

**STAFF REPORT FOR THE HISTORIC RESOURCES COMMISSION MEETING OF  
MARCH 8, 2018**

**FILE NO: HRC-18-014**

**AGENDA ITEM: E-2**

**STAFF AUTHOR:** Hope Sullivan, AICP, Planning Manager

**REQUEST:** Approval of a request from Carter and Peggy Twedt to install roof mounted solar panels on a garage on property zoned Single Family 6000 (SF6), located at 612 West Robinson Street, APN 003-275-01.

**APPLICANT:** Carter and Peggy Twedt

**OWNER:** Twedt Family Trust 2/2/99

**LOCATION:** 612 West Robinson Street

**APN:** 003-275-01

**RECOMMENDED MOTION: "I move to approve HRC-18-014, a request from Carter and Peggy Twedt to install roof mounted solar panels on a detached garage on property zoned Single Family 6000, located at 612 West Robinson Street, APN 003-275-01, based on the findings outlined in the staff report, the Standards and Guidelines for Rehabilitation, the Carson City Historic District Guidelines and consistent with Historic Resources Commission Policies."**



**RECOMMENDED CONDITIONS OF APPROVAL:**

1. All development shall be substantially in accordance with the submitted plans.
2. All on and off-site improvements shall conform to City standards and requirements.
3. The applicant must sign and return the Notice of Decision within 10 days of receipt of notification. If the Notice of Decision is not signed and returned within 10 days, then the item may be rescheduled for the next Historic Resources Commission meeting for further consideration.
4. HRC approval is based upon the project complying with the Standards and Guidelines for Rehabilitation, Carson City Historic District Guidelines, the Historic Resources Commission Policies and that the plans as submitted are in general conformance with the Secretary of the Interiors Standards.

**LEGAL REQUIREMENTS:** CCMC 18.06.015 (Procedure for Proposed Project)

**MASTER PLAN DESIGNATION:** Medium Density Residential (MDR)

**ZONING:** Single Family 6000 (SF6)

**PREVIOUS REVIEWS:**

HRC-15-084: Review of a front door

HRC-14-017: Re-roof

SUP-08-080: Addition to the rear of the house

HRC-08-069: Addition to the rear of the house

**DISCUSSION:**

According to the Assessor's Records, the house on this property was constructed in 1874. The home is considered a residential rendition of the Greek Revival tradition.

The garage was permitted in 1989. According to the 2011 Architectural Survey, the garage is not considered a contributing structure. The applicant proposes to mount the solar panels onto the southside of the garage.

The garage is located to the rear of the primary residence, in the northeast corner of the property.

As noted below, the Design Standards include standards for roofs.

**5.14.1 Guidelines for Historic Buildings**

Original roofing material and features are to be retained and repaired if at all possible. If new roofing is necessary or desired, the preferred treatment is to replace the original with identical new material. If this is not possible or desirable, then the use of Fireclass A, organic felt or fiberglass matt composition type shingle, preferably in a "thick butt" design is acceptable. These are to be laid approximately five inches to the weather with straight and true exposed edge lines. Other roof features such as chimneys, dormers and/or decorative elements are to be retained. **New mechanical systems, solar panels, skylights and/or**

**other devices on the roof are to be placed so they are inconspicuous from the street and in such a manner that no damage is done to any character defining features of the building.** (*Secretary of the Interior's Standards for Rehabilitation (Standard Number: 2, 6) – bold added for emphasis*)

The primary residence fronts on Robinson Street. The detached garage structure is to the rear of the house. Views of the garage from Robinson Street are obstructed.

As the units are proposed on a non-contributing building, with only obscured views when viewing the front façade of the house, staff finds that the proposed request is consistent with the District's guidelines.

Attachments:

- Carson City Historic Survey 1980
- 1988 Carson City Resources Inventory
- 2011 Architectural Survey
- National Park Service Guidelines on Sustainability
- Application (HRC-18-014)

CARSON CITY RESOURCES INVENTORY

IDENTIFICATION:

- 1. Address: 612 West Robinson APN 3-275-01
- 2. Common Name: \_\_\_\_\_
- 3. Historic Name: \_\_\_\_\_
- 4. Present Owner: H. Russell Thayer (Douglas Robin Merrill)
- 5. Address (if not occupant): \_\_\_\_\_
- 6. Present Use: residence Original Use: residence

DESCRIPTION, ALTERATIONS, AND RELATED FEATURES:

This T-shaped one story residence is vernacular in form with Greek Revival style influences. The foundation is scored concrete and the wood frame structure is surfaced with shiplap. The intersecting gables are enhanced by Greek Revival derived eave returns, and the projecting gabled entrance porch supported by turned columns further emphasizes the gable theme. Simple cornice moldings adorn the double hung windows which are varied in pane patterns.

Shiplap additions occur to the rear and some of the windows have been altered. The porch is either an early addition or has been slightly modified.

Two free standing sheds, one metal and one wood, are located on the property.

RELATIONSHIP TO SURROUNDINGS:

The structure is compatible to its neighbors in this relatively intact neighborhood.



Street Furniture: ---

Landscaping: lawn, shrubs, street trees on Robinson, hed row on west side of property

Architectural Evaluation: PS X NR \_\_\_\_\_

District Designation: PD 2 NR \_\_\_\_\_

HISTORIC ENVIRONMENT CONSULTANTS  
 2306 J Street, Penthouse  
 Sacramento, CA 95816  
 (916) 446-2447 Date March 1980

THREATS TO SITE:

None Known  Private Development \_\_\_\_\_  
Zoning SE6000 Public Works Project \_\_\_\_\_  
Vandalism \_\_\_\_\_ Neglect \_\_\_\_\_ Other \_\_\_\_\_

ADJACENT LAND USES:

residential

PHYSICAL CONDITION:

Excellent \_\_\_\_\_ Good  Fair \_\_\_\_\_ Deteriorated \_\_\_\_\_

APPROXIMATE SETBACK: 20 feet

HISTORICAL BACKGROUND:

Architect (if known) \_\_\_\_\_

Builder (if known) \_\_\_\_\_

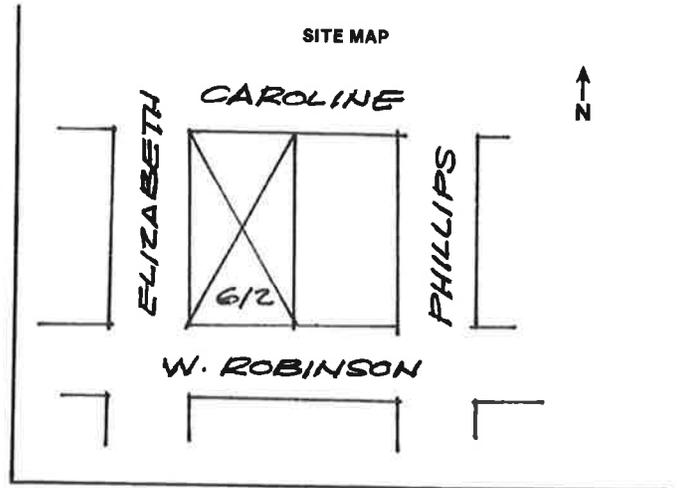
Date of Construction pre-1875 Estimated \_\_\_\_\_ Factual  Source: 1875 Bird's Eye Map

Is Structure on Original Site? \_\_\_\_\_ Moved? \_\_\_\_\_ Unknown

SIGNIFICANCE:

A crisp and rather formal design, the attractive structure is a fine residential rendition of the Greek Revival tradition. The particularly effective use of the eave return theme adds to the building's design value. The setting of the structure with its mature planting adds to its visual image and to the aura of the Preservation District #2.

Reputed associations with Judge Sweeney circa 1900 have not been documented.



SOURCES:

1875 Bird's Eye View Map

SUGGESTED LAND USE AND FACADE MODIFICATIONS, WHERE APPROPRIATE:

Adaptive Use:

Facade Changes:

Zoning:

CARSON CITY RESOURCES INVENTORY

1988 CC Resources Inventory N-6<sup>th</sup>  
(1980 updated)

IDENTIFICATION:

- 1. Address: 612 West Robinson 09 3-275-01
- 2. Common Name: \_\_\_\_\_ TWEDT, CARTER J & MARGARET A
- 3. Historic Name: \_\_\_\_\_ 612 W ROBINSON ST
- 4. Present Owner: H. Russell Thayer CARSON CITY NV 89703
- 5. Address (if not occupant): \_\_\_\_\_
- 6. Present Use: residence Original Use: residence

DESCRIPTION, ALTERATIONS, AND RELATED FEATURES:

This T-shaped one story residence is vernacular in form with Greek Revival style influences. The foundation is scored concrete and the wood frame structure is surfaced with shiplap. The intersecting gables are enhanced by Greek Revival derived eave returns, and the projecting gabled entrance porch supported by turned columns further emphasizes the gable theme. Simple cornice moldings adorn the double hung windows which are varied in pane patterns.

Shiplap additions occur to the rear and some of the windows have been altered. The porch is either an early addition or has been slightly modified.

Two free standing sheds, one metal and one wood, are located on the property.

RELATIONSHIP TO SURROUNDINGS:

The structure is compatible to its neighbors in this relatively intact neighborhood.



Street Furniture: ---

Landscaping: lawn, shrubs, street trees on Robinson, hed row on west side of property

Architectural Evaluation: PS X NR \_\_\_\_\_

District Designation: PD 2 NR \_\_\_\_\_

HISTORIC ENVIRONMENT CONSULTANTS  
2306 J Street, Penthouse  
Sacramento, CA 95816

(916) 446-2447 Date March 1980

## THREATS TO SITE:

None Known  Private Development \_\_\_\_\_Zoning SE6000 Public Works Project \_\_\_\_\_

Vandalism \_\_\_\_\_ Neglect \_\_\_\_\_ Other \_\_\_\_\_

## ADJACENT LAND USES:

residential

## PHYSICAL CONDITION:

Excellent \_\_\_\_\_ Good  Fair \_\_\_\_\_ Deteriorated \_\_\_\_\_APPROXIMATE SETBACK: 20 feet

## HISTORICAL BACKGROUND:

Architect (if known) \_\_\_\_\_

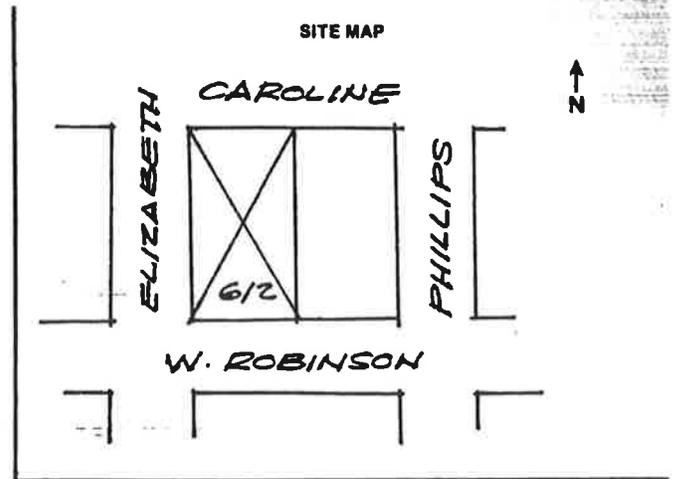
Builder (if known) \_\_\_\_\_

Date of Construction pre-1875 Estimated \_\_\_\_\_ Factual  Source: 1875 Bird's Eye MapIs Structure on Original Site? \_\_\_\_\_ Moved? \_\_\_\_\_ Unknown 

## SIGNIFICANCE:

A crisp and rather formal design, the attractive structure is a fine residential rendition of the Greek Revival tradition. The particularly effective use of the eave return theme adds to the building's design value. The setting of the structure with its mature planting adds to its visual image and to the aura of the Preservation District #2.

Reputed associations with Judge Sweeney circa 1900 have not been documented.



## SOURCES:

1875 Bird's Eye View Map

## SUGGESTED LAND USE AND FACADE MODIFICATIONS, WHERE APPROPRIATE:

Adaptive Use:

Facade Changes:

Zoning:

1988 Update by: Ana Koval  
 Rainshadow Associates  
 P.O. Box 352  
 Carson City, NV 89702  
 (702) 849-1438

NEVADA STATE HISTORIC PRESERVATION OFFICE  
HISTORIC RESOURCES INVENTORY FORM

Rev. 3/00

**For Office Use Only**

**1. PROPERTY NAME**

**1A. Historic Name**

--

YR Built \_\_\_\_\_  
NR Eligible? Y / N  
District? Y / N

**1B. Current/Common Name**

612 W. Robinson St.
---------------------

**2. PROPERTY ADDRESS**

Street Address	612 W. Robinson St.
City, Zip Code	Carson City, NV 89703
County	Carson City

**3. PROPERTY OWNERSHIP**

**3A. Original Owner**

Name	Unknown
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**3B. Current Owner**

Name	Twedt Family Trust 2/2/99
Mailing Address	612 W. Robinson St., Carson City, NV 89703
Assessor's Parcel Number (APN)	003-275-01

**4. CURRENT PROPERTY STATUS**

<input checked="" type="checkbox"/>	Occupied	<input type="checkbox"/>	Vacant
<input type="checkbox"/>	Other (please specify)		

**5. PROPERTY USE**

**5A. Current Use**

<input checked="" type="checkbox"/>	Residential	<input type="checkbox"/>	Commercial	<input type="checkbox"/>	Religious
<input type="checkbox"/>	Educational	<input type="checkbox"/>	Governmental	<input type="checkbox"/>	Industrial
<input type="checkbox"/>	Other (please specify)				

**5B. Historic Use**

X	Residential		Commercial		Religious
	Educational		Governmental		Industrial
	Other (please specify)				

**6. CURRENT ACCESS**

	Permitted-local public resource	X	By owner permission only
	Permitted-state public resource		Restricted
	Permitted-federal public resource		Other (specify)

**7. ACREAGE**

0.35		Estimated
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**8. PROPERTY LOCATION**

**8A. UTM Location/Reference(s)**

Zone 11 260640E 4338820N
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**8B. Township/Range/Section/Map**

T15N, R20E, Sec 18, Mt. Diablo Base Meridian, Carson City, NV USGS quad map (1994)
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**9. RESOURCE DESCRIPTION**

**9A. Resource Type**

X	Building		Structure		District		Object		Site
	Other (specify)								
	Contributing element to a historic district (specify district name)								

**9B. Exterior Resource Features**

	Basement	1	Number of stories
X	Porch		Balcony
	Dormer(s)	X	Chimney (flue)
	Other (please specify)		

**9C-F. Materials and Systems (See instructions and enter codes from HRIF Codes page)**

9C. Roofing Material(s)	9D. Exterior Surface Material(s)
R-3 Composition Shingle	ES-24 Weatherboard
9E. Building Structural System	9F. Foundation Structural System
SS-8 Wood - Balloon	F-2 Concrete

**9G. Written Description**

See continuation sheet

**9H. Associated Structures/Features**

Associated structures/features (submit <i>Associated Structures Summary</i> )	X	Yes		No
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**9I. Integrity**

X	Original site		
	Altered (describe on continuation sheet)	Date altered	
	Moved	Date moved	
Moved from			

**9J. Condition**

X	Good		Fair
	Poor		Ruins

**9K. Threats**

None known

**10. RESOURCE DATE AND SIGNIFICANCE**

**10A. Architect/Engineer/Designer**

unknown

**10B. Builder/Contractor**

unknown

**10C. Architectural Style/Period (See Appendix B)**

No style

**10D. Construction Date(s)**

1874		Circa
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**10E. Date(s) of Significance**

1874

**10F. Historic Resource Theme (See Appendix C)**

Land Usage: **Townsite Development and City Planning**

**10G. National Register Eligibility (See Appendix D)**

	Listed	Date Listed					
X	Eligible under:						
X	Criterion A		Criterion B	X	Criterion C		Criterion D
	Other (specify)						
	Not Eligible						
	Unevaluated						

**10H. Justification**

See continuation sheet

**11. BIBLIOGRAPHY**

See continuation sheet

**12. FORM INFORMATION**

Report Number/Name	2011 Carson City Survey
Date Surveyed	April 2011
Surveyor Name	J. Daniel Pezzoni
Company	Landmark Preservation Associates
Address	6 Houston Street, Lexington, VA 24450
Telephone Number	(540) 464-5315

**13. ATTACHED DOCUMENTATION**

X	Continuation sheets
X	Photographs
X	Location maps
X	Plans (site)
	Other (please specify)
X	Associated Structures Summary Form
X	Historic District Addendum (if applicable)

**NEVADA STATE HISTORIC PRESERVATION OFFICE HISTORIC RESOURCE INVENTORY FORM  
CONTINUATION SHEET**

**Property Name: 612 W. Robinson St.**

**City, County: Carson City**

**Section No. 9G, 11**

**Page No. 5**

The one-story frame house has a front-gable roof with gabled wings on the sides. The front entry porch has paired turned posts and pilasters and shelters an entry with a two-pane transom. Other features include cornice returns and 1/1 windows with molded lintels.

The property is classified as a contributing resource in the West Side Historic District.

**Sources**

Historic Environment Consultants. Carson City Resources Inventory Survey Forms. 1980.



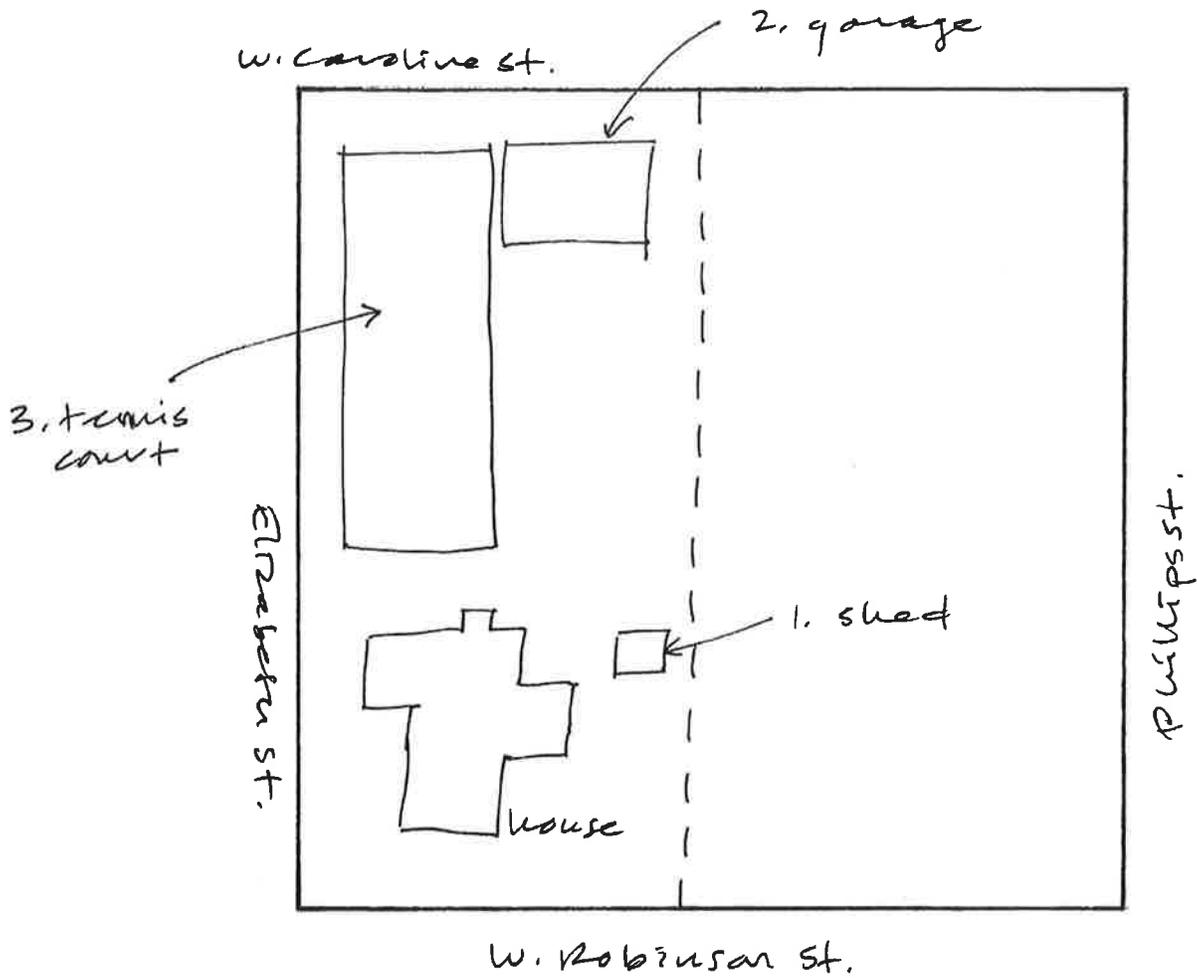
NEVADA STATE HISTORIC PRESERVATION OFFICE  
HISTORIC RESOURCE INVENTORY FORM  
CONTINUATION SHEET

Property Name: 612 W. Robinson St.

City, County: Carson City

Section No. 13: Site Plan

Page No. 6



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**NEVADA STATE HISTORIC PRESERVATION OFFICE  
HISTORIC RESOURCE INVENTORY FORM  
ASSOCIATED STRUCTURES/FEATURES SUMMARY FORM**

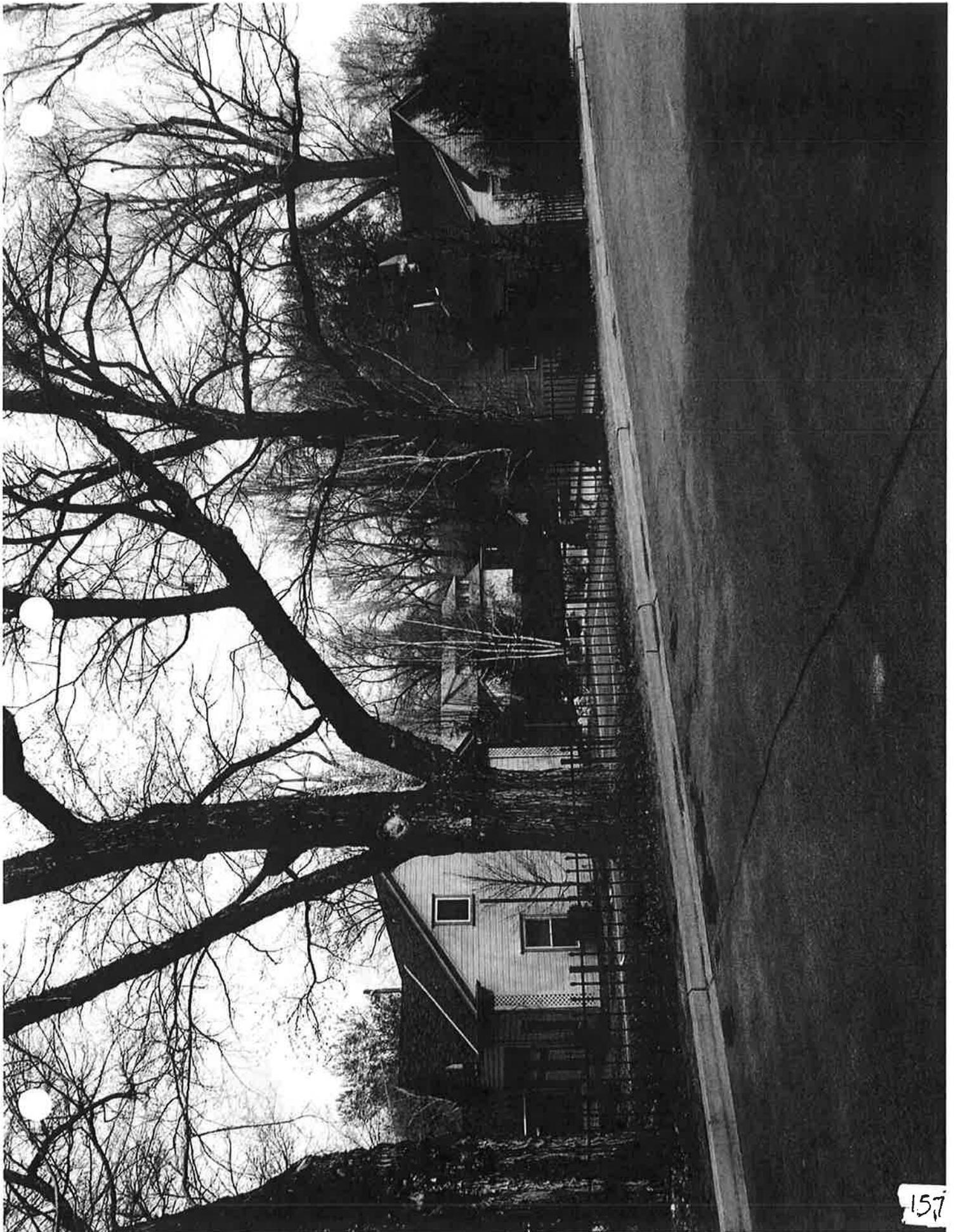
**Property Name:** 612 W. Robinson St.      **City, County:** Carson City

**Section No. 13**

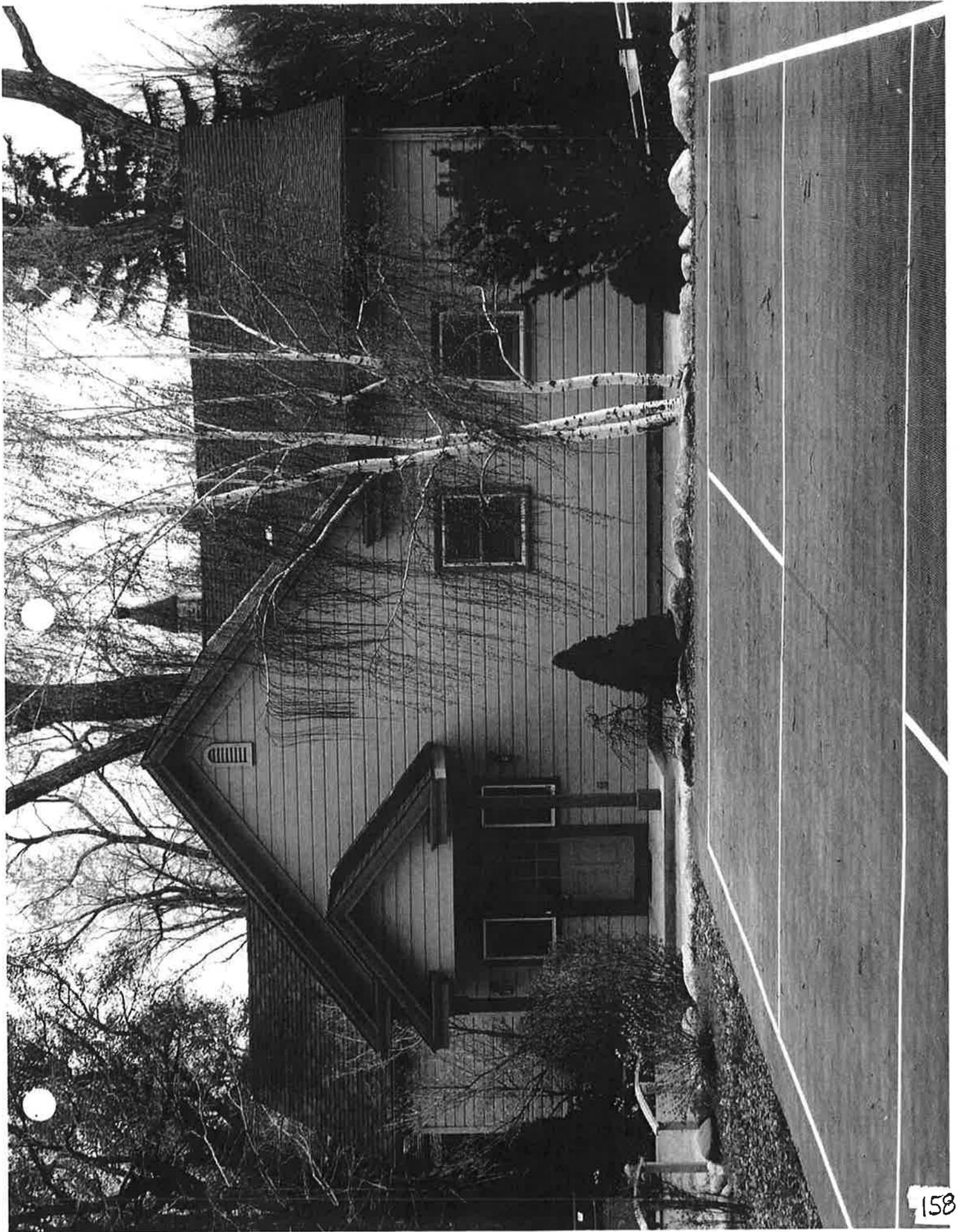
If this inventory involves associated structures or features, please include this form with the SHPO submission. Include continuation sheet, if necessary.

ASSOCIATED STRUCTURES/FEATURES SUMMARY					
Number of associated structures:	3	1	Contributing	2	Noncontributing
Number of associated features:			Contributing		Noncontributing

Structure/Feature #1		Structure/Feature #2	
Historic Name		Historic Name	
Property Type	Building	Property Type	Building
Historic Use	Shed	Historic Use	
Current Use	Shed	Current Use	Garage
Style (if applicable)	No style	Style (if applicable)	No style
Materials	Wood	Materials	Wood
Construction date	Ca. 1930	Construction date	Ca. 2000
Integrity	Good	Integrity	Good
Map Reference Code		Map Reference Code	
Structure/Feature #3		Structure/Feature #4	
Historic Name		Historic Name	
Property Type	Structure	Property Type	
Historic Use		Historic Use	
Current Use	Tennis court	Current Use	
Style (if applicable)	No style	Style (if applicable)	
Materials	Asphalt, stone	Materials	
Construction date	Ca. 2000	Construction date	
Integrity		Integrity	
Map Reference Code		Map Reference Code	

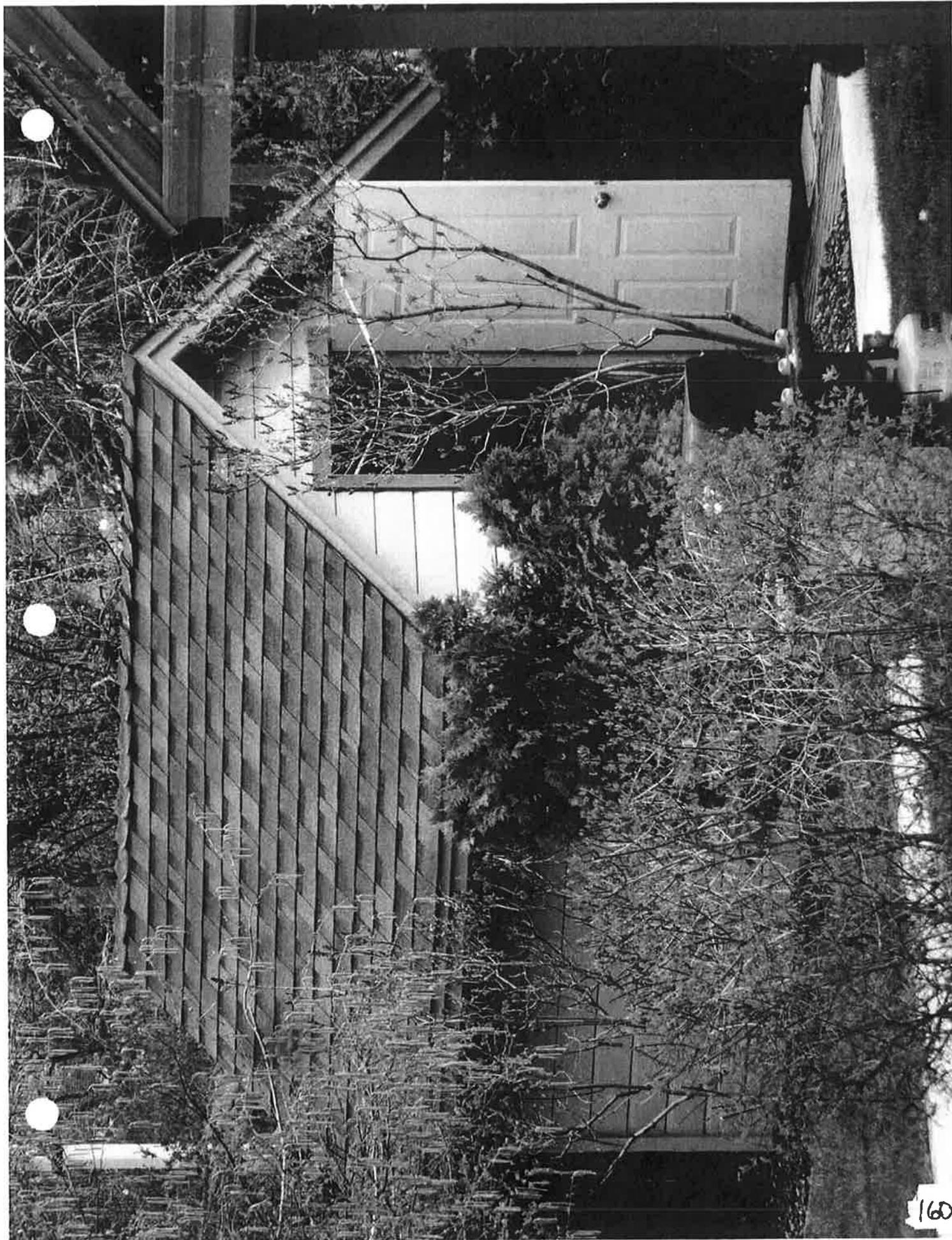


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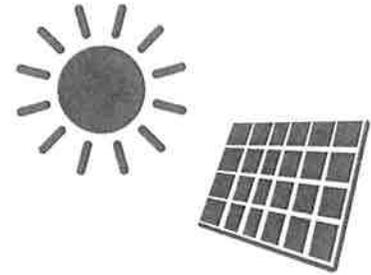
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# GUIDELINES FOR SOLAR ENERGY SYSTEMS



<b>Solar Technology</b> (NPS, <i>Illustrated Guidelines on Sustainability for Rehabilitating Buildings</i> )	
<b>Recommended</b>	<b>Not Recommended</b>
Considering on-site, solar technology only after implementing all appropriate treatments to improve energy efficiency of the building, which often have greater life-cycle cost benefit than on-site renewable energy.	Installing on-site, solar technology without first implementing all appropriate treatments to the building to improve its energy efficiency.
Analyzing whether solar technology can be used successfully and will benefit a historic building without compromising its character or the character of the site or the surrounding historic district.	Installing a solar device without first analyzing its potential benefit or whether it will negatively impact the character of the historic building or site or the surrounding historic district.
Installing a solar device in a compatible location on the site or on a non-historic building or addition where it will have minimal impact on the historic building and its site.	Placing a solar device in a highly-visible location where it will negatively impact the historic building and its site.
Installing a solar device on the historic building only after other locations have been investigated and determined infeasible.	Installing a solar device on the historic building without first considering other locations.
Installing a low-profile solar device on the historic building so that it is not visible or only minimally visible from the public right of way: for example, on a flat roof and set back to take advantage of a parapet or other roof feature to screen solar panels from view; or on a secondary slope of a roof, out of view from the public right of way.	Installing a solar device in a prominent location on the building where it will negatively impact its historic character.
Installing a solar device on the historic building in a manner that does not damage historic roofing material or negatively impact the building's historic character and is reversible.	Installing a solar device on the historic building in a manner that damages historic roofing material or replaces it with an incompatible material and is not reversible.
	Removing historic roof features to install solar panels.
	Altering a historic, character-defining roof slope to install solar panels.
	Installing solar devices that are not reversible.
Installing solar roof panels horizontally – flat or parallel to the roof—to reduce visibility.	Placing solar roof panels vertically where they are highly visible and will negatively impact the historic character of the building.
Investigating off-site, renewable energy options when installing on-site solar devices that would negatively impact the historic character of the building or site.	

Carson City Planning Division  
 108 E. Proctor Street • Carson City NV 89701  
 Phone: (775) 887-2180 • E-mail: [planning@carson.org](mailto:planning@carson.org)

FOR OFFICE USE ONLY:

CCMC 18.06

**HISTORIC RESOURCES COMMISSION**



**FILE # HRC - 18 - HRC - 18 - 014**

FEE: None

APPLICANT: Carter + Peggy Tweedt 882 2078  
 PHONE #

MAILING ADDRESS, CITY, STATE, ZIP  
 612 W Robinson St, Carson City, NV 89703

EMAIL ADDRESS  
 tweedt612@yahoo.com

PROPERTY OWNER: Tweedt Family Trust 882 2078  
 PHONE #

MAILING ADDRESS, CITY, STATE, ZIP  
 same as above

EMAIL ADDRESS  
 same as above

APPLICANT AGENT/REPRESENTATIVE: Kristina Knowles 925 690 7065  
 PHONE #

MAILING ADDRESS, CITY, STATE, ZIP  
 300 S Virginia St, Reno, NV 89501

EMAIL ADDRESS  
 Kristina.Knowles@SolarCity.com

SUBMITTAL PACKET – 4 Complete Packets (1 Unbound Original and 3 Copies) including:

- Application Form with Signatures
- Written Project Description
- Site Plan
- Building Elevations
- Proposed Building Materials
- Documentation of Taxes Paid-to-Date

CD or USB DRIVE with complete application in PDF

Application Received and Reviewed By:

Submittal Deadline: See attached Historic Resources Commission application submittal schedule.

Note: Submittals must be of sufficient clarity and detail for all departments to adequately review the request. Additional information may be required.

Project's Assessor Parcel Number(s): 003-275-01	Street Address 612 W Robinson Street	
Project's Master Plan Designation	Project's Current Zoning SFL6	Nearest Major Cross Street(s) Caroline + Elizabeth

Briefly describe the work to be performed requiring Historic Resources Commission review and approval. In addition to the brief description of your project and proposed use, provide additional page(s) to show a more detailed summary of your project and proposal. NOTE: The Historic District Ordinance and Historic District Design Guidelines, as well as Policy Statements, are available in the Planning Division to aid applicants in preparing their plans. If necessary, attach additional sheets.

Installation of solar panels on a portion of the garage roof. Installation will be screened from Robinson Street but visible from areas of Elizabeth Street. Installation will be done by Solar City/Tesla.

Reason for project:

We want to lessen our use of electricity from the grid, reduce our power bills and promote renewable energy

Will the project involve demolition or relocation of any structure within or into the Historic District?  Yes  No If Yes, please describe:

SUPPORTING DOCUMENTATION

Each application requires one complete original packet and three copies, folded to 8 1/2 x 11 inches, including a quality site plan and drawings showing work to be performed on the subject project which requires Historic Resources Commission approval. This is any work which will affect the exterior of any structure and any modifications to the site, i.e., fences, walls, or major landscaping. The name of the person responsible for preparation of the plans and drawings shall appear on each sheet.

After the initial review and acceptance of your application by staff, an additional 14 copies will be required to present your project to the Historic Resources Commission.

Attached is a Plan Checklist to aid preparation of plans and architectural drawings. It is understood that all checklist items may not be included in all projects. The list is intended to give the applicant an idea of the breadth of review by the Commission on those items which are included in the subject project. Photographs can be used for illustration and discussion, but are not acceptable as substitutes.

Peggy Twedt

Owner's Signature

Applicant's/Agent's Signature

Peggy Twedt

Owner's Printed Name

Applicant's/Agent's Printed Name

**JURISDICTION NOTES**

**ELECTRICAL NOTES**

- THIS SYSTEM IS GRID-INTERTIED VIA A UL-LISTED POWER-CONDITIONING INVERTER.
- THIS SYSTEM HAS NO BATTERIES, NO UPS.
- A NATIONALLY-RECOGNIZED TESTING LABORATORY SHALL LIST ALL EQUIPMENT IN COMPLIANCE WITH ART. 110.3.
- WHERE ALL TERMINALS OF THE DISCONNECTING MEANS MAY BE ENERGIZED IN THE OPEN POSITION, A SIGN WILL BE PROVIDED WARNING OF THE HAZARDS PER ART. 690.17.
- EACH UNGROUNDED CONDUCTOR OF THE MULTIWIRE BRANCH CIRCUIT WILL BE IDENTIFIED BY PHASE AND SYSTEM PER ART. 210.5.
- CIRCUITS OVER 250V TO GROUND SHALL COMPLY WITH ART. 250.97, 250.92(B).
- DC CONDUCTORS EITHER DO NOT ENTER BUILDING OR ARE RUN IN METALLIC RACEWAYS OR ENCLOSURES TO THE FIRST ACCESSIBLE DC DISCONNECTING MEANS PER ART. 690.31(E).
- ALL WIRES SHALL BE PROVIDED WITH STRAIN RELIEF AT ALL ENTRY INTO BOXES AS REQUIRED BY UL LISTING.
- MODULE FRAMES SHALL BE GROUNDED AT THE UL-LISTED LOCATION PROVIDED BY THE MANUFACTURER USING UL LISTED GROUNDING HARDWARE.
- MODULE FRAMES, RAIL, AND POSTS SHALL BE BONDED WITH EQUIPMENT GROUND CONDUCTORS.

**ABBREVIATIONS**

- A AMPERE
- AC ALTERNATING CURRENT
- BLDG BUILDING
- CONC CONCRETE
- DC DIRECT CURRENT
- ECC EQUIPMENT GROUNDING CONDUCTOR
- (E) EXISTING
- EMT ELECTRICAL METALLIC TUBING
- FSB FIRE SET-BACK
- GALV GALVANIZED
- GEC GROUNDING ELECTRODE CONDUCTOR
- GND GROUND
- HOG HOT DIPPED GALVANIZED
- I CURRENT
- Imp CURRENT AT MAX POWER
- Isc SHORT CIRCUIT CURRENT
- kVA KILOVOLT AMPERE
- kW KILOWATT
- LBW LOAD BEARING WALL
- MIN MINIMUM
- (N) NEW
- NEUT NEUTRAL
- NTS NOT TO SCALE
- OC ON CENTER
- PL PROPERTY LINE
- POI POINT OF INTERCONNECTION
- PV PHOTOVOLTAIC
- SCH SCHEDULE
- S STAINLESS STEEL
- STC STANDARD TESTING CONDITIONS
- TYP TYPICAL
- UPS UNINTERRUPTIBLE POWER SUPPLY
- V VOLT
- Vmp VOLTAGE AT MAX POWER
- Voc VOLTAGE AT OPEN CIRCUIT
- W WATT
- 3R NEMA 3R, RAINTIGHT

**GENERAL NOTES**

- ALL WORK SHALL COMPLY WITH THE 2012 IBC, 2012 IRC 2. ALL ELECTRICAL WORK SHALL COMPLY WITH THE 2011 NATIONAL ELECTRIC CODE. 3. IFC 2012 Section 605

**LICENSE**

NICK ARMSTRONG  
NV # 0078648 C-2 LICENSE



MODULE GROUNDING METHOD: ZEP SOLAR

AHJ: Carson City

UTILITY: NV Energy (Sierra Pacific Power)

**VICINITY MAP**



**INDEX**

Sheet 1	COVER SHEET
Sheet 2	PROPERTY PLAN
Sheet 3	SITE PLAN
Sheet 4	STRUCTURAL VIEWS
Sheet 5	UPFLT CALCULATIONS
Sheet 6	THREE LINE DIAGRAM
Cut sheets	Attached

**REV BY DATE COMMENTS**

REV	BY	DATE	COMMENTS
1	JAM	9/26/17	UPDATED TO BE MODULES
2			
3			
4			
5			
6			

DigitalGlobe, U.S. Geological Survey, USDA Farm Service Agency

**PROJ. OWNER**

PEGGY TWEDT  
612 W ROBINSON ST  
CARSON CITY, NV 89703

**DESIGNER**

Miles Adkins

**DESCRIPTION**

Peggy Twedt RESIDENCE  
2.275 KW PV ARRAY

**PAGE NAME**

COVER SHEET

**REV. DATE**

1 9/26/2017



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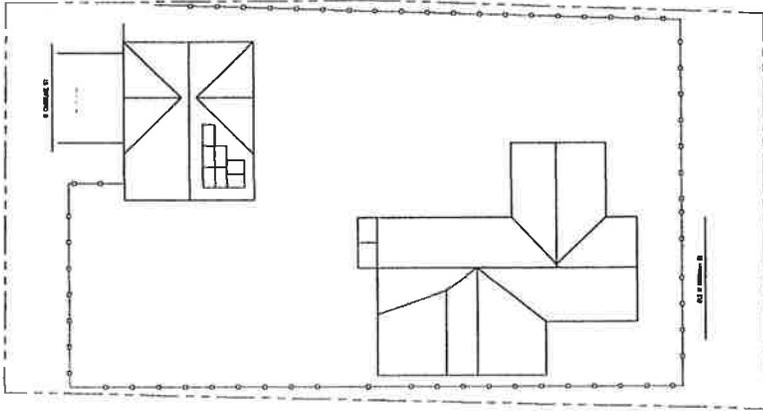
JOB NUMBER: JB-897206 00

WORKING SYSTEM: Copper Mount Type C

ADDRESS: (7) SolarCity Standard #SC325

WRITE: Delta # Soliva 3.8 TL

AA



**PROPERTY PLAN**  
 Scale: 1" = 30'-0"  
 0 30' 60'

DESIGN:	Miles Adkins
DATE:	2017/09/09
SHEET:	2 of 26

**TESLA**

DESCRIPTION:  
 Peggy Twedt RESIDENCE  
 2.275 KW PV ARRAY  
 PAGE NAME:  
 PROPERTY PLAN

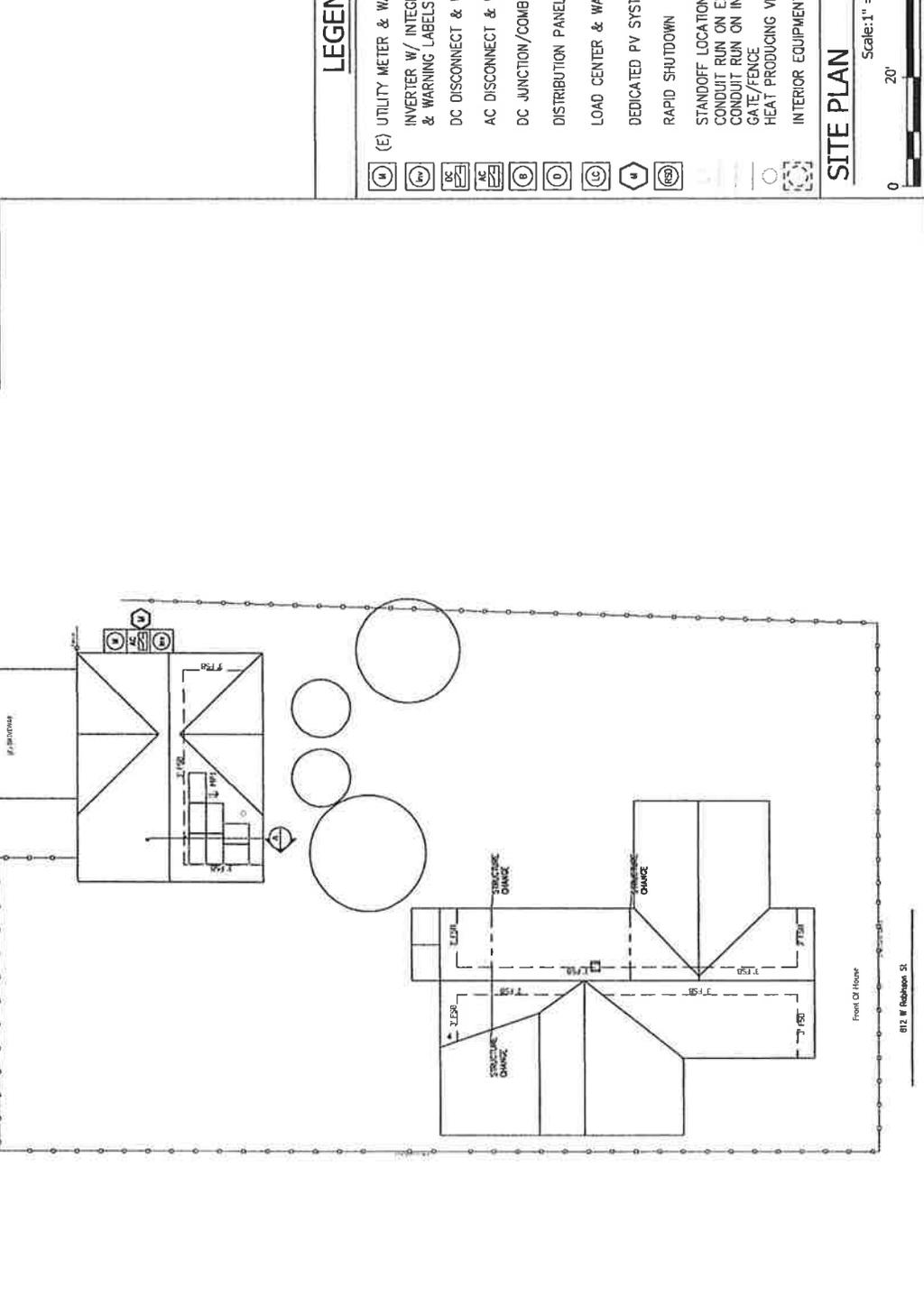
PROJECT OWNER:  
 PEGGY TWEDT  
 612 W ROBINSON ST  
 CARSON CITY, NV 89703

JOB NUMBER: JB-897206 00  
 MOUNTING SYSTEM:  
 Comp Mount Type C  
 INVERTER:  
 (7) SolarCity Standard #SC325  
 Delta # Solivia 3.8 TL

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PITCH: 33 ARRAY PITCH: 33  
 AZIMUTH: 180 ARRAY AZIMUTH: 180  
 MATERIAL: Comp Shingle STORY: 1 ST

MP1



**LEGEND**

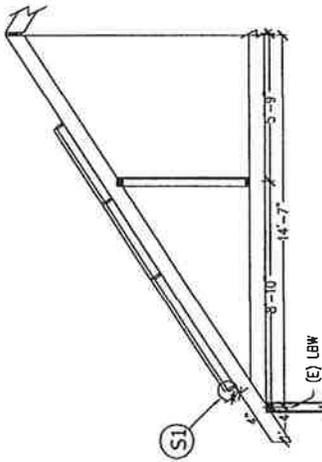
- (E) UTILITY METER & WARNING LABEL
- INVERTER W/ INTEGRATED DC DISCO & WARNING LABELS
- DC DISCONNECT & WARNING LABELS
- AC DISCONNECT & WARNING LABELS
- DC JUNCTION/COMBINER BOX & LABELS
- DISTRIBUTION PANEL & LABELS
- LOAD CENTER & WARNING LABELS
- DEDICATED PV SYSTEM METER
- RAPID SHUTDOWN
- STANDOFF LOCATIONS
- CONDUIT RUN ON EXTERIOR
- CONDUIT RUN ON INTERIOR
- GATE/FENCE
- HEAT PRODUCING VENTS ARE RED
- INTERIOR EQUIPMENT IS DASHED

**SITE PLAN**



JOB NUMBER: JB-897206 00 MOUNTING SYSTEM: Comp Mount Type C INVERTER: (7) SolarCity Standard #SC325 Delta # Solivia 3.8 TL	PREPARE OWNER: PEGGY TWEED 612 W ROBINSON ST CARSON CITY, NV 89703	DESIGNER: Miles Adkins	<b>TESLA</b>
	DESCRIPTION: Peggy Tweed RESIDENCE 2.275 KW PV ARRAY	SHEET: 3 of 9/26/2017 REV: DATE:	

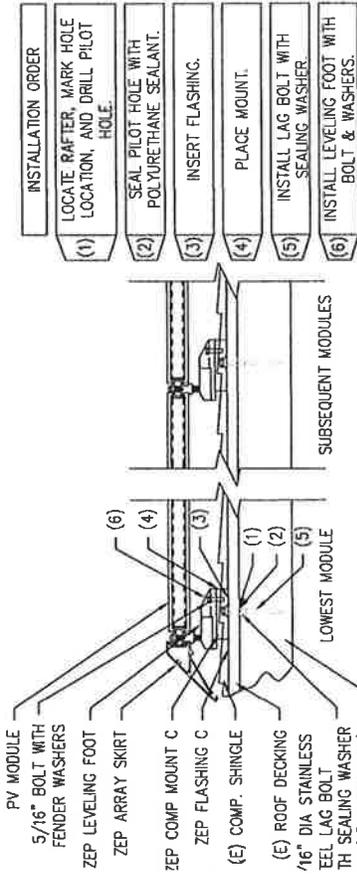
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**SIDE VIEW OF MP1** NTS

MP1	X-SPACING	X-CANTILEVER	Y-SPACING	Y-CANTILEVER	NOTES
LANDSCAPE	64"	24"	41"	0"	STAGGERED
PORTRAIT	48"	20"	62"	0"	
RAFTER	2x8 @ 16" OC		ROOF AZI 180	PITCH 33	STORIES: 1
C.J.	2x8 @ 16" OC		ARRAY AZI 180	PITCH 33	

X AND Y ARE ALWAYS RELATIVE TO THE STRUCTURE FRAMING THAT SUPPORTS THE PV.  
X IS ACROSS RAFTERS AND Y IS ALONG RAFTERS.



**S1** STANDOFF  
Scale: 1 1/2" = 1'

JOB NUMBER: JB-897206 00 DRAWING SYSTEM: Comp Mount Type C MODULES: (7) SolarCity Standard #SC325 MASTER: Delta # Solvira 3.8 TL	PROJECT OWNER: PEGGY TWEED 612 W ROBINSON ST CARSON CITY, NV 89703	DESCRIPTION: Peggy Tweed RESIDENCE 2.275 KW PV ARRAY	DESIGNER: Miles Adkins
			SHEET: REV: 4 DATE: 9/26/2017
PAGE NAME: STRUCTURAL VIEWS			

Handwritten signature/initials

00.26.2017  
Version #69.9  
Job# 897206

### DESIGN SUMMARY

Jobsite Specific Design Criteria		ASCE 7-10
Design Code		1.0
Importance Factor	I	1.00
Ultimate Wind Speed	V <sub>ult</sub>	C
Exposure Category	pg	20.0 psf
Ground Snow Load		

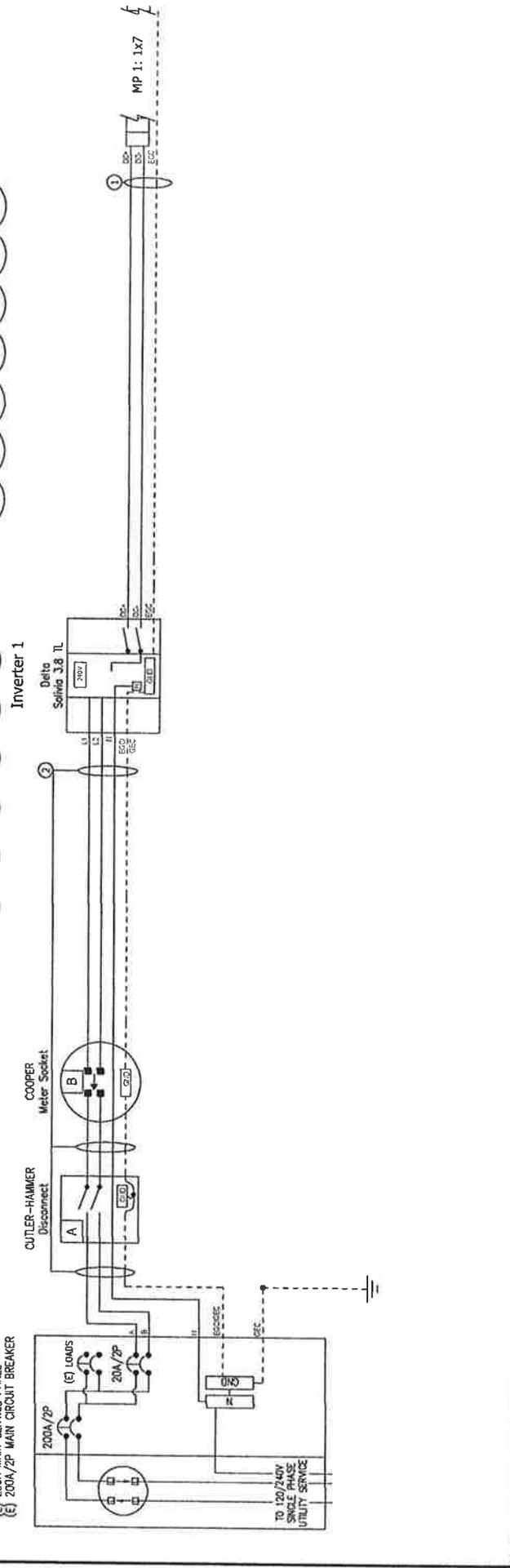
MP Specific Design Information	
MP Name	MP1
Roofing	Comp Roof
Standoff	Comp Mount Type C
Pitch	3.3°
SLRLL PV	13.0 psf
SLRLL Non-PV	21.0 psf

Standoff Spacing and Layout	
MP Name	MP1
X-Spacing	64"
X-Cantilever	24"
Y-Spacing	41"
Y-Cantilever	14"
X-Spacing	48"
X-Cantilever	20"
Y-Spacing	62"
Y-Cantilever	14"
Layout	Subarrayed

X and Y are dimensions and are always tabular to the structure framing that supports the PV. X is across rafters and Y is down rafters.

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	DESCRIPTION: Peggy Twedt Residence 2.275 KW PV ARRAY	PAGE NAME: UPLIFT CALCULATIONS	SHEET: 5	REV: 0 DATE: 9/26/2017

<b>GROUND SPECS</b> BOUND (N) BY GEC TO (N) GROUND ROD AT PANEL WITH IRREVERSIBLE CRAMP	<b>MAIN PANEL SPECS</b> Panel Number: Not Used Meter Number: 031 371 000 Underground Service Entrance	<b>GENERAL NOTES</b> Inv 1: DC Ungrounded	<b>INNER PER SPECS</b> (1) Delta # Solivio 3.8 TL Inverter, 3600W, 240V, 97.5%, Zqbee, PLC, RCM	<b>MODULE SPECS</b> (7) SolarCity Standard #SC325 PV Module, 325W, 366.5 PTC, 40MM, BK Frm, MCA, 600V, ZEP, 96-C Voc: 69.6 Vmp: 57.6 Isr AND Imp ARE SHOWN IN THE DC STRINGS IDENTIFIER	<b>LICENSE</b> NICK ARMSTRONG NV # 0078648 C-2 LIC
--	--	--	--	---	--



<b>POI</b> Voc* = MAX VOC AT MIN TEMP (1) OUTLER-HAMMER # 80231189 Disconnect, 30A, 240VAC, Non-Fusible, NEMA 3R (1) OUTLER-HAMMER # 80231189 Ground/Neutral Kit, 30A, General Duty (DC) (1) COOPER # B-Line Meter Socket 011 Type (1) MW COP, B-Line Meter Socket, Auxiliary	<b>AC</b>	(1) AWG #10, THHN-2, Black (1) AWG #10, THHN-2, Red (1) AWG #10, THHN-2, White (1) AWG #8, THHN-2, Green NEUTRAL Vmp = 240 VAC Imp = 15.8 AAC ECC/GEC - (1) Conduit RIE 3/4" EMT
---	-----------	---

<b>JOB NUMBER:</b> JB-897206 00	<b>PROJECT OWNER:</b> PEGGY TWEDT	<b>DESCRIPTION:</b> Peggy Twedt RESIDENCE	<b>DESIGNER:</b> Miles Adkins
<b>WAITING SYSTEM:</b> Comp Mount Type C	<b>PROJECT ADDRESS:</b> 612 W ROBINSON ST CARSON CITY, NV 89703	<b>2.275 KW PV ARRAY</b>	
<b>MODULES:</b> (7) SolarCity Standard #SC325			
<b>INVERTER:</b> Delta # Solivio 3.8 TL			
			<b>DATE:</b> 9/26/2017
			<b>SHEET:</b> 6

**CONTRACTOR:** THE INFORMATION HEREIN IS FOR THE USE OF THE CONTRACTOR ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ANY EXISTING UTILITIES AND SHALL BE RESPONSIBLE FOR THE PROTECTION OF ANY EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ANY EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ANY EXISTING UTILITIES.

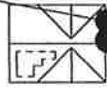
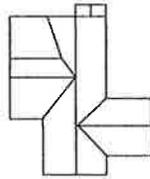
**TESLA**

# CAUTION

POWER TO THIS BUILDING IS ALSO SUPPLIED FROM THE FOLLOWING SOURCES WITH DISCONNECTS LOCATED AS SHOWN:

- Address: 612 W Robinson St

UTILITY SERVICE



INVERTER AND DC DISCONNECT

[ SOLAR PHOTOVOLTAIC ARRAY(S) ]

**PHOTOVOLTAIC BACK-FED CIRCUIT BREAKER IN MAIN ELECTRICAL PANEL IS AN A/C DISCONNECT PER NEC 690.17**

OPERATING VOLTAGE = 240V

JB-897206-00

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JOB NUMBER: JB-897206 00  
MOUNTING SYSTEM: Comp Mount, Type C  
WORKS: (7) SolarCity Standard #SC325  
INVERTER: Delta # Solivia 3.8 TL

PROJECT OWNER:  
PEGGY TWEED  
612 W ROBINSON ST  
CARSON CITY, NV 89703

DESCRIPTION:  
Peggy Tweed RESIDENCE  
2.275 KW PV ARRAY

PAGE NAME:  
SITE PLAN PLACARD

DESIGNER:  
Miles Adkins

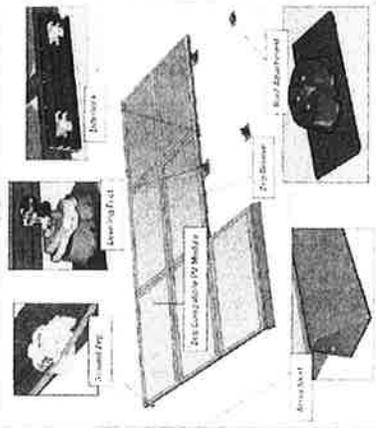
SHEET: 7 of 9/26/2017

TESLA



## Zep System

for composition shingle roofs



### Description

- PV mounting solution for composition shingle roofs
- Works with all Zep Compatible Modules
- Auto bonding UL-listed hardware creates structural and electrical bond
- Zep System has a UL 1703 Class "A" Fire Rating when installed using modules from any manufacturer certified as "Type 1" or "Type 2"

### Specifications

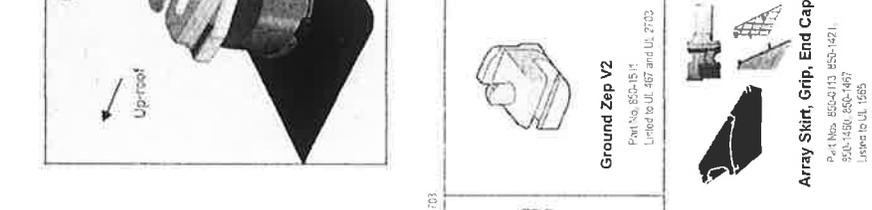
- Designed for pitched roofs
- Installs in partial and landscape orientations
- Zep System supports module wind uplift and snow load pressures in 50 psf per UL 1703
- Wind tunnel report to ASCE 7-05 and 7-10 standards
- Zep System grounding products are UL listed in UL 2703 and UL 467
- Zep System bonding products are UL listed in UL 2703
- Grounding for spans up to 72' and spans up to 24'
- Zep System is tested to meet UL 1665
- Attachment method UL listed in UL 2582 for Wind Direct Run

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## Components

 <p><b>Leveling Foot</b> Part No. 850-1772 ETL listed to UL 467</p>	 <p><b>Comp Mount</b> Part No. 850-1382 Listed to UL 2582 Mounting Block Listed to UL 2703</p>	 <p><b>Interlock</b> Part No. 850-1333 Listed to UL 2703</p>	 <p><b>Ground Zep V2</b> Part No. 850-1511 Listed to UL 467 and UL 2703</p>	 <p><b>DC Wire Clip</b> Part No. 850-1448 Listed to UL 1585</p>
 <p><b>Array Skirt, Grip, End Caps</b> Part No. 850-1413, 850-1421, 850-1450, 850-1487 Listed to UL 1585</p>				

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