CITY OF DARIEN TEMPORARY AMENDMENT TO PLANNING AND ZONING COMMISSION MEETING RULES FOR COMPLIANCE WITH ILLINOIS OPEN MEETINGS ACT:

- In person attendance at Planning and Zoning meetings will resume June 1, 2020.
- The public will be permitted to attend a Planning and Zoning meeting but the meeting room will be limited to 10 members of the public at one time. The public will be required to maintain social distancing rules and are required to wear a mask while in the building.
- The public is encouraged to participate in the Planning and Zoning Commission meeting by submitting questions and comments via email to the City Planner Joe Hennerfeind at jhennerfeind@darienil.gov.
- Emails providing public comment shall be submitted prior to the start of the Planning and Zoning Commission meeting.

CITY OF DARIEN

PLANNING AND ZONING COMMISSION

Wednesday, June 17, 2020
7:00 PM
City Hall Council Chambers
1702 Plainfield Road

AGENDA

1. Call to Order
2. Roll Call
3. Regular Meeting
   A. **Public Hearing - PZC 2020-06**
      8131 Lemont Road (Solar Panel Screening Variation)
      Petitioner RETHINK Electric seeks approval to vary Section 5A-5-9-8(B)5 of the City Zoning Code requiring non-flush mounted solar panels to be screened at 8131 Lemont Road in Darien, Illinois.
4. Correspondence
5. Old Business
6. New Business
7. Approval of Minutes June 3, 2020
8. Next Meeting July 1, 2020
9. Public Comments [On any topic related to planning and zoning]
10. Adjournment

MINUTES
CITY OF DARIEN
PLANNING & ZONING COMMISSION MEETING
June 3, 2020

PRESENT: Lou Mallers – Chairperson, Michael Desmond, Robert Erickson, Bryan Gay, Hilda Gonzalez, Steve Hiatt, Julie Kasprowicz, Brian Liedtke, Ralph Stompanato

ABSENT: None

OTHERS: Joseph Hennerfeind-City Planner

Chairperson Lou Mallers called the meeting to order at 7:00 p.m. at the Darien City Hall, Council Chambers, 1702 Plainfield Road, Darien, Illinois. Chairperson Mallers declared a quorum present and swore in the audience members wishing to present public testimony.

REGULAR MEETING:

A. Public Hearing PZC 2020-04– 7729 Warwick Avenue (Front Yard Setback Variation). Petitioners Daniel and Linda Gombac seek approval of a variation to Section 5A-7-2-6(A) of the City Zoning Code requiring a 35 foot front yard setback, for a proposed porch addition to the existing house at 7729 Warwick Avenue in Darien, Illinois.

Mr. Joe Hennerfeind, City Planner reported that the home was platted in 1959 with a permitted 30' front yard setback to the street and was incorporated as part of Darien in the R-2 zoning district with a 35' front yard setback.

Mr. Hennerfeind reported that the homes in the subdivision vary and most are small ranches. He reported that the petitioners are rehabbing the home and adding a detached garage and propose to construct a 6' wide porch addition that would be at 29.8' or a 5.2" encroachment into the required 35' front yard setback.

Mr. Hennerfeind reported that the petitioners completed the Findings of Fact and that the 6' wide porch fits within the character of the community and is not excessive.

Mr. Daniel Gombac, petitioner stated that the home was built in 1959 and he is unclear as to why the setback was further. He stated that the goal is to construct a craftsman style home with the ambiance of a front porch. He added that the PZC had the renderings in the packet.

Mr. Gombac stated that he spoke with the adjacent neighbors and has their support.

Chairperson Mallers stated that he was unfamiliar with that section of Darien and that a vast majority of the homes in the area will probably be updated.

Commissioner Hiatt stated that the proposal is consistent with the homes in the neighborhood and that the variance request is very small. He further stated that he was pleased with the rehab and that it was not a knock down.

Commissioner Stompanato stated that he appreciated the extra effort to contact the neighbors.

Commissioner Desmond questioned if any neighbors were opposed.

Mr. Gombac stated that he and his wife went door to door for over four hours trying to get the entire block and although some were not home there was no opposition.

There was no one else in the audience wishing to present public comment and Chairperson Mallers closed the public hearing at 7:11 p.m.

Commissioner Desmond reviewed the Findings of Fact and presented the motion.

Commissioner Desmond made a motion and is was seconded by Commissioner Stompanato approval of a variation to Section 5A-7-2-6(A) of the City Zoning Code requiring a 35 foot front yard setback, for a proposed porch addition to the existing house at 7729 Warwick Avenue in Darien, Illinois.

Upon roll call vote, THE MOTION CARRIED 9-0.

B. Public Hearing PZC 2020-05 -7532 South Cass Avenue (Sign Variations). Petitioner City of Darien requests approval to permit the construction of 2 (two) electronic message board signs adjacent Cass Avenue and Plainfield Road, located within the B-2 Community Shopping Center Business District.

Mr. Joe Hennerfeind, City Planner reported to the audience members and the Commission that this is the second time discussing and that it is almost identical to what was discussed in February and that the structure has not changed.

Mr. Hennerfeind reported that City Council was presented with all of the options and a third option was considered that would permit the installation of one sign, and limit construction of the second sign exclusively to infrastructure and that completion of the second sign could not occur without a second ordinance of approval by Council. He reported that this process would allow for codification of the necessary variations, permit construction of the first sign to evaluate net effect in advance of the second sign, and provide expiration of the second sign variations in the event it was not requested within one year of initial construction.

Mr. Hennerfeind reported that although City Council recommended this third alternative directing staff to prepare the necessary corresponding ordinance, the ordinance did not receive approval, specifically for details in the Lease Agreement. He reported that since the denial that staff has renegotiated the lease terms and received authorization from Council to represent the third option for new consideration.

Mr. Hennerfeind reported that the amended request would be approval to permit the construction of one electronic message board sign with conditional approval for a second sign subject to the following provisions:

a. Infrastructure and foundation for the second sign many be completed with initial construction.

b. Prior to the above-grade construction of the second sign, signage shall be subject to additional approval by Council ordinance.

c. In the event a second sign is not requested or constructed, variation approvals for said second sign will expire one year after the date the first signage becomes operational.

Mr. Hennerfeind reported that the proposed conditions would be written into the approving ordinance. He reported that the Lease Agreement has been revised to reduce the lease term to 10 years from 25 years with options for automatic renewals and provides the City with second 10-second spot with opportunities to allow non-profits with the City to utilize. He further reported that the owner of Brookhaven is entitled to one spot to share for the 2 businesses on the property and the grocery store.

Chairperson Mallers opened the meeting to anyone wishing to present public comment.

Ms. Pamela Taylor, Darien questioned the construction at Brookhaven and questioned how the sign is contributing to tax revenue and if the City is making any money from the structure.

Mr. Hennerfeind reported that the construction is the Dunkin Donuts with a drive-thru and a pizzeria which is independent of the petition this evening. He reported that the City has a working relationship with the property owner and the easement. He further reported that there is no revenue benefit from the sign but that the slots for advertising is of monetary value to the City.

Mr. Bill Przybylski, Chicago Billboards stated that he is working very closely with staff and that there will be a pond less water feature incorporated within the sign.

Mr. Hennerfeind reported that Director Dan Gombac designed a water feature with the first sign and if a second sign is incorporated the water feature will be seen facing southeast.

Commissioner Kasprowicz questioned the cost of an advertising slot.

Mr. Przybylski stated that because of Covid 19 that the rates are down. He stated that rates range from $600 – $900 per month . He further stated that Brookhaven, the Pizzeria, and the Dunkin Donuts will share one slot with slots at full rate advertising.

Commissioner Desmond questioned what other changes were made to the terms of lease. He asked if the use restrictions were new.

Mr. Hennerfeind reported that the lease could be discussed, but does not necessarily influence the variation requests. He stated that use restrictions were always a part of the lease, but had not been previously discussed. Changes include a second slot for non-profits, the shorter lease term, and no discounts to the other Brookhaven tenants. He reported that if the City does not like the sign in 10 years the lease can be renegotiated.

Commissioner Kasprowicz questioned what happens to the property should the lease be terminated.

Mr. Przybylski stated that they will restore the property back to the original state.

There was some discussion regarding Amber Alerts, setting up messaging and graphics.

Commissioner Gay stated that he did some research at the sign at 103rd and Cicero. He stated that it was the closest benchmark as to what is being proposed in Darien.

Commissioner Gay provided photos showing the size of the sign, advertising on the sign 32 miles away and the proximity to the street. He submitted the photos for evidence and stated that having a sign is going to create more competition for the businesses in town. Commissioner Gay stated that he was not in favor of a sign.

Commissioner Gonzalez stated that the signs are gigantic and block the view of the stores. She referenced the signs in Willowbrook that are high and more attractive.

Commissioner Hiatt stated that advertising 5-10 miles away is more risk and that he is hung up on the size. He stated that the second sign blocks the view.

Commissioner Liedtke questioned the maintenance upgrades and if they were included.

Mr. Przybylski stated that maintenance upgrades are done after 10 years and that everything is included.

Commissioner Stompanato stated that staff received a lot of emails against the sign. He stated that the size is overpowering to everyone.

Commissioner Liedtke questioned if the sign could be done without a variance.

Mr. Przybylski stated that the sign is not feasible and not buildable under the standards of the City of Darien zoning.

Commissioner Desmond questioned why the City of Darien is a party to the lease and why not between the property owner and the sign company. He stated that he did not understand it and that it is very unusual. He questioned how other signs are done.

Mr. Przybylski stated that it is mixed. Some are owned by the municipality and some are private.

Commissioner Desmond stated that this creates a liability for the City of Darien.

Mr. Hennerfeind reported that staff and the City Attorney have discussed the lease.

Commissioner Kasprowicz questioned if the City has explored doing a sign. Mr. Hennerfeind reported that it was not discussed.

Commissioner Desmond questioned if any traffic study was done. Mr. Hennerfeind reported that a traffic study was not done.

Commissioner Hiatt stated that the lease is not a zoning issue.

Commissioner Erickson questioned how advertising is done.

Mr. Przybylski stated that his partner works very closely with the Chambers of Commerce and other opportunities.

There was no one else in the audience wishing to present public comment.

Commissioner Hiatt made a motion and it was seconded by Commissioner Kasprowicz to approve Public Hearing PZC 2020-05 -7532 South Cass Avenue (Sign Variations) to permit the construction of 2 (two) electronic message board signs adjacent Cass Avenue and Plainfield Road, located within the B-2 Community Shopping Center Business District.

Upon roll call vote, THE MOTION WAS DENIED 8-1.

Aye – Erickson
Nay – Desmond, Gay, Gonzalez, Hiatt, Kasprowicz, Liedtke, Mallers, Stompanato

Commissioner Liedtke made a motion and is was seconded by Commissioner Gonzalez approval to permit the construction of 1 electronic message board adjacent Cass Avenue and Plainfield Road, located within the B-2 Community Shopping Center Business District.

Upon roll call vote, THE MOTION CARRIED 5-4.

Aye – Liedtke, Gonzalez, Mallers, Erickson, Hiatt
Nay – Desmond, Gay, Kasprowicz, Stompanato

CORRESPONDENCE

There was no correspondence.

OLD BUSINESS

There was no old business.

NEW BUSINESS

There was no new business.

APPROVAL OF MINUTES

Commissioner Desmond made a motion and is was seconded by Commissioner Liedtke to approve the May 6, 2020 Regular Meeting Minutes.

Upon voice vote, THE MOTION CARRIED 8-0. Commissioner Gay abstained.

NEXT MEETING

Chairperson Mallers announced that the next meeting is scheduled for June 17, 2020.

PUBLIC COMMENTS (On any topic related to planning and zoning)

There was no one in the audience wishing to present public comment.

ADJOURNMENT

With no further business before the Commission, Commissioner Liedtke made a motion and it was seconded by Commissioner Desmond. Upon voice vote, THE MOTION CARRIED unanimously, and the meeting adjourned at 8:30 p.m.

RESPECTFULLY SUBMITTED: **APPROVED:**

_____ _____

Elizabeth Lahey
Secretary

Lou Mallers
Chairperson

AGENDA MEMO
PLANNING AND ZONING COMMISSION
June 17, 2020

Case
PZC 2020-06 8131 Lemont Road (Solar Panel Screening Variation)

Issue Statement
Petitioner RETHINK Electric seeks approval to vary Section 5A-5-9-8(B)5 of the City Zoning Code for relief from the screening requirement for non-flush mounted solar panels at 8131 Lemont Road in Darien, Illinois.

General Information

Petitioner:	RETHINK Electric 850 North Central Avenue Wood Dale, IL 60191
Owner:	Safeguard Self Storage 3384 Peachtree Road, 4th Floor Atlanta, GA 30326
Property Location / PIN#:	8131 Lemont Road / 09-32-106-034
Zoning / Land Use:	Site: OR&I / Self-storage facility North: OR&I / Office-warehouse and cell tower South: OR&I / Rockwell building and parking lot East: OR&I / Office-warehouse West: Woodridge (Zoned OR&I, currently single-family)
Comprehensive Plan:	Office/Research/Industrial
Size of Subject Lot:	117,437 square feet, 2.69 acres
Transportation:	Frontage to Lemont Road to both east (234') and north (430')

Zoning Provisions
Section 5A-5-9-8(B)5 / Solar Energy Systems, Building Mounted standards

Development History and Proposal
The Safeguard Self-Storage facility received approvals in 2002 and was constructed shortly thereafter. The building sits approximately 75 feet from the primary Lemont Road frontage, and 100 feet from the north road frontage. Several large deciduous trees help to screen the buildings height, which is 3 stories and approximately 40 feet. The building is unique in that there is no parapet wall at the cap of the building. Parapet walls typically extend higher than the roof, and are often constructed to screen various types of rooftop equipment.

The petitioner proposes to install a solar array in the flat roof of the building. Solar panels installed on a flat roof must be installed at an angle, and although not excessive in height, are approximately 14 inches off the roof at the highest point.

Section 5A-5-9-8(B)5 states "panels on a flat roof that are not flush-mounted must have a parapet or screening wall between the panels and the adjacent street and said parapet or screening wall must be at least as high as the panels." Non-Flush mounted panels are further defined as any panels that extend more than 6 inches above the roof.

As presented, at 14 inches in height and without parapet wall on the building to properly screen the panels, the installation cannot occur without a variation. The petitioner has provided a response to the variation standards in a justification narrative which is attached.

The petitioner states that the unique condition of the property is the overall height of the building in comparison to surrounding development, and that the panels will not be seen in close proximity to the building. Line-of-sign diagrams have been provided for discussion.

Petitioner Documents (attached to this memo)

1. Application, including variation justification
2. Plat of Survey
3. Site Plans
4. Solar Racking Plans
5. Line of Sight Drawings

Staff Documents (attached to this memo)

6. Location Map
7. Zoning Variation Decision Criteria

Staff Plan Review

The City's solar code was revised in 2018 with the intention of removing obstructions to solar arrays when meeting certain conditions. Although the intent of the code was to prevent flat-roofed buildings, which are primarily commercial and office buildings, from installing visible solar panels and degrading the quality of a building's architectural elevation, there were no exceptions written in the code when the impact would be unseen or minimal. Staff is supportive of the request based on the information as presented.

Findings of Fact

The Petitioner was asked to provide evidence or finding-of-fact that would support the requested variation, especially in terms of the pertinent variation criteria. Staff notes relevant criteria below:

- Unique Circumstances – This building was constructed in and industrial/office area with large setbacks and without a parapet screen wall.
- Character of the Locality – Although the roof has no parapet to screen the panels, the building's height will eliminate or minimize any visual effect to the adjacent properties.
- Smallest Solution – Installation of a screen or parapet wall will require significant improvements to the roof structure.

Pending Meeting Schedule

Planning and Zoning Commission:	June 17, 2020
Municipal Services Committee:	TBD
City Council:	July 20, 2020

ZONING APPLICATION

CITY OF DARIEN
1702 Plainfield Road, Darien, IL 60561
www.darienil.us 630-852-5000

CONTACT INFORMATION

Garrison Riegel	Robert Lebrier
Applicant's Name	Owner's Name
850 N. Central Ave. Wood Dale, IL 60191	3384 Peachtree Rd 4th Floor, Atlanta GA 30326
Address, City, State, Zip Code	Address, City, State, Zip Code
630-998-3629	215-335-1927
Telephone	Telephone
Garrison@rethinkelectric.com	Rlabrier@safeguardit.com
Email	Email

PROPERTY INFORMATION

Safeguard Storage - 8131 S. Lemont Rd. Darien, IL 60561	09-32-106-035
Property address	PIN Number(s)
Commercial, Property Class I	Commercial Building, Storage Units
Zoning District	Current Land Use(s)

(Attach additional information per the Submittal Checklist.)

REQUEST

Brief description of the zoning approval requested. (Contact the City Planner for guidance.)

We request a Variance from this statement: Panels on a flat roof that are not flush-mounted must have a parapet or screening wall between the panels and the adjacent street and said parapet or screening wall must be at least as high as the panels.
We request a Variance because the proposed solar system will not be seen from the ground or neighboring buildings.
This particular racking plus modules (collectors) only reaches a height of 13.5(in) from the surface of the roof at its highest point. The building's flat roof upon which we are installing is a 35(ft) 3 story building that has no parapets, yet it has existing equipment on the roof located on the west corner of the building, most notably a gas pipe and a curb mounted roof hatch that are the same height as our equipment. Neither can be seen from ground level. Additionally, the solar modules (collectors) are set back from the edge of the roof by at least 4 ft.

As Notary Public, in and for DuPage County in Illinois, I do hereby certify that Garrison Riegel is personally known by me to be the same person whose name is subscribed above and has appeared before me this day in person and acknowledged that they have signed this document as their own free and voluntary act, for the purposes therein set forth.
Given under my hand and seal, this 21st day of April 2020.

Dawn M. Heid
Notary Public

For office use only	
Date Received:	5/12/20
Case Number:	PLC 2020-06
Fee Paid:	485.00
Hearing Date:	6/17/20

DAWN M HEID
OFFICIAL SEAL
Notary Public, State of Illinois
My Commission Expires
December 10, 2023

RE.THINK ELECTRIC

Justification Narrative: City of Darien

This justification narrative is in regards to the PV solar array being proposed on top of the Safeguard Storage building located at 8131 Lemont Rd. Darien, IL. We are requesting that we are permitted to construct this solar array without adding a parapet wall on the perimeter of the building as written in the City of Darien's code.

The variance is being requested due to there being no net visual benefit to adding this parapet wall to shield the array from being seen. As it currently exists, there are no vantage points that allow the system to be seen from around the building or from neighbors' buildings. There are currently roof hatches and other HVAC equipment on the roof that are of similar or greater height than our proposed solar array, and those cannot be seen from the surrounding areas.

Hardship condition would be an undo financial cost burden on the building owner. Adding a parapet wall is a costly endeavor and may involve modifying the structure of the building. This cost may effectively kill the project because the cost would be too great for the project to bear. In addition, the building is owned by a larger franchise entity which has a specific marketing brand/color scheme/aesthetic, and adding this parapet wall may disrupt that exterior brand.

As previously mentioned, there would be no impact on neighbors since it will not be possible to see the solar array from their vantage points. They will not know it is present.

2a. Not applicable

2b. We are currently installing numerous systems around numerous different cities and towns in Illinois and this is the only jurisdiction that is making such a request. Modifying the exterior of the building in this way is unnecessary, especially in this case where there will be no net benefit for anyone.

2c. The location of this building is in an industrial park, so adding a solar array to the roof without a parapet will not affect the essential character of the locality. The roof is 3 stories off the ground.

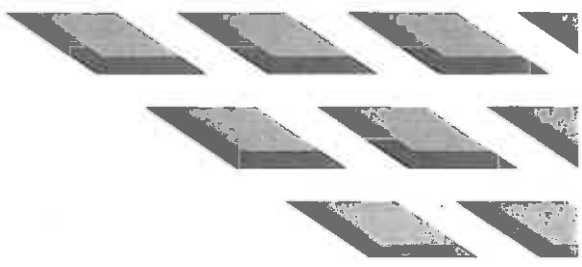
3a. As previously mentioned, if we were required to construct a parapet wall it may jeopardize the financial viability of installing solar at this store location.

3b. Not applicable

3c. There is no other simple and efficient way to install solar on this roof, although modifying our solar design would still not comply with the code the way it is presently written.

3d. Installing solar on top of this building will not cause any difficulty, hardship, burden or loss of value to neighboring buildings. Buildings are generously spaced, it is contained within an industrial park and the roof that the solar will be installed on is as high or higher than any other neighboring building.

3e. Future variances pertaining to solar array isntallations can be considered on a case by case basis based on the unique visual circumstances and the surrounding area where the building exists.



RE.THINK
ELECTRIC

3f. The positive impact on making an exception to this code is to increase the adoption of clean, renewable and distributed energy in local communities such as Darien. If commercial solar projects are required to construct parapet walls on all buildings it will disincentivize building owners and solar installers from trying to build solar in your City.

3g. The only thing that this solar installation will do is increase the value of the building due to it having its own energy generation on site. The only other thing that could be considered is aesthetic, which does not apply here because it cannot be seen from any reasonable vantage point.

630.747.4587

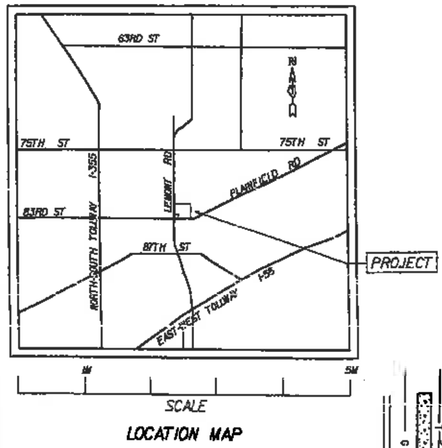
RethinkElectric.com

ALTA/ACSM LAND TITLE SURVEY

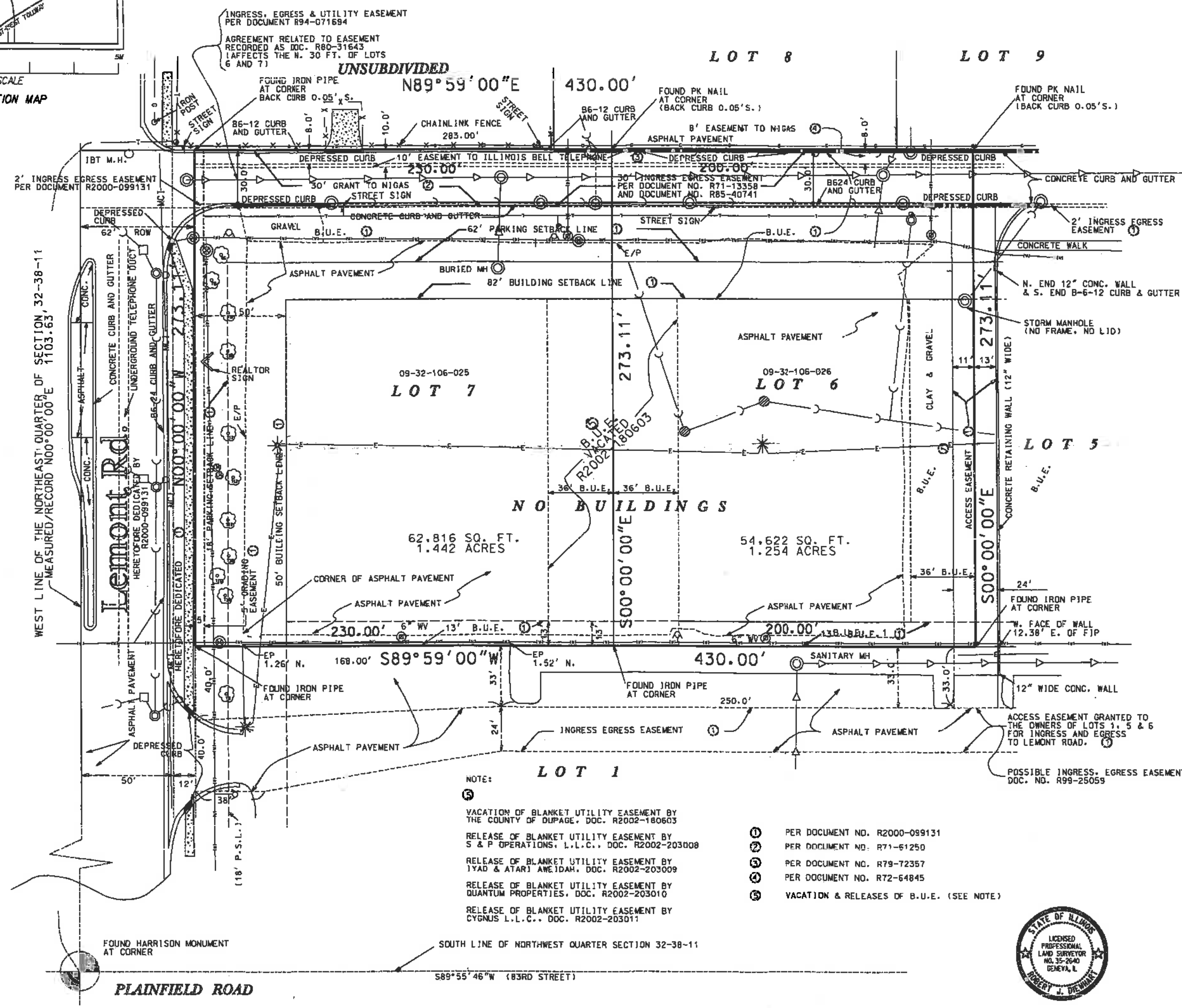
SCALE: 1 INCH = 30 FEET
BEARINGS ARE ASSUMED

PARCEL 1: LOTS 6 AND 7 IN DARIEN CORPORATE CENTRE, BEING A SUBDIVISION OF PART OF THE NORTHWEST QUARTER OF SECTION 32, TOWNSHIP 38 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED JUNE 29, 2000 AS DOCUMENT R2000-099131, IN DUPAGE COUNTY, ILLINOIS.

PARCEL 2: EASEMENT FOR BENIFIT OF PARCEL 1 AS CREATED BY THE PLAT OF DARIEN CORPORATE CENTRE', RECORDED JUNE 29, 2000 AS DOCUMENT R2000-099131, FOR INGRESS AND EGRESS OVER THE AREAS PLATTED AND DESIGNATED "INGRESS AND EGRESS EASEMENT"



LOCATION MAP



NOTE: ⑤

VACATION OF BLANKET UTILITY EASEMENT BY THE COUNTY OF DUPAGE. DOC. R2002-180603

RELEASE OF BLANKET UTILITY EASEMENT BY S & P OPERATIONS, L.L.C., DOC. R2002-203008

RELEASE OF BLANKET UTILITY EASEMENT BY IYAD & ATARI AMEIDAH, DOC. R2002-203009

RELEASE OF BLANKET UTILITY EASEMENT BY QUANTUM PROPERTIES, DOC. R2002-203010

RELEASE OF BLANKET UTILITY EASEMENT BY CYGNUS L.L.C., DOC. R2002-203011

① PER DOCUMENT NO. R2000-099131
② PER DOCUMENT NO. R71-61250
③ PER DOCUMENT NO. R79-72357
④ PER DOCUMENT NO. R72-64845
⑤ VACATION & RELEASES OF B.U.E. (SEE NOTE)

LEGEND

SYMBOLS

- EXIST ADVERTISEMENT SIGN
- EXIST BORING LOCATION & LABEL
- EXIST BUSH
- EXIST CATCH BASIN
- EXIST UNDERGROUND CABLE
- EXIST CABLE TV SPLICE BOX
- EXIST CULVERT
- EXIST HANDHOLE
- EXIST ELECTRIC VAULT/TRANSFORMER
- EXIST LIFT STATION
- EXIST STREET LIGHT
- EXIST ELECTRIC SPLICE BOX
- EXIST STORM SEWER & SIZE
- EXIST SIGNAL CONTROLLER
- EXIST FENCE
- EXIST FIRE HYDRANT
- EXIST FLARED END SECTION
- EXIST FLAG POLE
- EXIST UNDERGROUND GAS LINE/SERVICE
- EXIST GAS VALVE
- EXIST GUYWIRE
- EXIST IBT SPLICE BOX
- EXIST IBT VAULT
- EXIST INLET
- EXIST IRON SURVEY MARKER
- EXIST LAND HOOK
- EXIST LIGHT FIXTURE
- EXIST WATERMAIN
- EXIST OVERHEAD ELECTRIC
- EXIST MAILBOX (PRIVATE)
- EXIST MANHOLE
- EXIST MONUMENT STONE/R.O.W. MARKER
- EXIST PIPE UNDERDRAIN/FIELD TILE
- EXIST POWER POLE
- EXIST SANITARY SEWER
- EXIST STREET SIGN
- EXIST TREE & SIZE (DECIDUOUS)
- EXIST EVERGREEN & SIZE
- EXIST TREELINE/HEDGE
- EXIST UNDERGROUND ELECTRIC CABLE, DUCT/SERVICE
- EXIST UNDERGROUND IBT CABLE/DUCT
- EXIST VALVE & BOX
- EXIST VALVE & VAULT
- EXIST INLET
- N.B.U.E. — NON BLANKET UTILITY EASEMENT
- B.U.E. — BLANKET UTILITY EASEMENT
- UGC — UNDERGROUND CABLE
- P.S.L. — PARKING SETBACK LINE

STATE OF ILLINOIS)
) S.S.
COUNTY OF KANE)

SURVEYOR'S CERTIFICATE

TO: SAFEGUARD PROPERTIES, L.L.C., CHICAGO TITLE INSURANCE COMPANY, BANK ONE, N.A., ITS SUCCESSORS AND ASSIGNS

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH "MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/ACSM LAND TITLE SURVEYS", JOINTLY ESTABLISHED AND ADOPTED BY ALTA, ACSM AND NSPS IN 1999, AND INCLUDES ITEMS 1,2,3,4, 6,7(a), 7(b)(1), 8,9,10,11(a), 13,14,15, AND 16 OF TABLE A THEREOF. PURSUANT TO THE ACCURACY STANDARDS AS ADOPTED BY ALTA, NSPS, AND ACSM AND IN EFFECT ON THE DATE OF THIS CERTIFICATION.

THE UNDERSIGNED FURTHER CERTIFIES THAT PROPER FIELD PROCEDURES, INSTRUMENTATION AND ADEQUATE SURVEY PERSONNEL WERE EMPLOYED IN ORDER TO ACHIEVE RESULTS COMPARABLE TO THOSE OUTLINED IN THE "MINIMUM ANGLE, DISTANCE AND CLOSURE REQUIREMENTS FOR SURVEY MEASUREMENTS WHICH CONTROL LAND BOUNDARIES FOR ALTA/ACSM LAND AND TITLE SURVEYS".

THE UNDERSIGNED FURTHER CERTIFIES THAT NO PART OF THE SUBJECT PROPERTY IS LOCATED WITHIN AN AREA DESIGNATED AS A "SPECIAL FLOOD HAZARD AREA" BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), FLOOD INSURANCE RATE MAP (FIRM), FOR THE COMMUNITY IN WHICH THE SUBJECT PROPERTY IS LOCATED

BASED ON INSPECTION OF THE NATIONAL WETLANDS INVENTORY MAP (NWLI) ISSUED BY THE U.S. FISH AND WILDLIFE SERVICE, THERE ARE NO WETLANDS LOCATED ON THE SUBJECT PROPERTY.

DATED THIS 12th DAY OF OCTOBER, 2002.

ROBERT J. DIENHART, ILLINOIS PROFESSIONAL LAND SURVEYOR, NO. 2640

ROBERT H. ANDERSON & ASSOCIATES, INC.
220 WEST RIVER DRIVE, ST. CHARLES, ILLINOIS 60174
(630) 584-3530 FAX (630) 584-3047

RHA&A

DARIEN CORPORATE CENTRE
ALTA/ACSM LAND TITLE SURVEY
CITY OF DARIAN, DUPAGE COUNTY, ILLINOIS

PROJECT NO. 569602-21
DATE: OCT. 11, 2002
SCALE: 1" = 30'
CAD FILE: DARIAN\569602\SURVEY\dgn\ALTA_6_7_REV.DGN
SHEET 1 OF 1

17010b

SCOPE OF WORK

SYSTEM SIZE: 110960W DC, 100000W AC
MODULES: (304) ADANI ASM-7-PERC-365
INVERTER(S): (2) CHINT POWER SYSTEMS CPS SCA50KTL-DO/US-480
RACKING: PANELCLAW POLAR BEAR HDIII - 56" ROW-TO-ROW SPACING
ATTACHMENT: PANELCLAW BALLAST ATTACHMENT

WIND EXPOSURE: B
WIND SPEED: 115mph
GROUND SNOW LOAD: 25psf
OCCUPANCY: PRIMARY COMMERCIAL
CONSTRUCTION TYPE: COMMERCIAL

2014 NEC, 2015 IBC, 2015 IFC

BUILDING HEIGHT: 40 FEET
PV SYSTEM SQUARE FOOTAGE: 6606.96 sqft

This approval is for compliance to the current adopted building codes for the proposed Solar System only. It is the owner's responsibility to ensure that the proposed installation of solar systems and associated equipment is on legally permitted structures. If determined by inspection staff the proposed solar system is installed on non-permitted structures, any required modifications needed for code compliance will be at the owner's expense

GENERAL NOTES

- LOCAL UTILITY PROVIDER SHALL BE NOTIFIED PRIOR TO USE AND ACTIVATION OF ANY SOLAR PHOTOVOLTAIC INSTALLATION
- THIS PROJECT SHALL COMPLY WITH LOCAL ORDINANCES
- PROPER ACCESS AND WORKING CLEARANCE WILL BE PROVIDED
- ALL ELECTRICAL WORK SHOWN ON THESE PLANS WILL BE COMPLETED BY THE UNDERSIGNED
- ALL APPLICABLE PV EQUIPMENT LISTED AND COMPLIANT WITH UL2703, UL1741 AND UL1703
- THE SYSTEM WILL NOT BE INTERCONNECTED UNTIL APPROVAL FROM THE LOCAL JURISDICTION AND THE UTILITY IS OBTAINED
- THE SOLAR PHOTOVOLTAIC INSTALLATION SHALL NOT OBSTRUCT ANY PLUMBING, MECHANICAL, OR BUILDING ROOF VENTS
- IF THE EXISTING MAIN PANEL DOES NOT HAVE VERIFIABLE GROUNDING ELECTRODE, IT IS NECESSARY TO INSTALL A SUPPLEMENTAL GROUNDING ELECTRODE
- EACH MODULE WILL BE GROUNDED PER UL 2703 OR UL 1703 APPROVED METHOD USING THE SUPPLIED CONNECTION POINTS IDENTIFIED ON THE MODULE AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS
- A LADDER SHALL BE IN PLACE FOR THE INSPECTION IN COMPLIANCE WITH OSHA REGULATIONS
- ALL WORK SHALL COMPLY WITH 2014 NEC, 2015 IBC, 2015 IFC MUNICIPAL CODE, AND ALL MANUFACTURERS' LISTINGS AND INSTALLATION INSTRUCTION.
- PHOTOVOLTAIC SYSTEM WILL COMPLY WITH 2014 NEC.
- PHOTOVOLTAIC SYSTEM INVERTER IS UNGROUNDED. NO CONDUCTORS ARE SOLIDLY GROUNDED IN THE INVERTER, AND SYSTEM COMPLIES WITH 690.35.
- MODULES CONFORM TO AND ARE LISTED UNDER UL 1703.
- INVERTER CONFORMS TO AND IS LISTED UNDER UL 1741.
- ELECTRICAL EQUIPMENT AND MATERIAL TO BE LISTED, LABELED, AND INSTALLED PER THE NEC, THE INSTALLATION STANDARDS/MANUFACTURER'S RECOMMENDATIONS AND IF REQUIRED A RECOGNIZED ELECTRICAL TESTING LABORATORY.
- CONDUITS EXPOSED TO SUNLIGHT ON ROOF SHALL BE LOCATED NOT LESS THAN 7/8" ABOVE ROOF SURFACE.

VICINITY MAP

VICINITY MAP

PROJECT SITE

TABLE OF CONTENTS

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PROFESSIONAL ENGINEER STAMP

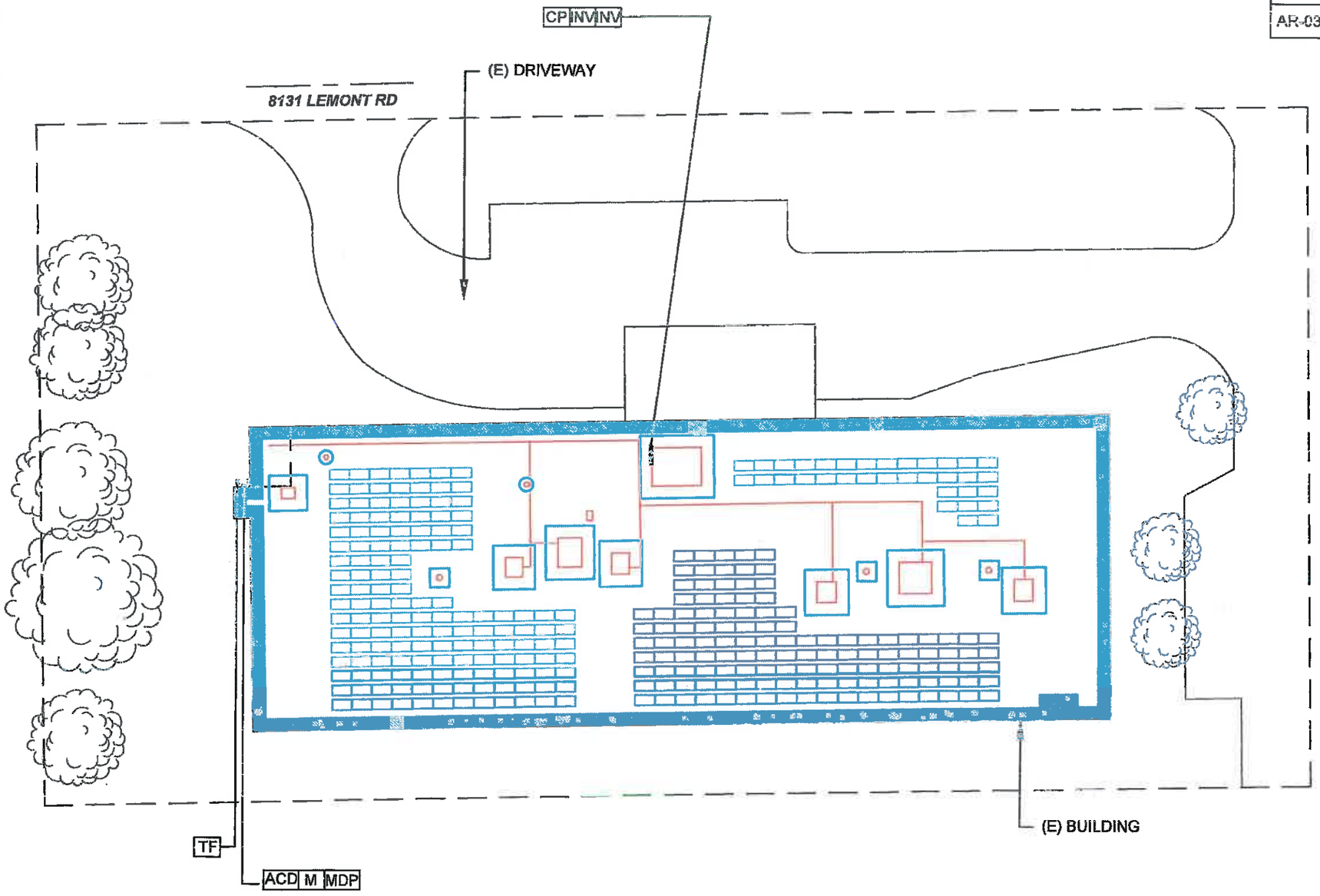
LICENSED PROFESSIONAL ENGINEER
MATTHEW JOSEPH BOYCE
062-070115
STATE OF ILLINOIS

Rev A
DATE:10 March 2020

COVER SHEET

PV 1.0

SITE PLAN: SCALE:- 1" = 36'



	ROOF SLOPE	AZIMUTH	SOLAR AREA (SQFT)	SOLAR WEIGHT (LBS)	# MODULES
AR-01	1°	179°	3130.56	7205.76	144
AR-02	1°	179°	739.16	1701.36	34
AR-03	1°	179°	2739.24	6305.04	126

LEGEND	
M	METER
MP	MAIN SERVICE PANEL
MDP	MAIN DISTRIBUTION PANEL
MSP	MAIN SERVICE PANEL
ACD	AC DISCONNECT
JB	JUNCTION BOX
INV	INVERTER
TF	TRANSFORMER
CP	COMBINER PANEL

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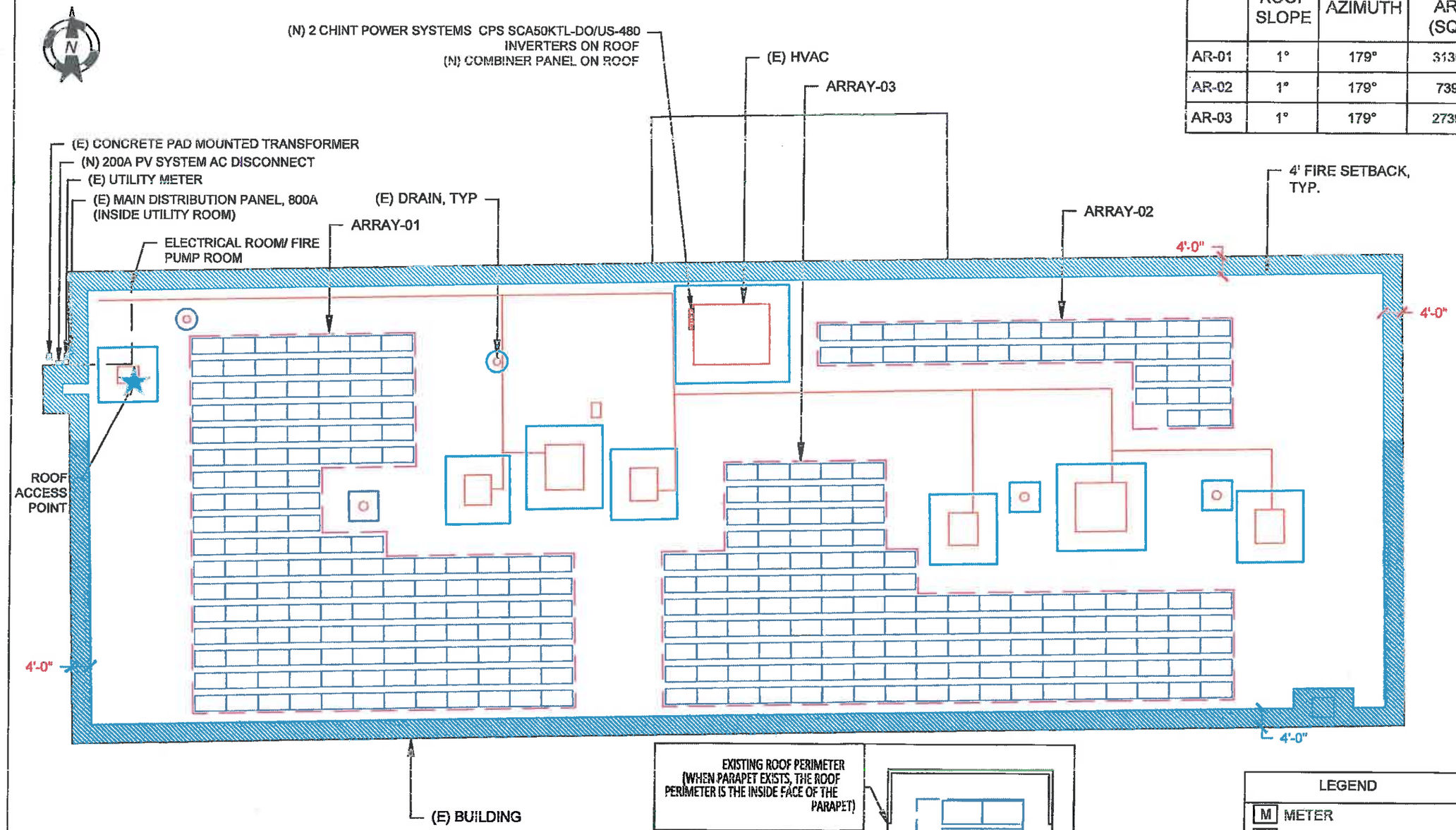
DATE:10 March 2020

SITE PLAN

PV 2.0

SITE PLAN DETAIL: SCALE:- 1" = 21.33333'



	ROOF SLOPE	AZIMUTH	SOLAR AREA (SQFT)	SOLAR WEIGHT (LBS)	# MODULES
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AR-02	1°	179°	739.16	1701.36	34
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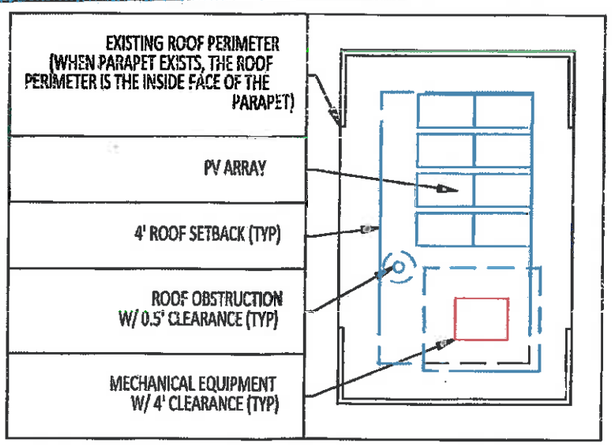

LEGEND	
M	METER
MP	MAIN SERVICE PANEL
MDP	MAIN DISTRIBUTION PANEL
MSP	MAIN SERVICE PANEL
ACD	AC DISCONNECT
JB	JUNCTION BOX
INV	INVERTER
TF	TRANSFORMER
CP	COMBINER PANEL

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3/4/2020

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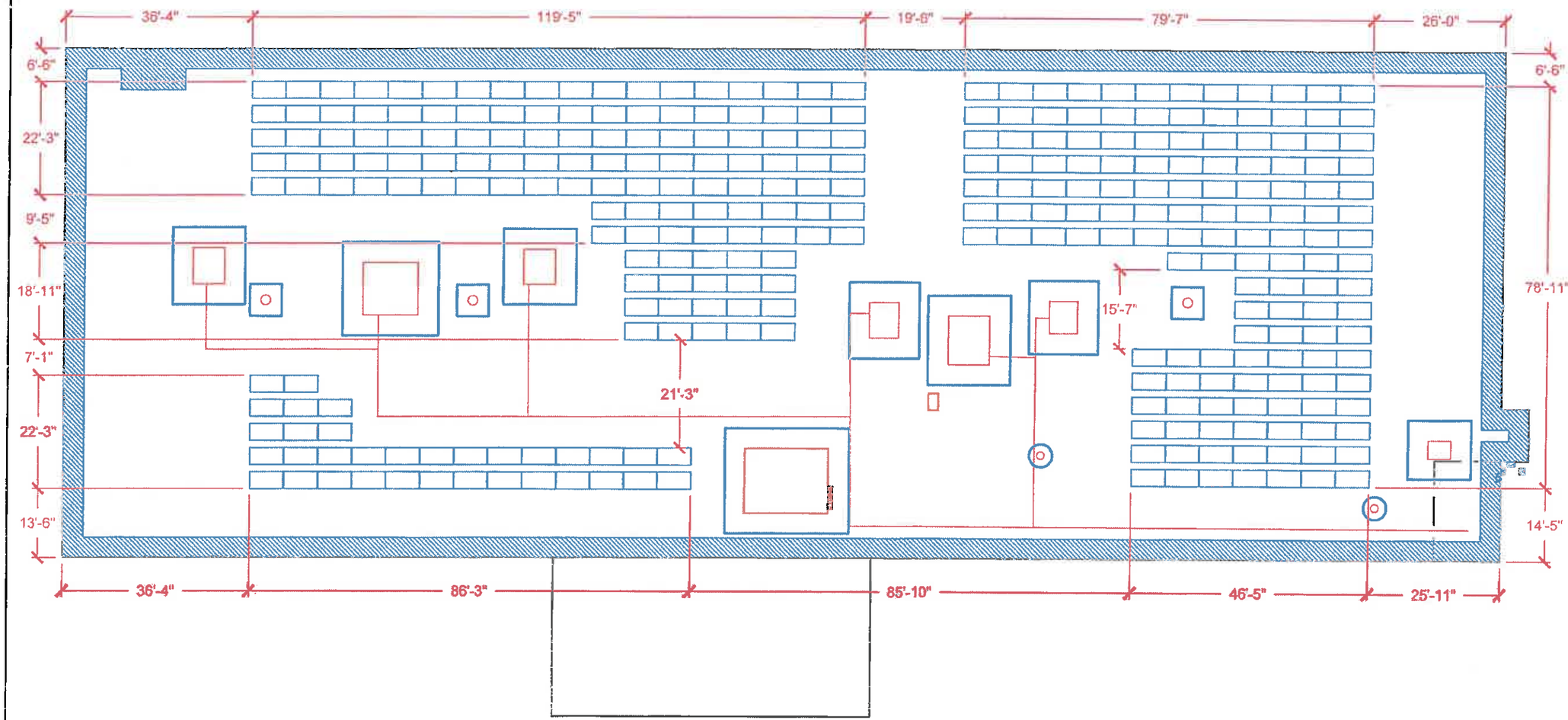
DATE:10 March 2020

SITE PLAN

PV 2.1

SITE PLAN DETAIL: SCALE:- 1" = 21.33334'



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STATE OF ILLINOIS

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ROOF PLAN

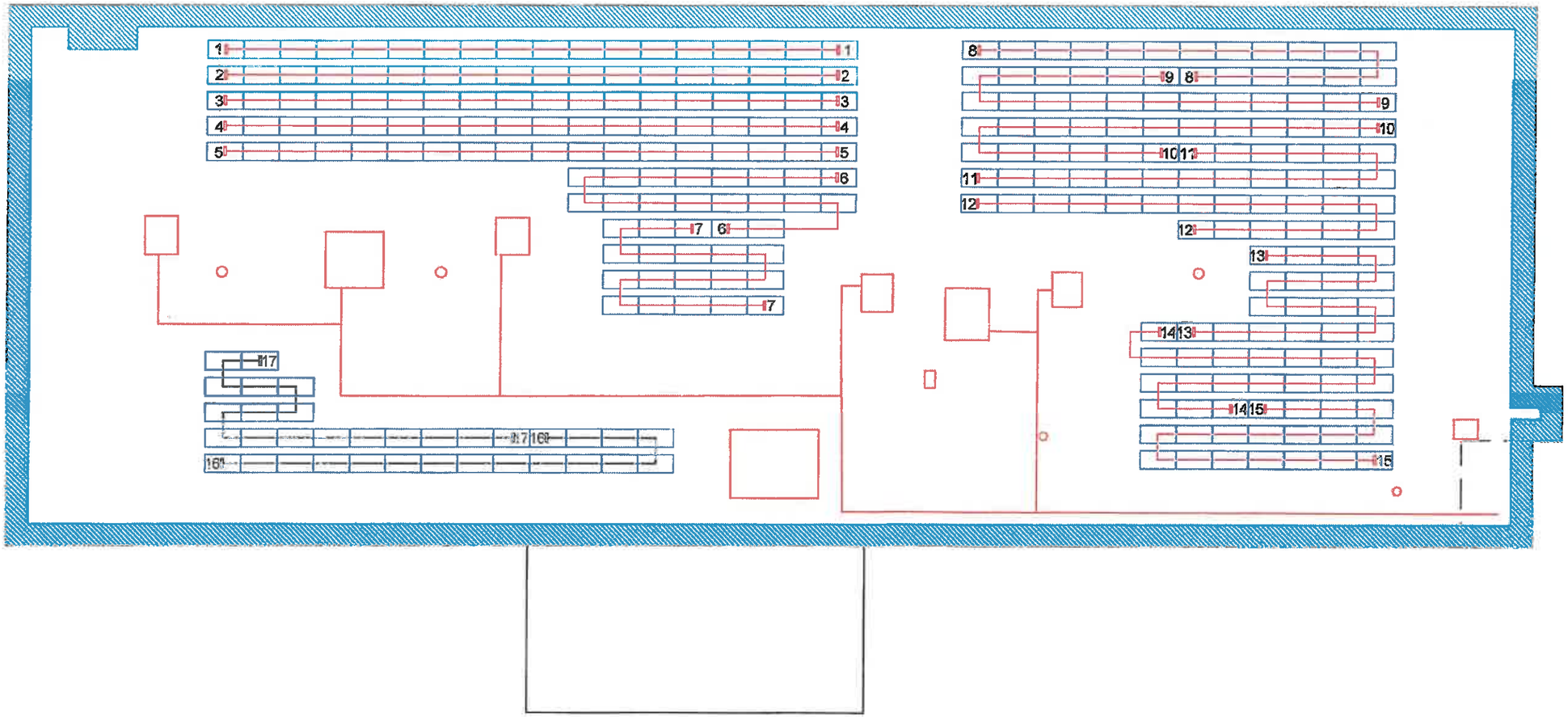
PV 2.2

SITE PLAN DETAIL: SCALE:- 3/64" = 1'-0"

LEGEND
STRING LENGTH: 18 MODULES NO. OF STRINGS: 15
STRING LENGTH: 17 MODULES NO. OF STRINGS: 2

MPPT	STRING	STRING LENGTH
A (INV- 1)	1	18 MODULES
	2	18 MODULES
	3	18 MODULES
B (INV- 1)	4	18 MODULES
	5	18 MODULES
	6	18 MODULES
C (INV- 1)	7	18 MODULES
	8	18 MODULES
	9	18 MODULES

MPPT	STRING	STRING LENGTH
D (INV- 2)	10	18 MODULES
	11	18 MODULES
	12	18 MODULES
E (INV- 2)	13	18 MODULES
	14	18 MODULES
	15	18 MODULES
F (INV- 2)	16	17 MODULES
	17	17 MODULES



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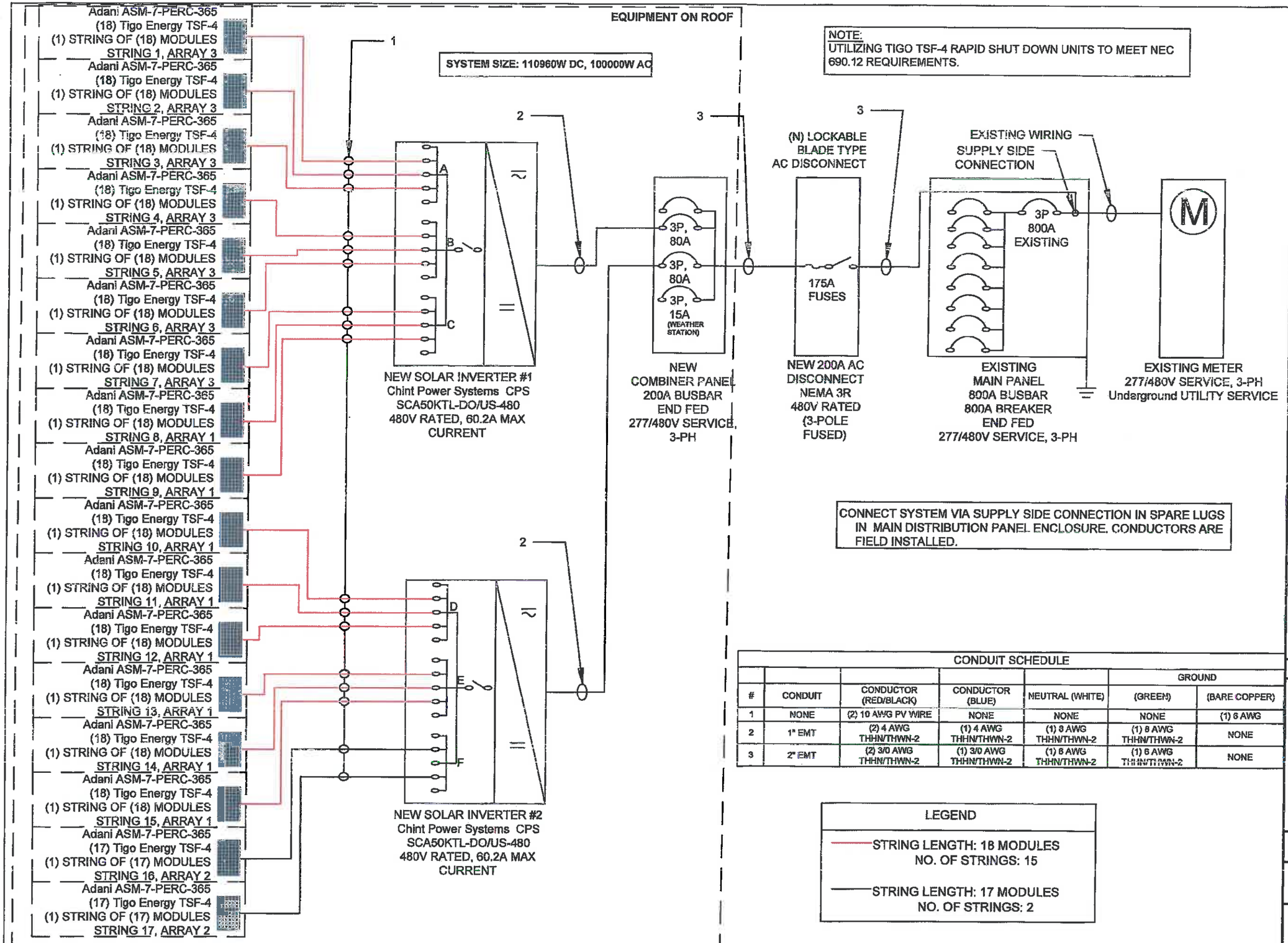
DATE:10 March 2020

STRING DIAGRAM

PV 3.0



CONDUIT SCHEDULE

#	CONDUIT	CONDUCTOR (RED/BLACK)	CONDUCTOR (BLUE)	NEUTRAL (WHITE)	GROUND (GREEN)	GROUND (BARE COPPER)
1	NONE	(2) 10 AWG PV WIRE	NONE	NONE	NONE	(1) 6 AWG
2	1" EMT	(2) 4 AWG THHN/THWN-2	(1) 4 AWG THHN/THWN-2	(1) 8 AWG THHN/THWN-2	(1) 8 AWG THHN/THWN-2	NONE
3	2" EMT	(2) 3/0 AWG THHN/THWN-2	(1) 3/0 AWG THHN/THWN-2	(1) 6 AWG THHN/THWN-2	(1) 6 AWG THHN/THWN-2	NONE

LEGEND

STRING LENGTH: 18 MODULES
NO. OF STRINGS: 15

STRING LENGTH: 17 MODULES
NO. OF STRINGS: 2

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062-070115
STATE OF ILLINOIS
3/10/2020

Rev A
DATE:10 March 2020

ELECTRICAL

PV 4.0

INVERTER RATINGS	
MAKE	CHINT POWER SYSTEMS
MODEL	CPS SCA50KTL-DO/US-480
MAX INPUT CURRENT	180A
MAX POWER (AC)	50000W
MAX DC INPUT VOLTAGE	1000V
RATED OUTPUT VOLTAGE	480V
MAX AC CURRENT	60.2A
CEC EFFICIENCY	98.5%

MODULE AND ARRAY RATINGS: (304) MODULES)				
SOLAR MODULE RATINGS (STC)			STRING 1-15	STRING 16 & 17
MAKE	ADANI	SERIES	18	17
MODEL	ASM-7-PERC-365	PARALLEL	1	1
Imp	9.36A	Imp	9.36A	9.36A
Vmp	39.01V	Vmp	702.18V	663.17V
Isc	9.93A	Isc	9.93A	9.93A
Voc	47.31V	Voc	851.58V	804.27V
Pmax	365W	Pmax	6570W	6205W
%Voc/C	-0.29%	Voc @ extreme min. temp	972.59V	918.56V

CONDUCTOR SIZING CALCULATIONS								
CIRCUIT DESCRIPTION	CURRENT	Imax (690.8(A))	Icont (690.8(B)(2)(a) calc	SPECIFIED CONDUCTOR	AMPACITY @ 90c	AMBIENT TEMP c	CURRENT CARRYING COND.	COND. OF USE APPLIED (690.8(B)(2)(b) calc
INVERTER AC OUTPUT	60.2A	60.2A	60.20A Imax x 1.25 = 75.25A	#4 THWN-2	95A	31-35	1-3	95A x 0.96 (am b. temp.) x1 (raceway fill) = 91.2A
COMBINER PANEL OUTPUT	120.4A	120.4A	120.4A Imax x 1.25 = 150.25A	#3/0 THWN-2	225A	31-35	1-3	225A x 0.96 (am b. temp.) x1 (raceway fill) = 216A

TERMINAL TEMPERATURE RATING CONSIDERATIONS					
CIRCUIT DESCRIPTION	CURRENT	Icont	TERMINAL TEMP RATING	SPECIFIED CONDUCTOR	AMPACITY @ TERMINAL TEMP. RATING
PV SOURCE CIRCUIT STRING 1-15	9.93A	12.41A x 1.25 = 15.52A	75C	#10	35A
PV SOURCE CIRCUIT STRING 16 &17	9.93A	12.41A x 1.25 = 15.52A	75C	#10	35A
INVERTER AC OUTPUT	60.2A	60.20A Imax x 1.25 = 75.25A	75C	#4	85A
COMBINER PANEL OUTPUT	120.4A	120.4A Imax x 1.25 = 150.25A	75C	#3/0	200A

VOLTAGE DROP CALCULATIONS					
LENGTH	I	Ohms/kFt	V	CALC	Vdrop
50Ft	9.93A	0.6282	1000V	50' x 9.93A x 2 x 0.6282/1000'/1000V=	0.06%
50Ft	9.93A	0.9989	1000V	50' x 9.93A x 2 x 0.9989/1000'/1000V=	0.10%
30Ft	60.2A	0.2485	480V	30' x 60.2A x 2 x 0.2485/1000'/480V=	0.19%
30Ft	120.4A	0.0618	480V	30' x 120.4A x 2 x 0.0618/1000'/480V=	0.09%

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DATE:10 March 2020

ELECTRICAL

PV 4.1

INSTALL ON THE UTILITY METER

WARNING

THIS SERVICE METER
IS ALSO SERVED BY A
PHOTOVOLTAIC SYSTEM

INSTALL ON THE MAIN BREAKER PANEL

RAPID SHUTDOWN
SWITCH FOR
SOLAR PV SYSTEM

TO BE INSTALLED IN ACCORDANCE
WITH SECTION 690.56(C):

CAUTION: SOLAR ELECTRIC
SYSTEM CONNECTED

PHOTOVOLTAIC SYSTEM
AC DISCONNECT

OPERATING VOLTAGE 480 VOLTS
OPERATING CURRENT 120.4 AMPS

WARNING

TURN OFF PHOTOVOLTAIC
AC DISCONNECT PRIOR TO
WORKING INSIDE PANEL

INSTALL ON PV ONLY SUBPANEL

NOTICE
PV SYSTEM COMBINER PANEL
DO NOT ADD LOADS TO THIS PANEL

LABEL LOCATION:
LOAD CENTER
[Only use when applicable for PV load center]

INSTALL ON THE AC DISCONNECT

PHOTOVOLTAIC SYSTEM
AC DISCONNECT

OPERATING VOLTAGE 480 VOLTS
OPERATING CURRENT 120.4 AMPS

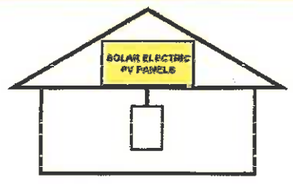
PV SYSTEM DISCONNECT FOR
UTILITY OPERATION

WARNING

ELECTRIC SHOCK HAZARD

DO NOT TOUCH TERMINALS
TERMINALS ON BOTH THE LINE AND
LOAD SIDES MAY BE ENERGIZED
IN THE OPEN POSITION

**SOLAR PV SYSTEM
EQUIPPED WITH
RAPID SHUTDOWN**



TURN RAPID SHUTDOWN SWITCH TO
THE "OFF" POSITION TO SHUT DOWN
PV SYSTEM AND REDUCE
SHOCK HAZARD IN THE ARRAY.

INSTALL ON THE INVERTER#1

PHOTOVOLTAIC SYSTEM
DC DISCONNECT

OPERATING VOLTAGE	972.59 VDC
OPERATING CURRENT	84.24 AMPS
MAX SYSTEM VOLTAGE	1000 VDC
SHORT CIRCUIT CURRENT	89.37AMPS
CHARGE CONTROLLER MAX	N/A AMPS

INSTALL ON THE INVERTERS

WARNING

ELECTRIC SHOCK HAZARD

DO NOT TOUCH TERMINALS
TERMINALS ON BOTH THE LINE AND
LOAD SIDES MAY BE ENERGIZED
IN THE OPEN POSITION

WARNING

ELECTRIC SHOCK HAZARD

IF GROUND FAULT IS INDICATED
ALL NORMALLY GROUNDED
CONDUCTORS MAY BE UNGROUNDED
AND ENERGIZED

TO BE INSTALLED EVERY 10 FEET ON
ALL EXTERIOR CONDUIT, RACEWAYS AND
BOXES

WARNING: PHOTOVOLTAIC
POWER SOURCE

INSTALL ON THE INVERTER#2

PHOTOVOLTAIC SYSTEM
DC DISCONNECT

OPERATING VOLTAGE	972.59 VDC
OPERATING CURRENT	74.88 AMPS
MAX SYSTEM VOLTAGE	1000 VDC
SHORT CIRCUIT CURRENT	79.44AMPS
CHARGE CONTROLLER MAX	N/A AMPS

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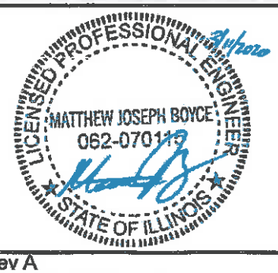


Rev A
DATE:10 March 2020

WARNING LABELS

PV 5.0

3/3/2020

PANELCLAW®

Partner Name: ReThink Electric

Project Name: SG - Darien

Project Location: 8131 Lemont Road
Darien, IL, 60516

Racking System: Polar Bear III HD

Structural Calculations for Roof-Mounted Solar Array

Submittal Release: Rev 0

Engineering Seal

LICENSED STRUCTURAL ENGINEER
MOHAMED THABET AL HARASH
081-006694
STATE OF ILLINOIS

PanelClaw, Inc., 1570 Osgood Street, Suite 2100, North Andover, MA 01845
(978) 688.4900 - (978) 688.5100 fax - www.panelclaw.com

PANELCLAW®

2.0 Snow Load:

Snow Calculations per ASCE 7-10, Chapter 7

2.1 Snow Load Data:

Ground Snow Load (Pg) =	25.00	psf	*ASCE, Figure 7-1*
Exposure Factor (Ce) =	1		*ASCE, Table 7-2*
Thermal Factor (Ct) =	1.2		*ASCE,Table 7-3*
Importance Factor (Is) =	1		*(ASCE, Table 1.5-2)*

Flat Roof Snow Load (Pf) =	0.7*Pg*Ce*Ct*Is=	21.00	psf	(ASCE 7.3-1)
Min Snow Load for Low Slope Roof =	20*Is=	20.00	psf	(ASCE 7.3.4)

Snow Load on Array (SLA) = 21.00 psf

SL_A

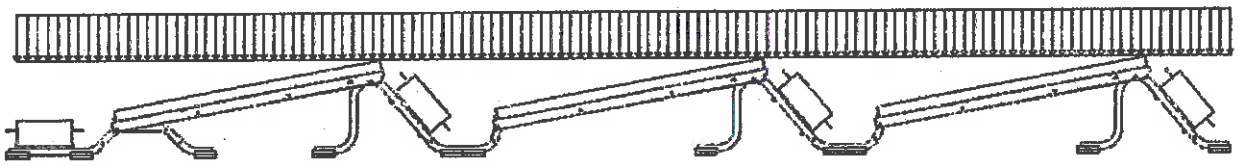


Fig. 2.1 - Uniform Roof Snow Load on Array

2.2 Snow Load Per Module:

Snow Load per Module (SLM) = $Module\ Projected\ Area * SL_A$

Where;

Module Projected Area (Amp) = Module Area * Cos(Module Tilt)

Where;

Module Area =	21.72	sq.ft.
Module Tilt =	10.40	degrees
Amp =	21.36	sq.ft.

$SL_M = A_{mp} * SL_A =$ 448.65 lb

PANELCLAW

6.0 Design Loads - Downward:

6.1 Downward Wind Load Calculation:

$$WL_{in} = q_z * A_m * C_{fz} * \cos\theta$$

Where:

qz =	18.17 psf		*(Ref. Pg. 3, Wind Load)*
Am =	21.72 sq.ft.	*(Single Module Area)*	*(Ref. Pg. 1, Project Information)*
θ =	10.40 deg.		*(Ref. Pg. 1, Project Information)*
C_{fz} =	1.13	*(Inward)*	*(Proprietary Wind Tunnel Data)*
C_{fz} =	0.30	(Inward with snow)	(ASCE 7-10 figure 30.4-2A)

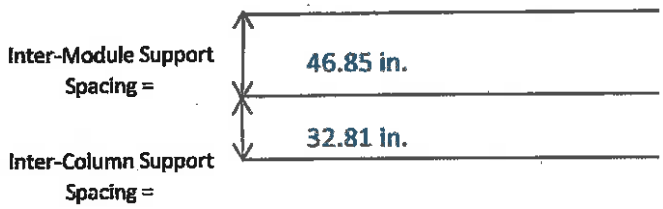
WL_{in} *(no snow)* = 439 lbs./module

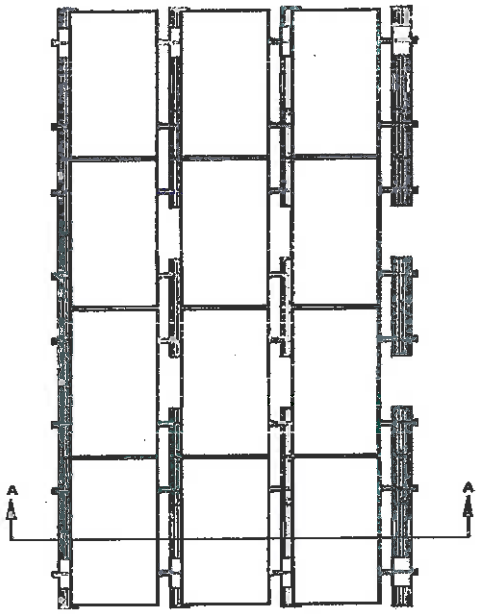
WL_{in}*(with snow)* = 116 lbs./module

Contact Pad by Location:

A = Northern
B = Northern
C = Interior
D = Interior
E = Southern
F = Southern

6.2 Racking Dimensions for Point Loads:



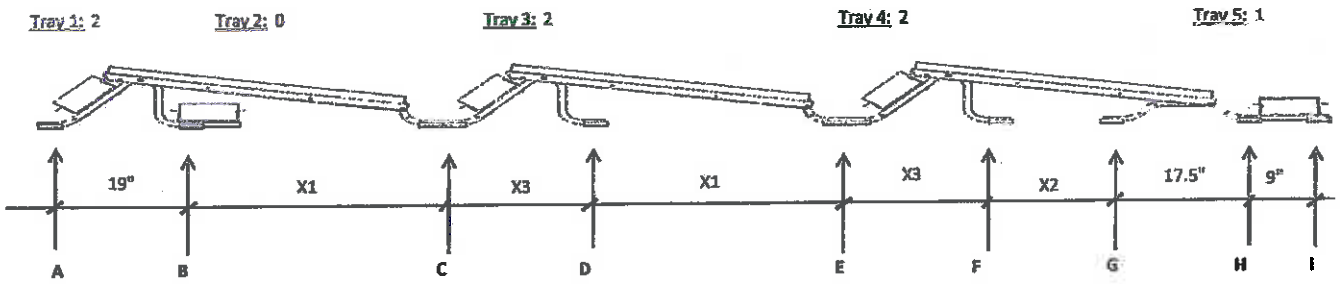


Typical Array Plan View
(Section A-A on Next Page)

PANELCLAW®

6.0 Design Loads - Downward (CONT.):

6.2 Racking Dimensions for Point Loads (Cont.):



Section A-A

Distances Between Supports (Unless Noted):

X1 = 34.25 in.
X2 = 14.33 in.
X3 = 21.77 in.

6.3 Point Load Summary:

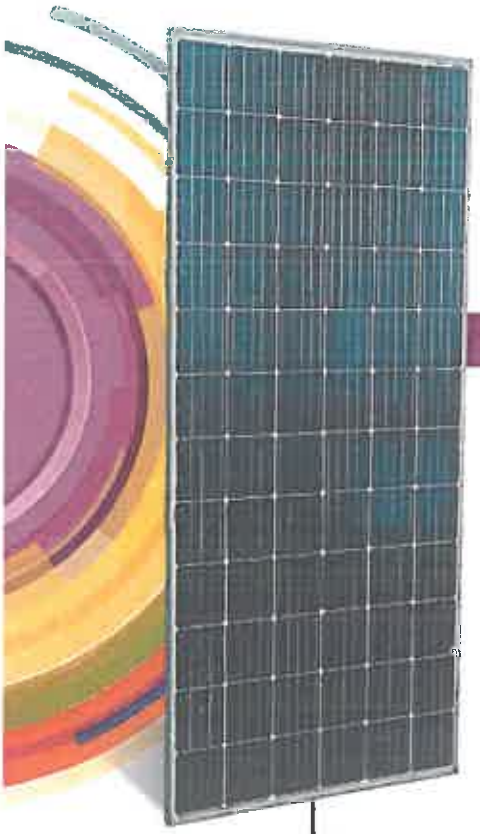
DLsys = 72
Total DL = (Varies on location and ballast quantity)
SLm = 449 lbs./module
Wlin (no snow) = 439 lbs./module
Wlin (with snow) = 116 lbs./module

Extreme Point Load Summary Table				
		load combinations (ASD)		
Location	Load	DL + SLm	DL + 0.6 X Wlin	DL + 0.75 X SLm + 0.75(0.6 X Wlin
Northern	A	86 lbs.	63 lbs.	79 lbs.
Northern	B	76 lbs.	53 lbs.	68 lbs.
Interior	C	152 lbs.	105 lbs.	137 lbs.
Interior	D	141 lbs.	94 lbs.	126 lbs.
Interior	E	152 lbs.	105 lbs.	137 lbs.
Interior	F	141 lbs.	94 lbs.	126 lbs.
Southern	G	43 lbs.	28 lbs.	38 lbs.
Southern	H	51 lbs.	36 lbs.	46 lbs.
Southern	I	51 lbs.	36 lbs.	46 lbs.
For Checking	T	893 lbs.	615 lbs.	804 lbs.

Table 6.1-A Extreme Point Load Summary

Ballast Block Point Load Summary - (LB/Single Block Applied at Tray Location)						
Location		Point Loads (lb/single block) at each Tray Location				
		Tray 1	Tray 2	Tray 3	Tray 4	Tray 5
Northern	A	11 lbs.				
Northern	B	5 lbs.	16 lbs.			
Interior	C			11 lbs.		
Interior	D			5 lbs.		
Interior	E				11 lbs.	
Interior	F				5 lbs.	
Southern	G					
Southern	H					8 lbs.
Southern	I					8 lbs.

Table 6.1-B Single Block Point Load Summary



adani Solar

ETERNAL SERIES

5BB Mono-Crystalline PERC Silicon Solar PV Modules – 1500V Series

ASM-7-PERC-AAA (AAA=365 - 390) | 72 Cells | 365 - 390 Wp

Highlights

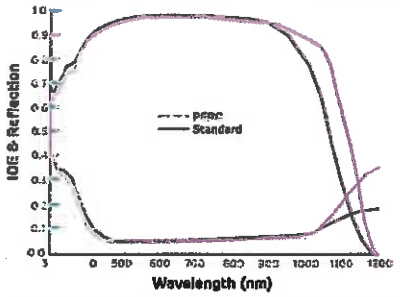
- Higher performance at longer wavelengths of light (1100-1200 nm)
- Superior temperature co-efficient and performance at NOCT, PTC ratings
- Excellent performance at low light irradiation (200 W/m2)
- LIR treated cells with least LID effect
- 5 bus bar cells offering better reliability against microcracks
- Triple EL checking to ensure defect free modules

TIER-1 BANKABLE MODULES

Reduces installation costs by 3% | Reduces transport costs by 3% | Reduces land costs by 3% | Reduces BOS costs by 6%

2019 TOP PERFORMER
PHOTON | DNV·GL
PV MODULE RELIABILITY SCORECARD

Significant benefit of PERC technology



PERC technology enables better light capturing abilities at longer wavelength, weak and diffused light and in cloudy conditions.

www.adanisolar.com

adani Solar

Technical Data

Electrical data – All data measured to STC*

Peak power, (0 –+ 4.99 Wp) Pmax (Wp)		365	370	375	380	385	390
Maximum voltage, Vmpp	(V)	39.01	39.16	39.34	39.5	39.66	39.82
Maximum current, Impp	(A)	9.36	9.46	9.55	9.64	9.743	9.84
Open circuit voltage, Voc	(V)	47.31	47.47	47.67	47.77	47.99	48.16
Short circuit current, Isc	(A)	9.93	9.99	10.03	10.06	10.11	10.16
Module efficiency	(%)	18.09	18.34	18.58	18.9	19.1	19.35

Electrical parameters at NOCT

Maximum Power Pmax @ NOCT		275	279.2	283.4	287.6	291.72	295.88
Maximum voltage, Vmpp	(V)	38.13	38.4	38.6	38.8	39.02	39.24
Maximum current, Impp	(A)	7.21	7.28	7.35	7.41	7.48	7.55
Open circuit voltage, Voc	(V)	46.87	47.09	47.31	47.53	47.77	48.00
Short circuit current, Isc	(A)	7.61	7.68	7.75	7.82	7.87	7.94

*STC: Irradiance 1000 W/m², cell temperature 25°C, air mass AM1.5 according to EN 60904-3. Average efficiency reduction of 4.5% at 200 W/m² according to EN 60904-1. Except Pmpp, all other parameters have a tolerance of +/-3%, measurement uncertainty <3%

*NOCT Irradiance 800 W/m2, ambient temperature 20°C, wind speed 1 m/sec

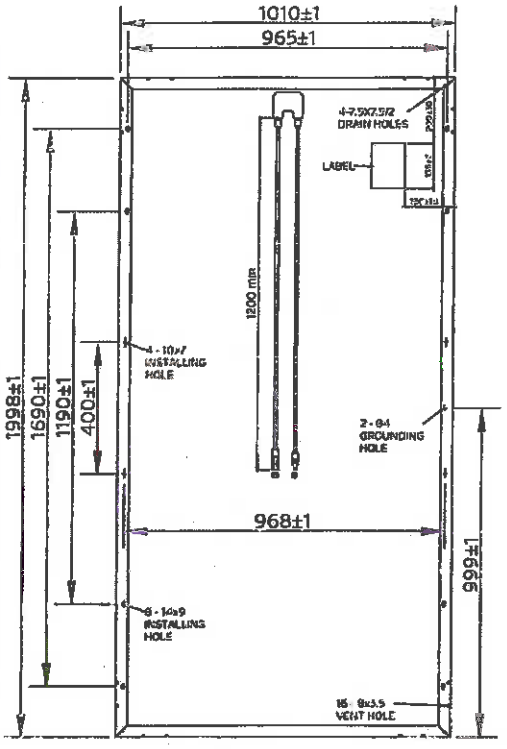
Temperature co-efficients (TC) and permissible operating conditions

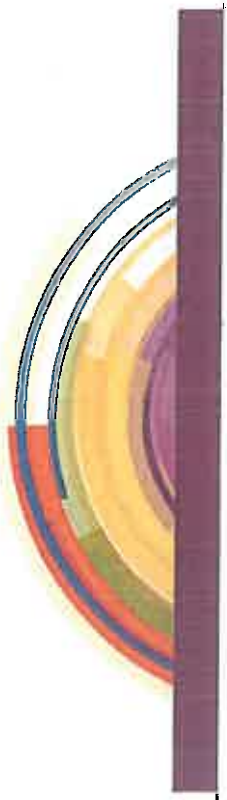
TC of open circuit voltage	(β)	-0.29% /°C
TC of short circuit current	(α)	0.048% /°C
TC of power	(γ)	-0.39% /°C
Maximum system voltage		1500 V (IEC & UL)
NOCT		45°C ± 2°C
Temperature range		-40°C to + 85°C

Mechanical data

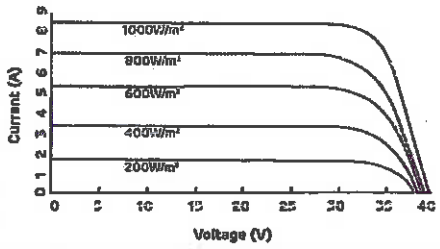
Length	1998 mm
Width	1010 mm
Height	35 mm/40 mm
Weight	22.7 Kg (35 mm) / 23 Kg (40mm)
Junction box	IP68
Cable and connectors	1200 mm length cable, MC4 & Amphenol compatible connectors
Application class	Class A (Safety class II)
Superstrate	High transmittance arc glass
Cells	72 mono-crystalline PERC solar cells; 5 bus bars
Encapsulation	Low shrinkage PID resistant EVA
Substrate	Tri layer backsheet
Frame	Anodized aluminium frame with twin wall profile
Mechanical load test as per IEC & UL	5400 Pa-front; 2400 Pa-back
Maximum series fuse rating	15 A

Dimensions in mm





Current-Voltage Curve



Warranty and certifications

Product warranty
12 years of product warranty

Performance guarantee**
Power degradation <- 3% in first year
<- 0.68% / year in 2-25 years

Approvals and certificates: IEC 61215 Ed2, IEC 61730, IEC 61701, UL 1703, MCS, JET, CEC, CEC-Aus, IEC 62716, IEC 62759, IEC 62804, IEC 62782, IEC 60068-2-68, IEC 61853

*All certifications are under process

Note:
- The specifications included in this datasheet are subject to change without notice.
- The electrical data given here is for reference purpose only.
- Please confirm your exact requirements with the sales representative while placing your order. All models sold will be as per MSPVL QAP.

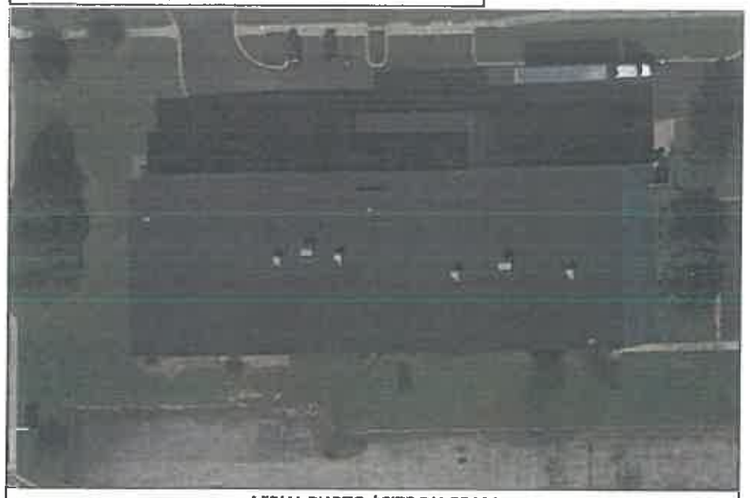
** Warranty:
Please read Adani solar warranty documents thoroughly.

*Caution: Please read safety and installation instructions before using the product.

MSPVL/MDL/PDM/Spec/27/Rev 01

Site Design Criteria - Flat Roof PV System Basis of Design	
Roof Live Load (psf)1	20 (see note 1)
Ground Snow Pg (psf)	25
Flat Roof Snow Pf (psf)	21
Snow Importance Factor (Is)	1.0
Wind Design Data	
Ult. Wind Speed (mph)	115
Nom. Wind Speed (mph)	N/A
Risk Category	II
Internal Pressure Coefficient	N/A
Design Life (years)	25 YEARS
MRI Adjustment Factor	0.93
Wind Exposure	B
C and C pressure (psf)	(see note 2)
Earthquake Design Data	
Risk Category	II
Importance Factor (Ie)	1.00
Component Importance Factor (Ip)	1.0
Mapped Acceleration Parameter (Ss)	0.155
Mapped Acceleration Parameter(S1)	0.066
Seismic Site Class	D - ASSUMED
Design Spectral Acceleration Parameter (Sds)	0.165
Design Spectral Acceleration Parameter (Sd1)	0.106
Seismic Design Category (SDC)	B
Basic seismic-force-resisting system(s)	see note 3
Base Design Shear = Fp x W	0.08 W
Seismic Response Coefficient (Cs)	N/A (see note 4)
Response Modification Factor (R)	2.5
Analysis Procedure	see note 3
Design Code (with local amendments)	2015 IBC
	ASCE 7-10
ADDITIONAL CODE PROVISIONS	SEAOC PV1-2012
	SEAOC PV2-2012

1. Roof live Load only applicable to areas not covered by PV modules. Reference SEAOC Design Guidelines
2. PV wind design per proprietary wind tunnel testing. Refer to calculations for additional information
3. Analysis procedure per ASCE 7 "Seismic Design Requirements for Nonstructural Components" and SEAOC PV1-2012.
4. Design seismic Fp which is calculated per procedure noted in note #3.



AERIAL PHOTO / SITE DIAGRAM

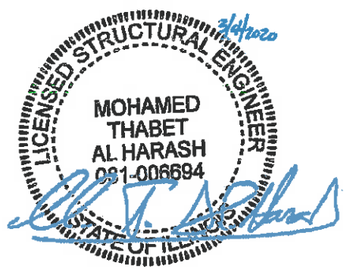
GENERAL NOTES:

1. ALL SITE, PROJECT, AND BUILDING DETAILS ARE PROVIDED BY CUSTOMER OR GENERATED VIA SATELLITE IMAGERY FROM INFORMATION PROVIDED BY CUSTOMER. PANELCLAW IS NOT RESPONSIBLE FOR SITE INACCURACIES THAT COULD LEAD TO CHANGES TO THESE DRAWING DETAILS AND ARRAY LAYOUT CONFIGURATIONS. ALL INFORMATION CONTAINED WITHIN THESE DOCUMENTS ARE TO BE FIELD VERIFIED BY CUSTOMER AND INSTALLER. ANY CHANGES OR MODIFICATIONS TO THESE DOCUMENTS, CONTAINED INFORMATION, OR FINAL ARRAY AND MOUNTING SYSTEM INSTALLATIONS MUST BE SUBMITTED TO PANELCLAW AND OTHER PROJECT AUTHORITIES FOR APPROVAL.
2. REFER TO AND FOLLOW THE APPROPRIATE PANELCLAW INSTALLATION MANUALS AND PROCEDURES DURING THE INSTALLATION PROCESS. NOT FOLLOWING SUCH PROCEDURES AND METHODS COULD RESULT IN DAMAGE TO THE COMPONENTS OR MAY VOID THE PRODUCT WARRANTY.
3. ARRAY SETBACKS: ALL ARRAYS ARE REQUIRED TO BE SETBACK 4-FEET FROM ALL ROOF EDGES UNLESS OTHERWISE SPECIFIED AND CALLED OUT ON THE ARRAY DIAGRAMS ON THIS PAGE OR ON ADDITIONAL ARRAY BALLAST PAGES.
4. REFER TO THE SPECIFIC ARRAY BALLAST SHEETS FOR BALLASTING REQUIREMENTS BASED ON THE PROVIDED SITE INFORMATION.
5. SYSTEM PSF INCLUDES ALL PANELCLAW RACKING COMPONENTS, MECHANICAL ATTACHMENTS(IF APPLICABLE), PV MODULE AND BALLAST BLOCKS. FOR MAXIMUM SYSTEM POINT LOAD SUMMARY (PLS), REFER TO CALCULATIONS.
6. PANELCLAW AND/OR PANELCLAW CONSULTING ENGINEERS ARE NOT RESPONSIBLE FOR DETERMINING THE ADEQUACY OF THE STRUCTURE TO SUPPORT LOADS IMPOSED BY THE ARRAY AND MOUNTING SYSTEM. SUPPORT STRUCTURE TO BE CHECKED BY OTHERS.
7. ALWAYS ALLOW 6" CLEARANCE BETWEEN ARRAYS AND ALL FIXED ROOF OBJECTS OR ROOF EDGES. REFER TO LOCAL FIRE CODES AND ELECTRICAL CODES FOR ADDITIONAL REQUIREMENTS WHICH MAY GOVERN DESIGN.

DRIFTED SNOW LOAD POTENTIAL!

PANELCLAW HAS IDENTIFIED THIS PROJECT AS POTENTIALLY HAVING SIGNIFICANT ROOFTOP DRIFTED SNOW LOADS. PLEASE HAVE THE SE REVIEWING THE ROOF STRUCTURE FOR POTENTIAL SOLAR APPLICATIONS CONSIDER DRIFTED SNOW LOADS IN THEIR ANALYSES. IF DRIFTED SNOW LOADS ARE PRESENT WITHIN THE PROPOSED ARRAY FOOTPRINT(S), PROVIDE PANELCLAW A DRIFTED SNOW LOAD PLAN SO WE CAN AVOID THESE AREAS OR PLAN FOR ADDITIONAL LOADS ACCORDINGLY. IN GENERAL, DRIFTED SNOW LOADS CAN AFFECT MODULE SELECTION (I.E. MAX PSF) AND POINT LOADING FROM PANELCLAW RACKING TO THE ROOF STRUCTURE.

SHEET INDEX	
NO.	DESCRIPTION
PC-1	COVER SHEET
PC-2	ARRAY SITE MAP
PC-3	TYPICAL ARRAY DIMENSIONS
PC-4	RACKING COMPONENTS
PC-5	BALLAST LEGEND
PC-6	BALLAST LAYOUT - 1
PC-7	BALLAST LAYOUT - 2



STAMP:

PANELCLAW®

RACKING CONSTRUCTION SET

1600 OSGOOD ST. SUITE 2023
NORTH ANDOVER, MA 01845
TEL. 978.688.4900
www.panelclaw.com

REV	DESCRIPTION	PREP	CHECK	DATE
0	Initial Ballast Map Layout	BG	MM	2020-03-02

SCALE: 0" 1/2" 1" 2"

ORIGINAL SIZE 36"X24"
SHEET SIZE ARCH "D"

PREPARED FOR:
RETHINK ELECTRIC

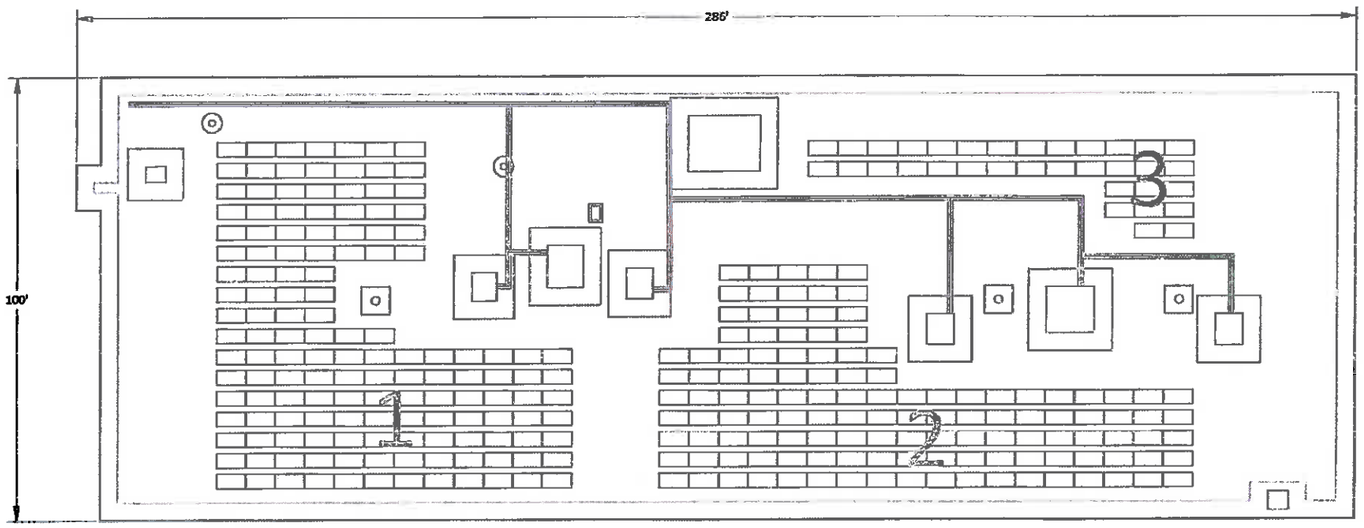
PROJECT:
SG - DARIEN

LOCATION:
8131 LEMONT ROAD
DARIEN IL 60516

SHEET TITLE:
COVER SHEET

REVISION: 0

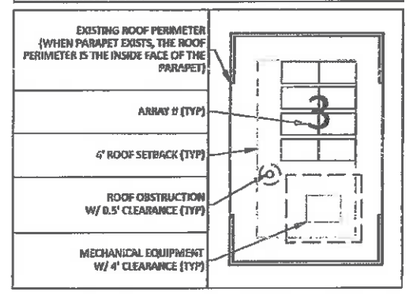
SHEET: PC-1

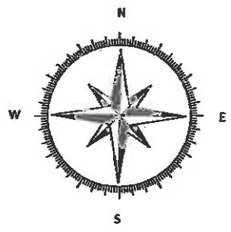


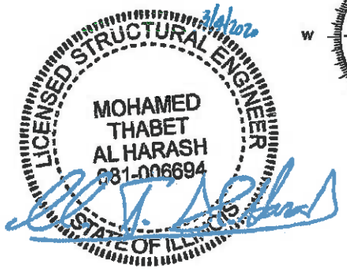
PROJECT SUMMARY	
MODULE TYPE	Adani Solar ASM-7-PERC-365
MODULE DIMENSIONS (IN.)	69.76 X 78.65 X 1.57
NUMBER OF MODULES	324
MODULE WATTAGE (W STC)	365
SYSTEM SIZE (kW STC)	118.0
SYSTEM WEIGHT (LB)	53017
SYSTEM AREA (SQ FT.)	9586
NUMBER OF ARRAYS	3
ARRAY TILT (DEG)	10.6

POLAR BEAR® III HD 20° - 56in		
PROJECT PART QUANTITY		
ITEM	PART NUMBER	QTY
NORTH SUPPORT	5000413102	82
SOUTH SUPPORT	5000412	82
STANDARD SUPPORT	5000410001	516
LONG BALLAST TRAY	200062206	312
SHORT BALLAST TRAY	200062503	76
CLAW	200069303	604
HARDWARE - CLAW	5000158G2	33
BOLT KIT - BALLAST TRAY	5000159	5
NUT KIT - BALLAST TRAY	5000169	13
CONCRETE MASONRY UNIT	N/A	383

*LONG BALLAST TRAY PART #200059303 MAY BE USED IN PLACE OF ALL LONG BALLAST TRAYS ABOVE. SHORT BALLAST TRAY PART #200060002 MAY BE USED IN PLACE OF ALL SHORT BALLAST TRAYS ABOVE.







ARRAY SITE MAP

SCALE: NTS

1 / PC-2

NOTES:

1. ALL DIMENSIONS SHOWN ARE BASED UPON INFORMATION PROVIDED TO PANELCLAW. FIELD VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION OF THE SOLAR ARRAY. NOTIFY PANELCLAW OF ANY DISCREPANCIES.

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REV	DESCRIPTION	DATE
0	Initial Ballast Map Layout	2020-03-02
	BG	MM

PREP	CHECK

SCALE:
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SHEET SIZE ARCH "D"

PREPARED FOR:
RETHINK ELECTRIC

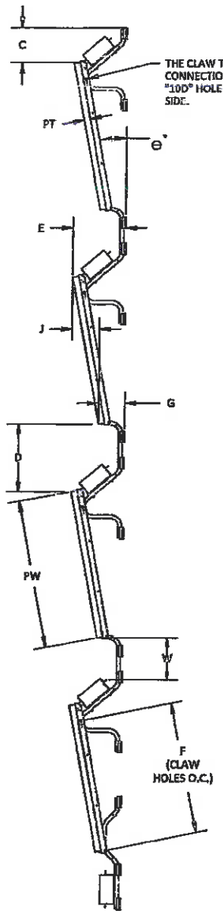
PROJECT:
SG - DARIEN

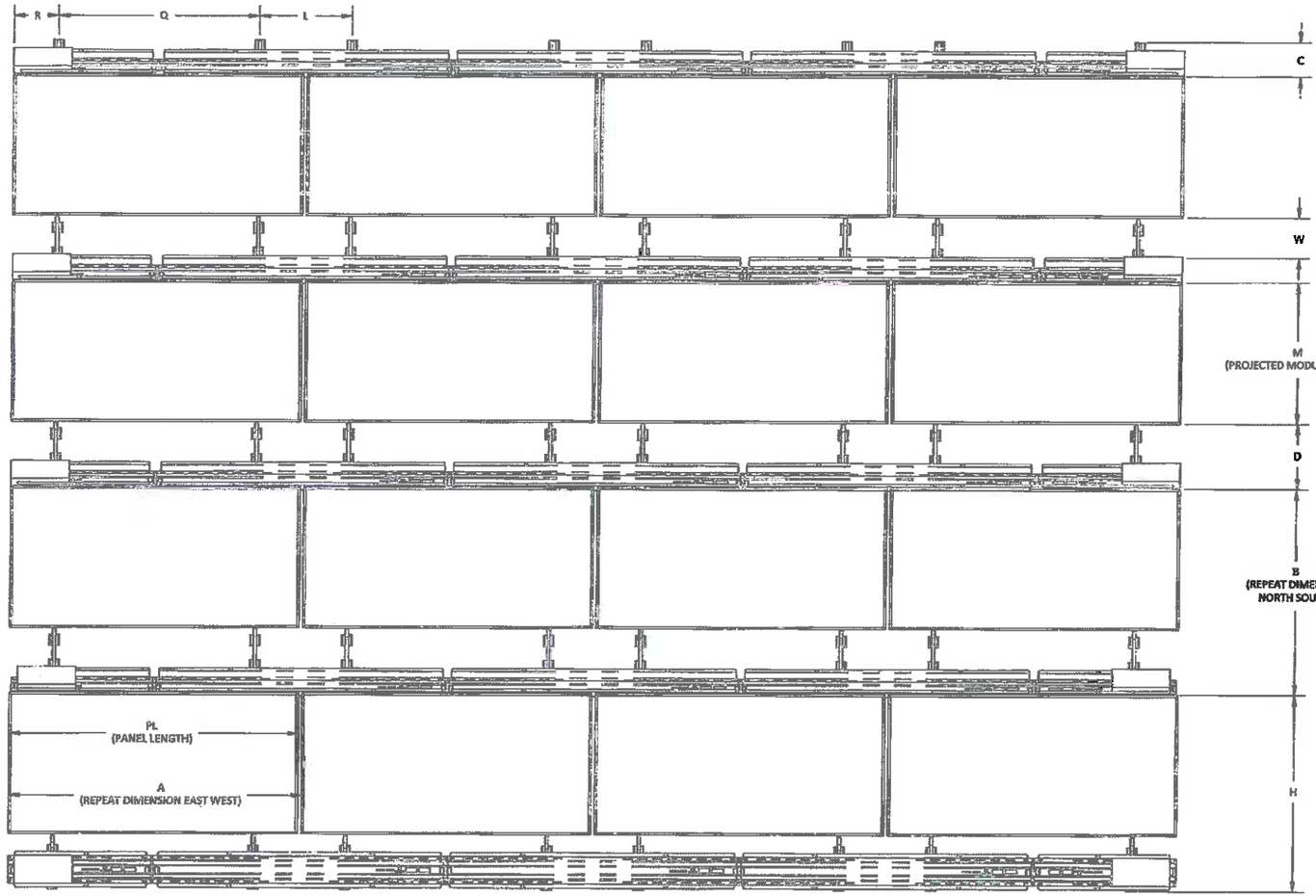
LOCATION:
8131 LEMONT ROAD
DARIEN IL 60516

SHEET TITLE:
ARRAY SITE MAP

REVISION: 0

SHEET: PC-2

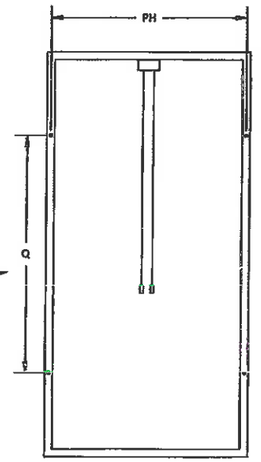




ARRAY CROSS SECTION VIEW (A / PC-3)
SCALE: NTS

ARRAY TOP VIEW (B / PC-3)
SCALE: NTS

WHEN INSTALLING CLAWS TO MODULES, BE SURE TO USE THE MODULE MOUNTING HOLES WITH THIS SPACING. SLIDE CLAWS TOWARD JUNCTION BOX PRIOR TO TORQUEING TO MAINTAIN CONSISTENT SUPPORT ALIGNMENT.



MODULE BACK VIEW DIMENSIONS (C / PC-3)
SCALE: NTS

TYPICAL ARRAY DIMENSIONS

		PL	PW	PT	PH	A	B	C	D	E	F	G	H	J	K	L	M	Q	R	W	Hole Diameter	B (DEG)	D / J (ft:1)	G.C.R.*
UNITS	mm	1998	1010	40	965	2023	1422	239	429	352	878	170	1356	182	103	833	993	1190	404	259	9.0	10.4	2.4	0.70
	IN	78.66	39.76	1.57	37.99	79.66	56.00	9.40	16.89	13.87	34.56	6.69	53.40	7.18	4.06	32.81	39.11	46.85	15.91	10.20	0.35	10.4	2.4	0.70

* G.C.R - Ground coverage ratio calculation = (PL*M) / (A*B)

STAMP:

LICENSED STRUCTURAL ENGINEER
MOHAMED THABET AL HARASH
081-006694
STATE OF ILLINOIS

PANELCLAW®

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NORTH ANDOVER, MA 01845
TEL: 978.688.4900
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REV	DESCRIPTION	PREP	CHECK	DATE
0	Initial Ballast Map Layout	BG	MM	2020-03-02

SCALE: 0" 3/2" 1" 2"
ORIGINAL SIZE 36"X24"
SHEET SIZE ARCH "D"

PREPARED FOR:
RETHINK ELECTRIC

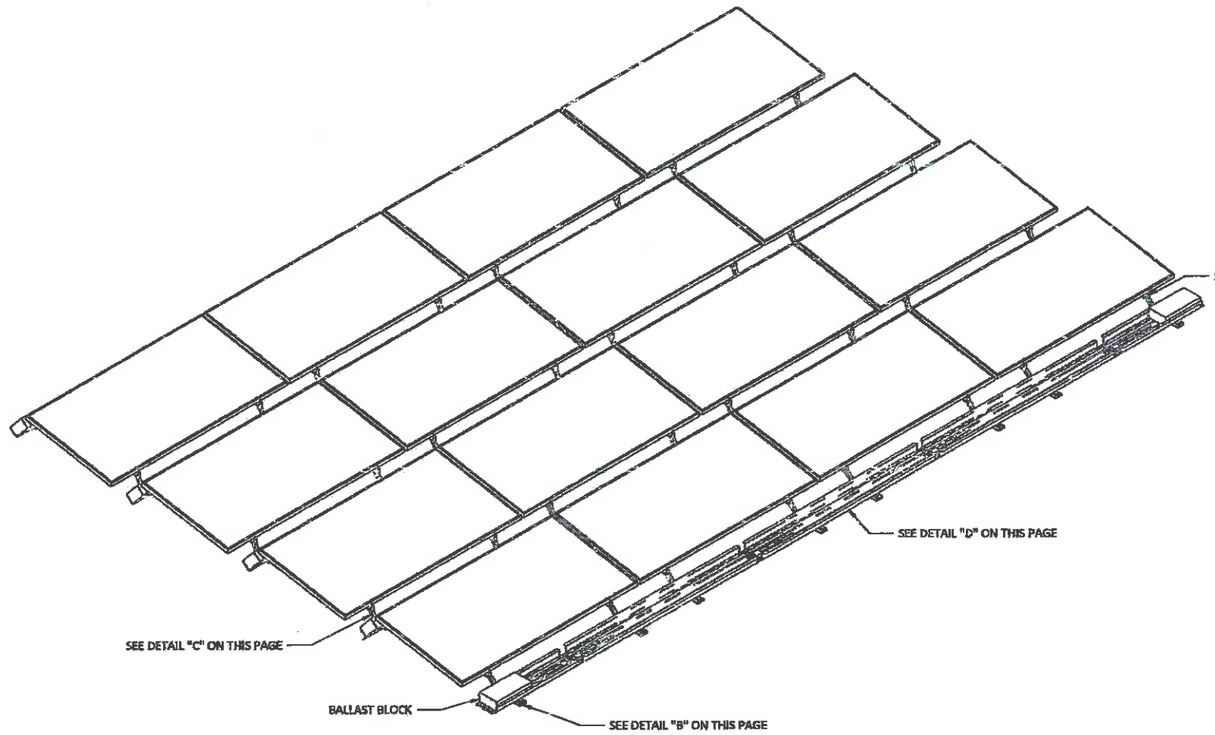
PROJECT:
SG - DARIEN

LOCATION:
8131 LEMONT ROAD
DARIEN IL 60516

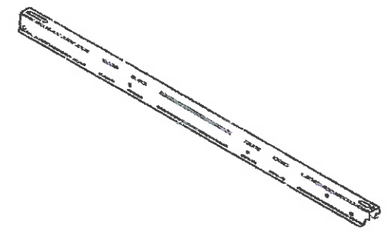
SHEET TITLE:
TYPICAL ARRAY DIMENSIONS

REVISION: 0
SHEET: PC-3

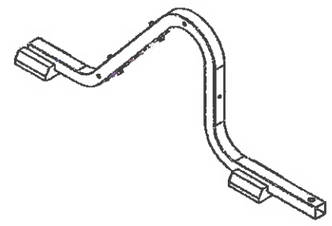
114375 8 7.2.0 7 10DHD-6.1 6 CT-10DHD-3.7 5 4 3 2 1



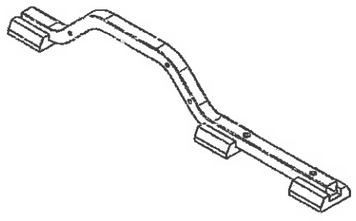
GENERIC ISOMETRIC VIEW — SCALE: NTS — A PC-4



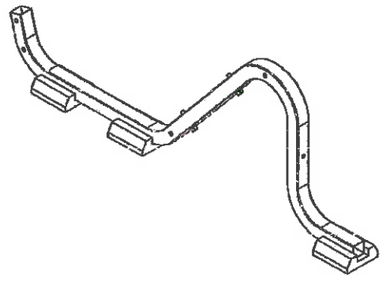
CLAW ISOMETRIC VIEW — SCALE: NTS — F PC-4



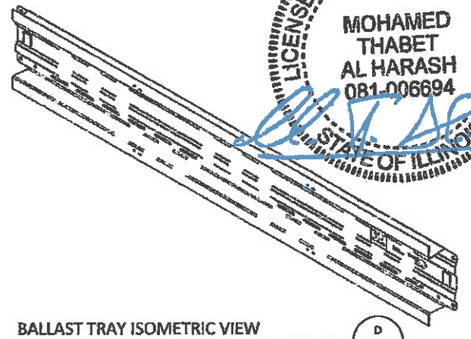
NORTH SUPPORT ISOMETRIC VIEW — SCALE: NTS — E PC-4



SOUTH SUPPORT ISOMETRIC VIEW — SCALE: NTS — B PC-4



STANDARD SUPPORT ISOMETRIC VIEW — SCALE: NTS — C PC-4



BALLAST TRAY ISOMETRIC VIEW — SCALE: NTS — D PC-4

LICENSED STRUCTURAL ENGINEER
MOHAMED THABET AL HARASH
081-006694
STATE OF ILLINOIS
2/6/2020

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1600 OSGOOD ST. SUITE 2023
NORTH ANDOVER, MA 01845
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www.panelclaw.com

REV	DESCRIPTION	CHECK	DATE
0	Initial Ballast Map Layout	MM	2020-03-02
		BG	

SCALE: 0" 1/2" 1" 2"
ORIGINAL SIZE 36"X24"
SHEET SIZE ARCH "D"

PREPARED FOR: RETHINK ELECTRIC

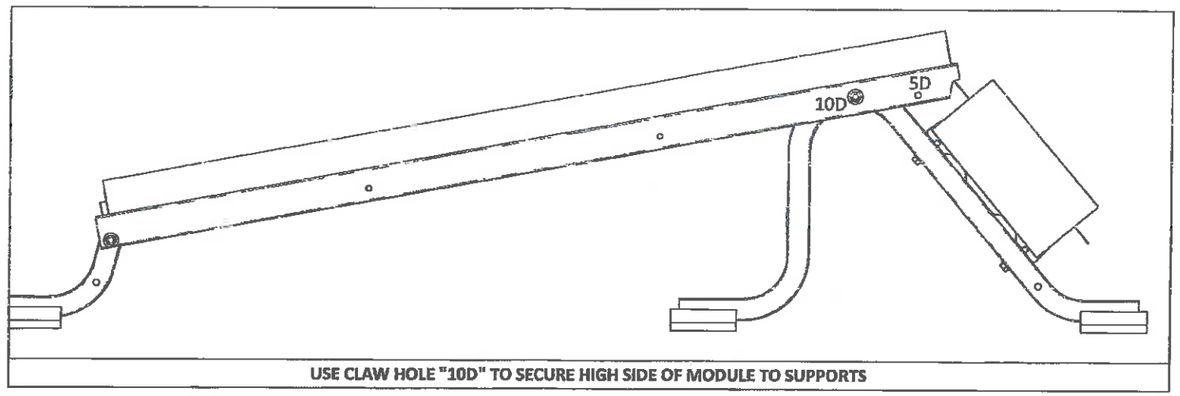
PROJECT: SG - DARIEN

LOCATION: 8131 LEMONT ROAD DARIEN IL 60516

SHEET TITLE: RACKING COMPONENTS

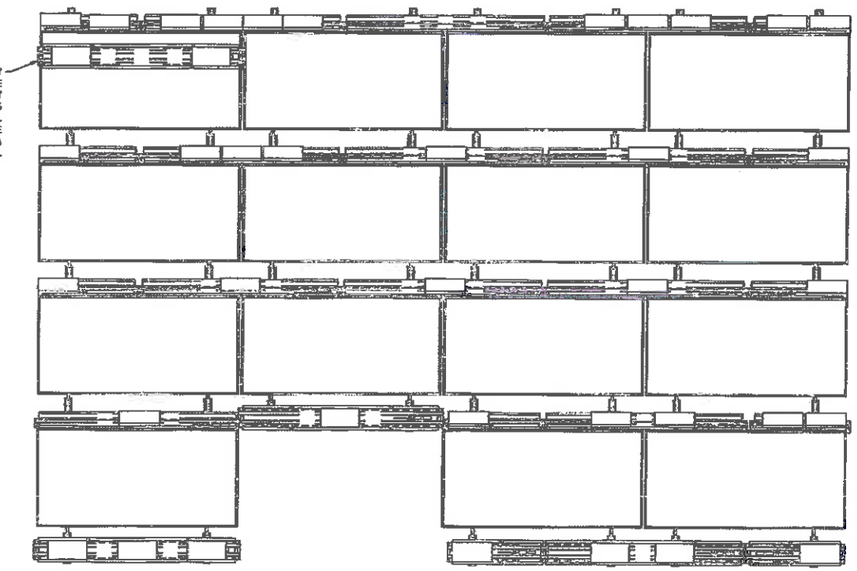
REVISION: 0

SHEET: PC-4

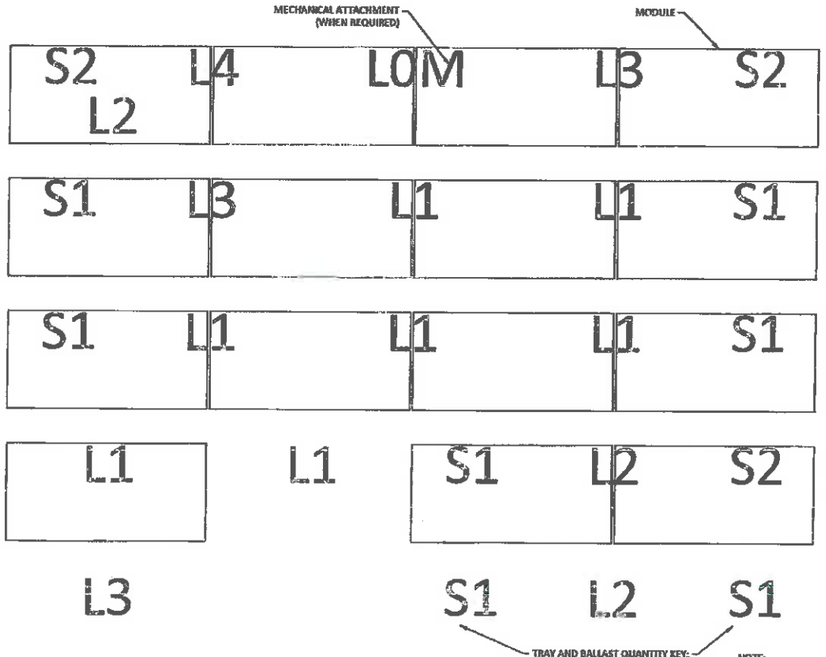


USE CLAW HOLE "10D" TO SECURE HIGH SIDE OF MODULE TO SUPPORTS

SUPPORT TO CLAW HOLE CONNECTION (A / PC-5)
SCALE: NTS



GENERIC BALLAST PLACEMENT LEGEND (B / PC-5)
SCALE: NTS



GENERIC TRAY, BALLAST, AND ATTACHMENT PLAN (C / PC-5)
SCALE: NTS

TRAY AND BALLAST QUANTITY KEY:
"S"=SHORT TRAY
"L"=LONG TRAY
"#"=QUANTITY OF BALLAST BLOCK IN TRAY
"M"=MECHANICAL ATTACHMENT (WHEN REQUIRED)
SEE PROJECT PART QUANTITIES TABLE PC-2 FOR LONG AND SHORT TRAY PART NUMBERS.

NOTE:
REFERENCE THE BALLAST MAP SHEETS FOR ARRAY SPECIFIC BALLAST TRAY AND BALLAST BLOCK QUANTITY REQUIREMENTS.

LICENSED STRUCTURAL ENGINEER
MOHAMED THABET AL HARASH
081-006694
STATE OF ILLINOIS
3/4/2020

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1600 OSGOOD ST. SUITE 2023
NORTH ANDOVER, MA 01845
TEL: 978.688.4900
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REV	DESCRIPTION	BG	CHECK	DATE
0	Initial Ballast Map Layout	MM	PREP	2020-03-02

SCALE:
0" 1/2" 1" 2"
ORIGINAL SIZE 36"X24"
SHEET SIZE ARCH "D"

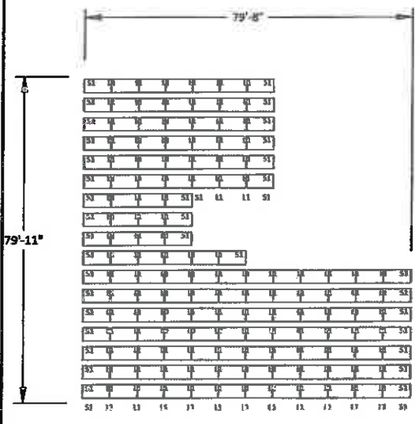
PREPARED FOR:
RETHINK ELECTRIC

PROJECT:
SG - DARIEN

LOCATION:
8131 LEMONT ROAD
DARIEN IL 60516

SHEET TITLE:
BALLAST LEGEND

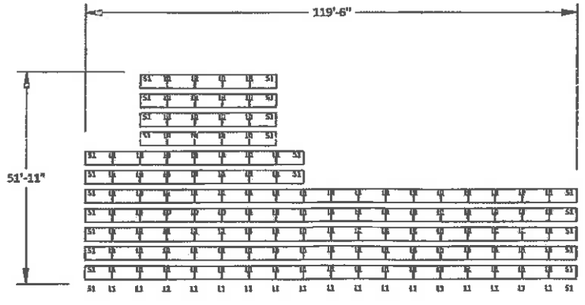
REVISION: 0
SHEET: PC-5



BALLAST LAYOUT - ARRAY 1

SCALE: 1/16" = 1'-0"

1 PC-6



BALLAST LAYOUT - ARRAY 2

SCALE: 1/16" = 1'-0"

2 PC-6

ARRAY 1		ARRAY 2	
ROOF INFORMATION		ROOF INFORMATION	
ROOF HEIGHT (FT)	35	ROOF HEIGHT (FT)	35
PARAPET HEIGHT (FT)	0	PARAPET HEIGHT (FT)	0
ROOF TILT (DEG)	1	ROOF TILT (DEG)	1
ROOF TYPE	EPDM	ROOF TYPE	EPDM
SPECIFICATIONS		SPECIFICATIONS	
NUMBER OF MODULES	144	NUMBER OF MODULES	126
MODULE POWER (W)	365	MODULE POWER (W)	365
ARRAY OUTPUT (kW)	52.6	ARRAY OUTPUT (kW)	46.0
ARRAY AZIMUTH	179	ARRAY AZIMUTH	179
PART QUANTITIES		PART QUANTITIES	
ITEM	QTY	ITEM	QTY
STANDARD SUPPORTS	258	STANDARD SUPPORTS	216
NORTH SUPPORTS	30	NORTH SUPPORTS	36
SOUTH SUPPORTS	30	SOUTH SUPPORTS	36
LONG BALLAST TRAY	140	LONG BALLAST TRAY	132
SHORT BALLAST TRAY	38	SHORT BALLAST TRAY	24
CLAWS	288	CLAWS	252
BALLAST BLOCKS	174	BALLAST BLOCKS	155
LOADING DETAILS		LOADING DETAILS	
SINGLE MODULE WT (LB)	50.7	SINGLE MODULE WT (LB)	50.7
SINGLE CMU WT (LB)	32	SINGLE CMU WT (LB)	32
TOTAL ARRAY WT (LB)	15515	TOTAL ARRAY WT (LB)	13721
ARRAY AREA (SQ. FT)	4516	ARRAY AREA (SQ. FT)	3969
ARRAY LOAD (PSF)	3.4	ARRAY LOAD (PSF)	3.5

LICENSED STRUCTURAL ENGINEER
MOHAMED THABET AL HARASH
081-006694
STATE OF ILLINOIS

STAMP:

PANELCLAW®

RACKING CONSTRUCTION SET

1600 OSGOOD ST. SUITE 2023
NORTH ANDOVER, MA 01845
TEL: 978.688.4900
www.panelclaw.com

REV	DESCRIPTION	PREP	CHECK	DATE
0	Initial Ballast Map Layout	BG	MM	2020-03-02

SCALE:
0" 1/2" 1" 2"
ORIGINAL SIZE 36"X24"
SHEET SIZE ARCH "D"

PREPARED FOR:
RETHINK ELECTRIC

PROJECT:
SG - DARIEN

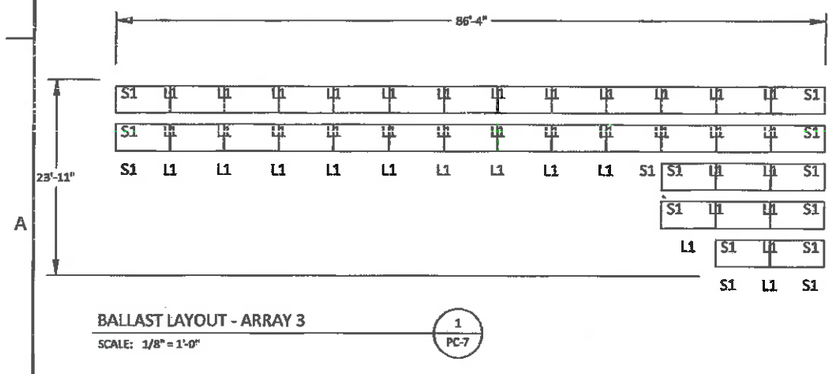
LOCATION:
8131 LEMONT ROAD
DARIEN IL 60516

SHEET TITLE:
BALLAST LAYOUT - 1

REVISION: 0

SHEET: PC-6

ARRAY 3	
ROOF INFORMATION	
ROOF HEIGHT (FT)	35
PARAPET HEIGHT (FT)	0
ROOF TILT (DEG)	1
ROOF TYPE	EPDM
SPECIFICATIONS	
NUMBER OF MODULES	34
MODULE POWER (W)	365
ARRAY OUTPUT (kW)	12.4
ARRAY AZIMUTH	179
PART QUANTITIES	
ITEM	QTY
STANDARD SUPPORTS	42
NORTH SUPPORTS	26
SOUTH SUPPORTS	26
LONG BALLAST TRAY	40
SHORT BALLAST TRAY	14
CLAWS	68
BALLAST BLOCKS	54
LOADING DETAILS	
SINGLE MODULE WT (LB)	50.7
SINGLE CMU WT (LB)	32
TOTAL ARRAY WT (LB)	4182
ARRAY AREA (SQ. FT)	1101
ARRAY LOAD (PSF)	3.8



BALLAST LAYOUT - ARRAY 3 (1 / PC-7)
SCALE: 1/8" = 1'-0"

STAMP:

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1600 OSGOOD ST. SUITE 2023
NORTH ANDOVER, MA 01845
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www.panelclaw.com

REV	DESCRIPTION	DATE	CHECK	PREP
0	Initial Ballast Map Layout	2020-03-02	MM	BG

SCALE: 0" 1/2" 1" 2"
ORIGINAL SIZE 36"X24"
SHEET SIZE ARCH "D"

PREPARED FOR:
RETHINK ELECTRIC

PROJECT:
SG - DARIEN

LOCATION:
8131 LEMONT ROAD
DARIEN IL 60516

SHEET TITLE:
BALLAST LAYOUT - 2

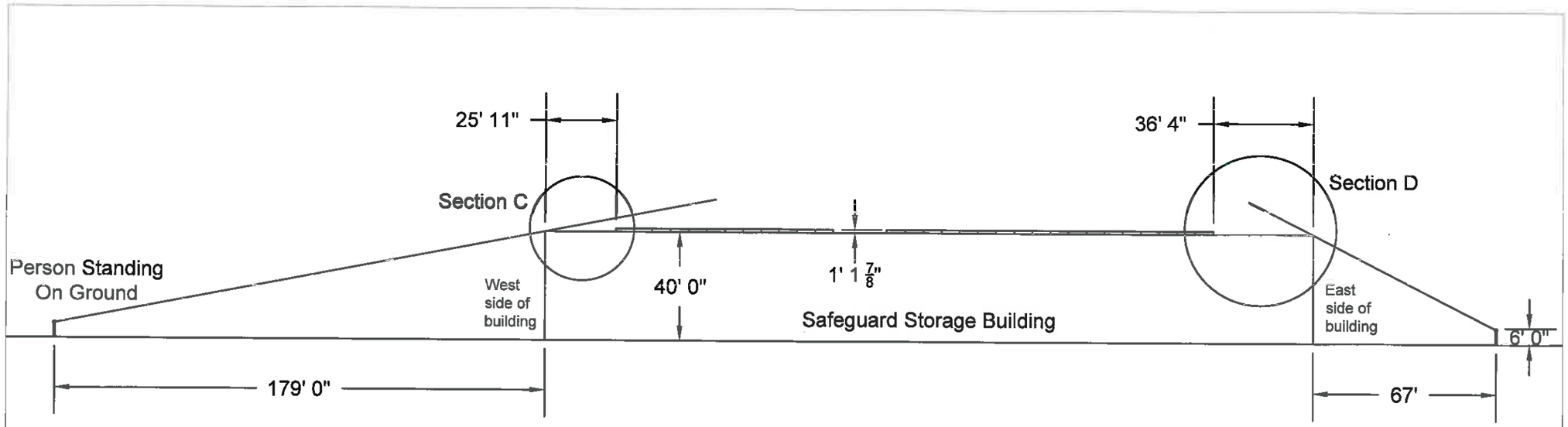
REVISION: 0
SHEET: PC-7

LICENSED STRUCTURAL ENGINEER
MOHAMED THABET AL HARASH
081-006694
STATE OF ILLINOIS

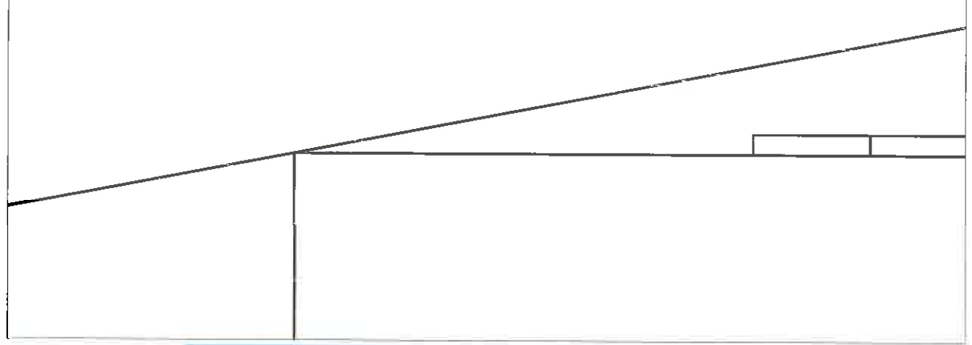
114375 8 7.2.0 7 10DHD-6.1 6 CT-10DHD-3.7 5 4 3 2 1

Solar Inst
ers

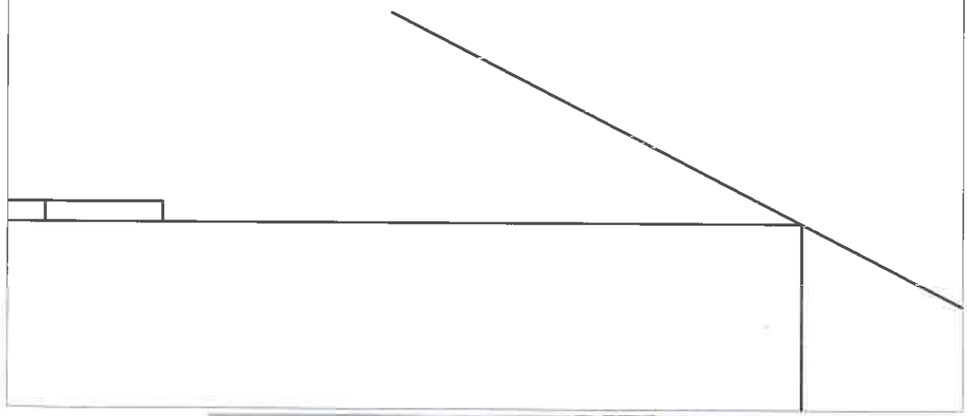
East/West Views



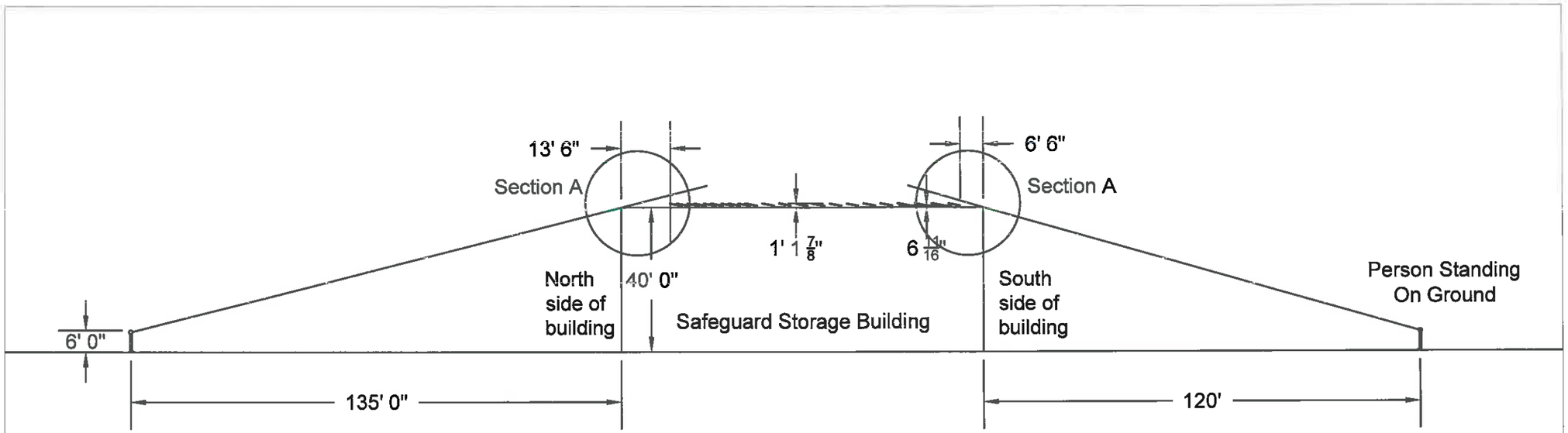
Section C



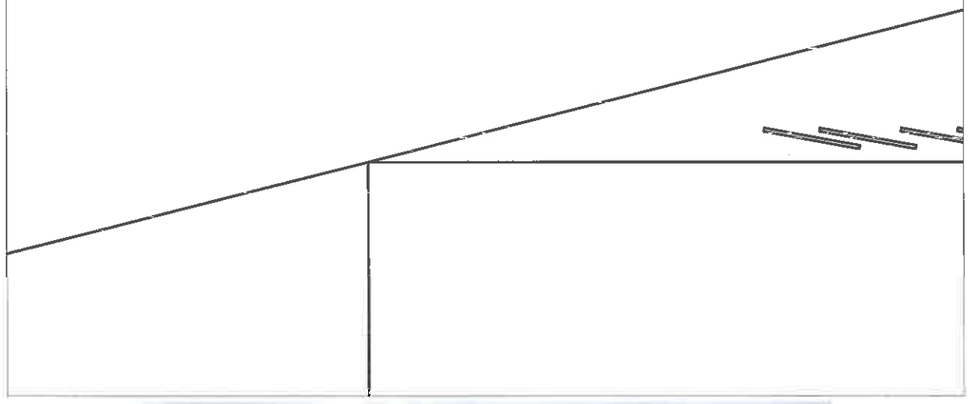
Section D



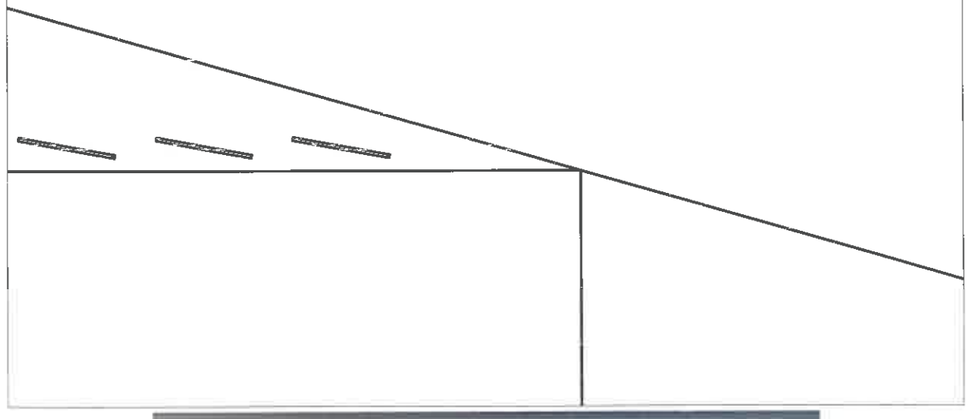
North/SouthViews



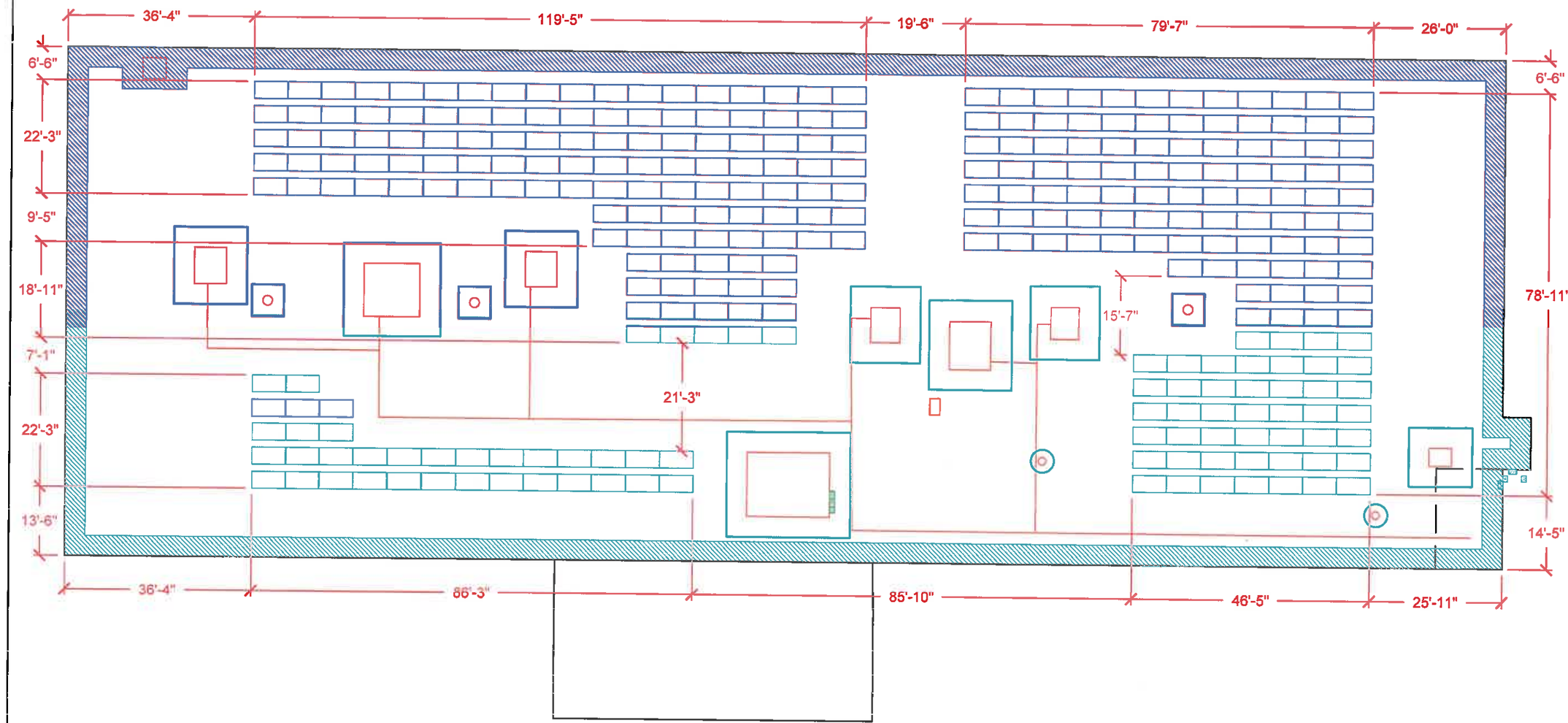
Section A



Section B



SITE PLAN DETAIL: SCALE:- 1" = 21.33334'



RE.THINK ELECTRIC

CONTRACTOR

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DEVELOPER

PIVOT ENERGY
1536 WYNKOOP ST.,
DENVER, CO 80202

PROJECT NAME & ADDRESS

SAFEGUARD STORAGE
8131 LEMONT RD
DARIEN, IL 60516

PROFESSIONAL ENGINEER STAMP

Rev A
DATE:10 March 2020

ROOF PLAN

PV 2.2

Dimension on North Side of Building

Dimension on South Side of Building

Dimension on East Side of Building

Dimension on West Side of Building

View from North Side of Building

View from South Side of Building

View from East Side of Building

View from West Side of Building

DuPage Web Mapping Application - DuPage County, Illinois

DuPage County
Information Technology Department
GIS Division
421 N County Farm Rd.
Wheaton, IL 60187
Ph# (630)407-5000
Email: gis@dupageco.org

DuPage Maps Portal:
http://dupage.maps.arcgis.com/home

DuPage County, Illinois Web Site:
www.dupageco.org

N

This map is for assessment purposes only.

CITY OF DARIEN

ZONING VARIATIONS

JUSTIFICATION NARRATIVE

Purpose

To be consistent and fair, the City is obligated to make decisions on zoning variation requests based on findings-of-fact. The Applicant should write a justification narrative that contains evidence (facts) that support a conclusion (finding) that the variation is necessary and would not cause problems. It should include: a) explanation of why the variation is being requested, b) describe the 'hardship condition' of the property that makes it difficult to conform, c) estimate the impact on neighbors, and d) respond to each of the decision criteria below.

Decision Criteria (See City Code Section 5A-2-2-3)

2a. The property in question cannot yield a reasonable return if permitted to be used only under the conditions allowed by the regulations in the zone.

2b. The plight of the owner is due to unique circumstances.

2c. The variation if granted will not alter the essential character of the locality.

3a. Essential Need? The owner would suffer substantial difficulty or hardship and not mere inconvenience or a decrease in financial gain if the variation is not granted.

3b. Problem with Property? There is a feature of the property such as slope or shape or change made to the property, which does not exist on neighboring properties, which makes it unreasonable for the owner to make the proposed improvement in compliance with the Zoning Code. Such feature or change was not made by the current owner and was not known to the current buyer at the time of purchase.

3c. Smallest Solution? There is no suitable or reasonable way to redesign the proposed improvements without incurring substantial difficulty or hardship or reduce the amount of variation required to make such improvements.

3d. Create Neighbor Problem? The variation, if granted, will not cause a substantial difficulty, undue hardship, unreasonable burden, or loss of value to the neighboring properties.

3e. Create Community Problem? The variation, if granted, may result in the same or similar requests from other property owners within the community, but will not cause an unreasonable burden or undesirable result within the community.

3f. Net Benefit? The positive impacts to the community outweigh the negative impacts.

3g. Sacrifice Basic Protections? The variation, if granted, will comply with the purposes and intent of the Zoning Code set forth in Section 5A-1-2(A) and summarized as follows: to lessen congestion, to avoid overcrowding, to prevent blight, to facilitate public services, to conserve land values, to protect from incompatible uses, to avoid nuisances, to enhance aesthetic values, to ensure an adequate supply of light and air, and to protect public health, safety, and welfare.