

4.11 PUBLIC SERVICES AND UTILITIES

This section describes existing public services and utilities, presents an analysis of potential impacts resulting from Alternatives 1 through 5, and identifies mitigation measures for those impacts determined to be significant. In particular, it addresses impacts on water supply, treatment and distribution; wastewater treatment and disposal; solid waste, electricity and natural gas, telecommunications, fire and emergency, law enforcement, and public schools. Analysis provided in this section is based on review of agency documents and consultation with local public services providers.

The potential for impacts on recreational facilities are addressed in Section 4.12, Recreation, and stormwater management and potential impacts on groundwater are addressed in Chapter 4.7, Hydrology and Water Quality.

4.11.1 REGULATORY BACKGROUND

Chapter 27 of the Tahoe Regional Planning Agency (TRPA) Code of Ordinances establishes standards for water, electrical and wastewater treatment services. In addition, the Public Facilities and Services Chapter of the Douglas County Master Plan (DCMP) includes policies that regulate the provision of adequate public facilities and services. Specifically, Policy 10.01.04 requires Douglas County to condition the issuance of development permits on a determination that there is sufficient capacity of public facilities to meet the standards for levels of service for existing and proposed development. Douglas County also has the jurisdiction to consider the adoption of impact fees to pay for infrastructure needed to serve new development (DCMP 2007).

WATER SERVICE

TRPA

Chapter 27.3 of TRPA's Code of Ordinances contains a basic water service requirement for projects proposing a new structure, reconstruction, or expansion of an existing structure, designed or intended for human occupancy, specifically directing that such projects shall have adequate water rights and water supply systems.

Per Chapter 27.3, adequate fire flow in gallons per minute (gpm) for the project site would require 500 to 750 gpm over a two hour period at 20 pounds per square inch (psi) residual pressure (TRPA 2004).

Douglas County

Chapter 12 of the DCMP addresses Public Facilities and Service Standards for Douglas County. The following Goals and Policies contained therein apply to water service as applicable to the proposed project and alternatives.

Goal 12.05: All water systems shall provide a minimum level of service, designated by this element as the minimum facilities requirement, in identified areas.

- ▶ **Policy 12.05.4:** New development must maintain a system's minimum level of service.

Douglas County Code states, in correlation with the Nevada Division of Health regulations and with the State Engineer, that the minimum service capacity per household is 1,000 gallons per day (gpd).

Kingsbury General Improvement District

Water for the project would be provided by KGID. The KGID is a publicly owned, non-county general improvement district. The KGID operates under a set of ordinances effective since 2003 that establish the rates, rules and regulations for water service (KGID 2003).

The KGID determines if there is sufficient water supply and conveyance capacity available in the system to meet the requested level of service. Applicable to the project site are the following regulations:

- ▶ A person seeking to substantially increase or alter the use of water must make an application to the District, secure a permit, and pay applicable charges.
- ▶ A service connection to a parcel of land not part of developed subdivision will be the responsibility of the property owner. Any change in the location or size of an existing service connection and service line shall be solely the responsibility of the property owner.

WASTEWATER SERVICE

TRPA

Chapter 27.4 of TRPA's Code of Ordinances contains wastewater service requirement for projects proposing a new structure, or reconstruction or expansion of an existing structure designed or intended for human occupancy. Chapter 27 specifically directs that such projects that would generate wastewater shall be served by facilities for the treatment and export of wastewater from the Lake Tahoe Basin. To be considered served, a service connection shall be required to transport wastewater from the parcel to a treatment plant (TRPA 2004).

Douglas County

Chapter 12 of the DCMP addresses Public Facilities and Service Standards for Douglas County.

The following are the level of service standards for the wastewater treatment facilities within Douglas County.

- ▶ Treatment Capacity: 250 gpd per equivalent residential unit (GPD/ERU)
- ▶ Storage Capacity: 250 (GPD/ERU)
- ▶ Disposal Capacity: 250 (GPD/ERU)

The following Goals and Policies contained within the DCMP apply to wastewater service as applicable to the proposed development.

Goal: 12.06: Urban Service Areas will be served by community wastewater facilities.

- ▶ **Policy 12.06.3:** Neither new development nor the expansion of service areas should be allowed to decrease a system's level of service below the specified minimum.

Wastewater services for the project site would be provided by the Douglas County Sewer Improvement District (DCSID). The DCSID Sewer Ordinance (DCSID 2003) regulates the installation and maintenance of private and community wastewater collection, treatment and export. Sewer user fees are a flat residential fee per unit that is assessed through Douglas County's property tax per the District Ordinance.

ELECTRICITY AND NATURAL GAS SERVICE

Although TRPA does not specifically regulate the provision of electrical and natural gas services in the Lake Tahoe Basin, Chapter 27.5 of the Code of Ordinances directs that projects proposing a new structure, reconstruction, or expansion of an existing structure, designed or intended for human occupancy shall be served by facilities to provide adequate electrical supply (TRPA 2004).

Arrangements for the design and installation of gas facilities must be made in accordance with the rules and regulations set forth by the Nevada Public Service Commission. Natural gas service would be provided to the project site by Southwest Gas Corporation (SGC). Once the project is approved for construction SGC would

require pre-construction review of site trenching and roadway improvement plans to determine the gas meter locations and specifications.

SOLID WASTE SERVICE

State of Nevada

The Nevada Revised Statute (NRS) 444.440 declares that it is the policy of the State of Nevada to regulate the collection and disposal of solid waste in a manner that will: protect public health and welfare; prevent water or air pollution; prevent the spread of disease and the creation of nuisances; conserve natural resources; enhance the beauty and quality of the environment (NRS 1971).

Douglas County

Chapter 12 of the DCMP addresses Public Facilities and Service Standards for Douglas County. The following are the Solid Waste Goals and Policies of Douglas County.

Goal 12.04: The County shall promote reliable and cost-effective solid waste management services.

- ▶ **Policy 12.04.01:** The County shall seek to implement solid waste management processes that reduce the waste stream, promote recycling, and provide for the separation of waste prior to incineration or landfilling.

LAW ENFORCEMENT

Douglas County Sheriff's Department

The project site would be served by the Douglas County Sheriff's Department (DCSD). The DCSD response time goal is within five minutes of alarm. Douglas County's proposed level of service is 211 square feet of administrative space per 1,000 residents and 1.93 jail beds per 1,000 residents. The 2006 DCMP describes the ratio of administrative office and jail bed space to be in compliance with this service ratio according to 2001 population and administrative office and jail bed statistics cited in the Master Plan. Based on these statistics Douglas County has a reserve of 40 jail beds and 1,029 square feet of administrative office space.

FIRE PROTECTION AND EMERGENCY SERVICES

Douglas County

Chapter 13 of the DCMP addresses Community and Regional Plans for Douglas County. While all development in the Tahoe area of Douglas County is subject to the provisions of the Tahoe Regional Planning Agency, Douglas County provides design review and building inspection service for those development projects within the Tahoe Basin, and Douglas County Development Code applies to the Tahoe area to the extent that the provisions meet the purpose and intent of TRPA regulations, and do not conflict with the provisions of TRPA (Douglas County Code, Chapter 20.700).

The following Goals and Policies are applicable to fire protection and emergency service for the project site.

- ▶ **Policy S.01.05:** Douglas County shall cooperate with the Tahoe-Douglas Fire District, U.S. Forest Service and Nevada Division of Forestry to provide adequate fire response times and fire suppression facilities for the Sierra community.

Tahoe Douglas Fire Protection District

The project site would be served by the Tahoe Douglas Fire Protection District (TDFPD). The TDFPD has a strategic plan that outlines response time objectives and other goals of the District. TDFPD's Strategic Plan outlines the department's service plan, which sets a response time of five minutes after the processing of alarm to the arrival of the first unit. The following guidelines included within the strategic plan document would apply to the proposed project.

The TDFPD Tahoe Douglas Sprinkler Ordinance requires that all residential buildings of 5,000 square feet or larger be equipped with a sprinkler system.

The TDFPD has noted that a sustained fire flow of 2,000 gallons of water per minute for 2 hours is required for the type and size of buildings planned for the project. Though no building codes applicable to the proposed project require the installation of an automatic sprinkler system, TDFPD recommends that each single and two-family dwelling unit on the project site be equipped with a sprinkler system, and note that the installation of such a system would reduce the sustained water flow required for a fire by up to 50% (Nicholson pers. comm., 2006).

PUBLIC SCHOOLS SERVICE

Douglas County

Although the educational needs of residents in the Tahoe Basin and specifically in the Douglas County area of the Tahoe Basin are not addressed specifically in TRPA Code of Ordinances or in the DCMP, the DCMP does set goals related to adequate public services. The following public service requirements may apply to the proposed development in regards to capital improvements required for schools in the area.

Goal 12.01: To provide levels of services for its residents to maintain at a minimum, the current quality of life for Douglas County's citizens.

- ▶ **Policy 12.01.04:** The County shall condition the issuance of development permits on a determination that there is sufficient capacity of public facilities to meet the standards for levels of service for existing development and the impacts of the proposed development concurrent with the proposed development.

4.11.2 AFFECTED ENVIRONMENT

WATER SERVICE

Water services for the project site would be provided by KGID. The KGID operates one water system and provides service to approximately 2,400 connections/ properties including single-family dwellings and business establishments, as well as separate irrigation and fire systems. KGID water comes from an intake in Lake Tahoe located offshore of Kahle Drive. The KGID has one well that is currently not operational near the top of Kingsbury Grade. The well is expected to be replaced and in operation in 2008. KGID water is treated at the Lake Intake Station at the end of Kahle Drive. Water is treated with ozone and chorine. The Lake Intake Station is normally operated in automatic mode and is continuously monitored by a computer system

The project site would likely be served by KGID's water system via the existing 10-inch water line under Lake Village Drive (Lake Village Drive) (Rohr, pers. comm., 2006). Development on the project site would connect to this existing water line in two places and a new water line would run through the project site. To the extent feasible, new utilities will be located under existing or proposed roadways and appropriate utility easements would be finalized as part of the permitting process.

WASTEWATER SERVICE

Wastewater services for the project site would be provided by the DCSID. The DCSID provides wastewater treatment for all tourist and commercial facilities, and local residences in the Douglas County portion of Lake Tahoe. The service area encompasses five Districts: KGID, Round Hill General Improvement District (RHGID), Elk Point Sanitation District (EPSD), Tahoe-Douglas District (TDD) and Douglas County Sewer Improvement District Number 1.

The DCSID treatment facility is located at the end of Sewer Plant Road in Stateline, Nevada approximately 1.5 miles from the project site. After treatment, the reclaimed wastewater is pumped over the mountain to the Carson Valley where it is used for irrigating ranch land. The DCSID maintains a storage facility on the east side of the valley comprised of three reservoirs capable of storing approximately 1,800 acre-feet of effluent (DCMP 2007).

The DCSID Wastewater Reclamation Facility has a capacity to treat 3.75 million gallons of wastewater per day. The facility currently treats an annual average of about 1.8 million gallons of wastewater per day.

The project site would be served by connection to an existing underground 8-inch sewer line located beneath Lake Village Drive. The connection point of this main line with the new sewer line serving the site would be determined based on the elevation of the new sewer line serving the project (Ikehara, pers. comm., 2006).

ELECTRICITY AND NATURAL GAS SERVICE

Electricity

Electrical service for the project site would be provided by SPP. Two SPP serviced power lines run through the property site: a 120 kilovolt (kV) transmission line along the eastern property line and a 14.4 kV distribution line through the middle of the site (Matthews, pers. comm., 2006).

SPP's service area includes 50,000 square miles in western, central, and northeastern Nevada and northeastern California, including the Lake Tahoe area. SPP provides service to approximately 306,053 residential customers in Nevada (SPP 2006). The electricity source for the project area would be the Round Hill Substation located at the end of Sewer Plant Road approximately 1.5 miles from the project site.

Natural Gas

Natural gas service to the Stateline Area is provided by SGC, which purchases, transports, and distributes natural gas to residential, commercial, and industrial customers in Arizona, Nevada, and portions of California (SGC 2006). Gas would be provided to the site via a 2-inch poly vinyl chloride (PVC) main on Lake Village Drive. Depending on the gas load demand per unit of the development this line may have to be upgraded.

SOLID WASTE SERVICE

South Tahoe Refuse (STR) provides waste removal services for the South Lake Tahoe area. STR collects more than 100,000 tons of waste each year. This waste is collected and sorted for recycling at a Materials Recovery Facility located at the South Tahoe Refuse Transfer Station. This station has been in operation since 1995.

Currently STR recycles approximately 35% of its waste stream through this sorting process. When applied to the state formula for diversion the STR service area is credited with diverting more than 50% of solid waste from the landfill.

The process targets the removal of glass, aluminum, tin, plastics and different grades of paper from the waste stream. Other recycling programs run by STR include the: Wood Diversion Program, Construction and Demolition Program, Cardboard and Office Paper Collection Routes, and the Household Hazardous and Universal

Waste Programs. STR's recycling programs were initiated in part to encourage compliance with California's solid waste diversion goal of 50%.

Though California's mandatory solid waste diversion requirement does not apply to the project site because it is in Nevada, because the project would be serviced by a California-based refuse company, waste generated at the project site would be collected and sorted along with all waste collected by STR.

The regional landfill STR utilizes is Lockwood Landfill, a 1,535 square-acre municipal solid waste facility located in Storey County, off Highway 80, east of Sparks, Nevada. The current capacity of Lockwood is one hundred-plus years.

TELECOMMUNICATIONS SERVICE

Verizon provides telecommunications services including local, long distance, DSL, ISDN and T-1 lines to the Stateline area. Cable service is provided to the area by Charter Communications. These services would also be available to the project site.

LAW ENFORCEMENT

DCSD provides law enforcement to the area. DCSD staff is responsible for all law enforcement duties within the Tahoe Basin in Douglas County. This area spans from the state line to approximately one mile north on Nevada State Route (SR) 28, one mile north/east over the summit towards Carson City, Nevada and three miles east on Kingsbury Grade (SR 207).

The closest sheriff's substation to the project is located at 175 U. S. 50, Stateline, Nevada, approximately one-quarter mile from the project site. This is the only law enforcement building located at Lake Tahoe that has jurisdiction for the project site. The substation is staffed with two patrol deputies each shift. The facility operates a satellite jail facility, staffed with a minimum of one deputy. A juvenile detention center is also operated within this facility and has two personnel on duty at all times. Additional staffing of the substation includes a station Commander, an Investigations Sergeant, two full-time Investigators and two support personnel. These positions are staffed during regular business hours, but are subject to call-out when necessary.

The Douglas County Sheriff's office ratio of officers to residents is 2.07. DCSD says this is fewer staff than what is required to provide adequate law enforcement staffing for Douglas County. DCSD is working with Douglas County to address the ratio of officers to residents (Logan pers. comm. 2006).

FIRE PROTECTION AND EMERGENCY HEALTH SERVICES

Fire protection and emergency services in the project area are provided by TDFPD. TDFPD provides service through four fire stations and 16 on-duty line personnel per day. TDFPD is in the process of hiring six more firefighters which would bring the on duty personnel up to 17 persons per day (Nicholson, pers. comm., 2006). Each fire station is equipped with a Type 1 Fire Engine capable of delivering up to 1,500 gallons of water per minute. TDFPD also has a 2006-104-foot Ladder Truck, three Advanced Life Support Ambulances and a 2,000-gallon tank Water Tender.

The station nearest the project site is the Round Hill Fire Station on Elks Point Road. Travel time to the site from the station is approximately 3 minutes and 20 seconds driving at Code 2. This is within the stated response time goal for the district of 5 minutes from alarm to site arrival (Nicholson, pers. comm., 2006).

Emergency Health Services

Three hospital service facilities are located within twenty miles by roadway from the project site. These health service facilities are:

1. Barton Memorial Hospital – approximately 6 miles from project site at 2170 South Avenue, South Lake Tahoe.
2. Carson Rehabilitation Center – approximately 18 miles from the project site in Carson City, NV.
3. Carson-Tahoe Hospital - approximately 19 miles from the project site in Carson City, NV.

The closest of these hospitals is Barton Memorial Hospital. Barton Memorial is an acute care hospital located in South Lake Tahoe. The hospital is fully accredited by the Joint Commission on Accreditation of Health Care Organizations and the State of California. The hospital provides 24-hour emergency care services, 75 patient beds for in-patient care, and a nursing facility with 48 resident beds. The hospital also has four inpatient care units: A Childbirth Center, a Medical Surgery Unit, an Orthopedics Unit, and an Intensive Care Unit. Outpatient medical services include ambulatory surgery, laboratories, medical imaging, occupational medicine, rehabilitation, social services, home health services and hospice service.

PUBLIC SCHOOLS SERVICES

Douglas County School District provides public school services for elementary through high schools (grades K–12). The District serves the communities of Gardnerville, Minden, and the southern Lake Tahoe area located in Nevada. The District operates seven elementary schools, three middle schools, and three high schools which serve more than 7,000 students. Education Standards are based upon the District Competency Objectives and Nevada Academic Performance Standards (Douglas County School District 2006).

Local schools include Zephyr Cove Elementary School at 226 Warrior Way in the unincorporated community of Round Hill; Kingsbury Middle School at 1900 Echo Drive in Stateline; and Whittel High School on Warrior Way in Round Hill. Enrollment at these schools has been steadily declining for the past 10 years. Enrollment at Kingsbury Middle School has declined an average of 16 students per year for the past 10 years. Because of declining enrollment, Kingsbury Middle School will close at the conclusion of the 2007/2008 school year. The sixth, seventh and eighth grade students served by this school will be transferred to Zephyr Cove Elementary (6th grade students) and Whittel High School (7th and 8th grade students). The District plans to retain the Kingsbury Middle School facility and property and would re-open the school if enrollment figures reversed substantially (Luna, pers. comm., 2006)

4.11.3 ENVIRONMENTAL CONSEQUENCES AND RECOMMENDED MITIGATION MEASURES

CRITERIA OF SIGNIFICANCE

No specific criteria of significance for public services or utilities have been set by TRPA, Douglas County, or other regulatory agency active in the Basin, although certain service delivery issues are indirectly associated with existing environmental thresholds (e.g., wastewater treatment capacity and water quality standards). Based on State of Nevada, TRPA, Douglas County, and service provider regulations (as described above), an impact may be considered significant if the project would result in any of the following:

- ▶ Alter the nature of demand for public services or utility services, causing substantial service delivery limitations or the service provider identifies serious deficiencies in the ability to provide service.
- ▶ Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or utilities, the construction of which could cause significant environmental impacts

that would be necessary to maintain acceptable service ratios, response times, or other performance objectives for any of the public services included in this analysis.

- ▶ Violate published national, state, or local laws relating to solid waste or litter control.
- ▶ Generate additional students such that adequate school facilities are not available or cannot be made available in a timely fashion.

Impacts associated with the construction/excavation impacts of upgrading existing infrastructure or installing new infrastructure on or off the project site are discussed Chapter 4.5, Geology and Soils, of this document.

ENERGY SAVINGS AND CONSERVATION BENEFITS OF LEED CERTIFICATION

The Sierra Colina Village Project was accepted into the LEED for Homes Pilot Program in 2006 and is striving to obtain LEED Platinum Certification, the highest LEED certification level^a. In November 2007, the LEED for Homes Rating System was launched by USGBC. LEED for Homes can now be applied to single and multi-family homes and is intended for both market-rate and affordable housing.

The Leadership in Energy and Environmental Design (LEED) for Homes Rating System is a voluntary green building certification program that recognizes and rewards the nation's top green home builders in terms of environmentally sound construction and community development. LEED provides a framework for assessing building performance and meeting sustainability goals. LEED for Homes rates qualified homes at the Certified, Silver, Gold, and Platinum levels, depending on the number of credits they achieve and in recognition of the level of performance achieved. To become certified, projects must meet all prerequisites and a minimum number of points within eight credit areas: innovation and design, location and linkages, sustainable sites, water efficiency, energy and atmosphere, materials and resources, indoor environmental quality, and awareness and education.

LEED homes contain features not typically present in conventional construction. Attributes of these homes include a variety of features all of which are designed to reduce the ecological footprint of the home with environmentally sensitive building methods. Some of the environmental benefits of LEED certified green sustainable homes include:

- ▶ *Reduced Water Use* - High efficiency water systems using the latest technology indoors and high efficiency fixtures (toilets, showers, faucets, etc.) reduce indoor water use. The average LEED-certified building saves 40% on water use as compared to a conventional building.
- ▶ *Reduced Energy Use* – Sierra Colina Village is an Energy Star Partner and has committed to obtaining Energy Star certification for all of its residential units. Meeting and/or exceeding Energy Star for Homes windows and utilizing energy efficient systems and fixtures lowers energy bills for homeowners. Energy Star qualified homes are independently verified to meet strict guidelines for energy efficiency set by the U.S. Environmental Protection Agency. Energy Star homes are significantly more energy efficient than standard homes, incorporating a variety of energy-efficient features, including effective insulation, high performance windows, tight construction and ducts, efficient heating and cooling equipment and Energy Star qualified lighting and appliances. These features contribute to lower energy demand and reduced air pollution. The average LEED certified building uses 32% less electricity, 26% less natural gas, and 30-40% less total energy as compared to a conventional building.
- ▶ *Use of Environmentally-Preferable Materials* – Construction materials utilizing the latest recycled content technology.
- ▶ *Reduced Construction Waste* – Efficient advanced framing techniques reduce waste from framing.

^a Although achieving this highest level of LEED certification cannot be guaranteed.

- ▶ *Stormwater Management and Water Quality Treatment* – Design will substantially exceed minimum requirements and typical standards of practice for stormwater management as required by TRPA, and if implemented, would result in a high level of water quality performance. Design will meet the minimum requirements of Douglas County Storm Drainage Design Criteria and Improvement Standards.
- ▶ *Improved Health For Homeowners* – By using moisture-control detailing, pollution and contamination-rejection and ventilation strategies during construction, green homes are healthier for residents.
- ▶ *Reduced Greenhouse Gases* – Through reduced energy consumption, sustainable homes generate less carbon dioxide to operate, thereby reducing emissions of greenhouse gases. Green homes use less energy and generate less carbon dioxide through their operation, require less transportation energy for their occupants, or avoid release of other greenhouse gases (such as hydrochlorofluorocarbons (HCFC) and hydrofluorocarbon refrigerants and foam insulation blowing agents).
- ▶ *Reduced Ozone Depletion* – Green homes minimize the use (and release) of ozone-depleting substances. This involves replacing chlorofluorocarbons-based chillers, specifying non-HCFC mechanical equipment, and avoiding foam insulation produced with an HCFC blowing agent.
- ▶ *Reduced Toxic Emissions From Use Of Sustainable Building Materials* – The manufacture of certain building materials, including some types of plastic, results in the emission of toxic air pollutants. The same materials (and others) may also emit toxins at the end of their lives, when they are land-filled or incinerated. There is growing concern about additives such as phthalate plasticizers and brominated flame retardants that are added to some plastics. LEED certified green buildings use materials selected to reduce the emission of toxic air pollutants, thereby contributing to the reduction in local air pollution. Some building materials also contribute to air pollution (smog) through the release of volatile organic compounds (VOCs). By selecting green building materials, air pollution sources are reduced.
- ▶ *Lower Energy Use To Transport Construction Materials Reduces Air Pollution* – The greater the distance building materials and products need to be shipped, the greater the energy use and environmental impacts. Green building strives to select more local materials. The LEED Rating System provides points for use of local materials.

The overall effect of receiving LEED certification has positive environmental consequences with respect to the consumption of natural resources and public utility services both during construction as well as throughout the lifetime of the homes that are created to be green sustainable.

IMPACT ANALYSIS

Alternative 1 – Proposed Project

IMPACT **Increased Demand for Water Supply, Treatment, Distribution, and Storage.** *Implementation of*
4.11.1-1 *Alternative 1 would result in increased water demand. The KGID has confirmed that the existing water supply, treatment facilities, distribution system, and storage facilities are adequate to serve the project. The project applicant would be required to pay the District a water connection fee at the time of issuance of the permit for a water connection. This impact would be **less than significant**.*

Implementation of Alternative 1, at buildout, would result in 50 new residential units, as well as associated new common facilities, resulting in an increase in demand for potable water from KGID. KGID has confirmed that the existing water supply, treatment facilities, distribution system and storage facilities are adequate to serve the project. (Rohr, pers. comm., 2006). The project applicant would be required to pay KGID a water connection fee at the time of issuance of the permit for a water connection. KGID has issued a Will Serve Letter for the project. Because Sierra Colina homes would be constructed so as to achieve LEED Certification, use of high efficiency

water systems using the latest technology and high efficiency fixtures (toilets, showers, faucets, etc.) would reduce indoor water consumption to levels below those of homes built with conventional methods. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

IMPACT 4.11.1-2 **Increased Demand for Wastewater Service.** *Buildout of Alternative 1 would generate an estimated 19,400 gallons per day of wastewater and therefore increase the demand for wastewater service. DCSID has indicated that capacity of sewer lines and capacity of the wastewater treatment facility would be adequate to serve Alternative 1. This impact would be less than significant.*

Alternative 1 would result in an increased demand for wastewater service. DCSID has estimated that the development proposed under Alternative 1 would generate an estimated 19,400 gallons of wastewater per day, which would not trigger a need for expansion or improvements to the wastewater treatment facility (Ikehara, pers. comm., 2006).

DCSID's estimate does not account for conservation elements associated with LEED certified sustainable homes. Because LEED homes have lower water demands, they are expected to produce less wastewater than conventional structures, thus reducing demand on municipal services. Therefore, it is likely that by implementing conservation elements associated with LEED certification, homes proposed under Alternative 1 will demand less water and generate a lower volume of wastewater than DCSID generation factors suggest. However, since the expected reduction in water demand and lower volume of wastewater to be generated is not quantifiable at this time, these assumptions are not weighed as factors in the significance determination for this impact discussion.

DCSID has indicated that the 8-inch existing sewer main located near Lake Village Drive would have adequate capacity to serve the proposed development. The point at which a new sewer line would connect to this main line would depend on the elevation of the new sewer line but would likely be made between manholes 606A and 607 located on or adjacent to Lake Village Drive. A new manhole would need to be installed for accessibility and maintenance of the new sewer line serving Alternative 1. DCSID has issued a Will Serve Letter for the project.

No expansion or improvement to the DCSID treatment facility would be required to accept wastewater from Alternative 1; therefore this impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

IMPACT 4.11.1-3 **Increased Demand for Electrical Services.** *Implementation of Alternative 1 would not require installation or extension of service lines to the project site. The existing 120kV and 14.4 kV power lines running above the site provide adequate power to service the development proposed under Alternative 1. This impact would be less than significant.*

SPP has confirmed that the two SPP-serviced power lines (120 kV power line and a 14.4 kV power line) running above the project site have sufficient power to serve the proposed development under Alternative 1 (Matthews, pers. comm., 2006). The electricity source for the project area would be the Round Hill Substation located at the end of Sewer Plant Road approximately 1.5 miles from the project site.

Minimizing energy consumption is a priority in nearly all LEED Green Buildings. LEED Green Buildings commonly use less than half as much energy as their conventional counterparts (Wilson 2005). LEED Certification requirements include guidelines for energy efficiency set by the EPA. Features such as effective

insulation, high performance windows, tight construction and ducts, and efficient heating and cooling equipment would reduce the energy^b required per home compared to a home built without adherence to LEED Certification requirements. Homes proposed under Alternative 1 would be constructed to meet LEED Certification requirements with respect to reducing electricity consumption.

SPP has expressed no objection to the undergrounding of the existing 14.4 kV overhead power lines which the applicant proposes for aesthetic quality reasons, as long as the proper substructure is installed per SPP specifications and all fees are paid by the applicant. There would be no service interruption due to the undergrounding of the power lines as several back-up feeds to the substation exist (Matthews, pers. comm., 2006). SPP has issued a Will Serve Letter for the project.

Because there would be adequate electrical supply available and SPP has confirmed that it would be able to provide service to the site, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

IMPACT 4.11.1-4 **Increased Demand for Natural Gas Services.** *Implementation of Alternative 1 would require the provision of natural gas services to the project site. SGC has confirmed that there are adequate supplies and infrastructure to provide natural gas services to the site. Therefore, this impact would be less than significant.*

Alternative 1 would require the provision of natural gas service to the site. SGC has acknowledged that it has adequate natural gas supplies to serve the proposed development (Smith, pers. comm., 2006). As described under Impact 4.11.1-3, the LEED Certification requirements would include energy efficient features that would reduce the energy consumption per home compared to its conventional counterpart.

The individual gas lines for each unit would be connected to the 2-inch PVC main gas line in Lake Village Drive. SGC has indicated that, depending on the load per unit requirements of the development, this main may have to be upgraded. If so, the closest connection point for a larger gas line is near the intersection of Lake Village Drive and Highway 50 (Smith, pers. comm., 2006).

The project applicant would pay for all necessary natural gas infrastructure improvements. The proposed natural gas utility improvements would be required to comply with all applicable SGC and Uniform Building Code requirements. SGC has issued a Will Serve Letter for the project.

Because there would be adequate supply available and SGC has confirmed that it would be able to provide natural gas services to the site, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

IMPACT 4.11.1-5 **Increased Demand for Solid Waste Services.** *Alternative 1 would generate approximately 495 pounds of solid waste per day, necessitating collection and disposal. STR has confirmed it would be able to provide service to the project without adversely affecting STR's existing services or facilities. This impact would be less than significant.*

^b In this context, energy may include electricity and/or natural gas, or other sources of energy used in the proposed homes.

STR has indicated that it has adequate system, equipment, and staff capacity to serve the proposed development under Alternative 1 and that providing service would not necessitate additional or expanded facilities. Collection at the project site would be added to existing collection routes in the area (Lear, pers. comm., 2006).

Assuming the Stateline average of 2.2 persons per unit, and the standard solid waste generation rates of 4.5 pounds/day/person^c, buildout of Alternative 1 is expected to generate approximately 495 pounds of solid waste per day. (50 units x 2.2 persons per unit = 110 persons x 4.5 pounds/day/person^d). This equates to approximately 180,675 pounds of solid waste annually.

The regional landfill utilized by STR, Lockwood Landfill, has a current capacity of 100-plus years. Lockwood Landfill has adequate capacity to serve the project and therefore Alternative 1 would not result in the need for new or expanded landfills. Alternative 1 would result in a **less-than-significant** impact to solid waste services.

Mitigation Measures

No mitigation is required.

IMPACT **Increased Demand for Telecommunications Service.** *Implementation of Alternative 1 would result in an increased demand for telecommunications services. Although limited on- and off-site improvements would be necessary to establish service, Verizon has indicated that it would be able to serve the development. This impact would be less than significant.*

Verizon has indicated that it would provide telecommunications services to Alternative 1 (Fesler, pers. comm., 2006). For Verizon to provide service, the project applicant would be required to install conduits at the project site. Verizon has a policy of paying 50% of installation fees inside the development while the developer is required to pay the other 50%. In regard to infrastructure outside the project site, the developer is allowed 100 feet of upgrades at no additional charge, but would be responsible for upgrades in excess of 100 feet from the project site. Verizon has indicated that if trenching is required for installation of the new lines, it is preferable to install in conjunction with other utilities. Verizon has issued a Will Serve Letter for the project. Alternative 1 would result in **less-than-significant** impacts to telecommunications service.

Mitigation Measures

No mitigation is required.

IMPACT **Increased Demand for Law Enforcement Services.** *Assuming the Stateline average of 2.2 persons to each unit, implementation of Alternative 1 would result in approximately 110 new residents to the project area. The DCSD has expressed that this would create a minimal increase in demand for services. This impact would be less than significant.*

The current ratio of DCSD officers per 1,000 civilians is 2.07. The addition of an average estimate of 110 additional residents to Douglas County under Alternative 1 would affect this ratio. However, this change would be negligible and by itself would not require the construction of new facilities or the addition of personnel. DCSD

^c Source of solid waste generation rates: U.S. EPA 2005.

^d As discussed in Section 4.10, Population and Housing, it is possible that the population increase associated with Alternative 1 would be less than 110 persons because the applicant is proposing to transfer existing development rights or existing residential units of use (ERUs) to the site necessary for the project. Any ERUs transferred to the site from within the Stateline area would not contribute to an increase in the Stateline area population because no new residential units of use would be created or approved for each of the ERUs transferred to the site. Estimated changes in demand for municipal services are calculated using the Stateline average and may therefore be conservative.

is in compliance with the Douglas County level of service regulations regarding administrative and jail bed space. This is considered a **less-than-significant** impact.

Mitigation Measures

No mitigation is required.

IMPACT **Emergency Access During Construction.** *Construction activities and construction-related traffic could temporarily interfere with the ability of DCSD and TDFPD to provide emergency services to the project area, particularly to those parcels adjacent to the project site. This impact is considered **potentially significant**.*

Although the project site is vacant, surrounding land uses include the Lake Village Professional Building and the Lake Village condominium complex to the north and the Kingsbury Middle School to the east. Douglas County School District has announced that Kingsbury Middle School will be closed at the conclusion of the 2007/2008 school year, and has not announced any new use for the site. The earliest date on which the Sierra Colina project would begin construction is the May 2009 building season. While facilities would not be in use in the foreseeable future after closure, buildings and other structures would remain on the site and would require adequate emergency access by TDFPD and DCSD.

Construction of Alternative 1 would occur over a period of three years. Construction activities would be primarily focused on the project site and not on Lake Village Drive /Echo Drive. However, transport of construction equipment and/or trenching along Lake Village Drive /Echo Drive associated with the extension of utility services could partially block or slow traffic on Lake Village Drive during construction. Although this would be a temporary construction impact, this impact would be **potentially significant** because it involves protection of public safety.

Mitigation Measure 4.11.1-8. Ensure Emergency Access During Construction. The project applicant shall prepare and submit an emergency access plan to TRPA, Douglas County, and the TDFPD for review and approval before the pre-construction inspection required under the TRPA Code of Ordinances and permits are issued. The plan shall include detailed descriptions of how emergency access would be maintained throughout project construction.

Implementation of Mitigation Measure 4.11.1-8 would reduce this impact to a **less-than-significant** level.

IMPACT **Increased Demand for Fire Protection.** *Implementation of Alternative 1 would result in an incremental increase in the local demand for fire protection. TDFPD staffing and equipment are adequate to provide service to the proposed project. This impact would be **less than significant**.*

Alternative 1 would result in the construction of 50 residential units and an increase in local population. Emergency access to the site is via Highway 50 to Lake Village Drive. The potential for an increase in fires and accidents is inherent with any increase in resident population. The TDFPD has stated that current staffing and equipment is sufficient to address the increased demand on fire protection associated with development of Alternative 1. TDFPD has issued a Will Serve Letter for the project.

All of the residential units located in buildings greater than 5,000 square feet in size would be equipped with sprinkler systems and fire hydrants would be installed at various locations on the project site per TDFPD requirements for fire protection. The only fees TDFPD would impose on the project would be for Fire and Life Safety plan review. The amount that would be required would depend on the final design of the project (such as Fire Sprinkler Plan review, Alarm Plan review, etc.). There are no fees assessed for Fire Flow Reports or Fire Hydrant Location Reviews. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

IMPACT 4.11.1-10 **Increased Demand for Emergency Medical Services.** *Implementation of Alternative 1 would result in an incremental increase in the local demand for emergency medical services. Medical facilities are available in close proximity to the project site, and TDFPD has adequate staffing and facilities to provide emergency life services to the project site. This impact would be **less than significant**.*

Three major medical facilities exist within 20 miles of the project site (see 4.11.2, Affected Environment, above). These facilities would provide emergency medical services to the 50 new single-family homes constructed under Alternative 1. It is not anticipated that new equipment or new or expanded facilities would be required to accommodate the number of new residents anticipated to reside on the project site under Alternative 1. TDFPD provides emergency life services to the project area and has stated they have adequate staffing and facilities to serve the project area. Because no additional staff, equipment, new facilities, or expansion of existing facilities would be necessary, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

IMPACT 4.11.1-11 **Increased Student Enrollment in Stateline Area Schools.** *Implementation of Alternative 1 would add new students to schools in the project area. The school district has stated that student enrollment for the region has been in a steady decline over the past 10 years. As a result the school district has capacity to accommodate new students generated by the implementation of Alternative 1. This impact would be **less than significant**.*

Implementation of Alternative 1 could add new students to Zephyr Cove Elementary School and Whittel High School. Enrollment at local schools has been steadily declining for the past 10 years. Because of declining enrollment rates, Kingsbury Middle School has a planned closure date of at the conclusion of the 2007/08 school year, prior to occupancy of the Sierra Colina Village project. The Douglas County School District has stated that existing school facilities in the project area could easily accommodate any increase in student population resulting from implementation of Alternative 1 (Luna, pers. comm., 2006). This impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

Alternative 2 – Grand Private Estate

IMPACT 4.11.2-1 **Increased Demand for Water Supply, Treatment, Distribution, and Storage.** *This impact is similar to Impact 4.11.1-1 described above for Alternative 1 except that Alternative 2 would require substantially less water because fewer people would reside on the project site. Implementation of Alternative 2 would result in an increase in water demand but would be easily accommodated with existing supplies and infrastructure. This impact would be **less than significant**.*

This impact is similar to Impact 4.11.1-1 described above for Alternative 1. See full discussion above.

While the demand would be substantially lower than that of Alternative 1, Alternative 2 would also result in an increase in water demand to the project site. KGID has indicated there is adequate water available and water pressure in the existing 10-inch water line located near Lake Village Drive to serve Alternative 2. The project

applicant would be required to pay KGID a water connection fee at the time of issuance of the permit for a water connection. Alternative 2 would not include the LEED water conservation features planned for Alternative 1. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

IMPACT 4.11.2-2 **Increased Demand for Wastewater Service.** *This impact is similar to Impact 4.11.1-2 described above for Alternative 1 except that Alternative 2 would generate substantially less wastewater because fewer people would reside on the project site. Implementation of Alternative 2 would result in an increase in demand for wastewater service but would be easily accommodated with existing conveyance and treatment capacity. This impact would be less than significant.*

This impact is similar to Impact 4.11.1-2 described above for Alternative 1. See full discussion above.

While the demand would be substantially lower than that of Alternative 1, Alternative 2 would also result in an increase in demand for wastewater service. However, as with Alternative 1, no expansion or improvement to the existing DCSID treatment facility would need to be made to accept wastewater from Alternative 2. Alternative 2 would not include the LEED water conservation features planned for Alternative 1. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

IMPACT 4.11.2-3 **Increased Demand for Electrical Services.** *This impact is similar to Impact 4.11.1-3 described above for Alternative 1 except that Alternative 2 would have lower electrical demand because fewer people would reside on the project site. Implementation of Alternative 2 would result in an increase in demand for electrical service but would be easily accommodated with existing supplies and infrastructure. This impact would be less than significant.*

This impact is similar to Impact 4.11.1-3 described above for Alternative 1. See full discussion above.

While the demand would be notably lower than that of Alternative 1, Alternative 2 would also result in an increase in demand for electrical service. However, as with Alternative 1, there would be adequate electrical supply available and SPP has confirmed that it would be able to provide service to the site. Alternative 2 would not include the LEED energy conservation features planned for Alternative 1. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

IMPACT 4.11.2-4 **Increased Demand for Natural Gas Services.** *This impact is similar to Impact 4.11.1-4 described above for Alternative 1 except that Alternative 2 would have a lower demand for natural gas service because fewer people would reside on the project site. Implementation of Alternative 2 would result in an increase in demand for natural gas service but would be easily accommodated with existing supplies and infrastructure. This impact would be less than significant.*

This impact is similar to Impact 4.11.1-4 described above for Alternative 1. See full discussion above.

While the demand would be notably lower than that of Alternative 1, Alternative 2 would also result in an increase in demand for natural gas service. Alternative 2 would not include the LEED energy conservation features planned for Alternative 1. Because there would be adequate supply available and SGC has confirmed that it would be able to provide natural gas services to the site, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

IMPACT 4.11.2-5 **Increased Demand for Solid Waste Services.** *This impact is similar to Impact 4.11.1-5 described above for Alternative 1, except that Alternative 2 would generate substantially less solid waste because fewer people would reside on the project site. This impact would be **less than significant**.*

This impact is similar to Impact 4.11.1-5 described above for Alternative 1. See full discussion above.

The amount of solid waste produced under Alternative 2 would be substantially lower than that of Alternative 1 since Alternative 2 proposes a single-family grand private estate rather than a multi-unit residential development. However, Alternative 2 would also result in an increase in demand for solid waste services. As with Alternative 1, implementation of Alternative 2 would not require additional equipment and staff or facility upgrades to provide solid waste services to the project site. Therefore, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

IMPACT 4.11.2-6 **Increased Demand for Telecommunications Service.** *This impact is similar to Impact 4.11.1-6 described above for Alternative 1, except that Alternative 2 would require less new infrastructure. Implementation of Alternative 2 would result in an increase in demand for telecommunications services but would be easily accommodated by the service provider. This impact would be **less than significant**.*

This impact is similar to Impact 4.11.1-6 described above for Alternative 1. See full discussion above.

While the demand for new infrastructure would be notably lower than that of Alternative 1, Alternative 2 would also result in an increase in demand for telecommunications services. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

IMPACT 4.11.2-7 **Increased Demand for Law Enforcement Services.** *This impact is similar to Impact 4.11.1-7 described above for Alternative 1, except that implementation of Alternative 2 would result in a much smaller increase in the local population. Demand would be easily accommodated by existing law enforcement services. This impact would be **less than significant**.*

This impact is similar to Impact 4.11.1-7 described above for Alternative 1. See full discussion above.

While implementation of Alternative 2 would result in an increase in demand for law enforcement services, the change in the current ratio of officers per residents in Douglas County would be less than that which would occur under Alternative 1 since Alternative 2 proposes a single-family grand private estate rather than a multi-unit residential development. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

IMPACT 4.11.2-8 **Emergency Access During Construction.** *This impact is similar to Impact 4.11.1-8 described above for Alternative 1. Construction activities and construction-related traffic could temporarily interfere with the ability of DCSD and TDFPD to provide emergency services to the project area, particularly to those parcels adjacent to the project site. This impact would be **potentially significant**.*

This impact is similar to Impact 4.11.1-8 described above for Alternative 1. See full discussion above.

Construction of Alternative 2 would occur over a period of two years. Construction activities would be primarily focused on the project site and not on Lake Village Drive. However, transport of construction equipment and/or trenching along Lake Village Drive associated with the extension of utility services (as discussed in this section) could temporarily partially block or slow traffic on Lake Village Drive. Although this would be a temporary construction impact, this impact would be **potentially significant** because it involves protection of public safety.

Mitigation Measure 4.11.2-8. Ensure Emergency Access During Construction. See Mitigation Measure 4.11.1-8 described above for Alternative 1. The same mitigation measure would apply.

Implementation of Mitigation Measure 4.11.2-8 would reduce this impact to **less than significant**.

IMPACT 4.11.2-9 **Increased Demand for Fire Protection.** *This impact is similar to Impact 4.11.1-9 described above for Alternative 1. Implementation of Alternative 2 would result in an incremental increase in the local demand for fire protection. This demand would be substantially less under Alternative 2 because fewer people would reside on the project site. Demand would be easily accommodated by existing fire protection services. This impact would be **less than significant**.*

This impact is similar to Impact 4.11.1-9 described above for Alternative 1. See full discussion above.

While implementation of Alternative 2 would result in an increase in demand for fire protection services, the increase in demand for these services would be less than that which would occur under Alternative 1 since Alternative 2 proposes a single-family grand private estate rather than a multi- unit residential development. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

IMPACT 4.11.2-10 **Increased Demand for Emergency Medical Services.** *This impact is similar to Impact 4.11.1-10 described above for Alternative 1. Implementation of Alternative 2 would result in an incremental increase in the local demand for emergency medical service. This demand would be substantially less under Alternative 2 because fewer people would reside on the project. Implementation of Alternative 2 would result in an incremental increase in the local demand for emergency medical services but would be easily accommodated by existing service providers. This impact would be **less than significant**.*

This impact is similar to Impact 4.11.1-10 described above for Alternative 1. See full discussion above.

While implementation of Alternative 2 would result in an increase in demand for emergency medical services, the increase in demand for these services would be less than that which would occur under Alternative 1 since

Alternative 2 proposes a single-family grand private estate rather than a multi- unit residential development. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

IMPACT 4.11.2-11 **Increased Student Enrollment in Stateline Area Schools.** *Implementation of Alternative 2 would result in the construction of a single-family grand estate, and is not anticipated to substantially increase student enrollment at schools within the project area. This impact would be less than significant.*

Implementation of Alternative 2 could result in an increase in student enrollment in local area schools (including school-age children that may reside on the site). Douglas County School District could easily accommodate any increase in student population resulting from Alternative 2. (See full discussion above under Impact 4.11.1-11.)

Mitigation Measures

No mitigation is required.

Alternative 3 – Reduced Density Alternative

IMPACT 4.11.3-1 **Increased Demand for Water Supply, Treatment, Distribution, and Storage.** *This impact is essentially the same as Impact 4.11.1-1 described above for Alternative 1. Implementation of Alternative 3 would result in increased water demand but would be accommodated with existing supplies and infrastructure. This impact would be less than significant.*

This impact is essentially the same as Impact 4.11.1-1 described above for Alternative 1. See full discussion above.

Alternative 3 would result in an increase in water demand to the project site. This demand would be slightly less than that anticipated under Alternative 1 due to the reduced number of units that would be constructed under Alternative 3. KGID has confirmed that the existing water supply, treatment facilities, distribution system and storage facilities are adequate to serve Alternative 3 (Rohr, pers. comm., 2006). The energy savings and conservation benefits of the homes being built to obtain LEED Certification as discussed under Alternative 1 would be equally applicable to Alternative 3. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

IMPACT 4.11.3-2 **Increased Demand for Wastewater Service.** *This impact is essentially the same as Impact 4.11.1-2 described above for Alternative 1 except that Alternative 3 would generate less wastewater because fewer people would reside on the project site. Implementation of Alternative 3 would result in an increase in demand for wastewater service but would be accommodated with existing conveyance and treatment capacity. This impact would be less than significant.*

This impact is essentially the same as Impact 4.11.1-2 described above for Alternative 1. See full discussion above.

While the demand would be lower than that of Alternative 1, Alternative 3 would also result in an increase in demand for wastewater service. As with Alternative 1, no expansion or improvement to the existing DCSID

treatment facility would need to be made to accept wastewater from Alternative 3. The energy savings and conservation benefits of the homes being built to obtain LEED Certification as discussed under Alternative 1 would be equally applicable to Alternative 3. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

IMPACT 4.11.3-3 **Increased Demand for Electrical Services.** *This impact is essentially the same as Impact 4.11.1-3 described above for Alternative 1. Implementation of Alternative 3 would result in an increase in demand for electrical service but would be accommodated with existing supplies and infrastructure. This impact would be less than significant.*

This impact is essentially the same as Impact 4.11.1-3 described above for Alternative 1. See full discussion above.

While the demand would be lower than that of Alternative 1, Alternative 3 would also result in an increase in demand for electrical service. However, as with Alternative 1, there would be adequate electrical supply available and SPP has confirmed that it would be able to provide service to the site. The energy savings and conservation benefits of the homes being built to obtain LEED Certification as discussed under Alternative 1 would be equally applicable to Alternative 3. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

IMPACT 4.11.3-4 **Increased Demand for Natural Gas Services.** *This impact is essentially the same as Impact 4.11.1-4 described above for Alternative 1. Implementation of Alternative 3 would result in an increase in demand for natural gas service but would be accommodated with existing supplies and infrastructure. Therefore, this impact would be less than significant.*

This impact is essentially the same as Impact 4.11.1-4 described above for Alternative 1. See full discussion above.

While the demand would be lower than that of Alternative 1, Alternative 3 would also result in an increase in demand for natural gas service. Because there would be adequate supply available and SGC has confirmed that it would be able to provide natural gas services to the site. The energy savings and conservation benefits of the homes being built to obtain LEED Certification as discussed under Alternative 1 would be equally applicable to Alternative 3. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

IMPACT 4.11.3-5 **Increased Demand for Solid Waste Services.** *This impact is essentially the same as Impact 4.11.1-5 described above for Alternative 1 except that Alternative 3 would generate less solid waste because fewer people would reside on the project site. Adequate collection and disposal capacity exists to accommodate Alternative 3. This impact would be less than significant.*

This impact is essentially the same as Impact 4.11.1-5 described above for Alternative 1. See full discussion above.

The amount of solid waste produced under Alternative 3 (approximately 365 pound per day, 133,043 pounds of solid waste annually) would be lower than that of Alternative 1 due to the reduced number of units that would be constructed under Alternative 3. However, Alternative 3 would still result in an increase in demand for solid waste services. As with Alternative 1, implementation of Alternative 3 would not require additional equipment and staff or facility upgrades to provide solid waste services to the project site.

Therefore, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

IMPACT 4.11.3-6 **Increased Demand for Telecommunications Service.** *This impact is essentially the same as Impact 4.11.1-6 described above for Alternative 1, except that Alternative 3 would require less new infrastructure. Implementation of Alternative 3 would result in an increase in demand for telecommunications services but would be accommodated by the service provider. This impact would be **less than significant**.*

This impact is essentially the same as Impact 4.11.1-6 described above for Alternative 1. See full discussion above.

While the demand for new infrastructure would be notably lower than that of Alternative 1, Alternative 3 would also result in an increase in demand for telecommunications services. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

IMPACT 4.11.3-7 **Increased Demand for Law Enforcement Services.** *This impact is essentially the same as Impact 4.11.1-7 described above for Alternative 1, except that under Alternative 3 fewer people would reside on the project site and therefore this Alternative would contribute less to an increase in the local population. Demand would be accommodated by existing law enforcement services. This impact would be **less than significant**.*

This impact is essentially the same as Impact 4.11.1-7 described above for Alternative 1. See full discussion above.

While implementation of Alternative 3 would result in an increase in demand for law enforcement services, the change in the current ratio of officers per residents in Douglas County would be less than that which would occur under Alternative 1 because Alternative 3 proposes fewer units and therefore would result in fewer new residents to the project area^c. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

IMPACT 4.11.3-8 **Emergency Access During Construction.** *This impact is essentially the same as Impact 4.11.1-8 described above for Alternative 1. Construction activities and construction-related traffic could temporarily interfere with the ability of DCSD and TDFPD to provide emergency services to the project area, particularly to those parcels adjacent to the project site. This impact would be **potentially significant**.*

^c See Section 4.10, *Population and Housing*, of this document for population projections calculations.

This impact is essentially the same as Impact 4.11.1-8 described above for Alternative 1. See full discussion above.

Construction of Alternative 3 would occur over a period of three years. Transport of construction equipment and/or trenching along Lake Village Drive associated with the extension of site services could temporarily partially block or slow traffic on Lake Village Drive. Although this would be a temporary construction impact, this impact would be **potentially significant** because it involves protection of public safety.

Mitigation Measure 4.11.3-8. Ensure Emergency Access During Construction. See Mitigation Measure 4.11.1-8 described above for Alternative 1. The same mitigation measure would apply.

Implementation of Mitigation Measure 4.11.3-8 would reduce this impact to a **less-than-significant** level.

IMPACT 4.11.3-9 **Increased Demand for Fire Protection.** *This impact is essentially the same as Impact 4.11.1-9 described above for Alternative 1. Implementation of Alternative 3 would result in an incremental increase in the local demand for fire protection. Demand would be accommodated by existing fire protection services. This impact would be less than significant.*

This impact is essentially the same as Impact 4.11.1-9 described above for Alternative 1. See full discussion above.

While implementation of Alternative 3 would result in an increase in demand for fire protection services, the increase in demand for these services would be less than that which would occur under Alternative 1 because Alternative 3 proposes fewer units and therefore would result in fewer new residents to the project area. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

IMPACT 4.11.3-10 **Increased Demand for Emergency Medical Services.** *This impact is essentially the same as Impact 4.11.1-10 described above for Alternative 1. Implementation of Alternative 3 would result in an incremental increase in the local demand for emergency medical services but would be accommodated by existing service providers. This impact would be less than significant.*

This impact is essentially the same as Impact 4.11.1-10 described above for Alternative 1. See full discussion above.

While implementation of Alternative 3 would result in an increase in demand for emergency medical services, the increase in demand for these services would be less than that which would occur under Alternative 1 because Alternative 3 proposes fewer units and therefore would result in fewer new residents to the project area. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

IMPACT 4.11.3-11 **Increased Student Enrollment in Stateline Area Schools.** *This impact is essentially the same as Impact 4.11.1-11 described above for Alternative 1. Implementation of Alternative 3 could increase student enrollment at schools in the project area and schools have adequate capacity to accommodate the projected increase. This impact would be less than significant.*

This impact is essentially the same as Impact 4.11.1-11 described above for Alternative 1. See full discussion above.

Implementation of Alternative 3 would result in an increase in student enrollment in local area schools. Douglas County School District has stated that existing school facilities in the project area could easily accommodate any increase in student population resulting from implementation of Alternative 1. Because fewer students would be generated under Alternative 3, adequate capacity exists to accommodate any increase in student enrollment that would occur under this alternative. (See full discussion above under Impact 4.11.1-11.)

Mitigation Measures

No mitigation is required.

Alternative 4 – Increased Density Alternative

IMPACT 4.11.4-1 **Increased Demand for Water Supply, Treatment, Distribution, and Storage.** *This impact is essentially the same as Impact 4.11.1-1 described above for Alternative 1. Implementation of Alternative 4 would result in increased water demand but would be accommodated with existing supplies and infrastructure. This impact would be less than significant.*

This impact is essentially the same as Impact 4.11.1-1 described above for Alternative 1. See full discussion above.

Alternative 4 would result in an increase in water demand to the project site. This demand may be slightly greater than that anticipated under Alternative 1 due to the four additional units that would be constructed under Alternative 4. KGID has confirmed that the existing water supply, treatment facilities, distribution system and storage facilities are adequate to serve Alternative 4 (Rohr, pers. comm., 2006). The energy savings and conservation benefits of the homes being built to obtain LEED Certification as discussed under Alternative 1 would be equally applicable to Alternative 4. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

IMPACT 4.11.4-2 **Increased Demand for Wastewater Service.** *This impact is essentially the same as Impact 4.11.1-2 described above for Alternative 1 except that Alternative 4 would generate slightly more wastewater because more people would reside on the project site. Implementation of Alternative 4 would result in an increase in demand for wastewater service but would be accommodated with existing conveyance and treatment capacity. This impact would be less than significant.*

This impact is essentially the same as Impact 4.11.1-2 described above for Alternative 1. See full discussion above.

Alternative 4 would result in an increase in demand for wastewater service. This demand may be slightly greater than that anticipated under Alternative 1 due to the four additional units that would be constructed under Alternative 4. However, as with Alternative 1, no expansion or improvement to the existing DCSID treatment

facility would need to be made to accept wastewater from Alternative 4. The energy savings and conservation benefits of the homes being built to obtain LEED Certification as discussed under Alternative 1 would be equally applicable to Alternative 4. Therefore, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

IMPACT 4.11.4-3 **Increased Demand for Electrical Services.** *This impact is essentially the same as Impact 4.11.1-3 described above for Alternative 1. Implementation of Alternative 4 would result in an increase in demand for electrical service but would be accommodated with existing supplies and infrastructure. This impact would be less than significant.*

This impact is essentially the same as Impact 4.11.1-3 described above for Alternative 1. See full discussion above.

Alternative 4 would result in an increase in demand for electrical service. This demand may be slightly greater than that anticipated under Alternative 1 due to the four additional units that would be constructed under Alternative 4. However, as with Alternative 1, there would be adequate electrical supply available and SPP has confirmed that it would be able to provide service to the site. The energy savings and conservation benefits of the homes being built to obtain LEED Certification as discussed under Alternative 1 would be equally applicable to Alternative 4. Therefore, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

IMPACT 4.11.4-4 **Increased Demand for Natural Gas Services.** *This impact is essentially the same as Impact 4.11.1-4 described above for Alternative 1. Implementation of Alternative 4 would result in an increase in demand for natural gas service but would be accommodated with existing supplies and infrastructure. Therefore, this impact would be less than significant.*

This impact is essentially the same as Impact 4.11.1-4 described above for Alternative 1. See full discussion above.

Alternative 4 would result in an increase in demand for natural gas service. This demand may be slightly greater than that anticipated under Alternative 1 due to the four additional units that would be constructed under Alternative 4. Because there would be adequate supply available, SGC has confirmed that it would be able to provide natural gas services to the site. The energy savings and conservation benefits of the homes being built to obtain LEED Certification as discussed under Alternative 1 would be equally applicable to Alternative 4. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

IMPACT 4.11.4-5 **Increased Demand for Solid Waste Services.** *This impact is essentially the same as Impact 4.11.1-5 described above for Alternative 1 except that Alternative 4 would generate slightly more solid waste because more people would reside on the project site. Adequate collection and disposal capacity exists to accommodate Alternative 4. This impact would be less than significant.*

This impact is essentially the same as Impact 4.11.1-5 described above for Alternative 1. See full discussion above.

The amount of solid waste produced under Alternative 4 (approximately 535 pounds per day, 195,458 pounds of solid waste annually) would be more than that of Alternative 1 due to the four additional units that would be constructed under Alternative 4. However, as with Alternative 1, implementation of Alternative 4 would not require additional equipment and staff or facility upgrades to provide solid waste services to the project site. Therefore, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

IMPACT 4.11.4-6 **Increased Demand for Telecommunications Service.** *This impact is essentially the same as Impact 4.11.1-6 described above for Alternative 1, except that Alternative 4 could require slightly more new infrastructure. Implementation of Alternative 4 would result in an increase in demand for telecommunications services but would be accommodated by the service provider. This impact would be less than significant.*

This impact is essentially the same as Impact 4.11.1-6 described above for Alternative 1. See full discussion above.

Alternative 4 would result in an increase in demand for telecommunications services. This demand may be slightly greater than that expected under Alternative 1 due to Alternative 4 having 4 more homes. However, Verizon has indicated that it would provide telecommunications services to Alternative 4 (Fesler, pers. comm., 2006). This impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

IMPACT 4.11.4-7 **Increased Demand for Law Enforcement Services.** *This impact is essentially the same as Impact 4.11.1-7 described above for Alternative 1, except that implementation of Alternative 4 would result in a slightly greater increase in the local population. Demand would be accommodated by existing law enforcement services. This impact would be less than significant.*

This impact is essentially the same as Impact 4.11.1-7 described above for Alternative 1. See full discussion above.

Alternative 4 would result in an increase in demand for law enforcement services. While this increase would be slightly greater than that which would occur under Alternative 1 because approximately ten more people would reside on the project site, the change in the officer per civilian ratio would be small and would not require the construction of new facilities or the addition of personnel. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

IMPACT 4.11.4-8 **Emergency Access During Construction.** *This impact is essentially the same as Impact 4.11.1-8 described above for Alternative 1. Construction activities and construction-related traffic could temporarily interfere with the ability of DCSD and TDFPD to provide emergency services to the project area, particularly to those parcels adjacent to the project site. This impact would be **potentially significant**.*

This impact is essentially the same as Impact 4.11.1-8 described above for Alternative 1. See full discussion above.

Construction of Alternative 4 would occur over a period of three years. Construction activities would be primarily focused on the project site as opposed to on Lake Village Drive. However, transport of construction equipment and/or trenching along Lake Village Drive associated with the extension of utility services (as discussed in this section) could temporarily partially block or slow traffic on Lake Village Drive. Although this would be a temporary construction impact, this impact would be **potentially significant** because it involves protection of public safety.

Mitigation Measure 4.11.4-8: Ensure Emergency Access During Construction. See Mitigation Measure 4.11.1-8 described above for Alternative 1. The same mitigation measure would apply.

Implementation of Mitigation Measure 4.11.4-8 would reduce this impact to a **less-than-significant** level.

IMPACT 4.11.4-9 **Increased Demand for Fire Protection.** *This impact is essentially the same as Impact 4.11.1-9 described above for Alternative 1. Implementation of Alternative 4 would result in an incremental increase in the local demand for fire protection. Demand would be accommodated by existing fire protection services. This impact would be **less than significant**.*

This impact is essentially the same as Impact 4.11.1-9 described above for Alternative 1. See full discussion above.

Alternative 4 would result in an increase in demand for fire protection services. While this increase would be slightly greater than that which would occur under Alternative 1 because approximately ten more people would reside on the project site, TDFPD has stated that current staffing and equipment is sufficient to address the increased demand on fire protection associated with development of Alternative 4. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

IMPACT 4.11.4-10 **Increased Demand for Emergency Medical Services.** *This impact is essentially the same as Impact 4.11.1-10 described above for Alternative 1. Implementation of Alternative 4 would result in an incremental increase in the local demand for emergency medical services but would be accommodated by existing service providers. This impact would be **less than significant**.*

This impact is essentially the same as Impact 4.11.1-10 described above for Alternative 1. See full discussion above.

Alternative 4 would result in an increase in demand for emergency medical services. This increase would be slightly greater than that which would occur under Alternative 1 because approximately ten more people would reside on the project site. However, it is not expected that new equipment or new or expanded facilities would be required to accommodate the number of new residents anticipated to reside on the project site under Alternative 4. TDFPD provides emergency life services to the project area and has stated they have adequate staffing and

facilities to serve the project area. Because no additional staff, equipment, new facilities, or expansion of existing facilities would be necessary, this impact would be **less than significant**

Mitigation Measures

No mitigation is required.

IMPACT 4.11.4-11 **Increased Student Enrollment in Stateline Area Schools.** *This impact is essentially the same as Impact 4.11.1-11 described above for Alternative 1. Implementation of Alternative 4 could increase student enrollment at schools in the project area and schools have adequate capacity to accommodate the projected increase. This impact would be **less than significant**.*

Implementation of Alternative 4 would result in an increase in student enrollment in local area schools. Douglas County School District has stated that existing school facilities in the project area could easily accommodate any increase in student population resulting from implementation of Alternative 1. Therefore, it is reasonable to assume that local schools could accommodate any increase in student enrollment that would occur as a result of implementing Alternative 4 since the number of total new residents to the area under Alternative 4 would be just slightly greater than under Alternative 1. (See full discussion above under Impact 4.11.1-11.)

Mitigation Measures

No mitigation is required.

Alternative 5 – No Project

Under Alternative 5, there would be no changes to existing conditions on the project site. Since no development would occur on the project site and no new residents would be added to the area, there would be no increase in demand for public services and utilities. Therefore, Alternative 5 would result in no impacts to public services or utilities.