



Board of Adjustment Staff Report

Meeting Date: May 7, 2020

Agenda Item: 7C

SPECIAL USE PERMIT CASE NUMBER: WSUP20-0005 Thomas Creek Bridge

BRIEF SUMMARY OF REQUEST: To construct a pedestrian bridge in the critical stream zone buffer area of Thomas Creek

STAFF PLANNER: Planner's Name: Julee Olander
Phone Number: 775.328.3627
E-mail: jolander@washoecounty.us

CASE DESCRIPTION

For possible action, hearing, and discussion for the construction of a 16 foot long and 5 foot wide pedestrian bridge to cross the critical stream zone buffer area of Thomas Creek, located approximately 500 ft. upstream from the Zolezzi bridge at the terminus of Zolezzi Lane and a new 420-foot long trail for public access.

Applicant/Property Owner: Washoe County
Location: 500 ft. upstream from the Zolezzi bridge at the terminus of Zolezzi Lane
APN: 152-021-07
Parcel Size: 20.62 acres
Master Plan: Open Space (OS)
Regulatory Zone: Open Space (OS)
Area Plan: Southwest Truckee Meadows
Citizen Advisory Board: South Truckee Meadow/Washoe Valley
Development Code: Authorized in Article 418, Significant Hydrological Resources and Article 810, Special Use Permits
Commission District: 2 – Commissioner Lucey



STAFF RECOMMENDATION

APPROVE

APPROVE WITH CONDITIONS

DENY

POSSIBLE MOTION

I move that, after giving reasoned consideration to the information contained in the staff report and information received during the public hearing, the Washoe County Board of Adjustment approve with conditions Special Use Permit Case Number WSUP20-0005 for Washoe County, having made all four findings in accordance with Washoe County Code Section 110. 810. 30.

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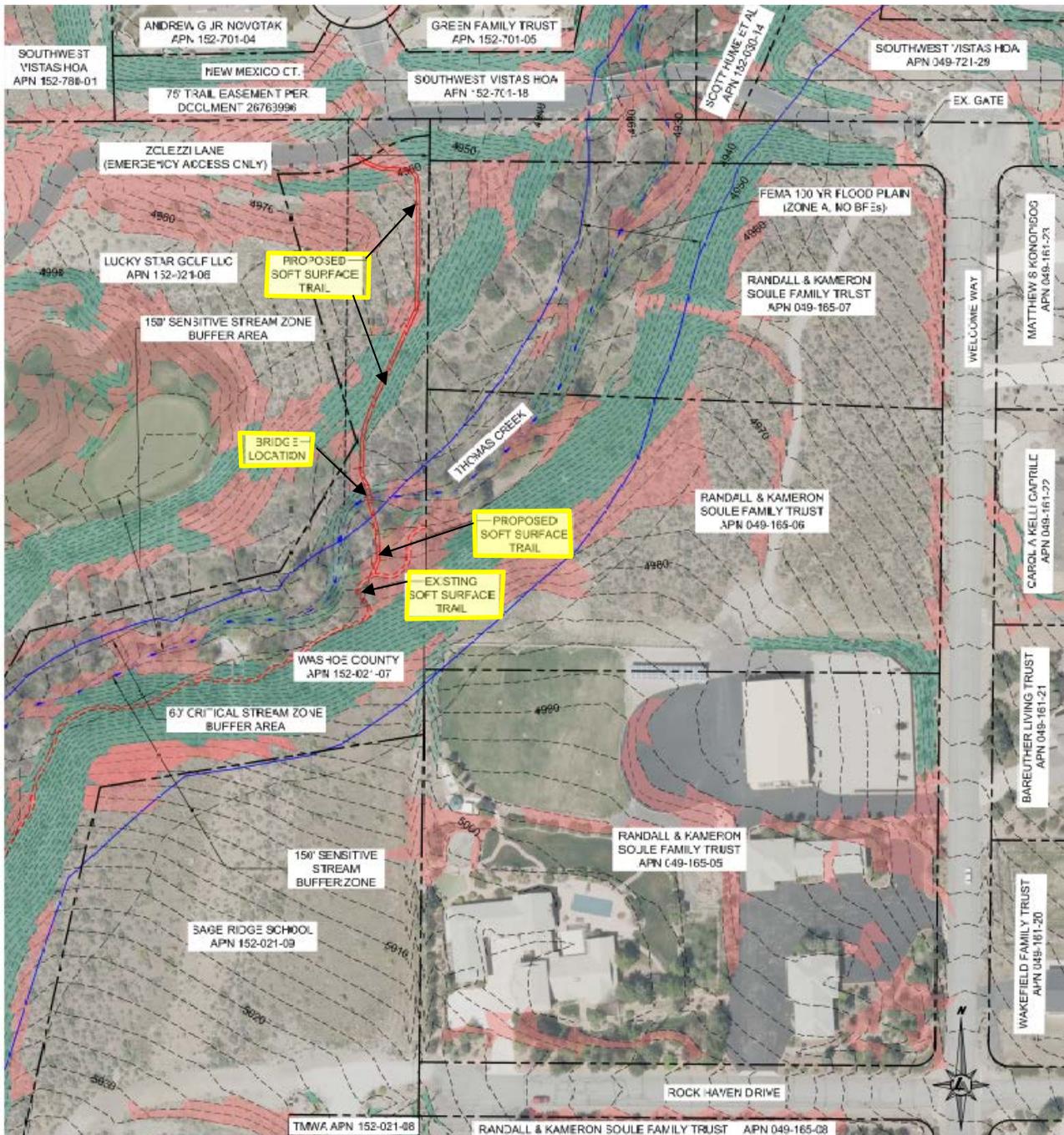
Special Use Permit

The purpose of a special use permit is to allow a method of review to identify any potential harmful impacts on adjacent properties or surrounding areas for uses that may be appropriate within a regulatory zone; and to provide for a procedure whereby such uses might be permitted by further restricting or conditioning them so as to mitigate or eliminate possible adverse impacts. If the Board of Adjustment grants an approval of the special use permit, that approval is subject to conditions of approval. Conditions of approval are requirements that need to be completed during different stages of the proposed project. Those stages are typically:

- Prior to permit issuance (i.e. a grading permit, a building permit, etc.)
- Prior to obtaining a final inspection and/or a certificate of occupancy on a structure
- Prior to the issuance of a business license or other permits/licenses
- Some conditions of approval are referred to as “operational conditions.” These conditions must be continually complied with for the life of the business or project.

The conditions of approval for Special Use Permit Case Number WSUP20-0005 are attached to this staff report and will be included with the action order, if approved.

The subject property is designated as open space (OS). The proposed use is to construct a bridge in the critical stream zone buffer area of Thomas Creek, which is permitted with a special use permit per Article 418, Significant Hydrological Resources. Therefore, the applicant is seeking approval of this SUP from the Board of Adjustment.



Site Plan

Project Evaluation

Washoe County, the property owner and applicant, is requesting to construct a 16-foot long and 5-foot wide pedestrian bridge across Thomas Creek and a new 420-foot long trail to connect to the bridge. Currently, the existing trail is located along the southside of Thomas Creek on Washoe County property and then crosses onto private property, which has been fenced and access has been blocked. Washoe County Parks is now proposing to re-route the trail across the proposed pedestrian bridge and to the new 420-foot long trail and maintain the trail on Washoe County

property. The trail located on the southside of the creek, on Washoe County property, crosses over the bridge to the north side of the creek. A new 420-foot long and 3-foot wide soft surface, single track trail will be constructed from the proposed bridge to Zolezzi Lane (see the site plan, on the previous page). This will maintain the Lower Thomas Creek Trail in this section to Zolezzi Lane. The project is designed to preserve the character of the site and have minimal impact on the site vegetation, habitat, and hydrological resources.

The proposed bridge will be located in the Thomas Creek critical stream zone buffer area. Washoe County Development Code 110.418.15(a) defines the critical stream zone buffer area as “all land and water surface within thirty (30) feet from the centerline of the perennial stream.” Thomas Creek is classified as a perennial stream on Map 110.418.05.1. A special use permit is required for any construction in the critical stream zone buffer area per Section 110.418.20(b). There are specific requirements per the code including a grading plan “showing compliance with applicable best management practices to minimize stream bank and stream bed erosion.” Also, the plan needs to “be designed to prevent construction drainage and materials from increasing sedimentation impacts to the stream environment and to minimize impervious surfaces.”

The 16-foot long, 5-foot wide timber, pedestrian bridge will be constructed with timbers that will be hand carried to the site. No heavy equipment will be required to construct the bridge. The bridge is located to cross the creek where it is narrow and can be easily spanned. The bridge will be constructed as a low flow bridge that will allow for the water to overtop the bridge during large flood events. The application states that Thomas Creek has a regulatory floodplain of 150-feet wide where the bridge will be located. The bridge is anchored to withstand the 10-year flow. Withstanding a larger event would require a larger structure that would have greater impact to the location and be more costly. If a major storm damages the bridge it is estimated that the repair/replacement cost would be low since the bridge is small and made of wood. The proposed bridge is intended to be low-impact and best management practices are planned to be utilized. The Stormwater Pollution Prevention Plan (SWPPP) will be required prior and during construction.



Proposed bridge crossing on Thomas Creek

A new 420 foot long and 3 foot wide soft surface single track trail will be constructed to connect the to the bridge. There will be 45 cubic yards of material excavated which will remain on site. The construction of the trail and bridge will disturb 2,130 sq. ft. The disturbed area will be revegetated with appropriate seeds and plants including an upland seed blend with native shrubs, grass and forbs. The seeds will be broadcast into the soil approximately ¼ inch deep. Within the riparian area the plantings will include Baltic rush, Nebraska sedge and plantings of willow stakes that have been harvested from the site. All trail finishing work will be conducted manually by crews. The plan is to construct the bridge and trail in one phase in 2020.

The Southwest Truckee Meadows Area Plan Goal Two requires that development in the southwest implement and preserve the community character commonly found in the area. Policy SW.2.1 requires when feasible, to minimize disruption of the natural topography, utilize natural contours and slopes, complement the natural characteristics of the landscape, preserve existing vegetation, minimize erosion and minimize cuts and fills. Also, policy SW.2.2 requires a plan for the control of noxious weeds. These policies have been addressed in the planned development of the site or are found in the conditions of approval. The applicant states that the development is planned as low impact with minimal impact on the site vegetation, habitat, and hydrological resources. Policy SW.2.3 requires that the applicant for a special use permit, “to present their items to the Citizen Advisory Board (CAB) and submit a statement to staff regarding how the final proposal responds to the community input received at the CAB.” However, with the CORVID-19 directives no CAB meetings have been held since this application was submitted. The CAB members were notified of the application and CAB worksheets were available however no worksheets were submitted to the Planning Department for this application.

South Truckee Meadows/Washoe Valley Citizen Advisory Board (STM/WV CAB)

The South Truckee Meadows/Washoe Valley CAB did not meet during the month of April. The CAB was notified of the application and a paper worksheet was sent to each member and no comments were received.

Reviewing Agencies

- Washoe County Community Services Department
 - Engineering and Capital Projects
 - Planning and Building
 - Parks
- Washoe County Health District
 - Air Quality
 - Environmental Health
 - What about Vector ?
- State of Nevada
 - Division of Environmental Protection
 - Division of Forestry
 - Division of Wildlife
 - Department of Water Resources
- Washoe-Storey Conservation District
- US Army Corp of Engineers

The following agencies/departments submitted a response to the proposed special use permit. A summary of each agency's comments and/or recommended conditions of approval and their contact information are provided. The conditions of approval document is attached to this staff report and will be included with the action order should the Planning Commission approve the special use permit application.

- Washoe County Planning and Building Division addressed common standards and other features associated with the project.
Contact: Julee Olander, 775.328.3627, jolander@washoecounty.us
- Washoe County Engineering and Capital Projects addressed land development, grading, and other associated matters.
Contact: Leo Vesely, 775.328.2040, lvesely@washoecounty.us
- Washoe County Parks addressed trail design.
Contact Name – Sophia Kirschenman, Park Planner, 775.328.3623, skirschenman@washoecounty.us
- US Army Corps of Engineers, Sacramento District provided information for a Section 404 Clean Water Act permit.
Contact Name – Jennifer C. Thomason, Senior Project Manager, 775.784.5304, Jennifer.C.Thomason@usace.army.mil
- Washoe-Storey Conservation District provided information for revegetation of the site.
Contact Name – Jim Shaffer, 775.857.8500 ext. 131, shafferjam51@gmail.com

Staff Comment on Required Findings

WCC Section 110.810.30, Article 810, *Special Use Permits*, requires that all the following findings be made to the satisfaction of the Washoe County Board of Adjustment before granting approval of the request. Staff has completed an analysis of the special use permit application and has determined that the proposal is in compliance with the required findings as follows.

1. That the proposed use is consistent with the action programs, policies, standards and maps of the Master Plan and the Truckee Canyon Area Plan.

Staff Comment: *Staff has reviewed the Master Plan and the Southwest Truckee Meadows Area Plan and the project is consistent with these plans. These plans encourage recreational activities and improved trail access throughout Washoe County, which this bridge will enable.*

2. Improvements. That adequate utilities, roadway improvements, sanitation, water supply, drainage, and other necessary facilities have been provided, the proposed improvements are properly related to existing and proposed roadways, and an adequate public facilities determination has been made in accordance with Division Seven.

Staff Comment: *The construction of the proposed bridge and trail will maintain public access to a portion of the Lower Thomas Creek trail and will not impact or require a change to utilities or other facilities in the area.*

3. Site Suitability. That the site is physically suitable for the proposed bridge and trail and for the intensity of such a development.

Staff Comment: *The proposed bridge is in Thomas Creek critical stream zone buffer area however; the proposed improvements will assist in keeping the area open to the public. The conditions of approval along with the required applicable code requirements will address the development of the area to ensure that the site is maintained appropriately.*

4. Issuance Not Detrimental. That issuance of the permit will not be significantly detrimental to the public health, safety or welfare; injurious to the property or improvements of adjacent properties; or detrimental to the character of the surrounding area.

Staff Comment: *The proposed bridge and trail will maintain public access to this portion of the Lower Thomas Creek trail. The conditions of approval have been included to mitigate any negative potential impacts.*

5. Effect on a Military Installation. Issuance of the permit will not have a detrimental effect on the location, purpose or mission of the military installation.

Staff Comment: *There is no military installation within the area of required notice for this special use permit; therefore, the project will have no effect on a military installation.*

Recommendation

After a thorough analysis and review, Special Use Permit Case Number WSUP20-0005 is being recommended for approval with conditions. Staff offers the following motion for the Board's consideration.

Motion

I move that, after giving reasoned consideration to the information contained in the staff report and information received during the public hearing, the Washoe County Board of Adjustment approve with conditions Special Use Permit Case Number WSUP20-0005 for Washoe County, having made all five findings in accordance with Washoe County Code Section 110.810.30:

1. Consistency. That the proposed use is consistent with the action programs, policies, standards and maps of the Master Plan and the Southwest Truckee Meadows Area Plan;
2. Improvements. That adequate utilities, roadway improvements, sanitation, water supply, drainage, and other necessary facilities have been provided, the proposed improvements are properly related to existing and proposed roadways, and an adequate public facilities determination has been made in accordance with Division Seven;

3. Site Suitability. That the site is physically suitable for construct of a bridge in the critical stream zone buffer area of Thomas Creek and for the intensity of such a development;
4. Issuance Not Detrimental. That issuance of the permit will not be significantly detrimental to the public health, safety or welfare; injurious to the property or improvements of adjacent properties; or detrimental to the character of the surrounding area;
5. Effect on a Military Installation. Issuance of the permit will not have a detrimental effect on the location, purpose or mission of the military installation.

Appeal Process

Board of Adjustment action will be effective 10 calendar days after the written decision is filed with the Secretary to the Board of Adjustment and mailed to the applicant, unless the action is appealed to the Washoe County Board of County Commissioners, in which case the outcome of the appeal shall be determined by the Washoe County Board of County Commissioners. Any appeal must be filed in writing with the Planning and Building Division within 10 calendar days from the date the written decision is filed with the Secretary to the Board of Adjustment and mailed to the applicant.

Applicant: Washoe County



Conditions of Approval

Special Use Permit Case Number WSUP20-0005

The project approved under Special Use Permit Case Number WSUP20-0005 shall be carried out in accordance with the conditions of approval granted by the Board of Adjustment on May 7, 2020. Conditions of approval are requirements placed on a permit or development by each reviewing agency. These conditions of approval may require submittal of documents, applications, fees, inspections, amendments to plans, and more. These conditions do not relieve the applicant of the obligation to obtain any other approvals and licenses from relevant authorities required under any other act.

Unless otherwise specified, all conditions related to the approval of this special use permit shall be met or financial assurance must be provided to satisfy the conditions of approval prior to issuance of a grading or building permit. The agency responsible for determining compliance with a specific condition shall determine whether the condition must be fully completed or whether the applicant shall be offered the option of providing financial assurance. All agreements, easements, or other documentation required by these conditions shall have a copy filed with the County Engineer and the Planning and Building Division.

Compliance with the conditions of approval related to this special use permit is the responsibility of the applicant, his/her successor in interest, and all owners, assignees, and occupants of the property and their successors in interest. Failure to comply with any of the conditions imposed in the approval of the special use permit may result in the institution of revocation procedures.

Washoe County reserves the right to review and revise the conditions of approval related to this Special Use Permit should it be determined that a subsequent license or permit issued by Washoe County violates the intent of this approval.

For the purpose of conditions imposed by Washoe County, “may” is permissive and “shall” or “must” is mandatory.

Conditions of approval are usually complied with at different stages of the proposed project. Those stages are typically:

- Prior to permit issuance (i.e., grading permits, building permits, etc.).
- Prior to obtaining a final inspection and/or a certificate of occupancy.
- Prior to the issuance of a business license or other permits/licenses.
- Some “conditions of approval” are referred to as “operational conditions.” These conditions must be continually complied with for the life of the project or business.

FOLLOWING ARE CONDITIONS OF APPROVAL REQUIRED BY THE REVIEWING AGENCIES. EACH CONDITION MUST BE MET TO THE SATISFACTION OF THE ISSUING AGENCY.

Washoe County Planning and Building Division

1. The following conditions are requirements of Planning and Building, which shall be responsible for determining compliance with these conditions.

Contact Name – Julee Olander, (775)328-3627, jolander@washoecounty.us

- a. **The applicant shall attach a copy of the action order approving this project to all permits and applications (including building permits) applied for as part of this special use permit.**
- b. The applicant shall demonstrate substantial conformance to the plans approved as part of this special use permit. The Planning and Building Division shall determine compliance with this condition.
- c. The applicant shall submit construction plans, with all information necessary for comprehensive review by Washoe County, and initial building permits shall be issued within two years from the date of approval by Washoe County. The applicant shall complete construction within the time specified by the building permits. Compliance with this condition shall be determined by the Planning and Building Division.
- d. A note shall be placed on all construction drawings and grading plans stating:

NOTE

Should any cairn or grave of a Native American be discovered during site development, work shall temporarily be halted at the specific site and the Sheriff's Office as well as the State Historic Preservation Office of the Department of Conservation and Natural Resources shall be immediately notified per NRS 383.170.

- e. The applicant shall re-vegetate all disturbed areas, including riparian areas with appropriate plants, with a mixture of seeds, native shrubs, and grass at the qualities as described in the application.
- f. The grading on site shall be in compliance with applicable best management practices to minimize stream bank and stream bed erosion.
- g. The grading plan shall be designed to prevent construction drainage and materials from increasing sedimentation impacts to the stream environment and to minimize impervious surfaces.
- h. An onsite noxious weeds management plan needs to be developed to ensure weed seeds do not impact other areas.

Washoe County Parks

2. The following conditions are requirements of Parks, which shall be responsible for determining compliance with these conditions.

Contact Name – Sophia Kirschenman, Park Planner, 775.328.3623, skirschenman@washoecounty.us

- a. Contractors will be required to utilize sustainable trail design methods and impacts associated with the construction of the trail are expected to be minimal.

Washoe County Engineering and Capital Projects

3. The following conditions are requirements of the Engineering Division, which shall be responsible for determining compliance with these conditions.

Contact Name – Leo Vesely, P.E., 775. 328.3600, lvesely@washoecounty.us

- a. A complete set of construction improvement drawings, including an on-site grading plan, shall be submitted when applying for a building/grading permit. Grading shall comply with best management practices (BMP's) and shall include detailed plans for grading, site

drainage, erosion control (including BMP locations and installation details), slope stabilization, and mosquito abatement. Placement or removal of any excavated materials shall be indicated on the grading plan. Silts shall be controlled on-site and not allowed onto adjacent property.

- b. All grading shall be in accordance with Article 110.438 Grading Standards.

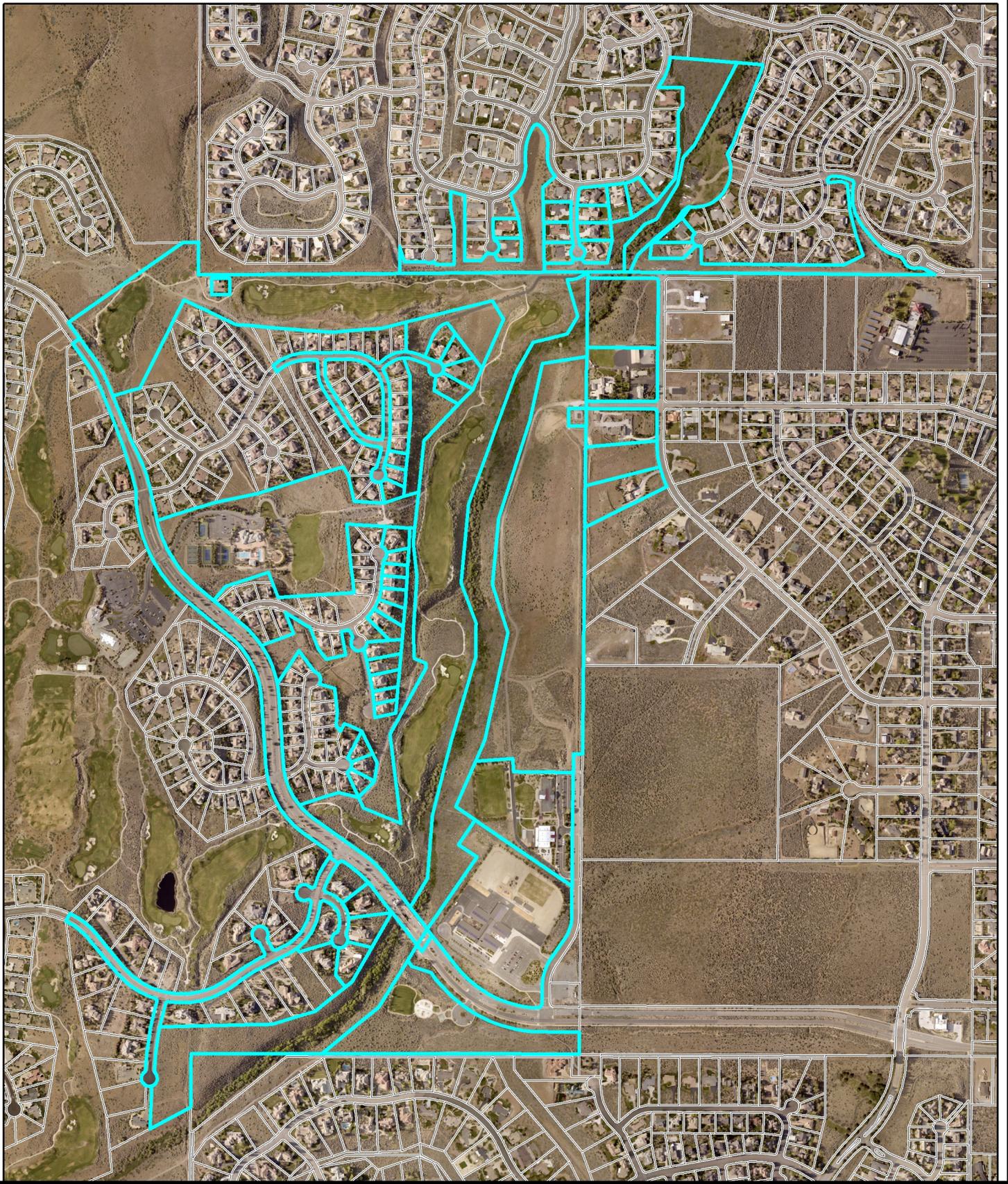
US Army Corps of Engineers, Sacramento District

4. The following conditions are requirements of the US Army Corps of Engineers, which shall be responsible for determining compliance with these conditions.

**Contact Name – Jennifer C. Thomason, Senior Project Manager, (775) 784-5304,
Jennifer.C.Thomason@usace.army.mil**

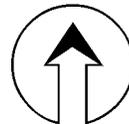
- a. A Section 404 Clean Water Act permit may be required if the project would result in fill material being placed, even temporarily, below the ordinary high water mark of Thomas Creek or any adjacent or abutting wetlands. If there are any questions about our Regulatory Program contact the US Army Corps of Engineers.

*** End of Conditions ***



WSUP20-0005 Thomas Creek bridge

Noticing Map- 500 feet from site



0 250 500 750
Feet

Community Services
Department



1001 E Ninth St
Reno, Nevada 89509

Community Services Department

Planning and Building

SPECIAL USE PERMIT

(see page 7)

SPECIAL USE PERMIT FOR GRADING

(see page 9)

SPECIAL USE PERMIT FOR STABLES

(see page 12)

APPLICATION



Community Services Department
Planning and Building
1001 E. Ninth St., Bldg. A
Reno, NV 89512-2845

Telephone: 775.328.6100

Special Use Permits

Washoe County Code (WCC) Chapter 110, Article 810, Special Use Permit, provides a method of reviewing proposed uses as listed in Article 302, Allowed Uses, which possess characteristics that require special appraisal in order to determine if the uses have the potential to adversely affect other land uses, transportation systems, or public facilities in the vicinity. The Planning Commission, Board of Adjustment, or Hearing Examiner may require conditions of approval necessary to eliminate or minimize, to an acceptable level, any potentially adverse effects of the use. See WCC 110.810, for further information.

Development Application Submittal Requirements

Applications are accepted on the 15th of each month (if the 15th is a non-work day, the first working day after the 15th)

1. **Fees:** See Master Fee Schedule. **Bring payment with your application to Community Service Department (CSD). Make check payable to Washoe County.**
2. **Development Application:** A completed Washoe County Development Application form.
3. **Owner Affidavit:** The Owner Affidavit must be signed and notarized by all owners of the property subject to the application request.
4. **Proof of Property Tax Payment:** The applicant must provide a written statement from the Washoe County Treasurer's Office indicating all property taxes for the current quarter of the fiscal year on the land have been paid.
5. **Application Materials:** The completed Special Use Permit Application materials.
6. **Proposed Site Plan Specifications (Special Use Permit and Stables):**
 - a. Lot size with dimensions drawn using standard engineering scales (e.g. scale 1" = 100', 1" = 200', or 1" = 500') showing all streets and ingress/egress to the property.
 - b. Show the location and configuration of all existing and proposed buildings (with distances from the property lines and from each other), all existing buildings that will remain (with distances from the property lines and from each other), all existing buildings that will be removed, and site improvements on a base map with existing and proposed topography expressed in intervals of no more than five (5) feet.
 - c. Show the location and configuration of wells and well houses, septic systems and leach fields, overhead utilities, water and sewer lines, and all existing and proposed easements.
 - d. Show locations of parking, landscaping, signage and lighting.
 - e. The cross sections of all rights-of-way, streets, alleys or private access ways within the proposed development, proposed name and approximate grade of each, and approximate radius of all curves and diameter of each cul-de-sac.
 - f. Property boundary lines, distances and bearings.
 - g. Contours at five (5) foot intervals or two (2) foot intervals where, in the opinion of the County Engineer, topography is a major factor in the development.
 - h. Indication of prominent landmarks, rock outcroppings, and natural foliage which will be deciding considerations in the design of the development.
 - i. If any portion of the land within the boundary of the development is subject to inundation or storm water overflow, as shown on the adopted Federal Emergency Management Agency's Flood Boundary and Floodway Maps, that fact and the land so affected shall be clearly shown on the map by a prominent note on each sheet, as well as width and direction of flow of each water course within the boundaries of the development.
 - j. Existing and proposed roads, trails or rights-of-way within the development shall be designated on the map. Topography and existing developments within three hundred (300) feet must also be shown on the map.

- k. Vicinity map showing the proposed development in relation to Interstate 80, Highway 395, I-580, or a major arterial. The vicinity map shall also include a north arrow.
- l. Date, scale, and number of each sheet in relation to the total number of sheets, and the name of the person preparing the plans.
- m. Location of snow storage areas sufficient to handle snow removed from public and private street, if above 5,500 feet.
- n. All known areas of potential hazard (and the basis for delineation) shall be clearly designated on the map. Additionally, active fault lines (post-Holocene) shall be delineated on the map.
- o. Location of areas with slopes greater than fifteen percent (15%) and thirty percent (30%).
- p. Boundary of any wetland areas and/or floodplains within the project site.
- q. Note by the project engineer or design professional indicating compliance with all applicable provisions of the Washoe County Development Code.
- r. Significant Hydrological Resources. Indicate the critical and sensitive buffer zones according to Article 418 of the Washoe County Development Code.

7. **Site Plan Specifications for Grading:**

- a. Location and limits of all work to be done.
- b. Existing contours and proposed contours.
- c. Location of any structures on adjacent parcels that are within fifteen (15) feet of the work site's parcel boundary.
- d. Existing draining (natural and man-made) and proposed drainage patterns.
- e. Sufficient elevation data to show the drainage will work as proposed.
- f. Quantities of excavation fill and disturbed surface area shall be calculated and shown on the site plan. **Areas under buildings and pavement need not be included in these calculations.**
- g. Quantities of material proposed to be removed from the site must be shown. The proposed disposal area and the disposition of fill must be noted on the plan.
- h. Limiting dimensions of cut and fill.
- i. Proposed BMPs (Best Management Practices) for controlling water and wind erosion if a disturbed area is left undeveloped for more than thirty (30) days.
- j. Cut and fill slopes setback from the property boundary.
- k. Structure setbacks from a slope.

8. **Grading:** In accordance with the grading provisions of Washoe County Code, Article 438, if the thresholds for a grading permit are met or exceeded, the grading plans shall indicate the existing and proposed grades, slope treatments (i.e. rip rap, erosion control, etc.) and drainage channels and the direction of flow. **Cross sections must be provided at a minimum of two key locations.**

9. **Traffic Impact Report (Special Use Permit and Stables):** Traffic impact reports are required whenever the proposed development project will generate 80 or more weekday peak hour trips as determined using the latest edition Institute of Transportation Engineers (ITE) trip generation rates or other such sources as may be accepted by Washoe County Engineering. Projects with less than 200 peak hour trips may not need to perform an impact analysis for future years. Traffic consultants are encouraged to contact Washoe County Engineering and Capital Projects staff prior to preparing a traffic impact report.

10. **Landscaping:** Landscape plans may be required, for **stables**. Landscape plans may include: a soils evaluation; color and type of building material, such as fencing material; type of plant material; location of plant material and proposed maintenance schedule; size of plant material at planting and size of plant material at full maturation; type and amount of mulch material; and an irrigation plan.

- a. **Planting Plan Specifications:** The planting plan must include all necessary information to satisfy Washoe County Code Section 110.412.60, Planting Standards.

- Proposed Tree Locations. Individual trees shall be graphically depicted in the proposed locations; trees shall be identified as either evergreen or deciduous; trees shall be individually labeled or coded and cross referenced to the proposed plant species in the plant legend.
 - Proposed Plant Material. The preliminary plan must identify where, and a square footage amount for, one or all of the following items: trees, mulch (rock, DG or bark), seeded areas, etc.
 - Existing On-Site Vegetation. In the case of large strands of trees and shrubs, individual locations may be identified with a revision cloud symbol. Smaller numbers or strands of trees (six (6) inch caliper and greater) shall be identified individually. Shrub areas and other forms of vegetation such as grasses shall be identified with a revision cloud symbol.
 - Plant Legend. Legend shall include all proposed plant material, including the following: common name, botanical name, size at planting, spacing and quantity (of trees only).
 - Landscape Area Legend. A summary of proposed areas and their square footages shall include: lawn, existing and or proposed paving, existing trees to be preserved, existing trees to be removed and the amount of proposed shrubs.
- b. **Irrigation Plan Specifications:** The irrigation plan must include all necessary information to satisfy Washoe County Code Section 110.412.65, Irrigation Standards.
- Location, size, and specifications of water source(s), water mains, meter(s), valves, and the controller.
 - Temporary or permanent water irrigation systems.
 - Specifications of irrigation equipment identified by manufacturer's name and equipment identification number.
 - An approved backflow prevention device is required on all landscape irrigation systems.
11. **Signage Plan:** The signage plans shall include sign elevations and delineate location, height, style, dimensions, intensity of sign lighting and finish of any proposed signage:
12. **Lighting Plan:** Show the location and configuration of all proposed exterior lighting including a detail of the parking lot light fixtures, pole heights, security lighting, and wall mounted illumination fixtures. Parking lot areas shall be depicted showing lumen isolines demonstrating compliance with the provisions of the Washoe County Development Code.
13. **Building Elevations:** All buildings and structures including fences, walls, poles and monument signs proposed for construction within the project shall be clearly depicted in vertical architectural drawings provided in accurate architectural scale. All architectural elevations from all building faces shall be presented.
14. **Packets:** Six (6) packets and a flash drive or DVD - any digital documents need to have a resolution of 300 dpi. One (1) packet must be labeled "Original" and contain a signed and notarized Owner Affidavit. Each packet shall include an 8.5" x 11" reduction of any applicable site plan, development plan, and/or application map. These materials must be readable. Labeling on these reproductions should be no smaller than 8 point on the 8½ x 11" display. Four (4) of the application packets shall include large format maps; the rest of the packets shall include either 8.5" x 11" or 11" x 17" maps. Large format sheets should be included in a slide pocket(s). Any specialized reports identified above shall be included as attachments or appendices and be annotated as such.

- Notes:
- (i) Application and map submittals must comply with all specific criteria as established in the Washoe County Development Code and/or the Nevada Revised Statutes.
 - (ii) Appropriate map engineering and building architectural scales are subject to the approval of Planning and Building and/or Engineering and Capital Projects.
 - (iii) All oversized maps and plans must be folded to a 9" x 12" size.
 - (iv) **Labels:** The applicant is required to submit three (3) sets of mailing labels for every tenant residing in a mobile home park that is within five hundred (500) feet of the

proposed project (or within seven hundred fifty (750) feet of the proposed project if the proposed project is a project of regional significance).

- (v) Based on the specific nature of the development request, Washoe County reserves the right to specify additional submittal packets, additional information and/or specialized studies to clarify the potential impacts and potential conditions of development to minimize or mitigate impacts resulting from the project. **No application shall be processed until the information necessary to review and evaluate the proposed project is deemed complete by the Director of Planning and Building.**
- (vi) Please be advised that the Washoe County Director of Planning and Building or their designee, Washoe County Board of Adjustment, and/or Washoe County Planning Commission have the ability to determine an application incomplete if they cannot ascertain what the applicant is requesting, or if there is insufficient information to determine a favorable outcome.

Washoe County Development Application

Your entire application is a public record. If you have a concern about releasing personal information, please contact Planning and Building staff at 775.328.6100.

Project Information		Staff Assigned Case No.: _____	
Project Name:			
Project Description:			
Project Address:			
Project Area (acres or square feet):			
Project Location (with point of reference to major cross streets AND area locator): <small>The project site is located on Thomas Creek approximately 500 ft. upstream of the Zolezzi Lane bridge, which in turn is located about 250 ft. west of the north terminus of Welcome Way. For many years there has been a use trail along the south side of Thomas Creek upstream from Zolezzi Lane. However, the use trail crossed some private parcels which have recently been fenced off and Washoe County Parks and Open Space wishes to reroute the trail so that it lies within APN 152-021-07 which is owned by Washoe County. This will require that the trail start at Zolezzi Lane on the north side of Thomas Creek and cross the creek on APN 152-021-07.</small>			
Assessor's Parcel No.(s):	Parcel Acreage:	Assessor's Parcel No.(s):	Parcel Acreage:
Indicate any previous Washoe County approvals associated with this application: Case No.(s).			
Applicant Information (attach additional sheets if necessary)			
Property Owner:		Professional Consultant:	
Name:		Name:	
Address:		Address:	
Zip:		Zip:	
Phone:		Phone:	
Fax:		Fax:	
Email:		Email:	
Cell:		Cell:	
Other:		Other:	
Contact Person:		Contact Person:	
Applicant/Developer:		Other Persons to be Contacted:	
Name:		Name:	
Address:		Address:	
Zip:		Zip:	
Phone:		Phone:	
Fax:		Fax:	
Email:		Email:	
Cell:		Cell:	
Other:		Other:	
Contact Person:		Contact Person:	
For Office Use Only			
Date Received:		Initial:	
County Commission District:		Planning Area:	
CAB(s):		Master Plan Designation(s):	
		Regulatory Zoning(s):	

Special Use Permit Application Supplemental Information

(All required information may be separately attached)

1. What is the project being requested?

2. Provide a site plan with all existing and proposed structures (e.g. new structures, roadway improvements, utilities, sanitation, water supply, drainage, parking, signs, etc.)

3. What is the intended phasing schedule for the construction and completion of the project?

4. What physical characteristics of your location and/or premises are especially suited to deal with the impacts and the intensity of your proposed use?

5. What are the anticipated beneficial aspects or affects your project will have on adjacent properties and the community?

6. What are the anticipated negative impacts or affect your project will have on adjacent properties? How will you mitigate these impacts?

7. Provide specific information on landscaping, parking, type of signs and lighting, and all other code requirements pertinent to the type of use being purposed. Show and indicate these requirements on submitted drawings with the application.

No landscaping, parking, signs or lighting is proposed for this project. See Attachment A for special review considerations under Article 418 Significant Hydrological Resources.

8. Are there any restrictive covenants, recorded conditions, or deed restrictions (CC&Rs) that apply to the area subject to the special use permit request? (If so, please attach a copy.)

<input type="checkbox"/> Yes	<input type="checkbox"/> No
------------------------------	-----------------------------

9. Utilities:

a. Sewer Service	
b. Electrical Service	
c. Telephone Service	
d. LPG or Natural Gas Service	
e. Solid Waste Disposal Service	
f. Cable Television Service	
g. Water Service	

For most uses, Washoe County Code, Chapter 110, Article 422, Water and Sewer Resource Requirements, requires the dedication of water rights to Washoe County. Please indicate the type and quantity of water rights you have available should dedication be required.

h. Permit #		acre-feet per year	
i. Certificate #		acre-feet per year	
j. Surface Claim #		acre-feet per year	
k. Other #		acre-feet per year	

Title of those rights (as filed with the State Engineer in the Division of Water Resources of the Department of Conservation and Natural Resources).

--

10. Community Services (provided and nearest facility):

a. Fire Station	
b. Health Care Facility	
c. Elementary School	
d. Middle School	
e. High School	
f. Parks	
g. Library	
h. Citifare Bus Stop	

**Special Use Permit Application
for Grading
Supplemental Information**
(All required information may be separately attached)

1. What is the purpose of the grading?

2. How many cubic yards of material are you proposing to excavate on site?

45 CY

3. How many square feet of surface of the property are you disturbing?

2,130 SF of disturbance would occur within the limits of the proposed trail alignment and bridge crossing.

4. How many cubic yards of material are you exporting or importing? If none, how are you managing to balance the work on-site?

5. Is it possible to develop your property without surpassing the grading thresholds requiring a Special Use Permit? (Explain fully your answer.)

6. Has any portion of the grading shown on the plan been done previously? (If yes, explain the circumstances, the year the work was done, and who completed the work.)

7. Have you shown all areas on your site plan that are proposed to be disturbed by grading? (If no, explain your answer.)

8. Can the disturbed area be seen from off-site? If yes, from which directions and which properties or roadways?

9. Could neighboring properties also be served by the proposed access/grading requested (i.e. if you are creating a driveway, would it be used for access to additional neighboring properties)?

10. What is the slope (horizontal/vertical) of the cut and fill areas proposed to be? What methods will be used to prevent erosion until the revegetation is established?

11. Are you planning any berms?

Yes	No	If yes, how tall is the berm at its highest?
-----	----	--

12. If your property slopes and you are leveling a pad for a building, are retaining walls going to be required? If so, how high will the walls be and what is their construction (i.e. rockery, concrete, timber, manufactured block)?

13. What are you proposing for visual mitigation of the work?

14. Will the grading proposed require removal of any trees? If so, what species, how many and of what size?

15. What type of revegetation seed mix are you planning to use and how many pounds per acre do you intend to broadcast? Will you use mulch and, if so, what type?

Washoe County parks will use an upland seed blend provided by Comstock seed that includes native shrubs, grasses, and forbs within any disturbed areas outside of the trail tread at a seeding rate of 18 PLS lbs. per acre. No mulch will be used. Disturbance outside of the trail tread is expected to be minimal. Baltic rush and Nebraska sedge may be seeded in disturbance areas immediately adjacent to the bridge within the floodplain. Willow cuttings taken from shrubs on site may also be used within the riparian area.

16. How are you providing temporary irrigation to the disturbed area?

--

17. Have you reviewed the revegetation plan with the Washoe Storey Conservation District? If yes, have you incorporated their suggestions?

--

18. Are there any restrictive covenants, recorded conditions, or deed restrictions (CC&Rs) that may prohibit the requested grading?

Yes	No	If yes, please attach a copy.
-----	----	-------------------------------

ATTACHMENT A:

Special Review Considerations for Article 418 Significant Hydrological Resources

(a) Conservation of topsoil;

Approximately 2,130 square feet of disturbance is proposed as part of this recreational trail project. Sustainable trail building standards that minimize erosion and movement of topsoil after trail construction would be followed. Topsoil would be removed within the 5-foot wide trail corridor and broadcast on the downhill side of the trail. Vegetation on the downslope side of the trail would not be affected. No material would be removed from the site.

Trail finishing work would be conducted by hand crews. Trail finishing work consists of the following: The 3-foot wide trail tread would be compacted and the back slope would be seeded and compacted to conserve remaining soil. Soil broadcast on the downhill side of the trail would be smoothed and nearby surface duff and debris would be spread on top of the area to give it a natural undisturbed appearance.

Fiber rolls would be placed around the bridge abutments and within 20-feet of creek banks to prevent any potential soil movement into Thomas Creek. Fiber rolls would be placed prior to start of work and left in place until revegetation of disturbed areas is complete.

(b) Protection of surface water quality;

No chemicals or other substances that could affect water quality are proposed for use as part of this project. Potential sedimentation from trail construction would be addressed by following best management practices for water quality protection. Fiber rolls would be placed around the bridge abutments and trail within 20-feet of creek banks to prevent sediment from entering Thomas Creek. Fiber rolls would be placed prior to start of work and left in place until revegetation of disturbed areas is complete. A Stormwater Pollution Prevention Plan (SWPPP) would also be required from the contractor prior to trail and bridge construction.

(c) Conservation of natural vegetation, wildlife habitats and fisheries;

This trail project was designed to preserve the character of the site and have a minimal impact on site vegetation and habitat. The low flow bridge installation would result in partial removal of two existing 10-foot tall willow shrubs. These willow shrubs are expected to recover and grow back in over time. Any additional disturbance areas outside of the 3-foot wide trail tread would be revegetated. Best management practices to control erosion and protect water quality would be followed. Impacts to wildlife habitat and fisheries would be minimal if any.

(d) Control of erosion;

Trail design will follow sustainable trail building standards that minimize erosion including utilizing a full bench cut with a 5% out slope on the trail tread, compaction of trail tread and back slope (cut slope), use of rolling grade dips, and a running slope of 10% or less. Best management practices would be

followed to control erosion including placing fiber rolls around the bridge abutments and within 20-feet of creek banks and revegetation of disturbed areas.

(e) Control of drainage and sedimentation;

No additional drainage areas would be created by this project. Sustainable trail design standards and best management practices would be utilized as described above to minimize erosion and sedimentation into Thomas Creek.

(f) Provision for restoration of the project site to predevelopment conditions;

All disturbed areas outside of the 3-foot wide trail tread would be revegetated. Washoe County parks will use an upland seed blend provided by Comstock Seed that includes native shrubs, grasses, and forbs at a rate of 18 PLS lbs. per acre. Seed would be broadcast and raked into the soil at a depth of approximately ¼-inch. Revegetation within the riparian corridor may include seeding with Baltic rush and Nebraska sedge, and planting of willow stakes harvested on site.

Utilities are not present on site and irrigation is not practical on this open space parcel. Seeding would be done in the fall to maximize the success rate. Site monitoring would occur in summer 2021 to determine success of revegetation efforts. A minimum 50% cover of shrubs, grasses, and forbs within disturbed areas would be considered successful. Additional planting and seeding may occur in fall 2021 with follow-up monitoring if needed.

(g) Provision of a bonding program to secure performance of requirements imposed; and

Washoe County Parks is the project applicant and would be responsible for performance of requirements imposed. Washoe County Parks would implement the revegetation plan and conduct monitoring and additional planting/seeding as needed until revegetation is successful.

(h) Preservation of the hydrologic resources, character of the area and other conditions as necessary.

For many years there was an existing trail along the south side of Thomas Creek upstream from Zolezzi Lane. The trail crossed a private parcel on which no easement had been secured. The private property owner removed and fenced off this trail section in 2018. In response to numerous complaints and requests from the public, Washoe County Parks would like to reroute this portion of trail so that it lies within APN 152-021-07 which is owned by the County. This requires the trail to start at Zolezzi Lane on the north side of Thomas Creek and cross the creek via bridge on APN 152-021-07 to connect to the existing trail. The existing Lower Thomas Creek trail continues up through Arrowcreek Park and eventually ties into the Thomas Creek Trailhead.

This trail project was designed to preserve the character of the site and have a minimal impact on site vegetation, habitat, and hydrologic resources. No landscaping, lighting, signage, or parking is proposed.

Thomas Creek has a regulatory floodplain that is approximately 150 feet wide at this point. Spanning the entire floodplain would require a major structure that is cost prohibitive for a recreational trail. Washoe

County Parks would like to construct a low flow bridge that will span the low flow channel, recognizing that it will be overtopped in large flood events. The bridge design calls for a 5-foot wide, 16-foot long wooden bridge that would be anchored to withstand the 10-year flow. It is acknowledged that in a major storm event it is possible that the bridge would be washed away. No impacts to adjacent or downstream properties are expected. See attached Thomas Creek Low Flow Bridge Drainage Memo for additional details.

ATTACHMENT B: Site Photos



Figure 1: Proposed bridge crossing on Thomas Creek.



Figure 2: Trail reroute section looking toward Zolezzi Lane from near the bridge crossing.

Account Detail

[Back to Account Detail](#)
[Change of Address](#)
[Print this Page](#)

CollectionCart		
Collection Cart	Items	Total
	0	\$0.00

[Checkout](#)
[View](#)

Pay Online

No payment due for this account.

Washoe County Parcel Information		
Parcel ID	Status	Last Update
15202107	Active	3/13/2020 2:08:53 AM

Current Owner:
 WASHOE COUNTY
 ATTN COMMUNITY SERVICES DEPT
 1001 E 9TH ST BLDG A
 RENO, NV 89512

SITUS:
 0 GRANITE POINTE CT
 WCTY NV

Taxing District:
 4000

Geo CD:

Legal Description

Township 18 SubdivisionName _UNSPECIFIED Range 19 Lot 2

Tax Bill (Click on desired tax year for due dates and further details)					
Tax Year	Net Tax	Total Paid	Penalty/Fees	Interest	Balance Due
2019	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
2018	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
2017	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
2016	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
2015	\$0.05	\$0.05	\$0.00	\$0.00	\$0.00
Total					\$0.00

Disclaimer

- ALERTS:** If your real property taxes are delinquent, the search results displayed may not reflect the correct amount owing. Please contact our office for the current amount due.
- For your convenience, online payment is available on this site. E-check payments are accepted without a fee. However, a service fee does apply for online credit card payments. See Payment Information for details.

Pay By Check

Please make checks payable to:
WASHOE COUNTY TREASURER

Mailing Address:
P.O. Box 30039
Reno, NV 89520-3039

Overnight Address:
1001 E. Ninth St., Ste D140
Reno, NV 89512-2845

-  **Payment Information**
-  **Special Assessment District**
-  **Installment Date Information**
-  **Assessment Information**

The Washoe County Treasurer's Office makes every effort to produce and publish the most current and accurate information possible. No warranties, expressed or implied, are provided for the data herein, its use, or its interpretation. If you have any questions, please contact us at (775) 328-2510 or tax@washoecounty.us

This site is best viewed using Google Chrome, Internet Explorer 11, Mozilla Firefox or Safari.

THOMAS CREEK LOW FLOW BRIDGE DRAINAGE MEMO

JN: 9913.000

Date: October 25, 2019

By: Chas Macquarie, P.E.

Project Background

The project site is located on Thomas Creek approximately 500 ft. upstream of the Zolezzi Lane bridge, which in turn is located about 250 ft. west of the north terminus of Welcome Way. For many years there has been a use trail along the south side of Thomas Creek upstream from Zolezzi Lane. However, the use trail crossed some private parcels which have recently been fenced off and Washoe County Parks and Open Space wishes to reroute the trail so that it lies within APN 152-021-07 which is owned by Washoe County. This will require that the trail start at Zolezzi Lane on the north side of Thomas Creek and cross the creek on APN 152-021-07.

Thomas Creek has a regulatory floodplain that is approximately 150 feet wide at this point and spanning the entire floodplain would require a major structure that is cost prohibitive for a use trail. Thus Parks and Open Space wishes to construct a low flow bridge that will span the low flow channel, recognizing that it will be overtopped in large flood events.

The bridge will be located about 50 feet upstream (west) of the west property line of APN 049-165-06 and will span the normal flow creek channel with a span of 16 feet. It is recognized that the bridge will not pass significant storm events and that in a major storm event it is possible that the bridge will be washed away even though the bridge will be anchored to withstand the 10-year flow.

The bridge will have a width of 5 feet and consist of two 16 ft. long 6" x 12" treated timber beams with 2" x 4" treated stringers and 2" x 12" treated decking planks (See the project plans). The stringers will be attached to the bottom of the beams to maximize the flow area under the structure while limiting the height of the deck to just less than 30" above the stream bed. Thus railings will not be required. The structure will be anchored to four 3-1/2" galvanized steel pipes that have been sized to withstand the force of the 10-year flow.

Hydrology

There is no USGS stream flow data available for Thomas Creek on the USGS website.

The US Army Corps of Engineers report titled *Section 205 Reconnaissance Investigation Thomas Creek, Nevada*, dated May 1993, determined the 10-year flow at this location to be 685 cfs and the 100-year flow to be 2,640 cfs.

The report titled *Statistical Generation and Analysis of Streamflow Data for Galena, Whites, Thomas and Hunter Creeks, Truckee Meadows, Washoe County, Nevada*, dated June 21, 2000 by Michael Widmer predicts exceedance probabilities for these creeks. Table 15, page 11 (attached) gives the 60%

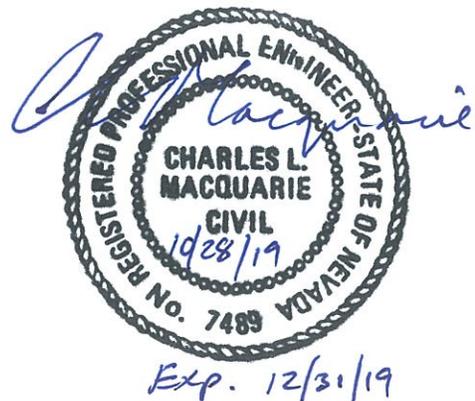
exceedance for a 3-day high flow event on Thomas Creek at less than 10 cfs. This is the best estimate we have found for an "average" flow on Thomas Creek.

Hydraulic Analysis

The stream cross section at the proposed bridge site was measured in the field and the Haestad Methods Flowmaster program was used to estimate the amount of flow that will pass under the bridge. The program predicts that approximately 160 cfs will pass under the bridge in a subcritical flow regime.

The 10-year water surface elevation at the bridge site was determined using the Haestad Methods Flowmaster program for normal and critical depths. The program predicts a subcritical flow regime with a normal depth of 3.45 feet. Thus the 10-year flow will overtop the bridge by approximately 1 ft.

The approximate 100-year water surface elevation at the bridge site was determined using the Haestad Methods Flowmaster program for normal and critical depths using contour information available from Washoe County. The program predicts a supercritical flow regime with a normal depth of 5.5 feet and a critical depth of 6.1 feet. Thus the 100-year flow will overtop the bridge by approximately 3.6 ft. The 100-year flow area will be about 219 sq. ft. with a top width of about 79 feet. The effective area of the bridge that would reduce the flow area is 14 sq. ft. (since the ends of the bridge are screened by bank vegetation) which is a reduction in cross-sectional area of about 6.5%. If you apply this reduction over the top width it would result in an increase of about 0.2 feet in the flood elevation. This would not impact the properties in the immediate area because the existing banks on either side of the flood area rise for over 20 feet before any developed land is reached. Since it is probable that the bridge would wash away in the 100-year event, it is unlikely to impact the 100-year water surface elevation at all.



Worksheet for Section - 2, under bridge

Results

Top Width	13.81	ft
Normal Depth	2.00	ft
Critical Depth	1.95	ft
Critical Slope	0.03630	ft/ft
Velocity	7.01	ft/s
Velocity Head	0.76	ft
Specific Energy	2.76	ft
Froude Number	0.95	
Flow Type	Subcritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	2.00	ft
Critical Depth	1.95	ft
Channel Slope	0.03300	ft/ft
Critical Slope	0.03630	ft/ft

Worksheet for Section - 2, bridge, 10-year flow

Results

Normal Depth		3.45	ft
Elevation Range	4949.30 to 4960.00		ft
Flow Area		102.38	ft ²
Wetted Perimeter		56.45	ft
Hydraulic Radius		1.81	ft
Top Width		55.13	ft
Normal Depth		3.45	ft
Critical Depth		3.26	ft
Critical Slope		0.04508	ft/ft
Velocity		6.69	ft/s
Velocity Head		0.70	ft
Specific Energy		4.15	ft
Froude Number		0.87	
Flow Type	Subcritical		

GVF Input Data

Downstream Depth		0.00	ft
Length		0.00	ft
Number Of Steps		0	

GVF Output Data

Upstream Depth		0.00	ft
Profile Description			
Profile Headloss		0.00	ft
Downstream Velocity		Infinity	ft/s
Upstream Velocity		Infinity	ft/s
Normal Depth		3.45	ft
Critical Depth		3.26	ft
Channel Slope		0.03300	ft/ft
Critical Slope		0.04508	ft/ft

Worksheet for Section - 1, 100-year flow at bridge

Options

Current roughness weighted Method	Pavlovskii's Method
Open Channel Weighting Method	Pavlovskii's Method
Closed Channel Weighting Method	Pavlovskii's Method

Results

Normal Depth	5.52	ft
Elevation Range	4949.30 to 4970.00	ft
Flow Area	219.04	ft ²
Wetted Perimeter	78.81	ft
Hydraulic Radius	2.78	ft
Top Width	77.30	ft
Normal Depth	5.52	ft
Critical Depth	6.12	ft
Critical Slope	0.02028	ft/ft
Velocity	12.05	ft/s
Velocity Head	2.26	ft
Specific Energy	7.78	ft
Froude Number	1.26	
Flow Type	Supercritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	5.52	ft
Critical Depth	6.12	ft
Channel Slope	0.03300	ft/ft
Critical Slope	0.02028	ft/ft

Cross Section for Section - 1, 100-year flow at bridge

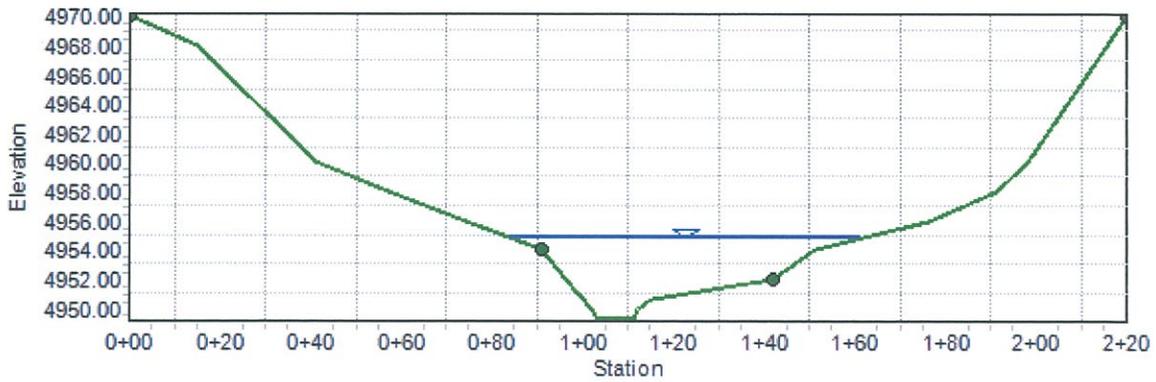
Project Description

Friction Method Manning Formula
Solve For Normal Depth

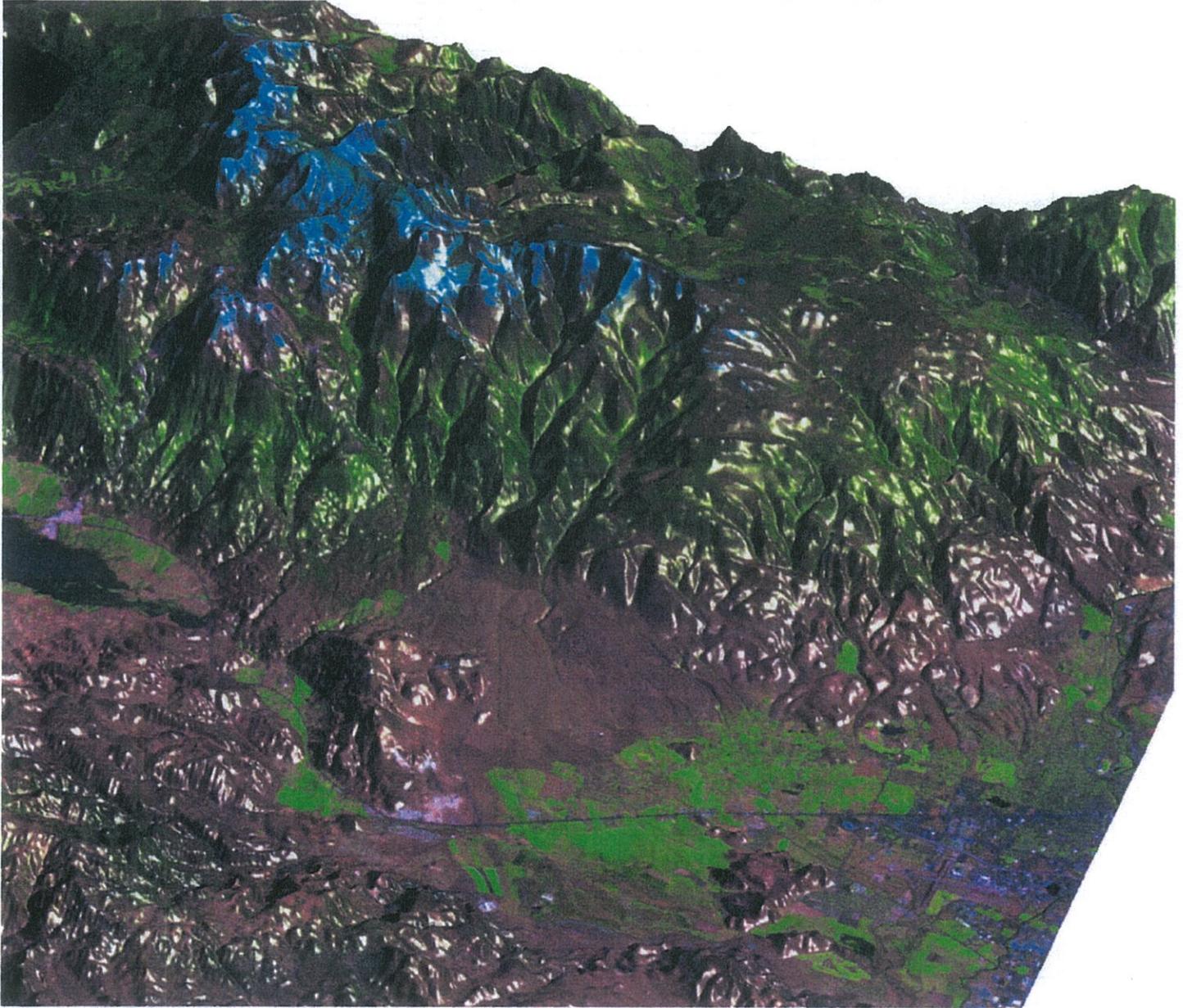
Input Data

Channel Slope 0.03300 ft/ft
Normal Depth 5.52 ft
Discharge 2640.00 ft³/s

Cross Section Image



STATISTICAL GENERATION AND ANALYSIS
OF STREAMFLOW DATA FOR
GALENA, WHITES, THOMAS AND HUNTER CREEKS
TRUCKEE MEADOWS, WASHOE COUNTY, NEVADA



Prepared for
Washoe County Regional Water Planning Commission
June 21, 2000

By
Michael C. Widmer
Washoe County Department of Water Resources

Table 13
Results from high-flow frequency duration analysis, Whites Creek (cfs)

high flow duration	90% exceedance	80% exceedance	60% exceedance
3-day	7.5	10.3	15.4
7-day	7.1	9.9	15.0
15-day	6.8	9.4	14.2
30-day	6.3	8.9	13.4
60-day	5.8	8.0	12.0
90-day	5.3	7.2	10.7
120-day	4.9	6.6	9.5
183-day	4.3	5.7	8.0

Table 14
Results from low-flow frequency duration analysis, Thomas Creek (cfs)

low flow duration	10% non-exceedance	20% non-exceedance	40% non-exceedance
3-day	0.6	0.9	1.3
7-day	0.6	0.9	1.4
15-day	0.7	1.0	1.5
30-day	0.7	1.0	1.6
60-day	0.8	1.2	1.8
90-day	0.9	1.3	1.9
120-day	1.0	1.4	2.2
183-day	1.4	1.9	2.7

Table 15
Results from high-flow frequency duration analysis, Thomas Creek (cfs)

high flow duration	90% exceedance	80% exceedance	60% exceedance
3-day	5.0	6.6	9.6
7-day	4.6	6.2	9.2
15-day	4.2	5.7	8.5
30-day	3.9	5.2	7.7
60-day	3.6	4.7	6.8
90-day	3.3	4.4	6.2
120-day	3.1	4.0	5.6
183-day	2.7	3.5	4.8

Table 16
Results from low-flow frequency duration analysis, Hunter Creek (cfs)

low flow duration	10% non-exceedance	20% non-exceedance	40% non-exceedance
3-day	1.3	2.0	3.1
7-day	1.4	2.1	3.2
15-day	1.4	2.2	3.4
30-day	1.6	2.3	3.5
60-day	1.7	2.6	3.9
90-day	1.9	2.8	4.2
120-day	2.1	3.1	4.6
183-day	2.8	3.9	5.3



Carson City
308 N. Curry Street, Suite 200
Carson City, Nevada 89703
775.883.7077

March 16, 2020

Washoe County Planning Department
1001 E. 9th Street, Building A, Second Floor
Reno, NV 89512

RE: SUP Application for the Thomas Creek Low Flow Bridge and Approach Trail

Dear Planning Department:

This letter is to verify that the electronic stamp and signature on the civil plans that are part of this application are a true representation of my full size stamp and signature.

Sincerely,

Charles L. Macquarie, P.E.
Senior Project Manager



Exp. 12/31/21

REV	DATE	DESCRIPTION
Δ	3/2/20	Updated for SUP
CLM		

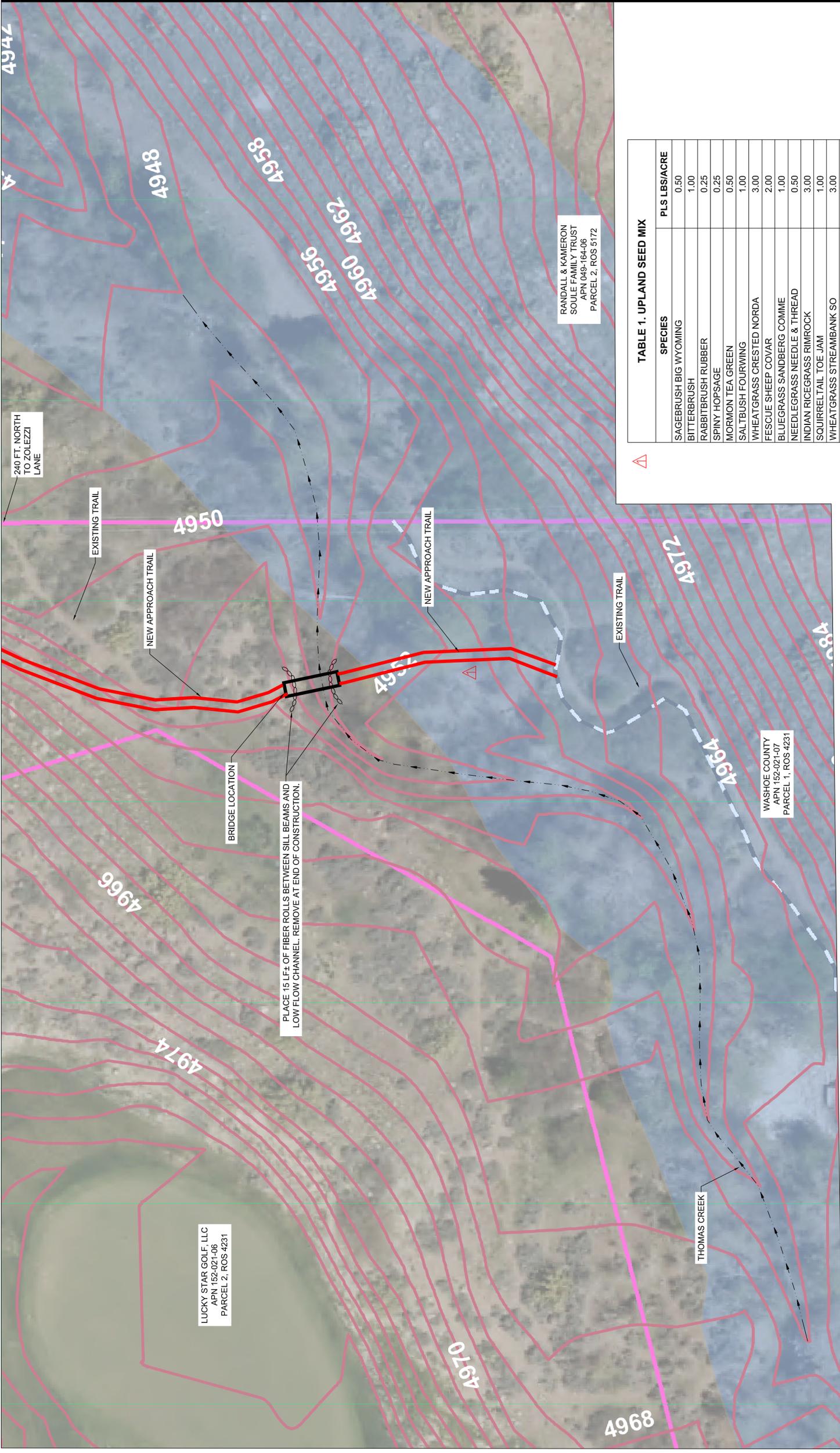


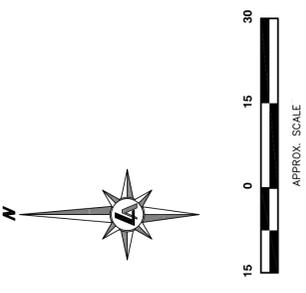
TABLE 1. UPLAND SEED MIX

SPECIES	PLS LBS/ACRE
SAGEBRUSH BIG WYOMING	0.50
BITTERBRUSH	1.00
RABBITBRUSH RUBBER	0.25
SPINY HOPSAGE	0.25
MORMON TEA GREEN	0.50
SALTBUSH FOURWING	1.00
WHEATGRASS CRESTED NORDA	3.00
FESCUE SHEEP COVAR	2.00
BLUEGRASS SANDBERG COMME	1.00
NEEDLEGRASS NEEDLE & THREAD	0.50
INDIAN RICEGRASS RIMROCK	3.00
SQUIRRELTAIL TOE JAM	1.00
WHEATGRASS STREAMBANK SO	3.00
WILDRYE BASIN	1.00
WILDFLOWER MIX DRYLAND nat.	0.25
AREA TOTALS	18.25

TABLE 2. RIPARIAN SEED MIX

SPECIES	PLS LBS/ACRE
BALTIC RUSH (JUNCUS BALTICUS)	0.60
NEBRASKA SEDGE (CAREX NEBRASCENSIS)	1.90
AREA TOTALS	2.50

- NOTES:**
1. PHOTO, APNS, AND PROPERTY LINES PROVIDED BY WASHOE COUNTY FROM COUNTY GIS DATABASE
 2. NEW APPROACH TRAILS MAY BE ADJUSTED IN FIELD TO BEST FIT THE TERRAIN.
 3. RESEED DISTURBED AREAS OUTSIDE THE TRAIL TREAD WITH THE SEED MIX IN TABLE 1 OR TABLE 2. RAKE SEED INTO THE CUT SLOPES.





WASHOE COUNTY REGIONAL PARKS AND OPEN SPACE
THOMAS CREEK LOW FLOW BRIDGE
EXTENDED AREA SITE PLAN
 WASHOE COUNTY

REV	DATE	DESCRIPTION
1	3/2/20	Sheet added to plan set
BY		CLM



C2.1

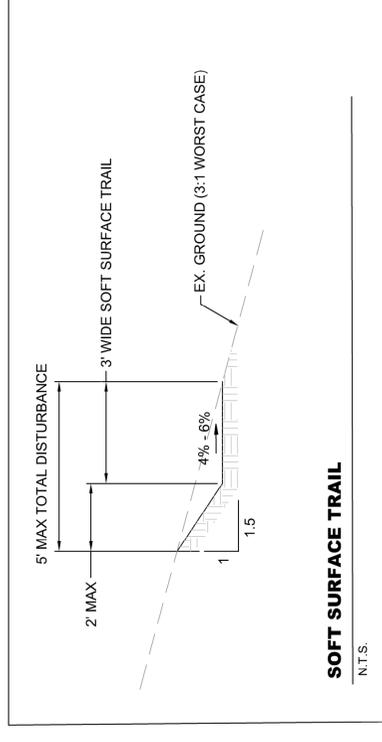
DRAWN BY: BG
 DESIGNED BY: CM
 CHECKED BY: CM
 JOB NO.: 9913.000

NOTES:

- THE PROPOSED PROJECT IS TO CONSTRUCT A SOFT SURFACE TRAIL AND LOW FLOW BRIDGE ACROSS THOMAS CREEK.
- THE ENTIRE PROJECT IS LOCATED WITHIN APN 152-021-07, OWNED BY WASHOE COUNTY, AND AN ASSOCIATED 75-FT. WIDE TRAIL EASEMENT, DOC. NO. 26763996.
- THE 16-FT LONG BRIDGE AND 50-FT. OF TRAIL WILL BE LOCATED WITHIN THE 60-FT. CRITICAL STREAM ZONE BUFFER AREA OF THOMAS CREEK.
- AN ADDITIONAL 180-FT. OF TRAIL WILL BE LOCATED WITHIN THE 150-FT. SENSITIVE STREAM ZONE BUFFER AREA OF THOMAS CREEK.
- THERE ARE NO EXISTING OR PROPOSED BUILDINGS ON THE SITE.
- THERE ARE NO KNOWN WELLS, SEPTIC SYSTEMS, LEACHFIELDS, OVERHEAD UTILITIES, WATER AND SEWER LINES ON THE SITE.
- NO PARKING, LANDSCAPING, SIGNAGE OR LIGHTING IS PROPOSED ON THE SITE.
- A PORTION OF THE PROJECT IS LOCATED WITHIN THE FEMA REGULATORY 100-YEAR FLOODPLAIN OF THOMAS CREEK. IT SHOULD BE NOTED THAT THE REGULATORY FLOODPLAIN IS NOT ACCURATE AS PORTIONS OF THOMAS CREEK ARE OUTSIDE THE REGULATORY FLOODPLAIN AND PORTIONS OF THE REGULATORY FLOODPLAIN ARE ON A BENCH 30-FT. ABOVE THE CREEK, WHICH IS WELL OUTSIDE THE ACTUAL FLOODPLAIN.
- THERE ARE NO KNOWN HAZARD AREAS (OTHER THAN THE 100-YEAR FLOOD EVENT) OR ACTIVE FAULT LINES (POST-HOLOCENE) IN THE PROJECT AREA.
- THE RIPARIAN CORRIDOR ALONG THOMAS CREEK IS APPROXIMATELY 40-FT. WIDE. NO WETLAND DELINEATION HAS BEEN PERFORMED FOR THIS SITE.
- SLOPES GREATER THAN 15% AND 30% ARE SHOWN ON THE SITE PLAN. SEE THE LEGEND FOR COLOR CODING.
- CRITICAL AND SENSITIVE BUFFER ZONES FOR THOMAS CREEK ARE SHOWN ON THE SITE PLAN.
- EARTHWORK QUANTITIES:
 - LENGTH OF TRAIL ON FLAT (<15% SLOPE) = 210-FT. LENGTH OF TRAIL ON SIDE SLOPE (>15%) = 210-FT. TOTAL LENGTH OF TRAIL = 420-FT.
 - MAXIMUM EXCAVATION PER LINEAL FOOT ON FLAT GROUND = 1.2 CF (0.044 CY/LF). MAXIMUM EXCAVATION PER LINEAL FOOT ON SIDE SLOPE = 4.5 CF (0.167 CY/LF).
 - TOTAL AMOUNT OF EXCAVATION (TRAIL AND BRIDGE) = 0.044 x 210 + 0.167 x 210 = 45 CY.
- EXCAVATED MATERIAL WILL BE BROADCAST ON THE DOWNHILL SIDE OF THE TRAIL. NO MATERIAL WILL BE REMOVED FROM THE SITE.
- TOTAL DISTURBED AREA (TRAIL AND BRIDGE) = 2,130 SF (0.049 AC.)
- PROPOSED BMPs: FIBER ROLLS WILL BE PLACED AROUND THE BRIDGE ABUTMENTS AND TRAIL WITHIN 20-FT. OF CREEK BANKS TO PREVENT SEDIMENT FROM ENTERING THOMAS CREEK.
- THERE WILL BE A MINIMUM 5-FT. GRADING SETBACK FROM THE PROPERTY BOUNDARY.
- NO LANDSCAPING IS PROPOSED FOR THIS PROJECT. DISTURBED SLOPES OUTSIDE THE TRAIL TREAD WILL BE RESEDED WITH THE SEED MIX IN TABLES ON C2.0.

ENGINEER'S NOTE: TO THE BEST OF MY KNOWLEDGE THE PROPOSED PROJECT COMPLIES WITH THE APPLICABLE PROVISIONS OF THE WASHOE COUNTY DEVELOPMENT CODE.

CHARLES MACQUARIE, P.E. NV LICENSE NO. 7489

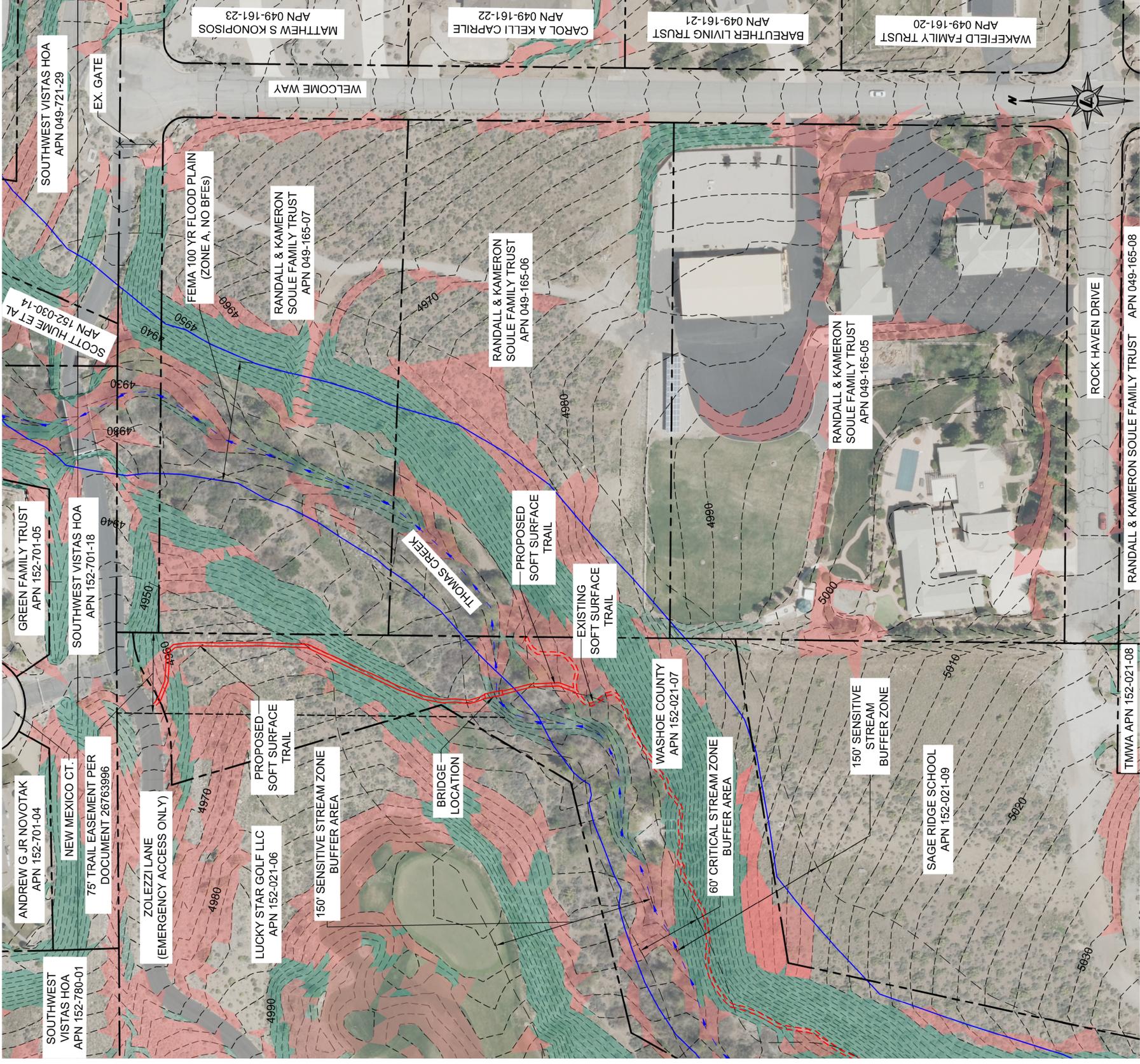


NOTE:

AERIAL PHOTO, TOPOGRAPHY, PROPERTY BOUNDARIES, APNS, AND FEMA FLOOD PLAIN LIMITS PROVIDED BY WASHOE COUNTY.

LEGEND

- SLOPES > 15%
- SLOPES > 30%





EXPIRES: JUNE 30, 2021

NEVADA

WASHOE COUNTY

RENO

THOMAS CREEK LOW FLOW BRIDGE
BRIDGE PLAN VIEW, SECTION & DETAILS

WASHOE COUNTY

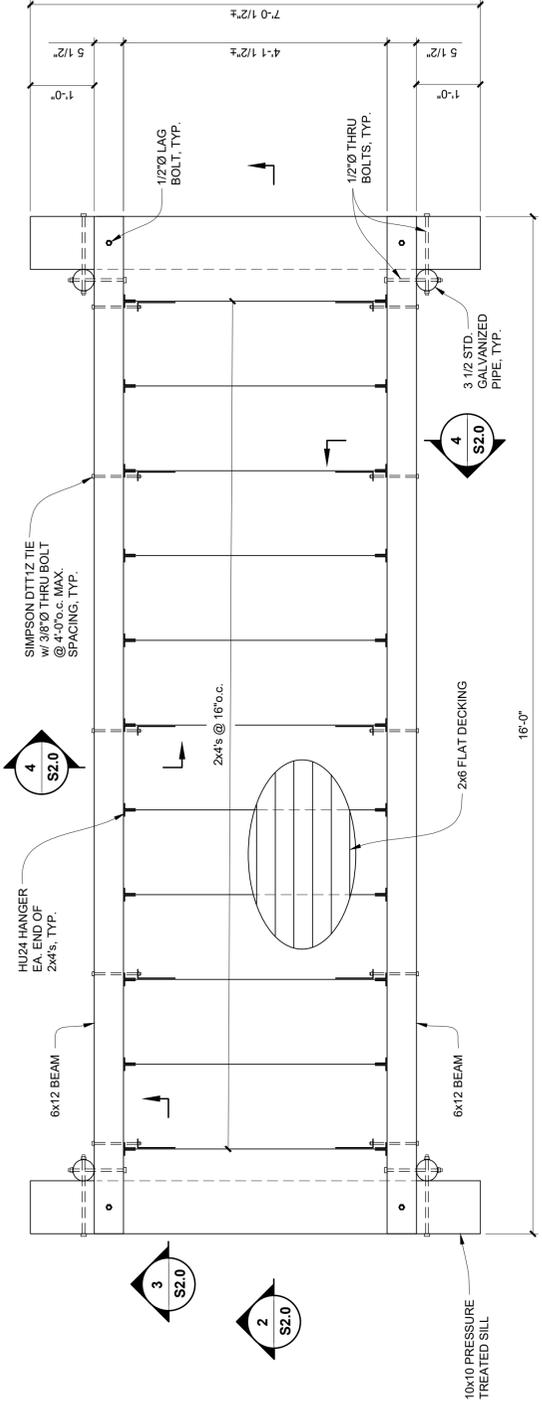
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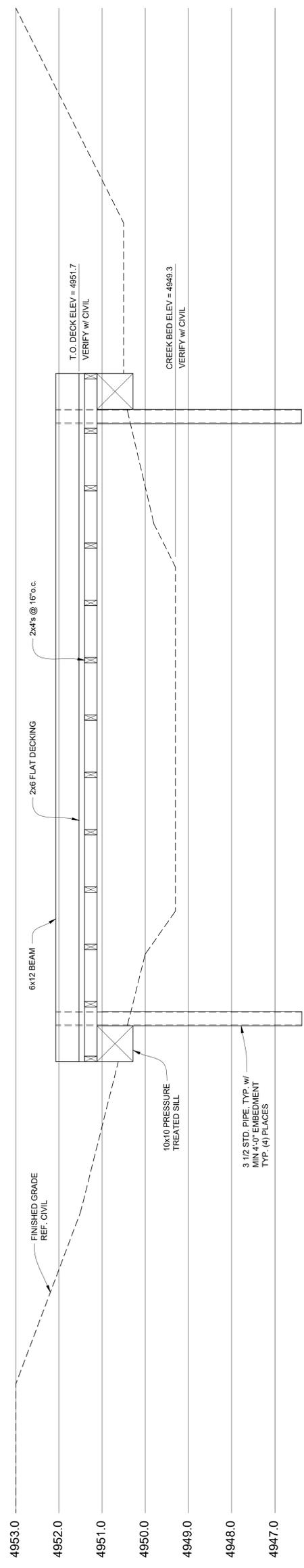
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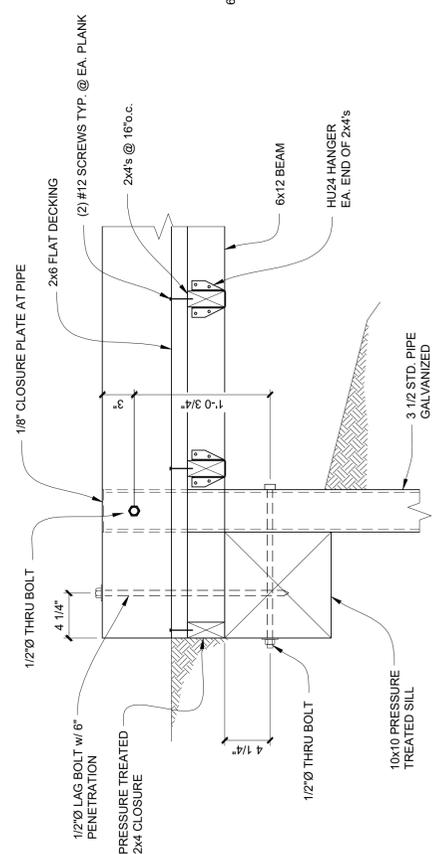
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 DESIGNED BY: E.H.
 CHECKED BY:
 JOB NO.: 9913.000
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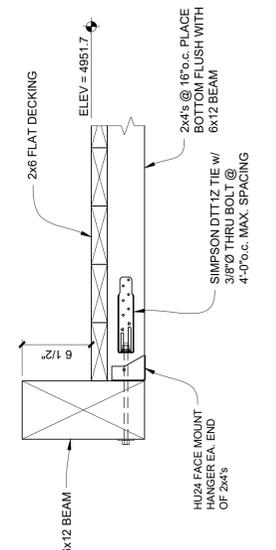
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