Agenda Item No: 14.B

STAFF REPORT

Report To: Board of Supervisors **Meeting Date:** August 6, 2020

Staff Contact: Darren Schulz, Public Works Director

Agenda Title: For Possible Action: Discussion and possible action regarding a Declaration of Restrictions for the Eagle Valley Creek Storm Water Detention Basins, portions of APN 007-531-35 and APN 007-531-36. (Darren Schulz; DSchulz@carson.org and Dan Stucky; DStucky@carson.org)

Staff Summary: The Declaration of Restrictions is the result of the Carson Tahoe Regional Healthcare's ("CTH") current building expansion from the main hospital to the surgical center via an enclosed building crossing over Eagle Creek. The addition of the new structure and associated channel improvements in Eagle Creek triggered a U.S. Army Corps of Engineers ("USACE") permit which requires a declaration of restrictions or deed restriction to protect existing wetlands within the City's detention basins (Basins "1" and "3"). The restriction is part of a required USACE 404 permit that allows channel improvements to be constructed within Eagle Creek as part of the CTH's hospital expansion project.

Agenda Action: Formal Action / Motion **Time Requested:** 10 minutes

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Proposed Motion

I move to approve the Declaration of Restrictions [AND IF LATE MATERIAL IS NOT PROVIDED BY THE MEETING REFLECTING THE FINAL VERSION: and authorize the Mayor to approve and execute any revised Declaration if it contains only clerical edits from the U.S. Army Corps of Engineers].

Board's Strategic Goal

Sustainable Infrastructure

Previous Action

N/A

Background/Issues & Analysis

CTH is in the process of connecting the main hospital to the surgical center via an enclosed building crossing over Eagle Creek. The project includes major channel improvements that will increase the conveyance capacity of the channel and provide erosion control measures along the project reach of Eagle Creek. These channel improvements will provide a regional benefit to Carson City in regards to flood control and water quality. During the progression of this project, it was discovered that some of the previous conditions outlined in the previous USACE permit (Permit Number: 200325013), which was obtained by CTH in 2003 during the construction of the main hospital and three detention basins, were not satisfied by CTH. Specifically, the existing permit is in non-compliance because as-built drawings and monitoring reports for the detention basins were not submitted to USACE as required by the permit. As a result, USACE is modifying the prior permit through a Letter of Permission (included in Exhibit C as part of the USACE Permit) and requesting that Carson City place a deed restriction to protect the existing wetlands within the two detention basins on City property (APNs 007-531-35

and 007-531-36) to serve as mitigation for both the current CTH project and associated channel improvements in Eagle Creek and the past basin improvements constructed in 2003.

These detention basins represent a critical component of the City's overall stormwater system by providing wetlands to enhance water quality as well as storage capacity to provide regional flood control benefits to the northern portion of Carson City. USACE is aware that these detention basins will need to continue to serve this dual purpose and the language in the deed restriction allows for this. Although the City has not had to dredge material from either of these basins over the past 17 years, the City would still be able to perform emergency maintenance duties in the future. Additionally, the previous agenda item related to an agreement between CTH and Carson City would provide the City funds to construct future stormwater and erosion control improvements in the upper watershed in order to limit the amount of sediment reaching the basins, ultimately reducing maintenance needs in the basin and helping to maintain the wetlands and enhance water quality.

At the time that this agenda was published, the USACE legal team has not completed its review of the language in the current version of the Declaration of Restrictions. Staff's understanding is that USACE is agreeable to the language proposed in the current version, but has not received formal approval. Based on these communications, staff proposes to move forward with the current version of the Declaration of Restrictions at the August 6, 2020, Board of Supervisors meeting. But because formal approval has not yet been received, staff also requests that the Mayor be granted the authority to accept any clerical changes that USACE may have to the Declaration of Restrictions, in addition to being granted the authority to sign the Declaration of Restrictions. If, however, USACE sends back to CTH and Carson City a version of the Declaration of Restrictions that contains substantive changes, then staff will either (a) provide the edited Declaration of Restrictions as late material prior to the August 6, 2020, Board of Supervisors meeting and discuss the changes on the record, or (b) bring the changes back to a subsequent Board of Supervisors meeting if substantive changes are received after the Board of Supervisors meeting.

Applicable Statute, Code, Policy, Rule or Regulation
NRS 244.270

Financial Information
Is there a fiscal impact? No

If yes, account name/number: N/A

Is it currently budgeted? No

Explanation of Fiscal Impact: N/A

Alternatives
Do not accept the deed restriction and propose a modified motion or alternate direction to staff.

Attachments:
1_Declaration of Restrictions.pdf

2_Exhibit A.pdf

3_Exhibit B.pdf

4_Exhibit C.pdf

5_Exhibit D.pdf

Board Action Taken:

Motion: _____ 1) _____ Aye/Nay

2) _____ _____

_____

_____

_____

_____

_____

_____

(Vote Recorded By)

WHEN RECORDED RETURN TO:

Reno Regulatory Office
300 Booth Street, Room 3050
Reno, Nevada 89509

THIS SPACE FOR RECORDER'S USE ONLY

DECLARATION OF RESTRICTIONS FOR EAGLE VALLEY CREEK STORM WATER DETENTION BASINS, Portion of Parcels APN 007-531-35 and APN 007-531-36

THIS DECLARATION OF RESTRICTIONS is made as of _____, 20____, by Carson City, a Consolidated Municipality ("Declarant").

WHEREAS, Declarant is the owner of certain real property located in Carson City Nevada, described in Exhibits "A & B" attached hereto and incorporated hereby by this reference (hereinafter "Preserve Area"); and

WHEREAS, Carson Tahoe Hospital (hereinafter "CTH") is in the process of constructing certain improvements on its properties located at 1600 Medical Parkway and 1400 Medical Parkway, in Carson City, Nevada, encompassing Carson City Assessor's Parcel Nos. ("APNs") 007-531-46 and 007-531-96, which improvements impact Eagle Valley Creek and the Lakeview Watershed in Carson City, Nevada; and

WHEREAS, the improvements to be made by CTH will require CTH to utilize the Declarant's existing storm water detention basins located on portions of Carson City APNs 007-531-35 and 007-531- 36, otherwise defined above as the Preserve Area, for wetlands mitigation; and

WHEREAS, the U.S. Army Corps of Engineers (hereinafter "Corps") requires the Preserve Area to be designated as a wetlands preserve area in perpetuity in accordance with the provisions of a Section 404 Permit Identification issued to CTH by the U.S. Army Corps of Engineers; and

WHEREAS, Declarant and CTH have entered into a Watershed and Wetlands Agreement concerning the Preserve Area whereby Declarant has agreed to place restrictions on the Preserve Area; and

WHEREAS, Declarant intends to protect the Preserve Area immediately following the recordation of this Declaration of Restrictions, as wildlife habitat and a wetland preserve area, to be so held in perpetuity subject to restrictions in accordance with the provisions of the Section 404 Permit Identification # 200325013, as amended, (Exhibit C (hereinafter "Permit")) issued to CTH, by the Corps in connection with the surrounding property of which the Preserve Area is a part, and the *Mitigation and Monitoring Plan* (Exhibit "D" (hereinafter "The Plan"));

WHEREAS, this Declaration of Restrictions is intended to implement the provisions of the Permit requiring a binding covenant running with the land, but shall not be construed to impose restrictions in addition to those provided for in the Permit; and

WHEREAS, the Preserve Area consists of both jurisdictional wetland features and associated attendant upland buffer areas (detention basins side-slopes);

WHEREAS, the Declaration will benefit CTH, the Corps, and Carson City, and their successors, in that it will assist in preserving and maintaining the wetland open space in the Preserve Area;

NOW THEREFORE, Declarant declares as follows:

1. Future Permit Applications. The onsite avoided wetlands and any onsite/offsite mitigation areas, created, restored, enhanced or preserved as compensation for work authorized by the Permit, and their attendant upland buffer areas, shall not be made the subject of a future Individual or General Department of the Army permit application for fill or any other development, except for the purposes of enhancing or restoring these areas.

2. Covenant Running with Land. In consideration of the benefits flowing to CTH, the Corps, and Carson City, and for other valuable consideration, the receipt and adequacy of which is hereby acknowledged, the Declarant does hereby covenant and agree to restrict, and does by this instrument intend to restrict, the future use of the Preserve Area as set forth below, by the establishment of this Covenant running with the land.

3. Restrictions Concerning the Preserve Areas. Except for those actions necessary to accomplish preservation, maintenance, repair, or enhancement as has been, or in the future is authorized by the Corps, consistent with the Permit and The Plan, no person shall engage in any of the following restricted activities in the Preserve Area:

a) No discharge of any dredged or fill material shall be done or permitted within the Preserve Area or any portion of such area except as consistent with the terms and conditions of the Permit;

b) No materials or debris shall be stored or placed (whether temporarily or permanently) within the Preserve Area or any portion of such area;

c) No plowing or cultivation of the Preserve Area or any portion of such area, shall be done or permitted except by the Declarant or its successors and assigns to the Preserve Area, as described in The Plan and with prior approval from the Corps;

d) No discharge, dumping, disposal, storage or placement of any trash, refuse, rubbish, grass clippings, cuttings or other waste materials within the Preserve Area or any portion of such area shall be done or permitted;

e) No leveling, grading or landscaping within the Preserve Area or any portion of such area shall be done or permitted;

f) No destruction or removal of any natural tree, shrub or other vegetation that exists upon the Preserve Area shall be done or permitted except by the Declarant or its successors and assigns to the Preserve Area, for the purposes of thatch management or the removal of noxious or dangerous plants as necessary to maintain the Preserve Area. Written authorization from the Corps shall be required prior to any such activity;

g) No motorized vehicles shall be ridden, brought, used or permitted on any portion of the Preserve Area, except as provided for in (a) and (f) above or;

h) No roads, utility lines, trails, benches, equipment storage, or other structures or activities shall occur within the Preserve Area.

i) No additional untreated stormwater, beyond the current design of the hospital drainage area, shall be discharged in a point source manner directly into the Preserve Area. At a minimum, primary treatment (i.e. detention to settle out suspended solids, oil/water separator, etc) of any additional point source discharge of stormwater shall be required if it is to be discharged into the Preserve Area.

4. Not An Offer to Dedicate: No Rights of Public Use. The provisions of this Declaration of Restrictions do not constitute an offer for public use. This instrument does not constitute an irrevocable offer to dedicate.

5. Successors and Assign Bound. Declarant hereby agrees and acknowledges that the Preserve Area shall be held, sold, conveyed, owned and used subject to the applicable terms, conditions and obligations imposed by this Declaration relating to the use, repair, maintenance and/or improvement of the Preserve Area, and matters incidental thereto. Such terms, conditions and obligations are a burden and restriction on the use of the Preserve Area, as applicable.

The provisions of this Declaration shall (subject to the limitations contained in this Declaration and without modifying the provisions of this Declaration) be enforceable by the Corps as equitable servitudes and conditions, restrictions and covenants running with the land, and shall be binding on the Declarant and upon each and all of its respective heirs, devisees, successors, and assigns, officers, directors, employees, agents, representatives, executors, trustees, successor trustees, beneficiaries and administrators, and upon future owners of the Preserve Area and each of them.

6. Severability. The provisions of the Declaration are severable and the violation of any of the provisions of this Declaration by a Court shall not affect any of the other provisions which shall remain in full force and effect.

CARSON CITY:

By: _____
Robert Crowell, Mayor

_____
Date

Approved as to Form:

_____
Deputy District Attorney

_____
Date

Attest:

_____
Aubrey Rowlatt, Clerk-Recorder

_____
Date

LEGAL DESCRIPTION OF "PRESERVE AREA"

EXHIBIT "A"

MITIGATION AREA

BASIN 1

All that certain real property situated in Section 6, Township 15 North, Range 20 East, M.D.B. & M. and Section 31, Township 16 North, Range 20 East, M.D.B. & M., City and County of Carson City, State of Nevada, more particularly described as follows:

BEGINNING at a point whence the Northwest corner of said Section 6 bears S. 89° 16' 50" W., 1512.91 feet distant;

Thence, N. 23° 30' 43" W., 20.24 feet; Thence, N. 06° 32' 18" W., 28.89 feet; Thence, N. 83° 03' 31" E., 7.67 feet; Thence, S. 68° 04' 26" E., 11.66 feet; Thence, S. 86° 00' 49" E., 14.92 feet; Thence, N. 62° 36' 05" E., 6.39 feet; Thence, S. 71° 57' 46" E., 3.68 feet; Thence, N. 60° 19' 30" E., 3.91 feet; Thence, N. 73° 52' 04" E., 5.49 feet; Thence, S. 74° 08' 09" E., 2.02 feet; Thence, N. 71° 24' 20" E., 11.18 feet; Thence, N. 86° 36' 07" E., 81.96 feet; Thence, N. 89° 06' 52" E., 30.84 feet; Thence, S. 75° 39' 49" E., 25.73 feet; Thence, S. 86° 54' 36" E., 13.96 feet; Thence, N. 77° 49' 42. E., 7.30 feet; Thence, S. 66° 09' 38" E., 20.22 feet; Thence, S. 36° 54' 33" E., 2.88 feet; Thence, S. 03° 51' 57" E., 38.94 feet; Thence, S. 01° 53' 21" E., 47.41 feet; Thence, S. 07° 42' 50" W., 40.38 feet; Thence, S. 37° 25' 19" W., 7.08 feet; Thence, N. 69° 29' 15" W., 9.39 feet; Thence, S. 84° 47' 59" W., 10.44 feet; Thence, S. 73° 41' 31" W., 11.97 feet; Thence, S. 51° 35' 00" W., 11.12 feet; Thence, S. 36° 19' 56" W., 11.46 feet; Thence, N. 75° 55' 05" W., 32.00 feet; Thence, N. 26° 09' 32" W., 25.56 feet; Thence, N. 58° 57' 06" W., 52.92 feet; Thence N. 70° 05' 06" W., 56.05 feet; Thence, N. 51° 08' 21" W., 50.32 feet to the **POINT OF BEGINNING.** Containing 27,192 Square Feet, more or less.

Basis of Bearings for this legal is the Nevada State Plane Coordinate System, West Zone NAD83(94) based upon real time kinematic GPS observations, observed 06/24/2020 using a survey grade dual frequency GPS receiver from control monument CC054 and CC016 modified by a combined factor of 1.0002, scaled from 0.00N ,0.00E and converted to U.S. Survey Feet. Per Record of Survey, File No. 403435, Recorded 8/11/2010, Map No. 2749 in the office of the County Recorder of Carson City, Nevada.

Prepared by
Lumos & Associates, Inc.
Dean Neubauer, PLS 9392
308 N. Curry Street, Suite 200
Carson City, NV 89703

LEGAL DESCRIPTION OF "PRESERVE AREA"

EXHIBIT "A"
MITIGATION AREA
BASIN 3

All that certain real property situated in Section 6, Township 15 North, Range 20 East, M.D.B. & M., M.D.B. & M., City and County of Carson City, State of Nevada, more particularly described as follows:

BEGINNING at a point whence the Northwest corner of said Section 6 bears N. 69° 17' 32" W., 2286.34 feet distant;

Thence, N. 70° 09' 19" W., 245.74 feet; Thence, N. 62° 48' 03. W., 37.72 feet; Thence, N. 00° 20' 35" E., 6.66 feet; Thence, N. 27° 57' 28" E., 18.89 feet; Thence, N. 88° 28' 42" E., 21.18 feet; Thence, N. 32° 29' 36" E., 28.93 feet; Thence, N. 00° 17' 42" E., 29.41 feet; Thence, N. 23° 46' 47" E., 44.98 feet; Thence, N. 36° 43' 29" E., 90.02 feet; Thence, N. 79° 46' 26" E., 46.00 feet; Thence, S. 54° 52' 36" E., 27.58 feet; Thence, S. 47° 20' 03" E., 54.52 feet; Thence, S. 37° 25' 04" E., 54.55 feet; Thence, S. 30° 44' 40" E., 64.59 feet; Thence, S. 14° 55' 46" E., 59.74 feet; Thence, S. 03° 00' 48" E., 55.55 feet; Thence S. 06° 32' 22" W., 38.11 feet; Thence, N. 86° 02' 00" W., 41.18 feet to the **POINT OF BEGINNING.** Containing 56,354 Square Feet, more or less.

Basis of Bearings for this legal is the Nevada State Plane Coordinate System, West Zone NAD83(94) based upon real time kinematic GPS observations, observed 06/24/2020 using a survey grade dual frequency GPS receiver from control monument CC054 and CC016 modified by a combined factor of 1.0002, scaled from 0.00N ,0.00E and converted to U.S. Survey Feet. Per Record of Survey, File No. 403435, Recorded 8/11/2010, Map No. 2749 in the office of the County Recorder of Carson City, Nevada.

Prepared by
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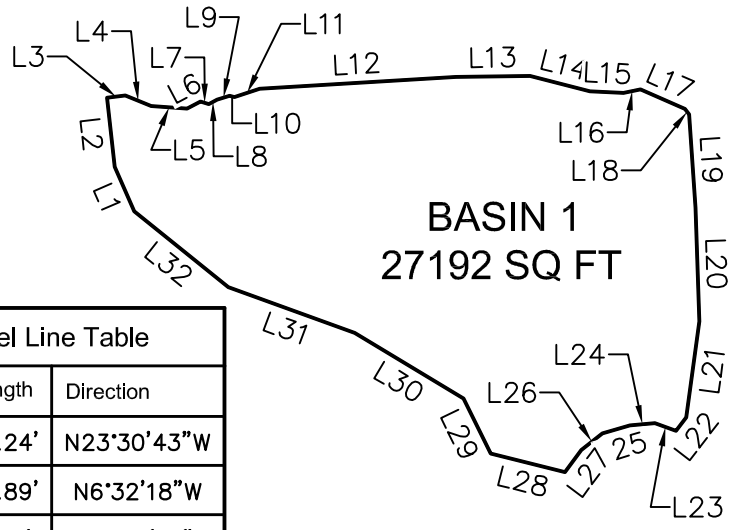
Dean Neubauer, PLS 9392
308 N. Curry Street, Suite 200
Carson City, NV 89703

MAP OF "PRESERVE AREA"



Parcel Line Table		
Line #	Length	Direction
L1	20.24'	N23°30'43"W
L2	28.89'	N6°32'18"W
L3	7.67'	N83°03'31"E
L4	11.66'	S68°04'26"E
L5	14.92'	S86°00'49"E
L6	6.39'	N62°36'05"E
L7	3.68'	S71°57'46"E
L8	3.91'	N60°19'30"E
L9	5.49'	N73°52'04"E
L10	2.02'	S74°08'09"E

Parcel Line Table		
Line #	Length	Direction
L21	40.38'	S7°42'50"W
L22	7.08'	S37°25'19"W
L23	9.39'	N69°29'15"W
L24	10.43'	S84°47'59"W
L25	11.97'	S73°41'31"W
L26	11.12'	S51°35'00"W
L27	11.46'	S36°19'56"W
L28	32.00'	N75°55'05"W
L29	25.56'	N26°09'32"W
L30	52.92'	N58°57'06"W

Parcel Line Table		
Line #	Length	Direction
L11	11.18'	N71°24'20"E
L12	81.96'	N86°36'07"E
L13	30.84'	N89°06'52"E
L14	25.73'	S75°39'49"E
L15	13.96'	S86°54'36"E
L16	7.30'	N77°49'42"E
L17	20.22'	S66°09'38"E
L18	2.88'	S36°54'33"E
L19	38.94'	S3°51'57"E
L20	47.41'	S1°53'21"E

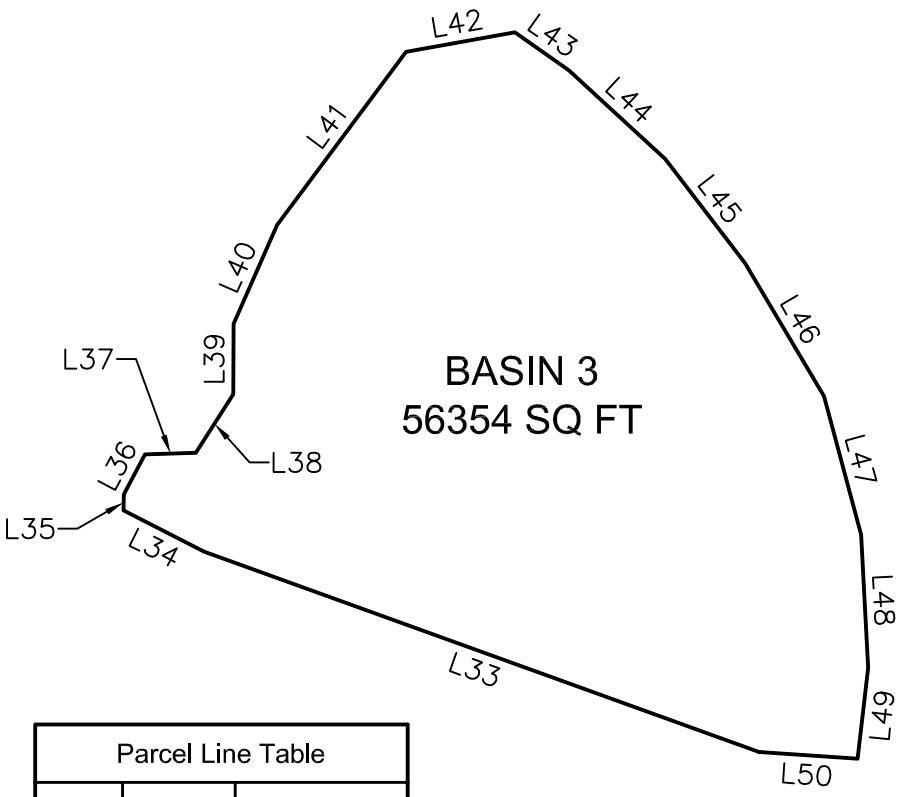
Parcel Line Table		
Line #	Length	Direction
L31	56.05'	N70°05'06"W
L32	50.32'	N51°08'21"W

LUMOS & ASSOCIATES
308 N. CURRY ST.,
SUITE 200
CARSON CITY, NV 89703
TEL (775) 883-7077

EXHIBIT "B"
CARSON TAHOE HEALTH
PORTION OF SEC. 31, T16N, R20E, &
PORTIONS OF SEC. 6, T15N, R20E, MDM
CARSON CITY NEVADA

Date: 06/2020
Scale: 1" = 80'
Job No: 9153.003

MAP OF "PRESERVE AREA"



Parcel Line Table		
Line #	Length	Direction
L33	245.74'	N70°09'19"W
L34	37.72'	N62°48'03"W
L35	6.66'	N0°20'35"E
L36	18.89'	N27°57'28"E
L37	21.18'	N88°28'42"E
L38	28.93'	N32°29'36"E
L39	29.41'	N0°17'42"E
L40	44.98'	N23°46'47"E
L41	90.02'	N36°43'29"E
L42	46.00'	N79°46'26"E

Parcel Line Table		
Line #	Length	Direction
L43	27.58'	S54°52'36"E
L44	54.52'	S47°20'03"E
L45	54.55'	S37°25'04"E
L46	64.59'	S30°44'40"E
L47	59.74'	S14°55'46"E
L48	55.55'	S3°00'48"E
L49	38.11'	S6°32'22"W
L50	41.18'	N86°02'00"W

LUMOS & ASSOCIATES
308 N. CURRY ST.,
SUITE 200
CARSON CITY, NV 89703
TEL (775) 883-7077

EXHIBIT "B"
CARSON TAHOE HEALTH
BASIN 3
PORTION OF SEC. 6, T15N, R20E, MDM
CARSON CITY NEVADA

Date: 06/2020
Scale: 1" = 80'
Job No: 9153.003

EXHIBIT C - SECTION 404 PERMIT #200325013

(LETTER OF PERMISSION AND ORIGINAL PERMIT #200325013)

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, SACRAMENTO DISTRICT
1325 J STREET
SACRAMENTO CA 95814-2922

July 28, 2020

Regulatory Division (SPK-2003-25013)

Carson Tahoe Healthcare
Attn: Ms. Michelle Joy
1600 Medical Parkway
Carson City, Nevada 89703
michelle.joy@carsontahoe.org

Dear Ms. Joy:

This letter of permission (LOP) authorizes your proposed activities in approximately 0.64 acres of waters of the United States, including wetlands, for the Carson Tahoe Hospital project. The approximately 0.64-acre project site is located on Eagle Creek, between the existing hospital and surgery center at 1600 Medical Parkway, Latitude 39.2024° Longitude -119.7841°, Carson City, Nevada.

The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer. **Work in waters of the United States must be in accordance with the following conditions of authorization and the General LOP Conditions listed in Attachment A, "General LOP Conditions":**

Special Conditions:

1. All terms and conditions of the July 13, 2020 Section 401 Water Quality Certification (Enclosure 1) are expressly incorporated as conditions of this permit.

2. To ensure avoidance of impacts beyond the permit limits, the project permit limits shall be clearly identified in the field with highly visible markers such as construction fencing or silt barriers prior to initiation of any construction activities within waters of the U.S. Such identification shall be properly maintained until construction is completed and the soils have been stabilized Equipment, materials, or any other substances or activities that impact waters of the U.S. outside the permit limits (as shown on the Wetlands Exhibit, Enclosure 2) are prohibited.

3. You shall use only clean and nontoxic fill material for this project. The fill material shall be free from items such as trash, debris, automotive parts, asphalt, construction materials, concrete with exposed reinforcement bars, and soils contaminated with any toxic substance, in toxic amounts in accordance with Section 307 of the Clean Water Act.

In addition, all newly poured concrete shall be allowed to cure for a minimum of 10 days prior to coming into contact with open water.

4. Prior to initiation any construction activities within waters of the U.S., you shall employ construction best management practices (BMPs) onsite to prevent degradation to on-site and off-site waters of the U.S. Methods shall include the use of appropriate measures to intercept and capture sediment prior to entering waters of the U.S., as well as erosion control measures along the perimeter of all work areas to prevent the displacement of fill material. All BMPs shall be in place prior to initiation of any construction activities and shall remain until construction activities are completed. Erosion control methods shall remain in place until all on-site soils are stabilized. You shall submit a description of and photo-documentation of your BMPs to our office within 10 days of commencement of construction.

5. The Final Mitigation Plan, entitled "Carson Tahoe Healthcare Sierra Surgery Hospital Connector, Department of the Army SPK-2003-25013, Final Mitigation Plan" dated July 2020 (Enclosure 3) is incorporated into this authorization and must be implemented prior to the construction of impacts in waters of the U.S. Proof of the deed restriction filing is required prior to the construction of impacts in waters of the U.S.

6. You shall take the actions required to record this permit and the original 2003 Individual Permit with the Registrar of Deeds or other appropriate official charged with the responsibility of maintaining records of title to or interest in real property within 90 days from the effective date of this permit. You shall provide a copy of the recorded permits to this office clearly showing a stamp from the appropriate official indicating the book and page at which the permit is recorded and the date of recordation. The Corps shall be a party to any modification, alteration, release, or revocation of the deed restriction and shall review and approve, as necessary, any additional structures or activities that require approval.

7. To prevent unauthorized fills and unforeseen impacts to avoided or adjacent waters, you shall install fencing and appropriate signage around the entire outer boundary of any required preserved waters of the U.S. within the project area prior to initiation of construction activities within waters of the U.S. All fencing surrounding preserved areas shall allow unrestricted visibility of these areas to discourage vandalism, destruction or disturbance, as well as enable wildlife passage. Following completion of construction activities, the preserved waters of the U.S. within the project area shall include signage designating the preserve areas. The signage shall be placed at all access points into preserved areas and shall contain the Corps identification number (SPK-2003-25013), contact information for the preserve manager and a statement that the site is a wetland preserve.

8. You and your authorized contractor shall allow representatives from this office to inspect the authorized activity and all preservation and avoidance areas at any time deemed necessary to ensure that work is being or has been accomplished in accordance with the terms and conditions of this permit/verification.

9. Within 60 days of this permit authorization, you must submit a Maintenance Baseline for all stormwater facilities that will be subject to future work. This Maintenance Baseline shall include plans for the Eagle Creek channel, Basins 1 and 2, and all support structures such as culverts, levees, and weirs. The Maintenance Baseline plans will, at minimum, for each project element include narrative descriptions and plan level drawings and how the element will be maintained into the future including how and when vegetation removal is required, under what conditions sediment will be removed, how the sediment will be removed including access and disposal of material, notification procedures and timeframes to the appropriate agencies, criteria for the addition of rock, and all other anticipated maintenance activities. For Basin 1, the Maintenance Baseline will include a surveyed elevation that will not be exceeded during sediment removal activities sufficient to ensure that the existing wetland soils will not be impacted during these activities. If this plan is not received within 60 days from the date of this permit, the Corps reserves the right to issue a Stop Work order for all impacts in aquatic resources, until this plan is received and approved.

General Conditions:

1. The time limit for completing the work authorized by this permit ends on **July 27, 2023**. If you find that you need more time to complete the authorized activity, submit a request for time extension to this office for consideration at least one month before the above date is reached.

2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of these requirements if you abandon the permitted activity. This permit may be transferred upon request provided the work complies with the terms and conditions of this authorization. When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. Should you wish to cease to maintain the authorized activity or abandon it without a good faith transfer, you must obtain a permit modification from this office.

3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register.

4. You shall comply with all terms and conditions of the Section 401 Water Quality Certification for this project.

5. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

6. You must sign the enclosed Compliance Certification (Enclosure 4) and return it to this office within 45 days after completion of the authorized work.

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

( ) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).

(X) Section 404 of the Clean Water Act (33 U.S.C. 1344).

2. Limits of this authorization.

a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal projects.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

a. You fail to comply with the terms and conditions of this permit.

b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (see 4 above).

c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5.

6. Extensions. General Condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

This letter contains an initially proffered permit for your proposed project. If you object to this decision, you may request an administrative appeal under Corps regulations at 33 CFR Part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form (Enclosure 5). If you request to appeal this decision, submit a completed RFA form to the South Pacific Division Office at the following address: Tom Cavanaugh, Administrative Appeal Officer, Army Engineer District-South Pacific (CESPD-PDS-O), 1455 Market Street, San Francisco CA 94103-1399, Phone 415-503-6574, FAX 415-503-6646.

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR Part 331.5, and that it has been received by the Division Office within 60 days of the NAP fact sheet. It is not necessary to submit an RFA for the Division Office if you do not object to the decision in this letter.

We appreciate your feedback. At your earliest convenience, please tell us how we are doing by completing the customer survey on our website under *Customer Service Survey*.

Please refer to identification number SPK-2003-25013 in any correspondence concerning this project. If you have any questions, please contact me at our Reno

Regulatory Office, Room 3050, Reno, Nevada 89509, by email at *Jennifer.C.Thomason@usace.army.mil*, or telephone at (775) 784-5304. For more information regarding our program, please visit our website at *www.spk.usace.army.mil/Missions/Regulatory.aspx*.

For and on the behalf of Colonel James J. Handura, Commander and District Engineer.

Sincerely,

Jennifer C. Thomason
Senior Project Manager
Nevada Utah Section

Enclosures

cc:

Garth Alling, Sierra Ecotone Solutions, galling@sierraecotonesolutions.com
Birgit Widegren, NDEP, bwidegren@ndep.nv.gov
Donette Barreto, P.E., NDEP, BWPC, dbarreto@ndep.nv.gov

ATTACHMENT A: General LOP Conditions

1. **Navigation.**
   (a) No activity may cause more than a minimal adverse effect on navigation.
   (b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.
   (c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. **Aquatic Life Movements**. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. Culverts placed in streams must be installed to maintain low flow conditions.

3. **Spawning Areas.** Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. **Migratory Bird Breeding Areas.** Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. **Shellfish Beds.** No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by the LOP or other Corps permit.

6. **Suitable Material.** No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).

7. **Water Supply Intakes.** No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. **Adverse Effects From Impoundments.** If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. **Management of Water Flows.** To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization and storm water management activities, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter

the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration activities).

10. **Fills Within 100-Year Floodplains.** The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

11. **Equipment.** Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. **Soil Erosion and Sediment Controls.** Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow.

13. **Temporary Fills.** Temporary fills must use only clean material and removed in their entirety and the affected areas returned to pre-construction elevations, contours and conditions within 45 days of activity completion. The affected areas must be revegetated with appropriate native plants.

14. **Utility lines.**
    (a) Installation of a utility line must not be designed or constructed (e.g., backfilling technique) in such a manner as to drain waters of the U.S.
    (b) Any trench constructed must be backfilled and returned to pre-activity contours and conditions. During construction, the top 6 –12 inches of topsoil must be removed and stockpiled separately. Following installation, the stockpiled topsoil will be replaced on top, and seeded with appropriate native vegetation.
    (c) Material resulting from trench excavation may be temporarily sidecast into waters of the U.S. for no more than three months, provided the material is not placed in such a manner that it may be dispersed by currents or other forces.

15. **Proper Maintenance.** Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety.

16. **Wild and Scenic Rivers**. No activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency in the area (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service).

17. **Tribal Rights.** No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

18. **Endangered Species.**
    (a) No activity is authorized under LOP which is likely to jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or

which will destroy or adversely modify the critical habitat of such species. No activity is authorized under LOP which "may affect" a listed species or critical habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed.

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements.

(c) Non-federal permittees shall notify the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that may be affected by the proposed work or that utilize the designated critical habitat that may be affected by the proposed work. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the activity, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification the proposed activities will have "no effect" on listed species or critical habitat, or until Section 7 consultation has been completed.

(d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species-specific regional endangered species conditions to the LOP.

(e) Authorization of an activity by LOP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the U.S. FWS or the NMFS, both lethal and non-lethal "takes" of protected species are in violation of the ESA. Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the U.S. FWS and NMFS or their World Wide Web pages at http://www.fws.gov/ and http://www.noaa.gov/fisheries.html respectively.

19. **Historic Properties.**

(a) In cases where the district engineer determines that the activity may affect properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of Section 106 of the National Historic Preservation Act. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements.

(c) Non-federal permittees must notify the district engineer if the authorized activity may have the potential to cause effects to any historic properties listed, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the notification must state which historic properties may be affected by the proposed work and include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of or potential for the presence of historic resources can be sought from

the State Historic Preservation Officer or Tribal Historic Preservation Officer, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted and these efforts, the district engineer shall determine whether the proposed activity has the potential to cause an effect on the historic properties. Where the non-Federal applicant has identified historic properties which the activity may have the potential to cause effects and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects or that consultation under Section 106 of the NHPA has been completed.

(d) The district engineer will notify the prospective permittee whether NHPA Section 106 consultation is required. Section 106 consultation is not required when the Corps determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR 800.3(a)). If NHPA section 106 consultation is required and will occur, the applicant shall not begin work until notified by the Corps that Section 106 consultation is completed.

(e) Prospective permittees should be aware that section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, explaining the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

20. **Designated Critical Resource Waters.** Critical resource waters include, NOAA-designated marine sanctuaries, National Estuarine Research Reserves, state natural heritage sites, and outstanding national resource waters or other waters officially designated by a state as having particular environmental or ecological significance and identified by the district engineer after notice and opportunity for public comment. The district engineer may also designate additional critical resource waters after notice and opportunity for comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by LOP for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters, unless the district engineer, in coordination with appropriate resource agencies, determines that the impacts to the critical resource waters will be no more than minimal.

21. **Mitigation.** The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that adverse effects on the aquatic environment are minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the activity site (i.e., on site).

(b) Mitigation, in all its forms (avoiding, minimizing, rectifying, reducing, or compensating) is required to the extent necessary to ensure that the adverse effects to the aquatic environment are minimal.

(c) Compensatory mitigation at a minimum 2:1 ratio for permittee responsible or in-lieu fee, or a minimum of 1:1 at a Corps-approved compensatory mitigation bank is required for all losses of waters of the U.S., including wetlands. Because the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, wetland restoration should be the first compensatory mitigation option considered.

(d) For development activities, unless specifically authorized by the Corps (e.g. discrete crossing, wetland fills, bank stabilization, stream and/or riparian habitat enhancement) as part of the activity, all intermittent and perennial streams, open waters, wetlands and other special aquatic sites within the site must be avoided and preserved with the following elements:

i. A buffer, extending a minimum of 50-feet from either side of the ordinary high water mark of the stream, or to the limits of the FEMA-mapped 100-year floodplain, whichever is greater, or to the property boundary, is established and maintained. At the discretion of the District Engineer, this may not apply to linear activities with a narrow right-of-way perpendicular to the stream.

ii. Any trails, utilities, roads and other infrastructure, except specifically designated crossings and/or water quality/storm water management facilities, must be located outside of the prescribed buffer.

iii. All above ground crossing of stream must ensure fish passage, especially for anadromous fisheries. Permittees must employ bridge designs that span the stream or river, utilize pier or pile supported structures, or involve large bottomless culverts with a natural streambed, where the substrate and streamflow conditions approximate existing channel conditions. Approach fills in waters of the United States OHWM are not authorized except where avoidance has specifically been determined to be impracticable by the District.

iv. All detention or water quality basins must be constructed and sited outside of the stream and riparian area and the activity may not adversely affect pre-construction flows within the stream.

v. Channelization, piping, realignment or relocation of intermittent or perennial drainage(s) is not authorized except when, as determined by the District, it would result in no net loss of functions of the aquatic ecosystem within the watershed.

vi. Fencing and appropriate signage must be installed around the entire perimeter of the preserve and avoided wetlands. All fencing surrounding mitigation, preservation, avoidance, and buffer areas must allow unrestricted visibility of these areas to discourage vandalism or disposing of trash or other debris in these areas. Signage must contain the District‘s identification number, contact information for the preserve manager, if applicable, and a statement that the site is a preserve.

vii. To ensure proper management of the preserve(s), a specific and detailed preserve management plan for the preserve should be developed and submitted to the Corps. This plan must describe in detail any activities that are proposed within the preserve area(s) and the long term funding and maintenance of each of the preserve area(s).

viii. The permittee shall place wetlands, other aquatic areas, and any vegetative buffers preserved as part of mitigation for impacts into a separate "preserve" parcel prior to discharging dredged or fill material into waters of the United States, except where specifically determined to be impracticable by the District. Permanent legal protection shall be established for all preserve parcels, following District approval of the legal instrument.

(e) Compensatory mitigation will not be used to increase the acreage impact or losses allowed by the LOP. However, compensatory mitigation will be used, as necessary, to ensure that an activity already meeting the established acreage limit also has minimal impacts.

(f) Compensatory mitigation plans for activities in or near streams or other open waters will normally include a requirement for the establishment, maintenance, and legal protection (e.g., conservation easements) of vegetated riparian areas next to open waters. In some cases, vegetated riparian areas may be the only compensatory mitigation required. Vegetated riparian areas should consist of native species. The width of the required vegetated riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area must be a minimum of 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. Where both wetlands and open waters exist on the site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(g) The permittee may propose the use of mitigation banks, in-lieu fee arrangements or separate activity-specific compensatory mitigation. In all cases, the mitigation provisions will specify the party responsible for accomplishing and/or complying with the mitigation plan.

(h) Where certain functions and services of waters of the United States are permanently adversely affected, such as the conversion of a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse effects of the activity to the minimal level.

(i) The permittee shall complete compensatory mitigation required by special conditions of the LOP verification before or concurrent with construction of the authorized activity, except when specifically determined to be impracticable by the District. When compensatory mitigation involves use of a mitigation bank or in-lieu fee program, payment shall be made before commencing construction.

(j) The permittee shall record the LOP with the Registrar of Deeds or other appropriate official charged with the responsibility for maintaining records of title to or interest in real property against areas (1) designated to be preserved as part of mitigation for authorized impacts, including any associated covenants or restrictions, or (2) where structures such as boat ramps or docks, marinas, piers, and permanently moored vessels will be constructed in or adjacent to navigable waters (Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act). The recordation shall also include a map showing the surveyed location of the authorized structure and any associated areas preserved to minimize or compensate for adverse impacts.

22. **Water Quality.** Where States and authorized Tribes, or EPA where applicable, have not previously certified LOP's to be issued in this process, individual 401 Water Quality Certification must be obtained or waived. The district engineer or State or Tribe may

require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality. The activity must comply with any special case-specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its section 401 Water Quality Certification.

23. **Transfer of LOP's.** If the permittee sells the property associated with a LOP, the permittee may transfer the LOP to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the LOP and the name and all available contact information, including company name, addresses, telephone numbers and e-mail, must be attached to the letter, and the letter must contain the following statement and signature:

    "When the structures or work authorized by this LOP are still in existence at the time the property is transferred, the terms and conditions of this LOP, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this LOP and the associated liabilities associated with compliance with its terms and conditions, the transferee must sign and date below."

    _____ _____
    (Transferee) (Date)

24. **Compliance Certification.** Each permittee who received an LOP from the Corps must submit a signed certification regarding the completed work and any required mitigation within 45 days after completing construction activities. The certification form must be forwarded by the Corps with the LOP and will include:
    (a) A statement that the authorized work was done in accordance with the LOP authorization, including any general or specific conditions;
    (b) A statement that any required mitigation was completed in accordance with the permit conditions; and
    (c) The signature of the permittee certifying the completion of the work and mitigation.

25. **Single and Complete Activity.** The activity to be covered under an LOP must be a single and complete activity. Only one LOP may be used for the same single and complete activity.

26. **Inspection.** The permittee shall allow Corps representatives to inspect the authorized activity and any mitigation areas at any time deemed necessary to determine compliance with the terms and conditions of the LOP. The permittee will be notified in advance of an inspection.

27. **Bank Stabilization.** Any bank stabilization shall include the use of vegetation or other biotechnical design to the maximum extent practicable must be reviewed by the Corps on a case-by-case basis and may not qualify for LOP authorization, unless the Corps determines the impact would be minimal.

28. **Federal Agencies.** For activities undertaken by other federal agencies, the application shall include a copy of the National Environmental Policy Act, including signed Categorical Exclusion, document(s) and final agency determinations regarding compliance with Section 7 of the Endangered Species Act, Essential Fish Habitat under the Magnussen-Stevens Act, and Section 106 of the National Historic Preservation Act.

29. **Histosols and Fens.** LOP authorization is revoked for activities in histosols, fens, and in wetlands contiguous with fens. Fens are defined as slope wetlands with a histic epipedon that are hydrologically supported by groundwater. Fens are normally saturated throughout the growing season, although they may not be during drought conditions.

30. **Springs.** Activities proposed within 100 feet of the point of groundwater discharge of a natural spring must be reviewed by the Corps on a case-by-case basis and may not qualify for LOP authorization, unless the Corps determines the impact would be minimal. A spring source is defined as any location where ground water emanates from a point in the ground. For purposes of this condition, springs do not include seeps or other discharges which lack a defined channel.

31. **Lake Tahoe.** In the Lake Tahoe basin, proposed activities must be reviewed by the Corps on a case-by-case basis and may not qualify for LOP authorization. Activities in this area may also be authorized under Regional General Permit 16 or through a standard permit.

NEVADA DIVISION OF
ENVIRONMENTAL
PROTECTION

STATE OF NEVADA
Department of Conservation & Natural Resources
Steve Sisolak, *Governor*
Bradley Crowell, *Director*
Greg Lovato, *Administrator*

July 13, 2020

Ms. Jennifer Thomason
Project Manager
U.S. Army Corps of Engineers
Sacramento District – Reno Office
300 Booth Street Rm 3050
Reno, NV 89509

Dear Ms. Thomason,

The Nevada Division of Environmental Protection (NDEP), Bureau of Water Quality Planning (BWQP) grants 401 Water Quality Certification (NV401-20-016) for Carson Tahoe Healthcare Regional Medical Center – Sierra Surgery Hospital Connector in Carson City, Nevada. Project is located at 1600 Medical Parkway and involves building a connection between the Regional Medical Center and the Sierra Surgery Hospital over Eagle Creek, and ephemeral creek. Channel modifications include vegetation removal, grading and installation of riprap, and geotextile materials. The modifications are for flood control and will result in permanent impact of 134 cubic yards soil fill, 1,440 cubic yards of concrete, and 3,237 cubic yards of riprap.

Photographs, which document conditions before, during and after construction, should be submitted to the Bureau of Water Quality Planning (BWQP) after project completion and must include BMPs used to prevent erosion, control sediment and protect water quality. Photos taken at each stage of the project should be documented using the same locations, camera position, view angles and zoom. If natural materials such as mulch, straw bales or coir logs are selected as BMPs, they should be certified as weed free. Any modifications to original project submittal must be reviewed and approved by this office prior to implementation.

Any modifications to original project submittal must be reviewed and approved by this office prior to implementation.
All conditions of the Authorization to Discharge (Working in Waterways permit) issued by the Bureau of Water Pollution Control (BWPC) or any other permits issued by NDEP for the project must be followed. Submitting a **copy** of the Working in Waterways Final Report to BWQP will also satisfy the 401 post-project reporting requirement.

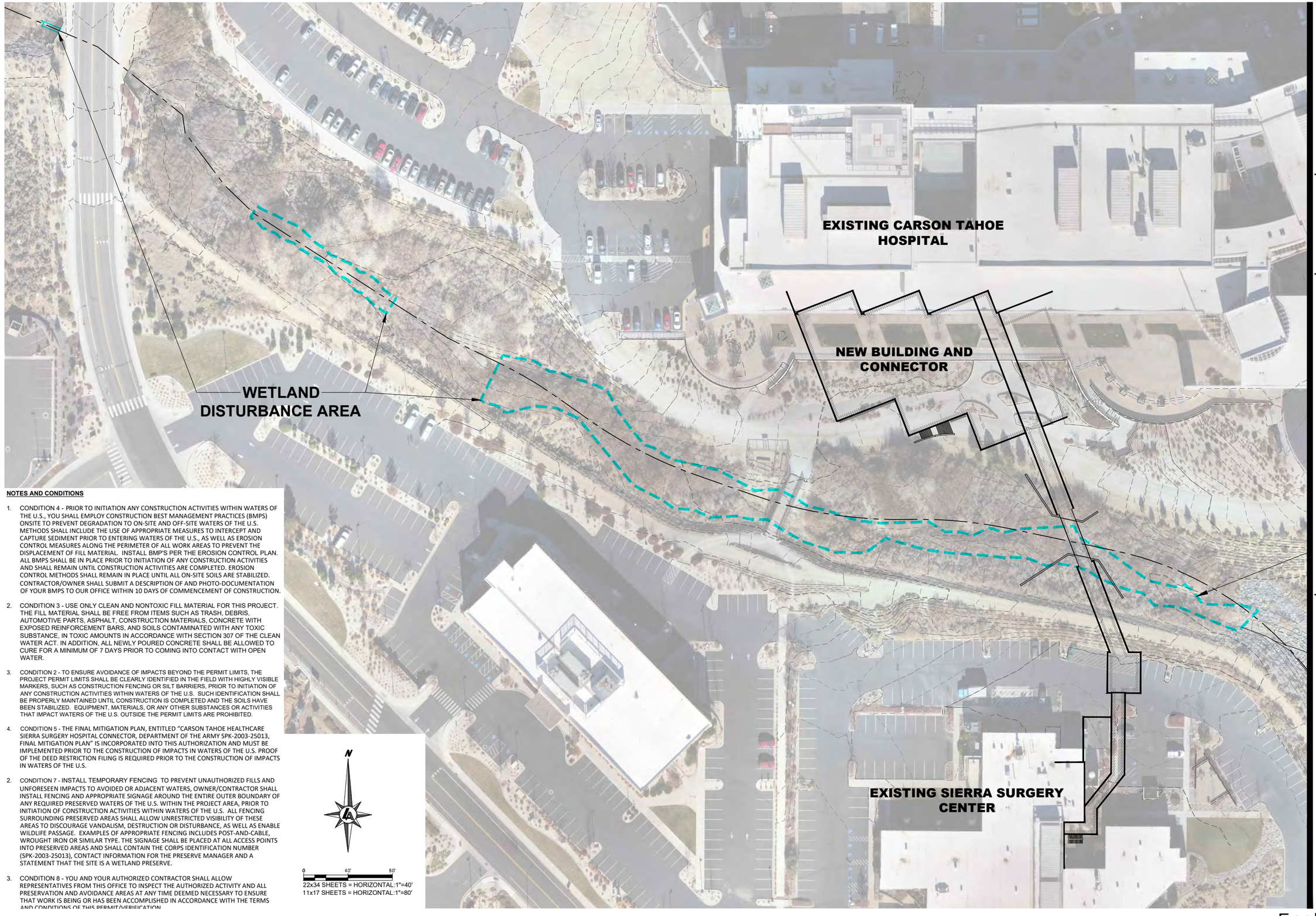
This 401 Water Quality Certification is subject to the acquisition of all necessary local, regional, state and federal permits and approvals as required by law. Failure to meet any conditions of this Certification, any other permit required by NDEP for this project or any violation of NAC 445A may result in the revocation of this 401 Water Quality Certification.

If you have any questions, please contact me via bwidegren@ndep.nv.gov.

Sincerely,

Birgit M. Widegren, CPM
Nonpoint Source Branch Supervisor
Environmental Scientist IV
Bureau of Water Quality Planning

cc: Michelle Joy, Carson Tahoe Healthcare
Garth Alling, Sierra Ecotone Solutions
Donette Barreto, NDEP BWPC



NOTES AND CONDITIONS

1. CONDITION 4 - PRIOR TO INITIATION ANY CONSTRUCTION ACTIVITIES WITHIN WATERS OF THE U.S., YOU SHALL EMPLOY CONSTRUCTION BEST MANAGEMENT PRACTICES (BMPS) ONSITE TO PREVENT DEGRADATION TO ON-SITE AND OFF-SITE WATERS OF THE U.S. METHODS SHALL INCLUDE THE USE OF APPROPRIATE MEASURES TO INTERCEPT AND CAPTURE SEDIMENT PRIOR TO ENTERING WATERS OF THE U.S., AS WELL AS EROSION CONTROL MEASURES ALONG THE PERIMETER OF ALL WORK AREAS TO PREVENT THE DISPLACEMENT OF FILL MATERIAL. INSTALL BMP'S PER THE EROSION CONTROL PLAN. ALL BMPS SHALL BE IN PLACE PRIOR TO INITIATION OF ANY CONSTRUCTION ACTIVITIES AND SHALL REMAIN UNTIL CONSTRUCTION ACTIVITIES ARE COMPLETED. EROSION CONTROL METHODS SHALL REMAIN IN PLACE UNTIL ALL ON-SITE SOILS ARE STABILIZED. CONTRACTOR/OWNER SHALL SUBMIT A DESCRIPTION OF AND PHOTO-DOCUMENTATION OF YOUR BMPS TO OUR OFFICE WITHIN 10 DAYS OF COMMENCEMENT OF CONSTRUCTION.

2. CONDITION 3 - USE ONLY CLEAN AND NONTOXIC FILL MATERIAL FOR THIS PROJECT. THE FILL MATERIAL SHALL BE FREE FROM ITEMS SUCH AS TRASH, DEBRIS, AUTOMOTIVE PARTS, ASPHALT, CONSTRUCTION MATERIALS, CONCRETE WITH EXPOSED REINFORCEMENT BARS, AND SOILS CONTAMINATED WITH ANY TOXIC SUBSTANCE, IN TOXIC AMOUNTS IN ACCORDANCE WITH SECTION 307 OF THE CLEAN WATER ACT. IN ADDITION, ALL NEWLY POURED CONCRETE SHALL BE ALLOWED TO CURE FOR A MINIMUM OF 7 DAYS PRIOR TO COMING INTO CONTACT WITH OPEN WATER.

3. CONDITION 2 - TO ENSURE AVOIDANCE OF IMPACTS BEYOND THE PERMIT LIMITS, THE PROJECT PERMIT LIMITS SHALL BE CLEARLY IDENTIFIED IN THE FIELD WITH HIGHLY VISIBLE MARKERS, SUCH AS CONSTRUCTION FENCING OR SILT BARRIERS, PRIOR TO INITIATION OF ANY CONSTRUCTION ACTIVITIES WITHIN WATERS OF THE U.S. SUCH IDENTIFICATION SHALL BE PROPERLY MAINTAINED UNTIL CONSTRUCTION IS COMPLETED AND THE SOILS HAVE BEEN STABILIZED. EQUIPMENT, MATERIALS, OR ANY OTHER SUBSTANCES OR ACTIVITIES THAT IMPACT WATERS OF THE U.S. OUTSIDE THE PERMIT LIMITS ARE PROHIBITED.

4. CONDITION 5 - THE FINAL MITIGATION PLAN, ENTITLED "CARSON TAHOE HEALTHCARE SIERRA SURGERY HOSPITAL CONNECTOR, DEPARTMENT OF THE ARMY SPK-2003-25013, FINAL MITIGATION PLAN" IS INCORPORATED INTO THIS AUTHORIZATION AND MUST BE IMPLEMENTED PRIOR TO THE CONSTRUCTION OF IMPACTS IN WATERS OF THE U.S. PROOF OF THE DEED RESTRICTION FILING IS REQUIRED PRIOR TO THE CONSTRUCTION OF IMPACTS IN WATERS OF THE U.S.

2. CONDITION 7 - INSTALL TEMPORARY FENCING TO PREVENT UNAUTHORIZED FILLS AND UNFORESEEN IMPACTS TO AVOIDED OR ADJACENT WATERS, OWNER/CONTRACTOR SHALL INSTALL FENCING AND APPROPRIATE SIGNAGE AROUND THE ENTIRE OUTER BOUNDARY OF ANY REQUIRED PRESERVED WATERS OF THE U.S. WITHIN THE PROJECT AREA, PRIOR TO INITIATION OF CONSTRUCTION ACTIVITIES WITHIN WATERS OF THE U.S. ALL FENCING SURROUNDING PRESERVED AREAS SHALL ALLOW UNRESTRICTED VISIBILITY OF THESE AREAS TO DISCOURAGE VANDALISM, DESTRUCTION OR DISTURBANCE, AS WELL AS ENABLE WILDLIFE PASSAGE. EXAMPLES OF APPROPRIATE FENCING INCLUDES POST-AND-CABLE, WROUGHT IRON OR SIMILAR TYPE. THE SIGNAGE SHALL BE PLACED AT ALL ACCESS POINTS INTO PRESERVED AREAS AND SHALL CONTAIN THE CORPS IDENTIFICATION NUMBER (SPK-2003-25013), CONTACT INFORMATION FOR THE PRESERVE MANAGER AND A STATEMENT THAT THE SITE IS A WETLAND PRESERVE.

3. CONDITION 8 - YOU AND YOUR AUTHORIZED CONTRACTOR SHALL ALLOW REPRESENTATIVES FROM THIS OFFICE TO INSPECT THE AUTHORIZED ACTIVITY AND ALL PRESERVATION AND AVOIDANCE AREAS AT ANY TIME DEEMED NECESSARY TO ENSURE THAT WORK IS BEING OR HAS BEEN ACCOMPLISHED IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THIS PERMIT/VERIFICATION.

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0 40' 80'

22x34 SHEETS = HORIZONTAL:1"=40'
11x17 SHEETS = HORIZONTAL:1"=80'

LUMOS & ASSOCIATES
308 N. CURRY ST., STE. 200
CARSON CITY, NV 89703
TEL: 775.883.7077
WWW.LUMOSINC.COM

CLIENT

CARSON TAHOE HOSPITAL CHANNEL GRADING PROJECT WETLANDS

CARSON CITY NEVADA

REV	DATE	DESCRIPTION	BY

6/8/2020

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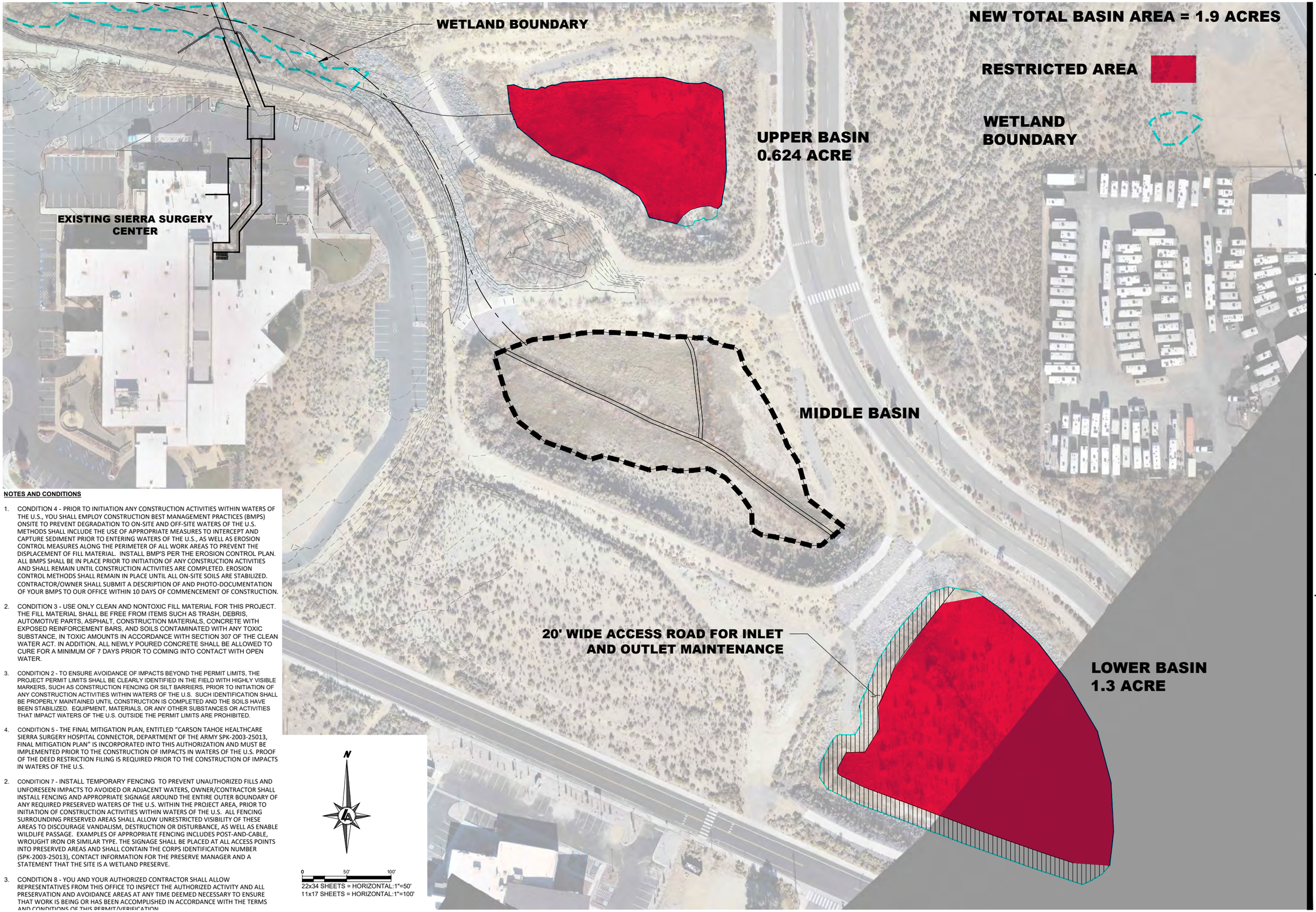
EXHIBIT

DRAWN BY:	KLM
DESIGNED BY:	TR
CHECKED BY:	TR
JOB NO.:	9153.003



NOTES AND CONDITIONS

1. CONDITION 4 - PRIOR TO INITIATION ANY CONSTRUCTION ACTIVITIES WITHIN WATERS OF THE U.S., YOU SHALL EMPLOY CONSTRUCTION BEST MANAGEMENT PRACTICES (BMPS) ONSITE TO PREVENT DEGRADATION TO ON-SITE AND OFF-SITE WATERS OF THE U.S. METHODS SHALL INCLUDE THE USE OF APPROPRIATE MEASURES TO INTERCEPT AND CAPTURE SEDIMENT PRIOR TO ENTERING WATERS OF THE U.S., AS WELL AS EROSION CONTROL MEASURES ALONG THE PERIMETER OF ALL WORK AREAS TO PREVENT THE DISPLACEMENT OF FILL MATERIAL. INSTALL BMP'S PER THE EROSION CONTROL PLAN. ALL BMPS SHALL BE IN PLACE PRIOR TO INITIATION OF ANY CONSTRUCTION ACTIVITIES AND SHALL REMAIN UNTIL CONSTRUCTION ACTIVITIES ARE COMPLETED. EROSION CONTROL METHODS SHALL REMAIN IN PLACE UNTIL ALL ON-SITE SOILS ARE STABILIZED. CONTRACTOR/OWNER SHALL SUBMIT A DESCRIPTION OF AND PHOTO-DOCUMENTATION OF YOUR BMPS TO OUR OFFICE WITHIN 10 DAYS OF COMMENCEMENT OF CONSTRUCTION.

2. CONDITION 3 - USE ONLY CLEAN AND NONTOXIC FILL MATERIAL FOR THIS PROJECT. THE FILL MATERIAL SHALL BE FREE FROM ITEMS SUCH AS TRASH, DEBRIS, AUTOMOTIVE PARTS, ASPHALT, CONSTRUCTION MATERIALS, CONCRETE WITH EXPOSED REINFORCEMENT BARS, AND SOILS CONTAMINATED WITH ANY TOXIC SUBSTANCE, IN TOXIC AMOUNTS IN ACCORDANCE WITH SECTION 307 OF THE CLEAN WATER ACT. IN ADDITION, ALL NEWLY POURED CONCRETE SHALL BE ALLOWED TO CURE FOR A MINIMUM OF 7 DAYS PRIOR TO COMING INTO CONTACT WITH OPEN WATER.

3. CONDITION 2 - TO ENSURE AVOIDANCE OF IMPACTS BEYOND THE PERMIT LIMITS, THE PROJECT PERMIT LIMITS SHALL BE CLEARLY IDENTIFIED IN THE FIELD WITH HIGHLY VISIBLE MARKERS, SUCH AS CONSTRUCTION FENCING OR SILT BARRIERS, PRIOR TO INITIATION OF ANY CONSTRUCTION ACTIVITIES WITHIN WATERS OF THE U.S. SUCH IDENTIFICATION SHALL BE PROPERLY MAINTAINED UNTIL CONSTRUCTION IS COMPLETED AND THE SOILS HAVE BEEN STABILIZED. EQUIPMENT, MATERIALS, OR ANY OTHER SUBSTANCES OR ACTIVITIES THAT IMPACT WATERS OF THE U.S. OUTSIDE THE PERMIT LIMITS ARE PROHIBITED.

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CLIENT

CARSON TAHOE HOSPITAL
CHANNEL GRADING PROJECT
BASINS

CARSON CITY, NEVADA

REV	DATE	DESCRIPTION	BY
	6/8/2020		

BAR IS 1 INCH ON ORIGINAL DRAWING
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IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

EXHIBIT

DRAWN BY:	KLM
DESIGNED BY:	TR
CHECKED BY:	TR
JOB NO.:	9153.[illegible]

Carson Tahoe Healthcare
Sierra Surgery Hospital Connector
Department of the Army SPK-2003-25013
Mitigation Plan

Prepared for:

U.S. Army Corps of Engineers
Nevada Utah Section
Regulatory Division
Attn: Ms. Jennifer C. Thomason
1325 J Street, Room 1350
Sacramento, CA 95814

Prepared by:

Garth Alling, Principal, Sierra Ecotone Solutions LLC.
Alison E. Stanton, M.S. Botanist
PO Box 1297
Zephyr Cove, NV 89448
galling@sierraecotonesolutions.com

Permittee:

Carson Tahoe Healthcare
Attn: Michelle Joy
1600 Medical Parkway
Carson City, Nevada 89703
michellejoy@carsontahoe.org

July 2020

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CONTRIBUTORS LIST

Preparation and Data Collection:
Garth Alling, Principal, Sierra Ecotone Solutions LLC.
PO Box 1297
Zephyr Cove, NV 89448
530-416-2440
galling@sierraecotonesolutions.com

Alison E. Stanton, M.S. Botanist
3170 US HWY 50 Suite#7
South Lake Tahoe, CA 96150
415-990-2269
alisonestanton@sbcglobal.net

GIS:

Jennifer DeMartino
DeMartino Mapping Services
www.demartinomapping.com
jennifer@demartinomapping.com

Engineering:

Tim Russell, P.E. WRS
Lumos & Associates. Inc.
308 N. Curry Street, Suite 200
Carson City, NV 89703
trussell@LumosInc.com

DISTRIBUTION LIST

List names, titles, and companies/agencies of all persons receiving a copy of the report.

Carson Tahoe Healthcare
Attn: Ms. Michelle Joy
1600 Medical Parkway
Carson City, Nevada 89703
775-445-8662

Tim Russell, P.E. WRS
Lumos & Associates. Inc.
308 N. Curry Street, Suite 200
Carson City, NV 89703
trussell@LumosInc.com

Carson City Department of Public Works
Dan Stucky
City Engineer
3505 Butti Way
Carson City, Nevada 89701

Nevada Division of Environmental Protection
Bureau of Water Quality Planning
901 South Stewart Street, Suite 4001
Carson City, Nevada 89701-5249
Birgit Widegren, Environmental Scientist IV
775-687-9550
bwidegren@ndep.nv.gov

EXECUTIVE SUMMARY

Carson Tahoe Healthcare (CTH) operates a Regional Medical Center (RMC) on the northwest end of Carson City, Nevada. CTH purchased the adjacent Sierra Surgery Hospital (SSH), located on the opposite side of Eagle Creek, and is proposing to build a connection between the two facilities to create a combined facility.

The proposed connector option is a single-story slab on-grade building that would exit the lower floor of the RMC and cross Eagle Creek before connecting to the SSH. The connector walkway would alleviate a number of administrative and operational issues and allow for streamlined facility permitting, improved communications, and shared staffing, equipment, and services. The connector walkway would facilitate patient, visitor, staff, and material transport between the two buildings in a temperature-controlled interior space and would eliminate costly Emergency Medical Services (EMS) trips that are currently required to transport patients between the facilities. The majority of the connector building footprint would be located in highly developed upland areas but a portion of the concrete abutment for the on-grade connector building slab would encroach below the ordinary high water mark (OHWM) of Eagle Creek.

Additional modifications of Eagle Creek would be required during the initial phase of the Project for flood control protection. Eagle Creek is an intermittent drainage that was highly constrained during construction of the RMC in 2003 when the channel bank was reinforced with rip-rap and a levee constructed along the south side of the creek. Three storm water detention basins were also constructed at that time. Proposed channel modifications below the OHWM of Eagle Creek would include vegetation removal, grading, and the removal and re-installation of rip-rap, channel bedding, and geotextile materials. These channel modifications are necessary to contain a projected 500-year storm event after the installation of the connector walkway and prevent the existing levee on the south side of the creek from being over-topped. This Mitigation Plan proposes compensatory mitigation measures for these impacts associated with the proposed connector Project.

The Project area is located within the boundary of an existing permit [SPK-200325013] issued to CTH by the U.S. Army Corps of Engineers (Corps) in 2003 authorizing the construction of the three stormwater basins. The Corps has indicated that it is appropriate to evaluate the proposed SSH connector Project impacts and resolution of non-compliance from the 2003 authorization using the Minor Impact Letter of Permission (LOP) Procedures. . The mitigation for the December 2003 individual permit is not in compliance with the permit conditions and the matter of non-compliance must be resolved before the Corps can authorize additional impacts to aquatic resources. Therefore, this Mitigation Plan is being submitted as part of the LOP application package to address impacts associated with the proposed connector Project and to resolve non-compliance with the 2003 permit conditions.

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Figures

Tables

Acronyms and Abbreviations

CTH	Carson Tahoe Healthcare
CCPW	Carson City Public Works
DD	decimal degrees
EMS	Emergency Medical Services
GPS	global positioning system
msl	mean sea level
NDEP	Nevada Department of Environmental Protection
NRCS	National Resource Conservation Service
NWI	National Wetland Inventory
OHW	ordinary high water
OHWM	ordinary high water mark
Project	Sierra Surgery Hospital Connector
SSH	Sierra Surgery Hospital
RMC	Regional Medical Center
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WRCC	Western Regional Climate Center

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1.0 PROJECT DESCRIPTION

1.1 BRIEF PROJECT OVERVIEW AND DESCRIPTION

This report presents the Mitigation Plan for the Carson Tahoe Healthcare (CTH) Regional Medical Center (RMC) Sierra Surgery Hospital (SSH) Connector (Project) in Carson City, Nevada. The two facilities are located on the northwest end of Carson City, Nevada, south of Interstate 580 (**Figure 1- Vicinity Map**).

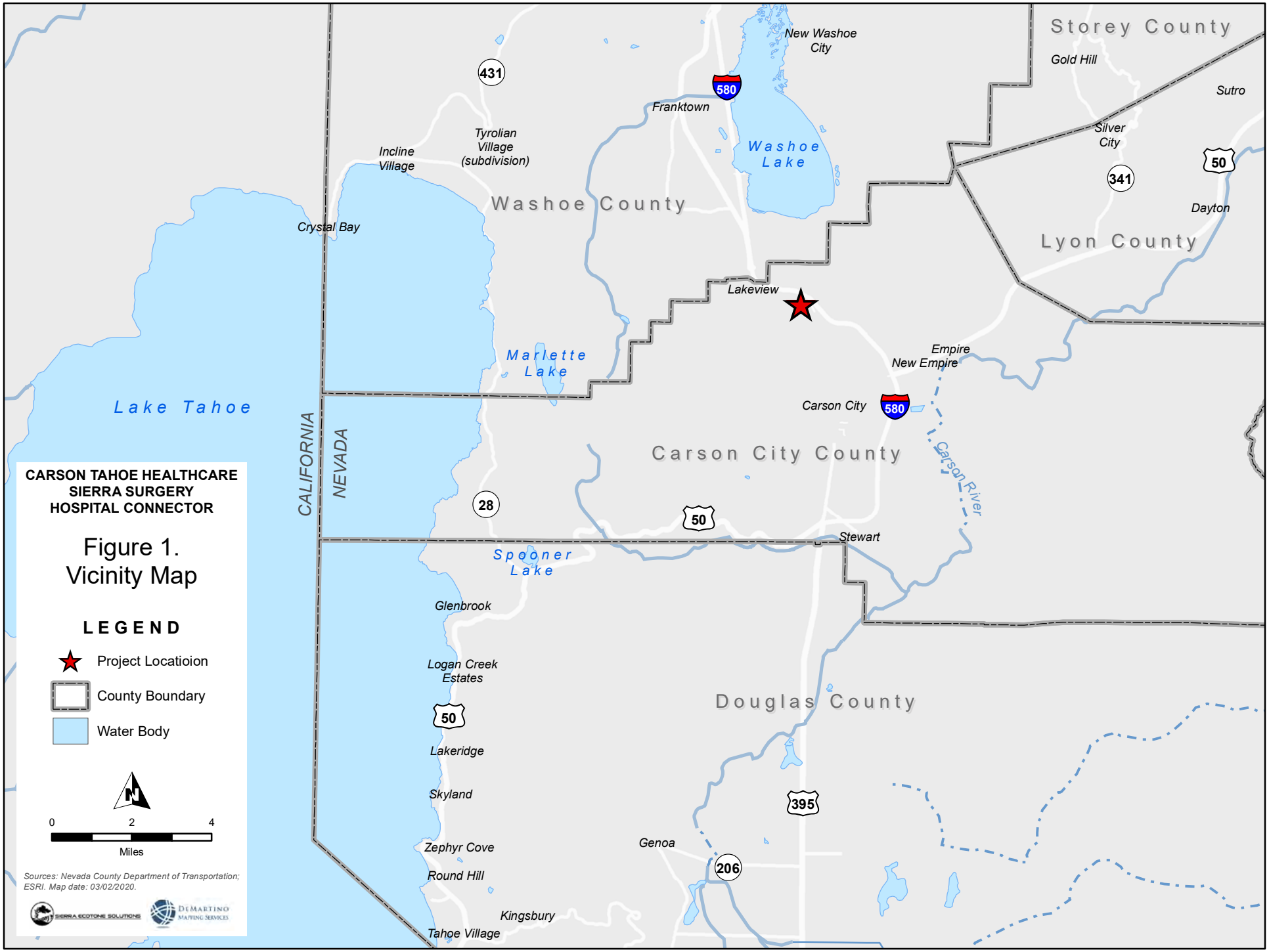
The existing RMC and SSH are separate facilities that currently operate independent of one another. The two facilities are located off Medical Parkway on opposite sides of Eagle Creek, an intermittent drainage that runs generally southeast between the RMC to the north and the SSH to the south (**Figure 2**- **Project Location**). CTH proposes to build a covered walkway between the two facilities to create a combined facility. The proposed connector walkway is a single-story slab on-grade building that would exit from the lower level of the RMC and cross Eagle Creek before connecting into the north side of the SSH at existing grades. The proposed connector would cross approximately 1,000 feet downstream of the existing Medical Parkway bridge.

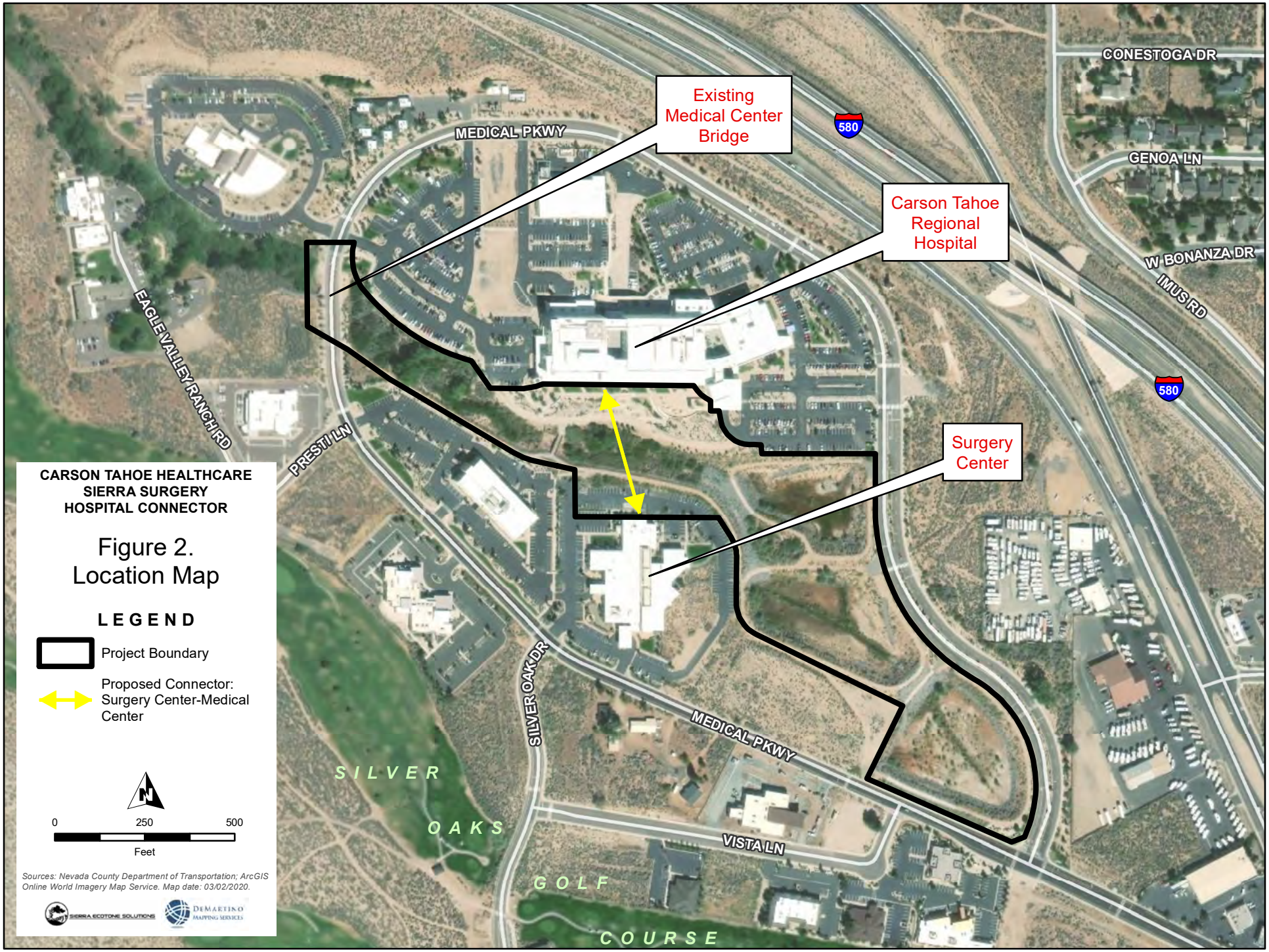
The proposed connector walkway would alleviate a number of administrative and operational issues and allow for streamlined facility permitting, improved communications, and shared staffing, equipment, and services. The covered connector walkway would facilitate patient, visitor, staff, and material transport between the two buildings in a temperature-controlled interior space and eliminate costly Emergency Medical Services (EMS) trips that are currently required to transport patients between the facilities.

The proposed total footprint of new buildings in the Eagle Creek Wetland is less than 1 acre. The majority of the connector building footprint would be located in highly developed upland areas outside of the ordinary high water mark (OHWM) of Eagle Creek. However, a portion of the concrete abutments for the on-grade connector building slab would encroach below the OHWM on the south side of the creek. In addition to the building construction, modification of the Eagle Creek channel would be required during the initial phase of the Project for flood control protection. The Eagle Creek channel was highly constrained during construction of the RMC in 2003 when the channel bank was reinforced with rip-rap and a levee constructed along the south side of the creek. Three storm water detention basins were also constructed at that time. Proposed flood protection measures below the OHWM of Eagle Creek would include vegetation removal, grading, and the removal and re-installation of rip-rap, channel bedding, and geotextile materials. These channel modifications are necessary to contain a projected 500-year storm event after the installation of the connector walkway and prevent the existing levee on the south side of the creek from being over-topped.

The Project area is located within the boundary of an existing permit [SPK-200325013] issued by the U.S. Army Corps of Engineers (Corps) in 2003 authorizing the construction of three stormwater detention basins. However, the mitigation for the December 2003 individual permit is not in compliance with the permit conditions and the matter of non-compliance must be resolved before the Corps can continue authorize additional impacts. In a letter dated November 14, 2019, the Corps indicated that it is appropriate to evaluate the proposed SSH connector Project impacts and resolution

of non-compliance from the 2003 authorization using the Minor Impact Letter of Permission (LOP) Procedures. Therefore, this Mitigation Plan is being submitted as part of the LOP application package to address impacts associated with the proposed connector Project and non-compliance with the 2003 permit conditions. The 2003 permit conditions are described next in Section 1.2


CARSON TAHOE HEALTHCARE
SIERRA SURGERY
HOSPITAL CONNECTOR
Figure 1.
Vicinity Map
LEGEND
Project Locatioion
County Boundary
Water Body
0
2
4
Miles
Sources: Nevada County Department of Transportation; ESRI. Map date: 03/02/2020.
Lake Tahoe
CALIFORNIA
NEVADA
Crystal Bay
Incline Village
Tyrolian Village (subdivision)
431
New Washoe City
580
Franktown
Washoe Lake
Washoe County
Storey County
Gold Hill
Sutro
Silver City
50
341
Dayton
Lyon County
Lakeview
Marlette Lake
Empire
New Empire
Carson City
580
Carson City County
Carson River
28
50
Stewart
Spooner Lake
Glenbrook
Logan Creek Estates
50
Douglas County
Lakeridge
Skyland
395
Genoa
Zephyr Cove
206
Round Hill
Kingsbury
Tahoe Village


Existing Medical Center Bridge
Carson Tahoe Regional Hospital
Surgery Center
MEDICAL PKWY
CONESTOGA DR
GENOA LN
W BONANZA DR
IMUS RD
580
EAGLE VALLEY RANCH RD
PRESTI LN
SILVER OAK DR
VISTA LN
SILVER OAKS GOLF COURSE
CARSON TAHOE HEALTHCARE
SIERRA SURGERY
HOSPITAL CONNECTOR
Figure 2.
Location Map
LEGEND
Project Boundary
Proposed Connector: Surgery Center-Medical Center
0
250
500
Feet
Sources: Nevada County Department of Transportation; ArcGIS Online World Imagery Map Service. Map date: 03/02/2020.
SIERRA ECOTONE SOLUTIONS
DEMARTINO MAPPING SERVICES

1.2 2003 PERMIT INFORMATION

In 2003, the U.S. Army Corps of Engineers (Corps) issued Permit #200325013 to CTH authorizing construction of three stormwater detention basins as attendant features for the RMC facility, to provide flood storage capacity along Eagle Creek. According to the letter dated November 14, 2019, the following Permit Special Conditions are in non-compliance:

Special Condition 6 - authorized fill of 1,530 linear feet of the lowest section of the Eagle Creek channel and mitigation of this impact with creation of 1,590 feet of channel within newly created detention basins 2 and 3. A jurisdictional delineation submitted in September, 2019 (See Section 2.3 below) determined that only 910 linear feet of channel was constructed. Therefore, 680 linear feet of channel was not constructed as required to complete the 1,590 linear feet of channel.

Special Condition 9 -required mitigation efforts to be fully implemented by September, 2004. The mitigation was not completed until 2008.

Special Condition 10- required annual mitigation monitoring for at least 5 years after completion to mitigation planting to ensure mitigation success. No monitoring has occurred.

Special Condition 13- required submission of 3 mitigation monitoring reports after the first, third, and fifth years after mitigation planting, or annually if mitigation is not successful after 5 years. No monitoring reports have been submitted.

Special Condition 14- required the monitoring reports to include information on success criteria and actions needed to address deficiencies.

Special Condition 15- specifies that non-compliance extends the term for submitting monitoring reports beyond the specified 5 year reporting term. Monitoring is no longer required when mitigation is certified by the Corps as successful.

The Corps determined that they would take no further action on seeking compliance for Special Conditions 9, 10, 13, 14, and 15 but that CTH would need to provide additional compensatory mitigation for the 680 linear feet of channel that was not created.

This Mitigation Plan is being submitted as part of the LOP application package to address non-compliance with the 2003 permit condition 6, listed above, in addition to new impacts associated with the proposed connector Project.

2.0 BASELINE INFORMATION

2.1 TOPOGRAPHY

Elevations in the project area range from approximately 4,830 to 4,760 feet above mean sea level (msl). Longitudinal slope upstream of Medical Parkway is five percent. Slopes reduce downstream of Medical Parkway to around three percent. During construction of the RMC, the lowest section of Eagle Creek was re-located within the new stormwater detention basins. The basins and channel contain the lowest points within the project area.

2.2 CLIMATE

The project area has a Great Basin climate characterized by cold winters with snowfall and hot, dry summers with occasional monsoon rain. Average maximum temperatures range from 45°F in January to 90°F in July; average minimum temperatures range from 20°F in January to 50°F in July (WRCC 2019). Average annual precipitation is 10.3 inches and average snowfall is 26 inches (WRCC 2019).

2.3 HYDROLOGY AND AQUATIC RESOURCES (DELINEATION OF WATERS OF THE U.S)

The Project area is located in the Central Lahontan Sub-region of the Great Basin within the Upper Carson watershed (HUC 16050201) of the Carson River Basin (USGS 2019). The headwaters of the Carson River lie at altitudes above 10,000 feet in the Sierra Nevada of east-central California and the river flows out of the mountains and north through Carson Valley. The main stem of the Carson River exits the Carson Valley a few miles southeast of Carson City and heads east through the Dayton Valley towards the Lahontan Reservoir.

Carson City is located within the Eagle Valley hydrologic area where streamflow tributary to the Carson River is perennial in only three watersheds: Clear Creek, Ash Canyon, and Kings Canyon Creeks (USGS 2011). The Project area is located north of these three watersheds on the northern boundary of the hydrologic area.

Hydrology in the watershed above Eagle Creek is influenced primarily by snowpack, but monsoonal summer rain can cause flash flooding. The watershed is very lightly developed with a handful of residences upslope in the Duck Hill area. Rose Canyon is undeveloped and downslope there are several other medical buildings in the vicinity of Eagle Creek as it passes under Medical Parkway bridge and into the Project area. The watershed does not appear to be subject to further development or rapid changes in land use that would cause changes in stream geomorphology.

Within the Project Area, a routine wetland delineation was conducted on 29 April and 12 July 2019 in accordance with Corps of Engineers guidelines. The Draft Aquatic Resources Report and preliminary results of the wetland delineation are included as Section 3 of the LOP application package. The report identifies Eagle Creek (W1) and three constructed channels (W2-W4) as potential non-wetland Waters of the U.S. and the Eagle Creek riparian zone below ordinary high water (OHW) and three constructed detention basins (Basin 1-3) as potential wetland Waters of the US. These potential aquatic resources are shown in **Figure 3.**

Eagle Creek

Eagle Creek is an intermittent drainage that that originates in the foothills of the Carson Range and flows over Duck Hill before passing into the project area. Within the project boundary, Eagle Creek enters a culvert to pass under Medical Parkway on the west side of the RMC. An existing footbridge is approximately 700 feet downstream (east) of Medical Parkway. The channel runs generally southeast between the RMC to the north and the SSH to the south. Eagle Creek was heavily modified during construction of the RMC and Medical Parkway in 2003. Beginning at Medical Parkway, a levee was constructed along the south side of the channel and the bank reinforced with rip-rap. The top of the levee provides flood protection for the SSH and surrounding development and also functions as a pedestrian pathway. The north side of the creek is gently sloping with another pathway of decomposed granite between Eagle Creek and the RMC. The riparian corridor is narrow and varies slightly in width from approximately 30 to 50 feet. The riparian vegetation is described in Section 2.4.

Detention basins

During construction of the RMC in 2003, CTH constructed three detention basins in upland sage-scrub habitat located in the eastern portion of the Project area. The detention basins were designed to convey flows from Eagle Creek. According to the project design, Eagle Creek flows that exceed a 5-year event are diverted from the creek into detention basin 1 via a lateral weir stationed approximately 1,200 feet downstream of Medical Parkway. A second inline weir is located approximately 200 ft further downstream that allows flows less than 5- year events to enter detention basin 2. Detention basins 2 and 3 are connected via a 2 x 4-foot box culvert. The outlet from basin 3 is a 36” corrugated metal pipe (CMP) that directly connects with Nevada Department of Transportation’s 48” metal pipe drain system.

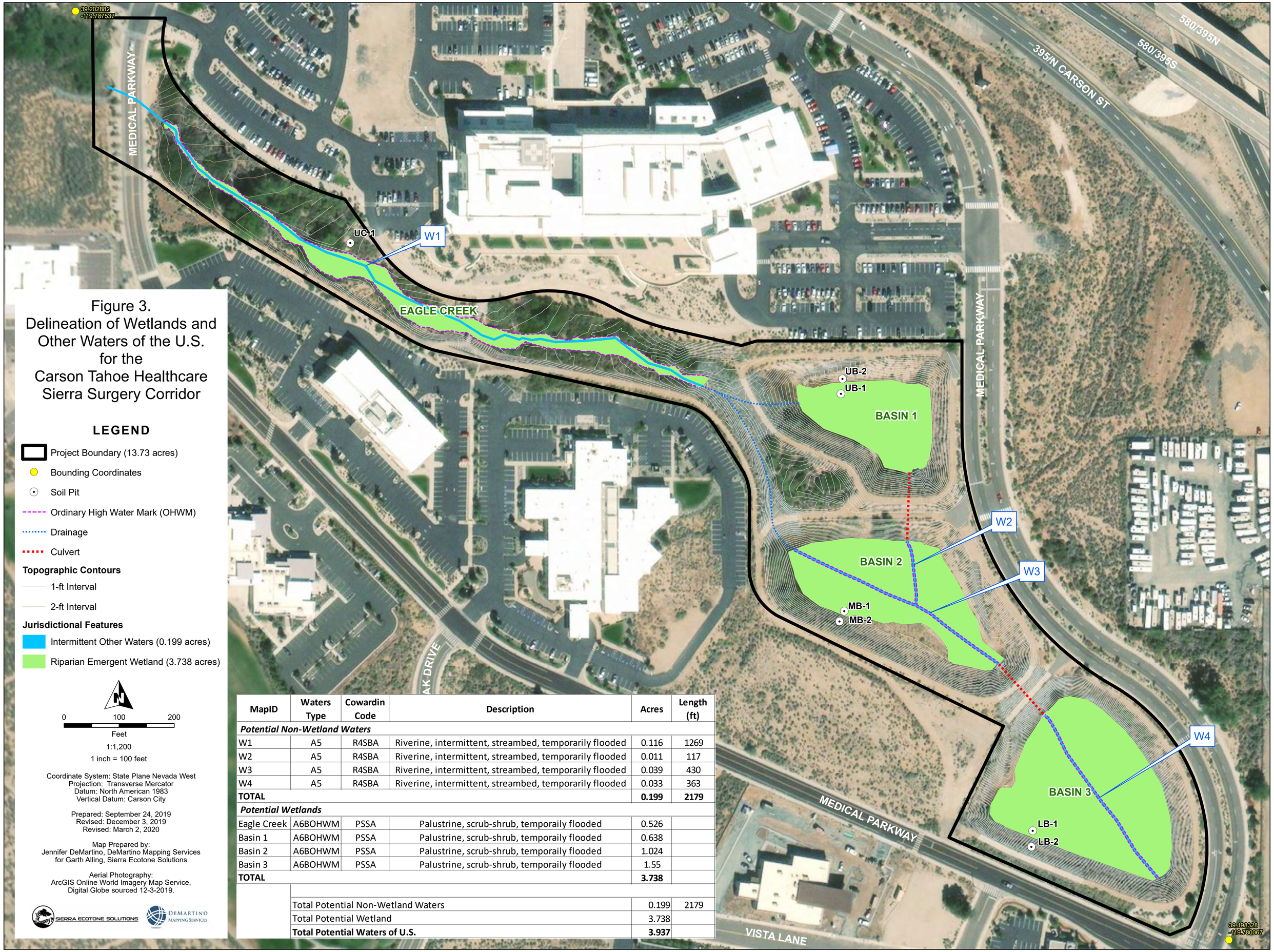


Figure 3.
Delineation of Wetlands and Other Waters of the U.S.
for the
Carson Tahoe Healthcare
Sierra Surgery Corridor

LEGEND

- Project Boundary (13.73 acres)
- Bounding Coordinates
- Soil Pit
- Ordinary High Water Mark (OHWM)
- Drainage
- Culvert

Topographic Contours

- 1-ft Interval
- 2-ft Interval

Jurisdictional Features

- Intermittent Other Waters (0.199 acres)
- Riparian Emergent Wetland (3.738 acres)

N

0 100 200
Feet

1:1,200

1 inch = 100 feet

Coordinate System: State Plane Nevada West
Projection: Transverse Mercator
Datum: North American 1983
Vertical Datum: Carson City

Prepared: September 24, 2019
Revised: December 3, 2019
Revised: March 2, 2020

Map Prepared by:
Jennifer DeMartino, DeMartino Mapping Services
for Garth Alling, Sierra Ecotone Solutions

Aerial Photography:
ArcGIS Online World Imagery Map Service,
Digital Globe sourced 12-3-2019.

SIERRA ECOTONE SOLUTIONS
DEMARTINO MAPPING SERVICES

MapID	Waters Type	Cowardin Code	Description	Acres	Length (ft)
Potential Non-Wetland Waters					
W1	A5	R4SBA	Riverine, intermittent, streambed, temporarily flooded	0.116	1269
W2	A5	R4SBA	Riverine, intermittent, streambed, temporarily flooded	0.011	117
W3	A5	R4SBA	Riverine, intermittent, streambed, temporarily flooded	0.039	430
W4	A5	R4SBA	Riverine, intermittent, streambed, temporarily flooded	0.033	363
TOTAL				**0.199**	**2179**
Potential Wetlands					
Eagle Creek	A6BOHWM	PSSA	Palustrine, scrub-shrub, temporaily flooded	0.526	
Basin 1	A6BOHWM	PSSA	Palustrine, scrub-shrub, temporaily flooded	0.638	
Basin 2	A6BOHWM	PSSA	Palustrine, scrub-shrub, temporaily flooded	1.024	
Basin 3	A6BOHWM	PSSA	Palustrine, scrub-shrub, temporaily flooded	1.55	
TOTAL				**3.738**	
	Total Potential Non-Wetland Waters			0.199	2179
	Total Potential Wetland			3.738	
	Total Potential Waters of U.S.			**3.937**	

2.4 VEGETATION AND LAND USE

The Project area is heavily developed and occupied by the RMC, the SSH, and associated parking lots and roads. Landscaping is present throughout the facilities and there are pedestrian pathways composed of compacted decomposed granite. The vegetation communities present in the study area include the riparian habitat in Eagle Creek, the wetlands in the detention basins, and upland sagebrush. Descriptions of the habitat conditions and vegetative communities are provided in this section based on field surveys conducted in 2019.

Riparian

Vegetation within the existing Eagle Creek channel is a dense thicket of willows (*Salix sp.)* 8 to 12 feet tall, with several emergent cottonwoods (*Populus sp.).* The riparian vegetative community is classified as Sandbar willow - Arroyo willow thicket (CNPS 2019). Sandbar willow *(Salix exigua)* and Arroyo willow *(S. lasiolepis)* are co-dominant in the riparian scrub that occupies the channel of Eagle Creek. Emergent trees include Fremont's cottonwood *(Populus fremontii),* and black cottonwood (*P. trichocarpa*). Palmer's penstemon (*Penstemon palmerii)* is a conspicuous forb, especially along the periphery of the willow thickets. Various hydrophytic plants are present near the channel margins including seep monkeyflower (*Erythranthe guttata*), snouted monkey flower (*Mimetanthe pilosa*) and marsh speedwell (*Veronica scutella*). Mesic graminoids are very sparse along the channel and include only a few rush (*Juncus* sp.) and sedge (*Carex* sp.). Non-native species like red-stem filaree (*Erodium cicutarium*), pineapple weed (*Matracaria discoidea*), and tansy mustard (*Descurania incisa*) are prevalent slightly upslope of the channel. Other native species observed include Virginia strawberry (*Fragaria virginiana*) and mugwort (*Artemisia douglasiana*).

Wetland

The wetland vegetation within the three detention basins includes emergent aquatic vegetation with willow scrub (*S. exigua and S. lasiolepis*) and some cottonwoods (*Populus sp.)*. Prevalent obligate wetland species in Basin #1 include common spikerush (*Eleocharis macrostachya*) and bulrush (*Schoenoplectus sp.).* The lowest detention basin (#3) is the largest and also supports willow and cotton wood. Dominant species in the herb stratum include non-native white sweetclover (*Melilotus albus*) and rabbitsfoot grass (*Polypogon monspeliensis*) along with typical wetland species like Sierra rush (Juncus nevadensis), common toad rush (*Juncus bufonius*), and cinquefoil (*Drymocaulus sp.).* The vegetation includes obligate wetland species like marsh speedwell (*Veronica scutellata*).

Upland

Outside of the detention basins and channel of Eagle Creek, the upland vegetation is dominated by big sagebrush (*Artemesia tridentata*), rabbitbrush (*Ericameria nauseousus*), and four-wing saltbush (*Atriplex canescens*). Weedy species like cheatgrass (*Bromus tectorum*) and tansy mustards (*Descurainia sp.)* are distributed among the shrubs and in some dense patches along with natives like the sub-shrub littleleaf horsebrush (*Tetradymia glabrata*) and naked buckwheat (*Eriogonum nudum*).

2.5 SOILS

The soil map is provided in Figure 5. As shown in that map, the Project area is located on an alluvial fan derived from the granitic and mixed rock. Soils in the study area are mapped as Surprise coarse sandy loam, on 2-4 percent slopes (58) or 4-8 percent slopes (59) (NRCS 2019). Surprise coarse sandy loam has moderately rapid permeability and slow runoff. Surprise soils are rarely flooded. There are some stony surface layers within the study area and possibly some hard pan at a depth of 35 inches (JBR 2003).

2.6 CULTURAL RESOURCES

The Corps has completed the required Section 106 consultation with the Nevada State Historic Preservation Officer and affected Washoe Tribe of Nevada and California Tribal Historic Preservation Officer The Corps made a determination of No Adverse Affect to Historic Properties and the State Historic Preservation Office concurred in a letter dated June 9, 2020.

3.0 OBJECTIVES

This section describes the objectives of the proposed compensatory mitigation including the amount and types of the proposed impacts, the source and method of the proposed compensation, and a discussion of the manner in which the resource function of the compensatory mitigation addresses the needs of the Eagle Creek riparian system present at the Project site and watershed needs.

3.1 BASELINE INFORMATION: AMOUNT AND TYPE OF PROPOSED IMPACTS

A majority of the components of the connector building walkway Project would be located in highly developed upland areas around the RMC and SSH. However, a portion of the concrete abutments for the on-grade connector building slab would encroach below the OHWM of Eagle Creek and channel modifications for flood control are necessary to contain a projected 500-year storm event after the installation of the connector walkway and prevent the existing levee on the south side of the creek from being over-topped. Proposed flood protection measures within the channel of Eagle Creek would include vegetation removal, grading, and the removal and re-installation of rip-rap, channel bedding, and geotextile materials.

The design requires vegetation to be removed/maintained along with the proposed grading work to improve the channel conveyance and provide adequate freeboard for the existing levee. Existing vegetation within the majority of Eagle Creek consists of highly-overgrown and unmaintained brush and trees, which has caused issues meeting FEMA levee freeboard requirements and significantly impacted the conveyance capacity of the channel/creek. Without the proposed improvements the channel/creek and the levee would not function as intended resulting in a higher risk of failure in a flood event. Following construction of the improvements, CTH would be required to continually maintain the brush, trees and debris buildup, so as to maintain the design flood conveyance.

The potential jurisdictional features impacted by these cut and fill modifications include the entire area of the delineated Eagle Creek riparian wetland (0.526 acres) and 1,182 feet of the delineated intermittent channel (channel width is4 feet, for a total impacted area of 0.108 acres). **Table 3-1** describes the impact sites and **Figure 4** shows the proposed Project impact site locations. Within these impact sites, a total volume of 1,440 cubic yards (CY) of concrete fill for the abutment wall on the south side of the creek, 134 CY of cut soil fill, and 3237 CY of rip-rap are proposed for discharge below the ordinary high water mark (OHWM) of Eagle Creek.

Table 3-1: Connector Project Aquatic Resources Impact Site Description

Site No.	Habitat Types	Vegetation Communities	Cowardin	HGM	Hydrology	Activity	Permanent Loss	Lin. Ft
Eagle Creek riparian wetland	Riparian emergent scrub-shrub	Arroyo willow series	PSSA	Palustrine	temporarily flooded	Cut, fill, rip-rap and concrete	0.526	N/A
W 1 Eagle Creek streambed	Riparian scrub	Arroyo willow series	R4SBA	Riverine	intermittent	Cut, fill, rip-rap and concrete	0.108	1,108

CARSON TAHOE HEALTHCARE
SIERRA SURGERY
HOSPITAL CONNECTOR

Figure 4.
Proposed Project Impact and Mitigation Site Locations

LEGEND

- Project Boundary
- Drainage
- Culvert
- Ordinary High Water Mark (OHWM)

Jurisdictional Features Not Impacted by Cut or Fill

- Intermittent Other Waters
- Riparian Emergent Wetland

Jurisdictional Features Impacted by Cut or Fill (acres of impact)

- W1 - Intermittent Other Waters (0.108 acres)

Eagle Creek Riparian Emergent Wetland (0.526 acres)

- Impacted by Cut
- Impacted by Fill

Other Impact Areas

- Rip-Rap
- Concrete Wall

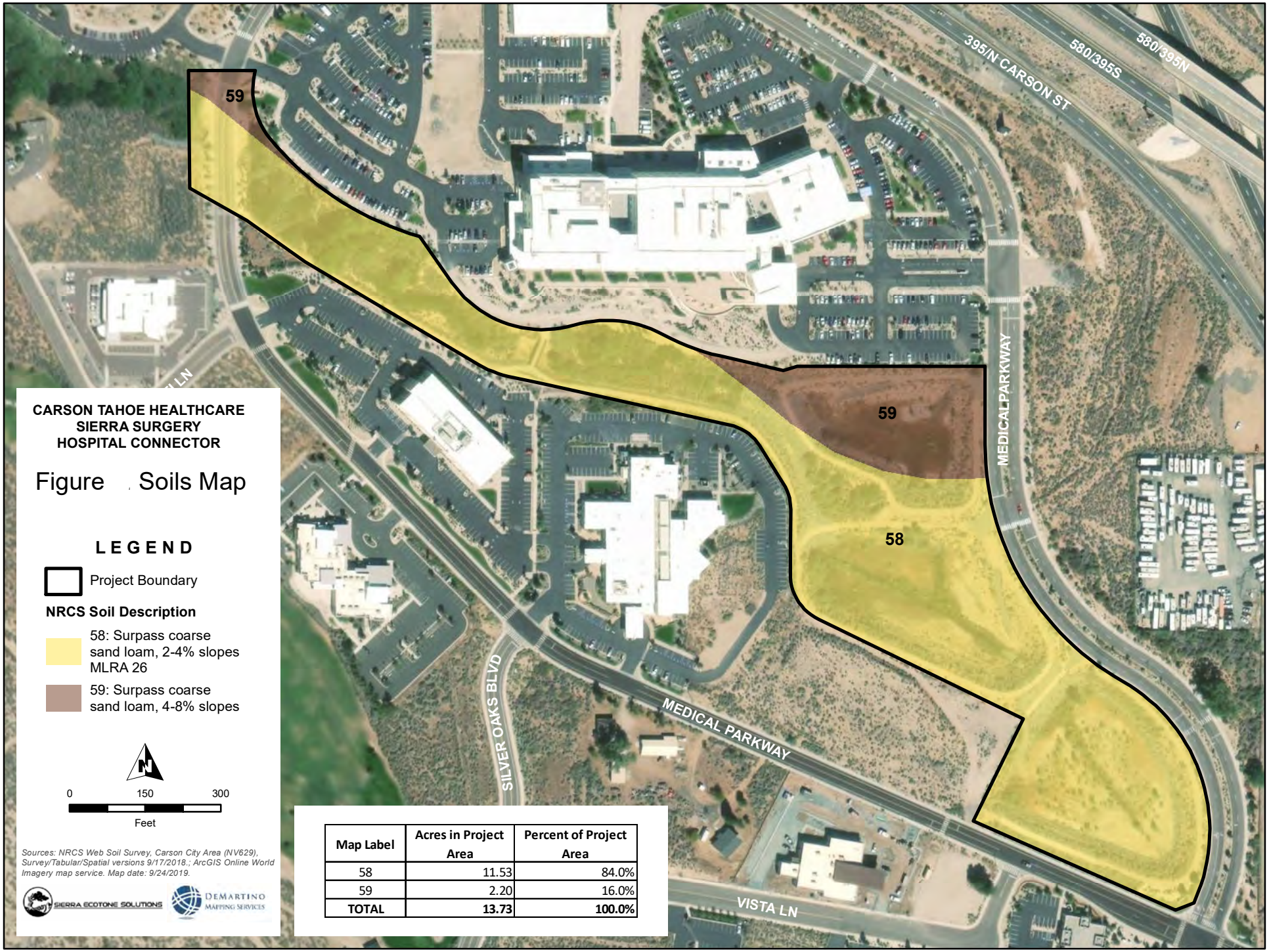
Mitigation Areas

- Mitigation Area 1 (0.624 acres)
- Mitigation Area 2 (1.3 acres)

0 100 200
Feet

Sources: Lumos & Associates; ArcGIS Online World Imagery Map Service. Map date: March 6, 2020.

SIERRA ECOTONE SOLUTIONS
DEMARTINO MAPPING SERVICES



CARSON TAHOE HEALTHCARE
SIERRA SURGERY
HOSPITAL CONNECTOR

Figure . Soils Map

LEGEND

Project Boundary

NRCS Soil Description

58: Surpass coarse sand loam, 2-4% slopes MLRA 26

59: Surpass coarse sand loam, 4-8% slopes

0 150 300

Feet

Sources: NRCS Web Soil Survey, Carson City Area (NV629), Survey/Tabular/Spatial versions 9/17/2018.; ArcGIS Online World Imagery map service. Map date: 9/24/2019.

SIERRA ECOTONE SOLUTIONS

DEMARTINO MAPPING SERVICES

Map Label	Acres in Project Area	Percent of Project Area
58	11.53	84.0%
59	2.20	16.0%
TOTAL	**13.73**	**100.0%**

3.2 BASELINE INFORMATION: AMOUNT AND TYPE OF PROPOSED MITIGATION

3.2.1 2003 Non-Compliance Resolution

The 2003 Department of the Army permit (#200325013) Special Condition 6 authorized permanent fill of the lowest 1,530 linear feet of the Eagle Creek channel. Mitigation of this impact required creation of 1,590 feet of channel within newly created detention basins 2 and 3. After completion of the RMC and 3 detention basins, CTH used the mitigation method of establishment (ES) to create three sections of constructed channel (W2-W4) within Basin 2 and 3 (see Figure 4 above). Construction of this mitigation was completed in 2008.

The preliminary jurisdictional delineation submitted in September 2019 determined that 910 linear feet of channel has been constructed. As shown in Figure 3 in Section 2.3, channels W2, W3, and W4 were delineated as potential non-wetland Waters with intermittent streambed channel lengths of 117, 430, and 363 linear feet, respectively, with a width of 4 feet Therefore, a total of 680 linear feet of channel were not constructed according to Special Condition 6 of the 2003 permit.

Prior to construction, habitat in the locations of the detention basins were described as sagebrush scrub in the pre-construction wetland delineation report (JBR 2003). Since their competition in 2008, the detention basins and constructed channels have become jurisdictional features as described and outlined in the Aquatic Resources Delineation. Photos 1-3 show site conditions in the basins in July, 2019. Basins 1-3 now support emergent wetland aquatic vegetation and riparian willow scrub comprised of shining willow (*Salix exigua),* arroyo willow (*S. lasiolepis*) and some cottonwoods (*Populus sp.)*.

Photo 1. Site conditions in created detention basin #2 in July, 2019.

Photo 2. Site conditions in created detention basin #3 in July, 2019.

Photo 3. Site conditions in created detention basin #1 in July, 2019.

3.2.2 Determination Of Credits

In lieu of construction of 680 feet of linear feet of new channel for the 2003 compliance, CTH proposes to preserve the wetland area that has been created as a result of Basin 1 construction. Basin 1 is directly hydrologically connected to Eagle Creek via a lateral weir that was designed to

convey 5-year flood flows. Photo 3 above shows the vegetation that has been established in Basin 1 and how the habitat has been converted from upland sage-scrub to riparian emergent wetland habitat with established stands of willow *(Salix* sp.) and cottonwood (*Populus* sp.).

Proposed Mitigation Area 1 provides 0.624 acres of existing riparian emergent wetland habitat (Table 3-1) that would be preserved through deed restriction. Protection of this area would offset the need for construction of an additional 680 linear feet of channel required by 2003 permit Special Condition 6 if the requirement were converted from a linear to an area basis. CTH proposes an area-based compensatory mitigation ratio based on a 20-foot distance from the centerline of the un-constructed channel (20 feet each side) that would result in a total required mitigation area of 27,200 square feet (40 feet x 680 linear feet).

Table 3-2: 2003 Permit Proposed Mitigation Site Description

Site No.	Pre-Construction Site Conditions	Post-Construction Site Conditions							
	Habitat Types	**Habitat Types**	**Vegetation**	**Hydrology**	**Mitigation Method**	***Acre***	***Lin. Ft***	**Cowardin**	**HGM**
Mitigation Area 1	Sage scrub	Riparian scrub	Arroyo willow series	intermittent	ES	0.624	NA	PSSA	Palustrine

Protection of 27,200 sq. ft. of existing wetland area (0.624 acres) in lieu of construction of 680 linear feet of new channel construction would result in no net loss of aquatic resource surface area if the habitat types are considered equivalent and mitigated at a 1:1 ratio. Through the ongoing and continued protection of proposed Mitigation Area 1 via the site protection measures described in Section 5.1 (Carson City Department of Public Works deed restriction), the wetland area will continue to function as a riparian zone and to mature and become increasingly suitable habitat for wildlife species in the future.

CTH, together with CCDPW, would continue to manage the Basin 1 for flood control and protection of the wetlands, as described in Section 5 of this Mitigation Plan. There would not be any temporal loss in function of the existing riparian area in Basin 1 as a result of the proposed preservation.

3.2.3 Proposed Mitigation for the Connector Project and Offset of Impacts

Impacts to Eagle Creek resulting from the proposed connector Project will be mitigated onsite. The overall impacts to the Riparian Emergent Wetland (0.526 acres) and Intermittent Other Waters (0.108 acres) located in Eagle Creek (identified as W1 and Eagle Creek Wetland on Figure 3) total 27,643 sq. ft. (0.634 acres). These impacts would be due to grading of the channel, with cut and fill of dirt (134 CY) and placement of rip-rap (3,237 CY) and concrete footings (1,440 CY). CTH proposes a 2:1 compensatory mitigation ratio (0.634 x 2 = 1.268 acres) and proposes to protect the 1.3 acres of existing riparian habitat and streambed channel identified as Mitigation Area #2 on Figure 3 and described in Table 3-3 to offset impacts from the proposed connector Project.

Table 3-3 : Connector Project Proposed Mitigation Site Description									
Site No.	**Pre-Construction Site Conditions**	**Post-Construction Site Conditions**							
	Habitat Types	**Habitat Types**	**Vegetation**	**Hydrology**	**Mitigation Method**	***Acres***	***Lin. Ft***	**Cowardin**	**HGM**
Mitigation Area 2	Sage scrub	Riparian scrub	Arroyo willow series	intermittent	ES	1.270	NA	R4SBA	Palustrine

Eagle Creek within the Project Area (identified as W1 and Eagle Creek Wetland (ECW) on Figure 4) only runs intermittently during large storm events during the winter and spring runoff. This intermittent flow regime only allows for surface water to be present for a short duration of time.

3.2.4 Site Selection

A watershed approach was used for site selection. The stream system as observed for Eagle Creek is typical in the watershed, however the wetlands to be preserved are special aquatic sites that are infrequently found in the watershed. Historically wetland areas such as the ones to be preserved would have been more prevalent prior to urban development and ranching activities, and therefore the need to protect the wetland areas has increased.

Biological functionality within the Eagle Creek riparian habitat is moderate due to low levels of species richness and biodiversity. The existing site is dominated by willow (Salix sp.) and emergent cottonwood (*Populus* sp.) trees. The levee on the south side of the creek and development and landscaping associated with the RMC on the north side of the creek narrowly constrains the habitat in close proximity to the channel and has created a relative monoculture that blocks forb and other shrub species growth opportunities. Vertebrate species observed in the area include avian species (e.g. magpie, Cassin's finch, American robin, spotted towhee, Brewer's blackbird, northern flicker), reptiles (western fence lizard) and mammal spoor (mule deer and Leporidae scat and tracks). None of the species noted above are wetland or riparian habitat dependent and are considered upland species.

Organic matter in the area is mainly evident in the large mass of dead *Salix* branches that are prevalent across the project site in high density. This mass of down woody debris is matted above the surface of the creek that contains mats of fallen leaves. Due to the xeric conditions that the site exhibits for the majority of the year, decomposition is relatively slow onsite and therefore does not allow for increased soil texture and moisture to be present. Therefore, carbon and nitrogen cycling as well as phosphorus cycling in the Eagle Creek soils is likely relatively low onsite.

The proposed mitigation site for the onsite impacts will result in a gain in wetland functionality. Hydrologically, Mitigation Area 2 is located within Basin 3 which is at the lowest portion of the

project area. Water appears to be present in this location for longer durations as compared to the Eagle Creek portion that is proposed to be impacted. This longer presence of surface water and saturated soils has resulted in increased suitability of wetland plant growth opportunity. The elevated groundwater levels here and increased surface water provides increased water storage and allows for the mitigation site to support wetland vegetation as described in the delineation report. Being that the mitigation area is within a flood control basin, the area is not subject to catastrophic damage from eroding banks and scour that could potentially occur during a large flood event.

Biologically the functional gain in Mitigation Area 2 will occur through overall plant cover, species richness, and increased abundance. The presence of herbs (e.g. *Eleocharis macrostachya, Veronica scutellate* and others) grasses (*Polypogon monspeliensis, etc.*) together with shrub (*Salix lemmonii*) and trees (*Populus fremontii*) complete the strata with a relative high degree of absolute total cover (87%) as noted on the wetland delineation forms. The variety of vegetation structure in Mitigation Area 2 will likely become increasingly favorable to riparian avian species (orange-crowned warbler, (*Vermivora celata*), yellow warbler (*Dendroica petechia*), common yellowthroat (*Ceothlpis trichas*) and Empids). Mitigation Area 2 will only become increasingly suitable for vertebrate species as the site continues to mature.

Mitigation Area 2 has increased functionality in the form of biogeochemistry as compared to Eagle Creek Wetland as noted above due to the hydrological and biological existing and future conditions discussed above. Nutrient cycling and storage will occur more readily onsite due to the persistence of water onsite together with the ability of the site to increase in readily decomposable organic matter from the presence of lower vegetation strata. Overall the wetland present and that will continue to mature over time will result in higher functionality as compared to the existing wetland that is to be disturbed in Eagle Creek.

Mitigation Area 2 is in close proximity (~1,000 feet) to the proposed impact area and is within the same watershed and is adjacent to a lower portion of Eagle Creek. The proposed 2:1 compensatory mitigation ratio would result in a net increase in aquatic resource surface area.

In an effort to decrease the likelihood of future excess silt deposition within the Mitigation Areas 1 and 2, Carson Tahoe Hospital has entered into an agreement with Carson City Public Works to provide $24,650 to implement erosion control projects in the watershed above the proposed project site. Erosion control projects have been identified by CCPW that will decrease erosion and stabilize upland areas that currently contribute sediment and degrade the water quality of Eagle Creek. These measures to limit erosion at the source will eventually decrease the need for future dredging in the project area flood control basins.

4.0 MITIGATION WORK PLAN

A mitigation work plan is intended to provide the practical "how-to" details necessary to take the compensatory mitigation project from a design on paper to "in-the-ground" implementation. As the proposed mitigation plan is to preserve areas that have already been constructed the following actions are considered the work plan for this proposal:

- The Deed Restriction outlining the protections for the wetland areas (as noted in Section 5.1 below) shall be recorded in Carson City Recorder's office along with the original 2003 individual permit and the Letter of Permissions SPK-2003-25013.
- On-site construction fencing shall be installed to identify and protect the wetland areas during construction of the Project as described in the special conditions of the 2020 Letter of Permissions SPK-2003-25013.
- Post-construction signing and fencing as described in the special conditions of the 2020 Letter of Permissions SPK-2003-25013.
- Carson Tahoe Hospital shall provide $24,650 to Carson City Public Works to implement erosion control projects in the watershed above the proposed project site in accordance with the agreement between the two parties.

5.0 LONG TERM MANAGEMENT AND FUNDING

This section includes a description of the site protection instrument and financial assurances. As already described, the proposed mitigation has been completed and long-term management has been ongoing since the RMC was completed in 2003. Long-term adaptive management includes maintenance and inspection schedules described in the sections below.

5.1 DESCRIPTION OF THE SITE PROTECTION INSTRUMENT

CTH proposes to utilize a deed restriction to protect the wetland resources within proposed Mitigation Area 1/Basin 1 and Mitigation Area 2/Basin 3 from future development. The deed restriction would require approval by the Carson City Board of Supervisors and the Corps. Proposed Mitigation Area 1 is offered as compensatory mitigation to bring the 2003 permit into compliance. CTH proposes to retain the right to conduct maintenance dredging within Mitigation Area 1/Basin 1 as a future management option to restore the area to its current condition following storm events and understands that additional authorization from the Corps will be required to perform this work.. Mitigation Area 2/Basin 3 is proposed to offset impacts from the proposed connector project under the LOP and would be fully protected with no maintenance dredging.

5.2 MAINTENANCE / INSPECTION SCHEDULE

The three flood control basins within the project area (Basins 1, 2 and 3), which includes Mitigation Area 1 and 2, are inspected and managed by Carson City Public Works (CCPW). These inspections occur on an annual basis and more frequently after large storm events and include inspections of culvert function and bank stability. Invasive plant species are also monitored.

Special Condition 16 of the 2003 permit - authorized Carson Tahoe Hospital and CCPW to perform "Annual maintenance dredging in detention basins 1-3 of approximately 100 cubic yards per year per basin or up to 6,500 cubic yards after a major storm event to maintain basin capacities. Dredging in Basins 2 and 3 are limited to areas at least 30 feet from the thalweg of the new channel." Dredging as outlined above has not been performed in any of the basins since their completion in 2008. As noted in Section 5.1 above, the proposed Mitigation Area 2 (Basin 3) would not be subject to dredging in the future as the site would be deed restricted in perpetuity to protect the wetlands on site. Maintenance dredging within Basin 2 is proposed to continue under the existing permit. Mitigation Area 1/Basin 1 could be maintenance dredged, under the proposed deed restriction, however a separate authorization for these activities will be required from the Corps prior to any of this type of work. Further, this work will be limited to removing storm-associated, accumulated sediments in a manner that will not impact the existing grade in order to protect the hydric soils present within the site.

5.3 PERFORMANCE STANDARDS AND MONITORING REQUIREMENTS

CCPW conducts annual monitoring of the 3 detention basins. Ongoing monitoring and non-chemical control of invasive plant species would continue as necessary through this program. In addition, ongoing monitoring of the detention basins and Eagle Creek flood control infrastructure would continue to occur on an annual basis and after large flood events to

ensure that the banks and culverts have sufficient function and integrity for continued operation.

Performance standards for this mitigation plan include:

- Providing the Corps a record stamped copy of the deed restriction prior to impacting any aquatic resources
- Providing the Corps proof of payment to the City for the upstream watershed work as described in Sections 3.2.4 and 4 of this mitigation plan

5.4 ADAPTIVE MANAGEMENT PLAN

CTH will seek separate Corps approval for any maintenance dredging/sediment removal activities in Mitigation Area 1/Basin 1. Basin 2 will subject to the 2003 IP limits on maintenance dredging/sediment removal activities. No maintenance dredging/sediment removal activities will be allowed in Mitigation Area 2/Basin 3. Any future work below the ordinary high water mark of Eagle Creek for flood maintenance will require separate authorization from the Corps.

5.5 FINANCIAL ASSURANCES

No additional funding will be required outside of existing flood control infrastructure monitoring and maintenance that is ongoing within Mitigation Area 1 and 2.

6.0 REFERENCES

Cowardin, L.M., V. Carter V., F.C. Golet, E.T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Fish and Wildlife Service Report No. FWS/OBS/-79/31.Washington, D.C.

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Western Regional Climate Center (WRCC). 2019. Climate Summary Carson City, Nevada (261485). Accessed April 15 at https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?nv1485

COMPLIANCE CERTIFICATION

Permit File Name: Carson Tahoe Hospital

Permit File Number: SPK-2003-25013

Permittee: Michelle Joy
Carson Tahoe Healthcare
1600 Medical Parkway
Carson City, Nevada 89703

County: Carson City

Date of Permit (Proffered): July 27, 2020

Within 45 days after completion of the activity authorized by this permit, sign this certification and return it to the following address:

U.S. Army Corps of Engineers
Sacramento District
Reno Regulatory Office
300 Booth Street, Room 3050
Reno, Nevada 89509
DLL-CESPK-RD-Compliance@usace.army.mil

Please note that your permitted activity is subject to a compliance inspection by a U.S. Army Corps of Engineers representative. If you fail to comply with the terms and conditions the permit may be suspended, modified, or revoked. If you have any questions about this certification, please contact the U.S. Army Corps of Engineers.

* * * * * * * * *

I hereby certify that the work authorized by the above-referenced permit, including all the required mitigation, was completed in accordance with the terms and conditions of the permit.

_____ _____
Signature of Permittee Date

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL		
Applicant: Carson Tahoe Healthcare, Attn: Ms. Michelle Joy	File No.: SPK-2003-25013	Date: July 27, 2020
Attached is:		See Section below
X	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
	PERMIT DENIAL	C
	APPROVED JURISDICTIONAL DETERMINATION	D
	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at *http://www.usace.army.mil/cecw/pages/reg_materials.aspx* or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.

- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.

- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer (address on reverse). This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer (address on reverse). This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.

- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer (address on reverse). This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:

Jennifer C. Thomason
Senior Project Manager
Nevada Utah Section
U.S. Army Corps of Engineers
Reno Regulatory Office
300 Booth Street, Room 3050
Reno, Nevada 89509
Phone: (775) 784-5304, FAX 775-784-5306
Email: Jennifer.C.Thomason@usace.army.mil

If you only have questions regarding the appeal process you may also contact:

Thomas J. Cavanaugh
Administrative Appeal Review Officer
U.S. Army Corps of Engineers
South Pacific Division
1455 Market Street, 2052B
San Francisco, California 94103-1399
Phone: 415-503-6574, FAX 415-503-6646)
Email: Thomas.J.Cavanaugh@usace.army.mil

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

	Date:	Telephone number:
_____ Signature of appellant or agent.		

SPD version revised December17, 2010

DEPARTMENT OF THE ARMY PERMIT

Permittee: Carson-Tahoe Hospital

Permit Number: 200325013

Issuing Office: US Army Corps of Engineers, Sacramento District

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description: Approximately 1530 feet of Eagle Creek will be filled and reconstructed within detention basins 2 and 3 so the new length will be 1590 feet. Eagle Creek flows that exceed a 5-year event will be diverted from the creek into detention basin 1 via a riprap-lined spillway feature; smaller flows will flow through detention basins 2 and 3 in a constructed, meandering channel that is approximately 2 feet wide, 1 foot deep with 1 vertical to 3 horizontal side slopes. Water from detention basin 1 will be discharged into detention basins 2 via a riprap lined channel. The connection between basins 2 and 3 will be via a 2' X 4' box culvert. The connection outlet from basin 3 will be via 36" CMP that will directly connect to Nevada Department of Transportation's (NDOT) 48" metal pipe drain system. A new trenchline crossing across the creek will accommodate sewer, water, and common utility conduits. This utility crossing will be placed beneath a bank-to-bank veciular bridge crossing that does not involve a discharge into Eagle Creek. You may complete annual maintenance dredging in detention basins 1, 2, and 3 and dredge approximately 100 cubic yards per year per basin or up to 6,500, cubic yards after a major storm event to maintain detention basins' capacities.

The enclosed drawings show project location and additional project details.

Purpose: The purpose of the project is to construct a regional medical facility with its corollary supporting structures and to create stormwater detention basins to provide flood storage capacity.

Project Location: In northwest Carson City in Section 31, Township 16 North, Range 20 East, and Section 6. Township 15 North, range 20 East, Carson City County, Nevada in the Carson City USGS Topographic Quadrangle.

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on November 15, 2006. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.

2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

Special Conditions:

1. Fill materials and materials used to construct the creek crossing and detention basins shall be free of toxic substances which are in concentrations that are harmful to aquatic (and other) life.

2. Safeguards to prevent stockpiled dredged (or excavated) material at upland sites from entering Eagle Creeks adjacent wetland shall be employed.

3. Trench lines through Eagle Creek shall contain impervious plugs or "collars" around the pipeline or utility line at the creek boundaries. The purpose of the impervious plugs is to prevent water piping along the trench line. Thus, plugs must be sufficiently large to prevent artificial water loss from the Eagle Creek from piping action.

4. Land clearing and other surface disturbances associated with this permitted activity must be outside the avian breeding season (typically 15 March to 31 July) to avoid destruction of active bird nests (nests with eggs or fledglings) that breed in the area. You may have a qualified biologist shall survey the area prior to construction. If the biologist locates active nests at or immediately adjacent to the project site, or if other evidence of nesting is observed, a protective buffer shall be marked with flagging so the nesting area will be avoided to prevent the destruction or disturbance to nests until they are no longer active.

5. All bridge and culverted tributary crossings shall allow unimpeded passage of a 100-year storm event.

6. This permit authorizes filling 1530 feet of Eagle Creek; you shall mitigate for this impact by creating a new 1590-foot channel in detention basins 2 and 3 (see Sheet 2 of 5)

7. Mitigation means creating a 1590-foot channel similar to that shown on Sheet 2 of 5 and planting riparian vegetation. This new channel will have a bottom width of 2 feet and depth within detention basins 2 and 3 of approximately 12 inches with side slopes of approximately 1 vertical to 3 horizontal. The channel substrate shall be small gravel material at least 1 inch deep. The mitigation goal is to have a functioning riparian zone around a newly created Eagle Creek segment.

8. To mitigate for riparian losses, you shall plant vegetation within 20 feet of the new channel. Trees and shrubs shall be either: cottonwood, *Populus trichocarpa* and *fremontii*, aspen, *Populus tremuloides*, chokecherry, *Prunus virginiana*, willow, *Salix lutea* and *exigua* and *lasiandra* and *lemonii*, red twig dogwood, *Cornus sericea*, and mountain alder, *Alnus incana var. tenuifolia*. Herbacious plants shall include: wiregrass, *Juncus balticus*, Nebraska sedge, *Carex nebracensis*, field sedge, *Carex praegracilis*, cattail, *Typha latifolia* (in the wetter areas), bulrush, *Scirpus americanus* (in the wetter areas), creeping wildrye, *Elymus triticoides*, and Douglas sedge, *Carex douglasii*.

9. The mitigation efforts must be fully implemented by September 2004.

10. You shall monitor the mitigation site for at least five years after completion of mitigation planting to ensure mitigation success. One measure of mitigation success shall be the number of surviving woody plants (and likelihood the woody vegetation will survive based on best professional judgement) at the end of five years. Additionally, the new channel must have stabilized banks and substrate with at least one inch of gravel on the substrate. For trees, shrubs, and saplings, success shall be at least one tree and five shrubs for every 50 feet of new channel. At the end of the third consecutive year of survival, trees or tree saplings must be at least 3 feet tall or at least 0.5 inches in diameter as measured 2 feet off the ground and shrubs must be at least 12 inches tall and no woody vegetation is to rely on supplemental water (from irrigation) to be counted as successful. If necessary, additional plantings or on-site modifications may be needed to attain a successful survival rate and plant density. If mitigation woody plant survival is unsatisfactory, it may be necessary to supplement natural water sources to establish woody vegetation. However, there must be at least three years of viable growth unassisted by supplemental water to be successful. The monitoring term may be longer than five years if success criteria are not met or artificial manipulation is needed to meet criteria.

11. All reasonable efforts must be pursued until September 2009 to control non-native, invasive plant species in detention basins 2 and 3. Reasonable efforts include physically pulling the plant, including the complete root mass; cutting of the flowering parts before seeds are produced; and drying and, if possible, burning plants. Mowing is an ineffective and unprogressive eradication technique.

12. You must control non-native, invasive species in detention basins 2 and 3, until September 2009, below one plant per any square yard area, except for *Lythrum salicaria*, purple loosestrife, *Lepidium latifolium*, tall whitetop, *Tamarix ramosissima*, saltcedar / tamarisk, and *Cirsium arvense*, Canada thistle; there is zero tolerance for these four species.

13. You shall provide at least three mitigation monitoring reports after the first, third and fifth years after mitigation planting, or annually, thereafter, if mitigation is not successful after five years.

14. The mitigation monitoring reports shall include information on mitigation success and actions needed to correct deficiencies; compliance with mitigation goals; photos of the impacted area; photos showing representative areas of the new channel, its dimensions and nature; a map showing photo locations; and species composition and density in the mitigation area. Submit the report and other required documents by October 15 of each year to:

US Army Corps of Engineers
Reno Regulatory Office, Sacramento District
300 Booth Street Rm 2103
Reno NV 89509-1361

15. Unless extended by non-compliance, the term for submitting monitoring reports is at least five years after completion of mitigation planting to ensure these areas revegetate as described. The Reno Regulatory Office, Corps of Engineers, Sacramento District, will determine if the mitigation effort was successful; if further actions are needed to bring the project in compliance; and the need for a monitoring report if the reporting term exceeds five years. Monitoring is no longer required when mitigation is certified by the Corps as successful.

16. You may maintain the storage capacity of detention basin 1, 2, and 3 by dredging up to 100 cubic yards per year or up to 6,500 cubic yards for a one-time storm event. Dredging in detention basins 2 and 3 is limited to those areas at least 30 feet away from the thalweg of the new creek channel.

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:
( ) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).
(X) Section 404 of the Clean Water Act (33 U.S.C. 1344).
( ) Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this authorization.

a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal project.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

a. You fail to comply with the terms and conditions of this permit.

b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).

c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

CEO

(PERMITTEE)

11/24/03

(DATE)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

(b) (6)

for (b) (6) *Acting Chief*
Regulatory Branch
FOR
District Engineer

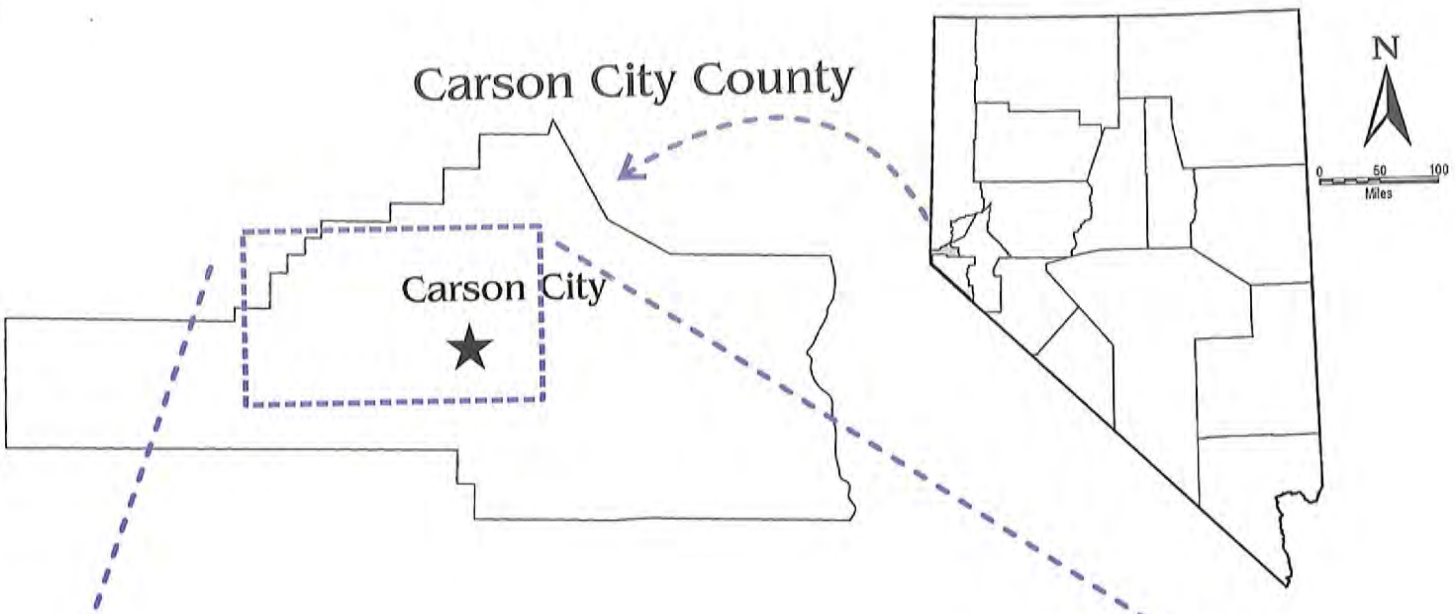
1 Dec 03

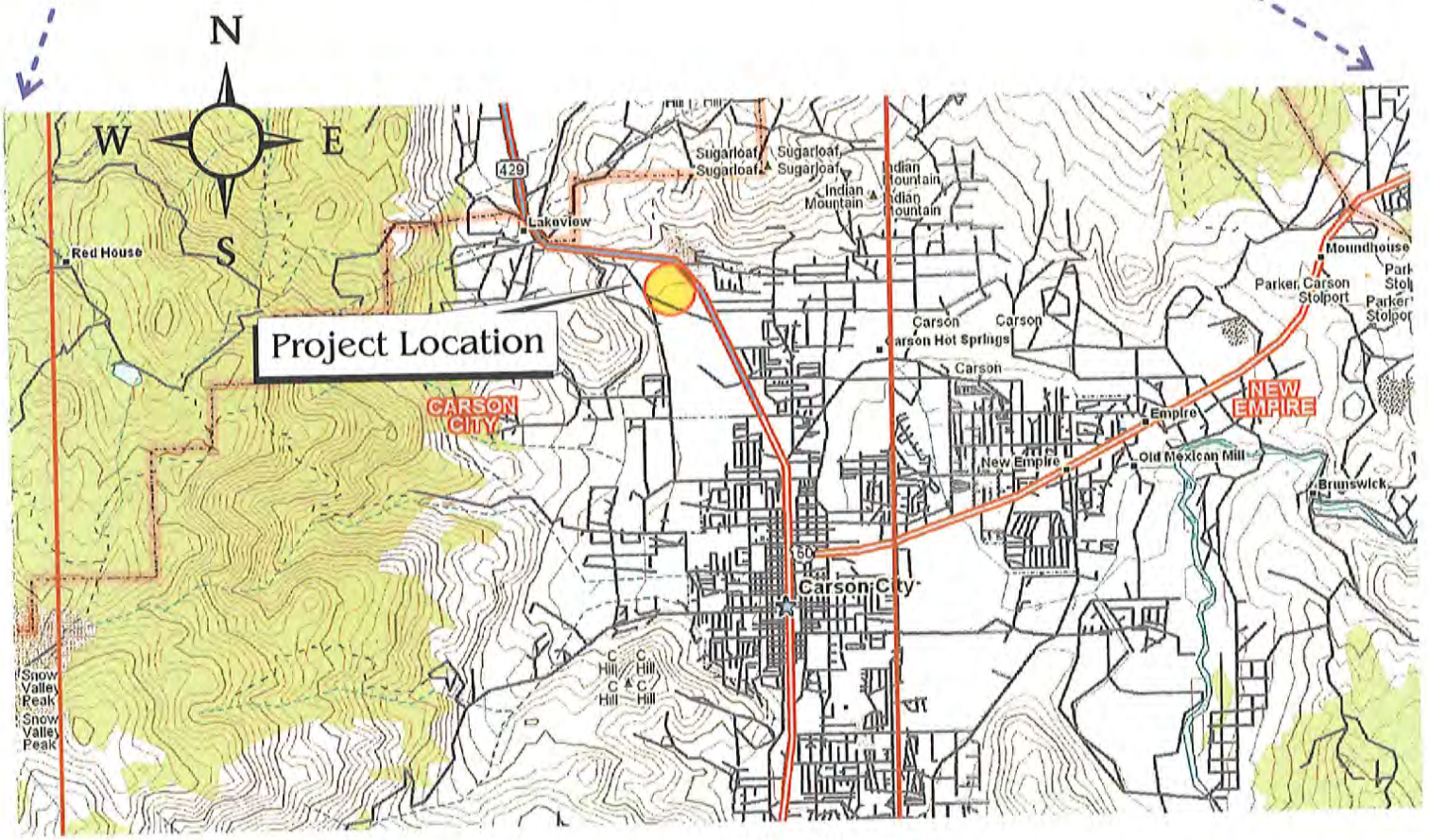
(DATE)

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

(TRANSFEREE)

(DATE)





Based on © Delorme Maps
X-Maps 4.0 with Quadrangle Names

Project Vicinity Maps

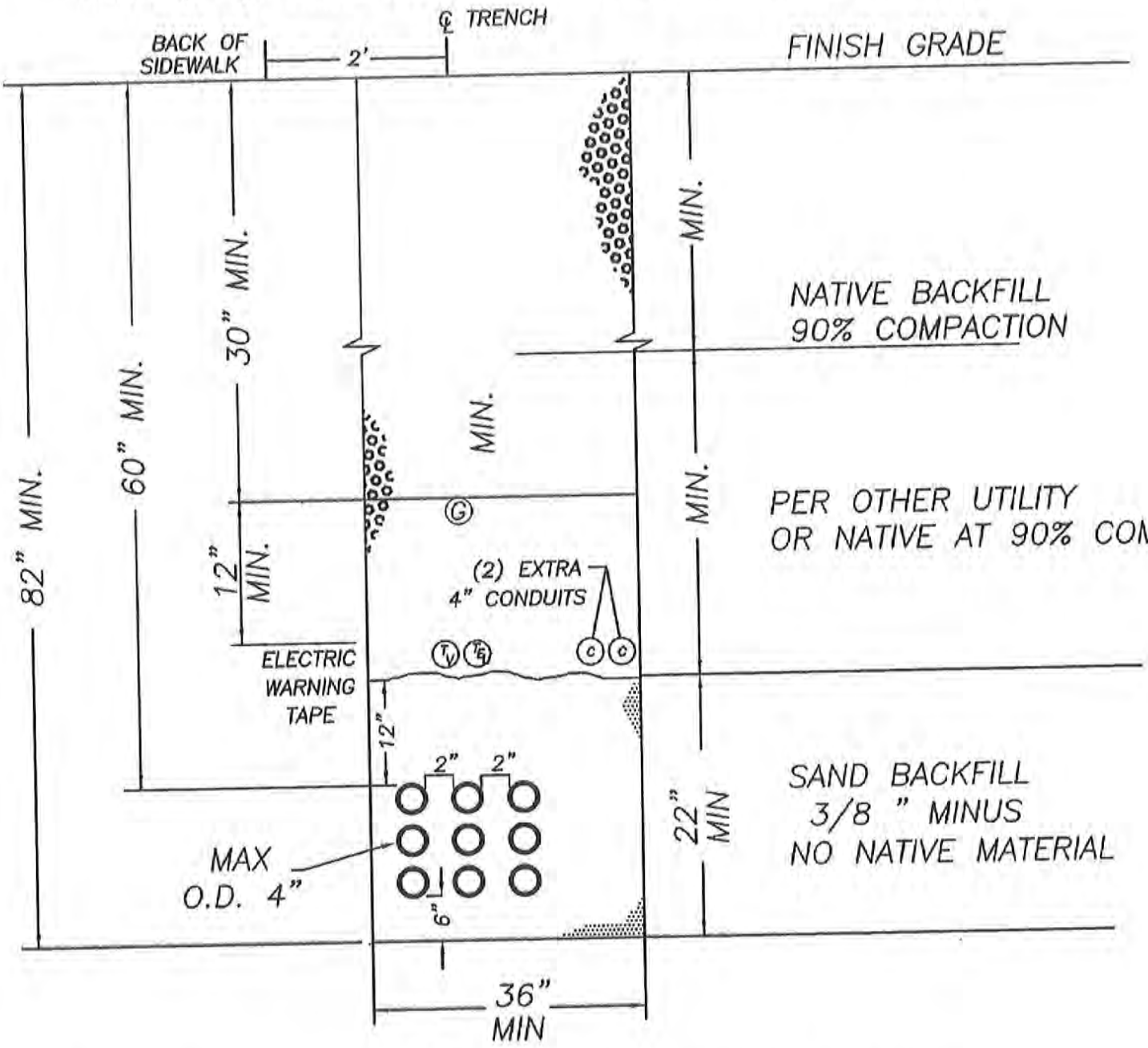
Carson Tahoe Regional Hospital
Eagle Creek
September 2003
Corps Number: 200325013
Sheet 1 of 5

Top View of Project Site
showing impacted creek segment

Carson Tahoe Regional Hospital
Eagle Creek
September 2003
Corps Number: 200325013
Sheet 2 of 5

Top View of Project Site
showing site development plan

Carson Tahoe Regional Hospital
Eagle Creek
September 2003
Corps Number: 200325013
Sheet 3 of 5



PRIMARY AND/OR SECONDARY TRENCH DETAIL

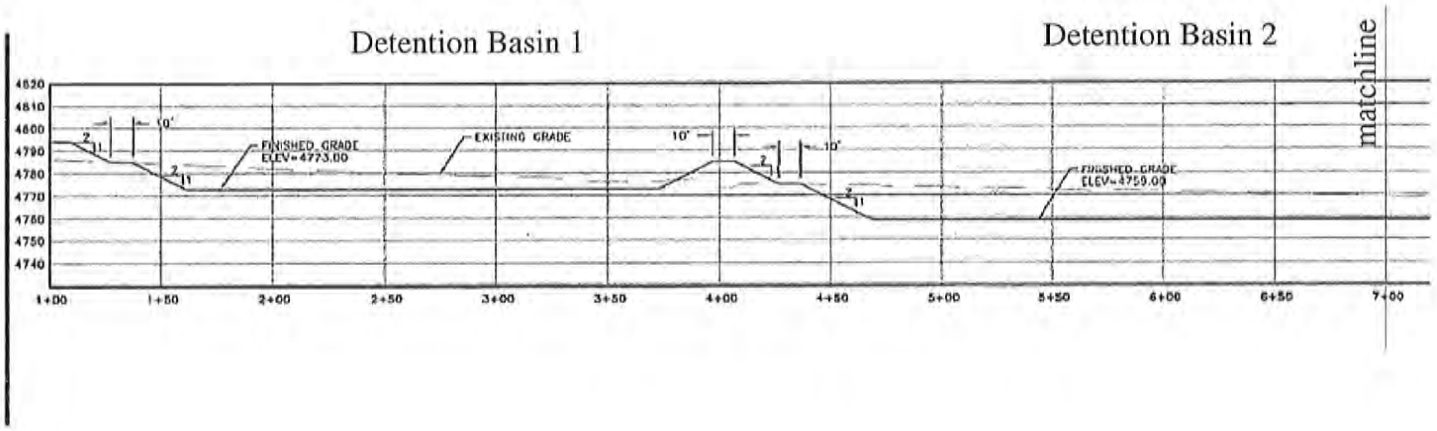
NTS

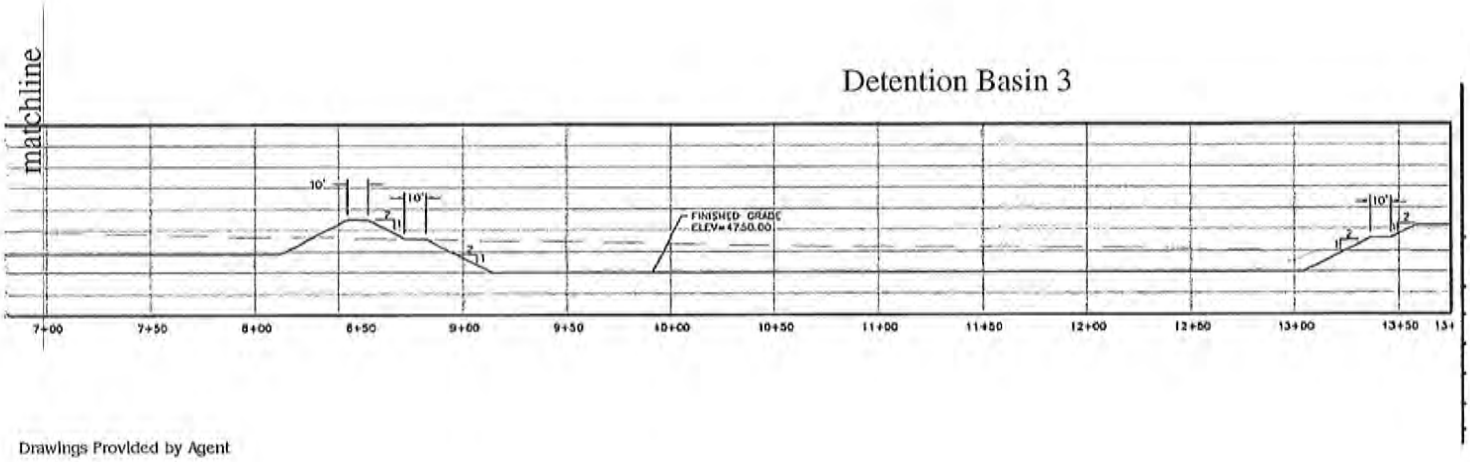
Drawing Provided by Agent

Typical Utility Trench Cross Section

under roadway

Carson Tahoe Regional Hospital
Eagle Creek
September 2003
Corps Number: 200325013
Sheet 4 of 5





Drawings Provided by Agent

Typical Cross Section of Project Site

no scale

Carson Tahoe Regional Hospital
Eagle Creek
September 2003
Corps Number: 200325013
Sheet 5 of 5

DEPARTMENT OF THE ARMY PERMIT EVALUATION AND DECISION DOCUMENT

Applicant: Carson-Tahoe Hospital Corps No: 200325013

This document constitutes the Corps Environmental Assessment, Statement of Findings, and review and compliance determination according to the Section 404(b)(1) guidelines for the proposed work (applicant's preferred alternative) described in the attached public notice.

I. Proposed Project: The location and description of work are described in the attached public notice. Acting on behalf of the applicant, their consultant submitted a "new" permit application that addressed and clarified public interest concerns. The new application was essentially the same, but fewer impacts, as in the original proposal. The revised project decreased the creek impacts from 1490 feet to 1260 feet, with the reconstructed length increased to 1590 feet through detention basins that will act as adjacent wetlands. The lower 270 feet of ditched creek was no longer proposed to be filled (culverted). Subsequently, in an email from (and via telephone conversations with) the consultant, they requested to complete annual maintenance dredging in detention basin 1 for approximately 100 cubic yards per year or up to 6,500, cubic yards after a major storm event to maintain detention basin 1's capacity. A spillway feature will direct creek flows that exceed a 5-year event will direct flows into detention basin 1. Still later, the applicant requested authorization to install an 8-inch conduit across the previously unaffected creek segment; this conduit will be used to implement a vacuum-tube messaging system between facility buildings. On 19 Sep 2003, the applicant, in a response to a Corps email, submitted revised plans. They will supplement basins 2 and 3 with irrigation water to help establish wetland vegetation. They provided updated cross-section drawings of the basins and modified / changed the diversion structure that diverts water into basin 1. Water from basin 1 will directly convey water into basin 2 via a riprap lined channel. They clarified that the connection between basins 2 and 3 will be via a 2' X 4' box culvert. The connection outlet from basin 3 will be via 36" CMP that will directly connect to NDOTs 48" metal pipe drain system. A new crossing across the creek is now proposed; this crossing will accommodate sewer, water, and common utility conduits. On 21 Oct 2003, the agent indicated that they will no longer need the 8" suction tube conduit that would have crossed the creek. Additionally, it was necessary to complete a cultural resources survey for the northern portion of the project area which was not included in the original cultural survey. Basins 2 and 3 are being made slightly larger, therefore the lower 270 feet of ditched creek will be incorporated (and filled) into Basin 3. Therefore the total length of creek impact is 1530 feet.

II. Environmental and Public Interest Factors Considered:

A. Purpose and need: The overall project purpose is to construct a regional medical facility with its corollary supporting structures and to create stormwater detention basins to provide flood storage capacity. There is a need to replace the existing local hospital that is under-capacity and lacks the capability for expansion. There is also a need to provide flood storage detention to prevent flooding in northern Carson City. Eagle Creek is bottlenecked by the

culvert that conveys the creek under Highway 395, downstream to the east and eventually into the Carson River.

B. Alternatives [33 CFR 320.4(b)(4), 40 CFR 230.10]

1. No action. This alternative includes no filling in Eagle Creek. While possible, it is not practical because a primary objective of the proposal is for flood control. It is necessary to build some kind of flood event diversion structure in-channel to direct flows to a flood detention basin.

2. Other project designs (smaller, larger, different, etc.). The proposed project design is the smallest possible to effect the needed work.

3. Other sites available to the applicant: The Corps required the applicant to look within the general urban area for vacant sites that would avoid impacts to aquatic resources. Areas with the least impacts to the least valuable aquatic resources should rate higher relative to site selection. Secondary considerations were afforded to sites that have access to major transportation systems because emergency, doctors, and other vehicles must have speedy and responsive access to a hospital facility. The applicants alternatives analysis demonstrates no other practical sites are available.

4. Other sites not available to the applicant (40 CFR 30.10): The alternatives analysis demonstrates no other practical sites are available.

5. The selected alternative: The selected alternative is the applicant's proposal. If a permit is issued, it will include the following permit conditions:

5.1. Fill materials and materials used to construct the creek crossing and detention basins shall be free of toxic substances which are in concentrations that are harmful to aquatic (and other) life.

5.2. Safeguards to prevent stockpiled dredged (or excavated) material at upland sites from entering Eagle Creek,s adjacent wetland shall be employed.

5.3. Trenchlines through Eagle Creek shall contain impervious plugs or "collars" around the pipeline or utility line at the creek boundaries. The purpose of the impervious plugs is to prevent water piping along the trenchline. Thus, plugs must be sufficiently large to prevent artificial water loss from the Eagle Creek from piping action.

5.4. Land clearing and other surface disturbances associated with this permitted activity must be outside the avian breeding season (typically 15 March to 31 July) to avoid destruction of active bird nests (nests with eggs or fledglings) that breed in the area. You may have a qualified biologist shall survey the area prior to construction. If the biologist locates active nests at or immediately adjacent to the project site, or if other evidence of nesting is observed, a protective buffer shall be marked with flagging so the nesting area will be avoided to prevent the destruction or disturbance to nests until they are no longer active.

5.5. All bridge and culverted tributary crossings shall allow unimpeded passage of a 100-year storm event.

5.6. This permit authorizes filling 1530 feet of Eagle Creek; you shall mitigate for this impact by creating a new 1590-foot channel in detention basins 2 and 3 (see Sheet 2 of 5)

5.7. Mitigation means creating a 1590-foot channel similar to that shown on Sheet 2 of 5 and planting riparian vegetation. This new channel will have a bottom width of 2 feet and depth within detention basins 2 and 3 of approximately 12 inches with side slopes of approximately 1 vertical to 3 horizontal. The channel substrate shall be small gravel material at least 1 inch deep. The mitigation goal is to have a functioning riparian zone around a newly created Eagle Creek segment.

5.8. To mitigate for riparian losses, you shall plant vegetation within 20 feet of the new channel. Trees and shrubs shall be either: cottonwood, Populus trichocarpa and fremontii, aspen, Populus tremuloides, chokecherry, Prunus virginiana, willow, Salix lutea and exigua and lasiandra and lemonii, red twig dogwood, Cornus sericea, and mountain alder, Alnus incana var. tenuifolia. Herbacious plants shall include: wiregrass, Juncus balticus, Nebraska sedge, Carex nebracensis, field sedge, Carex praegracilis, cattail, Typha latifolia (in the wetter areas), bulrush, Scirpus americanus (in the wetter areas), creeping wildrye, Elymus triticoides, and Douglas sedge, Carex douglasii.

5.9. The mitigation efforts must be fully implemented by September 2004.

5.10. You shall monitor the mitigation site for at least five years after completion of mitigation planting to ensure mitigation success. One measure of mitigation success shall be the number of surviving woody plants (and likelihood the woody vegetation will survive based on best professional judgement) at the end of five years. Additionally, the new channel must have stabilized banks and substrate with at least one inch of gravel on the substrate. For trees, shrubs, and saplings, success shall be at least one tree and five shrubs for every 50 feet of new channel. At the end of the third consecutive year of survival, trees or tree saplings must be at least 3 feet tall or at least 0.5 inches in diameter as measured 2 feet off the ground and shrubs must be at least 12 inches tall and no woody vegetation is to rely on supplemental water (from irrigation) to be counted as successful. If necessary, additional plantings or on-site modifications may be needed to attain a successful survival rate and plant density. If mitigation woody plant survival is unsatisfactory, it may be necessary to supplement natural water sources to establish woody vegetation. However, there must be at least three years of viable growth unassisted by supplemental water to be successful. The monitoring term may be longer than five years if success criteria are not met or artificial manipulation is needed to meet criteria.

5.11. All reasonable efforts must be pursued until September 2009 to control non-native, invasive plant species in detention basins 2 and 3. Reasonable efforts include physically pulling the plant, including the complete root mass; cutting of the flowering parts before seeds are produced; and drying and, if possible, burning plants. Mowing is an ineffective and unprogressive eradication technique.

5.12. You must control non-native, invasive species in detention basins 2 and 3, until September 2009, below one plant per any square yard area, except for Lythrum

salicaria, purple loosestrife, Lepidium latifolium, tall whitetop, Tamarix ramosissima, saltcedar / tamarisk, and Cirsium arvense, Canada thistle; there is zero tolerance for these four species.

5.13. You shall provide at least three mitigation monitoring reports after the first, third and fifth years after mitigation planting, or annually, thereafter, if mitigation is not successful after five years.

5.14. The mitigation monitoring reports shall include information on mitigation success and actions needed to correct deficiencies; compliance with mitigation goals; photos of the impacted area; photos showing representative areas of the new channel, its dimensions and nature; a map showing photo locations; and species composition and density in the mitigation area. Submit the report and other required documents by October 15 of each year to:

US Army Corps of Engineers
Reno Regulatory Office, Sacramento District
300 Booth Street Rm 2103
Reno NV 89509-1361

5.15. Unless extended by non-compliance, the term for submitting monitoring reports is at least five years after completion of mitigation planting to ensure these areas revegetate as described. The Reno Regulatory Office, Corps of Engineers, Sacramento District, will determine if the mitigation effort was successful; if further actions are needed to bring the project in compliance; and the need for a monitoring report if the reporting term exceeds five years. Monitoring is no longer required when mitigation is certified by the Corps as successful.

5.16. You may maintain the storage capacity of detention basin 1, 2, and 3 by dredging up to 100 cubic yards per year or up to 6,500 cubic yards for a one-time storm event. Dredging in detention basins 2 and 3 is limited to those areas at least 30 feet away from the thalweg of the new creek channel.

C. Physical/chemical characteristics and anticipated changes: In general, the discharge of fill material is not expected to change in the complex physical, chemical, and biological characteristics of the substrate. Although the discharge will alter substrate elevation and contours, no important changes in water circulation, depth, current pattern, water fluctuation and water temperature are expected. The discharge may affect bottom-dwelling organisms at the site by smothering immobile forms or forcing mobile forms to migrate, but this impact is expected to be temporary for mobile organisms; immotile organisms, particularly benthos, are expected to recolonize on the discharged material because it is similar to the discharge site material. Erosion, slumping, or lateral displacement of surrounding bottom of such deposits will be arrested by stabilizing the outside the perimeters of the disposal site with bank erosion structures. The composition of the discharged material and the location, method, and timing of discharges is not expected to have an important consequence on the disposal site.

(X) Substrate: The substrate of the existing channel will be lost, however it is not believed it inputs important constituents or changes water chemistry of the creek. Suspended particulates of the aquatic ecosystem consist of course to fine-grained material. Very little suspended particulates enter the creek as a result of land runoff, flooding, vegetative and planktonic breakdown, resuspension of bottom sediments, and mans activities including dredging and filling. The fill material could result in greatly elevated levels of suspended particulates in the water column, however the new channel within the basins will be stablized with gravel material and is not expected to create suspended particles that would remain suspended for varying lengths of time. Additionally, the increased length of the new channel and the infrequency of flows is not expected to create conditions that would increase sediment input into the system. Sight-dependent species could suffer reduced feeding ability leading to limited growth and lowered resistance to disease if high levels of suspended particulates persist, however suspended particulates are not expected to be an issue because the creek is intermittent to ephemeral and does not support nekton. Significant increases in suspended particulate levels could create turbid plumes which are highly visible and aesthetically displeasing, but this is not expected to be an issue because the new channel will be stabilized with gravels and most surge flows will be contained within detention basin 1 with subsequent discharging into basins 2 and 3. The extent and persistence of these adverse impacts caused by discharging suspended particles is not expected to contribute to suspended particulates above the amount occurring naturally. The discharge material will not have an unacceptable adverse impact either individually or cumulatively. Permit conditions to assure clean fill material is used and creating a stablized, longer channel will be specified to minimize this impact.

(X) Currents, circulation or drainage patterns: Current patterns and water circulation are, as discussed here, the physical movements of water in the aquatic ecosystem. Currents and circulation respond to natural forces as modified by basin shape and cover, physical and chemical characteristics of water strata and masses, and energy dissipating factors. The proposed project will reroute Eagle Creek through two detention basin, therefore current patterns and water circulation will obviously change. This will modify current patterns and water circulation by creating a new channel, changing the direction or velocity of water flow and circulation, and changing the dimensions of a water body. This is not expected to be an adverse change in location, structure, and dynamics of aquatic communities; substrate erosion and deposition rates; the deposition of suspended particulates; the rate and extent of mixing of dissolved and suspended components of the water body; and water stratification because Eagle Creek is intermittent to ephemeral and do not support an obvious aquatic community. As discussed above, the channel will be stablized with gravels so substrate erosion and deposition rates are not expected to be important. The rate and extent of mixing will be different than the existing condition, but is expected to quickly stabilize as the new creek channel conveys normal flows and riparian vegetation becomes established. The new channel and its new substrate is not expected to have an unacceptable adverse impact either individually or cumulatively. Permit conditions to minimize this impact are discussed elsewhere.

( ) Suspended particulates; turbidity:

( ) Water quality (temperature, salinity patterns and other parameters):

( ) Flood control functions:

( ) Storm, wave and erosion buffers:

( ) Erosion and accretion patterns:

( ) Aquifer recharge:

(X) Baseflow: Normal water fluctuations in a natural aquatic system consist of daily, seasonal, and annual tidal and flood fluctuations in water level. Biological and physical components of such a system are either attuned to or characterized by these periodic water fluctuations. Eagle Creek is a small watershed that has not been artificially modified at the upstream portions such that normal water fluctuations are diverted for irrigation or other purposes. The proposed new channel within two detention basins could alter the normal water-level fluctuation pattern of an area, resulting in exaggerated extremes of high and low water or a static, non-fluctuating water level, however this is not expected to occur because the existing channel is fairly incised and bank overtopping rarely occurs. With the new channel, overtopping, while infrequent, is expected to create a desirable vegetation corridor alongside the new creek channel. A desirable outcome is prolonged periods of inundation, particularly to adjacent areas that are expected to develop into temporary to seasonal wetland areas. Such water level modifications may change salinity patterns, alter erosion or sedimentation rates, aggravate water temperature extremes, and upset the nutrient and dissolved oxygen balance of the aquatic ecosystem, but this is not expected to occur because this will all occur within detention basins. Salinity gradients, as defined by the guidelines, are related to where salt water from the ocean meets and mixes with fresh water from land. This is not expected to be an issue at this location. The discharge material will not have an unacceptable adverse impact either individually or cumulatively. Permit conditions to minimize the impact of reducing base flows will be specified if the permit is issued.

( ) Mixing zone, in light of the depth of water at the disposal site; current velocity, direction and variability at the disposal site; degree of turbulence; water column stratification discharge vessel speed and direction; rate of discharges per unit of time; and any other relevant factors affecting rates and patterns of mixing.

D. Biological characteristics and anticipated changes:

(X) Special aquatic sites (wetlands, mudflats, coral reefs, pool and riffle areas, vegetated shallows, sanctuaries and refuges, as defined in 40 CFR 230.40-45): Wetlands consist of areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence

of vegetation typically adapted for life in saturated soil conditions. Wetland vegetation consists of plants that require saturated soils to survive (obligate wetland plants) as well as plants, including certain trees, that gain a competitive advantage over others because they can tolerate prolonged wet soil conditions and their competitors cannot. No fill material in wetlands will occur at the project site because the one wetland that does exist will be avoided. It will, as it currently does, continue to be influenced by flows from Eagle Creek, although flood events greater than 5 years will be diverted to detention basin 1 and subsequently to basins 2 and 3. Therefore the project will not likely damage or destroy wetland habitat or adversely affect the biological productivity of wetlands ecosystems by smothering, by dewatering, by permanently flooding, or by altering substrate elevation or periodicity of water movement. The discharge material will not have an unacceptable adverse impact either individually or cumulatively. Permit conditions to protect the adjacent wetland from being impacted by stockpiled discharges will be specified if a pemrit is issued.

(X) Habitat for fish and other aquatic organisms: Aquatic organisms in the food web include, but are not limited to finfish, crustaceans, mollusks, insects, annelids, planktonic organisms, and the plants and animals on which they feed and depend upon for their needs. All forms and life stages of an these organisms could be found in the project area and potentially impacted. The fill material could variously affect populations of fish, crustaceans, mollusks and other food web organisms through the release of contaminants which adversely affect adults, juveniles, larvae, or eggs, or result in the establishment or proliferation of an undesirable competitive species of plant or animal at the expense of the desired resident species; however this effect is not expected by the proposed project because Eagle Creek does not support notable nekton or benthic organisms. Any aquatic organisms present in the upstream portion of Eagle Creek will likely migrate downstream and quickly recolonize the new substrate; and a new detrital base will also need to become reestablished to facilitate recolonization of other species. Mollusks are particularly sensitive to the discharge of material during periods of reproduction and growth and development due primarily to their limited mobility, however the project will occur during their non-reproductive season nor are mollusks known to occur in the project site. The project is not expected to change the nature of this creek segment to encourage undesirable species to proliferate. The Corps is satisfied that the nature of the fill will not cause increased sediment loading or increase erosion. The discharge material will not have an unacceptable adverse impact either individually or cumulatively. There is no need to condition the permit to minimize this minimal impact.

(X) Wildlife habitat (breeding, cover, food, travel, general): Wildlife associated with aquatic ecosystems are resident and transient mammals, birds, reptiles, and amphibians. The fill material can result in the loss or change of breeding and nesting areas, escape cover, travel corridors, and preferred food sources for resident and transient wildlife species associated with the aquatic ecosystem, however the adjacent project area is dominated by typical rural Nevada sagebrush habitat. The project will impact adjacent, out-of-channel habitat areas by destroying most of the surrounding area; there are only a few trees and

willow shrubs along Eagle Creek. The impacted creek segment is low value and not expected to impact important habitat functions used by wildlife, however, revegetating the new channel with more diverse plant species and greater numbers of plants is expected to increase wildlife habitat value and expected to be beneficial. Increased water turbidity could adversely affect wildlife species which rely upon sight to feed, and disrupt the respiration and feeding of certain aquatic wildlife and food chain organisms, however, this is not expected to be an issue because, as described above, the creek is intermittent to ephemeral. Changes in such physical and chemical factors of the environment could favor the introduction of undesirable plant and animal species at the expense of resident species and communities, however a healthier riparian system is expected. Additionally, new disturbance in an area provides a ripe opportunity for noxious weeds to become established and thrive. Permit conditions will specify that noxious weeds be controlled. Mitigation is defined as a permit condition so the applicant is clear what is meant and when the mitigation planting must be completed. Additionally, monitoring requirements (term to be monitored) and non-compliance consequences are specified. To minimize potential impacts and further minimize negative affects, permit conditions will specify that fill material will be clean, land clearing will occur outside the avian breeding season, noxious weed control must occur, and riparian habitat be replaced. Furthermore, a permit condition will specify that maintenance dredging in basins 2 and 3 will not occur near the riparian community, The discharge material will not have an unacceptable adverse impact either individually or cumulatively.

( ) Endangered or threatened species:

( ) Biological availability of possible contaminants in dredged or fill material, considering hydrography in relation to known or anticipated sources of contaminants; results of previous testing of material from the vicinity of the project; known significant sources of persistent pesticides from land runoff or percolation; spill records for petroleum products or designated (Section 311 of the CWA) hazardous substances; other public records of significant introduction of contaminants from industries, municipalities, or other sources:

E. Human use characteristics and impacts:

( ) Existing and potential water supplies:

( ) Water conservation:

(X) Recreational or commercial fisheries: Recreational and commercial fisheries consist of harvestable fish, crustaceans, and other aquatic organisms used by man. Fill materials could affect the suitability of recreational and commercial fishing grounds as habitat for populations of consumable aquatic organisms, however this effect is not expected because no recreational fishing occurs at the project site. The discharge material will not have an unacceptable adverse impact either individually or cumulatively. There is no need to condition the permit to minimize this minimal impact.

(X) Other water related recreation: Water-related recreation encompasses activities undertaken for amusement and relaxation. Activities encompass two broad categories of use: consumptive, e.g., harvesting resources by hunting and fishing; and non-consumptive, e.g., canoeing and sight-seeing. One of the more important direct impacts of discharging fill materials is to impair or destroy the resources which support recreation activities; this is not expected to occur because virtually no water related recreation occurs on Eagle Creek.

(X) Aesthetics of the aquatic ecosystem: Aesthetics associated with the aquatic ecosystem consist of the perception of beauty by one or a combination of the senses of sight, hearing, touch, and smell. Aesthetics of aquatic ecosystems apply to the quality of life enjoyed by the general public and property owners. The fill material could mar the beauty of natural aquatic ecosystems by degrading water quality, creating distracting disposal sites, inducing inappropriate development, encouraging unplanned and incompatible human access, and by destroying vital elements that contribute to the compositional harmony or unity, visual distinctiveness, or diversity of an area, however this impact is not expected because Eagle Creek is a mostly dry, incised channel in the landscape. The aesthetic value of the project site is mostly related to the undeveloped sagebrush community; the creek and its one adjacent wetland is a minor project area feature. Because permit conditions will specify clean fill material and other requirements to minimize degrading water quality impacts, no impact to this aesthetic parameter is expected. Permit conditions will also specify the stock pile areas and that safeguards must be used to preclude subsequent degradation during construction. The fill will not encourage inappropriate development or destroy important riverine characteristics that most people find aesthetically pleasing. The discharge material will not have an unacceptable adverse impact either individually or cumulatively. There is no need to condition the permit to minimize this minimal impact. Permit conditions to minimize this impact are discussed elsewhere.

( ) Parks, national and historic monuments, national seashores, wild and scenic rivers, wilderness areas, research sites, etc.:

(X) Traffic/transportation patterns: While the project site selection criteria is, in part, based on access to existing major transportation roads, the project is not expected to be a disruption to existing traffic / transportation patterns. The proposal will not add to traffic congestion, even though the facility will be a major local employer. Staff from the existing medical facility in the center of Carson City will be directed to the northern portion of the city with less traffic congestion issues. Most traffic issues associated the proposal will occur at the project site and not on public roads. Only those traveling to work will use the primary north-south road to and through Carson City, Highway 395. With the completion of a major thoroughfare bypass project, traffic on Highway 395 will become even less.

( ) Energy consumption or generation:

( ) Navigation:

( ) Safety:

(X) Noise: The proposal will cause a temporary negative noise impact during construction. This is expected to above the normal condition for this site. After the project is completed, the recreational facility will have long-term recreational noise impacts. This is not expected to out of character for an urban development and normal for a hospital environment.

(X) Historic properties (Section 106 National Historic Preservation Act): Coordination with SHPO occurred. The project site had an incomplete cultural resources survey, subsequently the applicants agent was notified of the need to complete project area assessment. SHPO clearance was later provided.

( ) Land use classification:

(X) Economics: The locality will gain an economic benefit from the proposal. Having a hospital in the area will increase property values of adjacent neighborhoods. The new hospital will provide and assure economic viability in the metropolitan area. Short term employment impacts will result from construction activity, landscaping, and other businesses that are associated with this kind of major construction activity. Any business near the project site will likely benefit from before and after work shoppers who work at the hospital.

( ) Prime and unique farmland (7 CFR Part 658):

( ) Food and fiber production:

( ) General water quality:

( ) Mineral needs:

( ) Consideration of private property:

F. Summary of secondary and cumulative effects: The secondary and cumulative effects are expected to be unimportant. No further degradation, particularly via culverting, will occur. Although the creek will be rerouted, it will be an open system, unlike the creek downstream of the project site. Downstream, of the project, Eagle Creek is entirely culverted, therefore no additional cumulative impacts will occur. At least a 1500-foot segment of creek will have riparian vegetation established along the creek. This is considerably better than the current condition.

III. Findings:

A. Other authorizations:

1. Water quality certification: Issued: 29 Jul 2003
Special Conditions Yes__X___ No_____

2. State and/or local authorizations (if issued): The project received a Temporary Permit for Working in Waterways (formerly known as a Rolling Stock Permit) from the Nevada Division of Environmental Protection, Bureau of Water Pollution Control.

B. A complete application was received on 26 Feb 2003. A public notice describing the project was issued on 4 Mar 2003, and sent to all interested parties (mailing list) including appropriate state and Federal agencies. All comments received on this action have been reviewed and are summarized below.

1. Federal agencies:

a. US Environmental Protection Agency (EPA): Several telephone conversations and emails were submitted to the Corps about the proposed activity, both received on 7 Mar 2003. They objected to the proposal because they did not have information about alternatives considered and if the analysis is adequate. Subsequently, after telephone coordination with the Corps, the removed their objection and recommended three permit conditions: plant native vegetation along the realigned creek; submit a mitigation plan; and preserve the mitigation area in perpetuity, favoring a conservation easement.

b. US Fish and Wildlife Service (FWS): The FWS noted that this project was previously verified as authorized by nationwide permit in 2000 and was curious about the status. They lamented if the seemingly unaltered portion of creek that traverses the project site would be impacted. They believe it may be better to move detention basins 2 and 3 on the creek rather than move the creek to the location of the two detention basins. They also noted that impacts could be avoided if the hospital site was moved to another location. They believed more flood control information is needed. They recommended that project impacts be mitigated at a 2 to 1 ratio. They do not believe increasing the channel by 340 feet, compared to the natural channel, is adequate mitigation, and they believe a detention basin would not fulfill the functions and values of wetlands. They also recommend best management practices be implemented to minimize impacts, including using weed-free straw bales, and that land clearing occur outside the bird nesting season.

2. State and local agencies: No comments were received.

3. Organizations: No comments were received.

4. Individuals: No comments were received.

C. Evaluation:

The Corps has reviewed and evaluated, in light of the overall public interest the documents and factors concerning this permit application as well as the stated views of other interested agencies and the concerned public. In doing so, the Corps has considered the possible consequences of this proposed work in accordance with regulations published in 33 CFR Parts 320 to 330 and 40 CFR Part 230. The following paragraphs include my evaluation of comments received and how the project complies with the above cited regulations.

1. Consideration of comments: EPA withdrew their minor objections after telephone coordination with the Corps. As was discussed with FWS staff, the nationwide permit verification had exceeded its verification time limit and was not extended as requested by the applicant. While the Corps shares FWS concerns about modifying an unaltered creek, the existing ephemeral / intermittent creek is biologically unremarkable. The proposed relocated creek will provide important riparian habitat improvements; the Corps believes the detention basins will provide adjacent wetland habitat value and functions. This will satisfy the FWS mitigation recommendation. Avoidance of all creek impacts by choosing a different site was satisfactorily addressed in the alternatives analysis. The Corps will include best management practices as a permit condition, as well as require land clearing occur outside the migratory bird nesting season.

2. Evaluation of Compliance with Section 404 (b)(1) guidelines (restrictions on discharge, 40 CFR 230.10):

a. Alternatives test:

Yes*____ No __X__ Based on the discussion in II B, are available, practicable alternatives having less adverse impact on the aquatic ecosystem and without other significant adverse environmental consequences that do not involve discharges into "waters of the United States" or at other locations within these waters?

Yes __X__ No* ____ Based on II B, if the project is in a special aquatic site and is not water dependent, has the applicant clearly demonstrated that there are no practicable alternative sites available?

b. Special restrictions. Will the discharge:

Yes* ____ No _X___ Violate state water quality standards?

Yes* ____ No __X__ Violate toxic effluent standards (under Section 307 of the Act)?

Yes* ____ No _X___ Jeopardize endangered or threatened species or their critical habitat?

Yes* ____ No __X__ Violate standards set by the Department of Commerce to protect marine sanctuaries?

Yes* ____ No __X__ Evaluation of the information in II C and D above indicates that the proposed discharge material meets testing exclusion criteria for the following reason(s).

(X) based on the above information, the material is not a carrier of contaminants.

(X) the levels of contaminants are substantially similar at the extraction and disposal sites and the discharge is not likely to result in degradation of the disposal site and pollutants will not be transported to less contaminated areas.

( ) acceptable constraints are available and will be implemented to reduce contamination to acceptable levels within the disposal site and prevent contaminants from being transported beyond the boundaries of the disposal site.

c. Other restrictions. Will the discharge contribute to significant degradation of "waters of the United States" through adverse impacts to:

Yes* ____ No _X___ Human health or welfare, through pollution of municipal water supplies, fish, shellfish, wildlife, and special aquatic sites?

Yes* ____ No __X__ Life states of aquatic life and other wildlife?

Yes* ____ No __X__ Diversity, productivity and stability of the aquatic ecosystem, such as loss of fish or wildlife habitat, or loss of the capacity of wetlands to assimilate nutrients, purify water or reduce wave energy?

Yes* ____ No _X___ Recreational, aesthetic and economic values?

Yes __X__ No* ____ Actions to minimize potential adverse impacts (mitigation). Will all appropriate and practicable steps (40 CFR 230.70-77) be taken to minimize the potential adverse impacts of the discharge on the aquatic ecosystem? (Refer to Section II.B.5 for special conditions.)

3. General Evaluation (33 CFR 320.4 (a)):

a. The relative extent of the public and private need for the proposed work. There is a need to have a regional medical facility. The existing facility is over-capacity and cannot be expanded because no adjacent buildable space is available.

b. The practicability of using reasonable alternative locations and methods to accomplish the objective of the proposed structure or work. The alternatives analysis demonstrates there are no practical alternative locations or other methods to achieve the overall project purpose. There are no unresolved resource use conflicts.

c. The extent and permanence of the beneficial and/or detrimental effects the proposed structures or work may have on the public and private uses to which the area is suited. The project is expected to have long-term beneficial impacts on the locality and the enhanced segment of Eagle Creek. These impacts are well suited to the area; the beneficial effects associated with utilization of the property would be permanent. This is a rural area with scant aquatic resources. These aquatic resources are not used by the general public.

D. Determinations:

1. Finding of No Significant Impact (FONSI) (33 CFR Part 325). Having reviewed the information provided by the applicant, all interested parties and the assessment of environmental impacts contained in Part II of this document, the Corps finds that this permit action will not have a significant impact on the quality of the human environment. Therefore, an Environmental Impact Statement will not be required.

2. Section 404 (b)(1) Compliance/Non-compliance Review (40 CFR 230.12).

( ) The discharge complies with the guidelines.

(X) The discharge complies with the guidelines, with the inclusion of the appropriate and practicable conditions listed above (in II.B.5) to minimize pollution or adverse effects to the affected ecosystem.

( ) The discharge fails to comply with the requirements of these guidelines because:

( ) There is a practicable alternative to the proposed discharge that would have less adverse effect on the aquatic ecosystem and that alternative does not have other significant adverse environmental consequences.

( ) The proposed discharge will result in significant degradation of the aquatic ecosystem under 40 CFR 230.10(b) or (c).

( ) The discharge does not include all appropriate and practicable measures to minimize potential harm to the aquatic ecosystem, namely----

( ) There is not sufficient information to make a reasonable judgement as to whether the proposed discharge will comply with the guidelines.

3. Section 176(c) of the Clean Air Act: The Corps has analyzed the proposed project for conformity applicability and determined that the proposed activities in this permit application will not exceed de minimis levels of direct emissions of a criteria pollutant or its precursors, and are exempt by 40 CFR 93.152. Any later indirect emissions generally cannot be practicably controlled by the Corps and, for these reasons, the permit decision does not require a conformity determination.

4. Public interest determination: Issuance of a Department of the Army permit (with special conditions), as prescribed by regulations published in 33 CFR Parts 320 to 330, and 40 CFR Part 230 is not contrary to the public interest.

Form Prepared By: (b) (6) Date: 3 Nov 2003

Reviewed & Approved By: (b) (6) Date: 17 Nov 2003

Acting Chief, California/Nevada Section

CESPK-CO-R (1145)

MEMORANDUM FOR RECORD

SUBJECT: Department of the Army Permit Evaluation and Decision Document for Corps Number: 200325013

This document is an alternate decision document that is more procedurally correct and complete. It is prepared to supplement the mandated Sacramento District decision document checklist form that disallows inclusions of relevant review and decision issues. It includes the Corps public interest review, including the Environmental Assessment, Statement of Findings, specified in 33 CFR 320.4 (a)(1) and (2); the environmental considerations of NEPA (33 CFR 325, Appendix B); and the review and compliance determination and the impact analysis specified in the 404 (b) (1) guidelines (40 CFR 230) for the activity proposed by Carson City Regional Medical Facility

1. **Applicant**. Carson City Regional Medical Facility

2. **Proposed Project Location, Existing Site Conditions, and Project Description**.

2.1. *Location*. The project is located northwest Carson City in Section 31, Township 16 North, Range 20 East, and Section 6, Township 15 North, range 20 East, Carson City County, Nevada in the Carson City USGS Topographic Quadrangle.

2.2. *Existing Site Conditions*. The project location is a relatively undeveloped foothill area of northwest Carson City. One unnamed, intermittent tributary, locally called Eagle Creek, flows through the project site; there are also adjacent wetlands to this tributary. The vegetation community is a sagebrush association with sage brush and grasses. Along the creek and within the adjacent wetlands are, mostly young, cottonwood trees and coyote willow. For the most part, the tributary is incised and typically about 3-6 feet below the topography. Downstream of the project (off the project site), all of this tributary has been culverted. The wetlands are moderate value with the upper wetland having denser stands of willow (and cottonwoods) as dominants. Very little disturbance has occurred on the project site other than past grazing, however the lower end (270 feet) of the creek has been channelized into a roadside ditch.

2.3. *Proposed Project*. An application was received on 29 Jan 2003. The Carson City Regional Medical Facility requested Department of the Army authorization to construct a medical facility on a 69-acre site affecting Eagle Creek and its adjacent wetlands. Additional information was requested on 5 Feb 2003. An on-site meeting with the applicant and their consultant occurred on 11 Sep 2002 to discuss and defined the proposed project. The application was considered complete on 16 Apr 2003. The proposed project consists of a main hospital, central plant building, and associated roads and parking lots. A series three flood detention basins will require the relocation of Eagle Creek. Approximately 1260 feet of the existing, unaltered creek (0.63 acres) is proposed to be filled. Three detention basins are proposed: detention basin 1 (1.6 acres); detention basin 2 (2.3 acres) and detention basin 3 (2.1 acres); detention basins 2 and 3 will function as wetlands adjacent to the newly constructed creek. The filled creek segment will be relocated to flow through detention basins 2 and 3 as a 1590-foot low-flow channel. Creek flows that exceed a 5-year event will overflow into detention basin 1, and an overflow culvert from

detention basin 1 will directly discharge flows into detention basin 2. A newly constructed creek channel from detention basin 3 will divert flows back into Eagle Creek (the portion that is now a roadside ditch). The channelized portion of the creek that is now in a roadside ditch will be culverted. All on-site creek crossings for vehicles and pedestrians will span the creek with no filling occurring below the ordinary high water mark of the creek.

3. **Project Purpose, Need, and Regulatory Jurisdiction.**

3.1. *Basic Project Purpose.* The basic project purpose is to fill 1530 feet of Eagle Creek.

3.2. *Overall Project Purpose.* The overall project purpose is to construct a regional medical facility with its corollary supporting structures and to create stormwater detention basins to provide flood storage capacity.

3.3. *Project Need.* There is a need to replace the existing local hospital that is under-capacity and lacks the capability for expansion. There is also a need to provide flood storage detention to prevent flooding in northern Carson City. Eagle Creek is bottlenecked by the culvert that conveys the creek under Highway 395, downstream to the east and eventually into the Carson River. The relative extent of the public and private need for the proposed work or structure is demonstrated by the need to have a regional medical facility to treat sick and injured people. There will be short term employment benefits during construction and long term benefits from health sector employment. A larger medical facility will create more jobs than the existing facility.

3.4. *Regulatory Jurisdiction.* The impacted area is Eagle Creek, and it is regulated because under 33 CFR 328.3 it meets the definition of waters of the US: Category (5) Tributaries of and a category (7) wetlands adjacent to category (1) waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide, *i.e.*, the Carson River.

4. **Statutory Authorities.**

4.1. *Corps Authority.* The applicable statutory authority is Section 404, Clean Water Act (86 Stat. 816, P.L. 92-500).

4.2. *Water Quality Certification.* Under Section 401 of the Clean Water Act, the Nevada Division of Environmental Protection (NDEP) reviewed the proposed project for compliance with Nevada's and Federal water quality standards. Water quality standards include: 1) Beneficial Uses of Water - aquatic life, agriculture, recreation, municipal and domestic drinking water supply, industrial supply, and propagation of wildlife; 2) Water Quality Criteria - numeric and narrative limits or bans on substances, water characteristics and activities which impact water quality including discharges of waste materials, sediment and pesticides; procedures which alter concentrations of dissolved oxygen, temperature and turbidity; and any actions which generally increase in-stream toxicity and pollution; and 3) Anti-degradation - requires that surface waters whose quality is higher than the applicable standard must be protected and maintained.

4.3. *Compliance with Related Laws* (33 CFR 320.3). The proposed project has been evaluated for compliance with the related laws in 33 CFR 320.3. Potential adverse effects and compliance with the laws in 33 CFR 320.3 are controlled by the terms and conditions of this permit and specific permit conditions. This proposal has also been analyzed for conformity applicability pursuant to regulations implementing Section 176(c) of the Clean Air Act. It has been determined that the activities proposed under this permit will not exceed *de minimis* levels of direct emissions of a criteria pollutant or its precursors and are exempted by 40 CFR Part 93.153(c)(2). Any later indirect emissions are generally not within the Corps continuing program responsibility and generally cannot be practicably controlled by the Corps. For these reasons, a conformity determination is not required for this authorization.

4.4. *Other Authorizations*. The project received a Temporary Permit for Working in Waterways (formerly known as a "Rolling Stock Permit") from the Nevada Division of Environmental Protection, Bureau of Water Pollution Control.

5. **Public Notice, Summary of Comments, and Public Hearing.**

5.1. *Public Notice*. A public notice describing the proposed project was issued on 4 Mar 2003. There was a 30-day comment period. The public notice was sent to interested parties and public agencies to request public interest review comments. All comments received on this proposal have been reviewed and are summarized below.

5.1.1. *U.S. Environmental Protection Agency* (EPA). Several telephone conversations and emails were submitted to the Corps about the proposed activity, both received on 7 Mar 2003. They objected to the proposal because they did not have information about alternatives considered and if the analysis is adequate. Subsequently, after telephone coordination with the Corps, the removed their objection and recommended three permit conditions: plant native vegetation along the realigned creek; submit a mitigation plan; and preserve the mitigation area in perpetuity, favoring a conservation easement.

5.1.2. *U.S. Fish and Wildlife Service* (FWS). The FWS noted that this project was previously verified as authorized by nationwide permit in 2000 and was curious about the status. They lamented if the seemingly unaltered portion of creek that traverses the project site would be impacted. They believe it may be better to move detention basins 2 and 3 "on" the creek rather than move the creek to the location of the two detention basins. They also noted that impacts could be avoided if the hospital site was moved to another location. They believed more flood control information is needed. They recommended that project impacts be mitigated at a 2 to 1 ratio. They do not believe increasing the channel by 340 feet, compared to the natural channel, is adequate mitigation, and they believe a detention basin would not fulfill the functions and values of wetlands. They also recommend best management practices be implemented to minimize impacts, including using weed-free straw bales, and that land clearing occur outside the bird nesting season.

5.1.3. *State Historic Preservation Officer* (SHPO). Coordination with SHPO occurred. The project site had an incomplete cultural resources survey, subsequently the applicant's agent was notified of the need to complete project area assessment. SHPO clearance was later provided. Later SHPO noted that not all of the project area was surveyed, so it was necessary to complete a cultural resources survey for the northern portion of the project area

which was not included in the original cultural survey. SHPO provided clearance on 16 Oct 2003.

5.1.4. *Nevada Division of Wildlife* (NDOW). No comments were received from NDOW.

5.1.5. *Organizations*. No comments were received from organizations.

5.1.6. *Individuals*. No comments were received from individuals.

5.1.7. *Internal Coordination*. No comments were received from internal Corps elements.

5.2. *Applicant's Response to the Comments*: The Corps was frequently coordinating with the applicant's consultant and were apprised of public comments. The FWS had also coordinated with the consultant concerning their issues. Therefore, no "formal" letter expressing public interest concerns that should be addressed was provided to the applicant. Acting on behalf of the applicant, their consultant submitted a "new" permit application that addressed and clarified public interest concerns, except the cultural resources issues, expressed to them. The new application was essentially the same, but fewer impacts, as in the original proposal.

5.3. *Coordination Efforts*: The revised project decreased the creek impacts from 1490 feet to 1260 feet, with the reconstructed length increased to 1590 feet through detention basins. The lower 270 feet of ditched creek is no longer proposed to be filled (culverted). Subsequently, in an email from (and via telephone conversations with) the consultant, they requested to complete annual maintenance dredging in detention basin 1 for approximately 100 cubic yards per year or up to 6,500, cubic yards after a major storm event to maintain detention basin 1's capacity. A "spillway" feature will direct creek flows that exceed a 5-year event into detention basin 1. Still later, the applicant requested authorization to install an 8-inch conduit across the previously unaffected creek; this conduit will be used to implement a vacuum-tube messaging system between facility buildings. On 19 Sep 2003, the applicant, in a response to a Corps email, submitted revised plans. They will supplement basins 2 and 3 with irrigation water to help establish riparian vegetation. The provided updated cross-section drawings of the basins and modified / changed the diversion structure that diverts water into basin 1. Water from basin 1 will directly convey water into basin 2 via a riprap lined channel. They clarified that the connection between basins 2 and 3 will be via a 2' X 4' box culvert. The connection outlet from basin 3 will be via 36" CMP that will directly connect to NDOT's 48" metal pipe drain system. A new utility crossing across the creek is now proposed; this trenchline crossing will accommodate sewer, water, and common utility conduits and be placed under a vehicular, bank-to-bank crossing that will not involve a discharge below the ordinary high water elevation of Eagle Creek. On 21 Oct 2003, the agent indicated that they will no longer need the 8" "suction tube" conduit that would have crossed the creek. The applicant's consultant later conveyed that detention basins 2 and 3 will be slightly larger than anticipated and will, therefore the lower 270 feet of ditched creek will be incorporated (and filled) into Basin 3. Therefore the total length of creek impact is 1530 feet.

5.4. *Public Hearing Request and Responses:* No request of public hearing was made as a result of the public notice..

5.5. *Corps Analysis of Comments.* All comments received in response to the Public Notice have been considered in the following public interest review. EPA withdrew their minor objections after telephone coordination with the Corps. As was discussed with FWS staff, the nationwide permit verification had exceeded its verification time limit and was not extended as requested by the applicant. While the Corps shares FWS concerns about modifying an unaltered creek, the existing ephemeral / intermittent creek is biologically unremarkable. The proposed relocated creek will provide important riparian habitat improvements; the Corps believes the detention basins will provide adjacent riparian habitat value and functions. This will satisfy the FWS mitigation recommendation. Avoidance of all creek impacts by choosing a different site was satisfactorily addressed in the alternatives analysis. The Corps will include best management practices as a permit condition, as well as require land clearing occur outside the migratory bird nesting season.

6. **Alternatives Analysis.** [33 CFR 320.4(b)(4), 40 CFR 230.10]

6.1. *Alternatives Criteria.* The Corps required the applicant to look within the general urban area for vacant sites that would avoid impacts to aquatic resources. Areas with the least impacts to the least valuable aquatic resources should rate higher relative to site selection. Secondary considerations were afforded to sites that have access to major transportation systems because emergency, doctor's, and other vehicles must have speedy and responsive access to a hospital facility.

6.2. *Selected Alternative.* Through the public review process and coordination with the Corps, the applicant modified the original proposal slightly to lessen the length of creek that was proposed to be impacted. This is the selected alternative, and this is being evaluated with this document. The applicant has chosen this alternative to meet the overall project purpose.

6.3. *Avoidance.* Alternatives that avoid impacts include choosing another site and building detention basins that do not involve the creek. The applicant looked at several sites, but locating a site large enough that had easy access to major transportation routes was difficult to locate. Additionally, all sites had jurisdictional waters that would have been impacted. Other sites were determined to be impractical to the applicant. The applicant could have designed the project to avoid nearly all creek impacts at this site, however one project purpose was to provide flood detention. Without intercepting the high flows with a diversion structure, diverting water into the flood detention basin would be impossible.

6.4. *Minimization.* Alternatives that minimize impacts include leaving the creek in its original channel and not filling it to divert it into detention basins 2 and 3. These alternatives are not beneficial to the aquatic resource. Diverting the creek into detention basins would provide an opportunity to create valuable riparian habitat. Simply planting a riparian community along the existing creek is less likely to succeed than the proposal. The applicant has chosen to leave the upper, more environmentally valuable creek intact, thus minimizing impacts.

6.5. *Impacts of Proposed Project.* The proposed project impacts include losing a somewhat natural creek. Although the creek has likely been altered by past ranching practices,

viz., minor straightening, riparian tree removal, livestock intrusion, the existing values are low, although the creek still functions well. This intermittent to ephemeral creek provides low habitat value; although it is considered moderate where young willows and a couple older cottonwood trees are growing. The project is mostly impacting the low value segment of Eagle Creek.

6.6. *Proposed Compensatory Mitigation.* The applicant has proposed to compensate for unavoidable impacts and impacts that cannot be minimized by creating a more valuable riparian corridor through detention basins 2 and 3. The overall length of the creek will be lengthened by 60 feet.

7. **Public Interest Review**. In light of the overall public interest, the documents and factors concerning this permit application, as well as the stated views of other interested agencies and the concerned public, were reviewed and evaluated. The possible consequences of this proposed work in accordance with regulations published in 33 CFR Parts 320 to 330 and 40 CFR Part 230 were considered. The selected alternative was evaluated for impacts on air quality, water quality, noise, socioeconomic factors and biologic factors. This review revealed relatively minor to no impacts except those discussed below. The public notice comments and the Corps' review indicate the notable environmental factors that the proposed project will impact include filling an existing creek channel.

7.1. *Potential Impacts on Physical / Chemical Characteristics of the Aquatic Ecosystem and Water Quality* (33 CFR 320.4 d) & 40 CFR Subpart C 230.20–25). The substrate of the existing channel will be lost, however it is not believed it inputs important constituents or change water chemistry of the creek. The current patterns and water circulation will obviously change. Other factors related to the potential short-term or long-term effects on the substrate, suspended particulates / turbidity, water, current patterns and water circulation, normal water fluctuations, and salinity gradients were considered but expected to have little or no impact.

7.2. *Potential Impacts on Biological Characteristics of the Aquatic Ecosystem* (33 CFR 320.4 (c) & 40 CFR Subpart D 230.30–32). Because the habitat value of the system is low in this ephemeral to intermittent creek, impacts to wildlife is not expected to be important. Some trees will be lost as a result of the proposal. Other factors related to the potential short-term or long-term effects on fish, crustaceans, mollusks, and other aquatic organisms in the food web and other wildlife were considered but expected to have little or no impact. The proposed project will not jeopardize the continued existence or adversely impact the critical habitat of any listed federal species. Coordination with the FWS verifies this. The only species that could occur in the project area, the bald eagle, is not impacted by the proposal.

7.3. *Potential Impacts on Special Aquatic Sites* (33 CFR 320.4 (b) & 40 CFR Subpart E 230.40_45). The project site does include a special aquatic site, however it is not impacted by the proposal.

7.4. *Potential Impacts on Human Use Characteristics* (33 CFR 320.4 (e–q) & 40 CFR Subpart F 230.50–54). The biggest impact is on human use characteristics. The public will have

access to a better, more modern medical facility. This is compatible with designated land uses and will likely benefit the public use to which the land is suited in this urban environment. Other factors related to the potential short-term or long-term effects on the municipal and private water supplies, recreational and commercial fisheries, water-related recreation, aesthetics, and parks, national and historical monuments, national seashores, wilderness areas, research sites, and similar preserve are expected to have little or no impact.

7.5. *Other Environmental Factors Considered* (33 CFR 320. 4 and 325.3 (c) (1))

7.5.1. *Conservation.* No impact to conservation is anticipated. The proposal will enhance a long segment of Eagle Creek.

7.5.2. *Economics.* The locality will gain an economic benefit from the proposal. Having a hospital in the area will increase property values of adjacent neighborhoods. The new hospital will provide and assure economic viability in the metropolitan area. Short term employment impacts will result from construction activity, landscaping, and other businesses that are associated with this kind of major construction activity.

7.5.3. *Historic Values and Cultural Resources.* The site was surveyed for cultural sites and there are no unique historic or cultural resources on the project site. SHPO verified the Corps determination that no impact in the area of potential effect for this project.

7.5.4. *Floodplain values* (33 CFR 320.4(1)). One of the project purposes is to attenuate flood events. The flood detention ponds are expected to prevent flooding downstream of the project. All of the Eagle Creek watershed is diverted into an undersized culvert under Highway 395, the primary (and only) north access to Carson City. This is expected to preclude future flooding events across Highway 395. This project is part of an overall flood control management plan to attenuate future downstream flooding issues within the city.

7.5.5. *Consideration of Property Ownership.* The proposal will not interfere with the owner's right to develop their property. There is a public interest in having a regional medical facility, and the destruction of another segment of existing Eagle Creek is being replaced by an enhanced creek corridor rather than absolute destruction via culverting, as has happened downstream of the proposed project. This proposed project will help meet the needs and welfare of the people, in general, by providing this facility. While the project site selection criteria is, in part, based on access to existing major transportation roads, the project is not expected to be a disruption to existing traffic / transportation patterns. The proposal will not add to traffic congestion, even though the facility will be a major local employer. Staff from the existing medical facility in the center of Carson City will be directed to the northern portion of the city with less traffic congestion issues.

7.5.6. *Other Factors.* Other factors and impacts related to general environmental concerns, municipal and private water supplies, recreational and commercial fisheries, water-related recreation, aesthetics, and parks, national and historical monuments, national seashores, wilderness areas, research sites and similar preserves, navigation, effects on the limits of the territorial seas, activities in marine sanctuaries, other federal, state, or local requirements, safety of impoundment structures, energy conservation and development, activities affecting coastal zones, land use classifications, safety, air quality, noise, food and fiber production, and mineral needs were considered but expected to have little or no impact and are believed to be inconsequential or unrelated to the proposal. Prime and unique farmland will be unaffected. The

project is expected to have long-term beneficial impacts on the locality and the enhanced segment of Eagle Creek. These impacts are well suited to the area; the beneficial effects associated with utilization of the property would be permanent.

7.6. *Compensatory Mitigation.* Compensatory mitigation will compensate for environmental values by recreating an enhanced segment of Eagle Creek. This is an improvement over the existing condition and likely restores a historic condition. Compensatory mitigation is needed because the cumulative impacts of culverting another major segment of Eagle Creek is too great and unnecessary. There is environmental value added to not culverting and enhancing the remaining segment of the creek. Best management practices will be used to further minimize impact to the creek that will be avoided during and after construction. It is believed the proposed creek relocation is feasible with a great likelihood of success. Water that would otherwise flow through the creek will still provide hydrology to an enhanced riparian community.

7.7. *Evaluation of Fill Material* (40 CFR Subpart G 230.60–61). Chemical and biological testing are unnecessary for the proposed fill because the subject fill is not believed to be a carrier. The fill material is from an adjacent excavation site, and, therefore, is expected to have the same constituents or levels of contaminants as the disposal site. Therefore the discharge is not likely to result in degradation of the disposal site and pollutants will not be transported to less contaminated areas. Special conditions can be implemented to reduce contamination to acceptable levels within the disposal site and prevent contaminants from being transported beyond the boundaries of the disposal site.

7.8. *Actions to Minimize Adverse Effects* (33 CFR 320.4 (r) & 40 CFR Subpart H 230.70–77). A permit could be conditioned to provide assurances that the proposal will avoid, minimize, or compensate for adverse impacts and are being incorporated in this authorization.

7.8.1. Fill materials and materials used to construct the creek crossing and detention basins shall be free of toxic substances which are in concentrations that are harmful to aquatic (and other) life.

7.8.2. Safeguards to prevent stockpiled dredged (or excavated) material at upland sites from entering Eagle Creek's adjacent wetland shall be employed.

7.8.3. Trench lines through Eagle Creek shall contain impervious plugs or "collars" around the pipeline or utility line at the creek boundaries. The purpose of the impervious plugs is to prevent water piping along the trench line. Thus, plugs must be sufficiently large to prevent artificial water loss from the Eagle Creek from piping action.

7.8.4. Land clearing and other surface disturbances associated with this permitted activity must be outside the avian breeding season (typically 15 March to 31 July) to avoid destruction of active bird nests (nests with eggs or fledglings) that breed in the area. You may have a qualified biologist shall survey the area prior to construction. If the biologist locates active nests at or immediately adjacent to the project site, or if other evidence of nesting is observed, a protective buffer shall be marked with flagging so the nesting area will be avoided to prevent the destruction or disturbance to nests until they are no longer active.

7.8.5. All bridge and culverted tributary crossings shall allow unimpeded passage of a 100-year storm event.

7.8.6. This permit authorizes filling 1530 feet of Eagle Creek; you shall mitigate for this impact by creating a new 1590-foot channel in detention basins 2 and 3 (see Sheet 2 of 5)

7.8.7. Mitigation means creating a 1590-foot channel similar to that shown on Sheet 2 of 5 and planting riparian vegetation. This new channel will have a bottom width of 2 feet and depth within detention basins 2 and 3 of approximately 12 inches with side slopes of approximately 1 vertical to 3 horizontal. The channel substrate shall be small gravel material at least 1 inch deep. The mitigation goal is to have a functioning riparian zone around a newly created Eagle Creek segment.

7.8.8. To mitigate for riparian losses, you shall plant vegetation within 20 feet of the new channel. Trees and shrubs shall be either: cottonwood, *Populus trichocarpa* and *fremontii*, aspen, *Populus tremuloides*, chokecherry, *Prunus virginiana*, willow, *Salix lutea* and *exigua* and *lasiandra* and *lemonii*, red twig dogwood, *Cornus sericea*, and mountain alder, *Alnus incana var. tenuifolia*. Herbacious plants shall include: wiregrass, *Juncus balticus*, Nebraska sedge, *Carex nebracensis*, field sedge, *Carex praegracilis*, cattail, *Typha latifolia* (in the wetter areas), bulrush, *Scirpus americanus* (in the wetter areas), creeping wildrye, *Elymus triticoides*, and Douglas sedge, *Carex douglasii.*

7.8.9. The mitigation efforts must be fully implemented by September 2004.

7.8.10. You shall monitor the mitigation site for at least five years after completion of mitigation planting to ensure mitigation success. One measure of mitigation success shall be the number of surviving woody plants (and likelihood the woody vegetation will survive based on best professional judgement) at the end of five years. Additionally, the new channel must have stabilized banks and substrate with at least one inch of gravel on the substrate. For trees, shrubs, and saplings, success shall be at least one tree and five shrubs for every 50 feet of new channel. At the end of the third consecutive year of survival, trees or tree saplings must be at least 3 feet tall or at least 0.5 inches in diameter as measured 2 feet off the ground and shrubs must be at least 12 inches tall and no woody vegetation is to rely on supplemental water (from irrigation) to be counted as successful. If necessary, additional plantings or on-site modifications may be needed to attain a successful survival rate and plant density. If mitigation woody plant survival is unsatisfactory, it may be necessary to supplement natural water sources to establish woody vegetation. However, there must be at least three years of viable growth unassisted by supplemental water to be successful. The monitoring term may be longer than five years if success criteria are not met or artificial manipulation is needed to meet criteria.

7.8.11. All reasonable efforts must be pursued until September 2009 to control non-native, invasive plant species in detention basins 2 and 3. Reasonable efforts include physically pulling the plant, including the complete root mass; cutting of the flowering parts before seeds are produced; and drying and, if possible, burning plants. Mowing is an ineffective and unprogressive eradication technique.

7.8.12. You must control non-native, invasive species in detention basins 2 and 3, until September 2009, below one plant per any square yard area, except for *Lythrum salicaria*, purple loosestrife, *Lepidium latifolium*, tall whitetop, *Tamarix ramosissima*, saltcedar / tamarisk, and *Cirsium arvense*, Canada thistle; there is zero tolerance for these four species.

7.8.13. You shall provide at least three mitigation monitoring reports after the first, third and fifth years after mitigation planting, or annually, thereafter, if mitigation is not successful after five years.

7.8.14. The mitigation monitoring reports shall include information on mitigation success and actions needed to correct deficiencies; compliance with mitigation goals; photos of the impacted area; photos showing representative areas of the new channel, its dimensions and nature; a map showing photo locations; and species composition and density in the mitigation area. Submit the report and other required documents by October 15 of each year to:

US Army Corps of Engineers
Reno Regulatory Office, Sacramento District
300 Booth Street Rm 2103
Reno NV 89509-1361

7.8.15. Unless extended by non-compliance, the term for submitting monitoring reports is at least five years after completion of mitigation planting to ensure these areas revegetate as described. The Reno Regulatory Office, Corps of Engineers, Sacramento District, will determine if the mitigation effort was successful; if further actions are needed to bring the project in compliance; and the need for a monitoring report if the reporting term exceeds five years. Monitoring is no longer required when mitigation is certified by the Corps as successful.

7.8.16. You may maintain the storage capacity of detention basin 1, 2, and 3 by dredging up to 100 cubic yards per year or up to 6,500 cubic yards for a one-time storm event. Dredging in detention basins 2 and 3 is limited to those areas at least 30 feet away from the thalweg of the new creek channel.

8. **Determinations**.

8.1. *Finding of No Significant Impact* (FONSI). Having reviewed the information provided by the applicant and all interested parties and an assessment of the environmental impacts, the Corps has determined that this proposed permit action will not have a significant impact on the quality of the human environment (including adverse effects on human health; life stages of aquatic organisms; ecosystem diversity, productivity, and stability; and recreational, esthetic, and economic values) or cause or contribute to significant degradation of waters of the United States, therefore an Environmental Impact Statement is unnecessary.

8.2. *Compliance with 404(b)(1) Guidelines.*

8.2.1. *Restrictions on Discharge* (40 CFR 230.10). The written analysis in Section 7, above, demonstrates compliance with the restrictions on the proposed discharge. The project is not water dependent. The project received state water quality certification (see project file) on 29 Jul 2003 and is not expected to violate toxic effluent standards (under Section 307 of the Clean Water Act (CERCLA)). The project will not jeopardize the continued existence of federally listed species or their critical habitat. The project will have no impact on standards set by the Department of Commerce to protect marine sanctuaries. To fulfill the overall project purpose, the applicant has demonstrated that impacts cannot be avoided because alternative sites are not more practical and project objectives require diversion of flood-event flows. There are no available, practicable alternatives that will avoid adverse impact on the aquatic ecosystem or special aquatic sites. The applicant has demonstrated impacts cannot be minimized because created a relocated creek corridor that increases creek length (and thereby reduces flood-induced erosive forces) and enhancing the riparian community along the new creek channel. The applicant has further minimized impacts by avoiding creek impacts to on-site There are no available, practicable

alternatives that will cause less adverse impact on the aquatic ecosystem or special aquatic sites and without other significant adverse environmental consequences that do not involve discharges into "waters of the United States" or at other locations within these waters.

8.2.2. *Factual Determinations* (40 CFR 230.11). The short and long term impacts on the physical, chemical and biological components of the aquatic environment will be minor. The fill material will not adversely impact the substrate, circulation patterns, or turbidity of the Eagle Creek or its adjacent wetland. The fill will have limited impacts on the biologic community. Contaminants are not expected in the fill material. The cumulative and secondary effects will be insignificant.

8.2.3. *Findings of Compliance or Non-Compliance with the Restrictions on Discharge* (Section 230.12). The proposal will comply with the guidelines because appropriate and practical conditions will be specified to avoid, minimize, or compensate for adverse impacts. The permit will be conditioned to insure compliance. Resource use conflicts identified by commentors can be satisfactorily addressed; no alternatives will resolve Corps-identified issues and applicant objectives better than the selected alternative. The selected alternative, as modified is the preferred, most practical alternative. Based on 33 CFR 320 (r), the applicant will complete mitigation to compensate for unavoidable impacts. The project, with mitigation, will not significantly degrade the aquatic environment. The permit will specify appropriate and practical steps in order to minimize potential adverse impacts.

8.3. *Public Interest Determination.* I have determined that issuing a Department of the Army permit to the Carson Tahoe Regional Medical Facility for the preferred alternative is not contrary to the public interest. I have determined that the proposed work will not cause significant adverse impacts to any of the public interest factors evaluated above. The project is slightly changed from that described in the public notice. To further insure that the permit decision is in the public interest, the permit will be conditioned to assure only minimal environmental impacts would occur.

PREPARED BY: [redacted]
(b) (6)

Reno Regulatory Office Project Manager

29 Oct 2003
Date

jbr environmental consultants, inc.
www.jbr-env.com
4741 Caughlin Parkway, Suite 2 • Reno, Nevada 89509 [P] 775.747.5777 [F] 775.747.2177

October 6, 2003

Mr. Rich Gebhart
U.S. Army Corps of Engineers
C. Clifton Young Federal Building
300 Booth Street, Room 2103
Reno, Nevada 89509

RE: Carson Tahoe Regional Hospital Cultural Resources Report
JBR Project No. Palmer-01

Dear Rich,

Please find enclosed for your review the Cultural Resources Inventory Report for the Carson-Tahoe Regional Medical Facility project site. JBR Environmental Consultants, Inc. (JBR) has enclosed a bound copy for the Corps review, as well as an unbound copy intended for submittal to the State Historic Preservation Office (SHPO). JBR understands that the Corps will forward a copy of this report to SHPO for their immediate review. If convenient, JBR will hand deliver this report to SHPO upon the Corps direction; however, we will require a Corps submittal/cover letter from the Corps to SHPO.

Should you have any questions or concerns, please feel free to contact Catherine Clark, Division Manager (775) 747-5777 at your convenience.

Sincerely,

JBR ENVIRONMENTAL CONSULTANTS, INC.

Tina Kadrmas
Environmental Analyst

Via hand delivery
RECEIVED
OCT - 6 2003
2003 25013

cc: Matt Rasmussen, Palmer and Lauder

Palmer & Lauder Engineers, Inc.

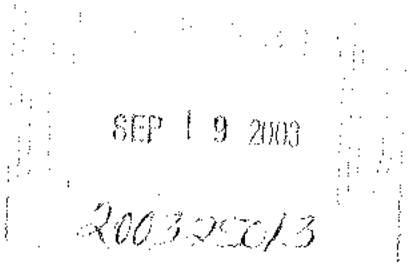
611 North Nevada Street · Carson City, NV 89703 · (775) 884-0479 Fax: 884-4226

Memo

To: Richard Gebhart

From: Mark Palmer P.E. MBP.

Date: September 17, 2003



Re: Carson Tahoe Regional Medical Facility
CORP Permit Additional Information

Richard,

The following is a summary of the information you requested through Catherine Clark of JBR Environmental Consultants, Inc. on September 15.

1) There will be supplemental water supplied to basin 2 and 3 through an irrigation system being proposed by the Landscape Architect.

2) We have supplied with this submittal a typical cross section of the flood detention basin's.

3) The diversion structure that was proposed has been changed. We will now convey the water directly to basin 2 through a rip rapped lined channel.

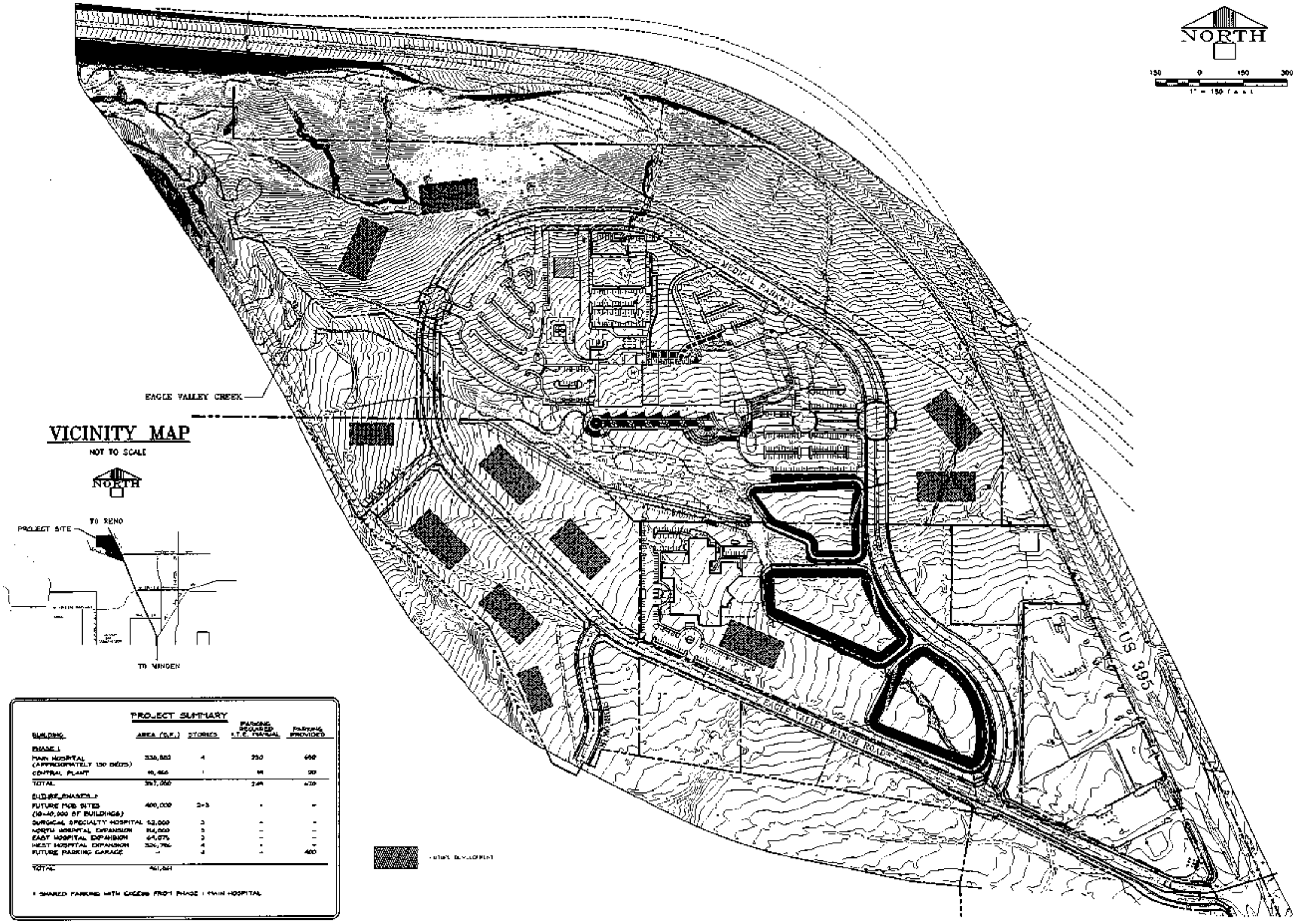
4) The connection between basin 2 and 3 will be via a 2' x 4' box culvert. The connection out of basin 3 will be via a 36" RCP pipe that will then connect directly to NDOT/CC's 48" RCP storm drain system that runs east along Eagle Valley Ranch Road then across US 395.

5) The hospital has proposed two crossing which are in the permit. The first being an 8-inch conduit crossing Eagle Valley Creek and a vehicular. This crossing will be provided by a con-span bridge which will span the Waters of the United States and does not require fill. However, there will be a need to supply a crossing for sewer, water and common utility trench. These cross sections have been included with transmittal.

6) A complete Master Plan of the site has been included.

Please keep in mind that the project we are requesting the Individual Permit for is directly related to the detention basins and the need for flood control, not the overall site development.

Please give me a call at 884-0479 if you have any questions. Thanks.



PROJECT SUMMARY

BUILDING	AREA (S.F.)	STORIES	PARKING REQUIRED I.T.E. MANUAL	PARKING PROVIDED
PHASE I				
MAIN HOSPITAL (APPROXIMATELY 150 BEDS)	330,600	4	230	660
CENTRAL PLANT	16,460	1	14	20
TOTAL	347,060		244	[illegible]
FUTURE PHASES *				
FUTURE MOB SITES (10-40,000 SF BUILDINGS)	400,000	2-3	-	-
SURGICAL SPECIALTY HOSPITAL	52,000	3	-	-
NORTH HOSPITAL EXPANSION	114,000	5	-	-
EAST HOSPITAL EXPANSION	64,075	3	-	-
WEST HOSPITAL EXPANSION	326,706	4	-	-
FUTURE PARKING GARAGE	-	4	-	400
TOTAL	[illegible]			

* SHARED PARKING WITH EXCESS FROM PHASE I MAIN HOSPITAL

PALMER & LAUDER ENGINEERS, INC.
611 N. Nevada Street, Carson City, Nevada 89703
PHONE (775) 884-0470 FAX (775) 884-4226 WEBSITE www.pl-eng.com

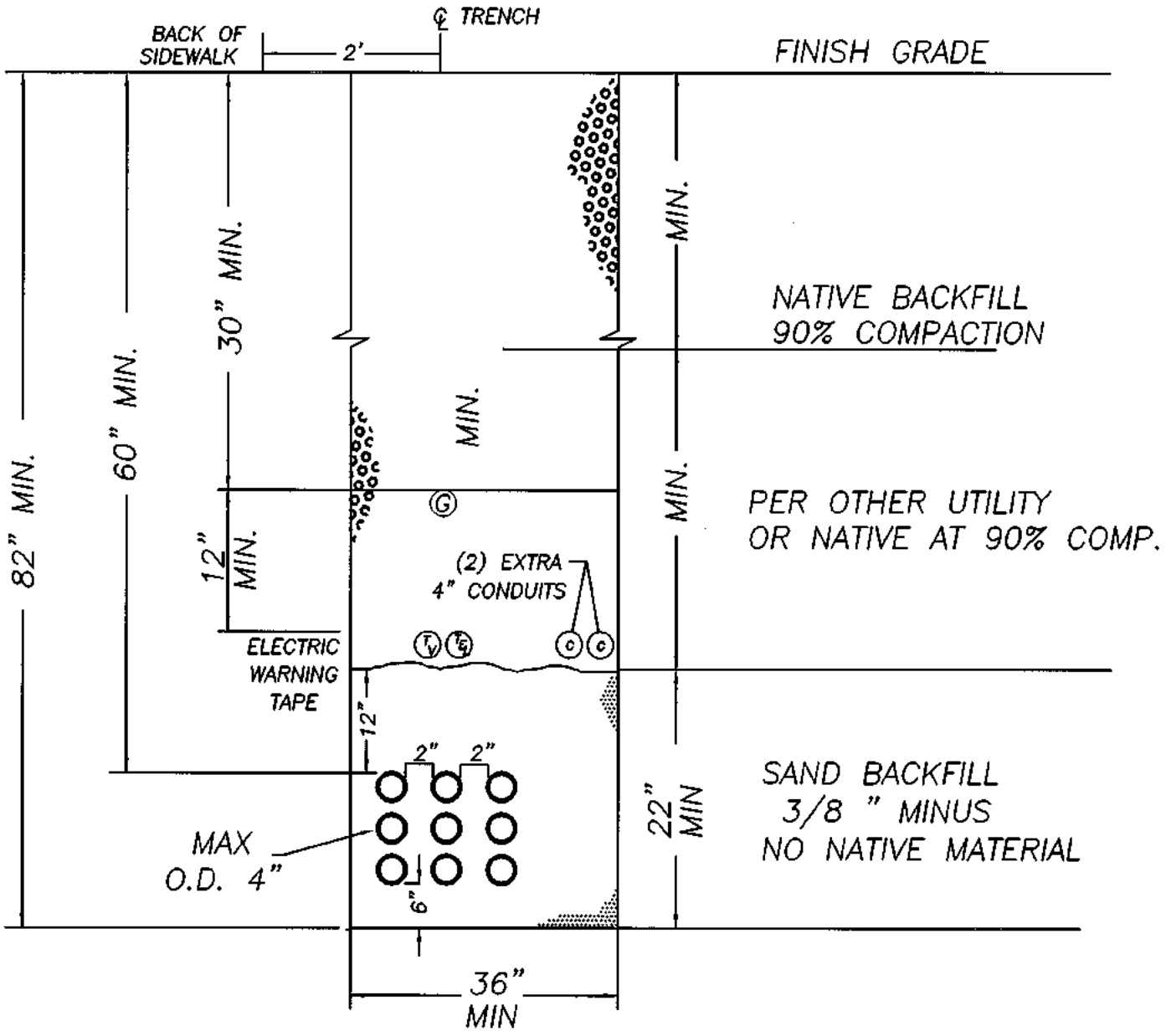
CARSON TAHOE HOSPITAL

MASTER PLAN

CARSON TAHOE REGIONAL MEDICAL FACILITY
CARSON CITY, NEVADA

SHEET	
JOB # 020031	
DESIGN BY	MFF
DRAWN BY	MFF
CHECKED BY	MBP
DATE	[illegible]
FILE	Master Plan.dwg

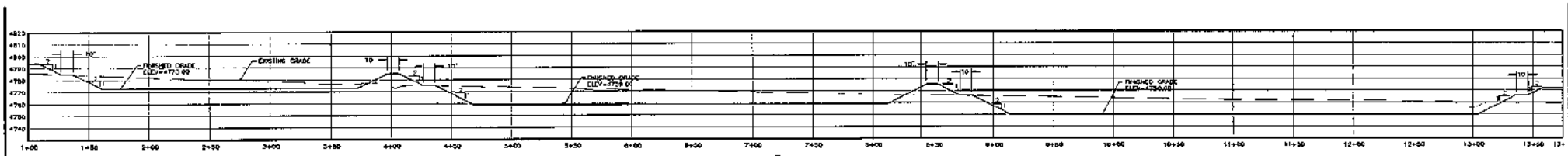
BACK FILL SPECIFICATIONS: PER SPPC STD. SUB–OIX;
SAND (2.1), CRUSHED GRAVEL (2.2), NATIVE (2.3)



PRIMARY AND/OR SECONDARY TRENCH DETAIL

NTS

TYPICAL UTILITY TRENCH WITHIN P.U.E.



④ SECTION C–C
VERT. SCALE 1"=10'
HORIZ. SCALE 1"=40'

(b) (6) SPK

From: Gebhart, Richard A. SPK
Sent: Monday, September 15, 2003 2:10 PM
To: 'cclark@jbrenv.com'
Cc: (b) (6) SPK
Subject: Carson Tahoe Regional Hospital info...

As I mentioned, I am sending you a follow-up note that reminds you of the things we discussed this morning:

* Will there be a supplemental water supply / source to help establish vegetation in the newly constructed channel and detention basins 2 and 3?
* Please send us a typical cross section of the flood detention basin 2 and / or 3.
* Please send us a typical cross section of the 5-year event overflow diversion structure that will be placed in Eagle Creek.
* How is the newly constructed channel between basin 2 and 3 connected, via culvert or open channel? Also is there a culvert or open channel conveying flows between basin 3 and the downstream roadside ditch?
* The latest submittal from Palmer and Lauder Engineers shows the newly proposed 8-inch conduit. If there are other utilities that will cross Eagle Creek, they should also be included in the proposal, along with project locations and a typical trench cross section.
* The Palmer and Lauder Engineer drawing shows development (buildings) on the south side of Eagle Creek. These structures are not depicted on the JBR drawings. A complete site development plan should be submitted before the permit is issued.

We will await final cultural resources survey and approval from SHPO before proceeding with the permit decision.

(b) (6)
Reno Regulatory Office
US Army Corps of Engineers
775-784-5307 (5304)

ALLEN BIAGGI, *Administrator*

(775) 687-4670

Administration
Facsimile 687-5856

Water Pollution Control
Facsimile 687-4684

Mining Regulation and
Reclamation
Facsimile 684-5259

STATE OF NEVADA
KENNY C. GUINN
Governor

R. MICHAEL TURNIPSEED, *Director*

Waste Management
Corrective Actions
Federal Facilities

Air Pollution Control
Air Quality Planning
Water Quality Planning

Facsimile 687-6396

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

DIVISION OF ENVIRONMENTAL PROTECTION

333 W. Nye Lane, Room 138

Carson City, Nevada 89706

July 29, 2003

(b) (6)
U.S. Army Corps of Engineers
Nevada/Sierra Regulatory Office
300 Booth Street Rm. 2103
Reno, NV 89509

Dear (b) (6)

Nevada Division of Environmental Protection (NDEP) grants 401 Certification for the Carson Tahoe Regional Medical Facility Project (PN 200325013) in Carson City, Nevada. BMP's must be properly installed and maintained throughout the project construction period until all disturbed areas are stabilized. Photographs of BMP's must be submitted to this office within two weeks of their installation. If straw bales are selected as BMPs they should be certified as weed free.

Any modifications to original project submittal must be reviewed and approved by this office prior to implementation.

All conditions of NDEP's Temporary Authorization To Discharge Permit (Construction / Dewatering Permit) or any other permit issued by NDEP for the project must be followed.

This Section 401 Water Quality Certification is subject to the acquisition of all necessary local, regional, state and federal permits and approvals as required by law. Failure to meet any conditions of this 401 Water Quality Certification or the Temporary Authorization Permit (Construction/Dewatering Permit) or any other permit issued by NDEP for this project or any violation of NAC 445A may result in the revocation of this 401 Water Quality Certification.

If you have any question please give me a call.

Sincerely yours,

Glen Gentry

Glen Gentry
Monitoring Branch Supervisor
Bureau Water Quality Planning

cc: Catherine Clark, JBR Consultants Inc.
Icyl Mulligan, NDEP

Post-it® Fax Note 7671	Date 9-10-03	# of pages ▶ 2
To (b) (6)	From Glen	
Co./Dept. COE	Co. NDEP	
Phone #	Phone # 687-9448	
Fax # 784-5306	Fax #	

(NSPO Rev. 7-02)

1991

ALLEN BIAGGI, *Administrator*

(775) 687-4670

Administration
Facsimile 687-5856

Water Pollution Control
Facsimile 687-4684

Mining Regulation and
Reclamation
Facsimile 684-5259

STATE OF NEVADA
KENNY C. GUINN
Governor

R. MICHAEL TURNIPSEED, *Director*

Waste Management
Corrective Actions
Federal Facilities

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If you have any question please give me a call.

Sincerely yours,

Glen Gentry
Monitoring Branch Supervisor
Bureau Water Quality Planning

JUL 30 2003

cc: Catherine Clark, JBR Consultants Inc.
Icyl Mulligan, NDEP

July 17, 2003

Regulatory Branch (200325013)

Rebecca Lyn Palmer
Nevada State Historic Preservation Office
100 Stewart Street
Carson City, NV 89701-4285

Dear Ms. Palmer:

The US Army Corps of Engineers (Corps) has received your request for supplemental information about the proposed Carson Tahoe Regional Medical Facility. You requested a (topographic) map to show the project area of impact.

Enclosed in this letter are the public notice (Enclosure 1) that describes the project; the public notice also provides project location information. Enclosure 2 is a topographic map of the project area showing the approximate project boundary. Sheet 2 of 2 of the public notice (Enclosure 1) shows the precise project boundary.

If you have any questions or need more clarification, you may write the US Army Corps of Engineers, Reno Regulatory Office, 300 Booth St Rm 2103, Reno NV 89509-1361 or call 784-5304. You may also send an email to: (b) (6) [redacted]@usace.army.mil.

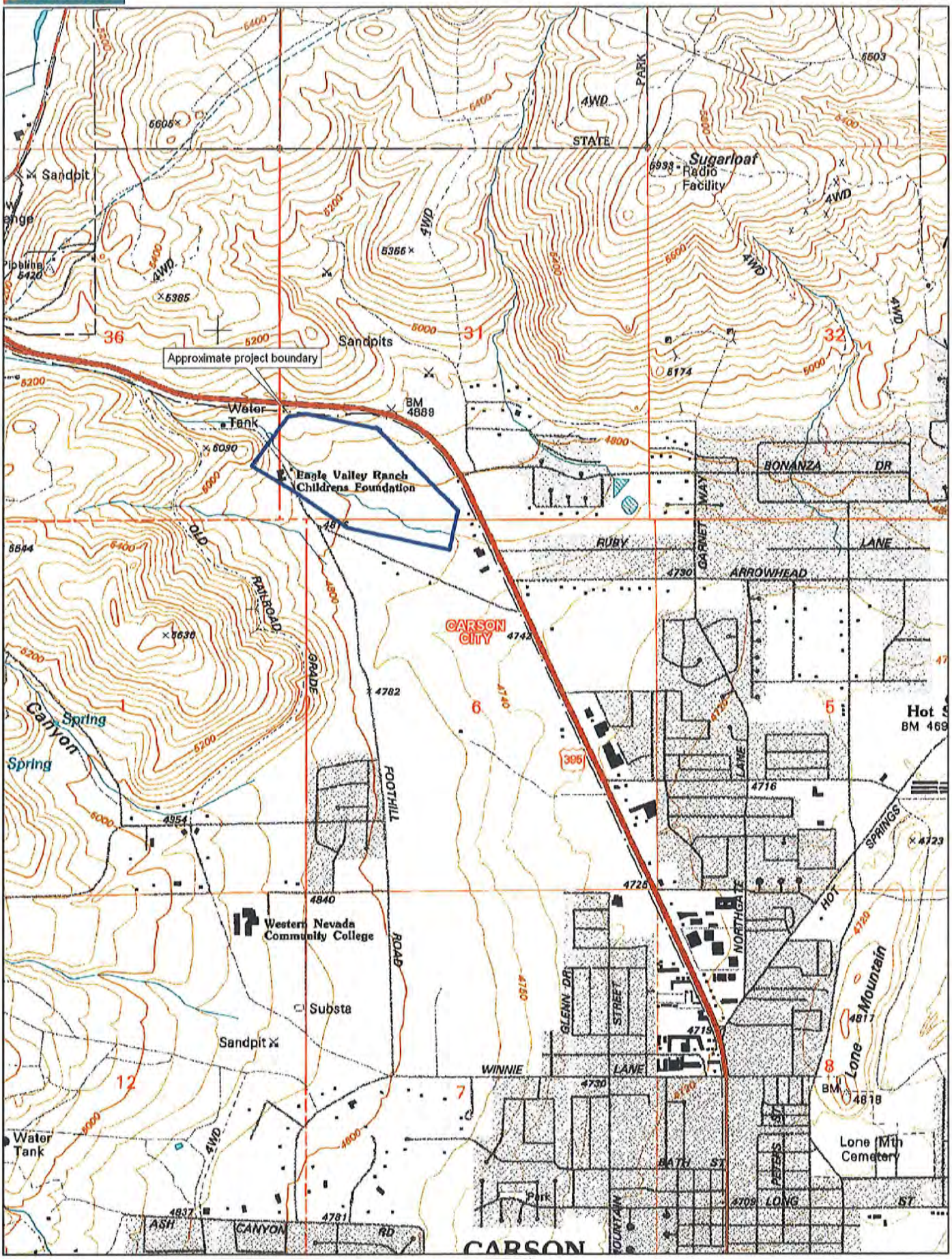
Sincerely,

(b) (6) [redacted]

Chief, Reno Regulatory Office

Enclosures

DeLORME XMap® 4.0



Carson Tahoe Regional Medical Facility
Corps Number 200325013
July 2003
Enclosure 2

Data Zoom 13-2

June 13, 2003

Regulatory Branch (200325013)

Rebecca Palmer
Nevada State Historic Preservation Office
Capitol Complex, 100 Stewart St
Carson City NV 89701-4285

Dear Ms. Palmer:

The US Army Corps of Engineers (Corps) has received supplemental cultural resources survey information from the applicant of the proposed Carson Tahoe Regional Medical Facility. A copy is enclosed for your review.

Please review this supplementary information for Section 106 compliance. This proposed activity has been assigned Corps number 200325013. Please reference that number in any correspondence concerning this activity. If you have any questions or need more clarification, you may write the US Army Corps of Engineers, Reno Regulatory Office, 300 Booth St Rm 2103, Reno NV 89509-1361 or call 784-5304. You may also send an email to: (b) (6) [redacted]@usace.army.mil.

Sincerely,

(b) (6) [redacted]
Chief, Reno Regulatory Office

Enclosure

jbr environmental consultants, inc.
www.jbr-env.com
4741 Caughlin Parkway, Suite 2 • Reno, Nevada 89509 [P] 775.747.5777 [F] 775.747.2177

June 13, 2003

RECEIVED
JUN 13 2003
Via hand delivery

(b) (6)
U.S. Army Corps of Engineers
300 Booth Street, Room 2103
Reno, NV 89509

Re: Cultural Resource Inventory Report, Carson Tahoe Regional Medical Facility
Corps Reference No. 200325013
JBR Project No. MacKay-01

Dear (b) (6),

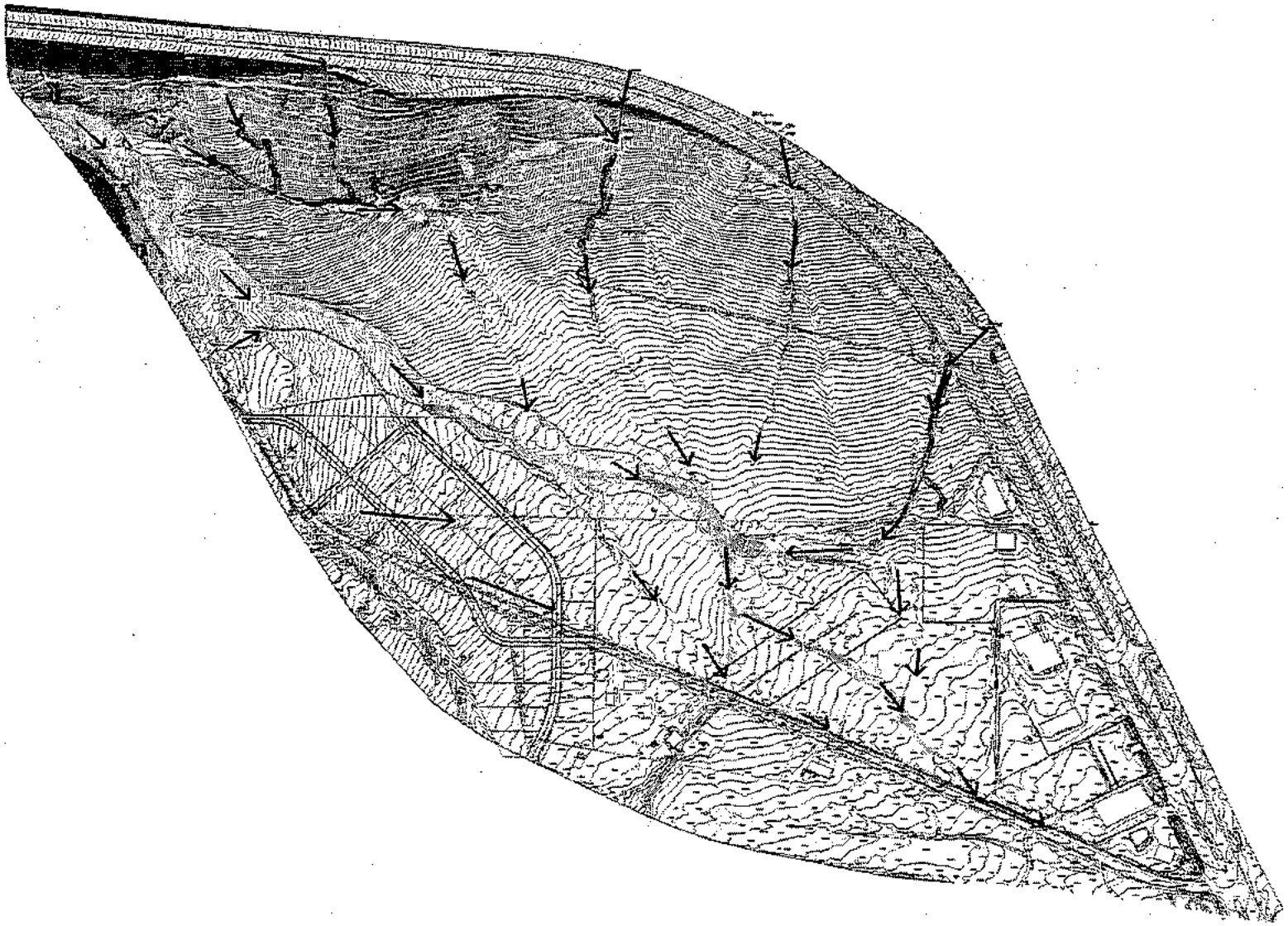
Please find enclosed two copies of the Cultural Resource Inventory Report for the Carson Tahoe Regional Medical Facility (CTRMF). According to the original Corps Permit Application this Cultural Resource Inventory Report was previously submitted to the U.S. Army Corps of Engineers. Per your request, here is an additional copy to facilitate the processing of the Corp Permit Application for the CTRMF.

Should you need further information or have any question, please feel free to contact Catherine Clark (775) 747-5777.

Sincerely,

JBR ENVIRONMENTAL CONSULTANTS, INC.

Tina Kadrmas
Environmental Analyst



N

Carson Tahoe Regional Medical Facility

Figure 3 Original Site Drainage

jbr environmental consultants, inc.
Salt Lake City, Utah Cedar City, Utah Reno, Nevada Elko, Nevada

DESIGN BY	DRAWN BY		SCALE

(b) (6) SPK

From: Catherine Clark [cclark@jbr-env.com]
Sent: Wednesday, June 04, 2003 9:23 AM
To: (b) (6)
Cc: Bsantner; Mark Palmer
Subject: Carson Tahoe Hospital

(b) (6) -

Please let this e-mail serve as formal notification for a change/revision in the permit application for the Carson Tahoe Hospital Project. This project involves the construction of three detention basins. Carson City expects an annual maintenace dredging to entail the removal of approximately 100 cubic yards (CY) from detention basin 1. However, in the 100 year event, there may be a need to remove about 4 acre-feet of sediment, amounting to a yield of approximately 6,500 CY from detention basin 1.

For your information, the project involves two flow's. The main stream will always flow though the diversion structure, to the wetlands and detention basins 2 and 3. The only time detention basin 1 will see flow is when the stream exceeds the 5 year flow and the flow is diverted to basin 1. The main/ jurisdictional channel is located within basin 2 and 3 (however flows will go into detention basin 1 when needed).

Per our email of last week, you indicated that you could allow "maintenance" as part of the Corps permit for the Carson Tahoe Hospital Project. Specifically, we are requesting to perform maintenance, as

needed within
detention basin 1, and would include the removal of as much as 6,500 CY at
any one time, to maintain the detention basin's capacitites. If possible,please specify this in the permit for Carson Tahoe Hospital.

Please let me know if this request is acceptable, whether you need a formal
letter sent, or if JBR can be of further assistance. Thank you for your time
and consideration.

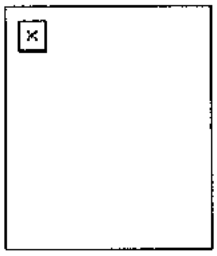
Catherine Clark
Manager, Natural Resource Group
JBR Environmental Consultants, Inc.
4741 Caughlin Parkway, Suite 2
Reno, Nevada 89509
775-747-5777 phone
775-747-2177 fax
cclark@jbr-env.com

(b) (6) [redacted] **SPK**

From: Glen Gentry [ggentry@ndep.nv.gov]
Sent: Monday, May 05, 2003 11:54 AM
To: (b) (6) [redacted] (E-mail)
Cc: Icyl Mulligan
Subject: Carson Tahoe Medical Facility (PN 200325013)

Just to let you know, I've talked to Nancy Nething at JBR and asked for additional information. She is waiting for the same info and expects it around May 15th and which time she will sent it to Icyl and myself. So in the mean time 401 Certification is denied until that info is reviewed and approved. Then 401 should be issued. Any question, please give me a call.

glen



Glen Gentry
Monitoring Branch Supervisor
Bureau of Water Quality Planning
333 W. Nye Lane, Suite 138
Carson City, Nevada 89706-0851
Phone: (775) 687-9448
Fax: (775) 687-5856
e-mail: ggentry@ndep.nv.gov

Public Notice

Public Notice Number: 200325013
Date: March 4, 2003
Comments Due: April 3, 2003

US Army Corps
of Engineers

Sacramento District
1325 J Street
Sacramento, CA 95814-2922

In reply, please refer to the Public Notice Number

The District Engineer, Sacramento District, Corps of Engineers (Corps) is evaluating a permit application from the Carson Tahoe Hospital. The purpose of this notice is to inform interested parties of a proposed work activity and to solicit comments. This proposal is being evaluated under Section 404, Clean Water Act, for excavation and / or discharge of dredged or fill material into waters of the United States. The proposed project is described below and shown on the attached drawings. This notice may also be viewed at the Corps web site at: http://www.spk.usace.army.mil/cespk-co/regulatory/PNs/.

Applicant: Carson Tahoe Hospital, PO Box 2168, Carson City NV 89702-2168

Location: The project site is in northwest Carson City in Section 31, Township 16 North Range 20 East and Section 6, Township 15 North, Range 20 East, Carson City County, Nevada in the Carson City USGS Topographic Quadrangle.

Purpose: The purpose of the proposed fill is develop a new regional medical facility and provide for stormwater detention.

Project Description: The applicant is proposing to construct the Carson-Tahoe Regional Medical Facility on a 69 acre site, consisting of a main hospital, central plant building, and associated roads and parking lots. They are also proposing to construct a series of three stormwater detention basins that will require the relocation of a portion of Eagle Creek, a tributary of the Carson River. Approximately 1,520 feet of creek is proposed to be filled: 1,250 feet (0.63 acres) of the existing, unaltered creek and 270 feet of a channelized portion that is now a roadside ditch. Three detention basins are proposed: detention basin 1 (1.6 acres), detention basin 2 (2.3 acres), and detention basin 3 (2.1 acres). The creek is proposed to be filled to cause a new channel of the creek to flow thru the detention basins 2 and 3. A culvert from detention basin 3 will divert flows back into Eagle Creek. The channelized portion of the creek that is now in a roadside ditch will be culverted. Nearly all the creek from this point to the Carson River is now culverted. The purpose of relocating the creek and creating the detention basins is to control flood events and prevent flooding downstream. The bottleneck of the creek is the culvert as it passes under Highway 395. Pedestrian and vehicular access to the new facility will cross the creek via bridges over Eagle Creek. These creek crossings will span the creek and not involve a discharge in the creek. The attached maps and drawings provide additional project details.

The applicant believes there is a need to build a Carson-Tahoe Regional Medical Facility. There is also a need to provide stormwater detention to prevent north Carson City flooding problems. The existing hospital is over-capacity and lacks room to expand to provide additional services. The present site will allow for expansion, better access, and more medical services. The project site also provides an opportunity to provide badly needed stormwater detention. Rapid growth and development and the filling and culverting of existing creeks has created flooding issues.

The Corps requires that applicants consider and use all reasonable and practical measures to avoid and minimize impacts. If the applicant is unable to avoid or minimize all impacts, the Corps may require compensatory mitigation. The Corps has not determined if compensatory mitigation will be required if the proposed impacts are authorized. However, in anticipation of an affirmative permit decision and a need to provide compensatory mitigation, the applicant has proposed to route the filled creek portion through the lower two detention basins which will increase the (filled) creek length by 340 feet. The detention basins will also serve as expanded adjacent wetlands, providing common wetland functions. Detention basins 2 and 3 will be vegetated with native, hydrophytic plants to create localized habitat needs.

Environmental Setting: The project site is located in a rural, undeveloped portion of northwest Carson City. Eagle Creek is an intermittent tributary that originates less than two miles west of the project site; downstream of the project site, it appears to be culverted until it discharges into the Carson River. The existing creek has sporadic occurrences of willows and cottonwoods and very few adjacent wetlands. One adjacent wetland on the project site will be avoided and is just north of the proposed detention basin 2 location. The upland portion of the project site is typical of undeveloped Nevada: rural sagebrush community. The site is relatively flat, with about 90 feet of topographic relief from west to east.

Additional Information: Additional information may be obtained from the applicant inCarson City or by calling Richard Gebhart, Project Manager, Corps of Engineers at 775-784-5304 in Reno. Participation is encouraged so that the District Engineer is better able to complete a more thorough public interest review. Comments assist the Corps to make a reasonable decision based on public interest factors. The District Engineer is particularly interested in receiving comments related to the proposals probable impacts on the affected aquatic systems functional values and the cumulative and secondary effects.

Water Quality Certification: A permit for the described work will not be issued until certification, as required under Section 401 of the Clean Water Act, has been granted or is waived from the Nevada Division of Environmental Protection (NDEP). A waiver will be deemed to occur if the state fails or refuses to act on the request for certification within 60 days.

Section 404(b)(1) Evaluation: The activity 's impact on the public interest will include application of the 404 (b) (1) guidelines promulgated by the Administrator, Environmental Protection Agency.

Public Hearing: Before the expiration date of this notice, anyone may request, in writing, that a public hearing be held to consider this application. Requests shall specifically state the reason(s) for holding a public hearing. If the District Engineer determines that the information received in response to this notice is inadequate for thorough evaluation, a public hearing may be warranted. If a public hearing is warranted, interested parties will be notified of the time, date, and location.

Endangered Species: Preliminary review for species protected under the Endangered Species Act (ESA) of 1973 (87 Stat. 844) indicates that the described activity will not affect listed species or their critical habitat. Consultation under Section 7 of the ESA is not required for the described activity.

Cultural Resources: In accordance with Section 106 of the National Historic Preservation Act, initial review of cultural resources information available in the National Register of Historic Places and its current supplements indicates that no historic properties would be affected by the proposed activity. This notice was sent to the Nevada State Historic Preservation Office.

Evaluation: The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the described activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the described activity must be balanced against its reasonably foreseeable detriments. All factors, which may be relevant to the described activity will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, consideration of property ownership and, in general, the needs and welfare of the people.

The Corps of Engineers is soliciting comments from the public; federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and / or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

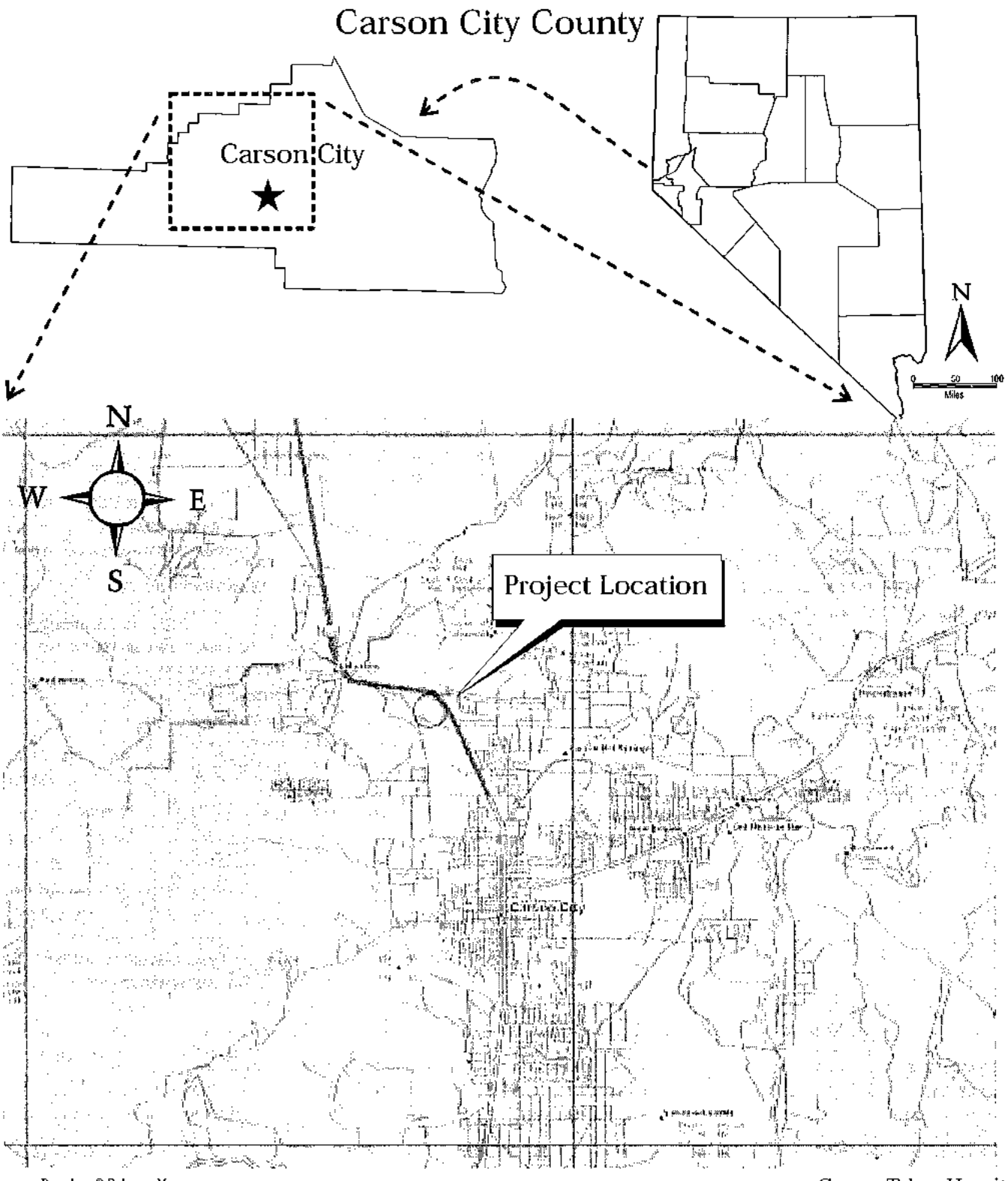
Submitting Comments: Comments must be received on or before the expiration date (located on top of the first page of this notice) to be considered in subsequent actions on this application. When submitting comments, reference the Corps number. Please note that all comment letters received are subject to release to the public through the Freedom of Information Act. Anyone whose interests may be affected by the proposed work is invited to submit favorable or unfavorable written comments to:

US Army Corps of Engineers
Reno Regulatory Office (Gebhart)
300 Booth Street Rm 2103
Reno NV 89509-1361
Email: richard.a.gebhart@usace.army.mil

Additional Requirements: State law requires that leases, easements, or permits be obtained for certain works or activity in the described waters. These state requirements must be met, where applicable, and a Department of the Army permit must be obtained before any work within the applicable statutory authority, previously indicated, may be accomplished. Other local governmental agencies may also have ordinances or requirements which must be satisfied before the work is accomplished.

Michael J. Conrad, Jr.
Colonel, US Army
District Engineer

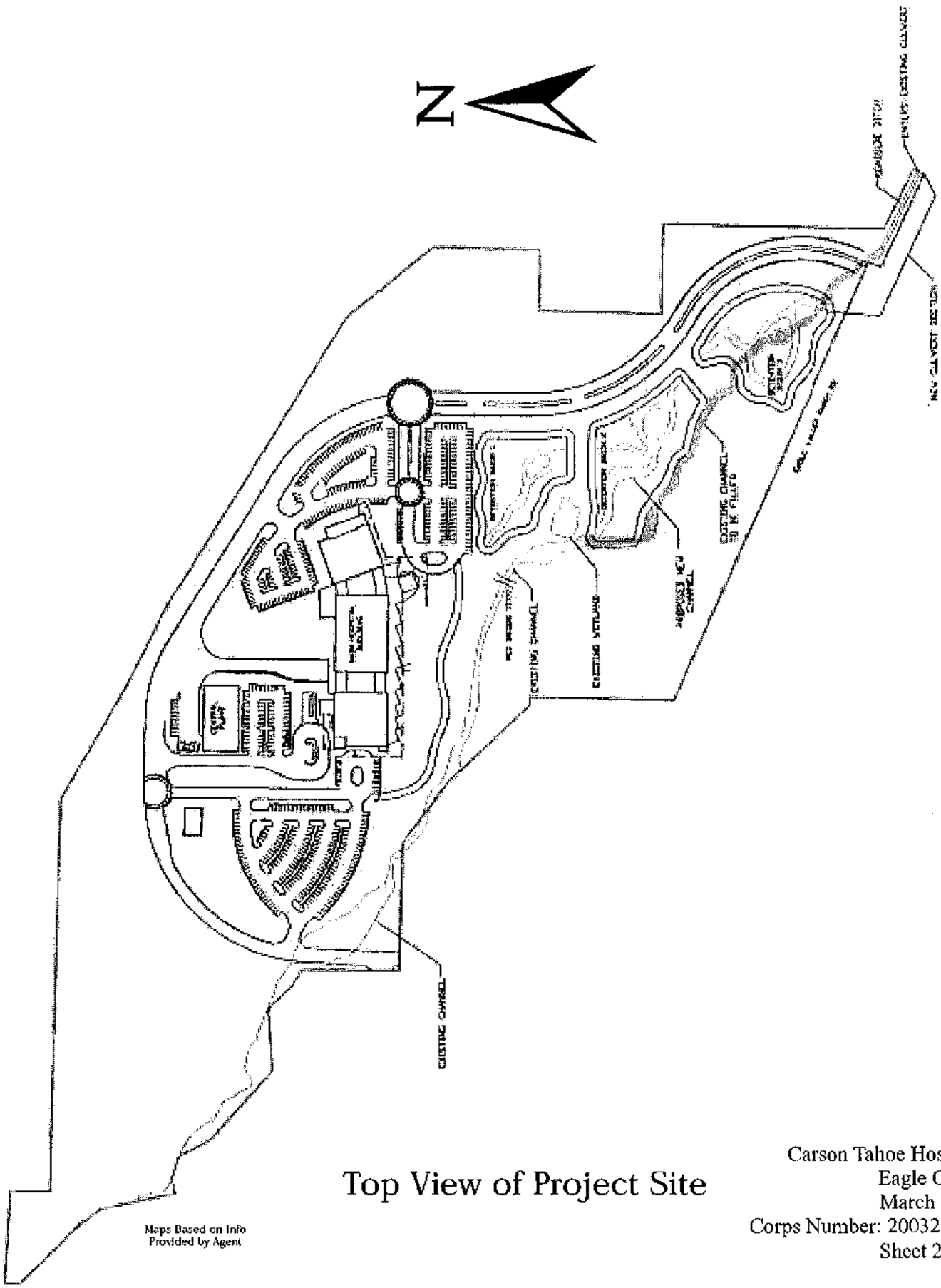
Attachments



Based on © Delorme Maps
X-Maps 3.5 with Quadrangle Names

Project Vicinity Maps

Carson Tahoe Hospital
Eagle Creek
March 2003
Corps Number: 200325013
Sheet 1 of 2



Top View of Project Site

Maps Based on Info
Provided by Agent

Carson Tahoe Hospital
Eagle Creek
March 2003
Corps Number: 200325013
Sheet 2 of 2

jbr
environmental consultants, inc.
4741 Caughlin Parkway, Suite 2 • Reno, Nevada 89509 • Phone: (775) 747-5777 • Fax (775) 747-2177

January 28, 2003

(b) (6)
U.S. Army Corps of Engineers
C. Clifton Young Federal Building
300 Booth Street, Room 2103
Reno, Nevada 89509

RE: Submittal of Documents

Dear (b) (6)

Please find enclosed one copy of the following documents:

√ **Carson-Tahoe Regional Medical Facility:**
Pre-Discharge Notification, Placement of Fill Material in Waters of the U.S., Carson-Tahoe Regional Medical Facility, Carson City, Nevada.

Delineation of Wetlands and Waters of the U.S. Carson Tahoe Regional Medical Facility, Carson City, Nevada.

Mountain Meadows Estates:
Regulated Waters of the United States, Figure 5.

Lawton Verdi Interceptor:
Truckee River Ventures mobile Home Park, Figure 5C.

Somersett
Delineation of Wetlands and Waters of the U.S. Somersett Southwestern Additions, Reno, NV.

If you have questions about these documents, I can be reached in our Reno office at 747-5777.

Sincerely,

JBR ENVIRONMENTAL CONSULTANTS, INC.

Nancy Speaker Nething, RG
Senior Scientist

PRE-DISCHARGE NOTIFICATION
PLACEMENT OF FILL MATERIAL
IN WATERS OF THE U.S.
CARSON-TAHOE REGIONAL MEDICAL FACILITY
CARSON CITY, NEVADA

Submitted to:

U.S. Army Corps of Engineers
C. Clifton Young Federal Building
300 Booth Street
Reno, Nevada 89509

Applicant:

Carson Tahoe Hospital
P.O. Box 2168
Carson City, Nevada
89702-2168

Contact: Mr. Ed Epperson

Prepared by:

JBR Environmental Consultants, Inc.
4741 Caughlin Parkway, Suite 2
Reno, Nevada 89509

Contact: Ms. Nancy Nething

January 27, 2003

PRE-DISCHARGE NOTIFICATION
PLACEMENT OF FILL MATERIAL IN WATERS OF THE U.S.
CARSON-TAHOE REGIONAL MEDICAL FACILITY

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PRE-DISCHARGE NOTIFICATION
PLACEMENT OF FILL MATERIAL IN WATERS OF THE U.S.
CARSON-TAHOE REGIONAL MEDICAL FACILITY

1.0 INTRODUCTION

Carson Tahoe Hospital is proposing to construct the Carson-Tahoe Regional Medical Facility (CTRMF) in northwest Carson City, Nevada. Construction on the approximately 69-acre site is scheduled to begin in June 2003. The development would include a main hospital building, central plant building, roads, parking lots, helicopter landing area, and landscaping. The medical facilities would be constructed on non-jurisdictional upland areas. Three stormwater detention basins would be constructed on the south side of the development. Construction of the detention basins would involve relocation of a portion of jurisdictional channel so that it flows through two of the basins. A delineation of waters of the United States (WOUS) was performed on a portion of the project area by Resource Concepts, Inc. in April 1999. This delineation was reviewed and approved by the U.S. Army Corps of Engineers (Corps) on October 20, 1999. JBR Environmental Consultants, Inc. (JBR) performed a delineation of WOUS for the remainder of the project area in December 2002. JBR's delineation is being submitted with this document.

This submittal represents a Pre-Discharge Notification to the Corps for Nationwide Permit 43 (Stormwater Management Facilities). The proposed project would result in approximately 1,490 linear feet and 27,375 square feet (0.63 acres) of permanent impacts to waters of the United States resulting from relocation of a channel.

2.0 APPLICANT

The project applicant is:

Carson Tahoe Hospital
P.O. Box 2168
Carson City, Nevada
89702-2168

Contact: Mr. Ed Epperson

3.0 GENERAL LOCATION

The project site is located in the northwest portion of Carson City, Nevada northwest of the intersection of U.S. Highway 395 and Eagle Valley Ranch Road. Specifically, the parcel is located in portions of the southwest ¼ of Section 31, Township 16 North, Range 20 East and the northwest ¼ of Section 6, Township 15 North, Range 20 East. Figure 1 shows the project's regional location and Figure 2 presents the proposed conceptual development plan.

4.0 PROJECT SITE CHARACTERISTICS

The project area is located below the eastern foothills of the Carson Range of the Sierra Nevada. The land slopes generally to the southeast, with elevations ranging from approximately 4,840 feet in the west to approximately 4,750 feet in the southeast corner. The project area is drained by Eagle Creek, which flows southeast, enters the Carson City stormwater system, and eventually flows to the Carson River. Eagle Creek is an intermittent drainage whose flow is augmented in the project area by runoff from U.S. Highway 395 to the north. The lower portion of the creek is deeply incised and has much less riparian vegetation than the upper portion. A small, off-channel wetland is located on the east side of the creek.

The survey area is largely undeveloped. Dirt roads enter the area from the east and southwest. A power transmission line crosses parcel and provides power to the Eagle Valley Children's Home, to the west of the regional medical facility property.

The plant community present in the area includes big sagebrush (*Artemisia tridentata*), antelope bitterbrush (*Purshia tridentata*), desert peach (*Prunus andersonii*), rubber rabbitbrush (*Chrysothamnus nauseosus*), squirreltail (*Sitanion hystrix*) and cheatgrass (*Bromus tectorum*). Sandbar, yellow and Pacific willow border Eagle Creek, and on the eastern part of the parcel, occur along old channels of the creek . Yellow willow (*Salix lutea*) and Pacific willow (*S. lasiandra*) are more common on the western portion of the parcel; sandbar willow (*S. exigua*) is more common on the eastern portion of the parcel. Scattered Fremont cottonwood (*Populus fremontii*) trees and a few Russian olives (*Elaeagnus angustifolia*), as well as areas of wild rose (*Rosa woodsii*), occur along the creek. Burned sagebrush stumps and fence posts show the area was burned in the past, though vegetation on the parcel appears to have recovered from this burn. Crested wheatgrass is common south of Eagle Creek, and was probably planted as a part of the post-fire rehabilitation of the site. A few planted fruit trees and grapes (*Vitis* sp.) are found north of the creek, in the western part of the survey area. A few young Jeffrey pines (*Pinus jeffreyi*) are also found in the western part of the survey area, adjacent to Eagle Creek. Photos of vegetation in the project area are included in JBR's

wetland delineation report (*Delineation of Wetlands and Waters of the United States, Carson-Tahoe Medical Facility, Carson City, Nevada*).

5.0 PROPOSED ACTIVITY AND PURPOSE

5.1 SUMMARY/PURPOSE

The CTRMF would be constructed on the approximately 69-acre site (Figure 2). The development includes construction of buildings, roads, parking lots, a helicopter landing pad, and landscaping. Three stormwater detention basins would be constructed on the south side of the medical facility. Paragraphs 5.2 through 5.4 discuss the proposed project design and construction in more detail.

In 1999, the Eagle Creek Detention Basin project was proposed on the site of the current project. The Detention Basin project was to have been part of the stormwater management system required as a result of constructing the proposed Carson City Bypass. A WOUS delineation, cultural resources inventory, and application to the Corps for a Nationwide Permit 26 (File Number 199925111) were prepared. The Detention Basin project was not implemented. The on-site detention basins that would be constructed under the present project would serve the purpose of the 1999 project.

5.2 MEDICAL FACILITY AND INFRASTRUCTURE

The three story main hospital building has a footprint of approximately 120,000 square feet and the central plant building has a footprint of approximately 18,500 square feet. The main hospital, central plant building, and parking lots would be constructed on upland, non-jurisdictional areas. The main access road and two or three pedestrian walkway bridges would cross Eagle Creek. All of these crossings would span Eagle Creek and would not require work in jurisdictional areas.

5.3 DETENTION BASINS

Three detention basins are proposed to be constructed south of the CTRMC and north of the existing location of Eagle Creek. Detention Basin 1 is approximately 1.6 acres in size with a capacity of 13.18 acre-feet and would receive flows only when the creek water level exceeded the five-year event. The outflow from Detention Basin 1 would enter Detention Basin 2 through a culvert. Eagle Creek would be diverted from its present course to flow into the northwest corner of Detention Basin 2, then through a culvert into Detention Basin 3. A culvert in the southeast corner of Detention Basin 3 would convey attenuated flows from Eagle Creek to the Carson City stormwater system. Detention Basins 2 and 3 cover approximately 2.3 and 2.1 acres, with capacities of 19.98 and 18.02 acre-feet, respectively.

Low-flow channels would be constructed at the bottom of Detention Basins 2 and 3. The channels would convey normal flows through the detention system. The channels would be landscaped with native riparian trees and shrubs capable of withstanding periodic inundation during flood events. Appendix A presents a draft list of plant species to be used for re-vegetation on the project site.

Best Management Practices (BMPs) would be used to protect channels from sediment input during construction. Silt fences would be installed at the limits of grading along all channels. Routine maintenance of the detention basins would be performed by CTRMF and Carson City would be responsible for any large-scale maintenance projects (e.g., caused by a 50-year event or greater) that were beyond the capabilities of CTRMF.

6.0 DISCHARGE OF DREDGED OR FILL MATERIAL

Two jurisdictional delineations have been completed in the project area. Resource Concepts, Inc. performed a delineation of WOUS on a portion of the project area in April 1999. This delineation was reviewed and approved by the Corps on October 20, 1999. JBR performed a delineation of WOUS for the remainder of the project area in December 2002. JBR's delineation is being submitted to the Corps for approval with this document.

The proposed project would relocate the lower portion of Eagle Creek from its existing channel to new channels that would flow through two of the new detention basins. The purpose of relocating the existing channel into the detention basins is to allow control of flood flows and prevent flooding downstream. Approximately 1,230 feet of the existing channel would be filled (Figure 3) and approximately 1,590 feet of new channels would be constructed as mitigation. Eagle Creek presently enters a roadside ditch on the north side of Eagle Creek Ranch Road and flows approximately 260 feet east to an existing culvert. The roadside ditch would be replaced with a culvert, which would connect the detention basins to the existing roadside culvert at the end of the ditch. Project impacts to jurisdictional areas are summarized in Table 1.

7.0 DIRECT AND INDIRECT ADVERSE ENVIRONMENTAL EFFECTS

Direct and indirect adverse effects on the environment resulting from the implementation of the proposed project were evaluated and are discussed in the following sections.

7.1 WATER QUALITY

It is the intent of the applicant that existing on-site water quality not be degraded and that water leaving the project site would be the same quality as when it entered. Riparian vegetation on the upper portion of the creek, which contributes to bank stability and maintenance of water quality,

would be preserved. The lower portion of the creek is presently unstable, sparsely vegetated, and the banks are eroded. Three on-site storm water detention basins, which are intended to control downstream flows and stabilize this portion of the creek, are part of the project design. The new detention basins and vegetated lower channels would improve water quality downstream by eliminating the existing erosion problem and preventing flood flows.

Table 1 Summary of Impacts and Mitigation

Proposed Fill	Permanent			Temporary
	Linear Feet	Square Feet	Acres	
Existing Eagle Creek Channel	1,250	27,375	0.63	None
Roadside Ditch	270	n/a	n/a	None
Total Fill	***1,520***	***n/a***	***n/a***	***None***
Proposed Mitigation				
Creation of New Channels	1,590	31,800	0.73	
Total Mitigation	***1,590***	***31,800***	***0.73***	

BMPs would be used to prevent introduction of sediment into channels during construction. Construction in the channels would typically be scheduled during periods of low expected flows.

7.2 CULTURAL RESOURCES

A federal agency undertaking or licensing a project has a duty to make a reasonable effort to identify properties on or eligible for listing on the National Register of Historic Places (NRHP) (36 CFR 800.4(b)). Corps regulations (33 CFR 325, Appendix C) establish the procedures for compliance with Section 106.

Cultural resources on the project site were evaluated in May 1999 by Resource Concepts, Inc. Only one historic period site was identified, and it was determined to be not eligible for the National Register. The summary report, *An Intensive Cultural Resources Inventory of the Eagle Creek Flood Control and Storm Water Routing Project, Carson City, Nevada*, was submitted to the Corps in February 2000. This submittal was part of the Pre-Discharge Notification for the 1999 stormwater detention basin project (File Number 199925111).

7.3 THREATENED AND ENDANGERED SPECIES

Section 7 of the Endangered Species Act (16 USC 1531) requires each federal agency in consultation with the Secretary of the Interior to "insure that an action authorized is not likely to jeopardize the continued existence of any endangered or threatened species."

To assist the Corps in determining the proposed project's effects on threatened and endangered species, JBR contacted the U.S. Fish and Wildlife Service (USFWS) and the Nevada Natural Heritage Program (NNHP) in December 2002. Correspondence from these agencies is presented in Appendix B. The USFWS identified the threatened bald eagle (*Haliaeetus leucocephalus*) and the candidate Webber ivesia (*Ivesia webberi*) as species that could be present.

During the breeding season, bald eagles are closely associated with water and are found along coasts, lake shores, or riverbanks, where they feed primarily on fish. Bald eagles typically nest in large trees, primarily cottonwoods (*Populus* sp.) and conifers, although they have also been known to nest on projections or ledges of cliff faces (Call 1978). Due to the large size of their nests, bald eagles usually build these structures in the largest or stoutest tree in the immediate vicinity (Call 1978). Two characteristics common to most nesting sites are a clear flight path to at least one side of the nest and excellent visibility, often with an unobstructed view of water. Most nests are in the top third of a living tree, with live foliage above the nest providing shade and protection during poor weather (Green 1985). Breeding territories, including the nest tree and favored nearby perches, are defended against other eagles. Alternate nests are also common within the territory. Breeding territories are typically 250 to 500 acres in size (Swenson et al. 1986). Bald eagle nesting activity has been reported near Stampede and Boca reservoirs, approximately 20 miles northwest of the project area, and at Lahontan Reservoir, approximately 35 miles to the northeast.

During winter, bald eagles concentrate wherever food is available. Areas of open water, where fish and waterfowl can be caught, are common wintering sites. Root (1988) notes that Christmas Bird Count data show concentrations of bald eagles occur near rivers, particularly near wildlife refuges where eagles prey on waterfowl, and near power plants, where cooling water discharges tend to keep some waters free of ice. Upland areas are also used in winter, where eagles feed on small mammals and deer carrion. Communal winter roosts are common and located in forested stands that provide protection from the weather. Wintering bald eagles are known to visit Washoe Lake, located approximately four miles north of the project area, and Lake Tahoe. Bald eagles are temporary residents of the agricultural areas south of Carson City during the spring calving season.

The Nevada Natural Heritage Program listed no occurrences of bald eagles near the project area. The habitat appears to be unsuitable for nesting because, although large cottonwood trees are present, there is no large water body to provide fish. The project area is also bordered by sources of human

disturbance, which include a busy highway on the north and east and a golf course and the children's home on the west. It is possible that bald eagles could visit the project as transients in the winter. However, more suitable and less disturbed habitat is available in nearby surrounding areas. Because the bald eagle is not known to be present in the project area, and the habitat is not of high quality, construction of the CTRMF is unlikely to have a measurable effect on the species.

Habitat for Webber ivesia is described by Witham (2000) as mid-elevation (4,480 to 5,950 feet) benches or terraces on slopes of Great Basin mountain ranges. Occupied habitat is generally free of upslope colluvium accumulation. Soils are described as being derived from volcanic clastic rock with significant quantities of quartz and clay minerals. The species is usually co-dominant or dominant with mostly dwarf perennial herbs, grasses and shrubs. Associated plant species include low sagebrush (*Artemisia arbuscula*), Hooker's balsamroot (*Balsamorhiza hookeri*), Douglas' dwarf draba (*Cusickiella douglasii*), rayless daisy (*Erigeron bloomeri*), Douglas' buckwheat (*Erigonum douglasii*), bitterroot (*Lewisia rediviva*), and sagebrush violet (*Viola beckwithii*).

From the Webber ivesia habitat description above, it appears that the project area is unlikely to be suitable for the species. Soils in the area are alluvial and derived from upslope granitic, not volcanic, rock (Trexler 1977). No bud sagebrush, or other species associated with Webber ivesia are known to be present in the project area. The project area includes a riparian vegetation zone along Eagle Creek, which is surrounded by a shrub land dominated by big sagebrush, bitterbrush, desert peach, and rabbitbrush. Therefore, the project area does not appear to be suitable habit for the Webber ivesia.

7.4 WILDLIFE HABITAT

The project area currently provides habitat for birds, small mammals, and reptiles. Mule deer (*Odocoileus hemionus*) tracks were observed near the upper portion of Eagle Creek. Bitterbrush, which forms a portion of the dominant shrub community in the project area is a preferred winter forage item for mule deer. Coyotes, skunks, jackrabbits, and cottontails are also likely to be found. The willows and cottonwood trees along the creek provide nesting and foraging habitat for songbirds and raptors. Approximately 22 acres of upland shrub community in the project area would be converted for building sites, roads, and parking lots, and another 6 acres would be converted for construction of the detention basins. Riparian vegetation along the upper portion of Eagle Creek would remain undisturbed. The sparse riparian vegetation along the lower 1,230 linear feet of the creek would be removed when the channel is relocated. A small, off-channel wetland area and all but one of the existing large cottonwood trees would be preserved.

The Nevada Division of Wildlife (NDOW) was asked to provide comments about wildlife impacts from the project. Mr. Walt Mandeville (2002) of NDOW stated that the area had been good mule

deer habitat in the past, but has become less valuable since development of the highway, businesses, a golf course, and housing.

7.5 CUMULATIVE IMPACT ASSESSMENT

Cumulative impacts have been defined as "The impact which results from the incremental impact of the action, decision, or project when added to other past, present, and reasonable foreseeable future actions, regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time" (40 CFR 1508.7).

The proposed project is not likely to contribute to cumulative impacts on downstream waters. Implementation of BMPs during construction, and construction of the storm water detention basins, should ensure that water quality will not be degraded by the project. In fact, elimination of the existing erosion problem in the lower portion of the creek should improve water quality. Development in Carson City has affected many intermittent and ephemeral channels as they are re-routed or confined to culverts and ditches. The CTRMF project will contribute to development of the north Carson City area, and the effects of development on wildlife habitat, air quality, and natural water channels. The medical center is nevertheless necessary to meet the health needs of a growing population.

8.0 ALTERNATIVES ANALYSIS: AVOIDANCE, MINIMIZATION, AND COMPENSATORY MITIGATION

The CTRMF development has been designed to avoid impacts to jurisdictional waters to the extent possible. The medical center and associated facilities have been located on upland, non-jurisdictional areas. The automobile and pedestrian bridges would span jurisdictional waters to avoid disturbance to the stream channel. The detention basins were placed so as to preserve the small off-channel wetland and as much of the natural channel as possible. The detention basins must, by their nature, be located on, or in close proximity to, the channel whose flow is to be regulated.

The project would mitigate the loss of approximately 1,230 linear feet of natural channel by creating new channels, which would be located in the detention basins. This approach allows the new channels to carry normal flows while the detention basins function to moderate flood flows.

9.0 SUMMARY/CONCLUSION

Carson-Tahoe Hospital is proposing to construct the CTRMF in north Carson City. The project consists of a main hospital building, central plant building, and associated roads and parking lots. Construction of a series of three detention basins will require the relocation of a portion of Eagle Valley Creek, which would be mitigated by construction of new channels. Carson-Tahoe Hospital is applying to the Corps for authorization for the project under Nationwide Permit 43. Carson-Tahoe Hospital proposes to start construction of the CTRMF in July 2003, pending approval of all required permits.

10.0 REFERENCES

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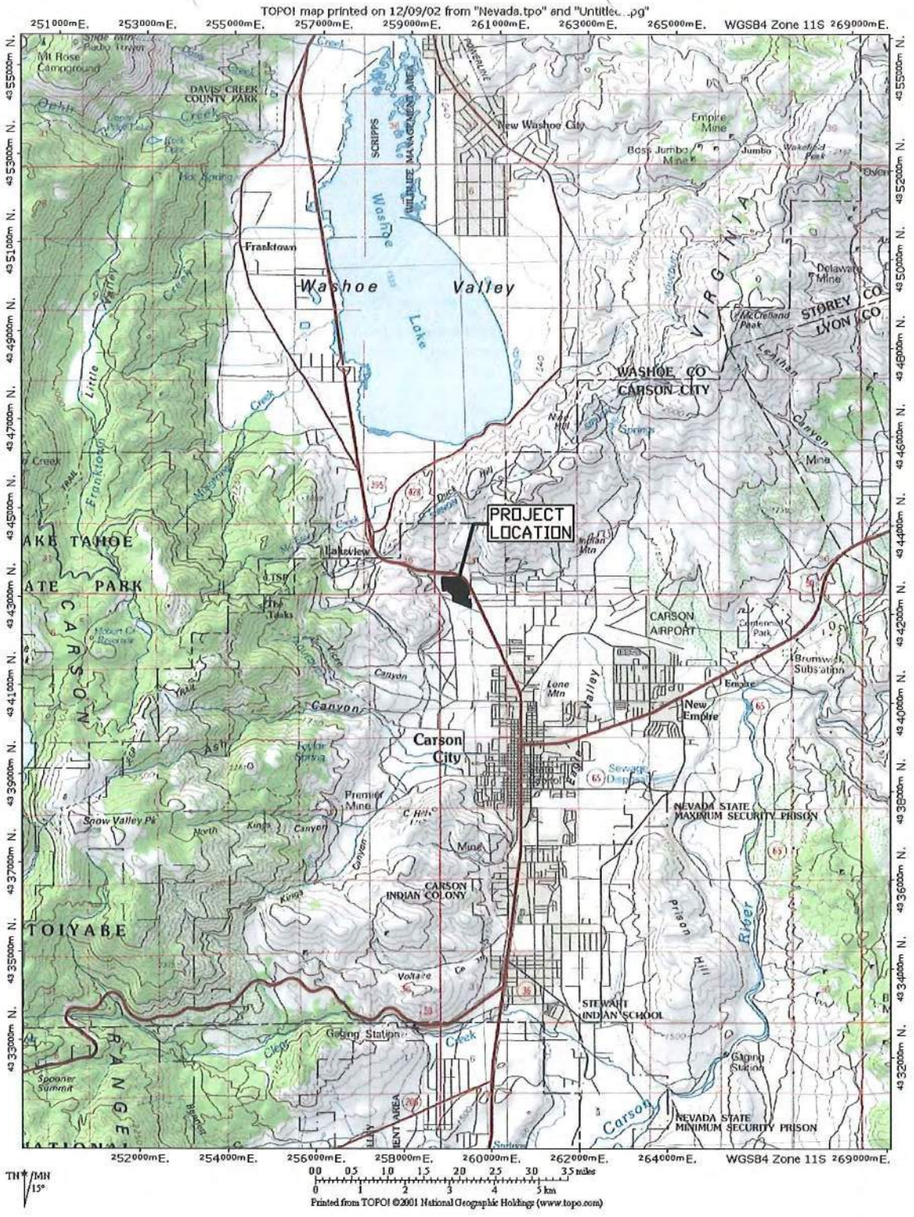
FIGURES



NEVADA

CARSON-TAHOE REGIONAL MEDICAL FACILITY

FIGURE 1
GENERAL LOCATION

jbr environmental consultants, inc.
Salt Lake City, Utah · Cedar City, Utah · Reno, Nevada · Elko, Nevada · Boise, Idaho

DESIGN BY	DRAWN BY	CH'D BY	SCALE	DATE DRAWN	REVISION
RD	RD		--	12/10/02	

FILE NAME

BASE IMAGE: USGS/TERRASERVER

PROJECT BOUNDARY

EXISTING CHANNEL AND WETLAND

N

300 0 300 FEET

CARSON-TAHOE REGIONAL MEDICAL FACILITY

PRE-DISCHARGE NOTIFICATION

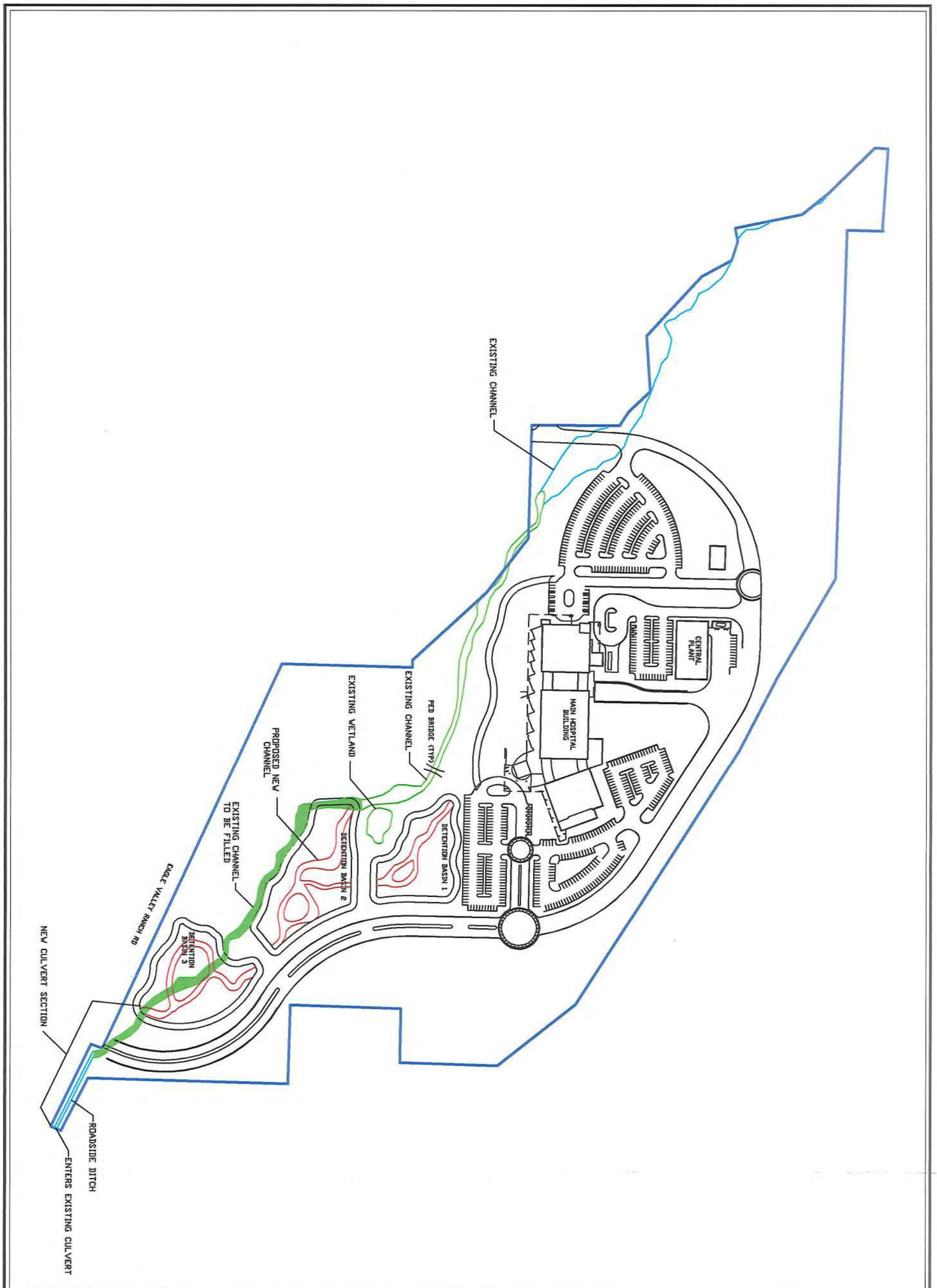
FIGURE 2
PROPOSED PROJECT CONCEPTUAL PLAN

jbr environmental consultants, inc.

Salt Lake City, Utah Cedar City, Utah Reno, Nevada Elko, Nevada Boise, Idaho

DESIGN BY	DRAWN BY	CH'D BY	SCALE	DATE DRAWN	REVISION
DW	RD		1:3,600	01/03/03	

FILE NAME



CARSON-TAHOE REGIONAL MEDICAL FACILITY

PRE-DISCHARGE NOTIFICATION

FIGURE 3
PROPOSED IMPACTS TO WATERS OF THE U.S.

jbr environmental consultants, inc.
Salt Lake City, Utah | Cedar City, Utah | Reno, Nevada | Elko, Nevada | Boise, Idaho

DESIGN BY	DRAWN BY	CH'D BY	SCALE	DATE DRAWN	REVISION
DW	RD		1:3,600	01/03/03	01/23/03

FILE NAME

APPENDIX A

DRAFT RE-VEGETATION PLANT SPECIES LIST

DRAFT-Plant List for Carson-Tahoe Hospital Site
For the Nationwide wetland permit

Submitted to: Mackay & Somps- Louise Kehmeier
Submitted by: Lynda S. Nelson-Botanical Consultant

Several guidelines have been used in developing this plant list:

1) Irrigation, both drip and overhead will be used to establish plant material, both native and non-native.

2) Native plants are recommended that will reflect the natural surroundings of the area and will also provide ascetics, habitat, shelter and food for attracting wildlife.

3) The plants selected will also provide erosion control on the detention pond slopes and riparian corridor.

4) A number of the native plants selected have significant cultural value which can in turn be used for interpretive purposes along the walkways.

Plant List:

Upland Area:

The upland area is adjacent to the riparian corridor and consists of two types: the slope area which is higher in elevation and contains mostly woody plants for erosion control and wildlife, and the flatter upland areas where excess sediment and flows will spill out into from the detention basins.

Upland slopes:	Wyoming Big Sagebrush	Artemesia tridentata
	Desert Peach	Prunus andersonii
	Bitterbrush	Purshia tridentata
	Mormon Tea	Ephedra viridis
	Creeping wildrye	Elymus triticoides
	Western wheatgrass	Agropyron smithii
	Douglas sedge	Carex douglasii
	Squirrel tail grass	Sitanion hystrix
	Chokecherry	Prunus virginiana
Upland flat areas:	Creeping wildrye	Elymus triticoides
	Western wheatgrass	Agropyron smithii
	Douglas sedge	Carex douglasii
	Wiregrass	Juncus balticus
	Field Sedge	Carex praegracilis

Riparian Corridor:

The riparian corridor is the area containing the flow or main channel between detention basins and may vary from 10-20' in width. It again is comprised primarily of native species for erosion control and wildlife value.

Woody Species:

Black Cottonwood	Populus trichocarpa
Aspen	Populus tremuoides
Chokecherry	Prunus virginiana
Lemon willow	Salix lemonii
Pacific tree willow	Salix lasiandra
Willow	Salix lutea
Ponderosa pine	Pinus pondersoa
Red twig dogwood	Cornus sericea
Mtn. Alder	Alnus incana var. tenuifolia

Grass & Grasslike species:

Wiregrass	Juncus balticus
Nebraska sedge	Carex nebracensis
Field Sedge	Carex praegracilis
Cattail	Typha latifolia (in the wetter areas)
Bulrush	Scirpus americanus (in the wetter areas)
Creeping wildrye	Elymus triticoides
Douglas sedge	Carex douglasii

APPENDIX B

AGENCY CORRESPONDENCE

Nevada Natural Heritage Program

Department of Conservation and Natural Resources
1550 East College Parkway, Suite 145 * Carson City, Nevada 89706-7921
voice: (775) 687-4245 fax: (775) 687-1288 web: www.state.nv.us/nvnhp/

5 December 2002

Nancy Nething
JBR Environmental Consultants, Inc.
4741 Caughlin Parkway, Suite 2
Reno, NV 89509

RE: Data request received 5 December 2002

Dear Ms. Nething,

We are pleased to provide the information you requested on endangered, threatened, candidate, and/or sensitive plant and animal taxa recorded within or near the Carson-Tahoe Regional Hospital Center project area. We searched our database and maps for the following, a three mile radius around:

Township 15N Range 20E Section 6
Township 16N Range 20E Section 31

The enclosed printout lists the taxa recorded within the given area. Please be aware that habitat may be available for: the Mono checkerspot, *Euphydryas editha monoensis*, a Nevada Bureau of Land Management (BLM) Sensitive Species; the Carson Valley wood nymph, *Cercyonis pegala carsonensis*, a Nevada BLM Sensitive Species; the Townsend's big-eared bat, *Corynorhinus townsendii*, a Nevada BLM Sensitive Species; the silver-haired bat, *Lasionycteris noctivagans*, a Taxon determined to be Vulnerable by the Nevada Natural Heritage Program; and the Mountain Plover, *Charadrius montanus*, a Nevada BLM Special Status Species. We do not have complete data on various raptors that may also occur in the area; for more information contact Ralph Phenix, Nevada Division of Wildlife at (775) 688-1565. Note that all cacti, yuccas, and Christmas trees are protected by Nevada state law (NRS 527.060-.120), including taxa not tracked by this office.

Please note that our data are dependent on the research and observations of many individuals and organizations, and in most cases are not the result of comprehensive or site-specific field surveys. Natural Heritage reports should never be regarded as final statements on the taxa or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments.

Thank you for checking with our program. Please contact us for additional information or further assistance.

Sincerely,

Eric S. Miskow
Biologist III/Data Manager

Sensitive Taxa Recorded Near the Carson-Tahoe Regional Hospital Center Project Area

Compiled by the Nevada Natural Heritage Program for JBR Environmental Consultants, Inc.
5 December 2002

Scientific name	Common name	Usfws	Blm	Usfs	State	Grank	Townrange	Section	Lat	Long	Prec	Last observed
Plants												
Loeflingia squarrosa ssp. *artemisiarum*	sagebrush pygmyleaf		C			G5T2T3	015N020E	08	39.185833	119.751944	S	1991-05-12
Mimulus ovatus	Steamboat monkeyflower					G1G2Q	015N020E	08	39.185833	119.751944	S	1991-05-12
Mimulus ovatus	Steamboat monkeyflower					G1G2Q	015N020E	05	39.196111	119.753333	S	2001-05-10
Phacelia inundata	playa phacelia		P	C		G2	016N019E	35	39.214444	119.808333	S	1976-08-04
Invertebrates												
Pseudocopaeodes eunus obscurus	Carson alkali skipperling	LE				G3G4T1	015N020E	09	39.182500	119.744722	S	1997-06-11
Speyeria nokomis carsonensis	Carson Valley silverspot	xC2	N			G3T1	015N019E	11	39.185833	119.814722	M	1964-08-09
Mollusks												
Anodonta californiensis	California floater	xC2	N	C		G3	016N020E	17;18	39.245000	119.769444	S	1990
Birds												
Pelecanus erythrorhynchos	American White Pelican		P		YES	G3	016N020E	18	39.244444	119.785278	M	1998
							016N019E	12				

U. S. Fish and Wildlife Service (Usfws) Categories for Listing under the Endangered Species Act:

LE Listed Endangered - in danger of extinction in all or a significant portion of its range

x C2 Former Category 2 Candidate, now species of concern

Bureau of Land Management (Blm) Species Classification:

N Nevada Special Status Species - designated Sensitive by State Office
P Proposed Nevada Special Status Species

C California Special Status Species (see definition S and N)

United States Forest Service (Usfs) Species Classification:

C Region 5 sensitive species, not yet known from Inyo NF or LTBMU

Nevada State Protected (State) Species Classification:

Fauna:
YES Species protected under NRS 501.

Precision (Prec) of Mapped Occurrence:

Precision, or radius of uncertainty around latitude/longitude coordinates:

S Seconds: within a three-second radius
M Minutes: within a one-minute radius, approximately 2 km or 1.5 miles
G General: within about 8 km or 5 miles, or to map quadrangle or place name

Nevada Natural Heritage Program Global (**Grank**) and State (**Srank**) Ranks for Threats and/or Vulnerability:

G Global rank indicator, based on worldwide distribution at the species level
T Global trinomial rank indicator, based on worldwide distribution at the infraspecific level
S State rank indicator, based on distribution within Nevada at the lowest taxonomic level
1 Critically imperiled and especially vulnerable to extinction or extirpation due to extreme rarity, imminent threats, or other factors
2 Imperiled due to rarity or other demonstrable factors
3 Vulnerable to decline because rare and local throughout its range, or wi[illegible]very restricted range
4 Long-term concern, though now apparently secure; usually rare in parts of its range, especially at its periphery
5 Demonstrably secure, widespread, and abundant
A Accidental within Nevada
B Breeding status within Nevada (excludes resident taxa)
H Historical; could be rediscovered
N Non-breeding status within Nevada (excludes resident taxa)
Q Taxonomic status uncertain
U Unrankable
Z Enduring occurrences cannot be defined (usually given to migrant or accidental birds)
? Assigned rank uncertain

DELINEATION OF WETLANDS AND WATERS OF THE UNITED STATES CARSON TAHOE REGIONAL MEDICAL FACILITY CARSON CITY, NEVADA

Prepared for:

Carson Tahoe Hospital
P.O. Box 2168
Carson City, Nevada
89702-2168

Contact: Mr. Ed Epperson

Prepared by:

JBR Environmental Consultants, Inc.
4741 Caughlin Parkway, Suite 2
Reno, Nevada 89509

Contact: Ms. Nancy Nething, Mr. Dave Worley

January 20, 2003

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ACRONYMS & ABBREVIATIONS

Corps	U.S. Army Corps of Engineers
CTH	Carson Tahoe Hospital
EPA	Environmental Protection Agency
JBR	JBR Environmental Consultants, Inc.
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
OHWM	Ordinary High Water Mark

DELINEATION OF WETLANDS AND WATERS OF THE UNITED STATES CARSON TAHOE REGIONAL MEDICAL FACILITY CARSON CITY, NEVADA

EXECUTIVE SUMMARY

Palmer and Lauder Engineering (Palmer and Lauder) is providing engineering services for the proposed Carson Tahoe Regional Medical Facility in Carson City, Nevada. The Carson-Tahoe Hospital is proposing to construct a hospital and other medical buildings on a 69 acre parcel in northern Carson City. MacKay and Somps is providing landscape planning services for the hospital facility, which will be constructed adjacent to Eagle Creek, in Eagle Valley at the north end of Carson City. Resources Concepts, Inc. (RCI) prepared a wetland delineation on the majority of the project site (RCI, 1999). It now appears some portions of the creek west of the existing delineation may be affected by road construction and by bridges for a trail system that will be built as an adjunct to the new hospital. The Carson Tahoe Hospital Trustees asked JBR Environmental Consultants, Inc. (JBR) to prepare a wetlands and waters of the United States (U.S.) delineation on those portions of Eagle Creek that may be impacted by project-related features, and that were not included in the original RCI delineation. JBR visited the site on December 12, 2002, and conducted a formal delineation on the remainder of the project area. As a part of the delineation, JBR tied the wetland boundaries as delineated during the December 2002 visit to the wetland boundaries identified by the RCI delineation. The December 2002 delineation preliminarily identified a total of 1.06 acres of wetlands and 0.06 acre waters of the U.S. in the western portion of the project area. When combined with the existing RCI delineation, a total of 1.56 acres of potentially jurisdictional wetlands and 0.76 acres of waters of the U.S. were identified on the parcel (as summarized in Table 1, Section 5.0).

1.0 INTRODUCTION

1.1 PURPOSE

The Carson Tahoe Hospital (CTH) is proposing to construct the Carson Tahoe Regional Medical Facility in the northwestern part of Carson City, Nevada. Palmer and Lauder Engineering (Palmer and Lauder) is providing engineering services for the facility. MacKay and Somps is providing landscape planning services for the facility. The project would include a regional hospital, and would be constructed adjacent to Eagle Creek just south and west of Highway 395. Within the project area, Eagle Creek has been affected by head cutting, which has resulted in erosion and deepening of the creek's channel. As a part of the proposed project, the lower 1,250 feet of the Eagle Creek channel would be relocated. The channel would be directed through three 100-year event detention basins on the grounds of the Regional Medical Facility. The detention basins would be designed to capture silt and arrest the head cutting problem on the current Eagle Creek channel.

In 1999, Resources Concepts, Inc. (RCI) prepared a wetland delineation on the majority of the Eagle Creek channel and the surrounding CTH project site (RCI, 1999). It now appears some portions of the creek west of the existing delineation may be impacted by road construction and/or by bridges for a proposed trail system associated with the new medical facility. The Carson Tahow Hospital Trustees asked JBR Environmental Consultants, Inc. (JBR) to prepare a wetlands and waters of the United States (U.S.) delineation on those portions of Eagle Creek that may be impacted by project-related features, and that were not included in the original RCI delineation. JBR visited the site on December 12, 2002, and conducted a formal delineation on the remainder of the project area. As a part of the December 2002 delineation, JBR tied the wetland boundaries in the new survey area to the wetland boundaries identified on the remainder of the project area, as delineated by RCI.

Chapter 2 of this report presents the federal definitions of waters of the U.S., including wetlands. Chapter 3 describes the methodology used for determining the location and extent of jurisdictional waters of the U.S., including wetlands. Chapter 4 describes the findings of the JBR delineation.

1.2 Location and Status

The project area is located between Eagle Valley Ranch Road and Highway 395 in northern Carson City, Nevada. Specifically, the project area is located in a portion of the N½ N½ Section 6, Township 15 North, Range 20 East (T15N, R20E) and a portion of the SW¼ Section 31, T16N, R20E, Mount Diablo Base and Meridian (MDBM), as shown in Figure 1. The JBR delineation area is located in the western portion of the project area, in SW¼ SW¼ Section 31, T16N, R20E, MDBM.

The project area is largely undeveloped, but is traversed by dirt roads from the east (north of Eagle Creek) and from the southwest (south of Eagle Creek). Burned fence posts and sagebrush stumps indicate that a wildfire burned the area in the past, though vegetation on the site has largely recovered from this burn. Soils present within the project area are shown on Figure 2. The National Wetlands Inventory (NWI) map of the area is shown in Figure 3. An aerial photograph of the project area is included as Figure 4.

2.0 DEFINITIONS

2.1 Waters of the U.S.

Waters of the U.S. (waters) are defined by 40 CFR 230.3 and 33 CFR 328.3 as:

> All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce...;

All interstate waters including wetlands;

All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce...;

All impoundments of waters otherwise defined as waters of the U.S. under this definition.

The limits of jurisdiction in non-tidal waters, according to 33 CFR 328.4, are:

1. In the absence of adjacent wetlands, the jurisdiction extends to the ordinary high water mark (OHWM); or

2. When adjacent wetlands are present, the jurisdiction extends beyond the OHWM to the limit of the adjacent wetlands.

3. When the water of the U.S. consists only of wetlands, the jurisdiction extends to the limit of the wetland.

Criteria used to determine whether a drainage constitutes a waters of the U.S. include:

Presence of a defined bed - a linear bed in a topographic depression which would transport surface water from a watershed.

Presence of defined bank - near vertical or steep-sided banks formed by erosion from flowing water.

Evidence of an OHWM - some indicator(s) that the drainage is subject to surface water flows on an average annual basis. Such indicators include a scoured bed, shelving, an absence of terrestrial vegetation (particularly perennials), and recent alluvial or litter deposition.

The presence of a defined bed and banks, along with some evidence that the drainage experiences surface water flows on an average annual basis, are considered to be indicative of a water of the U.S.

2.2 WETLANDS

Wetlands are defined by the U.S. Army Corps of Engineers (Corps) and the Environmental Protection Agency (EPA) in 40 CFR 230.3 and 33 CFR 328.3 as:

Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support,

> a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

As noted in the waters of the U.S. discussion, if wetlands are present adjacent to a waters of the U.S., Corps jurisdiction extends beyond the OHWM of the waters to the limit of the adjacent wetlands.

3.0 METHODOLOGY

Prior to the field investigation, the Soil Survey of the Carson City Area, Nevada, prepared by the Soil Conservation Service (SCS, now the Natural Resources Conservation Service,[NRCS]), was reviewed, as was the NWI map of the area. The NWI map (prepared in 1988) shows no wetlands or riparian areas in the survey area. On December 12, 2002, JBR visited the site and performed a field investigation to identify potentially jurisdictional waters of the U.S. (including wetlands) present on the property.

3.1 WATERS OF THE U.S.

Eagle Creek originates on the eastern slopes of the Carson Range and flows over Duck Hill, south of Highway 395, before passing through the project area. Several channels also run south from Highway 395, through the project area and toward Eagle Creek. These drainages were assessed for the presence of a defined bed and banks, along with some evidence that the drainages experience surface water flows on an average annual basis (i.e., the presence of an OHWM). These characteristics are considered to be indicative of a water of the U.S. The channels running south from Highway 395 were assessed for the presence of a continuous bed and bank connection with Eagle Creek, and investigated as to the source of flow in these channels. The lack of a defined bed and bank (OHWM) connection could indicate these channels are isolated, and not subject to jurisdiction by the Corps. Evidence indicating these channels are artificial could also affect the jurisdictional status of the channel.

When surveyed by JBR, the section of Eagle Creek located within the new project area, but west of the original RCI delineation, was considered to show evidence of an OHWM. The width of the Eagle Creek channel passing through the new delineation area was measured at the OHWM. Several measurements were taken at representative locations along the channel. An average width of the defined channel was then calculated. This figure was multiplied by the length of the defined channel, as determined from AutoCAD maps of the survey area, in order to obtain the extent (area) of jurisdictional waters in the Eagle Creek drainage as it crosses the parcel.

Definition was lost in all but one of the channels running south through the project area from Highway 395. An examination of the source of these channels found the channels were derived from

roadside runoff, rather than from natural runoff collecting in topographic lows. These drainages were considered artificial, created features. Such features are generally not considered jurisdictional by the Corps.

3.2 WETLANDS

Representative locations in potential wetland vegetation types on the parcel were examined for wetland characteristics in accordance with the criteria contained in Technical Report Y-87-1, *Corps of Engineers Wetland Delineation Manual*, January 1987 (Manual). Willows and some cottonwoods border the Eagle Creek channel as it passes through the project area. The majority of the willow and potential wetland habitat is confined within a topographic low followed by the channel. Three sample sites were established at locations that appeared to represent potentially jurisdictional wetlands. Two of these sample sites were established in a wider portion of a topographic low near several large Fremont cottonwood (*Populus fremontii*) trees immediately adjacent to the Eagle Creek channel. The third sample site was established in a similar low area north of the Eagle Creek channel, between the large cottonwood trees and the wetland area previously delineated by RCI. Since the total area of potential wetlands present in the area was less than five acres in size, the "routine" sampling method, as described in the Manual, was used to characterize these sites. At each site, the vegetation, soils and hydrology were examined for wetland characteristics, as described in the Manual.

3.2.1 Hydric Soils

Hydric soils are defined as "... soils that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions that favor the growth and regeneration of hydrophytic vegetation. Hydric soils usually include all histosols except Folists; soils in Aquic suborders, Aquic subgroups, albolls suborder, Salorthids great group, or Pell great groups of Vertisols that are: somewhat poorly drained, poorly drained, or very poorly drained; soils that are ponded for long or very long duration during the growing season; or soils that are frequently flooded for long duration or very long duration during the growing season" (Manual, 1987). Hydric soils often contain such indicators as low chroma color, mottling, gleying, iron or manganese concretions, organic matter streaking, or reddish staining or streaks. Another hydric soil indicator is the presence of a histic (organic - peak or muck) epipedon. Other criteria used to identify hydric soils include such indicators as soil color and the presence of bright mottles. Soil field characteristics are identified at 10 inches below the surface or immediately below the A horizon, whichever is shallower.

Some areas of sandy soils were found in the December, 2002 delineation area. As described in the Manual, soil color (i.e., low chroma) is not necessarily a reliable indicator of hydric conditions in sandy soils. Sandy soils may show other characteristics that can identify the presence of a hydric

soil. These other characteristics include a concentration of organic matter in the surface horizon; organic streaking in subsurface horizons; and the development of organic layers (pans), which may be slightly cemented with aluminum, forming a thin layer of hardened soil (spodic horizon).

3.2.2 Wetland Vegetation

Wetland (hydrophytic) vegetation is defined as any macrophyte that grows in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water. The 1987 Manual requires that, in most cases, more than 50 percent of the dominant vegetation includes plants that meet the wetland plant technical criteria.

Vegetation was visually surveyed in the vicinity of soil test pits to estimate the percent aerial cover of dominant species present in each stratum, or vegetative layer, and to characterize the plant communities, as required in the Manual. Vegetation percentages of cover were averaged in the area sampled by each soil pit. Plants not identifiable in the field were identified using *Intermountain Flora*, (Cronquist et al., 1972 and later [multiple volumes]), and *A Flora of Nevada* (Kartesz, 1988). Appendix A presents a list of common vegetation species found in the delineation area.

The wetland indicator status for each species was recorded to aid in making jurisdictional wetland determinations. According to the *National List of Plant Species that Occur in Wetlands: Intermountain (Region 8) - Biological Report 88 (26.8)*, (Reed, 1988), the indicator categories are defined as:

> Obligate Wetland (OBL). Occur almost always (estimated probability >99%) under natural conditions in wetlands.
>
> Facultative Wetland (FACW). Usually occur in wetlands (estimated probability 67%-99%), but occasionally found in non-wetlands.
>
> Facultative (FAC). Equally likely to occur in wetlands or non-wetlands (estimated probability 34%-66%).
>
> Facultative Upland (FACU). Usually occur in non-wetlands (estimated probability 67%-99%), but occasionally found in wetlands (estimated probability 1-33%).
>
> Obligate Upland (UPL). Occur almost always (estimated probability >99%) under natural conditions in non-wetlands in the region specified.
>
> No Indicator (NI). Insufficient information available to determine an indicator status. If required, status was determined by the investigator using the above mentioned references (particularly Cronquist et al., 1972 and later; and Hickman, 1993).

To further refine these categories, a + or - may be used to indicate whether a species of plant is more or less likely, respectively, to occur in a wetland site. An asterisk (*) indicates a tentative assignment to an indicator status, based on preliminary information.

3.2.3 Wetland Hydrology

Wetland hydrology is the driving force behind wetland formation. The term "wetland hydrology" encompasses all hydrologic characteristics of areas that are periodically inundated or have soil saturated to the surface at some time during the growing season (Manual, 1987). During the survey, several indicators were used to determine wetland hydrology. Some of these indicators include: visual observation of saturated soils, visual observation of flooding or ponding, soil permeability and texture, evidence of anaerobic conditions within the upper root zone, root staining, and the amount and type of plant cover. Other indicators of wetland hydrology include: drainage patterns (i.e., situation in topographical depressions or channels), drift lines, sediment deposits, water marks, oxidized root zones, location in annual floodplain, water-stained leaves, surface scoured areas, morphological plant adaptations, and algae growth or remnants.

4.0 FINDINGS

4.1 WATERS OF THE U.S.

As noted, the reach of Eagle Creek within the JBR delineation area showed evidence of a defined channel. The channel was flowing north and northeast of the Eagle Valley Children's Home, west of the CTH project area. Flow ceased near the western end of the CTH property, in the area of several large Fremont Cottonwood trees. The remainder of the channel was dry, though hydrophytic vegetation was found in the dry channel. A series of representative measurements taken on this channel indicated the width of the channel as measured at the OHWM averaged 4 feet. AutoCAD measurements of the channel indicate that 633 feet of the channel (in several segments) is located within the JBR survey area (Figure 4). Based on these measurements, a total of 2,532 square feet (0.06 acre) of jurisdictional channel was identified in the JBR survey area (Figure 4).

As noted, several channels run south through the project area and toward Eagle Creek from Highway 395. These channels included a defined bed and banks in their upper reaches, but evidence of an OHWM was lost before the channels reached the defined Eagle Creek channel in all but one case. Investigation of the source of flow in these channels determined these channels were created and maintained by road runoff from Highway 395. The road runoff was considered an artificial feature, and these channels were not identified as potentially jurisdictional waters of the U.S.

At the southeastern corner of the CTH project area, the lower end of the Eagle Creek has been directed into an approximately 270-foot long ditch. This ditch follows the northern edge of Eagle

Valley Ranch Road, before exiting the project area via a culvert under Eagle Creek Road. When visited in December, this ditch had recently been cleaned, and showed no evidence of an OHWM.

4.2 WETLANDS

Within the JBR delineation area, wetlands were identified along the length of the Eagle Creek channel. These wetlands were generally dominated by yellow and sandbar willow (*Salix lutea* and *S. exigua*, respectively), with a smaller percentage of Pacific willow (*Salix lasiandra*) and Fremont cottonwood. Low areas beside the channel supported a vegetation community dominated by creeping wildrye (*Elymus triticoides*), and also included Douglas wormwood (*Artemisia douglasiana*) and curley dock (*Rumex crispus*).

Sample sites 1 and 2 were established in a low area adjacent to the Eagle Creek drainage near several large cottonwood trees. Sample site 3 was established in a second low area immediately north of the Eagle Creek channel.

4.2.1 Soils

Soils within the project area have been mapped by the NRCS and are described in the Soil Survey of Carson City Area (SCS, 1979). Three soil types are identified within the survey area (Figure 2). None of these soil types appears on the list of *Hydric Soils of the United States* (SCS, 1987). The NRCS soil unit names, numbers, and soil descriptions are as follows:

Surprise coarse sandy loam, 2 to 4 percent slopes - 58

This deep, well drained soil is on alluvial fans at about 4,600 feet elevation. This soil formed in alluvium from mixed rock. Permeability of the Surprise soil is moderately rapid and surface runoff is slow. The hazard of erosion is slight. Included in this map unit are soils that have a loamy sand surface layer about 5 inches thick and soils that are sandy throughout the profile. This soil is rarely flooded. Within the project area this soil type occurs from near the north side of Eagle Creek south.

Surprise coarse sandy loam, 4 to 8 percent slopes - 59

This deep, well drained soil is on undulating alluvial fans at about 4,700 feet elevation. This soil formed in alluvium from mixed rock. Characteristics of the Surprise soil are described above. Included in this map unit are soils that have a loamy sand surface layer and some areas that have a stony surface layer, as well as an area of soils that have a hard pan at a depth of 35 inches. The Surprise soil is rarely flooded. Within the project area, this soil type occurs north of Eagle Creek

Tarloc-Glenbrook association - 63

This moderately steep and steep soil association occurs on uplands at 5,000 to 6,000 feet in elevation. The unit includes 55 percent Tarloc gravelly coarse sandy loam that has slopes of 15 to 50 percent and about 30 percent Glenbrook gravelly loamy coarse sand that has slopes of 30 to 50 percent. The Tarloc soil is moderately deep and well drained. It formed in residuum from granitic rock. Permeability of this soil is moderate. Surface runoff is rapid, and the hazard of erosion is high. The Glenbrook soil is shallow and somewhat excessively drained. It formed in residuum from granitic rock. Permeability of the Glenbrook soil is rapid. Surface runoff is medium, and the hazard of erosion is moderate. Included in this association are small areas of Mottsville soils, areas of a soil that is similar to the Tarloc soil but is shallow, and some areas of Rock outcrop. An area of this soil type is found in the northwestern portion of the project area.

4.2.2 Vegetation

The survey area is largely undeveloped. Dirt roads enter the area from the east and southwest. A power transmission line crosses the parcel and provides power to the Eagle Valley Children's Home, which is located to the west of the regional medical facility property.

The plant community present in the area includes big sagebrush (*Artemisia tridentata*), antelope bitterbrush (*Purshia tridentata*), desert peach (*Prunus andersonii*), rubber rabbitbrush (*Chrysothamnus nauseosus*), squirreltail (*Sitanion hystrix*) and cheatgrass (*Bromus tectorum*). Sandbar, yellow and Pacific willow border Eagle Creek. Sandbar willow also occurs along abandoned channels on the eastern part of the parcel. Yellow and Pacific willow are more common on the western portion of the parcel; sandbar willow is more common on the eastern portion of the parcel. Scattered Fremont cottonwood trees and a few Russian olives (*Elaeagnus angustifolia*), as well as areas of wild rose (*Rosa woodsii*), occur along the creek. Burned sagebrush stumps and fence posts indicate the area was burned in the past, though vegetation on the parcel appears to have recovered from this burn. Crested wheatgrass, probably planted as a part of the post-fire rehabilitation of the site, is common south of Eagle Creek. A few planted fruit trees and grapes (*Vitis*, sp.) were found north of the creek, in the western part of the survey area. A few young Jeffrey pines (*Pinus jeffreyi*) were also found in the western part of the survey area, adjacent to Eagle Creek. Appendix A presents a list of common vegetation noted in the survey area.

The 1988 NWI map of the area, prepared by the U.S. Fish and Wildlife Service, was reviewed (Figure 3). NWI maps are derived from air photo interpretation to identify areas that are dominated by wetland plants. No wetlands nor wetted drainages were identified on the NWI map as occurring within the project area. The willows bordering Eagle Creek apparently have become established after the date NWI photography for the area was taken.

4.2.3 Hydrology

Hydrology on the western portion of the parcel appears to be perennial, as the drainage was flowing at the time of the December delineation. Hydrology on the eastern portion of the parcel is intermittent (seasonal) or ephemeral, apparently occurring as spring-season runoff, or as runoff from intense precipitation events. No seeps or springs were found on the parcel.

4.2.4 Sample Sites

JBR evaluated three sample sites in the December 2002 survey area. Sample sites 1 and 2 were established near several large Fremont cottonwood trees near the southwestern boundary of the regional medical facility property. Sample site 1 was established between two braids of the channel, in a creeping wildrye and Douglas wormwood community. Excepting the upper two inches of the soil profile, low-chroma soils were not found at this site. Soils below two inches were sandy, and mottles were found below 9 inches. As noted in the above, sandy soils do not always exhibit the low-chroma characteristics found in loamy or clayey hydric soils. The presence of mottles in the sandy soil profile was interpreted as an indication the soil was hydric. Saturation was not present at the time of the delineation, but was assumed earlier in the growing season, and the site was identified as a potentially jurisdictional wetland.

Sample site 2 was established in a low area approximately 40 feet south of sample site 1 and the Eagle Creek drainage. Vegetation at the site was dominated by creeping wildrye. Soils at the site were more loamy than at sample site 1, and met the low-chroma criteria of a hydric soil (10YR 2/1). The site was not saturated at the time of the delineation, but based on the site's proximity to Eagle Creek and the low-lying nature of the site, saturation earlier in the growing season was assumed, and the site was identified as a potentially jurisdictional wetland.

Sample site 3 was established in a low-lying area north of the Eagle Creek channel, and east of sample sites 1 and 2. As at sample site 2, vegetation at this site was dominated by creeping wildrye. Sandy, mottled soils were found at this site. The site was not saturated at the time of the delineation, but again due to the site's location adjacent to Eagle Creek and the vegetation present, saturation earlier in the growing season was assumed. Table 1 summarizes the results of the delineation. A data sheet was completed for each sample site, and these data forms are presented in Appendix D.

Figure 4 shows the location of wetlands and waters of the U.S. identified within the survey area, and the location of the sample sites established on the parcel. Appendix B presents photographs of the delineation area. Photograph 1 shows the location of sample sites 1 and 2. Photo 2 shows an area of mixed herbaceous and shrubby hydrophytic vegetation in the channel. Photos 3 and 4 show up- and down-stream views of the wetland/riparian area bordering the Eagle Creek channel. Photos 5 and 6 show one of the channels created by runoff from Highway 395, north of the project area.

Photo 5 shows a deeply incised section of the channel near the highway; photo 6 shows the same channel downstream, as it braids and loses definition north of the Eagle Creek channel. Appendix D presents the wetland data sheets prepared on each sample site.

TABLE 1 VEGETATION, SOILS, AND HYDROLOGY CHARACTERISTICS FOUND AT SAMPLE SITES IN THE EAGLE CREEK SURVEY AREA

Sample Pit Number (GPS No. and 1996 No.)	Vegetation		Soils		Hydrology		Jurisdictional Determination
	Species	Indicator Status	Color/ Indicators	At: (Depth)	Indicator	At: (Depth)	
1 Between channel braids	*Elymus triticoides* (60%) *Artemisia douglasiana* (30%)	FAC+ FAC	10YR 2/1 10YR 4/3 10YR 5/4 w. 7.5YR 4/4 mottles	0-4 in. 4-9 in. 9-16 in.	None	Assumed	Wetland (Hydrology assumed)
2 Low area south of channel	*Elymus triticoides* (60%) *Bromus tectorum* (30%)	FAC+ NI	10YR 2/1	Throughout	None	Assumed	Wetland (Hydrology assumed)
3 Low area north of channel	*Elymus triticoides* (60%) *Bromus tectorum* (30%) *Rumex crispus* tr	FAC+ NI FACW	10YR 2/1 10YR 4/3 w. 7.5 YR 4/4 mottles	0-2 in. 2-16 in.	None	—	Wetland (Hydrology assumed)

5.0 SUMMARY

The delineation conducted by JBR on the western portion of the approximately 69 acre Carson Tahoe Regional Medical Facilities parcel identified approximately 0.06 acre of waters of the U.S. in a defined drainage crossing the parcel and 1.06 acres of wetland associated with this channel. Several eroded channels found on the northern portion of the CTH project area were formed by road runoff, and were not identified as potentially jurisdictional features. A ditch at the southeastern corner of the project area captures the flow in Eagle Creek. When visited in December, this ditch had recently been cleaned and did not show evidence of an ordinary high water mark.

When the results of the JBR December 2002 delineation are combined with the RCI 1999 delineation on the central and eastern portion of the CTH Regional Medical Facilities parcel, the two delineations identify a total of 0.76 acre of waters of the U.S. and 1.56 acres of jurisdictional wetland on the CTH Regional Medical Facilities parcel. Table 2 summarizes the results of the two delineations.

TABLE 2 SUMMARY OF WATERS OF THE U.S. AND WETLANDS FOUND IN THE EAGLE CREEK SURVEY AREA

Delineation	Wetlands	Waters of the U.S.	
		Area	Linear Feet
RCI, 1999 (Eastern and Central Area)	0.5 acre	0.7 acre	2,484 ft.
JBR, 2002 Western Area	1.06 acre	0.06 acre	633 ft.
Southeastern Ditch	0 acre	0 acre	269 ft.
Total	1.56 acres	0.76 acre	3,386 ft.

6.0 REFERENCES

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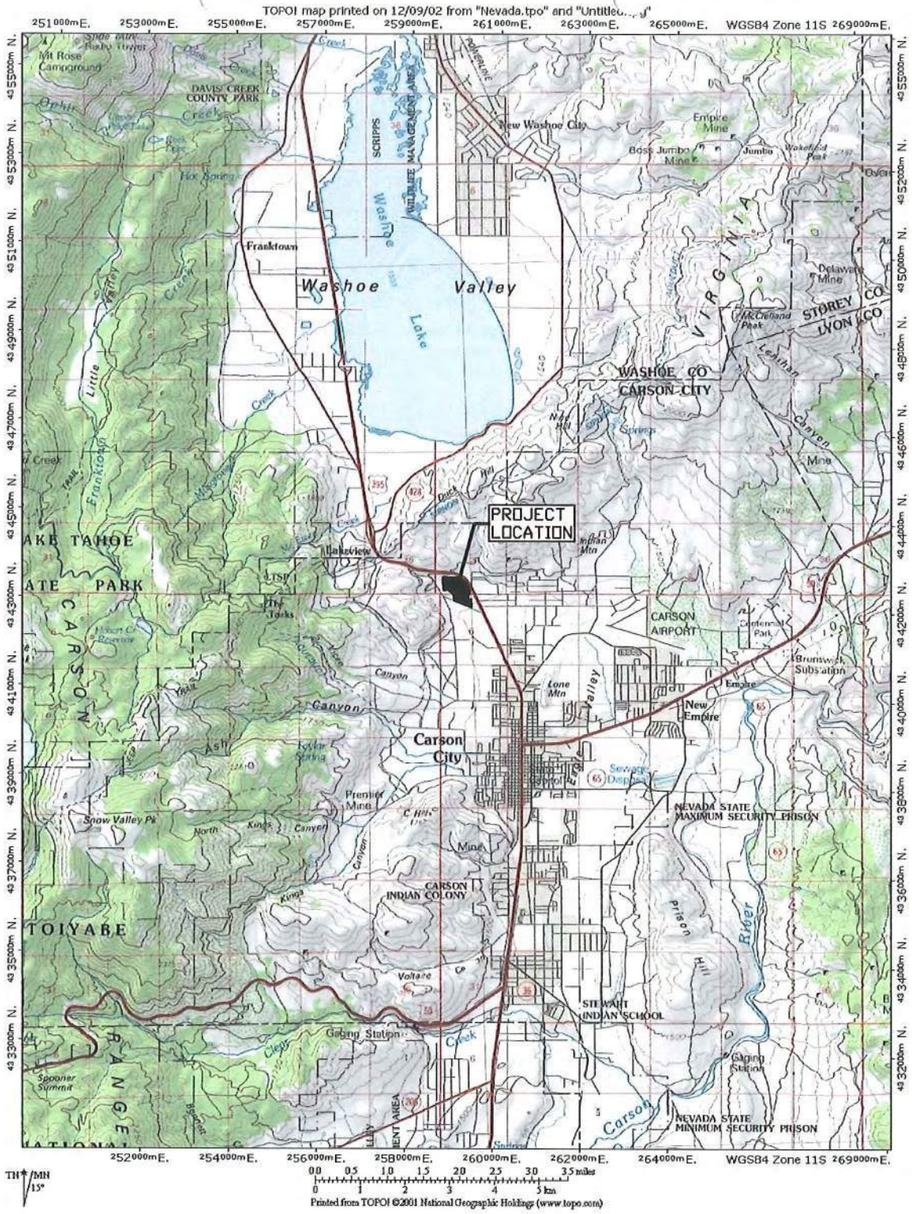
FIGURES



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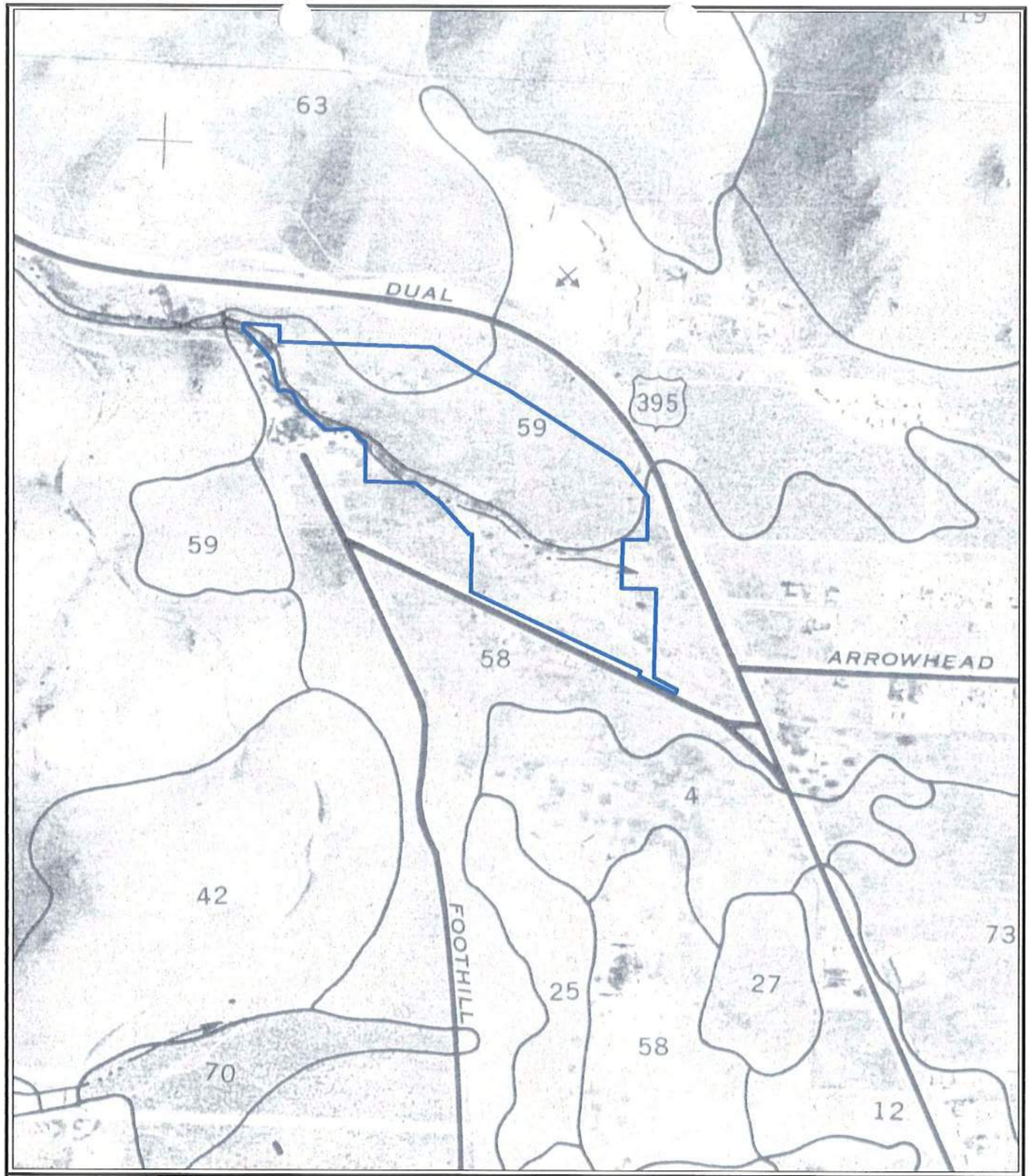
CARSON-TAHOE REGIONAL MEDICAL FACILITY

FIGURE 1
GENERAL LOCATION

jbr environmental consultants, inc.
Salt Lake City, Utah Cedar City, Utah Reno, Nevada Elko, Nevada Boise, Idaho

DESIGN BY RD
DRAWN BY RD
CH'D BY
SCALE ——
DATE DRAWN 12/10/02
REVISION

FILE NAME



BASE IMAGE SOURCE: SOIL SURVEY OF CARSON CITY AREA, NEVADA
USDA SCS AND USFS, 1979

1,000 0 1,000 FEET

N

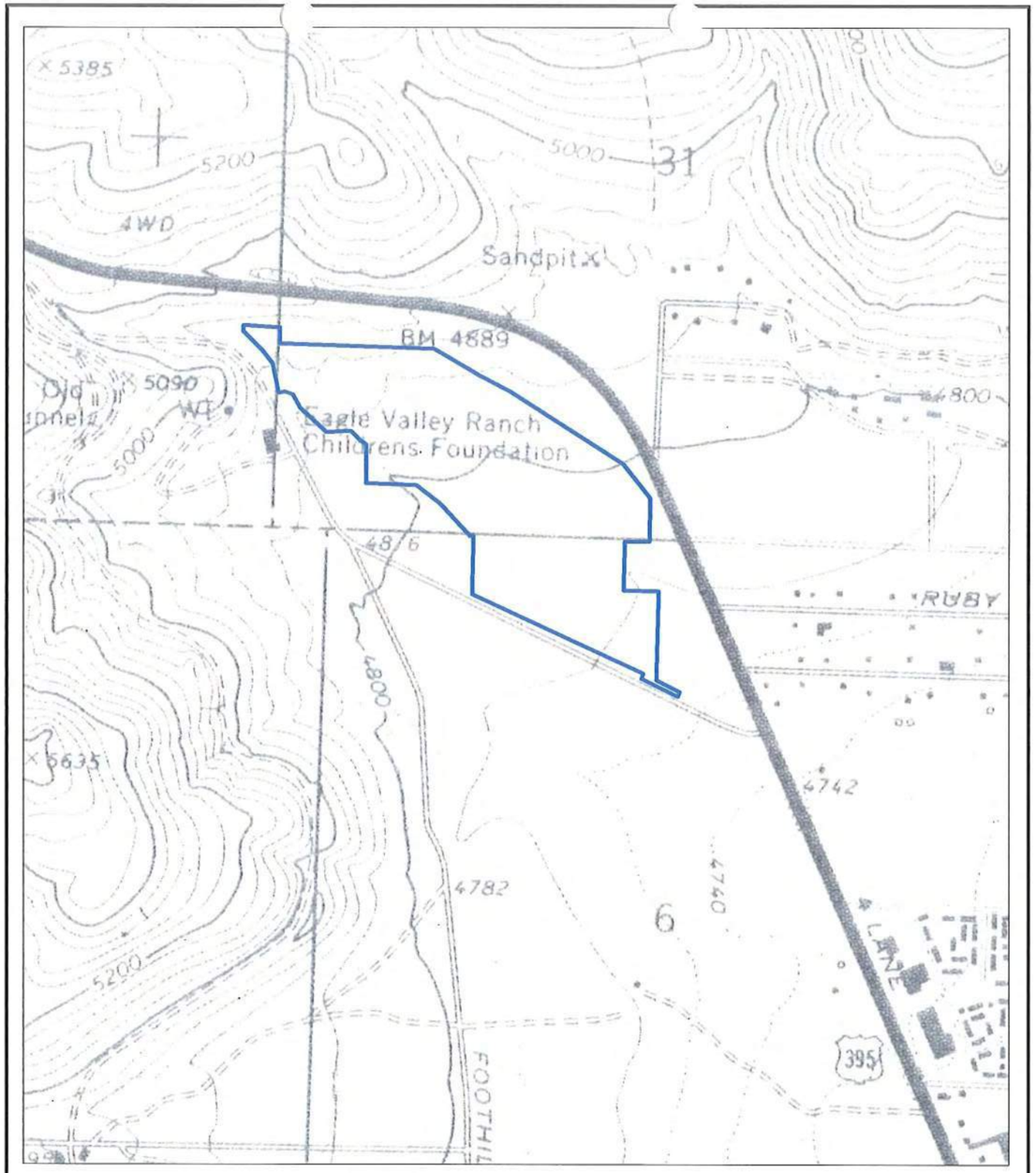
FILE NAME

CARSON-TAHOE REGIONAL MEDICAL FACILITY
WATERS OF THE U.S. DELINEATION

FIGURE 2
SOILS MAP

jbr environmental consultants, inc.
Salt Lake City, Utah Cedar City, Utah Reno, Nevada Elko, Nevada Boise, Idaho

DESIGN BY	DRAWN BY	CH'D BY	SCALE	DATE DRAWN	REVISION
RD	RD		1:12,000	12/10/02	



BASE IMAGE SOURCE: USFWS CARSON CITY NWI MAP

1,000 0 1,000 FEET

N

FILE NAME

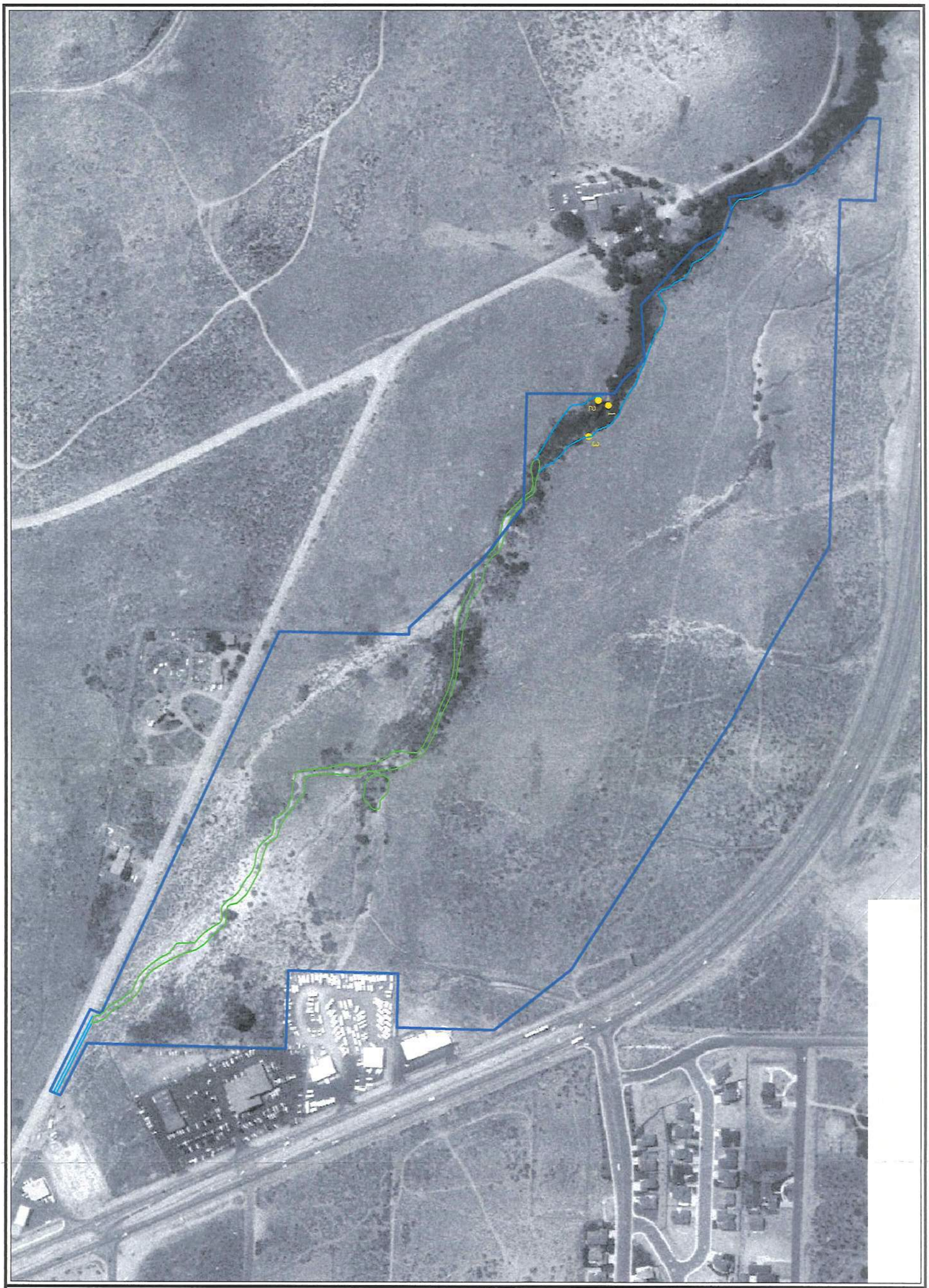
CARSON-TAHOE REGIONAL MEDICAL FACILITY

WATERS OF THE U.S. DELINEATION

FIGURE 3
NATIONAL WETLANDS INVENTORY MAP

jbr environmental consultants, inc.
Salt Lake City, Utah Cedar City, Utah Reno, Nevada Elko, Nevada Boise, Idaho

DESIGN BY	DRAWN BY	CH'D BY	SCALE	DATE DRAWN	REVISION
RD	RD		1:12,000	12/10/02	



BASE IMAGE: USGS/TERRASERVER

3 SOIL SAMPLE LOCATION

PROJECT BOUNDARY

1999 DELINEATION RESULTS

POTENTIALLY JURISDICTIONAL WATERS OF THE U.S.

N

300 0 300 FEET

FILE NAME

CARSON-TAHOE REGIONAL MEDICAL FACILITY

WATERS OF THE U.S. DELINEATION

FIGURE 4
AERIAL PHOTOGRAPH, EAGLE CREEK
WATERS OF THE U.S. DELINEATION

jbr environmental consultants, inc.
Salt Lake City, Utah Cedar City, Utah Reno, Nevada Elko, Nevada Boise, Idaho

DESIGN BY	DRAWN BY	CH'D BY	SCALE	DATE DRAWN	REVISION
DW	RD		1:3,600	12/18/02 01/16/03	

APPENDIX A

Dominant Vegetation Recorded Within the Project Area

Dominant Vegetation Recorded Within the Project Area

Scientific Name	Common Name	Indicator Status[1]
Agropyron cristatum	Crested Wheatgrass	NI
Artemisia douglasiana	Douglas Wormwood	FAC
Artemisia tridentata	Big Sagebrush	NI
Bromus tectorum	Cheatgrass	NI
Chrysothamnus nauseosus	Rubber Rabbitbrush	NI
Elaeagnus angustifolia	Russian Olive	FAC
Elymus cinereus	Great Basin Wildrye	NI
Elymus triticoides	Creeping Wildrye	FAC+
Ephedra viridis	Green Ephedra	NI
Eriogonum baileyi	Bailey's Buckwheat	NI
Juncus balticus	Baltic Rush	FACW
Malus sylvestris	Apple	NI
Polypogon monspeliensis	Annual Rabbit-foot Grass	FACW+
Populus fremontii	Fremont Cottonwood	FACW*
Prunus andersonii	Desert Peach	NI
Purshia tridentata	Antelope Bitterbrush	NI
Pyrus sp.	Pear	NI
Rumex crispus	Curley Dock	FACW
Salix exigua	Sandbar Willow	OBL
Salix lasiolepus	Pacific Willow	FACW+
Salix lutea	Yellow Willow	OBL
Sitanion hystrix	Bottlebrush Squirreltail	UPL
Vitis sp.	Grape	NI

[1] OBL - Obligate Wetland. Occur almost always (estimated probability >99%) under natural conditions in wetlands.
FACW - Facultative Wetland. Usually occur in wetlands (estimated probability 67%-99%), but occasionally found in non-wetlands.
FAC - Facultative. Equally likely to occur in wetlands or non-wetlands (estimated probability 34%-66%).
FACU - Facultative Upland. Usually occur in non-wetlands (estimated probability 67%-99%), but occasionally found in wetlands (estimated probability 1-33%).
UPL - Obligate Upland. Occur almost always (estimated probability >99%) under natural conditions in non-wetlands in the region specified.
NI - No Indicator. Insufficient information available to determine an indicator status. If required, status was determined by the investigator using the above mentioned references (particularly Cronquist et al., 1972 and later; and Hickman, 1993).
To further refine these categories, a + or - may be used to indicate whether a species of plant is more or less likely, respectively, to occur in a wetland site. An asterisk (*) indicates a tentative assignment to an indicator status, based on preliminary information.

APPENDIX B

Project Site Photographs

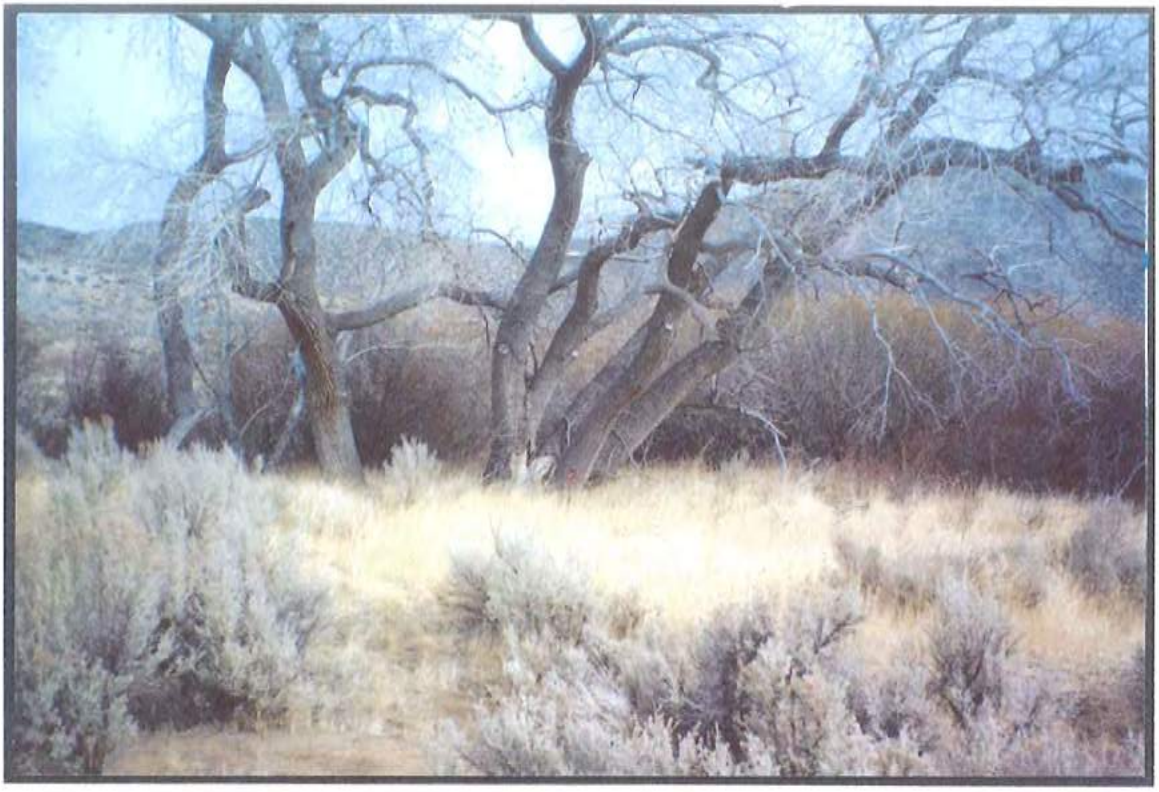


PHOTO 1. LOCATION OF SAMPLE SITES 1 AND 2. SHOVEL AT SAMPLE SITE 2, LOW-LYING AREA ADJACENT TO EAGLE CREEK CHANNEL. SAMPLE SITE 1 BESIDE CHANNEL.

PHOTO 2. HYDROPHYTIC VEGETATION IN CHANNEL AT LOWER END OF JBR DELINEATION AREA. VEGETATION PRESENT INCLUDES ANNUAL RABBIT-FOOT GRASS AND BALTIC RUSH.

PHOTO 3. UPPER REACHES OF EAGLE CREEK CHANNEL WITHIN JBR SURVEY AREA. SHARP UPLAND-WETLAND BOUNDARY PRESENT.

PHOTO 4. VIEW DOWNSTREAM OVER EAGLE CREEK DRAINAGE. VIEW IS TO SOUTHEAST.

PHOTO 5. CHANNEL ERODED BY ROAD RUNOFF FROM HIGHWAY 395. PIPE CONVEYING RUNOFF FROM HIGHWAY VISIBLE ON ROAD-FILL SLOPE.

PHOTO 6. LOWER REACH OF CHANNEL SHOWN IN PHOTO 5. CHANNEL BRAIDS AND DEFINITION IS LOST BEFORE REACHING EAGLE CREEK.

APPENDIX C

Wetland Survey Data Forms

DATA FORM
ROUTINE WETLAND DETERI ATION
(1987 COE Wetlands Delineation Manual)

Project/Site:	Tahoe-Carson Regional Hospital, Eagle Creek	**Project No:** MacKay-01	**Date:** 19-Dec-2002
Applicant/Owner:	MacKay and Somps		**County:** Carson City
Investigators:	David Worley and Richard Duncan		**State:** Nevada
			Plot ID: 1

Do Normal Circumstances exist on the site?	(Yes) No	**Community ID:** Floodplain
Is the site significantly disturbed (Atypical Situation:)?	Yes (No)	**Transect ID:**
Is the area a potential Problem Area?	Yes (No)	**Field Location:**
(If needed, explain on the reverse side)		GPS No.1, Between channel braids.

VEGETATION **(USFWS Region No. 8)**

Dominant Plant Species(Latin/Common)	Stratum	Indicator	Plant Species(Latin/Common)	Stratum	Indicator
Elymus triticoides Wild-Rye,Creeping	Herb	FAC+	*Artemisia douglasiana* Wormwood,Douglas'	Herb	FAC

Percent of Dominant Species that are OBL, FACW or FAC: (excluding FAC-) 2/2 = 100.00%

FAC Neutral: 0/0 = 0.00%
Numeric Index: 6/2 = 3.00

Remarks:
Cover by percent: Elymus 60%; Artemisia 30%

HYDROLOGY

YES **Recorded Data(Describe in Remarks):**
- NO Stream, Lake or Tide Gauge
- NO Aerial Photographs
- NO Other

NO **No Recorded Data**

Field Observations

Depth of Surface Water:	N/A *(in.)*
Depth to Free Water in Pit:	N/A *(in.)*
Depth to Saturated Soil:	N/A *(in.)*

Wetland Hydrology Indicators

Primary Indicators
- NO Inundated
- NO Saturated in Upper 12 Inches
- NO Water Marks
- NO Drift Lines
- NO Sediment Deposits
- NO Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- NO Oxidized Root Channels in Upper 12 Inches
- NO Water-Stained Leaves
- NO Local Soil Survey Data
- NO FAC-Neutral Test
- YES Other (Explain in Remarks)

Remarks:
Saturation assumed earlier in growing season.

DATA FORM
ROUTINE WETLAND DETERM ATION
(1987 COE Wetlands Delineation Manual)

Project/Site:	Tahoe-Carson Regional Hospital, Eagle Creek	**Project No:** MacKay-01	**Date:** 19-Dec-2002
Applicant/Owner:	MacKay and Somps		**County:** Carson City
Investigators:	David Worley and Richard Duncan		**State:** Nevada
			Plot ID: 1

SOILS

Map Unit Name (Series and Phase): Surprise coarse sandy loam, 2-4% slope
Map Symbol: 58 **Drainage Class:** Moderately Rapid **Mapped Hydric Inclusion?**
Taxonomy (Subgroup): Coarse-loamy, mixed, mesic, Aridic Haplo **Field Observations Confirm Mapped Type?** (Yes) No
Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)	Mottle Abundance/Contrast		Texture, Concretions, Structure, etc
0-4		10YR2/1	N/A	N/A	N/A	Sandy loam
4-9		10YR4/3	N/A	N/A	N/A	Sand
9-16		10YR5/4	7.5YR4/4	N/A	N/A	Sand

Hydric Soil Indicators:

NO **Histosol**	NO **Concretions**
NO **Histic Epipedon**	NO **High Organic Content in Surface Layer in Sandy Soils**
NO **Sulfidic Odor**	YES **Organic Streaking in Sandy Soils**
NO **Aquic Moisture Regime**	NO **Listed on Local Hydric Soils List**
NO **Reducing Conditions**	NO **Listed on National Hydric Soils List**
NO **Gleyed or Low Chroma Colors**	NO **Other (Explain in Remarks)**

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	(Yes) No	Is the Sampling Point within the Wetland?	(Yes) No
Wetland Hydrology Present?	(Yes) No		
Hydric Soils Present?	(Yes) No		

Remarks:
Wetland hydrology assumed earlier in growing season.

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site:	Tahoe-Carson Regional Hospital, Eagle Creek	**Project No:** MacKay-01	**Date:** 19-Dec-2002
Applicant/Owner:	MacKay and Somps		**County:** Carson City
Investigators:	David Worley and Richard Duncan		**State:** Nevada
			Plot ID: 2

Do Normal Circumstances exist on the site?	(Yes) No	**Community ID:** Floodplain
Is the site significantly disturbed (Atypical Situation:)?	Yes (No)	**Transect ID:**
Is the area a potential Problem Area?	Yes (No)	**Field Location:**
(If needed, explain on the reverse side)		GPS 2, Low area south of channel.

VEGETATION **(USFWS Region No. 8)**

Dominant Plant Species(Latin/Common)	Stratum	Indicator	Plant Species(Latin/Common)	Stratum	Indicator
Elymus triticoides	Herb	FAC+	*Bromus tectorum*	Herb	NI
Wild-Rye,Creeping			Cheatgrass		

Percent of Dominant Species that are OBL, FACW or FAC: (excluding FAC-) 1/1 = 100.00%

FAC Neutral: 0/0 = 0.00%

Numeric Index: 3/1 = 3.00

Remarks:
Cover by percent: Elymus 60%; Bromus 30%.

HYDROLOGY

YES **Recorded Data(Describe in Remarks):**
- NO Stream, Lake or Tide Gauge
- NO Aerial Photographs
- YES Other

NO **No Recorded Data**

Field Observations

Depth of Surface Water:	N/A *(in.)*
Depth to Free Water in Pit:	N/A *(in.)*
Depth to Saturated Soil:	N/A *(in.)*

Wetland Hydrology Indicators

Primary Indicators
- NO Inundated
- NO Saturated In Upper 12 Inches
- NO Water Marks
- NO Drift Lines
- NO Sediment Deposits
- NO Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- NO Oxidized Root Channels in Upper 12 Inches
- NO Water-Stained Leaves
- NO Local Soil Survey Data
- NO FAC-Neutral Test
- YES Other (Explain in Remarks)

Remarks:
Saturation assumed earlier in growing season.

DATA FORM
ROUTINE WETLAND DETERM ATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Tahoe-Carson Regional Hospital, Eagle Creek	**Project No:** MacKay-01	**Date:** 19-Dec-2002
Applicant/Owner: MacKay and Somps		**County:** Carson City
Investigators: David Worley and Richard Duncan		**State:** Nevada
		Plot ID: 2

SOILS

Map Unit Name (Series and Phase): Surprise coarse sandy loam, 2-4% slope
Map Symbol: 58 **Drainage Class:** Moderately Rapid **Mapped Hydric Inclusion?**
Taxonomy (Subgroup): Coarse-loamy, mixed, mesic, Aridic Haplo **Field Observations Confirm Mapped Type?** (Yes) No
Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)	Mottle Abundance/Contrast		Texture, Concretions, Structure, etc
0-16		10YR2/1	N/A	N/A	N/A	Sandy loam

Hydric Soil Indicators:

NO Histosol	NO Concretions
NO Histic Epipedon	NO High Organic Content in Surface Layer in Sandy Soils
NO Sulfidic Odor	NO Organic Streaking in Sandy Soils
NO Aquic Moisture Regime	NO Listed on Local Hydric Soils List
NO Reducing Conditions	NO Listed on National Hydric Soils List
YES Gleyed or Low Chroma Colors	NO Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Yes) No	Is the Sampling Point within the Wetland? (Yes) No	
Wetland Hydrology Present? (Yes) No		
Hydric Soils Present? (Yes) No		

Remarks:
Wetland hydrology assumed earlier in growing season.

DATA FORM
ROUTINE WETLAND DETERM .TION
(1987 COE Wetlands Delineation Manual)

Project/Site: Tahoe-Carson Regional Hospital, Eagle Creek	**Project No:** MacKay-01	**Date:** 19-Dec-2002
Applicant/Owner: MacKay and Somps		**County:** Carson City
Investigators: David Worley and Richard Duncan		**State:** Nevada
		Plot ID: 3

Do Normal Circumstances exist on the site?	(Yes) No	**Community ID:** Floodplain
Is the site significantly disturbed (Atypical Situation:)?	Yes (No)	**Transect ID:**
Is the area a potential Problem Area?	Yes (No)	**Field Location:**
(If needed, explain on the reverse side)		GPS 3, Low area north of channel.

VEGETATION **(USFWS Region No. 8)**

Dominant Plant Species(Latin/Common)	Stratum	Indicator	Plant Species(Latin/Common)	Stratum	Indicator
Elymus triticoides	Herb	FAC+	*Bromus tectorum*	Herb	NI
Wild-Rye,Creeping			Cheatgrass		
Rumex crispus	Herb	FACW			
Dock,Curly					

Percent of Dominant Species that are OBL, FACW or FAC: (excluding FAC-) 2/2 = 100.00%

FAC Neutral: 1/1 = 100.00%

Numeric Index: 5/2 = 2.50

Remarks:
Cover by percent: Elymus 60%; Bromus 30%; Rumex, trace.

HYDROLOGY

YES **Recorded Data(Describe in Remarks):**
- NO **Stream, Lake or Tide Gauge**
- NO **Aerial Photographs**
- YES **Other**

NO **No Recorded Data**

Field Observations

Depth of Surface Water:	N/A *(in.)*
Depth to Free Water in Pit:	N/A *(in.)*
Depth to Saturated Soil:	N/A *(in.)*

Wetland Hydrology Indicators

Primary Indicators
- NO **Inundated**
- NO **Saturated in Upper 12 Inches**
- NO **Water Marks**
- NO **Drift Lines**
- NO **Sediment Deposits**
- NO **Drainage Patterns in Wetlands**

Secondary Indicators (2 or more required):
- NO **Oxidized Root Channels in Upper 12 Inches**
- NO **Water-Stained Leaves**
- NO **Local Soil Survey Data**
- YES **FAC-Neutral Test**
- YES **Other (Explain in Remarks)**

Remarks:
Saturation assumed earlier in growing season.

DATA FORM
ROUTINE WETLAND DETERM ATION
(1987 COE Wetlands Delineation Manual)

Project/Site:	Tahoe-Carson Regional Hospital, Eagle Creek	**Project No:** MacKay-01	**Date:** 19-Dec-2002
Applicant/Owner:	MacKay and Somps		**County:** Carson City
Investigators:	David Worley and Richard Duncan		**State:** Nevada
			Plot ID: 3

SOILS

Map Unit Name (Series and Phase): Surprise coarse sandy loam, 2-4% slope
Map Symbol: 58 **Drainage Class:** Moderately Rapid **Mapped Hydric Inclusion?**
Taxonomy (Subgroup): Coarse-loamy, mixed, mesic, Aridic Haplo **Field Observations Confirm Mapped Type?** (Yes) No

Profile Description

Depth (Inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)	Mottle Abundance/Contrast		Texture, Concretions, Structure, etc
0-2		10YR2/1	N/A	N/A	N/A	Sandy loam
2-16		10YR4/3	7.5YR4/4	N/A	N/A	Sand

Hydric Soil Indicators:

NO **Histosol**	NO **Concretions**
NO **Histic Epipedon**	NO **High Organic Content in Surface Layer in Sandy Soils**
NO **Sulfidic Odor**	YES **Organic Streaking in Sandy Soils**
NO **Aquic Moisture Regime**	NO **Listed on Local Hydric Soils List**
NO **Reducing Conditions**	NO **Listed on National Hydric Soils List**
NO **Gleyed or Low Chroma Colors**	NO **Other (Explain in Remarks)**

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	(Yes)	No	Is the Sampling Point within the Wetland? (Yes) No
Wetland Hydrology Present?	(Yes)	No	
Hydric Soils Present?	(Yes)	No	

Remarks:
Wetland hydrology assumed earlier in growing season.

EXHIBIT D - MITIGATION AND MONITORING PLAN

Carson Tahoe Healthcare
Sierra Surgery Hospital Connector
Department of the Army SPK-2003-25013
Mitigation Plan

Prepared for:

U.S. Army Corps of Engineers
Nevada Utah Section
Regulatory Division
Attn: Ms. Jennifer C. Thomason
1325 J Street, Room 1350
Sacramento, CA 95814

Prepared by:

Garth Alling, Principal, Sierra Ecotone Solutions LLC.
Alison E. Stanton, M.S. Botanist
PO Box 1297
Zephyr Cove, NV 89448
galling@sierraecotonesolutions.com

Permittee:

Carson Tahoe Healthcare
Attn: Michelle Joy
1600 Medical Parkway
Carson City, Nevada 89703
michellejoy@carsontahoe.org

July 2020

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CONTRIBUTORS LIST

Preparation and Data Collection:
Garth Alling, Principal, Sierra Ecotone Solutions LLC.
PO Box 1297
Zephyr Cove, NV 89448
530-416-2440
galling@sierraecotonesolutions.com

Alison E. Stanton, M.S. Botanist
3170 US HWY 50 Suite#7
South Lake Tahoe, CA 96150
415-990-2269
alisonestanton@sbcglobal.net

GIS:

Jennifer DeMartino
DeMartino Mapping Services
www.demartinomapping.com
jennifer@demartinomapping.com

Engineering:

Tim Russell, P.E. WRS
Lumos & Associates. Inc.
308 N. Curry Street, Suite 200
Carson City, NV 89703
trussell@LumosInc.com

DISTRIBUTION LIST

List names, titles, and companies/agencies of all persons receiving a copy of the report.

Carson Tahoe Healthcare
Attn: Ms. Michelle Joy
1600 Medical Parkway
Carson City, Nevada 89703
775-445-8662

Tim Russell, P.E. WRS
Lumos & Associates. Inc.
308 N. Curry Street, Suite 200
Carson City, NV 89703
trussell@LumosInc.com

Carson City Department of Public Works
Dan Stucky
City Engineer
3505 Butti Way
Carson City, Nevada 89701

Nevada Division of Environmental Protection
Bureau of Water Quality Planning
901 South Stewart Street, Suite 4001
Carson City, Nevada 89701-5249
Birgit Widegren, Environmental Scientist IV
775-687-9550
bwidegren@ndep.nv.gov

EXECUTIVE SUMMARY

Carson Tahoe Healthcare (CTH) operates a Regional Medical Center (RMC) on the northwest end of Carson City, Nevada. CTH purchased the adjacent Sierra Surgery Hospital (SSH), located on the opposite side of Eagle Creek, and is proposing to build a connection between the two facilities to create a combined facility.

The proposed connector option is a single-story slab on-grade building that would exit the lower floor of the RMC and cross Eagle Creek before connecting to the SSH. The connector walkway would alleviate a number of administrative and operational issues and allow for streamlined facility permitting, improved communications, and shared staffing, equipment, and services. The connector walkway would facilitate patient, visitor, staff, and material transport between the two buildings in a temperature-controlled interior space and would eliminate costly Emergency Medical Services (EMS) trips that are currently required to transport patients between the facilities. The majority of the connector building footprint would be located in highly developed upland areas but a portion of the concrete abutment for the on-grade connector building slab would encroach below the ordinary high water mark (OHWM) of Eagle Creek.

Additional modifications of Eagle Creek would be required during the initial phase of the Project for flood control protection. Eagle Creek is an intermittent drainage that was highly constrained during construction of the RMC in 2003 when the channel bank was reinforced with rip-rap and a levee constructed along the south side of the creek. Three storm water detention basins were also constructed at that time. Proposed channel modifications below the OHWM of Eagle Creek would include vegetation removal, grading, and the removal and re-installation of rip-rap, channel bedding, and geotextile materials. These channel modifications are necessary to contain a projected 500-year storm event after the installation of the connector walkway and prevent the existing levee on the south side of the creek from being over-topped. This Mitigation Plan proposes compensatory mitigation measures for these impacts associated with the proposed connector Project.

The Project area is located within the boundary of an existing permit [SPK-200325013] issued to CTH by the U.S. Army Corps of Engineers (Corps) in 2003 authorizing the construction of the three stormwater basins. The Corps has indicated that it is appropriate to evaluate the proposed SSH connector Project impacts and resolution of non-compliance from the 2003 authorization using the Minor Impact Letter of Permission (LOP) Procedures. . The mitigation for the December 2003 individual permit is not in compliance with the permit conditions and the matter of non-compliance must be resolved before the Corps can authorize additional impacts to aquatic resources. Therefore, this Mitigation Plan is being submitted as part of the LOP application package to address impacts associated with the proposed connector Project and to resolve non-compliance with the 2003 permit conditions.

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TABLE OF CONTENTS

Figures

Tables

Acronyms and Abbreviations

CTH	Carson Tahoe Healthcare
CCPW	Carson City Public Works
DD	decimal degrees
EMS	Emergency Medical Services
GPS	global positioning system
msl	mean sea level
NDEP	Nevada Department of Environmental Protection
NRCS	National Resource Conservation Service
NWI	National Wetland Inventory
OHW	ordinary high water
OHWM	ordinary high water mark
Project	Sierra Surgery Hospital Connector
SSH	Sierra Surgery Hospital
RMC	Regional Medical Center
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WRCC	Western Regional Climate Center

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1.0 PROJECT DESCRIPTION

1.1 BRIEF PROJECT OVERVIEW AND DESCRIPTION

This report presents the Mitigation Plan for the Carson Tahoe Healthcare (CTH) Regional Medical Center (RMC) Sierra Surgery Hospital (SSH) Connector (Project) in Carson City, Nevada. The two facilities are located on the northwest end of Carson City, Nevada, south of Interstate 580 (**Figure 1- Vicinity Map**).

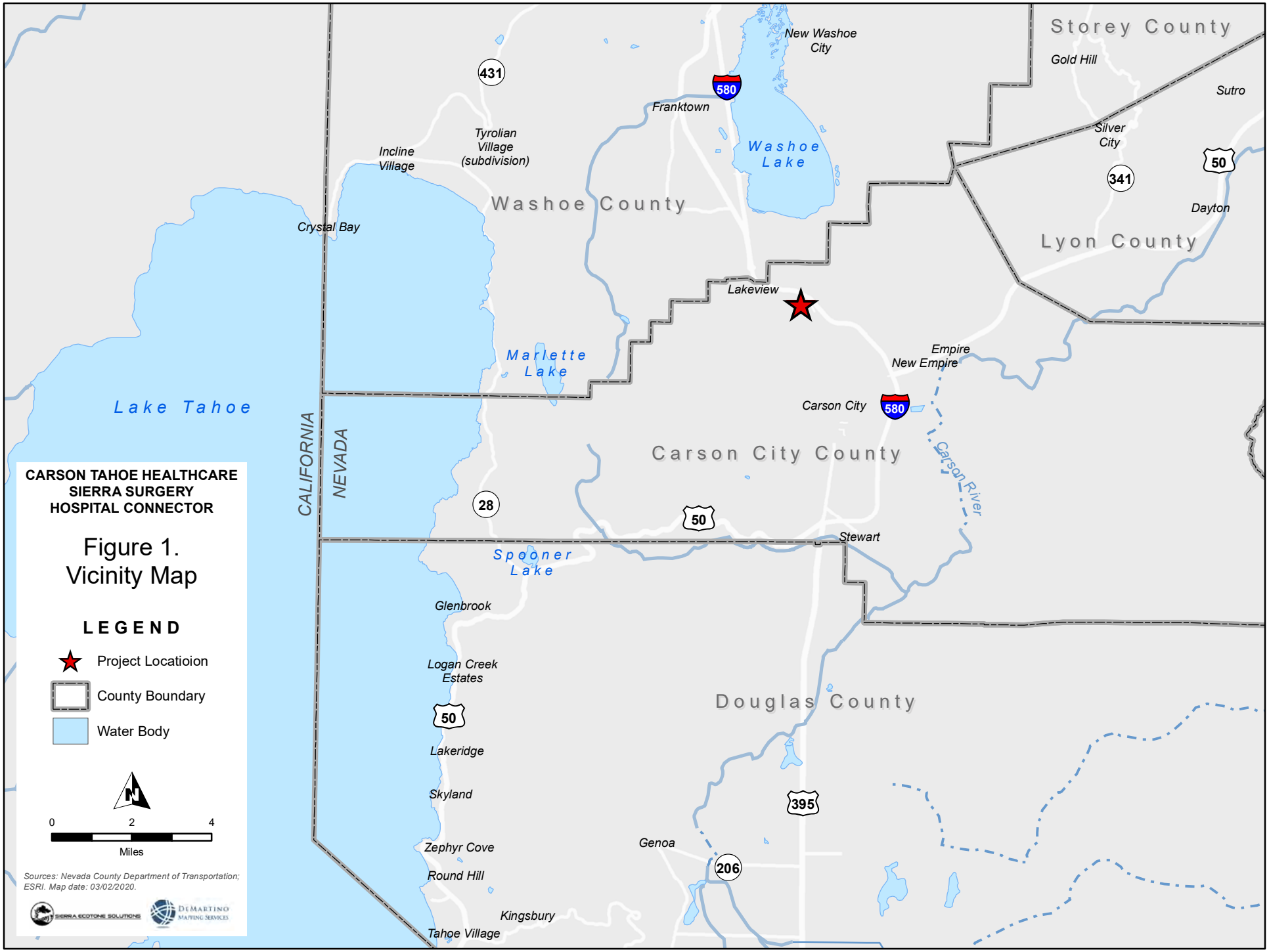
The existing RMC and SSH are separate facilities that currently operate independent of one another. The two facilities are located off Medical Parkway on opposite sides of Eagle Creek, an intermittent drainage that runs generally southeast between the RMC to the north and the SSH to the south (**Figure 2**- **Project Location**). CTH proposes to build a covered walkway between the two facilities to create a combined facility. The proposed connector walkway is a single-story slab on-grade building that would exit from the lower level of the RMC and cross Eagle Creek before connecting into the north side of the SSH at existing grades. The proposed connector would cross approximately 1,000 feet downstream of the existing Medical Parkway bridge.

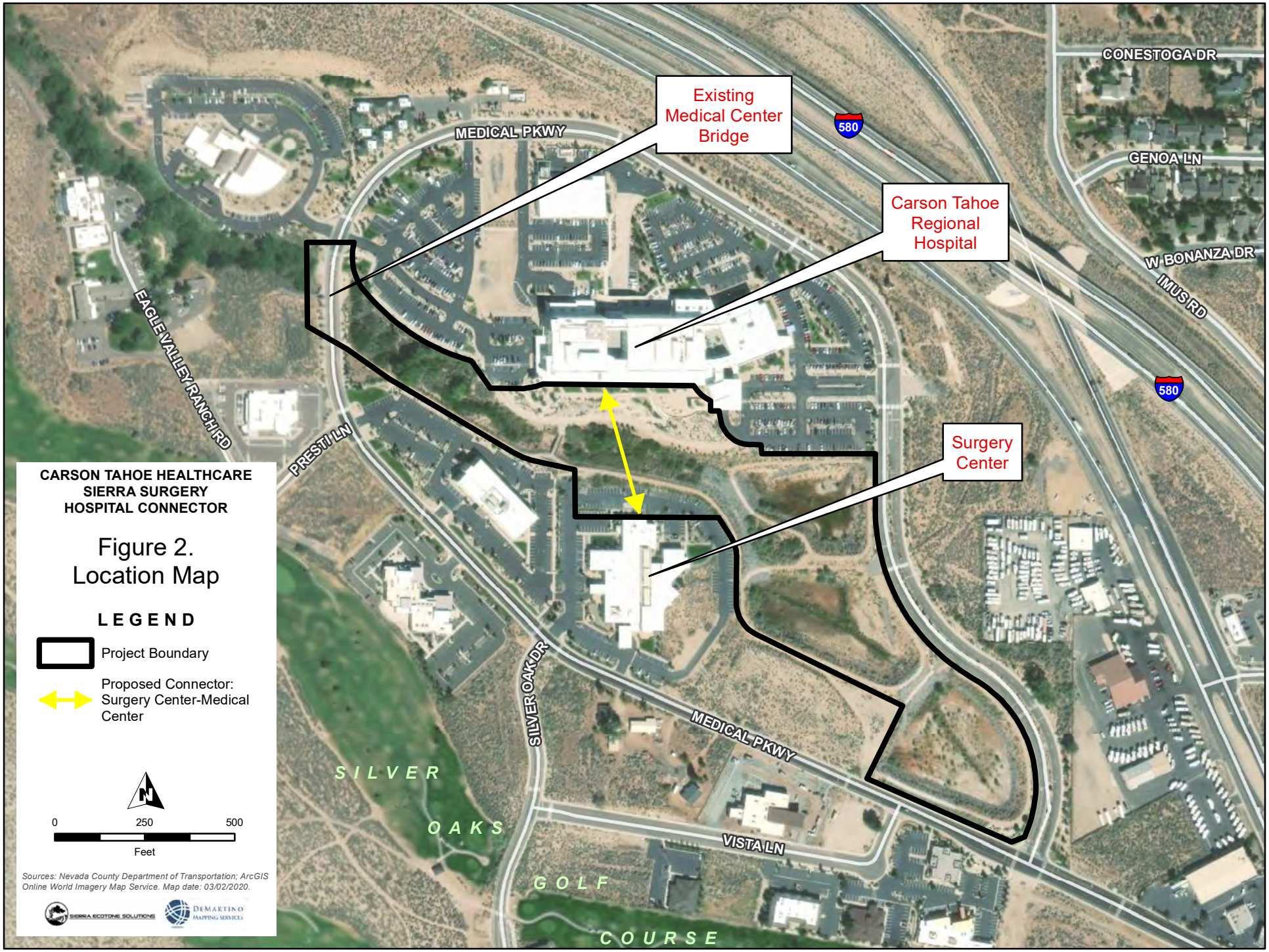
The proposed connector walkway would alleviate a number of administrative and operational issues and allow for streamlined facility permitting, improved communications, and shared staffing, equipment, and services. The covered connector walkway would facilitate patient, visitor, staff, and material transport between the two buildings in a temperature-controlled interior space and eliminate costly Emergency Medical Services (EMS) trips that are currently required to transport patients between the facilities.

The proposed total footprint of new buildings in the Eagle Creek Wetland is less than 1 acre. The majority of the connector building footprint would be located in highly developed upland areas outside of the ordinary high water mark (OHWM) of Eagle Creek. However, a portion of the concrete abutments for the on-grade connector building slab would encroach below the OHWM on the south side of the creek. In addition to the building construction, modification of the Eagle Creek channel would be required during the initial phase of the Project for flood control protection. The Eagle Creek channel was highly constrained during construction of the RMC in 2003 when the channel bank was reinforced with rip-rap and a levee constructed along the south side of the creek. Three storm water detention basins were also constructed at that time. Proposed flood protection measures below the OHWM of Eagle Creek would include vegetation removal, grading, and the removal and re-installation of rip-rap, channel bedding, and geotextile materials. These channel modifications are necessary to contain a projected 500-year storm event after the installation of the connector walkway and prevent the existing levee on the south side of the creek from being over-topped.

The Project area is located within the boundary of an existing permit [SPK-200325013] issued by the U.S. Army Corps of Engineers (Corps) in 2003 authorizing the construction of three stormwater detention basins. However, the mitigation for the December 2003 individual permit is not in compliance with the permit conditions and the matter of non-compliance must be resolved before the Corps can continue authorize additional impacts. In a letter dated November 14, 2019, the Corps indicated that it is appropriate to evaluate the proposed SSH connector Project impacts and resolution

of non-compliance from the 2003 authorization using the Minor Impact Letter of Permission (LOP) Procedures. Therefore, this Mitigation Plan is being submitted as part of the LOP application package to address impacts associated with the proposed connector Project and non-compliance with the 2003 permit conditions. The 2003 permit conditions are described next in Section 1.2


CARSON TAHOE HEALTHCARE
SIERRA SURGERY
HOSPITAL CONNECTOR
Figure 1.
Vicinity Map
LEGEND
Project Locatioion
County Boundary
Water Body
0
2
4
Miles
Sources: Nevada County Department of Transportation; ESRI. Map date: 03/02/2020.
Lake Tahoe
CALIFORNIA
NEVADA
Crystal Bay
Incline Village
Tyrolian Village (subdivision)
Washoe County
New Washoe City
Franktown
Washoe Lake
Storey County
Gold Hill
Sutro
Silver City
Dayton
Lyon County
Lakeview
Marlette Lake
Empire
New Empire
Carson City
Carson City County
Carson River
Stewart
Spooner Lake
Glenbrook
Logan Creek Estates
Douglas County
Lakeridge
Skyland
Zephyr Cove
Round Hill
Kingsbury
Tahoe Village
Genoa
431
580
341
50
28
395
206


Existing Medical Center Bridge
Carson Tahoe Regional Hospital
Surgery Center
MEDICAL PKWY
CONESTOGA DR
GENOA LN
W BONANZA DR
IMUS RD
580
EAGLE VALLEY RANCH RD
PRESTI LN
SILVER OAK DR
VISTA LN
SILVER OAKS GOLF COURSE
CARSON TAHOE HEALTHCARE
SIERRA SURGERY
HOSPITAL CONNECTOR
Figure 2.
Location Map
LEGEND
Project Boundary
Proposed Connector: Surgery Center-Medical Center
0
250
500
Feet
Sources: Nevada County Department of Transportation; ArcGIS Online World Imagery Map Service. Map date: 03/02/2020.
SIERRA ECOTONE SOLUTIONS
DEMARTINO MAPPING SERVICES

1.2 2003 PERMIT INFORMATION

In 2003, the U.S. Army Corps of Engineers (Corps) issued Permit #200325013 to CTH authorizing construction of three stormwater detention basins as attendant features for the RMC facility, to provide flood storage capacity along Eagle Creek. According to the letter dated November 14, 2019, the following Permit Special Conditions are in non-compliance:

Special Condition 6 - authorized fill of 1,530 linear feet of the lowest section of the Eagle Creek channel and mitigation of this impact with creation of 1,590 feet of channel within newly created detention basins 2 and 3. A jurisdictional delineation submitted in September, 2019 (See Section 2.3 below) determined that only 910 linear feet of channel was constructed. Therefore, 680 linear feet of channel was not constructed as required to complete the 1,590 linear feet of channel.

Special Condition 9 -required mitigation efforts to be fully implemented by September, 2004. The mitigation was not completed until 2008.

Special Condition 10- required annual mitigation monitoring for at least 5 years after completion to mitigation planting to ensure mitigation success. No monitoring has occurred.

Special Condition 13- required submission of 3 mitigation monitoring reports after the first, third, and fifth years after mitigation planting, or annually if mitigation is not successful after 5 years. No monitoring reports have been submitted.

Special Condition 14- required the monitoring reports to include information on success criteria and actions needed to address deficiencies.

Special Condition 15- specifies that non-compliance extends the term for submitting monitoring reports beyond the specified 5 year reporting term. Monitoring is no longer required when mitigation is certified by the Corps as successful.

The Corps determined that they would take no further action on seeking compliance for Special Conditions 9, 10, 13, 14, and 15 but that CTH would need to provide additional compensatory mitigation for the 680 linear feet of channel that was not created.

This Mitigation Plan is being submitted as part of the LOP application package to address non-compliance with the 2003 permit condition 6, listed above, in addition to new impacts associated with the proposed connector Project.

2.0 BASELINE INFORMATION

2.1 TOPOGRAPHY

Elevations in the project area range from approximately 4,830 to 4,760 feet above mean sea level (msl). Longitudinal slope upstream of Medical Parkway is five percent. Slopes reduce downstream of Medical Parkway to around three percent. During construction of the RMC, the lowest section of Eagle Creek was re-located within the new stormwater detention basins. The basins and channel contain the lowest points within the project area.

2.2 CLIMATE

The project area has a Great Basin climate characterized by cold winters with snowfall and hot, dry summers with occasional monsoon rain. Average maximum temperatures range from 45°F in January to 90°F in July; average minimum temperatures range from 20°F in January to 50°F in July (WRCC 2019). Average annual precipitation is 10.3 inches and average snowfall is 26 inches (WRCC 2019).

2.3 HYDROLOGY AND AQUATIC RESOURCES (DELINEATION OF WATERS OF THE U.S)

The Project area is located in the Central Lahontan Sub-region of the Great Basin within the Upper Carson watershed (HUC 16050201) of the Carson River Basin (USGS 2019). The headwaters of the Carson River lie at altitudes above 10,000 feet in the Sierra Nevada of east-central California and the river flows out of the mountains and north through Carson Valley. The main stem of the Carson River exits the Carson Valley a few miles southeast of Carson City and heads east through the Dayton Valley towards the Lahontan Reservoir.

Carson City is located within the Eagle Valley hydrologic area where streamflow tributary to the Carson River is perennial in only three watersheds: Clear Creek, Ash Canyon, and Kings Canyon Creeks (USGS 2011). The Project area is located north of these three watersheds on the northern boundary of the hydrologic area.

Hydrology in the watershed above Eagle Creek is influenced primarily by snowpack, but monsoonal summer rain can cause flash flooding. The watershed is very lightly developed with a handful of residences upslope in the Duck Hill area. Rose Canyon is undeveloped and downslope there are several other medical buildings in the vicinity of Eagle Creek as it passes under Medical Parkway bridge and into the Project area. The watershed does not appear to be subject to further development or rapid changes in land use that would cause changes in stream geomorphology.

Within the Project Area, a routine wetland delineation was conducted on 29 April and 12 July 2019 in accordance with Corps of Engineers guidelines. The Draft Aquatic Resources Report and preliminary results of the wetland delineation are included as Section 3 of the LOP application package. The report identifies Eagle Creek (W1) and three constructed channels (W2-W4) as potential non-wetland Waters of the U.S. and the Eagle Creek riparian zone below ordinary high water (OHW) and three constructed detention basins (Basin 1-3) as potential wetland Waters of the US. These potential aquatic resources are shown in **Figure 3.**

Eagle Creek

Eagle Creek is an intermittent drainage that that originates in the foothills of the Carson Range and flows over Duck Hill before passing into the project area. Within the project boundary, Eagle Creek enters a culvert to pass under Medical Parkway on the west side of the RMC. An existing footbridge is approximately 700 feet downstream (east) of Medical Parkway. The channel runs generally southeast between the RMC to the north and the SSH to the south. Eagle Creek was heavily modified during construction of the RMC and Medical Parkway in 2003. Beginning at Medical Parkway, a levee was constructed along the south side of the channel and the bank reinforced with rip-rap. The top of the levee provides flood protection for the SSH and surrounding development and also functions as a pedestrian pathway. The north side of the creek is gently sloping with another pathway of decomposed granite between Eagle Creek and the RMC. The riparian corridor is narrow and varies slightly in width from approximately 30 to 50 feet. The riparian vegetation is described in Section 2.4.

Detention basins

During construction of the RMC in 2003, CTH constructed three detention basins in upland sage-scrub habitat located in the eastern portion of the Project area. The detention basins were designed to convey flows from Eagle Creek. According to the project design, Eagle Creek flows that exceed a 5-year event are diverted from the creek into detention basin 1 via a lateral weir stationed approximately 1,200 feet downstream of Medical Parkway. A second inline weir is located approximately 200 ft further downstream that allows flows less than 5- year events to enter detention basin 2. Detention basins 2 and 3 are connected via a 2 x 4-foot box culvert. The outlet from basin 3 is a 36” corrugated metal pipe (CMP) that directly connects with Nevada Department of Transportation’s 48” metal pipe drain system.

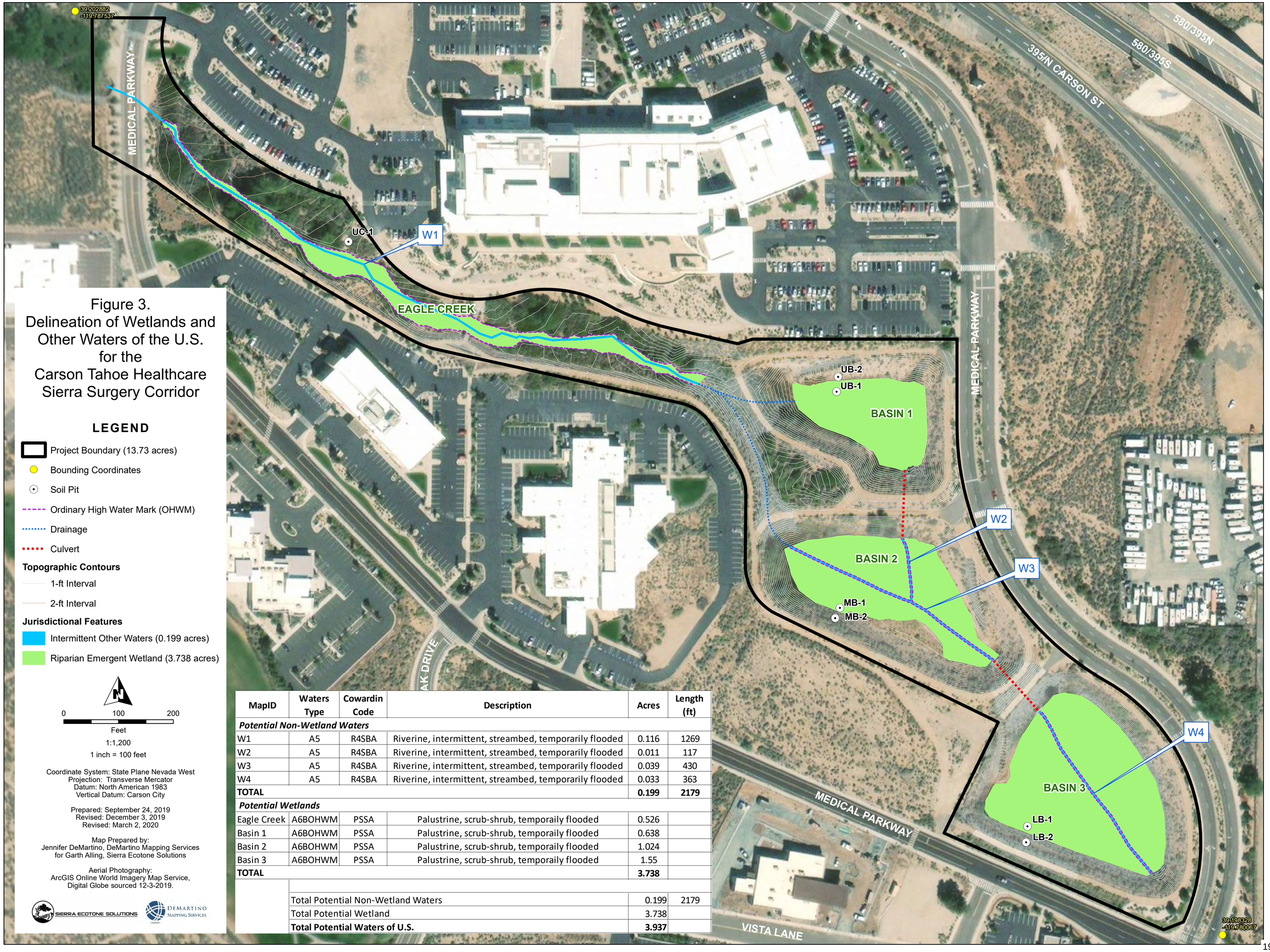


Figure 3.
Delineation of Wetlands and Other Waters of the U.S.
for the
Carson Tahoe Healthcare
Sierra Surgery Corridor

LEGEND

- Project Boundary (13.73 acres)
- Bounding Coordinates
- Soil Pit
- Ordinary High Water Mark (OHWM)
- Drainage
- Culvert

Topographic Contours

- 1-ft Interval
- 2-ft Interval

Jurisdictional Features

- Intermittent Other Waters (0.199 acres)
- Riparian Emergent Wetland (3.738 acres)

N

0 100 200
Feet

1:1,200

1 inch = 100 feet

Coordinate System: State Plane Nevada West
Projection: Transverse Mercator
Datum: North American 1983
Vertical Datum: Carson City

Prepared: September 24, 2019
Revised: December 3, 2019
Revised: March 2, 2020

Map Prepared by:
Jennifer DeMartino, DeMartino Mapping Services
for Garth Alling, Sierra Ecotone Solutions

Aerial Photography:
ArcGIS Online World Imagery Map Service,
Digital Globe sourced 12-3-2019.

SIERRA ECOTONE SOLUTIONS
DEMARTINO MAPPING SERVICES

MapID	Waters Type	Cowardin Code	Description	Acres	Length (ft)
Potential Non-Wetland Waters					
W1	A5	R4SBA	Riverine, intermittent, streambed, temporarily flooded	0.116	1269
W2	A5	R4SBA	Riverine, intermittent, streambed, temporarily flooded	0.011	117
W3	A5	R4SBA	Riverine, intermittent, streambed, temporarily flooded	0.039	430
W4	A5	R4SBA	Riverine, intermittent, streambed, temporarily flooded	0.033	363
TOTAL				**0.199**	**2179**
Potential Wetlands					
Eagle Creek	A6BOHWM	PSSA	Palustrine, scrub-shrub, temporaily flooded	0.526	
Basin 1	A6BOHWM	PSSA	Palustrine, scrub-shrub, temporaily flooded	0.638	
Basin 2	A6BOHWM	PSSA	Palustrine, scrub-shrub, temporaily flooded	1.024	
Basin 3	A6BOHWM	PSSA	Palustrine, scrub-shrub, temporaily flooded	1.55	
TOTAL				**3.738**	
	Total Potential Non-Wetland Waters			0.199	2179
	Total Potential Wetland			3.738	
	Total Potential Waters of U.S.			**3.937**	

2.4 VEGETATION AND LAND USE

The Project area is heavily developed and occupied by the RMC, the SSH, and associated parking lots and roads. Landscaping is present throughout the facilities and there are pedestrian pathways composed of compacted decomposed granite. The vegetation communities present in the study area include the riparian habitat in Eagle Creek, the wetlands in the detention basins, and upland sagebrush. Descriptions of the habitat conditions and vegetative communities are provided in this section based on field surveys conducted in 2019.

Riparian

Vegetation within the existing Eagle Creek channel is a dense thicket of willows (*Salix sp.)* 8 to 12 feet tall, with several emergent cottonwoods (*Populus sp.).* The riparian vegetative community is classified as Sandbar willow - Arroyo willow thicket (CNPS 2019). Sandbar willow *(Salix exigua)* and Arroyo willow *(S. lasiolepis)* are co-dominant in the riparian scrub that occupies the channel of Eagle Creek. Emergent trees include Fremont's cottonwood *(Populus fremontii),* and black cottonwood (*P. trichocarpa*). Palmer's penstemon (*Penstemon palmerii)* is a conspicuous forb, especially along the periphery of the willow thickets. Various hydrophytic plants are present near the channel margins including seep monkeyflower (*Erythranthe guttata*), snouted monkey flower (*Mimetanthe pilosa*) and marsh speedwell (*Veronica scutella*). Mesic graminoids are very sparse along the channel and include only a few rush (*Juncus* sp.) and sedge (*Carex* sp.). Non-native species like red-stem filaree (*Erodium cicutarium*), pineapple weed (*Matracaria discoidea*), and tansy mustard (*Descurania incisa*) are prevalent slightly upslope of the channel. Other native species observed include Virginia strawberry (*Fragaria virginiana*) and mugwort (*Artemisia douglasiana*).

Wetland

The wetland vegetation within the three detention basins includes emergent aquatic vegetation with willow scrub (*S. exigua and S. lasiolepis*) and some cottonwoods (*Populus sp.)*. Prevalent obligate wetland species in Basin #1 include common spikerush (*Eleocharis macrostachya*) and bulrush (*Schoenoplectus sp.).* The lowest detention basin (#3) is the largest and also supports willow and cotton wood. Dominant species in the herb stratum include non-native white sweetclover (*Melilotus albus*) and rabbitsfoot grass (*Polypogon monspeliensis*) along with typical wetland species like Sierra rush (Juncus nevadensis), common toad rush (*Juncus bufonius*), and cinquefoil (*Drymocaulus sp.).* The vegetation includes obligate wetland species like marsh speedwell (*Veronica scutellata*).

Upland

Outside of the detention basins and channel of Eagle Creek, the upland vegetation is dominated by big sagebrush (*Artemesia tridentata*), rabbitbrush (*Ericameria nauseousus*), and four-wing saltbush (*Atriplex canescens*). Weedy species like cheatgrass (*Bromus tectorum*) and tansy mustards (*Descurainia sp.)* are distributed among the shrubs and in some dense patches along with natives like the sub-shrub littleleaf horsebrush (*Tetradymia glabrata*) and naked buckwheat (*Eriogonum nudum*).

2.5 SOILS

The soil map is provided in Figure 5. As shown in that map, the Project area is located on an alluvial fan derived from the granitic and mixed rock. Soils in the study area are mapped as Surprise coarse sandy loam, on 2-4 percent slopes (58) or 4-8 percent slopes (59) (NRCS 2019). Surprise coarse sandy loam has moderately rapid permeability and slow runoff. Surprise soils are rarely flooded. There are some stony surface layers within the study area and possibly some hard pan at a depth of 35 inches (JBR 2003).

2.6 CULTURAL RESOURCES

The Corps has completed the required Section 106 consultation with the Nevada State Historic Preservation Officer and affected Washoe Tribe of Nevada and California Tribal Historic Preservation Officer The Corps made a determination of No Adverse Affect to Historic Properties and the State Historic Preservation Office concurred in a letter dated June 9, 2020.

3.0 OBJECTIVES

This section describes the objectives of the proposed compensatory mitigation including the amount and types of the proposed impacts, the source and method of the proposed compensation, and a discussion of the manner in which the resource function of the compensatory mitigation addresses the needs of the Eagle Creek riparian system present at the Project site and watershed needs.

3.1 BASELINE INFORMATION: AMOUNT AND TYPE OF PROPOSED IMPACTS

A majority of the components of the connector building walkway Project would be located in highly developed upland areas around the RMC and SSH. However, a portion of the concrete abutments for the on-grade connector building slab would encroach below the OHWM of Eagle Creek and channel modifications for flood control are necessary to contain a projected 500-year storm event after the installation of the connector walkway and prevent the existing levee on the south side of the creek from being over-topped. Proposed flood protection measures within the channel of Eagle Creek would include vegetation removal, grading, and the removal and re-installation of rip-rap, channel bedding, and geotextile materials.

The design requires vegetation to be removed/maintained along with the proposed grading work to improve the channel conveyance and provide adequate freeboard for the existing levee. Existing vegetation within the majority of Eagle Creek consists of highly-overgrown and unmaintained brush and trees, which has caused issues meeting FEMA levee freeboard requirements and significantly impacted the conveyance capacity of the channel/creek. Without the proposed improvements the channel/creek and the levee would not function as intended resulting in a higher risk of failure in a flood event. Following construction of the improvements, CTH would be required to continually maintain the brush, trees and debris buildup, so as to maintain the design flood conveyance.

The potential jurisdictional features impacted by these cut and fill modifications include the entire area of the delineated Eagle Creek riparian wetland (0.526 acres) and 1,182 feet of the delineated intermittent channel (channel width is4 feet, for a total impacted area of 0.108 acres). **Table 3-1** describes the impact sites and **Figure 4** shows the proposed Project impact site locations. Within these impact sites, a total volume of 1,440 cubic yards (CY) of concrete fill for the abutment wall on the south side of the creek, 134 CY of cut soil fill, and 3237 CY of rip-rap are proposed for discharge below the ordinary high water mark (OHWM) of Eagle Creek.

Table 3-1: Connector Project Aquatic Resources Impact Site Description

Site No.	Habitat Types	Vegetation Communities	Cowardin	HGM	Hydrology	Activity	Permanent Loss	Lin. Ft
Eagle Creek riparian wetland	Riparian emergent scrub-shrub	Arroyo willow series	PSSA	Palustrine	temporarily flooded	Cut, fill, rip-rap and concrete	0.526	N/A
W 1 Eagle Creek streambed	Riparian scrub	Arroyo willow series	R4SBA	Riverine	intermittent	Cut, fill, rip-rap and concrete	0.108	1,108

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Figure 4.
Proposed Project Impact and Mitigation Site Locations

LEGEND

- Project Boundary
- Drainage
- Culvert
- Ordinary High Water Mark (OHWM)

Jurisdictional Features Not Impacted by Cut or Fill

- Intermittent Other Waters
- Riparian Emergent Wetland

Jurisdictional Features Impacted by Cut or Fill (acres of impact)

- W1 - Intermittent Other Waters (0.108 acres)

Eagle Creek Riparian Emergent Wetland (0.526 acres)

- Impacted by Cut
- Impacted by Fill

Other Impact Areas

- Rip-Rap
- Concrete Wall

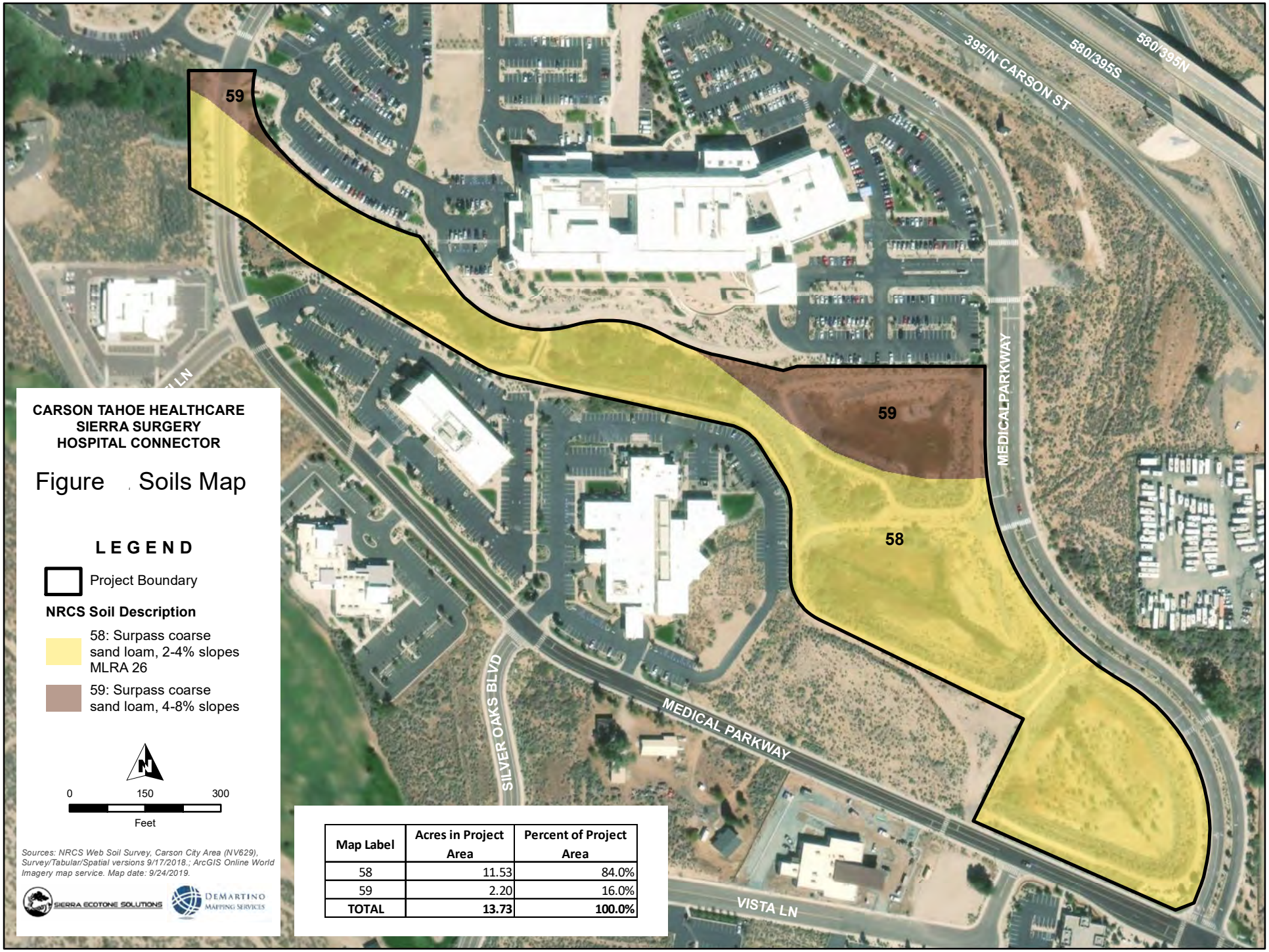
Mitigation Areas

- Mitigation Area 1 (0.624 acres)
- Mitigation Area 2 (1.3 acres)

0 100 200
Feet

Sources: Lumos & Associates; ArcGIS Online World Imagery Map Service. Map date: March 6, 2020.

SIERRA ECOTONE SOLUTIONS
DEMARTINO MAPPING SERVICES



Map Label	Acres in Project Area	Percent of Project Area
58	11.53	84.0%
59	2.20	16.0%
TOTAL	**13.73**	**100.0%**

3.2 BASELINE INFORMATION: AMOUNT AND TYPE OF PROPOSED MITIGATION

3.2.1 2003 Non-Compliance Resolution

The 2003 Department of the Army permit (#200325013) Special Condition 6 authorized permanent fill of the lowest 1,530 linear feet of the Eagle Creek channel. Mitigation of this impact required creation of 1,590 feet of channel within newly created detention basins 2 and 3. After completion of the RMC and 3 detention basins, CTH used the mitigation method of establishment (ES) to create three sections of constructed channel (W2-W4) within Basin 2 and 3 (see Figure 4 above). Construction of this mitigation was completed in 2008.

The preliminary jurisdictional delineation submitted in September 2019 determined that 910 linear feet of channel has been constructed. As shown in Figure 3 in Section 2.3, channels W2, W3, and W4 were delineated as potential non-wetland Waters with intermittent streambed channel lengths of 117, 430, and 363 linear feet, respectively, with a width of 4 feet Therefore, a total of 680 linear feet of channel were not constructed according to Special Condition 6 of the 2003 permit.

Prior to construction, habitat in the locations of the detention basins were described as sagebrush scrub in the pre-construction wetland delineation report (JBR 2003). Since their competition in 2008, the detention basins and constructed channels have become jurisdictional features as described and outlined in the Aquatic Resources Delineation. Photos 1-3 show site conditions in the basins in July, 2019. Basins 1-3 now support emergent wetland aquatic vegetation and riparian willow scrub comprised of shining willow (*Salix exigua),* arroyo willow (*S. lasiolepis*) and some cottonwoods (*Populus sp.)*.

Photo 1. Site conditions in created detention basin #2 in July, 2019.

Photo 2. Site conditions in created detention basin #3 in July, 2019.

Photo 3. Site conditions in created detention basin #1 in July, 2019.

3.2.2 Determination Of Credits

In lieu of construction of 680 feet of linear feet of new channel for the 2003 compliance, CTH proposes to preserve the wetland area that has been created as a result of Basin 1 construction. Basin 1 is directly hydrologically connected to Eagle Creek via a lateral weir that was designed to

convey 5-year flood flows. Photo 3 above shows the vegetation that has been established in Basin 1 and how the habitat has been converted from upland sage-scrub to riparian emergent wetland habitat with established stands of willow *(Salix* sp.) and cottonwood (*Populus* sp.).

Proposed Mitigation Area 1 provides 0.624 acres of existing riparian emergent wetland habitat (Table 3-1) that would be preserved through deed restriction. Protection of this area would offset the need for construction of an additional 680 linear feet of channel required by 2003 permit Special Condition 6 if the requirement were converted from a linear to an area basis. CTH proposes an area-based compensatory mitigation ratio based on a 20-foot distance from the centerline of the un-constructed channel (20 feet each side) that would result in a total required mitigation area of 27,200 square feet (40 feet x 680 linear feet).

Table 3-2: 2003 Permit Proposed Mitigation Site Description

Site No.	Pre-Construction Site Conditions	Post-Construction Site Conditions							
	Habitat Types	Habitat Types	Vegetation	Hydrology	Mitigation Method	*Acre*	*Lin. Ft*	Cowardin	HGM
Mitigation Area 1	Sage scrub	Riparian scrub	Arroyo willow series	intermittent	ES	0.624	NA	PSSA	Palustrine

Protection of 27,200 sq. ft. of existing wetland area (0.624 acres) in lieu of construction of 680 linear feet of new channel construction would result in no net loss of aquatic resource surface area if the habitat types are considered equivalent and mitigated at a 1:1 ratio. Through the ongoing and continued protection of proposed Mitigation Area 1 via the site protection measures described in Section 5.1 (Carson City Department of Public Works deed restriction), the wetland area will continue to function as a riparian zone and to mature and become increasingly suitable habitat for wildlife species in the future.

CTH, together with CCDPW, would continue to manage the Basin 1 for flood control and protection of the wetlands, as described in Section 5 of this Mitigation Plan. There would not be any temporal loss in function of the existing riparian area in Basin 1 as a result of the proposed preservation.

3.2.3 Proposed Mitigation for the Connector Project and Offset of Impacts

Impacts to Eagle Creek resulting from the proposed connector Project will be mitigated onsite. The overall impacts to the Riparian Emergent Wetland (0.526 acres) and Intermittent Other Waters (0.108 acres) located in Eagle Creek (identified as W1 and Eagle Creek Wetland on Figure 3) total 27,643 sq. ft. (0.634 acres). These impacts would be due to grading of the channel, with cut and fill of dirt (134 CY) and placement of rip-rap (3,237 CY) and concrete footings (1,440 CY). CTH proposes a 2:1 compensatory mitigation ratio (0.634 x 2 = 1.268 acres) and proposes to protect the 1.3 acres of existing riparian habitat and streambed channel identified as Mitigation Area #2 on Figure 3 and described in Table 3-3 to offset impacts from the proposed connector Project.

Table 3-3 : Connector Project Proposed Mitigation Site Description									
Site No.	**Pre-Construction Site Conditions**	**Post-Construction Site Conditions**							
	Habitat Types	**Habitat Types**	**Vegetation**	**Hydrology**	**Mitigation Method**	***Acres***	***Lin. Ft***	**Cowardin**	**HGM**
Mitigation Area 2	Sage scrub	Riparian scrub	Arroyo willow series	intermittent	ES	1.270	NA	R4SBA	Palustrine

Eagle Creek within the Project Area (identified as W1 and Eagle Creek Wetland (ECW) on Figure 4) only runs intermittently during large storm events during the winter and spring runoff. This intermittent flow regime only allows for surface water to be present for a short duration of time.

3.2.4 Site Selection

A watershed approach was used for site selection. The stream system as observed for Eagle Creek is typical in the watershed, however the wetlands to be preserved are special aquatic sites that are infrequently found in the watershed. Historically wetland areas such as the ones to be preserved would have been more prevalent prior to urban development and ranching activities, and therefore the need to protect the wetland areas has increased.

Biological functionality within the Eagle Creek riparian habitat is moderate due to low levels of species richness and biodiversity. The existing site is dominated by willow (Salix sp.) and emergent cottonwood (*Populus* sp.) trees. The levee on the south side of the creek and development and landscaping associated with the RMC on the north side of the creek narrowly constrains the habitat in close proximity to the channel and has created a relative monoculture that blocks forb and other shrub species growth opportunities. Vertebrate species observed in the area include avian species (e.g. magpie, Cassin's finch, American robin, spotted towhee, Brewer's blackbird, northern flicker), reptiles (western fence lizard) and mammal spoor (mule deer and Leporidae scat and tracks). None of the species noted above are wetland or riparian habitat dependent and are considered upland species.

Organic matter in the area is mainly evident in the large mass of dead *Salix* branches that are prevalent across the project site in high density. This mass of down woody debris is matted above the surface of the creek that contains mats of fallen leaves. Due to the xeric conditions that the site exhibits for the majority of the year, decomposition is relatively slow onsite and therefore does not allow for increased soil texture and moisture to be present. Therefore, carbon and nitrogen cycling as well as phosphorus cycling in the Eagle Creek soils is likely relatively low onsite.

The proposed mitigation site for the onsite impacts will result in a gain in wetland functionality. Hydrologically, Mitigation Area 2 is located within Basin 3 which is at the lowest portion of the

project area. Water appears to be present in this location for longer durations as compared to the Eagle Creek portion that is proposed to be impacted. This longer presence of surface water and saturated soils has resulted in increased suitability of wetland plant growth opportunity. The elevated groundwater levels here and increased surface water provides increased water storage and allows for the mitigation site to support wetland vegetation as described in the delineation report. Being that the mitigation area is within a flood control basin, the area is not subject to catastrophic damage from eroding banks and scour that could potentially occur during a large flood event.

Biologically the functional gain in Mitigation Area 2 will occur through overall plant cover, species richness, and increased abundance. The presence of herbs (e.g. *Eleocharis macrostachya, Veronica scutellate* and others) grasses (*Polypogon monspeliensis, etc.*) together with shrub (*Salix lemmonii*) and trees (*Populus fremontii*) complete the strata with a relative high degree of absolute total cover (87%) as noted on the wetland delineation forms. The variety of vegetation structure in Mitigation Area 2 will likely become increasingly favorable to riparian avian species (orange-crowned warbler, (*Vermivora celata*), yellow warbler (*Dendroica petechia*), common yellowthroat (*Ceothlpis trichas*) and Empids). Mitigation Area 2 will only become increasingly suitable for vertebrate species as the site continues to mature.

Mitigation Area 2 has increased functionality in the form of biogeochemistry as compared to Eagle Creek Wetland as noted above due to the hydrological and biological existing and future conditions discussed above. Nutrient cycling and storage will occur more readily onsite due to the persistence of water onsite together with the ability of the site to increase in readily decomposable organic matter from the presence of lower vegetation strata. Overall the wetland present and that will continue to mature over time will result in higher functionality as compared to the existing wetland that is to be disturbed in Eagle Creek.

Mitigation Area 2 is in close proximity (~1,000 feet) to the proposed impact area and is within the same watershed and is adjacent to a lower portion of Eagle Creek. The proposed 2:1 compensatory mitigation ratio would result in a net increase in aquatic resource surface area.

In an effort to decrease the likelihood of future excess silt deposition within the Mitigation Areas 1 and 2, Carson Tahoe Hospital has entered into an agreement with Carson City Public Works to provide $24,650 to implement erosion control projects in the watershed above the proposed project site. Erosion control projects have been identified by CCPW that will decrease erosion and stabilize upland areas that currently contribute sediment and degrade the water quality of Eagle Creek. These measures to limit erosion at the source will eventually decrease the need for future dredging in the project area flood control basins.

4.0 MITIGATION WORK PLAN

A mitigation work plan is intended to provide the practical "how-to" details necessary to take the compensatory mitigation project from a design on paper to "in-the-ground" implementation. As the proposed mitigation plan is to preserve areas that have already been constructed the following actions are considered the work plan for this proposal:

- The Deed Restriction outlining the protections for the wetland areas (as noted in Section 5.1 below) shall be recorded in Carson City Recorder's office along with the original 2003 individual permit and the Letter of Permissions SPK-2003-25013.
- On-site construction fencing shall be installed to identify and protect the wetland areas during construction of the Project as described in the special conditions of the 2020 Letter of Permissions SPK-2003-25013.
- Post-construction signing and fencing as described in the special conditions of the 2020 Letter of Permissions SPK-2003-25013.
- Carson Tahoe Hospital shall provide $24,650 to Carson City Public Works to implement erosion control projects in the watershed above the proposed project site in accordance with the agreement between the two parties.

5.0 LONG TERM MANAGEMENT AND FUNDING

This section includes a description of the site protection instrument and financial assurances. As already described, the proposed mitigation has been completed and long-term management has been ongoing since the RMC was completed in 2003. Long-term adaptive management includes maintenance and inspection schedules described in the sections below.

5.1 DESCRIPTION OF THE SITE PROTECTION INSTRUMENT

CTH proposes to utilize a deed restriction to protect the wetland resources within proposed Mitigation Area 1/Basin 1 and Mitigation Area 2/Basin 3 from future development. The deed restriction would require approval by the Carson City Board of Supervisors and the Corps. Proposed Mitigation Area 1 is offered as compensatory mitigation to bring the 2003 permit into compliance. CTH proposes to retain the right to conduct maintenance dredging within Mitigation Area 1/Basin 1 as a future management option to restore the area to its current condition following storm events and understands that additional authorization from the Corps will be required to perform this work.. Mitigation Area 2/Basin 3 is proposed to offset impacts from the proposed connector project under the LOP and would be fully protected with no maintenance dredging.

5.2 MAINTENANCE / INSPECTION SCHEDULE

The three flood control basins within the project area (Basins 1, 2 and 3), which includes Mitigation Area 1 and 2, are inspected and managed by Carson City Public Works (CCPW). These inspections occur on an annual basis and more frequently after large storm events and include inspections of culvert function and bank stability. Invasive plant species are also monitored.

Special Condition 16 of the 2003 permit - authorized Carson Tahoe Hospital and CCPW to perform "Annual maintenance dredging in detention basins 1-3 of approximately 100 cubic yards per year per basin or up to 6,500 cubic yards after a major storm event to maintain basin capacities. Dredging in Basins 2 and 3 are limited to areas at least 30 feet from the thalweg of the new channel." Dredging as outlined above has not been performed in any of the basins since their completion in 2008. As noted in Section 5.1 above, the proposed Mitigation Area 2 (Basin 3) would not be subject to dredging in the future as the site would be deed restricted in perpetuity to protect the wetlands on site. Maintenance dredging within Basin 2 is proposed to continue under the existing permit. Mitigation Area 1/Basin 1 could be maintenance dredged, under the proposed deed restriction, however a separate authorization for these activities will be required from the Corps prior to any of this type of work. Further, this work will be limited to removing storm-associated, accumulated sediments in a manner that will not impact the existing grade in order to protect the hydric soils present within the site.

5.3 PERFORMANCE STANDARDS AND MONITORING REQUIREMENTS

CCPW conducts annual monitoring of the 3 detention basins. Ongoing monitoring and non-chemical control of invasive plant species would continue as necessary through this program. In addition, ongoing monitoring of the detention basins and Eagle Creek flood control infrastructure would continue to occur on an annual basis and after large flood events to

ensure that the banks and culverts have sufficient function and integrity for continued operation.

Performance standards for this mitigation plan include:

- Providing the Corps a record stamped copy of the deed restriction prior to impacting any aquatic resources
- Providing the Corps proof of payment to the City for the upstream watershed work as described in Sections 3.2.4 and 4 of this mitigation plan

5.4 ADAPTIVE MANAGEMENT PLAN

CTH will seek separate Corps approval for any maintenance dredging/sediment removal activities in Mitigation Area 1/Basin 1. Basin 2 will subject to the 2003 IP limits on maintenance dredging/sediment removal activities. No maintenance dredging/sediment removal activities will be allowed in Mitigation Area 2/Basin 3. Any future work below the ordinary high water mark of Eagle Creek for flood maintenance will require separate authorization from the Corps.

5.5 FINANCIAL ASSURANCES

No additional funding will be required outside of existing flood control infrastructure monitoring and maintenance that is ongoing within Mitigation Area 1 and 2.

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