SPECIAL USE PERMIT APPLICATION

For

D'ANDREA WATER TANK #2

Prepared By:

Manhard CONSULTING

9850 Double R Blvd.

Reno, Nevada 89521

Prepared For:

TRUCKEE MEADOWS WATER AUTHORITY

Quality. Delivered.

1355 Capital Blvd.

Reno, Nevada 89502

October 2015

Washoe County Development Application

Your entire application is a public record. If you have a concern about releasing personal information, please contact Planning and Development staff at 775.328.3600.

Project Information

Staff Assigned Case No.: _____

Project Name:
D'Andrea Water Tank #2

Project Description: The construction of a 300,000 gallon welded steel above ground water tank and its associated access road.

Project Address: N/A

Project Area (acres or square feet): 3.5 ACRES

Project Location (with point of reference to major cross streets **AND** area locator):
NORTH OF THE INTERSECTION OF VISTA AND I-80, EAST OF D'ANDREA PARKWAY

Assessor's Parcel No.(s):	Parcel Acreage:	Assessor's Parcel No(s):	Parcel Acreage:
084-020-03	528.04		

Section(s)/Township/Range: SECTION 31, T20N, R21E

Indicate any previous Washoe County approvals associated with this application:
Case No.(s). N/A

Applicant Information (attach additional sheets if necessary)

Property Owner:		**Professional Consultant:**	
Name: TMWA		Name: Manhard Consulting	
Address: 1355 Capital Blvd		Address: 9850 Double R Blvd Suite 101	
Reno, NV	Zip: 89502	Reno, NV	Zip: 89521
Phone: 775-834-8080	Fax:	Phone: 775.746.3500 ex. 4861	Fax:
Email: cstruffert@tmwa.com		Email: cbaker@manhard.com	
Cell:	Other:	Cell:	Other:
Contact Person: Chris Stuffert		Contact Person: Chris Baker	
Applicant/Developer:		**Other Persons to be Contacted:**	
Name: Lennar Homes		Name: BLM Carson City District Office	
Address: 10345 Professional Circle, Suite 100		Address: 5665 Morgan Mill Road	
Reno, NV	Zip: 89521	Carson City, NV	Zip: 89701
Phone: 775-745-0049	Fax:	Phone: 775-885-6000	Fax:
Email: tim.scheideman@lennar.com		Email: bbuttazoni@blm.gov	
Cell:	Other:	Cell:	Other:
Contact Person: Tim Scheideman		Contact Person: Brian Buttazoni	

For Office Use Only

Date Received:	Initial:	Planning Area:	
County Commission District:		Master Plan Designation(s):	
CAB(s):		Regulatory Zoning(s):	

Property Owner Affidavit

Applicant Name: Truckee Meadows Water Authority (TMWA)

The receipt of this application at the time of submittal does not guarantee the application complies with all requirements of the Washoe County Development Code, the Washoe County Master Plan or the applicable area plan, the applicable regulatory zoning, or that the application is deemed complete and will be processed.

STATE OF NEVADA)
)
COUNTY OF WASHOE)

I, John A. Erwin,
(please print name)

being duly sworn, depose and say that I am the owner* of the property or properties involved in this application as listed below and that the foregoing statements and answers herein contained and the information herewith submitted are in all respects complete, true and correct to the best of my knowledge and belief. I understand that no assurance or guarantee can be given by members of Planning and Development.

(A separate Affidavit must be provided by each property owner named in the title report.)

Assessor Parcel Number(s): 084-020-03

Printed Name John A. Erwin, Director
Natural Resources Planning + Management

Signed

Address P.O. Box 30013

Reno, NV 89520

Subscribed and sworn to before me this 13 day of October, 2015.

Notary Public in and for said county and state

My commission expires: 11-20-17

(Notary Stamp)

HEATHER EDMUNSON
Notary Public - State of Nevada
Appointment Recorded in Washoe County
No: 96-2533-2 - Expires November 20, 2017

*Owner refers to the following: (Please mark appropriate box.)

- ☐ Owner
- ☐ Corporate Officer/Partner (Provide copy of recorded document indicating authority to sign.)
- ☐ Power of Attorney (Provide copy of Power of Attorney.)
- ☐ Owner Agent (Provide notarized letter from property owner giving legal authority to agent.)
- ☐ Property Agent (Provide copy of record document indicating authority to sign.)
- ■ Letter from Government Agency with Stewardship

Special Use Permit Application
Supplemental Information

(All required information may be separately attached)

Chapter 110 of the Washoe County Code is commonly known as the Development Code. Specific references to special use permits may be found in Article 810, Special Use Permits.

1. What is the type of project being requested?

The request is for a public utility service (water tank) within the open space zoning designation. The 0.3 million gallon tank is necessary to provide adequate water for municipal and fire suppression use for future residential phases of the D'Andrea master plan community.

2. What currently developed portions of the property or existing structures are going to be used with this permit?

There are no current developed portions or existing structures on the property at this time.

3. What improvements (e.g. new structures, roadway improvements, utilities, sanitation, water supply, drainage, parking, signs, etc.) will have to be constructed or installed and what is the projected time frame for the completion of each?

The proposed D'Andrea Water Tank #2 is to be an approximately 300,000 gallon welded steel above ground tank with a pad elevation of 5,192 feet. Also proposed to be included in the ROW is the tank's 20 foot access road, the associated roadside ditch for drainage and tank overflow, and a 12 inch diameter ductile iron and PVC pipe used to fill the tank. The tank itself will be surrounded by chain link fencing and the access road leading to the tank will be gated as to limit vehicular access to the facility. Once construction begins, the project will take approximately six (6) months to complete.

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

It is anticipated that construction will begin shortly following the approval process, with construction of the project taking approximately six (6) months to complete.

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

The proposed D'Andrea Water Tank #2 is required to be at a pad elevation of 5,192 feet. The project location was determined through a site selection process that included the Washoe County, the City of Sparks, BLM and the applicant. The exact location was chosen specifically to limit the visual impacts of the proposed tank.

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

The tank is necessary to provide adequate water for municipal and fire suppression use for future residential phases of the D'Andrea master plan community.

7. What will you do to minimize the anticipated negative impacts or effects your project will have on adjacent properties?

Careful consideration was taken during the site selection process to reduce the visual impact and limit any disturbance associated with the surface of the land.

8. Please describe operational parameters and/or voluntary conditions of approval to be imposed on the project special use permit to address community impacts:

Also occurring within the ROW will be TMWA general maintenance of the facility including; visual inspection on a weekly basis, inspection of tank coatings every 5-7 years and replacement of the exterior and interior coatings as needed basis. The access road and cut slopes will be maintained/repaired on an as-needed basis and weed abatement and general cleanup of tank site will be performed 1-2 times per growing season. The tank itself will be surrounded by chain link fencing and the access road leading to the tank will be gated as to limit vehicular access to the facility.

9. How many improved parking spaces, both on-site and off-site, are available or will be provided? (Please indicate on site plan.)

There is no improved parking on-site or off-site as the project is a public utility.

10. What types of landscaping (e.g. shrubs, trees, fencing, painting scheme, etc.) are proposed? (Please indicate location on site plan.)

All disturbed slopes and cut areas would be re-vegetated utilizing a Washoe County and BLM approved weed-free seed mix following construction. The tank site itself will be surrounded with a colored chain link fence with barb-wire. The tank's paint color will be selected from the BLM approved color pallet with input from TMWA with an overall goal of blending into the natural environment.

11. What type of signs and lighting will be provided? On a separate sheet, show a depiction (height, width, construction materials, colors, illumination methods, lighting intensity, base landscaping, etc.) of each sign and the typical lighting standards. (Please indicate location of signs and lights on site plan.)

No permanent lighting or signage is associated with the request.

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

❑ Yes	☑ No

13. Community Sewer

❑ Yes	☑ No

Community Water

❑ Yes	☑ No

TABLE OF CONTENTS

LIST OF FIGURES

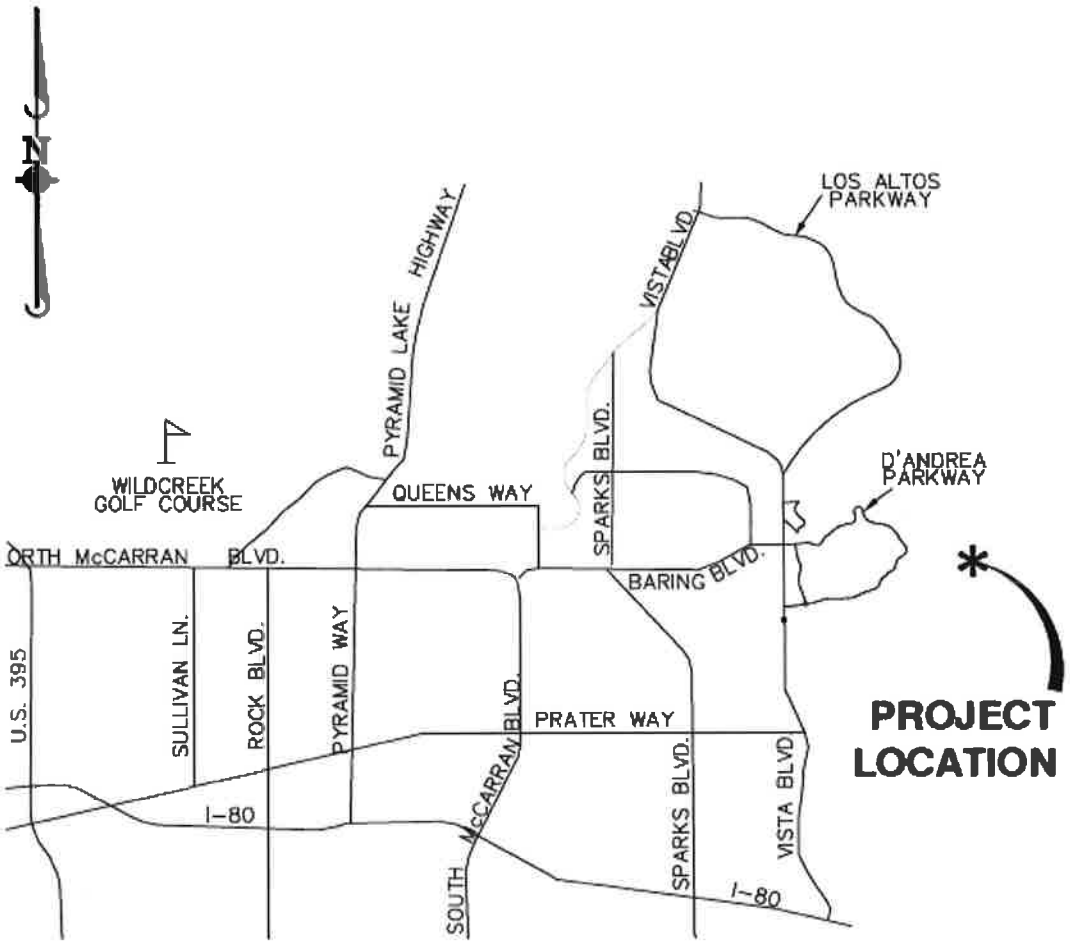
LIST OF TABLES

APPENDICES

PROJECT LOCATION

The proposed project site consists of a +/- 3.5 acre portion of APN: 084-020-03 which is located north of the I-80 and Vista Boulevard intersection, east of North D'Andrea Parkway, and south of Vecchio Way.

Figure 1: Project Location



EXISTING SITE CONDITIONS

The proposed project site is vacant open space owned by the BLM. Prior to the submittal of this special use request, the applicant received a Right of Way Grant from the BLM allowing for the construction and operation of the proposed tank.

EXISTING MASTER PLAN & ZONING DESIGNATIONS

The property has an existing Washoe County master plan and zoning designation of Open Space.

Figure 2: Existing Master Plan & Zoning Designations (*http://wcgisweb.washoecounty.us/QuickMap/*)

SURROUNDING PROPERTIES

Table 1: Surrounding Property Designations

Location	Master Plan Designation	Zoning Designation	Current Land Use
North	Open Space (OS)	Open Space (OS)	Vacant Open Space
South	Open Space (OS)	Open Space (OS)	Vacant Open Space
East	Open Space (OS)	Open Space (OS)	Vacant Open Space
West	NUD (City of Sparks)	NUD (City of Sparks)	D'Andrea PUD

APPLICATION REQUEST

In accordance with WCDC Table 110.302.05.2: Table Of Uses; Civic Use Types, A Board of Adjustment Special Use Permit is required to allow for "Utility Services" in an Open Space zoning designation.

PROJECT DESCRIPTION

The proposed D'Andrea Water Tank #2 is to be an approximately 300,000 gallon welded steel above ground tank with a pad elevation of 5,192 feet. Also proposed to be included in the ROW is the tank's 20 foot access road, the associated roadside ditch for drainage and tank overflow, and a 12 inch diameter ductile iron and PVC pipe used to fill the tank. The tank is necessary to provide adequate water for municipal and fire suppression use for future residential phases of the D'Andrea master plan community. Also occurring within the ROW will be TMWA general maintenance of the facility including; visual inspection on a weekly basis, inspection of tank coatings every 5-7 years and replacement of the exterior and interior coatings as needed basis. The access road and cut slopes will be maintained/repaired on an as-needed basis and weed abatement and general cleanup of tank site will be performed 1-2 times per growing season. The tank itself will be surrounded by chain link fencing and the access road leading to the tank will be gated as to limit vehicular access to the facility.

There is no temporary and or permanent landscaping associated with the proposed request. All disturbed slopes and cut areas will be revegetated utilizing a Washoe County and BLM approved weed-free seed mix following construction. Likewise no permanent lighting or signage is associated with the request.

Table 2: Project Specifics

Total Square Footage of ROW Request:	3.5 Acres (762 feet x 200 feet)
Total Disturb Area	1.8 Acres
Estimated Size of Tank	27 ft in height & 46 ft in diameter
Estimated Length of Roadway	870 LF (Including pavement surrounding tank)

A reduced Aerial Photo and Grading Plan for the site are shown as Figure 3 and 4, respectively, for reference. A full size version of the site plan and the proposed grading plan can be found in Appendix B and typical roadway sections are located in Appendix C.

Figure 3: Aerial Photo

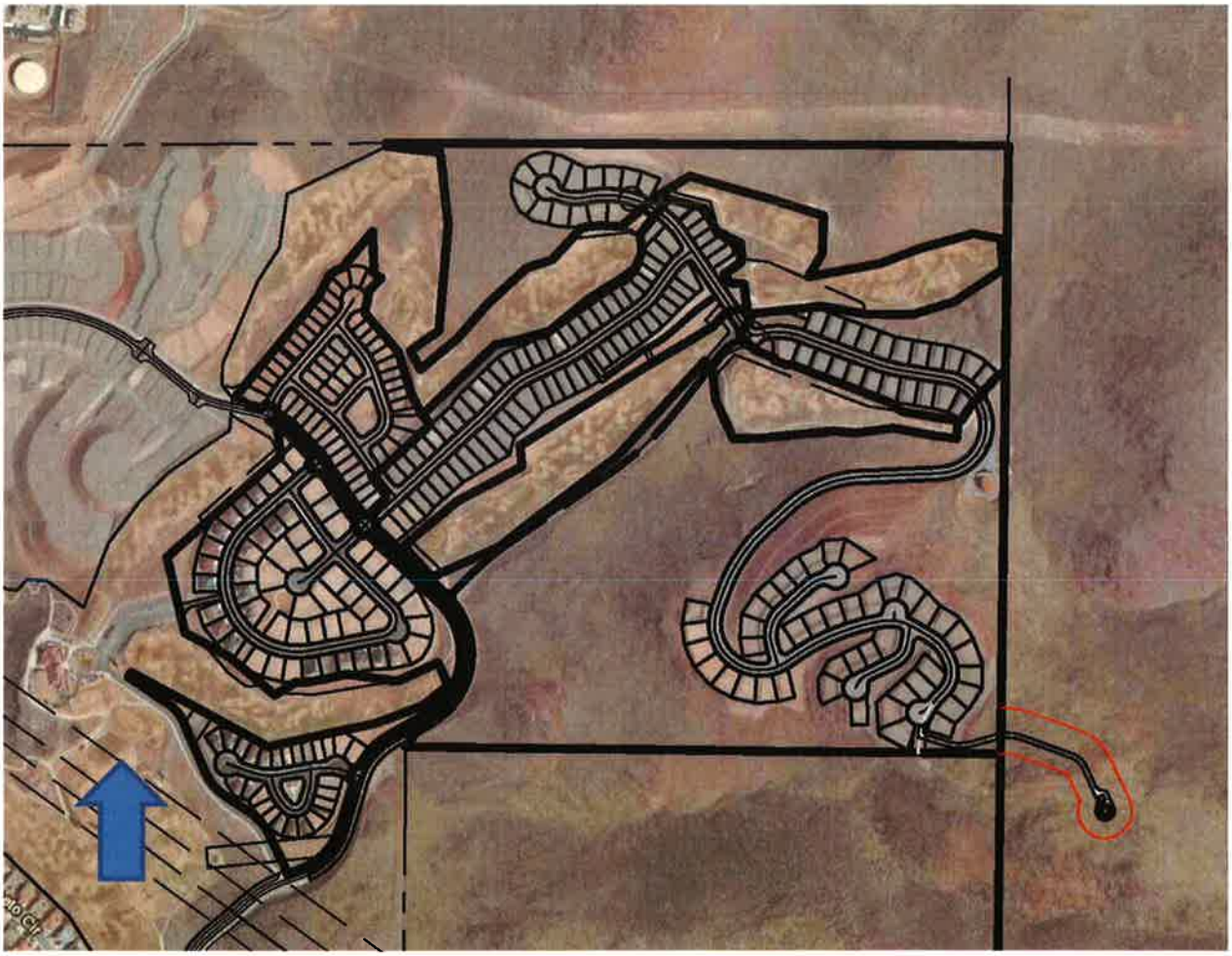
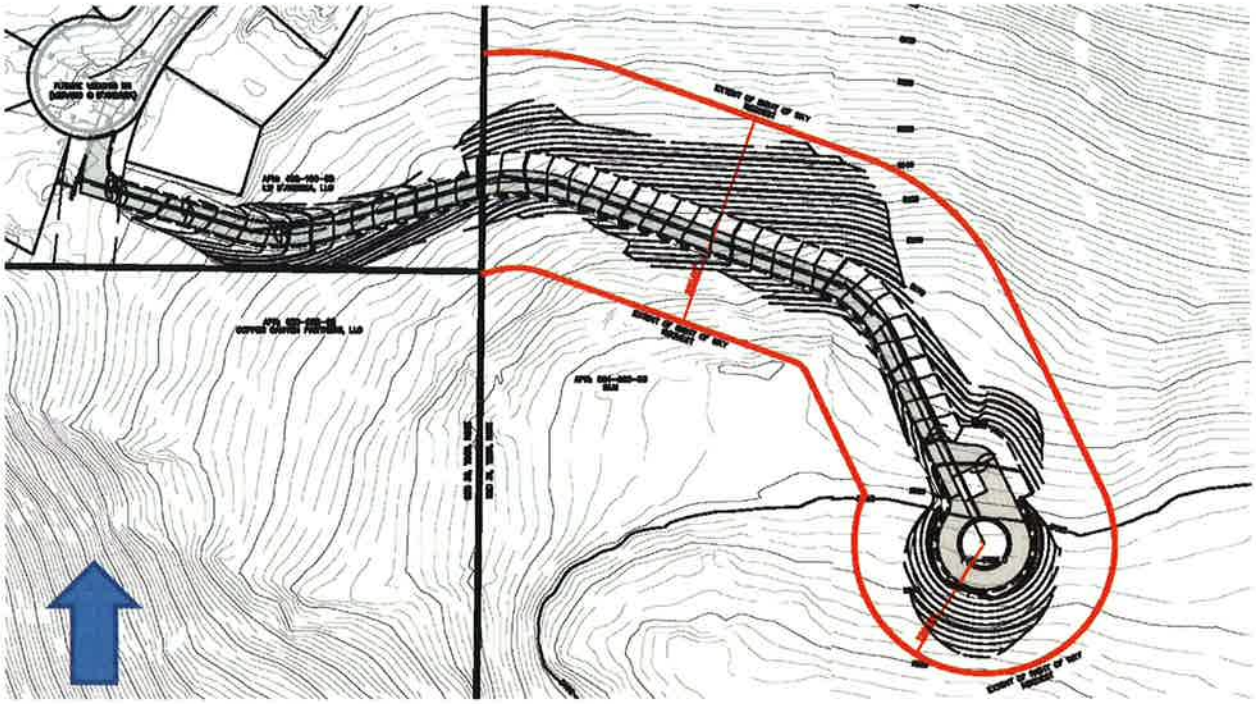


Figure 4: Grading Plan



VISUAL REPRESENTATION

At this time, we are unable to provide actual design renderings of the proposed water tank because TMWA to date has not built a tank to these particular specifications and therefore it is still under design. In lieu we have provided Figure 5, a photo of an existing TMWA water tank located in west Reno. Although this particular tank is 0.9 million gallons, three times the size of the proposed tank, it was selected to use as a representation because it's one of TWMA most recently constructed tanks and therefore incorporates TMWA's current design criteria.

Figure 5: Visual Representation

VIEWSHED ANALYSIS

In accordance with the BLM Right of Way Grant process a thorough viewshed analysis was conducted. The analysis included the selection of six (6) Key Observation Points (KOP) near the project site to determine the visual effects of the proposed project. The results of the analysis were that KOP 2 was the only point visually impacted by the project. It was determined that the impact would be minimal given the distance and elevation change between the KOP and the site. The BLM viewshed analysis exhibits are included as Figures 6 and 7 and also contained in Appendix D for reference.

Figure 6: Viewshed Analysis

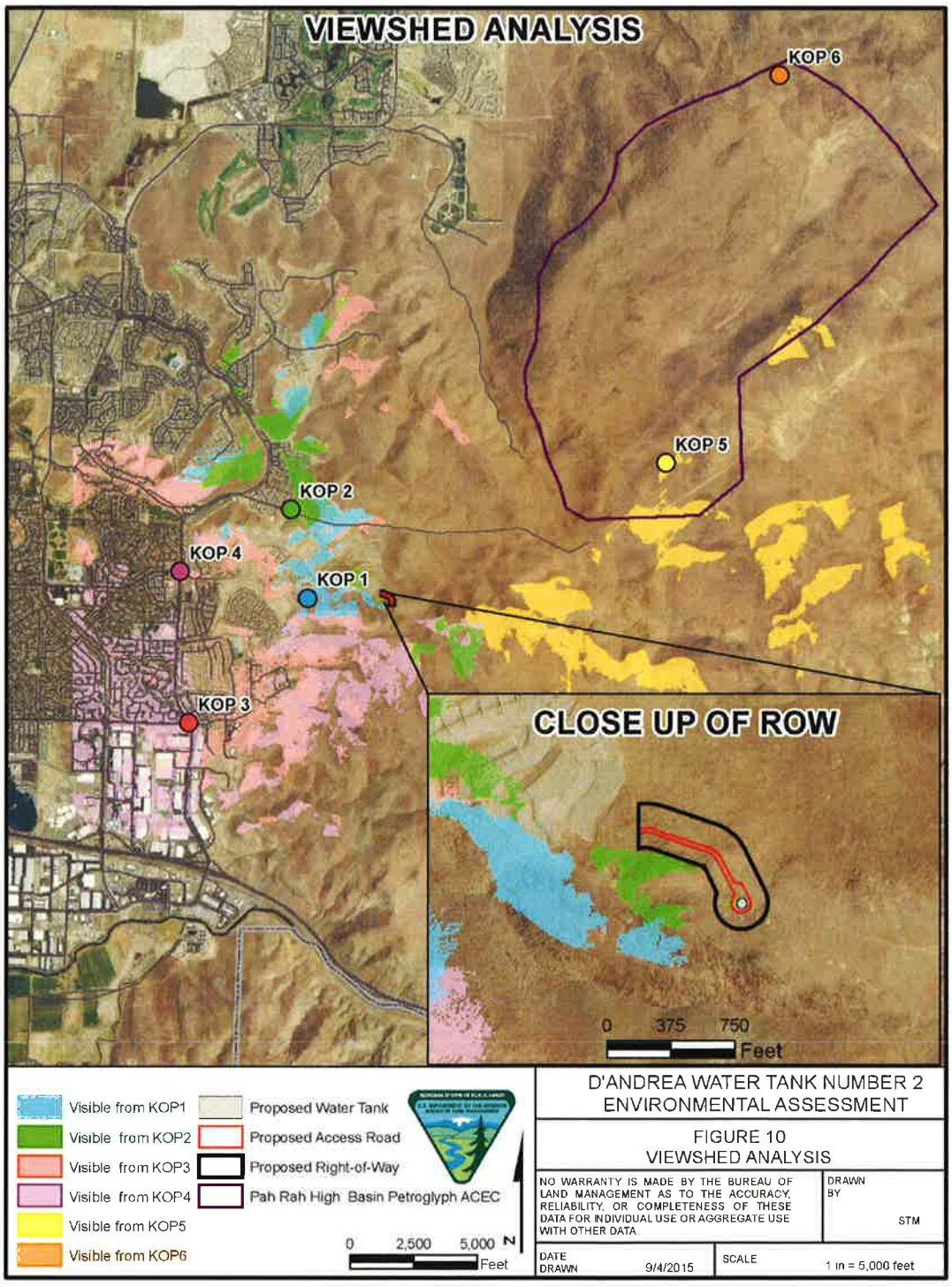
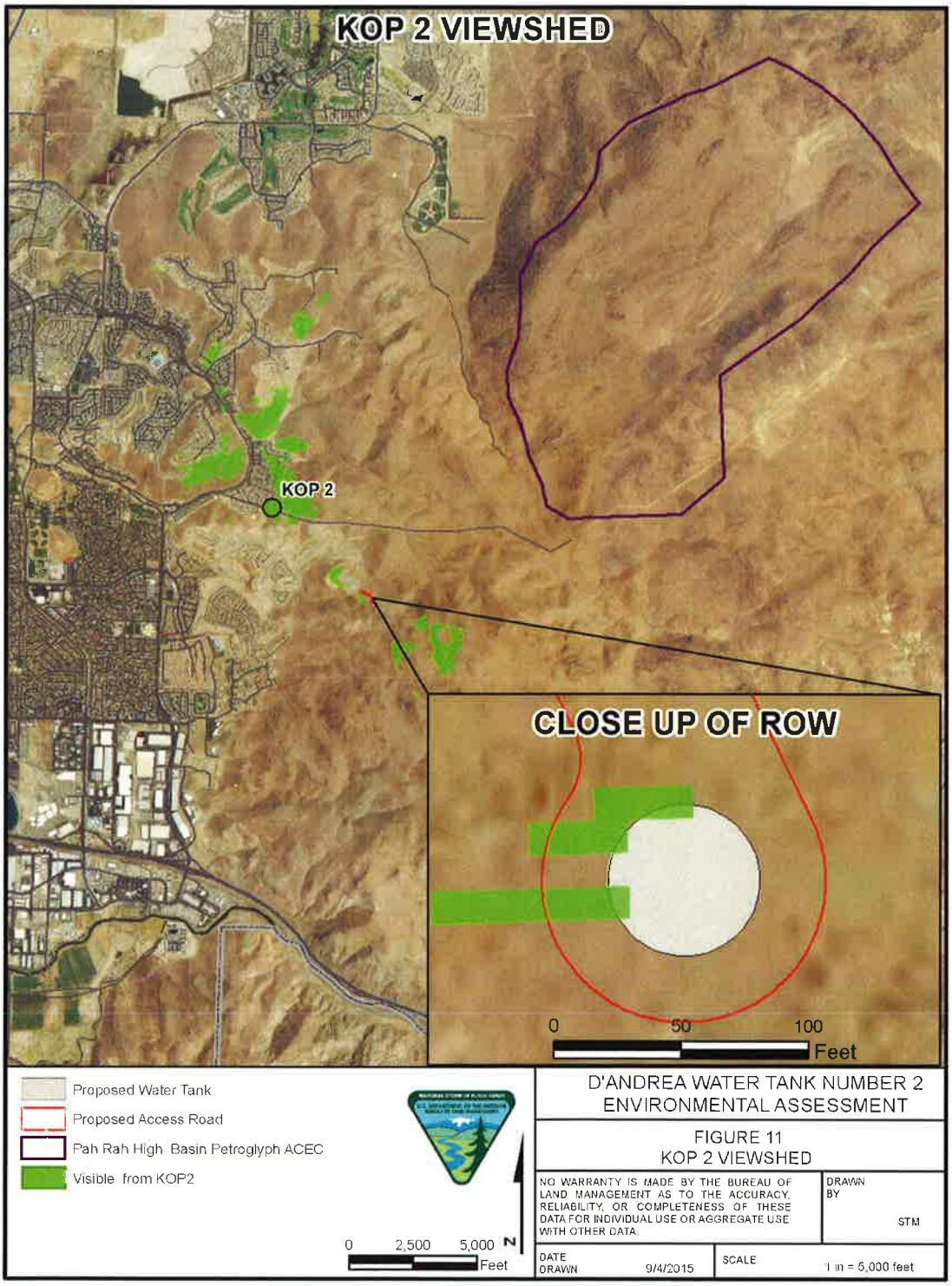


Figure 7: KOP 2 Viewshed



Appendix A

	WASHOE COUNTY ASSESSOR PROPERTY DATA	10/14/2015

APN: 084-020-03 Card 1 of 1

Owner Information & Legal Description

Situs	0 INTERSTATE 80 E		
Owner 1	UNITED STATES OF AMERICA		
Mail Address	NONE		
	RENO NV 00000		
Rec Doc No	1998545	Rec Date	05/29/1996
Prior Owner			
Prior Doc	CHK		
Keyline Desc	ALL SEC 31 TWP 20 RGE 21		
Subdivision	_UNSPECIFIED		
	Lot: Block:	Sub Map#	
	Record of Survey Map:	Parcel Map#	0
	Section: 31 Township: 20 Range: 21	SPC	001
Tax Dist	4005 Add'l Tax Info	Prior APN	
Tax Cap Status	Use does not qualify for Low Cap, High Cap Applied		

Building Information

Quality		Bldg Type	
Stories		Square Feet	0
Year Built	0	Square Feet does not include Basement or Garage Conversion Area.	
W.A.Y.	0	Finished Bsmt	0
Bedrooms	0	Unfin Bsmt	0
Full Baths	0	Bsmt Type	
Half Baths	0	Gar Conv Sq Foot	0
Fixtures		Total Gar Area	0
Fireplaces	0	Gar Type	
Heat Type		Det Garage	0
Sec Heat Type		Bsmt Gar Door	0
Ext Walls		Sub Floor	
Sec Ext Walls		Frame	
Roof Cover		Construction Mod	0
Obso/Bldg Adj	0	Units/Bldg	0
% Incomplete		Units/Parcel	0

Land Information

Land Use	120	Zoning	OS	Sewer	None	NBC	LAAJ
Size	528.04 Acre or ~ 23,001,421 SqFt	Water	None	Street	Unpaved	NBC Map	LA NBC Map

Valuation Information

Valuation History	2014/15 FV	2015/16 FV
Taxable Land Value	538,601	264,020
Taxable Improvement Value	0	0
Taxable Total	538,601	264,020
Assessed Land Value	188,510	92,407
Assessed Improvement Value	0	0
Total Assessed	188,510	92,407

Sales/Transfer Information/Recorded Document

V-Code	LUC	Doc Date	Value/Sale Price	Grantor	Grantee
		05-29-1996	0		UNITED STATES OF AMERICA
2MQC	120	06-20-1995	600,000		

Building #1 Sketch

If the property sketch is not available on-line you can obtain a copy by calling (775) 328-2277 or send an email to exemptions@washoecounty.us with '**Sketch Request**' in the subject line. Please include the APN.

Property Photo

Washoe County Treasurer
P O Box 30039 Reno, NV 89520-3039
ph: (775) 328-2510 fax: (775) 328-2500

Washoe County Treasurer
Tammi Davis

Bill Detail

Back to Account Detail Change of Address Print this Page

Washoe County Parcel Information

Parcel ID	Status	Last Update
08402003	Active	10/14/2015 2:12:25 AM

Current Owner:
UNITED STATES OF AMERICA
NONE
RENO, NV 00000

SITUS:
0 INTERSTATE 80 E
WASHOE COUNTY NV

Taxing District
4005

Geo CD:

Legal Description

Lot Block Range 21 Township 20 Section 31 SubdivisionName _UNSPECIFIED

Installments

Period	Due Date	Tax Year	Tax	Penalty/Fee	Interest	Total Due
INST 1	8/17/2015	2015	$0.58	$0.02	$0.00	$0.60
		Total Due:	**$0.58**	**$0.02**	**$0.00**	**$0.60**

Tax Detail

	Gross Tax	Credit	Net Tax
State of Nevada	$157.09	($157.09)	$0.00
Truckee Meadows Fire Dist	$499.00	($499.00)	$0.00
Washoe County	$1,286.00	($1,286.00)	$0.00
Washoe County Sc	$1,052.05	($1,052.05)	$0.00
Truckee Mdw Ungr Water	$0.58	$0.00	$0.58
Total Tax	**$2,994.72**	**($2,994.14)**	**$0.58**

Payment History

No Payment Records Found

Pay By Check

AMOUNT ABOVE WILL POPULATE AFTER PAYMENT TYPE IS SELECTED

Please make checks payable to:
WASHOE COUNTY TREASURER

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

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

Change of Address

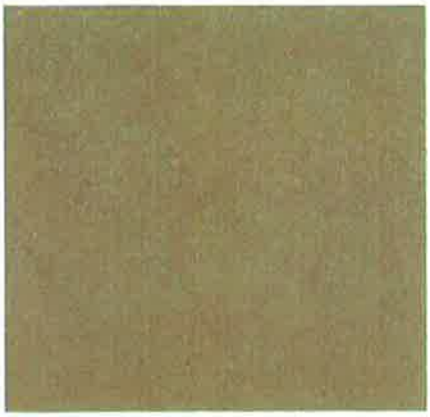
All requests for a mailing address change must be submitted in writing, including a signature (unless using the online form).

Please mail your request to: Washoe County Treasurer
P O Box 30039
Reno, NV 89520-3039

Or fax your request to:
(775) 328-2500

Or click here to submit online form

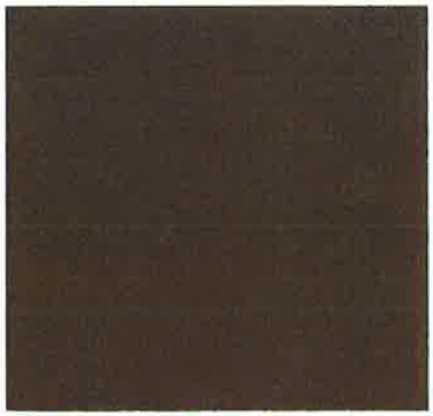
Standard Environmental Colors


Carlsbad Canyon


Covert Green


Shadow Gray


Juniper Green


Shale Green


Sudan Brown


Beetle


Yuma Green


Carob Brown

The **Standard Environmental Colors** chart was developed to assist with color selection to minimize the visual contrast of a facility in the landscape.

In order to ensure color accuracy, use an original color chart to match paint. When matching the color chip, request the paint company to have their computer scan set on "natural light." Compare the new paint sample to the color chip under indirect natural sunlight. Use semi-gloss paint, where appropriate, to enhance durability yet reduce reflectivity. Select colors a shade or two darker than the surrounding landscape to account for natural shadows, normal fading, and weathering.

Order **Standard Environmental Colors** charts by emailing your request to: Printed Material Distribution System (PMDS), **BLM_NOC_PMDS@blm.gov** or fax to 303-236-0845. Provide the quantity requested along with a contact name, physical address (no P.O. Boxes), and telephone number. For more information or questions, please call 202-785-6574.

Standard Environmental Color Chart CC-001: June 2008 BLM/WY/ST-08/015+8450

Standard Environmental Colors

Selecting a Color

Observe the color scheme of the overall landscape. Lighter colors visually advance toward the viewer, and darker colors recede into the landscape regardless of the actual distance. Choose a color that repeats the darker, more recessive color scheme of the surrounding soils and/or vegetation. Re-evaluate from a distance to select a color that is slightly darker than the undisturbed landscape.

Observe the color scheme of the overall landscape

Color Choices

Carlsbad Canyon: Use where herbaceous vegetation is dominant in a grassland or other light colored landscape.

Covert Green: Use in a mixed shrub/grass steppe where the shrub component is dominant.

Shadow Gray: Use in heavy shrublands, deciduous forests, or open pine or juniper woodlands where dark gray trunks and branches darken the landscape color.

Juniper Green: Use in mixed coniferous/deciduous or deciduous forests.

Shale Green: Use in dense shrublands, coniferous or deciduous forests, and mixed shrub woodlands.

Sudan Brown: Use where dark soils give the landscape a brownish color or in forests where dark brown trunks and branches are dominant.

Beetle: Use in spruce/fir or other dark coniferous forests having a bluish hue.

Yuma Green: Use in dense coniferous or deciduous forests. Use when viewing from a distance or in areas that are typically in shadow.

Carob Brown: Use when exposed red soil and rock clearly dominate color in the landscape. Use another dark color if the dominance of red tones is diminished by vegetation.

Narrow color choices and re-evaluate at a distance to select the best one

Consider season of use and critical view points

Select from the colors in the undisturbed landscape

Design Solutions

Proper color selection can dramatically mitigate adverse visual impacts. However, the design solution is more effective if used in combination with other mitigation such as: repeating the elements of form, line, and texture; proper siting and location; minimizing scale; and reducing unnecessary surface disturbance.

For more information visit: **http://www.blm.gov/bmp**

BLM

U.S. Department of the Interior – Bureau of Land Management

FINDING OF NO SIGNIFICANT IMPACT & DECISION RECORD

D'Andrea Water Tank Number 2 and Access Road Right-of-Way Project

BLM
Sierra Front Field Office, Nevada

DOI-BLM-NV-C020-2015-0036-EA

U.S. Department of the Interior
Bureau of Land Management
Carson City District
Sierra Front Field Office
5665 Morgan Mill Road
Carson City, NV 89701
775-885-6000

September 2015

Finding of No Significant Impact

Based on the analysis of potential environmental impacts contained in the Final Environmental Assessment (EA), and considering the significance criteria found in 40 CFR 1508.27, I have determined that the Proposed Action, will not have a significant effect on the human environment. An environmental impact statement (EIS) is not required.

ACTING FOR

Leon Thomas
Field Manager
Sierra Front Field Office

9-15-2015
Date

Decision Record

Introduction

Truckee Meadows Water Authority (TMWA) has submitted a draft Plan of Development (POD) for a Right-of-Way (ROW) for the construction and maintenance of a water tank to allow for construction of the future residential phases of the D'Andrea Master Plan Community. Within the ROW would be the proposed D'Andrea Water Tank Number 2, a 20-foot wide access road, the associated roadside ditch for drainage and tank overflow, a 12-inch diameter ductile iron and polyvinyl chloride (PVC) pipe to fill the tank, and 3H:1V (Horizontal to Vertical) cut slopes (Project).

Figure 1 of the Final EA shows the location of the Project, which encompasses 3.5 acres. The Project is located in northeastern Sparks, Washoe County, Nevada, legally described as Southwest quarter of Section 31, Township 20 North, Range 21 East, Mount Diablo Baseline, and Meridian.

Public Involvement

On July 27, 2015, a Bureau of Land Management (BLM) interdisciplinary team reviewed this Project and on July 29, 2015, they participated in a field visit to the Project area. Based on this meeting, the BLM determined which resources would require analysis as a part of the Final EA (see Section 3.0).

In early October 2014, the BLM notified the Reno-Sparks Indian Colony Tribal Historic Preservation Officer (THPO) about the cultural resources inventory for the Project and offered a site visit. On April 30, 2015, the BLM emailed the THPO Project information and negative cultural resources inventory report for review and comment. On July 23, 2015, the BLM provided the final inventory report to the THPO and followed up with phone and email communications, and invited the THPO to the site visit on July 29, 2015. The THPO did not identify concerns from the Project during the visit, but expressed concerns about potential impacts from future development in the area. These concerns were discussed and the THPO requested formal consultation. The BLM initiated formal consultation with the Reno-Sparks

Indian Colony with a letter dated August 17, 2015, requesting information regarding cultural resources, sensitive natural resources, resource access, or religious concerns relative to the Project. Government-to-government consultation with the Reno-Sparks Indian Colony will continue for the duration of the Project.

On August 31, 2015, the BLM announced a 15-day public scoping period. The notice was to solicit input from the public regarding the Project. The draft POD, maps, and information on how to comment were made available. The scoping period closed on September 14, 2015. The BLM did not receive any public comments.

Land Use Conformance

The Project is in conformance with the Carson City Field Office Consolidated Resource Management Plan (CRMP), May 2001, page SOP-1, RMP Standard Operating Procedures Common to All, #4 and #5:

- "All areas of new surface disturbance will be rehabilitated, where such action is necessary and practical, to replace ground cover and prevent erosion;" and
- "Construction of all fences (except in cases of public safety) will conform to the objectives and specifications in Bureau Manual 1737 to minimize impacts to wildlife, wild horses, recreation, and visual resources."

The Project is also in conformance with the CRMP, May 2001, page LND-7, RMP Administrative Actions, #6:

- "Exchanges and minor-non Bureau initiated realty proposals will be considered where analysis indicates they are beneficial to the public."

The Project is also in conformance with the CRMP, page ROW-5, RMP Standard Operating Procedures, #5, #6, #7 and #9:

- "The right-of-way holder shall permit free and unrestricted public access to and upon the right-of-way for all lawful and proper purposes, except in areas designated as restricted by the Bureau in order to protect the public safety or facilities constructed on the right-of-way;"
- "The Bureau will approve the location of all rights-of-way prior to construction through an analysis of the proposed action in an environmental assessment unless the proposal is categorically excluded or adequately analyzed in a previously prepared NEPA document. The environmental assessment will include cultural resource clearances, evaluations of impacts to threatened and endangered species, visual resources and other issues raised during scoping;"
- The right-of-way holder will use every reasonable means to minimize erosion and soil damage in connection with construction, rehabilitation or maintenance operations under a grant, including (but not limited to) construction of water bars, cross ditches, or other structures;" and
- "Revegetation of disturbed land will be required as specified by the Bureau. The appropriate seed mixture and proper planting techniques will be specified by the Bureau."

The Project is also in conformance with the CRMP, page VRM-4, RMP Administrative Actions, #1 and #2:

- "Visual resource management objectives and mitigation will be established on a case-by-case basis through the environmental assessment process;" and
- "Visual resources will continue to be evaluated as part of activity and project planning. Such evaluation will consider the significance of the proposed project and the visual sensitivity of the affected area."

Authority

The authority to grant the Proposed Action is under the authority of Title V of the Federal Land Policy and Management Act of 1976 (FLPMA) and the regulations at 43 CFR 2800.

Mitigation Measures

Rationale

Proposed Action (Selected Alternative)

The Proposed Action addresses the BLM's purpose and need, which is to respond to an application for ROW under the authority of Title V of FLPMA and the regulations at 43 CFR 2800. Granting the use of BLM-managed lands would facilitate TMWA's purpose and need, which is to obtain a ROW to construct, operate, and maintain a water tank, access road, waterline, and associated roadside ditch and slopes to provide water storage for municipal supply, emergency supply, and fire suppression to local residents.

No Action Alternative

Under the No Action Alternative, the BLM would not approve TMWA's request for a ROW. TMWA would not construct the water tank, access road, waterline, and associated ditch and slopes in the Project area. The need for the Proposed Action would not be met.

Decision

It is my Decision to issue a 30-year FLPMA ROW to TMWA for the installation, operation, maintenance, and termination of a 300,000-gallon water tank, access road, waterline, and associated roadside ditch and slopes as described in the Proposed Action of the Final EA. The ROW will be subject to environmental protection measures proposed by TMWA in the POD and BLM stipulations. Use of this ROW will be effective upon issuance by the BLM. The TMWA would likely begin construction of the Proposed Action in early 2016.

ACTING FOR Leon Thomas
Field Manager
Sierra Front Field Office

9-15-2015
Date

APPEAL PROCEDURES

This decision may be appealed to the Interior Board of Land Appeals, Office of the Secretary, in accordance with 43 CFR Part 4. If you appeal, your appeal must also be filed with the Bureau of Land Management at the following address:

Leon Thomas
Field Manager
BLM, Sierra Front Field Office
5665 Morgan Mill Road
Carson City, NV 89701

Your appeal must be filed within thirty (30) days from receipt or issuance of this decision. The appellant has the burden of showing that the decision appealed from is in error.

If you wish to file a petition pursuant to regulation 43 CFR 4.21 (58 FR 4942, January 19, 1993) for a stay (suspension) of the decision during the time that your appeal is being reviewed by the Board, the petition for stay must accompany your notice of appeal. Copies of the notice of appeal and petition for a stay must also be submitted to:

Board of Land Appeals
Dockets Attorney
801 N. Quincy Street, Suite 300
Arlington, VA 22203

A copy must also be sent to the appropriate Office of the Solicitor at the same time the original documents are filed with the above office.

U.S. Department of the Interior
Office of the Regional Solicitor
Pacific Southwest Region
2800 Cottage Way, Room E-1712
Sacramento, CA 95825

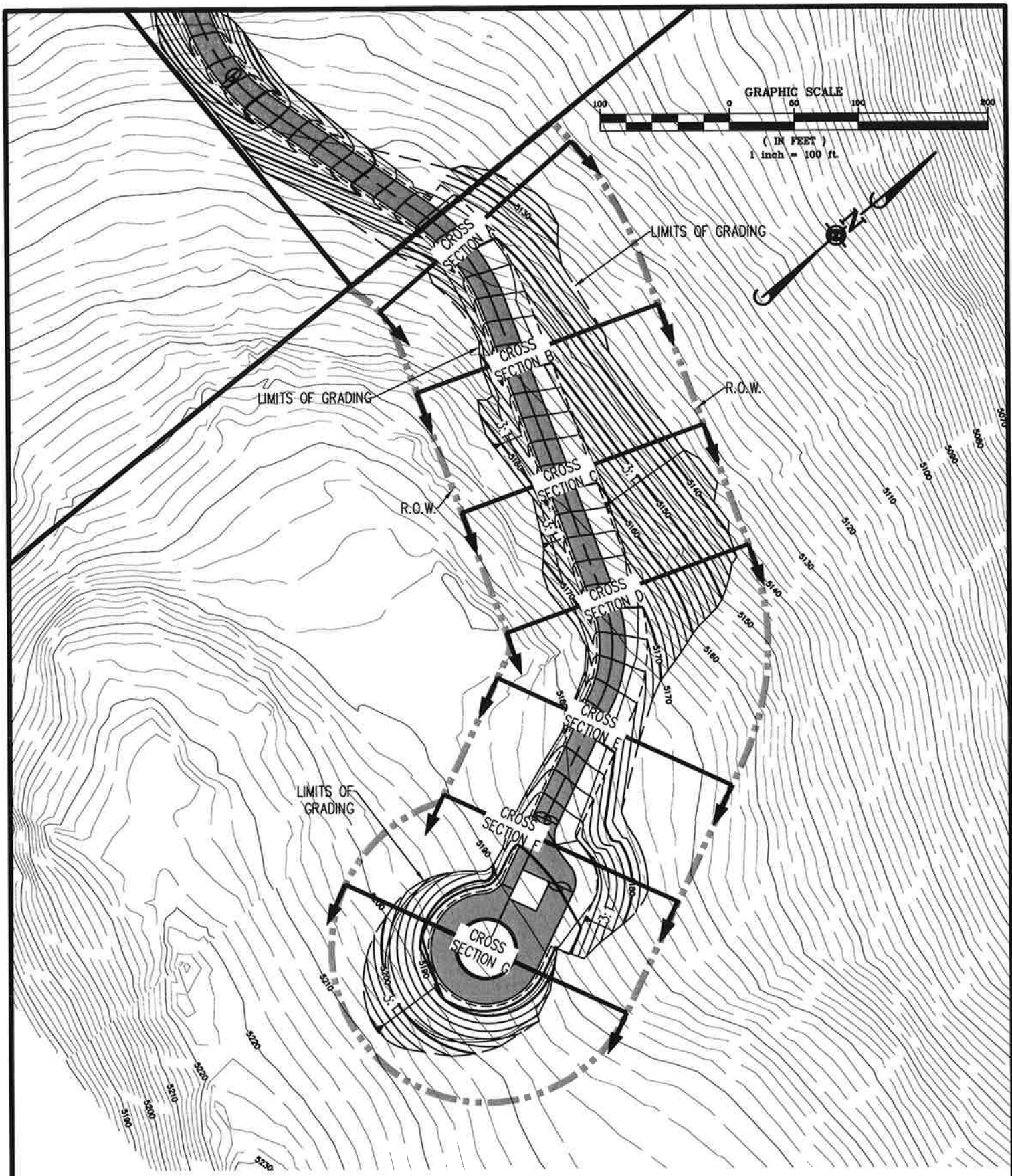
If you request a stay, you have the burden of proof to demonstrate that a stay should be granted. A petition for a stay is required to show sufficient justification based on the following standards:

1. The relative harm to the parties if the stay is granted or denied.
2. The likelihood of the appellants success on the merits.
3. The likelihood of immediate and irreparable harm if the stay is not granted.
4. Whether the public interest favors granting the stay.

The Office of Hearings and Appeals regulations do not provide for electronic filing of appeals. Electronically filed appeals will therefore not be accepted.

Appendix B

Appendix C



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D'ANDREA WATER TANK #2

WASHOE COUNTY, NV

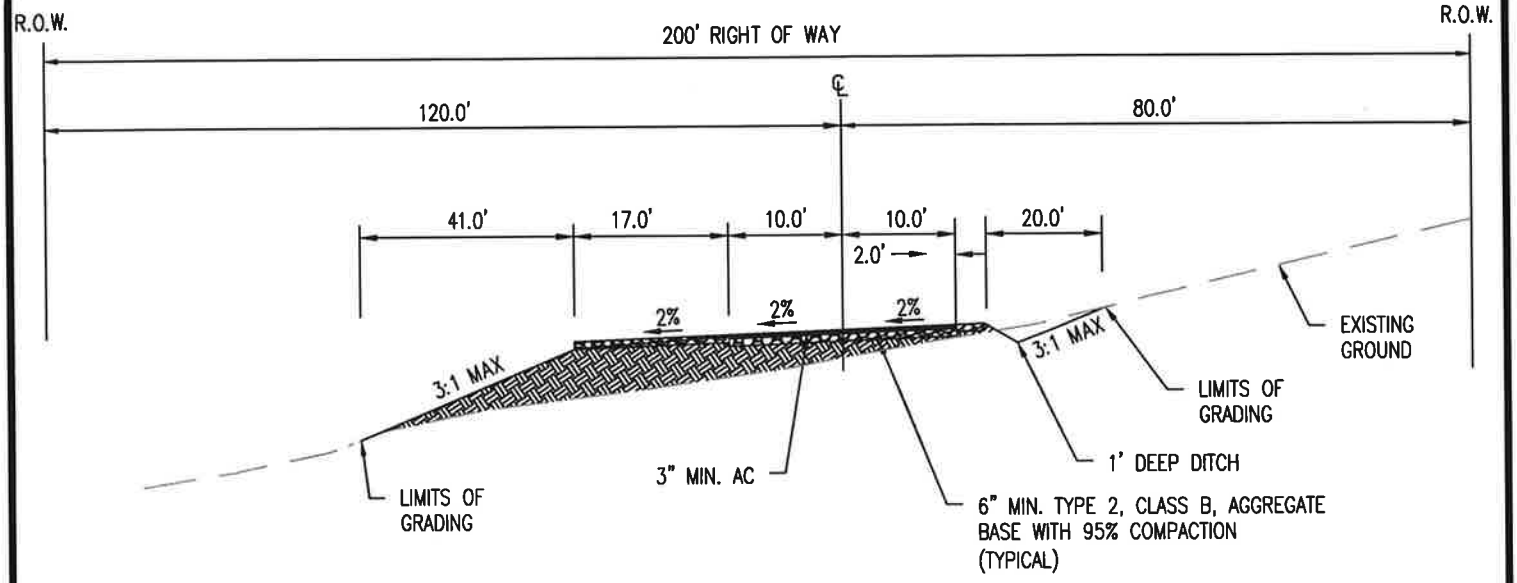
TYPICAL ROADWAY SECTIONS

PROJ. MGR.:	DCB
DRAWN BY:	TJS
DATE:	10/13/15
SCALE:	1"=100'

SHEET

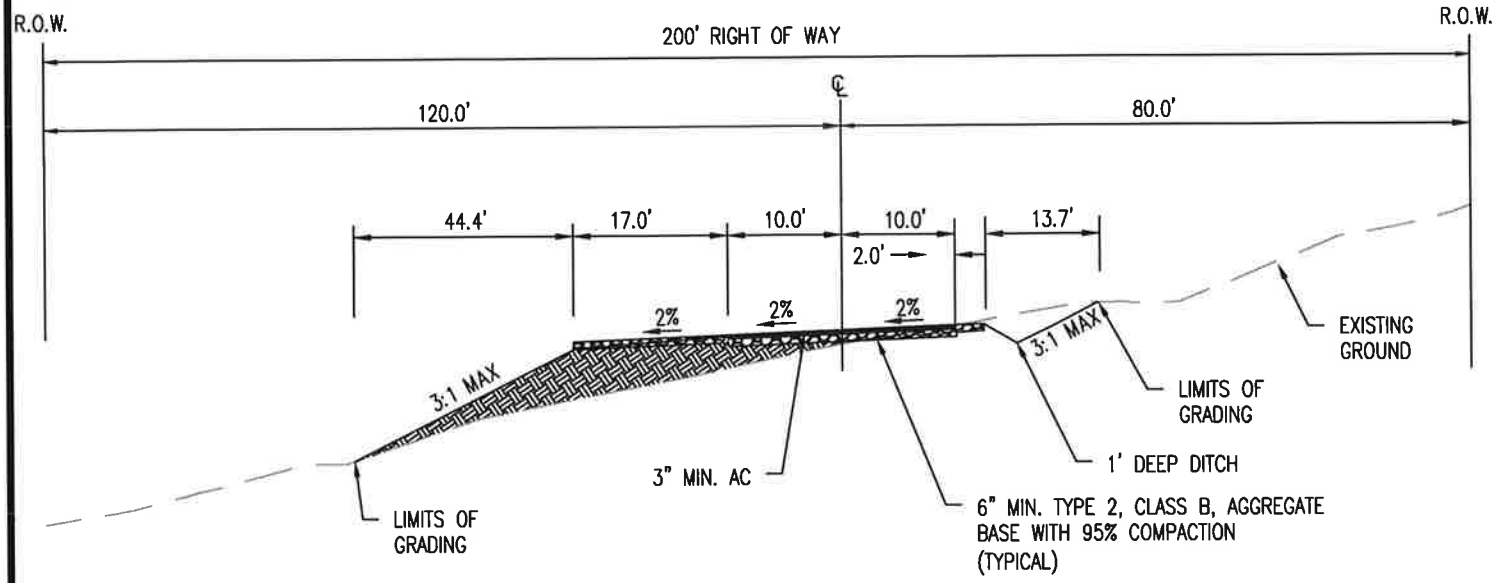
CROSS SECTIONS

LENSPN4



CROSS SECTION A TYPICAL ROADWAY SECTION

NTS



CROSS SECTION B TYPICAL ROADWAY SECTION

NTS

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D'ANDREA WATER TANK #2

WASHOE COUNTY, NV

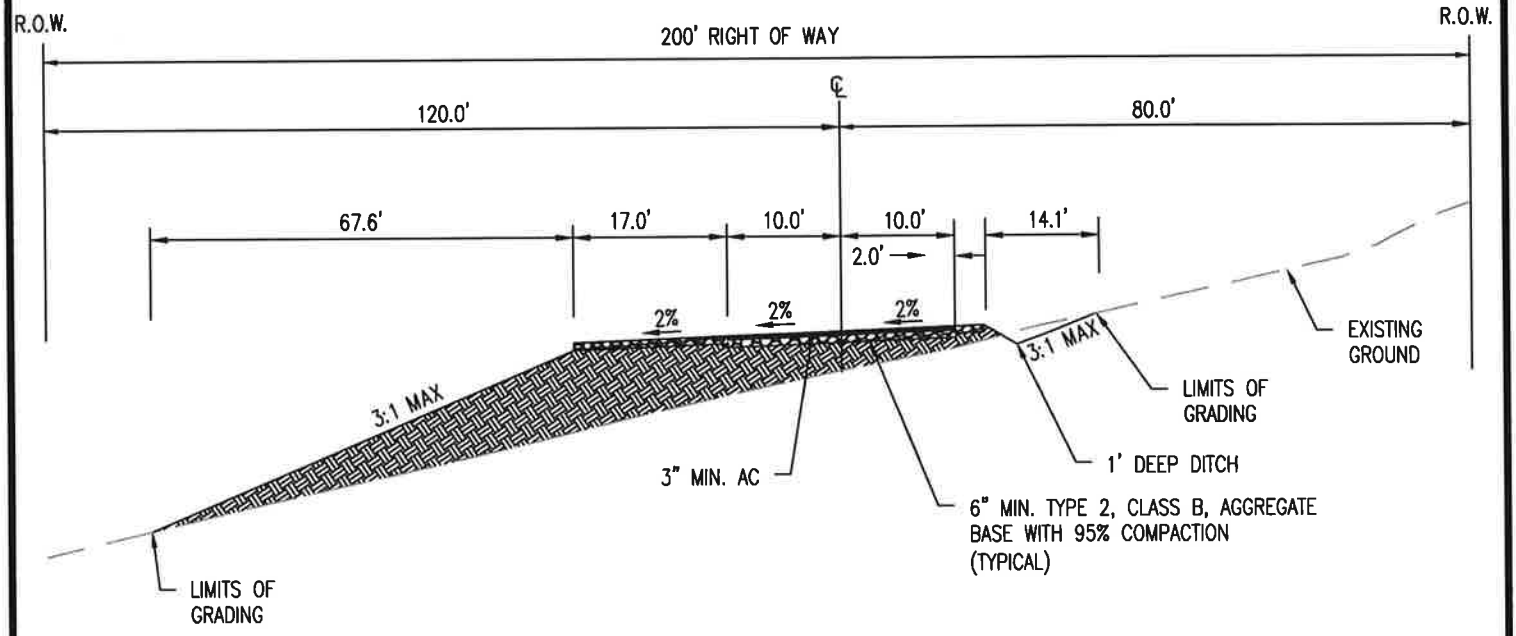
TYPICAL ROADWAY SECTIONS

PROJ. MGR.:	DCB
DRAWN BY:	TJS
DATE:	10/13/15
SCALE:	N.T.S.

SHEET

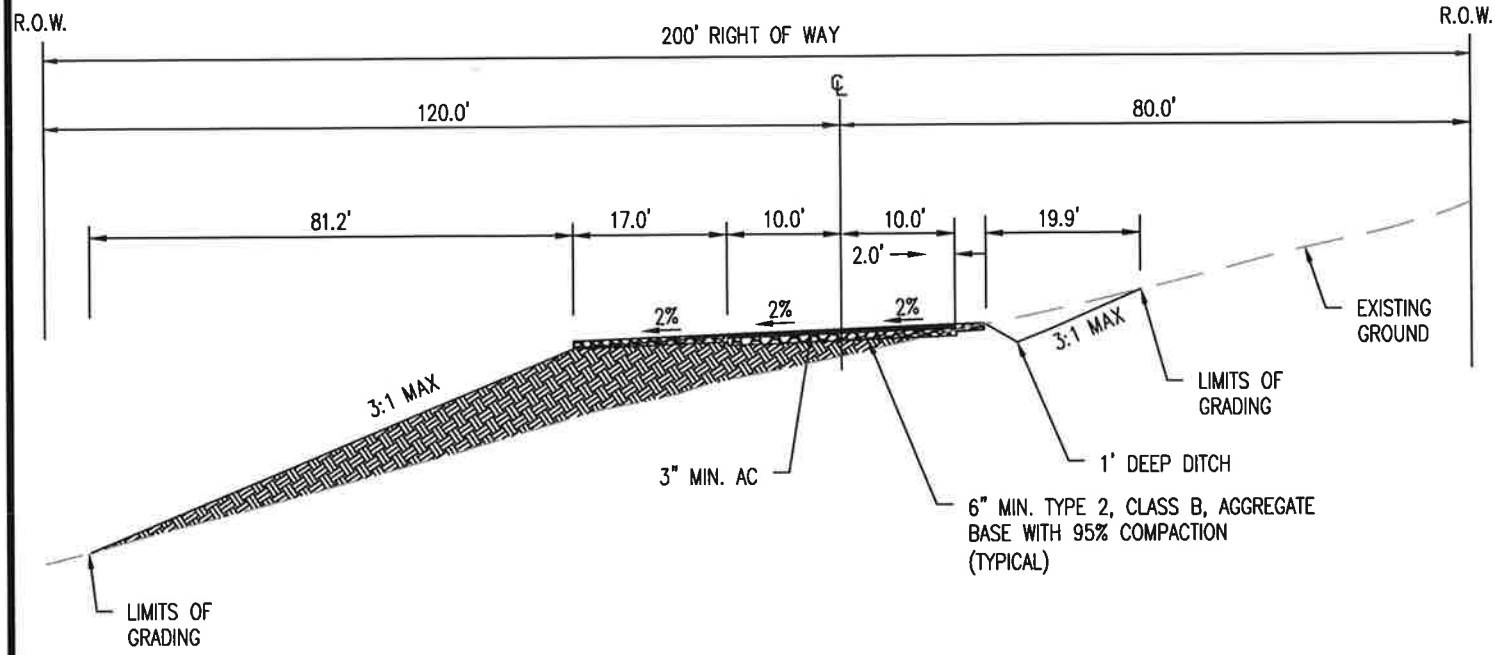
SECTIONS A&B

LENSPN4



CROSS SECTION C TYPICAL ROADWAY SECTION

NTS



CROSS SECTION D TYPICAL ROADWAY SECTION

NTS

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D'ANDREA WATER TANK #2

WASHOE COUNTY, NV

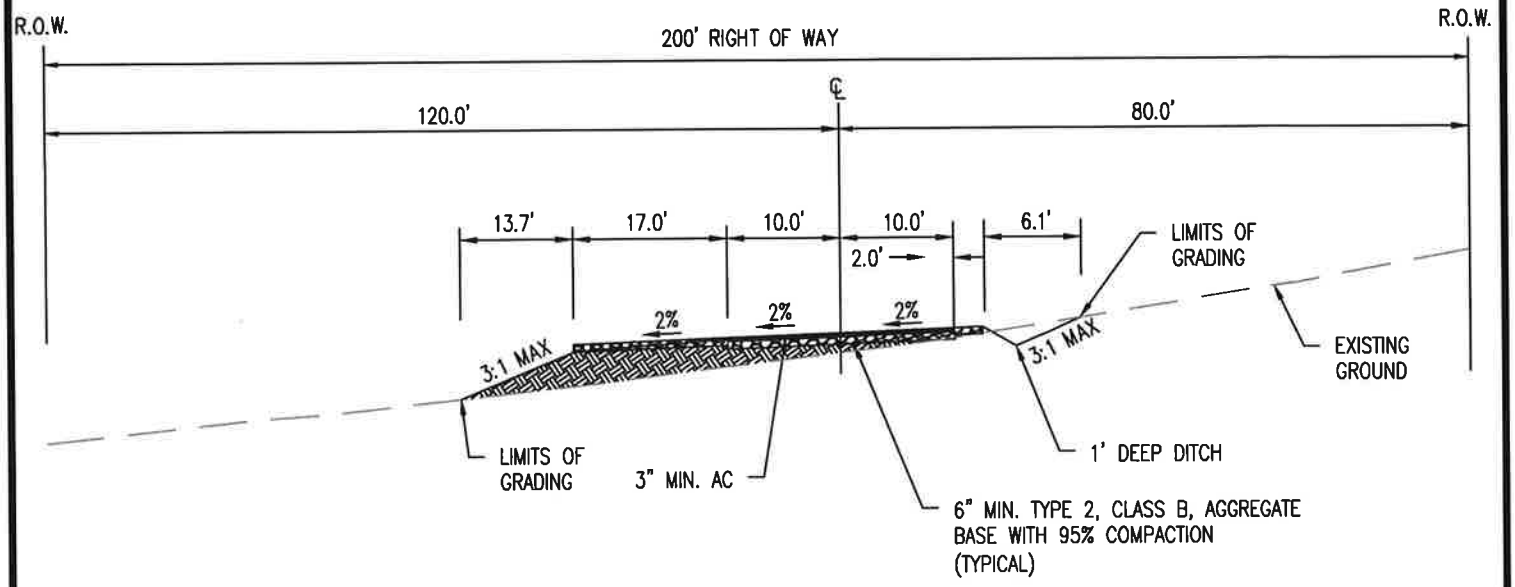
TYPICAL ROADWAY SECTIONS

PROJ. MGR.:	DCB
DRAWN BY:	TJS
DATE:	10/13/15
SCALE:	N.T.S.

SHEET

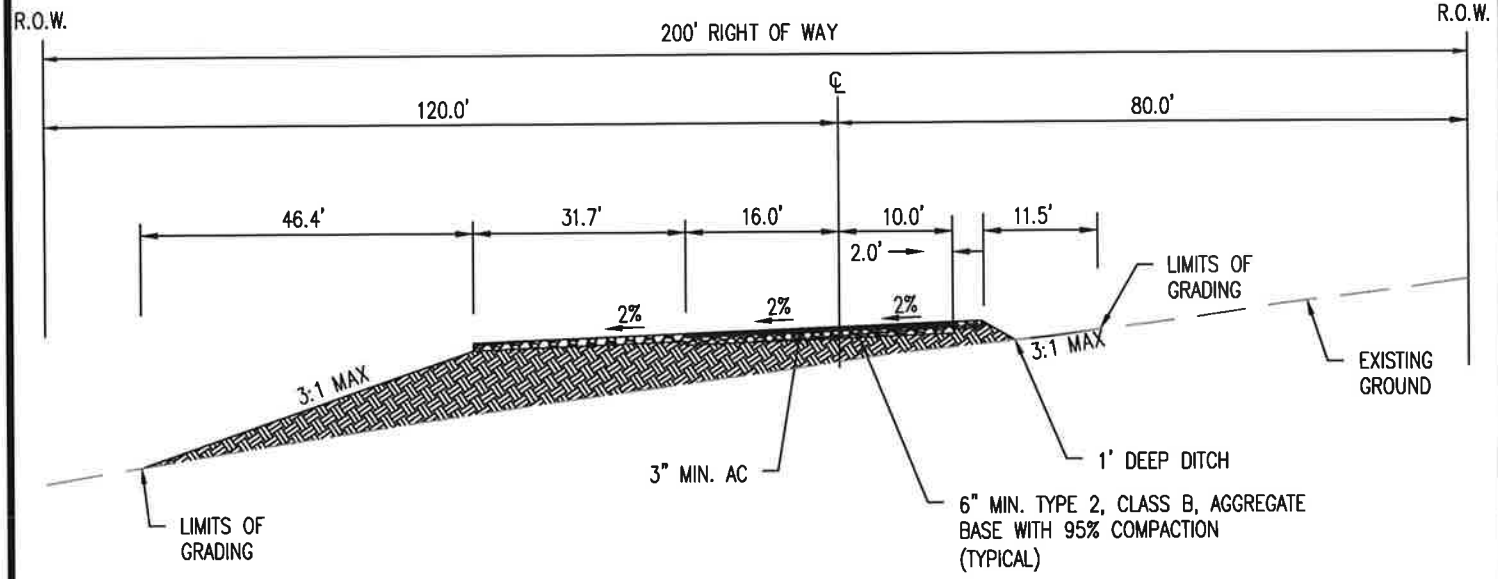
SECTIONS C&D

LENSPN4



CROSS SECTION E TYPICAL ROADWAY SECTION

NTS



CROSS SECTION F TYPICAL ROADWAY SECTION

NTS

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Construction Managers • Environmental Scientists • Landscape Architects • Planners

D'ANDREA WATER TANK #2

WASHOE COUNTY, NV

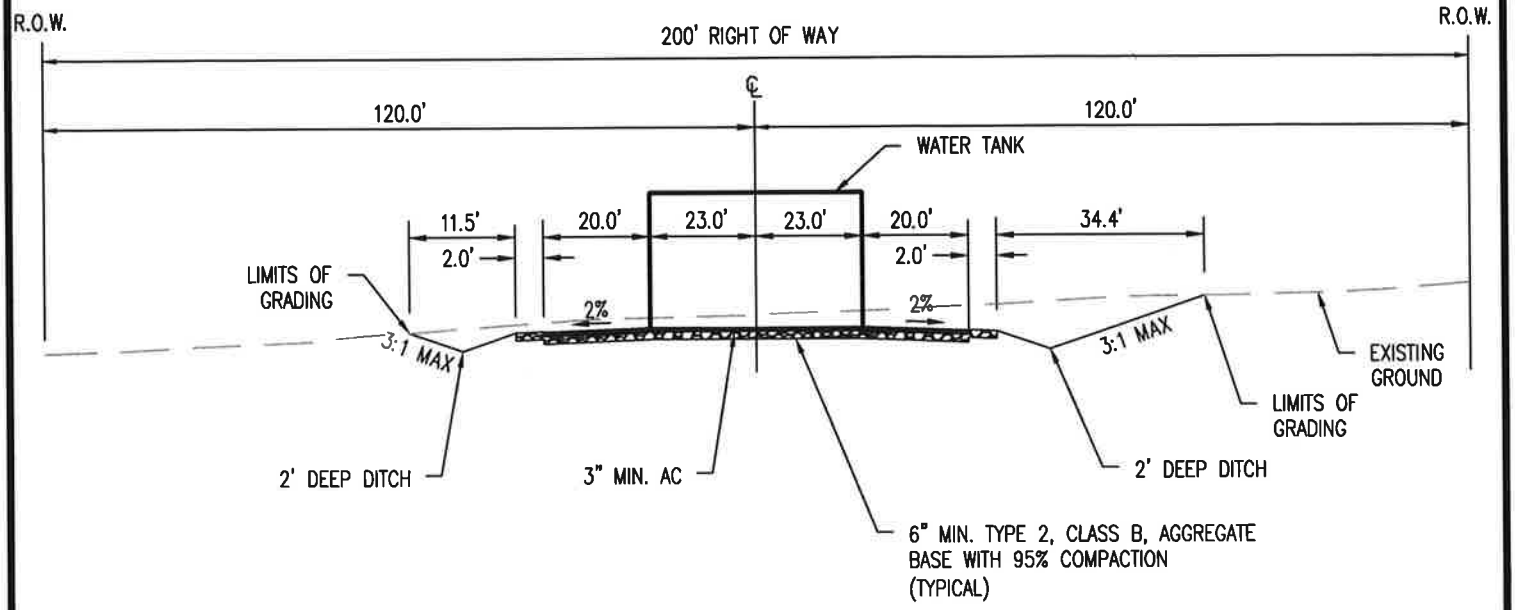
TYPICAL ROADWAY SECTIONS

PROJ. MGR.:	DCB
DRAWN BY:	TJS
DATE:	10/13/15
SCALE:	N.T.S.

SHEET

SECTIONS E&F

LENSPN4



CROSS SECTION G TYPICAL ROADWAY SECTION

NTS

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Construction Managers • Environmental Scientists • Landscape Architects • Planners

D'ANDREA WATER TANK #2
WASHOE COUNTY, NV
TYPICAL ROADWAY SECTIONS

PROJ. MGR.:	DCB
DRAWN BY:	TJS
DATE:	10/13/15
SCALE:	N.T.S.

SHEET
SECTION G
LENSPN4

Form 2800-14
(August 1985)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RIGHT-OF-WAY GRANT/TEMPORARY USE PERMIT

Issuing Office
BLM Sierra Front Field Office

Serial Number
NVN 093727

1. A (right-of-way) (permit) is hereby granted pursuant to:

a. ☑ Title V of the Federal Land Policy and Management Act of October 21, 1976 (90 Stat. 2776; 43 U.S.C. 1761);

b. ☐ Section 28 of the Mineral Leasing Act of 1920, as amended (30 U.S.C. 185);

c. ☐ Other *(describe)* _____

DRAFT

2. Nature of Interest:

a. By this instrument, the holder **Truckee Meadows Water Authority (TMWA), 1355 Capital Blvd., Reno, Nevada 89502** receives a right to construct, operate, maintain, and terminate a **300,000 gallon water tank, paved road, roadside ditch, 12" UG pipeline, & fencing** on public lands (or Federal land for MLA Rights-of-Way) described as follows:

Mount Diablo Meridian, Nevada
T. 20 N., R. 21 E.,
sec. 31, lot 3.

DRAFT

b. The right-of-way or permit area granted herein is **200** feet wide, **762** feet long and contains **3.50** acres, more or less. If a site type facility, the facility contains **N/A** acres.

c. This instrument shall terminate on **December 31, 2044**, **30** years from its effective date unless, prior thereto, it is relinquished, abandoned, terminated, or modified pursuant to the terms and conditions of this instrument or of any applicable Federal law or regulation.

d. This instrument ☑ may ☐ may not be renewed. If renewed, the right-of-way or permit shall be subject to the regulations existing at the time of renewal and any other terms and conditions that the authorized officer deems necessary to protect the public interest.

e. Notwithstanding the expiration of this instrument or any renewal thereof, early relinquishment, abandonment, or termination, the provisions of this instrument, to the extent applicable, shall continue in effect and shall be binding on the holder, its successors, or assigns, until they have fully satisfied the obligations and/or liabilities accruing herein before or on account of the expiration, or prior termination, of the grant.

(Continued on page 2)

3. Rental:

For and in consideration of the rights granted, the holder agrees to pay the Bureau of Land Management fair market value rental as determined by the authorized officer unless specifically exempted from such payment by regulation. Provided, however, that the rental may be adjusted by the authorized officer, whenever necessary, to reflect changes in the fair market rental value as determined by the application of sound business management principles, and so far as practicable and feasible, in accordance with comparable commercial practices.

4. Terms and Conditions:

a. This grant or permit is issued subject to the holder's compliance with all applicable regulations contained in Title 43 Code of Federal Regulations parts 2800 and 2880.

b. Upon grant termination by the authorized officer, all improvements shall be removed from the public lands within **120** days, or otherwise disposed of as provided in paragraph (4)(d) or as directed by the authorized officer.

c. Each grant issued pursuant to the authority of paragraph (1)(a) for a term of 20 years or more shall, at a minimum, be reviewed by the authorized officer at the end of the 20th year and at regular intervals thereafter not to exceed 10 years. Provided, however, that a right-of-way or permit granted herein may be reviewed at any time deemed necessary by the authorized officer.

d. The stipulations, plans, maps, or designs set forth in Exhibit(s) **A1, A2, A3, B, & C**, dated **October 14, 2015**, attached hereto, are incorporated into and made a part of this grant instrument as fully and effectively as if they were set forth herein in their entirety.

e. Failure of the holder to comply with applicable law or any provision of this right-of-way grant or permit shall constitute grounds for suspension or termination thereof.

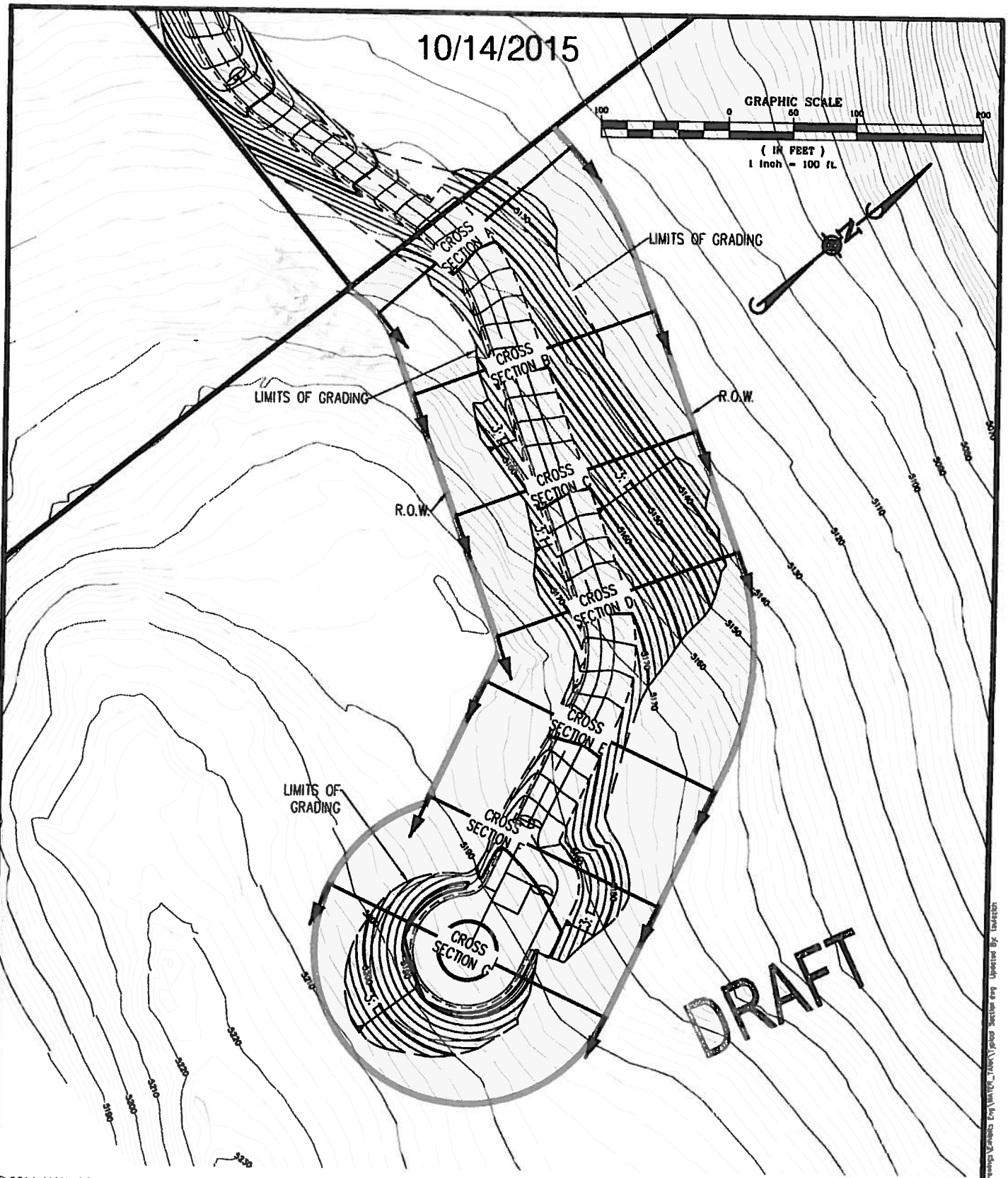
f. The holder shall perform all operations in a good and workmanlike manner so as to ensure protection of the environment and the health and safety of the public.

IN WITNESS WHEREOF, The undersigned agrees to the terms and conditions of this right-of-way grant or permit.

(Signature of Holder)	(Signature of Authorized Officer)
(Title)	**Bureau of Land Management, Sierra Front Field Manager** (Title)
(Date)	(Effective Date of Grant)

EXHIBIT A1

10/14/2015



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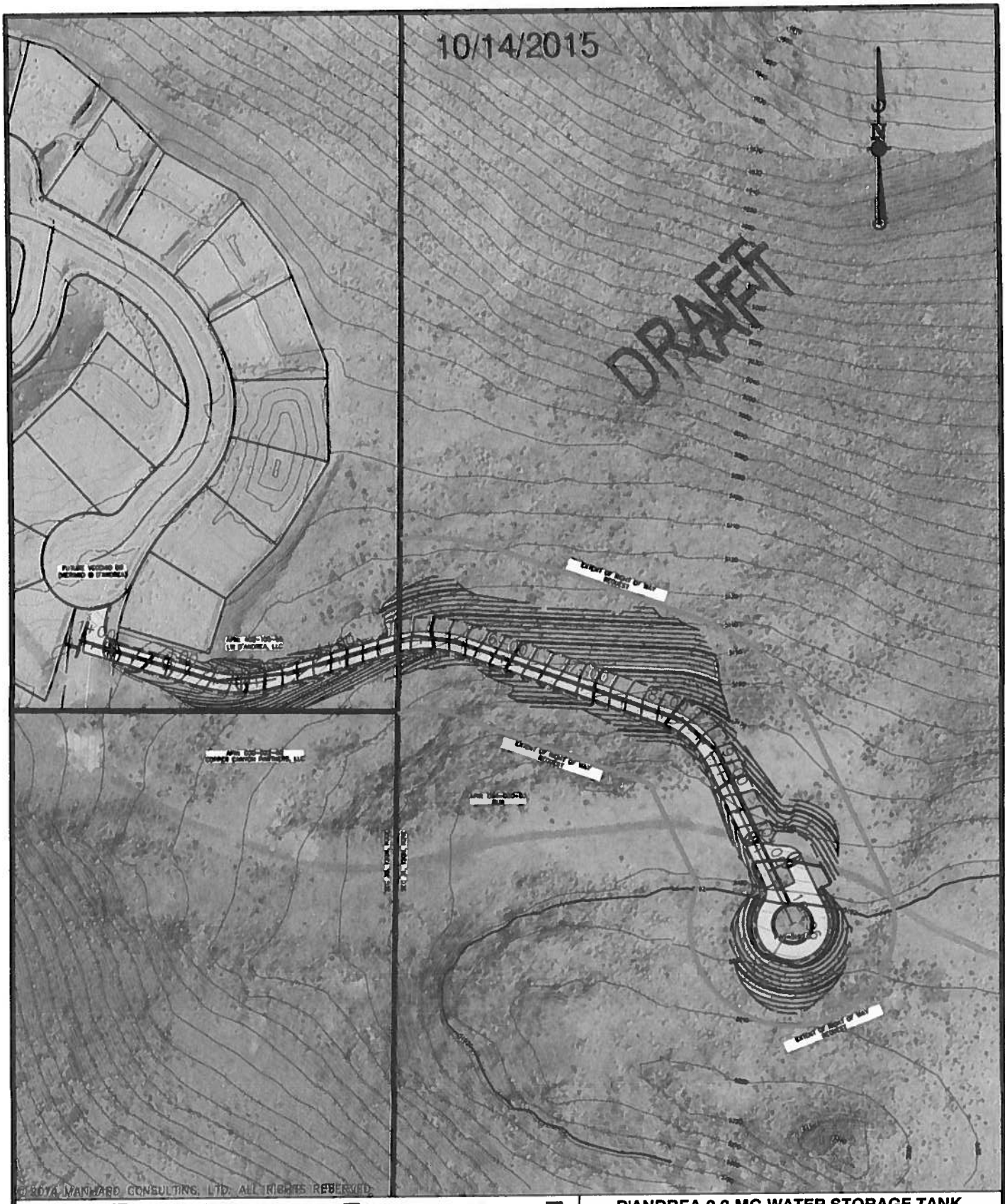
D'ANDREA 0.3 MG WATER STORAGE TANK
SPARKS, NV
TYPICAL ROADWAY SECTIONS

PROJ. MGR.:	KWA
DRAWN BY:	TJS
DATE:	7/1/15
SCALE:	N.T.S.

SHEET
EXHIBIT 6
LENSPN4

EXHIBIT A2



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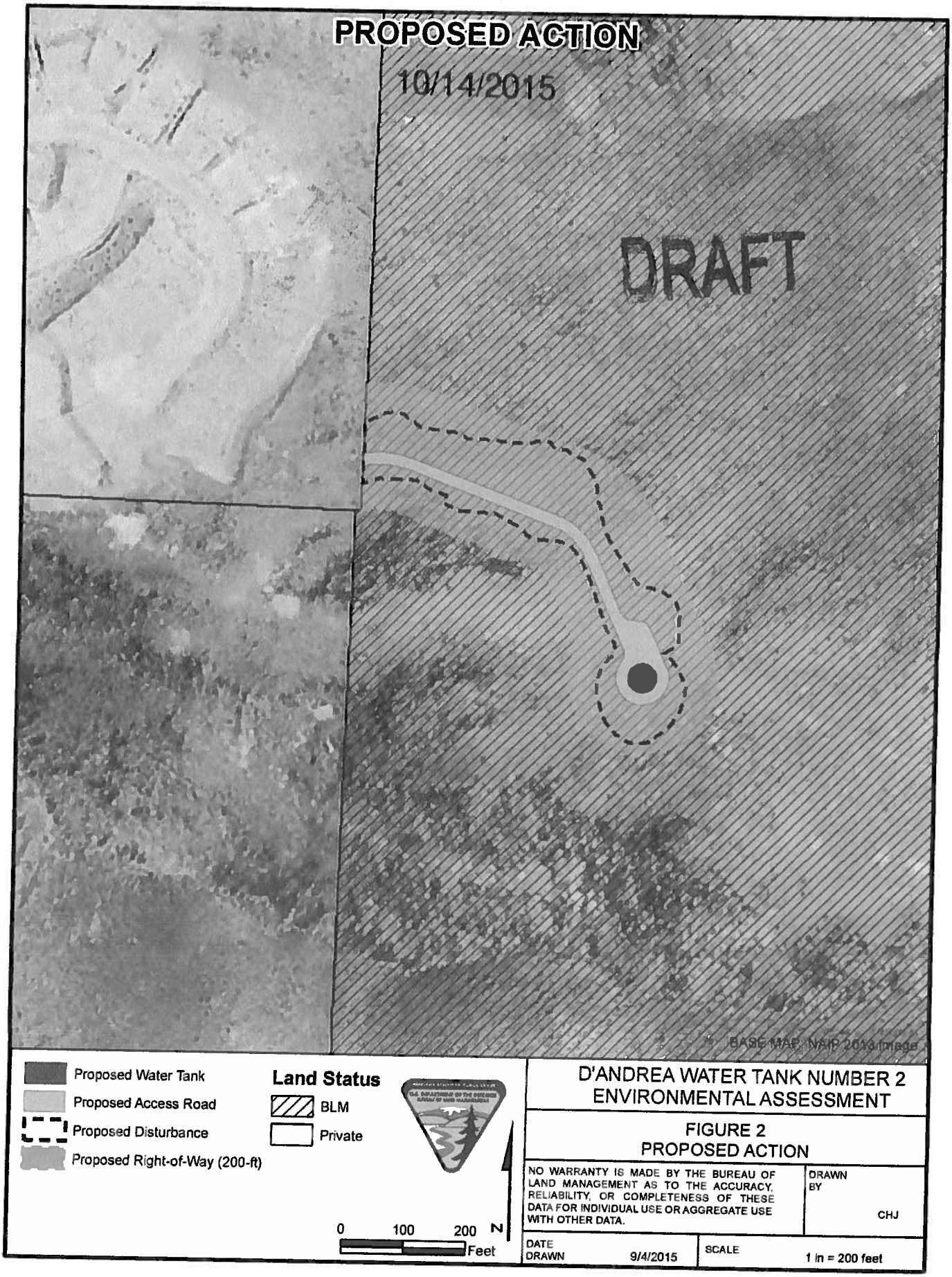
D'ANDREA 0.3 MG WATER STORAGE TANK
SPARKS, NV
BLM RIGHT-OF-WAY REQUEST

PROJ. MGR.:	KWA
DRAWN BY:	DCB
DATE:	06/09/15
SCALE:	1" = 150'

SHEET
EXHIBIT 4
LENSPN4

EXHIBIT A3


PROPOSED ACTION
10/14/2015
DRAFT
BASE MAP: NAIP 2013 Image
Proposed Water Tank
Proposed Access Road
Proposed Disturbance
Proposed Right-of-Way (200-ft)
Land Status
BLM
Private
0
100
200
N
Feet
D'ANDREA WATER TANK NUMBER 2
ENVIRONMENTAL ASSESSMENT
FIGURE 2
PROPOSED ACTION
NO WARRANTY IS MADE BY THE BUREAU OF LAND MANAGEMENT AS TO THE ACCURACY, RELIABILITY, OR COMPLETENESS OF THESE DATA FOR INDIVIDUAL USE OR AGGREGATE USE WITH OTHER DATA.
DRAWN BY
CHJ
DATE DRAWN
9/4/2015
SCALE
1 in = 200 feet

DRAFT

Grant NVN 093727
Exhibit B
Special Stipulations

a. The grant is subject to all valid rights existing on the effective date of the grant.

b. The United States retains the right to authorize use of the right-of-way for other compatible uses (including the subsurface and air space).

c. In case of change of address, the holder shall immediately notify the Authorized Officer.

d. The holder shall construct, operate, and maintain the facilities, improvements, and structures within this right-of-way in strict conformity with the plan of development and associated stipulations, which were approved and made part of the grant on October 14, 2015. Any relocation, additional construction, or use that is not in accord with the approved plan of development and/or associated stipulations, shall not be initiated without prior written approval of the authorized officer.

e. The holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 U.S.C. 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

f. The holder of right-of-way NVN 093727 agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the right-of-way (unless the release or threatened release is wholly unrelated to the right-of-way holder's activity on the right-of-way), or resulting from the activity of the right-of-way holder on the right-of-way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

g. The holder shall maintain the right-of-way in a safe, usable condition, as directed by the Authorized Officer. Construction sites shall be maintained in a sanitary condition at all times; waste material at those sites shall be disposed of promptly at an appropriate waste disposal site.

Surveying Instructions for the Survey of the Public Lands in the United States, latest edition. The holder shall record such survey in the appropriate county and send a copy to the Authorized Officer. If the Bureau cadastral surveyors or other Federal surveyors are used to restore the disturbed survey monument, the holder shall be responsible for the survey cost.

l. All above-ground structures not subject to safety requirements shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a flat (non-glossy) color which simulates the "Standard Environmental Colors." The color selected for this right-of-way must be either "Covert Green" or "Shale Green."

m. In the event that the public land underlying the right-of-way encompassed in this grant, or portion thereof, is conveyed out of Federal ownership and administration of the right-of-way or the land underlying the right-of-way is not being reserved to the United States in the patent/deed and/or the right-of-way is not within a right-of-way corridor being reserved to the United States in the patent/deed, the United States waives any right it has to administer the right-of-way, or portion thereof, within the conveyed land under Federal laws, statutes, and regulations, including the regulations in Title 43 CFR parts 2800 and 2880, as well as any rights to have the holder apply to the BLM for amendments, modifications, or assignments and for the BLM to approve or recognize such amendments, modifications, or assignments. At the time of conveyance, the patentee/grantee, and their successors and assigns, shall succeed to the interests of the United States in all matters relating to the right-of-way, or portion thereof, within the conveyed land and shall be subject to applicable State and local government laws, statutes, and ordinances. After conveyance, any disputes concerning compliance with the use and the terms and conditions of the right-of-way shall be considered a civil matter between the patentee/grantee and the right-of-way holder.

n. Six months prior to termination of the grant, the holder shall contact the authorized officer to arrange a joint inspection of the right-of-way. This inspection will be held to agree to an acceptable termination and rehabilitation plan. This plan shall include but is not limited to, removal of facilities, drainage structures, or surface material, recontouring, topsoiling, or seeding. The Authorized Officer must approve the plan in writing prior to the holder's commencement of any termination activities.

DRAFT

10/14/2015

EXHIBIT C

Draft Plan of Development
D'Andrea Water Tank #2
BLM Right-of-Way Request
(NVN 093727)

DRAFT

Prepared for:

Truckee Meadows Water Authority
1355 Capital Blvd
Reno, Nevada 89502
(775) 834-8080

Prepared by:

Manhard Consulting
9850 Double R Blvd
Suite 110
Reno, Nevada 89521
(775) 746-3500

Originally Submitted October 2014
Revised September 2015

Appendices

DRAFT

1.6 Temporary or Permanent

The right of way (ROW) authorization would be permanent.

1.7 Reasonable Alternatives

We identified two (2) viable sites at our BLM pre-application meeting and stated we would conduct a site selection process to determine which of these sites would be preferable. A field site selection meeting was conducted prior to the submittal of a Standard Form 299. The selection meeting included engineers and planners from both the City of Sparks and Washoe County, BLM was invited but did not attend the meeting. At the conclusion of the site selection meeting, it was determined that Alternative 1 was the preferred site location based on limited visual impact as compared to Alternative 2 (Figure 2).

2 Right-of-Way Location

2.1 Legal Description

The 3.5 acre portion included as part of this Right of Way request is contained completely on public land.

All that certain Right-of-Way situated within the SW 1/4 of Section 31, T.20N., R.21E., M.D.M., within Washoe County, State of Nevada, and being more particularly described as follows:

COMMENCING at the East 1/4 corner of Section 36, T. 20N., R.20E., M.D.M., as marked by a 5/8" rebar with "Tri-State Control" cap, shown on Parcel Map No. 4896, recorded March 27, 2008 as File No. 3634271 in the Official Records of Washoe County, Nevada;

THENCE along the West line of said Section 31, also being the East line of said Section 36, North 00°47'31" East, 44.25 feet to the **POINT OF BEGINNING;**

THENCE continuing along said common line, North 00°47'31" East, 71.82 feet to the beginning of a non-tangent curve to the right;

THENCE departing said common line and along the following nine (9) courses:

1. from a tangent bearing of North 80°38'10" East, 93.81 feet along the arc of a 185.00 foot radius curve through a central angle of 29°03'16";
2. South 70°18'34" East, 246.99 feet to the beginning of a tangent curve to the right;
3. 106.03 feet along the arc of a 135.00 foot radius curve through a centr al angle of 45°00'00";
4. South 25°18'34" East, 98.98 feet to the beginning of a non -tangent curve to the right;
5. From a tangent which bears North 81°38'54" East, 682.95 feet along the are a of a 120.00 foot radius curve through a central angle of 326°05'04";
6. North 25°18'34" West, 98.98 feet to the beginning of a tangent curve to the left;51.05
7. feet along the arc of a 65.00 foot radius curve through a central angle of 45°00'00";
8. North 70°18'34" West, 246.99 feet to the beginning of a tangent curve to the left;
9. 9) 71.01 feet along the arc of a 115.00 foot radius curve through a central angle of 35°22'38" to the aforementioned common section line and the **POINT OF BEGINNING.**

The pipeline will be subsurface approximately 3 to 4 feet below the surface of the road. The max slope of the pipe will max that of the roadway 10%. The pipe will be surrounded by standard bedding material and gravel.

3.1.5 Water Tank Pad

The perimeter of the tank itself will sit on a concrete stem wall and the tank floor will sit on a layer of sand over compacted base rock material. The shaded area within the access road ROW and the tank site will be paved with asphalt.

3.2 Detailed Engineering Plans for Major Structures

- The Developer will design the tank site plan (including grading, site piping, access road, etc.), feeder main plan & profile (with U/G electric and phone conduits, boxes, vaults, etc.), drain line plan & profile, landscaping plan, electrical site plan and details. Developer submits 50% level design review set to TMWA.
- TMWA provides tank detail drawings and technical specifications (except for landscaping and electrical) and returns package to Developer with 50% design level review comments.
- Developer submits 90% level design review set to TMWA for final comments.
- Developer submits final bid/construction level package to TMWA.
- Developer submits applications and pays all fees and/or contract costs for new electrical service to SPPC and new phone service to SBC.

3.3 Temporary Use Areas

No temporary use areas are proposed with this request.

4 Additional Components

4.1 Access to ROW

For security purposes access to the tank site will be restricted. A 6-foot high security fence (6' high chain link with an additional 1' high, 3-strand barbed wire top) will begin approximately where the ROW "bulb" begins and be installed around the tank pad cut slope and/or toe of slope. A 20-foot wide double swing gate will be located across the access road at the "bulb". The gate will be provided with a high-security latch and will be locked. Typically, TMWA is the only one with a key. If a contractor is working at the tank site, we will typically interlock a temporary combination lock with our lock to provide temporary access.

4.2 Location of Equipment Storage Areas

Equipment used during construction phase will be stored on the adjacent private property. Equipment required for maintenance will be stored off site.

5 Government Agencies Involved

The proposed tank site requires a special use permit to be processed through Washoe County prior to issuance of any grading or building permit.

9 Termination and Restoration

Termination of the tank site is not anticipated. Storage is required to provide emergency supply and fire suppression water to the customers located within the pressure zone created by the tank's hydraulic grade line elevation. Once TMWA establishes a tank zone, it is highly unlikely that the tank would ever be removed or retired. In the unlikely event that the tank was retired TMWA would demolish and remove the tank and fencing from the site; cut slopes and roads would be reclaimed/re-contoured as much as practicable; and the site would be reseeded.

10 Environmental Protection Measures

TMWA has committed to the following Environmental Protection Measures (EPMs) to prevent unnecessary or undue degradation during construction and operation activities. These EPMs include Best Management Practices (BMPs) derived from the Truckee Meadows Construction Site Best Management Practices Handbook.

- All disturbed slopes and cut areas would be revegetated utilizing a BLM-approved weed-free seed mix following construction.
- All vehicles would be washed down prior to entering the site to reduce the spread of weeds.
- TMWA would control noxious, invasive weeds within the project area in coordination with the BLM.
- Where possible, construction activities would preserve existing vegetation and areas with permeable soils that can be used for infiltration of storm water during and after construction is complete.
- Construction activities would provide perimeter control using vegetation swales and filter strips in conjunction with other sediment control BMPs such as fiber rolls, silt fences, gravel berms, and berms constructed of salvaged native material. Vegetated swales and filter strips can also provide permanent post construction structural treatment controls and can consist of preserved or enhanced existing vegetation.
- Inspection of site design features that are intended to block or filter storm water runoff would occur weekly during construction activities to ensure they are adequate to prevent sediment transport offsite. If they are not, installation of additional BMPs would occur.
- All site design features that are intended to block or filter storm water runoff would be inspected before and after storm events to ensure they are functioning properly. For prolonged rainfall events, these site design features would be inspected daily.
- Installation of high visibility temporary fencing would occur to protect high value existing vegetation before beginning clearing or other soil-disturbing activities.
- Where possible, construction activities would preserve desirable vegetation on steep slopes and near perennial and intermittent watercourses or swales.

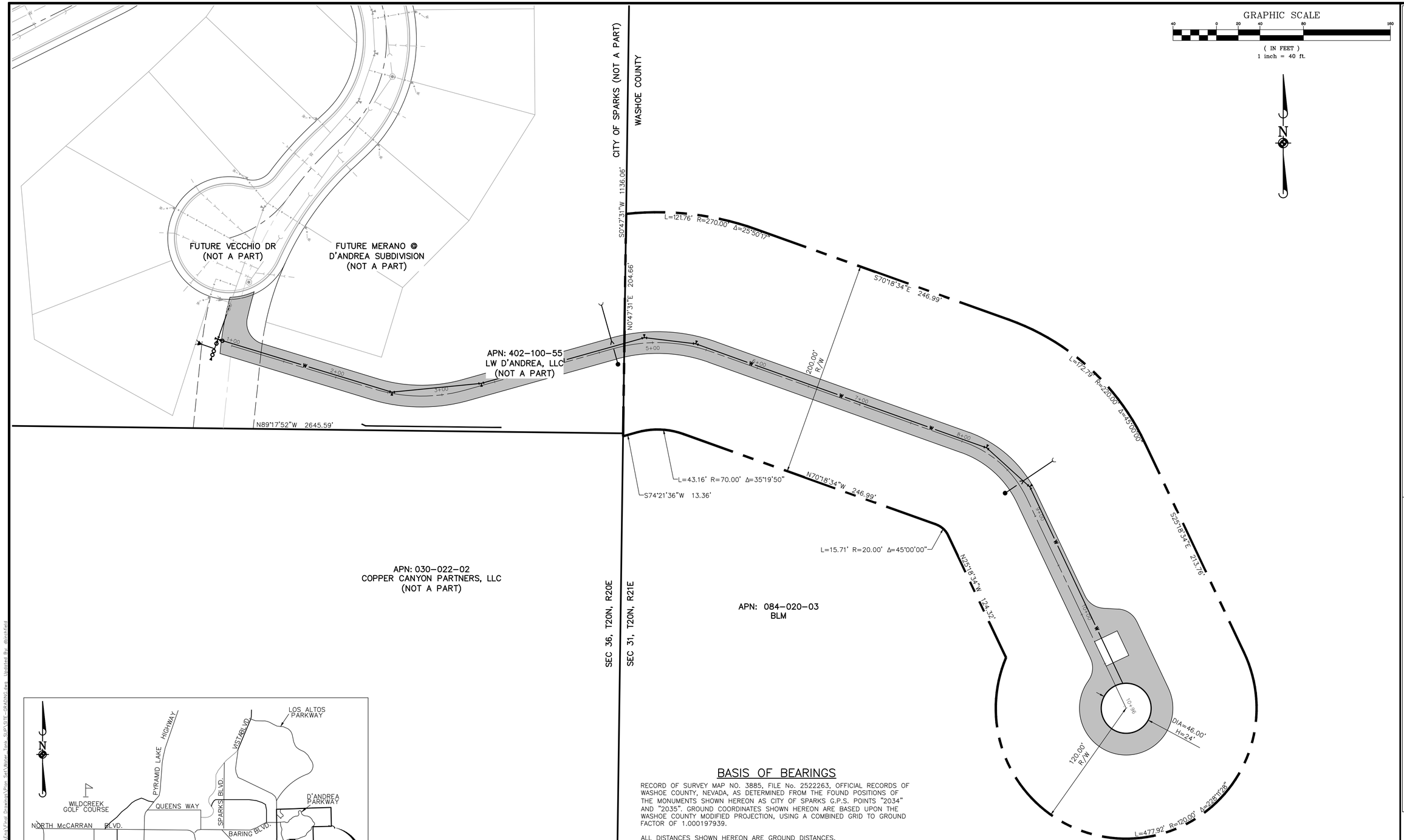
- Accumulated sediment in BMPs shall be removed within seven days after a storm water runoff event or prior to the next anticipated storm event whichever is earlier. Sediment must be removed when the BMP design capacity has been reduced by 50 percent or more.
- Material stockpiles would be located away from storm water flows, drainage courses, and inlets.
- Wind erosion and dust control measures would be applied on the surface of stockpiles.
- Stockpile perimeter controls would be installed such as temporary berms, dikes, silt fences, fiber rolls, sandbags, or gravel bag barriers as soon as possible after stockpiles are created.
- Construction activities would collect and properly dispose of Portland Cement Concrete and asphalt concrete waste so that it does not enter the storm drain system.
- Where possible, concrete suppliers should conduct washout activities at their own plants or dispatch facilities.
- If washout is conducted at the construction site, the operator shall employ control measures (e.g., lined pits or portable washouts) to contain and manage on-site concrete washout to prevent discharge. The pit or container must be designed so that no overflows can occur due to inadequate sizing or precipitation.
- Fueling, washing, and major maintenance of equipment would occur offsite whenever possible. In the event of oil, fuel, lubricating grease, or other equipment leaks, cleanup would be conducted as soon as possible. Any contaminated soil would be removed, managed, and disposed of at an off-site facility in compliance with State and federal regulations.
- In the event of a major spill, the following actions would be taken in addition to any federal, State, and local health and safety regulations;
    - Contain the spread or migration of the spill using the on-hand supply of erosion control structures and/or by creating dirt berms, as feasible and necessary;
    - Regulated wastes would be removed from the Project area and disposed of in a State, federal, or local designated area; and
    - If a spill of a petroleum constitute is considered to meet the reportable quantity per the Nevada Division of Environmental Protection's (NDEP) guidelines (greater than 25 gallons or greater than three cubic yards of impacted material) or a reportable quantity for hazardous waste is released based on the United States Environmental Protection Agency guidelines established under Title III List of Lists (40 CFR Part 302), the BLM and NDEP would be notified within 24 hours and the appropriate remedial actions and confirmation sampling would be conducted under the direction of the NDEP.
- Spill cleanup kits would be provided on-site and on fueling trucks. A drip pan or absorbent pad would be used unless fueling or conducting maintenance occurs over an impervious surface.
- All fueling equipment would be equipped with automatic shut-off nozzles to contain drips.

sacred objects, or objects of cultural patrimony (as defined in 43 CFR 10.2). Further, pursuant to 43 CFR 10.4 (c) and (d), the operator would immediately stop all activities in the vicinity of the discovery and not commence again for 30 days, or when notified to proceed by the BLM authorized officer.

- In the event that previously undiscovered paleontological resources are discovered in the performance of any surface disturbing activities, the item(s) or condition(s) would be left intact and immediately brought to the attention of the authorized officer of the BLM. If significant paleontological resources are found, avoidance, recordation, and data recovery would be required.

- Any cultural resource discovered by the permit holder, or any person working on their behalf, during the course of activities on federal land would be immediately reported to the BLM Authorized Officer by telephone, with written confirmation. The permit holder would suspend all operations within 100 meters (330 feet) of such discovery and protect it until an evaluation of the discovery can be made by the authorized officer. If the BLM determines, in consultation with the Nevada State Historic Preservation Office, that the site is or may be eligible for the National Register of Historic Places, a BLM archaeologist would determine an exclusion zone adequate to protect the resource. TMWA would not conduct any surface disturbing activities within this exclusion zone without further authorization from the BLM, which may require further environmental and/or cultural analyses. The holder is responsible for the cost of evaluation and mitigation. Operations may resume only upon written authorization to proceed from the authorized officer.

- All solid wastes would be disposed of in a State, federal, or local designated site. Pursuant to 43 CFR 8365.1-1(b) (3), no sewage, petroleum products, or refuse would be dumped from any vehicle.



VICINITY MAP

N.T.S.

BASIS OF BEARINGS

RECORD OF SURVEY MAP NO. 3885, FILE No. 2522263, OFFICIAL RECORDS OF WASHOE COUNTY, NEVADA, AS DETERMINED FROM THE FOUND POSITIONS OF THE MONUMENTS SHOWN HEREON AS CITY OF SPARKS G.P.S. POINTS "2034" AND "2035". GROUND COORDINATES SHOWN HEREON ARE BASED UPON THE WASHOE COUNTY MODIFIED PROJECTION, USING A COMBINED GRID TO GROUND FACTOR OF 1.000197939.

ALL DISTANCES SHOWN HEREON ARE GROUND DISTANCES.

BASIS OF ELEVATION

VERTICAL DATUM PER INFORMATION PUBLISHED FOR SPARKS GPS POINT 2034 TAKEN AS 4484.61 FEET AS SHOWN ON RECORD OF SURVEY MAP 2775, FILE NO. 1834848, OFFICIAL RECORDS OF WASHOE COUNTY, NEVADA.

ENGINEER'S STATEMENT

THESE PLANS HAVE BEEN PREPARED WITH ACCEPTED ENGINEERING PROCEDURES AND GUIDELINES, AND ARE IN SUBSTANTIAL COMPLIANCE WITH APPLICABLE STATUTES, ORDINANCES, AND CODES. IN THE EVENT OF A CONFLICT BETWEEN ANY PORTION OF THESE PLANS AND THE WASHOE COUNTY DEVELOPMENT CODE, THE COUNTY CODE SHALL PREVAIL.

DRAWN BY | CHECK BY

DATE | REVISION

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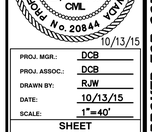
D'ANDREA WATER TANK #2

WASHOE COUNTY, NEVADA

SPECIAL USE PERMIT

NOT APPROVED FOR CONSTRUCTION



PROJ. MGR.:	DCB
PROJ. ASSOC.:	DCB
DRAWN BY:	RJW
DATE:	10/13/15
SCALE:	1"=40'

SHEET 1 OF 2

LENSPN4

October 13, 2015 - 17:45 Dwg Name: P:\Lenspn4\Data\Eng\Final Drawings\Plan Set\Water Tank SUP\SITE GRADING.dwg Updated By: dbirchfield

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

FUTURE VECCHIO DR
(NOT A PART)

FUTURE MERANO @
D'ANDREA SUBDIVISION
(NOT A PART)

CITY OF SPARKS (NOT A PART)

WASHOE COUNTY

APN: 402-100-55
LW D'ANDREA, LLC
(NOT A PART)

APN: 030-022-02
COPPER CANYON PARTNERS, LLC
(NOT A PART)

APN: 084-020-03
BLM

SEC 36, T20N, R20E

SEC 31, T20N, R21E

FLARED END SECTION
W/ OUTLET PROTECTION

CATCH BASIN

RIPRAP LINED CHANNEL

LIMITS OF GRADING

PAD=5192.0

5040 5050 5060 5070 5080 5090 5100 5110 5120 5130 5140 5150 5160 5170 5180 5190 5192 5200 5210 5220 5230

1+00 2+00 3+00 4+00 5+00 6+00 7+00 8+00 9+00 10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00 22+00 23+00 24+00 25+00 26+00 27+00 28+00 29+00 30+00 31+00 32+00 33+00 34+00 35+00 36+00 37+00 38+00 39+00 40+00 41+00 42+00 43+00 44+00 45+00 46+00 47+00 48+00 49+00 50+00 51+00 52+00 53+00 54+00 55+00 56+00 57+00 58+00 59+00 60+00 61+00 62+00 63+00 64+00 65+00 66+00 67+00 68+00 69+00 70+00 71+00 72+00 73+00 74+00 75+00 76+00 77+00 78+00 79+00 80+00 81+00 82+00 83+00 84+00 85+00 86+00 87+00 88+00 89+00 90+00 91+00 92+00 93+00 94+00 95+00 96+00 97+00 98+00 99+00 100+00 101+00 102+00 103+00 104+00 105+00 106+00 107+00 108+00 109+00 110+00 111+00 112+00 113+00 114+00 115+00 116+00 117+00 118+00 119+00 120+00 121+00 122+00 123+00 124+00 125+00 126+00 127+00 128+00 129+00 130+00 131+00 132+00 133+00 134+00 135+00 136+00 137+00 138+00 139+00 140+00 141+00 142+00 143+00 144+00 145+00 146+00 147+00 148+00 149+00 150+00 151+00 152+00 153+00 154+00 155+00 156+00 157+00 158+00 159+00 160+00 161+00 162+00 163+00 164+00 165+00 166+00 167+00 168+00 169+00 170+00 171+00 172+00 173+00 174+00 175+00 176+00 177+00 178+00 179+00 180+00 181+00 182+00 183+00 184+00 185+00 186+00 187+00 188+00 189+00 190+00 191+00 192+00 193+00 194+00 195+00 196+00 197+00 198+00 199+00 200+00 201+00 202+00 203+00 204+00 205+00 206+00 207+00 208+00 209+00 210+00 211+00 212+00 213+00 214+00 215+00 216+00 217+00 218+00 219+00 220+00 221+00 222+00 223+00 224+00 225+00 226+00 227+00 228+00 229+00 230+00 231+00 232+00 233+00 234+00 235+00 236+00 237+00 238+00 239+00 240+00 241+00 242+00 243+00 244+00 245+00 246+00 247+00 248+00 249+00 250+00 251+00 252+00 253+00 254+00 255+00 256+00 257+00 258+00 259+00 260+00 261+00 262+00 263+00 264+00 265+00 266+00 267+00 268+00 269+00 270+00 271+00 272+00 273+00 274+00 275+00 276+00 277+00 278+00 279+00 280+00 281+00 282+00 283+00 284+00 285+00 286+00 287+00 288+00 289+00 290+00 291+00 292+00 293+00 294+00 295+00 296+00 297+00 298+00 299+00 300+00 301+00 302+00 303+00 304+00 305+00 306+00 307+00 308+00 309+00 310+00 311+00 312+00 313+00 314+00 315+00 316+00 317+00 318+00 319+00 320+00 321+00 322+00 323+00 324+00 325+00 326+00 327+00 328+00 329+00 330+00 331+00 332+00 333+00 334+00 335+00 336+00 337+00 338+00 339+00 340+00 341+00 342+00 343+00 344+00 345+00 346+00 347+00 348+00 349+00 350+00 351+00 352+00 353+00 354+00 355+00 356+00 357+00 358+00 359+00 360+00 361+00 362+00 363+00 364+00 365+00 366+00 367+00 368+00 369+00 370+00 371+00 372+00 373+00 374+00 375+00 376+00 377+00 378+00 379+00 380+00 381+00 382+00 383+00 384+00 385+00 386+00 387+00 388+00 389+00 390+00 391+00 392+00 393+00 394+00 395+00 396+00 397+00 398+00 399+00 400+00 401+00 402+00 403+00 404+00 405+00 406+00 407+00 408+00 409+00 410+00 411+00 412+00 413+00 414+00 415+00 416+00 417+00 418+00 419+00 420+00 421+00 422+00 423+00 424+00 425+00 426+00 427+00 428+00 429+00 430+00 431+00 432+00 433+00 434+00 435+00 436+00 437+00 438+00 439+00 440+00 441+00 442+00 443+00 444+00 445+00 446+00 447+00 448+00 449+00 450+00 451+00 452+00 453+00 454+00 455+00 456+00 457+00 458+00 459+00 460+00 461+00 462+00 463+00 464+00 465+00 466+00 467+00 468+00 469+00 470+00 471+00 472+00 473+00 474+00 475+00 476+00 477+00 478+00 479+00 480+00 481+00 482+00 483+00 484+00 485+00 486+00 487+00 488+00 489+00 490+00 491+00 492+00 493+00 494+00 495+00 496+00 497+00 498+00 499+00 500+00 501+00 502+00 503+00 504+00 505+00 506+00 507+00 508+00 509+00 510+00 511+00 512+00 513+00 514+00 515+00 516+00 517+00 518+00 519+00 520+00 521+00 522+00 523+00 524+00 525+00 526+00 527+00 528+00 529+00 530+00 531+00 532+00 533+00 534+00 535+00 536+00 537+00 538+00 539+00 540+00 541+00 542+00 543+00 544+00 545+00 546+00 547+00 548+00 549+00 550+00 551+00 552+00 553+00 554+00 555+00 556+00 557+00 558+00 559+00 560+00 561+00 562+00 563+00 564+00 565+00 566+00 567+00 568+00 569+00 570+00 571+00 572+00 573+00 574+00 575+00 576+00 577+00 578+00 579+00 580+00 581+00 582+00 583+00 584+00 585+00 586+00 587+00 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2.0% 4.0% 5% 90° V/C 3:1 REVEG 2:1 REVEG 10.0% 18" RCP 24" RCP 30" RCP 36" RCP

REVISION	DRAWN BY	CHECK BY	DATE

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D'ANDREA WATER TANK #2
WASHOE COUNTY, NEVADA
SPECIAL USE PERMIT

PROFESSIONAL ENGINEER - STATE OF NEVADA
DANIEL C. BIRCHFIELD
Exp: 12-31-16
CIVIL
No. 20844
10/13/15

PROJ. MGR.:	DCB
PROJ. ASSOC.:	DCB
DRAWN BY:	RJW
DATE:	10/13/15
SCALE:	1"=40'

SHEET 2 OF 2
LENSPN4

NOT APPROVED FOR CONSTRUCTION

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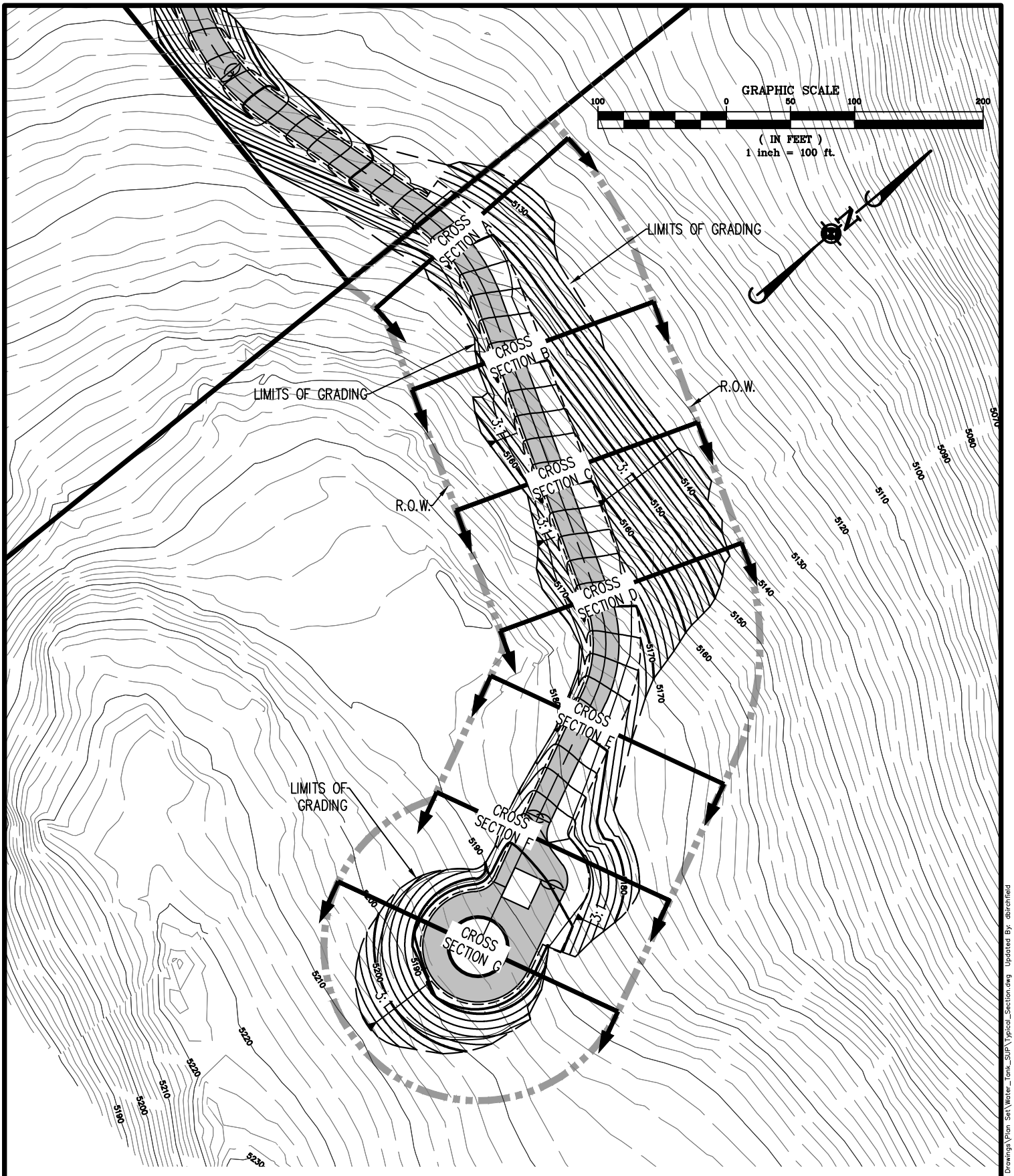

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D'ANDREA WATER TANK #2

WASHOE COUNTY, NV

TYPICAL ROADWAY SECTIONS

PROJ. MGR.:	DCB
DRAWN BY:	TJS
DATE:	10/13/15
SCALE:	1"=100'

SHEET

CROSS SECTIONS

LENSPN4

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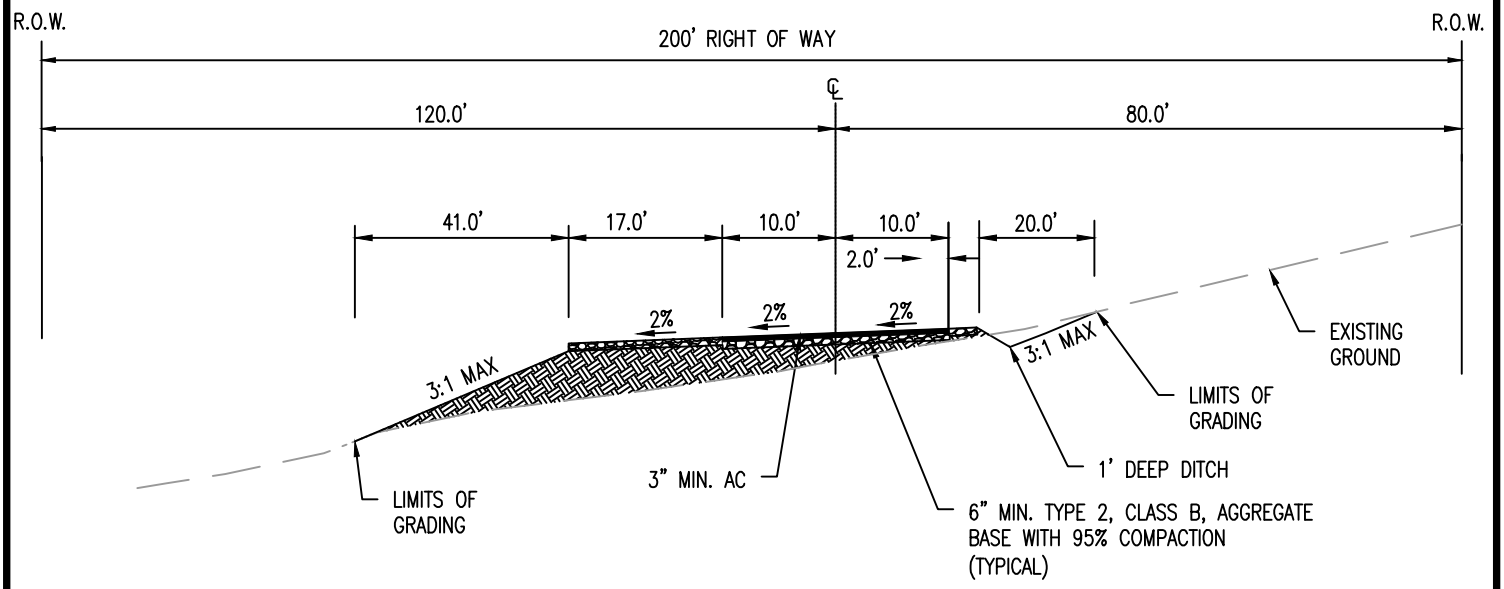
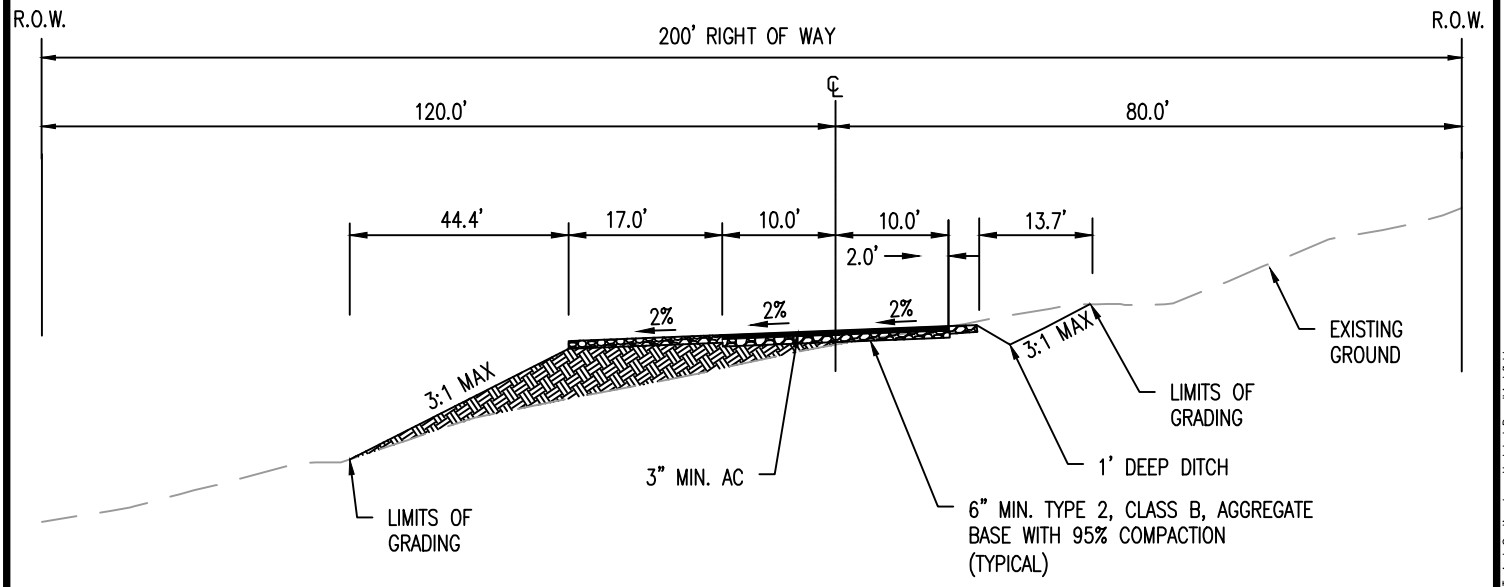
16:47



CROSS SECTION A TYPICAL ROADWAY SECTION

NTS



CROSS SECTION B TYPICAL ROADWAY SECTION

NTS

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D'ANDREA WATER TANK #2

WASHOE COUNTY, NV

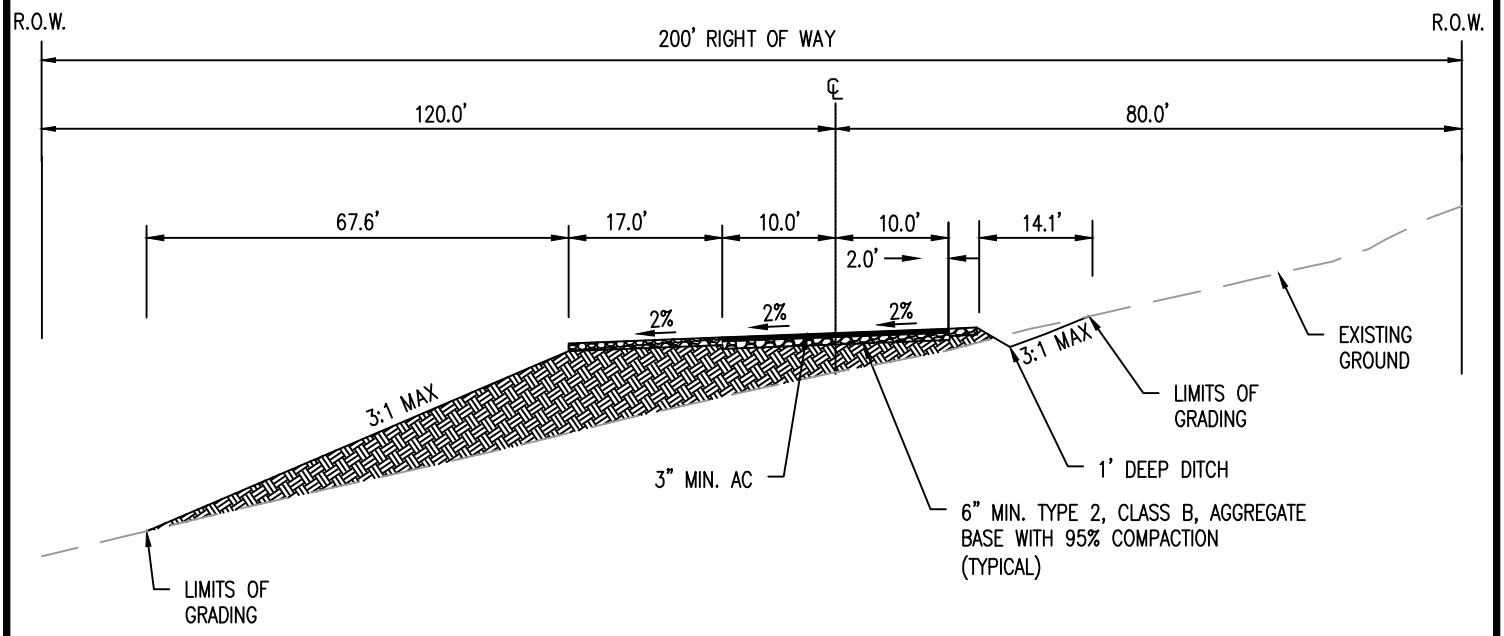
TYPICAL ROADWAY SECTIONS

PROJ. MGR.:	DCB
DRAWN BY:	TJS
DATE:	10/13/15
SCALE:	N.T.S.

SHEET

SECTIONS A&B

LENSPN4



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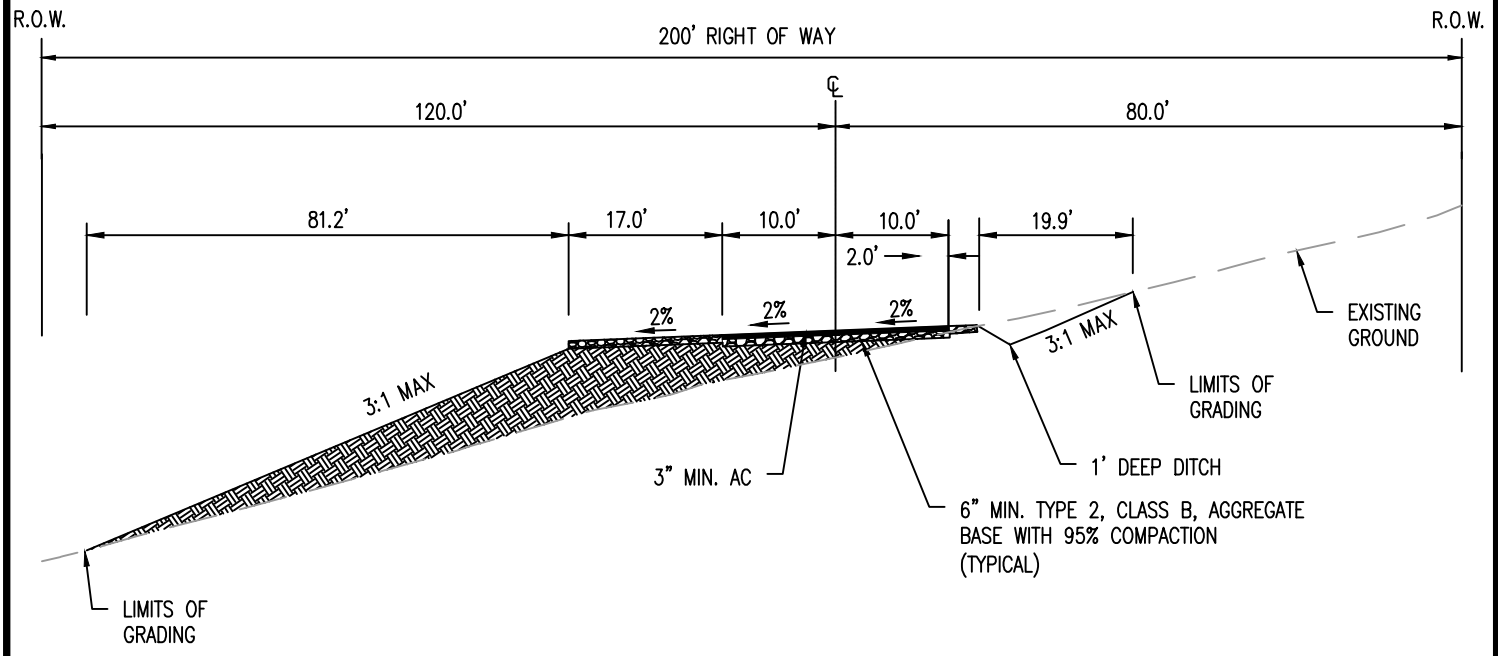

CROSS SECTION D TYPICAL ROADWAY SECTION

NTS

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D'ANDREA WATER TANK #2

WASHOE COUNTY, NV

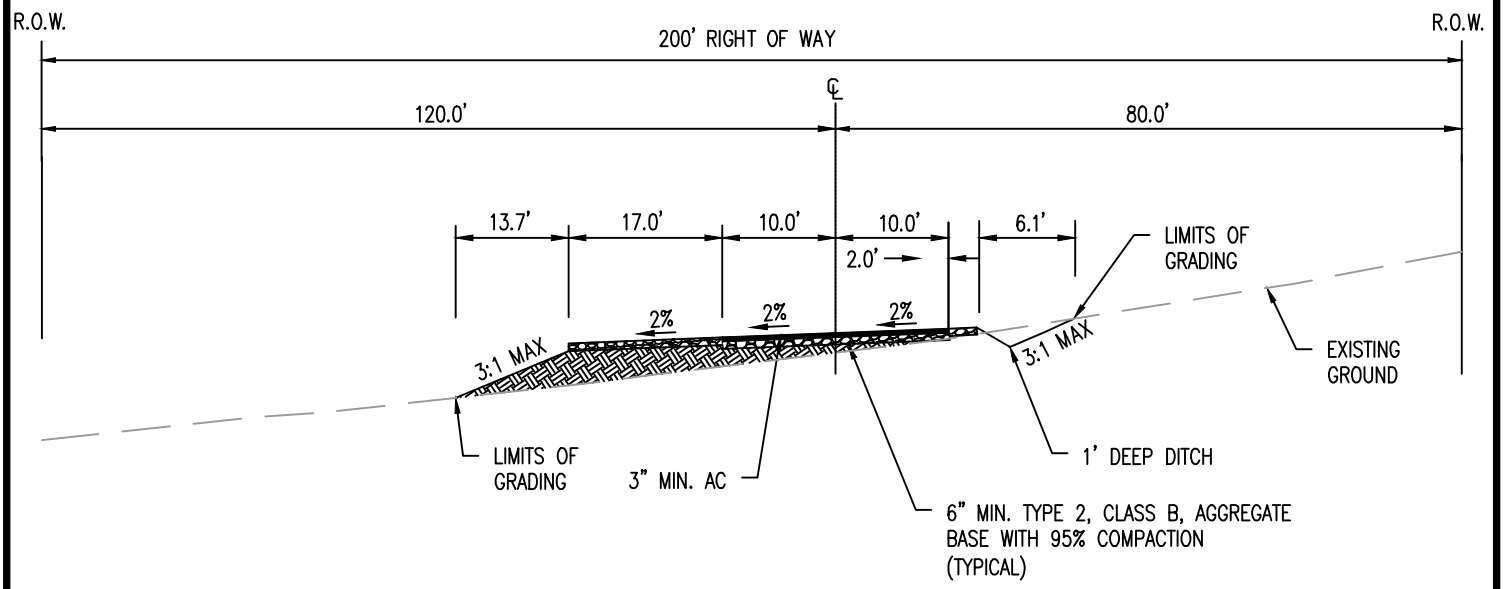
TYPICAL ROADWAY SECTIONS

PROJ. MGR.:	DCB
DRAWN BY:	TJS
DATE:	10/13/15
SCALE:	N.T.S.

SHEET

SECTIONS C&D

LENSPN4



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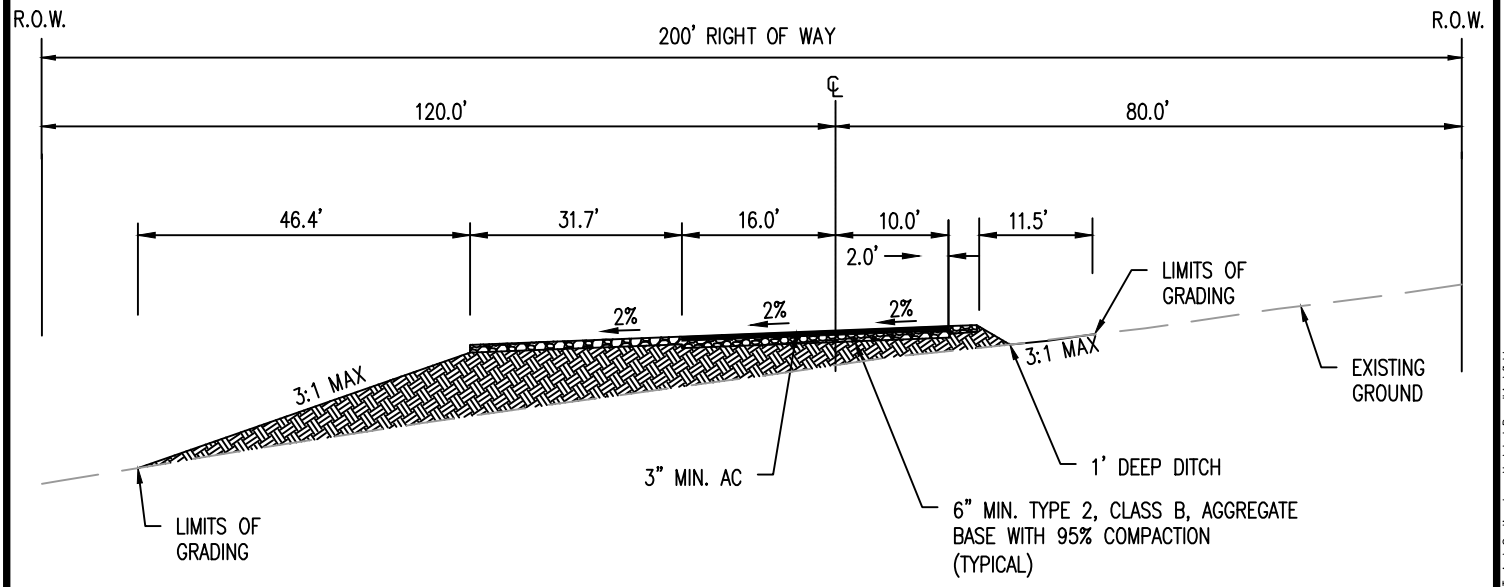
NTS



CROSS SECTION F TYPICAL ROADWAY SECTION

NTS

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Construction Managers • Environmental Scientists • Landscape Architects • Planners

D'ANDREA WATER TANK #2

WASHOE COUNTY, NV

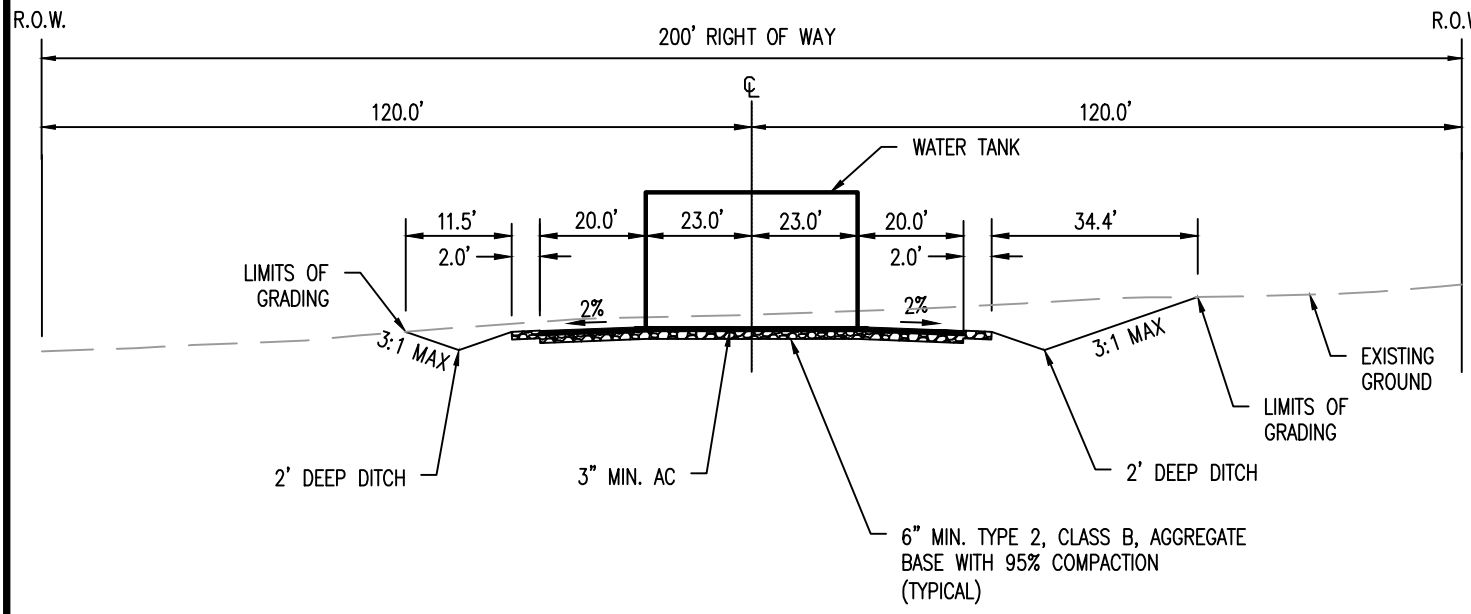
TYPICAL ROADWAY SECTIONS

PROJ. MGR.:	DCB
DRAWN BY:	TJS
DATE:	10/13/15
SCALE:	N.T.S.

SHEET

SECTIONS E&F

LENSPN4



CROSS SECTION G TYPICAL ROADWAY SECTION

NTS

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Construction Managers • Environmental Scientists • Landscape Architects • Planners

D'ANDREA WATER TANK #2

WASHOE COUNTY, NV

TYPICAL ROADWAY SECTIONS

PROJ. MGR.:	DCB
DRAWN BY:	TJS
DATE:	10/13/15
SCALE:	N.T.S.

SHEET

SECTION G

LENSPN4

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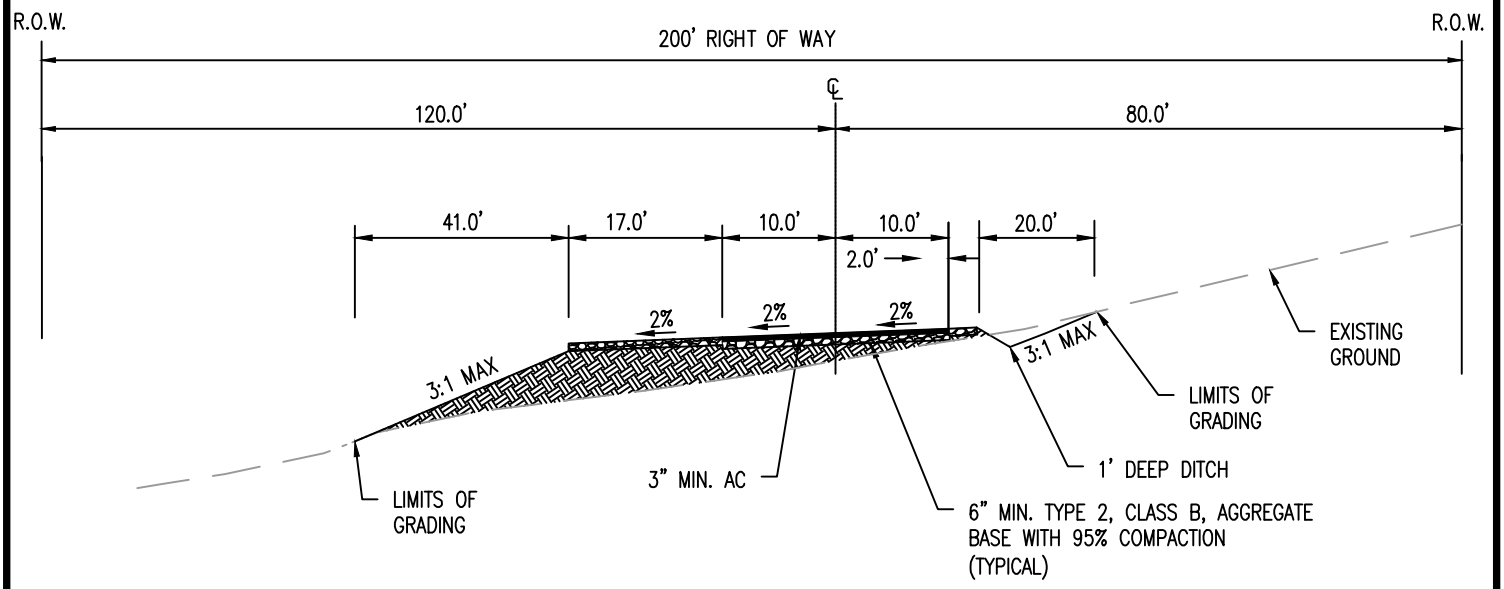
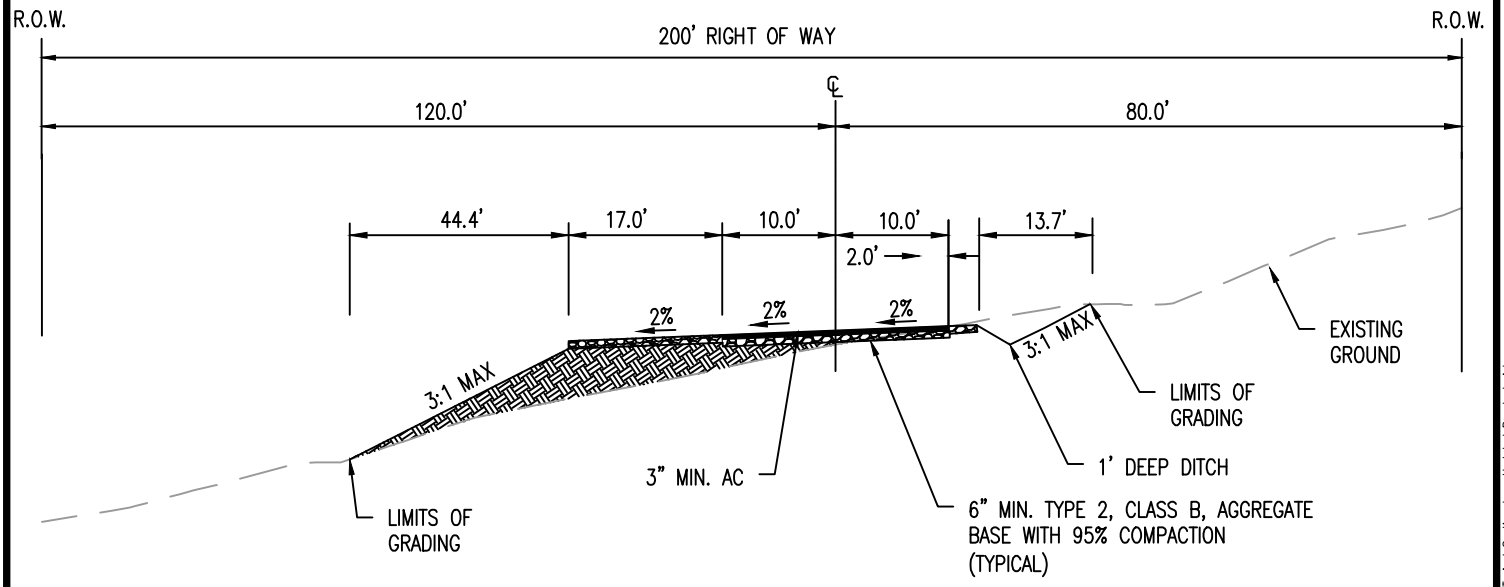


CROSS SECTION A TYPICAL ROADWAY SECTION

NTS



CROSS SECTION B TYPICAL ROADWAY SECTION

NTS

Manhard CONSULTING LTD
9850 Double R Boulevard, Suite 101, Reno, NV 89521 ph:775.746.3500 fx:775.746.3520 manhard.com
Civil Engineers • Surveyors • Water Resource Engineers • Water & Wastewater Engineers
Construction Managers • Environmental Scientists • Landscape Architects • Planners

D'ANDREA 0.3 MG WATER STORAGE TANK

SPARKS, NV

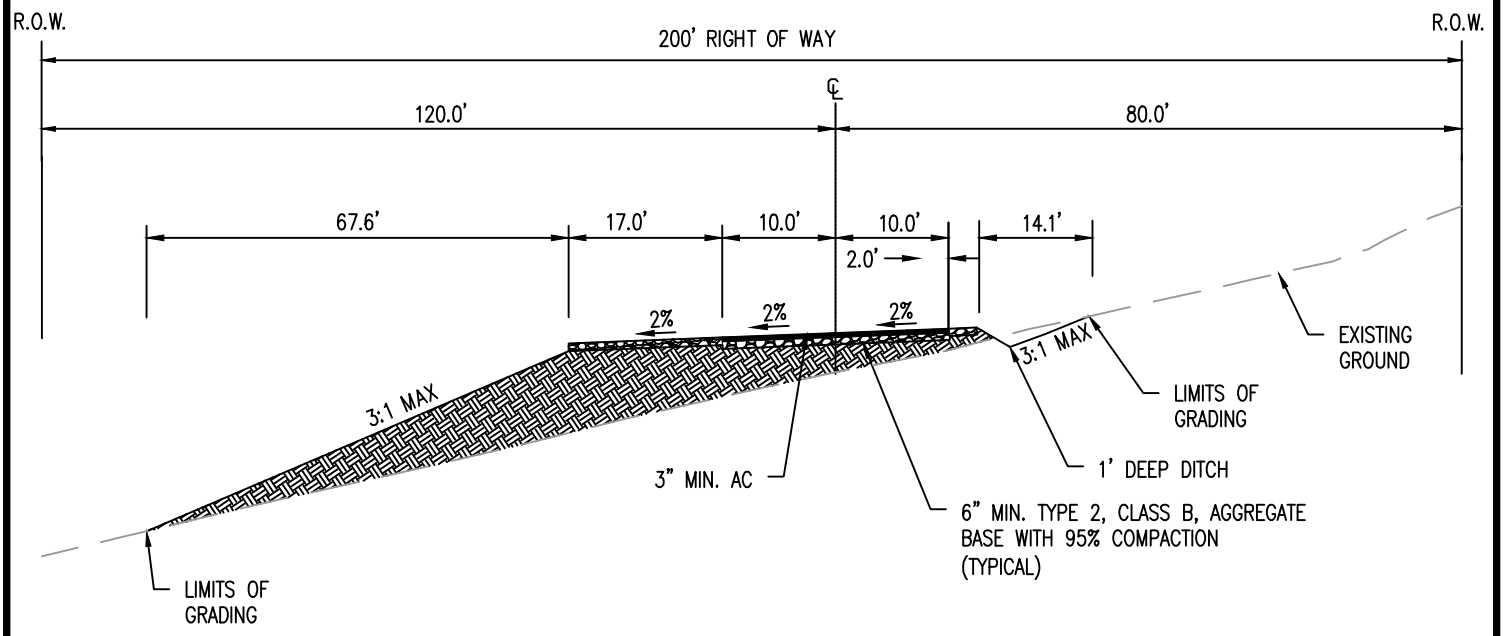
TYPICAL ROADWAY SECTIONS

PROJ. MGR.:	KWA
DRAWN BY:	TJS
DATE:	7/27/15
SCALE:	N.T.S.

SHEET

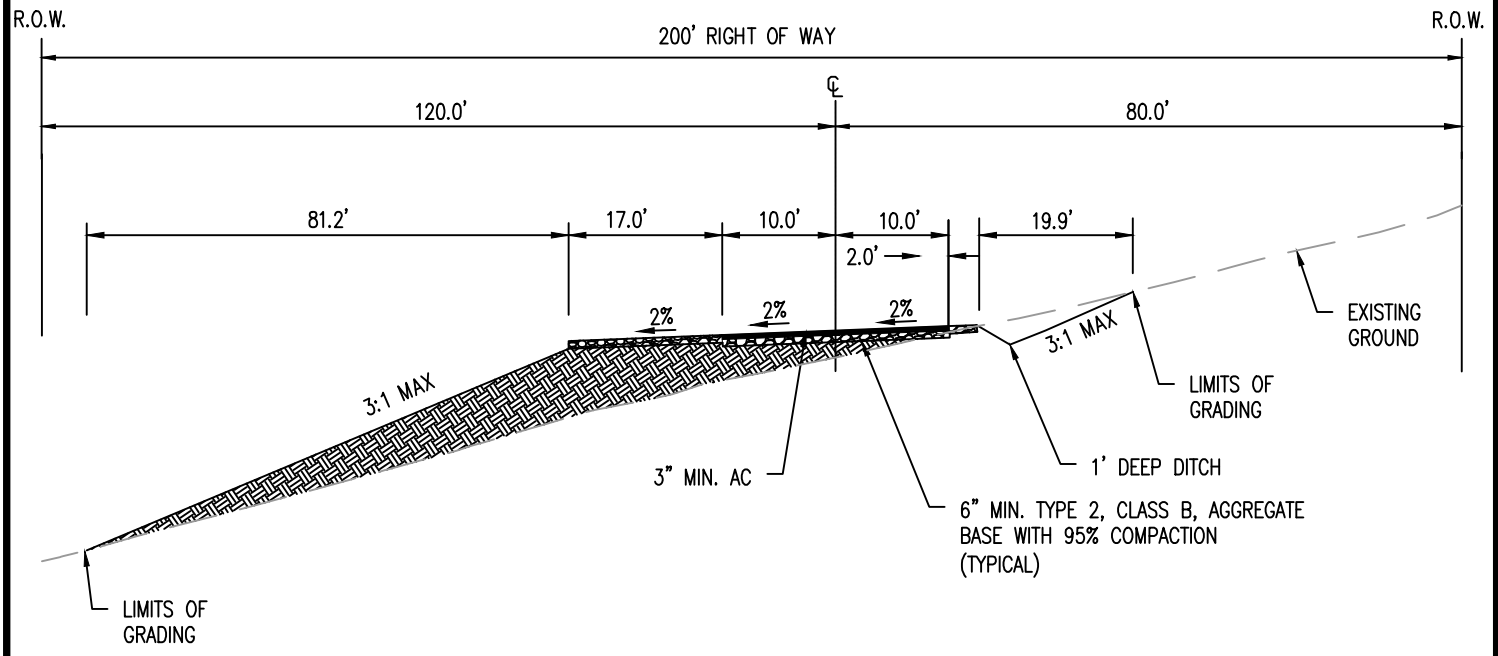
EXHIBIT 6A

LENSPN4



CROSS SECTION C TYPICAL ROADWAY SECTION

NTS



CROSS SECTION D TYPICAL ROADWAY SECTION

NTS

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D'ANDREA 0.3 MG WATER STORAGE TANK

SPARKS, NV

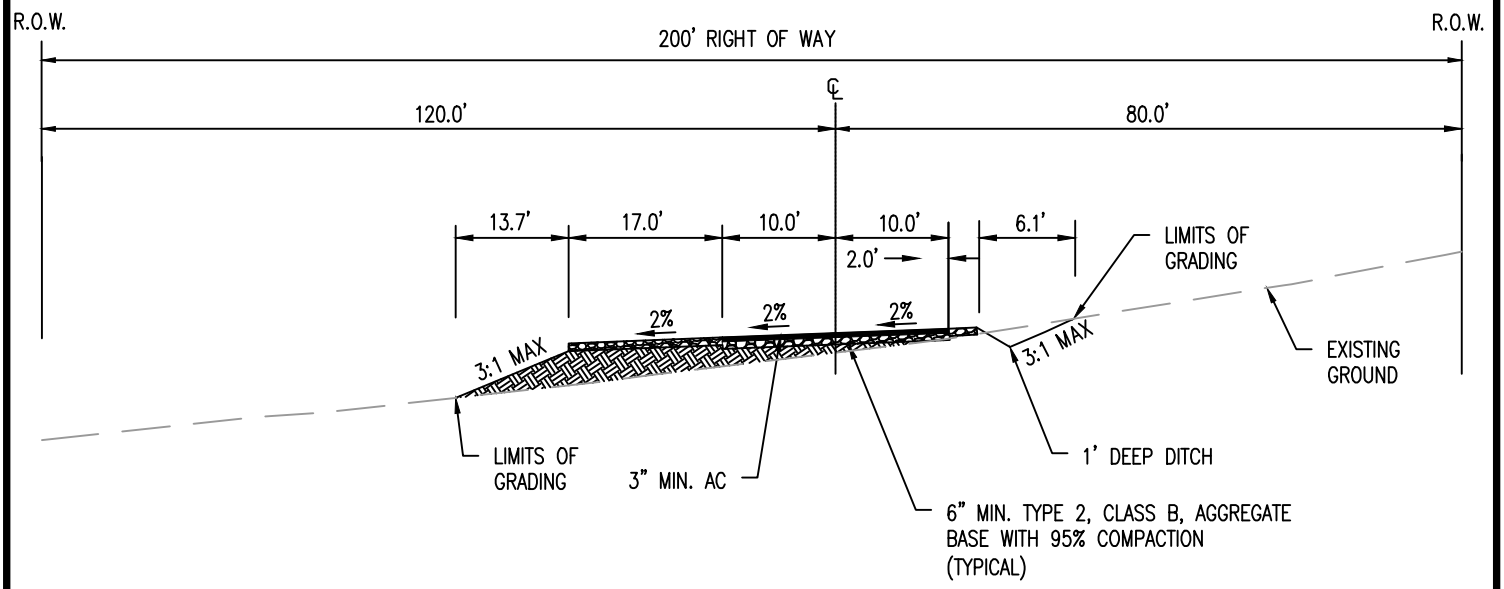
TYPICAL ROADWAY SECTIONS

PROJ. MGR.:	KWA
DRAWN BY:	TJS
DATE:	7/27/15
SCALE:	N.T.S.

SHEET

EXHIBIT 6B

LENSPN4



CROSS SECTION E TYPICAL ROADWAY SECTION

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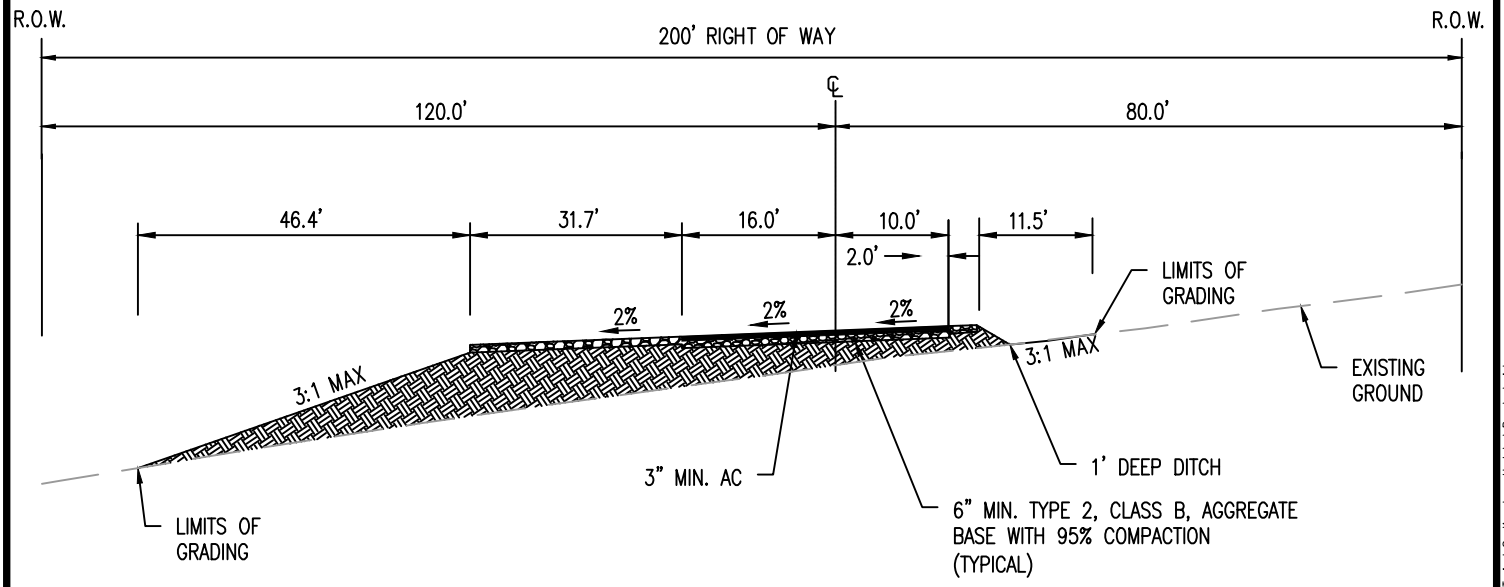

CROSS SECTION F TYPICAL ROADWAY SECTION

NTS

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Construction Managers • Environmental Scientists • Landscape Architects • Planners

D'ANDREA 0.3 MG WATER STORAGE TANK

SPARKS, NV

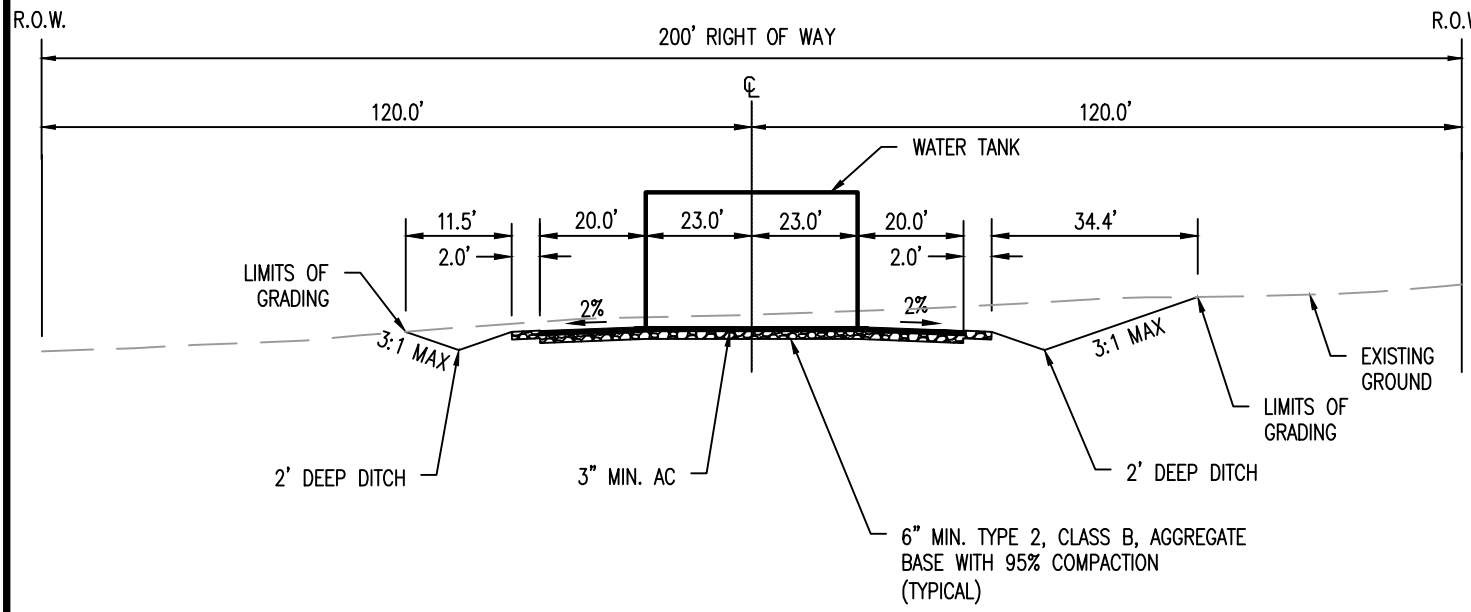
TYPICAL ROADWAY SECTIONS

PROJ. MGR.:	KWA
DRAWN BY:	TJS
DATE:	7/27/15
SCALE:	N.T.S.

SHEET

EXHIBIT 6C

LENSPN4



CROSS SECTION G TYPICAL ROADWAY SECTION

NTS

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Civil Engineers • Surveyors • Water Resource Engineers • Water & Wastewater Engineers
Construction Managers • Environmental Scientists • Landscape Architects • Planners

D'ANDREA 0.3 MG WATER STORAGE TANK

SPARKS, NV

TYPICAL ROADWAY SECTIONS

PROJ. MGR.:	KWA
DRAWN BY:	TJS
DATE:	7/27/15
SCALE:	N.T.S.

SHEET

EXHIBIT 6D

LENSPN4

STANDARD FORM 299 (05/2009)
Prescribed by DOI/USDA/DOT
P.L. 96-487 and Federal
Register Notice 5-22-95

APPLICATION FOR TRANSPORTATION AND UTILITY SYSTEMS AND FACILITIES ON FEDERAL LANDS

FORM APPROVED
OMB Control Number: 0596-0082
Expiration Date: 1/31/2017

FOR AGENCY USE ONLY

NOTE: Before completing and filing the application, the applicant should completely review this package and schedule a preapplication meeting with representatives of the agency responsible for processing the application. Each agency may have specific and unique requirements to be met in preparing and processing the application. Many times, with the help of the agency representative, the application can be completed at the preapplication meeting.

Application Number

Date Filed

1. Name and address of applicant *(include zip code)*

Truckee Meadows Water Authority (TMWA)
1355 Capital Blvd
Reno, NV 89502

2. Name, title, and address of authorized agent if different from item 1 *(include zip code)*

Christopher Baker, Planning Manager
Manhard Consulting, Ltd
9850 Double R Blvd, Suite 100
Reno, NV 89521

3. Telephone (area code)
775.746.3500 ex. 4861

Applicant
TMWA

Authorized Agent
Manhard Consulting

4. As applicant are you? *(check one)*

a. ☐ Individual
b. ☐ Corporation*
c. ☐ Partnership/Association*
d. ☐ State Government/State Agency
e. ☒ Local Government
f. ☐ Federal Agency

** If checked, complete supplemental page*

5. Specify what application is for: *(check one)*

a. ☒ New authorization
b. ☐ Renewing existing authorization No.
c. ☐ Amend existing authorization No.
d. ☐ Assign existing authorization No.
e. ☐ Existing use for which no authorization has been received *
f. ☐ Other*

** If checked, provide details under item 7*

6. If an individual, or partnership are you a citizen(s) of the United States? ☐ Yes ☐ No

7. Project description (describe in detail): (a) Type of system or facility, *(e.g., canal, pipeline, road);* (b) related structures and facilities; (c) physical specifications *(Length, width, grading, etc.)*; (d) term of years needed: (e) time of year of use or operation; (f) Volume or amount of product to be transported; (g) duration and timing of construction; and (h) temporary work areas needed for construction *(Attach additional sheets, if additional space is needed.)*

The D'Andrea Water Tank #2 is proposed to be an approximately 300,000 gallon welded steel above ground tank with a pad elevation of 5,192 feet. Also proposed to be included in the ROW is the tank's 20 foot access road, the associated roadside ditch for drainage and tank overflow, and a 12 inch diameter ductile iron and PVC pipe used to fill the tank. ROW authorization will be required indefinitely and it is anticipated that construction will begin shortly following the approval process and take approximately six (6) months to complete.

Project Specifics:

Total Square Footage of ROW Request:	3.5 Acres
Estimated Size of Tank:	Height; 27 feet Diameter; 46 feet
Estimated Length of Roadway:	870 LF (Including pavement surrounding tank)
Width of Road Surface:	20 feet

8. Attach a map covering area and show location of project proposal

9. State or Local government approval: ☐ Attached ☐ Applied for ☐ Not Required

10. Nonreturnable application fee: ☐ Attached ☐ Not required

11. Does project cross international boundary or affect international waterways? ☐ Yes ☒ No *(if "yes," indicate on map)*

12. Give statement of your technical and financial capability to construct, operate, maintain, and terminate system for which authorization is being requested.

Truckee Meadows Water Authority is technically and financially capable of completing the project describe in this application.

13a. Describe other reasonable alternative routes and modes considered.

We identified two (2) viable sites at our BLM pre-application meeting stating the ultimate tank location would be determined through a site selection process which will include the BLM, the City of Sparks and Washoe County prior to the submittal of a Standard Form 299. (See attached sheet)

b. Why were these alternatives not selected?

The site selection process determined site one (1) to be the preferred site location based on limited visual impact as compared to the alternative site.

c. Give explanation as t o why it is necessary to cross Federal Lands.

An acceptable tank site at the approximate pad elevation of 5,192 does not exist within the D'Andrea master planned community or on the adjacent private property, therefore we are proposing to locate the tank on the adjacent BLM property to the east APN: 084-020-03 (Section 31, T20N, R21E).

14. List authorizations and pending applications filed for similar projects which may provide information to the authorizing agency. *(Specify number, date, code, or name)*

N/A

15. Provide statement of need for project, including the economic feasibility and items such as: (a) cost of proposal (construction, operation, and maintenance); (b) estimated cost of next best alternative; and (c) expected public benefits.

The proposed tank is required to allow for construction of the previously approved residential phases of the D'Andrea master plan community. Please see the attached D'Andrea 3 & 4 Pressure Zones and Tank Discovery dated June 16, 2014 for estimated cost of the project. The alternative site cost was similar to that of the preferred site.

16. Describe probable effects on the population in the area, including the social and economic aspects, and the rural lifestyles.

The upgrading of necessary infrastructure will benefit the population from a social and economic perspective. The proposed location will have no foreseeable impact on the rural lifestyle of the community.

17. Describe likely environmental effects that the proposed project will have on: (a) air quality; (b) visual impact; (c) surface and ground water quality and quantity; (d) the control or structural change on any stream or other body of water; (e) existing noise levels; and (f) the surface of the land, including vegetation, permafrost, soil, and soil stability.

Environmental impacts relating to air quality and noise level will be minimal and limited to construction. There will be no impacts on water quality or quantity or a change to any body of water. Careful consideration was taken during the site selection process to reduce the visual impact and limit any disturbance associated with the surface of the land.

18. Describe the probable effects that the proposed project will have on (a) populations of fish, plantlife, wildlife, and marine life, including threatened and endangered species; and (b) marine mammals, including hunting, capturing, collecting, or killing these animals.

Effects that the proposed project will have on the biogeography of the area were deemed minimal by the BLM during the pre-application process.

19. State whether any hazardous material, as defined in this paragraph, will be used, produced, transported or stored on or within the right-of-way or any of the right-of-way facilities, or used in the construction, operation, maintenance or termination of the right-of-way or any of its facilities. "Hazardous material" means any substance, pollutant or contaminant that is listed as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. 9601 et seq., and its regulations. The definition of hazardous substances under CERCLA includes any "hazardous waste" as defined in the Resource Conservation and Recovery Act of 1976 (RCRA), as amended, 42 U.S.C. 6901 et seq., and its regulations. The term hazardous materials also includes any nuclear or byproduct material as defined by the Atomic Energy Act of 1954, as amended, 42 U.S.C. 2011 et seq. The term does not include petroleum, including crude oil or any fraction thereof that is not otherwise specifically listed or designated as a hazardous substance under CERCIA Section 101(14), 42 U.S.C. 9601(14), nor does the term include natural gas.

N/A

20. Name all the Department(s)/Agency(ies) where this application is being filed.

BLM

I HEREBY CERTIFY, That I am of legal age and authorized to do business in the State and that I have personally examined the information contained in the application and believe that the information submitted is correct to the best of my knowledge.

Signature of Applicant	Date
Sia Estes	7-27-15

Title 18, U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

GENERAL INFORMATION
ALASKA NATIONAL INTEREST LANDS

This application will be used when applying for a right-of-way, permit, license, lease, or certificate for the use of Federal lands which lie within conservation system units and National Recreation or Conservation Areas as defined in the Alaska National Interest lands Conservation Act. Conservation system units include the National Park System, National Wildlife Refuge System, National Wild and Scenic Rivers System, National Trails System, National Wilderness Preservation System, and National Forest Monuments.

Transportation and utility systems and facility uses for which the application may be used are:

1. Canals, ditches, flumes, laterals, pipes, pipelines, tunnels, and other systems for the transportation of water.

2. Pipelines and other systems for the transportation of liquids other than water, including oil, natural gas, synthetic liquid and gaseous fuels, and any refined product produced therefrom.

3. Pipelines, slurry and emulsion systems, and conveyor belts for transportation of solid materials.

4. Systems for the transmission and distribution of electric energy.

5. Systems for transmission or reception of radio, television, telephone, telegraph, and other electronic signals, and other means of communications.

6. Improved right-of-way for snow machines, air cushion vehicles, and all-terrain vehicles.

7. Roads, highways, railroads, tunnels, tramways, airports, landing strips, docks, and other systems of general transportation.

This application must be filed simultaneously with each Federal department or agency requiring authorization to establish and operate your proposal.

In Alaska, the following agencies will help the applicant file an application and identify the other agencies the applicant should contact and possibly file with:

Department of Agriculture
Regional Forester, Forest Service (USFS)
Federal Office Building,
P.O. Box 21628
Juneau, Alaska 99802-1628
Telephone: (907) 586-7847 *(or a local Forest Service Office)*

Department of the Interior
Bureau of Indian Affairs (BIA)
Juneau Area Office
Federal Building Annex
9109 Mendenhall Mall Road, Suite 5
Juneau, Alaska 99802
Telephone: (907) 586-7177

Department of the Interior
Bureau of Land Management
222 West 7th Avenue
P.O. Box 13
Anchorage, Alaska 99513-7599
Telephone: (907) 271-5477 (or a local BLM Office)

U.S. Fish & Wildlife Service (FWS)
Office of the Regional Director
1011 East Tudor Road
Anchorage, Alaska 99503
Telephone: (907) 786-3440

National Park Service (NPA)
Alaska Regional Office, 2225
Gambell St., Rm. 107
Anchorage, Alaska 99502-2892
Telephone: (907) 786-3440

Note - Filings with any Interior agency may be filed with any office noted above or with the Office of the Secretary of the Interior, Regional Environmental Office, P.O. Box 120, 1675 C Street, Anchorage, Alaska 9513.

Department of Transportation
Federal Aviation Administration
Alaska Region AAL-4, 222 West 7th Ave., Box 14
Anchorage, Alaska 99513-7587
Telephone: (907) 271-5285

NOTE - The Department of Transportation has established the above central filing point for agencies within that Department. Affected agencies are: Federal Aviation Administration (FAA), Coast Guard (USCG), Federal Highway Administration (FHWA), Federal Railroad Administration (FRA).

OTHER THAN ALASKA NATIONAL INTEREST LANDS

Use of this form is not limited to National Interest Conservation Lands of Alaska.

Individual department/agencies may authorize the use of this form by applicants for transportation and utility systems and facilities on other Federal lands outside those areas described above.

For proposals located outside of Alaska, applications will be filed at the local agency office or at a location specified by the responsible Federal agency.

SPECIFIC INSTRUCTIONS
(Items not listed are self-explanatory)

7 Attach preliminary site and facility construction plans. The responsible agency will provide instructions whenever specific plans are required.

8 Generally, the map must show the section(s), township(s), and range(s) within which the project is to be located. Show the proposed location of the project on the map as accurately as possible. Some agencies require detailed survey maps. The responsible agency will provide additional instructions.

9 , 10, and 12 The responsible agency will provide additional instructions.

13 Providing information on alternate routes and modes in as much detail as possible, discussing why certain routes or modes were rejected and why it is necessary to cross Federal lands will assist the agency(ies) in processing your application and reaching a final decision. Include only reasonable alternate routes and modes as related to current technology and economics.

14 The responsible agency will provide instructions.

15 Generally, a simple statement of the purpose of the proposal will be sufficient. However, major proposals located in critical or sensitive areas may require a full analysis with additional specific information. The responsible agency will provide additional instructions.

16 through 19 Providing this information is as much detail as possible will assist the Federal agency(ies) in processing the application and reaching a decision. When completing these items, you should use a sound judgment in furnishing relevant information. For example, if the project is not near a stream or other body of water, do not address this subject. The responsible agency will provide additional instructions.

Application must be signed by the applicant or applicant's authorized representative.

EFFECT OF NOT PROVIDING INFORMATION: Disclosure of the information is voluntary. If all the information is not provided, the application may be rejected.

DATA COLLECTION STATEMENT

The Federal agencies collect this information from applicants requesting right-of-way, permit, license, lease, or certification for the use of Federal lands. The Federal agencies use this information to evaluate the applicant's proposal. The public is obligated to submit this form if they wish to obtain permission to use Federal lands.

SUPPLEMENTAL		
NOTE: The responsible agency(ies) will provide instructions	CHECK APPROPRIATE BLOCK	
I - PRIVATE CORPORATIONS	ATTACHED	FILED*
a. Articles of Incorporation	☐	☐
b. Corporation Bylaws	☐	☐
c. A certification from the State showing the corporation is in good standing and is entitled to operate within the State	☐	☐
d Copy of resolution authorizing filing	☐	☐
e. The name and address of each shareholder owning 3 percent or more of the shares, together with the number and percentage of any class of voting shares of the entity which such shareholder is authorized to vote and the name and address of each affiliate of the entity together with, in the case of an affiliate controlled by the entity, the number of shares and the percentage of any class of voting stock of that affiliate owned, directly or indirectly, by that entity, and in the case of an affiliate which controls that entity, the number of shares and the percentage of any class of voting stock of that entity owned, directly or indirectly, by the affiliate.	☐	☐
f. If application is for an oil or gas pipeline, describe any related right- of-way or temporary use permit applications, and identify previous applications.	☐	☐
g. If application is for an oil and gas pipeline, identify all Federal lands by agency impacted by proposal.	☐	☐
II - PUBLIC CORPORATIONS		
a. Copy of law forming corporation	☐	☐
b. Proof of organization	☐	☐
c. Copy of Bylaws	☐	☐
d. Copy of resolution authorizing filing	☐	☐
e. If application is for an oil or gas pipeline, provide information required by item "I - f" and "I - g" above.	☐	☐
III - PARTNERSHIP OR OTHER UNINCORPORATED ENTITY		
a. Articles of association, if any	☐	☐
b. If one partner is authorized to sign, resolution authorizing action is	☐	☐
c. Name and address of each participant, partner, association, or other	☐	☐
d. If application is for an oil or gas pipeline, provide information required by item "I - f" and "I - g" above.	☐	☐

*If the required information is already filed with the agency processing this application and is current, check block entitled "Filed." Provide the file identification information *(e.g., number, date, code, name)*. If not on file or current, attach the requested information.

NOTICES

Note: This applies to the Department of Agriculture/Forest Service (FS)

This information is needed by the Forest Service to evaluate the requests to use National Forest System lands and manage those lands to protect natural resources, administer the use, and ensure public health and safety. This information is required to obtain or retain a benefit. The authority for that requirement is provided by the Organic Act of 1897 and the Federal Land Policy and Management Act of 1976, which authorize the secretary of Agriculture to promulgate rules and regulations for authorizing and managing National Forest System lands. These statutes, along with the Term Permit Act, National Forest Ski Area Permit Act, Granger-Thye Act, Mineral Leasing Act, Alaska Term Permit Act, Act of September 3, 1954, Wilderness Act, National Forest Roads and Trails Act, Act of November 16, 1973, Archeological Resources Protection Act, and Alaska National Interest Lands Conservation Act, authorize the Secretary of Agriculture to issue authorizations or the use and occupancy of National Forest System lands. The Secretary of Agriculture's regulations at 36 CFR Part 251, Subpart B, establish procedures for issuing those authorizations.

BURDEN AND NONDISCRIMINATION STATEMENTS

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0596-0082. The time required to complete this information collection is estimated to average 8 hours hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720- 2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, 1400 Independence Avenue, SW, Washington, DC 20250-9410 or call toll free (866) 632-9992 (voice). TDD users can contact USDA through local relay or the Federal relay at (800) 877-8339 (TDD) or (866) 377-8642 (relay voice). USDA is an equal opportunity provider and employer.

The Privacy Act of 1974 (5 U.S.C. 552a) and the Freedom of Information Act (5 U.S.C. 552) govern the confidentiality to be provided for information received by the Forest Service.

TRUCKEE MEADOWS WATER AUTHORITY
www.tmwa.com

Quality. Delivered.

1355 Capital Blvd. P.O. Box 30013 Reno, NV 89520-3013
775.834.8080 775.834.8003

June 16, 2014

To: Pam Parenti

Thru: Scott Estes SJE

From: Holly Flores HMF

RE: D'Andrea 3 & 4 Pressure Zones and Tank 2 Discovery
#05-1788-21

Purpose:
Conduct an engineering analysis to determine the least cost major onsite TMWA water facility requirements and preliminary cost estimate necessary to provide water service to the proposed Vicenza, Bolzano, Cortina and Merano subdivisions in D'Andrea Ranch Phase 3.

Preliminary Water Facility Requirements and Cost Estimates:
The estimated cost for water facility charges and major onsite facility requirements associated with this project is approximately $2,361,240. These costs are summarized in the table below.

Table 1: Estimated Major Water Facility Costs

Facility Description	Quantity	Unit	Unit Cost	Total Cost	Comments
Pump Stations	1	each	$1,100,000	$1,100,000	one high head pump station
Pressure Regulating Stations	1	each	$65,000	$65,000	based on preliminary plan
Storage Tanks	1	each	$450,000	$450,000	roughly 300,000 gallons
Area 4 Feeder Main Fees	106	per gpm	$2,877	$304,962	Rule 5
Supply and Treatment Facility Unit Cost	106	per gpm	$4,163	$441,278	Rule 5
Estimated Cost				**$2,361,240**	2014 planning level estimate only

Note: Land and tank main costs are not included in the estimated cost for the proposed storage tank.

A joint meeting is recommended with the Health Authority to review TMWA's proposed water facility plan for this portion of the D'Andrea project. The water facility plan proposed by TMWA must be reviewed for compliance with state and local codes and regulations and approved by the local health authority prior to service. The Health Authority may require changes to the enclosed water facility plan that may affect the included cost estimates.

Discussion:

Location:

The proposed development is located east of S. D'Andrea Parkway in the City of Sparks, Nevada within the NE ¼ of section 36, T20N, R20E. The project consists of approximately 103 single-family lots and is within TMWA's retail water service territory. This area is a portion of the D'Andrea Ranch Phase 3 Tentative Map.

Estimated Project Demands:

Preliminary demand calculations are included in the attachments. The estimated maximum day demand for the 103 single-family lots is 88.2 gpm. Irrigation demands are unknown at this time so an additional 20% was added for a total of 106 gpm of maximum day demand. It is assumed open space will not be irrigated.

Major Off-Site Facility Requirements:

No gravity zone improvements on the suction side of the D'Andrea 1 Pump Station are required. However, the existing D'Andrea 1 and 2 Booster Pump Stations must be modified to add capacity for the remainder of the D'Andrea project. These improvements are already underway and are scheduled to be completed this summer.

Major On-Site Facility Requirements:

This development will require major new water facilities be constructed for service including at least one new high head booster pumping station, one new water storage tank and one pressure regulating station. 12-inch ductile iron pipe and PVC pipe will form the majority of the backbone water system. The high head pump and pressure regulating stations are necessary due to the large elevation gain across the property. The elevation of the property ranges from 4770 feet in Vicenza to 5107 feet at the southeast corner in Merano for a total grade change of 337 feet. The limit of service of the existing D'Andrea 2 pump and tank zone is approximately 4770 feet in elevation. See attached Figure 1 for the proposed conceptual water facility plan for these subdivisions.

Generally, pumping stations or pressure regulating stations are required about every 125 feet in elevation change to achieve a service pressure range between 45 psi and 100 psi. Using the standard design, two pump stations would be required. However, this plan reduces the number of pump stations required by increasing the discharge pressure of the first pump station and constructing ductile iron main and pressure regulating stations such that no customer pressures exceed 100 psi as required in TMWA standards and Nevada Administrative Code 445A. All services will require privately owned pressure regulating valves per TMWA standards.

New water facilities will begin with the D'Andrea 3 high head pump station, discharge approximately 195 psi, located on the pad shown at 4775 feet in elevation. This pump station will incorporate pressure regulating valves and separate 8-inch discharge piping to serve units in the proposed D'Andrea 3 pressure zone including a portion of Vicenza, Bolzano and Cortina. A pressure regulating station at the east end of Cortina will provide emergency service to the #3 pressure zone as needed. 12-inch diameter ductile iron and PVC pipe will form the backbone system to Merano and to fill the D'Andrea 2 Tank. The D'Andrea 2 Tank will be welded steel, above ground, sized at approximately 300,000 gallons with a pad at 5192 feet in elevation and overflow at 5216 feet. The D'Andrea 3 Pump Station and D'Andrea 2 Tank will provide direct service to the D'Andrea 4 pressure zone and regulated service to the D'Andrea 3 pressure

24' HIGH
R=23'
ϕ=46'

zone. Phased construction of the onsite major water facilities might be possible with TMWA and Health Authority approval, but would increase costs at the proposed pump station.

Limitations of Preliminary Water Service Plan:
This conceptual water plan can service the remainder of the D'Andrea Ranch Phase 3 Tentative Map in full for those units above 4770 feet in elevation up to 5107 feet in elevation. This plan did not consider extending water service of any kind to the proposed Copper Canyon project to the south. Shared storage with the Copper Canyon project had been contemplated in past planning; however, this plan including the D'Andrea 2 Tank cannot serve Copper Canyon units.

Distribution System Dead Ends:
Dead ends must be eliminated and a looped water system designed, to the extent possible, per NAC 445A regulations (ref. NAC445A.6712). The Health Authority may require changes to the enclosed water facility plan that may in turn affect the included cost estimates. A check connection to the #2 pressure zone in Vicenza is proposed for backup service to the #3 pressure zone in an emergency. In addition, a pressure regulating station at the east end of Cortina will provide backup to the regulators located in the D'Andrea 3 Pump Station in the event of a service interruption.

Assumptions:
1. This preliminary study was based on information provided by Manhard Consulting in March through April 29 2014. No plat map was received showing lot sizes so the D'Andrea Ranch Phase 3 Tentative Map site plan by Summit Engineering from December 2003 was referenced for the preliminary demand calculations.
2. This study supersedes several prior preliminary water facility plans by Sierra Pacific Power Company and TMWA. Changes to TMWA tariffs and rules have occurred since the first master plan in 1998.
3. The D'Andrea 1 and D'Andrea 2 Pump Station improvements will be constructed and in service by summer of 2014.
4. The applicant will build and dedicate the required storage tank in lieu of paying storage facility unit costs.
5. An acceptable tank site at approximate pad elevation of 5192 feet does not appear to be available on the applicant's property. This tank will most likely be constructed offsite on BLM property to the east of Merano.
6. All new pump stations will be constructed above ground.
7. The applicant will provide all tank sites and all booster pumping station sites acceptable to TMWA and all necessary easements for all required water facilities at no cost to TMWA.
8. Per TMWA standards, all services in D'Andrea will require individual pressure regulating valves. Per the Uniform Plumbing Code, individual pressure regulating valves are recommended within the project where water pressures exceed 80 psi.
9. The common area/open space will not require potable irrigation.
10. The estimated maximum day demand for the project is approximately 106 gpm including an estimated irrigation demand. Actual demands will be determined at the time of service.
11. The maximum fire flow requirement is assumed to be 1,500 gpm for two hours for the single-family development. The actual fire flow requirements will be set by the governing fire agency.
12. Facility requirements were based on the estimated maximum day demand and fire flow requirements. Changes in demand or required fire flow rates will affect the facility requirements and in turn the cost estimates included herein.

13. All cost estimates are for major onsite facilities only, are preliminary and subject to change. Actual costs will be determined at the time of application for service.
14. This estimate does not include the cost of onsite facilities including backbone water mains, water rights for the project, nor contribution to the water meter retrofit fund.
15. The ultimate water facility plan proposed by the Truckee Meadows Water Authority must be reviewed for compliance with state and local codes and regulations and approved by the local health authority prior to service.
16. Dead ends must be eliminated and a looped water system designed, to the extent possible, per NAC 445A regulations. The health authority may require changes to the enclosed water facility plan that may in turn affect the included cost estimates.

Conclusion:
The Truckee Meadows Water Authority is agreeable to supplying water service to the project, subject to the applicant satisfying certain conditions precedent, including, without limitation, the dedication of water resources, approval of the water supply plan by the local health authority, the execution of a Water Service Agreement, payment of fees, and the construction and dedication of infrastructure in accordance with our rules and tariffs.

Review of conceptual site plans by the Truckee Meadows Water Authority does not constitute an application for service, nor implies a commitment by the Truckee Meadows Water Authority for planning, design or construction of the water facilities necessary for service. The extent of required off-site and onsite water infrastructure improvements will be determined by the Truckee Meadows Water Authority upon receiving a specific development proposal or complete application for service and upon review and approval of a water facilities plan by the local health authority. Because the NAC 445A water system regulations are subject to interpretation, the Truckee Meadows Water Authority cannot guarantee that a subsequent water facility plan will be approved by the health authority or that a timely review and approval of the project will be made. The applicant should carefully consider the financial risk associated with committing resources to their project prior to receiving all required approvals. After submittal of a complete application for service, the required facilities, the cost of these facilities, which could be significant, and associated fees will be estimated and will be included as part of the Water Service Agreement necessary for the project. All fees must be paid to the Truckee Meadows Water Authority prior to water being delivered to the project.

Please call me at (775) 834-8026 if you have questions or need more information.

/hmf
cc: Ken Anderson, P.E., Manhard Consulting

Attachments: D'Andrea Ranch Phase 3 Tentative Map Title Sheet by Summit Engineering – reduced
Preliminary Demand Calculations
Figure 1: D'Andrea Conceptual Plan – 3 & 4 Pressure Zones

TENTATIVE MAP
FOR
D'ANDREA RANCH PHASE 3
SPARKS WASHOE COUNTY NEVADA

OWNER/DEVELOPER

RYDER HOMES
290 GENTRY WAY SUITE 5
RENO, NV 89502

BASIS OF BEARINGS

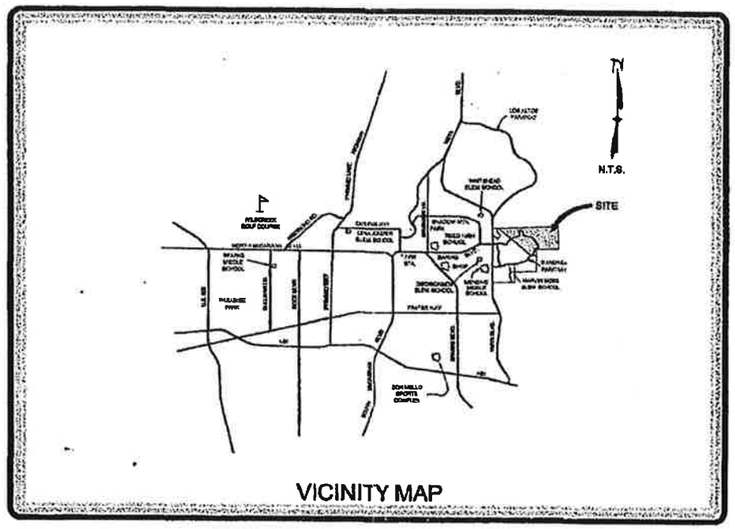
RECORD OF SURVEY MAP 2775 FOR THE CITY OF SPARKS
FILE NO. 1834848, OFFICIAL RECORDS OF WASHOE COUNTY, NEVADA

BASIS OF ELEVATION:

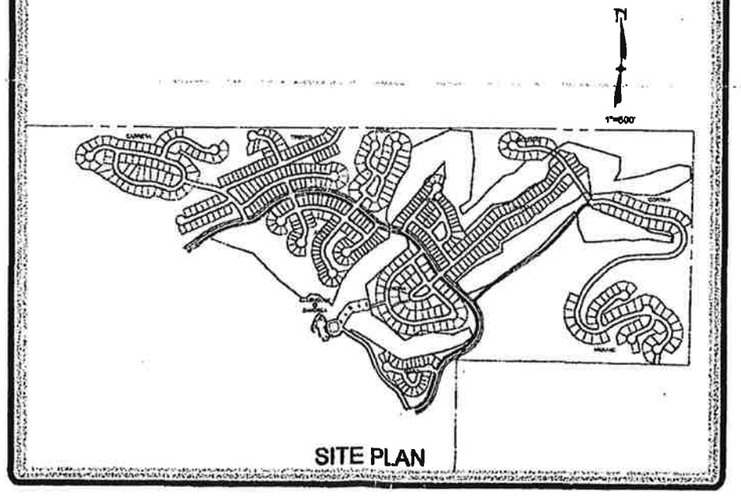
SPARKS GPS POINT 2034 TAKEN AS 4484.61 FEET
AS SHOWN ON RECORD OF SURVEY MAP 2775,
FILE NO. 1834848, OFFICIAL RECORDS OF WASHOE COUNTY, NEVADA

ABBREVIATIONS

A.C.	ASPHALTIC CONCRETE	LT.	LEFT
AGG.	AGGREGATE	M.H.	MANHOLE
B.C.	BEGIN CURVE	MPOC	MID POINT OF CURVE
B.F.	BOTTOM OF FOOTING	P.	PAD ELEVATION
B.V.C.	BEGIN VERTICAL CURVE	PCC	POINT OF COMPOUND CURVATURE
B.W.	BACK OF SIDEWALK	PI.	POINT OF INTERSECTION
C.B.	CATCH BASIN	P.R.C.	POINT OF REVERSE CURVATURE
℄	CENTERLINE	P.V.C.	POLYVINYL CHLORIDE PIPE
CONC.	CONCRETE	P.O.	PUBLIC ON
CONST.	CONSTRUCT	P.U.E.	PUBLIC UTILITY EASEMENT
C.O.	CLEAN OUT	℄	PROPERTY LINE
C.P.	CONCRETE PIPE	Q10	10-YEAR STORM FLOW
C.R.	CURB RETURN	Q100	100-YEAR STORM FLOW
D.I.	DROP INLET	(R)	RADIAL
DEV.	DEFINI	R	RADIUS
E.	ELECTRICAL	REF.	REFERENCE
ELEV.	ELEVATION	R.C.P.	REINFORCED CONCRETE PIPE
E.C.	END OF CURVE	R.P.	RADIUS POINT
E.V.C.	END OF VERTICAL CURVE	RT.	RIGHT
EXIST.	EXISTING	R/W	RIGHT OF WAY
(e)	EXISTING	S	SLOPE
E.G.	EXISTING GRADE	S.G.	SUBGRADE
F.F.	FINISHED FLOOR	S.S.	SANITARY SEWER
F.F.C.	FRONT FACE OF CURB	S.W.	SIDEWALK
F.G.	FINISHED GRADE	STD.	STANDARD
F.H.	FIRE HYDRANT	SHT.	SHEET
F.	FLOW LINE	STA.	STATION
FIG.	FLANGE	S.D.	STORM DRAIN
G.	GAS	T	TANGENT
G.B.	GRADE BREAK	TELE.	TELEPHONE
GTV.	GATE VALVE	T.C.	TOP OF CURB
H.C.	HANDICAPPED	T.B.	THRUST BLOCK
HORIZ.	HORIZONTAL	TOE	TOE OF SLOPE
H.P.	HIGH POINT	TOP	TOP OF SLOPE
INT.	INTERSECTION	TYP.	TYPICAL
I.E.	INVERT ELEVATION	V.C.	VERTICAL CURVE
L	LENGTH	V.P.I.	VERTICAL POINT OF INTERSECTION
L.F.	LINEAL FEET	W	WATER
L.P.	LOW POINT	Δ	CURVE DELTA
M.D.D	MAXIMUM DRY DENSITY		



VICINITY MAP



SITE PLAN

ENGINEER

SUMMIT ENGINEERING CORPORATION

SHEET INDEX

PROJECT DATA

D'ANDREA RANCH	281.39 AC.
VILLAGE AREA	129.27 AC.
COMMON AREA	145.19 AC
GOLF AREA	94.92 AC.
PARKS	2.12 AC.
TOTAL UNITS	569 LOTS
AVERAGE LOT SIZE	0.18 AC.

UTILITIES

CABLE	-	CHARTER COMMUNICATION
ELECTRICAL	-	SIERRA PACIFIC POWER COMPANY
SEWER	-	SPARKS
SOLID WASTE	-	DISPOSAL SERVICES
TELEPHONE	-	SBC
GAS	-	SIERRA PACIFIC POWER COMPANY
WATER	-	TMWA

ENGINEER'S STATEMENT

I, DAVID M. KITCHEN, DO HEREBY CERTIFY THAT THIS MAP HAS BEEN COMPLETED BY ME, OR UNDER MY SUPERVISION AND WAS COMPLETED ON THIS 6th DAY OF APRIL, 2004.

DAVID M. KITCHEN P.E. #14487

SUMMIT ENGINEERING CORPORATION
DESIGNED BY: DCB
DRAWN BY: JCAD14
CHECKED BY: MD

TENTATIVE MAP FOR
D'ANDREA RANCH PHASE 3
TITLE SHEET
WASHOE COUNTY NEVADA
SPARKS

REV.	DATE	DESCRIPTION	BY	APP'D

SHEET C-1
SCALE: HORIZ: VERT:
JOB NO: 2870
11

Bolzano

Proposed D'Andrea 3 Zone

Vicenza

Proposed D'Andrea 3
Pump Station

Check Valve

Cortina

Proposed PRS

Existing D'Andrea 1 Tank

D'Andrea 2 Zone

Merano

Proposed D'Andrea 4 Zone

Not a Part

Future Copper Canyon - Not a Part

Not a Part

(P) D'Andrea 2 Tank
Pad approx. 5192'
Approx 300,000 gallons

D'Andrea 1 Zone

docpath:\\user\filepath\stamp\tool\to copy and paste\docpath\here

TRUCKEE MEADOWS WATER AUTHORITY
Quality. Delivered.

D'Andrea Conceptual Plan - 3 & 4 Pressure Zones

High Head Pump Station to D'Andrea 2 Tank with PRS

D'Andrea System

DATE: 8/17/2014
MAP BY: hmf
Work Order #: 05-1786-22
SCALE: 1 inch = 362 feet

NORTH

NAD 83 NEVADA STATE PLANE WEST FEET

Bolzano @ D'Andrea
Demand Calculations
05-1788-21

Line No.	Lot Number	Lot Size (sq. ft.)	Max. Day Demand Calculation (gpm)
1	1	10,050	0.91
2	2	8,695	0.84
3	3	7,828	0.80
4	4	8,132	0.81
5	5	8,636	0.84
6	6	9,344	0.87
7	7	9,167	0.87
8	8	9,300	0.87
9	9	9,322	0.87
10	10	11,754	0.98
11	11	9,643	0.89
12	12	7,209	0.77
13	13	7,622	0.79
14	14	10,876	0.94
		127,578	12.1

Demand Equation: y=1.05(0.008607x^0.5)

where: y = maximum day demand in gpm
x = lot size in square feet

D'Andrea system peaking factors:

MDD:ADD = 2.61:1
PKHR:MDD = 1.8:1

Domestic Demand Summary:

ADD = 4.6 gpm
MDD = 12.1 gpm
PKHR = 21.8 gpm

Note: Lot sizes from Dec 2003 submittal -
Tentative Map for D'Andrea Ranch Phase 3

Vicenza @ D'Andrea
Demand Calculations
05-1788-21

Line No.	Lot Number	Lot Size (sq. ft.)	Max. Day Demand Calculation (gpm)
1	21	5,892	0.69
2	22	6,451	0.73
3	23	5,587	0.68
4	24	6,307	0.72
5	25	4,967	0.64
6	26	5,074	0.64
7	27	6,304	0.72
8	28	7,026	0.76
9	29	8,654	0.84
10	n/a	8,538	0.84
11	30	6,346	0.72
12	31	6,806	0.75
13	32	5,851	0.69
14	33	6,915	0.75
15	34	8,006	0.81
16	35	11,027	0.95
17	36	5,732	0.68
18	37	5,028	0.64
19	38	5,191	0.65
20	39	5,308	0.66
21	40	5,633	0.68
22	41	5,291	0.66
23	42	6,263	0.72
24	43	6,302	0.72
		154,499	17.3

Demand Equation: y=1.05(0.008607x^0.5)

where: y = maximum day demand in gpm
x = lot size in square feet

D'Andrea system peaking factors:

MDD:ADD = 2.61:1
PKHR:MDD = 1.8:1

Domestic Demand Summary:

ADD = 6.6 gpm
MDD = 17.3 gpm
PKHR = 31.1 gpm

3:30 PM,6/17/2014

Note: Lot sizes from Dec 2003 submittal -
Tentative Map for D'Andrea Ranch Phase 3

Cortina @ D'Andrea

Demand Calculations

05-1788-21

Line No.	Lot Number	Lot Size (sq. ft.)	Max. Day Demand Calculation (gpm)
1	1	8,360	0.83
2	2	9,240	0.87
3	3	8,360	0.83
4	4	9,240	0.87
5	5	8,779	0.85
6	6	9,706	0.89
7	7	8,360	0.83
8	8	9,130	0.86
9	9	9,026	0.86
10	10	9,310	0.87
11	11	9,374	0.87
12	12	9,418	0.88
13	13	10,226	0.91
14	14	9,240	0.87
15	15	8,360	0.83
16	16	9,808	0.90
17	17	8,424	0.83
18	18	9,237	0.87
19	19	8,295	0.82
20	20	9,099	0.86
21	21	7,981	0.81
22	22	9,820	0.90
		198,793	18.9

Demand Equation: $y=1.05(0.008607x^{0.5})$

where: y = maximum day demand in gpm
x = lot size in square feet

D'Andrea system peaking factors:

MDD:ADD = 2.61:1
PKHR:MDD = 1.8:1

Domestic Demand Summary:

ADD =	7.2 gpm
MDD =	18.9 gpm
PKHR =	34.0 gpm

Note: Lot sizes from Dec 2003 submittal -
Tentative Map for D'Andrea Ranch Phase 3

2:59 PM,6/17/2014

Merano @ D'Andrea
Demand Calculations
05-1788-21

Line No.	Lot Number	Lot Size (sq. ft.)	Max. Day Demand Calculation (gpm)
1	1	9,082	0.86
2	2	11,172	0.96
3	3	10,484	0.93
4	4	11,501	0.97
5	5	10,449	0.92
6	6	11,501	0.97
7	7	10,449	0.92
8	8	11,843	0.98
9	9	9,170	0.87
10	10	13,467	1.05
11	11	8,025	0.81
12	12	8,025	0.81
13	13	9,954	0.90
14	14	10,855	0.94
15	15	8,791	0.85
16	16	16,071	1.15
17	17	15,260	1.12
18	18	9,748	0.89
19	19	11,004	0.95
20	20	11,247	0.96
21	21	9,740	0.89
22	22	11,161	0.95
23	23	10,707	0.94
24	24	10,884	0.94
25	25	10,547	0.93
26	26	11,188	0.96
27	27	10,806	0.94
28	28	12,870	1.03
29	29	11,656	0.98
30	30	12,770	1.02
31	31	11,989	0.99
32	32	9,847	0.90
33	33	10,914	0.94
34	34	9,652	0.89
35	35	8,867	0.85
36	36	9,579	0.88
37	37	9,153	0.86
38	38	8,538	0.84
39	39	8,000	0.81
40	40	8,000	0.81
41	41	8,595	0.84
42	42	10,810	0.94
43	43	10,801	0.94
		455,172	39.9

Demand Equation: $y=1.05(0.008607x^{0.5})$

where: y = maximum day demand in gpm
x = lot size in square feet

3:17 PM,6/17/2014

D'Andrea system peaking factors:

MDD:ADD = 2.61:1
PKHR:MDD = 1.8:1

Domestic Demand Summary:

ADD =	15.3 gpm
MDD =	39.9 gpm
PKHR =	71.8 gpm

Note: Lot sizes from Dec 2003 submittal -
Tentative Map for D'Andrea Ranch Phase 3

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
CULTURAL RESOURCES INVENTORY NEGATIVE REPORT

BLM Office: Sierra Front Field Office, Carson City District **BLM Report Number:** CRR3-2447 (N)

Organization/Field Crew: Kautz Environmental Consultants, Inc., 1140 Financial Blvd., Reno, Nevada 89502. Field staff was Scott Campbell and Travis Hansen, B.S.

Project Name and Description: D'Andrea Water Tank Class III. Lennar Reno, LLC., of Reno, Nevada contracted with Kautz Environmental Consultants, Inc. (KEC) to perform a cultural resources inventory for a proposed water tank location.

Project Area: The project consists of a 15.8 acre block survey.

Geographic Unit: Truckee Meadows

Project Environment: The project area is situated on an east to west trending ridge of the Pah Rah Range, northeast of the City of Sparks, Nevada. The ridge is moderately steep on the south side and is characterized by basalt outcrops and scree slopes. The north side of the ridge has periodic basalt outcrops on a much gentler slope. Intermittent drainages at the bottom of the slopes drain westward into the Spanish Springs Valley. Soils are the Xman-Oppio-Old camp association consisting of locally derived colluvium from the volcanic outcrops. The elevation of the project block varies from 5120 ft. AMSL to 5210 ft. AMSL.

Within the project area the plant community consists of low sagebrush (Artimesia arbuscula), rabbitbrush (Chrysothamnus nauseous), and cheat grass (Bromus tectorum).

Legal Description: The project is located within the E ½ of the NW ¼ of the SW ¼, and the W ½ of the NE ¼ of the SW ¼ of Section 31, T.20N. R. 21E.

County: Washoe County

Map Reference: *Vista, Nev*. USGS 7.5' Topographic Quadrangle 1975 (P.R. 1982)

UTM Reference: (NAD 1983) Block NW corner - 269968mE, 4382043mN
Block NE corner - 270256mE, 4381934mN
Block SW corner - 269960mE, 4381773mN
Block SE corner - 270254mE, 4381767mN

Records Check: __X__ BLM Records __X__ NVCRIS ___ NR List ___State Archive _X__Other

On September 25 of 2014 Scott Campbell of Kautz Environmental Consultants, Inc., assisted by BLM Archaeologist Rachel Crews, conducted a literature search in the archives of the Sierra Front Field Office of the DOI Bureau of Land Management for prior inventories and previously recorded sites within 1 mile of this project area. Eight previous inventories fall within the one mile boundary. These include CRR-3-236(P), -1167, -1433-2, -2113, and -2539 as well as Reports 16-99, 16-113, and 16-838.

Results of Previous Inventories: None of the previous inventories falls within the project area. A description of each is detailed below:

CULTURAL RESOURCES INVENTORY NEGATIVE REPORT CONTINUATION FORM
BLM Office: Sierra Front Field Office, Carson City District **BLM Report Number:** CRR3-2447 (N)

Report No.	Report Author(s)	Report/Project Title	Summary	Inside Project Area
3-236(P)	Harrigan, W. 1978	*Tracy to Valley Road Substation 230/345 Kilovolt Transmission Line for the North Reno Power Grid*	The inventory is a linear survey of a 230/345kV Transmission line. Three small prehistoric sites and two isolates were recorded.	No
3-1167	Peak, A. 1987	*Cultural Resource Assessment of the Northeast Sparks Water Tank Project, Washoe County, Nevada*	The inventory is a block survey of approximately two acres as well as a linear survey of 4200 feet. No archaeological materials were identified.	No
3-1433	Johnson, F. 1992	*The Southwest Gas Line Project: An Archaeological Survey of Approximately 13 Miles of Pipeline Between Sparks and Wadsworth and two Valve locations in Washoe and Lyon counties, Nevada*	The inventory is a linear survey of a 12.6 mile gas pipeline. Five archaeological sites and seven isolates were recorded.	No
3-2113	Young, D. Craig and McGuire, K. 2003	*A Class III Cultural Resource Inventory of Six Alternative Routes for the Proposed Tracy/Silverlake 120 Kv Transmission Line, Washoe County, Nevada.*	The inventory is a linear survey of 1285 acres of public land and 2451 acres of private land. 107 archaeological sites were identified.	No
3-2539	Hall, Jeremy, and Drews, M. 2011	*A Class III Cultural Resources Inventory for Canoe Hill II, Washoe County, Nevada*	The inventory is a block survey of 728 acres of public land. Thirteen archaeological sites were recorded.	No
16-99	Smith, R 1979	*BLM Cultural Resources Report: Bureau Motion Sale*	Report not located at the Sierra Front BLM Field Office.	No

Report No.	Report Author(s)	Report/Project Title	Summary	Inside Project Area
16-113	Johnson, David S. 1981	*Archaeological Reconnaissance of Existing and Proposed Roadways for the Patrick Development Lower Pah-Rah Mountains, Washoe County, Nevada. A Cultural Resources Report.*	Report not located at the Sierra Front BLM Field Office.	No
16-838	Jensen, p. and s. Jensen 1981	*Archaeological Inventory Survey: D'Andrea Proposed Subdivision Project, C.861 Acres at Sparks, Washoe County, Nevada.*	Report not located at the Sierra Front BLM Field Office.	No

Previously Recorded Archaeological Sites: [redacted]

Site No. 26Wa-	Site No. CrNV-03-	Report No.	Site Type	NRHP Recomendation
[redacted]				

[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Historic Maps: Historic maps reviewed indicate no historic resources within the current survey area. Maps consulted included the GLO Original Survey for T20N R21 E, dated 1905, and the USGS Spanish Springs Valley Quadrangle, 15 minute series, dated 1957.

Expectations: The previously recorded sites within the one mile buffer included small lithic scatters, some with ground stone. Several rock features including hunting blinds, rock rings and small rock shelters were also recorded. During the current Class III survey, special attention was given to attempt to locate these types of resources.

Inventory Date(s): September 26, 2014

Inventory Type: Class III Cultural Resources Inventory

Findings: No archaeological materials were identified in the course of this survey. No previously recorded sites or isolated artifacts were located within the project area.

References:

Hall, Jeremy, and Drews, M.
2011 *A Class III Cultural Resources Inventory for Canoe Hill II, Washoe County, Nevada*. Gnomon Inc., Carson City, Nevada. On file, DOI Bureau of Land Management, Sierra Front Field Office, Carson City, Nevada. Report No. CRR3-2539.

Harrigan, W.
1978 *Tracy to Valley Road Substation 230/345 Kilovolt Transmission Line for the North Reno Power Grid*. Sierra Pacific Power Company, Reno, Nevada. On file, DOI Bureau of Land Management, Sierra Front Field Office, Carson City, Nevada. Report No. CRR3-236(P).

Johnson, F.
1992 *The Southwest Gas Line Project: An Archaeological Survey of Approximately 13 Miles of Pipeline Between Sparks and Wadsworth and two Valve locations in Washoe and Lyon counties, Nevada*. Frank Johnson, Archaeological Consultant, Crystal Bay, Nevada. On file, DOI Bureau of Land Management, Sierra Front Field Office, Carson City, Nevada. Report No. CRR3-1433.

Peak, A.
1987 *Cultural Resource Assessment of the Northeast Sparks Water Tank Project, Washoe County, Nevada*. Peak and Associates, Inc., Sacramento, California. On file, DOI Bureau of

Land Management, Sierra Front Field Office, Carson City, Nevada. Report No. CRR3-1167.

Young, D. Craig and McGuire, K.
2003 *Cultural Resource Assessment of the Northeast Sparks Water Tank Project, Washoe County, Nevada*. Far Western Anthropological Research Group, Davis, California. On file, DOI Bureau of Land Management, Sierra Front Field Office, Carson City, Nevada. Report No. CRR3-2113.

CULTURAL RESOURCES INVENTORY NEGATIVE REPORT CONTINUATION FORM

BLM Office: Sierra Front Field Office, Carson City District **BLM Report Number:** CRR3-2447 (N)

ATTACH CLEAN REPRODUCIBLE 15' OR 7.5' MAP(S) SHOWING
AREA OF POTENTIAL EFFECT AND AREA INVENTORIED

Prepared By: _____ Date: _____

Reviewed By: _____ Date: _____

Approved By: _____ Date: _____

SHPO Review By: _____ Date: _____

BLM

Sierra Front Field Office, Nevada

FINDING OF NO SIGNIFICANT IMPACT & DECISION RECORD

D'Andrea Water Tank Number 2 and Access Road Right-of-Way Project

DOI-BLM-NV-C020-2015-0036-EA

U.S. Department of the Interior
Bureau of Land Management
Carson City District
Sierra Front Field Office
5665 Morgan Mill Road
Carson City, NV 89701
775-885-6000

September 2015

Finding of No Significant Impact

Based on the analysis of potential environmental impacts contained in the Final Environmental Assessment (EA), and considering the significance criteria found in 40 CFR 1508.27, I have determined that the Proposed Action, will not have a significant effect on the human environment. An environmental impact statement (EIS) is not required.

ACTING FOR

Leon Thomas
Field Manager
Sierra Front Field Office

9-15-2015
Date

Decision Record

Introduction

Truckee Meadows Water Authority (TMWA) has submitted a draft Plan of Development (POD) for a Right-of-Way (ROW) for the construction and maintenance of a water tank to allow for construction of the future residential phases of the D'Andrea Master Plan Community. Within the ROW would be the proposed D'Andrea Water Tank Number 2, a 20-foot wide access road, the associated roadside ditch for drainage and tank overflow, a 12-inch diameter ductile iron and polyvinyl chloride (PVC) pipe to fill the tank, and 3H:1V (Horizontal to Vertical) cut slopes (Project).

Figure 1 of the Final EA shows the location of the Project, which encompasses 3.5 acres. The Project is located in northeastern Sparks, Washoe County, Nevada, legally described as Southwest quarter of Section 31, Township 20 North, Range 21 East, Mount Diablo Baseline, and Meridian.

Public Involvement

On July 27, 2015, a Bureau of Land Management (BLM) interdisciplinary team reviewed this Project and on July 29, 2015, they participated in a field visit to the Project area. Based on this meeting, the BLM determined which resources would require analysis as a part of the Final EA (see Section 3.0).

In early October 2014, the BLM notified the Reno-Sparks Indian Colony Tribal Historic Preservation Officer (THPO) about the cultural resources inventory for the Project and offered a site visit. On April 30, 2015, the BLM emailed the THPO Project information and negative cultural resources inventory report for review and comment. On July 23, 2015, the BLM provided the final inventory report to the THPO and followed up with phone and email communications, and invited the THPO to the site visit on July 29, 2015. The THPO did not identify concerns from the Project during the visit, but expressed concerns about potential impacts from future development in the area. These concerns were discussed and the THPO requested formal consultation. The BLM initiated formal consultation with the Reno-Sparks

Indian Colony with a letter dated August 17, 2015, requesting information regarding cultural resources, sensitive natural resources, resource access, or religious concerns relative to the Project. Government-to-government consultation with the Reno-Sparks Indian Colony will continue for the duration of the Project.

On August 31, 2015, the BLM announced a 15-day public scoping period. The notice was to solicit input from the public regarding the Project. The draft POD, maps, and information on how to comment were made available. The scoping period closed on September 14, 2015. The BLM did not receive any public comments.

Land Use Conformance

The Project is in conformance with the Carson City Field Office Consolidated Resource Management Plan (CRMP), May 2001, page SOP-1, RMP Standard Operating Procedures Common to All, #4 and #5:

- "All areas of new surface disturbance will be rehabilitated, where such action is necessary and practical, to replace ground cover and prevent erosion;" and
- "Construction of all fences (except in cases of public safety) will conform to the objectives and specifications in Bureau Manual 1737 to minimize impacts to wildlife, wild horses, recreation, and visual resources."

The Project is also in conformance with the CRMP, May 2001, page LND-7, RMP Administrative Actions, #6:

- "Exchanges and minor-non Bureau initiated realty proposals will be considered where analysis indicates they are beneficial to the public."

The Project is also in conformance with the CRMP, page ROW-5, RMP Standard Operating Procedures, #5, #6, #7 and #9:

- "The right-of-way holder shall permit free and unrestricted public access to and upon the right-of-way for all lawful and proper purposes, except in areas designated as restricted by the Bureau in order to protect the public safety or facilities constructed on the right-of-way;"
- "The Bureau will approve the location of all rights-of-way prior to construction through an analysis of the proposed action in an environmental assessment unless the proposal is categorically excluded or adequately analyzed in a previously prepared NEPA document. The environmental assessment will include cultural resource clearances, evaluations of impacts to threatened and endangered species, visual resources and other issues raised during scoping;"
- The right-of-way holder will use every reasonable means to minimize erosion and soil damage in connection with construction, rehabilitation or maintenance operations under a grant, including (but not limited to) construction of water bars, cross ditches, or other structures;" and
- "Revegetation of disturbed land will be required as specified by the Bureau. The appropriate seed mixture and proper planting techniques will be specified by the Bureau."

The Project is also in conformance with the CRMP, page VRM-4, RMP Administrative Actions, #1 and #2:

- "Visual resource management objectives and mitigation will be established on a case-by-case basis through the environmental assessment process;" and
- "Visual resources will continue to be evaluated as part of activity and project planning. Such evaluation will consider the significance of the proposed project and the visual sensitivity of the affected area."

Authority

The authority to grant the Proposed Action is under the authority of Title V of the Federal Land Policy and Management Act of 1976 (FLPMA) and the regulations at 43 CFR 2800.

Mitigation Measures

Rationale

Proposed Action (Selected Alternative)

The Proposed Action addresses the BLM's purpose and need, which is to respond to an application for ROW under the authority of Title V of FLPMA and the regulations at 43 CFR 2800. Granting the use of BLM-managed lands would facilitate TMWA's purpose and need, which is to obtain a ROW to construct, operate, and maintain a water tank, access road, waterline, and associated roadside ditch and slopes to provide water storage for municipal supply, emergency supply, and fire suppression to local residents.

No Action Alternative

Under the No Action Alternative, the BLM would not approve TMWA's request for a ROW. TMWA would not construct the water tank, access road, waterline, and associated ditch and slopes in the Project area. The need for the Proposed Action would not be met.

Decision

It is my Decision to issue a 30-year FLPMA ROW to TMWA for the installation, operation, maintenance, and termination of a 300,000-gallon water tank, access road, waterline, and associated roadside ditch and slopes as described in the Proposed Action of the Final EA. The ROW will be subject to environmental protection measures proposed by TMWA in the POD and BLM stipulations. Use of this ROW will be effective upon issuance by the BLM. The TMWA would likely begin construction of the Proposed Action in early 2016.

ACTING FOR

Leon Thomas
Field Manager
Sierra Front Field Office

9-15-2015
Date

APPEAL PROCEDURES

This decision may be appealed to the Interior Board of Land Appeals, Office of the Secretary, in accordance with 43 CFR Part 4. If you appeal, your appeal must also be filed with the Bureau of Land Management at the following address:

Leon Thomas
Field Manager
BLM, Sierra Front Field Office
5665 Morgan Mill Road
Carson City, NV 89701

Your appeal must be filed within thirty (30) days from receipt or issuance of this decision. The appellant has the burden of showing that the decision appealed from is in error.

If you wish to file a petition pursuant to regulation 43 CFR 4.21 (58 FR 4942, January 19, 1993) for a stay (suspension) of the decision during the time that your appeal is being reviewed by the Board, the petition for stay must accompany your notice of appeal. Copies of the notice of appeal and petition for a stay must also be submitted to:

Board of Land Appeals
Dockets Attorney
801 N. Quincy Street, Suite 300
Arlington, VA 22203

A copy must also be sent to the appropriate Office of the Solicitor at the same time the original documents are filed with the above office.

U.S. Department of the Interior
Office of the Regional Solicitor
Pacific Southwest Region
2800 Cottage Way, Room E-1712
Sacramento, CA 95825

If you request a stay, you have the burden of proof to demonstrate that a stay should be granted. A petition for a stay is required to show sufficient justification based on the following standards:

1. The relative harm to the parties if the stay is granted or denied.
2. The likelihood of the appellants success on the merits.
3. The likelihood of immediate and irreparable harm if the stay is not granted.
4. Whether the public interest favors granting the stay.

The Office of Hearings and Appeals regulations do not provide for electronic filing of appeals. Electronically filed appeals will therefore not be accepted.

Draft Plan of Development
D'Andrea Water Tank #2
BLM Right-of-Way Request
(NVN 093727)

Prepared for:

Truckee Meadows Water Authority
1355 Capital Blvd
Reno, Nevada 89502

(775) 834-8080

Prepared by:

Manhard Consulting
9850 Double R Blvd
Suite 110
Reno, Nevada 89521
(775) 746-3500

Originally Submitted October 2014
Revised September 2015

Table of Contents

List of Tables

List of Figures

Appendices

1 Purpose and Need for the Facility

Manhard Consulting, on behalf of Truckee Meadows Water Authority (TMWA), has prepared this Draft Plan of Development (POD) at the direction of the Bureau of Land Management (BLM), Carson City District, Sierra Front Field Office.

1.1 What Will Be Built

The proposed D'Andrea Water Tank #2 is to be an approximately 300,000 gallon welded steel above ground tank with a pad elevation of 5,192 feet. Also proposed to be included in the ROW is the tank's 20 foot access road, the associated roadside ditch for drainage and tank overflow, and a 12 inch diameter ductile iron and PVC pipe used to fill the tank.

1.2 What Is Its Use

The tank is necessary to provide adequate water for municipal and fire suppression use for future residential phases of the D'Andrea master plan community. The tank was identified in the D'Andrea 3 & 4 Zones and Tank Discovery dated June 16, 2014 (Appendix B). Also occurring within the ROW will be TMWA general maintenance of the facility including; visual inspection on a weekly basis, inspection of tank coatings every 5-7 years and replacement of the exterior and interior coatings as needed basis. The access road and cut slopes will be maintained/repaired on an as-needed basis and weed abatement and general cleanup of tank site will be performed 1-2 times per growing season. The tank itself will be surrounded by chain link fencing and the access road leading to the tank will be gated as to limit vehicular access to the facility.

1.3 Why Is It Necessary to Use Public Lands

An acceptable tank site at the approximate pad elevation of 5,192 does not exist within the D'Andrea master planned community or on the adjacent private property, therefore we are proposing to locate the tank on the adjacent BLM property to the east APN: 084-020-03 (Section 31, T20N, R21E).

1.4 Design Specifics

Table 1: Project Specifics	
Total Square Footage of ROW Request:	3.5 Acres (762 feet x 200 feet)
Total Disturb Area	1.8 Acres
Estimated Size of Tank	27 ft in height & 46 ft in diameter
Estimated Length of Roadway	870 LF (Including pavement surrounding tank)
Width of Road Surface:	20 ft

1.5 Proposed Construction Timeline

It is anticipated that construction will begin shortly following the approvals of both the BLM Right of Way request and the Washoe County Special Use Permit. It is anticipated that construction of the tank will take approximately six (6) months to complete.

1.6 Temporary or Permanent

The right of way (ROW) authorization would be permanent.

1.7 Reasonable Alternatives

We identified two (2) viable sites at our BLM pre-application meeting and stated we would conduct a site selection process to determine which of these sites would be preferable. A field site selection meeting was conducted prior to the submittal of a Standard Form 299. The selection meeting included engineers and planners from both the City of Sparks and Washoe County, BLM was invited but did not attend the meeting. At the conclusion of the site selection meeting, it was determined that Alternative 1 was the preferred site location based on limited visual impact as compared to Alternative 2 (Figure 2).

2 Right-of-Way Location

2.1 Legal Description

The 3.5 acre portion included as part of this Right of Way request is contained completely on public land.

All that certain Right-of-Way situated within the SW ^{1}/4 of Section 31, T.20N., R.21E., M.D.M., within Washoe County, State of Nevada, and being more particularly described as follows:

COMMENCING at the East 1/4 corner of Section 36, T. 20N., R.20E., M.D.M., as marked by a 5/8" rebar with "Tri-State Control" cap, shown on Parcel Map No. 4896, recorded March 27, 2008 as File No. 3634271 in the Official Records of Washoe County, Nevada;

THENCE along the West line of said Section 31, also being the East line of said Section 36, North 00°47'31" East, 44.25 feet to the **POINT OF BEGINNING;**

THENCE continuing along said common line, North 00°47'31" East, 71.82 feet to the beginning of a non-tangent curve to the right;

THENCE departing said common line and along the following nine (9) courses:

1. from a tangent bearing of North 80°38'10" East, 93.81 feet along the arc of a 185.00 foot radius curve through a central angle of 29°03'16";
2. South 70°18'34" East, 246.99 feet to the beginning of a tangent curve to the right;
3. 106.03 feet along the arc of a 135.00 foot radius curve through a central angle of 45°00'00";
4. South 25°18'34" East, 98.98 feet to the beginning of a non-tangent curve to the right;
5. From a tangent which bears North 81°38'54" East, 682.95 feet along the are a of a 120.00 foot radius curve through a central angle of 326°05'04";
6. North 25°18'34" West, 98.98 feet to the beginning of a tangent curve to the left;51.05
7. feet along the arc of a 65.00 foot radius curve through a central angle of 45°00'00";
8. North 70°18'34" West, 246.99 feet to the beginning of a tangent curve to the left;
9. 9) 71.01 feet along the arc of a 115.00 foot radius curve through a central angle of 35°22'38" to the aforementioned common section line and the **POINT OF BEGINNING.**

The basis of bearings for this description is identical to said Parcel Map No. 4896.

2.2 Maps Tied to Section Corners and Drawings

Figure 3 illustrates the location of the ROW request.

3 Facility Design Factors

3.1 Minimum and Maximum Engineering Standards

3.1.1 Tank

- 0.30 MG AWWA/NAC 445A welded steel tank
- Required Tank Pad Elevation = 5,192 feet
- Tank Dimensions = 24’ wall height, 46’ diameter, 3’ radius knuckle roof
- Overflow Design Flow = 1,500 gpm
- Required Appurtenances include, but are not limited to mushroom vent(s), two 36” diameter manways, silt stop/trap, cathodic monitoring system, exterior ladder assembly with safety cage and top landing safety grating and handrails, 30” square roof access hatch, intrusion alarm, liquid level/sample line and pressure transducer inside the valve vault.
- Coating System = Epoxy interior (2-coat, 8-10 mils total system minimum dry film thickness - MDFT), Polyurethane exterior (7 mils MDFT) with additional 3 mil clear coat on 100 percent of exterior surface. Color selected by developer and approved by TMWA (unless specified by City of Sparks).
- Inlet/Outlet and Overflow Piping = Schedule 40 Steel with fusion-bonded shop applied epoxy coating on interior and exterior. Steel pipe to extend 5’ outside the tank footing and transition to Feeder/Drain lines with Flng x Flng double ball joints (O/F pipe may terminate in an above grade air gap if discharging into a drainage structure located next to the tank).

3.1.2 Site Appurtenances

Liquid Level Transducer/Sample/Valve Vault, Common RTU/Power/Telecom pedestal, Irrigation pump/controller/meter vault, backflow assembly, two post hydrants.

3.1.3 Access Road

- Maximum Grade of 10%
- Road Surfacing will be Asphalt.
- Length and Width of Road will consist of approximately 870 LF of 20 foot wide roadway (Including pavement around the tank).

3.1.4 Pipeline

The pipeline will be subsurface approximately 3 to 4 feet below the surface of the road. The max slope of the pipe will max that of the roadway 10%. The pipe will be surrounded by standard bedding material and gravel.

3.1.5 Water Tank Pad

The perimeter of the tank itself will sit on a concrete stem wall and the tank floor will sit on a layer of sand over compacted base rock material. The shaded area within the access road ROW and the tank site will be paved with asphalt.

3.2 Detailed Engineering Plans for Major Structures

- The Developer will design the tank site plan (including grading, site piping, access road, etc.), feeder main plan & profile (with U/G electric and phone conduits, boxes, vaults, etc.), drain line plan & profile, landscaping plan, electrical site plan and details. Developer submits 50% level design review set to TMWA.
- TMWA provides tank detail drawings and technical specifications (except for landscaping and electrical) and returns package to Developer with 50% design level review comments.
- Developer submits 90% level design review set to TMWA for final comments.
- Developer submits final bid/construction level package to TMWA.
- Developer submits applications and pays all fees and/or contract costs for new electrical service to SPPC and new phone service to SBC.

3.3 Temporary Use Areas

No temporary use areas are proposed with this request.

4 Additional Components

4.1 Access to ROW

For security purposes access to the tank site will be restricted. A 6-foot high security fence (6' high chain link with an additional 1' high, 3-strand barbed wire top) will begin approximately where the ROW "bulb" begins and be installed around the tank pad cut slope and/or toe of slope. A 20-foot wide double swing gate will be located across the access road at the "bulb". The gate will be provided with a high-security latch and will be locked. Typically, TMWA is the only one with a key. If a contractor is working at the tank site, we will typically interlock a temporary combination lock with our lock to provide temporary access.

4.2 Location of Equipment Storage Areas

Equipment used during construction phase will be stored on the adjacent private property. Equipment required for maintenance will be stored off site.

5 Government Agencies Involved

The proposed tank site requires a special use permit to be processed through Washoe County prior to issuance of any grading or building permit.

6 Construction of the Facilities

6.1 Construction Description

The ultimate construction plan for the project will be determined by the tank contractor who at this preliminary stage has not been selected. In an attempt to balance the grading on-site, the preliminary design follows the existing contours and requires approximately 6,700 cubic yards of both cut and fill material and therefore import and export of material should not be required.

It is anticipated that the proposed project will utilize the following equipment during construction;

- One (1) Excavator
- One (1) Bulldozer
- One (1) Compactor
- One (1) Water Truck

6.2 Work Force

The estimated work force should be limited no more than twenty (20) personnel on site at any given time.

6.3 Access To and Along ROW during Construction

Access to the ROW is currently provided via the adjacent mass graded subdivision. During construction this access is not anticipated to be modified in any way.

6.4 Estimated Construction Costs

According to the TMWA Discovery (Appendix B), the estimated facility costs for the proposed storage tank is $450,000 excluding land, tank main and access road costs.

7 Resource Values and Environmental Concerns

Existing trails are present surrounding the proposed tank site. With construction, it is not anticipated access to these areas will be limited in any way.

Environmental impacts relating to air quality and noise level will be minimal and limited to construction. There will be no impacts on water quality or quantity or a change to any body of water. Careful consideration was taken during the site selection process to reduce the visual impact and limit any disturbance associated with the surface of the land.

Kautz Environmental Consultants have conducted a cultural resources inventory of the proposed site and the surrounding property as required (Appendix C).

8 Stabilization and Rehabilitation

Any disturbed slope areas will be re-vegetated utilizing an approved BLM seed mix.

9 Termination and Restoration

Termination of the tank site is not anticipated. Storage is required to provide emergency supply and fire suppression water to the customers located within the pressure zone created by the tank's hydraulic grade line elevation. Once TMWA establishes a tank zone, it is highly unlikely that the tank would ever be removed or retired. In the unlikely event that the tank was retired TMWA would demolish and remove the tank and fencing from the site; cut slopes and roads would be reclaimed/re-contoured as much as practicable; and the site would be reseeded.

10 Environmental Protection Measures

TMWA has committed to the following Environmental Protection Measures (EPMs) to prevent unnecessary or undue degradation during construction and operation activities. These EPMs include Best Management Practices (BMPs) derived from the Truckee Meadows Construction Site Best Management Practices Handbook.

- All disturbed slopes and cut areas would be revegetated utilizing a BLM-approved weed-free seed mix following construction.
- All vehicles would be washed down prior to entering the site to reduce the spread of weeds.
- TMWA would control noxious, invasive weeds within the project area in coordination with the BLM.
- Where possible, construction activities would preserve existing vegetation and areas with permeable soils that can be used for infiltration of storm water during and after construction is complete.
- Construction activities would provide perimeter control using vegetation swales and filter strips in conjunction with other sediment control BMPs such as fiber rolls, silt fences, gravel berms, and berms constructed of salvaged native material. Vegetated swales and filter strips can also provide permanent post construction structural treatment controls and can consist of preserved or enhanced existing vegetation.
- Inspection of site design features that are intended to block or filter storm water runoff would occur weekly during construction activities to ensure they are adequate to prevent sediment transport offsite. If they are not, installation of additional BMPs would occur.
- All site design features that are intended to block or filter storm water runoff would be inspected before and after storm events to ensure they are functioning properly. For prolonged rainfall events, these site design features would be inspected daily.
- Installation of high visibility temporary fencing would occur to protect high value existing vegetation before beginning clearing or other soil-disturbing activities.
- Where possible, construction activities would preserve desirable vegetation on steep slopes and near perennial and intermittent watercourses or swales.

- Where possible, construction activities would preserve contiguous areas or clumps of native or landscaped vegetation, instead of individual trees or shrubs.
- Construction activities would not place equipment, construction materials, native materials, topsoil, or fill dirt within the limits of preserved areas.
- With the exception of frozen ground conditions, permanent revegetation must be seeded no later than 14 days after final grading, unless final grading takes place outside of the seeding or planting window. In that case, temporary erosion control is required until seeding can occur.
- Seeding would take place between September 15 and February 15.
- Areas to be revegetated would be roughened prior to seeding. After seeding, mulch would be applied with a tackifier.
- Final stabilization requires that perennial vegetation cover consist of 70 percent of the native background cover, determined from a reference site or pre-project conditions.
- Silt fencing would be installed at a minimum of three feet from the toe of the slope or at the top of the bank.
- The drainage area upstream of the silt fence would be limited to 0.25 acre per 100 feet of fence.
- The slope area draining to any point along the silt fence would be limited to 100 feet or less.
- To reduce erosion in channels, swales or ditches caused by high flow velocities, installation of temporary check dams would occur which would be constructed of rocks or gravel bags.
- All check dams would be placed at an appropriate distance and height to allow small pools to temporarily form behind them.
- Check dams would be spaced such that the downstream toe of each dam meets the backwater from the next downstream check dam.
- All check dams would be designed to pass a two-year, 24-hour storm without causing damage to the dam or any upstream flooding.
- Check dams would be removed when no longer needed.
- Check dams would be inspected regularly during a runoff event for sediment buildup and signs of erosion under or around the dam.
- Appropriate storm drain inlet protection would occur to allow ponding and filtering of sediment-laden runoff prior to entering the storm drain system. This can be achieved through block and gravel drain inlet protection, filter fabric fence drain inlet protection, sandbag barriers (for drain inlets on grade), or excavated drop inlet sediment traps.

- Accumulated sediment in BMPs shall be removed within seven days after a storm water runoff event or prior to the next anticipated storm event whichever is earlier. Sediment must be removed when the BMP design capacity has been reduced by 50 percent or more.

- Material stockpiles would be located away from storm water flows, drainage courses, and inlets.

- Wind erosion and dust control measures would be applied on the surface of stockpiles.

- Stockpile perimeter controls would be installed such as temporary berms, dikes, silt fences, fiber rolls, sandbags, or gravel bag barriers as soon as possible after stockpiles are created.

- Construction activities would collect and properly dispose of Portland Cement Concrete and asphalt concrete waste so that it does not enter the storm drain system.

- Where possible, concrete suppliers should conduct washout activities at their own plants or dispatch facilities.

- If washout is conducted at the construction site, the operator shall employ control measures (e.g., lined pits or portable washouts) to contain and manage on-site concrete washout to prevent discharge. The pit or container must be designed so that no overflows can occur due to inadequate sizing or precipitation.

- Fueling, washing, and major maintenance of equipment would occur offsite whenever possible. In the event of oil, fuel, lubricating grease, or other equipment leaks, cleanup would be conducted as soon as possible. Any contaminated soil would be removed, managed, and disposed of at an off-site facility in compliance with State and federal regulations.

- In the event of a major spill, the following actions would be taken in addition to any federal, State, and local health and safety regulations;

    - Contain the spread or migration of the spill using the on-hand supply of erosion control structures and/or by creating dirt berms, as feasible and necessary;

    - Regulated wastes would be removed from the Project area and disposed of in a State, federal, or local designated area; and

    - If a spill of a petroleum constitute is considered to meet the reportable quantity per the Nevada Division of Environmental Protection's (NDEP) guidelines (greater than 25 gallons or greater than three cubic yards of impacted material) or a reportable quantity for hazardous waste is released based on the United States Environmental Protection Agency guidelines established under Title III List of Lists (40 CFR Part 302), the BLM and NDEP would be notified within 24 hours and the appropriate remedial actions and confirmation sampling would be conducted under the direction of the NDEP.

- Spill cleanup kits would be provided on-site and on fueling trucks. A drip pan or absorbent pad would be used unless fueling or conducting maintenance occurs over an impervious surface.

- All fueling equipment would be equipped with automatic shut-off nozzles to contain drips.

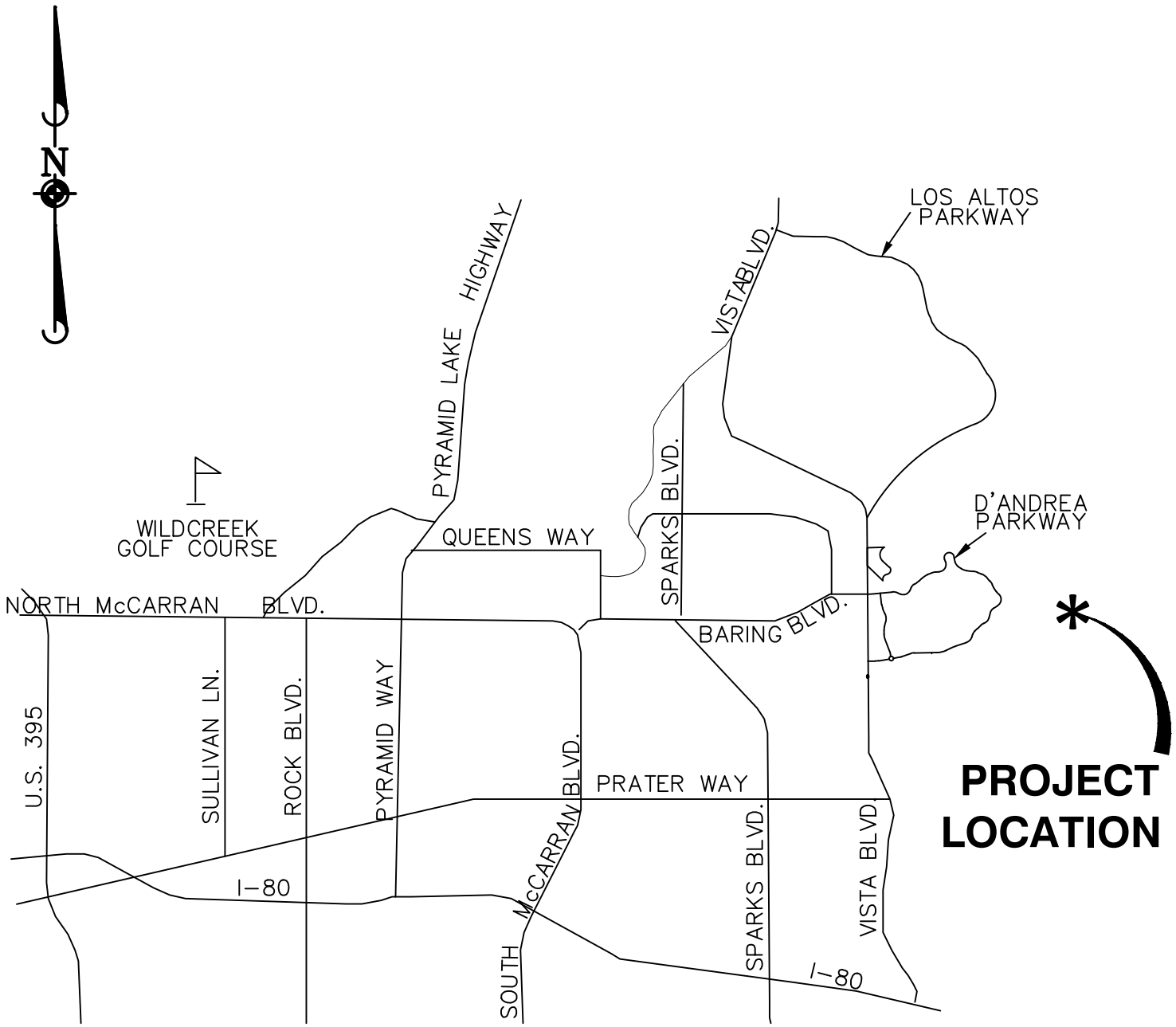
- All vehicles would be inspected daily for leaky hoses, gaskets, or other problems.
- No detergents, solvents, degreasers, or other chemical products would be used on site for on-site vehicle cleaning.
- Emissions of fugitive dust from disturbed surfaces would be minimized by the application of water to roads (or other appropriate dust palliative), and/or the use of wind-break fencing designed to limit wind erosion.
- Construction activities would follow all applicable Washoe County District Health Department dust control standards.
- The Project would comply with all Washoe County Air Quality permit requirements.
- The tank color would be selected by Lennar and TMWA, in coordination with the BLM, the City of Sparks, and Washoe County. The tank color would be consistent with the surrounding environment.
- If surface disturbance is initiated during the migratory bird breeding season (April 1 through July 31), a qualified biologist would survey the area prior to land clearing activities. Clearance surveys would occur within the Project area, including a 300-foot buffer around the Project area. Clearance surveys for migratory birds are only valid for 14 days. If surface disturbance for the specific location does not occur within 14 days of the survey, another survey would be needed. However, if the vegetation has been fully cleared from the work area within the 14-day clearance survey time frame, no additional clearance surveys would be required for the disturbed area because it would no longer contain potential migratory bird nesting habitat. If active nests are located, or if other evidence of nesting (i.e., mated pairs, territorial defense, carrying nesting material, transporting food) is observed, a 300-foot buffer would be delineated and the Project area avoided, preventing destruction or disturbance to nests until they are no longer actively breeding or rearing young, or until the young have fledged. TMWA's biologist would inform TMWA when the birds have left the nest. TMWA would not conduct surface disturbing activities within the exclusion zone until the biologist determines that the birds are no longer nesting.
- TMWA will avoid direct physical disturbance (e.g., grading) to rock outcrops that may potentially be used for bat roosting habitat.
- TMWA would comply with all applicable State and federal fire laws and regulations. All reasonable measures would be taken to prevent and suppress fires in the Project Area, and each vehicle would carry hand tools and a fire extinguisher.
- Vehicle catalytic converters would be inspected often and cleaned of brush and grass debris.
- Wildland fires would immediately be reported to the BLM Sierra Front Interagency Dispatch Center at 775-883-5995. Information reported would include the location (latitude and longitude if possible), fuels involved, time started, who or what is near the fire, and the direction of fire spread.
- Pursuant to 43 CFR 10.4(g), TMWA would notify the BLM authorized officer, by telephone, and with written confirmation, immediately upon the discovery of human remains, funerary objects,

sacred objects, or objects of cultural patrimony (as defined in 43 CFR 10.2). Further, pursuant to 43 CFR 10.4 (c) and (d), the operator would immediately stop all activities in the vicinity of the discovery and not commence again for 30 days, or when notified to proceed by the BLM authorized officer.

- In the event that previously undiscovered paleontological resources are discovered in the performance of any surface disturbing activities, the item(s) or condition(s) would be left intact and immediately brought to the attention of the authorized officer of the BLM. If significant paleontological resources are found, avoidance, recordation, and data recovery would be required.

- Any cultural resource discovered by the permit holder, or any person working on their behalf, during the course of activities on federal land would be immediately reported to the BLM Authorized Officer by telephone, with written confirmation. The permit holder would suspend all operations within 100 meters (330 feet) of such discovery and protect it until an evaluation of the discovery can be made by the authorized officer. If the BLM determines, in consultation with the Nevada State Historic Preservation Office, that the site is or may be eligible for the National Register of Historic Places, a BLM archaeologist would determine an exclusion zone adequate to protect the resource. TMWA would not conduct any surface disturbing activities within this exclusion zone without further authorization from the BLM, which may require further environmental and/or cultural analyses. The holder is responsible for the cost of evaluation and mitigation. Operations may resume only upon written authorization to proceed from the authorized officer.

- All solid wastes would be disposed of in a State, federal, or local designated site. Pursuant to 43 CFR 8365.1-1(b) (3), no sewage, petroleum products, or refuse would be dumped from any vehicle.



Manhard CONSULTING LTD
9850 Double R Boulevard, Suite 101, Reno, NV 89521 ph:775.746.3500 fx:775.746.3520 manhard.com
Civil Engineers • Surveyors • Water Resource Engineers • Water & Wastewater Engineers
Construction Managers • Environmental Scientists • Landscape Architects • Planners

D'ANDREA 0.3 MG WATER STORAGE TANK

SPARKS, NEVADA

VICINITY MAP

PROJ. MGR.:	KWA
DRAWN BY:	JPB
DATE:	06/17/15
SCALE:	NTS

SHEET

EXHIBIT 01

LENSPN4

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D'ANDREA 0.3 MG WATER STORAGE TANK

SPARKS, NV

ALTERNATE LOCATIONS

PROJ. MGR.:	KWA
DRAWN BY:	DCB
DATE:	06/08/15
SCALE:	NTS

SHEET

EXHIBIT 2

LENSPN4

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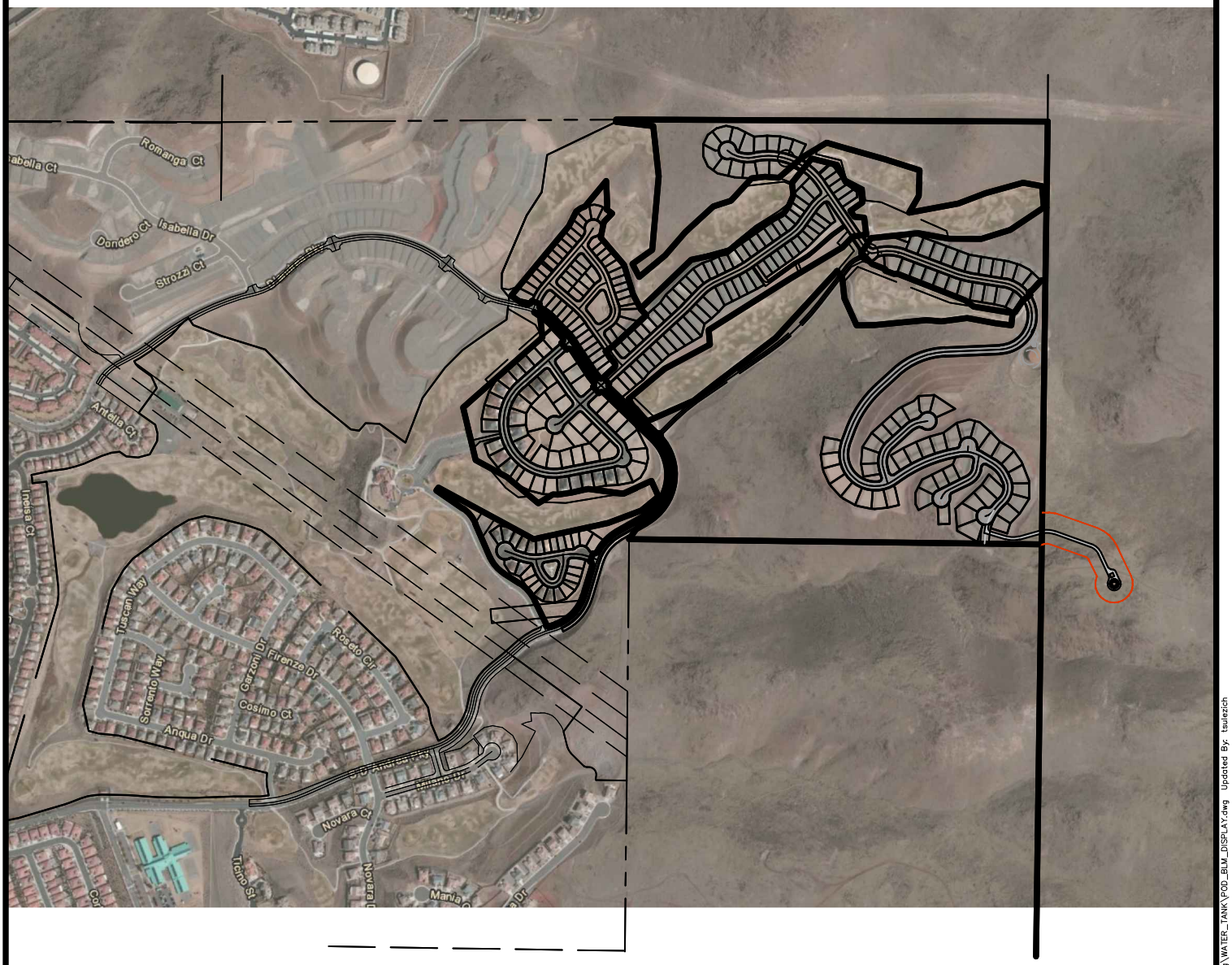

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D'ANDREA 0.3 MG WATER STORAGE TANK

SPARKS, NV

AERIAL PHOTOGRAPHY

PROJ. MGR.: KWA
DRAWN BY: DCB
DATE: 06/08/15
SCALE: 1" = 1000'

SHEET
EXHIBIT 3
LENSPN4

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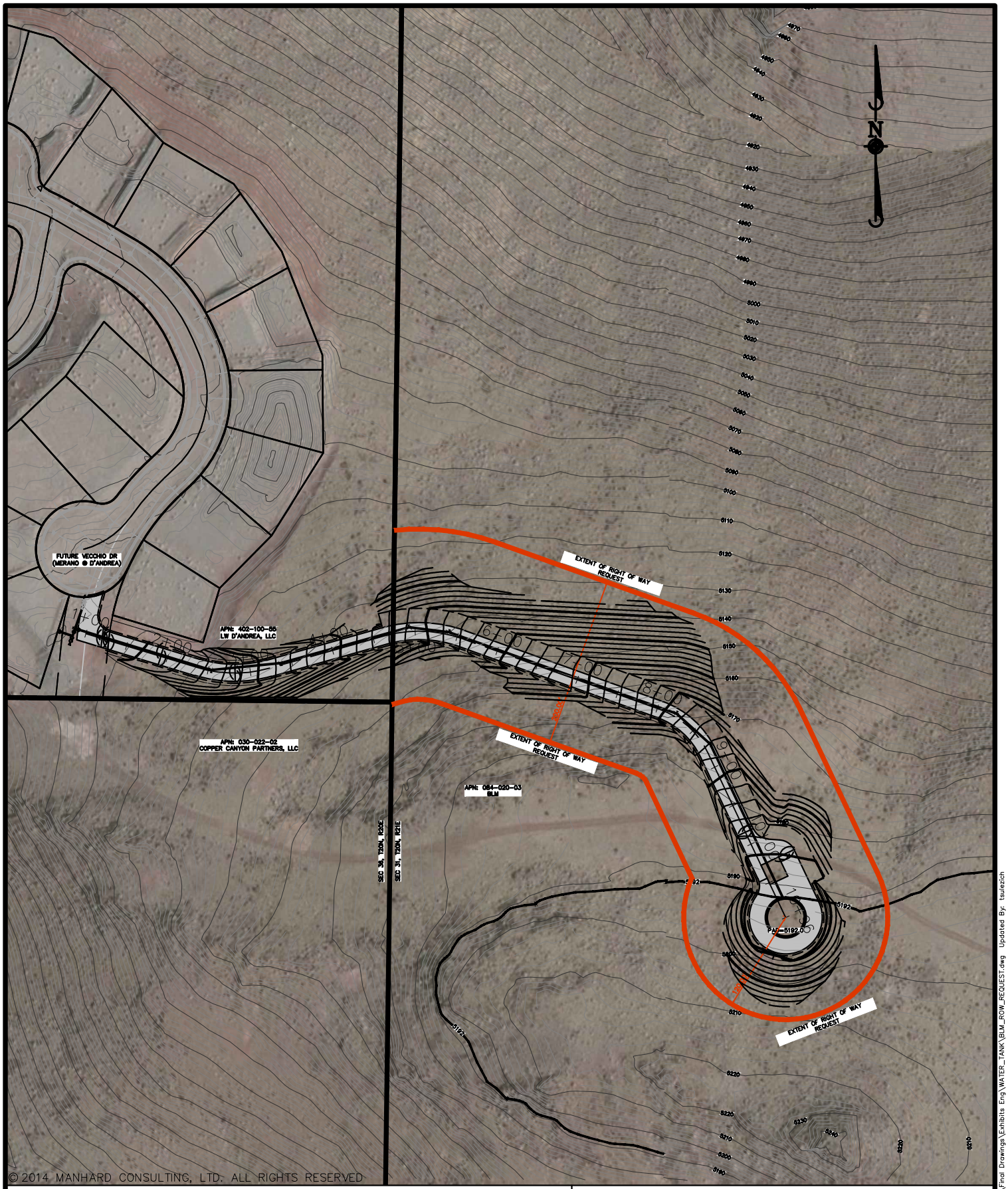

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D'ANDREA 0.3 MG WATER STORAGE TANK

SPARKS, NV

BLM RIGHT-OF-WAY REQUEST

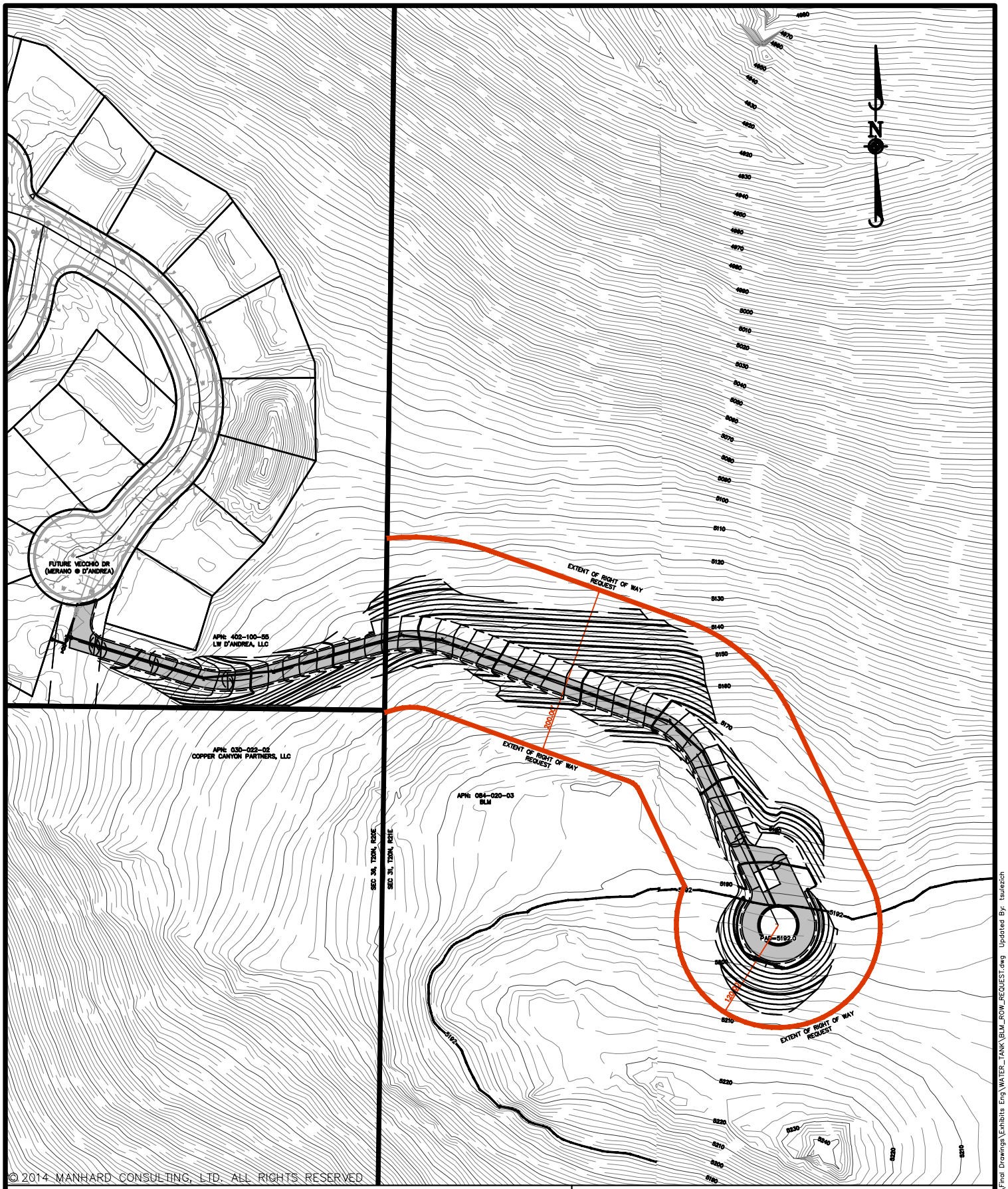
PROJ. MGR.:	KWA
DRAWN BY:	DCB
DATE:	06/08/15
SCALE:	1" = 150'

SHEET

EXHIBIT 4

LENSPN4

Dwg Name: P:\Lenspn4\dwg\Eng\Final Drawings\Exhibits Eng\WATER_TANK\BLM_ROW_REQUEST.dwg Updated By: tsulezich 11:21



Manhard CONSULTING LTD
9850 Double R Boulevard, Suite 101, Reno, NV 89521 ph:775-746-3500 fx:775.746.3520 manhard.com
Civil Engineers • Surveyors • Water Resource Engineers • Water & Wastewater Engineers
Construction Managers • Environmental Scientists • Landscape Architects • Planners

D'ANDREA 0.3 MG WATER STORAGE TANK

SPARKS, NV

PROPOSED SITE GRADING

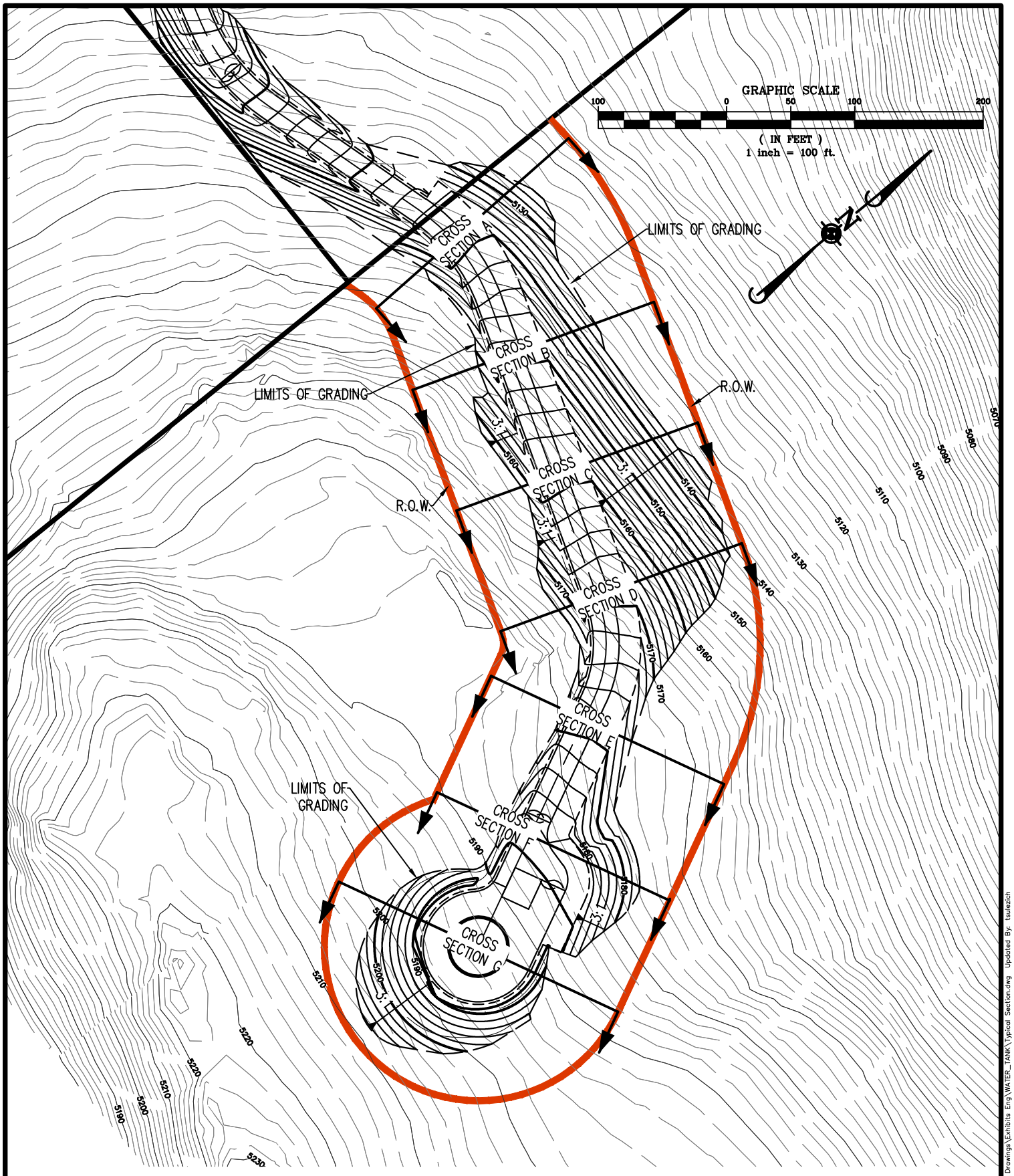
PROJ. MGR.:	KWA
DRAWN BY:	DCB
DATE:	06/08/15
SCALE:	1" = 150'

SHEET

EXHIBIT 5

LENSPN4

Dwg Name: P:\Lenspn4\dwg\Eng\Final Drawings\Exhibits Eng\WATER_TANK\BLM_ROW_REQUEST.dwg Updated By: tsulezich 11:21



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D'ANDREA 0.3 MG WATER STORAGE TANK

SPARKS, NV

TYPICAL ROADWAY SECTIONS

PROJ. MGR.:	KWA
DRAWN BY:	TJS
DATE:	7/1/15
SCALE:	N.T.S.

SHEET
EXHIBIT 6
LENSPN4

D'ANDREA WATER TANK NUMBER 2 AND ACCESS ROAD RIGHT-OF-WAY PROJECT

FINAL ENVIRONMENTAL ASSESSMENT

BLM

Sierra Front Field Office, Nevada

DOI-BLM-NV-C020-2015-0036-EA

U.S. Department of the Interior
Bureau of Land Management
Carson City District
Sierra Front Field Office
5665 Morgan Mill Road
Carson City, NV 89701
775-885-6000

September 2015

It is the mission of the Bureau of Land Management to sustain the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations.

DOI-BLM-NV-C020-2015-0036-EA

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

[Note: maps are not embedded in this document in order to maintain a small file size, maps are available on the Project website. Look under the Navigation Pane for "Maps."]

LIST OF ATTACHMENTS

[Note: attachments are not embedded in this document in order to maintain a small file size, attachments are available on the Project website. Look under the Navigation Pane for "Documents."]

Attachment A Biological Survey Report

LIST OF ACRONYMS & ABBREVIATIONS

ACEC	Area of Critical Environmental Concern
AMSL	Above Mean Sea Level
BLM	Bureau of Land Management
BMP	Best Management Practice
CESA	Cumulative Effects Study Area
CFR	Code of Federal Regulations
CRMP	Consolidated Resource Management Plan
EA	Environmental Assessment
EO	Executive Order
EPM	Environmental Protection Measure
FESA	Federal Endangered Species Act of 1973
FLPMA	Federal Land Policy and Management Act of 1976
GIS	Geographic Information Systems
IM	Instruction Memorandum
KOP	Key Observation Point
Lennar	Lennar Reno, LLC
LR2000	Legacy Rehost 2000 System
MBTA	Migratory Bird Treaty Act
NDEP	Nevada Division of Environmental Protection
NDOT	Nevada Department of Transportation
NDOW	Nevada Department of Wildlife
PGH	Preliminary General Habitat
POD	Plan of Development
Project	D'Andrea Water Tank Number 2
PVC	Polyvinyl Chloride
RFFA	Reasonably Foreseeable Future Actions
ROW	Right-of-Way
Stantec	Stantec Consulting Services Inc.
THPO	Tribal Historic Preservation Office
TMWA	Truckee Meadows Water Authority
USFWS	United States Fish and Wildlife Service
VRM	Visual Resource Management

1.0 INTRODUCTION

1.1 BACKGROUND

Truckee Meadows Water Authority (TMWA) has submitted a draft Plan of Development (POD) for a Right-of-Way (ROW) for the construction and maintenance of a water tank to allow for construction of the future residential phases of the D'Andrea Master Plan Community. Within the ROW would be the proposed D'Andrea Water Tank Number 2, a 20-foot wide access road, the associated roadside ditch for drainage and tank overflow, a 12-inch diameter ductile iron and polyvinyl chloride (PVC) pipe to fill the tank, and 3H:1V (Horizontal to Vertical) cut slopes (Project).

Figure 1 shows the location of the Project which encompasses 3.5 acres. The Project is located in northeastern Sparks, Washoe County, Nevada, legally described as Southwest quarter of Section 31, Township 20 North, Range 21 East, Mount Diablo Baseline and Meridian.

1.2 PURPOSE AND NEED

The Bureau of Land Management's (BLM's) need is established by the BLM's responsibility under Section 501 of the Federal Land Policy and Management Act of 1976 (FLPMA) and Title 43 Code of Federal Regulations (CFR) Part 2800 to respond to TMWA's POD and application for the ROW grant over public-administered lands, submitted to the BLM's Sierra Front Field Office in October 2014, and revised in June 2015, July 2015, and August 2015.

The purpose of the ROW is to allow TMWA to construct a water tank, access road, waterline and associated roadside ditch and slopes in order to provide water storage for municipal water supply, emergency supply, and fire suppression water to residents located within the pressure zone created by the tank's hydraulic grade line elevation.

1.3 SCOPING AND ISSUES IDENTIFICATION

On July 27, 2015, a BLM interdisciplinary team reviewed this Project and on July 29, 2015, they participated in a field visit to the Project area. Issues that were raised included:

- What would be the visual impacts from the Project?
- How can these effects be minimized?
- Would the water tank affect the visual setting of the Pah Rah High Basin Petroglyph Area of Critical Environmental Concern (ACEC)?

Based on this meeting, the BLM determined which resources would require analysis as a part of this final Environmental Assessment (EA) (see Section 3.0).

In early October 2014, the BLM notified the Reno-Sparks Indian Colony Tribal Historic Preservation Officer (THPO) about the cultural resources inventory for the Project and offered a site visit. On April 30, 2015, the BLM emailed the THPO Project information and negative cultural resources inventory report for review and comment. On July 23, 2015, the BLM provided the final inventory report to the THPO and followed up with phone and email communications, and invited the THPO to the site visit on July 29, 2015. The THPO did not identify concerns from the Project during the visit, but expressed concerns about potential impacts from future development in the area. These concerns were discussed and the THPO

requested formal consultation. The BLM initiated formal consultation with the Reno-Sparks Indian Colony with a letter dated August 17, 2015, requesting information regarding cultural resources, sensitive natural resources, resource access, or religious concerns relative to the Project. Government-to-government consultation with the Reno-Sparks Indian Colony will continue for the duration of the Project.

On August 31, 2015, the BLM announced a 15-day public scoping period. The notice was to solicit input from the public regarding the Project. The draft POD, maps, and information on how to comment were made available. The scoping period closed on September 14, 2015.

1.4 DECISION TO BE MADE

The BLM has received a ROW application and POD from TMWA. The POD is included as an attachment to this final EA (Attachment A). The BLM Authorized Officer would decide which alternative presents the best option for meeting the purpose and need, and whether to add terms and conditions (stipulations) to the selected alternative. The Authorized Officer could decide to deny the ROW application. The proposed ROW would be issued to TMWA for 30 years.

1.5 LAND USE PLAN CONFORMANCE STATEMENT

The Project is in conformance with the Carson City Field Office Consolidated Resource Management Plan (CRMP), May 2001, page SOP-1, RMP Standard Operating Procedures Common to All, #4 and #5:

- All areas of new surface disturbance will be rehabilitated, where such action is necessary and practical, to replace ground cover and prevent erosion; and

- Construction of all fences (except in cases of public safety) will conform to the objectives and specifications in Bureau Manual 1737 to minimize impacts to wildlife, wild horses, recreation, and visual resources.

The Project is also in conformance with the CRMP, May 2001, page LND-7, RMP Administrative Actions, #6:

- Exchanges and minor-non Bureau initiated realty proposals will be considered where analysis indicates they are beneficial to the public.

The Project is also in conformance with the CRMP, page ROW-5, RMP Standard Operating Procedures, #5, #6, #7 and #9:

- The right-of-way holder shall permit free and unrestricted public access to and upon the right-of-way for all lawful and proper purposes, except in areas designated as restricted by the Bureau in order to protect the public safety or facilities constructed on the right-of-way;

- The Bureau will approve the location of all rights-of-way prior to construction through an analysis of the proposed action in an environmental assessment unless the proposal is categorically excluded or adequately analyzed in a previously prepared NEPA document. The environmental assessment will include cultural resource clearances, evaluations of

impacts to threatened and endangered species, visual resources and other issues raised during scoping;

- The right-of-way holder will use every reasonable means to minimize erosion and soil damage in connection with construction, rehabilitation or maintenance operations under a grant, including (but not limited to) construction of water bars, cross ditches, or other structures; and

- Revegetation of disturbed land will be required as specified by the Bureau. The appropriate seed mixture and proper planting techniques will be specified by the Bureau.

The Project is also in conformance with the CRMP, page VRM-4, RMP Administrative Actions, #1 and #2:

- Visual resource management objectives and mitigation will be established on a case-by-case basis through the environmental assessment process; and

- Visual resources will continue to be evaluated as part of activity and project planning. Such evaluation will consider the significance of the proposed project and the visual sensitivity of the affected area.

1.6 RELATIONSHIPS TO STATUTES, REGULATIONS, AND OTHER PLANS

The Proposed Action is in compliance with the following federal, State, and local plans to the maximum extent possible:

- FLPMA of 1976 (43 United States Code 1701 et seq.);
- Migratory Bird Treaty Act (1918 as amended) and Executive Order (EO) 13186;
- National Environmental Policy Act of 1969 (as amended);
- National Historic Preservation Act of 1966 (as amended);
- Public Rangelands Improvement Act of 1978;
- State Protocol Agreement between the BLM, Nevada and the Nevada Historic Preservation Office (2009);
- Special Status Species Manual and Direction for State Directors to Review and Revise Existing Bureau Sensitive Species Lists (Instruction Memorandum [IM] No. NV-2011-059);
- Endangered Species Act of 1973;
- BLM Manual 8400 - Visual Resources Management;
- Washoe County Master Plan and Development Code; and
- IM Number 2012-043 on greater sage-grouse interim management policies and procedures and IM 2013-044 on greater sage-grouse land use planning strategy.

The Project will also require a Special Use Permit, air quality permit, and grading permits to be processed through Washoe County prior to issuance of any grading or building permit.

2.0 ALTERNATIVES

2.1 DESCRIPTION OF ALTERNATIVES

2.1.1 Alternative A: Proposed Action

The Proposed Action would include the construction and maintenance of a 300,000-gallon, welded steel above ground water tank (complying with Nevada Administrative Code 445A and the American Water Works Association Standards) to allow for construction of the future residential phases of the D'Andrea master planned community. The ROW would be 200 feet wide and 762 linear feet in length. Within the 200-foot wide ROW would be the proposed Project, a 20-foot wide access road, the associated roadside ditch for drainage and tank overflow, a 12-inch diameter ductile iron and PVC pipe to fill the tank, and 3H:1V cut slopes (Figures 2, 3, 4, 5, and 6). The total area of the ROW would be 3.5 acres (762 linear feet in length by 200 feet in width). Total ground disturbance associated with Project activities would be approximately 1.8 acres. Primary access to the ROW would be via Interstate 80 east to Vista Boulevard, to South D'Andrea Parkway. Access to the ROW is currently provided via the adjacent mass graded subdivision (Merano at D'Andrea). During construction this access it not anticipated to be modified in any way.

Construction

It is anticipated that construction of the access road, pad, and water tank would take approximately six months. The preliminary design follows the existing contours to balance the grading on site. Site grading would require approximately 6,700 cubic yards of both cut and fill material and, therefore, import and export of material would not be required. No material would be exported from the BLM administered land to be used on adjoining private property, and all cut and fill material generated on site would be used entirely within the 3.5-acre proposed ROW area. Any disturbed slope would be revegetated utilizing a BLM-approved weed-free seed mix following construction.

Equipment used during the construction phase would be stored on adjacent private property. Equipment stored for maintenance activities would be also be on adjacent private property. It is anticipated that the Project would utilize the following equipment during construction: one excavator; one bulldozer; one compactor; and one water truck. The estimated work force should be limited to no more than twenty personnel on the site at any given time during construction.

Water Tank

The specific site location of the water tank was identified during the D'Andrea 3 and 4 Pressure Zones and Tank 2 Discovery prepared by TMWA because it met the required water tank pad elevation of 5,192 feet above mean sea level (AMSL). The estimated tank size would be 27 feet in height (24-foot wall height with a three foot radius knuckle roof) and 46 feet in diameter. Overflow design flow would be for 1,500 gallons per minute. Inlet/Outlet and overflow piping would consist of schedule 40 steel with fusion-bonded shop applied epoxy coating on interior and exterior. Steel pipe would extend five feet outside the tank footing and transition to the feeder/drain lines. The overflow piping may terminate in an above grade air gap if discharging into a drainage structure located next to the tank.

Required appurtenances include, but are not limited to, mushroom vent(s), two 36-inch diameter manways, silt stop/trap, cathodic monitoring system, exterior ladder assembly with safety cage

and top landing safety grating and handrails, 30-inch square roof access hatch, intrusion alarm, liquid level/sample line and pressure transducer inside the valve vault. The coating system would consist of an epoxy interior, polyurethane exterior. The color would be selected by Lennar Reno, LLC (Lennar) and TMWA, in coordination with the BLM, the City of Sparks and Washoe County.

Water Tank Pad

The perimeter of the tank itself would sit on a concrete stem wall and the tank floor would sit on a layer of sand over compacted base rock material. The access road and the tank site would be paved with asphalt.

Access Road

The access road would be built at a maximum grade of ten percent, the road surfacing would be asphalt, and the length of the road would be approximately 870 linear feet (including the circumference of the pavement around the tank) in length and approximately 20 feet wide. For security purposes access to the tank site would be restricted from public access. A six-foot high security fence (six-foot high chain link with an additional one-foot high three-strand barbed wire top) would begin approximately where the ROW bulb begins and would be installed around the tank pad cut slope and/or toe of slope. A 20-foot wide double swing gate would be located across the access road at the bulb. The gate would be provided with a high-security latch and would be locked. TMWA would have the key to the gate, and would interlock a temporary combination lock with their lock to provide temporary access to the BLM or contractors that may need access to the tank site.

Pipeline

The pipeline would be subsurface, approximately three to four feet below the surface of the road. The maximum slope of the pipe would match the maximum slope of the roadway (i.e., ten percent).

Maintenance

General maintenance of the water tank would include the following: visual inspections on a weekly basis; inspection of the tank coatings every five to seven years; and replacement of the exterior and interior coatings on an as-needed basis. The access road and cut slopes would be maintained/repaired on an as-needed basis and weed abatement and general clean-up of the tank site would be performed one to two times per growing season.

Termination and Restoration

All disturbed slopes would be revegetated utilizing a BLM-approved weed-free seed mix following construction. Termination of the ROW is not anticipated because storage is required to provide municipal water supply, emergency supply, and fire suppression water to the customers located within the pressure zone created by the tank's hydraulic grade line elevation. In the unlikely event that the tank was retired, TMWA would demolish and remove the tank and fencing from the site, cut slopes and roads would be reclaimed and recontoured as much as practicable, and the site would be reseeded with a BLM approved certified weed free seed mix.

Environmental Protection Measures

TMWA has committed to the following Environmental Protection Measures (EPMs) to prevent unnecessary or undue degradation during construction and operation activities. These EPMs include Best Management Practices (BMPs) derived from the Truckee Meadows Construction Site Best Management Practices Handbook.

- All disturbed slopes and cut areas would be revegetated utilizing a BLM-approved weed-free seed mix following construction.
- All vehicles would be washed down prior to entering the site to reduce the spread of weeds.
- TMWA would control noxious, invasive weeds within the project area in coordination with the BLM.
- Where possible, construction activities would preserve existing vegetation and areas with permeable soils that can be used for infiltration of storm water during and after construction is complete.
- Construction activities would provide perimeter control using vegetation swales and filter strips in conjunction with other sediment control BMPs such as fiber rolls, silt fences, gravel berms, and berms constructed of salvaged native material. Vegetated swales and filter strips can also provide permanent post construction structural treatment controls and can consist of preserved or enhanced existing vegetation.
- Inspection of site design features that are intended to block or filter storm water runoff would occur weekly during construction activities to ensure they are adequate to prevent sediment transport offsite. If they are not, installation of additional BMPs would occur.
- All site design features that are intended to block or filter storm water runoff would be inspected before and after storm events to ensure they are functioning properly. For prolonged rainfall events, these site design features would be inspected daily.
- Installation of high visibility temporary fencing would occur to protect high value existing vegetation before beginning clearing or other soil-disturbing activities.
- Where possible, construction activities would preserve desirable vegetation on steep slopes and near perennial and intermittent watercourses or swales.
- Where possible, construction activities would preserve contiguous areas or clumps of native or landscaped vegetation, instead of individual trees or shrubs.
- Construction activities would not place equipment, construction materials, native materials, topsoil, or fill dirt within the limits of preserved areas.
- With the exception of frozen ground conditions, permanent revegetation must be seeded no later than 14 days after final grading, unless final grading takes place outside of the

seeding or planting window. In that case, temporary erosion control is required until seeding can occur.

- Seeding would take place between September 15 and February 15.
- Areas to be revegetated would be roughened prior to seeding. After seeding, mulch would be applied with a tackifier.
- Final stabilization requires that perennial vegetation cover consist of 70 percent of the native background cover, determined from a reference site or pre-project conditions.
- Silt fencing would be installed at a minimum of three feet from the toe of the slope or at the top of the bank.
- The drainage area upstream of the silt fence would be limited to 0.25 acre per 100 feet of fence.
- The slope area draining to any point along the silt fence would be limited to 100 feet or less.
- To reduce erosion in channels, swales or ditches caused by high flow velocities, installation of temporary check dams would occur which would be constructed of rocks or gravel bags.
- All check dams would be placed at an appropriate distance and height to allow small pools to temporarily form behind them.
- Check dams would be spaced such that the downstream toe of each dam meets the backwater from the next downstream check dam.
- All check dams would be designed to pass a two-year, 24-hour storm without causing damage to the dam or any upstream flooding.
- Check dams would be removed when no longer needed.
- Check dams would be inspected regularly during a runoff event for sediment buildup and signs of erosion under or around the dam.
- Appropriate storm drain inlet protection would occur to allow ponding and filtering of sediment-laden runoff prior to entering the storm drain system. This can be achieved through block and gravel drain inlet protection, filter fabric fence drain inlet protection, sandbag barriers (for drain inlets on grade), or excavated drop inlet sediment traps.
- Accumulated sediment in BMPs shall be removed within seven days after a storm water runoff event or prior to the next anticipated storm event whichever is earlier. Sediment must be removed when the BMP design capacity has been reduced by 50 percent or more.

- Material stockpiles would be located away from storm water flows, drainage courses, and inlets.

- Wind erosion and dust control measures would be applied on the surface of stockpiles.

- Stockpile perimeter controls would be installed such as temporary berms, dikes, silt fences, fiber rolls, sandbags, or gravel bag barriers as soon as possible after stockpiles are created.

- Construction activities would collect and properly dispose of Portland Cement Concrete and asphalt concrete waste so that it does not enter the storm drain system.

- Where possible, concrete suppliers should conduct washout activities at their own plants or dispatch facilities.

- If washout is conducted at the construction site, the operator shall employ control measures (e.g., lined pits or portable washouts) to contain and manage on-site concrete washout to prevent discharge. The pit or container must be designed so that no overflows can occur due to inadequate sizing or precipitation.

- Fueling, washing, and major maintenance of equipment would occur offsite whenever possible. In the event of oil, fuel, lubricating grease, or other equipment leaks, cleanup would be conducted as soon as possible. Any contaminated soil would be removed, managed, and disposed of at an off-site facility in compliance with State and federal regulations.

- In the event of a major spill, the following actions would be taken in addition to any federal, State, and local health and safety regulations;

    - Contain the spread or migration of the spill using the on-hand supply of erosion control structures and/or by creating dirt berms, as feasible and necessary;

    - Regulated wastes would be removed from the Project area and disposed of in a State, federal, or local designated area; and

    - If a spill of a petroleum constitute is considered to meet the reportable quantity per the Nevada Division of Environmental Protection's (NDEP) guidelines (greater than 25 gallons or greater than three cubic yards of impacted material) or a reportable quantity for hazardous waste is released based on the United States Environmental Protection Agency guidelines established under Title III List of Lists (40 CFR Part 302), the BLM and NDEP would be notified within 24 hours and the appropriate remedial actions and confirmation sampling would be conducted under the direction of the NDEP.

- Spill cleanup kits would be provided on-site and on fueling trucks. A drip pan or absorbent pad would be used unless fueling or conducting maintenance occurs over an impervious surface.

- All fueling equipment would be equipped with automatic shut-off nozzles to contain drips.

- All vehicles would be inspected daily for leaky hoses, gaskets, or other problems.

- No detergents, solvents, degreasers, or other chemical products would be used on site for on-site vehicle cleaning.

- Emissions of fugitive dust from disturbed surfaces would be minimized by the application of water to roads (or other appropriate dust palliative), and/or the use of wind-break fencing designed to limit wind erosion.

- Construction activities would follow all applicable Washoe County District Health Department dust control standards.

- The Project would comply with all Washoe County Air Quality permit requirements.

- The tank color would be selected by Lennar and TMWA, in coordination with the BLM, the City of Sparks, and Washoe County. The tank color would be consistent with the surrounding environment.

- If surface disturbance is initiated during the migratory bird breeding season (April 1 through July 31), a qualified biologist would survey the area prior to land clearing activities. Clearance surveys would occur within the Project area, including a 300-foot buffer around the Project area. Clearance surveys for migratory birds are only valid for 14 days. If surface disturbance for the specific location does not occur within 14 days of the survey, another survey would be needed. However, if the vegetation has been fully cleared from the work area within the 14-day clearance survey time frame, no additional clearance surveys would be required for the disturbed area because it would no longer contain potential migratory bird nesting habitat. If active nests are located, or if other evidence of nesting (i.e., mated pairs, territorial defense, carrying nesting material, transporting food) is observed, a 300-foot buffer would be delineated and the Project area avoided, preventing destruction or disturbance to nests until they are no longer actively breeding or rearing young, or until the young have fledged. TMWA's biologist would inform TMWA when the birds have left the nest. TMWA would not conduct surface disturbing activities within the exclusion zone until the biologist determines that the birds are no longer nesting.

- TMWA will avoid direct physical disturbance (e.g., grading) to rock outcrops that may potentially be used for bat roosting habitat.

- TMWA would comply with all applicable State and federal fire laws and regulations. All reasonable measures would be taken to prevent and suppress fires in the Project Area, and each vehicle would carry hand tools and a fire extinguisher.

- Vehicle catalytic converters would be inspected often and cleaned of brush and grass debris.

- Wildland fires would immediately be reported to the BLM Sierra Front Interagency Dispatch Center at 775-883-5995. Information reported would include the location (latitude and

longitude if possible), fuels involved, time started, who or what is near the fire, and the direction of fire spread.

- Pursuant to 43 CFR 10.4(g), TMWA would notify the BLM authorized officer, by telephone, and with written confirmation, immediately upon the discovery of human remains, funerary objects, sacred objects, or objects of cultural patrimony (as defined in 43 CFR 10.2). Further, pursuant to 43 CFR 10.4 (c) and (d), the operator would immediately stop all activities in the vicinity of the discovery and not commence again for 30 days, or when notified to proceed by the BLM authorized officer.

- In the event that previously undiscovered paleontological resources are discovered in the performance of any surface disturbing activities, the item(s) or condition(s) would be left intact and immediately brought to the attention of the authorized officer of the BLM. If significant paleontological resources are found, avoidance, recordation, and data recovery would be required.

- Any cultural resource discovered by the permit holder, or any person working on their behalf, during the course of activities on federal land would be immediately reported to the BLM Authorized Officer by telephone, with written confirmation. The permit holder would suspend all operations within 100 meters (330 feet) of such discovery and protect it until an evaluation of the discovery can be made by the authorized officer. If the BLM determines, in consultation with the Nevada State Historic Preservation Office, that the site is or may be eligible for the National Register of Historic Places, a BLM archaeologist would determine an exclusion zone adequate to protect the resource. TMWA would not conduct any surface disturbing activities within this exclusion zone without further authorization from the BLM, which may require further environmental and/or cultural analyses. The holder is responsible for the cost of evaluation and mitigation. Operations may resume only upon written authorization to proceed from the authorized officer.

- All solid wastes would be disposed of in a State, federal, or local designated site. Pursuant to 43 CFR 8365.1-1(b) (3), no sewage, petroleum products, or refuse would be dumped from any vehicle.

2.1.2 Alternative B: No Action

The purpose of the No Action Alternative is to provide the baseline of existing conditions. On the basis of the No Action Alternative, this final EA is able to evaluate the degree of change from the current situation to what would occur under implementation of any other alternative.

Under the No Action Alternative, the ROW would not be approved and the access road and water tank would not be constructed. The Project area would remain in the existing condition and would remain open for other multiple-use actions, as approved by the BLM. Under this alternative, municipal water supply, emergency supply, and fire suppression water would not be available to residents located within the pressure zone created by the hydraulic grade line elevation of the proposed water tank. As a result of there being no site with an acceptable pad area at the required elevation of 5,192 feet AMSL within the D'Andrea master planned community, or on adjacent private property, future residential phases of the D'Andrea master planned community would likely be restricted to existing developed or platted lots. Future lots could not be final mapped without the additional water storage provided by the proposed water tank.

2.1.3 Alternatives Considered but Dismissed from Further Analysis

An alternate site location for the water tank was considered prior to the submission of the POD (Alternative C) (Figure 7). This alternative would have been located approximately 200 feet northwest of the Proposed Action. After a field site selection meeting with the City of Sparks and Washoe County, it was determined that this alternate location would result in increased visual impacts because it would be visible from residents and travel ways within the surrounding area. Therefore, this alternative was not selected for detailed analysis.

3.0 AFFECTED ENVIRONMENT

3.1 SETTING

3.1.1 Resources Considered for Analysis

The BLM is required to address specific elements of the environment that are subject to requirements in statute or regulation or by EO (BLM, 2008). Table 3-1 lists the elements that must be addressed in all environmental analysis and indicates whether the Proposed Action and Alternatives affect those elements. Other resources of the human environment that have been considered for analysis are listed in Table 3-2.

Table 3-1 Supplemental Authorities*

Resource	Present Yes/No	Affected Yes/No	Rationale
Air Quality, including Global Climate Change and Greenhouse Gas Emissions	Y	N	The Project area is within the Washoe County air basin, which is in non-attainment status for PM_{10} (large particulates). During construction activities there would be negligible emissions from motor vehicles and equipment, and fugitive dust (particulates). These negligible increases in emissions and particulates would be minimized by implementation of applicant committed EPMs. Maintenance activities over the long-term would also contribute to negligible increases in emissions and particulates.
Areas of Critical Environmental Concern	N	N	There are no designated ACECs within the Project area. Potential visual impacts to the Pah Rah High Basin Petroglyph ACEC are analyzed with visual resources below.
Cultural Resources	N	N	Based on a class III cultural resources inventory, there a no prehistoric or historic sites in the Project area (CR-15-087).
Environmental Justice	N	N	No environmental justice issues are present in the Project area, and the proposed Project will not result in disproportionately high or adverse impacts to minority or low income populations.
Farm Lands (prime or unique)	N	N	There are no designated prime or unique farm lands in the Project area managed by the BLM.
Floodplains	N	N	There are no designated flood plains in the Project area managed by the BLM.
Noxious Weeds	N	N	Based on a biological resources baseline report, there are no noxious weeds present in the Project area (Attachment A). Potential impacts to vegetation are analyzed below.
Migratory Birds	Y	Y	Carried forward for analysis.
Native American Religious Concerns	N	N	Coordination of the Proposed Action is on-going with the Reno-Sparks Indian Colony. No religious concerns have been identified within the Project area. Coordination with the tribe would continue through Project implementation.
Threatened or Endangered Species	N	N	Consultation was conducted with the Nevada Department of Wildlife (NDOW) and the United States Fish and Wildlife Service (USFWS), and the resource was determined to not be present.
Wastes, Hazardous or Solid	N	N	Any accidental spills created by motorized vehicles or equipment would be addressed through applicant committed EPMs.
Water Quality (Surface/Ground)	N	N	Resource not present. Applicant committed EPMs will be implemented to address storm water control within the Project area.
Wetlands/Riparian Zones	N	N	Resource not present.

Resource	Present Yes/No	Affected Yes/No	Rationale
Wild and Scenic Rivers	N	N	Resource not present.
Wilderness/WSA	N	N	Resource not present.

*See H-1790-1 (January 2008) Appendix 1 Supplemental Authorities to be Considered.
Supplemental Authorities determined to be Not Present or Present/Not Affected need not be carried forward or discussed further in the document.
Supplemental Authorities determined to be Present/May Be Affected may be carried forward in the document.

Table 3-2 Resources or Uses Other Than Supplemental Authorities.

Resource or Issue**	Present Yes/No	Affected Yes/No	Rationale
BLM Sensitive Species (animals)	Y	Y	Carried forward for analysis.
BLM Sensitive Species (plants)	N	N	Based on a biological resources baseline report, there are no sensitive plants species or their habitat present in the Project area (Attachment A).
Fire Management	Y	N	The Proposed Action would have no effect on fire suppression activities. The Project includes applicant committed EPMs to address wildland fire prevention during construction operations.
Forest Resources	N	N	Resource not present.
General Wildlife	Y	Y	Carried forward for analysis.
Lands and Realty	Y	Y	Carried forward for analysis.
Lands with Wilderness Characteristics	N	N	Resource not present.
Livestock Grazing	Y	N	Although the Spanish Springs Grazing Allotment overlaps the Project area, there would be no effect to grazing operations by the construction and maintenance activities.
Minerals	N	N	Resource not present.
Paleontological	N	N	Resource not present.
Recreation	Y	N	Although dispersed recreational activities occur throughout the Project area, construction and long-term maintenance activities would have negligible impacts to recreational activities within and adjacent to the Project area.
Socioeconomics	Y	Y	Resource not present.
Soils	Y	N	Construction impacts to soils would be minimized through implementation of applicant committed EPMs.
Travel Management	Y	N	Construction and maintenance activities would not affect public access through the Project area.
Vegetation	Y	Y	Carried forward for analysis.
Visual Resource Management	Y	Y	Carried forward for analysis.
Wild Horses and Burros	N	N	Resource not present.

**Resources or uses determined to be Not Present or Present/Not Affected need not be carried forward or discussed further in the document.
Resources or uses determined to be Present/May Be Affected may be carried forward in the document.

3.2 VEGETATION

3.2.1 Alternative A: Proposed Action

A vegetation survey was conducted by Stantec Consulting Services Inc. (Stantec) on July 14, 2015, to identify which vegetation community and species were present in the Project area. The baseline biological report is included as Attachment A. The survey confirmed that the Southwest Regional Gap Analysis Project data, which identified Great Basin Xeric Mixed Sagebrush Shrubland as the land cover type, were correct. Species in the Project area include a mix of native species including Wyoming big sagebrush (*Artemisia tridentata* ssp. *wyomingensis*), Nevada ephedra (*Ephedra nevadensis*), rubber rabbitbrush (*Ericameria nauseosa*), Parry's rabbitbrush (*Ericameria parryi* var. *nevadensis*), desert prickly phlox (*Linanthus pungens*), littleleaf horsebush (*Tetradymia glabrata*), and shortspine horsebrush (*Tetradymia spinosa*) and a large invasive component consisting of Russian thistle (*Salsola tragus*), tall tumblemustard (*Sisymbrium altissimum*), cheatgrass (*Bromus tectorum*) as well as pigweed (*Amaranthus retroflexus*), redstem storks bill (*Erodium cicutarium*), saltlover (*Halogeton glomeratus*), and red brome (*Bromus rubens*). A complete list of plant species observed is included in Attachment A. Out of the 11 herbaceous plant species identified within the area surveyed for the biological baseline report prepared by Stantec in August 2015, five of those species (45 percent of the herbaceous plant species identified) were identified as non-native, invasive weed species.

3.2.2 Alternative B: No Action

The existing conditions for Alternative B: No Action would be the same as described for the Proposed Action.

3.3 GENERAL WILDLIFE

3.3.1 Alternative A: Proposed Action

As discussed in Section 3.2, vegetation in the Project area consists of sagebrush shrubland species with a large component of invasive species. The survey conducted by Stantec on July 14, 2015, encompassed the Project area and a 500-foot buffer on each side of the proposed ROW (survey area). Elevations in the survey area ranged from approximately 5,100 to 5,200 feet AMSL. Wildlife species observed in and near the Project area during the survey include the following mammals: black-tailed jackrabbit (*Lepus californicus*); yellow-bellied marmot (*Marmota flaviventris*); woodrat (*Neotoma* sp.); chisel-toothed kangaroo rat (*Dipodomys microps*); and cottontail rabbit (*Sylvilagus audubonii*) (Attachment A). These were the species observed during the survey; however, habitat for additional wildlife species is available in the Project area.

Additionally, bats are common in arid shrubland areas where water is available. Bat species that may be present are discussed in BLM Sensitive Species (Wildlife) (Section 3.5).

Big game species that have the potential to occur include mule deer (*Odocoileus hemionus*) and pronghorn antelope (*Antilocapra americana*). The NDOW has mapped the Project as occupied habitat for mule deer and pronghorn antelope.

A number of bird species were observed in, or have the potential to occur in, the Project area. Section 3.4 (Migratory Birds) contains a list of all the bird species observed during the 2015 field survey. No raptors were observed during the survey. Potential habitat for golden eagles is discussed in BLM Sensitive Species (Wildlife) (Section 3.5).

Reptiles observed in the Project area include Great Basin whiptail (*Aspidoscelis tigris tigris*), Great Basin collard lizard (*Crotaphytus bicinctores*), common sagebrush lizard (*Sceloporus graciosus*), and Great Basin fence lizard (*Sceloporus occidentalis longipes*).

3.3.2 Alternative B: No Action

The existing conditions for Alternative B: No Action would be the same as described for the Proposed Action.

3.4 MIGRATORY BIRDS

3.4.1 Alternative A: Proposed Action

Migratory birds include species of birds that may breed in the Project area and then would migrate south, out of the area, prior to the onset of winter. Migratory birds are protected under the Migratory Bird Treaty Act (MBTA). On January 11, 2011, President Clinton signed EO 13186 placing emphasis on the conservation and management of migratory birds. EO 13186 addresses the responsibilities of federal agencies to protect migratory birds by taking actions to implement the MBTA. BLM management for migratory bird species on public lands is based on Information Bulletin No. 2010-110 (BLM, 2010). This Information Bulletin transmits the 2010 Memorandum of Understanding between the BLM and the USFWS for the conservation of migratory bird populations. BLM priority migratory birds include migratory birds that are either those species listed in the periodic report Birds of Conservation Concern (USFWS, 2008) or identified by the USFWS Division of Migratory Bird Management as "game birds below desired condition."

A number of migratory bird species have the potential to occur in the Project area, or make use of particular habitat features at different times of the year. During surveys in 2015, the following species were observed in the Project area and vicinity: sagebrush sparrow (*Artemisiospiza nevadensis*); black-throated sparrow (*Amphispiza bilineata*); horned lark (*Eremophila alpestris*); northern mockingbird (*Mimus polyglottos*); rock wren (*Salpinctes obsoletus*); Brewer's sparrow (*Spizella breweri*); American robin (*Turdus migratorius*); and mourning dove (*Zenaida macroura*).

3.4.2 Alternative B: No Action

The existing conditions for Alternative B: No Action would be the same as described for the Proposed Action.

3.5 BLM SENSITIVE SPECIES (WILDLIFE)

BLM Manual 6840 provides policy and guidance for the conservation of BLM sensitive species and the ecosystems upon which they depend on public lands. BLM sensitive species are: 1) species listed or proposed for listing under the Federal Endangered Species Act of 1973 (FESA); and 2) species requiring special management considerations to promote their conservation and reduce the likelihood and need for future listing under the FESA, which are designated as sensitive by the State BLM Director(s).

Prior to conducting the July 14, 2015 field survey, a list of BLM sensitive wildlife species was reviewed and it was utilized to evaluate which species may potentially occur in or near the Project area (Table 3-3). Species with potential habitat in the Project area are discussed further below.

Table 3-3 Potential for Sensitive Wildlife Species to Occur within the Project Area

Scientific Name Common Name	Listing Status (Federal/State/BLM)	General Habitat	Potential to Occur in the Project Area
Birds			
Golden eagle *Aquila chrysaetos*	--/SP/NS	Nests on cliffs of all heights and in larger trees near open areas. Occurs in rolling foothills, mountain terrain, sage-juniper flats, and rugged open habitats with canyons and escarpments. Preys mostly on small mammals.	Suitable nesting habitat may occur in the mountainous areas east of the evaluation area. The evaluation area is suitable foraging habitat. According to NDOW, there is one eagle nest within 10 miles of the survey area. The species of eagle was not specified. A raptor nest that may either be an eagle nest or a *Buteo* (e.g., red-tailed hawk) was located in 2014 approximately 10 miles from the survey area.
Western burrowing owl *Athene cunicularia hypugaea*	--/SP/NS	Prefers open, arid, treeless landscapes with low vegetation. Nests in burrows that have been abandoned by other burrowing mammals, usually in open areas with good surrounding visibility.	Suitable habitat may occur within the Project area. Western burrowing owls can be in urban/suburban and disturbed sites, and appear to be fairly tolerant of human activities. According to NDOW, burrowing owls have been observed in the vicinity of the survey area and there is one burrow within 10 miles of the survey area.
Greater sage-grouse *Centrocercus urophasianus*	FC/SP/NS	Occupies flat/rolling terrain vegetated by sage-brush, upon which it depends for both food and shelter.	Vegetation in the Project area includes sagebrush. The Project area has been classified as Priority habitat by the Nevada Sagebrush Ecosystem Program. The BLM refers to this as preliminary general habitat (PGH). There are no known greater sage-grouse lek sites within the survey area or surrounding vicinity. The nearest active lek is 10 miles northeast of the Project area.
Loggerhead shrike *Lanius ludovicianus*	--/SS/NS	Prefers open country in greasewood, sagebrush, and agricultural areas, where this avian predator can hunt reptiles, insects, small mammals and birds.	May nest in taller shrubs in the Project area.

Scientific Name Common Name	Listing Status (Federal/State/BLM)	General Habitat	Potential to Occur in the Project Area
Sage thrasher *Oreoscoptes montanus*	--/SS/NS	Considered a sagebrush obligate species and are commonly found in habitats of intact, fairly dense stands of sagebrush. They may also occur in greasewood or bitterbrush. Nest within dense brush or on the ground. Feed on insects but occasionally eat berries.	Limited habitat occurs within the Project area where sagebrush stands exist.
Brewer's sparrow *Spizella breweri*	--/SS/NS	Found throughout Nevada in sagebrush and mixed shrub communities. Nests in brush communities with low shrubs and grasses, and primarily feed on insects and seeds.	Potential to occur in sagebrush habitats.
Mammals			
Spotted bat *Euderma maculatum*	--/ST/NS	Found in a wide variety of habitats from low elevation desert scrub to high elevation coniferous forest habitats, pinyon-juniper, sagbebrush, riparian and urban high-rise habitats. Closely associated with rocky cliffs. Active foraging may be mostly in open terrain, including forest clearings, meadows, and open wetlands, sometimes in open areas near buildings or even golf courses. Roosts, including maternity roosts, generally are in cracks and crevices in cliffs, sometimes in caves or in buildings near cliffs. Diet includes a variety of insects but predominantly moths.	Limited roosting habitat occurs within the survey area. Foraging habitat in the Project area is marginal at best due to distance from nearest water source (Truckee River), but may possibly be a forager in the Project area.
Pallid bat *Antrozous pallidus*	--/SP/NS	Inhabits low desert shrubland, juniper woodlands, and grasslands. Occur in low, dry regions with rock outcrops, usually near water, and roost in rock crevices, buildings, rock piles, tree cavities, shallow caves, and abandoned mines. Their primary food sources are arthropods.	Limited roosting habitat occurs within survey area. No suitable roosting habitat occurs in the Project area. Foraging habitat is marginal at best in the Project area due to distance from nearest water source (Truckee River), but may possibly be a forager in the Project area.

Scientific Name Common Name	Listing Status (Federal/State/BLM)	General Habitat	Potential to Occur in the Project Area
Big brown bat *Eptesicus fuscus*	--/--/NS	Occurs in a variety of habitats, including pinyon-juniper, sagebrush, and agriculture. Day roosts include caves and trees. Their primary diet includes beetles and they usually forage within a few kilometers of their roost. This bat can be locally common in some urbanized environments.	Possible foraging habitat occurs within the Project area. However, the Project area does not include suitable roosting habitat.
Western small-footed *myotis* *Myotis ciliolabrum*	--/--/NS	Inhabits a variety of habitats, including desert scrub, grasslands, sagebrush steppe, blackbrush, greasewood, pinyon-juniper woodlands, pine-fir forests, agriculture and urban areas. Known to roost in caves, mines, and trees. Food items include small moths, flies, ants and beetles, with foraging occurring in the open.	Project area does not provide suitable roosting habitat. However, species is a possible forager within the Project area.
Long-legged myotis *Myotis volans*	--/--/NS	Most common in forested habitats; does occur in more arid habitats. Roosts primarily in hollow trees, but also uses rock crevices, caves, mines, and buildings. Foraging occurs in open areas for moths, beetles, flies, and termites.	Suitable roosting habitat does not occur within the Project area. However, species is a possible forager in the Project area.
Yuma myotis *Myotis yumanensis*	--/--/NS	Inhabits riparian areas, scrublands, deserts, and forests and is commonly found roosting in bridges, buildings, cliff crevices, caves, mines, and trees. Feeds on emergent aquatic insects such as caddis flies, midges, and small moths and beetles. Typically forages over water in forests.	The Project area does not provide suitable roosting habitat. May be a possible forager within the Project area, but the preferred diet of aquatic insects are not available in the Project area (approximately four miles away from the nearest water source which is the Truckee River).
Brazilian free-tailed bat *Tadarida brasiliensis*	--/SP/NS	Occurs in a wide range of habitats from desert to pinyon-juniper and pine-oak forests. Roosts in caves, mines, buildings, cliffs, bridges, and tree hallows, generally occurring in large colonies. Feeds mainly on moths, and other insects. Foraging occurs in the open. Considered migratory in northern Nevada.	Suitable roosting habitat does not occur within the Project area, but the species is a possible forager within the Project area.

Scientific Name Common Name	Listing Status (Federal/State/BLM)	General Habitat	Potential to Occur in the Project Area
Western pipistrelle *Pipistrellus hesperus*	--/--/NS	Common to deserts, woodlands, and shrublands and roosts among boulders, or in cracks and crevices of rock faces. Buildings and vegetation are occasionally used for roosting. Hibernacula includes mines and caves. Foraging occurs in the open with food sources including ants, mosquitoes, moths, and leafhoppers.	Suitable roosting habitat does not occur within the Project area. However, species is a possible forager within the Project area.

KEY:

Federal (USFWS):
FE = Listed as Endangered by the federal government
FT = Listed as Threatened by the federal government
FC = Candidate for listing by the federal government
BLM Species Classification:
NS = Nevada Sensitive Species

State:
SE = State-listed endangered
ST = State listed threatened
SP = State protected
SS = State listed sensitive

Source: Stantec, 2015

The BLM sensitive species that were determined not to have potential habitat in the Project area are included in Attachment A.

Only one BLM sensitive species was detected during the 2015 field survey by song which was Brewer's sparrow. The site could support foraging or dispersal habitat for loggerhead shrike, sage thrasher, and a number of raptor species.

The 2015 field survey confirmed that there is no nesting habitat for golden eagles and limited suitable bat roosting habitat in the survey area consisting of small rock outcrops approximately seven feet in height. These rock outcrops could support day roosting for a number of bat species including pallid bat and a number of myotis species. However, these outcrops are not expected to support many individual bats given their size. Potential foraging habitat for golden eagle, migratory birds, and BLM sensitive bat species is located within the Project area.

No suitable habitat for western burrowing owl was located and no burrows were discovered in the survey area. The survey area lacks suitable soils, according to the Natural Resources Conservation Service soil data (NRCS, 2015). A typical soil profile of the survey area consists of a very stony loam, clay, and bedrock, which are not suitably friable for deep burrows. The site had small burrows as a result of small mammal diggings, nonetheless, each were collapsed.

The Project is located in greater sage-grouse PGH (Figure 8). The presence of invasive species throughout the Project area and vicinity results in lower quality PGH as these plant species reduce the available forage and cover for greater sage-grouse. Additionally, wildland fires have occurred in the vicinity resulting in habitat fragmentation and decreasing the quality of the PGH in the Project area. Anthropogenic disturbances including noise from urban development in the vicinity further fragments and reduces the quality of PGH in the Project area. Greater sage-grouse nesting habitat is generally located within three miles of lek sites and is generally comprised of denser brush canopy for concealment of nests (Manier et al., 2014). The Project is

located approximately 10 miles away from the nearest active greater sage-grouse lek, and there was no evidence of greater sage-grouse presence or use in the Project area (Stantec, 2015).

3.5.1 Alternative B: No Action

The existing conditions for Alternative B: No Action would be the same as described for the Proposed Action.

3.6 LANDS AND REALTY

The proposed Project is located in Washoe County, Nevada, on the northwestern flank of the Pah Rah Range (Figure 1). The proposed Project is located on public land administered by the BLM Carson City District, Sierra Front Field Office. The Project area is administered according to the CRMP (BLM, 2001). Specific goals and policies set forth in the CRMP that are applicable to the proposed Project are detailed in Chapter 1. Since the Project area is within Washoe County, the development within the Project area is also guided by the Washoe County Master Plan, which provides goals and policies for various elements including land use and transportation and open space and natural resource management. The goals and policies set forth in the Washoe County Master Plan are designed to guide development within the boundaries of Washoe County. This includes goals and policies for community design, compatibility and land use patterns, infrastructure availability and minimum levels of service, visual and scenic character, and recreational resources (including potential trailheads and trail corridors). The open space and natural resources element of the Washoe County Master Plan has designated the Pah Rah Range as having high visual and scenic values. Construction of the Project would also be subject to Washoe County Development Code requirements and design standards.

The surrounding area is primarily developed with residential communities. The D'Andrea Master Planned Community is directly west of the Project area and the Wingfield Springs subdivision is to the northwest of the Project area. The surrounding area to the east and southeast is undeveloped and land uses consist of recreation activities and sand and gravel mining operations (i.e., Granite Construction's Lockwood Facility). The Project area is withdrawn from surface entry and mining (BLM, 2015). The Project area has likely been used for recreational activities which include off-highway vehicle use, hiking, mountain biking, and horseback riding. The BLM Land and Mineral Legacy Rehost 2000 System (LR2000) was queried to determine ROWs and land use authorizations within the Project area, as well as the surrounding area. No existing ROWs or BLM land use authorizations occur within the Project area. Table 3-4 lists the land use authorizations within the same township, range, and section as the proposed Project.

Table 3-4 Land Use Authorizations in the Surrounding Area

Description/Holder	Type of Authorization	Document Number
BLM	Donation of Land to US	NVN 060394
BLM	WDL-BLM- Miscellaneous	NVN 066363

Source: BLM, 2015

Project access would be via Interstate 80 east to Vista Boulevard, to South D'Andrea Parkway, and access to the ROW would be via the adjacent mass graded subdivision (Merano at D'Andrea). The Nevada Department of Transportation (NDOT) publishes an annual traffic report providing details on the amount of traffic on certain locations on Nevada Roads. Table 3-5

details annual average daily traffic levels from 2010 to 2014 at several monitoring stations along the primary access routes to the Project area.

Table 3-5 Annual Average Daily Traffic (2010-2014)

Monitoring Station	Route/Location	Average Annual Daily Traffic				
		2010	2011	2012	2013	2014
0310050	Vista Boulevard, 100 feet north of the west bound off-ramp of Interstate 80, Exit 21	25,000	24,000	26,500	26,500	27,000*
0310713	Vista Boulevard, 0.3 miles north of East Prater Way	25,000*	23,000	23,000*	22,500*	24,500
0311157	Vista Boulevard, 0.75 Miles South of Prater Way	22,000*	22,000*	22,500	28,500	29,000

*Data Adjusted or Estimated
Source: NDOT, 2015

3.6.1 Alternative B: No Action

The existing conditions for Alternative B: No Action would be the same as described for the Proposed Action.

3.7 VISUAL RESOURCE MANAGEMENT

The Visual Resource Management (VRM) system designates classes for BLM-administered lands in order to identify and evaluate scenic values to determine the appropriate levels of management during land use planning. According to BLM Manual H-8410-1, each management class portrays the relative value of the visual resources and serves as a tool that describes the visual management objectives (BLM, 1986a). The Project area is within the VRM Class III as designated by the CRMP (Figure 9). Table 3-6 describes the VRM Class III objectives.

Table 3-6 BLM Visual Resource Management Class III Objectives

Class	Objective
III	The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should no dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

Source: BLM, 1986a

BLM Manual H-8431 (BLM, 1986b) is used to determine the degree to which a project would conform to the BLM-identified guidelines and objectives of the applicable VRM. A visual contrast rating process is used for this analysis, which involves comparing the project features with the major features in the existing landscape using the basic design elements of form, line, color, and texture (BLM, 1986b). The Project area is located on the northwestern flank of the Pah Rah Range. Existing disturbance and development is part of the visual landscape of the surrounding area. The Project area is located on a hillside at the wildland-urban interface. Urban development occurs both north and west of the Project area, and the Project is immediately adjacent to the mass graded subdivision of Merano at D'Andrea. The background surrounding the Project area consists of the D'Andrea Master Planned Community to the west and the Wingfield Springs subdivision to the northwest. The background of the area to the south and east

of the Project is undeveloped and characterized by the Pah Rah Range and moderately steep drainages. The Project area is characterized by a regular, horizontal, rolling mountainous form and line. The Project area consists primarily of earth tones and hues of brown, red, gray, and tan, with some gray to green from vegetation. Vegetation within the Project area results in patchy, sparse to medium texture. The Project viewshed is dominated by objects in the distance (primarily urban development to the west and north, and mountains to the east and south). The Project is not visible from major highways or roads within the surrounding area including Interstate 80 or Vista Boulevard.

Key Observation Points

A Key Observation Point (KOP) is a specific place on a travel route or with an existing or potential use area where the view of a management activity or project would be most revealing for purposes of the contrast rating. KOPs are selected based on existing land use, frequency of visibility, duration of visibility, and anticipated activities of the observer. KOPs are generally selected along highways, well used roadways, near communities close to a project or action, and scenic overlooks because these are the areas where a large population would occur that may be impacted by a proposed action.

A total of six KOPs were analyzed through a viewshed analysis run in Geographic Information Systems (GIS) (Figure 10). The KOPs were located at various points throughout the surrounding area where it was determined visual impacts from the Project may occur, including the following: the Garda subdivision in D'Andrea west of the Project area (KOP 1); the Desert Highlands subdivision northwest of the Project area (KOP 2); the intersection of Vista Boulevard and Prater Way (KOP 3); the intersection of Vista Boulevard and Baring Boulevard (KOP 4); and the two highest points of the Pah Rah High Basin Petroglyph ACEC (KOP 5 and KOP 6) (Figure 10). The GIS viewshed analysis eliminated all but one KOP for analysis in this EA. KOP 2 was determined to be the only KOP that would have the potential to be visually impacted by the proposed Project. The analysis determined that no visual impacts would result from the proposed Project at the other KOPs, including at the two KOPs within the Pah Rah High Basin Petroglyph ACEC.

KOP 2

KOP 2 is located at the edge of the Desert Highlands subdivision approximately one mile northwest of the Project area. This angle view of the Project area at KOP 2 is southeast toward the Pah Rah Range. The topography in the foreground consists of gently rolling hills and linear unpaved roads with more flat topography in the immediate foreground. The middle ground to background consist of higher elevation, rounded mountains creating an irregular, undulating horizontal line in the distance with varying degrees of vertical relief. Vegetation in the foreground consists of short shrubs and grasses creating a patchy, medium texture with colors consisting of earth tones and hues of brown and green. Vegetation in the middle ground to background is less distinct and the colors consist of earth tones and hues of brown and red.

3.7.1 Alternative B: No Action

The existing conditions for Alternative B: No Action would be the same as described for the Proposed Action.

3.8 SOCIOECONOMICS

The Project area is within Washoe County and is bordered by the City of Sparks to the west. The City of Sparks is an incorporated city within Washoe County. The population of Washoe County at the 2010 United States census was 421,407, and the population of the City of Sparks at the 2010 census was 90,264 (U.S. Census Bureau, 2010). Table 3-7 displays population trends from 2000 to 2014 and the percent change over the 14-year period in Washoe County and the City of Sparks. As the table shows, population has grown over the 14-year period in Washoe County as a whole, as well as the City of Sparks. The Nevada State Demographers Office 2015 five-year projections show the Washoe County population increasing by approximately two percent from 2015 to 2019 (Nevada State Demographers Office, 2015).

Table 3-7 Population Trends

Community	Population by Year		Percent Change (14-Year Period)
	2000	2014	
Washoe County	333,566	436,797	+31
City of Sparks	66,420	92,396	+39

Source: Nevada State Demographer's Office, 2014

Table 3-8 summarizes key housing data for Washoe County and the City of Sparks. Washoe County as a whole has a larger housing stock than the City of Sparks; however, available housing (i.e., vacancy rates) within Washoe County and the City of Sparks are both low

Table 3-8 Housing Characteristics - 2013

Housing Characteristics	Washoe County	City of Sparks
Housing Units	184,882	37,497
Occupied Housing Units	163,198	34,250
Percent of Total Units Occupied	88	91
Owner-Occupied Units	94,596	20,108
Owner Occupied (%)	58	59
Renter-Occupied Units	68,602	14,142
Renter Occupied (%)	42	41
Vacant Housing Units	21,684	3,247
Vacancy Rate (percent)	12	9
Vacant Units: Seasonal Migrant Workers	6,067	511
Vacancy Rate, Excluding Seasonal and Migrant Workers	8	8
Average Household Size (Occupied Units)	2.57	2.65

Source: U.S. Census Bureau, 2013a, 2013b, and 2013c

Table 3-9 shows the current annual employment status of Washoe County.

Table 3-9 Washoe County Current Annual Employment Statistics for 2015

Indicator	Washoe County
Labor Force	226,388
Employment	211,174
Unemployed	15,214
Unemployment Rate	6.7

Source: NDETR, 2015

According to the United States Census Bureau, the median household income in Washoe County during the 2010 Census was $53,040 and the median household income in the City of Sparks was $52,581 (U.S. Census Bureau, 2013d). The percentage of families whose income was below the poverty level was 10.6 percent in Washoe County and 10.1 percent in the City of Sparks (U.S. Census Bureau, 2013d). The largest employment industries in Washoe County are educational services, health care, social services (approximately 20 percent), accommodation and food services (approximately 17 percent), retail (approximately 12 percent), and professional/ administrative services (approximately 11 percent) (U.S. Census Bureau, 2013d).

4.0 ENVIRONMENTAL CONSEQUENCES

4.1 INTRODUCTION

This chapter describes and compares the environmental consequences predicted to result from implementing the Proposed Action or Alternatives described in Chapter 2.0. The purpose of this chapter is to present the impact analysis of the alternatives and to disclose the impacts of the actions on affected resources by the Proposed Action or Alternatives.

The potential consequences or impacts of each alternative are addressed in the same order of resource topics in Chapter 3.0. This parallel organization allows readers to compare existing resource conditions (Chapter 3.0) with potential impacts (Chapter 4.0).

4.1.1 Types of Effects

This chapter describes the potential direct, indirect, and residual effects to resources that may result from the Proposed Action or Alternatives, as well as identifies the potential monitoring needs associated with the specific resources. In this document, the word "adverse" is used in characterizing minor (non-significant) detrimental effects to a resource, and "negligible" is used in characterizing minor (non-significant) detrimental effects to a resource that are generally undetectable. "Beneficial" effects would have a positive effect on the resource. In this document, the terms "effect" and "impact" are used synonymously. Assessment of effects can be for short-term (generally considered during Project implementation) or the long-term. Effects fall into two categories, direct (caused by the action, same time and place) and indirect (caused by the action, but later in time or further in distance).

4.2 VEGETATION

Alternative A: Proposed Action

Under the Proposed Action, TMWA would construct and maintain a 300,000-gallon, welded steel above ground water tank with an associated 20-foot wide access road and appurtenant drainage ditch and slopes resulting in 1.8 acres of permanent surface disturbance. Direct impacts would result from vegetation removal. Vegetation that would be removed as a result of the Proposed Action includes Wyoming big sagebrush, Nevada ephedra, rubber rabbitbrush, as well as several invasive non-native species. In order to prevent the introduction and spread of noxious weeds in the Project area, TMWA would revegetate all disturbed slopes and cut areas with a BLM-approved weed-free seed mix following construction, wash all vehicles down prior to entering the site, and conduct weed abatement one to two times per growing season. Due to the small size of the Project, impacts to vegetation would be negligible and long-term lasting the life of the Project.

Alternative B: No Action

Under Alternative B: No Action, the Project area would remain in existing conditions, which would include the large invasive, non-native species population. No disturbance of vegetation would occur under this alternative.

4.3 GENERAL WILDLIFE

Alternative A: Proposed Action

Under the Proposed Action, TMWA would construct and maintain a 300,000-gallon, welded steel above ground water tank with an associated 20-foot wide access road and appurtenant

drainage ditch and slopes resulting in 1.8 acres of permanent surface disturbance. Short-term, direct impacts to general wildlife from Project-related activities may occur during construction which may include temporary disturbance from human activity and noise, and temporary displacement and habitat fragmentation. Long-term, direct impacts would include the loss of 1.8 acres of habitat and forage area following construction, and/or mortality associated with vehicular collisions during road and tank maintenance. The tank would be enclosed and would not sit in a pit; therefore, there would be no impacts to general wildlife being trapped within the tank fenced area.

The Project area is close to urban development which results in noise and disturbance from human activity that results in a lower quality habitat for wildlife affected by human activity. Additional, undeveloped habitat is located adjacent to the Project area and would continue to provide habitat for general wildlife. Therefore, long-term impacts from the Project are expected to be minor.

Alternative B: No Action
No impacts to general wildlife would be expected under this alternative.

4.4 MIGRATORY BIRDS

Under the Proposed Action, TMWA would construct and maintain a 300,000-gallon, welded steel above ground water tank with an associated 20-foot wide access road and appurtenant drainage ditch and slopes resulting in 1.8 acres of permanent surface disturbance. Short-term impacts to migratory birds from Project-related activities may occur during construction.

In order to avoid short-term impacts to migratory birds, a pre-disturbance nest survey would be conducted by a qualified biologist prior to any land clearing activities during the migratory bird breeding season (April 1 through July 31). Clearance surveys would occur within the Project area, including a 300-foot buffer around the Project area. Clearance surveys for migratory birds are only valid for 14 days. If surface disturbance for the specific location does not occur within 14 days of the survey, another survey would be needed. However, if the vegetation has been fully cleared from the work area within the 14-day clearance survey time frame, no additional clearance surveys would be required for the disturbed area because it would no longer contain potential migratory bird nesting habitat. If active nests are located, or if other evidence of nesting (i.e., mated pairs, territorial defense, carrying nesting material, transporting food) is observed, a 300-foot buffer would be delineated and the Project area avoided, preventing destruction or disturbance to nests until they are no longer actively breeding or rearing young, or until the young have fledged. TMWA's biologist would inform TMWA when the birds have left the nest. TMWA would not conduct surface disturbing activities within the exclusion zone until the biologist determines that the birds are no longer nesting.

Long-term, direct impacts would include the loss of 1.8 acres of habitat and forage area following construction and/or mortality associated with vehicular collisions during road and tank maintenance. The Project area is close to urban development which results in noise and disturbance from human activity that results in lower quality nesting, roosting, and foraging habitat for migratory birds that are sensitive to human activity. Additional, undeveloped habitat is located adjacent to the Project area and would continue to provide habitat for bird species. Long-term impacts to migratory birds are expected to be minor.

Alternative B: No Action
No impacts to migratory birds would be expected under this alternative.

4.5 BLM SENSITIVE SPECIES (WILDLIFE)

Alternative A: Proposed Action
Under the Proposed Action, TMWA would construct and maintain a 300,000-gallon, welded steel above ground water tank with an associated 20-foot wide access road and appurtenant drainage ditch and slopes resulting in 1.8 acres of permanent surface disturbance. Short-term, direct impacts to BLM sensitive wildlife species from Project-related activities may occur during construction which may include temporary disturbance from human activity and noise, and temporary displacement and fragmentation. Long-term, direct impacts would include the loss of 1.8 acres of habitat and forage area following construction, and/or mortality associated with vehicular collisions during road and tank maintenance. The tank would be enclosed and not located within a pit; therefore, there would be no impacts to BLM sensitive wildlife species from being trapped within the tank fenced area.

Habitat within the 3.5-acre Project area is not considered quality nesting, roosting, or foraging habitat for BLM sensitive wildlife species as a result of the presence of invasive species, its location near urban development, and its proximity to areas burned by wildland fire. Potential impacts to golden eagles nests are not expected since they are not known to nest within the Project area or vicinity. However, foraging habitat for BLM sensitive avian species (i.e., Brewer's sparrow, golden eagle, sage thrasher, loggerhead shrike) is present and a Brewer's sparrow was detected in the vicinity of the Project area by song during the survey. Additional, undeveloped habitat is located adjacent to the Project area, and these areas would continue to provide habitat for BLM sensitive avian species. As discussed in Section 2.1.7.4, a pre-disturbance nest survey would be conducted on public lands during the nesting season to prevent short-term impacts to avian species. Therefore, impacts from the Project to BLM sensitive avian species are expected to be negligible, but long-term.

There is limited suitable bat roosting habitat in the survey area which could support day roosting for a number of bat species. However, these outcrops are not expected to support many individual bats given their size. While potential long-term impacts to BLM sensitive bat species foraging habitat may occur as a result of the Proposed Action, additional foraging habitat is located adjacent to the Project Area and would continue to provide forage for those species. As discussed in Section 2.1.7.4, TMWA would avoid direct physical disturbance of rock outcrops that may potentially be used for bat roosting habitat. Therefore, impacts from the Project to BLM sensitive bat species are expected to be negligible, but long-term.

Although the Project is located in greater sage-grouse PGH, the survey identified the habitat in the Project area and vicinity as low quality. There was no evidence of greater sage-grouse use in the Project area, and based on the invasive vegetation species present, lack of dense sagebrush cover, habitat fragmentation from previous disturbances, proximity to the urban interface, and distance from active lek sites, it is unlikely to provide greater sage-grouse foraging, nesting or brood-rearing habitat. Therefore, impacts from the Project to greater sage-grouse or their habitat are not expected.

Alternative B: No Action
No impacts to BLM sensitive species would be expected under this alternative.

4.6 LANDS AND REALTY

Alternative A: Proposed Action
Under the Proposed Action, TMWA proposes to construct and maintain a 300,000-gallon, welded steel above ground water tank with an associated 20-foot wide access road and appurtenant drainage ditch and slopes. This will require a 200-foot wide ROW, with a total ROW area of 3.5 acres. The Proposed Action is in conformance with the CRMP and the Washoe County Master Plan, particularly because it was designed to reduce visual impacts within the area. Impacts to land use resulting from the proposed ROW would be long-term because the ROW, access road, and water tank would be permanent and would change the existing land use within the Project area (which is primarily dispersed recreation activities). The ROW would result in indirect impacts because the 3.5 acres would no longer be open for other multiple use authorizations. However, because the ROW is relatively small, and because there would still be large areas surrounding the Proposed Action that would be open for multiple use authorizations, the Proposed Action would have negligible impacts on potential future multiple use authorizations in the area. Public access would be restricted during construction, but permanently at the tank location, which may result in direct impacts to access for land uses such as dispersed recreation and livestock grazing. However, because public access will remain open on a majority of the ROW, impacts to public access would largely be temporary resulting from construction restrictions (except at the tank pad location) and would be negligible. No existing land use authorizations or ROWs occur within the Project area, so no impacts would occur to existing land use authorizations.

The estimated work force would be limited to no more than 20 personnel on the site at any given time during construction. Construction operations would result in direct, short-term impacts to traffic within the area. However, because construction of the tank would not require extensive construction traffic, traffic impacts would be temporary and negligible.

Alternative B: No Action
Under Alternative B: No Action, the ROW would not be approved and the access road and water tank would not be constructed. Existing land uses (primarily dispersed recreation) would continue at current levels. The area would remain open for multiple use actions, as approved by the BLM.

4.7 VISUAL RESOURCE MANAGEMENT

Alternative A: Proposed Action
Project activities may result in direct impacts to visual resources by changing the existing scenic quality of the landscape. Within the Project area, the construction of the road and drainage ditch would increase the number of linear, horizontal forms. The road would introduce a finer texture than currently present on site. The 3:1 slopes within the ROW may result in the appearance of contrasting forms with more complex lines than are present in existing conditions. The slopes would introduce a more uniform gradation than is currently on site. Disturbed areas may result in differing colors from existing conditions, primarily on cut slopes and areas of vegetation removal. Visual impacts resulting from disturbed areas would be reduced through revegetation. Disturbed areas would result in a smoother texture and may contrast with the more medium

texture of the Project area. During construction, vehicles may introduce glare and reflections into the viewshed, and would result in the temporary introduction of prominent, contrasting and irregular forms and lines within the Project area. The water tank would introduce a solid, vertical, geometric form into the visual landscape, as opposed to the existing horizontal, irregular nature of the exiting landscape. The tank color would be selected to be consistent with the surrounding environment to reduce potentials for contrasting, bold elements and glare to be introduced into the viewshed. The fencing and gate would introduce vertical, straight, linear objects into the landscape. The fence would be vinyl coated with a flat, earth tone color which would reduce visual impacts and prevent glare. The Proposed Action was selected because of its location in front of an adjacent hillside which results in the tank appearing to blend into the adjacent hillside rather than appearing to be a large, vertical object on a hill top. As a result of the location of the tank, the color requirements of the tank, revegetation of disturbed areas, and other Project EPMs, the Proposed Action would have minor impacts on VRM within the Project area, but negligible visual impacts outside of the Project area. The Proposed Action meets the VRM Class III objectives because the Proposed Action would result in only a moderate change to the existing character of the landscape since it would retain the existing character of the landscape by revegetating disturbed areas and the tank placement and color would be compatible with the surrounding area. The tank will not dominate the view of the casual observer and is not visible from most of the surrounding developed area. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

The viewshed from KOP 2 has limited visibility of the proposed water tank (Figure 11). This would be a long term, direct impact lasting for the life of the Project. However, only small portions of the north and west sides of the tank are visible from KOP 2. The viewshed analysis included the tank height of 27 feet from the existing ground elevation, which is conservative because the tank pad would be within a cut area ranging from a one-foot to five-foot cut. With the tank location being within a cut area and the placement of the tank in front of an adjacent hillside, visibility from KOP 2 would likely be reduced. In addition, using a color for the tank that is compatible with the surrounding area would also reduce visibility from KOP 2. As a result of tank location and color requirements for the tank, impacts from the tank on the viewshed at KOP 2 would be negligible.

Alternative B: No Action

Under Alternative B: No Action, the ROW would not be approved and the access road and water tank would not be constructed. The viewshed would remain in the existing condition.

4.8 SOCIOECONOMICS

Alternative A: Proposed Action

The Project would have direct, beneficial socioeconomic impacts on Washoe County and the City of Sparks. However, socioeconomic impacts would primarily occur within the City of Sparks. The Project would employ a temporary workforce of at least 20 individuals during construction of the water tank. The Project may contribute to indirect, beneficial impacts through additional revenue generated for local businesses from the purchase of goods and services during construction. Services that may be impacted include construction, retail, services and accommodations. The Project would also have direct, beneficial impacts from the added revenue to Washoe County and the City of Sparks resulting from construction and building permitting fees for the construction of the water tank as well as property taxes levied on the improved land.

The personnel required for the construction of the water tank would be present in the short-term and would not create a noticeable increase in demand for additional public or private services (e.g., law enforcement, emergency response, fire protection, health care and social services, and solid waste). The Project would result in indirect, beneficial impacts from a potential increase in sales and tax receipts from the purchase of equipment, supplies and construction material needed for the Proposed Action.

Alternative B: No Action

Under Alternative B: No Action, the ROW would not be approved and the access road and water tank would not be constructed. Current socioeconomic impacts would remain in the existing conditions. Direct socioeconomic impacts may occur from the loss of revenue associated with construction and building permitting costs for the water tank construction. Direct socioeconomic impacts may also result from the loss of employment opportunities associated with the water tank construction. Other indirect impacts may result from the loss of sales and tax receipts that may be generated from the purchase of equipment, supplies and construction materials.

4.9 RESIDUAL EFFECTS

"Residual effects" are those adverse effects that remain after implementation of mitigation measures. No major adverse effects ("significant" per 43 CFR 1508.27) have been identified in this final EA that warrant mitigation. Measures have been incorporated into the elements of the Proposed Action to avoid and minimize adverse effects. No mitigation is necessary; there would be no residual effects.

5.0 CUMULATIVE EFFECTS

A cumulative effect is defined under NEPA as "the change in the environment which results from the incremental impact of the action, decision, or project when added to other past, present, and reasonably foreseeable future actions (RFFAs), regardless of what agency (federal or non-federal) or person undertakes such other action." "Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time" (40 CFR Part 1508.7). Past, present, and RFFAs are analyzed to the extent that they are relevant and useful in analyzing whether the reasonably foreseeable effects of the Proposed Action and/or Alternatives may have an additive and significant relationship to those effects.

Cumulative Effects Geographic Area

Cumulative effects and the geographic area to be analyzed for cumulative effects vary by the type of resource and impact. To determine the size of the Cumulative Effects Study Areas (CESAs), each environmental resource was analyzed to determine the geographic extent to which the environmental effect from the Proposed Action would be reasonably detected. However, for simplicity, ease of cumulative effects analysis, and in an attempt to avoid having only slightly different CESAs for a number of resources, CESA boundaries were left identical for multiple resources where it seemed reasonable and conservative to do so. Table 5-1 details the different CESAs that have been developed for the various resources.

Table 5-1 Cumulative Effects Study Area by Resource

Resource	CESA Boundary	Approximate Acres	Description	Figure Number
Vegetation, General Wildlife, Migratory Birds, BLM Sensitive Species (Wildlife)	Vegetation and Wildlife CESA	43	2015 Biological Baseline Survey Area	Figure 12
Lands and Realty	Lands and Realty CESA	4	ROW Area	Figure 13
Visual Resource Management	VRM CESA	919	KOP 2 Viewshed	Figure 14
Socioeconomics	Socioeconomics CESA	22,934	The City of Sparks Municipal Boundary and the Proposed Project Area	Figure 15

Timeframe for Effects Analysis

The timeframe for past, present, and RFFAs begins with the earliest recorded data in LR2000 and extends into the future 10 years to capture the most likely RFFAs that may result in cumulative impacts when combined with the Proposed Action.

Past, Present, and Reasonably Foreseeable Actions

Information utilized in the cumulative impacts assessment was gathered from the following sources: BLM's LR2000; The Nevada Atlas; aerial photography; Washoe County and the City of Sparks data. The BLM LR2000 database was queried for authorized and pending multiple land use activities, ROW grants, mineral and non-mineral exploration and mining permits. Aerial photography was used to located potential disturbances not within the LR2000 database (i.e.,

development on private land) and to confirm disturbance acreages from the LR2000 query. Past and present actions, as well as RFFAs, occurring with each CESA are discussed below.

Effects Analysis
Those resources which it was determined have potential impact from the Proposed Action have been analyzed for cumulative effects.

Vegetation
Past and present actions within the vegetation and wildlife CESA (Figure 12) include dispersed recreation, previously mass graded residential lots, limited livestock grazing, and past wildland fires. RFFAs within the CESA would include continued dispersed recreation and the development of the residential lots within the D'Andrea subdivision. Cumulative impacts to vegetation from the future development of the lots would be negligible because these lots have already been mass graded, and vegetation was previously removed. The LR2000 database was queried and no authorized or pending actions (other than the Proposed Action) occur within the CESA.

Proposed Action
The Proposed Action would result in 1.8 acres of surface disturbance within the 43-acre vegetation and wildlife CESA (approximately 4.2 percent of the CESA). The disturbance associated with the proposed access road and water tank would result in a permanent loss of vegetation within the CESA. Existing vegetation in the CESA consists of sagebrush shrubland species with a large component of invasive species. Previous disturbance from recreation, grazing, and wildland fires, and previous development has likely contributed to the introduction and spread of invasive species in the CESA. In order to prevent the introduction and spread of noxious weeds in the Project area, TMWA would revegetate all disturbed slopes and cut areas with a BLM-approved weed-free seed mix following construction, wash all vehicles down prior to entering the site, and conduct weed abatement one to two times per growing season. Therefore, incremental impacts to vegetation as a result of the Proposed Action, when combined with the impacts from past and present actions and RFFAs, are expected to be long-term and negligible in the CESA.

Alternative B: No Action
Under Alternative B: No Action, vegetation removal from the Project within the CESA would not occur and impacts to vegetation from present actions would continue. Cumulative impacts from Alternative B: No Action, when added to past, present and RFFAs, to vegetation within the CESA are not expected.

General Wildlife
Past and present actions within the vegetation and wildlife CESA (Figure 12) include dispersed recreation, previously mass graded residential lots, limited livestock grazing, and past wildland fires. RFFAs within the CESA would include continued dispersed recreation and the development of the residential lots within the D'Andrea subdivision. Cumulative impacts to general wildlife from the future development of the lots would likely be negligible because these lots have already been mass graded, and wildlife habitat has already been disturbed. The LR2000 database was queried and no authorized or pending actions (other than the Proposed Action) occur within the CESA.

Proposed Action

The Proposed Action would result in 1.8 acres of surface disturbance within the 43-acre vegetation and wildlife CESA (approximately 4.2 percent of the CESA). The disturbance associated with the proposed access road and water tank would result in a permanent loss of wildlife habitat within the CESA. Existing habitat in the CESA consists of sagebrush shrubland species with a large component of invasive species. Previous disturbance from recreation, grazing, previous development, and wildland fires as well as the proximity of the Project to urban development has resulted in lower quality habitat available for wildlife sensitive to human activity in the CESA. TMWA would conduct reclamation and reseeding following construction, which would help reestablish wildlife foraging and nesting habitat. Therefore, incremental impacts to wildlife species and their habitat as a result of the Proposed Action, when combined with the impacts from past and present actions and RFFAs, are expected to be long-term and negligible in the CESA.

Alternative B: No Action

Under Alternative B: No Action, impacts to wildlife species and their habitat from the Project within the CESA would not occur and impacts to wildlife from present actions would continue. Cumulative impacts from Alternative B: No Action, when added to past, present and RFFAs, to wildlife within the CESA are not expected.

Migratory Birds

Past and present actions within the vegetation and wildlife CESA (Figure 12) include dispersed recreation, previously mass graded residential lots, limited livestock grazing and past wildland fires. RFFAs within the CESA would include continued dispersed recreation and the development of the residential lots within the D'Andrea subdivision. Cumulative impacts to migratory birds from the future development of the lots would likely be negligible because these lots have already been mass graded and migratory bird nesting and foraging area has previously been removed. The LR2000 database was queried and no authorized or pending actions (other than the Proposed Action) occur within the CESA.

Proposed Action

The Proposed Action would result in 1.8 acres of surface disturbance within the 43-acre vegetation and wildlife CESA (approximately 4.2 percent of the CESA). The disturbance associated with the proposed access road and water tank would result in a permanent loss of migratory bird habitat within the CESA. Existing habitat in the CESA consists of sagebrush shrubland species with a large component of invasive species. Previous disturbance from recreation, grazing, and wildland fires as well as the proximity of the Project to urban development has resulted in lower quality habitat available for migratory birds sensitive to human activity in the CESA. TMWA would conduct reclamation and reseeding following construction, which would help reestablish migratory bird foraging and nesting habitat. TMWA would also conduct pre-disturbance nest surveys during the migratory bird nesting season. Therefore, incremental impacts to migratory birds and their habitat as a result of the Proposed Action, when combined with the impacts from past and present actions and RFFAs, are expected to be negligible in the CESA.

Alternative B: No Action

Under Alternative B: No Action, impacts to migratory birds and their habitat from the Project within the CESA would not occur and impacts to migratory birds from present actions would continue. Cumulative impacts from Alternative B: No Action, when added to past, present and RFFAs, to migratory birds within the CESA are not expected.

BLM Sensitive Species (Wildlife)

Past and present actions within the vegetation and wildlife CESA (Figure 12) include dispersed recreation, previously mass graded residential lots, limited livestock grazing, and past wildland fires. RFFAs within the CESA would include continued dispersed recreation and the development of the residential lots within the D'Andrea subdivision. Cumulative impacts to BLM sensitive species from the future development of the lots would not occur because these lots have already been mass graded and habitat for BLM sensitive species has already occurred. The LR2000 database was queried and no authorized or pending actions (other than the Proposed Action) occur within the CESA.

Proposed Action

The Proposed Action would result in 1.8 acres of surface disturbance within the 43-acre vegetation and wildlife CESA (approximately 4.2 percent of the CESA). The disturbance associated with the proposed access road and water tank would result in a permanent loss of BLM sensitive species habitat within the CESA. Existing habitat in the CESA consists of sagebrush shrubland species with a large component of invasive species. Previous disturbance from recreation, grazing, and wildland fires as well as the proximity of the Project to urban development has resulted in lower quality habitat available for animals sensitive to human activity in the CESA. TMWA would conduct pre-disturbance nest surveys during the migratory bird nesting season, avoid direct physical disturbance of rock outcrops that may potentially be used for BLM sensitive bat roosting habitat, and conduct reclamation including reseeding. Therefore, incremental impacts to BLM sensitive animal species and their habitat as a result of the Proposed Action, when combined with the impacts from past and present actions and RFFAs, are expected to be negligible in the CESA.

Alternative B: No Action

Under Alternative B: No Action, impacts to BLM sensitive animal species and their habitat from the Project within the CESA would not occur and impacts to BLM sensitive animal species from present actions would continue. Cumulative impacts from Alternative B: No Action, when added to past, present and RFFAs, to BLM sensitive animal species within the CESA are not expected.

Lands and Realty

Past and present actions within the lands and realty CESA (Figure 13) include dispersed recreation, limited livestock grazing, and past wildland fires. RFFAs within the CESA would include continued dispersed recreation. The LR2000 database was queried and no authorized or pending ROWs or land use authorizations (other than the Proposed Action) occur within the CESA.

Alternative A: Proposed Action

The Proposed Action would increase surface disturbance within the CESA by approximately 1.8 acres (approximately 51 percent of the CESA), and the proposed ROW would remove

approximately 3.5 acres from being used for certain land uses such as livestock grazing. The Proposed Action would also restrict public access to the tank site; however, a majority of the ROW area would remain open to dispersed recreational activities. Cumulative impacts from the Proposed Action, when combined with past, present, and RFFAs, on lands and realty within the CESA are expected to be long-term and minor.

Alternative B: No Action

Under Alternative B: No Action, existing land uses within the CESA would remain unchanged and impacts to lands and realty from current land uses would continue. Cumulative impacts from Alternative B: No Action, when added to past, present, and RFFAs, on lands and realty within the CESA are expected to be negligible.

Visual Resource Management

Past and present actions within the VRM CESA (Figure 14) include dispersed recreation, limited livestock grazing, urban development, public facilities (e.g., parks), roads, ROWs and utility infrastructure (e.g., water and sewer infrastructure including an existing 1,500,000-gallon water tank, power lines, gas lines, telephone lines and communication facilities), and historic wildland fires. Urban development includes the D'Andrea Golf and Country Club, existing residential development within the D'Andrea subdivision, existing mass graded lots within the D'Andrea subdivision, existing residential development within the Desert Highlands subdivision, existing residential development within the Vista Heights subdivision, and existing residential development and mass graded lots in the Miramonte subdivision. Public facilities include the Canyon Hills Park north of the Desert Highlands subdivision. The LR2000 database was queried and four ROWs were determined to be within the CESA. These include ROWs for portions of an oil and gas pipeline for Southwest Gas Corporation (NVN 0058689) and portions of two power transmission line ROWs, including 0.25 mile of a 345 kilovolt transmission line (NVN 030813) and approximately 340 feet of the NV Energy Washoe to Wadsworth transmission line (NVCC 0025152). RFFAs within the CESA would include continued dispersed recreation, urban development (primarily residential construction on the mass graded lots in the D'Andrea and Miramonte subdivisions), utility infrastructure, and road construction. The majority of the CESA is within the VRM Class III, with small portions of the CESA in the north and south being within the VRM Class IV (Figure 14).

Past, present, and RFFAs within the CESA have resulted in vegetation removal, development, and surface disturbance that may have affected the form, line, color, and texture of the visual landscape within the CESA. Urban development creates bold, prominent, geometric forms and features (i.e., buildings and structures) within the visual landscape, and creates both horizontal and vertical lines with differing color hues from the natural environment, and it creates dense urbanized areas as opposed to the more sparse to medium textures of the less developed areas within the CESA. Roads and above ground utilities (i.e., power lines) have increased the number of linear features within the CESA which often involve vegetation removal which impacts the texture, color, and form of the existing landscape, at least until natural revegetation of disturbed areas has occurred. If disturbed areas have become revegetated with non-native, invasive weed species, this may further impact the texture of the landscape. Above ground power lines result in vertical forms that create additional horizontal lines on the horizon. Buried utility lines (e.g., water lines, sewer lines, gas lines, telephone and fiber optic lines, and some power distribution lines), likely have resulted in negligible visual impacts and likely occurred primarily during

construction activities and lasted until revegetation of disturbed areas was completed. The existing 1,500,000-gallon water tank would have introduced a solid, vertical, geometric form into the visual landscape. The tank color is an earth tone color that is consistent with the surrounding area which reduced the overall visual impact from the tank within the CESA. Past wildland fires within the CESA have resulted in modifications to the visual landscape and are noticeable, but typically are not perceived as a man-caused or intrusive feature.

Alternative A: Proposed Action

The Proposed Action would increase surface disturbance within the CESA by approximately 1.8 acres, approximately 0.2 percent of the CESA. Project activities may result in impacts to visual resources within the CESA by changing the existing scenic quality of the landscape by adding linear, horizontal forms (e.g., access road), disturbed areas may result in differing colors from existing conditions, and the water tank would introduce a solid, vertical, geometric form into the visual landscape. These impacts would be in addition to those described from the past, present, and RFFAs. Project EPMs would help to reduce visual impacts resulting from the Project. Cumulative impacts from the Proposed Action, when combined with past, present, and RFFAs, on VRM within the CESA are expected to be long-term and minor, and would not result in non-compliance with the VRM Class III or IV objectives in the CESA.

Alternative B: No Action

Under Alternative B: No Action, past and present actions would continue to affect visual resources. Under this alternative, the water tank and associated access road would not be built and the adjacent housing development may not be constructed, which would reduce visual impacts from RFFAs compared to the Proposed Action. Cumulative impacts from Alternative B: No Action when added to past, present, and RFFAs, on VRM within the CESA are expected to be negligible.

Socioeconomics

Past and present actions within the socioeconomics CESA (Figure 15) include recreation activities, limited livestock grazing, urban development, public facilities, roads, highways and railroads, and utility infrastructure (e.g., water and sewer infrastructure including an existing 1,500,000-gallon water tank, power lines, gas lines, telephone lines, and communication facilities). Urban development includes the existing residential, commercial, civic, and industrial development within the City of Sparks. Public facilities include numerous parks, sports complexes, and the Truckee Meadows Water Reclamation Facility. Utility infrastructure is primarily associated with the urban development within the CESA. RFFAs would likely consist of continued urban development and associated utility infrastructure and road construction.

The past, present, and RFFAs within the CESA have resulted in impacts to the socioeconomic situation of both Washoe County and the City of Sparks. As stated in Section 3.8, the largest employment industries in Washoe County and the City of Sparks are educational services, health care, social services, accommodation and food services, retail, and professional/ administrative services (U.S. Census Bureau, 2013d). Development within the CESA is the primary economy of the City of Sparks and is an important part of the economy of Washoe County. The past, present, and RFFAs within the CESA provide sales and tax receipts, permitting and licensing fees, and other forms of revenue for Washoe County, the City of Sparks, and the businesses operating within the CESA. Past, present, and RFFAs have also had socioeconomic impacts through

civilian employment and by increasing the demand for public services and the need for adequate housing to accommodate the increasing population.

Alternative A: Proposed Action

The Project would have the following socioeconomic impacts on Washoe County and the City of Sparks: through employment of a temporary workforce during construction of the water tank; through additional revenue generated for local businesses from the purchase of goods and services during construction; and through additional revenue generated for Washoe County and the City of Sparks from construction and building permitting fees for the construction of the water tank as well as sales and tax receipts. Construction of the water tank would not create a noticeable increase in demand for additional public or private services (e.g., law enforcement, emergency response, fire protection, health care and social services, and solid waste). The Project would also result in a cumulative socioeconomic impact resulting from the additional employment, sales and tax receipts, property taxes, and construction and building permit fees that would be generated from the RFFA consisting of construction of the residential development that would be possible as a result of the water tank construction. In addition, the Proposed Action would result in cumulative impacts from the additional housing that would be added to the existing housing stock (which is fairly low within both Washoe County and the City of Sparks in relation to an expected two percent population growth between 2015 and 2019) (Nevada State Demographers Office, 2015) resulting from the RFFA consisting of development of the residential housing that would be possible as a result of the water tank construction, but the housing increase from the RFFA would be relatively small as opposed to available locations for housing development within the City of Sparks and Washoe County. Cumulative impacts from the Proposed Action, when combined with past, present, and RFFAs, on the socioeconomic situation within the CESA is expected to be long-term and minor.

Alternative B: No Action

Under Alternative B: No Action, past, present, and RFFAs affecting socioeconomics within the CESA would continue as described above. The additional employment and income generated from the temporary workforce needed during construction of the water tank would not occur. The additional revenue generated for local businesses from the purchase of goods and services during construction of the water tank, and the additional revenue generated for Washoe County and the City of Sparks from sales and tax receipts, construction, and building permitting fees would also not occur. In addition, cumulative socioeconomic impacts may also occur within the CESA if the housing development that would occur as a RFFA following construction of the water tank did not occur. Without the additional housing development, there would be no revenue from sales and tax receipts, building and construction permit fees to Washoe County and the City of Sparks from that housing development. In addition, the available housing stock in both Washoe County and the City of Sparks is low, and the population forecast shows a population increase of approximately two percent from 2015 to 2019 (NSDO, 2015). Under Alternative B: No Action, the available housing stock would not be increased since the RFFA of the development of the adjacent subdivision would not occur. However, housing demand would likely drive development in other available locations in the City of Sparks or Washoe County. Cumulative impacts from Alternative B: No Action when added to past, present, and RFFAs, on socioeconomics within the CESA are expected to be long-term and minor.

6.0 CONSULTATION AND COORDINATION

6.1 PUBLIC REVIEW AND COMMENT

On August 31, 2015, the BLM announced a 15-day public scoping period. The notice was to solicit input from the public regarding the Project. The draft POD, maps, and information on how to comment were made available. The scoping period closed on September 14, 2015. The BLM received no comments during this scoping period.

6.2 LIST OF PREPARERS

BLM staff that contributed to this document are listed in the table below.

Name	Role/Resource
Brian Buttazoni	Planning and Environmental Coordinator
Shaina Shippen	Lands and Realty
Pilar Ziegler	Wildlife, BLM Sensitive Species (Wildlife)
Dean Tonenna	Vegetation, Noxious Weeds
Alicia Alfaro	Archaeology
Melanie Hornsby	Recreation

Representatives from Stantec, Kautz Environmental Consultants, Inc., Manhard Consulting, TMWA, and Lennar also contributed to the preparation of this document.

Company	Name	Role/Resource
Stantec Consulting Services, Inc.	Kristi Schaff	Senior Review, Quality Assurance/Quality Control
	Michele Lefebvre	Project Manager, Wildlife, Vegetation, BLM Sensitive Species (Wildlife), Invasive Non-native Species
	Steve Morton	Assistant Project Manager, Lands and Realty, Socioeconomics, Visual Resources
	Kim Carter	Project Administrator
Kautz Environmental Consulting	Barbi Malinky-Harmon	Cultural Resources
Manhard Consulting	Chris Baker	Project Engineer
Truckee Meadows Water Authority	Heather Edmunson	Proponent
	Amanda Duncan	Proponent
	Chris Struffert	Proponent
Lennar Reno, LLC	Tim Scheideman	Proponent

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ATTACHMENT A

Biological Survey Report

2015 BIOLOGICAL SURVEY
D'ANDREA WATER TANK NUMBER 2 RIGHT-OF-WAY PROJECT
WASHOE COUNTY, NEVADA

Prepared for:

Manhard Consulting, Ltd.
9850 Double R Boulevard, Suite 101
Reno, NV 89521

Prepared by:

Stantec Consulting Services Inc.
6995 Sierra Center Parkway
Reno, NV 89511

Stantec Project Number 203703117

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Table of Contents

TABLES

FIGURES

APPENDICES

ABBREVIATIONS

AMSL	Above Mean Sea Level
BLM	Bureau of Land Management
GPS	Global Positioning System
HE	Habitat Evaluation
NDOW	Nevada Department of Wildlife
NEPA	National Environmental Policy Act
PGH	Preliminary General Habitat
ROW	Right-of-Way
Stantec	Stantec Consulting Services Inc.
SWReGAP	Southwest Regional Gap Analysis Project
TES	Threatened, Endangered, and Sensitive
TMWA	Truckee Meadows Water Authority
USFWS	United States Fish and Wildlife Service

1.0 INTRODUCTION

Truckee Meadows Water Authority (TMWA) is currently pursuing the permits and environmental approvals for a right-of-way (ROW) that would allow for access to and construction of a water tank. The proposed D'Andrea Water Tank Number 2 is located in eastern Sparks in Washoe County, Nevada (Figure 1). The Bureau of Land Management (BLM) has initiated the National Environmental Policy Act (NEPA) process to analyze the impacts of the proposed ROW and water tank at the project location. A baseline biological survey of the area was required for the NEPA analysis for the project.

In July 2015, Manhard Consulting Ltd. (on behalf of Lennar Reno, LLC and TMWA) contracted with Stantec Consulting Services Inc. (Stantec) to conduct the baseline biological survey within a 500-foot buffer of the proposed ROW. The survey included a ground survey to locate the following: 1) potential habitat for threatened, endangered, and sensitive (TES) plant and wildlife species; 2) TES plant and wildlife species individuals and/or populations; and 3) noxious weeds.

1.1 PROJECT LOCATION

The project is located in the southwest ¼ of Section 31, Township 20 North, Range 21 East, within Washoe County, Nevada (Figure 1). The project can be accessed from Sparks by taking the Vista Boulevard exit from Interstate 80 to South D'Andrea Parkway, and then traveling along unpaved roads adjacent to the mass graded subdivision of Merano at D'Andrea. Elevations in the survey area range from 5,100 feet above mean sea level (AMSL) to 5,200 feet AMSL.

The land cover type in the survey area (as defined by Southwest Regional Gap Analysis Project [SWReGAP]) is Great Basin Xeric Mixed Sagebrush Shrubland. Field conditions during the survey for wildlife and vegetation conducted on July 14, 2015, included warm temperatures and clear skies.

2.0 METHODS

Pre-field review included the preparation of a habitat evaluation (HE) form, which included an analysis for potential habitat for BLM sensitive species to occur within the survey area. A survey for all biological resources was conducted on July 14, 2015, by one biologist. A focused survey was conducted in areas with potential habitat for noxious and invasive, non-native plant species and TES plant species. All plant species encountered were noted (Appendix A). Stantec reviewed the SWReGAP data prior to going into the field and verified that community during the survey.

A focused survey was conducted in areas with potential habitat for TES wildlife species. During the field survey, all wildlife species observed in the area were recorded, as was evidence of wildlife use, including tracks, diggings, droppings, and other sign. All migratory bird species detected in the area were recorded. A list of wildlife species detected is included in Appendix A.

2.1 NOXIOUS AND INVASIVE, NON-NATIVE SPECIES

Noxious weeds within Nevada are defined in Nevada Revised Statutes 555.005 as "any species of plant which is, or is likely to be, detrimental or destructive and difficult to control or eradicate". The Nevada Department of Agriculture provides a list of all weeds currently listed as noxious for the state of Nevada (NDA, 2015). Invasive species are alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health. Native species or non-native species may show invasive traits, although this is rare for native species and relatively common for non-native species. An alien (non-native) species is, with respect to a particular ecosystem, any species that is not found in that ecosystem, any species including its seeds, eggs, spores, or other biological material capable of propagating that species that is not native to that ecosystem (EPA, 1999).

Stantec surveyed for noxious, invasive, and non-native plant species in the survey area. Stantec biologists would collect data on the locations of individuals and/or noxious weed populations, if encountered, using a Global Positioning System (GPS) unit with sub-meter accuracy. Data collected would include population density, field observations, and photographs. When invasive species are encountered they are noted; however, their locations would not be recorded by GPS. Potential habitat for noxious and invasive, non-native species included drainages, previously disturbed areas, and roadsides.

2.2 THREATENED, ENDANGERED, AND SENSITIVE PLANT SPECIES

Databases maintained by the United States Fish and Wildlife Service (USFWS) and Nevada Natural Heritage Program were searched to identify any TES plant species that may occur in the survey area or that had previously been identified in the area. The BLM Sensitive Species list was reviewed for species with potential habitat within the survey area.

Habitat for threatened or endangered plant species was not identified within the survey area during the pre-field review. Prior to field work, potential habitat was identified during Stantec's preparation of the HE for the following BLM sensitive species in the survey area: Lavin eggvetch (*Astragalus oophorus* var. *lavinii*); Ames milkvetch (*Astragalus pulsiferae* var. *pulsiferae*); Bodie Hills draba (*Cusickiella quadricostata*); windloving buckwheat (*Eriogonum anemophilum*); and Webber ivesia (*Ivesia webberi*).

A literature review for information pertaining to each plant species of interest was included in the HE submitted by Stantec on July 2, 2015 (Appendix B). Known locations and occurrences were researched and noted. Habitat requirements for the species including elevation ranges, slope positions, soil types, and precipitation zones were identified. Known plant species often found in association with species of interest were identified to help narrow areas containing potential habitat in the study area. Surveys were conducted on foot in areas identified as suitable habitat for BLM sensitive plant species and areas identified as potential habitat were spot-checked in order to determine if habitat was suitable and for presence of BLM sensitive plant species.

2.2.1 Lavin Eggvetch

Habitat for the Lavin eggvetch consists of open, dry, relatively barren gravelly clay slopes, knolls, badlands, or outcrops, derived from volcanic ash or carbonate, usually on northeast to southeast aspects, in openings in the pinyon-juniper or sagebrush (*Artemisia* spp.) zones. It is known to occur at elevations ranging from 5,700 to 7,467 feet AMSL (NNHP, 2001), and flower in late spring.

2.2.2 Ames Milkvetch

Habitat for the Ames milkvetch consists of sandy or rocky soils, often with pines or sagebrush (Hickman, 1993). It is known to occur at elevations ranging from 4,625 to 5,200 feet AMSL (NNHP, 2001), and flower in late spring.

2.2.3 Bodie Hills Draba

Habitat for the Bodie Hills draba consists of Great Basin scrub, pinyon (*Pinus monophylla*) and juniper (*Juniperus* sp.) woodlands, and is known to occur on clay or rocky soils in California, but habitat has not yet been reviewed for Nevada (NNHP, 2001). It is also known on rocky flats in California (Jepson Flora Project, 2013). It is known to occur at elevations ranging from 6,200 to 8,500 feet AMSL.

2.2.4 Windloving Buckwheat

Habitat for the windloving buckwheat consists of generally high elevation dry, exposed, relatively barren ridges and knolls on shallow soils over bedrock from 4,750 to 9,840 feet AMSL in elevation (NNHP, 2001; Reveal, 2005). At low elevations it is known to occur on dry, relatively barren and undisturbed knolls and slopes of light-colored, platy volcanic tuff weathered to form stiff clay soils (NNHP, 2001). It flowers late spring to summer.

2.2.5 Webber Ivesia

Habitat for the Webber ivesia consists of shallow shrink-swell clay soils with a gravelly surface layer over volcanic, generally andesitic bedrock, on mid-elevation benches and flats, usually co-dominating with *Artemisia arbuscula* and *Elymus elymoides* in association with *Antennaria dimorpha*, *Balsamorhiza hookeri*, *Erigeron bloomeri*, *Lewisia rediviva*, *Viola beckwithii*, etc. Its reported elevation range is 4,000 to 5,950 feet AMSL (NNHP, 2001), and is known to flower in late spring to summer.

2.3 THREATENED, ENDANGERED, AND SENSITIVE WILDLIFE SPECIES

Databases maintained by the USFWS and Nevada Department of Wildlife (NDOW) were searched to identify any TES wildlife species that may occur in the survey area or that had previously been identified in the area. In their letter dated June 29, 2015, the USFWS generated an official species list which included endangered cui-ui (*Chasmistes cujus*), threatened Lahontan cutthroat trout (*Oncorhynchus clarkii henshawi*), and endangered Carson wandering skipper (*Pseudocopaeodes eunus obscurus*) (Consultation Code: 08ENVD00-2015-SLI-0434).

Potentially suitable habitat for threatened or endangered wildlife species was not identified within the survey area during the pre-field review (Table 1).

Table 1 Threatened and Endangered Species Identified by the USFWS

Species	Known Habitat	Available Habitat Present in the Project Area
Cui-ui (*Chasmistes cujus*)	Cui-ui are lake suckers found only in Pyramid Lake and the lower Truckee River where they spawn in gravel beds. To reach spawning habitat they must first negotiate Marble Bluff Dam (USFWS, 2015a).	No perennial water sources are present in the survey area; therefore, there is no available habitat for the species.
Lahontan cutthroat trout (*Oncorhynchus clarkii henshawi*)	Perennial streams and waterbodies on the east side of the northern Sierra Nevada Mountains (USFWS, 1995).	No perennial water sources are present in the survey area; therefore, there is no available habitat for the species.
Carson wandering skipper (*Pseudocopaeodes eunus obscurus*)	Locally distributed in grassland habitats on alkaline substrates in Nevada and California. Salt grass is the larval food plant and is commonly found in the salt-bush-greasewood community of the intermountain west (USFWS, 2015b).	Salt grass is not present in the survey area; therefore, there is no available habitat for the species.

The BLM Sensitive Species list was also reviewed for wildlife species with potential habitat within the survey area. Prior to field work, potential habitat was identified for the following BLM sensitive species in the survey area: golden eagle (*Aquila chrysaetos*); western burrowing owl (*Athene cunicularia hypugaea*); greater sage-grouse (*Centrocercus urophasianus*); sage thrasher (*Oreoscoptes montanus*); Brewer's sparrow (*Spizella breweri*); spotted bat (*Euderma*

maculatum); pallid bat (*Antrozous pallidus*); big brown bat (*Eptesicus fuscus)*, Western small-footed myotis (*Myotis ciliolabrum*); long-legged myotis (*Myotis volans*); Yuma myotis (*Myotis yumanensis*); Brazilian free-tailed bat (*Tadarida brasiliensis*); and Western pipistrelle (*Pipistrellus hesperus*).

A literature review for information pertaining to each wildlife species of interest was included in the HE submitted by Stantec on July 2, 2015. Habitat requirements for each species were identified. Surveys were conducted on foot in areas identified as suitable habitat for BLM sensitive wildlife species and areas identified as potential habitat were spot-checked in order to determine if habitat was suitable and for presence of BLM sensitive species.

2.3.1 Golden Eagle

Habitat for the golden eagle consists of mountains, canyons, sagebrush steppe, deserts, and plains (Floyd et al., 2007). They nest on rocky scarps with large expanses of hunting territory. They also nest in coniferous and deciduous trees when rocks are unavailable (Ryser, 1985). Primary food base are rabbits and hares, particularly black-tailed jackrabbit. The NDOW identified one eagle nest within 10 miles of the survey area dating back to 1979, but the species of eagle was not specified (NDOW, 2015). No golden eagle nesting habitat is located in the survey area, the nearest nesting habitat is located in the mountainous area east of the project (NDOW, 2015). A raptor nest that may either be an eagle nest or a *Buteo* (e.g., red-tailed hawk) was located in 2014 approximately 10 miles from the survey area (Ziegler, 2015). Potential foraging habitat for the golden eagle is located in the area surveyed.

2.3.2 Western Burrowing Owl

The burrowing owl is a ground-dwelling owl and prefers open, arid, treeless landscapes with low vegetation (Floyd et al., 2007). They often nest in burrows that have been abandoned by other burrowing mammals, usually in open areas with good surrounding visibility. Burrowing owls are present in northern Nevada in the spring and summer months and winter in the southwestern states (GBBO, 2010). Western burrowing owls can be in urban/suburban and disturbed sites, and appear to be fairly tolerant of human activities (GBBO, 2010). According to the NDOW, burrowing owls have been observed in the vicinity of the survey area and there is one burrow within ten miles of the survey area dating back to 1977 (NDOW, 2015).

2.3.3 Greater Sage-grouse

The greater sage-grouse occupies habitats dominated by sagebrush, which the birds utilize for both cover and forage. During the breeding season sage-grouse congregate on historic open sites known as leks where males display in attempt to attract females. Nesting habitat is generally adjacent to lek sites and is comprised of denser brush canopy for concealment of nests, while brood-rearing and summer habitat encompasses sagebrush and meadow interfaces or other habitats, which supply a diversity of forbs and insects consumed by growing chicks. The majority of the year sage-grouse feed on sagebrush (Schroeder et al., 1999; GBBO, 2010). The nearest known lek to the survey area is located approximately nine miles away, and the survey area is located in BLM classified general greater sage-grouse habitat.

2.3.4 Loggerhead Shrike

The loggerhead shrike occupies open country in greasewood, sagebrush, and agricultural areas where it can hunt reptiles, insects, small mammals and birds (Floyd et al., 2007). Large prey are always impaled (barbed wire or vegetation) before eating (Yosef, 1996).

2.3.5 Sage Thrasher

The sage thrasher is considered a sagebrush obligate species and is commonly found in habitats of intact, fairly dense stands of sagebrush. They may also occur in greasewood (*Sarcobatus vermiculatus*) or bitterbrush (*Purshia tridentata*) (Floyd et al., 2007). Sage thrashers situate their nests within dense brush or on the ground. They primarily feed on insects but occasionally eat berries (Reynolds et al., 1999). Habit for sage-thrasher is limited within the survey area, and occurs in areas where sagebrush stands exist.

2.3.6 Brewer's Sparrow

Brewer's sparrow is found throughout Nevada in sagebrush and mixed shrub communities. Brewer's sparrows nest in brush communities with low shrubs and grasses, and primarily feed on insects and seeds (Floyd, et al., 2006). Habitat for Brewer's sparrow may occur within the survey area where sagebrush stands exist.

2.3.7 Spotted Bat

Spotted bat is found in a wide variety of habitats from low elevation desert scrub to high elevation coniferous forest habitats, pinyon-juniper, sagebrush, riparian and urban high-rise (cliff analog) habitats. They are closely associated with rocky cliffs. Habitats may range from desert to montane coniferous stands, including open ponderosa pine, pinyon juniper woodland, canyon bottoms, riparian and river corridors, meadows, open pasture, and hayfields. Active foraging may be mostly in open terrain, including forest clearings, meadows, and open wetlands, sometimes in open areas near buildings or even golf courses. Roosts, including maternity roosts, generally are in cracks and crevices in cliffs, sometimes in caves or in buildings near cliffs. Winter habitats are poorly known. Diet includes a variety of insects but predominantly moths (Naturserve Explorer, 2015; Bradley, et al., 2006). Roosting habitat is limited within the survey area. The survey area may consist of potential foraging habitat. However, foraging area is marginal due to the Project's distance from a water source.

2.3.8 Pallid Bat

The pallid bat inhabits low desert shrubland, juniper woodlands, and grasslands. Pallid bats most commonly occur in low, dry regions with rock outcrops, usually near water, and roost in rock crevices, buildings, rock piles, tree cavities, shallow caves, and abandoned mines (NatureServe Explorer, 2015; Bradley, et al., 2006). Their primary food sources are arthropods such as crickets, grasshoppers, beetles, scorpions, and spiders. Roosting habitat is limited within the survey area. The survey are may consist of potential foraging area. However, foraging area is marginal due to the projects distance from a water source.

2.3.9 Big Brown Bat

The big brown bat is considered a generalist in its foraging behavior and habitat selections, showing little preference for feeding over water, land, forests, or clearings (BCI, 2015). Day roosts include caves and trees (Bradley et al., 2006). This species occurs in a variety of habitats, including pinyon-juniper, sagebrush, and agriculture (BCI, 2015; Bradley et al., 2006). Their primary diet includes beetles and they usually forage within a few kilometers of their roost. This bat can be locally common in some urbanized environments (Bradley et al., 2006). Roosting habitat is limited within the survey area. The survey are may consist of potential foraging area.

2.3.10 Western Small-Footed Myotis

The western small-footed myotis inhabits a variety of habitats, including desert scrub, grasslands, sagebrush steppe, blackbrush, greasewood, pinyon-juniper woodlands, pine-fir forests, agriculture and urban areas (Bradley et al., 2006). They are known to roost in caves, mines, and trees. Food items include small moths, flies, ants and beetles, with foraging occurring in the open (Bradley et al., 2006). Roosting habitat is limited within the survey area. The survey are may consist of potential foraging area.

2.3.11 Long-Legged Myotis

The long-legged myotis is most common in forested habitats; does occur in more arid habitats (Bogen et al., 1998; Bradley et al., 2006). This species roosts primarily in hollow trees, but also uses rock crevices, caves, mines, and buildings (Bradley et al., 2006). Foraging occurs in open areas for moths, beetles, flies, and termites (Bradley et al., 2006). Roosting habitat is limited within the survey area. The survey are may consist of potential foraging area.

2.3.12 Yuma Myotis

The Yuma myotis inhabits riparian areas, scrublands, deserts, and forests and is commonly found roosting in bridges, buildings, cliff crevices, caves, mines, and trees. Its primary diet is emergent aquatic insects such as caddis flies, midges, and small moths and beetles (Bradley, et al. 2006). Typically forages over water in forests (BCI, 2013). Roosting habitat is limited within the survey area. Foraging area would also be limited within the survey area because the species' preferred diet of aquatic insects is not available in the survey area.

2.3.13 Brazilian Free-Tailed Bat

Also known as the Mexican free-tailed bat, this species occurs in a wide range of habitats from desert to pinyon-juniper and pine-oak forests (BCI, 2015). This species roosts in caves, mines, buildings, cliffs, bridges, and tree hallows, generally occurring in large colonies (BCI, 2015; Bradley et al., 2006). The diet is dominated by moths, but includes other insects as well (BCI, 2015; Bradley et al., 2006). Foraging occurs in the open (Bradley et al., 2006). This species is considered migratory in northern Nevada (Bradley et al., 2006). Roosting habitat is limited within the survey area. The survey are may consist of potential foraging area.

2.3.14 Western Pipistrelle

Now classified as canyon bat (*Parastrellus hesperus)*, the western pipistrelle is common to deserts, woodlands, and shrublands and roosts among boulders, or in cracks and crevices of rock faces (BCI, 2015). Buildings and vegetation are occasionally used for roosting (Bradley et al., 2006). Hibernacula includes mines and caves (BCI, 2015). Foraging occurs in the open with food sources including ants, mosquitoes, moths, and leafhoppers (Bradley et al., 2006). Roosting habitat is limited within the survey area. The survey are may consist of potential foraging area.

3.0 RESULTS

A complete list of plants and wildlife detected during the survey is provided in Appendix A. The vegetation community within the survey area was confirmed during the field survey to be Great Basin Xeric Mixed Sagebrush Shrubland (Figure 2). Habitat was not located for Lavin eggvetch, Ames milkvetch, Bodie Hills draba, windloving buckwheat, and Webber ivesia during the survey. Individuals or populations of TES plant species were not encountered during the survey. Survey tracks are shown on Figure 2.

Noxious weed species were not located in the survey area. Invasive, non-native plant species found during the survey include pigweed (*Amaranthus retroflexus*), redstem storks bill (*Erodium cicutarium*), saltlover (*Halogeton glomeratus*), Russian thistle (*Salsola tragus*), tall tumblemustard (*Sisymbrium altissimum*), red brome (*Bromus rubens*), and cheatgrass (*Bromus tectorum*). These are invasive, non-native species that are not considered noxious weeds in Nevada.

Only one BLM sensitive species was detected during the survey by song which was Brewer's sparrow. The site could support foraging or dispersal habitat for loggerhead shrike, sage thrasher, and a number of raptor species. The survey confirmed that there is no nesting habitat for golden eagles and limited suitable bat roosting habitat in the survey area consisting of small rock outcrops approximately seven feet in height. These rock outcrops could support day roosting for a number of bat species including pallid bat and a number of myotis species. However, these outcrops are not expected to support many individual bats given their size. No suitable habitat for western burrowing owl was located and no burrows were discovered in the survey area. The survey area lacks suitable soils, according to the Natural Resources Conservation Service soil data (NRCS, 2015). A typical soil profile of the survey area consists of a very stony loam, clay, and bedrock, which are not suitably friable for deep burrows. The site had small burrows as a result of small mammal diggings, nonetheless, each were collapsed. However, potential foraging habitat for golden eagle, migratory birds, and BLM sensitive bat species is located within the survey area. The BLM identifies greater sage-grouse habitat in the survey area as preliminary general habitat (PGH); however, due to the proximity to urban areas, platted lots, and previously disturbed areas, and because the nearest lek is nine miles away, it is unlikely to be considered quality habitat for greater sage-grouse.

The NDOW identified the survey area as being in occupied mule deer (*Odocoileus hemionus*) and pronghorn antelope (*Antilocapra americana*) habitat; however, big game animals were not directly observed during the survey.

The following migratory birds were detected during surveys: black-throated sparrow (*Amphispiza bilineata*); horned lark (*Eremophila alpestris*); northern mockingbird (*Mimus polyglottos*); rock wren (*Salpinctes obsoletus*); American robin (*Turdus migratorius*); and mourning dove (*Zenaida macroura*). Raptor nests were not discovered during the survey.

4.0 SUMMARY

A baseline biological survey for vegetation and wildlife was conducted in July 2015. During the survey, the vegetation community was confirmed, and surveys for noxious weeds and invasive, non-native plant species, as well as TES plant and wildlife species were conducted. TES plants or their habitat were not located in the survey area. There were no noxious weeds discovered within the survey area; however, a number of invasive, non-native plant species were located in the survey area. Threatened or endangered wildlife species or their habitat were not expected, nor were any located in the survey area. A number of BLM sensitive species have potentially suitable habitat available within the survey area. One BLM sensitive species was detected which was the Brewer's sparrow.

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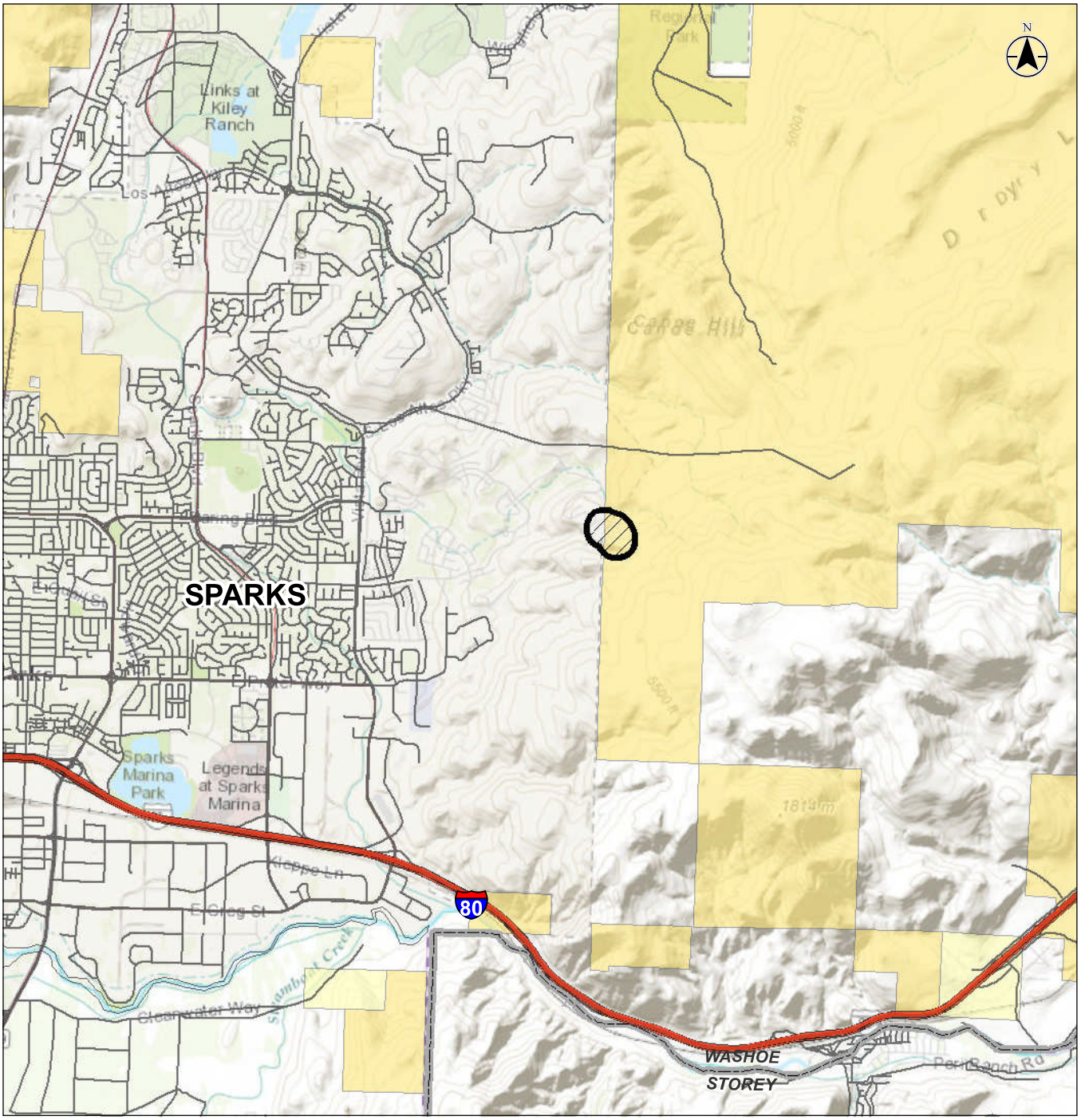
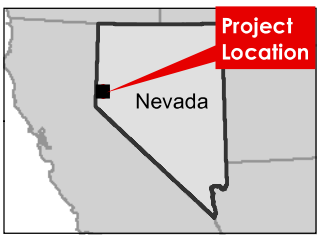
FIGURES

X:\NV\Clients\Manhard\DAndrea Water Tank 2 EA 201303117\MXDs\Working\MXDs\Fig 1 Project Location.mxd Revised: 2015-07-16 By: chjohnson





Survey Area

Land Status

- BLM
- Bureau of Reclamation
- Private (Unrestricted Development)

0 2,500 5,000 Feet

1:60,000 (at original document size of 8.5x11)

Stantec

Project Location: Washoe County' Nevada
Project No.: 201303117
Prepared by CJ on 7/16/2015
Review by DE on 7/16/2015

Client/Project:
Manhard
D'Andrea Water Tank
Biological Survey

Figure Number/Title:

Figure 1
Project Location

Notes
1. Coordinate System: NAD 1983 UTM Zone 11N
2. Basemap: Sources: Esri, HERE, DeLorme, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance

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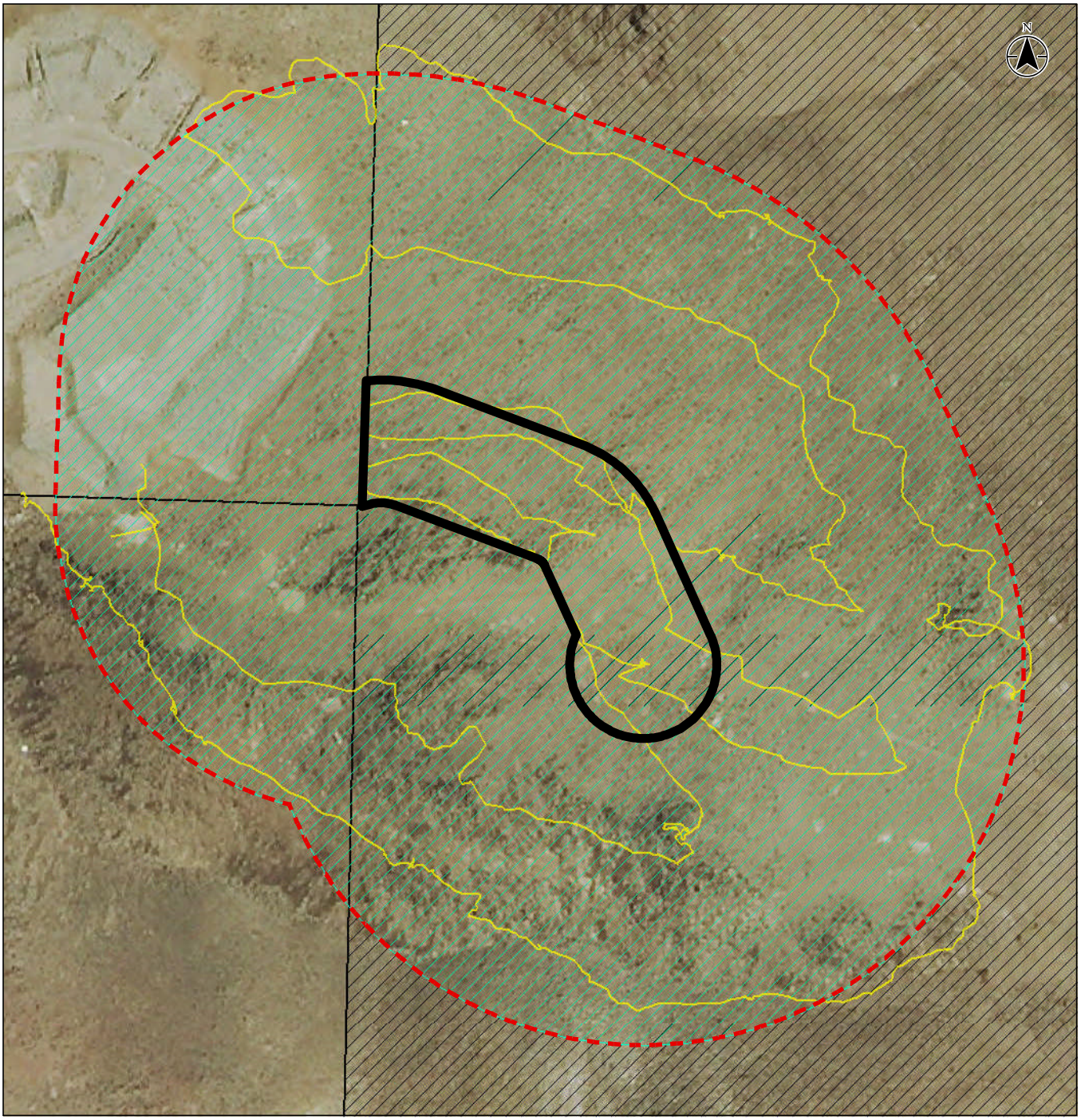

Proposed ROW

500-ft Buffer

Mixed Xeric Sagebrush

Biological Survey Tracks

Land Status

BLM

Private

0 125 250 Feet

1:3,000 (at original document size of 8.5x11)

Stantec

Project Location:
Washoe County
Nevada

Project No.: 201303117
Prepared by SM on 7/29/2015
Review by ML on 7/29/2015

Client/Project:
Manhard
D'Andrea Water Tank
Biological Survey

Figure Number/Title:

Figure 2
Survey Area, Vegetation, and Survey Tracks

Notes
1. Coordinate System: NAD 1983 UTM Zone 11N
2. Basemap: NAIP 2013 Iamge

APPENDIX A

Plant and Wildlife Species Detected in the Survey Area

D'ANDREA WATER TANK NO. 2 PROJECT
PLANT SPECIES OBSERVED

Scientific Name	Common Name
Shrubs and Trees	
Artemisia tridentata ssp. *wyomingensis*	Wyoming big sagebrush
Ephedra nevadensis	Nevada ephedra
Ericameria nauseosa	Rubber rabbitbrush
Ericameria parryi var. *nevadensis*	Parrys rabbitbrush
Eriogonum nidularium	Bird's nest buckwheat
Guiterrezia sarothrae	Broom snakeweed
Lepidium fremontii	Desert pepperweed
Linanthus pungens	Desert prickly phlox
Tetradymia glabrata	Littleleaf horsebrush
Tetradymia spinosa	Shortspine horsebrush
Grasses and grass-like plants	
Achnatherum hymenoides	Indian ricegrass
Achnatherum speciosum	Desert needlegrass
Bromus rubens[1]	Red brome
Bromus tectorum[1]	Cheat grass
Elymus elymoides	Bottlebrush squaretail
Poa secunda	Sandberg bluegrass
Herbaceous Plants	
Amsinckia tessellata	Bristly fiddleneck
Amaranthus retroflexus[1]	Pigweed
Astragalus sp.	Vetch
Descurainia pinnata var. *filipes*	Western tansymustard
Erodium cicutarium[1]	Redstem storks bill
Halogeton glomeratus[1]	Saltlover
Dieteria canescens (Machaeranthera canescens)	Hoary tansyaster
Penstemon deustus	Hotrock penstemon
Salsola tragus[1]	Prickly Russian thistle
Sisymbrium altissimum[1]	Tumble mustard
Sphaeralcea ambigua var. *ambigua*	Desert globemallow

[1]Non-native, invasive species

D'ANDREA WATER TANK NO. 2 PROJECT
WILDLIFE SPECIES DETECTED

Scientific Name	Common Name
Birds	
Artemisiospiza nevadensis	Sagebrush sparrow
Amphispiza bilineata	Black-throated sparrow
Eremophila alpestris	Horned lark
Mimus polyglottos	Northern mockingbird
Salpinctes obsoletus	Rock wren
Spizella breweri	**Brewer's sparrow**
Turdus migratorius	American robin
Zenaida macroura	Mourning dove
Mammals	
Lepus californicus	Black-tailed jackrabbit
Marmota flaviventris	Yellow-bellied marmot
Neotoma sp.	Woodrat
Dipodomys microps (likely sp.; dead juvenile)	Chisel-toothed kangaroo rat
Sylvilagus audubonii	Desert cottontail
Reptile	
Aspidoscelis tigris tigris	Great Basin whiptail
Crotaphytus bicinctores	Great Basin collard lizard
Sceloporus graciosus	Common sagebrush Lizard
Sceloporus occidentalis longipes	Great Basin fence lizard

Note: BLM Special Status Species are denoted in **bold** print.

APPENDIX B

Habitat Evaluation

Habitat Evalauation for Special Status Species --D'Andrea Water Tank #2 EA, Washoe County, NV, June 30, 2015

Common Name	Scientific Name	Status	Preferred Habitat (include elevation and soil type for plants)	Potential to Occur in Project Area? Y/N	Reasoning for Occurrence Determination	Habitat Use (see explanation below)** Plants: Flowering Dates	Nest type (ground, grass, shrub, tree, burrow, etc.)	Citations
PLANTS								
Eastwood Milkweed	*Asclepias eastwoodiana*	NS	Open areas on a wide variety of basic soils (usually pH 8 or higher), including calcareous clay knolls, sand, carbonate, or basaltic gravels, or shale outcrops, generally barren and lacking competition, frequently in small washes or other moisture-accumulating microsites, in the shadscale, sagebrush, and low pinyon-juniper zones. Elevation range is between 4,680 feet and 7,080 feet in elevation (NNHP, 2001).	No	Evaluation area does not contain basic soils with pH of 8 or higher.	Flowers in late spring. Range of most frequent survey months are May through June (NNHP, 2001)	N/A	Nevada Natural Heritage Program (NNHP). 2001. Rare Plant Atlas. Index to Maps and Fact Sheets. June 25, 2001. http://heritage.nv.gov/atlas/atlasndx.html
Margaret rushy milkvetch	*Astragalus convallarius var. margaretiae*	NS	Rocky slopes and flats among sagebrush in the pinyon-juniper and sagebrush zones, 4,480-7,680 feet in elevation (NNHP, 2001). Apparently endemic to the Pine Nut and Virginia Ranges (NNHP, 2001).	No	Evaluation area is outside of the endemic range of the species.	Late-spring. Range of most frequent survey months: May-June	N/A	Nevada Natural Heritage Program (NNHP). 2001. Rare Plant Atlas. Index to Maps and Fact Sheets. August 8, 2001. http://heritage.nv.gov/atlas/atlasndx.html
Sodaville milkvetch	*Astragalus lentiginosus* var. *sesquimetralis*	NS	Moist, open, alkaline hummocks and drainages near cool springs with Distichlis spicata, Sarcobatus vermiculatus, Sporobolus airoides, etc. Aquatic or wetland dependent in Nevada. Known elevation range is 4,150 to 4,705 feet (NNHP, 2001).	No	Evaluation area does not contain suitable aquatic or wetland habitat. The evaluation area is also approxinmately 507 feet higher than the highest end of the reported elevation range for the species.	Late-spring. Range of most frequent survey months: June-September	N/A	Nevada Natural Heritage Program (NNHP). 2001. Rare Plant Atlas. Index to Maps and Fact Sheets. June 25, 2001. http://heritage.nv.gov/atlas/atlasndx.html
Lavin eggvetch	*Astragalus oophorus* var. *lavinii*	NS	Open, dry, relatively barren gravelly clay slopes, knolls, badlands, or outcrops, derived from volcanic ash or carbonate, usually on northeast to southeast aspects, in openings in the pinyon-juniper or sagebrush zones. Elevation range is 5,700 to 7,467 feet (NNHP, 2001).	Yes	Possible, but unlikely to occur. The evaluation area does not contain gravelly clay slopes. However, the evaluation area is approximately 488 feet below the lowest end of the reported elevation range for the species.	Flowers in late spring. Range of most frequent survey months are May through June (NNHP, 2001)	N/A	Nevada Natural Heritage Program (NNHP). 2001. Rare Plant Atlas. Index to Maps and Fact Sheets. June 25, 2001. http://heritage.nv.gov/atlas/atlasndx.html
Tonopah milkvetch	*Astragalus pseudiodanthus*	NS	Deep loose sandy soils of stabilized and active dune margins, old beaches, valley floors, or drainages, with *Sarcobatus vermiculatus* and other salt desert shrub taxa. Dependent on sand dunes or deep sand in Nevada, 4,320-5,920 feet in elevation (NNHP, 2001; Barneby et at., 1989).	No	Evaluation area does not contain sand dunes or deep sand.	Late-spring. Range of most frequent survey months: May-June	N/A	Barneby, R.C. 1989. Fabales, pp. 1-279 in: Cronquist, A., A.H. Holmgren, N.H. Holmgren, J.L. Reveal and P.K. Holmgren. Intermountain Flora Volume 3, Part B. Fabales. New York Botanical Garden. Nevada Natural Heritage Program (NNHP). 2001. Rare Plant Atlas. Index to Maps and Fact Sheets. June 25, 2001. http://heritage.nv.gov/atlas/atlasndx.html
Ames milkvetch	*Astragalus pulsiferae* var. *pulsiferae*	NS	Sandy or rocky soils, often with pines or sagebrush (Hickman, 1993). Reported elevation range is 4,625 to 5,200 feet (NNHP, 2001).	Yes	Rocky soils occur throughout the evaluation area and within the reported elevation range of the species.	Flowers in late spring. Range of most frequent survey months are May through June (NNHP, 2001)	N/A	Hickman, J. C. 1993. *The Jepson Manual Higher Plants of California* . Berkeley and Los Angeles, California: University of California Press. Nevada Natural Heritage Program. 2001. Rare Plant Atlas. Index to Maps and Fact Sheets. June 25, 2001. http://heritage.nv.gov/atlas/atlasndx.html.
Bodie Hills rockcress	*Boechera bodiensis*	NS	Dry, open, rocky, high or north-facing slopes or exposed summits of granitic or rhyolitic material, on moisture-accumulating microsites in sagebrush associations within the pinyon-juniper and mountain sagebrush zones. Elevation range is 6,720 to 9,970 feet.	No	Evaluation area is on north-facing rocky slopes. However, the highest elevation of the evaluation area is approximately 1,508 feet below the lowest end of the reported elevation range.	Flowers in early spring. Range of most frequent survey months are June through July (NNHP, 2001)	N/A	Nevada Natural Heritage Program (NNHP). 2001. Rare Plant Atlas. Index to Maps and Fact Sheets. June 25, 2001. http://heritage.nv.gov/atlas/atlasndx.html

Habitat Evalauation for Special Status Species --D'Andrea Water Tank #2 EA, Washoe County, NV, June 30, 2015

Common Name	Scientific Name	Status	Preferred Habitat (include elevation and soil type for plants)	Potential to Occur in Project Area? Y/N	Reasoning for Occurrence Determination	Habitat Use (see explanation below)** Plants: Flowering Dates	Nest type (ground, grass, shrub, tree, burrow, etc.)	Citations
Bodie Hills draba	*Cusickiella quadricostata*	NS	Great Basin scrub, pinyon and juniper woodland; clay or rocky soils in California, but not yet reviewed for Nevada (NNHP, 2001). Also known on rocky flats in California (Jepson Flora Project, 2013). Elevation range is 6,200 to 8,500 feet.	Yes	Possible, but unlikely to occur. Evaluation area contains clay and rocky soils, but is more than 1,000 feet below the lowest end of the reported elevation range of the species and considerably separated from the reported range of the species	Flower phenology unknown. Range of most frequent survey months: June-September (NNHP, 2001)	N/A	Jepson Flora Project (eds.). 2013. Jepson eFlora. http://ucjeps.berkeley.edu/IJM.html Nevada Natural Heritage Program. 2001. Rare Plant Atlas. Index to Maps and Fact Sheets. June 25, 2001. http://heritage.nv.gov/atlas/atlasndx.html
Windloving buckwheat	*Eriogonum anemophilum*	NS	Generally high elevation dry, exposed, relatively barren ridges and knolls on shallow soils over bedrock from 4,750 to 9,840 feet in elevation (NNHP, 2001; Reveal, 2005). At low elevations on dry, relatively barren and undisturbed knolls and slopes of light-colored, platy volcanic tuff weathered to form stiff clay soils (NNHP, 2001).	Yes	Evaluation area contains shallow, rocky soils over bedrock, as well as clay soils. The evaluation area is within the known elevation range of the species.	Late-spring to summer. Range of most frequent survey months: May-August	N/A	Nevada Natural Heritage Program. 2001. Rare Plant Atlas. Index to Maps and Fact Sheets. August 8, 2001. http://heritage.nv.gov/atlas/atlasndx.htm. Reveal, J.L. 2005. Eriogonum, pp. 221-430 *in* : Flora of North America Editorial Committee. Flora North America North of Mexico; Volume 5: Magnoliophyta: Caryophyllidae, part 2. Oxford University Press. 656 pp.
Beatley buckwheat	*Eriogonum beatleyae*	NS	Dry volcanic outcrops at elevations between 5,600 and 8,745 feet (NNHP, 2001).	No	There are no rock outcroppings in the evaluation area and the highest elevation of the evaluation area is 388 feet lower than the lowest end of the know elevation of the species	Flower phenology unknown. Range of most frequent survey months: June-July (NNHP, 2001)	N/A	Nevada Natural Heritage Program (NNHP). 2001. Rare Plant Atlas. Index to Maps and Fact Sheets. June 25, 2001. http://heritage.nv.gov/atlas/atlasndx.html
Churchill Narrows buckwheat	*Eriogonum diatomaceum*	FC; SE; NS	Dry, relatively barren and undisturbed, white to yellowish tan, often gysiferous, clay to silty diatomaceous deposits of the Coal Valley Formation, with a variable volcanic cobble overburden, on rounded knolls, low ridges, slopes, and especially small drainages on all aspects with *Atriplex confertifolia* , *Stanleya pinnata* , *Sarcobatus baileyi* , *Artemisia spinescens* , *Bassia americana* , *Tetradymia glabrata* , and other shadscale zone associates. Known elevation range is 4,300 to 4,600 feet (NNHP, 2001).	No	Evaluation area does not contain diatomaceous deposits. Evaluation area is higher than the known elavation range for the species.	Late-spring to summer. Range of most frequent survey months: July-December (NNHP, 2001)	N/A	Nevada Natural Heritage Program (NNHP). 2001. Rare Plant Atlas. Index to Maps and Fact Sheets. June 25, 2001. http://heritage.nv.gov/atlas/atlasndx.html
Steamboat buckwheat	*Eriogonum ovalifolium* var. *williamsiae*	FE; SE; NS	Young, shallow, poorly-developed, dry soils derived from siliceous opaline sinter precipitated by past thermal spring flows, but not currently near surface water, in open areas with sparse *Atriplex confertifolia* , *Sarcobatus vermiculatus* , *Chrysothamnus nauseosus* , etc. Sometimes found on adjacent deeper and/or disturbed soils when competitive vegetation is lacking. Dependent of wetland margin areas (NNHP, 2001). Elevation range is 4,565 to 4,720 feet.	No	Evaluation area does not contain soils derived from siliceous opaline sinter or wetland margin areas. Evaluation area is higher than the known elevation range of the species.	Flowering late-spring. Range of most frequent survey months: May-July (NNHP, 2001)	N/A	Nevada Natural Heritage Program (NNHP). 2001. Rare Plant Atlas. Index to Maps and Fact Sheets. June 25, 2001. http://heritage.nv.gov/atlas/atlasndx.html
Altered andesite buckwheat	*Eriogonum robustum*	NS	Dry, shallow, highly acidic (pH 3.3-5.5) gravelly clay soils mainly of the Smallcone Series, derived from weathering of hydrothermal sulfide deposits formed in andesite, or sometimes in rhyolitic or granitoid rocks, forming mostly barren yellowish to orange brown patches on ridges, knolls, and steep slopes on all aspects, on all but the most xeric sites supporting a sparse, stunted relict woodland of yellow pines (Pinus ponderosa and/or P. jeffreyi) and pinyon pine (P. monophylla), with an equally sparse understory codominated with Arenaria nuttallii fragilis, Ericameria parryi or E. nauseosa, Elymus elymoides, and/or Poa secunda. Other normally mesic-montane conifer taxa, such as white fir, western white pine, and lodgepole pine, are occasionally present. Elevation range is 4,410 to 7,325 feet (NNHP, 2001).	No	Evaluation area does not contain soils that are highly acidic with pH of 5.5 or less.	Flowering late-spring to summer. Range of most frequent survey months: May-September (NNHP, 2001)	N/A	Nevada Natural Heritage Program (NNHP). 2001. Rare Plant Atlas. Index to Maps and Fact Sheets. June 25, 2001. http://heritage.nv.gov/atlas/atlasndx.html

Habitat Evalauation for Special Status Species --D'Andrea Water Tank #2 EA, Washoe County, NV, June 30, 2015

Common Name	Scientific Name	Status	Preferred Habitat (include elevation and soil type for plants)	Potential to Occur in Project Area? Y/N	Reasoning for Occurrence Determination	Habitat Use (see explanation below)** Plants: Flowering Dates	Nest type (ground, grass, shrub, tree, burrow, etc.)	Citations
Smooth dwarf greasebush	*Glossopetalon pungens* var. *glabrum*	NS	Crevices of carbonate cliffs and outcrops, generally avoiding southerly exposures, in the pinyon-juniper, mountain mahogany, and montane conifer zones. Elevation range is 6,000 to 7,800 feet (NNHP, 2001).	No	Evaluation area does not contain carbonate cliffs or carbonate soils and is not in the pinyon-juniper, mountain mahogany, and montane conifer zones. Evaluation area is lower than the known elevation range fot he species.	Flowering spring to early-summer; in bloom from mid-April to early July. Range of most frequent survey months: June-July (NNHP, 2001)	N/A	Nevada Natural Heritage Program (NNHP). 2001. Rare Plant Atlas. Index to Maps and Fact Sheets. June 25, 2001. http://heritage.nv.gov/atlas/atlasndx.html
Rough dwarf greasebush	*Glossopetalon pungens* var. *pungens*	NS	Crevices of carbonate cliffs and outcrops, generally avoiding southerly exposures, in the pinyon-juniper, mountain mahogany, and montane conifer zones. Elevation range is 4,400 to 7,800 feet (NNHP, 2001).	No	Evaluation area does not contain carbonate cliffs or carbonate soils and is not in the pinyon-juniper, mountain mahogany, and montane conifer zones.	Flowering spring to early-summer; in bloom from mid-April to early July. Range of most frequent survey months: April-July (NNHP, 2001)	N/A	Nevada Natural Heritage Program (NNHP). 2001. Rare Plant Atlas. Index to Maps and Fact Sheets. June 25, 2001. http://heritage.nv.gov/atlas/atlasndx.html
Sand cholla	*Grusonia pulchella*	SP, NS	Sandy to rocky flats, often in sandy areas from 3,800 to 5,000 feet in elevation; throughout most of Nevada. Habitat includes sand of dunes, dry-lake borders, river bottoms, washes, valleys, and plains in the desert. Depending on sand dunes or deep sand in Nevada. Elevation recorded at 3,950 to 6,300 feet. (NNHP, 2001; Pinkava, 2003).	No	The evaluation area does contain sandy soils, sand dunes, or deep sand.	Range of most frequent survey months: May-June.	N/A	Nevada Natural Heritage Program (NNHP). 2001. Rare Plant Atlas. Index to Maps and Fact Sheets. August 8, 2001. http://heritage.nv.gov/atlas/atlasndx.html. Pinkava, D.J. 2003. Grusonia, pp. 118-123 *in* : Flora of North America Editorial Committee, Flora of North America 4: 1-559. Oxford University Press, New York, NY; JBR 2011 Baseline Survey Report Hycroft Mine, Mine Expansion Project 2010.
Sierra Valley mousetails	*Ivesia aperta* var. *aperta*	NS	Shallow, vernally saturated, slowly draining, sandy to rocky clay soils derived from mostly andesitic volcanic rock or alluvium on benches and flats in meadows, seeps, intermittent drainages, etc., in the yellowpine, mountain sagebrush, and mountain mahogany zones. Dependent on wetland margin areas in Nevada. Reported elevation range is 6,460 to 7,300 feet (NNHP, 2001).	No	Evaluation area does not contain suitable aquatic or wetland habitat.	Flowers in late spring to summer, from late May through mid-August. Range of most frequent survey months: June-August (NNHP, 2001)	N/A	Nevada Natural Heritage Program (NNHP). 2001. Rare Plant Atlas. Index to Maps and Fact Sheets. June 25, 2001. http://heritage.nv.gov/atlas/atlasndx.html
Pine Nut Mountains mousetails	*Ivesia pityocharis*	NS	Seasonally or periodically wet, otherwise moist to dry decomposed granite soils or sod of meadow margins with shallow underlying water table and/or bedrock, associated with springs, moist drainages, or ephemeral ponds, typically on flats or gentle northwest to northeast exposures, but found on all aspects with slopes up to about 20 degrees, with *Artemisia tridentata vaseyana* , *Juncus balticus* , *Elymus elymoides* , *Camissonia tanacetifolia* , *Muhlenbergia richardsonis* , *Poa secunda* , etc. Aquatic or wetland-dependent. Reported elevation range is 6,990 to 8,550 feet (NNHP, 2001).	No	Evaluation area does not contain suitable aquatic or wetland habitat and the elevation of the evaluation area is lower than the reported elevation range for the species.	Flowers in late spring to summer. Range of most frequent survey months: July-September (NNHP, 2001)	N/A	Nevada Natural Heritage Program (NNHP). 2001. Rare Plant Atlas. Index to Maps and Fact Sheets. June 25, 2001. http://heritage.nv.gov/atlas/atlasndx.html
Webber ivesia	*Ivesia webberi*	FT, SE, NS	Shallow shrink-swell clay soils with a gravelly surface layer over volcanic, generally andesitic bedrock, on mid-elevation benches and flats, usually codominating with *Artemisia arbuscula* and *Elymus elymoides* in association with *Antennaria dimorpha* , *Balsamorhiza hookeri* , *Erigeron bloomeri* , *Lewisia rediviva* , *Viola beckwithii* , etc. Reported elevation range is 4,000 to 5,950 feet (NNHP, 2001).	Yes	Potential habitat occurs throughout the evaluation area.	Flowers in late spring to summer. Range of most frequent survey months: April-September (NNHP, 2001)	N/A	Nevada Natural Heritage Program (NNHP). 2001. Rare Plant Atlas. Index to Maps and Fact Sheets. June 25, 2001. http://heritage.nv.gov/atlas/atlasndx.html
Sagebrush pygmyleaf	*Loeflingia squarrosa* ssp. *Artemisiarum*	NS	Fine, deep, often granitic, sandy soils of valley flats and dunes in the sagebrush and possibly mixed-shrub zones, usually in openings among sagebrush. Reported elevation range is 4,350 to 4,700 feet (NNHP, 2001).	No	Evaluation area does not contain deep sandy soils or dunes and is higher than the reported elevation range for the species.	Flowers in late April to early June, appearing only in exceptionally wet years. Range of most frequent survey months is not reported (NNHP, 2001)	N/A	Nevada Natural Heritage Program (NNHP). 2001. Rare Plant Atlas. Index to Maps and Fact Sheets. June 25, 2001. http://heritage.nv.gov/atlas/atlasndx.html

Habitat Evalauation for Special Status Species --D'Andrea Water Tank #2 EA, Washoe County, NV, June 30, 2015

Common Name	Scientific Name	Status	Preferred Habitat (include elevation and soil type for plants)	Potential to Occur in Project Area? Y/N	Reasoning for Occurrence Determination	Habitat Use (see explanation below)** Plants: Flowering Dates	Nest type (ground, grass, shrub, tree, burrow, etc.)	Citations
Tiehm blazingstar	*Mentzelia tiehmii*	NS	Occupies white, alkaline clay badlands and flats, Associated species include: *Artemisia pygmaea* , *A. tridentata* , *Eriogonum shockleyi* , *Physaria chambersii* , *Cryptantha welshii* , *Hymenopappus filifolius* , *Phlox tumulosa* , *Lepidium nanum* , *Linum kingii* , *Pleiacanthus spinosus* , *Commandra umbellata* , *Frasera gypsicola* , and *Juniperus osteospermum* . Reported elevation range is 4,950 to 5,200 feet (NNHP, 2001).	No	Evaluation area does not contain white, alkaline clay badlands or flats.	Phenology unknown.	N/A	Nevada Natural Heritage Program (NNHP). 2001. Rare Plant Atlas. Index to Maps and Fact Sheets. June 25, 2001. http://heritage.nv.gov/atlas/atlasndx.html
Oryctes	*Oryctes nevadensis*	NS	Deep loose sand from 3,900 to 5,960 feet in elevation. Wide spread in western Nevada (NNHP, 2001; Cronquist et al., 1984)	No	Suitable deep loose sand does not occur within the evaluation area.	Late-spring. Range of most frequent survey months: May-June	N/A	Cronquist, A., A.H. Holmgren, N.H. Holmgren, J.L. Reveal and P.K. Holmgren. 1984. Intermountain Flora Volume 4: Subclass Asteridae (except Asteraceae). New York Botanical Garden. 573pp. Nevada Natural Heritage Program (NNHP). 2001. Rare Plant Atlas. Index to Maps and Fact Sheets. June 25, 2001. http://heritage.nv.gov/atlas/atlasndx.html.
Nevada dune beardtongue	*Penstemon arenarius*	NS	Sandy flats and low sand dunes from 3,800 to 5,000 feet in elevation (Cronquist et al., 1984; NNHP, 2001)	No	Sandy flats and low sand dunes do not occur within the evaluation area. The elevation of the evaluation area is higher than the reported elevation for the species.	Late-spring. Range of most frequent survey months: May-June	N/A	Cronquist, A., A.H. Holmgren, N.H. Holmgren, J.L. Reveal and P.K. Holmgren. 1984. Intermountain Flora Volume 4: Subclass Asteridae (except Asteraceae). New York Botanical Garden. 573pp. Nevada Natural Heritage Program (NNHP). 2001. Rare Plant Atlas. Index to Maps and Fact Sheets. August 8, 2001. http://heritage.nv.gov/atlas/atlasndx.html.
Lahontan beardtongue	*Penstemon palmeri var. macranthus*	NS	Along washes, roadsides, and canyon floors from 3,430 to 5,500 feet in elevation. Associated with carbonate soils and some subsurface moisture (NNHP, 2001; Cronquist, et al., 1984)	No	Evaluation area does not contain carbonate soils.	Late-spring, May-July (August). Range of most frequent survey months: May-June.	N/A	Nevada Natural Heritage Program (NNHP). 2001. Rare Plant Atlas. Index to Maps and Fact Sheets. August 8, 2001. http://heritage.nv.gov/atlas/atlasndx.html. Cronquist, A., A.H. Holmgren, N.H. Holmgren, J.L. Reveal and P.K. Holmgren. 1984. Intermountain Flora Volume 4: Subclass Asteridae (except Asteraceae). New York Botanical Garden. 573pp.
Wassuk beardtongue	*Penstemon rubicundus*	NS	Open, rocky to gravelly soils on perched tufa shores, steep decomposed granite slopes, rocky drainage bottoms, and roadsides or other recovering disturbances with enhanced runoff, locally abundant on recent burns, in the pinyon-juniper, sagebrush, and upper mixed-shrub and shadscale zones. Reported elevation range is 4,220 to 6,850 feet (NNHP, 2001).	No	The evaluation area is not within steep decomposed granite slopes or rocky drainage bottoms.	Flowers in late spring to summer. Range of most frequent survey months: May-September (NNHP, 2001)	N/A	Nevada Natural Heritage Program (NNHP). 2001. Rare Plant Atlas. Index to Maps and Fact Sheets. June 25, 2001. http://heritage.nv.gov/atlas/atlasndx.html
Playa phacelia	*Phacelia inundata*	NS	Alkali playas and seasonally inundated areas with clay soils, in Nevada, aquatic or wetland dependant from 5,030 to 5,640 feet in elevation (Cronquist, et al., 1984; NNHP, 2001).	No	Suitable habitat does not occur in the evaluation area.	Range of most frequent survey months: June-August	N/A	Nevada Natural Heritage Program (NNHP). 2001. Rare Plant Atlas. Index to Maps and Fact Sheets. June 25, 2001. http://heritage.nv.gov/atlas/atlasndx.htm. Cronquist, A., A.H. Holmgren, N.H. Holmgren, J.L. Reveal and P.K. Holmgren. 1984. Intermountain Flora Volume 4: Subclass Asteridae (except Asteraceae). New York Botanical Garden. 573pp.
Mono County phacelia	*Phacelia monoensis*	NS	Alkaline, barren or sparsely vegetated grayish, brownish, or reddish shrink-swell clays of mostly andesitic origin, on various slopes and aspects, mostly on stabilized or low-intensity artificial or natural disturbances, most abundant on road berms that cross such soils, less frequently on naturally eroding badlands or apparently undisturbed soil, in the pinyon-juniper and mountain sagebrush zones, variously associated with Monolepis nuttalliana, Lappula redowskii, Navarretia breweri, Mentzelia albicaulis, Phacelia gymnoclada, Cleomella, Allium anceps, Phlox longifolia, Trifolium andersonii, Elymus elymoides, Atriplex, Artemisia tridentata vaseyana, Pinus monophylla, Juniperus osteosperma, Cercocarpus ledifolius intermontanus, etc. Reported elevation range is 5,920 to 9,055 feet (NNHP, 2001).	No	Evaluation area does not contain alkaline soils. Evaluation area is relatively far north of the known range of the species in Nevada (Esmeralda, Lyon, and Mineral counties).	Flowers in late spring to summer. Range of most frequent survey months: May-June (NNHP, 2001)	N/A	Nevada Natural Heritage Program (NNHP). 2001. Rare Plant Atlas. Index to Maps and Fact Sheets. June 25, 2001. http://heritage.nv.gov/atlas/atlasndx.html

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Common Name	Scientific Name	Status	Preferred Habitat (include elevation and soil type for plants)	Potential to Occur in Project Area? Y/N	Reasoning for Occurrence Determination	Habitat Use (see explanation below)** Plants: Flowering Dates	Nest type (ground, grass, shrub, tree, burrow, etc.)	Citations
Washoe pine	*Pinus pondersoa* ssp. *Washoensis*	SS, NS	Dry montane forests from Mt Rose, Washoe County, north to the Warner Mountains in northeast California (Earle, 2012).	No	Evaluation area does not contain any conifer trees or forests.	Unknown.	N/A	Earle, C. J. (Ed.). 2012. The Gymnosperm Database. Retrieved on April 1, 2015, from http://www.conifers.org/pi/Pinus_washoensis.php
Altered andesite popcornflower	*Plagiobothrys glomeratus*	NS	Dry, shallow, mostly acidic (pH 3.3-5.5) gravelly clay soils mainly of the Smallcone Series, derived from weathering of hydrothermal sulfide deposits formed in andesite, or sometimes in rhyolitic or granitoid rocks, forming mostly barren yellowish to orange brown patches on ridges, knolls, and steep slopes on all aspects in sagebrush, pinyonjuniper, and montane conifer zones, on all but the most xeric sites supporting a sparse, stunted relict woodland of yellow pines (Pinus ponderosa and/or P. jeffreyi) and pinyon pine (P. monophylla), with an equally sparse understory codominated by Eriogonum robustum, Arenaria nuttallii fragilis, Ericameria parryi or E. nauseosa, Elymus elymoides, and/or Poa secunda. Elevation range reported: 4,850 to 6,650 feet (NNHP, 2001).	No	Evaluation area does not contain soils that are highly acidic with pH of 5.5 or less.	Flowers in summer. Range of most frequent survey months are June-July (NNHP, 2001)	N/A	Nevada Natural Heritage Program (NNHP). 2001. Rare Plant Atlas. Index to Maps and Fact Sheets. June 25, 2001. http://heritage.nv.gov/atlas/atlasndx.html
Williams combleaf	*Polyctenium williamsiae*	SE; NS	Relatively barren sandy to sandy-clay or mud margins and bottoms of non-alkaline seasonal lakes perched over volcanic bedrock in the sagebrush, pinyon-juniper, and mountain sagebrush zones, with *Carex douglasii* , *Muhlenbergia richardsonis* , *Camissonia tanacetifolia* , *Iva axillaris* , *Myosurus minimus* , *Potentilla newberryi* , *Psilocarphus brevissimus* , *Downingia* sp., *Eleocharis* , *Juncus balticus* , *Artemisia tridentata* , *A. cana* , etc. Aquatic or wetland-dependent in Nevada. Elevation range reported is 5,670 to 8,930 feet (NNHP, 2001).	No	Suitable seasonal lake, wetlands, or aquatic habitat does not occur in the evaluation area.	Flowers in early spring. Range of most frequent survey months are March through July (NNHP, 2001)	N/A	Nevada Natural Heritage Program (NNHP). 2001. Rare Plant Atlas. Index to Maps and Fact Sheets. June 25, 2001. http://heritage.nv.gov/atlas/atlasndx.html
Masonic Mountain jewelflower	*Streptanthus oliganthus*	NS	Pinyon-juniper woodlands (Calflora, 2015). Elevation range is 6,800 to 8,770 feet in elevation (NNHP, 2001).	No	Suitable habitat does not occur in the evaluation area; evaluation area is substantially lower than the reported elevation range.	Flower phenology unknown. Range of most frequent survey months: June-August (NNHP, 2001)	N/A	Calflora: Information on California plants for education, research and conservation, with data contributed by public and private institutions and individuals, including the Consortium of California Herbaria. [web application]. 2015. Berkeley, California: The Calflora Database [a non-profit organization]. Available: http://www.calflora.org/ (Accessed: Apr 01, 2015). Nevada Natural Heritage Program (NNHP). 2001. Rare Plant Atlas. Index to Maps and Fact Sheets. June 25, 2001. http://heritage.nv.gov/atlas/atlasndx.html
Shevock bristlemoss	*Orthotrichum shevockii*	NS	Arid pinyon pine woodland to very open ponderosa pine forests. Restricted to very large granitic boulders and rock walls and preferecs crevices that only receive capillary water. 3,600-5,250 feet in elevation (NatureServe, 2015; eFloras, 2008).	No	Suitable habitat does not occur within the evaluation area.	Not yet systematically surveyed in Nevada.	N/A	NatureServe Explorer. 2015. NatureServe Explorer Species Index. Available online at: http://www.natureserve.org/ eFloras (2008).Published on the Internet http://www.efloras.org [accessed 10 March 2015]. Missouri Botanical Garden, St. Louis, MO & Harvard University Herbaria, Cambridge, MA.
Tiehm peppercress	*Stroganowia tiehmii*	NS	Dry, open, very rocky clay soils or soil pockets in or near scree, talus, or boulder fields derived from basalt, other volcanic rocks, and/or fluviolacustrine sediments, on gentle to steep slopes of all aspects and topographic positions, but best developed on northeasterly aspects, in the sagebrush, upper shadscale, and lower juniper woodland zones (NNHP, 2001). Recorded elevation range is 4,820 to 6,170 feet.	No	Evaluation area is not located near or on scree, talus, or boulder fields.	Flower in early spring. Range of most frequent survey months: May (NNHP, 2001)	N/A	Nevada Natural Heritage Program (NNHP). 2001. Rare Plant Atlas. Index to Maps and Fact Sheets. June 25, 2001. http://heritage.nv.gov/atlas/atlasndx.html
AMPHIBIANS								
Dixie Valley toad	*Bufo boreas* ssp.	NS	Wetlands and aquatic habitat. Known range is Dixie Valley (U.S. Navy, 2010).	No	Wetlands and aquatic habitat does not occur within the evaluation area.	Unknown	N/A	U.S. Navy. 2010. Conservation Efforts on Navy Installations Recognized by U.S. Fish and Wildlife Service. Retrieved on April 1, 2014, from http://www.navy.mil/submit/display.asp?story_id=51633

Habitat Evalauation for Special Status Species --D'Andrea Water Tank #2 EA, Washoe County, NV, June 30, 2015

Common Name	Scientific Name	Status	Preferred Habitat (include elevation and soil type for plants)	Potential to Occur in Project Area? Y/N	Reasoning for Occurrence Determination	Habitat Use (see explanation below)** Plants: Flowering Dates	Nest type (ground, grass, shrub, tree, burrow, etc.)	Citations
Northern leopard frog	*Rana pipiens*	SP, NS	The northern leopard frog requires a mosaic of habitats to meet the requirements of all of its life stages. Northern leopard frogs breed in a variety of aquatic habitats that include slow-moving or still water along streams and rivers, wetlands, permanent or temporary pools, beaver ponds, and human-constructed habitats such as earthen stock tanks and borrow pits (AmphiaWeb, 2013). Subadult frogs typically migrate to feeding sites near larger, more permanent bodies of water (USFWS, 2009). Their documented distribution across the Great Basin is limited.	No	Aquatic and riverine habitat does not occur within the evaluation area.	Year-round	N/A	AmphibiaWeb: Information on amphibian biology and conservation. [web application]. 2013. Berkeley, California: AmphibiaWeb. Available: http://amphibiaweb.org/. (Accessed: Feb 28, 2013). U.S. Fish and Wildlife Service (USFWS). 2009. Endangered or Threatened wildlife or Plants; 90 Day Finding on Petition to List Northern Leopard Frog in Western United States. 74 FR 125 31389. Published July 1, 2009.
BIRDS								
Northern goshawk	*Accipiter gentilis*	SS, NS	The northern goshawk is a fairly large hawk (55 – 61 cm in length) with rounded wing tips and conspicuous pale eye brow. It nests in a variety of habitat types including deciduous, coniferous, and mixed forests. Western birds, including most Nevada birds, are known to nest in deciduous forests dominated by aspen (NatureServe, 2015; Ryser, 1985).	No	Suitable nesting habitat does not occur within the evaluation area.	Year-round, but can be found elsewhere in winter.	Stick nest in trees	NatureServe Explorer. 2015. NatureServe Explorer Species Index. Available online at: .http://www.natureserve.org/explorer/servlet/NatureServe?searchSciOrCommonName=northern+goshawk. Ryser, Fred. 1985. Birds of the Great Basin. University of Nevada Press. Reno, Nevada. 604pp.
Swainson's Hawk	*Buteo swainsoni*	NS	Historically and in existing native habitat, forages in open stands of grass-dominated vegetation, sparse shrublands, and small open woodlands. In many parts of range today, has adapted well to foraging in agricultural areas. Typically nesting habitat is in scattered trees within grassland, shrubland, or agricultral landscapes (e.g., along stream courses or in open woodlands) (England et al., 2010).	No	According to NDOW, this species may occur in the vicinity of the evaluation area (NDOW, 2015). However, the evaluation area does not consist of grass-dominated, sparse shrublands, and small open woodlands. The site also does not contain suitable nesting habitat.	Migratory. Migrates march-early may, with a peak in the first half of April (England et al., 2010).	Stick nest is trees	England, S.A, Bechard, M.J., and Houston S.C. 2010. Swainson's Hawk (*Buteo swainsoni*). The Birds of North America Online. Issue No. 265. Revised August 16, 2010.
Golden eagle	*Aquila chrysaetos*	SP, NS	Mountains, canyons, sagebrush steppe, deserts, plains (Floyd et al., 2007). Nests on rocky scarps with large expanses of hunting territory. Also nests in coniferous and deciduous trees when rocks are unavailable (Ryser, 1985). Primary food base are rabbits and hares, particularly black-tailed jackrabbit.	Yes	Suitable nesting habitat may occur in the mountainous areas east of the evaluation area. The evaluation area is suitable foraging habitat. According to NDOW, there is one eagle nest within ten miles of the evaluation area. The species of eagle was not specified (NDOW, 2015).	Generally year-round, migrants may occur in winter	Large stick nests on rock outcrops	Floyd, T., C.S. Elphick, G. Chisholm, K. Mack, R.G. Elston, E.M. Ammon, and J.D. Boone. 2007. Atlas of the breeding birds of Nevada. University of Nevada Press. Reno, NV. Ryser, F.A. Jr. 1985. Birds of the Great Basin. University of Nevada Press. Reno, Nevada. Nevada Department of Wildlife (NDOW). 2015. Response to data request. Timothy Herrick, NDOW, to Steve Morton, Stantec Consulting Services Inc. June 30, 2015.
Western burrowing owl	*Athene cunicularia hypugaea*	SP, NS	The burrowing owl is a small (9 to 10 inches) ground-dwelling owl with long legs, white chin stripe, round head, and stubby tail (NatureServe, 2015). Prefer open, arid, treeless landscapes with low vegetation (Floyd et al., 2007). Often nests in burrows that have been abandoned by other burrowing mammals, usually in open areas with good surrounding visibility. Burrowing owls are present in northern Nevada in the spring and summer months and winter in the southwestern states (GBBO, 2010).	Yes	Suitable habitat may occur within the evaluation area. Western burrowing owls can be in urban/suburban and disturbed sites, and appear to be fairly tolerant of human activities (GBBO, 2010). According to NDOW, burrowing owl have been observed in the vicinity of the evaluation area and there is one burrow within ten miles of the evaluation area (NDOW, 2015).	Northern Nevada's population is thought to be migratory.	Burrows dug by other species	Floyd, T., C.S. Elphick, G. Chisholm, K. Mack, R.G. Elston, E.M. Ammon, and J.D. Boone. 2007. Atlas of the breeding birds of Nevada. University of Nevada Press. Reno, NV. NatureServe. 2015. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available http://explorer.natureserve.org. Accessed January 2015. Great Basin Bird Observatory (GBBO). 2010. Nevada Comprehensive Bird Conservation Plan, Ver. 1.0. Reno, NV. Nevada Department of Wildlife (NDOW). 2015. Response to data request. Timothy Herrick, NDOW, to Steve Morton, Stantec Consulting Services Inc. June 30, 2015.

Habitat Evalauation for Special Status Species --D'Andrea Water Tank #2 EA, Washoe County, NV, June 30, 2015

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Ferruginous hawk	*Buteo regalis*	SP, NS	In pinyon-juniper habitats of the Great Basin, ferruginous hawks typically nest in juniper trees along the forest shrubland edge, however in western Nevada they are commonly found nesting on rock or earthen high points. Ferruginous hawks prey heavily on ground squirrels. Because their principal prey (ground squirrels) enters aestivation by late July or early August, ferruginous hawks typically fledge young and leave the area by early August (Montana, 2012; GBBO, 2010).	No	Pinyon-juniper habitat does not occur within the evaluation area. Earthern high-points and outcrops do not occur within the evaluation area. According to NDOW, there is one known hawk nest within ten miles of the evaluation area. The species of hawk associated with the nest was not specified (NDOW, 2015).	Migratory, arrives usually in Feb./ March.	Stick nests in trees or on ground/outcrops	Great Basin Bird Observatory (GBBO). 2010. Nevada Comprehensive Bird Conservation Plan, Ver. 1.0. Reno, NV. Montana. 2012. Montana Fish and Game Field Guide. Species of Concern. http://fieldguide.mt.gov/detail_ABNKC19120.aspx Nevada Department of Wildlife (NDOW). 2015. Response to data request. Timothy Herrick, NDOW, to Steve Morton, Stantec Consulting Services Inc. June 30, 2015.
Greater sage-grouse	*Centrocercus urophasianus*	FC, GS, NS	The greater sage-grouse occupies habitats dominated by sagebrush, which the birds utilize for both cover and forage. During the breeding season sage-grouse congregate on historic open sites known as leks where males display in attempt to attract females. Nesting habitat is generally adjacent to lek sites and is comprised of denser brush canopy for concealment of nests, while brood-rearing and summer habitat encompasses sagebrush and meadow interfaces or other habitats, which supply a diversity of forbs and insects consumed by growing chicks. The majority of the year sage-grouse feed on sagebrush (Schroeder et al., 1999; GBBO, 2010).	Yes	The majority of the vegetation cover mapped on the on the evaluation area consists of communities with sagebrush as a major component (Utah State University, 2004). Evaluation area has been classified as Priority habitat by the Nevada Sagebrush Ecosystem Program (NDOW, 2015). The BLM referns to this as preliminary general habitat (PGH). There are no known greater sage-grouse lek sites within the evaluation area or surrounding vicinity (NDOW, 2015).	Year-round but seasonal movement occurs in range.	Ground nest (sagebrush habitats)	Great Basin Bird Observatory (GBBO). 2010. Nevada Comprehensive Bird Conservation Plan, Ver. 1.0. Reno, NV. Nevada Department of Wildlife (NDOW). 2015. Response to data request. Timothy Herrick, NDOW, to Steve Morton, Stantec Consulting Services Inc. March 27, 2015. Schroeder, M. A., J. R. Young and C. E. Braun. 1999. Greater Sage-Grouse (*Centrocercus urophasianus*). The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/425 doi:10.2173/bna.425 Utah State University. 2004. Provisional Digital Landcover Dataset for the Southwestern United States [vector data]. Logan, Utah: Utah State University, College of Natural Resources, RS/GIS Laboratory.
Western snowy plover	*Charadrius alexandrinus nivosus*	SP, NS	Beaches, playas, playa margins with brine flies or other suitable forage. Known from Lahontan Valley, Humboldt Sink, and Honey, Mono and Owens Lakes in California (Floyd et al., 2007; GBBO, 2010).	No	Suitable beach or playa habitat does not occur in the evaluation area.	Migratory arrives approximately mid-April.	Scrape (ground)	Floyd, T., C. S. Elphick, G. Chisholm, K. Mack, R. G. Elston, E. M. Ammon, and J. D. Boone. 2007. Atlas of the breeding birds of Nevada. University of Nevada Press. Reno, NV. Great Basin Bird Observatory (GBBO). 2010. Nevada Comprehensive Bird Conservation Plan, Ver. 1.0. Reno, NV.
Peregrine falcon	*Falco peregrinus*	SE, NS	Peregrine falcons typically nest on vertical cliffs and ledges, generally near water. They are known to nest on man-made structures including buildings, bridges, and raised platforms or old nests of ravens or bald eagles. These birds of prey are not commonly found in Nevada. They feed primarily on medium sized birds, but are known to sometimes forage on small mammals, lizards, fish, and insects (White et al., 2002; GBBO 2010).	No	Evaluation area does not contain nesting habitat. May occasionally be noted as a fly-over species. According to NDOW, one confirmed falcon nest and on probable falcon nest have been identified within ten miles of the evaluation area. The specific species of falcon was not specified (NDOW, 2015).	Possible year-round resident	Scrape on cliffs or buildings	Great Basin Bird Observatory (GBBO). 2010. Nevada Comprehensive Bird Conservation Plan, Ver. 1.0. Reno, NV. White, Clayton M., Nancy J. Clum, Tom J. Cade and W. Grainger Hunt. 2002. Peregrine Falcon (Falco peregrinus), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/660
Pinyon jay	*Gymnorhinus cyanocephalus*	SP, NS	Pinyon jays are highly social, cooperative-breeding, seed-caching bird. Pinyon jays inhabit higher elevations of the Great Basin, commonly within pinyon-juniper woodlands with diverse age class distribution. They are the earliest of the passerines to breed, synchronously nesting in winter, depending on seed caches from the fall crop of pine seeds. Systematic destruction of pinyon woodlands has been the reason for their decline (Balda, 2002; Floyd, et al., 2007).	No	Suitable nesting habitat does not occur in the evaluation area; may occasionally be noted as a fly-over species.	Year-round resident, ranges widely in winter (in search of pine nuts).	Nest in trees	Balda, Russell P. 2002. Pinyon Jay (Gymnorhinus cyanocephalus), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/605. Floyd, T., C. S. Elphick, G. Chisholm, K. Mack, R. G. Elston, E. M. Ammon, and J. D. Boone. 2007. Atlas of the breeding birds of Nevada. University of Nevada Press. Reno, NV.

Habitat Evalauation for Special Status Species --D'Andrea Water Tank #2 EA, Washoe County, NV, June 30, 2015

Common Name	Scientific Name	Status	Preferred Habitat (include elevation and soil type for plants)	Potential to Occur in Project Area? Y/N	Reasoning for Occurrence Determination	Habitat Use (see explanation below)** Plants: Flowering Dates	Nest type (ground, grass, shrub, tree, burrow, etc.)	Citations
Loggerhead shrike	*Lanius ludovicianus*	SS, NS	Open country in greasewood, sagebrush, and agricultural areas, where this avian predator can hunt reptiles, insects, small mammals and birds (Floyd et al. 2007). Large prey are always impaled (barbed wire or vegetation) before eating (Yosef, 1996).	Yes	Potential nester in taller shrubs.	Resident, but breeding and wintering territories may differ.	Nest in shrubs.	Floyd, T., C. S. Elphick, G. Chisholm, K. Mack, R. G. Elston, E. M. Ammon, and J. D. Boone. 2007. Atlas of the breeding birds of Nevada. University of Nevada Press, Reno, NV. Yosef, Reuven. 1996. Loggerhead Shrike (*Lanius ludovicianus*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/231.
Lewis' woodpecker	*Melanerpes lewis*	SP, NS	Lewis's Woodpecker favors open forests, ranging in altitude from low-elevation riparian areas to higher-elevation burns and pine forests. Like all other woodpeckers, it requires snags (standing, dead or partly dead trees) for nesting, although it is not anatomically specialized for excavating in wood and the trees it selects for nesting are generally well decayed (Vierling et al., 2013). Northeastern Nevada Breeding Bird Atlas records for the species are concentrated in Rubies, East Humboldt and Jarbidge mountain ranges (Floyd et al., 2007).	No	Suitable forested or riparian woodland habitat does not occur within the evaluation area. Breeding habitat localized to forest edge, especially Ponderosa Pine, or in groves and scattered trees which do not occur in the evaluation area (Baicich and Harrison, 2005).	Migratory in northern part of range, year-round elsewhere.	est in tree cavitie	Floyd, T., C. S. Elphick, G. Chisholm, K. Mack, R. G. Elston, E. M. Ammon, and J. D. Boone. 2007. Atlas of the breeding birds of Nevada. University of Nevada Press, Reno, NV. Vierling, Kerri T., Victoria A. Saab and Bret W. Tobalske. 2013. Lewis's Woodpecker (*Melanerpes lewis*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/284. Baicich, P.J. and Harrison, C.J. 2005. Nests, Eggs and Nestlings of North American Birds. Princeton Field Guides.
Sage thrasher	*Oreoscoptes montanus*	SS, NS	The sage thrasher is considered a sagebrush obligate and is commonly found in habitats of intact, fairly dense stands of sagebrush. Nonetheless, they may also occur in greasewood or bitterbrush (Floyd et al., 2007). Sage thrashers situate their nests within dense brush or on the ground. They primarily feed on insects but occasionally eat berries (Reynolds et al., 1999).	Yes	Limited habitat occurs within the evaluation area where sagebrush stands exist.	Migratory, arriving in nesting territories in March.	Nest in sagebrush or ground (Baicich and Harrison, 2005)	Floyd, T., C. S. Elphick, G. Chisholm, K. Mack, R. G. Elston, E. M. Ammon, and J. D. Boone. 2007. Atlas of the breeding birds of Nevada. University of Nevada Press, Reno, NV. Reynolds, Timothy D., Terrell D. Rich and Daniel A. Stephens. 1999. Sage Thrasher (Oreoscoptes montanus), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/463 Baicich, P.J. and Harrison, C.J. 2005. Nests, Eggs and Nestlings of North American Birds. Princeton Field Guides.
Brewer's sparrow	*Spizella breweri*	SS, NS	This species is found throughout Nevada in sagebrush and mixed shrub communities. Brewer's sparrows nest in brush communities with low shrubs and grasses, and primarily feed on insects and seeds (Floyd, et al., 2006).	Yes	Potential to occur in sagebrush habitats.	Migratory, arrives mid-April.	Nests low in sagebrush (Sagebrush habitats) (Baicich and Harrison, 2005).	Baicich, P.J. and Harrison, C.J. 2005. Nests, Eggs and Nestlings of North American Birds. Princeton Field Guides. Floyd, T., C. S. Elphick, G. Chisholm, K. Mack, R. G. Elston, E. M. Ammon, and J. D. Boone. 2007. Atlas of the breeding birds of Nevada. University of Nevada Press, Reno, NV.
Bald eagle	*Haliaeetus leucocephalus*	SE, NS	The bald eagle inhabits areas near water and feeds on fish and waterfowl, but also inhabits areas where other food is available, such as rabbits and road kill (NatureServe, 2015). Bald eagle nests are most commonly built in trees. During winter months, eastern Nevada bald eagles roost in trees at ranches or on sagebrush in the valley bottoms (GBBO, 2010).	No	Evaluation area is not located near water. The nearest waterbody to the evaluation area is the Truckee River, which is approximately three miles away. Additionally, there are no trees within the evaluation area for nesting. According to NDOW (2015), bald eagles have been observed in the vicinity of the evaluation area. It is likely this observation was associated with the Truckee River. May occassionally be noted as a fly-over species. According to NDOW, there is one eagle nest within ten miles of the evaluation area. The species of eagle was not specified.	Generally in Nevada, winter visitor.	Stick nests in trees near water	Great Basin Bird Observatory (GBBO). 2010. Nevada Comprehensive Bird Plan. Species Accounts. Ver. 1.0. Reno, NV. NatureServe Explorer. 2015. NatureServe Explorer Species Index. Available online at: http://www.natureserve.org/. Nevada Department of Wildlife (NDOW). 2015. Response to data request. Timothy Herrick, NDOW, to Steve Morton, Stantec Consulting Services Inc. June 30, 2015.
FISH								

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Cui-ui	*Chasmistes cujus*	FE; SE; NS	Inhabits Pyramid Lake and enters the lower Truckee River to spawn (USFWS, 1992).	No	Aquatic and riverine habitat does not occur within the evaluation area.	Year-round	N/A	United States Fish and Wildlife Service (USFWS). 1992. *Cui-ui (Chasmistes cujus) Second Revision Recovery Plan* . Portland, Oregon: United States Fish and Wildlife Service, Cui-ui Recovery Team.
Wall Canyon sucker	*Catostomus* sp. 1	SP; NS	Endemic to the Wall Canyon drainage in northwestern Nevada (Desert Fish Habitat Partnership, 2010).	No	Aquatic and riverine habitat does not occur within the evaluation area.	Year-round	N/A	Desert Fish Habitat Partnership. 2010. Desert Fish Habitat Partnership Newsletter, Volume 1, No. 3. Retrieved on April 1, 2015, from http://www.fishhabitat.org/sites/default/files/partnership_uploads/dfhp_newsletter.pdf
Railroad Valley springfish	*Crenichthys nevadae*	FT, SE, NS	Railroad Valley springfish inhabit warm spring pools, outflow streams, and adjacent marshes (NNHP, no date).	No	Aquatic and riverine habitat does not occur within the evaluation area.	Year-round	N/A	Nevada Natural Heritage Program (NNHP). No date. Crenichthys nevadae. Retrieved on April 1, 2015, from http://heritage.nv.gov/taxon_detail/18465
Lahontan cutthroat trout	*Oncorhyncus clarki henshawi*	FT, SE, GS, NS	Cold-water lakes and cool-water rivers, and streams with available cover of vegetated stable stream banks, where there are breaks in current, and in relatively silt free, rocky riffles (USFWS, 2012b).	No	Suitable habitat of cold rivers or streams do not occur in the evaluation area.	Year-round	N/A	United States Fish and Wildlife Service (USFWS). 2012b. Lahontan cutthroat trout (*Oncorhynchus clarkii henshawi*). U.S. Fish and Wildlife Service, Nevada Fish and Wildlife Office. September 2012. Available online at: http://www.fws.gov/nevada/protected_species/fish/species/lct.html.
MAMMALS								
Spotted bat	*Euderma maculatum*	ST, NS	Found in a wide variety of habitats from low elevation desert scrub to high elevation coniferous forest habitats, pinyon-juniper, sagbebrush, riparian and urban high-rise (cliff analog) habitats. Closely associated with rocky cliffs. Habitats may range from desert to montane coniferous stands, including open ponderosa pine, pinyon juniper woodland, canyon bottoms, riparian and river corridors, meadows, open pasture, and hayfields. Active foraging may be mostly in open terrain, including forest clearings, meadows, and open wetlands, sometimes in open areas near buildings or even golf courses. Roosts, including maternity roosts, generally are in cracks and crevices in cliffs, sometimes in caves or in buildings near cliffs. Winter habitats are poorly known. Diet includes a variety of insects but predominantly moths. (Naturserve, 2015; Bradely, et al., 2006).	Yes	Limited roosting habitat occurs within evaluation area. Foraging habitat is marginal at best due to distance from nearest water source (Truckee River), but may possibly be a forager in the evaluation area.	Year round resident. Hibernates in winter but periodically arouses to actively forage and drink in the winter (Bradely et al., 2006).	N/A	Bradley, P. V., M. J. O'Farrell, J. A. Williams, and J. E. Newmark, Editors. 2006. The Revised Nevada Bat Conservation Plan. Nevada Bat Working Group. Reno, Nevada. NatureServe Explorer. 2015. NatureServe Explorer Species Index. Available online at: http://www.natureserve.org/
Pallid bat	*Antrozous pallidus*	SP, NS	The pallid bat inhabits low desert shrubland, juniper woodlands, and grasslands. Pallid bats most commonly occur in low, dry regions with rock outcrops, usually near water, and roost in rock crevices, buildings, rock piles, tree cavities, shallow caves, and abandoned mines (NatureServe, 2015; Bradley, et al., 2006). Their primary food sources are arthropods such as crickets, grasshoppers, beetles, scorpions, and spiders.	Yes	Limited roosting habitat occurs within evaluation area. Foraging habitat is marginal at best due to distance from nearest water source (Truckee River), but may possibly be a forager in the evaluation area.	Believed to hibernate in winter; active during insect emergence.	N/A	Bradley, P. V., M. J. O'Farrell, J. A. Williams, and J. E. Newmark, Editors. 2006. The Revised Nevada Bat Conservation Plan. Nevada Bat Working Group. Reno, Nevada. NatureServe Explorer. 2015. NatureServe Explorer Species Index. Available online at: http://www.natureserve.org/
Townsend's big-eared bat	*Corynorhinus townsendii*	SS, NS	Townsend's big-eared bat is a permanent resident in North America. Maternity and hibernation colonies generally occur in caves and abandoned mine workings. This species may roost in buildings and has often been found utilizing mine shafts and adits as maternity roosts and hibernacula. Habitats in the vicinity of roosts include pine forests, pinyon-juniper woodland, and cottonwood bottomland. The Townsend's big-eared bat is a moth specialist with over 90% of its diet composed of *Lepidopterans* (BCI, 2013; Bradley et al., 2006).	No	Suitable roosting and foraging habitat does not occur within the evaluation area. Pine forests and cottonwood bottland also do not occur within the evaluation area.	Resident, but hibernates in winter.	N/A	Bat Conservation International (BCI). 2015. Species Accounts for North American http://www.batcon.org/resources/media-education/species-profiles Bradley, P. V., M. J. O'Farrell, J. A. Williams, and J. E. Newmark, Editors. 2006. The Revised Nevada Bat Conservation Plan. Nevada Bat Working Group. Reno, Nevada.

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Big brown bat	*Eptesicus fuscus*	NS	The big brown bat is considered a generalist in its foraging behavior and habitat selections, showing little preference for feeding over water, land, forests, or clearings (BCI, 2015). Day roosts include caves and trees (Bradley et al., 2006). This species occurs in a variety of habitats, including pinyon-juniper, sagebrush, and agriculture (BCI, 2015; Bradley et al., 2006). Their primary diet includes beetles and they usually forage within a few kilometers of their roost. This bat can be locally common in some urbanized environments (Bradley et al., 2006).	Yes	Possible foraging habitat occurs within the evaluation area. However, the project does not include suitable roosting habitat.	Year-round. Hibernates in winter; active with onset of warm weather, spring to fall.	N/A	Bat Conservation International (BCI). 2015. Species Accounts for North American Bats. http://www.batcon.org/resources/media-education/species-profiles Bradley, P. V., M. J. O'Farrell, J. A. Williams, and J. E. Newmark. Editors. 2006. The Revised Nevada Bat Conservation Plan. Nevada Bat Working Group. Reno, Nevada.
Silver-haired bat	*Lasionycteris noctivagans*	NS	This bat is strongly associated with coniferous and mixed coniferous forests, particularly old growth forests. It is widely distributed within these habitats (BCI, 2015; Bradley et al., 2006).Silver-haired bats typically roost in trees along forest borders (BCI, 2015). This species primarily feeds on small, soft-bodied insects (BCI, 2015).	No	The evaluation area does not contain conifereous and mixed coniferous forests.	Resident/Migratory; hibernates in winter.	N/A	Bat Conservation International (BCI). 2015. Species Profile for Lasionycteris noctivagans. http://www.batcon.org/resources/media-education/species-profiles/detail/2160 Bradley, P. V., M. J. O'Farrell, J. A. Williams, and J. E. Newmark. Editors. 2006. The Revised Nevada Bat Conservation Plan. Nevada Bat Working Group. Reno, Nevada.
Western red bat	*Lasiurus blossevillii*	SS; NS	Closely associated with cottonwoods in riparian areas at elevations below 6,500 feet. Especially favored roosts are found where leaves form a dense canopy above and branches do not obstruct the bats' flyway below. Typically species feeds along forest edges, in small clearings, or around street-lights (BCI, 2013).	No	Evaluation area lacks suitable riparian habitat, forest edges, small clearings, and street lights.	Resident, but hibernates in winter.	N/A	Bat Conservation International (BCI). 2015. Species Accounts for North American Bats. http://www.batcon.org/resources/media-education/species-profiles
Hoary bat	*Lasiurus cinereus*	NS	The hoary bat is known for its relatively large size and golden-colored fur. Hoary bat is a tree-associated species. Common roosting sites include coniferous and deciduous trees and caves. Found primarily in forested upland habitats, as well as in gallery-forest riparian zones. May occur in park and garden settings in urban areas (Bradley, et al. 2006; BCI, 2013). Primary food sources include beetles, moths, grasshoppers, dragonflies, and wasps.	No	Evaluation area lacks suitable woodland or cave habitat.	Migratory, returns to nothern areas in spring.	N/A	Bat Conservation International (BCI). 2015. Species Accounts for North American Bats. http://www.batcon.org/resources/media-education/species-profiles Bradley, P. V., M. J. O'Farrell, J. A. Williams, and J. E. Newmark. Editors. 2006. The Revised Nevada Bat Conservation Plan. Nevada Bat Working Group. Reno, Nevada.
California myotis	*Myotis californicus*	NS	The California myotis inhabits riparian woodlands, canyons, grasslands, and desert habitats and utilizes rock crevices, caves, buildings, holllow trees, under exfoliating bark and abandoned mine workings for roosting, maternity and hibernation. These bats forage on insects along margins of tree canopy and over water (NatureServe, 2015; Bradley, et al., 2006).	No	Suitable roosting habitat and foraging area does not occur within the evaluation area.	Hibernates in winter; active with onset of warm weather, spring to fall.	N/A	Bradley, P. V., M. J. O'Farrell, J. A. Williams, and J. E. Newmark. Editors. 2006. The Revised Nevada Bat Conservation Plan. Nevada Bat Working Group. Reno, Nevada. NatureServe Explorer. 2015. NatureServe Explorer Species Index. Available online at: http://www.natureserve.org/
Western small-footed myotis	*Myotis ciliolabrum*	NS	Inhabits a variety of habitats, including desert scrub, grasslands, sagebrush steppe, blackbrush, greasewood, pinyon-juniper woodlands, pine-fir forests, agriculture and urban areas (Bradley et al., 2006). Known to roost in caves, mines, and trees. Food items include small moths, flies, ants and beetles, with foraging occurring in the open (Bradley et al., 2006).	Yes	Evaluation area does not provide suitable roosting habitat. However, species is a possible forager within the evaluation area.	Hibernates in winter; active with onset of warm weather, spring to fall.	N/A	Bradley, P. V., M. J. O'Farrell, J. A. Williams, and J. E. Newmark. Editors. 2006. The Revised Nevada Bat Conservation Plan. Nevada Bat Working Group. Reno, Nevada.

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Long-eared myotis	*Myotis evotis*	NS	This species is primarily found at higher elevations and is associated with coniferous forest (Bradley et al., 2006). In Northern Nevada, this species is common in pinyon-juniper communities and above, but has also been found in sagebrush and desert scrub habitats (Bradley et al., 2006). Roosting sites include beneath bark or within cavities, crevices in cliffs, hollow trees, and buildings. Foraging occurs along rivers and streams, over ponds, and within forests (Bradley et al., 2006).	No	Forested habitat or cliffs do not occur within the evaluation area.	Year-round; hibernates in winter; active with onset of warm weather, spring to fall.	N/A	Bat Conservation International (BCI). 2015. Species Accounts for North American Bats. http://www.batcon.org/resources/media-education/species-profiles Bradley, P. V., M. J. O'Farrell, J. A. Williams, and J. E. Newmark. Editors. 2006. The Revised Nevada Bat Conservation Plan. Nevada Bat Working Group. Reno, Nevada.
Little brown myotis	*Myotis lucifugus*	NS	Wide-ranging bat, typically found in mesic or forested habitats (Rainey 1998; Bradley, et al., 2006).	No	Typical habitat types do not occur within the evaluation area.	Hibernates in winter; active with onset of warm weather, spring to fall.	N/A	Bradley, P. V., M. J. O'Farrell, J. A. Williams, and J. E. Newmark. Editors. 2006. The Revised Nevada Bat Conservation Plan. Nevada Bat Working Group. Reno, Nevada. Rainey, W.E. 1998. Little Brown Bat Myotis lucifugus. in proceedings of the Western Bat Work Group Workshop.
Fringed myotis	*Myotis thysanodes*	SP, NS	Found in a wide range of habitats from desert scrub to coniferous forests, and is generally found near woodlands at moderate elevations in mountains (BCI, 2015; Bradley et al., 2006). Roosting is known to occur in mines, caves, trees, and buildings (Bradley et al., 2006). Hibernacula includes caves and buildings (BCI, 2015).	No	The evaluation area does not consist of desert scrub or conifereous forests. Mine workings, caves and buildings do not occur within the evaluation area.	Year-round: hibernate in winter; active with onset of warm weather, spring to fall.	N/A	Bat Conservation International (BCI). 2015. Species Accounts for North American Bats. http://www.batcon.org/resources/media-education/species-profiles Bradley, P. V., M. J. O'Farrell, J. A. Williams, and J. E. Newmark. Editors. 2006. The Revised Nevada Bat Conservation Plan. Nevada Bat Working Group. Reno, Nevada.
Long-legged myotis	*Myotis volans*	NS	Most common in forested habitats; does occur in more arid habitats (Bogen et al., 1998; Bradley et al., 2006). This species roosts primarily in hollow trees, but also uses rock crevices, caves, mines, and buildings (Bradley et al., 2006). Foraging occurs in open areas for moths, beetles, flies, and termites (Bradley et al., 2006).	Yes	Suitable roosting habitat does not occur within the evaluation area. However, species is a possible forager in the evaluation area.	Hibernates in winter; active with onset of warm weather, spring to fall.	N/A	Bogen, M.A., E.W. Valdez, and K.W. Navo. 1998. Long-legged Myotis Myotis volans. In: Proceedings of the Western Bat Work Group Workshop. Bradley, P. V., M. J. O'Farrell, J. A. Williams, and J. E. Newmark. Editors. 2006. The Revised Nevada Bat Conservation Plan. Nevada Bat Working Group. Reno, Nevada."
Yuma myotis	*Myotis yumanensis*	NS	The Yuma myotis inhabits riparian areas, scrublands, deserts, and forests and is commonly found roosting in bridges, buildings, cliff crevices, caves, mines, and trees. Its primary diet is emergent aquatic insects such as caddis flies, midges, and small moths and beetles (Bradley, et al. 2006). Typically forages over water in forests (BCI, 2013).	Yes	Evaluation area does not provide suitable roosting habitat. Species may be a possible forager within the evaluation area, but the preferred diet of aquatic insects are not available in the evaluation area (approximately four miles away from nearest a water source).	Hibernates in winter; active with onset of warm weather, spring to fall.	N/A	Bat Conservation International (BCI). 2015. Species Accounts for North American Bats. http://www.batcon.org/resources/media-education/species-profiles Bradley, P. V., M. J. O'Farrell, J. A. Williams, and J. E. Newmark. Editors. 2006. The Revised Nevada Bat Conservation Plan. Nevada Bat Working Group. Reno, Nevada.
Brazilian free-tailed bat	*Tadarida brasiliensis*	SP, NS	Also known as Mexican free-tailed bats, this species occurs in a wide range of habitats from desert to pinyon-juniper and pine-oak forests (BCI, 2015). This species roosts in caves, mines, buildings, cliffs, bridges, and tree hallows, generally occurring in large colonies (BCI, 2015; Bradley et al., 2006). The diet is dominated by moths, but includes other insects as well (BCI, 2015; Bradley et al., 2006). Foraging occurs in the open (Bradley et al., 2006). Considered migratory in northern Nevada (Bradley et al., 2006).	Yes	Suitable roosting habitat does not occur within the evaluation area, but the species is a possible forager within the evaluation area.	Believed to be migratory in Nevada; most active in Nevada with warm weather, spring to fall.	N/A	Bat Conservation International (BCI). 2015. Species Profile for Tadarida brasiliensis. http://www.batcon.org/resources/media-education/species-profiles Bradley, P. V., M. J. O'Farrell, J. A. Williams, and J. E. Newmark. Editors. 2006. The Revised Nevada Bat Conservation Plan. Nevada Bat Working Group. Reno, Nevada.
Western pipistrelle	*Pipistrellus hesperus*	NS	Now classified as *Parastrellus hesperus* (canyon bat), is common to deserts, woodlands, and shrublands and roosts among boulders, or in cracks and crevices of rock faces (BCI, 2015). Buildings and vegetation are occasionally used for roosting (Bradley et al., 2006). Hibernacula includes mines and caves (BCI, 2015). Foraging occurs in the open with food sources including ants, mosquitoes, moths, and leafhoppers (Bradley et al., 2006).	Yes	Suitable roosting habitat does not occur within the evaluation area. However, species is a possible forager within the evaluation area.	Resident but hibernates in winter.	N/A	Bat Conservation International (BCI). 2015. Species Accounts for North American Bats. http://www.batcon.org/resources/media-education/species-profiles Bradley, P. V., M. J. O'Farrell, J. A. Williams, and J. E. Newmark. Editors. 2006. The Revised Nevada Bat Conservation Plan. Nevada Bat Working Group. Reno, Nevada.

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Pygmy rabbit	*Brachylagus idahoensis*	GS, NS	The pygmy rabbit occurs throughout much of the Great Basin in areas of tall, dense sagebrush (*Artemisia* spp.) (USFWS, 2015c) or mixed sagebrush habitats (Utah DWR, 2003). Other shrub species may be present, including bitterbursh (*Purshia tridentata*), rabbit brush (*Chrysothamnus* spp.), greasewood (*Sarcobatus vermiculatus*), snowberry (*Symphoricarpos* spp.), and juniper (*Juniperus* spp.) (Ulmschneider, 2004). Pygmy rabbit burrows are typically found in relatively deep, loose soils of wind- or water-born origin suitable for burrowing (USFWS, 2015c; Utah DWR, 2003). Pygmy rabbit may occur in areas of shallower or more compact soils with sufficient shrub cover because abandoned burrows of other species (USFWS, 2015c). In addition to direct sighting, indirect evidence of pygmy rabbits includes the presence of trail systems established in understory vegetation, often leading to burrows under sagebrush or rabbitbrush, and groups of small, dark pellets (Utah DWR, 2003).	No	Based on aerial photography, there is very little dense sagebrush cover. According to Natural Resources Conservation Service soil data, a typical soil profile of the evaluation area consists of very stony loam, clay, and bedrock. There is a lack of the loose, deep soils required by pygmy rabbit to construct their burrows (NRCS, 2015).	Year-round	Burrows	United States Fish and Wildlife Service (USFWS). 2015c. Pygmy Rabbit (Brachylagus idahoensis). U.S. Fish and Wildlife Service, Nevada Fish and Wildlife Office. September 2012. Available online at: http://www.fws.gov/nevada/nv_species/pygmy_rabbit.html. Utah Division of Wildlife Resources (Utah DWR). 2003. The Pygmy Rabbit Brachylagus idahoensis. Available online at: http://wildlife.utah.gov/habitat/pdf/pygmy_rabbit.pdf. April 2003. Ulmschneider, Helen. 2004. Surveying for Pygmy Rabbits (*Brachylagus idahoensis*). Bureau of Land Managmenet, Boise District. Fourth Draft. June 3, 2004. Natural Resources Conservation Service (NRCS). 2015. Web Soil Survey. Accessed online at http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. Accessed June 30, 2015.
Dark kangaroo mouse	*Microdipodops megacephalus*	SP, NS	Inhabits stabilized sand dunes and other sandy soils in valley bottoms and alluvial fans dominated by big sagebrush (Artemisia tridentata), rabbitbrush (Chrysothamnus spp.), and horsebrush (Tetradymia spp.) (WAPT, 2012). The species also occurs on fine gravelly soils (O'Farrell and Blaustein, 1974), or sandy soils with varying amounts of gravel (Hall, 1995; WAPT, 2012). This species typically occurs in sandy habitats below the elevation where pinyon-juniper occur and above where greasewood and saltbush predominate (WAPT, 2012).	No	Evaluation area is not situated in a valley bottom or alluvial fan and does not conssit of sandy soils or fine gravelly soils.	Year-round	Burrows	Hall, E. R. 1995. Mammals of Nevada (2nd edition). Reno and Las Vegas, NV: University of Nevada Press. O'Farrell, M. J., and Blaustein, A. R.. 1974. Microdipodops megacephalus. Mammalian Species, 46:1-3. Wildlife Action Plan Team (WAPT). 2012. Nevada Wildlife Action Plan. Nevada Department of Wildlife.
Pale kangaroo mouse	*Microdipodops pallidus*	SP, NS	This mouse is endemic to the Great Basin and nearly restricted to Nevada with one known population in California. It is restricted to valley bottoms where stabilized dunes occur. Generally occurring within the west-central portion of the state (Hafner et al. 2008). Restricted to fine, loose, wind-blown sand (Hall, 1995) and sandy soils with little or no gravel overlay (NDOW, 2006). Typically in valley bottoms dominated by saltbush and greasewood, but also near sagebrush at its higher elevation range (NDOW, 2006).	No	Evaluation area does not contain suitable sand dune habitat. Sandy surface soils within the evaluation area are considerably rocky.	Year-round	Burrows	Hafner, J., N. Upham, E. Reddington, and C. Torres. 2008. Phylogeography of the pallid kangaroo mouse, Microdipodops pallidus: a sand-obligate endemic of the Great Basin, Western North America. Journal of Biogeography. 2008 November, 35 (11): 2102-2118. Hall, E. R.. 1995. Mammals of Nevada (2nd edition). Reno and Las Vegas, NV: University of Nevada Press. Nevada Department of Wildlife (NDOW). 2006. Nevada Wildlife Action Plan. Developed by the Wildlife Action Plan Team. Reno, NV: Nevada Department of Wildlife. June 23, 2006.
Bighorn sheep	*Ovis canadensis*	GS, NS	Typically occur in steep, mountain rocky terrain and in arid environments in areas with perennial water sources (natural or human made) (Shackelton, 1985. NDOW, 2012).	No	According to NDOW (2015), the evaluation area does not contain occupied bighorn sheep habitat.	Year-round	Ground	Shackleton D. 1985. Mammalian Species. Ovis canadensis. The American Society of Mammalogists 230:1-9. Nevada Department of Wildlife (NDOW). 2012. 2011-2012 Big Game Status Report. Nevada Department of Wildlife, Reno Nevada. Accessed via: http://ndow.org/about/pubs/reports/ Nevada Department of Wildlife (NDOW). 2015. Response to data request. Timothy Herrick, NDOW, to Steve Morton, Stantec Consulting Services Inc. June 30, 2015.
Pika	*Ochotona princeps*	SP, NS	Thermal regulation is extremely important because of high body temperature (104 F), habitat consists of high elevation mountain ranges with suitable talus for cover and thermal regulation. Generally occurring above 8,000 in elevation within the Great Basin (USFWS, 2010).	No	No suitable habitat. Restricted to high mountains; limited by high temperatures (NDOW, 2006).	Generalist herbivore, within upper montane to alpine talus	Talus	U.S. Fish and Wildlife Service (USFWS). 2010.*Endangered and Threatened Wildlife and Plaints; 12-month Finding on a Petition to List the American Pika as Threatened or Endangered* . Vol. 75 Number 26 FR 2010-2405. Published February 9, 2010. Nevada Department of Wildlife (NDOW). 2006. Nevada Wildlife Action Plan. Wildlife Action Plan Team. 547pp.
REPTILES								

Habitat Evalauation for Special Status Species --D'Andrea Water Tank #2 EA, Washoe County, NV, June 30, 2015

Common Name	Scientific Name	Status	Preferred Habitat (include elevation and soil type for plants)	Potential to Occur in Project Area? Y/N	Reasoning for Occurrence Determination	Habitat Use (see explanation below)** Plants: Flowering Dates	Nest type (ground, grass, shrub, tree, burrow, etc.)	Citations
Shasta alligator lizard	*Elgaria coerulea shastaensis*	SP, NS	Woodland, forests, grassland, coastal chapparal; prefers wetter and cooler habitats (CaliforniaHerps.com, 2015).	No	Potential habitat is not present within the evaluation area.	Year-round	N/A	CaliforniaHerps.com. 2015. *Shasta Alligator Lizard - Elgaria coerulea shastensis* . Accessed on April 1, 2015. Available online at: http://www.californiaherps.com/lizards/pages/e.c.shastensis.html
INSECTS								
Hardy's aegialian scarab	*Aegialia hardyi*	NS	Sand dunes. It is known to aggregate around the root systems of Kearney buckwheat plants (Wainscott, 2004). Endemic to Sand Mountain and Blow Sand Mountain (WildEarth Guardians, 2011).	No	Evaluation area does not contain sand dunes and is not located at Sand Mountain or Blow Sand Mountain.	Year-round	N/A	Wainscott, S. 2004. *Blowing Sand Mountains, Initial Conservation Assessment and Strategies* . The Nature Conservancy of Nevada. WildEarth Guardians. 2011. *Feds Agree to Consider Four of Six Sand Dune Beetles for Protection* . August 4, 2011. Available online at: http://www.wildearthguardians.org/site/News2?page=NewsArticle&id=7087&news_iv_ctrl=1227
Bee	*Anthopjora* sp. Nov. 1	NS	Endemic to Sand Mountain and Blow Sand Mountains, Nevada (Wainscott, 2004).	No	Species is limited to the dunes where it currently exists. No dunes are present in the evaluation area and is not located in Sand Mountain or Blow Sand Mountain.		N/A	Wainscott, S. 2004. Blowing Sand Mountains, Initial Conservation Assessment and Strategies. The Nature Conservancy of Nevada.
Sand Mountain aphodius scarab	*Aphodius* sp. 3	NS	Sand dunes; endemic to Sand Mountain and Blow Sand Mountains (WildEarth Guardians, 2011).	No	Evaluation area does not contain sand dunes and is not located at Sand Mountain or Blow Sand Mountain.	Year-round	N/A	WildEarth Guardians. 2011. *Feds Agree to Consider Four of Six Sand Dune Beetles for Protection* . August 4, 2011. Available online at: http://www.wildearthguardians.org/site/News2?page=NewsArticle&id=7087&news_iv_ctrl=1227

Habitat Evalauation for Special Status Species --D'Andrea Water Tank #2 EA, Washoe County, NV, June 30, 2015

Common Name	Scientific Name	Status	Preferred Habitat (include elevation and soil type for plants)	Potential to Occur in Project Area? Y/N	Reasoning for Occurrence Determination	Habitat Use (see explanation below)** Plants: Flowering Dates	Nest type (ground, grass, shrub, tree, burrow, etc.)	Citations
Click beetle	*Cardiophorus* ssp. Nov.	NS	Endemic to Sand Mountain dune system (Wainscott, 2004).	No	Evaluation area does not contain sand dunes and is not located at Sand Mountain.	Year-round	N/A	Wainscott, S. 2004. *Blowing Sand Mountains, Initial Conservation Assessment and Strategies* . The Nature Conservancy of Nevada.
Sand Mountain pygmy scarab beetle	*Coenonycha pygmaea*	NS	Sand dunes; known only from Sand Mountain and Blow Sand Mountain (NatureServe, 2015).	No	Evaluation area does not contain sand dunes and is not located at Sand Mountain or Blow Sand Mountain.	Year-round	N/A	NatureServe. 2015. *NatureServe Explorer: An online encyclopedia of life* [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available http://explorer.natureserve.org. Accessed: March 12, 2015.
Early blue	*Euphilotes enoptes primavera*	NS	A subspecies of Pacific dotted blue butterfly. Larvae feed primarily on naked buckwheat (*Eriogonum nudum*) and other buckwheat (*Eriogonum* ssp.) (Brock and Kaufman, 2003). Subspecies type locality is in Mineral County, Nevada, 9.0 road miles south of Schurz, Nevada on US Highway 95, along the Wassuk Range, at Penrod Canyon (4,800 feet above mean sea level) (Warren et al., 2012). Known only from the lower mountain canyons in Mineral and Esmeralda Counties (NatureServe, 2015).	No	Evaluation area is considerably separated from the known species range in Mineral and Esmeralda counties.	Year-round	N/A	Brock, J. P., and Kaufman, K. 2003. *Butterflies of North America: Kaufman Field Guides* . New York, NY: Houghton Mifflin Company. NatureServe. 2015. *NatureServe Explorer: An online encyclopedia of life* [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available http://explorer.natureserve.org. (Accessed: June 30, 2015). Warren, A. D., Davis, K. J., Grishin, N. V., Pelham, J. P., and Stangeland, E. M. 2012. *Interactive Listing of American Butterflies* . Available at: http://butterfliesofamerica.com/
Sand Mountain blue	*Euphilotes pallescens arenamontana*	NS	Dependent on Kearney buckwheat during larval stage; life span is approximately one week. Known only from Sand Mountain (USFWS, Nevada Fish and Wildlife Office, 2015).	No	Evaluation area does not contain sand dunes and is not located at Sand Mountain.	Year-round	N/A	United States Fish and Wildlife Service (USFWS), Nevada Fish and Wildlife Office. 2015. *Sand Mountain Blue Butterfly (Euphilotes pallescens arenamontana)* . Accessed March 12, 2015. Available at: http://www.fws.gov/nevada/nv_species/smb_butterfly.html
Bee	*Hesperapis* sp. Nov. 2	NS	Endemic to Sand Mountain, Nevada (Wainscott, 2004).	No	Evaluation area does not contain sand dunes and is not located at Sand Mountain.	Year-round	N/A	Wainscott, S. 2004. *Blowing Sand Mountains, Initial Conservation Assessment and Strategies* . The Nature Conservancy of Nevada.
Mono Basin skipper	*Hesperia uncas giulianii*	NS	Also known as Railroad Valley skipper. Type locality is rolling hills with sandy soils; sparse singleleaf pinyon woodlands and sagebrush steppe communities. Species is known only from the Adobe Hills in Mono County, California, although it may also occur in extreme western Mineral County, Nevada (WildEarth Guardians, 2010).	No	Evaluation area is considerably separated from the known species range in Mono County, California, and extreme western Mineral County, Nevada.	Year-round	N/A	WildEarth Guardians. 2010. *Petition to List Ten Great Basin Butterflies Under the U.S. Endangered Species Act* . January 25, 2010. Available at: http://www.wildearthguardians.org/legal/listing_petition_great_basin_butterflies.pdf
Bee	*Perdita haigi*	NS	Endemic to Sand Mountain, Nevada (Wainscott, 2004).	No	Evaluation area does not contain sand dunes and is not located at Sand Mountain.	Year-round	N/A	Wainscott, S. 2004. *Blowing Sand Mountains, Initial Conservation Assessment and Strategies* . The Nature Conservancy of Nevada.
Bee	*Perdita* sp. Nov. 3	NS	Endemic to Sand Mountain (Wainscott, 2004).	No	Evaluation area does not contain sand dunes and is not located at Sand Mountain.	Year-round	N/A	Wainscott, S. 2004. *Blowing Sand Mountains, Initial Conservation Assessment and Strategies* . The Nature Conservancy of Nevada.

Habitat Evalauation for Special Status Species --D'Andrea Water Tank #2 EA, Washoe County, NV, June 30, 2015

Common Name	Scientific Name	Status	Preferred Habitat (include elevation and soil type for plants)	Potential to Occur in Project Area? Y/N	Reasoning for Occurrence Determination	Habitat Use (see explanation below)** Plants: Flowering Dates	Nest type (ground, grass, shrub, tree, burrow, etc.)	Citations
Great Basin small blue [1]	*Philotiella speciosa septentrionalis*	NS	The Great Basin small blue is a type locality from Fort Churchill Road, approximately 12.3 road miles south of U.S. Highway 50 in Lyon County, Nevada (Warren et al., 2012). The type locality elevation is approximately 4,400 feet (Warren et al., 2012). The Great Basin small blue is subspecies of the small blue (*Philotiella speciosa*). Habitat for the small blue is desert flats and dry washes (Opler and Wright, 1999). Adults are sedentary and stay close to their larval food plant (Brock and Kaufman, 2003). According to Opler and Wright (1999), the larval food plant of the small blue are Oxytheca spp. and kidney-leaf buckwheat (*Eriogonum reniforme*). The food plant associated with the type locality holotype is round-leaf puncturebract (*Oxytheca perfoliata*), which is a species of plant in the buckwheat family. Within Nevada, round-leaf puncturebract is widespread along the entire western and southwestern portions of the state, and is associated with sandy or gravelly soils (Kartesz, 1987). Kartesz indicates (1987) that the species has made its way into western Nevada by following the Lahontan Trough. Kidney-leaf buckwheat is known to occur throughout the Mojave Desert area in southern and southwestern Nevada, and extend north up the Lahontan Trough to Brady's Hot Springs in Churchill County (Kartesz, 1987). According to Kartesz (1987), within its range the kidney-leaf buckwheat is found along dry roadsides, gravelly and sandy hillsides, and gravelly washes.	No	Unlikely to occur, range of subspecies is still unknown but is likely restricted due to lack of mobility of adults. However, host plants are widely distributed. The more common small blue butterfly is widely distributed in central Nevada, where suitable host plants occur.	Year-round	N/A	Brock, J. P., and Kaufman, K. 2003. Butterflies of North America: Kaufman Field Guides. New York, NY: Houghton Mifflin Company. Kartesz, J. T. 1987. A Flora of Nevada (Parts 1-3). Reno, NV: University of Nevada Reno. Opler, P. A., and Wright, A. B. 1999. A Field Guide to Western Butterflies: Peterson Field Guide Series (2nd ed.). New York, NY: Houghton Mifflin Company. Warren, A. D., Davis, K. J., Grishin, N. V., Pelham, J. P., and Stangeland, E. M. 2012. Interactive Listing of American Butterflies. Retrieved on April 18, 2013, from: http://butterfliesofamerica.com/.
Carson wandering skipper	*Pseudocopaeodes eunus obscurus*	FE; NS	Larval hostplant is saltgrass. A nectar source tolerant of alkaline soils must be present nearby, such as crisped thelypody. Habitat is alkaline desert seeps with a freshwater source, such as hotsprings. Known to occur from 3,975-4,640 feet in elevation (NNHP, 2001).	No	Evaluation area does not contain alkaline soils, alkaline desert seeps, or saltgrass.	Year-round	N/A	Nevada Natural Heritage Program (NNHP). 2001. Rare Plant Atlas. Index to Maps and Fact Sheets. June 25, 2001. http://heritage.nv.gov/atlas
Carson Valley silverspot	*Serica humboldti*	NS	Uses wet meadows and other mesic habitats where its hostplant, northern bog violet, grows (WildEarth Guardians, 2010).	No	Evaluation area does not contain wet meadows or other mesic habitats.	Year-round	N/A	WildEarth Guardians. 2010. *Petition to List Ten Great Basin Butterflies Under the U.S. Endangered Species Act* . January 25, 2010. Available at: http://www.wildearthguardians.org/legal/listing_petition_great_basin_butterflies.pdf

Habitat Evalauation for Special Status Species --D'Andrea Water Tank #2 EA, Washoe County, NV, June 30, 2015

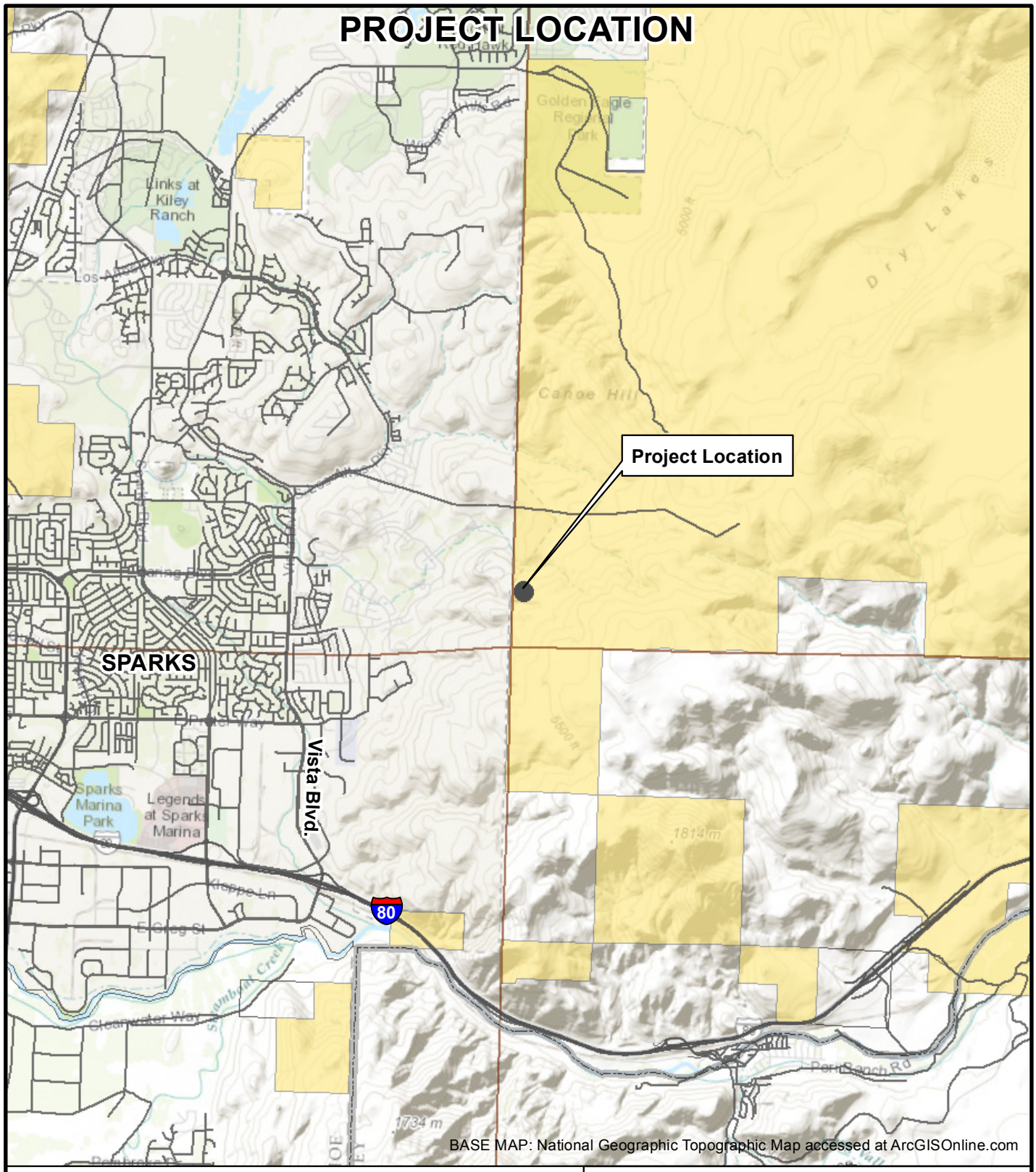
Common Name	Scientific Name	Status	Preferred Habitat (include elevation and soil type for plants)	Potential to Occur in Project Area? Y/N	Reasoning for Occurrence Determination	Habitat Use (see explanation below)** Plants: Flowering Dates	Nest type (ground, grass, shrub, tree, burrow, etc.)	Citations
MOLLUSCS								
Ovate Cain Spring pyrg	*Pyrgulopsis pictilis*	NS	Freshwater spring pools; endemic to Cain Spring in the Antelope Valley, Lander County, Nevada (Hershler, 1998; Hershler & Sada, 2006).	No	Evaluation area does not contain springs and is not located in Antelope Valley.	Year-round	N/A	Hershler, R. 1998. A systematic review of the Hydrobiid snails (Gastropoda: Rissooidea) of the Great Basin, western United States. Part I. Genus Pyrgulopsis. The Veliger. Volume 41. January 2, 1998. Hershler, R. and D. Sada. 2006. Biogeography of Great Basin Aquatic Snails of the Genus Pyrgulopsis. Smithsonian Contributions to the Earth Sciences, Number 33: 255-276.
Wongs pyrg	*Pyrgulopsis wongi*	NS	Thermal aquatic habitat below spring systems in Owens Valley and Deep Springs Valley, California, and Fish Lake Valley and Huntoon Valley, Nevada (Hershler, 1994).	No	No potential to occur. There is no thermal aquatic habitat and species is found within the southwestern portion of the state, near Owens Valley, CA and Fish Lake Valley, NV.	Year-round	N/A	Hershler, R. 1994. A Review of the North American Freshwater Snail Genus *Pyrgulopsis* (Hydrobiidae). *Smithsonian Contributions to Zoology, 554* , 1-115.

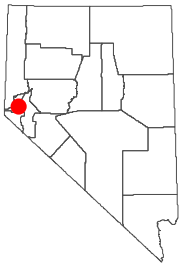
1: 1 These butterflies have speciated due to their isolation, and are described from specific, discrete localities, none of which are near the evaluation area. Quoting Scott in The Butterflies of North America (Scott 1896): "Why does a species occur only in certain places and not in others? Its range may be small, just a few states or parts of a state, and within the range it may occur only at scattered sites. The answer is that butterflies do not survive equally well in all microhabitats and climates; each species has adapted to survive best in places with a particular combination of hostplants, weather, and other necessities. In many cases, a species could persist in another area if introduced there, but unsuitable intervening habitats contain it within its present range" (emphasis added).

**Habitat Use: List type of use (i.e. year 'round, breeding, migration, foraging, etc.) and dates species would most likely be present for that activity. Breeding activities include dates of arrival through post-fledging dependency for birds. Denote probable nesting/parturition dates in parenthesis for all animals. For

Status Codes
FE = Federally listed endangered
FT = Federally listed threatened
FC = Federally listed candidate
SE = State listed endangered
ST = State listed threatened
SP = State protected
SS = State sensitive
GS = Game species
NS = Nevada BLM sensitive species

PROJECT LOCATION





Land Status

- BLM
- Private

0 2,500 5,000 Feet

N

D'ANDREA WATER TANK NUMBER 2
ENVIRONMENTAL ASSESSMENT

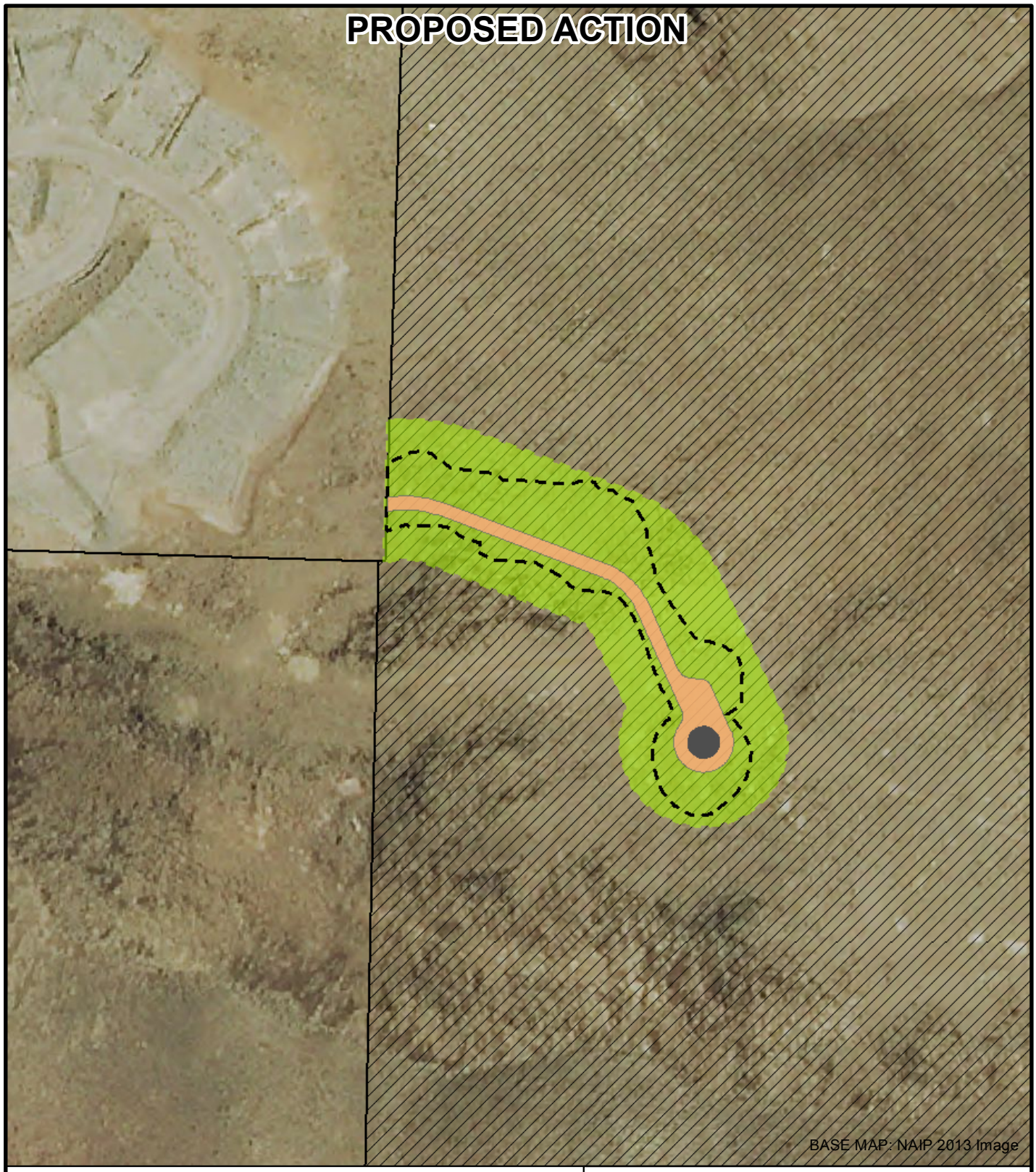
FIGURE 1
PROJECT LOCATION

NO WARRANTY IS MADE BY THE BUREAU OF LAND MANAGEMENT AS TO THE ACCURACY, RELIABILITY, OR COMPLETENESS OF THESE DATA FOR INDIVIDUAL USE OR AGGREGATE USE WITH OTHER DATA.

DRAWN BY: CHJ

DATE DRAWN: 9/4/2015

SCALE: 1 in = 5,000 feet



Proposed Water Tank
Proposed Access Road
Proposed Disturbance
Proposed Right-of-Way (200-ft)

Land Status

BLM
Private

0 100 200 Feet

N

D'ANDREA WATER TANK NUMBER 2 ENVIRONMENTAL ASSESSMENT

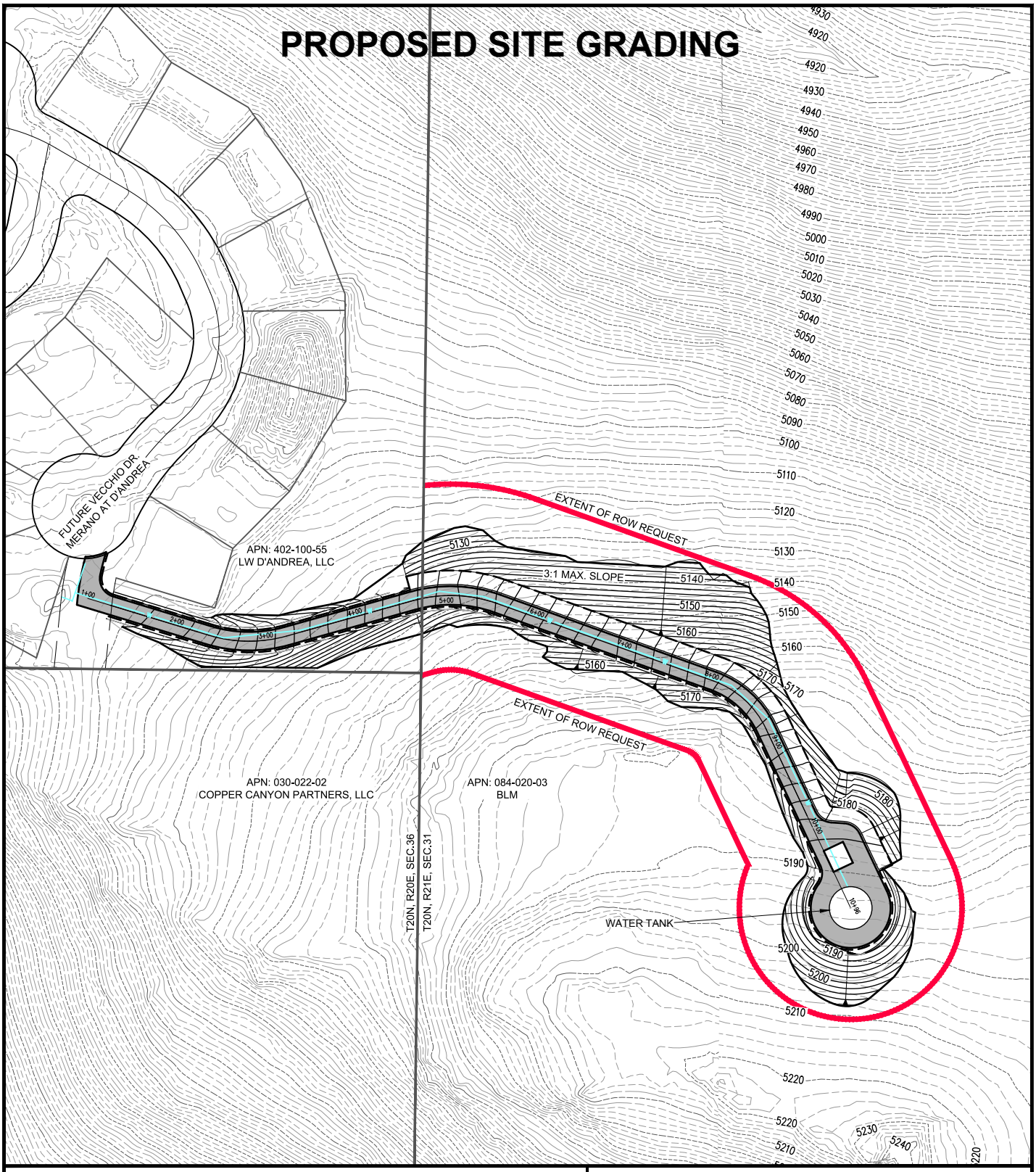
FIGURE 2
PROPOSED ACTION

NO WARRANTY IS MADE BY THE BUREAU OF LAND MANAGEMENT AS TO THE ACCURACY, RELIABILITY, OR COMPLETENESS OF THESE DATA FOR INDIVIDUAL USE OR AGGREGATE USE WITH OTHER DATA.

DRAWN BY: CHJ

DATE DRAWN: 9/4/2015

SCALE: 1 in = 200 feet



DESIGN PROVIDED BY MANHARD CONSULTING LTD.

- PROPOSED RIGHT OF WAY (200 FEET)
- WATER MAIN
- PROPOSED GRADING CONTOUR (2 FT)
- EXISTING CONTOUR (2 FT)
- PROPOSED PAVEMENT

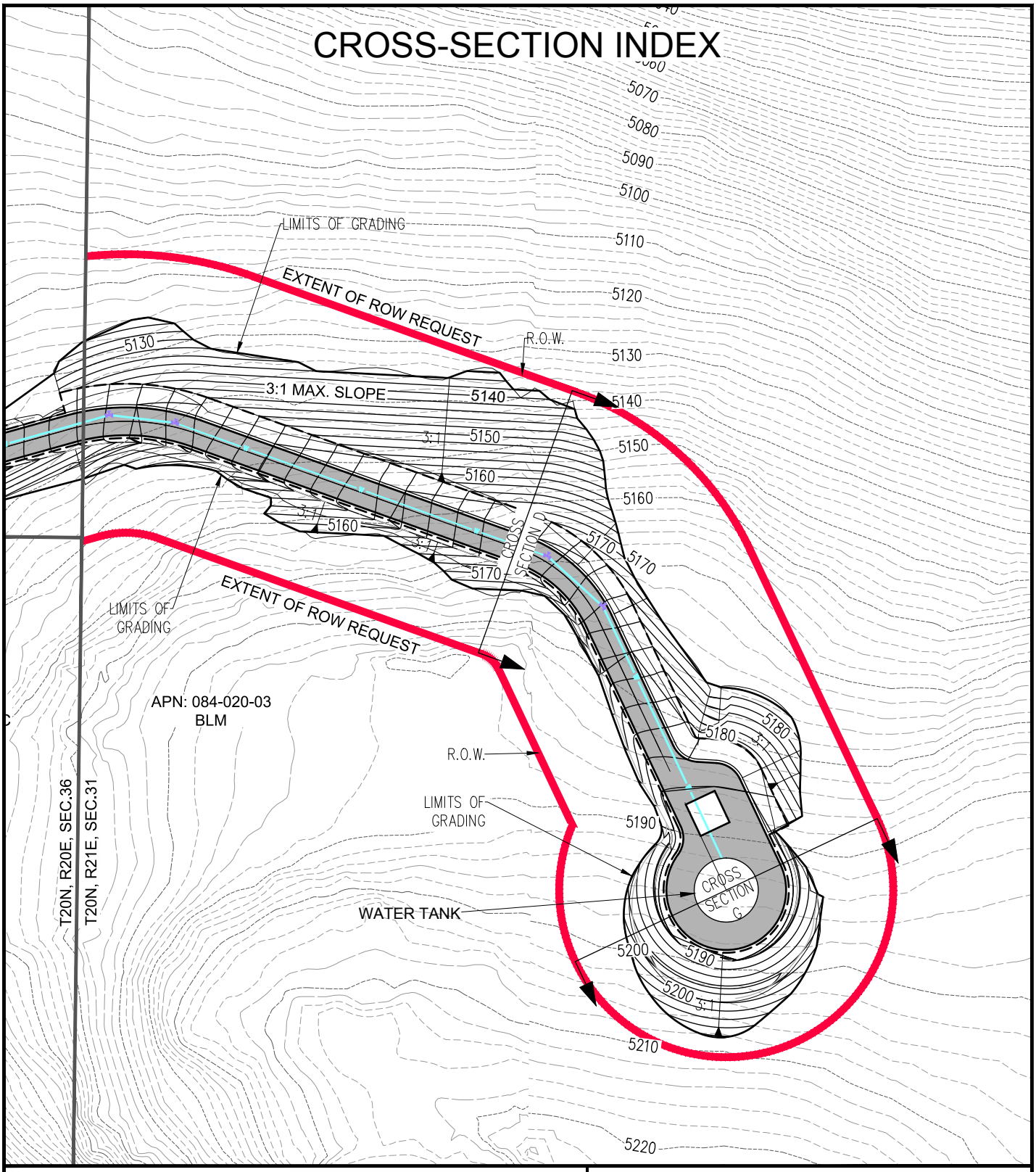
0 75 150 Feet

N

D'ANDREA WATER TANK NUMBER 2 ENVIRONMENTAL ASSESSMENT

FIGURE 3
PROPOSED SITE GRADING

DATE DRAWN	SCALE	DRAWN BY
8/17/2015	1 inch = 150 feet	MD



DESIGN PROVIDED BY MANHARD CONSULTING LTD.

- PROPOSED RIGHT OF WAY (200 FEET)
- WATER MAIN
- PROPOSED GRADING CONTOUR (2 FT)
- EXISTING CONTOUR (2 FT)
- PROPOSED PAVEMENT

0 50 100 Feet

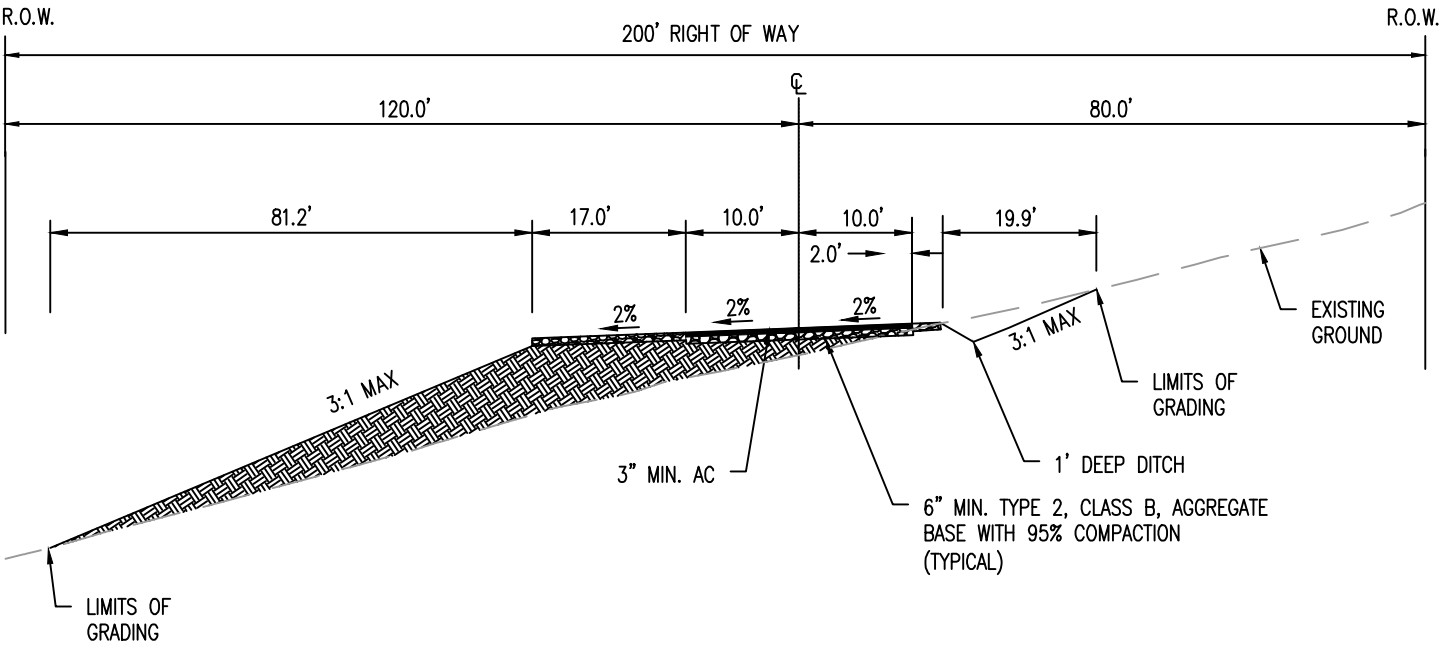
N

D'ANDREA WATER TANK NUMBER 2 ENVIRONMENTAL ASSESSMENT

FIGURE 4
CROSS-SECTION INDEX

DATE DRAWN	SCALE	DRAWN BY
8/17/2015	1 inch = 100 feet	MD

CROSS SECTION D ROADWAY



CROSS SECTION D TYPICAL ROADWAY SECTION

NTS

DESIGN PROVIDED BY MANHARD CONSULTING LTD.

EXISTING GROUND

ASPHALT CONCRETE 3" MINIMUM

TYPE 3 CLASS B AGGREGATE BASE

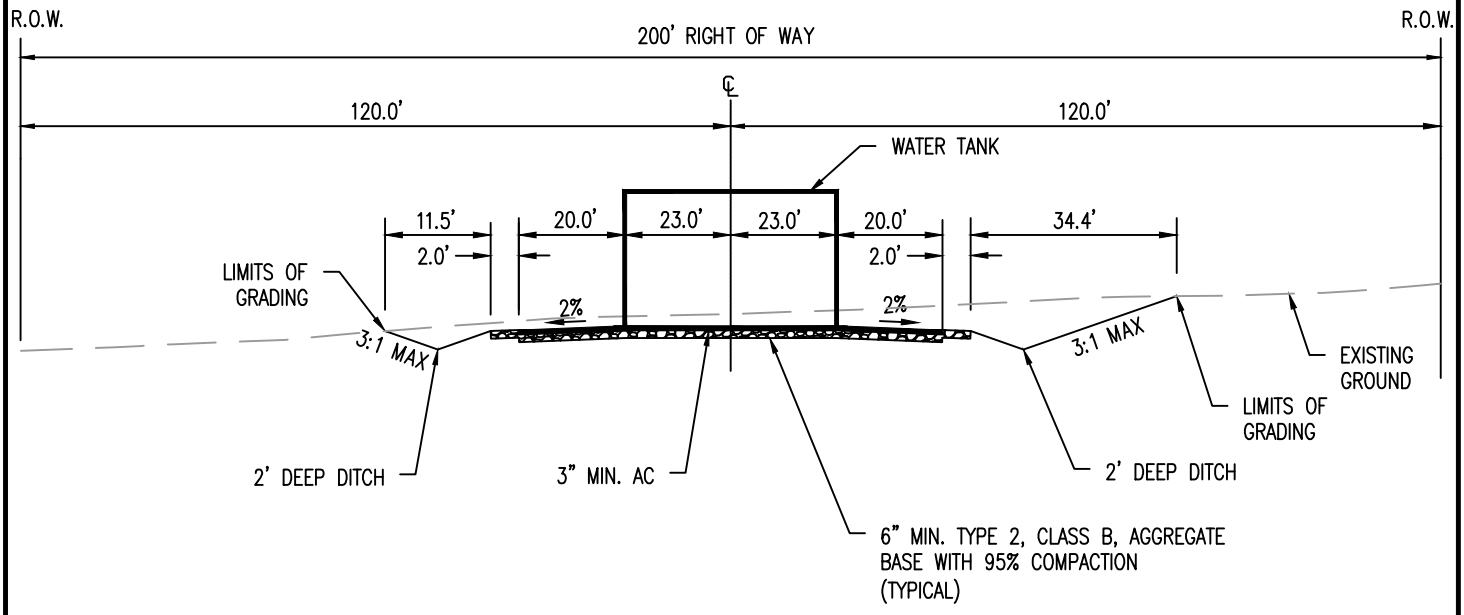
COMPACTED SLOPE FILL

D'ANDREA WATER TANK NUMBER 2 ENVIRONMENTAL ASSESSMENT

FIGURE 5
CROSS SECTION D ROADWAY

DATE DRAWN	SCALE	DRAWN BY
8/17/2015	NOT TO SCALE	MD

CROSS SECTION G WATER TANK PAD



CROSS SECTION G TYPICAL ROADWAY SECTION

NTS

DESIGN PROVIDED BY MANHARD CONSULTING LTD.

EXISTING GROUND

ASPHALT CONCRETE 3" MINIMUM

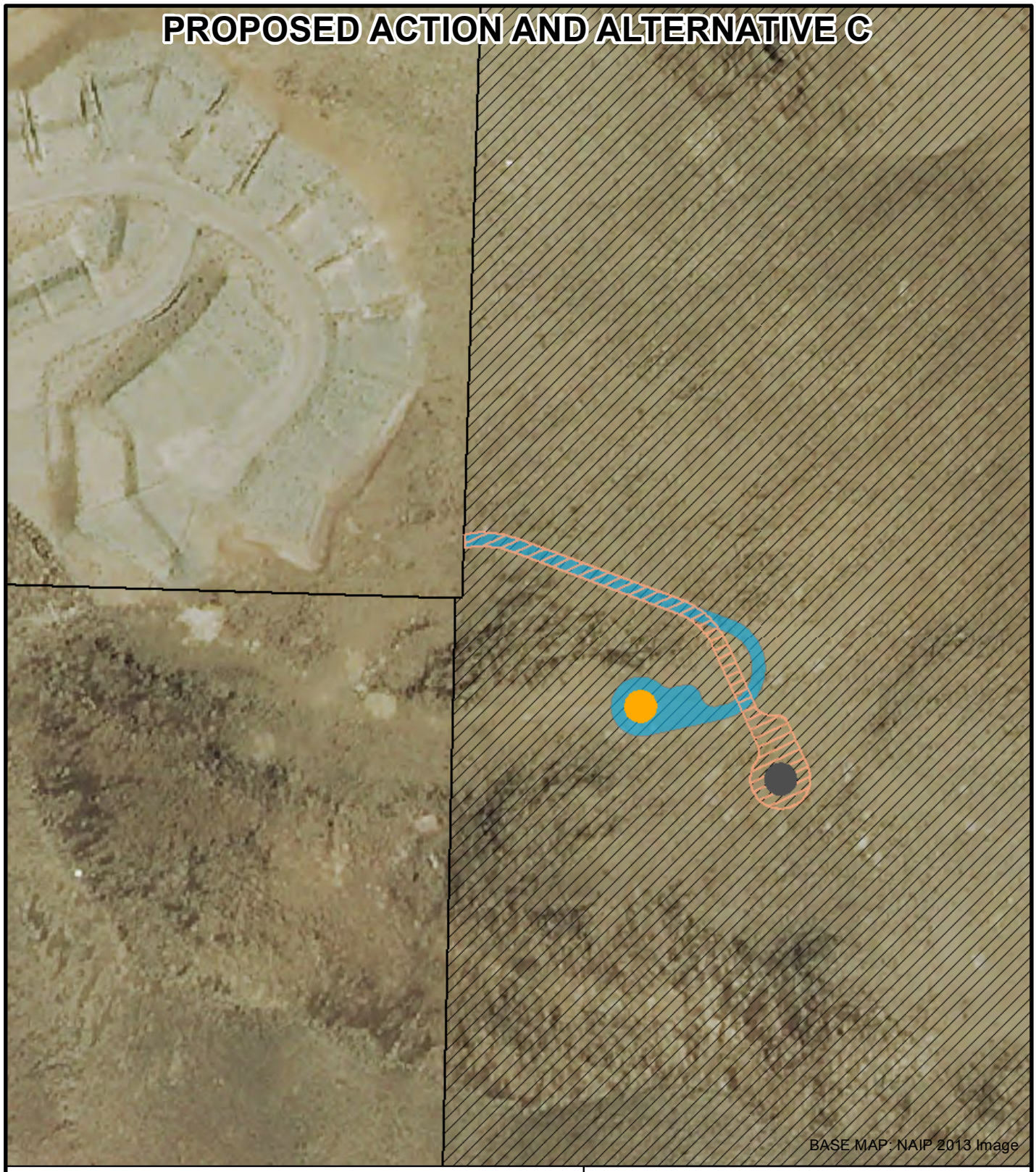
TYPE 3 CLASS B AGGREGATE BASE

D'ANDREA WATER TANK NUMBER 2
ENVIRONMENTAL ASSESSMENT

FIGURE
CROSS SECTION G WATER TANK PAD

DATE DRAWN	SCALE	DRAWN BY
8/17/2015	NOT TO SCALE	MD

PROPOSED ACTION AND ALTERNATIVE C



Proposed Water Tank
Proposed Access Road
Alternative C Tank Location
Alternative C Access Road

Land Status

BLM
Private

0 100 200 Feet

N

D'ANDREA WATER TANK NUMBER 2
ENVIRONMENTAL ASSESSMENT

FIGURE 7
PROPOSED ACTION AND ALTERNATIVE C

NO WARRANTY IS MADE BY THE BUREAU OF LAND MANAGEMENT AS TO THE ACCURACY, RELIABILITY, OR COMPLETENESS OF THESE DATA FOR INDIVIDUAL USE OR AGGREGATE USE WITH OTHER DATA.

DRAWN BY: CHJ

DATE DRAWN: 9/4/2015

SCALE: 1 in = 200 feet

GREATER SAGE-GROUSE HABITAT

Proposed Right-of-Way (200-ft)

Preliminary General Habitat (PGH)

Mapped Habitat

Land Status

BLM

Private

0 500 1,000 Feet

N

D'ANDREA WATER TANK NUMBER 2
ENVIRONMENTAL ASSESSMENT

FIGURE 8
GREATER SAGE-GROUSE HABITAT

NO WARRANTY IS MADE BY THE BUREAU OF LAND MANAGEMENT AS TO THE ACCURACY, RELIABILITY, OR COMPLETENESS OF THESE DATA FOR INDIVIDUAL USE OR AGGREGATE USE WITH OTHER DATA.

DRAWN BY: STM

DATE DRAWN: 9/4/2015

SCALE: 1 in = 1,000 feet

VISUAL RESOURCE MANAGEMENT CLASSES

Proposed Right-of-Way (200-ft)

VRM Class

- 3
- 4

Land Status

- BLM
- Private

0 500 1,000 Feet

N

D'ANDREA WATER TANK NUMBER 2
ENVIRONMENTAL ASSESSMENT

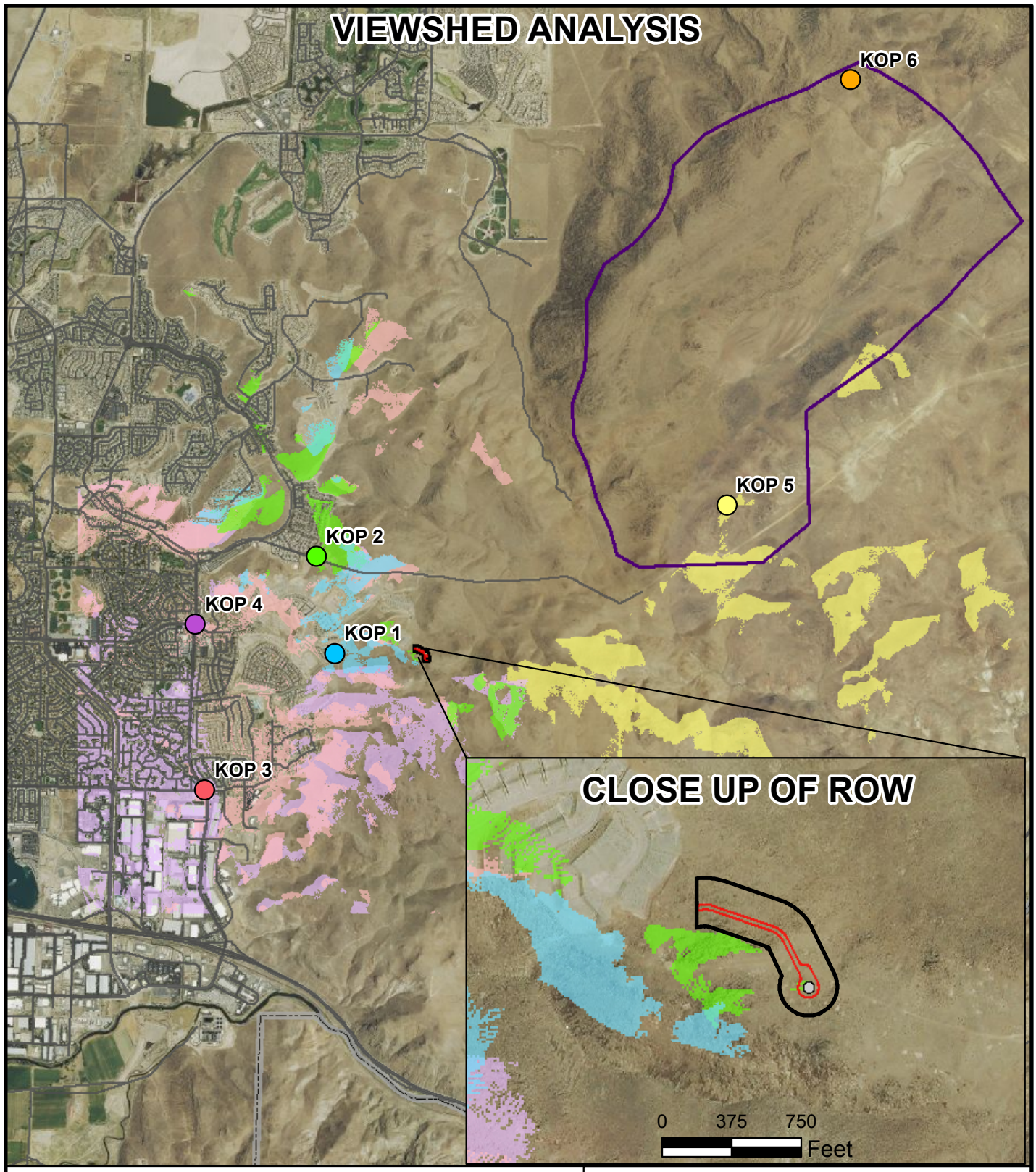
FIGURE 9
VISUAL RESOURCE MANAGEMENT CLASSES

NO WARRANTY IS MADE BY THE BUREAU OF LAND MANAGEMENT AS TO THE ACCURACY, RELIABILITY, OR COMPLETENESS OF THESE DATA FOR INDIVIDUAL USE OR AGGREGATE USE WITH OTHER DATA.

DRAWN BY: STM

DATE DRAWN: 9/4/2015

SCALE: 1 in = 1,000 feet



D'ANDREA WATER TANK NUMBER 2
ENVIRONMENTAL ASSESSMENT

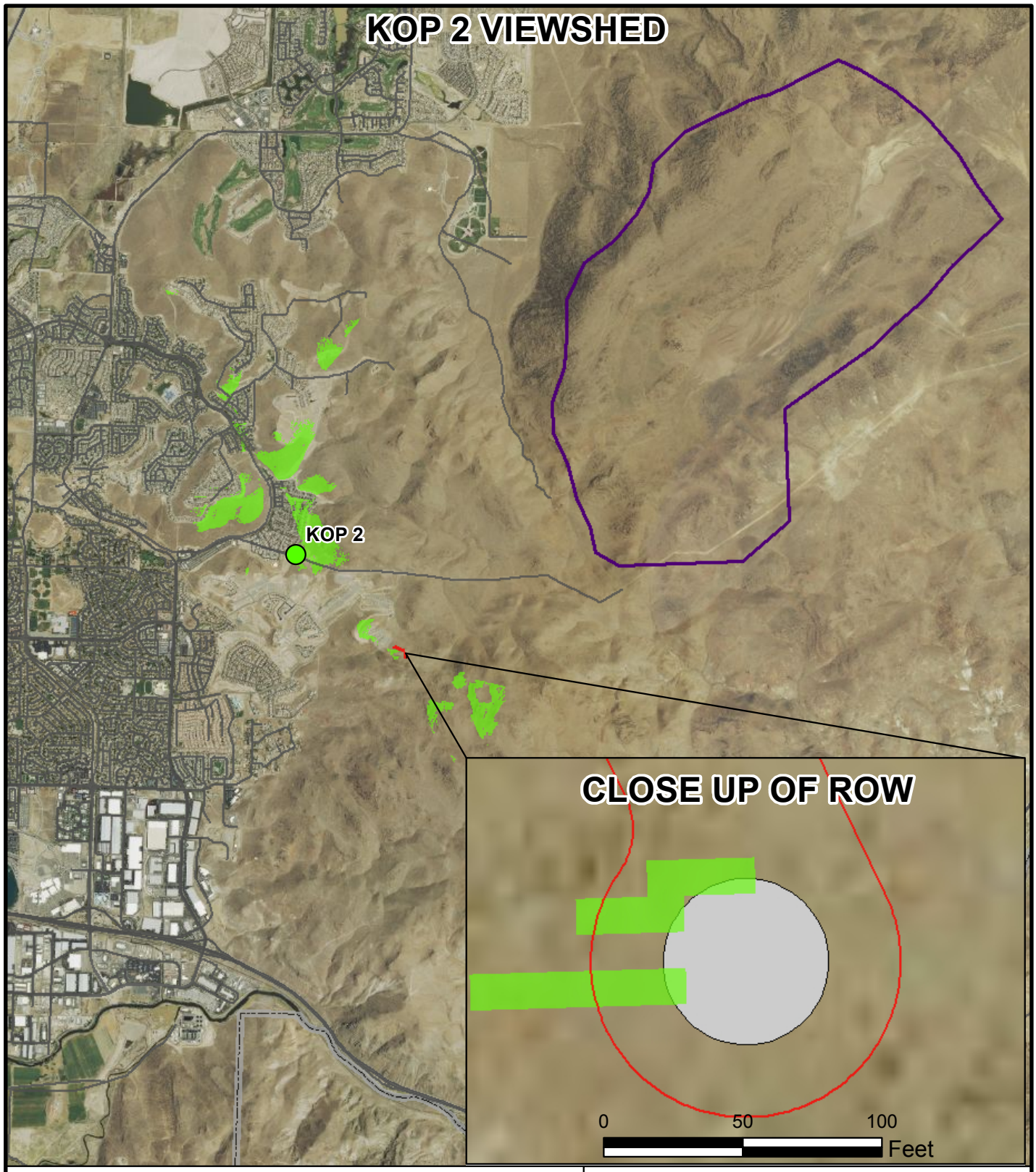
FIGURE 10
VIEWSHED ANALYSIS

NO WARRANTY IS MADE BY THE BUREAU OF LAND MANAGEMENT AS TO THE ACCURACY, RELIABILITY, OR COMPLETENESS OF THESE DATA FOR INDIVIDUAL USE OR AGGREGATE USE WITH OTHER DATA.

DRAWN BY: STM

DATE DRAWN: 9/4/2015

SCALE: 1 in = 5,000 feet



Proposed Water Tank
Proposed Access Road
Pah Rah High Basin Petroglyph ACEC
Visible from KOP2

0 2,500 5,000 Feet

N

D'ANDREA WATER TANK NUMBER 2 ENVIRONMENTAL ASSESSMENT

FIGURE 11
KOP 2 VIEWSHED

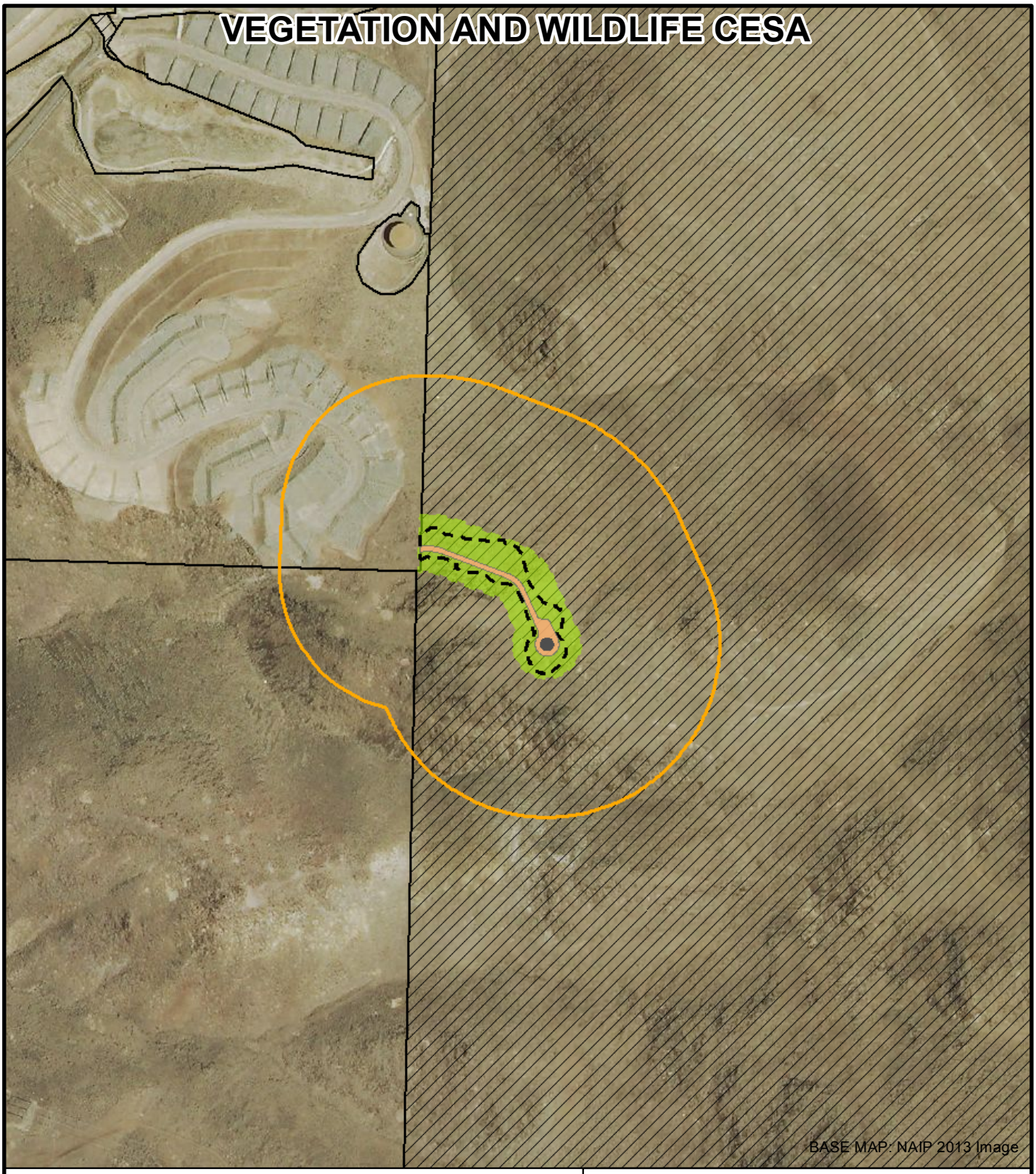
NO WARRANTY IS MADE BY THE BUREAU OF LAND MANAGEMENT AS TO THE ACCURACY, RELIABILITY, OR COMPLETENESS OF THESE DATA FOR INDIVIDUAL USE OR AGGREGATE USE WITH OTHER DATA.

DRAWN BY: STM

DATE DRAWN: 9/4/2015

SCALE: 1 in = 5,000 feet

VEGETATION AND WILDLIFE CESA



Vegetation and Wildlife CESA
Proposed Water Tank
Proposed Access Road
Proposed Disturbance
Proposed Right-of-Way (200-ft)

Land Status

BLM
Private

0 250 500 Feet

N

D'ANDREA WATER TANK NUMBER 2
ENVIRONMENTAL ASSESSMENT

FIGURE 12
VEGETATION AND WILDLIFE CESA

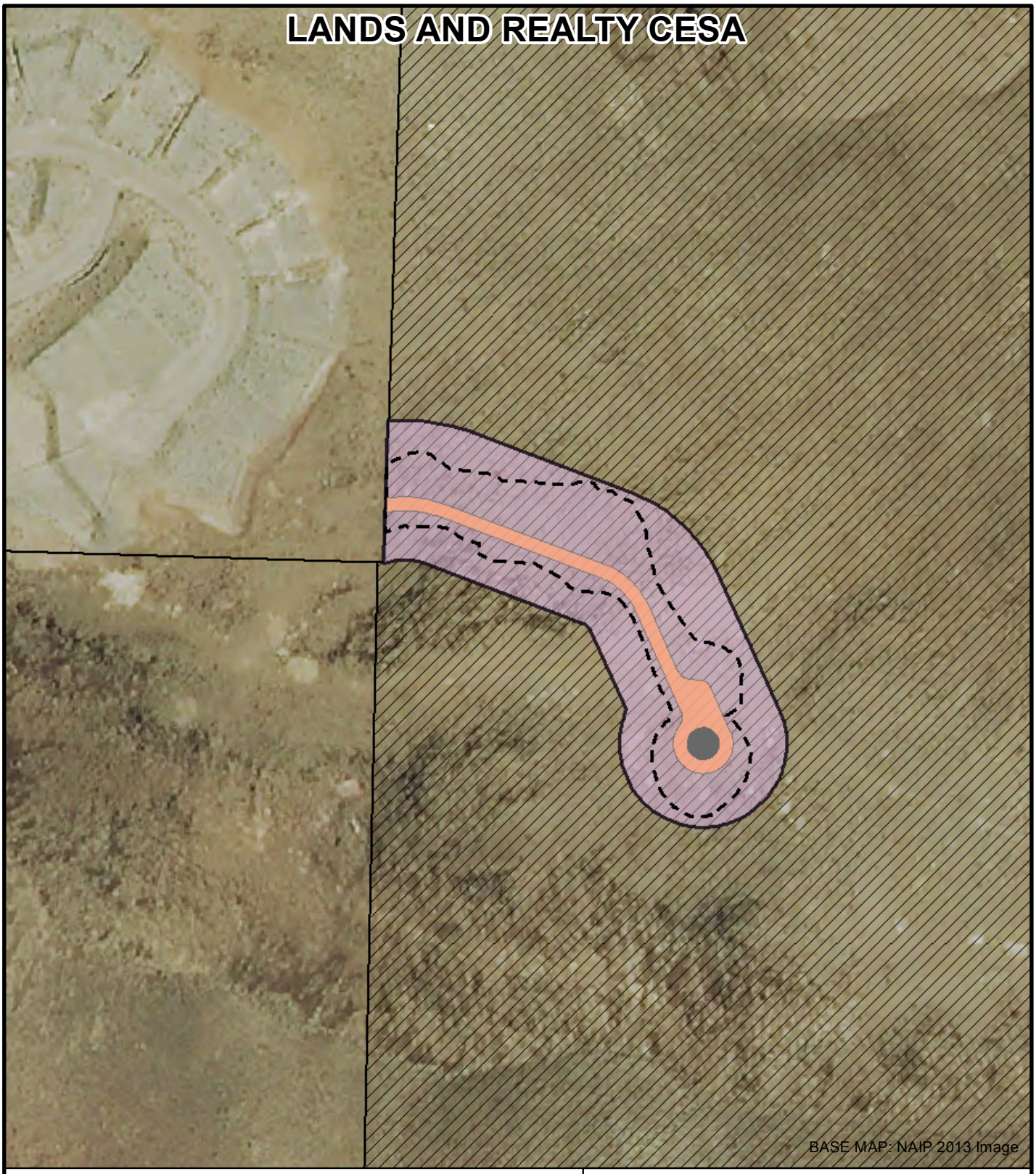
NO WARRANTY IS MADE BY THE BUREAU OF LAND MANAGEMENT AS TO THE ACCURACY, RELIABILITY, OR COMPLETENESS OF THESE DATA FOR INDIVIDUAL USE OR AGGREGATE USE WITH OTHER DATA.

DRAWN BY: CHJ

DATE DRAWN: 9/4/2015

SCALE: 1 in = 500 feet

LANDS AND REALTY CESA



Proposed Right-of-Way (200-ft)
Lands and Realty CESA
Proposed Water Tank
Proposed Access Road
Proposed Disturbance

Land Status

BLM
Private

0 100 200 Feet

N

D'ANDREA WATER TANK NUMBER 2
ENVIRONMENTAL ASSESSMENT

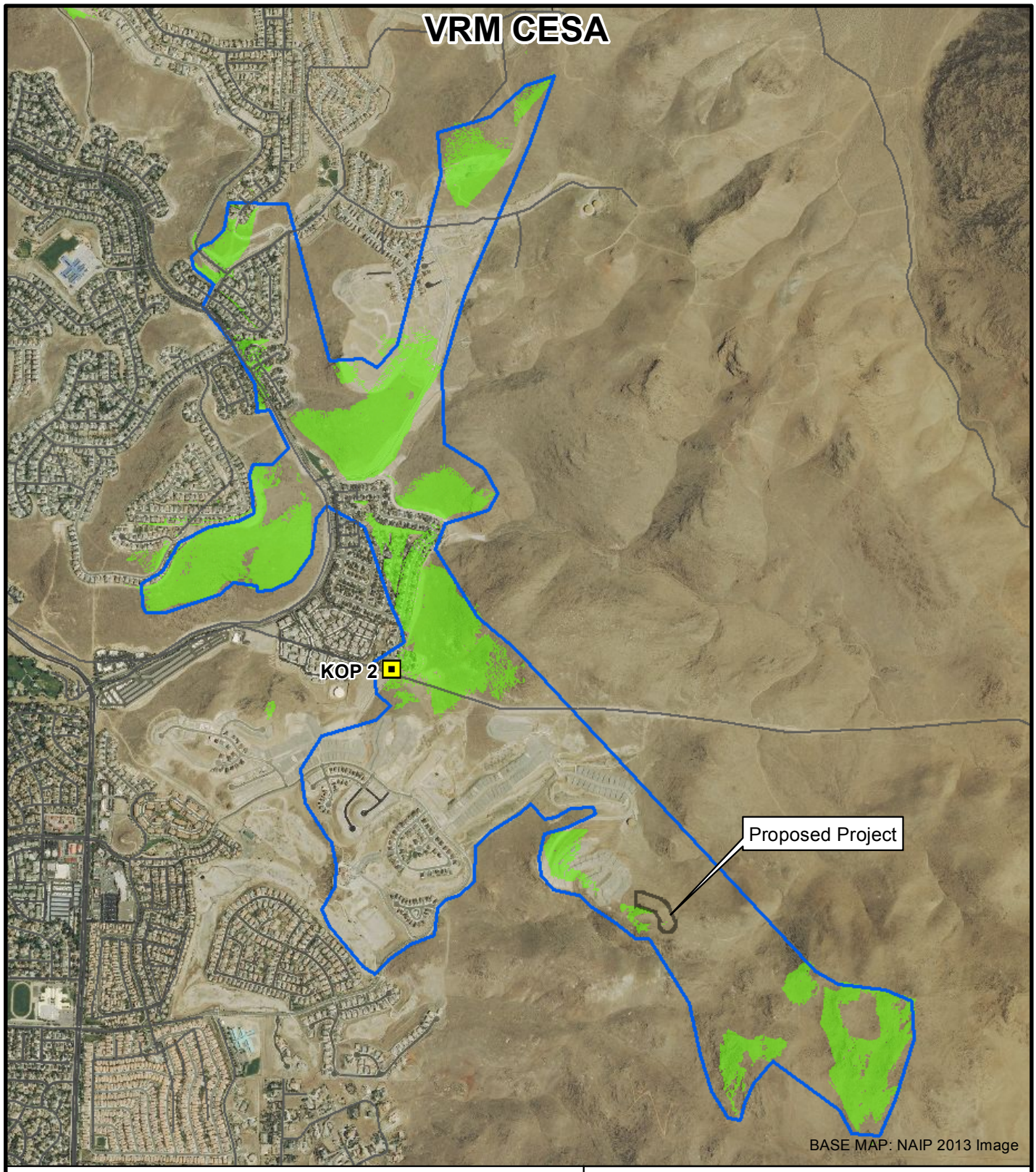
FIGURE 13
LANDS AND REALTY CESA

NO WARRANTY IS MADE BY THE BUREAU OF LAND MANAGEMENT AS TO THE ACCURACY, RELIABILITY, OR COMPLETENESS OF THESE DATA FOR INDIVIDUAL USE OR AGGREGATE USE WITH OTHER DATA.

DRAWN BY: CHJ

DATE DRAWN: 9/4/2015

SCALE: 1 in = 200 feet



VRM CESA

Visible Area from KOP2

Proposed Right-of-Way (200-ft)

KOP 2

0 1,000 2,000 Feet

N

D'ANDREA WATER TANK NUMBER 2 ENVIRONMENTAL ASSESSMENT

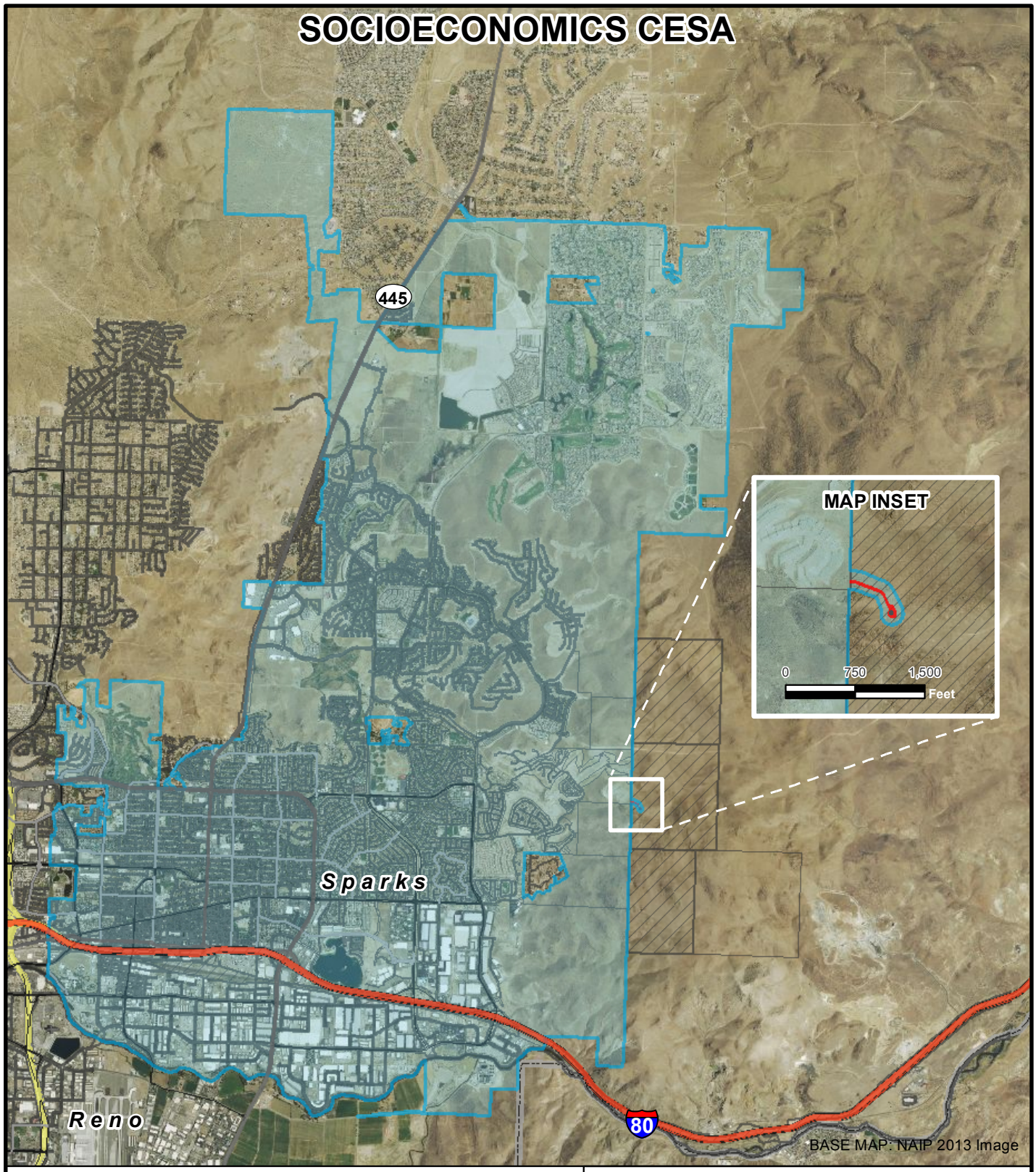
FIGURE 14
VRM CESA

NO WARRANTY IS MADE BY THE BUREAU OF LAND MANAGEMENT AS TO THE ACCURACY, RELIABILITY, OR COMPLETENESS OF THESE DATA FOR INDIVIDUAL USE OR AGGREGATE USE WITH OTHER DATA.

DRAWN BY: STM

DATE DRAWN: 9/4/2015

SCALE: 1 in = 2,000 feet



Socioeconomics CESA
Proposed Water Tank
Proposed Access Road

Land Status

BLM
Private

NATIONAL SYSTEM OF PUBLIC LANDS
U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

0 3,500 7,000 Feet

N

D'ANDREA WATER TANK NUMBER 2 ENVIRONMENTAL ASSESSMENT

FIGURE 15
SOCIOECONOMICS CESA

NO WARRANTY IS MADE BY THE BUREAU OF LAND MANAGEMENT AS TO THE ACCURACY, RELIABILITY, OR COMPLETENESS OF THESE DATA FOR INDIVIDUAL USE OR AGGREGATE USE WITH OTHER DATA.

DRAWN BY: CHJ

DATE DRAWN: 9/4/2015

SCALE: 1 in = 7,000 feet