



5.5 Traffic and Circulation

5.5 TRAFFIC AND CIRCULATION

This section is based upon the *Mammoth Community and Multi-Use Facilities Focused Traffic Impact Analysis* (Traffic Impact Analysis), dated July 29, 2016, prepared by LSC Transportation Consultants, Inc.; refer to [Appendix 11.4, *Traffic Impact Analysis*](#). The purpose of the Traffic Impact Analysis is to evaluate development of the proposed project from a traffic and circulation standpoint. Mitigation measures are recommended, if necessary, to avoid or reduce project impacts on traffic and circulation.

The Traffic Impact Analysis analyzes existing and future weekday daily peak hour traffic conditions for the following conditions:

- Existing conditions;
- Existing with project conditions;
- Future without project conditions; and
- Future with project conditions.

5.5.1 EXISTING SETTING

STUDY AREA

Study Intersections

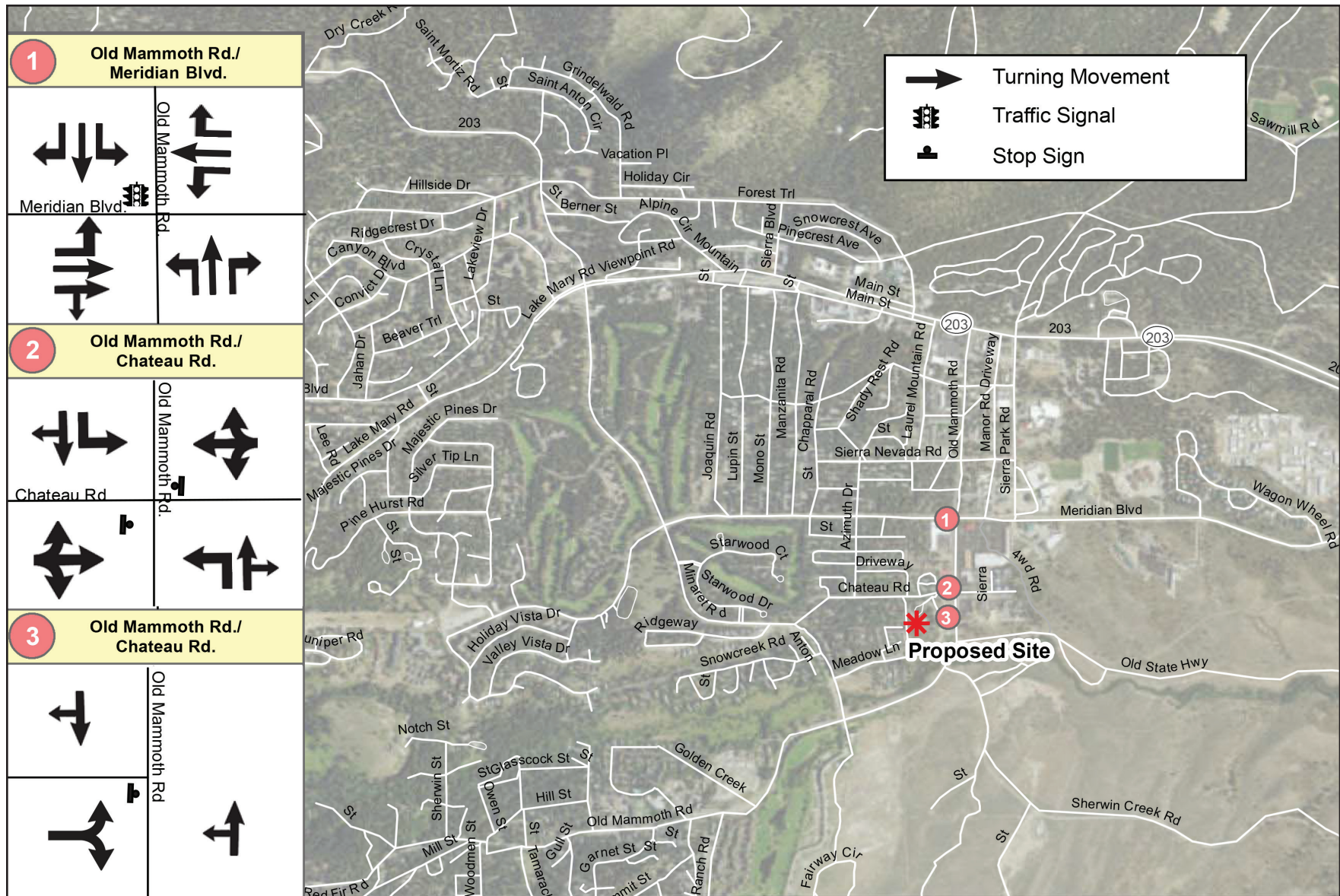
Exhibit 5.5-1, *Location and Intersection Configuration of Study Intersections*, presents the site location, lane configuration, and intersection control devices for the following three study intersections located in the vicinity.

- Old Mammoth Road/Meridian Boulevard;
- Old Mammoth Road/Chateau Road; and
- Old Mammoth Road/Mammoth Creek Park West Site Access.

ANALYSIS METHODOLOGY

Year 2015 turning movement volumes were developed as part of the recent Mammoth Lakes Mobility Element EIR for all study intersections except the Mammoth Creek Park West Site Access along Old Mammoth Road. These volumes were increased by a one percent average annual growth rate, based on California Department of Transportation (Caltrans) traffic volumes in the Town of Mammoth Lakes, to estimate existing year “no project” traffic volumes. Even though the existing park is closed in the winter, eight existing vehicle trips are estimated to be generated (with four entering and four exiting the site) in the existing winter p.m. peak hour. Considering that a minimal amount of traffic uses the plowed parking lot and playground (in low snow years) or the park for snow play.

The Town of Mammoth Lakes Travel Demand Model was recently updated as part of the Mammoth Mobility Element EIR. During this process several model alternatives were developed. Town staff have directed that the “future model with new floor area ratio (FAR) and with the new Mobility Element” version should be used for purposes of this analysis.



Source: LSC Transportation Consultants, Inc., Mammoth Community and Multi-Use Facilities Focused Traffic Impact Analysis, dated July 29, 2016.

NOT TO SCALE

Michael Baker
INTERNATIONAL



12/16 • JN 151373

Location and Intersection Configuration of Study Intersections

ENVIRONMENTAL IMPACT REPORT
MAMMOTH CREEK PARK WEST
NEW COMMUNITY MULTI-USE FACILITIES

Exhibit 5.5-1

The Mammoth Creek Park West site is in the Mammoth Lakes Travel Model as Traffic Analysis Zone (TAZ) 140. The existing model land uses in TAZ 140 are 12 acres of Public Utilities, which remains the same in the future model. In other words, the model estimates no additional land uses would be constructed in this area. Therefore, the proposed project would be above and beyond the future model's estimation.

Future turning movement volumes were pulled from the Mammoth Lakes Travel Model for all study intersections with the exception of the site access driveway, as this intersection is not represented in the model. Future volumes entering and exiting the proposed site would remain unchanged in the future without project scenario.

The following potential areas of transportation impacts are considered in the Traffic Impact Analysis including intersection level of service, the need for turn lanes, signals, or roundabouts, and vehicle miles traveled, refer to [Appendix 11.4](#).

LEVEL OF SERVICE METHODOLOGY AND PERFORMANCE CRITERIA

Level of service (LOS) is commonly used as a qualitative description of intersection operation and is based on the type of traffic control and delay experienced at the intersection. Intersection LOS was evaluated using Synchro software (Version 8.0, Trafficware 2013) based on the 2010 HCM methodologies at all study intersections. All LOS calculations are presented in Appendix A of [Appendix 11.4](#). The 2010 Highway Capacity Manual (HCM) analysis methodology describes the operation of an intersection using a range of LOS from LOS A (free-flow conditions) to LOS F (severely congested conditions); refer to [Table 5.5-1, LOS and Delay Ranges](#). Roadway operations and the relationship between capacity and traffic volumes are generally expressed in terms of LOS. These levels recognize that, while an absolute limit exists regarding the amount of traffic traveling through a given intersection (the absolute capacity), the conditions that motorists experience rapidly deteriorates as traffic approaches the absolute capacity. Under such conditions, congestion is experienced. There is general instability in the traffic flow, which means that relatively small incidents (e.g., momentary engine stalls) can cause considerable fluctuations in speeds and delays. This near-capacity situation is labeled LOS E. Beyond LOS E, capacity has been exceeded, and arriving traffic would exceed the ability of the intersection to accommodate it. An upstream queue would then form and continue to expand in length until the demand volume again declines.

The General Plan presents the following LOS thresholds:

- *For Signalized Intersections:* Total intersection LOS D or better must be maintained. Therefore, if a signalized intersection is found to operate at a total intersection LOS E or F, mitigation is required. It is assumed that this same threshold applies to roundabouts.

**Table 5.5-1
LOS and Delay Ranges**

Level of Service	Description	Signalized Intersections	Unsignalized Intersections
		Delay (seconds)	Delay (seconds)
A	LOS A represents free flow. Individual users are virtually unaffected by the presence of others in the traffic stream. Freedom to select desired speeds and to maneuver within the traffic stream is extremely high. The general level of comfort and convenience provided to the motorist, passenger, or pedestrian is excellent.	≤ 10.0	≤ 10.0
B	LOS B is in the range of stable flow, but the presence of other users in the traffic stream begins to be noticeable. Freedom to select desired speeds is relatively unaffected, but there is a slight decline in the freedom to maneuver within the traffic stream from LOS A. The level of comfort and convenience provided is somewhat less than at LOS A, because the presence of others in the traffic stream begins to affect individual behavior.	> 10.0 and ≤ 20.0	> 10.0 and ≤ 15.0
C	LOS C is in the range of stable flow, but marks the beginning of the range of flow in which the operation of individual users becomes significantly affected by interactions with others in the traffic stream. The selection of speed is now affected by the presence of others, and maneuvering within the traffic stream requires substantial vigilance on the part of the user. The general level of comfort and convenience declines noticeably at this level.	> 20.0 and ≤ 35.0	> 15.0 and ≤ 25.0
D	LOS D represents high-density, but stable, flow. Speed and freedom to maneuver are severely restricted, and the driver or pedestrian experiences a generally poor level of comfort and convenience. Small increases in traffic flow will generally cause operational problems at this level.	> 35.0 and ≤ 55.0	> 25.0 and ≤ 35.0
E	LOS E represents operating conditions at or near the capacity level. All speeds are reduced to a low, but relatively uniform value. Freedom to maneuver within the traffic stream is extremely difficult, and it is generally accomplished by forcing a vehicle or pedestrian to “give way” to accommodate such maneuvers. Comfort and convenience levels are extremely poor, and driver or pedestrian frustration is generally high. Operations at this level are usually unstable, because small increases in flow or minor perturbations within the traffic stream will cause breakdowns.	> 55.0 and ≤ 80.0	> 35.0 and ≤ 50.0
F	LOS F is used to define forced or breakdown flow. This condition exists wherever the amount of traffic approaching a point exceeds the amount which can traverse the point. Queues form behind such locations. Operations within the queue are characterized by stop-and-go waves, and they are extremely unstable. Vehicles may progress at reasonable speeds for several hundred feet or more, then be required to stop in a cyclic fashion. LOS F is used to describe the operating conditions within the queue, as well as the point of the breakdown. It should be noted, however, that in many cases operating conditions of vehicles or pedestrians discharged from the queue may be quite good. Nevertheless, it is the point at which arrival flow exceeds discharge flow which causes the queue to form, and LOS F is an appropriate designation for such points.	> 80.0	> 50.0

Source: Town of Mammoth Lakes, *Final Program Environmental Impact Report for the Town of Mammoth Lakes 2005 General Plan Update*, dated May 2007 and LSC Transportation Consultants, Inc., *Mammoth Community and Multi-Use Facilities Focused Traffic Impact Analysis*, dated July 29, 2016; included as [Appendix 11.4, Traffic Impact Analysis](#).

- For Unsignalized Intersections: In order to avoid the identification of a LOS failure for intersections that result in only a few vehicles experiencing a delay greater than 50 seconds (such as at a driveway serving a few homes that accesses onto a busy street), a LOS deficiency is not identified for all intersections with approach LOS E or F. Instead, a LOS deficiency is assumed to occur at an unsignalized intersection only if an individual minor street movement operates at LOS E or F and total minor approach delay exceeds four vehicle hours for a single lane approach and five vehicle hours for a multi-lane approach. A deficiency is found to occur if the average number of vehicles queued over the peak-hour exceeds four at a single-lane approach, or exceeds five at a multi-lane approach.

EXISTING (WINTER) CONDITIONS

Intersection Levels of Service

Table 5.5-2, *Existing Peak Hour Intersection Levels of Service*, summarizes the existing peak hour LOS for the study intersections.

**Table 5.5-2
Existing Peak Hour Intersection Levels of Service**

Study Intersection		Traffic Control ¹	Delay (sec/veh)	LOS
1	Old Mammoth Road/Meridian Boulevard	Traffic Signal	30.6	C
2	Old Mammoth Road/Chateau Road	Stop-Control	20.1	C
3	Old Mammoth Road/Site Access Road	Stop-Control	11.6	B
LOS = level of service; sec = seconds; veh = vehicles.				
Notes:				
1. LOS is reported as total intersection delay for signalized intersection and worst movement/approach for unsignalized intersections and roundabouts.				
Source: LSC Transportation Consultants, Inc., <i>Mammoth Community and Multi-Use Facilities Focused Traffic Impact Analysis</i> , dated July 29, 2016; included as Appendix 11.4, <i>Traffic Impact Analysis</i> .				

As indicated in Table 5.5-2, all study intersections are currently operating at an acceptable LOS (LOS D or better) during the peak hours based on the Town's LOS standards.

EXISTING TRANSIT SERVICE

The project area is primarily served by bus transit lines operated by Eastern Sierra Transit Authority (ESTA) and the Town's intra-city shuttle/trolley service. The ESTA operates both regional and local bus lines that serve the Town, including inter-city service along Highway 395 and the Town's intra-city shuttle/trolley service. Other key transit providers in the area are the Mammoth Mountain Ski Area (MMSA), who contracts with ESTA to provide access between the Town and their ski area portals, and the Yosemite Area Regional Transportation System (YARTS), which provides summer shuttle service between the Town and Yosemite National Park.

The Town's fixed route service is fare-free. The routes that provide service to the project area have a stop along Old Mammoth Road, at Chateau Road, north of the project site. Routes serving the project area include the Gray Line and the Town Trolley.

EXISTING PEDESTRIAN AND BICYCLE FACILITIES

The project site is currently occupied by Mammoth Creek Park West and includes trail connections and biking via the Town Loop trail to the east and south of the project site.¹ According to Map 2-2, *Existing Summer Recreation Nodes and Facilities (UGB & Beyond)*, of the *Town of Mammoth Lakes Trail System Master Plan* (Trail System Master Plan), adopted October 19, 2011, existing Class I Paved Multi-Use Paths are located along Old Mammoth Road and Mammoth Creek Road, adjacent to the project site. A multi-use path provides for bicycle and pedestrian travel on a paved right-of-way completely separated from any street or highway.

5.5.2 REGULATORY SETTING

STATE LEVEL

California Department of Transportation

Caltrans publishes a document entitled *Guide for the Preparation of Traffic Impact Studies* (Guide), which provides guidelines and recommended elements of traffic studies for projects that could potentially impact state facilities such as State Route highways and freeway facilities. This is a State-level document that is used by each of the Caltrans District offices.

The Guide defines when traffic studies should be conducted to address impacts to state facilities, but does not define quantitative impact standards. The Guide states that Measures of Effectiveness (MOEs) are used to evaluate Caltrans facilities, and that the agency strives to maintain a LOS value of C on its facilities. However, the Guide states that the appropriate target LOS varies by facility and congestion level, and is defined differently by Caltrans depending on the analyzed facility.

LOCAL LEVEL

Town of Mammoth Lakes General Plan

The Mobility Element of the General Plan describes how the Town achieves a progressive and integrated multi-modal transportation system that serves the various needs of residents, employees, and visitors. The Element focuses on the Town being connected, accessible, uncongested, and safe with emphasis on feet first, public transportation second, and car last, and identifies measures to improve mobility throughout.

¹ Mammoth Lakes Trail System, *Mammoth Creek Park*, <http://www.mammothtrails.org/destination/17/mammoth-creek-park/>, accessed August 10, 2016.

Mobility Element policies that pertain to the proposed project include, but are not limited to, the following:

- Maintain and expand access to recreation areas via coordinated system of shuttle and bus services, scenic routes, trails and highways (Policy M.2.A).
- Maintain a Level of Service D or better on the Peak Design Day at intersections along arterial and collector roads (Policy M.3.A).
- Reduce automobile trips by promoting and facilitating:
 - Walking;
 - Bicycling;
 - Local and regional transit;
 - Innovative parking management;
 - Gondolas and trams;
 - Employer-based trip reduction programs;
 - Alternate work schedules;
 - Telecommuting;
 - Ride-share programs; and
 - Cross-country skiing and snowshoeing (Policy M.3.B).
- Reduce automobile trips by promoting land use and transportation strategies such as: implementation of compact pedestrian oriented development; clustered and infill development; mixed uses and neighborhood serving commercial mixed use centers (Policy M.3.C).
- Require development to implement Transportation Demand Management (TDM) measures (Policy M.3.E).
- Construction activities shall be planned, scheduled and conducted to minimize the severity and duration of traffic impediments (Policy M.3.G).
- Improve safety of sidewalks, trails and streets (Policy M.4.A).
- Provide a high quality pedestrian system linked throughout the community with year-round access (Policy M.4.B).
- Design streets, sidewalks and trails to ensure public safety such as:
 - Adequate dimensions and separation;
 - Glare-free lighting at intersections;
 - Directional and informational signage;
 - Trash receptacles;
 - Benches;

- Shuttle shelters;
 - Protected roadway crossings;
 - Landscaping;
 - Groomed community trails; and
 - Snow removed from sidewalks (Policy M.4.C).
- Provide safe travel for pedestrians to schools and parks (Policy M.4.D).
- Development shall improve existing conditions to meet Town standards (Policy M.4.E).
- Encourage transit use by requiring development and facility improvements to incorporate features such as shelters, safe routes to transit stops, and year-round access (Policy M.5.B).
- Develop efficient and flexible parking strategies to reduce the amount of land devoted to parking (Policy M.6.A).
- Support development of strategically located public parking facilities (Policy M.6.B).
- Require all development to construct improvements and/or pay traffic impact fees to adequately mitigate identified impacts. Mitigation of significant project-related impacts may require improvements beyond those addressed by the current Capital Improvement Program and Town of Mammoth Lakes Air Quality Management Plan and Particulate Emissions Regulations (Policy M.7.E).

The Parks, Open Space, and Recreation Element of the General Plan outlines goals and policies which emphasize a wide variety of outdoor winter and summer activities.

Parks, Open Space, and Recreation Element policies that pertain to the proposed project include, but are not limited to, the following:

- Continue to maintain and upgrade existing parks and recreation facilities, and develop a plan to retrofit existing parks and design all new facilities to ADA standards, to provide for accessibility and enjoyment by physically impaired citizens (Policy P.1.B).
- Upgrade parks and recreation facilities to promote resource efficiency and cost effective maintenance practices (Policy P.1.C).
- Increase understanding and appreciation of the cultural, natural and historical resources of the region and town through development of programs, facilities and interpretive signage (Policy P.2.D).
- Promote Mammoth Lakes' quality of life with parkland and recreation facility acquisition and development at or above the level of service standards recommended in the Parks and Recreation Master Plan (Policy P.2.F).

- Provide parks and recreation facilities in a timely manner with existing and planned development (Policy P.2.G).
- Design and build parks and recreation facilities to ensure compatibility with the surrounding neighborhood and natural environment (Policy P.2.J).
- Assure that new parks and recreation facilities comply with ADA standards and, for safe use and enjoyment by physically impaired citizens (Policy P.2.K).
- Develop parks and recreation facilities to facilitate efficient and cost-effective maintenance practices, and to conserve water, energy, and other resources (Policy P.2.L).
- Ensure public routes for access to public lands are provided in all developments adjacent to National Forest lands (Policy P.3.A).
- Support the construction of trails to provide public access from Town to public lands (Policy P.3.D).
- Provide an affordable and wide range of year-round recreational opportunities to foster a healthy community for residents and visitors. Activities include but are not limited to:² (Policy P.4.B).
- Acquire, construct, or upgrade indoor recreation facilities to accommodate desired indoor recreation activities and leisure programs (Policy P.4.G).
- Provide recreation facilities, programs, and classes that are available to all citizens, including people of all ages, abilities, ethnic background, and income levels. Keep programs affordable, and develop program packages for those with more moderate incomes (including seasonal workers) (Policy P.4.H).
- Provide parks and recreation facilities that are accessible by a variety of mobility linkages:
 - i. Public pedestrian access to private development projects.
 - ii. Transit stops within private development projects (private or public roads).
 - iii. Public opportunities for parking to access public lands (including ADA parking) (Policy P.4.I).
- Create open space corridors by combining open space on neighboring properties (Policy P.5.A).
- Design and construct trails as components of a regional and local network for recreation and commuting (Policy P.5.B).
- Require development to incorporate linked public trail corridors identified in the Mammoth Lakes Trail System Plan into overall project site plan (Policy P.5.C).

² P.4.B. Policy lists 29 activities.

- Design parks and open space to be accessible and usable except when set aside for preservation of natural resources, health and safety (Policy P.5.E).
- Identify, zone and procure land for new and expanded parklands including:³
 - Develop an integrated trail system in cooperation with federal agencies and consistent with the Town's General Plan (Mobility Element), by updating the General Bikeway Plan and Trail System Plan (Policy P.5.I).
 - The trail system should accommodate winter and summer use by a variety of users, including pedestrians, bicyclists, and Nordic sports enthusiasts (Policy P.5.J).
 - The trail system should connect parks, schools, other designated activity centers, and trails on public lands adjacent to Mammoth Lakes (Policy P.5.K).
- Plan parks and recreation facilities and develop recreation programs with public input (Policy P.6.A).
- Distribute parkland within the community to increase walkability from key residential nodes (Policy P.6.B).
- Offer and accommodate events and activities that foster community gathering and celebration (Policy P.6.C).
- Encourage neighborhood district identity and cohesion through events and programs (Policy P.6.D).
- Provide facilities and programs that support togetherness within and among families (Policy P.6.E).

Town of Mammoth Lakes Trail System Master Plan

The *Town of Mammoth Lakes Trail System Master Plan* (Trail System Master Plan), adopted October 19, 2011, updates the 1991 Trail System Plan, in accordance with the General Plan. The Trail System Master Plan also carries forward projects from the *General Bikeway Plan* and the *Shermins Area Recreation Plan* (SHARP). The Trail System Master Plan envisions an integrated system of infrastructure and programs that support recreation and mobility simultaneously, by seamlessly connecting homes, hotels, businesses, recreation nodes, and backcountry experiences. It is based on the notion that the recreational trail experience begins when you leave your home or hotel, not just when you park your car at the trailhead. In addition to new trails, paved pathways, signage and wayfinding, and associated amenities, the Trail System Master Plan includes suggestions for other improvements such as sidewalks, crosswalks, bus stops, bike lanes, bicycle parking, summer maintenance, and snow removal.

³ P.5.G. Policy lists 11 activities.

Town of Mammoth Lakes Pedestrian Master Plan

The *Town of Mammoth Lakes Pedestrian Master Plan* (Pedestrian Master Plan), adopted April 16, 2014, serves as an update to the Town's Sidewalk Master Plan and guides the future development and enhancement of pedestrian facilities within the Town. It is intended to follow the General Plan Mobility Element goals, policies, and actions related to pedestrian infrastructure. The Pedestrian Master Plan focuses on the triple-bottom-line, which is where transportation complements the community's social, economic, and natural capital and seeks to implement feet-first transportation, which emphasizes and prioritizes: 1) non-motorized travel; 2) public transportation; and 3) vehicles. The Pedestrian Master Plan inventories existing infrastructure, assesses current and future needs, and makes recommendations for the funding and implementation of projects.

Town of Mammoth Lakes Bikeway Plan Update

The *Town of Mammoth Lakes Bikeway Plan Update* (Bikeway Plan Update), adopted April 16, 2014, guides the future development of bicycle facilities and programs in the Town. Its recommendations facilitate bicycling for transportation and recreation and help attain the goals identified in the bicycle section of the General Plan Mobility Element. The Bikeway Plan Update seeks to meet the community needs and desires for a pleasant, enjoyable, and safer bicycle experience by establishing an overall framework for developing the bicycle network.

Town of Mammoth Lakes Municipal Code

Article II. Development Impact Mitigation Fees. The Town has established development impact fees which are imposed on the issuance of building permits for development within the Town. Any person who seeks to develop land within the Town by applying for a building permit is required to pay the appropriate development impact fee prior to the first framing or "skeleton" inspection of the permit or annex into a Mello Roos District, if established. A development impact fee, Circulation System (Streets, Signals, Bridges, Transit and Trails), has been established. Revenues are deposited into a fund and administered on a consolidated basis.

5.5.3 IMPACT THRESHOLDS AND SIGNIFICANCE CRITERIA

DEFINITION OF LOS THRESHOLDS SIGNIFICANT IMPACT

Definition of LOS Thresholds

For signalized intersections, the total intersection LOS D (less than 55.0 seconds of delay) or better must be maintained. Therefore, if a signalized intersection is found to operate at a total intersection LOS E or F, mitigation is required. It is assumed that this same threshold applies to roundabouts.

For unsignalized intersections, in order to avoid the identification of a LOS failure for intersections that result in only a few vehicles experiencing a delay greater than 50 seconds (such as at a driveway serving a few homes that accesses onto a busy street), a LOS deficiency is not identified for all

intersections with approach LOS E or F. Instead, a LOS deficiency is assumed to occur at an unsignalized intersection only if an individual minor street movement operates at LOS E or F and total minor approach delay exceeds four vehicle hours for a single lane approach and five vehicle hours for a multi-lane approach. In other words, a deficiency is found to occur if the average number of vehicles queued over the peak-hour exceeds four at a single-lane approach, or exceeds five at a multi-lane approach.

Definition of Significant Impact

The identification of significant impacts is a requirement of the California Environmental Quality Act (CEQA). A traffic impact is considered significant and immitigable if the project both: i) contributes measurable traffic to, and ii) substantially and adversely changes the level of service at any off-site location projected to experience deficient operations under foreseeable cumulative conditions, where feasible improvements consistent with the General Plan cannot be constructed.

Significance Criteria

Appendix G of the *CEQA Guidelines* contains the Environmental Checklist form that was used during the preparation of this EIR. Accordingly, a project may create a significant adverse environmental impact if it would:

- Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit (refer to Impact Statements TRA-1 and TRA-2);
- Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways refer to Section 8.0, *Effects Found Not To Be Significant*;
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks; refer to Section 8.0, *Effects Found Not To Be Significant*;
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) [refer to Impact Statement TRA-2];
- Result in inadequate emergency access; refer to Section 8.0, *Effects Found Not To Be Significant*;
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities refer to Section 8.0, *Effects Found Not To Be Significant*.

5.5.4 IMPACTS AND MITIGATION MEASURES

CONSTRUCTION TRAFFIC

TRA-1 PROJECT CONSTRUCTION WOULD NOT CAUSE A SIGNIFICANT INCREASE IN TRAFFIC FOR EXISTING CONDITIONS WHEN COMPARED TO THE TRAFFIC CAPACITY OF THE STREET SYSTEM.

Impact Analysis: Construction-related trips associated with trucks and employees traveling to and from the project site may result in minor traffic delays within the project area. However, the potential traffic interference caused by construction vehicles would only be a temporary, impact to vehicles using Old Mammoth Road and Meadow Lane in the morning and afternoon hours.

Hauling of the material would be restricted to occur during the off-peak hours (9:00 a.m. to 3:00 p.m.) and appropriate traffic control personnel (“flaggers”) would be used to ensure construction vehicles operate safely along Old Mammoth Road and Meadow Lane in a manner that minimizes disruption of traffic along these roadways. A small access road would be extended off Meadow Lane and would be used periodically during construction.

It is anticipated that a maximum of 30 workers and an average of 24 workers per day would be on site at any given time during construction of the project. Many of these workers would stagger their work schedules and would not arrive or depart at the same time. However, as a conservative estimate, if all 30 workers drove individually and arrived and departed during the peak periods, the interim traffic generated by construction workers traveling to and from the project site would be less than what the project would generate when fully constructed and occupied. The actual construction worker trip volumes would be dispersed throughout the peak period (consisting of multiple hours) and the entire day. The temporary nature of the construction trips and the nominal increase in temporary traffic volumes would not result in a significant impact. Thus, construction worker traffic impacts would be less than significant in this regard.

In order to reduce the potential impact of construction-related vehicles interacting with pedestrians and local traffic, a construction management plan would be developed to implement a variety of measures to minimize traffic and parking impacts upon the local circulation system (Mitigation Measure TRA-1). The construction management plan would include, but not be limited to the: prohibition of construction worker parking along local streets, identification of appropriate haul routes to avoid traffic disruptions, and limitation of hauling activities to off-peak hours. Implementation of a construction management plan would ensure potential impacts associated with construction-related traffic would be reduced to a less than significant level.

Mitigation Measures:

TRA-1 Prior to Issuance of any grading and/or demolition permits, whichever occurs first, a Construction Management Plan shall be submitted for review and approval by the Public Works Director. The Construction Management Plan shall, at a minimum, address the following:

- Traffic control for any street closure, detour, or other disruption to traffic circulation.

- Identify construction vehicles haul routes for the delivery of construction materials (i.e., lumber, tiles, piping, windows, etc.) to the site; necessary traffic controls and detours; and a construction phasing plan for the project.
- Identify any off-site construction staging or material storage sites.
- Specify the hours during which transport activities can occur and methods to mitigate construction-related impacts to adjacent streets.
- Require the Contractor to keep all haul routes clean and free of debris, including but not limited, to gravel and dirt as a result of its operations. The Contractor shall clean adjacent streets, as directed by the Town Engineer (or representative of the Town Engineer), of any material which may have been spilled, tracked, or blown onto adjacent streets or areas.
- The scheduling of hauling or transport of oversize loads shall avoid peak hour traffic periods to the maximum extent feasible, unless approved otherwise by the Town Engineer. No hauling or transport shall be allowed during nighttime hours or Federal holidays. All hauling and transport activities shall comply with Municipal Code Chapter 8.16, *Noise Regulation*.
- Haul trucks entering or exiting public streets shall at all times yield to public traffic.
- If hauling operations cause any damage to existing pavement, streets, curbs, and/or gutters along the haul route, the contractor shall be fully responsible for repairs. The repairs shall be completed to the satisfaction of the Town Engineer.
- All constructed-related parking and staging of vehicles shall be kept out of the adjacent public roadways and shall occur on-site.
- This Construction Management Plan shall meet standards established in the current California Manual on Uniform Traffic Control Device (MUTCD) as well as Town of Mammoth Lakes requirements.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

PROJECT TRAFFIC GENERATION

TRA-2 PROJECT IMPLEMENTATION WOULD NOT CAUSE A SIGNIFICANT INCREASE IN TRAFFIC WHEN COMPARED TO THE TRAFFIC CAPACITY OF THE STREET SYSTEM.

Impact Analysis: “Trip generation analysis” is the process by which transportation analysts identify the number of vehicle-trips that a specific proposed land use plan would add to local roadways. The trip generation of the proposed project is estimated. A credit for trips to be eliminated from the site of the existing ice rink was estimated. The “project net impact” on total trip generation through the study area was determined.

The Institute of Transportation Engineers (ITE) Trip Generation Manual does contain trip rates for an ice skating rink; however, the rates are not utilized in this analysis since there is an insufficient amount of data points available. Additionally, for the proposed multi-use facilities, the ITE Manual standard trip generation rates would not accurately reflect the trip generation due to the unique activities to be offered at the site. The ITE trip Generation Manual only has one data point for ice skating rinks, meaning the rate is based on data collected at only one ice rink location. Users of the manual are cautioned to use this data with care because of the small sample size. A more accurate estimation of trip generation is provided based on a 'person-trip analysis', which evaluates the number of persons that are estimated to arrive and depart the site over the course of the day, factored by their expected travel modes, vehicle occupancy rates, and drop-off/pick-up activity. Multiplying the number of person trips entering and exiting the site driveway by the percent of trips made by automobile, and dividing by the average vehicle occupancy rate yields the number of vehicle trips. Next, additional vehicle trips are included to reflect the drop-off and pick-up trips (given that one drop-off trip generates two trips at the site driveway, one entering and one exiting).

Consistent with Town standards, the design day is a busy winter Saturday, but not a peak time (such as Christmas week). A list of all activities that would take place at the new Multi-Use/Community Center is shown in Table 5.5-3, *Proposed Multi-Use Community Center – Determination of Design Day*. Programs/activities included in the design day are indicated with a 'yes' in the far right column.

Design day activities are listed in Table 5.5-4, *Proposed Project Daily Trip Generation*. As shown in Table 5.5-4, it is estimated that the Multi-Use/Community Center would generate 590 daily trips. The existing ice skating rink provides the same uses as the proposed ice skating rink, including Recreational Skating, Ice Skating/Figure Skating Program (Get up and Go), and Youth and Adult Hockey. Therefore the number of persons using the existing ice skating rink is estimated at 450 persons per day, which is the same as the proposed ice skating rink. Not all the trips generated by the project are new trips as all the ice skating rink-related trips are already on the area roadways (380 daily trips). These trips would be shifted to the project site; therefore, the net impact of the project on area roadways is 210 daily trips.

The number of these trips occurring in the peak hour is summarized in Table 5.5-5, *Proposed Project P.M. Peak Hour Trip Generation*, for a total of 116 p.m. peak hour (62 entering; 54 exiting). The ice skating rink-related trips occurring in the peak hour is 80 p.m. peak hour (46 entering; 34 exiting). As these trips would be shifted to the project site, the net trips occurring in the peak hour is 36 p.m. peak hour (16 entering; 20 exiting).

The distribution of traffic arriving and departing the project site is estimated based on existing traffic patterns, the location of the site relative to residential and commercial uses in the region, and regional access patterns. Existing traffic patterns were based on recent count data in the area and from the Town of Mammoth Lake Travel Model). P.M. peak-hour traffic volumes are shown in Table 5.5-6, *P.M. Peak Hour Intersection Turning Movement Volumes*.



Table 5.5-3
Proposed Multi-Use Community Center – Determination of Design Day

Program/Activity	Winter?	Saturday?	If Saturday, What time?	P.M. Peak Hour? ¹	Frequency	Max Attendees	Total ¹
Ice Rink							
Recreational Skating	Yes	Yes	2 p.m. – 10 p.m.	Yes	Daily	300	Yes
Youth and Adult Hockey	Yes	Yes	9 a.m. – 11 a.m.	No	Daily	100	Yes
Ice Skating/Figure Skating Program	Yes	Yes ²	4:30 p.m. – 5:30 p.m.	Yes	Daily	50	Yes
Curling Program	Yes	No	-	-	Weekly	100	No
Skate Program	Yes	No	-	-	Weekly	50	No
Ice Rental	Yes	No	-	-	Weekly	50	No
Birthday Party	Yes	Yes	9 a.m. – 9 p.m.	Yes	Weekly	100	No ³
Community Events	Yes	No	-	-	Monthly/Occasionally	200	No
Special Programs / Events	Yes	No	-	-	Monthly/Occasionally	100	No
Hockey Tournaments	Yes	Yes	6 a.m. – 12 p.m., 6 p.m. – 12 a.m.	No	Monthly/Occasionally	200	No
Private Rentals	Yes	No	-	-	Monthly/Occasionally	200	No
Professional/Club/College/School Rental	Yes	No	-	-	Monthly/Occasionally	200	No
Community Center							
Educational Programming	Yes	No	-	-	Weekly	100	No
Adult Introductory Fitness Classes	Yes	Yes	7 p.m. – 9 p.m.	No	Weekly	50	Yes
Youth Introductory Fitness Classes	Yes	No	5 p.m. – 7 p.m.	No	Weekly	50	No
Games	Yes	Based on Availability	4 p.m. – 10 p.m.	Yes	Weekly	50	Yes
Summer Arts Camps / Craft Programs	No	-	-	-	Weekly	-	No
Training/Certification & Community Board Meetings	Yes	Yes, Based on Availability	8 a.m. – 6 p.m.	Yes	Weekly	50	Yes
Breastfeeding support	Yes	Based on Availability	12 p.m. – 10 p.m.	Yes	Weekly	10	Yes
County First 5 programs	Yes	No	-	-	Weekly	30	No
Youtheatre/Rehearsal Space	No	-	-	-	Weekly	30	No
Drop-in Art Programs	Yes	Based on Availability	7 pm – 10 p.m.	No	Monthly	50	Yes
Ted Talks	Yes	Based on Availability	6 p.m. – 10 p.m.	No	Monthly	-	No
Community and Social Gathering	Yes	Based on Availability	12 p.m. – 10 p.m.	Yes	Monthly	100	No
Indoor Venue/Staging Area	No	Based on Availability	12 p.m. – 10 p.m.	Yes	Monthly	200	No
Rotating Art Gallery	Yes	Yes	N/A	Yes	Monthly	N/A	No
Community Variety/Talent Show		Based on Availability	6 p.m. – 10 p.m.	No	Monthly	200	No
Teen Safe Space Hangout					Occasionally		No
Facility Rentals for Events/Conferences					Occasionally		No
Movie Nights					Occasionally		No
Notes: 1. Bold indicates the activity is included in the design day. 2. Includes the Get up and Go Program. 3. No because it is included in Recreational Skating which is already included in the design day. Source: LSC Transportation Consultants, Inc., <i>Mammoth Community and Multi-Use Facilities Focused Traffic Impact Analysis</i> , dated July 29, 2016; included as Appendix 11.4, Traffic Impact Analysis .							

**Table 5.5-4
Proposed Project Daily Trip Generation**

Land Use	Persons per day	Persons in Autos ¹	Total Vehicles ²	Percent Drop Off / Pick Up ³	Daily Vehicle Trips at Site Driveway		
					In	Out	Total
PROPOSED USES							
Ice Rink							
- Recreational Skating	300	245	91	40%	127	127	254
- Ice Skating/Figure Skating Program (Get up and Go)	50	41	15	40%	21	21	42
- Youth and Adult Hockey	100	82	30	80%	42	42	84
- Subtotal of Ice Skating Rink	450	368	136	-	190	190	380
Games	100	82	30	80%	42	42	84
Meeting or event in multipurpose rooms (2 per day)	100	82	30	40%	42	42	84
Drop-in Art Programs or Adult Fitness Class	50	41	15	20%	21	21	42
<i>Total Proposed Uses</i>	<i>700</i>	<i>573</i>	<i>211</i>	<i>-</i>	<i>295</i>	<i>295</i>	<i>590</i>
EXISTING USES							
Ice Rink							
- Recreational Skating	300	245	91	40%	127	127	254
- Ice Skating/Figure Skating Program (Get up and Go)	50	41	15	40%	21	21	42
- Youth and Adult Hockey	100	82	30	80%	42	42	84
<i>Total of Existing Ice Skating Rink</i>	<i>450</i>	<i>368</i>	<i>136</i>	<i>-</i>	<i>190</i>	<i>190</i>	<i>380</i>
Net Impact of Project on Area Roadways	250	205	75	-	105	105	210
Notes: 1. Mode split includes 5 percent walking, 14 percent transit, and 81 percent automobile. 2. Assumption of 2.7 persons per vehicle. 3. A significant proportion of activity participants would be dropped off and picked up, which doubles the number of trips generated (as each drop-off or pick-up generates two trips at the site driveway, one inbound and one outbound). Pick-up/drop-off percentages vary based on activity. The portion of persons dropped-off/picked-up for each activity was estimated by Town staff.							
Source: LSC Transportation Consultants, Inc., <i>Mammoth Community and Multi-Use Facilities Focused Traffic Impact Analysis</i> , dated July 29, 2016; included as Appendix 11.4, <i>Traffic Impact Analysis</i> .							

**Table 5.5-5
Proposed Project P.M. Peak Hour Trip Generation**

Land Use	Persons per day	Persons in Autos ¹	Total Vehicles ²	Portion of trips occurring in Peak Hour		Percent Drop Off / Pick Up	Daily Vehicle Trips at Site Driveway		
				In	Out		In	Out	Total
Ice Rink									
- Recreational Skating	200	163	60	50%	25%	40%	36	27	63
- Ice Skating/Figure Skating Program (Get up and Go)	50	41	15	50%	25%	40%	10	7	17
<i>Subtotal of Ice Skating Rink</i>	<i>250</i>	<i>204</i>	<i>75</i>	-	-	-	<i>46</i>	<i>34</i>	<i>80</i>
Games	50	41	15	50%	10%	80%	10	8	18
Meeting or event in multipurpose rooms (1 during peak hour)	50	41	15	10%	75%	40%	6	12	18
<i>Total Proposed Project</i>	<i>350</i>	<i>286</i>	<i>105</i>	-		-	<i>62</i>	<i>54</i>	<i>116</i>
Total of Existing Ice Skating Rink	250	204	75	-		-	46	34	80
Net Impact of Project on Area Roadways	100	82	30	-		-	16	20	36
Notes:									
1. Mode split includes 5 percent walking, 14 percent transit, and 81 percent automobile.									
2. Assumption of 2.7 persons per vehicle.									
Source: LSC Transportation Consultants, Inc., Mammoth Community and Multi-Use Facilities Focused Traffic Impact Analysis, dated July 29, 2016; included as Appendix 11.4, Traffic Impact Analysis.									

Table 5.5-6
P.M. Peak Hour Intersection Turning Movement Volumes

Study Intersection		Northbound			Southbound			Eastbound			Westbound			Total
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing No Project														
1	Old Mammoth Road/ Meridian Boulevard	128	230	48	118	295	59	188	680	112	96	365	75	2,394
2	Old Mammoth Road/ Chateau Road	11	251	5	48	300	75	37	16	11	5	11	27	797
3	Old Mammoth Road/ Site Access Road	2	259	0	0	300	2	2	0	2	0	0	0	567
Future No Project														
1	Old Mammoth Road/ Meridian Boulevard	150	270	55	130	360	65	195	700	130	110	375	85	2,625
2	Old Mammoth Road/ Chateau Road	15	350	5	95	415	90	40	30	15	5	20	55	1,135
3	Old Mammoth Road/ Site Access Road	2	370	0	0	435	2	2	0	2	0	0	0	813
Project Net Impact														
1	Old Mammoth Road/ Meridian Boulevard	25	16	-6	-14	19	0	0	-21	29	-4	-16	-10	18
2	Old Mammoth Road/ Chateau Road	2	39	0	0	47	-1	-2	0	2	0	0	0	87
3	Old Mammoth Road/ Site Access Road	8	-6	0	0	-5	54	47	0	7	0	0	0	105
Existing Plus Project														
1	Old Mammoth Road/ Meridian Boulevard	153	246	42	104	314	59	188	659	141	92	349	65	2,412
2	Old Mammoth Road/ Chateau Road	13	290	5	48	347	74	35	16	13	5	11	27	884
3	Old Mammoth Road/ Site Access Road	10	253	0	0	295	56	49	0	9	0	0	0	672
Future Plus Project														
1	Old Mammoth Road/ Meridian Boulevard	175	286	49	116	379	65	195	679	159	106	359	75	2,643
2	Old Mammoth Road/ Chateau Road	17	389	5	95	462	89	38	30	17	5	20	55	1,222
3	Old Mammoth Road/ Site Access Road	10	364	0	0	430	56	49	0	9	0	0	0	918
Note: Negative volumes reflect the shift in existing traffic associated with the existing ice rink.														
Source: LSC Transportation Consultants, Inc., Mammoth Community and Multi-Use Facilities Focused Traffic Impact Analysis, dated July 29, 2016; included as Appendix 11.4, Traffic Impact Analysis.														

Based on a review of these factors, the estimated distribution pattern for trips made in and out of the project site is summarized in Table 5.5-7, *Project Trip Distribution*. The site-generated trips are assigned through the study intersections by applying the trip distribution pattern to the trip generation from Table 5.5-4.

**Table 5.5-7
Project Trip Distribution**

Origin	Distribution
Old Mammoth Road north of Meridian Boulevard	30%
Meridian Boulevard west of Old Mammoth Road	46%
Chateau Road west of Old Mammoth Road	4%
Old Mammoth Road south of Project Driveway	13%
Meridian Boulevard east of Old Mammoth Road	3%
Between Chateau Road and Meridian Boulevard	4%
Total Percent Distributed	100%
Source: LSC Transportation Consultants, Inc., <i>Mammoth Community and Multi-Use Facilities Focused Traffic Impact Analysis</i> , dated July 29, 2016; included as <u>Appendix 11.4, <i>Traffic Impact Analysis</i></u> .	

Existing With Project Conditions

Traffic operations at the study intersections were assessed in terms of LOS and delay. LOS analyses were performed at all of the study intersections under existing without and existing with project conditions.

Intersection Levels of Service

Table 5.5-8, *Existing With Project Peak Hour Intersection Analysis*, summarizes the peak hour LOS results at the study intersections for existing with project conditions.

**Table 5.5-8
Existing With Project Peak Hour Intersection Analysis**

Study Intersection		Traffic Control ¹	Existing Without Project		Existing With Project		Significant Project Impact?
			Delay ¹	LOS	Delay ¹	LOS	
1	Old Mammoth Road/Meridian Boulevard	Traffic Signal	30.6 sec	C	32.9 sec	C	No
2	Old Mammoth Road/Chateau Road	Stop-Control	20.1 sec	C	22.9 sec	C	No
3	Old Mammoth Road/Site Access Road	Stop-Control	11.6 sec	B	11.7 sec	B	No
LOS = level of service; sec = seconds.							
Notes:							
1. LOS is reported as total intersection delay for signalized intersection and worst movement/approach for unsignalized intersections and roundabouts.							
Source: LSC Transportation Consultants, Inc., <i>Mammoth Community and Multi-Use Facilities Focused Traffic Impact Analysis</i> , dated July 29, 2016; included as <u>Appendix 11.4, <i>Traffic Impact Analysis</i></u> .							

As indicated in [Table 5.5-8](#), all study intersections are anticipated to operate at an acceptable LOS (LOS D or better) based on the Town's performance criteria under existing with project conditions.

Turn Lanes

As there are no LOS deficiencies, intersection improvements are not needed. However, turn lanes may be warranted to enhance safety by separating vehicles turning into the site from those passing by the site. Using the National Cooperative Highway Research Program (NCHRP) 457 Guidelines, a northbound left-turn lane and a southbound right-turn lane along Old Mammoth Road into the site were evaluated. Based on the proposed volumes with the project, no turn lanes are warranted under any project scenarios.

Vehicle Miles Traveled

Existing vehicle miles traveled (VMT) data was developed as part of the recent Mammoth Lakes Mobility Element EIR. The existing without project VMT townwide is 152,844, shown in [Table 5.5-9, Mammoth Creek Park West Vehicle Miles Traveled](#). The VMT impact of the project was then assessed by calculating the average trip length for each zone, and then multiplying it by the number of trips. An additional 386 vehicle miles traveled is expected to be generated in the Town of Mammoth Lakes by the proposed project. This VMT was then added to the existing without project VMT to create the existing with project values of 153,231; refer to [Table 5.5-9](#). It is noted that the increase in VMT due to the project is minimal at approximately 0.3 percent of existing VMT.

**Table 5.5-9
Mammoth Creek Park West Vehicle Miles Traveled**

Origin/Destination	Average Distance (miles)	Percent of Trips to Area	Net Increase in Daily Trips	Net Increase in Daily VMT
Old Mammoth Road north of Meridian Blvd	1.6	30%	63	101
Meridian Blvd west of Old Mammoth Road	2.5	46%	97	239
Chateau Road west of Old Mammoth Road	0.8	4%	8	7
Old Mammoth Road south of Project Driveway	1.2	13%	28	34
Meridian Blvd east of Old Mammoth Road	0.7	3%	6	4
Between Chateau Road and Meridian Blvd	0.2	4%	8	2
<i>Project Net Impact</i>	-	100%	210	387
Townwide VMT				
Existing No Project	152,844			
Future No Project	178,638			
Project Net Impact	387			
Existing Plus Project	153,231			
Future Plus Project	179,025			
VMT = vehicle miles traveled.				
Source: LSC Transportation Consultants, Inc., <i>Mammoth Community and Multi-Use Facilities Focused Traffic Impact Analysis</i> , dated July 29, 2016; included as Appendix 11.4. <i>Traffic Impact Analysis</i> .				

Line of Sight

Implementation of the proposed project could impact line of sight. Adequate traffic conditions are expected to be provided with the proposed project, as long as the final landscaping plans provide adequate drive sight distance at the site driveway. Mitigation Measure TRA-2 would reduce line of sight impacts by providing adequate drive sight distance at the site driveway on final landscaping plans. Upon implementation of Mitigation Measure TRA-2, impacts in this regard would be less than significant.

Conclusion

All intersections would operate at an acceptable LOS under their existing configurations and control. No new turn lanes are expected to be necessary along Old Mammoth Road at the site access intersection. Mitigation Measure TRA-2 states that the final landscape plans would provide adequate drive sight distance at the site driveway. With implementation of Mitigation Measure TRA-2, impacts would be less than significant in this regard.

Mitigation Measures:

TRA-2 Prior to Issuance of any grading and/or demolition permits, whichever occurs first, final landscaping plans shall be submitted for review and approval by the Town Engineer to provide adequate drive sight distance at the site driveway.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

5.5.5 CUMULATIVE IMPACTS

For traffic purposes, Town staff has directed that the “future model with new FAR (floor area ratio) and with the new Mobility Element” version be used for purposes of cumulative analysis.

● CONSTRUCTION OF THE PROPOSED PROJECT, AND OTHER RELATED CUMULATIVE PROJECTS, COULD INCREASE TRAFFIC WHEN COMPARED TO THE TRAFFIC CAPACITY OF THE EXISTING STREET SYSTEM.

Impact Analysis: Construction activities associated with the proposed project and cumulative projects may overlap, resulting in traffic impacts to local roadways. However, as stated, construction of the proposed project would not result in significant traffic impacts to study intersections. Further, the project would be required to prepare a Construction Management Plan in order to reduce the impact of construction-related traffic upon the local circulation system within the project area. The cumulative development projects would also be required to reduce construction traffic impacts on the local circulation system and implement any required mitigation measures that may be prescribed pursuant to CEQA provisions. Therefore, the project’s contribution to cumulative construction traffic impacts would be less than significant.

Mitigation Measures: Refer to Mitigation Measure TRA-1.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

- **IMPLEMENTATION OF THE PROPOSED PROJECT AND OTHER RELATED CUMULATIVE PROJECTS, WOULD NOT CAUSE A SIGNIFICANT INCREASE IN TRAFFIC FOR EXISTING AND FUTURE CUMULATIVE CONDITIONS WHEN COMPARED TO THE TRAFFIC CAPACITY OF THE STREET SYSTEM.**

Impact Analysis:

Future With Project Conditions

Table 5.5-10, *Project P.M. Peak Hour Intersection Turning Movement Volumes*, shows the future without project and future with project intersection turning movement volumes.

Table 5.5-10
Project P.M. Peak Hour Intersection Turning Movement Volumes

Study Intersection		Northbound			Southbound			Eastbound			Westbound			Total
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Future Without Project														
1	Old Mammoth Road/ Meridian Boulevard	150	270	55	130	360	65	195	700	130	110	375	85	2,625
2	Old Mammoth Road/ Chateau Road	15	350	5	95	415	90	40	30	15	5	20	55	1135
3	Old Mammoth Road/ Site Access Road	2	370	0	0	435	2	2	0	2	0	0	0	813
Future With Project														
1	Old Mammoth Road/ Meridian Boulevard	175	286	49	116	379	65	195	679	159	106	359	75	2643
2	Old Mammoth Road/ Chateau Road	17	389	5	95	462	89	38	30	17	5	20	55	1222
3	Old Mammoth Road/ Site Access Road	10	364	0	0	430	56	49	0	9	0	0	0	918
Source: LSC Transportation Consultants, Inc., Mammoth Community and Multi-Use Facilities Focused Traffic Impact Analysis, dated July 29, 2016; included as <u>Appendix 11.4. Traffic Impact Analysis</u> .														

Traffic operations at the study intersections were assessed in terms of LOS and delay. LOS analyses were performed at all of the study intersections under future scenarios.

Intersection Levels of Service

Table 5.5-11, *Future With Project Peak Hour Intersection Analysis*, summarizes the peak hour LOS results at the study intersections for future without project and future with project conditions.

Table 5.5-11
Future With Project Peak Hour Intersection Analysis

Study Intersection		Traffic Control ¹	Future Without Project			Future With Project			Significant Project Impact?
			Delay ¹	Veh-Hrs	LOS	Delay ¹	Veh-Hrs	LOS	
1	Old Mammoth Road/Meridian Boulevard	Traffic Signal	34.0 sec	-	C	36.2 sec	-	C	No
2	Old Mammoth Road/Chateau Road	Stop-Control	42.5 sec	1.0	E	52.8 sec	1.1	F	No
3	Old Mammoth Road/Site Access Road	Stop-Control	11.5 sec	-	B	12.9 sec	-	B	No
LOS = level of service; sec = seconds.									
Notes:									
1. LOS is reported as total intersection delay for signalized intersection and worst movement/approach for unsignalized intersections and roundabouts.									
Source: LSC Transportation Consultants, Inc., Mammoth Community and Multi-Use Facilities Focused Traffic Impact Analysis, dated July 29, 2016; included as Appendix 11.4, Traffic Impact Analysis .									

As indicated in [Table 5.5-11](#), under future cumulative conditions the LOS may degrade by one level at the eastbound approach of Old Mammoth Road/Chateau Road intersection. However, the Old Mammoth Road/Chateau Road intersection maintains an acceptable LOS with less than four cumulative hours of delay. All other study intersections are anticipated to operate at an acceptable LOS (LOS D or better) based on the Town's performance criteria under future cumulative conditions. Therefore, impacts would be less than significant in this regard.

Vehicle Miles Traveled

Existing VMT data was developed as part of the recent Mammoth Lakes Mobility Element EIR. The future without project VMT townwide is 178,638, shown in [Table 5.5-9](#). The VMT impact of the project was then assessed by calculating the average trip length for each zone, and then multiplying it by the number of trips. An additional 386 vehicle miles traveled is expected to be generated in the Town of Mammoth Lakes by the proposed project. This VMT was then added to the future VMT to result in the future with project values of 179,025; refer to [Table 5.5-9](#). It is noted that the increase in VMT due to the project is minimal at approximately 0.3 percent of future VMT.

Line of Sight

Implementation of the proposed project could impact line of sight. Adequate traffic conditions are expected to be provided with the proposed project with implementation of Mitigation Measure TRA-2 as final landscaping plans would provide adequate drive sight distance at the site driveway. Thus, with implementation of Mitigation Measure TRA-2, impacts in this regard would be less than significant.

Cumulative projects would be evaluated on a project-by-project basis, as they are implemented within the Town of Mammoth Lakes. Each cumulative project would undergo a similar plan review process as the proposed project, to determine potential line of sight impacts. Individual projects would be required to implement required mitigation measures (Mitigation Measure TRA-2) that may be



prescribed pursuant to CEQA provisions. Project impacts would not be cumulatively considerable and impacts in this regard would be less than significant.

The proposed project would not result in a cumulatively considerable traffic impacts in regards to local intersections. Impacts would be less than significant in this regard.

Mitigation Measures: Refer to Mitigation Measure TRA-2.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

5.5.6 SIGNIFICANT UNAVOIDABLE IMPACTS

No significant unavoidable impacts related to traffic/circulation have been identified.



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