



TOWN OF WATERVILLE VALLEY NEW HAMPSHIRE

PEDESTRIAN VILLAGE REVITALIZATION STUDY

FEBRUARY 2015

PREPARED BY:



ACKNOWLEDGEMENTS

The Town of Waterville Valley Pedestrian Village Revitalization Study has been a collaboration of the Town of Waterville Valley Planning Board along with its consulting team and the generous support and assistance of many local stakeholders. The Consulting Team would like to thank the Planning Board for its thoughtful assistance during the process and would like to especially acknowledge the contribution of Wendi Rathgeber who acted as our primary contact and liaison. We would also like to thank Mark Decoteau for his assistance and helping to make Town staff available during this process.

Town of Waterville Valley, Planning Board Members	
Raymond Kucharski , Chairman	Bob Guilbert, Member
Terry Waite, Vice Chair	Cheryl Saenger, Alternate
Cyndy Piekos, Secretary	Wendi Rathgeber, Alternate
Nancy Goldston-Knight, Member	Harry Notowitz, Alternate
Kathy Chandler, Member	William Larsen , Ex Officio

We would like to acknowledge the contributions of the following individuals who helped inform our understanding of the community during the execution of this Study.

Stakeholders		
Fred Gendron	Fred Fontas	Leah Wilson
Tom Gross	Harry Notowitz	Susan Hammond
Dorothy Dibona	Gail Hannigan	Bill Cantlin
Peter Stakloza	Chris Bierbrier	Chris Sununu
Keith Sutherland	John Carpenter	Bob Fries
Matt Hesser	Jan Sterns	Chris Hodges
Jim Mayhew	Rachael Gasowski	Tom Quackenbush
Ann Whitehouse	Terry Roper	Chip Roper

And lastly, we would like to thank the hundreds of people who responded to community surveys, participated at public meeting or provided comments to us during the process. Your participation now and in the future is critical.

CONSULTANT TEAM

- **SE Group** has over 55 years of experience working with ski areas and mountain resort communities. SE Group brings broad experience in helping ski areas and their communities realize opportunities for sustainable multi-season operations, while maintaining the qualities and character of the area that are important to the community.
- **VHB** has offered integrated transportation, land development, and environmental services, providing results for our clients and benefits to our communities, since the firm was founded in 1979. VHB’s business is to fulfill human needs while responsibly managing the natural resources that sustain us, enhancing those resources through our strategic planning, thoughtful design, and creative engineering projects.

PHOTO CREDITS

All photographs included were either taken by SE Group / VHB or provided to the Consulting Team for use in this Study. Special thanks to the Waterville Company for some of the marketing images.



EXPLORING WATERVILLE VALLEY IN WINTER

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- (Bound as separate documents)
- A. Existing Conditions Traffic Operations Analysis
 - B. Bike/Pedestrian Improvements Technical Report
 - C. Community Survey #1 Summary Report
 - D. Community Survey #2 Summary Report
 - E. Community Picnic Question Board Responses
 - E. Case Study Summary

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Introduction

BACKGROUND

Waterville Valley, New Hampshire is clearly a special place. While it is small in size and relatively low in population (350 persons), its setting, people and places are outsized when compared to similar communities. For nearly 190 years, Waterville Valley has been a refuge for those seeking greater connection with nature in a tranquil setting. Beginning in the 1960's with the purchase of the resort and roughly 500 acres, Tom Corcoran's master plan began the progression of the community from a remote outpost to the "town at the end of the road".

The evolution of the community over the past 30 years has resulted in some remarkable outcomes. Waterville Valley has incredible facilities such as the Waterville Valley Resort, the recreation center, Town Square, Snow's Mountain, Corcoran's Pond and the golf course. It has great institutions such as Waterville Valley Academy, the Hockey Academy, the Rey Center and the Waterville Valley Athletic & Improvement Association. It has great local businesses and entrepreneurs who work hard to promote this special place to the outside world. It is surrounded by the White Mountain National Forest which creates a stunning backdrop and reinforces the importance of nature.

The Town also has a real and functioning local government. Often outside of the limelight, the people who work for and with the Town provide comprehensive municipal services (water, sewer, police, fire, recreation, etc.) and they monitor and influence the shape of future growth and development.

While the Town has had its share of successes, it also is highly influenced by the ebb and flow of its resort setting. Maintaining economic viability in the face of an evolving mountain resort industry has long been a community concern.

WHY A STUDY?

As the Waterville Valley Planning Board thought about the future it knew that greater input was needed to ensure that the objectives set forth in the 2011 Town of Waterville Valley Master Plan ("Master Plan") could be achieved. The Master Plan provides the community with guidance on how things could evolve and it helps paint a picture of what the future might look like.

Faced with this and recognizing that Waterville Valley is no longer a "one company Town", the Planning Board wanted to explore how future improvements, primarily within the remaining undeveloped lands in the center of town, could be guided in ways that promote greater pedestrian connectivity, help support economic sustainability, assure that important natural/scenic resources are protected, and foster greater opportunities for cooperative efforts between the Town and private interests.

"WATERVILLE VALLEY SEEKS TO BE A SELF-CONTAINED RESIDENTIAL FOUR-SEASON RESORT COMMUNITY WITH EXTENSIVE RECREATIONAL, EDUCATIONAL AND LEISURE AMENITIES AND ACTIVITIES, A COMMUNITY THAT PROTECTS AND ENHANCES THE GREAT NATURAL BEAUTY OF THE VALLEY WHILE PROVIDING A HIGH LEVEL OF SERVICES AND FACILITIES FOR RESIDENTS, PROPERTY OWNERS AND VISITORS."

- TOWN MASTER PLAN, SECTION 2.1.6.1

With this in mind, in early 2014 the Planning Board issued a Request for Proposals for a Pedestrian Village Revitalization Study (the "Study"). The goals and objectives for the Study include:

- **Review of transportation systems components including walking, bicycling and transit. Provide recommendations to improve or enhance these systems.**
- **Review of existing land use policies including such things as parking, lighting and signage and provide recommendations to promote business vitality and enhance community access to recreation and amenities.**
- **Conduct the study so that public input was widely heard and make engagement a key element of the effort.**

Following approval to proceed with the project at Town Meeting in the spring of 2014, SE Group and VHB (the "Consulting Team") were retained to complete this study. This report represents the culmination of this effort and is organized into five parts:

ANALYSIS - Review of existing conditions

ENGAGEMENT - Summary of stakeholder and public engagement that informed the study

OPPORTUNITIES - Review of key themes and opportunities for supporting pedestrian revitalization

RECOMMENDATIONS - Specific suggestions and guidance on policy changes and improvements

STRATEGIES - Discussion of opportunities, implementation issues, and approaches



KEY PLACES AND ORGANIZATIONS

Waterville Valley has many exceptional facilities and community institutions that help make it such a unique and special place. Some of the most important of these include:

- The **Waterville Valley Resort** owns and operates the ski area facilities located north of Town off Tripoli Road. In addition, the Resort also owns Town Square, Snow's Mountain, the Conference Center and operates the transit system in partnership with the Waterville Valley Resort Association and the Town.
- **Town Square** - the commercial center of the Town which includes lodging units as well as numerous shops, restaurants, private offices, and the post office.
- Major Lodges including the **Golden Eagle Lodge, Snowy Owl Inn, Black Bear Lodge, Silver Fox, and Valley Inn.**
- The **Waterville Valley Conference Center** on Packard's Road which provides conference space for weddings and events.
- The **Waterville Valley Athletic Center** is semi-private but is available to lodge guests through a pass program. This facility includes indoor pools, hot tubs, tennis courts, the Coyote Grill, fitness rooms and rentals.
- The **Curious George Cottage/Rey Center** - The cottage is located next to the school/WV Recreation Center. The Rey Center (named after the author of the Curious George books, Margaret Rey, a former resident of Waterville Valley), had been at the Cottage, but moved to Town Square to get more exposure. The Rey Center focuses on innovative science and literacy programs.
- At the north end of town are **Snow's Mountain** and the **Waterville Academy** or **BBTS** (Black and Blue Trail Smasher). BBTS has about 500 members and great facilities located off Boulder Path Road at the foot of Snow's Mountain. BBTS recently announced they would be having some year-round students and expanding facilities for more indoor space. The Waterville Valley Resort operates a lift at Snow's Mountain

which is used during the summer for rides, including mountain bikers.

- The **Waterville Elementary School** provides K-8 educational services to the residents and tuition paying non-resident students of the Town. This includes a full curriculum (math, science, literacy, music, art and physical education).
- The **Waterville Valley Recreation Center** is located adjacent to the Elementary School, this is the home of the Recreation Department. Through this facility and outdoor programming it provides locals and visitors with an array of recreational offerings.
- The **Waterville Valley Resort Association** consists of representatives from most of the active lodging establishments, restaurants, Waterville Valley Resort, and other businesses in town. In addition to conducting marketing efforts, the association participates in financing the transit system.
- The **Waterville Company** controls much of the undeveloped lands in and around Town Square (i.e. Town Core) and is an active developer in the community. The Waterville Company was founded by Tom Corcoran.
- The **Waterville Valley Athletic & Improvement Association (WVAIA)** is a volunteer led organization that oversees the management and maintenance of the trail network outside of the National Forest.
- The **"Silver Streaks"** are a volunteer organization of active elders which sponsors social activities and camaraderie.



THE MANY FACES OF MOBILITY IN WATERVILLE VALLEY



PATTERN

As a planned community, the Town of Waterville Valley has benefitted from having a relatively specific land use pattern that reinforces some very strong village-oriented planning paradigms.

- The “center” of the community is associated with the areas in and around Valley Road and Packard’s Road encompassing the Village Core/Commercial district within the Town Zoning. Current zoning within the Town is identified on the figure to the left.
- To the south of the Village Core is predominately high density residential development, including some accommodation/ lodge uses as well as condominiums. To the north is largely either low density residential or recreational lands.
- This organization pattern places the heart of commercial activity near the geographic center of the community. This helps make the core more accessible and convenient to those living or staying in Town.
- While the commercial core is centrally-located, the municipal core is not. The town offices, public works, public safety and recycling are on Tripoli Road and largely out of view. While some of these municipal uses benefit from this remoteness, the lack of visibility of the town government within the center of town is notably different from traditional community development patterns.
- Recreational open space is also a key element of the land use pattern. While largely focused on the golf course lands, the land use is also evident along Snow’s Brook to Corcoran’s Pond. This supports recreational connectivity within the “center” of Town.
- Views out from much of the Town are exceptional. The broad mountain landscape extends nearly 365 degrees.

31.5

TOTAL NUMBER OF ACRES OF UNDEVELOPED LAND
WITHIN THE TOWN CORE (C1) ZONING DISTRICT.

BUILT FORMS

The architectural expression within Waterville Valley is quite varied, but some forms appear more commonly than others. These forms help reinforce two vernaculars; the traditional New England Village and mountain-oriented community.

- Gabled roofs and gazebos are highlighted in numerous locations around town.
- The use of traditional, New England building materials (clapboard, standing seam roofing, stone)
- A diverse mix of housing types- single-family, duplex, townhouse, condominium and lodge



WEDDING VENUE OVERLOOKING CORCORAN'S POND



OSCEOLA LIBRARY IN WATerville VALLEY



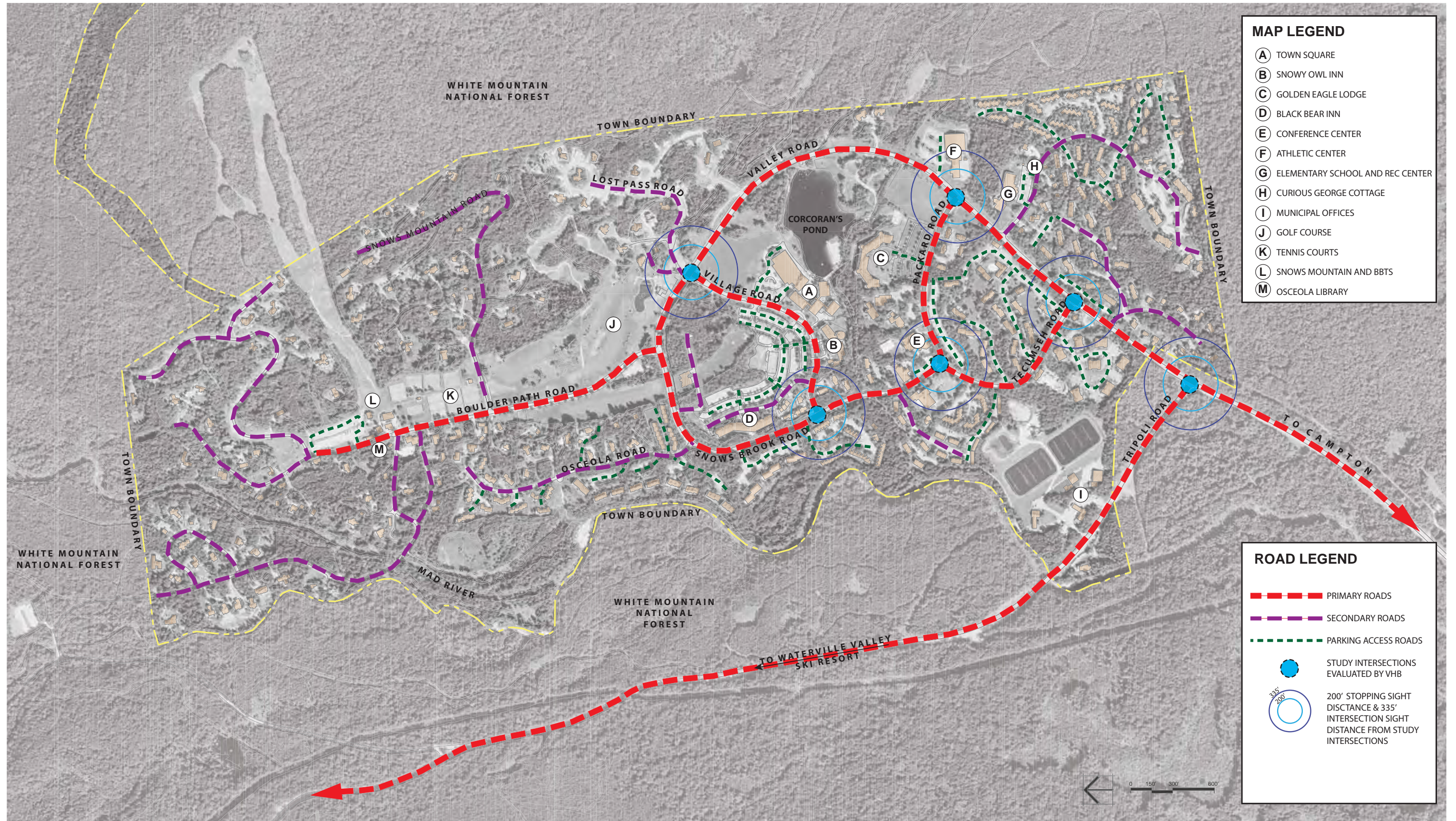
VIEW OF TOWN SQUARE AND CORCORAN'S POND



LODGING OPTIONS



RECENT CONSTRUCTION NEAR THE TOWN CORE



DESCRIPTION

Vehicles coming to and moving around within Waterville Valley are supported by a small, but largely effective road network. The road network is presented in the figure to the left and described below:

- **Route 49** is a two-lane roadway that provides the only year-round access between Waterville Valley and adjacent communities and the regional transportation system to the south. It becomes **Valley Road** as it enters the Town and supports north-south travel within the community.
- **Tripoli Road** is a two-lane road that provides secondary connectivity to the regional transportation system, albeit on a seasonal (non-winter) basis. It also connects Valley Road to the Waterville Valley Resort (i.e. **the Ski Area Road**) and serves as the arrival route for day skiers to the ski area.
- **Tecumseh Road** provides a connection between Valley Road and **Snow's Brook Road/Packard's Road**. It forms a three-way unsignalized intersection at this point.
- **Village Road** provides east-west connectivity between Valley Road and Snow's Brook Road and acts as the primary access point to the commercial center of Waterville Valley.'
- North of Valley Road, **Boulder Path Road** provides access to the Snow's Mountain area and BBTS facilities. **Osceola Road** accesses additional residential development areas.

METHODS

The Consulting Team conducted a detailed analysis of roadway conditions in February 2014. The analysis work included:

- Collecting traffic, transit and pedestrian data over the Presidents Day (2014) weekend as a "high-use" condition.
- Review of road and intersections, including levels of service and sight distances.
- Review of pedestrian crossing and use patterns.

The full results of this analysis are provided as **Appendix A**.

IDENTIFIED ISSUES

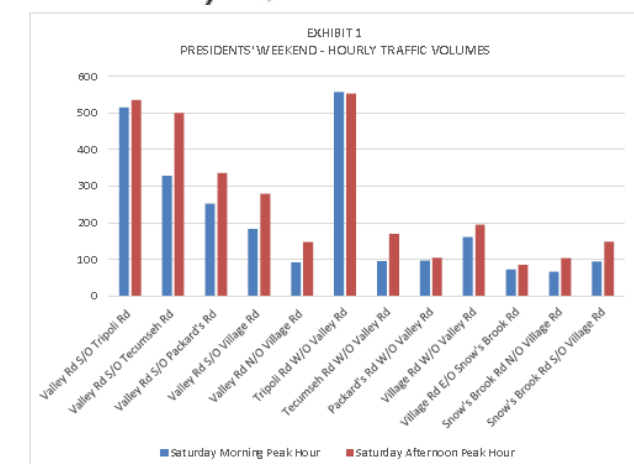
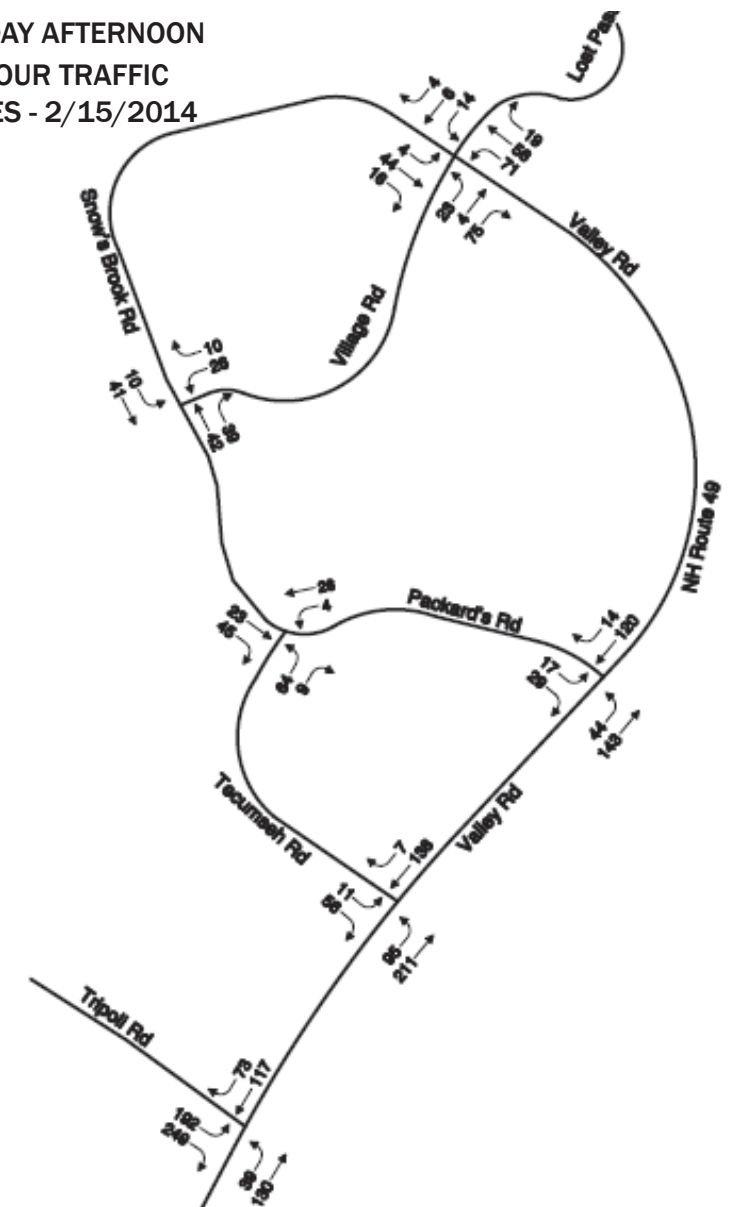
Overall the roadway analysis suggests that the road network functions very well, even during peak use (i.e. holiday weekends during winter ski season). In fact, no road operates at more than 43% of capacity during peak conditions.

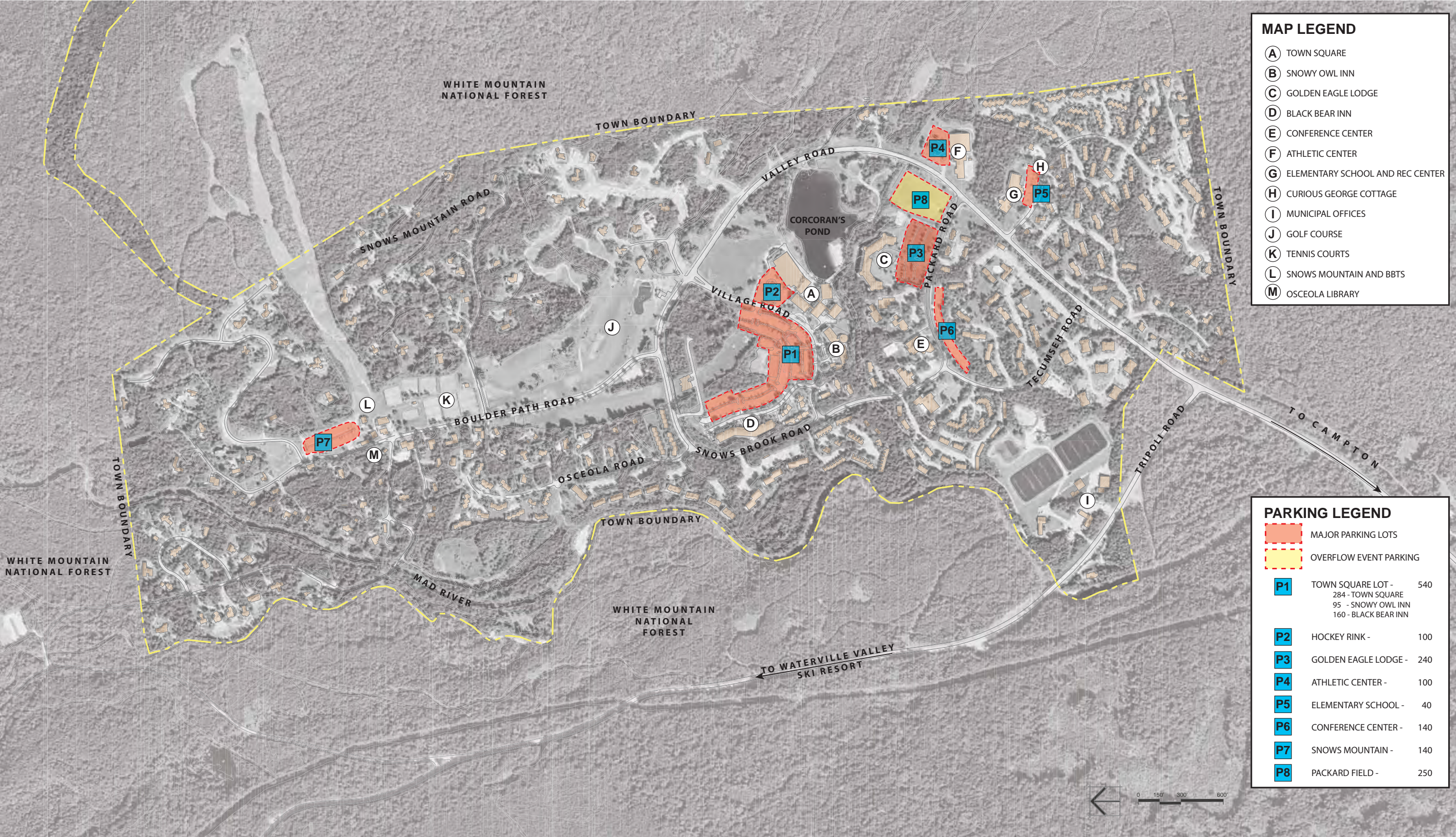
While functioning well, the engineering review completed by the Consulting Teams highlighted some issues for further consideration.

- Based on peak flows during winter ski season (2/15/2014), Valley Road and Tripoli Road, south of town, exhibit highest traffic volumes of 500-560 vehicles per hour.
- The area of highest pedestrian use was across Valley Road towards Lost Pass Road with more than 20 persons crossing per hour.
- The Level of Service (LOS) for all intersections reviewed was better than LOS B (the range is from A-F, with A representing best operating conditions), with the exception of east-bound (left) from Tripoli Road to Valley Road during the peak morning hour. This intersection operates at LOS D for this short duration.
- Stopping Sight Distances (SSD) are better than recommended minimums at all studied intersections. Two intersections have vegetation that should be trimmed to increase visibility of the intersections. The three-way intersection at Tecumseh/Packard's and Snow's Brook Road has design geometry issues which limit Intersection Sight Distance (ISD) to below the recommended threshold.

SSD (STOPPING SIGHT DISTANCE): THE RECOMMENDED DISTANCE FOR CLEAR VISIBILITY OF AN INTERSECTION TO ALLOW A VEHICLE ADEQUATE TIME TO STOP BASED ON A POSTED SPEED LIMIT.
- SEE "A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS",
AASHTO, 2011.

SATURDAY AFTERNOON
PEAK HOUR TRAFFIC
VOLUMES - 2/15/2014





LOCATION

The Consulting Team inventoried parking within Town to evaluate whether location (see figure to left) and availability pose any challenges to serving existing demand. This inventory identified seven (7) primary parking areas within Town that serve quasi-public needs.

- P1- The Town Square Lot. This parking area provides approximately 539 spaces of which 160 are allocated to the Black Bear Lodge, 95 to the Snowy Owl Inn and the remainder to Town Square. This lot is located on private land off Village Road and across the street from Town Square. This lot represents a significant percentage of the undeveloped land holdings of the Waterville Company within the Town Core.
- P2- Hockey Rink. Adjacent to the hockey rink, we estimate this lot provides approximately 100 spaces which support uses at Town Square and/or rink.
- P3- Golden Eagle Lodge . This large lot provides off Packard's Road provides around 240 spaces.
- P4- Athletic Center. This lot provides parking (about 100 spaces) for the Athletic Center and Coyote Grill and is located off Valley Road.
- P5- Elementary School/Recreation Center. About 40 spaces are available at the Elementary School site just off Valley Road.
- P6- Conference Center. The Waterville Valley Conference Center has about 140 spaces within a narrow lot along Packard's/Tecumseh Road.
- P7- Snow's Mountain and BBTS. The Snow's Mountain/BBTS lot provides about 140 spaces. Future construction at BBTS might alter the location/number of spaces.

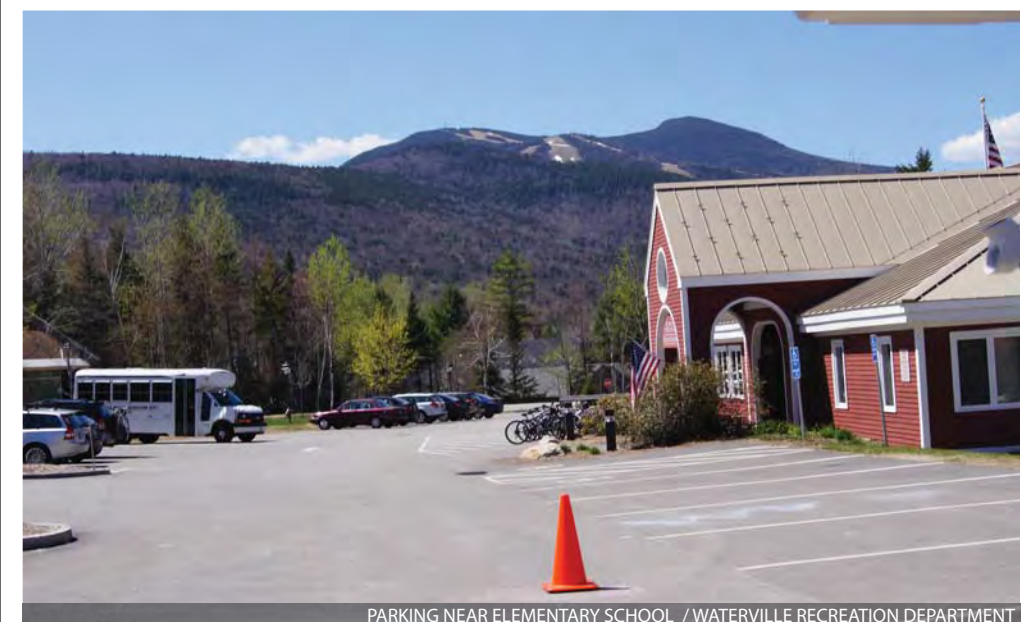
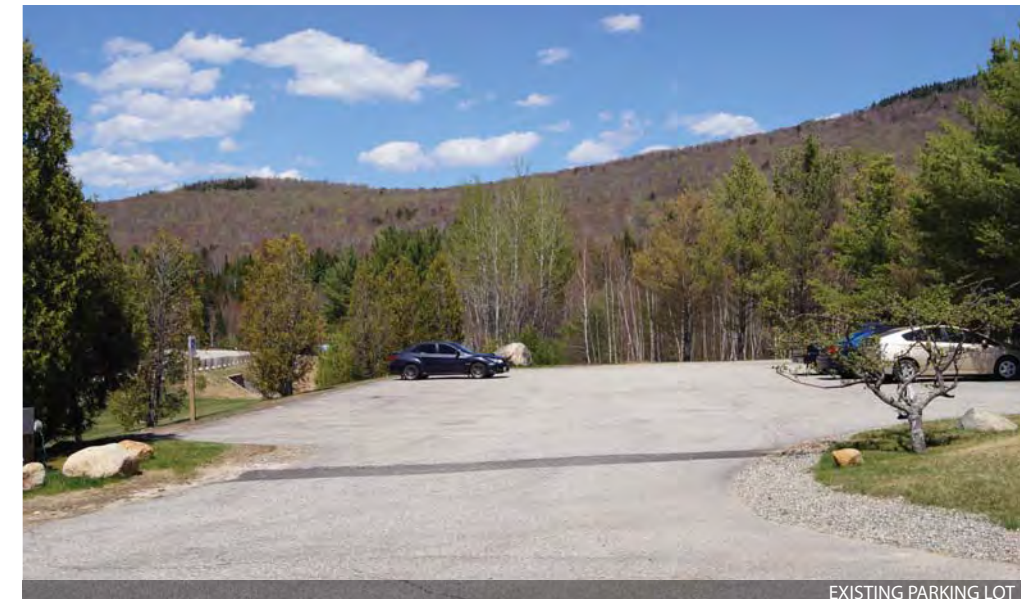
Overall, about **1,300** spaces are available in Town for "quasi-public" benefit. While these **are not** public parking facilities, they do often serve multiple uses and represent possible opportunities for shared parking. Additional, overflow (event) parking is also available on vacant lands near the town center.

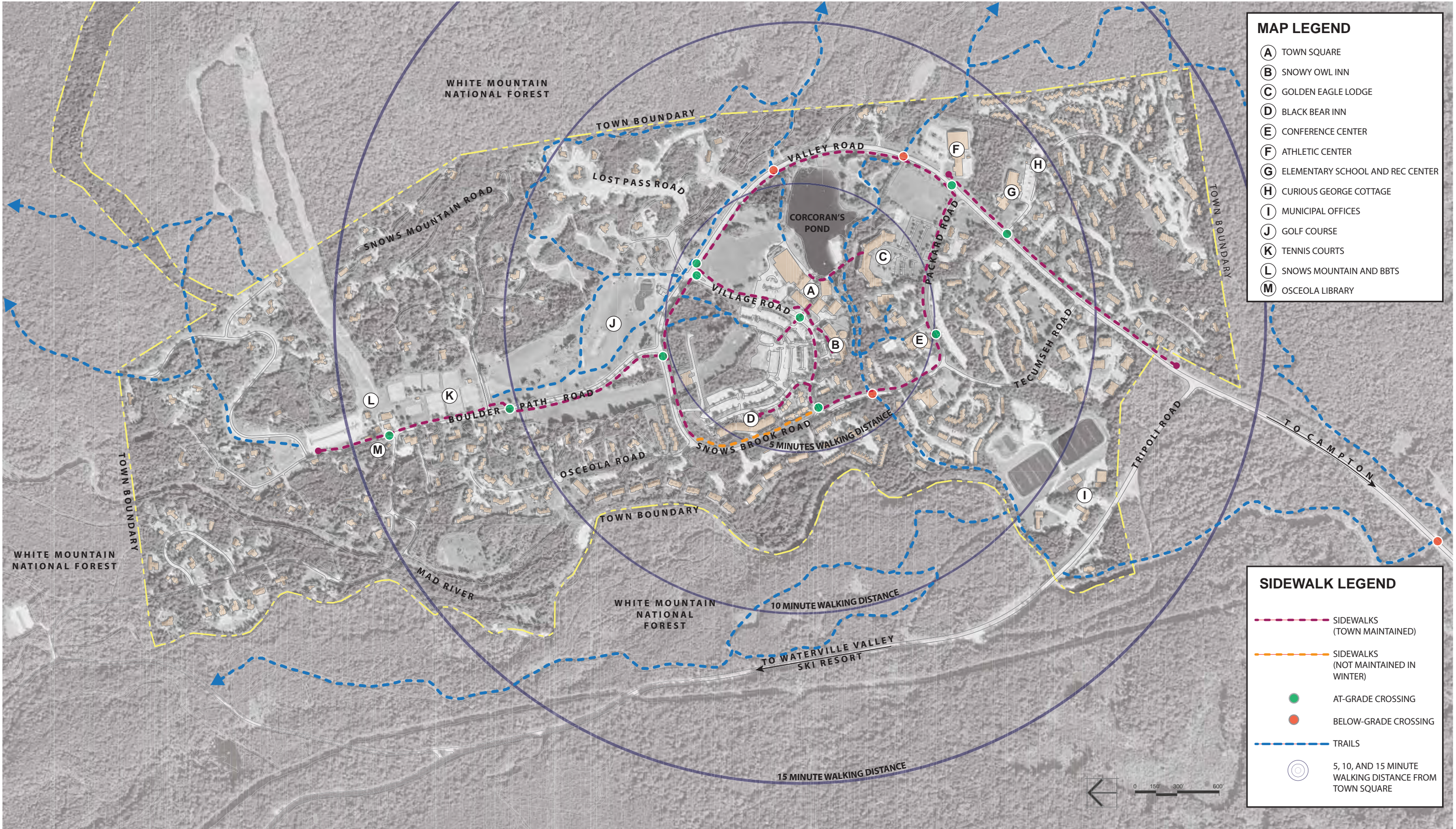
CONDITION/ISSUES

While parking areas appear well placed with consideration of uses (i.e. proximity), some have unique conditions that make these surface lots less operationally efficient.

- P1 and P2- these areas have irregular geometry and are somewhat broken up; decreasing parking efficiency and complicating snow management.
- P2 - this area is near/adjacent to service area which limits parking options and complicates deliveries.
- P5 - this parking area appears to be undersized for larger events at the Recreation Center.
- P6- this area is a narrow lot with poor parking efficiency and challenges for snow management.
- P7- The size of this area may be reduced depending on growth or expansion at BBTS. This represents

Improving or expanding these lots may create new parking spaces that have broad public benefit.





INTRODUCTION

Waterville Valley has two separate, but integrated pedestrian circulation systems that, in combination, provide a high degree of mobility into/out-of the town center. These systems address both walking and bicycling. The figure to the left highlights the key elements of the existing pedestrian circulation network.

The more “formal” system includes sidewalks with designated crosswalks and/or underpasses. The more “informal” system includes multi-use trails that weave in/around Town and ultimately connect to US Forest Service Lands trails.

The Consulting Team prepared a detailed assessment of the existing pedestrian systems associated with major roadways. This technical report is provided as **Appendix B** to this Study. The findings from this assessment are summarized below.

TOWN-WIDE ISSUES

On a town-wide basis, the Consulting Team identified a number of issues and concerns related to non-vehicular circulation.

Bike Parking: There is a general lack of secure public or private bike parking around Town. As a result, cyclists tend to lock their bikes to trees, light poles, signs, or they don’t lock them at all.

Pedestrian Ramps: Few, if any, of the existing pedestrian crossings have Americans with Disabilities Act (ADA) compliant pedestrian ramps. Deficiencies include excessive longitudinal or cross slopes on the ramps, lack of visual contrast between the ramps, the sidewalk and the road, and lack of Detectable Warning Surfaces (DWS) in the pedestrian ramps. There are even locations where there are crosswalks but no sidewalks or pedestrian ramps to receive pedestrians, and in at least one crosswalk location there is no break in the full height vertical granite curb, making that crossing completely inaccessible to people in wheelchairs.

Crosswalks: The majority of the existing crosswalks consist of parallel white painted stripes, which is a perfectly acceptable configuration. A few crosswalks include green in-fill painting and while distinctive, the Federal Highway Administration has gone on record stating that it does not contribute to lower crash or injury rates since it does not contribute to visual detection of the crossing by motorists. The crosswalk style that has been found to be most visible to motorists is the “ladder” style of white markings.

Additionally, while most of the crosswalks in Town are aligned perpendicular to the roadways, but a few are skewed, which is less desirable.



CROSSWALK AT INTERSECTION OF VALLEY ROAD AND VILLAGE ROAD

Pedestrian Signage: Few of the existing crosswalks have crossing warning signs associated with them. On low volume low speed roads this is less problematic, but on higher speed or higher volume roads, signs would help motorists identify the crossing location well in advance.

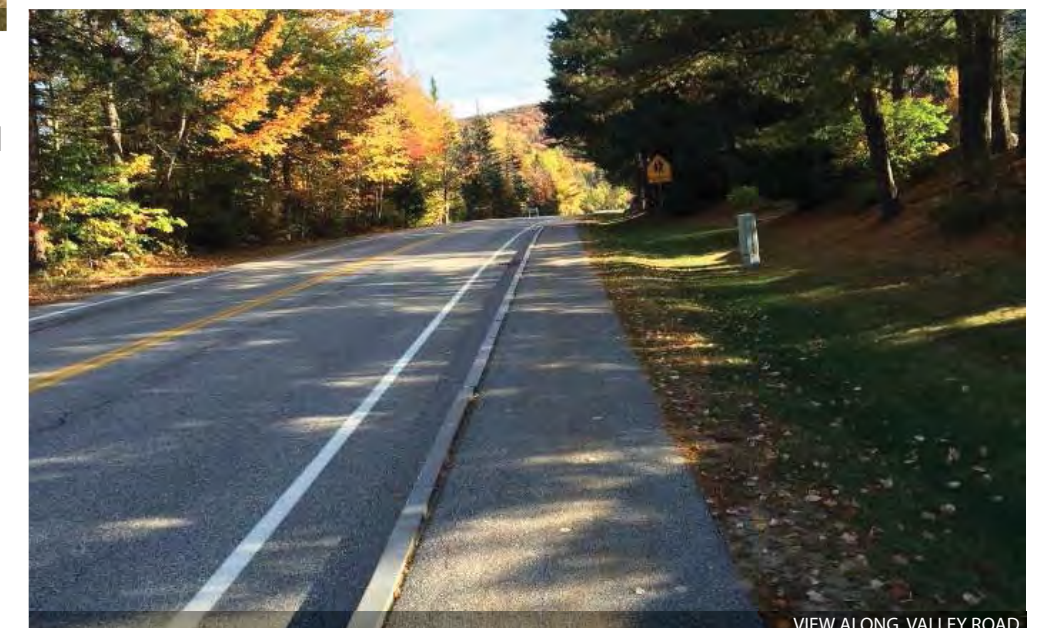
Street Lighting: Most crosswalks are at roadway intersections, some of which have street lighting. In general, the lack of lighting and reflective signs at crosswalks obviously reduces motorist awareness of the crossings. (See Page 19 for more information on street lighting)

VALLEY ROAD

Valley Road is currently posted for 30 miles per hour (MPH), but has the feel of a minor State route since there are wide setbacks, smooth geometry and no stop signs. Given these factors, the Consulting Team expects that vehicle speeds would typically exceed 30 MPH if it were not for regular police enforcement and the radar actuated speed display sign at the entrance to Town.

Current Conditions: There is an existing Town-maintained sidewalk that begins just north of the Tripoli Road intersection and continues the entire length of Valley Road to where it becomes Snows Brook Road. The sidewalk extends along the east side of Valley Road as it leads northward and it crosses to the west side of Valley Road at Packard’s Road. The majority of the sidewalk abuts vertical granite curb along the edge of Valley Road. The width is approximately 5 feet along the east side, including the curb, and as much as 10 feet along the west side, including the curb. The width of the west side sidewalk decreases to about 5 feet at the bridges that pass over ski trails and Snows Brook as it flows into Corcoran’s Pond.

Pedestrians: The existing sidewalks on Valley Road provide only the bare essential accommodations for pedestrians. While the sidewalk is continuous, it only serves one side of the road at



VIEW ALONG VALLEY ROAD

a time. The 5 foot wide curbed sections are substandard by current guidelines which state that the width of the curb does not count toward the minimum 5 foot sidewalk width. While this is a minor deficiency since pedestrian volumes are perceived to be low, the Consulting Team recommendation is that new or up-graded sidewalks meet the minimum 5 foot paved width.



WALKING ALONG VALLEY ROAD

Bicyclists: Traffic volumes and speeds are normally low on Valley Road and there is no on-street parking. Truck volumes are low, sight lines are good, and driveways and side streets are well dispersed. These factors contribute to a relatively low stress environment for experienced on-road cyclists. Those cyclists will find that Valley Road has an approximately 3 foot wide, striped paved shoulders and 11 foot travel lanes. By most guidelines, shoulders this narrow are not considered adequate for bike use, especially adjacent to vertical curbing, but most experienced cyclists are accustomed to sharing 14 feet of pavement with motor vehicles on low speed and volume roadways such as Valley Road.

Less experienced cyclists, including children and in many cases tourists, may find Valley Road intimidating to ride on due to the narrow shoulders, especially along the side of the road that is curbed. As noted by several people during this study, this results in less experienced cyclists often riding on the sidewalks along Valley Road. The result is cyclists mixing with pedestrians. Safety is a concern where the sidewalks is too narrow to accommodate



BICYCLIST HEADING OUT ONTO VALLEY ROAD

both users safely. Even the wider sidewalks should not be considered multi-use (i.e. bicycle & pedestrian) facilities because they are separated from the roadway with vertical granite curb, often a fall hazard. In addition, the existing 10 foot wide sidewalk sections are interrupted by 5 foot wide sections across the bridges.

Based on the above observations, The Consulting Team believes that the **average cyclist is not well accommodated** on Valley Road. This represents a concern and a missed opportunity as Valley Road is effectively a primary collector route for cyclists from any of the adjoining residential developments or side roads. As noted earlier, there are key destinations on Valley Road, including the elementary school, that should be accessible by bike.

TECUMSEH ROAD

While there are currently no sidewalks on Tecumseh Road, it serves numerous residential units and functions as a convenient link to Valley Road. Tecumseh Road is approximately 22 feet wide and there are no shoulder or edge line stripes. Traffic volumes and speeds are low.

Pedestrians: Based on field observations, it appears that the topography along the roadway is suitable for construction of a sidewalk on the inside of the curve (i.e. the east side of Tecumseh Road). The sidewalk could either be separated from the roadway

with a landscaped strip or constructed adjacent to the road with curbing. The final determination would likely be influenced by the availability of right-of-way, utility conflicts, public input and cost.

Any new sidewalk would need to connect to the existing sidewalk on the north side of the Tecumseh Road / Snows Brook Road / Packard's Road Intersection. It appears that the best location for a crosswalk would be at the apex of the curve; where optimal sight distance is located and since a pedestrian ramp could be built in the existing sidewalk on the north side between two private driveways.

Bicyclists: Tecumseh Road is not wide enough for bike lanes and widening for that purpose is not proposed or warranted. As a local roadway with low volumes and speeds, the expectation is that cyclists will share the road with motor vehicles.

SNOWS BROOK ROAD

Snows Brook Road has a continuous sidewalk from Tecumseh Road to Boulder Path Road. It is however, located on private property and is not maintained between Village Road and Gorwood Way. That segment is only 4 feet wide and is separated from the road by dense woods in sections. The sidewalk segments between Tecumseh Road and Village Road, and between Gorwood Way and Boulder Path Road are 5 to 6 feet wide and separated from the road by a grass strip



SNOW'S BROOK SIDEWALK

Pedestrians: The existing 4 foot wide sidewalk that is not town maintained in the winter is the primary concern on this roadway since it represents a discontinuity in the winter and it is of substandard width in the summer. The fact that it is so close to the residential units leads us to believe it is not within a Town right-of-way. The Town should explore widening the sidewalk to a 6 foot width closer to the road to support winter maintenance.

Bicyclists: Similar to Tecumseh Road, we recommend shared use of the road by bikes. The enhancements would include shared lane arrows and “Share the Road” signs. Also similar to Tecumseh Road, children and other inexperienced cyclists may still ride on the sidewalk. The Snows Brook Road may be a candidate for an 8 foot wide path if this is a strong concern.

BOULDER PATH ROAD

Boulder Path Road has an approximately 8 foot wide paved path along the golf course that appears to function well for all users. The path is well separated from the road and there are even benches for people to rest along the way. When the path reaches Snows Mountain Road and the tennis courts it transitions back to sidewalk of only 4 to 5 feet wide.

Pedestrians: Pedestrians are well accommodated along this roadway on the wide path segments. The only section of concern is the narrow section by the tennis courts. There are also ADA concerns in that area due to the steep sidewalk slope at the Snows Mountain Road intersection. The sidewalk in the area of the tennis courts does not match the width of the path by the golf course.

In addition, the crosswalk across Snows Mountain Road should be realigned to cross in front of the stop line. The existing crossing is aligned behind the stop line, which is prohibited. The existing path has two mid-block crossings of Boulder Path Road. The northern crossing is skewed and we recommend reconfiguring it to a perpendicular crossing with the appropriate crossing signs.



SIDEWALK ALONG BOULDER PATH ROAD NEAR TENNIS COURTS

Bicyclists: There is a great opportunity to complete a multi-use path along the entire length of Boulder Path Road. This path would connect to potential paths along Valley Road and Snows Brook Road. Snows Mountain is a destination for some mountain bikers and visitors and there are hiking trails that emanate from the vicinity of Cascade Ridge Road.

VILLAGE ROAD

Village Road passes through the core of the existing Town Square and is adjacent to the future development area (“Town Core”). There is a sidewalk along the southeast side of Village Road from Valley Road to the Town Square development. From Town Square to Snows Brook Road the sidewalk is located on the northwest side.



VILLAGE ROAD LOOKING TOWARDS TOWN SQUARE

Pedestrians: Town Square is a high pedestrian activity area and that is likely to only increase with further development. There is opportunity to provide on street parking from Town Square to Snows Brook Road with curbing and sidewalk on both sides; a typical condition in a village center.

At the four-way intersection of Valley Road, Village Road and Lost Pass Road there are two crosswalks across Valley Road, one north and one south of the intersection; neither of which connect to sidewalks on the Lost Pass Road side of the intersection. In the near-term a short sidewalk should be constructed from the northern crosswalk to the golf course parking lots since it is a likely destination serving pedestrians heading to Lost Pass Road.

Bicyclists: Bicyclists presently share the road within the village center area. This would likely continue as the expectation is that traffic volumes will remain slow through this segment. Inexperienced cyclists should be encouraged by signing to walk their bikes on the sidewalks through the village section.

PACKARD’S ROAD

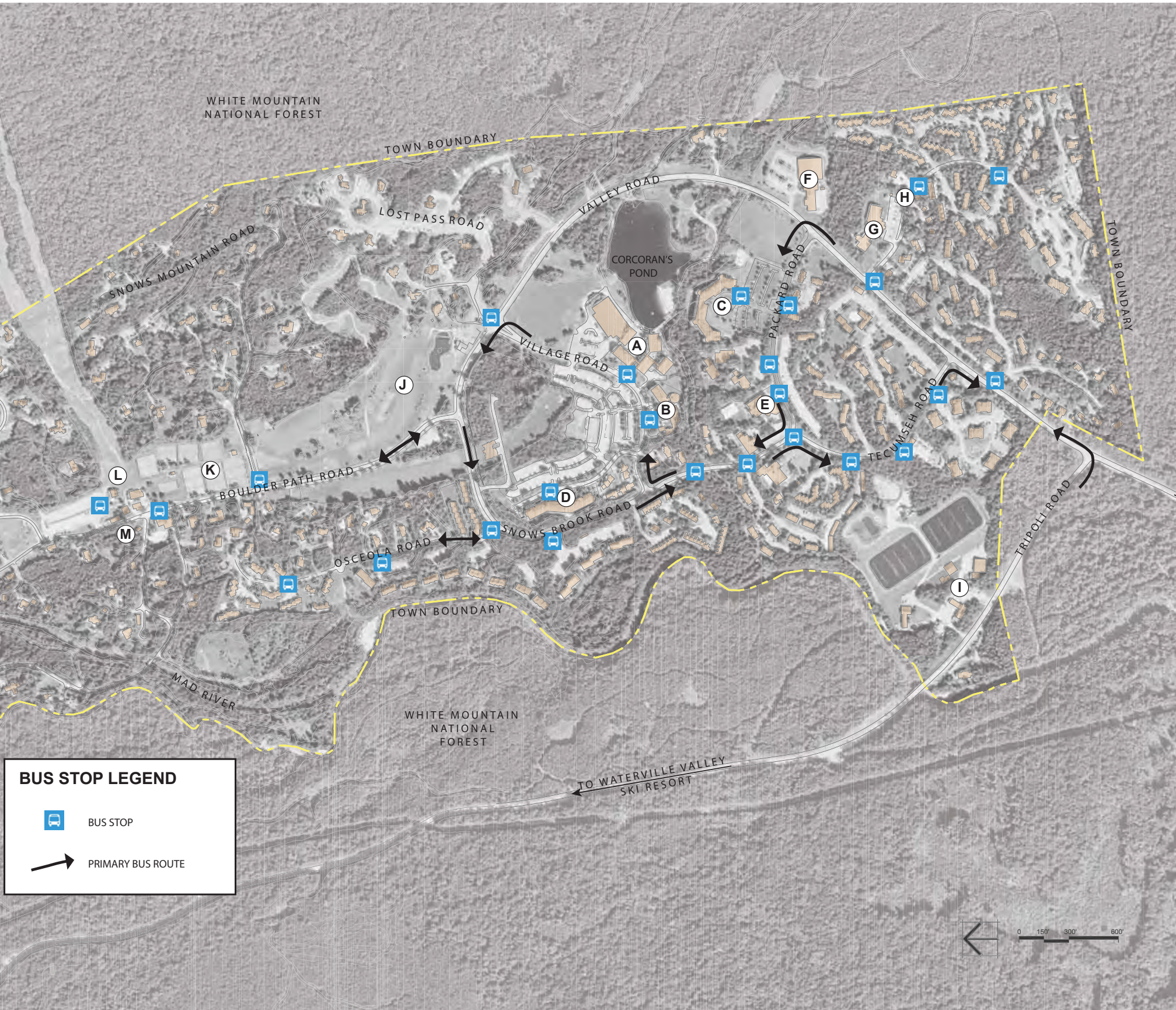
Packard’s Road has a continuous sidewalk that abuts the road along the north side from Tecumseh Road to Valley Road. Packard’s Road is a low volume and low speed internal roadway that has residential development on the south side and commercial development on the north side.

Pedestrians: Pedestrians are currently well served by the sidewalk on the north side of Packard’s Road, but a formal crossing from the development on the south side should be considered. An informal woods trail passes north-south near the Golden Eagle Inn and there is an opportunity to create a formal connection to that trail from the pedestrian way on Packard’s Road, including wayfinding signage and a trailhead.

Bicyclists: Bikes should be accommodated on Packard’s Road similar to other internal roadways.

SNOWS BROOK TRAIL

One of the trails that passes through the heart of the existing development is the trail that passes along the south side of Snows Brook from Corcoran’s Pond to Snows Brook Road, which it passes under on its way toward the National Forest. There is also a walking trail that follows the east side of Snows Brook to where it once crossed the brook. The former crossing was a footbridge that was destroyed by flooding.



CURRENT SERVICES

The Waterville Valley Resort currently operates a free-to-use private transit system linking the resort to various locations within Town. The Town provides some financial contribution to this operations. The system runs year-round, with non-winter services consisting of a loop within Town limits.

The transit fleet includes a fleet of 5 vehicles ranging from shuttles to repurposed school buses. The capacity of each bus is generally about 35-40 persons. The fleet does not have integrated bike racks on the buses. The fleet also includes a trolley for service to/from the resort parking lot to the ski area base facilities.

Ridership data has not been routinely collected, but according to the Waterville Valley Resort, a study completed in 2000 suggested a seasonal (winter) ridership of around 85,000. This likely fluctuates greatly with skier visitation. Assuming 150,000 annual skier visits, the seasonal ridership would likely be in the 40-50% range (75,000+/-). On peak days, the volume of riders tends to overwhelm operations, particularly on holiday weekends.

The current system has 27 “bus stops” in Town that are shown on the figure to the left. The Waterville Valley Resort believes this is too many stops, but are striving for convenience. Bus stops generally consist of irregularly designed signs with no amenities or accommodations (seating, shelter, bike racks, etc.).



THE BUS STOPPED NEAR TOWN SQUARE ON VILLAGE ROAD

ISSUES

While the transit system is critical to the operations of the resort and is an amenity to those visiting or staying in Waterville Valley, the indication is that the service is under-utilized by locals. Issues noted from our review include:

- Too many stops and informal stops which are confusing to riders
- Lack of a clear route map and schedule with appropriate signage
- No defined shelter spaces and lack of integration of stops with other elements of the pedestrian network (sidewalks, crosswalks)
- Lack of lighting at stops
- Inconsistent signage identifying bus stops
- Confusion on transit system “branding” - is this a resort system or a community system?
- Lack of bike racks on buses
- Buses are unattractive and uncomfortable
- Downloading (debarking) can take a long time. Cannot consistently exit from both front and rear doors.
- Want to make the system as “personal” as possible, but trip can take 20+ minutes.

The Consulting Team has evaluated the travel times for the stops and believes that the trip duration is much greater than 20 minutes. A dual system (express/lodge) might help spread out the ridership and could reduce trip durations. An express route would connect only to a few pre-determined stops that are positioned to be as highly accessible as possible. A lodge route would frequent more stops (many of the lodges for example), but provide a more “personal” touch.

These options will be explored later in the Study (See Page 40).

75,000

APPROXIMATE NUMBER OF TRANSIT SYSTEM RIDERS
DURING AN AVERAGE SKI SEASON



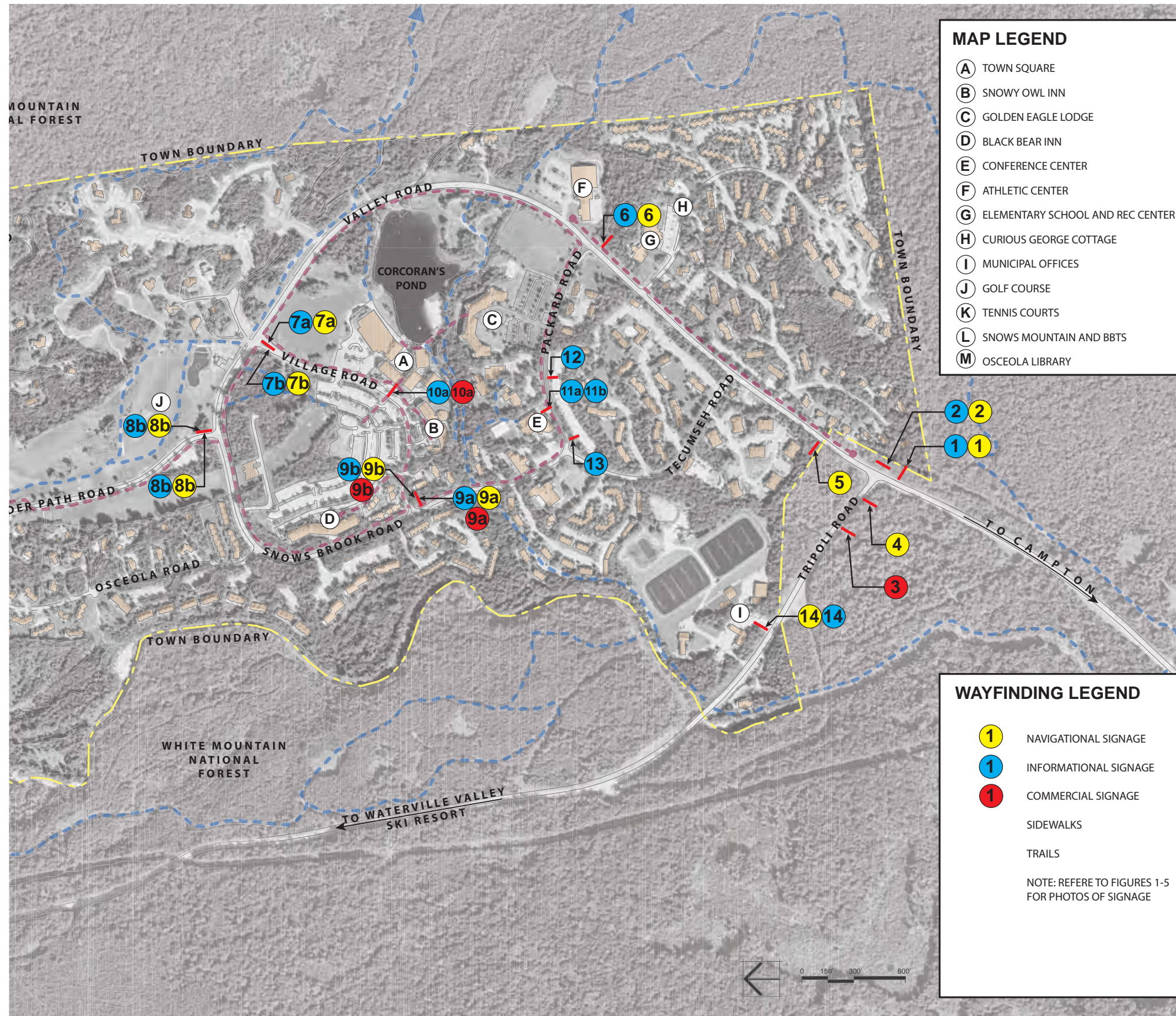
BUS STOP NEAR CONFERENCE CENTER



TYPICAL BUS/SHUTTLE SIGN



BUS STOP ALONG VILLAGE ROAD NEAR TOWN SQUARE



WHAT IS SIGNAGE AND WAYFINDING?

Places like Waterville Valley attract visitors and guests. How those guests know where to go and the messages that support that information is the role of signage and wayfinding. Information and direction can be clearly communicated in ways that make moving around easy and support area businesses and attractions. As stated in *"Your Town: A Destination"* by Brooks and Forman, "Real men don't ask for directions"! A good signage and wayfinding system can make it so they don't need to! A good system helps connect the people with the places they want to see, visit and experience.

CURRENT SYSTEM

The signage and wayfinding system present in Waterville Valley today has basically evolved over the years without significant comprehensive planning or design standards. While the visual motifs expressed in the existing signage have some common elements (use of "green", filigree form, etc.), there is a significant amount of variability; perhaps too much. Our visual inspection of major signage in Town (see Figure to the left and images to the right) highlights some of this variety.

In addition to significant variability in the design of the signage systems, wayfinding (directional) is often confusing when it is provided. More often, directional information appears to be lacking, particularly directing people to specific lodge properties. Lighting of directional signs is often limited which makes them less effective; particularly in winter months when dark comes early. Snow management in/around signs is also problematic. Infrequent and inconsistent signage for trails was also observed by the Consulting Team.

ARRIVING

One of the first signs that an arriving visitor sees as they approach Waterville Valley is south of Town on Route 49 and says "Waterville Valley - Birthplace



Analysis

Signage and Wayfinding



of Freestyle Skiing". This is an obvious nod to BBTS and its historic and storied role in developing the sport of freestyle skiing; but BBTS is not specifically mentioned. Slightly closer to Town is a "welcome" sign that, in some aspects functions as a gateway. Gateways set a tone for arriving

visitors and create a physical "sense of arrival". This welcome sign, however, does not have a real presence to it nor does it establish the look and feel of the overall signage system.

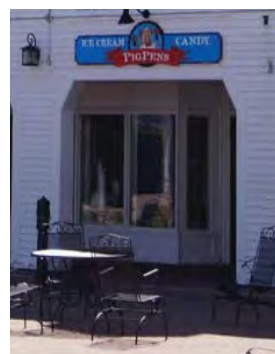
APPEARANCE

Logo use is one of the most confusing elements of the current signage system. Many signs use the community logo while others sport the Resort's logo of the crossed W and V. Perhaps symptomatic of a broader disconnect between "brands" within the community, the lack of alignment in logo use only serves to reinforce distinctions that, for visitors and guests, do not exist.

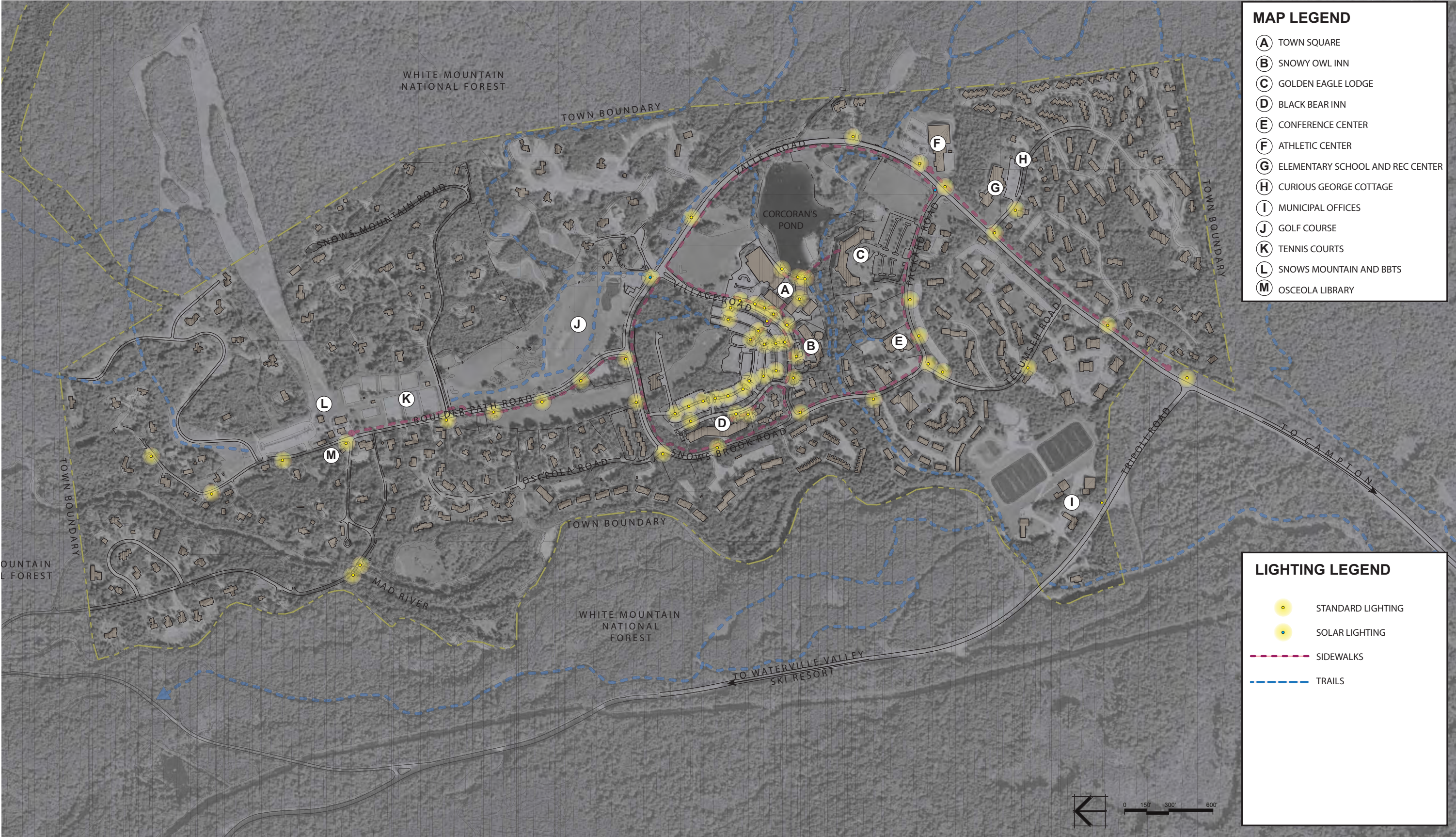
The Town Square signage is also highly varied in its appearance. One common element is the inclusion of specific businesses names within the complex. In addition to creating a lot of visual “clutter”, when a visitor passes them by at 25-30 mph, they are not able to read them. Furthermore, use of specific business names might be meaningless to a new visitor. Using broader, descriptive language about the diverse attractions (restaurants, bars, shops, etc.) within Town Square, can pique a visitor’s interest and, with direction, press them onward toward the destination.

ORIENTATION

When considering pedestrians within the Town Core it will be very important to make sure signs address their perspective. Signs mounted flush on buildings, for example, do not encourage pedestrian movement. Perpendicular signs help improve pedestrian visibility and enliven the streetscape.



TYPICAL SIGNAGE AROUND TOWN



EXISTING FACILITIES

The Consulting Team reviewed information on existing outdoor lighting provided by the Waterville Valley Public Works Department as well as made observations during our site visits. While this was not an exhaustive technical review of lighting system design and/or a capacity study, the information we reviewed helped to reinforce what we heard from many in the community; lighting levels are generally very low.

The current system is composed of two basic forms; standard exterior lighting fixtures ranging from 14 to 24 feet in height and mostly metal halide and a singular “solar” fixture near the intersection of Valley Road and Village Road. The figure to the left identifies the location of these fixtures (or luminaires).

Observations from this data include:

- The lighting of the existing parking areas in/around Town Square is generally adequate with the possible exception of pedestrian-oriented lighting connecting the lots with the Black Bear Lodge and better lighting of the existing parking lot for the Hockey Rink.
- Lighting on the approach to Town from the intersection of Route 49 and Tripoli Road shows only 5 luminaires. These fixtures are focused primarily on the roadway. No fixture was observed at the intersection of Tecumseh and Valley Road.
- Lighting in and around Town Square generally consists of shorter downcasting fixtures. Several of these fixtures were noted along Snow Brook Road and near the Conference Center. Lighting on both Packard’s Road and much of Tecumseh is limited making these areas very dark.
- Two roadway oriented lights were found off Valley Road in the vicinity of the Recreation Center and Elementary School.
- Lighting along Boulder Path Road appears to be more consistent with a spacing of about 300-350 feet between luminaires. Spacing elsewhere is often much greater and/or highly inconsistent.
- Lighting for signage is also inconsistent; some signs have them and some do not. Some are uplit using flood lights.

REGULATORY CONTEXT

The current outdoor lighting requirements outlined within the Zoning Ordinance (See Section 3.5.19) include allowing luminaires to be installed at a height of 25 feet for public roadway illumination (Section 3.5.19.5.1.2) or for sign illumination (Section 3.5.19.5.1.3). The latter provisions provide no lumen rating limitation. These standards is generally geared towards management of off-site glare and limit the directed light emission above the horizontal plane to no more than 3% of the output from the luminaires (Section 3.5.19.5).



EXAMPLES OF LIGHT FIXTURES IN TOWN



“NIGHT LIGHTING NEEDS TO BE IMPROVED ALONG THE SIDEWALKS. ‘IT’S TOO SCARY TO WALK AT NIGHT WITHOUT A FLASHLIGHT’”

- PARTICIPANT AT OPEN HOUSE