

Please note that, pursuant to the authority provided by Minn. Stat. Sec. 13D.021, subd. 1(1), the City has determined that in-person meetings of the City Council are not practical or prudent due to the COVID-19 public health pandemic and the declared national, state, and local emergencies. Meetings of the Council will be conducted by electronic or telephonic means. Under Minn. Stat. Sec. 13D.021, subd. 3, to the extent practical and possible, the City Council will allow individuals to monitor the meeting electronically. Access to the meeting can be obtained online by following the link provided below or by contacting the City Hall for instructions and methods for obtaining access to the meeting.

Meeting Access Information: <a href="https://www.ci.independence.mn.us/meetings">https://www.ci.independence.mn.us/meetings</a>

PLANNING COMMISSION MEETING AGENDA REGULAR MEETING TUESDAY MARCH 16, 2021

#### 7:30 PM Regular Meeting

- 1. Call to Order
- 2. Oath of Reappointed Commissioner
- 3. Roll Call
- 4. Approval of Minutes:
  - a. February 16, 2021 Planning Commission Meeting
  - b. March 2, 2021 City Council Meeting Minutes (For Information Only)
- 5. **TABLED FROM 2.16.2021:** John Nyhlen (Applicant) and Jeffrey Cunningham (Owner) request that the City consider the following action for the property located at 9226 Highway 12 (PID No. 07-118-24-34-0005) in Independence, MN:
  - a. A variance to allow a ground mounted solar system that exceeds 500 SF in total area.
- 6. **PUBLIC HEARING:** Mike Kuka (Applicant/Owner) is requesting the following action for the property located at 4405 County Road 92 N. (PID No. 0411824310002) in the City of Independence, MN:
  - a. An amendment to the existing conditional use permit, allowing a commercial riding stable, to construct a new detached accessory structure to be used as a tack room on the property located at 4405 County Road 92 N.

- 7. <u>PUBLIC HEARING:</u> Mark Kroskin (Applicant/Owner) is requesting the following action for the property located at 6000 Providence Curve (PID No. 1411824420008) in the City of Independence, MN:
  - a. A variance to allow a detached accessory structure to be located closer to the side and rear property lines than otherwise permitted on the property located at 6000 Providence Curve.
- 8. Bryant Johnson (Applicant) and Hilltop Farm, Inc. (Owner) is requesting a concept plan review for a subdivision of the property located between CSAH 90 and CSAH 83 and identified as PID No. 2611824130001. The proposed subdivision would ultimately require the rezoning of the property and a minor subdivision and would create eleven rural residential lots.
- 9. Open/Misc.
- 10. Adjourn.

Fax: 763.479.0528

# MINUTES OF A MEETING OF THE INDEPENDENCE PLANNING COMMISSION TUESDAY, FEBRUARY 16, 2020 – 7:30 P.M. (Virtual Meeting)

#### 1. CALL TO ORDER

Pursuant to due call and notice thereof, a regular meeting of the Independence Planning Commission was called to order by Palmquist at 7:30 p.m.

#### 2. OATH OF REAPPOINTED COMMISSIONERS

Volkenant sworn in by Horner for a three-year term as Planning Commissioner.

3. ROLL CALL (all virtual)

PRESENT: Commissioners Garner, Volkenant, Dumas and Palmquist STAFF: City Administrator Kaltsas, Assistant to Administrator Horner

ABSENT: Commissioner Thompson

VISITORS: Mayor Johnson, Andrew Toumisto

#### 4. Approval of Minutes:

- a. December 15, 2020 Planning Commission Meeting
- b. January 5, 2021 City Council Meeting Minutes (For Information Only)

Motion by Dumas to approve the December 15, 2020 Planning Commission minutes, second by Volkenant. Ayes: Volkenant, Gardner, Dumas, and Palmquist. Nays: None. Absent: Thompson. Abstain: None. Motion Approved.

- 5. **PUBLIC HEARING:** John Nyhlen (Applicant) and Jeffrey Cunningham (Owner) request that the City consider the following action for the property located at 9226 Highway 12 (PID No. 07-118-24-34-0005) in Independence, MN:
  - a. A variance to allow a ground mounted solar system that exceeds 500 SF in total area.

Kaltsas said The applicant approached the City in 2020 about the possibility of installing a ground mounted solar system on the subject property. The City provided the applicant with the requirements and discussed the process for initially developing the City's standards relating to ground mounted solar systems. All ground mounted solar systems require a conditional use permit. Ground mounted solar systems are limited to a maximum square footage of 500 square feet. Ground mounted solar systems have the following requirements:

Subd. 5. Ground-mounted solar energy systems shall conform to the following standards:

- (a) Ground-mounted systems shall only be allowed on a parcel with an existing principal structure.
- (b) Ground-mounted systems shall be located only in rear or side yards.
- (c) Ground-mounted systems shall not be located in the Shoreland Overlay District.
- (d) Ground-mounted systems shall be wholly screened from view from the public right-of-way and

adjacent residential structures. Methods for screening shall include berming, fencing, landscaping and/or combination thereof.

- (e) Ground-mounted systems shall be located on a parcel of at least 2.5 acres.
- (f) Ground-mounted systems shall be setback 40 feet from the rear yards.
- (g) Ground-mounted systems shall be setback 30 feet from the side yards.
- (h) Ground-mounted systems shall have a maximum area of 500 SF.
- (i) The maximum height for any component of the system shall be 15 feet.
- (j) Ground-mounted systems shall be in compliance with any applicable local, state and federal regulatory standards, including building, electrical and plumbing codes.
- (k) Ground-mounted systems and their support structures shall be designed by a certified professional to meet applicable professional standards for the local soil and climate conditions.

The proposed ground mounted solar system would be located in the rear yard of the existing home. The proposed solar system would be comprised of two separate ground mounted arrays. The total square footage of the two arrays is proposed to be 2,600 SF (1,300 SF per array). The proposed system would exceed the maximum square footage permitted by 2,100 SF. The arrays would be setback approximately 40 feet from the north rear property line (rear yard) and 55 feet from the west side property line (side yard). The required setback for the rear yard is 40 feet and the required setback for the side yard is 30 feet. The proposed ground mounted system would have a maximum height of 9'-3" to the top of the highest portion of the panels. The City requires systems to be wholly screened from view of the public right of way and adjacent residential structures. There is a residential home and property just to the south of the subject property and proposed location of the ground mounted array. The proximity of the proposed ground mounted system to the nearest residence is approximately 250 feet. The distance from the proposed solar arrays to the Hwy 12 right of way is approximately 350 feet. The City will need to discuss whether or not additional screening should be added to the south property line should the request be recommended for approval. There is some existing vegetation located along the south property line (north property line of the adjacent property). One additional consideration relating to screening is that the panels will be oriented to face south.

The applicant has provided the City with a site plan and images of the proposed solar system. The system is comprised 120 panels. The panels are oriented to the south and will be installed at a 30-degree angle to the ground. The proposed panels are mounted to a galvanized metal racking system. The racking system is proposed to be secured to the ground using helical pilings. The proposed solar panels are a mono Perc cell panel that has an anti-reflection coating. This type of panel is typically a little darker blue in color. The criteria for granting a conditional use permit are clearly delineated in the City's Zoning Ordinance (Section 520.11 subd. 1, a-i) as follows:

- 1. The conditional use will not adversely affect the health, safety, morals and general welfare of occupants of surrounding lands.
- 2. The proposed use will not have a detrimental effect on the use and enjoyment of other property in the immediate vicinity for the proposes already permitted or on the normal and orderly development and improvement of surrounding vacant property for uses predominant in the area.
- 3. Existing roads and proposed access roads will be adequate to accommodate anticipated traffic.
- 4. Sufficient off-street parking and loading space will be provided to serve the proposed use.
- 5. The proposed conditional use can be adequately serviced by public utilities or on-site sewage treatment, and sufficient area of suitable soils for on-site sewage treatment is available to protect the city form pollution hazards.

- 6. The proposal includes adequate provision for protection of natural drainage systems, natural topography, tree growth, water courses, wetlands, historic sites and similar ecological and environmental features.
- 7. The proposal includes adequate measures to prevent or control offensive odor, fumes, dust, noise, or vibration so that none of these will constitute a nuisance.
- 8. The proposed condition use is consistent with the comprehensive plan of the City of Independence.
- 9. The proposed use will not stimulate growth incompatible with prevailing density standards.
- 520.21. Standards for granting variances. Subdivision 1. The City Council may grant a variance from the terms of this zoning code, including restrictions placed on nonconformities, in cases where:
- 1) the variance is in harmony with the general purposes and intent of this zoning code; 2) the variance is consistent with the comprehensive plan; and 3) the applicant establishes that there are practical difficulties in complying with the zoning code (Amended, Ord. 2011-08)
- Subd. 2. An applicant for a variance must demonstrate that there are practical difficulties in complying with the zoning code. For such purposes, "practical difficulties" means:
- (a) The property owner proposes to use the property in a reasonable manner not permitted by the zoning code;
- (b) the plight of the property owner is due to circumstances unique to the property not created by the landowner;
- (c) the variance, if granted, will not alter the essential character of the locality.

Economic considerations alone do not constitute practical difficulties. Practical difficulties include, but are not limited to, inadequate access to direct sunlight for solar energy systems. (Amended, Ord. 2011-08)

Subd. 3. The City Council shall not grant a variance to permit a use that is not allowed under the zoning code based on the zoning classification of the affected property. (Amended, Ord. 2011-08) 520.23. Conditions and restrictions. The board of adjustments may recommend, and the City Council may impose conditions on a variance. Conditions must be directly related to and must bear a rough proportionality to the impact created by the variance. (Amended, Ord. 2011-08)

The City has discussed the proposed ground mounted solar system with the applicant. The proposed ground mounted solar system exceeds the City's maximum size for ground mounted solar systems. The energy generated by this system 38.4 kW (AC) falls just below the maximum amount permitted by the state tariff limits for residential systems. The applicant has noted that the homeowners are planning on remodeling the home and installing a ground source HVAC system. The ground source system will generate a significant energy need for the property. There are a few additional considerations that should be noted by the City:

- The maximum size of permitted by a ground mounted solar system (500 SF) was based on the size of a typical residential solar system. This system would require the City to grant a variance to the maximum size to allow 2,100 additional square feet of surface area. The criteria for granting a variance are provided within this report. The City will need to find that the size limitation on ground mounted systems creates a hardship to the owner. Additionally, the City will need to also find that the granting of a variance will not alter the essential character of the area and maintain the reasonable use of the property.
- The proposed system is a residential system that generates an amount of energy that comes in City of Independence

just below the maximum permitted for a residential installation. The system will generate approximately 62,000 kWh in the first year. The average residential property across the US uses approximately 10,649 kWh per year and as much as 15,000 kWh per year. The proposed system meets the location, setback and maximum height requirements of the zoning ordinance.

- The property has only one neighboring and potentially impacted property. The visibility of this system from the Hwy 12 right of way is limited or fully screened. The existing vegetation that separates the two properties is comprised primarily deciduous trees/shrubs.
- The location of the proposed solar system is close to a potential wetland area (see yellow possible and blue probable areas below). The applicant is going to need to verify the extents of the wetland and confirm that no impact or a de minimis impact to the wetland is permitted. This may require a wetland delineation, adjusting the location within this general area of the property or splitting the system into three shorter arrays versus two longer arrays.

The City will need to determine if the system should be further screened from the south property line. The City will also need to find that the proposed variance and conditional use permit meet the criteria for granting both and continues to allow the reasonable use and enjoyment of the surrounding properties. This site located off of US Hwy 12, the orientation of the proposed solar system and the relationship to the surrounding properties all aid in the mitigation of potential impacts relating to the ground mounted solar array. The City will need to determine if the system should be further screened from the south property line. The City will also need to find that the proposed variance and conditional use permit meet the criteria for granting both and continues to allow the reasonable use and enjoyment of the surrounding properties.

This site located off of US Hwy 12, the orientation of the proposed solar system and the relationship to the surrounding properties all aid in the mitigation of potential impacts relating to the ground mounted solar array. Staff is seeking a recommendation from the Planning Commission pertaining to the request for a conditional use permit and variance with the following findings and conditions:

- 1. The proposed conditional use permit and amendment request meets all applicable conditions and restrictions stated in Chapter V, Section 510, Zoning, in the City of Independence Zoning Ordinance.
- 2. Approval of the conditional use permit will be subject to the following conditions:
- a) The applicant shall verify the extents of the wetland boundary and confirm that no impact or a de minimis impact to the wetland is permitted by all regulatory authorities. This may require a wetland delineation. Based on the information provided relating to the wetland boundary, the proposed location and layout of the solar array may need to be adjusted or the array may need to be split into three shorter arrays versus two longer arrays.
- 3. The conditional use permit will include the following conditions:
- a) The conditional use permit will allow a 2,600 SF ground mounted solar system that is installed in accordance with the approved plans attached hereto as Exhibit A.
- b) The ground mounted solar system shall be constructed in accordance with all applicable zoning code, building code and other applicable standards.
- 4. The City finds that the criteria for granting a variance have been satisfied by the applicant. Specifically, the City finds the following:
- a. The proposed residential ground mounted solar system will not take away from the essential character of the property or surrounding properties.
- b. The proposed variance will allow a larger residential ground mounted solar system that provides energy solely for this residential property. c. Potential impacts resulting from the larger ground mounted solar

system are adequately mitigated as a result of the properties location and proximity to surrounding properties.

b) The applicant shall pay for all costs associated with the review and recording of the resolution granting approval of the conditional use permit and variance.

Dumas asked if any neighbors had an issue. Kaltsas said one property owner near the east had inquired on the application but now formal or written comments. Gardner noted it is pretty isolated and pretty commercial.

Gardner opened the Public Hearing.

#### **Public Hearing Open**

No comments.

Palmquist motioned to close the Public Hearing, second by Dumas.

#### **Public Hearing Closed**

Gardner asked why all this was needed and that we had denied previous applications as quasi-commercial. He asked how this creeps over that line as it is pretty big for a single house. Kaltsas agreed it is a pretty big system. Dumas asked if the plan was to use it for electric heat pump. Kaltsas said yes that it was to be used in that manner. Gardner said it was well-hidden but very large. Kaltsas said it maintains state tariffs for residential systems and that could be the threshold to consider. He noted the system needs to be 40 kilowatts lower than AC.

Palmquist said this is an option for future energy and generally accepted but he feels it is too big as far as scale of the scope. He thinks it could set a precedent for the City. He noted this was 400% increase over what the ordinance currently allows. Dumas agreed it was a really large system. Kaltsas said the net metering is regulated through the utility and this system would max out that metering while coming in just under the threshold to have a faster rate of return. Palmquist said p.4 of 520.21 – Practical difficulties should be guiding the decision as it lists the standards for granting the variance. Palmquist said he does not think there is a practical difficulty being established. Volkenant said what is the intent of the owner for so large of a system and thought more information should be requested of the homeowner.

Motion by Volkenant, second by Dumas to table the request for a variance to allow a ground mounted solar system that exceeds 500 SF in total area until more information is obtained from the applicant. Ayes: Volkenant, Dumas, and Gardner. Nays: Palmquist. Absent: Thompson. Abstain: None. Motion Approved.

- 6. **PUBLIC HEARING:** Andrew Toumisto (Applicant/Owner) requests that the City consider the following action for the properties located at 4024 and 4084 Lake Sarah Drive South (PID No.s 02-118-24-43-0004 and 02-118-24-43-0005) in Independence, MN:
  - a. A minor subdivision to permit a lot combination which would combine the two subject properties into one property.

Kaltsas said in 2015 the previous owner of this parcel subdivided the original property into 5 (5) buildable lots known as HENDLEY ADDITION. There were three lots created on Lake Sarah Drive South and two

lots created on CSAH 11. The applicant initially purchased 4084 Lake Sarah Drive South (north parcel) and constructed a home on the property. The applicant recently acquired 4024 Lake Sarah Drive South. Following acquisition of the property, he located a small, detached shed on the north side of the property not knowing that it was not permitted without a principal structure. The City notified the applicant that the shed was not permitted and discussed possible solutions which included combining the two properties into one property. The applicant would like to combine the properties back into one (1) lot for the purpose of using the entire property as one property. There are several aspects of this property that should be noted by the City during consideration of the application:

- 1. The properties are heavily wooded and have a large wetland on the east side.
- 2. The existing shed is considered an illegal structure and will have to be removed if the lot combination is not approved. If approved, the detached accessory shed would be permitted and would meet applicable setbacks.
- 3. Based on the current zoning and combined lot size, this property could be subdivided again in the future. The minimum lot size in the RR-Rural Residential zoning district required in order for subdivision to be considered is 7.6 acres. The current standard would allow a maximum of two lots for properties less than 12.6 acres (this property will be 12.51 acres combined).
- 4. The existing home and accessory buildings will meet all requisite setbacks in the after condition.
- 5. The applicant is proposing to dedicate the new and amended 10' drainage and utility easements as shown on the proposed plan. The City will consider vacating a portion of the drainage and utility easement that is located along the east/west property line to be removed (see below). The applicant shall execute the necessary documents to clean up any easements as determined necessary by the City. The proposed subdivision to allow a lot combination appears to meet all applicable standards of the City's zoning and subdivision ordinance. The combined lot will fit into the surrounding area and should have minimal impacts on the surrounding properties. Staff is seeking a recommendation from the Planning Commission for the requested minor subdivision with the following findings:
- 1. The proposed minor subdivision to allow a lot combination meets all applicable criteria and conditions stated in Chapter V, Section 500, Planning and Land Use Regulations of the City of Independence Zoning Ordinance.
- 2. The Applicant shall pay for all costs associated with the City's review of the requested minor subdivision.
- 3. The Applicant shall record the subdivision and City Council Resolution with the county within six (6) months of approval.
- 4. The Applicant shall execute and record the requisite drainage and utility easements with the county within six (6) months of approval.

Gardner opened the Public Hearing.

#### **Public Hearing Opened**

Toumisto said he is buying the property from his in-laws and didn't know he could not put a shed on that property prior.

Dumas motioned to close the Public Hearing, second by Thompson.

#### **Public Hearing Closed.**

Motion by Palmquist, second by Dumas to approve a minor subdivision to permit a lot combination which would combine the two subject properties into one property for the properties located at 4024 and 4084 Lake Sarah Drive South (PID No.s 02-118-24-43-0004 and 02-118-24-43-0005) in Independence, MN: Ayes: Volkenant, Dumas, Gardner and Palmquist. Nays: . Absent: Thompson. Abstain: None. Motion Approved.

8. Open/Misc.

Palmquist asked where the Comp Plan is at and Kaltsas said it is being looked at as getting agreement on density through Met Council. He hopes to have resolution in 4-6 weeks.

9. Adjourn.

Motion by Palmquist, second by Volkenant to adjourn at 8:40 p.m.

Respectfully Submitted,

Trish Gronstal/Recording Secretary

# MINUTES OF A REGULAR MEETING OF THE INDEPENDENCE CITY COUNCIL

TUESDAY, FEBRUARY 16, 2021 –6:30 P.M.

(Virtual Meeting/ All Attendees)

#### 1. CALL TO ORDER.

Pursuant to due call and notice thereof, a regular meeting of the Independence City Council was called to order by Mayor Johnson at 6:30 p.m.

#### 3. PLEDGE OF ALLEGIANCE.

Mayor Johnson led the group in the Pledge of Allegiance.

2. ROLL CALL (Note: all noted present were "virtually" present

PRESENT: Mayor Johnson, Councilors Spencer, Betts, and McCoy

ABSENT: Grotting

STAFF: City Administrator Kaltsas, Assistant to Administrator Horner

VISITORS: None

#### 3. \*\*\*\*Consent Agenda\*\*\*\*

All items listed under Consent Agenda are considered to be routine by Council and will be acted on by one motion. There will be no separate discussion of these items. If discussion is desired, that item will be removed from the Consent Agenda and will be considered separately.

- a. Approval of City Council Minutes from the February 2, 2021 Regular City Council Meeting.
- b. Approval of Accounts Payable; (Batch #1 Checks Numbered 20271-20275, Batch #2 Check Numbered 20276-20292).
- c. Approval of annual liquor license renewals for the following establishments:
  - i. Ox Yoke Inn Off Sale, On Sale and Sunday License
  - ii. Windsong Farm Golf Club LLC Off Sale, On Sale and Sunday License
  - iii. Pioneer Creek Golf LLC On Sale and Sunday License

Motion by McCoy, second by Betts to approve the Consent Agenda. Ayes: Johnson, Spencer, McCoy, and Betts. Nays: None. Absent: Grotting. Abstain. None. MOTION DECLARED CARRIED.

4. SET AGENDA – ANYONE NOT ON THE AGENDA CAN BE PLACED UNDER OPEN/MISC.

Kaltsas added discussion on Medina Fire District Meeting.

#### 5. REPORTS OF BOARDS AND COMMITTEES BY COUNCIL AND STAFF

#### **Spencer attended the following meetings:**

• Met with Joe Baker on Pioneer Sarah Creek Watershed.

#### **Grotting attended the following meetings:**

• None

#### **McCoy** attended the following meetings:

• None

#### Betts attended the following meetings: (Virtual)

- Experienced Officials Conferences
- Police Commission Meeting

#### Johnson attended the following meetings: (Virtual)

- Towards Zero Death Virtual Meetings
- Experienced Officials Conference
- Regional Council of Mayors Meeting
- Orono School Board Meeting
- West Hennepin Chamber of Commerce Meeting
- Northwest League of Cities Meeting
- Fire Department Meeting with Medina
- Executive Committee Meeting for Highway 55 Corridor
- Met with Engineer on Highway 55 Corridor
- Met with Dobozenski resident (in-person)
- Met with Wes Bendickson (in-person)

#### **Horner attended the following meetings:**

• West Hennepin Chamber of Commerce Meeting

#### **Kaltsas attended the following meetings:**

- Bi-weekly meeting on County Road 92 and Highway 12 projects
- 6. West Hennepin Public Safety Director Gary Kroells: Presentation of the January 2021 Activity Report.

Kroells stated there were 388 incidents reported through the end of January. There were 265 in the City of Independence and 109 in the City of Maple Plain. Kroells highlighted a few cases.

\*\*for a complete report see the packet\*\*

7. Consideration of the **Ordinance 2021-01**: An ordinance updating <u>Section 305.01 Planning commission established and continued.</u> Adding two (2) alternate planning commission positions.

Kaltsas stated Council discussed the possibility of expanding the planning commission by adding Planning Commission Alternates as a way to provide experience for citizens interested in serving the City and also as a way to ensure a quorum for all meetings. Staff reviewed possible ways to achieve alternates on the planning commission with Council and has prepared an amendment to the ordinance based on the discussion. The proposed ordinance will allow the City Council the ability to appoint up to two alternate planning commissioners. The alternates would have the ability to vote if there were any absent members of the commission. Alternate members would also attend all regular meetings of the commission.

2 City of Independence City Council Meeting Minutes 6:30 p.m. February 16, 2021 Motion by Spencer, second by McCoy to approve Ordinance 2021-01: updating <u>Section 305.01</u> <u>Planning commission established and continued.</u> Adding two (2) alternate planning commission positions. Ayes: Johnson, Spencer, McCoy, and Betts. Nays: None. Absent: Grotting. Abstain. None. MOTION DECLARED CARRIED.

#### 8. OPEN/MISC.

Kaltsas stated he and Johnson attended the Medina Fire District meeting number one and wanted to know the feedback on whether the City should proceed with attending these meetings. Kaltsas said the meeting was not well organized. Johnson agreed it was not a good meeting and people could not hear or see well at all. Johnson said he is not interested in participating in further meetings. Kaltsas said he will let Scott Johnson know that the City is not going to actively participate at this point.

#### 9. ADJOURN.

Motion by Betts, second by Spencer to adjourn at 7:10 p.m. Ayes: Johnson, McCoy, Betts, and Spencer. Nays: None. Absent: Grotting. None. Abstain. None. MOTION DECLARED CARRIED.

Respectfully Submitted, Trish Gronstal/ Recording Secretary

#### City of Independence

# Request for a Conditional Use Permit and Variance to Construct a Ground Mounted Solar System on the Property located at 9226 US Hwy 12

To: | Planning Commission

From: | Mark Kaltsas, City Planner

Meeting Date: | March 16, 2021

Applicant: | John Nylen with Cedar Creek Energy

Property Owner: Jeff Cunningham

Location: 9226 US Hwy 12

#### Request:

John Nyhlen (Applicant) and Jeffrey Cunningham (Owner) request that the City consider the following applications for the property located at 9226 US Hwy 12 (PID No. 07-118-24-34-0005) in Independence, MN:

- a. A conditional use permit to allow a ground mounted solar system that is less than 500 SF.
- b. A variance to allow a ground mounted solar system that is greater than 500 SF.

#### **Property/Site Information:**

The property is located on the north side of US Hwy 12 and nearly across from Nelson Road. The property has an existing home and two detached accessory structures. The property has the following characteristics:

Property Information: 9226 US Hwy 12

Zoning: Agriculture

Comprehensive Plan: Agriculture

Acreage: 4.43 acres



#### **UPDATE:**

This item was tabled at the February Planning Commission Meeting. Staff asked the petitioner to attend the March Meeting as requested by the Planning Commission.

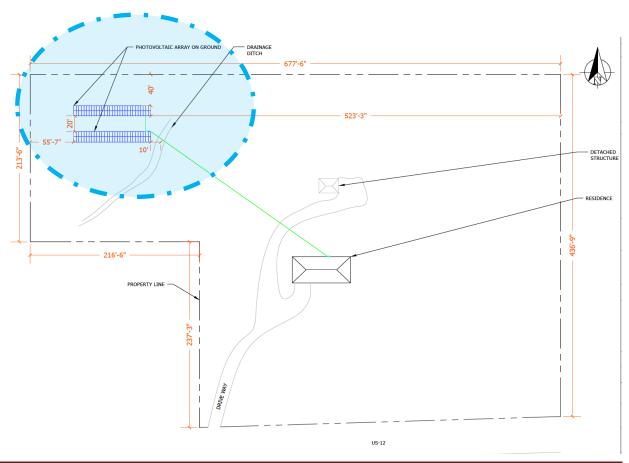
#### Discussion:

The applicant approached the City in 2020 about the possibility of installing a ground mounted solar system on the subject property. The City provided the applicant with the requirements and discussed the process for initially developing the City's standards relating to ground mounted solar systems. All ground mounted solar systems are limited to a maximum square footage of 500 square feet. Ground mounted solar systems have the following requirements:

- Subd. 5. Ground-mounted solar energy systems shall conform to the following standards:
  - (a) Ground-mounted systems shall only be allowed on a parcel with an existing principal structure.
  - (b) Ground-mounted systems shall be located only in rear or side yards.
  - (c) Ground-mounted systems shall not be located in the Shoreland Overlay District.

- (d) Ground-mounted systems shall be wholly screened from view from the public right-of-way and adjacent residential structures. Methods for screening shall include berming, fencing, landscaping and/or combination thereof.
- (e) Ground-mounted systems shall be located on a parcel of at least 2.5 acres.
- (f) Ground-mounted systems shall be setback 40 feet from the rear yards.
- (g) Ground-mounted systems shall be setback 30 feet from the side yards.
- (h) Ground-mounted systems shall have a maximum area of 500 SF.
- (i) The maximum height for any component of the system shall be 15 feet.
- (j) Ground-mounted systems shall be in compliance with any applicable local, state and federal regulatory standards, including building, electrical and plumbing codes.
- (k) Ground-mounted systems and their support structures shall be designed by a certified professional to meet applicable professional standards for the local soil and climate conditions.

The proposed ground mounted solar system would be located in the rear yard of the existing home. The proposed solar system would be comprised of two separate ground mounted arrays. The total square footage of the two arrays is proposed to be 2,600 SF (1,300 SF per array). The proposed system would exceed the maximum square footage permitted by 2,100 SF. The arrays would be setback approximately 40 feet from the north rear property line (rear yard) and 55 feet from the west side property line (side yard). The required setback for the rear yard is 40 feet and the required setback for the side yard is 30 feet.



The proposed ground mounted system would have a maximum height of 9'-3" to the top of the highest portion of the panels. The City requires systems to be wholly screened from view of the public right of way and adjacent residential structures. There is a residential home and property just to the south of the subject property and proposed location of the ground mounted array. The proximity of the proposed ground mounted system to the nearest residence is approximately 250 feet. The distance from the proposed solar arrays to the Hwy 12 right of way is approximately 350 feet. The City will need to discuss whether or not additional screening should be added to the south property line should the request be recommended for approval. There is some existing vegetation located along the south property line (north property line of the adjacent property). One additional consideration relating to screening is that the panels will be oriented to face south.

The applicant has provided the City with a site plan and images of the proposed solar system. The system is comprised 120 panels. The panels are oriented to the south and will be installed at a 30-degree angle to the ground. The proposed panels are mounted to a galvanized metal racking system. The racking system is proposed to be secured to the ground using helical pilings. The proposed solar panels are a mono Perc cell panel that has an anti-reflection coating. This type of panel is typically a little darker blue in color.

The criteria for granting a conditional use permit are clearly delineated in the City's Zoning Ordinance (Section 520.11 subd. 1, a-i) as follows:

- 1. The conditional use will not adversely affect the health, safety, morals and general welfare of occupants of surrounding lands.
- 2. The proposed use will not have a detrimental effect on the use and enjoyment of other property in the immediate vicinity for the proposes already permitted or on the normal and orderly development and improvement of surrounding vacant property for uses predominant in the area.
- 3. Existing roads and proposed access roads will be adequate to accommodate anticipated traffic
- 4. Sufficient off-street parking and loading space will be provided to serve the proposed use.
- 5. The proposed conditional use can be adequately serviced by public utilities or on-site sewage treatment, and sufficient area of suitable soils for on-site sewage treatment is available to protect the city form pollution hazards.
- 6. The proposal includes adequate provision for protection of natural drainage systems, natural topography, tree growth, water courses, wetlands, historic sites and similar ecological and environmental features.
- 7. The proposal includes adequate measures to prevent or control offensive odor, fumes, dust, noise, or vibration so that none of these will constitute a nuisance.
- 8. The proposed condition use is consistent with the comprehensive plan of the City of Independence.
- 9. The proposed use will not stimulate growth incompatible with prevailing density standards.

520.21. <u>Standards for granting variances</u>. Subdivision 1. The City Council may grant a variance from the terms of this zoning code, including restrictions placed on nonconformities, in cases where: 1) the variance is in harmony with the general purposes and intent of this zoning code; 2) the variance is consistent with

the comprehensive plan; and 3) the applicant establishes that there are practical difficulties in complying with the zoning code (Amended, Ord. 2011-08)

Subd. 2. An applicant for a variance must demonstrate that there are practical difficulties in complying with the zoning code. For such purposes, "practical difficulties" means:

- (a) The property owner proposes to use the property in a reasonable manner not permitted by the zoning code;
- (b) the plight of the property owner is due to circumstances unique to the property not created by the landowner;
- (c) the variance, if granted, will not alter the essential character of the locality.

Economic considerations alone do not constitute practical difficulties. Practical difficulties include, but are not limited to, inadequate access to direct sunlight for solar energy systems. (Amended, Ord. 2011-08)

Subd. 3. The City Council shall not grant a variance to permit a use that is not allowed under the zoning code based on the zoning classification of the affected property. (Amended, Ord. 2011-08)

520.23. Conditions and restrictions. The board of adjustments may recommend, and the City Council may impose conditions on a variance. Conditions must be directly related to and must bear a rough proportionality to the impact created by the variance. (Amended, Ord. 2011-08)

The City has discussed the proposed ground mounted solar system with the applicant. The proposed ground mounted solar system exceeds the City's maximum size for ground mounted solar systems. The energy generated by this system 38.4 kW (AC) falls just below the maximum amount permitted by the state tariff limits for residential systems. The applicant has noted that the homeowners are planning on remodeling the home and installing a ground source HVAC system. The ground source system will generate a significant energy need for the property. There are a few additional considerations that should be noted by the City:

- The maximum size of permitted by a ground mounted solar system (500 SF) was based on the size of a typical residential solar system. This system would require the City to grant a variance to the maximum size to allow 2,100 additional square feet of surface area. The criteria for granting a variance are provided within this report. The City will need to find that the size limitation on ground mounted systems creates a hardship to the owner. Additionally, the City will need to also find that the granting of a variance will not alter the essential character of the area and maintain the reasonable use of the property.
- The proposed system is a residential system that generates an amount of energy that comes in just below the maximum permitted for a residential installation. The system will generate approximately 62,000 kWh in the first year. The average residential property across the US uses approximately 10,649 kWh per year and as much as 15,000 kWh per year.

- The proposed system meets the location, setback and maximum height requirements of the zoning ordinance.
- The property has only one neighboring and potentially impacted property. The visibility of this system from the Hwy 12 right of way is limited or fully screened. The existing vegetation that separates the two properties is comprised primarily deciduous trees/shrubs.
- The location of the proposed solar system is close to a potential wetland area (see yellow possible and blue probable areas below). The applicant is going to need to verify the extents of the wetland and confirm that no impact or a de minimis impact to the wetland is permitted. This may require a wetland delineation, adjusting the location within this general area of the property or splitting the system into three shorter arrays versus two longer arrays.



The City will need to determine if the system should be further screened from the south property line. The City will also need to find that the proposed variance and conditional use permit meet the criteria for granting both and continues to allow the reasonable use and enjoyment of the surrounding properties. This site located off of US Hwy 12, the orientation of the proposed solar system and the relationship to the surrounding properties all aid in the mitigation of potential impacts relating to the ground mounted solar array.

#### **Neighbor Comments:**

The City has received some verbal questions relating to the project and whether or not his is a commercial installation. It was noted that this is a residential installation. The City has not received any written comments regarding the proposed variance and conditional use permit.

#### Recommendation:

Staff is seeking a recommendation from the Planning Commission pertaining to the request for a conditional use permit and variance with the following findings and conditions:

- 1. The proposed conditional use permit and amendment request meets all applicable conditions and restrictions stated in Chapter V, Section 510, Zoning, in the City of Independence Zoning Ordinance.
- 2. Approval of the conditional use permit will be subject to the following conditions:
  - a) The applicant shall verify the extents of the wetland boundary and confirm that no impact or a de minimis impact to the wetland is permitted by all regulatory authorities. This may require a wetland delineation. Based on the information provided relating to the wetland boundary, the proposed location and layout of the solar array may need to be adjusted or the array may need to be split into three shorter arrays versus two longer arrays.
- 3. The conditional use permit will include the following conditions:
  - a) The conditional use permit will allow a 2,600 SF ground mounted solar system that is installed in accordance with the approved plans attached hereto as Exhibit A.
  - b) The ground mounted solar system shall be constructed in accordance with all applicable zoning code, building code and other applicable standards.
- 4. The City finds that the criteria for granting a variance have been satisfied by the applicant. Specifically, the City finds the following:
  - a. The proposed residential ground mounted solar system will not take away from the essential character of the property or surrounding properties.
  - b. The proposed variance will allow a larger residential ground mounted solar system that provides energy solely for this residential property.
  - c. Potential impacts resulting from the larger ground mounted solar system are adequately mitigated as a result of the properties location and proximity to surrounding properties.
  - b) The applicant shall pay for all costs associated with the review and recording of the resolution granting approval of the conditional use permit and variance.

#### Attachments:

- 1. Application
- Ground Mounted Solar Site Plan (Exhibit A)
   Ground Mounted Solar Plans and Details



**Applicant Information** 

Name: Jeffrey D Cunningham

Address: 10361

Address: 9226 US HWY 12

**Owner Information** 

Delano, Minnesota 55328

Primary Phone: 7634509767

Primary Phone: 952-855-2788

Email: permits@cedarcreekenergy.com

JOHN M Nyhlen

Blaine, Minnesota 55449

Email: jeff\_cunningham@hotmail.co

Property Address:

PID:

Name:

Planning Application Type: Variance

Description:

Supporting Documents: Building Plans, Construction Plans, Wetland Delineation, Preliminary/Final Plan

Signature:

# JEFF CUNNINGHAM - 48.000kW DC, 38.400kW AC

#### **SITE PLAN-1**

DISTANCE BETWEEN EQUIPMENT				
FROM	FROM TO			
ARRAY-02	PV INVERTER-01&02	20		
ARRAY-01	PV INVERTER-03&04	1		
PV INVERTER-01&05	AC COMBINER PANEL	1		
AC COMBINER PANEL	UTILITY AC DISCONNECT	140		
UTILITY AC DISCONNECT	ТАР ВОХ	1		
TAP BOX	UTILITY METER	1		
UTILITY METER	MAIN SERVICE PANEL	1		

#### NOTE:

1. MODULES ARE UL 1703 RATED.

20' DC TRENCHED CONDUIT RUN(N) PV INVERTER-05(ARRAY MOUNTED)

2. INVERTERS ARE UL 1741 RATED.

#### NOTE:

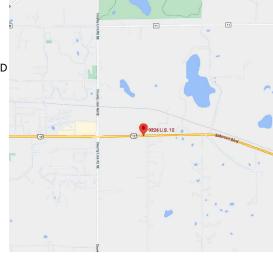
1.NO CLEARANCE ISSUES WITH EXITING OVERHEAD LINES 2.PV UTILITY DISCONNECTS ARE

- LOCATED WITHIN 10' OF MAIN SERVICE/BILLING METER
- VISIBLE, LOCKABLE, READILY ACCESIBLE AND 24/7 ACCESS
- 3.DESIGN COMPLY WITH NEC AND NEC690

4.LABELS SHALL BE WEATHERPROOF, DURABLE, AND PERMANENTLY MOUNTED 5.24/7 UNSCORTED KEYLESS ACCESS TO METERS AND UTILITY AC DISCONNECTS.

6..SECONDARY INTERCONNECTION

ACCOUNT	#150-1695-6047
METER	#91794822



A1 VICINITY MAP

PV-1.0 SCALE: NTS

GENERAL INFORMATION		
ELECTRIC CODE	NEC 2017	
FIRE CODE	IFC 2018	
RESIDENTIAL CODE	MNRC 2020	
BUILDING CODE	MNBC 2020	
WIND SPEED 115 MPI		
SNOW LOAD 50 PS		
HIGH TEMP	32°C	
LOW TEMP	-26°C	

INDEX			
INDEX NO. DESCRIPTION			
PV-1.0	SITE PLAN-1		
PV-1.1	SITE PLAN-2		
PV-2.0	GENERAL NOTES		
PV-3.0	MOUNTING DETAILS		
PV-3.1	STRUCTURAL DETAILS-1		
PV-3.2	STRUCTURAL DETAILS-2		
PV-4.0	SINGLE LINE DIAGRAM		
PV-4.1	ELECTRICAL CALCULATION		
PV-5.0	WARNING PLACARDS		
SS	SPEC SHEET(S)		



#### **SYSTEM INFORMATION**

DC SYSTEM SIZE: 48000W AC SYSTEM SIZE: 38400W

MODULES:

(120)JINKO SOLAR JKM400M-72HL-V

INVERTER:

(5)SMA SUNNY BOY SB7.7-1TP-US-41(240V,1PH)

#### **ENGINEER OF RECORD**



10361 JAMESTOWN ST NE BLAINE, MN 55449 763-450-9763 LIC:ELEC#EA006457 LIC:GEN#BC638279

#### **CUSTOMER INFORMATION**

NAME&ADDRESS: JEFF CUNNINGHAM 9226 US-12, DELANO, MN 55328

45°02'11.7"N 93°45'31.9"W

AHJ:MN-COUNTY HENNEPIN

PR/RR

UTILITY:WRIGHT HENNEPIN COOP ELECTRIC ASSOCIATION
PROJECT NUMBER:CCEN-001549
SITE PLAN-1
DESIGNER/CHECKED BY:

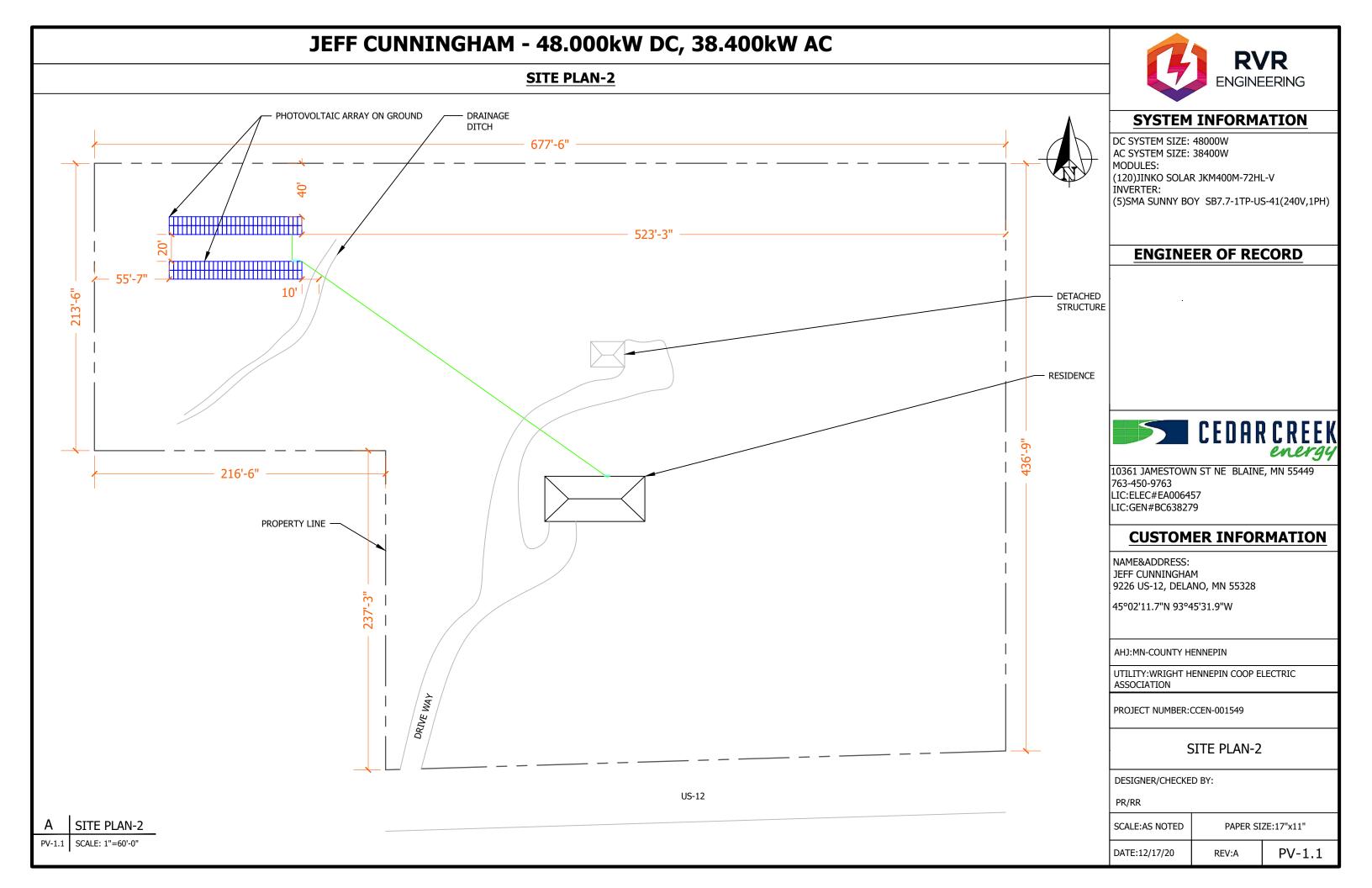
SCALE:AS NOTED PAPER SIZE:17"x11"

DATE:12/17/20 REV:A PV-1.0

(N) PV INVERTER-04(ARRAY MOUNTED)  (N) PV INVERTER-03(ARRAY MOUNTED)  (N) PV INVERTER-02(ARRAY MOUNTED)
(N) PV INVERTER-01(ARRAY MOUNTED)  (N) AC COMBINER PANEL (ARRAY MOUNTED)
PHOTOVOLTAIC ARRAY ON GROUND 280' AC TRENCHED CONDUIT RUN
(N) SERVICE METER WITH DETENT (ENERGYSUPPLIED BY MEMBER)(EXTERIOR)
(N) GENERAL SERVICE METER WITH DETENT (ENERGY USED BY MEMBER)(EXTERIOR)
(N) TAP BOX (EXTERIOR)  (E) MAIN SERVICE PANEL (INTERIOR)  (EXTERIOR)



A SITE PLAN-1
PV-1.0 SCALE: 1"=40'-0"



#### **GENERAL NOTES**

#### **GENERAL NOTES**

- 1. MODULES ARE LISTED UNDER UL 1703 AND CONFORM TO THE STANDARDS.
- 2. INVERTERS ARE LISTED UNDER UL 1741 AND CONFORM TO THE STANDARDS.
- DRAWINGS ARE DIAGRAMMATIC, INDICATING GENERAL ARRANGEMENT OF THE PV SYSTEM AND THE ACTUAL SITE CONDITION MIGHT VARY.
- 4. WORKING CLEARANCES AROUND THE NEW PV ELECTRICAL EQUIPMENT WILL BE MAINTAINED IN ACCORDANCE WITH NEC CODE.
- 5. ALL GROUND WIRING CONNECTED TO THE MAIN SERVICE GROUNDING IN MAIN SERVICE PANEL/ SERVICE EQUIPMENT.
- 6. ALL CONDUCTORS SHALL BE 600V, 75°C STANDARD COPPER UNLESS OTHERWISE NOTED.
- THE SYSTEM WILL NOT BE INTERCONNECTED BY THE CONTRACTOR UNTIL APPROVAL FROM THE LOCAL JURISDICTION AND/OR THE UTILITY.
- 8. PV ARRAY COMBINER/JUNCTION BOX PROVIDES TRANSITION FROM ARRAY WIRING TO CONDUIT WIRING

#### **EQUIPMENT LOCATION:**

- 9. ALL EQUIPMENT SHALL MEET MINIMUM SETBACKS AS REQUIRED BY NEC CODE.
- 10. WIRING SYSTEMS INSTALLED IN DIRECT SUNLIGHT MUST BE RATED FOR EXPECTED OPERATING TEMPERATURE AS SPECIFIED BY NEC CODE AND NEC TABLES.
- 11. JUNCTION AND PULL BOXES PERMITTED INSTALLED UNDER PV MODULES ACCORDING TO NEC CODE.
- 12. ADDITIONAL AC DISCONNECT(S) SHALL BE PROVIDED WHERE THE INVERTER IS NOT WITHIN SIGHT OF THE AC SERVICING DISCONNECT.
- 13. ALL EQUIPMENT SHALL BE INSTALLED ACCESSIBLE TO QUALIFIED PERSONNEL ACCORDING TO NEC APPLICABLE CODES.
- 14. ALL COMPONENTS ARE LISTED FOR THEIR PURPOSE AND RATED FOR OUTDOOR USAGE WHEN APPROPRIATE

#### **WIRING & CONDUIT NOTES:**

- 15. ALL CONDUIT AND WIRE WILL BE LISTED AND APPROVED FOR THEIR PURPOSE. CONDUIT AND WIRE SPECIFICATIONS ARE BASED ON MINIMUM CODE REQUIREMENTS AND ARE NOT MEANT TO LIMIT UP-SIZING.
- 16. CONDUCTORS SIZED ACCORDING TO NEC CODE.
- 17. DC WIRING LIMITED TO MODULE FOOTPRINT. MICRO INVERTER WIRING SYSTEMS SHALL BE LOCATED AND SECURED UNDER THE ARRAY WITH SUITABLE WIRING CLIPS.
- 18. AC CONDUCTORS COLORED OR MARKED AS FOLLOWS: PHASE A OR L1- BLACK PHASE B OR L2- RED, OR OTHER CONVENTION IF THREE PHASE PHASE C OR L3- BLUE, YELLOW, ORANGE\*\*, OR OTHER CONVENTION NEUTRAL- WHITE OR GREY IN 4-WIRE DELTA CONNECTED SYSTEMS THE PHASE WITH HIGHER VOLTAGE TO BE MARKED ORANGE [NEC CODE].

#### **INTERCONNECTION NOTES:**

- 24. LOAD-SIDE INTERCONNECTION SHALL BE IN ACCORDANCE WITH [NEC CODE]
- 25. THE SUM OF THE UTILITY OCPD AND INVERTER CONTINUOUS INPUT MAY NOT EXCEED 120% OF BUSBAR RATING [NEC CODE].
- 26. WHEN SUM OF THE PV SOURCES EQUALS >100% OF BUSBAR RATING, PV DEDICATED BACKFFED BREAKERS MUST BE LOCATED OPPOSITE END OF THE BUS FROM THE UTILITY SOURCE OCPD [NEC CODE].
- 27. AT MULTIPLE PV OUTPUT COMBINER PANEL, TOTAL RATING OF ALL OVER CURRENT DEVICES SHALL NOT EXCEED AMPACITY OF BUSBAR. HOWEVER, THE COMBINED OVER CURRENT DEVICE MAY BE EXCLUDED ACCORDING TO NEC 705.12 CODE.
- 28. FEEDER TAP INTER CONNECTION (LOAD SIDE) ACCORDING TO NEC CODE.
- 29. SUPPLY SIDE TAP INTERCONNECTION ACCORDING TO NEC 705.12 (A) WITH SERVICE ENTRANCE CONDUCTORS IN ACCORDANCE WITH NEC CODE.
- 30. BACK FEEDING BREAKER FOR UTILITY-INTERACTIVE INVERTER OUTPUT IS EXEMPT FROM ADDITIONAL FASTENING [NEC CODE.

#### **GROUNDING NOTES:**

- 31. GROUNDING SYSTEM COMPONENTS SHALL BE LISTED FOR THEIR PURPOSE, AND GROUNDING DEVISES EXPOSED TO THE ELEMENTS SHALL BE RATED FOR SUCH USE.
- 32. PV EQUIPMENT SHALL BE GROUNDED ACCORDING TO NEC CODE AND MINIMUM NEC TABLE.
- 33. EQUIPMENT GROUNDING CONDUCTORS SHALL BE SIZED ACCORDING TO NEC CODE AND MICRO INVERTER MANUFACTURER'S INSTRUCTIONS.
- 34. THE GROUNDING CONNECTION TO A MODULE SHALL BE ARRANGED SUCH THAT THE REMOVAL OF A MODULE DOES NOT INTERRUPT A GROUNDING CONDUCTOR TO ANOTHER MODULE.
- 35. GROUNDING AND BONDING CONDUCTORS, IF INSULATED, SHALL BE COLORED GREEN OR MARKED GREEN IF #4 AWG OR LARGER [NEC CODE]
- 36. DISCONNECTING SWITCHES SHALL BE WIRED SUCH THAT WHEN THE SWITCH IS OPENED THE CONDUCTORS REMAINING ENERGIZED ARE CONNECTED TO THE TERMINALS MARKED "LINE SIDE" (TYPICALLY THE UPPER TERMINALS).
- 37. DISCONNECTS TO BE ACCESSIBLE TO QUALIFIED UTILITY PERSONNEL, BE LOCKABLE, AND BE A VISIBLE-BREAK SWITCH
- 8. RAPID SHUTDOWN OF ENERGIZED CONDUCTORS BEYOND 10 FT OF PV ARRAY OR 5 FT INSIDE A BUILDING WITHIN 10 SECONDS. CONTROLLED CONDUCTORS ≤30V AND ≤240VA [NEC CODE]. LOCATION OF LABEL ACCORDING TO AHJ.
- 39. ALL OCPD RATINGS AND TYPES SPECIFIED ACCORDING TO NEC CODES.



#### **SYSTEM INFORMATION**

DC SYSTEM SIZE: 48000W AC SYSTEM SIZE: 38400W

MODULES:

(120)JINKO SOLAR JKM400M-72HL-V

INVERTER:

(5)SMA SUNNY BOY SB7.7-1TP-US-41(240V,1PH)

#### **ENGINEER OF RECORD**



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#### **CUSTOMER INFORMATION**

NAME&ADDRESS: JEFF CUNNINGHAM 9226 US-12, DELANO, MN 55328

45°02'11.7"N 93°45'31.9"W

AHJ:MN-COUNTY HENNEPIN

UTILITY:WRIGHT HENNEPIN COOP ELECTRIC ASSOCIATION

PROJECT NUMBER:CCEN-001549

**GENERAL NOTES** 

DESIGNER/CHECKED BY:

PR/RR

 SCALE:AS NOTED
 PAPER SIZE:17"x11"

 DATE:12/17/20
 REV:A
 PV-2.0

# **MOUNTING DETAILS**

— VERTICAL POST

- PV MODULES



ARRAY-02





NO. OF MODULES

MODULES DATA			
	JINKO SOLAR JKM400M-72HL-V		
MODULE DIMS 79.06"x39.45"x1.57"		79.06"x39.45"x1.57"	
	SITE INFORMATION		
	AZIMUTH	180°	
	PITCH	30°	

120



#### **SYSTEM INFORMATION**

DC SYSTEM SIZE: 48000W AC SYSTEM SIZE: 38400W

MODULES:

(120)JINKO SOLAR JKM400M-72HL-V

INVERTER:

(5)SMA SUNNY BOY SB7.7-1TP-US-41(240V,1PH)

#### **ENGINEER OF RECORD**



10361 JAMESTOWN ST NE BLAINE, MN 55449 763-450-9763 LIC:ELEC#EA006457 LIC:GEN#BC638279

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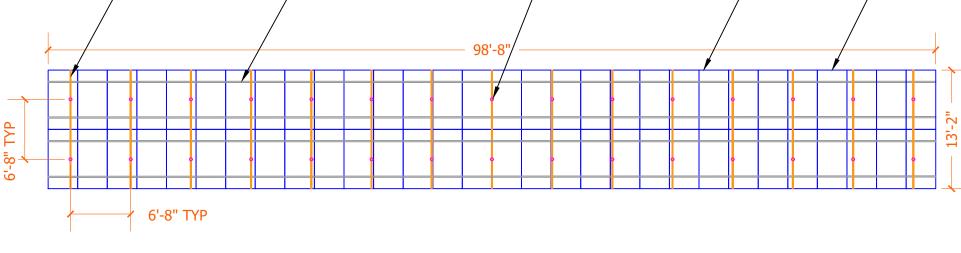
PROJECT NUMBER: CCEN-001549

#### MOUNTING DETAILS

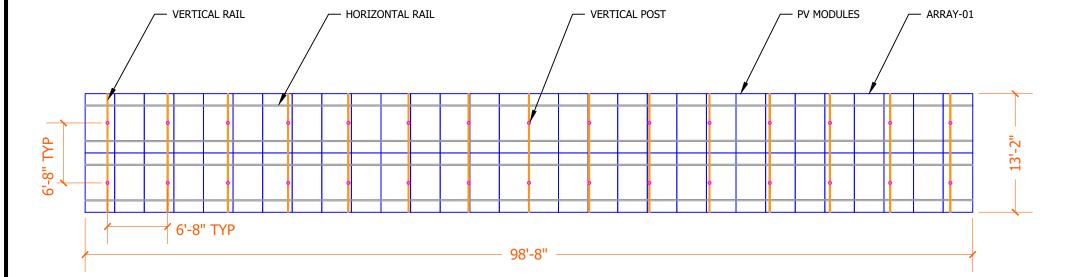
DESIGNER/CHECKED BY:

PR/RR

SCALE:AS NOTED	PAPER SIZE:17"x11"	
DATE:12/17/20	REV:A	PV-3.0



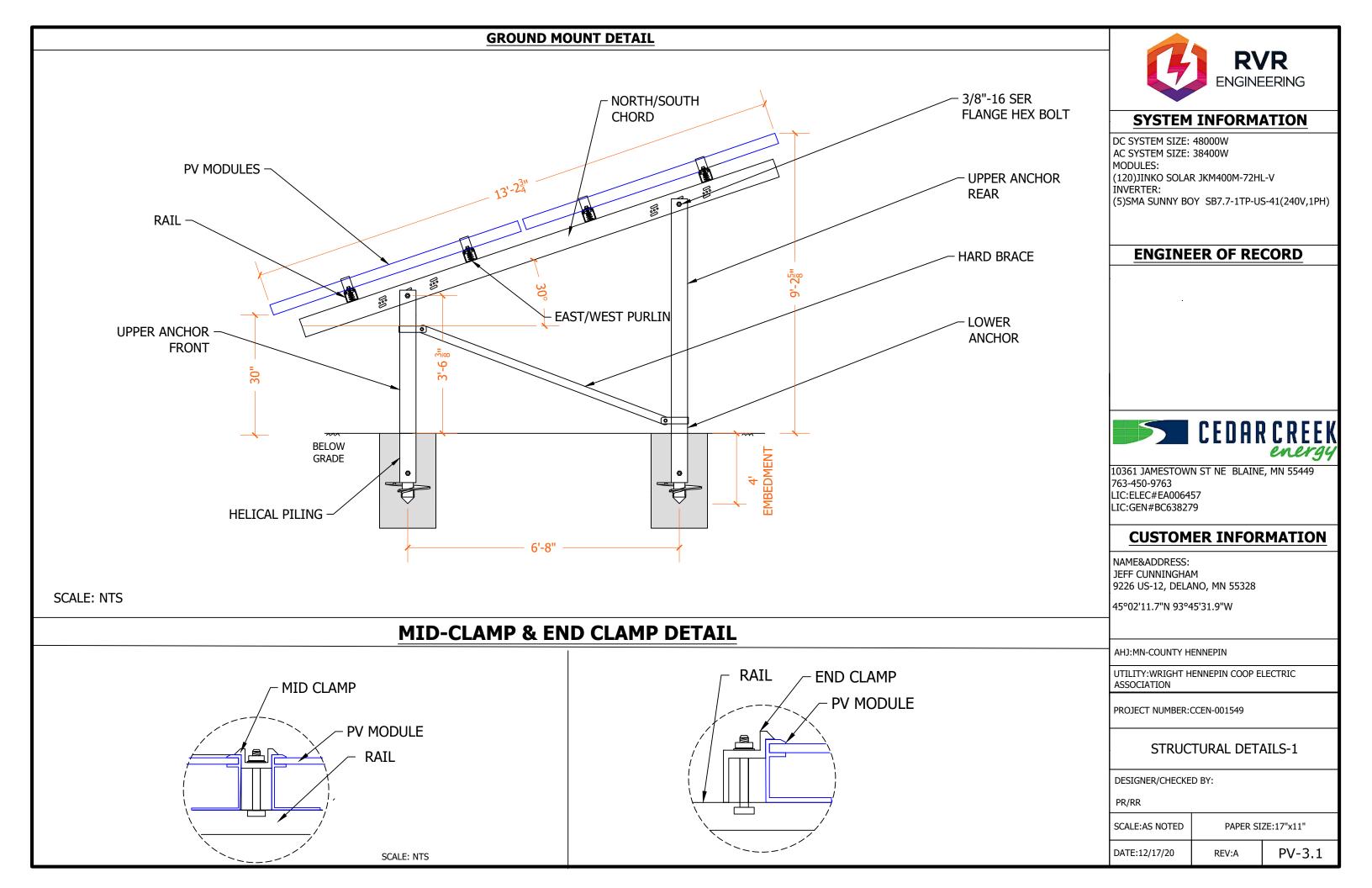
HORIZONTAL RAIL

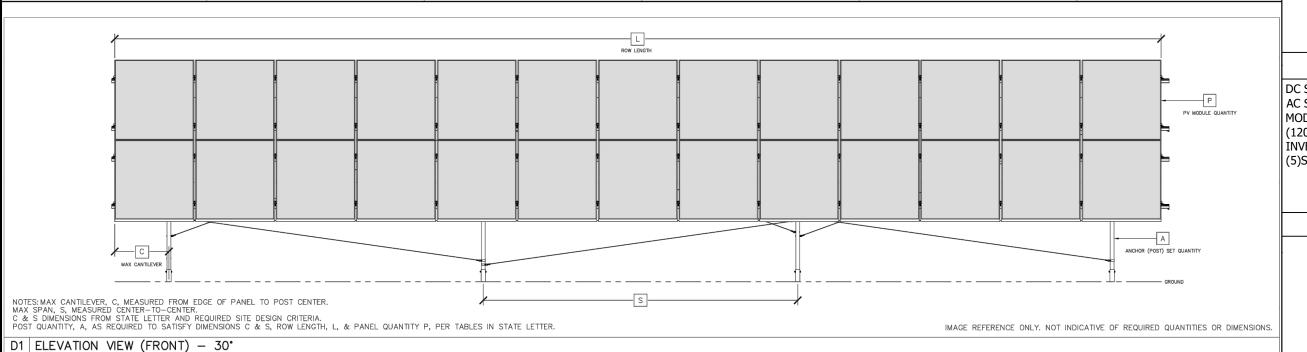


MOUNTING DETAILS

- VERTICAL RAIL

PV-3.0 | SCALE: 3/32" = 1'-0"



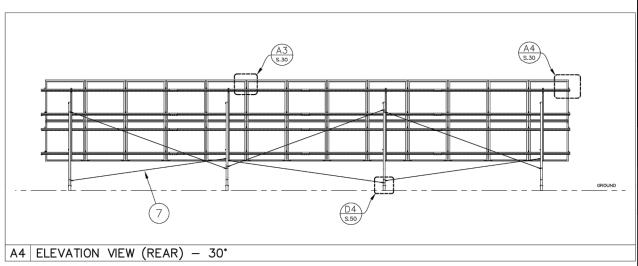


# CEDAR CREEK energy

LIC:GEN#BC638279

PV MODULES REMOVED FOR CLARITY.

B4 PLAN VIEW - 30°



#### SYSTEM INFORMATION

DC SYSTEM SIZE: 48000W AC SYSTEM SIZE: 38400W

MODULES:

(120)JINKO SOLAR JKM400M-72HL-V

INVERTER:

(5)SMA SUNNY BOY SB7.7-1TP-US-41(240V,1PH)

#### **ENGINEER OF RECORD**

# CUSTOMER INFORMATION

NAME&ADDRESS: JEFF CUNNINGHAM 9226 US-12, DELANO, MN 55328

45°02'11.7"N 93°45'31.9"W

763-450-9763 LIC:ELEC#EA006457

AHJ:MN-COUNTY HENNEPIN

UTILITY:WRIGHT HENNEPIN COOP ELECTRIC ASSOCIATION

PROJECT NUMBER: CCEN-001549

#### STRUCTURAL DETAILS-2

DESIGNER/CHECKED BY:

PR/RR

SCALE: AS NOTED

PAPER SIZE:17"x11"

DATE:12/17/20 REV:A

/:A PV-3.2

# 

NOTES: PV MODULE & MODULE RELATED DIMENSIONS THIS DETAIL ARE MAX ALLOWABLE. SEE STATE LETTER FOR FURTHER INFORMATION. ADDITIONAL DIMENSIONS ARE NOMINAL FROM LEVEL GROUND. SEE NOTES SHEET FOR TOLERANCES.

A1 PROFILE VIEW - 30°

## GENERAL NOTES

- 1. IN THIS DOCUMENT, THE CONTRACTOR WILL BE REFEREED TO AS THE RESPONSIBLE PARTY IN CHARGE OF THE ARRAY. THIS PARTY MAY BE THE OWNER, BUYER, CUSTOMER, OR INSTALLER. USAGE OF ANY OF THE AFOREMENTIONED TERMS ARE TAKEN TO BE ANY OF THE SAME GROUPS, BUT NONE INCLUDE AP ALTERNATIVES OR THE JDI GROUP.
- 2. THE CONTRACTOR MUST VERIFY ONSITE CONDITIONS, TO VERIFY CONFORMANCE TO CONTRACT DOCUMENTATION, INCLUDING BUT NOT LIMITED TO: THIS DOCUMENT, THE STATE SEALED LETTER DOCUMENT, APPLICABLE AUXILIARY DRAWINGS, AND THE INSTALLATION MANUAL.
- 3. THE CONTRACTOR MUST VERIFY ALL FIELD DIMENSIONS AND THE SHAPES AND SIZES OF STRUCTURAL MEMBERS TO ENSURE THE PROPER STRENGTH, FIT. AND LOCATION OF THE STRUCTURAL WORK. CONDITIONS WHICH MAY PREVENT THE PROPER EXECUTION AND COMPLETION OF THE WORK MUST BE REPORTED TO AP ALTERNATIVES, IN WRITING, BEFORE RESUMING WORK.
- 4. AP ALTERNATIVES AND THE JDI GROUP IS NOT RESPONSIBLE FOR WORK CONDUCTED BY OTHERS.
- 5. WORK DONE BY OTHERS INCLUDE BUT NOT BE LIMITED TO, EXCEPT WHERE EXPLICITLY CONTRACTED TO DO SO WITHIN THE CONTRACT DOCUMENTS.
- 5.1. SITE WORK AND DEVELOPMENT, INCLUDING BUT NOT LIMITED TO GRADING, CONSTRUCTION ROADS, FENCING, SEEDING, EROSION CONTROL.
- 5.2. ALL ELECTRICAL WORK.
- 5.3. ALL GROUNDING AND BONDING
- 5.4. ALL SHADING AND PRODUCTION ANALYSIS.
- 6. SEE OTHER MANUFACTURER'S DRAWINGS AND INSTALLATION MANUALS FOR ADDITIONAL INFORMATION ON THEIR PARTS, (IE. FOR PV MODULES, GROUNDING LUGS, DYNOBONDS, ETC.).
- 7. INSTALLATION CONTRACTOR RESPONSIBLE FOR ALL CONSTRUCTION EQUIPMENT, METHODS, AND SEQUENCES.
- 8. CUSTOMER IS RESPONSIBLE FOR VERIFYING CORROSION COMPATIBILITY WITH ANCHOR POSTS.
- 9. DO NOT SCALE OFF OF THESE DRAWINGS. USE GIVEN DIMENSIONS WHEN WRITTEN. DIMENSIONS PORTRAYED WITH A VARIABLE, MAY BE FOUND IN THE APPROPRIATE TABLE, IN THE APPROPRIATE STATE SEALED LETTER.
- WHERE THERE ARE MULTIPLE DIMENSIONS OR CRITERIA, THE MOST CONSERVATIVE APPROACH SHOULD BE TAKEN AS THE INTENDED.

- 11. IT IS THE CONTRACTORS RESPONSIBILITY TO DETERMINE THE APPLICABLE DESIGN CRITERIA FOR THE PROJECT. THIS SHALL BE DONE UNDER THE GUIDANCE OF THE AHJ AND A CUSTOMER CONTRACTED ENGINEER. PRIOR TO PURCHASE. AP ALTERNATIVES AND THE JDI GROUP ARE NOT RESPONSIBLE FOR INCORRECTLY BUYING OR BUILDING TO INAPPLICABLE DESIGN CRITERIA.
- 12. DESIGN CRITERIA NOT CONSIDERED BY THESE DRAWINGS OR THE STATE SEALED LETTER (BUT MAY BE REQUIRED BY THE AHJ) INCLUDE FLOOD LOADS, IMPACT LOADS, DEBRIS LOADS, EROSION, EXPANSIVE SOILS. FROST HEAVE, ACTS OF GOD, DYNAMIC ANALYSIS, AND ANY OTHER LOADING NOT EXPLICITLY STATED AS BEING INCLUDED IN THE DESIGN OF THE RACKING.
- 13. IT IS THE BUYERS RESPONSIBILITY TO DETERMINE THE APPLICABILITY OF THIS DESIGN PACKET AND THE STATE SEALED LETTER WITH ALL LOCAL AND STATE LAWS, PRIOR TO PURCHASE.

## ADDITIONAL DOCUMENTATION

ADDITIONAL ENGINEERING DOCUMENTATION DEVELOPED FOR THIS PROJECT & GENERAL DOCUMENTATION INTENDED TO BE USED ON THIS PROJECT, CREATED BY OTHERS:

- 1. PV MODULE INSTALLATION MANUAL, (PROVIDED BY PV MODULE MANUFACTURER).
- 2. APA RACKING INSTALLATION MANUAL.
- 3. PE STATE SEALED LETTER.

## DESIGN RESPONSIBILITY

- 1. THE JDI GROUP IS THE STRUCTURAL ENGINEER OF RECORD.
- AP ALTERNATIVES AND THE JDI GROUP ARE RESPONSIBLE ONLY FOR THE STRUCTURAL DESIGN OF THE RACKING, AS PROVIDED AND LIMITED TO THE DRAWING SET HEREIN AND THE APPROPRIATE STATE SEALED LETTER.
- 3. AP ALTERNATIVES AND THE JDI GROUP ARE NOT THE ELECTRICAL ENGINEER OF RECORD. AP ALTERNATIVES AND THE JDI GROUP ARE NOT RESPONSIBLE FOR THE ELECTRICAL DESIGN OF THE SITE (INCLUDING BUT NOT LIMITED TO INVERTER SELECTION AND INSTALLATION. PIPING & WIRING, TRENCHING, BONDING, GROUNDING, ETC.., OR ANY OTHER ENGINEERING NOT COVERED BY THE STRUCTURAL ENGINEERING OF THE RACKING SYSTEM).
- 4. AP ALTERNATIVES AND THE JDI GROUP ARE NOT THE NGINEER OF RECORD. AP ALIERNATIVES AND THE JDI GROUP ARE NOT RESPONSIBLE FOR THE CIVIL

- GRADING, SURVEYING, SITE CLEARING, EROSION, SITE MAINTENANCE, ETC.., OR ANY OTHER ENGINEERING NOT COVERED BY THE STRUCTURAL ENGINEERING OF THE RACKING SYSTEM).
- 5. AP ALTERNATIVES AND THE JDI GROUP ARE NOT THE GEOTECHNICAL ENGINEER OF RECORD. AP ALTERNATIVES AND THE JDI GROUP ARE NOT RESPONSIBLE FOR THE GEOTECHNICAL DESIGN OF THE SITE (INCLUDING BUT NOT LIMITED TO SOIL ANALYSIS, ANALYSIS OF THE SOILS ABILITY TO RESIST FORCES. CORROSION ANALYSIS, ETC.., OR ANY OTHER ENGINEERING NOT COVERED BY THE STRUCTURAL ENGINEERING OF THE RACKING SYSTEM).
- 6. AP ALTERNATIVES AND THE JDI GROUP ARE NOT THE SOLAR DESIGN ENGINEER OF RECORD. AP ALTERNATIVES AND THE JDI GROUP ARE NOT RESPONSIBLE FOR THE SOLAR DESIGN OF THE SITE (INCLUDING BUT NOT LIMITED TO SHADING, EFFICIENCY, ORIENTATION, PART SELECTION, TILT SELECTION, ETC.., OR ANY OTHER ENGINEERING NOT COVERED BY THE STRUCTURAL ENGINEERING OF THE RACKING SYSTEM).

## CONSTRUCTION

- 1. ALL CONSTRUCTION SHALL CONFORM TO LOCAL CODES, INCLUDING THE INTERNATIONAL BUILDING CODE AND FIRE CODE.
- 2. LOCATION OF UNDERGROUND UTILITIES SHALL BE VERIFIED PRIOR TO START OF WORK.
- 3. INSTALLATION CONTRACTORS ARE RESPONSIBLE FOR REVIEWING, UNDERSTANDING, AND FOLLOWING ALL DIRECTIONS, MEASUREMENTS, AND GUIDELINES CONTAINED IN THIS DRAWING PACKET AND IN ANY DOCUMENTATION INTENDED TO BE USED IN CONJUNCTION WITH THIS PACKET.
- 4. GOOD INDUSTRY PRACTICES ARE EXPECTED TO BE USED IN THE ASSEMBLY OF ALL STRUCTURAL COMPONENTS OF THIS PROJECT.
- 5. ALL WORK SHALL BE DONE IN A WORKMAN-LIKE MANNER.
- 6. ALL CONTRACTORS MUST COMPLY WITH ALL APPLICABLE SAFETY REQUIREMENTS WHILE CONSTRUCTING.
- . AP ALTERNATIVES IS NOT LIABLE FOR THE SAFETY OF PERSONNEL, PARTS, MATERIALS, PERSONAL PROPERTY. OR OTHER.
- 8. CARE SHOULD BE USED WHEN HANDLING PV MODULES. ANY PANELS EXPOSED TO SUNLIGHT SHOULD BE TREATED AS IF IT IS FULLY CHARGED. MOST PANELS ARE CAPABLE OF PRODUCING 600VDC DURING DAYLIGHT HOURS.
- DESIGN OF THE SITE (INCLUDING BUT NOT LIMITED TO 9. CHECK MODULE SPECIFIC SPEC SHEET FOR

## ELECTRICAL SPECIFICATIONS.

#### 10. ANCHOR POST TOLERANCES

- 10.1.  $\pm$  2" VARIATION IN HEIGHT. 10.2.  $\pm$  2" VARIATION IN NORTH-SOUTH DIRECTION. 10.3.  $\pm$  2" Variation in East-West direction. 10.4.  $\pm$  2° VARIATION IN POST PLUMBNESS.
- 11. ACCURATELY LOCATE AND INSTALL ANCHOR POSTS BY SUCH METHODS AND EQUIPMENT SO AS NOT TO IMPAIR THE ANCHOR STRENGTH OR DAMAGE ANCHORS OR ADJACENT CONSTRUCTION.
- 12. INSTALLATION CONTRACTOR RESPONSIBLE FOR ALL CONSTRUCTION EQUIPMENT, METHODS, AND SEQUENCES.
- 13. DISTURBED GALVANIZED SURFACES SHALL BE TOUCHED UP WITH AN APPROVED COLD GALVANIZING COMPOUND OR EQUIVALENT.
- 14. GOOD INDUSTRY PRACTICE SHALL BE USED IN THE ASSEMBLY OF ALL STRUCTURAL COMPONENTS OF THIS PROJECT.
- 15. STORE ALL PARTS AND COMPONENTS PROPERLY. PREVENT TRAPPING MOISTURE. PREVENT GROUND CONTACT. PREVENT DEFORMATION OR POTENTIAL DAMAGE.
- 16. IT IS THE RESPONSIBILITY OF THE CUSTOMER TO VERIFY EASEMENTS, SETBACK, FIRE LANES, AND OTHER DISTANCES REQUIRED BY THE AHJ. FAILURE TO PROPERLY VERIFY AND MARK SUCH DISTANCES MAY RESULT IN PROJECT DELAYS AND ADDITIONAL COSTS TO BE COVERED BY THE CUSTOMER.
- 17. UNDER SPECIFIC CIRCUMSTANCES, TERRAIN AND SITE PROPERTIES MAY INDICATE THE NEED FOR ADDITIONAL PARTS, WITH COSTS TO BE COVERED BY THE CUSTOMER.

# STEEL

- 1. ALL FASTENERS SHALL BE THE TYPE AND SIZE INDICATED ON THE DRAWINGS.
- 2. ALL BOLTS, WASHERS, AND NUTS SHALL BE STAINLESS STEEL OR CORROSION-RESISTANT EQUIVALENT.

SOLAR RACKING

- 3. STRUCTURAL SHAPES, TUBING, AND COLD-FORMED SHAPES SHALL CONFORM TO THE ASTM GUIDELINES INDICATED WITHIN THE SEALED STRUCTURAL PERMIT PACKAGE.
- 4. ALL STRUCTURAL MATERIALS SHALL HAVE ADEQUATE CORROSION PROTECTION FOR THE ENVIRONMENT ABOVE GRADE STRUCTURAL STEEL SHALL BE HOT DIPPED GALVANIZED PER ASTM A123 OR AN APPROVED EQUIVALENT SHALL BE EVALUATED BY THE ENGINEER.

#### 5. IT IS THE CUSTOMERS RESPONSIBILITY TO ENSURE THE PROVIDED CORROSION PROTECTION IS ADEQUATE FOR THE THE SITE CONDITIONS AND LIFE OF THE PROJECT, PRIOR TO PURCHASE AND AT THE

6. SEE CONNECTIONS DRAWING FOR FASTENER TORQUE VALUES.

CUSTOMERS EXPENSE.

## ELECTRICAL

- 1. UNLESS SPECIFIED BY CONTRACT DOCUMENTS, AP ALTERNATIVES AND THE JDI GROUP ARE NOT RESPONSIBLE FOR ANY WORK CONCERNING THE ELECTRICAL SYSTEMS OR COMPONENTS, INCLUDING BUT NOT LIMITED TO, ELECTRICAL INSTALLATION AS THEY PERTAIN TO THE RACKING HARDWARE, PV MODULES, OR THE SITE.
- 2. AP ALTERNATIVES AND THE JDI GROUP ARE NOT RESPONSIBLE FOR GROUNDING AND BONDING COMPONENTS, OR THE REQUIREMENTS AND INSTALLATION METHODS.
- 3. ELECTRICAL COMPONENTS, INCLUDING THOSE FOR BONDING, GROUNDING, AND WIRE MANAGEMENT. PROVIDED BY AP ALTERNATIVES, ARE PROVIDED AS COMPONENTS ONLY. AP ALTERNATIVES AND THE JDI GROUP ARE NOT RESPONSIBLE FOR THEIR USAGE OR INSTALLATION AND PROVIDE NO GUARANTEE TO THEIR LIFE OR ADHERENCE TO APPLICABLE BUILDING CODES.
- 4. ANY DRAWING, NOTE, OR DOCUMENTATION PROVIDED BY AP ALTERNATIVES, REFERENCING ANY ELECTRICAL, GROUNDING, OR BONDING COMPONENT OR INSTALLATION IS PROVIDED AS REFERENCE ONLY, AND SHALL NOT BE TAKEN AS PROOF OF AP ALTERNATIVES RESPONSIBILITIES OR LIABILITY, EXCEPT WHERE EXPLICITLY DEFINED IN THE CONTRACT DOCUMENTS.
- 5. MOUNTING OF ELECTRICAL EQUIPMENT TO AP ALTERNATIVES RACKING IS FORBIDDEN.

# SPECIAL INSPECTION

WHERE REQUIRED BY OWNER, CUSTOMER, AND/OR AUTHORITY HAVING JURISDICTION. MINIMUM INSPECTION SHALL INCLUDE THE FOLLOWING NOTES AND TABLE BELOW.

- 1. ALL SPECIAL INSPECTORS SHALL BE RETAINED BY OWNER/CUSTOMER. THE EXTENT OF THE INSPECTION SHALL COMPLY WITH THE CONTRACT DOCUMENTS, THE BUILDING CODE REQUIREMENTS, AND LOCAL JURISDICTION. IT IS THE OWNER/CUSTOMER'S RESPONSIBILITY TO GIVE PROPER NOTIFICATION TO THE SPECIAL INSPECTOR AND PROCEED WITH THE WORK ONLY AFTER THE SPECIAL INSPECTOR'S APPROVAL.
- 2. FAILURE TO NOTIFY THE SPECIAL INSPECTOR MAY RESULT IN OWNER/CUSTOMER HAVING TO REMOVE WORK FOR THE PURPOSE OF INSPECTION AT THE OWNER'S/CUSTOMERS EXPENSE.
- 3. SPECIAL INSPECTORS SHALL KEEP RECORDS OF ALL INSPECTIONS. RECORDS SHALL BE FURNISHED TO THE OWNER, ENGINEER OF RECORD, AND LOCAL JURISDICTION AS REQUIRED.
- 4. SPECIAL INSPECTIONS DO NOT RELIEVE OWNER FROM ADDITIONAL INSPECTIONS REQUIRED BY THE AHJ.

SPECIAL INSPECTION & TESTING	SCHEDU	LE
	CONTINUOUS	PERIODIO
STRUCTURAL STEEL ERECTION		
MATERIAL IDENTIFICATION		X
INSTALLATION OF HIGH STRENGTH BOLTS		Х
WELDED CONNECTIONS		X
MEMBER SIZES AND PLACEMENT		X
GENERAL CONFORMANCE WITH DESIGN DOCUMENTS		X
DRIVEN DEEP FOUNDATION ELEMENTS		
VERIFY ELEMENT MATERIALS, SIZE, LENGTHS COMPLY WITH DESIGN DOCUMENTS	×	
DETERMINE CAPACITIES OF TEST ELEMENTS & CONDUCT ADDITIONAL LOAD TESTS, AS REQ.	X	
OBSERVE DRIVING OPERATIONS, MAINTAIN RECORDS	×	
VERIFY PLACEMENT LOCATIONS & PLUMBNESS	X	

# GOVERNING CODES & REFERENCE

- AND OTHER STRUCTURES
  - FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS
- 4. AISC-10 STEEL CONSTRUCTION MANUAL, 14TH ED.

## PACKAGE COVERAGE - LOADING & SETUP RANGES & CONSTANTS

TILT ANGLES: 20°, 25°, & 30° GROUND SNOW LOAD (PSF): 0 - 70WIND SPEEDS (MPH): 110 - 140WIND EXPOSURE CATEGORY: MAX SEISMIC Ss: 3.730 g 1.390 q MAX SEISMIC S1: PV MODULE: 39.50" MAX. PANEL WIDTH: 79.00" MAX. PANEL LENGTH:

60.00 LBS MAX. PANEL WEIGHT: RISK CATEGORY: MAX. FRONT LIP CLEARANCE:

# ABBREVIATIONS

2.00"

ADMOD ADVANCED MODULAR GROUND MOUNT AUTHORITY HAVING JURISDICTION ALTERNATE, ALTERNATIVE ALT AMERICAN NATIONAL STANDARDS INSTITUTE ANSI

APA AP ALTERNATIVES, LLC APPD

APPROVED APPROX APPROXIMATE

MAX. PANEL HEIGHT:

AMERICAN SECTION OF THE INTERNATIONAL ASSOCIATION FOR TESTING MATERIALS

ΑZ AZIMUTH BLDG BUILDING

CAD COMPUTER AIDED DESIGN

CMB COMBINER BOX

DC DIRECT CURRENT DIA DIAMETER

DWG DRAWING

EXISTING (A)

ENGINEER OF RECORD EAST TO WEST

G.C. GENERAL CONTRACTOR

G,GND GROUND

GALV GALVANIZED

INTERNATIONAL BUILDING CODE

INSIDE DIAMETER KILOWATT

MANUFACTURER

MIN MINIMUM

MISCELLANEOUS MTD MOUNTED

MWMEGAWATT

(N) NEW

NATIONAL ELECTRIC CODE

NO NUMBER

NORTH TO SOUTH

OUTSIDE DIAMETER OD

PROFESSIONAL ENGINEER PΥ

PHOTOVOLTAIC

REV REVISION

SCH SCHEDULE

SQUARE FOOT/FEET

SOCKET HEAD CAP SCREW

SPECIFICATION

STAINLESS STEEL

STD STANDARD

TO BE DETERMINED TYPICAL

UNDERWRITERS LABORATORIES VOLTS DIRECT CURRENT

S.00 A STRUCTURAL COVER

S.30 A STRUCTURAL PURLINS S.40 A GENERAL CONNECTIONS

A ANCHOR BRACING

S.11 A RACKING OVERVIEW - 20° TILT

S.12 A RACKING OVERVIEW - 25° TILT

A RACKING OVERVIEW - 30° TILT

A ANCHOR POSTS & HELIXES

SHEET INDEX

WATT

S.20

# DOCUMENTS

- 1. 2015 INTERNATIONAL BUILDING CODE
- 2. ASCE 7-10 MINIMUM DESIGN LOADS FOR BUILDING
- 3. AISI S100-2007 NORTH AMERICAN SPECIFICATION

\_\_\_\_

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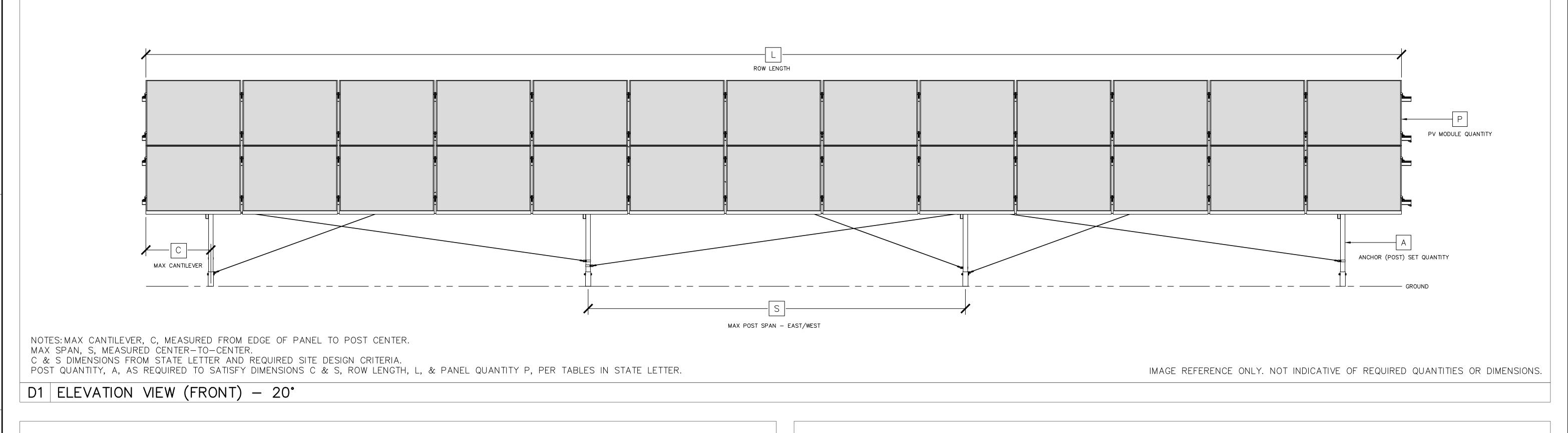
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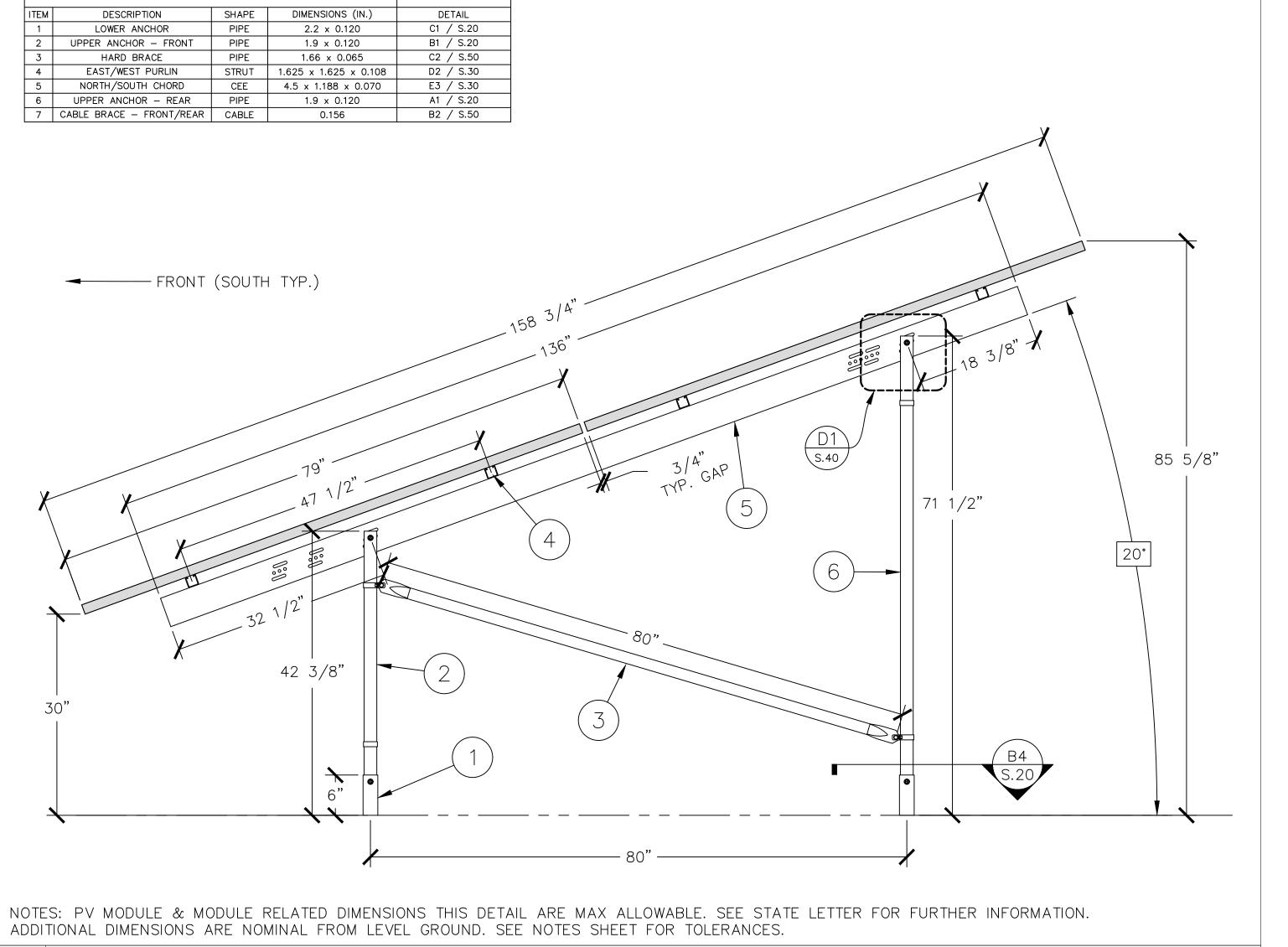
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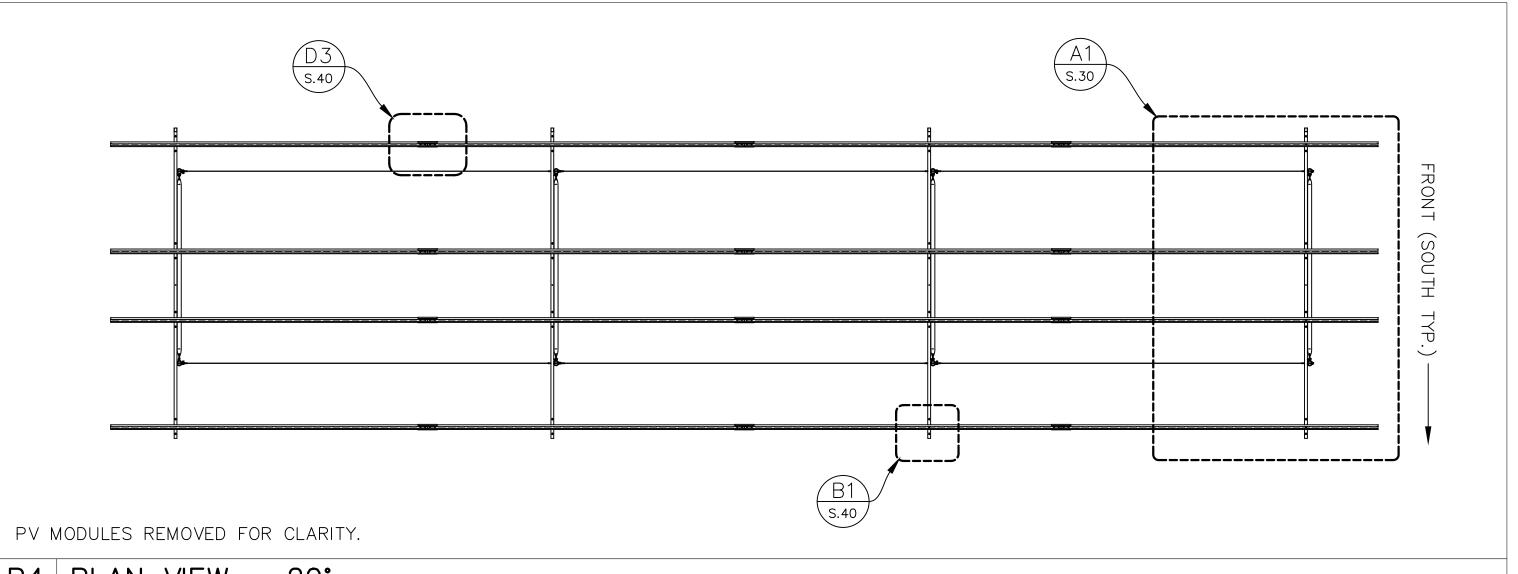
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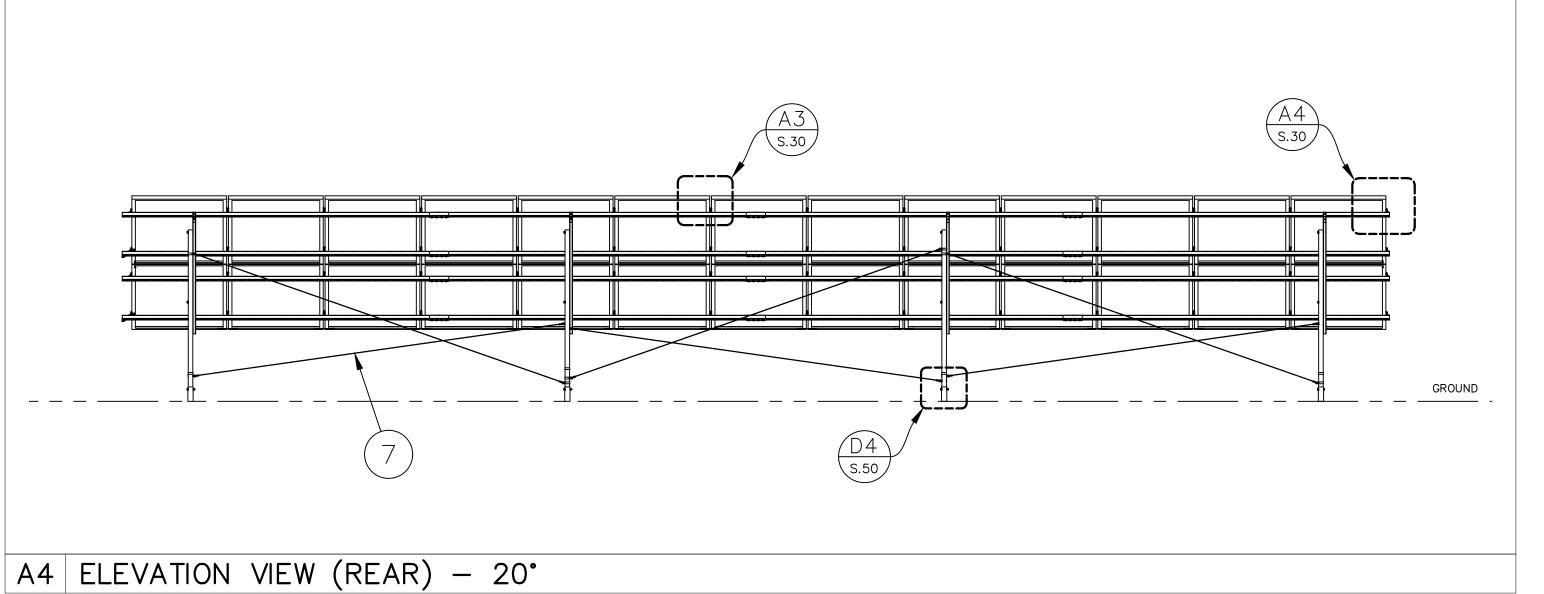
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B4 PLAN VIEW - 20°



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THE PARTICIPATIONS

THE PARTI

SHEET REVISIONS
REV. DESCRIPTION DATE
A INITIAL RELEASE 05/03/2018

APPROVED

DRAWN REVIEWED APPROVED SIZE

NF JR JDI D

SHEET NAME

RACKING OVERVIEW

20° TILT

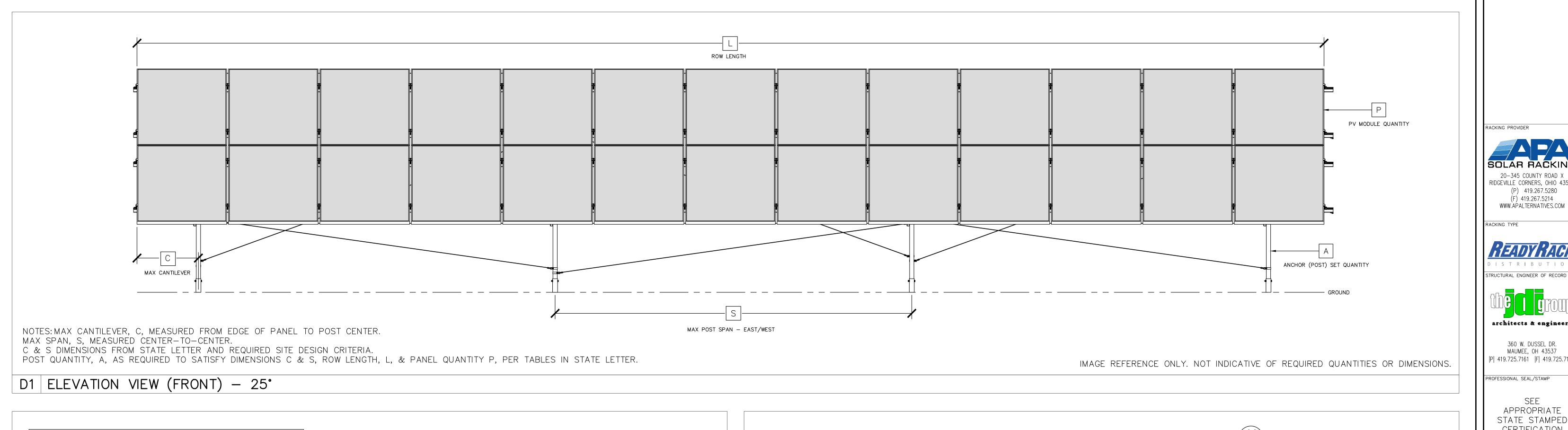
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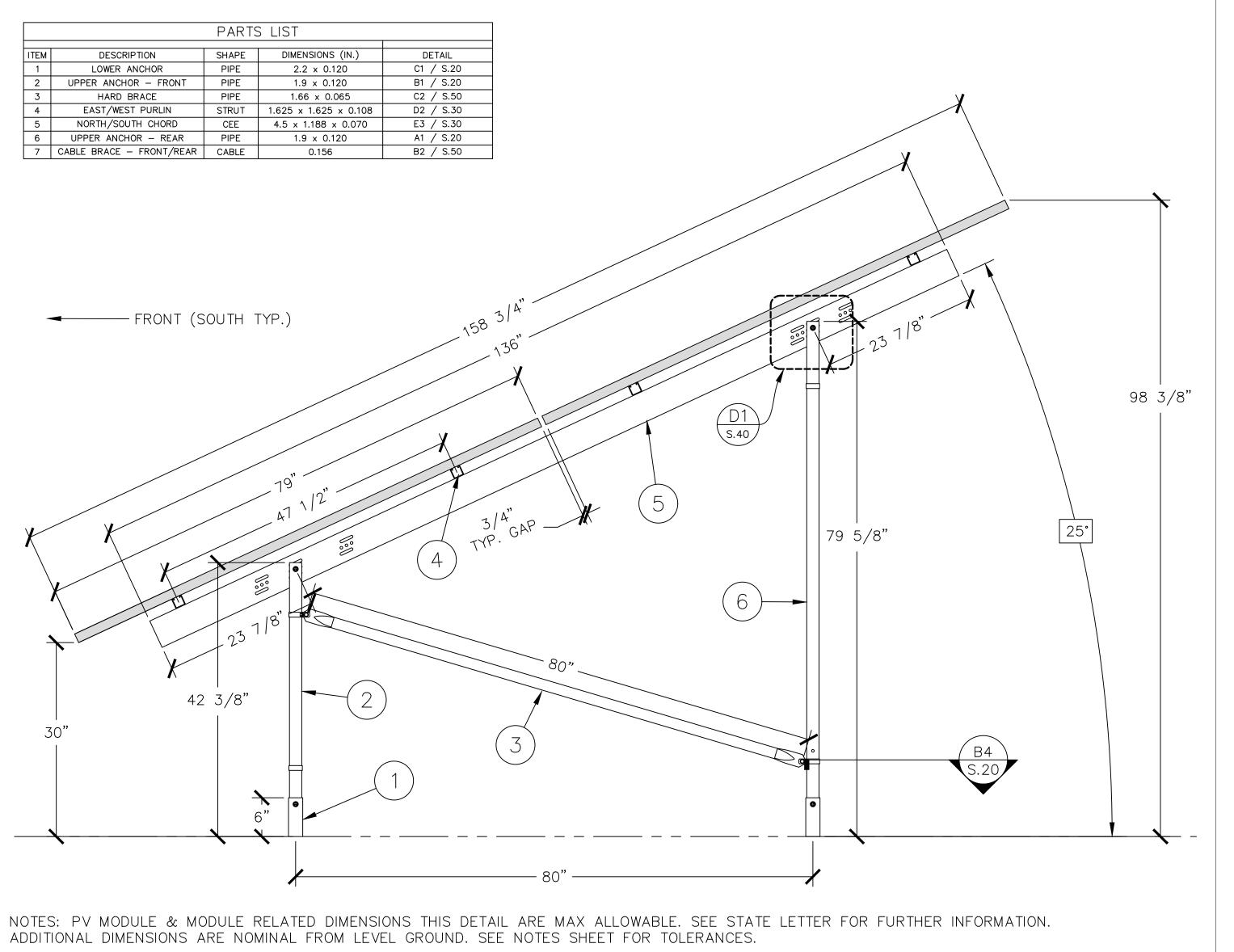
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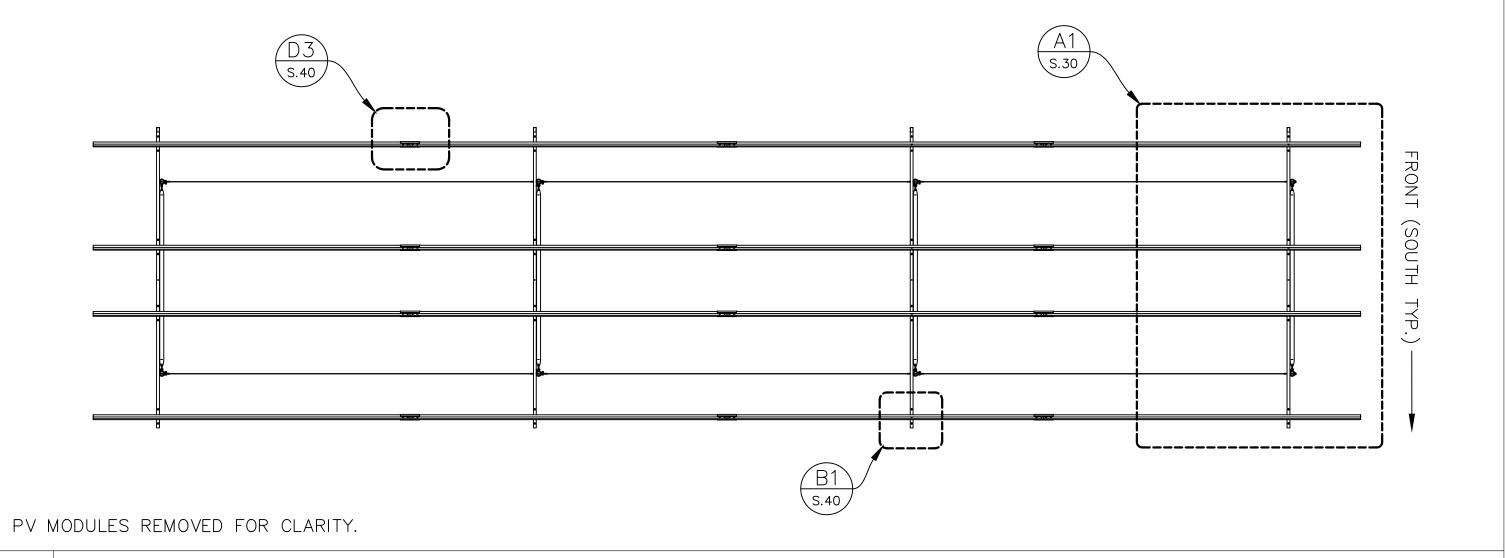
A1 PROFILE VIEW - 20°

PARTS LIST





A1 PROFILE VIEW - 25°



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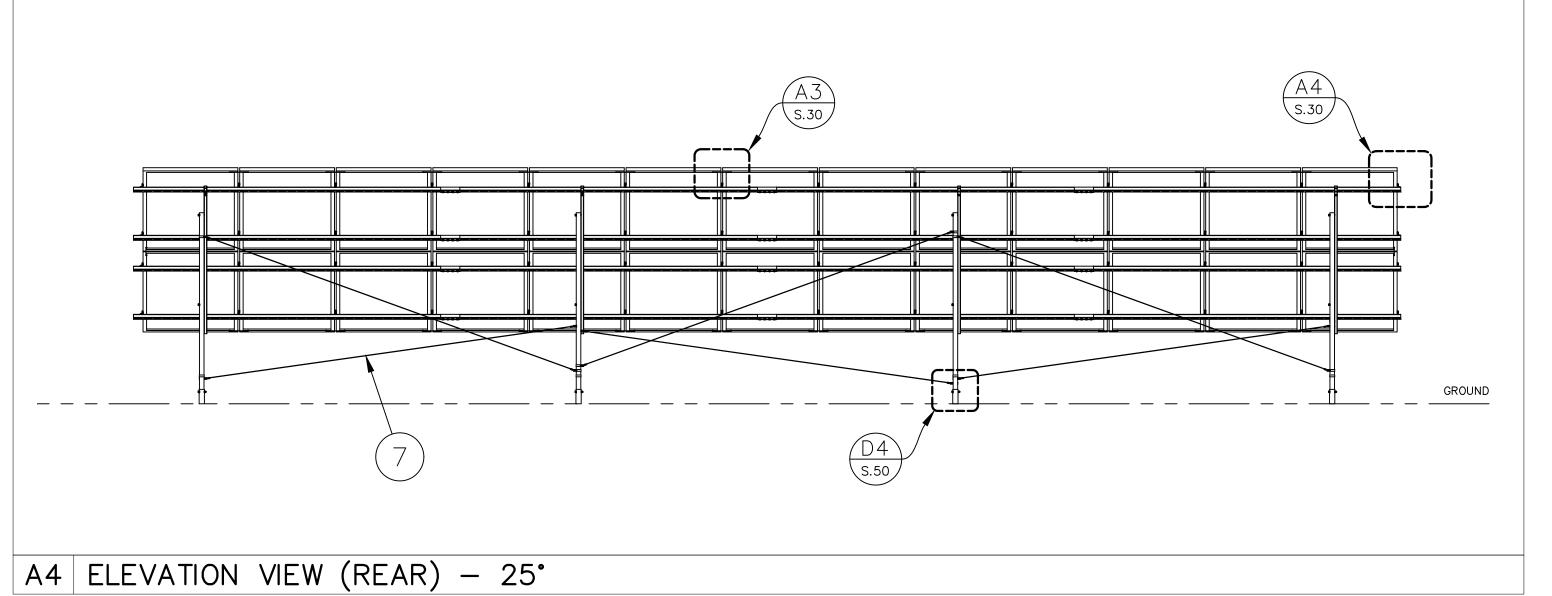
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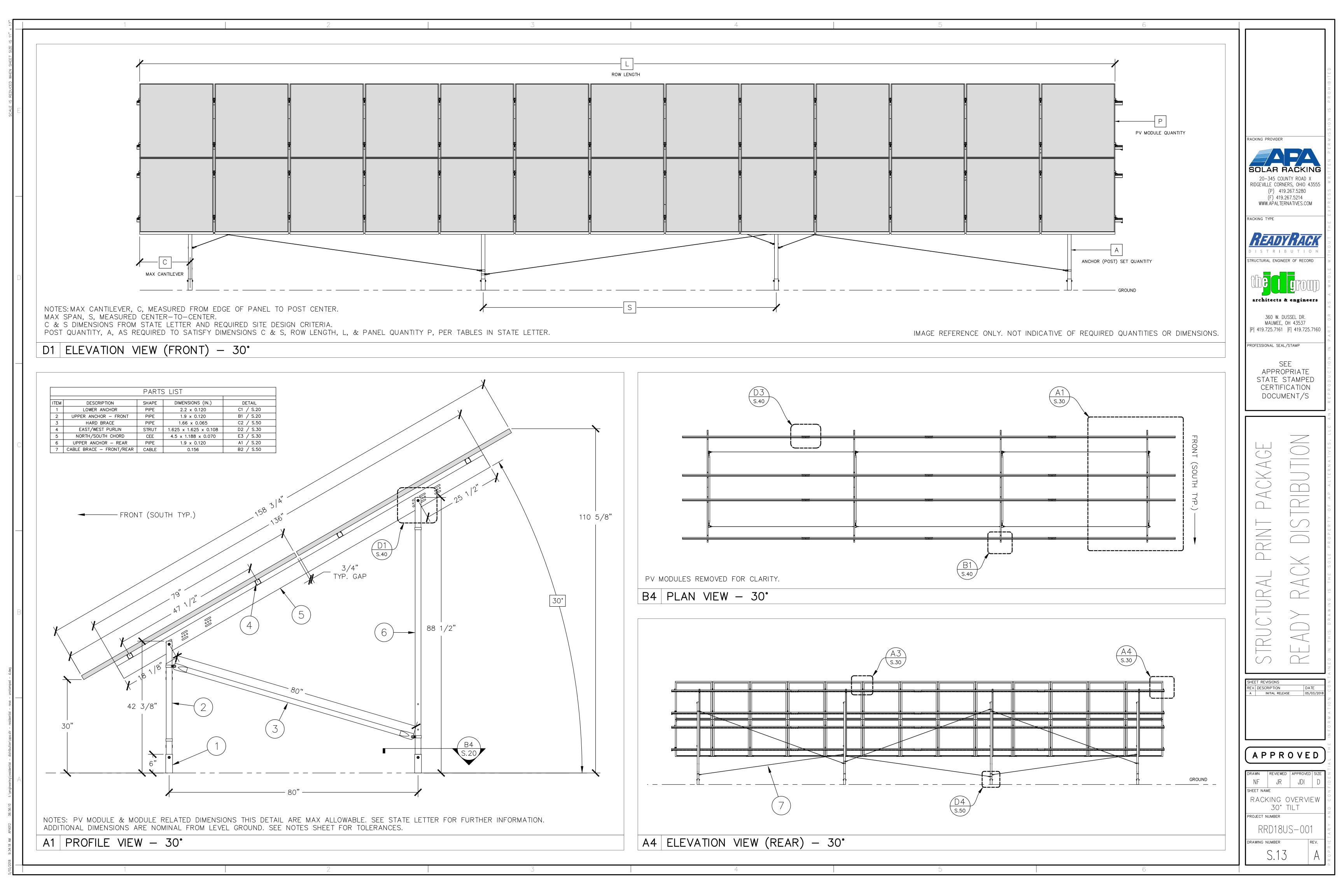
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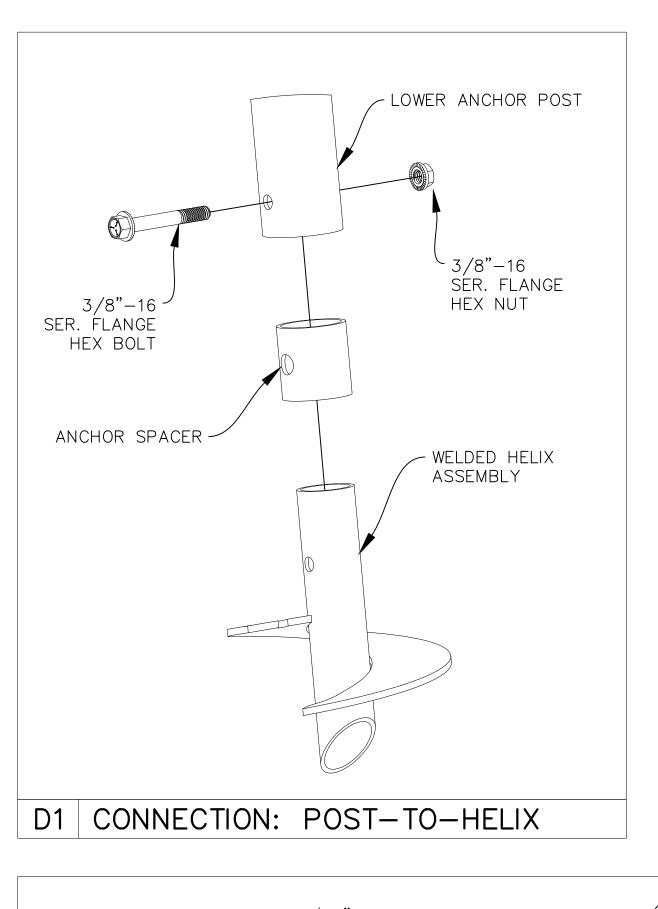
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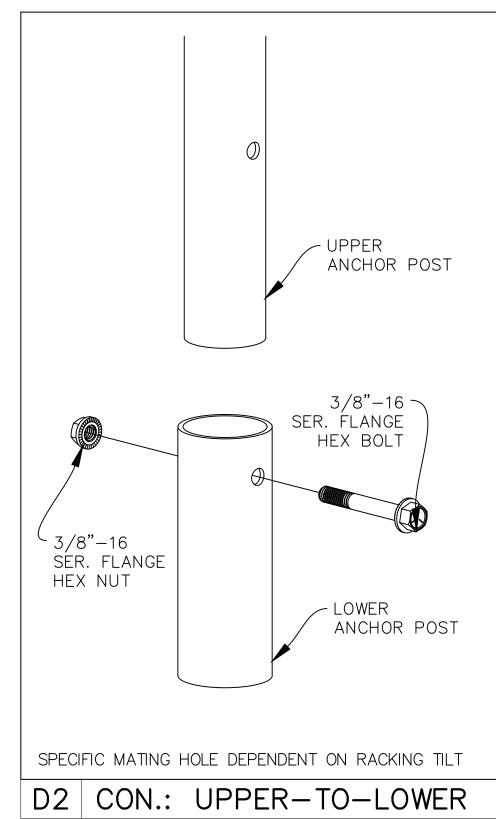
RACKING OVERVIEW 25° TILT

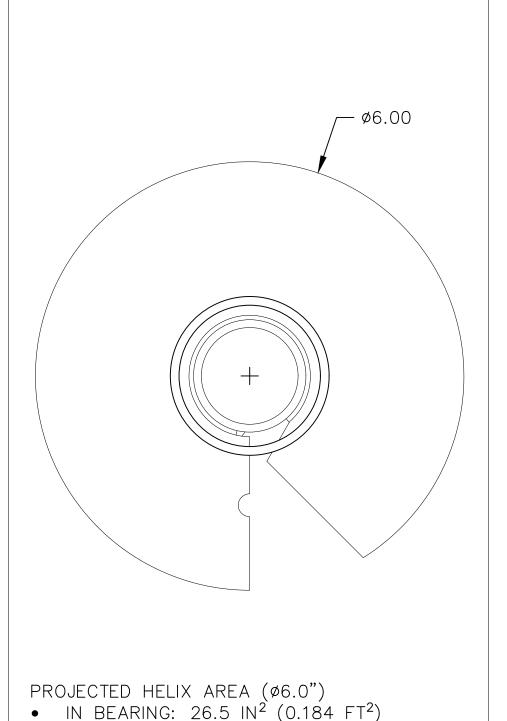
B4 PLAN VIEW - 25°





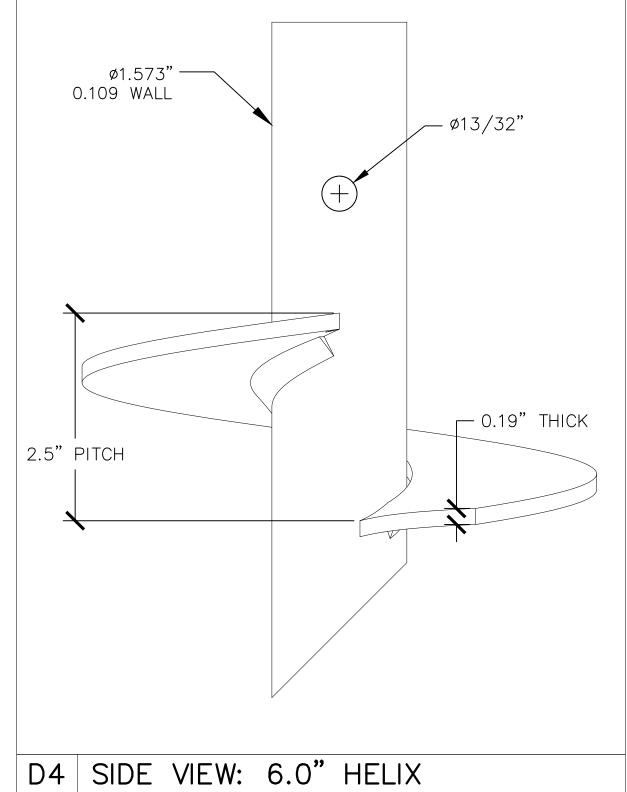


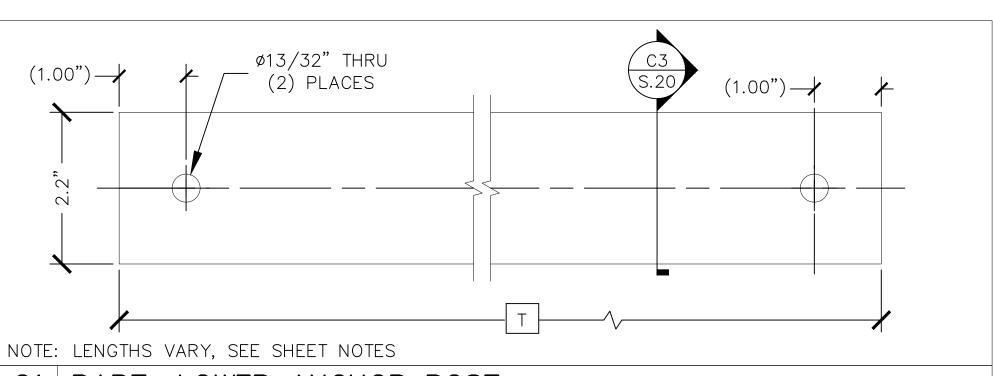


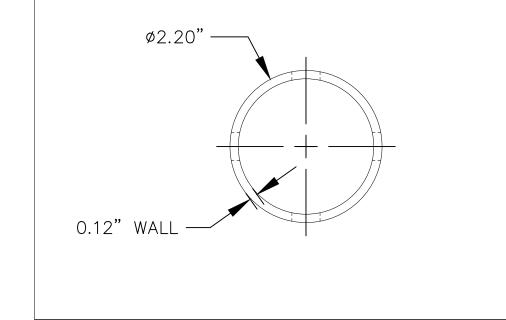


• IN TENSION:  $22.7 \text{ IN}^2 (0.158 \text{ FT}^2)$ 

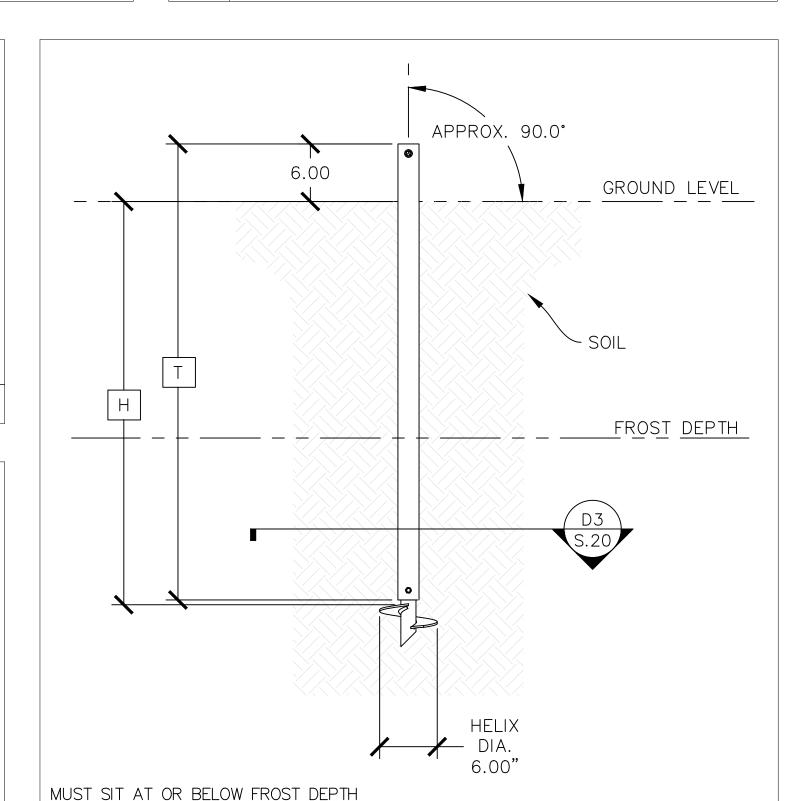
D3 TOP VIEW: 6.0" HELIX ASM.



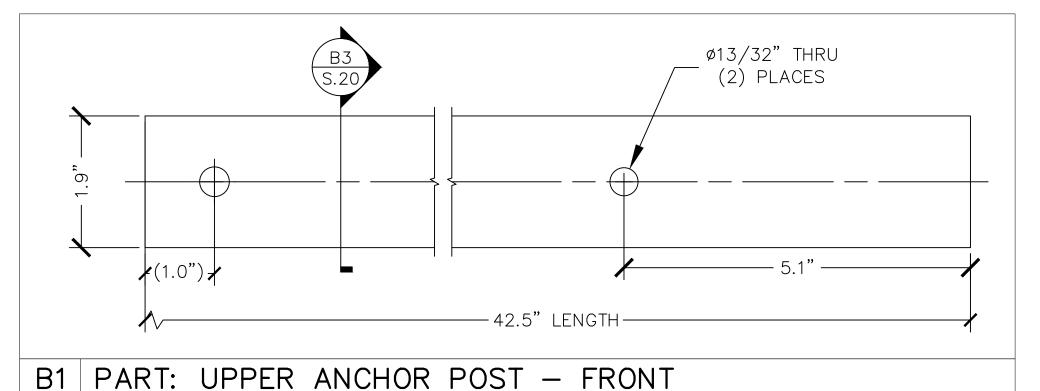




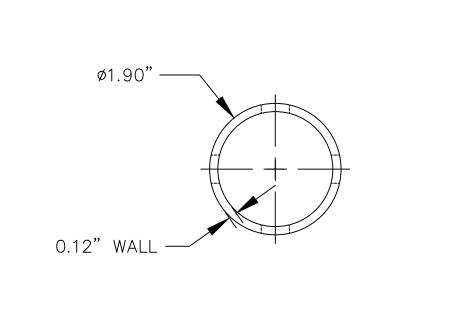
C3 SEC.: LOWER POST



C1 PART: LOWER ANCHOR POST



B3 SEC.: UPPER POST



B4 VIEW: POST EMBEDMENT

ø13/32" THRU (4) PLACES 20° HOLE	 OLE S.20	Jao. Hore
(1.0")	 22.0"	

EMBEDMENT TABLE				
DESIGN FROST				
DEPTH (PER AHJ)	H MIN. EMBEDMENT	TUBE LENGTH		
≤30"	30"	(35.5")		
≤36"	36"	(41.5")		
≤42"	42"	(47.5")		
≤48"	48"	(53.5")		
≤60"	60"	(65.5")		

NOTES:

- 1. TUBE MATERIAL, SPACER, AND WELDED HELIX ASSEMBLY:
  50 KSI MIN YIELD STRENGTH, 1010 STEEL.
- 2. TUBE AND ANCHOR SYSTEM TO BE HOT DIPPED GALVANIZED TO ASTM A123 OR INLINE GALVANIZED TO ASTM A1057.
- 3. ALL HARDWARE IS 300 SERIES STAINLESS STEEL.
- 4. RECOMMENDED TORQUE VALUES FOR STAINLESS STEEL HARDWARE:

  3/8-16 HARDWARE TO 19.6 FT-LBS
- MIN/MAX TORQUE VALUES FOR STAINLESS STEEL HARDWARE)

3/8-16: 17.5 - 21.5 FT-LBS

- 6. ANCHOR HELIX SHALL PENETRATE THE SOIL TO A DEPTH PAST THE FROST LINE AND TO THE DEPTH INDICATED AS MINIMUM TO ACHIEVE MINIMUM RESISTANCE TO TENSION, COMPRESSION, AND TENSION LOADS, PER THE STATE SEALED LETTER, WHICHEVER IS DEEPER.
- 7. INSTALLERS SHALL REFER TO STRUT AND POST SETUP SHEETS FOR LENGTH AND PLACEMENT DETAILS.
- 8. LISTED EMBEDMENT DEPTHS, ARE ONLY TO EXCEED SPECIFIC FROST DEPTHS, AS INDICATED IN THE TABLE. IT'S THE CUSTOMERS RESPONSIBILITY TO CONFIRM THE PROJECT FROST DEPTH, OR REQUIRED MINIMUM DESIGN DEPTH WITH THE LOCAL AHJ, BEFORE PURCHASING MATERIALS.
- 9. DEEPER EMBEDMENT, THAN LISTED HERE, MAY BE REQUIRED TO RESIST ANTICIPATED MAXIMUM LOAD VALUES, PER THE STATE SEALED STRUCTURAL LETTER. IT IS THE CUSTOMERS RESPONSIBILITY TO CONFIRM THAT THE ONSITE SOIL CONDITIONS ARE COMPATIBLE WITH THE PURCHASED HELIX SIZE, EMBEDMENT, AND REACTION VALUES (FROM THE STATE SEALED LETTER).
- 10. PILES MUST BE DRIVEN TO FULL DEPTH, OR THEY ARE CONSIDERED A FAILURE AND AN ADDITIONAL ANCHOR OR ALTERNATE ANCHORING METHOD MAY BE REQUIRED.
- 11. SHALLOWER PILE EMBEDMENTS MAY ONLY BE USED IF APPROVED BY A CUSTOMER CONTRACTED LICENSED GEOTECHNICAL ENGINEER. INSTALLING FOUNDATIONS IN ANY METHOD OR DEPTH LESS THAN THOSE LISTED HERE, IN THE STATE SEALED LETTER, AND COMPANION DOCUMENTATION, MAY VOID THE WARRANTY OF THE FOUNDATION, THE RACKING SYSTEM, OR ANY OTHER PART.
- 12. ANCHOR POST INSTALLATION
- 12.1. ACCURATELY LOCATE AND INSTALL ANCHOR POSTS BY SUCH METHODS AND EQUIPMENT SO AS NOT TO IMPAIR THE ANCHOR STRENGTH OR DAMAGE ANCHORS OR ADJACENT CONSTRUCTION.
- 12.2. INSTALLATION CONTRACTOR RESPONSIBLE FOR ALL CONSTRUCTION EQUIPMENT, METHODS, AND SEQUENCES.
- 12.3. DISTURBED GALVANIZED SURFACES SHALL BE TOUCHED UP WITH AN APPROVED COLD GALVANIZING COMPOUND.
- 12.4. INSTALL ANCHORS TO MINIMUM DEPTH AS REQUIRED, MINIMUM VALUE OF THIS SHEET, THE STATE SEALED LETTER, OR THE LOCAL AHJ.
- 13. HELICAL ANCHOR POSTS SHALL BE INSTALLED SO THAT POST TOLERANCES ARE MET, AND THE POST DOES NOT DEFORM EXCESSIVELY, SO THAT THE RACKING CANNOT CONNECT TO THE POST.
- 14. ANCHORS DRIVEN TOO SHALLOW OR TOO DEEP WILL NEED TO BE REMEDIED (AT THE CONTRACTOR'S EXPENSE).
- 15. IT IS THE CONTRACTORS RESPONSIBILITY TO DETERMINE THE LOCAL DESIGN FROST DEPTH, AND DETERMINE THE LOAD CAPACITIES OF THE SOIL.
- 16. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO THE PILE AFTER DELIVERY, INCLUDING HITTING UNDERGROUND OBSTRUCTIONS, INCORRECTLY INSTALLING RESULTING IN DAMAGE, OR OTHER.
- 17. PILES ARE DESIGNED TO SOIL CONDITIONS STATED IN IBC 2012. THE CUSTOMER SHALL VERIFY SITE CONDITIONS MEET MINIMUM REQUIREMENTS. AP ALTERNATIVES AND THE JDI GROUP ARE NOT RESPONSIBLE FOR IMPROPER PILE CHOICE OR INSTALLATION.

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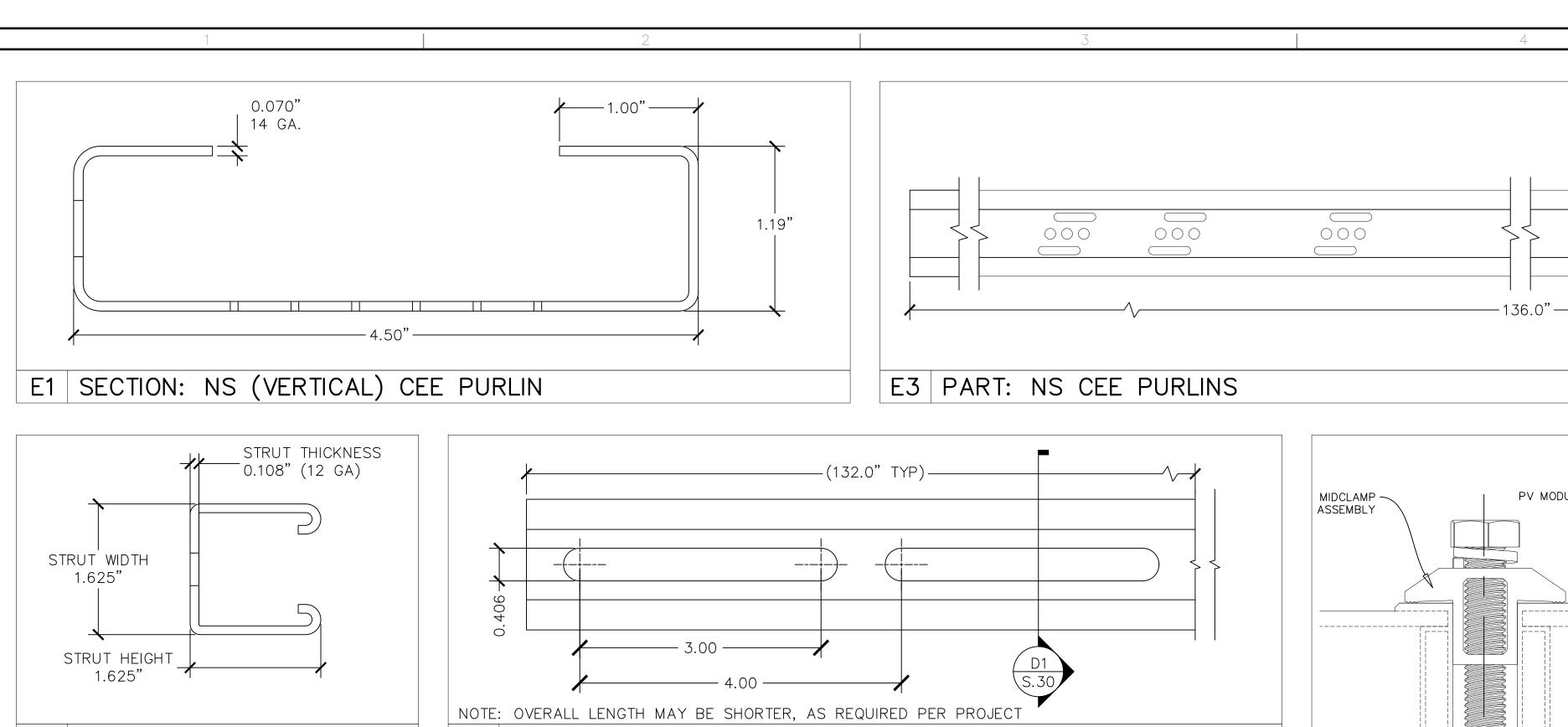
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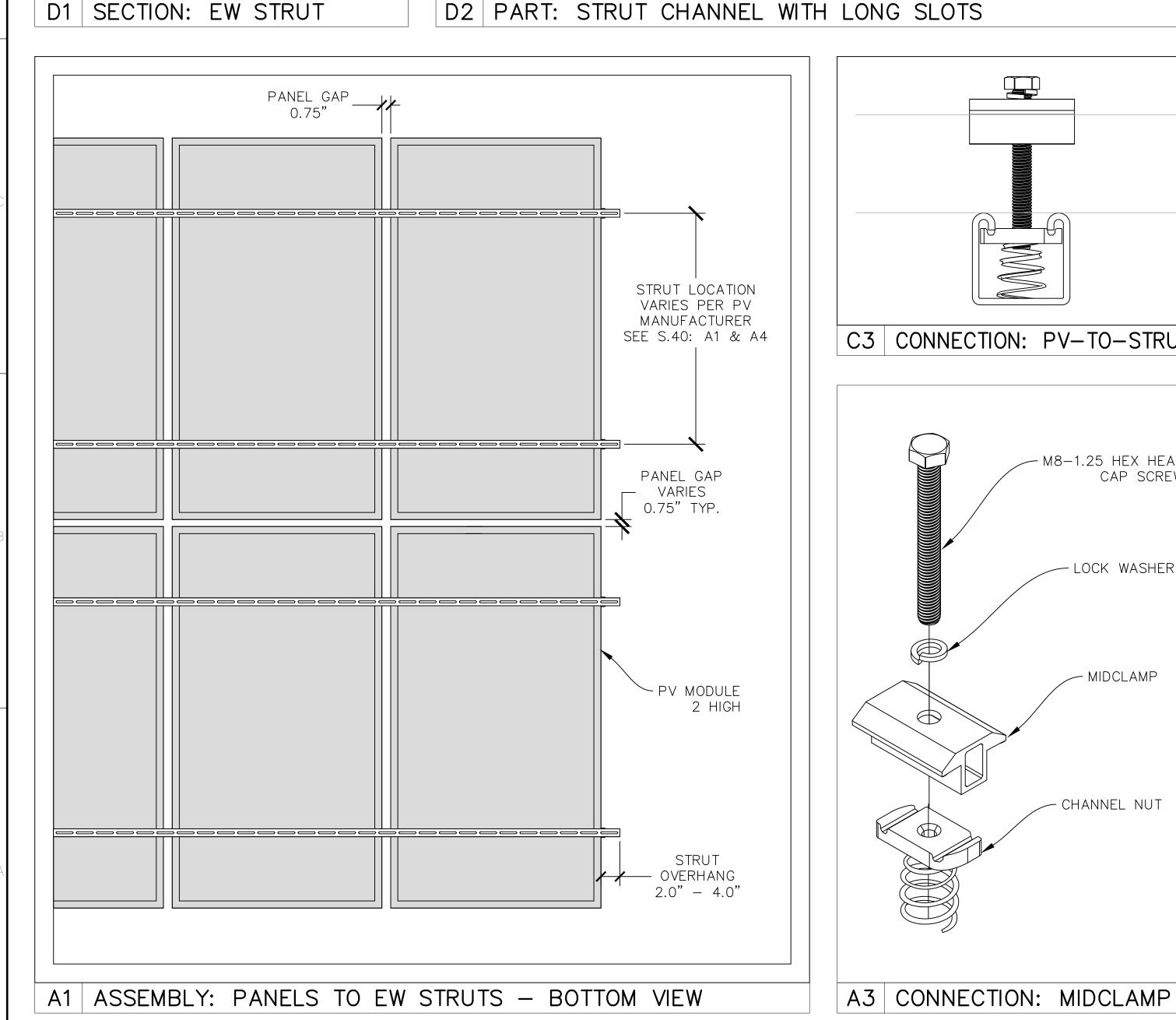
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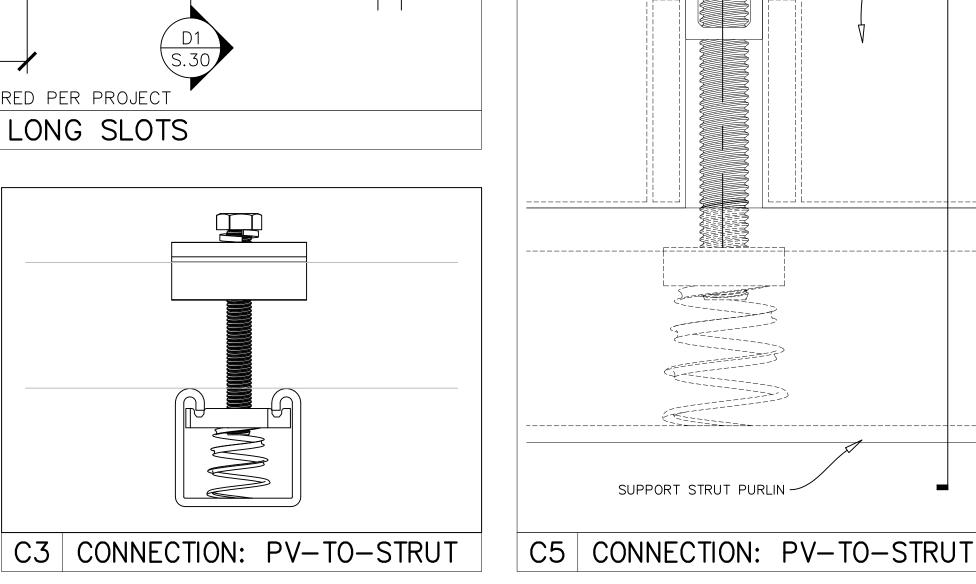
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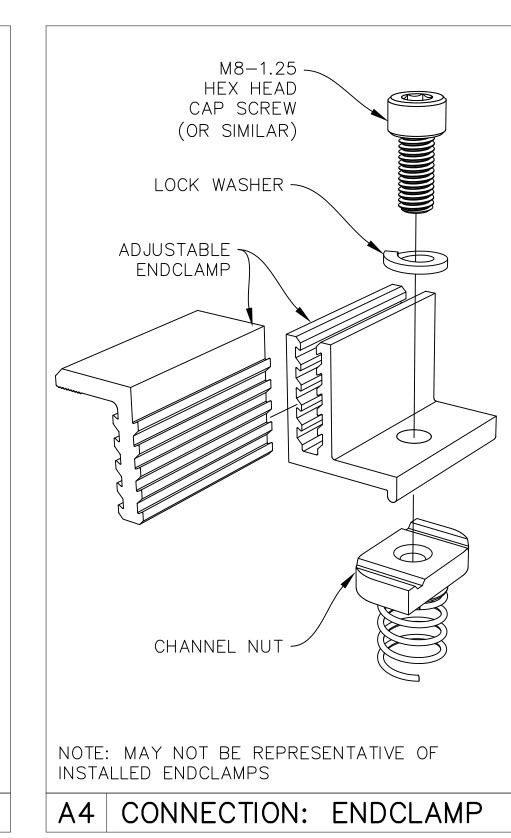
- M8-1.25 HEX HEAD

- LOCK WASHER

- MIDCLAMP

CHANNEL NUT

CAP SCREW



 $\bigcirc\bigcirc\bigcirc\bigcirc$ 

00000

 $\begin{pmatrix} C3 \\ S.30 \end{pmatrix}$ 

PV MODULE -

NOTES

- 1. STRUT PURLIN MATERIAL AND FINISH ARE MANUFACTURED TO SPECIFICATIONS THAT EXCEED OUR STANDARD PRODUCT WARRANTY.
- 2. ALL PURLINS GALVANIZED TO CONFORM TO A MINIMUM THICKNESS DESIGNATION EQUAL TO G90 OR INLINE GALVANIZED TO COMPARABLE THICKNESS AS PER ASTM A1057.
- 3. ALL PURLINS MANUFACTURED USING ASTM A1011/A1011M STRUCTURAL STEEL.
- 4. MINIMUM STEEL Fy YIELD STRENGTH OF STRUT PURLINS TO BE 50 KSI.
- 5. MINIMUM STEEL FY YIELD STRENGTH OF CEE CHANNEL TO BE 50 KSI.
- LENGTH OF CUT STRUT PURLINS VARIES BY PROJECT AND LOCATION WITHIN ARRAY. LENGTH OF PURLINS DOES NOT AFFECT STRUCTURAL CAPACITY.
- 7. PANEL DIMENSIONS VARY. REFER TO MANUFACTURER'S SPEC SHEET.
- 8. STRUT PLACEMENT IN RELATIONSHIP TO PANEL DICTATED BY MANUFACTURER, SEE MANUFACTURER'S INSTALL MANUAL.
- 9. CLAMP PLACEMENT DETERMINED BY STRUT PLACEMENT.
- 10. ENDCLAMPS MUST BE INSTALLED AT BOTH ENDS OF THE ROW, AT THE EAST AND WEST END (TYP.) OF EACH STRUT.
- 11. STAINLESS STEEL HARDWARE)

NOMINAL TORQUE VALUE M8-1.25: 15.6 FT-LBS

MIN/MAX TORQUE VALUES M8-1.25: 14.0 - 17.5 FT-LBS

- 12. KEEP ENDS OF TRIMMED STRUT PURLINS UNTIL END OF PROJECT FOR USE ON REMAINING ROWS.
- 13. STRUTS SHALL EXTEND APPROXIMATELY 4" PAST PANEL EDGES TO ACCOMMODATE END CLAMPS.
- 14. ENSURE ALL STRUTS SPAN MINIMUM OF ONE (1) ANCHORS
- 15. FOUR (4) ROWS OF STRUT PURLINS PER RACK
- 16. STRUT ENDS MUST BE AT LEAST 4" FROM ANCHOR CENTERS (TO PREVENT INTERFERENCE BETWEEN SPLICE AND BRACKET)
- 17. SPLICES SHALL NOT OCCUR IN THE CANTILEVERED PORTION.

RACKING PROVIDER SOLAR RACKING 20-345 COUNTY ROAD X RIDGEVILLE CORNERS, OHIO 43555 (P) 419.267.5280 (F) 419.267.5214

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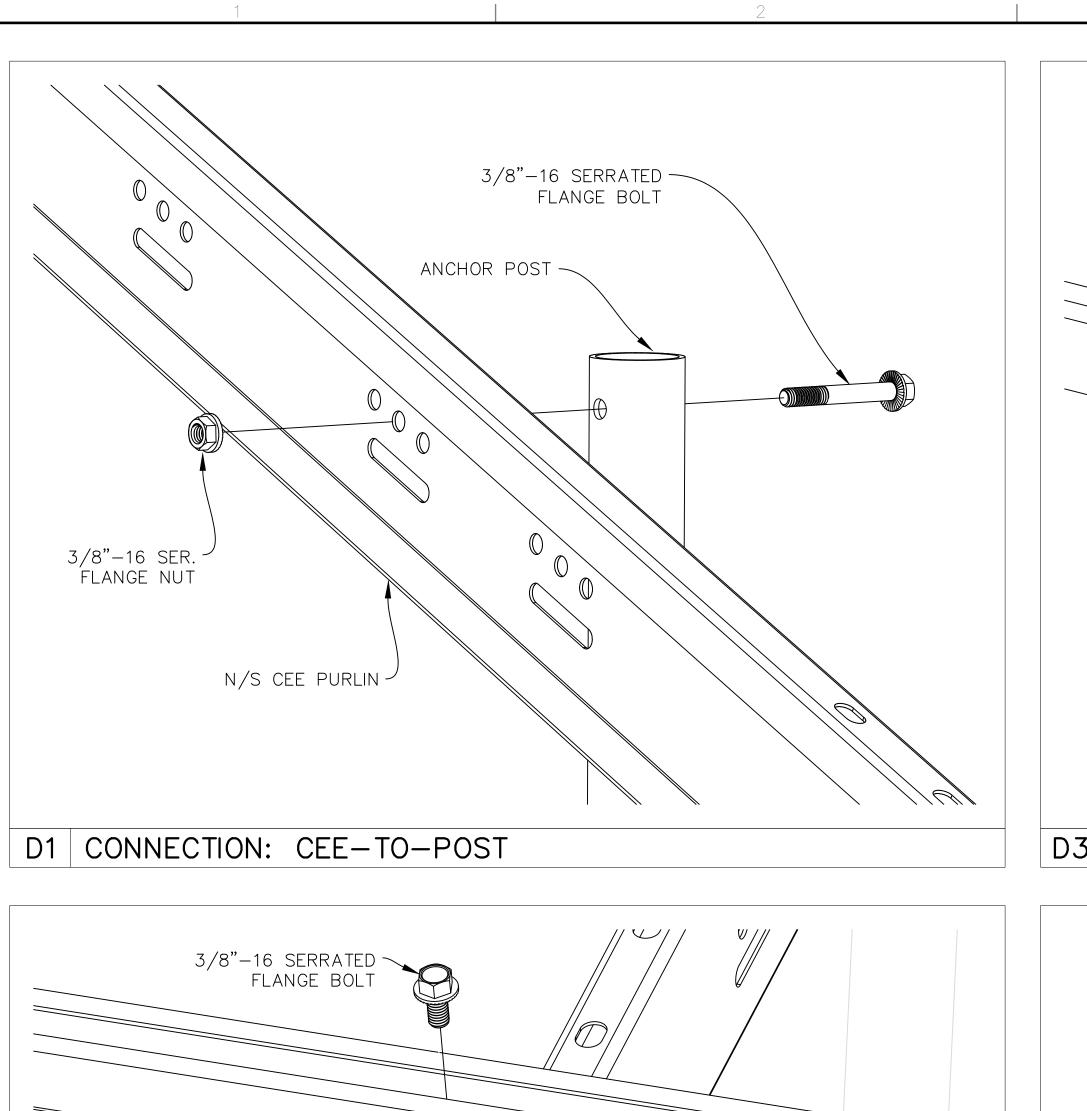
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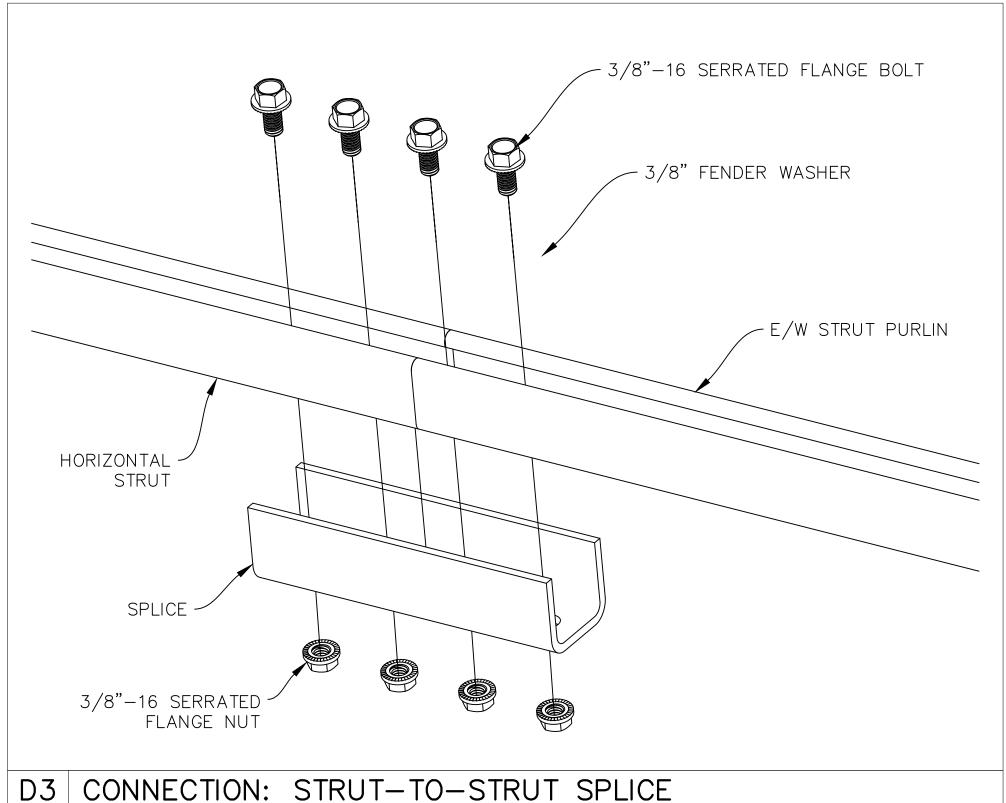
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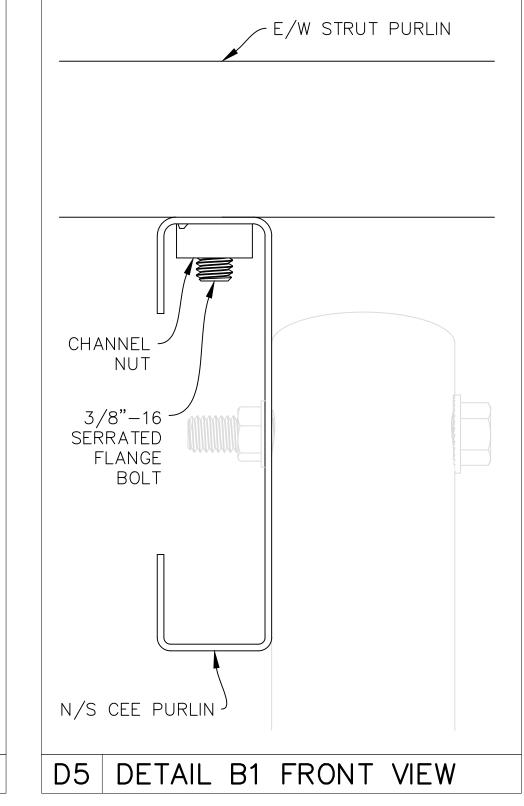
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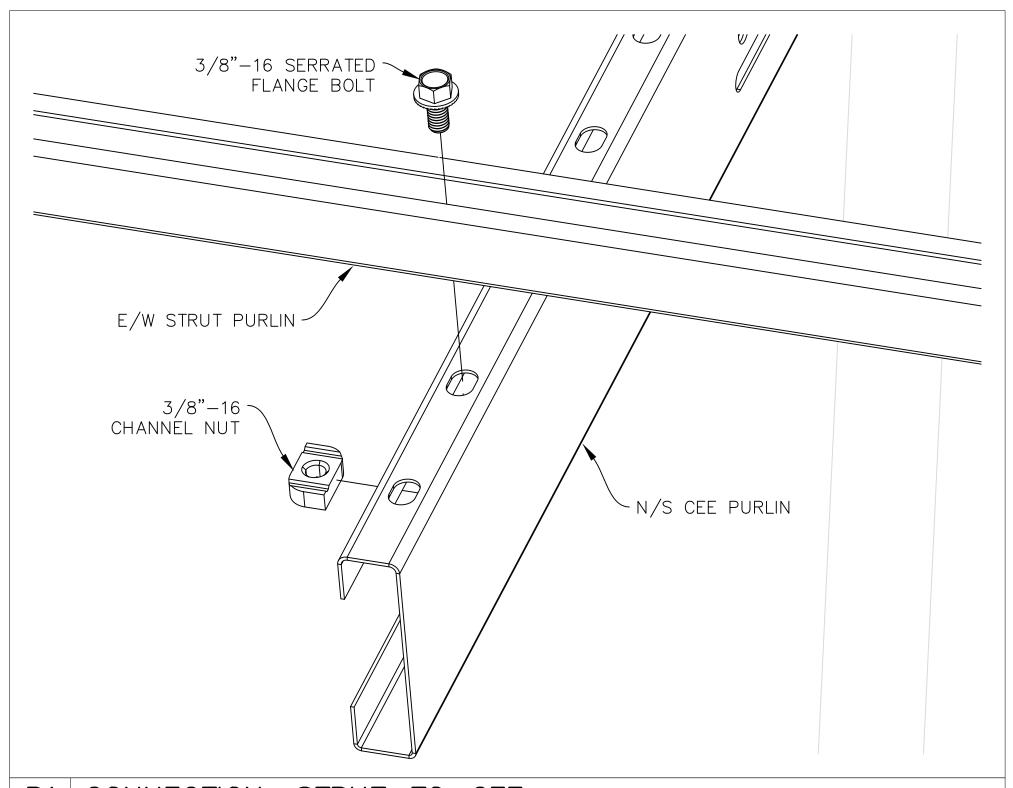




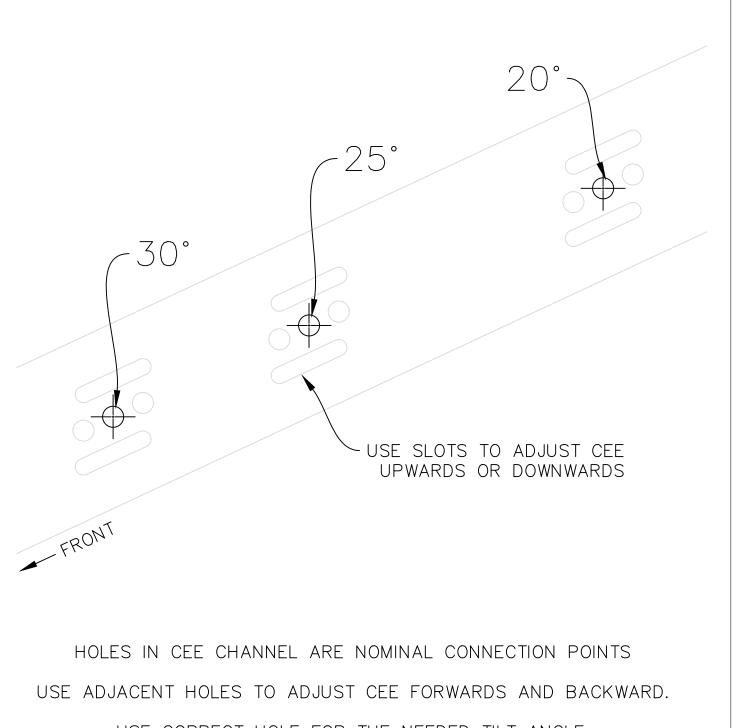


# NOTES

- 1. RECOMMENDED TORQUE VALUES (FOR STAINLESS STEEL HARDWARE)
- 1.1. 3/8-16: 19.6 FT-LBS
- 2. MIN/MAX TORQUE VALUES (FOR STAINLESS STEEL HARDWARE) 2.1. 3/8-16: 17.5 - 21.5 FT-LBS
- 3. DEPICTED HARDWARE AND PART PLACEMENT NOT INDICATIVE OF PREFERRED OR REQUIRED POSITIONS.
- 4. TILT ANGLE IS SETUP BY ANCHOR POST HEIGHTS.
- 5. CEE CHANNEL PURLIN ALLOWS FOR HEIGHT ADJUSTMENT, FORWARD/REAR ADJUSTMENT, AND MULTIPLE TILT ANGLES.
- 6. OTHER SPECIFIC CONNECTIONS ELSEWHERE IN DRAWING SET.
- 7. STRUT PURLINS MUST CONNECT TO THE CORRECT HOLES IN CEE CHANNEL (INNER, MIDDLE, OR OUTER TYPICALLY), AS DETERMINED BY PV MODULE MANUFACTURERS ALLOWABLE CLAMPING ZONE.
- 8. USE CORRECT NOMINAL HOLES IN CEE TO CONNECT TO ANCHOR POST, AS INDICATED. ADJACENT HOLES AND SLOTS FOR FIELD ADJUSTMENTS.
- 9. SERRATED HARDWARE MAY BE REPLACED WITH EQUIVALENT HARDWARE WITH WASHERS IF NECESSARY.

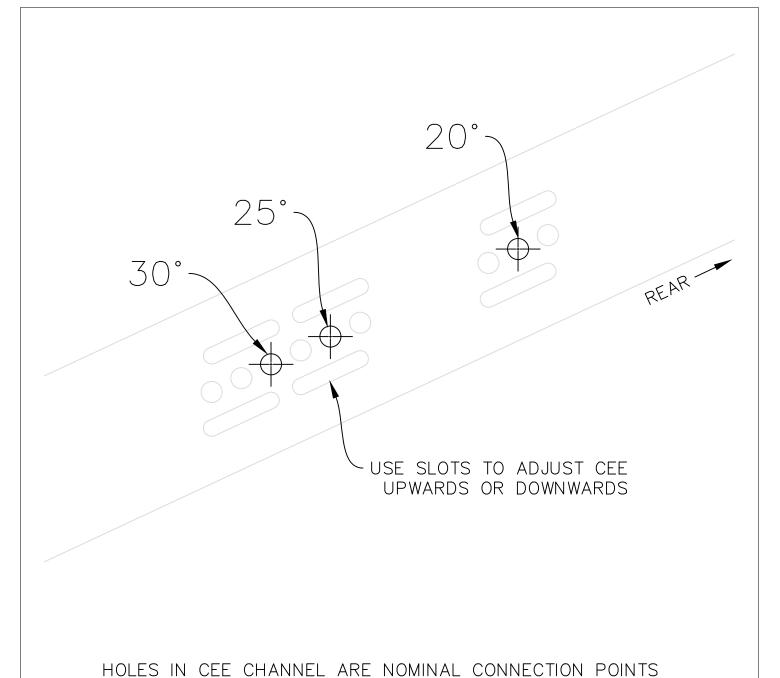


B1 CONNECTION: STRUT-TO-CEE



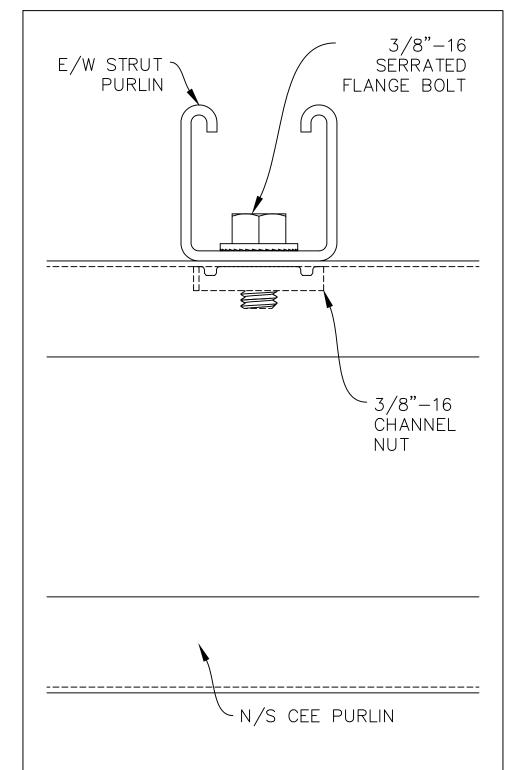
USE CORRECT HOLE FOR THE NEEDED TILT ANGLE.

B3 DETAIL: CEE-TO-POST ADJUSTMENT

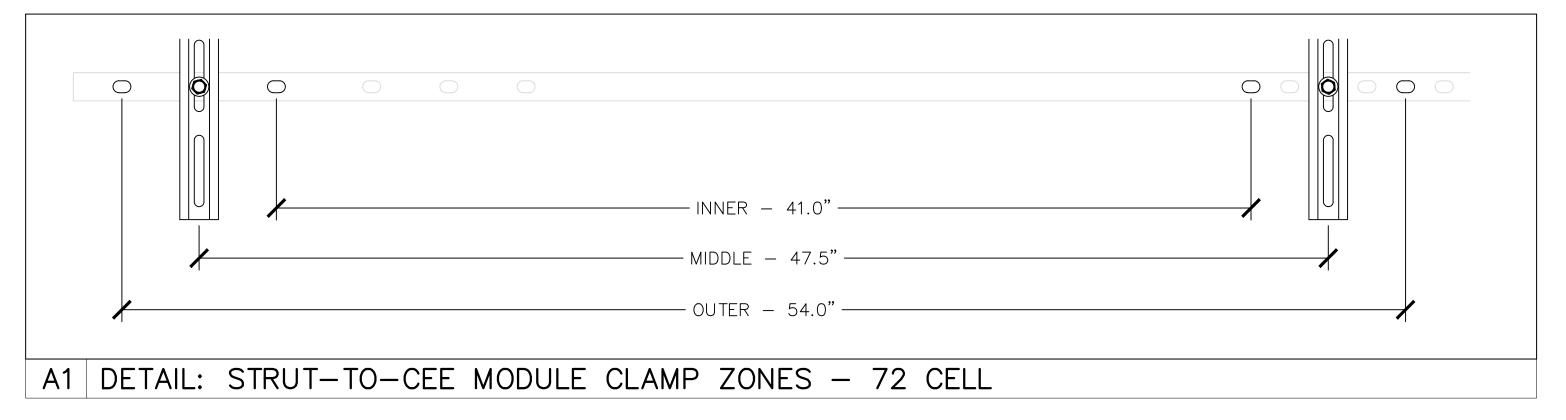


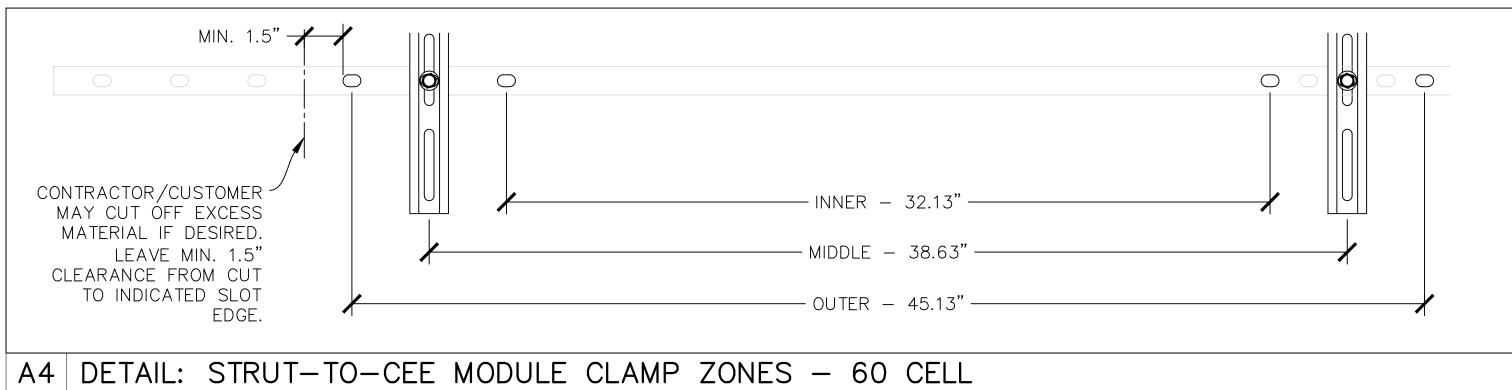
USE ADJACENT HOLES TO ADJUST CEE FORWARDS AND BACKWARD. USE CORRECT HOLE FOR THE NEEDED TILT ANGLE.

B4 DETAIL: CEE-TO-POST ADJUSTMENT



B6 DETAIL B1 SIDE VIEW





RACKING PROVIDER SOLAR RACKING 20-345 COUNTY ROAD X

RIDGEVILLE CORNERS, OHIO 43555 (P) 419.267.5280 (F) 419.267.5214 WWW.APALTERNATIVES.COM

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RACKING TYPE

STRUCTURAL ENGINEER OF RECORD

architects & engineers

360 W. DUSSEL DR. MAUMEE, OH 43537 |P| 419.725.7161 |F| 419.725.7160

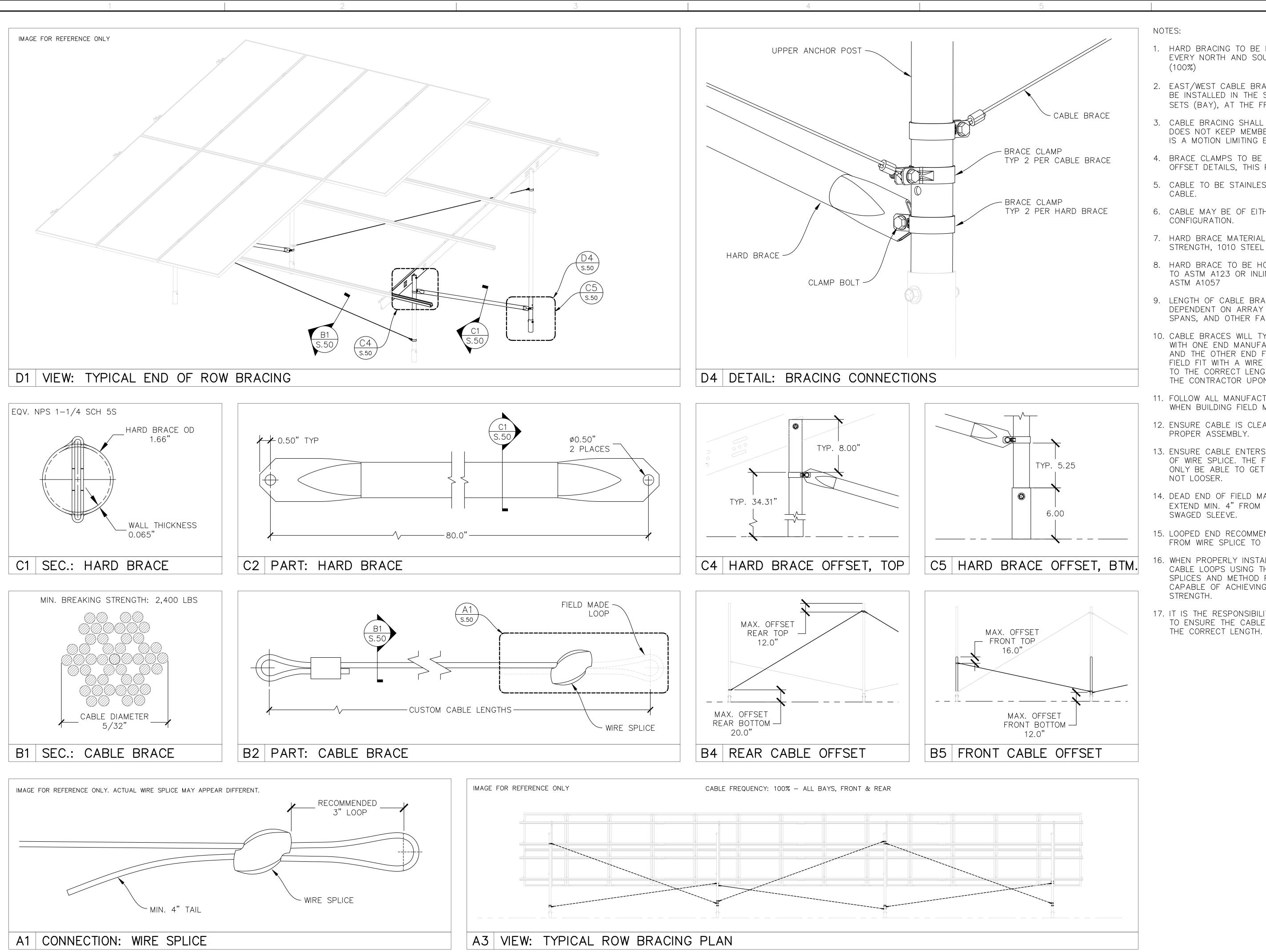
PROFESSIONAL SEAL/STAMP

APPROPRIATE STATE STAMPED CERTIFICATION DOCUMENT/S

APPROVED

A INITIAL RELEASE

NF | JR | JDI | CONNECTIONS OVERVIEW PROJECT NUMBER RRD18US-001



- 1. HARD BRACING TO BE INSTALLED BETWEEN EVERY NORTH AND SOUTH ANCHOR SET. (100%)
- 2. EAST/WEST CABLE BRACING (VEE BRACES) TO BE INSTALLED IN THE SPACE BETWEEN ANCHOR SETS (BAY), AT THE FRONT AND REAR.
- 3. CABLE BRACING SHALL BE INSTALLED TAUT. IT DOES NOT KEEP MEMBERS IN TENSION, BUT IT IS A MOTION LIMITING ELEMENT.
- 4. BRACE CLAMPS TO BE LOCATED AS SHOWN IN OFFSET DETAILS, THIS PAGE.
- 5. CABLE TO BE STAINLESS STEEL AIRCRAFT CABLE.
- 6. CABLE MAY BE OF EITHER 7X7 OR 7X19
- 7. HARD BRACE MATERIAL: 40 KSI MIN YIELD
- 8. HARD BRACE TO BE HOT DIPPED GALVANIZED TO ASTM A123 OR INLINE GALVANIZED TO ASTM A1057
- 9. LENGTH OF CABLE BRACES WILL VARY DEPENDENT ON ARRAY TILT, TERRAIN, POST SPANS, AND OTHER FACTORS.
- 10. CABLE BRACES WILL TYPICALLY BE RECEIVED WITH ONE END MANUFACTURED WITH A LOOP AND THE OTHER END FREE. THESE SHOULD BE FIELD FIT WITH A WIRE SPLICE AND ADJUSTED TO THE CORRECT LENGTH AND TENSION, BY THE CONTRACTOR UPON INSTALLATION.
- 11. FOLLOW ALL MANUFACTURERS GUIDELINES WHEN BUILDING FIELD MADE END OF CABLES.
- 12. ENSURE CABLE IS CLEANLY CUT TO ENSURE PROPER ASSEMBLY.
- 13. ENSURE CABLE ENTERS CORRECT APERTURE OF WIRE SPLICE. THE FINAL LOOP SHOULD ONLY BE ABLE TO GET TIGHTER UNDER LOAD, NOT LOOSER.
- 14. DEAD END OF FIELD MADE CABLE MUST EXTEND MIN. 4" FROM THE END OF THE SWAGED SLEEVE.
- 15. LOOPED END RECOMMENDED TO EXTEND 3" FROM WIRE SPLICE TO CLAMP BOLT.
- 16. WHEN PROPERLY INSTALLED, FIELD MADE CABLE LOOPS USING THE PROVIDED WIRE SPLICES AND METHOD PRESENTED HERE, ARE CAPABLE OF ACHIEVING ADEQUATE BREAKING STRENGTH.
- 17. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THE CABLES ARE PREPARED TO THE CORRECT LENGTH.

RACKING PROVIDER SOLAR RACKING 20-345 COUNTY ROAD X RIDGEVILLE CORNERS, OHIO 43555 (P) 419.267.5280

RACKING TYPE

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STRUCTURAL ENGINEER OF RECORD

architects & engineers 360 W. DUSSEL DR.

PROFESSIONAL SEAL/STAMP

MAUMEE, OH 43537

|P| 419.725.7161 |F| 419.725.7160

SEE APPROPRIATE STATE STAMPED

CERTIFICATION

DOCUMENT/S

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REV. DESCRIPTION
A INITIAL RELEASE

APPROVED

NF JR JDI SHEET NAME ANCHOR BRACING OVERVIEW PROJECT NUMBER

RRD18US-001

#### City of Independence

#### Request for a Conditional Use Permit Amendment to Allow a Tack Room Associated with the Commercial Riding Stable Located on the Property at 4405 County Road 92 N.

*To:* Planning Commission

From: | Mark Kaltsas, City Planner

Meeting Date: | March 16, 2021

Applicant: | Mike and Bonnie Kuka

Owner: Mike and Bonnie Kuka

Location: 4405 County Road 92 N

#### Request:

Mike Kuka (Applicant/Owner) is requesting the following action for the property located at 4405 County Road 92 N. (PID No. 0411824310002) in the City of Independence, MN:

a. An amendment to the existing conditional use permit, allowing a commercial riding stable, to construct a new detached accessory structure to be used as a tack room on the property located at 4405 County Road 92 N.

#### Property/Site Information:

The property is located on the west side of CSAH 92 and north of CSAH 11. The property is comprised of rolling topography, ponds, wetlands and pasture. The applicant has two properties under the same ownership. The properties have the following characteristics:

Property Information 4405 County Road 92 N

Zoning: Agriculture

Comprehensive Plan: Agriculture

Acreage: PID No. 04-118-24-31-0002 – 80.07 acres



#### Previous Approval/Conditional Use Permit:

The City approved a conditional use permit (CUP) for the subject property in 2016 to allow a commercial riding stable. The CUP was amended in 2018 to allow additional horses to be boarded on the property. The applicant is now seeking an amendment to allow a tack room to be located on the property. A commercial riding stable is further defined in the City's ordinance as follows:

Subd. 69. "Riding stable, commercial." Stables, barns, and facilities for the keeping and riding of horses, both indoor and outdoor, operated as a livery or boarding stable, or other commercial recreational use.

The commercial riding stable currently permitted allows the boarding of horses as well as hosting a limited number of additional equestrian related events within the facility. The proposed tack room would be located near the pen areas on the south side of the property. The applicant is currently using a mobile trailer as a tack room on the property. Staff notified the applicant that the City would require an amendment for any type of structure on the property including a temporary trailer.



Staff has reviewed the request and offers several discussion points for further consideration by the City.

1. The applicant is proposing to use the existing trailer for several years prior to being able to construct a permanent structure in this location. Staff is generally agreeable to the use of the trailer for a temporary tack room given its location and proximity to surrounding properties.

- The applicant has noted that they intend to construct a permanent structure in the future. The City
  could allow an amendment to the CUP which would allow the temporary trailer for period of time (5
  years or similar) at which time the permanent structure would need to be constructed and the
  temporary structure removed.
- 3. The applicant further noted that the location of the proposed tack room near the existing pens is important to the operation of the commercial riding stable.
- 4. The temporary trailer could not be occupied as a temporary residence or for living quarters at any time.

Commercial riding stables are permitted as conditional uses in the Agriculture zoning district. In order for the City to consider approval of an amendment to the conditional use permit request it must find that it meets the criteria established within the zoning ordinance. The criteria for granting a conditional use permit are clearly delineated in the City's Zoning Ordinance (Section 520.11 subd. 1, a-i) as follows:

- 1. The conditional use will not adversely affect the health, safety, morals and general welfare of occupants of surrounding lands.
- 2. The proposed use will not have a detrimental effect on the use and enjoyment of other property in the immediate vicinity for the proposes already permitted or on the normal and orderly development and improvement of surrounding vacant property for uses predominant in the area.
- 3. Existing roads and proposed access roads will be adequate to accommodate anticipated traffic.
- 4. Sufficient off-street parking and loading space will be provided to serve the proposed use.
- 5. The proposed conditional use can be adequately serviced by public utilities or on-site sewage treatment, and sufficient area of suitable soils for on-site sewage treatment is available to protect the city form pollution hazards.
- 6. The proposal includes adequate provision for protection of natural drainage systems, natural topography, tree growth, water courses, wetlands, historic sites and similar ecological and environmental features.
- 7. The proposal includes adequate measures to prevent or control offensive odor, fumes, dust, noise, or vibration so that none of these will constitute a nuisance.
- 8. The proposed condition use is consistent with the comprehensive plan of the City of Independence.
- 9. The proposed use will not stimulate growth incompatible with prevailing density standards.

The subject property is located directly south of the Shrine Horse Facility which operates as a commercial riding stable. The relative size of the property, its access to County Road 92 and geographic seclusion help to mitigate potential issues related to the proposed tack room addition. The City is not aware of any current complaints or concerns relating to the operation of the commercial riding stable on this property.

The proposed conditional use permit amendment to allow a tack room (temporary trailer and then permanent detached accessory structure) is consistent with the Agricultural nature of the property and

surrounding land uses. The Planning Commission will need to determine if the requested conditional use permit amendment meets the criteria for granting a conditional use permit.

#### **Neighbor Comments:**

The City has not received any verbal or written comments at the time this report was prepared.

#### Recommendation:

Staff is seeking a recommendation from the Planning Commission for the request for a conditional use permit amendment. Should the Planning Commission make a recommendation to approve the requested action, the following findings and conditions should be considered:

- The proposed Conditional Use Permit Amendment request meets all applicable conditions and restrictions stated Chapter V, Section 510, Zoning, in the City of Independence Zoning Ordinance.
- 2. The conditional use permit will be reviewed annually by the City to ensure conformance with the conditions set forth in the resolution.
- 3. All conditions stated in **Resolution No. 16-1213-02 AND 18-0710-01** shall remain in force.
- 4. Approval of the conditional use permit amendment shall be subject to the following additional conditions:
- 5. The City will allow the temporary use of the existing trailer as a tack room for a period not to exceed five (5) years from the date of City Council approval. The temporary trailer will need to be removed from the location upon completion of a permanent detached accessory structure. The City will permit a permanent tack room in the location designated on the approved site plan attached hereto as Exhibit A. The overall size of the permanent detached accessory structure shall be less than 1,500 SF.
- 6. The temporary trailer shall not be occupied as a temporary residence or for living quarters at any time.
- 7. The applicant shall pay for all costs associated with processing and recording the application for a conditional use permit amendment.

#### Attachments:

- 1. Application
- 2. Proposed Site Plan/Picture

## City of Independence

The Independence City Code was established to protect both current and future residents from the negative impacts of improper development and to ensure a positive future for the city. The land use application review is the mechanism that allows the city to examine proposed uses to ensure compatibility with the surrounding environment, natural or otherwise. It is important to understand that a proposed use may be acceptable in some circumstances, but unacceptable in others—all applications are viewed on a case-by-case basis.

	Request: Add To CUP a Tack Room out by			
☐ Appeal	New Paddocks south of house			
Comprehensive Plan Amendment				
Concept Plan				
Conditional Use Permit  Residential Commercial/Light Industrial Telecommunications Agriculture Home Occupation Non-Conforming Use Guest/Bunk House Institutional X_CUP Amendment	Site Address or Property Identification Number(s): 4405 County Road 92 North			
Extension Request	NOTE: Minnesota State Statute 15.99 requires local			
Final Plat	governments to review an application within 15 days of its submission to determine if an application is complete and/or			
☐ Interim Use Permit	if additional information is needed to adequately review the subject request. To ensure an expedited review, applicants			
Lot Consolidation	shall schedule a pre-application meeting with the City Planner/Administrator at least one week prior to			
Minor Subdivision (Survey) Lot Subdivision Lot Combination Lot Line Rearrangement	<b>submittal</b> . Most applications have a review period of 60 days, with the City's ability to extend an additional 60 days if necessary due to insufficient information or schedule.			
Moving Buildings	Office Use Only			
Preliminary Plat	Received By (Staff Initials)			
☐ Rezoning				
Site Plan Review (Commercial)	Date			
☐ Vacation	Application Amount Application Check #			
☐ Variance	Deposit Paid Deposit Check #			
Subdivision RegulationsZoningRoad Frontage	Date Accepted by Planner			
Zoning Text Amendment	City Planner			

\*\*\*Note: All parties with a fee interest in the real estate must sign this application before the City will review for consideration!

Applicant Information:	Owner Information (if different than applicant)		
Name: Michael - Bonnie Kuka	Name:		
Address:4405 County Road 92 North	Address:		
City, State, Zip: Independence, MN. 55359	City, State, Zip:		
Phone:763-286-3449	Phone:		
kukaequestriancenter@gmail.com Email:	Email:		
Signature:	Signature:		
The City of Independence has set forth a fee schedule by Cit two or more requests will be required to provide a larger dependence. The fees collected for land use projects are comploy application will be billed to the applicant within 30 dependence often utilizes consulting firms to assist in the	posit than the resolution sets forth as set by the City collected as deposits. All invoices associated with each land days upon receipt by the City for each project. The City of review of projects. The consultant and City rates are included		
in the fee schedule. By signing this form, the applicant recognished with the land use application from the plan review release of any financial guarantee for an approved project. It applicant, the fees associated for the project until such denian	we stage to the construction monitoring stage through to the f a project is denied by the City Council or withdrawn by the cl or withdrawal, remain the applicant's responsibility.		
I UNDERSTAND THE FEE STATEMENT AND RESPONAPPLICATION:	ISIBILITIES ASSOCIATED WITH THIS LAND USE		
A 1' and G's makes			
Applicant Signature: Date:			
Owner Signature (if different): Date:			

## Google Maps 4405 County Rd 92



Imagery @2021 Maxar Technologies, U.S. Geological Survey, USDA Farm Service Agency, Map data @2021 200



## City of Independence

### Request for a Variance from the Side and Rear Yard Setbacks for the Property Located at 6000 Providence Curve

To: | Planning Commission

From: | Mark Kaltsas, City Planner

Meeting Date: | March 16, 2021

Applicant: | Mark Kroskin

Owner: Mark Kroskin

Location: 6000 Providence Curve

#### Request:

Mark Kroskin (Applicant/Owner) is requesting the following action for the property located at 6000 Providence Curve (PID No. 1411824420008) in the City of Independence, MN:

 A variance to allow a detached accessory structure to be located closer to the side and rear property lines than otherwise permitted on the property located at 6000 Providence Curve.

#### Property/Site Information:

The subject property is located at 6000 Providence Curve. There is an existing home and detached accessory structure located on the subject property.

Property Information: 6000 Providence Curve

Zoning: Rural Residential

Comprehensive Plan: Rural Residential

Acreage: 1.92 acres

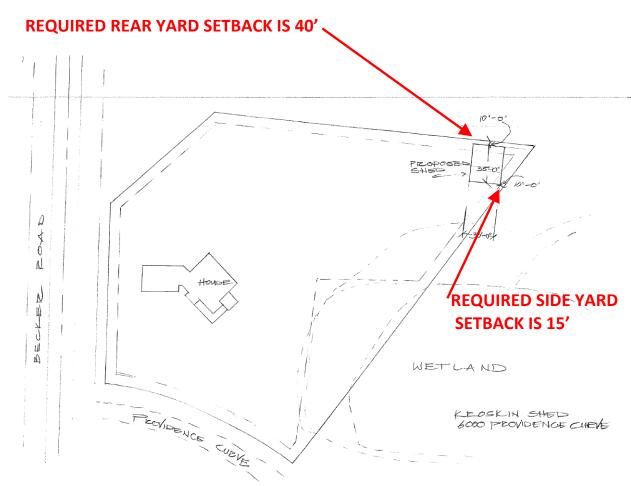
6000 Providence Curve (blue outline)



#### Discussion:

The applicant approached the City about the possibility of locating a new detached accessory structure in the northeast corner of their property. The applicant noted that they would like some additional storage space and identified the proposed location as the spot most desired for a multitude of reasons. The proposed detached accessory structure would be 1,050 SF (30' x 35') and would have a double overhead door. The proposed building would include a second story storage loft. The exterior building materials proposed would match the siding and roof of the house.

The applicant is seeking a variance from the rear and side yard setbacks to allow the proposed structure. The variances requested would allow the construction of a detached accessory structure to be located closer to the east and north property lines than permitted by the City. The applicant is proposing to setback the proposed structure 10'-0" from the east property line and 10'-0" from the north property line. The required rear yard setback is 40' and the required side yard setback is 15'.



#### Setbacks for RR-Rural Residential Properties are as follows:

Side Yard Setback for Detached Accessory Structures:

Required: 15'-0"

Proposed (East): 10'-0" (variance of 5'-0")

Rear Yard Setback for Detached Accessory Structures:

Required: 40'-0"

Proposed: (North): 10'-0" (variance of 30'-0")

There are several factors to consider relating to granting a variance. The City's ordinance has established criteria for consideration in granting a variance.

520.21. <u>Standards for granting variances</u>. Subdivision1. The City Council may grant a variance from the terms of this zoning code, including restrictions placed on nonconformities, in cases where: 1) the variance is in harmony with the general purposes and intent of this zoning code; 2) the variance is consistent with the comprehensive plan; and 3) the applicant establishes that there are practical difficulties in complying with the zoning code (Amended, Ord. 2011-08)

Subd. 2. An applicant for a variance must demonstrate that there are practical difficulties in complying with the zoning code. For such purposes, "practical difficulties" means:

- (a) The property owner proposes to use the property in a reasonable manner not permitted by the zoning code;
- (b) the plight of the property owner is due to circumstances unique to the property not created by the landowner;
- (c) the variance, if granted, will not alter the essential character of the locality.

Economic considerations alone do not constitute practical difficulties. Practical difficulties include, but are not limited to, inadequate access to direct sunlight for solar energy systems. (Amended, Ord. 2011-08)

Subd. 3. The City Council shall not grant a variance to permit a use that is not allowed under the zoning code based on the zoning classification of the affected property. (Amended, Ord. 2011-08)

520.23. Conditions and restrictions. The board of adjustments may recommend, and the City Council may impose conditions on a variance. Conditions must be directly related to and must bear a rough proportionality to the impact created by the variance. (Amended, Ord. 2011-08)

#### Consideration of the criteria for granting a variance:

- a. Residential use of the property is consistent with the Rural Residential District. The applicants are seeking a variance that exceeds the typical setback granted for properties in this area.
- b. The property backs up to an Outlot owned by the Providence HOA. The City recently adopted standards that would allow the City's ABRC to consider allowing relief of the rear yard setback to a minimum of 15' (see actual ordinance provision below). The applicant was provided with this information.
  - a. The property shares a rear yard property line with an Outlot, and the setback will be at least 15 feet.

There are several criteria that would need to be met in order for the ABRC to consider granting relief to the setback. One of those criteria is consent or agreement on the reduced setback from the property owner(s) of the adjacent property (HOA).

- c. The character of the surrounding area is residential. The proposed detached accessory structure would be in keeping and consistent with the surrounding uses found in this neighborhood.
- d. There is an existing detached accessory structure located behind the house on the subject property. The overall size of this structure is approximately 475 SF. The City allows a maximum of 1,850 SF for the total permitted for all detached accessory structures on properties less than 2.5

- acres. The total SF in the after condition would be 1,525 SF which is less than the maximum permitted.
- e. The alternate septic site location is located in the general vicinity of the proposed detached accessory structure. Moving the structure further away from the property lines (to the west and south) potentially encroaches further into the alternate site. This site is an estimated area and could likely be adjusted to the south and east when needed in the future.
- f. The applicant has noted that they would like to maintain the existing evergreen trees in this area and the proposed location makes this possibility more feasible.

#### **Public Comments:**

The City has not received any written or verbal comments at the time this report was prepared.

#### Recommendation:

Staff is seeking a recommendation from the Planning Commission pertaining to the request for a variance. Should the Planning Commission consider granting a variance, the following findings and conditions should be considered.

- 1. The proposed Variance request meets all applicable conditions and restrictions stated in Chapter V, Section 520.19, Procedures on variances, in the City of Independence Zoning Ordinance.
- 2. The City finds that the criteria for granting a variance have been satisfied by the applicant. Specifically, the City finds the following:
  - a. Residential use of the property is consistent with the Rural Residential District. The applicants are seeking a variance that exceeds the typical setback granted for properties in this area.
  - b. The property backs up to an Outlot owned by the Providence HOA.
  - c. The character of the surrounding area is residential. The proposed detached accessory structure would be in keeping and consistent with the surrounding uses found in this neighborhood.
- 3. The variance will permit a 30-foot reduction of the north rear yard setback and a 5-foot reduction of the east side yard setback to allow the proposed detached accessory structure as depicted on the site plan and building plans attached hereto as Exhibit A. Any modification changes or alteration to the structure that does not meet applicable setbacks in the future would require additional review and approval in the form of a variance.

4. The applicant shall submit a drainage plan to the City at the time of building permit application. The drainage plan will be reviewed by the City to ensure that the proposed improvements do not adversely impact any of the surrounding properties.

#### Attachments:

- 1. Application
- 2. Site Plan
- 3. Building Plans
- 4. Original Survey



**Applicant Information Owner Information** 

Name: Mark Kroskin Name: Mark Kroskin

Address: 6000 Providence Curve

6126705314

Independence, Minnesota 55359

Primary Phone: 6126705314

6000 Providence Cu

Independence, Minr

Address:

Email: mfkroskin@mfkventuremanagement.com Email: mfkroskin@mfkven

Property Address:

Primary Phone:

PID:

Planning Application Type: Variance

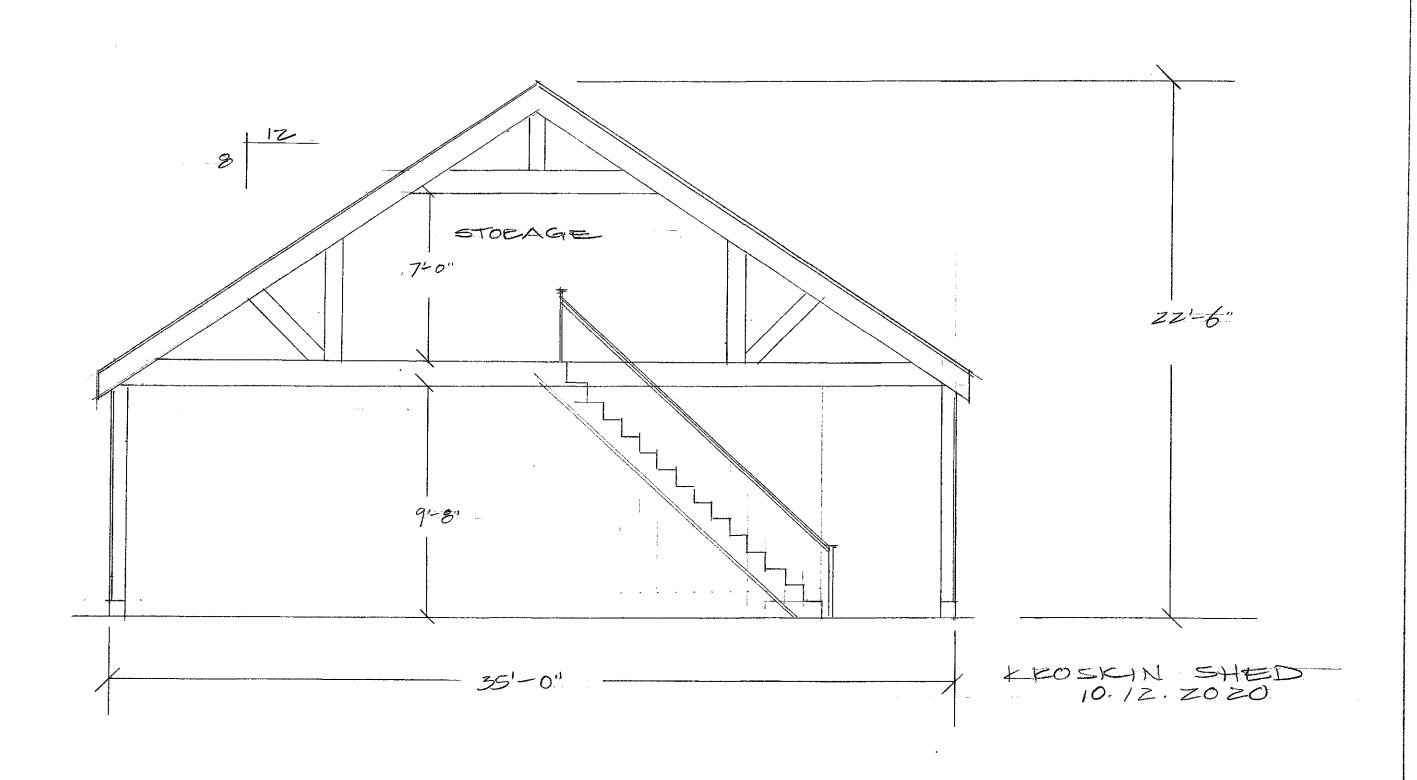
Description:

Supporting Documents: Site Survey (Existing Conditions), Site Survey (Proposed Conditions), Building Plans

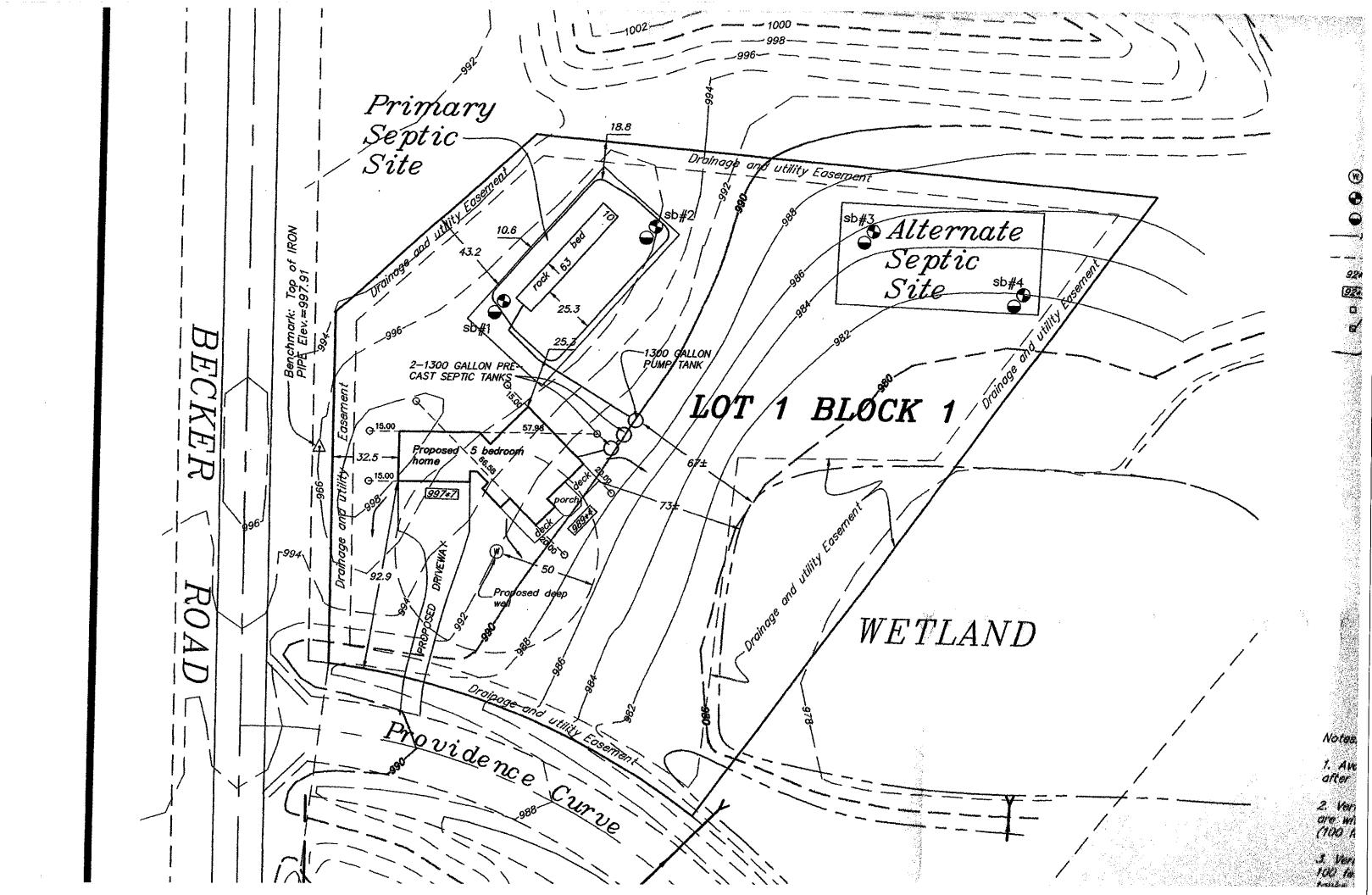
Signature:
Marke L-valuet

PROPOSED SHED HOUSE WETLAND PROVIDENCE CHEVE KEOSKIN SHED 6000 PROVIDENCE CHEVE

ON HOUSE MATCH SIDING GARAGIE DOOR 3 KROSKIN SHED 10.12.2020



35'-0" STAIRS UP 30'70" 3-0" CEDICE DOOR ZZ'-O" GARAGE DOOR KICOSKIN SHED





## City of Independence

## Concept Plan Review of a Proposed 11 Lot Subdivision on the Subject Property Located Between CSAH 90 and CSAH 83 and Generally Known as the Independence Airport Property

To: | Planning Commission

From: | Mark Kaltsas, City Planner

Meeting Date: | March 16, 2021

Applicant: Bryant Johnson

Owner: Hilltop Farm, Inc.

Location: Property Identified by PID No. 26-118-24-13-0001

#### Request:

Bryant Johnson (Applicant) and Hilltop Farm, Inc. (Owner) is requesting a concept plan review for a subdivision of the property located between CSAH 90 and CSAH 83 and identified as PID No. 26-118-24-13-0001. The proposed subdivision would ultimately require the rezoning of the property and a minor subdivision and would create eleven (11) rural residential lots.

#### **Property/Site Information:**

The property is located on the east side of CSAH 90, north of the future Turner Road and south of Main Street. There is a grass air strip on the property and several detached airplane hangars. The property is comprised primarily of agriculture land with some woodlands.

Property Information: PID No. 26-118-24-13-0001

Zoning: Agriculture

Comprehensive Plan: Rural Residential (2040 Plan – designates part of the property to be sewered

residential)

Acreage: ~150 acres (60 acres considered for subdivision with 90 remaining)



#### Discussion:

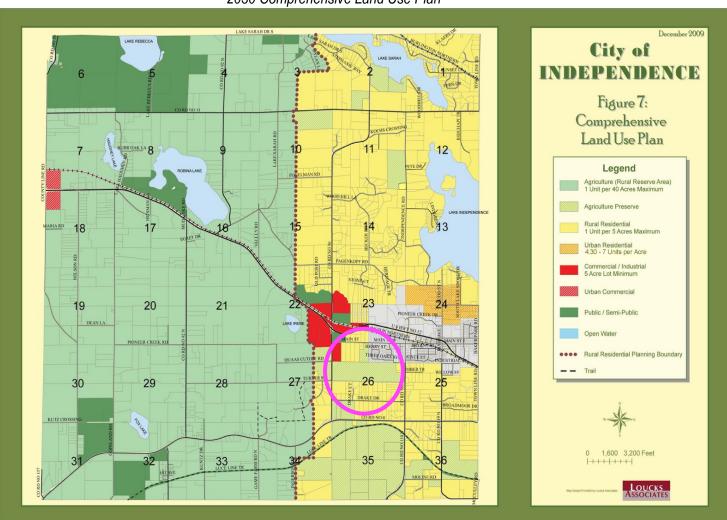
The applicant is asking the City to consider and provide feedback relating to a concept plan for the proposed subdivision of a portion of the subject property. A concept plan allows the City the opportunity to initially review the proposed subdivision and provide feedback and comments to the applicant prior to the submittal of any applications for rezoning and preliminary plat. In order for the City to ultimately consider approval of a plan similar to the proposed concept plan, the following steps would be required:

- 1. Rezone the property to the new zoning district.
- 2. Consider Preliminary Plat approval.
- 3. Consider Final Plat approval.

#### Comprehensive Plan/Rezoning

The City is in the process of updating the Comprehensive Plan from the 2030 plan to the 2040 plan. The City's 2030 plan identifies this property as Rural Residential. The rural residential designation allows for a

general development density of 1 unit per 5 acres. The 2040 Comprehensive Plan guides the eastern portion of this property for sewered residential.

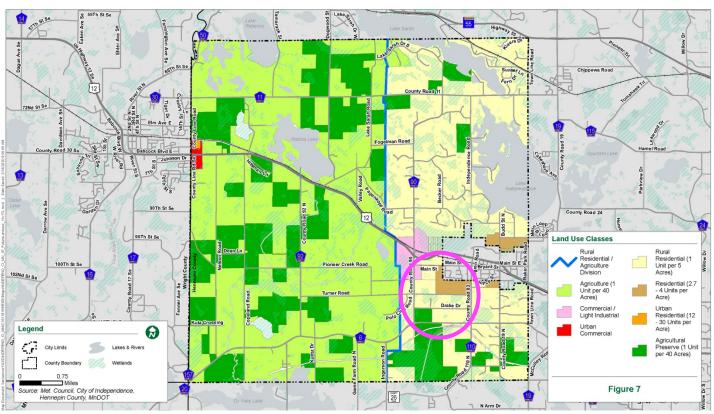


2030 Comprehensive Land Use Plan



Future Land Use





#### Proposed Subdivision Concept Plan

The applicant has prepared a concept plan for review by the City. The City has preliminarily reviewed this plan and provides a general review if the various aspects within this report. The 2030 and 2040 Comprehensive Plan both guide the western portion of this property for RR-Rural Residential. Rural Residential properties can realize the following number of lots:

Subd. 3. Density. Lots of record in the rural residential district may be divided or subdivided into the following maximum number of lots, said maximum number to include the lot for any existing dwelling unit or other principal use: (Amended, Ord. 2010-01)

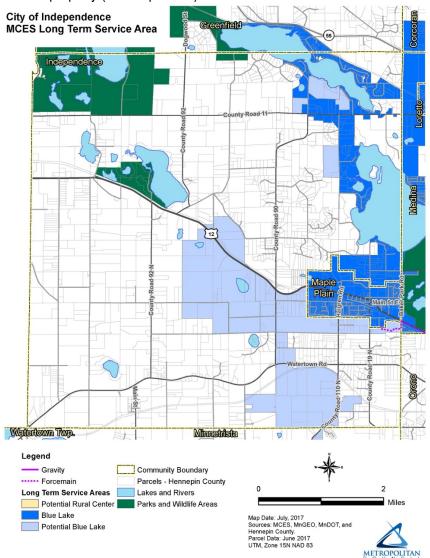
Area of Lot	Maximum Number	
of Record	of Lots Permitted	
7.5 acres or less	One	
7.6 through 12.5 acres	Two	
12.6 through 17.5 acres	Three	
17.6 through 22.5 acres	Four	
22.6 through 27.5 acres	Five	

27.6 through 32.5 acres 32.6 through 37.5 acres 37.6 through 42.5 acres 42.6 through 47.5 acres Six Seven Eight Nine, plus one addn. lot for every five addn. acres of land.

Based on a traditional Rural Residential subdivision, it is estimated that western portion of this property guided for RR can yield 11 lots (9, plus (60-47.5 = 11.5) (11.5/5 = 2).

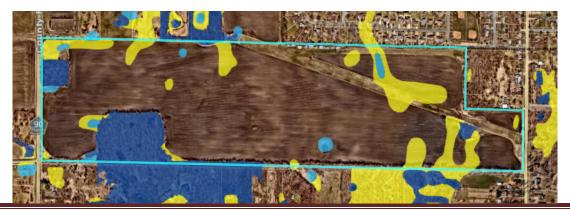
#### Concept Plan Considerations:

The City has discussed the potential subdivision of this property with the applicant. The City discussed a couple of key considerations relating to the future development of this property and adjacent properties. The City noted that the Metropolitan Council has identified a potential future (beyond 2040) sewer expansion area which encompasses this property (see map below).



The initial review of the subdivision contemplates a high-level review only of the proposed concept development plan. A detailed review of the storm water, grading, wetlands and infrastructure details will be completed prior to consideration of any future applications. The City does not formally approve or deny a concept plan. The concept plan review will provide direction and comments to the applicant for their use during the preparation of future applications. The following comments should be considered by the City:

- 1. The proposed plan shows lots that would be accessed via a new cul-de-sac that would be connected to County Road 90. Hennepin County would ultimately need to approve any proposed road connection and may require both northbound and southbound turn lanes. It does not appear that the proposed access point would meet the County's spacing guidelines from Turner Road. This property does have the ability to be accessed via the Tuner Road right of way.
- 2. The proposed development does not consider the use of the existing right of way known as the unimproved portion of Turner Road to the south. The City should discuss the future of Turner Road and whether or not this development should incorporate Turner Road into the design. At a minimum, the City may want to consider requiring dedication of the additional 33 feet of right of way.
- 3. The length of the proposed cul-de-sac (greater than ¼ mile) should be noted by the City. In addition, the City may want to consider a future connection of the proposed road to the east. The current plan does not provide for a future connection. The City would generally require that roads be extended to the edge of the property unless it is not feasible for a future road connection due to natural features, topography, etc.
- 4. The property abuts an industrial property to the north. The applicant should consider buffering and or berms along the north property line to mitigate the existing industrial development.
- 5. There is an existing powerline easement that bisects the property in the northeast corner. Proposed Lot 5 my need to be reconfigured to address the easement. Staff would likely want to further review grading, proposed building pads and septic sites.
- 6. There are probable wetlands that show up on the national wetland inventory in several locations on this property (see image below). A wetland inventory will be required to be prepared and submitted with preliminary plat.



- 7. The applicant will need to confirm that all lots meet the minimum of 2.5 acres of upland (buildable) area. In addition, the applicant will need to confirm that all lots can accommodate a primary and secondary septic site.
- 8. It appears that all of the proposed lots meet the minimum lot frontage requirements.
- 9. The overall property would need to be split in order to accommodate the proposed development. The remainder 90 acres would become a separate lot and likely not plated at this time.
- 10. The applicant will need to provide more information relating to the ownership and use of Outlot A.
- 11. It is anticipated that the proposed homes would be custom built.
- 12. The proposed concept subdivision would be subject to the City's park dedication requirements. No park land dedication is shown on the concept plans. The City should provide feedback relating to possible park dedication on the subject property. It may be desirable for the City to consider some park development on this property. Discussion relating to park dedication should be provided by the City. The standard park dedication per lot fee would otherwise be applicable to all newly developed lots.

Staff would like direction and feedback relating to the general design and layout of the proposed subdivision. The City should consider whether or not a future path should be maintained for the extension of utilities to the west noting that there is not another undeveloped route. Consideration of a cluster development that would maintain a developable area that could accommodate the expansion of utilities in the future could be considered. The City should also provide additional feedback and direction relating to the development of Turner Road, future use and dedication of additional right of way.

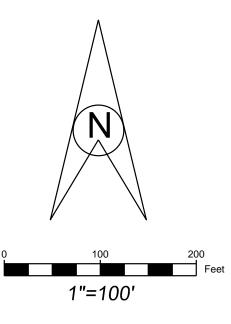
#### Recommendation:

The Planning Commission should review the plans and provide feedback to the applicant pertaining to the proposed concept plan. No formal action can be taken by the Planning Commission on the concept plan. There are additional steps that will need to be taken for any development of this property to occur.

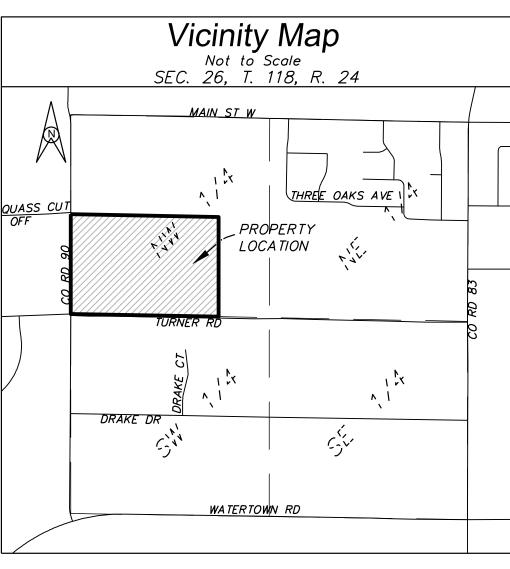
#### Attachments:

- 1. Application
- 2. Concept Site Plan with Aerial
- 3. 2030 Comprehensive Land Use Map
- 4. 2040 Comprehensive Land Use Map
- 5. Metropolitan Council Future Sewer Area Map





TOTAL PLAT AREA = 60.0 ACRES



LOCATION: PART OF THE S 1/2 OF THE NW 1/4 OF SECTION 26, T. 118, R. 24, HENNEPIN COUNTY, MN.

DESIGNED DRA	DESCRIPTION	BY	DATE	REV. NO.
P.E.O. T.F				
CHECKED				
P.E.O.				

I hereby certify that this survey, plan, or report was prepared by my or under my direct supervision and that I am a duly Licensed Land Surveyor under the laws of the State of Minnesota. Paul E. Otto License #40062

2-22-21

www.ottoassociates.com 9 West Division Street Buffalo, MN 55313 (763)682-4727 Fax: (763)682-3522 **SSOCIATES** ingineers & Land Surveyors, Inc.

HILLTOP FARM HILLTOP FARM, INC. MAPLE PLAIN, MN

CONCEPT PLAN SHEET NO. 1 OF 1 SHEETS

20-0476 DATE: 2-9-2021

## LAKE SARAH DR S LAKE REBECCA LAKE SARAH CORD NO 11 KOCHS CROSSIN BURR OAK LA 12 ROBINA LAKE FOCELMAN RD OD HILL LAKE INDEPENDENCE MARIA RD 18 PAGENKOPF RD 23 20 21 19 PIONEER CREEK DR DEAN LA LAKE IRENE PIONEER CREEK RI THREE OAKS AVE QUAAS CUTOF RD LOWST 26 29 30 28 BROADMOOR DR CORD NO 6 KUTZ CROSSING 35 33 LUCE LINE TR

# City of INDEPENDENCE

# Figure 7: Comprehensive Land Use Plan





0 1,600 3,200 Feet

Map Design Provided by Loucks Associates



2040 Comprehensive Plan

Independence, MN

**Future Land Use** 

BOLTON & MENK

January 2020

