

Massachusetts Department of Environmental Protection Bureau of Resource Protection - Wetlands

Ware, MA City/Town

WPA Form 1- Request for Determination of Applicability Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

A. General Information

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.





0	Cathy A Lafond	cath32758@	vahoo com			
	ame	cath32758@yahoo.com E-Mail Address				
	60 Old Belchertown Rd					
	lailing Address					
V	Vare	MA	01082			
	ity/Town	State	Zip Code			
(4	413) 345-1781		Sec. 18.			
	hone Number	Fax Number (if	applicable)			
. R	Representative (if any):					
Т	rinity Solar					
Fi	m					
	like Bailey	applications.	westma@trinity-			
	ontact Name	solar.com				
	Open Square Way Suite 410	_				
	ailing Address					
	olyoke	MA	01040			
	ty/Town	State	Zip Code			
Ph 3. D	132039088 ext 1522 none Number Peterminations	Fax Number (if	applicable)			
B. D	Peterminations		applicable) . Check any that ap			
8. D	Determinations request the Conservation Comission make the following	g determination(s)	. Check any that ap			
B. D	Peterminations request the Conservation Comission make the following Conservation Commission a. whether the area depicted on plan(s) and/or map(s) re	g determination(s)	. Check any that apparents an area subject to			
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B. D	Peterminations request the Conservation Comission make the following Conservation Commission a. whether the area depicted on plan(s) and/or map(s) rejurisdiction of the Wetlands Protection Act. b. whether the boundaries of resource area(s) depicted below are accurately delineated.	of determination(s) Inferenced below is on plan(s) and/or is subject to the V	. Check any that apply an area subject to map(s) referenced			
B. D	Peterminations request the Conservation Comission make the following Conservation Commission a. whether the area depicted on plan(s) and/or map(s) rejurisdiction of the Wetlands Protection Act. b. whether the boundaries of resource area(s) depicted below are accurately delineated. c. whether the work depicted on plan(s) referenced below d. whether the area and/or work depicted on plan(s) referenced.	of determination(s) Inferenced below is on plan(s) and/or is subject to the V	. Check any that apply an area subject to map(s) referenced			



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C	Pro	iect	Des	cri	ption
•		1000		VI 1	P () C 1

60 Old Belchertown Rd	Ware
Street Address	City/Town
M_134348_887715	5-4-8
Assessors Map/Plat Number b. Area Description (use additional paper, if neo	Parcel/Lot Number
	ecessary):
Street approximately 340 from	bank of Ware Kiver. System w.
/	11 15 15
be located in the buckyard	approximately 150 from river 6
9.	, ,
c. Plan and/or Map Reference(s):	
,	
litte .	Date
Title	Date
litte	
	Date
 Work Description (use additional paper and 	/or provide plan(s) of work, if necessary):
Install 10.08 kW de solar sy	stem ground mounted. System
	1 ' U
will consist of 5d peruls a	nd is upproximately 150' from
fiver bank. Will be using a	Solar Edge 7.6 KW ac
	+L L.1 V
fourther So and all	6 1 TG(4 0 c)
inverter. Specs and plans	q i recept
inverter. Specs and plans	y merce)
inverter. Specs and plans	q · · · · · · · · · · · ·
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	Drainat	Dagarintian	(aant)
U.	Froiect	Description	(COIII.)

	 Identify provisions of the Wetlands Protection Act or regulations which may exempt the applicant from having to file a Notice of Intent for all or part of the described work (use additional paper, if necessary).
	System will be located approximately 150' from river.
3.	 a. If this application is a Request for Determination of Scope of Alternatives for work in the Riverfront Area, indicate the one classification below that best describes the project.
	Single family house on a lot recorded on or before 8/1/96
	☐ Single family house on a lot recorded after 8/1/96
	Expansion of an existing structure on a lot recorded after 8/1/96
	Project, other than a single family house or public project, where the applicant owned the lot before 8/7/96
	☐ New agriculture or aquaculture project
	☐ Public project where funds were appropriated prior to 8/7/96
	Project on a lot shown on an approved, definitive subdivision plan where there is a recorded deed restriction limiting total alteration of the Riverfront Area for the entire subdivision
	Residential subdivision; institutional, industrial, or commercial project
	☐ Municipal project
	☐ District, county, state, or federal government project
	Project required to evaluate off-site alternatives in more than one municipality in an Environmental Impact Report under MEPA or in an alternatives analysis pursuant to an application for a 404 permit from the U.S. Army Corps of Engineers or 401 Water Quality Certification from the Department of Environmental Protection.
	b. Provide evidence (e.g., record of date subdivision lot was recorded) supporting the classification above (use additional paper and/or attach appropriate documents, if necessary.)
	Records indicate chest has owned the house since



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D. Signatures and Submittal Requirements

I hereby certify under the penalties of perjury that the foregoing Request for Determination of Applicability and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge.

I further certify that the property owner, if different from the applicant, and the appropriate DEP Regional Office were sent a complete copy of this Request (including all appropriate documentation) simultaneously with the submittal of this Request to the Conservation Commission.

Failure by the applicant to send copies in a timely manner may result in dismissal of the Request for Determination of Applicability.

Cathy A Lafond		
Name		
60 Old Belchertown Rd		
Mailing Address		
Ware		
City/Town		
MA	01082	
State	Zip Code	
natures: so understand that notification of this Request	will be placed in a local newspaper at	mv expense
natures: so understand that notification of this Request of the Recordance with Section 10.05(3)(b)(1) of the W	will be placed in a local newspaper at etlands Protection Act regulations.	my expense
so understand that notification of this Request of the William Portion of the William Porti	will be placed in a local newspaper at etlands Protection Act regulations.	my expense 3/16/2020
so understand that notification of this Request accordance with Section 10.05(3)(b)(1) of the W	etlands Protection Act regulations.	
so understand that notification of this Request of the William Portion of the William Porti	etlands Protection Act regulations.	
so understand that notification of this Request of the William Portion of the William Porti	etlands Protection Act regulations.	

INSTALLATION OF NEW GROUND MOUNTED PV SOLAR SYSTEM 60 OLD BEI CHERTOWN ROAD

WARE, MA 01082 42.237521,-72.295503

GENERAL NOTES

IF ISSUED DRAWING IS MARKED WITH A REVISION CHARACTER OTHER THAN "A". PLEASE BE ADVISED THAT HIVAL EQUIPMENT AND/OR SYSTEM CHARACTERISTICS ARE SUBJECT TO CHANGE DUE TO AVAILABLITY OF EQUIPMENT

GENERAL NOTES

- 1. THE INSTALLATION CONTRACTOR IS RESPONSIBLE FOR INSTALLING ALL RESPONSIBLE FOR THE FALLING ALL
 COMPACT AND FOLLOWING ALL
 COMECTIONS AND INSTRUCTIONS
 CONTRINED IN THE DRAWING PACKAGE AND
 INFORMATION RECEIVED FROM FRINITY.
 THE INSTALLATION CONTRACTOR IS
- RESPONSIBLE FOR INSTALLING ALL EQUIPMENT AND FOLLOWING AL
- DIRECTIONS AND INSTRUCTION CONTAINED IN THE COMPLETE MANUAL.
 THE INSTALLATION CONTRACTOR IS RESPONSIBLE FOR READING AND UNDERSTANDING ALL DRAWINGS COMPONENT AND INVERTER MANUALS PRIOR TO INSTALLATION. THE INSTALLATION CONTRACTOR IS ALSO REQUIRED TO HAVE ALL COMPONENT SWITCHES IN THE OFF POSITION AND FUSES REMOVED PRIOR TO THE INSTALLATION OF ALL FUSE BEARING. SYSTEM COMPONENTS
- ONCE THE PHOTOGOLTAIC MODULES ARE MOUNTED. THE INSTALLATION
 CONTRACTOR SHOULD HAVE A MINIMUM OF
 ONE ELECTRICIAN WHIO HAS ATTENDED A
 SOLAR PHOTOVOLTAIC INSTALLATION
- 5. FOR SAFETY, IT IS RECOMMENDED THAT THE INSTALLATION CHEW ALWAYS HAVE A MINIMUM OF TWO PERSONS WORKING TOUCHTHER AND THAT EACH OF THE INSTALLATION CREW MEMBERS BE TRAINED IN FIRST AID AND CPR.
 THIS SOLAR PHOTOVOLTAIC SYSTEM IS TO
- THIS SILLAR PHOTOVOLTAIC SYSTEM IS TO BE INSTALLED FOLLOWING THE CONVENTIONS OF THE NATIONAL ELECTRICAL CODE, ANY LOCAL CODE WHICH MAY SUPERSEDE THE NEC SMALL
- INSTALLED WITH THIS SYSTEM ARE TO BE "UL" LISTED, ALL EQUIPMENT WILL BE NEMA OF OUTDOOR HATED UNLESS INDOORS.

GENERAL NOTES CONTINUED

- 6. THE DC VOLTAGE FROM THE PANELS IS THE DC VOLTAGE FROM THE PANELS IS ALWAYS PRESENT AT THE DC DISCONNECT ENCLOSURE AND THE DC TERMINALS OF THE INVESTER DURING DAYLIGHT HOURS, ALT PERSONS WORKING ON OR INVOLVED WITH THE PHOTOVOLTAIC SYSTEM ARE WARNED PHOTOVOLTAIC SYSTEM ARE MARIN THAT THE SOLAR MODULES ARE ENERGIZED WHENEVER THEY ARE EXPOSED TO LIGHT. ALL PORTIONS OF THIS SOLAR PHOTOVOLTAIC SYSTEM SHALL BE PHOTOVOLTAIC SYSTEM SHALL BE
- MARKED CLEARLY IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE
- ARTICLE 6H & 705.
 PRIOR TO THE INSTALLATION OF THIS PHOTOVOLTAIC SYSTEM, THE INSTALLATION CONTRACTOR SHALL ATTEND A PRE-INSTALLTION MEETING. FOR THE REVIEW OF THE INSTALLATION PROCEDURES, SCHEDULES, SAFETY AND
- PRIOR TO THE SYSTEM START UP THE INSTALLATION CONTRACTOR SHALL ASSIST IN PERFORMING ALL INITIAL HARDWARE CHECKS AND DC WIRING
- HARDWARE CHECKS AND DE WIRDNING CONDUCTIVITY CHECKS.
 FOR THE PROPER MAINTENANCE AND ISOLATION OF THE INVERTIERS REFER TO THE ISOLATION PROCEDURES IN THE OPERATION MANUAL.
 THE LOCATION OF PROPOSED ELECTRIC
- AND TELEPHONE UTILITIES ARE SUBJECT TO FINAL APPROVAL OF THE APPROPRIATE UTILITY COMPANIES AND
- IMPROVEMENTS SHOWN HEREIN SHALL BE IN ACCORDANCE WITH A) CURRENT PREVAILING MUNICIPAL AND/OR COUNTY SPECIFICATIONS, STANDARDS AND REQUIREMENTS

GENERAL NOTES CONTINUED

- BE CORRENT PREVAILING UTILITY COMPANY SPECIFICATIONS.
 STANDARDS, AND REQUIREMENTS.
 THIS SET OF PLANS HAVE BEEN
 PREPARED FOR THE PURPOSE OF
- MUNICIPAL AND AGENCY REVIEW AND MUNICIPAL AND AGENCY REVIEW AND APPROVAL. THIS SET OF PLANS SHALL NOT BE UTILIZED AS CONSTRUCTION DRAWINGS UNTIL REVISED TO INDICATE ISSUED FOR CONSTRUCTION! ALL INFORMATION SHOWN MUST BE
- GERTIFIED PRIOR TO USE FOR CONSTRUCTION ACTIVITIES.

ABBREVIATIONS

- AMP AMPERE AC ALTERNATING CURRENT ALUMINUM AMP, FRAME
- ABOVE FINISHED FLOOR
- ABOVE FINISHED GRADE AMERICAN WIRE GAUGE CONDUIT (GENERIC TERM OF RACEWAY, PROVIDE AS SPECIFIED
- COMBINER BOX CBSCLIST
- CURRENT TRANSFORMER COPPER DIRECT CURRENT DISCONNECT SWITCH DWG DRAWING
- ELECTRICAL SYSTEM INSTALLER ELECTRICAL METALLIC TUBING FS FUSIBLE SWITCH FU FUSE GND GROUND
 - GROUND FAULT INTERRUPTER
 - FREQUENCY | CYCLES PER

ABBREVIATIONS CONTINUED

- JB JUNCTION BOX KCMIL THOUSAND CIRCULAR MILS KILO-VOLT AMPERE KILO-WATT kWH: KEOWATT HOUR
- KEOWATT HOUR
 LINE
 MCB MAIN CIRCUIT BREAKER
 MDP MAIN DISTRIBUTION PANEL
 MCO MAIN LIGG ONLY
 MCO MAIN LIGG ONLY
 MCO MAIN LIGG ONLY
 MCO MOUNTING

- NATIONAL ELECTRICAL CODE NOT IN CONTRACT NUMBER NOT TO SCALE
- OVER CURRENT PROTECTION
- POLE
 POLY
 POLY
 POLY
 POLY
 POLY
 POLY
 POWER

 POLY
 POWER

 POWE
- QUANTITY
- OST GOSNITY

 RISS RODO GALVANIZED STEEL

 SN SOLID NEUTRAL

 SWED SWITCHEDARD

 TYP TYPICAL

 UO 1. UNLESS OTHERWISE INDICATED

 WE WEATHERPROOF
- TRANSFORMER
- MOUNT 72 INCHES TO BOTTOM OF ABOVE FINISHED FLOOR OR

OLD BELCHERTOWN.



VICINITY MAP

SITE



SHEET INDEX

COVER SHEET W/ SITE INFO & NOTES PV-2 LAYOUT PLAN W/ MODULE LOCATIONS

PV-3 STRUCTURAL DETAILS

PV-4 ELECTRICAL 3 LINE DIAGRAM

APP APPENDIX



-	Issued / Revisions	_
70	GOVED TO TOWNSHIP FOR PERMIT	9/59/2003
NO.	DESCRIPTION	DATE

LAFOND, CATHY TRINITY ACCT #: 2019-07-357934

60 OLD BELCHERTOWN ROAD WARE, MA 01082 42.237521,-72.295503

PROPOSED PV SOLAR SYSTEM

Drawing Information HAWN BY REVISED BY

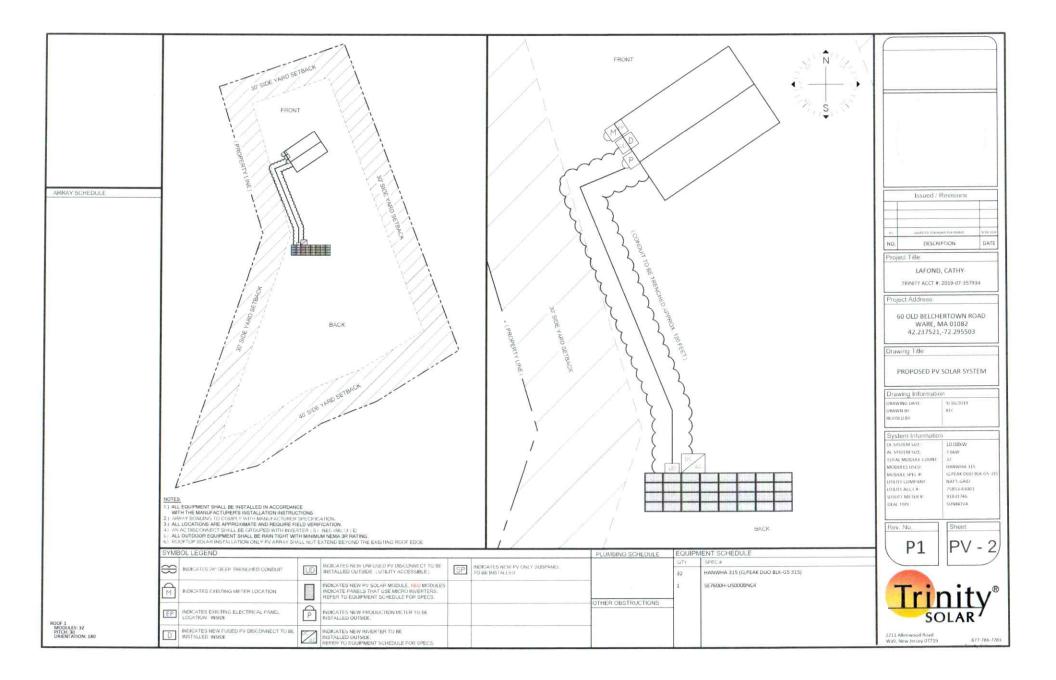
AC SYSTEM SIZE DUTAL MODELE COUN MODULES USED: Q PEAK DUO BLX-G5 31 DIRTTY COMPANY NAT'I GRID UTILITY ACCT # 75853-43001 DITUITY METER # 91831746 DEAL TYPE SUNNOVA

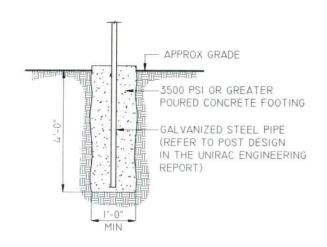




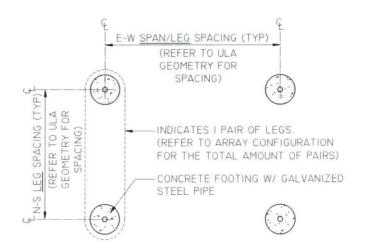


PLANS COMPLY WITH 2010 RCNYS ASCE 7-05, 2001 WECH AS PER REFERINCED STANDARDS. WIND SPEED DESIGN IS 110 MPH

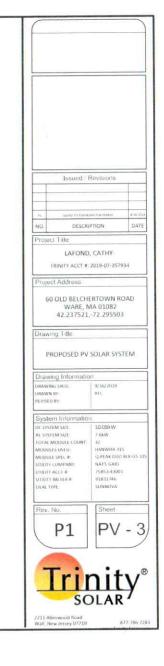








CONCRETE FOOTING LAYOUT
SCALE: NTS REFER TO UNIRAC ULA QUOTATIONS
FOR SPECIFICATIONS



ARRAY CIRCUIT WIRING NOTES
1.] LICENSED ELECTRICIAN ASSUMES ALL RESPONSIBILITY
FOR DETERMINING ONSITE CONDITIONS AND
EXECUTING INSTALLATION IN ACCORDANCE WITH

NEC 2017

2.) LOWEST EXPECTED AMBIENT TEMPERATURE BASED ON ASHRAE MINIMUM MEAN EXTREME DRY BUILD TEMPERATURE FOR ASHRAE LOCATION MOST SIMILAR TO INSENT EXPECTED AMBIENT TEMPERATURE FOR ASHRAE LOCATION MOST EXPECTED AMBIENT TEMPERATURE.

3.) HIGHEST CONTINUOUS AMBIENT TEMPERATURE BASED ON ASHRAE HIGHEST MONTH 2% DRY BUILD TEMPERATURE FOR ASHRAE ELOCATION MOST SIMILAR TO INSTALLATION LOCATION: HIGHEST CONTINUOUS TEMP = 33°C

4.) 2005 ASHRAE FUNDAMENTALS 2% DESIGN LIMPRATURES DO NOT VICEED 47°C IN THE UNITED STATES (PALM SPRINDS, CA 18-41 TC), FOR LESS TRANS CURRENT CARRYING CONDUCTORS IN A ROOF-MOONTED SOULT CONDUIT AT LEAST 0.5° ABOVE ROOF AND MUD USING THE OUTGOOR DISION I (IMPERATURE DE 47°C OR LESS (ALL OF UNITED STATES)

5.) PV SYSTEM CIRCUITS INSTALLED ON OR IN BUILDINGS SHALL INCLUDE A BAPID SHUTDOWN FUNCTION THAT CONTROLS SPECIFIC CONDUCTORS IN ACCORDANCE WITH NEC 690.12(A) THROUGH (D)

B.) PHOTOVOLTAIC POWER SYSTEMS SHALL BE PERMITTED
 TO OPERATE WITH UNGROUNDED PHOTOVOLTAIC
 SOURCE AND OUTPUT CIRCUIT AS PER NEC 690.41 (A)(4)

7.) UNGROUNDED DC CIRCUIT CONDUCTORS SHALL BE IDENTIFIED WITH THE FOLLOWING OUTER FINISH: POSITIVE CONDUCTORS = RED NEGATIVE CONDUCTORS = BLACK NEC 210.5(C)(2)

8.) ARRAY AND SUB ARRAY CONDUCTORS SHALL BE #10 DV WIRE TYPE THAY 2 OR EQUIPMENT AND SHALL BE #10 DV WIRE TYPE THAY 2 OR EQUIPMENT AND SHALL BE PROTECTED BY CONDUIT WHERE EXPOSED TO DIRECT SUBLIGHT SUB-ARRAY COMPANY AND CURRENT EXPOSED THAN 2 THAT SHALL CONTAIN & 20 CHERN IT ARRAY CONDUIT CONS. SHALL CONTAIN SUB-ARRAY CONTAIN 2 OF CONTAIN 2 OF CARRYING CONDUIT CIPMS AND WHERE EXPOSED TO DIRECT SUBLIGHT SHALL CONTAIN 2 OF CIPMEN IT LARRYING CONDUIT CIPMS.

9.) ALL WIRE LENGTHS SHALL BE LESS THAN 100' UNLESS OTHERWISE NOTED.

10.) FLEXIBLE CONDUIT SHALL NOT BE INSTALLED ON ROUGHTOP AND SHALL BE TIMITED TO 12" IF USED OUTDOORS

11.) OVERCURRENT PROTECTION FOR CONDUCTORS CONNECTED TO THE SUPPLY SIDE OF A SERVICE SHALL BE LOCATED WITHIN 10° OF THE POINT OF CONNECTION NEC 705-31

12.) WHERE TWO SOURCES FEED A BUSSBAR, ONE A UTILITY AND THE OTHER AN INVERTER, PV BACKFEED BREAKERS) SHALL BE LOCATED OPPOSITE FROM UTILITY NEC 705.12(B)(2)(3)(b)

13.) ALL SCRAR SYSTEM LOAD CENTERS TO CONTAIN ONLY GENERATION CIRCUITS AND NO UNUSED POSITIONS OR LOADS.

14.) ALL EQUIPMENT INSTALLED OUTDOORS SHALL HAVE A NEMA 3R RATING

CALCULATIONS FOR CURRENT CARRYING CONDUCTORS REQUIRED CONDUCTOR AMPACITY PER STRING INEC 690.8(B)(1)): (15.00*1.25)1 = 18.75A

AWG #10, DERATED AMPACITY
AMBLING TLMP: 33°C, TEMP DERATING FACTOR: 96
RACEWAY DERATING = 4 CCC; 0.80
(40° 96)0.80 = 30.72A

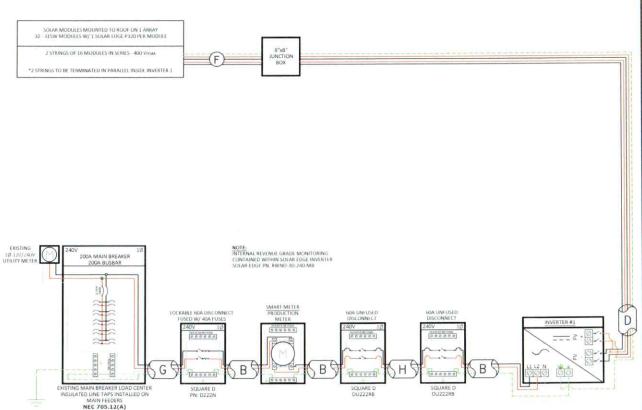
30.72A 18.75A. THEREFORE WIRE SIZE IS VALID

TOTAL AC REQUIRED CONDUCTOR AMPACITY 32,00A*1.25 = 40,00A

AWG #8, DERATED AMPACITY
AMBIENT 1EMP 30°C, TEMP DERATING: 1.0
RACEWAY DERATING 1.3 CCC: N/A

55A : 40.00A, THEREFORE AC WIRE SIZE IS VALID

CALCULATION FOR PV OVERCURRENT PROTECTION
TOTAL INVERTER CURRENT: 32.00A
32.00A*1.25 = 40.00A
--> 40A OVERCURRENT PROTECTION IS VALID



PV M	ODULE SPECIFICATIONS
HANWHA 315 (Q.PEAK DUO BLK-G5 3	
Imp	9.41
Vmp	33.46
Voc	40.29
lsc	9.89

INVERTER#1 - SE7600H-US0008				
DC			AC	
Imp.	20	Pout	7600	
Vmp	400	Imax	32	
Voc	480	OCPDmin	40	
lisc.	30	Vnom	240	

NOTE: CONDUST TYPE SHALL BE CHOSEN BY THE INSTALLATION CONTRACTOR

Α	#6 THWN-2 GEC TO EXISTING GROUND ROD	G	3/4" CONDUIT W/ 2-#6 THWN-2, 1-#6 THWN-2, 1-#8 THWN-2 GROUND
8	3/4" CONDUIT W/ 2-#8 THWN-2, 1-#10 THWN-2, 1-#10 THWN-2 GROUND	н	1" PVC W/ 2-#4 THWN-2, 1-#8 THWN-2, 1-#8 THWN-2 GROUND (TRENCHED APPROX. 120')
c	3/4" CONDUIT W/ 4-#10 THWN-2, 1-#10 THWN-2 GROUND		
0	3/4" CONDUIT W/ 4-#10 THWN-2, 1-#10 THWN-2 GROUND		
E	3/4" CONDUIT W/ 2-#8 THWN-2, 1-#10 THWN-2, 1-#10 THWN-2 GROUND		
F	#10 PV WIRE (FREE AIR) W/ #6 BARE COPPER BOND TO ARRAY		

Issued / Revisions

19. Industrial Tolkhome For Frankli STATE

19. DESCRIPTION DATE

Project Title:

LAFOND, CATHY-TRINITY ACCT #: 2019-07-357934

60 OLD BELCHERTOWN ROAD WARE, MA 01082 42,237521,-72,295503

Drawing Title:
PROPOSED PV SOLAR SYSTEM

Drawing Information

DRAWING DATE 9/16/2019

DRAWING THE HTC

REVISED BY

System Information DE SYSTEM SIZE 10.08kW AC SYSTEM SIZE 7.6kW TOTAL MODULE COUNT MODULES USED HANWHA 315 MODULE SPEC#: Q.PEAK DUO BLK-GS-3: NAT'L ORID UTILITY COMPANY UTIDITY ACCT III 75853-43001 DURITY METER #: 91831746 DEAL TYPE: SUNNOVA

P1

PV - 4



2211 Allenwood Road Wall, New Jersey 07719

877-786-7283