SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT
V&T HISTORIC RAILWAY RECONSTRUCTION PROJECT

FHWA-NV-EA 10.01
PROJECT ID: 73619/DE-0025(018)

September 2011

FEDERAL HIGHWAY ADMINISTRATION
AND THE
NEVADA DEPARTMENT OF TRANSPORTATION

Drako Way Terminal

Interim Eastgate Station

Balloon Track

PREFERRED DRAKO WAY TERMINAL, 9,000 FOOT LINE CHANGE
INTERIM EASTGATE STATION AND BALLOON TRACK
CARSON CITY, NEVADA

Prepared in cooperation with the Carson City, District Office
Bureau of Land Management

SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT

for

V&T Historic Railway Reconstruction Project:
Preferred Drako Way Terminal, 9,000 Foot Line Change,
Interim Eastgate Station and Balloon Track
Carson City, Nevada

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This Environmental Assessment has been prepared in accordance with the provisions and requirements of Chapter 1, Title 23, 23 CRF Part 771, relating to implementation of the National Environmental Policy Act of 1969 as amended.

Abstract

The Nevada Department of Transportation (NDOT) and the Federal Highway Administration (FHWA), in cooperation with the Nevada Commission for the Reconstruction of the V&T Railway (the Commission), and the Bureau of Land Management (BLM), have prepared this Supplemental Environmental Assessment which examines the potential environmental impacts of a new Carson City Terminal site, a new 9,000 foot alignment (H-1 Line) to that site, an optional balloon track, and an interim station site for the Virginia and Truckee (V&T) Railway Reconstruction Project. This document is considered supplemental to the original Environmental Assessment (EA) prepared by FHWA and NDOT in cooperation with the Commission and BLM in April 2003 and subsequent FHWA issued "Finding of no Significant Impact" (FONSI) on August 19, 2003 for the overall project.

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Glossary of Acronyms and Abbreviations

ACEC	Area of Critical Environmental Concern
ACOE	Army Corps of Engineers
APE	Area of Potential Effect
ATV	All Terrain Vehicle
AUM	Animal Unit Month
BGS	Below the Ground Surface
BLM	Bureau of Land Management (U.S. Department of the Interior)
BLVD	Boulevard
BMP	Best Management Practice
CAAA	Clean Air Act Amendments
CESQG	Conditionally Exempt Small Quantity Generator
CFR	Code of Federal Regulations
CFS	Cubic Feet Per Second
CO	Carbon Monoxide
Commission	Nevada Commission for the Reconstruction of the V&T Railway
dBA	A-weighted sound level in decibels
EA	Environmental Assessment
EB	Eastbound
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRMS	Flood Insurance Rate Maps
FONSI	Finding of No Significant Impact
Kg	Kilogram
L_{Aeq1h}	Average decibels over one hour, A-weighted
L_{dn}	Day-night average sound level equal to the 24-hour average sound level with an adjustment of 10 decibels to sound levels in the night from 10:00 p.m. to 7:00 a.m.
LUMOS	Lumos and Associates
mg/m^3	Milligrams Per Meter (cubed)
MPO	Metropolitan Planning Organization
NAAQS	National Ambient Air Quality Standards
NAC	Noise Abatement Criteria
NB	Northbound
NDEP	Nevada Division of Environmental Protection
NDOT	Nevada Department of Transportation
NDOW	Nevada Department of Wildlife
NDWR	Nevada Division of Water Resources
NEPA	National Environmental Policy Act (PL 91-190)
NNHP	Nevada Natural Heritage Program
NOI	Notice of Intent
NPDES	National Pollution Discharge Elimination System
NPL	National Priorities List
NRCS	Natural Resource Conservation Service
NRS	Nevada Revised Statute
NWI	National Wetlands Inventory
OHV	Off-Highway Vehicle
PM_{10}	Particulate matter with an aerodynamic diameter less than ten micrometers
ppm	Parts Per Million
PSC	Public Service Commission
PUC	Public Utilities Commission
R/W	Right of Way

RCB	Reinforced Concrete Box
RCRA	Resource Conservation and Recovery Act
RR	Railroad
RTC	Regional Transportation Commission
RTP	Regional Transportation Plan
RV	Recreational Vehicle
SB	Southbound
SEA	Supplemental Environmental Assessment
SHPO	State Historic Preservation Office
SQG	Small Quantity Generator
SR	State Route
STOLPORT	Short Takeoff and Landing Airport
SWPPP	Storm Water Pollution Prevention Plan
TPH	Total Petroleum Hydrocarbons
USC	United States Code
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	Underground Storage Tank
V&T	Virginia and Truckee (Railroad or Railway)
VTPC	V&T Project Corridor
WB	Westbound

List of Mitigation Measures

The following list describes measures that would be implemented as part of the project to avoid, reduce, or otherwise mitigate environmental impacts associated with this project. The mitigation measures presented here are intended for the portion of the project considered herein and to supplement those contained in the April 2003 Environmental Assessment *V&T Historic Railroad Reconstruction, Carson City, Lyon County, and Gold Hill, Nevada*, FHWA-NV-EA 03.03, STP-0029(004).

Mitigation measures and actions to comply with federal, state, and local laws/regulations in the areas of noise, air quality, water quality, and hazardous materials as well as those listed below will be specified in the contract documents.

The following mitigation measures and commitments are not subject to change or modification without prior written approval from the Federal Highway Administration.

Nevada Commission for the Reconstruction of the V&T Railway and/or Project Contractor is responsible for implementing the following Mitigation Measures:

EA Page No. Reference	Mitigation Category	Description
10	Social/Business (Section 2.1.3)	All relocations will be conducted in accordance with the Relocation Assistance and Real Property Acquisition Policy Act of 1970 (Uniform Act). Blasting required for the construction of the 9,000 foot alignment will be coordinated with nearby businesses in order not to impact any motion sensitive production periods. Surrounding business and/or residences that may be impacted by the blasting will receive adequate notification in advance of the blasting specifying days and times of proposed blasting. The blasting schedule will be determined in cooperation with those businesses engaged in high precision manufacturing to reduce any impact to production. All blasting will be conducted in compliance with state and local laws and be monitored. Maximum velocities for shock waves will be specified in the contract documents to minimize vibration impacts to structures or manufacturing processes. Should the Parker-Carson STOLPORT be listed as a public use airport on current aviation charts at the time of final design and construction then interim Eastgate Station improvements will be in conformance with FAA guidelines.
10	Recreation (Section 2.1.3)	A single railway crossing will be constructed just west of the proposed balloon track location that will maintain recreation access to this portion of the river and surrounding area. This crossing will be constructed regardless of the ultimate terminal location or balloon track construction. A second crossing on the 9,000 foot line change to provide 10access to the Carson City water tank above the intersection of Deer Run Road and Carson River Road will avoid any impact to recreational use of this area.

EA Page No. Reference	Mitigation Category	Description
10	Utilities (Section 2.1.3)	Mitigation of existing utilities will consist primarily of raising power lines along the 9,000 foot line change and at the Drako Way Terminal site. Relocation of the water line to the Carson City water tank above Deer Run Road or relocation of a few power poles will be coordinated with the city and the utility company. Temporary utilities installed for the interim Eastgate Station, if constructed, will eventually be removed or abandoned in place as required by NDEP permits and in accordance with BLM right-of-way grant requirements. It is anticipated that all relocations will be within acquired or BLM granted right-of-way.
11	Traffic (Section 2.1.3)	Traffic studies would be conducted and traffic signage or signal systems will be upgraded or installed where Carson City or NDOT deem necessary. In addition, all railroad crossings will be designed and constructed to avoid automobile and pedestrian conflicts with train traffic.
12	Noise (Section 2.3.4)	Construction noise would be temporary and limited to daytime operations in accordance with standard grading and other permits. Noise during construction of the 9,000 foot alignment and terminal site will temporarily increase to levels above the ambient levels. Blasting will be scheduled for daylight hours and vibration limited by project specifications which will also limit related noise levels. Stationary equipment will be placed as far away as practical from sensitive receptors. Proper maintenance of rail equipment and limited hours of operation would be used to maintain consistent noise levels during operation. As the project proceeds through the later design stages, if a vibration assessment is warranted and if it is determined that vibration levels would be excessive, then mitigation measures to reduce the levels of ground-borne vibration would be included into the final design. Such measures may include but are not limited to floating slabs, resiliently supported ties, high-resilience fasteners, and vibration reducing ballast mats. To be effective, any approved measure must be optimized for the frequency spectrum of the vibration in question.
13	Air Quality (Section 2.4.4)	Contract documents will specify that the contractor must implement a dust control plan to address impacts. In addition, the contractor must comply with all federal, state, and local laws and regulations.
15	Surface Water (Section 2.5.3)	Energy dissipaters and interceptor ditches will be constructed at the drainage structure outfalls to prevent down gradient scouring. Interceptor ditches will be constructed on the upstream side of the roadbed to carry storm runoff through the cut sections. They will discharge to natural channels on the upstream side in fill areas, or to small pipes crossing under the track bed. Embankment fill in the area of the low point of the project east of the Bertagnolli gravel pit will raise the track structure relative to the flood elevation. BMPs will be utilized to limit and control the potential for water quality impacts due to erosion of sediment from wind and water related forces as well as containing construction materials onsite during the construction and operation of the proposed project.

EA Page No. Reference	Mitigation Category	Description
15	Surface Water (Section 2.5.3) continued	The contractor will be required to file a Notice of Intent (NOI) with the Nevada Division of Environmental Protection's Bureau of Water Pollution Control. This provides coverage under the General Permit for Storm Water Discharges Associated with Construction Activity (NVR100000) required by the National Pollutant Discharge Elimination System (NPDES) program pursuant to the Clean Water Act. A Storm Water Pollution Prevention Plan (SWPPP) must be developed prior to the NOI submittal. The SWPPP outlines temporary erosion and sediment controls incorporating BMPs, therefore reducing non-point source pollution that may be generated relative to the construction project.
15-16	Surface Water (Section 2.5.3) continued	The following mitigation measures will be required at the Drako Way Terminal site and the interim Eastgate Station if constructed: Drains will be constructed inside the vehicle maintenance area. Flow from the drains will be treated prior to discharge into the local sanitary sewer system or offsite disposal in the event that the interim station is not served by sewer. A maintenance plan will be developed for the oil/water separator. Vehicles, equipment, and train rolling stock will be washed on a special wash pad at the Drako Way Terminal location. Flow from the wash pad will be treated prior to discharge into the local sanitary sewer system. Vehicles, equipment and train rolling stock will be washed on a special wash pad at the Interim Eastgate Station and the wash water disposed of by collection and offsite disposal or treated and discharged to the local sanitary sewer system when extended to the site. Wastewater from buildings or restrooms at the Drako Way Terminal will be connected to local sewer and water utilities. Train wastes will be stored on the train and properly disposed of at the depot or at the Eastgate Station. The interim Eastgate Station will be served by a holding tank, septic system or by a holding tank(s). Train wastes will be disposed of either on site to a holding tank, septic system or sewer as appropriate to the ultimate development of the site. Stormwater runoff from parking lots, rooftops, and maintenance areas will be treated to meet water quality standards prior to flowing into the local storm drain or drainage conveyance.
17	Floodplain and Hydrologic Assessment (Section 2.6.3)	Existing flow patterns and capacities for drainage features will be perpetuated in the railroad corridor. Minor drainages will be perpetuated and discharged into their historic drainage paths with minimal disturbance. The railroad grade will be raised a foot or more by design along the Bertagnolli gravel pit area. Impacts to upstream, downstream and adjacent properties and to the Carson River will be minimized by limiting encroachment into FEMA designated floodplain (100 and 500 year flood zones) and avoiding any construction within the ordinary high water mark of the Carson River.

EA Page No. Reference	Mitigation Category	Description
19	Hazardous Materials Track Right-of-Way (Section 2.7.3)	Mitigation for potentially mercury contaminated soils will consist of placing fill over the native soils. Embankment fills will be placed for a short distance near the Bertagnolli gravel pit and in the area of the balloon track which combined with dust control will help mitigate exposure to workers. Standards for safe handling of native soils with possible mercury contamination will be incorporated into the special provisions of the project contract. Close coordination with NDEP will be required of the design team including plan reviews. Soils excavated in the area of the Bertagnolli aggregate pit will be screened for hydrocarbon contamination (TPH). If contaminated soils are encountered during construction they will be disposed of in accordance with appropriate regulations. Current preliminary plans call for raising the grade in this area and little excavation is planned. No other constituents were discovered by NDOT which exceeded state action levels. However, if additional contamination is discovered during construction it will be reported to NDEP so necessary steps can be taken. The balloon track area will for the most part involve the placement of fill averaging three or more feet thick. The placement of a minimum of two feet of clean fill over hazardous metal contamination is a standard practice in the area recognized by NDEP for isolating heavy metals such as mercury and lead from public exposure. Proper handling and disposal methods as approved by NDEP will need to be specified in the Special Provisions for the project. It will be necessary to ensure that no excavated material is moved from this area without testing to determine the extent of any contamination.
19	Hazardous Materials Depot and Interim Station Operations (Section 2.7.3)	The impacts caused by hazardous waste generation and fuel storage at the depot or interim station sites will be mitigated by proper handling and spill prevention techniques. This will include following applicable Federal, State and local regulations. Federal RCRA regulations cover the storage and handling of hazardous waste. Carson City Fire Department regulations pertain to aboveground fuel storage tanks and Carson City Utility Department regulations cover the storage of hazardous material and waste. Special attention will be given to secondary containment for hazardous waste and fuel storage. A Spill Prevention Control and Countermeasure Plan (SPCC) will be developed for the terminal and interim station.

EA Page No. Reference	Mitigation Category	Description
19	Hazardous Materials Depot and Interim Station Operations (Section 2.7.3) continued	Wash water, generated by steam cleaning and washing of trains and maintenance vehicles, will be managed as wastewater and disposed of in the sanitary sewer or at an approved offsite disposal facility in the case of the interim station. The Carson City Utility Department regulates these discharges and requires some form of pretreatment prior to discharge to the sewer or at an approve disposal site. This and/or other regulations will be adhered to in the handling of wastewater. Over excavation and removal of the construction debris materials observed on the proposed Drako Way Terminal site will be necessary due to the need for track structures to pass over the area. Monitoring of the removal will be necessary to ensure no hazardous materials are present. If hazardous materials are encountered they will be properly handled and disposed of in accordance with state and local standards. Clean structural fill will need to be placed once the offensive materials have been completely removed.
27-28	Biological Resources Vegetation (Section 2.8.3)	A preconstruction survey of the project area will be necessary. Construction and associated activities will occur strictly within the limits of the Drako Way Terminal site, the Interim Eastgate Station site, the utility easement between Morgan Mill Road and Flint Drive and on the 9,000 foot alignment change with the exception of areas designated for avoidance. Avoidance areas shown on plans will include where necessary potential jurisdictional waters, cultural areas and if present sensitive vegetation areas. Clearing of vegetation will be limited to areas necessary for construction, future maintenance and where safety concerns exist. Topsoil will be stockpiled when appropriate and reused during reclamation. Vegetated areas disturbed outside of required maintenance zones will be graded, covered with reclaimed topsoil, and revegetated with native, certified weed-free seed mixes. The train operator and/or the Commission will remove debris from areas within the right-of-way. This will help restore habitat and make the ride more visually pleasing. An inadvertent discovery plan for sensitive species will be included in project documents to protect sensitive species should they be found. Permits if required will be obtained if plants need to be removed.

EA Page No. Reference	Mitigation Category	Description
28	Biological Resources Noxious Weeds (Section 2.8.3)	During construction, contract documents will specify a noxious weed management plan to control the invasion and/or spread of noxious weeds in the project area. To ensure noxious weeds do not become established subsequent to construction, a qualified biologist will monitor the site after reclamation activities have concluded on a yearly basis and the revegetation efforts have had an opportunity to become established. If field inspections show that noxious weeds are invading the reclaimed sites, biologists will consult with the BLM and/or the State Cooperative Extension weed program to determine and implement appropriate control measures. Abatement measures may include hand pulling, spraying, or mechanized methods of weed control.
28	Biological Resources Wildlife (Section 2.8.3)	Structures which inhibit large mammal movement, such as fencing, retaining walls, mesh netting (used for rock fall protection), will only be installed where safety concerns exist. To avoid direct and indirect impacts to migratory birds, removal of vegetation will occur outside the bird breeding season. If vegetation removal is scheduled to occur during the nesting season, then a qualified biologist would survey the area prior to initiation of construction. If active nests are located, then a buffer would be established around the nests and the area avoided until the nests are no longer active. The size of the buffer is dependant on the identified nesting species and would be determined by the biologist in consultation with the Nevada Department of Wildlife (NDOW). A pre-construction survey shall be conducted by a qualified biologist within 30 days prior to construction to identify special-status bats that may be located near any of the project features considered for construction here. If an existing roost or signs of an existing roost is found, avoidance of the roost is optimal and mitigation measures to ensure avoidance shall be implemented in conjunction with consultation(s) with NDOW. If avoidance is not possible, consultation with the NDOW is required prior to impacting the species.
28-29	Biological Resources Wetlands/ Riparian/ Jurisdictional Waters (Section 2.8.3)	Pursuant to the Clean Water Act: the project will prepare and submit a Pre-Construction Notification or permit application for the 9,000 foot alignment portion of the project prior to any construction. BMPs as determined by the appropriate agencies as included in an approved Storm Water Pollution Prevention Plan (SWPPP) will be followed when performing work in or near washes, wetlands, and perennial waters. Common BMPs include silt screens, hay bales, heavy equipment with non-metal tracks, and coffer dams. In the area adjacent to the Carson River at the east end of the proposed new alignment, flagging/stakes/fencing will be placed prior to any work to delineate wetland boundaries. The contractor will be required to avoid these areas.

EA Page No. Reference	Mitigation Category	Description
29	Biological Resources Threatened and Endangered Species (Section 2.8.3)	No mitigation is required; however, in the unlikely event any threatened, endangered, species of concern, or sensitive species are encountered prior to or during construction and which may be impacted, the USFWS and/or NDOW shall first be consulted with to address the issue. If such species are encountered, the species and their habitats will be avoided via measures which have been approved by the resource agency where feasible. If avoidance is not possible, minimization measures shall be employed, and as a last resort, unavoidable impacts shall be mitigated as approved by USFWS and/or NDW as appropriate.
29	Biological Resources Range (Section 2.8.3)	Areas outside of the permanent construction zone and falling outside of maintenance zones will be revegetated. Fencing, which would limit open-range grazing, will be installed only in areas where safety concerns exist. Other appropriate mitigation measures as mentioned in the wild horse and burro sections also apply to livestock.
29	Biological Resources Wild Horse and Burro (Section 2.8.3)	Mitigation will be the same for these species (when appropriate) as listed above in the range and wildlife sections. The train operator will be prohibited from stopping the train for recreational purposes such as petting or feeding when herds or individuals are encountered. If the train stops for picture taking the passengers will be required to stay on board.
30	Cultural Resources (Section 2.9.3)	Mitigation measures to avoid or minimize construction impacts to Cr 03-6984 will be developed and implemented in coordination with FHWA, BLM, SHPO and the Commission in accordance with the Section 106 programmatic agreement for the reconstruction of the V&T Railway. Feature 206 of Site Cr 03-4412 will be avoided. Monitoring of cultural resource sites would occur during construction and an inadvertent discovery plan will be in place prior to the commencement of construction. The plan will be similar to the plan used on earlier phases of the project. The plan requires the contractors' personnel and the owners' on-site representatives to be trained to recognize what types of items could be of historical significance. Procedures are established for the collection of artifacts by appropriate personnel and archiving of artifacts. Inadvertent discoveries will be handled in accordance set forth in the programmatic agreement entered into by FHWA, BLM, the Nevada State Historic Preservation Office, and the Commission.

1.0 PROPOSED ACTION

1.1 Introduction

This Supplemental Environmental Assessment (SEA) addresses newly proposed elements for the completion of the V&T Historic Railway Reconstruction Project from Gold Hill to Carson City, Nevada. All of the proposed changes are located entirely within Carson City, Nevada as shown on the Vicinity Map, Figure 1. The overall project is administered by the Nevada Commission for the Reconstruction of the V&T Railway (the "Commission"). The original EA for the entire project was prepared by the Nevada Department of Transportation (NDOT) in cooperation with the Federal Highway Administration (FHWA), and the Bureau of Land Management (BLM), Carson City Field Office. The EA was issued in April 2003 followed by the lead agency, FHWA, issuing a "Finding of No Significant Impact" (FONSI) on August 19, 2003. Approximately 12.5 miles of the 17 mile overall project has been completed in the period from 2005 to 2010. Funding for the overall project has been obtained by the Commission over a protracted period of time from a number of mostly public sources. The Commission obtained funding in an incremental fashion which has resulted in the construction progressing in four separate phases.

The project, as now proposed includes two new permanent features; a new alternative terminal site referred to as the "Drako Way Terminal" and a new 9,000 foot segment of railway alignment to reach the new alternative terminal. In addition, possible interim facilities are being considered to support additional phasing of the project if deemed necessary by the Commission. The interim facilities would include a temporary station off of Flint Drive referred to as the "Interim Eastgate Station", a utility corridor extension from Morgan Mill Road to Flint Drive to provide sewer and perhaps other utility services to the temporary station; and a "balloon track" near the Carson River. These facilities may or may not be constructed based entirely on the amount and timing of funding received. The locations of the proposed facilities are shown on the Site Map, Figure 2.

The SEA is being prepared in cooperation with the Bureau of Land Management (BLM) Carson City Field Office to support future right-of-way authorizations from the BLM.

Throughout this document, the terms "V&T Railway" and "V&T Railroad" are used. The meaning of these names must be taken from the context in which they are presented. The historic V&T operation ran at different times under both of the names "Railroad" and "Railway". The "V&T Railway" as used herein is used to reference the title of the "Commission", a State of Nevada entity, charged with reconstructing the V&T and for the name for the track between Carson City and Gold Hill which is now officially recognized by the Federal Railroad Administration and Public Utilities Commission. The "V&T Railroad" is the trademarked name of the privately held Virginia & Truckee Railroad Corporation, Inc. This entity is currently under contract to provide train operations for 2010 on the portion of the completed portions of the V&T Railway project. In this document the term "V&T Railroad" is used both in reference to the Historic Railroad (1869 through 1951which during part of the time was also referred to as V&T Railway) and to the privately owned present day corporation. The modern day V&T Railroad has no responsibility for the financing, construction, or permitting of the V&T Railway Project as administered by the Commission.

1.2 Description

This SEA addresses proposed actions consisting of the following new elements of the overall reconstruction project (totaling approximately 111 acres of land) which were previously not considered:

- Preferred alternative Drako Way Terminal consisting of approximately 17.2 acres of which 3.6 acres is owned by the Commission and the remaining 13.6 acres is privately owned.
- 9,000 feet of new alignment consisting of approximately 13.0 acres of which approximately 4.3 acres is BLM administered and the remaining 8.7 acres is privately owned.
- An optional segment of balloon track consisting of approximately 11.7 acres that are all privately owned. The balloon track would allow for turning the train around at the most logical location for the next possible phase of construction.
- An interim station facility off of Flint Drive consisting of approximately 61.8 acres of public land that is entirely BLM administered.

- Utility corridor for sewer and possibly other utilities to the Eastgate Interim Station. The corridor would nominally be 40 foot wide and cross both public and private land with an overall length of approximately 7,900 linear feet or 7.3 acres. Approximately 4,300 linear feet or 4.0 acres will require private land and approximately 3,600 feet or 3.3 acres will be on BLM administered public land.

The 2003 EA considered two alternative locations for a terminal site in Carson City. The terminal sites described in the 2003 EA were referred to as "Terminal A" located at US Highway 50 and Detroit Lane and "Terminal B" located at the intersection of Deer Run Road and the Carson River Road as shown on Figure 2. Due to the development of the Terminal B site in 2005, the construction of the Deer Run Road bridge approach across the proposed alignment, public safety concerns related to the interface of the route with automobile traffic along the Carson River Road, Deer Run Road and Morgan Mill Road, and environmental concerns due to wetlands, a new alternative terminal location is now proposed by the Commission as the preferred location just off of US Highway 50 in Carson City on Drako Way.

The determination of the Drako Way Terminal as the "preferred alternative" was made based on Commission action in September of 2005 in response to developments described above that were occurring along the project route as described in Section 1.4 Alternatives. The decision of the previously unconsidered site as the preferred alternative was made with the understanding that the full NEPA process is required to be completed prior to making the final depot site selection.

The proposed Drako Way Terminal is located between US Highway 50 and Morgan Mill Road. Access to the terminal site will be from the west by Morgan Mill Road via Deer Run Road and off of US Highway 50 via Drako Way. The proposed terminal site includes approximately 17.2 acres of private land. When completed the terminal facility is planned to consist of a minimum of four or five parallel tracks (mainline, fueling, siding, and house tracks), water tank or fill stand, above ground fuel tanks (or rail cars), a terminal building for ticket sales, a public restroom facility, a maintenance/office building, public parking and associated landscaping as shown in Figure 3. The 20,000 square foot maintenance/office building and associated equipment yard was purchased by the Commission in 2005 to provide a construction office and storage space for donated and purchased materials. If the Drako Way Terminal proves viable from a NEPA perspective, the existing building and associated parcel of land owned by the Commission would be a major component of the overall terminal facilities.

As shown on the Project Site Map, Figure 2, the 9,000 foot alignment change will leave the historic route along the north side of the Carson River at the location of the existing Bertagnolli gravel pit and traverse upslope towards the west. After approximately 6,000 feet, the proposed alignment will turn northward toward US Highway 50. The route will cross over Morgan Mill Road on a proposed bridge structure and then enter the train yard of the proposed Drako Way Terminal. The 9,000 foot alignment will require approximately 13.0 acres of which 8.7 acres is privately owned and 4.3 acres is BLM administered public land.

The interim Eastgate Station site would be located immediately south of US Highway 50 off of Flint Drive entirely on approximately 61.80 acres of BLM administered public land as shown on Figure 2. Facilities would include the interim station building, combined engine house and maintenance building, a parking area, yard tracks, wye track and associated utilities. The selection process for the planned improvement and utilities used will be driven by the V&T operations and specifically by the number of train passengers that are planned for and the length of time that the facility may be used. A conceptual layout for the interim facility is shown on Figure 4.

The station building would be less than 3,000 square feet and the engine shed/shop would be on the order of 9,000 square feet. Modular and or metal buildings are proposed for this site specifically so that they could be removed or reused at the Drako Way Terminal site when the project is completed.

If the interim Eastgate Station is constructed, a short term, on-site sanitary septic system, holding tank or connection to the Carson City sewer system would be proposed. Permitting would be subject to BLM approval and NDEP requirements. The sanitary sewer line if constructed would follow a new utility corridor from Morgan Mill Road to Drako Way and then continue directly adjacent to an existing NV Power Right-of-Way to Flint Drive. It would then follow Flint Drive north to the interim Eastgate Station site as shown on Figure 2. A 600 foot section of utility corridor from US 50 to the interim Eastgate Station is also included as an alternative utility route if needed. The need for this short section of corridor may be driven by development along US 50 prior to construction of the Eastgate

Station or if utilities need to be "looped". Existing utilities in US 50 corridor include phone, high pressure gas, and fiber optic cable.

Electric service at the interim Eastgate Station may be provided by an off grid system or by connection to existing power lines. A solar system with backup propane powered generator may be used that the Commission already owns and is currently in use at the Eastgate siding. Power may be brought to the site along the utility corridor from Morgan Mill or from US 50 along Flint Drive.

Water service would most likely be extended from the Eastgate siding area where it was installed as part of the project construction in 2009 to support temporary operations at that location.

If utilized, the optional segment of balloon track will be located approximately 1 mile east of the Bertagnolli aggregate pit entirely on private land and consist of an approximately 800 foot diameter circle of track accessed directly from the historic alignment. This new segment of track will allow for the turnaround of trains. There will be no facilities built here other than the balloon track and track switches. This feature will serve as an interim terminus point for the railway.

Upon the completion of the project to the Drako Way Terminal, the interim facilities would be abandoned in accordance with any applicable federal, state, or local requirements. Any utility improvements to the site such would be likely to be maintained by Carson City to support future developments in the area.

1.3 Purpose and Need

The need for the project is both economic and cultural. Nevada has experienced over the past 20 years a decreasing tax base due to competing gambling across the country and particularly in the adjacent states. During the same time there has been a general decline in the public awareness of the role that Nevada played in building the nation and in particular the significance of the Comstock mining bonanza to that history.

The purpose of the Reconstruction of the V&T Railway addresses the needs described by creating a world class tourist attraction generating a broader tax base through the construction activities, operation of the railway, and community impacts from increased visitors. The historic aspects of the project are brought to light by the interpretive activities including oral history, brochures, meetings and symposia held by various historical societies.

The reconstruction of the V&T Railway is to recreate what is considered to be the most historic short line railroad of its day, create a world class tourist attraction, and bring economic benefits to the Northern Nevada region. The project is expected to have a positive economic impact to the combined areas of Carson City, Virginia City (Storey County), Reno-Sparks (Washoe County), Douglas County, and Lyon County. Construction of the project and the long-term operation of the railway are expected to benefit Northern Nevada by creating new jobs, stimulating tourism growth and generating additional revenues from sales, room taxes and gaming.

The project will also contribute to publicizing the historic cultural importance of the Comstock mines and the Virginia and Truckee Railroad to the development of the United States and the region. When completed, the railway will serve as a focal point for the surrounding communities to celebrate their historical significance and encourage further interpretive and educational historical endeavors in and around the project.

1.4 Alternatives

1.4.1 Alignment and Depot Alternatives

Since the 2003 EA was approved, a number of developments occurred requiring the Commission to reconsider the Carson City terminal location. In the 2003 EA, two sites were considered for the Carson City terminal; one on US 50 at Detroit Lane referred to in 2003 EA as Terminal A, and a second on Deer Run Road near the Carson River referred to in 2003 EA as Terminal B. In 2003 the Deer Run Road site was developed as the new US Geological Survey Carson City office. This construction eliminated the site from further consideration leaving only the Detroit Lane site. In addition, the Deer Run Road Bridge was reconstructed and the approaches built with superelevation. These developments led the Commission in September of 2005 to request the Manhard Consulting Design Team to reevaluate

all of the proposed permanent and temporary depots that had been considered during the life of the project and evaluate any other possible sites. Temporary depots and stations had been considered by the design team due to the uncertainties of the funding and the need to start interim operations. This was necessary to comply with the Federal Highway Administration (FHWA) requirement that each project have logical termini. This was accomplished by placing a siding (short passing track) near the end of each phase that could allow for the locomotive to run around the cars to be located at the head of the train. Through the evaluation process Manhard Consulting developed a previously unconsidered site at Drako Way that had the potential to meet the Commissions top criteria for terminal site selection.

1.4.2 No-Build

The No-Build Alternative for the proposed changes would be to construct the project elements as considered in the 2003 EA. Under the No-Build Alternative, the request for right-of-way authorizations before BLM would no longer be pursued.

1.4.3 Preferred Terminal Site

The Detroit Lane terminal site was a potentially viable alternative location for the Carson City terminus in the 2003 EA study. However, based on current design analysis, constructing a terminal at this location will result in substantial design difficulty, increased expenses and environmental impacts (see Tables 1.4.1 and Table 1.4.2 below). The longer route along Carson River road and two required additional public crossings will involve substantial impacts related to construction in the Carson River Mercury site as well as persistent safety concerns due to pedestrian/vehicle train conflicts. The Drako Way terminal site is now the preferred terminal site for the V&T Historic Railway Reconstruction Project.

Benefits of going to the Detroit Lane terminus would include more job creation, the depot being closer to the downtown corridor, greater visibility on US 50 and a slightly longer ride for passengers.

Table 1.4.1
DETROIT LANE TERMINAL SITE ANALYSIS

Pros	Cons
1. In Carson City	1. ACOE Permit likely to be required for site
2. At End of Line	2. ACOE Permit will be required for Carson River Floodway
3. Visible from US Highway 50	3. Site is in portion of historic town of Empire site
4. Room for Expansion	4.Conflicts with effluent line in Carson River Road
5. Closer to Downtown Carson City	5.Conflicts with truck traffic on Carson River Road
	6. Two public road crossing required
	7. High groundwater will impact utility construction
	8. Superfund site will require NDEP involvement
	9. Approximately one half of site is in Flood Zone
	10. May require traffic signal on US 50
	11. Reconstruction of Bridge approach at Deer Run Road

Table 1.4.2
DRAKO WAY TERMINAL SITE ANALYSIS

Pros	Cons
1. In Carson City	1. Requires additional EA
2. At End of Line	2. Requires 9,000 feet of new alignment with possible blasting
3. Visible from US Highway 50	3. Cultural impacts to historic retaining walls on wagon roads
4. Room for Expansion	4. Requires significant site grading
5. Existing Warehouse/Office Building and Storage Yard	5. May require traffic signal on US 50
6. Existing Road Access	6. Uncontrolled fill on portion of site will require mitigation
7. Avoids conflicts with traffic on Carson River Road	7. Further from downtown
8. Avoids conflicts with effluent line in Carson River Road	
9. Avoids two public road crossings	
10. Avoids Carson River floodway	

2.0 ENVIRONMENTAL IMPACTS AND MITIGATION

2.1 Social Considerations

2.1.1 Existing Conditions

A. Social

The Drako Way Terminal site is surrounded by several businesses and adjacent to a NV Energy Power Substation (see Figure 3). It consists of both private land and public land owned by the Commission and Carson City and is currently zoned as Mixed-Use Commercial in the Carson City Master Plan adopted on April 6, 2006. The 9,000 foot line change is mostly private land with a small amount (4.3 acres) of BLM ownership. The alignment traverses recreational areas of the Carson River Canyon and crosses adjacent to the Bertagnolli gravel pit operation. The entire area needed for the proposed balloon track is privately owned. The proposed interim Eastgate Station site is located off of Flint Drive near US Highway 50 and is adjacent to the dispersed Eagletec Industrial Park and Carson City's organic materials handling/recycling facility (see Figure 4). The site is entirely on BLM land and currently zoned as Mixed-Use Commercial in the Carson City Master Plan. The site covers 61.8 acres of 64.7 acres of public land the majority of which is designated for disposal in the Omnibus Public Land Management Act of 2009. Of the land designated for disposal a small remainder of the property consisting of 2.9 acres as shown on Figure 4, is not included in the proposed interim Eastgate Station. This exclusion is due to a new access proposed by the Eagletech Industrial Park through the remainder parcel. Carson City has expressed their desire by letter to the BLM to grant the use of the land identified for the interim Eastgate Station to the Commission as their preferred use for the property at this time. When the project is completed to the Drako Way Terminal, the public lands that are no longer needed would be reclaimed and the right-of-way authorization from BLM would be terminated.

The Carson–Parker short take off and landing airport (STOLPORT) is a privately-owned public use facility located adjacent to the proposed Eastgate Station. The BLM issued a lease for the STOLPORT in 1977 which expired in 1997. Unauthorized use of public land by ultralight aircraft and single engine fixed-wing aircraft has continued. Only 815 feet of runway resides on private property. The BLM lands formerly used for the STOLPORT were designated for disposal in the Omnibus Public Land Management Act of 2009 as described above.

It is anticipated that this airport will be closed in the future and developed for other uses based on change of use applications that have been submitted to Carson City Planning by the property owner. Carson City maintains jurisdiction over the facility and its eventual disposition.

Areas of the Carson River Canyon considered in this document have been traditionally used for recreation. However, these areas are increasingly being used for nefarious activities including gang graffiti, illegal dumping of domestic and commercial refuse, abandonment of cars, and other similar activities.

B. Recreation

The Carson River Canyon where the balloon track and majority of the 9,000 foot alignment change would be located is accessed from Deer Run Road. The area is used for dispersed recreational purposes including equestrian, all terrain vehicles (ATVs), fishing, hiking, hunting, target shooting, bicycling, rafting and sight-seeing. Access to the area is by portions of the abandoned V&T alignment and various four-wheel drive roads. The historic V&T alignment was the primary through road access since the railroad was abandoned in 1938. Through access via the railroad grade was blocked by the construction of Phase 3A in August of 2009.

Approximately one third of the proposed Drako Way Terminal site is already developed. The developed area includes two commercial sites. The largest is the Commission owned building and storage yard. On the north side of the Commission property is an outdoor RV and boat storage lot with a small metal office building. The primary usage of the undeveloped, portions of the Drako Way Terminal site is for off road vehicles and occasional hiking.

The proposed interim Eastgate Station site located off of Flint Drive near US Highway 50 is on BLM land that is used for dispersed recreational purposes including all terrain vehicles, equestrian use and hiking. Most of the use is confined to the south side of the property within the 80 foot wide power line easement. Approximately one-quarter mile south east of the interim Eastgate Station site is an active remote control model aircraft field owned by Carson City.

C. Utilities

All of the existing utility easements are shown on the Site Plan Figure 2. All utility crossings and relocations will be coordinated with Carson City and the affected utility, and the BLM where appropriate. Existing easements are cited in the following discussion of the specific sites. Overhead power lines cross the proposed Drako Way Terminal site at several locations within BLM easements. Large transmission lines are found along the west side of the site and running across the site from the NV Energy Substation to the west. Phone and gas services enter the site from Drako Way. The existing Drako Way building owned by the Commission is on well water and has a commercial septic system.

The proposed 9,000 foot new line change would cross under overhead power lines as it climbs out of the Carson River Canyon and turns northward toward the terminal site. The alignment would also cross over a sewer effluent line located in a Carson City easement at the Bertagnolli gravel pit. In addition, sewer and water lines are found along Morgan Mill Road where the proposed bridge structure would be located. An additional water line would be crossed approximately 1,200 feet south of Morgan Mill Road along the access road to a Carson City water tank. Overhead power and phone lines would be crossed in the vicinity of the Bertagnolli aggregate pit and approaching Morgan Mill Road.

The interim station site has utilities along Flint Drive and Eastgate Road. Along Flint Drive underground telephone is located in a 5 foot wide easement on the east side of the road. A two pole overhead power line is located within an 80 foot wide easement along the north side of Eastgate Road. A 40 foot wide waterline easement (which includes Eastgate Road within it) is located on the south side of the power line easement. The phone line along Flint Drive will be crossed but no relocations are anticipated.

No utilities are located in the area of the proposed balloon track. A single power line is located a few hundred feet west of the proposed balloon track location within a Carson City easement.

D. Traffic

The proposed Drako Way Terminal site has several adjacent businesses that generate minimal traffic on a daily basis and nearly no traffic on weekends. The conceptual terminal layout, proposed and existing access routes are shown on Figure 4.

The proposed 9,000 foot line change would cross over Morgan Mill Road which presently does not extend as a developed road through to Drako Way. Utility service vehicle and off road vehicle traffic crosses the alignment at the

access road to the Carson City water tank which is located east of the intersection of Deer Run Road and Carson River Road. Traffic also crosses the alignment at the entrance to and east of the Bertagnolli aggregate operation.

The proposed interim Eastgate Station would be accessed by Flint Drive. Flint Drive is the primary access to the Carson City landfill and therefore subject to truck and automobile traffic. Eastgate Road provides access off of Flint Drive to the Carson City model airplane field, to the existing V&T Railway temporary depot and tracks on the west side of the Eastgate siding and for maintenance vehicles to the Carson City water tank located at the end of the road.

Traffic also crosses the northwest corner of the proposed Eastgate Station site to access a few residences, the Eagletec light industrial park and the STOLPORT. A few unimproved dirt roads cross onto or through the Eastgate site. One of the most prominent dirt roads on aerial photographs appears to have been intended as a "cross wind" landing strip for the STOLPORT but is being largely overgrown by vegetation due to lack of use (see Figure 2).

The optional balloon track is crossed by existing dirt roads including the old balloon track that serviced the historic Yerington Smelter. The use of the site for target shooting has resulted in a generally disturbed area for several hundred feet where vehicular traffic has randomly crossed the site.

2.1.2 Impacts

A. *Social*

When completed the V&T Reconstruction project would generate both positive and negative effects to the region and Carson City in particular. The positive effects would include increased tourism dollars and an educational component focusing on the historical setting and contributions of the surrounding communities to the growth of Nevada and the nation. Additional positive impacts include facilitated public access to remote natural areas and exposure to historical interpretive and educational displays and literature.

Seasonal and intermittent traffic increases would potentially create congestion. Negative impacts may consist of higher traffic, potentially creating congestion in the immediate vicinity of US Highway 50 and Drako Way or Detroit Lane. Similar impacts would be generated by the use of the interim Eastgate Station. The increased tourism would place pressure on public infrastructure including water, sewer, and other utilities, transportation, and local services such as police, fire, and medical.

Commercial and recreational access would be affected where the alignment crosses existing dirt roads and dirt trails. No public road accesses will be eliminated by the elements of the project considered in this Supplemental EA document. The 9,000 foot line change would reduce the amount of private dirt access road (historic V&T alignment) in the vicinity of the Bertagnolli aggregate pit by approximately 500 feet relative to the original 2003 EA.

A single building located at the north end of the proposed depot on property belonging to the Thomas Family Trust, APN 08-521-75, would be required to be relocated for construction of the Drako Way Terminal facility. A single office building, fencing, a fueling station and equipment parking would need to be moved and relocated at the Bertagnolli gravel pit operation to construct the 9,000 foot line change or to reach the Detroit Lane Depot site. Businesses in the vicinity of the depot would experience indirect impacts such as increased noise and traffic during the spring and summer months. Other businesses surrounding the depot site would experience either no impacts or indirect impacts. The primary impact to these businesses would be increased traffic congestion, litter and noise associated with the steam engine and train maintenance. Ground vibrations associated with the operation of the train would be negligible. Blasting will likely be required for the construction of the 9,000 foot alignment and the vibrations associated with this temporary activity may affect some of the businesses that engage in high precision manufacturing.

Businesses in the vicinity of the interim Eastgate Station would also experience increases noise and traffic, especially during the spring and summer months. No businesses would be relocated in order to construct this facility. The primary impact to these businesses would be increased traffic, litter and noise associated with the steam engine and train maintenance. Ground vibrations associated with the operation of the train would be negligible. Should the Eastgate Station need to be constructed, a new sewer line would be extended to the existing Carson City sewer system. Additional utilities might also be placed in this corridor if needed. This new infrastructure may facilitate future development of the Eagletec Industrial Park and the Eastgate Station site BLM lands when ultimately disposed of.

B. Recreation

The 9,000 foot new alignment to the Drako Way Terminal site would limit but not prohibit access to recreational areas of the Carson River Canyon by blocking the existing grade just past the current entry into the Bertagnolli operation. While limiting access for recreational uses, this action will also curtail undesirable activities such as gang graffiti, illegal dumping of refuse and cars and other criminal behavior.

Access to recreational areas in the Brunswick Canyon area near the proposed alignment change in the Carson River Canyon would not be significantly changed from what was originally considered in the 2003 EA. Access for motorized vehicles would be reduced east of the Bertagnolli gravel pit. Alternative vehicle access to the Balloon Track area is provided from the Carson Shooting Range Road via unimproved dirt roads.

The Carson City Parks and Recreation department has established an Aquatic Trail as shown on Figure 8 (Carson City Master Plan, April 2006). The Aquatic Trail is intended to support watercraft access to the river corridor only, however land acquisitions of large parcels along the V&T alignment are currently in progress. These acquisitions will allow for trail developments in the future. River access improvements including the proposed Aquatic Trail are located outside of the project limits. Through access for non-motorized boats will be facilitated by the proposed improvements and the experience made more aesthetically pleasing by the reduction of dumping and also limiting noise from vehicles and target shooting.

Recreational use of the Drako Way Terminal site is limited to the south and west unfenced portions of the site where occasional pedestrian traffic and all terrain vehicle use occur. This use would be curtailed by the construction of track in the south area if the site and potentially by rail yard security fencing. The remainder of the terminal site is occupied by businesses with fenced boundaries precluding public use.

Recreational use of the interim Eastgate Station site would be minimally affected. Current use is along existing roads and easements and would not be impacted except in the case of the Eastgate Road intersection with the proposed wye track. At the intersections of the existing road, railroad crossings will be provided. Recreation use of the proposed sewer corridor would remain unchanged once construction is complete. No impacts to the usage of the Model Airplane field are anticipated other than traffic increases on the access roads.

C. Emergency Access

Emergency access to the Carson River Canyon and other locations within the project limits will be planned and coordinated with local, state, and federal authorities to provide law enforcement, fire control, and emergency response (refer to Appendix B).The emergency access plan for the V&T Railway is currently being developed by the train operator and the emergency management personnel from the three affected counties. The complete plan is anticipated to be adopted by the current operator prior to the 2011 operating season. No new emergency access roads are planned at the balloon track or along the 9,000 foot line change. Access to the Drako Way Terminal site and the interim Eastgate Station site will be from existing roads. Equipment access roads along tracks and within yards will be present at each of these facilities and will provide ancillary emergency access to internal areas of each site.

D. Utilities: Power

Relocations are not anticipated to be conducted outside of the identified construction corridors. Utilities impacted for the remaining portions of the project include overhead power lines located between the Sierra Pacific Power substation and Carson River Canyon and between the Drako Way Terminal site and the interim Eastgate Station site. These relocations should have a minimal impact.

NV Energy has proposed to construct the 120 kV Blackhawk to Heybourne Transmission Line. As currently planned, a potential conflict exists between one of the proposed power line alignments with both the Drako Way Terminal and the 9,000 foot alignment. The Blackhawk to Heybourne Transmission Line project is currently on an indefinite hold by NV Energy. Close coordination during final design of the projects will allow for the construction of both with only minimal impacts to either.

E. Utilities: Sewer and Water

A buried high pressure 24 inch diameter treated effluent line would be crossed twice by the new 9,000 foot alignment in the area adjacent to the Bertagnolli gravel pit. One of the crossings is nearly parallel to the line and extends for approximately 600 linear feet. This conflict would have little impact other than the need to temporarily remove rail if a break should occur. This is a major reduction in the length of track that would conflict with the effluent line from what was proposed in the 2003 EA.

The two new road crossings required for the 9,000 foot alignment change are short and one is within the current roadbed very close to the location covered by the 2003 EA document. The road is subject to heavy truck traffic when the gravel pit is in operation. No adverse impacts to the underground effluent line are anticipated from the track construction, truck traffic or from the effects of train traffic. Relocation of the effluent line is not necessary.

The waterline to the Carson City Tank located east of the 9,000 foot alignment change would likely require relocation in depth and possibly alignment prior to construction to avoid any impact. A bridge will be constructed over Morgan Mill Road, therefore the sewer and water lines along the road will not be impacted and relocation is not necessary.

The April 2003 EA stated that "the additional water/sewer use generated by the proposed project will not adversely affect water/sewer services in either Carson City or Virginia City." The proposed depot location and 9,000 foot alignment change would not affect the previous conclusions regarding impacts to community sewer or water.

The interim Eastgate Station off Flint Drive, if constructed, would have little impact on water usage in Carson City. Current plans for the Eastgate Station consider three alternatives at the site for handling sewage; a temporary holding tank, an onsite septic system or the extension of sewer to the site from Drako Way. Should the sewer line be extended to the Eastgate Station, a positive impact would be gained for the any future development surrounding the site. Specifically it would potentially benefit the Eagletec Industrial Park, BLM and other businesses along Highway 50 to the Lyon County line that are currently on septic systems. Based on published soil and groundwater depth data, no adverse impact to groundwater is anticipated from any of the alternatives.

F. Traffic

To assess impacts to traffic caused by the Drako Way Terminal and possible Interim Eastgate Station a preliminary traffic study was performed in July of 2009 and updated in December 2010 for the proposed facilities. The report titled Virginia & Truckee Railway Reconstruction Eastgate Station and Drako Way Terminal in Carson City, Traffic Impact Analysis was prepared by Jacobs (engineers) and is attached as Appendix C. The traffic study assumes three scenarios in the analysis. The first is for the interim Eastgate Station at a 90% of the peak ridership as has been projected. The second and third scenarios assume 100% of the projected ridership for both the interim Eastgate Station and the Drako Way Terminal. The proposed project is forecast to generate approximately 128 entering and 128 exiting peak hour trips for the interim Eastgate Station with an anticipated build-out year of 2011, and 144 entering and 144 exiting peak hour trips for the both the interim Eastgate and Drako Way Terminal with an anticipated build-out year of 2014. These traffic volumes are expected to occur May through September and on occasional weekends throughout the remainder of the year.

Currently, minor intersections in the project area operate with a reasonably free to stable flow of traffic in the morning peak hour and with an unstable to a breakdown in traffic flow in the evening peak hour.

Without the project trips and based on a background traffic growth rate of 4.18 percent per year, minor street approaches to intersections in the project area would operate with a reasonably free to stable flow of traffic in the morning peak hour and would suffer from a breakdown in traffic flow in the evening peak hour. Without any intersection improvements, at build-out, intersections in the project area would suffer from a breakdown in traffic flow in both the morning and evening peak hours, however access to the project areas can be expected to operate satisfactorily during both morning and evening peak hours.

The construction of the railway bridge over Morgan Mill Road will allow for the improvement of the roadway allowing greater public access to the area in general, provided an alternative emergency access and further reduce traffic congestion on US Highway 50.

G. Environmental Justice

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, signed by the President on February 11, 1994, directs Federal agencies to take the appropriate and necessary steps to identify and address disproportionately high and adverse effects of Federal projects on the health or environment of minority and low-income populations to the greatest extent practicable and permitted by law. Based upon a review of available demographic information and the location of the project relative to commercial, open space, and undeveloped land uses, no minority or low-income populations have been identified that would be adversely impacted by the proposed project as determined above. Therefore, this project is not subject to the provisions of E.O. 12898.

2.1.3 Mitigation

A. Social

All relocations will be conducted in accordance with the Relocation Assistance and Real Property Acquisition Policy Act of 1970 (Uniform Act).

Blasting required for the construction of the 9,000 foot alignment will be coordinated with nearby businesses in order not to impact any motion sensitive production periods. Surrounding business and/or residences that may be impacted by the blasting will receive adequate notification in advance of the blasting specifying days and times of proposed blasting. The blasting schedule will be determined in cooperation with those businesses engaged in high precision manufacturing to reduce any impact to production. All blasting will be conducted in compliance with state and local laws and be monitored. Maximum velocities for shock waves will be specified in the contract documents to minimize vibration impacts to structures or manufacturing processes.

Should the Parker-Carson STOLPORT be listed as public use airport on current aviation charts at the time of final design and construction then interim Eastgate Station improvements will be in conformance with FAA guidelines.

B. Recreation

No significant change will occur to pedestrian or recreational vehicular use of the areas considered by this Supplemental EA.

A single railway crossing will be constructed just west of the proposed balloon track location that will maintain recreation access to this portion of the river and surrounding area. This crossing will be constructed regardless of the ultimate terminal location or balloon track construction. A second crossing on the 9,000 foot line change to provide access to the Carson City water tank above the intersection of Deer Run Road and Carson River Road will avoid any impact to recreational use of this area.

Efforts are currently underway by Carson City Parks and Recreation Department, Open Space Committee to purchase the Bently Family Trust and Serpa Properties that would allow for enhanced public access via trails into the Carson River corridor.

C. Utilities

Mitigation of existing utilities will consist primarily of raising power lines along the 9,000 foot line change and at the Drako Way Terminal site. Relocation of the water line to the Carson City water tank above Deer Run Road or relocation of a few power poles will be coordinated with the city and the utility company. Final utility locations would not be known until final design is complete and if any additional environmental compliance work is required it would be completed at that time. Temporary utilities installed for the interim Eastgate Station, if constructed, will eventually be removed or abandoned in place as required by NDEP permits and in accordance with BLM right-of-way grant requirements. Abandonment of the site would be dictated by the completion of the route and construction of the Drako Way Terminal. No other utility mitigation is anticipated to be necessary.

D. Traffic

A thorough traffic study of the selected terminal and if necessary the interim Eastgate Station would be required as part of the building permit process. Traffic studies would be conducted and traffic signage or signal systems will be upgraded or installed where Carson City or NDOT deem necessary. In addition, all railway crossings will be designed and constructed to avoid automobile and pedestrian conflicts with train traffic.

2.2 Economic Considerations

2.2.1 Existing Conditions

Beginning in August of 2009 the first revenue generating trains ran from the Eastgate Siding in Carson City to Virginia City. These trains were only operated on Saturday and Sunday on August 15 and August 16 and then for an additional 11 weeks on Saturday only. During the 2010 operating season trains operated from the end of May through October three days a week. All round trips were from the Carson City end at the Eastgate siding while the train storage facilities are in Virginia City. One round trip per day was the normal routine with "dead head" (one way) runs down from Virginia City in the morning and a return trip to Virginia City at the end of the day. This type of interim operations will likely continue seasonally and steadily increase in length until such time the project is complete. At that time actual revenue projections and operating costs can be evaluated. These operations are far below the projected numbers of riders when the project is completed and thus the related economic impacts are relatively modest.

If the project as discussed in this document is approved, the Commission will seek additional funding to complete construction of the 9,000 foot alignment, interim station, and balloon track from a variety of local, state, and federal funding sources.

2.2.2 Impacts

Economic impacts have now begun on an interim basis that will continue at least seasonally until the project is complete. Assuming that the train continues operating over a six-month period in the next year with two round trips a week at 75% capacity, at an average ticket price of $40.00, the potential gross sales from tickets alone would conservatively be $224,000. This estimate does not include any estimate of impacts from room nights, food, beverage and merchandise sales.

When the project is completed, economic impacts should remain as originally estimated after adjustment for inflation. The area would experience positive economic benefits that will be unaffected by the changes in the depot location and line change, interim station, or interim balloon track terminus.

Approximately 50.4 acres of taxable land will be needed for additional right-of-way if all elements considered herein are constructed. There will be no adverse impact to taxes when this land is taken off the tax rolls. Should the project be funded to completion at the Drako Way Terminal, the amount of taxable land will be reduced to approximately 25.9 acres.

2.2.3 Mitigation

No mitigation is required.

2.3 Noise

2.3.1 Existing Conditions

Measurements of ambient sound levels representing a typical daytime hour for the Deer Run Road area of the project were conducted by NDOT as part of the original EA as shown on Figure 5. The ambient sound for this area was measured at 46.8 dBA (average energy level in decibels).

2.3.2 Future Conditions

Increased noise will occur during construction of the various elements considered herein. The construction noise will be similar to grading projects in the area and consistent with previous construction. Blasting is likely to be necessary for portions of construction along and above the privately owned Carson River Road.

Railway operations will generally be limited to one to five roundtrips during the daytime with an occasional evening dinner train. Normal operations would be limited to 9:00 am to 6:00 pm. Train sound levels were monitored at the existing railroad between Virginia City and Gold Hill to determine future noise levels for the rest of the project area. The train produced momentary noise levels of up to 94 dBA at 15 meters (50 feet) from the track. Sound levels peaked at 117 dBA when the whistle blew at road crossings. These levels should be similar to noise generated at the proposed depot site, interim station and at the road crossings at the Bertagnolli gravel pit and at the Carson City waterline access road above Deer Run Road.

Four mobile home residences are located northwest of the end of the track at the Interim Eastgate Station. The nearest residences are located from two hundred to four hundred feet from the end of track as shown on the Site Plan, Figure 4.

2.3.3 Impacts

There are two road crossings planned for the 9,000 foot new alignment portion of the project; at the Bertagnolli gravel pit and at the Carson City waterline access above Deer Run Road. While a similar crossing was previously considered in the 2003 EA at the Bertagnolli gravel pit, the new alignment change would shift the crossing ten to twenty feet to the east. The train whistle will blow when approaching all of planned at grade crossings related to the 9,000 foot alignment change, interim Eastgate Station and Drako Way Terminal. A bridge will be built to cross over Morgan Mill Road avoiding an at-grade crossing which will not require a whistle. Normal operations require that the train whistle will be used for train movements or when leaving and arriving at the Drako Way Terminal or interim Eastgate Station.

2.3.4 Mitigation

A. Railroad/Construction Noise

Construction noise would be temporary and limited to daytime operations in accordance with standard grading and other permits. The increased noise levels due to train operation are short in duration and occur only a few times daily. Construction noise will be limited by contract documents to daytime operation. Noise during construction of the 9,000 foot alignment and terminal site will temporarily increase to levels above the ambient levels. Blasting will be scheduled for daylight hours and vibration limited by project specifications which will also limit related noise levels. Stationary equipment will be placed as far away as practical from sensitive receptors.

Ground-borne vibration is not as common a problem as environmental noise therefore mitigation approaches are not as well defined and developed. Proper maintenance of rail equipment and limited hours of operation would be used to maintain consistent noise levels during operation. As the project proceeds through the later design stages, if a vibration assessment is warranted and if it is determined that vibration levels would be excessive, then mitigation measures to reduce the levels of ground-borne vibration would be included into the final design. Such measures may include but are not limited to floating slabs, resiliently supported ties, high-resilience fasteners, and vibration reducing ballast mats. To be effective, any approved measure must be optimized for the frequency spectrum of the vibration in question.

2.4 Air Quality

2.4.1 Existing Conditions

A. Ambient Air Quality

The project is located within an area that is in attainment/unclassifiable of the National Ambient Air Quality Standards (NAAQS) for PM_{10} and $PM_{2.5}$ (Particulate Matter with an aerodynamic diameter less than 10 and 2.5 microns, respectively), Ozone, and Carbon Monoxide.

B. Air Receptor Locations

The proposed Drako Way Terminal will be located in an area of low density commercial and light industrial businesses. The new alignment to the Drako Way Terminal will traverse through or near three businesses. On the east end the alignment will pass through the southwest edge of the Bertagnolli gravel pit operation. On the west end of the alignment near the depot site the right-of-way is adjacent to two businesses, Taiyo America, Inc., a paint manufacturer and Triangle Labs, Inc., an electronics manufacturer (see Figure 3).

The proposed interim station site is also located in an area of low density residential, commercial and light industrial businesses that are part of the Eagletech Industrial Park. If the sewer line is constructed from near Drako Way to the interim station, it will pass a few hundred feet south of the Computer Corps buildings. There are no existing businesses or residences in the vicinity of the balloon track site.

Receptors that will be near the depot or the new alignment, the interim station, or the balloon track do not include any that would be considered sensitive (hospitals, schools, or senior citizen living facilities).

2.4.2 Impacts

A. Build Conditions

The project will not cause any violations of the NAAQS. Overall air quality impacts were considered in the 2003 EA. If all of the elements proposed and considered herein are constructed, the resulting length of the project will be essentially identical to the original plans that included the Detroit Lane Depot (Terminal A).

The primary fuel for steam train operations will be waste oil. The secondary fuel will be diesel for diesel electric operations. For the preparation of the 2003 EA, NDOT was unable to find any program or data that would provide a model for exhaust emissions from a steam-powered locomotive. Steam powered locomotives are rare and therefore not listed in the Clean Air Act Amendments (CAAA) 1990.

NDOT provided data for emissions on stationary rails. The data was intended to provide an estimate of emissions from a historic steam locomotive. The air quality in the Eagle Valley/Carson City area is in compliance with the NAAQS for Carbon Monoxide, Ozone and PM_{10} and $PM_{2.5}$.This information was included in the previous EA resulting in the FONSI being issued. No differences in operations or equipment types are planned due to the new Drako Way depot site, the new 9,000 foot alignment, the interim Eastgate Station, or the balloon track.

2.4.3 Construction Impacts

Increased CO levels and fugitive dust levels will be generated during construction due to equipment operations. The increase in CO is temporary and will not cause long term effects.

2.4.4 Mitigation

A. PM_{10}

Contract documents will specify that the contractor must implement a dust control plan to address impacts. In addition, the contractor must comply with all federal, state, and local laws and regulations. With the implementation of an effective dust control program, the increase in PM_{10} levels will not create adverse affects.

It is not anticipated that operation of the V&T Railway will have a measurable impact on the local or regional air quality.

2.5 Water Quality

2.5.1 Existing Conditions

A. Surface Water

The proposed project is located at the eastern edge of the Eagle Valley Basin, a portion of the Carson River Hydrographic Region. The Carson River flows from the Sierra Nevada Mountain Range to the east into Carson Valley and northward through Eagle Valley. The river turns eastward near Morgan Mill Road in Carson City and flows eastward through the Pine Nut Range to the town of Dayton. From Dayton the river flows farther east eventually terminating at the Carson Sink in Churchill County. Beneficial uses of the river include agricultural irrigation, waterfowl and fishery habitat, recreational use, municipal use and light industrial use. Most community water systems along the river use well water that draw from regional aquifers.

United States Geological Survey data show that the mean annual discharge for the Carson River as measured downstream from Deer Run Road (USGS Gauging Station 10311400) is 439 cubic feet per second (cfs) for the period from 1979 through 2005.

Water quality standards for the Carson River have been established by the Nevada Division of Environmental Protection (NDEP). The reach of the river potentially affected by the V&T construction is from New Empire to the Dayton Bridge. Water quality data for this reach is collected at monitoring location C11 located a few hundred feet east of the Deer Run Road Bridge on river right (Figure 2). Water quality data collected in 2000 at the C11 site indicates that total phosphates were exceeded, total suspended solids were exceeded during spring flows and mercury levels were exceeded in most years.

Since 1990, portions of the Carson River and surrounding low areas have been designated by USEPA as mercury contaminated Superfund site. The contamination traces back to the 1800's when mercury was used in the separation of precious metals from numerous mills related to the Comstock Mining District. The Superfund site extends from Carson City some 60 miles east to the Carson Sink. Geographically, the Carson River Superfund site is the largest in area of any USEPA identified Superfund site.

A small portion (approximately 500 feet) of the 9,000 foot line change adjacent to the Bertagnolli gravel pit is located in the FEMA-designated 100 year floodplain as shown on Figure 6.

The new 9,000 foot alignment change climbs up and away from the river to reach the proposed Drako Way Terminal site. This new alignment will result in eliminating approximately 1,500 feet of alignment that was considered in the 2003 EA that would be within both the Superfund site and Carson River floodplain west of the Deer Run Road Bridge.

The interim Eastgate Station site is not in any flood zones nor do any surface water courses cross the site.

Approximately two thirds of the balloon track will be located in the Carson River 100 year floodplain as mapped by FEMA in 2009. No surface watercourses are crossed by the proposed alignment of the balloon track.

B. Groundwater

Groundwater depths are anticipated to be at a minimum where the 9,000 foot alignment leaves the historic alignment on the south easterly side of the Bertagnolli gravel pit. At this location groundwater is about 10 feet below ground surface or near the level of the adjacent river flow line. This level fluctuates according to seasons and flood events. Groundwater levels increase relative to the ground surface as the alignment climbs out of the river canyon. The average depth to groundwater on the Drako Way Terminal site is greater than 60 feet below the existing ground surface. No springs are known or mapped near the new alignment or the proposed Drako Way Terminal site.

Groundwater at the interim Eastgate Station site and sewer utility route is anticipated to be located greater than 40 feet below the existing surface which is well below any potential construction depths.

Groundwater depths at the proposed balloon track location are anticipated to be greater than ten feet below the existing grade and also below any probable construction excavation depths.

2.5.2 Impacts

A. Surface Water

The Drako Way Terminal site, the 9,000 foot alignment change, the interim Eastgate Station and the balloon track are located in areas with established drainage pathways created by past runoff events and grading activities. New point source impacts will occur where the new alignment impacts channels or drainages. Best management practices (BMP's) will be incorporated into the alignment and depot drainage design and construction. Due to the deviation of the alignment (uphill) and placement of the terminal away from the river, a net decrease in potential effects to surface waters is anticipated relative to the alternatives described in the 2003 EA.

B. Groundwater

There are no impacts to groundwater for the proposed project. No domestic wells are located within the project area. Three municipal commercial wells are located on the Bertagnolli gravel pit property (see Appendix D). These wells are all located on the upper portions of the property several hundred feet away from the proposed alignment. A single municipal commercial well is located near the northeast corner of Astro Way and Drako Way. This well is located approximately 300 feet east of the Commission owned building on the proposed depot site. There are several domestic wells in the Eagletec Industrial Park. The elimination of the proposed Detroit Lane Terminal site will result in a reduction in the impact to groundwater due to the shallow groundwater known to exist on that site.

2.5.3 Mitigation

A. Surface Water

Natural drainages and channels will be returned to as near as possible their original condition to minimize erosion and sediment loss. Energy dissipaters and interceptor ditches will be constructed at the drainage structure outfalls to prevent down gradient scouring. Interceptor ditches will be constructed on the upstream side of the roadbed to carry storm runoff through the cut sections. They will discharge to natural channels on the upstream side in fill areas, or to small pipes crossing under the track bed. Embankment fill in the area of the low point of the project east of the Bertagnolli gravel pit will raise the track structure relative to the flood elevation. Fill depths will be a minimum of six to twelve inches above the existing grades. The ballast section will raise the track another 14 inches above the subgrade resulting in the bottom of rail being a minimum of from 20 inches to 26 inches above the existing grade. This will reduce the amount of track subject to flooding to less than 200 linear feet.

BMPs will be utilized to limit and control the potential for water quality impacts due to erosion of sediment from wind and water related forces as well as containing construction materials onsite during the construction and operation of the proposed project. BMPs are prescriptive construction methodologies and erosion control practices that taken together prevent or reduce the amount of impacts to water from non-point sources to levels that meet or exceed local, state and federal water quality goals.

Because the project will disturb more than one acre of land, the contractor will be required to file a Notice of Intent (NOI) with the Nevada Division of Environmental Protection's Bureau of Water Pollution Control. This provides coverage under the General Permit for Storm Water Discharges Associated with Construction Activity (NVR100000) required by the National Pollutant Discharge Elimination System (NPDES) program pursuant to the Clean Water Act. A Storm Water Pollution Prevention Plan (SWPPP) must be developed prior to the NOI submittal. The SWPPP outlines temporary erosion and sediment controls incorporating BMPs, therefore reducing non-point source pollution that may be generated relative to the construction project.

The following mitigation measures will be required at the Drako Way Terminal site and the interim Eastgate Station if constructed:

- Drains will be constructed inside the vehicle maintenance area. Flow from the drains will be treated prior to discharge into the local sanitary sewer system or offsite disposal in the event that the interim station is not served by sewer. A maintenance plan will be developed for the oil/water separator.
- Vehicles, equipment, and train rolling stock will be washed on a special wash pad at the Drako Way Terminal location. Flow from the wash pad will be treated prior to discharge into the local sanitary sewer system.
- Vehicles, equipment and train rolling stock will be washed on a special wash pad at the Interim Eastgate Station and the wash water disposed of by collection and offsite disposal or treated and discharged to the local sanitary sewer system when extended to the site.
- Wastewater from buildings or restrooms at the Drako Way Terminal will be connected to local sewer and water utilities. Train wastes will be stored on the train and properly disposed of at the depot or at the Eastgate Station.
- The interim Eastgate Station will be served by a holding tank, septic system or by a holding tank(s). Train wastes will be disposed of either on site to a holding tank, septic system or sewer as appropriate to the ultimate development of the site.
- Stormwater runoff from parking lots, rooftops, and maintenance areas will be treated to meet water quality standards prior to flowing into the local storm drain or drainage conveyance.
- The Drako Way Terminal and the interim Eastgate Station, if constructed, will need Storm Water National Pollutant Discharge Elimination Systems Permit (NPDES) to discharge water into the Carson River (SIC 40).

B. Groundwater

No impacts to groundwater are expected; therefore, mitigation will not be needed. However, if any unanticipated wells are encountered within project limits during construction, they must be properly abandoned by a Nevada-licensed driller. NDWR permits must be obtained prior to the abandonment.

2.6 Floodplain and Hydrological Assessment

2.6.1 Existing Conditions

Existing watersheds in this portion of the project include the Carson River with steep to moderately steep minor intermittent natural drainages that flow into the Carson River. The Carson River corridor consists of well developed wetlands and riparian areas. Runoff generated from storm events is conveyed through the intermittent minor drainages and crosses the original V&T alignment through primitive structures ranging from small steel pipes to box culverts constructed from native rock. The minor intermittent drainages are generally undeveloped and vegetated mainly with sagebrush and grasses. The watercourses are lined with vegetation on the sides and have gravelly bottoms that range from one to 15 feet wide.

The minor intermittent drainages that cross the 9,000 foot alignment are generally undeveloped and vegetated mainly with sagebrush and grasses. Intermittent drainages in this area are generally lined with vegetation on the sides and have sandy to gravelly bottoms that range from one to 15 feet wide. Two intermittent streams are shown to cross the 9,000 foot alignment change as shown on Figure 9. The northerly stream course located near the location of Morgan Mill Road has been obliterated by mass grading of the site and the road construction. The southerly drainage near Deer Run Road has been almost entirely blocked by grading but still flows during peak precipitation events.

Surface water on the proposed Drako Way Terminal site drains to the west and north as sheet flows that ultimately reach either the US Highway 50 road side ditch or Deer Run Road.

Surface water flows on the proposed interim Eastgate Station site flow to the southwest. These flows ultimately reach the US Highway 50 roadside ditch or the Carson River in the case of very large events. Most flows infiltrate into soils prior to reaching the Carson River.

Surface flows in the vicinity of the balloon track are impounded on the uphill side by the existing V&T embankment. Flows emanating to the downhill side of the existing V&T alignment flow southward towards the Carson River.

The Federal Emergency Management Agency (FEMA) FIRM map (Panel Numbers 320001 0104 E, 0110 E, 0112Eand 0116 E) revised in January 2009, identify the portions of the 9,000 foot alignment change and the balloon track that are in the 100 year flood zone. Figure 7 is a composite drawing of the FIRM maps showing the project relationship to the 100 year flood zone.

Approximately 500 linear feet at the east end of the 9,000 foot alignment change is located within the 100 year flood zone of the Carson River. About two thirds or 1,600 linear feet of the balloon track will also be in the 100 year flood zone. Neither the interim station site nor the Drako Way Terminal site is in a FEMA-designated flood zone.

2.6.2 Impacts

Construction of the proposed project along the 9,000 foot alignment upslope from the Carson River will impact the single drainage located near Deer Run Road at a point approximately 400 feet south of the Morgan Mill Road. This drainage will be impacted by the proposed railroad embankment. The embankment at this location will be approximately 60 feet high. Existing flows (intermittent) will be accommodated in large culverts. The cut and fill construction will not create adverse hydraulic effects to upstream or downstream properties.

The Drako Way Terminal, the interim Eastgate Station, utility corridor and the balloon track will not impact any drainage.

The balloon track will have a minimal impact on flooding due to the shallow depth of flooding and the placement of cross culverts that will allow for water to flow to the Carson River and into higher areas where it has historically reached during flood events.

2.6.3 Mitigation

Existing flow patterns and capacities for drainage features will be perpetuated in the railroad corridor. Minor drainages will be perpetuated and discharged into their historic drainage paths with minimal disturbance. The railway grade will be raised a foot or more by design along the Bertagnolli gravel pit area.

Impacts to upstream, downstream and adjacent properties and to the Carson River will be minimized by limiting encroachment into FEMA designated floodplain (100 and 500 year flood zones) and avoiding any construction within the ordinary high water mark of the Carson River. No wetlands or watercourses will be impacted by construction.

2.7 Hazardous Materials

2.7.1 Existing Conditions

A short segment (approximately 1,000 linear feet) of the new 9,000 foot alignment is within the boundaries of the Carson River Mercury Site along the Carson River (see Figure 7). The Carson River Mercury Site is on the Environmental Protection Agency's (EPA) National Priorities List (NPL). The mercury contamination is the result of dumping into the drainage from the numerous ore processing mills that lined the Carson River and its tributaries during the late 1880's. The boundaries of the Carson River Mercury Site are defined as the bed and bank of the Carson River.

During the preparation of the 2003 EA, NDOT tested soils from two storm water drainages that cross the Bertagnolli Pit. The sample locations are described as the "south drainage" and the "east drainage". Only the south drainage crosses the proposed new alignment. The soils were tested for Total Petroleum Hydrocarbons (TPH). Per the 2003 EA, the test result in the south drainage reported TPH as oil range organics (C18 to C34) at levels of 800 ppm. This TPH value was above reporting levels (100 ppm) and was forwarded to Nevada Emergency Management per NAC 445.201.

A portion of the proposed Drako Way Terminal site along the western boundary has been observed to be the location of dumping of construction refuse consisting primarily of asphalt and concrete. The vertical extent of the dumping and nature of materials that may be buried within the uncontrolled fill is not known.

The balloon track will be located within a portion of the Carson River Mercury site and adjacent to and within the historic Yerington Smelter. The Yerington smelter has also been used as an unofficial target shooting range and lead

associated with that use is present. Considering that ore processing may have been conducted on the site, elevated levels of lead and other heavy metals may be present. Testing results are listed in Report 101356, 10-19-2009, Sierra Environmental Monitoring, and upon report review by NDOT, mitigation measures (Section 2.7.3) will be specified in the contract documents.

2.7.2 Impacts

A. Track Right-of-Way

Impacts of the Carson River Mercury site to the construction of the new 9,000 foot alignment near the river are minimal due to the short length involved and raised embankment construction in that area. No cuts within the Mercury site other than culvert pipes and those necessary to remove tanks or buildings at the Bergtagnolli Aggregate pit are planned. The balloon track will mostly be constructed on fill with only minimal cut areas. Contaminated areas along the balloon track, if any will only be disturbed during clearing and grubbing and in the minimal cut areas.

B. Terminal Site and Interim Station Site

The proposed Drako Way Terminal and interim Eastgate Station (if constructed) will have fueling areas as well as storage tanks. In addition, a wash rack will be necessary for cleaning rolling stock and maintenance equipment.

Conceptual plans for the proposed terminal site and interim station site include railroad and highway/off road vehicle maintenance facilities. The interim station site would by nature include temporary and less extensive facilities. Portable buildings and limited storage facilities would be constructed at this site.

Similar maintenance facilities use oils, grease, and solvents in their maintenance operations, which could generate hazardous wastes. According to the Resource Conservation and Recovery Act (RCRA), any facility that generates more than 220 pounds and less than 2,200 pounds of hazardous wastes in a month is classified as a Small Quantity Generator (SQG). The V&T maintenance shops have the potential to be SQGs.

If the shops are SQGs, they will be required to follow the RCRA regulations. According to RCRA, a SQG is required to have their waste transported from the site by an EPA-registered hazardous waste hauler. This would not impact the surrounding area unless there was an accident. If the amount of hazardous waste generated can be limited to less than 220 pounds it would be classified by RCRA as a Conditionally Exempt Small Quantity Generator (CESQG). Like SQGs, these hazardous wastes will be transported from the site by an EPA-registered hazardous waste hauler.

The Preliminary Design document by Lumos and Associates, 1998 indicates that a maximum of approximately 20,000 gallons of locomotive fuel oil will be stored at the terminal. Fuel oil would be stored in either tank cars or in above ground storage tanks. Based on recent discussions the Commission has had with potential operators, a diesel locomotive is also envisioned to be used on a limited basis. It is assumed that the quantity and storage vessel type for the diesel fuel will be similar to the requirements for the locomotive fuel oil.

Possible impacts of the diesel and fuel oil storage on the depot site could include fuel truck traffic (two semi loads per month), spills during loading and unloading of fuel, and spills from leaking tanks.

Wash racks will produce turbid waste water typically containing small amounts of hydrocarbons.

The presence of uncontrolled construction related debris fill on a portion of the proposed Drako Way Terminal site will possibly require exploration, testing, removal and monitoring.

2.7.3 Mitigation

A. Track Right-of-Way

Mitigation for potentially mercury contaminated soils will consist of placing fill over the native soils. Embankment fills will be placed for a short distance near the Bertagnolli gravel pit and in the area of the balloon track which

combined with dust control will help mitigate exposure to workers. Standards for safe handling of native soils with possible mercury contamination will be incorporated into the special provisions of the project contract. Close coordination with NDEP will be required of the design team including plan reviews. In addition, contractors will also be required to coordinate with NDEP during construction near the river or mill sites.

Soils excavated in the area of the Bertagnolli aggregate pit will be screened for hydrocarbon contamination (TPH). If contaminated soils are encountered during construction they will be disposed of in accordance with appropriate regulations. Current preliminary plans call for raising the grade in this area and little excavation is planned.

No other constituents were discovered by NDOT which exceeded state action levels. However, if additional contamination is discovered during construction it will be reported to NDEP so necessary steps can be taken.

The balloon track area will for the most part involve the placement of fill averaging three or more feet thick. The placement of a minimum of two feet of clean fill over hazardous metal contamination is a standard practice in the area recognized by NDEP for isolating heavy metals such as mercury and lead from public exposure. Proper handling and disposal methods as approved by NDEP will need to be specified in the Special Provisions for the project. It will be necessary to ensure that no excavated material is moved from this area without testing to determine the extent of any contamination.

B. Terminal and Interim Station Operations

The impacts caused by hazardous waste generation and fuel storage at the terminal or interim station sites will be mitigated by proper handling and spill prevention techniques. This will include following applicable Federal, State and local regulations. Federal RCRA regulations cover the storage and handling of hazardous waste. Carson City Fire Department regulations pertain to aboveground fuel storage tanks and Carson City Utility Department regulations cover the storage of hazardous material and waste. Special attention will be given to secondary containment for hazardous waste and fuel storage. A spill prevention plan will be developed for the terminal and station facilities.

Wash water, generated by steam cleaning and washing of trains and maintenance vehicles, will be managed as wastewater and disposed of in the sanitary sewer or at an approved offsite disposal facility in the case of the interim station. The Carson City Utility Department regulates these discharges and requires some form of pretreatment prior to discharge to the sewer or at an approve disposal site. This and/or other regulations will be adhered to in the handling of wastewater.

Over excavation and removal of the construction debris materials observed on the proposed Drako Way Terminal site will be necessary due to the need for track structures to pass over the area. Monitoring of the removal will be necessary to ensure no hazardous materials are present. If hazardous materials are encountered they will be properly handled and disposed of in accordance with state and local standards. Clean structural fill will need to be placed once the offensive materials have been completely removed.

2.8 Biological Resources

2.8.1 Existing Conditions

The Drako Way Terminal site is a relatively flat area that is located a short distance from the Carson River which is located southwest of the site. The area was formerly in an area of low hills that drained to the southwest toward the Carson River. Grading of the site and surrounding businesses resulted in leveling and clearing of much of the proposed terminal area. Sagebrush and other low shrubs are present on the proposed site from the Commission property for a few hundred feet south. Additional mass grading of the surrounding area to the south and east was completed in the early 1980's for planned future development. Approximately 400 feet south of Morgan Mill Road the fill reaches a maximum depth of approximately 120 feet. The area that has been mass graded is lacking in native vegetation except for moderate amounts of weeds and occasional low shrubs due to the mass grading described above and heavy use of the area by off road vehicles.

The new terminal site requires 9,000 linear feet of railway which will extend from the site south and east towards the Carson River as shown on Figure 2. The 9,000 foot alignment ranges from an elevation of 4,577 feet adjacent to the

Bertagnolli gravel pit to a maximum of 4,685 feet at the entry to the Drako Way Terminal site on the north side of Morgan Mill Road. North of Morgan Mill Road the fill transitions from about 15 feet thick to a cut slope about half of the distance to US Highway 50.

The interim Eastgate Station site is in an area that is gently sloping to the southwest at approximately one to three percent. The site ranges in elevation from approximately 4,920 feet to 5,000 feet. Vegetation is moderately dense sagebrush, native grasses and other low shrubs with a few pinyon and juniper trees scattered over the site. During 2009 the construction of the V&T Railway included placing up to twenty feet of fill along the east side of the proposed project site.

The utility corridor from Morgan Mill Road to the interim Eastgate Station crosses gently to moderately sloping west facing slopes. Much of the area along the corridor is or has been disturbed by the NV Energy power line construction and maintenance. The alignment follows Morgan Mill, Drako Way and Astro Way in the first about one third of its length. Vegetation ranges from sparse weeds to mature sagebrush scrub. The utility corridor ranges in elevation from approximately 4,680 feet to 4,920 feet.

The climate in the area of the project is typical of the Great Basin Desert, which is the mildest of the high elevation deserts or cold interior climates. Climate in the area is arid, with low rainfall (about 8 inches per year) and mean annual temperatures of 49 degrees to 51 degrees Fahrenheit.

A. Vegetation

Biological reviews of the various components of the project were conducted by NDOT, Quad Knopf, and Resource Concepts Inc. between 2003 and 2011. Table 2.8.1 shows the various project elements and species identified at each location. NDOT surveys were done as part of the 2003 EA and cover only the portions of the project where the main project alignment overlaps the proposed changes at the Balloon Track, the interim Eastgate Station and the east end of the 9,000 foot line change.

The following reports and responsible parties that performed the work are the basis for the following discussion and summary tables.

1. *Environmental Assessment FHWA-NV-EA-03.03,* Federal Highway Administration and the Nevada Department of Transportation, April 2003
2. *Reconnaissance-Level Biological Site Assessment and Special-Status Species plant Survey of V&T Railroad Project-Depot Site and 9,000 foot Re-Alignment,* Quad Knopf, May 2006 (Drako Way Terminal and Realignment)
3. *Reconnaissance-Level Biological Site Assessment for the V&T Railroad Revised Depot Site (Carson City Property,* Quad Knopf, March 5, 2007
4. *V&T Railway Reconstruction, Interim Station and Balloon Track, Biological Review,* Resource Concepts Inc., July 2009 (Interim Eastgate Station)
5. *V&T Railway Reconstruction 2010 Addendum, Interim Station and Balloon Track, Biological Review,* Resource Concepts Inc., December 29, 2010
6. *V&T Railway Reconstruction, Phases 3A/3B Staging Areas and Access Road Biological Review,* Resource Concepts Inc., January 2009
7. *V&T Railway Reconstruction, Phases 3B & 3C, Jurisdictional Waters of the U.S.,* Resource Concepts Inc., December 4, 2009

The immediate areas adjacent to and near the proposed Drako Way depot site, interim Eastgate Station, balloon track and new 9,000 foot alignment are dominated by plant species characterized as Great Basin scrub and sagebrush scrub communities. The sagebrush scrub community is dominated by big sagebrush (*Artemisia tridentata v wyomingensis*), rabbitbrush *(Chrysothamnus nauseosus*), and antelope bitterbrush (*Purshia tridentata*). Other common shrubs include greasewood (*Sarcobates vermiculatus*), Mormon tea (*Ephedra nevadensis*), and shadscale (*Atriplex confirtafolia*). The understory was dominated by grasses and forbs including Great Basin wildrye (*Leymus cinereus*), Indian ricegrass (*Acnatherum hymenoides*), wild buckwheat *(Eriogonum vimineum*), Chryptanthas (*Chryptantha spp.*) and Eriastrubm

(*Eriastrubm sp.*) several weedy species, including cheatgrass (*Bromus tectorum*), skeletonweed (*Stephanomeria spinosa*), tansy mustard (*Descurainia incana*) and crane's bill (*Erodium cicutarium*). Tree species including juniper (*Juniperus utahensis*) and pinyon pine (*Pinus monophylla*) are also located in the area and adjacent to the proposed alignment.

Table 2.8.1
Plants and Trees Observed in the Survey Area

Plants and Trees Observed in the Survey Areas					
Scientific Name	**Common Name**	9,000 Ft. Alignment & Drako Way Terminal	Interim Station	Utility Line	Balloon Track
Achnatherum hymenoides	Indian ricegrass		X	X	X
Achnatherum thurberanium	Thurber needlegrass		X	X	X
Ambrosia artemisifolia	Annual ragweed		X	X	X
Amsinckia menziesii var. *intermedia*	Common fiddleneck	X			
Arabis c.f. *pulchra*	Rock cress	X			
Artemisia tridentata	Big sagebrush	X			X
Asclepias sp.	non-specific Milkweed				X
Astragalus purshii	Pursh's mik-vetch	X			
Atriplex confirtafolia	Salt Brush		X		X
Bromus tectorum	Cheatgrass	X	X		X
Castilleja angustifolium	Desert Indian-paintbrush	X			
Chaenactis douglasii v. douglasii	Douglas dustymaiden		X	X	
Chryptantha sp.	non-specific		X		X
Chrysothamnus nauseosus	Rabbitbrush		X		X
Descurainia incana	Mountain tansymustard		X	X	X
Distichalis spicata	Salt grass				X
Elymus elymoides	Squirreltail		X	X	
Ephedra viridis	Green ephedra	X	X		X
Eriastrum sp.	non-specific wollystar		X		
Erodium cicutarium	Redstem filaree Common Stork's-bill		X		X
Erigeron aphanactis v. aphanactis	Shaggy fleabane	X	X		
Erigeron sp.	Rayless sunflower	X			
Erodium cicutarium	Redstem filaree Common Stork's-bill		X		X

Scientific Name	Common Name	9,000 Ft. Alignment& Drako Way Terminal	Interim Station	Utility Line	Balloon Track
Eriogonum c.f. *thurberi*	Annual buckwheat, not mattted	X			
Eriogonum nimuloides	Buckwheat	X		X	X
Eriogonum vimineum			X	X	X
Grayia spinosa	Hop sage	X			X
Halogeton glomeratus			X		X
Juniperus osteosperma	Utah Juniper		X	X	X
Lepidium latifoilum			X	X	
Lepidium perfoliatum[1]			X		
Leymus cinereus	Basin wildrye				X
Lomatium dissectum	Fern-leaved lomatium	X			
Lupinus c.f. *lepidus*	Lupine	X			
Lygodesmia sp.				X	X
Mentzelia laevicaulis	Blazing Star				X
Mirabilis bigelovii	Bigelow's desert four-o'clock	X			
Opuntia erinaceae	Grizzlybear pricklypear	X			
Phlox stansburyi	Stansbury's phlox	X			
Pinus monophylla	Single-leaf pinyon pine	X		X	
Poa secunda	Sandberg bluegrass	X	X		X
Polygonum prostrates	Knotweed				X
Populus fremontii	Fremont Cottonwood		X		
Prunus andersonii	Desert peach	X	X		X
Purshia tridentata	Bitterbrush	X		X	X
Salix exigua	Narrowleaf Willow				X
Salsola tragus	Russian thistle	X			X
Sarcobates vrrmiculates	Greasewood				X
Stephanomeria spinosa	Thorn Skeltonweed		X		X
Tetradymia canecens	Gray horsebrush		X		X
Verbascum blattaria	Moth Mullein			X	

B. Noxious Weeds

As in many parts of Nevada that have been disturbed, noxious weeds are common. Several species of State listed noxious weeds exist along the alignment and at all of the sites considered here. Species known to occur include tall whitetop (perennial pepperweed, *Lepidium latifolium*), hoary cress (whitetop, *Cardaria draba*), and scotch thistle (*Onopordum acanthium*). These weeds are interspersed with native vegetation and occasionally dominate areas where past disturbance has occurred.

C. Wildlife Species

Wildlife species found in Nevada include twenty-five species of raptors, twenty-three species of bats, rodents, reptiles, amphibians and large and small mammals. A major raptor migratory corridor passes through the state, including species such as the bald eagle (*Haliaeetus leucocephalus*), Cooper's hawk (*Accipiter cooperii*), Swainson's hawk (*Buteo swainsoni*), and Prairie falcon (*Falco mexicanus*).

Fifty game bird species may be found in the state, many of which are introduced. Sixteen birds are classified as upland birds, of which eight are native to Nevada and eight are introduced. The native game birds include sage grouse (*Centrocerus sp.*), blue grouse (*Dendragapus obscurus*), sharp-tailed grouse (*Tympanuchus phasianellus*), mountain quail (*Oreortyx pictus*), and Gambel's quail (*Callipepla gambelii*).

Passerines (e.g., perching songbirds) such as warblers, sparrows, finches, and flycatchers comprise 60 percent of the non-game species. Water and shorebirds, cranes (*Grus spp.*), woodpeckers (*Family Picidae*), hummingbirds (*Family Trochilidae*), swifts (*Family Apodidae*), and kingfishers (*Family Alcedinidae*) are among the other groups represented in the state. All wild birds, with the exception of the starling (*Sturnus vulgaris*) and house sparrow (*Passer domesticus*), are covered by the Federal Migratory Bird Treaty Act (MBTA), and are further protected from shooting or capture by State wildlife regulations.

Mammal species found in Nevada include shrews (*Family Soricidae*) and jumping mice (*Family Zapodidae*), elk (*Cervus canadensis*), Mule deer (*Odocoileus hemionus*), bats, black bears (*Ursus americana*), snowshoe hare (*Lepus americanus*) and the pronghorn antelope (*Antilocapra americana*). Rodent species, which include desert dwelling kangaroo rats (*Dipodomys spp.*) and a variety of mice, rats, squirrels and ground squirrels (*Citellus spp.*), gophers (*Thomomys spp.*), and voles (*Family Cricetidae*), perform important ecological functions, such as seed dispersal and soil aeration.

One at-risk special-status species of mammal, Townsend's big-eared bat (*Corynorhinus townsendii*), was identified as having the potential to exist within three kilometers of the proposed project. Townsend's big-eared bat tolerates environmental conditions that vary from moist coastal forest to semi-desert scrublands, but its distribution in North America is probably determined more by the presence of cave-rich terrain than by vegetative communities. In summer, it forms maternity colonies of up to a thousand or more individuals. In winter, it hibernates in small numbers or alone in mines and caves not far from its summer roosts. Riparian habitats, wetlands and other moist places are important foraging sites for the bat. Summer day and night roosts include caves, old mines and buildings; these locations are also suitable hibernating sites. The bat is dependent on proximity of roosting and foraging sites. Summer maternity colonies and hibernation sites are usually within a few miles. They are more sensitive to human disturbance than other bat species. People going into mines where Townsend's big-eared bats live may cause bats to abandon that habitat. If this happens when bat pups are not old enough to fly, the pups will die if abandoned by their mothers. This species was not observed during the survey and it is not expected to occur on the depot site or re-alignment. However, riparian areas exist along the Carson River in proximity to the re-alignment and this general area may be used by this species as a foraging site. Extra noise, vibration, increased lights or the reconfiguration of large objects can lead to the disturbance of roosting bats which may have a negative impact on the animals. Human disturbance can also lead to a change in humidity, temperatures, or the approach to a roost that could force the animals to change their mode of egress and/or ingress to a roost. Although temporary, such disturbance can lead to the abandonment of a maternity roost, which in most cases would be considered a significant impact.

Reptiles and amphibians expected in this area of the project include Great Basin spadefoot (*Scaphiopus intermonyanus*), western toad (*Bufo boreas*), pacific treefrog (*Hyla regilla*), common kingsnake (*Lampropeltis getulus*), western rattlesnake (*Crotalus viridis*), gopher snake (*Pituophis melanoleucus*), coachwhip (*Masticophus*

flagellum), side-blotched lizard (*Uta stansburiana*), desert spiney lizard (*Sceloporus magister*), collared lizard (*Crotaphytus collaris*), western fence lizard (*Sceloporus occidentalis*), sagebrush lizard (*Sceloporus graciosus*), zebra-tailed lizard (*Callisaurus draconoides*), western whiptail (*Cnemidopherus tigeris*), leopard lizard (*Gambellila wislizenii*), and desert horned lizard (*Phrynosoma platyrhinos*). Fish species expected in the Carson River include, but are not limited to, Sacramento perch (*Archoplites interruptus*), mosquito fish (*Gambusia affinis*), largemouth bass (*Micropterus salmoides*), black crappie (*Pomoxis nigromaculatus*), yellow perch (*Perca flavescens*), rainbow trout (*Salmo gairdneri*), brook trout (*Salvelinus fontinalis*), brown trout (*Salmo trutta*), carp (*Cyprinus carpio*), speckled dace (*Rhinichthys osculus*), red-sided shiner (*Richardsonius balteata*), and black bullhead (*Ictalurus melas*).

Table 2.8.2
Wildlife Observed in the Survey Area

Wildlife Observed In the Survey Areas					
Scientific Name	**Common Name**	**9,000 Ft. Alignment & Drako Way Terminal**	**Interim Station**	**Utility Line**	**Balloon Track***
Buteo jamaicensis	Red-tailed hawk	X			
Callipepla californica	California quail	X			
Cathartes aura	Turkey vulture	X			
Crotalus viridis	Western rattlesnake	X			
Equus ferus sp.	Wild horse			X	
Lepus californicus	Jackrabbit	X		X	
Mephitis sp.	Skunk	X			
Scelopeorus occidentalis	Western fence lizard	X	X		
Spermophilus sp.	Squirrel	X			
Sylvilagus nuttallii	Mountain cottontail rabbit		X		
Uta stansuriana	Side-blotched lizard		X		

*** No wildlife was observed in the Balloon Track area**

D. Wetlands/Riparian/Jurisdictional Waters

There are no wetlands/riparian/jurisdictional waters on the Drako Way Terminal site, at the interim Eastgate Station site, or in the area of the balloon track. However, the area where the new 9,000 foot alignment parallels the Carson River it is adjacent to a well developed wetlands located within the riparian corridor. The Carson River is a perennial waterway that is relatively undisturbed beyond the existing dirt road fill slope. Cottonwoods, willows, wild rose and tall whitetop dominate the river edge. The National Wetlands Inventory (NWI) maps categorize this area as riverine, intermittent, streambed, seasonally flooded. The 9,000 foot alignment follows the existing dirt road along the river for a distance of approximately 1,100 linear feet beginning on the east side of the T.E. Bertagnolli and Assoc. yard and continuing east to the end of the alignment at the Bertagnolli property line (APN 08-531-44). The alignment follows the river within approximately 10 feet of the river high water mark at its closest point. Due to the steepness of the river bank, the edge of the track bed is approximately 5 feet vertically above the ordinary high water mark at its closest point(s). The portion of the 9,000 foot alignment to the north of the Bertagnolli facility quickly gains elevation and diverges away from the river riparian corridor.

Two "blue line" streams are shown crossing the proposed 9,000 foot alignment on the USGS New Empire Quadrangle (1994). A "Delineation of Jurisdictional Waters of the U.S", for Phases 3B and 3C was prepared by Resource Concepts

Inc. (RCI) for a portion of the project including the 9,000 foot alignment and balloon track area and was submitted to the ACOE in December of 2009. Only one area was identified as an ephemeral stream that is considered jurisdictional waters of the U.S. on the 9,000 foot alignment with which the ACOE concurred on April 30, 2010. The area consists of 0.032 acres on the "blue line" stream located near Deer Run road. Pursuant to the Clean Water Act, the V&T Commission will prepare and submit a Pre-Construction Notification or permit application for the affected portions of the project prior to any construction.

E. Threatened and Endangered Species

The following lists and databases were reviewed to determine potential habitat requirements for threatened, endangered and special status species with potential to occur in the project area: BLM Sensitive Species, and Nevada Natural Heritage Database. Coordination with NDOW and USFWS also was performed in developing lists of species with potential to occur.

Based on the coordination with USFWS no federal-listed threatened or endangered species are known to exist within the project area boundaries. Systematic surveys of the project area identified no threatened, endangered, or special status species. Other plant species of concern include special-status cacti and yuccas species as they are protected by Nevada State law.

F. Wilderness/ACEC/Wild and Scenic Rivers

The project is outside any lands under wilderness review or designated as a Wilderness Study Area (WSA). No Areas of Critical Environmental Concern (ACEC) or Wild and Scenic Rivers are located near the project.

G. Range

The proposed depot and new alignment are located in the Carson Plain/Gold Hill Grazing Allotment. This is a sheep allotment that consists of 535 active animal unit months (AUMs). Generally the active season is from April 1 to May 31 each year. The permittee is Borda Land and Sheep.

H. Forestry

The area along the new alignment and proposed depot site is generally devoid of trees. Large cottonwoods are established along the river where the alignment deviates from the historic alignment. The BLM has noted that the cottonwood trees are under threat from beavers in the area and are not regenerating due to regulation of the Carson River upstream. Agricultural diversions are preventing spring runoff from achieving historical sustained high flows which are essential to cottonwood regeneration.

I. Wild Horse and Burro

No wild horses or burros were documented within the depot site or new alignment during the survey. The alignment is not located in a Wild Horse and Burro Management Area. However, these species frequent the general area. Horses are not often observed in the area of the depot site due to the commercial activities and traffic as well as fencing of much of the area. Horses north of the river in the Virginia Range are considered strays under the jurisdiction of the State Brand Inspector. Horses are occasionally observed along the river particularly near the Empire Ranch Golf Course approximately one mile west of the project along Morgan Mill Road.

2.8.2 Impacts

A. Vegetation

The Drako Way Terminal site is disturbed from past uses, including grading and vehicular traffic. Large areas within the terminal site are devoid of vegetation. This also applies to the new 9,000 foot alignment, portions of which are dirt roads or rock outcrops. The interim Eastgate Station area is largely undisturbed except along Flint Drive and where a few dirt roads cross the site.

All construction will occur within acquired right-of-way. Approximately 111.0 acres of land would be utilized for the proposed project if all of the proposed elements were constructed. Of the 111.0 acres, 69.4 acres are BLM land and 41.6 acres are state or privately owned land. Of the 69.4 acres of BLM land, approximately 1 to 2 acres are currently disturbed and it is assumed that the entire remaining area would be new disturbance. Of the 41.6 acres of state or privately owned land, approximately 21 acres are disturbed and the balance of the area would be new disturbance. Loss of existing vegetation will indirectly affect resident wildlife (e.g., small rodents, reptiles) that depends on it for forage and cover. Cleared areas will be subject to soil erosion.

B. Noxious Weeds

Disturbance to native soils and their associated vegetation allows noxious species to invade the area. In addition, invasive species may be introduced via vehicles driven into the area and by the nature of the urban/rural interface introducing non-native plant species into the native plant communities. If noxious weed species are not controlled, they may out-compete native species and prevent them from becoming reestablished in the area of disturbance, thereby altering habitat composition and value to support diverse species.

The likelihood of a noxious weed invasion is dependent upon many factors. The abundance of noxious weeds in the area of disturbance or the presence of a nearby seed source may dictate the severity of invasion. Because of past disturbance, the linear nature of the project, implementation of a noxious weeds management plan, and revegetation of disturbed areas, the potential for noxious weed invasion will be limited.

C. Wildlife Species

Since most of the railway right-of-way is located near existing roads, in areas of bedrock or passes through already disturbed sites, wildlife species especially sensitive to disturbances are not likely to be present and therefore will not be impacted. Due to common species composition, the presence of disturbed areas, and in the case of the interim station and terminal, the proximity of developments, impacts to wildlife, tolerant to disturbance, are expected to be minimal. Wildlife that occupies construction areas will be permanently impacted through loss of habitat. Direct mortality to some species with very small home ranges (burrowing animals in particular) may be caused by construction activities such as grading. Once the rail line is completed and operational, it is anticipated that wildlife kills from train animal encounters will only occur on rare occasions. The reduction of motorized traffic through approximately three miles of the Carson River Canyon should result in a net decrease in animal vehicle collisions. Project induced habitat disturbance and habitat loss will also cause indirect mortality by displacing animals now inhabiting the project area. Some individuals may succeed in relocating to adjacent lands, some may not.

The greatest impact will be to resident rodents and reptiles. These species have small ranges and the construction project may eliminate the entire home range of some, resulting in the eventual loss of individuals. Impacts to bird species will also occur due to the loss of nesting and roosting areas. The scarcity of trees on these portions of the project will result in only minimal losses primarily to birds that nest on the ground. The filling of washes and elimination of brush will also eliminate cover areas for larger mammals. Loss of vegetation will indirectly affect resident wildlife that depends on it for forage and cover. Overall, this loss of vegetation and cover should have a negligible impact, if any, on wildlife species.

D. Wetlands/Riparian/Jurisdictional Waters

There are no wetlands or riparian areas located with the project right of way areas and therefore, no impacts to wetlands or riparian areas will occur.

Approximately 0.032 acres of jurisdictional waters will be impacted on the 9,000 foot alignment change at the "blue line" stream located at the intersection of Deer Run Road and River Road. Fill and culverts will be installed within the drainage area to maintain the existing hydrology. Impacts to the drainage require authorization (permits) from the U. S. Army Corps of Engineers and from the Nevada Department of Environmental Protection.

E. Threatened and Endangered Species

No federally threatened or endangered species were identified on the Drako Way depot site, the Interim Eastgate Station Site, the utility easement between Morgan Mill Road and Flint Drive or on the 9,000 foot alignment change; therefore, there are no impacts.

Lavin's eggvetch (*Astragalus oophorus v. lavinii*), a BLM sensitive plant species, has potential to occur within the project area. The species occurs on open, dry relatively barren gravelly clay slopes, which can be found along the 9,000 linear feet of new alignment. Systematic surveys were completed on all of the project sites. No Lavin's eggvetch were observed under optimal conditions for sighting on the 9,000 foot alignment and Drako Way Terminal sites. There will be no impact to Lavin's eggvetch on these sites. The surveys on the Balloon Track and interim Eastgate Station sites were done at less than optimal times and further observations will be made prior to construction as described in 2.8.3.

A Grizzlybear pricklypear cactus was found within the 100-foot survey area located northeast of the 9,000 foot alignment near the depot site. This species is relatively common in the region, and although protected under State law, is not listed as a special-status species. The location will be marked and there will be no impact to the cactus on the site.

F. Wilderness/ACEC/Wild and Scenic Rivers

No impacts are anticipated as the terminal site, interim station and new alignment are outside any lands under wilderness review, designated as a WSA, ACEC or as a Wild and Scenic River.

G. Range

Grazing acreage in the area will be reduced as palatable vegetation will be permanently removed within portions of the project boundaries. However, due to the disturbed nature of much of the area of the project and the abundance of bedrock, the amount of vegetation affected is negligible relative to the area of the grazing allotment.

H. Forestry

Removal of juniper or pinyon pine trees in and around the depot site and new alignment are unnecessary due to the scarcity of trees in this area. No cottonwood trees are to be removed from this portion of the project.

I. Wild Horse and Burro

As with other wildlife, the new alignment and depot site is likely to have a negligible impact on wild horse and burro movement. There is the possibility of train/animal collisions due to the lack of fencing on the new alignment. Much of the depot area will likely be fenced. Forage and grazing areas will be reduced through the removal of habitat; however, this is expected to be negligible on the portions of the project considered herein. Dust, noise, and vibration caused by construction activities may temporarily affect these species. Noise and vibration may startle these species during train operation which will range from two to four trains per day through the tourist season (May through October).

2.8.3 Mitigation

A. Vegetation

To minimize disturbance to vegetation, the following mitigation measures will be implemented:

1. A preconstruction survey of the project area will be necessary.

2. Construction and associated activities will occur strictly within the limits of the Drako Way Terminal site, the Interim Eastgate Station site, the utility easement between Morgan Mill Road and Flint Drive and on the 9,000 foot alignment change with the exception of areas designated for avoidance. Avoidance areas shown on plans will include where necessary potential jurisdictional waters, cultural areas and if present

sensitive vegetation areas. Clearing of vegetation will be limited to areas necessary for construction, future maintenance and where safety concerns exist.

3. Topsoil will be stockpiled when appropriate and reused during reclamation. Vegetated areas disturbed outside of required maintenance zones will be graded, covered with reclaimed topsoil, and revegetated with native, certified weed-free seed mixes.

4. The train operator and/or the Commission will remove debris from areas within the right-of-way. This will help restore habitat and make the ride more visually pleasing.

5. An inadvertent discovery plan for sensitive species will be included in project documents to protect sensitive species should they be found. Permits if required will be obtained if plants need to be removed.

B. Noxious Weeds

During construction, contract documents will specify a noxious weed management plan to control the invasion and/or spread of noxious weeds in the project area.

To ensure noxious weeds do not become established subsequent to construction, a qualified biologist will monitor the site after reclamation activities have concluded and the revegetation efforts have had an opportunity to become established. If field inspections show that noxious weeds are invading the reclaimed sites, biologists will consult with the BLM and/or the State Cooperative Extension weed program to determine and implement appropriate control measures. Abatement measures may include hand pulling, spraying, or mechanized methods of weed control.

C. Wildlife Species

1. Structures which inhibit large mammal movement, such as fencing, retaining walls, mesh netting (used for rock fall protection), will only be installed where safety concerns exist.

2. To avoid direct and indirect impacts to migratory birds, removal of vegetation will occur outside the bird breeding season. If vegetation removal is scheduled to occur during the nesting season, then a qualified biologist would survey the area prior to initiation of construction. If active nests are located, then a buffer would be established around the nests and the area avoided until the nests are no longer active. The size of the buffer is dependant on the identified nesting species and would be determined by the biologist in consultation with the Nevada Department of Wildlife (NDOW).

3. A pre-construction survey shall be conducted by a qualified biologist within 30 days prior to construction to identify special-status bats that may be located near any of the project features considered for construction here. If an existing roost or signs of an existing roost is found, avoidance of the roost is optimal and mitigation measures to ensure avoidance shall be implemented in conjunction with consultation(s) with NDOW. If avoidance is not possible, consultation with the NDOW is required prior to impacting the species.

D. Wetlands/Riparian/Jurisdictional Waters

To minimize impacts to these lands, the following mitigation measures will be implemented:

1. Pursuant to the Clean Water Act: the project will prepare and submit a Pre-Construction Notification or permit application for the 9,000 foot alignment portion of the project prior to any construction.

2. BMPs as determined by the appropriate agencies as included in an approved Storm Water Pollution Prevention Plan (SWPPP) will be followed when performing work in or near washes, wetlands, and perennial waters. Common BMPs include silt screens, hay bales, heavy equipment with non-metal tracks, and coffer dams.

3. In the area adjacent to the Carson River at the east end of the proposed new alignment, flagging/stakes/fencing will be placed prior to any work to delineate wetland boundaries. The contractor will be required to avoid these areas.

E. Threatened and Endangered Species

No mitigation is required; however, in the unlikely event any threatened, endangered, species of concern, or sensitive species are encountered prior to or during construction and which may be impacted, the USFWS and/or NDOW shall first be consulted with to address the issue. If such species are encountered, the species and their habitats will be avoided via measures which have been approved by the resource agency where feasible. If avoidance is not possible, minimization measures shall be employed, and as a last resort, unavoidable impacts shall be mitigated as approved by USFWS and/or NDW as appropriate.

F. Wilderness/ACEC/Wild and Scenic Rivers

No mitigation is required.

G. Range

Areas outside of the permanent construction zone and falling outside of maintenance zones will be revegetated. Fencing, which would limit open-range grazing, will be installed only in areas where safety concerns exist. Other appropriate mitigation measures as mentioned in the wild horse and burro sections also apply to livestock.

H. Forestry

The NDF and/or BLM pre-construction salvage that allows woodcutting of all trees within the construction boundaries will not be necessary on this portion of the project due to the lack of trees.

Removal of cottonwood trees within the railroad right-of-way along the Carson River will be avoided if possible. If removal of cottonwood trees cannot be avoided, to prevent further stress on the cottonwood population in the Carson River Canyon, mitigation measures will include replacement of trees, protection of remaining trees from beavers, and removing Russian olive trees, which tend to out-compete cottonwood trees.

I. Wild Horse and Burro

Mitigation will be the same for these species (when appropriate) as listed above in the range and wildlife sections. The train operator will be prohibited from stopping the train for recreational purposes such as petting or feeding when herds or individuals are encountered. If the train stops for picture taking the passengers will be required to stay on board.

2.9 Cultural Resources

2.9.1 Existing Conditions

Cultural resource inventories have been conducted that address portions of the Virginia & Truckee Railway project corridor that make up the present proposed action. They include an inventory prepared by NDOT entitled An Archaeological Survey of the Virginia and Truckee Railroad Grade from Empire to Gold Hill (Matranga 2000; CRR 3-1597); a report entitled Virginia and Truckee Railway Reconstruction Project, H1 Line and Depot Cultural Resources Inventory Report (Zeier and Reno 2007; CRR 3-1597.3), a report entitled Virginia and Truckee Railway Reconstruction Project, Interim Depot and Balloon Track, Carson City County, Nevada, Cultural Resources Inventory Report (Zeier, Drews and Hall 2009; CRR 3-1597.6) and a report entitled Virginia and Truckee Railway Reconstruction Project, Phase 3, Lyon and Carson City Counties, Nevada, Cultural Resources Inventory Report (Zeier 2009; CRR 3-1597.4). The purpose of the inventories was to identify cultural resources located within the area of potential effect, to assess the National Register eligibility of any resources present, and to assess the project's potential to impact and National Register eligible sites present in the area. These actions are consistent with a programmatic

agreement entered into by FHWA, BLM, the Nevada State Historic Preservation Office and the Commission (Appendix D).

Native American consultation was initiated by FHWA on March 27, 2002. Based on that consultation, FHWA found that there are no Native American concerns associated with this project.

2.9.2 Impacts

Cultural resource surveys of the project area identified two sites; Site Cr 03-6984 and Site Cr 03-4412 Feature 206 that are potentially eligible to the National Register of Historic Places (NHRP) that may be impacted by the project construction activities (Appendix E). Site Cr 03-6984 is the old Empire to Brunswick Canyon Road located in the Carson River Canyon. Feature 206 is the remnants of a retaining wall along the V&T grade (Site Cr 03-4412) within the area of the Balloon Track.

2.9.3 Mitigation

A. Cr 03-6984 and Cr 03-4412 Feature 206

Mitigation measures to avoid or minimize construction impacts to Cr 03-6984 will be developed and implemented in coordination with FHWA, BLM, SHPO and the Commission in accordance with the Section 106 programmatic agreement for the reconstruction of the V&T Railway. Feature 206 of Site Cr 03-4412 will be avoided and therefore no mitigation is necessary.

B. Inadvertent Discoveries

Monitoring of cultural resource sites would occur during construction and an inadvertent discovery plan will be in place prior to the commencement of construction. The plan will be similar to the plan used on earlier phases of the project. The plan requires the contractors' personnel and the owners' on-site representatives to be trained to recognize what types of items could be of historical significance. Procedures are established for the collection of artifacts by appropriate personnel and archiving of artifacts. Inadvertent discoveries will be handled in accordance set forth in the programmatic agreement entered into by FHWA, BLM, the Nevada State Historic Preservation Office, and the Commission.

3.0 CUMULATIVE AND INDIRECT IMPACTS

3.1 Introduction

3.1.1 Purpose and Regulatory Basis

NEPA requires that the potential direct, indirect and cumulative impacts of a federally-funded or approved project be identified, evaluated, and mitigated as appropriate. Within the context of NEPA, indirect effects are defined by the Council on Environmental Quality (CEQ) as impacts that are "caused by an action and are later in time or farther removed in distance but are still reasonably foreseeable" (40 CFR 1508.8). Cumulative effects are defined as "the impact on the environment which results from incremental impact of the action when added to other past, present, and reasonably foreseeable future actions..." (40 CFR 1508.7).

3.1.2 FHWA and CEQ Guidance

This analysis is conducted in accordance with FHWA and CEQ regulations and guidance documents, including the January 1997 CEQ handbook entitled *Considering Cumulative Effects Under the National Environmental Policy Act* (CEQ, 1997) and the April 1992 FHWA position paper entitled *Secondary and Cumulative Impact Assessment in the Highway Project Development Process* (USDOT, 1992).

3.1.3 Methodology

The regional context used for this analysis was the Northern Nevada region comprised of Washoe County, Douglas County, Storey County, Lyon County, and the incorporated city of Carson City, all of which with representation on the

Nevada Commission for the Reconstruction of the V&T Railway. The Regional Transportation Commissions of Washoe County and Carson City are federally-designated regional transportation planning Metropolitan Planning Organizations (MPOs). Since the project predominately follows the V&T's historic alignment in Storey County through a portion of Mound House (Lyon County) and Carson City, analysis is focused on those areas.

Data compiled for preparation of the EA was used for this analysis as well as information from land use planning and resource management documents.

3.2 Overview of Past, Existing, and Future Population and Land Use Conditions

3.2.1 Population

Several factors have impacted the overall growth in the region since the 1990s, including economic and job market growth in the gaming, housing, retail services, and construction industries, among others. While the current recession is having an adverse impact on economic development and employment in the region, slowing the rate of area growth, projections predict long term population growth to continue in the Northern Nevada region.

3.2.2 Land Use

A. Past and Existing Land Use

Growth in the Northern Nevada region has steadily converted predominately rural, open space, and agricultural land to urbanized land uses including a variety of commercial, industrial, retail facilities. It has created demand for housing which has and is being supplied with the development of master planned communities, subdivisions, and other types of residential housing. This demand has also placed pressure on the public infrastructure, particularly the need for new and improved transportation facilities and services (e.g., transit routes and pedestrian and bicycle facilities).

The I-580 and Carson City Bypass freeways are two such examples of major transportation facilities under construction having an impact on the region in terms of changing traffic patterns; commercial, business, and residential development; and impacts to natural resources. These impacts have been analyzed in the respective Environmental Impact Statements (EIS) and associated documents for these projects and are incorporated by reference.

Relative to the overall regional development, land uses along the V&T alignment have been far less intense. Much of the alignment is within the Comstock Historic District or is situated through the Carson River Canyon, both of which restrict development to preserve historic and natural resources and to maintain recreational and scenic values. Business and residential land uses are primarily concentrated in Virginia City, Gold Hill, and Mound House areas and along US 50.

B. Future Residential/Commercial Land Uses

The V&T is expected to have a positive economic regional impact as described in this document, but is not expected to largely affect future residential and commercial land uses other than what is envisioned in the affected communities' long-term comprehensive master plans.

The proposed Blackhawk to Heybourne Transmission Line Project includes the construction of approximately 34 miles of an electrical 120 kV transmission line through four counties in Nevada, beginning at the proposed new Blackhawk Substation in Storey County. The proposed transmission line runs parallel with existing transmission lines along all but the first four miles in Storey and Lyon Counties and three and a half miles in Douglas County. This proposed project would cross over the 9,000 foot alignment near the mouth of the Carson Canyon in Carson City.

A Chinese Workers Museum is in the early stages of development and currently planned for land southeast of Morgan Mill Road and Drako Way. The 9,000 foot alignment would run along the west edge of the proposed location overlooking the Carson Canyon. Co-location of the museum and the railroad would serve to enhance the visitor experience of either proposed project.

3.3 Analysis of Potential Impacts

Due to the temporary or short term impacts as described in the referenced sections, the proposed project would not contribute to long term indirect impacts or cumulative impacts on the following environmental resources:

- Noise
- Air Quality
- Floodplain and Hydrological Resources

The project will pose some direct impacts and therefore the potential for cumulative and indirect impacts is further discussed.

- Social/Economic
- Water Quality
- Hazardous Materials
- Biological Resources
- Cultural Resources

3.3.1 Social/Economic

Cumulative effects of this portion of the proposed project are expected to be traffic-related. More people coming to the area will add to the traffic volumes and congestion occurring as the overall local population growth in Carson City and nearby communities continues. Construction of roadway projects such as the Carson City Bypass, proposed widening of US 50 between Carson City and Silver Springs,, and the completion of the I-580 Freeway will help to relieve traffic pressures on local arterial streets. Traffic studies will be conducted at various locations as design progresses to address the need for traffic signals and/or other traffic operations/safety improvements to address congestion and safety concerns

The proposed project is expected to create a direct positive economic benefit for Carson City and Virginia City, as well as have an indirect positive impact in the surrounding communities. If maximum ridership goals are met, this project will generate higher numbers of people visiting the area who will spend money in different sectors of the economy. As is the case for Nevada's economy as a whole, it is expected that the greater tourist demand will encourage new business starts, particularly in the service industry.

The project will have a beneficial secondary impact by eliminating through traffic to the Carson River Canyon. The Carson City Parks and Recreation Department has expressed the belief that the restriction on traffic will reduce illegal dumping and vandalism, enhancing public safety, and encouraging recreational activities such as rafting in the river corridor.

However, in spite of the economic benefits of the project, other factors may contribute to the local community's perceptions of adverse effects attributed to growth. An indirect effect may be the local community's perception that any economic development project contributing to more development may be counter to "quality of life" planning goals. Areas considered to enhance quality-of-life that may be negatively impacted by growth include community safety (traffic, pedestrian, bicycle), ease of mobility, retention of open space, recreational development and "main street" redevelopment. It is not expected that the combined effects of potential "permanent" population growth tied to an increase in jobs and tourism growth generated from the proposed project will outpace the capacity of the public infrastructure or the ability of local communities to provide services in the long-term, and is consistent with long term local community plans.

3.3.2 Water Quality

Drainage facilities will be maintained in the project after condition to prevent or reduce impacts to water from non-point sources to levels that meet or exceed local, state, and federal water quality standards.

3.3.3 Hazardous Materials

Since it is possible mercury contaminated soils could be encountered during project construction, mitigation will likely consist of covering contaminated native soils with clean fill. Both design and project construction will be coordinated with NDEP to avoid disturbing contaminated soils. Soils to be excavated will be tested prior to excavation. Worker safety precautions will be specified in the contract documents.

3.3.4 Biological Resources

Cumulatively, implementation of the proposed project in areas that are relatively rural and/or undisturbed, may affect species distribution, movement patterns, reproduction, and habitat use among the various populations. Since this portion of the railroad will be primarily built on or adjacent to disturbed areas, the cumulative effect of habitat fragmentation is expected to be minimal.

3.4 Conclusion

Adverse indirect or cumulative impacts from the construction and operation of the project will be minimal with the implementation of the mitigation measures described in this document and adherence to ongoing operations and maintenance commitments. The project is expected to generate both short- and long-term economic benefits to the area and is consistent with local and community planning goals.

4.0 AGENCY COORDINATION AND PUBLIC INVOLVEMENT

4.1 Informational Meetings

Informational meetings were held regarding the 9,000 foot line change and the Drako Way Terminal on the following dates and at the following locations:

- Tuesday, January 24, 2006, Carson City Community Center
- Wednesday, January 25, 2006, Dayton Library

Meeting notices were mailed to interested and affected agencies and individuals and advertisements were placed in the local adjudicated newspapers. The above locations were chosen so that the meetings would be held in each of the two counties most involved: Carson City Urban Area and Lyon County. Representatives from NDOT and the Capital Engineering Design Team (now Manhard Consulting Design Team) explained the proposed project at that time and invited comments from those who wished to make a statement which would then become part of the project record.

A total of thirty-two people attended the meetings. One statement indicating support of the project was provided to the court reporter.

A Location/Design hearing was held on June 2, 2010, at the Carson City Community Center as part of the public involvement process for an earlier approved draft of this SEA. Meeting notices were mailed to the agencies and individuals identified in Appendix F. In addition advertisements were placed in the local adjudicated newspapers. Six non-agency members of the public attended the hearing.

The BLM has participated in the development of this EA. Public involvement to date assists the BLM in fulfilling it's obligations under 43 CFR Part 46. Upon conclusion of this process, if determined adequate, the BLM would adopt this EA. The BLM would then issue a FONSI and Decision Record, prior to issuing any right-of-way authorizations. Should any right-of-way authorization be needed for a project element which requires other federal permitting such as an ACOE 404 permit, the BLM would defer issuing its decision until such permit is first obtained.