

# **Lionshead Transit Center White Paper**

Prepared for:

Town of Vail  
Public Works

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## **INTRODUCTION**

The Town of Vail has been planning for a major transportation center in the Lionshead portal area for many years. This was identified in the Lionshead Master Plan prepared back in 1997. Since 1997, The Town has reviewed numerous sites as potential centers for transit including public services, shuttles, and skier drop activity. The need for a center has only been strengthened due to significant planning in the Lionshead area and given the potential for regional growth along with associated regional transit service. The Vail Transportation Center (VTC) has a finite capacity, and increased service by current providers (Vail and ECO) and the advent of additional providers (I-70 Front Range Service and Summit Stage for example) will overwhelm the practical functionality of VTC facility if it is to serve as the only transit hub within Town.

## **NEED FOR A LIONSHEAD TRANSPORTATION FACILITY**

### Lionshead Activity

Lionshead is a major hub today including a gondola and ski lift, a major parking structure, and tourist-oriented commercial space, and condominium units. Recent redevelopment and planned redevelopment, such as Arrabelle, Lionshead Center, Landmark, and the Lionshead Parking Structure redevelopment will establish Lionshead as a near equal rival to the activity in Vail Village. Currently, the Lionshead Village area is anticipated to see approximately 1500 net new units and 290,000 additional square feet of non-residential development given current plans. In 1997, the new development levels anticipated were approximately 586 units and 193,000 square feet of non-residential uses. The residential unit count has nearly tripled since the 1997 plan while the non residential uses have increased by 50 percent.

As this growth comes to fruition, there will be a stronger natural “demand” to travel to/from this hub, and this will require numerous bus routes from several services to stop at Lionshead. Current Vail routes that stop at Lionshead include the In-Town shuttle, and the West Vail routes. In the future, there is the potential to construct a new underpass of I-70 at Simba Run, and this will establish the Lionshead Transportation Center in a much better position than the VTC to serve as the ski-area access hub for western Vail with respect to transit; the synergy that could be developed by a Lionshead transit center and the Simba Run Underpass together will be an extraordinary enhancement to transit service in West Vail. Further, given the potential of a line-haul, Frontage Road bus routing system to make use of the Simba Run underpass, it would be prudent to establish a notable transit facility at a notable hub (Lionshead) along the line-haul route. The Simba Run underpass could also provide for a connection with the Sandstone route as well. Potentially, five bus routes could serve Lionshead in the future as compared to only three today.

In addition to Town service, current regional service to Lionshead includes five routes. The ECO Transit will continue to “want” to serve Lionshead, maybe more so given the growth that is planned at Lionshead. ECO Transit sees a Lionshead Transit Center as a way to improve the efficiency of their current routes by establishing a Vail terminus in Lionshead. Regional ridership has increased 29 percent over the past two years. This regional demand is anticipated to increase much more as growth in Eagle County continues and Vail redevelops and adds jobs. Today, ECO Transit struggles to maintain their bus schedules due in part to the popularity of their service. This challenge prevents too much deviation from their primary routes.

In addition, dwell times have been kept to a minimum by ECO Transit, again in the interest of trying to keep up with their schedules. Future growth will only add more demand to ECO service, thus requiring additional buses along their routes (and the need for additional accommodation in Vail). ECO Transit's revenue has increased by more than 10 percent per year, and they have utilized this increase to add 10 to 15 hours of daily service each year. This year, ECO Transit added the Edwards Express and also established some shadow/piggy back service (when two buses run together as one run).

Besides ECO Transit, other regional services that choose to serve Vail will want to serve the Lionshead hub. Regional bus service connections to Vail are being considered for Summit Stage. This is currently happening on a private basis via Vail Resorts buses. The Roaring Fork Transit Authority (RFTA) is considering connecting to ECO Transit on the west end of Eagle County, potentially introducing new transit market ridership from Pitkin and Garfield Counties into Vail. Also, an I-70 Front Range Service is being discussed. Like ECO, these too would "want" to serve a major hub area like Lionshead due to the natural attractiveness

#### VTC Capacity

A Lionshead Transportation facility will also provide needed redundancy to VTC. Today, it is not uncommon for the VTC to experience more buses on-site than bus-spaces. Currently, there are six bus bays, and each hold up to two buses. ECO Transit uses two bays, and peak times can see four or five ECO buses at the VTC. The Town uses the remaining four bus bays, and most peak periods see each stall serving two vehicles, in part due to the need to shadow several routes.

Besides accommodating more bus routes, the VTC is also a designated area for bus drivers to take a break. Regulations require drivers to park their vehicle and rest at minimum specified intervals, and the VTC serves in this capacity. Vail is ideal for ECO service driver breaks given that Vail is the terminus of many ECO routes. With the potential of more service, regionally and locally, there will be greater demand for a dedicated driver break area. The VTC will not be able to accommodate all services, all routes, and all driver break activity in the future. Another means is necessary to relieve the VTC; a Lionshead Transportation Center would be able to provide this relief to the VTC.

So, the need for a Lionshead Transportation Center is driven by:

- The need to provide a high level of transit service to a dense area of activity within Vail.
- The intent to leverage the future Simba Run underpass to vastly improve the nature of transit service connecting western Vail to Central Vail.
- The need to relieve the VTC of some of its transit-related demands with respect to regional routes and driver break areas.
- The need to "clean up" significant conflicts which occur at the Lionshead Mall/Lionshead Parking Structure entry area, particularly with pedestrian activity.

- The desire to better accommodate hotel shuttles.
- The desire to better establish an official, organized skier drop off area.

Charter buses currently use the east side of the LH Parking Structure. This area does not provide a good guest experience in which Vail strives to achieve. Further, this is planned to be removed once this lot is developed.

The Town's Transit Plan and Vail's 20/20 vision recognizes the need for multimodal transportation with an emphasis on transit. Employees who work in the Lionshead area (or access the ski area via Lionshead) are expected to avoid commuting via their car. This is a trend that is expected to be encouraged into the future, thus necessitating appropriate transit accommodations for employee users. The Town's estimates for required future parking spaces are heavily reliant on increased transit use. Vail's overall environmental strategies include increased reliance on transit service to reduce green house gas emissions.

For these numerous reason, it is critical to establish a major transit center in the Lionshead area.

### **LIONSHEAD TRANSPORTATION CENTER NEEDS**

The Lionshead area should ultimately be user-friendly for riders. The ideal characteristics for service would include the following:

- An adequate number of spaces (now and in the future) for the various transit providers including:
  - Town routes
  - ECO routes and planned regional services
  - Hotel shuttles
  - Short-term drop-off activity (passenger cars, taxis)
  - Charter Buses

Vail has an excellent reputation as a provider for transit service and allowing guests and residents to leave their car at home. Establishing a robust facility at the Lionshead hub will strengthen this notion and encourage travelers to utilize transit.

The vehicle space needs for the above providers varies during peak season. Each of the users is described in more detail below.

Town of Vail Bus Routes – Given current conditions, three bus routes would likely serve the Lionshead Transit Facility including the two West Vail loop routes and the In-Town shuttle. Expanded local service in the future could instill additional routes stopping at a Lionshead Facility. With the Simba Run underpass of I-70, a Lionshead facility is in an excellent position to serve western Vail, and a hub at Lionshead anchoring these routes would reduce bus mileage (versus traveling all the way to the Vail Village Transportation Center). Potentially, a "line-haul" service could be implemented (given a Simba Run underpass) along the south and north frontage roads providing direct continuity between West Vail, Timber Ridge, Ever Vail, Lionshead, Vail Village, and Ford Park. This continuous service alone could generate 10 to 15 buses into and out of a Lionshead

facility per hour; with potentially three buses from this route on-site at the same time. In addition, outlying bus routes could potentially link to the line-haul at Lionshead creating a peak potential of four to six buses on-site at the same time (2 or 3 line-haul, 1 or 2 outlying, 1 In-Town shuttle).

The 1997 Lionshead Village Transportation Plan had identified 3 vehicles for Town service at the Center. With the advent of the In-Town serving this facility and the increase due to a Frontage Road “line haul” system between West Vail and Ford Park (and the associated reshuffling of outlying service), this estimate has increased to a minimum of four and as many as six vehicles.

ECO Routes (and other Regional Services) – The ECO service has been experiencing more ridership over the years and Vail is one of its prime destinations. Five routes currently serve Vail with stops at Lionshead and at Vail Village. All of the routes terminate at Vail Village. Currently at peak times, four ECO buses stop at the Vail Transportation Center at the same time. Some of this demand could be instead served by a Lionshead Transportation Center, thus providing some badly needed relief to the Vail Village Transportation Center (plus a second driver break area). Given the potential increases described above, the number of buses that Vail would need to accommodate will increase.

The 1997 Lionshead Village Transportation Plan had identified one vehicle for County service. This is clearly too low. With four today at Vail during peak times, and the potential growth described, potentially six to eight spaces for regional buses should be provided. If these are split between The Vail Village Transportation Center and the Lionshead Transportation Center, up to four ECO buses could be at the Lionshead facility at the same time. Part of this demand is the fact that ECO service tends to shadow their routes at peak times.

Hotel Shuttles – There are approximately 20 lodges in Vail and Avon that make use of shuttle services to transport their guests to the ski area. Today, these shuttles park along East Lionshead Circle near the Lionshead Mall (adjacent to the parking structure). During peak times, these shuttles travel continuously between their base lodge and Lionshead creating demand to park and unload guests to the gondola. As Vail reaches build out, more lodges will implement more shuttle services, so this element is anticipated to grow

The 1997 Plan identified the need for four parking stalls to serve lodge shuttles. Build out of Vail is now anticipated to be more aggressive than that thought in 1997, so the expectation of four stalls may be low to accommodate peak demands. An estimate of up to six shuttle parking spaces should ideally be provided to accommodate peak conditions.

Auto Drop off – This use is comprised of private automobiles that temporarily park close to the lifts and drop-off skiers and visitors to the commercial activity centers. Some of these vehicles then park in the structure, but others leave the area entirely only to return in the afternoon and pick up the skiers and shoppers. These users typically attempt to park as close to their destination as possible, often illegally. If this use is not properly accommodated, it will happen anyway, likely at locations not intended to accommodate it which causes problems for others using that area. A significant increase of second homes has occurred down valley, and this use has intensified as a result. Also, a change in the demographics of visitors has increased the ability and desire for groups/families to drop-off/pick-up their members as close as to the skiing and shopping as possible. This trend indicates that larger families and groups who visit Vail usually have at least one member who does not shop or ski and can serve as the designated chauffer. This has added congestion to the “high-desire” locations and increases the need to provide designated drop-off/pick-up areas for autos that is clearly identified.

The 1997 Plan identified the need for a minimum of 5 parking spaces for this type of activity. Again, since Vail’s build out is now planned to be denser, the need for more spaces to accommodate peak times would be appropriate. An estimate of 7 to 12 spaces should be provided to accommodate this user in the long term. This would include demand generated by taxis and airport shuttle activity.

Charter Buses – Today, the charter activity occurs just west of the Lionshead Parking Structure. Peak days can see 15 to 20 of these vehicles. The 1997 Plan had identified 3 to 5 loading/unloading spaces to serve charter activity. It is suggested that the upper end of the range be maintained and that 5 bus spaces be established to serve Charter activity that is clearly identified. Besides accommodating their passenger loading/unloading, these buses need to park for the entire day that they are in Town; this is still a critical element without a clear solution.

In summary, the following number of spaces is estimated to be needed for each transit use when considered individually:

- Town Bus Routes – 4-6 spaces
- ECO and Regional Bus Routes – 3-4 spaces
- Hotel Shuttles – 4-6 shuttle spaces
- Auto Drop Off – 7 -12 spaces
- Charter Buses – 5 spaces

It should be noted that combining users into a common facility and allowing for shared parking stops could result in a net reduction. In other words, uses combined into a common area are unlikely to peak at the exact same time, so some reduction to the needed spaces might be appropriate. If each user was accommodated at separate locations, no reduction would be possible. So, there is some advantage to combining users into one facility for total space considerations, subject to keeping certain users separate from each other.

## **LIONSHEAD TRANSPORTATION CENTER LOCATION CONSIDERATIONS**

The ideal location of a facility (or facilities) is driven by numerous operational factors. Different transit services will place different weight on the factors, so no one site is absolutely perfect for all users. The critical considerations for each of the users are discussed below:

Town Bus Routes – Outlying routes, the In-Town Shuttle Route, and future “line-haul” routes could all stop at the facility. The key considerations with respect to location are as follows:

- Connection to other public services (like ECO).
- Provide service to the Parking Structure to serve skiers returning to their cars at the end of ski day
- Have adequate space to include various amenities including shelters, benches, information kiosks, vending services, and possibly restrooms.
- Be located relatively close the Gondola and skier services.
- Be located relatively close to residential, commercial density, and jobs,

Regional Bus Routes – ECO is the only regional service currently serving Vail, but more is possible as mentioned. Key considerations for regional services(s) include:

- Connection to other public services (like Town of Vail).
- Have adequate space to include various amenities including shelters, benches, information kiosks, vending services, and possibly restrooms.
- Be located relatively close the Gondola and skier services.
- Be located relatively close to residential, commercial density, and jobs.
- Be able to return to the Frontage Road easily to maintain schedules. Ideally, the site is very close to the Frontage Road for this reason.

Charter Buses, Auto Drop-off, and Hotel Shuttles – The primary consideration for these three providers is to be located as close to their destination (ski lifts, ski services, and commercial area) as possible. Very few of the passengers using these services are transferring to another transit service; most are heading to/from Lionshead. Auto drop-off and charter buses also consider way-finding as a critical consideration so that these users (pedestrians and drivers) know where to go. Loading/unloading areas should be easy to find for charter services and auto drop-off users.

## **SITE SELECTION**

It is nearly impossible to identify a site that would 100 percent satisfy every characteristic mentioned above. Different sites have different trade-offs with respect to effectiveness and impacts, but the above list gives a good sense of ideal characteristics of a preferred site. The above characteristics also suggest the following:

- Town routes and Regional routes **MUST** be placed together in a common facility. The provision to transfer from one public service to another is key, and this facility would be one of two major transit hubs in Vail for these types of transfers.

- The ideal location for a combined facility would be along the Frontage Road to assist Vail and ECO Transit in maintaining their schedules.
- Charters, Auto Drop-off, and Hotel shuttles need not be part of the transit facility. While it would be ideal to allow these providers to make use of transit amenities provided by the public services, it is by no means critical for these users to be part of a facility serving the public routes. In fact, these three providers do not even need to be together. Users of these three services are primarily interested in accessing Lionshead, not transferring to another service.

## CANDIDATE SITES AND THEIR ASSESSMENT

A total of four sites in Lionshead have been considered for a Transit Center as well as the Ever Vail area. One of the sites, the Lionshead Parking Structure, is considered twice, once as a retrofit of the existing structure and once as a facility integrated into a complete redevelopment of the Parking Structure as a mixed-use facility. The candidate locations are listed below:

- LH Structure – Existing to be Retrofitted
- LH Structure – Element of redevelopment
- E. LH Circle Mall area
- Concert Hall Plaza
- North Day Lot
- Ever Vail Area

In evaluating the sites, the characterization factors listed previously were considered. A summary of the each site' assessment is as follows:

- Ever Vail – This location is too far from the LH core area and gondola and will not serve Lionshead. However, there is enough density being planned in the specific area (including public parking and a new lift) such that it makes sense to establish a bus stop capable of accommodating two or three vehicles as well as hotel shuttles and auto drop-off activity given the mountain portal planned here. Further, this area has been identified as a potential candidate to accommodate charter buses to load and unload riders if the necessary skier services are provided here. Potentially, this site can serve one of the uses like Charters, but it is not a candidate to serve as THE public transit center for Lionshead.  
**Summary – Not a location for THE public Lionshead Transportation Center, but given a planned ski lift from Ever Vail, this could be an appropriate location for charter buses. Transit service shuttles and auto drop-off also need to serve the planned development. Walk distance to the Lionshead Gondola is approximately 2355 feet (nearly one-half mile).**
- Concert Hall Plaza – This area is not large enough. Significant expansion of the area would be needed to fit the appropriate number of spaces and amenities to establish this area as the Lionshead Transportation Center, even if it is just for the public services. However, there is enough space to possibly serve one of the users such as hotel shuttles or auto drop off. One other consideration is that this area serves delivery activity which can conflict with transit operations. **Summary – Not a good location for THE public Lionshead Transportation Center due**



**to its relatively small size, but this area could be appropriate for auto drop-off or hotel shuttles. Walk distance to the Gondola is approximately 910 feet.**

- Existing LH Structure (Retrofit) – This option poses numerous design and circulation challenges within the structure and how it interfaces with the Frontage Road. In addition, it also displaces valuable public parking spaces. This site is not recommended for any of the users. **Summary – Not a good solution for any transit users due to need to retrofit and the displacement of parking. Walk distance to the Gondola is approximately 1290 feet.**
- LH Structure Redevelopment – With the redevelopment and reconstruction of the Lionshead Parking Structure to include mixed use development, the opportunity would also exist to incorporate a transit center with many of the ideal characteristics. This would be a bit hidden from the public, but it would be shielded from any nearby residential uses. There are concerns with how real a redevelopment scenario might be given the current deed restrictions on the property. This is a promising scenario if the obstacles of redevelopment can be overcome and the design of the new structure can accommodate the public service program. The close proximity to the Frontage Road is also a plus. **Summary – Very good location for the Transportation Center if appropriate design elements can be incorporated into the redevelopment. Auto drop-off users and hotel shuttles may find it too far away from the Gondola. Walk distance to the Gondola is approximately 1155 feet.**
- North Day Lot – This area is centrally located to serve Lionshead and the walk distance to the Gondola is reasonable compared to the other options. Issues include developing a workable site plan to accommodate the necessary transportation center as well as planned residential uses. In addition, adjacent condominium residents do not support buses utilizing this site, and mitigation will be required. It is close to the Frontage Road which is beneficial to the public services. The pedestrian overpass of I-70 is beneficial, as a facility here would also be able to serve the north side of I-70 (including the Sandstone Elementary School). **Summary – Very good location for the Transit Center. Potentially, this site may only need to serve the public services with auto drop-off users, charter buses, and hotel shuttles being served by another area. If the entire site is used for transit purposes, all of the providers can be accommodated here except for charter buses. Walk Distance from the Gondola is approximately 885 feet.**
- E. LH Circle Mall – This location currently serves as a stop for the In-Town shuttle and hotel shuttles today. The area is congested many times due to pedestrian activity walking between the parking structure and Lionshead Village and its conflict with shuttles, buses, deliveries and other general traffic. This location is away from the Frontage Road which lessens its visibility and negatively impacts the regional routes and Vail's outlying routes. Vehicles that would use this facility would experience delay due to pedestrian activity associated with the parking structure and drop-off in front of Subway. The 1997 study identified 1400 pedestrians per hour crossing East Lionshead Circle at peak time near the Mall. Pedestrian activity will only increase as Lionshead

grows. The Mall could be adequate for hotel shuttles as exists today, but shuttle activity here may be in direct conflict with planned retail along the south side of the parking structure. However, the site is relatively close to the Lionshead core including the Gondola. **Summary – Not a good solution for the public transit elements (other than the In-Town Shuttle which makes routine stops here today), but this area could be adequate for hotel shuttles as used today. Adding auto drop-off to the area as well would not be appropriate as it might create too much congestion. Walk distance to the Gondola is approximately 875 feet.**

## RECOMMENDATIONS

There are numerous options to accommodate the five transit providers. Ideally, these five should all be combined onto one site. The availability of an appropriate site in Lionshead may offer too many challenges to accomplish this. At a minimum, the following is recommended:

- Provide public transit service in either the North Day Lot or a redeveloped Lionshead Parking Structure. Either is adjacent to the Frontage Road and large enough to accommodate both providers.
- Barring combining hotel shuttles with the public transit (in either North Day or in the redeveloped parking structure), either Concert Hall Plaza or the Lionshead Mall (current operations) would be appropriate for this provider. The Town has the ability to control the hotel shuttles more-so than the autos and the charters.
- Auto drop-off activity will tend to find the closest location to the gondola regardless what accommodations are provided. The Mall and the North Day Lot has the shortest walk distance to the gondola. However, the congestion that this user would add to the Mall area is problematic. Further, this site is not apparent from the Frontage Road. The North Day Lot would be the best location for these users given a reasonable walking length, good visibility, and no conflicts with existing pedestrian activity. However, it is not critical that the auto drop-off be located with the public transit elements.
- Charter buses can be accommodated at Ever Vail. A planned lift with appropriate skier services in that area will serve these users.

The Town faces a critical decision to construct a transit center on the North Day Lot or wait (and hope) for the redevelopment of the parking structure and incorporate it into its design. If deed restrictions on the structure were removed, this would be an easy decision. But they are not and it is not clear if and when they will be. Relying on the Parking Structure to redevelop becomes a very risky venture because if it does not happen, the North Day Lot is the only other logical location for a public transit center in Lionshead. If both opportunities are lost, the Town will be forced to try and establish a less than adequate facility such as Concert Hall Plaza which would result in no better transit service than exists today. The North Day Lot is the only other reasonable opportunity, especially if the entire site can be used as depicted in the Lionshead Master Plan.

Because of this, Felsburg Holt & Ullevig suggests that the Town not let the North Day Lot slip away from consideration unless there is a guarantee that the Lionshead Parking Structure will redevelop and it will be designed to accommodate the transit facility. One possible course of action for the Town would be to establish the North Day Lot as the Lionshead Transit Center, and plan to relocate the transit center into the Parking Structure once (and if) it redevelops. At that time, auto drop-off and hotel shuttles could make use of the North Day Lot and take advantage of the amenities and access improvements left behind by the public services.

The phasing of transit service provisions ultimately depend on the disposition of the parking structure redevelopment. If the structure redevelops and the appropriate transit elements can be programmed into the plan, North Day Lot may only be needed for auto drop-off and/or shuttles. The North Day Lot is a good location for the drop-offs and shuttles. Even with a redeveloped parking structure facility, the North Day Lot can still play a major role in the Lionshead transit "picture" and provide some relief to other congested areas around the Village.