Memorandum

To: **Planning Commission**
From: **Niall Connolly, Principal Planner**
Date: **June 13th 2025**
Re: **Erosion Hazard Zone Permit, 95 Zion Park Blvd**

Introduction

Cheyne Chauvin has applied for an erosion hazard zone permit for a project at Zion Canyon Village, 95 Zion Park Blvd. The proposal is to construct a small building for Desert Ice, which is a local company that sells Italian ice. The building will be in the landscaped area in front of the Brew Pub and Happy Camper Market. The building will be situated in the Moderate Erosion Hazard Zone, and so an erosion hazard zone permit is required.

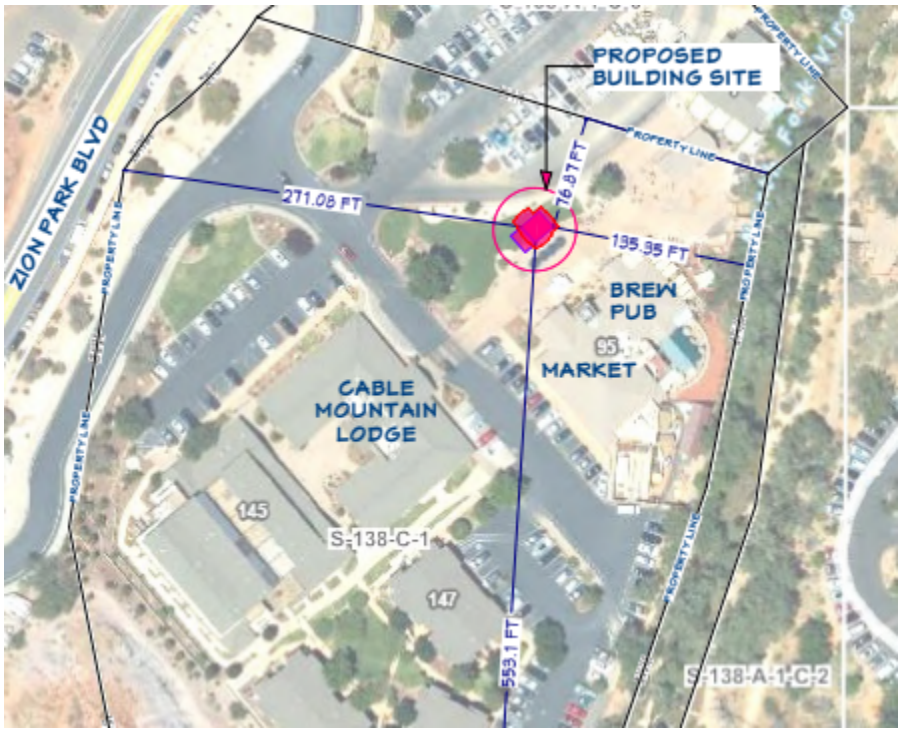


Figure 1. Location of Proposed Building

In 2023, the planning commission approved an erosion hazard permit for a project involving a cell tower on the roof of the Happy Camper Market. This project involved infrastructure at ground level behind the market. This study determined that the existing boulders and cottonwood trees provided a good standard of bank reinforcement and that no additional armoring or erosion protection was needed.

The Happy Camper Market and Brew Pub building sits between the newly proposed building and the river. This building essentially provides a buffer to any erosion hazards arising from the river. Further, the erosion study that was completed in 2023 did not recommend that any additional erosion protection was needed.

For this reason, staff are of the opinion that it is unnecessary for the applicant to carry out a fresh erosion hazard study, and that it is reasonable to rely on the study that has already been done at this location.

Figure 2. Locations of the AT&T project and the Desert Ice project in relation to the river

In addition to the erosion hazard permit, the applicant has applied for a floodplain development permit and has provided supporting information to confirm compliance with chapter 10-13A of the Town Code. Floodplain development permits are reviewed and approved by Town staff.

Applicable Ordinances

The Commission may wish to refer to the following ordinance to help inform the review of this application:

- Chapter 13E: Erosion Hazard Overlay Zone
- Chapter 11B: Village Commercial Zone

Staff Analysis

Standard	***Requirement***	***Proposal***	***Comments***
Floodplain Impacts	An erosion hazard permit application must include an engineering analysis. This must identify potential impacts on adjacent properties and ensure that no increases to base flood elevations in the regulatory floodway occur.	The proposed building is not within the floodway, and therefore no increases to base flood elevation are likely to occur.	Complies.
Stream Stability Impacts	Engineering analyses must be submitted to document all impacts on adjacent properties due to the proposed land disturbance activities. It is the applicant's responsibility to demonstrate that any such impacts are minimal, justified, and consistent with the goals and objectives of the Virgin River Management Plan, and will not cause adverse or detrimental conditions on adjacent, upstream, or downstream properties.	No erosion protection measures were deemed necessary by the 2023 study. No improvements are proposed in the floodway.	Complies/ Not applicable.

Erosion Protection Improvements	Bioengineering techniques combining natural vegetation and live materials to provide a stable streambank as envisioned by the Virgin River Management Plan (VRMP) are required for all erosion protection improvements, unless an engineering analysis demonstrates such techniques are not feasible. All erosion protection improvements shall be as minimally impactful to the natural function and appearance of the river system and riparian area as possible. Structural erosion protection improvements such as rock riprap, concrete or gabion structures, etc. may only be used to protect existing or planned structures and infrastructure located within the high risk erosion hazard zone, and only after the Town Engineer has validated an applicant's engineering analysis documenting bioengineering is not a feasible option.	No erosion protection measures were deemed necessary by the study.	Complies/ Not applicable.

Materials	Where possible and feasible, stone for rip rap and gabion baskets shall resemble stone naturally found in Springdale in appearance.	No erosion protection measures were deemed necessary by the 2023 study.	Complies/ Not applicable.
Maintenance	The owner of property where erosion protection improvements are located shall inspect all erosion protection improvements at least annually and immediately after major flooding events to assess damage and determine if repairs are necessary. The Town of Springdale has the right to inspect all erosion protection improvements as often as the Town deems necessary. If the Town's inspection reveals necessary repairs to the erosion protection improvements, the property owner shall make the required repairs as soon as feasibly possible after being noticed in writing by the Town. All proposed erosion protection measures shall require a perpetual private easement to be recorded providing unobstructed access for	No erosion protection measures were deemed necessary by the 2023 study.	Complies/ Not applicable.

	inspection and maintenance of the erosion protection improvements. The costs to inspect, repair and maintain these improvements shall be the sole responsibility of the applicant or property owner. Required maintenance and repairs shall be completed within a reasonable time at no cost to the Town of Springdale.		
Revegetation	Any proposed disturbance to existing vegetation on the riverbank or within the floodplain must be mitigated by replacing the disturbed vegetation with native riparian plants in accordance with the approved plant list. The replacement vegetation shall be selected to best enhance the natural function of the river system (e.g. flexible species closest to the river, large woody vegetation farther from the river on upper flood terraces). The engineering analysis shall include a section describing the required vegetation mitigation and planting requirements	No erosion protection measures were deemed necessary by the 2023 study.	Complies/ Not applicable.

Statement of methodologies and findings	The analysis must include a summary of the methodologies used to support the impact analysis. The engineering analysis and findings shall be summarized in an engineering report including all assumptions, computations and other documentation supporting the analyses and conclusions. The report shall include the engineer's professional opinion that when the land disturbance activities and mitigation measures, if any, are implemented, the proposed land disturbance will not adversely affect reaches or properties upstream, downstream, and across the river from the proposed project. The report must also include the engineer's opinion that the proposed land disturbance minimizes the risk of flood and erosion damage to adjacent properties and the watercourse.	The 2023 erosion hazard study included details of the methodologies and findings.	Complies.

Planning Commission Action

The Planning Commission should review the proposed Erosion Hazard Zone Permit application to determine if it complies with the applicable standards in the Town Ordinance. Staff recommends the Commission specifically consider the following:

- Does the proposed development meet all the requirements of the erosion hazard zone ordinance?
- Does the Commission concur with staff's conclusion that the 2023 erosion hazard study associated with the wireless communication infrastructure can be used to satisfy the erosion hazard analysis requirement for this project?

Sample Motion Language

The Commission may refer to the following sample language when making a motion on the application:

*The Planning Commission **approves/denies** the Erosion Hazard Zone Permit for the proposed new Desert Ice building at 95 Zion Park Blvd as discussed in the Commission meeting on June 18th 2025. This motion is based on the following findings:*

[LIST FINDINGS]

Appendices:

1. **Appendix A: Application drawings**
2. **Appendix B: Erosion Hazard Study that was completed for the AT&T Project**

Appendix A

DESERT ICE PROJECT

WUI - SPRINGDALE, UT

MODERATE FIRE HAZARD SEVERITY ZONE: WILDLAND URBAN INTERFACE (WUI) REQUIRES EXTERIOR OF STRUCTURE TO BE IGNITION RESISTANT, ABLE TO RESIST THE ENTRY OF FLYING EMBERS AND FIRE RADIATION DURING A WILDFIRE PER 2021 IRC SECTION R337.
FLOOR STRUCTURE:
DEAD LOAD = 20 PSF LIVE LOAD = 40 PSF
ROOF STRUCTURE:
DEAD LOAD = 20 PSF LIVE LOAD = 20 PSF
GROUND SNOW LOAD = 21 PSF
WIND EXPOSURE: 94 MPH
RISK II, CATEGORY B
SEISMIC DESIGN CATEGORY = D
SITE CLASS = D
FLOOD DESIGN DATA = N/A
FROSTLINE DEPTH = 36 IN
FOUNDATION: CLASS 5 MATERIAL (2021 IBC TABLE 1806.2)
SOIL BEARING = 1,500 PSF
PASSIVE LATERAL PRESSURE=100 PSF/FT
ALLOWABLE COHESION=130 PSF X AREA
ENERGY DESIGN = CLIMATE ZN 7A-7B-8A
OCC CATEGORY = II

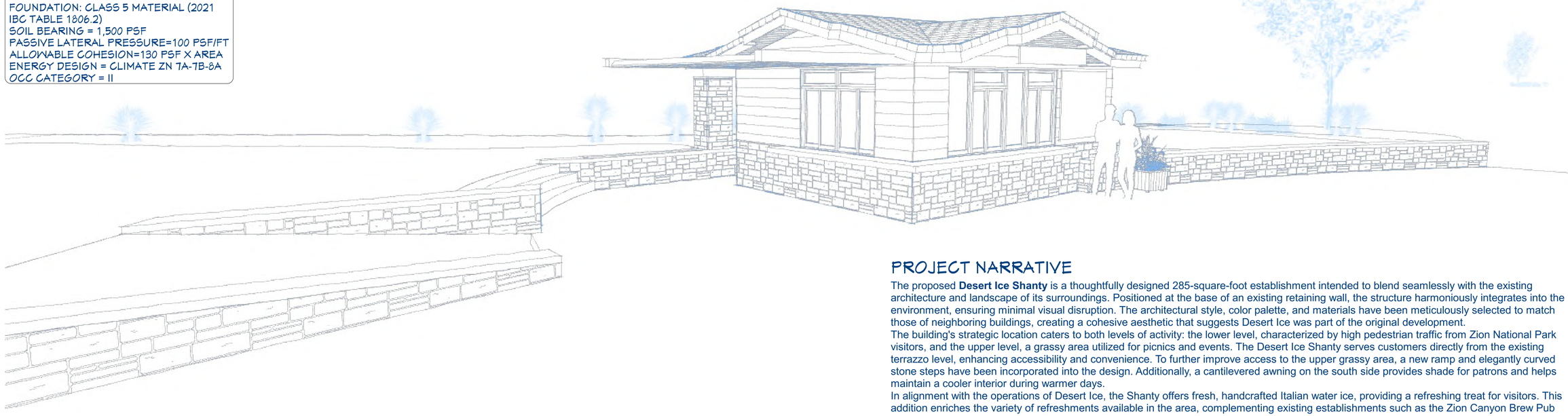
PROJECT COMPLIANCE:

2021 International Building Code (IBC)
2021 International Residential Code (IRC)
2021 International Mechanical Code (IMC)
2021 International Fire Code (IFC)
2021 International Plumbing Code (IPC)
2020 National Electrical Code (NEC)
2021 International Energy Conservation Code (IECC)
2021 International Green Construction Code (IgCC)

SPRINGDALE, UTAH

ZONING V-C

Maximum height above grade 26 ft



PROJECT NARRATIVE

The proposed **Desert Ice Shanty** is a thoughtfully designed 285-square-foot establishment intended to blend seamlessly with the existing architecture and landscape of its surroundings. Positioned at the base of an existing retaining wall, the structure harmoniously integrates into the environment, ensuring minimal visual disruption. The architectural style, color palette, and materials have been meticulously selected to match those of neighboring buildings, creating a cohesive aesthetic that suggests Desert Ice was part of the original development.

The building's strategic location caters to both levels of activity: the lower level, characterized by high pedestrian traffic from Zion National Park visitors, and the upper level, a grassy area utilized for picnics and events. The Desert Ice Shanty serves customers directly from the existing terrazzo level, enhancing accessibility and convenience. To further improve access to the upper grassy area, a new ramp and elegantly curved stone steps have been incorporated into the design. Additionally, a cantilevered awning on the south side provides shade for patrons and helps maintain a cooler interior during warmer days.

In alignment with the operations of Desert Ice, the Shanty offers fresh, handcrafted Italian water ice, providing a refreshing treat for visitors. This addition enriches the variety of refreshments available in the area, complementing existing establishments such as the Zion Canyon Brew Pub and the Happy Camper Market. The Shanty's presence not only diversifies the culinary offerings but also enhances the overall visitor experience, making it a valuable and popular permanent fixture in the community.

The landscaping surrounding the Shanty has been designed to mirror the existing flora, utilizing similar plants and xeriscape groundcover to ensure a seamless transition between new and existing areas. This approach maintains the visual continuity of the landscape and supports water conservation efforts. The design also incorporates shaded areas for pedestrians, providing respite from the summer sun, and strategically placed vegetation to soften the building's visual impact, aligning with local landscape design standards.

In compliance with local building codes and design standards, the Desert Ice Shanty exemplifies thoughtful integration into its environment. Its design respects the historical and aesthetic context of the area while introducing a contemporary amenity that meets the needs of today's visitors. This careful balance ensures that the Shanty is not only compliant with regulations but also serves as an excellent and popular addition to the existing establishments, enriching the community and enhancing the overall ambiance of the area.

PROJECT STATISTICS:

BUILDING INFO:

PROPOSED NEW BUILDING:	DESERT ICE SHANTY
CONDITIONED	285 SqFt
NEW CONCRETE (est>)	956 SqFt
COVERED FOOTPRINT	504 SqFt
BUILDING HT.	± 10.75 FT
ZONING	VC
SUBDIVISION	
CONSTRUCTION TYPE	V
ADDRESS:	CABLE MOUNTAIN LLC 95 ZION PARK BLVD SPRINGDALE, UT 84767
PARCEL	S-138-C-1
LOT SIZE	7.74 ACRES 337,154.4 SqFt
ELEVATION	+/- 3,858 FT

SPRINGDALE TOWN, UTAH
ZONING VC
Site Development Regulations:
10-11A-14(A): COMMERCIAL ZONE DESIGN STANDARDS
10-16-5: ARCHITECTURAL AND DESIGN GUIDELINES
10-18-6: LANDSCAPE DESIGN

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GENERAL NOTES:

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PLEASE SEE ADDITIONAL NOTES CALLED OUT ON OTHER SHEETS.

ENGINEER OF RECORD:

Walter E. Wood PE
State of Utah
No. 10939694
woodwe@hotmail.com
(229) 878-8028

FOR:	Cable Mountain Lodge, Desert Ice, AND Cheyne Chauvin cheynechauvin@gmail.com 707-499-0423
PROJECT ADDRESS:	95 Zion Park Blvd Springdale, UT 84767
LEGAL:	OWNER: Cable Mountain LLC APN S-138-C-1
FIRE DISTRICT:	ROCKVILLE/SPRINGDALE FIRE DISTRICT (STATION 49)
WATER:	TOWN OF SPRINGDALE WATER/WASTEWATER DEPT.
SEWER:	TOWN OF SPRINGDALE WATER/WASTEWATER DEPT.
BLDG PERMIT:	_____
DESIGNER: CONSULTANT:	Romy Creative LLC Jeromy Williams design@romycreative.com (530) 863-7238
BUILDER:	Cheyne Chauvin

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PROJECT OVERVIEW

95 ZION PARK BLVD
SPRINGDALE, UT 84767

DESERT ICE SHANTY

DATE:
5/20/2025

SCALE:
NONE

SHEET:
1

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IBC CHAPTER 7A COMPLIANCE

ZONE:
MODERATE FIRE HAZARD SEVERITY ZONE: EXTERIOR OF STRUCTURE MUST BE IGNITION-RESISTANT, ABLE TO RESIST THE ENTRY OF FLYING EMBERS AND FIRE RADIATION DURING A WILDFIRE. PER 2021 IRC SECTION R337.
WILDLAND URBAN INTERFACE (WUI) SOME CONSTRUCTION REQUIREMENTS LISTED:

ROOFS & ROOF EDGES IBC 705A / IRC R337.5
A NONCOMBUSTIBLE (TILE OR METAL) OR CLASS 'A' ROOFING ASSEMBLY IS REQUIRED IN SRA WHERE THE ROOF PROFILE ALLOWS A SPACE BETWEEN THE ROOF COVERING AND THE ROOF DECKING, THE SPACES SHALL: BE CONSTRUCTED TO PREVENT THE INTRUSION OF FLAMES AND EMBERS; BE FIRE-STOPPED WITH APPROVED MATERIALS; OR HAVE ONE LAYER OF NO. 72 CAP SHEET INSTALLED OVER THE COMBUSTIBLE DECKING.

EXTERIOR WALLS/SIDING IBC 707A.3 /IRC R337.7.3
NONCOMBUSTIBLE, LISTED IGNITION-RESISTANT MATERIALS, HEAVY TIMBER, 5/8" TYPE-X GYPSUM SHEATHING BEHIND EXTERIOR COVERING, EXTERIOR PORTION OF 1-HR ASSEMBLY OR LOG WALL CONSTRUCTION IS ALLOWED.

INTERIOR WALLS 1/2" GYPSUM BOARD OR EQUIVALENT REQUIRED ON INSIDE OF EXTERIOR WALLS [TABLE R302.6], OR LOG WALL CONSTRUCTION IS ALLOWED.

EAVES & PORCH CEILINGS IBC 707A.4, A.6 / IRC 337.7.4, R337.7.6
THE EXPOSED ROOF DECK UNDER UNENCLOSED EAVES AND UNDERSIDE OF PORCH CEILINGS SHALL BE NONCOMBUSTIBLE, LISTED IGNITION-RESISTANT MATERIALS, OR 5/8" TYPE-X GYPSUM SHEATHING BEHIND EXTERIOR COVERING.

VENTS IBC 706A / IRC R337.6
ATTIC VENTS AND UNDERFLOOR VENT OPENINGS MUST RESIST THE INTRUSION OF FLAME AND EMBERS OR SHALL BE A MINIMUM OF 1/16" AND MAXIMUM 1/8" CORROSION-RESISTANT, NONCOMBUSTIBLE WIRE MESH OR EQUIVALENT. COMBUSTIBLE VENTS ON TOP OF ROOFS MAY BE COVERED WITH THIS MATERIAL TO COMPLY. VENTILATION OPENINGS ON THE UNDERSIDE OF EAVES ARE NOT PERMITTED, UNLESS A SFM APPROVED VENT IS INSTALLED, OR EAVES ARE FIRE SPRINKLERED, OR VENT IS 12 FEET ABOVE A WALKING SURFACE OR GRADE BELOW. [R302.5.2]

WINDOWS & EXTERIOR DOORS IBC 708A / IRC R337.8
WINDOWS MUST BE INSULATED GLASS WITH A MINIMUM OF 1 TEMPERED PANE OR 20 MIN RATED OR GLASS BLOCK.

EXTERIOR DOORS MUST BE NONCOMBUSTIBLE OR IGNITION RESISTANT MATERIAL OR 1 3/8" SOLID CORE, OR HAVE A 20 MIN FIRE-RESISTANCE RATING.

EXTERIOR DECKING & STAIRS IBC 709A / IRC R337.9
WALKING SURFACES OF DECKS, PORCHES, BALCONIES AND STAIRS WITHIN 10 FEET OF THE BUILDING MUST BE CONSTRUCTED OF NONCOMBUSTIBLE, FIRE-RETARDANT TREATED OR HEAVY-TIMBER CONSTRUCTION. ALTERNATE MATERIALS CAN BE USED IF THEY ARE IGNITION-RESISTANT.

FEMA FLOOD PLANE:
MORE THAN 12" ELEVATION LIFT IS REQUIRED ABOVE NATIONAL HYDROGROPHY DATASET (NHD) LINE FOR LOWEST FLOOR OF A PROPERTY IN A FEMA FLOOD PLANE.

BUILDING NOTES:

ALL FOUNDATION STEM WALLS SHALL BE CONSTRUCTED WITH REINFORCED CONCRETE AND EXTEND A MINIMUM OF 12 INCHES ABOVE THE BASE FLOOD ELEVATION (BFE) AS ESTABLISHED BY CURRENT FEMA FLOOD INSURANCE RATE MAPS AND VERIFIED BY SITE-SPECIFIC ELEVATION DATA. THE EXTERIOR FACE OF THE STEM WALL SHALL BE COATED WITH A WATERPROOFING MEMBRANE RATED FOR BELOW-GRADE APPLICATIONS AND RESISTANT TO HYDROSTATIC PRESSURE. WATERPROOFING SHALL EXTEND FROM THE FOOTING TO AT LEAST 6 INCHES ABOVE THE BFE. ALL PENETRATIONS SHALL BE SEALED WITH APPROVED FLOOD-RESISTANT MATERIALS. FOUNDATION DESIGN SHALL COMPLY WITH THE SPRINGDALE TOWN CODE CHAPTER 13 – FLOOD HAZARD OVERLAY (F-H) ZONE AND MEET FEMA TECHNICAL BULLETIN 3 REQUIREMENTS FOR DRY FLOODPROOFING WHERE APPLICABLE.

PERIMETER WALLS ABOVE WATERPROOFED STEM WALLS ARE 2X6 WOOD CONSTRUCTION.

EXTERIOR MATERIAL VENEER USING LIGHTWEIGHT STONE VENEER AT THE BASE AND COMPOSITE WOOD CLADDING ABOVE WITH LP COMPOSITE OR HARDIE TRIM AND/OR METAL FASCIA. ALL INTERIOR WALLS 2X4 UNLESS OTHERWISE NOTED.

FLOORS AND WALLS ABOVE MOP-SINK COMPARTMENTS SHALL BE FINISHED WITH A NONABSORBENT SURFACE AND SUCH WALL SURFACES, EXTENDING TO A HEIGHT NOT LESS THAN 6 FEET ABOVE THE FLOOR [IRC R308.4.1]

BUILDING PERFORMANCE:
HEAT LOSS CALCULATIONS SHALL COMPLY WITH THE REQUIREMENTS OF REGIONAL AND LOCAL CODES. SEE RESCHECK CALCULATIONS AND MANUEL J/S/D.

PORCHES NOT INCLUDED IN LIVING AREA. ALL EXHAUST FANS TO BE VENTED DIRECTLY TO THE EXTERIOR. ALL PENETRATIONS OF THE BUILDING ENVELOPE SHALL BE SEALED WITH CAULK OR FOAM.
MINIMUM INSULATION:

WALLS = R-23 cavity SLAB INSU. = 0 ATTIC/CEILING = R-38

DOORS & WINDOWS:
EGRESS WINDOWS SHALL NOT HAVE AN OPENING LESS THAN 20" WIDE OR 24" HIGH WITH FINISH SILL HEIGHT NOT GREATER THAN 44" ABOVE THE FINISH FLOOR HEIGHT AND SHALL HAVE A MINIMUM OPENABLE AREA OF 5.7 SQFT..

ALL WINDOWS BELOW 60" SILL HEIGHT SHALL HAVE SAFETY GLAZING. GLAZING IN WALLS AND ENCLOSURES SHALL BE TEMPERED. [IRC R308.4.5]

WINDOWS WITHIN 36" OF DOOR, OR WITH SILL HEIGHT LESS THAN 18", SHALL REQUIRE SAFETY GLAZING.

WINDOW GLAZING IN ALL FIXED AND OPERABLE PANELS OF SWINGING, SLIDING, AND BIFOLD DOORS SHALL BE TEMPERED [IRC R308.4.1]

INTERIOR DOORS SHALL BE PAINTED/SEALED. ENTRY DOOR TO BE DEFINED BY DESERT ICE AND PROPERTY MANAGERS PRIOR TO ORDERING.

ALL EXTERIOR WALK-THRU DOORS SHALL BE NONCOMBUSTIBLE OR IGNITION RESISTANT MATERIAL OR MIN. 1 3/8" TIGHT FITTING SOLID CORE DOORS, SOLID OR HONEYCOMB CORE STEEL, WITH A IBC FIRE RATING OF 20 MINUTES. [IRC 302.5]

EXTERIOR EXIT DOORS WILL BE 36" MIN. NET CLEAR DOORWAY SHALL BE 32" MIN. DOOR SHALL BE OPENABLE FROM INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT. GLAZING IN DOORS SHALL BE DUAL PANE SAFETY GLASS WITH MIN. U-VALUE OF 0.60.

EXTERIOR LANDING SHALL BE AT LEAST THE WIDTH OF THE DOOR AND EXTEND 36" MIN. [IRC R311.3]
EXTERIOR DOOR LANDINGS NOT MORE THAN 7- 3/4" BELOW TOP OF DOOR THRESHOLD. [IRC R311.3]

ROOF / ATTIC VENTING: (SEE ROOF PLAN FOR CALCULATIONS)
PROJECT REQUIREMENTS PER U.S. FEDERAL HOUSING AUTHORITY, IRC R806.2 (1 SQ.FT. VENTING PER 150 SQ.FT. ATTIC EQUALLY SPLIT BETWEEN INTAKE AND EXHAUST, OR 1/300 WITH VAPOR BARRIER).

INSTALL POLYISOCYANURATE FOAM TYPE INSULATION AT FLOOR AND PLATE LINES, OPENINGS IN PLATES, CORNER STUD CAVITIES AND AROUND DOOR AND WINDOW ROUGH OPENING CAVITIES.

WUI REQUIREMENTS INCLUDE EMBER RESISTANCE FOR FIRE STOPPING; RECOMMENDS CONTINUOUS SOFFIT VENTING AND CONTINUOUS RIDGE VENTING. RECOMMENDATIONS INCLUDE UL CLASS A-FIRE-RATING, CLASS CC1, WITH THE FOLLOWING TESTING: TAS-100(A), ASTM D-635-06, ASTM D-2843, ASTM D-5207.

EXTERIOR MATERIAL NOTES:
SIDING:
EXTERIOR VENEER CONSISTS OF LIGHTWEIGHT STONE, COMPOSITE WOOD CLADDING & TRIM.
ALL EXPOSED WOOD SEALED WITH CLASS "A" FIRE RETARDANT.
RECOMMENDED SEALER PRODUCT: FLAME SEAL WOOD SEAL-A FIRE RETARDANT, WATER BASED [ASTM E84-05]
FLAME SPREAD INDEX: 25
SMOKE DEVELOPMENT INDEX: 50
RECOMMENDED STAIN PRODUCT: SIKKENS PROLUXE CETOL LOG & SIDING

ROOFING:
NEW ROOF WITH CLASS-A SHINGLES ROOF MEMBRANE OVER ICE AND WATER SHIELD. (MATCH EXISTING BUILDINGS)

SOFFIT:
COMPOSITE CLADDING SOFFIT AND TRIM, SAME OR SIMILAR TO SIDING. (MATCH EXISTING BUILDINGS)

PLUMBING NOTES:
TIE-IN TO EXISTING LATERALS FOR CULINARY SOURCE AND SEWER.
INSTALL WATER HEATER PER PLAN. (SEE NOTES)

HVAC NOTES:
HEAT PUMP DUCTLESS MINISPLIT WITH IAQ FAN. (SEE NOTES)

ELECTRICAL NOTES:
NEW 200AMP SERVICE PER PLAN. (SEE NOTES)

STRUCTURAL NOTES:
SEE STRUCTURAL PLANS, CALCS, AND DETAILS, ON RESPECTIVE SHEETS

FLOOD ELEVATION DATA:

1. FEMA BASE FLOOD ELEVATION (BFE) @ BUILDING SITE 3917.63'
2. TOP OF SLAB ELEVATION..... 3913.83'
3. BUILDING FLOODPROOFED ELEVATION.....3918.63'
4. FLOODPROOFED STRUCTURE MEETS THE FLOODPROOFING CRITERIA OF SUBSECTION 10-13A-8B2
5. NO WATERCOURSE WILL BE ALTERED IN ANY WAY.
6. NATURAL DRAINAGE UPHILL OF THE NEW BUILDING WILL BE DIVERTED AROUND THE BUILDING BY MEANS OF SLOPED GRADING AND FOOTING DRAINS TO THE DOWNHILL SIDE OF THE PROPERTY.
7. BELOW THE BASE FLOOD LEVEL THE STRUCTURE IS WATERTIGHT WITH WALLS SUBSTANTIALLY IMPERMEABLE TO THE PASSAGE OF WATER AND WITH STRUCTURAL COMPONENTS HAVING THE CAPABILITY OF RESISTING HYDROSTATIC AND HYDRODYNAMIC LOADS AND EFFECTS OF BUOYANCY.
8. THERE ARE NO ENCLOSURES BELOW THE LOWEST FLOOR AND THEREFORE NOT NECESSARY TO EQUALIZE HYDROSTATIC FLOOD FORCES ON EXTERIOR WALLS.

EROSION CONTROL NOTES:
1. FOR SLOPED TERRAIN ≥15%, INSTALL SILT FENCE PRIOR TO ANY EXCAVATION OR CONSTRUCTION.
2. MINIMIZE SITE DISTURBANCE BY TIGHT CONTROL OF EXCAVATION LIMITS.
3. ALL DISTURBED AREAS SHALL BE REVEGETATED WITH ORNAMENTAL PLANTS, NATIVE PLANTS, LAWN, AND/ OR DRYLAND SEED MIX, OR COVERED WI MIN. 2" DECORATIVE ROCK.
4. STRIP SWALES SHALL OVERFLOW ONTO NATIVE UNDISTURBED GROUND. NO SITE DISTURBANCE BELOW SWALES.

GRADING NOTES:
1. CONTRACTOR TO VERIFY LOCATION OF ALL EXISTING UTILITIES.
2. ALL FINISH GRADES SHALL BE SMOOTH AND UNIFORM.
3. PERIMETER GRADES SHALL HAVE A POSITIVE 5% DRAINAGE AWAY FROM FOUNDATION FOR 10ft, MIN. 6" FALL IN 10'. (IRC R401.3)
4. FOOTING DRAINS AND FINAL GRADE TO CONVEY SURFACE DRAINAGE TOWARD ROCK CHANNELS AND DISPERSION TRENCHES.
5. AREAS TO BE FILLED SHALL BE CLEARED, GRUBBED TO REMOVE TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL, AND STRIPPED OF TOPSOIL.
6. PLACE FILL SLOPES WITH A GRADIENT STEEPER THAN 3:1 IN LIFTS NOT TO EXCEED 8 INCHES, AND MAKE SURE EACH LIFT IS PROPERLY COMPACTED.
7. LOOSE SOIL UNDER FOOTINGS AND SLABS TO BE COMPACTED TO 96PSI, OR FILLED W/ 1" WASHED GRAVEL.

SPECIAL INSPECTION NOTES:

1. NO CONCRETE SHALL BE PLACED, NO MASONRY SHALL BE GROUTED, AND NO WORK REQUIRING SPECIAL INSPECTION SHALL BE CONCEALED WITHOUT WRITTEN APPROVAL FROM THE CITY/COUNTY BUILDING INSPECTOR.
2. THE SPECIAL INSPECTOR SHALL BE EMPLOYED BY THE OWNER, THE ARCHITECT, OR THE ENGINEER OF RECORD, OR THE AGENT OF THE OWNER, BUT NOT THE TRADE CONTRACTOR OR ANY OTHER PERSON RESPONSIBLE FOR THE WORK.
3. SPECIAL INSPECTION IN ACCORDANCE WITH THE REQUIREMENTS OF 2021 IBC CHAPTER 17 ARE OUTLINED ON SHEET S-02 OF THE STRUCTURAL ENGINEERED PLANS.
4. PRIVATE ENGINEERING FIRMS CAN BE CONTACTED FOR SPECIAL INSPECTIONS, BUT FOR SPRINGDALE, UT, IT IS RECOMMENDED TO CONTACT THE PLANNING DEPARTMENT FOR A LIST OF RECOMMENDED FIRMS.

LEGAL DESCRIPTION:

Legal S: 28 T: 41S R: 10W BEG S 0°14'52 W 594 FT & S 49°14'52 W 77 FT FM N1/4 COR SEC 28 T41S R10W TH ALG WLY BDRY ZION NAT'L PARK S 11°14'52 W 247 FT; TH S 19°14'52 W 300 FT; TH S 25°06'52 W 164.30 FT; TH N 89°45'08 W 403.24 FT, TH N 57°49'52 E 158 FT; TH N10°10'08 W 320 FT; TH N 09°36'24 E 270.67 FT TO E R/W LN HWY U-9; TH N 28°44'08 E ALG R/W 50.41 FT TO PT OF CUR RT CNT RLN CUR DATA: A=25°53' R=300.00 T=68.90 L= 135.50; ALG ARC CUR 112.94 FT; TH S 73°05'15 E 416.96 FT TO POB ALSO: COMMENCING AT THE SOUTHWEST CORNER OF THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER (SE1/4NW1/4) OF SECTION 28, TOWNSHIP 41 SOUTH, RANGE 10 WEST, SALT LAKE BASE AND MERIDIAN AND RUNNING THENCE NORTH 0°11'27" EAST ALONG THE 1/16TH SECTION LINE, 1074.86 FEET; THENCE SOUTH 89°48'33" EAST 226.70 FEET TO A POINT ON THE SOUTH RIGHT OF WAY LINE OF SR-9; THENCE NORTH 28°45'00" EAST ALONG THE SAID RIGHT OF WAY, 286.56 FEET; THENCE SOUTH 89°57'22" EAST 365.65 FEET TO THE TRUE POINT OF BEGINNING; THENCE SOUTH 89°57'22" EAST 291.01 FEET; THENCE SOUTH 48°00'00" WEST 155.35 FEET; THENCE NORTH 59°18'59" WEST 204.14 FEET TO THE POINT OF BEGINNING.

NOTICE, DISCLAIMER AND COPYRIGHT

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ABBREVIATIONS

BM	BEAM
B.O.	BOTTOM OF
BW	BRACED WALL
CF	CONTINUOUS FOOTING
CL	CENTER LINE
CS	CONTINUOUS SHEATHING
(E)	EXISTING
EA.	EACH
EOR	ENGINEER OF RECORD
FB	FLOOR BEAM
H	HEADER
HDR	HEADER
O.C.	ON CENTER
PB	PORCH BEAM
PP	PORCH POST
PT	PRESSURE TREATED
R	RIDGE
SF	SINGLE FAMILY
SPF	SPRAY POLYURETHANE FOAM
T.O.	TOP OF
TYP.	TYPICAL
U.N.O	UNLESS OTHERWISE NOTED

FOR:	Cable Mountain Lodge, Desert Ice, AND Cheyne Chauvin cheynechauvin@gmail.com 707-499-0423
PROJECT ADDRESS:	95 Zion Park Blvd Springdale, UT 84767
LEGAL:	OWNER: Cable Mountain LLC APN S-138-C-1
FIRE DISTRICT:	ROCKVILLE/SPRINGDALE FIRE DISTRICT (STATION 49)
WATER:	TOWN OF SPRINGDALE WATER/WASTEWATER DEPT.
SEWER:	TOWN OF SPRINGDALE WATER/WASTEWATER DEPT.
BLDG PERMIT:	_____
DESIGNER:	Romy Creative LLC
CONSULTANT:	Jeromy Williams design@romycreative.com (530) 863-7238
BUILDER:	Cheyne Chauvin

SHEET MODIFIED 16 MAY 2025

RESPONSIBLE DESIGNER:
Romy CREATIVE
Jeromy Williams
Lic:1324064-6160
Jeromy Williams

DRAWINGS FOR:
Cheyne Chauvin
(707) 444-0423
chayenechauvin@gmail.com

DRAWINGS PROVIDED BY:
Jeromy Williams
Romy Creative LLC
St. George, UT 84790
design@romycreative.com
(530) 863-7230

PROJECT NOTES

95 ZION PARK BLVD
SPRINGDALE, UT 84767

DESERT ICE SHANTY

DATE:
5/20/2025

SCALE:
NONE

SHEET:
2

NOTE:
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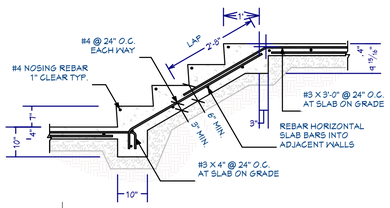


EXTERIOR STAIR SECTION
SCALE 1/2" = 1'

SITE PLAN NOTES
SPRINGDALE, UT

EXISTING LANDSCAPING DISBURSED BY NEW BUILDING
= 807 SqFt
FLOOR STRUCTURE:
DEAD LOAD = 20 psf, LIVE LOAD = 40 psf
ROOF STRUCTURE:
DEAD LOAD = 20 psf, LIVE LOAD = 20 psf (L/360)
GROUND SNOW LOAD = 21 psf
WIND EXPOSURE: 94 mph, RISK II, CATEGORY B
SEISMIC DESIGN CATEGORY = D
SITE CLASS = D
FLOOD DESIGN DATA = N/A
FROSTLINE DEPTH = 36 in
FOUNDATION: Class 5 Material (2021 IBC Table 1806.2)
SOIL BEARING = 1,500 psf
PASSIVE LATERAL PRESSURE
= 100 psf/ft
ALLOWABLE COHESION
= 130 psf x contact area
ENERGY DESIGN = CLIMATE ZONE 7a, 7b, & 8a
OCC CATEGORY = II

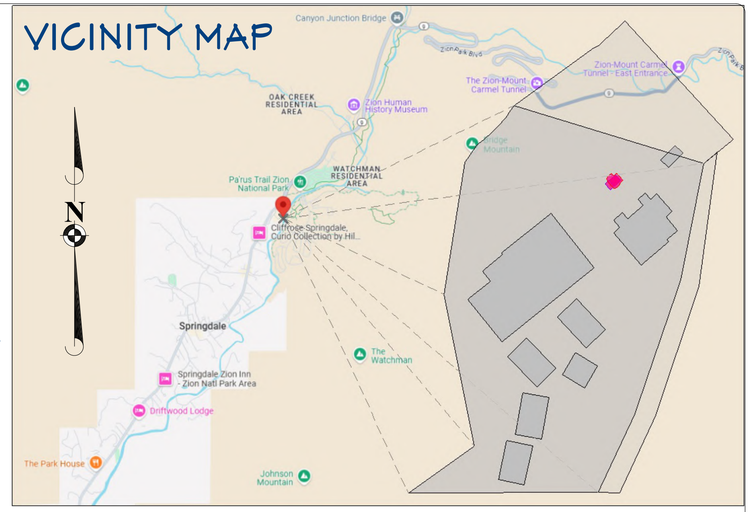
PROJECT STATISTICS:
BUILDING INFO:

PROPOSED NEW BUILDING:	DESERT ICE SHANTY
CONDITIONED	285 SqFt
NEW CONCRETE (est>)	956 SqFt
COVERED FOOTPRINT	504 SqFt
BUILDING HT.	± 10.75 FT
ZONING	VC
SUBDIVISION	
CONSTRUCTION TYPE	V
ADDRESS:	CABLE MOUNTAIN LLC 95 ZION PARK BLVD SPRINGDALE, UT 84767
PARCEL	S-138-C-1
LOT SIZE	7.74 ACRES 337,154.4 SqFt
ELEVATION	+/- 3,858 FT

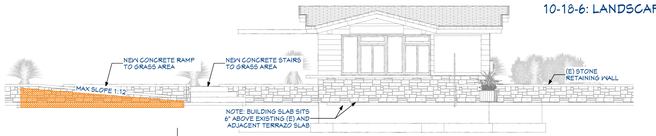
SPRINGDALE TOWN, UTAH
ZONING VC
Site Development Regulations:
10-11A-14(A): COMMERCIAL ZONE DESIGN STANDARDS
10-16-5: ARCHITECTURAL AND DESIGN GUIDELINES
10-18-6: LANDSCAPE DESIGN

BMP's ORDINANCE
BEST MANAGEMENT PRACTICES (13-5.1(c)(2) AND 24- 145)
CONSTRUCTION BMP's
1 - LIMIT AREA OF DISTURBANCE (DB) TO FOUNDATION OVER-DIG, DRIVES, AND WALKS AS MUCH AS POSSIBLE (< 1,800 SqFt).
2 - PRESERVE ANY EXISTING TREES AND VEGETATION EVERYWHERE POSSIBLE.
3 - USE MULCHING TO PRESERVE CRITICAL AREAS DURING CONSTRUCTION.

POST CONSTRUCTION BMP's
4 - FINAL VEGETATION, STRUCTURES, AND MULCHING, TO BE INSTALLED OVER ALL DISTURBED AREAS UPON COMPLETION OF CONSTRUCTION.
5 - FIT FOUNDATION INTO LAND TOPOGRAPHY WHERE 5% FINAL GRADE EXPOSES NO MORE THAN 12" OF FOUNDATION WALL.
6 - MATERIAL STOCKPILE
7 - EROSION CONTROL SEDIMENT TRAP DOWNHILL OF DISTURBED AREA.
8 - PORTABLE SANITATION
9 - DUMPSTER

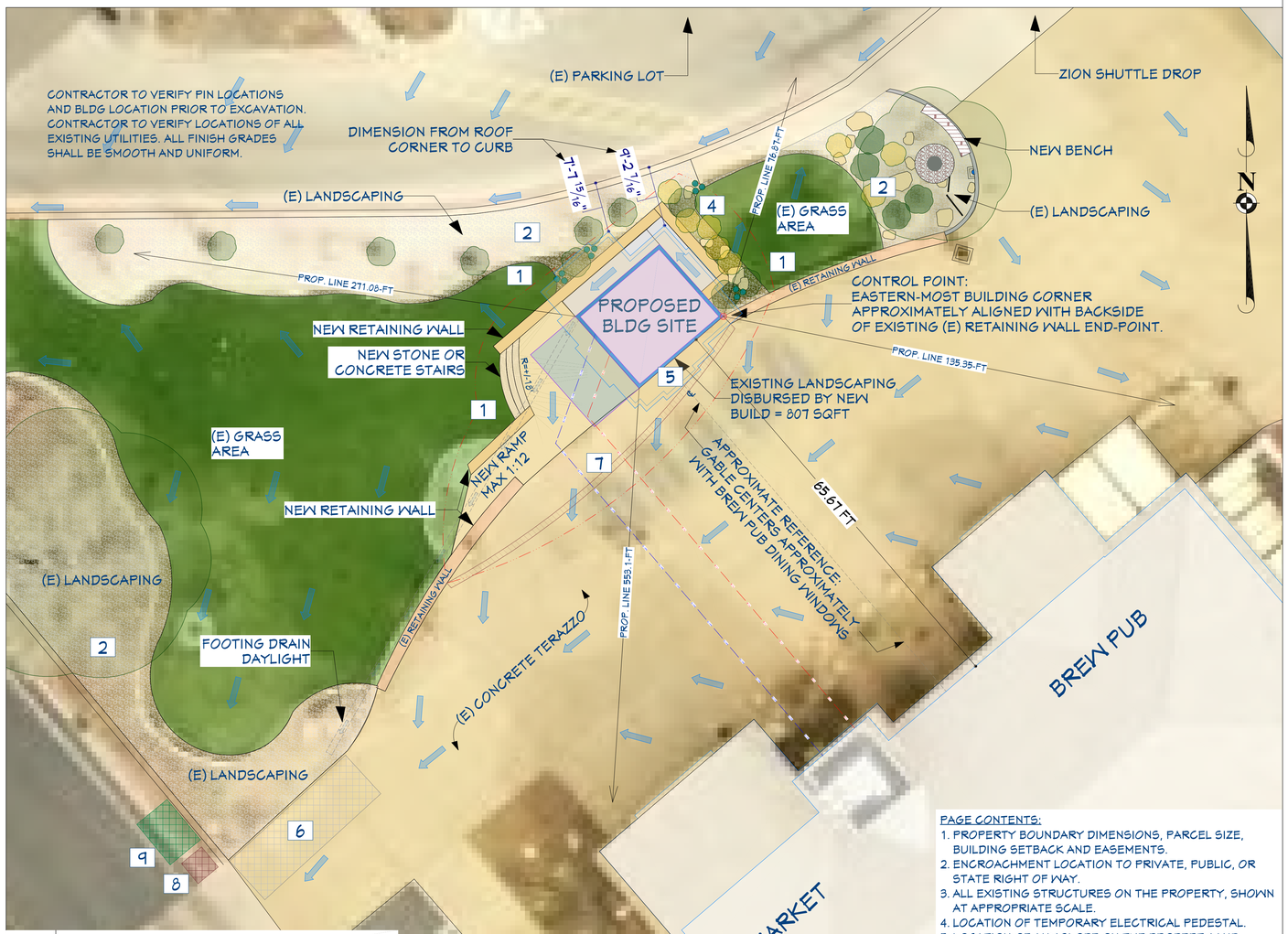
VICINITY MAP


SITE LEGEND
- SET BACK
- SEWER
- WATER LINE
- GAS LINE
- POWER LINE
- AREA OF DISTURBANCE
- EROSION CONTROL
- ELEVATION LINE
- EXISTING GRADE
- FINAL GRADE
- FEMA FLOOD AREA
- FOOTING DRAIN EXIT PT.
- DRAINAGE DIRECTION



SOUTH CROSS SECTION
SCALE 1/8" = 1'

PROPOSED SITE PLAN
SCALE 1"=60'



PROPOSED SITE PLAN
SCALE 1"=10'

PAGE CONTENTS:
1. PROPERTY BOUNDARY DIMENSIONS, PARCEL SIZE, BUILDING SETBACK AND EASEMENTS.
2. ENCROACHMENT LOCATION TO PRIVATE, PUBLIC, OR STATE RIGHT OF WAY.
3. ALL EXISTING STRUCTURES ON THE PROPERTY, SHOWN AT APPROPRIATE SCALE.
4. LOCATION OF TEMPORARY ELECTRICAL PEDESTAL.
5. LOCATION OF ANY SLOPE ON THE PROPERTY AND INDICATING IMPACT ON BUILDING.
6. DRAINAGE CURTAIN LOCATION DURING CONSTRUCTION.
7. FEMA FLOOD BOUNDARY

RESPONSIBLE DESIGNER:
Romy CREATIVE
Jeromy Williams
Lic:13242064-6160
Jeromy Williams

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cheynechauvin@gmail.com

DRAWINGS PROVIDED BY:
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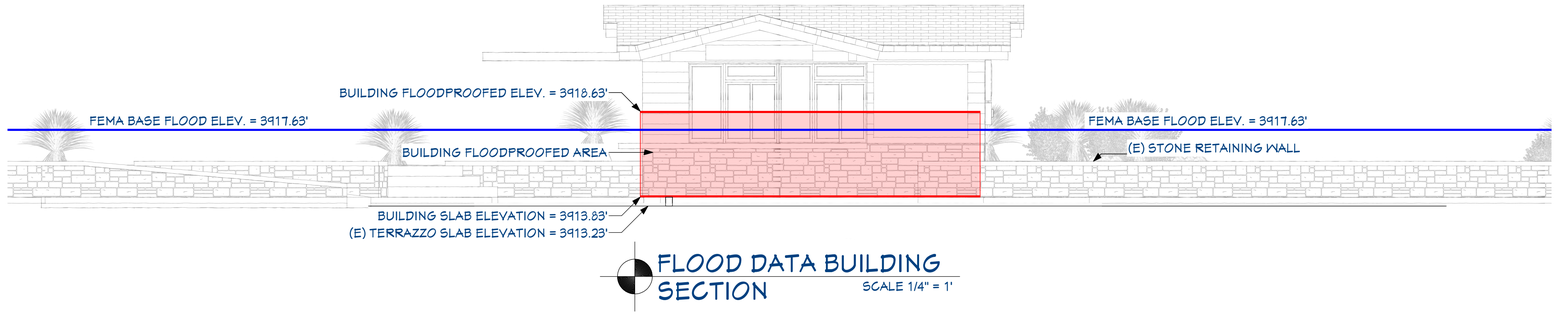
St. George, UT 84790
design@romycreative.com
(650) 365-7230

SITE PLAN

95 ZION PARK BLVD
SPRINGDALE, UT 84767
DESERT ICE SHANTY

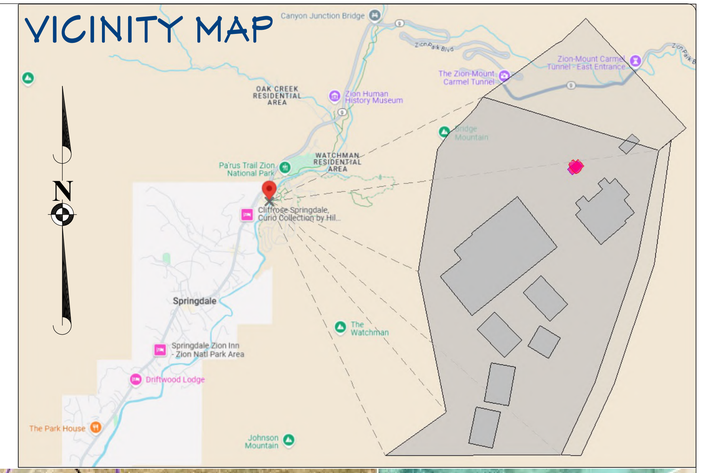
DATE: 5/20/2025
SCALE: NOTED
SHEET: 3



FLOOD DATA BUILDING SECTION

SCALE 1/4" = 1'

VICINITY MAP



PROJECT STATISTICS:

BUILDING INFO:
EXISTING LANDSCAPING DISBURSED BY NEW BUILDING = 807 SqFt

PROPOSED NEW BUILDING:	DESERT ICE SHANTY
CONDITIONED	285 SqFt
NEW CONCRETE (est>)	956 SqFt
COVERED FOOTPRINT	504 SqFt
BUILDING HT.	± 10.75 FT
ZONING	VC
SUBDIVISION	
CONSTRUCTION TYPE	V
ADDRESS:	CABLE MOUNTAIN LLC 95 ZION PARK BLVD SPRINGDALE, UT 84767
PARCEL	S-138-C-1
LOT SIZE	7.74 ACRES 337,154.4 SqFt
ELEVATION	+/- 3,858 FT

SPRINGDALE TOWN, UTAH
ZONING VC
Site Development Regulations:
10-11A-14(A): COMMERCIAL ZONE DESIGN STANDARDS
10-16-5: ARCHITECTURAL AND DESIGN GUIDELINES
10-18-6: LANDSCAPE DESIGN

FLOOD ELEVATION DATA:

1. FEMA BASE FLOOD ELEVATION (BFE) @ BUILDING SITE 3917.63'
2. TOP OF SLAB ELEVATION..... 3913.83'
3. BUILDING FLOODPROOFED ELEVATION..... 3918.63'
4. FLOODPROOFED STRUCTURE MEETS THE FLOODPROOFING CRITERIA OF SUBSECTION 10-13A-8B2
5. NO WATERCOURSE WILL BE ALTERED IN ANY WAY.
6. NATURAL DRAINAGE UPHILL OF THE NEW BUILDING WILL BE DIVERTED AROUND THE BUILDING BY MEANS OF SLOPED GRADING AND FOOTING DRAINS TO THE DOWNHILL SIDE OF THE PROPERTY.
7. BELOW THE BASE FLOOD LEVEL THE STRUCTURE IS WATERTIGHT WITH WALLS SUBSTANTIALLY IMPERMEABLE TO THE PASSAGE OF WATER AND WITH STRUCTURAL COMPONENTS HAVING THE CAPABILITY OF RESISTING HYDROSTATIC AND HYDRODYNAMIC LOADS AND EFFECTS OF BUOYANCY.
8. THERE ARE NO ENCLOSURES BELOW THE LOWEST FLOOR AND THEREFORE NOT NECESSARY TO EQUALIZE HYDROSTATIC FLOOD FORCES ON EXTERIOR WALLS.

NOTE:
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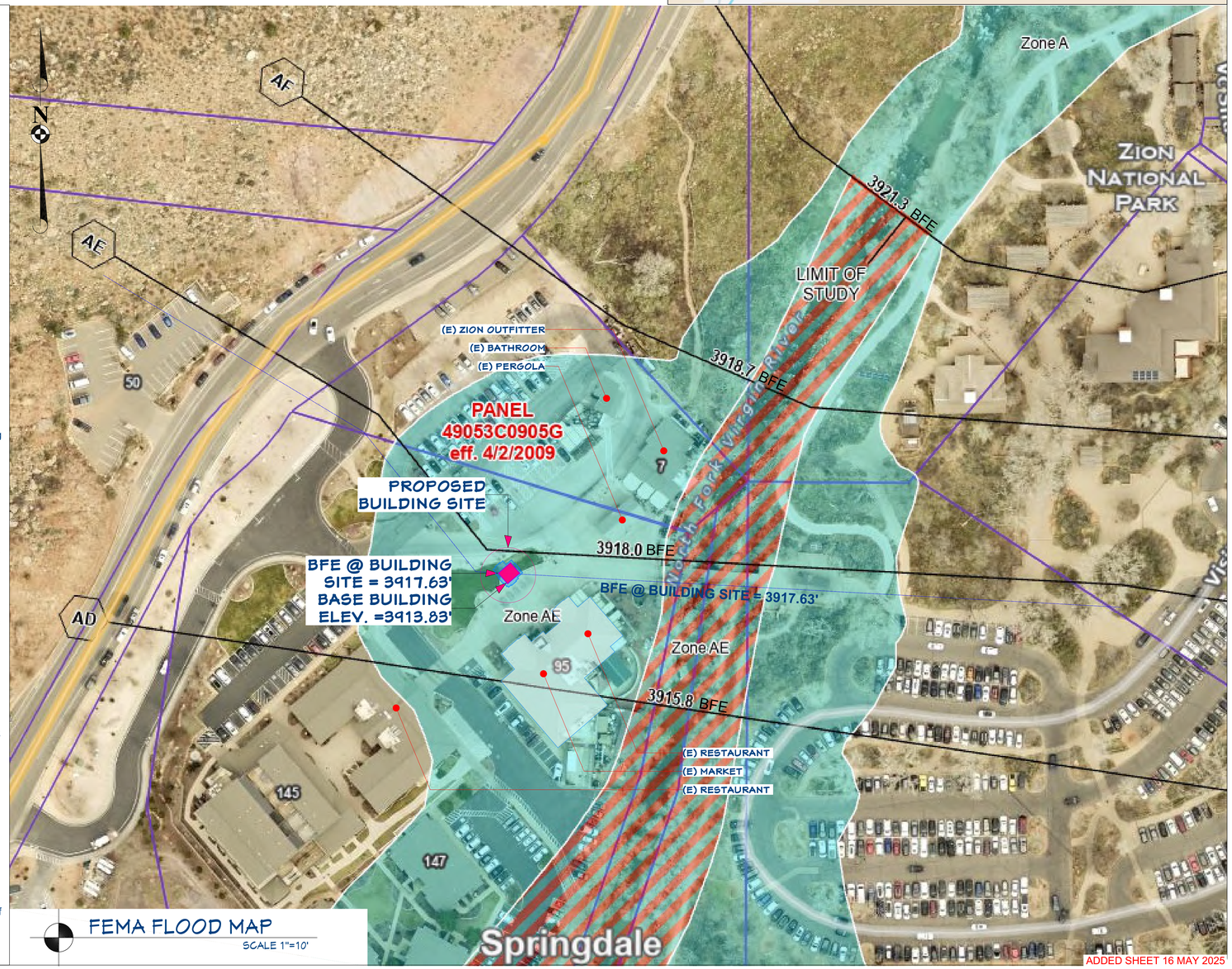
PAGE CONTENTS:
1. FEMA FLOOD BOUNDARY
2. FLOOD ELEVATION DATA
3. FLOODPROOFING CODE REQUIREMENTS

CHAPTER 13 OVERLAY ZONES
ARTICLE A. FLOOD HAZARD OVERLAY (F-H) ZONE

10-13A-7: ADMINISTRATION:
C. Application For Development Permit: Application for a development permit shall be presented to the floodplain administrator on forms furnished by him/her and may include, but not be limited to, plans in duplicate drawn to scale showing the location, dimensions, and elevation of proposed landscape alterations, existing and proposed structures, including the placement of manufactured homes, and the location of the foregoing in relation to areas of special flood hazard. Additionally, the following information is required:
1. Elevation (in relation to mean sea level) of the lowest floor (including basement) of all new and substantially improved structures;
2. Elevation (in relation to mean sea level) to which any nonresidential structure shall be floodproofed;
3. A certificate from a registered professional engineer or architect that the nonresidential floodproofed structure shall meet the floodproofing criteria of subsection 10-13A-8B2 of this article.
4. Description of the extent to which any watercourse or natural drainage will be altered or relocated as a result of proposed development.
5. The floodplain administrator shall maintain a record of all the above information in accordance with subsection B1 of this section.

10-13A-8: PROVISIONS FOR FLOOD HAZARD REDUCTION:
B. Specific Standards: In all areas of special flood hazards where base flood elevation data has been provided the following provisions are required:
1. Residential Construction: New construction and substantial improvement of any residential structure shall have the lowest floor (including basement) elevated to or above the base flood elevation. A registered professional engineer, architect, or land surveyor shall submit a certification to the floodplain administrator that the standard of this subsection as proposed in subsection 10-13A-7C1 of this article, is satisfied.
2. Nonresidential Construction: New construction and substantial improvements of any commercial, industrial or other nonresidential structure shall either have the lowest floor (including basement) elevated to or above the base flood level or together with attendant utility and sanitary facilities, be designed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. A registered professional engineer or architect shall develop and/or review structural design, specifications, and plans for the construction, and shall certify that the design and methods of construction are in accordance with accepted standards of practice as outlined in this subsection. A record of such certification which includes the specific elevation (in relation to mean sea level) to which such structures are floodproofed shall be maintained by the floodplain administrator.
3. Enclosures: New construction and substantial improvements, with fully enclosed areas below the lowest floor that are usable solely for parking of vehicles, building access or storage in an area other than a basement and which are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or meet or exceed the following minimum criteria: a. A minimum of two (2) openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided. b. The bottom of all openings shall be no higher than one foot (1') above grade. c. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.



FEMA FLOOD MAP

SCALE 1"=10'

ADDED SHEET 16 MAY 2025

RESPONSIBLE DESIGNER:
Romy CREATIVE
Jeromy Williams
Lic:1324206-6160
Jeromy Williams

DRAWINGS FOR:
Cheyne Chauvin
(707) 444-0428
cheynechauvin@gmail.com

DRAWINGS PROVIDED BY:
Jeromy Williams
Romy Creative LLC
St. George, UT 84790
design@romycreative.com
(650) 565-7230

FEMA FLOOD MAP INFO

95 ZION PARK BLVD
SPRINGDALE, UT 84767

DESERT ICE SHANTY

DATE: 5/20/2025

SCALE: NOTED

SHEET: 4

NOTE:
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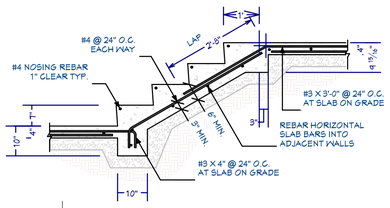

EXTERIOR STAIR SECTION

SCALE 1/2" = 1'

SITE PLAN NOTES

SPRINGDALE, UT

FLOOR STRUCTURE:
DEAD LOAD = , LIVE LOAD = 40 psf
ROOF STRUCTURE:
DEAD LOAD = 20 psf , LIVE LOAD = 20 psf (L/360)
GROUND SNOW LOAD = 21 psf
WIND EXPOSURE: 94 mph, RISK II, CATEGORY B
SEISMIC DESIGN CATEGORY = D
SITE CLASS = D
FLOOD DESIGN DATA = N/A
FROSTLINE DEPTH = 36 in
FOUNDATION: Class 5 Material (2021 IBC Table 1806.2)
SOIL BEARING = 1,500 psf
PASSIVE LATERAL PRESSURE
= 100 psf/ft
ALLOWABLE COHESION
= 130 psf x contact area
ENERGY DESIGN = CLIMATE ZONE 7a, 7b, & 8a
OCC CATEGORY = II

PROJECT STATISTICS:

BUILDING INFO:

PROPOSED NEW BUILDING:	DESERT ICE SHANTY
CONDITIONED	285 SqFt
NEW CONCRETE (est>)	956 SqFt
COVERED FOOTPRINT	504 SqFt
BUILDING HT.	± 10.75 FT
ZONING	VC
SUBDIVISION	VALLEY HILLS ESTATE PLAT C, LOT 24
CONSTRUCTION TYPE	V
ADDRESS:	CABLE MOUNTAIN LLC 95 ZION PARK BLVD SPRINGDALE, UT 84767
PARCEL	S-138-C-1
LOT SIZE	7.74 ACRES 337,154.4 SqFt
ELEVATION	+/- 3,858 FT

SPRINGDALE TOWN, UTAH
ZONING VC
Site Development Regulations:
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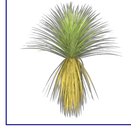
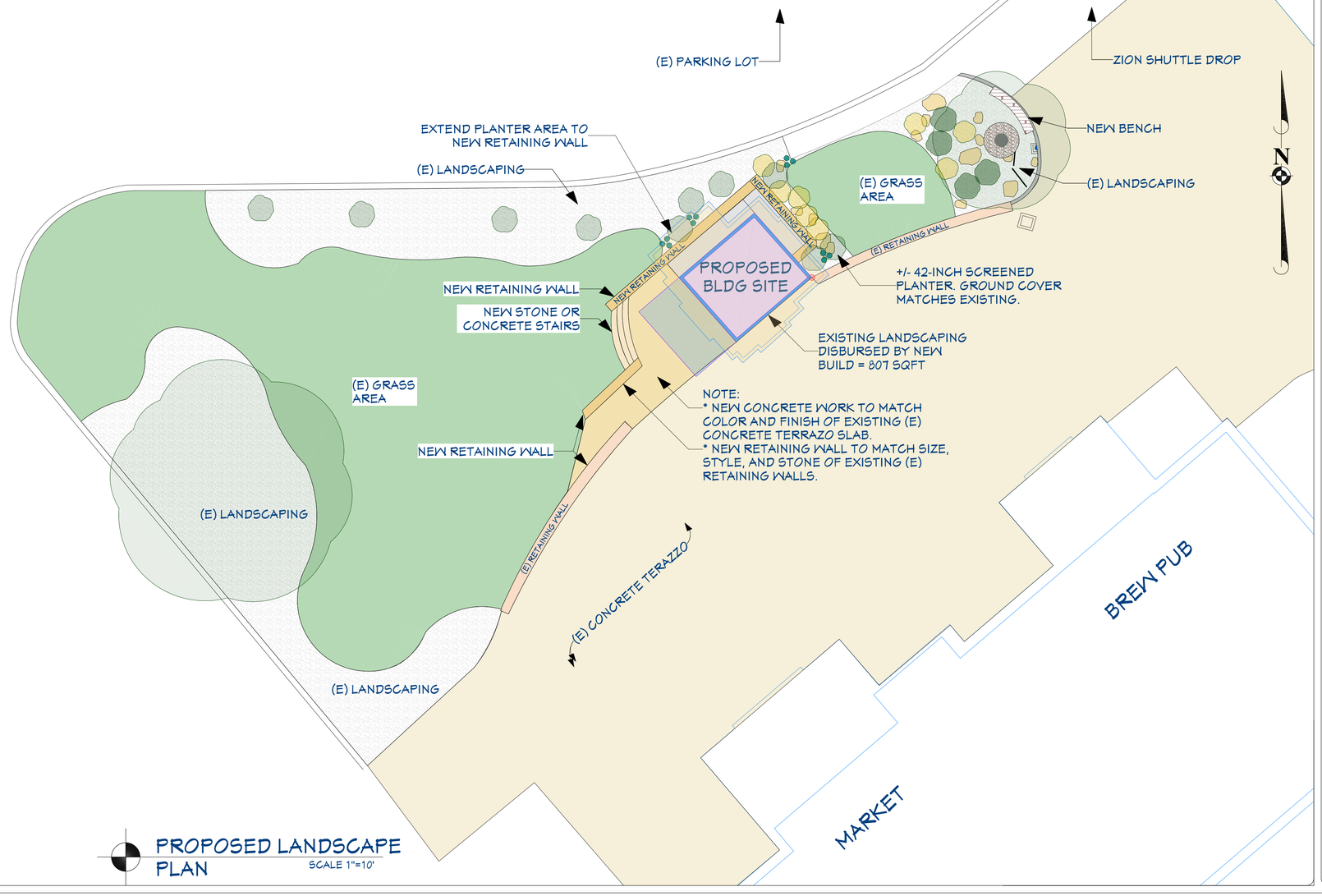
10-16-5: ARCHITECTURAL AND DESIGN GUIDELINES
10-18-6: LANDSCAPE DESIGN

PLANT SCHEDULE

3D PERSPECTIVE	NUMBER	QTY	COMMON NAMES	SCIENTIFIC NAME
	P01	18	CINQUEFOIL	POTENTILLA FRUTICOSA
	P03	24	FESCUE	FESTUCA
	P04	17	YUCCA SOAPTREE	YUCCA ELATA



PROPOSED LANDSCAPE PLAN

SCALE 1"=10'

LANDSCAPE NARRATIVE

The landscape design for this project integrates seamlessly with the existing environment, maintaining the visual and ecological integrity of Zion National Park's main foot traffic area. Retaining walls and concrete finishes match the existing site elements, ensuring continuity in materials and design. The planting palette consists of cinquefoils, fescues, and yucca soaptrees, which are native and drought-tolerant, aligning with water conservation principles while enhancing the natural beauty of the space. Minimal but intentional landscaping preserves open space and reinforces the appearance of the project as an original part of the development. Thoughtful placement of vegetation helps soften the building's presence, integrating it into the surrounding landscape. By following local guidelines, the design provides a cohesive, historically sensitive, and sustainable outdoor environment that enhances visitor experience while respecting the natural desert setting.

RESPONSIBLE DESIGNER:
Romy CREATIVE
Jeromy Williams
Lic:13242064-6160
Jeromy Williams

DRAWINGS FOR:
Cheyne Chauvin
(707) 444-0428
cheynechauvin@gmail.com

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design@romycreative.com
(550) 365-7230

LANDSCAPE PLAN

95 ZION PARK BLVD
SPRINGDALE, UT 84767

DESERT ICE SHANTY

DATE:
5/20/2025

SCALE:
1"=10'

SHEET:
5

EXTERIOR MATERIAL NOTES:

SIDING:
EXTERIOR VENEER CONSISTS OF LIGHTWEIGHT STONE & COMPOSITE LAP SIDING & COMPOSITE TRIM, ALL DESIGNED TO MATCH CONGRUENTLY WITH THE ADJACENT BUILDINGS ON THE PROPERTY.

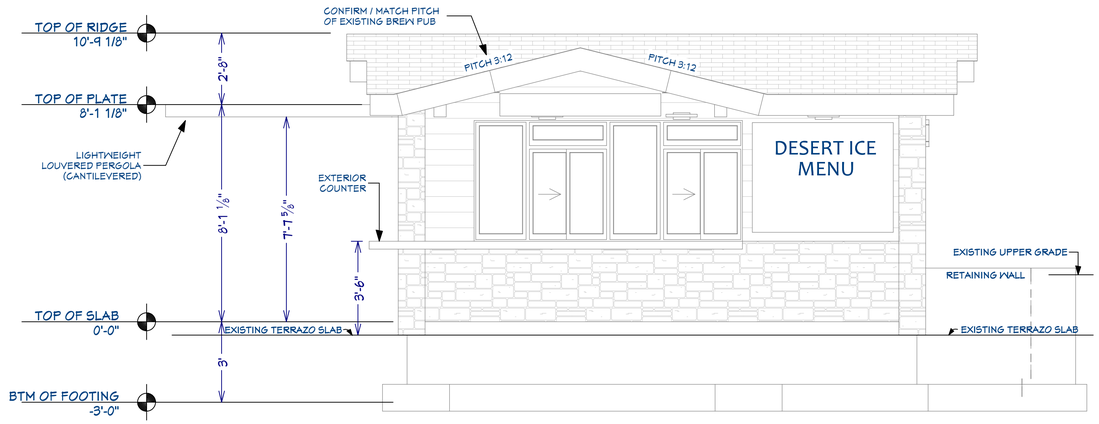
ALL EXPOSED WOOD SEALED WITH CLASS "A" FIRE RETARDANT.
RECOMMENDED SEALER PRODUCT: FLAME SEAL WOOD SEAL-A FIRE RETARDANT, WATER BASED [ASTM E84-05]
FLAME SPREAD INDEX: 25
SMOKE DEVELOPMENT INDEX: 50
RECOMMENDED STAIN PRODUCT: SIKKENS PROLUXE CETOL LOG & SIDING

ROOFING:
NEW ROOF WITH CLASS-A SHINGLES AND HIGH PROFILE RIDGE & GABLE EDGE-OVER ON TOP OF ICE AND WATER SHIELD. ROOFING STYLE, COLOR, AND MANUFACTURER TO MATCH ROOFING OF ADJACENT BUILDINGS.

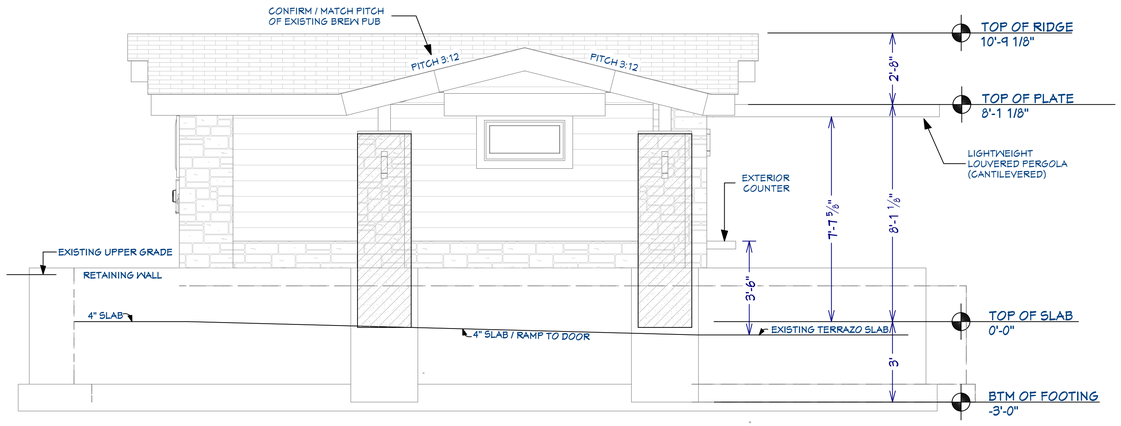
SOFFIT:
COMPOSITE T&G SOFFIT AND COMPOSITE TRIM, SAME OR SIMILAR TO SIDING. SOFFIT COLOR & STYLE TO MATCH SOFFIT OF ADJACENT BUILDINGS.

FENESTRATIONS:
WINDOWS MUST BE INSULATED WITH A MINIMUM OF 1 TEMPERED PANE OR 20 MIN RATED OR GLASS BLOCK. SASH COLOR TO MATCH WINDOWS OF ADJACENT BUILDINGS.

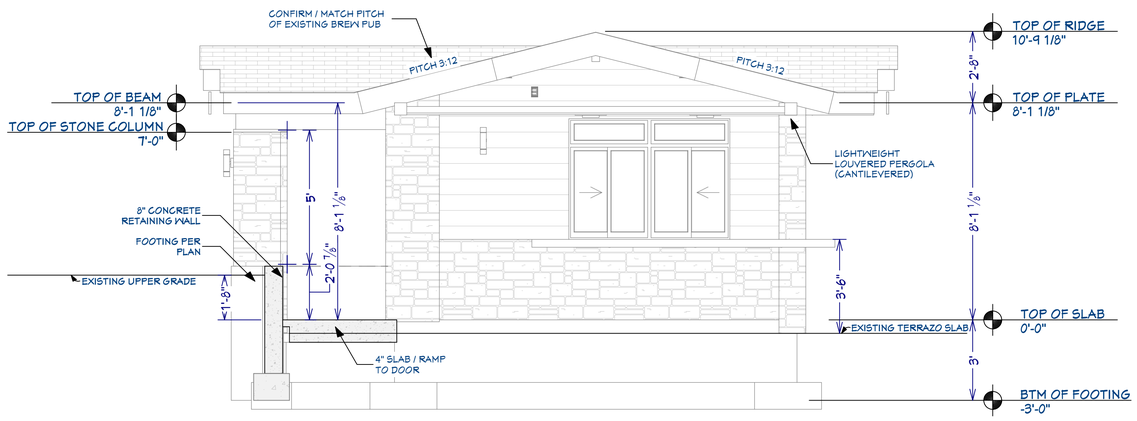
EXTERIOR DOORS MUST BE NONCOMBUSTIBLE OR IGNITION RESISTANT MATERIAL OR 1-3/8" SOLID CORE, OR HAVE A 20 MINUTE FIRE-RESISTANCE RATING. DOOR COLOR TO MATCH ADJACENT BUILDINGS. CONFIRM DOOR STYLE WITH DESERT ICE & PROPERTY MANAGERS PRIOR TO ORDERING.



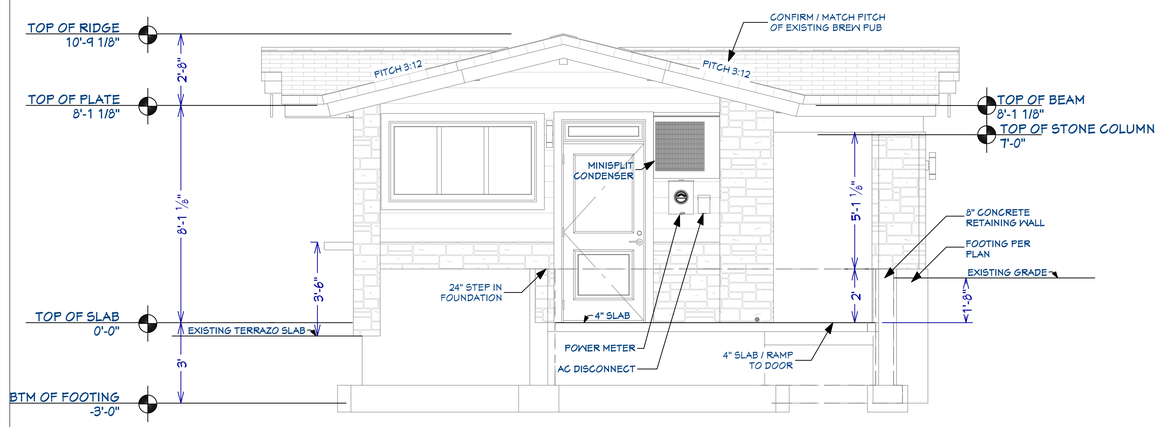
FRONT (SE) ELEVATION
SCALE 3/8" = 1'



BACK (NW) ELEVATION
SCALE 3/8" = 1'



LEFT - SW ELEVATION
SCALE 3/8" = 1'



RIGHT - NE ELEVATION
SCALE 3/8" = 1'

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ELEVATIONS

95 ZION PARK BLVD
SPRINGDALE, UT 84767

DESERT ICE SHANTY

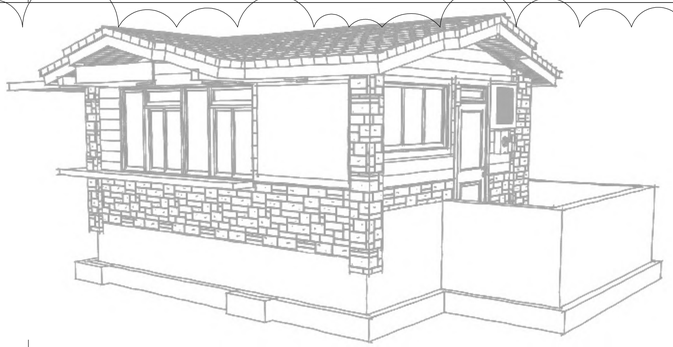
DATE:
5/20/2025

SCALE:
3/8"=1'

SHEET:
6

RENDERING FRONT-LT
FOR ILLUSTRATION ONLY NO SCALE

RENDERING LEFT
FOR ILLUSTRATION ONLY NO SCALE



RENDERING FRONT-RT
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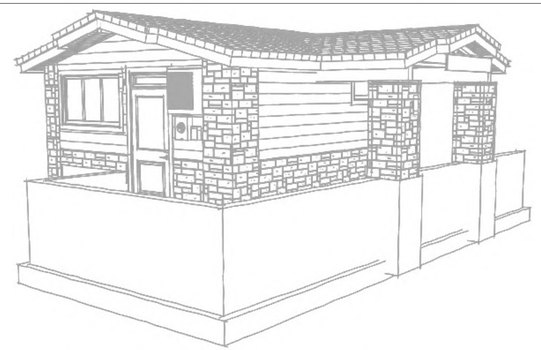
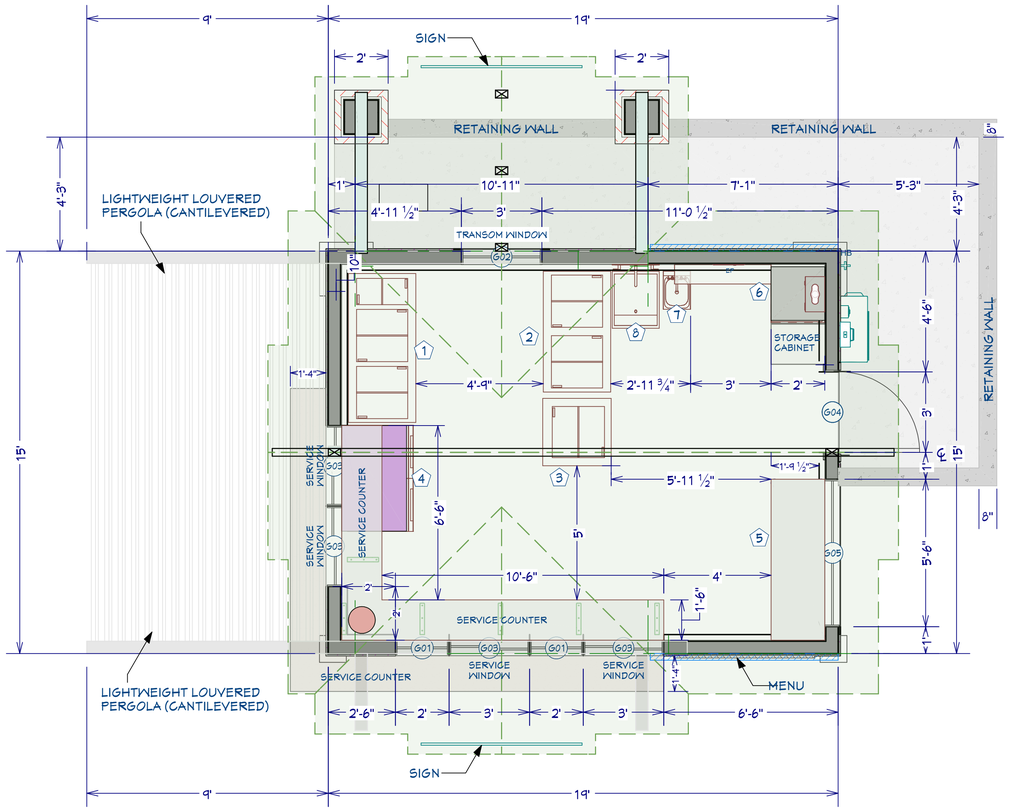


RENDERING RIGHT-BACK
FOR ILLUSTRATION ONLY NO SCALE



MAIN FLOORPLAN
SCALE 3/8" = 1'

WINDOW/DOOR SCHEDULE

3D PERSPECTIVE	NUMBER	LABEL	QTY	SIZE	DESCRIPTION
	G01	2046FX	2	2046FX	FIXED GLASS
	G02	3016FX	1	3016FX	FIXED GLASS
	G03	3046MU	4	3046	MULLED UNIT
	G04	3076MU	1	3076	MULLED UNIT
	G05	5630FX	1	5630FX	FIXED GLASS

FIXTURE SCHEDULE

1	WATER ICE	MASTER-BILT DC-10DSE 66 5/8" STAND ALONE ICE CREAM DIPPING CABINET W/ 28 TUB CAPACITY - STAINLESS, 115V
2	WATER ICE	MASTER-BILT DC-8DSE 54 3/4" STAND ALONE ICE CREAM DIPPING CABINET W/ 19 TUB CAPACITY - STAINLESS, 115V
3	ICE CREAM	MASTER-BILT DC-4DSE 30 5/8" STAND ALONE ICE CREAM DIPPING CABINET W/ 7 TUB CAPACITY - STAINLESS, 115V
4	UNDER COUNTER FRIDGE	MOTAK MUR-48-X 47 1/4" W UNDERCOUNTER REFRIGERATOR W/ (2) SECTIONS & (2) DOORS, 115V
5	STAINLESS WORK TABLE	ROYAL INDUSTRIES ROY WT 2472 72" 18 GA WORK TABLE W/ UNDERSHELF & 430 SERIES STAINLESS FLAT TOP
6	MOP SINK	KROWNE MS-2424 FLOOR MOUNT MOP SINK W/ 8"D BOWL, STAINLESS
7	HAND SINK	KROWNE HS-30L WALL MOUNT COMMERCIAL HAND SINK W/ 9 3/4"L X 11 3/4"W X 5"D BOWL, SIDE SPLASHES
8	PREP SINK	JOHN BOOS E1S8-1620-12 21" 1 COMPARTMENT SINK W/ 16"L X 20"W BOWL, 12" DEEP

PROJECT STATISTICS:

BUILDING INFO:

PROPOSED NEW BUILDING:	DESERT ICE SHANTY
CONDITIONED	285 SqFt
NEW CONCRETE (est>)	956 SqFt
COVERED FOOTPRINT	504 SqFt
BUILDING HT.	± 10.75 FT
ZONING	VC
SUBDIVISION	VALLEY HILLS ESTATE PLAT C, LOT 24
CONSTRUCTION TYPE	V
ADDRESS:	CABLE MOUNTAIN LLC 95 ZION PARK BLVD SPRINGDALE, UT 84767
PARCEL	S-138-C-1
LOT SIZE	7.74 ACRES 337,154.4 SqFt
ELEVATION	+/- 3,858 FT

SPRINGDALE TOWN, UTAH
ZONING VC
Site Development Regulations:
10-11A-14(A): COMMERCIAL ZONE DESIGN STANDARDS
10-16-5: ARCHITECTURAL AND DESIGN GUIDELINES
10-18-6: LANDSCAPE DESIGN

FLOOR PLAN NOTES:

1. ALL EXTERIOR DIMENSIONS ARE TO THE FRAMING OR MAIN LAYER. DIMENSIONS TO OPENINGS ARE TO THE FRAMING, ROUGH OPENING.
2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND IS RESPONSIBLE FOR ALL DIMENSIONS (INCLUDING ROUGH OPENINGS).
3. PERIMETER WALLS ARE FRAMED 2X6 CONSTRUCTION.
4. CONCRETE SLAB IS BASE OF MAIN FLOOR.
5. EXTERIOR SHEATHING USING 7/16" OSB U.N.O AND WRAPPED WITH TYVEK OR SIMILAR.

WALL LEGEND

- EXTERIOR 2X6 SIDING VENEER
- EXTERIOR 2X6 STONE VENEER
- EXPOSED BEAM
- STRUCTURAL POST
- FOOTING

SHEET MODIFIED 16 MAY 2025

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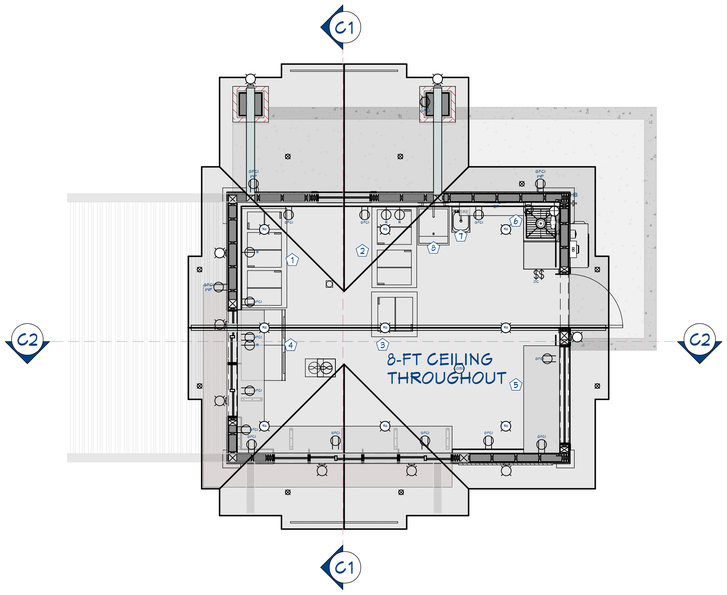
FLOORPLAN - 1ST FLOOR

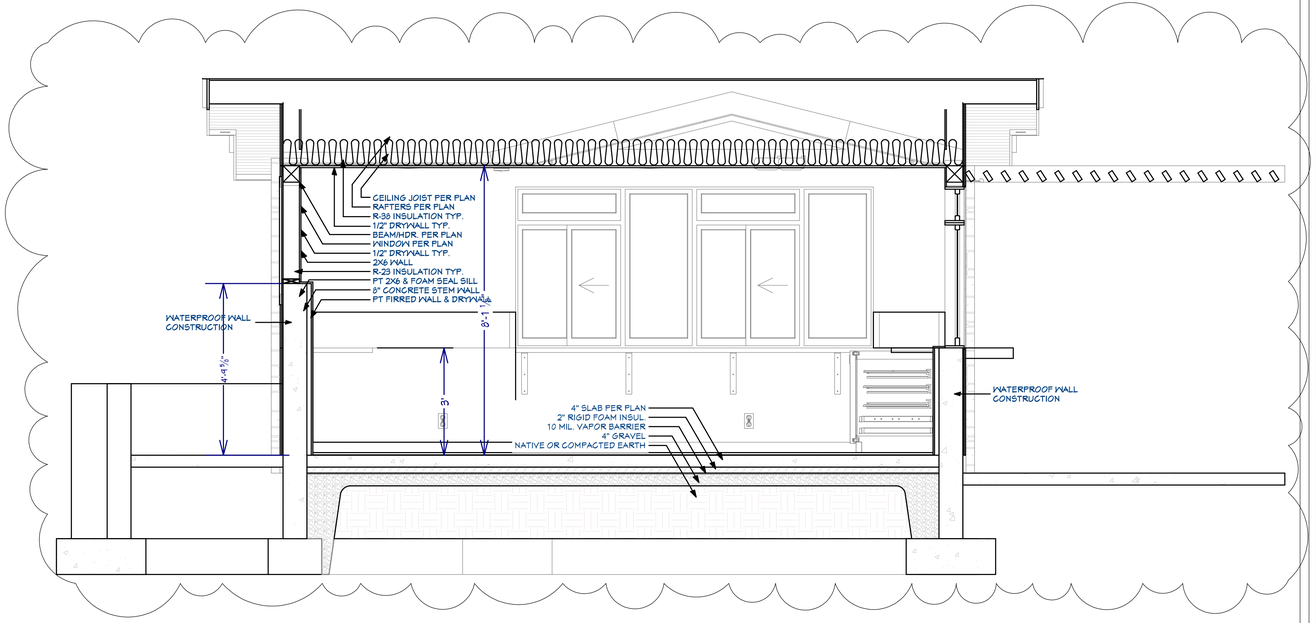
95 ZION PARK BLVD
SPRINGDALE, UT 84767

DESERT ICE SHANTY

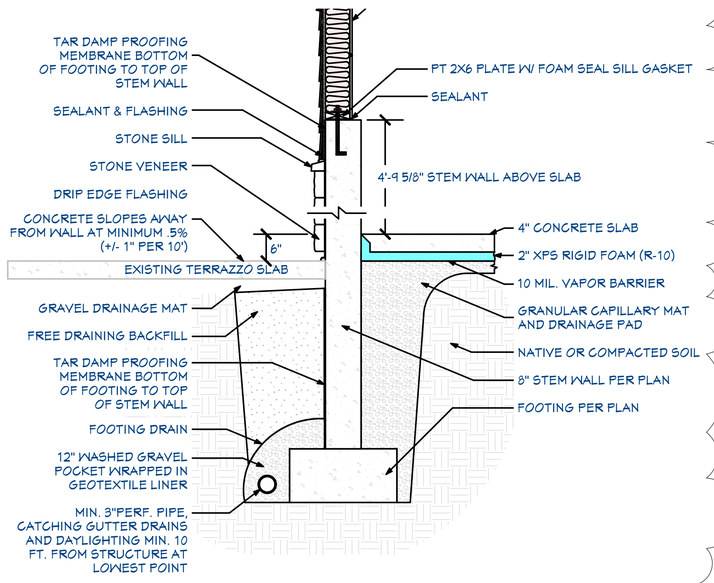
DATE: 5/20/2025
SCALE: 3/8"=1'
SHEET: 1



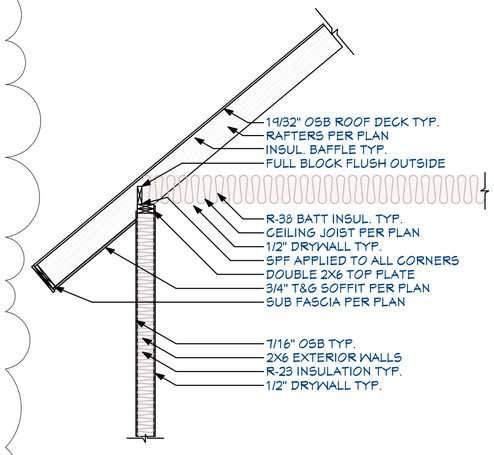
CEILING & SECTION PLAN
SCALE 1/4" = 1'



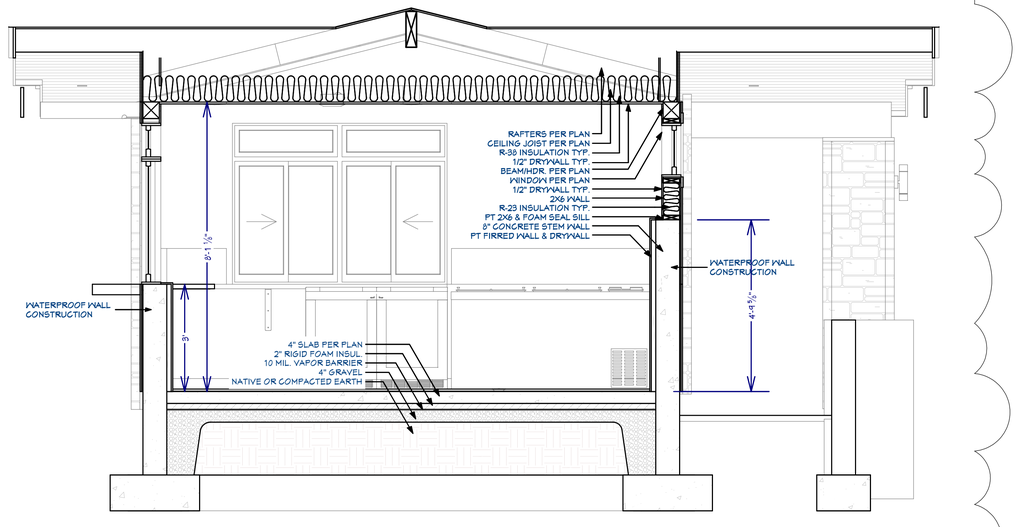
C2 CEILING SECTION
SCALE 1/2"=1'



WALL SECTION DETAIL
SCALE 3/4" = 1'



WALL SECTION DETAIL
SCALE 3/4" = 1'



C1 CEILING SECTION
SCALE 1/2"=1'

SHEET MODIFIED 16 MAY 2025

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CEILING & SECTIONS

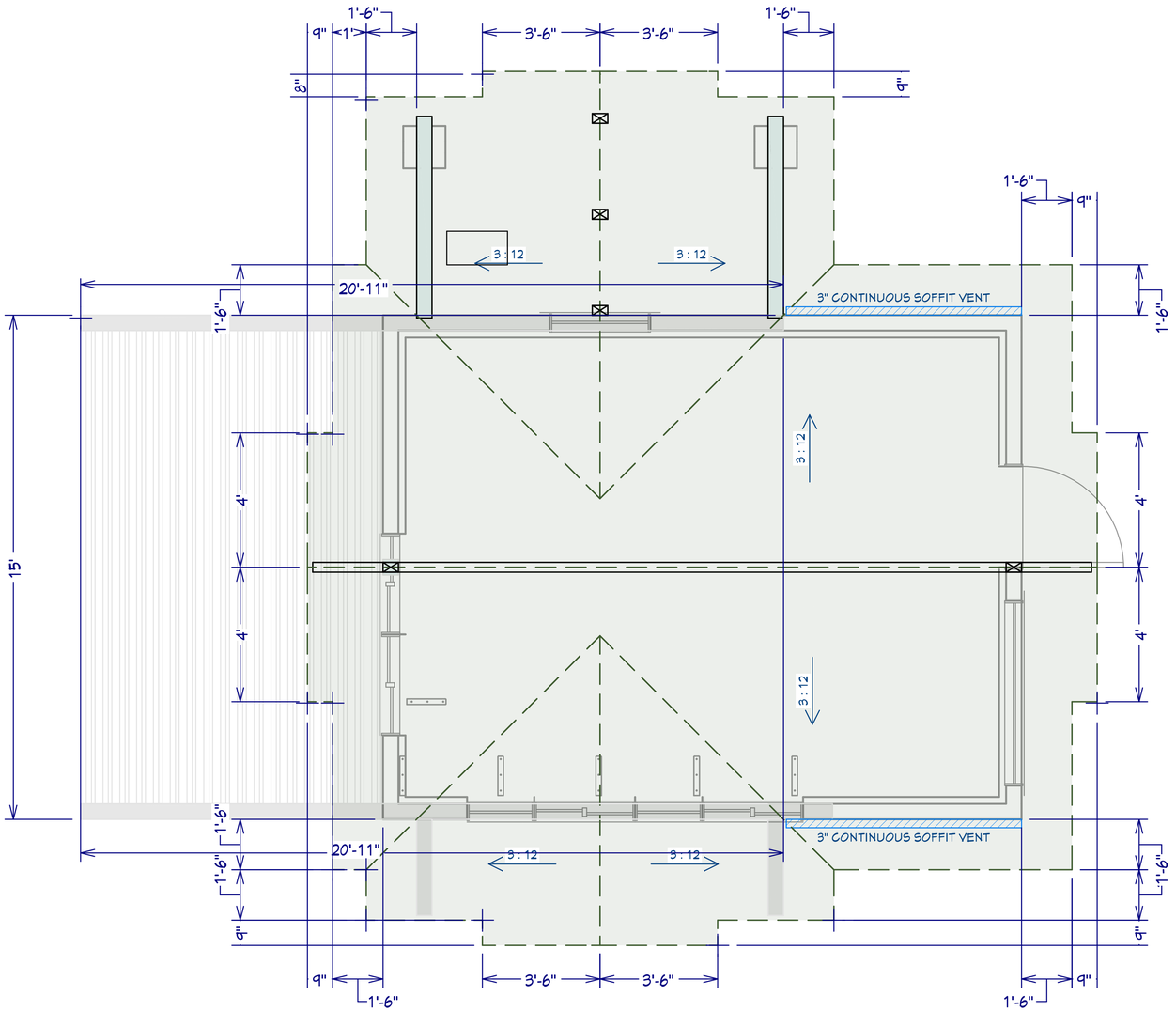
95 ZION PARK BLVD
SPRINGDALE, UT 84767

DESERT ICE SHANTY

DATE:
5/20/2025

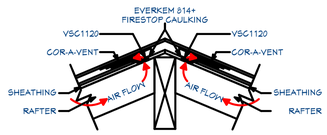
SCALE:
NOTED

SHEET:
8



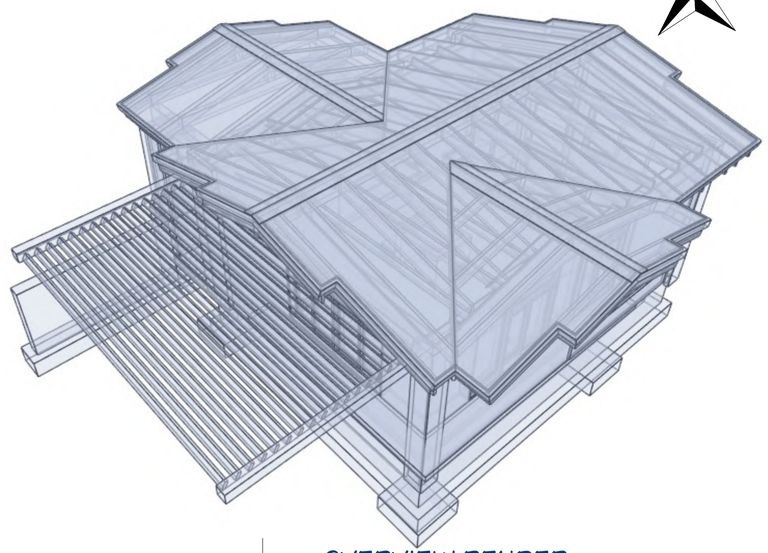
ROOF PLAN

SCALE 1/2" = 1'



RIDGE VENT DETAIL

SCALE 1" = 1'



OVERVIEW RENDER

FOR ILLUSTRATION ONLY NO SCALE

ROOF & FRAMING NOTES:

1 FRAMING IS FOR ILLUSTRATION ONLY. ALL FRAMING SHALL BE INSTALLED & BRACED TO MANUFACTURER'S DRAWINGS & SPECIFICATIONS.
2 ALL CONNECTIONS OF RAFTERS TO WALL USING (2) SDWS 0.160 X 3" SCREWS - PREDRILL IF NECESSARY TO AVOID SPLITTING OF BOTTOM TJI FLANGE.
3 CEILING JOISTS NOTED.
4 ALL ROOF OVERHANGS NOTED.
5 MIN. SNOW LOAD SHALL BE 21 PSF PER UTAH GROUND SNOW LOAD MAP..

ROOF/ATTIC VENTILATION NOTES:

PROJECT REQUIREMENTS PER U.S. FEDERAL HOUSING AUTHORITY, IRC R806.2 (1 SQ.FT. VENTING PER 150 SQ.FT. ATTIC EQUALLY SPLIT BETWEEN INTAKE AND EXHAUST, OR 1/300 WITH VAPOR BARRIER).

MAINTAIN 1" CLEARANCE BETWEEN THE INSULATION AND THE ROOF SHEATHING, AND AT THE LOCATION OF THE VENT. [IRC R806.3]

WUI REQUIREMENTS INCLUDE EMBER RESISTANCE FOR FIRE STOPPING; RECOMMENDS CONTINUOUS SOFFIT VENTING AND CONTINUOUS RIDGE VENTING.

CALCULATED VENTED AREA INCLUDES ANY ATTIC SPACE OVER LIVING SPACE, PORCH, PATIO, AND/OR EAVES.

ATTIC 396 SQ.FT. = 2.64 SQ.FT. VENTING REQUIRED
SOFFIT VENT REQUIRED = 1.32 SQ.FT.
RIDGE / ROOF VENT REQUIRED = 1.32 SQ.FT.

DESIGN RECOMMENDATIONS:

SOFFIT/EAVE VENTING-->
VULCAN VSC3120 CONTINUOUS SOFFIT VENT (14.4 SQ.IN. NFVA PER L.F.)
14 L.F. SOFFIT VENTING PER PLAN = 1.4 SQ.FT. NFVA

RIDGE VENTING -->
VULCAN VSC1120 CONTINUOUS 1" RIDGE VENT EACH SIDE OF RIDGE (5 SQ.IN. NFVA PER L.F.)
NET FREE ROOF/ATTIC VENTILATION = 1.62 SQ.FT NFVA.

PROJECT TOTALS:

NET FREE VENTING REQUIRED = 2.64 SQ.FT.
PROJECT NET FREE VENTING = 3.02 SQ.FT

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ROOF PLAN

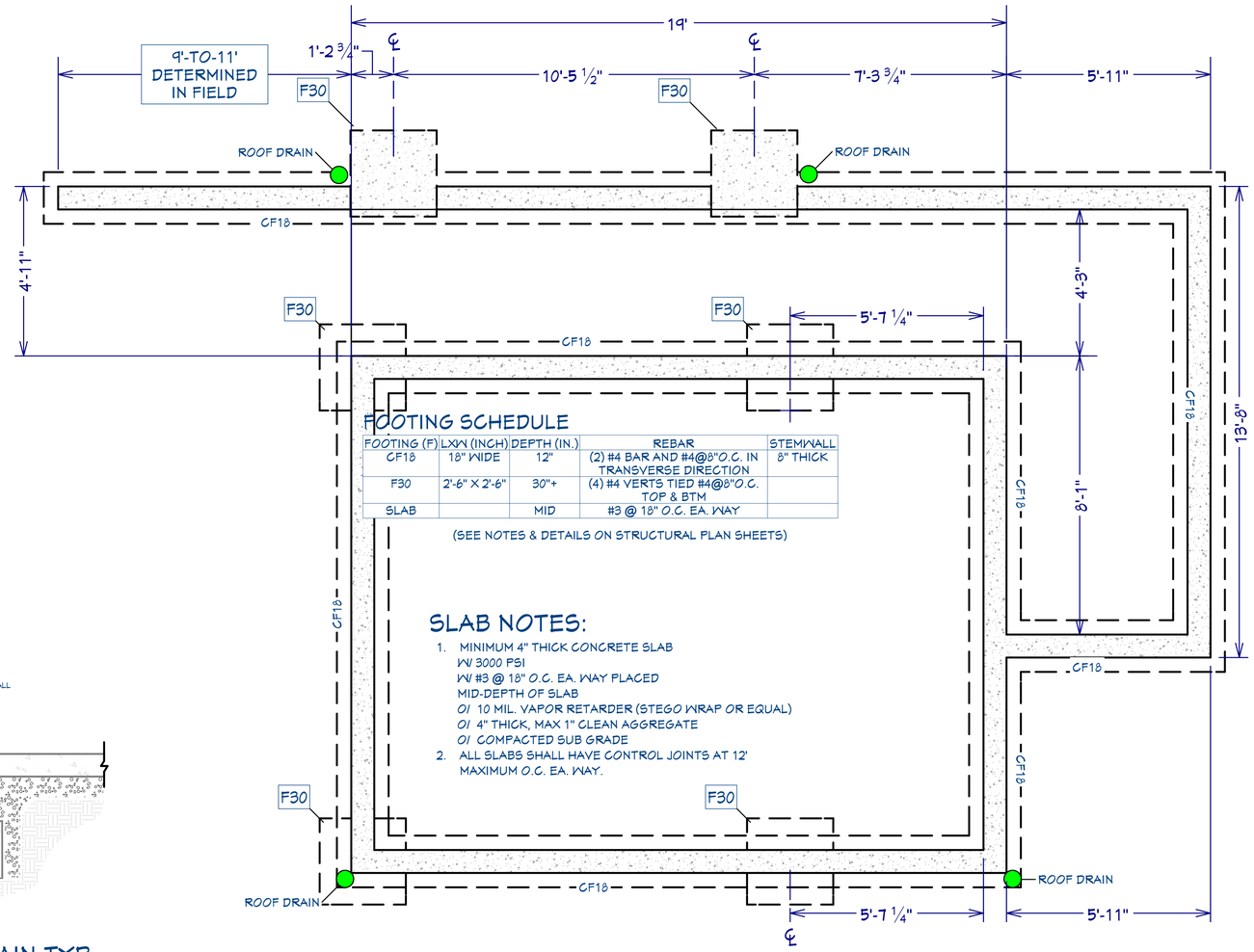
95 ZION PARK BLVD
SPRINGDALE, UT 84767

DESERT ICE SHANTY

DATE: 5/20/2025

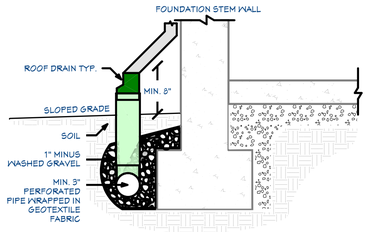
SCALE: 1/2" = 1'

SHEET: 9

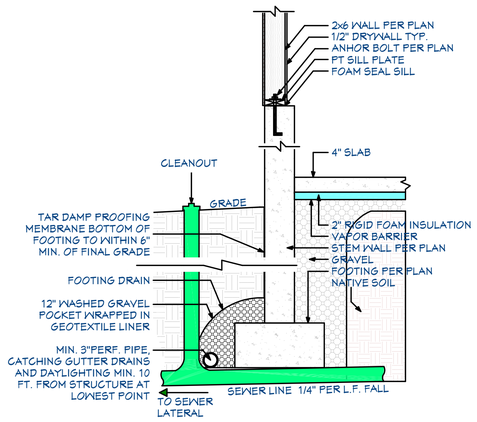


FOUNDATION NOTES:

1. FOUNDATION PLAN FOR ILLUSTRATION AND DIMENSIONS, AND TO BE USED IN CONJUNCTION WITH STRUCTURAL FOUNDATION PLANS, NOTES, AND CALCULATIONS. ALL FOUNDATION SEGMENTS, COMPONENTS, HOLD DOWNS, SLAB, AND DETAILS FOUND ON STRUCTURAL ENGINEERING PLANS AND GEOTECHNICAL SOILS REPORT.
2. ALL FOUNDATION STEM WALLS SHALL BE CONSTRUCTED WITH REINFORCED CONCRETE AND EXTEND A MINIMUM OF 12 INCHES ABOVE THE BASE FLOOD ELEVATION (BFE) AS ESTABLISHED BY CURRENT FEMA FLOOD INSURANCE RATE MAPS AND VERIFIED BY SITE-SPECIFIC ELEVATION DATA. THE EXTERIOR FACE OF THE STEM WALL SHALL BE COATED WITH A WATERPROOFING MEMBRANE RATED FOR BELOW-GRADE APPLICATIONS AND RESISTANT TO HYDROSTATIC PRESSURE. WATERPROOFING SHALL EXTEND FROM THE FOOTING TO AT LEAST 6 INCHES ABOVE THE BFE. ALL PENETRATIONS SHALL BE SEALED WITH APPROVED FLOOD-RESISTANT MATERIALS. FOUNDATION DESIGN SHALL COMPLY WITH THE SPRINGDALE TOWN CODE CHAPTER 13 – FLOOD HAZARD OVERLAY (F-H) ZONE AND MEET FEMA TECHNICAL BULLETIN 3 REQUIREMENTS FOR DRY FLOODPROOFING WHERE APPLICABLE.
3. GRADING, EXCAVATION, BACKFILL, AND COMPACTION OF BACKFILL MUST COMPLY WITH THE GEOTECHNICAL REPORT AND REQUIREMENTS OF GOVERNING CODE AUTHORITY, AND PERFORMED UNDER CONTINUOUS SPECIAL INSPECTION OF GEOTECHNICAL ENGINEER.
4. SPECIAL INSPECTIONS, IF REQUIRED, FOR EXCAVATION & ENGINEERING ELEMENTS DESIGNED IN STRUCTURAL CALCULATIONS ARE NOTED ON STRUCTURAL PLANS.
5. ALL EXISTING FILL SOIL, ALL DISTURBED NATURAL SOILS AND ORGANIC MATTER ARE TO BE EXCAVATED AND REPLACED AS REQUIRED WITH PROPERLY COMPACTED FILL.
6. FOUNDATIONS ARE TO BEAR ON APPROVED COMPACTED FILL, OR COMPETENT NATIVE MATERIAL.
7. ENSURE EXCAVATIONS ARE CLEAN, DRY, AND FREE OF DEBRIS OR LOOSE SOIL.
8. CONTRACTOR SHALL PERFORM THE FOLLOWING DUTIES:
   - OBSERVATION OF CLEARED AREAS AND BENCHES PREPARED TO RECEIVE FILL.
   - OBSERVATION OF THE REMOVAL OF ALL UNSUITABLE SOIL AND OTHER MATERIALS.
   - APPROVAL OF SOILS TO BE USED AS FILL MATERIAL.
   - INSPECTION OF PLACEMENT AND COMPACTION OF FILL MATERIALS.
   - TESTING OF COMPACTED FILLS.
   - INSPECTION OR REVIEW OF DRAINAGE DEVICES.
9. ALL ANCHOR BOLTS TO BE 5/8" DIA X 10 (7" EMBED) @ 48" O/C UNO. SEE SHEAR PLANS FOR HOLD DOWN DETAILS.
10. ALL REINFORCING STEEL SHALL BE ASTM A-615, GRADE 60 WITH COVERAGE PER ENGINEERING NOTES.
11. ALL SPLICES OF REINFORCING STEEL IN WALLS TO BE STAGGERED 48" MIN. U.N.O.
12. PROVIDE CORNER BARS TO MATCH CONTINUOUS STEEL.
13. MINIMUM ALLOWABLE CONCRETE COMPRESSIVE STRENGTH FOR SLABS AND FOUNDATION SHALL BE 4,000 PSI (DESIGNED AS 2,500 PSI) AT 28 DAYS. MAX. AGGREGATE SIZE IS 1". MAXIMUM AIR ENTRAINMENT IS 3%.
14. ALL CEMENT SHALL CONFORM TO ASTM C-150, BE TYPE II/V CEMENT, WITH MAX. WATER/CEMENT RATIO 0.45.
15. SOIL BEARING CAPACITY ASSUMED TO BE 1,500 PSF. ALL SLOPES MUST BE STABILIZED.
16. ALL BACKFILL SHALL BE COMPACTED TO A MIN. OF 90% AS DETERMINED BY ASTM TEST METHOD D1557 OR PER REQUIREMENT OF GEOTECHNICAL ENGINEER.
17. BACKFILLING OF RETAINING WALLS TO BE DONE AFTER COMPLETION OF WATERPROOFING, IF NECESSARY. ADEQUATELY SHORE RETAINING WALLS DURING BACKFILL OPERATION.
18. ADJACENT GROUND SURFACES SHALL BE SLOPED AWAY FROM STRUCTURE. DRAINAGE OF SURROUNDING AREA SHALL ALSO BE PROVIDED TO PREVENT ACCUMULATION OF SOIL AND EROSION OF SOIL NEAR FOOTINGS.
19. THE TOPS OF FOUNDATION WALLS SHALL EXTEND 48" ABOVE THE ADJACENT FINISH GRADE.
20. FOUNDATION DAMP-PROOFING REQUIRED ON STEM WALLS FOOTING TO TOP OF STEM WALL.

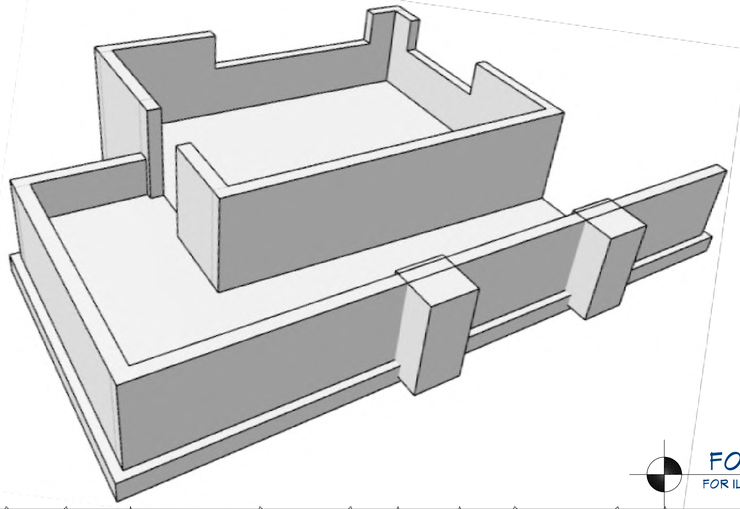


FOOTING DRAIN TYP.
NO SCALE

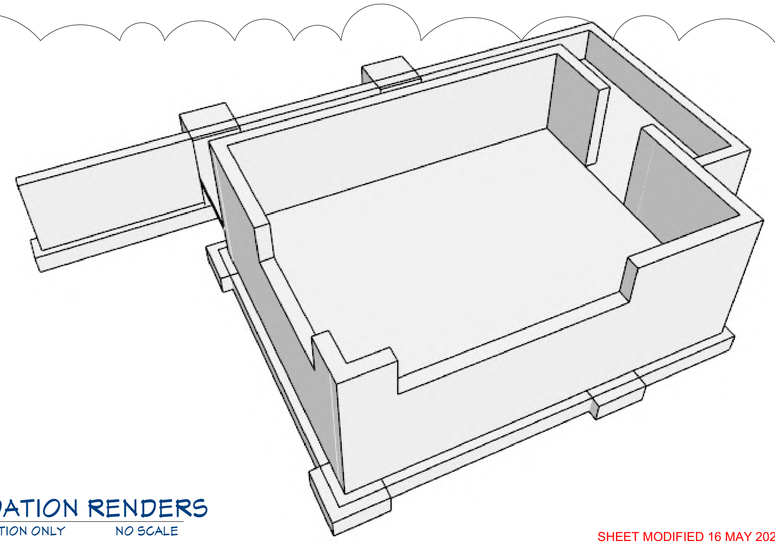


FOUNDATION SECTION & SEWER LINE EXIT
NO SCALE

FOUNDATION PLAN
SCALE 1/2" = 1'



FOUNDATION RENDERS
FOR ILLUSTRATION ONLY NO SCALE



SHEET MODIFIED 16 MAY 2025

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FOUNDATION PLAN

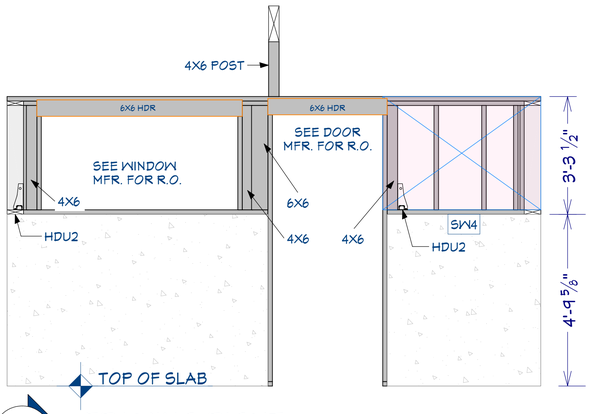
95 ZION PARK BLVD
SPRINGDALE, UT 84767

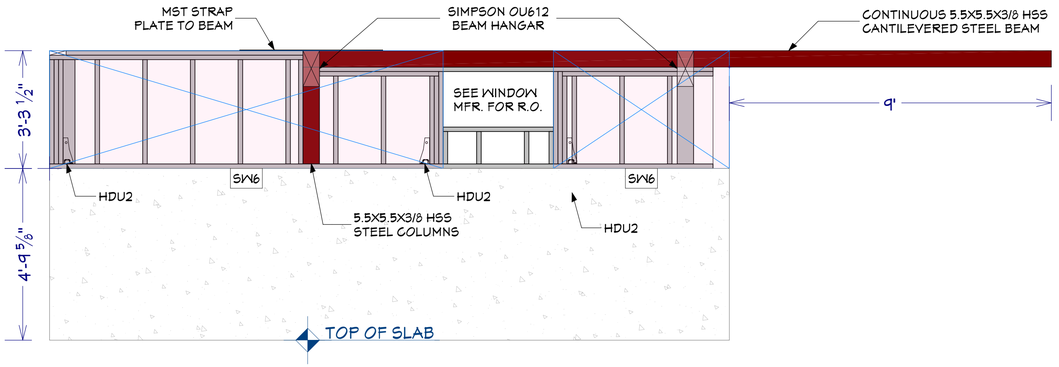
DESERT ICE SHANTY

DATE: 5/20/2025

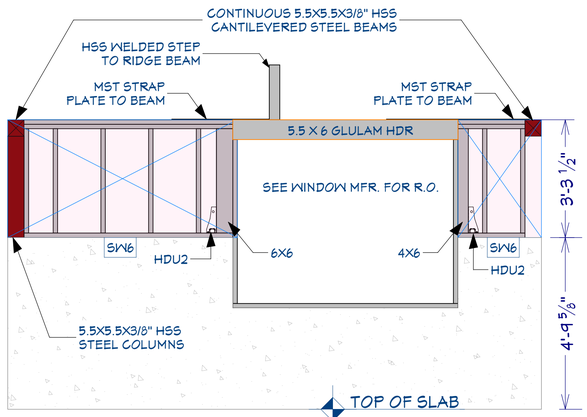
SCALE: 1/2" = 1'

SHEET: 10

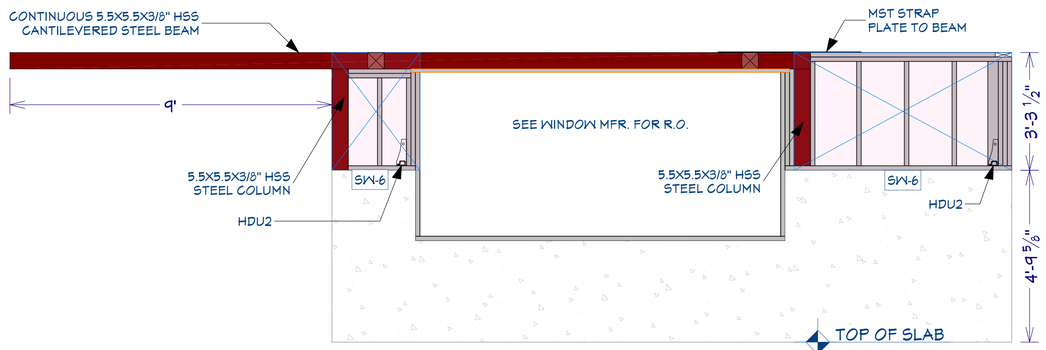




WF4 L1 **FRAMING RIGHT**
SCALE 1/2" = 1'

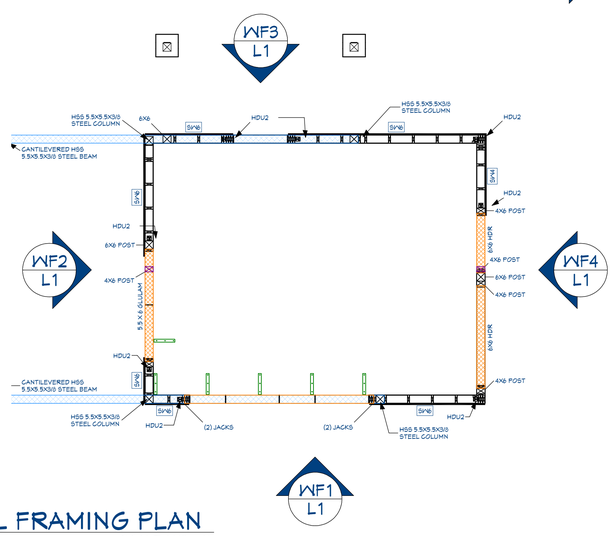


WF3 L1 **FRAMING BACK**
SCALE 1/2" = 1'



WF2 L1 **FRAMING LEFT**
SCALE 1/2" = 1'

WF1 L1 **FRAMING FRONT**
SCALE 1/2" = 1'



WALL FRAMING PLAN
SCALE 1/4" = 1'

GENERAL FRAMING NOTES:

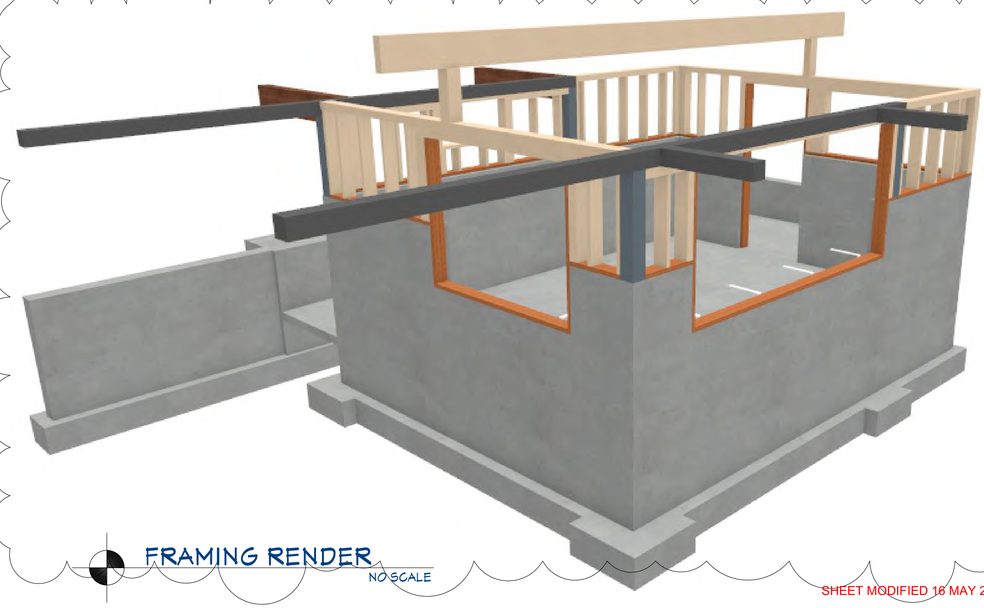
1 ARCHITECTURAL FRAMING PLAN FOR ILLUSTRATION AND DIMENSIONS ONLY. REFER TO STRUCTURAL ENGINEERING PLANS FOR ALL FRAMING SPECIFICATIONS AND DETAILS. IF DISCREPANCIES ARE FOUND BETWEEN THE ARCHITECTURAL AND STRUCTURAL PLANS, DEFAULT TO THE STRUCTURAL PLANS FOR CONSTRUCTION AND NOTIFY THE DESIGNER.
2 ALL LUMBER SHALL BE DOUGLAS FIR NO. 2 OR BETTER, U.N.O.
3 ALL HANGERS AND NAILS IN CONTACT WITH PRESSURE TREATED LUMBER SHALL BE SIMPSON Z-MAX HANGERS OR STAINLESS STEEL.
4 EXTERIOR WALL CONSTRUCTION 2X6@16" O.C. AND WITH DOUBLE TOP PLATE.
5 PRE-MANUFACTURED WOOD JOISTS & TRUSSES SHALL BE OF THE SIZE AND TYPE SHOWN ON THE DRAWINGS. ALTERNATES WILL BE CONSIDERED, PROVIDED THE ALTERNATE IS COMPATIBLE WITH THE LOAD CAPACITY, STIFFNESS, DIMENSIONAL, AND FIRE RATING REQUIREMENTS OF THE PROJECT.
6 ALL JOISTS AND RAFTERS SHALL HAVE SOLID BLOCKING AT THEIR BEARING POINTS.
7 ALL COLUMNS SHALL EXTEND DOWN THRU THE STRUCTURE TO THE FOUNDATION. ALL COLUMNS SHALL BE BRACED AT ALL FLOOR LEVELS AND SHALL BE THE SAME WIDTH AS THE MEMBERS THAT THEY ARE SUPPORTING.
8 ALL SUB-FLOORING SHALL BE INSTALLED WITH FACE GRAIN PERPENDICULAR TO SUPPORTS, U.N.O.
9 GLULAM BEAMS SHALL BE FABRICATED IN CONFORMANCE WITH U.S. PRODUCT STANDARD PS 56, "STRUCTURAL GLUED LAMINATED TIMBER" AND AMERICAN INSTITUTE OF TIMBER CONSTRUCTION, ATIC 117. EACH MEMBER SHALL BEAR AN ATIC OR APA-EWS IDENTIFICATION MARK AND BE ACCOMPANIED BY A CERTIFICATE OF CONFORMANCE. ONE COAT OF END SEALER SHALL BE APPLIED IMMEDIATELY AFTER TRIMMING IN EITHER SHOP OR FIELD.
10 GLULAM BEAMS SHALL BE 24F-V4 DF/DF OR EQUAL FOR SIMPLE SPANS, AND 24F-V8 DF/DF FOR CONTINUOUS SPANS.
11 "VERSA-LAM" & "MICRO-LAM MEMBERS SHALL BE GRADE 2.0 E.
12 ANY WOOD IN CONTACT W/ CONCRETE OR MASONRY SHALL BE PRESSURE TREATED.
13 ALL WOOD & IRON CONNECTORS SHALL BE INSTALLED W/ ALL REQUIRED FASTENERS IN COMPLIANCE W/ THEIR WRITTEN APPROVAL.
14 ALL HANGERS TO BE "SIMPSON" OR EQUAL.
15 WALL SHEATHING 7/16" OSB TYPICAL.
16 ROOF SHEATHING 19/32" OSB TYPICAL.
17 JOIST, HEADERS, POSTS, AND BEAMS, AS NOTED.
18 ALL HOLD DOWNS, POST TO BEAM CONNECTIONS, AND JOIST HANGERS SHALL BE INSTALLED AND BRACED TO MANUFACTURERS DRAWINGS AND SPECIFICATIONS.
19 FRAMING DESIGN AND DETAILS SHALL BE ON SITE FOR FRAMING INSPECTION.

WALL FRAMING NOTES:

1 FRAMING & STRUCTURAL NOTES WINDOW ROUGH OPENING: 1/2" FOR TOP/ BOTTOM & 1/2" FOR SIDES. CONFIRM WINDOW MFG. SPECS. BEFORE FRAMING.
2 WALL HEADERS ON EXTERIOR WALLS: 6X_ DF #2 TYP. INSULATED W/ (1) 2X_ CRIPPLE & (1) 2X_ KING AT TOP OF PLATE, UNO.
3 PROVIDE FIRE BLOCKING, DRAFT STOPS AND FIRE STOPS AS PER IBC SEC. R502.12.
4 PROVIDE POSITIVE CONNECTIONS AT EACH END OF ALL POSTS AND COLUMNS TO RESIST LATERAL DISPLACEMENT
5 SEE ROOF & FRAMING PLAN FOR ADDITIONAL FRAMING NOTES

LUMBER SPECIES:

1 ALL LUMBER NOT SPECIFICALLY NOTED TO BE D.F. #2 OR BETTER.
2 WALL SHEATHING SHALL BE 1/2" INT-APA RATED OR 7/16" OSB.



FRAMING RENDER
NO SCALE

SHEET MODIFIED 16 MAY 2025

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WALL FRAMING

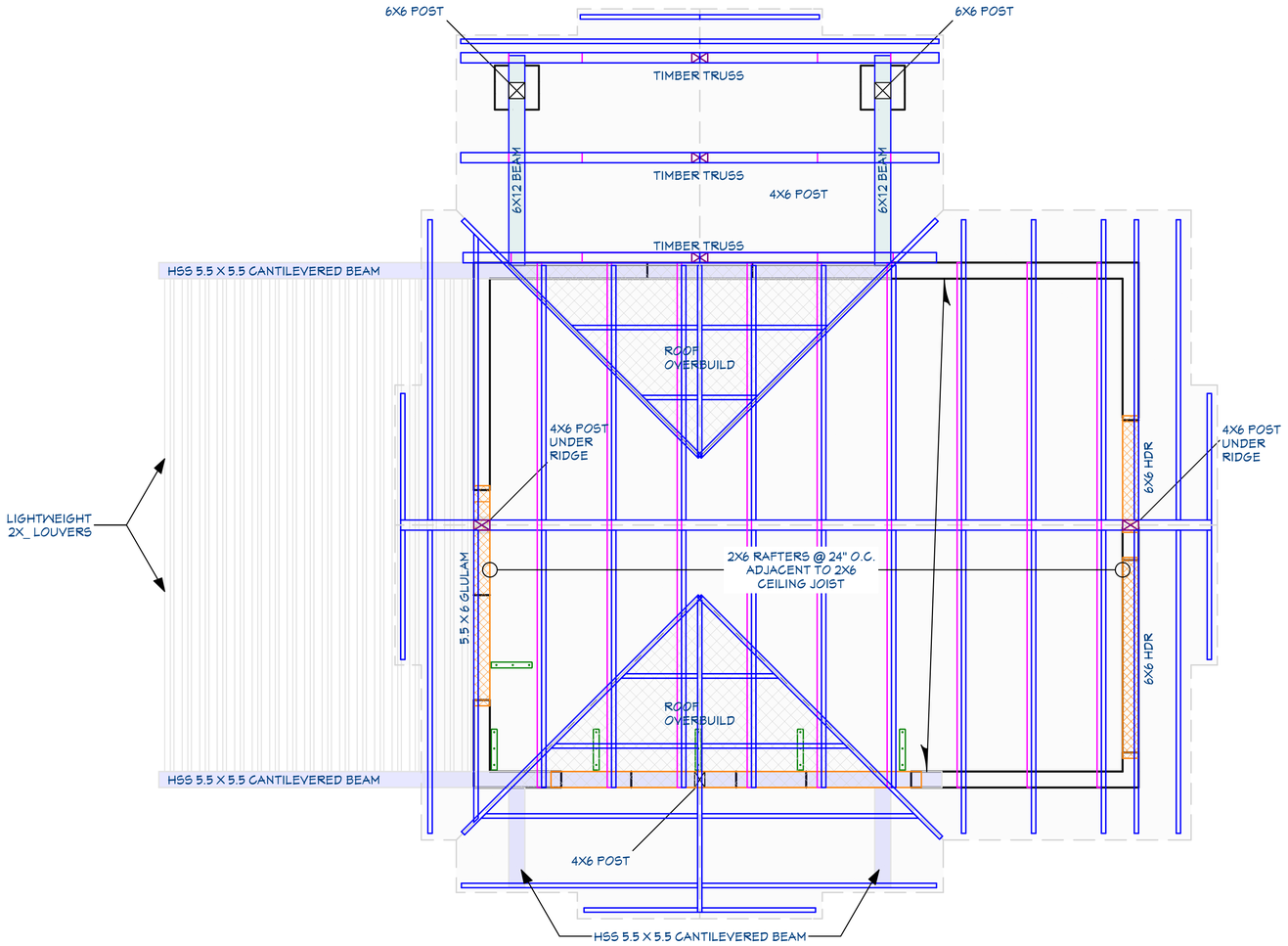
95 ZION PARK BLVD
SPRINGDALE, UT 84767

DESERT ICE SHANTY

DATE: 5/20/2025
SCALE: NOTED
SHEET: 11

ROOF & FRAMING NOTES:

1 FRAMING IS FOR ILLUSTRATION ONLY. ALL FRAMING SHALL BE INSTALLED & BRACED TO MANUFACTURER'S DRAWINGS & SPECIFICATIONS.
2 ALL CONNECTIONS OF RAFTERS TO WALL AS SPECIFIED IN STRUCTURAL PLANS.
3 ROOF STRUCTURE USING 2X_ RAFTERS @ 24" O.C., WITH CONVENTIONAL FRAMING OVERBUILDS.
4 CEILING STRUCTURE USING 2X6 JOISTS @ 24" O.C., USING HOGBACK AND TENSION STRAP TO RIDGE @ 48" O.C.
5 POSTS, BEAMS, TRUSSES, AND CONNECTIONS PER STRUCTURAL PLANS & DETAILS.
6 ALL BEAMS TO BE INSTALLED AS FLUSH BEAMS FOR FLAT CEILING U.N.O.
7 ALL ROOF OVERHANGS NOTED.
8 MIN. SNOW LOAD SHALL BE 21 PSF.



ROOF FRAMING
SCALE 1/2" = 1'

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ROOF FRAMING PLAN

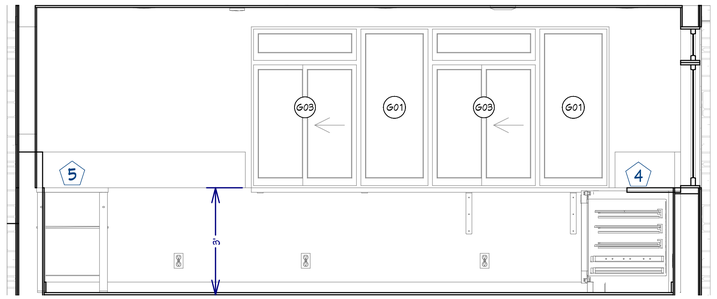
95 ZION PARK BLVD
SPRINGDALE, UT 84767

DESERT ICE SHANTY

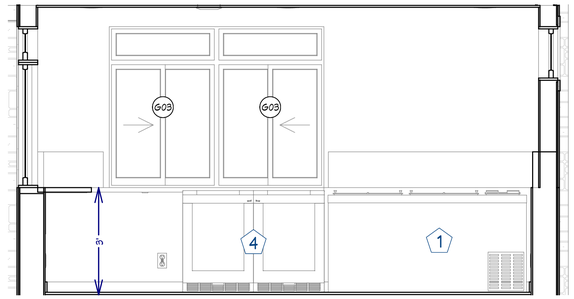
DATE:
5/20/2025

SCALE:
1/2" = 1'

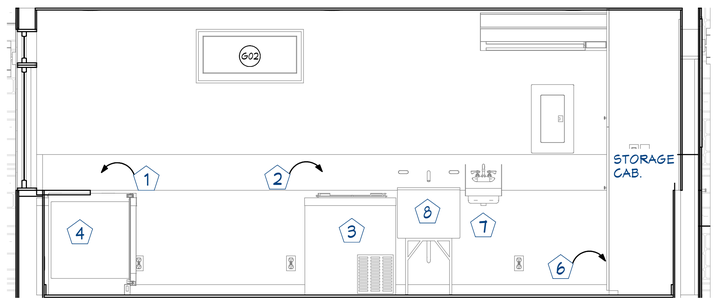
SHEET:
12



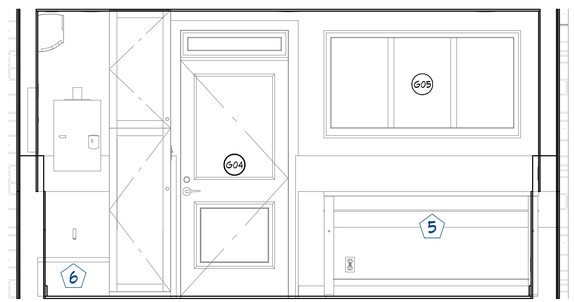
I.E. 1 **INTERIOR ELEVATION 1**
SCALE 1/2" = 1'



I.E. 2 **INTERIOR ELEVATION 2**
SCALE 1/2" = 1'



I.E. 3 **INTERIOR ELEVATION 1**
SCALE 1/2" = 1'



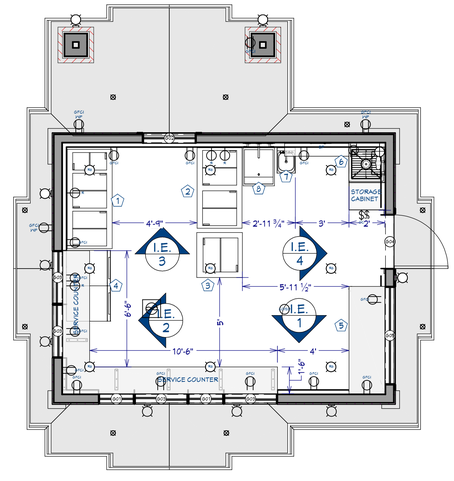
I.E. 4 **INTERIOR ELEVATION 2**
SCALE 1/2" = 1'

FIXTURE NOTES:

1. ALL CABINETS; CONFIRM WOOD, LACQUER FINISH & STAIN WITH DESERT ICE PRIOR TO ORDERING.
2. CONFIRM DOOR & DRAWER STYLES WITH DESERT ICE PRIOR TO ORDERING.
3. INSTALL HARDWARE ON SITE.
4. INSTALL CROWN MOLDING ON SITE; CONFIRM PROFILE AND DIMENSION WITH DESERT ICE.
5. INSTALL SERVICE COUNTER ON-SITE, SEE APPLIANCE SPECIFICATIONS.
6. INSTALL ALL APPLIANCES PER MANUFACTURER SPECIFICATIONS.
7. ALL APPLIANCES TO BE ON DEDICATED CIRCUITS, UNO. REFER TO APPLIANCE SPECIFICATIONS FOR AMP/VOLTAGE REQUIREMENTS.
8. USE MIN 6" DUCT FOR IAQ FAN - CONFIRM 600 CFM MIN.
9. CONFIRM FINAL MATERIALS FOR BACKSPLASH AND COUNTERTOP WITH DESERT ICE PRIOR TO ORDERING.
10. ANY CABINET GLASS TO BE TEMPERED.
11. ALL DRAWERS GLIDES AND HINGES TO BE CONFIRMED WITH DESERT ICE.
12. CONFIRM CABINET LIGHTING WITH DESERT ICE.
13. COUNTER FABRICATION: CONFIRM ALL FIXTURE MEASUREMENTS AND CENTERLINES.

FIXTURE SCHEDULE

1	WATER ICE	MASTER-BILT DC-10DSE 66 5/8" STAND ALONE ICE CREAM DIPPING CABINET W/ 25 TUB CAPACITY - STAINLESS, 115V
2	WATER ICE	MASTER-BILT DC-8DSE 54 3/4" STAND ALONE ICE CREAM DIPPING CABINET W/ 19 TUB CAPACITY - STAINLESS, 115V
3	ICE CREAM	MASTER-BILT DC-4DSE 30 5/8" STAND ALONE ICE CREAM DIPPING CABINET W/ 7 TUB CAPACITY - STAINLESS, 115V
4	UNDER COUNTER FRIDGE	MOTAK MUR-48-X 47 1/4" W UNDERCOUNTER REFRIGERATOR W/ (2) SECTIONS & (2) DOORS, 115V
5	STAINLESS WORK TABLE	ROYAL INDUSTRIES ROY PT 2472 72" 18 GA WORK TABLE W/ UNDERSHELF & 430 SERIES STAINLESS FLAT TOP
6	MOP SINK	KROWNE MS-2424 FLOOR MOUNT MOP SINK W/ 4"D BOWL, STAINLESS
7	HAND SINK	KROWNE HS-30L WALL MOUNT COMMERCIAL HAND SINK W/ 9 3/4"L X 11 3/4"W X 5"D BOWL, SIDE SPLASHES
8	PREP SINK	JOHN BOOS ET8S-1620-12 21" 1 COMPARTMENT SINK W/ 16"L X 20"W BOWL, 12" DEEP



MAIN FLOOR ELEV. MAP
SCALE 1/4"=1"

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INTERIOR ELEVATIONS

95 ZION PARK BLVD
SPRINGDALE, UT 84767

DESERT ICE SHANTY

DATE:
5/20/2025

SCALE:
NOTED

SHEET:
13

PLUMBING NOTES

- METALLIC GAS PIPE, WATER PIPE, AND FOUNDATION REINFORCING BARS SHALL BE BONDED TO THE ELECTRICAL SERVICE GROUND.
- WATER HEATER AND KITCHEN VENTING SHALL EXHAUST TO THE OUTSIDE OF THE BUILDING AND BE EQUIPPED WITH A BACKDRAFT DAMPER.
- ALL GAS LINES SHALL BE SIZED FOR APPLIANCE LOAD. "BLACK" PIPE SHALL BE USED INSIDE THE BUILDING, "GREEN" PIPE WHERE UNDERGROUND OR EXPOSED TO WEATHER.
- THE WATER SYSTEM SHALL BE PROVIDED WITH AN APPROVED, LISTED, ADEQUATELY SIZED COMBINATION TEMPERATURE AND PRESSURE-RELIEF VALVE. [IPC 608.3]

ADDITIONALLY, EACH COMBINATION TEMPERATURE AND PRESSURE-RELIEF VALVE SHALL BE PROVIDED WITH A DRAIN IN ACCORDANCE WITH [IPC 608.5]

* WATER HEATERS SHALL INCLUDE THE FOLLOWING COMPONENTS [NEC 150.0(N)1]:

A. A DEDICATED 125-VOLT, 20 AMP ELECTRICAL RECEPTACLE CONNECTED WITH A 120/240 VOLT 3 CONDUCTOR, 10 AWG COPPER BRANCH CIRCUIT WITHIN 3 FEET FROM THE WATER HEATER AND ACCESSIBLE TO THE WATER HEATER WITH NO OBSTRUCTIONS WHERE

I. BOTH ENDS OF THE UNUSED CONDUCTOR SHALL BE LABELED WITH THE WORD "SPARE" AND BE ELECTRICALLY ISOLATED

II. A RESERVED SINGLE POLE CIRCUIT BREAKER SPACE IN THE ELECTRICAL PANEL ADJACENT TO THE CIRCUIT BREAKER FOR THE BRANCH CIRCUIT IN (A) ABOVE AND LABELED WITH THE WORDS "FUTURE 240V USE";

B. A CATEGORY III OR IV VENT, OR A TYPE B VENT WITH STRAIGHT PIPE BETWEEN THE OUTSIDE TERMINATION AND THE SPACE WHERE THE WATER HEATER IS INSTALLED;

C. A CONDENSATE DRAIN THAT IS NO MORE THAN 2 INCHES HIGHER THAN THE BASE OF THE INSTALLED WATER HEATER, AND ALLOWS NATURAL DRAINING WITHOUT PUMP ASSISTANCE;

- APPLIANCES NEAR VEHICLE ACCESS SHALL BE GUARDED AGAINST MECHANICAL DAMAGE BY BEING BEHIND PROTECTIVE BARRIERS OR BY BEING ELEVATED OR LOCATED OUT OF THE NORMAL PATH OF VEHICLES. [IPC 507.13.1]"
- WATER SOFTENER, IF INSTALLED, SHALL BE CONDITIONED WATER BEFORE ENTERING THE WATER HEATERS AND THE COLD WATER SOURCE.
- EACH HOSE BIB SHALL BE EQUIPPED WITH A BACKFLOW PREVENTION DEVICE.
- INSTALL NON-ABSORBENT SURFACE AROUND MOP SINK EXTENDING TO 6 FEET ABOVE THE FLOOR [IRC R307.2]
- INSTALL WATERPROOF GYPSUM BOARD AT ALL WATER SPLASH AREAS TO MINIMUM 70".
- INSULATE WASTE LINES FOR SOUND CONTROL.

VENTILATION NOTES

- ALL COMBUSTION APPLIANCES SHALL BE VENTED DIRECTLY TO THE EXTERIOR FURNACE FIREBOX AND TANKLESS WATER HEATER SHALL HAVE OUTSIDE COMBUSTION AIR SUPPLY PURSUANT TO REGIONAL AND LOCAL CODES.
- PROJECT REQUIREMENTS PER U.S. FEDERAL HOUSING AUTHORITY, IRC R806.4, UNVENTED ATTIC ASSEMBLIES, SUCH THAT UNVENTED ATTIC SPACE IS COMPLETELY CONTAINED WITHIN THE BUILDING THERMAL ENVELOPE. NO INTERIOR VAPOR RETARDERS ARE TO BE INSTALLED ON THE CEILING SIDE.
- EXHAUST VENTS AND FANS DIRECTLY TO OUTSIDE VIA METAL DUCTS, PROVIDE 100 CFM (MIN) FANS TO PROVIDE 5 AIR CHANGES PER HOUR.
- MAIN FAN SHALL BE DEDICATED FOR INDOOR AIR QUALITY (IAQ) VENTILATION.

GENERAL HVAC NOTES

- HVAC SHALL CONSIST OF ONE (1) DUCTLESS MINISPLIT HEAT PUMP SYSTEM.
- WATER HEATER CONSISTS OF ONE (1) ELECTRIC INCTANTANEOUS SYSTEM.
- ANY AIR DISTRIBUTION DUCTS AND PLENUMS, IF CONSIDERED, ARE TO BE SEALED AND INSULATED TO MEET THE REQUIREMENTS OF IMC601.0, 602.0, 603.0, 604.0, 605.0, AND ANSI/ SMACNA-006-2006 HVAC DUCT CONSTRUCTION STANDARDS METAL AND FLEXIBLE 3RD EDITION.
- SUPPLY-AIR AND RETURN-AIR DUCTS AND PLENUMS, IF CONSIDERED, ARE TO BE INSULATED TO A MINIMUM INSTALLED LEVEL OF R-8.0 OR ENCLOSED ENTIRELY IN DIRECTLY CONDITIONED SPACE.
- CONNECTIONS OF METAL DUCTS AND INNER CORE OF FLEXIBLE DUCTS ARE MECHANICALLY FASTENED. OPENINGS SHALL BE SEALED WITH MASTIC, TAPE, OR OTHER DUCT-CLOSURE SYSTEM THAT MEETS THE APPLICABLE REQUIREMENTS OF UL-181, UL-181A, OR UL-181B OR AEROSOLE SEALANT OF UL-723. IF MASTIC OR TAPE IS USED TO SEAL OPENINGS GREATER THAN 1/4", THE COMBINATION OF MASTIC AND EITHER MESH OR TAPE SHALL BE USED.
- DUCTS INSTALLED IN CAVITIES AND SUPPORT PLATFORMS SHALL NOT BE COMPRESSED TO CAUSE REDUCTIONS IN THE CROSS-SECTIONAL AREA OF THE DUCTS.
- FIELD FABRICATED DUCT SYSTEM SHALL COMPLY WITH REQUIREMENTS FOR: PRESSURE-SENSITIVE TAPE, MASTICS, SEALANTS, AND OTHER REQUIREMENTS SPECIFIED FOR DUCT CONSTRUCTION; DUCT INSULATION R-VALUE RATINGS DUCT INSULATION THICKNESS; AND DUCT LABELS.
- ALL FAN SYSTEMS THAT EXCHANGE AIR BETWEEN THE CONDITIONED SPACE AND THE OUTSIDE OF THE BUILDING MUST HAVE BACKDRAFT OR AUTOMATIC DAMPERS.
- ALL PIPE FOR COOLING SYSTEM SHALL BE INSULATED WITH NON-CORROSIVE AND HARD-COVERED WHERE EXPOSED TO WEATHER.
- FLEXIBLE DUCTS CANNOT HAVE POROUS INNER CORES.
- A HOLE FOR A STATIC PRESSURE PROBE (HSPP), OR A PERMANENTLY INSTALLED STATIC PRESSURE PROBE (FSPP), SHALL BE PLACED IN THE SUPPLY PLENUM. THE SPACE CONDITIONING SYSTEM MUST ALSO DEMONSTRATE AIRFLOW NO LESS THAT 350 CFM PER TON OF NOMINAL COOLING CAPACITY THROUGH THE RETURN GRILLES, AND AN AIR HANDLING UNIT FAN EFFICACY NO GREATER THAN 0.58 WiCFM IN ACCORDANCE WITH REFERENCE RESIDENTIAL APPENDIX RA3.

BUILDING PERFORMANCE:

- HEAT LOSS CALCULATIONS SHALL COMPLY WITH THE REQUIREMENTS OF REGIONAL AND LOCAL CODES. SEE CALCULATIONS. PORCHES, DECKS, FOUNDATION, FIREPLACE ENCLOSURES, AND GARAGE AREAS NOT INCLUDED IN LIVING AREA. ALL EXHAUST FANS TO BE VENTED DIRECTLY TO THE EXTERIOR. ALL PENETRATIONS OF THE BUILDING ENVELOPE SHALL BE SEALED WITH CAULK OR FOAM.
- REFER TO RES-CHECK CERT., BUILDING ENERGY ANALYSIS FOR ALL EQUIPMENT.
- CALCULATIONS SHALL BE APPROVED BY ACCA TO MEET ALL REQUIREMENTS OF MANUEL J 8th Ed. VALUES SHALL BE GIVEN AT ARI CONDITIONS.

Utah Energy Conservation Code
RESCheck Energy Efficiency Summary

95 Zion Park Blvd
Springdale, UT
Renovation/New Construction:

Under Slab	0
Walls (2x6)	R223
Roof Attic	R38
Attic Knee Walls	R25
Windows	0.30 U-Value / 0.25 SHGC
Doors	0.30 U-Value / 0.25 SHGC
Water Heater	Instantaneous Electric
HVAC (HP)	Heat Pump/AC 1.0 Ton Unit
Balanced IAQ	HRV 100 CFM, 0.25 Watts/CFM

NOTE:

DESERT ICE AND BUILDER SHALL DO A WALK-THRU WITH HVAC AND PLUMBING TECHS TO VERIFY THE EXACT TYPES AND LOCATION FOR REGISTERS, FIXTURES, VALVES, SUPPLIES, ETC.

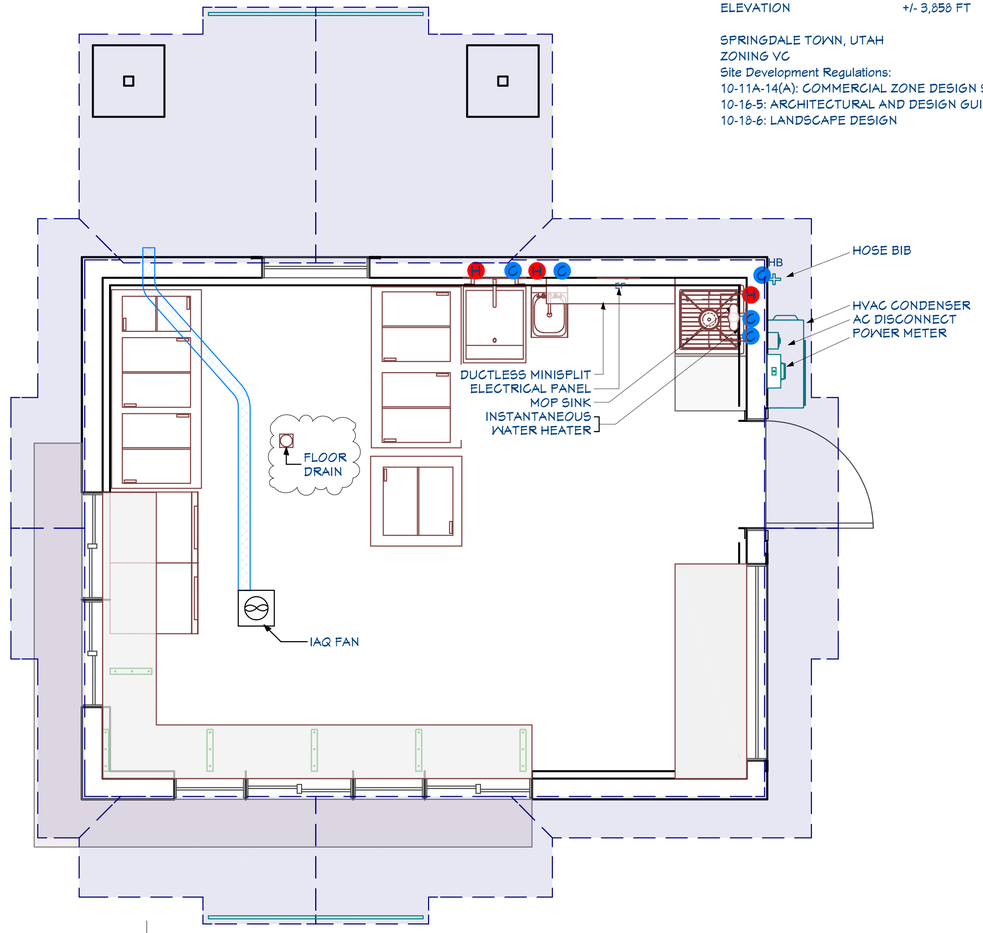
	MECH. SCHEDULE
●	HOT TERMINATION
●	COLD TERMINATION
▨	EXHAUST VENT

PROJECT STATISTICS:

BUILDING INFO:

PROPOSED NEW BUILDING:	DESERT ICE SHANTY
CONDITIONED	285 SqFt
NEW CONCRETE (est>)	456 SqFt
COVERED FOOTPRINT	485 SqFt
BUILDING HT.	± 10.75 FT
ZONING	VC
SUBDIVISION	VALLEY HILLS ESTATE PLAT C, LOT 24
CONSTRUCTION TYPE	V
ADDRESS:	CABLE MOUNTAIN LLC 95 ZION PARK BLVD SPRINGDALE, UT 84767
PARCEL	S-138-C-1
LOT SIZE	7.74 ACRES 337,154.4 SqFt
ELEVATION	+/- 3,858 FT

SPRINGDALE TOWN, UTAH
ZONING VC
Site Development Regulations:
10-11A-14(A): COMMERCIAL ZONE DESIGN STANDARDS
10-16-5: ARCHITECTURAL AND DESIGN GUIDELINES
10-18-6: LANDSCAPE DESIGN



MECH. / PLUMBING
MAIN FLOOR
SCALE 1/2" = 1'

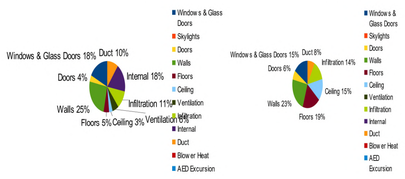
Heat Loss and Gain

Manual J as Prepared Per ACCA Manual J Spreadsheets

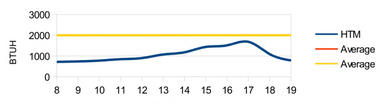
ACCA

Summer Outdoor	91	Summer Indoor	75	Design Grains	-29	Daily Range	High
Winter Outdoor	21	Winter Indoor	70	Cooling RH	50.00%	Elevation	2941

Cooling Loads				Heating Loads			
Name	Area	Sensible	Latent	Name	Area	Heat Loss	
Windows & Glass Doors	120	1686		Windows & Glass Doors	120	1938	
Skylights	0	0		Skylights	0	0	
Doors	63	382		Doors	63	797	
Walls	748	2385		Walls	748	2930	
Floors	724	473		Floors	724	2370	
Ceiling	285	306		Ceiling	1441	1884	
Ventilation	80	551		Ventilation	80	0	
Infiltration	0	1076	15	Infiltration	0	1726	
Internal	0	1713	16	Internal	0	0	
Duct	0	956	16	Duct	0	969	
Blower Heat	0	0		Blower Heat	0	0	
AED Excursion	0	0		AED Excursion	0	0	
Total	**2020**	**9528**	**47**	**Total**	**3176**	**12615**	



AED Graph



Page 2

MANUEL "J-S-D"
SCALE 1/4" = 1'

ACCA Climate Data

ACCA Climate Data and Cover Sheet

ACCA

Design Address
95 Zion Park Blvd
Springdale UT

Form J1 Abridged Version of Manual J, 8th Edition

Project		**Design State & City**	Utah	**Saint George CC**	
Indoor Design Heating db	70	**@ Outdoor (Winter) 99% db**	21	**HTD**	49
Indoor Design Cooling db	75	**@ Outdoor (Summer) 1% db**	91	**CTD**	16
Indoor Design Cooling RH	0.5	**Grains Difference**	-29	**Daily Range**	High
Latitude	37	**Elevation**	2941	**ACF**	0.9

Manual S

Equipment Selection as Per Manual S ACCA Spreadsheet

ACCA

	BTUH	Nom.Tons		Design Temp	Outdoor	Indoor
Total Heat Loss	12615			Winter	21	70
Total Heat Gain	9575	0.8		Summer	91	75
Sensible Heat Gain	9528			ID design RH	50.00%	63F WB
Latent Heat Gain	47			Altitude	2941	
Sensible/Total Ratio	1.00					
Target Cooling TD	21					

Manufacturer's Equipment Specification

Equipment	Manufact	Model No.	BTU output			
Furnace			20000	Cooling Capacity @ OD Design Temp		
Boiler				Total	Sensible	Latent
Heat Pump/AC	1.0	Ton Unit		12000	11000	1000
Evaporator						
Air Handler						
Total Capacity with Altitude Correction			17661	11476	10552	942
Selected Equipment Size			**OK**	**OK**	**OK**	**OK**

Manual D

Manual D Duct Sizing Per ACCA Spreadsheet

ACCA

Total Sq ft	Tonnage of Unit	CFM per ton	Total CFM	CFM/Sq Ft
285	1.0000	400	400	1.4

CPL	ASP
Longest Supply	Longest Return

						400	200	133	Total Heat Loss	Total Heat Gain
				Index # - 0.1		0.05	0.05	0.05	12,615	9575
Room Name	Sq Feet	Req CFM	Supply Ducts		Return D	Return Du	Return Duc	Room Heat Loss	Room Heat Gain
Supply	210	295	11 in		14	12	9	9,295.06	7,055.07
Supply	185	260	10 in					8,188.51	6,215.18
Supply	224	314	11 in					9,914.73	7,525.40
Supply	175	246	10 in					7,745.88	5,879.22

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HVAC / PLUMBING

95 ZION PARK BLVD
SPRINGDALE, UT 84767
DESERT ICE SHANTY

DATE:
5/20/2025

SCALE:
1/2"=1'

SHEET:
14

SHEET MODIFIED 16 MAY 2025

Generated by REScheck-Web Software

Compliance Certificate

Project Springdale95

Energy Code:	**Utah Energy Conservation Code**
Location:	**Springdale, Utah**
Construction Type:	**Single-family**
Project Type:	**New Construction**
Project SubType:	**None**
Conditioned Floor Area:	**285 ft2**
Glazing Area	**30%**
Climate Zone:	**6 (7544 HDD)**
Permit Date:	
Permit Number:	
All Electric	**false**
Is Renewable	**false**
Has Charger	**false**
Has Battery:	**false**
Has Heat Pump:	**false**

Construction Site:
95 Zion Park Blvd
Springdale, UT

Owner/Agent:
New Construction

Designer/Contractor:
Architectural Plans

Compliance: Passes using UA trade-off

Compliance: **9.5% Better Than Code** Maximum UA: **116** Your UA: **105**

The % Better or Worse Than Code Index reflects how close to compliance the house is based on code trade-off rules.
It DOES NOT provide an estimate of energy use or cost relative to a minimum-code home.

Slab-on-grade tradeoffs are no longer considered in the UA or performance compliance path in REScheck. Each slab-on-grade assembly in the specified climate zone must meet the minimum energy code insulation R-value and depth requirements.

Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Prop. U-Factor	Req. U-Factor	Prop. UA	Req. UA
Ceiling area of home forming top of insulation envelope: Flat Ceiling or Scissor Truss	285	38.0	0.0	0.030	0.026	9	7
Wall area of home forming sides of insulation envelope: Wood Frame, 16" o.c.	748	23.0	0.0	0.055	0.060	29	31
Energy efficient door unit: Glass Door (over 50% glazing)	21			0.300	0.350	6	7
Energy efficient door unit: Glass Door (over 50% glazing)	84			0.300	0.350	25	29
Window area of home using energy efficient units: Vinyl Frame	120			0.300	0.350	36	42
Slab perimeter of the home forming the bottom of the structure's insulation envelope: Slab-On-Grade (Unheated) Insulation depth: 4.0' Insulation position: No Insulation	81		10.0	0.684	0.684	0	0

Compliance Statement: The proposed building design described here is consistent with the building plans, specifications, and other calculations submitted with the permit application. The proposed building has been designed to meet the Utah Energy Conservation Code requirements in RES*check* Version : REScheck-Web and to comply with the mandatory requirements listed in the RES*check* Inspection Checklist.

Jobe Leonard — Signature — 2/26/25 Date
Name - Title

REScheck Software Version : REScheck-Web

Inspection Checklist

Energy Code: Utah Energy Conservation Code

Requirements: 0.0% were addressed directly in the RES*check* software

Text in the "Comments/Assumptions" column is provided by the user in the REScheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Pre-Inspection/Plan Review	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
103.1, 103.2 [PR1][1]	Construction drawings and documentation demonstrate energy code compliance for the building envelope.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
302.1, 403.6 [PR2][2]	Heating and cooling equipment is sized per ACCA Manual S based on loads calculated per ACCA Manual J or other methods approved by the code official.	Heating: Btu/hr____ Cooling: Btu/hr____	Heating: Btu/hr____ Cooling: Btu/hr____	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Foundation Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
402.1.1 [FO1][1]	Slab edge insulation R-value.	R-____ ☐ Unheated ☐ Heated	R-____ ☐ Unheated ☐ Heated	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
303.2, 402.2.9 [FO2][1]	Slab edge insulation installed per manufacturer's instructions.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
402.1.1 [FO3][1]	Slab edge insulation depth/length.	____ ft	____ ft	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
303.2.1 [FO11][2]	A protective covering is installed to protect exposed exterior insulation and extends a minimum of 6 in. below grade.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
403.8 [FO12][2]	Snow- and ice-melting system controls installed.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Framing / Rough-In Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
402.1.1, 402.3.1, 402.3.3, 402.3.6, 402.5 [FR2][1]	Glazing U-factor (area-weighted average).	U-____	U-____	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
303.1.3 [FR4][1]	U-factors of fenestration products are determined in accordance with the NFRC test procedure or taken from the default table.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
402.4.3 [FR20][1]	Fenestration that is not site built is listed and labeled as meeting AAMA /WDMA/CSA 101/I.S.2/A440 or has infiltration rates per NFRC 400 that do not exceed code limits.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
402.4.4 [FR16][2]	IC-rated recessed lighting fixtures sealed at housing/interior finish and labeled to indicate ≤2.0 cfm leakage at 75 Pa.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
403.2.1 [FR12][1]	Supply ducts in attics are insulated to ≥R-8. All other ducts in unconditioned spaces or outside the building envelope are insulated to ≥R-6.	R-____ R-____	R-____ R-____	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
403.2.2 [FR13][1]	All joints and seams of air ducts, air handlers, and filter boxes are sealed.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
403.3 [FR17][2]	HVAC piping conveying fluids above 105 °F or chilled fluids below 55 °F are insulated to ≥R-3.	R-____	R-____	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
403.3.1 [FR24][2]	Protection of insulation on HVAC piping.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
403.4.2 [FR18][2]	Hot water pipes are insulated to ≥R-3.	R-____	R-____	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
403.5 [FR19][2]	Automatic or gravity dampers are installed on all outdoor air intakes and exhausts.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Insulation Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
303.1 [IN13][2]	All installed insulation is labeled or the installed R-values provided.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
402.1.1, 402.2.5, 402.2.6 [IN3][1]	Wall insulation R-value. If this is a mass wall with at least ½ of the wall insulation on the wall exterior, the exterior insulation requirement applies (FR10).	R-____ ☐ Wood ☐ Mass ☐ Steel	R-____ ☐ Wood ☐ Mass ☐ Steel	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
303.2 [IN4][1]	Wall insulation is installed per manufacturer's instructions.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Final Inspection Provisions	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
402.1.1, 402.2.1, 402.2.2, 402.2.6 [FI1][1]	Ceiling insulation R-value.	R-____ ☐ Wood ☐ Steel	R-____ ☐ Wood ☐ Steel	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
303.1.1.1, 303.2 [FI2][1]	Ceiling insulation installed per manufacturer's instructions. Blown insulation marked every 300 ft².			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
402.2.3 [FI22][2]	Vented attics with air permeable insulation include baffle adjacent to soffit and eave vents that extends over insulation.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
402.2.4 [FI3][1]	Attic access hatch and door insulation ≥R-value of the adjacent assembly.	R-____	R-____	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
403.2.2 [FI4][1]	Duct tightness test result of <=10 cfm/100 ft2 across the system or <=7.5 cfm/100 ft2 without air handler @ 25 Pa. For rough-in tests, verification may need to occur during Framing Inspection.	____ cfm/100 ft²	____ cfm/100 ft²	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
403.2.2.1 [FI24][1]	Air handler leakage designated by manufacturer at <=2% of design air flow.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
403.1.1 [FI9][2]	Programmable thermostats installed on forced air furnaces.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
403.1.2 [FI10][2]	Heat pump thermostat installed on heat pumps.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
403.4.1 [FI11][2]	Circulating service hot water systems have automatic or accessible manual controls.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
403.5.1 [FI25][2]	All mechanical ventilation system fans not part of tested and listed HVAC equipment meet efficacy and air flow limits.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
401.3 [FI7][2]	Compliance certificate posted.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
303.3 [FI18][3]	Manufacturer manuals for mechanical and water heating systems have been provided.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Utah Energy Conservation Code Energy Efficiency Certificate

Insulation Rating	R-Value
Above-Grade Wall	**23.00**
Below-Grade Wall	**0.00**
Floor	**10.00**
Ceiling / Roof	**38.00**
Ductwork (unconditioned spaces):	_____

Glass & Door Rating	U-Factor	SHGC
Window	**0.30**	
Door	**0.30**	

Heating & Cooling Equipment	Efficiency
Heating System:_____	_____
Cooling System:_____	_____
Water Heater:_____	_____

Name: _____ **Date:** _____
Comments

RESPONSIBLE DESIGNER:
Romy CREATIVE
Jeromy Williams
Lic:13242064-6160
Jeromy Williams

DRAWINGS FOR:
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cheynecchauvin@gmail.com

DRAWINGS PROVIDED BY:
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St. George, UT 84790
design@romycreative.com
(650) 585-7250

RESCHECK COMPLIANCE

95 ZION PARK BLVD
SPRINGDALE, UT 84767

DESERT ICE SHANTY

DATE: 5/20/2025

SCALE: NOTED

SHEET: 15

ELECTRICAL - DATA - AUDIO LEGEND

SYMBOL	DESCRIPTION
	Ceiling Fan
	Ventilation Fans: Ceiling Mounted, Wall Mounted
	Ceiling Mounted Light Fixtures: Surface/Pendant, Recessed, Heat Lamp, Low Voltage
	Wall Mounted Light Fixtures: Flush Mounted, Wall Sconce
	Chandelier Light Fixture
	Fluorescent Light Fixture
RA CO DW W	240V, Wall Oven, Dryer, Washer, Cook Hood
USB WP GFCI	OUTLETS: USB, Duplex, Weather Proof, GFCI
R M DW DC	Specific: Fridge, Microwave, Dish Washer, Disposal
WP 3 4	Switches: Single Pole, Weather Proof, 3-Way, 4-Way
OC DM T	Switches: Occupancy Sensor, Dimmer, Timer
AV Control A	Audio Video: Control Panel, Switch
SP SP	Speakers: Ceiling Mounted, Wall Mounted
CS CAT5 TV	Wall Jacks: CAT5, CAT5 + TV, TV/Cable
	Telephone Jack
	Intercom
T G VAC	Thermostat, Gas Connect, Central Vac
	Door Chime, Door Bell Button
CO CO CO	Smoke/CO Detectors: Ceiling Mounted, Wall Mounted
EP	Electrical Breaker Panel

ELECTRICAL LEGEND

DESERT ICE AND BUILDER SHALL DO A WALK-THRU WITH RELEVANT INSTALLERS TO VERIFY THE EXACT LOCATION FOR OUTLETS, LIGHTS, SWITCHES, CABLE, DATA, PHONE, AUDIO, ETC.

ELECTRICAL NOTES:

*PROVIDE MIN. 200 AMP SERVICE TO MAIN PANEL.
*ALL OUTLETS AFCI UNLESS NOTED AS GFCI. ALL 120-V, SINGLE PHASE, 15- & 20-AMP BRANCH CIRCUITS SUPPLYING OUTLETS OR DEVICES INSTALLED THROUGHOUT BUILDING SHALL BE PROTECTED BY A LISTED ARC-FAULT CIRCUIT INTERRUPTER, COMBINATION TYPE, INSTALLED TO PROVIDE PROTECTION OF THE BRANCH CIRCUIT. [NEC 210.12(A)]

- ALL RECEPTACLES SHALL BE TAMPER PROOF TYPE [NEC 210.52] ALL NONLOCKING-TYPE 125-VOLT, 15- AND 20-AMP RECEPTACLES SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES [NEC 406.12], WITH THE EXCEPTION OF 1) RECEPTACLES 5 1/2 FEET ABOVE THE FLOOR, 2) RECEPTACLES THAT ARE PART OF LUMINAIRE OR APPLIANCE, &/OR 3) A SINGLE RECEPTACLE OR DUPLEX RECEPTACLE FOR TWO APPLIANCES LOCATED WITHIN DEDICATED SPACE FOR EACH APPLIANCE THAT, IN NORMAL USE, IS NOT EASILY MOVED FROM ONE PLACE TO ANOTHER AND THAT IS CORD-AND-PLUG-CONNECTED IN ACCORDANCE WITH 400.7(A)(6,7,OR 8).
- ALL LUMINAIRES IN WET OR DAMP LOCATIONS SHALL BE INSTALLED SUCH THAT WATER CANNOT ENTER OR ACCUMULATE IN WIRING COMPARTMENTS, LAMP HOLDERS, OR OTHER ELECTRICAL PARTS, AND ALL LUMINAIRES INSTALLED IN DAMP LOCATION SHALL BE MARKED, "SUITABLE FOR WET/DAMP LOCATIONS." [NEC 410.10]
- ALL RECESSED LIGHTING SHALL BE CONTROLLED BY DIMMERS OR VACANCY SENSORS. [IECC 150.0(K)2K AND IECC 150.0(K)1C.VI]
- OUTDOOR LIGHTING SHALL BE CONTROLLED BY AN ON/OFF SWITCH AND A PHOTOCELL OR MOTION SENSOR, OR ONE OF THE OTHER METHODS LISTED IN IECC 150.0(K)3A. IF ALSO CONTROLLED BY A MANUAL ON/OFF SWITCH THAT OVERRIDES THE PHOTOCELL OR MOTION SENSOR, THEN THE OVERRIDE MUST AUTOMATICALLY REACTIVATE THE PHOTOCELL OR MOTION SENSOR WITHIN 6 HOURS.
- BATHROOMS SHALL BE ON A SEPARATE CIRCUIT OR GFI RECEPTACLES SHALL BE ON A SEPARATE CIRCUIT.
- KITCHEN FAN SHALL HAVE MIN. EXHAUST RATE OF 100 CFM [IMC TABLE 403.7]
- KITCHEN RECEPTACLES SERVING COUNTERS SHALL BE ON TWO 20AMP SMALL APPLIANCE BRANCH CIRCUITS WHICH SERVE NOTHING ELSE.
- GARBAGE DISPOSAL AND DISHWASHER SHALL BE ON SEPARATE BRANCHES TO PROVIDE OVERLOAD PROTECTION FOR MOTOR-OPERATED APPLIANCES. [NEC 422.12(G) AND NEC 430.32]
- ALL 125-V, SINGLE-PHASE, 15- AND 20-AMP RECEPTACLES INSTALLED IN THE LOCATIONS SPECIFIED IN 210.8(A)(1) THROUGH (8) SHALL HAVE GFCI PROTECTION FOR PERSONNEL. [NEC 210.8]
- ALL EXTERIOR OUTLETS TO BE WEATHERPROOF GFCI PROTECTED [NEC 2016 210.52.E (3)].

* OVERHEAD CEILING OUTLETS TO BE GFI PROTECTED [210.52.G(1)].
* THE WATER HEATER SHALL INCLUDE THE FOLLOWING COMPONENTS [IECC 150.0(N)1]:
A. A DEDICATED 125-VOLT, 20 AMP ELECTRICAL RECEPTACLE CONNECTED WITH A 120/240-V 3 CONDUCTOR, 10 AWG COPPER BRANCH CIRCUIT WITHIN 3 FEET FROM, AND ACCESSIBLE TO, THE WATER HEATER WITH NO OBSTRUCTIONS WHERE:
I. BOTH ENDS OF THE UNUSED CONDUCTOR SHALL BE LABELED WITH THE WORD "SPARE" AND BE ELECTRICALLY ISOLATED
II. A RESERVED SINGLE POLE CIRCUIT BREAKER SPACE IN THE ELECTRICAL PANEL ADJACENT TO THE CIRCUIT BREAKER FOR THE BRANCH CIRCUIT IN (A) ABOVE AND LABELED WITH THE WORDS "FUTURE 240V USE."
* PROVIDE ONE SMOKE DETECTOR IN MAIN WORKING AREA. CONNECT SMOKE DETECTOR(S) TO BUILDING POWER AND INTERCONNECT SMOKE DETECTOR SO THAT, WHEN ANY ONE IS TRIPPED, THEY ALL WILL SOUND. PROVIDE BATTERY BACKUP FOR ALL UNITS.

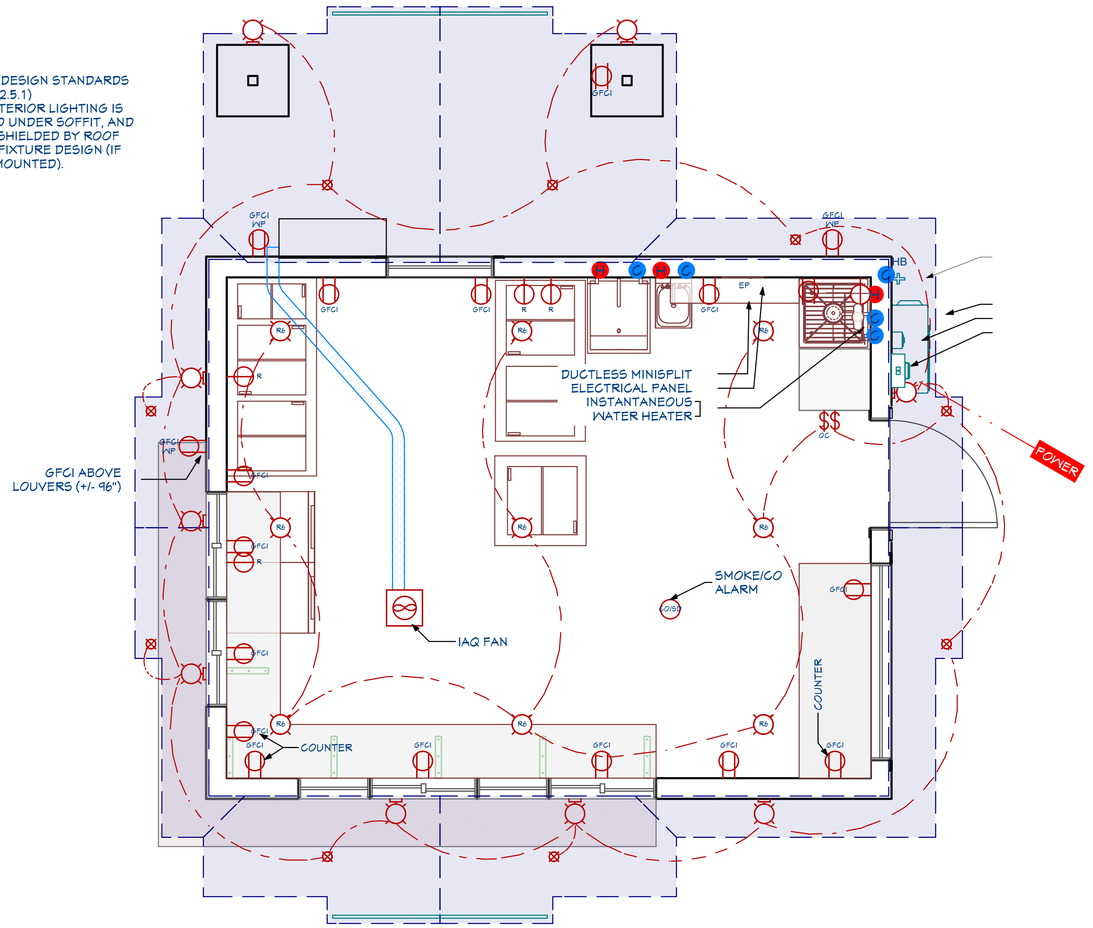
- CARBON MONOXIDE ALARMS SHALL RECEIVE THEIR PRIMARY POWER FROM THE BUILDING WIRING AND WHERE PRIMARY POWER IS INTERRUPTED, SHALL RECEIVE POWER FROM A BATTERY. [IRC R315.6]
- CIRCUITS, FINAL SWITCHES FOR TIMERS & DIMMERS, AND ALL FIXTURES, SHALL BE VERIFIED WITH DESERT ICE PRIOR TO WIRE INSTALLATION.

DATA CABLE:
* SYSTEM AND LOCATIONS TO BE APPROVED BY DESERT ICE.
AUDIO:
* SYSTEM, SPEAKERS, JACKS, DATA CABLE, AND LOCATIONS TO BE APPROVED BY DESERT ICE.
VENTILATION NOTES:

- ALL COMBUSTION APPLIANCES SHALL BE VENTED DIRECTLY TO THE EXTERIOR FURNACE FIREBOX AND TANKLESS WATER HEATER SHALL HAVE OUTSIDE COMBUSTION AIR SUPPLY PURSUANT TO REGIONAL AND LOCAL CODES.
- EXHAUST VENTS AND FANS DIRECTLY TO OUTSIDE VIA METAL DUCTS, PROVIDE 100 CFM (MIN) FANS TO PROVIDE 5 AIR CHANGES PER HOUR.

NOTE: (DESIGN STANDARDS 10-15C-2.5.1)
ALL EXTERIOR LIGHTING IS PLACED UNDER SOFFIT, AND FULLY SHIELDED BY ROOF OR BY FIXTURE DESIGN (IF WALL MOUNTED).

EXTERIOR LIGHTING RENDERING — NO SCALE



ELECTRICAL PLAN MAIN FLOOR — SCALE 1/2" = 1'

RESPONSIBLE DESIGNER:
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Jeromy Williams
Lic:5242064-6160
Jeromy Williams

DRAWINGS FOR:
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DRAWINGS PROVIDED BY:
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(650) 365-7250

ELECTRICAL PLAN

95 ZION PARK BLVD
SPRINGDALE, UT 84767

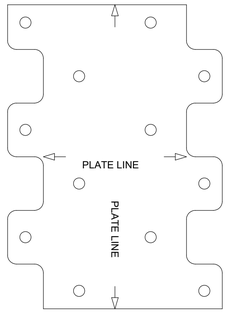
DESERT ICE SHANTY

DATE: 5/20/2025

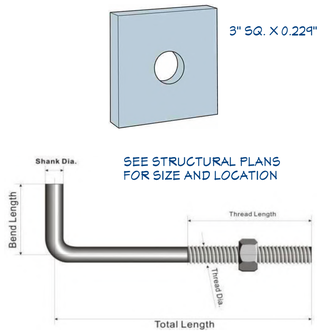
SCALE: 1/2"=1'

SHEET: 16

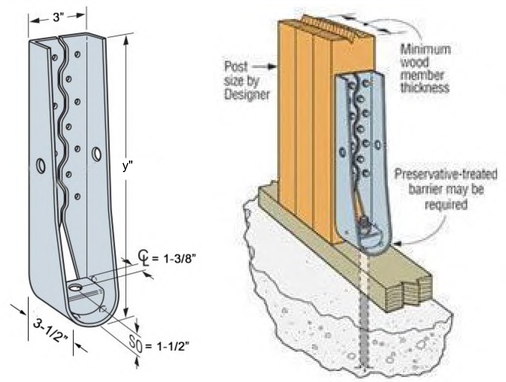
4 ALL THREAD W/ SIMPSON SET-3G EPOXY

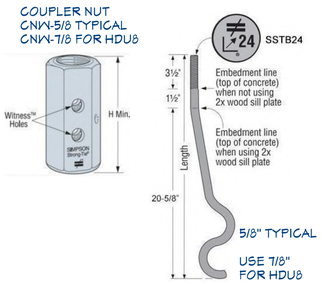


3 SIMPSON LTP4 TIE PLATE

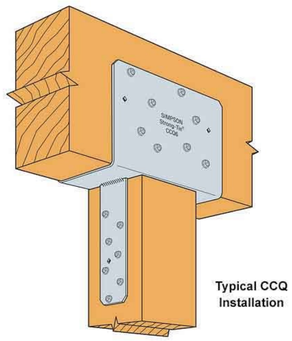


2 TYP. ANCHOR BOLT HOLD DOWN



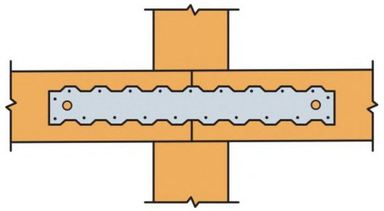


1 SIMPSON HDU2 HOLD DOWN



5 SIMPSON CCQ POST-BEAM

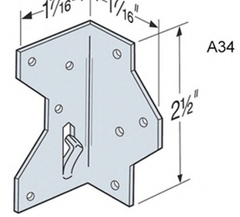
6 SIMPSON BC6 POST-BEAM



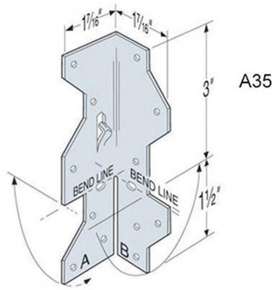
7 SIMPSON ST6624 @ BEAM SPLICE

8 SIMPSON CS16 STRONG TIE

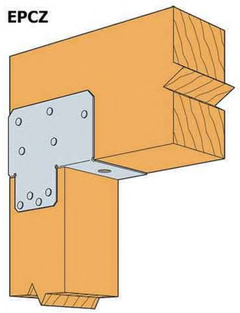
9 SIMPSON MSTAI48 STRONG TIE



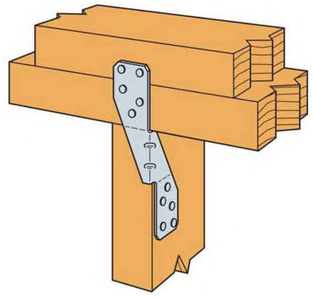
14 SIMPSON A34 STRONG TIE



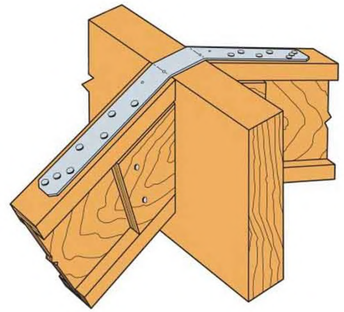
13 SIMPSON A35 STRONG TIE



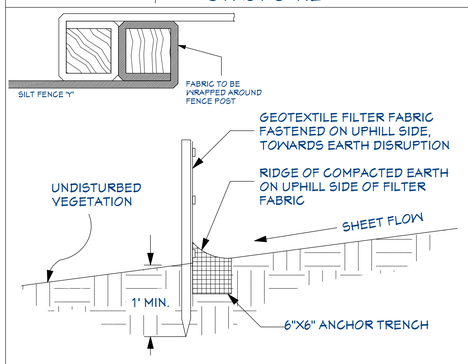
12 SIMPSON EPC6Z STRONG TIE



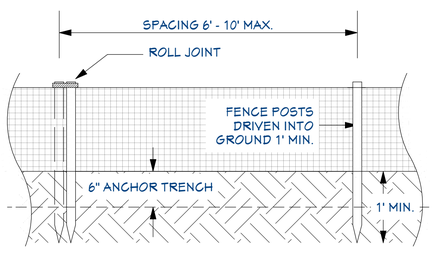
11 SIMPSON H2.5A HURRICANE TIE



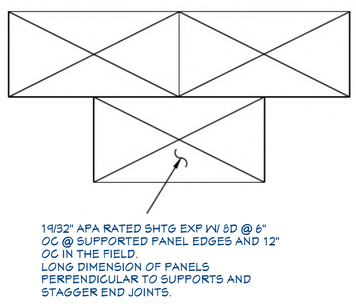
10 SIMPSON LSTA24 RAFTER TIES



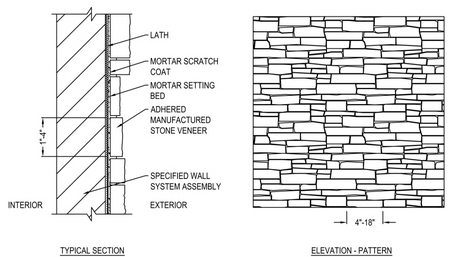
15 SILT FENCE CROSS SECTION



16 SILT FENCE DETAIL



17 SHEATHING LAYOUT TYPICAL



18 STONE VENEER TYPICAL

RESPONSIBLE DESIGNER:
Romy CREATIVE
Jeromy Williams
Lic:13242064-6160
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CONSTRUCTION DETAILS

95 ZION PARK BLVD
SPRINGDALE, UT 84767

DESERT ICE SHANTY

DATE: 5/20/2025

SCALE: 1/4"=1'

SHEET: 17

Appendix B

EROSION HAZARD ASSESSMENT

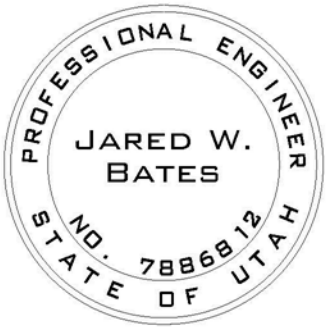
Zion National Park Visitor Center AT&T Facility
Springdale, Utah

Prepared For:

J5 Infrastructure Partners
2030 Main Street, Suite 200
Irvine, CA, 84790
kmiller@j5ip.com

Rosenberg Associates
Project No: 13835-23
August 28, 2023

Revised September 25, 2023



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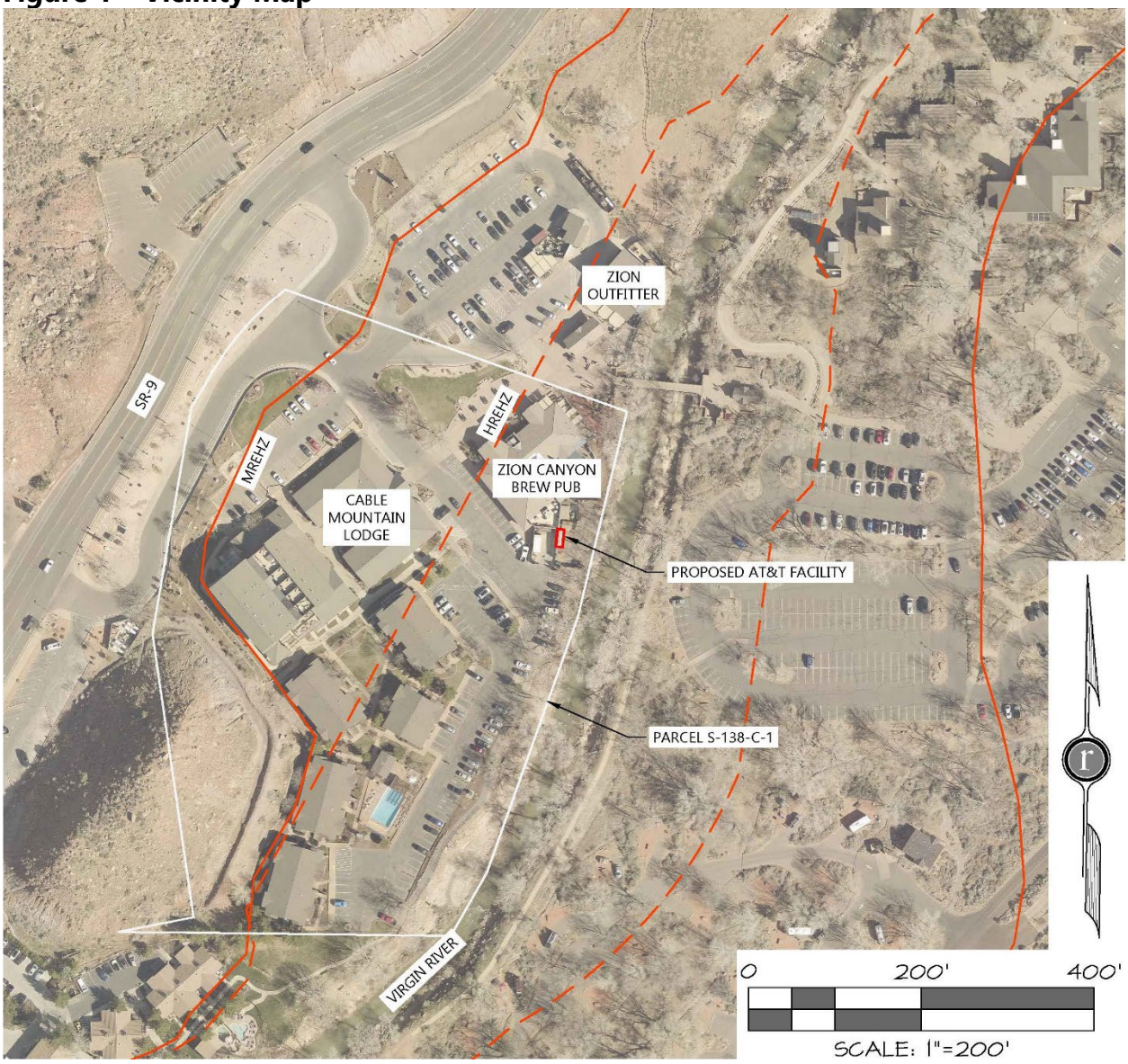
ROSENBERG ASSOCIATES™
CIVIL ENGINEERS LAND SURVEYORS

1.0 INTRODUCTION

1.1 PROJECT OVERVIEW & LOCATION

An AT&T telecommunications facility is proposed adjacent to the existing Zion Canyon Brew Pub within Parcel S-138-C-1. Parcel S-138-C-1 is a 7.74 acre lot in Springdale, UT, located within Section 28, Township 41 South, Range 10 West, Salt Lake Base and Meridian. The proposed facility will be located within the existing storage area on the southeast side of the building, replacing an existing outdoor storage enclosure atop a concrete slab. The proposed facility is unmanned and not intended for human habitation. The proposed facility is bounded by an asphalt path along the Virgin River to the east, commercial development to the south and west, and the existing Zion Canyon Brew Pub to the north. A copy of the proposed site plan is included in the Appendix.

Figure 1 – Vicinity Map



The Erosion Hazard Zone (EHZ) consists of areas adjacent to the river channel likely to suffer flood related damage by a typical series of flood events over a 60 year period, plus the erosion caused by a single 100 year flood event. The EHZ also includes areas prone to natural channel movement due to geomorphic processes such as meander migration or channel avulsion. It is important to recognize an EHZ is not a "no build" zone, but it serves notice to landowners of the inherent risk that should be addressed through engineering design, insurance, appropriate land uses or avoidance. Springdale City Ordinance requires an Erosion Hazard Assessment be completed as part of any proposed development or building permits issued on properties impacted by the established Erosion Hazard Zone (EHZ).

The proposed telecommunications facility is located within the HREHZ (High Risk Erosion Hazard Zone) as defined by the *Draft Erosion Hazard Delineation* (Reference 1). The purpose of this document is to assess the erosion hazard risks associated with the Virgin River adjacent to the proposed facility, present recommendations to mitigate the risk of lateral erosion damage to proposed structures and ensure proposed improvements associated with the project do not increase the risk of erosion to adjacent properties.

2.0 SITE INVESTIGATION

2.1 SITE CONDITIONS

The study reach of the North Fork of the Virgin River is located along a relatively straight reach extending from a pedestrian bridge adjacent to the Zion Visitor Center Parking Lot downstream approximately 600 feet. The low flow channel of the river consists of a well defined cobble bed with occasional large boulders. The right (west) bank slopes steeply up from the low flow channel and is naturally armored with large cottonwoods and boulders. Downstream of the project site, a large vertical cut bank has formed between the active floodplain and the high terrace. Adjacent to the project site, many of the cottonwoods have been partially undermined and have exposed root structures, however, the trees appear stable and the root structures have prevented additional erosion from impacting the bank. The left (east) bank is less steep and a slight terrace is present between the low flow channel and the overbank.

2.2 SOILS

Soil data for the study reach was obtained from the NRCS Web Soil Survey Application (Reference 2) to assess erosion characteristics of the site. The overbank where the proposed facility will be located is within the soil unit RbA (Redbank silty clay loam) and the central channel is within soil unit NaC (Naplene silt loam) These soil units consist of medium dense alluvial sediments derived from sedimentary rock such as limestone, sandstone, and shale. The relative density and clay content of these soils makes them more resistant to erosion than the sandy alluvium found throughout most of the lower Virgin River.

Figure 2 – July 12, 2023. Right bank of North Fork Virgin River adjacent to the project area, looking upstream. The bank is relatively steep (approximately 2H:1V), but is naturally armored with mature cottonwood trees and large boulders.

Figure 3 – July 12, 2023. Right bank of North Fork Virgin River adjacent to the project area, looking downstream. The exposed root structures of the trees indicates some erosion of the bank toe has occurred.

Figure 4 – July 12, 2023. Project area, looking upstream. The proposed AT&T telecommunications facility will replace the existing enclosure on the left side of the image behind the umbrella. The existing asphalt path provides access for emergency erosion protection of the site.

Figure 5 – July 12, 2023. Right bank of North Fork Virgin River downstream of project area, looking upstream. A vertical cut bank has formed adjacent to the parking lot downstream of the proposed facility.

2.3 EFFECTIVE FLOODPLAIN INFORMATION

The proposed telecommunications facility is located within Zone AE, defined as areas inside the 1% annual chance floodplain according to the FEMA Flood Insurance Rate Map, panel 49053C 0905G, dated April 2, 2009 (Reference 3). A Town of Springdale Floodplain Development Permit will be required as part of the development process. A FIRMette of panel 0905G and a floodplain exhibit with the project boundary is included within the Appendix.

2.4 FLOODPLAIN ANALYSIS

A HEC-RAS hydraulic model was prepared based on existing conditions and compared with the regulatory model of the North Fork of the Virgin River along the study reach. The existing conditions hydraulic model was prepared from 2023 field survey data, 2017 Washington County LiDAR topography, and 2009 Washington County FIS (Reference 3) regulatory flow information. No placement of fill or elevation changes are anticipated with the proposed project, therefore, the proposed conditions water surface elevations (WSELs) are identical to the existing conditions WSELs. Effective water surface elevations at each cross section were determined using linear interpolation between regulatory 100 year water surface elevations at established FEMA cross sections. Table 1 below provides a comparison between effective, existing, and proposed water surface elevations.

Table 1
100 Year Water Surface Elevations

Station	*Effective 100 Year Water Surface Elevation*	*Existing 100 Year Water Surface Elevation*	*Proposed 100 Year Water Surface Elevation*	*Difference (Proposed – Effective)*
19+564	3917.52′	3916.05′	3916.05′	-1.47′
19+446 (FEMA AD)	3915.79′	3914.66′	3914.66′	-1.13′
19+339 (Project Area)	3914.00′	3912.89′	3912.89′	-1.11′
19+236	3913.10′	3912.20′	3912.20′	-0.90′
18+991 (FEMA AC)	3911.82′	3911.42′	3911.42′	-0.40′

As shown in Table 1 above, the proposed improvements do not raise the 100 year water surface, meeting the requirements of Ordinance 2020-04. Based on the hydraulic analysis, the proposed improvements do not impact water surface elevations to properties adjacent to the project area. Water surface elevations based on proposed conditions are below the effective water surface elevations. See the floodplain exhibit and hydraulic calculations included in the Appendix for additional information.

3.0 RIVER MEANDER & SCOUR ANALYSIS

3.1 HISTORICAL AERIAL PHOTO ANALYSIS

Historic aerial photos from 1973 to 2022 of the study reach were reviewed to establish the location of the North Fork of the Virgin River active channel and determine meander patterns and trends over the extended recent time period; including the impacts of the significant flood events in 2005 and 2010.

The results of the analysis illustrated no significant changes to the North Fork of the Virgin River active channel location adjacent to the site. The relatively consistent location of the North Fork of the Virgin River main channel is likely due to the presence of mature cottonwood trees and other established vegetation along both overbanks and the consistent channel geometry along the reach.

3.2 SCOUR ANALYSIS

Scour depths were calculated based on the Virgin River 100-year flood event. 100 year flood water surface elevations, flow depths and flow velocities were based on the proposed conditions HEC-RAS model of the study reach.

Total estimated scour depth is based on the sum of long term degradation, bend scour, and (1/2) anti-dune scour. Table 2 lists the individual components and total scour value calculated for the site. Refer to the Appendix for the hydraulic analysis data and scour calculations. Overbank velocities and depths were used to calculate scour for the proposed project. Based on the historical data and current conditions of the active channel, it is assumed that the main channel will not migrate towards the site, therefore, any scour that occurs adjacent to the proposed facility will result from overbank flows during a flood event that overtops the channel banks.

Table 2 – Overbank Scour Depths	
½ Anti-Dune Scour	0.04 ft
Bend Scour	0.03 ft
Long Term Degradation	2 ft
Total Scour	***2.07 ft***

3.3 ANALYSIS OF EROSION HAZARD RISK

The project site is located along a relatively straight reach of the North Fork of the Virgin River and the bank directly adjacent to the site appears relatively stable. The mature cottonwood trees and large boulders located along the toe of the right bank provide significant natural armoring, preventing lateral migration of the channel and limiting the effects of scour. Although there is evidence of scour in the exposed root structures of several of the cottonwood trees, the trees remain structurally stable and the roots have prevented the formation of vertical cut banks directly adjacent to the site. A vertical cut bank has formed downstream of the proposed project location where the density of cottonwood trees and other vegetation is lower, which has the potential to impact the site if not carefully monitored and indicates there is potential for lateral migration of the

bank within the study reach.

The proposed facility will be located within an existing storage area adjacent to the Zion Canyon Brew Pub. The proposed improvements are intended to closely match existing grades and no significant alterations to the site are anticipated. The proposed telecommunications facility will be constructed atop a concrete slab founded on (4) 2' diameter concrete piers. The proposed facility is unmanned and not intended for human habitation. Because the proposed facility will result in minimal impacts to the existing developed conditions of the site and the intended use of the area is similar to the current use, there is no increased risk of erosion associated with the proposed project. Additionally, an existing asphalt path is located between the proposed facility and the river, allowing access for emergency erosion protection measures and maintenance to take place during a major flood event.

Based on the Engineer's experience working in this reach of the North Fork of the Virgin River, it is assumed that the proposed project is not susceptible to any increased risk of erosion damage, and the existing risk is manageable due to the presence of the asphalt path for emergency access and the intended use of the facility. It is the opinion of the Engineer that no additional erosion protection is required to mitigate the risk.

4.0 RECOMMENDATIONS

4.1 PROPOSED IMPROVEMENTS

It is recommended that the concrete piers on which the facility will be founded extend a minimum of 3 feet below the existing adjacent ground elevation and be reinforced to withstand flooding up to 1 foot above finished grade as to provide protection from overland flooding.

All applicable provisions of the Uniform Building Code must be adhered to while constructing the proposed improvements and any associated site grading activities. Any public utilities or facilities constructed with the proposed development should be located and constructed so as to minimize the risk of flood and erosion damage.

4.2 DO NOT DISTURB THE STREAM BANKS & RIPARIAN ZONE

No disturbance should be allowed within the regulatory floodplain, Virgin River wet stream or the riparian zone without the necessary regulatory permits. Significant biological conditions are anticipated to be part of the regulatory permits issued by the Corps of Engineers or the State Engineers Office as part of any proposed disturbance within the jurisdictional areas. The existing Virgin River streambanks and riparian zone should remain undisturbed during the construction process except for the permitted removal of invasive species (Tamarisk, Russian Olive and Arundo). In addition, any disturbed areas within the riparian corridor should be re-vegetated with native Coyote Willow, Goulding Willow or Fremont Cottonwood plantings as appropriate. All proposed development grading should adhere to the recommendations of the *Virgin River Management Plan* (Reference 4) as it relates to grading, surface drainage and surface roughness. A Floodplain Development Permit and a Grading Permit are required by the Town of Springdale prior to construction of proposed improvements.

4.3 IMPACTS TO STREAM STABILITY AND ADJACENT PROPERTIES

As shown in Table 1 and the Floodplain Exhibit included in the Appendix, 100 year water surface elevations within the project area and adjacent properties will not increase above the effective water surface elevations as a result of the proposed improvements. No changes or impacts to the regulatory floodway shall occur with this project. As designed, construction of the proposed improvements should not impact the Waters of the U.S., riparian vegetation, or federally protected endangered species. No impacts to stream stability or sediment transport patterns are anticipated with the project.

4.4 PROVIDE FOR PERPETUAL ACCESS & MAINTENANCE

Legal access to the area between the proposed project and the river is required. The existing asphalt path located adjacent to the proposed facility should be maintained perpetually and remain unobstructed to allow access during emergency flood scenarios. Routine inspection of the access should be completed at least annually and immediately following any major flood event in the river. The parking lot downstream of the proposed facility should be continuously monitored for signs of erosion and lateral bank migration as vertical cut banks have formed adjacent to the parking lot. Although this area is downstream of the proposed project, significant bank migration could cause changes to the channel geometry that impact the project site. Maintenance of the access will be the responsibility of the property owner. Any required repair of the improvements or access shall be completed in a timely manner as per the direction of a professional engineer or his assignee. The access will require a permanent easement to be recorded providing unobstructed access for inspection and maintenance.

4.5 PROPERTY OWNERS SHALL ACKNOWLEDGE RISKS

It should be acknowledged by the developer and any future property owners that flood events larger than the 100 year flood can and do occur. Areas adjacent to the Virgin River are susceptible to flooding and erosion damage beyond the design events analyzed in this report. Development plans should consider the risk of erosion, sedimentation, and flood damage from large flood events during the design of structural foundation systems, utilities, pavements, and site drainage. Approval of future building permit approvals for the development should be conditioned upon acknowledgement by property owners of the potential risks of flood and erosion damage at this location.

5.0 ENGINEER'S OPINION OF RISK

The findings and recommendations presented in this document are based on a review of existing technical studies concerning the flooding and erosion hazard risks at this location on the North Fork of the Virgin River; a site investigation to determine existing conditions; evaluation of other erosion protection counter measures already in place; engineering analysis and past professional experience working in the Virgin River. It is the professional engineering opinion of Rosenberg Associates that if the recommendations presented in this document are implemented and maintained properly, then the risk of lateral bank erosion to the proposed telecommunications

facility will be mitigated as required by the Town of Springdale code. No adverse effects to properties upstream, downstream, or across the river is anticipated with the proposed project.

REFERENCES

1. Draft Erosion Hazard Delineation, Rosenberg Associates, January, 2020.

2. Custom Soil Resource Report – Washington County, Utah, Natural Resource Conservation Service, August, 2023.

3. Washington County Flood Insurance Study, Federal Emergency Management Agency, April 2, 2009.

4. Virgin River Management Plan, Town of Springdale, 2019.

APPENDIX

Site Plan – AT&T UT_ZION_NP_VISITOR_CENTER
Soil Map, Natural Resource Conservation Service (Web Soil Survey)
FIRMette Washington County FIS, Panel 49053C 0905G
Floodplain Exhibit, Rosenberg Associates, 2021

Hydraulic Model Data
Total Scour Calculations

CODE COMPLIANCE

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES
AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING
TO THESE CODES.

2018 INTERNATIONAL BUILDING CODE WITH LOCAL AMENDMENTS
2018 INTERNATIONAL FIRE CODE (IFC)
2018 INTERNATIONAL ENERGY CONSERVATION CODE

NEW SITE BUILD

1C PACE ID:	MRUTH044902
WM ID:	WSUTH0012983
USID:	317992
FA CODE:	15506602
RFDS ID #:	5228190

AT&T

SITE NUMBER:	UTL05403
SITE NAME:	UT_ZION_NP_VISITOR_CENTER
SITE TYPE:	ROOFTOP / WUC
ADDRESS:	95 ZION PARK BLVD SPRINGDALE, UT 84767
PARCEL ID:	S-138-C-1

PREPARED FOR

AT&T

NEW CINGULAR WIRELESS PCS, LLC ("AT&T")
7670 S. CHESTER ST.
CENTENNIAL, CO 80112

Vendor:

J5 INFRASTRUCTURE PARTNERS

23 MAUCHLY #110
IRVINE, CA 92618

J5 PROJECT ID: P-056464

Issued For:

UTL05403

UT_ZION_NP_VISITOR_CENTER

95 ZION PARK BLVD
SPRINGDALE, UT 84767

PARCEL ID: S-138-C-1

DRAWN BY: SLM

CHECKED BY: KM

REV	DATE	DESCRIPTION
A	12/14/22	90% ZD
B	1/16/23	90% ZD
C	4/5/23	90% ZD

Licensor:

Sheet Title: TITLE SHEET

Sheet Number: T-1

PROJECT TEAM

SITE CONSTRUCTION MANAGER:
NAME: AT&T
ADDRESS: 7670 S. CHESTER ST.
CITY, STATE, ZIP: CENTENNIAL, CO 80112
CONTACT: BYRON BOSSHARDT
PHONE: (801) 485-8888

SITE APPLICANT:
NAME: AT&T
ADDRESS: 7670 S. CHESTER ST.
CITY, STATE, ZIP: CENTENNIAL, CO 80112
CONTACT: JAN ROBINETTE
PHONE: (801) 201-4173

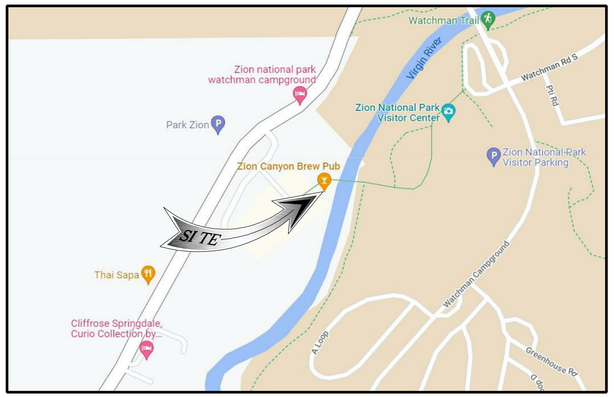
RF ENGINEER:
NAME: AT&T
ADDRESS: 7670 S. CHESTER ST.
CITY, STATE, ZIP: CENTENNIAL, CO 80112
CONTACT: PETE GOVITVIWAT
PHONE: (385) 439-9998

CIVIL ENGINEER:
NAME: J5 INFRASTRUCTURE PARTNERS
ADDRESS: P.O. BOX 190
CITY, STATE, ZIP: MIDVALE, UTAH
CONTACT: KEVIN MILLER
PHONE: (720) 296-6180

ELECTRICAL ENGINEER:
NAME: J5 INFRASTRUCTURE PARTNERS
ADDRESS: 23 MAUCHLY #110
CITY, STATE, ZIP: IRVINE, CA 92618

PROPERTY OWNER:
NAME: CABLE MOUNTAIN LLC
ADDRESS: PO BOX 369
CITY, STATE, ZIP: SAINT GEORGE, UT 84771
PHONE: ----------

VICINITY MAP



LOCAL MAP

NORTH

PROJECT DESCRIPTION

PROPOSED SITE BUILD OF AN UNMANNED TELECOMMUNICATIONS FACILITY, CONSISTING OF THE FOLLOWING:

TOWER/ANTENNA SOW:
- INSTALLATION OF (12) AT&T PANEL ANTENNAS
- INSTALLATION OF (24) AT&T REMOTE RADIO HEADS (RRH'S)
- INSTALLATION OF (4) AT&T DC-9 SURGE SUPPRESSORS
- INSTALLATION OF (1) AT&T ANTENNA ENCLOSURE

EQUIPMENT SOW:
- INSTALLATION OF AN AT&T (187.0 SQ. FT.) TELECOMMUNICATION COMPOUND LEASE AREA
- INSTALLATION OF AN AT&T WOOD FENCE AROUND COMPOUND
- INSTALLATION OF (1) AT&T WALK-UP CABINET (WUC) ON 10'-0" x 16'-0" EQUIPMENT PLATFORM
- INSTALLATION OF (1) AT&T BATTERY CABINET W/(12) BATTERIES ON EQUIPMENT PLATFORM
- INSTALLATION OF (1) AT&T 200A AC POWER PANEL
- INSTALLATION OF (1) AT&T VERTICAL CABLE TRAY
- INSTALLATION OF AT&T UTILITY EQUIPMENT ON FENCE
- INSTALLATION OF (12) AT&T DC POWER & (4) FIBER CABLE TRUNKS
- INSTALLATION OF (1) AT&T DC12 SURGE SUPPRESSOR BOX
- INSTALLATION OF (6) AT&T RECTIFIERS
- INSTALLATION OF (1) AT&T BASEBAND UNIT
- INSTALLATION OF (1) AT&T GPS ANTENNA

OTHER:
- INSTALLATION OF SCREEN WALL W\FAUX BRICK
- 1'-6" EXTENSION OF HVAC ROOF CAP

PROJECT AREAS:
- 11'-0" X 17'-0" (187.0 SQ. FT.) LEASE AREA
- 11'-0" X 16'-0" (176 SQ. FT.) ANTENNAS LEASE AREA

SITE INFORMATION

JURISDICTION:	CITY OF SPRINGDALE
WIND LOADS:	X
EXPOSURE CATEGORY:	C
SEISMIC ZONE:	X
FLOOD ZONE:	AE
PARCEL ID #:	S-138-C-1
ZONING:	VILLAGE COMMERCIAL
LATITUDE (NAD 83):	37.19887°
LONGITUDE (NAD 83):	-112.988996°

IMPERVIOUS SURFACE SF: ±N/A
BASE OF EXISTING STRUCTURE: ±0'-0"
TOP OF EXISTING STRUCTURE: ±25'-0"

ACCESSIBILITY REQUIREMENTS: FACILITY IS AN UNMANNED EQUIPMENT SPACE NOT INTENDED FOR HUMAN HABITATION AND ONLY FREQUENTLY VISITED BY MAINTENANCE PERSONAL. ACCESSIBILITY IS NOT REQUIRED PER IBC 2018, SECTION 1103.2.9 (EQUIPMENT SPACES)

TOWER OWNER: CABLE MOUNTAIN LLC
POWER AGENCY: ROCKY MOUNTAIN POWER
TELCO PROVIDER: TBD
RFDS VERSION: TBD
DATE UPDATED: TBD

GENERAL CONTRACTOR NOTES

DO NOT SCALE DRAWINGS

THESE PLANS ARE FORMATTED TO BE FULL SIZE AT 24" X 36". CONTRACTORS SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT/ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR MATERIAL ORDERS OR BE RESPONSIBLE FOR THE SAME.

HABITATION NOTE

THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. A TECHNICIAN WILL VISIT THE SITE AS REQUIRED FOR ROUTINE MAINTENANCE. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT DISTURBANCE OR EFFECT ON DRAINAGE; NO SANITARY SEWER SERVICE, POTABLE WATER, OR TRASH DISPOSAL IS REQUIRED AND NO COMMERCIAL SIGNAGE IS PROPOSED.

STATEMENTS

STRUCTURAL ANALYSIS IS NOT WITHIN THE SCOPE OF WORK CONTAINED IN THIS DRAWINGS SET. FOR ANALYSIS OF EXISTING AND/OR PROPOSED COMPONENTS, REFER TO STRUCTURAL ANALYSIS PROVIDED UNDER SEPARATE COVER.

ANTENNA MOUNT ANALYSIS IS NOT WITHIN THE SCOPE OF WORK CONTAINED IN THIS DRAWING SET. FOR ANALYSIS OF MOUNT TO SUPPORT EXISTING AND/OR PROPOSED COMPONENTS, REFER TO ANTENNA MOUNT STRUCTURAL ANALYSIS PROVIDED UNDER SEPARATE COVER.

DRIVING DIRECTIONS

DIRECTIONS FROM NEAREST MAIN AIRPORT (ST. GEORGE REGIONAL AIRPORT):

1. GET ON UT-7 E/HWY 7 E/SOUTHERN PARKWAY (1.9 MI)
2. TURN LEFT TO MERGE ONTO UT-7 E/HWY 7 E/SOUTHERN PKWY TOWARD WASHINGTON (0.3 MI)
3. CONTINUE ON UT-7 E/HWY 7 E/SOUTHERN PARKWAY TO LA VERKIN (24.3 MI)
4. SLIGHT RIGHT TO MERGE ONTO UT-9 E/W STATE STREET (5.9 MI)
5. TURN RIGHT ONTO UT-9 E/W 500 N (20 MI)
6. TURN RIGHT (66 FT)
7. DESTINATION WILL BE ON THE RIGHT

DIGALERT
811
Call 2 Full Working Days In Advance

SHEET INDEX

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GN-2	GENERAL NOTES	C
GN-3	SITE SIGNAGE	C
SU1	SITE SURVEY	-
1A	1A CERTIFICATION	-
A-1	SITE & HVAC RELOCATION PLANS	C
A-1.1	PROPERTY LINE & EASEMENT PLAN	C
A-1.2	DEMO SITE PLAN	C
A-2	ENLARGED SITE PLAN & COMPOUND PLAN	C
A-3	ANTENNA PLAN	C
A-4	ELEVATIONS	C
A-5	ELEVATIONS	C

GENERAL CONSTRUCTION NOTES:

1. PLANS ARE INTENDED TO BE DIAGRAMMATIC OUTLINE ONLY, UNLESS NOTED OTHERWISE. THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
2. THE CONTRACTOR SHALL OBTAIN, IN WRITING, AUTHORIZATION TO PROCEED BEFORE STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED OR IDENTIFIED BY THE CONTRACT DOCUMENTS.
3. CONTRACTOR SHALL CONTACT USA (UNDERGROUND SERVICE ALERT) AT (800) 227-2600, FOR UTILITY LOCATIONS, 48 HOURS BEFORE PROCEEDING WITH ANY EXCAVATION, SITE WORK OR CONSTRUCTION.
4. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY INDICATED OTHERWISE, OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.
5. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE IBC / UBC'S REQUIREMENTS REGARDING EARTHQUAKE RESISTANCE, FOR, BUT NOT LIMITED TO, PIPING, LIGHT FIXTURES, CEILING GRID, INTERIOR PARTITIONS, AND MECHANICAL EQUIPMENT. ALL WORK MUST COMPLY WITH LOCAL EARTHQUAKE CODES AND REGULATIONS.
6. REPRESENTATIONS OF TRUE NORTH, OTHER THAN THOSE FOUND ON THE PLOT OF SURVEY DRAWINGS, SHALL NOT BE USED TO IDENTIFY OR ESTABLISH BEARING OF TRUE NORTH AT THE SITE. THE CONTRACTOR SHALL RELY SOLELY ON THE PLOT OF SURVEY DRAWING AND ANY SURVEYOR'S MARKINGS AT THE SITE FOR THE ESTABLISHMENT OF TRUE NORTH, AND SHALL NOTIFY THE ARCHITECT / ENGINEER PRIOR TO PROCEEDING WITH THE WORK IF ANY DISCREPANCY IS FOUND BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND THE TRUE NORTH ORIENTATION AS DEPICTED ON THE CIVIL SURVEY. THE CONTRACTOR SHALL ASSUME SOLE LIABILITY FOR ANY FAILURE TO NOTIFY THE ARCHITECT / ENGINEER.
7. THE BUILDING DEPARTMENT ISSUING THE PERMITS SHALL BE NOTIFIED AT LEAST TWO WORKING DAYS PRIOR TO THE COMMENCEMENT OF WORK, OR AS OTHERWISE STIPULATED BY THE CODE ENFORCEMENT OFFICIAL HAVING JURISDICTION.
8. DO NOT EXCAVATE OR DISTURB BEYOND THE PROPERTY LINES OR LEASE LINES, UNLESS OTHERWISE NOTED.
9. ALL EXISTING UTILITIES, FACILITIES, CONDITIONS, AND THEIR DIMENSIONS SHOWN ON THE PLAN HAVE BEEN PLOTTED FROM AVAILABLE RECORDS. THE ARCHITECT / ENGINEER AND THE OWNER ASSUME NO RESPONSIBILITY WHATSOEVER AS TO THE SUFFICIENCY OR THE ACCURACY OF THE INFORMATION SHOWN ON THE PLANS, OR THE MANNER OF THEIR REMOVAL OR ADJUSTMENT. CONTRACTORS SHALL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL EXISTING UTILITIES AND FACILITIES PRIOR TO START OF CONSTRUCTION. CONTRACTORS SHALL ALSO OBTAIN FROM EACH UTILITY COMPANY DETAILED INFORMATION RELATIVE TO WORKING SCHEDULES AND METHODS OF REMOVING OR ADJUSTING EXISTING UTILITIES.
10. CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES, BOTH HORIZONTAL AND VERTICALLY, PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES OR DOUBTS AS TO THE INTERPRETATION OF PLANS SHOULD BE IMMEDIATELY REPORTED TO THE ARCHITECT / ENGINEER FOR RESOLUTION AND INSTRUCTION, AND NO FURTHER WORK SHALL BE PERFORMED UNTIL THE DISCREPANCY IS CHECKED AND CORRECTED BY THE ARCHITECT / ENGINEER. FAILURE TO SECURE SUCH INSTRUCTION MEANS CONTRACTOR WILL HAVE WORKED AT HIS/HER OWN RISK AND EXPENSE.
11. ALL NEW AND EXISTING UTILITY STRUCTURES ON SITE AND IN AREAS TO BE DISTURBED BY CONSTRUCTION SHALL BE ADJUSTED TO FINISH ELEVATIONS PRIOR TO FINAL INSPECTION OF WORK.
12. ANY DRAIN AND/OR FIELD TILE ENCOUNTERED / DISTURBED DURING CONSTRUCTION SHALL BE RETURNED TO IT'S ORIGINAL CONDITION PRIOR TO COMPLETION OF WORK. SIZE, LOCATION AND TYPE OF ANY UNDERGROUND UTILITIES OR IMPROVEMENTS SHALL BE ACCURATELY NOTED AND PLACED ON "AS-BUILT" DRAWINGS BY GENERAL CONTRACTOR, AND ISSUED TO THE ARCHITECT / ENGINEER AT COMPLETION OF PROJECT.
13. ALL TEMPORARY EXCAVATIONS FOR THE INSTALLATION OF FOUNDATIONS, UTILITIES, ETC., SHALL BE PROPERLY LAID BACK OR BRACED IN ACCORDANCE WITH CORRECT OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REQUIREMENTS.
14. INCLUDE MISC. ITEMS PER AT&T SPECIFICATIONS
15. IT IS A VIOLATION OF LAW FOR ANY PERSONS, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT
16. ALL (N) CABLING AND EQUIPMENT MUST BE INSTALLED AND USED IN ACCORDANCE WITH THE PRODUCT'S INCLUDED INSTRUCTIONS, LISTING AND/OR LABELING REQUIREMENTS. PER NEC SECTION 110.3(B)
17. THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. A TECHNICIAN WILL VISIT THE SITE AS REQUIRED FOR ROUTINE MAINTENANCE. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT DISTURBANCE OR EFFECT ON DRAINAGE; NO SANITARY SEWER SERVICE, POTABLE WATER, OR TRASH DISPOSAL IS REQUIRED AND NO COMMERCIAL SIGNAGE IS PROPOSED.
18. PENETRATIONS SHALL BE FIRE-STOPPED AND OPENINGS SHALL BE PROTECTED THROUGH FIRE-RATED WALLS, FLOOR, ROOF AND CEILING ASSEMBLIES AS REQUIRED BY THE 2018 IBC CHAPTER 7.
19. STRUCTURAL ANALYSIS IS NOT WITHIN THE SCOPE OF WORK CONTAINED IN THIS DRAWINGS SET. FOR ANALYSIS OF EXISTING AND/OR PROPOSED COMPONENTS, REFER TO STRUCTURAL ANALYSIS PROVIDED BY J5 UNDER SEPARATE COVER.
20. ANTENNA MOUNT ANALYSIS IS NOT WITHIN THE SCOPE OF WORK CONTAINED IN THIS DRAWING SET. FOR ANALYSIS OF MOUNT TO SUPPORT PROPOSED COMPONENTS, REFER TO ANTENNA MOUNT STRUCTURAL ANALYSIS PROVIDED BY J5 UNDER SEPARATE COVER.
21. TOWER ANALYSIS TO BE CONDUCTED AND PROVIDED BY TOWER OWNER. FOR ANALYSIS OF EXISTING AND/OR PROPOSED COMPONENTS, REFER TO TOWER STRUCTURAL ANALYSIS UNDER SEPARATE COVER.

APPLICABLE CODES, REGULATIONS AND STANDARDS:

1. SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION.
2. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.
3. SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS:
   - 3.1. AMERICAN CONCRETE INSTITUTE (ACI) 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
   - 3.2. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), MANUAL OF STEEL CONSTRUCTION, LRFD, FOURTEENTH EDITION
   - 3.3. TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA/EIA) 222-H, STRUCTURAL STANDARD FOR ANTENNA SUPPORTING STRUCTURES AND ANTENNAS
   - 3.4. INSTITUTE FOR ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE) 81, GUIDE FOR MEASURING EARTH RESISTIVITY, GROUND IMPEDANCE, AND EARTH SURFACE POTENTIALS OF A GROUND SYSTEM IEEE 1100 (1999) RECOMMENDED PRACTICE FOR POWERING AND GROUNDING OF ELECTRICAL EQUIPMENT.
   - 3.5. IEEE C62.41, RECOMMENDED PRACTICES ON SURGE VOLTAGES IN LOW VOLTAGE AC POWER CIRCUITS (FOR LOCATION CATEGORY "C3" AND "HIGH SYSTEM EXPOSURE")
   - 3.6. TIA 607 COMMERCIAL BUILDING GROUNDING AND BONDING REQUIREMENTS FOR TELECOMMUNICATIONS TELCORDIA GR-63 NETWORK
   - 3.7. EQUIPMENT-BUILDING SYSTEM (NEBS): PHYSICAL PROTECTION
   - 3.8. TELCORDIA GR-347 CENTRAL OFFICE POWER WIRING
   - 3.9. TELCORDIA GR-1275 GENERAL INSTALLATION REQUIREMENTS
   - 3.10. TELCORDIA GR-1503 COAXIAL CABLE CONNECTIONS
   - 3.11. ANY AND ALL OTHER LOCAL & STATE LAWS AND REGULATIONS
   - 3.12. FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

ABBREVIATIONS:

A.B.	ANCHOR BOLT	FDN.	FOUNDATION	SCH.	SCHEDULE
ABV.	ABOVE	F.O.C.	FACE OF CONCRETE	SHT.	SHEET
ACCA	ANTENNA CABLE COVER ASSEMBLY	F.O.M.	FACE OF MASONRY	SIM.	SIMILAR
ADD'L	ADDITIONAL	F.O.S.	FACE OF STUD	SPEC.	SPECIFICATIONS
A.F.F.	ABOVE FINISHED FLOOR	F.O.W.	FACE OF WALL	SQ.	SQUARE
A.F.G.	ABOVE FINISHED GRADE	F.S.	FINISH SURFACE	S.S.	STAINLESS STEEL
ALUM.	ALUMINUM	FT.(')	FOOT (FEET)	STD.	STANDARD
ALT.	ALTERNATE	FTG.	FOOTING	STL.	STEEL
ANT.	ANTENNA	G.	GROWTH (CABINET)	STRUC.	STRUCTURAL
APPRX.	APPROXIMATE(LY)	GA.	GAUGE	TEMP.	TEMPORARY
ARCH.	ARCHITECT(URAL)	GI.	GALVANIZE(D)	THK.	THICK(NESS)
AWG.	AMERICAN WIRE GAUGE	G.F.I.	GROUND FAULT CIRCUIT	T.N.	TOE NAIL
BLDG.	BUILDING	INTERRUPTER		T.O.A.	TOP OF ANTENNA
BLK.	BLOCK	GLB. (GLU-LAM)	GLUE LAMINATED BEAM	T.O.C.	TOP OF CURB
BLKG.	BLOCKING	GPS	GLOBAL POSITIONING SYSTEM	T.O.F.	TOP OF FOUNDATION
BM.	BEAM	GRND.	GROUND	T.O.P.	TOP OF PLATE (PARAPET)
B.N.	BOUNDARY NAILING	HDR.	HEADER	T.O.S.	TOP OF STEEL
BTCW.	BARE TINNED COPPER WIRE	HGR.	HANGER	T.O.W.	TOP OF WALL
B.O.F.	BOTTOM OF FOOTING	HT.	HEIGHT	TYP.	TYPICAL
B/U	BACK-UP CABINET	ICGB.	ISOLATED COPPER GROUND BUS	U.G.	UNDER GROUND
CAB.	CABINET	IN. (")	INCH(ES)	U.L.	UNDERWRITERS LABORATORY
CANT.	CANTILEVER(ED)	INT.	INTERIOR	U.N.O.	UNLESS NOTED OTHERWISE
C.I.P.	CAST IN PLACE	LB.(#)	POUND(S)	V.I.F.	VERIFY IN FIELD
CLG.	CEILING	L.B.	LAG BOLTS	W	WIDE (WIDTH)
CLR.	CLEAR	L.F.	LINEAR FEET (FOOT)	w/	WITH
COL.	COLUMN	L.	LONG(ITUDINAL)	WD.	WOOD
CONC.	CONCRETE	MAS.	MASONRY	W.P.	WEATHERPROOF
CONN.	CONNECTION(OR)	MAX.	MAXIMUM	WT.	WEIGHT
CONST.	CONSTRUCTION	M.B.	MACHINE BOLT	℄	CENTERLINE
CONT.	CONTINUOUS	MECH.	MECHANICAL	ℙ	PLATE, PROPERTY LINE
d	PENNY (NAILS)	MFR.	MANUFACTURER		
DBL.	DOUBLE	MIN.	MINIMUM		
DEPT.	DEPARTMENT	MISC.	MISCELLANEOUS		
D.F.	DOUGLAS FIR	MTL.	METAL		
DIA.	DIAMETER	(N)	NEW		
DIAG.	DIAGONAL	NO.(#)	NUMBER		
DIM.	DIMENSION	N.T.S.	NOT TO SCALE		
DWG.	DRAWING(S)	O.C.	ON CENTER		
DWL.	DOWEL(S)	OPNG.	OPENING		
EA.	EACH	P/C	PRECAST CONCRETE		
EL.	ELEVATION	PCS	PERSONAL COMMUNICATION		
ELEC.	ELECTRICAL	SERVICES			
ELEV.	ELEVATOR	PLY.	PLYWOOD		
EMT.	ELECTRICAL METALLIC TUBING	PPC	POWER PROTECTION CABINET		
E.N.	EDGE NAIL	PRC	PRIMARY RADIO CABINET		
ENG.	ENGINEER	P.S.F.	POUNDS PER SQUARE FOOT		
EQ.	EQUAL	P.S.I.	POUNDS PER SQUARE INCH		
EXP.	EXPANSION	P.T.	PRESSURE TREATED		
EXST.(E)	EXISTING	PWR.	POWER (CABINET)		
EXT.	EXTERIOR	QTY.	QUANTITY		
FAB.	FABRICATION(OR)	RAD.(R)	RADIUS		
F.F.	FINISH FLOOR	REF.	REFERENCE		
F.G.	FINISH GRADE	REINF.	REINFORCEMENT(ING)		
FIN.	FINISH(ED)	REQ'D/ RGS.	REQUIRED RIGID GALVANIZED STEEL		
FLR.	FLOOR				

SYMBOLS LEGEND:

- BLDG. SECTION (1 / A-300 — 1 / A-300)
- WALL SECTION (A5 / A-310)
- DETAIL (D5 / A-500)
- ELEVATION (C1, A4, C4, A1 / A-113)
- DOOR SYMBOL (001)
- WINDOW SYMBOL (10)
- TILT-UP PANEL MARK (3)
- PROPERTY LINE
- CENTERLINE
- SETBACK
- ELEVATION DATUM (+0")
- GRID/COLUMN LINE (A)
- KEYNOTE, DIMENSION ITEM (3)
- KEYNOTE, CONSTRUCTION ITEM (2)
- WALL TYPE MARK (W- 3)
- ROOM NAME / ROOM NUMBER (OFFICE 101)

- GROUT OR PLASTER
- (E) BRICK
- (E) MASONRY
- CONCRETE
- EARTH
- GRAVEL
- PLYWOOD
- SAND
- PLYWOOD
- SAND
- (E) STEEL
- MATCH LINE
- GROUND CONDUCTOR
- OH — OVERHEAD SERVICE CONDUCTORS
- Tel — TELEPHONE CONDUIT
- Pwr — POWER CONDUIT
- Coax — COAXIAL CABLE
- CHAIN LINK FENCE
- CHAIN LINK FENCE
- WOOD FENCE
- (P) ANTENNA
- (P) RRH
- (P) DC SURGE SUPPRESSION
- (F) ANTENNA
- (F) RRH
- (E) EQUIPMENT

PREPARED FOR

AT&T

NEW CINGULAR WIRELESS PCS, LLC ("AT&T")
7670 S. CHESTER ST.
CENTENNIAL, CO 80112

Vendor:

J5 INFRASTRUCTURE PARTNERS

23 MAUCHLY #110
IRVINE, CA 92618

J5 PROJECT ID: P-056464

Issued For:

UTL05403

UT_ZION_NP_VISITOR_CENTER

95 ZION PARK BLVD
SPRINGDALE, UT 84767

PARCEL ID: S-138-C-1

DRAWN BY: SLM

CHECKED BY: KM

REV	DATE	DESCRIPTION
A	12/14/22	90% ZD
B	1/16/23	90% ZD
C	4/5/23	90% ZD

Licensor:

Sheet Title:

GENERAL NOTES

Sheet Number:

GN-1

SITE WORK GENERAL NOTES:

1. THE SUBCONTRACTOR SHALL CONTRACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
2. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY CONTRACTOR. EXTREME CAUTION SHOULD BE USED BY THE SUBCONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES, SUBCONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A.) FALL PROTECTION B.) CONFINED SPACE C.) ELECTRICAL SAFETY D.) TRENCHING AND EXCAVATION.
3. ALL SITE WORK SHALL BE AS INDICATED ON THE STAMPED CONSTRUCTION DRAWINGS AND PROJECT SPECIFICATIONS.
4. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES, AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
5. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED, OR OTHERWISE DISCONNECTED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF CONTRACTOR, OWNER, AND/OR LOCAL UTILITIES.
6. THE SUBCONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATION FOR SITE SIGNAGE.
7. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE BTS EQUIPMENT AND TOWER AREAS.
8. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW, OR ICE SHALL BE PLACED IN ANY FILL OR EMBANKMENT.
9. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
10. THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT, OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE AND STABILIZED TO PREVENT EROSION AS SPECIFIED ON THE PROJECT SPECIFICATIONS.
11. SUBCONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.
12. NOTICE TO PROCEED - NO WORK TO COMMENCE PRIOR TO COMPANY'S WRITTEN NOTICE TO PROCEED AND THE ISSUANCE OF A PURCHASE ORDER.
13. ALL CONSTRUCTION MEANS AND METHODS: INCLUDING BUT NOT LIMITED TO, ERECTION PLANS, RIGGING PLANS, CLIMBING PLANS, AND RESCUE PLANS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN AND SHALL ADHERE TO ANSI/TIA-1019 (LATEST EDITION) INCLUDING THE REQUIRED INVOLVEMENT OF A QUALIFIED ENGINEER FOR CLASS IV CONSTRUCTION.

GENERAL NOTES:

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:

   CONTRACTOR - J5 INFRASTRUCTURE PARTNERS
   SUBCONTRACTOR - GENERAL CONTRACTOR (CONSTRUCTION)
   CARRIER - AT&T
   OEM - ORIGINAL EQUIPMENT MANUFACTURER
2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE THEMSELVES, WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR AND AT&T
3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
4. DRAWINGS PROVIDED HERE ARE NOT TO SCALE AND ARE INTENDED TO SHOW OUTLINE ONLY.
5. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
6. 'KITTING LIST' SUPPLIED WITH THE BID PACKAGE IDENTIFIES ITEMS THAT WILL BE SUPPLIED BY CONTRACTOR. ITEMS NOT INCLUDED IN THE BILL OF MATERIALS AND KITTING LIST SHALL BE SUPPLIED BY THE SUBCONTRACTOR.
7. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
8. IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS. THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CONTRACTOR AND AT&T PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION.
9. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWINGS.
10. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT THE SUBCONTRACTOR'S EXPENSE; TO THE SATISFACTION OF THE OWNER.
11. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
12. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION, TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.

CONCRETE AND REINFORCING STEEL NOTES:

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185, AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.
2. ALL CONCRETE SHALL HAVE A MINIMUM COMPESSIVE STRENGTH OF 2,500 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE. SLAB FOUNDATION DESIGN ASSUMING ALLOWABLE SOIL BEARING PRESSURE OF 2000 PSF.
3. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD. UNO.
4. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS.

   4.1. CONCRETE CAST AGAINST EARTH: 3" MIN.
   4.2. CONCRETE EXPOSED TO WEATHER:
   4.2.1. #6 AND LARGER - 2" MIN.
   4.2.2. #5 AND SMALLER & WWF. - 1 1/2" MIN.
   4.3. CONCRETE NOT EXPOSED TO WEATHER OR NOT CAST AGAINST THE GROUND:
   4.3.1. SLAB AND WALLS 3/4" MIN.
   4.3.2. BEAMS AND COLUMNS 1 1/2" MIN.
5. A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNLESS NOTED OTHERWISE, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4

PREPARED FOR

AT&T

NEW CINGULAR WIRELESS PCS, LLC ("AT&T")
7670 S. CHESTER ST.
CENTENNIAL, CO 80112

Vendor:

J5 INFRASTRUCTURE PARTNERS

23 MAUCHLY #110
IRVINE, CA 92618

J5 PROJECT ID: P-056464

Issued For:

UTL05403

UT_ZION_NP_VISITOR_CENTER

95 ZION PARK BLVD
SPRINGDALE, UT 84767

PARCEL ID: S-138-C-1

DRAWN BY: SLM

CHECKED BY: KM

REV	DATE	DESCRIPTION
A	12/14/22	90% ZD
B	1/16/23	90% ZD
C	4/5/23	90% ZD

Licensor:

Sheet Title:

GENERAL NOTES

Sheet Number:

GN-2

This Site Operated by:

AT&T MOBILITY

AT&T MOBILITY 7670 S. CHESTER ST. CENTENNIAL, CO 80112
IN CASE OF FIRE AND THE NEED FOR SHUTDOWN
TO DEACTIVATE ANTENNAS CALL THE
FOLLOWING NUMBER:
For 24 Hour Emergency Contact and Access Please Call:
(800) 638-2822

Reference Site#: UTL05403

Site Address: 95 ZION PARK BLVD SPRINGDALE, UT 84767

10 FENCED COMPOUND SIGNAGE
N.T.S.

DANGER

NO TRESPASSING

9 FENCED COMPOUND SIGNAGE
N.T.S.

INFORMATION

Federal Communications Communication Tower Registration Number

1 2 3 4 5 6 7

Posted in accordance with federal Communications Commission rules and antenna tower registration 47CFR 17.4(g).

8" x 12"

6 FCC ASR SIGNAGE
N.T.S.

NOTICE

AUTHORIZED PERSONNEL ONLY

8 DOOR / EQUIPMENT SIGN
N.T.S.

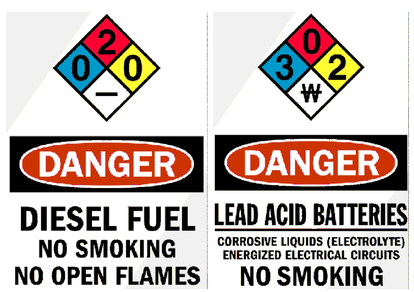
Property of AT&T

Authorized Personnel Only

No Trespassing
Violators will be Prosecuted

In case of emergency, or prior to performing maintenance on this site, call _____
and reference cell site number _____

5 GATE SIGNAGE
N.T.S.



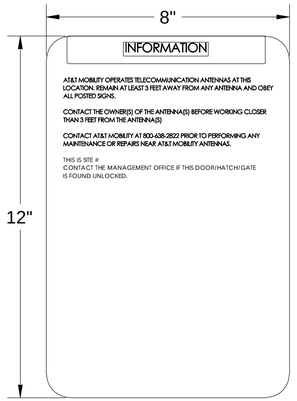
7 NFPA HAZARD SIGN - TYPICAL
N.T.S.

Property of AT&T

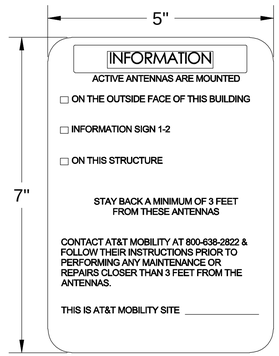
Authorized Personnel Only

In case of emergency, or prior to performing maintenance on this site, call _____
and reference cell site number _____

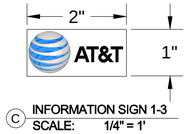
4 SHELTER / CABINET DOORS SIGNAGE
N.T.S.



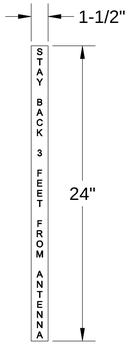
A INFORMATION SIGN 1-1
SCALE: 1/2"= 1'



B INFORMATION SIGN 1-2
SCALE: 3/4" = 1'



C INFORMATION SIGN 1-3
SCALE: 1/4" = 1'



D INFORMATION SIGN 1-4
SCALE: 3/16" = 1'

1. CONTRACTOR SHALL INSTALL ALL INFORMATION SIGNAGE IN ACCORDANCE w/ AT&T WIRELESS DOCUMENT #03-0074, RF EXPOSURE POLICY AND RF SAFETY COMPLIANCE PROGRAM, LATEST EDITION.

2. FABRICATION:

*SIGN I-1: ENTRANCE DOOR, SEE DETAIL 1A, THIS SHEET

SIGN 1 IS TO BE MADE ON THE 50 MIL ALUMINUM SHEETING (SIZE 8 INCHES BY 12 INCHES) w/ FOUR (4) ¼ INCH MOUNTING HOLES, ONE EACH CORNER OF THE SIGN FOR MOUNTING w/ HARDWARE w/ TIE WRAPS. THE MAIN BACKGROUND COLOR IS TO BE WHITE FRONT & BACK w/ BLACK LETTERING.

THE INFORMATION BAND SHALL BE 1.2 INCH SOLID GREEN BAND w. 0.5 INCH HIGH BLACK LETTERING. THE BODY TEXT SHALL BE IN BLACK LETTERING w/0.2 INCH HIGH LETTERS. THE REF LINE SHALL BE IN ⅛ INCH LETTERS.

THE PLACEMENT OF TEXT SHALL BE DONE IN A MANNER THAT WILL PERMIT EASY READING FROM A DISTANCE OF APPROXIMATELY 6 FEET IN FRONT OF THE SIGN.

ALL PAINT WILL BE BAKED w/ENAMEL w/ UV PROTECTIVE COATING OVER THE FACE OF THE SIGN.

*SIGN 1-2: POLE, SEE DETAIL 1B, THIS SHEET

SIGN 2 MUST BE A NON METALLIC LABEL w/ AN ADHESIVE BACKING, THE LABEL SHALL BE MADE USING VINYL OR SIMILAR WEATHERPROOF MATERIAL. THE LABEL SHALL BE APPROXIMATELY 5X7 INCHES w/ A WHITE BACKGROUND AND BLACK LETTERING. THE GREEN BAND SHALL BE 1.375 INCH IN HEIGHT & THE LETTERING SHALL BE BLACK w/ 0.75 INCH HIGH LETTERS. THE TEXT LETTERING SHALL BE BLACK w/ ⅛ INCH HIGH LETTERS. UV PROTECTION SHALL BE PLACED OVER THE FRONT OF THE LABEL.

*SIGN 1-3: BACK OF ANTENNAS, SEE DETAIL 1C & 3, THIS SHEET

*SIGN 3 IS A 1 INCH X 2 INCH PANEL THAT CAN BE APPLIED TO THE BACK OR SIDE OF AN ANTENNA TO IDENTIFY IT AS AN AT&T ANTENNA.

*SIGN 1-4: SIDE OF ANTENNAS, SEE DETAIL 1D & 3, THIS SHEET

SIGN 4 IS MADE FROM TRANSPARENT MATERIAL 1-1/2 INCHES WIDE & 24 INCHES LONG. THE LETTERING IS TO BE BLACK w ½ INCH LETTERING IN A VERTICAL COLUMN. THE SPACING BETWEEN WORDS MUST BE SUCH THAT IT IS EASILY READ & FILLS THE LENGTH OF THE SIGN.

3 INFORMATION SIGNAGE
N.T.S.

NOTE:
1. CONTRACTOR SHALL INSTALL ALL INFORMATION SIGNAGE IN ACCORDANCE w/ AT&T WIRELESS DOCUMENT #03-0074, RF EXPOSURE POLICY AND RF SAFETY COMPLIANCE PROGRAM, LATEST EDITION.
2. CONTRACTOR SHALL CONTACT AT&T R-RFSC FOR INFORMATION ON MPE LEVELS AND INSTRUCTIONS ON LEVEL AND LOCATION OF SIGNAGE

CAUTION

On this tower:

Radio frequency (RF) fields near some antennas *may exceed* the FCC Occupational Exposure Limits.

Contact AT&T at 800-638-2822, option 9 and 3, and follow their instructions prior to performing maintenance or repairs beyond this point.

Personnel climbing this tower should be trained for working in RF environments and use a personal RF monitor if working near active antennas.

Caution Sign #CADFT-AL-05.7 This is AT&T site 317992

2 CAUTION SIGN
N.T.S.

SIGNAGE AND STRIPING INFORMATION

1. THE FOLLOWING INFORMATION IS A GUIDELINE w/ RESPECT TO PREVAILING STANDARDS LIMITING HUMAN EXPOSURE TO RADIO FREQUENCY ENERGY AND SHOULD BE USED AS SUCH. IF THE SITE'S EMF REPORT OR ANY LOCAL, STATE OR FEDERAL GUIDELINES OR REGULATIONS SHOULD BE IN CONFLICT w/ ANY PART OF THESE NOTES OR PLANS, THE MORE RESTRICTIVE GUIDELINE OR REGULATION SHALL BE FOLLOWED AND OVERRIDE THE LESSER.
2. THE PUBLIC LIMIT OF RF EXPOSURE ALLOWED BY AT&T IS 1mWcm*2 AND THE OCCUPATIONAL LIMIT OF RF EXPOSURE ALLOWED BY AT&T IS 5mWcm*2
3. IF THE BOTTOM OF THE ANTENNA IS MOUNTED (8) EIGHT FEET ABOVE THE GROUND OR WORKING PLATFORM LINE OF THE PERSONAL COMMUNICATION SYSTEM (PCS) AND DOES NOT EXCEED THE PUBLIC LIMIT OF RF EXPOSURE LIMIT THEN NO STRIPING OR BARRICADES SHOULD BE NEEDED.
4. IF THE PUBLIC LIMIT OF RF EXPOSURE ON THE SITE IS EXCEEDED AND THE AREA IS PUBLICLY ACCESSIBLE (e.g. ROOF ACCESS DOOR THAT CANNOT BE LOCKED, OR FIRE EGRESS) THEN BOTH BARRICADES AND STRIPING SHALL BE PLACED AROUND THE ANTENNAS. THE EXACT EXTENT OF THE BARRICADES AND STRIPING SHALL BE DETERMINED BY THE EMF REPORT FOR THE SITE DONE BEFORE OR SHORTLY AFTER COMPLETION OF SITE CONSTRUCTION. USE THE PLANS AS A GUIDELINE FOR PLACEMENT OF SUCH BARRICADES AND STRIPING.
5. IF THE PUBLIC LIMIT OF RF EXPOSURE ON THE SITE IS EXCEEDED AND THE AREA IS PUBLICLY ACCESSIBLE (e.g. ROOF ACCESS DOOR THAT CANNOT BE LOCKED, OR FIRE EGRESS) THEN BOTH BARRICADES AND STRIPING SHALL BE PLACED AROUND THE ANTENNAS. THE EXACT EXTENT OF THE BARRICADES & STRIPING SHALL BE DETERMINED BY THE EMF REPORT FOR THE SITE DONE BEFORE OR SHORTLY AFTER COMPLETION OF SITE CONSTRUCTION. USE THE PLANS AS A GUIDELINE FOR PLACEMENT OF SUCH BARRICADES AND STRIPING.
6. ALL TRANSMIT ANTENNAS REQUIRE A THREE LANGUAGE WARNING SIGN WRITTEN IN ENGLISH, SPANISH, AND CHINESE. THIS SIGN SHALL BE PROVIDED TO THE CONTRACTOR Y THE AT&T CONSTRUCTION PROJECT MANAGER AT THE TIME OF CONSTRUCTION. THE LARGER SIGN SHALL BE PLACED IN PLAIN SIGHT AT ALL ROOF ACCESS LOCATIONS AND ON ALL BARRICADES. THE SMALLER SIGN SHALL BE PLACED ON THE ANTENNA ENCLOSURES IN A MANNER THAT IS EASILY SEEN BY ANY PERSON ON THE ROOF. WARNING SIGNS SHALL COMPLY w/ ANSI C95.2 COLOR, SYMBOL, AND CONTENT CONVENTIONS. ALL SIGNS SHALL HAVE AT&T'S NAME AND THE COMPANY CONTACT INFORMATION (e.g. TELEPHONE NUMBER) TO ARRANGE FOR ACCESS TO THE RESTRICTED AREAS. THIS TELEPHONE NUMBER SHALL BE PROVIDED TO THE CONTRACTOR BY THE AT&T CONSTRUCTION PROJECT MANAGER AT THE TIME OF CONSTRUCTION.
7. PHOTOS OF ALL STRIPING, BARRICADES & SIGNAGE SHALL BE PART OF THE CONTRACTORS CLOSE OUT PACKAGE & SHALL BE TURNED INTO THE AT&T CONSTRUCTION PACKAGE & SHALL BE TURNED INTO THE AT&T CONSTRUCTION PROJECT MANAGER AT THE END OF CONSTRUCTION. STRIPING SHALL BE DONE w/ FADE RESISTANT YELLOW SAFETY PAINT IN A CROSS-HATCH PATTERN AS DETAILED BY THE CONSTRUCTION DRAWINGS. ALL BARRICADES SHALL BE MADE OF AN RF FRIENDLY MATERIAL SO AS NOT TO BLOCK OR INTERFERE w/ THE OPERATION OF THE ANTENNAS. BARRICADES SHALL BE PAINTED w/ FADE RESTRAINT YELLOW SAFETY PAINT. THE CONTRACTOR SHALL PROVIDE ALL RF FRIENDLY BARRICADES NEEDED, & SHALL PROVIDE THE AT&T CONSTRUCTION PROJECT MANAGER w/ A DETAILED SHOP DRAWING OF EACH BARRICADE. UPON CONSTRUCTION COMPLETION.

1 GENERAL NOTES
N.T.S.

PREPARED FOR

AT&T

NEW CINGULAR WIRELESS PCS, LLC ("AT&T")
7670 S. CHESTER ST.
CENTENNIAL, CO 80112

Vendor:

J5 INFRASTRUCTURE PARTNERS

23 MAUCHLY #110
IRVINE, CA 92618

J5 PROJECT ID: P-056464

Issued For:

UTL05403

UT_ZION_NP_VISITOR_CENTER

95 ZION PARK BLVD
SPRINGDALE, UT 84767

PARCEL ID: S-138-C-1

DRAWN BY: SLM

CHECKED BY: KM

REV	DATE	DESCRIPTION
A	12/14/22	90% ZD
B	1/16/23	90% ZD
C	4/5/23	90% ZD

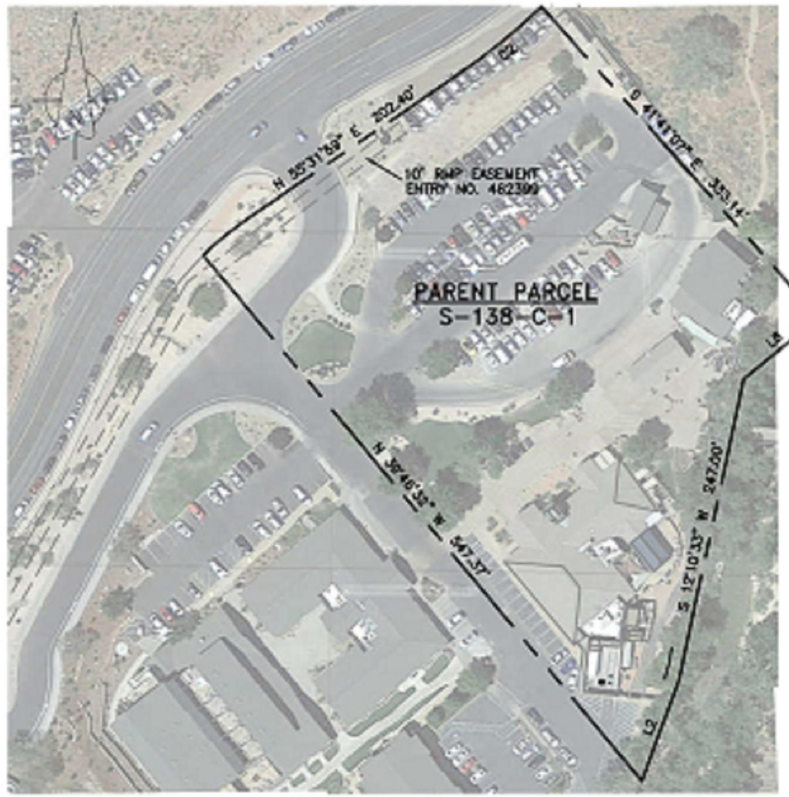
Licensor:

Sheet Title:

SITE SIGNAGE

Sheet Number:

GN-3



PARENT PARCEL AND SURVEY CONTROL OVERVIEW

0' 60' 120' 180'

SCALE: 1" = 120'

Line Table

LINE	BEARING	DISTANCE
L2	S 20°10'33" W	85.91'
L6	S 50°46'08" W	77.30'

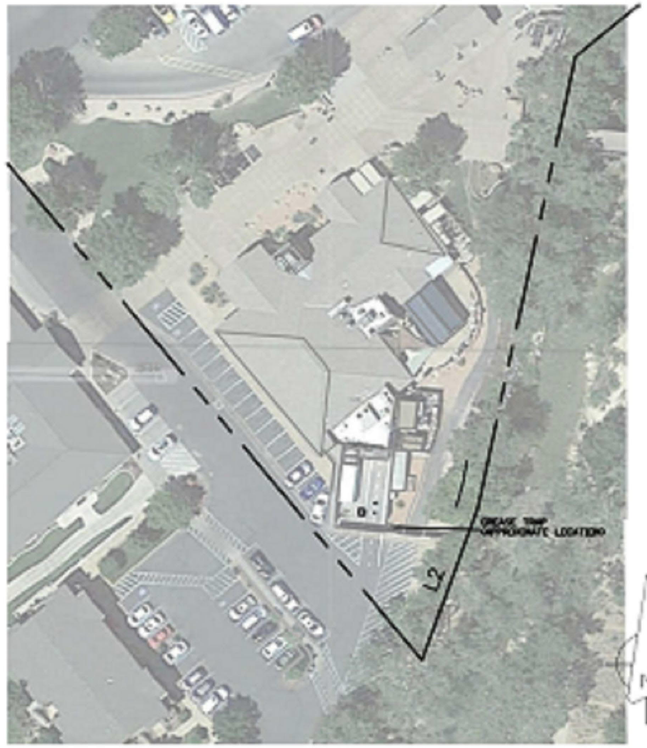
Curve Table

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C2	550.00'	88.17'	88.08'	N 50°56'26" E	9°11'06"

KEYED NOTES

(B) FOUND MONUMENT N ¼ COR S28, T41S R10W, SLB&M. (HELD FOR ORIGIN OF SURVEY)

(C) FOUND MONUMENT CENTER OF S28, T41S R10W, SLB&M. (HELD FOR ALIGNMENT)

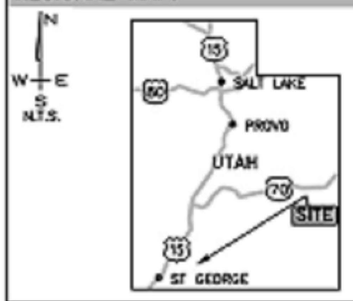


SITE VIEW

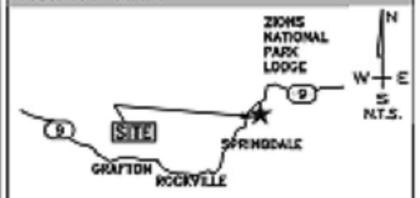
0' 40' 80' 160'

SCALE: 1" = 80'

REGIONAL MAP:



VICINITY MAP:



FEMA PUBLIC FLOOD MAP INFO:

ZONE: AE PANEL: 49053C0900G DATE: 04/02/2009

Flood Note:Regulatory Floodway

PARENT PARCEL OWNER:

PUBLIC RECORD PARCEL ID:

S-138-C-1

DRIVING DIRECTIONS:

Head Northeast on N Terminal Dr (2.3 ft) Slight right (0.2 mi) Use the middle lane to turn right toward N 3700 W (144 ft) Continue onto W Crossbar Rd (0.7 mi) Take the ramp onto Terminal Dr (0.3 mi) Use the middle lane to take the I-80 E ramp to City Ctr/Ogden/Provo (0.7 mi) Use the right lane to keep left at the fork, follow signs for I-80 E and merge onto I-80 E (2.6 mi) merge onto I-80 E (0.6 mi) Use the right 2 lanes to take exit 12 to merge onto I-15 S toward Las Vegas (3.3 mi) Keep left to stay onto I-15 S (386 mi) Take exit 27 for UT-17 E toward Toquerville/Hurricane (0.3 mi) Turn left onto UT-17 S/UT-228 (0.1 mi) Turn left onto UT-9 E/W 500 N (20.0 mi) Turn right (499 ft) Turn right (315 ft) Destination will be on the left.

SURVEYOR'S NARRATIVE:

It is the intent of this map and the survey on which it is based to correctly represent the boundary lines of the Parent Parcel and proposed lease area and Access/Utility easements within the parent parcel. Utility locations shown are based on observed evidence together with evidence from utility plans (if provided by utility companies in response to an Online Survey Locate Request via www.bluestakes.org). Property corners and other survey markers, monuments or evidence that were found at the time of this survey are shown and noted accordingly hereon. There may however exist other related monuments or evidence, any other monuments or related physical evidence contradictory to this survey should be presented to the surveyor for his review and consideration.

BASIS OF BEARING AND DATUM NOTE:

1.) All distances are surface (ground) in US survey feet and all bearings are Grid based upon the Utah Coordinate System 1983, Utah Central Zone (NAD83).

2.) Survey Performed with a survey grade gps rover connected via mobile device to the Trimble Pivot VRS system of Utah (Managed by the Utah AGRC).

Geodetic Position of Control Monument is:

(B) LATITUDE: 37°12'04.63241"N

LONGITUDE: 112°59'18.13826"W

HORZ. DATUM NAD83(UTAH VRS)

VERT. DATUM NAVD88 (GEOID12)

GRID POSITION (SURVEY FT)

NORTHING: 10040614.746aft

EASTING: 1206929.376aft

ELEVATION: 3945.341aft

SURVEYOR'S NOTE & CERTIFICATION:

This "Lease Area Survey" is based on an actual field survey performed by me or under my direction. It correctly depicts existing, readily visible improvements and above ground utilities and the Boundary of the parent parcel was verified from field and record information. This "Lease Area Survey" is not a Boundary Survey of the Parent Parcel and this Survey was developed to support the communications facility plan set named hereon.

PROFESSIONAL LAND SURVEYOR No.5561206 CORY I. SQUIRE 7/6/22 STATE OF UTAH

CIS PROFESSIONAL LAND SURVEYING

Mona, UT (435)660-0816 cory@cispls.com

CORY IVAN SQUIRE UT P.L.S. #5561206-2203

PROJECT NAME:

AT&T

UTL05403

PROJECT ADDRESS:

147 ZION MOUNT CARMEL HWY
SPRINGDALE CITY 84767

TITLE REPORT REVIEW CERTIFICATION

This is to certify that the locatable easements listed in schedule b part I of that certain commitment for title insurance issued 7/13/2022 by First American Title Insurance Company (Commit no. 383-6234597) have been reviewed by the surveyor. If any of those easements affect the AT&T proposed lease area(s) they are plotted and noted accordingly hereon.

DATE OF SUR: 06/30/22

THESE DRAWINGS AND SURVEYS ARE COPYRIGHT PROTECTED AND THE SOLE PROPERTY OF J5 INFRASTRUCTURE PARTNERS AND PRODUCED FOR THE USE OF OUR CLIENT. ANY REPRODUCTION OR USE OF THE INFORMATION CONTAINED WITHIN SAID DOCUMENTS IS PROHIBITED WITHOUT THE WRITTEN CONSENT BY J5 INFRASTRUCTURE PARTNERS.

REV.	DESCRIPTION	DATE	BY	CHK
A	90% PRELIMINARY FOR CLIENT REVIEW ONLY	07/6/22	CKS	CIS
B	FINAL REVIEW AND SURVEYOR'S CERTIFICATION			

DESIGNED FOR:

at&t

DESIGNED BY:

J5 INFRASTRUCTURE PARTNERS

SHEET TITLE:

SURVEY NOTES & REFERENCE
SURVEY CONTROL OVERVIEW
SITE PLAN OVERVIEW

J5 SITE I.D.:	UTL05403	
SHEET INFO.:	Sheet 1 of 1	SU1

PREPARED FOR:

at&t

1A CERTIFICATION LETTER

FOR

AT&T

FACILITY KNOWN AS:

UTL05403

WASHINGTON COUNTY, UTAH

ELEVATION REPORT:	LOCATED WITHIN:	APPROX. SITE LOCATION:
NAVD88 - GROUND ELEVATION: 3915 sft [ELEVATION METERS]: 1193.294 m	WITHIN NENW SECTION 2, TOWNSHIP 41 SOUTH, RANGE 10 WEST, SALT LAKE BASE AND MERIDIAN . WASHINGTON COUNTY, UTAH	147 ZION MOUNT CARMEL HWY SPRINGDALE CITY, WASHINGTON COUNTY, UTAH. 84767

PLAN VIEW: SCALE 1" = 60'

PROFILE VIEW

BASIS OF GEODETIC COORDINATES:

(1) HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (NAD83) [PRIMARY] EXPRESSED IN DEGREES (°) MINUTES (') AND SECONDS (") AND CARRIED TO THE 100TH OF A SECOND, AND ALSO EXPRESSED IN DEGREES AND DECIMAL DEGREES.

(2) VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) EXPRESSED IN U.S. SURVEY FEET AND METERS (METER EQUIVALENT TO 39.37 INCHES).

(3) NAD83 GEODETIC DATA SHOWN HEREON WAS DERIVED FROM AND IS TIED TO THE NATIONAL GEODETIC SURVEY, NATIONAL C.O.R.S. VIA THE O.P.U.S. UTILITY AND OR TRIMBLE GEOMATICS SOFTWARE.

1A GEODETIC COORDINATES:

NAD 83:	37°11'57.09"N 112°59'20.45"W
DECIMAL DEGREES:	37.199192°N 112.989015°W

SURVEYOR'S CERTIFICATION:

I HEREBY CERTIFY THAT THE GEO-DETIC COORDINATES REPORTED HEREON ARE ACCURATE AND MEET FAA/FCC REPORTING RE-QUIREMENTS OF 1A: FIFTEEN FEET (15') HORIZONTALLY AND THREE FEET (3') VERTICALLY.

PROFESSIONAL LAND SURVEYOR
No.5561206
CORY I. SQUIRE
7/6/22
STATE OF UTAH

DATE OF SURV.: 06/30/22

THESE DRAWINGS AND SURVEYS ARE COPYRIGHT PROTECTED AND THE SOLE PROPERTY OF J5 INFRASTRUCTURE PARTNERS AND PRODUCED FOR THE USE OF OUR CLIENT. ANY REPRODUCTION OR USE OF THE INFORMATION CONTAINED WITHIN SAID DOCUMENTS IS PROHIBITED WITHOUT THE WRITTEN CONSENT BY J5 INFRASTRUCTURE PARTNERS.

PREPARED BY:

CIS
PROFESSIONAL LAND SURVEYING
295 N 200 E
MONA, UT 84645
(435)660-0816
cory@cispls.com

J5 INFRASTRUCTURE PARTNERS

PREPARED FOR

AT&T

NEW CINGULAR WIRELESS PCS, LLC ("AT&T")
7670 S. CHESTER ST.
CENTENNIAL, CO 80112

Vendor:

J5 INFRASTRUCTURE PARTNERS

23 MAUCHLY #110
IRVINE, CA 92618

J5 PROJECT ID: P-056464

Issued For:

UTL05403

UT_ZION_NP_VISITOR_CENTER

95 ZION PARK BLVD
SPRINGDALE, UT 84767

PARCEL ID: S-138-C-1

DRAWN BY: SLM

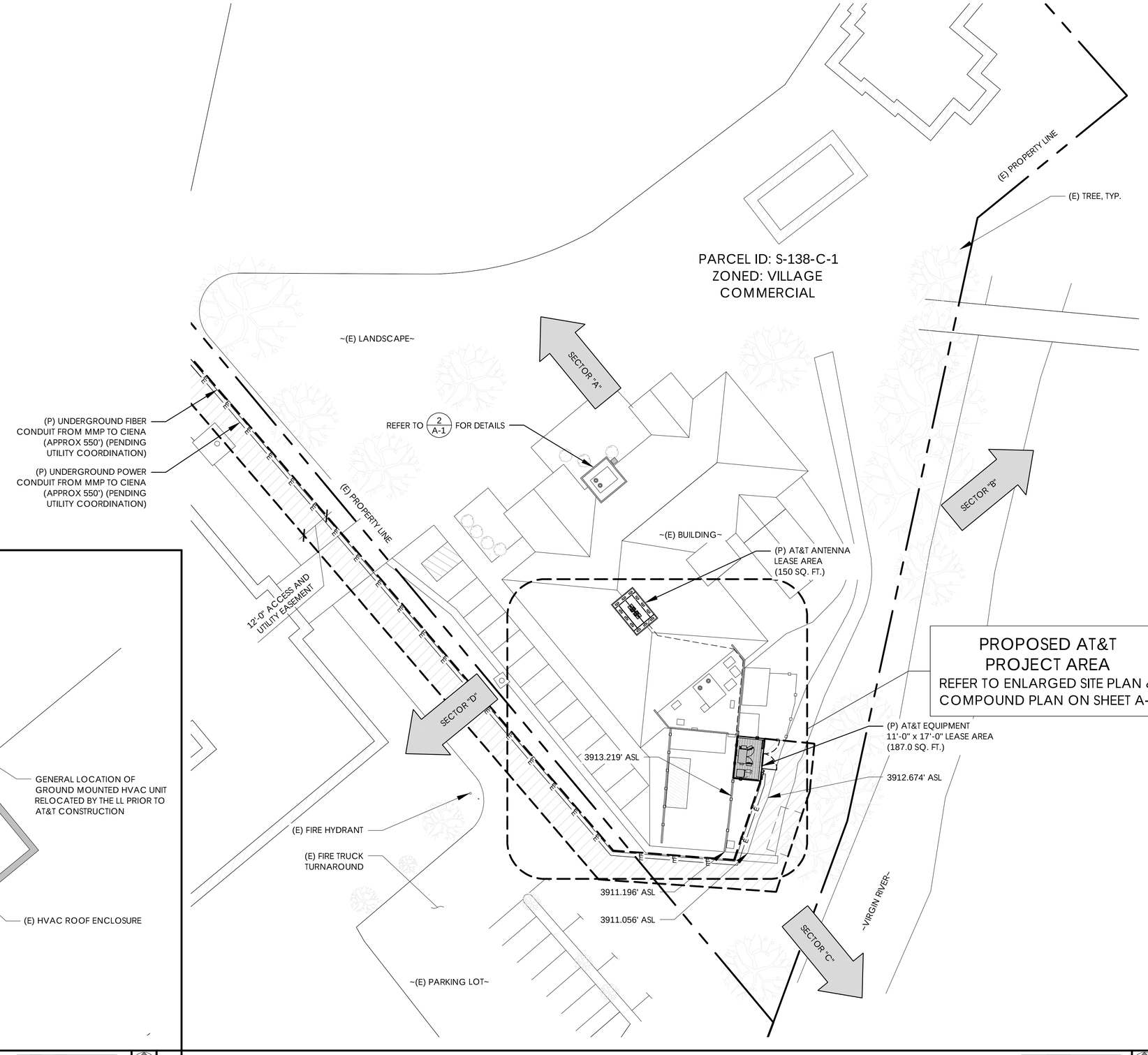
CHECKED BY: KM

REV	DATE	DESCRIPTION
A	12/14/22	90% ZD
B	1/16/23	90% ZD
C	4/5/23	90% ZD

Licensor:

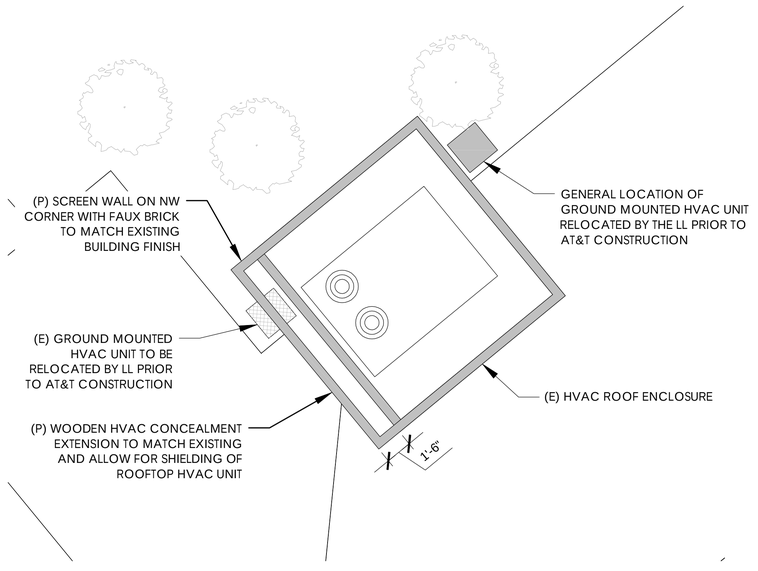
Sheet Title:
1A CERTIFICATION

Sheet Number:
1A



SITE PLAN

24"x36" SCALE: 1" = 20'-0"



HVAC RELOCATION PLAN

24"x36" SCALE: 1/4" = 1'-0"

PREPARED FOR

AT&T

NEW CINGULAR WIRELESS PCS, LLC ("AT&T")
7670 S. CHESTER ST.
CENTENNIAL, CO 80112

Vendor:

J5 INFRASTRUCTURE PARTNERS

23 MAUCHLY #110
IRVINE, CA 92618

J5 PROJECT ID: P-056464

Issued For:

UTL05403

UT_ZION_NP_VISITOR_CENTER

95 ZION PARK BLVD
SPRINGDALE, UT 84767

PARCEL ID: S-138-C-1

DRAWN BY: SLM

CHECKED BY: KM

REV	DATE	DESCRIPTION
A	12/14/22	90% ZD
B	1/16/23	90% ZD
C	4/5/23	90% ZD

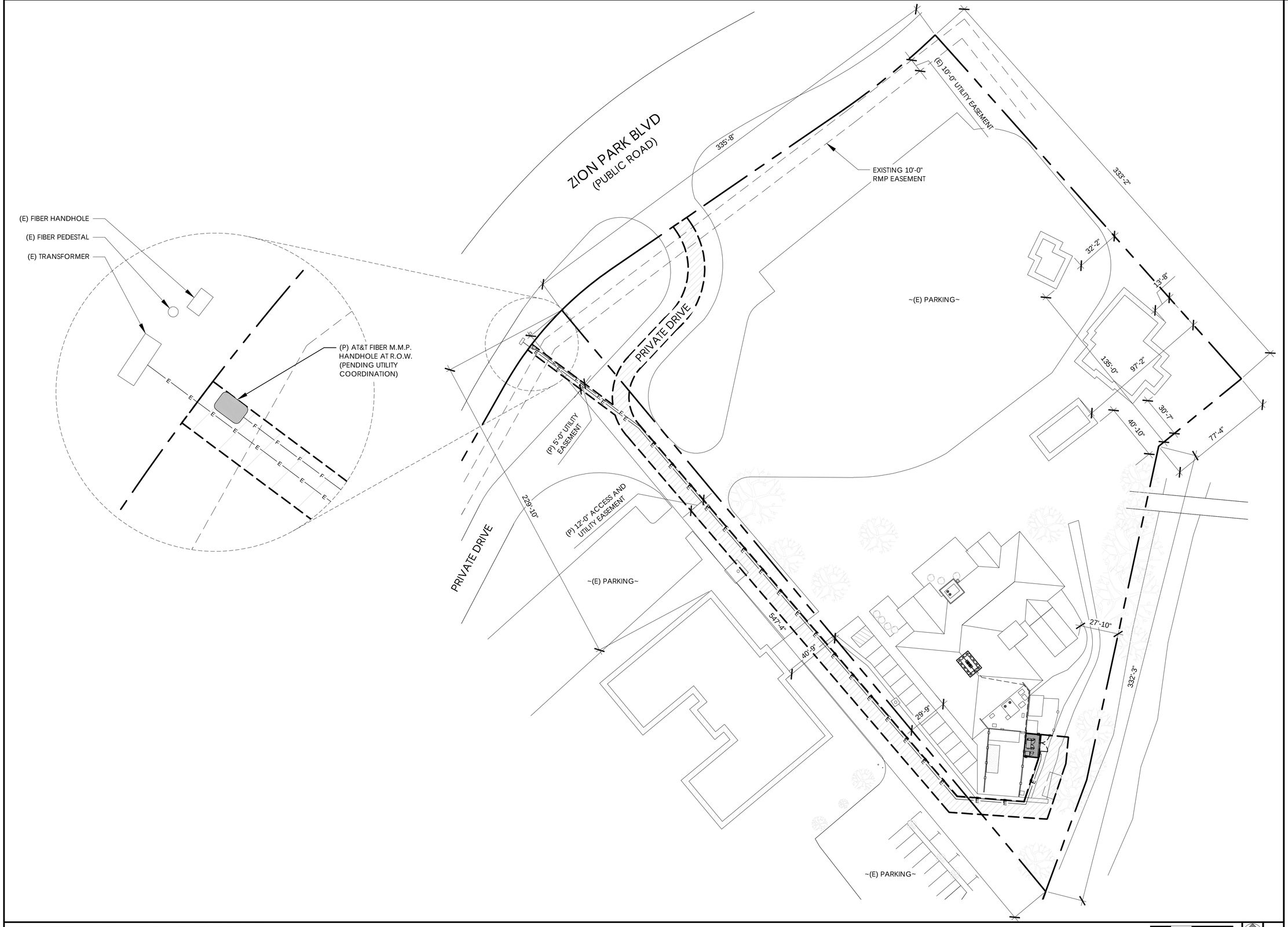
Licensor:

Sheet Title:

SITE & HVAC RELOCATION PLANS

Sheet Number:

A-1



PREPARED FOR

AT&T

NEW CINGULAR WIRELESS PCS, LLC ("AT&T")
7670 S. CHESTER ST.
CENTENNIAL, CO 80112

Vendor:

J5 INFRASTRUCTURE PARTNERS

23 MAUCHLY #110
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J5 PROJECT ID: P-056464

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UT_ZION_NP_VISITOR_CENTER

95 ZION PARK BLVD
SPRINGDALE, UT 84767

PARCEL ID: S-138-C-1

DRAWN BY: SLM

CHECKED BY: KM

REV	DATE	DESCRIPTION
A	12/14/22	90% ZD
B	1/16/23	90% ZD
C	4/5/23	90% ZD

Licensor:

Sheet Title:

PROPERTY LINE AND EASEMENT PLAN

Sheet Number:

A-1.1

PROPERTY LINE AND EASEMENT PLAN

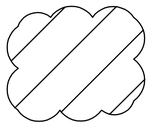
24"x36" SCALE: 1" = 30'-0"

30' 15' 0" 30'

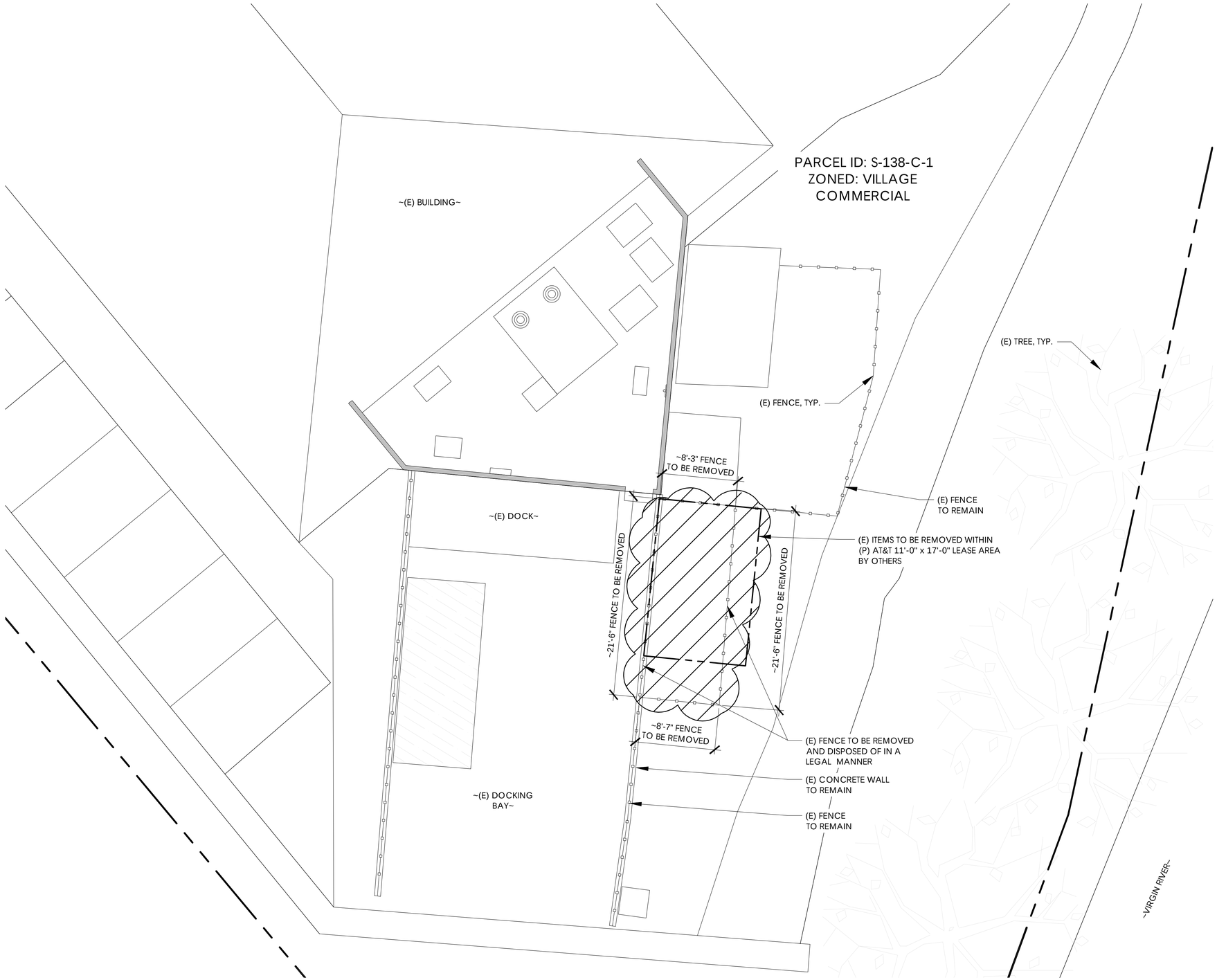
NORTH

NOTES:
1. PRIOR TO EXCAVATION, CONTRACTOR SHALL CHECK THE AREA FOR UNDERGROUND FACILITIES.

NOTE:



TO BE REMOVED AND DISPOSED OF IN A LEGAL MANNER.



DEMO SITE PLAN

24"x36" SCALE: 3/16" = 1'-0" 4' 2' 0" 4' NORTH 1

PREPARED FOR

AT&T

NEW CINGULAR WIRELESS PCS, LLC ("AT&T")
7670 S. CHESTER ST.
CENTENNIAL, CO 80112

Vendor:

J5 INFRASTRUCTURE PARTNERS

23 MAUCHLY #110
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J5 PROJECT ID: P-056464

Issued For:

UTL05403

UT_ZION_NP_VISITOR_CENTER

95 ZION PARK BLVD
SPRINGDALE, UT 84767

PARCEL ID: S-138-C-1

DRAWN BY: SLM

CHECKED BY: KM

REV	DATE	DESCRIPTION
A	12/14/22	90% ZD
B	1/16/23	90% ZD
C	4/5/23	90% ZD

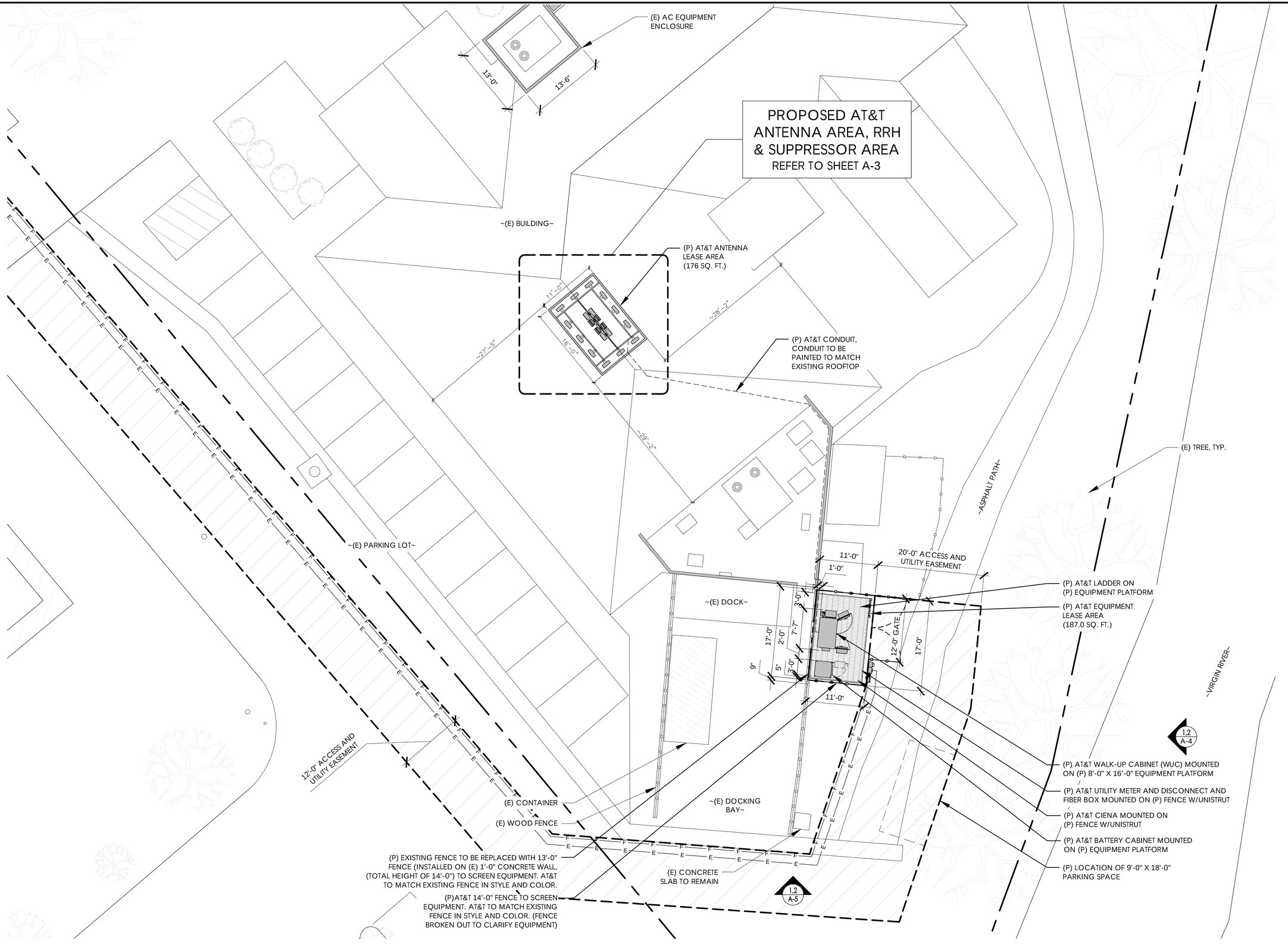
Licensor:

Sheet Title:

DEMO PLAN

Sheet Number:

A-1.2



ENLARGED SITE PLAN

24"x36" SCALE: 1/8" = 1'-0" 8' 6' 4' 2' 0" 8' NORTH 1

PREPARED FOR

AT&T

NEW CINGULAR WIRELESS PCS, LLC ("AT&T")
7670 S. CHESTER ST.
CENTENNIAL, CO 80112

Vendor:

J5 INFRASTRUCTURE PARTNERS

23 MAUCHLY #110
IRVINE, CA 92618

J5 PROJECT ID: P-056464

Issued For:

UTL05403

UT_ZION_NP_VISITOR_CENTER

95 ZION PARK BLVD
SPRINGDALE, UT 84767

PARCEL ID: S-138-C-1

DRAWN BY: SLM

CHECKED BY: KM

REV	DATE	DESCRIPTION
A	12/14/22	90% ZD
B	1/16/23	90% ZD
C	4/5/23	90% ZD

Licensor:

Sheet Title:

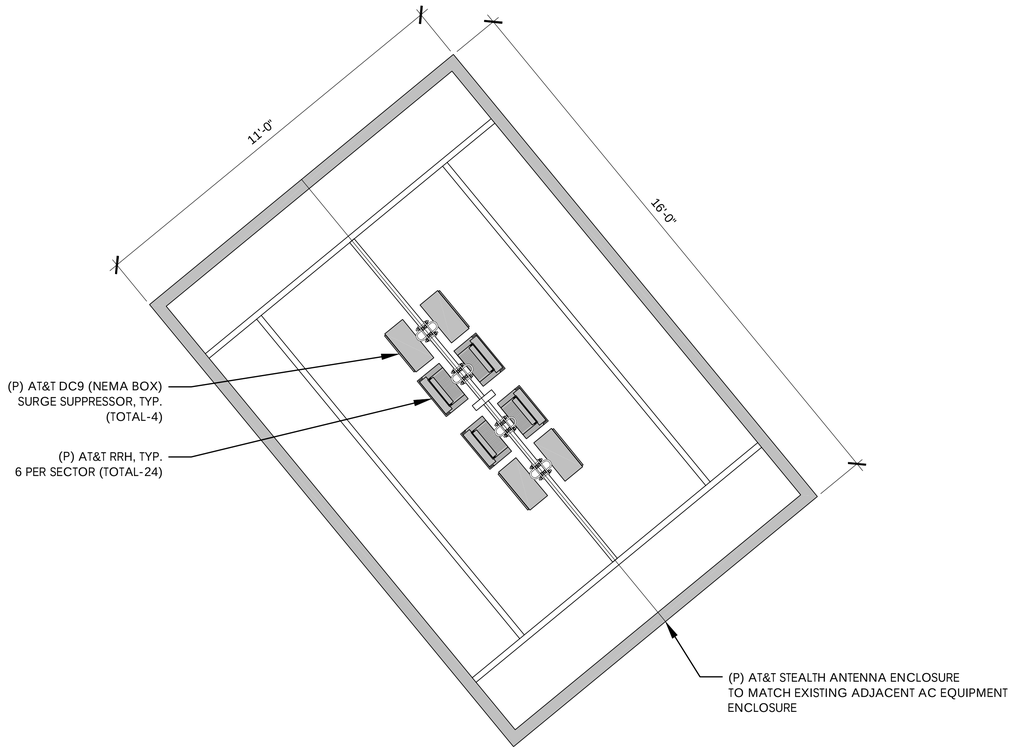
ENLARGED SITE PLAN & COMPOUND PLAN

Sheet Number:

A-2

ANTENNA SCHEDULE

2



RRHS & SURGE SUPPRESSORS PLAN

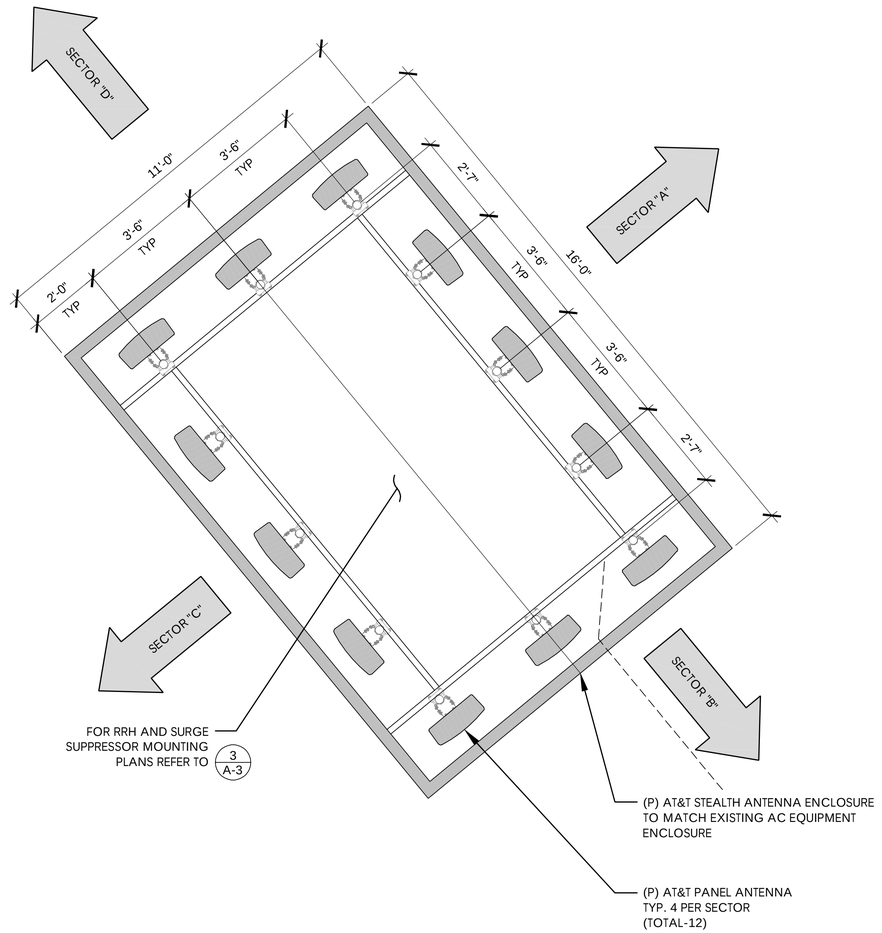
NORTH 3

STRUCTURAL ANALYSIS NOTE:

1. ALL RELEVANT STRUCTURAL ANALYSIS IS UNDER A SEPARATE PERMIT BY OTHERS.

NOTE:

1. ALL (P) CABLING AND EQUIPMENT MUST BE INSTALLED AND USED IN ACCORDANCE WITH THE PRODUCT'S INCLUDED INSTRUCTIONS, LISTING AND/OR LABELING REQUIREMENTS. PER NEC SECTION 110.3(B).
2. ALL (P) CABLING CONFORMS WITH, AND IS TO BE INSTALLED PER NEC 356.10 & 356.12.
3. RRH'S ARE STACKED AND STAGGERED TO FIT



ANTENNA PLAN

24"x36" SCALE: 1/2" = 1'-0"

NORTH 1

PREPARED FOR

AT&T

NEW CINGULAR WIRELESS PCS, LLC ("AT&T")
7670 S. CHESTER ST.
CENTENNIAL, CO 80112

Vendor:

J5 INFRASTRUCTURE PARTNERS

23 MAUCHLY #110
IRVINE, CA 92618

J5 PROJECT ID: P-056464

Issued For:

UTL05403

UT_ZION_NP_VISITOR_CENTER

95 ZION PARK BLVD
SPRINGDALE, UT 84767

PARCEL ID: S-138-C-1

DRAWN BY: SLM

CHECKED BY: KM

REV	DATE	DESCRIPTION
A	12/14/22	90% ZD
B	1/16/23	90% ZD
C	4/5/23	90% ZD

Licensor:

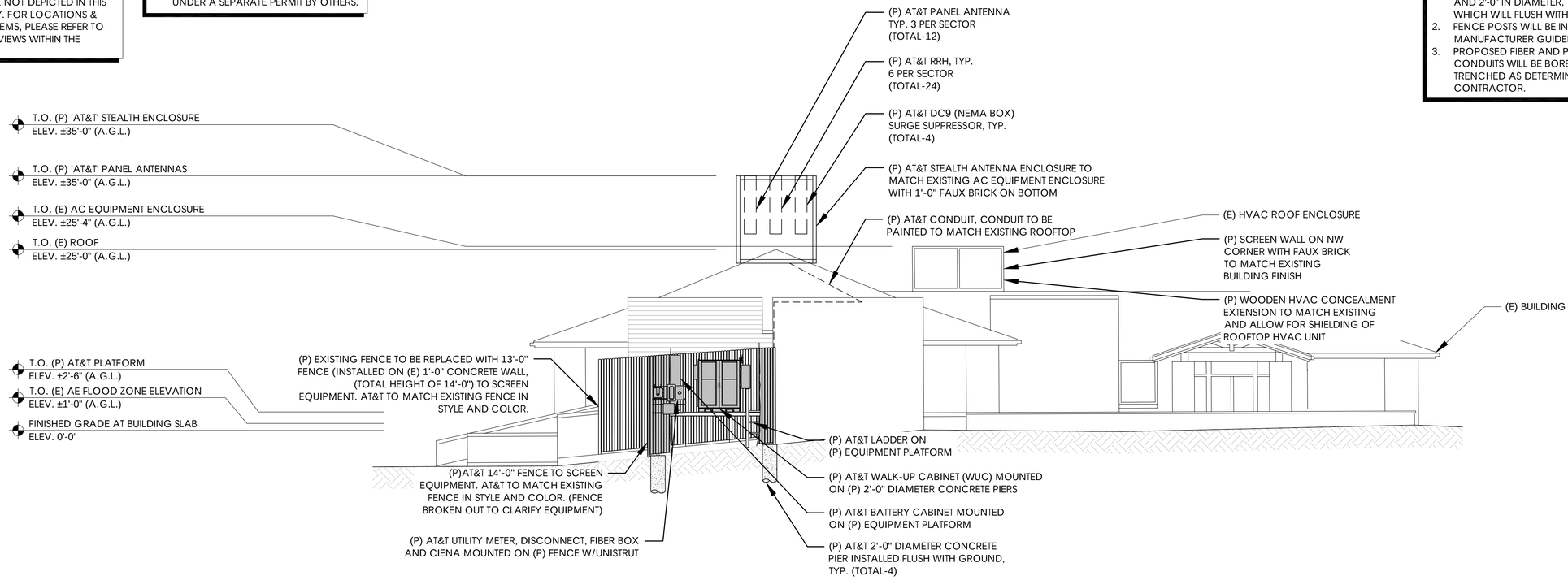
Sheet Title:
ANTENNA PLAN & SCHEDULE & EQUIPMENT PLAN

Sheet Number:
A-3

NOTE:
1. 'AT&T' RRH'S, TMA'S, AND SURGE SUPPRESSORS ARE NOT DEPICTED IN THIS VIEW FOR CLARITY. FOR LOCATIONS & VIEWS OF THESE ITEMS, PLEASE REFER TO PREVIOUS PLANS VIEWS WITHIN THE DRAWING SET

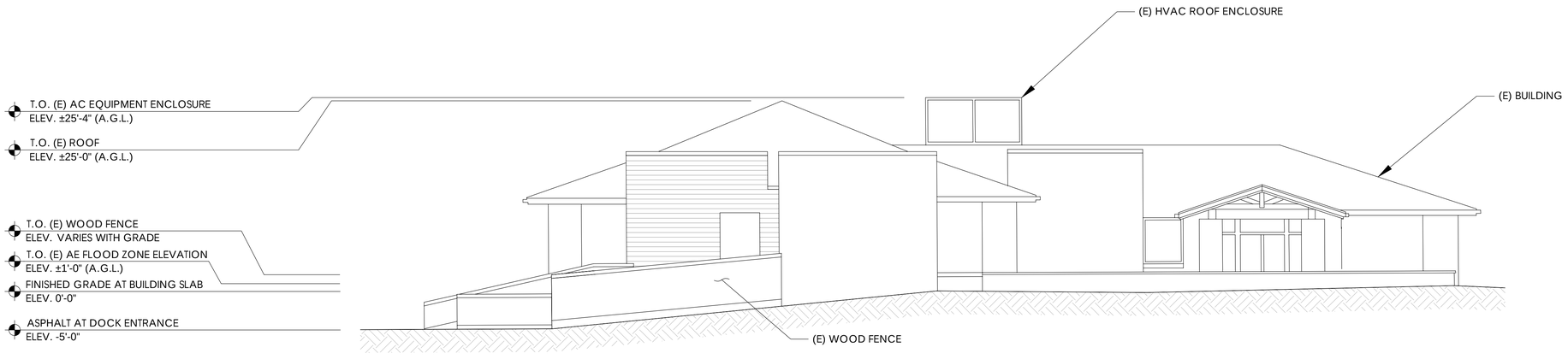
STRUCTURAL ANALYSIS NOTE:
1. ALL RELEVANT STRUCTURAL ANALYSIS IS UNDER A SEPARATE PERMIT BY OTHERS.

EXCAVATION NOTES:
1. CONCRETE PIERS WILL BE 10'-0" DEEP AND 2'-0" IN DIAMETER, THE TOP OF WHICH WILL FLUSH WITH THE GROUND.
2. FENCE POSTS WILL BE INSTALLED PER MANUFACTURER GUIDELINES.
3. PROPOSED FIBER AND POWER CONDUITS WILL BE BORED OR TRENCHED AS DETERMINED BY CONTRACTOR.



(P) NORTHWEST ELEVATION

24"x36" SCALE: 1/8" = 1'-0" 8" 6" 4" 2" 0" 8" 1



(E) NORTHWEST ELEVATION

24"x36" SCALE: 1/8" = 1'-0" 8" 6" 4" 2" 0" 8" 2

PREPARED FOR

AT&T

NEW CINGULAR WIRELESS PCS, LLC ("AT&T")
7670 S. CHESTER ST.
CENTENNIAL, CO 80112

Vendor:

J5 INFRASTRUCTURE PARTNERS

23 MAUCHLY #110
IRVINE, CA 92618

J5 PROJECT ID: P-056464

Issued For:

UTL05403

UT_ZION_NP_VISITOR_CENTER

95 ZION PARK BLVD
SPRINGDALE, UT 84767

PARCEL ID: S-138-C-1

DRAWN BY: SLM

CHECKED BY: KM

REV	DATE	DESCRIPTION
A	12/14/22	90% ZD
B	1/16/23	90% ZD
C	4/5/23	90% ZD

Licensor:

Sheet Title:

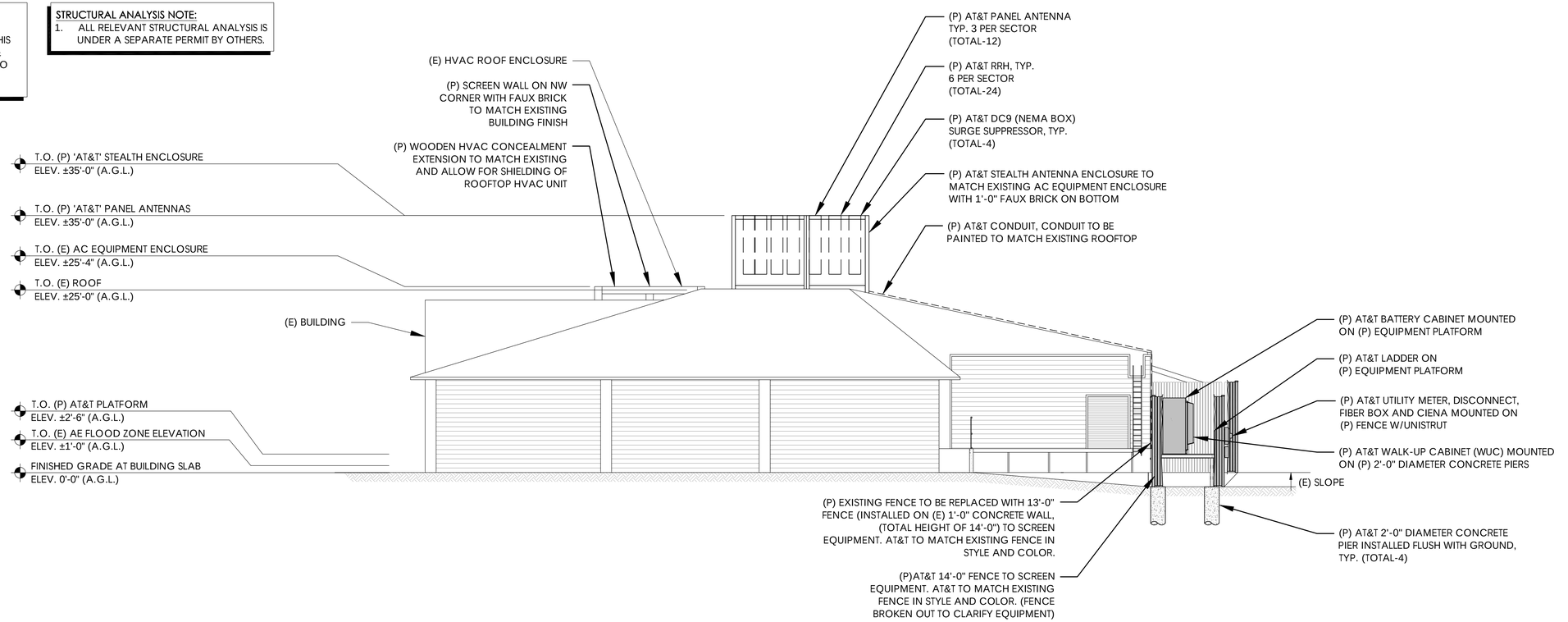
ELEVATIONS

Sheet Number:

A-4

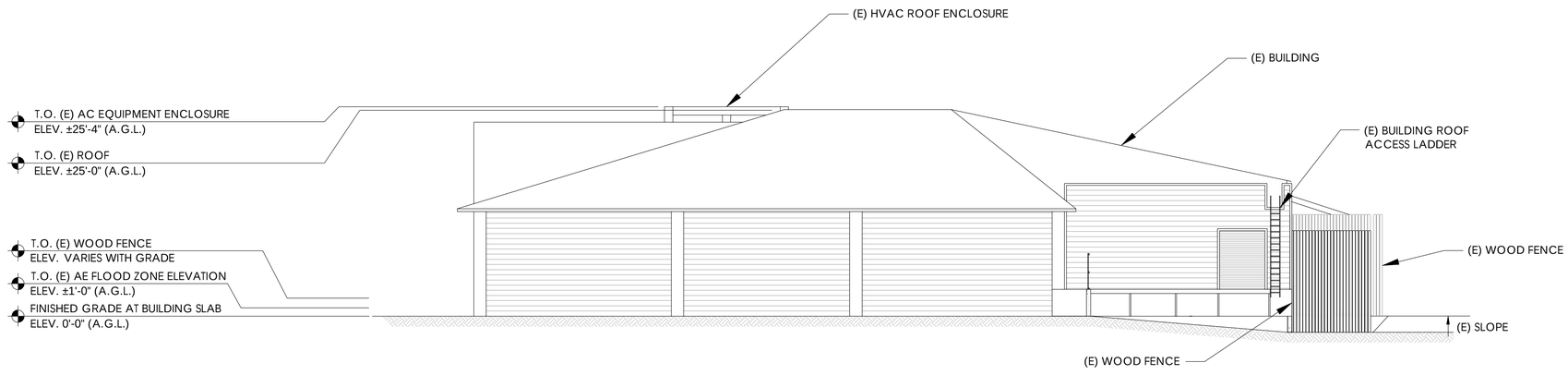
NOTE:
1. 'AT&T' RRH'S, TMA'S, AND SURGE SUPPRESSORS ARE NOT DEPICTED IN THIS VIEW FOR CLARITY. FOR LOCATIONS & VIEWS OF THESE ITEMS, PLEASE REFER TO PREVIOUS PLANS VIEWS WITHIN THE DRAWING SET

STRUCTURAL ANALYSIS NOTE:
1. ALL RELEVANT STRUCTURAL ANALYSIS IS UNDER A SEPARATE PERMIT BY OTHERS.



(P) SOUTH ELEVATION

24"x36" SCALE: 1/8" = 1'-0" 8' 6' 4' 2' 0" 8' 1



(E) EAST ELEVATION

24"x36" SCALE: 1/8" = 1'-0" 8' 6' 4' 2' 0" 8' 2

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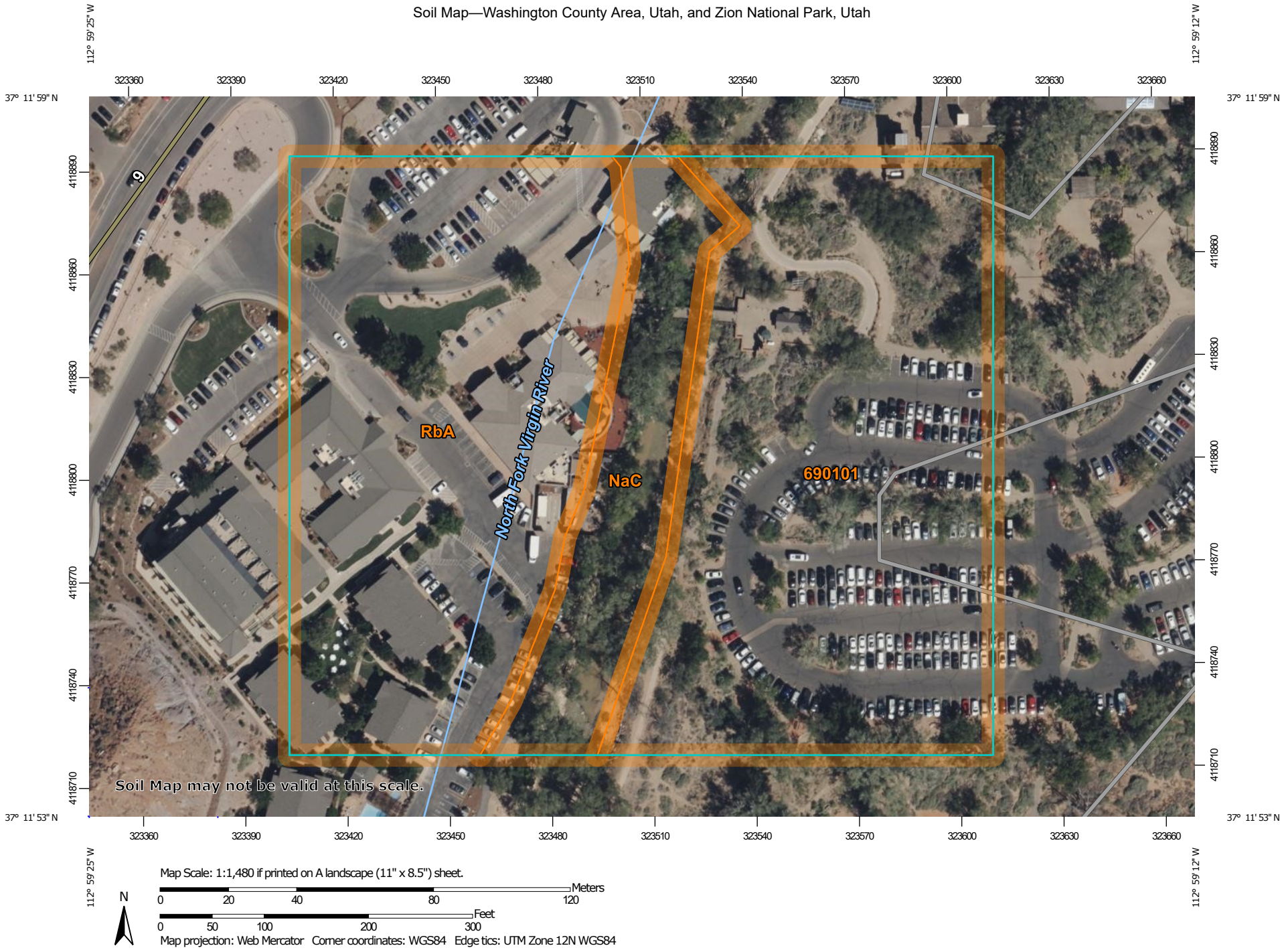
Licensor:

Sheet Title:

ELEVATIONS

Sheet Number:

A-5



Map Scale: 1:1,480 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 20 40 80 120

Feet
0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 12N WGS84

Map Unit Legend

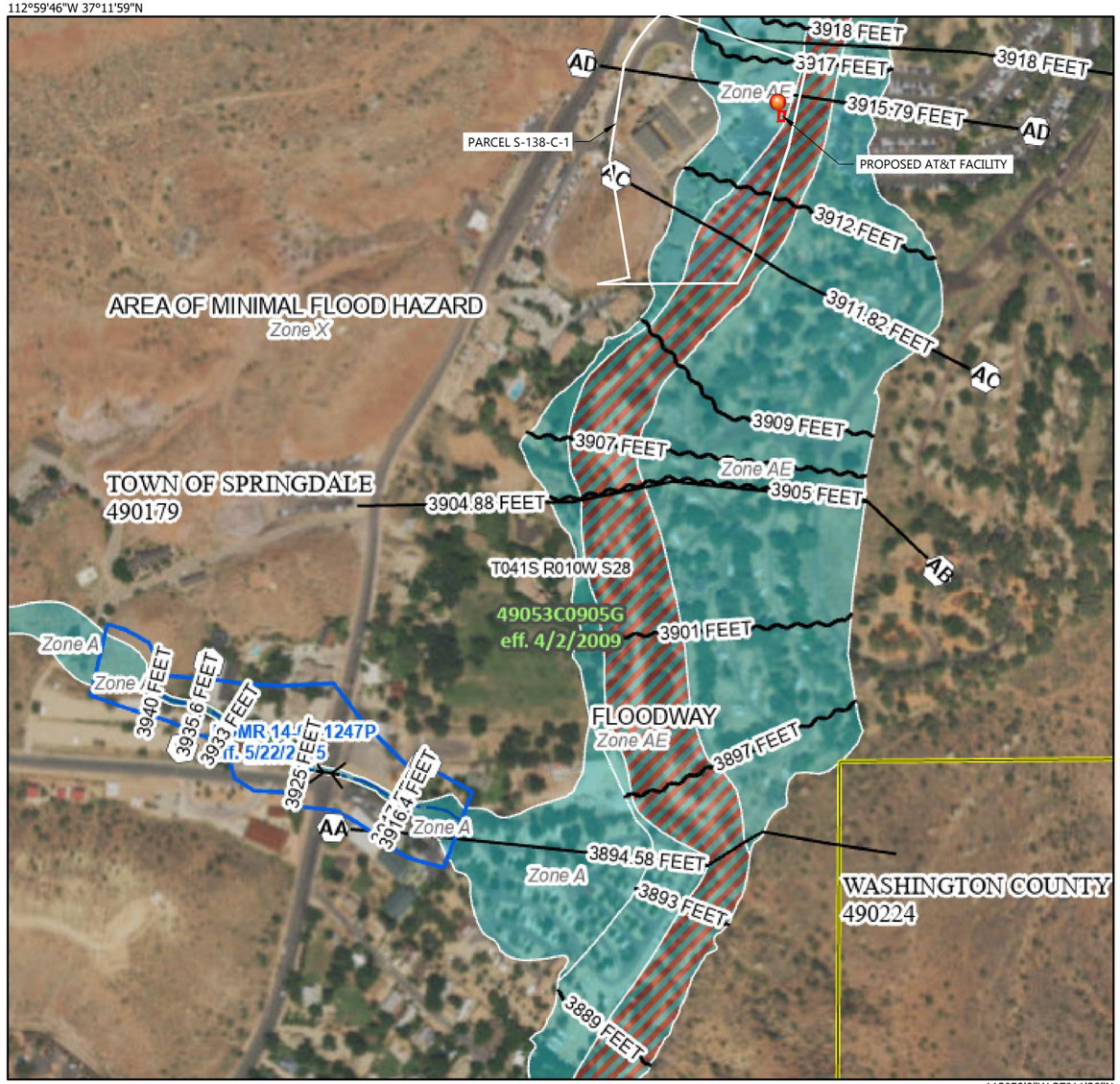
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
NaC	Naplene silt loam, 2 to 6 percent slopes	1.2	13.3%
RbA	Redbank silty clay loam, 0 to 2 percent slopes	3.7	41.2%
Subtotals for Soil Survey Area		**4.9**	**54.5%**
Totals for Area of Interest		**9.0**	**100.0%**

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
690101	Radnik-Spenlo-Riverwash-Notom complex, 0 to 10 percent slopes	4.1	45.5%
Subtotals for Soil Survey Area		**4.1**	**45.5%**
Totals for Area of Interest		**9.0**	**100.0%**

National Flood Hazard Layer FIRMette

FEMA

112°59'46"W 37°11'59"N



0 250 500 1,000 1,500 2,000 Feet

1:6,000

112°59'9"W 37°11'30"N

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN — Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 — Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 5/4/2021 at 4:55 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

DATE: 8/24/2023
JOB NO.: 13835-23
DESIGNED BY: GRF
CHECKED BY: JWB
DWG: EHZ
DATE
REVISIONS

ROSENBERG ASSOCIATES
CIVIL ENGINEERS • LAND SURVEYORS
352 East Riverside Drive, Suite A-2
St. George, Utah 84790
Ph (435) 673-8586 Fx (435) 673-8397
www.racivil.com

FEMA FIRMETTE
FOR
ZION NATIONAL PARK VISITOR CENTER AT&T FACILITY
SPRINGDALE, UTAH

SHEET 1
1 OF 1 SHEETS

ZION OUTFITTER

ZION CANYON BREW PUB

CABLE MOUNTAIN LODGE

PROPOSED AT&T FACILITY

PARCEL S-138-C-1

SR-9

VIRGIN RIVER

3430 3420 3414 3412 3410 3408 3406 3404 3402 3400

STA: 19+779
EFFECTIVE BFE: 3918.69
EXISTING BFE: 3918.23
PROPOSED BFE: 3918.23

STA: 19+595
EFFECTIVE BFE: 3918.00
EXISTING BFE: 3916.70
PROPOSED BFE: 3916.70

STA: 19+564
EFFECTIVE BFE: 3917.52
EXISTING BFE: 3916.05
PROPOSED BFE: 3916.05

STA: 19+446 (FEMA AD)
EFFECTIVE BFE: 3915.79
EXISTING BFE: 3914.66
PROPOSED BFE: 3914.66

STA: 19+339
EFFECTIVE BFE: 3914.00
EXISTING BFE: 3912.89
PROPOSED BFE: 3912.89

STA: 19+236
EFFECTIVE BFE: 3913.10
EXISTING BFE: 3912.20
PROPOSED BFE: 3912.20

STA: 18+991 (FEMA AC)
EFFECTIVE BFE: 3911.82
EXISTING BFE: 3911.42
PROPOSED BFE: 3911.42

EFFECTIVE 100 YEAR FLOODPLAIN (2009 FIS)

EFFECTIVE FLOODWAY (2009 FIS)

EROSION HAZARD BOUNDARY MODERATE HAZARD (2019 STUDY)

EROSION HAZARD BOUNDARY HIGH HAZARD (2019 STUDY)

0 100' 200'

SCALE: 1"=100'

DATE: 8/28/2023
JOB NO.: 13853-23
DESIGNED BY: GRF
CHECKED BY: JNB
DWG: BASE

REVISIONS
DATE

ROSENBERG ASSOCIATES
CIVIL ENGINEERS • LAND SURVEYORS
352 East Riverside Drive, Suite A-2
St. George, Utah 84790
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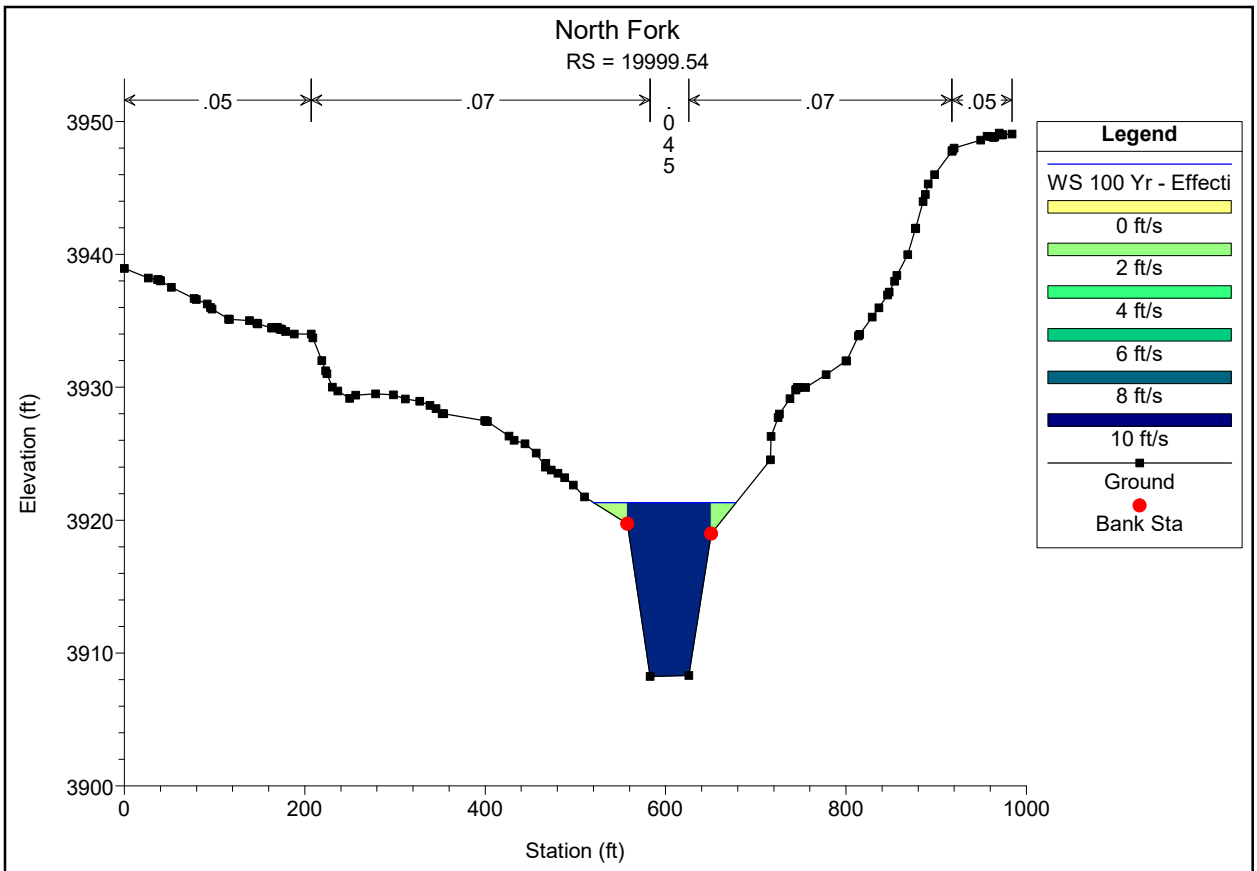
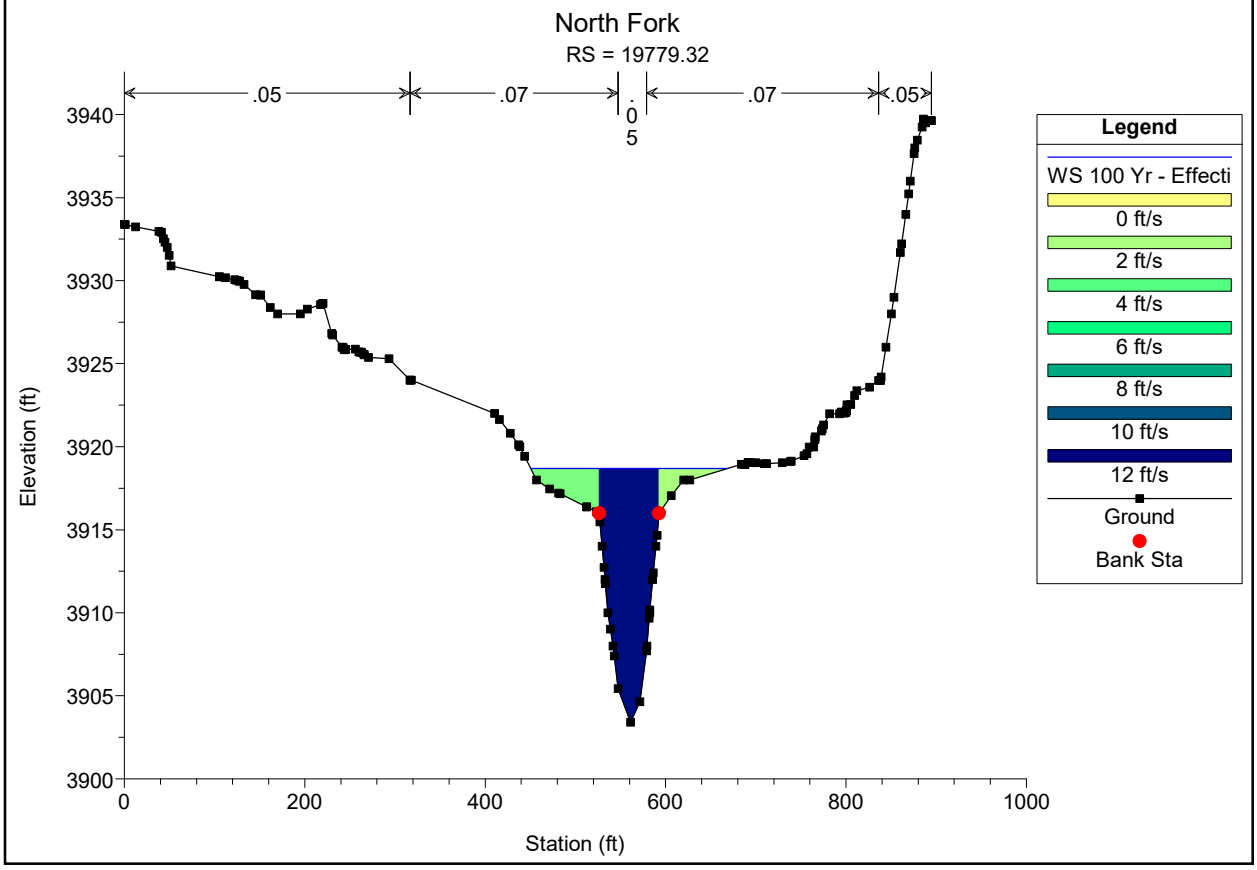
www.racivil.com

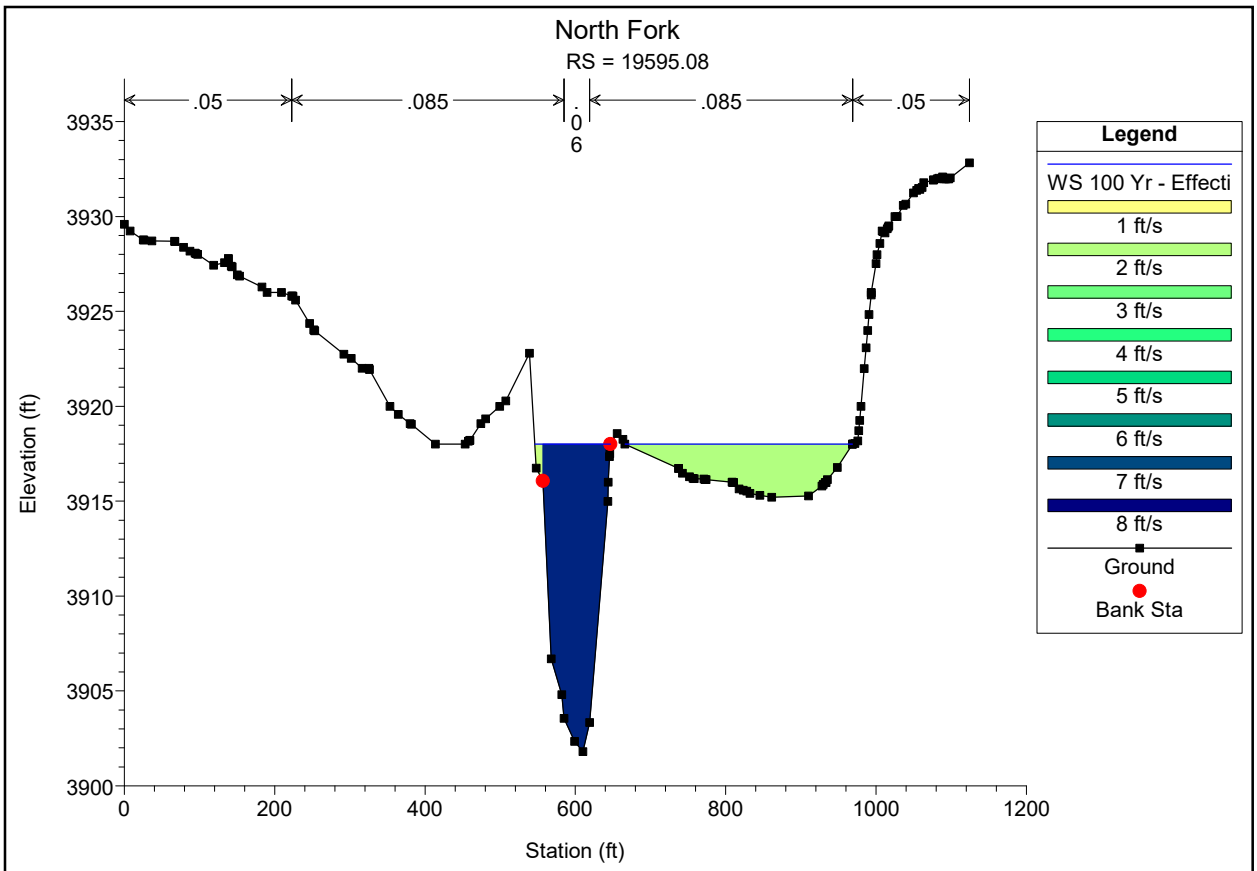
FLOODPLAIN EXHIBIT
FOR
ZION NATIONAL PARK VISITOR CENTER AT&T FACILITY
SPRINGDALE
UTAH

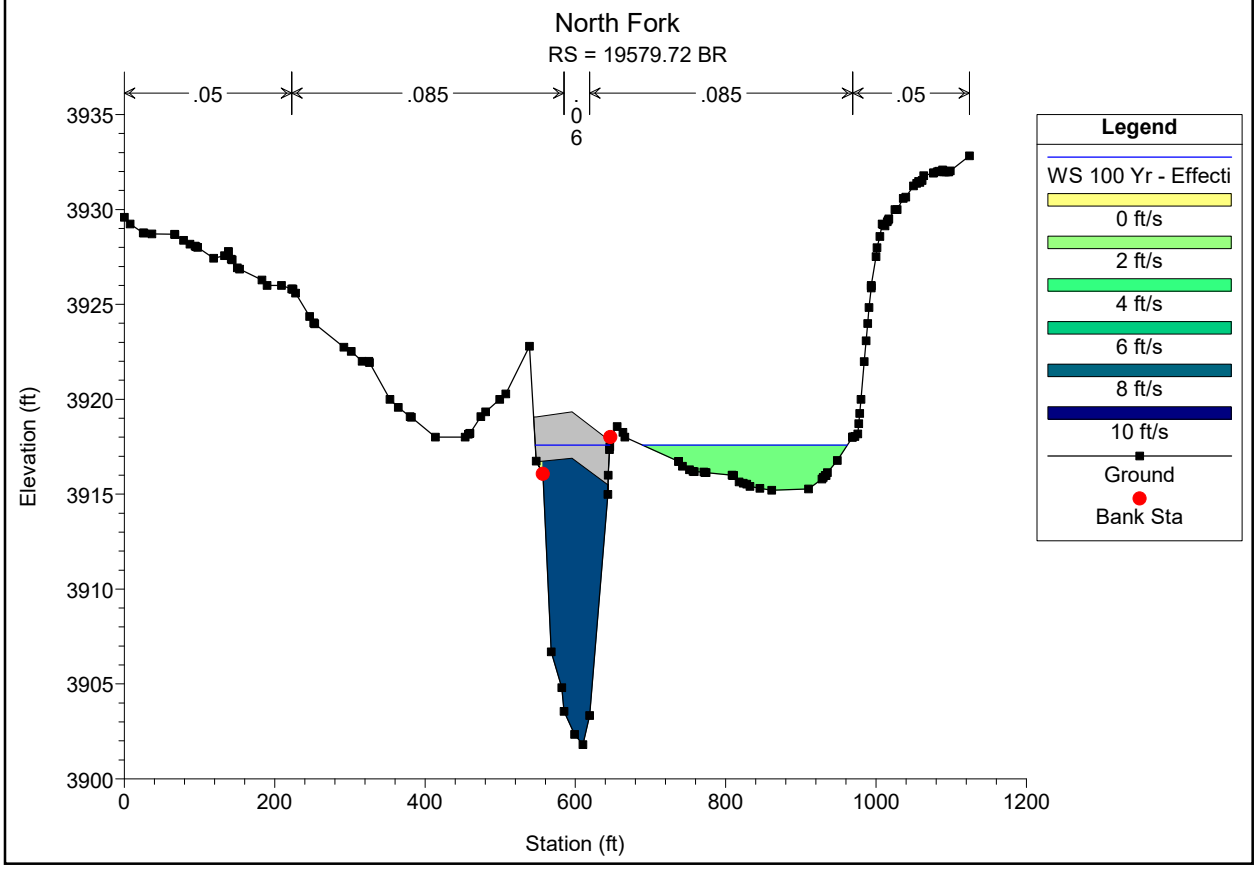
SHEET
1
1 OF 1 SHEETS

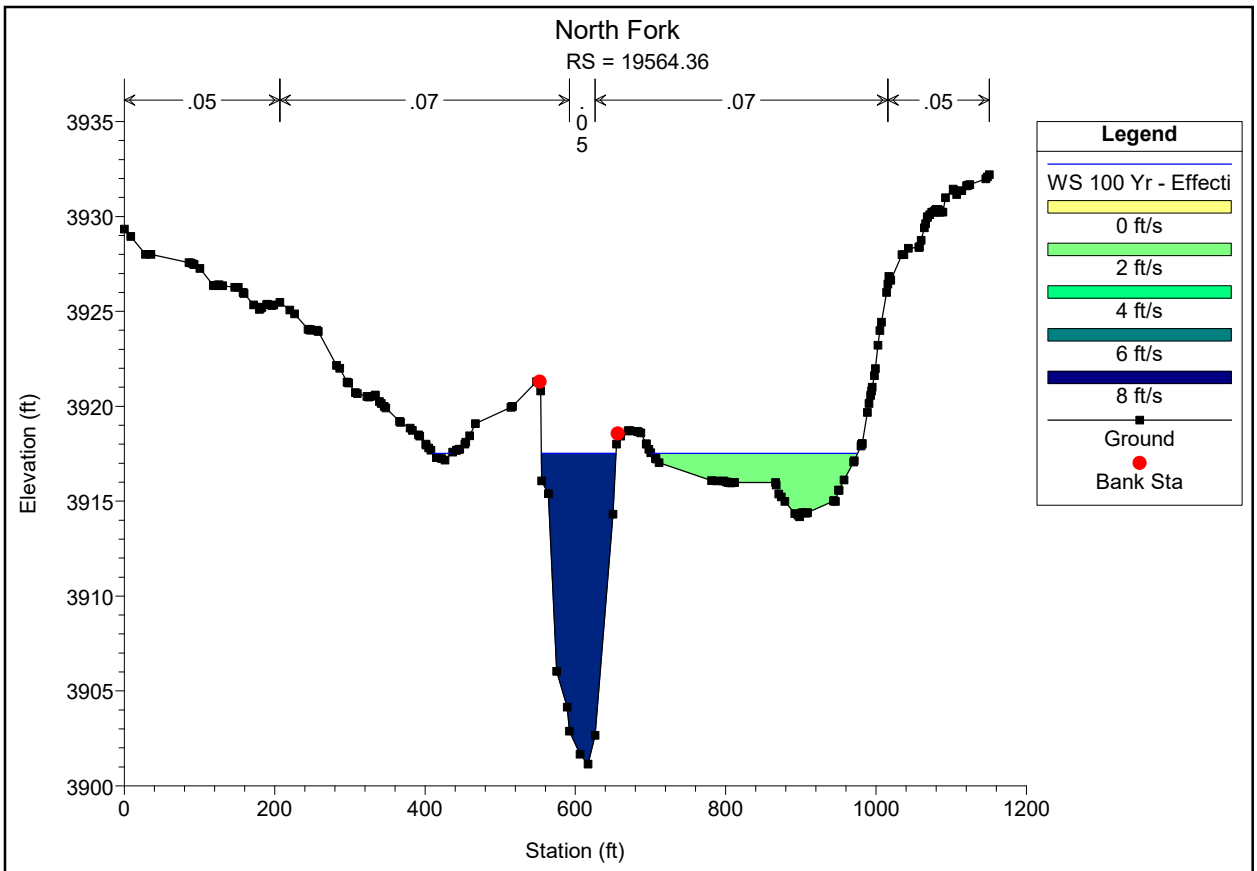
HEC-RAS Model Results - Effective												
River Sta	FEMA Sta.	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Max Chl Dpth	Vel Right	Hydr Depth R
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	(ft/s)	(ft)
19+779	AF	8830	3903.41	3918.69	3916.15	3920.69	0.011077	11.69	899.08	15.28	2	0.84
19+595	AE	8830	3901.81	3918	3912.59	3918.77	0.0065	7.51	1575.64	16.19	2.06	1.77
Bridge												
19+564		8830	3901.14	3917.52	3911.92	3918.29	0.004887	7.43	1521.32	16.38	2.08	1.66
19+446	AD	8830	3900.53	3915.79	3912.48	3917.2	0.013786	9.93	1194.34	15.26	1.96	0.93
19+355		8830	3900.4	3914.22	3911.71	3915.99	0.012153	10.92	995.69	13.82	1.75	0.64
19+264		8830	3900.27	3913.26	3910.92	3914.84	0.011833	10.46	1083.48	12.99	2.15	0.9
19+173		8830	3900.15	3912.59	3910.09	3913.77	0.009372	9.29	1305.23	12.44	2.64	1.45
19+082		8830	3900.02	3912.35	3910.26	3913	0.005183	7.27	1874.87	12.33	2.86	2.46
18+991	AC	8830	3899.89	3911.82	3909.23	3912.17	0.014722	5.68	2488.75	11.93	2.62	3.17
18+818		8830	3899.17	3909.96	3908.35	3910.7	0.005265	7.64	1822.9	10.79	2.43	1.99
18+645		8830	3898.45	3909.06	3907.2	3909.68	0.006222	7.04	1913.11	10.61	2.45	1.77

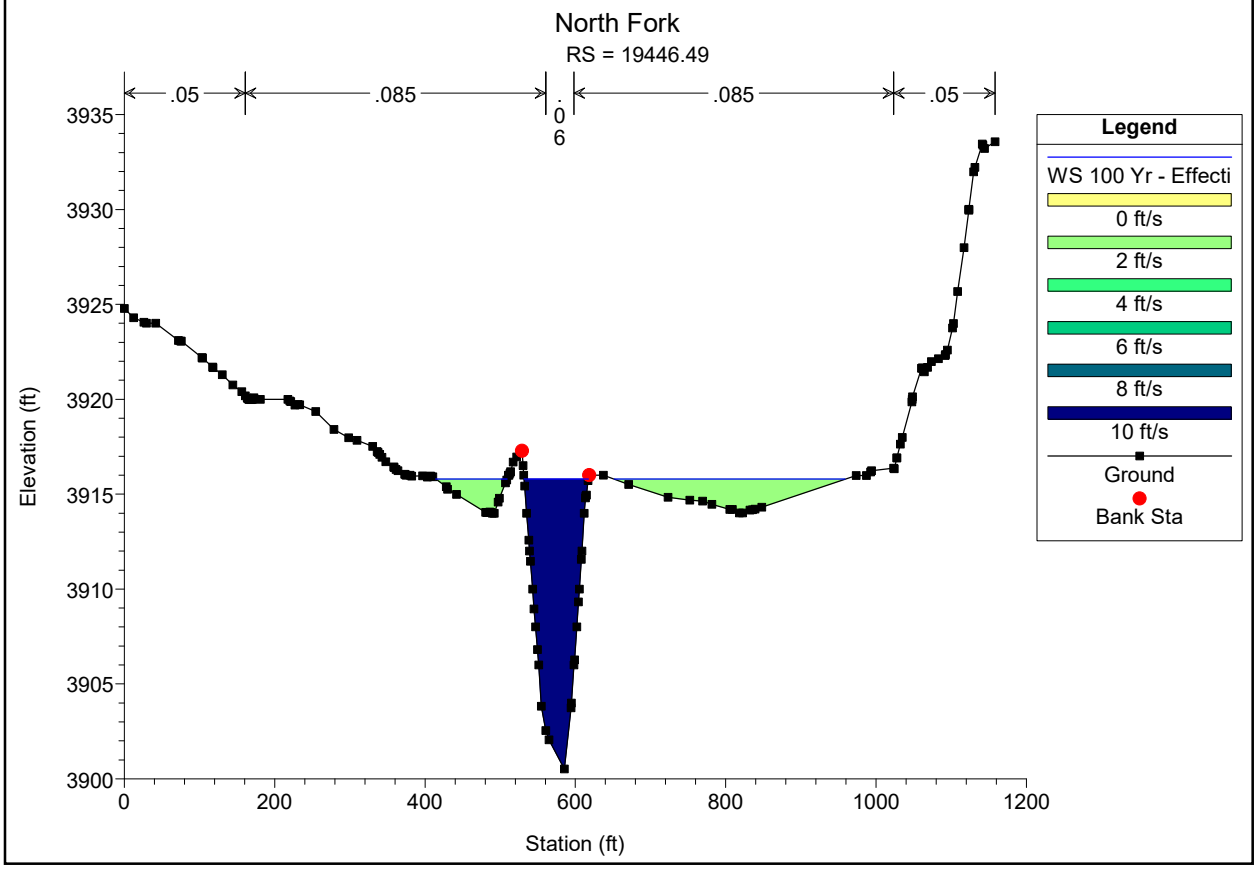

North Fork
RS = 19999.54
.05
.07
.045
.07
.05
3950
3940
3930
3920
3910
3900
Elevation (ft)
0
200
400
600
800
1000
Station (ft)
Legend
WS 100 Yr - Effecti
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta

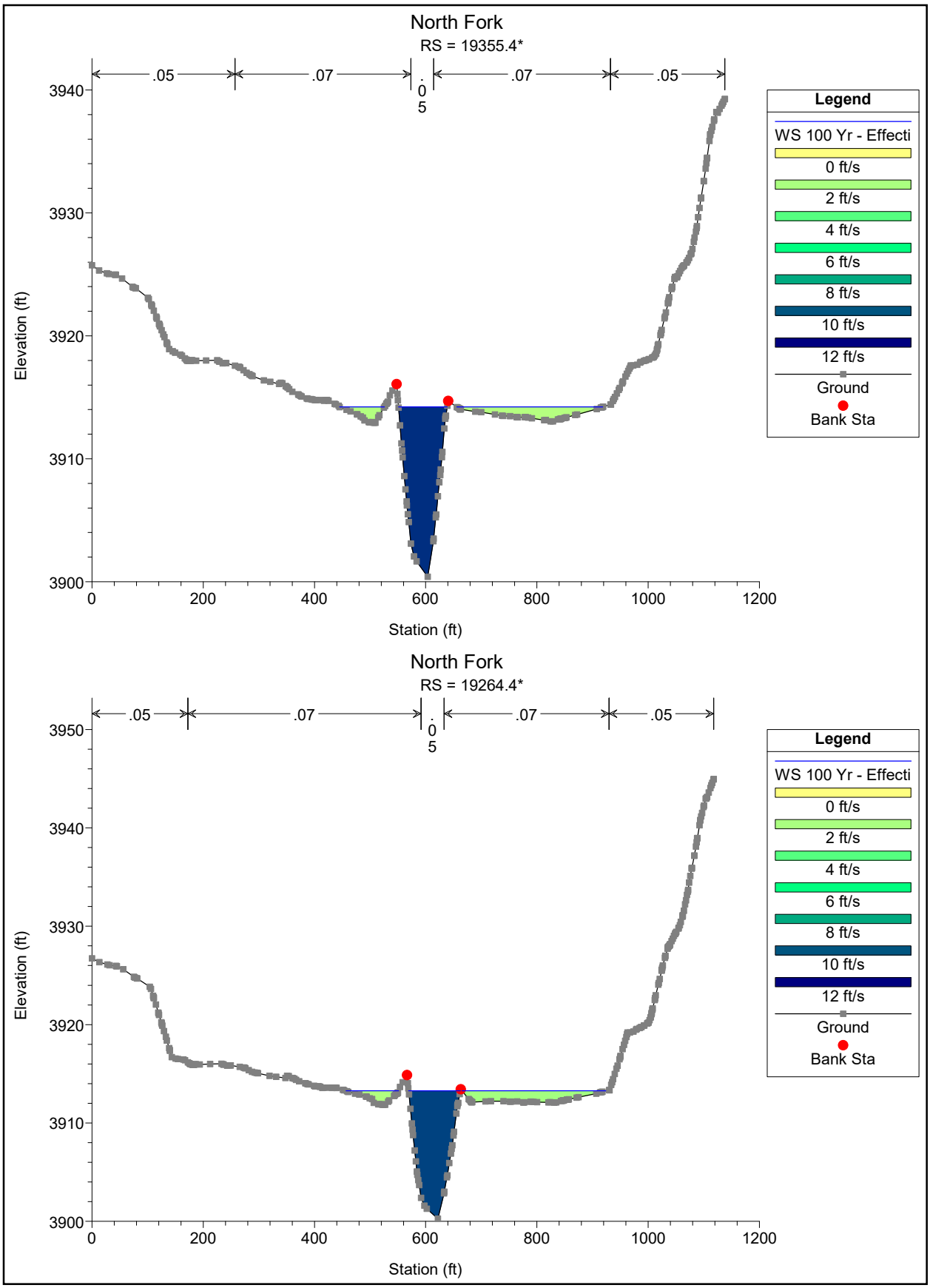

North Fork
RS = 19779.32
.05
.07
.05
.07
.05
3940
3935
3930
3925
3920
3915
3910
3905
3900
Elevation (ft)
0
200
400
600
800
1000
Station (ft)
Legend
WS 100 Yr - Effecti
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
12 ft/s
Ground
Bank Sta

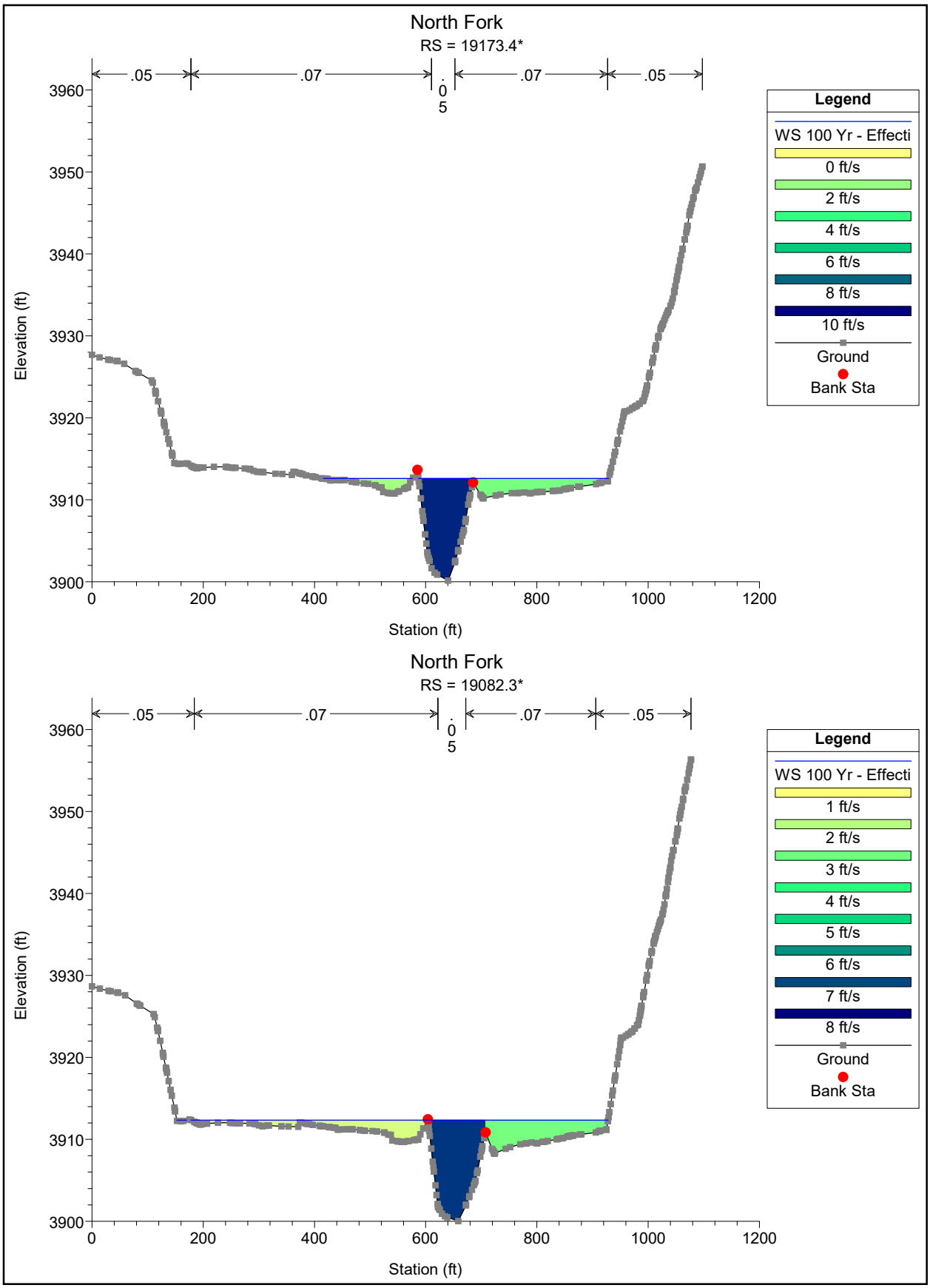

North Fork
RS = 19595.08
.05
.085
.085
.05
0
6
Elevation (ft)
3935
3930
3925
3920
3915
3910
3905
3900
0
200
400
600
800
1000
1200
Station (ft)
Legend
WS 100 Yr - Effecti
1 ft/s
2 ft/s
3 ft/s
4 ft/s
5 ft/s
6 ft/s
7 ft/s
8 ft/s
Ground
Bank Sta

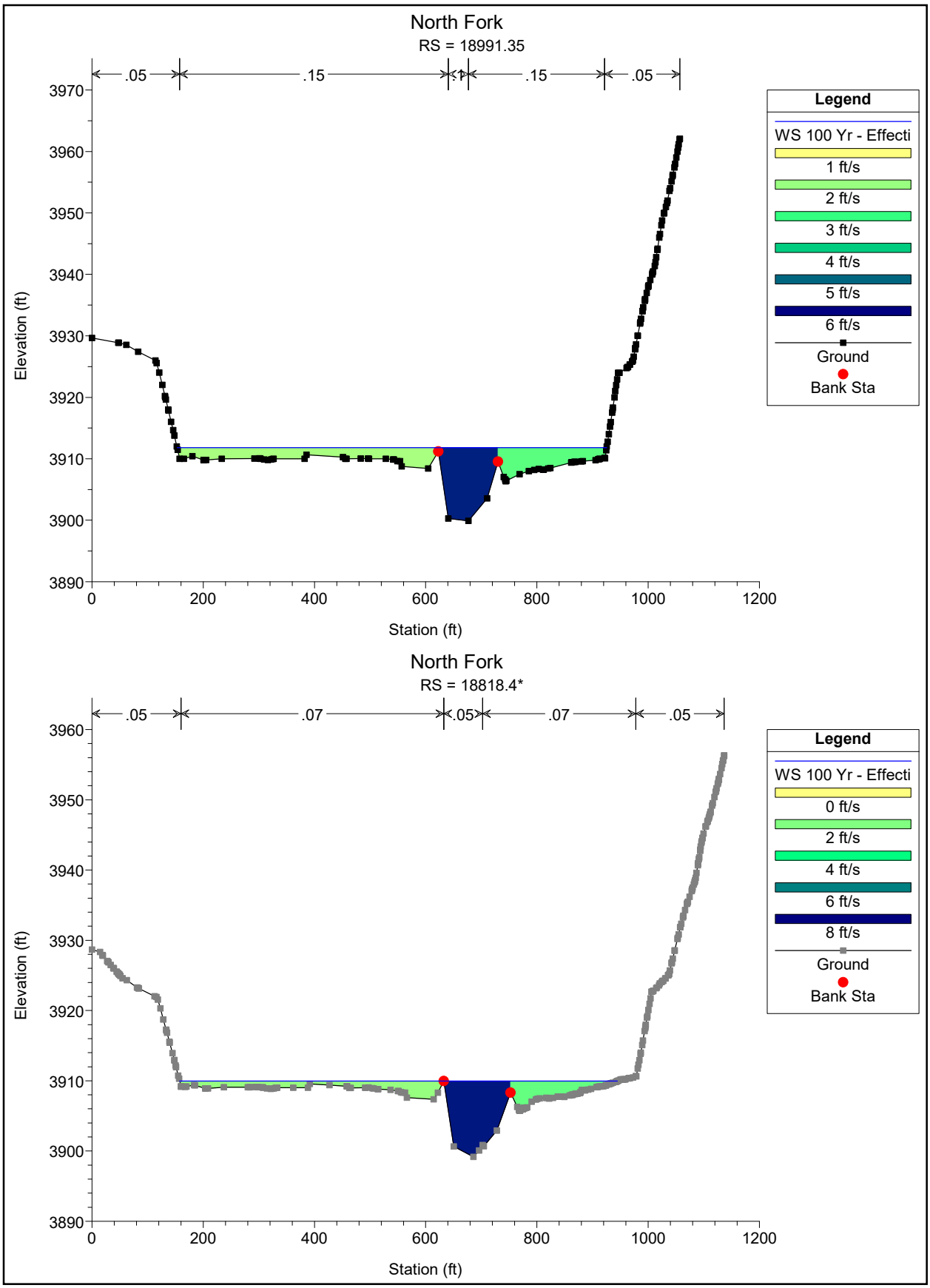

North Fork
RS = 19579.72 BR
.05
.085
.085
.05
0
6
Elevation (ft)
3935
3930
3925
3920
3915
3910
3905
3900
0
200
400
600
800
1000
1200
Station (ft)
Legend
WS 100 Yr - Effecti
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta


North Fork
RS = 19564.36
.05
.07
.05
.07
.05
Elevation (ft)
Station (ft)
Legend
WS 100 Yr - Effecti
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta


North Fork
RS = 19446.49
.05
.085
.085
.05
Elevation (ft)
Station (ft)
Legend
WS 100 Yr - Effecti
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta


North Fork
RS = 19355.4*
.05
.07
.07
.05
0.05
Elevation (ft)
3940
3930
3920
3910
3900
0
200
400
600
800
1000
1200
Station (ft)
Legend
WS 100 Yr - Effecti
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
12 ft/s
Ground
Bank Sta
North Fork
RS = 19264.4*
.05
.07
.07
.05
0.05
Elevation (ft)
3950
3940
3930
3920
3910
3900
0
200
400
600
800
1000
1200
Station (ft)
Legend
WS 100 Yr - Effecti
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
12 ft/s
Ground
Bank Sta


North Fork
RS = 19173.4*
.05
.07
.05
.07
.05
Elevation (ft)
3960
3950
3940
3930
3920
3910
3900
0
200
400
600
800
1000
1200
Station (ft)
Legend
WS 100 Yr - Effecti
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
North Fork
RS = 19082.3*
.05
.07
.05
.07
.05
Elevation (ft)
3960
3950
3940
3930
3920
3910
3900
0
200
400
600
800
1000
1200
Station (ft)
Legend
WS 100 Yr - Effecti
1 ft/s
2 ft/s
3 ft/s
4 ft/s
5 ft/s
6 ft/s
7 ft/s
8 ft/s
Ground
Bank Sta


North Fork
RS = 18991.35
.05
.15
.15
.05
Elevation (ft)
3970
3960
3950
3940
3930
3920
3910
3900
3890
0
200
400
600
800
1000
1200
Station (ft)
Legend
WS 100 Yr - Effecti
1 ft/s
2 ft/s
3 ft/s
4 ft/s
5 ft/s
6 ft/s
Ground
Bank Sta
North Fork
RS = 18818.4*
.05
.07
.05
.07
.05
Elevation (ft)
3960
3950
3940
3930
3920
3910
3900
3890
0
200
400
600
800
1000
1200
Station (ft)
Legend
WS 100 Yr - Effecti
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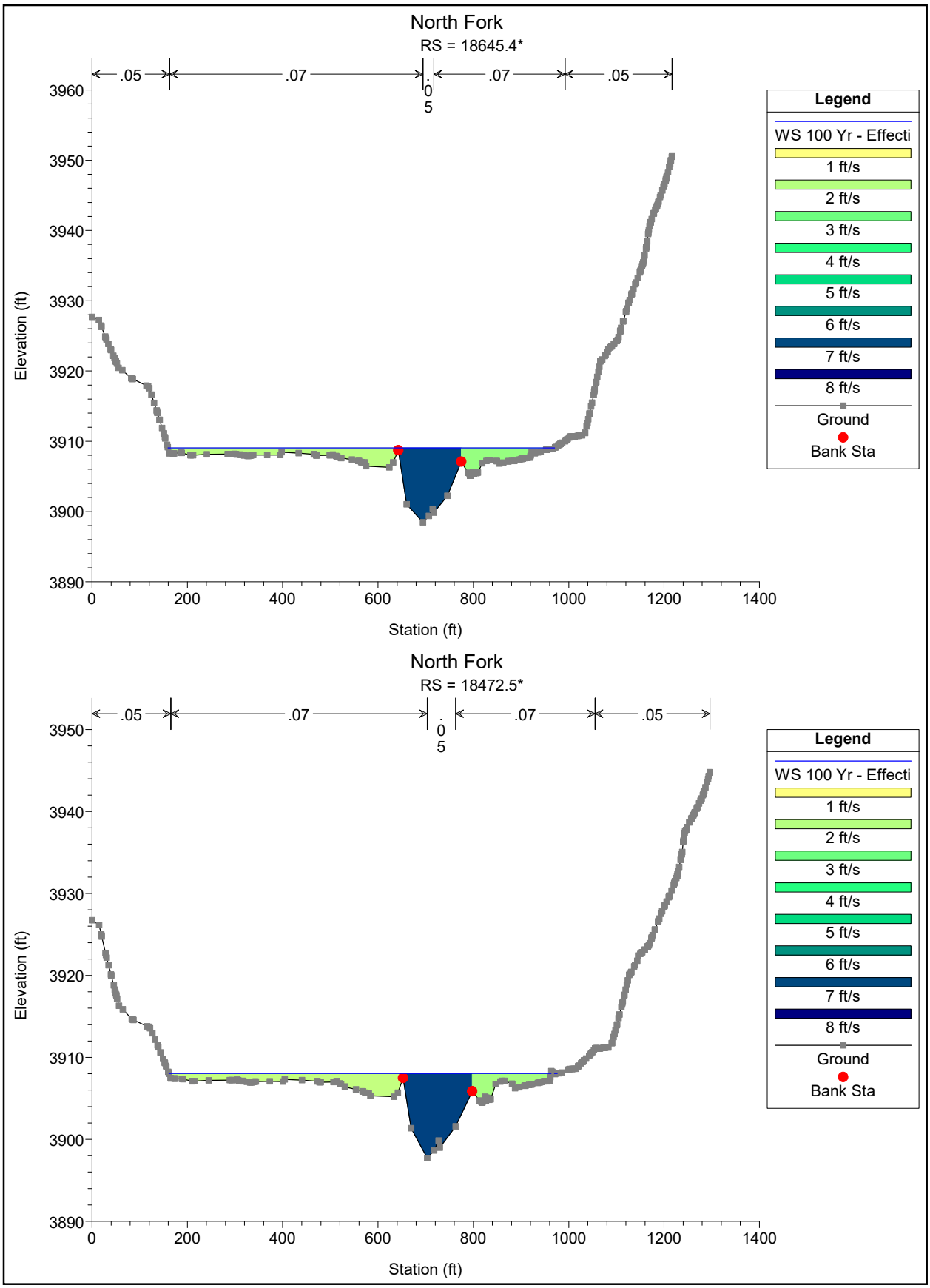
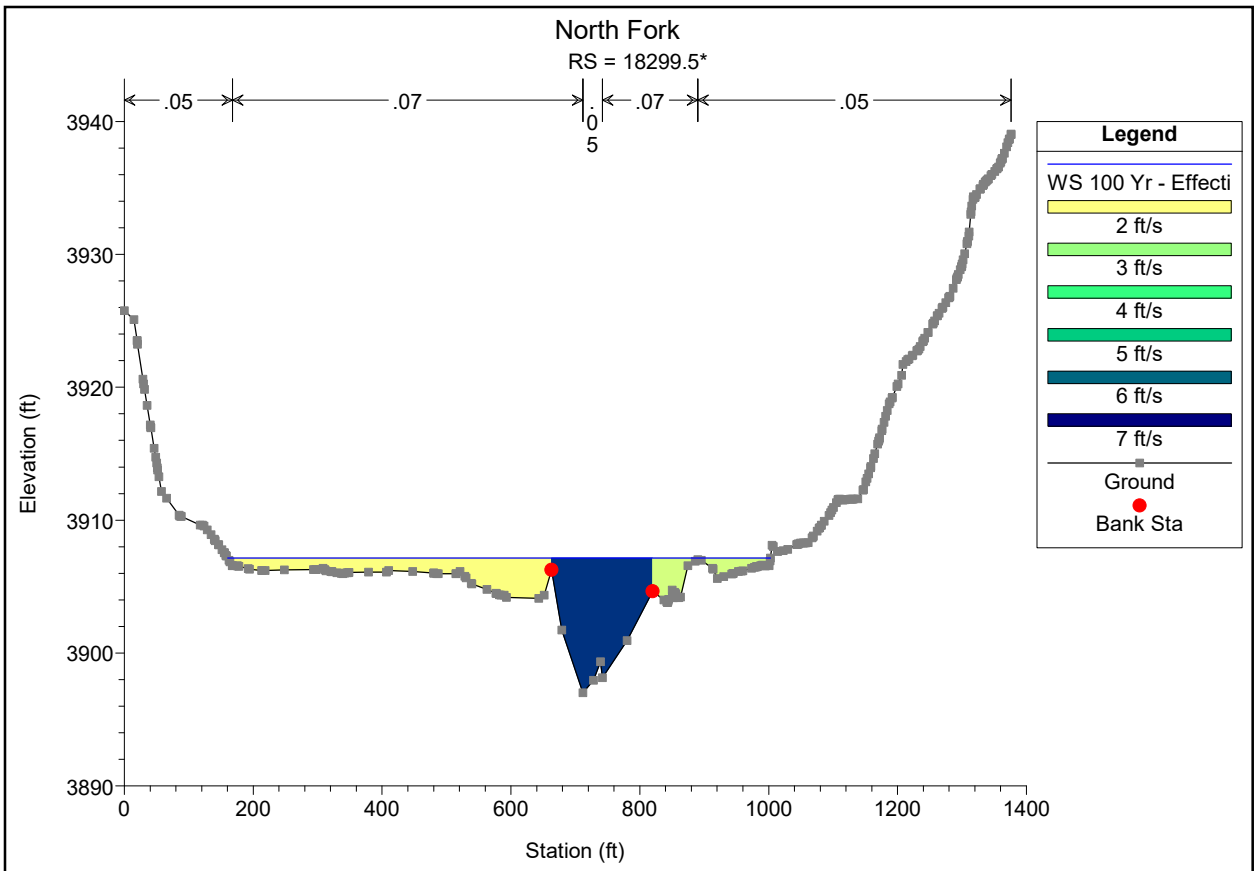
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta


North Fork
RS = 18645.4*
.05
.07
.07
.05
.05
Elevation (ft)
Station (ft)
Legend
WS 100 Yr - Effecti
1 ft/s
2 ft/s
3 ft/s
4 ft/s
5 ft/s
6 ft/s
7 ft/s
8 ft/s
Ground
Bank Sta
North Fork
RS = 18472.5*
.05
.07
.07
.05
.05
Elevation (ft)
Station (ft)
Legend
WS 100 Yr - Effecti
1 ft/s
2 ft/s
3 ft/s
4 ft/s
5 ft/s
6 ft/s
7 ft/s
8 ft/s
Ground
Bank Sta


North Fork
RS = 18299.5*
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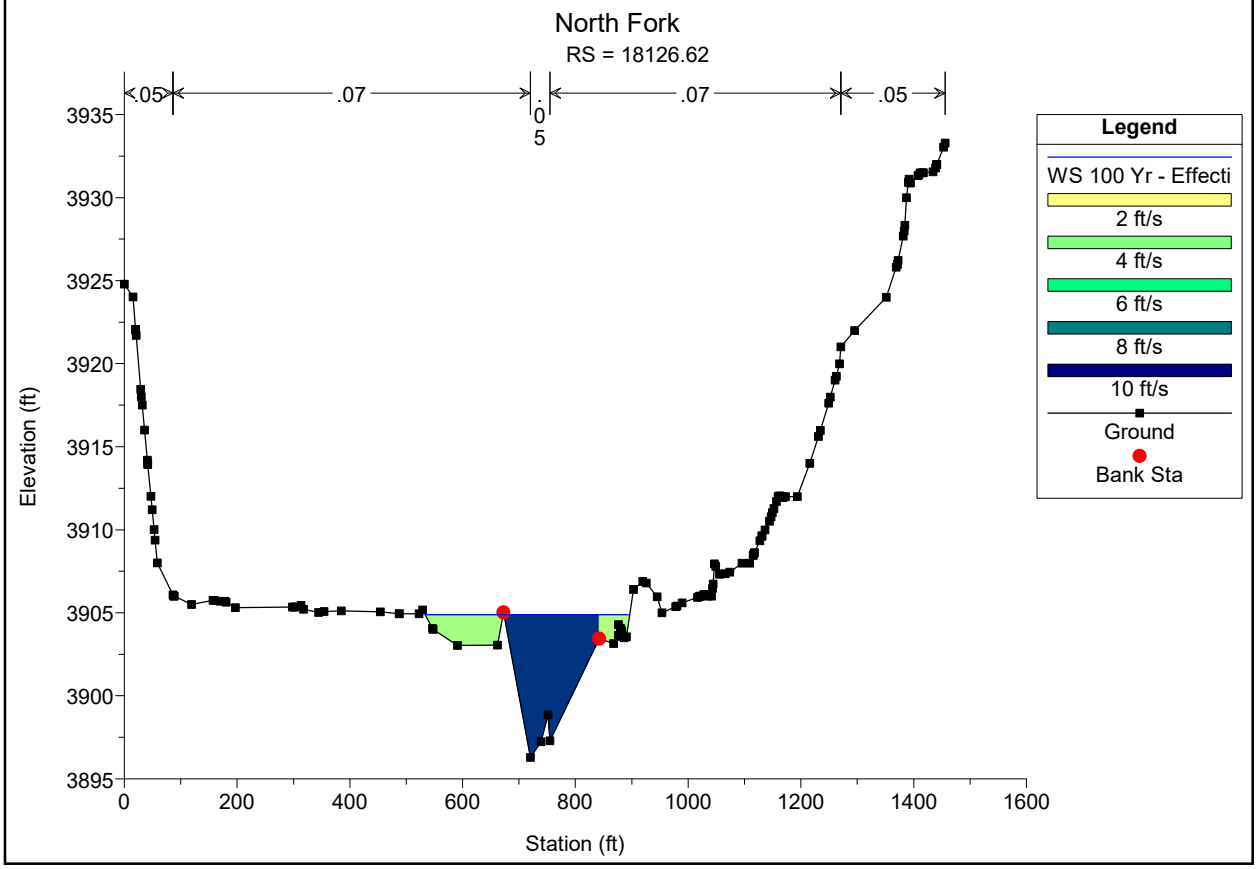
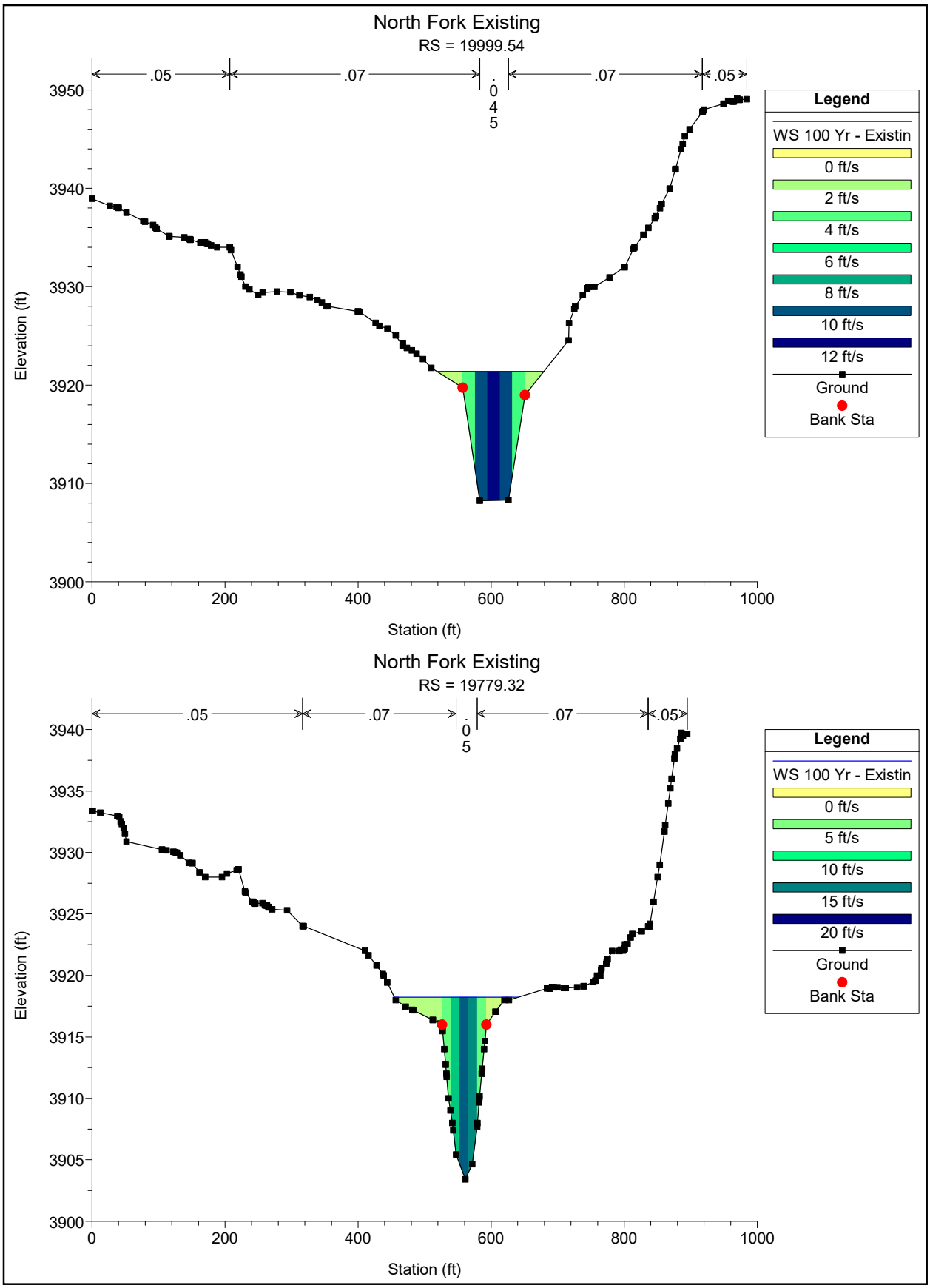
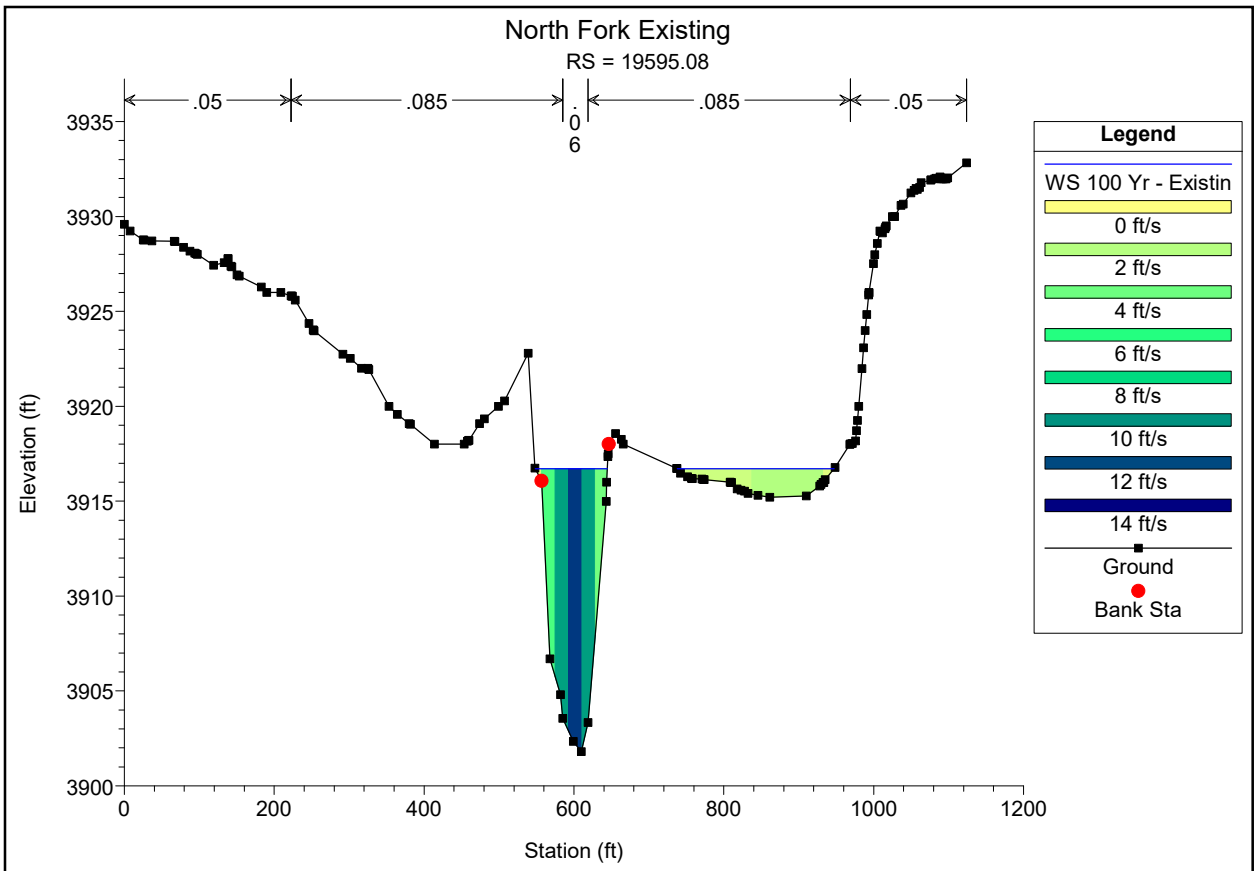
.07
.07
.05
0.05
Elevation (ft)
Station (ft)
Legend
WS 100 Yr - Effecti
2 ft/s
3 ft/s
4 ft/s
5 ft/s
6 ft/s
7 ft/s
Ground
Bank Sta


North Fork
RS = 18126.62
.05
.07
.07
.05
0.05
Elevation (ft)
Station (ft)
Legend
WS 100 Yr - Effecti
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta

HEC-RAS Model Results - Existing Conditions												
River Sta	FEMA Sta.	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Max Chl Dpth	Vel Right	Hydr Depth R
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	(ft/s)	(ft)
19+779	AF	8830	3903.41	3918.23	3916.2	3920.56	0.013394	12.48	806.13	14.82	2.02	0.75
19+595	AE	8830	3901.81	3916.7	3912.58	3917.99	0.011185	9.28	1117.98	14.89	1.81	0.97
Bridge												
19+564		8830	3901.14	3916.05	3911.91	3917.4	0.009016	9.43	1031	14.91	1.62	0.72
19+446	AD	8830	3898.93	3914.66	3911.52	3916.08	0.014009	10.06	1233.63	15.73	2	0.93
19+339		8830	3899.39	3912.89	3910.71	3914.82	0.009394	11.5	973.14	13.49	2.39	1.26
19+236		8830	3898.31	3912.2	3912.2	3913.67	0.010639	10.4	1227.64	13.9	2.7	1.37
18+991	AC	8830	3896.33	3911.42	3907.92	3911.86	0.003818	6.19	2247.83	15.09	2.61	2.78
18+126	AB	8830	3896.29	3904.9	3904.51	3906.09	0.015327	9.19	1138.09	8.61	3.15	1.33


North Fork Existing
RS = 19999.54
.05
.07
.045
.07
.05
Elevation (ft)
Station (ft)
Legend
WS 100 Yr - Existin
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
12 ft/s
Ground
Bank Sta
North Fork Existing
RS = 19779.32
.05
.07
.05
.07
.05
Elevation (ft)
Station (ft)
Legend
WS 100 Yr - Existin
0 ft/s
5 ft/s
10 ft/s
15 ft/s
20 ft/s
Ground
Bank Sta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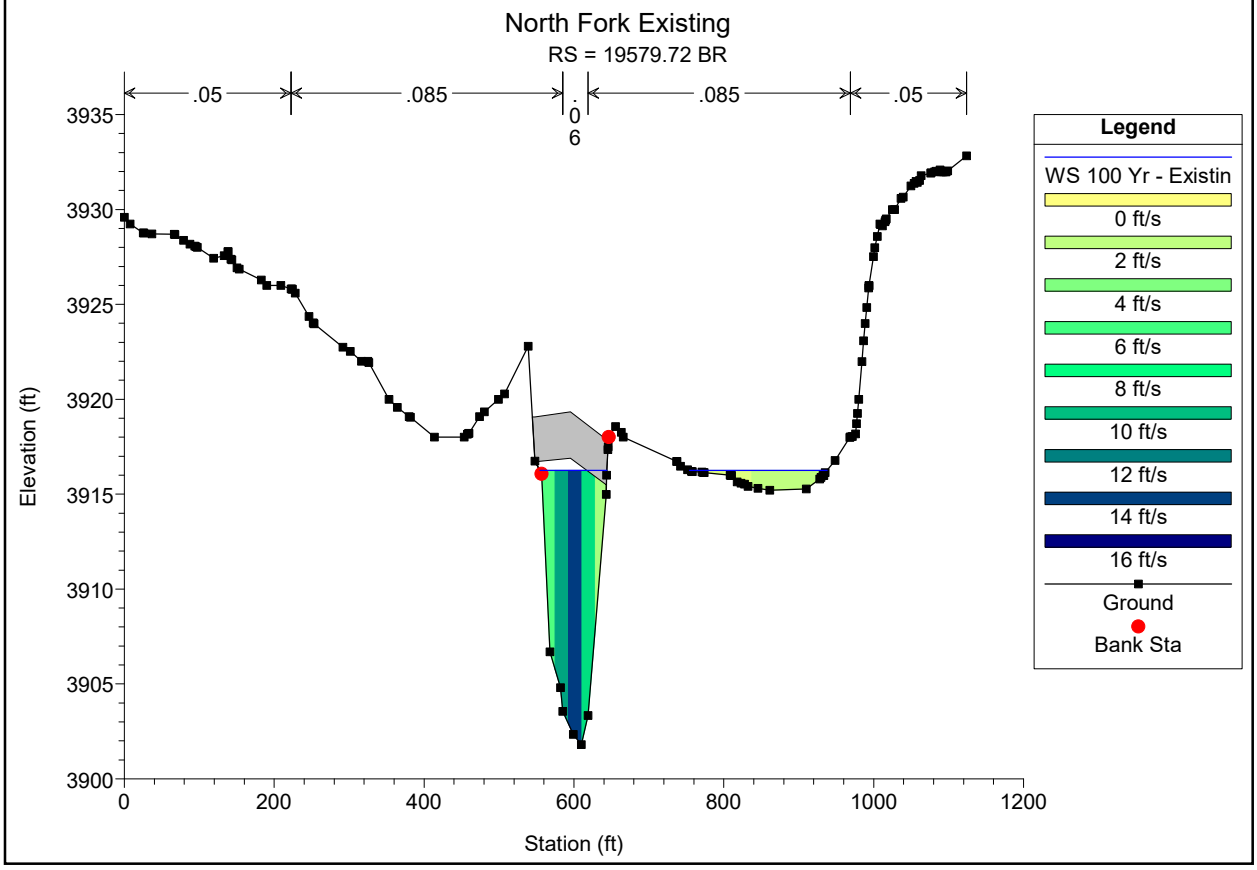
.05
.085
.06
.085
.05
Elevation (ft)
Station (ft)
3900
3905
3910
3915
3920
3925
3930
3935
0
200
400
600
800
1000
1200
Legend
WS 100 Yr - Existin
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
12 ft/s
14 ft/s
Ground
Bank Sta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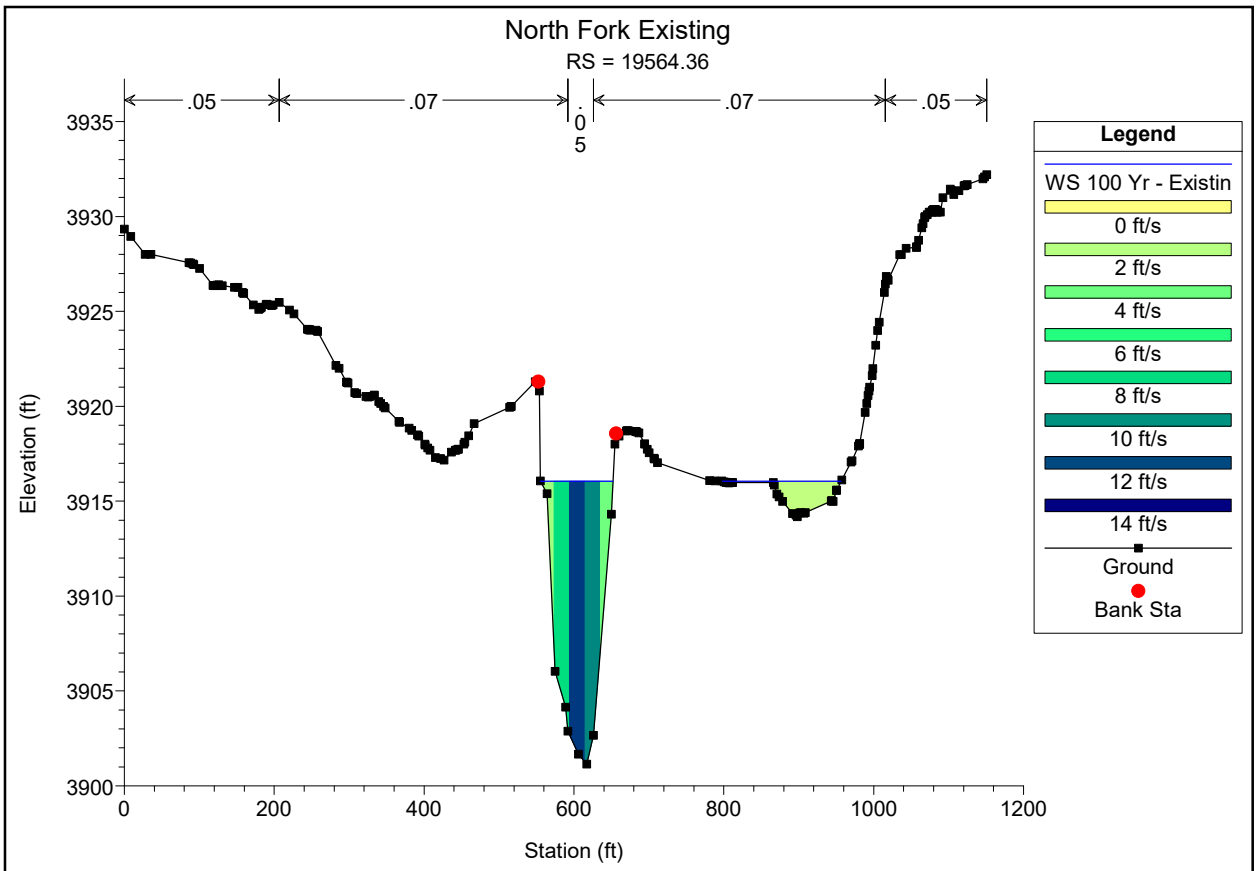
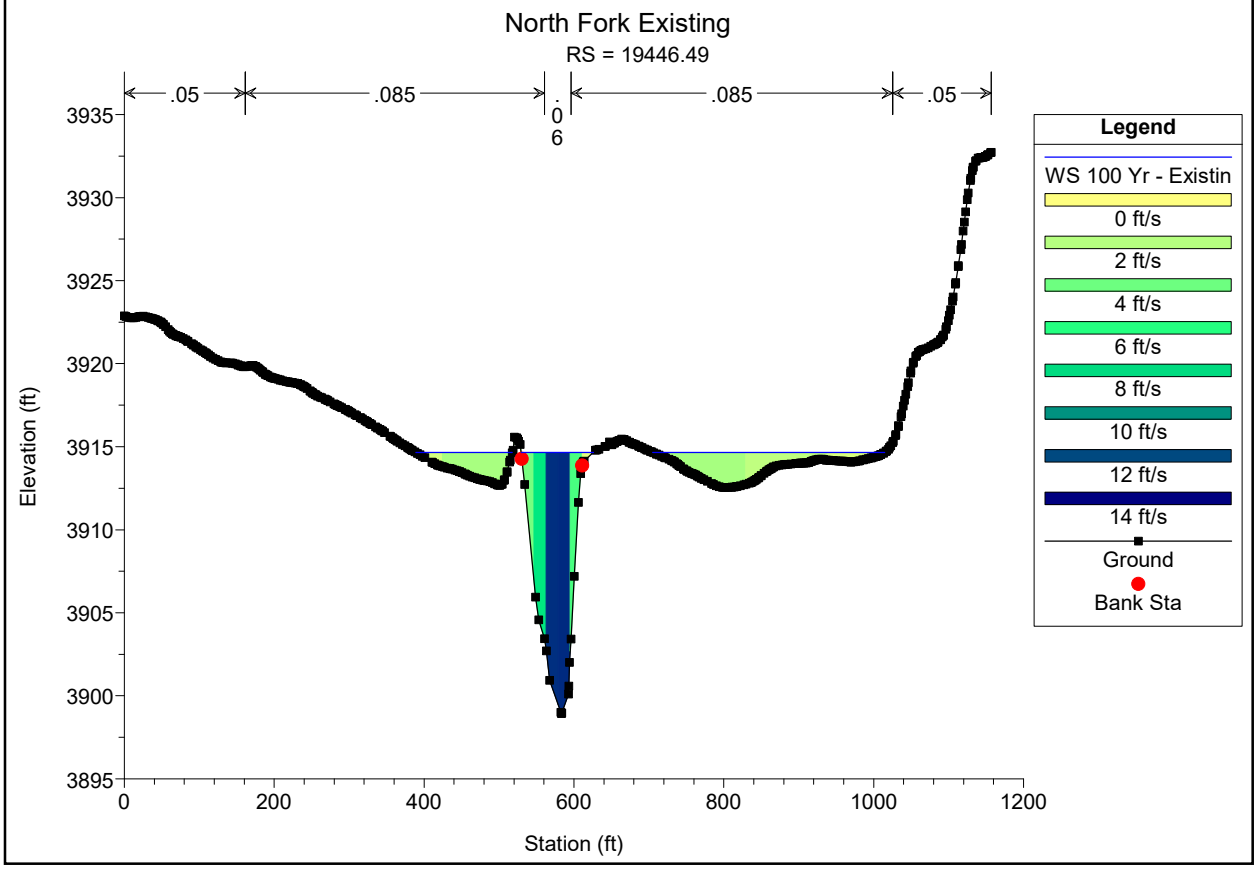
.05
.085
.06
.085
.05
Elevation (ft)
Station (ft)
3900
3905
3910
3915
3920
3925
3930
3935
0
200
400
600
800
1000
1200
Legend
WS 100 Yr - Existin
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
12 ft/s
14 ft/s
16 ft/s
Ground
Bank Sta


North Fork Existing
RS = 19564.36
.05
.07
.05
.07
.05
Elevation (ft)
Station (ft)
Legend
WS 100 Yr - Existin
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
12 ft/s
14 ft/s
Ground
Bank Sta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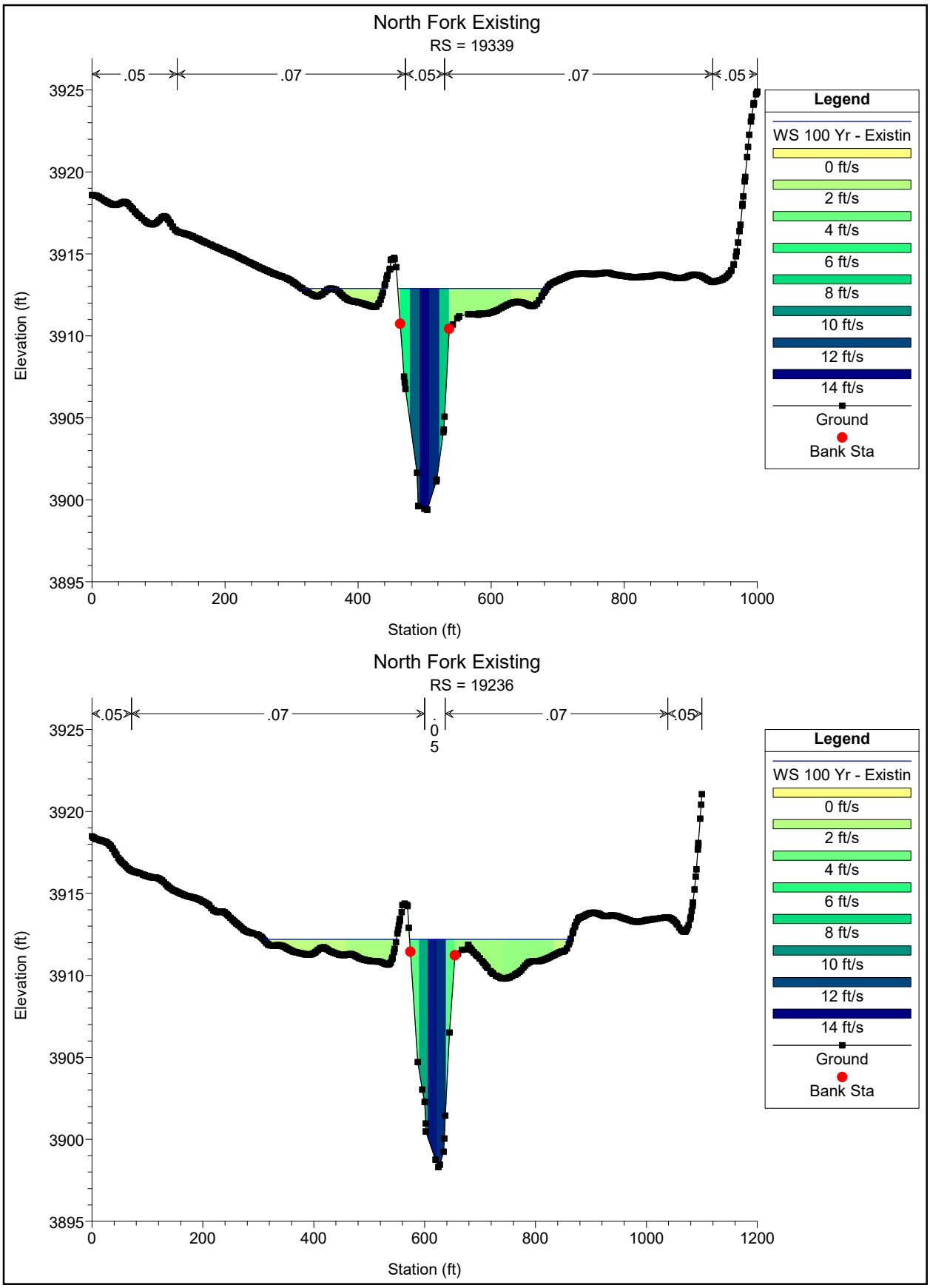
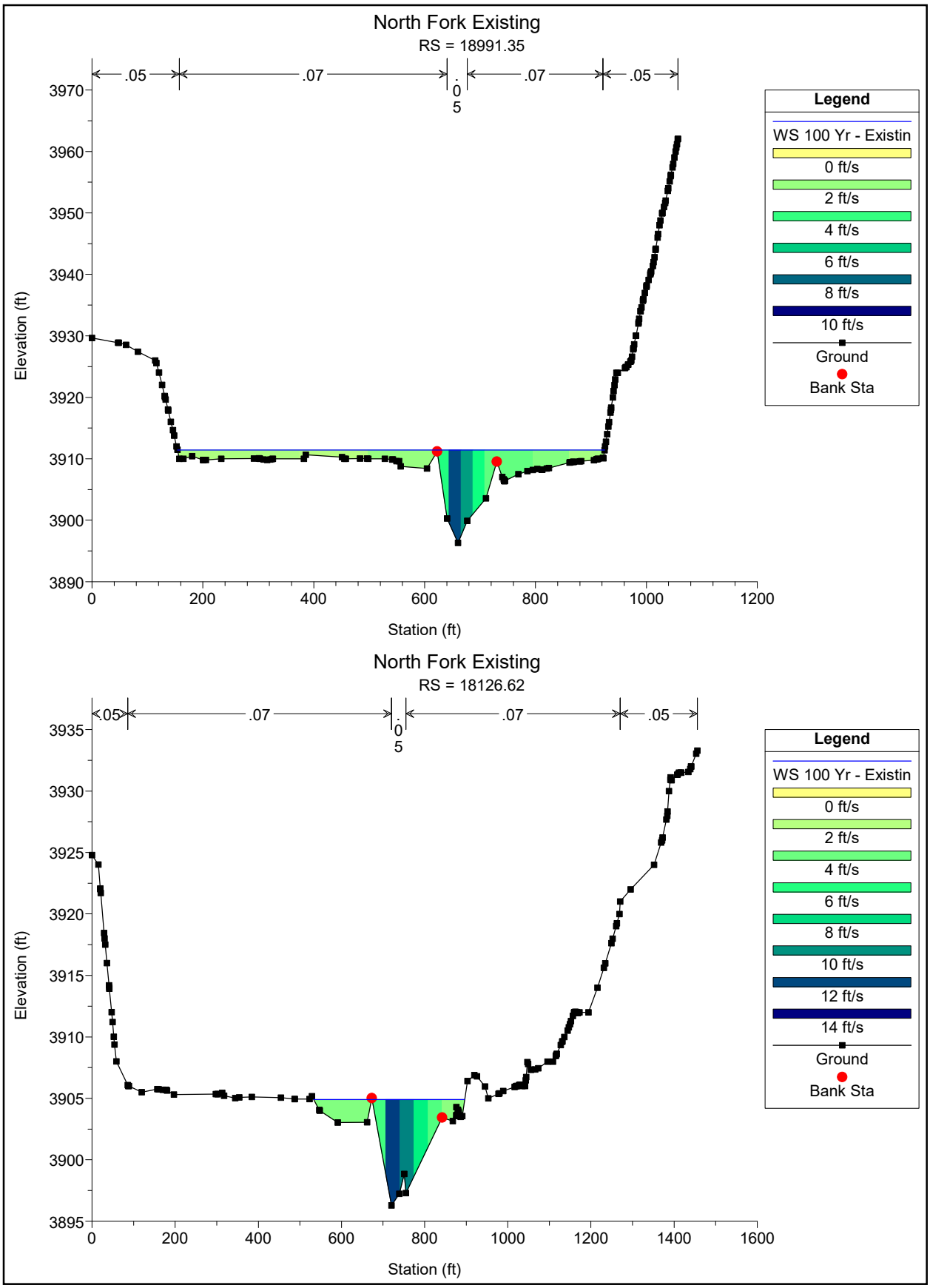
.05
.085
.085
.05
Elevation (ft)
Station (ft)
Legend
WS 100 Yr - Existin
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
12 ft/s
14 ft/s
Ground
Bank Sta


North Fork Existing
RS = 19339
.05
.07
.05
.07
.05
3925
3920
3915
3910
3905
3900
3895
Elevation (ft)
0
200
400
600
800
1000
Station (ft)
Legend
WS 100 Yr - Existin
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
12 ft/s
14 ft/s
Ground
Bank Sta
North Fork Existing
RS = 19236
.05
.07
.05
.07
.05
3925
3920
3915
3910
3905
3900
3895
Elevation (ft)
0
200
400
600
800
1000
1200
Station (ft)
Legend
WS 100 Yr - Existin
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
12 ft/s
14 ft/s
Ground
Bank Sta


North Fork Existing
RS = 18991.35
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.07
.07
.05
0.05
Elevation (ft)
Station (ft)
Legend
WS 100 Yr - Existin
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
North Fork Existing
RS = 18126.62
.05
.07
.07
.05
0.05
Elevation (ft)
Station (ft)
Legend
WS 100 Yr - Existin
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
12 ft/s
14 ft/s
Ground
Bank Sta

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SHEET 1 of 3

PROJECT NO. 13835-23

Project: Zion NP Visitor Center AT&T BY: GRF DATE: 8/28/2023

Subject: Long Term Degradation CHKD. BY: JWB DATE:

Assumptions:

Based on review of available topography (2017 LiDAR and 2023 Field Survey), it appears that the river maintains a relatively consistent grade through the project area and downstream of the project area. Review of historical images (1973-2020) indicate that the location of the main channel has remained unchanged through the study period. No evidence of head cutting or long term degradation/erosion is present at this location. Based on these factors, a long term degradation value of 2' would be reasonable within the main channel at this location. Based on the assumption that the project area is only susceptible to overbank scour, degradation of the overbank could result from flows overtopping the main channel during an extreme flood event. Sediment transport and deposition patterns due to such an event are not expected to be greater than that expected within the main channel. As a conservative estimate, a degradation value of 2' was assigned for this site.

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PROJECT NO. 13835-23

Project: Zion NP Visitor Center AT&T BY: GRF DATE: 8/28/2023

Subject: Bend Scour CHKD. BY: JWB DATE:

Bend Scour: (Section 704.2.1.4 - Bend Scour
Clark County Hydraulic Criteria and Drainage Design Manual, 8/12/99)

Location:
Virgin River - North Fork Station 19+446

Given:

Average velocity upstream from bend, V =	2	ft/s
Maximum depth upstream of bend, Y_{max} =	2.12	ft
Hydraulic depth in channel upstream of bend, Y_h =	0.93	ft
Energy slope upstream of bend, S_e =	0.009394	ft/ft
Angle of bend, α =	18	deg

*Determined by acute angle formed by intersection between projection of flowline and line tangent to outer bank of bend

Equation:

$$Z_{bs} = \left(\frac{0.0685 * Y_{max} * V^{0.8}}{Y_h^{0.4} * S_e^{0.5}} \right) \left(2.1 \left(\frac{\sin^2\left(\frac{\alpha}{2}\right)^{0.2}}{\cos \alpha} \right) - 1 \right)$$

Bend Scour, Z_{bs} = **0.03 ft** ←

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SHEET 3 of 3

PROJECT NO. 13835-23

Project: Zion NP Visitor Center AT&T BY: GRF DATE: 8/28/2023

Subject: 100 YR Anti Dune Trough Scour CHKD. BY: JWB DATE:

Anti Dune Trough: (Section 704.2.1.3 - Anti Dune Trough Depth
Clark County Hydraulic Criteria and Drainiage Design Manual, 8/12/99)

Location:
Virgin River - North Fork Station 19+339

Given:

100 YR	Average channel velocity, V =	2.39	fps
	Hydraulic depth, Y =	1.26	ft

Anti Dune Depth based on Velocity:

Equation:

$$Z_a = 0.0137 * V^2$$

Anti Dune Trough Depth, Z_a = **0.08 ft** ←

Anti Dune Trough Depth (max), Z_a = **0.63**