



Envisioning a Greater Keene Transportation Hub A Feasibility Study

SOUTHWEST REGION PLANNING COMMISSION

June 2020



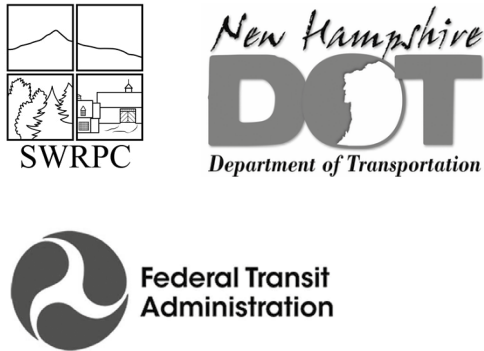
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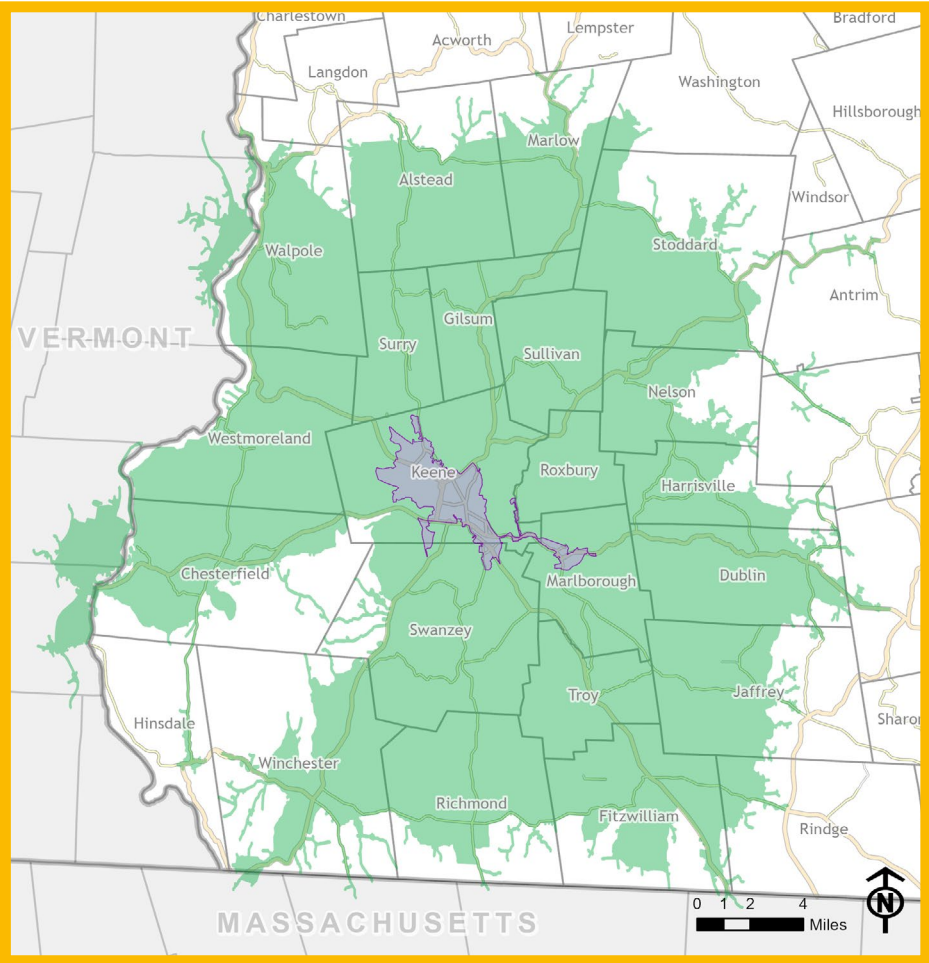
Introduction

The City of Keene serves as a regional center for employment, commerce and services for Cheshire County and Southwest New Hampshire. As the only city in the otherwise rural Monadnock Region, Keene’s daytime population grows significantly as residents from surrounding communities arrive for jobs, educational opportunities, retail activity, cultural experiences, medical appointments, and access to a whole range of institutions and services.¹

In reviewing a map of Southwest New Hampshire, it becomes readily apparent that a number of transportation facilities converge in Keene – major highways, arterial roads, trail networks, former rail beds, etc. The City has a vibrant Main Street and downtown area and serves as host to Keene State College, Antioch University New England and River Valley Community College as well as Cheshire Medical Center/ Dartmouth Hitchcock Keene – the largest employer in Cheshire County with approximately 1,500 employees. Furthermore, significant investments have been made in bicycle and pedestrian infrastructure within and emanating outside the City center. The Dillant-Hopkins Airport, a general aviation facility with the 3rd longest runway in the State, is operated by the City of Keene and is located on adjacent property in the Town of Swanzey.



Top - Main Street in downtown Keene.
Middle - Ashuelot Rail Trail on the Keene State College campus near downtown Keene.
Bottom - Passengers boarding a jet at Dillant Hopkins Airport.



As a bustling regional service center, Southwest Region Planning Commission and its partners determined that the area would benefit from a feasibility study of a conceptual inter-modal transportation center (Hub) to be located in the Greater Keene area. The idea of a Hub has been linked to Keene’s role as a regional service center, to facilitate orderly community development activities and promote smart growth principles, become a catalyst for economic activity, and serve as a cultural center for the community and the Region.

Above - The study area for the project, described as “Greater Keene,” includes two areas. The part of this Study that examined the location of a potential Transportation Hub focused on the Keene “urban cluster” (shown in purple) as defined by the U.S. Census Bureau. The service area considered for the Hub examined the area within a 30 minute drive of the urban cluster (shown in green).

The intent of this Study is to explore questions around establishing an intermodal Transportation Hub in or near Keene, NH. Although this Study concludes that there is a good case for developing a Transportation Hub, it does not recommend a specific design or location. The question of developing a Transportation Hub is complex and will be an iterative process, with the first step involving the gathering and analysis of data and information to evaluate its feasibility. As such, this Study is meant to be a resource to inform further conversation, deliberation and if warranted, implementation.

Key questions this Study is meant to address include:

Is there a need, demand or desire for more transportation choices in the Greater Keene area? If so, how important is it to have a Hub that connects these modes of transportation?

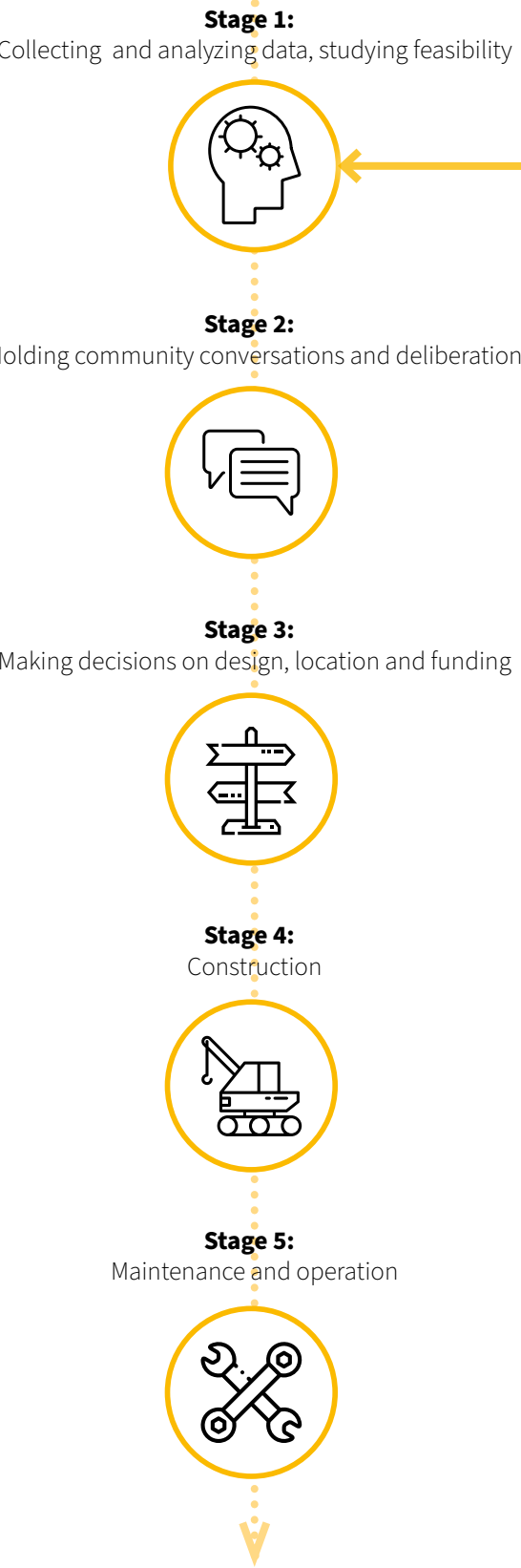
Who and how many people would benefit from a Transportation Hub?

What are the potential benefits of a Transportation Hub? Are there drawbacks or is it just a matter of determining whether the benefit is worth the cost of construction and maintenance? What are the order-of-magnitude costs of constructing a Transportation Hub?

What kinds of features or services would be appropriate for a Transportation Hub to offer?

What considerations should be given to a Transportation Hub's location?

WHERE THIS STUDY FITS IN THE HUB DEVELOPMENT PROCESS



The idea of creating a Transportation Hub in Keene is not a new idea. The existing transportation center, owned by the City of Keene, is located on Gilbo Avenue. Over the years a number of factors led to the building becoming less of a transportation center and more of rental commercial space. A major factor was a change to area intercity bus services including a change to automated ticketing and a decline in intercity bus routes. At the time of writing, the Monadnock Economic Development Corporation is in discussions with the City of Keene about potential further changes to the Gilbo Avenue area to accommodate an Arts and Culture Corridor. The existing transportation center is located in the heart of a critical area targeted for the revitalization project. In addition, the City of Keene has determined that the condition of the building has deteriorated and opportunities to re-purpose the building are limited. There are also questions as to whether the site is practical for hosting the kinds of services and activities that a Transportation Hub should offer, particularly if an expansion of services were warranted.



The existing Keene Transportation Center on the corner of Gilbo Avenue and Main Street.

Photo: Google Earth



Neighboring regional service providers in Brattleboro, VT (above right) and Greenfield, MA (right) have decided to construct Transportation Hubs as a way to improve local and regional travel and support the regional economy.

Photos: Brattleboro Area Chamber of Commerce (top right) and Peter Vanderwarker (bottom right).

Key Findings

There are eight key findings as a result of this Study. Along with these findings, we offer eight corresponding high level recommendations to help guide next steps.

The need for a Transportation Hub exists today.

Although transportation options in the area are underdeveloped, they are not insignificant. Greater Keene enjoys a local public transit service, intercity bus services, volunteer driver programs, taxi service, car rental opportunities, a fairly large community of walkers and bicyclists, a bike path system, and good sidewalks that connect to a sizeable user base. Community members currently transferring between modes lack basic amenities such as shelter, travel information and restrooms.

A Transportation Hub can't be all things to everyone.

Senior citizens, college students, commuters, urban residents, rural residents, tourists, and visitors all represent different transportation markets. Each tend to have unique transportation needs and preferences. Any decisions relating to a Hub's function and location will involve some level of prioritizing the needs and preferences of certain target audiences over others.

Location, location, location

Decisions about a Hub's location means making decisions about accessibility and convenience. Again, this means carefully thinking about the segments of population for which the Hub is designed, and giving thought to where people live, where people want to go and ensuring that the Hub is sited in a location that people and modes of transportation can access safely and conveniently.

Context matters.

The impact of a Hub on the community is contingent on a number of factors, some of which are under local control and some of which are not. Factors could include investment in walking, bicycling and transit, land use decisions, costs of energy, transportation technology, and state and federal transportation policy.

Any significant redevelopment initiatives in Greater Keene, particularly in Keene's urban core, should consider the need and potential for hosting Transportation Hub amenities such as shelter, travel information and restrooms.

This doesn't necessarily mean that there needs to be a standalone building to provide this functionality. It can be incorporated into existing buildings where space is available as long as the location is right.

Prioritize segments of the population (markets) that a Hub will serve.

This will bring focus of purpose to a Hub and improve its effectiveness and reliability for its core user base. This Study suggests prioritizing serving people that live within walking, bicycling and transit distance of a Hub first. Other important ancillary markets that could be accommodated include regional residents and visitors using intercity bus services and carless tourists or visitors.

Locate the Hub in Keene's urban core where walking, bicycling, transit, intercity bus, and vehicle access is as safe and convenient as possible.

This includes ensuring the sidewalk and bikeway network connectivity to the surrounding area is strong and that the geometrics of nearby intersections and streets can accommodate coach-type buses. It also involves positioning the Hub adjacent to land uses that create synergies like enhanced neighborhood activity, land values and safety.

Invest in and advocate for enhanced walking, bicycling, transit, and intercity bus transportation and plan for a dense mixed-use neighborhood around a Hub.

A Hub is merely a strategy to realize a transportation vision to create more transportation choices in Greater Keene. This vision aligns with local and regional goals to improve transportation affordability, reduce greenhouse gas emissions and keep the area bustling and vital.

Recommendations

Form follows function.

At the risk of stating the obvious, a Hub will need to provide value to people if people are to use it, and it will need to have enough value that it drives changes in travel behavior. The functions of the Hub need to be attractive, convenient, comfortable, and safe enough to meet these objectives.

Include basic components in the design of a Hub such as restrooms, drop off spaces, sheltered seating, long-term parking, information desks or kiosks, wi-fi, and office space.

The functionality of the Hub should also extend beyond the provision of transportation services. In our rural locale where transportation choices are underdeveloped, complementary functions housed within or adjacent to a Hub are an important consideration. For example, a Hub can support services, amenities, housing, and employment, while also generating ongoing pedestrian traffic to create a sense of safety and security in and around the Hub.

Hub rests on local support and action.

The future of a Hub is in local hands. Even if the Hub serves a regional market and provides regional benefits, a Hub needs a place to call home and will benefit from local champions. Although Keene has a modest transportation center, developing a Hub is a new idea that will require a shift in thinking, reimagining the possibilities of local and regional transportation.

Coalesce existing support from Study participants and work with them to develop a broader outreach plan to key stakeholders.

Success will rely on multi-sector support that will likely need to include all levels of government (local, state and federal), businesses, institutions, transportation providers, and interest groups. Robust public involvement and transparency during any future stage of project development will be critical (see the diagram “Where this Study fits in the Hub Development Process” on page 6). During this period, it will be important to explore partnership opportunities as well as synergies with other stakeholder’s plans.

Creative financing needed.

Transportation Hub ownership and operation will be as important as development considerations. There is no individual source of funding that is likely to finance a Hub, particularly one with substantial square footage and amenities. However, there are a number of sources of funding—including grants, loans, tax credits, and other financing mechanisms—to be explored for this purpose.

Finding a developer or development partnership with experience managing a complex combination of funding sources is the likely path forward for ensuring a successful development project.

Furthermore, serious consideration should be given to the cost of on-going operations and maintenance. There are limited ways of generating income from the provision of public transportation services alone. A Hub may require a donation of space, a substantially reduced leasing agreement and/or income from other complementary uses sharing a Hub building.

More than one way.

There can be different approaches for developing a Hub, each with its own benefits and drawbacks. An approach could involve construction of a Hub, incorporating a Hub in an existing building, or co-locating different transportation services and activities in close proximity, but not necessarily in the same building or on the same site.

Project sponsors and champions should keep an open mind as to what the possibilities for a Transportation Hub could be.

This should include considerations about potential changes to transportation services (demand or supply) as well as the spatial and site-specific needs for those activities.

A Conceptual Design

To illustrate the potential benefits of a Hub, this Study developed a conceptual design intended to help community stakeholders envision what a Hub might look like, what features it could include, and how it might fit into the context of downtown Keene.

The conceptual design envisions the Hub as a facility that accommodates both existing transportation options as well as those that may become available in the future. It also imagines a Hub that tightly integrates transportation infrastructure with other community needs.

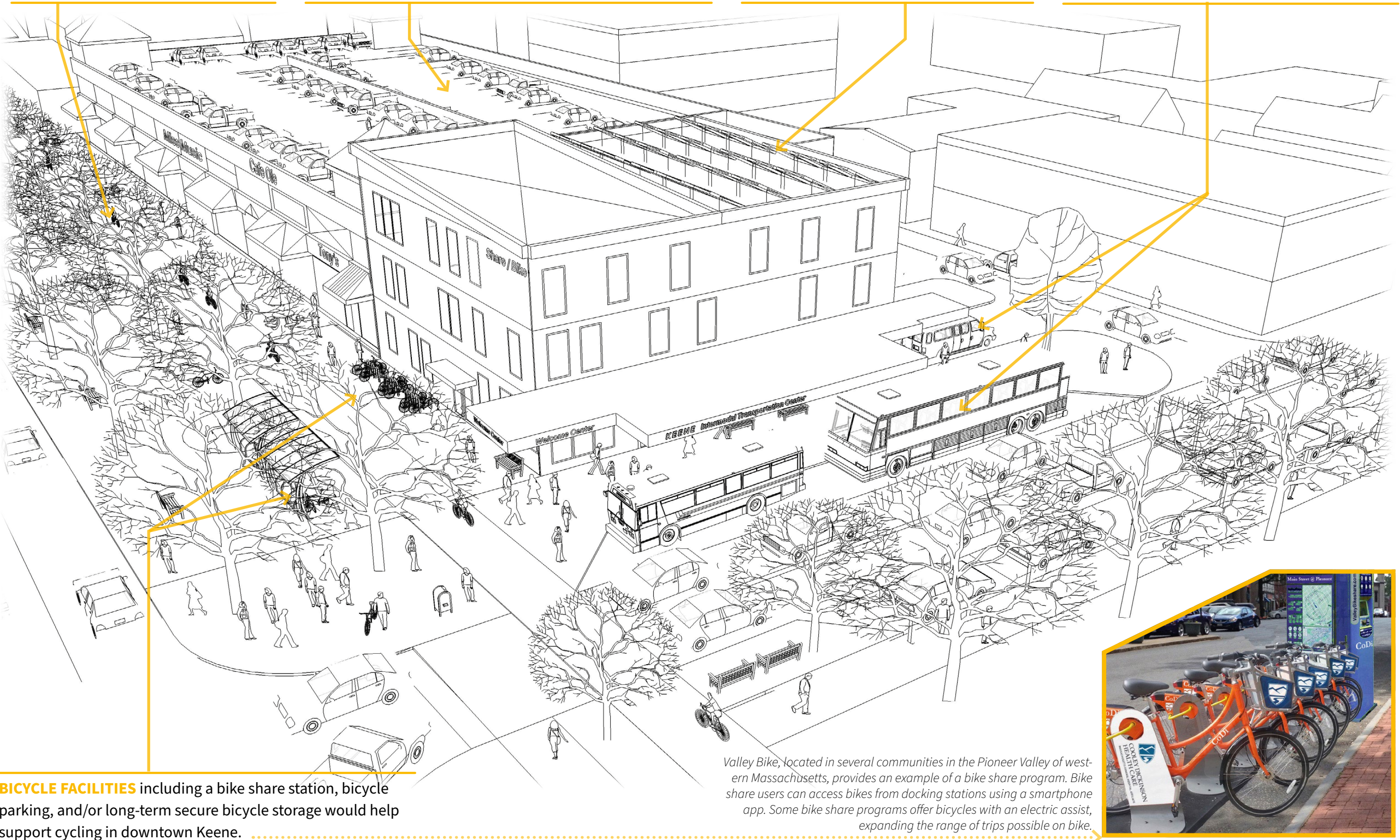
There are a number of ways in which a Transportation Hub could be incorporated into Keene’s urban core. It does not have to be a standalone building. Nor does a Transportation Hub need to be the main focal point or purpose of a building, although it should be accessible and have good visibility. Aside from a proposed parking garage, this conceptual design sets aside less floor space towards Transportation Hub services than it does for accessory uses including retail space, eating establishments, office space, public space, and housing. This helps ensure that the Hub is a bustling, safe space throughout the day and establishes a revenue stream for the facility.

WALKABLE, ACTIVE ENVIRONMENT. In this exercise, the envisioned Hub is surrounded by high quality pedestrian infrastructure including wide, tree-lined sidewalks, benches, and traffic calming measures.

A PARKING STRUCTURE is envisioned as a three story structure. One side of the ground floor would include store-fronts and shops to activate the adjacent street or plaza. The balance of the structure would provide public parking as well as opportunities for other amenities related to the Hub such as sheltered bike storage, EV charging and car rentals.

SOLAR PANELS could supply at least a portion of the Hub’s power, reducing energy costs and addressing local targets for greenhouse gas emission reductions.

CONNECTION POINT FOR INTERCITY BUS, LOCAL BUS AND PARATRANSIT. The Hub would provide a comfortable place to spend time during a layover with convenient access to free wi-fi, food and refreshments.



BICYCLE FACILITIES including a bike share station, bicycle parking, and/or long-term secure bicycle storage would help support cycling in downtown Keene.

Valley Bike, located in several communities in the Pioneer Valley of western Massachusetts, provides an example of a bike share program. Bike share users can access bikes from docking stations using a smartphone app. Some bike share programs offer bicycles with an electric assist, expanding the range of trips possible on bike.



Photo: Alta Planning + Design

Conceptual Site Plan + Interior Layout

This example of a Hub is envisioned as a three-story structure, with transportation and community facilities occupying the ground floor and office space and housing located on the upper stories.

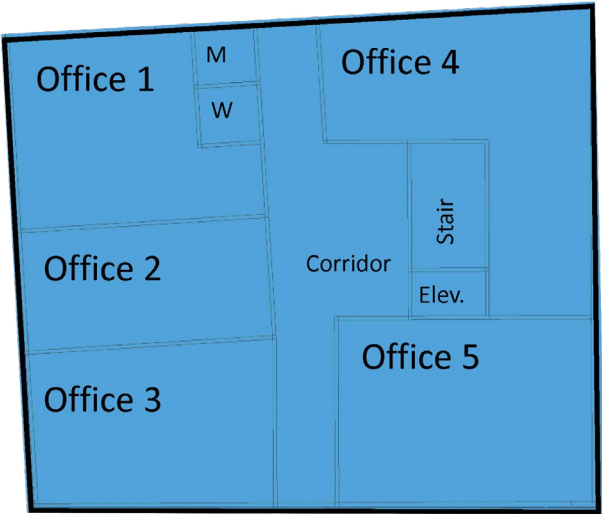
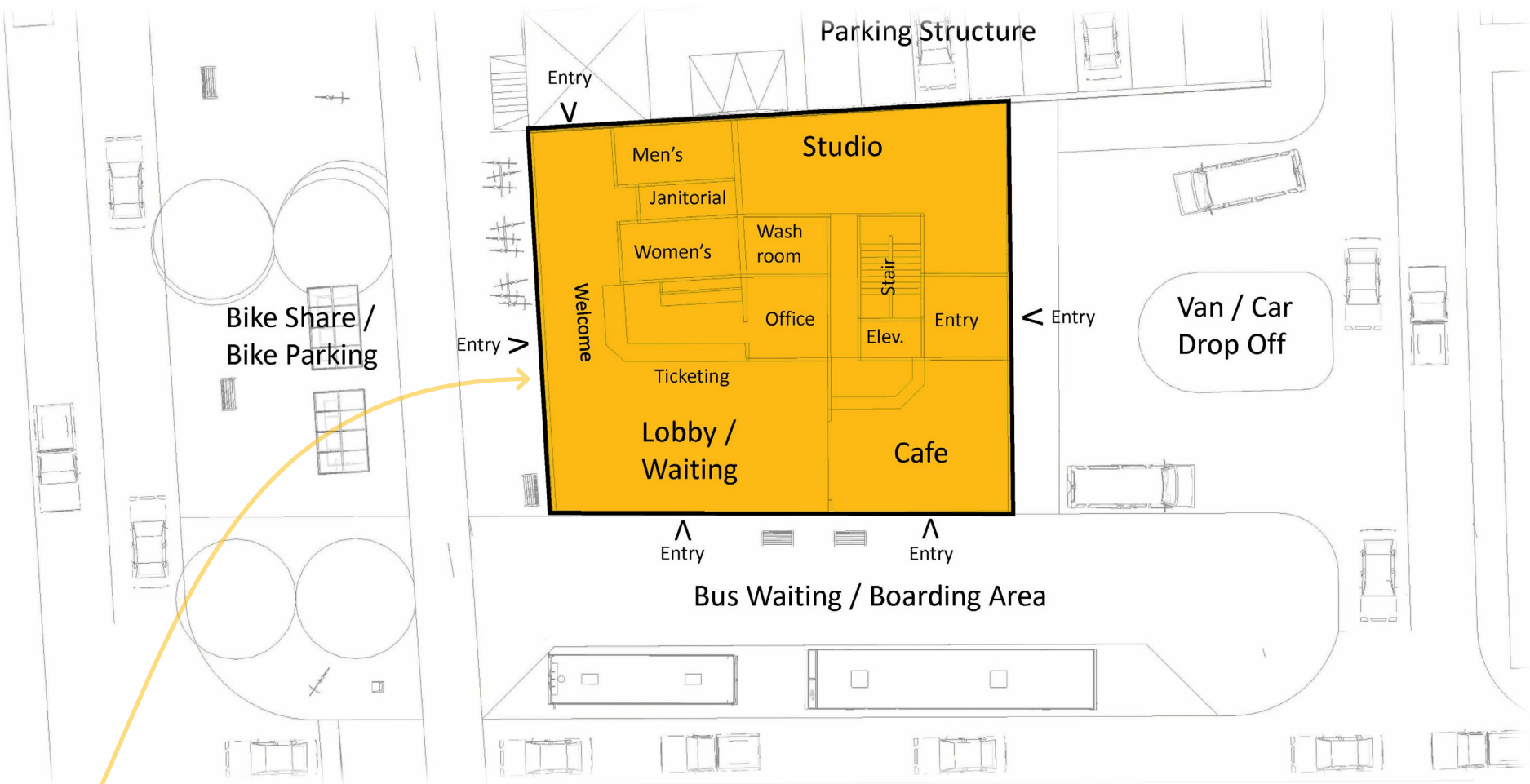
On the ground floor, co-locating community space with transportation facilities yields a number of benefits. Uses that attract foot traffic, such as a cafe or studio, can help add a sense of safety to the Hub and the surrounding environment. This can also improve the rider experience for passengers waiting to transfer between services.

Upper floor complementary uses can help generate revenue for facility maintenance and operation. Such uses also provide jobs and homes within a few steps of a the Hub’s transportation services.

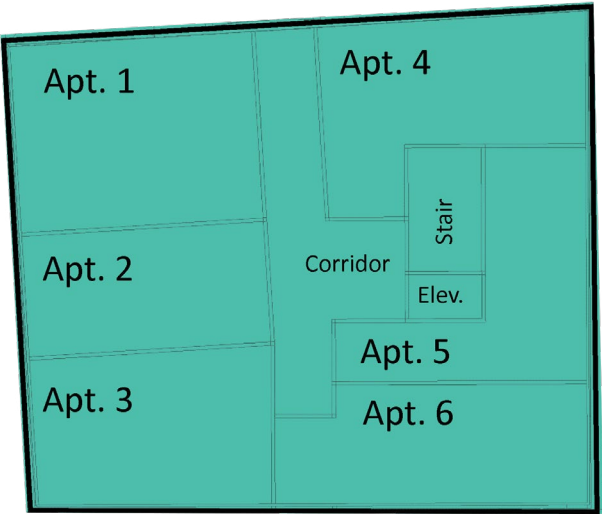


A welcome center could provide visitors with information on things to do and access to bike rentals, car rentals or whatever is needed to enjoy the downtown, the City and the Region. The Vermont Visitor Center off of I-91 in Guilford, VT (above) provides an example of offering visitors and tourists information about cultural and recreational opportunities.

Photo: easternwhitepine.org



2nd Floor



3rd Floor

Interior Space

Ground Floor	Area (square feet)
Waiting Area with Seating	1,280
Welcome and Ticket Counter	300
Ticket Counter Office	180
Bathrooms	380
Janitorial	90
Washroom	120
Café	750
Maker Space	900
Private Entry	180
Other (corridors, stairs, elevator)	680
Total	4,860

2nd Floor	Area (square feet)
Offices (x5)	3,730
Bathrooms	120
Other	1,010
Total	4,860

3rd Floor	Area (square feet)
Apartments (x6)	4,060
Other	800
Total	4,860



Conceptual Cost Estimate

While much of this Study focuses on decisions about the preferred general location, building and site programming and the overall conceptual design, the cost of a Hub is also considered. Information relating to the cost of the project would be a key element in moving the project forward. As consultant to this Study, Stevens & Associates developed an order-of-magnitude opinion of cost based on the conceptual design. Considering the conceptual nature of the design, cost information does not include exact materials, sizes or counts but rather uses generic square foot costs for each component.

It's important to note that costs are only one side of the equation. A Transportation Hub coupled with a strong investment in walking and bicycling infrastructure and transit service has the potential to yield significant savings for residents

and workers in close proximity to Keene's downtown. How? Nation-wide, transportation is the second most expensive household expense after housing, averaging \$9,800 per year per household with 92% of that cost coming from owning multiple vehicles. An average household simply reducing ownership to one vehicle (and relying more on walking, bicycling and transit to get to destinations) could reduce household transportation expenses by 44%--a dramatic economic benefit for most households. Making this kind of lifestyle change is often possible for people that live or work within walking or bicycling distance (1 to 2 miles) of important destinations including Transportation Hubs that can connect people to destinations much farther away.²

Conceptual construction cost estimates can be broken down approximately as follows.

Hub building

\$5,250,000

Parking structure

\$9,975,000

Site areas

\$1,500,000



Estimate Calculations

HUB BUILDING (64' X 80')	Area	Unit	Unit Cost	Line Total	Notes
Ground Floor (ITC +)	5,120	GSF*	\$400 =	\$2,048,000	Institutional grade
Canopy	1,800	GSF	\$50 =	\$90,000	Bus, Drop-off area and welcome center
Second Floor (Office)	5,120	GSF	\$300 =	\$1,536,000	Typical office cost
Third Floor (Residential)	5,120	GSF	\$300 =	\$1,536,000	Typical residential cost
Solar Array	48	Panel	\$0 =	\$0	Assume lease with \$0 down payment
Hub Building Total				\$5,210,000	

PARKING STRUCTURE (260' X 124')	Area	Unit	Unit Cost	Line Total	Notes
Ground Floor Shops / Retail	16,120	GSF	\$300 =	\$4,836,000	Half of floor area towards bike path
Ground Floor Parking	6,000	GSF	\$50 =	\$300,000	Small areas under ramp (approx. 18 cars)
1st Ramp and Second Level Parking	32,240	GSF	\$75 =	\$2,418,000	Approx. 100 cars
2nd Ramp and Third Level Parking	32,240	GSF	\$75 =	\$2,418,000	Approx. 100 cars
Parking Structure Total				\$9,972,000	

SITE AREAS	Area	Unit	Unit Cost	Line Total	Notes
Bus Waiting / Boarding Area	6,460	SF	\$50 =	\$323,000	High quality with benches, etc.
Bike Share / Bike Parking	4,096	SF	\$60 =	\$245,760	Substantial bike parking / storage
Van / Car Drop-Off	4,560	SF	\$40 =	\$182,400	Asphalt, granite curb, concrete sidewalk
Storefront Area to bike path	3,640	SF	\$50 =	\$182,000	High quality with benches, lighting, etc.
Pedestrian Plaza	10,400	SF	\$50 =	\$520,000	High quality, benches, planting, lighting, etc.
Site Work Total				\$1,453,160	

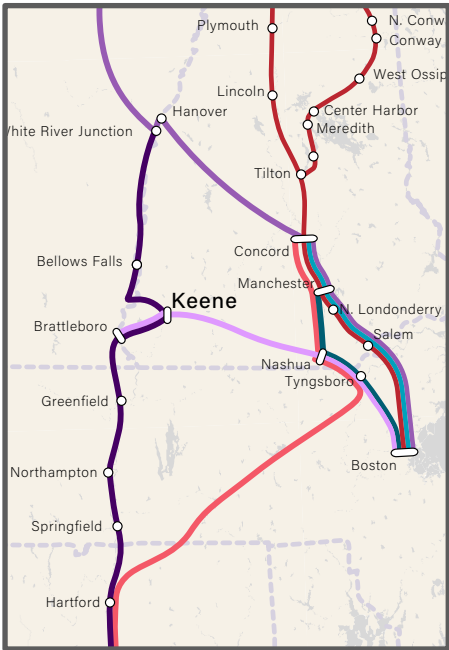
Construction/Hard Cost Total	\$16,635,160	
Soft Costs (design, permitting, etc) 20%	\$3,327,032	
GRAND TOTAL (Conceptual)	\$19,962,192	All cost estimates are listed in 2020 dollars

*GSF = gross square feet.

Background Conditions

The Existing Transportation System

Any discussion about how a Hub might fit into the transportation system of the future must include a careful examination of the transportation system that we have today. What are its strengths and weaknesses? How is it being used? How has it changed over time?



Intercity bus routes in the vicinity of Keene.

The existing Keene Transportation Center, located on the corner of Gilbo Avenue and Main Street, is in poor condition and lacks amenities important for supporting a positive rider experience.

Intercity and local bus passengers must wait outside, unsheltered from the cold or wind. According to City officials, the structure’s poor physical state and inflexible design work against making significant improvements to the building.

Keene has fewer transportation options than it did in years past. Commercial flight, passenger rail, and inter-regional bus services, available in the late 20th century, have since disappeared.

Since 2002, intercity bus service has dwindled from six daily routes and one weekend route to two daily routes and two weekend routes. No service is available between Keene and Concord, which functions as the state’s central hub for the intercity bus system.

Bus ridership has declined, both on intercity and local services.

Intercity ridership has dropped by two-thirds, from about 30 passengers per day in 2002 to just 10 in 2018. Meanwhile, ridership on the City Express—Greater Keene’s sole public transit service—dropped from an average of 145 passengers per day in 2008 to 89 passengers per day in 2016. Drops in intercity ridership is likely due to fewer available routes. Declines in local transit ridership may be attributable to declining enrollments at Keene State College as well as a change in policy to allow freshmen to park vehicles on campus.

Ridehailing services such as Uber and Lyft have yet to make much of an impact on daily transportation habits in Greater Keene.

Both Uber and Lyft include Greater Keene in their service area, but lack of drivers currently prevents ridehailing from becoming a practicable option for most people.

While some transportation options have declined in the level of use or service, others have seen major improvements.

In Greater Keene, the walking and cycling network has benefited from the recent construction of two new bicycle-pedestrian bridges over the Keene highway bypass system safely connecting Swanzey and West Keene to Keene’s urban core. Both the City of Keene and the Town of Swanzey have also adopted complete streets policies and design guidelines, demonstrating an official commitment to developing streets that accommodate all users and modes, including walking and cycling. Paratransit, medical shuttles and volunteer driver programs have expanded critical services for older adults and individuals with disabilities. Home Healthcare Hospice & Community Services (HCS) now offers a well-used bi-weekly shuttle between Keene and medical facilities in Lebanon, NH as well as a biweekly shopping shuttle designed for residents in Keene, Swanzey and Marlborough. Volunteer driver programs have grown in importance providing thousands of rides each year to medical appointments, groceries and other essential services.

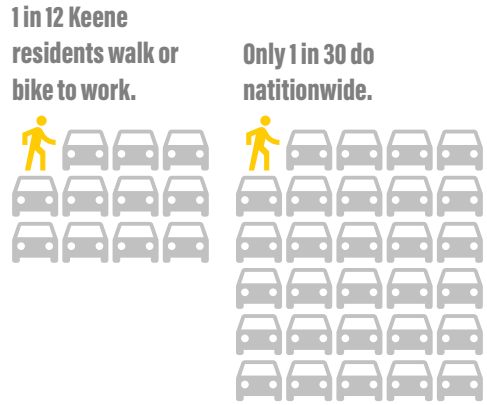
Personal cars and trucks remain the dominant mode of transportation, but there are many residents in Greater Keene who rely on other options for daily mobility needs.

For example, of the 11,788 workers over the age of 16 in Keene, 3,230 do not drive alone in a car to/from work. Of that group, about 1,000 either walk or bike to work, or about 8.5% of all workers. The same figure nationwide is 3.3%. Also noteworthy, is the increasing proportion of people that work from home and may be less reliant on personal vehicle ownership. That estimated percentage of residents working from home is 9%, 9.7% and 6.2% respectively in Keene, Marlborough and Swanzey as compared to 4.9% nationwide.³

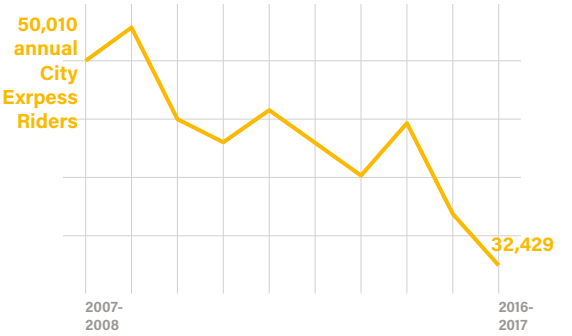


One of the goals of volunteer driver services is to avoid trip duplication and to “group” passengers wherever possible. A Hub could help volunteer driver programs better meet this goal by providing a central place to facilitate transfers of individual riders to higher capacity vehicles or facilitate larger group pickups of people with origins or destinations in downtown Keene

Photo: Community Volunteer Transportation Company.



Source: American Community Survey, 2018 5-Year Estimates

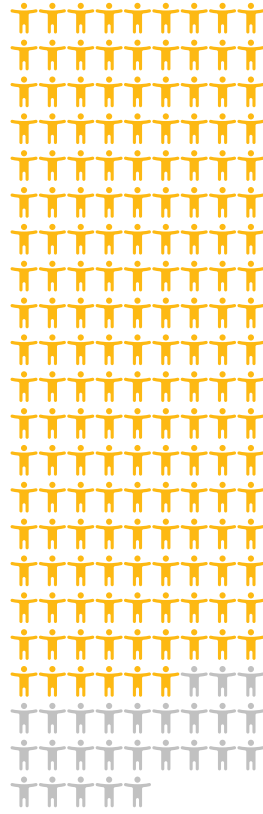


Source: Home Healthcare Hospice & Community Services

Demographics,
Housing and Economy

As our transportation system has changed over time, so too has our Region’s population and its transportation needs. Below are just a few notable examples of these shifts and how they point to a need for expanded transportation options.

 = 100 Cheshire County Residents 21 Years Old & Younger in 2018
 = 100 Fewer Residents in Same Age Group Than 10 Years Earlier



Source: American Community Survey 5-Year Estimates

Our population is growing older.

Between 2010 and 2040, the number of adults aged 65 and over is expected to nearly double. The number of those aged 85 and over is expected to nearly triple. Although many older adults will be able to continue driving safely, others will experience medical conditions that prevent them from operating a motor vehicle. This growing segment of the population will need transportation alternatives in order to access basic needs and to remain active community members.

The Region’s aging population may act as a driver of population growth within the more urbanized areas of Greater Keene.

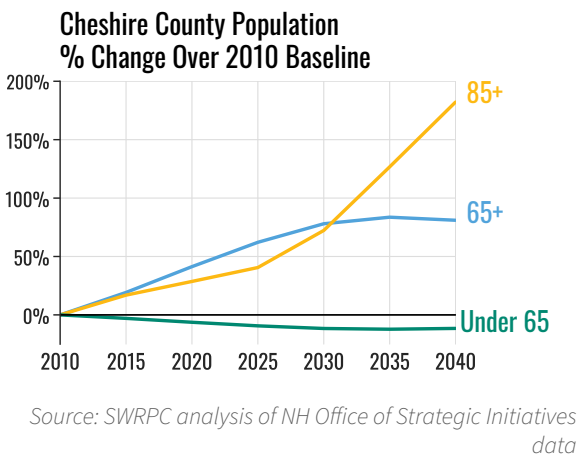
Senior and assisted living facilities are concentrated within the City. Some older adults in outlying areas may move to the City in order to be closer to medical services, community amenities and daily basic needs.

The Monadnock Region will need to attract young people to the Region in order to sustain and grow its workforce.

In 2018, Cheshire County had 2,748 fewer residents below the age of 21 than it did ten years earlier. This drop in young residents signals that workforce shortages could become more challenging in the years ahead. Sustaining a sufficient labor supply will require not only retaining the young people who already live here, but also attracting additional young residents from other parts of the country and the world. Providing transportation options that meet the needs of young people is consequently tightly linked with workforce development.

National surveys show that young people prefer to live in communities with transportation options.

For example, a survey by the American Planning Association found that 56 percent of Millennials would prefer to live in walkable communities with nearby amenities.⁵ A Rockefeller Foundation/Transportation for America survey of 18-34 year-olds found that 80 percent said that being able to “live in a place where I don’t need to rely on a car to get around” is important.⁶



Transportation costs continue to burden many households in the Monadnock Region.

According to the Center for Neighborhood Technology, a typical household in Cheshire County spends about \$1,156 per month on costs associated with auto ownership, about a quarter of total household income.⁷ Lower income households often spend a significantly higher proportion of their income on auto-related expenses. Supporting transportation alternatives such as walking, biking, carsharing, and public transit could make these options more practicable for more Monadnock Region households, thereby freeing up cash for other priorities like food, education and social activities.

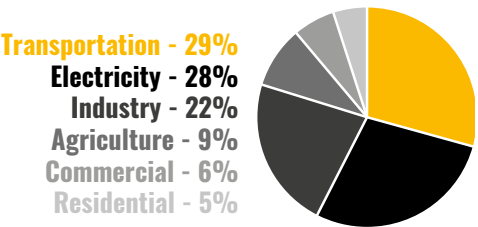
E-commerce and delivery apps reduce the need for using a personal car to shop for daily goods.

E-commerce continues to grow, occupying an increasingly significant share of the overall retail market (11.4% in Q4 of 2019, compared with 4.1% in Q4 of 2009) . A range of delivery apps are also now available for use in Greater Keene and the Monadnock Region. Instacart, for example, offers shopping and delivery service from a range of grocery stores and retailers, including Market Basket, Aldi, CVS, Price Chopper, and Target.⁸

Promoting and supporting transportation options is critical for addressing the climate crisis.

According to the EPA, transportation accounts for nearly 30% of the nation’s greenhouse gas emissions. Within the transportation sector, light-duty vehicles, such as personal cars and trucks, are the leading source of emissions.⁹ Switching to low or no-emission transportation modes like walking, biking and electric vehicles is key to slowing and halting climate change. The City of Keene has established a goal (Resolution R-2018-36) to source all transportation-related energy from renewable sources by 2050.

2017 U.S. Greenhouse Gas Emissions, by Sector



Source: U.S. Environmental Protection Agency



Public Engagement

A key goal of this Study is to start a public conversation about how Greater Keene and the Monadnock Region might benefit from expanded transportation options supported by a Hub. The Study included multiple opportunities for the public to contribute input and join the dialogue. A Project Working Group (PWG) of transportation stakeholders convened regularly over the course of this Study and provided critical guidance along the way. PWG membership included representatives from the transportation sector, municipal government, social service providers, educational institutions, state agencies, and the business community.

The project team also organized two public meetings—an open house held in the fall of 2019 and another in the winter of 2020. The first open house was held in the Cheshire County Courthouse and included “stations” for people to interact with staff, members of the PWG and the consultant team to learn about the project and provide input. The second open house was conducted at the Keene Public Library and included a week-long installation in the Library’s atrium. The installation explored how future scenarios in Greater Keene might differ depending on a number of factors, such as development patterns, gas prices and transportation policy. Each depicted scenario included a conceptual Hub design that responded to scenario factors, both in terms of scale and features.

Here a few examples of the feedback received during the course of this Study—both from open house attendees and project working group members:

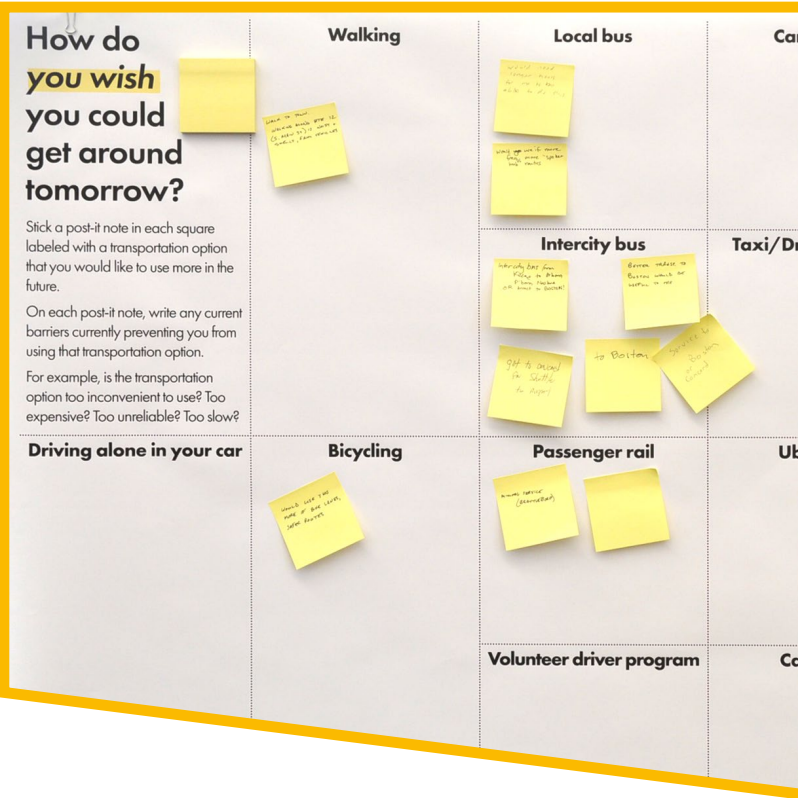
Keene needs more transportation options! Many people in our community don’t own a car because they can’t afford one or because they value a car-free lifestyle.

It could be worth exploring how Hub features might be developed incrementally over time in order to match gradual improvements in service and shifts in demand for transportation alternatives. Are there smaller steps that we can take now in order to prepare for when a more substantial Hub might be needed?

Better understanding the transportation preferences of tourists and visitors is important. A short survey could produce useful information about visitor transportation preferences and needs.

We’ll need to continue building a coalition around the project in order to make it a reality. Promotion and outreach will be necessary on an ongoing basis.

A Hub would embody the City of Keene’s climate goals. Sustainability should be front and center in discussions about why a Hub would be worth constructing.

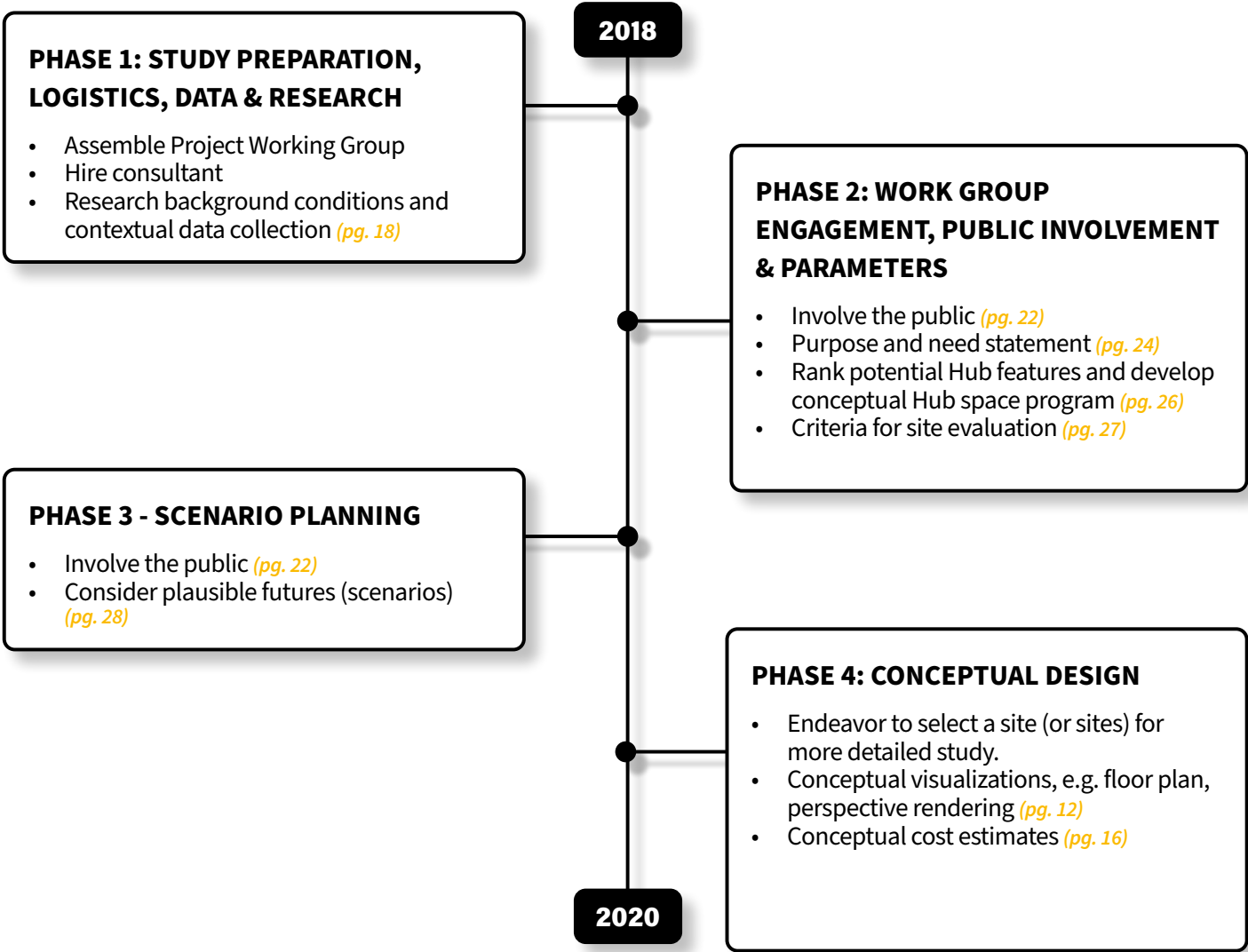




Project Process

The Study was organized into four phases with each phase representing approximately six months. The Study began in July 2018 and completed in June 2020. Each phase was supported by information collected and decisions made during the preceding phase.

Some components of the project process are described in the pages that follow. Others have already been highlighted in the preceding pages.



Purpose and Need Statement

One of the first study activities was developing a draft Purpose and Need Statement. This type of statement is often used in the development of a project as a way to broadly gather initial thoughts, develop consensus about the overall purpose of the project and determine what goals should be highlighted and addressed. An abbreviated version of the purpose and need statement appears to the right.

Through further refinement and consensus building the document can continue to serve as a statement of the communities' need for the project, and can express the overall purpose and specific goals. This statement can serve to guide future decision making just as it did for the Study. Just as importantly, the Purpose and Need Statement is often used as an important reference for follow-up activities such as grant submissions, media relations and more formal legal documents such as those related to environmental review.

In the Greater Keene Region there is a significant need to respond to changing transportation challenges and to address opportunities and concerns about the Region's future. Currently there is a need to develop a more diversified transportation system that accommodates the Region's aging population and supports efforts to retain and attract younger individuals and families to the area. Furthermore, the transportation options required to meet projected needs must be well connected and coordinated, supporting local, regional and long distance trips. In addition to responding to changing demographics and transportation preferences, there is consensus in the Greater Keene Region that our approach to transportation should be prepared to adapt to likely changes to transportation-related technology, fuels and other factors.

The purpose of a Greater Keene Intermodal Transportation Center is to meet these needs by creating an integrated hub that improves transportation by providing additional access to information, expanded options and increased connectivity between modes – enhancing mobility for all who live, work, study, and recreate in the Region. An Intermodal Transportation Center (ITC) will help accomplish three goals:

- Increase access to and support a diverse set of transportation options.
- Improve the ease of transferring between modes of transportation.
- Sustain and enhance the area's economic vitality and community vibrancy.



Determining Hub Features

The creation of a list of uses and amenities for both the Hub building and site was the next step in the overall process. This is typically referred to as “program development”.

Participants in the Study determined that several versions or levels of the program should be developed. This was partially in response to the range of ideas and goals within the Purpose and Need Statement which included both basic requirements for a Hub and aspirational goals. It was also in response to the fact that no specific site had been selected or would be selected during the course of the project. This meant that there were not specific limits to the size of the Hub and a range of options could be considered.

Three models of programs were developed. These were referred to as the Basic model, which included just the most basic elements that would be required for a functioning Hub; the Silver model, which would accommodate a much more robust facility, but still focused on transportation needs; and the Gold model, which would include additional spaces that would allow the project to accommodate other uses and address some of the community related goals expressed in the Purpose and Need Statement. Below are some of the larger/more important program elements in each group.



BASIC
▪ <i>Waiting area with seating</i> ▪ <i>Restrooms with diaper changing stations</i> ▪ <i>Janitorial facilities</i> ▪ <i>Car passenger drop-off area</i> ▪ <i>Short- and long-term car parking</i> ▪ <i>Bus circulation, parking, and loading area</i> ▪ <i>Pedestrian and ADA access</i> ▪ <i>Bike racks</i>

SILVER
▪ <i>Welcome Desk/Ticket counter</i> ▪ <i>Lockers</i> ▪ <i>Transportation information display</i> ▪ <i>Wi-fi</i> ▪ <i>Vending machines</i> ▪ <i>Sheltered bicycle storage</i> ▪ <i>Bike share station</i> ▪ <i>Outdoor community space</i> ▪ <i>Electric vehicle (EV) charging for autos</i>

GOLD
▪ <i>Showers integrated into the bathrooms</i> ▪ <i>Outdoor greenspace/ shaded seating area</i> ▪ <i>Public art</i> ▪ <i>EV charging for buses and E-bikes</i> ▪ <i>PV array</i> ▪ <i>Retail space</i> ▪ <i>Food vendors</i> ▪ <i>Housing above</i> ▪ <i>Shared work space</i>



Site Evaluation

Although this project is not recommending specific sites for a Transportation Hub at this time, location was an extremely important consideration in this Study. At a minimum, a Hub’s location has a bearing on the practicality of developing a site including the cost and availability of land, the size of available parcels and any anticipated natural or regulatory constraints on development. In addition, the Hub’s location would have a direct bearing on its usefulness to residents and visitors based on an analysis of where those potential users travel and the condition of infrastructure that supports various modes of transportation surrounding a site.

The Purpose and Need Statement provided additional guidance to help prioritize some sites over others. A “location screening tool” was developed as part of this Study to screen mock sites using these types of criteria and several mock sites were tested. An important contribution to the Study, however, is that it helped arrive at one of the fundamental findings of this Study: that a site in Keene’s urban core would make for the most appropriate location. It also provided a basis with which to embark on the next phase of the project to conduct a scenario planning analysis. The scenario planning analysis used location considerations to project the number of users a Hub was likely to attract in three different study area neighborhoods. The screening tool should also prove useful for any next steps taken after this Study, if specific parcels are identified.

Site evaluation criteria included:

- **Availability of property**
- **Capacity to accommodate building program**
- **Site suitable for intercity bus service**
- **Increase access to and diversity of transportation and ease of transferring**
- **Improve the environment and reduce environmental impact**
- **Improve access to basic necessities**
- **Sustain and enhance community vibrancy**
- **Enhance community character**
- **Site constraints and available infrastructure**
- **Planning conformity/permit feasibility**





Scenario Planning

Another important part of the project was to look at various plausible changes twenty years into the future.

Factors used to imagine changes in future conditions included:

1. **Changes to the degree of population and economic growth.**
2. **Changes to the style and location of future housing and commercial development.**
3. **Changes to transportation fuel prices.**
4. **Changes in the degree of mobility offered by local transit services.**

This exercise, known as “scenario planning,” is a procedural tool to assist in better decision-making about the future. It involves assessing how conditions are likely to change based on a range of factors that are understood to cause or drive change. Scenario planning is particularly useful when considering multiple options. It doesn’t just answer the question of whether a decision is yes or no, but helps decide which option is best. An option that appears to fail under a certain plausible future condition might be considered a deal breaker, whereas an option that stays consistently useful in all conditions might be the preferred choice.

Five distinct scenarios were developed as follows: Status quo; Transit Supportive; Transit Supportive with Strong Growth; Sprawl; and Moderate Change. Each of these was tested using 4 measures: average daily intercity boardings; transit access; bike and pedestrian access; and driving access and parking. Each scenario was tested in three neighborhoods including the Dillant-Hopkins Airport area in the Town of Swanzey, and the Marlboro Street and Gilbo Avenue/ downtown neighborhoods in the City of Keene.

The scenario planning exercise was especially important for pointing out one of the major findings of this Study, which is that context matters. For example, it was clear from the exercise that decisions about how the built environment develops over the next few years, and decisions about investments made in transportation infrastructure and services are likely to have a major bearing on the success and utility of a Transportation Hub.

Summary of Scenario Planning Assumptions

Scenarios	Factors				
	Degree of Population and Economic Growth	Style/Location of Housing & Commercial Development	Fuel Prices	Degree of Mobility from Local Transit Service	
	Status Quo	Population and economy relatively constant; Growth in population over 80.	A few housing and commercial development projects; Otherwise landscape looks similar to today.	Fuel prices remain low in real terms.	Transit services continue to operate as today.
	Transit Supportive	Population of Keene rises by 10% (to around 25,000).	Transit oriented development in and around Keene.	Fuel prices rise by 50%.	Local transit service increases: Four local routes with 30 minute headways and microtransit covering rest of area.*.....
	Transit Supportive with Strong Growth	Population of Keene rises by 30% (to about 30,000 residents of Keene).	All development in a transit-oriented design.	Fuel prices rise by 50%.	Local transit service increases: Four local routes with 30 minute headways and microtransit covering rest of area.
	Sprawl and Automobiles	No population growth in Keene over baseline; shift from center to fringes; Retail activity drops overall, replaced by online shopping.	No new development downtown; Suburban-style housing built on fringes of Keene and surrounding towns.	Fuel prices remain low and fleet changes over to electric.	City Express terminated and replaced by microtransit; Riders are almost exclusively people who cannot drive due to age, disability or income.
	Moderate Change	Population and employment in Keene increase by 10%.	Moderate increase in downtown development, plus streetscape improvements.	Moderate increase in fuel prices (15-20%).	Expansion of City Express leads to 25% ridership increase; Microtransit replaces Friendly Bus.

*Microtransit, as defined in this Study, is on-demand transportation for everyone. Microtransit systems are not restricted by an individual’s mobility needs or their ability to use fixed route transportation. Microtransit service is often enabled by transportation and communications technology to provide curb-to-curb service, corner-to-corner service, or in some cases, stop-to-stop service and it often involves the use of vehicles smaller than conventional buses.



Preliminary Design Alternatives

With the various building programs (Basic, Silver, Gold) in-hand and the decision to recommend a Hub in a downtown location, it became possible to develop graphics and related information that would begin to bring the ideas to life.

In early 2020, Stevens & Associates developed a series of sketch-level graphics to depict the three levels of building that fit well with three different scenarios. These include using the Basic building program in a scenario depicting the Sprawl and Automobiles scenario, using the Silver model with the Moderate Change scenario and using the Gold model with the Transit Supportive with Strong Growth scenario.

Based on feedback from study participants, a decision was made to better develop design and cost estimates for a Silver model that showed transit supportive growth in a downtown location. This option reflected the aspirations of the Purpose and Need Statement conducted during the Study, after determining that transit supportive growth could be a plausible future for the area. The Hub's design included an adjoining parking structure with three levels of parking and retail space as well as significant infrastructure for bicyclists and pedestrians. Study participants also recommended several additional program elements that were depicted in the Gold model including items like additional office or residential space and a community space or studio space that could help activate the ground floor and adjacent site as well as provide leasable space that could help financially support the public functions of a Hub.



Preliminary designs were developed in response to different future circumstances envisioned through the scenario planning process. A design for a minimal or “base” model (top) was designed assuming a future dominated by personal automobiles and sprawling development patterns. A design for a more comprehensive facility (bottom) was developed with the assumption the compact development patterns, policy changes and other factors would support transportation alternatives. The preferred conceptual design presented on pages 12-13 reflects a middle ground.

Funding

One of the principal findings of this Study is that there is not likely to be an individual source of funding to finance a Hub. Additional discussion about this finding is provided below in the form of a high-level funding strategy.

Funding Approach	Sample Strategy
Public Funding System Basics	Funding for transportation projects is provided by multiple departments and levels of government.
Maximize Public Investment	Create a project with multiple community benefits.
Develop a Broad Strategy	Utilize limited local and regional funds to attract maximum Federal and State investment. Incorporate multiple transportation modes, including modes potentially managed by the private sector, and community uses into the project to unlock maximum number of potential sources of funding. Attract private investment to strengthen local funding match.

Governmental Resources

Federal

- [Federal Transit Administration](#)
- [Federal Transportation Alternatives Program](#)
- [Federal Congestion Management and Air Quality Program](#)
- [Federal Funds for Regional Ten Year Plan Priority Projects](#)
- [Federal Opportunity Zone Funds](#)
- [Better Utilizing Investments to Leverage Development \(BUILD\) Program](#)
- [Northern Border Regional Commission](#)
- [Federal New Market Tax Credits](#)
- Funds from Other Federal Programs (EPA, DOE, HUD, etc.)

State

- [NH Economic Revitalization Zone Tax Credits](#)
- [NH Department of Environmental Services Brownfields Program](#)
- [NH Community Development Finance Authority Programs](#)

Local & Regional

- [Local Tax Increment Finance Districts \(NH RSA 162-K\)](#)
- County and Local Capital Improvement Funds
- [Community Revitalization Tax Incentive Program \(NH RSA 79-E\)](#)
- [Brownfield Tax Abatement Program \(NH RSA 76:19a\)](#)

Non-Governmental

Private Capital

- Opportunities for Private Development and Partnerships
- Private Donors
- Naming/Advertising Rights
- Leasable Space

Non-Profit Contributions and Fundraising

- Fundraising Campaign
- Community Foundation Funds
- [Monadnock Economic Development Corporation](#)
- Volunteerism
- In-Kind Professional Labor

Notes

1. Southwest Region Planning Commission. *Daytime Population Estimate Findings for Jaffrey, Keene, New Ipswich, Peterborough, and Swanzey*. <http://www.swrpc.org/files/data/trans/Daytime%20Population%20Estimate%20Findings.pdf>

2. Bureau of Labor Statistics, 2018 Consumer Expenditure Survey and Southwest Region Planning Commission

3. U.S. Census Bureau, American Community Survey, 2018 5-Year Estimates

4. U.S. Census Bureau American Community Survey 5-Year Estimates

5. American Planning Association. *Investing in Place: Two Generations' View on the Future of Communities: Millennials, Boomers, and New Directions for Planning and Economic Development*. 2014. Via *Millennials in Motion: Changing Travel Habits of Young Americans and the Implications for Public Policy*, U.S. PIRG Education Fund and Frontier Group. <https://uspirg.org/sites/pirg/files/reports/Millennials%20in%20Motion%20USPIRG.pdf>

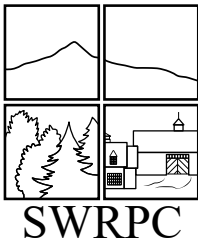
6. Global Strategy Group, *Rockefeller Millennials Survey*. 2014. Via *Millennials in Motion: Changing Travel Habits of Young Americans and the Implications for Public Policy*, U.S. PIRG Education Fund and Frontier Group. <https://uspirg.org/sites/pirg/files/reports/Millennials%20in%20Motion%20USPIRG.pdf>

7. Center for Neighborhood Technology. *Housing and Transportation Affordability Index*. <https://htaindex.cnt.org>

8. Federal Reserve Bank of St. Louis. <https://fred.stlouisfed.org/series/ECOMPCTSA>

9. U.S. Environmental Protection Agency. <https://www.epa.gov/greenvehicles/fast-facts-transportation-greenhouse-gas-emissions>

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