competition (moderately severe).	M							
65	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	10.5	10.5	43	27	17	Mature	10.5	55	Fair	15	Fair	Vine competition (moderately severe).	M							
66	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	10.1, 10.0	14.2	61	23	22	Mature	14.2	85	Fair	10	Good	---	M							

#	SITE TYPE (SIZE)	SPECIES	LOWER HUDSON PRISM TIER 1-4 INVASIVE SPECIES	DIAMETER (in) (dead stems)	SINGLE-STEM EQUIVELENT (RSS)	TREE HEIGHT (ft)	CROWN HEIGHT (ft)	CROWN WIDTH (ft)	AGE CLASS	CRZ (ft radius)	HEALTH + VIGOR (%)	STRUCTURE + FORM	DIEBACK / MISSING CROWN (%)	OVERALL CONDITION	DISORDERS + DEFECTS, COMMENTS, ADDITIONAL RECOMMENDATIONS	CLEAN CROWN	RAISE CROWN	REDUCE CROWN	STRUCTURAL PRUNE	CABLE	CLEAR VINES	INSPECT	REMOVE (CONDITION)
67	Former tree nursery	Carolina silverbell *Halesia carolina*	---	19.5	19.5	80	34	39	Mature	19.5	85	Fair	10	Fair	---				M				
68	Former tree nursery	Carolina silverbell *Halesia carolina*	---	8.5	8.5	46	15	25	Mature	8.5	85	Fair	10	Fair	---								
69	Former tree nursery	Black cherry *Prunus serotina*	---	10.9	10.9	59	30	28	Young	8.2	85	Fair	10	Fair	---								
70	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	19.0, 11.6, 10.8	24.7	70	27	42	Mature	24.7	85	Fair	10	Good	---	M							
71	Former tree nursery	Black cherry *Prunus serotina*	---	11.7, 8.3, 5.2	15.3	71	27	31	Mature	15.3	85	Fair	10	Good	---	M							
72	Former tree nursery	Black cherry *Prunus serotina*	---	10.0, 9.0, 6.6	15.0	57	23	31	Mature	15.0	75	Fair	15	Fair	Vine competition (moderately severe).	M							
73	Former tree nursery	Tulip *Liriodendron tulipifera*	---	9.8	9.8	37	9	20	Young	7.4	85	Good	0	Good	---								
74	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	10.3, 10.0, 9.2	17.1	53	29	22	Mature	17.1	55	Fair	15	Fair	Vine competition (moderately severe).	M							
75	Former tree nursery	Sugar maple *Acer saccharum*	---	8.0	8.0	41	12	25	Young	8	85	Good	10	Good	---								
76	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	15.4, 14.5, 13.0	24.83	75	29	35	Mature	24.8	85	Fair	10	Fair	---	M							
77	Former tree nursery	Carolina silverbell *Halesia carolina*	---	11.5, 10.0, 8.5	17.5	65	38	29	Mature	17.5	65	Fair	10	Fair	---	M							
78	Former tree nursery	Amur cork tree *Phellodendron amurense*	Tier 2	8.4	8.4	44	18	26	Young	8.4	85	Fair	10	Fair	---	M							
79	Former tree nursery	Yulan magnolia *Magnolia denudata* or similar	---	9.9, 8.9, 8.9	16.0	55	27	32	Mature	20.0	85	Fair	10	Good	---								
80	Former tree nursery	Carolina silverbell *Halesia carolina*	---	16.3, 11.3	19.8	70	22	30	Mature	19.8	65	Fair	10	Fair	---	M							
81	Former tree nursery	Carolina silverbell *Halesia carolina*	---	13.0	13.0	79	28	20	Mature	13.0	60	Fair	10	Fair	---	M							
82	Former tree nursery	Carolina silverbell *Halesia carolina*	---	12.2, 5.9	13.6	72	26	25	Mature	13.6	65	Fair	10	Fair	---	M							
83	Former tree nursery	Carolina silverbell *Halesia carolina*	---	15.1	15.1	83	36	31	Mature	15.1	85	Fair	10	Fair	---	M							
84	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	10.8	10.8	61	22	20	Mature	10.8	60	Good	10	Fair	---	M							
85	Former tree nursery	Black oak *Quercus velutina*	---	14.5	14.5	80	31	30	Mature	14.5	85	Good	5	Good	---	H							
86	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	10.5, 5.5	11.85	63	34	18	Mature	11.85	85	Fair	10	Good	---								
87	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	13.3	13.3	64	35	19	Mature	13.3	60	Fair	15	Fair	Vine competition (moderate).	M							
88	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	12.6	12.6	63	26	18	Mature	12.6	85	Good	10	Good	---	M							
89	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	11.5	11.5	56	24	22	Mature	11.5	85	Good	10	Good	---								

#	SITE TYPE (SIZE)	SPECIES	LOWER HUDSON PRISM TIER 1-4 INVASIVE SPECIES	DIAMETER (in) (dead stems)	SINGLE-STEM EQUIVELENT (RSS)	TREE HEIGHT (ft)	CROWN HEIGHT (ft)	CROWN WIDTH (ft)	AGE CLASS	CRZ (ft radius)	HEALTH + VIGOR (%)	STRUCTURE + FORM	DIEBACK / MISSING CROWN (%)	OVERALL CONDITION	DISORDERS + DEFECTS, COMMENTS, ADDITIONAL RECOMMENDATIONS	CLEAN CROWN	RAISE CROWN	REDUCE CROWN	STRUCTURAL PRUNE	CABLE	CLEAR VINES	INSPECT	REMOVE (CONDITION)
90	Former tree nursery	Black cherry *Prunus serotina*	---	13.2, 12.9, 10.4	21.2	73	30	34	Mature	21.2	75	Fair	15	Fair	Vine competition (moderately severe).	H							
91	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	8.2, 7.5, 4.6, 4.0	12.7	47	29	21	Young	9.5	80	Fair	15	Fair	Vine competition (moderate).	M							
92	Former tree nursery	Yulan magnolia *Magnolia denudata* or similar	---	8.0, 7.0	10.6	26	13	23	Mature	13.3	85	Fair	10	Good	---	M							
93	Former tree nursery	Black cherry *Prunus serotina*	---	8.3	8.3	39	11	18	Young	6.2	85	Poor	10	Poor	Lean in main trunk (severe).								
94	Former tree nursery	Tulip *Liriodendron tulipifera*	---	8.0	8.0	48	23	19	Young	6.0	85	Good	0	Good	---								
95	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	12.4	12.4	58	20	25	Mature	12.4	85	Good	10	Good	---	M							
96	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	10.1	10.1	44	23	16	Young	7.6	80	Good	15	Good	Vine competition (moderate).	M							
97	Former tree nursery	Yulan magnolia *Magnolia denudata* or similar	---	8.1	8.1	35	23	15	Mature	10.1	20	Fair	25	Poor	Bark dieback on main trunk (moderately severe). Vine competition (severe). Limited remaining life expectancy.								M
98	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	14.0	14.0	66	15	23	Mature	14.0	85	Good	10	Good	---	M							
99	Former tree nursery	Quaking aspen *Populus tremuloides*	---	8.1, 5.7	9.9	53	24	24	Young	7.4	85	Fair	10	Good	---								
100	Former tree nursery	Carolina silverbell *Halesia carolina*	---	15.3	15.3	78	38	32	Mature	15.3	85	Good	10	Good	---	M							
101	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	12.8, 4.3	13.5	58	23	19	Mature	13.5	40	Poor	20	Poor	Decay in lower trunk and buttress roots (moderately severe). Apparent root disease infection (moderately severe).								H
102	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	8.7, 4.7	9.9	52	12	16	Young	7.4	85	Fair	10	Good	---								
103	Former tree nursery	Carolina silverbell *Halesia carolina*	---	12.5, 9.0, 8.7, 8.5, 5.7	20.4	65	23	35	Mature	20.4	75	Fair	15	Fair	Vine competition (moderately severe).	M							
104	Former tree nursery	Carolina silverbell *Halesia carolina*	---	10.8, 7.8	13.3	69	41	20	Mature	13.3	85	Fair	10	Fair	---								
105	Former tree nursery	Carolina silverbell *Halesia carolina*	---	14.5	14.5	72	36	29	Mature	14.5	85	Good	10	Good	---	M							
106	Former tree nursery	Carolina silverbell *Halesia carolina*	---	9.0, 6.4	11.04	45	35	12	Mature	11.04	40	Poor	80	Poor	Dieback in 1 upper trunk (severe). Vine competiton (severe).	M							
107	Former tree nursery	Carolina silverbell *Halesia carolina*	---	8.8, 3.5	9.5	71	46	10	Mature	9.5	60	Fair	10	Fair	---								
108	Former tree nursery	Carolina silverbell *Halesia carolina*	---	12.6	12.6	56	16	28	Mature	12.6	85	Fair	10	Fair	---								
109	Former tree nursery	Carolina silverbell *Halesia carolina*	---	10.6, 8.3	13.5	66	41	25	Mature	13.5	85	Fair	10	Fair	---								
110	Former tree nursery	Carolina silverbell *Halesia carolina*	---	13.3, 4.5	14.0	70	35	32	Mature	14.0	85	Fair	10	Fair	---	M							
111	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	11.8, 9.6	15.2	63	33	19	Mature	15.2	55	Fair	15	Fair	Vine competition (moderately severe).	M							

#	SITE TYPE (SIZE)	SPECIES	LOWER HUDSON PRISM TIER 1-4 INVASIVE SPECIES	DIAMETER (in) (dead stems)	SINGLE-STEM EQUIVELENT (RSS)	TREE HEIGHT (ft)	CROWN HEIGHT (ft)	CROWN WIDTH (ft)	AGE CLASS	CRZ (ft radius)	HEALTH + VIGOR (%)	STRUCTURE + FORM	DIEBACK / MISSING CROWN (%)	OVERALL CONDITION	DISORDERS + DEFECTS, COMMENTS, ADDITIONAL RECOMMENDATIONS	CLEAN CROWN	RAISE CROWN	REDUCE CROWN	STRUCTURAL PRUNE	CABLE	CLEAR VINES	INSPECT	REMOVE (CONDITION)
112	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	13.0, 11.8, 4.1, 3.4	18.4	63	31	33	Mature	18.4	60	Fair	10	Fair	Decay in 1 lower trunk (moderate).	M							
113	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	8.0	8.0	48	34	9	Young	6.0	85	Fair	10	Good	---								
114	Former tree nursery	Black oak *Quercus velutina*	---	10.0	10.0	60	14	19	Young	7.5	85	Good	10	Good	---								
115	Former tree nursery	Amur cork tree *Phellodendron amurense*	Tier 2	8.0	8.0	55	19	23	Young	8.0	85	Good	10	Good	---								
116	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	9.4, 8.2	12.5	49	23	21	Mature	12.5	60	Fair	15	Fair	Vine competition (moderate).	M							
117	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	9.6, 8.5	12.8	49	26	18	Mature	12.8	85	Fair	10	Fair	---	M							
118	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	17.4, 16.6	24.1	62	26	32	Mature	24.1	55	Poor	10	Poor	Decay in lower trunk and buttress roots (moderately severe).	H							
119	Former tree nursery	American linden *Tilia americana*	---	16.9	16.9	76	36	33	Mature	21.1	50	Good	15	Fair	Vine competition (severe).	H							
120	---	*(Tag #120 not used)*	---	---	---	---	---	---	---	---	---	---	---	---	---								
121	Former tree nursery	Carolina silverbell *Halesia carolina*	---	10.3	10.3	64	34	19	Mature	10.3	55	Fair	10	Fair	Vine competition (moderately severe).								
122	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	13.6	13.6	62	33	13	Mature	13.6	55	Good	15	Fair	Vine competition (moderately severe).								
123	Former tree nursery	Carolina silverbell *Halesia carolina*	---	15.6	15.6	64	23	27	Mature	15.6	85	Good	10	Good	---								
124	Former tree nursery	Carolina silverbell *Halesia carolina*	---	13.0, 12.3	17.9	68	27	31	Mature	17.9	80	Fair	10	Fair	Vine competition (moderate).	M							
125	Former tree nursery	Northern catalpa *Catalpa speciosa*	---	13.0	13.0	53	18	28	Mature	9.8	85	Good	0	Good	---	M							
126	Former tree nursery	Cucumber magnolia *Magnolia acuminata*	---	15.9, 13.9	21.1	59	14	37	Mature	21.1	85	Fair	10	Good	---	M							
127	Former tree nursery	Star magnolia *Magnolia stellata* or similar	---	8.5	8.5	31	5	24	Mature	10.6	50	Poor	15	Poor	Decay in lower trunk and buttress roots (severe). Lean in main trunk (moderate). Partially uprooted.								M
128	Former tree nursery	Black oak *Quercus velutina*	---	17.9	17.9	64	11	32	Mature	17.9	85	Fair	10	Good	---	M							
129	Former tree nursery	Pin oak *Quercus palustris*	---	22.4	22.4	69	12	41	Mature	22.4	85	Good	10	Good	---								
130	Lawn	Katsura tree *Cercidiphyllum japonicum*	---	16.3 @ 1.5'	16.3	43	6	31	Mature	20.4	85	Fair	0	Good	---				L				
131	Lawn	Katsura tree *Cercidiphyllum japonicum*	---	11.9 @ 1.5'	11.9	36	6	22	Mature	14.9	60	Fair	0	Fair	---				L				
132	Lawn	Katsura tree *Cercidiphyllum japonicum*	---	14.1 @ 1.5'	14.1	43	7	25	Mature	17.6	85	Fair	0	Good	---				L				
133	Lawn	Katsura tree *Cercidiphyllum japonicum*	---	13.5 @ 1.5'	13.5	43	6	28	Mature	16.9	85	Fair	0	Good	---				L				

#	SITE TYPE (SIZE)	SPECIES	LOWER HUDSON PRISM TIER 1-4 INVASIVE SPECIES	DIAMETER (in) (dead stems)	SINGLE-STEM EQUIVELENT (RSS)	TREE HEIGHT (ft)	CROWN HEIGHT (ft)	CROWN WIDTH (ft)	AGE CLASS	CRZ (ft radius)	HEALTH + VIGOR (%)	STRUCTURE + FORM	DIEBACK / MISSING CROWN (%)	OVERALL CONDITION	DISORDERS + DEFECTS, COMMENTS, ADDITIONAL RECOMMENDATIONS	CLEAN CROWN	RAISE CROWN	REDUCE CROWN	STRUCTURAL PRUNE	CABLE	CLEAR VINES	INSPECT	REMOVE (CONDITION)
134	Lawn	Kwanzan cherry *Prunus serrulata* 'Kwanzan'	---	14.8, 13.0, 13.0	23.6	29	5	36	Mature	29.5	85	Fair	0	Good	---	H							
135	Lawn	Crabapple *Malus spp.*	---	15.3	15.3	32	5	32	Mature	15.3	85	Good	15	Good	---				L				
136	Lawn	Crabapple *Malus spp.*	---	11.8, 9.2	15.0	31	8	29	Mature	15.0	60	Fair	30	Fair	Lean in lower trunk (severe). Vine competition (moderately severe).				L				
137	Lawn	Hawthorn *Crataegus spp.*	---	11.3	11.3	27	8	22	Mature	8.5	40	Fair	50	Poor	1 split wound in main trunk (moderately severe). Branch dieback in portions of crown (moderate).				L				
138	Farm field	River birch *Betula nigra*	---	13.9	13.9	43	7	34	Mature	13.9	85	Good	0	Good	---								
139	Farm field	Carolina silverbell *Halesia carolina*	---	8.0	8.0	28	6	20	Young	6.0	85	Good	10	Good	---								
139.1	Landscape	Sweetgum *Liquidambar styraciflua*	---	18.3	18.3	38	6	39	Mature	18.3	85	Good	0	Good	---	M							
140	Lawn	White mulberry *Morus alba*	Tier 4	17.0, 15.0	22.7	40	10	44	Mature	22.7	85	Fair	10	Fair	---	M							
141	Landscape	Black oak *Quercus velutina*	---	18.5	18.5	53	10	43	Mature	18.5	85	Fair	10	Fair	---				M				
142	Landscape	Sassafras *Sassafras albidum*	---	10.9	10.9	33	15	21	Young	5.5	55	Fair	45	Fair	Suppressed by adjacent trees (moderate).								
143	Landscape	Sassafras *Sassafras albidum*	---	10.1	10.1	32	11	24	Young	5.1	50	Poor	50	Fair	Suppressed by adjacent trees (moderately severe).								
144	Landscape	Black cherry *Prunus serotina*	---	17.9	17.9	57	17	40	Mature	17.9	60	Fair	20	Fair	---	H							
145	Landscape	Black cherry *Prunus serotina*	---	12.5	12.5	42	28	30	Mature	12.5	85	Fair	15	Good	---								
146	Landscape	Black locust *Robinia pseudoacacia*	Tier 4	16.2, 14.5	21.7	81	22	36	Mature	16.3	60	Fair	20	Fair	---	H							
147	Landscape	Black locust *Robinia pseudoacacia*	Tier 4	11.5	11.5	77	21	26	Mature	8.6	60	Fair	20	Fair	---	M							
148	Landscape	Black locust *Robinia pseudoacacia*	Tier 4	11.7	11.7	75	37	21	Mature	8.8	60	Fair	20	Fair	---								
149	Landscape	Black locust *Robinia pseudoacacia*	Tier 4	12.6	12.6	80	29	19	Mature	9.5	60	Fair	20	Fair	---	M							
150	Landscape	Black locust *Robinia pseudoacacia*	Tier 4	41.1 @ 3.5'	41.1	94	10	31	Over-mature	41.1	30	Poor	40	Poor	Decay in lower trunk (severe). Decay in multiple areas of upper trunks (moderate to moderately severe). Multiple splits and crack in main trunks. Dieback in 1 upper trunks and scaffold limbs (moderate).								H
151	Landscape	Black locust *Robinia pseudoacacia*	Tier 4	35.8	35.8	95	24	52	Over-mature	35.8	30	Poor	40	Poor	Decay in lower trunk (severe). Split between 2 main upper trunks (severe). Decay in multiple areas of upper trunks (moderate to moderately severe). Dieback in small branches and twigs (moderate).								H

#	SITE TYPE (SIZE)	SPECIES	LOWER HUDSON PRISM TIER 1-4 INVASIVE SPECIES	DIAMETER (in) (dead stems)	SINGLE-STEM EQUIVELENT (RSS)	TREE HEIGHT (ft)	CROWN HEIGHT (ft)	CROWN WIDTH (ft)	AGE CLASS	CRZ (ft radius)	HEALTH + VIGOR (%)	STRUCTURE + FORM	DIEBACK / MISSING CROWN (%)	OVERALL CONDITION	DISORDERS + DEFECTS, COMMENTS, ADDITIONAL RECOMMENDATIONS	CLEAN CROWN	RAISE CROWN	REDUCE CROWN	STRUCTURAL PRUNE	CABLE	CLEAR VINES	INSPECT	REMOVE (CONDITION)
152	Landscape	Black locust *Robinia pseudoacacia*	Tier 4	37.6	37.6	97	16	33	Over-mature	37.6	40	Poor	40	Poor	Decay in lower trunk (severe). Decay in multiple areas of upper trunks (moderate to moderately severe). Multiple splits and crack in main trunks. Split wounds in upper trunks from prior limb failures (severe).								H
153	Landscape	Black locust *Robinia pseudoacacia*	Tier 4	21.6	21.6	92	60	29	Mature	16.2	30	Poor	40	Poor	Decay in lower trunk (moderate). Decay in 1 main upper trunk (severe). Dieback in scaffold limbs (moderate).								H
154	Landscape	Black cherry *Prunus serotina*	---	12.7, 12.4	17.8	47	16	34	Mature	17.8	55	Poor	40	Fair	1 main upper trunk split off.	M							
155	Landscape	Black locust *Robinia pseudoacacia*	Tier 4	16.5	16.5	89	59	27	Mature	12.4	40	Poor	30	Poor	Decay in main trunk (moderately severe). Dieback in small branches and twigs (moderate).								M
156	Landscape	Black locust *Robinia pseudoacacia*	Tier 4	15.4	15.4	34	30	6	Mature	11.6	20	Poor	80	Poor	Decay in main trunk (severe). Upper trunk split off at approximately 34'. Very few remaining live branches.								H
157	Landscape	Black locust *Robinia pseudoacacia*	Tier 4	12.8	12.8	50	40	5	Mature	9.6	20	Poor	80	Poor	Upper trunk split off at approximately 50'. Bark dieback on main trunk (severe). Very few remaining live branches.								H
158	Landscape	Black locust *Robinia pseudoacacia*	Tier 4	25.4 (11.9)	25.4	92	10	40	Mature	19.1	60	Fair	30	Fair	Decay in scaffold limbs (moderate to moderately severe).	H							
159	Farm field	Gray willow *Salix atrocinerea*	Tier 2	8.5, 8.0, 7.7, 6.2, 5.4, 5.1	17.0	25	8	30	Over-mature	17.0	55	Poor	10	Poor	Tree partially uprooted in past (severe). Multiple cracks in main stems.	M							
160	Farm field	Eastern cottonwood *Populus deltoides*	---	9.4	9.4	37	6	20	Young	7.1	85	Good	0	Good	---								
161	Farm field	Red maple *Acer rubrum*	---	22.5	22.5	44	7	45	Mature	22.5	60	Fair	15	Fair	---	M							
162	Farm field	Red maple *Acer rubrum*	---	24.7 @ 3.0'	24.7	40	11	42	Mature	24.7	70	Fair	15	Fair	---	M							
163	Farm field	Red maple *Acer rubrum*	---	21.7, 20.7	30.0	59	12	60	Mature	30.0	85	Fair	15	Fair	---	M							
164	Farm field	Amur cork tree *Phellodendron amurense*	Tier 2	8.6	8.6	10	5	18	Young	8.6	85	Fair	30	Fair	---								
165	Farm field	Amur cork tree *Phellodendron amurense*	Tier 2	12.5, 10.2	16.1	31	10	4	Mature	20.2	85	Fair	20	Good	---	M							
166	Farm field	Eastern redcedar *Juniperus virginiana*	---	17.5	17.5	44	9	27	Mature	13.1	60	Good	20	Fair	---	M							

All Inventoried Trees

Carbon Storage of Trees by Species

Location: Yorktown, Westchester, New York, United States of America
Project: Kitchawan Farm, Series: 1, Year: 2021
Generated: 3/6/2021

Species	Carbon Storage (ton)	Carbon Storage (%)	CO_2 Equivalent (ton)
Red maple	6.4	6.9%	23.5
Sugar maple	6.2	6.7%	22.7
Black birch	0.4	0.5%	1.6
River birch	0.4	0.4%	1.5
Northern catalpa	0.2	0.2%	0.7
Katsura tree	0.9	0.9%	3.1
hawthorn spp	0.2	0.3%	0.9
silverbell spp	12.8	13.7%	46.9
Eastern red cedar	0.6	0.7%	2.3
sweetgum spp	0.9	1.0%	3.5
Tulip tree	0.6	0.7%	2.3
magnolia spp	1.0	1.1%	3.7
Cucumber tree	27.9	29.9%	102.3
Star magnolia	1.2	1.3%	4.5
Crabapple 'Sugar Tyme'	1.1	1.2%	4.2
White mulberry	0.9	0.9%	3.1
Amur corktree	0.7	0.8%	2.7
Eastern cottonwood	0.1	0.2%	0.5
Quaking aspen	0.1	0.1%	0.5
Black cherry	5.1	5.5%	18.7
Kwanzan cherry	2.2	2.3%	8.0
Pin oak	1.1	1.2%	4.1
Northern red oak	0.6	0.6%	2.1
Black oak	3.0	3.2%	11.1
Black locust	16.0	17.2%	58.8
Sassafras	0.5	0.6%	1.9
Pussy willow	1.4	1.5%	5.3
American basswood	0.4	0.4%	1.4
Total	**93.3**	**100%**	**342.0**

Due to limits of available models, i-Tree Eco will limit carbon storage to a maximum of 7,500 kg (16,534.7 lbs) and not estimate additional storage for any tree beyond a diameter of 254 cm (100 in). Whichever limit results in lower carbon storage is used.

All Inventoried Trees

Annual Carbon Sequestration of Trees by Species

Location: Yorktown, Westchester, New York, United States of America
Project: Kitchawan Farm, Series: 1, Year: 2021
Generated: 3/6/2021

Species	Gross Carbon Sequestration (ton/yr)	CO_2 Equivalent (ton/yr)
Red maple	0.11	0.39
Sugar maple	0.09	0.33
Black birch	0.01	0.02
River birch	0.02	0.06
Northern catalpa	0.01	0.02
Katsura tree	0.01	0.05
hawthorn spp	0.00	0.01
silverbell spp	0.01	0.04
Eastern red cedar	0.00	0.02
sweetgum spp	0.02	0.07
Tulip tree	0.03	0.10
magnolia spp	0.01	0.04
Cucumber tree	0.55	2.02
Star magnolia	0.00	0.00
Crabapple 'Sugar Tyme'	0.00	0.00
White mulberry	0.01	0.05
Amur corktree	0.02	0.08
Eastern cottonwood	0.01	0.03
Quaking aspen	0.01	0.02
Black cherry	0.13	0.48
Kwanzan cherry	0.02	0.08
Pin oak	0.01	0.04
Northern red oak	0.01	0.05
Black oak	0.06	0.23
Black locust	0.01	0.04
Sassafras	0.01	0.04
Pussy willow	0.00	0.00
American basswood	0.01	0.02
Total	**1.19**	**4.35**

Carbon Storage of Trees by Species

Location: Yorktown, Westchester, New York, United States of America
Project: Kitchawan Farm, Series: Removals + Invasives Omitted, Year: 2021
Generated: 3/6/2021

Species	Carbon Storage (ton)	Carbon Storage (%)	CO_2 Equivalent (ton)
Red maple	6.4	9.0%	23.5
Sugar maple	5.5	7.7%	20.1
Black birch	0.4	0.6%	1.6
River birch	0.4	0.6%	1.5
Northern catalpa	0.2	0.3%	0.7
Katsura tree	0.9	1.2%	3.1
hawthorn spp	0.2	0.3%	0.9
silverbell spp	12.8	17.9%	46.9
Eastern red cedar	0.6	0.9%	2.3
sweetgum spp	0.9	1.3%	3.5
Tulip tree	0.6	0.9%	2.3
magnolia spp	0.9	1.2%	3.3
Cucumber tree	26.2	36.6%	96.1
Star magnolia	1.1	1.5%	4.0
Crabapple 'Sugar Tyme'	1.1	1.6%	4.2
Eastern cottonwood	0.1	0.2%	0.5
Quaking aspen	0.1	0.2%	0.5
Black cherry	5.1	7.1%	18.7
Kwanzan cherry	2.2	3.1%	8.0
Pin oak	1.1	1.6%	4.1
Northern red oak	0.6	0.8%	2.1
Black oak	3.0	4.2%	11.1
Sassafras	0.5	0.7%	1.9
American basswood	0.4	0.5%	1.4
Total	**71.5**	**100%**	**262.2**

Due to limits of available models, i-Tree Eco will limit carbon storage to a maximum of 7,500 kg (16,534.7 lbs) and not estimate additional storage for any tree beyond a diameter of 254 cm (100 in). Whichever limit results in lower carbon storage is used.

Annual Carbon Sequestration of Trees by Species

Location: Yorktown, Westchester, New York, United States of America
Project: Kitchawan Farm, Series: Removals + Invasives Omitted, Year: 2021
Generated: 3/6/2021

Species	Gross Carbon Sequestration (ton/yr)	CO_2 Equivalent (ton/yr)
Red maple	0.11	0.39
Sugar maple	0.08	0.31
Black birch	0.01	0.02
River birch	0.02	0.06
Northern catalpa	0.01	0.02
Katsura tree	0.01	0.05
hawthorn spp	0.00	0.01
silverbell spp	0.01	0.04
Eastern red cedar	0.00	0.02
sweetgum spp	0.02	0.07
Tulip tree	0.03	0.10
magnolia spp	0.01	0.03
Cucumber tree	0.52	1.91
Star magnolia	0.00	0.00
Crabapple 'Sugar Tyme'	0.00	0.00
Eastern cottonwood	0.01	0.03
Quaking aspen	0.01	0.02
Black cherry	0.13	0.48
Kwanzan cherry	0.02	0.08
Pin oak	0.01	0.04
Northern red oak	0.01	0.05
Black oak	0.06	0.23
Sassafras	0.01	0.04
American basswood	0.01	0.02
Total	**1.10**	**4.04**

Arcadia Farm Solar Farm

From: **Keith Schepart** <keith@taconictreecare.com>
Date: Sat, Aug 7, 2021 at 3:03 PM
Subject: 1300 Baptist Church Road
To: Keith Schepart <keith@taconictreecare.com>

To: Yorktown Planning Board
From: Yorktown Tree Conservation Advisory Commission (TCAC)
Date: August 7, 2021

RE: Mitigation Plan for 1300 Baptist Church Road (Arcadia Solar Farm)

Chairman Fon and members of the Planning Board

Chapter 270 - 10.C(4) Use of native species of trees, understory shrubs and herbaceous ground cover if planting is required. The mitigation plan for 1300 Baptist Church Road fails the provisions of this part of the tree ordinance.

1) Cornus Kousa = Also known as Korean Dogwood. As the name suggests this tree is native to China and Korea.
2) Malus x domestica = Common Apple. Acceptable general species and curious as to what species will be chosen.
3) Picea abies = Norway Spruce. Although these trees were introduced in the 19 century they are native to Scandanavia.
4) Pyrus communis = Common Pear. The name is misleading. This species of Pear are native to Europe and southwest asia.
5) Hibiscus syriacus = Rose of sharon. This popular flowering shrub is native to Asia.
6) Mahonia aquifolium = Oregon Grape. This shrub is native to the pacific coast from British Columbia to Northern California. At least this one is on our continent.
7) Viburnum dentatum = Arrowwood viburnum. This is a native shrub. However, Cornell University has identified this viburnum highly susceptible to Viburnum Leaf Beetle.

These are the comments regarding the four trees and three shrubs in the Plant Schedule provided by 1300 Baptist Church Road.

Sincerely,

Lawrence W.Klein, PE,Member
Tom Schmitt, Member
Keith Schepart ISA, Member

TO: Town of Yorktown Planning Board

FROM: Ecogy Energy

DATE: July 28, 2021

RE: Example Ground-Mounted Solar Array and Spec Sheets for Equipment for Ecogy Arcadia Farm Solar Farm

Example Ground-Mounted Solar Array by Ecogy at Longwood Gardens in Kennett Square, PA

Ecogy Longwood is a 1.57 MW ground-mount system installed in 2011-2012 for Longwood Gardens, the largest botanical garden in the U.S. Using a special mounting system, we were able to avoid stripping the land, altering the topography, or affecting Longwood's storm water plan. Partnering with Longwood allowed for the development of a special meadow seed mix that was planted between rows to minimize storm water runoff, maximize biodiversity, and create aesthetic appeal.

As shown in these images, the array was installed to follow the contours of the existing topography, which avoided the need for grading. The proposed solar farm will be similar in installation type and aesthetic quality.

ECOGY ENERGY

Spec Sheets

Spec Sheets for Major Equipment are included on the following pages. To address some comments previously received, please note:

1. The solar panels have anti-reflective coatings. See the below spec sheet for confirmation (anti-reflective is abbreviated AR).
2. The access road shown on the site plan shall be gravel or Item 4. A spec sheet is not included for this detail as it is still being designed.
3. There will be minimal or no grading on site.
4. Details of the wildlife-friendly fencing are included separately in a drawing.

INVERTERS

Three Phase Inverter with Synergy Technology

for the 277/480V Grid for North America

SE66.6KUS / SE100KUS

Specifically designed to work with power optimizers

- Easy two-person installation – each unit mounted separately, equipped with cables for simple connection between units
- Balance of System and labor reduction compared to using multiple smaller string inverters
- Independent operation of each unit enables higher uptime and easy serviceability
- No wasted ground area: wall/rail mounted, or horizontally mounted under the modules (10˚ inclination)
- Integrated arc fault protection and rapid shutdown for NEC 2014, NEC 2017 and NEC 2020, per article 690.11 and 690.12
- Built-in module-level monitoring with Ethernet or cellular GSM
- Fixed voltage inverter for superior efficiency (98.5%) and longer strings
- Integrated DC Safety Switch
- Built-in RS485 Surge Protection, to better withstand surges caused by lightning or other events
- 150% DC oversizing, enabling higher energy production

solaredge

/ Three Phase Inverter with Synergy Technology

for the 277/480V Grid for North America

SE66.6KUS / SE100KUS

	SE66.6KUS	SE100KUS	
OUTPUT			
Rated AC Power Output	66600	100000	VA
Maximum AC Power Output	66600	100000	VA
AC Output Line Connections	4-wire WYE (L1-L2-L3-N) plus PE		
AC Output Voltage Minimum-Nominal-Maximum(1) (L-N)	244 - 277 - 305		Vac
AC Output Voltage Minimum-Nominal-Maximum(1) (L-L)	422.5 - 480 - 529		Vac
AC Frequency Min-Nom-Max(1)	59.3 - 60 - 60.5		Hz
Maximum Continuous Output Current (per Phase) @277V	80	120	A
GFDI Threshold	1		A
Utility Monitoring, Islanding Protection, Configurable Power Factor, Country Configurable Thresholds	Yes		
INPUT			
Maximum DC Power (Module STC) / Unit	100000 / 50000	150000 / 50000	W
Transformer-less, Ungrounded	Yes		
Maximum Input Voltage DC to Gnd	500		Vdc
Maximum Input Voltage DC+ to DC-	1000		Vdc
Nominal Input Voltage DC to Gnd	425		Vdc
Nominal Input Voltage DC+ to DC-	850		Vdc
Maximum Input Current	2 x 40	3 x 40	Adc
Maximum Input Short Circuit Current	120		Adc
Reverse-Polarity Protection	Yes		
Ground-Fault Isolation Detection	350kΩ Sensitivity per Unit		
CEC Weighted Efficiency	98.5		%
Nighttime Power Consumption	< 12		W
ADDITIONAL FEATURES			
Supported Communication Interfaces	RS485, Ethernet, Cellular GSM (optional)		
Rapid Shutdown	NEC2014, NEC2017 and NEC2020 compliant/certified, upon AC Grid Disconnect		
RS485 Surge Protection	Built-in		
DC SAFETY SWITCH			
DC Disconnect	1000V / 2 x 40A	1000V / 3 x 40A	
STANDARD COMPLIANCE			
Safety	UL1741, UL1741 SA, UL1699B, UL1998, CSA 2.22		
Grid Connection Standards	IEEE 1547, Rule 21, Rule 14 (HI)		
Emissions	FCC part15 class A		
INSTALLATION SPECIFICATIONS			
Number of units	2	3	
AC Output Conduit Size / Max AWG / Max PE AWG	1.5" / 2/0 / 6	2" / 4/0 / 4	
DC Output Conduit Size / Terminal Block AWG Range / Number of Strings(2)	2 x 1.25" / 6-14 / 6 strings	2 x 1.25" / 6-14 / 9 strings	
Dimensions (H x W x D)	Primary Unit: 37 x 12.5 x 10.5 / 940 x 315 x 260; Secondary Unit: 21 x 12.5 x 10.5 / 540 x 315 x 260		in / mm
Weight	Primary Unit: 105.8 / 48; Secondary Unit 99.2 / 45		lb / kg
Operating Temperature Range	-40 to +140 / -40 to +60(3)		°F / °C
Cooling	Fan (user replaceable)		
Noise	< 60		dBA
Protection Rating	NEMA 3R		
Mounting	Brackets provided		

(1) For other regional settings please contact SolarEdge support
(2) Single input option per unit (up to 3AWG) available
(3) De-rating from 50℃

CE RoHS

Power Optimizer

For North America

P801 / P850 / P950 / P1100

POWER OPTIMIZER

PV power optimization at the module-level

The most cost-effective solution for commercial and large field installations

- Specifically designed to work with SolarEdge inverters
- Up to 25% more energy
- Superior efficiency (99.5%)
- Balance of System cost reduction; 50% less cables, fuses and combiner boxes, over 2x longer string lengths possible
- Fast installation with a single bolt
- Advanced maintenance with module-level monitoring
- Module-level voltage shutdown for installer and firefighter safety
- Meets NEC requirements for arc fault protection (AFCI), Photovoltaic Rapid Shutdown System (PVRSS)
- Use with two PV modules connected in series or in parallel

solaredge

/ Power Optimizer For North America

P801 / P850 / P950 / P1100

Power Optimizer Model (Typical Module Compatibility)	P801 (for up to 2 x 72-cell PV modules)	P850 (for up to 2 x high power or bi-facial modules)	P950 (for up to 2 x high power or bi-facial modules)	P1100 (for up to 2 x high power or bi-facial modules)	
INPUT					
Rated Input DC Power(1)	800	850	950	1100	W
Connection Method	Single input for series connected modules				
Absolute Maximum Input Voltage (Voc at lowest temperature)	125				Vdc
MPPT Operating Range	12.5 - 105				Vdc
Maximum Short Circuit Current per input (Isc)	11.75	14.1*		14.1	Adc
Maximum Efficiency	99.5				%
Weighted Efficiency	98.6				%
Overvoltage Category	II				
OUTPUT DURING OPERATION (POWER OPTIMIZER CONNECTED TO OPERATING SOLAREDGE INVERTER)					
Maximum Output Current	15	18			Adc
Maximum Output Voltage	80				Vdc
OUTPUT DURING STANDBY (POWER OPTIMIZER DISCONNECTED FROM SOLAREDGE INVERTER OR SOLAREDGE INVERTER OFF)					
Safety Output Voltage per Power Optimizer	1 ± 0.1				Vdc
STANDARD COMPLIANCE					
Photovoltaic Rapid Shutdown System	NEC 2014				
EMC	FCC Part 15 Class A, IEC61000-6-2, IEC61000-6-3				
Safety	IEC62109-1 (class II safety), UL1741			IEC62109-1 (class II safety), UL1741, UL3741	
Material	UL94 V-0, UV Resistant				
RoHS	Yes				
INSTALLATION SPECIFICATIONS					
Compatible SolarEdge Inverters	SE9K & larger		SE20K & larger	SE30K & larger	
Maximum Allowed System Voltage	1000				Vdc
Dimensions (W x L x H)	129 x 153 x 49.5 / 5.1 x 6 x 1.9	129 x 162 x 59 / 5.1 x 6.4 x 2.3			mm / in
Weight	933 / 2.05	1064 / 2.34			gr / lb
Input Connector	MC4(2)				
Input Wire Length	0.16 / 0.52 / 1.3 / 4.27	0.16 / 0.52 / 1.6 / 5.24	1.3 / 4.27	1.6 / 5.24	m / ft
Output Wire Length	2.2 / 7.2	2.1 / 6.9 / 2.2 / 7.2	2.2 / 7.2	2.4 / 7.8	m / ft
Output Wire Type / Connector	Double Insulated / MC4				
Operating Temperature Range(3)	-40 to +85 / -40 to +185				°C / °F
Protection Rating	IP68 / NEMA6P				
Relative Humidity	0 - 100				%

* For P850/P950 models manufactured in work week 06/2020 or earlier, the maximum Isc per input is 12.5A. The manufacture code is indicated in the Power Optimizer's serial number example: S/N SJ0620A-xxxxxxxx (work week 06 in 2020)

(1) Rated power of the module at STC will not exceed the Power Optimizer "Rated Input DC Power". Modules with up to +5% power tolerance are allowed

(2) For other connector types please refer to: https://www.solaredge.com/sites/default/files/optimizer-input-connector-compatibility.pdf

(3) For ambient temperature above +70°C / +158°F power de-rating is applied. Refer to https://www.solaredge.com/sites/default/files/se-temperature-derating-note-na.pdf for more

PV System Design Using a SolarEdge Inverter(4)(5)(6)		208V Grid SE14.4K*		208V Grid SE17.3K*		277/480V Grid SE20K, SE30K, SE33.3K*, SE40K*	277/480V Grid SE20K, SE30K	277/480V Grid SE33.3K*, SE40K*	
Compatible Power Optimizers		P801	P850, P950, P1100	P801	P850, P950, P1100	P801	P850, P950, P1100	P850, P950, P1100	
Minimum String Length	Power Optimizers	8	8	9	9	14	14	14	
	PV Modules	15	15	17	17	27	27	27	
Maximum String Length	Power Optimizers	30	30	30	30	30	30	30	
	PV Modules	60	60	60	60	60	60	60	
Maximum Continuous Power per String		6000	7200	7275	8730	12750	15300	15300	W
Maximum Allowed Connected Power per String(7) (Permitted only when the difference in connected power between strings is up to 2,000W for the 277/480V grid, or 1,000W for the 208V grid)		2 strings or less - 7200	1 string - 8400	2 strings or less - 8475	1 string - 9930	15000	1 string 17550	2 strings or less - 17550	W
		3 strings or more - 7800	2 strings or more - 9000	3 strings or more - 9075	2 strings or more - 10530		2 strings or more - 20300	3 strings or more - 20300	
Parallel Strings of Different Lengths or Orientations		Yes							

* The same rules apply for Synergy units of equivalent power ratings, that are part of the modular Synergy Technology inverter

(4) P850/P950/P1100 can be mixed in one string only with P850/P950/P1100. P801 cannot be mixed with any other Power Optimizer in the same string

(5) For each string, a Power Optimizer may be connected to a single PV module if 1) each Power Optimizer is connected to a single PV module or 2) it is the only Power Optimizer connected to a single PV module in the string

(6) Design with three phase 208V inverters is limited. Use the SolarEdge Designer for verification

(7) To connect more STC power per string, design your project using SolarEdge Designer

RoHS

Intertek

BOVIET SOLAR USA

Advancing the Power of the Sun

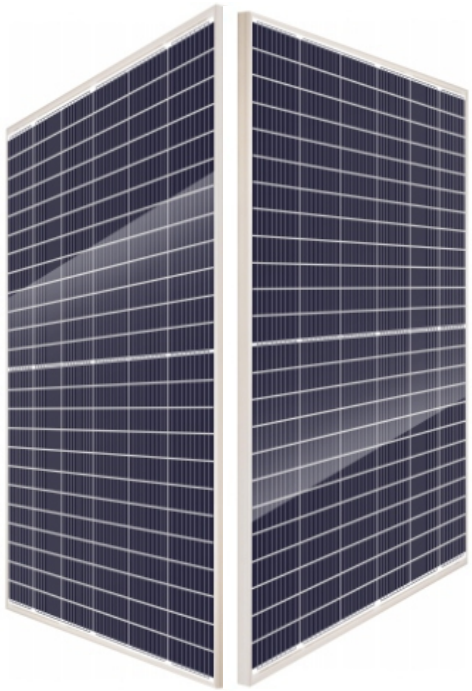
144 Cell Mono 440-450W

BVM6612M(S)-HC-BF-DG

0~+5W
Power Tolerance

20.2%
Maximum Efficiency

440-450W
Power Output Range



41.19 x 84.06 Inches

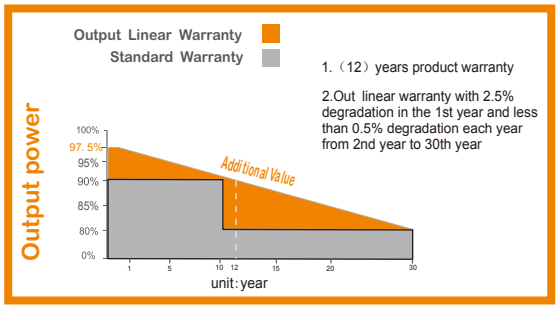
Silver Frame / Double-sided glass

High Quality and Reliable Modules

- Double-sided glass technology, more power generation
- Withstand up to 5400 Pa snow load and 2400 Pa wind load
- 2 EL inspections per cell/module for defect-free consistency
- High salt and ammonia resistance certified
- 0~+5 W guaranteed positive tolerance
- Rugged design for long-term durability; passed extended reliability tests

Warranty

- 12-year product warranty
- 30-year linear power output warranty



Comprehensive Certificates for Products and Management

- UL 61730, IEC 61215, IEC 61730, CEC listed, MCS and CE
- ISO 9001 for Quality Management Systems
- ISO 14001 for Environmental Management Systems
- OHSAS 18001 Occupational Health and Safety Systems

Listed in Bloomberg New Energy Finance's tier 1 list as of 1Q 2018

TÜVRheinland · Intertek · MCS · GO solar CALIFORNIA · 2019 TOP PERFORMER PVEL DNV·GL PV MODULE RELIABILITY SCORECARD

2107 N 1st Street Suite 550 San Jose, CA 95131

BOVIETSOLARUSA.COM ◆ 877.253.2858 ◆ SALES@BOVIETSOLARUSA.COM

Electrical Characteristics STC

	BVM6612M-440S-H-HC-BF-DG	BVM6612M-445S-H-HC-BF-DG	BVM6612M-450S-H-HC-BF-DG
Maximum Power (Pmax)	440W	445W	450W
Maximum Power Current (Imp)	10.92A	10.99A	11.06A
Maximum Power Voltage (Vmp)	40.37V	40.57V	40.76V
Short Circuit Current (Isc)	11.48A	11.55A	11.60A
Open Circuit Voltage (Voc)	48.60V	48.80V	49.05V
Module Efficiency	19.7%	19.9%	20.2%
Power Tolerance	0~+5W	0~+5W	0~+5W

STC: AM1.5, Irradiance 1000W/㎡, 25°C

Electrical Characteristics NOCT

	BVM6612M-440S-H-HC-BF-DG	BVM6612M-445S-H-HC-BF-DG	BVM6612M-450S-H-HC-BF-DG
Maximum Power (Pmax)	324W	342W	361W
Maximum Power Current (Imp)	8.46A	8.65A	8.84A
Maximum Power Voltage (Vmp)	38.29V	39.54V	40.8V
Short Circuit Current (Isc)	8.87A	9.08A	9.28A
Open Circuit Voltage (Voc)	47.8V	48.2V	48.6V

NOCT: AM1.5, Irradiance 800W/㎡, 20°C, Wind speed 1m/s

Mechanical Characteristics

Solar Cell	Bifacial-Monocrystalline 6.54 x 3.27 inch, 144 (6 x 24) pcs. in series
Double glass	2.0mm AR coating tempered glass+2.0mm Semi-tempered glass,low iron
Frame	Anodized aluminum alloy
Junction Box	IP68 rated, with 3 bypass diode
Output Cable	4 mm² (EU)/12 AWG (US), 39.38 inch
Connector	MC4 compatible
Dimension	84.06x 41.19 x 1.38 inch
Weight	68.34 lb

Thermal Characteristics

Pmax Temperature Coefficient	-0.37%/K
Voc Temperature Coefficient	-0.30%/K
Isc Temperature Coefficient	+0.06%/K
NOCT	113±35.6°F

Maximum Ratings

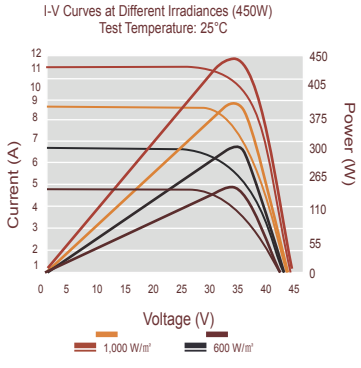
Operating Temperature	-40°F~185°F
Maximum Series Fuse Rating	20A
Maximum System Voltage	1000/1500V DC

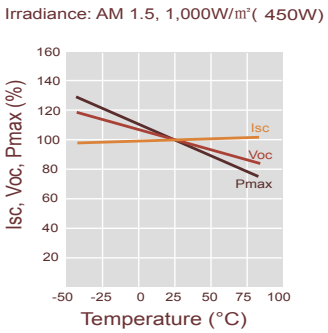
Packing Information

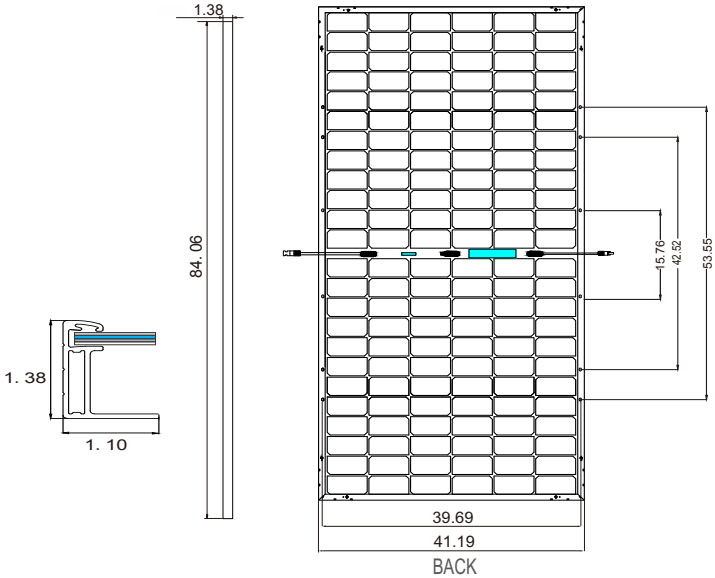
Pieces per pallet	30
Pallets per container (40HQ)	22
Pieces per container (40HQ)	660
Pallet weight/size	2162 lb/ 85.23 x 46.85 x 45.08 inch

Bifacial Output-Backside Power Gain

10%	Pmax (W)	484	489	495
	Module efficiency (%)	21.67	21.89	22.17
20%	Pmax (W)	528	534	540
	Module efficiency (%)	23.64	23.91	24.18







GROUND FIXED TILT

UNIRAC

GROUND FIXED TILT (GFT) is an engineered system of standard, lightweight ground mount components that are in stock and ready to ship from North America's largest ground mount distribution network. UNIRAC's unmatched commercial project support makes construction easy, from permitting through installation, including region-specific engineering. GFT's refined solution, including a new shared rail design, delivers enhanced system and labor optimization. Plus, enjoy peace of mind with **SOLAR**MOUNT Mounting Technology and UNIRAC's industry-leading 25-year warranty.

UNIRAC 25 YEAR FULL-SYSTEM WARRANTY

IN STOCK & READY TO SHIP

THE BEST SOLUTION IS AVAILABLE

COMMERCIAL PARTNERSHIP

EXPERIENCE THAT MAKES A DIFFERENCE

INSTALLATION EXPERIENCE

REFINED WITH YOU IN MIND

MAKE GROUND MOUNT SIMPLE

FOR QUESTIONS OR CUSTOMER SERVICE VISIT UNIRAC.COM OR CALL (505) 248-2702

GROUND FIXED TILT

UNIRAC

IN STOCK AND READY TO SHIP

THE BEST SOLUTION IS AVAILABLE

Single post configurations with 20° and 30° tilt options. Standardized components and kitted hardware bring ease of stockability and repeatability, from 2KW to multi-MW. North America's largest Ground Mount Distributor network ensures the fastest lead times and empowers you to finish your projects on schedule.

COMMERCIAL PARTNERSHIP

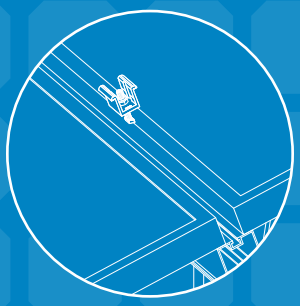
EXPERIENCE THAT MAKES A DIFFERENCE

Permit ready, pre-engineered regional designs save you valuable time. Standard construction drawings with general structural notes, table and component cross sections, foundation options and structural details speed permit submittal and construction. Industry leading commercial customer service supports you across your project, from design and logistics thru installation.

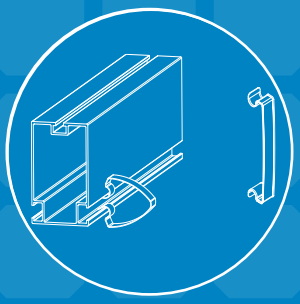
INSTALLATION EXPERIENCE

REFINED WITH YOU IN MIND

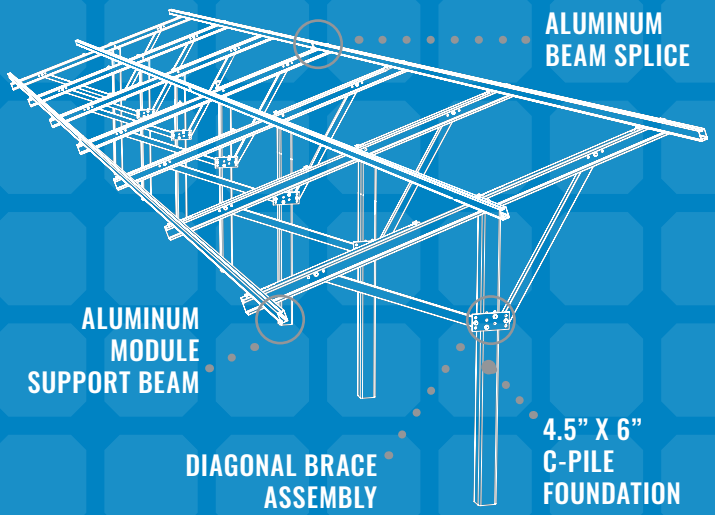
Kitted hardware, integrated bonding, and pre-assembled parts streamline construction, from pre-mobilization to installation. Straightforward connections ensure maximum strength and require no specialized labor or training. Lightweight components allow for one or two-person assembly. System flexibility enables you to mount 60 & 72 cell modules and choose from multiple foundation and rail options to optimize your projects.



TOP MOUNTING
MODULE CLAMPS
W/ INTEGRATED BONDING



SNAP-ON
WIRE MANAGEMENT



UL2703 ELECTRICAL BONDING & GROUNDING

UNMATCHED | CERTIFIED | ENGINEERING | BANKABLE | DESIGN | PERMIT

ON-TIME DELIVERY

No waiting. Our goal is simple: Consistently deliver solutions and services correctly, efficiently and dependably to exceed your expectations. Our world-class operations provide a 99% on-time delivery to help you meet your commitment dates.

CERTIFIED QUALITY PROVIDER

UNIRAC is the only PV mounting vendor with ISO certifications for 9001:2008, 14001:2004 and OHSAS 18001:2007, which means we deliver the highest standards for fit, form, and function. These certifications demonstrate our excellence and our commitment to first class business

BANKABLE WARRANTY

UNIRAC has the financial strength to back our products and reduce your risk. Have peace of mind knowing you are receiving products of exceptional quality. GFT is covered by a 25-year manufacturing warranty on all parts.

FOR QUESTIONS OR CUSTOMER SERVICE VISIT UNIRAC.COM OR CALL (505) 248-2702

GENERAL NOTES:

1. ALL CONSTRUCTION FOR UNIRAC'S "GROUND FIXED TILT" (GFT) RACKING SYSTEM AND FOUNDATION REQUIREMENTS SHALL CONFORM TO THE 2009, 2012, 2015 & 2018 EDITION OF THE INTERNATIONAL BUILDING CODE (IBC).
2. WHEREVER THE TERM CONTRACTOR IS USED IN THE CONSTRUCTION DOCUMENTS, IT SHALL BE DEFINED TO MEAN THE GENERAL CONTRACTOR AND ANY SUB-CONTRACTOR COLLECTIVELY AS APPLICABLE AND AS REQUIRED.
3. THE CONTRACT "STRUCTURAL RACKING" DRAWINGS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE MEANS, METHOD, OR SEQUENCE OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR AND PROVIDE ALL MEASURES NECESSARY TO PROTECT THE RACKING SYSTEM FROM THE POINT OF MATERIAL DELIVERY THROUGH THE COMPLETION OF CONSTRUCTION. UNIRAC AND THE ENGINEER OF RECORD WILL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES OF CONSTRUCTION. UNIRAC AND THE ENGINEER OF RECORD WILL NOT BE RESPONSIBLE FOR CONSTRUCTION SITE SAFETY, OR SAFETY PRECAUTIONS AND PROGRAMS INCIDENT HERETO.
4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSPECT AND ENSURE THAT ALL WORK IS IN CONFORMANCE WITH THE CONTRACT DOCUMENTS. ANY STRUCTURAL INSPECTION/OBSERVATION PROVIDED BY OTHERS DOES NOT RELIEVE THE CONTRACTOR OF THIS RESPONSIBILITY.
5. ANY DEVIATIONS FROM THE CONTRACT DOCUMENTS THAT ARE ENCOUNTERED AT A LATER DATE AND ARE DECLARED TO BE SIGNIFICANT BY THE RACKING DISTRIBUTOR SHALL BE CORRECTED BY THE CONTRACTOR (AT THE CONTRACTOR'S EXPENSE).
6. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND COORDINATE SITE CONDITIONS WITH THESE DRAWINGS PRIOR TO BIDDING OR THE START OF CONSTRUCTION. ANY CONFLICTS, DISCREPANCIES, OR OMISSIONS SHALL BE RESOLVED THROUGH YOUR RACKING DISTRIBUTOR PRIOR TO PROCEEDING.
7. DO NOT SCALE OFF OF THESE DRAWINGS. WRITTEN DIMENSIONS SHALL BE USED OR WHERE NO DIMENSION IS PROVIDED CONSULT WITH YOUR RACKING DISTRIBUTOR FOR CLARIFICATION BEFORE PROCEEDING WITH THE BID OR THE WORK.
8. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE EQUIPMENT AND INSTALLATION PROCESS (MEANS AND METHODS) ARE APPROPRIATE FOR THE FOUNDATIONS AND THAT THE PILES ARE INSTALLED TO THE SPECIFIED TOLERANCES. UNIRAC IS NOT RESPONSIBLE FOR DAMAGED AND/OR OUT-OF-TOLERANCE PILES DUE TO IMPROPER INSTALLATION EQUIPMENT, METHODS, AND SOIL RELATED ISSUES INCLUDING DENSE SOILS, GRAVEL, OR BEDROCK.
9. WHERE ANY DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, STRUCTURAL NOTES AND SPECIFICATIONS, THE GREATER (MOST CONSERVATIVE) REQUIREMENTS SHALL GOVERN. WHERE NO SPECIFIC DETAIL IS SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT, OR IF THERE IS NO SIMILAR WORK, THEN CONSTRUCTION SHALL CONFORM TO INDUSTRY STANDARDS. CONTRACTOR MUST INFORM UNIRAC OF ANY DISCREPANCIES.
10. REFER TO SITE PLAN, PILE LAYOUT DRAWING, ELECTRICAL DRAWINGS AND/OR OTHER CIVIL DRAWINGS FOR SPECIFIC PILE LOCATIONS, NORTH-SOUTH PILE SPACING, LOCATION AND DETAILS OF CURBS, INVERTER/EQUIPMENT PADS, TRENCHING/CONDUIT LOCATIONS, JUNCTION BOXES, SITE WORK ITEMS, ETC. AND DIMENSIONS NOT SHOWN ON STRUCTURAL RACKING DRAWINGS.
11. CONTRACTOR SHALL INVESTIGATE THE SITE DURING CLEARING AND EARTHWORK OPERATIONS FOR FILLED EXCAVATIONS OR BURIED STRUCTURES, SUCH AS CESSPOOLS, CISTERNS, EXISTING FOUNDATIONS, OR OTHER.
12. ASTM SPECIFICATIONS ON THE DRAWINGS SHALL BE OF THE LATEST ASTM STANDARD SPECIFICATION.
13. ANY ENGINEERING DESIGN PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW SHALL BEAR THE SEAL OF A PROFESSIONAL CIVIL OR STRUCTURAL ENGINEER REGISTERED IN THE STATE OF THE LOCAL JURISDICTION.
14. THE FOLLOWING DESIGN CRITERIA ARE EXCLUDED FROM THE RACKING AND FOUNDATION DESIGN: FLOOD LOADING, DEBRIS LOADING, DYNAMIC ANALYSIS, ACTS OF GOD (TORNADO, HURRICANE, WATER INUNDATION LOADING, ETC.), EROSION, EXPANSIVE SOILS, FROST HEAVE, SOIL LIQUEFACTION, DYNAMIC LOADING FROM SEISMIC EVENTS AND CONDITIONS. THE DESIGN CAN CONSIDER THESE CRITERIA FOR SPECIFIC PROJECTS IN A SEPARATE DOCUMENT FROM UNIRAC OR BY A THIRD PARTY ENGINEER.
15. DESIGN CRITERIA PER ASCE 7-05, 7-10, OR ASCE 7-16*:
    - DESIGN WIND SPEED = VARIES (SEE DESIGN PACKAGE AND STATE LETTER)
    - GROUND SNOW LOAD = VARIES (SEE DESIGN PACKAGE AND STATE LETTER)
    - ICE THICKNESS = VARIES (SEE DESIGN PACKAGE AND STATE LETTER)
    - ICE LOAD WIND SPEED = VARIES (SEE DESIGN PACKAGE AND STATE LETTER)
    - SEISMIC Ss = VARIES (SEE DESIGN PACKAGE AND STATE LETTER)
    - SEISMIC S1 = VARIES (SEE DESIGN PACKAGE AND STATE LETTER)
    - SOIL SITE CLASS = D
    - WIND EXPOSURE CATEGORY = B OR C (SEE LETTER)
    - HURRICANE ZONE = SEE LETTER
    - RISK CATEGORY = I OR II (SEE LETTER)
    - MINIMUM OF 20' OFFSET FROM NEAREST ADJACENT BUILDING (TO AVOID SNOW DRIFT.)

    *DESIGN WIND PRESSURES PER ASCE 7-05, SECTION 6.5.13,"WIND LOADS ON OPEN BUILDINGS WITH MONOSLOPE, PITCHED OR TROUGHED ROOFS", AND SECTION 6.5.13.3, "COMPONENTS AND CLADDING" FOR MONOSLOPE FREE ROOFS, ASCE 7-10, SECTION 27.4.3, "WIND LOAD ON OPEN BUILDING WITH MONOSLOPE, PITCHED OR TROUGHED FREE ROOFS", AND SECTION 30.7.1, "COMPONENTS AND CLADDING" FOR MONOSLOPED PITCHED OR TROUGHED ROOFS, OR ASCE 7-16, SECTION 27.3.2, "WIND LOAD ON OPEN BUILDING WITH MONOSLOPE, PITCHED OR TROUGHED ROOFS", AND SECTION 30.7.2, "COMPONENTS AND CLADDING" FOR MONOSLOPE, PITCHED OR TROUGHED ROOFS.
16. SOLAR REQUIREMENTS: FROM OWNER
17. CORROSION PROTECTION REQUIREMENTS:
    - COLD-FORMED STEEL MEMBERS = SEE MEMBER SECTION TABLE
    - HARDWARE = STAINLESS STEEL OR DELTA PROTEKT
18. ABOVE GRADE CORROSION PROTECTION WILL SUFFICE FOR MOST ENVIRONMENTAL CONDITIONS. BELOW GRADE CORROSION PROTECTION WILL SUFFICE FOR MOST SOILS WITH RESISTIVITY VALUES GREATER THAN 10,000 OHM/CM. IT IS THE OWNER'S RESPONSIBILITY TO DETERMINE IF THE SOILS ARE MORE CORROSIVE AND FURTHER CORROSION PROTECTION WILL BE REQUIRED.
19. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SPLICE EAST-WEST BEAMS (AS REQUIRED) TO COMPLETE THE TABLE AND AVOID SPLICE CONFLICTS SPECIFIED IN DETAIL 501 ON SHEET SR-500.
20. EACH ROW CANNOT EXCEED 100 FEET IN LENGTH WITHOUT HAVING A THERMAL BREAK.

SPECIAL INSPECTION (PER CHAPTER 17 OF THE IBC):

STRUCTURAL ONLY: SPECIAL INSPECTION IS TO BE PROVIDED FOR THE ITEMS LISTED BELOW IN ADDITION TO THE INSPECTIONS CONDUCTED BY THE BUILDING JURISDICTION. "SPECIAL STRUCTURAL INSPECTION" SHALL NOT RELIEVE THE OWNER OR THEIR AGENT FROM REQUESTING THE BUILDING JURISDICTION INSPECTIONS REQUIRED.

1. DRIVEN DEEP ELEMENTS: PERIODICALLY DURING THE PLACEMENT OF ALL DRIVEN DEEP FOUNDATION ELEMENTS ON STRUCTURAL DRAWINGS.
    - A. VERIFICATION OF ELEMENT MATERIALS, SIZES, AND LENGTHS.
    - B. OBSERVATION AND DOCUMENTATION OF DRIVING OPERATIONS. MAINTAIN A COMPLETE AND ACCURATE RECORD FOR EACH PILE DRIVEN.
    - C. VERIFICATION OF PLACEMENT LOCATIONS AND PLUMBNESS, TYPE OF PILE DRIVER, ELEVATION OF TIP AND BUTT, ANY DAMAGE TO FOUNDATION ELEMENT, ETC.
2. BOLTING: VERIFICATION OF TORQUE PER TORQUE TABLE SHOWN.

TORQUE REQUIREMENTS:		SOCKET SIZE
1/4"Ø HARDWARE :		
BEAM CLAMP	= 9 - 11 FT-LBS	9/16"
STANDARD MID 7 END CLAMPS	= 9 - 11 FT-LBS	9/16"
PRO-SERIES MID-CLAMPS	= 10 - 12 FT-LBS	1/2"
PRO-SERIES END CLAMP	= 3 FT-LBS	1/2"
5/8"Ø HARDWARE	= 54 - 66 FT-LBS	15/16"
3/4"Ø HARDWARE	= 99 - 121 FT-LBS	1-1/8"

3. CONCRETE: SEE CHAPTER 17 OF MOST CURRENT IBC FOR REQUIRED INSPECTIONS.

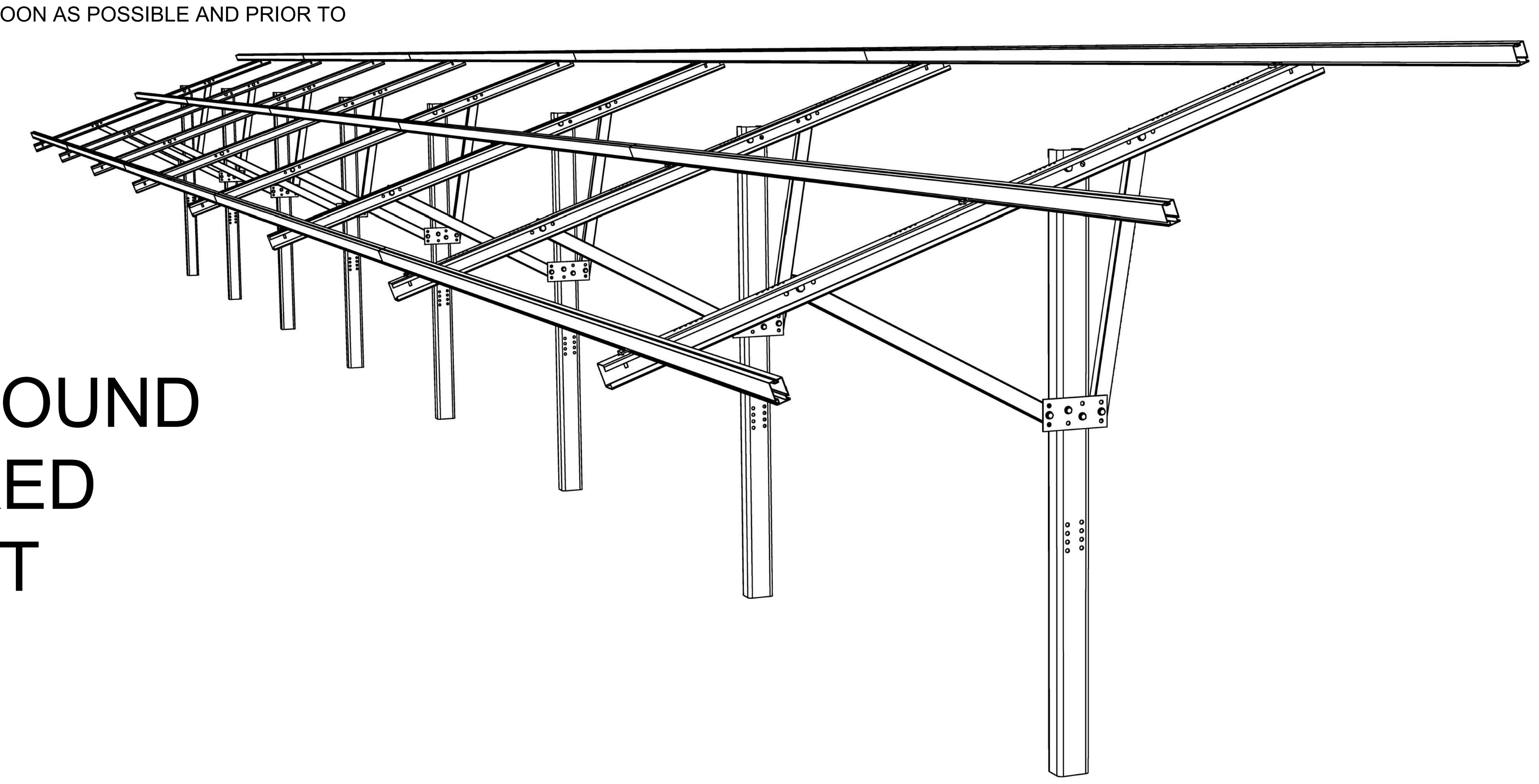
ALUMINUM:

1. ALL ALUMINUM EAST-WEST BEAM MEMBERS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE "ALUMINUM DESIGN MANUAL" BY THE ALUMINUM DESIGN ASSOCIATION, CURRENT EDITION.
2. ALL ALUMINUM EAST-WEST BEAMS CONFORM TO ONE OF THE FOLLOWING:
    - ALLOY: 6005A TEMPER: T61 (Ftu = 38 KSI, Fcy = 35 KSI)
    - ALLOY: 6351 TEMPER: T5 (Ftu = 38 KSI, Fcy = 35 KSI)
    - ALLOY: 6061 TEMPER: T6 (Ftu = 38 KSI, Fcy = 35 KSI)
3. ALL ALUMINUM EAST-WEST BEAMS HAVE A MILL FINISH.
4. WELDING IS NOT REQUIRED OR PERMITTED UNLESS SPECIFICALLY APPROVED BY UNIRAC AND THE ENGINEER OF RECORD.
5. FIELD CUTTING OF ALUMINUM MEMBERS IS PERMITTED WHEN REQUIRED TO ACCOMMODATE PROJECT SPECIFIC MODULE WIDTHS.

HARDWARE:

1. ALL 1/4"Ø HARDWARE SHALL CONFORM TO 18/8 STAINLESS STEEL (AISI 300 SERIES STAINLESS, 304) OF DIMENSIONS PER ASME B18.2.1.
2. ALL 1/4"Ø SELF DRILLING SCREW HARDWARE SHALL CONFORM TO GRADE 5 SAE J429 AND ASTM A449.
3. ALL 5/8"Ø AND 3/4"Ø BOLTS SHALL CONFORM TO GRADE 2 SAE J429 OR ASTM A307.
4. ALL 5/8"Ø AND 3/4"Ø SERRATED FLANGE NUTS SHALL CONFORM TO ASME B.18.16.4.
5. ALL 5/8"Ø AND 3/4"Ø WASHERS SHALL CONFORM TO USS TYPE A WIDE OR ANSI TYPE A WIDE.
6. UNIRAC T-BOLTS, MID CLAMPS, AND END CLAMPS ARE PROPRIETARY. TECHNICAL DATA SHEETS WITH TESTED CAPACITIES CAN BE PROVIDED UPON REQUEST.
7. CORROSION PROTECTION FOR HARDWARE CAN BE FOUND IN THE GENERAL NOTES SECTION OF THIS DOCUMENT, NOTE 17.
8. ALL HARDWARE RECEIVED ON SITE SHALL BE CHECKED BY CONTRACTOR AGAINST THE SPECIFICATIONS ON THIS SHEET SR-100, DIAMETERS AND LENGTHS CALLED OUT ON RACKING DETAILS SHEET SR-500, AS WELL AS THE PROJECT BILL OF MATERIAL. ANY CONFLICTS, DISCREPANCIES, OR OMISSIONS MUST BE RESOLVED WITH THE RACKING DISTRIBUTOR AS SOON AS POSSIBLE AND PRIOR TO PROCEEDING.

UNIRAC GFT GROUND FIXED TILT



COLD FORMED STEEL:

1. ALL COLD FORMED STRUCTURAL STEEL MEMBER CONSTRUCTION SHALL BE IN ACCORDANCE WITH AISI "SPECIFICATIONS FOR DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS" CURRENT EDITION.
2. ALL COLD-FORMED STRUCTURAL MEMBERS SHALL BE PER ICC-ER-4943P.
3. ALL COLD-FORMED STEEL CONFORMS TO ONE OF THE FOLLOWING:
    - A653 HSLAS 50 (Fy = 50 KSI, Fu = 60 KSI)
    - A653 SS 50 CLASS 4 (Fy = 50 KSI, Fu = 60 KSI)
4. ALL COLD-FORMED STEEL MEMBERS ARE GALVANIZED PER ASTM A653 (MOST RECENT EDITION).
5. WELDING IS NOT REQUIRED OR PERMITTED UNLESS SPECIFICALLY APPROVED BY UNIRAC AND/OR THE ENGINEER OF RECORD.
6. FIELD CUTTING OF COLD-FORMED STEEL MEMBERS IS NOT REQUIRED OR PERMITTED UNLESS THE C-PILE IS BEING MODIFIED DUE TO ALTERNATIVE FOUNDATION REQUIREMENTS PROVIDED ON SHEET 400.
7. ALL CALCULATED COLD-FORMED MEMBER PROPERTIES PER AISI SPECIFICATIONS ARE BASED ON THE FOLLOWING MINIMUM THICKNESSES:
    - 14 GAGE (0.070" OR 70 MILS)
    - 11 GAGE (0.120" OR 120 MILS)

UNIRAC CUSTOM RACKING MEMBER SECTIONS

RACKING MEMBER		DEPTH	WIDTH	THICKNESS	MIN. CORROSION PROTECT
	ALUMINUM BEAM	3.25 IN.	2.0 IN.	0.063-0.125 IN	AAMA 611-12
	ALUMINUM SPLICE	3.061 IN.	1.818 IN.	0.800-0.110 IN	AA-M12
	TOP CHORD CHANNEL	4.1 IN.	3.42 IN.	14 GAGE	G180
	DIAGONAL BRACE	3 IN.	2 IN.	14 GAGE	G180
	C-PILE	6 IN.	4.5 IN.	11 GAGE	G235

SOLAR DESIGN:

UNIRAC IS NOT THE SOLAR DESIGN ENGINEER OF RECORD AND IS NOT RESPONSIBLE FOR ANY SOLAR DESIGN, OUTPUT EFFICIENCIES, SHADING, ROW SPACING, POWER PRODUCTION, ETC.

ELECTRICAL DESIGN:

UNIRAC IS NOT THE ELECTRICAL ENGINEER OF RECORD AND IS NOT RESPONSIBLE FOR THE ELECTRICAL DESIGN FOR THIS PROJECT. THE UNIRAC GFT RACKING SYSTEM IS CERTIFIED TO UL-2703 WHEN PROPERLY INSTALLED. SEE THE GFT INSTALLATION GUIDE FOR MORE DETAIL.

CIVIL/GRADING/SITE WORK:

UNIRAC IS NOT THE CIVIL ENGINEER OF RECORD FOR THIS PROJECT AND IS NOT RESPONSIBLE FOR ANY SITE GRADING, SURVEYING, TRENCHING, EARTHWORK, LAYOUT, STORM WATER POLLUTION PREVENTION PLANS, SURFACE WATER MITIGATION, PERMITTING, OR EROSION CONTROL PLANS.

MATERIAL MANAGEMENT:

PRIOR TO INSTALLATION, ALL MATERIALS MUST BE STORED PROPERLY. MATERIALS REMAINING IN PLACE FOR MORE THAN ONE WEEK MUST BE IN OPEN AIR CONDITIONS (I.E. OFF THE GROUND). IF TARPS OR OTHER PROTECTIVE COVERS ARE USED, THE ENDS SHALL BE LEFT OPEN FOR VENTILATION. TIGHT FITTING COVERINGS ARE NOT RECOMMENDED AS MATERIAL COATINGS ARE NOT DESIGNED FOR THIS CONDITION. LONG GOODS STORED HORIZONTALLY FOR MORE THAN ONE WEEK SHOULD NOT REMAIN BUNDLED TO PREVENT ACCELERATED CORROSION. BLOCKING IS REQUIRED BENEATH THE LONG GOODS AT PROPER INTERVALS TO ENSURE THE PRODUCT IS OFF THE GROUND.

FOUNDATION NOTES:

1. SEE THE "COLD FORMED STEEL" SECTION FOR STEEL AND GALVANIZATION REQUIREMENTS FOR FOUNDATIONS.
2. UNIRAC SHALL NOT BE HELD LIABLE FOR ANY UTILITY LINES DAMAGED DURING FOUNDATION INSTALLATION. IT SHALL BE THE RESPONSIBILITIES OF OTHERS TO DETERMINE THE PLACEMENT OF EXISTING AND NEW UTILITY LINES.
3. PILES ARE DESIGNED TO SOIL CONDITIONS STATED IN IBC. IT IS THE CLIENTS RESPONSIBILITY TO VERIFY SOILS MEET THE MINIMUM REQUIREMENTS. UNIRAC AND OR THE ENGINEER OF RECORD WILL NOT BE HELD RESPONSIBLE FOR FOUNDATIONS INSTALLED IN SOILS WITH LOWER CAPACITY OR FOR IMPROPER FOUNDATION INSTALLATION OR CHOICE.
4. SOIL CONDITIONS ARE ASSUMED TO HAVE PROPERTIES OF CLASS 4 OR BETTER STATED IN IBC.

NOTE: SEE GFT INSTALLATION GUIDE FOR SYSTEM ADJUSTMENTS AND TOLERANCES

DRIVEN STEEL PILE NOTES:

1. STEEL PILES HAVE BEEN DESIGNED IN ACCORDANCE WITH THE DESIGN CRITERIA STATED IN THE GENERAL NOTES.
2. PILES SHALL BE INSTALLED TO THE PILE TOLERANCES IN THE UNIRAC GFT INSTALLATION GUIDE WITHOUT EXCESSIVE DEFORMATION. EXCESSIVE DEFORMATION IS DEFINED AS DISTORTION PREVENTS THE RACKING FROM CONNECTING FLUSH TO THE PILE.
3. FOUNDATIONS MUST NOT BE INSTALLED IN ORGANIC SOILS OR IN AREAS WITH GROUND WATER WITHIN 12 FEET OF THE SURFACE.
4. IT IS THE OWNER OR CONTRACTORS RESPONSIBILITY TO DETERMINE WHICH FROST ZONE THEIR PROJECT IS LOCATED IN.
5. IF PILE REFUSAL IS ENCOUNTERED, AN ALTERNATE FOUNDATION DESIGN ON SHEET SR-400 CAN BE UTILIZED OR OTHER FOUNDATIONS APPROVED BY A REGISTERED PROFESSIONAL ENGINEER AND UNIRAC.
6. DRAINAGE SHALL BE DIRECTED AWAY FROM PILES. PILES SHALL NOT BE PLACED IN SWALES, DRAINAGE AREAS OR WHERE WATER MAY BE ALLOWED TO FLOW OR STAND WITHOUT SPECIFIC ALLOWANCE IN WRITING FROM UNIRAC. ALL POSSIBLE EFFORTS SHALL BE MADE TO PREVENT WATER FROM FLOWING OR PONDING AROUND OR NEAR TO THE PILES.
7. PILES MAY NOT BE PAINTED PRIOR TO INSTALLATION OF THE RACKING SYSTEM. AFTER INSTALLATION OF THE COMPLETE RACKING SYSTEM, PILES MAY BE PAINTED AT THE CONTRACTORS/CLIENTS DISCRETION. NO ADJUSTMENTS MAY BE MADE AFTER THE PILES HAVE BEEN PAINTED.
8. PILES DRIVEN TOO SHALLOW OR TOO DEEP WILL NEED TO BE ALTERED AT THE CONTRACTORS EXPENSE. UNIRAC HAS PROVIDED TOLERANCES IN THE GFT INSTALLATION GUIDE THAT SHALL BE FOLLOWED.
9. IT IS THE CONTRACTORS RESPONSIBILITY TO DETERMINE THE MEANS AND METHODS FOR DRIVING PILES. THE PILE INSTALLATION METHOD UTILIZED DURING ONSITE PILE TESTING SHALL BE THE SAME AS INSTALLATION. THE CONTRACTOR MUST INSTALL PILES UTILIZING A PILE DRIVING RIG WITH A PERCUSSION PNEUMATIC HAMMER. A VIBRATORY PILE DRIVER IS NOT RECOMMENDED. SEE PILE TEST PLAN FOR DETAILS.
10. THE RACKING DISTRIBUTOR SHALL NOT BE HELD RESPONSIBLE FOR DAMAGE TO THE PILE AFTER IT ARRIVES TO THE SITE OR THE POINT OF AGREED DROP OFF.
11. IF DAMAGE OCCURS WHERE GALVANIZATION IS REMOVED FROM THE PILE, THE PILE SHALL BE TOUCHED UP WITH GALVANIZATION OF EQUAL THICKNESS PRIOR TO INSTALLATION AT THE CONTRACTOR'S EXPENSE.
12. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT VIBRATIONS FROM DRIVING EQUIPMENT AND PILE INSTALLATION DO NOT AFFECT ANY ADJACENT PROPERTY STRUCTURES. THE CONTRACTOR SHALL BE HELD LIABLE FOR DAMAGE TO THE ADJACENT PROPERTY IF DAMAGE OCCURS.
13. ANY EXCAVATIONS NEAR THE PILE SHALL NOT BE MADE CLOSER THAN 2 FEET FROM PILE OR DEEPER THAN 2 FEET FROM GRADE. IF EXCAVATIONS ARE NECESSARY, THEY SHALL BE ON THE EAST OR WEST SIDE OF THE PILE, SHALL BE TEMPORARY, AND SHALL BE COMPACTED PER THE ENGINEER OF RECORD'S RECOMMENDATIONS. NORTH SOUTH EXCAVATIONS SHALL BE A MINIMUM OF 3 FEET FROM THE PILE. IF EXCAVATIONS EXCEED THESE DIMENSIONAL REQUIREMENTS, THE CONTRACTOR SHALL NOTIFY UNIRAC. THE ENGINEER OF RECORD SHALL BE INFORMED OF ANY EXCAVATION AND COMPACTION EFFORTS ON THE SITE.
14. PILES MAY NOT BE ALTERED IN ANY WAY WITHOUT UNIRAC WRITTEN APPROVAL. UNLESS IT IS TO CUT A PILE FOR USE IN THE CONCRETE FOUNDATION OPTION.
15. PILES HAVE BEEN DESIGNED FOR STATIC LOADING UNDER THE DESIGN CRITERIA IN GENERAL NOTE 15.

QUALITY ASSURANCE AND SPECIAL INSPECTION:

1. TESTING LABORATORY: RETAINED BY OWNER AND SATISFACTORY TO ENGINEER OF RECORD (THROUGH UNIRAC) AND GOVERNING CODE AUTHORITY TO PERFORM REQUIRED TESTS AND INSPECTIONS OF THIS CONTRACT AND APPLICABLE CODE. THE TYPE AND FREQUENCY OF SPECIAL INSPECTION, STRUCTURAL TESTING AND SUBSEQUENT REPORTING SHALL CONFORM TO THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE (IBC).

CONCRETE:

1. ALL ASPECTS OF WORK PERTAINING TO THE CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI 318-14, "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" AND THE LATEST EDITION OF "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" ACI 301, WITH MODIFICATIONS AS NOTED ON THE PROJECT DRAWINGS AND/OR SPECIFICATIONS.
2. HOT WEATHER CONCRETING SHALL CONFORM TO ACI 305, "HOT WEATHER CONCRETING".
3. COLD WEATHER CONCRETING SHALL CONFORM TO ACI 306, "COLD WEATHER CONCRETING".
4. ALL MIX DESIGNS SHALL BE DESIGNED BY A QUALIFIED TESTING LABORATORY AND SHALL BE WET STAMPED BY A CIVIL ENGINEER LICENSED IN THE JURISDICTION OF THE PROJECT, AS STIPULATED IN IBC CHAPTER 19.
5. TYPE II PORTLAND CEMENT SHALL BE USED AT ALL CONCRETE ALTERNATE FOUNDATION LOCATIONS FOR THE RACKING SYSTEM - WHERE CONCRETE IS REQUIRED AS AN ALTERNATE SOLUTION. (TYPE V CEMENT SHALL BE USED WHERE THE CONCRETE IS IN CONTACT WITH SOIL CONTAINING SULFATES IN EXCESS OF 3000 PPM. CONCRETE THAT WILL BE EXPOSED TO SULFATE-CONTAINING SOLUTIONS SHALL COMPLY WITH IBC CHAPTER 19 AND ACI 318 SEVERE AND VERY SEVERE SULFATE EXPOSURES AS IDENTIFIED IN THE PROJECT GEOTECHNICAL REPORT, THE WATER-CEMENT RATIO SHALL NOT EXCEED 0.44.)
6. IN THE PRESENCE OF REACTIVE AGGREGATE, CLASS F FLY ASH OR OTHER ASR MITIGATING ADMIXTURE SHALL BE INCORPORATED IN THE MIX SUCH THAT THE EXPANSION PRODUCED BY THE MORTAR-BAR METHOD (ASTM C1567) USING BLENDED AGGREGATES IS LESS THAN 0.1% AT 14 DAYS IMMERSED IN SOLUTION. WHERE CLASS F FLY ASH IS SELECTED AS A SUPPLEMENTAL ADMIXTURE, THE LOSS OF IGNITION SHALL BE LIMITED TO 2%. THE CONTRACTOR SHALL SUBMIT ALL CERTIFICATES SHOWING THE FLY ASH IS IN ACCORDANCE WITH ASTM 6618.
7. DO NOT USE CONCRETE OR GROUT CONTAINING CHLORIDES. WATER SHALL CONTAIN A CHLORIDE CONTENT LESS THAN 1000 PPM AS C1. DO NOT USE CONCRETE CONTAINING ALKALI-CARBONATE AND BICARBONATES PRESENT IN AGGREGATE IN EXCESS OF 1000 PPM. TESTS FOR THEIR EFFECT ON SETTING TIME AND 28-DAY STRENGTH SHALL BE EVALUATED.
8. HARD ROCK CONCRETE AGGREGATE SHALL CONFORM TO ALL REQUIREMENTS AND TESTS OF THE ASTM C33 CLASS DESIGNATION 35 AND PROJECT SPECIFICATIONS. EXCEPTIONS MAY BE USED ONLY WITH APPROVAL OF THE STRUCTURAL ENGINEER. PROVIDE CONCRETE MIX DESIGN WITH PROVEN SHRINKAGE CHARACTERISTICS OF LESS THAN 0.0005 INCHES/INCH.
9. MAXIMUM SIZED AGGREGATE OF 0.75".
10. SLUMP RANGE OF 3" ± 1" PER ASTM C143.
11. CONCRETE PLACEMENT SHALL BE IN ACCORDANCE WITH ACI STANDARD 304 AND PROJECT SPECIFICATIONS.
12. THE UNIRAC PILE SHALL BE CENTERED IN THE HOLE TO MAXIMIZE CONCRETE COVER AND THE HOLE SHALL BE CENTERED IN THE SPECIFIED LOCATION TO ALLOW FOR RACKING INSTALLABILITY.
13. THE TOP OF THE CONCRETE SHALL BE SMOOTHED AND SLOPED AT 2% TO FACILITATE POSITIVE DRAINAGE AWAY FROM THE UNIRAC PILE.
14. CONCRETE CHLORIDE PERMEABILITY SHALL BE CLASSIFIED AS HAVING "NEGLIGIBLE" TO "VERY LOW" CHLORIDE ION PERMEABILITY PER ASTM C1202.
15. CONCRETE SHOULD BE PLACED IN A CONTINUOUS FLOW WITHOUT SEGREGATING THE CONCRETE. DO NOT ALLOW CONCRETE TO FREE FALL MORE THAN 5 FEET UNLESS MEASURES ARE TAKEN TO ENSURE THAT CONCRETE DOES NOT HIT THE SIDES OF THE EXCAVATION DURING FREE FALL.
16. MECHANICALLY VIBRATE THE CONCRETE AT EACH PIER.
17. PRECAUTIONS SHOULD BE TAKEN DURING THE INSTALLATION OF PIERS TO MINIMIZE THE POSSIBILITY OF CAVING. PIER EXCAVATIONS SHOULD BE FILLED WITH CONCRETE AS SOON AFTER DRILLING AND INSPECTION AS POSSIBLE. SONOTUBES (OR EQUIVALENT) CAN BE UTILIZED, AS REQUIRED, ONLY IN THE UPPER 2 FT. OF THE AUGERED/DRILLED HOLE.
18. CONCRETE MIXING OPERATION SHALL CONFORM TO ASTM C-94.
19. AGGREGATE FOR HARDROCK CONCRETE SHALL CONFORM TO ALL REQUIREMENTS AND TESTS OF THE ASTM C-33 AND PROJECT SPECIFICATIONS. EXCEPTIONS MAY BE USED ONLY WITH THE PERMISSION OF THE ENGINEER OF RECORD.
20. THE DENSITY OF CONCRETE SHALL BE BETWEEN 140 PCF TO 150 PCF. THE 28-DAY STRENGTH OF CONCRETE SHALL BE 2500 PSI WITH A MAXIMUM WATER-CEMENT RATIO OF 0.40.

SHEET INDEX

REVISION BLOCK

MARK	DATE	DESCRIPTION
0	08/14/2019	Original Release
1	08/22/2019	Rev-1
2	03/30/2020	Rev-2
3	07/30/2020	Rev-3

OWNER/CLIENT:

ENGINEERING CONSULTANT:

PROFESSIONAL SEAL

SEE STATE SPECIFIC STAMPED & SIGNED GFT CERTIFICATION LETTER

UNIRAC'S GFT
GROUND FIXED TILT
STRUCTURAL RACKING DRAWINGS

1411 Broadway Boulevard NE
Albuquerque, New Mexico 87102
Phone: (505) 242-6411
Fax: (505) 242-6412
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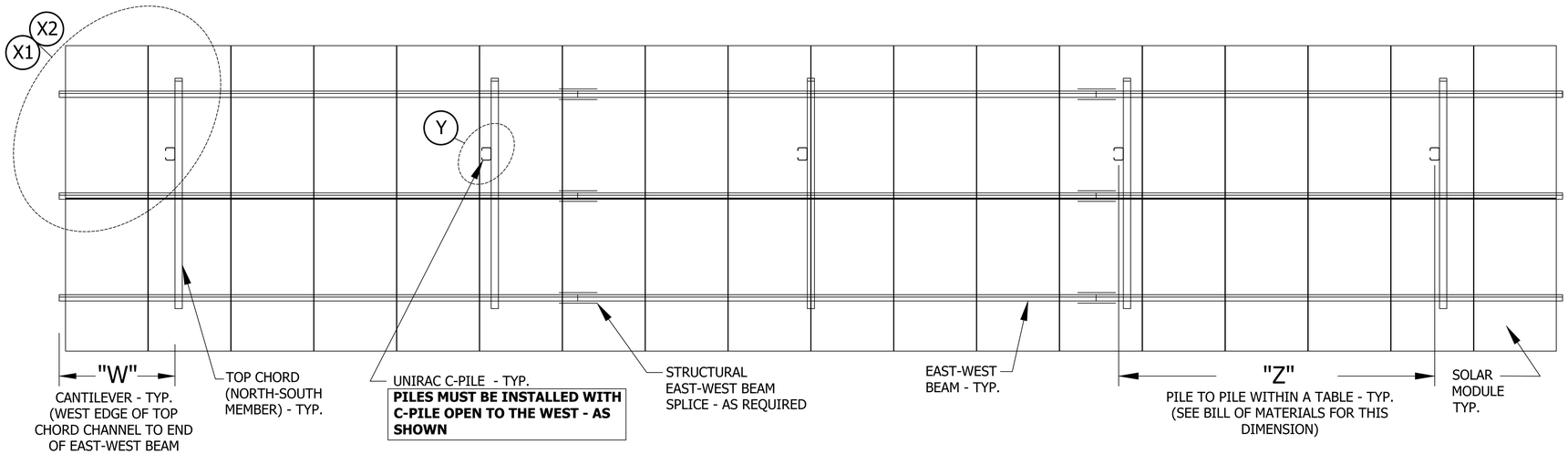
PROJECT NUMBER:	GFT
ENGINEERED BY:	JRS
DRAFTED BY:	JRS
REVIEWED BY:	EP
ORIGINAL RELEASE DATE:	08/14/2019
DRAWING SHEET SIZE:	'D' - 24x36

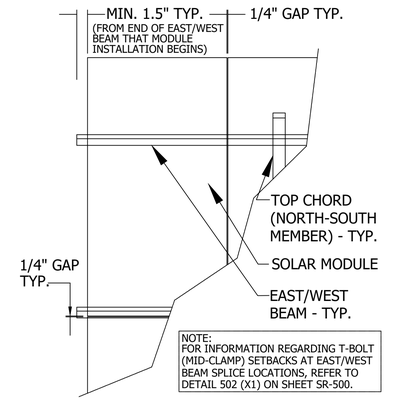
SHEET TITLE
GENERAL STRUCTURAL RACKING NOTES

SHEET NUMBER
SR-100



PLAN VIEW OF TABLE

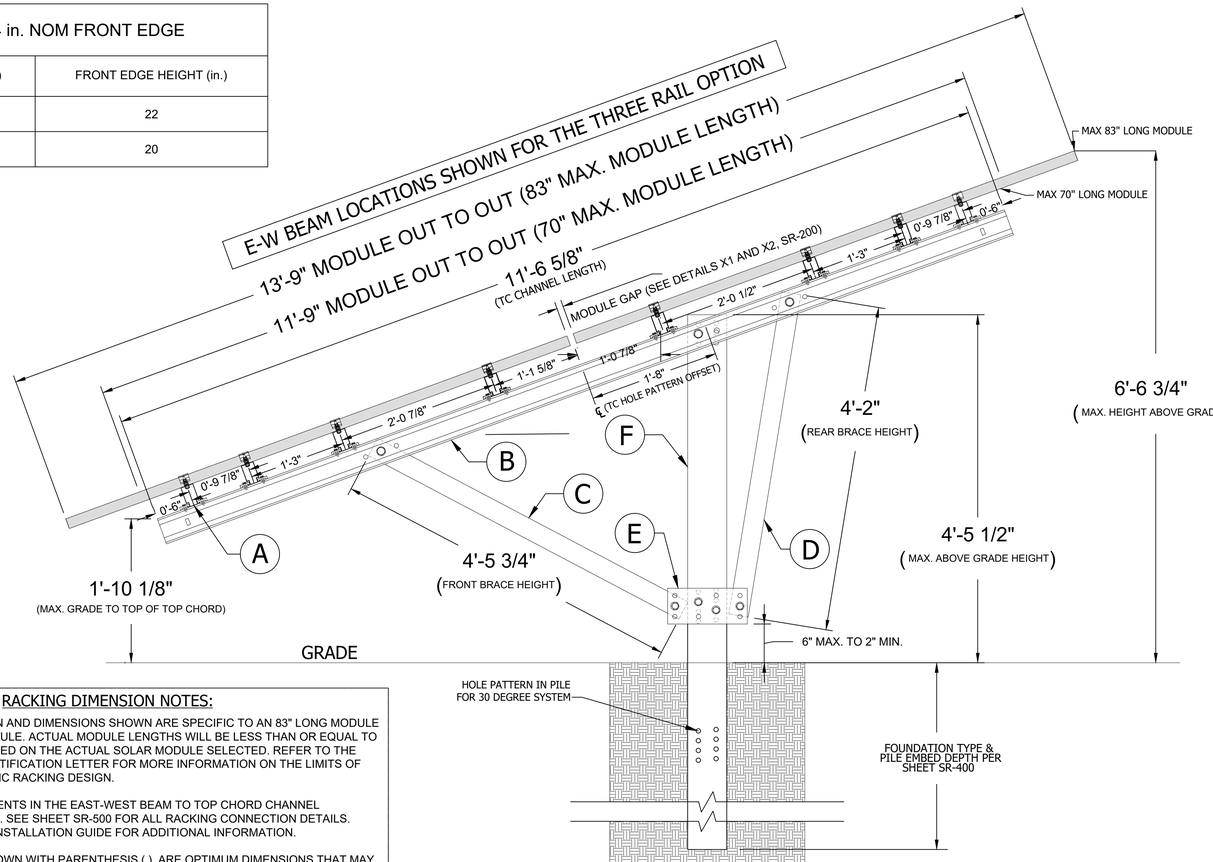
SEE LETTER FOR PILE QUANTITY REQUIREMENT PER TABLE SIZE
TABLE SIZE CANNOT EXCEED 30 COLUMNS OF MODULES



X1 DETAILED VIEW STANDARD CLAMPS

(SEE ALSO SHEET SR-500, DETAIL 502 (X1) AND 503 (X1)

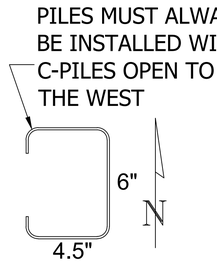
20° 20-24 in. NOM FRONT EDGE	
MODULE LENGTH (in.)	FRONT EDGE HEIGHT (in.)
77	22
83	20



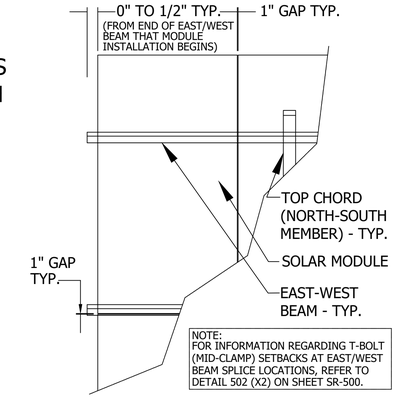
RACKING DIMENSION NOTES:

1. THIS CROSS SECTION AND DIMENSIONS SHOWN ARE SPECIFIC TO AN 83" LONG MODULE AND A 70" LONG MODULE. ACTUAL MODULE LENGTHS WILL BE LESS THAN OR EQUAL TO WHAT IS SHOWN BASED ON THE ACTUAL SOLAR MODULE SELECTED. REFER TO THE STATE SPECIFIC CERTIFICATION LETTER FOR MORE INFORMATION ON THE LIMITS OF THIS REGION SPECIFIC RACKING DESIGN.
2. FINE TUNE ADJUSTMENTS IN THE EAST-WEST BEAM TO TOP CHORD CHANNEL CONNECTIONS EXIST. SEE SHEET SR-500 FOR ALL RACKING CONNECTION DETAILS. REFER TO THE GFT INSTALLATION GUIDE FOR ADDITIONAL INFORMATION.
3. ALL DIMENSIONS SHOWN WITH PARENTHESIS ( ), ARE OPTIMUM DIMENSIONS THAT MAY VARY SLIGHTLY DUE TO THE FOLLOWING; INSTALLATION SYSTEM USING DIFFERENT HOLE OPTIONS, VARIANCE IN THE PILE STICK-UP HEIGHT, MODULE SELECTION, OR VARIANCE IN THE FINISHED/EXISTING GRADE. ALL OTHER DIMENSIONS ARE FIXED.

SECTION VIEW OF GFT TABLE - 20° TILT



Y DETAILED VIEW



X2 DETAILED VIEW PRO SERIES CLAMPS

(SEE ALSO SHEET SR-500, DETAIL 502 (X2) AND 503 (X2)

GFT PARTS LIST				
REF NUMBER	PART DESCRIPTION	CATALOG #	GUAGE/ THICKNESS	FINISH
A	ALUMINUM E-W BEAM (166" OR 246")	411166M OR 411246M	SEE SHEET SR-100	
B	TOP CHORD CHANNEL	404036	SEE SHEET SR-100	
C	FRONT DIAGONAL BRACE (20°)	404031	SEE SHEET SR-100	
D	REAR DIAGONAL BRACE (20°)		SEE SHEET SR-100	
E	DIAGONAL BRACE PLATE		SEE SHEET SR-100	
F	C-PILE (12.5 FT OR 15 FT)	404001 OR 404002	SEE SHEET SR-100	

REVISION BLOCK		
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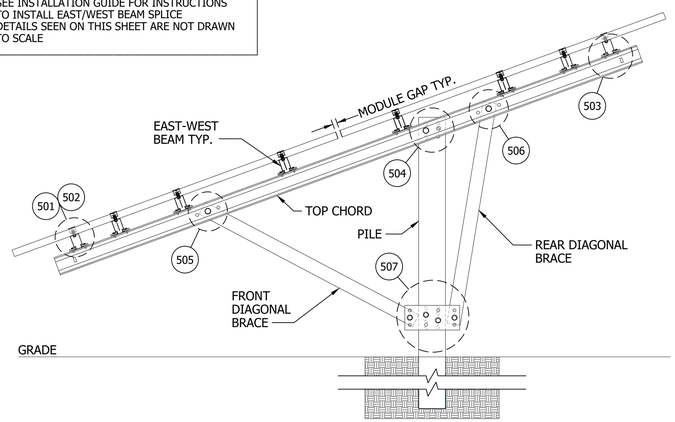
DRAWING SHEET SIZE:	"D" - 24x36

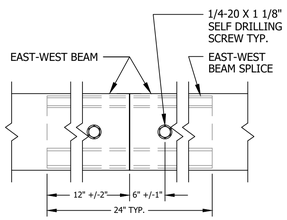
SHEET TITLE
GFT TABLE CROSS-SECTION AND PARTS LIST (20 DEGREE TILT)

SHEET NUMBER
SR-200
SHEET 2 of 11

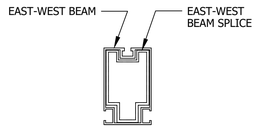
RACKING DETAIL NOTES:

1. SEE INSTALLATION GUIDE FOR PILE TOLERANCES
2. SEE INSTALLATION GUIDE FOR CONNECTION ADJUSTMENT INSTRUCTIONS
3. SEE INSTALLATION GUIDE FOR INSTRUCTIONS TO INSTALL EAST/WEST BEAM SPLICE
4. DETAILS SEEN ON THIS SHEET ARE NOT DRAWN TO SCALE

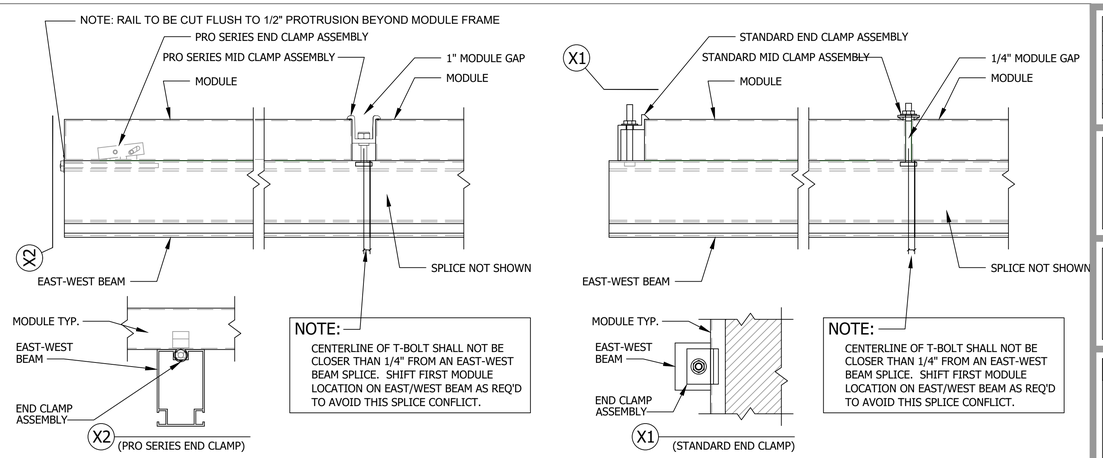




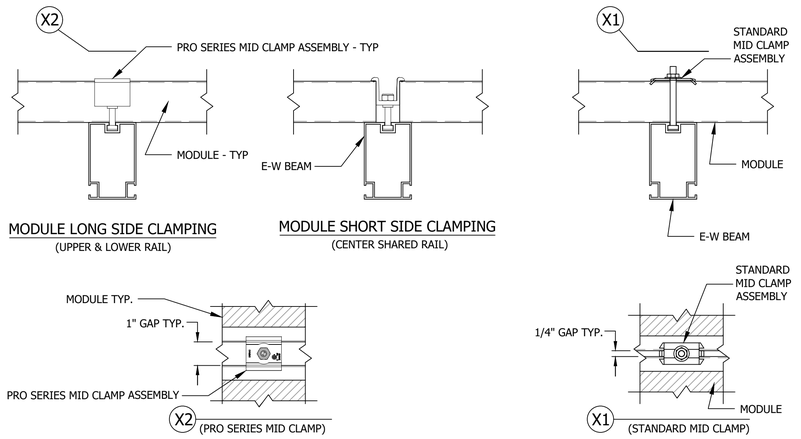
EAST-WEST BEAM WITH SPLICE
(TYPICAL ELEVATION)



501 EAST-WEST BEAM WITH SPLICE
(TYPICAL SECTION)



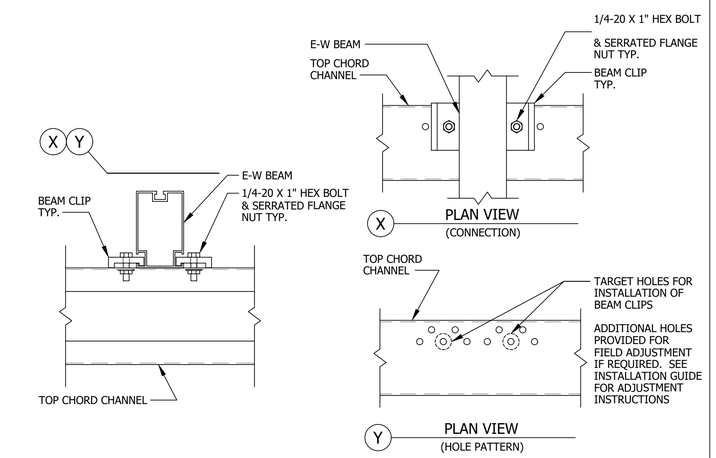
502 MODULE TO EAST-WEST BEAM END CLAMP CONNECTION



MODULE LONG SIDE CLAMPING
(UPPER & LOWER RAIL)

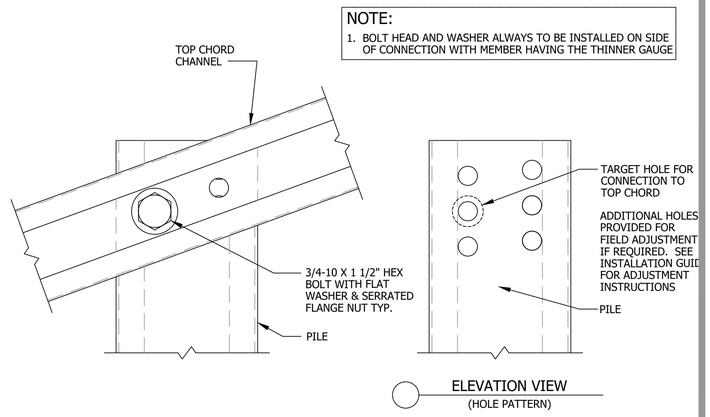
MODULE SHORT SIDE CLAMPING
(CENTER SHARED RAIL)

503 MODULE TO EAST-WEST BEAM MID CLAMP CONNECTION



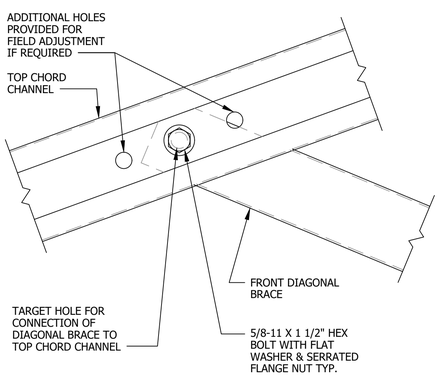
504 EAST-WEST BEAM TO TOP CHORD CONNECTION

NOTE:
1. BOLT HEAD AND WASHER ALWAYS TO BE INSTALLED ON SIDE OF CONNECTION WITH MEMBER HAVING THE THINNER GAUGE



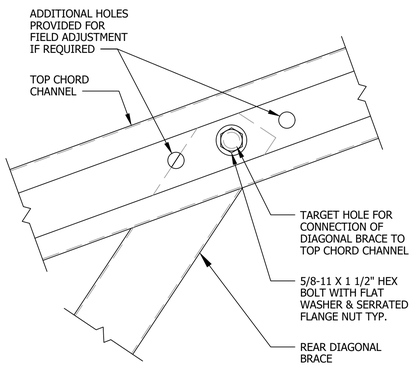
505 TOP CHORD TO PILE CONNECTION

NOTE:
1. BOLT HEAD AND WASHER ALWAYS TO BE INSTALLED ON SIDE OF CONNECTION WITH MEMBER HAVING THE THINNER GAUGE



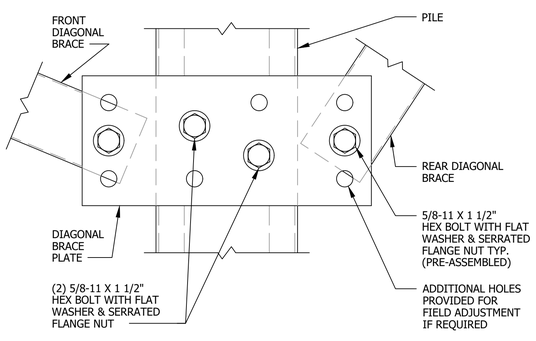
506 TOP CHORD TO DIAGONAL BRACE CONNECTION
(FRONT BRACE)

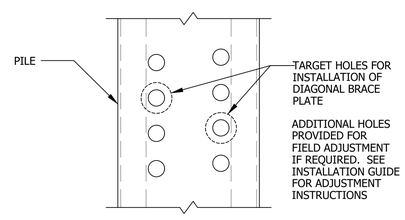
NOTE:
1. BOLT HEAD AND WASHER ALWAYS TO BE INSTALLED ON SIDE OF CONNECTION WITH MEMBER HAVING THE THINNER GAUGE



507 TOP CHORD TO DIAGONAL BRACE CONNECTION
(REAR BRACE)

NOTE:
1. BOLT HEAD AND WASHER ALWAYS TO BE INSTALLED ON SIDE OF CONNECTION WITH MEMBER HAVING THE THINNER GAUGE





508 DIAGONAL BRACE TO PILE CONNECTION

REVISION BLOCK		
MARK	DATE	DESCRIPTION
0	08/14/2019	Original Release
1	08/22/2019	Rev-1
2	03/30/2020	Rev-2
3	07/30/2020	Rev-3

OWNER/CLIENT:

ENGINEERING CONSULTANT:

PROFESSIONAL SEAL

SEE STATE SPECIFIC STAMPED & SIGNED GFT CERTIFICATION LETTER

UNIRAC'S GFT GROUND FIXED TILT STRUCTURAL RACKING DRAWINGS

UNIRAC®
1411 Broadway Boulevard NE
Albuquerque, New Mexico 87102
Phone: (505) 242-6411
Fax: (505) 242-6412
www.unirac.com

PROJECT NUMBER:	GFT
ENGINEERED BY:	JRS
DRAFTED BY:	JRS
REVIEWED BY:	EP
ORIGINAL RELEASE DATE:	08/14/2019
DRAWING SHEET SIZE:	'D' - 24x36

SHEET TITLE
RACKING DETAILS

SHEET NUMBER
SR-500
SHEET 11 of 11

ARCADIA
GROUND MOUNT PV SYSTEM

985.88 KW-DC SOLAR PV SYSTEM
1300 BAPTIST CHURCH ROAD
YORKTOWN HEIGHTS, NEW YORK 10598

SCOPE OF WORK:

TO INSTALL A GROUND MOUNTED SOLAR PHOTOVOLTAIC (PV) SYSTEM.
THE POWER GENERATED BY THE PV SYSTEM WILL BE INTERCONNECTED WITH THE UTILITY GRID

THE PV SYSTEM DOES NOT INCLUDE STORAGE BATTERIES

CODES & STANDARDS:

2017 NATIONAL ELECTRICAL CODE
2015 INTERNATIONAL BUILDING CODE
2018 INTERNATIONAL FIRE CODE
UL 1741

LOT INFORMATION:

11 +/- ACRES
PARCEL ID # 47.11-1-4
ZONING DISTRICT - R-1 ONE FAMILY RESIDENTIAL

RECORD OWNER:

ARCADIA HOLDING CO., LLC
14 SUN VALLEY ROAD
NORTH SALEM, NEW YORK 10560

RECORD APPPLICANT:

ECOGY NEW YORK XIII, LLC
315 FLATBUSH AVENUE #393
BROOKLYN, NEW YORK 11217

SYSTEM SUMMARY:

985.88 kW DC
800.0 kW-AC

TILT ANGLE = 20 °
AZIMUTH = 172 °

EQUIPMENT:

MODULE:
(2,186) BOVIET 450W MODULE

INVERTER:
(8) SOLAREDGE 100K-US INVERTER

RACKING:
UNIRAC

DAS:
ECOGY ECONODE

UTILITY:

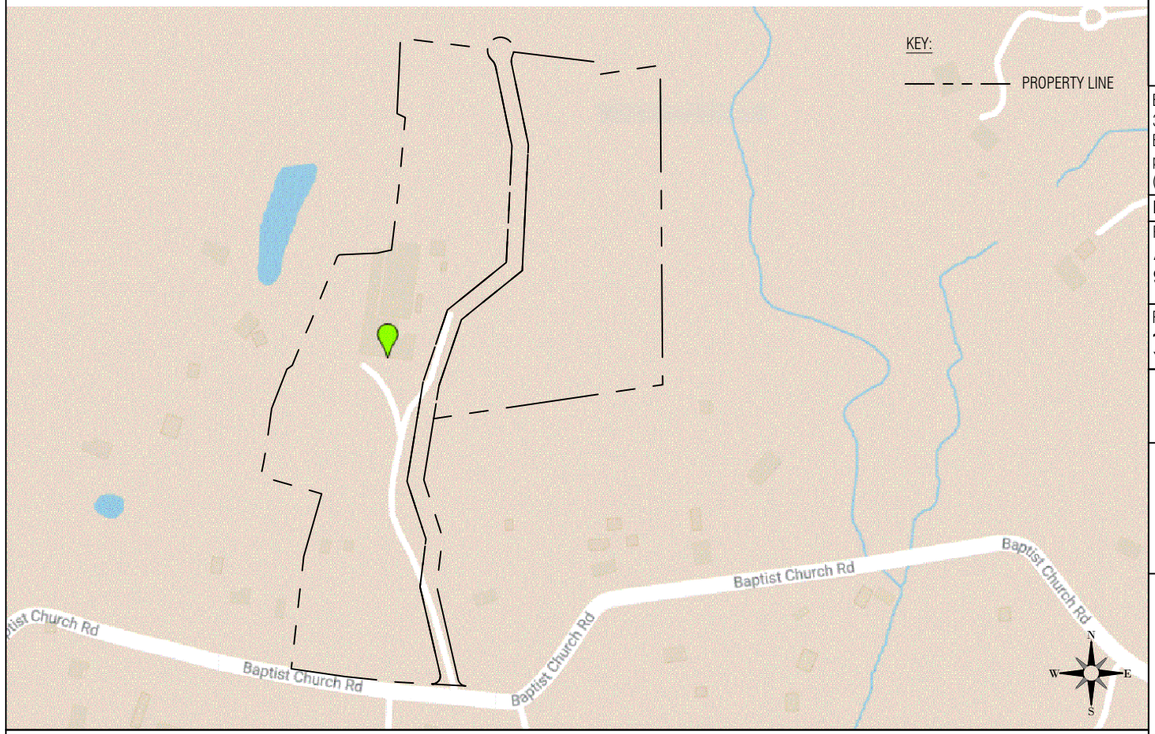
CON ED

DRAWING LIST	
DWG. NO.	DRAWING TITLE
G-001	TITLE SHEET
PV-101	SITE PLAN
PV-101.1	PARTIAL SITE PLAN
PV-507	MISCELLANEOUS DETAILS
PV-200	GROUND MOUNT ELEVATION
PV-200.1	GROUND MOUNT DETAIL

REVIEW PLAN SET
ISSUE DATE: 07/28/2020

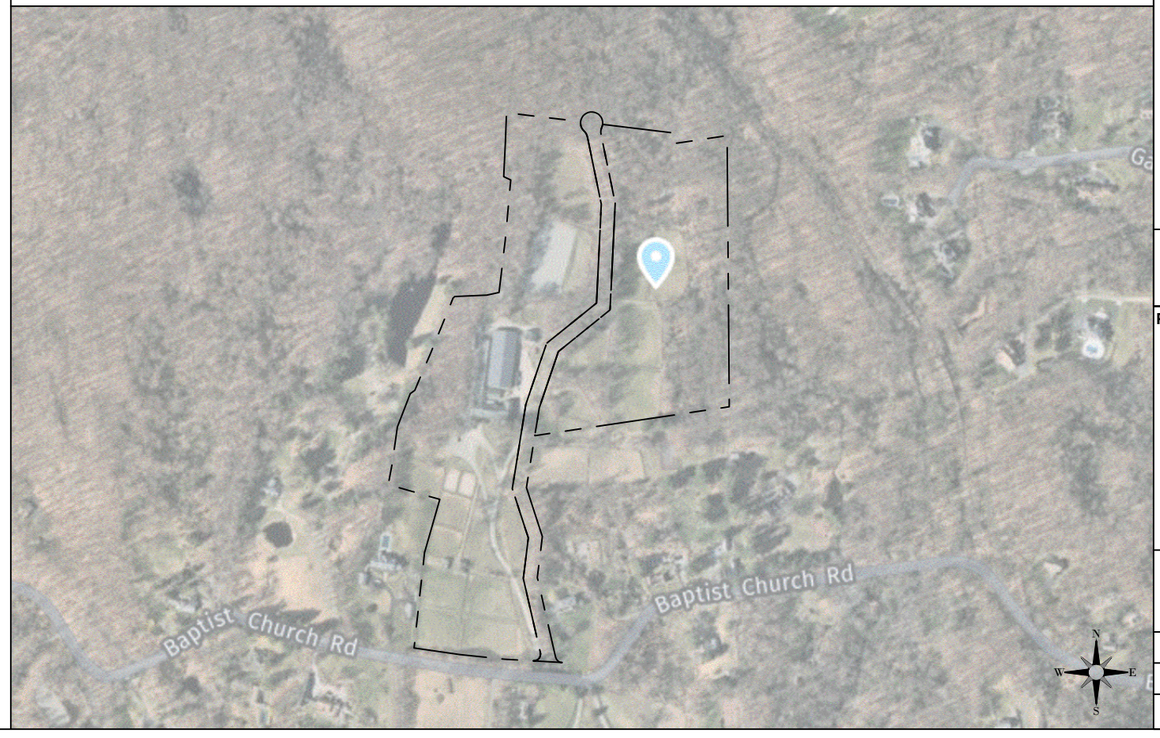
LOCATION MAP

SCALE: NTS



SATELLITE MAP

SCALE: NTS



ECOGY ENERGY
ECOGY ENERGY
315 FLATBUSH AVENUE, #393
BROOKLYN, NY 11217
projectmanagement@ecogyenergy.com
(718)-304-0945

Ecogy New York XIII LLC

Project Name:
ARCADIA GROUND
985.88 kW-DC

Project Site:
1300 BAPTIST CHURCH RD
YORKTOWN, NY, 10598

#	REVISION DESCRIPTION	DATE	BY

Professional Stamp

PRELIMINARY

SHEET NAME:
TITLE SHEET

PROJECT NUMBER:	DRAWN BY:	CHECKED BY:
---	DQP	---
DATE: 07/28/2021	DWG. NUMBER: G-001	
SHEET NUMBER: - of -		

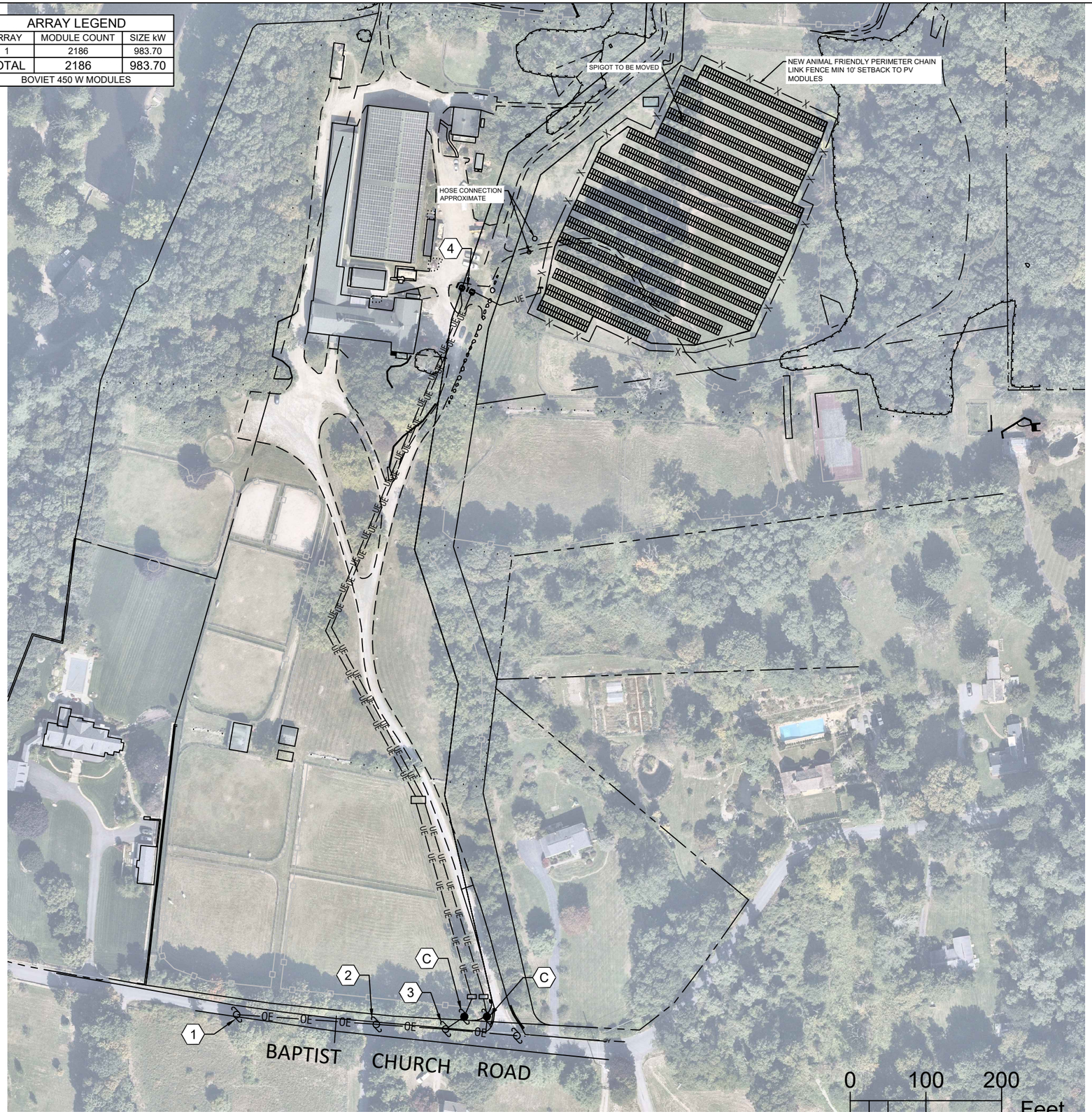
CUSTOMER EQUIPMENT KEY:

- (A) SOLAREDGE INVERTERS
- (B) 600A AC COMBINER PANEL
  MAIN PV AC 1200 A DISCONNECT
  SECONDARY METER
  DAS (ECONODE)
- (C) NEW CUSTOMER OWNED RISER POLE WITH METER

UTILITY EQUIPMENT KEY:

- (1) EXISTING UTILITY POLE #30
- (2) EXISTING UTILITY POLE #29
- (3) NEW UTILITY OWNED POLE
- (4) NEW UTILITY OWNED TRANSFORMER

ARRAY LEGEND		
ARRAY	MODULE COUNT	SIZE kW
1	2186	983.70
TOTAL	2186	983.70
BOVIET 450 W MODULES		



SYMBOLS LEGEND:

- EXISTING UTILITY POLE
- PROPOSED UTILITY POLE

LINETYPE LEGEND:

- APPROXIMATE PROPERTY LINE
- PROPERTY LINE SETBACK
- PROPOSED CHAINLINK FENCE
- OVERHEAD ELECTRIC
- UNDERGROUND ELECTRIC
- APPROXIMATE WETLAND BOUNDARY
- WETLAND 100' BUFFER

ECOGY ENERGY

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projectmanagement@ecogyenergy.com
(718)-304-0945

Ecogy New York XIII LLC

Project Name:
ARCADIA GROUND
985.88 kW-DC

Project Site:
1300 BAPTIST CHURCH RD
YORKTOWN, NY, 10598

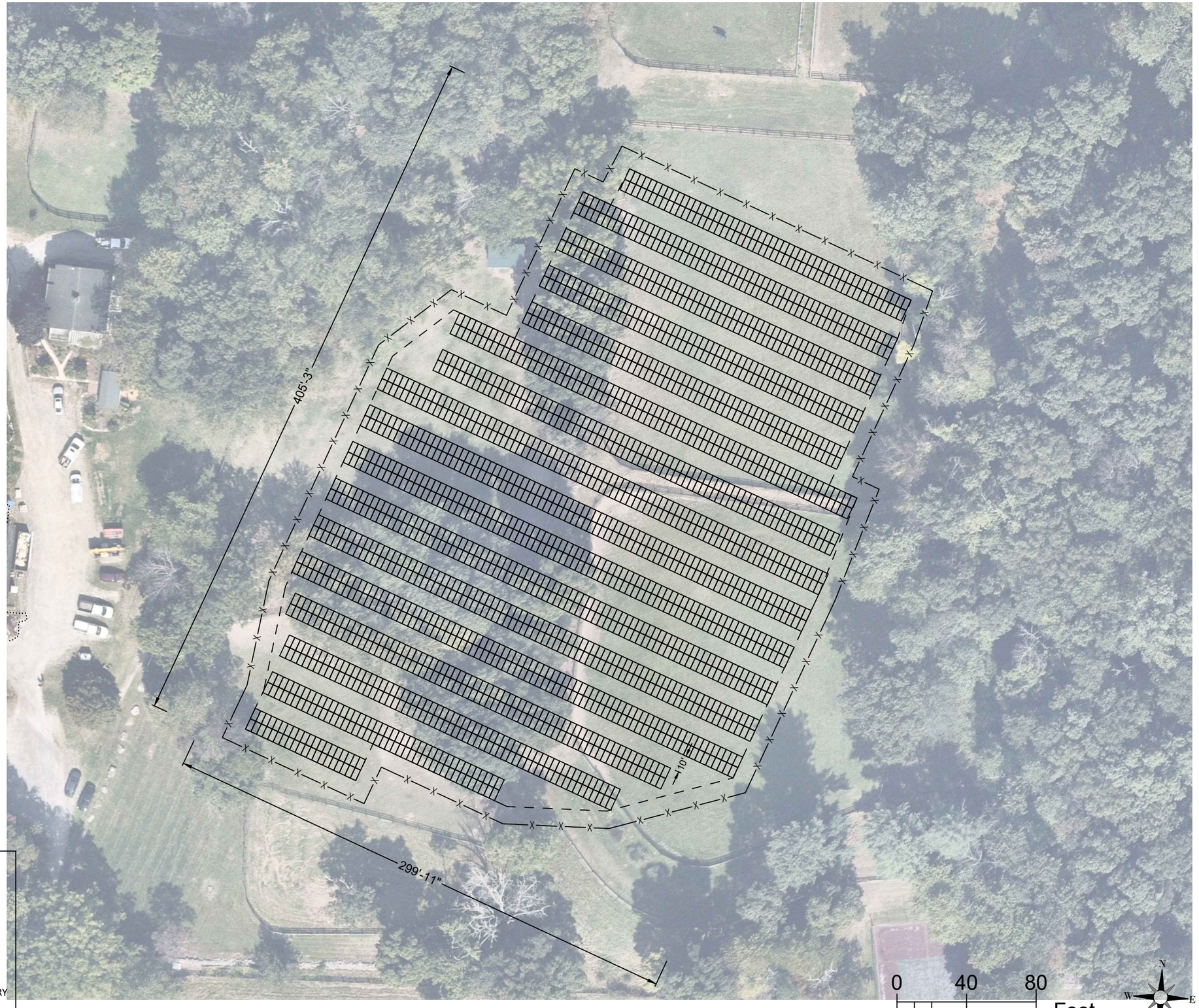
#	REVISION DESCRIPTION	DATE	BY

Professional Stamp

PRELIMINARY

SHEET NAME:
SITE PLAN

PROJECT NUMBER:	DRAWN BY:	CHECKED BY:
---	SCG	---
DATE: 07/28/2021	DWG. NUMBER: PV-100	
SHEET NUMBER: X of X		



SYMBOLS LEGEND:

- EXISTING UTILITY POLE
- PROPOSED UTILITY POLE

LINETYPE LEGEND:

- APPROXIMATE PROPERTY LINE
- PROPERTY LINE SETBACK
- PROPOSED CHAINLINK FENCE
- OVERHEAD ELECTRIC
- UNDERGROUND ELECTRIC
- APPROXIMATE WETLAND BOUNDARY
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ECOGY ENERGY

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315 FLATBUSH AVENUE, #393
BROOKLYN, NY 11217
projectmanagement@ecogyenergy.com
(718)-304-0945

Ecogy New York XIII LLC

Project Name:
ARCADIA GROUND
985.88 kW-DC

Project Site:
1300 BAPTIST CHURCH RD
YORKTOWN, NY, 10598

#	REVISION DESCRIPTION	DATE	BY

Professional Stamp

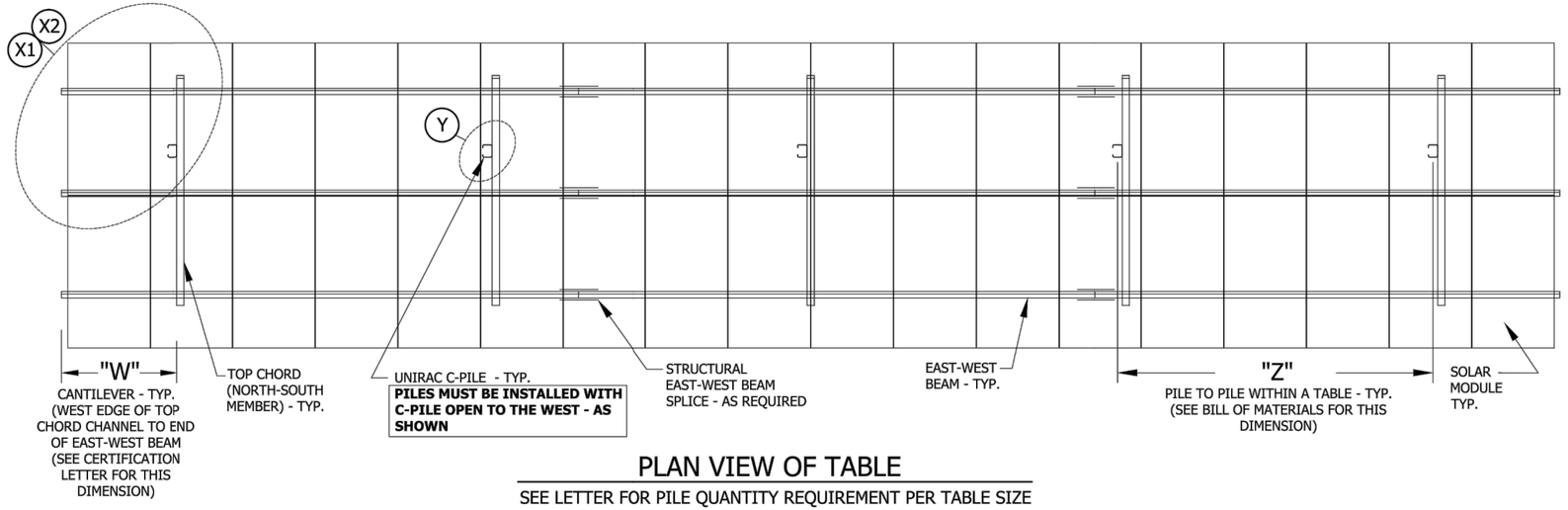
PRELIMINARY

SHEET NAME:
PARTIAL
SITE PLAN

PROJECT NUMBER:	DRAWN BY:	CHECKED BY:
---	SCG	---

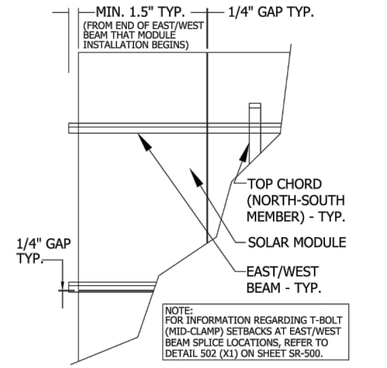
DATE:	DWG. NUMBER:
07/28/2021	PV-100.1

SHEET NUMBER: X of X



PLAN VIEW OF TABLE

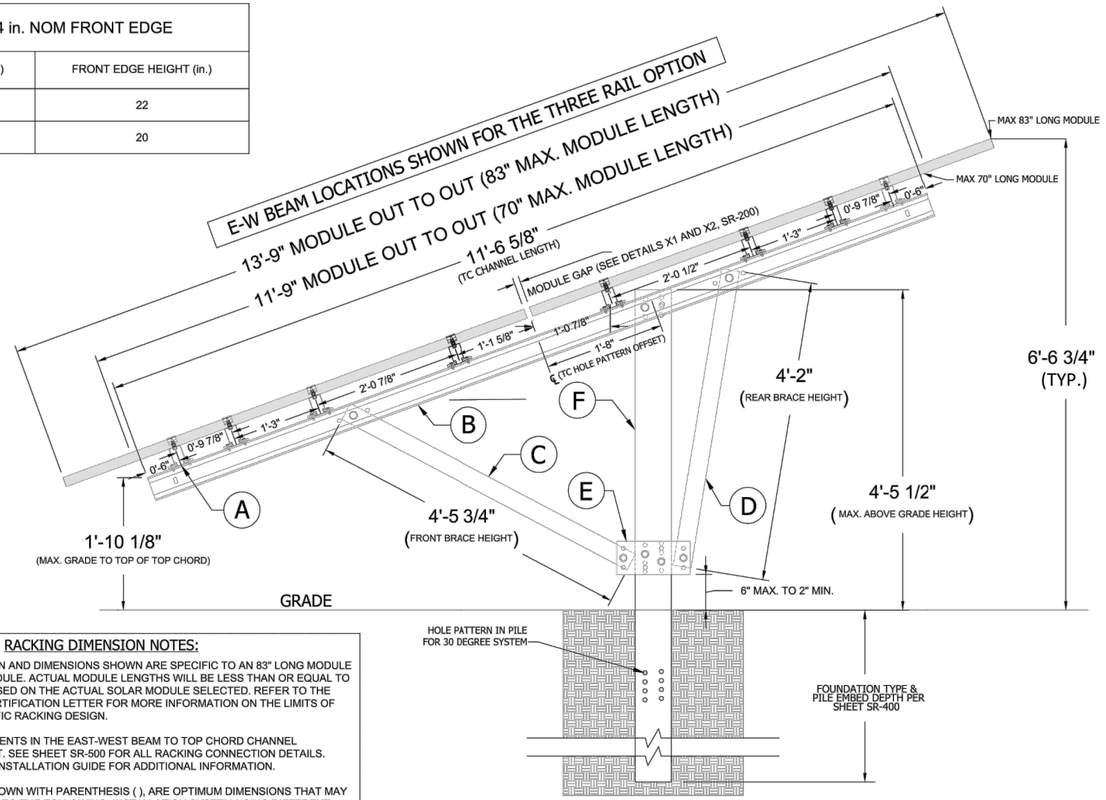
SEE LETTER FOR PILE QUANTITY REQUIREMENT PER TABLE SIZE
TABLE SIZE CANNOT EXCEED 30 COLUMNS OF MODULES



X1 DETAILED VIEW STANDARD CLAMPS

(SEE ALSO SHEET SR-500, DETAIL 502 (X1) AND 503 (X1)

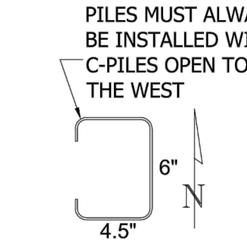
20° 20-24 in. NOM FRONT EDGE	
MODULE LENGTH (in.)	FRONT EDGE HEIGHT (in.)
77	22
83	20



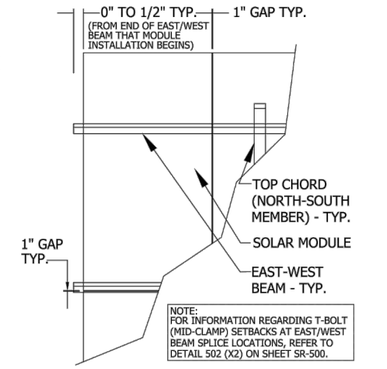
RACKING DIMENSION NOTES:

1. THIS CROSS SECTION AND DIMENSIONS SHOWN ARE SPECIFIC TO AN 83" LONG MODULE AND A 70" LONG MODULE. ACTUAL MODULE LENGTHS WILL BE LESS THAN OR EQUAL TO WHAT IS SHOWN BASED ON THE ACTUAL SOLAR MODULE SELECTED. REFER TO THE STATE SPECIFIC CERTIFICATION LETTER FOR MORE INFORMATION ON THE LIMITS OF THIS REGION SPECIFIC RACKING DESIGN.
2. FINE TUNE ADJUSTMENTS IN THE EAST-WEST BEAM TO TOP CHORD CHANNEL CONNECTIONS EXIST. SEE SHEET SR-500 FOR ALL RACKING CONNECTION DETAILS. REFER TO THE GFT INSTALLATION GUIDE FOR ADDITIONAL INFORMATION.
3. ALL DIMENSIONS SHOWN WITH PARENTHESIS ( ), ARE OPTIMUM DIMENSIONS THAT MAY VARY SLIGHTLY DUE TO THE FOLLOWING; INSTALLATION SYSTEM USING DIFFERENT HOLE OPTIONS, VARIANCE IN THE PILE STICK-UP HEIGHT, MODULE SELECTION, OR VARIANCE IN THE FINISHED/EXISTING GRADE. ALL OTHER DIMENSIONS ARE FIXED.

SECTION VIEW OF GFT TABLE - 20° TILT



Y DETAILED VIEW



X2 DETAILED VIEW PRO SERIES CLAMPS

(SEE ALSO SHEET SR-500, DETAIL 502 (X2) AND 503 (X2)

GFT PARTS LIST				
REF NUMBER	PART DESCRIPTION	CATALOG #	GUAGE/ THICKNESS	FINISH
A	ALUMINUM E-W BEAM (166" OR 246")	411166M OR 411246M	SEE SHEET SR-100	
B	TOP CHORD CHANNEL	404036	SEE SHEET SR-100	
C	FRONT DIAGONAL BRACE (20°)	404031	SEE SHEET SR-100	
D	REAR DIAGONAL BRACE (20°)		SEE SHEET SR-100	
E	DIAGONAL BRACE PLATE		SEE SHEET SR-100	
F	C-PILE (12.5 FT OR 15 FT)	404001 OR 404002	SEE SHEET SR-100	

ECOGY ENERGY

ECOGY ENERGY
315 FLATBUSH AVENUE, #393
BROOKLYN, NY 11217
projectmanagement@ecogyenergy.com
(718)-304-0945

Ecogy New York XIII LLC

Project Name:
ARCADIA GROUND
985.88 kW-DC

Project Site:
1300 BAPTIST CHURCH RD
YORKTOWN, NY, 10598

#	REVISION DESCRIPTION	DATE	BY

Professional Stamp

PRELIMINARY

SHEET NAME:
GROUND MOUNT ELEVATION

PROJECT NUMBER:	DRAWN BY:	CHECKED BY:
---	DQP	---

DATE: 07/28/2021
SHEET NUMBER: of
DWG. NUMBER: PV-200

20 DEGREE UNIRAC STEEL C-PILE FOUNDATION DEPTHS

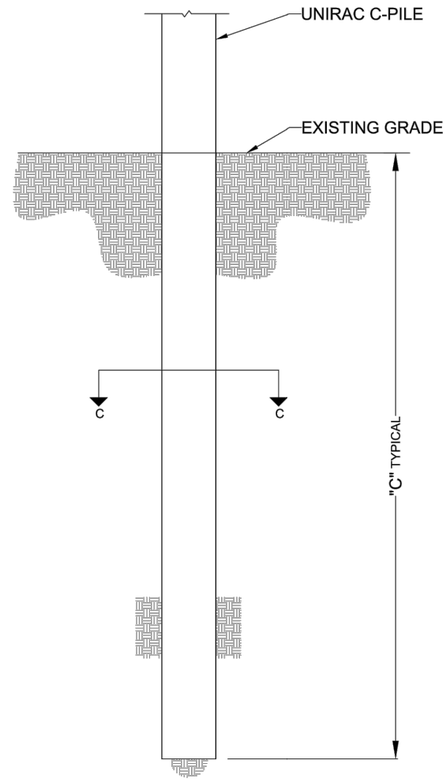
(REFER TO SHEET SR-200 FOR PILE STICK-UP HEIGHT) (c)

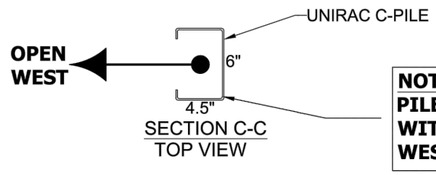
FOUNDATION TYPE	DETAIL NUMBER	DIMENSION "C"
FULLY DRIVEN PILE (b)	403	8'-0"
(b) PILE EMBEDMENT DEPTH NEEDS TO BE VERIFIED BY PILE TESTING OR FROM A GEOTECHNICAL OR PROFESSIONAL ENGINEER.		
(c) BASED ON THE PILE STICK-UP HEIGHT FOR A STANDARD 20 DEGREE GFT TABLE, ALL PILE EMBEDMENT DEPTHS THAT ARE 8'-1" OR GREATER, REQUIRE A 15 FT LONG PILE.		

30 DEGREE UNIRAC STEEL C-PILE FOUNDATION DEPTHS

(REFER TO SHEET SR-300 FOR PILE STICK-UP HEIGHT) (e)

FOUNDATION TYPE	DETAIL NUMBER	DIMENSION "C"
FULLY DRIVEN PILE (d)	403	8'-6"
(d) PILE EMBEDMENT DEPTH NEEDS TO BE VERIFIED BY PILE TESTING OR FROM A GEOTECHNICAL OR PROFESSIONAL ENGINEER.		
(e) BASED ON THE PILE STICK-UP HEIGHT FOR A STANDARD 30 DEGREE GFT TABLE, ALL PILE EMBEDMENT DEPTHS THAT ARE 6'-4" OR GREATER, REQUIRE A 15 FT LONG PILE.		





NOTE:
PILES MUST BE INSTALLED WITH C-PILE OPEN TO THE WEST - AS SHOWN

403 FULLY DRIVEN PILE

(ALTERNATE OPTION) NOT TO SCALE

FOUNDATION 403: FULLY DRIVEN PILE

1. DRIVEN PILE FOUNDATIONS MAY NOT BE USED IN SOILS THAT CONTAIN SILT OR CLAY WITH GROUNDWATER WITHIN 12 FEET OF THE SURFACE UNLESS APPROVED BY A GEOTECHNICAL ENGINEER. IT IS RECOMMENDED TO VERIFY GROUNDWATER IS NOT PRESENT IF USING THIS FOUNDATION TYPE IN FROST PRONE REGIONS.
2. PILES MUST BE INSTALLED TO THE FULL DEPTH. PILES NOT DRIVEN TO FULL DEPTH ARE CONSIDERED FAILED PILES AND A DIFFERENT FOUNDATION MUST BE UTILIZED.
3. FOUNDATIONS MUST NOT BE INSTALLED IN ORGANIC SOILS OR IN AREAS WITH GROUNDWATER NEAR THE SURFACE.
4. PILE EMBEDMENT MUST BE DETERMINED BY A LICENSED CIVIL ENGINEER OR BY SITE PILE TESTS.

ECOGY ENERGY
315 FLATBUSH AVENUE, #393
BROOKLYN, NY 11217
projectmanagement@ecogyenergy.com
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Ecogy New York XIII LLC

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ARCADIA GROUND
985.88 kW-DC

Project Site:
1300 BAPTIST CHURCH RD
YORKTOWN, NY, 10598

#	DESCRIPTION	DATE	BY

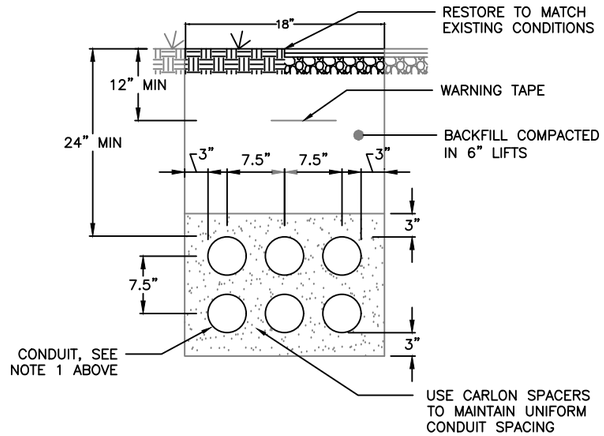
Professional Stamp

PRELIMINARY

SHEET NAME:
GROUND MOUNT ELEVATION

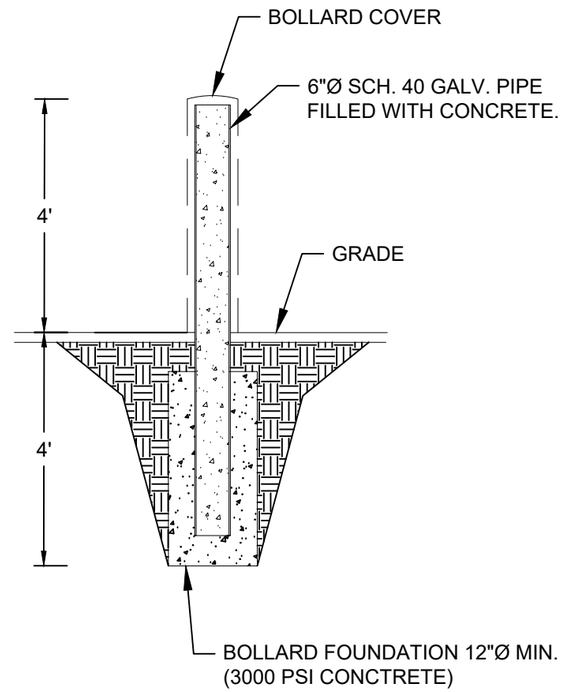
PROJECT NUMBER:	DRAWN BY:	CHECKED BY:
---	DQP	---

DATE: 07/28/2021
SHEET NUMBER: of
DWG. NUMBER: PV-200.1

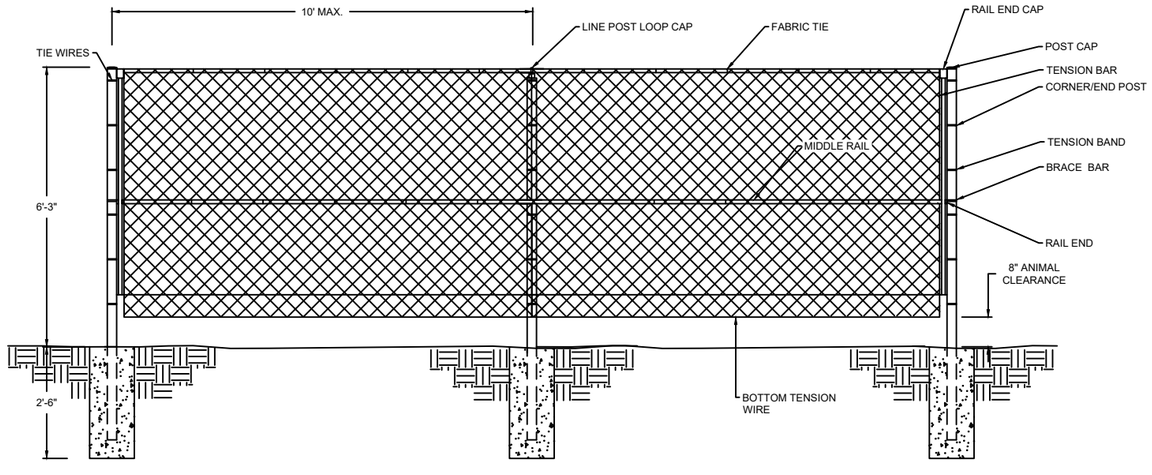


NOTE:
1. ALL UNDEGROUND CONDUIT SHALL BE PVC AND TRANSITION TO RMC FOR ELBOW. RMC ELBOW DOES NOT NEED TO BE BONDED IF ANY PART OF THE ELBOW IS 18" DEEP (NEC 250.86 EXCEPTION 3)
2. UNDER ROADS AND PARKING AREAS ENCASEMENT SHALL BE 3000 PSI CONCRETE. UNDER GRASSY AREAS ENCASEMENT SHALL BE SAND
3. COORDINATE WITH DIG SAFE AND LOCAL UTILITIES PRIOR TO EXCAVATING

TRENCH DETAIL
N.T.S.



BOLLARD DETAIL
N.T.S.



FENCE DETAIL
N.T.S.

NOTE:
1. FENCING TO BE ANIMAL FRIENDLY WITH AN 8" MIN. CLEARANCE FROM BOTTOM OF FENCE TO THE GROUND.

ECOGY ENERGY
ECOGY ENERGY
315 FLATBUSH AVENUE, #393
BROOKLYN, NY 11217
projectmanagement@ecogyenergy.com
(718)-304-0945

Ecogy New York XIII LLC

Project Name:
ARCADIA GROUND
985.88 kW-DC

Project Site:
1300 BAPTIST CHURCH RD
YORKTOWN, NY, 10598

#	REVISION DESCRIPTION	DATE	BY

Professional Stamp

PRELIMINARY

SHEET NAME:
MISC. MECHANICAL DETAILS

PROJECT NUMBER:	DRAWN BY:	CHECKED BY:
---	DQP	---
DATE: 07/28/2021	DWG. NUMBER: PV-507	
SHEET NUMBER: X of X		

PAUL COWIE AND ASSOCIATES
consulting arborists / urban foresters

11 N. Beverwyck Road
Lake Hiawatha, New Jersey 07034

v. 973.276.0599
f. 973.276.9616
w. www.paulcowieandassociates.com
e. pcowie@paulcowieandassociates.com

April 7, 2021

Julia Magliozzo
Director of Operations
Ecogy Energy
315 Flatbush Avenue #393
Brooklyn, NY 11217

Re: Arcadia Farm, Yorktown, NY
Recommended Tree + Shrub Species for Planting

Dear Julia:

As requested, we have listed in the attached table several tree and shrub species in various mature size classes that are appropriate for planting at Arcadia Farm.

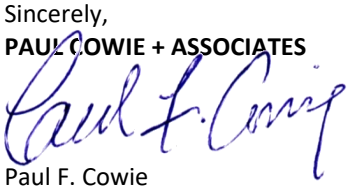
All are native or non-invasive naturalized species that can be expected to grow well with proper maintenance.

These recommendations are based on our evaluation of the relative performance and condition of the various tree species currently growing on the property, and review of relevant site conditions including local climate, exposures, soil conditions, drainage, and other factors.

Generally, we did not find soil or other site constraints that would severely limit the species that could be planted on this site. Nevertheless, because the property is large with varying topography and exposures, the relative success of different species will depend upon where they are planted. Care should be taken to site trees in areas where the soils, drainage, exposure, and other site factors meet the species' inherent requirements.

Please do not hesitate to call if you have any questions or need any additional information.

Sincerely,
PAUL COWIE + ASSOCIATES



Paul F. Cowie
President

PFC:pc
Encl.

Arcadia Farm, Yorktown, NY

Recommended Tree + Shrub Species for Planting

April 7, 2021

MATURE HEIGHT CLASS	COMMON NAME	BOTANICAL NAME	NAMED CULTIVARS	SHADE PREFERENCE	COMMENTS
Compact (8'-12')	American cranberry-bush	*Viburnum opulus* var. *americanum*	'Bailey Compact' 'Compactum' 'Hahs' 'J.N. Select'	Full to partial sun	---
Compact (6'-12')	Spicebush	*Lindera benzoin*	---	Full to partial sun	Native deciduous shrub. Common forest understory inhabitant.
Compact (8')	Common winterberry	*Ilex verticillata*	'Spravy' (female) 'Jim Dandy' (male) 'Winter Red' (female) 'Southern Gentleman' (male)	Full to partial sun	Supports bird and butterfly populations. Both male and female specimens required to fruit.
Compact (8')	Oak-leaved hydrangea	*Hydrangea quercifolia*	'Alice' 'Ruby Slippers' 'Snowflake'	Full to partial sun	Beautiful, long lasting flowers in summer.
Compact (8'-15')	Common witch-hazel	*Hamamelis virginiana*	'Harvest moon' 'Little Suzie' 'Pendula'	Full sun to full shade	Unique, subtle flowers in fall.
Compact (8')	Bayberry	*Myrica pensylvanica*	Winter fruit supports bird species.	Full to partial sun	Winter fruit supports bird species.
Compact (8'-15')	Dwarf crabapple	*Malus spp.*	Several species and cultivars available in various low-spreading, weeping, and dwarf upright forms (e.g. 'Cinderella', 'Coralburst', 'Lollipop', 'Pink Princess', 'Louisa', and many others)	Full sun	Various flower colors. Be sure to select varieties with good resistance to apple scab and cedar apple rust diseases. Be sure to select varieties with an appropriate mature size and form.
Small (10' – 20')	Star magnolia	*Magnolia stellata*	'Royal Star' 'Waterlilly'	Full sun to partial shade	White flowers in early spring.

MATURE HEIGHT CLASS	COMMON NAME	BOTANICAL NAME	NAMED CULTIVARS	SHADE PREFERENCE	COMMENTS
Small (12’-20’)	Fringe tree	*Chionanthus virginicus*		Full to partial sun	Unique, fragrant white flowers in late spring
Small (15’-30’)	Eastern redbud	*Cercis canadensis*	'Appalachian Red' 'Morton' 'Ace of Hearts' (dwarf form)	Full to partial sun	Small magenta flowers before leaves in early spring.
Small (20’-25’)	Serviceberry	*Amelanchier x laevis* and others	'Cumulus' 'Rogers'	Partial sun to shade	Subtle white flowers before leaves in early spring; Yellow to orange red fall color; Several other suitable species and cultivars of *Amelanchier* exist.
Medium (30’-50’)	Yellowwood	*Cladrastis kentukea*	---	Full sun	Long panicles of fragrant white spring flowers. Good yellow fall color.
Medium (20’-30’)	American hornbeam	*Carpinus caroliniana*	---	Full sun to full shade	---
Medium (40’-50’)	Eastern red cedar	*Juniperus virginiana*	Several varieties available of various mature heights.	Full sun	---
Medium (25’-40’)	Hophornbeam	*Ostrya virginiana*	---	Full sun to partial shade	
Medium (30’-40’)	River birch	*Betula nigra*	‘Heritage’ ‘Dura-Heat’ 'Little King' (dwarf form) 'Cully'	Full sun	More resilient than the white-bark birches, which are prone to severe damage from bronze birch borer and birch leafminer infestations; The cultivars have attractive peeling white bark with undertones of salmon and brown.
Large (40’-60’)	Black gum (aka Tupelo)	*Nyssa sylvatica*	‘Wildfire’	Full to partial sun	Brilliant red fall color.
Large (60’-80’)	White oak	*Quercus alba*	---	Full sun	---
Large (60’-80’)	Kentucky coffeetree	*Gymnocladus dioicus*	‘Espresso’ (male variety that does not produce large seed pods)	Full sun	---
Large (60’-80’)	Swamp white oak	*Quercus bicolor*	---	Full sun	---
Large (50’-80’)	American linden	*Tilia americana*	---	Full sun to partial shade	---
Large (50’-70’)	Red maple	*Acer rubrum*	‘Red Sunset’ and ‘October Glory’ are common; many other are available	Full sun to partial sun	Will tolerate somewhat wet and compacted soils.

MATURE HEIGHT CLASS	COMMON NAME	BOTANICAL NAME	NAMED CULTIVARS	SHADE PREFERENCE	COMMENTS
Large (60’-80’)	Norway spruce	*Picea abies*	---	Full sun	Densely branched evergreen; Good choice for large hedgerows.
Large (60’-80’)	Eastern white pine	*Pinus strobus*	---	Full sun	Suitable for evergreen buffer plantings; Do not plant in areas with poorly drained or compacted soils.
Large (40’-60’)	White spruce	*Picea glauca*	---	Full sun	---

PAUL COWIE AND ASSOCIATES
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May 15, 2021

Julia Magliozzo
Director of Operations
Ecogy Energy
315 Flatbush Avenue #393
Brooklyn, NY 11217

Re: Arcadia Farm, Yorktown, NY
Tree Inventory Evaluation and Results – Revised Project Layout

Dear Julia:

As requested, Paul Cowie + Associates (PC+A) inventoried and evaluated the condition of existing trees at 1300 Baptist Church Road on several days between March 27 and April 5, 2021.

On May 6, 2021, PC+A returned to the site to inventory additional trees and revise the original inventory (dated April 7, 2021) to reflect a proposed new layout for the project.

The goals of this study were to:

1. Identify, measure, and evaluate the current health and structural condition of existing 'Protected Trees' within the designated tree removal areas;
2. Calculate carbon storage and sequestration benefits provided by these inventoried trees;
3. Compile a list of tree species suitable and recommended for mitigation plantings based on a review of current species performance, existing site conditions, Town preferences, and other relevant factors.

The data collected and the recommendations made for each inventoried tree are presented in the attached spreadsheet. The following is an explanation of the data parameters included and an overview of our general finding and recommendations.

Tree Included

This tree inventory and evaluation was limited to trees within and approximately 10-feet beyond the proposed tree removal area, as indicated with a blue line on the attached site plan. Tree stumps, standing dead tree trunks less than 15-feet in height, shrubs, vines, and other vegetation within these areas were not inventoried and evaluated. No other trees in any other portions of the property, or on adjacent properties, were inventoried and evaluated.

Within the designated tree removal areas, trees were included based on whether they met the definition of a 'Protected Tree,' as per Chapter 270 of the Yorktown Town Code, *Trees*. Specifically, trees rooted on the subject private property were included if they possessed at least one stem measuring at least 8.0-inches in diameter (DBH). 'Street Trees' (defined by Town Code as trees with their base at least 50-percent within the public right-of-way) were included regardless of size.

A temporary aluminum tag hand-embossed with the corresponding tree ID number (#1 - #197) was attached to each of the

trees inventoried. The approximate location of each tree is indicated on the attached site plan. Trees #1 through #110 were inventoried, measured, and evaluated in March and April 2021. Trees #160 through #197 were added on May 6, 2021. Gaps in the Tree ID sequence are a result of previously inventoried trees being dropped from this revised inventory because they were more than 10-feet outside the revised project limit.

A total of 87 standing trees are included in this revised tree inventory.

Tree Species + Exotic Invasive Status

Each tree is identified in the attached data table by both its regionally accepted common name and its botanical name.

The invasive status of each species is indicated based on species index information published by the Lower Hudson Partnership for Regional Invasive Species Management and accessed via https://www.lhprism.org/species-information on February 26, 2021. Within the current proposed project limit, there are no tree species that are designated as invasive per the aforementioned source.

Tree Size + Age Classification

The diameter of each inventoried tree was measured with a diameter tape to the nearest one-tenth inch at a point 4.5-feet above ground level (DBH), or at the height indicated when branching or abnormal swellings at 4.5-feet would produce an inaccurate measurement.

In the case of multiple-stem trees, the diameter of each stem was measured and recorded, and the root sum squared of the stems (RSS = SQRT($D1^2$+$D2^2$+$D3^2$…)) was calculated to provide a single-stem equivalence for the purpose of determining critical root zone radii.

Total tree height, crown height, and crown width were measured using a Leica Disto D810 Touch laser distance meter.

- Total tree height was measured to the nearest whole foot from the ground to the highest main body foliage.
- Crown height was measured from the ground to the bottom of main body foliage at the outer edge of the crown and/or lowest scaffold branch (whichever came first); individual low hanging small branches were excluded.
- Crown spread was measured at the widest point of the main body drip line; individual extended small branches were excluded. For asymmetrical crowns, the crown was either measured 1) by averaging two perpendicular crown diameters or 2) by averaging four crown radii at right angles relative to each other, multiplying by 2, and adding the diameter in feet. Measurements were rounded to the nearest whole foot.

The age class of each individually inventoried tree was recorded based on apparent age relative to the normal life expectancy of the species. Age was classified as ‘Young’ if the tree had exhausted up to 20% of the species’ typical life expectancy, ‘Mature’ if it had exhausted 20% to 80% of the species’ life expectancy, or ‘Over-Mature’ if it had exhausted more than 80% of the species’ life expectancy.

Critical Root Zone (CRZ)

Critical root zone radius (CRZ) is the ground area around a tree which, if fully protected from soil compaction, grade changes, excavation, and other soil and root-damaging impacts, will ensure that tree health and structural integrity will not be compromised by construction activity. This information is provided to assist designers in locating grading, pavement, underground utilities, and other proposed improvements in a manner that minimizes impacts to any trees that may be retained.

Tree Condition

The condition of each inventoried tree was systematically evaluated and rated with consideration given to both the health and vigor and the structural integrity of the root system, primary stems, scaffold branching, small branches and twigs, and foliage.

A rating of 'Good', 'Fair', or 'Poor' was assigned separately to the health and vigor as well as to the structure and form of each inventoried tree. An 'Overall Condition' rating was then assigned, as follows:

- *Good:* The tree had no more than one or two minor health disorders and/or structural defects and was growing with normal vigor;
- *Fair:* The tree had 2 – 4 minor, or one major, health disorders and/or structural defects, and/or was growing with below-normal vigor or other limitations.
- *Poor:* The tree had several minor, or two or more major, health disorders and/or structural defects, and/or was declining in vigor.
- *Dead:* 75% or more of the crown was dead and any remaining live portions were deteriorating in health.

For the purpose of carbon benefits modeling, health and vigor ratings were converted to corresponding percentages (i.e. Good = 75% - 100%, Fair = 50% - 75%, Poor = 25% - 50%, Dead/Dying = 0% - 25%) and percent crown dieback and percent missing crown were recorded.

Please note that inspection of the inventoried trees was limited to visual observations from the ground and did not include climbing, aerial inspections, subsurface exploration, wood strength testing, or other advanced diagnostic techniques, which may be necessary to fully identify and evaluate the severity of certain health disorders and structural defects. Therefore, certain health disorders and/or structural defects may have not been noted or their extent may not have been fully determined.

Observations

The 'Disorders + Defects, Comments, Additional Recommendations' column contains various comments regarding the nature and severity of disorders and defects noted, particularly where they resulted in reduced condition ratings and/or recommendations for tree removal.

Additionally, this column contains additional treatment recommendations not included in the subsequent recommendation columns.

Maintenance Recommendations

It is PC+A's understanding that all existing trees within the designated areas are proposed for removal. Nevertheless, where appropriate, recommendations for pruning to remove dead, dying, damaged, and/or diseased limbs, pruning to improve branch architecture, cabling to reduce the risk of failure at certain branch defects, or other treatments were made based on conditions observed at the time each tree was evaluated.

This information is provided to further characterize the trees' current condition and provide guidance in the event that decisions are made to preserve any of the trees.

Terminology for various pruning types (e.g. 'Clean Crown', 'Raise Crown', 'Reduce Crown', 'Structural prune', etc.) correspond to ANSI A300 *American National Standard for Tree Care Operations.*

Each recommendation was prioritized based on the severity of potential safety risks first (e.g. large dead trees versus small dead trees, trees containing large dead limbs versus small dead branches, etc.) and addressing tree health and appearance

second. The priority of each recommendation was ranked as High ('H'), Medium ('M'), or Low ('L'). These recommendations should be implemented in order of decreasing priority.

Tree Removal Recommendations

Definitive recommendations for tree removal were made for trees that were dead, had substantial dieback and/or limited remaining life expectancy, or possessed severe, irreparable structural defects that pose potential safety risks.

It is PC+A's opinion that those trees for which a specific removal recommendation was made should be removed whether or not the project proceeds. Further, it is PC+A's interpretation that those trees satisfy the 'Permit Not Required' exemptions provided in Section 270-5 of the Yorktown Town Code.

At this time, twenty-eight trees are recommended for removal due to death, severely deteriorated and irreparable health or structural condition, or limited remaining life expectancy. Seventeen of the trees recommended for removal are white ash (*Fraxinus americana*) trees with severe emerald ash borer infestation. Many of these ash trees are dead or near dead and the remainder will almost certainly succumb within the next year or two.

Tree Inventory Summary

Count of Protected Trees by Lower Hudson PRISM invasive status and current condition (Viable Trees = trees to be removed for design reasons only; Non-Viable Trees = trees requiring removal regardless of the design because they are dead, dying, diseased, or in an otherwise deteriorated and irreparable health or structural condition and, therefore, exempt from permit requirements.

INVASIVE STATUS	VIABLE TREES TO BE REMOVED	NON-VIABLE TREES REQUIRING REMOVAL DUE TO CONDITION	TOTAL
Invasive	0	0	0
Non-Invasive	59	28	87
TOTAL	**59**	**28**	**87**

Carbon Benefits Estimation via iTree Eco

The *Eco* module of the *iTree* software suite was used to calculate current carbon storage and annual sequestration rates for the inventoried trees. Relevant reports produced by the *iTree Eco* model are attached.

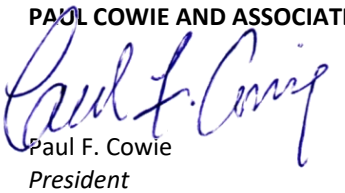
iTree was developed and is under active review and constant improvement by a consortium of industry organizations and experts led by the U.S. Forest Service. It is widely considered to be the current state of the art and is the most widely used tool for calculating the level and value of a variety of ecosystem services that trees provide in urban and rural settings.

iTree Eco requires specific inputs to run its models. PC+A used the following data derived from the measurements described above to run the carbon models:

- Weather: 2016 weather and pollution data from the Westchester County Airport weather station in White Plains, NY.
- Species
- DBH: Diameter at breast height (4.5-feet above the ground), or the single-stem equivalent for multi-stem trees.
- Total Tree Height
- Crown Height
- Crown Width
- Crown Condition
- Crown Dieback / Missing Crown

Please do not hesitate to contact me if you have any questions or require any additional information.

Sincerely,
PAUL COWIE AND ASSOCIATES



Paul F. Cowie
President

PFC:pc
Encl.

1 / A-000 SITE PLAN OVERVIEW

Legend

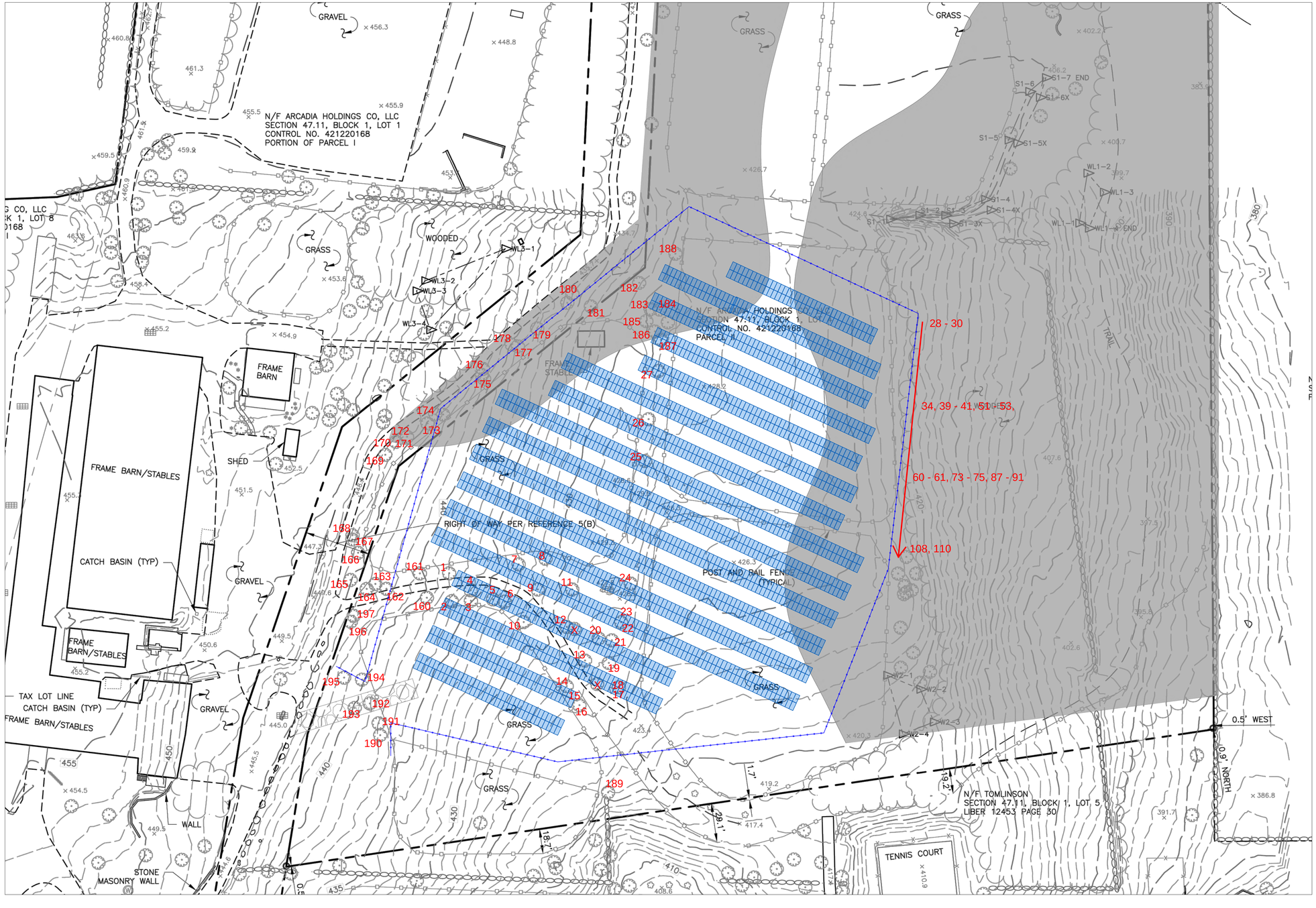
- Solar Panel
- FD Setbacks & Pathways
- Gas Line
- D/C Home Run
- A/C Home Run
- Light Shade
- Heavy Shade
- Obstruction (Vent Pipe)
- Building Outline
- Solar Inverter / Electrical Equipment

SCOPE OF WORK

Installation of:
(2232) Solar Modules 445W (49,662 sqft)
(8) SolarEdge 100kW 480V Inverters
(1) 52IT 800A Solar AC Combiner Panel
(1) 89L 800A AC Disconnect Switch

2 / A-000 TAX MAP
Scale: NTS

3 / A-000 UTILITY CAPACITY MAP
Scale: NTS



N

SCALE: 1"=10'-0" (IN FEET)
0 5' 10' 20'

Drafting/Design Firm

CEG SOLAR
75 S. Riverside Ave.
Croton-on-Hudson, NY 10520
914-862-4220

Developer

ECOGY ENERGY
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718.304.0945
O&M Contact: John Gorman
assetmanagement@ecogyenergy.com
Construction Contact: Jim Donnelly
jim.donnelly@ecogyenergy.com
Project Manager: Julia Magliozzo
Projectmanagement@ecogyenergy.com

Page Size: 24" x 36"

Power Clerk Project #:

PROPERTY INFORMATION
SBL: 47.11-1-4
Block Group: 1
Lot: 4
Lot Area: 11.67 Acres
Latitude: 41°15'34.3"N
Longitude: 73°49'24.5"W

Array 1 Azimuth: 205°

Panel Tilt: 20°

PE Stamps/ Signatures

Rev	Date	Description	Initial
.00	4/1/21	Design	MT

1300 Baptist Church Rd
Yorktown Hts. NY
10598

Owner: Arcadia Holding Co., LLC

Solar Modules:
(2232) 445W Solar Modules

Solar Inverters:
(8) SolarEdge 100kW 3ϕ 480V Inv's

Solar System DC Size: 993.24kW

Solar System AC Size: 800kW

Interconnection Type:
Community Solar

SITE PLAN OVERVIEW

Scale: See Scales | Page 2 of 2

A-001.01

#	SITE TYPE (SIZE)	OVERHEAD WIRES	SPECIES	LOWER HUDSON PRISM TIER 1-4 INVASIVE SPECIES	DIAMETER (in) (dead stems)	SINGLE-STEM EQUIVELENT (RSS)	TREE HEIGHT (FT)	CROWN HEIGHT (FT)	CROWN WIDTH (FT)	AGE CLASS	CRZ (ft radius)	HEALTH + VIGOR	STRUCTURE + FORM	OVERALL CONDITION	DISORDERS + DEFECTS, COMMENTS, ADDITIONAL RECOMMENDATIONS	CLEAN CROWN	RAISE CROWN	REDUCE CROWN	STRUCTURAL PRUNE	CABLE	CLEAR VINES	INSPECT	REMOVE (CONDITION)
1	Lawn	No	Red maple *Acer rubrum*	---	10.4, 10.1, 9.7, 9.1	19.7	51	8	35	Mature	19.7	Fair	Poor	Poor	Moderately severe decay in lower trunk of 10.1" stem. Severe decay in main trunk of 9.1" stem. Moderate decay in main trunk of 9.7" stem.								M
2	Lawn	No	Red maple *Acer rubrum*	---	15.3, 8.2	17.4	53	18	29	Mature	17.4	Fair	Fair	Fair	Moderate decay in main trunk of 8.2" stem.	M							
3	Lawn	No	Black oak *Quercus velutina*	---	21.6	21.6	69	20	42	Mature	21.6	Good	Fair	Good	---	H							
4	Lawn	No	Red maple *Acer rubrum*	---	11.1	11.1	63	28	17	Young	8.3	Fair	Fair	Fair	Moderate decay in main trunk.	M							
5	Lawn	No	Red maple *Acer rubrum*	---	8.0, 5.4	9.7	54	22	26	Young	7.2	Fair	Fair	Fair	---	M							
6	Lawn	No	White ash *Fraxinus americana*	---	11.2	11.2	67	29	18	Young	8.4	Poor	Fair	Poor	Severe emerald ash borer infestation. Severe dieback.								H
7	Lawn	No	Red maple *Acer rubrum*	---	10.5, 10.2, 10.5, 9.7	20.5	64	16	34	Mature	20.5	Fair	Fair	Fair	Moderate dieback in lower trunk.	M							
8	Lawn	No	Red maple *Acer rubrum*	---	13.7, 7.5, 9.9, 11.0, 14.8, 16.5, 8.4	32.0	69	17	46	Mature	32.0	Fair	Fair	Fair	---	M							
9	Lawn	No	Red maple *Acer rubrum*	---	14.1, 10.2, 11.5, 6.5	21.8	73	19	35	Mature	21.8	Fair	Fair	Fair	---	H							
10	Lawn	No	Red maple *Acer rubrum*	---	16.0, 15.4, 10.4, 9.7, 8.2, 6.6	28.4	69	13	47	Mature	28.4	Fair	Fair	Fair	---	M							
11	Lawn	No	Black oak *Quercus velutina*	---	26.3	26.3	89	24	51	Mature	26.3	Good	Good	Good	---	H							
12	Lawn	No	Red maple *Acer rubrum*	---	10.4, 11.4, 11.2	19.1	68	26	31	Mature	19.1	Fair	Fair	Fair	---	M							
13	Lawn	No	Shagbark hickory *Carya ovata*	---	11.6	11.6	78	35	23	Young	11.6	Good	Fair	Good	---								
14	Lawn	No	Northern red oak *Quercus rubra*	---	30.3	30.3	76	8	48	Mature	30.3	Good	Fair	Good	---	H							
15	Lawn	No	White oak *Quercus alba*	---	12.5	12.5	54	19	22	Young	6.3	Fair	Fair	Fair	---	M							
16	Lawn	No	White oak *Quercus alba*	---	28.6	28.6	85	17	47	Mature	21.5	Good	Good	Good	---	M							
17	Lawn	No	Shagbark hickory *Carya ovata*	---	13.5	13.5	79	12	27	Mature	16.9	Good	Fair	Good	---	H							
18	Lawn	No	Shagbark hickory *Carya ovata*	---	13.6	13.6	84	15	22	Mature	17.0	Good	Good	Good	---	M							
19	Lawn	No	Shagbark hickory *Carya ovata*	---	11.3	11.3	73	21	24	Young	11.3	Good	Good	Good	---	M							
20	Lawn	No	Red maple *Acer rubrum*	---	16.2	16.2	58	21	27	Mature	16.2	Poor	Poor	Poor	Severe decay and cavity in lower trunk. Two upper trunks split off.								H

#	SITE TYPE (SIZE)	OVERHEAD WIRES	SPECIES	LOWER HUDSON PRISM TIER 1-4 INVASIVE SPECIES	DIAMETER (in) (dead stems)	SINGLE-STEM EQUIVELENT (RSS)	TREE HEIGHT (FT)	CROWN HEIGHT (FT)	CROWN WIDTH (FT)	AGE CLASS	CRZ (ft radius)	HEALTH + VIGOR	STRUCTURE + FORM	OVERALL CONDITION	DISORDERS + DEFECTS, COMMENTS, ADDITIONAL RECOMMENDATIONS	CLEAN CROWN	RAISE CROWN	REDUCE CROWN	STRUCTURAL PRUNE	CABLE	CLEAR VINES	INSPECT	REMOVE (CONDITION)
21	Lawn	No	Shagbark hickory *Carya ovata*	---	12.2	12.2	81	46	26	Young	12.2	Good	Fair	Good	---								
22	Lawn	No	Shagbark hickory *Carya ovata*	---	13.5	13.5	78	34	27	Mature	16.9	Good	Good	Good	---	M							
23	Lawn	No	Black cherry *Prunus serotina*	---	11.7	11.7	63	26	26	Young	8.8	Poor	Poor	Poor	Moderately severe dieback in scaffold limbs. Limited remaining life expectancy.								M
24	Lawn	No	Shagbark hickory *Carya ovata*	---	21.5	21.5	89	18	50	Mature	26.9	Good	Good	Good	---	M							
25	Lawn	No	Shagbark hickory *Carya ovata*	---	34.2 @ 2'	34.2	70	12	44	Mature	42.8	Fair	Poor	Poor	Severe split in one upper trunk. Severe decay in one main trunk. Severe decay in one large scaffold limb. Severe weak crotch between two main upper trunks.								H
26	Lawn	No	Shagbark hickory *Carya ovata*	---	25.8	25.8	85	31	44	Mature	32.3	Good	Fair	Fair	---	M							
27	Lawn	No	Shagbark hickory *Carya ovata*	---	23.2	23.2	88	18	43	Mature	29.0	Good	Good	Good	---	M							
28	Woodland	No	Red maple *Acer rubrum*	---	22.5	22.5	54	13	32	Mature	22.5	Fair	Fair	Fair	Moderately severe lean in upper trunks. Moderately suppressed.	M							
29	Woodland	No	Tulip poplar *Liriodendron tulipifera*	---	28.0	28.0	91	19	40	Mature	28.0	Good	Poor	Poor	Severe split wound and decay in main trunk. Upper trunks poorly formed and at high risk of failing.								H
30	Woodland	No	Shagbark hickory *Carya ovata*	---	11.5	11.5	64	30	32	Young	11.5	Fair	Fair	Fair	Severe vine competition.	M					M		
34	Woodland	No	Black birch *Betula lenta*	---	13.1	13.1	57	25	24	Mature	13.1	Fair	Poor	Fair	Moderately severe vine competition. Moderately severe lean in upper trunk. Poorly formed crown.	M					M		
39	Woodland	No	White ash *Fraxinus americana*	---	14.2	14.2	79	30	30	Mature	14.2	Poor	Poor	Poor	Severe emerald ash borer infestation. Severe dieback in small branches, twigs, and scaffold branches.								H
40	Woodland	No	White ash *Fraxinus americana*	---	8.9	8.9	30	---	---	---	---	---	---	Dead	Only 25' of trunk remaining.								H
41	Woodland	No	White ash *Fraxinus americana*	---	8.4	8.4	15	---	---	---	---	---	---	Dead	Only 12' of trunk remaining.								M
51	Woodland	No	White ash *Fraxinus americana*	---	11.3	11.3	63	---	---	---	---	---	---	Dead	Severe emerald ash borer infestation. Crown more than 75% dead.								H
52	Woodland	No	White ash *Fraxinus americana*	---	14	14.0	69	39	28	Mature	14.0	Poor	Poor	Poor	Severe emerald ash borer infestation. Severe dieback in small branches and twigs.								H
53	Woodland	No	Red maple *Acer rubrum*	---	11.0	11.0	46	12	31	Young	8.3	Fair	Fair	Fair	Moderately suppressed. Moderate vine competition.						L		
60	Woodland	No	White ash *Fraxinus americana*	---	12.0	12.0	64	---	24	---	---	---	---	Dead	Severe emerald ash borer infestation.								H
61	Woodland	No	White ash *Fraxinus americana*	---	17.5	17.5	91	34	44	Mature	17.5	Poor	Fair	Poor	Severe emerald ash borer infestation. Severe vine competition. Moderately severe dieback in small branches and twigs.								H

#	SITE TYPE (SIZE)	OVERHEAD WIRES	SPECIES	LOWER HUDSON PRISM TIER 1-4 INVASIVE SPECIES	DIAMETER (in) (dead stems)	SINGLE-STEM EQUIVELENT (RSS)	TREE HEIGHT (FT)	CROWN HEIGHT (FT)	CROWN WIDTH (FT)	AGE CLASS	CRZ (ft radius)	HEALTH + VIGOR	STRUCTURE + FORM	OVERALL CONDITION	DISORDERS + DEFECTS, COMMENTS, ADDITIONAL RECOMMENDATIONS	CLEAN CROWN	RAISE CROWN	REDUCE CROWN	STRUCTURAL PRUNE	CABLE	CLEAR VINES	INSPECT	REMOVE (CONDITION)
73	Woodland	No	White ash *Fraxinus americana*	---	15.3	15.3	75	---	---	---	---	---	---	Dead	Severe emerald ash borer infestation.								H
74	Woodland	No	White ash *Fraxinus americana*	---	13.2	13.2	57	---	---	---	---	---	---	Dead	Severe emerald ash borer infestation.								H
75	Woodland	No	White ash *Fraxinus americana*	---	12.0	12.0	75	48	21	Mature	12.0	Poor	Poor	Poor	Severe emerald ash borer infestation. Severe dieback in small branches and twigs.								H
87	Woodland	No	White ash *Fraxinus americana*	---	8.8	8.8	70	---	---	---	---	---	---	Dead	Severe emerald ash borer infestation.								H
88	Lawn	No	Red maple *Acer rubrum*	---	24.9	24.9	84	10	41	Mature	24.9	Good	Fair	Good	---	M							
89	Lawn	No	Red maple *Acer rubrum*	---	17.9	17.9	63	15	37	Mature	17.9	Fair	Fair	Fair	---	M							
90	Lawn	No	White ash *Fraxinus americana*	---	8.6	8.6	48	---	---	---	---	---	---	Dead	Severe emerald ash borer infestation.								H
91	Lawn	No	Red maple *Acer rubrum*	---	14.2	14.2	62	27	31	Mature	14.2	Good	Good	Good	---	M							
108	Lawn	No	Black cherry *Prunus serotina*	---	18.7	18.7	81	35	25	Mature	18.7	Poor	Poor	Poor	Severe dieback in two upper trunks. Moderately severe dieback of scaffold limbs.								H
110	Lawn	No	Black oak *Quercus velutina*	---	29.9	29.9	83	24	60	Mature	29.9	Good	Good	Good	---	H							
160	Lawn	No	Red maple *Acer rubrum*	---	10.9	10.9	50	23	22	Young	8	Poor	Fair	Poor	Severe dieback in upper trunk and scaffold limbs. Limited remaining life expectancy.								M
161	Lawn	No	Red maple *Acer rubrum*	---	10.2, 12.2	15.9	52	17	30	Mature	16	Fair	Fair	Fair	---	M							
162	Lawn	No	Black oak *Quercus velutina*	---	24.5	24.5	74	31	42	Mature	25	Fair	Poor	Poor	Severe decay in lower trunk. Cracks in lower trunk.								H
163	Lawn	No	Black oak *Quercus velutina*	---	15.8	15.8	64	27	35	Mature	16	Good	Fair	Fair	---	M							
164	Lawn	No	White oak *Quercus alba*	---	14.2	14.2	68	25	36	Mature	11	Fair	Good	Fair	---	M							
165	Lawn	No	White ash *Fraxinus americana*	---	18.7	18.7	66	---	---	---	---	---	---	Dead	Severe emerald ash borer infestation.								H
166	Lawn	No	Red maple *Acer rubrum*	---	11.3, 10.1, 8.8	17.5	59	9	32	Mature	18	Good	Fair	Fair	---	M							
167	Lawn	No	Red maple *Acer rubrum*	---	10.3, 9.9	14.3	52	13	36	Mature	14	Fair	Fair	Fair	Severe weak crotch in lower trunk.	M							
168	Lawn	No	Red maple *Acer rubrum*	---	14.7, 10.0	17.8	49	14	34	Mature	18	Good	Fair	Good	10" stem dead and only 20' remains - not included in carbon calculations.	M							
169	Lawn	No	Red maple *Acer rubrum*	---	14.6, 22.1	26.5	67	7	45	Mature	26	Fair	Poor	Poor	Severe decay in 1 lower trunk. Severe decay in multiple upper trunks. 1 severe weak crotch in lower trunk. Crack in lower trunk.								H

#	SITE TYPE (SIZE)	OVERHEAD WIRES	SPECIES	LOWER HUDSON PRISM TIER 1-4 INVASIVE SPECIES	DIAMETER (in) (dead stems)	SINGLE-STEM EQUIVELENT (RSS)	TREE HEIGHT (FT)	CROWN HEIGHT (FT)	CROWN WIDTH (FT)	AGE CLASS	CRZ (ft radius)	HEALTH + VIGOR	STRUCTURE + FORM	OVERALL CONDITION	DISORDERS + DEFECTS, COMMENTS, ADDITIONAL RECOMMENDATIONS	CLEAN CROWN	RAISE CROWN	REDUCE CROWN	STRUCTURAL PRUNE	CABLE	CLEAR VINES	INSPECT	REMOVE (CONDITION)
170	Lawn	No	Red maple *Acer rubrum*	---	11.7, 9.9	15.3	86	15	27	Mature	15	Fair	Fair	Fair	---	M							
171	Lawn	No	Red maple *Acer rubrum*	---	10.3	10.3	48	10	25	Mature	10	Fair	Fair	Fair	Moderately severely oppressed by tree #172.								
172	Lawn	No	Red maple *Acer rubrum*	---	20.3	20.3	87	37	33	Mature	20	Fair	Poor	Poor	Moderate decay in main trunk.	M							
173	Lawn	No	Red maple *Acer rubrum*	---	15.0, 9.3	17.6	68	41	19	Mature	18	Poor	Fair	Poor	1/3 of crown recently broken off. Moderate dieback in small branches and twigs. 1 weak crotch in lower trunk. Moderate decay in main trunk. Limited remaining life expectancy.								M
174	Lawn	No	Red maple *Acer rubrum*	---	14.8, 15.6	21.5	67	7	30	Mature	22	Fair	Poor	Poor	Large dead limb from tree #173 hung in crown. 1 severe weak crotch in lower trunk. Severe decay in 1 lower trunk.								H
175	Lawn	No	Red maple *Acer rubrum*	---	16, 14, 11	23.9	77	7	39	Mature	24	Fair	Poor	Fair	Multiple severe weak crotches in lower trunk. 11" stem is dead and only 20' remains; not included in carbon calculations.	H							
176	Lawn	No	Red maple *Acer rubrum*	---	14.9	14.9	73	44	26	Mature	15	Fair	Fair	Fair	2 broken scaffold limbs.	H							
177	Lawn	No	Red maple *Acer rubrum*	---	16.2, 17.3, 7.7	24.9	78	23	36	Mature	25	Fair	Poor	Fair	Multiple severe weak crotches in lower trunk.	H							
178	Lawn	No	Red maple *Acer rubrum*	---	14.5	14.5	86	25	25	Mature	15	Good	Fair	Fair	---	M							
179	Lawn	No	Red maple *Acer rubrum*	---	11.4, 12.7, 13.0, 7.5	22.7	81	12	33	Mature	23	Fair	Poor	Poor	Multiple severe weak crotches in lower trunk. Moderate decay in 1 lower trunk.	M							
180	Lawn	No	White ash *Fraxinus americana*	---	10.6	10.6	60	---	---	---	---	---	---	Dead	Severe emerald ash borer infestation.								H
181	Lawn	No	Red maple *Acer rubrum*	---	17.5, 9.3, 13.2	23.8	75	12	37	Mature	24	Fair	Fair	Fair	---	H							
182	Lawn	No	Black walnut *Juglans nigra*	---	25.1	25.1	71	19	59	Mature	31	Good	Good	Good	---	M							
183	Lawn	No	Shagbark hickory *Carya ovata*	---	8.7	8.7	53	10	17	Young	9	Fair	Good	Fair	---								
184	Lawn	No	Shagbark hickory *Carya ovata*	---	10.0	10.0	58	20	21	Young	10	Fair	Good	Fair	---								
185	Lawn	No	Shagbark hickory *Carya ovata*	---	8.0	8.0	52	17	13	Young	8	Fair	Good	Fair	---								
186	Lawn	No	Shagbark hickory *Carya ovata*	---	8.0	8.0	36	11	20	Young	8	Fair	Fair	Fair	---								
187	Lawn	No	Black walnut *Juglans nigra*	---	24.0	24.0	85	22	40	Mature	30	Good	Fair	Good	---	M							
188	Lawn	No	Red maple *Acer rubrum*	---	19.1	19.1	43	7	35	Mature	19	Poor	Poor	Poor	Moderately severe decay in lower trunk. Moderate dieback in scaffold limbs.								M

#	SITE TYPE (SIZE)	OVERHEAD WIRES	SPECIES	LOWER HUDSON PRISM TIER 1-4 INVASIVE SPECIES	DIAMETER (in) (dead stems)	SINGLE-STEM EQUIVELENT (RSS)	TREE HEIGHT (FT)	CROWN HEIGHT (FT)	CROWN WIDTH (FT)	AGE CLASS	CRZ (ft radius)	HEALTH + VIGOR	STRUCTURE + FORM	OVERALL CONDITION	DISORDERS + DEFECTS, COMMENTS, ADDITIONAL RECOMMENDATIONS	CLEAN CROWN	RAISE CROWN	REDUCE CROWN	STRUCTURAL PRUNE	CABLE	CLEAR VINES	INSPECT	REMOVE (CONDITION)
189	Lawn	No	Black walnut *Juglans nigra*	---	27.5	27.5	75	11	42	Mature	34	Good	Fair	Fair	Moderate decay in lower trunk.	M							
190	Lawn	No	Red maple *Acer rubrum*	---	14.1	14.1	44	6	36	Mature	14	Fair	Fair	Fair	---	M							
191	Lawn	No	Red maple *Acer rubrum*	---	12.9	12.9	42	6	33	Mature	13	Fair	Fair	Fair	---								
192	Lawn	No	White ash *Fraxinus americana*	---	14.9	14.9	57	31	35	Mature	15	Poor	Fair	Poor	Moderately severe dieback in scaffold limbs. Moderately severe emerald ash borer infestation.								H
193	Lawn	No	Red maple *Acer rubrum*	---	9.5, 8.4, 7.2	14.6	53	36	24	Young	11	Poor	Fair	Poor	7.2" stem dead - not included in carbon calculations.	M							
194	Lawn	No	Red maple *Acer rubrum*	---	17.3	17.3	65	21	35	Mature	17	Good	Fair	Fair	---	M							
195	Lawn	No	Red maple *Acer rubrum*	---	16.6	16.6	65	12	26	Mature	17	Fair	Good	Fair	---								
196	Lawn	No	Black oak *Quercus velutina*	---	22.7	22.7	68	12	44	Mature	23	Good	Good	Good	---	M							
197	Lawn	No	Red maple *Acer rubrum*	---	9.2	9.2	40	12	23	Young	7	Poor	Fair	Poor	Moderate dieback in small branches and twigs.	M							

All Inventoried Trees

Carbon Storage of Trees by Species

Location: Yorktown Heights, Westchester, New York, United States of America
Project: Arcadia Farm Revised, Series: Arcadia, Year: 2021
Generated: 5/15/2021

Species	Carbon Storage (ton)	Carbon Storage (%)	CO_2 Equivalent (ton)
Red maple	36.7	48.4%	134.7
Black birch	0.4	0.5%	1.5
Shagbark hickory	8.2	10.7%	29.9
White ash	5.8	7.6%	21.3
Black walnut	3.3	4.3%	12.0
Tulip tree	1.8	2.4%	6.7
Black cherry	1.3	1.7%	4.6
White oak	3.3	4.4%	12.2
Northern red oak	2.8	3.6%	10.1
Black oak	12.4	16.4%	45.5
Total	**75.9**	**100%**	**278.5**

Due to limits of available models, i-Tree Eco will limit carbon storage to a maximum of 7,500 kg (16,534.7 lbs) and not estimate additional storage for any tree beyond a diameter of 254 cm (100 in). Whichever limit results in lower carbon storage is used.

All Inventoried Trees

Annual Carbon Sequestration of Trees by Species

Location: Yorktown Heights, Westchester, New York, United States of America
Project: Arcadia Farm Revised, Series: Arcadia, Year: 2021
Generated: 5/15/2021

Species	Gross Carbon Sequestration (ton/yr)	CO_2 Equivalent (ton/yr)
Red maple	0.40	1.46
Black birch	0.01	0.02
Shagbark hickory	0.04	0.16
White ash	0.03	0.09
Black walnut	0.06	0.23
Tulip tree	0.01	0.05
Black cherry	0.01	0.04
White oak	0.03	0.11
Northern red oak	0.02	0.09
Black oak	0.12	0.44
Total	**0.73**	**2.70**

Invasive Species + Non-Viable Trees Omitted

Carbon Storage of Trees by Species

Location: Yorktown Heights, Westchester, New York, United States of America
Project: Arcadia Farm Revised No Removals, Series: Arcadia Farm, Year: 2021
Generated: 5/15/2021

Species	Carbon Storage (ton)	Carbon Storage (%)	CO_2 Equivalent (ton)
Red maple	30.7	54.7%	112.5
Black birch	0.4	0.7%	1.5
Shagbark hickory	5.4	9.7%	19.9
Black walnut	3.3	5.8%	12.0
White oak	3.3	5.9%	12.2
Northern red oak	2.8	4.9%	10.1
Black oak	10.2	18.3%	37.6
Total	**56.1**	**100%**	**205.6**

Due to limits of available models, i-Tree Eco will limit carbon storage to a maximum of 7,500 kg (16,534.7 lbs) and not estimate additional storage for any tree beyond a diameter of 254 cm (100 in). Whichever limit results in lower carbon storage is used.

Invasive Species + Non-Viable Trees Omitted

Annual Carbon Sequestration of Trees by Species

Location: Yorktown Heights, Westchester, New York, United States of America
Project: Arcadia Farm Revised No Removals, Series: Arcadia Farm, Year: 2021
Generated: 5/15/2021

Species	Gross Carbon Sequestration (ton/yr)	CO_2 Equivalent (ton/yr)
Red maple	0.34	1.24
Black birch	0.01	0.02
Shagbark hickory	0.03	0.12
Black walnut	0.06	0.23
White oak	0.03	0.11
Northern red oak	0.02	0.09
Black oak	0.10	0.37
Total	**0.60**	**2.18**

Old Hill Farm Solar Farm

BERGMANN
ARCHITECTS ENGINEERS PLANNERS

July 28, 2021

Mr. John A. Tegeder, Director of Planning
Albert A. Capellini Community & Cultural Center
1974 Commerce Street
(Top Floor, Room 222)
Yorktown Heights, NY 10598
(914) 962-6565

RECEIVED
PLANNING DEPARTMENT
JUL 28 2021
TOWN OF YORKTOWN

RE: Old Hill Farm Solar Farm
Site Plan and Special Use Permit Application

Dear Mr. Tegeder;

On behalf of Hillside Solar LLC, please find enclosed a complete Site Plan and Special Use Permit Application for the Old Hill Farm Solar Farm project. By submission of these applications, we are requesting to be placed on the agenda for the August 9th, 2021 Planning Board meeting to review the proposed solar project. The project involves the installation of ground mounted photovoltaic panels on a parcel south of East Main Street and north of Route 6.

Please find the enclosed items for your review:

- Eight (8) copies of the Site Plan Application
- Eight (8) copies of the Special Use Permit Application
- Eight (8) copies of the Special Use Permit Application Addendum
- Eight (8) copies of the Full Environmental Assessment Form (EAF)
- Eight (8) copies of the Site Plan Set
- One (1) copy of the Stormwater Pollution Prevention Plan (SWPPP)
- Special Use Permit Application Fee in the amount of $625 (provided under separate cover)
- Site Plan Application Fee in the amount of $10,582 (provided under separate cover)

Should you have any questions or require additional information, do not hesitate to contact me at (518) 556-3631 or by email at eredding@bergmannpc.com.

Sincerely,

Eric Redding

Eric Redding, PE, LEED AP
DISCIPLINE LEADER, BERGMANN

TOWN OF YORKTOWN
PLANNING BOARD

RECEIVED
PLANNING DEPARTMENT
JUL 28 2021
TOWN OF YORKTOWN

Albert A. Capellini Community and Cultural Center, 1974 Commerce Street, Yorktown Heights, New York 10598, Phone (914) 962-6565, Fax (914) 962-3986

APPLICATION FOR SITE PLAN APPROVAL

Date 7/28/2021

1. Name of Project: Old Hill Farm Solar Farm
2. Tax Map Designation (Section, Block, Lot) 16.08-1-4 & 16.08-1-17
3. Zone: R1-20 Total Acreage: 19.40±
4. Is a statement of easements relating to property attached? ☑ Yes ☐ None exist
5. Project narrative (brief description of proposed development):

   The proposed project consists of a 15.0± acre community solar farm (Old Hill Farm Solar Farm).

6. Contact Person - CHOOSE ONLY ONE:

☐ Applicant	☐ Owner	☐ Architect	☐ Wetland Scientist
☐ Attorney	☑ Engineer	☐ Surveyor	☐ Landscape Architect

7. Applicant

Name	Kathryn Hoenig
Firm	Hillside Solar LLC
Address	227 Guard Hill Road, Bedford Corners, NY 10549
Phone	(914) 953-5312
Fax	N/A
Email	khoenig@optonline.net

8. Owner of Record

Name	Kathryn Hoenig
Firm	Old Hill Farm LLC
Address	227 Guard Hill Road, Bedford Corners, NY 10549
Phone	(914) 953-5312
Fax	N/A
Email	khoenig@optonline.net

9. **Attorney**

Name TBD

Firm

Address

Phone

Fax

Email

10. **Engineer**

Name Eric Redding

Firm Bergmann

Address 2 Winners Circle, Suite 102, Albany NY 12205

Phone 518-556-3631

Fax N/A

Email eredding@bergmannpc.com

Lic. No. 092442

11. **Surveyor**

Name Mark R. DeLor

Firm Colliers Engineering & Design

Address 18 Computer Drive East, Suite 203, Albany NY 12205

Phone 518-459-3252

Fax 518-459-3284

Email N/A

Lic. No. 050478

12. **Architect**

Name TBD

Firm

Address

Phone

Fax

Email

Lic. No.

13. **Wetland Scientist/Specialist**

Name TBD

Firm _____

Address _____

Phone _____

Fax _____

Email _____

14. **Landscape Architect**

Name TBD

Firm _____

Address _____

Phone _____

Fax _____

Email _____

Lic. No. _____

15. **Is this project within 500 feet of the Town line?** ☐ Yes ☑ No

16. **Is this project within 500 feet of the Putnam County line?** ☐ Yes ☑ No

17. **Is this project within the Sustainable Development Study Area?** ☐ Yes ☑ No

18. **Is this project within 500 feet of:**

The right-of-way of any existing or proposed state or county road? ☑ Yes ☐ No

The boundary of an existing or proposed state or county park or any state or county recreation area? ☐ Yes ☑ No

The boundary of state or county-owned land on which a public building/ institution is located? ☐ Yes ☑ No

An existing or proposed county drainage line? ☐ Yes ☑ No

The boundary of a farm located in an agricultural district? ☐ Yes ☑ No

19. **Does the entire development plan for this project propose the disturbance of more than 5,000 SF of land? Note: If project is phased, include all phases in determination.** ☑ Yes ☐ No

20. **This project requires the following permits or approvals from the Town of Yorktown:**

☐ Wetland Permit

☑ Stormwater Permit

☐ Tree Permit *TBD

☑ Planning Board special permit: Large-Scale Solar Power Generation Systems and Facilities

☐ Town Board variance or approval: _____

☐ Zoning Board of Appeals variance or special permit: _____

21. This project requires the following permits or approvals from other outside agencies:

- ☐ Westchester County Board of Health
- ☐ NYC DEP
- ☑ NYS DEC
- ☑ Other: Westchester County Planning Board GML 239 Referral

22. This parcel is in the following districts:

School District	Lakeland Central S.D.	Water District	Yorktown Consolidated W.D.
Fire District	Mohegan	Sewer District	Peekskill Sewer District

A Short or Full EAF with the original signature of the applicant must be attached to this application when submitted.

The applicant agrees to comply with the requirements of the Road Specifications, the Land Use Regulations, Zoning Ordinance, Tree Removal and Excavation ordinance, and any additions or amendments thereto.

The applicant agrees to execution and delivery of deeds and required documents for reserved parks/recreation/open space/drainage control, roads and road widening strips and descriptions of easements at the time of the public hearing. Such execution and delivery shall not operate to vest title of said property in the Town of Yorktown until such dedication is accepted in the form of a resolution adopted by the Town Board at a regular meeting of said Board.

The execution and delivery of the deeds to the roads in the proposed subdivision as provided for by the terms of the deeds to the roads in the proposed subdivision as provided for by the terms of the approving resolution shall not operate to vest title of said roads in the Town of Yorktown until such deed is accepted in the form of a resolution adopted by the Town Board at regular meeting of said Board.

Applicant	Owner of Record
Hillside Solar LLC c/o Kathryn Hoenig	Old Hill Farm LLC c/o Kathryn Hoenig
NAME (PLEASE PRINT)	NAME (PLEASE PRINT)
SIGNATURE	SIGNATURE
July 26, 2021	July 26, 2021
DATE	DATE

Note: If the property owner is not the applicant for this application, in addition to the signature above, the owner of the property must also complete and have notarized one of the owner affidavits on the following page.

Note: By signing this document the owner of the subject property grants permission for Town Officials to enter the property for the purpose of reviewing this application.

REFER TO AFFIDAVITS ON THE FOLLOWING PAGES

ONE OF THE FOLLOWING AFFIDAVITS MUST BE COMPLETED

****

AFFIDAVIT TO BE COMPLETED BY OWNER, OTHER THAN CORPORATION

STATE OF NEW YORK; COUNTY OF WESTCHESTER SS. :

_____, being duly sworn, deposes and says that he is the owner in fee of the property described in the foregoing application for consideration of preliminary plat, and that the statements contained therein are true to the best of his knowledge and belief.

_____

Sworn before me this
_____ date of _____, 20 __

_____
Notary Public

****

AFFIDAVIT TO BE COMPLETED BY CORPORATION OWNER

STATE OF NEW YORK; COUNTY OF WESTCHESTER SS. :

_____, being duly sworn, deposes and says that he resides at _____ in the County of _____ and State of _____. That he is the _____ of _____ the corporation which is owner in fee of the property described in the foregoing application for _____ and that the statements contained therein are true to the best of his knowledge and belief.

_____

Sworn before me this
_____ date of _____, 20 __

_____
Notary Public

****

AFFIDAVIT TO BE COMPLETED BY AGENT OF OWNER

STATE OF NEW YORK; COUNTY OF ~~WESTCHESTER~~ NEW YORK SS. :

James C. Kennedy, being duly sworn, deposes and says that he is the agent named in the foregoing application for Site Plan Approval and that he has been duly authorized by the owner in fee to make such application and that foregoing statements are true to the best of his knowledge and belief.

Sworn before me this 26th date of July, 2021

Ten Lin Lee Wyatt
Notary Public

TEN LIN LEE WYATT
Notary Public, State of New York
No. 01WY2203250
Qualified in Queens County
Commission Expires July 31, 2025

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Last updated: December 2011

TOWN OF YORKTOWN
PLANNING BOARD

RECEIVED
PLANNING DEPARTMENT
JUL 28 2021
TOWN OF YORKTOWN

Yorktown Community and Cultural Center, 1974 Commerce Street, Yorktown Heights, New York 10598, Phone (914) 962-6565, Fax (914) 962-4986

SPECIAL USE PERMIT APPLICATION

If this application is not being made in conjunction with a request for site plan approval from the Planning Board, a site plan/plot plan and Short EAF must also be submitted with this application. The required fee is $625.00 for new applications and $312.00 for requests to renew an existing permit.

Date 7/28/2021

1. **Tax Map Designation (Section, Block, Lot)** 16.08-1-4 & 16.08-1-17

2. **Property Address** 571 East Main Street, Jefferson Valley, NY 10535

3. **Zone:** R1-20 **Total Acreage:** 19.40±

4. **Indicate requested special use permit:**

☐	§300-21(8)(a)[1]	Outdoor service in commercial districts.
☐	§300-40	Bus passenger shelters.
☐	§300-54	Religious institutions, social, cultural, charitable and recreational nonprofit uses.
☐	§300-55	Parochial, private elementary and high schools, colleges and seminaries.
☐	§300-69	Valet parking at banquet halls.
☐	§300-71	New and/or used car automobile sales.
☐	§300-73.1(A)(2)	Permanent seasonal outdoor sales in commercial districts.
☐	§300-75	Warehouse or storage in retail shopping centers.
☐	§300-78	Cemeteries.
☐	§300-79	Self-storage centers.
☐	§300-80	Sidewalk cafes. (outdoor dining for more than 12 seats)
☐	§300-81.1	Helistops.
☐	§300-81.2	Accessory recycling facilities.
☑	§300-81.4	Large-Scale Solar Power Generation Systems and Facilities
☐	§300-81.5	Tier 2 Battery Energy Storage Systems
☐	§300-238.1	Multifamily dwelling units in the Country Commercial Zone.

5. **Description of proposed use (if applying for outdoor dining, indicate proposed dining area square footage and number of seats):**

The proposed project consists of a 15.0± acre community solar farm (Old Hill Farm Solar Farm).

6. **Applicant**

Name Kathryn Hoenig
Firm Hillside Solar LLC
Address 227 Guard Hill Road, Bedford Corners, NY 10549
Phone (914) 953-5312
Email khoenig@optonline.net

7. **Owner of Record**

Name Kathryn Hoenig
Firm Old Hill Farm LLC
Address 227 Guard Hill Road, Bedford Corners, NY 10549
Phone (914) 953-5312
Email khoenig@optonline.net

In the event the permit is issued, the undersigned applicant will comply with all provisions of the Code of the Town of Yorktown and all other applicable laws, codes, rules and regulations of any Federal, State or County Government, bureau or department thereof, having jurisdiction over said premises and the use to be conducted thereat.

Hillside Solar LLC
Applicant
Kathryn L. Hoenig
SIGNATURE
Kathryn L. Hoenig
PRINT NAME
7/27/21
DATE

Old Hill Farm LLC
Owner of Record
Kathryn L. Hoenig
SIGNATURE
Kathryn L. Hoenig
PRINT NAME
7/27/21
DATE

Note: By signing this document the owner of the subject property grants permission for Town Officials to enter the property for the purpose of reviewing this application.

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This form last updated: September 2020

TOWN OF YORKTOWN PLANNING BOARD

Large Scale Solar Power Generation Systems & Facilities

Special Permit Application Addendum

GENERAL PROJECT INFORMATION

Project Name: Old Hill Farm Solar Farm

Section, Block, Lot: 16.08-1-4 & 16.08-1-17

Existing Site Use: ☑ Residential ☐ Commercial Zone: R1-20

Is Applicant? ☐ Property Owner ☑ Lessee

Proposed Lot Coverage: 77.3%

PROVIDE THE TOTAL SYSTEM CAPACITY RATING

A Large Scale Solar Energy system is a Solar Energy System that exceeds 20 kW DC as rated by its nameplate capacity. The maximum system capacity and the maximum area of land upon which the system shall be erected are as follows:

(1) Up to one megawatt AC on an area of land no larger than 10 acres, excluding any easement for accessing the parcel; or over1 but not to exceed 5 Megawatt AC on an area of land no larger than 20 acres, excluding any easement for accessing the parcel.

Total System Capacity Rating: _____ kWh Power Rating 3,750 kW (Select One) ☑ AC or ☐ DC

SELECT INSTALLATION TYPE

☑ Ground ☐ Rooftop

PROPOSED SOLAR ENERGY SYSTEM INSTALLATION INFORMATION

Sponsor Company

Contact Name: Kathryn Hoenig

Business Name: Hillside Solar LLC

Address: 227 Guard Hill Road, Bedford Corners, NY 10549

Phone: (914) 953-5312

Email: khoenig@optonline.net

Contractor/Installation Company

Contact Name TBD

Business Name TBD

Address TBD

Phone TBD

Email TBD

PROPOSED OWNER AND/OR OPERATOR (IF DIFFERENT FROM ABOVE)

Name Kathryn Hoenig

Firm Old Hill Farm LLC

Address 227 Guard Hill Road, Bedford Corners, NY 10549

Phone (914) 953-5312

Email khoenig@optonline.net

SUBMITTAL REQUIREMENTS

In order to submit a complete permit application for a new large-scale solar power generation system, the applicant must include:

a) Completed Planning Board Special Use Permit Application with this Large Scale Solar Power Generation System Addendum.

b) A special permit application fee of $625.00 paid by check made payable to the Town of Yorktown.

c) Required documents as listed in Section 300-84.1(F):
   - Equipment specification sheets shall be submitted for all photovoltaic panels, significant components, mounting systems, and inverters that are to be installed.
   - A property Operation and Maintenance Plan shall be submitted.
   - A carbon sequestration for tree loss calculation.
   - Proposed tree loss mitigation, if applicable.
   - A Decommissioning Plan

d) All site plan application requirements pursuant to Section 300-85/1(I) of the Town of Yorktown Town Code.

Instructions for Completing Part 1

Part 1 is to be completed by the applicant or project sponsor. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification.

Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information; indicate whether missing information does not exist, or is not reasonably available to the sponsor; and, when possible, generally describe work or studies which would be necessary to update or fully develop that information.

Applicants/sponsors must complete all items in Sections A & B. In Sections C, D & E, most items contain an initial question that must be answered either "Yes" or "No". If the answer to the initial question is "Yes", complete the sub-questions that follow. If the answer to the initial question is "No", proceed to the next question. Section F allows the project sponsor to identify and attach any additional information. Section G requires the name and signature of the applicant or project sponsor to verify that the information contained in Part 1is accurate and complete.

A. Project and Applicant/Sponsor Information.

Name of Action or Project: Old Hill Farm Solar Farm		
Project Location (describe, and attach a general location map): 571 E Main St, Jefferson Valley, NY 10535		
Brief Description of Proposed Action (include purpose or need): The proposed project consists of a 15.0± acre community solar farm (Old Hill Farm Solar Farm). The proposed community solar project will provide significant local sustainability and carbon reduction benefits to the Town of Yorktown and cash savings to community members directly on ConEdison monthly bills through the community solar structure. Community solar allows multiple members of our community to participate in solar, even if they cannot or prefer not to install solar systems on their own properties. The system will also increase local grid resiliency and help to facilitate New York State's broader renewable energy goals.		
Name of Applicant/Sponsor: Hillside Solar LLC c/o Kathryn Hoenig	Telephone: (914) 953-5312 E-Mail: khoenig@optonline.net	
Address: 227 Guard Hill Road		
City/PO: Bedford Corners	State: NY	Zip Code: 10549
Project Contact (if not same as sponsor; give name and title/role): Bergmann c/o Eric Redding, PE as Agent for Applicant	Telephone: (518) 556-3631 E-Mail: eredding@bergmannpc.com	
Address: 2 Winners Circle, Suite 102		
City/PO: Albany	State: NY	Zip Code: 12205
Property Owner (if not same as sponsor): Old Hill Farm LLC c/o Kathryn Hoenig	Telephone: (914) 953-5312 E-Mail: khoenig@optonline.net	
Address: 227 Guard Hill Road		
City/PO: Bedford Corners	State: NY	Zip Code: 10549

B. Government Approvals

B. Government Approvals, Funding, or Sponsorship. ("Funding" includes grants, loans, tax relief, and any other forms of financial assistance.)

Government Entity	If Yes: Identify Agency and Approval(s) Required	Application Date (Actual or projected)
a. City Counsel, Town Board, or Village Board of Trustees ☐Yes ☑No		
b. City, Town or Village Planning Board or Commission ☑Yes ☐No	Yorktown Planning Board - Site Plan Approval and Special Use Permit	
c. City, Town or Village Zoning Board of Appeals ☐Yes ☑No		
d. Other local agencies ☐Yes ☑No		
e. County agencies ☑Yes ☐No	Westchester County - GML 239 Referral	
f. Regional agencies ☐Yes ☑No		
g. State agencies ☑Yes ☐No	NYSDEC - SPDES General Permit GP-0-20-001; SHPO - No Effect; NYSERDA - Incentives;	
h. Federal agencies ☐Yes ☑No		

i. Coastal Resources.

i. Is the project site within a Coastal Area, or the waterfront area of a Designated Inland Waterway? ☐Yes ☑No

ii. Is the project site located in a community with an approved Local Waterfront Revitalization Program? ☐Yes ☑No

iii. Is the project site within a Coastal Erosion Hazard Area? ☐Yes ☑No

C. Planning and Zoning

C.1. Planning and zoning actions.

Will administrative or legislative adoption, or amendment of a plan, local law, ordinance, rule or regulation be the only approval(s) which must be granted to enable the proposed action to proceed? ☐Yes ☑No

- **If Yes,** complete sections C, F and G.
- **If No,** proceed to question C.2 and complete all remaining sections and questions in Part 1

C.2. Adopted land use plans.

a. Do any municipally- adopted (city, town, village or county) comprehensive land use plan(s) include the site where the proposed action would be located? ☑Yes ☐No

If Yes, does the comprehensive plan include specific recommendations for the site where the proposed action would be located? ☑Yes ☐No

b. Is the site of the proposed action within any local or regional special planning district (for example: Greenway; Brownfield Opportunity Area (BOA); designated State or Federal heritage area; watershed management plan; or other?) ☐Yes ☑No

If Yes, identify the plan(s):

_____

_____

_____

c. Is the proposed action located wholly or partially within an area listed in an adopted municipal open space plan, or an adopted municipal farmland protection plan? ☐Yes ☑No

If Yes, identify the plan(s):

_____

_____

_____

C.3. Zoning

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. ☑ Yes ☐ No
If Yes, what is the zoning classification(s) including any applicable overlay district?
R1-20 - One Family Residential

b. Is the use permitted or allowed by a special or conditional use permit? ☑ Yes ☐ No

c. Is a zoning change requested as part of the proposed action? ☐ Yes ☑ No
If Yes,
i. What is the proposed new zoning for the site?

C.4. Existing community services.

a. In what school district is the project site located? Lakeland Central School District

b. What police or other public protection forces serve the project site?
Yorktown Police Department

c. Which fire protection and emergency medical services serve the project site?
Mohegan Fire District

d. What parks serve the project site?
Donald J. Trump State Park, Willow Park, New Hope Farms Park

D. Project Details

D.1. Proposed and Potential Development

a. What is the general nature of the proposed action (e.g., residential, industrial, commercial, recreational; if mixed, include all components)? Community Solar Farm

b. a. Total acreage of the site of the proposed action? 19.40± acres
b. Total acreage to be physically disturbed? 1.0± acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 19.40± acres

c. Is the proposed action an expansion of an existing project or use? ☐ Yes ☑ No
i. If Yes, what is the approximate percentage of the proposed expansion and identify the units (e.g., acres, miles, housing units, square feet)? % _____ Units: _____

d. Is the proposed action a subdivision, or does it include a subdivision? ☐ Yes ☑ No
If Yes,
i. Purpose or type of subdivision? (e.g., residential, industrial, commercial; if mixed, specify types)
ii. Is a cluster/conservation layout proposed? ☐ Yes ☐ No
iii. Number of lots proposed? _____
iv. Minimum and maximum proposed lot sizes? Minimum _____ Maximum _____

e. Will the proposed action be constructed in multiple phases? ☐ Yes ☑ No
i. If No, anticipated period of construction: 6 months
ii. If Yes:
- Total number of phases anticipated _____
- Anticipated commencement date of phase 1 (including demolition) _____ month _____ year
- Anticipated completion date of final phase _____ month _____ year
- Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases: _____

f. Does the project include new residential uses? ☐ Yes ☑ No
If Yes, show numbers of units proposed.

	One Family	Two Family	Three Family	Multiple Family (four or more)
Initial Phase				
At completion of all phases				

g. Does the proposed action include new non-residential construction (including expansions)? ☑ Yes ☐ No
If Yes,
i. Total number of structures N/A
ii. Dimensions (in feet) of largest proposed structure: N/A height; N/A width; and N/A length
iii. Approximate extent of building space to be heated or cooled: N/A square feet

h. Does the proposed action include construction or other activities that will result in the impoundment of any liquids, such as creation of a water supply, reservoir, pond, lake, waste lagoon or other storage? ☑ Yes ☐ No
If Yes,
i. Purpose of the impoundment: Stormwater Detention
ii. If a water impoundment, the principal source of the water: ☐ Ground water ☐ Surface water streams ☑ Other specify: Stormwater
iii. If other than water, identify the type of impounded/contained liquids and their source.
iv. Approximate size of the proposed impoundment. Volume: TBD million gallons; surface area: TBD acres
v. Dimensions of the proposed dam or impounding structure: TBD height; TBD length
vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete): Earth Fill

D.2. Project Operations

a. Does the proposed action include any excavation, mining, or dredging, during construction, operations, or both? ☐ Yes ☑ No
(Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite)
If Yes:
i. What is the purpose of the excavation or dredging?
ii. How much material (including rock, earth, sediments, etc.) is proposed to be removed from the site?
- Volume (specify tons or cubic yards):
- Over what duration of time?

iii. Describe nature and characteristics of materials to be excavated or dredged, and plans to use, manage or dispose of them.
iv. Will there be onsite dewatering or processing of excavated materials? ☐ Yes ☐ No
If yes, describe.
v. What is the total area to be dredged or excavated? acres
vi. What is the maximum area to be worked at any one time? acres
vii. What would be the maximum depth of excavation or dredging? feet
viii. Will the excavation require blasting? ☐ Yes ☐ No
ix. Summarize site reclamation goals and plan:

b. Would the proposed action cause or result in alteration of, increase or decrease in size of, or encroachment into any existing wetland, waterbody, shoreline, beach or adjacent area? ☐ Yes ☑ No
If Yes:
i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description):

ii. Describe how the proposed action would affect that waterbody or wetland, e.g. excavation, fill, placement of structures, or alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in square feet or acres:

_____

_____

_____

_____

iii. Will the proposed action cause or result in disturbance to bottom sediments? ☐Yes☐No

If Yes, describe: _____

iv. Will the proposed action cause or result in the destruction or removal of aquatic vegetation? ☐Yes☐No

If Yes:

- acres of aquatic vegetation proposed to be removed: _____
- expected acreage of aquatic vegetation remaining after project completion: _____
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access): _____

_____

- proposed method of plant removal: _____
- if chemical/herbicide treatment will be used, specify product(s): _____

v. Describe any proposed reclamation/mitigation following disturbance: _____

_____

c. Will the proposed action use, or create a new demand for water? ☐Yes☑No

If Yes:

i. Total anticipated water usage/demand per day: _____ gallons/day

ii. Will the proposed action obtain water from an existing public water supply? ☐Yes☐No

If Yes:

- Name of district or service area: _____
- Does the existing public water supply have capacity to serve the proposal? ☐Yes☐No
- Is the project site in the existing district? ☐Yes☐No
- Is expansion of the district needed? ☐Yes☐No
- Do existing lines serve the project site? ☐Yes☐No

iii. Will line extension within an existing district be necessary to supply the project? ☐Yes☐No

If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____

- Source(s) of supply for the district:

iv. Is a new water supply district or service area proposed to be formed to serve the project site? ☐Yes☐No

If, Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- Proposed source(s) of supply for new district:

v. If a public water supply will not be used, describe plans to provide water supply for the project: _____

vi. If water supply will be from wells (public or private), what is the maximum pumping capacity: _____ gallons/minute.

d. Will the proposed action generate liquid wastes? ☐Yes☑No

If Yes:

i. Total anticipated liquid waste generation per day: _____ gallons/day

ii. Nature of liquid wastes to be generated (e.g., sanitary wastewater, industrial; if combination, describe all components and approximate volumes or proportions of each): _____

_____

_____

iii. Will the proposed action use any existing public wastewater treatment facilities? ☐Yes☐No

If Yes:

- Name of wastewater treatment plant to be used: _____
- Name of district: _____
- Does the existing wastewater treatment plant have capacity to serve the project? ☐Yes☐No
- Is the project site in the existing district? ☐Yes☐No
- Is expansion of the district needed? ☐Yes☐No

- Do existing sewer lines serve the project site? ☐Yes ☐No
- Will a line extension within an existing district be necessary to serve the project? ☐Yes ☐No

If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____

iv. Will a new wastewater (sewage) treatment district be formed to serve the project site? ☐Yes ☐No

If Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- What is the receiving water for the wastewater discharge? _____

v. If public facilities will not be used, describe plans to provide wastewater treatment for the project, including specifying proposed receiving water (name and classification if surface discharge or describe subsurface disposal plans):

vi. Describe any plans or designs to capture, recycle or reuse liquid waste: _____

e. Will the proposed action disturb more than one acre and create stormwater runoff, either from new point sources (i.e. ditches, pipes, swales, curbs, gutters or other concentrated flows of stormwater) or non-point source (i.e. sheet flow) during construction or post construction? ☑Yes ☐No

If Yes:

i. How much impervious surface will the project create in relation to total size of project parcel?

0± Square feet or 0± acres (impervious surface)

844,987± Square feet or 19.40± acres (parcel size)

ii. Describe types of new point sources. Limited Use Pervious Gravel Driveway

iii. Where will the stormwater runoff be directed (i.e. on-site stormwater management facility/structures, adjacent properties, groundwater, on-site surface water or off-site surface waters)?

Stormwater runoff will be directed to on-site stormwater management facilities (detention pond, swale) and ultimately discharge to on-site wetlands.

- If to surface waters, identify receiving water bodies or wetlands: On-site wetland.
- Will stormwater runoff flow to adjacent properties? ☐Yes ☑No

iv. Does the proposed plan minimize impervious surfaces, use pervious materials or collect and re-use stormwater? ☑Yes ☐No

f. Does the proposed action include, or will it use on-site, one or more sources of air emissions, including fuel combustion, waste incineration, or other processes or operations? ☐Yes ☑No

If Yes, identify:

i. Mobile sources during project operations (e.g., heavy equipment, fleet or delivery vehicles)

ii. Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers)

iii. Stationary sources during operations (e.g., process emissions, large boilers, electric generation)

g. Will any air emission sources named in D.2.f (above), require a NY State Air Registration, Air Facility Permit, or Federal Clean Air Act Title IV or Title V Permit? ☐Yes ☑No

If Yes:

i. Is the project site located in an Air quality non-attainment area? (Area routinely or periodically fails to meet ambient air quality standards for all or some parts of the year) ☐Yes ☐No

ii. In addition to emissions as calculated in the application, the project will generate:

- _____Tons/year (short tons) of Carbon Dioxide (CO_2)
- _____Tons/year (short tons) of Nitrous Oxide (N_2O)
- _____Tons/year (short tons) of Perfluorocarbons (PFCs)
- _____Tons/year (short tons) of Sulfur Hexafluoride (SF_6)
- _____Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflourocarbons (HFCs)
- _____Tons/year (short tons) of Hazardous Air Pollutants (HAPs)

h. Will the proposed action generate or emit methane (including, but not limited to, sewage treatment plants, landfills, composting facilities)? ☐Yes ☑No

If Yes:

i. Estimate methane generation in tons/year (metric): _____

ii. Describe any methane capture, control or elimination measures included in project design (e.g., combustion to generate heat or electricity, flaring): _____

i. Will the proposed action result in the release of air pollutants from open-air operations or processes, such as quarry or landfill operations? ☐Yes ☑No

If Yes: Describe operations and nature of emissions (e.g., diesel exhaust, rock particulates/dust):

j. Will the proposed action result in a substantial increase in traffic above present levels or generate substantial new demand for transportation facilities or services? ☐Yes ☑No

If Yes:

i. When is the peak traffic expected (Check all that apply): ☐ Morning ☐ Evening ☐Weekend ☐ Randomly between hours of _____ to _____.

ii. For commercial activities only, projected number of truck trips/day and type (e.g., semi trailers and dump trucks): _____

iii. Parking spaces: Existing _____ Proposed _____ Net increase/decrease _____

iv. Does the proposed action include any shared use parking? ☐Yes ☐No

v. If the proposed action includes any modification of existing roads, creation of new roads or change in existing access, describe:

vi. Are public/private transportation service(s) or facilities available within ½ mile of the proposed site? ☐Yes ☐No

vii Will the proposed action include access to public transportation or accommodations for use of hybrid, electric or other alternative fueled vehicles? ☐Yes ☐No

viii. Will the proposed action include plans for pedestrian or bicycle accommodations for connections to existing pedestrian or bicycle routes? ☐Yes ☐No

k. Will the proposed action (for commercial or industrial projects only) generate new or additional demand for energy? ☐Yes ☑No

If Yes:

i. Estimate annual electricity demand during operation of the proposed action: _____

ii. Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/local utility, or other):

iii. Will the proposed action require a new, or an upgrade, to an existing substation? ☐Yes ☐No

l. Hours of operation. Answer all items which apply.

i. During Construction:

- Monday - Friday: 7:00 a.m. - 6:00 p.m.
- Saturday: 7:00 a.m. - 6:00 p.m.
- Sunday: N/A
- Holidays: N/A

ii. During Operations:

- Monday - Friday: N/A
- Saturday: N/A
- Sunday: N/A
- Holidays: N/A

m. Will the proposed action produce noise that will exceed existing ambient noise levels during construction, operation, or both? ☑ Yes ☐ No

If yes:

i. Provide details including sources, time of day and duration:

Noise levels will temporarily increase during construction due to construction equipment during the hours of 7:00 a.m. – 6:00 p.m., Monday – Saturday. Construct duration will not exceed 4 months. No significant impact with respect to noise is anticipated during operations. Work will conform to local noise ordinance.

ii. Will the proposed action remove existing natural barriers that could act as a noise barrier or screen? ☐ Yes ☑ No

Describe: Existing vegetation will remain around the boundary of the project site.

n. Will the proposed action have outdoor lighting? ☐ Yes ☑ No

If yes:

i. Describe source(s), location(s), height of fixture(s), direction/aim, and proximity to nearest occupied structures:

ii. Will proposed action remove existing natural barriers that could act as a light barrier or screen? ☐ Yes ☐ No

Describe:

o. Does the proposed action have the potential to produce odors for more than one hour per day? ☐ Yes ☑ No

If Yes, describe possible sources, potential frequency and duration of odor emissions, and proximity to nearest occupied structures:

p. Will the proposed action include any bulk storage of petroleum (combined capacity of over 1,100 gallons) or chemical products 185 gallons in above ground storage or any amount in underground storage? ☐ Yes ☑ No

If Yes:

i. Product(s) to be stored

ii. Volume(s) _____ per unit time _____ (e.g., month, year)

iii. Generally, describe the proposed storage facilities:

q. Will the proposed action (commercial, industrial and recreational projects only) use pesticides (i.e., herbicides, insecticides) during construction or operation? ☐ Yes ☑ No

If Yes:

i. Describe proposed treatment(s):

ii. Will the proposed action use Integrated Pest Management Practices? ☐ Yes ☐ No

r. Will the proposed action (commercial or industrial projects only) involve or require the management or disposal of solid waste (excluding hazardous materials)? ☐ Yes ☑ No

If Yes:

i. Describe any solid waste(s) to be generated during construction or operation of the facility:

- Construction: _____ tons per _____ (unit of time)
- Operation : _____ tons per _____ (unit of time)

ii. Describe any proposals for on-site minimization, recycling or reuse of materials to avoid disposal as solid waste:

- Construction:
- Operation:

iii. Proposed disposal methods/facilities for solid waste generated on-site:

- Construction:
- Operation:

s. Does the proposed action include construction or modification of a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Type of management or handling of waste proposed for the site (e.g., recycling or transfer station, composting, landfill, or other disposal activities): _____

ii. Anticipated rate of disposal/processing:

- _____ Tons/month, if transfer or other non-combustion/thermal treatment, or
- _____ Tons/hour, if combustion or thermal treatment

iii. If landfill, anticipated site life: _____ years

t. Will the proposed action at the site involve the commercial generation, treatment, storage, or disposal of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Name(s) of all hazardous wastes or constituents to be generated, handled or managed at facility: _____

ii. Generally describe processes or activities involving hazardous wastes or constituents: _____

iii. Specify amount to be handled or generated _____ tons/month

iv. Describe any proposals for on-site minimization, recycling or reuse of hazardous constituents: _____

v. Will any hazardous wastes be disposed at an existing offsite hazardous waste facility? ☐ Yes ☐ No

If Yes: provide name and location of facility: _____

If No: describe proposed management of any hazardous wastes which will not be sent to a hazardous waste facility:

E. Site and Setting of Proposed Action

E.1. Land uses on and surrounding the project site

a. Existing land uses.

i. Check all uses that occur on, adjoining and near the project site.

☐ Urban ☐ Industrial ☑ Commercial ☑ Residential (suburban) ☐ Rural (non-farm)
☑ Forest ☐ Agriculture ☐ Aquatic ☐ Other (specify): _____

ii. If mix of uses, generally describe:

b. Land uses and covertypes on the project site.

Land use or Covertype	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces	0.30±	0.00	-0.30±
• Forested	2.64±	0.47±	-2.17±
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	9.37±	15.40±	+6.03±
• Agricultural (includes active orchards, field, greenhouse etc.)	0.00	0.00	0.00
• Surface water features (lakes, ponds, streams, rivers, etc.)	0.00	0.00	0.00
• Wetlands (freshwater or tidal)	1.30±	1.30±	0.00
• Non-vegetated (bare rock, earth or fill)	0.00	0.00	0.00
• Other Describe: Limited Use Pervious Gravel Former farm area with subsequent tree growth	0.00 5.79±	0.58± 1.65±	+0.58± -4.14±

c. Is the project site presently used by members of the community for public recreation? ☐ Yes ☑ No

i. If Yes: explain:

d. Are there any facilities serving children, the elderly, people with disabilities (e.g., schools, hospitals, licensed day care centers, or group homes) within 1500 feet of the project site? ☑ Yes ☐ No

If Yes,

i. Identify Facilities:

Advanced Dental Concepts, Raymond Opticians Inc, Jefferson Valley Eye Care

e. Does the project site contain an existing dam? ☐ Yes ☑ No

If Yes:

i. Dimensions of the dam and impoundment:

- Dam height: _____ feet
- Dam length: _____ feet
- Surface area: _____ acres
- Volume impounded: gallons OR acre-feet

ii. Dam's existing hazard classification: _____

iii. Provide date and summarize results of last inspection:

f. Has the project site ever been used as a municipal, commercial or industrial solid waste management facility, or does the project site adjoin property which is now, or was at one time, used as a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Has the facility been formally closed? ☐ Yes ☐ No

- If yes, cite sources/documentation: _____

ii. Describe the location of the project site relative to the boundaries of the solid waste management facility:

iii. Describe any development constraints due to the prior solid waste activities: _____

g. Have hazardous wastes been generated, treated and/or disposed of at the site, or does the project site adjoin property which is now or was at one time used to commercially treat, store and/or dispose of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Describe waste(s) handled and waste management activities, including approximate time when activities occurred:

h. Potential contamination history. Has there been a reported spill at the proposed project site, or have any remedial actions been conducted at or adjacent to the proposed site? ☐ Yes ☑ No

If Yes:

i. Is any portion of the site listed on the NYSDEC Spills Incidents database or Environmental Site Remediation database? Check all that apply: ☐ Yes ☐ No

☐ Yes – Spills Incidents database — Provide DEC ID number(s): _____

☐ Yes – Environmental Site Remediation database — Provide DEC ID number(s): _____

☐ Neither database

ii. If site has been subject of RCRA corrective activities, describe control measures: _____

iii. Is the project within 2000 feet of any site in the NYSDEC Environmental Site Remediation database? ☐ Yes ☑ No

If yes, provide DEC ID number(s): _____

iv. If yes to (i), (ii) or (iii) above, describe current status of site(s):

v. Is the project site subject to an institutional control limiting property uses? ☐ Yes ☑ No

- If yes, DEC site ID number: _____
- Describe the type of institutional control (e.g., deed restriction or easement): _____
- Describe any use limitations: _____
- Describe any engineering controls: _____
- Will the project affect the institutional or engineering controls in place? ☐ Yes ☐ No
- Explain:

E.2. Natural Resources On or Near Project Site

a. What is the average depth to bedrock on the project site? >6.56 feet

b. Are there bedrock outcroppings on the project site? ☐ Yes ☑ No
If Yes, what proportion of the site is comprised of bedrock outcroppings? 0 %

c. Predominant soil type(s) present on project site:

ChB (HSG B)	49.1± %
ChC (HSG B)	40.8± %
LcB (HSG A/D)	6.8± %

d. What is the average depth to the water table on the project site? Average: 3.53± feet

e. Drainage status of project site soils:
☑ Well Drained: 89.9 % of site
☑ Moderately Well Drained: 6.8 % of site
☑ Poorly Drained 3.3 % of site

f. Approximate proportion of proposed action site with slopes:
☑ 0-10%: 58.8 % of site
☑ 10-15%: 22.4 % of site
☑ 15% or greater: 18.8 % of site

g. Are there any unique geologic features on the project site? ☐ Yes ☑ No
If Yes, describe: _____

h. Surface water features.

i. Does any portion of the project site contain wetlands or other waterbodies (including streams, rivers, ponds or lakes)? ☑ Yes ☐ No

ii. Do any wetlands or other waterbodies adjoin the project site? ☑ Yes ☐ No

If Yes to either *i* or *ii*, continue. If No, skip to E.2.i.

iii. Are any of the wetlands or waterbodies within or adjoining the project site regulated by any federal, state or local agency? ☑ Yes ☐ No

iv. For each identified regulated wetland and waterbody on the project site, provide the following information:

- Streams: Name _____ Classification _____
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name NYS Wetland Approximate Size 1.30± Acres
- Wetland No. (if regulated by DEC) A-4

v. Are any of the above water bodies listed in the most recent compilation of NYS water quality-impaired waterbodies? ☐ Yes ☑ No

If yes, name of impaired water body/bodies and basis for listing as impaired:

_____

i. Is the project site in a designated Floodway? ☐ Yes ☑ No

j. Is the project site in the 100-year Floodplain? ☐ Yes ☑ No

k. Is the project site in the 500-year Floodplain? ☐ Yes ☑ No

l. Is the project site located over, or immediately adjoining, a primary, principal or sole source aquifer? ☑ Yes ☐ No
If Yes:

i. Name of aquifer: Principal Aquifer

m. Identify the predominant wildlife species that occupy or use the project site:
Various Migratory Birds
Typical Northeastern Wildlife

n. Does the project site contain a designated significant natural community? ☐ Yes ☑ No
If Yes:
i. Describe the habitat/community (composition, function, and basis for designation):
ii. Source(s) of description or evaluation:
iii. Extent of community/habitat:
- Currently: _____ acres
- Following completion of project as proposed: _____ acres
- Gain or loss (indicate + or -): _____ acres

o. Does project site contain any species of plant or animal that is listed by the federal government or NYS as endangered or threatened, or does it contain any areas identified as habitat for an endangered or threatened species? ☑ Yes ☐ No
If Yes:
i. Species and listing (endangered or threatened):
Indiana Bat (Myotis Sodalis), Bog Turtle (Clemmys Muhlenbergii)*
*From IPAC resource list

p. Does the project site contain any species of plant or animal that is listed by NYS as rare, or as a species of special concern? ☐ Yes ☑ No
If Yes:
i. Species and listing:

q. Is the project site or adjoining area currently used for hunting, trapping, fishing or shell fishing? ☐ Yes ☑ No
If yes, give a brief description of how the proposed action may affect that use:

E.3. Designated Public Resources On or Near Project Site

a. Is the project site, or any portion of it, located in a designated agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? ☐ Yes ☑ No
If Yes, provide county plus district name/number:

b. Are agricultural lands consisting of highly productive soils present? ☑ Yes ☐ No
i. If Yes: acreage(s) on project site? 18.0±
ii. Source(s) of soil rating(s): NRCS Soil Survey

c. Does the project site contain all or part of, or is it substantially contiguous to, a registered National Natural Landmark? ☐ Yes ☑ No
If Yes:
i. Nature of the natural landmark: ☐ Biological Community ☐ Geological Feature
ii. Provide brief description of landmark, including values behind designation and approximate size/extent:

d. Is the project site located in or does it adjoin a state listed Critical Environmental Area? ☐ Yes ☑ No
If Yes:
i. CEA name:
ii. Basis for designation:
iii. Designating agency and date:

e. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places? ☐ Yes ☑ No

If Yes:

i. Nature of historic/archaeological resource: ☐ Archaeological Site ☐ Historic Building or District

ii. Name: _____

iii. Brief description of attributes on which listing is based:

_____

f. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory? ☐ Yes ☑ No

g. Have additional archaeological or historic site(s) or resources been identified on the project site? ☐ Yes ☑ No

If Yes:

i. Describe possible resource(s): _____

ii. Basis for identification: _____

h. Is the project site within fives miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource? ☑ Yes ☐ No

If Yes:

i. Identify resource: Taconic State Parkway

ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): Scenic Byway

iii. Distance between project and resource: 0.63± miles.

i. Is the project site located within a designated river corridor under the Wild, Scenic and Recreational Rivers Program 6 NYCRR 666? ☐ Yes ☑ No

If Yes:

i. Identify the name of the river and its designation: _____

ii. Is the activity consistent with development restrictions contained in 6NYCRR Part 666? ☐ Yes ☐ No

F. Additional Information

Attach any additional information which may be needed to clarify your project.

If you have identified any adverse impacts which could be associated with your proposal, please describe those impacts plus any measures which you propose to avoid or minimize them.

G. Verification

I certify that the information provided is true to the best of my knowledge.

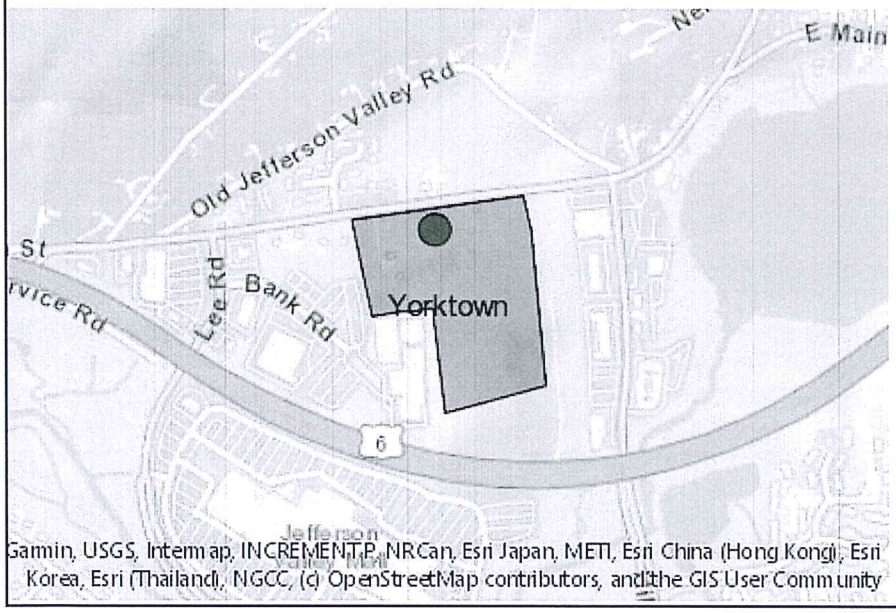
Applicant/Sponsor Name Hillside Solar LLC c/o Kathryn Hoenig Date 07/28/2021

Signature Eric Redding Bergmann c/o Eric Redding, PE as Agent for Applicant Title Discipline Leader

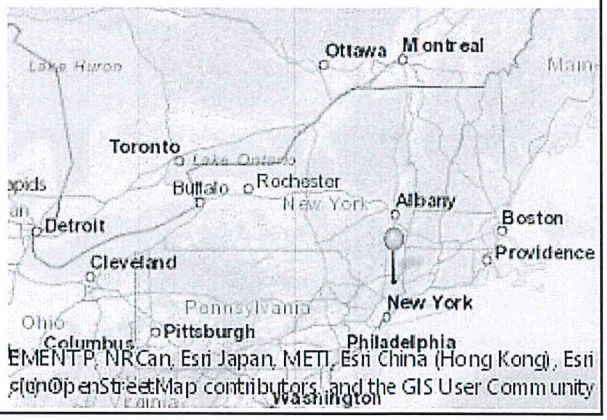
PRINT FORM

EAF Mapper Summary Report

Tuesday, June 29, 2021 1:56 PM



Disclaimer: The EAF Mapper is a screening tool intended to assist project sponsors and reviewing agencies in preparing an environmental assessment form (EAF). Not all questions asked in the EAF are answered by the EAF Mapper. Additional information on any EAF question can be obtained by consulting the EAF Workbooks. Although the EAF Mapper provides the most up-to-date digital data available to DEC, you may also need to contact local or other data sources in order to obtain data not provided by the Mapper. Digital data is not a substitute for agency determinations.



B.i.i [Coastal or Waterfront Area]	No
B.i.ii [Local Waterfront Revitalization Area]	No
C.2.b. [Special Planning District]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h [DEC Spills or Remediation Site - Potential Contamination History]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Listed]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Environmental Site Remediation Database]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.iii [Within 2,000' of DEC Remediation Site]	No
E.2.g [Unique Geologic Features]	No
E.2.h.i [Surface Water Features]	Yes
E.2.h.ii [Surface Water Features]	Yes
E.2.h.iii [Surface Water Features]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
E.2.h.iv [Surface Water Features - Wetlands Name]	NYS Wetland
E.2.h.iv [Surface Water Features - Wetlands Size]	NYS Wetland (in acres):224.6
E.2.h.iv [Surface Water Features - DEC Wetlands Number]	A-4
E.2.h.v [Impaired Water Bodies]	No
E.2.i. [Floodway]	No
E.2.j. [100 Year Floodplain]	No
E.2.k. [500 Year Floodplain]	No

E.2.l. [Aquifers]	Yes
E.2.l. [Aquifer Names]	Principal Aquifer
E.2.n. [Natural Communities]	No
E.2.o. [Endangered or Threatened Species]	No
E.2.p. [Rare Plants or Animals]	No
E.3.a. [Agricultural District]	No
E.3.c. [National Natural Landmark]	No
E.3.d [Critical Environmental Area]	No
E.3.e. [National or State Register of Historic Places or State Eligible Sites]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.3.f. [Archeological Sites]	No
E.3.i. [Designated River Corridor]	No

To: Yorktown Planning Board
From: Yorktown Tree Conservation Advisory Commission (TCAC)
Date: 2 August 2021
cc: Yorktown Planning Dept. (J. Tegeder, R. Steinberg, N. Calicchia); Engineering Dept. (L. Kobiliak); Conservation Board (K. Hughes); Town Supervisor (M. Slater); Town Clerk (D. Quast); TCAC members (L. Klein, T. Schmitt, K. Schepart)

Re: TCAC comment on proposed solar facility at 571 East Main St (Old Hill Farm Solar Farm). (Materials received 7/30/21)

Dear Chairman Fon and members of the Planning Board:

TCAC does not approve this project. No tree removal plan has been submitted as required by the tree law. This is a wooded lot which would require a mitigation plan as per the tree law. No mitigation plan has been submitted.

Sincerely,

Tree Conservation Advisory Commission
Lawrence W. Klein, PE, Member
Keith Schepart, ISA, Member
Tom Schmitt, Member

ARCH D 24x36

PRELIMINARY DEVELOPMENT PLANS FOR
PROPOSED
OLD HILL FARM SOLAR FARM
SOLAR DEVELOPMENT
571 EAST MAIN STREET
JEFFERSON VALLEY, NEW YORK

PROJECT CONTACTS

CIVIL ENGINEER
BERGMANN
2 WINNERS CIRCLE, SUITE 102
ALBANY, NY 12205
CONTACT: ERIC REDDING, PE
PHONE: 518.556.3631

OWNER
OLD HILL FARM LLC
227 GUARD HILL ROAD
BEDFORD CORNERS, NY 10549

APPLICANT
HILLSIDE SOLAR LLC
227 GUARD HILL ROAD
BEDFORD CORNERS, NY 10549
CONTACT: KATHRYN HOENIG
PHONE: 914.953.5312

ELECTRICAL ENGINEER
TBD

SITE LOCATION MAP
1"=1000'

N

DRAWING INDEX		
DRAWING NO.	DRAWING TITLE	SHEET NO.
C000	COVER	1
C001	GENERAL NOTES	2
C002	AREA PARCEL PLAN	3
C003	EXISTING CONDITIONS PLAN	4
C004	OVERALL SITE PLAN	5
C005	SITE PLAN	6
C006	GRADING & EROSION & SEDIMENT CONTROL PLAN	7
C007	GRADING PLAN DETAILS	8
C008	DETAILS I	9
C009	DETAILS II	10
C010	DETAILS III	11

BERGMANN
ARCHITECTS ENGINEERS PLANNERS

2 Winners Circle, Suite 102
Albany, NY 12205
www.bergmannpc.com
office: 518.862.0325

HILLSIDE SOLAR LLC

227 GUARD HILL ROAD
BEDFORD CORNERS, NY 10549

OLD HILL FARM SOLAR FARM

571 EAST MAIN STREET
JEFFERSON VALLEY, NY 10535

Date Revised	Description

PRELIMINARY
NOT FOR CONSTRUCTION

Project Manager	Discipline Lead
ECR	ECR
Designer	Reviewer
AG	WD
Date Issued	Project Number
07/28/2021	14064.11

Sheet Name

COVER

Drawing Number

C000

1 of 11

7/28/2021 8:45 AM

SEQUENCE OF CONSTRUCTION:

1. PRE-CONSTRUCTION MEETING HELD TO INCLUDE PROJECT MANAGER, OPERATOR'S ENGINEER, CONTRACTOR, AND SUB-CONTRACTORS PRIOR TO LAND DISTURBING ACTIVITIES.
2. CONSTRUCT CONSTRUCTION ENTRANCE/EXIT AT LOCATIONS DESIGNATED ON PLANS.
3. INSTALL PERIMETER SILT FENCE.
4. HAVE A QUALIFIED PROFESSIONAL CONDUCT AN ASSESSMENT OF THE SITE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
5. BEGIN CLEARING AND GRUBBING OPERATIONS. CLEARING AND GRUBBING SHALL BE DONE ONLY IN AREAS WHERE EARTHWORK WILL BE PERFORMED AND ONLY IN AREAS WHERE CONSTRUCTION IS PLANNED TO COMMENCE WITHIN 14 DAYS AFTER CLEARING AND GRUBBING.
6. CONSTRUCT GRAVEL ROAD TO BE USED DURING CONSTRUCTION
7. STRIP TOPSOIL AND STOCKPILE IN A LOCATION ACCEPTABLE TO CONSTRUCTION MANAGER. WHEN STOCKPILE IS COMPLETE, INSTALL PERIMETER SILT FENCE, SEED SURFACE WITH 100% PERENNIAL RYEGRASS MIXTURE AT A RATE OF 2-4 LBS. PER 1000 SF. APPLY 90-100 LBS PER 1000 SF OF MULCH.
8. COMMENCE EARTHWORK CUT AND FILLS. THE WORK SHALL BE PROGRESSED TO ALLOW A REASONABLE TRANSFER OF CUT AND FILL EARTH FOR ROUGH GRADING AND EARTH MOVING. THE CONTRACTOR WILL BE GIVEN SOME LATITUDE TO VARY FROM THE FOLLOWING SCHEDULE IN ORDER TO MEET THE FIELD CONDITIONS ENCOUNTERED. CONTRACTOR SHALL REVIEW VARIATIONS TO SWPPP WITH DESIGN ENGINEER AND QUALIFIED PROFESSIONAL PRIOR TO IMPLEMENTATION.
9. REMOVE GRAVEL DRIVEWAY USED DURING CONSTRUCTION AND CONSTRUCT THE PROPOSED PERVIOUS GRAVEL DRIVEWAY AFTER CONSTRUCTION ACTIVITIES SUCH AS THE INSTALLATION OF THE PANELS AND PERIMETER FENCE. THE SUB-GRADE MATERIAL WHERE THE DRIVEWAY IS TO BE INSTALLED SHALL BE DECOMPACTED PER NYSDEC'S "DEEP-RIPPING AND DECOMPACTION" MANUAL, DATED APRIL 2008. CONTRACTOR SHALL AVOID FREQUENT HEAVY TRAFFIC ON THE LIMITED USE PERVIOUS GRAVEL.
10. AS ROADWAY AND ACCESS DRIVES ARE BROUGHT TO GRADE, THEY WILL BE STABILIZED WITH CRUSHED STONE SUBBASE AT A DEPTH SPECIFIED ON PLANS TO PREVENT EROSION AS SOON AS PRACTICABLE.
11. STABILIZE ALL AREAS AS SOON AS PRACTICABLE, IDLE IN EXCESS OF 7 DAYS AND IN WHICH CONSTRUCTION WILL NOT RECOMMENCE WITHIN 14 DAYS.
12. INSTALL UTILITIES. TRENCH EXCAVATION/BACKFILL AREAS SHOULD BE STABILIZED PROGRESSIVELY AT THE END OF EACH WORKDAY WITH SEED AND STRAW MULCH AT A RATE OF 100% PERENNIAL RYE GRASS AT 2-4 LBS/1000 SF MULCHED AT 90-100 LBS/1000 SF.
13. STABILIZE ALL AREAS IDLE IN EXCESS OF 7 DAYS IN WHICH CONSTRUCTION WILL NOT RECOMMENCE WITHIN 14 DAYS.
14. REMOVE TEMPORARY CONSTRUCTION EXITS AND PERIMETER SILT FENCE ONCE SITE HAS ACHIEVED 80% UNIFORM STABILIZATION.

GENERAL NOTES:

1. THE UNDERGROUND STRUCTURES AND UTILITIES SHOWN ON THIS MAP HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORD MAPS, THEY ARE NOT CERTIFIED TO THE ACCURACY OF THEIR LOCATION AND/OR COMPLETENESS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION AND EXTENT OF ALL UNDERGROUND STRUCTURES AND UTILITIES PRIOR TO ANY DIGGING OR CONSTRUCTION ACTIVITIES IN THEIR VICINITY. THE CONTRACTOR SHALL HAVE ALL EXISTING UTILITIES FIELD STAKED BEFORE STARTING WORK BY CALLING 1-800-962-7962.
2. THE CONTRACTOR SHALL PERFORM ALL WORK IN COMPLIANCE WITH TITLE 29 OF FEDERAL REGULATIONS, PART 1926, SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION (OSHA).
3. HIGHWAY DRAINAGE ALONG ALL ROADS AND PRIVATE DRIVES SHALL BE KEPT CLEAN OF MUD, DEBRIS ETC. AT ALL TIMES.
4. THE CONTRACTOR SHALL CONSULT THE DESIGN ENGINEER BEFORE DEVIATING FROM THESE PLANS.
5. IN ALL TRENCH EXCAVATIONS, CONTRACTOR MUST LAY THE TRENCH SIDE SLOPES BACK TO A SAFE SLOPE, USE A TRENCH SHIELD OR PROVIDE SHEETING AND BRACING.
6. IF SUSPICIOUS AND/OR HAZARDOUS MATERIAL IS ENCOUNTERED DURING DEMOLITION/CONSTRUCTION, ALL WORK SHALL STOP AND THE WESTCHESTER COUNTY DEPARTMENT OF HEALTH AND THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION SHALL BE NOTIFIED IMMEDIATELY. WORK SHALL NOT RESUME UNTIL THE DEVELOPER HAS OUTLINED APPROPRIATE ACTION FOR DEALING WITH THE WASTE MATERIAL AND THE DEVELOPMENT PLANS ARE MODIFIED AS MAY BE NECESSARY.
7. EXCAVATED WASTE MATERIAL REMOVED FROM THE SITE SHALL BE PLACED AT A LOCATION ACCEPTABLE TO THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION.
8. AREAS DISTURBED OR DAMAGED AS PART OF THIS PROJECTS CONSTRUCTION THAT ARE OUTSIDE OF THE PRIMARY WORK AREA SHALL BE RESTORED, AT THE CONTRACTORS EXPENSE, TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE.
9. UNLESS COVERED BY THE CONTRACT SPECIFICATIONS OR AS NOTED ON THE PLANS, ALL WORK SHALL CONFORM TO THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS DATED JANUARY 1, 2020 AND ANY SUBSEQUENT APPENDICES.

WASTE/HAZARDOUS MATERIAL PRACTICES:

1. WHENEVER POSSIBLE COVERED TRASH CONTAINERS SHOULD BE USED.
2. DAILY SITE CLEANUP IS REQUIRED TO REDUCE DEBRIS AND POLLUTANTS IN THE ENVIRONMENT.
3. CONTRACTOR SHALL PROVIDE A SAFE STORAGE SPACE FOR ALL PAINTS, STAINS AND SOLVENTS INSIDE A COVERED STORAGE AREA.
4. ALL FUELS, OILS, AND GREASE MUST BE KEPT IN CONTAINERS AT ALL TIMES.

EROSION & SEDIMENT CONTROL NOTES:

1. INSTALL EROSION CONTROL MEASURES AS INDICATED ON THE PLAN PRIOR TO THE START OF ANY EXCAVATION WORK. EROSION CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH THE NEW YORK STATE GUIDELINES FOR URBAN EROSION SEDIMENT CONTROL MANUAL, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, AND THE GOVERNING MUNICIPAL REQUIREMENTS.
2. REMOVE AND STOCKPILE TOPSOIL AS DIRECTED BY THE CONSTRUCTION MANAGER REPLACE TOPSOIL TO A MINIMUM 4" DEPTH WITH TOPSOIL OR AMENDED SOIL. ALL DISTURBED AREAS TO BE SEEDED TO PROMOTE VEGETATION AS SOON AS PRACTICABLE.
3. IF THE SEASONS PROHIBITS TEMPORARY SEEDING, THE DISTURBED AREAS WILL BE MULCHED WITH STRAW HAY OR EQUIVALENT AND ANCHORED IN ACCORDANCE WITH THE "STANDARDS", NETTING OR LIQUID MULCH BINDER.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND REMOVAL OF TEMPORARY SEDIMENTATION CONTROLS. EROSION CONTROL MEASURES SHALL NOT BE REMOVED BEFORE 80% UNIFORM VEGETATIVE COVER HAS BEEN ACHIEVED.
5. ALL EROSION CONTROL MEASURES ARE TO BE REPLACED WHENEVER THEY BECOME CLOGGED OR INOPERABLE AND SHALL BE REPLACED AT A MINIMUM OF EVERY 3 MONTHS.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORATION OF TOPSOIL OR AMENDED TO ALL DISTURBED AREAS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN EROSION CONTROL MEASURES AT ALL TIMES.
7. THE CONTRACTOR SHALL DESIGNATE A MEMBER OF HIS/HER FIRM TO BE RESPONSIBLE TO MONITOR EROSION CONTROL, EROSION CONTROL STRUCTURES, TREE PROTECTION AND PRESERVATION THROUGHOUT CONSTRUCTION.
8. ALL DISTURBED AREAS SHALL BE FINISH GRADED TO PROMOTE VEGETATION ON ALL EXPOSED AREAS AS SOON AS PRACTICABLE. STABILIZATION PRACTICES (TEMPORARY/PERMANENT SEEDING, MULCHING, GEOTEXTILES, ETC.) MUST BE IMPLEMENTED WITHIN SEVEN (7) DAYS WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, AND NOT EXPECTED TO RESUME WITHIN FOURTEEN (14) DAYS.
9. PAVED ROADWAYS MUST BE KEPT CLEAN AT ALL TIMES. ALL CONSTRUCTION DEBRIS AND SEDIMENT SPOILS, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT-OF-WAYS MUST BE REMOVED IMMEDIATELY.
10. DUST SHALL BE CONTROLLED BY WATERING.
11. ADJOINING PROPERTY SHALL BE PROTECTED FROM EXCAVATION AND FILLING OPERATIONS ON THE PROPOSED SITE.
12. SLOPE TRACKING SHALL BE IMPLEMENTED ON ALL SLOPE 1 ON 3 OR GREATER AT THE END OF EACH WORK DAY AND PRIOR TO FINAL SLOPE GRADING AND STABILIZATION.

STORM WATER POLLUTION PREVENTION PLAN NOTES:

1. THE CONTRACTOR SHALL PROVIDE A QUALIFIED INSPECTOR TO INSPECT THE PROJECT AT THE END OF EACH WORK WEEK AND PROVIDE A REPORT AT LEAST ONCE PER WEEK.
2. EROSION CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH THE NEW YORK STATE GUIDELINES FOR URBAN EROSION SEDIMENT CONTROL MANUAL, WESTCHESTER COUNTY DEPARTMENT OF HEALTH, AND THE TOWN OF YORKTOWN REQUIREMENTS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE BEST MANAGEMENT PRACTICES (BMP'S) UNTIL GROUND COVER IS ESTABLISHED.
4. REMOVE AND STOCKPILE TOPSOIL AS DIRECTED BY THE CONSTRUCTION MANAGER. REPLACE TOPSOIL TO A MINIMUM 4" DEPTH. ALL DISTURBED AREAS TO BE HYDROSEEDED AS DIRECTED BY THE CONSTRUCTION MANAGER TO PROMOTE VEGETATION AS SOON AS PRACTICABLE.
5. IF THE SEASONS PROHIBITS TEMPORARY SEEDING, THE DISTURBED AREAS WILL BE MULCHED WITH STRAW HAY OR EQUIVALENT AND ANCHORED IN ACCORDANCE WITH THE "STANDARDS", NETTING OR LIQUID MULCH BINDER.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND REMOVAL OF TEMPORARY SEDIMENTATION CONTROLS. EROSION CONTROL MEASURES SHALL NOT BE REMOVED BEFORE 80% UNIFORM VEGETATION HAS BEEN ACHIEVED.
7. ALL EROSION CONTROL MEASURES ARE TO BE REPLACED WHENEVER THEY BECOME CLOGGED OR INOPERABLE AND SHALL BE REPLACED WHEN THEY HAVE REACHED THE DESIGN LIFE INDICATED IN THE NYS GUIDELINES FOR URBAN EROSION SEDIMENT CONTROL DESIGN MANUAL OR EVERY THREE MONTHS.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORATION OF TOPSOIL TO ALL DISTURBED AREAS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN EROSION CONTROL MEASURES AT ALL TIMES.
9. THE CONTRACTOR SHALL DESIGNATE A MEMBER OF HIS/HER FIRM TO BE RESPONSIBLE TO MONITOR EROSION CONTROL AND EROSION CONTROL STRUCTURES THROUGHOUT CONSTRUCTION.
10. ALL DISTURBED AREAS SHALL BE FINISH GRADED TO PROMOTE VEGETATION ON ALL EXPOSED AREAS AS SOON AS PRACTICABLE. STABILIZATION PRACTICES (TEMPORARY/PERMANENT SEEDING, MULCHING, GEOTEXTILES, ETC.) MUST BE IMPLEMENTED WITHIN SEVEN (7) DAYS WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, AND NOT EXPECTED TO RESUME WITHIN FOURTEEN (14) DAYS.
11. PAVED ROADWAYS MUST BE KEPT CLEAN AT ALL TIMES. ALL CONSTRUCTION DEBRIS AND SEDIMENT SPOILS, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT-OF-WAYS MUST BE REMOVED IMMEDIATELY.
12. DUST SHALL BE CONTROLLED BY WATERING.
13. ADJOINING PROPERTIES SHALL BE PROTECTED FROM EXCAVATION AND FILLING OPERATIONS ON THE PROPOSED SITE.
14. EROSION CONTROL MEASURES SHOULD BE RELOCATED INWARD AS PERIMETER SLOPE CONSTRUCTION PROGRESSES AND RECONSTRUCTED TO THE NYS STANDARDS & SPECIFICATION AT THE END OF EACH DAY.
15. PERIMETER AREAS SHALL BE TEMPORARILY STABILIZED WITH SEED AND MULCH PROGRESSIVELY AT MINIMUM AT THE END OF EACH WEEK WITH 100% PERENNIAL RYEGRASS MIX AT A RATE OF 2-4 LBS PER 1000 SF AND MULCH 90-100 LBS PER 1000 SF OF WEED FREE STRAW.
16. SLOPE TRACKING SHALL BE IMPLEMENTED ON ALL SLOPE 1 ON 3 OR GREATER AT THE END OF EACH WORK DAY AND PRIOR TO FINAL SLOPE GRADING AND STABILIZATION.

SITE STABILIZATION:

1. WHEN FINAL GRADE IS ACHIEVED DURING NON-GERMINATING MONTHS, THE AREA SHOULD BE MULCHED UNTIL THE BEGINNING OF THE NEXT PLANTING SEASON.
2. MULCHES SHOULD BE APPLIED AT THE RATES SHOWN IN THE MULCH APPLICATION RATES TABLE. VERY LITTLE BARE GROUND SHOULD BE VISIBLE THROUGH THE MULCH.
3. STRAW AND HAY MULCH SHOULD BE ANCHORED OR TACKIFIED IMMEDIATELY AFTER APPLICATION TO PREVENT BEING WINDBLOWN. A TRACTOR-DRAWN IMPLEMENTS MAY BE USED TO "CRIMP" THE STRAW OR HAY INTO THE SOIL - ABOUT 3 INCHES. THIS METHOD SHOULD BE LIMITED TO SLOPES NO STEEPER THAN 3H:1V. THE MACHINERY SHOULD BE OPERATED ALONG THE CONTOUR, NOTE: CRIMPING OF HAY OR STRAW BY RUNNING OVER IT WITH TRACKED MACHINERY IS NOT RECOMMENDED.
4. BEFORE SEEDING IS APPLIED THE CONTRACTOR SHALL SPREAD SOIL TO PREVENT PONDING AND CONFIRM THAT SOIL WILL SUSTAIN THE SEED GERMINATION AND ESTABLISHMENT OF VEGETATION.
5. GRADED AREAS SHOULD BE SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3 TO 5 INCHES TO PERMIT BONDING OF THE TOPSOIL TO THE SURFACE AREAS AND TO PROVIDE A ROUGHENED SURFACE TO PREVENT TOPSOIL FROM SLIDING DOWN SLOPE. COMPACTED SOILS SHOULD BE SCARIFIED TO A DEPTH OF 6 TO 12 INCHES, ALONG CONTOUR WHEREVER POSSIBLE, PRIOR TO SEEDING.
6. TOPSOIL OR AMENDED SOIL SHOULD BE UNIFORMLY DISTRIBUTED ACROSS THE DISTURBED AREA TO A MINIMUM DEPTH OF 6 INCHES. SPREADING SHOULD BE DONE IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL PREPARATION OR TILLAGE. IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOIL PLACEMENT SHOULD BE CORRECTED IN ORDER TO PREVENT FORMATION OF DEPRESSIONS.
7. TOPSOIL SHOULD NOT BE PLACED WHILE THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET, OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.
8. WHEN USED AS A MULCH REPLACEMENT, THE APPLICATION RATE (THICKNESS) OF THE COMPOST SHOULD BE ½" TO ¾". COMPOST SHOULD BE PLACED EVENLY AND SHOULD PROVIDE 100% SOIL COVERAGE. NO SOIL SHOULD BE VISIBLE.
9. POLYMERIC AND GUM TACKIFIERS MIXED AND APPLIED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS MAY BE USED TO TACK MULCH. AVOID APPLICATION DURING RAIN AND ON WINDY DAYS. A 24-HOUR CURING PERIOD AND A SOIL TEMPERATURE HIGHER THAN 45° F ARE TYPICALLY REQUIRED. APPLICATION SHOULD GENERALLY BE HEAVIEST AT EDGES OF SEEDED AREAS AND AT CRESTS OF RIDGES AND BANKS TO PREVENT LOSS BY WIND. THE REMAINDER OF THE AREA SHOULD HAVE BINDER APPLIED UNIFORMLY. BINDERS MAY BE APPLIED AFTER MULCH IS SPREAD OR SPRAYED INTO THE MULCH AS IT IS BEING BLOWN ONTO THE SOIL. APPLYING STRAW AND BINDER TOGETHER IS GENERALLY MORE EFFECTIVE.
10. SYNTHETIC BINDERS, OR CHEMICAL BINDERS, MAY BE USED AS RECOMMENDED BY THE MANUFACTURER TO ANCHOR MULCH PROVIDED SUFFICIENT DOCUMENTATION IS PROVIDED TO SHOW THEY ARE NON-TOXIC TO NATIVE PLANT AND ANIMAL SPECIES.
11. MULCH ON SLOPES OF 8% OR STEEPER SHOULD BE HELD IN PLACE WITH NETTING. LIGHTWEIGHT PLASTIC, FIBER, OR PAPER NETS MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
12. SHREDDED PAPER HYDROMULCH SHOULD NOT BE USED ON SLOPES STEEPER THAN 5%. WOOD FIBER HYDROMULCH MAY BE APPLIED ON STEEPER SLOPES PROVIDED A TACKIFIER IS USED. THE APPLICATION RATE FOR ANY HYDROMULCH SHOULD BE 2,000 LB/ACRE AT A MINIMUM.
13. LIME, FERTILIZER, SEED, AND MULCH DISTURBED AREAS PER THE EROSION AND SEDIMENT CONTROL PLANS. IN AREAS OF STEEP SLOPES OR OBVIOUS AREAS WHERE POTENTIAL EROSION MAY OCCUR, AN EROSION CONTROL MAT OR FLEXIBLE GROWTH MEDIUM (FGM) SHALL BE USED. FGM SHALL BE APPLIED PER MANUFACTURER SPECIFICATIONS.
14. ONCE A SECTION OF THE ALIGNMENT HAS BEEN STABILIZED, NO CONSTRUCTION TRAFFIC SHALL OCCUR TO REMOVE ANY BMPS UNTIL THE SECTION HAS ACHIEVED 80% PERENNIAL VEGETATIVE COVER. AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM 80% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NONVEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING OR OTHER MOVEMENTS.

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HILLSIDE SOLAR LLC

227 GUARD HILL ROAD
BEDFORD CORNERS, NY 10549

OLD HILL FARM SOLAR FARM

571 EAST MAIN STREET
JEFFERSON VALLEY, NY 10535

Date Revised	Description

PRELIMINARY
NOT FOR CONSTRUCTION

Project Manager	Discipline Lead
ECR	ECR
Designer	Reviewer
AG	ECR
Date Issued	Project Number
07/28/2021	14064.11

Sheet Name

GENERAL NOTES

Drawing Number

C001

NUMBER	TAX ID	PARCEL OWNER
1	16.08-1-51	DANIELLE DISALVO
2	16.08-1-50	TERRENCE & MURPHY
3	16.08-1-49	LINDA EINFRANK
4	16.08-1-48	LOUISE MILLER
5	16.08-1-57	WILLIAM & OFRIAS

NUMBER	TAX ID	PARCEL OWNER
6	16.08-1-56	MICHAEL & LISA HUFFMAN
7	16.08-1-55	THOMAS & FURIA
8	16.08-1-54	ALFREDO & CASTRO ROMANO
9	16.08-1-53	MCHELE & MILAZZO
10	16.08-1-52	MICHAEL MANDINO

N

0 120" 240" 360" FT

1" = 120' SCALE BAR

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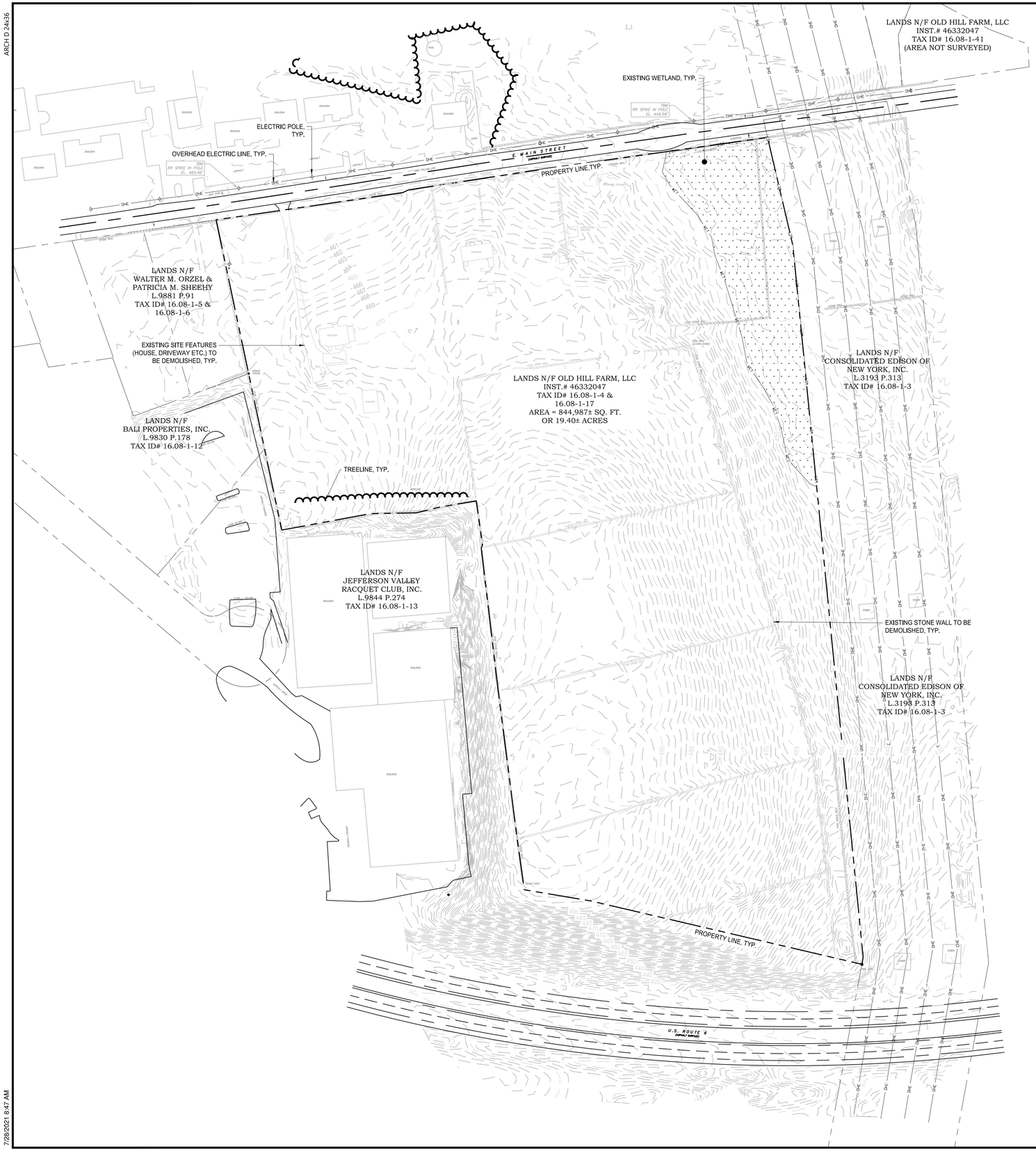
Sheet Name

AREA PARCEL PLAN

Drawing Number

C002

ARCH D 24x36



SCHEDULE B EXCEPTIONS:

5. COVENANTS, RESTRICTIONS, EASEMENTS AND AGREEMENTS FOUND OF RECORD:

A. TERMS, CONDITIONS, EASEMENTS AND RESERVATIONS CONTAINED IN DEED MADE BY JAMES CURRY HILL , ET AL. TO WESTCHESTER LIGHTING COMPANY, DATED 9/19/1931 AND RECORDED 11/12/1931 IN LIBER 3193 CP. 313, AS MODIFIED BY: TRANSMISSION LINE AS SHOWN.

(I) RELEASE MADE BETWEEN SMALL SHOPPING CENTERS VENTURE AND CONSOLIDATED COMPANY OF NEW YORK, INC., RECORDED 10/2/1972 IN LIBER 7084 CP. 402 (RELEASES EASEMENTS GRANTED IN LIBER 3193 CP.313); AND

(II) RELEASE OF EASEMENT MADE BETWEEN CONSOLIDATED COMPANY OF NEW YORK, INC. AND SMALL SHOPPING CENTERS VENTURE, RECORDED 11/24/1972 IN LIBER 7094 CP. 647 (RELEASES EASEMENTS GRANTED IN LIBER 3193 CP.313), (SEE EXHIBIT A)

B. UTILITY EASEMENT GRANT TO WESTCHESTER LIGHTING COMPANY AND NEW YORK TELEPHONE COMPANY, RECORDED 6/14/1940 IN LIBER 3837 CP. 48. (EXHIBIT B). DOES NOT AFFECT SUBJECT PROPERTY.

C. GRANT OF PIPELINE EASEMENT TO ALGONQUIN GAS TRANSMISSION COMPANY, RECORDED 7/21/1952 IN LIBER 5118 CP. 386. (EXHIBIT C). DOES NOT AFFECT SUBJECT PROPERTY.

D. UTILITY EASEMENT GRANT TO CONSOLIDATED COMPANY OF NEW YORK, INC., RECORDED 10/9/1967 IN LIBER 6737 CP. 754. (EXHIBIT D) BLANKET IN NATURE

E. NEW YORK TELEPHONE COMPANY EASEMENT AGREEMENT, RECORDED 10/10/1967 IN LIBER 6738 CP. 134. (EXHIBIT E) DOES NOT AFFECT SUBJECT PROPERTY.

GENERAL NOTES:

1. UNDERGROUND UTILITIES SHOWN HEREON BASED ON UTILITY EVIDENCE VISIBLE AT GROUND SURFACE AND RECORD DRAWINGS AND ARE SUBJECT TO FIELD VERIFICATION BY EXCAVATION. UTILITIES SHOWN DO NOT PURPORT TO CONSTITUTE OR REPRESENT ALL UTILITIES LOCATED UPON OR ADJACENT TO THE SURVEYED PREMISES.
2. THE OFFSETS OR DIMENSIONS SHOWN HEREON, FROM THE PROPERTY LINES TO THE STRUCTURES, ARE FOR A SPECIFIC PURPOSE AND USE; THEREFORE, THEY ARE NOT INTENDED TO MONUMENT THE PROPERTY LINES OR TO GUIDE THE ERECTION OF FENCES, ADDITIONAL STRUCTURES OR ANY OTHER IMPROVEMENTS.
3. EASEMENTS AND/OR SUBSURFACE STRUCTURES RECORDED OR UNRECORDED ARE NOT GUARANTEED UNLESS PHYSICALLY EVIDENT ON THE PREMISES AT THE TIME OF THE SURVEY.
4. SUBJECT TO ALL RIGHTS, EASEMENTS, COVENANTS AND RESTRICTIONS OF RECORD.
5. REFERENCE IS MADE TO STEWART TITLE INSURANCE COMPANY, TITLE NUMBER 837326 (S-NY-CP-BTA), EFFECTIVE DATE AUGUST 11, 2017.
6. BASIS OF BEARING IS NEW YORK STATE PLANE COORDINATE SYSTEM EAST ZONE, CONTROL WAS ESTABLISHED USING NYSNET VRS SYSTEM. THE HORIZONTAL DATUM IS RELATIVE TO NAD83
7. THE VERTICAL POSITION OF THE HEREIN SURVEY IS BASED ON THE NYSNET RTK GPS NETWORK AND IS SUBJECT TO FURTHER ADJUSTMENT TO ANY LOCAL NGS BENCHMARKS. THE VERTICAL DATUM IS RELATIVE TO NAVD 1988.

MAP REFERENCES:

1. MAP ENTITLED "THE NEW YORK EDISON CO. JAMES CURRY HILL & THEODORE HILL JR. - PURCHASE, 132 KV RIGHT OF WAY BETWEEN PUTNAM-WESTCHESTER CO. LINE & MILLWOOD" DATED SEPT 3, 1931, N-664.
2. MAP ENTITLED "SUBDIVISION MAP OF JEFFERSON VALLEY INDUSTRIAL PARK NO 1 FOR JEFFERSON VALLEY CORP.", BY J. HENRY CARPENTER & CO., DATED FEB. 3, 1964, AND FILED IN THE WESTCHESTER COUNTY CLERK'S OFFICE ON MAY 25, 1964 AS MAP NO. 13954.
3. MAP ENTITLED "AMENDED SUBDIVISION MAP OF JEFFERSON VALLEY INDUSTRIAL PARK NO 1 FOR JEFFERSON VALLEY CORP.", BY J. HENRY CARPENTER & CO., DATED OCTOBER 2,1964, AND FILED IN THE WESTCHESTER COUNTY CLERK'S OFFICE ON FEB 1, 1965 AS MAP NO. 14225.
4. MAP ENTITLED "SUBDIVISION MAP SHOWING RE-SUBDIVISION OF JEFFERSON VALLEY INDUSTRIAL PARK NO. 1" BY J. HENRY CARPENTER & CO., LAST REVISED MAY 24, 1990. AND FILED IN THE WESTCHESTER COUNTY CLERK'S OFFICE ON JUNE 11, 1990 AS MAP NO. 24181.

CERTIFICATIONS INDICATED HEREON SIGNIFY THAT THIS SURVEY WAS PREPARED IN ACCORDANCE WITH THE EXISTING CODE OF PRACTICE FOR LAND SURVEYORS ADOPTED BY THE N.Y. STATE ASSOCIATION OF PROFESSIONAL LAND SURVEYORS. SAID CERTIFICATIONS SHALL RUN ONLY TO THE PERSON FOR WHOM THE SURVEY IS PREPARED, AND ON BEHALF OF THE TITLE COMPANY, GOVERNMENTAL AGENCY AND LENDING INSTITUTION LISTED HEREON, AND TO THE ASSIGNEES OF THE LENDING INSTITUTION OR SUBSEQUENT OWNERS.

LEGEND

- PROPERTY LINE
- ADJOINER PROPERTY LINE
- ROAD RIGHT-OF-WAY
- STONE WALL
- ROAD CENTERLINE
- OVERHEAD WIRE
- STREAM CENTERLINE
- CONTOUR - MAJOR
- CONTOUR - MINOR
- SWALE CENTERLINE
- EDGE OF ASPHALT
- EXISTING TREELINE
- PALUSTRINE FORESTED WETLAND (PFO)
- UTILITY POLE
- IRON MONUMENT
- FOUND CONCRETE MONUMENT
- EXISTING SIGN
- GUY WIRE

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OLD HILL FARM SOLAR FARM

571 EAST MAIN STREET
JEFFERSON VALLEY, NY 10535

Date Revised	Description

PRELIMINARY
NOT FOR CONSTRUCTION

Project Manager	Discipline Lead
ECR	ECR
Designer	Reviewer
AG	ECR
Date Issued	Project Number
07/28/2021	14064.11

Sheet Name

EXISTING CONDITIONS PLAN

Drawing Number

C003

7/28/2021 8:47 AM

ARCH D 24x36

SITE PLAN DATA TABLE		
SITE IS LOCATED IN THE "R1-20" ONE-FAMILY RESIDENTIAL		
PROPOSED USE: SOLAR ENERGY SYSTEM		
PARCEL 16.08-1-17 TOWN OF YORKTOWN, COUNTY OF WESTCHESTER STATE OF NEW YORK		
APPLICANT: POWERFLEX 805 THIRD AVENUE NEW YORK, NY, 120022 (917) 426-9523	OWNER(S) OF RECORD: ROMER BEATO	
PLANS PREPARED BY: BERGMANN 2 WINNERS CIRCLE, SUITE 102 ALBANY, NY 12205 (518) 862-0325		
DESCRIPTION	REQUIRED	PROPOSED
MIN. LOT SIZE	N/A	844,987± SF
MINIMUM LOT WIDTH	N/A	900± FT
MIN. SIDE YARD SETBACK	50 FT	50± FT
MIN. FRONT YARD SETBACK	50 FT	51± FT
MIN. REAR YARD SETBACK	50 FT	50± FT

NOTES

1. REQUIRED ZONING STANDARDS REFLECT THE MOST STRICT RESIDENTIAL ZONING REQUIREMENTS OF THE TOWN OF YORKTOWN PER SECTION 300 ATTACHMENT 1 APPENDIX A RESIDENCE ZONE STANDARDS.

LEGEND

- PROPERTY LINE
- SET BACK LINE
- WETLAND SET BACK
- STONE WALL
- ADJOINER PROPERTY LINE
- ROAD RIGHT-OF-WAY
- EXISTING ROAD CENTERLINE
- EXISTING OVERHEAD WIRE
- EXISTING STREAM CENTERLINE
- PROPOSED FENCE LINE
- PROPOSED OVERHEAD UTILITY LINE
- PROPOSED UNDERGROUND UTILITY LINE
- PROPSED SWALE
- PROPOSED TREELINE
- SWALE CENTERLINE
- EXISTING BUILDING
- EXISTING EDGE OF ASPHALT
- EXISTING TREELINE
- PROPOSED DRIVEWAY
- PALUSTRINE FORESTED WETLAND (PFO)
- PROPOSED SOLAR PANEL
- EXISTING UTILITY POLE

N

0 80 160 240 FT

1" = 80' SCALE BAR

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Date Issued	Project Number
07/28/2021	14064.11

Sheet Name

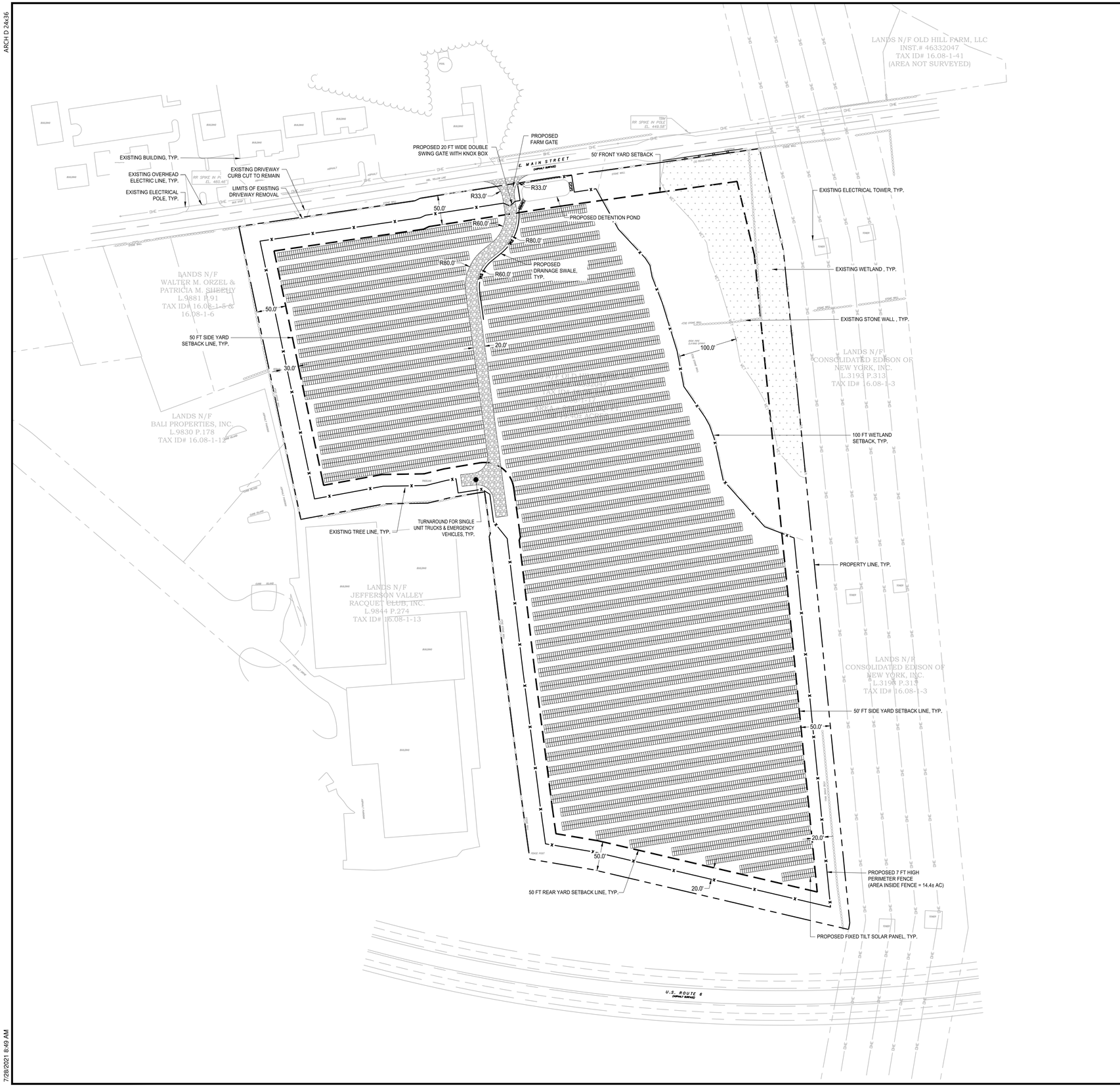
OVERALL SITE PLAN

Drawing Number

C004

7/28/2021 8:48 AM

ARCH D 24x36



SITE PLAN DATA TABLE		
SITE IS LOCATED IN THE "R1-20" ONE-FAMILY RESIDENTIAL		
PROPOSED USE: SOLAR ENERGY SYSTEM		
PARCEL 16.08-1-17 TOWN OF YORKTOWN, COUNTY OF WESTCHESTER STATE OF NEW YORK		
APPLICANT: POWERFLEX 805 THIRD AVENUE NEW YORK, NY, 120022 (917) 426-9523	OWNER(S) OF RECORD: ROMER BEATO	
PLANS PREPARED BY: BERGMANN 2 WINNERS CIRCLE, SUITE 102 ALBANY, NY 12205 (518) 862-0325		
DESCRIPTION	REQUIRED	PROPOSED
MIN. LOT SIZE	N/A	844,987± SF
MINIMUM LOT WIDTH	N/A	900± FT
MIN. SIDE YARD SETBACK	50 FT	50± FT
MIN. FRONT YARD SETBACK	50 FT	51± FT
MIN. REAR YARD SETBACK	50 FT	50± FT

NOTES

1. REQUIRED ZONING STANDARDS REFLECT THE MOST STRICT RESIDENTIAL ZONING REQUIREMENTS OF THE TOWN OF YORKTOWN PER SECTION 300 ATTACHMENT 1 APPENDIX A RESIDENCE ZONE STANDARDS.

LEGEND

- PROPERTY LINE
- SET BACK LINE
- WETLAND SET BACK
- STONE WALL
- ADJOINER PROPERTY LINE
- ROAD RIGHT-OF-WAY
- EXISTING ROAD CENTERLINE
- EXISTING OVERHEAD WIRE
- EXISTING STREAM CENTERLINE
- PROPOSED FENCE LINE
- PROPOSED OVERHEAD UTILITY LINE
- PROPOSED UNDERGROUND UTILITY LINE
- PROPSED SWALE
- PROPOSED TREELINE
- SWALE CENTERLINE
- EXISTING BUILDING
- EXISTING EDGE OF ASPHALT
- EXISTING TREELINE
- PROPOSED DRIVEWAY
- PALUSTRINE FORESTED WETLAND (PFO)
- PROPOSED SOLAR PANEL
- EXISTING UTILITY POLE

N

0 80 160 240 FT

1" = 80' SCALE BAR

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AG	ECR
Date Issued	Project Number
07/28/2021	14064.11

Sheet Name

SITE PLAN

Drawing Number

C005

6 of 11

7/28/2021 8:49 AM

ARCH D 24x36

DETENTION POND DETAIL
SCALE: 1"=20'

LEGEND

- PROPERTY LINE
- SET BACK LINE
- WETLAND SET BACK
- STONE WALL
- ADJOINER PROPERTY LINE
- ROAD RIGHT-OF-WAY
- EXISTING ROAD CENTERLINE
- EXISTING OVERHEAD WIRE
- EXISTING STREAM CENTERLINE
- PROPOSED FENCE LINE
- PROPOSED OVERHEAD UTILITY LINE
- PROPOSED UNDERGROUND UTILITY LINE
- LIMITS OF DISTURBANCE
- PROPOSED TREELINE
- SILT FENCE
- PROFILE ALIGNMENT
- EXISTING EDGE OF ASPHALT
- EXISTING TREELINE
- PROPOSED DRIVEWAY
- PALUSTRINE FORESTED WETLAND (PFO)
- PROPOSED SOLAR PANEL
- EXISTING UTILITY POLE

N

0 60 120 180 FT

1" = 60' SCALE BAR

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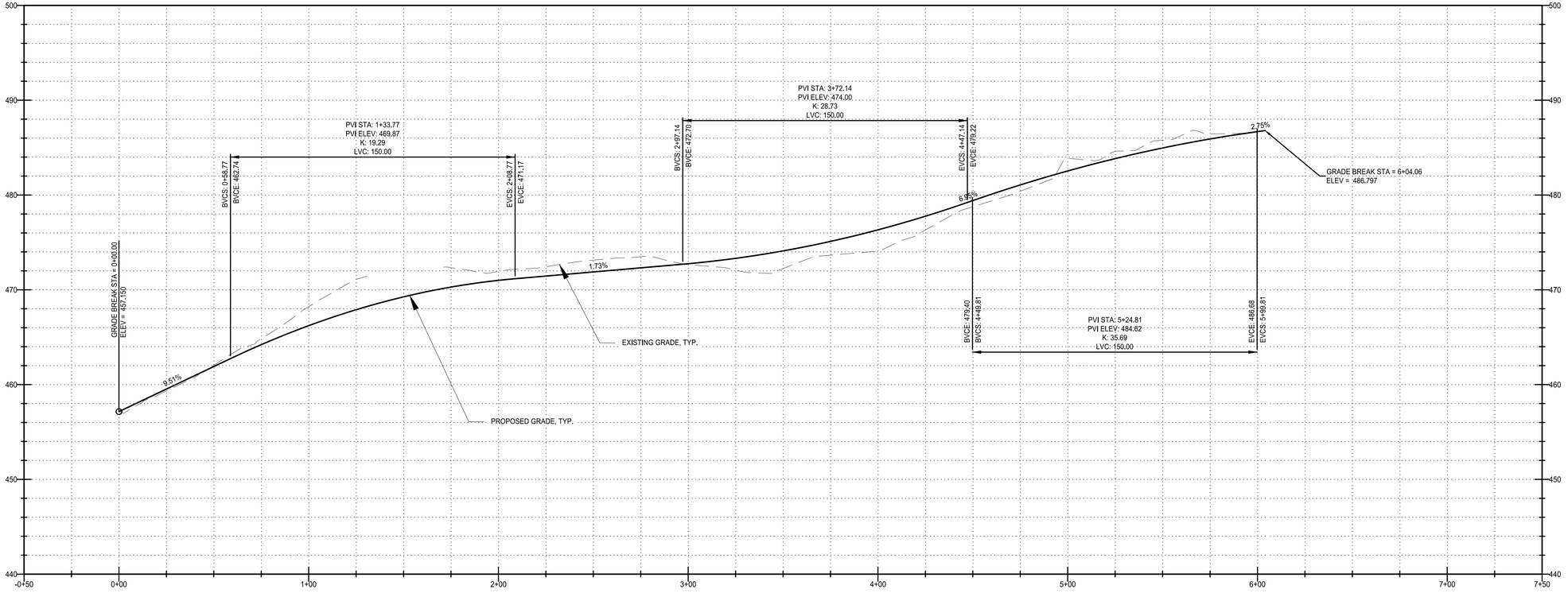
Sheet Name

GRADING & EROSION & SEDIMENT CONTROL PLAN

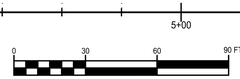
Drawing Number

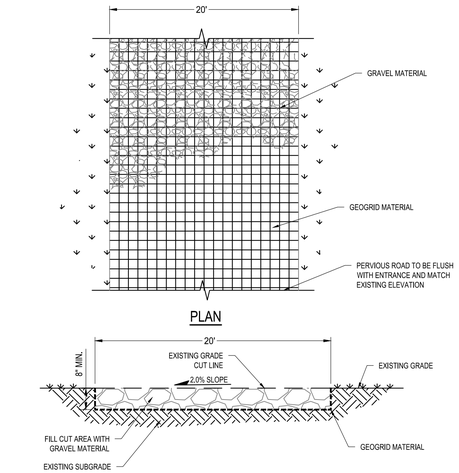
C006

7/28/2021 9:50 AM



DRIVEWAY PROFILE
1"=6' VERTICAL
1"=30' HORIZONTAL





LIMITED USE PERVIOUS ACCESS ROAD - 0% TO 10% SLOPES

NO SCALE

GEOGRID MATERIAL NOTES:

1. THE GEOGRID, OR COMPARABLE PRODUCT, IS INTENDED FOR USE IN ALL CONDITIONS, IN ORDER TO ASSIST IN MATERIAL SEPARATION FROM NATIVE SOILS AND PRESERVE ACCESS LOADS.
2. GRAVEL FILL MATERIAL SHALL CONSIST OF 1-4" CLEAN, DURABLE, SHARP ANGLED CRUSHED STONE OF UNIFORM QUALITY, MEETING THE SPECIFICATION OF NYSDOT 703-02, SIZE DESIGNATION 3-5 OF TABLE 703-4. STONE MAY BE PLACED IN FRONT OF AND SPREAD WITH A TRACKED VEHICLE. GRAVEL SHALL NOT BE COMPACTED.
3. GEOGRID SHALL BE MIRAFI BXG110 OR APPROVED EQUAL. GEOGRID SHALL BE DESIGNED BASED ON EXISTING SOIL CONDITIONS AND PROPOSED HAUL ROAD SLOPES.
4. IF MORE THAN ONE ROLL WIDTH IS REQUIRED, ROLLS SHOULD OVERLAP A MINIMUM OF SIX INCHES.
5. REFER TO MANUFACTURER'S SPECIFICATION FOR PROPER TYING AND CONNECTIONS.
6. LIMITED USE PERVIOUS ACCESS ROAD SHALL BE DRESSED AS REQUIRED WITH ONLY 1-4" CRUSHED STONE MEETING NYSDOT 703-02 SPECIFICATIONS.

BASIS OF DESIGN: TENCATE MIRAFI BXG110 GEOGRIDS; 365 SOUTH HOLLAND DRIVE, PENDERGRASS, GA; 800-685-9990 OR 706-693-2226; WWW.MIRAFI.COM

WOVEN GEOTEXTILE MATERIAL NOTES:

1. SPECIFIED GEOTEXTILE WILL ONLY BE UTILIZED IN PLACID SOILS. PLACID SOILS CONSIST OF POORLY DRAINED SOILS COMPOSED OF FINELY TEXTURED PARTICLES AND ARE PRONE TO RUTTING. PLACID SOILS ARE TYPICALLY PRESENT IN LOW-LYING AREAS WITH HYDROLOGIC SOILS GROUP (HSG) OF C OR D OR AS SPECIFIED FROM AN ENVIRONMENTAL SCIENTIST, SOIL SCIENTIST OR GEOTECHNICAL DATA.
2. THE CONCERN OF POTENTIAL REDUCTION OF NATIVE INFILTRATION RATES DIE TO THE GEOTEXTILE MATERIAL WOULD NOT BE A SIGNIFICANT CONCERN IN POORLY DRAINED SOILS WHERE SEGREGATION OF PERVIOUS STONE AND NATIVE MATERIALS IS CRUCIAL FOR LONG TERM OPERATION AND MAINTENANCE.

BASIS OF DESIGN: TENCATE MIRAFI RSI-SERIES WOVEN GEOSYNTHETICS; 365 SOUTH HOLLAND DRIVE, PENDERGRASS, GA; 800-685-9990 OR 706-693-2226; WWW.MIRAFI.COM

GENERAL NOTES:

1. USE OF THIS DETAIL/CRITERION IS LIMITED TO ACCESS ROADS USED ON AN OCCASIONAL BASIS ONLY (I.E. PROVIDE ACCESS FOR MOWING, EQUIPMENT REPAIR OR MAINTENANCE)
2. LIMITED USE PERVIOUS ACCESS ROAD IS LIMITED TO LOW IMPACT IRREGULAR MAINTENANCE ACCESS ASSOCIATED WITH RENEWABLE ENERGY PROJECTS IN NEW YORK STATE.
3. REMOVE STUMPS, ROCKS AND DEBRIS AS NECESSARY, FILL VOIDS TO MATCH EXISTING NATIVE SOILS AND COMPACTION LEVEL.
4. REMOVED TOPSOIL MAY BE SPREAD IN ADJACENT AREAS AS DIRECTED BY THE PROJECT ENGINEER, COMPACT TO THE DEGREE OF THE NATIVE IN SITU SOIL. DO NOT PLACE IN AN AREA THAT IMPEDES STORM WATER DRAINAGE.
5. GRADE ROADWAY, WHERE NECESSARY, TO NATIVE SOILS AND DESIRED ELEVATION. MINOR GRADING FOR CROSS SLOPE CUT AND FILL MAY BE REQUIRED.
6. REMOVE REFUSE SOILS AS DIRECTED BY THE PROJECT ENGINEER; DO NOT PLACE IN AN AREA THAT IMPEDES STORM WATER DRAINAGE.
7. ROADWAY WIDTH TO BE DETERMINED BY CLIENT.
8. THE LIMITED USE PERVIOUS ACCESS ROAD CROSS SLOPE SHALL BE 1.5% IN MOST CASES AND SHOULD NOT EXCEED 6%. THE LONGITUDINAL SLOPE OF THE ACCESS DRIVE SHOULD NOT EXCEED 15%.
9. LIMITED USE PERVIOUS ACCESS ROAD IS NOT INTENDED TO BE UTILIZED FOR CONSTRUCTION WHICH MAY SUBJECT THE ACCESS TO SEDIMENT TRACKING. THIS SPECIFICATION IS TO BE DEVELOPED FOR POST-CONSTRUCTION USE. SOIL RESTORATION PRACTICES MAY BE APPLICABLE TO RESTORE CONSTRUCTION RELATED COMPACTION TO PRE-EXISTING CONDITIONS AND SHOULD BE VERIFIED BY SOIL PENETROMETER READINGS. THE PENETROMETER READINGS SHALL BE COMPARED TO THE RESPECTIVE RECORDED READINGS TAKEN PRIOR TO CONSTRUCTION, EVERY 100 LINEAR FEET ALONG THE PROPOSED ROADWAY.
10. TO ENSURE THAT SOIL IS NOT TRACKED ONTO THE LIMITED USE PERVIOUS ACCESS ROAD, IT SHALL NOT BE USED BY CONSTRUCTION VEHICLES TRANSPORTING SOIL, FILL MATERIAL, ETC. IF THE LIMITED USE PERVIOUS ACCESS IS COMPLETED DURING THE INITIAL PHASES OF CONSTRUCTION AND UTILIZED TO REMOVE SEDIMENT FROM CONSTRUCTION VEHICLES AND EQUIPMENT PRIOR TO ENTERING THE LIMITED USE PERVIOUS ACCESS ROAD FROM ANY LOCATION ON, OR OFF SITE, MAINTENANCE OF THE PERVIOUS ACCESS ROAD WILL BE REQUIRED IF SEDIMENT IS OBSERVED WITHIN THE CLEAN STONE.
11. THE LIMITED USE PERVIOUS ACCESS ROAD SHALL NOT BE CONSTRUCTED OR USED UNTIL ALL AREAS SUBJECT TO RUNOFF ONTO THE PERVIOUS ACCESS HAVE ACHIEVED FINAL STABILIZATION.
12. PROJECTS SHOULD AVOID INSTALLATION OF THE LIMITED USE PERVIOUS ACCESS ROAD IN POORLY DRAINED ARES, HOWEVER IF NO ALTERNATIVE LOCATION IS AVAILABLE, THE PROJECT SHALL UTILIZE WOVEN GEOTEXTILE MATERIAL AS DETAILED IN FOLLOWING NOTES.
13. THE DRAINAGE DITCH IS OFFERED IN THE DETAIL FOR CIRCUMSTANCES WHEN CONCENTRATED FLOW COULD NOT BE AVOIDED . THE INTENTION OF THE DESIGN IS TO MINIMIZE ALTERATIONS TO HYDROLOGY, HOWEVER WHEN DEALING WITH 5%-15% GRADES NOT PARALLEL TO THE CONTOUR, A ROADSIDE DITCH MAY BE REQUIRED. THE NYS STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROLS FOR GRASSED WATERWAYS AND VEGETATED WATERWAYS ARE APPLICABLE FOR SIZING AND STABILIZATION. DIMENSIONS FOR THE GRASSED WATERWAY SPECIFICATION WOULD BE DESIGNED FOR PROJECT SPECIFIC HYDROLOGIC RUNOFF CALCULATIONS, AND A SEPARATE DETAIL FOR THE SPECIFIC GRASSED WATERWAY WOULD BE INCLUDED IN THIS PRACTICE. RUNOFF DISCHARGE WILL BE SUBJECT TO THE OUTLET REQUIREMENTS OF THE REFERENCED STANDARD. INCREASED POST-DEVELOPMENT RUNOFF FROM THE ASSOCIATED ROADSIDE DITCH MAY REQUIRE ADDITIONAL PRACTICES TO ATTENUATE RUNOFF TO PRE-DEVELOPMENT CONDITIONS.
14. IF A ROADSIDE DITCH IS NOT UTILIZED TO CAPTURE RUNOFF FROM THE ACCESS ROAD, THE PERVIOUS ACCESS ROAD WILL HAVE A WELL-ESTABLISHED PERENNIAL VEGETATIVE COVER, WHICH SHALL CONSIST OF UNIFORM VEGETATION (I.E. BUFFER), 20 FEET WIDE AND PARALLEL TO THE DOWN GRADIENT SIDE OF THE ACCESS ROAD. POST-CONSTRICTION OPERATION AND MAINTENANCE PRACTICES WILL MAINTAIN THIS VEGETATIVE COVER TO ENSURE FINAL STABILIZATION FOR THE LIFE OF THE ACCESS ROAD.
15. THE DESIGN PROFESSIONAL MUST ACCOUNT FOR THE LIMITED USED PERVIOUS ACCESS ROAD IN THEIR SITE ASSESSMENT / HYDROLOGY ANALYSIS. IF THE HYDROLOGY ANALYSIS SHOWS THAT THE HYDROLOGY HAS BEEN ALTERED FROM PRE- TO POST-DEVELOPMENT CONDITIONS (SEE APPENDIX A OF GP-0-20-001 FOR THE DEFINITION OF "ALTER THE HYDROLOGY..."), THE DESIGN MUST INCLUDE THE NECESSARY DETENTION/RETENTION PRACTICES TO ATTENUATE THE RATES (10 AND 100 YEAR EVENTS) TO PRE-DEVELOPMENT CONDITIONS.

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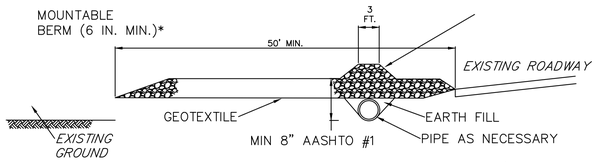
Project Manager	Discipline Lead
ECR	ECR
Designer	Reviewer
AG	ECR
Date Issued	Project Number
07/28/2021	14064.11

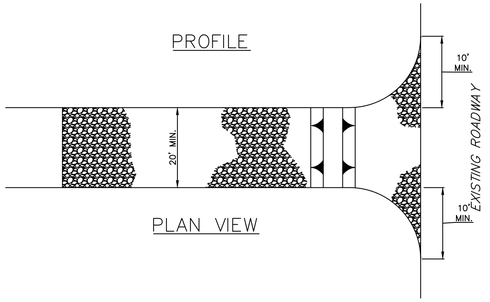
Sheet Name

GRADING PLAN DETAILS

Drawing Number

C007





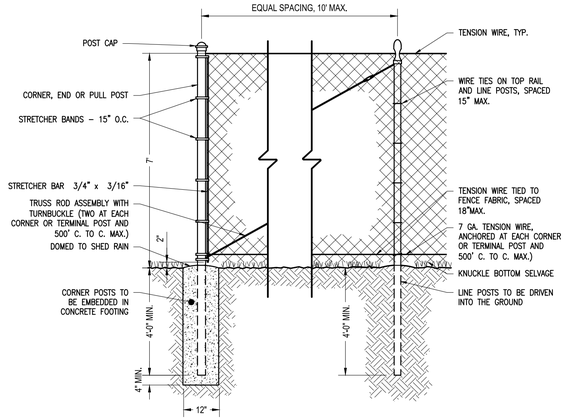
* MOUNTABLE BERM USED TO PROVIDE PROPER COVER FOR PIPE

NOTES:

1. REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE.
2. RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE.
3. MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED AND PROPER PIPE COVER AS SPECIFIED BY MANUFACTURER IS NOT OTHERWISE PROVIDED. PIPE SHALL BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED.
4. MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. IF EXCESSIVE AMOUNTS OF SEDIMENT ARE BEING DEPOSITED ON ROADWAY, EXTEND LENGTH OF ROCK CONSTRUCTION ENTRANCE BY 50 FOOT INCREMENTS UNTIL CONDITION IS ALLEVIATED OR INSTALL WASH RACK. WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.

STABILIZED CONSTRUCTION ENTRANCE

N.T.S.



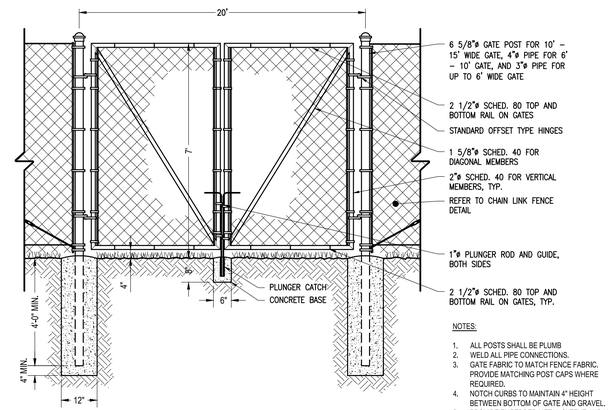
NOTES:

1. ALL POSTS SHALL BE PLUMB
2. WIRE TIES SHALL BE PLACED 15" ON CENTER ALONG TOP RAIL AND LINE POSTS.
3. LINE POSTS SHALL BE DRIVEN INTO THE GROUND.
4. CORNER POSTS SHALL BE EMBEDDED IN 12" DIAMETER CONCRETE FOOTING.

USE	NOM. OD.
LINE POSTS	2 1/2 "
CORNER, END, GATE, & PULL POSTS	3"
RAILS	1 5/8 "
GATE FRAMES	2"

CHAIN-LINK FENCE DETAIL

N.T.S.

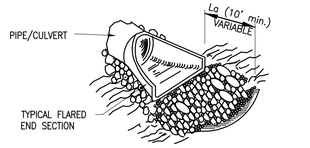


NOTES:

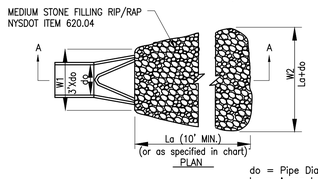
1. ALL POSTS SHALL BE PLUMB
2. WELD ALL PIPE CONNECTIONS.
3. GATE FABRIC TO MATCH FENCE FABRIC. PROVIDE MATCHING POST CAPS WHERE REQUIRED.
4. NOTCH CURBS TO MAINTAIN 4" HEIGHT BETWEEN BOTTOM OF GATE AND GRAVEL.
5. PROVIDE EMBEDDED METAL SLEEVE AND HOLD OPEN FOR EACH LEAF OF GATE.
6. CONTRACTOR SHALL INSTALL A KNOX BOX NEXT TO GATE FOR FIRE DEPARTMENT ACCESS

CHAIN-LINK FENCE GATE DETAIL

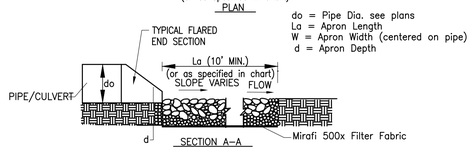
N.T.S.



ISOMETRIC VIEW



PLAN



SECTION A–A

do = Pipe Dia. see plans
La = Apron Length
W = Apron Width (centered on pipe)
d = Apron Depth

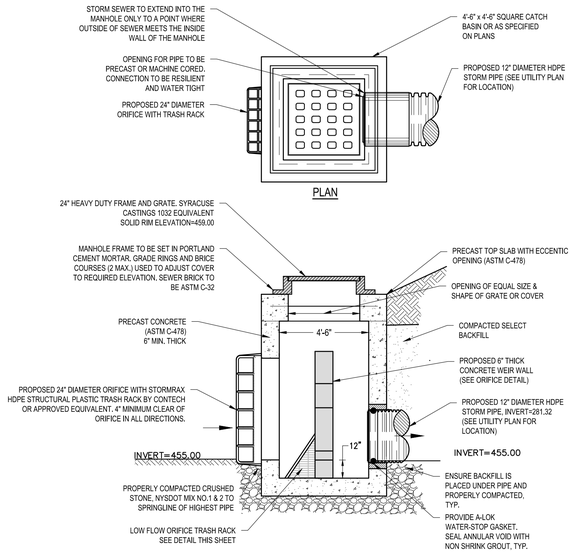
RIP RAP SIZING CHART				
PIPE DIA.	W1–MINIMUM	W2–MINIMUM	La–MINIMUM	D–MINIMUM
12"	3'	15'	14'	13.5"
18"	4.5'	15.5	14'	13.5"
24"	6'	15'	13'	13.5"

NOTES:

1. d = 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NO LESS THAN 6".
2. NSTALL FILTER MIRAFI 500X OR APPROVED EQUAL FILTER FABRIC BETWEEN RIP–RAP AND SUBGRADE

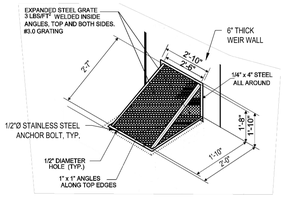
OUTLET PROTECTION RIP-RAP APRON

N.T.S.



OUTLET CONTROL STRUCTURE DETAIL

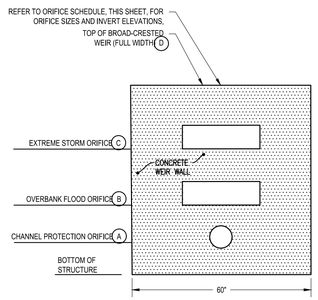
N.T.S.



LOW FLOW ORIFICE TRASH RACK DETAIL

N.T.S.

CONTROL STRUCTURE	A SIZE	A ELEV	B SIZE	B ELEV	D SIZE	C ELEV	D ELEV
1	3"	455.00	24"X4"	456.00	24"X5"	457.00	458.00



ORIFICE DETAIL

N.T.S.

BERGMANN
ARCHITECTS ENGINEERS PLANNERS

2 Winners Circle, Suite 102
Albany, NY 12205
www.bergmannpc.com
office: 518.862.0325

HILLSIDE SOLAR LLC

227 GUARD HILL ROAD
BEDFORD CORNERS, NY 10549

OLD HILL FARM SOLAR FARM

571 EAST MAIN STREET
JEFFERSON VALLEY, NY 10535

Date Revised	Description

PRELIMINARY
NOT FOR CONSTRUCTION

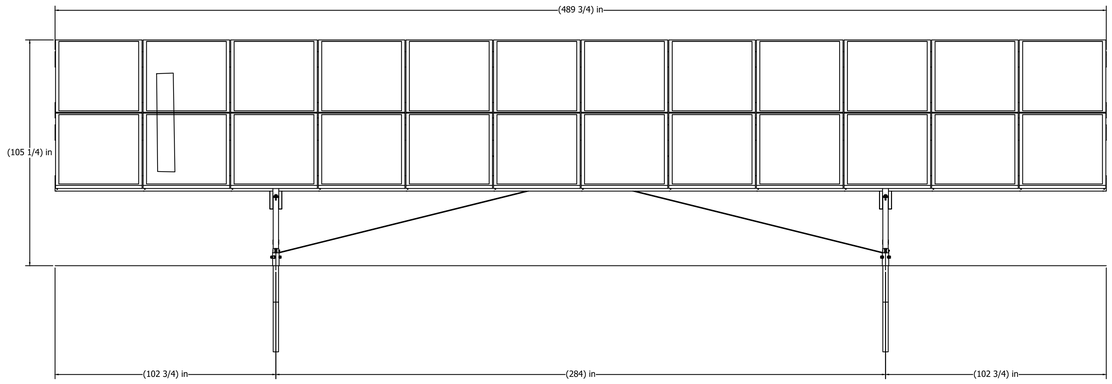
Project Manager	Discipline Lead
ECR	ECR
Designer	Reviewer
AG	WD
Date Issued	Project Number
07/28/2021	14064.11

Sheet Name

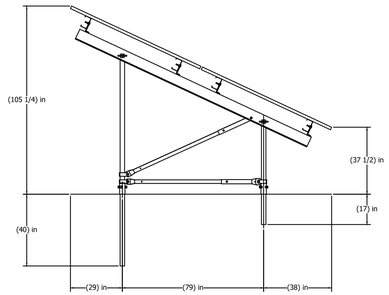
DETAILS I

Drawing Number

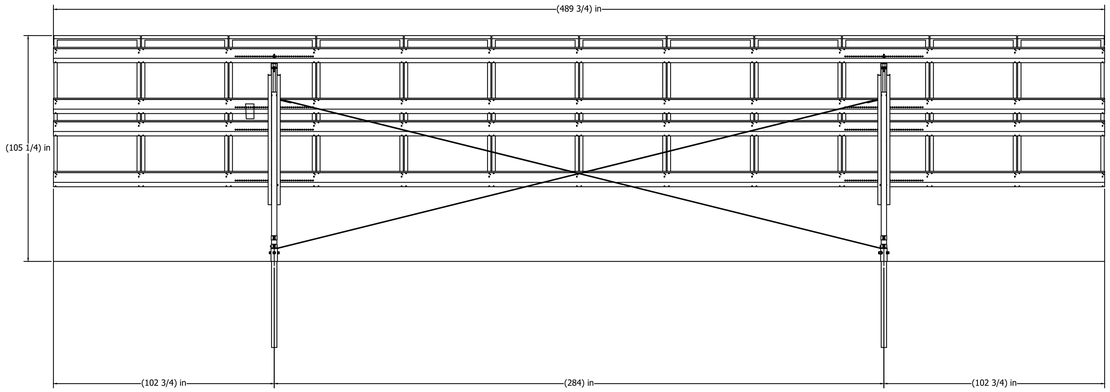
C008



FRONT ELEVATION VIEW



SIDE ELEVATION VIEW



REAR ELEVATION VIEW

NOTES:
1. TYPICAL INSTALLATION DIMENSIONS MAY BE ADJUSTED TO SUIT FIELD CONDITIONS.
2. FINAL DESIGN AND ENGINEERING PLANS TO BE PROVIDED BY THE RACKING MANUFACTURER.

SOLAR ARRAY DETAIL
N.T.S.

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HILLSIDE SOLAR LLC

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Date Revised	Description

PRELIMINARY
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Project Manager	Discipline Lead
ECR	**ECR**
Designer	Reviewer
AG	**WD**
Date Issued	Project Number
07/28/2021	**14064.11**

Sheet Name

DETAILS II

Drawing Number

C009

UPLAND SEED MIX		
LOW-GROWING WILDFLOWER & GRASS MIX - ERNMX #156		
SEEDING RATE: 20 LB PER ACRE WITH A COVER CROP OF GRAIN RYE AT 30 LB PER ACRE		
SCIENTIFIC NAME	**COMMON NAME**	**% OF MIX**
FESTUCA OVINA	SHEEP FESCUE, VARIETY NOT STATED	63.60%
LOLIUM MULTIFLORUM (L. PERENNE VAR. ITALICUM)	ANNUAL RYEGRASS	17%
LINUM PERENNE SSP. LEWISII	PERENNIAL BLUE FLAX	8%
RUDBECKIA HIRTA	BLACKEYED SUSAN, COASTAL PLAIN NC ECOTYPE	2%
COREOPSIS LANCEOLATA	LANCELEAF COREOPSIS, COASTAL PLAIN NC ECOTYPE	2%
CHRYSANTHEMUM LEUCANTHEMUM	OXEYE DAISY	2%
CHRYSANTHEMUM MAXIMUM	SHASTA DAISY	1%
CHAMAECRISTA FASCICULATA (CASSIA F.)	PARTRIDGE PEA, PA ECOTYPE	1%
PAPAVER RHOEAS, SHIRLEY MIX	CORN POPPY/SHIRLEY MIX	1%
ACHILLEA MILLEFOLIUM	COMMON YARROW	0.5%
ASTER OBLONGIFOLIUS (SYMPHYOTRICHUM OBLONGIFOLIUM)	AROMATIC ASTER, PA ECOTYPE	0.5%
EUPATORIUM COELESTINUM (CONOCLINIUM C.)	MISTFLOWER, VA ECOTYPE	0.5%
MONARDA PUNCTATA, COASTAL PLAIN SC ECOTYPE	SPOTTED BEEBALM, COASTAL PLAIN SC ECOTYPE	0.5%
ASCLEPIAS TUBEROSA	BUTTERFLY MILKWEED	0.3%
PYCNANTHEMUM TENUIFOLIUM	SLENDER MOUNTAINMINT	0.1%
COMPANY INFORMATION		
ERNST CONSERVATION SEEDS, INC.		
ADDRESS: 8884 MERCER PIKE, MEADVILLE, PA 16335		
PHONE: (800) 873-3321		
WEB: HTTP://WWW.ERNSTSEED.COM		

*OR APPROVED EQUIVALENT

SITE STABILIZATION - SEED MIX
N.T.S.

SOIL AMENDMENT APPLICATION RATE EQUIVALENTS					
SOIL AMENDMENT		**PER ACRE**	**PER 1,000 SQ. FT.**	**PER 1,000 SQ. YD.**	**NOTES**
PERMANENT SEEDING	AGRICULTURAL LIME	6 TONS	240 LB.	2,480 LB.	OR AS PER SOIL TEST: MAY NOT BE REQUIRED IN AGRICULTURAL FIELDS
PERMANENT SEEDING	10-10-20 FERTILIZER	1,000 L.B.	25 LB.	210 LB.	
TEMPORARY SEEDING	AGRICULTURAL LIME	1 TON	40 LB.	410 LB.	TYPICALLY NOT REQUIRED FOR TOPSOIL STOCKPILES
TEMPORARY SEEDING	10-10-20 FERTILIZER	500 LB.	12.5 LB.	100 LB.	

COMPOST STANDARDS	
ORGANIC MATTER CONTENT	80% - 100% (DRY WEIGHT BASIS)
ORGANIC PORTION	FIBROUS AND ELONGATED
pH	5.5 - 8.0
MOISTURE CONTENT	35% - 55%
PARTICLE SIZE	98% PASS THROUGH 1" SCREEN
SOLUBLE SALT CONCENTRATION	5.0 dS/m (mmhos/cm) MAXIMUM

MULCH APPLICATION RATES				
MULCH TYPE	**APPLICATION RATE (MIN.)**			**NOTES**
	PER ACRE	**PER 1,000 SQ. FT.**	**PER 1,000 SQ. YD.**	
STRAW	3 TONS	140 LB.	1,240 LB.	EITHER WHEAT OR OAT STRAW, FREE OF WEEDS, NOT CHOPPED OR FINELY BROKEN
HAY	3 TONS	140 LB.	1,240 LB.	TIMOTHY, MIXED CLOVER AND TIMOTHY, OR OTHER NATIVE FORAGE GRASSES
WOOD CELLULOSE	1,500 LB.	35 LB.	310 LB.	DO NOT USE ALONE IN WINTER, DURING HOT AND DRY WEATHER OR ON STEEP SLOPES (> 3:1)
WOOD	1,000 LB. CELLULOSE	25 LB.	210 LB.	WHEN USED OVER STRAW OR HAY
WOOD CHIPS	4 - 6 TONS	185 - 275 LB.	1,650 - 2,500 LB.	MAY PREVENT GERMINATION OF GRASSES AND LEGUMES

NOTES:

1. WHEN FINAL GRADE IS ACHIEVED DURING NON–GERMINATING MONTHS, THE AREA SHOULD BE TEMPORARILY STABILIZED UNTIL THE BEGINNING OF THE NEXT PLANTING SEASON.
2. MULCHES SHOULD BE APPLIED AT THE RATES SHOWN IN THE MULCH APPLICATION RATES TABLE. VERY LITTLE BARE GROUND SHOULD BE VISIBLE THROUGH THE MULCH.
3. STRAW AND HAY MULCH SHOULD BE ANCHORED OR TACKIFIED IMMEDIATELY AFTER APPLICATION TO PREVENT BEING WINDBLOWN.
4. TOPSOIL SHOULD BE UNIFORMLY DISTRIBUTED ACROSS THE DISTURBED AREA TO A DEPTH OF 4 INCHES MINIMUM. SPREADING SHOULD BE DONE IN SUCH A MANNER THAT SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL PREPARATION OR TILLAGE.
5. TOPSOIL SHOULD NOT BE PLACED WHILE THE TOPSOIL OF SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET, OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.
6. WHEN USED AS A MULCH REPLACEMENT, THE APPLICATION RATE (THICKNESS) OF THE COMPOST SHOULD BE 1/2" TO 3/4". COMPOST SHOULD BE PLACED EVENLY AND SHOULD PROVIDE 100% SOIL COVERAGE. NO SOIL SHOULD BE VISIBLE.
7. BLANKETING SHALL BE USED ON ALL SLOPES 3H:1V OR STEEPER OR AS NOTED ON THE PLANS.
8. PERMANENT STABILIZATION SHALL BE INSTALLED IMMEDIATELY UPON COMPLETION OF EARTH DISTURBANCE.

BERGMANN
ARCHITECTS ENGINEERS PLANNERS

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www.bergmannpc.com
office: 518.862.0325

HILLSIDE SOLAR LLC

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Date Revised	Description

PRELIMINARY
NOT FOR CONSTRUCTION

Project Manager	Discipline Lead
ECR	ECR
Designer	Reviewer
AG	WD
Date Issued	Project Number
07/28/2021	14064.11

Sheet Name

DETAILS III

Drawing Number

C010

11 of 11

Strawberry Road Solar Project

TOWN OF YORKTOWN
PLANNING BOARD

Albert A Capellini Community and Cultural Center, 1974 Commerce Street, Yorktown Heights, New York 10598, Phone (914) 962-6565, fax (914) 962-3986

APPLICATION FOR SITE PLAN APPROVAL

Date 7/22/2021

1. Name of Project: Ciuffetelli CDG Solar project

2. Tax Map Designation (Section, Block, Lot) 15.12-1-30 &
15.12-1-12

3. Zone: R1-20 Total Acreage: Aprox. 21 Acres

4. Is a statement of easements relating to property attached? ☐ Yes ☑ None exist

5. Project narrative (brief description of proposed development):

The Proposed Project is located at 1645 Strawberry Road & 1700 Route 6, Mohegan Lake in the Town of Yorktown, Westchester County, NYand is known and designated by Westchester County as Tax Map Numbers 15.12-1-12 and 15.12-1-30 (approximately 21 acres). Green Street Power Partners is proposing to construct a solar array facility, with associated equipment, access roads and utilities.

6. Contact Person - CHOOSE ONLY ONE:

☑ Applicant	☐ Owner	☐ Architect	☐ Wetland Scientist
☐ Attorney	☐ Engineer	☐ Surveyor	☐ Landscape Architect

7. Applicant

Name GSPP 1654 Strawberry Rd. LLC
Firm
Address 1 Landmark Sq. Suite 320, Stamford CT 06901
Phone (914) 365-9338
Fax
Email Commercialopperations@gspp.com

8. Owner of Record

Name Quin Ciuffetelli
Firm 1645 Strawberry Rd., LLC 1645 & RBC Industries, INC.
Address 30 Soundview Dr., Huntington, NY 11743
Phone (914)552-4617
Fax
Email qciuffetelli@gmail.com

9. Attorney

Name	David Steinmetz
Firm	Zarin & Steinmetz
Address	81 Main St. Suite 415 White Plains, NY 10601
Phone	(914) 682-7800
Fax	(914) 683-5490
Email	David@zarin-steinmetz.com

10. Engineer

Name	
Firm	
Address	
Phone	
Fax	
Email	
Lic. No.	

11. Surveyor

Name	Theodore Haines
Firm	Tectonic – Manger of Surveying Services
Address	70 Pleasant Hill Road Mountainville, NY 10953
Phone	845-534-5959
Fax	
Email	TJHaines@Tectonicengineering.com
Lic. No.	Lic: 050440-1

12. Architect

Name	
Firm	
Address	
Phone	
Fax	
Email	
Lic. No.	

13. **Wetland Scientist/Specialist**

Name: Christopher Camacho
Firm: Tectonic Engineering
Address: 70 Pleasant Hill Rd, Mountainville, NY
Phone: (845)534-5959 (office)
Fax: N/A
Email: ccamacho@tectonicengineering.com

14. **Landscape Architect**

Name: _____
Firm: _____
Address: _____
Phone: _____
Fax: _____
Email: _____
Lic. No.: _____

15. **Is this project within 500 feet of the Town line?**	☑ Yes	☐ No
16. **Is this project within 500 feet of the Putnam County line?**	☐ Yes	☑ No
17. **Is this project within the Sustainable Development Study Area?**	☐ Yes	☑ No

18. **Is this project within 500 feet of:**

The right-of-way of any existing or proposed state or county road?	☑ Yes	☐ No
The boundary of an existing or proposed state or county park or any state or county recreation area?	☐ Yes	☑ No
The boundary of state or county-owned land on which a public building/ institution is located?	☐ Yes	☑ No
An existing or proposed county drainage line?	☑ Yes	☐ No
The boundary of a farm located in an agricultural district?	☐ Yes	☑ No

19. **Does the entire development plan for this project propose the disturbance of more than 5,000 SF of land? Note: If project is phased, include all phases in determination.** ☑ Yes ☐ No

20. **This project requires the following permits or approvals from the Town of Yorktown:**

☐ Wetland Permit
☐ Stormwater Permit
☑ Tree Permit
☑ Planning Board special permit: large scale solar
☐ Town Board variance or approval: _____
☐ Zoning Board of Appeals variance or special permit: _____

21. This project requires the following permits or approvals from other outside agencies:

☐ Westchester County Board of Health
☐ NYC DEP
☐ NYS DEC
☐ Other: _____

22. This parcel is in the following districts:

School District	Lakeland	Water District	Yorktown
Fire District	Mohegan Volunteer	Sewer District	Yorktown

A Short or Full EAF with the original signature of the applicant must be attached to this application when submitted.

The applicant agrees to comply with the requirements of the Road Specifications, the Land Use Regulations, Zoning Ordinance, Tree Removal and Excavation ordinance, and any additions or amendments thereto.

The applicant agrees to execution and delivery of deeds and required documents for reserved parks/recreation/open space/drainage control, roads and road widening strips and descriptions of easements at the time of the public hearing. Such execution and delivery shall not operate to vest title of said property in the Town of Yorktown until such dedication is accepted in the form of a resolution adopted by the Town Board at a regular meeting of said Board.

The execution and delivery of the deeds to the roads in the proposed subdivision as provided for by the terms of the deeds to the roads in the proposed subdivision as provided for by the terms of the approving resolution shall not operate to vest title of said roads in the Town of Yorktown until such deed is accepted in the form of a resolution adopted by the Town Board at regular meeting of said Board.

Applicant

Scott Kerner, Authorized Rep. of Applicant
NAME (PLEASE PRINT)

SIGNATURE

7/26/21
DATE

Owner of Record

Quin Cifrelli
NAME (PLEASE PRINT)

SIGNATURE

7/23/21
DATE

Note: If the property owner is not the applicant for this application, in addition to the signature above, the owner of the property must also complete and have notarized one of the owner affidavits on the following page.

Note: By signing this document the owner of the subject property grants permission for Town Officials to enter the property for the purpose of reviewing this application.

REFER TO AFFIDAVITS ON THE FOLLOWING PAGES

ONE OF THE FOLLOWING AFFIDAVITS MUST BE COMPLETED

****

AFFIDAVIT TO BE COMPLETED BY OWNER, OTHER THAN CORPORATION

STATE OF NEW YORK; COUNTY OF WESTCHESTER SS. :

_________________________________, being duly sworn, deposes and says that he is the owner in fee of the property described in the foregoing application for consideration of preliminary plat, and that the statements contained therein are true to the best of his knowledge and belief.

____

Sworn before me this
____________ date of _____________, 20 __

____
Notary Public

****

AFFIDAVIT TO BE COMPLETED BY CORPORATION OWNER

STATE OF NEW YORK; COUNTY OF WESTCHESTER SS. :

Quin Cuffetelli, being duly sworn, deposes and says that he resides at 30 Sandview Dr, Huntington in the County of Suffolk and State of NY. That he is the Owner of 1643 Strawboy Rd LLC & RBC Industries inc the corporation which is owner in fee of the property described in the foregoing application for ______________________________ and that the statements contained therein are true to the best of his knowledge and belief.

[signature]

Sworn before me this
23rd date of Oct, 2023

[signature]
Notary Public

Thomas P Crescenzo
Notary Public, State of New York
NO. 01CR6397182
Qualified in Suffolk County
Commission Expires September 03, 2023

****

AFFIDAVIT TO BE COMPLETED BY AGENT OF OWNER

STATE OF NEW YORK; COUNTY OF WESTCHESTER SS. :

_____, being duly sworn, deposes and says that he is the agent named in the foregoing application for _____ and that he has been duly authorized by the owner in fee to make such application and that foregoing statements are true to the best of his knowledge and belief.

_____

Sworn before me this
_____ date of _____, 20 __

_____
Notary Public

F:\Office\WordPerfect\APPLICATION FORMS\APPSITEPLAN.wpd
Last updated: December 2011

TOWN OF YORKTOWN
PLANNING BOARD

Yorktown Community and Cultural Center, 1974 Commerce Street, Yorktown Heights, New York 10598, Phone (914) 962-6565, Fax (914) 962-3986

SPECIAL USE PERMIT APPLICATION

If this application is not being made in conjunction with a request for site plan approval from the Planning Board, a site plan/plot plan and Short EAF must also be submitted with this application. The required fee is $625.00 for new applications and $312.00 for requests to renew an existing permit.

Date 7/22/2021

1. **Tax Map Designation (Section, Block, Lot)** 15.12-1-30 ; 15.12-1-12

2. **Property Address** 1645 Strawberry Rd. & 1700 RT. 6, Mohegan Lake, NY 10547

3. **Zone:** R1-20 **Total Acreage:** Aprox. 21 Acres

4. **Indicate requested special use permit:**

☐	§300-21(8)(a)[1]	Outdoor service in commercial districts.
☐	§300-40	Bus passenger shelters.
☐	§300-54	Religious institutions, social, cultural, charitable and recreational nonprofit uses.
☐	§300-55	Parochial, private elementary and high schools, colleges and seminaries.
☐	§300-69	Valet parking at banquet halls.
☐	§300-71	New and/or used car automobile sales.
☐	§300-73.1(A)(2)	Permanent seasonal outdoor sales in commercial districts.
☐	§300-75	Warehouse or storage in retail shopping centers.
☐	§300-78	Cemeteries.
☐	§300-79	Self-storage centers.
☐	§300-80	Sidewalk cafes. (outdoor dining for more than 12 seats)
☐	§300-81.1	Helistops.
☐	§300-81.2	Accessory recycling facilities.
☑	§300-81.4	Large-Scale Solar Power Generation Systems and Facilities
☐	§300-81.5	Tier 2 Battery Energy Storage Systems
☐	§300-238.1	Multifamily dwelling units in the Country Commercial Zone.

5. **Description of proposed use (if applying for outdoor dining, indicate proposed dining area square footage and number of seats):**

The Proposed Project is located at 1645 Strawberry Road & 1700 Route 6, Mohegan Lake in the Town of Yorktown, Westchester County, NY and is known and designated by Westchester County as Tax Map Numbers 15.12-1-12 and 15.12-1-30 (approximately 21 acres). GSPP 1654 Strawberry Rd., LLC is proposing to construct a solar array facility, with associated equipment, access roads and utilities.

6. **Applicant**

Name GSPP 1654 Strawberry Rd., LLC

Firm

Address 1 Landmark Sq. Suite 320 Stamford, CT 06901

Phone (914) 365-9338

Email commercialoperations@gspp.com

7. **Owner of Record**

Name Quin Ciuffetelli

Firm 1645 Strawberry Rd., LLC & RBC Industries, INC.

Address 30 Soundview Dr., Huntington, NY 11743

Phone (914) 552-4617

Email qciuffetelli@gmail.com

In the event the permit is issued, the undersigned applicant will comply with all provisions of the Code of the Town of Yorktown and all other applicable laws, codes, rules and regulations of any Federal, State or County Government, bureau or department thereof, having jurisdiction over said premises and the use to be conducted thereat.

Applicant

SIGNATURE

Scott Kerner, Authorized Rep. of Applicant

PRINT NAME

7/26/21

DATE

Owner of Record

SIGNATURE

Quin Ciuffetelli

PRINT NAME

7/23/21

DATE

Note: By signing this document the owner of the subject property grants permission for Town Officials to enter the property for the purpose of reviewing this application.

F:\Office\WordPerfect\Application Forms\APP-SpecialPermit.wpd
This form last updated: September 2020

TOWN OF YORKTOWN PLANNING BOARD

Large Scale Solar Power Generation Systems & Facilities

Special Permit Application Addendum

GENERAL PROJECT INFORMATION

Project Name: Ciuffetelli CDG Solar project

Section, Block, Lot: 15.12-1-30 & 15.12-1-12

Existing Site Use: ☑ Residential ☐ Commercial Zone: R1-20

Is Applicant? ☐ Property Owner ☑ Lessee

Proposed Lot Coverage: 9.10 Acres

PROVIDE THE TOTAL SYSTEM CAPACITY RATING

A Large Scale Solar Energy system is a Solar Energy System that exceeds 20 kW DC as rated by its nameplate capacity. The maximum system capacity and the maximum area of land upon which the system shall be erected are as follows:

(1) Up to one megawatt AC on an area of land no larger than 10 acres, excluding any easement for accessing the parcel; or over1 but not to exceed 5 Megawatt AC on an area of land no larger than 20 acres, excluding any easement for accessing the parcel.

Total System Capacity Rating: _____ kWh Power Rating 2398.5 kW (Select One) ☐ AC or ☑ DC

SELECT INSTALLATION TYPE

☑ Ground ☐ Rooftop

PROPOSED SOLAR ENERGY SYSTEM INSTALLATION INFORMATION

Sponsor Company

Contact Name GSPP 1654 Strawberry Rd., LLC

Business Name Green Street Power Partners

Address 1 Landmark Square Ste. 320, Stamford CT 06902

Phone (914) 365-9338

Email _Commercialopperations@GSPP.com

Contractor/Installation Company

Contact Name Brian Matthews

Business Name GSPP 1654 Strawberry Rd Land, LLC

Address 1 Landmark Square Ste. 320, Stamford CT 06902

Phone (914) 365-9338

Email Bmatthews@GSPP.com

PROPOSED OWNER AND/OR OPERATOR (IF DIFFERENT FROM ABOVE)

Name _____

Firm _____

Address _____

Phone _____

Email _____

SUBMITTAL REQUIREMENTS

In order to submit a complete permit application for a new large-scale solar power generation system, the applicant must include:

a) Completed Planning Board Special Use Permit Application with this Large Scale Solar Power Generation System Addendum.
b) A special permit application fee of $625.00 paid by check made payable to the Town of Yorktown.
c) Required documents as listed in Section 300-84.1(F):
   - Equipment specification sheets shall be submitted for all photovoltaic panels, significant components, mounting systems, and inverters that are to be installed.
   - A property Operation and Maintenance Plan shall be submitted.
   - A carbon sequestration for tree loss calculation.
   - Proposed tree loss mitigation, if applicable.
   - A Decommissioning Plan
d) All site plan application requirements pursuant to Section 300-85/1(I) of the Town of Yorktown Town Code.

Short Environmental Assessment Form
Part 1 - Project Information

Instructions for Completing

Part 1 – Project Information. The applicant or project sponsor is responsible for the completion of Part 1. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification. Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information.

Complete all items in Part 1. You may also provide any additional information which you believe will be needed by or useful to the lead agency; attach additional pages as necessary to supplement any item.

Part 1 – Project and Sponsor Information

GSPP 1654 Strawberry Rd, LLC

Name of Action or Project:

Ciuffetelli Solar Project

Project Location (describe, and attach a location map):

1645 Strawberry Road & 1700 Route 6 Mohegan Lake, Town of Yorktown, Westchester County, NY

Brief Description of Proposed Action:

The Proposed Project is located at 1645 Strawberry Road & 1700 Route 6, Mohegan Lake in the Town of Yorktown, Westchester County, NY and is known and designated by Westchester County as Tax Map Numbers 15.12-1-12 and 15.12-1-30 (approximately 21 acres). Green Street Power Partners is proposing to construct a solar array facility, with associated equipment, access roads and utilities.

Name of Applicant or Sponsor:	Telephone: 203-496-8950
GSPP 1654 Strawberry Rd, LLC	E-Mail: bmatthews@gspp.com

Address:

1 Landmark Square Suite 320

City/PO:	State:	Zip Code:
Stamford	CT	06901

	NO	YES
1. Does the proposed action only involve the legislative adoption of a plan, local law, ordinance, administrative rule, or regulation? If Yes, attach a narrative description of the intent of the proposed action and the environmental resources that may be affected in the municipality and proceed to Part 2. If no, continue to question 2.	☑	☐
2. Does the proposed action require a permit, approval or funding from any other government Agency? If Yes, list agency(s) name and permit or approval: Town of Yorktown Building and electrical Permits, Planning Board Approval and US Army Corps of Engineers Section 404 Permit	☐	☑

3. a. Total acreage of the site of the proposed action? ~~10~~ acres
   b. Total acreage to be physically disturbed? ~~10~~ acres
   c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? ~20 acres

4. Check all land uses that occur on, are adjoining or near the proposed action:

5. ☐ Urban ☐ Rural (non-agriculture) ☐ Industrial ☑ Commercial ☑ Residential (suburban)
   ☑ Forest ☐ Agriculture ☑ Aquatic ☑ Other(Specify): Undeveloped
   ☐ Parkland

	NO	YES	N/A
5. Is the proposed action,			
a. A permitted use under the zoning regulations?	☐	☑	☐
b. Consistent with the adopted comprehensive plan?	☐	☑	☐
6. Is the proposed action consistent with the predominant character of the existing built or natural landscape?	NO	YES	
	☑	☐	
7. Is the site of the proposed action located in, or does it adjoin, a state listed Critical Environmental Area?	NO	YES	
If Yes, identify: _____	☑	☐	
8. a. Will the proposed action result in a substantial increase in traffic above present levels?	NO	YES	
	☑	☐	
b. Are public transportation services available at or near the site of the proposed action?	☐	☑	
c. Are any pedestrian accommodations or bicycle routes available on or near the site of the proposed action?	☐	☑	
9. Does the proposed action meet or exceed the state energy code requirements?	NO	YES	
If the proposed action will exceed requirements, describe design features and technologies: _____ _____	☑	☐	
10. Will the proposed action connect to an existing public/private water supply?	NO	YES	
If No, describe method for providing potable water: _____ _____	☑	☐	
11. Will the proposed action connect to existing wastewater utilities?	NO	YES	
If No, describe method for providing wastewater treatment: _____ _____	☑	☐	
12. a. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places?	NO	YES	
	☑	☐	
b. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory?	☐	☑	
13. a. Does any portion of the site of the proposed action, or lands adjoining the proposed action, contain wetlands or other waterbodies regulated by a federal, state or local agency?	NO	YES	
	☐	☑	
b. Would the proposed action physically alter, or encroach into, any existing wetland or waterbody?	☑	☐	
If Yes, identify the wetland or waterbody and extent of alterations in square feet or acres: _____ _____			

14. Identify the typical habitat types that occur on, or are likely to be found on the project site. Check all that apply:

☐ Shoreline ☑ Forest ☐ Agricultural/grasslands ☑ Early mid-successional

☑ Wetland ☐ Urban ☐ Suburban

	NO	YES
15. Does the site of the proposed action contain any species of animal, or associated habitats, listed by the State or Federal government as threatened or endangered?	☑	☐
16. Is the project site located in the 100-year flood plan? The proposed development is not located in a 100-year flood plain.	☐	☑
17. Will the proposed action create storm water discharge, either from point or non-point sources?	☑	☐
If Yes, a. Will storm water discharges flow to adjacent properties?	☑	☐
b. Will storm water discharges be directed to established conveyance systems (runoff and storm drains)?	☑	☐
If Yes, briefly describe: _____ _____		
18. Does the proposed action include construction or other activities that would result in the impoundment of water or other liquids (e.g., retention pond, waste lagoon, dam)? If Yes, explain the purpose and size of the impoundment: _____ _____	☑	☐
~~1~~9. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility? If Yes, describe: _____ _____	☑	☐
20. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste? If Yes, describe: _____ _____	☑	☐

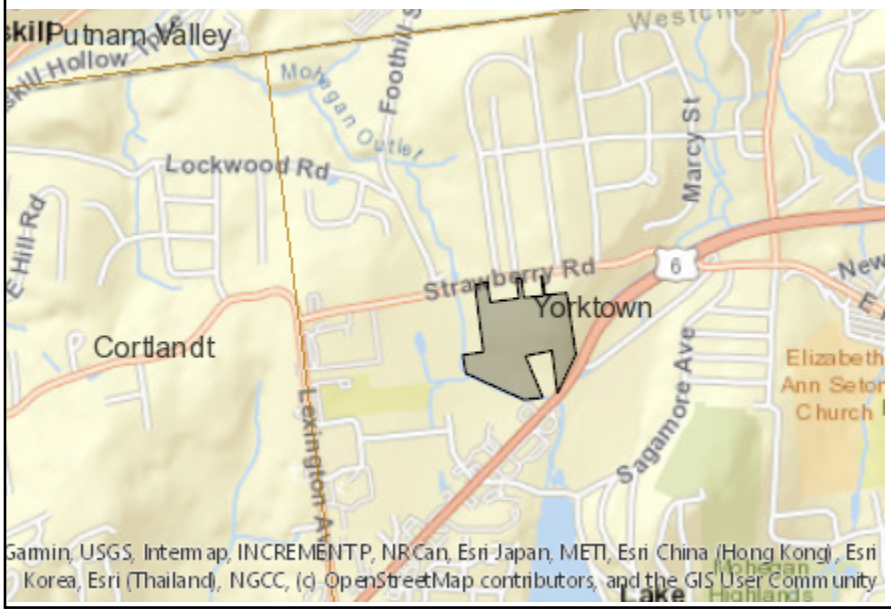
I CERTIFY THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE

Applicant/sponsor/name: GSPP 1654 Strawberry Rd, LLC, By GSPP Holdco, LLC, its Manager, By: Scott Kerner Date: 7/21/21

Signature: _____ Title: Manager

EAF Mapper Summary Report

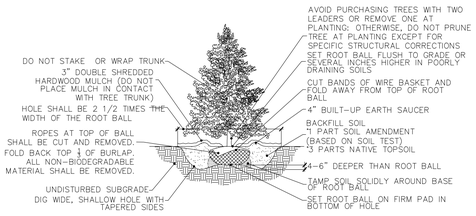
Friday, July 9, 2021 2:38 PM



Disclaimer: The EAF Mapper is a screening tool intended to assist project sponsors and reviewing agencies in preparing an environmental assessment form (EAF). Not all questions asked in the EAF are answered by the EAF Mapper. Additional information on any EAF question can be obtained by consulting the EAF Workbooks. Although the EAF Mapper provides the most up-to-date digital data available to DEC, you may also need to contact local or other data sources in order to obtain data not provided by the Mapper. Digital data is not a substitute for agency determinations.

Part 1 / Question 7 [Critical Environmental Area]	No
Part 1 / Question 12a [National or State Register of Historic Places or State Eligible Sites]	No
Part 1 / Question 12b [Archeological Sites]	Yes
Part 1 / Question 13a [Wetlands or Other Regulated Waterbodies]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
Part 1 / Question 15 [Threatened or Endangered Animal]	No
Part 1 / Question 16 [100 Year Flood Plain]	Yes
Part 1 / Question 20 [Remediation Site]	No

SYSTEM COMPONENTS			
	COUNT	RATING (W)	MODEL
PV MODULE	5330	450	HELIENE 144HC
INVERTER TYPE 1	14	125,000	CPS 125KW
INVERTER TYPE 2	0	0	–
INVERTER TYPE 3	0	0	–
INVERTER TYPE 4	0	0	–
TOTAL INVERTER	14		
SYSTEM SIZE			
SYSTEM DC RATING (KW)	2398.50		
SYSTEM AC NAME PLATE (KW)	1750.00	DC: AC RATIO	1.37
		TOTAL STRING	205
SYSTEM MOUNTING INFORMATION			
	GROUND MOUNTED		
MODULE MOUNTING METHOD	20° GROUND, 180° AZI		
RACKING BRAND	RBI		



EVERGREEN TREE PLANTING DETAIL

NOT TO SCALE

NOTES:

1. FOR CONTAINER-GROWN TREES, USE FINGERS OR SMALL HAND TOOLS TO PULL THE ROOTS OUT OF THE OUTER LAYER OF POTTING SOIL; THEN CUT OR PULL APART ANY ROOTS CIRCLING THE PERIMETER OF THE CONTAINER.
2. THOROUGHLY SOAK THE TREE ROOT BALL AND ADJACENT PREPARED SOIL SEVERAL TIMES DURING THE FIRST MONTH AFTER PLANTING AND REGULARLY THROUGHOUT THE FOLLOWING TWO SUMMERS.
3. SOIL AMENDMENTS:
   - MODIFY HEAVY CLAY OR SILT SOILS (MORE THAN 40% CLAY OR SILT) BY ADDING COMPOSTED PINE BARK (UP TO 30% BY VOLUME) OR GYPSUM
   - MODIFY EXTREMELY SANDY SOILS (MORE THAN 85% SAND) BY ADDING ORGANIC MATTER AND/OR DRY, SHREDDED CLAY LOAM UP TO 30% OF THE TOTAL MIX
4. EVERGREEN TREES TO BE PLANTED SHALL BE THUJA GREEN GIANT (THUJA STANDISHII X PLICATA). DOUBLE STAGGERED ROW OF TREES SHALL BE PLANTED WITH A 15' SPACING HORIZONTAL AND DIAGONAL . EVERGREEN TREE PLANTINGS SHALL BE GUARANTEED FOR A PERIOD OF 1 YEAR. 12' TALL EVERGREENS SHALL BE PLANTED AS SHOWN ON THIS PLAN.

NO.	DATE	REVISIONS	BY	APP
1	07/19/2021	PRELIMINARY	GSPP	GSPP
2	07/22/2021	PRELIMINARY REV.	GSPP	GSPP
3				
4				
5				
6				
7				

SCALE: N.T.S.

PROJECT NUMBER: KIMCO GREENRIDGE

SHEET: 1 OF 1

SHEET SIZE: 24" X 36"

PROJECT NAME: CIUFFETELLI - STRAWBERRY

PROJECT ADDRESS: 1645 STRAWBERRY ROAD, MOHEGAN LAKE, NY 10547

SHEET NAME: PRELIMINARY SITE PLAN

E-100

SITE INFORMATION

SITE NAME/ADDRESS:	1654 STRAWBERRY ROAD MOHEGAN LAKE, NY 10547
LANDOWNER:	1654 STRAWBERRY ROAD LLC 1654 STRAWBERRY ROAD MOHEGAN LAKE, NY 10547
APPLICANT:	GREEN STREET POWER PARTNERS 1 LANDMARK SQUARE, SUITE 320 STAMFORD, CT 06901

PV SYSTEM SPECIFICATIONS

INVERTER:	(16) 125kW CHINT POWER CPS 125KTL
SOLAR MODULE:	(6,221) 435W LONGI SOLAR MODULE (LR4-72HBD 435M)
STRING SIZE:	(232) 26-MODULE STRING (7) 27-MODULE STRING
RACKING:	20° TILT 180° AZIMUTH GROUND MOUNTED RACKING

NOTES:
1. THIS CONCEPTUAL PLAN AND ELECTRICAL SINGLE LINE DIAGRAM ARE NOT FOR CONSTRUCTION.
2. THIS CONCEPTUAL PLAN IS BASED SOLELY ON AERIAL PHOTOGRAPHS AND PROVIDED PLANS. NO SITE VISITS WERE CONDUCTED.
3. GROUND MOUNTED ELECTRICAL EQUIPMENT NOT SHOWN ON THIS PLAN, MAY INCLUDE, INVERTERS, SWITCHGEAR, AND/OR TRANSFORMERS.
4. NO VERIFICATION OF SOIL CAPACITY WAS CONDUCTED. A FULL GEOTECHNICAL ANALYSIS IS SUGGESTED.

1 / CP-1 CONCEPTUAL PLAN
SCALE: 1:80

GRAPHIC SCALE
80 0 40 80 160 320
(IN FEET)
1 INCH = 80 FT.

WHITMAN
Environmental • Geotechnical • Civil
Structural • Mechanical • Electrical
7 PLEASANT HILL ROAD
CRANBURY, NJ 08512
TEL: (732) 390-5858
FAX: (732) 390-9496

SEAL :

STATE OF NEW YORK · MICHAEL W WELLET JR · 081403-1 · LICENSED PROFESSIONAL ENGINEER

MICHAEL W. WELLET JR., P.E. DATE
NEW YORK PROFESSIONAL ENGINEER
LIC. NO. 081403-1

DRAWING NOTES:
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2. THIS DRAWING HAS BEEN PREPARED AS A 'D' SIZE DOCUMENT. DO NOT SCALE THIS DRAWING IF IT IS PLOTTED AS ANY OTHER SIZE.

GREEN STREET POWER PARTNERS

GREEN STREET POWER PARTNERS
1 LANDMARK SQUARE, SUITE 320
STAMFORD, CT 06901
(203) 496-8950

NO.	DATE:	REVISION DESCRIPTION
0	08/06/20	PRELIMINARY SUBMISSION
1	08/18/20	REVISED MODULE
2	08/26/20	COMMENTS INCORPORATED

PROJECT:
±2.7 MW (DC), 2 MW (AC)
GROUND MOUNTED
PHOTOVOLTAIC SYSTEM

1654 STRAWBERRY ROAD
MOHEGAN LAKE, NY 10547
WESTCHESTER COUNTY

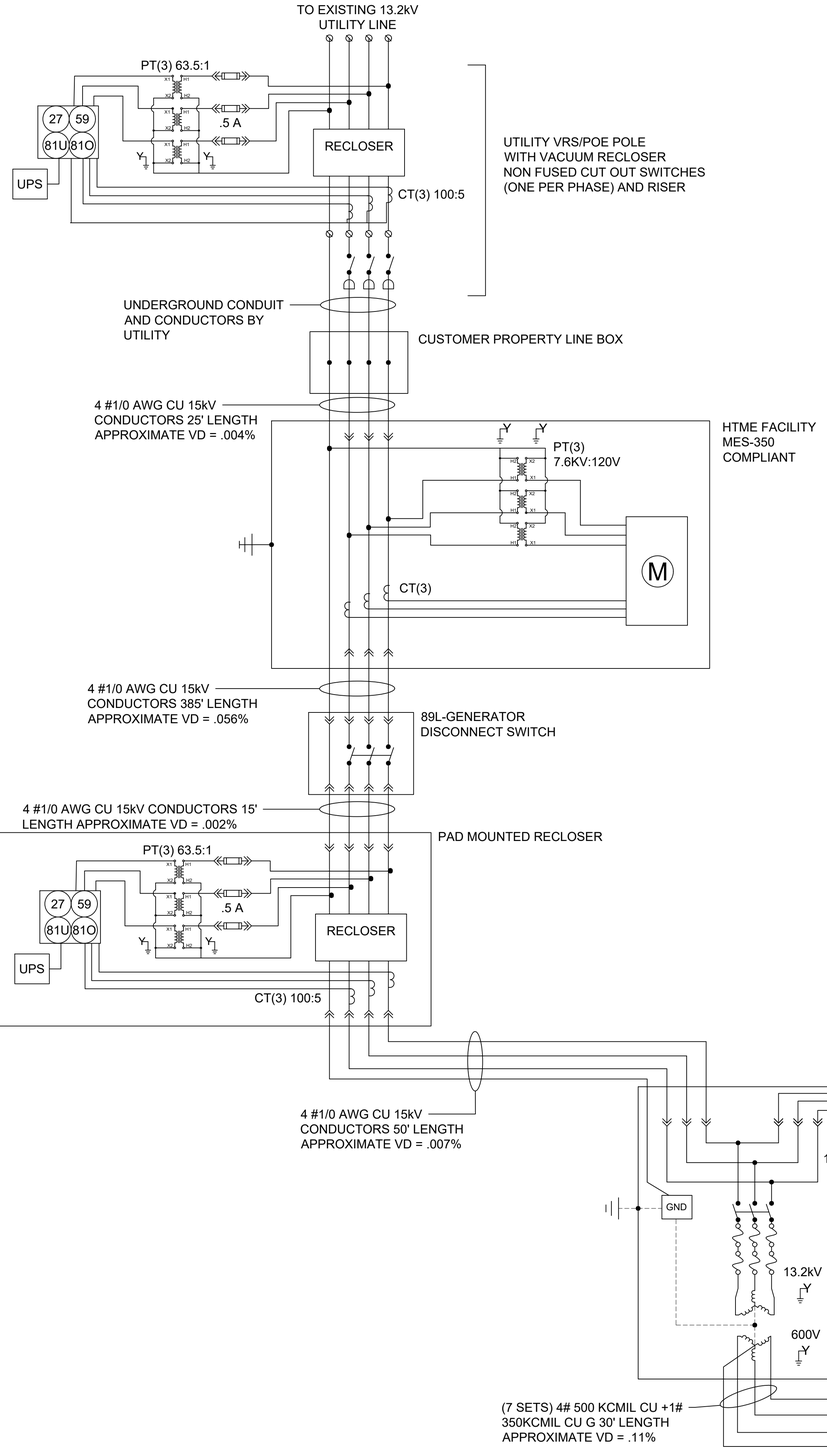
TAX ID:	XX	LOT:	---
SCALE:	AS SHOWN	PROJECT NO:	20-07-30
PLOT DATE:	8/26/20	CLIENT:	GREEN
DRAWN BY:	M.E.D./K.K.	REVIEWED BY:	J.T.

DRAWING TITLE:
CONCEPTUAL PLAN

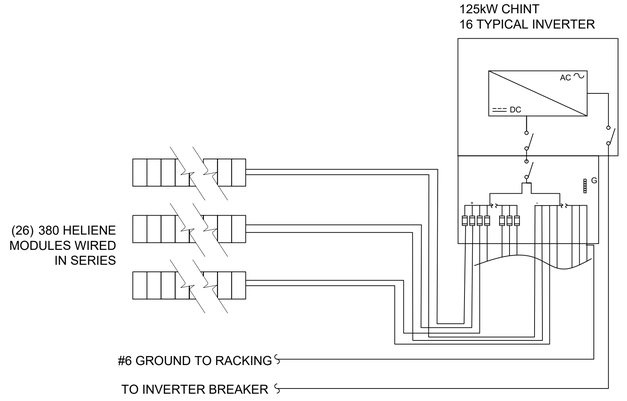
DRAWING NO.:
CP-1

SHEET NO.:
1 OF 2

W:\2020\20-07-30T GREEN STREET POWER PARTNERS - STRAWBERRY ROAD\021 ENGINEERING CAD\REV 2\20-07-30T CP1



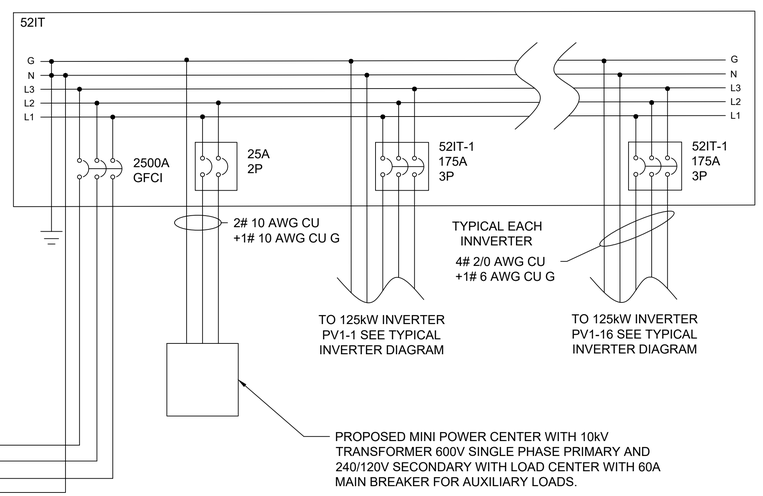
1 E-500 ELECTRICAL THREE LINE DIAGRAM
NOT TO SCALE



2 E-500 TYPICAL INVERTER DIAGRAM
NOT TO SCALE

RELAY FUNCTIONS			
ELEMENT	PICKUP RANGE	CLEARING TIME	DESCRIPTION
27-1	50% OF NOMINAL (60V)	1.1s	UNDERVOLTAGE RELAY
27-2	88% OF NOMINAL (105.6V)	2s	UNDERVOLTAGE RELAY
59-1	110% OF NOMINAL (132V)	2s	OVERVOLTAGE RELAY
59-2	120% OF NOMINAL (144V)	0.16s	OVERVOLTAGE RELAY
81U-1	56.5HZ	0.16s	UNDERFREQUENCY RELAY
81U-2	58.5Hz	300s	UNDERFREQUENCY RELAY
81O-1	61.2Hz	300s	OVERFREQUENCY RELAY
81O-2	62.0Hz	0.16s	OVERFREQUENCY RELAY
SETTING INCLUDED 3 CYCLE ESTIMATE CONTACTOR OPENING TIME.			
VOLTAGE SETTING ARE BASED ON A 120V SECONDARY PT BASE.			
UTILITY RESTORATION SETTINGS:			
RELAY TO AUTO RECLOSE 5 MUINUTES AFTER ALL RELAY CLEAR			

PROPOSED 3000A 346/600V 3 PHASE 4 WIRE NEMA 3R 52IT SWITCHBOARD SDP-1 WITH 3000A GFCI BI-DIRECTIONAL MAIN BREAKER, (16) 175A 3 POLE BI-DIRECTIONAL BREAKERS FOR INVERTERS AND (1) 25A 2 POLE BREAKER FOR MINI POWER CENTER.



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1	08/18/20	REVISED MODULE
2	08/26/20	COMMENTS INCORPORATED

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PHOTOVOLTAIC SYSTEM

1654 STRAWBERRY ROAD
MOHEGAN LAKE, NY 10547
WESTCHESTER COUNTY

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PLOT DATE:	8/26/20	CLIENT:	GREEN
DRAWN BY:	M.E.D./K.K.	REVIEWED BY:	J.T.

DRAWING TITLE:

ELECTRICAL THREE LINE
DIAGRAM

DRAWING NO.:

E-500

SHEET NO.:

2 OF 2

W:\2020\20-07-30T GREEN STREET POWER PARTNERS - STRAWBERRY ROAD\021 ENGINEERING CAD\REV 2\20-07-30T E500

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

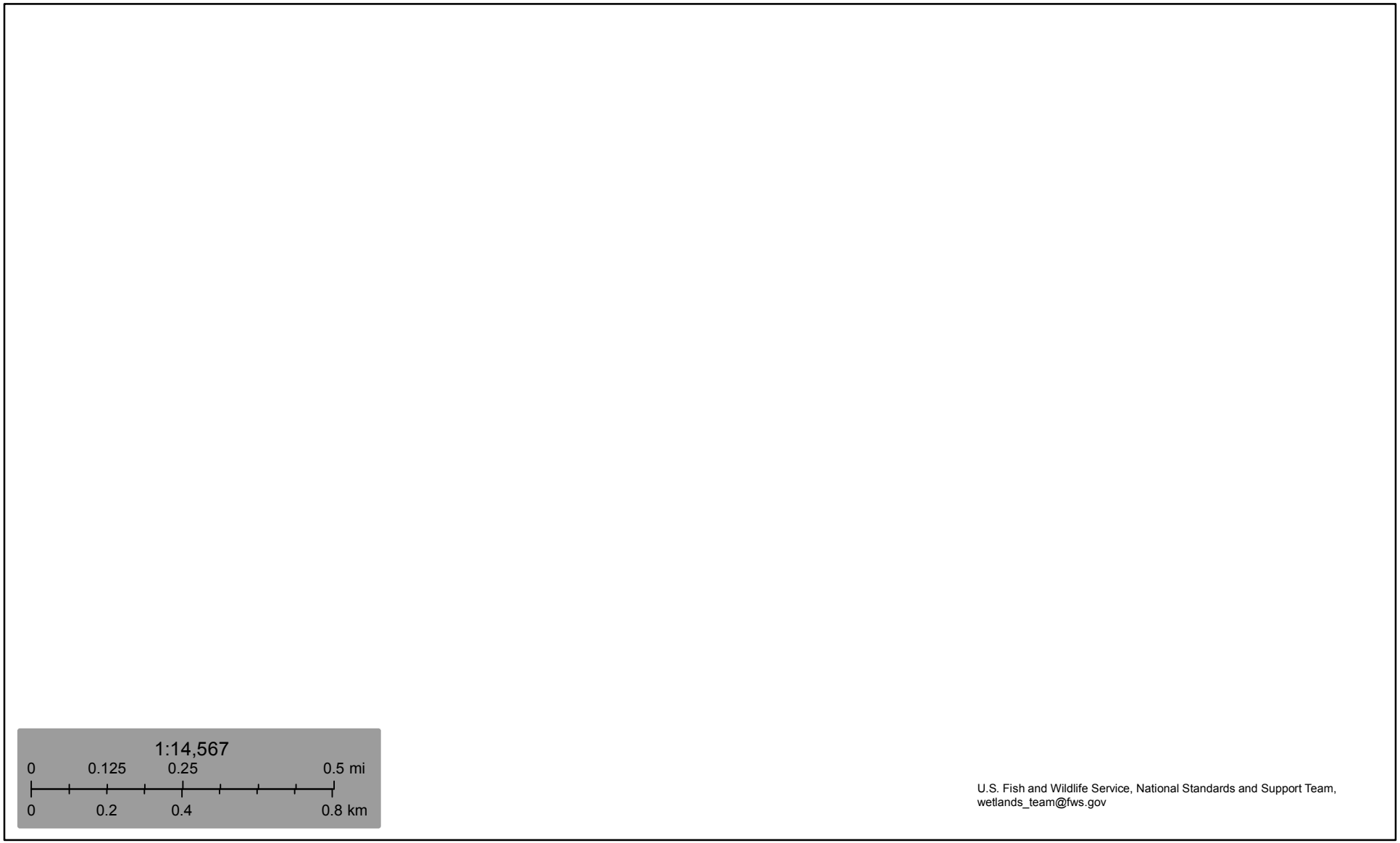
Environmental Resource Mapper

Base Map: Topographical | Using this map

- Search
- Tools
- **Layers and Legend**
  - All Layers
  - Unique Geological Features
  - Waterbody Classifications for Rivers/Streams
  - Waterbody Classifications for Lakes
  - State Regulated Freshwater Wetlands (Outside of the Adirondack Park)
  - State Regulated Wetland Checkzone
  - Imperiled Mussels
  - Mussel Screening Ponded Waters
  - Mussel Screening Streams
  - Significant Natural Communities
- Other Wetland Layers
- Reference Layers
- Tell Me More...
- Need A Permit?
- Contacts

[redacted]

NWI Map



July 9, 2021

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

National Flood Hazard Layer FIRMette

FEMA

Feet

0 250 500 1,000 1,500 2,000

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 7/9/2021 at 2:26 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

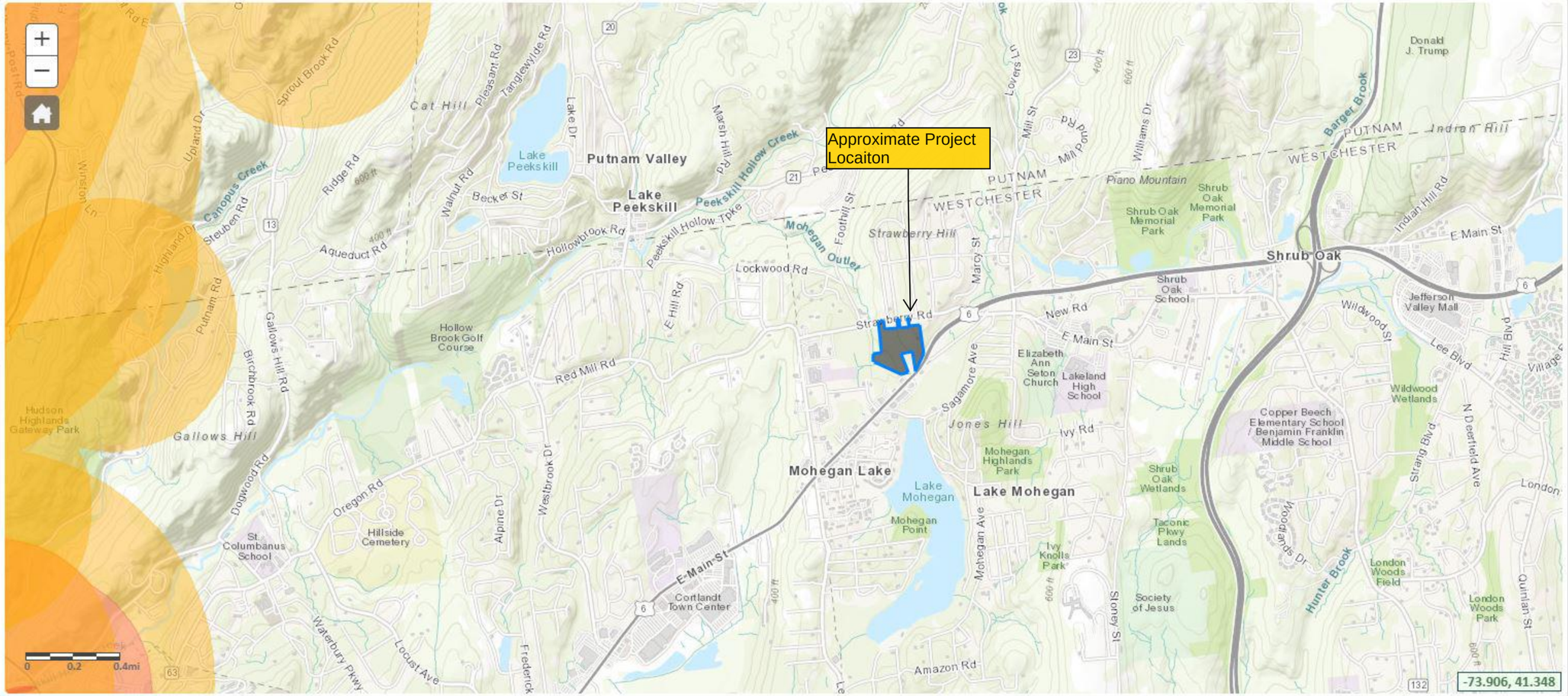
This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Environmental Resource Mapper

Base Map: Topographical | Using this map

- Search
- Tools
- **Layers and Legend**
  - Waterbody Classifications for Lakes
  - State Regulated Freshwater Wetlands (Outside of the Adirondack Park)
  - State Regulated Wetland Checkzone
  - Imperiled Mussels
  - Mussel Screening Ponded Waters
  - Mussel Screening Streams
  - Significant Natural Communities
  - Natural Communities Near This Location
  - Rare Plants or Animals
  - Base Flood Elevation Plus 72/75 Inches Sea-level Rise
  - Limit to Moderate Wave Action
- Other Wetland Layers
- Reference Layers
- Tell Me More...
- Need A Permit?
- Contacts



United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Westchester County, New York

July 9, 2021

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

Map Scale: 1:2,740 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 40 80 160 240

Feet: 0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Westchester County, New York
Survey Area Data: Version 16, Jun 11, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Oct 7, 2013—Feb 26, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
ChB	Charlton fine sandy loam, 3 to 8 percent slopes	0.0	0.2%
ChC	Charlton fine sandy loam, 8 to 15 percent slopes	6.0	28.6%
ChD	Charlton fine sandy loam, 15 to 25 percent slopes	5.2	24.9%
LcB	Leicester loam, 3 to 8 percent slopes, stony	1.2	5.7%
NcA	Natchaug muck, 0 to 2 percent slopes	1.8	8.5%
PnB	Paxton fine sandy loam, 3 to 8 percent slopes	0.0	0.1%
Sh	Sun loam	6.2	29.4%
SuB	Sutton loam, 3 to 8 percent slopes	0.4	1.9%
Uc	Udorthents, wet substratum	0.2	0.7%
Totals for Area of Interest		**21.0**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas

are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Westchester County, New York

ChB—Charlton fine sandy loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2wh0n
Elevation: 0 to 1,440 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Charlton and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Charlton

Setting

Landform: Hills, ground moraines, ridges
Landform position (two-dimensional): Backslope, shoulder, summit
Landform position (three-dimensional): Crest, side slope, nose slope
Down-slope shape: Linear, convex
Across-slope shape: Convex
Parent material: Coarse-loamy melt-out till derived from granite, gneiss, and/or schist

Typical profile

Ap - 0 to 7 inches: fine sandy loam
Bw - 7 to 22 inches: gravelly fine sandy loam
C - 22 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water capacity: Moderate (about 6.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Minor Components

Sutton

Percent of map unit: 8 percent
Landform: Ground moraines, hills
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Paxton

Percent of map unit: 5 percent
Landform: Drumlins, hills, ground moraines
Landform position (two-dimensional): Backslope, summit, shoulder
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Linear, convex
Across-slope shape: Convex
Hydric soil rating: No

Leicester

Percent of map unit: 1 percent
Landform: Drainageways, depressions
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: Yes

Chatfield

Percent of map unit: 1 percent
Landform: Hills, ridges
Landform position (two-dimensional): Backslope, shoulder, summit
Landform position (three-dimensional): Crest, side slope, nose slope
Down-slope shape: Convex
Across-slope shape: Linear, convex
Hydric soil rating: No

ChC—Charlton fine sandy loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2wh0q
Elevation: 0 to 1,440 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Charlton and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Charlton

Setting

Landform: Ground moraines, ridges, hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Coarse-loamy melt-out till derived from granite, gneiss, and/or schist

Typical profile

Ap - 0 to 7 inches: fine sandy loam
Bw - 7 to 22 inches: gravelly fine sandy loam
C - 22 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water capacity: Moderate (about 6.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Minor Components

Paxton

Percent of map unit: 5 percent
Landform: Drumlins, hills, ground moraines
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear, convex
Across-slope shape: Convex
Hydric soil rating: No

Sutton, fine sandy loam

Percent of map unit: 5 percent
Landform: Hills, ridges, ground moraines
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Chatfield

Percent of map unit: 3 percent
Landform: Hills, ridges
Landform position (two-dimensional): Backslope, shoulder, summit
Landform position (three-dimensional): Crest, side slope, nose slope
Down-slope shape: Convex
Across-slope shape: Convex, linear
Hydric soil rating: No

Canton

Percent of map unit: 2 percent
Landform: Hills, ground moraines, ridges
Landform position (two-dimensional): Shoulder, backslope, summit
Landform position (three-dimensional): Side slope, nose slope, crest
Down-slope shape: Linear, convex
Across-slope shape: Convex
Hydric soil rating: No

ChD—Charlton fine sandy loam, 15 to 25 percent slopes

Map Unit Setting

National map unit symbol: 2wh0t
Elevation: 0 to 1,290 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Charlton and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Charlton

Setting

Landform: Hills, ground moraines, ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear, convex
Across-slope shape: Convex
Parent material: Coarse-loamy melt-out till derived from granite, gneiss and/or schist

Typical profile

Ap - 0 to 7 inches: fine sandy loam
Bw - 7 to 22 inches: gravelly fine sandy loam
C - 22 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 15 to 25 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water capacity: Moderate (about 6.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: B
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Minor Components

Sutton, fine sandy loam

Percent of map unit: 5 percent
Landform: Ridges, ground moraines, hills
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Paxton

Percent of map unit: 5 percent
Landform: Drumlins, hills, ground moraines
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear, convex
Across-slope shape: Convex
Hydric soil rating: No

Chatfield

Percent of map unit: 3 percent
Landform: Hills, ridges
Landform position (two-dimensional): Summit, backslope, shoulder
Landform position (three-dimensional): Crest, side slope, nose slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Canton

Percent of map unit: 2 percent
Landform: Ridges, hills, moraines
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex

Hydric soil rating: No

LcB—Leicester loam, 3 to 8 percent slopes, stony

Map Unit Setting

National map unit symbol: bd8w
Elevation: 0 to 1,120 feet
Mean annual precipitation: 46 to 50 inches
Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 115 to 215 days
Farmland classification: Not prime farmland

Map Unit Composition

Leicester, somewhat poorly drained, and similar soils: 50 percent
Leicester, poorly drained, and similar soils: 35 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Leicester, Somewhat Poorly Drained

Setting

Landform: Hills, ridges, till plains
Landform position (two-dimensional): Footslope, summit
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loamy acid till derived mostly from schist and gneiss

Typical profile

H1 - 0 to 8 inches: loam
H2 - 8 to 26 inches: sandy loam
C - 26 to 60 inches: sandy loam

Properties and qualities

Slope: 3 to 8 percent
Surface area covered with cobbles, stones or boulders: 0.1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Moderate (about 7.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A/D
Ecological site: F144AY009CT - Wet Till Depressions
Hydric soil rating: No

Description of Leicester, Poorly Drained

Setting

Landform: Ridges, till plains, hills
Landform position (two-dimensional): Footslope, summit
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loamy acid till derived mostly from schist and gneiss

Typical profile

H1 - 0 to 8 inches: loam
H2 - 8 to 26 inches: sandy loam
C - 26 to 60 inches: sandy loam

Properties and qualities

Slope: 3 to 8 percent
Surface area covered with cobbles, stones or boulders: 0.1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Moderate (about 7.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A/D
Ecological site: F144AY009CT - Wet Till Depressions
Hydric soil rating: Yes

Minor Components

Sun

Percent of map unit: 7 percent
Landform: Depressions
Hydric soil rating: Yes

Sutton

Percent of map unit: 5 percent
Hydric soil rating: No

Leicester, very stony

Percent of map unit: 3 percent
Hydric soil rating: No

NcA—Natchaug muck, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2w68z
Elevation: 0 to 1,550 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 145 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Natchaug and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Natchaug

Setting

Landform: Depressions, depressions, depressions
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Highly decomposed organic material over loamy glaciofluvial deposits and/or loamy glaciolacustrine deposits and/or loamy till

Typical profile

Oa1 - 0 to 12 inches: muck
Oa2 - 12 to 31 inches: muck
2Cg1 - 31 to 39 inches: silt loam
2Cg2 - 39 to 79 inches: fine sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.01 to 14.17 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 25 percent
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water capacity: Very high (about 17.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: B/D
Ecological site: F144AY042NY - Semi-Rich Organic Wetlands

Hydric soil rating: Yes

Minor Components

Catden

Percent of map unit: 8 percent
Landform: Depressions, depressions, depressions
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Limerick

Percent of map unit: 5 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Sun

Percent of map unit: 4 percent
Landform: Depressions, hills
Landform position (two-dimensional): Toeslope, footslope
Landform position (three-dimensional): Base slope, head slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Halsey

Percent of map unit: 3 percent
Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

PnB—Paxton fine sandy loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2t2qp
Elevation: 0 to 1,570 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Paxton and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Paxton

Setting

Landform: Drumlins, ground moraines, hills
Landform position (two-dimensional): Backslope, summit, shoulder
Landform position (three-dimensional): Side slope, crest, nose slope
Down-slope shape: Linear, convex
Across-slope shape: Convex
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Ap - 0 to 8 inches: fine sandy loam
Bw1 - 8 to 15 inches: fine sandy loam
Bw2 - 15 to 26 inches: fine sandy loam
Cd - 26 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: 18 to 39 inches to densic material
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water capacity: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: C
Ecological site: F144AY007CT - Well Drained Dense Till Uplands
Hydric soil rating: No

Minor Components

Woodbridge

Percent of map unit: 9 percent
Landform: Hills, drumlins, ground moraines
Landform position (two-dimensional): Backslope, footslope, summit
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Ridgebury

Percent of map unit: 6 percent
Landform: Drainageways, hills, ground moraines, depressions
Landform position (two-dimensional): Backslope, footslope, toeslope
Landform position (three-dimensional): Head slope, base slope, dip
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Charlton

Percent of map unit: 5 percent
Landform: Hills
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Sh—Sun loam

Map Unit Setting

National map unit symbol: bd9q
Elevation: 600 to 1,800 feet
Mean annual precipitation: 46 to 50 inches
Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 115 to 215 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Sun and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sun

Setting

Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Loamy till derived primarily from limestone and sandstone, with a component of schist, shale, or granitic rocks in some areas

Typical profile

H1 - 0 to 9 inches: loam
H2 - 9 to 27 inches: loam
H3 - 27 to 60 inches: gravelly fine sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 15 percent
Available water capacity: Moderate (about 6.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: C/D
Ecological site: F144AY039NY - Semi-Rich Wet Till Depressions
Hydric soil rating: Yes

Minor Components

Leicester

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Ridgebury

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Palms

Percent of map unit: 3 percent
Landform: Swamps, marshes
Hydric soil rating: Yes

Sun, stony

Percent of map unit: 2 percent
Landform: Depressions
Hydric soil rating: Yes

SuB—Sutton loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2xffp
Elevation: 10 to 1,250 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 145 to 240 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Sutton, loam, and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sutton, Loam

Setting

Landform: Hills, ridges, ground moraines
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave

Across-slope shape: Linear
Parent material: Coarse-loamy melt-out till derived from gneiss, granite, and/or schist

Typical profile

Ap - 0 to 9 inches: loam
Bw1 - 9 to 17 inches: fine sandy loam
Bw2 - 17 to 30 inches: sandy loam
C1 - 30 to 39 inches: sandy loam
C2 - 39 to 60 inches: sandy loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: About 12 to 27 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: High (about 9.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B/D
Ecological site: F144AY008CT - Moist Till Uplands
Hydric soil rating: No

Minor Components

Charlton

Percent of map unit: 10 percent
Landform: Ridges, ground moraines, hills
Landform position (two-dimensional): Backslope, shoulder, summit
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

Leicester, loam

Percent of map unit: 5 percent
Landform: Depressions, drainageways, hills, ground moraines
Landform position (two-dimensional): Toeslope, footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear, concave
Across-slope shape: Concave
Hydric soil rating: Yes

Woodbridge, loam

Percent of map unit: 5 percent
Landform: Drumlins, hills, ground moraines
Landform position (two-dimensional): Footslope, summit, backslope
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Convex

Across-slope shape: Linear
Hydric soil rating: No

Uc—Udorthents, wet substratum

Map Unit Setting

National map unit symbol: bd7g
Elevation: 50 to 2,400 feet
Mean annual precipitation: 46 to 50 inches
Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 115 to 215 days
Farmland classification: Not prime farmland

Map Unit Composition

Udorthents, wet substratum, and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udorthents, Wet Substratum

Typical profile

H1 - 0 to 4 inches: gravelly loam
H2 - 4 to 72 inches: very gravelly loam

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: 40 to 60 inches to lithic bedrock
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.06 to 5.95 in/hr)
Depth to water table: About 6 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water capacity: Low (about 4.6 inches)

Minor Components

Udorthents

Percent of map unit: 5 percent
Hydric soil rating: No

Urban land

Percent of map unit: 5 percent
Hydric soil rating: Unranked

Raynham

Percent of map unit: 2 percent
Hydric soil rating: Yes

Fredon

Percent of map unit: 2 percent

Landform: Depressions
Hydric soil rating: Yes

Paxton

Percent of map unit: 2 percent
Hydric soil rating: No

Ipswich

Percent of map unit: 2 percent
Landform: Tidal marshes
Hydric soil rating: Yes

Hinckley

Percent of map unit: 2 percent
Hydric soil rating: No

Soil Information for All Uses

Suitabilities and Limitations for Use

The Suitabilities and Limitations for Use section includes various soil interpretations displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each interpretation.

Building Site Development

Building site development interpretations are designed to be used as tools for evaluating soil suitability and identifying soil limitations for various construction purposes. As part of the interpretation process, the rating applies to each soil in its described condition and does not consider present land use. Example interpretations can include corrosion of concrete and steel, shallow excavations, dwellings with and without basements, small commercial buildings, local roads and streets, and lawns and landscaping.

Shallow Excavations

Shallow excavations are trenches or holes dug to a maximum depth of 5 or 6 feet for graves, utility lines, open ditches, or other purposes. The ratings are based on the soil properties that influence the ease of digging and the resistance to sloughing. Depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, the amount of large stones, and dense layers influence the ease of digging, filling, and compacting. Depth to the seasonal high water table, flooding, and ponding may restrict the period when excavations can be made. Slope influences the ease of using machinery. Soil texture, depth to the water table, and linear extensibility (shrink-swell potential) influence the resistance to sloughing.

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the specified use. "Not limited" indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. "Somewhat limited" indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate

maintenance can be expected. "Very limited" indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

Map Scale: 1:2,740 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 40 80 160 240

Feet: 0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil Rating Polygons

- Very limited
- Somewhat limited
- Not limited
- Not rated or not available

Soil Rating Lines

- Very limited
- Somewhat limited
- Not limited
- Not rated or not available

Soil Rating Points

- Very limited
- Somewhat limited
- Not limited
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Westchester County, New York
Survey Area Data: Version 16, Jun 11, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Oct 7, 2013—Feb 26, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Tables—Shallow Excavations

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
ChB	Charlton fine sandy loam, 3 to 8 percent slopes	Somewhat limited	Charlton (85%)	Unstable excavation walls (0.01)	0.0	0.2%
				Dusty (0.00)		
ChC	Charlton fine sandy loam, 8 to 15 percent slopes	Somewhat limited	Charlton (85%)	Slope (0.63)	6.0	28.6%
				Unstable excavation walls (0.01)		
				Dusty (0.00)		
			Canton (2%)	Slope (0.63)		
				Unstable excavation walls (0.10)		
				Dusty (0.00)		
ChD	Charlton fine sandy loam, 15 to 25 percent slopes	Very limited	Charlton (85%)	Slope (1.00)	5.2	24.9%
				Unstable excavation walls (0.01)		
				Dusty (0.00)		
			Paxton (5%)	Slope (1.00)		
				Depth to saturated zone (1.00)		
				Dense layer (0.50)		
				Unstable excavation walls (0.01)		
				Dusty (0.00)		
			Sutton, fine sandy loam (5%)	Slope (1.00)		
				Depth to saturated zone (1.00)		
				Unstable excavation walls (0.01)		
				Dusty (0.00)		
			Chatfield (3%)	Depth to hard bedrock (1.00)		
				Slope (1.00)		
				Unstable excavation walls (0.01)		

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
				Dusty (0.00)		
			Canton (2%)	Slope (1.00)		
				Unstable excavation walls (0.10)		
				Dusty (0.00)		
LcB	Leicester loam, 3 to 8 percent slopes, stony	Very limited	Leicester, somewhat poorly drained (50%)	Depth to saturated zone (1.00)	1.2	5.7%
				Unstable excavation walls (0.01)		
				Dusty (0.00)		
			Leicester, poorly drained (35%)	Depth to saturated zone (1.00)		
				Unstable excavation walls (0.01)		
				Dusty (0.00)		
NcA	Natchaug muck, 0 to 2 percent slopes	Very limited	Natchaug (80%)	Ponding (1.00)	1.8	8.5%
				Depth to saturated zone (1.00)		
				Unstable excavation walls (0.01)		
				Dusty (0.01)		
			Catden (8%)	Ponding (1.00)		
				Depth to saturated zone (1.00)		
				Organic matter content (1.00)		
				Unstable excavation walls (0.01)		
				Dusty (0.01)		
			Limerick (5%)	Depth to saturated zone (1.00)		
				Flooding (0.80)		
				Unstable excavation walls (0.01)		
				Dusty (0.01)		

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
			Sun (4%)	Depth to saturated zone (1.00)		
				Unstable excavation walls (0.01)		
				Dusty (0.01)		
			Halsey (3%)	Ponding (1.00)		
				Depth to saturated zone (1.00)		
				Unstable excavation walls (0.75)		
				Dusty (0.00)		
PnB	Paxton fine sandy loam, 3 to 8 percent slopes	Very limited	Paxton (80%)	Depth to saturated zone (1.00)	0.0	0.1%
				Dense layer (0.50)		
				Unstable excavation walls (0.01)		
				Dusty (0.00)		
			Woodbridge (9%)	Depth to saturated zone (1.00)		
				Dense layer (0.50)		
				Unstable excavation walls (0.01)		
				Dusty (0.00)		
			Ridgebury (6%)	Depth to saturated zone (1.00)		
				Dense layer (0.50)		
				Unstable excavation walls (0.01)		
				Dusty (0.00)		
Sh	Sun loam	Very limited	Sun (85%)	Ponding (1.00)	6.2	29.4%
				Depth to saturated zone (1.00)		
				Unstable excavation walls (0.01)		

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
				Dusty (0.01)		
SuB	Sutton loam, 3 to 8 percent slopes	Very limited	Sutton, loam (80%)	Depth to saturated zone (1.00)	0.4	1.9%
				Unstable excavation walls (0.01)		
				Dusty (0.00)		
			Leicester, loam (5%)	Depth to saturated zone (1.00)		
				Unstable excavation walls (0.01)		
				Dusty (0.00)		
			Woodbridge, loam (5%)	Depth to saturated zone (1.00)		
				Dense layer (0.50)		
				Unstable excavation walls (0.01)		
				Dusty (0.00)		
Uc	Udorthents, wet substratum	Very limited	Udorthents, wet substratum (80%)	Depth to saturated zone (1.00)	0.2	0.7%
				Depth to hard bedrock (0.42)		
				Unstable excavation walls (0.01)		
				Dusty (0.01)		
Totals for Area of Interest					**21.0**	**100.0%**

Rating	Acres in AOI	Percent of AOI
Very limited	14.9	71.3%
Somewhat limited	6.0	28.7%
Totals for Area of Interest	**21.0**	**100.0%**

Rating Options—Shallow Excavations

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

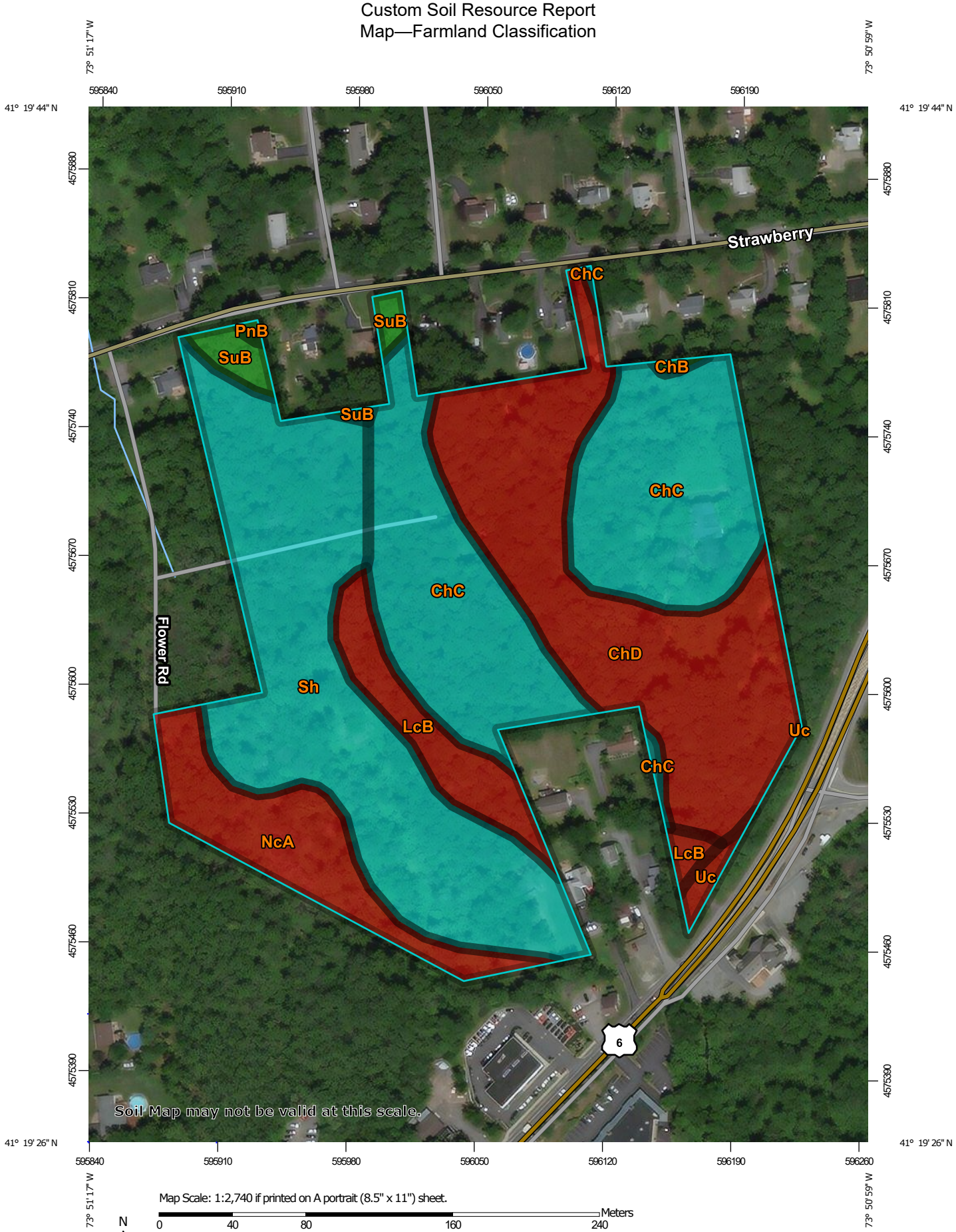
Tie-break Rule: Higher

Land Classifications

Land Classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

Farmland Classification

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.



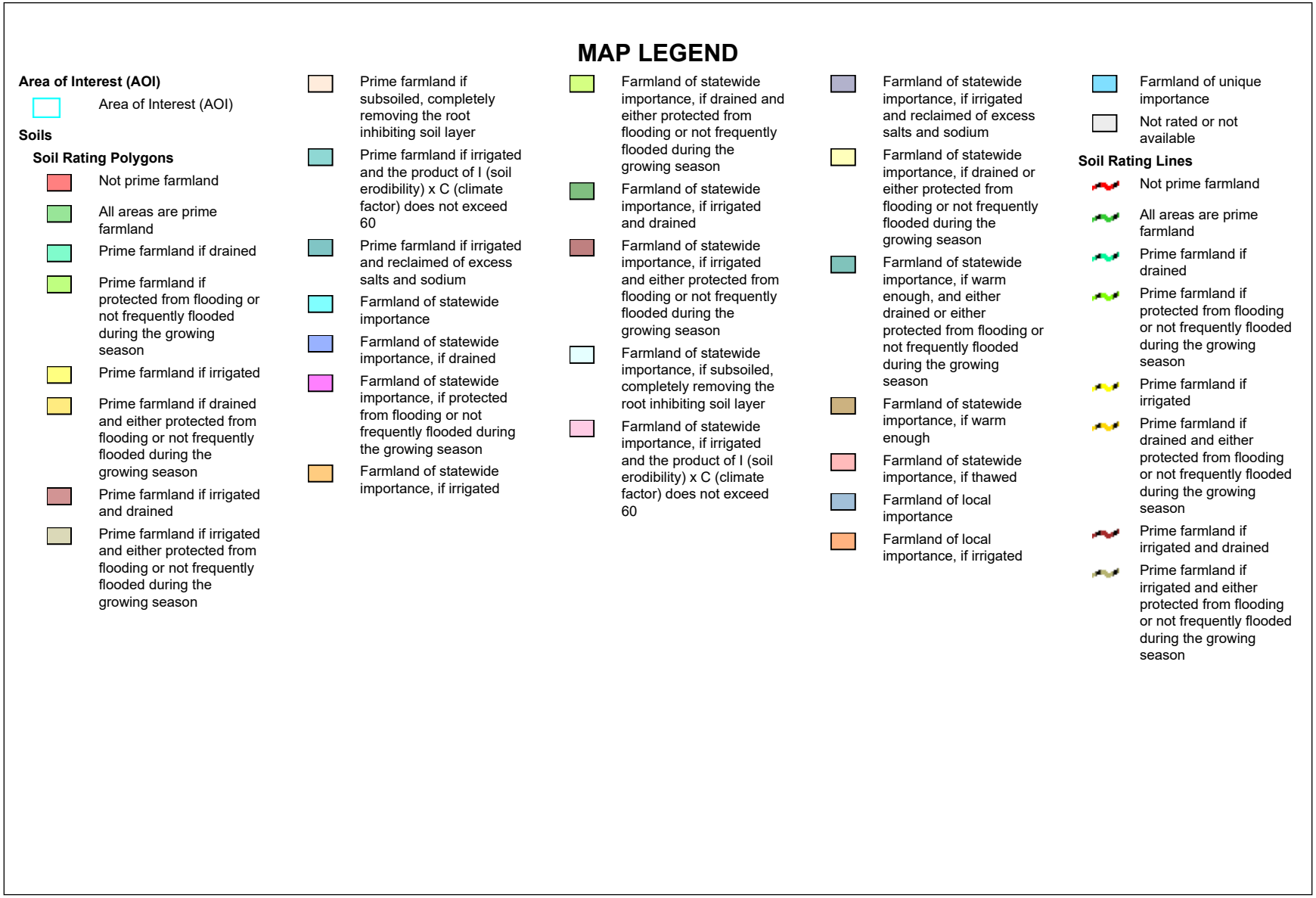
Map Scale: 1:2,740 if printed on A portrait (8.5" x 11") sheet.

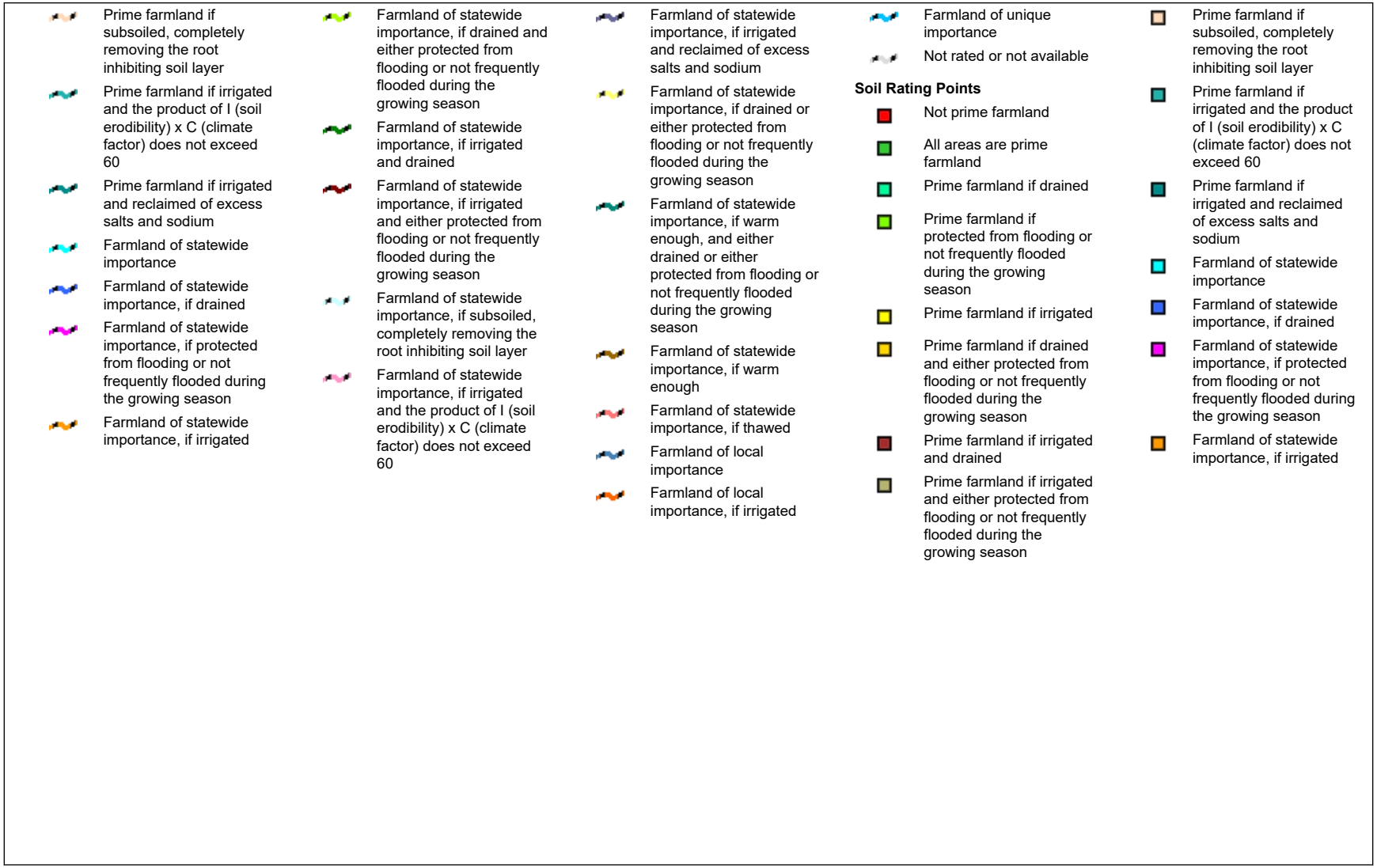
N

Meters: 0 40 80 160 240

Feet: 0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84


MAP LEGEND
Area of Interest (AOI)
Area of Interest (AOI)
Soils
Soil Rating Polygons
Not prime farmland
All areas are prime farmland
Prime farmland if drained
Prime farmland if protected from flooding or not frequently flooded during the growing season
Prime farmland if irrigated
Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
Prime farmland if irrigated and drained
Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
Prime farmland if subsoiled, completely removing the root inhibiting soil layer
Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
Prime farmland if irrigated and reclaimed of excess salts and sodium
Farmland of statewide importance
Farmland of statewide importance, if drained
Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if irrigated
Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if irrigated and drained
Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if warm enough
Farmland of statewide importance, if thawed
Farmland of local importance
Farmland of local importance, if irrigated
Farmland of unique importance
Not rated or not available
Soil Rating Lines
Not prime farmland
All areas are prime farmland
Prime farmland if drained
Prime farmland if protected from flooding or not frequently flooded during the growing season
Prime farmland if irrigated
Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
Prime farmland if irrigated and drained
Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season


Prime farmland if subsoiled, completely removing the root inhibiting soil layer
Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
Prime farmland if irrigated and reclaimed of excess salts and sodium
Farmland of statewide importance
Farmland of statewide importance, if drained
Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if irrigated
Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if irrigated and drained
Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if warm enough
Farmland of statewide importance, if thawed
Farmland of local importance
Farmland of local importance, if irrigated
Farmland of unique importance
Not rated or not available
Soil Rating Points
Not prime farmland
All areas are prime farmland
Prime farmland if drained
Prime farmland if protected from flooding or not frequently flooded during the growing season
Prime farmland if irrigated
Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
Prime farmland if irrigated and drained
Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
Prime farmland if subsoiled, completely removing the root inhibiting soil layer
Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
Prime farmland if irrigated and reclaimed of excess salts and sodium
Farmland of statewide importance
Farmland of statewide importance, if drained
Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if irrigated

- Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated and drained
- Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
- Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough
- Farmland of statewide importance, if thawed
- Farmland of local importance
- Farmland of local importance, if irrigated
- Farmland of unique importance
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Westchester County, New York
Survey Area Data: Version 16, Jun 11, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Oct 7, 2013—Feb 26, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Farmland Classification

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
ChB	Charlton fine sandy loam, 3 to 8 percent slopes	All areas are prime farmland	0.0	0.2%
ChC	Charlton fine sandy loam, 8 to 15 percent slopes	Farmland of statewide importance	6.0	28.6%
ChD	Charlton fine sandy loam, 15 to 25 percent slopes	Not prime farmland	5.2	24.9%
LcB	Leicester loam, 3 to 8 percent slopes, stony	Not prime farmland	1.2	5.7%
NcA	Natchaug muck, 0 to 2 percent slopes	Not prime farmland	1.8	8.5%
PnB	Paxton fine sandy loam, 3 to 8 percent slopes	All areas are prime farmland	0.0	0.1%
Sh	Sun loam	Farmland of statewide importance	6.2	29.4%
SuB	Sutton loam, 3 to 8 percent slopes	All areas are prime farmland	0.4	1.9%
Uc	Udorthents, wet substratum	Not prime farmland	0.2	0.7%
Totals for Area of Interest			**21.0**	**100.0%**

Rating Options—Farmland Classification

Aggregation Method: No Aggregation Necessary

Tie-break Rule: Lower

Hydric Rating by Map Unit

This rating indicates the percentage of map units that meets the criteria for hydric soils. Map units are composed of one or more map unit components or soil types, each of which is rated as hydric soil or not hydric. Map units that are made up dominantly of hydric soils may have small areas of minor nonhydric components in the higher positions on the landform, and map units that are made up dominantly of nonhydric soils may have small areas of minor hydric components in the lower positions on the landform. Each map unit is rated based on its respective components and the percentage of each component within the map unit.

The thematic map is color coded based on the composition of hydric components. The five color classes are separated as 100 percent hydric components, 66 to 99 percent hydric components, 33 to 65 percent hydric components, 1 to 32 percent hydric components, and less than one percent hydric components.

In Web Soil Survey, the Summary by Map Unit table that is displayed below the map pane contains a column named 'Rating'. In this column the percentage of each map unit that is classified as hydric is displayed.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). Under natural conditions, these soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

References:

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.

Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

Map Scale: 1:2,740 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 40 80 160 240

Feet: 0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

Soil Rating Lines
- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

Soil Rating Points
- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Westchester County, New York
Survey Area Data: Version 16, Jun 11, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Oct 7, 2013—Feb 26, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Hydric Rating by Map Unit

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
ChB	Charlton fine sandy loam, 3 to 8 percent slopes	1	0.0	0.2%
ChC	Charlton fine sandy loam, 8 to 15 percent slopes	0	6.0	28.6%
ChD	Charlton fine sandy loam, 15 to 25 percent slopes	0	5.2	24.9%
LcB	Leicester loam, 3 to 8 percent slopes, stony	42	1.2	5.7%
NcA	Natchaug muck, 0 to 2 percent slopes	100	1.8	8.5%
PnB	Paxton fine sandy loam, 3 to 8 percent slopes	6	0.0	0.1%
Sh	Sun loam	100	6.2	29.4%
SuB	Sutton loam, 3 to 8 percent slopes	5	0.4	1.9%
Uc	Udorthents, wet substratum	6	0.2	0.7%
Totals for Area of Interest			**21.0**	**100.0%**

Rating Options—Hydric Rating by Map Unit

Aggregation Method: Percent Present

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577

Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374

United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

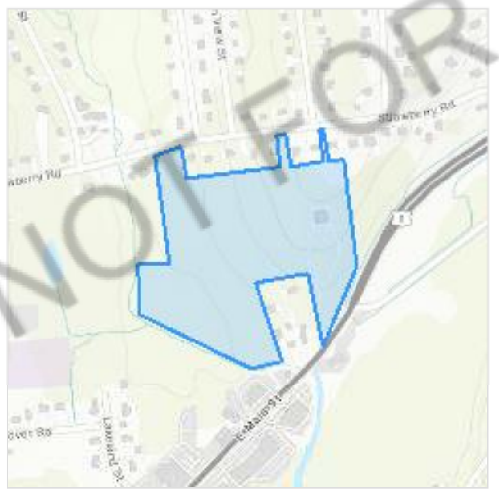
Project information

NAME

Ciuffetelli Solar Project

LOCATION

Westchester County, New York



DESCRIPTION

Some(The Proposed Project is located at 1645 Strawberry Road & 1700 Route 6, Mohegan Lake in the Town of Yorktown, Westchester County, NY and is known and designated by Westchester County as Tax Map Numbers 15.12-1-12 and 15.12-1-30 (approximately 21 acres). Green Street Power Partners is proposing to construct a solar array facility, with associated equipment, access roads and utilities.)

Local offices

Long Island Ecological Services Field Office

(631) 286-0485
(631) 286-4003

340 Smith Road
Shirley, NY 11967-2258

New York Ecological Services Field Office

(607) 753-9334
(607) 753-9699

3817 Luker Road
Cortland, NY 13045-9385

http://www.fws.gov/northeast/nyfo/es/section7.htm

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Log in to IPaC.
2. Go to your My Projects list.
3. Click PROJECT HOME for this project.
4. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS

Indiana Bat Myotis sodalis Wherever found There is **final** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/5949	Endangered

Reptiles

NAME	STATUS
Bog Turtle Clemmys muhlenbergii No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/6962	Threatened

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ

below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Aug 31
Black-capped Chickadee *Poecile atricapillus practicus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Apr 10 to Jul 31
Rusty Blackbird *Euphagus carolinus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Wood Thrush *Hylocichla mustelina* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 31

Yellow-bellied Sapsucker sphyrapicus varius — Breeds May 10 to Jul 15

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/8792

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (▪)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

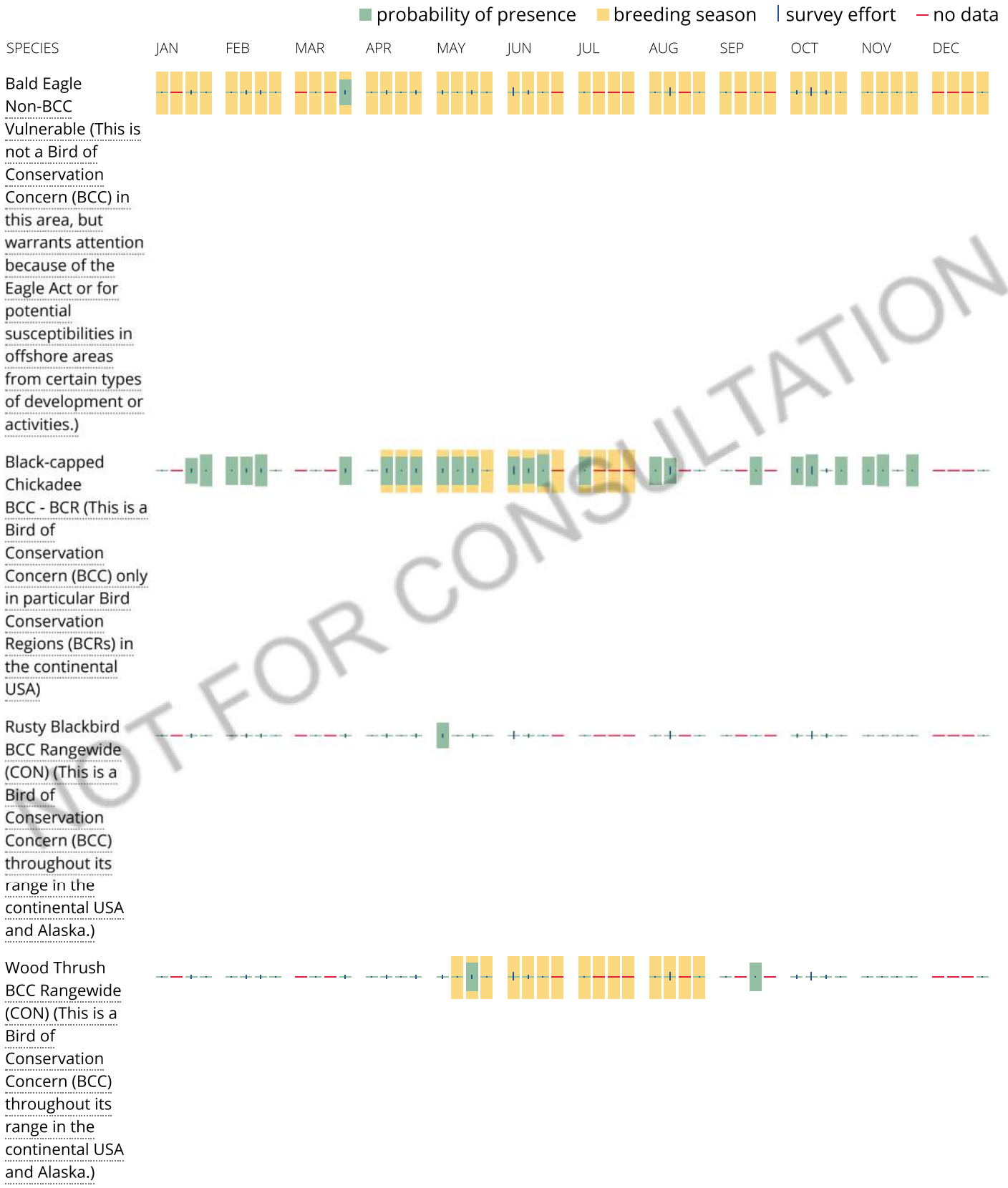
Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

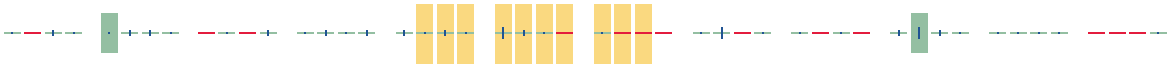
No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Yellow-bellied Sapsucker
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER FORESTED/SHRUB WETLAND

- PFO1Ed
- PSS1E

FRESHWATER POND

- PUBHx

RIVERINE

- R3UBH

A full description for each wetland code can be found at the National Wetlands Inventory website

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New York Ecological Services Field Office
3817 Luker Road
Cortland, NY 13045-9385
Phone: (607) 753-9334 Fax: (607) 753-9699
http://www.fws.gov/northeast/nyfo/es/section7.htm

In Reply Refer To: July 20, 2021
Consultation Code: 05E1NY00-2021-SLI-3476
Event Code: 05E1NY00-2021-E-10642
Project Name: Ciuffetelli Solar Project

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq.*). This list can also be used to determine whether listed species may be present for projects without federal agency involvement. New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list.

Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the ESA, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC site at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list. If listed, proposed, or candidate species were identified as potentially occurring in the project area, coordination with our office is encouraged. Information on the steps involved with assessing potential impacts from projects can be found at: http://www.fws.gov/northeast/nyfo/es/section7.htm

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the Services wind

energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the ESA. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New York Ecological Services Field Office
3817 Luker Road
Cortland, NY 13045-9385
(607) 753-9334

This project's location is within the jurisdiction of multiple offices. Expect additional species list documents from the following office, and expect that the species and critical habitats in each document reflect only those that fall in the office's jurisdiction:

Long Island Ecological Services Field Office
340 Smith Road
Shirley, NY 11967-2258
(631) 286-0485

Project Summary

Consultation Code: 05E1NY00-2021-SLI-3476
Event Code: 05E1NY00-2021-E-10642
Project Name: Ciuffetelli Solar Project
Project Type: Federal Grant / Loan Related
Project Description: The Proposed Project is located at 1645 Strawberry Road & 1700 Route 6, Mohegan Lake in the Town of Yorktown, Westchester County, NY and is known and designated by Westchester County as Tax Map Numbers 15.12-1-12 and 15.12-1-30 (approximately 21 acres). Green Street Power Partners is proposing to construct a solar array facility, with associated equipment, access roads and utilities.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@41.326493400000004,-73.8519581671764,14z

Counties: Westchester County, New York

Endangered Species Act Species

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Indiana Bat *Myotis sodalis*	Endangered

There is **final** critical habitat for this species. The location of the critical habitat is not available.
Species profile: https://ecos.fws.gov/ecp/species/5949

Reptiles

NAME	STATUS
Bog Turtle *Clemmys muhlenbergii*	Threatened

Population: Wherever found, except GA, NC, SC, TN, VA
No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/6962

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Long Island Ecological Services Field Office
340 Smith Road
Shirley, NY 11967-2258
Phone: (631) 286-0485 Fax: (631) 286-4003

In Reply Refer To:
Consultation Code: 05E1LI00-2021-SLI-0735
Event Code: 05E1LI00-2021-E-01746
Project Name: Ciuffetelli Solar Project

July 20, 2021

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)

(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Long Island Ecological Services Field Office
340 Smith Road
Shirley, NY 11967-2258
(631) 286-0485

This project's location is within the jurisdiction of multiple offices. Expect additional species list documents from the following office, and expect that the species and critical habitats in each document reflect only those that fall in the office's jurisdiction:

New York Ecological Services Field Office
3817 Luker Road
Cortland, NY 13045-9385
(607) 753-9334

Project Summary

Consultation Code: 05E1LI00-2021-SLI-0735
Event Code: 05E1LI00-2021-E-01746
Project Name: Ciuffetelli Solar Project
Project Type: Federal Grant / Loan Related
Project Description: The Proposed Project is located at 1645 Strawberry Road & 1700 Route 6, Mohegan Lake in the Town of Yorktown, Westchester County, NY and is known and designated by Westchester County as Tax Map Numbers 15.12-1-12 and 15.12-1-30 (approximately 21 acres). Green Street Power Partners is proposing to construct a solar array facility, with associated equipment, access roads and utilities.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@41.326493400000004,-73.8519581671764,14z

Counties: Westchester County, New York

Endangered Species Act Species

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Indiana Bat *Myotis sodalis*	Endangered

There is **final** critical habitat for this species. The location of the critical habitat is not available.
Species profile: https://ecos.fws.gov/ecp/species/5949

Reptiles

NAME	STATUS
Bog Turtle *Clemmys muhlenbergii*	Threatened

Population: Wherever found, except GA, NC, SC, TN, VA
No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/6962

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Arborist Report for Project Site Located at:

1645 Strawberry Rd

Yorktown, NY 10547

Prepared for:

GREEN STREET
POWER PARTNERS

1 Landmark Square, Suite 320

Stamford, CT 06901

Prepared by:

PLANIT GEO™
mapping a greener future

7878 Wadsworth Blvd, Suite 340

Arvada, CO 80003

(303)214-5067

info@planitgeo.com

Contact: Nathan Cummings

ISA Certified Arborist #NY-6214A

May 25, 2021

On May 17, 2021, PlanIT Geo's ISA Certified Arborist Nathan Cummings met with Brian Matthews from Green Street Power Partners at the project site located at 1645 Strawberry Rd in Yorktown, New York to review the site and discuss the project scope and boundaries for an inventory of trees on the property.

While on site, Mr. Matthews walked the project boundaries with Mr. Cummings and discussed overall goals of the project. Data was collected on-site using a handheld mobile device and PlanIT Geo's tree inventory software, TreePlotter. Data collected during the project included: tree location (latitude and longitude), species, condition rating (Excellent, Good, Fair, Poor), diameter at breast height (DBH) measured to the nearest inch, as well as standard arboriculture observations. Upon initial walkthrough, it was determined and agreed upon that 8" DBH would be the threshold for inclusion in the survey. This size threshold was agreed upon to include an accurate representation of trees within the canopy and tree species diversity on-site. Dead trees were not included in the inventory.

The inventory area at the project site located at 1645 Strawberry Rd encompasses 15 acres. While conducting the inventory, it was observed that the upper (emergent) layer of the canopy consisted mainly of sugar maple *(Acer saccharum)* and red maple *(Acer rubrum)*, with smaller percentages of black locust *(Robinia pseudoacacia)* and tulip tree *(Liriodendron tulipifera)*. The understory is mainly sugar maple *(Acer saccharum)* and red maple *(Acer rubrum)*, with smaller percentages of black locust *(Robinia pseudoacacia)*, Norway maple *(Acer platanoides)*, and shagbark hickory *(Carya ovata)*. There is spotty ground cover throughout the inventory area of wild rose *(Rosa spp.)* and Japanese barberry (*Berberis thunbergii*), which is listed as a "prohibited and regulated invasive plant" per New York State Department of Environmental Conservation.

The tree inventory of the property identified a total of 638 trees within the canopy measuring 8" or larger in DBH. Composition and condition of the 638 inventoried trees is shown in Table 1 below:

Table 1: Tree Inventory Composition & Condition

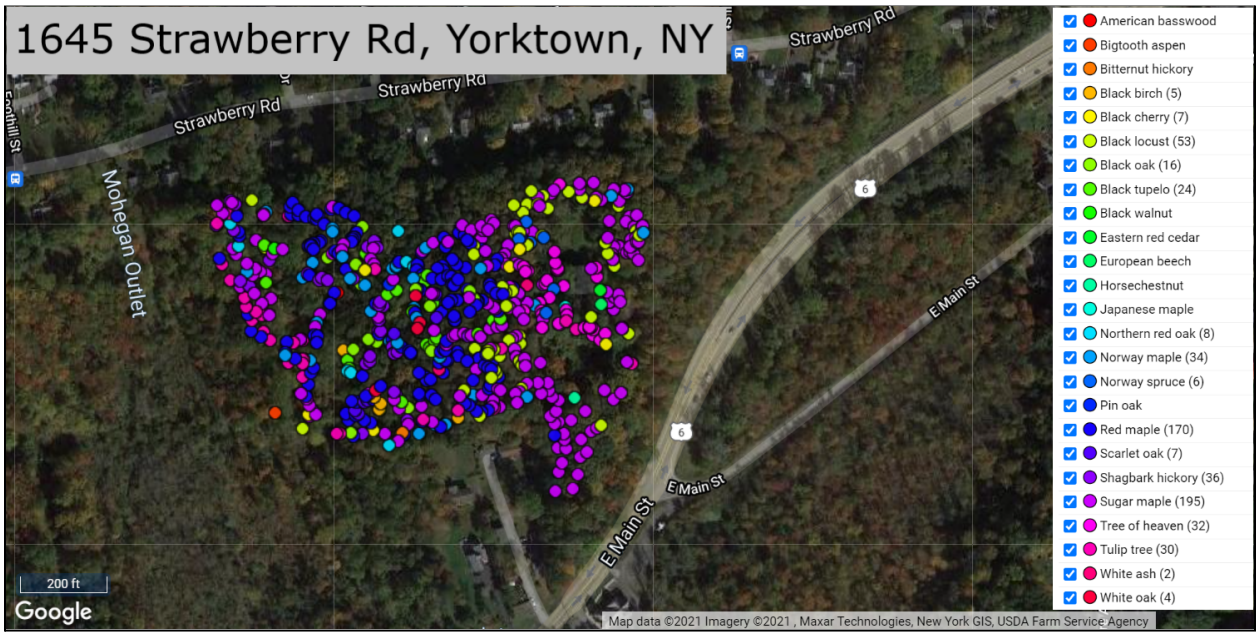
Common Name	Total	Percent (%)	Excellent	Good	Fair	Poor
Sugar maple	195	30.56	0	179	12	4
Red maple	170	26.65	0	154	11	5
Black locust	53	8.31	0	5	11	37
Shagbark hickory	36	5.64	0	31	5	0
Norway maple	34	5.33	0	31	3	0
Tree of heaven	32	5.02	0	0	31	1
Tulip tree	30	4.70	0	26	3	1
Black tupelo	24	3.76	0	18	6	0
Black oak	16	2.51	0	16	0	0
Northern red oak	8	1.25	0	8	0	0
Black cherry	7	1.10	0	6	1	0
Scarlet oak	7	1.10	0	7	0	0

Common Name	Total	Percent (%)	Excellent	Good	Fair	Poor
Norway spruce	6	0.94	0	3	2	1
Black birch	5	0.78	0	4	1	0
White oak	4	0.63	0	4	0	0
White ash	2	0.31	0	0	0	2
American basswood	1	0.16	0	1	0	0
Bigtooth aspen	1	0.16	0	0	1	0
Bitternut hickory	1	0.16	0	1	0	0
Black walnut	1	0.16	0	1	0	0
Eastern red cedar	1	0.16	0	0	1	0
European beech	1	0.16	0	0	0	1
Horsechestnut	1	0.16	0	0	0	1
Japanese maple	1	0.16	0	1	0	0
Pin oak	1	0.16	0	1	0	0

Tree Species Composition

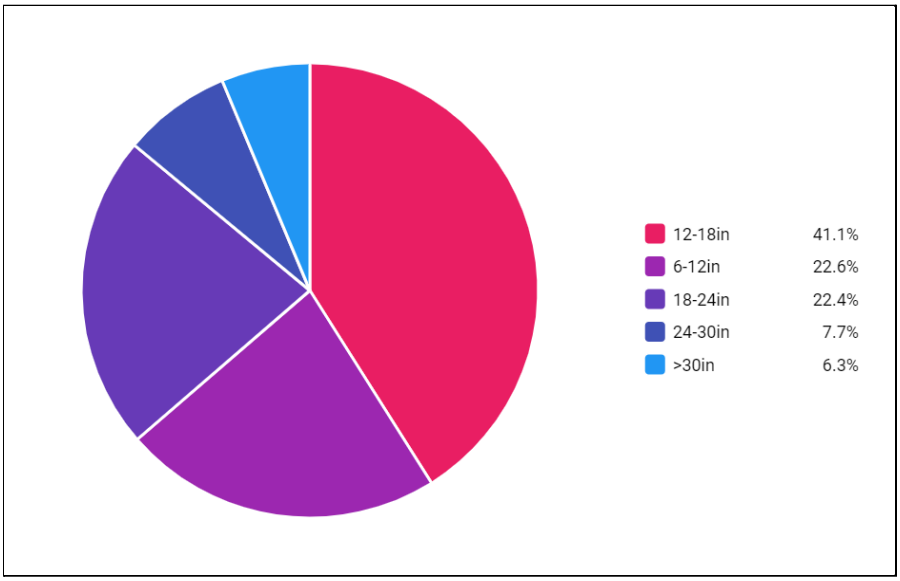
Of the 638 trees inventoried within the inventory area, the predominant species are sugar maple *(Acer saccharum)* and red maple *(Acer rubrum)*, comprising over 57% of the total trees inventoried. Black locust *(Robinia pseudoacacia)* accounted for 8.31%. Shagbark hickory *(Carya ovata),* Norway maple *(Acer platanoides)*, tree of heaven *(Ailanthus altissima),* and tulip tree *(Liriodendron tulipifera)* accounted for roughly 5% each. The remaining 15% of trees within the inventory area consist of the other 18 species listed in the table above and the site map below.

Site Map - Tree Species (common name)

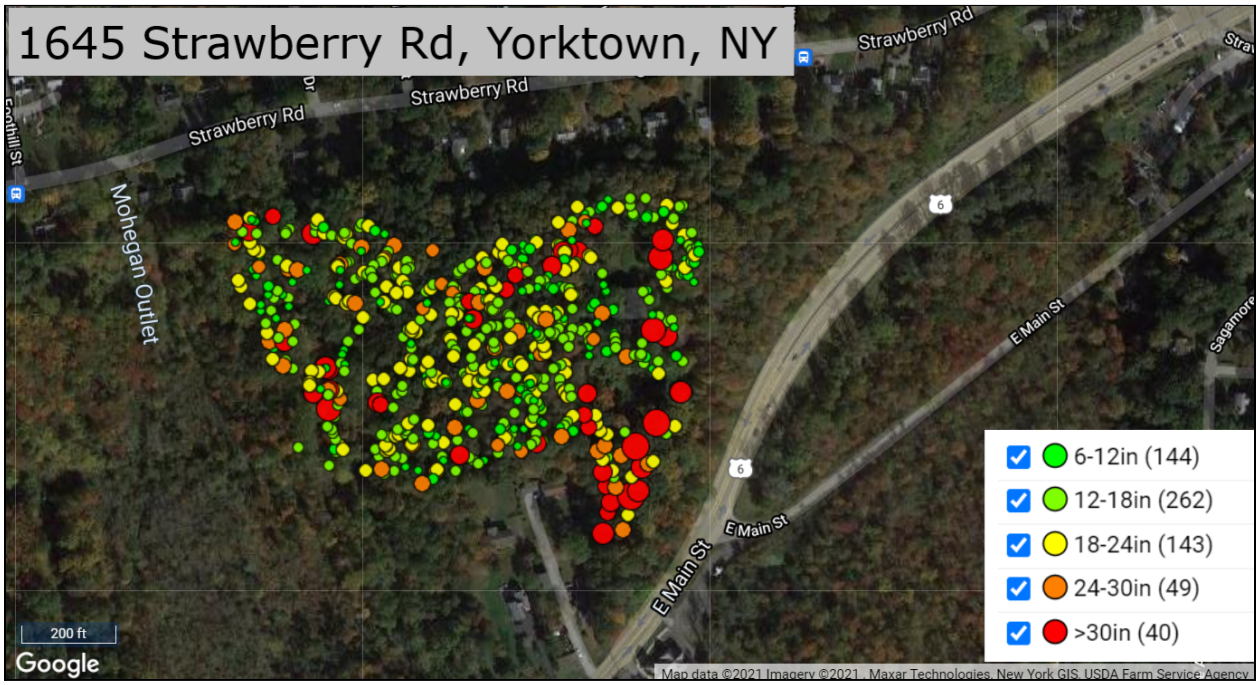


Tree Size Distribution

Diameter at breast height (DBH) was measured for all trees within the scope of the inventory to the nearest inch and assigned a DBH range. Of the 638 trees inventoried, 144 (22.57%) measured 6-12 inches, 262 (41.07%) measured 12-18 inches, 143 (22.41%) measured 18-24 inches, 49 (7.68%) measured 24-30 inches, and 40 (6.27%) measured 30 inches or greater.



Site Map - Tree DBH Range



Conclusion and Disclaimer

Arborists are tree specialists who use their education, knowledge, training and experience to examine and identify trees, recommend measures to enhance the beauty and health of trees, or attempt to reduce the risk of living near trees. Arborists cannot detect every condition that could possibly lead to structural failure of a tree or anticipate all environmental factors that could contribute to failure; as a living organism, a tree's condition may change at any time. Since these trees are within the proposed project area and are to be removed, this report does not include any maintenance recommendations or tree risk assessments. This report is solely intended for the purpose of identifying arboricultural resources onsite that may be subject to regulation by the Town of New Castle, NY.

Federal Aviation Administration

« OE/AAA

Notice of Proposed Construction or Alteration - Off Airport

Add a New Case (Off Airport) - Desk Reference Guide V_2018.2.1

Add a New Case (Off Airport) for Wind Turbines - Met Towers (with WT Farm) - WT-Barge Crane - Desk Reference Guide V_2018.2.1

Project Name: GREEN-000634099-21 **Sponsor:** Green Street Solar Power

Details for Case : Strawberry Rd-NE corner

Show Project Summary

Case Status

ASN:	2021-AEA-6332-OE	**Date Accepted:**	05/17/2021
Status:	Determined	**Date Determined:**	06/02/2021
		Letters:	06/02/2021 DNE
Public Comments:	None	**Documents:**	None
			Project Documents: None

Construction / Alteration Information

Notice Of:	Construction
Duration:	Permanent
if Temporary :	Months: Days:
Work Schedule - Start:	
Work Schedule - End:	

For temporary cranes-Does the permanent structure require separate notice to the FAA? To find out, use the Notice Criteria Tool. If separate notice is required, please ensure it is filed. If it is not filed, please state the reason in the Description of Proposal.

State Filing:

Structure Summary

Structure Type:	Solar Panel
Structure Name:	Strawberry Rd-NE corner
FDC NOTAM:	
NOTAM Number:	
FCC Number:	
Prior ASN:	

Structure Details

Latitude:	41° 19' 38.70" N
Longitude:	73° 50' 58.80" W
Horizontal Datum:	NAD83
Site Elevation (SE):	496 (nearest foot) PASSED
Structure Height (AGL):	15 (nearest foot)
Current Height (AGL): ** For notice of alteration or existing provide the current AGL height of the existing structure. Include details in the Description of Proposal*	(nearest foot)
Minimum Operating Height (AGL): ** For aeronautical study of a crane or construction equipment the maximum height should be listed above as the Structure Height (AGL). Additionally, provide the minimum operating height to avoid delays if impacts are identified that require negotiation to a reduced height. If the Structure Height and minimum operating height are the same enter the same value in both fields.*	(nearest foot)
Requested Marking/Lighting:	None
Other :	
Recommended Marking/Lighting:	None
Current Marking/Lighting:	None
Other :	
Nearest City:	Mohegan Lake
Nearest State:	New York
Description of Location: *On the Project Summary page upload any certified survey.*	20 acres of forested area to be cleared for construction
Description of Proposal:	2703 DC kW ground mounted photovoltaic system

Proposed Frequency Bands

Select any combination of the applicable frequencies/powers identified in the Colo Void Clause Coalition, Antenna System Co-Location, Voluntary Best Practices, effective 21 Nov 2007, to be evaluated by the FAA with your filing. If not within one of the frequency bands listed below, manually input your proposed frequency(ies) and power using the Add Specific Frequency link.

Add Specific Frequency

Low Freq	High Freq	Freq Unit	ERP	ERP Unit

← Previous Back to Search Result Next →

Federal Aviation Administration

« OE/AAA

Notice of Proposed Construction or Alteration - Off Airport

Add a New Case (Off Airport) - Desk Reference Guide V_2018.2.1

Add a New Case (Off Airport) for Wind Turbines - Met Towers (with WT Farm) - WT-Barge Crane - Desk Reference Guide V_2018.2.1

Project Name: GREEN-000634090-21 **Sponsor:** Green Street Solar Power

Details for Case : Strawberry Rd-SW corner

Show Project Summary

Case Status

ASN:	2021-AEA-6330-OE	**Date Accepted:**	05/17/2021
Status:	Determined	**Date Determined:**	06/02/2021
		Letters:	06/02/2021 DNE
Public Comments:	None	**Documents:**	None
			Project Documents: None

Construction / Alteration Information

Notice Of:	Construction
Duration:	Permanent
if Temporary :	Months: Days:
Work Schedule - Start:	
Work Schedule - End:	

For temporary cranes-Does the permanent structure require separate notice to the FAA? To find out, use the Notice Criteria Tool. If separate notice is required, please ensure it is filed. If it is not filed, please state the reason in the Description of Proposal.

State Filing:

Structure Summary

Structure Type:	Solar Panel
Structure Name:	Strawberry Rd-SW corner
FDC NOTAM:	
NOTAM Number:	
FCC Number:	
Prior ASN:	

Structure Details

Latitude:	41° 19' 28.33" N
Longitude:	73° 51' 11.55" W
Horizontal Datum:	NAD83
Site Elevation (SE):	440 (nearest foot) PASSED
Structure Height (AGL):	15 (nearest foot)
Current Height (AGL): ** For notice of alteration or existing provide the current AGL height of the existing structure. Include details in the Description of Proposal*	(nearest foot)
Minimum Operating Height (AGL): ** For aeronautical study of a crane or construction equipment the maximum height should be listed above as the Structure Height (AGL). Additionally, provide the minimum operating height to avoid delays if impacts are identified that require negotiation to a reduced height. If the Structure Height and minimum operating height are the same enter the same value in both fields.*	(nearest foot)
Requested Marking/Lighting:	None
Other :	
Recommended Marking/Lighting:	None
Current Marking/Lighting:	None
Other :	
Nearest City:	Mohegan Lake
Nearest State:	New York
Description of Location: *On the Project Summary page upload any certified survey.*	20 acres of forested area to be cleared for construction
Description of Proposal:	2,703 DC kW ground mount solar photovoltaic system

Proposed Frequency Bands

Select any combination of the applicable frequencies/powers identified in the Colo Void Clause Coalition, Antenna System Co-Location, Voluntary Best Practices, effective 21 Nov 2007, to be evaluated by the FAA with your filing. If not within one of the frequency bands listed below, manually input your proposed frequency(ies) and power using the Add Specific Frequency link.

Add Specific Frequency

Low Freq	High Freq	Freq Unit	ERP	ERP Unit

← Previous Back to Search Result Next →

Federal Aviation Administration

« OE/AAA

Notice of Proposed Construction or Alteration - Off Airport

Add a New Case (Off Airport) - Desk Reference Guide V_2018.2.1

Add a New Case (Off Airport) for Wind Turbines - Met Towers (with WT Farm) - WT-Barge Crane - Desk Reference Guide V_2018.2.1

Project Name: GREEN-000634104-21 **Sponsor:** Green Street Solar Power

Details for Case : Strawberry Rd-Center

Show Project Summary

Case Status

ASN:	2021-AEA-6335-OE	**Date Accepted:**	05/17/2021
Status:	Determined	**Date Determined:**	06/02/2021
		Letters:	06/02/2021 DNE
		Documents:	None
Public Comments:	None		Project Documents: None

Construction / Alteration Information

Notice Of:	Construction
Duration:	Permanent
if Temporary :	Months: Days:
Work Schedule - Start:	
Work Schedule - End:	

For temporary cranes-Does the permanent structure require separate notice to the FAA? To find out, use the Notice Criteria Tool. If separate notice is required, please ensure it is filed. If it is not filed, please state the reason in the Description of Proposal.

State Filing:

Structure Summary

Structure Type:	Solar Panel
Structure Name:	Strawberry Rd-Center
FDC NOTAM:	
NOTAM Number:	
FCC Number:	
Prior ASN:	

Structure Details

Latitude:	41° 19' 34.61" N
Longitude:	73° 51' 6.71" W
Horizontal Datum:	NAD83
Site Elevation (SE):	474 (nearest foot) PASSED
Structure Height (AGL):	15 (nearest foot)
Current Height (AGL): ** For notice of alteration or existing provide the current AGL height of the existing structure. Include details in the Description of Proposal*	(nearest foot)
Minimum Operating Height (AGL): ** For aeronautical study of a crane or construction equipment the maximum height should be listed above as the Structure Height (AGL). Additionally, provide the minimum operating height to avoid delays if impacts are identified that require negotiation to a reduced height. If the Structure Height and minimum operating height are the same enter the same value in both fields.*	(nearest foot)
Requested Marking/Lighting:	None
Other :	
Recommended Marking/Lighting:	None
Current Marking/Lighting:	None
Other :	
Nearest City:	Mohegan Lake
Nearest State:	New York
Description of Location: *On the Project Summary page upload any certified survey.*	20 acres of forested area to be cleared for construction
Description of Proposal:	2703 DC kW ground mounted photovoltaic solar system

Proposed Frequency Bands

Select any combination of the applicable frequencies/powers identified in the Colo Void Clause Coalition, Antenna System Co-Location, Voluntary Best Practices, effective 21 Nov 2007, to be evaluated by the FAA with your filing. If not within one of the frequency bands listed below, manually input your proposed frequency(ies) and power using the Add Specific Frequency link.

Add Specific Frequency

Low Freq	High Freq	Freq Unit	ERP	ERP Unit

← Previous Back to Search Result Next →

Federal Aviation Administration

« OE/AAA

Notice of Proposed Construction or Alteration - Off Airport

Add a New Case (Off Airport) - Desk Reference Guide V_2018.2.1

Add a New Case (Off Airport) for Wind Turbines - Met Towers (with WT Farm) - WT-Barge Crane - Desk Reference Guide V_2018.2.1

Project Name: GREEN-000634100-21 **Sponsor:** Green Street Solar Power

Details for Case : Strawberry Rd-NW corner

Show Project Summary

Case Status

ASN:	2021-AEA-6333-OE	**Date Accepted:**	05/17/2021
Status:	Determined	**Date Determined:**	06/02/2021
		Letters:	06/02/2021 DNE
Public Comments:	None	**Documents:**	None
			Project Documents: None

Construction / Alteration Information

Notice Of:	Construction
Duration:	Permanent
if Temporary :	Months: Days:
Work Schedule - Start:	
Work Schedule - End:	

For temporary cranes-Does the permanent structure require separate notice to the FAA? To find out, use the Notice Criteria Tool. If separate notice is required, please ensure it is filed. If it is not filed, please state the reason in the Description of Proposal.

State Filing:

Structure Summary

Structure Type:	Solar Panel
Structure Name:	Strawberry Rd-NW corner
FDC NOTAM:	
NOTAM Number:	
FCC Number:	
Prior ASN:	

Structure Details

Latitude:	41° 19' 37.60" N
Longitude:	73° 51' 13.91" W
Horizontal Datum:	NAD83
Site Elevation (SE):	447 (nearest foot) PASSED
Structure Height (AGL):	15 (nearest foot)
Current Height (AGL): ** For notice of alteration or existing provide the current AGL height of the existing structure. Include details in the Description of Proposal*	(nearest foot)
Minimum Operating Height (AGL): ** For aeronautical study of a crane or construction equipment the maximum height should be listed above as the Structure Height (AGL). Additionally, provide the minimum operating height to avoid delays if impacts are identified that require negotiation to a reduced height. If the Structure Height and minimum operating height are the same enter the same value in both fields.*	(nearest foot)
Requested Marking/Lighting:	None
Other :	
Recommended Marking/Lighting:	None
Current Marking/Lighting:	None
Other :	
Nearest City:	Mohegan Lake
Nearest State:	New York
Description of Location: *On the Project Summary page upload any certified survey.*	20 acres of forested area to be cleared for construction
Description of Proposal:	2703 DC kW ground mounted solar photovoltaic system

Proposed Frequency Bands

Select any combination of the applicable frequencies/powers identified in the Colo Void Clause Coalition, Antenna System Co-Location, Voluntary Best Practices, effective 21 Nov 2007, to be evaluated by the FAA with your filing. If not within one of the frequency bands listed below, manually input your proposed frequency(ies) and power using the Add Specific Frequency link.

Add Specific Frequency

Low Freq	High Freq	Freq Unit	ERP	ERP Unit

← Previous Back to Search Result Next →

Federal Aviation Administration

« OE/AAA

Notice of Proposed Construction or Alteration - Off Airport

Add a New Case (Off Airport) - Desk Reference Guide V_2018.2.1

Add a New Case (Off Airport) for Wind Turbines - Met Towers (with WT Farm) - WT-Barge Crane - Desk Reference Guide V_2018.2.1

Project Name: GREEN-000634097-21 **Sponsor:** Green Street Solar Power

Details for Case : Strawberry Rd-SE corner

Show Project Summary

Case Status

ASN:	2021-AEA-6331-OE	**Date Accepted:**	05/17/2021
Status:	Determined	**Date Determined:**	06/02/2021
		Letters:	06/02/2021 DNE
Public Comments:	None	**Documents:**	None
			Project Documents: None

Construction / Alteration Information

Notice Of:	Construction
Duration:	Permanent
if Temporary :	Months: Days:
Work Schedule - Start:	
Work Schedule - End:	

For temporary cranes-Does the permanent structure require separate notice to the FAA? To find out, use the Notice Criteria Tool. If separate notice is required, please ensure it is filed. If it is not filed, please state the reason in the Description of Proposal.

State Filing:

Structure Summary

Structure Type:	Solar Panel
Structure Name:	Strawberry Rd-SE corner
FDC NOTAM:	
NOTAM Number:	
FCC Number:	
Prior ASN:	

Structure Details

Latitude:	41° 19' 30.66" N
Longitude:	73° 51' 2.42" W
Horizontal Datum:	NAD83
Site Elevation (SE):	458 (nearest foot) PASSED
Structure Height (AGL):	15 (nearest foot)
Current Height (AGL): ** For notice of alteration or existing provide the current AGL height of the existing structure. Include details in the Description of Proposal*	(nearest foot)
Minimum Operating Height (AGL): ** For aeronautical study of a crane or construction equipment the maximum height should be listed above as the Structure Height (AGL). Additionally, provide the minimum operating height to avoid delays if impacts are identified that require negotiation to a reduced height. If the Structure Height and minimum operating height are the same enter the same value in both fields.*	(nearest foot)
Requested Marking/Lighting:	None
Other :	
Recommended Marking/Lighting:	None
Current Marking/Lighting:	None
Other :	
Nearest City:	Mohegan Lake
Nearest State:	New York
Description of Location: *On the Project Summary page upload any certified survey.*	20 acres of forested area to be cleared for construction
Description of Proposal:	2703 DC kW ground mounted photovoltaic system

Proposed Frequency Bands

Select any combination of the applicable frequencies/powers identified in the Colo Void Clause Coalition, Antenna System Co-Location, Voluntary Best Practices, effective 21 Nov 2007, to be evaluated by the FAA with your filing. If not within one of the frequency bands listed below, manually input your proposed frequency(ies) and power using the Add Specific Frequency link.

Add Specific Frequency

Low Freq	High Freq	Freq Unit	ERP	ERP Unit

← Previous Back to Search Result Next →

DECOMMISSIONING PLAN FOR GSPP 1645 STRAWBERRY RD. SOLAR FARM SITE PLAN & SPECIAL USE PERMIT (SOLAR FARM)

LOCATED AT 1645 STRAWBERRY RD & 1700 RT.6 YORKTOWN, NY

Use of the Solar Farm will be discontinued at the end of its effective life, expected to be approximately 20-25 years after installation. At that time the Owners, GSPP Strawberry Rd. Land, LLC will physically remove the Solar Farm from the site.

Scope:

"Physically remove" will include, but not be limited to the following scope:

- Removal of the solar array:
  - Solar Collection of Panels
  - Racking and support structures (rails, purlins, beams, etc.)
  - Foundations (I-beam piles).
- Removal of the electrical equipment:
  - Inverters
  - Transformers
  - Switchgear
  - AC Collection Equipment
  - DAS Equipment
  - Electric Poles and Associated supporting Equipment
  - Electrical equipment concrete pads
  - Electrical conductors, conduits and all misc, connections
  - Electrical vaults, as applicable.
- Removal of other equipment, as applicable:
  - Equipment shelters
  - Security barriers and all appurtenant structures.
- Proper disposal of all solid or hazardous materials and wastes from the site in accordance with local and state solid waste disposal regulations.
- Restoration of the location of the Solar Farm site to its natural conditions, except that any landscaping consistent with the character of the site and neighborhood may remain.

Schedule:

The estimated timeframe of the decommissioning work will be 3-5 weeks to complete. The electrical equipment will be sold back to the manufacturers or to a recycling facility. The project contains copper, aluminum, and other metals that will be recycled. Racking materials and fencing will be pulled from the ground and folded for transport.

Cost and Permitting:

The Owner will be responsible for all decommissioning costs and will obtain all permits or approvals required by the Town prior to commencing decommissioning work.

If additional information is needed, contact Green Street Power Partners at (347) 491-4560 or CommercialOperations@gspp.com.

100/125kW, 1500Vdc String Inverters for North America

CPS SCH100/125KTL-DO/US-600

The 100 & 125kW high power CPS three phase string inverters are designed for ground mount applications. The units are high performance, advanced and reliable inverters designed specifically for the North American environment and grid. High efficiency at 99.1% peak and 98.5% CEC, wide operating voltages, broad temperature ranges and a NEMA Type 4X enclosure enable this inverter platform to operate at high performance across many applications. The CPS 100/125kW products ship with the Standard or Centralized Wire-box, each fully integrated and separable with AC and DC disconnect switches. The Standard Wire-box inlcudes touch safe fusing for up to 20 strings. The CPS Flex Gateway enables communication, controls and remote product upgrades.

Key Features

- NFPA 70, NEC 2014 and 2017 compliant
- Touch safe DC Fuse holders adds convenience and safety
- CPS Flex Gateway enables remote FW upgrades
- Integrated AC & DC disconnect switches
- 1 MPPT with 20 fused inputs for maximum flexibility
- Copper and Aluminum compatible AC connections
- NEMA Type 4X outdoor rated, tough tested enclosure
- Advanced Smart-Grid features (CA Rule 21 certified)
- kVA Headroom yields 100kW @ 0.9PF and 125kW @ 0.95PF
- Generous 1.87 and 1.5 DC/AC Inverter Load Ratios
- Separable wire-box design for fast service
- Standard 5 year warranty with extensions to 20 years

100/125KTL Standard Wire-box

100/125KTL Centralized Wire-box

C SP US

This device complies with part 15 of the FCC Rules

Chint Power Systems America
6800 Koll Center Parkway, Suite 235 Pleasanton, CA 94566
Tel: 855-584-7168 Mail: AmericaSales@chintpower.com Web: www.chintpowersystems.com

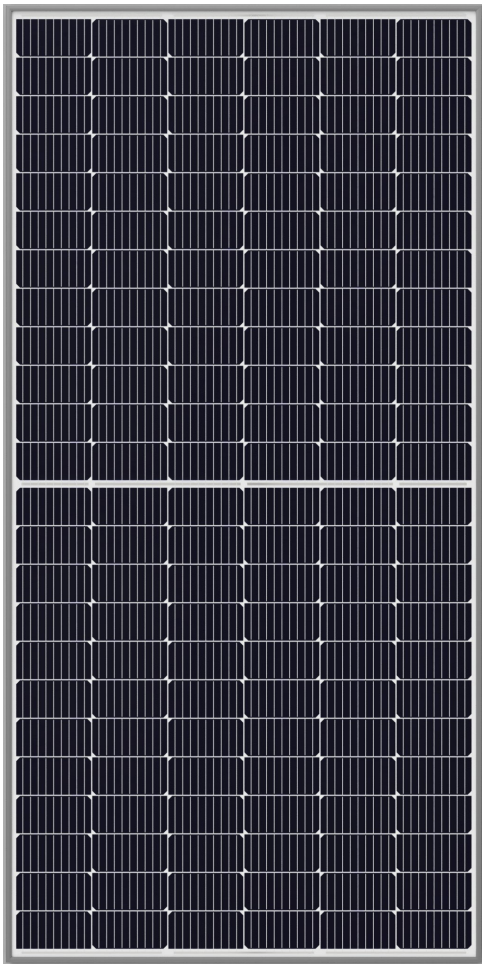
Model Name	CPS SCH100KTL-DO/US-600	CPS SCH125KTL-DO/US-600
DC Input		
Max. PV Power	187.5kW	
Max. DC Input Voltage	1500V	
Operating DC Input Voltage Range	860-1450Vdc	
Start-up DC Input Voltage / Power	900V / 250W	
Number of MPP Trackers	1	
MPPT Voltage Range[1]	870-1300Vdc	
Max. PV Input Current (Isc x1.25)	275A	
Number of DC Inputs	20 PV source circuits, pos. & neg. fused (Standard Wire-box) 1 PV output circuit, 1-2 terminations per pole, non-fused (Centralized Wire-box)	
DC Disconnection Type	Load-rated DC switch	
DC Surge Protection	Type II MOV (with indicator/remote signaling), Up=2.5kV, In=20kA (8/20uS)	
AC Output		
Rated AC Output Power	100kW	125kW
Max. AC Output Power[2]	100kVA (111KVA @ PF>0.9)	125kVA (132KVA @ PF>0.95)
Rated Output Voltage	600Vac	
Output Voltage Range[3]	528-660Vac	
Grid Connection Type[4]	3Φ / PE / N (Neutral optional)	
Max. AC Output Current @600Vac	96.2/106.8A	120.3/127.2A
Rated Output Frequency	60Hz	
Output Frequency Range[3]	57-63Hz	
Power Factor	>0.99 (±0.8 adjustable)	>0.99 (±0.8 adjustable)
Current THD	<3%	
Max. Fault Current Contribution (1-cycle RMS)	41.47A	
Max. OCPD Rating	150A	175A
AC Disconnection Type	Load-rated AC switch	
AC Surge Protection	Type II MOV (with indicator/remote signaling), Up=2.5kV, In=20kA (8/20uS)	
System		
Topology	Transformerless	
Max. Efficiency	99.1%	
CEC Efficiency	98.5%	
Stand-by / Night Consumption	<4W	
Environment		
Enclosure Protection Degree	NEMA Type 4X	
Cooling Method	Variable speed cooling fans	
Operating Temperature Range	-22°F to +140°F / -30°C to +60°C (derating from +113°F / +45°C)	
Non-Operating Temperature Range[5]	-40°F to +158°F / -40°C to +70°C maximum	
Operating Humidity	0-100%	
Operating Altitude	8202ft / 2500m (no derating)	
Audible Noise	<65dBA@1m and 25°C	
Display and Communication		
User Interface and Display	LED Indicators, WiFi + APP	
Inverter Monitoring	Modbus RS485	
Site Level Monitoring	CPS Flex Gateway (1 per 32 inverters)	
Modbus Data Mapping	SunSpec/CPS	
Remote Diagnostics / FW Upgrade Functions	Standard / (with Flex Gateway)	
Mechanical		
Dimensions (WxHxD)	45.28x24.25x9.84in (1150x616x250mm) with Standard Wire-box 39.37x24.25x9.84in (1000x616x250mm) with Centralized Wire-box	
Weight	Inverter: 121lbs / 55kg; Wire-box: 55lbs / 25kg (Standard Wire-box); 33lbs / 15kg (Centralized Wire-box)	
Mounting / Installation Angle	15 - 90 degrees from horizontal (vertical or angled)	
AC Termination	M10 Stud Type Terminal Block [3Φ] (Wire range: 1/0AWG - 500kcmil CU/AL, Lugs not supplied) Screw Clamp Terminal Block [N] (#12 - 1/0AWG CU/AL)	
DC Termination	Screw Clamp Fuse Holder (Wire range: #12 - #6AWG CU) - Standard Wire-box Busbar, M8 PEMserts (Wire range: #1AWG - 250kcmil CU/AL, Lugs not supplied) - Centralized Wire-box	
Fused String Inputs	15A or 20A fuses provided (Determined by product SKU)	
Safety		
Safety and EMC Standard	UL1741-SA-2016, CSA-C22.2 NO.107.1-01, IEEE1547a-2014; FCC PART15	
Selectable Grid Standard	IEEE 1547a-2014, CA Rule 21, ISO-NE	
Smart-Grid Features	Volt-RideThru, Freq-RideThru, Ramp-Rate, Specified-PF, Volt-VAr, Freq-Watt, Volt-Watt	
Warranty		
Standard[6]	5 years	
Extended Terms	10, 15 and 20 years	

1) See user manual for further information regarding MPPT Voltage Range when operating at non-unity PF
2) "Max. AC Apparent Power" rating valid within MPPT voltage range and temperature range of -30°C to +40°C (-22°F to +104°F) for 100KW PF ≥0.9 and 125KW PF ≥0.95
3) The "Output Voltage Range" and "Output Frequency Range" may differ according to the specific grid standard.
4) Wye neutral-grounded, Delta may not be corner-grounded.
5) See user manual for further requirements regarding non-operating conditions.
6) 5 year warranty effective for units purchased after October 1st, 2019.

HELIENE

144HC BIFACIAL

HALF CUT MONOCRYSTALLINE M6 CELLS



460 Wp
MAX POWER OUTPUT

20.8%
MAX EFFICIENCY

15 YEAR
PRODUCT WARRANTY

25 YEAR
LINEAR PERFORMANCE GUARANTEE

HELIENE IS A PREMIER SOLAR MODULE MANUFACTURER, SERVICING THE GROWING SOLAR ENERGY MARKETS OF NORTH AMERICA.

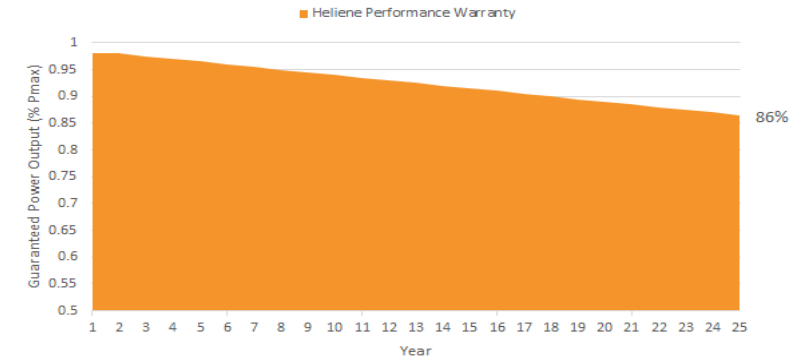
COMBINING PROVEN EUROPEAN TECHNOLOGY WITH NORTH AMERICAN INGENUITY ALLOWS HELIENE TO MAKE A REAL COMMITMENT IN PROVIDING SMARTER ENERGY CHOICES FOR THE FUTURE.

HELIENE
www.heliene.com

- HALF CELL DESIGN WITH SPLIT J-BOX TECHNOLOGY
- 1500V MAX. SYSTEM VOLTAGE RATING
- QUALITY MANAGEMENT SYSTEM FOLLOWING INTERNATIONAL STANDARD: ISO9001

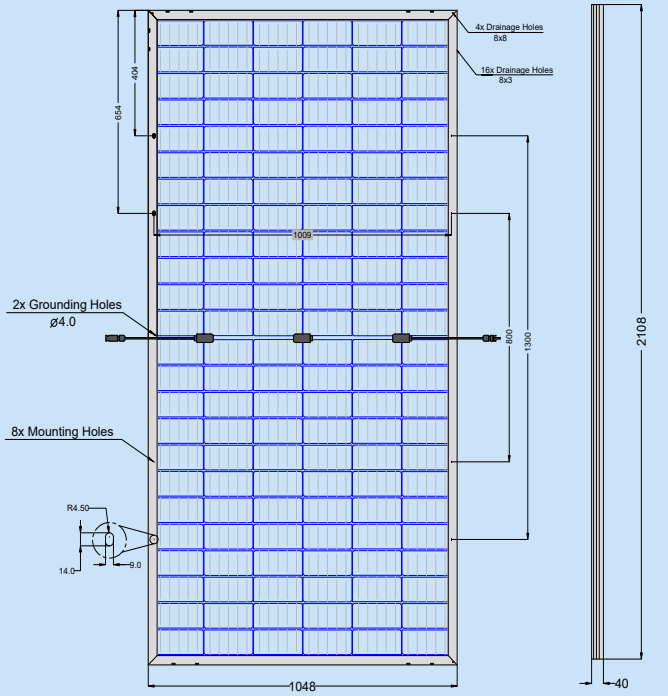
LINEAR PERFORMANCE GUARANTEE

15 YEAR WORKMANSHIP WARRANTY • 25 YEAR LINEAR PERFORMANCE GUARANTEE

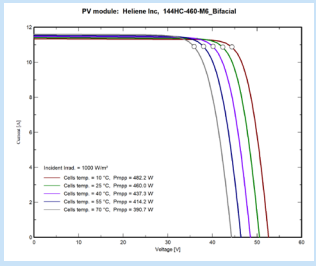


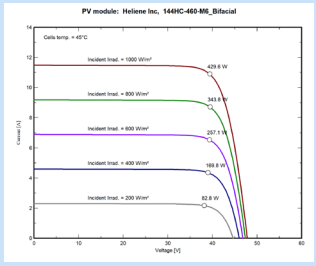
144HC BIFACIAL

DIMENSIONS FOR HELIENE 144HC M6 SERIES



I-V CURVE FOR HELIENE 144HC M6 SERIES





CERTIFICATIONS

ELECTRICAL DATA (STC)

Peak Rated Power	P_{mpp} (W)	460	450	440
Maximum Power Voltage	V_{mpp} (V)	42.58	42.16	41.74
Maximum Power Current	I_{mpp} (A)	10.80	10.68	10.58
Open Circuit Voltage	V_{oc} (V)	50.53	50.03	49.04
Short Circuit Current	Isc (A)	11.40	11.29	11.21
Module Efficiency *	Eff (%)	20.8	20.4	19.9
Maximum SeriesFuse Rating	MF (A)	20	20	20
Power Output Tolerance	[- 3/+3%]			

STC - Standard Test Conditions: Irradiation 1000 W/m2 - Air mass AM 1.5 - Cell temperature 25 ºC

MECHANICAL DATA

Dimensions (L x W x D)	2108 x 1048 x 40 mm (82.99 x 41.25 x 1.6 inch)
Weight	25 kg (55.12 lbs)
Output Cables	0.3 m symmetrical cables with MC4 style connectors
Junction Box	IP-68 rated with 3 bypass diodes
Frame	Double webbed 15 micron anodized aluminum alloy
Front Glass	Low-iron content, high-transmission PV solar glass with anti-reflective coating
Solar Cells	144 Half-Cut, M6, 166mm, PERC Cells
Construction	Glass-Clear Backsheet with Bifacial Cells

TEMPERATURE RATINGS

Nominal Operating Cell Temperature (NOCT)	+45°C (±2°C)
Temperature Coefficient of P_{max}	-0.39%/°C
Temperature Coefficient of V_{oc}	-0.30%/°C
Temperature Coefficient of I_{sc}	0.037%/°C

PACKAGING CONFIGURATION

Modules per box:	27 pieces
Modules per 53' trailer:	702 pieces

MAXIMUM RATINGS

Operational Temperature	-40°C to +85°C
Max System Voltage	1500V

WARRANTY

15 Year Manufacturer's Workmanship Warranty
25 Year Linear Power Guarantee

(Refer to product warranty page for details)

HSPE-144HC-M6-Bifacial-Rev.01

HELIENE

CAUTION: READ SAFETY AND INSTALLATION INSTRUCTIONS BEFORE USING THE PRODUCT.

RBI SOLAR

Fixed-Tilt Ground Mount Solution | GM-2

When EPCs and project developers across the USA need dependable, low-maintenance ground mount racking, they turn to RBI Solar. As a single-source provider, we take responsibility for the Design, Engineering, Manufacturing, and Installation of PV mounting solutions. When you choose RBI Solar for your next ground mount, you're choosing peace of mind that your project is in the hands of the most trusted solar racking team in the industry.

Why choose RBI Solar?

- Professional Engineers licensed in all 50 states
- Quick response & efficient communication
- National installation capabilities
- Our in-house team members are an extension of your staff
- 85+ years manufacturing experience
- Complete turn-key process, reduction in your vendor coordination
- Company owned post driving equipment
- National project management capabilites with roaming site service personnel
- More time to focus on your business

www.rbisolar.com

GM-2 Solution Features

Foundation and racking design	Site wind speeds 170+ mph and ground snow loads 90+ psf
Signed and sealed drawings	Available in all 50 states
Proprietary on-site testing	Pull testing & corrosion testing - no geotechnical report required
Pre-assembled parts	Reduction in installation time
Variable slope	Accommodates slopes up to 30% (with topographic site map)
20-yr standard warranty	Proven rack reliability and bankability
G115 minimum galvanized coating	Exceeds ASTM and UL standards for 30% extended life
Driven posts	Cost-effective cee channel or I-beam post options available
Up to 24’ long post driving	Ability to address challenging soils or elevate array structure
Module configurations	Portrait, landscape (all module types)
Raised purlins	Integrated bonding and grounding to UL 2703
Corrosion class	System available for all corrosion classes
Wire management and electrical	Integrated wire management solution and inverter mounting

Contact us at info@rbisolar.com or (513) 242-2051

DESIGN • ENGINEERING • MANUFACTURING • INSTALLATION

6715 Steger Drive, Cincinnati, OH 45237 | 513-242-2051 | info@rbisolar.com | **www.rbisolar.com**

RBI SOLAR

Equivalency Results

How are they calculated?

The sum of the greenhouse gas emissions you entered above is of Carbon Dioxide Equivalent. This is equivalent to:

2,541 Metric Tons

Greenhouse gas emissions from

553 Passenger vehicles driven for one year

-or-

6,386,879 Miles driven by an average passenger vehicle

CO_2 emissions from

285,961 gallons of gasoline consumed

-or-

249,640 gallons of diesel consumed

-or-

2,808,896 Pounds of coal burned

-or-

33.6 tanker trucks' worth of gasoline

-or-

306 homes' energy use for one year

-or-

462 homes' electricity use for one year

-or-

14 railcars' worth of coal burned

-or-

5,884 barrels of oil consumed

-or-

103,889 propane cylinders used for home barbeques

-or-

0.0006

309,134,759

coal-fired power plants in one year

-or-

number of smartphones charged

Greenhouse gas emissions avoided by

864

Tons of waste recycled instead of landfilled

-or-

123

Garbage trucks of waste recycled instead of landfilled

-or-

108,133

trash bags of waste recycled instead of landfilled

-or-

0.529

Wind turbines running for a year

-or-

96,319

Incandescent lamps switched to LEDs

Carbon sequestered by

42,022

tree seedlings grown for 10 years

-or-

3,114

acres of U.S. forests in one year

-or-

17.4

acres of U.S. forests preserved from conversion to cropland in one year