

ADMINISTRATIVE COMMITTEE

Monday, August 17, 2015

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 July 13, 2015 and July 20, 2015.
3. **PUBLIC HEARING:** Consider approval of a Conditional Use Permit to allow for Solar Panels at 702 Emerald Hills Drive, Larry Murdock, applicant.
4. Consider approval of a Conditional Use Permit, in written form, to allow for Solar Panels at 3039 South 600 West, Roger Beattie, applicant.
5. 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
July 13, 2015**

Present: Acting Chairman – Lloyd Cheney; Committee Members – John Marc Knight and Dave Badham; Recording Secretary – Julie Holmgren.

Excused: Chad Wilkinson

1. Welcome and Introductions.

Acting Chairman Cheney opened the meeting at 5:05 p.m. and introduced all present.

2. Consider approval of minutes for July 6, 2015.

Mr. Knight made a motion to approve the minutes for July 6, 2015. Mr. Cheney seconded the motion.

<u> A </u>	Mr. Cheney
<u> A </u>	Mr. Knight
—	Mr. Badham (Abstained)

Motion passed 2-0.

3. PUBLIC HEARING: Consider approval of a Conditional Use Permit to allow for Solar Panels at 2920 South 450 East, Darryl Brown, applicant.

Darryl Brown, applicant, and his wife Susan Brown, were present.

Acting Chairman Cheney 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 7.5 kilowatts (7,500 watts), requiring a conditional use permit.

The application submitted indicates the proposed installation of 1 photovoltaic array of 24 total panels. The array will occupy 415.9 square feet which is smaller than the 50% Maximum roof coverage. The array is on the west facing roof and is arranged in two rows with 12 panels on the upper row and 12 panels on the lower row. The roof has a slope of 4/12, is of rafter construction, and has 20 year old aluminum shingles in good condition. The panels will be secured to the rafters with a Series 100 SnapNrack mounting system. A review of information provided in the application indicates that all engineering requirements for the

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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.

PUBLIC HEARING: Acting Chairman Cheney opened the Public Hearing at 5:09 p.m., and the hearing was closed at 5:09 p.m. with no comment from the public.

Mr. Badham inquired regarding Mr. Brown's aluminum roof. A discussion ensued regarding installation of solar panels on an aluminum roof and the necessity for a special sealant to prevent leaking. Mr. Badham inquired about the roof structure, and Mr. Brown explained that his home has a rafter roof and an engineer has completed an analysis of the roof. Mr. Knight inquired about solar rebates and tax credits, and a brief discussion ensued.

Mr. Knight made a motion for approval of a Conditional Use Permit to allow for Solar Panels at 2920 South 450 East, Darryl Brown, applicant. Mr. Badham seconded the motion.

A Mr. Cheney
A Mr. Knight
A Mr. Badham

Motion passed 3-0.

4. Miscellaneous business and scheduling.

Acting Chairman Cheney ascertained there were no further items of business.

The meeting was adjourned at 5:18 p.m.

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
July 20, 2015**

Present: Chairman – Chad Wilkinson; Committee Member – Lloyd Cheney; Recording Secretary – Julie Holmgren.

Absent: John Marc Knight

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 13, 2015.

Approval of minutes for July 13, 2015 was tabled.

3. PUBLIC HEARING: Consider approval of a Conditional Use Permit to allow for Solar Panels at 828 Oakwood Circle, Ted Liou, applicant.

Ted Liou, applicant, and his contractor, Scott Jones (Creative Energies), were present. Greg and Vicki Gunn (850 Oakwood Circle) were also present.

Chairman Wilkinson 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 7.93 kilowatts (7,930 watts), requiring a conditional use permit.

The application submitted indicates the proposed installation of 1 photovoltaic array for a total of 26 panels. The arrays will occupy approximately 486 square feet, which is smaller than the 50% maximum roof coverage. The south facing roof will have 26 panels with 9 panels on the lowest row, 10 panels on the middle row, and 7 panels on the highest row. The panels will be connected to the roof by a roof mount system which includes L-Foot Brackets anchored into the underlying manufactured trusses every 48”. The roof is of truss construction, has a slope of 7/12, and is 15-20 years old. 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:

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

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 inquired regarding the condition of the shingles. Mr. Jones responded that they are in good shape.

PUBLIC HEARING: Chairman Wilkinson opened the Public Hearing at 5:03 p.m. Greg and Vicki Gunn (850 Oakwood Circle) were present for the Public Hearing. Mr. Gunn reported that he had met with Mr. Liou and Mr. Jones prior to the Administrative Committee Meeting and received answers to most of his questions regarding the solar project. Mr. Gunn was concerned about glare and placement of the solar panels. Mr. Wilkinson showed Mr. Gunn a site plan, and Mr. Gunn said he was fine with the plan. Mr. Jones explained that the solar panels are black, flat and non-reflective, and they will be installed parallel with the roof. The Public Hearing was closed at 5:05 p.m.

Mr. Cheney made a motion for approval of a Conditional Use Permit to allow for Solar Panels at 828 Oakwood Circle, Ted Liou, applicant. Mr. Wilkinson seconded the motion.

A Mr. Wilkinson
A Mr. Cheney

Motion passed 2-0.

4. **Consider approval of a Conditional Use Permit, in written form, to allow for Solar Panels at 2920 South 450 East, Darryl Brown, applicant.**

Mr. Cheney made a motion for approval of a Conditional Use Permit in written form, to allow for Solar Panels at 2920 South 450 East, Darryl Brown, applicant. Mr. Wilkinson seconded the motion.

A Mr. Wilkinson
A Mr. Cheney

Motion passed 2-0.

5. **Miscellaneous business and scheduling.**

Chairman Wilkinson ascertained there were no further items of business.

The meeting was adjourned at 5:07 p.m.

Chad Wilkinson, City Planner



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City of Beautiful Homes and Gardens

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JOHN PITT

CITY MANAGER
GARY R. HILL

Memo

Date: August 12, 2015
To: Administrative Committee
From: Chad Wilkinson, Planning Director
Re: Staff Report for the Administrative Committee Meeting on Monday, August 17, 2015

Overview

- 3. PUBLIC HEARING** - Consider approval of a Conditional Use Permit to allow for Solar Panels at 702 Emerald Hills Drive, Larry Murdock, applicant.

Item #3

Background

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 7 kilowatts (7000 watts), requiring a conditional use permit.

Findings

The application submitted indicates the proposed installation of 1 photovoltaic array for a total of 28 panels. The arrays will occupy approximately 493 square feet, which is smaller than the 50% maximum roof coverage. All panels will be installed on the south facing roof face with four rows of seven panels. The panels will be connected to the roof by a Unirac roof mount system with 5/16" Lag bolts. The roof is of truss construction with asphalt shingles, has a slope of 4/12, and is approximately 6 years old. 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:

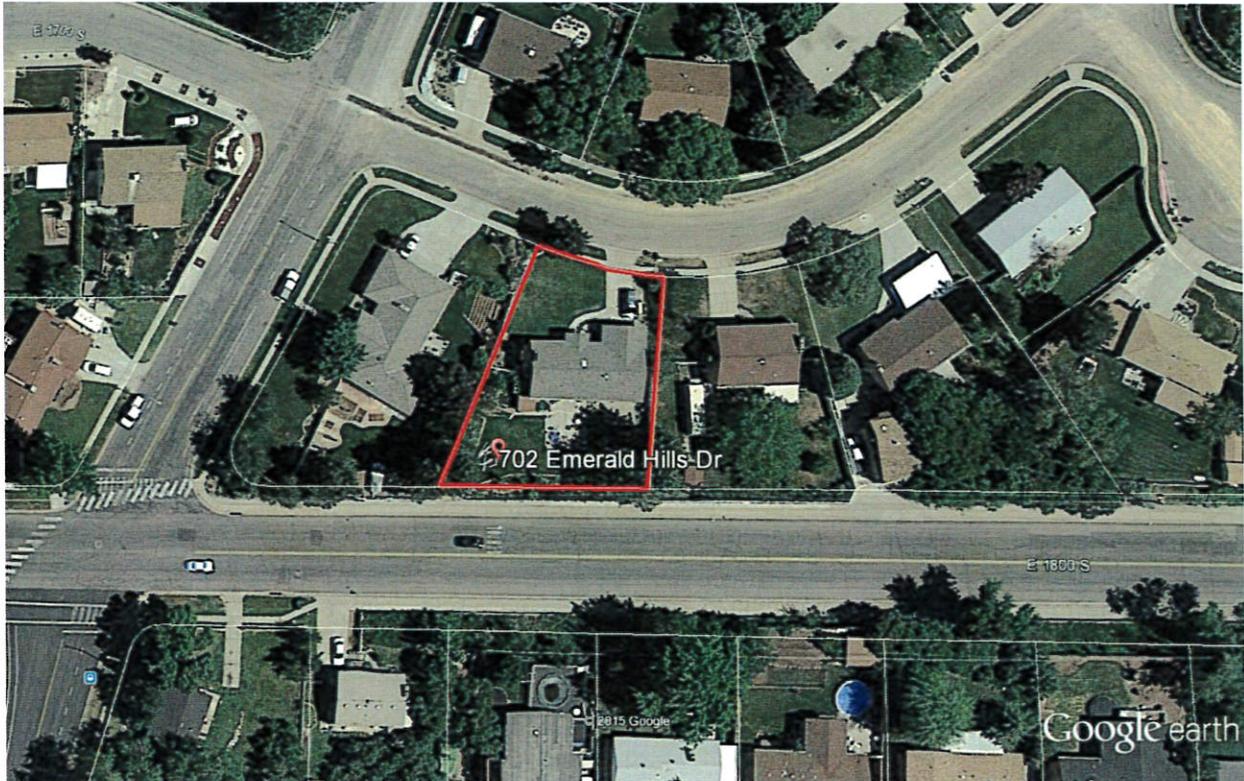
1. The applicant shall obtain a building permit.
2. The panels must be installed only as proposed in the application.
3. This conditional use permit is solely for this site and is non-transferable.

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/500mAmp (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

702 Emerald Hills Drive



Aug 17

CONDITIONAL USE PERMIT APPLICATION

Date of Submittal: 7/30/2015

Property Address: 702 Emerald hills Dr.

Applicant Name: Larry Murdock / SolarWorks, Inc

Applicant Address: 702 Emerald hills Dr. / SolarWorks - 506 S. Main St #102

Applicant Phone #: 801 867 9646 Dustin Matthews

Applicant Email: info@Solarworksutah.com

1. Items that shall be included with any Conditional Use Permit application:

- a. A completed Bountiful City Application for Conditional Use Permit cover sheet (this document).
- b. Payment of Filing Fee (\$200 P.C. / \$50 A.C.)
- c. If the conditional use permit is to be approved by the Planning Commission, a mailing list of all property owners within three hundred feet (300') of the subject property boundaries based on the most recent Davis County Tax Assessment records, submitted on self-adhesive mailing labels. Items heard by the Administrative Committee do not require mailing labels.
- d. If the conditional use permit requires site plan review, two (2) full sized, and one (1) 11x17 copy or one (1) .PDF file, 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:
 - i. A north arrow, the scale of the drawing, and the date of the drawing.
 - ii. Street names and addresses.
 - iii. Property lines with dimensions.
 - iv. All sidewalks, driveways, curbs and gutter, and parking areas.
 - v. All existing easements, rights-of-way, and any other restrictions on the use of the property.
 - vi. Existing buildings, proposed buildings, and other significant features on the site.
 - vii. Existing buildings and significant features located on adjacent properties within 50 feet (50') of the subject property boundaries
 - viii. 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.

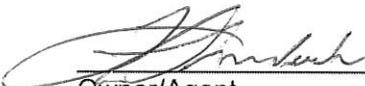
- e. Typed responses to the following questions:
- i. How does your proposed project fit in with surrounding properties and uses?
 - ii. What will you do to mitigate the potential conflicts with surrounding properties and uses?

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



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City of Beautiful Homes and Gardens

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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)

Total Number of Panels	
Array Dimensions	
Total rating of photovoltaic system:	<u>7</u> KW
Mounting Location	
Roof/Wall/Other	Roof
Roof Pitch (Rise/Run e.g. "5/12")	4/12 5/14 ← 5/12 ? 4/12
Roofing Material Asphalt Shingle/Tile/Steel/Other Age & Condition of Shingles	Asphalt Shingle; replaced 2009; Good Condition
Roof Construction Rafter/Truss/Joist	Truss
Engineering Analysis	
Connection to Roof	Racking - Lag Bolts
Analysis of Existing Roof Structure with added Solar Equipment	Permitted to remain unaltered 43 psf / 5.5 psf
Adequate Uplift Resistance (120 mph Exp B)	Adequate (155 mph)



UTAH OFFICES
Sandy
Layton
St. George

Project Number: U1838-001-151

July 29, 2015

Utah Solar Works
506 South Main Street, Suite 102
Bountiful, Utah 84010

ATTENTION: Dustin Matthews

REFERENCE: **Murdock Residence: 702 Emerald Hills Dr., Bountiful, Utah 84010**

Dear Mr. Matthews:

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 supporting members and connections is by the manufacturer and/or installer. The adopted building code in this jurisdiction is the 2012 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 125 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 3.5 pounds per square foot. In the area of the solar panels, no 20 psf live loads will be present. 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 15 psf, solar panel dead load of 3.5 psf, and affected roof area of 40% (maximum), the additional dead load (and consequential seismic load) will be 9.3%. 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 2012 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.

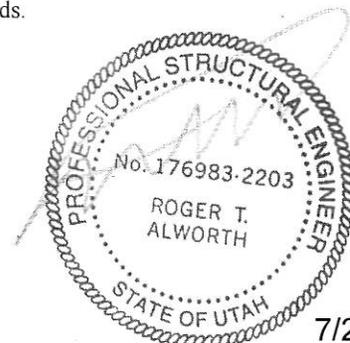
Very truly yours,

VECTOR STRUCTURAL ENGINEERING, LLC

Roger T. Alworth, S.E.
Principal

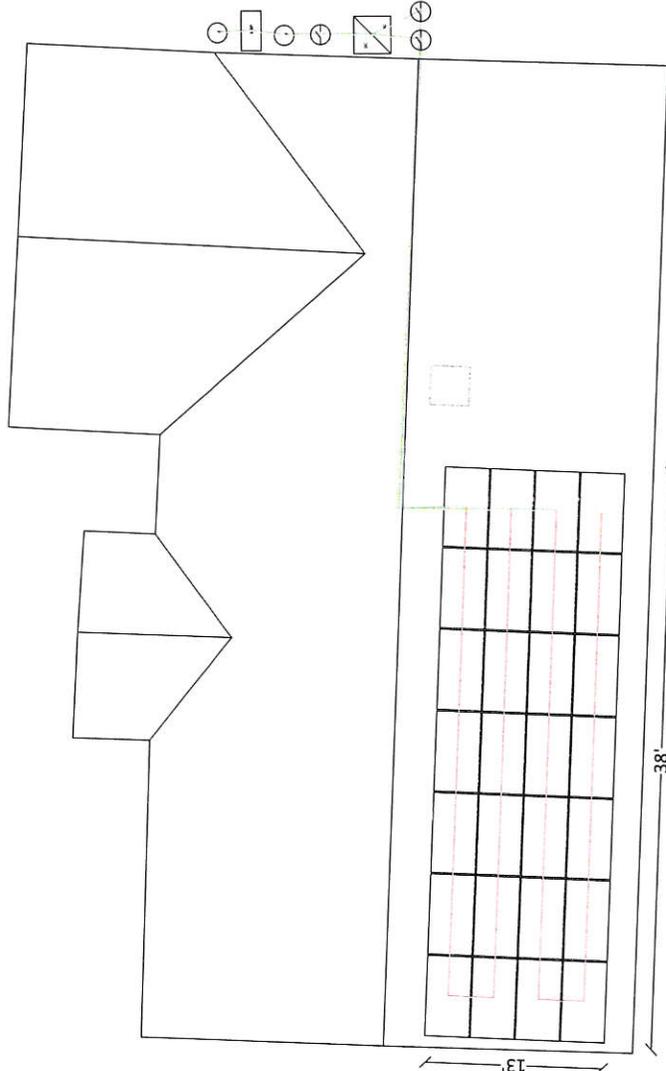
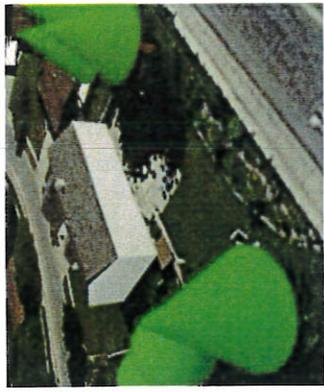
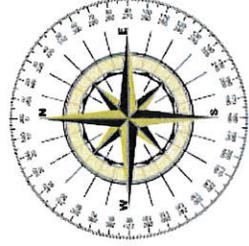
Enclosures

RTA/KBH



7/29/2015

Roof Information	Module and Inverter
Pitch (Rise/Run): 5/14 Roof Type: Standard Asphalt Shingle Condition/Age: Good/replaced 2009 Roof Construction: Truss Total Area of Array(s): 493 ft ²	Module Make: Renesola Ltd. Module Model: JC250M-24\bb-Virtusll Inverter Make: SMA Solar Technology AG Inverter Model: (5B 60001L-US-22)
Notes	
Wiring shall not be installed within ten inches of roof decking, except where directly below the roof's surface covered by PV modules and/or equipment.	
Production Meter Upgrade:	Yes



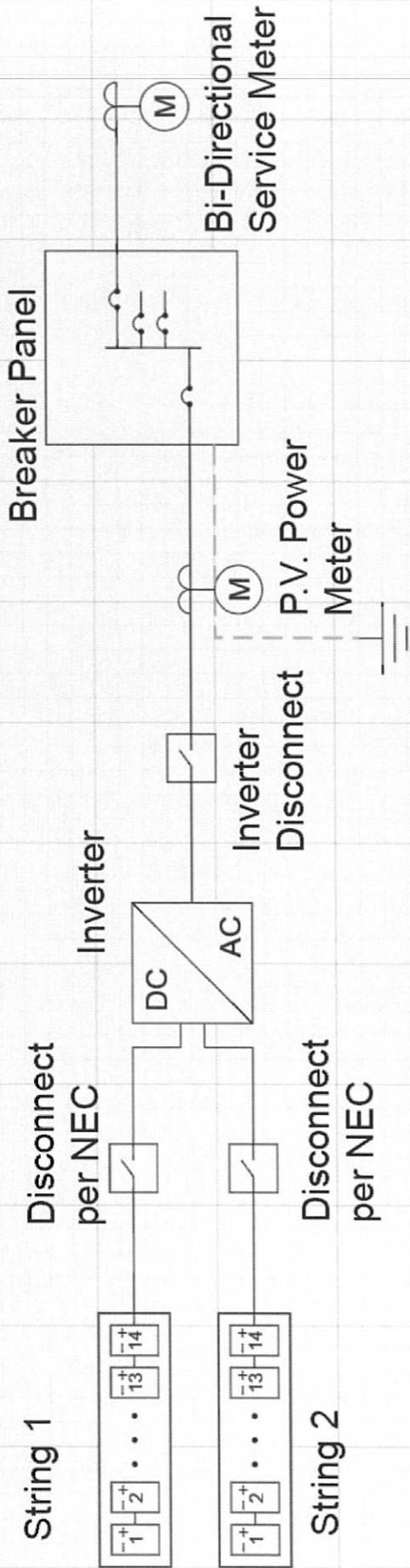
Roof Detail



Attic Detail



	SolarWorks Inc. 506 South Main Street Ste. 102 Bountiful, UT 84010 Ph. 801-332-9495	Date: 2015-07-29 Designer: M. Feil Project Number: 2015B001 System Size: 7.0 kW	Larry Murdock 702 Emerald Hills Drive Bountiful, UT 84010
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7kW

Murdock, Larry

702 Emerald Hills Dr.

Bountiful, Utah 84010

Plan # 2015B001



MAYOR
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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 3, 2015, at Bountiful City Hall to consider the request of Roger Beattie for a Conditional Use Permit allowing for a Private Power Plant (Solar Panels) at the following location:

3039 South 600 West, Bountiful City, Davis County, Utah

ALL OF LOT 5A, BLK 4, AMD PLAT OF IRFRED PARK SUB. CONT. 0.48 ACRES.

Parcel: 06-101-0055

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 3039 South 600 West, 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 3, 2015, and this written form was approved this 17th day of August, 2015.

Chad Wilkinson
Planning Director

ATTEST: Julie Holmgren
Recording Secretary