

MEETING AGENDA
THURSDAY, SEPTEMBER 8, 2016 AT 9:00 A.M.
SUN VALLEY PLANNING AND ZONING COMMISSION
TO BEGIN WITH A SITE VISIT AT 410 FAIRWAY LOOP
FOLLOWED IMMEDIATELY BY A HEARING HELD
IN THE COUNCIL CHAMBERS AT SUN VALLEY CITY HALL

1. Call To Order

The Idaho Code requires that, "...A member or employee of a [Planning and Zoning] Commission shall not participate in any proceeding or action when the member or employee or his employer, business partner, business associate, or any person related to him by affinity or consanguinity within the second degree has an economic interest in the procedure or action." Any actual or potential interest in any proceeding shall be disclosed at or before any meeting at which the action is being heard or considered. A knowing violation of this section shall be a misdemeanor.

2. Public Comment

Opportunity for the public to talk with the Planning and Zoning Commissioners about general issues and ideas not otherwise agendized below (3 minutes max. each).

3. Consent Agenda

4. New Business

- a) **Design Review 2016-37 and Conditional Use Permit 2016-05:** Dollar Mountain Wireless Tower. An application by Verizon Wireless to replace existing equipment, and add additional antennas & related equipment to an existing tower. Applicant: Richard C. Lee for American Towers, LLC.
- b) **Design Review 2016-39 and Variance 2016-01:** Application for the proposed construction of a new 1,207 sq ft trellis as well as a new landscape plan for an existing single-family residence at 410 Fairway Loop. 94 sq ft of the proposed trellis extends into the required setback, which necessitates a variance. Applicant: Carmen Finegan, AIA for Michael Browne.

5. Continued Business

- a) Review of changes to Title 9, Chapter 3, Article I of the Sun Valley Municipal Code Regarding Flood Hazard Protection.

6. Discussion Items

None.

7. Adjourn

Meeting Schedule: Regular Meeting at 9:00 am on Thursday, September 22, 2016

**CITY OF SUN VALLEY
PLANNING & ZONING COMMISSION
AGENDA REPORT**

From: Abby Rivin, CFM, Associate Planner
Meeting Date: 8 September 2016

DESIGN REVIEW (DR2016-37)

APPLICANT: Technology Associates EC Inc. for American Tower Corporation (for Verizon Wireless and Sun Valley Company)

LEGAL DESC.: SUN VALLEY GOLF COURSE/HILLSIDE/GAS STATIONS/HORSE CENTER; SEC 5,6,7,8,17,18 4N R18E

LOCATION: Top of Dollar Mountain

ZONING DISTRICT: Recreation (REC)

REQUEST: Approve a collocation of three new antennas and three replacement antennas with associated equipment to an existing wireless facility, a conditionally permitted use in the Recreational Zoning District.

ANALYSIS: The applicant, Technology Associates EC Inc., is representing the tower owner, American Towers, LLC, in regards to an expansion of the Verizon Network. The tower is located on property leased from the Sun Valley Company. The applicant proposes to remove three existing LTE antennas and install six new Octo-port antennas, as well as add nine new Remote Radio Head (RRH) amps to the tower for real estate preparation. The proposed development also includes the installation of a Hybriflex cable and one OVP surge suppression box.

Per Section 9-3K-5 of the Municipal Code, changes to wireless communications facilities require Design Review approval.

Per Section 9-3K-6, a Conditional Use Permit is required for a wireless communications facility. The applicant has applied for CUP 2016-05 concurrently with this application, and approval of this Design Review is contingent on approval of the CUP.

Though the Commission has the ability to impose conditions (such as requiring additional on- or off-site improvements) through the City's Conditional Use Permit approval process, Staff finds that this project has no adverse impacts on the provision of public services (such as fire or police service) and in fact *enhances* the provision of mobile communications to homes and businesses within the service area. The installation of the six new Octo-port antennas will increase network capacity and coverage in the area resulting in improved service as far away as Galena.

From 47 USC § 1455(a)(1) – “Notwithstanding section 704 of the Telecommunications Act of 1996 (Public Law 104–104) or any other provision of law, a State or local government **may not deny, and shall approve,** any eligible facilities request for a modification of an existing wireless tower or base station that does not substantially change the physical dimensions of such tower or base station.”

The Commission retains the right to impose reasonable conditions on the tower’s operation or appearance, or that of the site, but CAN NOT deny the application, under federal law. The law further defines "substantial change" as being limited to the height of the "eligible support structure" or to modifications to appurtenances that would increase the width by an amount equivalent to the width of the support structure. Substantial change also includes changes to any concealment options and specific conditions of approval – neither of which is applicable here. The regulation does not cover the modification of an individual antenna panel, regardless of the changes in dimensions of a particular array or panel. The support structure dimensions remain unchanged by this proposal.

EVALUATION STANDARDS (SVMC § 9-3A-3):

A. Design and Siting:

1. The design of proposed improvements is appropriate and compatible to the lot and the surrounding neighborhood. Attention has been given to the location and design of streets, view corridors, privacy of adjacent properties, outdoor spaces, shadows, solar access, view access, lighting, vehicular access, building massing, privacy of other noise generating equipment, openings and doors as these elements impact adjacent properties. **The backup generators are located several hundred feet from any habitable structure or residence.**

2. The location and design of the proposed improvements has given consideration to special sites of historical, natural, ecological, architectural, archaeological, and scenic value or significance, including, but not limited to, those identified in the city's comprehensive plan. The essential character of special sites should be preserved and protected with any proposed site or structure improvements. **While the top of Dollar Mountain is identified as a special site in the City’s Comprehensive Plan, the proposed additions to the existing tower will not dramatically alter the appearance from adjoining areas.**

3. The siting of the proposed improvements complies with the adopted uniform fire code and any other applicable regulations regarding emergency vehicle access and circulation as set forth in title 7 of this code. **This structure complies with the Fire Code. Access is provided by a dirt access road and only serviced by Type 6 or Wildland apparatus.**

4. The proposed improvements are sited to meet the ingress, egress, and driveway standards and requirements set forth in title 7 of this code, and the siting standard in subsection A1 of this section. **Not applicable, as service to this site is intermittent and not undertaken by the public.**

5. The proposed improvements are sited to take into consideration and to mitigate natural hazards such as floodplains and avalanches as set forth in this chapter. Mitigation measures shall not adversely

impact other properties. **The site, at the top of Dollar Mountain, is not subject to flooding or avalanche hazards.**

6. The siting of the proposed improvements minimizes interference with natural drainage patterns and is designed to minimize adverse impact on other properties. All drainage shall comply with the standards set forth in title 7 of this code; be contained on site, or be connected to drainage easements or rights of way. No drainage shall be diverted off site onto private property. **Not applicable, as the footprint of the development is unchanged by this application.**

7. The site design provides for adequate space or means to maintain snow storage. Snow storage areas are in accordance with the requirements set forth in article G of this chapter. **Not applicable, as the development is only accessed by snow-mobile or similar apparatus during the winter.**

8. Appropriate address numbers and monuments are shown in accordance with the requirements as set forth in article G of this chapter. **Not applicable, as the Fire Department does not serve the site by traditional means.**

9. The siting of the proposed improvements, including streets and driveways, where applicable, minimizes hillside visibility and, where applicable, skylining by using a combination of stepped building forms, natural colors and materials, sloped roofs, and landscaping. **By necessity, the existing tower skylines the top of Dollar Mountain.**

10. Every lot shall be designed to be connected to public water and sewer systems, unless the property is over five hundred feet (500') from a public system as measured from the closest property line and an alternative utility system is approved by the city engineer. **The lot is connected to water and sewer systems.**

B. Grading: **Not applicable.**

C. Architectural Quality:

1. The proposed project maintains the quality of materials and design that is appropriate to the location, the lot and the neighborhood. **This project requires the additions of antennas and electrical equipment only.**

2. The proposed improvements conform to natural landscape features by minimizing the degree of cuts and fills. **No cuts or fills are proposed.**

3. The plan includes the location of all exterior lighting. All lighting shall be directed onto the subject lot and shall not be directed towards other properties. **The site is unlit.**

4. Building design includes weather protection that prevents water from dripping or snow from sliding onto pedestrian or vehicle areas or onto adjacent properties. **There are no adjacent pedestrian or vehicular areas and no adjacent properties.**

5. Any exterior addition or alteration to an existing building is compatible with the design character of the original building. Any new detached structure is compatible with the design character of the existing buildings and/or structure(s). **The only addition to the building and tower are electrical equipment.**

6. All improvements are designed to minimize light and sound emanating to other properties as set forth in article B of this chapter. **The tower will remain unlit. No additional lighting is proposed. The only sound emits from intermittent backup generators.**

7. Rooftop chimneys and utilities are enclosed and design is consistent with the primary structure. **Not applicable.**

D. Pedestrian And Vehicle Circulation Design: **Not applicable.**

E. Landscaping Quality: **Not applicable.**

F. Irrigation Limits: **Not applicable.**

G. Fences, Walls, Retaining Walls, Screens, And Dog Runs: **Not applicable.**

H. Sign Design: **Not applicable.**

I. Exterior Lighting: **The site is unlit.**

J. Additional Evaluation Standards For Commercial, Public, And Multiple-Unit Projects (PUDs, RM-1, RM-2, SC, CC And OS-1 Zones, And Condominium And Townhouse Projects): **Not applicable.**

RELEVANT DEFINITIONS:

WIRELESS COMMUNICATION FACILITY: A steel monopole, guywire tower, lattice tower or other similar structure designed to support directional antennas, parabolic dishes or antennas, microwave dishes, in addition to associated ground equipment and other similar equipment used in the wireless communications industry

RECOMMENDATION: Staff recommends approval of DR2016-37 allowing for the collocation of three new and three replacement antennas and other associated equipment to the existing wireless communication facility.

RECOMMENDED MOTION: "I move to approve Design Review DR2016-37, approving the collocation of new antennas on an existing wireless communications facility, pursuant to the Findings of Fact and Conditions of Approval."

ALTERNATIVE ACTIONS: Move denial of the application and draft findings supporting denial.

ATTACHMENTS:

1. Findings of Fact
2. Application Materials

FINDINGS OF FACT AND CONCLUSIONS OF LAW
CITY OF SUN VALLEY
DESIGN REVIEW APPROVAL

Project Name: Design Review Application DR2016-37

Applicant: Technology Associates EC Inc. for American Tower Corporation (for Verizon Wireless and Sun Valley Company)

Legal Desc.: SUN VALLEY GOLF COURSE/HILLSIDE/GAS STATIONS/HORSE CENTER; SEC 5,6,7,8,17,18 4N R18E

Location: Top of Dollar Mountain

Zoning District: Recreation (REC)

Request: Approve the collocation of six new antennas to an existing wireless facility, a conditionally permitted use in the Recreational Zoning District.

Required Findings: In order to approve a design review application, and based on the standards set forth in **Sun Valley Municipal Code, Title 9, Chapter 3, Article A (DESIGN REVIEW)**, the Planning and Zoning Commission shall make the following findings:

1. The proposed design is in conformance with the purpose of the zoning district and all dimensional regulations of that district. **Wireless communications facilities are a conditionally permitted use in the Recreation Zoning District. The tower is setback several hundred feet from the nearest property line.**
2. The proposed design is in conformance with the standards for design review as set forth in chapter 3, article A of this title. **The tower meets all of the applicable, enumerated standards for the use in the REC Zoning District, as conditionally-permitted.**
3. The proposed design does not significantly impact the natural, scenic character and aesthetic value of hillsides, ridges, ridgelines, ridge tops, knolls, saddles, and summits in the city. **The addition of antennas to the existing tower will not substantially change the dimensions of the structure and collocation will reduce the need for additional towers and facilities.**
4. The proposed design is in context and complementary to adjacent properties. **The existing facility is located atop Dollar Mountain, adjacent to a chairlift which contains other metal towers and appurtenances.**
5. The proposed design is compatible with the community character and scale of the neighborhood. **The existing facility is located over 2,000 feet from the nearest neighborhood.**
6. The proposed design adheres to standards for the protection of health, safety, and general welfare. **The existing structure is engineered to withstand wind and snow loads, and the facility poses no additional need for services by fire, police, water, or other agencies.**

7. The proposed design is of quality architectural character and materials. **The collocation uses expensive, high-end communications antenna. Collocation further reduces the need for additional facilities.**
8. The use is not in conflict with the comprehensive plan or other adopted plans, policies, or ordinances of the city. **The collocation is providing for an essential public service facility as per Goal 6 of the Comprehensive Plan, and is not in conflict with any other section.**

CONDITIONS OF APPROVAL

1. Prior to any new construction activity, the applicant shall receive City approval for Conditional Use Permit Application No. 2016-05 as well as any relevant building permit applications.

CONCLUSIONS OF LAW

The Sun Valley Planning & Zoning Commission concludes that the proposed collocation on the existing wireless facility meets the standards for approval under Articles 9-3K and 9-3A, of the City of Sun Valley Municipal Code provided the above conditions of approval are met.

DECISION

Therefore, the Sun Valley Planning & Zoning Commission **approves** the subject Design Review Application No. DR2016-37, subject to the Conditions of Approval above.

Dated this 8th day of September, 2016.

Ken Herich, Chairman
Sun Valley Planning & Zoning Commission

Date Findings of Fact signed

**CITY OF SUN VALLEY
PLANNING & ZONING COMMISSION
AGENDA REPORT**

From: Abby Rivin, CFM, Associate Planner
Meeting Date: 8 September 2016

CONDITIONAL USE PERMIT (CUP2016-05)

APPLICANT: Technology Associates EC Inc. for American Tower Corporation (for Verizon Wireless and Sun Valley Company)

LEGAL DESC.: SUN VALLEY GOLF COURSE/HILLSIDE/GAS STATIONS/HORSE CENTER; SEC 5,6,7,8,17,18 4N R18E

LOCATION: Top of Dollar Mountain

ZONING DISTRICT: Recreation (REC)

REQUEST: Approve a collocation of new antennas to an existing wireless facility, a conditionally permitted use in the Recreational Zoning District.

ANALYSIS: The applicant, Technology Associates EC Inc., is representing the tower owner, American Towers, LLC, in regards to an expansion of the Verizon network. The tower is located on property leased from the Sun Valley Company. The applicant proposes to remove three existing LTE antennas and install six new Octo-port antennas, as well as add nine new Remote Radio Head (RRH) amps to the tower.

Per Section 9-3K-6, a Conditional Use Permit is required for a wireless communications facility.

Though the Commission has the ability to impose conditions (such as requiring additional on- or off-site improvements) through the City's Conditional Use Permit approval process, Staff finds that this project has no adverse impacts on the provision of public services (such as fire or police service) and in fact *enhances* the provision of mobile communications to homes and businesses within the service area.

From 47 USC § 1455(a)(1) – “Notwithstanding section 704 of the Telecommunications Act of 1996 (Public Law 104–104) or any other provision of law, a State or local government **may not deny, and shall approve**, any eligible facilities request for a modification of an existing wireless tower or base station that does not substantially change the physical dimensions of such tower or base station.”

The Commission retains the right to impose reasonable conditions on the tower's operation or appearance, or that of the site, but CAN NOT deny the application, under federal law. The law further defines "substantial change" as being limited to the height of the "eligible support structure" or to modifications to appurtenances that would increase the width by an amount equivalent to the width of

the support structure. Substantial change also includes changes to any concealment options and specific conditions of approval – neither of which is applicable here. The regulation does not cover the modification of an individual antenna panel, regardless of the changes in dimensions of a particular array or panel. The support structure dimensions remain unchanged by this proposal.

The subject application, per Section 9-3K-5, is also required to receive Design Review approval of the application; as such, approval of the associated Design Review application is a Condition of Approval of this Conditional Use Permit.

RELEVANT DEFINITIONS:

WIRELESS COMMUNICATION FACILITY: A steel monopole, guywire tower, lattice tower or other similar structure designed to support directional antennas, parabolic dishes or antennas, microwave dishes, in addition to associated ground equipment and other similar equipment used in the wireless communications industry

RECOMMENDATION: Staff recommends approval of CUP 2016-05 allowing for the collocation of three new and three replacement antennas to the existing wireless communication facility.

RECOMMENDED MOTION: "I move to approve Conditional Use Permit CUP2016-05, approving the collocation of new antennas on an existing wireless communications facility, pursuant to the Findings of Fact and Conditions of Approval."

ALTERNATIVE ACTIONS: Move denial of the application and draft findings supporting denial.

ATTACHMENTS:

1. Findings of Fact
2. Application Materials

FINDINGS OF FACT AND CONCLUSIONS OF LAW
CITY OF SUN VALLEY
CONDITIONAL USE PERMIT

Project Name: Conditional Use Application CUP 2016-05

Applicant: Technology Associates EC Inc. for American Tower Corporation (for Verizon Wireless and Sun Valley Company)

Legal Desc.: SUN VALLEY GOLF COURSE/HILLSIDE/GAS STATIONS/HORSE CENTER; SEC 5,6,7,8,17,18 4N R18E

Location: Top of Dollar Mountain

Zoning District: Recreation (REC)

Request: Approve a collocation of new antennas to an existing wireless facility, a conditionally permitted use in the Recreational Zoning District.

Required Findings: In order to approve a conditional use permit application and based on the standards set forth in **Sun Valley Municipal Code, Title 9, Chapter 5B-2 (CONDITIONAL USE)**, the Planning and Zoning Commission shall make the following findings:

1. The use is appropriate to the location, the lot, and the neighborhood, and is compatible with the uses permitted in the applicable zoning district. **The use is appropriate to the location and lot as wireless communication facilities may be conditionally permitted in the Recreation Zoning District. Collocation of antennas on an existing tower reduces the need for additional new towers, thereby minimizing visibility.**
2. The use will be supported by adequate public facilities or services to the surrounding area, or conditions can be established to mitigate adverse impacts. **The proposed upgrades to the wireless communication facility will increase service to the existing population and support new growth.**
3. The use will not unreasonably diminish either the health, safety or welfare of the community. **The use will enhance the health, safety, and welfare of the community by providing a necessary public facility to serve the City of Sun Valley. No additional demands on Fire, Police, or other services are anticipated.**
4. The use is not in conflict with the comprehensive plan or other adopted plans, policies, or ordinances of the city. **The Conditional Use Permit process was established to develop procedures that allow for a particular use on a specific property subject to specific terms and conditions of approval. The collocation application is consistent with the goals of the Comprehensive Plan as it provides for necessary and appropriate public facilities to serve the existing population and new growth.**

CONDITIONS OF APPROVAL

1. Prior to any new construction activity, the applicant shall receive City approval for Design Review Application No. 2016-37 as well as any required building permit applications.

CONCLUSIONS OF LAW

The Sun Valley Planning & Zoning Commission concludes that the proposed collocation on the existing wireless facility meets the standards for approval under Title 9, Chapter 3, Article K, of the City of Sun Valley Municipal Code provided the above condition of approval is met.

DECISION

Therefore, the Sun Valley Planning & Zoning Commission **approves** the subject Conditional Use Permit Application No. CUP 2016-05, subject to the Condition of Approval above.

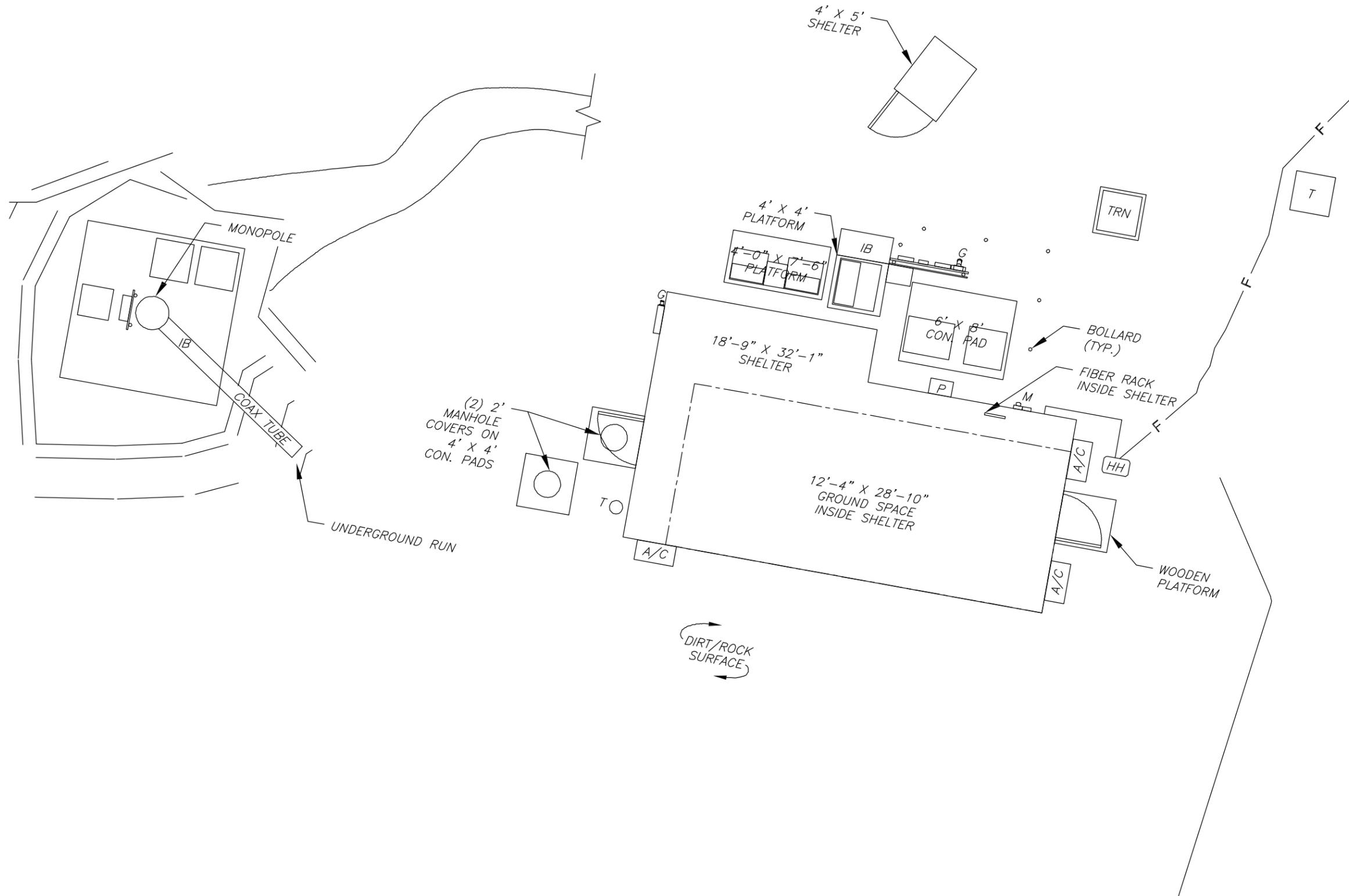
Dated this 8th day of September, 2016.

Ken Herich, Chairman
Sun Valley Planning & Zoning Commission

Date Findings of Fact signed

GENERAL SITE PLAN NOTES:

1. SITE PLAN AS SHOWN IS BASED UPON A LIMITED SITE MAPPING OF THE SURROUNDING AREA AND ARCHIVED SURVEY DOCUMENTS.
2. SITE PLAN AS SHOWN IS FOR REFERENCE ONLY. CONFIRMATION AND PROOF OF LEASE AREA AND/OR EASEMENTS IS BEYOND THE SCOPE OF THIS PROJECT.



verizon
wireless

VERIZON WIRELESS
9656 SOUTH PROSPERITY ROAD
WEST JORDAN, UTAH 84088

TAEC

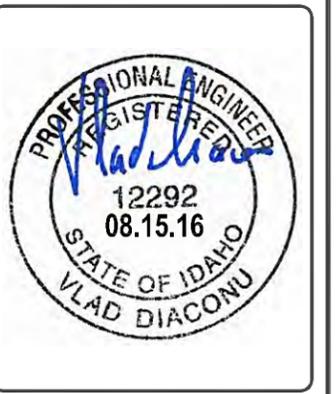
Technology Associates Engineering Corporation Inc.
TECHNOLOGY ASSOCIATES

UTAH MARKET OFFICE
5710 SOUTH GREEN STREET
SALT LAKE CITY, UTAH 84123

CORPORATE OFFICE
3115 SOUTH MELROSE DRIVE, SUITE #110
CARLSBAD, CALIFORNIA 92010

DRAWN BY: SEAN T.
CHECKED BY: MARK K.

REV	DATE	DESCRIPTION
1	06.07.2016	REVISED PER CITY COMMENT
0	04.28.2016	LTE_PCS MODIFICATION



ID5 - KETCHUM
ATOP DOLLAR MTN, /
ELKHORN ROAD
SUN VALLEY, IDAHO 83353
-- LTE_PCS PROJECT--

SHEET TITLE
ENLARGED SITE PLAN

SHEET NUMBER
C101



verizon
wireless

VERIZON WIRELESS
9656 SOUTH PROSPERITY ROAD
WEST JORDAN, UTAH 84088

TAEC

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TECHNOLOGY ASSOCIATES

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CARLSBAD, CALIFORNIA 92010

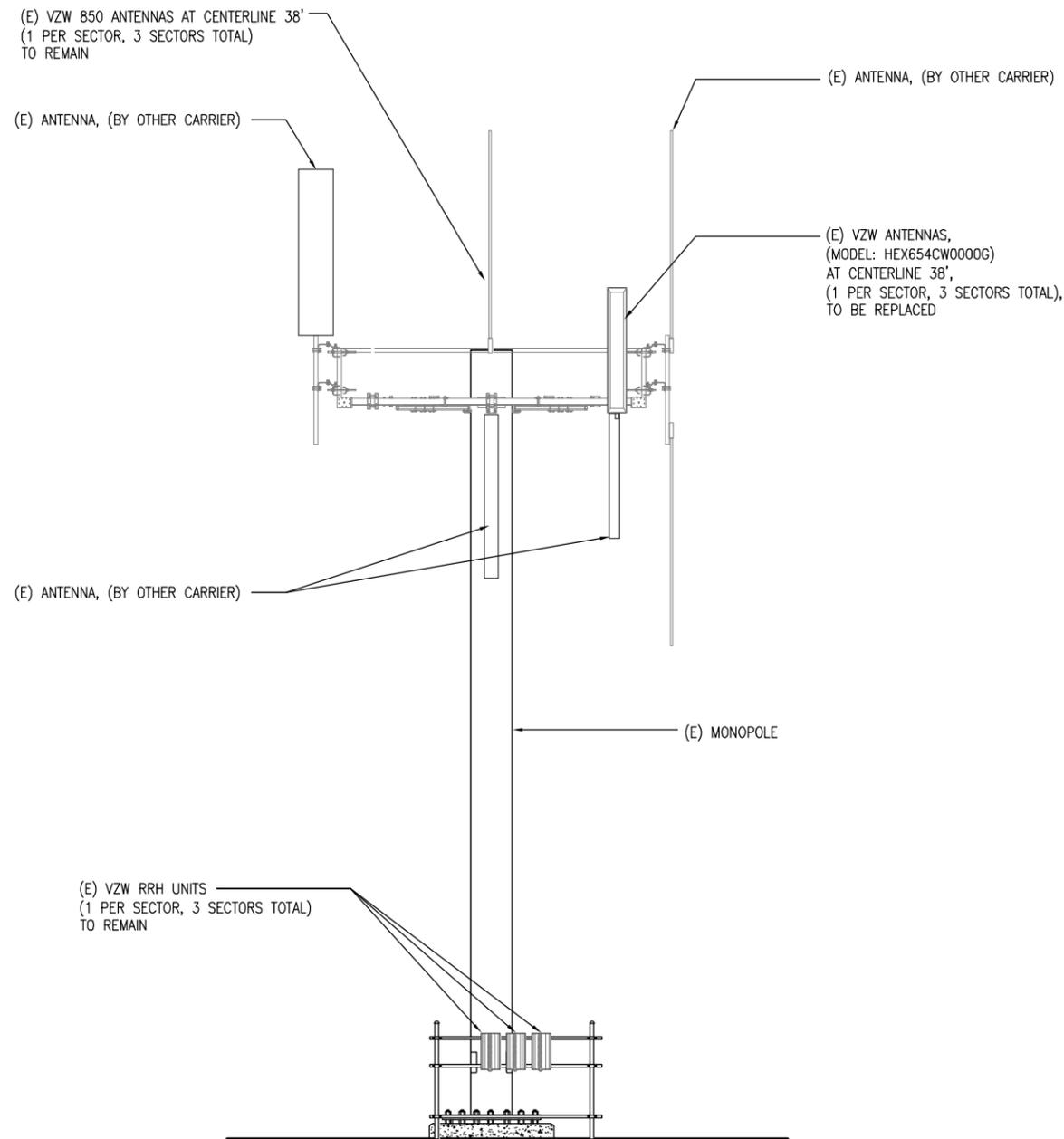
DRAWN BY: SEAN T.
CHECKED BY: MARK K.

REV	DATE	DESCRIPTION
0	04.28.2016	LTE_PCS MODIFICATION

ID5 - KETCHUM
ATOP DOLLAR MTN, /
ELKHORN ROAD
SUN VALLEY, IDAHO 83353
-- LTE_PCS PROJECT--

SHEET TITLE
SITE ELEVATIONS

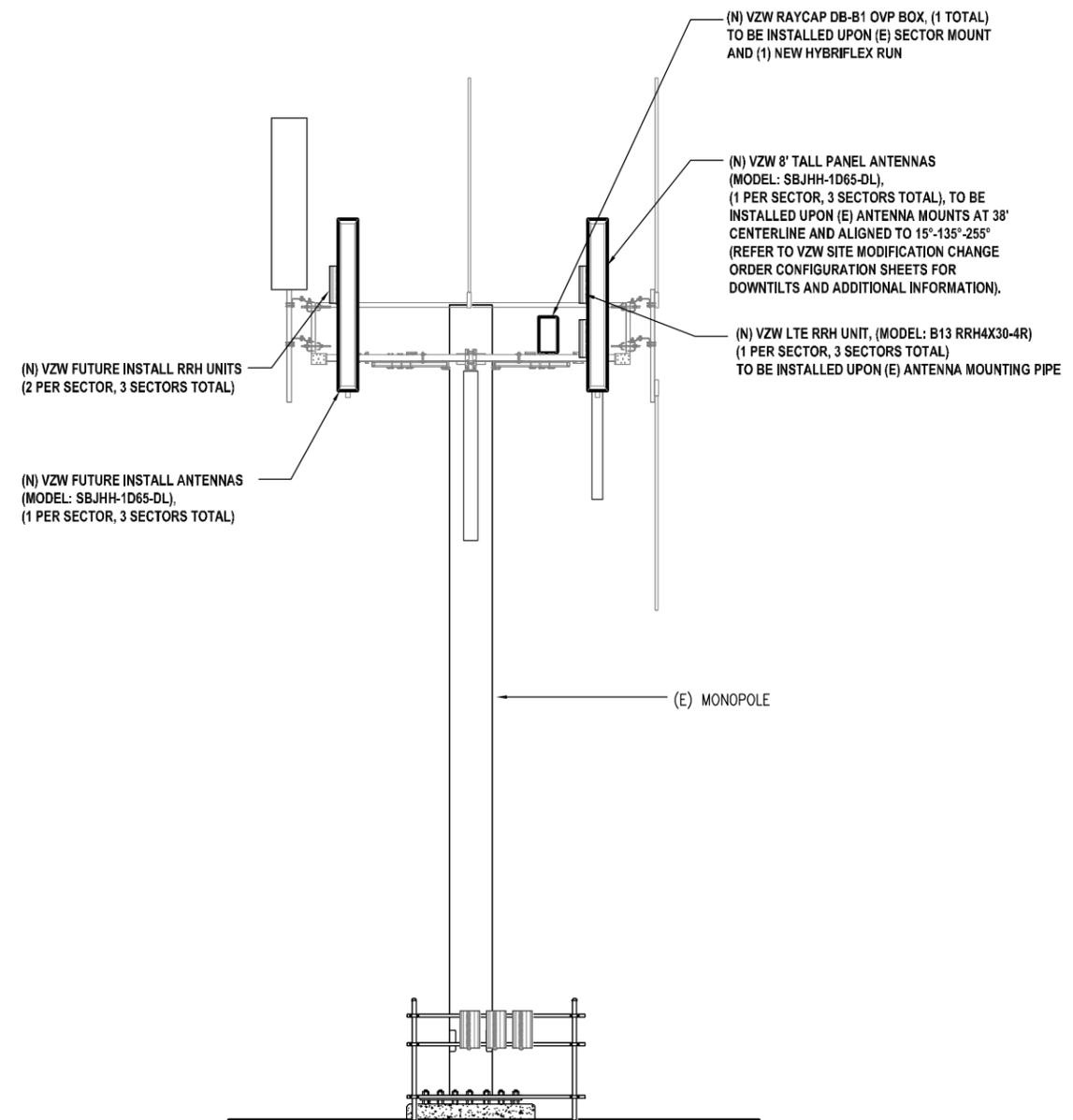
SHEET NUMBER
C200



EXISTING SITE ELEVATION

0 1' 2' 4' SCALE: 1/4" = 1'-0" (24x36)
(OR) 1/8" = 1'-0" (11x17)

1



PROPOSED SITE ELEVATION

0 1' 2' 4' SCALE: 1/4" = 1'-0" (24x36)
(OR) 1/8" = 1'-0" (11x17)

2



VIEW OF EXISTING SITE ELEVATION



VIEW OF EXISTING ANTENNAS



EXISTING COAX



EXISTING HD 4.0 MODCELL



EXISTING BATTERY



EXISTING PDF



EXISTING eNODE B



EXISTING FIBER RACK & 9228 MCPA RACKS

verizon
wireless

VERIZON WIRELESS
9656 SOUTH PROSPERITY ROAD
WEST JORDAN, UTAH 84088

TAEC

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CARLSBAD, CALIFORNIA 92010

DRAWN BY: SEAN T.

CHECKED BY: MARK K.

REV	DATE	DESCRIPTION
0	04.28.2016	LTE_PCS MODIFICATION

ID5 - KETCHUM
ATOP DOLLAR MTN, /
ELKHORN ROAD
SUN VALLEY, IDAHO 83353
-- LTE_PCS PROJECT--

SHEET TITLE

SITE PICTURES

SHEET NUMBER

SP100

August 18, 2016

City of Sun Valley
Development Services
81 Elkhorn Road
PO Box 416
Sun Valley, ID 83353

Subject:

American Tower Corporation: Site #82705
Verizon Wireless: ID5 Ketchum
Site Address: At the top of Dollar Mountain, Elkhorn
Road, Sun Valley, ID 83353
Parcel # RPS000000001F

Planning and Development Services,

Technology Associates EC, Inc. is representing American Tower Corporation (American Towers, LLC; ATC) in regards to the Verizon Wireless LTE-PCS 2015 network expansion project on the existing wireless communication facility ATC owns within the City limits of Sun Valley, Idaho referenced above.

The proposed scope of work for this project is as follows:

No change to the existing CDMA antennas
Exchange (3) existing LTE antennas with (3) Octo-port antennas for 700/850MHz and AWS services.
Add (3) additional Octo-port antennas for 700/850MHz and PCS-LTE prep
Add (9) Remote Radio Head (RRH) amps for real estate prep work. Make everything remote electrical tilt (RET) functional and connect as 4RX
Add (1) run of Hybriflex cable and add the (1) OVP (surge suppression) box needed for RRH amps for real estate prep work

The proposed modifications will not require a change in overall height, footprint or power requirements.

Below is the response to City of Sun Valley's 9-3k-7 supplementary materials.

A. Description Of Services: A description of the services the applicant proposes to offer at the proposed site, including:

1. A description of the location, type, capacity, field strength or power density, and calculated geographic service area of the proposed antenna or antenna array. In instances of applications that generate public controversy, the city retains the right to retain experts, at the applicant's expense, to review and assess the technical data.

This is an existing unmanned communications facility located approximately 360' west of the top terminal of Dollar Mountain's Dollar chairlift. Within the boundaries of the existing compound is a 30' monopole. Verizon's proposed scope of work for this installation will increase both network capacity and coverage in the area resulting in better service as far away as Galena Lodge. Please refer to the included propagation maps.

2. Documentation that the applicant has obtained and is in compliance with all applicable licenses, permits or authorizations required by the federal communications commission.

FCC licenses for Blaine County attached; please refer to pages 55-65.

3. Location of all existing, proposed and anticipated wireless communication facilities in the applicant's network located in the city, or within one mile of the city limits, in any direction.

A map showing all existing communications facilities is on pages 54-55 in the submittal packet.

4. A description of how the proposed facility fits into, and is a necessary part of, the applicant's network.

The proposed RRHs and additional antennas will increase Verizon's network capacity providing customers with improved service throughout the service area. Propagation map attached.

5. If the proposal does not include collocation, written documentation of all efforts made to collocate at another site, and a justification for the decision not to collocate.

This subject site is an existing, unmanned communication facility servicing T-Mobile and Verizon carriers and their respective wireless customers.

6. In the instance where a facility is proposed within five hundred feet (500') of any school, child daycare center, hospital or residential dwelling, the applicant shall submit a narrative description of alternative sites considered, if any, and include specific reasons these alternative sites were deemed infeasible.

The subject property is not within 500' of any of the above referenced locations.

C. Operational Plan: All applications for wireless communication facilities shall include written assurances that the facilities shall be operated in accordance with the following:

1. Security Lighting: Security lighting shall be kept to a minimum in every instance and should only be triggered by a motion detector where practical. Security lighting potentially impacting residential districts and prominent view areas shall be minimized and all lighting shall be compliant with the city's exterior lighting regulations. Prominent views are listed in action item 1.1.2 of the comprehensive plan.

This communications site is an existing facility and all previous installed security measures remain in place.

2. Maintenance: All facilities, landscaping, and related equipment shall be maintained in good working order and free from trash, debris, graffiti and designed to discourage vandalism. Any damaged equipment shall be repaired or replaced within thirty (30) calendar days. Damaged, dead or decaying plant materials shall be removed and replaced within thirty (30) calendar days.

The proposed site upgrades will not have an adverse impact on Verizon's ability to conduct required maintenance of the subject property.

3. Maintenance Hours:

a. Routine Maintenance: Routine maintenance of equipment located in or adjacent to existing residential land uses shall be conducted only during the hours of eight o'clock (8:00) A.M. to five o'clock (5:00) P.M. weekdays, not including holidays. In other areas, routine maintenance may be conducted at any time.

The subject property is not immediately adjacent to any existing residential properties.

b. Emergency Repairs and Maintenance: Emergency repairs and maintenance shall be conducted only in the cases of power outages and equipment failures or malfunctions.

Verizon Wireless will continue to comply with the *Emergency Repairs and Maintenance* regulations noted above.

- c. Change Out And Overhaul: Equipment change out and overhaul may occur any time with thirty (30) days' notice to the city to allow notice to property owners and residents within three hundred feet (300') of the facility, if applicable.

Verizon Wireless will continue to comply with the *Change Out and Overhaul* regulations noted above.

4. Monitoring: Once the wireless communication facility is operating, the city may require the applicant to submit documentation that the facility is operating within the technical standards as described in the application and the federal communications commission permit. Independent field strength or power density measurements shall be provided to the city within thirty (30) days of written request to the applicant. At five (5) year intervals from the date when the city issues any permit authorized by this article, the applicant shall submit the following information, in writing, to the community development director:

- a. Confirmation that the facility continues to operate in compliance with all terms and conditions of approval by the city.
- b. Independent field strength or power density measurements taken within the past thirty (30) days that verify that the facility continues to operate in compliance with all terms and conditions and emissions standards imposed by the federal communications commission.
- c. Confirmation that there is no equipment available that would enhance the safety, efficiency or visibility of the facility or reduce the size of the facility.
- d. Confirmation that there are not more appropriate locations available for the facility.
- e. Confirmation that the facility continues to function as an essential element of the applicant's network.
- f. Documentation of any complaints received by the applicant since the inception of operations regarding the operation and maintenance of the facility, including the applicant's actions to address the complaints.

Verizon Wireless will continue to comply with the *Monitoring* regulations noted above.

5. Construction Time, Abandonment And Decommissioning: All wireless communication facilities which receive a conditional use permit under this article shall be completed and operational within one hundred eighty (180) calendar days of the issuance of the permit and all related permits or licenses. The construction time may be extended for an additional one hundred eighty (180) calendar days upon a showing of good faith efforts to complete the facility, which shall take into account complications beyond the control of applicant, including seasonal considerations. If the facility is not completed and operational by the end of the extension period, then the permit shall expire, and the applicant must reapply for the permit; however, this provision shall not apply when the applicant demonstrates to the satisfaction of the community development director that the operational delay is due entirely to factors beyond the control of the applicant, in which event, the director may extend the construction time in his or her discretion. The director reserves the right to consult with the planning and zoning commission regarding any proposed extension. Any facility that ceases operating for more than ninety (90) consecutive days shall be considered abandoned. In such an event, the applicant must either: a) apply for all permits required at the time of expiration to reactivate the operation; or b) remove all elements of the facility and restore the site. In the event the applicant fails to apply for permits or perform the removal and restoration within these ninety (90) days, the property owner shall have the facility removed. (Ord. 382, 10-25-2006)

Verizon Wireless will continue to comply with the *Construction Time, Abandonment and Decommissioning* regulations noted above.

This is an existing wireless communications facility and the proposed scope of work will not have a negative impact on any adjoining properties. Any noise currently generated by this site will continue at previously approved levels. Changes to the visual aspect will be negligible to the average citizen.

The proposed scope of work will allow Verizon Wireless to provide their customers in the Sun Valley community both better and quicker network access. Should you have any questions whatsoever about the proposed project, please contact me at your convenience.

Very truly yours,

Richard C. Lee
Real Estate Specialist
Technology Associates EC Inc.
5710 Green Street
Salt Lake City, Utah 84123
435-640-4020
Richard.lee@taec.net

ALCATEL-LUCENT B13 RRH4X30-4R

Alcatel-Lucent B13 Remote Radio Head 4x30-4R is the newest addition of Remote Radio Head to the extended product line of Alcatel-Lucent's distributed Base Station solutions, aimed at facilitating smooth RF site acquisition and related civil engineering.

Supporting 2Tx/4Tx MIMO and 4-way Rx diversity, Alcatel-Lucent B13 RRH4x30-4R allows operators to have a compact radio solution to deploy LTE in the 700U band (700 MHz, 3GPP band 13), providing them with the means to achieve high capacity, high quality and high coverage with minimum site requirements.

The Alcatel-Lucent B13 RRH4x30-4R product has four transmit RF paths, offering the possibility to **select, via software only, 2Tx or 4Tx MIMO configurations** with either 2x60 W or 4x30 W RF output power. It supports also 4-way Rx diversity and up to 10MHz instantaneous bandwidth.

The Alcatel-Lucent B13 RRH4x30-4R is a near zero-footprint solution and operates noise free, simplifying negotiations with site property owners and minimizing environmental impacts.

Its compactness and slim design makes the Alcatel-Lucent B13 RRH4x30-4R easy to install close to the antenna: operators can therefore locate this Remote Radio Head where RF design conditions are deemed ideal, minimizing trade-offs between available sites and RF optimum sites, together with reducing the RF feeder needs and installation costs.

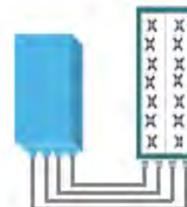


FEATURES

- Supporting LTE in 700 MHz band (700U, 3GPP band 13)
- LTE 2Tx or 4Tx MIMO (SW switchable)
- Output power: Up to 2x60W or 4x30W
- 10MHz LTE carrier with 4Rx Diversity
- Convection-cooled (fan-less)
- Supports AISG 2.0 ALD devices (RET, TMA) through RS485 or RF ports

BENEFITS

- Compact to reduce additional footprint when adding LTE in 700U band
- MIMO scheme operation selection (2Tx or 4Tx) by software only
- Improves downlink spectral efficiency through MIMO4
- Increases LTE coverage thanks to 4Rx diversity capability and best in class Rx sensitivity
- Flexible mounting options: Pole or Wall



4x30W with 4T4R
or
2x60W with 2T4R

Can be switched between modes via SW w/o site visit

TECHNICAL SPECIFICATIONS

Features & performance	
Number of TX/RX paths	4 duplexed (either 4T4R or 2T4R by SW)
Frequency band	U700 (C) (3GPP bands 13): DL: 746 - 756 MHz / UL: 777 - 787 MHz
Instantaneous bandwidth - #carriers	10MHz – 1 LTE carrier (in 10MHz occupied bandwidth)
LTE carrier bandwidth	10 MHz
RF output power	2x60W or 4x30W (by SW)
Noise figure – RX Diversity scheme	2 dB typ. (<2.5 dB max) – 2 or 4 way Rx diversity
Sizes (HxWxD) in mm (in.)	550 x 305 x 230 (21.6" x 12.0" x 9") (with solar shield)
Volume in L	38 (with solar shield)
Weight in kg (lb) (w/o mounting HW)	26 (57.2) (with solar shield)
DC voltage range	-40.5 to -57V at full performance, -38 to -57V with relaxation on power consumption
DC power consumption	550W typical @100% RF load (in 2Tx or 4Tx mode)
Environmental conditions	-40°C (-40°F) / +55°C (+131°F) IP65
Wind load (@150km/h or 93mph)	Frontal:<200N / Lateral :<150N
Antenna ports	4 ports 7/16 DIN female (50 ohms) VSWR < 1.5
CPRI ports	2 CPRI ports (HW ready for Rate7, 9.8 Gbps) SFP single mode dual fiber
AISG interfaces	1 AISG2.0 output (RS485) Integrated Smart Bias Tees (x2)
Misc. Interfaces	4 external alarms (1 connector) – 4 RF Tx & 4 RF Rx monitor ports - 1 DC connector (2 pins)
Installation conditions	Pole and wall mounting
Regulatory compliance	3GPP 36.141 / 3GPP 36.113 / GR-1089-CORE / GR-3108-CORE / UL 60950-1 / FCC Part 27

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DC Surge Protection for RRHs
RxxDC-4750-PF-48 • RxxDC-3103-PF-48 •
RxxDC-3315-PF-48

Tower / Base / Rooftop / Rooftop Distribution Models

Raycap's flexible Tower, Base Stations and Rooftop protection and Distribution products provide protection for up to 6 Remote Radio Heads. The solutions mitigate the risk of damage due to lightning and provide high levels of availability and reliability to radio equipment.



Shown with optional 90° elbow for side entry. Can be installed on left or right side of unit.

Mounting Bracket Included

Features

- Employs the Strikesorb® 30-V1-HV Surge Protective Device (SPD) specifically designed for the Remote Radio Head (RRH) installation environment and certified for use in DC applications and at low DC operating voltages (48V).
- The Strikesorb 30-V1-HV is a Class I SPD, certified by VDE per the IEC 61643-1 standard as suitable for installation in areas where direct lightning exposure is expected. Strikesorb 30-V1-HV is able to withstand direct lightning currents of up to 5kA (10/350) and induced surge currents of up to 60kA (8/20).
- Provides very low let through / clamping voltage - unique for a Class I product - as it does not employ spark gaps or other switching elements. Strikesorb offers unique protection levels to the RRH equipment as well as the Base Band Units.
- Fully recognized to the UL 1449 3rd Edition Safety Standard.
- Patent pending design

Benefits

- Offers unique maintenance-free protection against direct lightning currents.
- Protects up to 6 Remote Radio Heads and connects up to 12 fiber pairs.
- Utilizes an IP 67 rated enclosure, allowing for indoor or outdoor installation on a roof or tower top.
- Configurable cable ports are designed to accommodate varying diameters of hybrid (combined power and fiber optic) or standard cables with diameters up to 2" (will fit most standard 1 5/8" coax class cables) depending upon port configuration.
- Lightweight aerodynamic design provides maximum flexibility for tower top installation.
- Companion to the RxxDC-4291-PF-48 / RxxDC-1064-PF-48 (Sector) models.



Tower / Base / Rooftop / Rooftop Distribution Models
 RxxDC-4750-PF-48
 RxxDC-3103-PF-48
 RxxDC-3315-PF-48

Companion Sector Models:
 RxxDC-4291-PF-48
 RxxDC-1064-PF-48

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G02-00-236 121001

SPECIFICATIONS

DC Surge Protection for RRHs

RxxDC-4750-PF-48 • RxxDC-3103-PF-48 •

RxxDC-3315-PF-48

Tower / Base / Rooftop / Rooftop Distribution Models

Electrical

Model Numbers	RxxDC-4750-PF-48	RxxDC-3103-PF-48	RxxDC-3315-PF-48
Nominal Operating Voltage	48 VDC	48 VDC	48 VDC
Nominal Discharge Current [I_n]	20 kA 8/20 μ s	20 kA 8/20 μ s	20 kA 8/20 μ s
Maximum Surge Current [I_{max}]	60 kA 8/20 μ s	60 kA 8/20 μ s	60 kA 8/20 μ s
Maximum Impulse (Lightning) Current per IEC 61643-1	5 kA 10/350 μ s	5 kA 10/350 μ s	5 kA 10/350 μ s
Maximum Continuous Operating Voltage [U_c]	75 VDC	75 VDC	75 VDC
Voltage Protection Rating (VPR) per UL 1449 3rd Edition	400V	400V	400V
Protection Class as per IEC 61643-1	Class I	Class I	Class I
Intrusion Sensor	microswitch	microswitch	microswitch
Moisture Sensor	infrared moisture detector	infrared moisture detector	infrared moisture detector
Strikesorb Module Type	No Strikesorb modules installed	Strikesorb modules installed to protect 3 Remote Radio Heads	Strikesorb modules installed to protect 6 Remote Radio Heads

Mechanical

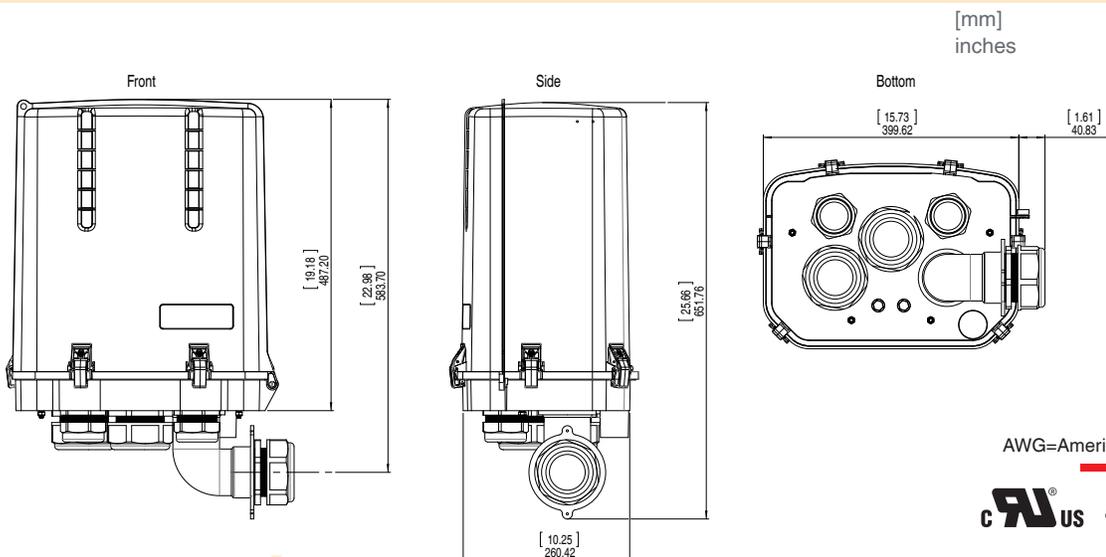
Suppression Connection Method	Compression lug, #14 - #2/0 AWG (2.5 mm ² - 70 mm ²) Copper; #12 - #2/0 AWG (4 mm ² - 70 mm ²) Aluminum		
Fiber Connection Method	LC-LC Single mode		
Pressure Equalizing Vent	Gore™ Vent		
Environmental Rating	IP 67		
Operating Temperature	-40° C to +80° C		
UV Resistant	Yes		
Weight	System: 16.0 lbs (7.25 kg) Mount: 5.5 lbs (2.49 kg) Total: 21.5 lbs (9.75 kg)	System: 18.7 lbs (8.48 kg) Mount: 5.5 lbs (2.49 kg) Total: 24.2 lbs (10.98 kg)	System: 21.4 lbs (9.70 kg) Mount: 5.5 lbs (2.49 kg) Total: 26.9 lbs (12.20 kg)
Combined Wind Loading	150mph (sustained): 200 lbs (889.6 N)		

Standards Compliance

Strikesorb modules are compliant to the following Surge Protective Device (SPD) Standards

Standards	ANSI/UL 1449 3rd Edition
	IEEE C62.41
	NEMA LS-1, IEC 61643-1:2005 2nd Edition (Class I Protection)
	IEC 61643-12
	EN 61643-11:2002 (including A11:2007)

Product Diagram

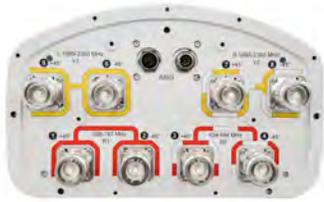


AWG=American Wire Gauge



Raycap

www.raycapsurgeprotection.com



SBJAHH-1D65C-DL

Multiband Antenna, 698–787, 824–894 and 2 x 1695–2360 MHz, 65° horizontal beamwidth, internal RETs and low bands have diplexers

- Independent tilt for high bands and single tilt for low bands
- Interleaved dipole technology providing for attractive, low wind load mechanical package

Electrical Specifications

Frequency Band, MHz	698–787	824–894	1695–1880	1850–1990	1920–2200	2300–2360
Gain, dBi	15.6	15.4	17.5	17.8	18.2	18.4
Beamwidth, Horizontal, degrees	67	63	71	66	64	58
Beamwidth, Vertical, degrees	9.2	7.9	5.7	5.2	4.9	4.5
Beam Tilt, degrees	0–11	0–11	0–7	0–7	0–7	0–7
USLS (First Lobe), dB	13	15	19	19	18	17
Front-to-Back Ratio at 180°, dB	29	32	31	29	28	31
Isolation, dB	25	25	25	25	25	25
Isolation, Intersystem, dB	30	30	30	30	30	30
VSWR Return Loss, dB	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0
PIM, 3rd Order, 2 x 20 W, dBc	-153	-153	-153	-153	-153	-153
Input Power per Port, maximum, watts	250	250	300	300	300	300
Polarization	±45°	±45°	±45°	±45°	±45°	±45°
Impedance	50 ohm					

Electrical Specifications, BASTA*

Frequency Band, MHz	698–787	824–894	1695–1880	1850–1990	1920–2200	2300–2360
Gain by all Beam Tilts, average, dBi	15.4	15.2	17.2	17.6	17.9	18.1
Gain by all Beam Tilts Tolerance, dB	±0.4	±0.3	±0.3	±0.3	±0.4	±0.4
Gain by Beam Tilt, average, dBi	0° 15.5	0° 15.3	0° 17.1	0° 17.5	0° 17.8	0° 17.9
	5° 15.4	5° 15.3	4° 17.2	4° 17.7	4° 18.0	4° 18.1
	11° 15.1	11° 15.0	7° 17.1	7° 17.6	7° 17.9	7° 18.2
Beamwidth, Horizontal Tolerance, degrees	±1.6	±2	±3.4	±3.8	±4.7	±4.2
Beamwidth, Vertical Tolerance, degrees	±0.5	±0.5	±0.3	±0.2	±0.3	±0.2
USLS, beampeak to 20° above beampeak, dB	12	12	14	13	13	13
Front-to-Back Total Power at 180° ± 30°, dB	25	22	27	25	25	25
CPR at Boresight, dB	25	28	20	22	19	17
CPR at Sector, dB	14	11	15	12	9	4

* CommScope® supports NGMN recommendations on Base Station Antenna Standards (BASTA). To learn more about the benefits of BASTA, [download the whitepaper Time to Raise the Bar on BSAs.](#)

General Specifications

Antenna Type	Sector with internal RET
Band	Multiband
Brand	DualPol®
Operating Frequency Band	1695 – 2360 MHz 698 – 787 MHz 824 – 894 MHz
Performance Note	Outdoor usage

Mechanical Specifications

Color	Light gray
Lightning Protection	dc Ground

SBJAHH-1D65C-DL

Radiator Material	Copper Low loss circuit board
Radome Material	Fiberglass, UV resistant
Reflector Material	Aluminum
RF Connector Interface	7-16 DIN Female
RF Connector Location	Bottom
RF Connector Quantity, total	8
Wind Loading, maximum	879.0 N @ 150 km/h 197.6 lbf @ 150 km/h
Wind Speed, maximum	241 km/h 150 mph

Dimensions

Depth	181.0 mm 7.1 in
Length	2453.0 mm 96.6 in
Width	301.0 mm 11.9 in
Net Weight, without mounting kit	26.0 kg 57.3 lb

Remote Electrical Tilt (RET) Information

Input Voltage	10–30 Vdc
Internal RET	High band (2) Low band (1)
Power Consumption, idle state, maximum	2.0 W
Power Consumption, normal conditions, maximum	13.0 W
Protocol	3GPP/AISG 2.0 (Multi-RET)
RET Interface	8-pin DIN Female 8-pin DIN Male
RET Interface, quantity	1 female 1 male

Packed Dimensions

Depth	299.0 mm 11.8 in
Length	2572.0 mm 101.3 in
Width	409.0 mm 16.1 in
Shipping Weight	38.7 kg 85.3 lb

Regulatory Compliance/Certifications

Agency	Classification
RoHS 2011/65/EU	Compliant by Exemption
China RoHS SJ/T 11364-2006	Above Maximum Concentration Value (MCV)
ISO 9001:2008	Designed, manufactured and/or distributed under this quality management system



Included Products

BSAMNT-3 — Wide Profile Antenna Downtilt Mounting Kit for 2.4 - 4.5 in (60 - 115 mm) OD round members. Kit contains one scissor top bracket set and one bottom bracket set.

SBJAHH-1D65C-DL

* **Footnotes**

Performance Note Severe environmental conditions may degrade optimum performance



AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure : 30 ft Monopole
ATC Site Name : Sun Valley/Ketchum, ID
ATC Site Number : 82705
Engineering Number : 65724421
Proposed Carrier : Verizon
Carrier Site Name : ID5 Ketchum
Carrier Site Number : N/A
Site Location : Dollar Mountain
Sun Valley, ID 83353-7700
43.683028,-114.348444
County : Blaine
Date : March 31, 2016
Max Usage : 91%
Result : Pass

Reviewed by:
Neil Kuplic, PE
Director of Structural Engineering

Prepared By:
John D. Bigham, E.I.
Structural Engineer II



Mar 31 2016 2:55 PM

COA: C-3229



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Calculations	Attached



Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 30 ft monopole to reflect the change in loading by Verizon.

Supporting Documents

Tower Drawings	Pirol Drawing #122291-B, dated September 1, 1993
Foundation Drawing	Pirol Drawing #122291-B, dated September 21, 1993
Geotechnical Report	RZA Project #11-09092-00, dated September 1, 1993

Analysis

The tower was analyzed using American Tower Corporation's tower analysis software. This program considers an elastic three-dimensional model and second-order effects per ANSI/TIA-222.

Basic Wind Speed:	90 mph (3-Second Gust Vasd)/ 115 mph (3-second Gust Vult)
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 1/4" radial ice concurrent
Code:	ANSI/TIA-222-G / 2012 IBC
Structure Class:	II
Exposure Category:	C
Topographic Category:	3
Crest Height:	690 ft
Spectral Response:	$S_s = 0.60, S_1 = 0.17$
Site Class:	D - Stiff Soil

Conclusion

Based on the analysis results, the structure meets the requirements per the applicable codes listed above. The tower and foundation can support the equipment as described in this report.

If you have any questions or require additional information, please contact American Tower via email at Engineering@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.



Existing and Reserved Equipment

Elevation ¹ (ft)		Qty	Antenna	Mount Type	Lines	Carrier			
Mount	RAD								
30.0	38.0	--	--	Platform w/ Handrails	(12) 1 5/8" Coax (1) 1 5/8" Hybriflex	Verizon			
	38.0	2	16' Omni		(7) 7/8" Coax	--			
	35.0	1	10' Omni						
		1	10' Dipole						
	34.0	2	8' Omni						
	27.0	1	6' Omni						
	25.0	3	60" x 10" Panel				(6) 7/8" Coax	Sprint Nextel	
		17.0	3						Commscope TMAT1921B78-21A
			3						CellMax CMA-B/6521/E0-6
	3	Andrew LNX-6515DS-A1M	(6) 1 5/8" Coax	T-Mobile					
20.0	20.0	1	40.8" x 36" Yagi	Side Arm	(1) 7/8" Coax	--			
15.0	15.0	12	Alvarion BMAX-BST-AU-ODU-HP-2.5-A	Sector Frames	(13) 3/8" Coax	Digital Bridge Comm.			
		6	PCTel Z3247						
		1	Radio Waves HPD2-18						

Equipment to be Removed

Elevation ¹ (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
38.0	38.0	3	Alcatel-Lucent B4 RRH2X60-4R	--	(6) 1 5/8" Coax	Verizon
		3	Antel HEX654CW0000L			

Proposed Equipment

Elevation ¹ (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
30.0	38.0	3	Alcatel-Lucent B13 RRH4x30-4R	Platform w/ Handrails	(1) 1 5/8" Hybriflex	Verizon
		3	Alcatel-Lucent B25 RRH4x30-4R			
		2	RFS DB-B1-6C-12AB-0Z			
		3	Alcatel-Lucent B66A RRH4x45-4R w/ Solar Shield			
		6	Andrew SBJAHH-1D65C-DL			
		3	EMS RS80-12-000A2			

¹Mount elevation is defined as height above bottom of steel structure to the bottom of mount, RAD elevation is defined as center of antenna above ground level (AGL).

Install proposed coax inside the pole shaft.



Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Anchor Bolts	43%	Pass
Shaft	64%	Pass
Base Plate	16%	Pass
Flanges	34%	Pass

Foundations

Reaction Component	Analysis Reactions	% of Usage
Moment (Kips-Ft)	508.7	79%
Axial (Kips)	11.8	91%
Shear (Kips)	19.9	27%

The structure base reactions resulting from this analysis were found to be acceptable through analysis based on geotechnical and foundation information, therefore no modification or reinforcement of the foundation will be required.

Deflection and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Sway (Rotation) (°)
30.0	Alcatel-Lucent B25 RRH4x30-4R	Verizon	0.056	0.160
	Alcatel-Lucent B13 RRH4x30-4R			
	RFS DB-B1-6C-12AB-0Z			
	Alcatel-Lucent B66A RRH4x45-4R w/ Solar Shield			
	Andrew SBJAHH-1D65C-DL			
	EMS RS80-12-000A2			
15.0	Radio Waves HPD2-18	Digital Bridge Commu	0.018	0.120

*Deflection and Sway was evaluated considering a design wind speed of 60 mph (3-Second Gust) per ANSI/TIA-222-G



Standard Conditions

All engineering services are performed on the basis that the information used is current and correct. This information may consist of, but is not necessary limited, to:

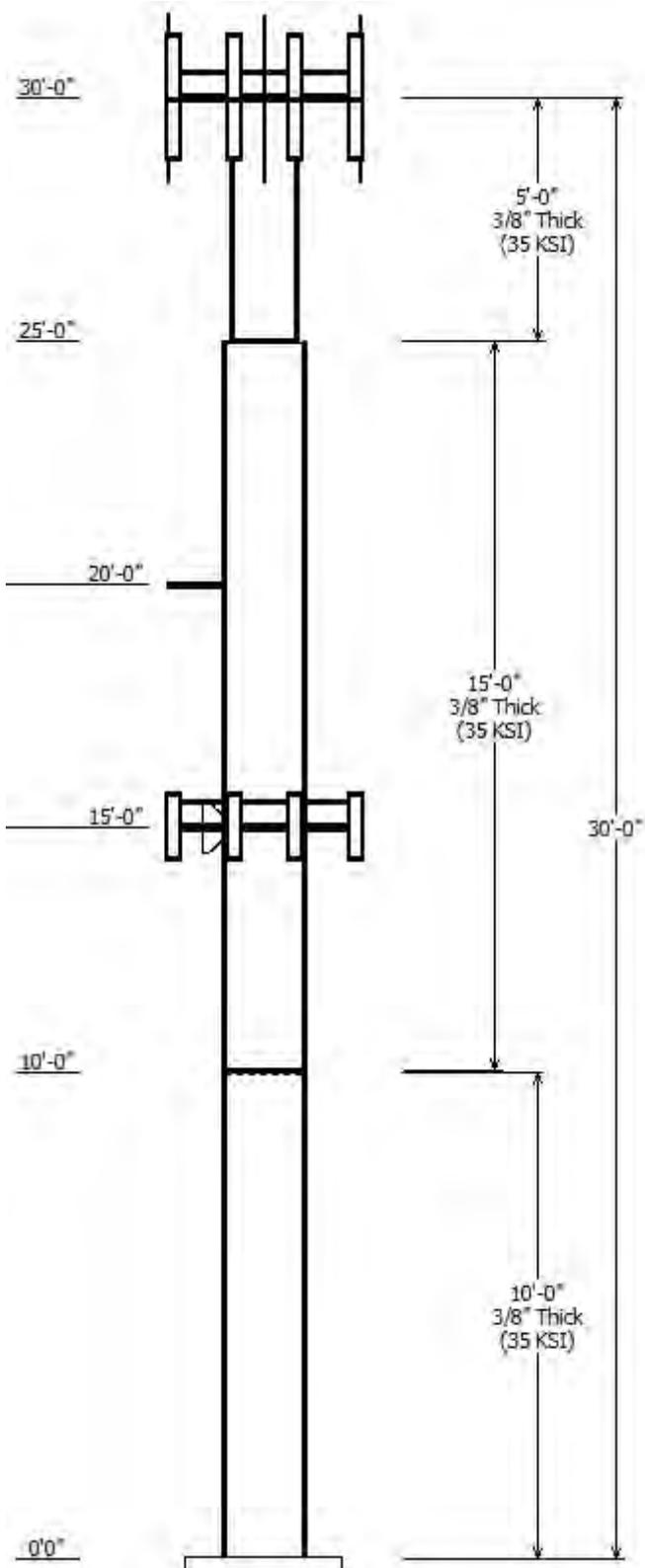
- Information supplied by the client regarding the structure itself, antenna, mounts and feed line loading on the structure and its components, or other relevant information.
- Information from drawings in the possession of American Tower Corporation, or generated by field inspections or measurements of the structure.

It is the responsibility of the client to ensure that the information provided to ATC Tower Services LLC and used in the performance of our engineering services is correct and complete. In the absence of information to the contrary, we assume that all structures were constructed in accordance with the drawings and specifications and that their capacity has not significantly changed from the "as new" condition.

Unless explicitly agreed by both the client and American Tower Corporation, all services will be performed in accordance with the current revision of ANSI/TIA -222. The design basic wind speed will be determined based on the minimum basic wind speed as prescribed in ANSI/TIA-222. Although every effort is taken to ensure that the loading considered is adequate to meet the requirements of all applicable regulatory entities, we can provide no assurance to meet any other local and state codes or requirements. If wind and ice loads or other relevant parameters are to be different from the minimum values recommended by the codes, the client shall specify the exact requirement.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. ATC Tower Services LLC is not responsible for the conclusions, opinions and recommendations made by others based on the information we supply.

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Job Information	
Pole :	82705
Code:	ANSI/TIA-222-G
Description :	30' Pirod Monopole
Client :	VERIZON WIRELESS
Struct Class :	II
Location :	Sun Valley - Ketchum, ID
Shape :	Round
Exposure :	C
Height :	30.00 (ft)
Topo :	3
Base Elev (ft):	0.00
Taper:	0.00000(in/ft)

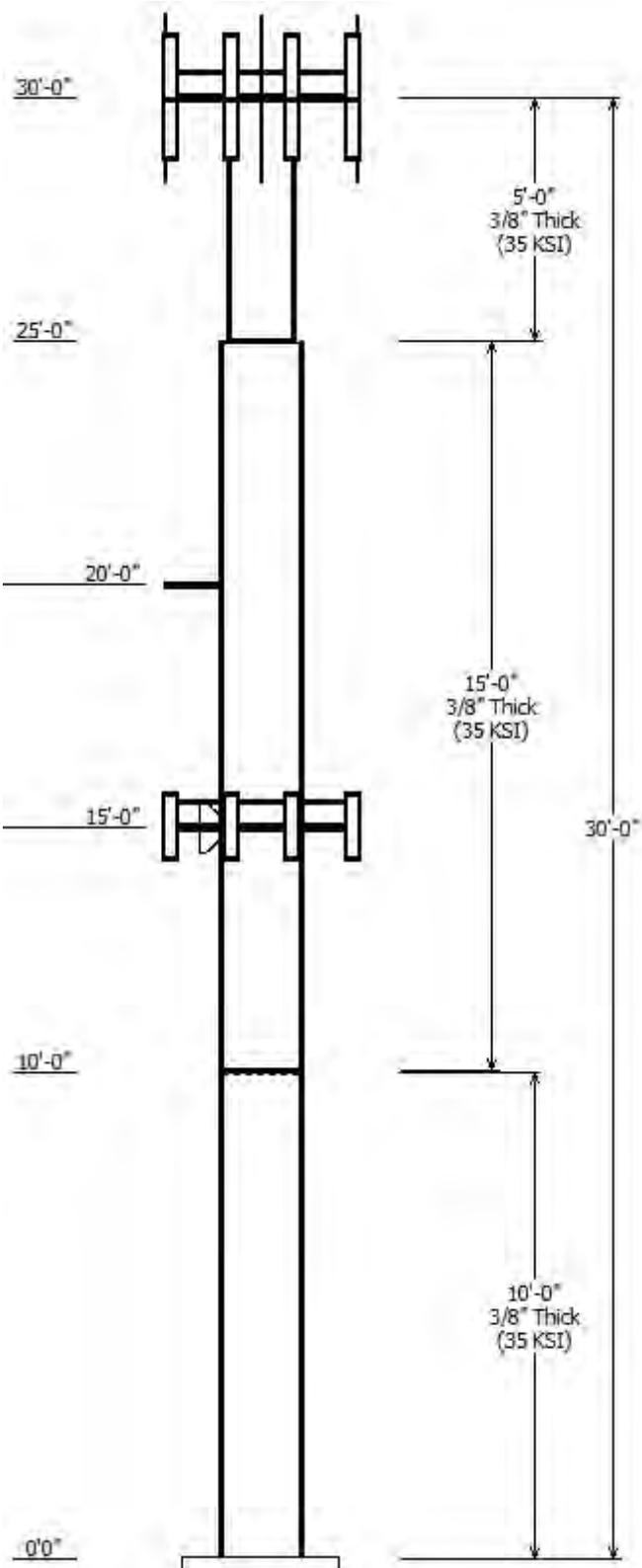
Sections Properties								
Shaft Section	Length (ft)	Diameter (in)		Thick (in)	Joint Type	Overlap Length (in)	Steel Taper (in/ft)	Grade (ksi)
		Top	Bottom					
1	10.000	30.00	30.00	0.375		0.000	0.000000	35
2	15.000	30.00	30.00	0.375	Butt Joint	0.000	0.000000	35
3	5.000	24.00	24.00	0.375	Butt Joint	0.000	0.000000	35

Discrete Appurtenance			
Attach Elev (ft)	Force Elev (ft)	Qty	Description
30.000	38.000	3	Alcatel-Lucent B13 RRH4x30-4R
30.000	38.000	3	Alcatel-Lucent B25 RRH4x30-4R
30.000	38.000	2	RFS DB-B1-6C-12AB-0Z
30.000	38.000	3	Alcatel-Lucent B66A RRH4x45-
30.000	38.000	6	Andrew SBJAHH-1D65C-DL
30.000	38.000	3	EMS RS80-12-000A2
30.000	30.000	1	Round Platform w/ Handrails
30.000	25.000	3	60" x 10" Panel
30.000	17.000	3	Andrew LNX-6515DS-A1M
30.000	17.000	3	CellMax CMA-B/6521/E0-6
30.000	17.000	3	Commscope TMAT1921B78-
30.000	27.000	1	6' Omni
30.000	34.000	2	8' Omni
30.000	38.000	2	16' Omni
30.000	35.000	1	10' Dipole
30.000	35.000	1	10' Omni
20.000	20.000	1	Round Side Arm
20.000	20.000	1	40.8" x 36" Yagi
15.000	15.000	1	Round Side Arm
15.000	15.000	3	Flat Light Sector Frame
15.000	15.000	1	Radio Waves HPD2-18
15.000	15.000	6	PCTel Z3247
15.000	15.000	12	Alvarion BMAX-BST-AU-ODU-

Linear Appurtenance			
Elev (ft)		Description	Exposed To Wind
From	To		
10.000	25.000	Climbing Ladder	Yes
0.000	30.000	1 5/8" Coax	No
0.000	30.000	1 5/8" Coax	No
0.000	30.000	1 5/8" Hybriflex	No
0.000	30.000	1 5/8" Hybriflex	No
0.000	30.000	7/8" Coax	No
0.000	15.000	3/8" Coax	No
0.000	20.000	7/8" Coax	No
0.000	25.000	7/8" Coax	No

Load Cases	
1.2D + 1.6W	90 mph with No Ice
0.9D + 1.6W	90 mph with No Ice (Reduced DL)

1.2D + 1.0Di + 1.0Wi	50 mph with 0.25 in Radial Ice
(1.2 + 0.2Sds) * DL + E	Seismic Equivalent Lateral Forces Method
(1.2 + 0.2Sds) * DL + E	Seismic Equivalent Modal Analysis Method
(0.9 - 0.2Sds) * DL + E	Seismic (Reduced DL) Equivalent Lateral
(0.9 - 0.2Sds) * DL + E	Seismic (Reduced DL) Equivalent Modal
1.0D + 1.0W	Serviceability 60 mph



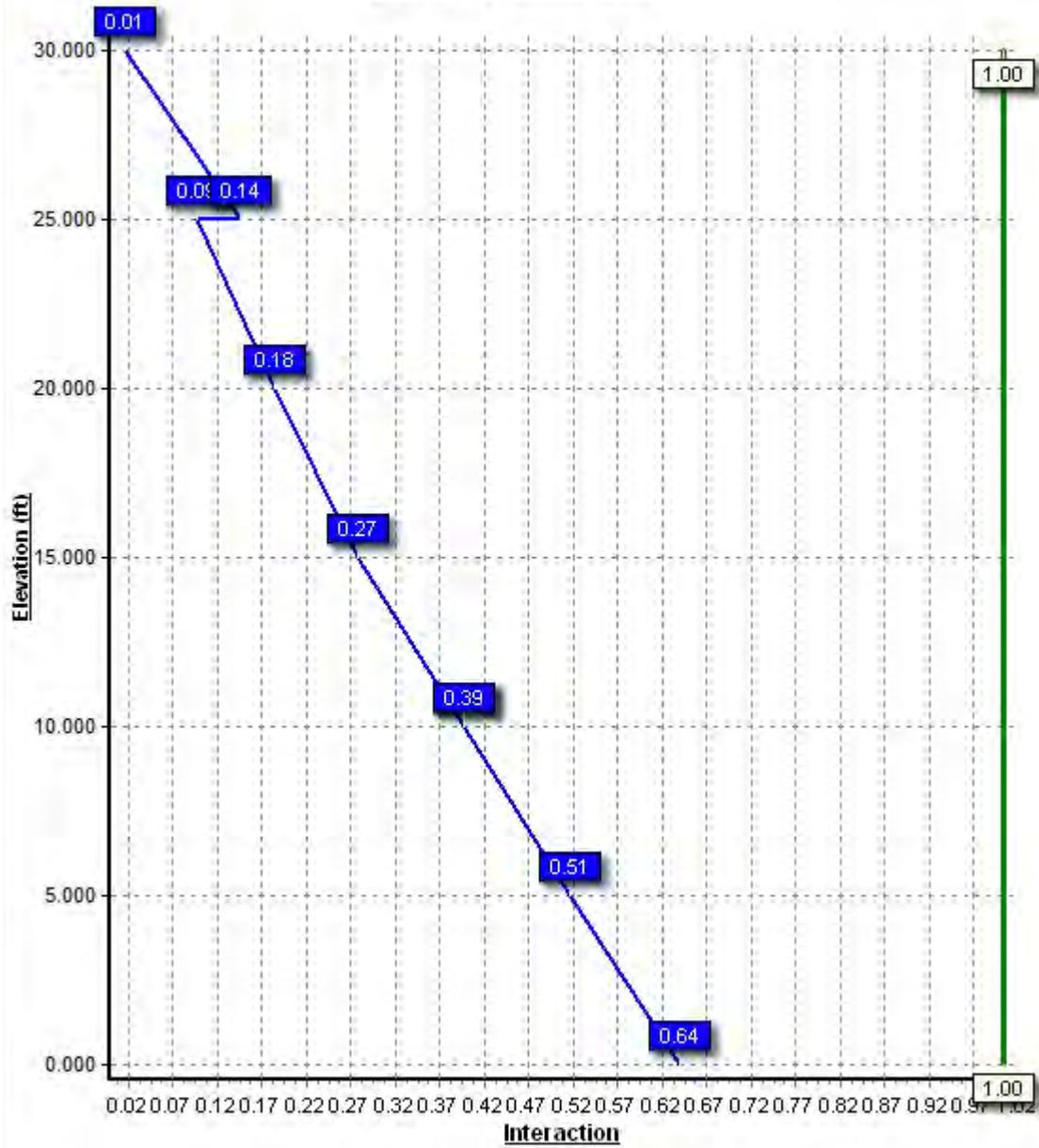
Reactions

Load Case	Moment (kip-ft)	Shear (kip)	Axial (kip)
1.2D + 1.6W	508.68	19.90	11.79
0.9D + 1.6W	508.33	19.89	8.84
1.2D + 1.0Di + 1.0Wi	123.71	5.02	14.73
(1.2 + 0.2Sds) * DL + E ELFM	106.74	4.45	11.93
(1.2 + 0.2Sds) * DL + E EMAM	160.76	5.97	11.93
(0.9 - 0.2Sds) * DL + E ELFM	106.63	4.45	7.27
(0.9 - 0.2Sds) * DL + E EMAM	160.59	5.97	7.27
1.0D + 1.0W	141.24	5.53	9.85

Dish Deflections

Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)
1.0D + 1.0W	15.00	0.201	0.112

Load Case : 1.2D + 1.6W
Max Ratio 67.67% at 0.0ft



Site Number: 82705

Code: ANSI/TIA-222-G

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Site Name: Sun Valley - Ketchum, ID

Engineering Number: 65724421

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Customer: VERIZON WIRELESS

Analysis Parameters

Location:	Blaine County, ID	Height (ft):	30
Code:	ANSI/TIA-222-G	Base Diameter (in):	30.00
Shape:	Round	Top Diameter (in):	24.00
Pole Type:	Stepped	Taper (in/ft) :	0.000
Pole Manufacturer:	Pirod		

Ice & Wind Parameters

Structure Class:	II	Design Wind Speed Without Ice:	90 mph
Exposure Category:	C	Design Wind Speed With Ice:	50 mph
Topographic Category:	3	Operational Wind Speed:	60 mph
Crest Height:	690.4 ft	Design Ice Thickness:	0.25 in

Seismic Parameters

Analysis Method:	Equivalent Modal Analysis & Equivalent Lateral Force Methods		
Site Class:	D - Stiff Soil		
Period Based on Rayleigh Method (sec):	0.27		
T _L (sec):	6	p:	1.3
S _s :	0.595	S ₁ :	0.172
F _a :	1.324	F _v :	2.112
S _{ds} :	0.525	S _{d1} :	0.242
		C _s :	0.350
		C _s Max:	0.593
		C _s Min:	0.030

Load Cases

1.2D + 1.6W	90 mph with No Ice
0.9D + 1.6W	90 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph with 0.25 in Radial Ice
(1.2 + 0.2Sds) * DL + E ELFM	Seismic Equivalent Lateral Forces Method
(1.2 + 0.2Sds) * DL + E EMAM	Seismic Equivalent Modal Analysis Method
(0.9 - 0.2Sds) * DL + E ELFM	Seismic (Reduced DL) Equivalent Lateral Forces Method
(0.9 - 0.2Sds) * DL + E EMAM	Seismic (Reduced DL) Equivalent Modal Analysis Method
1.0D + 1.0W	Serviceability 60 mph

Site Number: 82705

Code: ANSI/TIA-222-G

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Site Name: Sun Valley - Ketchum, ID

Engineering Number: 65724421

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Customer: VERIZON WIRELESS

Shaft Section Properties

Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Slip Joint Len (in)	Weight (lb)	Bottom						Top						
							Dia (in)	Elev (ft)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	Taper (in/ft)
1-R	10.000	0.3750	35		0.00	1,188	30.00	0.00	34.90	3831.8	0.00	80.00	30.00	10.00	34.90	3831.8	0.00	80.00	0.000000
2-R	15.000	0.3750	35	Butt	0.00	1,781	30.00	10.00	34.90	3831.8	0.00	80.00	30.00	25.00	34.90	3831.8	0.00	80.00	0.000000
3-R	5.000	0.3750	35	Butt	0.00	474	24.00	25.00	27.83	1943.3	0.00	64.00	24.00	30.00	27.83	1943.3	0.00	64.00	0.000000
Shaft Weight						3,443													

Discrete Appurtenance Properties

Attach Elev (ft)	Description	Qty	No Ice			Ice			Distance From Face (ft)	Vert Ecc (ft)
			Weight (lb)	EPAA (sf)	Orientation Factor	Weight (lb)	EPAA (sf)	Orientation Factor		
30.00	10' Dipole	1	30.00	3.760	1.00	69.13	8.125	1.00	0.000	5.000
30.00	10' Omni	1	25.00	3.000	1.00	46.14	4.334	1.00	0.000	5.000
30.00	16' Omni	2	55.00	4.800	1.00	101.51	6.934	1.00	0.000	8.000
30.00	6' Omni	1	25.00	1.760	1.00	47.88	2.239	1.00	0.000	-3.000
30.00	60" x 10" Panel	3	30.00	5.650	0.79	74.12	6.033	0.79	0.000	-5.000
30.00	8' Omni	2	25.00	2.400	1.00	55.24	3.332	1.00	0.000	4.000
30.00	Alcatel-Lucent B13 RRH4x30-	3	57.80	2.140	0.67	83.44	2.355	0.67	0.000	8.000
30.00	Alcatel-Lucent B25 RRH4x30-	3	51.00	2.140	0.67	74.17	2.355	0.67	0.000	8.000
30.00	Alcatel-Lucent B66A	3	56.80	2.540	0.67	83.51	2.782	0.67	0.000	8.000
30.00	Andrew LNX-6515DS-A1M	3	49.80	11.450	0.84	136.72	12.053	0.84	0.000	-13.000
30.00	Andrew SBJAHH-1D65C-DL	6	55.10	11.390	0.84	141.71	12.001	0.84	0.000	8.000
30.00	CellMax CMA-B/6521/E0-6	3	31.00	6.570	0.86	80.31	7.061	0.86	0.000	-13.000
30.00	Commscope TMAT1921B78-	3	17.60	0.770	0.50	25.28	0.782	0.50	0.000	-13.000
30.00	EMS RS80-12-000A2	3	36.00	11.470	0.83	122.59	12.079	0.83	0.000	8.000
30.00	RFS DB-B1-6C-12AB-0Z	2	32.00	2.510	0.67	62.33	2.740	0.67	0.000	8.000
30.00	Round Platform w/ Handrails	1	2000.00	27.200	1.00	2,482.77	36.307	1.00	0.000	0.000
20.00	40.8" x 36" Yagi	1	11.00	4.910	1.00	38.73	7.220	1.00	0.000	0.000
20.00	Round Side Arm	1	150.00	5.200	1.00	176.22	6.174	1.00	0.000	0.000
15.00	Alvarion BMAX-BST-AU-ODU-	12	18.90	0.880	0.50	29.61	1.020	0.50	0.000	0.000
15.00	Flat Light Sector Frame	3	400.00	17.900	0.75	504.68	23.148	0.75	0.000	0.000
15.00	PCTel Z3247	6	6.00	1.470	0.90	18.47	1.683	0.90	0.000	0.000
15.00	Radio Waves HPD2-18	1	90.00	3.960	1.00	186.37	4.368	1.00	0.000	0.000
15.00	Round Side Arm	1	150.00	5.200	1.00	175.44	6.145	1.00	0.000	0.000
Totals		65	5488.40			8,531.67			Number of Loadings :	23

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Qty	Description	Coax Diameter (in)	Coax Weight (lb/ft)	Flat	Projected Width (in)	Exposed To Wind	Carrier
0.00	30.00	12	1 5/8" Coax	1.98	0.82	N	0.00	N	Verizon
0.00	30.00	6	1 5/8" Coax	1.98	0.82	N	0.00	N	T-Mobile
0.00	30.00	1	1 5/8" Hybriflex	1.98	1.30	N	0.00	N	Verizon
0.00	30.00	1	1 5/8" Hybriflex	1.98	1.30	N	0.00	N	Verizon
0.00	30.00	7	7/8" Coax	1.09	0.33	N	0.00	N	Unknown
0.00	25.00	6	7/8" Coax	1.09	0.33	N	0.00	N	Sprint Nextel
10.00	25.00	3	Climbing Ladder	2.88	5.80	N	2.88	Y	--
0.00	20.00	1	7/8" Coax	1.09	0.33	N	0.00	N	Unknown
0.00	15.00	13	3/8" Coax	0.44	0.08	N	0.00	N	Digital Bridge Communications

Site Number: 82705

Code: ANSI/TIA-222-G

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Site Name: Sun Valley - Ketchum, ID

Engineering Number: 65724421

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Customer: VERIZON WIRELESS

Segment Properties (Max Len : 5.ft)

Seg Top Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	Fy (ksi)	S (in ³)	Z (in ³)	Weight (lb)
0.00		0.3750	30.000	34.901	3,831.8	0.00	80.00	35.0	255.5	329.1	0.0
5.00		0.3750	30.000	34.901	3,831.8	0.00	80.00	35.0	255.5	329.1	593.8
10.00	Top - Section 1	0.3750	30.000	34.901	3,831.8	0.00	80.00	35.0	255.5	329.1	593.8
10.00	Bot - Section 2	0.3750	30.000	34.901	3,831.8	0.00	80.00	35.0	255.5	329.1	593.8
15.00		0.3750	30.000	34.901	3,831.8	0.00	80.00	35.0	255.5	329.1	593.8
20.00		0.3750	30.000	34.901	3,831.8	0.00	80.00	35.0	255.5	329.1	593.8
25.00	Top - Section 2	0.3750	30.000	34.901	3,831.8	0.00	80.00	35.0	255.5	329.1	593.8
25.00	Bot - Section 3	0.3750	24.000	27.833	1,943.3	0.00	64.00	35.0	161.9	209.3	473.5
30.00		0.3750	24.000	27.833	1,943.3	0.00	64.00	35.0	161.9	209.3	473.5
											3,442.6

Site Number: 82705

Code: ANSI/TIA-222-G

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Site Name: Sun Valley - Ketchum, ID

Engineering Number: 65724421

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Customer: VERIZON WIRELESS

Load Case: 1.2D + 1.6W

90 mph with No Ice

9 Iterations

Gust Response Factor : 1.10

Wind Importance Factor : 1.00

Dead Load Factor : 1.20

Wind Load Factor : 1.60

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		257.4	0.0					0.0	0.0	257.4	0.0	0.0	0.0
5.00		512.3	712.6					0.0	138.1	512.3	850.7	0.0	0.0
10.00	Top - Section 1	507.2	712.6					0.0	138.1	507.2	850.7	0.0	0.0
15.00	Appertunance(s)	510.2	712.6	3,344.5	0.0	0.0	2,043.4	0.0	242.5	3,854.7	2,998.4	0.0	0.0
20.00	Appertunance(s)	527.0	712.6	711.4	0.0	0.0	193.2	0.0	236.3	1,238.5	1,142.0	0.0	0.0
25.00	Top - Section 2	491.7	712.6					0.0	234.3	491.7	946.9	0.0	0.0
30.00	Appertunance(s)	222.5	568.2	13,050.5	0.0	6,589.3	4,349.5	0.0	118.0	13,273.0	5,035.8	0.0	0.0
Totals:										20,134.8	11,824.4	0.00	0.00

Site Number: 82705

Code: ANSI/TIA-222-G

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Site Name: Sun Valley - Ketchum, ID

Engineering Number: 65724421

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Customer: VERIZON WIRELESS

Load Case: 1.2D + 1.6W

90 mph with No Ice

9 Iterations

Gust Response Factor : 1.10

Wind Importance Factor : 1.00

Dead Load Factor : 1.20

Wind Load Factor : 1.60

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-11.79	-19.90	0.00	-508.68	0.00	508.68	1,099.39	549.69	1,339.29	814.32	0.00	0.00	0.637
5.00	-10.89	-19.41	0.00	-409.20	0.00	409.20	1,099.39	549.69	1,339.29	814.32	0.09	-0.17	0.514
10.00	-10.00	-18.92	0.00	-312.15	0.00	312.15	1,099.39	549.69	1,339.29	814.32	0.35	-0.30	0.394
10.00	-10.00	-18.92	0.00	-312.15	0.00	312.15	1,099.39	549.69	1,339.29	814.32	0.35	-0.30	0.394
15.00	-7.01	-15.06	0.00	-217.54	0.00	217.54	1,099.39	549.69	1,339.29	814.32	0.72	-0.40	0.274
20.00	-5.86	-13.82	0.00	-142.26	0.00	142.26	1,099.39	549.69	1,339.29	814.32	1.18	-0.47	0.181
25.00	-4.92	-13.32	0.00	-73.18	0.00	73.18	1,099.39	549.69	1,339.29	814.32	1.70	-0.51	0.095
25.00	-4.92	-13.32	0.00	-73.18	0.00	73.18	876.73	438.36	849.03	539.02	1.70	-0.51	0.142
30.00	0.00	-13.27	0.00	-6.59	0.00	6.59	876.73	438.36	849.03	539.02	2.25	-0.52	0.013

Site Number: 82705

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Site Name: Sun Valley - Ketchum, ID

Engineering Number: 65724421

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Customer: VERIZON WIRELESS

Load Case: 0.9D + 1.6W

90 mph with No Ice (Reduced DL)

9 Iterations

Gust Response Factor : 1.10

Wind Importance Factor : 1.00

Dead Load Factor : 0.90

Wind Load Factor : 1.60

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		257.4	0.0					0.0	0.0	257.4	0.0	0.0	0.0
5.00		512.3	534.4					0.0	103.6	512.3	638.0	0.0	0.0
10.00	Top - Section 1	507.2	534.4					0.0	103.6	507.2	638.0	0.0	0.0
15.00	Appertunance(s)	510.2	534.4	3,344.5	0.0	0.0	1,532.5	0.0	181.9	3,854.7	2,248.8	0.0	0.0
20.00	Appertunance(s)	527.0	534.4	711.4	0.0	0.0	144.9	0.0	177.2	1,238.5	856.5	0.0	0.0
25.00	Top - Section 2	491.7	534.4					0.0	175.7	491.7	710.1	0.0	0.0
30.00	Appertunance(s)	222.5	426.2	13,050.5	0.0	6,589.3	3,262.1	0.0	88.5	13,273.0	3,776.8	0.0	0.0
Totals:										20,134.8	8,868.33	0.00	0.00

Site Number: 82705

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Site Name: Sun Valley - Ketchum, ID

Engineering Number: 65724421

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Customer: VERIZON WIRELESS

Load Case: 0.9D + 1.6W

90 mph with No Ice (Reduced DL)

9 Iterations

Gust Response Factor : 1.10

Wind Importance Factor : 1.00

Dead Load Factor : 0.90

Wind Load Factor : 1.60

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-8.84	-19.89	0.00	-508.33	0.00	508.33	1,099.39	549.69	1,339.29	814.32	0.00	0.00	0.634
5.00	-8.15	-19.40	0.00	-408.88	0.00	408.88	1,099.39	549.69	1,339.29	814.32	0.09	-0.17	0.511
10.00	-7.47	-18.90	0.00	-311.88	0.00	311.88	1,099.39	549.69	1,339.29	814.32	0.35	-0.30	0.391
10.00	-7.47	-18.90	0.00	-311.88	0.00	311.88	1,099.39	549.69	1,339.29	814.32	0.35	-0.30	0.391
15.00	-5.23	-15.04	0.00	-217.35	0.00	217.35	1,099.39	549.69	1,339.29	814.32	0.72	-0.40	0.272
20.00	-4.37	-13.80	0.00	-142.14	0.00	142.14	1,099.39	549.69	1,339.29	814.32	1.18	-0.47	0.179
25.00	-3.66	-13.31	0.00	-73.12	0.00	73.12	1,099.39	549.69	1,339.29	814.32	1.70	-0.51	0.094
25.00	-3.66	-13.31	0.00	-73.12	0.00	73.12	876.73	438.36	849.03	539.02	1.70	-0.51	0.141
30.00	0.00	-13.27	0.00	-6.59	0.00	6.59	876.73	438.36	849.03	539.02	2.24	-0.52	0.013

Site Number: 82705

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Site Name: Sun Valley - Ketchum, ID

Engineering Number: 65724421

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Customer: VERIZON WIRELESS

Load Case: 1.2D + 1.0Di + 1.0Wi	50 mph with 0.25 in Radial Ice	9 Iterations
Gust Response Factor : 1.10	Ice Dead Load Factor : 1.00	Wind Importance Factor : 1.00
Dead Load Factor : 1.20		Ice Importance Factor : 1.00
Wind Load Factor : 1.00		

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		102.7	0.0					0.0	0.0	102.7	0.0	0.0	0.0
5.00		204.9	809.3					0.0	138.1	204.9	947.4	0.0	0.0
10.00	Top - Section 1	203.4	820.4					0.0	138.1	203.4	958.5	0.0	0.0
15.00	Appertunance(s)	204.9	825.8	797.6	0.0	0.0	2,366.7	0.0	275.5	1,002.5	3,467.9	0.0	0.0
20.00	Appertunance(s)	211.9	829.3	181.8	0.0	0.0	172.9	0.0	270.0	393.7	1,272.2	0.0	0.0
25.00	Top - Section 2	198.8	831.9					0.0	268.6	198.8	1,100.5	0.0	0.0
30.00	Appertunance(s)	90.5	665.9	2,918.0	0.0	2,077.6	6,196.6	0.0	118.0	3,008.5	6,980.5	0.0	0.0
Totals:										5,114.53	14,727.0	0.00	0.00

Site Number: 82705

Code: ANSI/TIA-222-G

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Site Name: Sun Valley - Ketchum, ID

Engineering Number: 65724421

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Customer: VERIZON WIRELESS

Load Case: 1.2D + 1.0Di + 1.0Wi

50 mph with 0.25 in Radial Ice

9 Iterations

Gust Response Factor : 1.10

Ice Dead Load Factor : 1.00

Wind Importance Factor : 1.00

Dead Load Factor : 1.20

Ice Importance Factor : 1.00

Wind Load Factor : 1.00

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-14.73	-5.02	0.00	-123.71	0.00	123.71	1,099.39	549.69	1,339.29	814.32	0.00	0.00	0.165
5.00	-13.77	-4.82	0.00	-98.62	0.00	98.62	1,099.39	549.69	1,339.29	814.32	0.02	-0.04	0.134
10.00	-12.81	-4.62	0.00	-74.52	0.00	74.52	1,099.39	549.69	1,339.29	814.32	0.08	-0.07	0.103
10.00	-12.81	-4.62	0.00	-74.52	0.00	74.52	1,099.39	549.69	1,339.29	814.32	0.08	-0.07	0.103
15.00	-9.35	-3.62	0.00	-51.41	0.00	51.41	1,099.39	549.69	1,339.29	814.32	0.17	-0.10	0.072
20.00	-8.07	-3.22	0.00	-33.32	0.00	33.32	1,099.39	549.69	1,339.29	814.32	0.29	-0.11	0.048
25.00	-6.97	-3.02	0.00	-17.20	0.00	17.20	1,099.39	549.69	1,339.29	814.32	0.41	-0.12	0.027
25.00	-6.97	-3.02	0.00	-17.20	0.00	17.20	876.73	438.36	849.03	539.02	0.41	-0.12	0.040
30.00	0.00	-3.01	0.00	-2.08	0.00	2.08	876.73	438.36	849.03	539.02	0.54	-0.13	0.004

Site Number: 82705

Code: ANSI/TIA-222-G

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Site Name: Sun Valley - Ketchum, ID

Engineering Number: 65724421

3/31/2016 2:20:59 PM

Customer: VERIZON WIRELESS

Load Case: 1.0D + 1.0W

Serviceability 60 mph

9 Iterations

Gust Response Factor : 1.10

Wind Importance Factor : 1.00

Dead Load Factor : 1.00

Wind Load Factor : 1.00

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		71.5	0.0					0.0	0.0	71.5	0.0	0.0	0.0
5.00		142.3	593.8					0.0	115.1	142.3	708.9	0.0	0.0
10.00	Top - Section 1	140.9	593.8					0.0	115.1	140.9	708.9	0.0	0.0
15.00	Appertunance(s)	141.7	593.8	929.0	0.0	0.0	1,702.8	0.0	202.1	1,070.7	2,498.7	0.0	0.0
20.00	Appertunance(s)	146.4	593.8	197.6	0.0	0.0	161.0	0.0	196.9	344.0	951.7	0.0	0.0
25.00	Top - Section 2	136.6	593.8					0.0	195.2	136.6	789.0	0.0	0.0
30.00	Appertunance(s)	61.8	473.5	3,625.1	0.0	1,830.4	3,624.6	0.0	98.3	3,687.0	4,196.5	0.0	0.0
Totals:										5,593.00	9,853.70	0.00	0.00

Site Number: 82705

Code: ANSI/TIA-222-G

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Site Name: Sun Valley - Ketchum, ID

Engineering Number: 65724421

3/31/2016 2:21:00 PM

Customer: VERIZON WIRELESS

Load Case: 1.0D + 1.0W

Serviceability 60 mph

9 Iterations

Gust Response Factor : 1.10

Wind Importance Factor : 1.00

Dead Load Factor : 1.00

Wind Load Factor : 1.00

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-9.85	-5.53	0.00	-141.24	0.00	141.24	1,099.39	549.69	1,339.29	814.32	0.00	0.00	0.183
5.00	-9.14	-5.39	0.00	-113.61	0.00	113.61	1,099.39	549.69	1,339.29	814.32	0.03	-0.05	0.148
10.00	-8.43	-5.25	0.00	-86.66	0.00	86.66	1,099.39	549.69	1,339.29	814.32	0.10	-0.08	0.114
10.00	-8.43	-5.25	0.00	-86.66	0.00	86.66	1,099.39	549.69	1,339.29	814.32	0.10	-0.08	0.114
15.00	-5.93	-4.18	0.00	-60.40	0.00	60.40	1,099.39	549.69	1,339.29	814.32	0.20	-0.11	0.080
20.00	-4.98	-3.84	0.00	-39.49	0.00	39.49	1,099.39	549.69	1,339.29	814.32	0.33	-0.13	0.053
25.00	-4.19	-3.70	0.00	-20.32	0.00	20.32	1,099.39	549.69	1,339.29	814.32	0.47	-0.14	0.029
25.00	-4.19	-3.70	0.00	-20.32	0.00	20.32	876.73	438.36	849.03	539.02	0.47	-0.14	0.043
30.00	0.00	-3.69	0.00	-1.83	0.00	1.83	876.73	438.36	849.03	539.02	0.62	-0.15	0.003

Site Number: 82705

Code: ANSI/TIA-222-G

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Site Name: Sun Valley - Ketchum, ID

Engineering Number: 65724421

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Customer: VERIZON WIRELESS

Equivalent Lateral Forces Method Analysis

(Based on ASCE7-10 Chapters 11, 12, 15)

Spectral Response Acceleration for Short Period (S_s):	0.60
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.17
Long-Period Transition Period (T_L):	6
Importance Factor (I_E):	1.00
Site Coefficient F_a :	1.32
Site Coefficient F_v :	2.11
Response Modification Coefficient (R):	1.50
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.53
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.24
Seismic Response Coefficient (C_s):	0.35
Upper Limit C_s	0.59
Lower Limit C_s	0.03
Period based on Rayleigh Method (sec):	0.27
Redundancy Factor (p):	1.30
Seismic Force Distribution Exponent (k):	1.00
Total Unfactored Dead Load:	9.85 k
Seismic Base Shear (E):	4.49 k

Load Case (1.2 + 0.2S_{ds}) * DL + E ELFM

Seismic Equivalent Lateral Forces Method

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
6	27.50	572	16	0.078	349	746
5	22.50	789	18	0.088	394	1,030
4	17.50	791	14	0.069	307	1,032
3	12.50	796	10	0.049	221	1,039
2	7.50	709	5	0.026	118	925
1	2.50	709	2	0.009	39	925
Commscope TMA1921B7	30.00	53	2	0.008	35	69
6' Omni	30.00	25	1	0.004	17	33
Alcatel-Lucent B25 R	30.00	153	5	0.023	102	200
Alcatel-Lucent B13 R	30.00	173	5	0.026	116	226
8' Omni	30.00	50	2	0.007	33	65
RFS DB-B1-6C-12AB-0Z	30.00	64	2	0.010	43	84
Alcatel-Lucent B66A	30.00	170	5	0.025	114	222
10' Omni	30.00	25	1	0.004	17	33
10' Dipole	30.00	30	1	0.004	20	39
16' Omni	30.00	110	3	0.016	73	144
60" x 10" Panel	30.00	90	3	0.013	60	117
CellMax CMA-B/6521/E	30.00	93	3	0.014	62	121
Andrew SBJAHH-1D65C-	30.00	331	10	0.049	220	431
Andrew LNX-6515DS-A1	30.00	149	4	0.022	100	195
EMS RS80-12-000A2	30.00	108	3	0.016	72	141
Round Platform w/ Ha	30.00	2,000	60	0.297	1,333	2,610
40.8" x 36" Yagi	20.00	11	0	0.001	5	14

Site Number: 82705

Code: ANSI/TIA-222-G

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Site Name: Sun Valley - Ketchum, ID

Engineering Number: 65724421

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Customer: VERIZON WIRELESS

Round Side Arm	20.00	150	3	0.015	67	196
Alvarion BMAX-BST-AU	15.00	227	3	0.017	76	296
PCTel Z3247	15.00	36	1	0.003	12	47
Radio Waves HPD2-18	15.00	90	1	0.007	30	117
Round Side Arm	15.00	150	2	0.011	50	196
Flat Light Sector Fr	15.00	1,200	18	0.089	400	1,566
		9,854	202	1.000	4,485	12,859

Load Case (0.9 - 0.2Sds) * DL + E ELFM

Seismic (Reduced DL) Equivalent Lateral Forces Method

Segment	Height Above Base (ft)	Weight (lb)	W _z (lb-ft)	C _{vx}	Horizontal Force (lb)	Vertical Force (lb)
6	27.50	572	16	0.078	349	455
5	22.50	789	18	0.088	394	627
4	17.50	791	14	0.069	307	629
3	12.50	796	10	0.049	221	633
2	7.50	709	5	0.026	118	564
1	2.50	709	2	0.009	39	564
Commscope TMAT1921B7	30.00	53	2	0.008	35	42
6' Omni	30.00	25	1	0.004	17	20
Alcatel-Lucent B25 R	30.00	153	5	0.023	102	122
Alcatel-Lucent B13 R	30.00	173	5	0.026	116	138
8' Omni	30.00	50	2	0.007	33	40
RFS DB-B1-6C-12AB-0Z	30.00	64	2	0.010	43	51
Alcatel-Lucent B66A	30.00	170	5	0.025	114	135
10' Omni	30.00	25	1	0.004	17	20
10' Dipole	30.00	30	1	0.004	20	24
16' Omni	30.00	110	3	0.016	73	87
60" x 10" Panel	30.00	90	3	0.013	60	72
CellMax CMA-B/6521/E	30.00	93	3	0.014	62	74
Andrew SBJAHH-1D65C-	30.00	331	10	0.049	220	263
Andrew LNX-6515DS-A1	30.00	149	4	0.022	100	119
EMS RS80-12-000A2	30.00	108	3	0.016	72	86
Round Platform w/ Ha	30.00	2,000	60	0.297	1,333	1,590
40.8" x 36" Yagi	20.00	11	0	0.001	5	9
Round Side Arm	20.00	150	3	0.015	67	119
Alvarion BMAX-BST-AU	15.00	227	3	0.017	76	180
PCTel Z3247	15.00	36	1	0.003	12	29
Radio Waves HPD2-18	15.00	90	1	0.007	30	72
Round Side Arm	15.00	150	2	0.011	50	119
Flat Light Sector Fr	15.00	1,200	18	0.089	400	954
		9,854	202	1.000	4,485	7,833

Site Number: 82705

Code: ANSI/TIA-222-G

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Site Name: Sun Valley - Ketchum, ID

Engineering Number: 65724421

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Customer: VERIZON WIRELESS

Load Case (1.2 + 0.2Sds) * DL + E ELFM

Seismic Equivalent Lateral Forces Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-11.93	-4.45	0.00	-106.74	0.00	106.74	1,099.39	549.69	1,339.29	814.32	0.00	0.00	0.142
5.00	-11.01	-4.34	0.00	-84.49	0.00	84.49	1,099.39	549.69	1,339.29	814.32	0.02	-0.04	0.114
10.00	-9.97	-4.12	0.00	-62.80	0.00	62.80	1,099.39	549.69	1,339.29	814.32	0.07	-0.06	0.086
10.00	-9.97	-4.12	0.00	-62.80	0.00	62.80	1,099.39	549.69	1,339.29	814.32	0.07	-0.06	0.086
15.00	-6.71	-3.24	0.00	-42.21	0.00	42.21	1,099.39	549.69	1,339.29	814.32	0.15	-0.08	0.058
20.00	-5.47	-2.77	0.00	-26.00	0.00	26.00	1,099.39	549.69	1,339.29	814.32	0.24	-0.09	0.037
25.00	-4.73	-2.42	0.00	-12.12	0.00	12.12	1,099.39	549.69	1,339.29	814.32	0.35	-0.10	0.019
25.00	-4.73	-2.42	0.00	-12.12	0.00	12.12	876.73	438.36	849.03	539.02	0.35	-0.10	0.028
30.00	0.00	-2.42	0.00	0.00	0.00	0.00	876.73	438.36	849.03	539.02	0.46	-0.10	0.000

Site Number: 82705

Code: ANSI/TIA-222-G

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Site Name: Sun Valley - Ketchum, ID

Engineering Number: 65724421

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Customer: VERIZON WIRELESS

Load Case (0.9 - 0.2Sds) * DL + E ELFM

Seismic (Reduced DL) Equivalent Lateral Forces Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-7.27	-4.45	0.00	-106.63	0.00	106.63	1,099.39	549.69	1,339.29	814.32	0.00	0.00	0.138
5.00	-6.70	-4.33	0.00	-84.39	0.00	84.39	1,099.39	549.69	1,339.29	814.32	0.02	-0.04	0.110
10.00	-6.07	-4.11	0.00	-62.72	0.00	62.72	1,099.39	549.69	1,339.29	814.32	0.07	-0.06	0.083
10.00	-6.07	-4.11	0.00	-62.72	0.00	62.72	1,099.39	549.69	1,339.29	814.32	0.07	-0.06	0.083
15.00	-4.09	-3.24	0.00	-42.15	0.00	42.15	1,099.39	549.69	1,339.29	814.32	0.15	-0.08	0.056
20.00	-3.33	-2.77	0.00	-25.96	0.00	25.96	1,099.39	549.69	1,339.29	814.32	0.24	-0.09	0.035
25.00	-2.88	-2.42	0.00	-12.11	0.00	12.11	1,099.39	549.69	1,339.29	814.32	0.35	-0.10	0.018
25.00	-2.88	-2.42	0.00	-12.11	0.00	12.11	876.73	438.36	849.03	539.02	0.35	-0.10	0.026
30.00	0.00	-2.42	0.00	0.00	0.00	0.00	876.73	438.36	849.03	539.02	0.46	-0.10	0.000

Site Number: 82705

Code: ANSI/TIA-222-G

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Site Name: Sun Valley - Ketchum, ID

Engineering Number: 65724421

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Customer: VERIZON WIRELESS

Equivalent Modal Forces Analysis

(Based on ASCE7-10 Chapters 11, 12 & 15 and ANSI/TIA-G, section 2.7)

Spectral Response Acceleration for Short Period (S_s):	0.60
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.17
Importance Factor (I_E):	1.00
Site Coefficient F_a :	1.32
Site Coefficient F_v :	2.11
Response Modification Coefficient (R):	1.50
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.53
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.24
Period Based on Rayleigh Method (sec):	0.27
Redundancy Factor (ρ):	1.30

Load Case (1.2 + 0.2Sds) * DL + E EMAM

Seismic Equivalent Modal Analysis Method

Segment	Height Above Base (ft)	Weight (lb)	a	b	c	Saz	Horizontal Force (lb)	Vertical Force (lb)
6	27.50	572	1.588	0.742	0.654	0.952	472	746
5	22.50	789	1.063	-0.088	0.165	0.474	324	1,030
4	17.50	791	0.643	-0.068	0.020	0.299	205	1,032
3	12.50	796	0.328	0.039	0.010	0.192	132	1,039
2	7.50	709	0.118	0.070	0.035	0.097	60	925
1	2.50	709	0.013	0.059	0.034	0.037	23	925
Commscope	30.00	53	1.890	1.980	1.140	1.389	64	69
6' Omni	30.00	25	1.890	1.980	1.140	1.389	30	33
Alcatel-Lucent B25 R	30.00	153	1.890	1.980	1.140	1.389	184	200
Alcatel-Lucent B13 R	30.00	173	1.890	1.980	1.140	1.389	209	226
8' Omni	30.00	50	1.890	1.980	1.140	1.389	60	65
RFS DB-B1-6C-12AB-0Z	30.00	64	1.890	1.980	1.140	1.389	77	84
Alcatel-Lucent B66A	30.00	170	1.890	1.980	1.140	1.389	205	222
10' Omni	30.00	25	1.890	1.980	1.140	1.389	30	33
10' Dipole	30.00	30	1.890	1.980	1.140	1.389	36	39
16' Omni	30.00	110	1.890	1.980	1.140	1.389	132	144
60" x 10" Panel	30.00	90	1.890	1.980	1.140	1.389	108	117
CellMax CMA-B/6521/E	30.00	93	1.890	1.980	1.140	1.389	112	121
Andrew SBJAHH-	30.00	331	1.890	1.980	1.140	1.389	398	431
Andrew LNX-6515DS-A1	30.00	149	1.890	1.980	1.140	1.389	180	195
EMS RS80-12-000A2	30.00	108	1.890	1.980	1.140	1.389	130	141
Round Platform w/ Ha	30.00	2,000	1.890	1.980	1.140	1.389	2,408	2,610
40.8" x 36" Yagi	20.00	11	0.840	-0.118	0.066	0.367	4	14
Round Side Arm	20.00	150	0.840	-0.118	0.066	0.367	48	196
Alvarion BMAX-BST-AU	15.00	227	0.472	-0.006	0.006	0.244	48	296
PCTel Z3247	15.00	36	0.472	-0.006	0.006	0.244	8	47
Radio Waves HPD2-18	15.00	90	0.472	-0.006	0.006	0.244	19	117
Round Side Arm	15.00	150	0.472	-0.006	0.006	0.244	32	196
Flat Light Sector Fr	15.00	1,200	0.472	-0.006	0.006	0.244	254	1,566
		9,854	38.036	32.166	19.321	26.236	5,991	12,859

Site Number: 82705

Code: ANSI/TIA-222-G

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Site Name: Sun Valley - Ketchum, ID

Engineering Number: 65724421

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Customer: VERIZON WIRELESS

Load Case (0.9 - 0.2Sds) * DL + E EMAM

Seismic (Reduced DL) Equivalent Modal Analysis Method

Segment	Height Above Base (ft)	Weight (lb)	a	b	c	Saz	Horizontal Force (lb)	Vertical Force (lb)
6	27.50	572	1.588	0.742	0.654	0.952	472	455
5	22.50	789	1.063	-0.088	0.165	0.474	324	627
4	17.50	791	0.643	-0.068	0.020	0.299	205	629
3	12.50	796	0.328	0.039	0.010	0.192	132	633
2	7.50	709	0.118	0.070	0.035	0.097	60	564
1	2.50	709	0.013	0.059	0.034	0.037	23	564
Commscope	30.00	53	1.890	1.980	1.140	1.389	64	42
6' Omni	30.00	25	1.890	1.980	1.140	1.389	30	20
Alcatel-Lucent B25 R	30.00	153	1.890	1.980	1.140	1.389	184	122
Alcatel-Lucent B13 R	30.00	173	1.890	1.980	1.140	1.389	209	138
8' Omni	30.00	50	1.890	1.980	1.140	1.389	60	40
RFS DB-B1-6C-12AB-0Z	30.00	64	1.890	1.980	1.140	1.389	77	51
Alcatel-Lucent B66A	30.00	170	1.890	1.980	1.140	1.389	205	135
10' Omni	30.00	25	1.890	1.980	1.140	1.389	30	20
10' Dipole	30.00	30	1.890	1.980	1.140	1.389	36	24
16' Omni	30.00	110	1.890	1.980	1.140	1.389	132	87
60" x 10" Panel	30.00	90	1.890	1.980	1.140	1.389	108	72
CellMax CMA-B/6521/E	30.00	93	1.890	1.980	1.140	1.389	112	74
Andrew SBJAHH-	30.00	331	1.890	1.980	1.140	1.389	398	263
Andrew LNX-6515DS-A1	30.00	149	1.890	1.980	1.140	1.389	180	119
EMS RS80-12-000A2	30.00	108	1.890	1.980	1.140	1.389	130	86
Round Platform w/ Ha	30.00	2,000	1.890	1.980	1.140	1.389	2,408	1,590
40.8" x 36" Yagi	20.00	11	0.840	-0.118	0.066	0.367	4	9
Round Side Arm	20.00	150	0.840	-0.118	0.066	0.367	48	119
Alvarion BMAX-BST-AU	15.00	227	0.472	-0.006	0.006	0.244	48	180
PCTel Z3247	15.00	36	0.472	-0.006	0.006	0.244	8	29
Radio Waves HPD2-18	15.00	90	0.472	-0.006	0.006	0.244	19	72
Round Side Arm	15.00	150	0.472	-0.006	0.006	0.244	32	119
Flat Light Sector Fr	15.00	1,200	0.472	-0.006	0.006	0.244	254	954
		9,854	38.036	32.166	19.321	26.236	5,991	7,833

Site Number: 82705

Code: ANSI/TIA-222-G

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Site Name: Sun Valley - Ketchum, ID

Engineering Number: 65724421

3/31/2016 2:21:00 PM

Customer: VERIZON WIRELESS

Load Case (1.2 + 0.2Sds) * DL + E EMAM

Seismic Equivalent Modal Analysis Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-11.93	-5.97	0.00	-160.76	0.00	160.76	1,099.39	549.69	1,339.29	814.32	0.00	0.00	0.208
5.00	-11.00	-5.92	0.00	-130.89	0.00	130.89	1,099.39	549.69	1,339.29	814.32	0.03	-0.05	0.171
10.00	-9.96	-5.80	0.00	-101.27	0.00	101.27	1,099.39	549.69	1,339.29	814.32	0.11	-0.10	0.134
10.00	-9.96	-5.80	0.00	-101.27	0.00	101.27	1,099.39	549.69	1,339.29	814.32	0.11	-0.10	0.134
15.00	-6.70	-5.23	0.00	-72.29	0.00	72.29	1,099.39	549.69	1,339.29	814.32	0.23	-0.13	0.095
20.00	-5.46	-4.85	0.00	-46.15	0.00	46.15	1,099.39	549.69	1,339.29	814.32	0.38	-0.15	0.062
25.00	-4.72	-4.38	0.00	-21.89	0.00	21.89	1,099.39	549.69	1,339.29	814.32	0.55	-0.16	0.031
25.00	-4.72	-4.38	0.00	-21.89	0.00	21.89	876.73	438.36	849.03	539.02	0.55	-0.16	0.046
30.00	0.00	-4.36	0.00	0.00	0.00	0.00	876.73	438.36	849.03	539.02	0.72	-0.17	0.000

Site Number: 82705

Code: ANSI/TIA-222-G

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Site Name: Sun Valley - Ketchum, ID

Engineering Number: 65724421

3/31/2016 2:21:00 PM

Customer: VERIZON WIRELESS

Load Case (0.9 - 0.2Sds) * DL + E EMAM

Seismic (Reduced DL) Equivalent Modal Analysis Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-7.27	-5.97	0.00	-160.59	0.00	160.59	1,099.39	549.69	1,339.29	814.32	0.00	0.00	0.204
5.00	-6.70	-5.92	0.00	-130.73	0.00	130.73	1,099.39	549.69	1,339.29	814.32	0.03	-0.05	0.167
10.00	-6.06	-5.79	0.00	-101.14	0.00	101.14	1,099.39	549.69	1,339.29	814.32	0.11	-0.10	0.130
10.00	-6.06	-5.79	0.00	-101.14	0.00	101.14	1,099.39	549.69	1,339.29	814.32	0.11	-0.10	0.130
15.00	-4.08	-5.22	0.00	-72.20	0.00	72.20	1,099.39	549.69	1,339.29	814.32	0.23	-0.13	0.092
20.00	-3.32	-4.85	0.00	-46.09	0.00	46.09	1,099.39	549.69	1,339.29	814.32	0.38	-0.15	0.060
25.00	-2.87	-4.37	0.00	-21.86	0.00	21.86	1,099.39	549.69	1,339.29	814.32	0.55	-0.16	0.030
25.00	-2.87	-4.37	0.00	-21.86	0.00	21.86	876.73	438.36	849.03	539.02	0.55	-0.16	0.044
30.00	0.00	-4.36	0.00	0.00	0.00	0.00	876.73	438.36	849.03	539.02	0.72	-0.17	0.000

Site Number: 82705

Code: ANSI/TIA-222-G

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Site Name: Sun Valley - Ketchum, ID

Engineering Number: 65724421

3/31/2016 2:21:00 PM

Customer: VERIZON WIRELESS

Analysis Summary

Load Case	Reactions						Max Usage	
	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Elev (ft)	Interaction Ratio
1.2D + 1.6W	19.90	0.00	11.79	0.00	0.00	508.68	0.00	0.64
0.9D + 1.6W	19.89	0.00	8.84	0.00	0.00	508.33	0.00	0.63
1.2D + 1.0Di + 1.0Wi	5.02	0.00	14.73	0.00	0.00	123.71	0.00	0.17
(1.2 + 0.2Sds) * DL + E ELFM	4.45	0.00	11.93	0.00	0.00	106.74	0.00	0.14
(1.2 + 0.2Sds) * DL + E EMAM	5.97	0.00	11.93	0.00	0.00	160.76	0.00	0.21
(0.9 - 0.2Sds) * DL + E ELFM	4.45	0.00	7.27	0.00	0.00	106.63	0.00	0.14
(0.9 - 0.2Sds) * DL + E EMAM	5.97	0.00	7.27	0.00	0.00	160.59	0.00	0.20
1.0D + 1.0W	5.53	0.00	9.85	0.00	0.00	141.24	0.00	0.18

Base/Flange Plate	Plate Type	Baseplate
	Pole Diameter	30 in
	Pole Thickness	0.375 in
	Plate Diameter	36 in
	Plate Thickness	1 in
	Plate Fy	36 ksi
	Weld Length	0.3125 in
	ϕ_s Resistance	124.87 k-in
Applied	19.57 k-in	
Stiffeners	#	12 Show
	Thickness	0.625 in
	Length	3 in
	Height	5 in
	Chamfer	0 in
	Offset Angle	45°
	Fy	36 ksi

Bolts	#	24
	Bolt Circle (R)adial / (S)quare	33 in R
	Diameter	1 in
	Hole Diameter	1.125 in
	Type	A687
	Fy	105 ksi
	Fu	150 ksi
	ϕ_s Resistance	72.69 k
Applied	31.31 k	

Reinforcement	#	

Extra Bolts O	#	0

Code Rev. **G**

Date **3/31/2016**
 Engineer **JDB**
 Site # **82705**
 Carrier **Verizon**

Moment **508.7 k-ft**
 Axial **11.8 k**

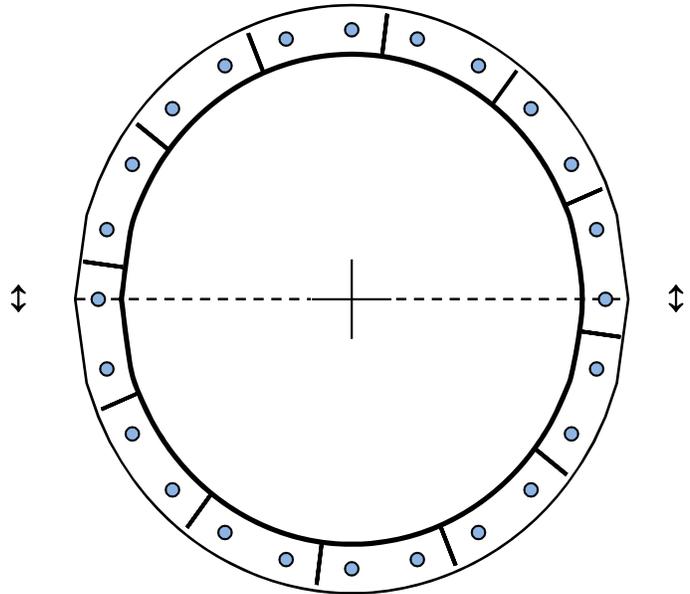


Plate Stress Ratio:
0.16 (Pass)

Bolt Stress Ratio:
0.43 (Pass)

Base/Flange Plate	Plate Type	Flange @ 10.0 ft
	Pole Diameter	30 in
	Pole Thickness	0.375 in
	Plate Diameter	36 in
	Plate Thickness	1 in
	Plate Fy	36 ksi
	Weld Length	0.3125 in
	ϕ_s Resistance	124.87 k-in
	Applied	11.56 k-in
Stiffeners	#	12 Show
	Thickness	0.625 in
	Length	3 in
	Height	5 in
	Chamfer	0 in
	Offset Angle	45°
	Fy	36 ksi

Code Rev. **G**

Date **3/31/2016**
 Engineer **JDB**
 Site # **82705**
 Carrier **Verizon**

Moment **312.2 k-ft**
 Axial **10.0 k**

Bolts	#	24
	Bolt Circle	33 in
	(R)adial / (S)quare	R
	Diameter	1 in
	Hole Diameter	1.125 in
	Type	A325
	Fy	92 ksi
	Fu	120 ksi
	ϕ_s Resistance	54.52 k
Applied	18.50 k	

Reinforcement	#	

Extra Bolts	#	0

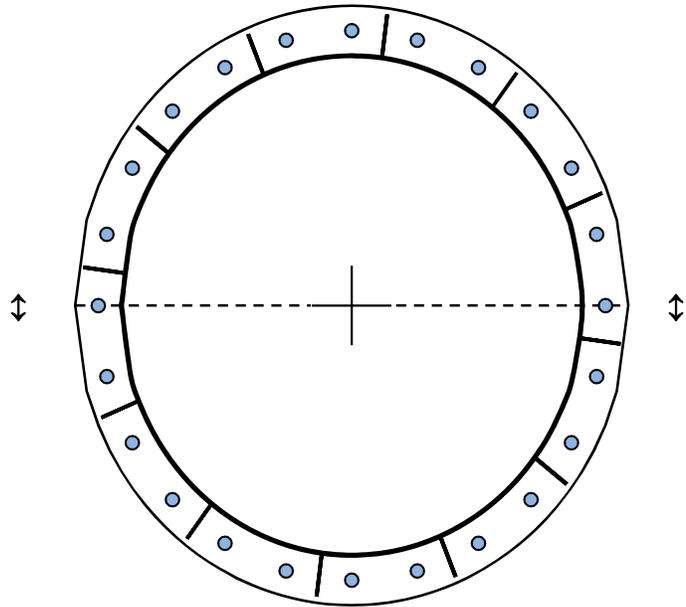


Plate Stress Ratio:
0.09 (Pass)

Bolt Stress Ratio:
0.34 (Pass)

Base/Flange Plate	Plate Type	Flange @ 25.0 ft
	Pole Diameter	24 in
	Pole Thickness	0.375 in
	Plate Diameter	30 in
	Plate Thickness	1 in
	Plate Fy	36 ksi
	Weld Length	0.3125 in
	ϕ_s Resistance	219.44 k-in
	Applied	7.82 k-in
	#	10 Show
Stiffeners	Thickness	0.625 in
	Length	3 in
	Height	5 in
	Chamfer	0 in
	Offset Angle	0°
	Fy	36 ksi

Code Rev. **G**

Date **3/31/2016**
 Engineer **JDB**
 Site # **82705**
 Carrier **Verizon**

Moment **73.2 k-ft**
 Axial **4.9 k**

Bolts	#	10
	Bolt Circle	27 in
	(R)adial / (S)quare	R
	Diameter	1 in
	Hole Diameter	1.125 in
	Type	A325
	Fy	92 ksi
	Fu	120 ksi
	ϕ_s Resistance	54.52 k
	Applied	12.51 k
Reinforcement	#	
Extra Bolts	#	0

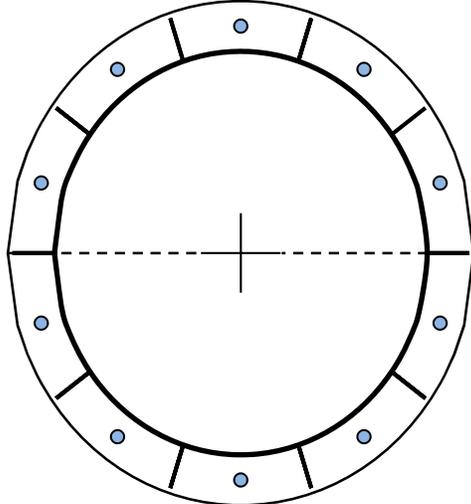
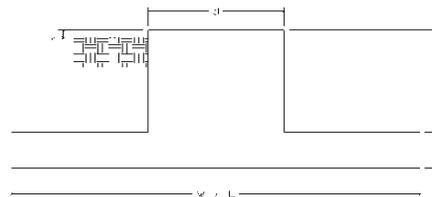


Plate Stress Ratio:
0.04 (Pass)

Bolt Stress Ratio:
0.23 (Pass)

Site Name: Sun Valley, ID
 Site Number: 82705
 Engineering Number: 65724421
 Engineer: JDB
 Date: 03/31/16
 Tower Type: MP

Program Last Updated: 5/13/2014



Design Loads (Factored) - Analysis per TIA-222-G Standards

Design / Analysis / Mapping:

Analysis

Total Shear:	19.9 k
Moment:	508.7 k-ft
Tower + Appurtenance Weight:	11.8 k
Depth to Base of Foundation (l + t - h):	4.00 ft
Diameter of Pier (d):	3.00 ft
Length of Pier (l):	0.00 ft
Height of Pier above Ground (h):	0.00
Width of Pad (W):	12.00 ft
Length of Pad (L):	12.00 ft
Thickness of Pad (t):	6.50 ft
Tower Leg Center to Center:	0.00 ft
Number of Tower Legs:	1.0 (1 if MP or GT)
Tower Center from Mat Center:	0.00 ft
Depth Below Ground Surface to Water Table:	99.00 ft
Unit Weight of Concrete:	150.0 pcf
Unit Weight of Soil Above Water Table:	100.0 pcf
Unit Weight of Water:	62.4 pcf
Unit Weight of Soil Below Water Table:	50.0 pcf
Friction Angle of Uplift:	0.0 Degrees
Ultimate Coefficient of Shear Friction:	0.65
Ultimate Compressive Bearing Pressure:	6000.0 psf
Ultimate Passive Pressure on Pad Face:	0.0 psf
$\phi_{\text{Soil and Concrete Weight}}$:	0.9
ϕ_{Soil} :	0.75

Concrete Strength (f'_c):	3000 psi
Pad Tension Steel Depth:	74.00 in
ϕ_{Shear} :	0.75
$\phi_{\text{Flexure / Tension}}$:	0.90
$\phi_{\text{Compression}}$:	0.65
β :	0.85
Bottom Pad Rebar Size #:	5
Dead Load Factor:	1.20
# of Bottom Pad Rebar:	13
Pad Bottom Steel Area:	4.03 in ²
Pad Steel F_y :	60000 psi
Top Pad Rebar Size #:	5
# of Top Pad Rebar:	13
Pad Top Steel Area:	4.03 in ²

Overturning Moment Usage

Design OTM:	638.0 k-ft
OTM Resistance:	811.2 k-ft
Design OTM / OTM Resistance:	0.79 Result: OK

Soil Bearing Pressure Usage

Net Bearing Pressure:	4076 psf
Factored Nominal Bearing Pressure:	4500 psf
Net Bearing Pressure/Factored Nominal Bearing Pressure:	0.91 Result: OK
Load Direction Controlling Design Bearing Pressure:	Diagonal to Pad Edge

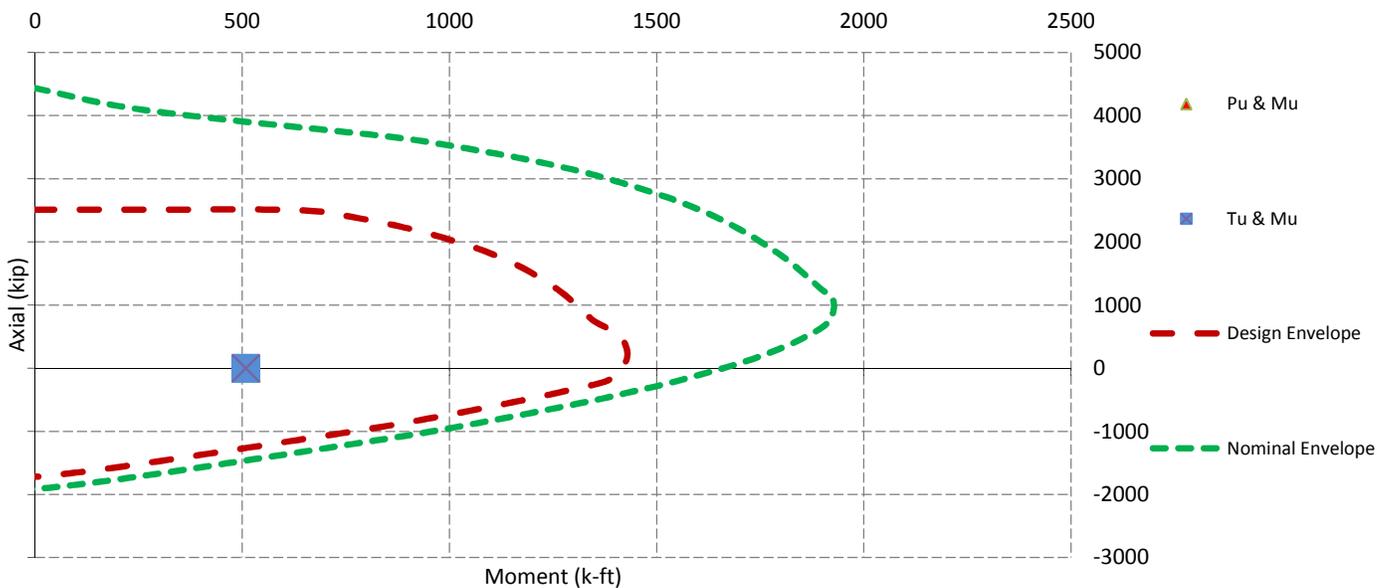
Sliding Factor of Safety

Total Factored Sliding Resistance:	73.2 k
Sliding Design / Sliding Resistance:	0.27 Result: OK

One Way Shear, Flexural Capacity, and Punching Shear

Factored One Way Shear (V_u):	2.6 k
One Way Shear Capacity (ϕV_c):	119.4 k - ACI11.3.1.1
$V_u / \phi V_c$:	0.02 Result: OK
Load Direction Controlling Shear Capacity:	Diagonal to Pad Edge
Lower Steel Pad Factored Moment (M_u):	670.5 k-ft
Lower Steel Pad Moment Capacity (ϕM_n):	1336.9 k-ft - ACI10.3
$M_u / \phi M_n$:	0.50 Result: OK
Load Direction Controlling Flexural Capacity:	Parallel to Pad Edge
Upper Steel Pad Factored Moment (M_u):	295.9 k-ft
Upper Steel Pad Moment Capacity (ϕM_n):	1336.9 k-ft
$M_u / \phi M_n$:	0.22 Result: OK
Lower Pad Flexural Reinforcement Ratio:	0.0004 OK - Minimum Reinforcement Ratio Met - ACI10.5.1
Upper Pad Flexural Reinforcement Ratio:	0.0004 OK - Minimum Reinforcement Ratio Met - ACI10.5.1
Lower Pad Reinforcement Spacing:	11 in - Pad Reinforcing Spacing OK - ACI7.12.2.2 & 10.5.4
Upper Pad Reinforcement Spacing:	11 in - Pad Reinforcing Spacing OK - ACI7.12.2.2 & 10.5.4
Factored Punching Shear (V_u):	-193.9 k
Nominal Punching Shear Capacity ($\phi_c V_n$):	4202.0 k - ACI11.12.2.1
$V_u / \phi V_c$:	-0.05 Result: OK

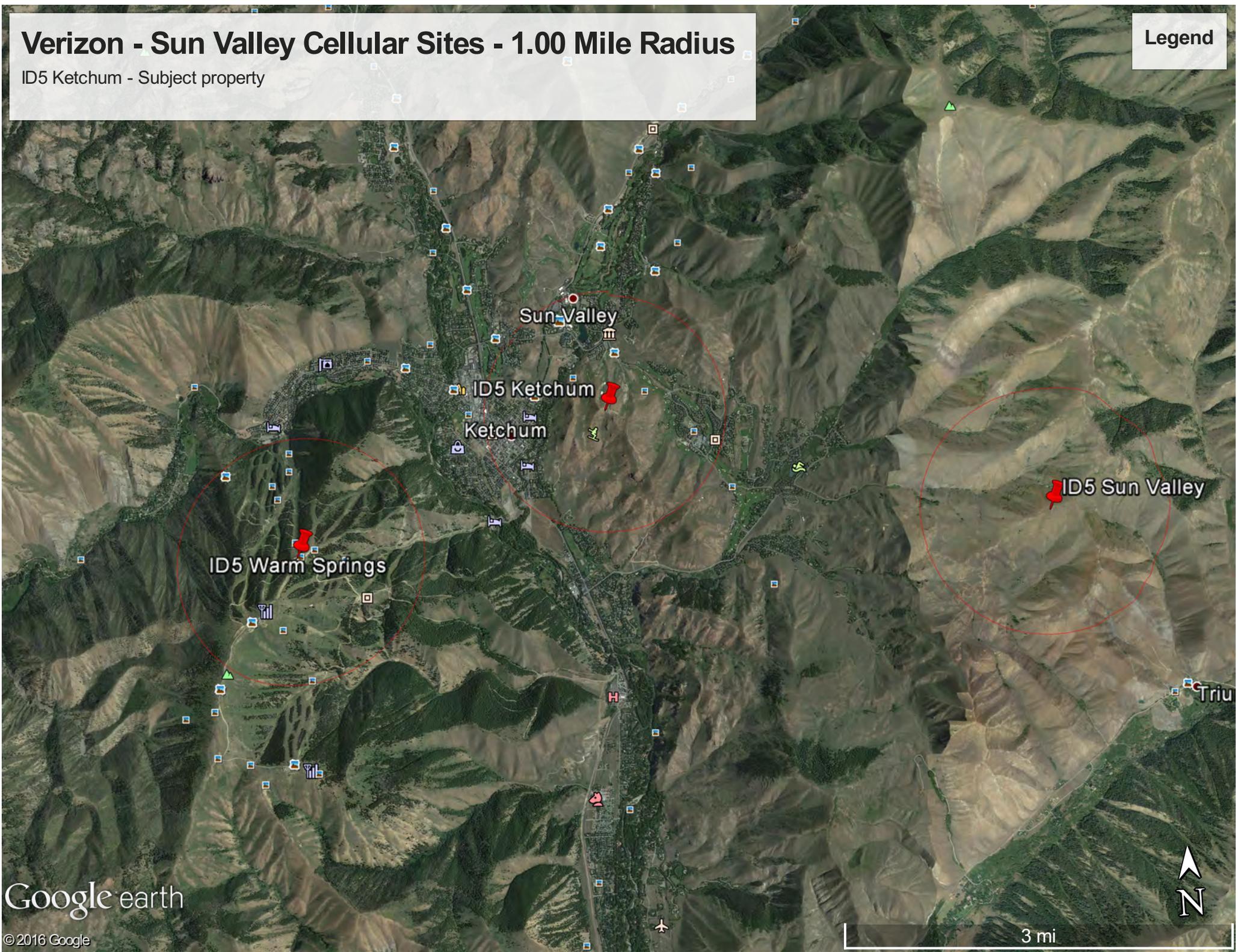
Nominal and Design Moment Capacity and Factored Design Loads

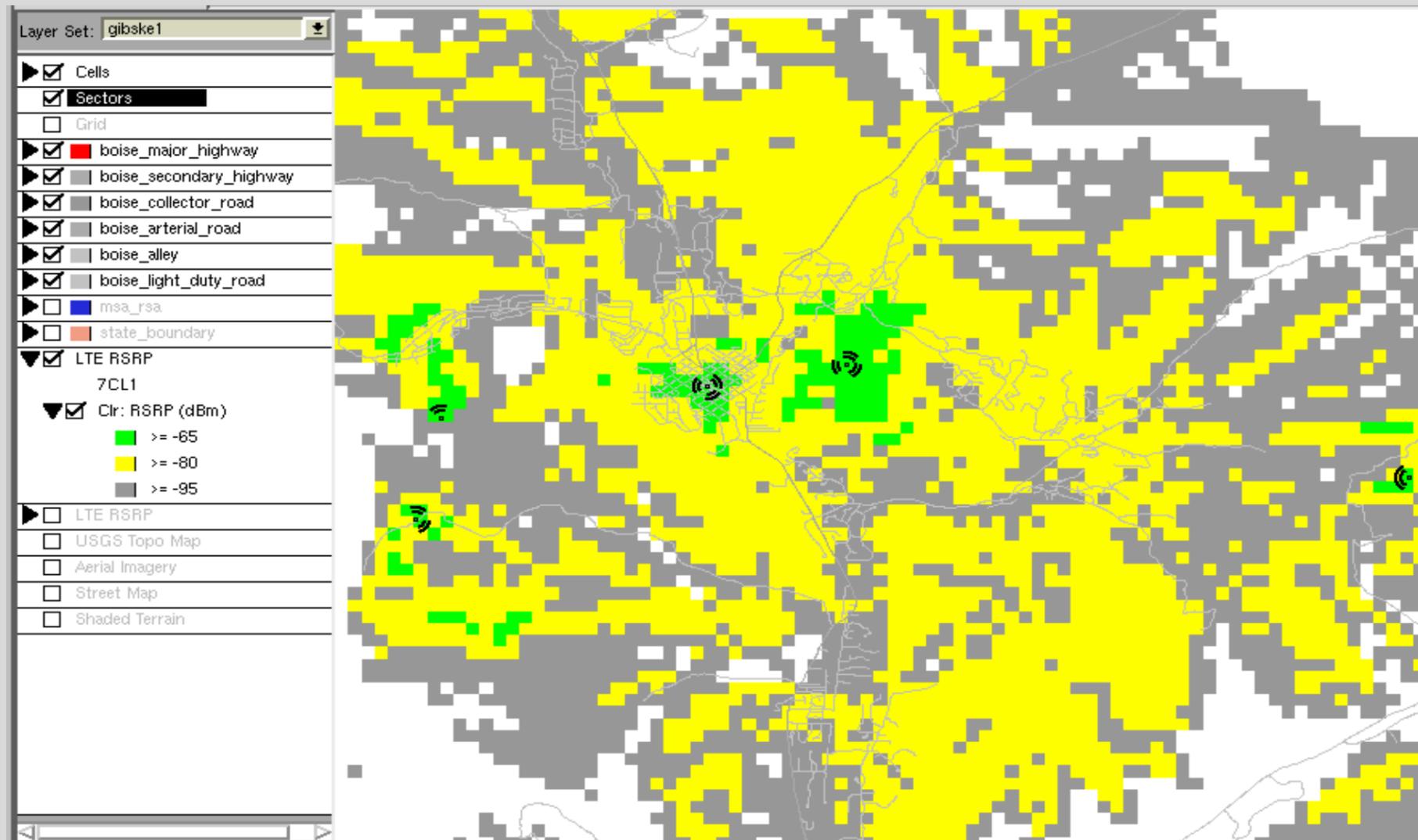


Verizon - Sun Valley Cellular Sites - 1.00 Mile Radius

ID5 Ketchum - Subject property

Legend





<input checked="" type="checkbox"/> Green	>= -65	Green is very good 4G signal
<input checked="" type="checkbox"/> Yellow	>= -80	Yellow is fair 4G signal
<input checked="" type="checkbox"/> Grey	>= -95	Grey is weak 4G signal

FCC licenses for Verizon in Blaine county.

- Cellular A block KNKN339
- Cellular B block KNKQ387
- PCS E block KNLH702
- AWS A block WQGD443
- AWS B block WQGB212
- 700 Upper C block WQJQ694

ULS License

700 MHz Upper Band (Block C) License - WQJQ694 - Cellco Partnership

PA This license has pending applications: 0007212718, 0007375558, 0007368105, 0007367977, 0007349849, 0007348131, 0007315271, 0007306993, 0006352199, 0005826931

Call Sign	WQJQ694	Radio Service	WU - 700 MHz Upper Band (Block C)
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Status	Active	Auth Type	Regular
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Market

Market	REA006 - West	Channel Block	C
Submarket	0	Associated Frequencies (MHz)	000746.00000000- 000757.00000000 000776.00000000- 000787.00000000

Dates

Grant	11/26/2008	Expiration	06/13/2019
Effective	07/27/2016	Cancellation	

Buildout Deadlines

1st	06/13/2013	2nd	06/13/2019
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Notification Dates

1st	2nd
-----	-----

Licensee

FRN	0003290673	Type	General Partnership
-----	------------	------	---------------------

Licensee

Cellco Partnership 1120 Sanctuary Pkwy, #150 GASA5REG Alpharetta, GA 30009-7630 ATTN Regulatory	P:(770)797-1070 F:(770)797-1036 E:LicensingCompliance@VerizonWireless.com
--	---

Contact

Verizon Wireless Licensing Manager LicensingCompliance@VerizonWireless.com Alpharetta, GA 30009-7630 ATTN Regulatory	P:(770)797-1070 F:(770)797-1036 E:LicensingCompliance@VerizonWireless.com
--	---

Ownership and Qualifications

Radio Service Type	Mobile
Regulatory Status	Common Carrier Interconnected Yes

Alien Ownership

The Applicant answered "No" to each of the Alien Ownership questions.

Basic Qualifications

The Applicant answered "No" to each of the Basic Qualification questions.

Tribal Land Bidding Credits

This license did not have tribal land bidding credits.

Demographics

Race
Ethnicity

Gender

ULS License

AWS (1710-1755 MHz and 2110-2155 MHz) License - WQGD443 - Cellco Partnership

PA This license has pending applications: 0007349849

Call Sign	WQGD443	Radio Service	AW - AWS (1710-1755 MHz and 2110-2155 MHz)
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Status	Active	Auth Type	Regular
--------	--------	-----------	---------

Market

Market	CMA392 - Idaho 5 - Butte	Channel Block	A
Submarket	0	Associated Frequencies (MHz)	001710.00000000-001720.00000000-002110.00000000-002120.00000000

Dates

Grant	12/18/2006	Expiration	12/18/2021
-------	------------	------------	------------

Effective	04/01/2016	Cancellation	
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Buildout Deadlines

1st	2nd
-----	-----

Notification Dates

1st	2nd
-----	-----

Licensee

FRN	0003290673	Type	General Partnership
-----	------------	------	---------------------

Licensee

Cellco Partnership 1120 Sanctuary Pkwy #150 - GASA5REG Alpharetta, GA 30009 ATTN Regulatory	P:(770)797-1070 F:(770)797-1036 E:licensingcompliance@verizonwireless.com
--	---

Contact

Verizon Wireless Licensing Manager 1120 Sanctuary Pkwy, #150 GASA5REG Alpharetta, GA 30009-7630 ATTN Regulatory	P:(770)797-1070 F:(770)797-1036 E:LicensingCompliance@VerizonWireless.com
---	---

Ownership and Qualifications

Radio Service Type	Mobile
Regulatory Status	Common Carrier Interconnected Yes

Alien Ownership

The Applicant answered "No" to each of the Alien Ownership questions.

Basic Qualifications

The Applicant answered "No" to each of the Basic Qualification questions.

Tribal Land Bidding Credits

This license did not have tribal land bidding credits.

Demographics

Race

Ethnicity

Gender

ULS License

AWS (1710-1755 MHz and 2110-2155 MHz) License - WQGB212 - Cellco Partnership

PA This license has pending applications: 0007349849

Call Sign	WQGB212	Radio Service	AW - AWS (1710-1755 MHz and 2110-2155 MHz)
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Status	Active	Auth Type	Regular
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Market

Market	BEA149 - Twin Falls, ID	Channel Block	B
Submarket	0	Associated Frequencies (MHz)	001720.00000000-001730.00000000-002120.00000000-002130.00000000

Dates

Grant	11/29/2006	Expiration	11/29/2021
Effective	04/01/2016	Cancellation	

Buildout Deadlines

1st	2nd
-----	-----

Notification Dates

1st	2nd
-----	-----

Licensee

FRN	0003290673	Type	General Partnership
-----	------------	------	---------------------

Licensee

Cellco Partnership 1120 Sanctuary Pkwy, #150 GASAS5REG Alpharetta, GA 30009-7630 ATTN Regulatory	P:(770)797-1070 F:(770)797-1036 E:LicensingCompliance@VerizonWireless.com
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Contact

Verizon Wireless Licensing Manager 1120 Sanctuary Pkwy, #150 GASAS5REG Alpharetta, GA 30009-7630 ATTN Regulatory	P:(770)797-1070 F:(770)797-1036 E:LicensingCompliance@VerizonWireless.com
--	---

Ownership and Qualifications

Radio Service Type	Mobile
Regulatory Status	Common Carrier Interconnected Yes

Alien Ownership

The Applicant answered "No" to each of the Alien Ownership questions.

Basic Qualifications

The Applicant answered "No" to each of the Basic Qualification questions.

Tribal Land Bidding Credits

This license did not have tribal land bidding credits.

Demographics

Race

Ethnicity

Gender

ULS License

PCS Broadband License - KNLH702 - Verizon Wireless (VAW) LLC

Call Sign	KNLH702	Radio Service	CW - PCS Broadband
Status	Active	Auth Type	Regular

Market

Market	BTA451 - Twin Falls, ID	Channel Block	E
Submarket	0	Associated Frequencies (MHz)	001885.00000000-001890.00000000-001965.00000000-001970.00000000

Dates

Grant	07/23/2007	Expiration	06/26/2017
Effective	02/18/2011	Cancellation	

Buildout Deadlines

1st	06/26/2002	2nd	
-----	------------	-----	--

Notification Dates

1st	06/19/2002	2nd	
-----	------------	-----	--

Licensee

FRN	0003800307	Type	Limited Liability Company
-----	------------	------	---------------------------

Licensee

Verizon Wireless (VAW) LLC 1120 Sanctuary Pkwy, #150 GASA5REG Alpharetta, GA 30009-7630 ATTN Regulatory	P:(770)797-1070 F:(770)797-1036 E:LicensingCompliance@VerizonWireless.com
--	---

Contact

Verizon Wireless Licensing - Manager 1120 Sanctuary Pkwy, #150 GASA5REG Alpharetta, GA 30009-7630 ATTN Regulatory	P:(770)797-1070 F:(770)797-1036 E:LicensingCompliance@VerizonWireless.com
---	---

Ownership and Qualifications

Radio Service Type	Mobile		
Regulatory Status	Common Carrier	Interconnected	Yes

Alien Ownership

Is the applicant a foreign government or the representative of any foreign government?	No
--	----

Is the applicant an alien or the representative of an alien?	No
--	----

Is the applicant a corporation organized under the laws of any foreign government?	No
--	----

Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?	No
---	----

Is the applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or	Yes
--	------------

representative thereof, or by any corporation organized under the laws of a foreign country?

The Alien Ruling question is not answered.

Basic Qualifications

The Applicant answered "No" to each of the Basic Qualification questions.

Tribal Land Bidding Credits

This license did not have tribal land bidding credits.

Demographics

Race

Ethnicity

Gender

ULS License

Cellular License - KNKQ387 - Verizon Wireless (VAW) LLC

Call Sign	KNKQ387	Radio Service	CL - Cellular
Status	Active	Auth Type	Regular

Market

Market	CMA392 - Idaho 5 - Butte	Channel Block	B
Submarket	0	Phase	2

Dates

Grant	08/31/2010	Expiration	10/01/2020
Effective	12/23/2014	Cancellation	

Five Year Buildout Date**Control Points**

1 500 W Dove Rd, TARRANT, Southlake, TX
P: (800)264-6620 

Licensee

FRN	0003800307	Type	Limited Liability Company
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Licensee

Verizon Wireless (VAW) LLC 1120 Sanctuary Pkwy, #150 GASA5REG Alpharetta, GA 30009-7630 ATTN Regulatory	P:(770)797-1070 F:(770)797-1036 E:LicensingCompliance@VerizonWireless.com
--	---

Contact

Verizon Wireless Licensing Manager 1120 Sanctuary Pkwy, #150 GASA5REG Alpharetta, GA 30009-7630 ATTN Regulatory	P:(770)797-1070 F:(770)797-1036 E:LicensingCompliance@VerizonWireless.com
---	---

Ownership and Qualifications

Radio Service Type	Mobile		
Regulatory Status	Common Carrier	Interconnected	Yes

Alien Ownership

The Applicant answered "No" to each of the Alien Ownership questions.

Basic Qualifications

The Applicant answered "No" to each of the Basic Qualification questions.

Demographics

Race		
Ethnicity		Gender

ULS License

Cellular License - KNKN339 - Alltel Communications, LLC

Call Sign	KNKN339	Radio Service	CL - Cellular
Status	Active	Auth Type	Regular

Market

Market	CMA392 - Idaho 5 - Butte	Channel Block	A
Submarket	0	Phase	2

Dates

Grant	08/31/2010	Expiration	10/01/2020
Effective	03/17/2015	Cancellation	

Five Year Buildout Date

03/07/1996

Control Points

1 500 W Dove Rd, TARRANT, Southlake, TX
P: (800)264-6620 

Licensee

FRN	0018437624	Type	Limited Liability Company
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Licensee

Alltel Communications, LLC 1120 Sanctuary Pkwy #150 - GASA5REG Alpharetta, GA 30009 ATTN Regulatory	P:(770)797-1070 F:(770)797-1036 E:licensingcompliance@verizonwireless.com
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Contact

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Ownership and Qualifications

Radio Service Type	Mobile		
Regulatory Status	Common Carrier	Interconnected	Yes

Alien Ownership

The Applicant answered "No" to each of the Alien Ownership questions.

Basic Qualifications

The Applicant answered "No" to each of the Basic Qualification questions.

Demographics

Race

Ethnicity

Gender

**CITY OF SUN VALLEY
PLANNING AND ZONING COMMISSION
AGENDA REPORT**

From: Abby Rivin, CFM, Associate Planner
Meeting Date: 8 September 2016

DESIGN REVIEW (DR 2016-39)

APPLICANT: Carmen Finegan, AIA, Architectural Resources for Michael & Kelly Browne

LOCATION: 410 Fairway Loop, Fairway Subdivision Lot 8

ZONING DISTRICTS: Single-Family Residential (RS-1) Zoning District

REQUEST: Approve the design of a new 1,207 sq ft trellis addition and landscape plan for an existing single-family dwelling in the Fairway Subdivision. 94 sq ft of the proposed addition extends into the 15 ft setback and requires a variance.

ANALYSIS: The applicant submitted an application for design review approval for a new 1,207 sq ft trellis addition and landscape plan to an existing, detached single-family dwelling on Lot 8 in Fairway Subdivision. 94 sq ft of the proposed trellis extends into the 15 ft setback, which requires a variance. A significant portion, 73.6 sq ft, of the trellis extends 13'-3" into the setback and 20.7 sq ft extends 4'-5 1/4" into the setback. The majority of the trellis addition, 997 sq ft, is located on the east elevation of the structure over the backyard patio. While the home lies adjacent to residences to the north, south, and west, the backyard is adjacent to the Sun Valley golf course. A small section of trellis, 210 sq ft, is proposed on the north elevation of the structure. The trellis materials include steel and wood.

Per Municipal Code § 9-2A-3.E.2, eaves, roofs, awnings, or canopies may encroach into a required setback a maximum of four feet (4'). This application exceeds even that allowance by more than 9 feet, and leaves less than 2 feet of setback to the adjoining property line.

The applicant submitted an administrative design review application (ADR 2015-48) for an interior remodel, exterior alterations, and trellis addition, which was approved on December 2, 2015. The site plan provided with the submittal drawings (received by the City of Sun Valley on November 12, 2015) did not indicate the full extent of the trellis addition's encroachment into the required setback. The plans indicated that the encroachment did not exceed the maximum of four feet allowed in City Code Section 9-2A-3E-2. A building permit for the remodel and exterior alteration project was issued on June 30, 2016 (BP#2016-105).

The subject home has been a nonconforming structure since it was built in 1968, prior to the adoption of both the current 15 foot setback requirement and the maximum footprint allowed pursuant to City Code §9-2A-3. The project design intensifies the existing nonconformities by further encroaching into the required setback, violating Sun Valley Municipal Code § 9-1B-2C-1, which prohibits additions or

enlargements of nonconforming structures that increase the degree of nonconformity. The applicant submitted a variance request concurrently with this application for the trellis addition encroachment on July 12, 2016 (VR2016-01). Approval of this Design Review is contingent on approval of the variance request.

The landscape plan proposes new paver terraces in both the front and back yards. The lawn will be enhanced with meadow planting, which include native grasses and perennials. Small aspen groves, shrubs, and free standing fence panels are proposed to enhance screening between adjacent residences. The proposed height of the fence panels ranges from 5 ft to 6 ft. The maximum height for fences in the City's RS-1 Zone is 4 ft, however fences in excess of the maximum height limit may be approved through the design review process (SVMC §9-3G-8). The landscape plan proposes an outdoor fire pit, which will be gas burning.

The existing development consists of a single-story, detached single-family dwelling with associated landscaping, vehicular access, and other site improvements. No changes are proposed to the building footprint or height of the existing structure.

Applications for design review are subject to standards in SVMC § 9-3A-3.

A. Design and Siting:

*1. The design of proposed improvements is appropriate and compatible to the lot and the surrounding neighborhood. Attention has been given to the location and design of streets, view corridors, privacy of adjacent properties, outdoor spaces, shadows, solar access, view access, lighting, vehicular access, building massing, privacy of other noise generating equipment, openings and doors as these elements impact adjacent properties. **The trellis addition does not comply with applicable dimensional regulations of the RS-1 Zone as 94 sq ft of the structure extends into the required 15 ft setback. A significant portion, 73.6 sq ft, of the trellis extends 13'-3" into the setback and 20.7 sq ft extends 4'-5 ¼" into the setback.***

*2. The location and design of the proposed improvements has given consideration to special sites of historical, natural, ecological, architectural, archaeological, and scenic value or significance, including, but not limited to, those identified in the city's comprehensive plan. The essential character of special sites should be preserved and protected with any proposed site or structure improvements. **Not applicable as no special sites are adjacent to the property.***

*3. The siting of the proposed improvements complies with the adopted uniform fire code and any other applicable regulations regarding emergency vehicle access and circulation as set forth in title 7 of this code. **The proposal does not significantly change access to the structure. The new asphalt drive is slightly realigned from the existing for easier entry and exit from the garage.***

4. *The proposed improvements are sited to meet the ingress, egress, and driveway standards and requirements set forth in title 7 of this code, and the siting standard in subsection A1 of this section. **The proposed access meets ingress, egress, and driveway standards.***

5. *The proposed improvements are sited to take into consideration and to mitigate natural hazards such as floodplains and avalanches as set forth in this chapter. Mitigation measures shall not adversely impact other properties. **The site is not located in a floodplain or avalanche zone.***

6. *The siting of the proposed improvements minimizes interference with natural drainage patterns and is designed to minimize adverse impact on other properties. All drainage shall comply with the standards set forth in title 7 of this code; be contained on site, or be connected to drainage easements or rights of way. No drainage shall be diverted off site onto private property. **All drainage will be contained on-site through existing and new dry wells as well as soil percolation. A piped overflow is proposed to provide relief if the existing system is overwhelmed.***

7. *The site design provides for adequate space or means to maintain snow storage. Snow storage areas are in accordance with the requirements set forth in article G of this chapter. **The applicant has proposed 1,250 sq ft of snow storage area. The total hardscape area is 2,900 and the total required snow storage is 1,450 as required by SVMC §9-3G-13. The applicant must provide 200 sq ft more snow storage.***

8. *Appropriate address numbers and monuments are shown in accordance with the requirements as set forth in article G of this chapter. **The address must be posted in a place that is visible from Fairway Loop on contrasting background to be visible both day and night and in all weather conditions. Any planned permanent address monument shall meet all applicable requirements of City Code Section 9-3G-14, including letter size and height.***

9. *The siting of the proposed improvements, including streets and driveways, where applicable, minimizes hillside visibility and, where applicable, skylining by using a combination of stepped building forms, natural colors and materials, sloped roofs, and landscaping. **No changes are proposed to the existing building footprint.***

10. *Every lot shall be designed to be connected to public water and sewer systems, unless the property is over five hundred feet (500') from a public system as measured from the closest property line and an alternative utility system is approved by the city engineer. **The new residence will be connected to existing water and sewer hookups.***

B. Grading:

1. *Essential grading is shaped to blend with natural landforms and to minimize the necessity of padding and/or terracing of building sites. Cut and fill are shaped, rounded, minimized and nonuniform to simulate natural existing contours. **Minimal grading is proposed with this project. The backyard area***

will be leveled to accommodate the new paver terrace. The front yard will be contoured into a continuous gentle slope.

*2. Areas which are not well suited for development because of existing soil conditions, ridges, ridgelines, ridge tops, knolls, saddles, summits, wildlife habitat, natural features or hydrology are allocated for open site area or recreational uses. **The design minimizes impact on the existing grade.***

*3. The development is in accordance with the design criteria, as applicable, as set forth in article H of this chapter and title 7 of this code. **Grading has been shaped to coincide with the natural landscape. Drainage has been contained on-site.***

C. Architectural Quality:

*1. The proposed project maintains the quality of materials and design that is appropriate to the location, the lot and the neighborhood. **The trellis addition utilizes high quality materials that complement the existing dwelling. The proposed landscape design enhances screening between adjacent residences.***

*2. The proposed improvements conform to natural landscape features by minimizing the degree of cuts and fills. **The project does not significantly alter the site's existing grade.***

*3. The plan includes the location of all exterior lighting. All lighting shall be directed onto the subject lot and shall not be directed towards other properties. **The proposed exterior lighting includes both landscape path lights and wall sconces. Both fixtures are fully shielded and downcast.***

*4. Building design includes weather protection that prevents water from dripping or snow from sliding onto pedestrian or vehicle areas or onto adjacent properties. **Not applicable.***

*5. Any exterior addition or alteration to an existing building is compatible with the design character of the original building. Any new detached structure is compatible with the design character of the existing buildings and/or structure(s). **Not applicable.***

*6. All improvements are designed to minimize light and sound emanating to other properties as set forth in article B of this chapter. **All exterior lighting is designed and located to prevent and minimize glare, light trespass, and sky glow.***

*7. Rooftop chimneys and utilities are enclosed and design is consistent with the primary structure. **Not applicable.***

*D. Pedestrian and Vehicle Circulation Design: **Reconfiguration for the driveway enhances access from Fairway Loop as well as access into the garage. The landscape plan proposes a network of pedestrian paths.***

E. Landscaping Quality: **The proposed landscape plan enhances screening between adjacent properties. Terraces adjacent to the residence provide increased outdoor space. New plantings include native grasses, perennials, and aspens.**

F. Irrigation Limits: **The irrigated area of the site is .30 acres, which is less than the half-acre maximum as required by Code.**

G. Fences, Walls, Retaining Walls, Screens, and Dog Runs: **The proposed fences range from 5 ft to 6 ft in height. Per § 9-3G-8, fences in excess of the 4ft maximum limit may be approved through the design review process.**

H. Sign Design: **Not applicable.**

I. Exterior Lighting: **All proposed exterior lighting complies with the City's Exterior Lighting Regulations.**

RECOMMENDATION: Staff recommends denial of DR2016-39.

RECOMMENDED MOTION: "I move to deny approval of DR2016-39, pursuant to the Findings of Fact."

ALTERNATIVE ACTIONS: Move to approve the application contingent on approval of DR 2016-39 and draft findings supporting approval.

ATTACHMENTS:

1. Findings of Fact
2. Application Materials

**FINDINGS OF FACT AND CONCLUSIONS OF LAW
CITY OF SUN VALLEY PLANNING & ZONING COMMISSION
DESIGN REVIEW**

Project Name: **410 Fairway Loop Trellis Addition and Landscape Plan**

Applicant: **Carmen Finegan, AIA, Architectural Resources for Michael & Kelly Browne**

Location: **410 Fairway Loop, Fairway Subdivision Lot 8**

Zoning District: **Single-Family Residential (RS-1) Zoning District**

Project Description: The applicant has submitted an application for the construction of a new 1,207 sq ft trellis addition and landscape plan for an existing single-family dwelling in the Fairway Subdivision. 94 sq ft of the proposed addition extends into the 15 ft required setback. A significant portion, 73.6 sq ft, of the trellis extends 13'-3" into the setback and 20.7 sq ft extends 4'-5 ¼" into the setback.

Project Analysis: The subject home has been a nonconforming structure since it was built in 1968, prior to the adoption of both the current 15 foot setback requirement and the maximum footprint allowed pursuant to City Code §9-2A-3. The project design intensifies the existing nonconformities by further encroaching into the required setback, violating Sun Valley Municipal Code §9-1B-2C-1, which prohibits additions or enlargements of nonconforming buildings that increase the degree of nonconformity.

Per Municipal Code § 9-2A-3.E.2, eaves, roofs, awnings, or canopies may encroach into a required setback a maximum of four feet (4'). This application exceeds even that allowance by more than 9 feet, and leaves less than 2 feet of setback to the adjoining property line.

Required Findings: Based on the standards set forth in **Sun Valley Municipal Code, Title 9, Chapter 3A (DESIGN REVIEW REGULATIONS)**, the Planning Commission has made the following findings supporting denial, pursuant to **Development Code Section 9-5B-3 (DESIGN REVIEW)**.

1. The proposed design is NOT in conformance with the purpose of the zoning district and the dimensional regulations of that district. **Sun Valley Municipal Code §9-2A-3E-1 requires that all buildings, structures, decks, or porches exceeding 30" in height above record grade must meet the minimum setback requirement. The minimum setback requirement in the City's RS-1 Zone is 15 ft. 94 sq ft of the proposed trellis addition extends into the 15 ft required setback. 73.6 sq ft of the trellis extends into the setback 13'-3" and 20.7 sq ft extends 4'-5 ¼" into the setback.**

CONCLUSIONS OF LAW

Therefore, this project does not meet the standards for approval under Title 9, Chapter 3A, City of Sun Valley Municipal Code.

DECISION

Therefore, the Sun Valley Planning and Zoning Commission denies this Design Review Application No. DR2016-39.

Dated this 8th day of September, 2016.

Ken Herich, Chair
Sun Valley Planning and Zoning Commission

Date Findings of Fact signed _____

BROWNE RESIDENCE

401 Fairway Loop

Sun Valley, ID 83353

Project Description:

The project consists of a full interior remodel and updates to cabinetry, flooring, tile, fixtures and finishes.

General aesthetic upgrades to the exterior include new windows and an addition of a steel trellis on the East elevation. All exterior lighting will comply with Dark Sky Ordinance of the City of Sun Valley. Another change to the exterior will be removal of the existing clerestory windows.

BROWNE RESIDENCE COMPLIANCE STATEMENT

410 FAIRWAY LOOP

- Grading

The illustrative landscape plan depicts proposed grading. In the back of the house minimal adjustment to existing grades is proposed. This work includes leveling of the area for the new lower terrace and the addition of a second, larger, dry well. Landscape areas in the front of the home are to be contoured into a continuous gentle slope from new terrace at front of house to street. This will include the addition of a culvert for the existing drainage and fill in that area.

- Architectural Quality

The proposed trellis at the master bedroom provides shade, protection from the elements, and a sense of enclosure for the master bedroom patios. The design is complementary to the architecture of the residence. The trellis extension over the master bedroom door continues the existing roof line, but does not add height and as such it is not visible from the street.

-

- Pedestrian and Vehicle Circulation Design

Reconfiguration of the existing driveway does not diminish capacity. The proposed new alignment of the asphalt driveway allows for easier access and turning into the rebuilt two-car garage. Parking for three cars off-street in addition to garage is maintained. Asphalt surfaces to receive a chip seal surface to lighten color and soften appearance.

A network of pedestrian paths is provided to all entrances, around the house, and to various points in the garden. Paths are paved in a variety of permeable materials including sand-set pavers and gravel. Small asphalt paths are provided for movement of trash and recycle bins to the street.

- Landscaping Quality;

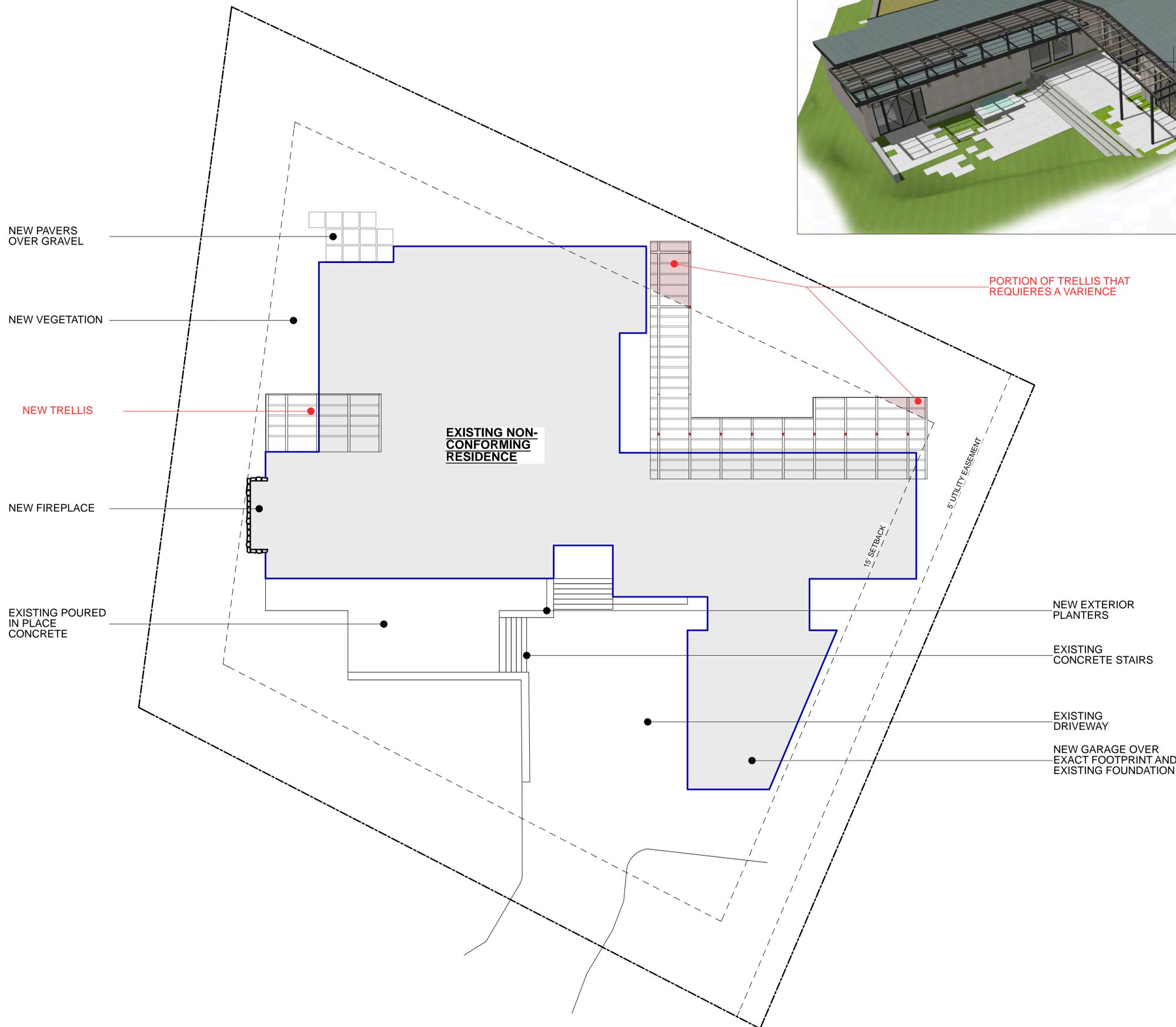
The new gardens provide an expansive and natural setting, enhancing views and reinforcing the character of the home which is open to the landscape. Terraces adjacent to the building expand the living spaces and create transition zones to the

outdoors. The architectural character of the building is reflected by long low horizontal lines that blend into gently sloping topography. Planting emphasizes native species and a natural look.

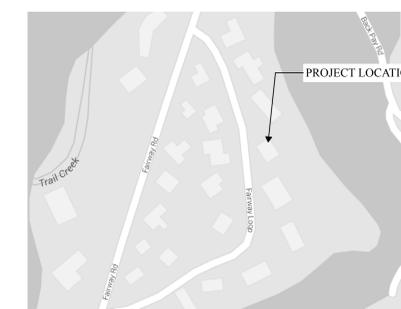
- Irrigation Limits – see the attached irrigation diagram.

- Fences – see attached illustrative details. Free standing fence panels are proposed to screen sight lines to/from neighboring properties to the north and south. Panels will be field located in response to the dictates of topography and existing tree. Note – panels are arranged in a staggered and intermittent pattern, there is no continuous fence.

- Sign Design- address numbers will be low key and located discreetly on the building
- Exterior Lighting – see the attached irrigation diagram.



PROJECT LOCATION:



PROJECT TEAM:

OWNER:

MICHAEL BROWNE
 157 Thockmorton Ave. 2nd floor
 MILL VALLEY, CA 94941
 PHONE: (415) 912-8555
 mbrowne@brownepartners.com

ARCHITECT:

CARMEN FINEGAN
 P.O. BOX 3433
 SUN VALLEY, ID 83353
 PHONE: 208.7208508
 CARMEN@ARSUNVALLEY.COM

STRUCTURAL:

LIV JENSEN
 P.O. BOX 6117
 KETCHUM, ID 83340
 PHONE: 208.5788162
 LIV@COX.NET

CONTRACTOR:

MIKE HANLEY
 HANLEY CONSTRUCTION, INC.
 P.O. BOX 4598
 KETCHUM, ID 83340
 PHONE: 208.720.4613
 MIKE@HANLEYCONSTRUCTION.COM

ENERGY CONSULTANT:

JOHN REUTER
 P.O. BOX 4714
 KETCHUM, ID 83340
 PHONE: 208.721.2922
 JOHNREUTER@GREENWORKS.COM

ADDRESS:
 410 FAIRWAYS LOOP, SUN VALLEY, ID 83353

LEGAL DESCRIPTION:
 FAIRWAY SUBDIVISION LOT 8- SECTION 8, T4N.R18E, B.M.

PARCEL NUMBER:
 RPS0425000080

TRELLIS AREA OVER EXISTING FLAT ROOF:	606 sqft
TRELLIS AREA OVER PATIO:	601 sqft
TOTAL TRELLIS AREA:	1,207 sqft
AREA OF TRELLIS THAT EXTENDS INTO SETBACK:	94 sqft



REVISIONS

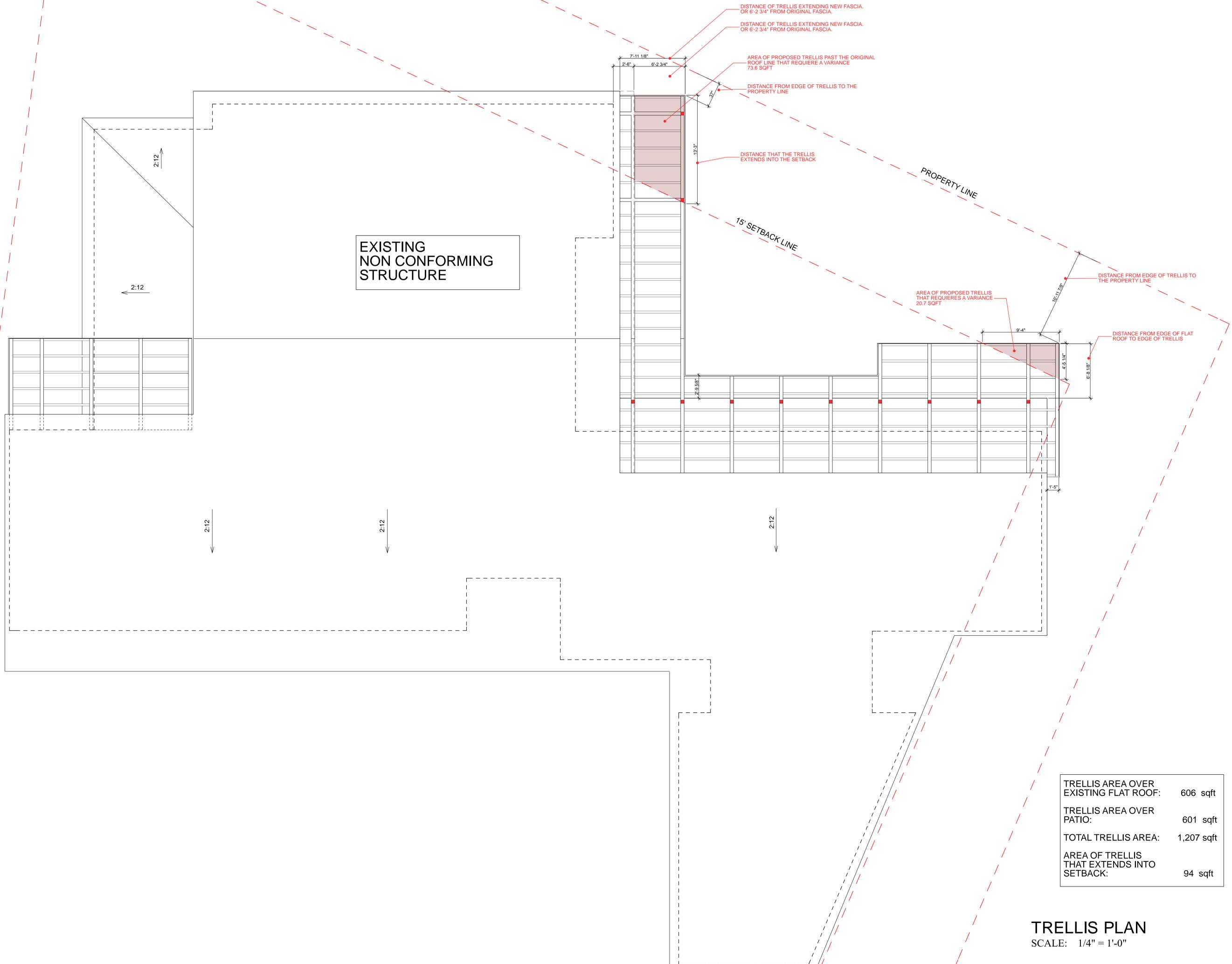
PROJECT: **0415**

SITE PLAN
 SCALE: 1/8" = 1'-0"

A1.1



BROWNE RESIDENCE
 410 Fairway Loop, Sun Valley ID 83353



EXISTING NON CONFORMING STRUCTURE

TRELLIS AREA OVER EXISTING FLAT ROOF:	606 sqft
TRELLIS AREA OVER PATIO:	601 sqft
TOTAL TRELLIS AREA:	1,207 sqft
AREA OF TRELLIS THAT EXTENDS INTO SETBACK:	94 sqft

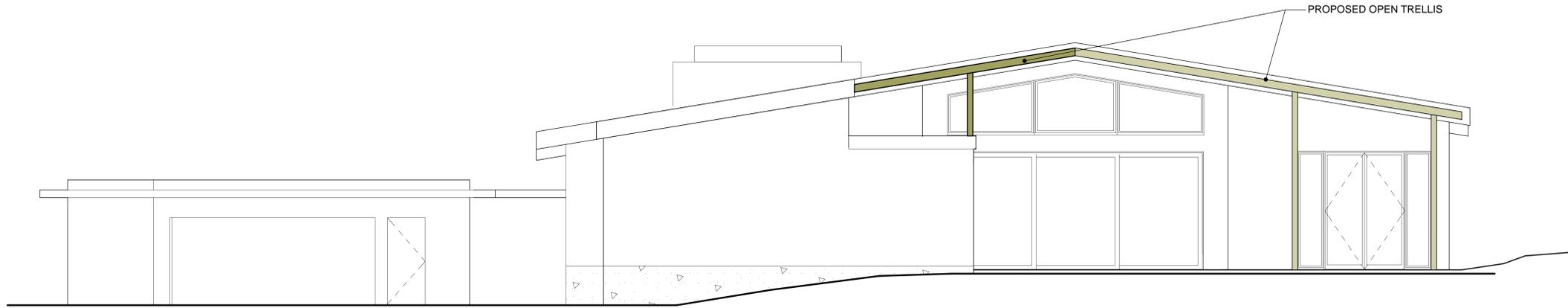
REVISIONS

PROJECT: **0415**

TRELLIS PLAN
 SCALE: 1/4" = 1'-0"



EAST ELEVATION



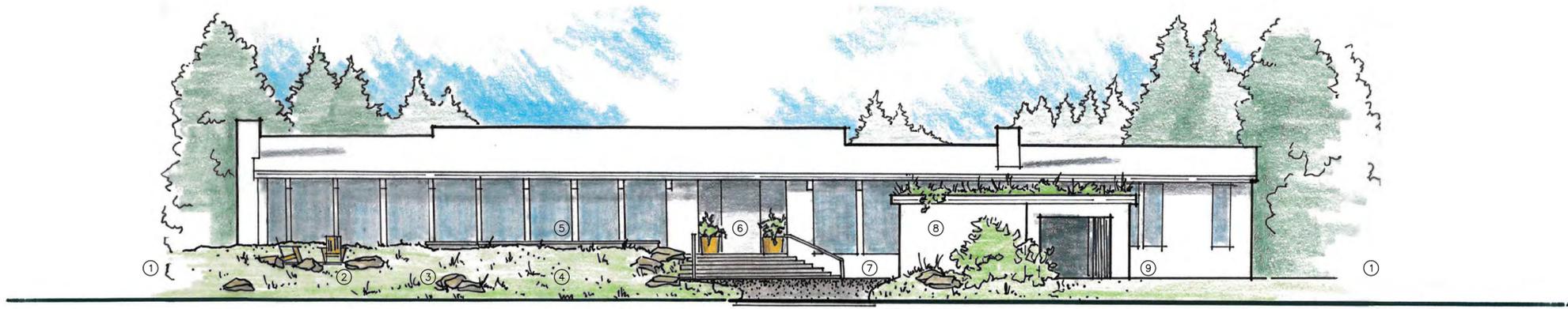
SOUTH ELEVATION

BROWNE RESIDENCE
 410 Fairway Loop, Sun Valley ID 83353

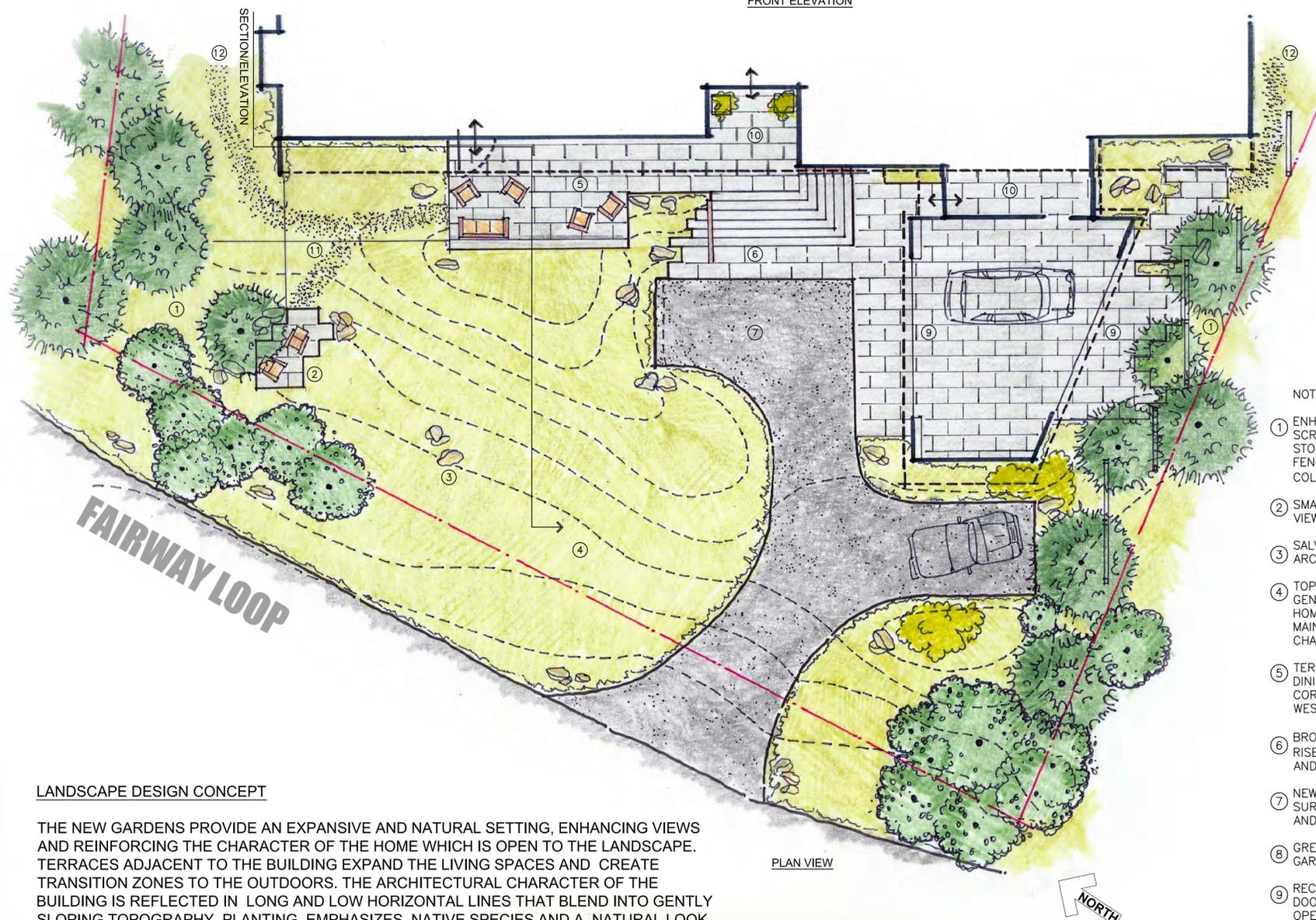
REVISIONS

PROJECT: **0415**





FRONT ELEVATION



PLAN VIEW

NOTES:

- ① ENHANCE BUFFER PLANTING TO SCREEN NEIGHBORS. ADD UNDER STORY SHRUBS AND FREE STANDING FENCE PANELS THAT MATCH THE COLOR/MATERIALS OF THE HOME.
- ② SMALL DESTINATION TERRACE WITH VIEW TO MOUNTAINS.
- ③ SALVAGED BOULDERS – LANDSCAPE ARCHITECT TO SUPERVISE PLACEMENT.
- ④ TOPOGRAPHY IS RESHAPED TO A GENTLE NATURALISTIC SLOPE FROM HOME TO STREET. A CULVERT MAINTAINS EXISTING DRAINAGE CHANNEL.
- ⑤ TERRACE ADJACENT TO LIVING AND DINING SPACES. A LOW WALL WITH CORTEN STEEL DETAILING DEFINES WEST EDGE.
- ⑥ BROAD LOW RISE STEPS TO ENTRY. 5" RISER W/ 14" TREADS. CORTEN STEEL AND WOOD HANDRAILS.
- ⑦ NEW ASPHALT DRIVE WITH CHIP SEAL SURFACE. REALIGN FOR EASIER ENTRY AND EXIT FROM GARAGE.
- ⑧ GREEN ROOF ON RECONFIGURED GARAGE.
- ⑨ RECONFIGURED GARAGE FEATURES DOORS FRONT AND BACK THAT CAN BE OPENED IN SUMMER TO CREATE A FREE FLOWING CARPORT LIKE STRUCTURE. THIS ALLOWS FOR EASY MOVEMENT FOR BIKES AND CARS.
- ⑩ LARGE SCALE PAVERS UNIFY SPACES ADJACENT TO THE HOME. IN SOME CASES PAVING MATERIAL IS BROUGHT INDOORS AS FLOORING TO EMPHASIZE INDOOR/OUTDOOR CONNECTION. PRECAST CONCRETE PAVERS ARE SUGGESTED. POLISHED WHEN USED FOR INTERIOR FLOORING.
- ⑪ CORTEN STEEL HEADERS BROUGHT OUT INTO LANDSCAPE TO EXTEND LINES OF TERRACE AND HOUSE
- ⑫ SECONDARY PATHS. SALVAGED DRIVEWAY PAVERS MAY RE USED IN A STEP STONE LAYOUT TO ACCOMPLISHED THEE PATHWAYS.

LANDSCAPE DESIGN CONCEPT

THE NEW GARDENS PROVIDE AN EXPANSIVE AND NATURAL SETTING, ENHANCING VIEWS AND REINFORCING THE CHARACTER OF THE HOME WHICH IS OPEN TO THE LANDSCAPE. TERRACES ADJACENT TO THE BUILDING EXPAND THE LIVING SPACES AND CREATE TRANSITION ZONES TO THE OUTDOORS. THE ARCHITECTURAL CHARACTER OF THE BUILDING IS REFLECTED IN LONG AND LOW HORIZONTAL LINES THAT BLEND INTO GENTLY SLOPING TOPOGRAPHY. PLANTING EMPHASIZES NATIVE SPECIES AND A NATURAL LOOK.

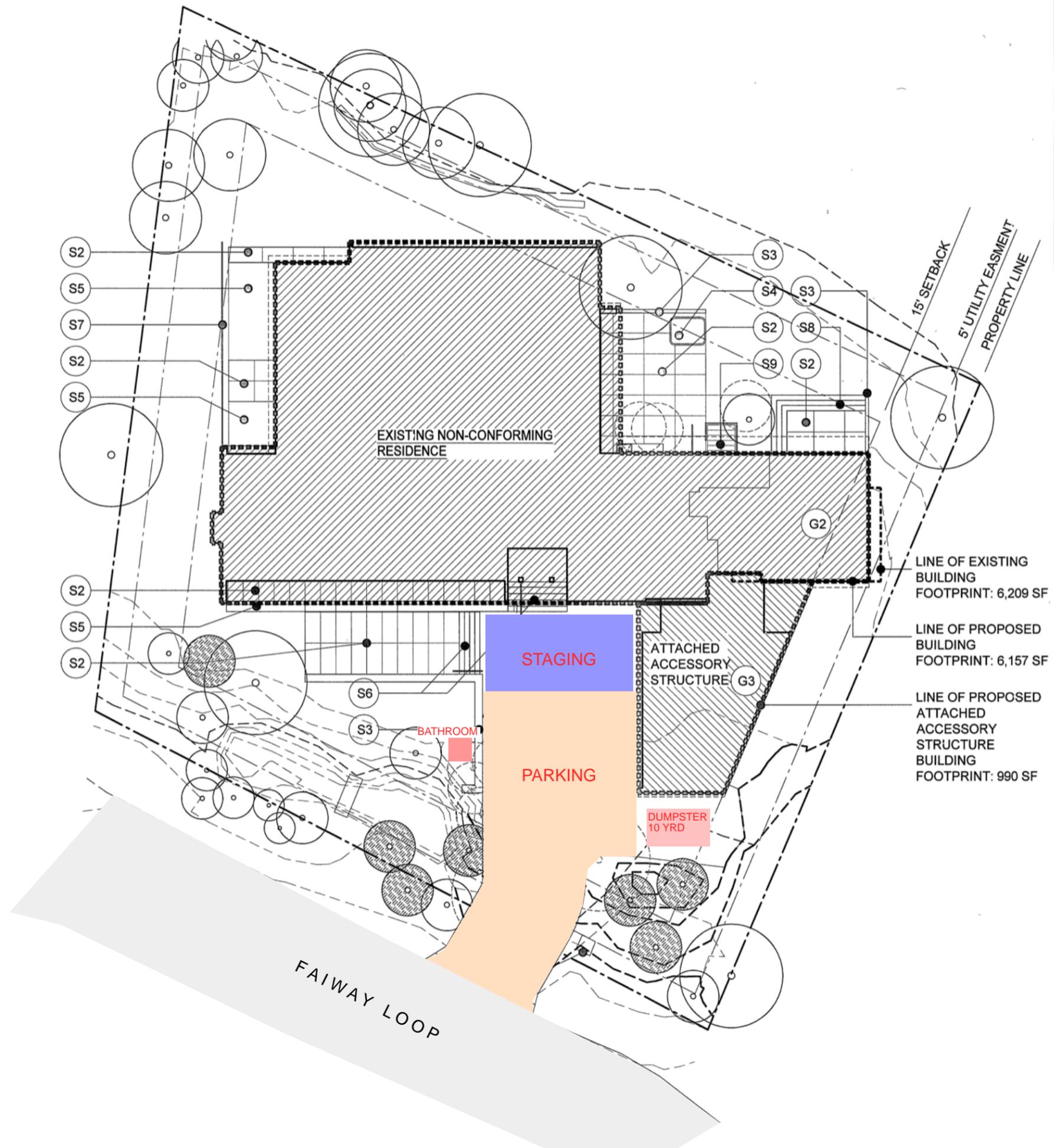


SECTION/ELEVATION

410 FAIRWAY LOOP

LANDSCAPE CONCEPT - FRONT GARDEN

APPROXIMATE SCALE - 1" = 10'-0"



**CITY OF SUN VALLEY
PLANNING AND ZONING COMMISSION
AGENDA REPORT**

From: Abby Rivin, CFM, Associate Planner
Meeting Date: 8 September 2016

VARIANCE (VR 2016-01)

APPLICANT: Carmen Finegan, AIA, Architectural Resources for Michael & Kelly Browne

LOCATION: 410 Fairway Loop, Fairway Subdivision Lot 8

ZONING DISTRICTS: Single-Family Residential (RS-1) Zoning District

REQUEST: Approve a variance request to allow for the encroachment of 94 sq ft of a new 1,207 sq ft trellis addition 13'3" into the required 15 ft setback.

ANALYSIS: The applicant submitted a variance application for a new 1,207 sq ft trellis addition and landscape plan to an existing, detached single-family dwelling on Lot 8 in Fairway Subdivision. 94 sq ft of the proposed trellis extends into the 15 ft setback. A significant portion, 73.6 sq ft, of the trellis extends 13'-3" into the setback and 20.7 sq ft extends 4'-5 ¼" into the setback. The applicant submitted a Design Review application concurrently with this application for a variance on July 12, 2016 (DR 2016-39).

Per Municipal Code § 9-2A-3.E.2, eaves, roofs, awnings, or canopies may encroach into a required setback a maximum of four feet (4'). This application exceeds even that allowance by more than 9 feet, and leaves less than 2 feet of setback to the adjoining property line.

The subject home has been a nonconforming structure since it was built in 1968, prior to the adoption of both the current 15 foot setback requirement and the maximum footprint allowed pursuant to City Code § 9-2A-3. The project design intensifies the existing nonconformities by further encroaching into the required setback. Sun Valley Municipal Code restricts increasing the degree of nonconformity of legally nonconforming structures.

SVMC Code §9-1B-2C-1 (NONCONFORMING STRUCTURES) states that:

1. *A nonconforming building shall not be enlarged or extended so as to increase the degree of nonconformity, except that nonconforming setbacks may be extended vertically or horizontally, subject to an approved design review application and the following criteria:*
 - a. *The extended nonconforming setback of the addition will not noticeably impact adjacent property any more than a conforming addition would.*
 - b. *The extended nonconforming setback of the addition maintains the plane of existing walls of the nonconforming structure.*

Clauses A and B are not met with this project as the proposed encroachment is not a vertical or horizontal extension of the existing nonconformity. The trellis addition is located at the east elevation of the

residence and encroaches into the backyard setback. The existing nonconformity is located at the south elevation and extends into the side yard setback.

In order to approve a variance application and based on the standards set forth in Sun Valley Municipal Code, Title 9, Chapter 5B (SPECIFIC PROVISIONS), the Planning and Zoning Commission must make the following findings pursuant to Development Code Section 9-5B-8 (VARIANCE). The applicant has provided the following findings for the variance request:

1. The subject property is deprived, by provision of this title, of rights and privileges enjoyed legally by other properties in the vicinity and under the applicable zoning district because of the unique size, shape, topography or location of the subject property (a finding of undue hardship). **As situated, it is not possible to provide adequate sun or weather protection to a significant portion of the south facing corner of the home without extension of overhead cover into the setback. The shape of the lot and location and orientation of the home combine to create this difficulty which will be alleviated to a great degree by the small extension of overhead structure requested.**
2. The need for the variance is not the result of actions of the applicant or property owner. **The nonconforming location of the home in relation to the property line, a condition existing before the current owner purchased the property, imposes hardship on the effectiveness of the renovation project.**
3. The variance will not unreasonably diminish either the health, safety or welfare of the community neighborhood. **The adjoining property buffered by the setback in question is open space maintained by the neighboring golf course. There are no structures for a considerable distance on the neighboring golf course property. If granted the variance will not unreasonably diminish the health, safety or welfare of the community.**
4. The variance is the only reasonable alternative to overcome the undue hardship. **The proposed small extension of the overhead trellis into the setback and the variance required for its construction are the only reasonable alternative to overcome undue hardship created by nonconforming relationship of building to property line. Omitting the overhead cover at the setback line would expose a significant portion of the south facing corner of the home to inordinate sun and weather damage.**
5. The variance is the minimum relief necessary to allow reasonable use of the subject property. **Trellis design alternatives were studied and the proposed trellis extension shown in this application for variance is the minimum relief necessary to allow reasonable use of the subject.**

Staff is unable to make required findings 1, 2, 4, and 5. The applicant is not deprived of reasonable use of the property due to the unique size, shape, topography, or location of the lot. The application for the trellis encroachment is entirely the result of the owners' actions, as they could continue to enjoy the property without addition and encroachment into required setbacks. Compliant site design would be the minimum relief necessary for the trellis addition project. The property is already enjoying reasonable use as a single-family residence.

RECOMMENDATION: Staff recommends denial of VR 2016-01.

RECOMMENDED MOTION: "I move to deny approval of VR 2016-01, pursuant to the Findings of Fact."

ALTERNATIVE ACTIONS: Move to approve VR 2016-01 and draft findings supporting approval.

ATTACHMENTS:

1. Findings of Fact
2. Application Materials

**FINDINGS OF FACT AND CONCLUSIONS OF LAW
CITY OF SUN VALLEY PLANNING & ZONING COMMISSION
VARIANCE**

Project Name: **410 Fairway Loop Trellis Addition and Landscape Plan**

Applicant: **Carmen Finegan, AIA, Architectural Resources for Michael & Kelly Browne**

Location: **410 Fairway Loop, Fairway Subdivision Lot 8**

Zoning District: **Single-Family Residential (RS-1) Zoning District**

Project Description: The applicant has submitted an application for the construction of a new 1,207 sq ft trellis addition and landscape plan for an existing single-family dwelling in the Fairway Subdivision. 94 sq ft of the proposed addition extends into the 15 ft required setback. A significant portion, 73.6 sq ft, of the trellis extends 13'-3" into the setback and 20.7 sq ft extends 4'-5 ¼" into the setback.

Project Analysis: The subject home has been a nonconforming structure since it was built in 1968, prior to the adoption of both the current 15 foot setback requirement and the maximum footprint allowed pursuant to City Code §9-2A-3. The project design intensifies the existing nonconformities by further encroaching into the required setback, violating Sun Valley Municipal Code §9-1B-2C-1, which prohibits additions or enlargements of nonconforming buildings that increase the degree of nonconformity.

Required Findings: In order to approve a variance application and based on the standards set forth in **Sun Valley Municipal Code, Title 9, Chapter 5B (SPECIFIC PROVISIONS)**, the Planning and Zoning Commission has made the following findings pursuant to **Development Code Section 9-5B-8 (VARIANCE)**.

1. The subject property is NOT deprived, by provision of this title, of rights and privileges enjoyed legally by other properties in the vicinity and under the applicable zoning district because of the unique size, shape, topography or location of the subject property (a finding of undue hardship). **The applicants could continue to enjoy the property without the trellis addition and encroachment into the required setback. The property is not deprived, by provision of the Development Code, of rights and privileges enjoyed legally by other properties in the vicinity, to maintain a single-family residence.**
2. The need for the variance IS the result of actions of the applicant or property owner. **The trellis encroachment is not a result of the existing property dimensions, but rather a consequence of the owners' actions. The property is already enjoying reasonable use as a single-family residence.**
4. The variance is NOT the only reasonable alternative to overcome the undue hardship. **The applicant could design the home and related elements in a different manner so as not to further encroach into the setbacks.**
5. The variance is NOT the minimum relief necessary to allow reasonable use of the subject property. **The applicant already enjoys reasonable use of the property; the minimum relief necessary for the trellis addition would be relocation of the proposed trellis, redesign of the site, or other similar action.**

CONCLUSIONS OF LAW

Therefore, this project does not meet the standards for approval under Title 9, Chapter 5B, Section 8 City of Sun Valley Municipal Code.

DECISION

Therefore, the Sun Valley Planning and Zoning Commission denies this Variance Application No. VR2016-01.

Dated this 8th day of September, 2016.

Ken Herich, Chair
Sun Valley Planning and Zoning Commission

Date Findings of Fact signed _____

410 FAIRWAY LOOP
VARIANCE REQUEST 7.18.16

This application is for a shade trellis on the southeast (non public) side of the home. The trellis provides shade and weather protection to the building and family terrace. This design revises a previously approved design by aligning the trellis with the existing roof line. The total area of the trellis structure is 1,207 square feet. A significant portion of the trellis, 606 square feet, extends over an existing flat roof extension on the east side of the house. A small portion of the trellis, less than 8% - 94 square feet, extends into the 15' property line setback. This aspect of the design requires a variance for permit approval. This incursion is required to protect the home from the elements complete by continuing a line compatible with the existing roof line. The new trellis structure replaces a 30" roof overhang which had previously extended into the set back.

1) As situated, it is not possible to provide adequate sun or weather protection to a significant portion of the south facing corner of the home without extension of overhead cover into the setback. The shape of the lot and location and orientation of the home combine to create this difficulty which will be alleviated to a great degree by the small extension of overhead structure requested.

2) The nonconforming location of the home in relation to the property line, a condition existing before the current owner purchased the property, imposes hardship on the effectiveness of the renovation project.

3) The adjoining property buffered by the setback in question is open space maintained by the neighboring golf course. There are no structures for a considerable distance on the neighboring golf course property. If granted, the variance will not unreasonably diminish the health, safety or welfare of the community neighborhood.

4) The proposed small extension of the overhead trellis into the setback and the variance required for its construction are the only reasonable alternative to overcome the undue hardship created by nonconforming relationship of building to property line. Omitting the overhead cover at the setback line would expose a significant portion of the south facing corner of the home to inordinate sun and weather damage.

5) Trellis design alternatives were studied and the proposed trellis extension shown in this application for variance is the minimum relief necessary to allow reasonable use of the subject property.

41 of this definition and are akin to a river of liquid and flowing mud on the surfaces of normally dry
42 land areas, as when earth is carried by a current of water and deposited along the path of the
43 current.

44 2. The collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion
45 or undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly
46 caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by
47 an unanticipated force of nature, such as flash flood or an abnormal tidal surge, or by some similarly unusual
48 and unforeseeable event which results in flooding as defined in paragraph 1.a. of this definition.

49
50 FLOOD INSURANCE RATE MAP (FIRM): The official map on which the federal insurance administration has
51 delineated both the areas of special flood hazard and the risk premium zones applicable to the community.
52 A FIRM that has been available digitally is called a Digital Flood Insurance Rate Map (DFIRM).

53
54 ~~FLOOD INSURANCE STUDY: The official report provided by the federal insurance administration that~~
55 ~~includes flood profiles, the flood boundary floodway map, and the water surface elevation of the base~~
56 ~~flood. An examination, evaluation, and determination of flood hazards and, if appropriate, corresponding~~
57 ~~water surface elevations; or an examination, evaluation and determination of mudslide (i.e., mudflow)~~
58 ~~and/or flood-related erosion hazards.~~

59
60 ~~FLOOD PROTECTION ELEVATION (FPE): An elevation that corresponds to the elevation of the one percent~~
61 ~~(1%) chance annual flood (base flood), plus any increase in flood elevation due to floodway encroachment,~~
62 ~~plus one foot (1') of freeboard. Therefore the FPE for Sun Valley is equal to BFE plus floodway elevation (if~~
63 ~~present) plus freeboard. The Base Flood Elevation plus the Freeboard.~~

- 64 a. In "Special Flood Hazard Areas" where Base Flood Elevations (BFEs) have been determined,
65 this elevation shall be the BFE plus 2 feet of freeboard; and
66 b. In "Special Flood Hazard Areas" where no BFE has been established, this elevation shall be
67 at least 2 feet above the highest adjacent grade.

68
69 STRUCTURE: Includes buildings, signs, fences, and other improvements, or any portion thereof,
70 constructed, erected, built, installed or placed upon any real property. A walled and roofed building,
71 including a gas or liquid storage tank that is principally above ground, as well as a manufactured home.

72
73 ~~SUBSTANTIAL IMPROVEMENT: A. Any repair, reconstruction or improvement of a structure, the cost of~~
74 ~~which equals or exceeds fifty percent (50%) of the market value of the structure either:~~

- 75 ~~1. Before the improvement or repair is started; or~~
76 ~~2. If the structure has been damaged and is being restored, before the damage occurred.~~
77 ~~B. For the purposes of this definition, substantial improvement is considered to occur when the first~~
78 ~~alteration of any wall, ceiling, floor or other structural part of the building commences, whether or not that~~
79 ~~alteration affects the external dimensions of the structure.~~
80 ~~C. The term does not, however, include either:~~

- 81 ~~1. Any project for improvement of a structure to comply with existing state or local health, sanitary~~
82 ~~or safety code specifications which are solely necessary to assure safe living conditions; or~~
83 ~~2. Any alteration of a structure listed on the national register of historic places or a state inventory~~
84 ~~of historic places.~~

85 before the “start of construction” of the improvement. This term includes structures which have incurred
86 “substantial damage”, regardless of the actual repair work performed. The term does not, however, include
87 either:

- 88 1. Any project for improvement of a structure to correct existing violations of state or local
89 health, sanitary, or safety code specifications which have been identified by the local code
90 enforcement official and which are the minimum necessary to assure safe living conditions; or
91 2. Any alteration of a “historic structure”, provided that the alteration will not preclude the
92 structure's continued designation as a “historic structure” and the alteration is approved by
93 variance issued pursuant to this ordinance.

94

95 SECTION 2. The following definitions will be added to Title 9, Chapter 1, Article C, Section 1:

96

97 ADDITION (to an existing building): An extension or increase in the floor area or height of a building or
98 structure.

99

100 APPEAL: A request for review of the Floodplain Administrator's interpretation of provisions of this ordinance
101 or request for a variance.

102

103 CRITICAL FACILITIES: Facilities that are vital to flood response activities or critical to the health and safety
104 of the public before, during, and after a flood, such as a hospital, emergency operations center, electric
105 substation, police station, fire station, nursing home, school, vehicle and equipment storage facility, or
106 shelter; and facilities that, if flooded, would make the flood problem and its impacts much worse, such as
107 a hazardous materials facility, power generation facility, water utility, or wastewater treatment plant.

108

109 ELEVATED BUILDING: For insurance purposes, a non-basement building which has its lowest elevated floor
110 raised above ground level by foundation walls, shear walls, posts, piers, pilings, or columns.

111

112 ELEVATION CERTIFICATE: The Elevation Certificate is an important administrative tool of the NFIP. It is used
113 to determine the proper flood insurance premium rate; it is used to document elevation information
114 necessary to ensure compliance with community floodplain management regulations; and it may be used
115 to support a request for a Letter of Map Amendment (LOMA) or Letter of Map Revision based on fill (LOMR-
116 F).

117

118 ENCLOSURE: An area enclosed by solid walls below the BFE/FPE or an area formed when any space below
119 the BFE/FPE is enclosed on all sides by walls or partitions. Insect screening or open wood lattice used to
120 surround space below the BFE/RFPE is not considered an enclosure.

121
122 FLOODPLAIN DEVELOPMENT PERMIT: Any type of permit that is required in conformance with the
123 provisions of this ordinance, prior to the commencement of any development activity.

124
125 FREEBOARD: A factor of safety usually expressed in feet above a flood level for the purposes of floodplain
126 management. Freeboard tends to compensate for the many unknown factors that could contribute to flood
127 heights greater than the height calculated for a selected size flood and floodway conditions, such as wave
128 action, obstructed bridge openings, debris and ice jams, and the hydrologic effects of urbanization in a
129 watershed. The Base Flood Elevation (BFE) plus the freeboard establishes the Flood Protection Elevation
130 (FPE). Freeboard shall be {insert number} of feet.

131
132 FUNCTIONALLY DEPENDENT USE: A facility that cannot be used for its intended purpose unless it is located
133 or carried out in close proximity to water, such as a docking or port facility necessary for the loading and
134 unloading of cargo or passengers, shipbuilding, or ship repair facilities. The term does not include long-term
135 storage, manufacture, sales, or service facilities.

136
137 NATIONAL FLOOD INSURANCE PROGRAM (NFIP): The NFIP is a Federal program created by Congress to
138 mitigate future flood losses nationwide through sound, community-enforced building and zoning
139 ordinances and to provide access to affordable, federally backed flood insurance protection for property
140 owners.

141
142 VARIANCE: A grant of relief by the governing body from a requirement of this ordinance.

143
144 VIOLATION: The failure of a structure or other development to be fully compliant with the community's
145 floodplain management regulations. A structure or other development without the Finished Construction
146 Elevation Certificate, other certifications, or other evidence of compliance required in § 60.3(b)(5), (c)(4),
147 (c)(10), (d)(3), (e)(2), (e)(4), or (e)(5) is presumed to be in violation until such time as that documentation is
148 provided.

149
150 SECTION 3. Title 9, Chapter 3, Article I [Flood Hazard Protection] and Chapter 5, Article B, Section 10 of the
151 Municipal Code of the City of Sun Valley shall be deleted and replaced as Title 9, Chapter 3, Article I Flood
152 Hazard Protection, with the following sections:

153
154 **9-3I-1: STATUTORY AUTHORIZATION, FINDINGS OF FACT, PURPOSE, AND OBJECTIVES**

155
156 **A. Statutory Authority**

157
158 The Legislature of the State of Idaho, pursuant to Idaho Code §§ 46-1020 through 46-1024,
159 authorizes local governments to adopt floodplain management ordinances that identify

160 floodplains and minimum floodplain development standards to minimize flood hazards and
161 protect human life, health, and property.

162

163 **B. Findings of Fact**

164

165 1. The flood hazard areas of the City of Sun Valley are subject to periodic inundation that
166 results in:

167 a. loss of life and property;

168 b. health and safety hazards;

169 c. disruption of commerce and governmental services;

170 d. extraordinary public expenditures for flood relief and protection; and

171 e. impairment of the tax base, all of which adversely affect the public health, safety,
172 and general welfare.

173

174 2. These flood losses are caused by structures in flood hazard areas, which are inadequately
175 elevated, flood-proofed, or otherwise unprotected from flood damages, and by the
176 cumulative effect of obstructions in floodplains causing increases in flood heights and
177 velocities.

178

179 3. Local government units have the primary responsibility for planning, adopting, and
180 enforcing land use regulations to accomplish proper floodplain management.

181

182 **C. Statement of Purpose**

183

184 The purpose of this ordinance is to promote public health, safety, and general welfare and to
185 minimize public and private losses due to flood conditions in specific areas by provisions designed
186 to:

187

188 1. Protect human life, health, and property;

189

190 2. Minimize damage to public facilities and utilities such as water purification and sewage
191 treatment plants, water and gas mains, electric, telephone and sewer lines, streets, and
192 bridges located in floodplains;

193

194 3. Help maintain a stable tax base by providing for the sound use and development of flood
195 prone areas;

- 196
197 4. Minimize expenditure of public money for costly flood control projects;
198
199 5. Minimize the need for rescue and emergency services associated with flooding, generally
200 undertaken at the expense of the general public;
201
202 6. Minimize prolonged business interruptions;
203
204 7. Ensure potential buyers are notified the property is in an area of special flood hazard; and
205
206 8. Ensure those who occupy the areas of special flood hazard assume responsibility for their
207 actions.

208

209 **D. Objectives and Methods of Reducing Flood Losses**

210

211 In order to accomplish its purpose, this ordinance includes methods and provisions to:

212

- 213 1. Require that development which is vulnerable to floods, including structures and facilities
214 necessary for the general health, safety, and welfare of citizens, be protected against
215 flood damage at the time of initial construction;
216
217 2. Restrict or prohibit uses which are dangerous to health, safety, and property due to water
218 or erosion hazards, or which increase flood heights, velocities, or erosion;
219
220 3. Control filling, grading, dredging, and other development which may increase flood
221 damage or erosion;
222
223 4. Prevent or regulate the construction of flood barriers that will unnaturally divert flood
224 waters or that may increase flood hazards to other lands;
225
226 5. Preserve and restore natural floodplains, stream channels, and natural protective barriers
227 which carry and store flood waters.

228

229 **9-31-2. GENERAL PROVISIONS**

230

231 **A. Lands to Which This Ordinance Applies**

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This Ordinance shall apply to all Special Flood Hazard Areas within the jurisdiction of the City of Sun Valley. Nothing in this ordinance is intended to allow uses or structures that are otherwise prohibited by the zoning ordinance.

B. Basis for Special Flood Hazard Areas

The Special Flood Hazard Areas identified by the Federal Emergency Management Agency in its Flood Insurance Study (FIS) for Blaine County, Idaho and Incorporated Areas, dated November 26, 2010, with accompanying Flood Insurance Rate Maps (FIRM) or Digital Flood Insurance Rate Maps (DFIRM), and other supporting data, are adopted by reference and declared a part of this ordinance. The FIS and the FIRM are on file at City Hall, 81 Elkhorn Rd, Sun Valley, ID 83353.

C. Establishment of Floodplain Development Permit

A Floodplain Development Permit shall be required in conformance with the provisions of this ordinance prior to the commencement of any development activities within Special Flood Hazard Areas determined in accordance with the provisions of §9-31-3B.

D. Compliance

No structure or land shall hereafter be located, extended, converted, altered, or developed in any way without full compliance with the terms of this ordinance and other applicable regulations.

E. Abrogation and Greater Restrictions

This ordinance shall not in any way repeal, abrogate, impair, or remove the necessity of compliance with any other laws, ordinances, regulations, easements, covenants, or deed restrictions, etcetera. However, where this ordinance and another conflict or overlap, whichever imposes more stringent or greater restrictions shall control.

F. Interpretation

In the interpretation and application of this ordinance all provisions shall be:

- 268 1. Considered as minimum requirements;
269
270 2. Liberally construed in favor of the governing body; and
271
272 3. Deemed neither to limit nor repeal any other powers granted under state statutes.
273

274 **G. Warning and Disclaimer of Liability**
275

276 The degree of flood protection required by this ordinance is considered reasonable for regulatory
277 purposes and is based on scientific and engineering considerations. Larger floods can and will
278 occur. Flood heights may be increased by man-made or natural causes. This ordinance does not
279 imply that land outside the Special Flood Hazard Areas or uses permitted within such areas will
280 be free from flooding or flood damages. This ordinance shall not create liability on the part of
281 City of Sun Valley or by any officer or employee thereof for flood damages that result from
282 reliance on this ordinance or an administrative decision lawfully made hereunder.
283

284 **H. Penalties for Violation**
285

286 No structure or land shall hereafter be located, extended, converted, or altered unless in full
287 compliance with the terms of this ordinance and other applicable regulations.
288

289 Violation of the provisions of this ordinance or failure to comply with any of its requirements,
290 including violation of conditions and safeguards established in connection with grants of variance
291 or special exceptions, shall constitute an infraction under this Code. Each day the violation
292 continues shall be considered a separate offense. Nothing herein contained shall prevent the City
293 of Sun Valley from taking such other lawful actions as is necessary to prevent or remedy any
294 violation.
295

296 **9-31-3: ADMINISTRATION**
297

298 **A. Designation of Floodplain Ordinance Administrator**
299

300 The Community Development Director, hereinafter referred to as the "Floodplain
301 Administrator", is hereby appointed to administer and implement the provisions of this
302 ordinance.
303

304 **B. Duties and Responsibilities of the Floodplain Administrator**

305

306 The Floodplain Administrator shall perform, but not be limited to, the following duties:

307

308 1. Review all floodplain development applications and issue permits for all proposed
309 development within Special Flood Hazard Areas to assure that the requirements of this
310 ordinance have been satisfied.

311

312 2. Review all proposed development within Special Flood Hazard Areas to assure that all
313 necessary Local, State, and Federal permits have been received, including Section 404 of
314 the Federal Water Pollution Control Act Amendments of 1972, 33 USC 1334.

315

316 3. Notify adjacent communities and the Idaho Department of Water Resources State
317 Coordinator for the National Flood Insurance Program (NFIP) prior to any alteration or
318 relocation of a watercourse and submit evidence of such notification to the Federal
319 Emergency Management Agency (FEMA).

320

321 4. Assure that maintenance is provided within the altered or relocated portion of said
322 watercourse so that the flood-carrying capacity is maintained.

323

324 5. Prevent encroachments into floodways and flood fringe areas unless the certification and
325 flood hazard reduction provisions of Article V, Section E are met.

326

327 6. Obtain actual elevation (in relation to mean sea level) of the reference level (including
328 basement) and all attendant utilities of all new and substantially improved structures, in
329 accordance with the provisions of §9-31-3C.3.

330

331 7. Obtain actual elevation (in relation to mean sea level) to which all new and substantially
332 improved structures and utilities have been floodproofed, in accordance with the
333 provisions of §9-31-3C.3.

334

335 8. Obtain actual elevation (in relation to mean sea level) of all public utilities in accordance
336 with the provisions of §9-31-3C.3.

337

- 338 9. When floodproofing is utilized for a particular structure, obtain certifications from a
339 registered professional engineer or architect in accordance with the provisions of §9-3I-
340 3C.3 and §9-3I-4B.2.
- 341
- 342 10. Where interpretation is needed as to the exact location of boundaries of the Special Flood
343 Hazard Areas, floodways, or flood fringe areas (for example, where there appears to be a
344 conflict between a mapped boundary and actual field conditions), make the necessary
345 interpretation. The person contesting the location of the boundary shall be given a
346 reasonable opportunity to appeal the interpretation as provided in this article.
- 347
- 348 11. When Base Flood Elevation (BFE) data has not been provided in accordance with the
349 provisions of § 9-3I-2B obtain, review, and reasonably utilize any BFE data, along with
350 floodway data or flood fringe area data available from a Federal, State, or other source,
351 including data developed pursuant to §9-3I-4C.2b, in order to administer the provisions
352 of this ordinance.
- 353
- 354 12. When Base Flood Elevation (BFE) data is provided but no floodway or flood fringe area
355 data has been provided in accordance with the provisions of §9-3I-2B, obtain, review, and
356 reasonably utilize any floodway data or flood fringe area data available from a Federal,
357 State, or other source in order to administer the provisions of this ordinance.
- 358
- 359 13. When the lowest floor and the lowest adjacent grade of a structure or the lowest ground
360 elevation of a parcel in a Special Flood Hazard Area (SFHA) is above the Base Flood
361 Elevation (BFE), advise the property owner of the option to apply for a Letter of Map
362 Amendment (LOMA) from FEMA. Maintain a copy of the LOMA issued by FEMA in the
363 floodplain development permit file.
- 364
- 365 14. Permanently maintain all records that pertain to the administration of this ordinance and
366 make these records available for public inspection, recognizing that such information may
367 be subject to the Privacy Act of 1974, as amended.
- 368
- 369 15. Make on-site inspections of work in progress. As the work pursuant to a floodplain
370 development permit progresses, the Floodplain Administrator shall make as many
371 inspections of the work as may be necessary to ensure that the work is being done
372 according to the provisions of the local ordinance and the terms of the permit. In
373 exercising this power, the Floodplain Administrator has a right, upon presentation of

374 proper credentials, to enter on any premises within the jurisdiction of the community at
375 any reasonable hour for the purposes of inspection or other enforcement action.

376

377 16. Issue stop-work orders as required. Whenever a building or part thereof is being
378 constructed, reconstructed, altered, or repaired in violation of this ordinance, the
379 Floodplain Administrator may order the work to be immediately stopped. The stop-work
380 order shall be in writing and directed to the person doing or in charge of the work. The
381 stop-work order shall state the specific work to be stopped, the specific reason(s) for the
382 stoppage, and the condition(s) under which the work may be resumed. Violation of a
383 stop-work order constitutes a misdemeanor.

384

385 17. Revoke floodplain development permits as required. The Floodplain Administrator may
386 revoke and require the return of the floodplain development permit by notifying the
387 permit holder in writing stating the reason(s) for the revocation. Permits shall be revoked
388 for any substantial departure from the approved application, plans, and specifications;
389 for refusal or failure to comply with the requirements of State or local laws; or for false
390 statements or misrepresentations made in securing the permit. Any floodplain
391 development permit mistakenly issued in violation of an applicable State or local law may
392 also be revoked.

393

394 18. Make periodic inspections throughout the Special Flood Hazard Areas within the
395 jurisdiction of the community. The Floodplain Administrator and each member of his or
396 her inspections department shall have a right, upon presentation of proper credentials,
397 to enter on any premises within the territorial jurisdiction of the department at any
398 reasonable hour for the purposes of inspection or other enforcement action.

399

400 19. Follow through with corrective procedures of §9-3I-3D.

401

402 20. Review, provide input, and make recommendations for variance requests.

403

404 21. Maintain a current map repository to include, but not limited to, the FIS Report, FIRM and
405 other official flood maps, and studies adopted in accordance with the provisions of §9-3I-
406 2B of this ordinance, including any revisions thereto including Letters of Map Change,
407 issued by FEMA. Notify the NFIP State Coordinator and FEMA of your community's
408 mapping needs.

409

410 22. Coordinate revisions to FIS reports and FIRMs, including Letters of Map Revision Based on
411 Fill (LOMR-Fs) and Letters of Map Revision (LOMRs).

412

413 **C. Floodplain Development Application, Permit, and Certification Requirements**

414

415 1. Application Requirements. Application for a Floodplain Development Permit shall be
416 made to the Floodplain Administrator prior to any development activities located within
417 Special Flood Hazard Areas. The following items shall be presented to the Floodplain
418 Administrator to apply for a floodplain development permit:

419 a. A plot plan drawn to scale which shall include, but shall not be limited to, the
420 following specific details of the proposed floodplain development:

421 i. the nature, location, dimensions, and elevations of the area of
422 development/disturbance; existing and proposed structures, utility
423 systems, grading/pavement areas, fill materials, storage areas, drainage
424 facilities, and other development;

425 ii. the boundary of the Special Flood Hazard Area as delineated on the FIRM
426 or other flood map as determined in §9-3I-2B, or a statement that the
427 entire lot is within the Special Flood Hazard Area;

428 iii. the flood zone(s) designation of the proposed development area as
429 determined on the FIRM or other flood map as determined in §9-3I-2B A;

430 iv. the boundary of the floodway(s) or flood fringe area(s) as determined in
431 §9-3I-2B;

432 v. the Base Flood Elevation (BFE) where provided as set forth in §9-3I-2B; §9-
433 3I-2C; or §9-3I-4C;

434 vi. the old and new location of any watercourse that will be altered or
435 relocated as a result of proposed development; and

436 vii. the certification of the plot plan by a registered land surveyor or
437 professional engineer.

438 b. Proposed elevation, and method thereof, of all development within a Special
439 Flood Hazard Area including but not limited to:

440 i. Elevation in relation to mean sea level of the proposed reference level
441 (including basement) of all structures;

442 ii. Elevation in relation to mean sea level to which any non-residential
443 structure in Zone A, AE, AH, AO, or A1-30 will be floodproofed; and

444 iii. Elevation in relation to mean sea level to which any proposed utility
445 systems will be elevated or floodproofed.

- 446 c. If floodproofing, a Floodproofing Certificate (FEMA Form 086-0-33) with
447 supporting data, an operational plan, and an inspection and maintenance plan
448 that include, but are not limited to, installation, exercise, and maintenance of
449 floodproofing measures.
- 450 d. A Foundation Plan, drawn to scale, which shall include details of the proposed
451 foundation system to ensure all provisions of this ordinance are met. These details
452 include but are not limited to:
- 453 i. The proposed method of elevation, if applicable (i.e., fill, solid foundation
454 perimeter wall, solid backfilled foundation, open foundation, or on
455 columns/posts/piers/piles/shear walls); and
- 456 ii. Openings to facilitate automatic equalization of hydrostatic flood forces on
457 walls in accordance with §9-31-4B.d.i-vi when solid foundation perimeter
458 walls are used in Zones A, AE, AH, AO, and A1-30.
- 459 e. Usage details of any enclosed areas below the lowest floor.
- 460 f. Plans and/or details for the protection of public utilities and facilities such as
461 sewer, gas, electrical, and water systems to be located and constructed to
462 minimize flood damage.
- 463 g. Certification that all other Local, State, and Federal permits required prior to
464 floodplain development permit issuance have been received.
- 465 h. Documentation for placement of recreational vehicles and/or temporary
466 structures, when applicable, to ensure that the provisions of §9-31-4B.6 and 7 of
467 this ordinance are met.
- 468 i. A description of proposed watercourse alteration or relocation, when applicable,
469 including an engineering report on the effects of the proposed project on the
470 flood-carrying capacity of the watercourse and the effects to properties located
471 both upstream and downstream; and
- 472 i. A map (if not shown on plot plan) showing the location of the proposed
473 watercourse alteration or relocation.
- 474
- 475 2. Permit Requirements. The Floodplain Development Permit shall include, but not be
476 limited to:
- 477 a. A complete description of all the development to be permitted under the
478 floodplain development permit (i.e. house, garage, pool, septic, bulkhead, cabana,
479 pole barn, chicken coop, pier, bridge, mining, dredging, filling, grading, paving,
480 excavation or drilling operations, or storage of equipment or materials, etcetera).

- 481 b. The Special Flood Hazard Area determination for the proposed development in
- 482 accordance with available data specified in §9-3I-2B.
- 483 c. The Flood Protection Elevation required for the reference level and all attendant
- 484 utilities.
- 485 d. The Flood Protection Elevation required for the protection of all public utilities.
- 486 e. All certification submittal requirements with timelines.
- 487 f. A statement that no fill material or other development shall encroach into the
- 488 floodway or flood fringe area of any watercourse, as applicable.
- 489 g. The flood openings requirements, if in Zones A, AE, AH, AO, or A1-30.
- 490 h. All floodplain development permits shall be conditional upon the start of
- 491 construction of work within 180 days. A floodplain development permit shall
- 492 expire 180 days after issuance unless the permitted activity has commenced as
- 493 per the Start of Construction definition.
- 494 i. A statement of the limitations of below BFE enclosure uses, if applicable. (i.e.,
- 495 parking, building access and limited storage only).
- 496 j. A statement that all materials below BFE/FPE must be flood resistant materials.

- 497
- 498 3. Certification Requirements.
- 499 a. Elevation Certificates
- 500 i. An Elevation Certificate (FEMA Form 86-0-33) is required prior to the
- 501 actual start of any new construction. It shall be the duty of the permit
- 502 holder to submit to the Floodplain Administrator a certification of the
- 503 elevation of the reference level, in relation to mean sea level. The
- 504 Floodplain Administrator shall review the certificate data submitted.
- 505 Deficiencies detected by such review shall be corrected by the permit
- 506 holder prior to the beginning of construction. Failure to submit the
- 507 certification or failure to make required corrections shall be cause to deny
- 508 a floodplain development permit.
- 509 ii. An Elevation Certificate (FEMA Form 86-0-33) is required after the
- 510 reference level is established. Within seven (7) calendar days of
- 511 establishment of the reference level elevation, it shall be the duty of the
- 512 permit holder to submit to the Floodplain Administrator a certification of
- 513 the elevation of the reference level, in relation to mean sea level. Any
- 514 work done within the seven (7) day calendar period and prior to
- 515 submission of the certification shall be at the permit holder's risk. The
- 516 Floodplain Administrator shall review the certificate data submitted.

517 Deficiencies detected by such review shall be corrected by the permit
518 holder immediately and prior to further work being permitted to proceed.
519 Failure to submit the certification or failure to make required corrections
520 shall be cause to issue a stop-work order for the project.

521 iii. A final as-built Finished Construction Elevation Certificate (FEMA Form 86-
522 0-33) is required after construction is completed and prior to Certificate of
523 Compliance/Occupancy issuance. It shall be the duty of the permit holder
524 to submit to the Floodplain Administrator a certification of final as-built
525 construction of the elevation of the reference level and all attendant
526 utilities. The Floodplain Administrator shall review the certificate data
527 submitted. Deficiencies detected by such review shall be corrected by the
528 permit holder immediately and prior to Certificate of
529 Compliance/Occupancy issuance. In some instances, another certification
530 may be required to certify corrected as-built construction. Failure to
531 submit the certification or failure to make required corrections shall be
532 cause to withhold the issuance of a Certificate of Compliance/Occupancy.

533 *(The Finished Construction Elevation Certificate certifier shall*
534 *provide at least two (2) photographs showing the front and rear of the*
535 *building taken within 90 days from the date of certification. The*
536 *photographs must be taken with views confirming the building description*
537 *and diagram number provided in Section A. To the extent possible, these*
538 *photographs should show the entire building including foundation. If the*
539 *building has split-level or multi-level areas, provide at least two (2)*
540 *additional photographs showing side views of the building. In addition,*
541 *when applicable, provide a photograph of the foundation showing a*
542 *representative example of the flood openings or vents. All photographs*
543 *must be in color and measure at least 3" x 3". Digital photographs are*
544 *acceptable.)*

545 b. Floodproofing Certificate. If non-residential floodproofing is used to meet the
546 Flood Protection Elevation requirements, a Floodproofing Certificate (FEMA Form
547 086-0-34), with supporting data, an operational plan, and an inspection and
548 maintenance plan are required prior to the actual start of any new construction.
549 It shall be the duty of the permit holder to submit to the Floodplain Administrator
550 a certification of the floodproofed design elevation of the reference level and all
551 attendant utilities, in relation to mean sea level. Floodproofing certification shall
552 be prepared by or under the direct supervision of a professional engineer or

553 architect and certified by same. The Floodplain Administrator shall review the
554 certificate data, the operational plan, and the inspection and maintenance plan.
555 Deficiencies detected by such review shall be corrected by the applicant prior to
556 permit approval. Failure to submit the certification or failure to make required
557 corrections shall be cause to deny a Floodplain Development Permit. Failure to
558 construct in accordance with the certified design shall be cause to withhold the
559 issuance of a Certificate of Compliance/Occupancy.

560 c. If a manufactured home is placed within Zone A, AE, AH, AO, or A1-30 and the
561 elevation of the chassis is more than 36 inches in height above grade, an
562 engineered foundation certification is required in accordance with the provisions
563 of §9-31-4B.3.b.

564 d. If a watercourse is to be altered or relocated, the following shall all be submitted
565 by the permit applicant prior to issuance of a floodplain development permit:

- 566 i. a description of the extent of watercourse alteration or relocation; and
- 567 ii. a professional engineer's certified report on the effects of the proposed
568 project on the flood-carrying capacity of the watercourse and the effects
569 to properties located both upstream and downstream; and
- 570 iii. a map showing the location of the proposed watercourse alteration or
571 relocation; and

572 iv. an Idaho Stream Channel Alteration Permit approval shall be provided by
573 the applicant to the Floodplain Administrator.

574 e. Certification Exemptions. The following structures, if located within Zone A, AE,
575 AH, AO, or A1-30, are exempt from the elevation/floodproofing certification
576 requirements specified in items a and b of this subsection:

- 577 i. Recreational Vehicles meeting requirements of §9-31-4B.6.a;
- 578 ii. Temporary Structures meeting requirements of §9-31-4B.7A; and
- 579 iii. Accessory Structures less than 200 square feet meeting requirements of
580 §9-31-4B.8.

581
582 4. Determinations for Existing Buildings and Structures. For applications for building permits
583 to improve buildings and structures, including alterations, movement, enlargement,
584 replacement, repair, change of occupancy, additions, rehabilitations, renovations,
585 substantial improvements, repairs of substantial damage, and any other improvement of
586 or work on such buildings and structures, the Floodplain Administrator, in coordination
587 with the Building Official, shall:

- 588 a. Estimate the market value, or require the applicant to obtain an appraisal of the
589 market value prepared by a qualified independent appraiser, of the building or
590 structure before the start of construction of the proposed work. In the case of
591 repair, the market value of the building or structure shall be the market value
592 before the damage occurred and before any repairs are made;
- 593 b. Compare the cost to perform the improvement, the cost to repair a damaged
594 building to its pre-damaged condition, or the combined costs of improvements
595 and repairs, if applicable, to the market value of the building or structure;
- 596 c. Determine and document whether the proposed work constitutes substantial
597 improvement or repair of substantial damage; and
- 598 d. Notify the applicant if it is determined that the work constitutes substantial
599 improvement or repair of substantial damage and that compliance with the flood
600 resistant construction requirements of the adopted Idaho Building Code and this
601 ordinance is required.

602

603 **D. Corrective Procedures**

604

- 605 1. Violations to be Corrected. When the Floodplain Administrator finds violations of
606 applicable State and local laws, it shall be his or her duty to notify the owner or occupant
607 of the building of the violation. The owner or occupant shall immediately remedy each
608 of the violations of law cited in such notification.
- 609
- 610 2. Actions in Event of Failure to Take Corrective Action. If the owner of a building or property
611 shall fail to take prompt corrective action, the Floodplain Administrator shall give the
612 owner written notice, by certified or registered mail to the owner's last known address or
613 by personal service, stating:
- 614 a. that the building or property is in violation of the floodplain management
615 regulations;
- 616 b. that a hearing will be held before the Floodplain Administrator at a designated
617 place and time, not later than ten (10) days after the date of the notice, at which
618 time the owner shall be entitled to be heard in person or by counsel and to present
619 arguments and evidence pertaining to the matter; and
- 620 c. that following the hearing, the Floodplain Administrator may issue an order to
621 alter, vacate, or demolish the building; or to remove fill as applicable.

622

623 3. Order to Take Corrective Action. If, upon a hearing held pursuant to the notice prescribed
624 above, the Floodplain Administrator shall find that the building or development is in
625 violation of the Flood Hazard Protection Ordinance, he or she shall issue an order in
626 writing to the owner, requiring the owner to remedy the violation within a specified time
627 period, not less than sixty (60) calendar days, nor more than (180) calendar days. Where
628 the Floodplain Administrator finds that there is imminent danger to life or other property,
629 he or she may order that corrective action be taken in such lesser period as may be
630 feasible.

631
632 4. Appeal. Any owner who has received an order to take corrective action may appeal the
633 order to the local elected governing body by giving notice of appeal in writing to the
634 Floodplain Administrator and the clerk within ten (10) days following issuance of the final
635 order. In the absence of an appeal, the order of the Floodplain Administrator shall be
636 final. The local governing body shall hear an appeal within a reasonable time and may
637 affirm, modify and affirm, or revoke the order.

638
639 5. Failure to Comply with Order. If the owner of a building or property fails to comply with
640 an order to take corrective action for which no appeal has been made or fails to comply
641 with an order of the governing body following an appeal, the owner shall be guilty of a
642 misdemeanor and shall be punished at the discretion of the court.

643

644 **E. Variance Procedures**

645

646 1. The Planning & Zoning Commission, hereinafter referred to as “the Commission”, shall
647 hear and decide requests for variances from the requirements of this ordinance.

648

649 2. Variances may be issued for:

650 a. the repair or rehabilitation of historic structures upon the determination that the
651 proposed repair or rehabilitation will not preclude the structure's continued
652 designation as a historic structure and that the variance is the minimum necessary
653 to preserve the historic character and design of the structure;

654 b. functionally dependent facilities, if determined to meet the definition as stated in
655 §9-1C-1, provided provisions of §9-3I-3E.9.b, c, and e, have been satisfied, and
656 such facilities are protected by methods that minimize flood damages during the
657 base flood and create no additional threats to public safety; or

- 658 c. any other type of development, provided it meets the requirements of this
659 Section.
- 660
- 661 3. In passing upon variances, the Commission shall consider all technical evaluations, all
662 relevant factors, all standards specified in other sections of this ordinance, and:
 - 663 a. the danger that materials may be swept onto other lands to the injury of others;
 - 664 b. the danger to life and property due to flooding or erosion damage;
 - 665 c. the susceptibility of the proposed facility and its contents to flood damage and the
666 effect of such damage on the individual owner;
 - 667 d. the importance of the services provided by the proposed facility to the
668 community;
 - 669 e. the necessity to the facility of a waterfront location as defined under §9-1C-1 of
670 Sun Valley Municipal Code as a functionally dependent facility, where applicable;
 - 671 f. the availability of alternative locations, not subject to flooding or erosion damage,
672 for the proposed use;
 - 673 g. the compatibility of the proposed use with existing and anticipated development;
 - 674 h. the relationship of the proposed use to the comprehensive plan and floodplain
675 management program for that area;
 - 676 i. the safety of access to the property in times of flood for ordinary and emergency
677 vehicles;
 - 678 j. the expected heights, velocity, duration, rate of rise, and sediment transport of
679 the floodwaters and the effects of wave action, if applicable, expected at the site;
680 and
 - 681 k. the costs of providing governmental services during and after flood conditions
682 including maintenance and repair of public utilities and facilities such as sewer,
683 gas, electrical and water systems, and streets and bridges.
- 684
- 685 4. The applicant shall include a written report addressing each of the above factors in §9-3I-
686 3E.3.a-k with their application for a variance.
- 687
- 688 5. Upon consideration of the factors listed above and the purposes of this ordinance, the
689 Commission may attach such conditions to the granting of variances as it deems necessary
690 to further the purposes and objectives of this ordinance.
- 691
- 692 6. Any applicant to whom a variance is granted shall be given written notice specifying the
693 difference between the Base Flood Elevation (BFE) and the elevation to which the

694 structure is to be built and that such construction below the BFE increases risks to life and
695 property, and that the issuance of a variance to construct a structure below the BFE will
696 result in increased premium rates for flood insurance up to \$25 per \$100 of insurance
697 coverage. Such notification shall be maintained with a record of all variance actions,
698 including justification for their issuance.

699
700 7. The Floodplain Administrator shall maintain the records of all appeal actions and report
701 any variances to the Federal Emergency Management Agency and the State of Idaho upon
702 request.

703
704 8. Conditions for Variances:

705 a. Variances shall not be issued when the variance will make the structure in
706 violation of other Federal, State, or local laws, regulations, or ordinances.

707 b. Variances shall not be issued within any designated floodway or flood fringe area
708 if the variance would result in any increase in flood levels during the base flood
709 discharge.

710 c. Variances shall only be issued upon a determination that the variance is the
711 minimum necessary, considering the flood hazard, to afford relief.

712 d. Variances shall only be issued prior to development permit approval.

713 e. Variances shall only be issued upon:

714 i. a showing of good and sufficient cause;

715 ii. a determination that failure to grant the variance would result in
716 exceptional hardship; and

717 iii. a determination that the granting of a variance will not result in increased
718 flood heights, additional threats to public safety, or extraordinary public
719 expense, create nuisance, cause fraud on or victimization of the public, or
720 conflict with existing local laws or ordinances.

721
722 9. A variance may be issued for solid waste disposal facilities or sites, hazardous waste
723 management facilities, salvage yards, and chemical storage facilities that are located in
724 Special Flood Hazard Areas provided that all of the following conditions are met.

725 a. The use serves a critical need in the community.

726 b. No feasible location exists for the use outside the Special Flood Hazard Area.

727 c. The reference level of any structure is elevated or floodproofed to at least the
728 Flood Protection Elevation.

729 d. The use complies with all other applicable Federal, State and local laws.

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- 10. The City of Sun Valley will notify the State NFIP Coordinator of the Idaho Department of Water Resources of its intention to grant a variance at least thirty (30) calendar days prior to granting the variance.
- 11. Any person aggrieved by the decision of the Commission may appeal such decision to the City Council, as provided in Section 9-5A-9 of this Title.

9-3I-4: PROVISIONS FOR FLOOD HAZARD REDUCTION

A. General Standards

In all Special Flood Hazard Areas the following provisions are required:

- 1. All new construction and substantial improvements shall be designed (or modified) and adequately anchored to prevent flotation, collapse, and lateral movement of the structure.
- 2. All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage in accordance with the Technical Bulletin 2, Flood Damage-Resistant Materials Requirements, and available from the Federal Emergency Management Agency.
- 3. All new construction and substantial improvements shall be constructed by methods and practices that minimize flood damages.
- 4. All new and replacement electrical, heating, ventilation, plumbing, air conditioning equipment, and other service facilities shall be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding to the Flood Protection Elevation. These include, but are not limited to, HVAC equipment, water softener units, bath/kitchen fixtures, ductwork, electric/gas meter panels/boxes, utility/cable boxes, hot water heaters, and electric outlets/switches.
- 5. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system.

- 766 6. All new and replacement sanitary sewage systems shall be designed to minimize or
767 eliminate infiltration of floodwaters into the systems and discharges from the systems
768 into flood waters.
769
- 770 7. On-site waste disposal systems shall be located and constructed to avoid impairment to
771 them or contamination from them during flooding.
772
- 773 8. A fully enclosed area, of new construction and substantially improved structures, which
774 is below the lowest floor shall:
- 775 a. be constructed entirely of flood resistant materials at least to the Flood Protection
776 Elevation; and
 - 777 b. include, in Zones A, AE, AH, AO, and A1-30, flood openings to automatically
778 equalize hydrostatic flood forces on walls by allowing for the entry and exit of
779 floodwaters. To meet this requirement, the openings must either be certified by
780 a professional engineer or architect or meet or exceed the following minimum
781 design criteria:
 - 782 i. A minimum of two flood openings on different sides of each enclosed area
783 subject to flooding;
 - 784 ii. The total net area of all flood openings must be at least one (1) square inch
785 for each square foot of enclosed area subject to flooding;
 - 786 iii. If a building has more than one enclosed area, each enclosed area must
787 have flood openings to allow floodwaters to automatically enter and exit;
 - 788 iv. The bottom of all required flood openings shall be no higher than one (1)
789 foot above the interior or exterior adjacent grade;
 - 790 v. Flood openings may be equipped with screens, louvers, or other coverings
791 or devices, provided they permit the automatic flow of floodwaters in both
792 directions; and
 - 793 vi. Enclosures made of flexible skirting are not considered enclosures for
794 regulatory purposes, and, therefore, do not require flood openings.
795 Masonry or wood underpinning, regardless of structural status, is
796 considered an enclosure and requires flood openings as outlined above.
797
- 798 9. Any alteration, repair, reconstruction, or improvements to a structure, which is in
799 compliance with the provisions of this ordinance, shall meet the requirements of “new
800 construction” as contained in this ordinance.
801

- 802 10. Nothing in this ordinance shall prevent the repair, reconstruction, or replacement of a
803 building or structure existing on the effective date of this ordinance and located totally or
804 partially within the floodway, flood fringe area, or stream setback, provided there is no
805 additional encroachment below the Flood Protection Elevation in the floodway, flood
806 fringe area, or stream setback, and provided that such repair, reconstruction, or
807 replacement meets all of the other requirements of this ordinance.
808
- 809 11. New solid waste disposal facilities and sites, hazardous waste management facilities,
810 salvage yards, and chemical storage facilities shall not be permitted, except by variance
811 as specified in §9-31-3E.10. A structure or tank for chemical or fuel storage incidental to
812 an allowed use or to the operation of a water treatment plant or wastewater treatment
813 facility may be located in a Special Flood Hazard Area only if the structure or tank is either
814 elevated or floodproofed to at least the Flood Protection Elevation and certified in
815 accordance with the provisions of §9-31-3C.3.
816
- 817 12. All subdivision proposals and other development proposals shall be consistent with the
818 need to minimize flood damage and determined to be reasonably safe from flooding.
819
- 820 13. All subdivision proposals and other development proposals shall have public utilities and
821 facilities such as sewer, gas, electrical, and water systems located and constructed to
822 minimize flood damage.
823
- 824 14. All subdivision proposals and other development proposals shall have adequate drainage
825 provided to reduce exposure to flood hazards.
826
- 827 15. All subdivision proposals and other development proposals shall have received all
828 necessary permits from those governmental agencies for which approval is required by
829 Federal or State law, including Section 404 of the Federal Water Pollution Control Act
830 Amendments of 1972, 33 USC 1334.
831
- 832 16. When a structure is partially located in a Special Flood Hazard Area, the entire structure
833 shall meet the requirements for new construction and substantial improvements.
834
- 835 17. When a structure is located in multiple flood hazard zones or in a flood hazard risk zone
836 with multiple base flood elevations, the provisions for the more restrictive flood hazard
837 risk zone and the highest Base Flood Elevation (BFE) shall apply.

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18. Fill is prohibited in the SFHA, including construction of buildings on fill. This includes not approving Conditional Letters or Letters of Map Revision (CLOMR-F or LOMR-F).

B. Specific Standards

In all Special Flood Hazard Areas where Base Flood Elevation (BFE) data has been provided, as set forth in §9-3I-2B, or §9-3I-4D, the following provisions, in addition to the provisions of §9-3I-4A, are required:

1. Residential Construction. New construction and substantial improvement of any residential structure (including manufactured homes) shall have the reference level, including basement, elevated no lower than the Flood Protection Elevation, as defined in §9-1C-1 of Sun Valley Municipal Code.
2. Non-Residential Construction. New construction and substantial improvement of any commercial, industrial, or other non-residential structure shall have the reference level, including basement, elevated no lower than the Flood Protection Elevation, as defined in §9-1C-1 of Sun Valley Municipal Code. Structures located in Zones A, AE, AH, AO, and A1-30 may be floodproofed to the Flood Protection Elevation in lieu of elevation provided that all areas of the structure, together with attendant utility and sanitary facilities, below the Flood Protection Elevation are watertight with walls substantially impermeable to the passage of water, using structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effect of buoyancy. For AH and AO Zones, the floodproofing elevation shall be in accordance with §9-3I-4F.2. A registered professional engineer or architect shall certify that the floodproofing standards of this subsection are satisfied. Such certification shall be provided to the Floodplain Administrator as set forth in §9-3I-3C.3, along with the operational plan and the inspection and maintenance plan.
3. Manufactured Homes.
 - a. New and replacement manufactured homes shall be elevated so that the reference level of the manufactured home is no lower than the Flood Protection Elevation.
 - b. Manufactured homes shall be securely anchored to an adequately anchored foundation to resist flotation, collapse, and lateral movement, either by certified

874 engineered foundation system, or in accordance with the most current edition of
875 the Idaho Division of Building Safety's "Idaho Manufactured Home Installation
876 Standard" in accordance with Idaho Code § 44-2201(2). Additionally, when the
877 elevation would be met by an elevation of the chassis thirty-six (36) inches or less
878 above the grade at the site, the chassis shall be supported by reinforced piers or
879 engineered foundation. When the elevation of the chassis is above thirty-six (36)
880 inches in height, an engineering certification is required.

881 c. All enclosures or skirting below the lowest floor shall meet the requirements of
882 §9-31-4B.4.

883 d. An evacuation plan must be developed for evacuation of all residents of all new,
884 substantially improved, or substantially damaged manufactured home parks or
885 subdivisions located within flood prone areas. This plan shall be filed with and
886 approved by the Floodplain Administrator and the local Emergency Management
887 Coordinator.

888
889 4. Additions/Improvements.

890 a. Additions and/or improvements to pre-FIRM structures when the addition and/or
891 improvements in combination with any interior modifications to the existing
892 structure are

893 i. not a substantial improvement, the addition and/or improvements must
894 be designed to minimize flood damages and must not be any more non-
895 conforming than the existing structure; or

896 ii. a substantial improvement, both the existing structure and the addition
897 and/or improvements must comply with the standards for new
898 construction.

899 b. Additions to post-FIRM structures that are a substantial improvement with no
900 modifications to the existing structure other than a standard door in the common
901 wall shall require only the addition to comply with the standards for new
902 construction.

903 c. Additions and/or improvements to post-FIRM structures when the addition
904 and/or improvements in combination with any interior modifications to the
905 existing structure are

906 i. not a substantial improvement, the addition and/or improvements only
907 must comply with the standards for new construction; or

- 908 ii. a substantial improvement, both the existing structure and the addition
909 and/or improvements must comply with the standards for new
910 construction.
- 911 d. Any combination of repair, reconstruction, rehabilitation, addition, or
912 improvement of a building or structure taking place **during a 4 year period**, the
913 cumulative cost of which equals or exceeds 50 percent (50%) of the market value
914 of the structure before the improvement or repair is started, must comply with
915 the standards for new construction. For each building or structure, **the 4 year**
916 **period** begins on the date of the first improvement or repair of that building or
917 structure subsequent to the effective date of this ordinance. If the structure has
918 sustained substantial damage, any repairs are considered substantial
919 improvement regardless of the actual repair work performed. The requirement
920 does not, however, include either: *(CRS - Up to 90 points for counting*
921 *improvements cumulatively; up to 20 points for a substantial improvement*
922 *threshold lower than 50%)*
- 923 i. any project for improvement of a building required to correct existing
924 health, sanitary, or safety code violations identified by the building official
925 and that are the minimum necessary to assume safe living conditions; or
926 ii. any alteration of a historic structure provided that the alteration will not
927 preclude the structure’s continued designation as a historic structure.
928
- 929 5. Recreational Vehicles. Recreational vehicles shall be either:
- 930 a. Temporary Placement
- 931 i. be on site for fewer than 180 consecutive days and be fully licensed and
932 ready for highway use (a recreational vehicle is ready for highway use if it
933 is on its wheels or jacking system, is attached to the site only by quick
934 disconnect type utilities, and has no permanently attached additions); or
- 935 b. Permanent Placement.
- 936 i. Recreational vehicles that do not meet the limitations of Temporary
937 Placement shall meet all the requirements for new construction, as set
938 forth in §9-3I-4A.
- 939
- 940 6. Temporary Non-Residential Structures. Prior to the issuance of a floodplain development
941 permit for a temporary structure, the applicant must submit to the Floodplain
942 Administrator a plan for the removal of such structure(s) in the event of a flash flood or

943 other type of flood warning notification. The following information shall be submitted in
944 writing to the Floodplain Administrator for review and written approval:

- 945 a. a specified time period for which the temporary use will be permitted. Time
946 specified may not exceed six (6) months, renewable up to one (1) year;
- 947 b. the name, address, and phone number of the individual responsible for the
948 removal of the temporary structure;
- 949 c. the time frame prior to the event at which a structure will be removed (i.e.,
950 immediately upon flood warning notification);
- 951 d. a copy of the contract or other suitable instrument with the entity responsible for
952 physical removal of the structure; and
- 953 e. designation, accompanied by documentation, of a location outside the Special
954 Flood Hazard Area, to which the temporary structure will be moved.

955
956 7. Accessory Structures. When accessory structures (sheds, detached garages, etc.) are to
957 be placed within a Special Flood Hazard Area, elevation or floodproofing certifications are
958 required for all accessory structures in accordance with §9-3I-3C.3, and the following
959 criteria shall be met:

- 960 a. Accessory structures shall not be used for human habitation (including working,
961 sleeping, living, cooking, or restroom areas);
- 962 b. Accessory structures shall not be temperature-controlled;
- 963 c. Accessory structures shall be designed to have low flood damage potential;
- 964 d. Accessory structures shall be constructed and placed on the building site so as to
965 offer the minimum resistance to the flow of floodwaters;
- 966 e. Accessory structures shall be firmly anchored in accordance with the provisions of
967 §9-3I-4A.1;
- 968 f. All service facilities, such as electrical, shall be installed in accordance with the
969 provisions of §9-3I-4A.4; and
- 970 g. Flood openings to facilitate automatic equalization of hydrostatic flood forces
971 shall be provided below Flood Protection Elevation in conformance with the
972 provisions of §9-3I-4B.4.d.

973 An accessory structure with a footprint less than 200 square feet and is a minimal
974 investment of \$10,000 or less and satisfies the criteria outlined in a - g above is not
975 required to meet the elevation or floodproofing standards of §9-3I-4B.2.

976
977 8. Tanks. When gas and liquid storage tanks are to be placed within a Special Flood Hazard
978 Area, the following criteria shall be met:

- 979 a. Underground tanks in flood hazard areas shall be anchored to prevent flotation,
980 collapse, or lateral movement resulting from hydrodynamic and hydrostatic loads
981 during conditions of the base flood, including the effects of buoyancy (assuming
982 the tank is empty);
- 983 b. Elevated above-ground tanks, in flood hazard areas shall be attached to and
984 elevated to or above the design flood elevation on a supporting structure that is
985 designed to prevent flotation, collapse, or lateral movement during conditions of
986 the base flood. Tank-supporting structures shall meet the foundation
987 requirements of the applicable flood hazard area;
- 988 c. Not elevated above-ground tanks, that do not meet the elevation requirements
989 of §9-31-4 B.2 of this ordinance shall be permitted in flood hazard areas provided
990 the tanks are anchored or otherwise designed and constructed to prevent
991 flotation, collapse or lateral movement resulting from hydrodynamic and
992 hydrostatic loads during conditions of the design flood, including the effects of
993 buoyancy assuming the tank is empty and the effects of flood-borne debris.
- 994 d. Tank inlets, fill openings, outlets and vents shall be:
- 995 i. at or above the flood protection elevation or fitted with covers designed
996 to prevent the inflow of floodwater or outflow of the contents of the tanks
997 during conditions of the base flood; and
- 998 ii. anchored to prevent lateral movement resulting from hydrodynamic and
999 hydrostatic loads, including the effects of buoyancy, during conditions of
1000 the base flood.

1001

1002 9. Construction of Below-Grade Crawlspace.

- 1003 a. The interior grade of a crawlspace must not be below the BFE and must not be
1004 more than two (2) feet below the exterior lowest adjacent grade (LAG).
- 1005 b. The height of the below-grade crawlspace, measured from the interior grade of
1006 the crawlspace to the top of the crawlspace foundation wall, must not exceed four
1007 (4) feet at any point.
- 1008 c. There must be an adequate drainage system that removes floodwaters from the
1009 interior area of the crawlspace. The enclosed area should be drained within a
1010 reasonable time after a flood event.
- 1011 d. The velocity of floodwaters at the site should not exceed five (5) feet per second
1012 for any crawlspace.

1013 *See Technical Bulletin 11 for further information.*

1014 *Caution:*

1015 *Buildings that have below-grade crawlspaces will have higher flood insurance premiums*
1016 *than buildings that have the preferred crawlspace construction, with the interior elevation*
1017 *of the crawlspace soil at or above the Base Flood Elevation (BFE).*
1018

- 1019 10. Other Development in regulated floodways and flood fringe.
- 1020 a. Fences that have the potential to block the passage of floodwaters, such as
1021 stockade fences and wire mesh fences, in regulated floodways and flood fringe
1022 shall meet the limitations of §9-3I-4E of this ordinance.
 - 1023 b. Retaining walls, bulkheads, sidewalks, and driveways that involve the placement
1024 of fill in regulated floodways and flood fringe shall meet the limitations of §9-3I-
1025 4E of this ordinance.
 - 1026 c. Roads and watercourse crossings, including roads, bridges, culverts, low-water
1027 crossings, and similar means for vehicles or pedestrians to travel from one side of
1028 a watercourse to the other side, which encroach into regulated floodways and
1029 flood fringe, shall meet the limitations of §9-3I-4E of this ordinance.
 - 1030 d. Drilling water, oil, and/or gas wells including fuel storage tanks, apparatus, and
1031 any equipment at the site that encroach into regulated floodways and flood fringe
1032 shall meet the limitations of §9-3I-4E of this ordinance.
 - 1033 e. Docks, piers, boat ramps, marinas, moorings, decks, docking facilities, port
1034 facilities, shipbuilding, and ship repair facilities that encroach into regulated
1035 floodways and flood fringe shall meet the limitations of §9-3I-4E of this ordinance
1036

1037 **C. Standards for Floodplains without Established Base Flood Elevations**
1038

1039 Within the Special Flood Hazard Areas designated as Zone A (also known as Unnumbered A
1040 Zones) and established in §9-3I-2B, where no Base Flood Elevation (BFE) data has been provided
1041 by FEMA, the following provisions, in addition to the provisions of §9-3I-4A, shall apply:
1042

1043 The BFE used in determining the Flood Protection Elevation (FPE) shall be determined based on
1044 the following criteria:

- 1045 1. When Base Flood Elevation (BFE) data is available from other sources, all new
1046 construction and substantial improvements within such areas shall also comply with all
1047 applicable provisions of this ordinance and shall be elevated or floodproofed in
1048 accordance with standards in §9-3I-4A and B.

- 1049 2. When floodway or flood fringe data is available from a Federal, State, or other source, all
1050 new construction and substantial improvements within floodway and flood fringe areas
1051 shall also comply with the requirements of §9-3I-4B and E.
- 1052 3. All subdivision, manufactured home park, and other development proposals shall provide
1053 Base Flood Elevation (BFE) data if development is greater than five (5) acres or has more
1054 than fifty (50) lots/manufactured home sites. Such Base Flood Elevation (BFE) data shall
1055 be adopted by reference in accordance with §9-3I-2B and utilized in implementing this
1056 ordinance. The applicant/developer shall submit an application for a Conditional Letter of
1057 Map Revision (CLOMR) prior to Preliminary Plat approval and have obtained a Letter of
1058 Map Revision (LOMR) prior to any building permits for structures being issued.
1059 See FEMA 480 and/or FEMA 265 for further information
- 1060 4. When Base Flood Elevation (BFE) data is not available from a Federal, State, or other
1061 source as outlined above, the reference level shall be elevated or floodproofed (non-
1062 residential) to two feet (2.0 ft.) above the Highest Adjacent Grade (HAG) at the building
1063 site or to the Flood Protection Elevation (FPE) whichever is higher. All other applicable
1064 provisions of §9-3I-4B shall also apply.

1065
1066 **D. Standards for Riverine Floodplains with Base Flood Elevations but without Established**
1067 **Floodways or Flood Fringe Areas.**
1068

1069 Along rivers and streams where Base Flood Elevation (BFE) data is provided by FEMA or is
1070 available from another source but neither floodway nor flood fringe areas are identified for a
1071 Special Flood Hazard Area on the FIRM or in the FIS report, the following requirements shall apply
1072 to all development within such areas:
1073

- 1074 1. Standards of §9-3I-4A and B; and
1075
- 1076 2. Until a regulatory floodway or flood fringe area is designated, no encroachments,
1077 including fill, new construction, substantial improvements, or other development shall be
1078 permitted unless certification with supporting technical data by a registered professional
1079 engineer is provided demonstrating that the cumulative effect of the proposed
1080 development, when combined with all other existing and anticipated development, will
1081 not increase the water surface elevation of the base flood at any point within the
1082 community.
1083

1084 **E. Standards for Floodways and Flood Fringe Areas**

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Areas designated as floodways or flood fringe areas are located within the Special Flood Hazard Areas established in §9-3I-2B. The floodways and flood fringe areas are extremely hazardous areas due to the velocity of floodwaters that have erosion potential and carry debris and potential projectiles. The following provisions, in addition to standards outlined in §9-3I-4A and B, shall apply to all development within such areas:

1. No encroachments, including fill, new construction, substantial improvements, and other developments shall be permitted unless:
 - a. it is demonstrated that the proposed encroachment would not result in any increase in the flood levels during the occurrence of the base flood, based on hydrologic and hydraulic analyses performed in accordance with standard engineering practice and presented to the Floodplain Administrator prior to issuance of floodplain development permit; or
 - b. a Conditional Letter of Map Revision (CLOMR) has been approved by FEMA. A Letter of Map Revision (LOMR) must also be obtained within six months of completion of the proposed encroachment.
2. If §9-3I-4E.1 is satisfied, all development shall comply with all applicable flood hazard reduction provisions of this ordinance.
3. Manufactured homes may be permitted provided the following provisions are met:
 - a. the anchoring and the elevation standards of §9-3I-4B.3; and
 - b. the encroachment standards of §9-3I-4E.1.

F. Standards for Areas of Shallow Flooding (Zone AO, AH, AR/AO, or AR/AH)

Located within the Special Flood Hazard Areas established in §9-3I-2B, are areas designated as shallow flooding areas. These areas have special flood hazards associated with base flood depths of one (1) to three (3) feet where a clearly defined channel does not exist and where the path of flooding is unpredictable and indeterminate. In addition to §9-3I-4A and B, all new construction and substantial improvements shall meet the following requirements:

1. The reference level shall be elevated at least as high as the depth number specified on the Flood Insurance Rate Map (FIRM), in feet, plus a freeboard of 2 feet, above the highest adjacent grade; or **at least 4 feet above** the highest adjacent grade if no depth number is

1121 specified. *A minimum of two (2) feet is required and four (4) feet is recommended where*
1122 *a depth is not provided.*

1123

1124 2. Non-residential structures may, in lieu of elevation, be floodproofed to the same level as
1125 required in §9-3I-4F.1 so that the structure, together with attendant utility and sanitary
1126 facilities, below that level shall be watertight with walls substantially impermeable to the
1127 passage of water and with structural components having the capability of resisting
1128 hydrostatic and hydrodynamic loads and effects of buoyancy. Certification is required in
1129 accordance with §9-3I-3C.3, and §9-3I-4B.2.

1130

1131 3. Adequate drainage paths shall be provided around structures on slopes to guide
1132 floodwaters around and away from proposed structures.

1133

1134 **9-3I-5 LEGAL STATUS PROVISIONS**

1135

1136 **A. Effect on Rights and Liabilities under the Existing Flood Hazard Protection Ordinance**

1137

1138 This ordinance, in part, comes forward by re-enactment of some of the provisions of the Flood
1139 Hazard Protection Ordinance enacted 2006 as amended, and it is not the intention to repeal
1140 but rather to re-enact and continue to enforce without interruption of such existing provisions,
1141 so that all rights and liabilities that have accrued thereunder are reserved and may be enforced.
1142 The enactment of this ordinance shall not affect any action, suit, or proceeding instituted or
1143 pending. All provisions of the Flood Hazard Protection Ordinance of the City of Sun Valley
1144 enacted on 2006 as amended, which are not reenacted herein are repealed.

1145

1146 **B. Effect upon Outstanding Floodplain Development Permits**

1147

1148 Nothing herein contained shall require any change in the plans, construction, size, or designated
1149 use of any development or any part thereof for which a Floodplain Development Permit has been
1150 granted by the Floodplain Administrator or his or her authorized agents before the time of
1151 passage of this ordinance. Provided, however, that when construction is not begun under such
1152 outstanding permit within a period of 180 days subsequent to the date of issuance of the
1153 outstanding permit, construction or use shall be in conformity with the provisions of this
1154 ordinance.

1155

1156 **C. Severability**

1157
1158 The ordinance is hereby declared to be severable. Should any portion of this ordinance be
1159 declared invalid by a court of competent jurisdiction, the remaining provisions shall continue in
1160 full force and effect and shall be read to carry out the purpose(s) of the ordinance before the
1161 declaration of partial invalidity.

1162
1163 **D. Effective Date**

1164
1165 This ordinance shall become effective upon adoption by the City Council.
1166

1167 SECTION 6. CODIFICATION. The City Clerk is instructed pursuant to Section 1-1-3 of the City of Sun Valley
1168 Municipal Code to immediately forward this ordinance to the codifier of the official municipal code for
1169 proper revision of the code.

1170
1171 APPROVED BY THE SUN VALLEY CITY COUNCIL THIS 3rd day of MARCH, 2016.

1172
1173 APPROVED:
1174
1175 _____
1176 ATTEST: Peter Hendricks, Mayor
1177 City of Sun Valley
1178

1179 _____
1180 Alissa Weber, City Clerk
1181 City of Sun Valley