

ADMINISTRATIVE COMMITTEE

Monday, August 8, 2016

5:00 p.m.

NOTICE IS HEREBY GIVEN that the Bountiful City Administrative Committee will hold its regular meeting in the Conference Room at City Hall, 790 South 100 East, Bountiful, Utah, at the time and on the date given above. The public is invited. Persons who are disabled as defined by the Americans with Disabilities Act may request an accommodation by contacting the Bountiful City Planning Office at 298-6190. Notification at least 24 hours prior to the meeting would be appreciated.

AGENDA

1. Welcome and Introductions.
2. Consider approval of minutes for August 1, 2016.
3. **PUBLIC HEARING:** Consider approval of a Conditional Use Permit to allow for Solar Panels at 18 West 1000 South, Clark Watson, applicant.
4. **PUBLIC HEARING:** Consider approval of a Conditional Use Permit to allow for Solar Panels at 111 East North Canyon Road, Stephanie Jackson, applicant.
5. Consider approval of a Conditional Use Permit, in written form, to allow for Solar Panels at 827 East 750 North, David Demille, applicant.
6. Consider approval of a Conditional Use Permit, in written form, to allow for a Home Occupation Handyman Contractor Business at 1640 South 200 West, Jonathan Graf, applicant.
7. Consider approval of a Conditional Use Permit, in written form, to allow for Solar Panels at 920 East 1500 South, Scott and Maren Radmall, applicants.
8. Miscellaneous business and scheduling.



Chad Wilkinson, City Planner

Pending minutes have not yet been approved by the Administrative Committee and are subject to change until final approval has been made.

**Bountiful City
Administrative Committee Minutes
August 1, 2016**

Present: Chairman – Chad Wilkinson; Committee Members –John Marc Knight and Todd Christensen; Assistant Planner – Andy Hulka; Recording Secretary – Julie Holmgren

Excused: Committee Member – Lloyd Cheney

1. Welcome and Introductions.

Chairman Wilkinson opened the meeting at 5:00 p.m. and introduced all present.

2. Consider approval of minutes for July 26, 2016.

Mr. Knight made a motion to approve the minutes for July 26, 2016. Mr. Wilkinson seconded the motion.

<u> A </u>	Mr. Wilkinson
<u> A </u>	Mr. Knight
—	Mr. Christensen (Abstained)

Motion passed 2-0.

3. PUBLIC HEARING: Consider approval of a Conditional Use Permit to allow for Solar Panels at 827 East 750 North, David Demille, applicant.

[This item was heard last in order to allow the solar representative additional time to arrive at the meeting.]

Neither the applicant, David Demille, nor his solar representative from Legend Electric, was present.

Andy Hulka presented a summary of the staff report (the full staff report follows).

The property where the solar panels are to be installed is located in the R-4 Single Family Zone. Solar power panels are classified in the city ordinance as “private power plants” and require a conditional use permit if they are over 10 watts. The applicant has indicated that the photovoltaic system to be installed will produce 5.89 kilowatts (5,890 watts), requiring a conditional use permit.

The application submitted indicates the proposed installation of 2 photovoltaic arrays with a total of 18 panels. The arrays will occupy approximately 292 square feet, which is smaller than the 50% maximum roof coverage. The arrays will be located on south and east facing portions of the roof. The south facing array will include 5 panels in 2 rows. The east facing array will include 13 panels in 2 rows. The roof is of truss construction and has a slope of

Pending minutes have not yet been approved by the Administrative Committee and are subject to change until final approval has been made.

2:12. The applicant has indicated that the asphalt shingles are 5 years old and in good condition. The panels will be connected to the roof with a Sun Power Invisimount and Sun Modo mount system. A review of information provided in the application indicates that all engineering requirements for the construction of solar panels in Bountiful City will be met. A reflection analysis of the roof pitch indicates that photovoltaic panels should not produce a reflection nuisance to surrounding properties.

Based on the findings, staff has determined that the applicant would comply with all requirements for the conditional use permit. Staff recommends approval of the conditional use permit with the following conditions:

1. The applicant shall obtain a building permit.
2. The panels must be installed only as proposed in the application.
3. This conditional use permit is solely for this site and is non-transferable.

Mr. Wilkinson highlighted the proposed placement of panels on the garage roof and a discussion ensued regarding the probability that the solar panels would be very visible to the public, but the committee conceded that the proposed placement was optimal for taking advantage of solar energy.

PUBLIC HEARING: Chairman Wilkinson opened and closed the Public Hearing at 5:15 p.m. with no comments from the public.

Mr. Knight referenced the last paragraph of the engineer's analysis report which states that the analysis was based on assumptions rather than on an on-site visit or review of photos. A discussion ensued, and the committee determined that the applicant would need to provide a new engineer's analysis letter stating the engineer reviewed photos of the structural components of the roof in completing the analysis.

Mr. Christensen made a motion for approval of a Conditional Use Permit to allow for Solar Panels at 827 East 750 North, David Demille, applicant, with conditions outlined by staff and with an additional condition which reads as follows: Prior to permit issuance the applicant shall provide a new engineer's analysis letter stating the engineer reviewed photos of the structural components of the roof in completing the analysis. Mr. Knight seconded the motion.

 A Mr. Wilkinson
 A Mr. Knight
 A Mr. Christensen

Motion passed 3-0.

4. **PUBLIC HEARING: Consider approval of a Conditional Use Permit to allow for a Home Occupation Handyman Contractor Business at 1640 South 200 West, Jonathan Graf, applicant.**

Pending minutes have not yet been approved by the Administrative Committee and are subject to change until final approval has been made.

Jonathan Graf, applicant, was present.

Andy Hulka presented a summary of the staff report (the full staff report follows).

The property where the Home Occupation Handyman Contractor Business is proposed is located in the RM-19 Multi-Family Zone. Home Occupation Contractor Businesses in this zone are classified in the City Ordinance as requiring a Conditional Use Permit.

The application submitted indicates that the property will be used for a handyman business. The applicant uses a pickup truck for the business, which will be parked on the driveway in front of the home. The applicant will store paint and basic hand and power tools in the enclosed space behind the carport. There will be no employees working on site. The applicant has indicated that no work will be performed on site, no product will be sold from the property, and no customers will visit the site. There will be no signage on the property associated with the business. The use appears to be incidental and secondary to the use of the dwelling and shall not change the appearance, character, or condition of the property.

Based on the findings, staff has determined that the applicant would comply with all requirements for the conditional use permit. Staff recommends approval of the Conditional Use Permit with the following conditions:

1. The applicant shall maintain an active Bountiful City business license.
2. The Home Occupation will not create nuisances discernible beyond the premises (e.g. noise, dust, fumes, glare, traffic, etc.).
3. The use will comply with all applicable fire, building, plumbing, electrical, and life safety and health codes in the State of Utah, Davis County, and Bountiful City.
4. The Conditional Use Permit is solely for this site and is non-transferable.

PUBLIC HEARING: Chairman Wilkinson opened and closed the Public Hearing at 5:04 p.m. with no comments from the public.

Mr. Knight reviewed several conditions of the conditional use permit and stressed that the intent of any home occupation business is invisibility to the public. Mr. Graf acknowledged his understanding.

Mr. Knight made a motion for approval of a Conditional Use Permit to allow for a Home Occupation Handyman Contractor Business at 1640 South 200 West, Jonathan Graf, applicant. Mr. Christensen seconded the motion.

 A Mr. Wilkinson
 A Mr. Knight
 A Mr. Christensen

Motion passed 3-0.

Pending minutes have not yet been approved by the Administrative Committee and are subject to change until final approval has been made.

5. PUBLIC HEARING: Consider approval of a Conditional Use Permit to allow for Solar Panels at 920 East 1500 South, Scott and Maren Radmall, applicants.

Scott and Maren Radmall, applicants, were present.

Andy Hulka explained that the applicant had submitted a new site plan just prior to the meeting, and Mr. Hulka presented that plan to the committee. A discussion ensued regarding the new site plan and the committee noted that the number of panels and kilowatts listed on the application would remain the same even though the site plan had been modified. After reviewing the site plan, the committee accepted the new site plan as replacement for the site plan previously submitted.

Andy Hulka presented a summary of the staff report (the full staff report follows).

The property where the solar panels are to be installed is located in the R-3 Single Family Zone. Solar power panels are classified in the city ordinance as “private power plants” and require a conditional use permit if they are over 10 watts. The applicant has indicated that the photovoltaic system to be installed will produce 6.03 kilowatts (6,030 watts), requiring a conditional use permit.

The application submitted indicates the proposed installation of 2 photovoltaic arrays with a total of 18 panels. The arrays will occupy approximately 335 square feet, which is smaller than the 50% maximum roof coverage. The arrays will both be located on the south facing portions of the roof on the back of the house. One array will include 10 panels in 2 rows. The other array will include 6 panels in 2 rows. The roof is of truss construction and has a slope of 4:12. The applicant has indicated that the asphalt shingles were installed this year. The panels will be connected to the roof with a Snap n Rack mount system. A review of information provided in the application indicates that all engineering requirements for the construction of solar panels in Bountiful City will be met. A reflection analysis of the roof pitch indicates that photovoltaic panels should not produce a reflection nuisance to surrounding properties.

Based on the findings, staff has determined that the applicant would comply with all requirements for the conditional use permit. Staff recommends approval of the conditional use permit with the following conditions:

1. The applicant shall obtain a building permit.
2. The panels must be installed only as proposed in the application.
3. This conditional use permit is solely for this site and is non-transferable.

Mr. Wilkinson noted that the Radmall's application should be corrected to state that the panel array dimensions should be 2x5 and 2x4 (rather than 2x5 and 2x3).

PUBLIC HEARING: Chairman Wilkinson opened and closed the Public Hearing at 5:08 p.m. with no comments from the public.

Pending minutes have not yet been approved by the Administrative Committee and are subject to change until final approval has been made.

Mr. Knight noted that the project would be completed by the homeowner acting as contractor and asked regarding Mr. Radmall's credentials. Mr. Radmall explained that he is a contractor by trade and would be hiring an electrician to do the wiring on the project. Further, Mr. Radmall stated that he has a friend with solar installation experience who will mentor him. Mr. Knight admonished Mr. Radmall to ensure the panels are securely installed according to manufacturer installation procedures. Mr. Wilkinson stated that the project must be completed within the time specified on the issued permit.

Mr. Christensen made a motion for approval of a Conditional Use Permit, with site plan changes presented by the applicant, to allow for Solar Panels at 920 East 1500 South, Scott and Maren Radmall, applicants. Mr. Knight seconded the motion.

A Mr. Wilkinson
A Mr. Knight
A Mr. Christensen

Motion passed 3-0.

6. Consider approval of a Conditional Use Permit, in written form, to allow for Solar Panels at 447 East 1700 South, Kelly Barnett, applicant.

Mr. Knight made a motion for approval of a Conditional Use Permit, in written form, to allow for Solar Panels at 447 East 1700 South, Kelly Barnett, applicant. Mr. Cheney seconded the motion.

A Mr. Wilkinson
A Mr. Knight
___ Mr. Christensen (Abstained)

Motion passed 2-0.

7. Miscellaneous business and scheduling.

Mr. Wilkinson ascertained there were no further items of business. The meeting was adjourned at 5:21 p.m.

Chad Wilkinson, City Planner



MAYOR
RANDY LEWIS

CITY COUNCIL
RICHARD HIGGINSON
BETH HOLBROOK
JOHN M. (MARC) KNIGHT
KENDALYN HARRIS
JOHN PITT

CITY MANAGER
GARY R. HILL

Memo

Date: August 2, 2016
To: Administrative Committee
From: Andy Hulka, Assistant Planner
Re: Staff Report for the Administrative Committee Meeting on Monday, August 8, 2016

Overview

- 3. PUBLIC HEARING** - Consider approval of a Conditional Use Permit to allow for Solar Panels at 18 West 1000 South, Clark Watson, applicant.

Item #3

Background

The property where the solar panels are to be installed is located in the R-4 Single Family Zone. Solar power panels are classified in the city ordinance as “private power plants” and require a conditional use permit if they are over 10 watts. The applicant has indicated that the photovoltaic system to be installed will produce 10.00 kilowatts (10,000 watts), requiring a conditional use permit.

Findings

The application submitted indicates the proposed installation of 1 photovoltaic array with a total of 33 panels. The arrays will occupy approximately 577 square feet, which is smaller than the 50% maximum roof coverage. The array will be located on south facing portion of the roof. The array will include all 33 panels in 2 rows. The roof is of truss construction and has a slope of 4:12. The applicant has indicated that the asphalt shingles were newly installed in July of this year. The panels will be connected to the roof with an Invisimount racking system. A review of information provided in the application indicates that all engineering requirements for the construction of solar panels in Bountiful City will be met. A reflection analysis of the roof pitch indicates that photovoltaic panels should not produce a reflection nuisance to surrounding properties.

Staff Recommendation

Based on the findings, staff has determined that the applicant would comply with all requirements for the conditional use permit. Staff recommends approval of the conditional use permit with the following conditions:

1. The applicant shall obtain a building permit.
2. The panels must be installed only as proposed in the application.
3. This conditional use permit is solely for this site and is non-transferable.

Bountiful Land Use Ordinance

14-14-126 PRIVATE POWER PLANTS

- A. A "Private Power Plant" is any device or combination of devices not owned and operated by a regulated utility company, which convert mechanical or chemical energy into electricity. A private power plant with a peak power generation capacity of 10 Watts/12v/500mA (or equivalent) is exempt from the provisions of this Section. A private power plant, including a windmill or wind turbine, shall not be permitted within Bountiful City limits, with the following exceptions:
1. A back-up power generator running on unleaded gasoline, diesel, natural gas, propane, or hydrogen fuel cell, rated for a single structure or building lot, located in accordance with the requirements of the zone in which it is located.
 2. A photovoltaic cell array or other passive solar energy system located in accordance with the requirements for occupied structures for the zone in which it is located.
- B. With the exception of a back-up power generator, no private power plant may be installed or used on any property unless a conditional use permit has been issued for the specific power generation device.
- C. A private power plant is not exempt from the height requirements of the Zone in which it is located, and shall be considered an occupied structure for the purposes of calculating height.
- D. Solar energy design standards and requirements
1. Solar energy panels or collectors that are mounted to the roof shall:
 - a. Not extend beyond the roofline.
 - b. Not reflect sunlight onto neighboring windows or rights-of-way.
 - c. Not exceed fifty (50) percent of the total roof area.
 - d. Shall be maintained in good condition.
 2. Prior to installation, use, and connection to the grid, the following shall be done:
 - a. A Conditional Use Permit shall be issued
 - b. A Building Permit shall be issued
 - c. The Power Department shall approve the application for net metering
 - d. The Power Department shall approve the physical installation

18 W 1000 S





For Office Use Only

Date Rec'd 7-20-14
Admin Date 8-8-16
Application \$ 50

SOLAR PANEL - CONDITIONAL USE PERMIT APPLICATION

PROPERTY OWNER INFORMATION:

Property Owner Name(s): Clark Watson
Property Address: 18 West 1000 South 03-076-0017
Property Owner Phone Number: 801-918-1931
Property Owner E-Mail: cwatsonis@gmail.com

(Property Owner(s) - please sign Authorization and Affidavit on page 2)

SOLAR CONTRACTOR INFORMATION:

Solar Company Name: Intermountain Wind and Solar
Company Address: 1953 W 2425 S Woods Cross, UT 84087
Company Phone Number: 801-298-5255
Contact Person for Solar Project: Peggy Loomis
E-Mail Address: permitting@imwindandsolar.com

1. Please include the following with your application:



\$50.00 Fee: Conditional Use Permit Application (Administrative Committee)

- SITE PLAN:** Two (2) 11"x17" sized sets of the proposed site plan drawn at 1:10 scale or as required by the City Engineer and City Planner. A site plan shall include:
- Plan view (bird's-eye) of site with placement of solar panels.
 - A north arrow, the scale of the drawing, and the date of the drawing.
 - Street names and addresses.
- FOR GROUND-MOUNTED SOLAR ARRAYS, THE FOLLOWING:**
- Property lines with dimensions.
 - All sidewalks, driveways, curbs and gutter, and parking areas.
 - All existing easements, rights-of-way, and any other restrictions on the use of the property.
 - Existing buildings, proposed buildings, and other significant features on the site.
 - Existing buildings and significant features located on adjacent properties within 50 feet (50') of the subject property boundaries.
 - When required by the City Planner or City Engineer, and for all new construction, a survey including both existing and proposed contours of the land at intervals of two feet (2') or better.
- ONE-LINE DIAGRAM** (or electrical diagram or block diagram): Two (2) 11" x 17" sets (diagram must follow Bountiful City Light & Power sample diagram included in the solar packet – attachment 2, page 3).
- ENGINEER ANALYSIS LETTER** (including an analysis of the existing roof structure with added solar equipment and uplift resistance)
- COMPLETED SOLAR PACKET FORMS:**
- Solar Panel Questions
 - Photovoltaic System Net Metering Requirements (signed by property owner)
 - Bountiful City Light & Power - diagram form
 - Building Permit Application
- SPEC SHEETS:** Solar product information
- PHOTO:** Electrical service (meter main with disconnect)

2. Property Owner Authorization and Affidavit

The undersigned, being duly sworn, depose that I am (we are) the owner(s) of the property involved in this application and that the statements contained herein and by attachment, are to the best of my (our) knowledge true and correct.


Property Owner

Property Owner



MAYOR
Randy C. Lewis
CITY COUNCIL
Kendalyn Harris
Richard Higginson
Beth Holbrook
John M. Knight
John Pitt
CITY MANAGER
Gary Hill

SOLAR PANEL QUESTIONS

Please completely answer all questions (do not simply refer to an attachment)

Size of Array	
Array Dimensions	61.39 in x 41.18 in
Total Number of Panels	33
Total rating of photovoltaic system:	10.00 KW Max AC output
Mounting Location	
Roof/Wall/Other	Roof
Roof Pitch (Rise/Run e.g. "5/12")	4/12
Roofing Material Asphalt Shingle/Tile/Steel/Other Age & Condition of Shingles	Asphalt Shingle Roof New roof installed as of July 2016
Roof Construction Rafter/Truss/Joist	Truss
Engineering Analysis	
Connection to Roof	InvisiMount Racking
Analysis of Existing Roof Structure with added Solar Equipment	Our conclusion regarding the adequacy of the existing roof is based on the fact that the additional weight related to the solar panels is less than 2.75 pounds per square foot. In the area of the solar panels, no 20 psf live loads will be present per Section 1607.12.5.1 of the 2015 IBC. Regarding snow loads, it is our conclusion that since the panels are slippery and dark, effective snow loads will likely be reduced in the areas of the panels. Regarding wind loads, we conclude that any additional forces will be negligible due to the low profile of the flush-mounted panel system. Regarding seismic loads, we conclude that any additional forces will be small. With an assumed roof dead load of 14.8 psf, solar panel dead load of 2.75 psf, and affected roof area of 40% (maximum), the additional dead load (and consequential seismic load) will be 7.4%. This calculation conservatively neglects the weight of wall dead load. Because the increase is less than 10%, this alteration meets the requirements of the exception in Section 807.5 of the 2015 International Existing Building Code. Thus the existing structure is permitted to remain unaltered.
Adequate Uplift Resistance (120 mph Exp B)	Design wind speed for risk category II structures: 120 mph (3-sec gust)



UTAH OFFICES
Sandy
Layton
St. George

Project Number: U1678-0527-161

August 1, 2016

Intermountain Wind and Solar
1953 West 2425 South
Woods Cross, UT 84087

ATTENTION: Ryan Shaw

REFERENCE: **Clark Watson Residence: 18 West 1000 South, Bountiful, UT 84010
Solar Panel Installation**

Dear Mr. Shaw:

Per your request, we have reviewed photos relating to the installation of solar panels at the above-referenced site.

Based upon our review, it is our conclusion that the installation of solar panels on this existing roof will not adversely affect the structure of this house. The design of the solar panel supporting members and connections is by the manufacturer and/or installer. The adopted building code in this jurisdiction is the 2015 International Building Code and ASCE 7-10. Appropriate design parameters which must be used in the design of supporting members and connections are listed below:

- Ground snow load: 43 psf per Utah amendments to the IBC (verify with local building department)
- Design wind speed for risk category II structures: 155 mph (3-sec gust)
- Wind exposure: Category C

If using documents referencing ASCE 7-05, the design wind speed may be converted to an ASCE 7-05 equivalent of 120 mph, Exposure C.

Our conclusion regarding the adequacy of the existing roof is based on the fact that the additional weight related to the solar panels is less than 2.75 pounds per square foot. In the area of the solar panels, no 20 psf live loads will be present per Section 1607.12.5.1 of the 2015 IBC. Regarding snow loads, it is our conclusion that since the panels are slippery and dark, effective snow loads will likely be reduced in the areas of the panels. Regarding wind loads, we conclude that any additional forces will be negligible due to the low profile of the flush-mounted panel system. Regarding seismic loads, we conclude that any additional forces will be small. With an assumed roof dead load of 14.8 psf, solar panel dead load of 2.75 psf, and affected roof area of 40% (maximum), the additional dead load (and consequential seismic load) will be 7.4%. This calculation conservatively neglects the weight of wall dead load. Because the increase is less than 10%, this alteration meets the requirements of the exception in Section 807.5 of the 2015 International Existing Building Code. Thus the existing structure is permitted to remain unaltered.

During design and installation particular attention must be paid to the maximum allowable spacing of attachments and the location of solar panels relative to roof edges. The use of solar panel support span tables provided by the manufacturer is allowed only where the building type, site conditions, and solar panel configuration match the description of the span tables. Attachments to existing roof joist or rafters must be staggered so as not to over load any existing structural member. Waterproofing around the roof penetrations is the responsibility of others. All work performed must be in accordance with accepted industry-wide methods and applicable safety standards. Vector Structural Engineering assumes no responsibility for improper installation of the solar panels.

Please note that we have reviewed photos taken of the existing roof framing, but a representative of Vector Structural Engineering has not physically observed the roof framing of this home. Our conclusions are based upon our review of the photos and the assumption that all structural roof components and other supporting elements are in good condition and are sized and spaced such that they can resist standard roof loads.

Very truly yours,

VECTOR STRUCTURAL ENGINEERING, LLC

Brett D. Veazie, S.E.
Project Engineer

BDV/tim

Enclosure



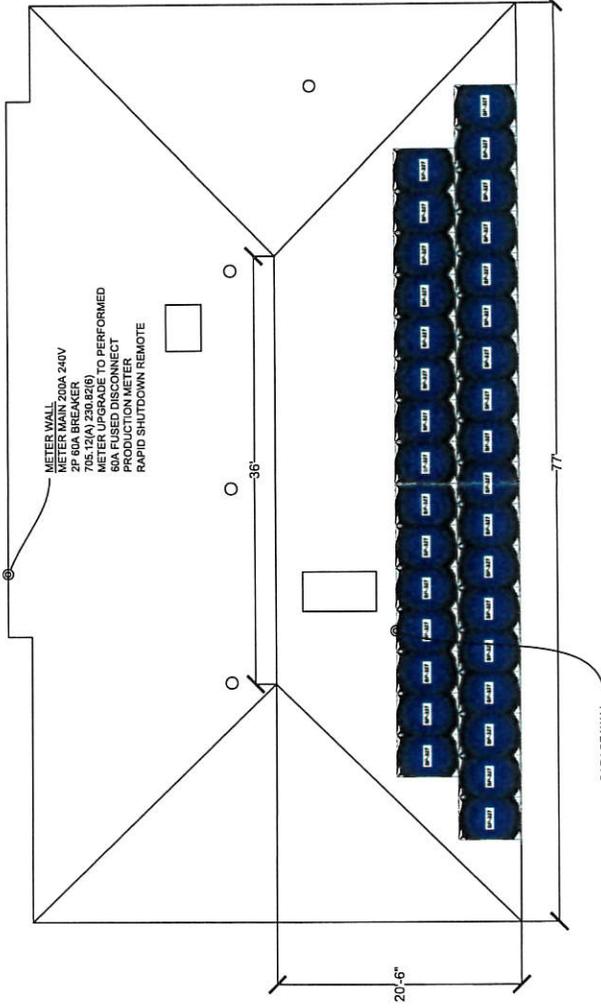
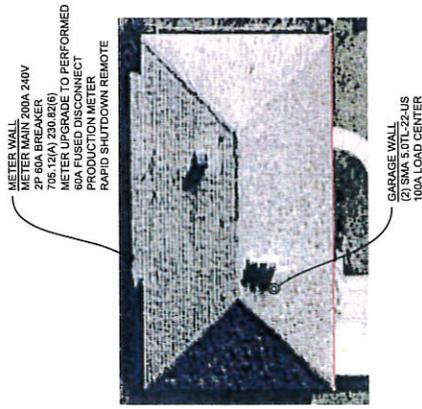
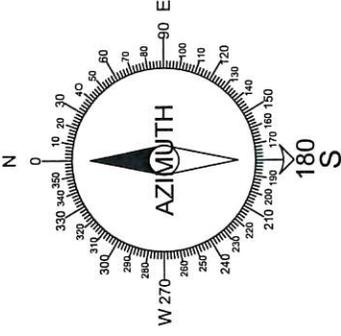
08/1/2016

SCOPE OF WORK

System Size: 10kW Max AC Output
 Standard Asphalt Shingle Roof
 Total Area of Array(s): 528ft²
 Anchored on 48" Centers using UL Listed InvisiMount Racking System
 Sun Resistant Ties Used for Wire Management Under Arrays(s)
 Pass Through Boxes Mounted Flush on Installation Surface (18.5")
 Meter Upgrade: YES

MODULE AND INVERTER(S)
 (33) SunPower 327w (4) SMA RAPID SHUTDOWN UNITS
 (2) SMA 5.0 - 1 SP-US-22

NOTES
 PLEASE REFER TO LABEL PLAN FOR WARNINGS PER NEC 690 & IRC 2012
 WIRING SHALL NOT BE INSTALLED WITHIN 10" OF ROOF DECKING EXCEPT WHERE
 DIRECTLY BELOW THE ROOF SURFACE COVERED BY PV MODULES AND/OR EQUIPMENT
 ARRAY COMPLIES WITH NEC 690.12(1) RAPID SHUTDOWN



Clark Watson
 18 W 1000 S
 Bountiful, UT 84010

INTERMOUNTAIN WIND & SOLAR
 1953 WEST 2425 SOUTH
 WOODS CROSS, UT, 84087
 P: 801-298-5255
 F: 801-298-5355



PV Installation
 Professional

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DATE: 07/19/2016
 PERMIT DESIGNER: CWS
 PROJECT #: 2016-521
 SYSTEM SIZE: 10kW Max AC Output
 BOUNTIFUL

SCALE: N.T.S.
 SHEET # PV02



MAYOR
RANDY LEWIS

CITY COUNCIL
RICHARD HIGGINSON
BETH HOLBROOK
JOHN M. (MARC) KNIGHT
KENDALYN HARRIS
JOHN PITT

CITY MANAGER
GARY R. HILL

Memo

Date: August 3, 2016
To: Administrative Committee
From: Andy Hulka, Assistant Planner
Re: Staff Report for the Administrative Committee Meeting on Monday, August 8, 2016

Overview

4. **PUBLIC HEARING** - Consider approval of a Conditional Use Permit to allow for Solar Panels at 111 East North Canyon Road, Stephanie Jackson, applicant.

Item #4

Background

The property where the solar panels are to be installed is located in the R-4 Single Family Zone. Solar power panels are classified in the city ordinance as "private power plants" and require a conditional use permit if they are over 10 watts. The applicant has indicated that the photovoltaic system to be installed will produce 7.83 kilowatts (7,830 watts), requiring a conditional use permit.

Findings

The application submitted indicates the proposed installation of 1 photovoltaic array with a total of 29 panels. The arrays will occupy approximately 518 square feet, which is smaller than the 50% maximum roof coverage. The array will be located on southeast facing portion of the roof. The array will include all 29 panels in 2 rows. The roof is of truss construction and has a slope of 9:12. The applicant has indicated that the asphalt shingles are one year old and in excellent condition. The panels will be connected to the roof with an Ironridge mount system. A review of information provided in the application indicates that all engineering requirements for the construction of solar panels in Bountiful City will be met. A reflection analysis of the roof pitch indicates that photovoltaic panels should not produce a reflection nuisance to surrounding properties.

Staff Recommendation

Based on the findings, staff has determined that the applicant would comply with all requirements for the conditional use permit. Staff recommends approval of the conditional use permit with the following conditions:

1. The applicant shall obtain a building permit.
2. The panels must be installed only as proposed in the application.
3. This conditional use permit is solely for this site and is non-transferable.

Bountiful Land Use Ordinance

14-14-126 PRIVATE POWER PLANTS

- A. A "Private Power Plant" is any device or combination of devices not owned and operated by a regulated utility company, which convert mechanical or chemical energy into electricity. A private power plant with a peak power generation capacity of 10 Watts/12v/500mA (or equivalent) is exempt from the provisions of this Section. A private power plant, including a windmill or wind turbine, shall not be permitted within Bountiful City limits, with the following exceptions:
1. A back-up power generator running on unleaded gasoline, diesel, natural gas, propane, or hydrogen fuel cell, rated for a single structure or building lot, located in accordance with the requirements of the zone in which it is located.
 2. A photovoltaic cell array or other passive solar energy system located in accordance with the requirements for occupied structures for the zone in which it is located.
- B. With the exception of a back-up power generator, no private power plant may be installed or used on any property unless a conditional use permit has been issued for the specific power generation device.
- C. A private power plant is not exempt from the height requirements of the Zone in which it is located, and shall be considered an occupied structure for the purposes of calculating height.
- D. Solar energy design standards and requirements
1. Solar energy panels or collectors that are mounted to the roof shall:
 - a. Not extend beyond the roofline.
 - b. Not reflect sunlight onto neighboring windows or rights-of-way.
 - c. Not exceed fifty (50) percent of the total roof area.
 - d. Shall be maintained in good condition.
 2. Prior to installation, use, and connection to the grid, the following shall be done:
 - a. A Conditional Use Permit shall be issued
 - b. A Building Permit shall be issued
 - c. The Power Department shall approve the application for net metering
 - d. The Power Department shall approve the physical installation

111 E North Canyon Rd





For Office Use Only

Date Rec'd 7-27-16

Admin Date 8-8-16

Application \$ 50

SOLAR PANEL - CONDITIONAL USE PERMIT APPLICATION

PROPERTY OWNER INFORMATION:

Property Owner Name(s): Stephanie Jackson

Property Address: 111 E North Canyon Rd, Bountiful

Property Owner Phone Number: 801-244-0232

Property Owner E-Mail: heathjackson@outlook.com

(Property Owner(s) - please sign Authorization and Affidavit on page 2)

SOLAR CONTRACTOR INFORMATION:

Solar Company Name: TELT Ventures dba One Solar

Company Address: 2391 S 1560 W, #C, Woods Cross UT 84087

Company Phone Number: 801-683-8168 or Jim 801-884-6945

Contact Person for Solar Project: Jim Dowdy

E-Mail Address: Jim@onesolarutah.com

1. Please include the following with your application:

- \$50.00 Fee:** Conditional Use Permit Application (Administrative Committee)

SITE PLAN: Two (2) 11"x17" sized sets of the proposed site plan drawn at 1:10 scale or as required by the City Engineer and City Planner. A site plan shall include:

- Plan view (bird's-eye) of site with placement of solar panels.
- A north arrow, the scale of the drawing, and the date of the drawing.
- Street names and addresses.

FOR GROUND-MOUNTED SOLAR ARRAYS, THE FOLLOWING:

- Property lines with dimensions.
- All sidewalks, driveways, curbs and gutter, and parking areas.
- All existing easements, rights-of-way, and any other restrictions on the use of the property.
- Existing buildings, proposed buildings, and other significant features on the site.
- Existing buildings and significant features located on adjacent properties within 50 feet (50') of the subject property boundaries.
- When required by the City Planner or City Engineer, and for all new construction, a survey including both existing and proposed contours of the land at intervals of two feet (2') or better.

ONE-LINE DIAGRAM (or electrical diagram or block diagram): Two (2) 11" x 17" sets (diagram must follow Bountiful City Light & Power sample diagram included in the solar packet – attachment 2, page 3).

ENGINEER ANALYSIS LETTER (including an analysis of the existing roof structure with added solar equipment and uplift resistance)

COMPLETED SOLAR PACKET FORMS:

- Solar Panel Questions
- Photovoltaic System Net Metering Requirements (signed by property owner)
- Bountiful City Light & Power - diagram form
- Building Permit Application

SPEC SHEETS: Solar product information

PHOTO: Electrical service (meter main with disconnect)

2. Property Owner Authorization and Affidavit

The undersigned, being duly sworn, depose that I am (we are) the owner(s) or authorized agent(s) of the owner(s) of the property involved in this application and that the statements contained herein or by attachment, are to the best of my (our) knowledge true and correct.



Owner/Agent

Owner/Agent

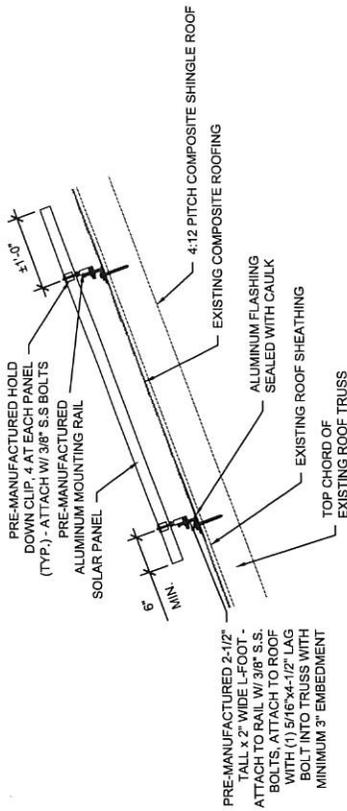


MAYOR
Randy C. Lewis
CITY COUNCIL
Kendalyn Harris
Richard Higginson
Beth Holbrook
John M. Knight
John Pitt
CITY MANAGER
Gary Hill

SOLAR PANEL QUESTIONS

Please completely answer all questions (do not simply refer to an attachment)

Size of Array	
Array Dimensions Total Number of Panels Total rating of photovoltaic system:	29 panels 270 watt black mono = 7.830 kW 7.830 kW
Mounting Location	
Roof/Wall/Other	Roof Mount
Roof Pitch (Rise/Run e.g. "5/12")	9/12
Roofing Material Asphalt Shingle/Tile/Steel/Other Age & Condition of Shingles	Asphalt Shingle Excellent condition 1 year
Roof Construction Rafter/Truss/Joist	Truss construction
Engineering Analysis	
Connection to Roof	Ironridge flash foot solar mount
Analysis of Existing Roof Structure with added Solar Equipment	Thomas Engineering Company confirmed that the addition of the proposed solar panels would not cause the the existing truss members to become overstressed due to the additional load from the solar panels.
Adequate Uplift Resistance (120 mph Exp B)	Yes 155 wind speed



PRE-MANUFACTURED 2-1/2" TALL x 2" WIDE L-FOOT - ATTACH TO RAIL W/ 3/8" S.S. BOLTS, ATTACH TO ROOF WITH (1) 5/16"x4-1/2" LAG BOLT INTO TRUSS WITH MINIMUM 3" EMBEDMENT

FLASHFOOT STANDOFF

FLUSH MOUNTED ARRAY

COMPOSITE SHINGLE

"MEETS OR EXCEEDS 2015 IBC IRC CONSTRUCTION STANDARDS CASE 1 Load Calculations 2X4 Construction 24" on Center Trusses"

CENTROSOLAR B-SERIES BM60 270BB PANEL:
18kg = 39.7 LBS/PANEL

UNIRAC SOLARMOUNT CONNECTION HARDWARE:
.986 PLF = 6.66 FT/PANEL = 6.37 LBS/PANEL

SYSTEM INCLUDES 29 PANELS AND UNIRAC MOUNTING HARDWARE:
29 X 52.95 = 1535.55 LBS

A = L x W (PANEL):
18.04 SQ. FT = 39.4' x 65.95"
ARRAY:
18.04 SQ. FT X 29 = 523.16 x 30 PSF = 15694.8 LBS

PULL OUT STRENGTH
CONNECTOR 5/16 LAG BOLT
50 STANDOFFS (50 LAGS)
50 x 3" EMBED x 205 LBS = 30750 LBS

ROOF LOAD BEARING
1535.55LBS / 50 STANDOFFS = 30.71 LBS
TOTAL WEIGHT = PANELS + HARDWARE
1535.55 LBS
1535.55 LBS / 523.16 SQ. FT = 2.94 PSF



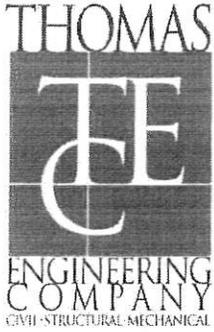
JACKSON RESIDENCE
111 E NORTH CANYON RD, BOUNTIFUL, UTAH 84010



MOUNTING DETAILS AND WEIGHT LOAD CALC
6.235 KW AC PHOTOVOLTAIC SYSTEM
7.830 W DC PHOTOVOLTAIC SYSTEM

SCALE: NTS
SHEET 6 OF 6

DATE:	06/28/2016
DRAWN:	JMB
CHECKER:	
ENGINEER:	
SALESMAN:	SA
PROJECT:	JACKSON RESIDENCE



380 NORTH
200 WEST
SUITE 207
BOUNTIFUL, UTAH
84010

PHONE
801-295-4897
FAX
801-299-0974

www.thomasengr.com

05 Jul 16

16131

ONE SOLAR UTAH
2391 S 1650 W #C
Woods Cross, UT 84087

ATTENTION: Mr. Jake Kilgore

RE: Analysis of Roof Truss
SUBJECT: Load Summary Report for Roof Truss located at 111 E North Canyon Rd. Bountiful, UT (Jackson Residence)

Pursuant to the request of One Solar Utah, Thomas Engineering Company (TEC) was asked to verify the capacity of truss on a home located at 111 E North Canyon Rd. Bountiful, UT. TEC was to confirm that the addition of the proposed solar panels by One Solar Utah would not cause any of the existing truss members to support the proposed solar panels to become overstressed.

SUMMARY

TEC reviewed documents from a site visit to obtain truss spacing, member size, member grade, dimensions, and overall site observation of the condition of the existing trusses. The proposed solar panels are to be installed per the layout provided to TEC by One Solar Utah. TEC created a mathematical model of each truss and determined that none of the existing truss members became overstressed due to the additional load from the solar panels.

BASIS OF ANALYSIS

TEC based their analysis on the following:

1. Documents from One Solar Utah. Said documents included 3 pdfs titled: E3 SITE LAYOUT.pdf, E5 ONE LINE WIRING DIAGRAM.pdf, and E7 MOUNTING DETAILS AND WEIGHT LOAD CALCS.pdf. Documents also included truss layout with dimensions, grade of lumber, and pictures of home and trusses.

ANALYSIS

TEC created a STAAD Pro (mathematical modeling software) of an existing truss in which the solar panels were to be added in order to obtain anticipated stresses in the model. TEC used allowable stresses for the truss members based on stamps observed on the truss members during the site visit. TEC assumed that the lateral seismic and wind loads acting perpendicular to the truss were distributed to the roof sheathing and into the walls and were not included in the model. TEC did include seismic and wind loads that were acting parallel to the trusses. TEC's analysis was

limited to each single roof truss and did not include any analysis of the wall, footing, etc. TEC used the ASD method as outlined in the latest edition of the NDS (National Design Specification for Wood Construction for their analysis. TEC's analysis consisted of the following loads:

- | | |
|--------------------------------|-------------|
| 1. Dead Load | |
| a. Truss Members | Self-weight |
| b. Roof Load | 10 psf |
| c. Solar Panel | 3 psf |
| d. Ceiling Loads | 5 psf |
| 2. Live Load | 20 psf |
| 3. Ground Snow Load | 43 psf |
| 4. Wind | |
| a. 3 Second Wind Gust Velocity | 155 mph |
| b. Importance Factor | 1.0 |
| c. Exposure | B |
| 5. Seismic | |
| a. Site Classification | D |
| b. Design Spectral Reponses | |
| i. S_{DS} | 0.979 |
| ii. S_{D1} | 0.567 |
| c. Importance Factor | 1.0 |

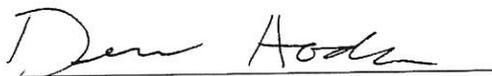
Based on TEC's analysis of the existing trusses, the additional loading from the solar panels did not cause any of the truss members to become overstressed.

If you should need any additional assistance, please contact TEC at your convenience

Sincerely,

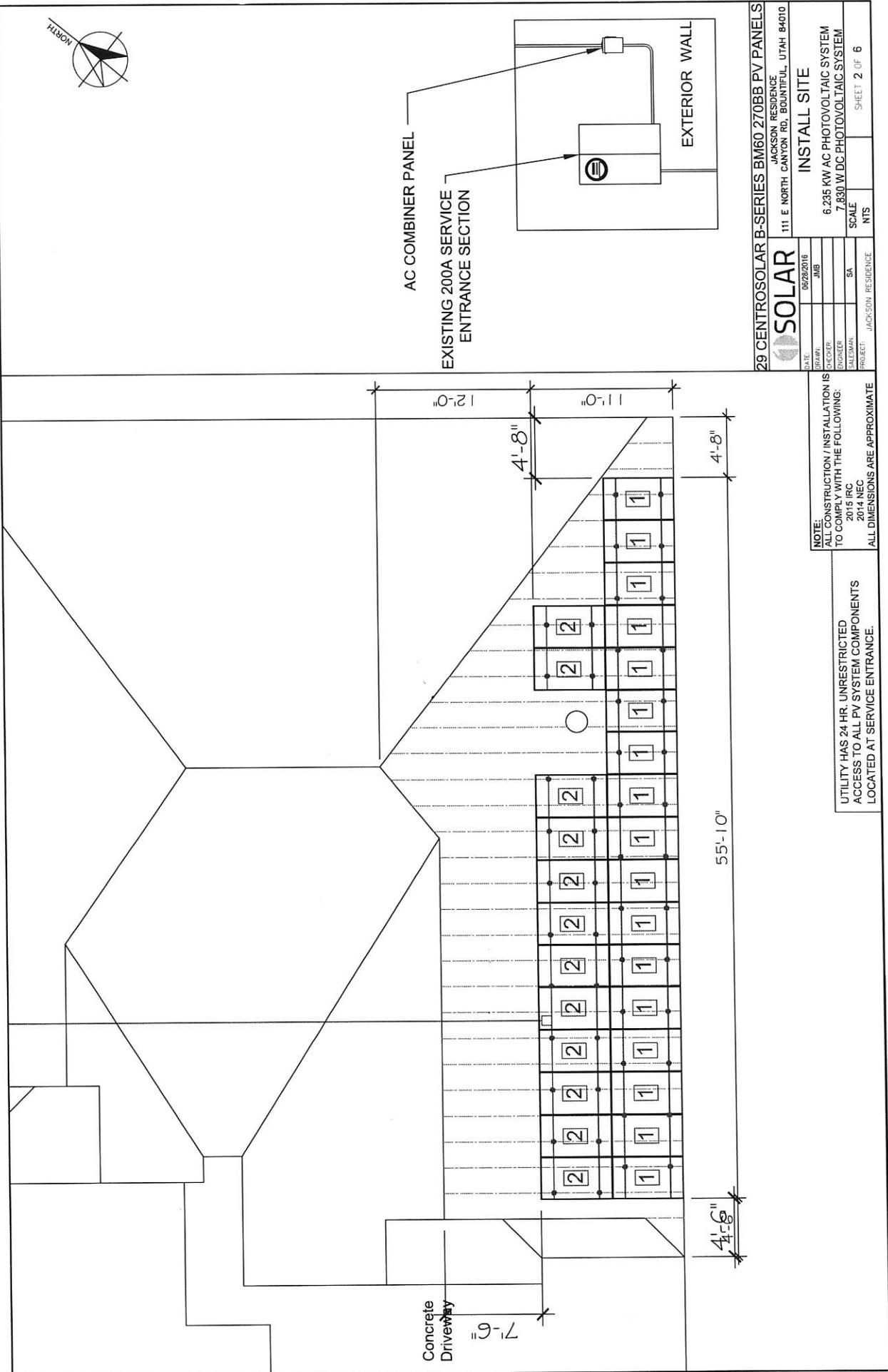
THOMAS ENGINEERING COMPANY

Prepared By:



Dereck Hodson, P.E.
Professional Engineer
State of Utah
License No. 9090765-2202
Expires 31 Mar 2017





NOTE:
 ALL CONSTRUCTION / INSTALLATION IS
 TO COMPLY WITH THE FOLLOWING:
 2015 IRC
 2014 NEC
 ALL DIMENSIONS ARE APPROXIMATE

UTILITY HAS 24 HR. UNRESTRICTED
 ACCESS TO ALL PV SYSTEM COMPONENTS
 LOCATED AT SERVICE ENTRANCE.

29 CENTROSOLAR B-SERIES BM60 270BB PV PANELS
 JACKSON, RESIDENCE
 111 E. NORTH CANYON RD., BOUNTIFUL, UTAH 84010



DATE:	06/26/2016
DRAWN:	JMB
CHECKED:	
ENGINEER:	
SALESMAN:	SA
PROJECT:	JACKSON, RESIDENCE

INSTALL SITE
 6.235 KW AC PHOTOVOLTAIC SYSTEM
 7.830 W DC PHOTOVOLTAIC SYSTEM
 SCALE: NTS
 SHEET 2 OF 6

Source Circuit:
 17 Panels:
 Power = 3655 Watts ac
 Nominal Voltage = 240 V ac
 Continuous Output Current = 15.3 A ac

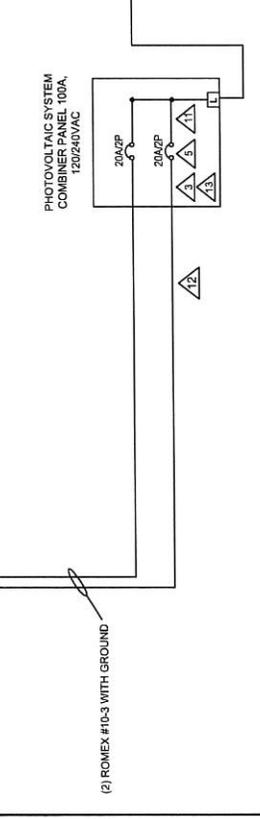
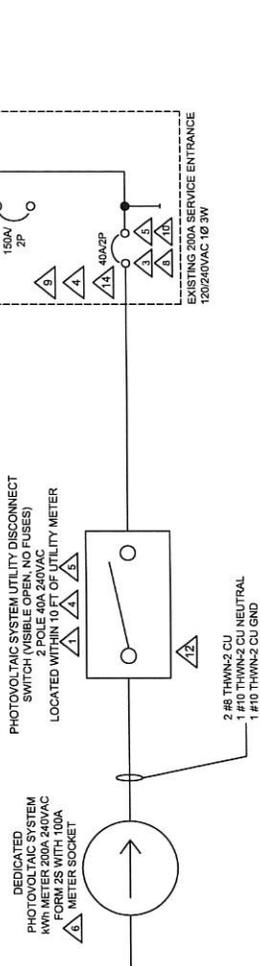
Source Circuit:
 12 Panels:
 Power = 2580 Watts ac
 Nominal Voltage = 240 V ac
 Continuous Output Current = 10.8 A ac

SubArray #1 Specs:
 29 Panels:
 Power = 6235 Watts ac
 Nominal Voltage = 240 V ac
 Continuous Output Current = 26.1 A ac

Total Array Specs:
 29 Panels:
 Power = 6235 Watts ac

Each DC Panel:
 CENTRO-SOLAR B-Series BM60 270BB
 Power = 270 Watts dc
 Vmp = 30.9 Vdc
 Imp = 8.81 Adc
 Voc = 39.2 Vdc
 Isc = 9.44 Adc

Each Panel:
 CENTRO-SOLAR B-Series BM60 270BB
 with Enphase M215 microinverter
 Continuous Output Power = 215 Watts ac
 Nominal Voltage = 240 V ac
 Continuous Output Current = 0.9 A ac
 Maximum Units Per Branch Circuit = 17
 Maximum Overcurrent Protection = 20A ac



- NOTES:**
1. EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE 2014 NEC AND ALL APPLICABLE REQUIREMENTS OF THE SERVING ELECTRIC UTILITY COMPANY AND OF THE LOCAL AUTHORITY HAVING JURISDICTION.
 2. BI-DIRECTIONAL UTILITY METER TO BE INSTALLED BY UTILITY COMPANY WHEN REQUIRED.
 3. LABEL BREAKER "PHOTOVOLTAIC ELECTRIC POWER SOURCE" PER NEC 705-10 AND "BREAKERS ARE BACK-FEED" PER NEC 705.12(D)(5). LABEL WITH THE MAXIMUM AC OUTPUT OPERATING CURRENT AND THE OPERATING VOLTAGE PER NEC 690-54.
 4. LABEL "PHOTOVOLTAIC SYSTEM UTILITY DISCONNECT SWITCH". SWITCH TO BE LOCKED AT ALL TIMES. SWITCH TO BE VISIBLE BLADE AND ACCESSIBLE PER UTILITY REQUIREMENTS AND CONFORM TO NEC 705.22.
 5. PROVIDE WARNING SIGN PER NEC 690-17 READING "WARNING - ELECTRIC SHOCK HAZARD DO NOT TOUCH TERMINALS. TERMINALS ON BOTH THE LINE AND THE LOAD SIDE MAY BE ENERGIZED IN THE OPEN POSITION".
 6. LABEL "PV SYSTEM DEDICATED KWH METER"
 7. ALL ROOF PENETRATIONS SHALL BE FLASHED IN ACCORDANCE WITH IRC M2302.2.2. MODULES SHALL NOT BE INSTALLED OVER, OR BLOCK ANY, ATTIC VENTS, PLUMBING VENTS, FURNACE OR WATER VENTS, ETC. ADDITIONALLY, ALL WIRING MUST BE COMPLETELY SUPPORTED ONLY BY DEVICES THAT ARE UL LISTED AND SUNLIGHT RESISTANT.
 8. PER 2014 NEC 705.12(D)(2), THE SUM OF THE AMPERE RATINGS OF OVERCURRENT DEVICES IN CIRCUITS SUPPLYING POWER TO THE BUS BAR SHALL NOT EXCEED 120% THE RATING OF THE BUS BAR OR OR CONDUCTOR.
 9. WARNING SIGN IS TO BE PROVIDED READING "PHOTOVOLTAIC SYSTEM EQUIPPED WITH RAPID SHUTDOWN" ENPHASE MICROINVERTERS ARE RAPID SHUTDOWN COMPLIANT IN ACCORDANCE WITH 2014 NEC 690.12

PER ARTICLE 705.12(D)(7) INVERTER OUTPUT CONNECTION TO BE LOCATED AT OPPOSITE (LOAD) END FROM THE MAIN CIRCUIT LOCATION. LABEL TO READ "WARNING: INVERTER OUTPUT CONNECTION, DO NOT RELOCATE THIS OVERCURRENT DEVICE."

LABELS ARE TO BE PERMANENTLY ETCHED, SECURELY MOUNTED IN PLACE, AND ABLE TO ENDURE THE ENVIRONMENT IN WHICH THEY ARE LOCATED.

FOR THE PORTION OF THE AC RUN FROM THE ARRAY THAT RUNS FROM THE ATTIC SPACE TO THE AC COMBINER PANEL, THE ROMEX SHALL BE PROTECTED BY A 1" EMT CONDUIT.

THERE SHALL BE A SIGN PROVIDED AT THE AC COMBINER PANEL STATING THAT IT IS DEDICATED ONLY TO THE PV SYSTEM, AND NO ADDITIONAL LOAD CONNECTIONS ARE ALLOWED TO BE CONNECTED IN ACCORDANCE WITH NEC ARTICLE 705.12(0).

THERE SHALL BE A SIGN PROVIDED AT THE SERVICE PANEL STATING THE TOTAL RATED AC OUTPUT CURRENT IN AMPS (24.3 AMPS), AND THE VOLTAGE OF THE SYSTEM (240 VAC) PER NEC ARTICLE 690.54.

SOLAR		JACKSON RESIDENCE	
DATE:	06/28/2016	111 E NORTH CANYON RD, BOUNTIFUL, UTAH 84010	
DESIGNER:	JMB	ONE LINE WIRING DIAGRAM	
ENGINEER:	SA	6,235 KW AC PHOTOVOLTAIC SYSTEM	
SALESMAN:	SA	7,830 W DC PHOTOVOLTAIC SYSTEM	
PROJECT:	JACKSON RESIDENCE	SCALE:	NIS
		SHEET:	5 OF 6



MAYOR
RANDY LEWIS

CITY COUNCIL
RICHARD HIGGINSON
BETH HOLBROOK
JOHN M. (MARC) KNIGHT
KENDALYN HARRIS
JOHN PITT

CITY MANAGER
GARY R. HILL

Bountiful City, Utah Conditional Use Permit

A public hearing was held on August 1, 2016, at Bountiful City Hall to consider the request of David Demille for a Conditional Use Permit allowing for a Private Power Plant (Solar Panels) at the following location:

827 East 750 North, Bountiful City, Davis County, Utah

ALL OF LOT 107, BOUNTIFUL'S LAKE HILLS SUB - PLAT E. CONT. 0.16 ACRES.

Parcel: 04-008-0107

The Bountiful City Administrative Committee heard the matter and considered the statements of the applicant, the City staff, and the public. As a result, the Administrative Committee makes the following findings:

1. This matter is properly heard before the Administrative Committee.
2. Appropriate public notice has been provided and a public hearing held.
3. The proposed request to operate a Private Power Plant (Solar Panels) meets the letter and the intent of the specific requirements in §14-2 and 14-14 et seq (Conditional Use Permit provisions) of the Bountiful City Land Use Ordinance.

The Bountiful City Administrative Committee hereby grants this Conditional Use Permit for a Private Power Plant (Solar Panels) to be located at 827 East 750 North, in Bountiful, Davis County, Utah, with the following conditions:

1. The applicant shall obtain a building permit.
2. The panels must be installed only as proposed in the application.
3. This conditional use permit is solely for this site and is non-transferable.
4. Prior to permit issuance the applicant shall provide a new engineer's analysis letter stating the engineer reviewed photos of the structural components of the roof in completing the analysis.

The Conditional Use Permit was approved on August 1, 2016, and this written form was approved this 8th day of August, 2016.

Chad Wilkinson
Planning Director

ATTEST: Julie Holmgren
Recording Secretary



RANDY C. LEWIS
MAYOR

CITY COUNCIL
Kendalyn Harris
Richard Higginson
Beth Holbrook
John Marc Knight
John S. Pitt

CITY MANAGER
Gary R. Hill

Bountiful City, Utah Conditional Use Permit

A public hearing was held on August 1, 2016, at Bountiful City Hall to consider the request of Jonathan Graf, for a Conditional Use Permit allowing a Home Occupation Business for Handyman Contractor at the following location:

1640 South 200 West, Bountiful City, Davis County, Utah

ALL OF LOT 20, SUNSHINE SUB. CONT. 0.17 ACRES.

Parcel 03-088-0020

The Bountiful City Administrative Committee heard the matter and considered the statements of the applicant, the City staff, and the public. As a result, the Administrative Committee makes the following findings:

1. This matter is properly heard before the Administrative Committee.
2. Appropriate public notice has been provided and a public hearing held.
3. The proposed request to operate a contractor business meets the letter and the intent of the specific requirements in §14-17 et seq (Conditional Use Permit provisions) of the Bountiful City Land Use Ordinance.

The Bountiful City Administrative Committee hereby grants this Conditional Use Permit for Jonathan Graf to operate a contractor business located at 1640 South 200 West, in Bountiful, Davis County, Utah, with the following conditions:

1. The applicant shall maintain an active Bountiful City business license.
2. The Home Occupation will not create nuisances discernible beyond the premises (e.g. noise, dust, fumes, glare, traffic, etc.).
3. The use will comply with all applicable fire, building, plumbing, electrical, and life safety and health codes in the State of Utah, Davis County, and Bountiful City.
4. The Conditional Use Permit is solely for this site and is non-transferable.

The Conditional Use Permit was approved on August 1, 2016, and this written form was approved this 8th day of August, 2016.

Chad Wilkinson
Planning Director

ATTEST: Julie Holmgren
Recording Secretary



MAYOR
RANDY LEWIS

CITY COUNCIL
RICHARD HIGGINSON
BETH HOLBROOK
JOHN M. (MARC) KNIGHT
KENDALYN HARRIS
JOHN PITT

CITY MANAGER
GARY R. HILL

Bountiful City, Utah Conditional Use Permit

A public hearing was held on August 1, 2016, at Bountiful City Hall to consider the request of Scott and Maren Radmall for a Conditional Use Permit allowing for a Private Power Plant (Solar Panels) at the following location:

920 East 1500 South, Bountiful City, Davis County, Utah

ALL OF LOT 3, BOUNTIFUL HILLS C. CONT. 0.245 ACRES

Parcel: 04-103-0003

The Bountiful City Administrative Committee heard the matter and considered the statements of the applicant, the City staff, and the public. As a result, the Administrative Committee makes the following findings:

1. This matter is properly heard before the Administrative Committee.
2. Appropriate public notice has been provided and a public hearing held.
3. The proposed request to operate a Private Power Plant (Solar Panels) meets the letter and the intent of the specific requirements in §14-2 and 14-14 et seq (Conditional Use Permit provisions) of the Bountiful City Land Use Ordinance.

The Bountiful City Administrative Committee hereby grants this Conditional Use Permit for a Private Power Plant (Solar Panels) to be located at 920 East 1500 South, in Bountiful, Davis County, Utah, with the following conditions:

1. The applicant shall obtain a building permit.
2. The panels must be installed only as proposed in the application.
3. This conditional use permit is solely for this site and is non-transferable.

The Conditional Use Permit was approved on August 1, 2016, and this written form was approved this 8th day of August, 2016.

Chad Wilkinson
Planning Director

ATTEST: Julie Holmgren
Recording Secretary