

Ossipee Transportation Center

Ossipee,
New Hampshire

Prepared for: **New Hampshire Department of Transportation
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Introduction

The New Hampshire Department of Transportation (NHDOT) and the Lakes Region Planning Commission (LRPC) have studied the feasibility of constructing an intermodal transportation center in the town of Ossipee as a way to increase mobility and accessibility for travelers, help meet the region’s travel demand, improve the environment and quality of life, and enhance economic development. The idea of creating a transportation center in Ossipee grew out of the *Route 16 Corridor Protection Study*, a five-year demonstration project that evaluated transportation, economic vitality and quality of life in the NH Route 16 Corridor. One of the recommendations of the study was to create a visitor-welcome center along the corridor in the town of Ossipee. A Federal Transit Administration (FTA) grant was secured leading to the current Feasibility Study. The focus of this study was to establish the needs for a transportation center in Ossipee; evaluate possible sites for the transportation center; identify possible ownership and operations scenarios for the facility; and develop conceptual designs, capital costs, and operating costs for the project. This report summarizes the process and findings of the Feasibility Study.

1.1 Study Background

Situated on the east side of the Lakes Region in New Hampshire, Ossipee is located on the NH Route 16 corridor, a well-traveled roadway serving travelers between New Hampshire’s Seacoast, Lakes, and White Mountains regions. Ossipee, a town of about 4,200 residents, is one of the fastest growing communities in the Lakes Region, having experienced population growth of more than 25% between 1990 and 2000. Many tourists visit the Lakes Region and the town of Ossipee, particularly during the summer months, putting a strain on the region’s roadways. This combination of population growth and tourism-related travel has led to efforts in recent years to improve the transportation system along the Route 16 corridor.

Several important corridor and area planning efforts have occurred over the past decade that are relevant to the Ossipee Transportation Center Feasibility Study. These include:

- The Route 16 Corridor Protection Study: This study was a five-year demonstration project funded by federal and state funds that took place in the mid- to late-1990s. The goal of the study was “to demonstrate an innovative approach to developing a long-range solution to the problem of providing an

efficient transportation system which promotes economic vitality and a high quality of life for the residents of communities and visitors to the regions served by the NH Route 16 Corridor.” One of the recommendations of the study was the creation of a visitor-welcome center and park-and-ride lot along the Route 16 corridor in the town of Ossipee.

- The West Ossipee 2020 Visioning Charrette: In January 2002, a three-day series of workshops were held to craft a 20-year vision for the future development and revitalization of West Ossipee. More than 100 West Ossipee citizens and other stakeholders took part, and the results of this effort were documented in a summary report. The Visioning Charrette recommended the development of a visitor/intermodal center in West Ossipee near the intersection of NH 16 and NH 25 West.

In addition to these area-specific efforts, two documents recently developed at the state level are also relevant to the Ossipee Transportation Center Feasibility Study:

- The New Hampshire Statewide Intermodal Transportation Planning Study: This comprehensive study, completed in December 2003, addresses the future direction of New Hampshire’s intermodal transportation program. The effort addressed intercity bus services, the statewide park-and-ride lot network, commuter bus services, intermodal facilities and services, and marketing needs. The Final Report for the study included several findings and recommendations that are relevant to the current Feasibility Study:
 - Based on an analysis of potential ridership and revenue in corridors that are currently underserved by intercity bus service, the study concluded that potential intercity bus routes on the eastern side of the Lakes Region have a relatively low predicted need for subsidy, suggesting that they have potential for future operation out of farebox revenue after ridership has developed.
 - Based on an analysis of potential new park-and-ride facilities across the state, the study estimated that a park-and-ride location visible from the highway in Ossipee (at NH 16/NH 28) or West Ossipee (at NH 16/NH 25 West) would attract about 25 patrons per day.
 - In discussing the potential for the creation of intermodal passenger facilities in New Hampshire, the study recommended that such facilities be constructed in areas that meet several criteria: revenue generation, multiple modes, local interest/local match, and ability to combine efforts. On the topic of local interest/local match, the study notes that because Ossipee does not currently have any local transit service, and the bus service is limited to the Concord Trailways Berlin service, the intermodal aspect of a transportation center in Ossipee would initially be limited to auto parking/park-and-ride and intercity bus service.
- The State of New Hampshire Ten-Year Transportation Improvement Plan: This plan develops and prioritizes transportation improvement projects across the

State of New Hampshire based on input at the local, regional, and statewide level. The Ten-Year Plan is updated every other year through a complex, interactive process that includes the regional planning commissions, the NHDOT, the Governor, and the State Legislature. After the Ten-Year Plan is adopted by the Legislature, the regional planning commissions incorporate approved projects into their Transportation Improvement Program. The Ten-Year Transportation Improvement Plan currently includes roadway projects along the Route 16 Corridor, including improvements in the town of Ossipee and the planned Conway Bypass project.

In addition to these past studies and planning efforts, another key step in the project development process occurred several years ago when an earmark of FTA capital funding was secured. This earmark authorizes the use of nearly \$2 million in FTA capital grant funds for the Ossipee Transportation Center should the project be deemed feasible and receive the necessary environmental permits. Since the earmark was obtained through the FTA, the current study is transit-focused. Therefore this Feasibility Study has been developed consistent with the guidelines for the use of FTA capital funding.

1.2 Study Area

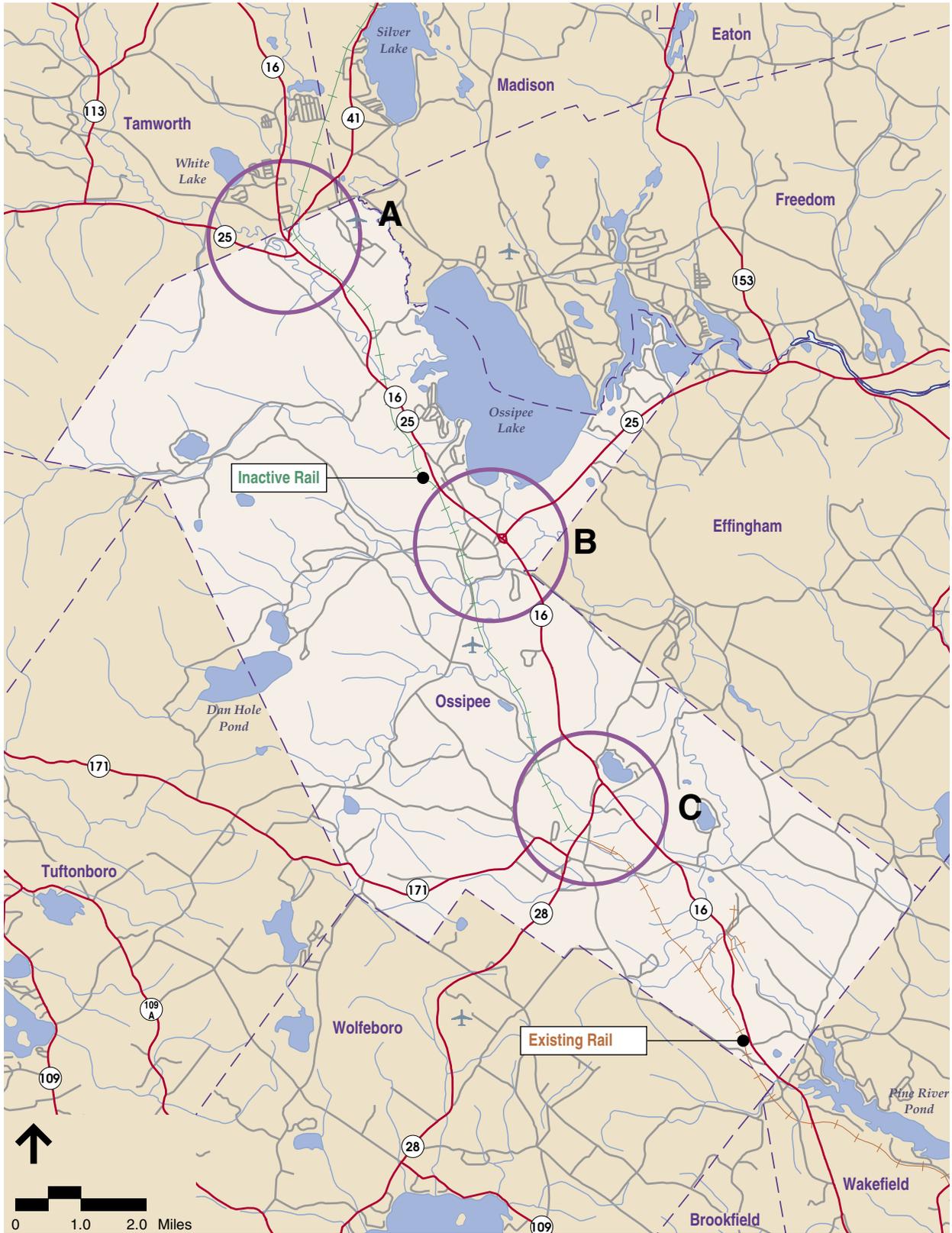
The Study Area for the Ossipee Transportation Center Feasibility Study covers the town of Ossipee, focusing on the NH Route 16 Corridor and adjacent activity centers. The project location map in Figure 1-1 depicts the Study Area highlighting the three primary activity centers in the area: West Ossipee (labeled A on the map, located near the intersection of NH 16 and NH 25 West); Center Ossipee (labeled B on the map, located near the intersection of NH 16 and NH 25 East); and Ossipee (labeled C on the map, located near the intersection of NH 16 and NH 28).

1.3 Public Participation

The Ossipee Transportation Center Feasibility Study included a substantial public participation component throughout the study. LRPC and NHDOT have a history of respecting the public process and including involvement early and often throughout a project. For this reason, the Study Team, in coordination with LRPC and NHDOT, developed an extensive Public Involvement Plan at the start of the Feasibility Study.

The public participation process for the Ossipee Transportation Center Feasibility Study included three main elements:

1. Formation of a Project Advisory Committee (PAC)
2. A series of Public Meetings at key intervals in the study process
3. Establishment of a project website



Vanasse Hangen Brustlin, Inc.

Project Location Map

Figure 1-1

The full Public Involvement Plan for the Ossipee Transportation Center Feasibility Study is included in Appendix A for reference.

The Project Advisory Committee (PAC) was composed of 15 members representing a diverse array of town and community groups as well as LRPC and NHDOT. Over the course of the Feasibility Study, the PAC met four times. The following is a list of the meeting dates and the general purpose of each meeting:

- PAC Meeting #1 – June 25, 2004: To initiate the PAC and discuss the project’s Purpose and Need
- PAC Meeting #2 – July 22, 2004: To discuss the project’s draft Purpose and Need Statement and begin identifying potential sites
- PAC Meeting #3 – September 24, 2004: To review and rank alternative sites and discuss the program for the Transportation Center
- PAC Meeting #4 – October 22, 2004: To review the development of the conceptual plan for the preferred site and discuss operational and funding issues

Minutes from the PAC meetings are included in Appendix B of this report.

In addition to the PAC meetings described above, an effort was made to involve the broader community through a series of public meetings at key intervals in the study process. These meetings were advertised through media outlets such as local newspapers; flyers for distribution at the library and other public buildings; and via the project website (described below). The following is a list of the meeting dates and the general purpose of each meeting:

- Public Meeting #1 – June 24, 2004: To initiate the public involvement process for the project
- Public Meeting #2 – August 26, 2004: To review the Purpose and Need and present and obtain input on alternative sites
- Public Meeting #3 – October 21, 2004: To present the ranking process and alternatives and discuss the program for the Transportation Center
- Public Meeting #4 – November 18, 2004: To present the results of the study

Minutes from the public meetings are included in Appendix C of this report.

A website was also developed for the Ossipee Transportation Center Feasibility Study and remained functional for the duration of the study. It included meeting notices, presentations, and minutes; project information such as maps and the draft and final report; a PAC contact list; and links to the LRPC and NHDOT websites. A project email address and a user-friendly Public Comment Form were established through the project Website to allow members of the PAC or the general public to offer feedback between meetings. In addition, the phone number and mailing address of LRPC was made available on the project website.

1.4 FTA Project Planning and Development Process

As the proposed Ossipee Transportation Center would be constructed with FTA capital funds, planning for the project follows the FTA's project planning and development process. The following paragraphs summarize the FTA's general project planning process. This summary is followed by a description of how this Feasibility Study relates to that process.

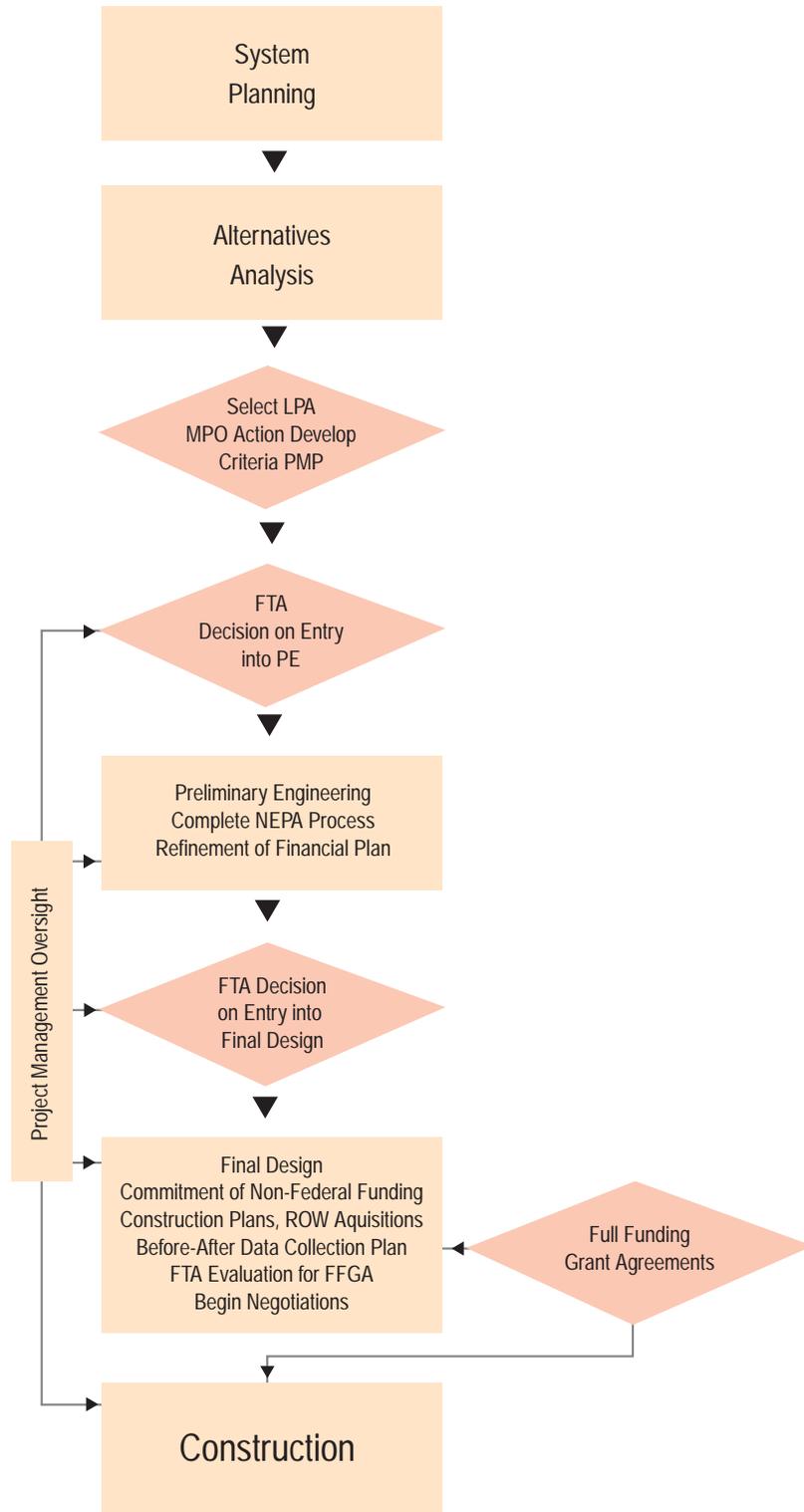
The FTA's process for the planning and development of a project consists of four steps – system planning and alternatives analysis; National Environmental Policy Act (NEPA) compliance and preliminary engineering (PE); final engineering; and construction. The system planning and NEPA/PE portion of the process is intended to be carried out as part of the overall metropolitan planning (23 CFR Part 450 FTA/FHWA Joint Final Rule on Metropolitan and Statewide Planning) and environmental review (23 CFR Part 771 Final Rule on Environmental Impact and Related Procedures) processes. Figure 1-2 presents a flow chart that summarizes the general FTA project planning and development process.

The key to the early part of the process is the Alternatives Analysis (AA). The intent of the AA is to identify and compare the costs, benefits, and impacts of a range of transportation alternatives. FTA views the AA as a “bridge” between the system planning process (macro-level metropolitan scale evaluation of regional travel patterns and transportation corridor needs) and preliminary engineering (micro-level design refinement). There are several ways that the AA is coordinated with the environmental review process. It can be conducted prior to initiating the NEPA process and incorporated by reference, or it can be conducted by developing a programmatic Environmental Impact Statement (EIS) as an AA.

The AA is expected to document the full range of alternatives considered consistent with the Purpose and Need of the study. An evaluation of the costs, benefits, and impacts of each alternative will be documented providing local decision makers with the information necessary to select a locally preferred alternative (LPA). With the identification of an LPA and subsequent action by the metropolitan planning organization (MPO), the project can then address the specific requirements for any element of the LPA that would be considered as a transit investment to enter the NEPA/Preliminary Engineering phase. The entry into the PE phase of development is required in order to complete the NEPA process under the FTA's planning and project development guidelines.

The Ossipee Transportation Center Study is in the system planning phase. The current effort is focused on identifying the purpose and need for the facility and developing a preliminary screening of alternatives. Although not considered as the AA, the current study has been prepared within the context of FTA's AA guidelines. As this project is already included in NHDOT's 10-Year Plan, the project would proceed through the NEPA process according to FTA guidelines if this study determines the project to be feasible.

Figure 1-2: The FTA Project Planning and Development Process
(Illustrative Example)



1.5 Report Organization

This report is organized into eight chapters and a set of Appendices.

Chapter 1 presents an overview of the study, defines the Study Area, describes the Public Participation process that was undertaken, and summarizes the relationship of this Feasibility Study to the FTA project planning process.

Chapter 2 presents a summary of existing conditions information relevant to the proposed Transportation Center in the Study Area.

Chapter 3 summarizes the Purpose and Need for the project.

Chapter 4 discusses potential users of the Transportation Center, examples of other Transportation Centers, and possible building program scenarios.

Chapter 5 summarizes the alternative sites that were evaluated for the Transportation Center, the evaluation methodology and criteria, and the results of the screening and ranking process.

Chapter 6 presents the Preferred Alternative for the Ossipee Transportation Center. It describes the conceptual site layout, architectural elements and features, operational issues, infrastructure needs, potential environmental impacts, and anticipated permitting requirements associated with the proposed Transportation Center at the preferred site.

Chapter 7 summarizes the conceptual capital costs and operations and maintenance costs of the proposed Transportation Center, and discusses potential funding sources.

Chapter 8 presents conclusions regarding the feasibility of the proposed Ossipee Transportation Center as well as recommendations for next steps in the project development process.

Existing Conditions

This chapter provides information on existing conditions within the Study Area for the Ossipee Transportation Center Feasibility Study. It covers topics including demographics; transportation; land use; and natural resources and the environment. This chapter begins with a list of data sources consulted in documenting existing conditions, followed by sections addressing each topic area.

2.1 Data Sources

The data sources consulted in documenting existing conditions for the Ossipee Transportation Center Feasibility Study include the following:

- *Lakes Region Demographic Profile*, Lakes Region Planning Commission, July 2003
- *Lakes Region Tourism Profile*, Lakes Region Planning Commission, January 2002
- *The Corridor Tomorrow: A Final Summary Report for the Route 16 Corridor Protection Study*, New Hampshire Department of Transportation, January 1999.
- *West Ossipee 2020 Visioning Charrette Report*, prepared for the New Hampshire Department of Transportation and the Lakes Region Planning Commission by Walkable Communities, Inc., June 2002.
- *New Hampshire Statewide Intermodal Transportation Planning Study: Final Report*, prepared for the New Hampshire Department of Transportation by KFH Group, December 2003
- *Conway Branch Railroad Line Feasibility Study*, New Hampshire Department of Transportation, Bureau of Rail & Transit, June 30, 2004
- Update of the 1983 *Town of Ossipee Master Plan*, ongoing
- Town of Ossipee zoning ordinance
- New Hampshire Geographic Information System (NH GRANIT), University of New Hampshire Complex Systems Research Center (CSRC), October 2004
- Town of Ossipee website
- Lakes Region Planning Commission website
- New Hampshire Department of Transportation website

- New Hampshire Employment Security website
- New Hampshire Executive Council website
- Wolfeboro Trolley Company website
- Greater Laconia Transit Agency website
- Ossipee Valley Snowmobile Club website
- New Hampshire Division of Forests and Lands website
- New England Forestry Foundation website

2.2 Demographics

The following sections present demographic information in four key areas: population, housing, economic trends, and travel patterns.



2.2.1 Population Trends

According to the 2000 United States Census, the population of the town of Ossipee was 4,211 persons. Table 2-1 shows the population of Ossipee, the Lakes Region portion of Carroll County, and the State of New Hampshire in 1980, 1990 and 2000.

Table 2-1: Population Comparison, 1980–2000

Location	1980	1990	2000	% Change 80-90	% Change 90-00
Ossipee	2,465	3,309	4,211	34.2%	27.3%
Carroll County (Lakes Region portion)	14,035	18,021	23,298	28.4%	29.3%
New Hampshire	920,475	1,109,786	1,235,786	20.5%	11.4%

(Source: Lakes Region Demographic Profile, LRPC)

2.2.1.1 Recent Population Growth

As the table above shows, the population of Ossipee has grown quickly in recent decades. According to the *Lakes Region Demographic Profile*:

- Between 1980 and 1990, the population of Ossipee grew by 844 people (ranking fifth among the 30 communities in the Lakes Region in absolute growth)
- During the same period, the population of Ossipee grew by 34.2% (ranking eighth among the 30 Lakes Region communities in percentage growth)
- Between 1990 and 2000, the population of Ossipee grew by 902 people (ranking seventh among the 30 Lakes Region communities in absolute growth)

- During the same period, the population of Ossipee grew by 27.3 percent (ranking fifth among the 30 Lakes Region communities in percentage growth)

2.2.1.2 Population Projections

The Population Characteristics section of the current Ossipee Master Plan update presents population projections for Ossipee prepared by the New Hampshire Office of Energy and Planning in 2004. According to these projections, the population of Ossipee is projected to grow to 4,570 by 2005; to 5,460 by 2015; and to 6,180 by 2025.

2.2.1.3 Median Age

As the *Lakes Region Demographic Profile* reports, median ages have risen steadily since 1980 throughout most of the Lakes Region as well as the State of New Hampshire. The town of Ossipee is no exception. The median age in Ossipee in 2000 was 41.5 years, compared to 37.8 in 1980 and 36.8 in 1990. Table 2-2 shows median ages in Ossipee, the Lakes Region portion of Carroll County, and the State of New Hampshire in 1980, 1990 and 2000.

Table 2-2: Median Age Comparison, 1980–2000

Location	1980	1990	2000	% Change 80-90	% Change 90-00
Ossipee	37.8	36.8	41.5	-1.0 years	+4.7 years
Carroll County (Lakes Region portion)	38.3	36.9	42.5	-1.4 years	+5.6 years
New Hampshire	30.1	32.8	37.1	+2.7 years	+4.3 years

(Source: Lakes Region Demographic Profile, LRPC)

As a result of these demographic shifts, the number and percentage of senior citizens have risen in Ossipee and in the region recently. Table 2-3 shows the number and percentage of senior citizens in Ossipee, the Lakes Region portion of Carroll County, and the State of New Hampshire in 1990 and 2000.

Table 2-3: Number and Percentage of Senior Citizens, 1990–2000

Location	1990		2000		% Change 90-00	
	Number	%	Number	%	Number	%
Ossipee	586	17.7%	748	17.8%	162	27.6%
Carroll County (Lakes Region portion)	3,346	17.9%	4,784	20.5%	1,438	43.0%
New Hampshire	125,029	11.3%	147,970	12.0%	22,941	18.3%

(Source: Lakes Region Demographic Profile, LRPC)

2.2.1.4 Population Density

As the population of the town of Ossipee and the surrounding region has increased over the past decades, the population density has correspondingly increased. Table 2-4 shows the population density (in persons per square mile) in Ossipee, the Lakes Region portion of Carroll County, and the State of New Hampshire in 1980, 1990 and 2000.

Table 2-4: Population Density Comparison, 1980–2000

Location	Square Miles	Population Density		
		1980	1990	2000
Ossipee	71.2	34.6	46.5	59.1
Carroll County (Lakes Region portion)*	444	31.6	40.6	52.5
New Hampshire	8,969	102.6	123.7	137.8

*Note: Carroll County area figure includes area in the Lakes Region only and includes land only.
 (Source: Lakes Region Demographic Profile, LRPC)

2.2.2 Housing

According to the 2000 United States Census, the town of Ossipee had a total of 2,742 housing units in 2000. Of these 1,822, or 66.4%, were year-round units and 920, or 33.6%, were seasonal units. This percentage of seasonal units is high in comparison to the State as a whole and indicates the popularity of Ossipee as a seasonal tourist destination. However, the percentage of seasonal units in the town, the Lakes Region and the State all declined from 1990 to 2000.

Table 2-5 presents a comparison of year-round versus seasonal housing units in Ossipee, the Lakes Region portion of Carroll County, and the State of New Hampshire in 1980, 1990 and 2000.

Table 2-5: Year-Round and Seasonal Housing Unit Comparison, 1990–2000

Location	All Housing Units		Year-Round Units		Seasonal Units		% Seasonal 2000
	1990	2000	1990	2000	1990	2000	
Ossipee	2,617	2,742	1,548	1,822	1,069	920	33.6%
Carroll County (Lakes Region portion)	16,553	18,011	8,324	10,418	8,229	7,593	42.2%
New Hampshire	503,904	547,024	446,769	490,611	57,135	56,413	10.3%

(Source: Lakes Region Demographic Profile, LRPC)



2.2.3 Economic Trends

Median income, percentage of persons in poverty, and employment are three key indicators of the economic health of a community. The following are key economic statistics regarding Ossipee’s economy:

- The town of Ossipee has one of the lowest median incomes in the Lakes Region. In 1999, the median household income in Ossipee was \$34,709, which ranked 28th out of the 30 communities in the Lakes Region.
- In 1999, 10% of all persons in Ossipee were living with incomes below the Federal poverty level. This was higher than the percentage in Carroll County and the State of New Hampshire, and represented an increase of 13.5% from 1989.
- The average unemployment rate in Ossipee in 2001 was 4.6%, according to the *Lakes Region Demographic Profile*. This was higher than the rate in the Lakes Region portion of Carroll County and the State of New Hampshire as a whole. According to the New Hampshire Employment Security website, the unemployment rate in Ossipee averaged 5.5% in 2002.
- According to the New Hampshire Employment Security website, the six largest employers in Ossipee in 2003 were: Carroll County Government (200 employees), Hannaford Brothers (60-70 employees), McDonald’s (45 employees), Ossipee Aggregates Corporation (30-35 employees), Tufpak, Inc. (25 employees), and Valueland IGA (21 employees).

Table 2-6 presents a comparison of median family and household income in Ossipee, the Lakes Region portion of Carroll County, and the State of New Hampshire in 1989 and 1999.

Table 2-6: Median Family and Household Income Comparison, 1989-1999

Location	Family Income		Household Income	
	1989	1999	1989	1999
Ossipee	\$26,932	\$38,790	\$25,117	\$34,709
Carroll County (Lakes Region portion)	\$32,308	\$46,922	\$28,145	\$39,990
New Hampshire	\$41,628	\$57,575	\$36,329	\$49,467

(Source: Lakes Region Demographic Profile, LRPC)

Table 2-7 presents a comparison of poverty status in Ossipee, the Lakes Region portion of Carroll County, and the State of New Hampshire in 1989 and 1999.

Table 2-7: Poverty Status Comparison, 1989-1999

Location	All Persons 1989		All Persons 1999		% Change 1989-1999
	Number	%	Number	%	
Ossipee	355	11.2%	403	10.0%	13.5%
Carroll County (all)	3,137	9.0%	3,411	7.9%	8.7%
New Hampshire	69,104	6.4%	78,530	6.5%	13.6%

(Source: Lakes Region Demographic Profile, LRPC)

Table 2-8 presents a comparison of the unemployment rate in Ossipee, the Lakes Region portion of Carroll County, and the State of New Hampshire in 2001.

Table 2-8: Unemployment Rate Comparison, 2001

Location	Labor Force (2001 Average)	Persons Unemployed (2001 Average)	Unemployment (2001 Average)
Ossipee	1,705	78	4.6%
Carroll County (Lakes Region portion)	10,540	311	2.9%
New Hampshire	664,290	24,360	3.5%

(Source: Lakes Region Demographic Profile, LRPC)



2.2.4 Travel Patterns

Travel patterns in the Ossipee area are complex and are not easily summarized. Patterns within the town of Ossipee may vary considerably from those of neighboring communities, the Lakes Region, or the State of New Hampshire as a whole. In addition, travel patterns vary considerably by trip purpose (work vs. recreational vs. shopping trips), season (summer vs. winter), day of the week, and time of day. Data are available for some, but not all, of these categories of trips. The following indicators provide a starting point in characterizing travel patterns in the Ossipee area.

2.2.4.1 Commute Trips

The *Lakes Region Demographic Profile* notes that destinations for most Lakes Region residents who commute to work are within the Region. Laconia is clearly the dominant employment center for the Region, but in the northern portion of the Region, Ossipee is the most popular commuting destination. Many people in the Region reside and commute within the same community, especially if they live in a major employment center. In addition to commuting to locations within the Lakes Region, many residents travel elsewhere. Many residents who live in the northeast part of the Lakes Region travel to work in Conway, and east to the state of Maine. Table 2-9 summarizes the top five commute destinations for Ossipee residents, and

the percentage of total commuters each destinations represents, based on the 2000 U.S. Census.

Table 2-9: Top Commute Destinations for Ossipee Residents, 2000

Commute Destination	Number of Commuters	% of Total
Ossipee	740	41.8%
Wolfeboro	232	13.1%
Conway	181	10.2%
Other NH destinations	144	8.1%
Effingham	76	4.3%

(Source: Lakes Region Demographic Profile, LRPC)

Table 2-10 summarizes the mode of transportation used by Ossipee residents in commuting to work, based on the 2000 U.S. Census.

Table 2-10: Mode of Commuting to Work for Ossipee Residents, 2000

Mode	% of Commuters
Drove alone, car/truck/van	82.6%
Carpooled, car/truck/van	8.7%
Public transportation	0.3%
Walked	2.7%
Other means	0.5%
Worked at home	5.2%

(Source: New Hampshire Employment Security website)

2.2.4.2 Tourist Trips

The *Lakes Region Tourism Profile*, published by the LRPC in January 2002, notes that tourism and travel data are generally only available at the state level, which makes analysis of local or regional patterns difficult. However, LRPC's 2002 publication presents some statistics about tourist travel patterns across the entire state that may shed some light on tourist travel patterns in the Ossipee region.

According to the *Lakes Region Tourism Profile*:

- In 1999-2000, there were over 25 million trips made to New Hampshire; in 2000-2001, there were over 26 million trips made.
- Summer is the most popular season for tourists statewide, with 10.1 million trips in summer 2000. The next most popular season is fall, with 6.9 million trips made in fall 2000. Spring and winter are less popular, with 5.6 million trips made in spring 2001 and 4.26 million trips made in winter 2000-2001.

- The most popular origin for New Hampshire visitors is Massachusetts. New Hampshire residents making in-state trips are next most common, followed by visitors from New York, Connecticut, Rhode Island, and New Jersey.

2.3 Transportation

The primary mode of transportation in the Ossipee area is the automobile. This section will briefly summarize the characteristics of the Ossipee roadway network; traffic volumes on roads in and around the town; and traffic safety data. Other means of transportation in the area include intercity bus service, air travel, walking, cycling, and snowmobiling, as well as freight rail from southern Ossipee to the south. Some of these other means of transportation have the potential to be included in the proposed Ossipee Transportation Center and are briefly summarized later in this section.



2.3.1 Roadway Network

According to the *Lakes Region Demographic Profile*, in 2000 there were 2,258 miles of public roads in the Lakes Region. On the eastern side of the Region, the principal north-south highway is New Hampshire Route 16; on the western side it is Interstate 93. The town of Ossipee has a total of 123 miles of public roads. Of these, 36.5 miles are state highways and 86.7 miles are town streets and roads. Principal roadways in and around Ossipee include NH Routes 16, 25, 28, 41, 113, and 171.



2.3.2 Traffic Volumes

The roadway with the highest traffic volumes in the Ossipee area is New Hampshire Route 16. According to the *Lakes Region Demographic Profile*, the Average Daily Traffic (ADT) volume on Route 16 in Ossipee, year-round, was 11,569 vehicles in 2000. This figure increases substantially during the summer; in July 2000 the ADT on Route 16 in Ossipee was over 15,400 vehicles.

Year-round and summer traffic volumes on this stretch of roadway have increased substantially in recent years. Year-round ADT on Route 16 in Ossipee increased by 17.1% from 1990-2000, and summer ADT on that roadway segment increased by 14.7% over the same period.

Table 2-11 summarizes Average Daily Traffic volumes for a representative sample of roadway locations in and around Ossipee.

Table 2-11: Average Daily Traffic Volumes, 1997-2001

Location	1997	1998	1999	2000	2001
NH 16 2 miles North of NH 28	10,640	11,168	11,465	11,569	11,847
NH 16 South of NH 28	10,000		11,000		8,500
NH 16 over NH 25		7,000			7,000
NH 16 at Tamworth Town Line	9,500	8,700	9,800		9,300
NH 25 West at NH 16				4,180	
NH 28 South of NH 16		5,000			5,300
NH 28 at Wolfeboro Town Line	4,000	4,300	4,100		4,400
NH 171 at Tuftonboro Town Line		830			870

(Sources: LRPC Website, NHDOT)

2.3.3 Traffic Safety

According to the National Highway Traffic Safety Administration (NHTSA), in 2002 there were a total of 127 traffic fatalities in the State of New Hampshire. This figure represented a rate of 1.01 fatalities per 100,000 Vehicle-Miles Traveled (VMT), and 9.96 fatalities per 100,000 population; both of these rates are significantly lower than the national average. The number of traffic fatalities in New Hampshire ranged from a low of 118 to a high of 192 over the prior twenty years. Of the 127 traffic fatalities in New Hampshire in 2002, 40% were alcohol-related.

In the town of Ossipee in 2002, there were a total of 183 accidents recorded in the NHDOT crash database. There were two fatalities and 90 injuries in these 183 accidents. Table 2-12 summarizes this data. The number of fatalities from traffic accidents in Ossipee varied from zero to two over the preceding few years.

Table 2-12: Traffic Accident Trends in Ossipee, 1997-2002

Indicator	1997	1998	1999	2000	2001	2002
Total accidents in Ossipee	141	170	161	171	187	183
Fatalities in traffic accidents in Ossipee	1	3	0	1	4	2
Injuries in traffic accidents in Ossipee	52	54	77	78	46	90

(Sources: NHDOT Crash Records and Statistics database)

2.3.4 Transit Services

The primary transit service in Ossipee is intercity bus service, which is provided by Concord Trailways at West Ossipee, at the intersection of NH 16 and NH 25 West. Two round trips per day are offered at this location, on the Concord Trailways route extending from Berlin, NH to Boston, MA. The first southbound trip originates from Berlin at 7:45AM, stops in West Ossipee at 9:15AM, and reaches Boston-South Station at 12:20PM. The second southbound trip originates from North Conway at 2:35PM,

stops in West Ossipee at 3:10PM, and reaches Boston-South Station at 6:20PM. The first northbound trip departs Boston-South Station at 10:00AM, stops in West Ossipee at 1:05PM, and terminates in North Conway at 1:35PM. The second northbound trip departs Boston-South Station at 5:15PM, stops in West Ossipee at 8:10PM, and terminates in Berlin at 9:35PM. On the southern end of the trips, service continues to Boston's Logan International Airport. In West Ossipee, the buses currently stop at Watson's General Store, which serves as the Concord Trailways ticket agent. Concord Trailways reports that ridership in West Ossipee averages three boardings per day at West Ossipee, with higher volumes in the summer months and lower volumes during the winter.

In addition to the service described above, Concord Trailways provides intercity bus service to a number of Lakes Region communities beyond Ossipee on its Berlin-to-Boston route. These communities include Moultonborough, Center Harbor, Meredith, New Hampton, and Tilton. Farther to the south, C&J Trailways provides commuter bus and airport service from Dover and Portsmouth to South Station and Logan Airport in Boston with frequent daily service.

The town of Ossipee has no regularly-scheduled or fixed-route local transit service. A private taxi company provides transportation services to senior citizens, persons with disabilities, children, welfare recipients, persons who request transport via the town, county or the state, as well as the general public. In addition, several community organizations provide specialized transportation services such as volunteer-provided rides for seniors, occasional group recreational and shopping trips, and Meals-On-Wheels.

Some areas relatively close to Ossipee in the Lakes Region have regularly scheduled local transit service. In Wolfeboro, the Wolfeboro Trolley Company operates a seasonal transit service called Molly the Trolley that serves a variety of attractions around the town. On the southern and western side of Lake Winnepesaukee, the Greater Laconia Transit Agency (GLTA) offers daily transit service in Laconia, Belmont, Tilton, and Franklin, and a summer trolley route from Weirs Beach to Meredith. In 2000, GLTA provided over 125,000 rides.



2.3.5 Rail Infrastructure

The Conway Branch is the primary rail corridor in the Ossipee area. The Conway Branch corridor generally runs in a north-south direction, extending from North Conway in the north to the junction with the Guilford Main Line West in Rollinsford to the south. From Rollinsford to Route 28 in Ossipee, the line is owned by the New Hampshire Northcoast Railroad, which transports sand and gravel from Ossipee Aggregates to destinations in the south. To the north, the Conway Scenic Railroad owns the corridor from North Conway to the Albany-Conway town line and operates tourist excursion trains. Most of the remaining portion from Route 28 in Ossipee to the Albany-Conway town line is owned by the State of New Hampshire.

NHDOT recently completed a Feasibility Study of restoring this inactive segment of the branch to service. This study concluded that restoration of the remaining 21 miles is feasible, although it would require a significant reconstruction effort costing between \$6 million and \$18 million. This range of costs corresponds to a three-phased approach to restoration identified in the study. Phase 1, which represents the work needed immediately to restore service on the line, would cost about \$6.2 million. Phase 2, which represents work that could be carried out prior to service restoration but that would at a minimum be required to sustain service within five years, would cost an additional \$1.3 million. Phase 3, which would involve replacing the rail on the corridor with heavier rail to permit heavier freight operation or higher track speeds, would cost an additional \$11 million.

The Feasibility Study noted that one scenario for reconstructing the Conway Branch is an incremental approach in which the line is upgraded as business develops, from the south end in Ossipee north to Conway. For instance, the cost to rehabilitate the line from Ossipee to West Ossipee would be about \$2.7 million for Phase 1 and an additional \$700,000 for Phase 2. In addition to the costs of reconstruction, the study identified several other factors to be considered in future planning to restore the Conway Branch. These factors include the reactivation of grade crossings; the displacement of snowmobiles, the extent of freight rail demand; and the extent of passenger demand on the corridor.



2.3.6 Airports

The Ossipee area has access to four local airports within the Lakes Region, as well as several larger international airports within a drive of two to three hours. The local airports in the Lakes Region include Laconia Airport (Gilford), Lakes Region Airport (Wolfeboro), Newfound Valley Airport (Bristol), and Moultonborough Airport (Moultonborough). Larger airports within a two to three hour drive of Ossipee include Manchester Airport (Manchester, NH), Pease Tradeport (Portsmouth, NH), Logan International Airport (Boston, MA), and Portland Jetport (Portland, ME).



2.3.7 Walking and Cycling

The roadway system and development patterns in the Ossipee area generally favor walking and cycling within historic village centers rather than between centers or in other areas. Within village centers, vehicular travel speeds are generally slow to moderate, sidewalks may be present, and development is relatively compact, creating a pedestrian and cycling-friendly environment. Outside of the village centers, where vehicular travel speeds are faster, there are few sidewalks, development is sparser and walking and cycling is less common.

NHDOT and the New Hampshire Department of Resources and Economic Development (DRED) are currently developing a State Trails Plan. Pending the

outcome of this Plan, one or more bicycle/pedestrian trails may be designated in the Ossipee area, which could further enhance the pedestrian and cycling environment.



2.3.8 Snowmobiling

There are about 7,000 miles of marked, designated snowmobile trails in the State that are maintained by approximately 125 clubs and 200 groomers. These trails include both club trails and State Corridor trails. In the Ossipee and Tamworth areas, the Ossipee Valley Snowmobile club maintains 50 miles of club trails and 18 miles of State Corridor trails. This trail system includes inactive portions of the Conway Branch railroad corridor in the town of Ossipee.

2.4 Land Use

The following section briefly describes the existing land uses and the planning tools and institutions that regulate the development and use of land in the town of Ossipee.



2.4.1 Existing Land Uses

Existing land uses in the Ossipee area include compact village centers, highway-oriented commercial development, lightly settled residential areas, public spaces, recreation areas, and conservation land. The three Village Districts in Ossipee include Center Ossipee, Ossipee Village, and West Ossipee. The primary commercial districts in Ossipee are located along or near New Hampshire Route 16. Water Resources Protection Districts and Wetlands Conservation Districts are located around Ossipee Lake as well as along the Route 16 corridor.



2.4.1 Land Use Planning and Regulation

The Ossipee Master Plan serves as the guide for advance land use planning in the town of Ossipee. The Town is currently developing an update of the 1983 Master Plan. This update has included a survey of residents to determine their views on topics such as housing, schools, services, land use, town government, and economic development, as well as an updated Land Use element.

Land use and development is regulated by the Ossipee Zoning Ordinance. The Zoning Ordinance is enforced and interpreted by the Zoning Enforcement Officer, the Zoning Board of Adjustment, and the Planning Board with the Ossipee Board of Selectmen as the final authority in administration and enforcement of the Zoning Ordinance. Proposals for Special Exceptions to the Zoning Ordinance may also

receive comments from the Selectmen, the Planning Board, Road Agent, Fire Department and Conservation Commission.

The town of Ossipee Zoning Ordinance includes the following types of Districts:

- Village District
- Residential District
- Roadside Commercial District
- Commercial District
- Commercial Node District
- Corridor District
- Rural District
- Water Resource Protection District
- Wetlands Conservation District

The boundaries of the zoning districts listed above are shown on the Ossipee Zoning Map, Ossipee Water Resource Protection Map, and Ossipee Wetlands Map, which are located in Ossipee Town Hall.

2.5 Natural Resources and the Environment

This section briefly summarizes existing conditions related to natural resources and the environment that are relevant to the Ossipee Transportation Center Feasibility Study. It focuses on three areas: Groundwater Resources; Surface Waters, Wetlands and Floodplains; and Conservation Lands and Parks. These areas are addressed in the following sections.

■

2.5.1 Groundwater Resources

Information on groundwater resources was obtained from the NH GRANIT database.¹ A transmissivity layer developed under a cooperative agreement by the United States Geological Survey (USGS) and New Hampshire Department of Environmental Services (NHDES) was the focus for the groundwater resource assessment. Transmissivity is a measure of the ability of an aquifer to transmit water. Areas of high transmissivity require greater protection than areas of lower transmissivity.

◆
¹ Digital data in NH GRANIT represent the efforts of the contributing agencies to record information from the cited source materials. Complex Systems Research Center (CSRC), under contract to the Office of State Planning (OSP), and in consultation with cooperating agencies, maintains a continuing program to identify and correct errors in these data. Neither OSP nor CSRC make any claim as to the validity or reliability or to any implied uses of these data.

In the town of Ossipee, areas of high transmissivity are located along the town's northeastern corner, extending from Lake Ossipee's northwestern shore along Route 16 to the town's border with Tamworth, Madison and Freedom. One other area of high transmissivity is located within the town's southeastern corner, beginning just south of Route 171 and extending south along the Pine River to the town line. These two areas have transmissivities in the range of 2000 to 4000 square feet per day. Other less transmissive areas extend along Route 16 from the southern town line to the Route 28 intersection, and a narrow area adjacent to the highly transmissive region around Lake Ossipee. Refer to the Appendix for a map of Transmissivity of Stratified Drift Aquifers which was used in the site selection process described in Chapter 5.

NHDES has established Drinking Water Protection Areas (DWPAs) around all active community (C) and non-transient/non-community (P) public water systems to protect them from possible contamination. Transient, non-community systems (N) are not protected. For surface water supplies, a drainage area is defined around the source, while for wells a radius is defined forming a circular Wellhead Protection Area (WHPA). The radius is determined, in general, by the type, capacity, and depth of the well.

Guidelines for protecting groundwater resources when planning transportation improvement projects can be found in *Recommendations for Implementing Groundwater Protection Measures When Siting or Improving Roadways*, (NHDES, November 1995). The report defines four levels of protection along with suggested Best Management Practices (BMPs). The levels of protection are dictated by the type of groundwater resource or well size, distance of the roadway from the well or source, whether the well is up or down gradient from the roadway, and whether there is an impermeable layer between the roadway and well.

As noted previously, the Ossipee Zoning Ordinance includes Water Resource Protection Districts, which are overlay districts that have been established to protect public health by preventing contamination of both current and future ground and surface water resources capable of providing water to the town of Ossipee. The locations of these Water Resource Protection Districts generally correspond to the locations of the areas of high transmissivity described above, and the surface waters described in the next section.



2.5.2 Surface Waters, Wetlands, and Floodplains

The following sections briefly summarize existing conditions in the study area with regard to surface waters, wetlands, and floodplains. Refer to the Appendix for maps of Floodplains and Surface Waters and Wetlands and Surface Waters which were used in the site selection process described in Chapter 5.

2.5.2.1 Surface Waters

The town of Ossipee's most prominent surface water feature is Lake Ossipee, located along the town's northeastern border. Other notable lakes and ponds include (from north to south in the town) Conner Pond, Moody Pond, Bean Pond, Little Dan Hole Pond, Dan Hole Pond, Archers Pond, Garland Pond, Duncan Lake, White Pond, Snake Pond, and Round Pond. Duncan Lake and Round Pond are the only lakes or ponds located within 1000 feet of the Route 16 corridor.

From north to south, named streams occurring in the town of Ossipee include the Stony Brook, Bearcamp River*, Lovell River*, Gils Brook, Folsom Brook*, Dan Hole River*, Phillips Brook, Red Brook, Beech River, Peavy Brook, Frenchman Brook*, Pine River*, Poland Brook*, Youngs Brook*, and Pike Brook. Streams marked with an asterisk (*) cross the Route 16 corridor.

Protection of surface water resources falls under the jurisdiction of both the United States Army Corps of Engineers (USACOE) and NHDES. Information on water bodies in the project corridor was obtained using Terrain Navigator Pro software, which displays USGS quadrangle sheets. The Lake Winnepesaukee sheet, number 43071-E1-TM was used to inventory surface waters in the town.

2.5.2.2 Wetlands

Wetlands were identified and mapped within the project corridor using National Wetlands Inventory (NWI) maps downloaded from the NH GRANIT database. NWI maps use the U.S. Fish and Wildlife Service (USFWS) *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin *et al.*, 1979). The Cowardin approach classifies wetland "systems" according to plants, soils, and frequency of flooding. The systems are then further divided into subsystems, classes, and subclasses based on substrate material, flooding regime, and vegetation type.

The largest wetlands areas in Ossipee are to the south of Ossipee Lake, extending along both sides of NH 25 northeast of Center Ossipee. Other wetlands areas are located east of the Conway Branch railroad corridor near West Ossipee, near Duncan Lake in Ossipee, and in other smaller locations around the town.

Wetlands are federally protected under the Clean Water Act and activities resulting in impacts to them require a permit from the USACOE under Section 404 of that Act. Executive Order 11990 also requires that federal actions which affect wetlands must include a "finding that there are no practicable alternatives" to the proposed construction in wetlands and the Proposed Action includes all practical means to reduce harm to wetlands. Wetlands are also protected under State of New Hampshire statutes, with a permit required from the NHDES Wetlands Bureau.

2.5.2.3 Floodplains

The NH GRANIT Database was used to identify 100-year floodplains in the vicinity of the project corridor. The mapping information in GRANIT utilizes Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM). A 100-year floodplain is defined as having a one percent chance of flooding in any particular year. The floodway is a regulatory limit established by FEMA in which any encroachment cannot result in more than a 0.3 meter (1.0 foot) increase in surface water elevation. In most cases, the floodway approximates the actual channel of the watercourse. The floodway and the so-called “floodway fringe” comprise the 100-year floodplain. By definition, the floodway fringe can be completely obstructed without increasing the water surface elevation of the 100-year flood by more than 0.3 meter (1.0 foot) at any point.

A number of FEMA-designated 100-year floodplains are located in the town of Ossipee. They are generally located along the Pine River, Lovell River, Beech River, and other rivers and streams in the town.



2.5.3 Conservation Lands and Parks

Information on conservation lands, parks and recreation areas was obtained through the NH GRANIT database, the New Hampshire Division of Forests and Lands website, and the New England Forestry Foundation website. NH GRANIT identifies 103 areas of conserved public lands ranging in size from under 10 acres to over 1,000 acres. Major conservation lands in Ossipee, along with the number of acres within the town boundaries, include: Ossipee Mountains Conservation area (2,804 acres), Pine River State Forest (1,012 acres), Heath Pond Bog Natural Area (474 acres), and Ossipee Lake Natural Area (400 acres). Forests maintained by the New England Forestry Foundation in Ossipee include Bearcamp Forest (244 acres) and Thissell Smith Forest (165 acres). Refer to the Appendix for a map of Zoning and Conservation Lands that was used in the site selection process described in Chapter 5.

Potential impacts on public parks and recreation areas (as well as historic sites) must be addressed under the Section 4(f) provision of the National Transportation Act of 1966. In addition, any properties which have received funding under the Land and Water Conservation Fund Act (LWCF), as administered by the US Department of Interior, require special evaluation including specific requirements for mitigation under Section 6(f) of that Act.

New Hampshire law under RSA 4:30-a requires that impacted municipally owned recreation or conservation lands be replaced. The RSA states that when the State of New Hampshire acquires any municipal conservation or recreation land, it shall transfer to the affected municipality other comparable land and facilities to the extent feasible, or shall grant to the municipality sufficient funds to acquire comparable lands.

All NHDOT projects are also required to identify any impacts to LCIP (Land Conservation Investment Program) properties. This program, under the auspices of NHOEP and now inactive, purchased properties specifically for conservation purposes.

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Purpose and Need

This chapter establishes the Purpose and Need for the project and identifies a number of related project goals. The Purpose and Need statement is a simple method for outlining both the reasons for proposing a project and the underlying need for the project.

3.1 Purpose and Need

The **Purpose** of the Ossipee Transportation Center is to create an integrated, intermodal passenger facility that increases mobility and accessibility for travelers and helps meet the region's travel demand. Secondary benefits of such a facility may include improvement of the environment, quality of life, and economic vitality of the Ossipee area.

The **Need** for the Ossipee Transportation Center is demonstrated in the three main areas: Transportation and Mobility; Environment and Quality of Life; and Economic Development. The following sections contain discussions of need in each of these three areas.



3.1.1 Transportation and Mobility

The Need for the Ossipee Transportation Center in the area of Transportation and Mobility is demonstrated in several ways:

- There is a lack of a centralized, integrated transportation hub in the town of Ossipee and the surrounding region. The proposed Ossipee Transportation Center could create such a hub, enhancing the connectivity of the transportation system, across and between modes.
- There is a lack of alternative transportation modes in the area, which forces travelers to rely on private automobiles for mobility. The proposed Ossipee Transportation Center could encourage the development of private or public transportation services in the area, creating a more balanced transportation system.



3.1.2 Environment and Quality of Life

The Need for the Ossipee Transportation Center in the area of Environment and Quality of Life is demonstrated in several ways:

- The lack of alternative modes of transportation and heavy reliance on the private automobile results in high energy consumption and vehicular emissions relative to the amount of travel in the region. The proposed Ossipee Transportation Center could protect and enhance the environment by promoting energy conservation and a reduction in emissions through the use of alternative modes of transportation.
- The traffic congestion, emissions, and noise associated with high levels of private vehicle use have a negative impact on the quality of life in the town of Ossipee and the surrounding region. The proposed Ossipee Transportation Center could improve the quality of life for residents and visitors by reducing the reliance on private vehicles and promoting alternative modes of transportation.



3.1.3 Economic Development

The Need for the Ossipee Transportation Center in the area of Economic Development is demonstrated in several ways:

- There is currently a poor connection between businesses in portions of Ossipee and the state highways that pass through the town, which leads to missed opportunities for economic development as visitors pass through the area without stopping. The proposed Ossipee Transportation Center could help promote economic vitality in the town of Ossipee by encouraging travelers to stop in Ossipee and patronize local businesses and attractions.
- Currently there are few locations in the town of Ossipee where visitors can stop and gather information about local attractions and businesses. The proposed Ossipee Transportation Center could provide a visible, more centralized location, thereby helping to promote local economic development and tourism.



3.1.4 Other Goals

In addition to addressing the needs identified above, the following are other goals for the Ossipee Transportation Center project:

- Support the principles and recommendations of the U.S. Transportation Equity Act for the 21st Century (TEA-21), the New Hampshire Long Range Statewide Transportation Plan (LRSTP), the Route 16 Corridor Protection Study, and other relevant local, regional and state planning efforts. Main principles of TEA-21 include creating a balanced, multimodal transportation system; coordinating land use and air quality planning with transportation planning; and extensive public involvement throughout the transportation planning process. The New Hampshire LRSTP vision includes planning for multiple modes; enhancing intermodal connections; and protecting and enhancing community character.
- Create an attractive “gateway” to Ossipee that attracts visitors and serves the needs of travelers along NH Route 16.
- Provide a location where residents of Ossipee and nearby communities can leave their automobiles and take another means of transportation to access employment sites such as Portsmouth, Rochester, and Conway, and to access airports including Pease Tradeport, Logan Airport, Portland Jetport, and Manchester Airport.
- Develop a facility that supports connections to recreational opportunities in the Ossipee area.
- Create a facility with the potential to accommodate taxi service, paratransit/van service for elderly and disabled residents, and a possible future local transit service.
- Provide a location that allows for accommodation of passenger rail service in the event that the 22 inactive miles of the Conway Branch between the Ossipee Gravel Pit and Conway Village are restored to service in the future.

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Transportation Center Program

An important step in the feasibility study process is to determine the program for the proposed Transportation Center. To determine the program, it is necessary to identify potential users, analyze the needs of these users, and anticipate how their needs could be addressed by the proposed facility. In analyzing the program for the Ossipee Transportation Center, it is also useful to look at examples of similar facilities. Based on the analysis of users and examples of similar facilities, it is possible to develop initial scenarios for the Transportation Center program. This chapter summarizes these steps in the study process.

4.1 Potential Transportation Center Users

The process of analyzing potential users for the proposed Transportation Center consists of three steps: 1) identifying the users, 2) assessing their needs, and 3) summarizing potential users and needs so that building program scenarios can be developed. The following sections discuss the development of these three steps for the Ossipee Transportation Center.



4.1.1 Identification of Users

There are two main groups of users for a facility such as the proposed Ossipee Transportation Center: transportation users, and ancillary users. Potential users of the Ossipee Transportation Center in both categories were identified based on input from the LRPC, the PAC and the general public. These users are listed below, and an assessment of their needs is discussed in Section 4.1.2.

4.1.1.1 Transportation Users

Transportation users for an intermodal transportation center may include users of several modes of transportation. Potential transportation-related users of the Ossipee Transportation Center include the following:

- Intercity bus companies/passengers

- Park-and-ride users
- Local transit agencies/passengers
- Passenger rail operators/passengers

4.1.1.2 Ancillary Users

A second group of users includes those that are not necessarily transportation-related, but which can support the efficient and comprehensive operation of an intermodal transportation facility. Potential ancillary users of the Ossipee Transportation Center include the following:

- Taxi companies/passengers
- Commercial businesses
- Town departments or offices
- Community services agencies and non-profits
- Recreational users/businesses

4.1.1.3 Other Users

In addition to the users identified above, a number of members of the PAC and the public identified highway travelers as another group of users who could potentially benefit from a new facility, if the programming and funding arrangements permit it. Several members of the community pointed out that the *Route 16 Corridor Protection Study* envisioned the facility serving as a visitor center and rest stop for highway travelers.



4.1.2 Assessment of Needs

Once the potential users of the Ossipee Transportation Center were identified, an assessment of their needs and the possibility of their inclusion in the proposed facility was conducted. The information for this assessment was gathered in several ways: (1) Telephone correspondence with potential users; (2) Review of studies such as the *New Hampshire Statewide Intermodal Transportation Planning Study*; (3) Input from the PAC and the general public at study meetings. The following sections summarize the assessment of user needs.

4.1.2.1 Transportation Users

As noted above, four groups of potential transportation users for the Ossipee Transportation Center were identified. The following is a summary of the needs of

each of these groups of users as demonstrated over the process of the Feasibility Study:

- Intercity bus companies/passengers: Based on conversations with Concord Trailways and C&J Trailways, there appears to be a modest but viable market for intercity bus service in the Ossipee area. Concord Trailways has operated its route through West Ossipee for more than 20 years, as part of an extensive network of routes in northern New England. Currently, Concord Trailways passengers in West Ossipee purchase tickets at Watson's Store at the NH 16/NH 25 West intersection. Construction of a Transportation Center would provide Concord Trailways a much more visible location, better passenger amenities, and a secure place to park. These changes are likely to increase ridership and foster a greater demand for intercity bus service in Ossipee. C&J Trailways, which operates intercity bus service farther south on Route 16 from Dover and Portsmouth to Boston, sees ridership potential on the southern end of Route 16. At the present time, C&J Trailways has no plans to expand north to the Ossipee area on Route 16.
- Park-and-ride users: As noted in Chapter 1, *The New Hampshire Statewide Intermodal Transportation Planning Study*, published in December 2003, assessed the need for park-and-ride lots across the State of New Hampshire. As part of the study, an inventory of existing park-and-ride lots was completed; a survey of park-and-ride users was conducted and demand for new facilities was estimated; a hierarchy of park-and-ride amenities was identified; and a strategy for establishment of new park-and-ride facilities was developed. The demand model used in the study took into account the market population around the proposed park-and-ride location and whether the facility would be visible from the highway. Based on this model, it was estimated that daily usage of a park-and-ride facility in West Ossipee (near NH 16/NH 25 West) would be 25 patrons with highway visibility and 10 without highway visibility, and daily usage in Ossipee (near NH 16/NH 28) would be 24 patrons with highway visibility and eight without highway visibility. These demand figures are based on 2000 U.S. Census data; demand would grow as population and congestion along Route 16 increase in the future.
- Local transit agencies/passengers: A local or community transit agency and its passengers could be another type of user for the proposed Ossipee Transportation Center. At the present time however, no local public transit agency serves Ossipee. The nearest local transit is located on the west/southwest side of Lake Winnepesaukee in the Meredith-Laconia area and in the Berlin-Gorham area north of Conway. During the Feasibility Study process, a number of individuals stated that there is a need for local public transit service in Ossipee, but no stakeholders expressed a willingness to lead an effort to establish a local transit agency.
- Passenger rail operators/passengers: As noted in Chapter 2, the Conway Branch runs through Ossipee close to Route 16, although it is currently inactive between southern Ossipee and the Albany-Conway town line. This railroad corridor

presents an opportunity to offer an intermodal connection to a Transportation Center in Ossipee, should the line be restored and passenger service be established. The Conway Scenic Railroad currently operates a successful tourist excursion service to the north. The Conway Scenic Railroad is not in a position to contribute funds for the restoration of the inactive portion of the Conway Branch, so state or federal funding would likely be required to undertake this project. Further information about the costs of restoration of the Branch is provided in Chapter 2. No source of funding or timetable for restoration has been identified at this time.

4.1.2.2 Ancillary Users

As noted above, five groups of potential ancillary users for the Ossipee Transportation Center were identified. The following is a summary of the needs of each of these groups of users as demonstrated over the process of the Feasibility Study:

- Taxi companies/passengers: Currently one private taxi company, Mama's Taxi, serves the town of Ossipee. This company provides transportation services to senior citizens, persons with disabilities, children, welfare recipients, persons who request transport via the Town, County or the State, as well as the general public. Typically, small taxi companies do not require a separate facility to house their operations. Therefore, it was assumed that while a private taxi company would serve the proposed Transportation Center, it would not occupy any space inside the facility.
- Commercial businesses: Transportation centers often contain ancillary commercial businesses that support the transit use at the facility by providing services that enhance the convenience or comfort of the transit patron's experience. Examples of such businesses include newsstands, coffee shops, dry cleaning or tailoring shops, florists, or concierge businesses. Anecdotal evidence from the PAC and the general public suggests it would be feasible to attract such a business to the proposed Transportation Center, particularly given the high visibility and traffic volumes at most locations that would be considered for the facility.
- Municipal offices or functions: Some transportation centers are owned by the municipality and include space for municipal offices or functions. For instance, the planned Amesbury Transportation Center in Amesbury, MA will be owned by the Town of Amesbury and will include space for the Town's Council on Aging. Other examples of municipal uses that can complement transit functions in a transportation center include public meeting rooms, a youth center, or a police substation. While there might be a potential for a municipal office or function of the town of Ossipee to locate in the proposed transportation center, no interest was expressed in such an idea during the study process.

- Community services agencies and non-profits: Some transportation centers include space for community services agencies or non-profits, who often provide services that complement and support public transit. Uses that may be located in a transportation center include a day care center, health clinic or offices with comprehensive services that can benefit transit patrons as well as members of the general public. In the Ossipee area, four community services agencies and non-profits that might have an interest in the proposed transportation center were noted during the study process: Tri-County Community Action Program (CAP), Ossipee Concerned Citizens (OCC), the Greater Ossipee Area Chamber of Commerce, and the Retired Senior Volunteer Program (RSVP). While there might be a potential for one of these organizations to locate in the proposed transportation center, only casual interest was expressed in such an idea during the study process. It was suggested, however, that the current Ossipee Information Booth, located in West Ossipee and staffed by RSVP volunteers, could be combined with the proposed transportation center to provide information to both bus and auto travelers.
- Recreational users/businesses: It was suggested during the study process that some linkage could be established between the existing recreational amenities in Ossipee and the proposed transportation center. Recreational users that were mentioned included snowmobilers, cross-country skiers, and cyclists. It was also suggested that there might be potential to attract a recreation-oriented business such as a bicycle rental shop to the transportation center, depending on the location of the facility.

4.1.2.3 Other Users

Based on the traffic volumes on the Route 16 corridor through Ossipee and the fact that there is no highway rest stop between Portsmouth and Intervale on Route 16 (a distance of over 80 miles), it seems likely that there would be demand for a highway rest stop use in Ossipee. Since the potential funding source to construct the Ossipee Transportation Center (an FTA capital grant) would not fund a facility serving primarily highway travelers, the plans for the Ossipee Transportation Center have not been designed to accommodate highway travelers or depend on their patronage. However, an effort has been made to keep this set of potential users in mind so that the proposed facility concept does not preclude the possibility of adding a highway rest stop function through separate funding.



4.1.3 Programming Summary

Given the list of possible transportation users and ancillary users of the proposed transportation center and their respective needs, a consensus emerged about the type of uses that should be considered for the facility. These uses included:

- Space for intercity bus passengers

- Space for park-and-ride patrons
- A pick-up/drop-off area that could accommodate taxis as well as private autos
- Space for a commercial tenant
- Space for a community or non-profit use (potential)
- Space for recreational users (potential)

The space needs of each of these potential users must be considered in light of the FTA's capital grant guidelines to determine which combination of uses and what space allocation would be appropriate for a project funded by an FTA capital grant. In addition, the potential operating costs and revenues associated with each of these users must be weighed to determine if including them in the transportation center is feasible given available operating funding.

4.2 Transportation Center Examples

The main purpose of looking at examples of Transportation Centers is to be able to gain a better understanding of possible arrangements of uses inside such facilities. For instance, the relationship of the transit portion with an ancillary use within the building shell can be indicative of decisions made in the facility planning process about funding, operational arrangements, and security considerations. In the Transportation Center examples that follow, building floor plans show the arrangement of functions inside the building. The site plans show how the buildings are balanced with their surrounding context and how efficient vehicular and pedestrian access is provided to the facility. In each site plan and building floor plan, the area dedicated to transportation uses is shaded in grey. From these examples, three elements emerge as fundamental design components: the building, the bus circulation lane and the parking areas. In the end, the size and design of the building is a reflection of the anticipated usage of the facility in terms of numbers of patrons, frequency of buses, and other similar factors.



4.2.1 Amesbury Transportation Center

The Amesbury Transportation Center in Amesbury, MA is a relevant example for this study because it is located in a relatively small community in New England and includes a community-serving ancillary use. The Amesbury Transportation Center is a planned multi-use facility that is currently under design. The facility will be a hub for the Merrimack Valley Regional Transit Authority (MVRTA) and will house a bus terminal with interior waiting areas, restrooms and ticketing. The building will consist of 10,000 square feet on two floors, located on a site of about 2.5 acres. Figure 4-1 summarizes the key characteristics of the planned Amesbury Transportation Center and shows a rendering of the planned facility.

Building Program Summary

Size of Transportation Center Site	115,000 square feet (2.5 acres)
Size of Building	10,000 square feet
Building space for transit use	25 %
Building space for non-transit use	75 %
Entity owning the Center	MVRTA
Entities renting space in the Center	Town of Amesbury, Other office space
Entity operating the ticketing	Council on Aging, Town of Amesbury
Entity maintaining the Center	Responsibilities are under negotiations



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Amesbury Transportation Center
Overview

Figure 4-1

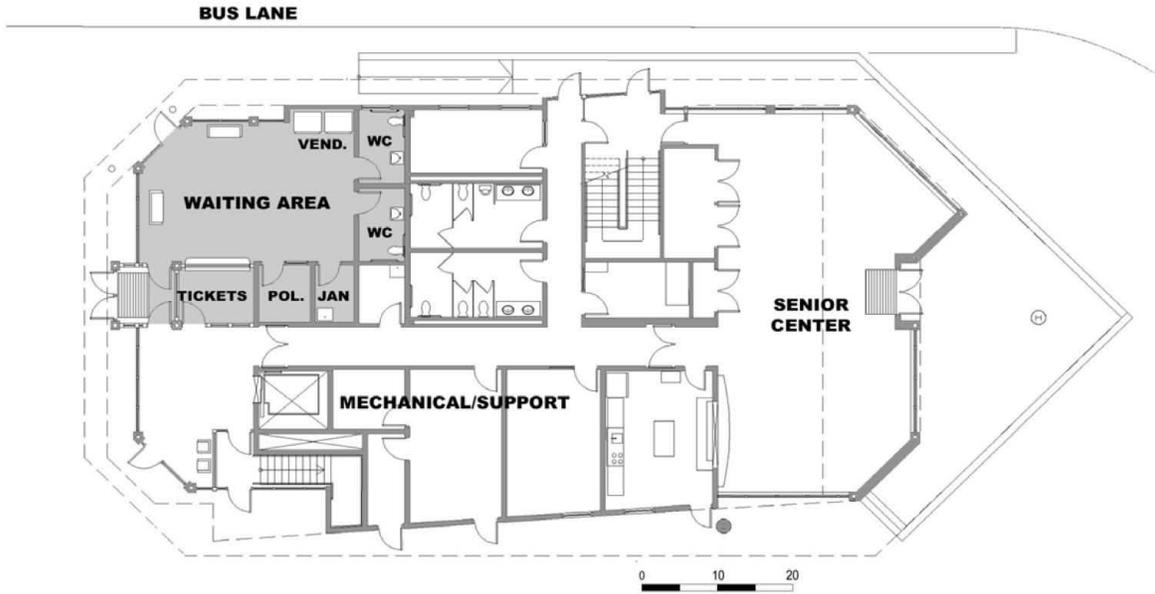
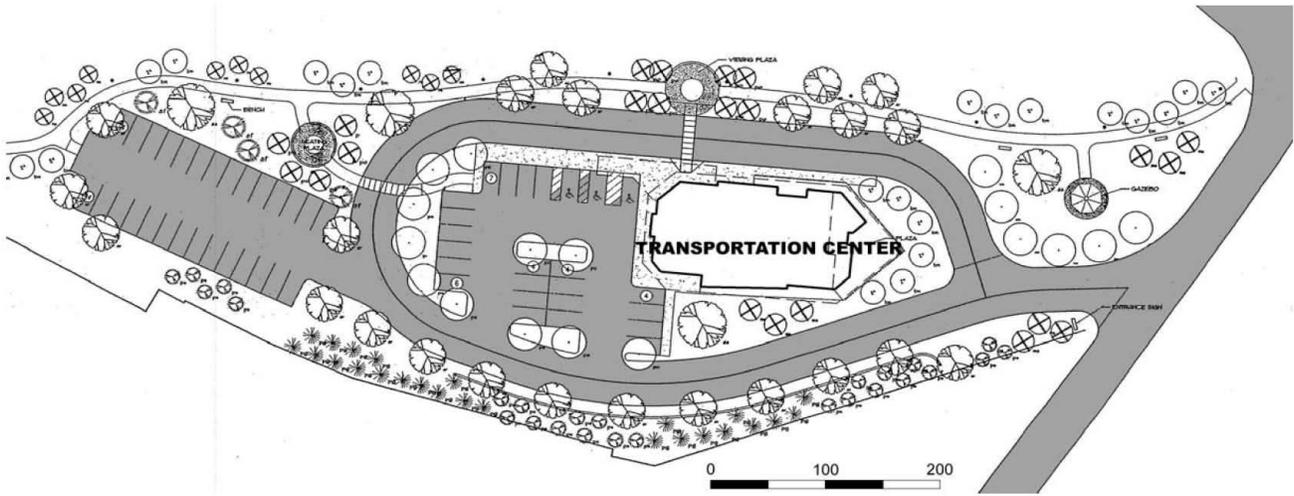
The site is located along the Back River in the “Lower Mill Yard” area of Amesbury. It will be extensively redeveloped to include 56 parking spaces for long and short-term parking, significant landscaping, as well as an extension of the pedestrian “riverwalk” that is being developed along the adjacent Powwow River. Several site amenities will provide a link between the building and the nearby downtown, including sitting areas, a pergola, gazebo, and an exterior plaza adjacent to the building’s Senior Center space. Figure 4-2 presents the Site Plan and First Floor Plan. As can be seen in the Site Plan, an exterior curbside loading and unloading area will accommodate four buses, complementing the building’s main purpose as a transit facility. The transportation operations are shared between the local MVRTA bus service and a coach bus service geared towards park-and-ride patrons. Looking at the interior of the building, the planned multi-use facility will also house a new Senior Center for the Town of Amesbury’s Council on Aging. The senior center will occupy a large portion of the usable building area and will operate as a tenant to the MVRTA; it will include dining/gathering functions, kitchen facilities, offices, classrooms, craft studios, as well as exercise and recreational spaces. The senior center function will also complement the operation of the transportation center as the ticketing services are to be provided by the senior volunteers who will use the Senior Center.



4.2.1 Brockton Intermodal Center

The Brockton Intermodal Center in Brockton, MA is another relevant example for this study because it includes multiple ancillary uses and is adjacent to a rail line. The Brockton Intermodal Center is a multi-use facility that is currently in operation. The facility is a hub for Brockton Area Transit (BAT), a local transit agency south of Boston. The BAT Intermodal Center is a key element in Brockton's downtown revitalization and a catalyst for a regional economic renaissance. The facility accommodates local and coach buses, taxis, bicycles, pedestrians, and private automobiles, and is located adjacent to a commuter rail station on the MBTA’s Middleborough/Lakeville line, part of the recently-restored Old Colony rail service. The BAT Intermodal Center consists of a 4,200 square foot building, located on a site of about 4.5 acres. Figure 4-3 summarizes the key characteristics of the Brockton Intermodal Center and shows several photos of the facility.

Figure 4-4 presents the Site Plan and Floor Plan for the Brockton Intermodal Center. The interior of the facility provides for a passenger waiting area, transit support functions and retail space. The transit operations are handled by BAT which maintains a ticketing room adjacent to the building’s entrance. In addition to a community police substation, four small commercial tenants occupy the retail portion of the building: a donut shop, a snack shop, a newsstand, and a gift shop. With the recent addition of a new garage adjacent to the Intermodal Center, there are approximately 250 parking spaces – long and short-term – located on site.



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Amesbury Transportation Center:
Site Plan and First Floor Plan

Figure 4-2

Building Program Summary

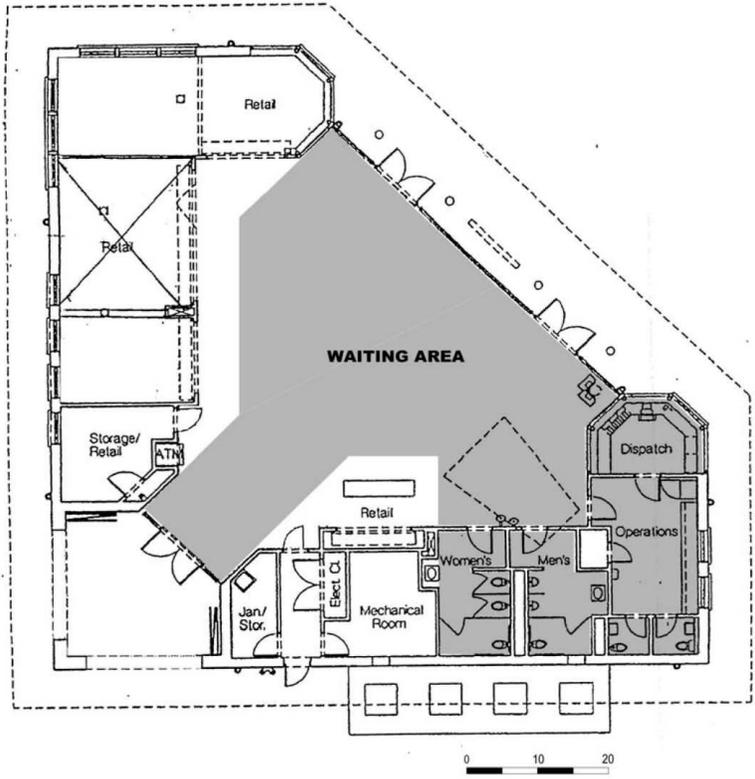
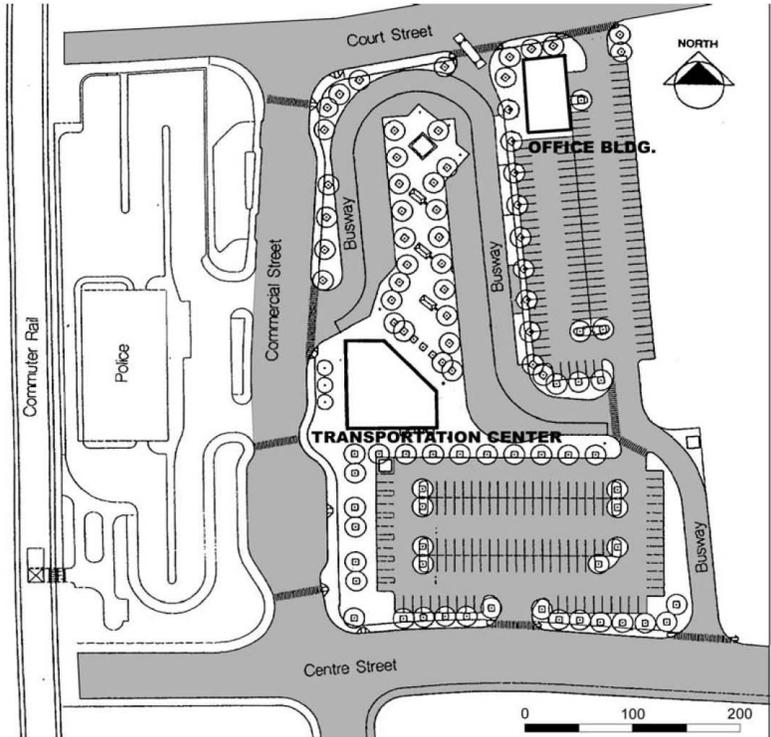
Size of Intermodal Center Site	200,000 square feet (4.5 acres)
Size of Building	4,200 square feet
Building space for transit use	65 %
Building space for non-transit use	35 %
Entity owning the Center	BAT
Entities renting space in the Center	Four commercial businesses
Entity operating the ticketing	BAT
Entity maintaining the Center	BAT



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Brockton Intermodal Center
Overview

Figure 4-3



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Brockton Intermodal Center: Site Plan and First Floor Plan

Figure 4-4

4.3 Building Program Scenarios

Based on the identification of potential users of the Ossipee Transportation Center, the assessment of their needs, and a review of other Transportation Center examples, a set of initial building program scenarios were developed. These scenarios are generic, intended to show several possible allocations of space within the Transportation Center building. At this stage in the feasibility study process, these scenarios are also not site-specific and should be applicable to any site chosen through the site selection process. Table 4-1 presents these three building program scenarios.

Table 4-1: Building Program Scenarios (in square feet)

	Transportation Center (TC)	TC with Community Function	TC with Commercial functions
1 Public Spaces	950	1050	1400
1.1 Entrance	100	100	150
1.2 Waiting area	400	500	750
1.3 Vending machines area	100	100	100
1.4 Ticketing/Office	150	150	200
1.5 Bathrooms (2)	150	150	150
1.6 Lockers area	50	50	50
2 Tenant	0	800	950
2.1 Tenant main area	-	600	800
2.2 Tenant Bathrooms (2)	-	200	150
3 Support	400	700	1000
3.1 Storage	100	100	100
3.2 Tenant storage/support	-	200	400
3.3 Mechanical spaces	300	400	500
Net Total	1,350	2,550	3,350
Circulation/Walls +25%	350	650	850
Total	1,700	3,200	4,200

The first scenario illustrates a facility that will have only a transit use, along with all the necessary supporting functions. The second and the third scenarios add other functions to the transit component, such as a community function or a retail use. In these scenarios, an ancillary or incidental use occupies space within the Center's shell and may be responsible for the operation of the center - ticketing, providing general information, assisting passengers, and other functions. As the table indicates, in the second and third scenarios the ancillary uses comprise about one-quarter of the total area of the facility, with the remainder dedicated to transit use and public space.

Site Identification and Screening

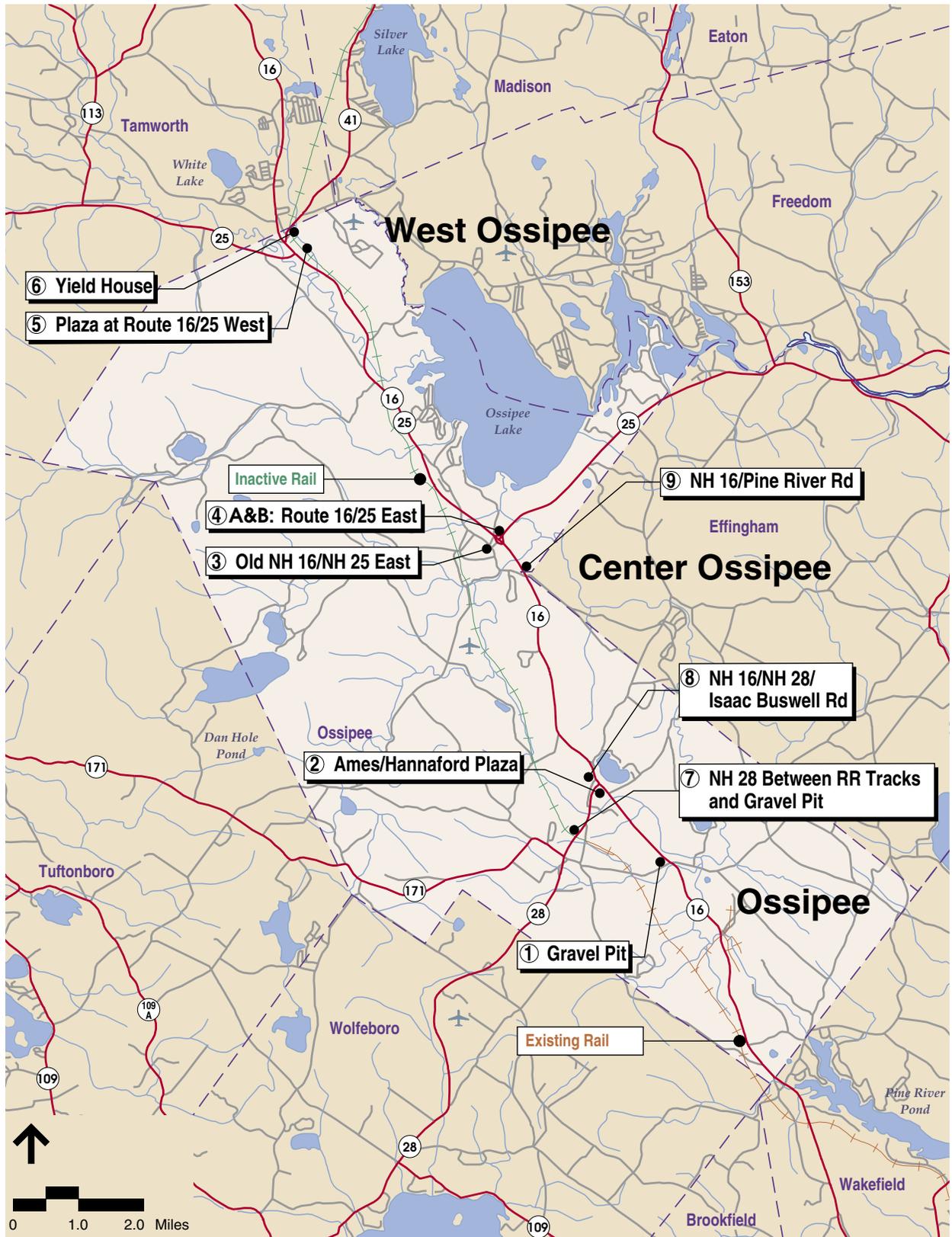
This chapter summarizes the process that was undertaken to identify and screen potential alternative sites for the Ossipee Transportation Center. The result of this screening and evaluation process was selection of a preferred site upon which to base conceptual plans for the Transportation Center.

5.1 Alternative Sites

Based on input from the Project Advisory Committee and the public, a preliminary list of possible sites for the proposed transportation center was developed. This list of potential sites was narrowed to a set of ten site alternatives (nine locations; a location includes two alternate sites) to be evaluated further, through a comparison with the needs and goals in the project Purpose and Need statement. Four of these sites are located in or near Center Ossipee, four are in or near Ossipee, and two are in West Ossipee. The locations of the site alternatives are shown on the Site Alternatives Map in Figure 5-1.

The following are brief descriptions of each of the ten site alternatives. The size in acres of the site that was evaluated is identified for reference. It is important to note that most of the sites are considerably larger than the size necessary for the proposed Transportation Center, so only a portion of any site would be affected. Refer to the Appendix for maps of each site showing an aerial photograph, parcel boundaries, and roadways.

- Site 1 - Former Gravel Pit: This site is located southwest of the intersection of NH 171 and NH 16, near Pine River Road. It consists of a former gravel pit that is currently unused, and is located near the inactive Conway Branch railroad right-of-way. Site 1 is 44 acres in size.
- Site 2 - Ames/Hannaford Plaza: This site is located on the southwest side of the intersection of NH 28 and NH 16 in Ossipee. It consists of a former Ames store (vacant), a Hannaford Brothers grocery store (active), and a large parking lot with highway access. The Ames portion of the site consists of approximately four acres.



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Site Alternatives Map

Figure 5-1

- Site 3 – Old NH 16/NH 25 East: This site is located on Old Route 16 in Center Ossipee, just west of the interchange of NH 16 and NH 25 East. The site is nearly flat along Old Route 16, becoming hilly and sloping upward away from the roadway. Site 3 is approximately nine acres in size.
- Sites 4A & 4B – Route 16/25 East: This alternative is located on the eastern side of the interchange of NH 16 and NH 25 East in Center Ossipee. It consists of two possible sites, one on the northern side of NH 25 along Hodgson Shores Road, and one on the southern side of NH 25. Site 4A consists of 14 acres, while Site 4B consists of 10 acres.
- Site 5 – Plaza at Route 16/25 West: This site is located east of the intersection of NH 16 and NH 25 West in West Ossipee. It consists of a plaza with a Post Office, gift shop, information booth, McDonald’s restaurant, a large parking lot, and some undeveloped areas. There is also a vacant parcel immediately to the south of the plaza that contains the foundation of a former ice cream stand. The inactive Conway Branch railroad right-of-way runs adjacent to the site. The site containing the plaza and McDonald’s consists of about seven acres, while the parcel to the south consists of another four acres.
- Site 6 – Yield House: This site is located southeast of the intersection of NH 16 and NH 41 in West Ossipee. It consists of a former industrial building, associated structures, and some adjacent undeveloped land. The former West Ossipee train depot is located just to the east of the site, and a portion of the site borders the inactive Conway Branch railroad ROW. Site 6 is about 12 acres in size.
- Site 7 – NH 28 between Railroad ROW and Gravel Pit: This site is located on NH 28 in Ossipee between the inactive Conway Branch railroad Right-of-Way and a sand and gravel pit. The site is owned by the State of New Hampshire and is 16 acres in size.
- Site 8 – NH 16/NH 28/Isaac Buswell Road: This site, roughly triangular in shape, is located between NH 16, NH 28 and Isaac Buswell Road in Ossipee, across NH 28 from the Ames/Hannaford Plaza. The portion of the site facing NH 16 has several buildings, while the remainder of the site is mostly undeveloped. Site 8 is about five acres in size.
- Site 9 – NH 16/Pine River Road: This site is located northeast of the intersection of NH 16 and Pine River Road near Center Ossipee. It owned by the State of New Hampshire, is currently undeveloped, and is 18 acres in size.

5.2 Evaluation Methodology

This section describes the process, criteria and sources of information that were used in the evaluation of alternative sites for the proposed Ossipee Transportation Center.



5.2.1 Evaluation Process

The process used in evaluating the proposed sites for the Ossipee Transportation Center was a one-stage screening process. It was conducted using a matrix developed by the Study Team that weighed the full set of alternatives against a set of evaluation criteria that were developed specifically for the study. Each alternative was assigned a score of +1, 0, or -1 in each category, as summarized below:

- +1 meant that the alternative met that criterion or was favorable in that area.
- 0 meant that the alternative was neutral with respect to that criterion.
- -1 meant that the alternative failed to meet the criterion or was unfavorable in that area.

The individual scores were summed to produce a total score for each alternative, and the alternative with the highest score was considered the Preferred Alternative.



5.2.2 Evaluation Criteria

The following are brief definitions of the criteria that were used in evaluating and screening the site alternatives for the Ossipee Transportation Center Feasibility Study. The criteria are grouped into three categories: Transportation, Site/Location Considerations, and Environmental Considerations.

5.2.2.1 Transportation

The following criteria related to Transportation were used to evaluate and screen the site alternatives:

- Transit Service Plan – Intercity/Regional Service: Is the proposed site currently serviced by an intercity or regional transit provider? If a transit provider were to expand or provide new service in the area, how suitable would the proposed site be for this intercity/regional service?
- Transit Service Plan – Community Service: If a community transit service were established (such as a circulator shuttle or trolley), how suitable would the proposed site be for this community service?
- Regional Accessibility: How accessible is the proposed site from the regional roadway system? Is the site located on a main thoroughfare, or does it require travel on secondary/local roads to access?
- Proximity to Rail Corridor: Is the proposed site adjacent to the Conway Branch rail corridor?

5.2.2.2 Site/Location Considerations

The following criteria related to Site/Location Considerations were used to evaluate and screen the site alternatives:

- Availability of Land: Is the land for the proposed site available? Are there any obstacles to acquisition of the land?
- Zoning/Land Use: Is the zoning designation favorable for development as a Transportation Center? Are the current land uses on and around the site compatible with the establishment of a Transportation Center?
- Proximity to Village Centers: Is the proposed site near one of the established village centers? Is it close to population centers, businesses, and areas with pedestrian access?
- Construction/Implementation Considerations: Does the site have characteristics that will affect construction and implementation of a Transportation Center, such as existing structures that must be demolished, challenging topography, or other features?

5.2.2.3 Environmental Considerations

The following criteria related to Environmental Considerations were used to evaluate and screen the site alternatives:

- Wetlands/Floodplain Constraints: Is the site located within the FEMA 100-year floodplain? Does the site contain wetlands as shown in the National Wetlands Inventory (NWI)?
- Watershed Protection: Is the site located within the established Water Resources Protection Zone? Does the underlying aquifer have a high degree of transmissivity? Do any Wellhead Protection Areas (or Source Water Protection Areas) overlap with the site? Is the site in a primary aquifer recharge area?
- Hazardous Materials: Does the site have any Above-Ground Storage Tanks, auto salvage yards, remediation sites, or Underground Storage Tanks, according to the NHDES One-Stop Geographic Information System (GIS) website?
- Historical/Archeological: Does the site contain any structure listed on the National Register of Historic Places?
- Other Environmental Constraints: Does the site have any of the following other environmental constraints?
 - Part of a large block of undisturbed wildlife habitat
 - Contains important farmland soils
 - Adjacent to public conservation lands

- A co-occurrence of a number of environmental resources, as mapped by the Green Mountain Conservation Group (GMCG) in July 2001



5.2.3 Sources of Information

The evaluation of the alternative sites with regards to Transportation criteria was based on a review of the existing intercity bus route; the existing roadway network; the locations of community services, residential development, and retail areas; and the alignment of the Conway Branch rail corridor. Sources of information for this review included the Concord Trailways website and available highway and topographic maps.

The evaluation of the alternatives with regards to Site/Location Criteria was based on field observations of the sites; discussions with local residents and members of the PAC; and a review of town zoning and land uses. Sources of information for this effort included aerial photography from the NH GRANIT database, the Ossipee Zoning Ordinance, and available highway and topographic maps.

For the environmental screening, information was obtained from the NH GRANIT database, the NHDES One-Stop GIS website, and the Green Mountain Conservation Group. In July 2001, the GMCG developed a series of GIS-based resource maps for the Lake Ossipee Watershed. These maps identified unfragmented habitat blocks, aquifer recharge areas, and the co-occurrence of nine environmental factors. The intent of these maps was to heighten public awareness for protection of the lake's watershed. For the evaluation of potential sites for the Ossipee Transportation Center, 11 individual environmental criteria were used to screen each of the alternative sites, with these 11 criteria grouped into the five areas defined in Section 5.2.2: Wetlands/Floodplain Constraints, Watershed Protection, Hazardous Materials, Historical/Archeological, and Other Environmental Constraints. Maps showing the location of the nine site alternatives in relation to environmental resources and constraints are included in Appendix E.

5.3 Site Evaluation Results

Based on the site evaluation criteria and the sources of information listed in Section 5.2, the ten alternative sites for the Ossipee Transportation Center were evaluated and screened to identify a Preferred Alternative. The Study Team conducted the initial site evaluation based on site visits and a review of available technical information and summarized this evaluation in a draft evaluation matrix. The Study Team presented these initial ratings to the PAC at the September 24th meeting to receive additional input. At this meeting, the PAC suggested and approved several adjustments to these ratings. The PAC also requested that the Study Team revisit one area of evaluation, Wetlands/Floodplain Constraints, for Sites 5 and 6 to confirm the initial rankings. Environmental Analysts on the Study Team looked into this area

in early October and determined based on available wetlands and floodplain mapping that no change in the initial ratings was warranted.

The final Site Evaluation Matrix is shown in Figure 5-2. As the matrix shows, Site 5 emerged as the site with the highest rating and is therefore the Preferred Alternative for the Ossipee Transportation Center. The following is a brief summary of the rationale used in assigning the ratings for each criterion:

- Transit Service Plan – Intercity/Regional Service: Sites that are currently served by the current intercity bus operator in West Ossipee were given a +1 rating (Sites 5 and 6). Sites not served by the present operator but located on or immediately adjacent to Route 16 were given a 0 rating (Sites 1, 2, 3, 4A/4B, 8 and 9). Any site not served by the current operator and not located on Route 16 was given a -1 rating (Site 7).
- Transit Service Plan – Community Service: Sites located near a clustering of community, residential and retail uses that would enhance a community transit hub were given a +1 rating (Site 3). Sites located far from any clustering of such uses were given a -1 rating (Sites 1, 7 and 9). The remaining sites were considered neutral and given a 0 for this rating (Sites 2, 4A/4B, 5, 6 and 8).
- Regional Accessibility: Sites located on or immediately adjacent to Route 16, which has the most heavily traveled and accessible regional highway in Ossipee, were given a +1 rating (all sites except Site 7). Sites not located on or adjacent to Route 16 were given a -1 rating (Site 7).
- Proximity to Rail Corridor: Sites located adjacent to the Conway Branch rail corridor were given a +1 rating (Sites 5, 6 and 7). All other sites were given a -1 rating.
- Availability of Land: Sites that were either for sale or that had significant undeveloped portions were given a +1 rating (Sites 5, 6 and 8). Sites with a potential obstacle to acquisition such as current litigation were given a -1 rating (Sites 1 and 3). All other sites were given a 0 rating.
- Zoning/Land Use: Sites were given a +1 rating if they were located completely in the Roadside Commercial, Commercial, Commercial Node, or Corridor zoning districts (Sites 2, 4A/4B, 5, 6, and 8). Sites located partially in one of the aforementioned districts were given a 0 rating (Site 1). Sites located in either the Village or Rural zoning district were given a -1 rating (Sites 3, 7 and 9).
- Proximity to Village Centers: Sites located within or immediately adjacent to one of the established village centers were given a +1 rating (Sites 3, 5, 6, and 7). Sites located close to a village center but separated by a physical obstacle such as a major roadway crossing were given a 0 rating (Sites 2, 4A/4B, 8 and 9). Sites not located close to an established village center were given a -1 rating (Site 1).

Alternative Sites	Evaluation Criteria										TOTAL SCORE						
	Transportation					Site/Location				Environmental		SUBTOTAL					
	Transit Service Plan - Intercity/Regional	Transit Service Plan - Community	Regional Accessibility	Proximity to Rail Corridor	SUBTOTAL	Availability of Land	Land Use/Zoning	Proximity to Village Centers	Construction/ Implementation Considerations	SUBTOTAL			Wetlands/Floodplain Constraints	Watershed Protection	Hazardous Materials	Historical/Archeological	Other
Site 1: Former Gravel Pit on NH 16	0	-1	+1	-1	-1	-1	0	-1	-1	-3	+1	-1	+1	0	0	+1	-3
Site 2: Ames/Hannaford Plaza	0	0	+1	-1	0	0	+1	0	+1	+2	+1	-1	0	0	-1	-1	+1
Site 3: Old NH 16/NH 25 East	0	+1	+1	-1	+1	-1	-1	+1	0	-1	+1	0	+1	0	+1	+3	+3
Site 4A: NH 16/NH 25 East (NE quadrant)	0	0	+1	-1	0	0	+1	0	0	+1	0	+1	+1	0	+1	+1	+2
Site 4B: NH 16/NH 25 East (SE quadrant)	0	0	+1	-1	0	0	+1	0	+1	+2	+1	-1	+1	0	-1	0	+2
Site 5: Plaza at NH 16/NH 25 West	+1	0	+1	+1	+3	+1	+1	+1	+1	+4	+1	-1	+1	0	0	+1	+8
Site 6: Yield House	+1	0	+1	+1	+3	+1	+1	+1	-1	+2	+1	-1	-1	0	0	-1	+4
Site 7: NH 28 btw/RR Tracks and Gravel Pit	-1	-1	-1	+1	-2	0	-1	+1	-1	-1	0	-1	+1	0	-1	-1	-4
Site 8: NH 16/NH 28/Isaac Buswell Rd	0	0	+1	-1	0	+1	+1	0	0	+2	0	-1	+1	0	0	0	+2
Site 9: NH 16/Pine River Rd	0	-1	+1	-1	-1	0	-1	0	0	-1	+1	-1	+1	0	-1	0	-2

Scoring System	
+1	Favorable/Meets Objective
0	Neutral
-1	Unfavorable/Fails to Meet Objective

Note: Other environmental constraints that were considered included Unfragmented Habitat Blocks, Important Farmland Soils, Conservation Lands, and Co-Occurrence of Nine Resource Layers (from Green Mountain Conservation Group study)

Figure 5-2

Site Evaluation Matrix

- Construction/Implementation Considerations: Sites that had no physical obstacles to construction were given a +1 rating (Sites 2, 4B and 5). Sites that had minor physical obstacles to construction were given a 0 rating (Sites 3, 4A, 8 and 9). Sites that had challenging topography that would require extensive grading, existing structures that would need to be demolished, or significant obstacles were given a -1 rating (Sites 1, 6 and 7).
- Wetlands/Floodplain Constraints: None of the nine sites were located within the mapped MEMA 100-year floodplain. Sites that had no mapped wetlands were given a +1 rating (Sites 1, 2, 3, 4B, 5, 6, and 9). Sites with a small percentage of mapped wetlands were given a 0 rating (Sites 4A, 7 and 8). None of the nine sites had a large percentage of mapped wetlands (greater than 15% of the site).
- Watershed Protection: Sites that were either located in the Town Water Resources Protection District, had high aquifer transmissivity, had Wellhead Protection Areas overlapping the site, or were in a primary aquifer recharge area were given a -1 rating (all sites except Site 3). Site 3 was given a 0 rating because it is not located in the Water Resource Protection District and has low aquifer transmissivity, no overlapping Wellhead Protection Areas, and is mostly in a secondary aquifer recharge area.
- Hazardous Materials: Sites with known remediation issues were given a -1 rating (Site 6). Sites adjacent to a remediation site were given a 0 rating (Site 2). All other sites were given a +1 rating.
- Historical/Archeological: None of the sites contained structures listed on the National Register of Historic Places. However, acknowledging the possibility that historical or archeological resources could be found at any of the sites upon further investigation, all sites were given a 0 rating.
- Other Environmental Constraints: Sites lacking any of the constraints identified in Section 5.2.2.3 were given a +1 rating (Sites 3 and 4A). Sites that are part of an unfragmented habitat block, adjacent to conservation land, or having multiple constraints in the GMCG co-occurrence analysis were given a -1 rating (Sites 2, 4B, 7 and 9). The remaining sites were considered neutral in this category (Sites 1, 5, 6 and 8).

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6

Preferred Alternative

Through the site identification and screening process described the previous chapter, Site 5 was identified as the Preferred Alternative for the Ossipee Transportation Center. This chapter describes the development of the conceptual design for the preferred alternative site including the existing conditions, the conceptual design approach, the conceptual site layout, and the architectural elements and features of the proposed Transportation Center building. This chapter also describes the infrastructure requirements, operational issues, potential environmental impacts, and anticipated environmental permitting requirements associated with the Preferred Alternative.

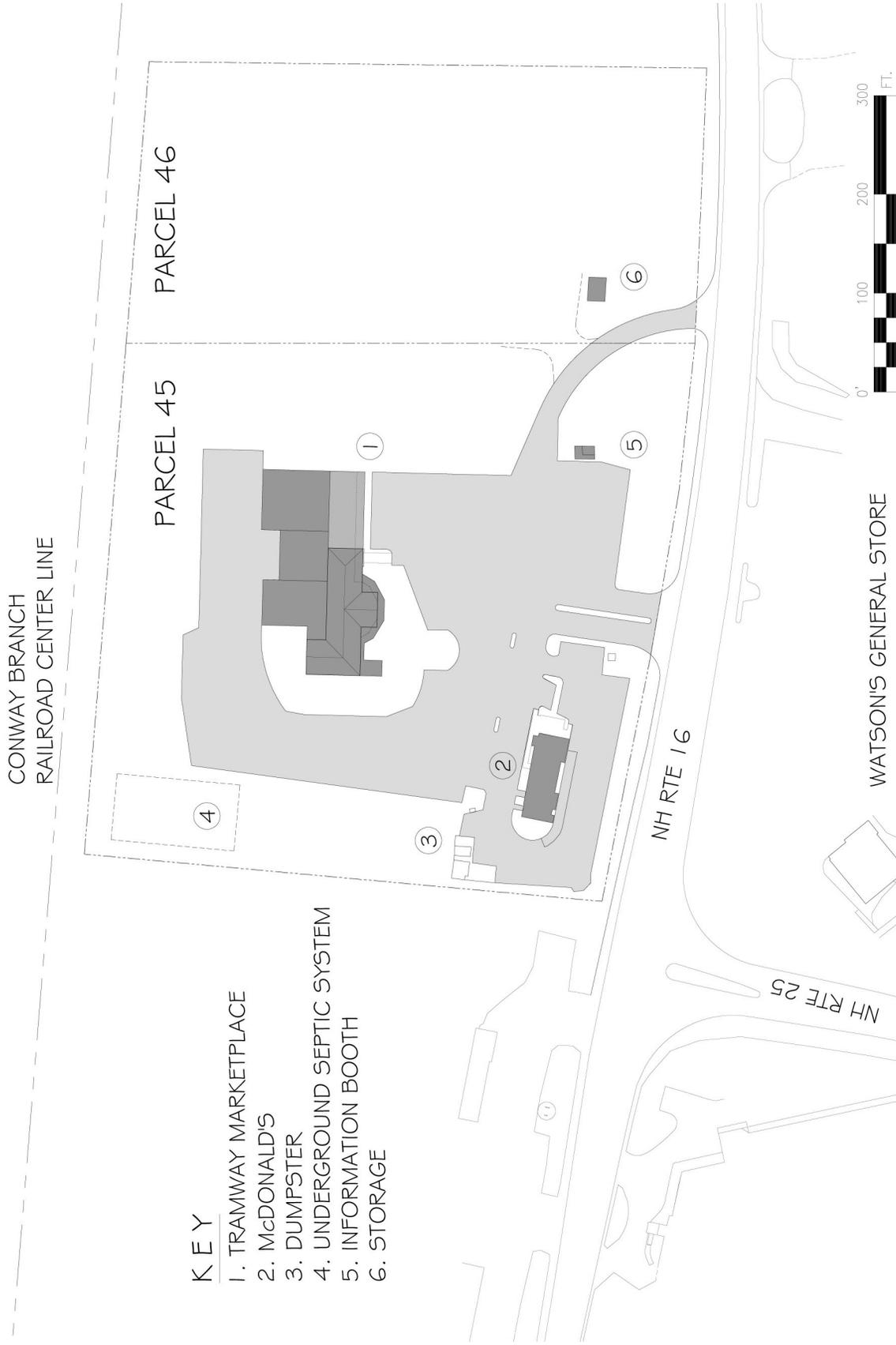
6.1 Existing Site Conditions

Site 5 is located in West Ossipee, adjacent to the intersection of NH 16 and NH 25 West. The site is generally rectangular in shape and is bounded by NH 16 on the west, a mostly undeveloped commercial parcel to the north, the inactive Conway Branch railroad corridor to the east, and an undeveloped commercial parcel to the south. The site is currently zoned as Commercial Node in the Ossipee Zoning Ordinance. Table 6-1 summarizes the relevant zoning regulations at Site 5.

Table 6-1: Relevant Zoning Regulations at Site 5

Minimum Lot Size	10,000 square feet
Minimum Lot Frontage	80 feet
Front Setback	10 feet
Side/Rear Setback	15 feet
Maximum Lot Coverage	50%
Maximum Height	28 feet
Parking	1 for every 4 seats and 1 for every 2 employees anticipated

The investigation of Site 5 has focused on two adjacent parcels, Parcel 45 and 46 on Assessor’s Map 26, which have the capacity to allow a Transportation Center and its associated improvements to be constructed. Figure 6-1 shows the existing site conditions at Site 5. The existing features of Parcels 45 and 46 are described briefly in the following sections.



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Figure 6-1

Site 5: Existing Site Conditions



6.2.1 Parcel 45

Parcel 45 is the more northerly of the two parcels that make up Site 5, the Preferred Alternative, and is about seven acres in size. Currently, access to Parcel 45 occurs through two entrances: a two-lane driveway located in the middle of the Parcel 45 frontage which serves as the main entrance to the plaza, and a two-lane driveway to the south which serves as an alternate entrance. The driveway to the south is actually located on the northern half of Parcel 46, which is under the same owner as Parcel 45.

There are three structures located on Parcel 45:

1. The Tramway Marketplace building which houses the West Ossipee Post Office, a gift shop, an insurance agency, a construction company, and a vacant tenant space; a portion of this building is the historic base of the tram for the now-defunct Mount Whittier ski area on the west side of Route 16;
2. A McDonald's restaurant with a drive-through lane, located on the northwestern portion of the site; and
3. A small information booth operated by the Retired Senior Volunteer Program (RSVP) and located on the southwestern portion of the site.

The area between these three structures is devoted to parking, while the easterly most piece of the parcel is used to access the back side of the Tramway Marketplace building. The northeastern portion of Parcel 45 is grassy and contains a septic system, while the southeastern portion of the parcel, adjacent to Parcel 46, is undeveloped and covered with gravel and grass.



6.2.2 Parcel 46

Parcel 46 is the more southerly of the two parcels that make up Site 5, the Preferred Alternative, and is about four acres in size. This parcel is currently accessed by the same two-lane driveway that serves as the alternate entrance to the Tramway Marketplace plaza. The parcel is currently vacant with the exception an abandoned storage trailer and an ice storage container. The property was formerly a go-kart track in the 1970s and early 1980s, and more recently it contained an ice cream stand which burned about five years ago. Three concrete pads still exist on the site, presumably from former buildings, and a circuitous, asphalt track also remains on the site. A significant portion of this parcel is located between three and eight feet below the elevation of Route 16 and Parcel 45, a typical situation in undeveloped properties adjacent to Route 16 in that area.

6.2 Conceptual Design Approach

Two conceptual design options were developed for a Transportation Center on Site 5, Option A and Option B. Option A is located on Parcel 45 and consists of a building that fits the minimum requirements for the transit function, along with space for one ancillary tenant. Option B is located on Parcel 46 and consists of a slightly larger building with room for two to three ancillary tenants, along with a slightly larger site and a small picnic area for recreational use. These two options have been developed to show some of the different options that are available on Site 5 with regards to building size and site configuration, as well as to present a range of capital costs for the facility.

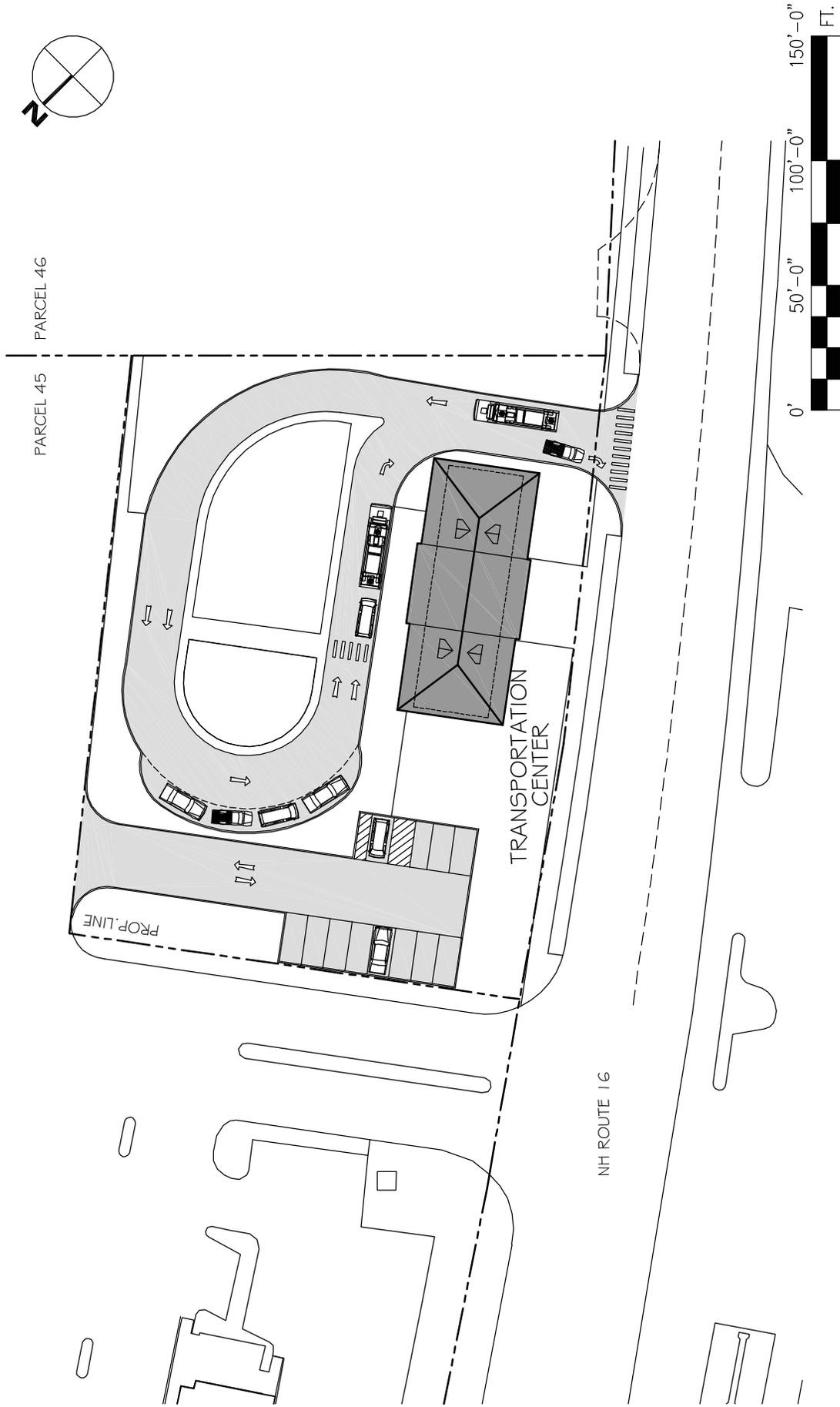
6.3 Conceptual Site Layout

This section describes the conceptual site layout for Option A and Option B on the Preferred Site. Figures 6-2 and 6-3 show the conceptual site plans for Options A and B, respectively.



6.3.1 Option A

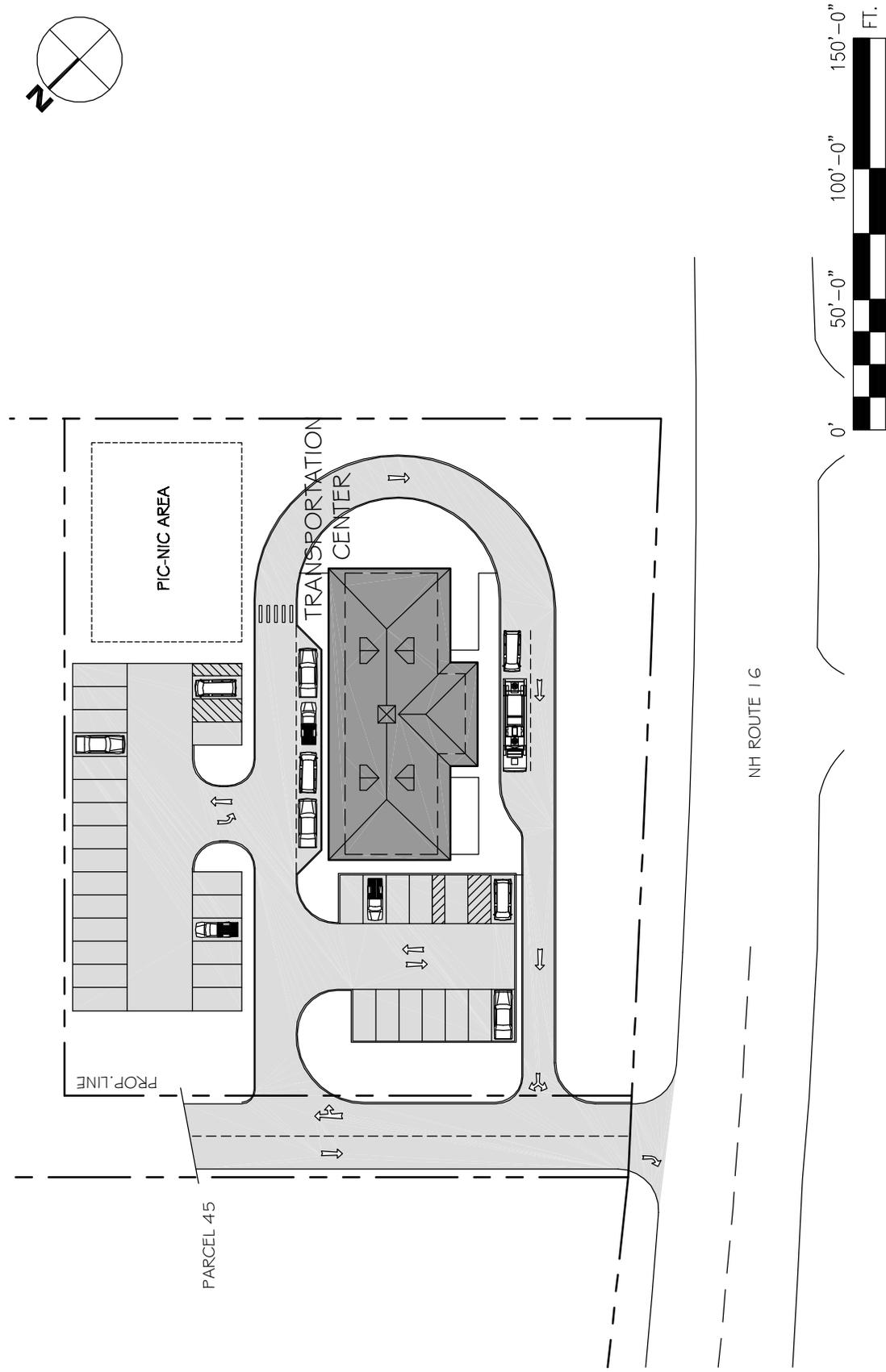
This option is situated on the southwest corner of Parcel 45, adjacent to Route 16, on a site of just under an acre or about 14% of the total area of the parcel. The single-story Transportation Center building is located near the Route 16 edge of the site. The main entrance to the facility is located on the southern end of the parcel frontage to avoid conflicts with vehicles queuing at the NH 16/NH 25 West intersection. The configuration of the bus and auto loop is counterclockwise and provides a covered curbside stop on the right side of the bus at the building entrance. A pick-up and drop-off area is placed in the exterior side of the loop, with a possibility for additional pick-up and drop-off in the parking area to the north. The parking area, which is accessed from the main parking lot for the Tramway Plaza, has a capacity for 12 cars with a possible addition of another 12 spaces should they be required in the future. A paved area in front of the building encourages pedestrian access to the Transportation Center from a sidewalk on Route 16 when it is constructed at some point in the future. Finally, a pedestrian path towards the currently inactive railroad corridor is established to permit a connection to a possible future rail station.



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Figure 6-2

Option A: Site Plan



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Figure 6-3

Option B: Site Plan



6.3.2 Option B

This option is located on the western portion of Parcel 46, adjacent to Route 16, on a site of about 1.3 acres or about 33% of the total area of the parcel. As in Option A, the single-story Transportation Center is located near the Route 16 edge of the site. An easement 30 feet wide has been left on the north side of the site to provide access to the remaining area of Parcel 46. This easement is utilized as a driveway entrance to the Transportation Center for both buses and cars. The bus and auto loop is clockwise and provides a covered curbside stop on the right side of the bus at the building entrance. The arrangement of the building and bus lane offers excellent visibility of the loading and unloading of passengers from Route 16. In this option, the pick-up and drop-off area is placed at the back of the building, opposite the long-term parking area. There are two parking areas: a short-term parking area located to the north of the building, and a long-term and tenant parking area located to the east of the building. The long-term parking area could be gated to permit fee parking in the future. The total number of spaces in the two lots is 38. A picnic area, outdoor picnic tables, benches, bicycle racks, and potentially an area for ski racks and snowmobile parking may be located at the southeast corner of the site to provide an opportunity to enhance the recreational use of the facility. Finally, a pedestrian path towards the currently inactive railroad corridor is established to permit a connection to a possible future rail station, as well as potentially to offer a connection for cyclists, cross-country skiers and snowmobilers.

6.4 Architectural Elements and Features

This section describes the architectural elements and features of the Transportation Center building in Option A and Option B on the Preferred Site. A description of each option is provided in the sections below. Figures 6-4 through 6-9 illustrate Option A, and Figures 6-10 through 6-15 depict Option B. For each option, a conceptual floor plan, building elevation, longitudinal section, transverse section, and two perspective sketches are provided.



6.4.1 Option A

In Option A, the size of the building is about 2,700 square feet and its height at the roof ridge is 18 feet. The main entrance is located at the east side where the bus stops and patrons enter through a glass vestibule to the main area. The interior is organized in three groups of spaces: a waiting area in the center, support facilities to the south and a tenant space to the north. This configuration provides an overall openness of the interior space which is enhanced in the design by natural light infiltrating the building. The acoustic ceiling is placed nine feet above floor level and is supported by the wooden trusses of the roof. The waiting area includes seating;

vending machines; and an information counter and display boards where visitor information about the town of Ossipee can be obtained. Table 6-2 summarizes the program of Option A including the interior space allocation as well as the amount of area devoted to vehicular and pedestrian circulation on the site.

Table 6-2: Transportation Center Program: Option A

	BUILDING		
1	Public Spaces		1,050
1.1	Entrance		100
1.2	Waiting area		500
1.3	Vending machines area		100
1.4	Ticketing/Office		0
1.5	Bathrooms (2)		250
1.6	Lockers area		100
2	Tenant		650
2.1	Tenant main area		500
2.2	Tenant Bathrooms (2)		150
3	Support		440
3.1	Storage		100
3.2	Tenant storage/support		100
3.3	Mechanical spaces		200
3.4	Janitor's closet		40
	Net Total		2,140
	Circulation & Walls 25%		540
	Total		2,680
	SITE		
4	Vehicular areas		
4.1	bus & auto lane		9,500
4.2	parking		5,300
5	Pedestrian areas		
5.1	pedestrian paving		7,300
5.2	canopies		830



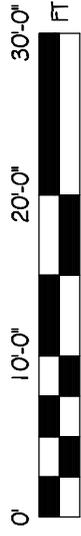
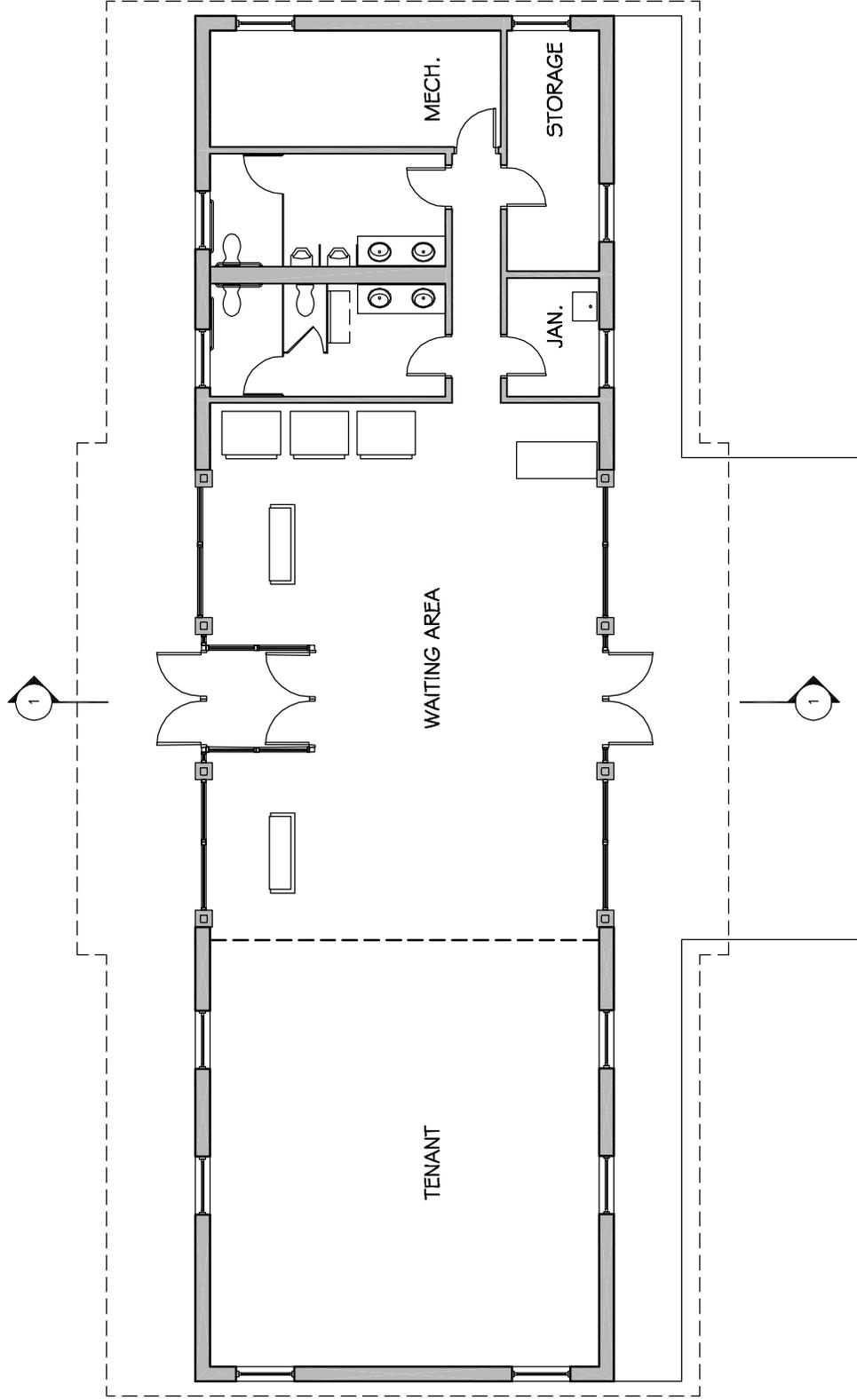
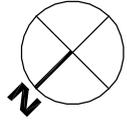
6.4.2 Option B

Option B exhibits a number of similarities to Option A in terms of architectural features, as a result of a process starting with two different building programs and converging to a set of shared architectural values such as functionality, efficiency and character. In Option B, the building occupies about 3,900 square feet and its height is 20 feet. The entrance is located in the west side of the building facing Route 16, a configuration which provides high visibility for the buses as they load and unload. The interior organization is similar to Option A, with the difference of having three tenants leasing space in the building: a community function with a conference facility and two commercial entities with supporting spaces. The acoustic ceiling is nine feet above floor level with an inset portion located above a free-standing information kiosk in the middle of the waiting area. Table 6-3 summarizes the program of Option

B including the interior space allocation as well as the amount of area devoted to vehicular and pedestrian circulation on the site.

Table 6-3: Transportation Center Program: Option B

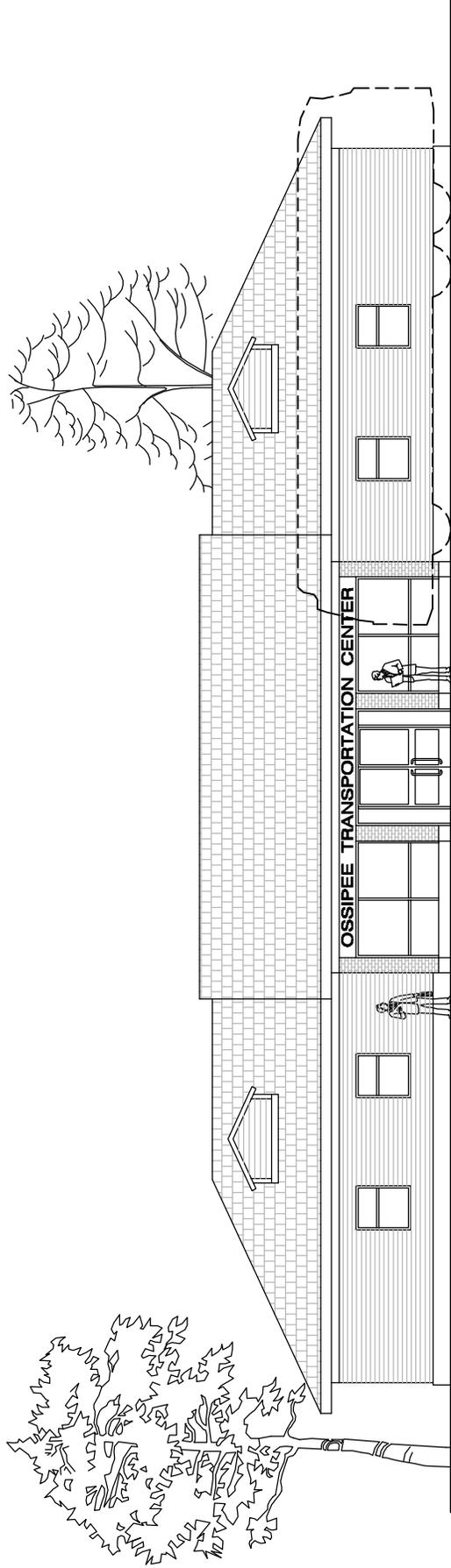
	BUILDING		
1	Public Spaces		1,450
1.1	Entrance	100	
1.2	Waiting area	1,000	
1.3	Vending machines area	50	
1.4	Lockers area	50	
1.5	Bathrooms (2)	250	
2	Commercial Tenant(s)		550
2.1	Tenant main area	500	
2.2	Tenant Bathrooms (1)	50	
3	Community Tenant		500
3.1	Conference Room (20)	300	
3.2	Office space	150	
3.3	Bathroom	50	
4	Support		600
4.1	Storage	100	
4.2	Tenant storage/support	250	
4.3	Mechanical spaces	200	
4.4	Janitor's closet	50	
	Net Total		3,100
	Circulation & Walls 25%		800
	Total		3,900
	SITE		
5	Vehicular areas		
5.1	bus & auto lane	12,600	
5.2	parking	11,750	
6	Pedestrian areas		
6.1	pedestrian paving	2,850	
6.2	canopies	480	



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Figure 6-4

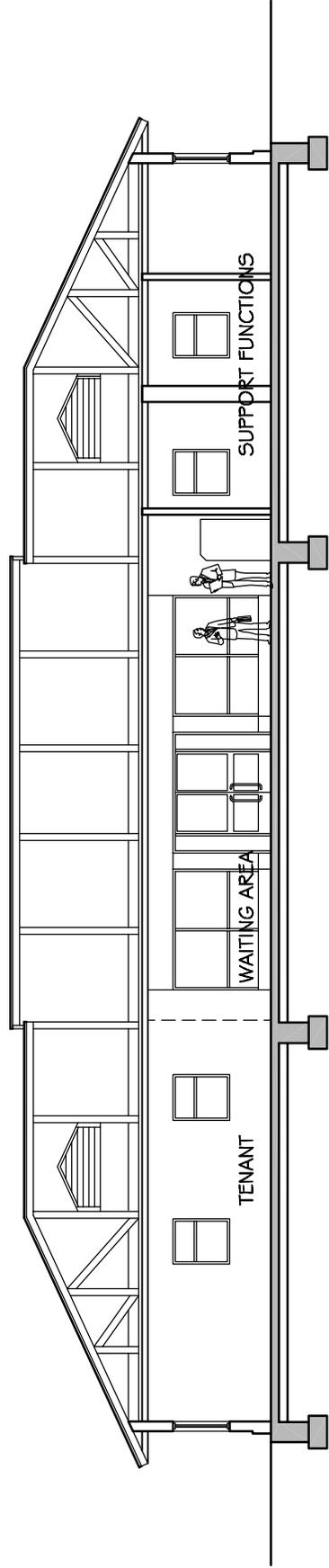
Option A: Building Floor Plan



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Figure 6-5

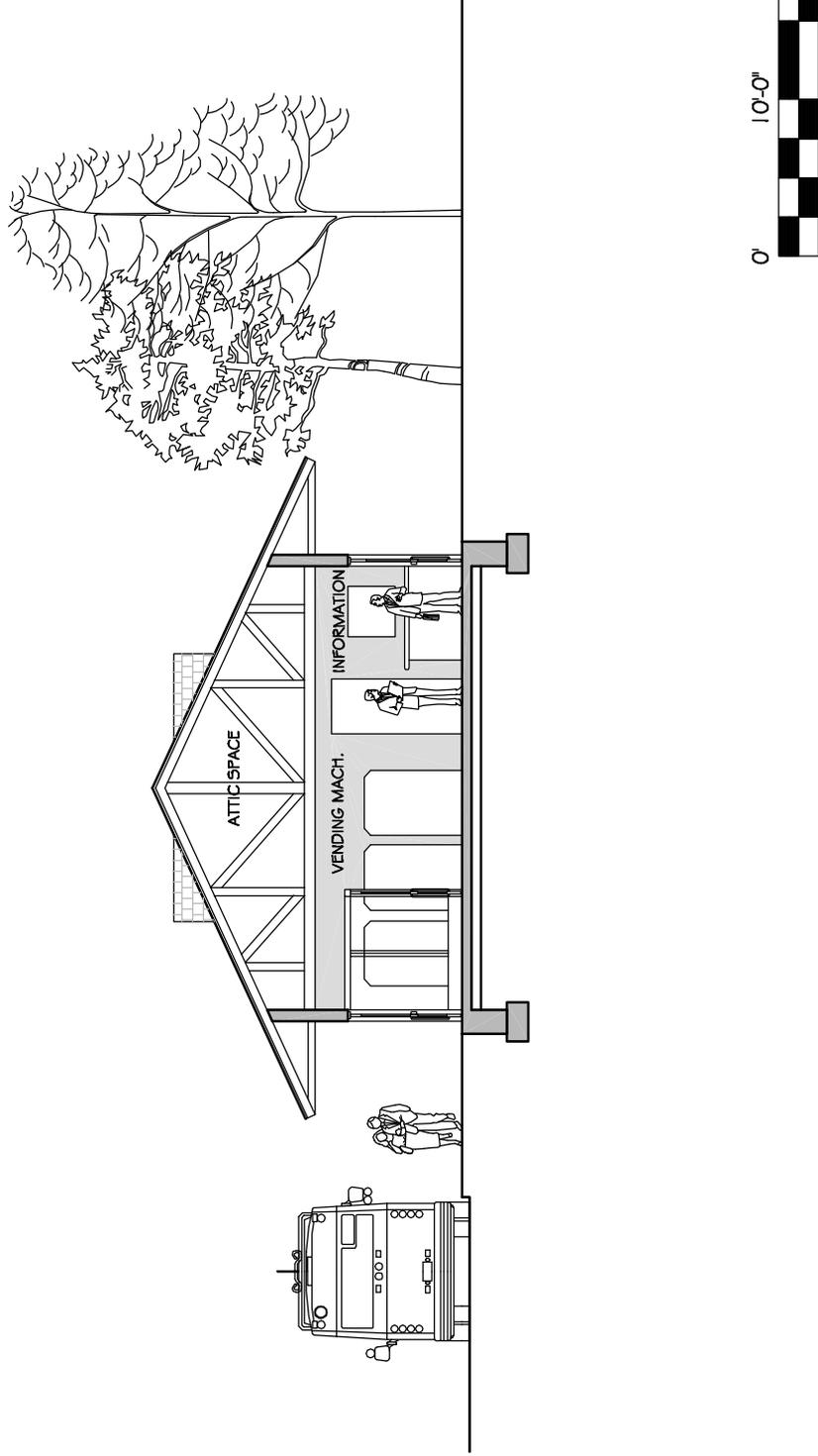
Option A: Building Elevation



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Figure 6-6

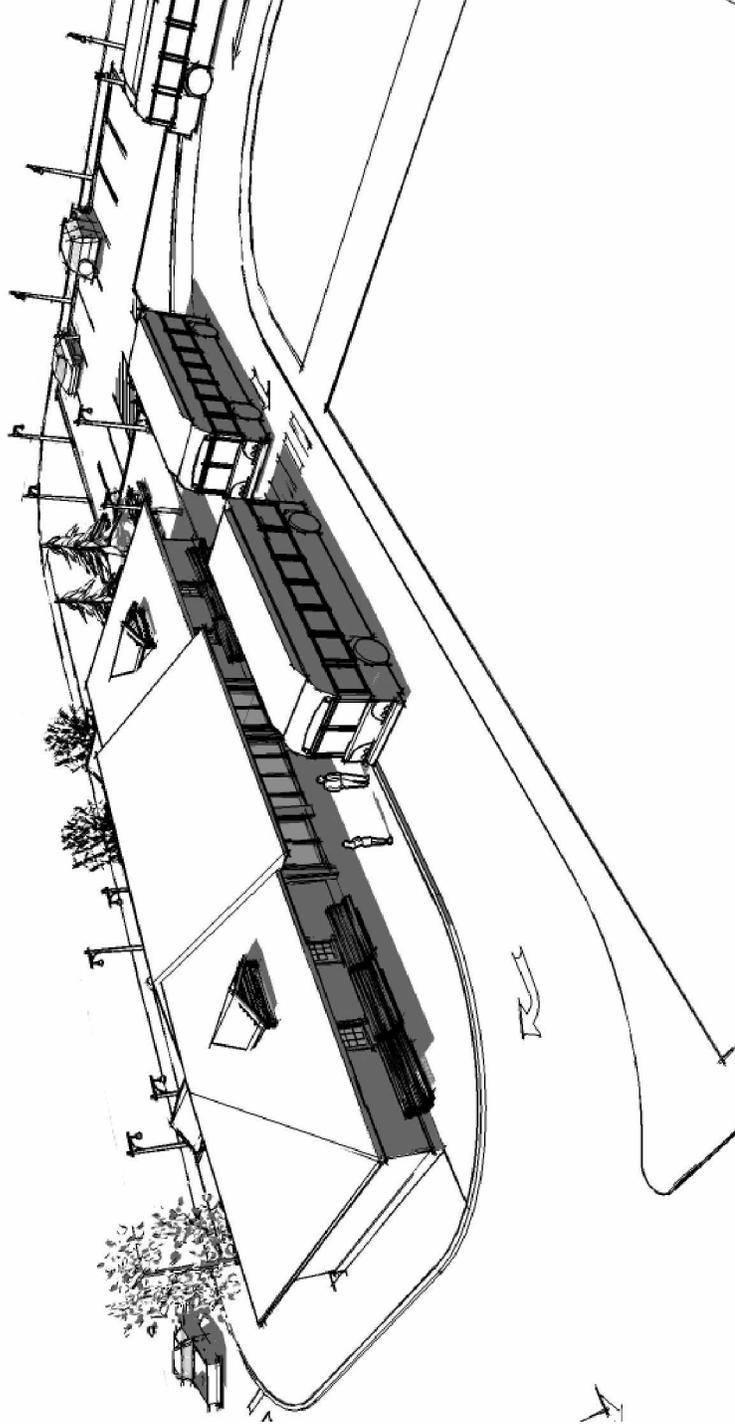
Option A: Longitudinal Section



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Figure 6-7

Option A: Transverse Section



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Figure 6-8

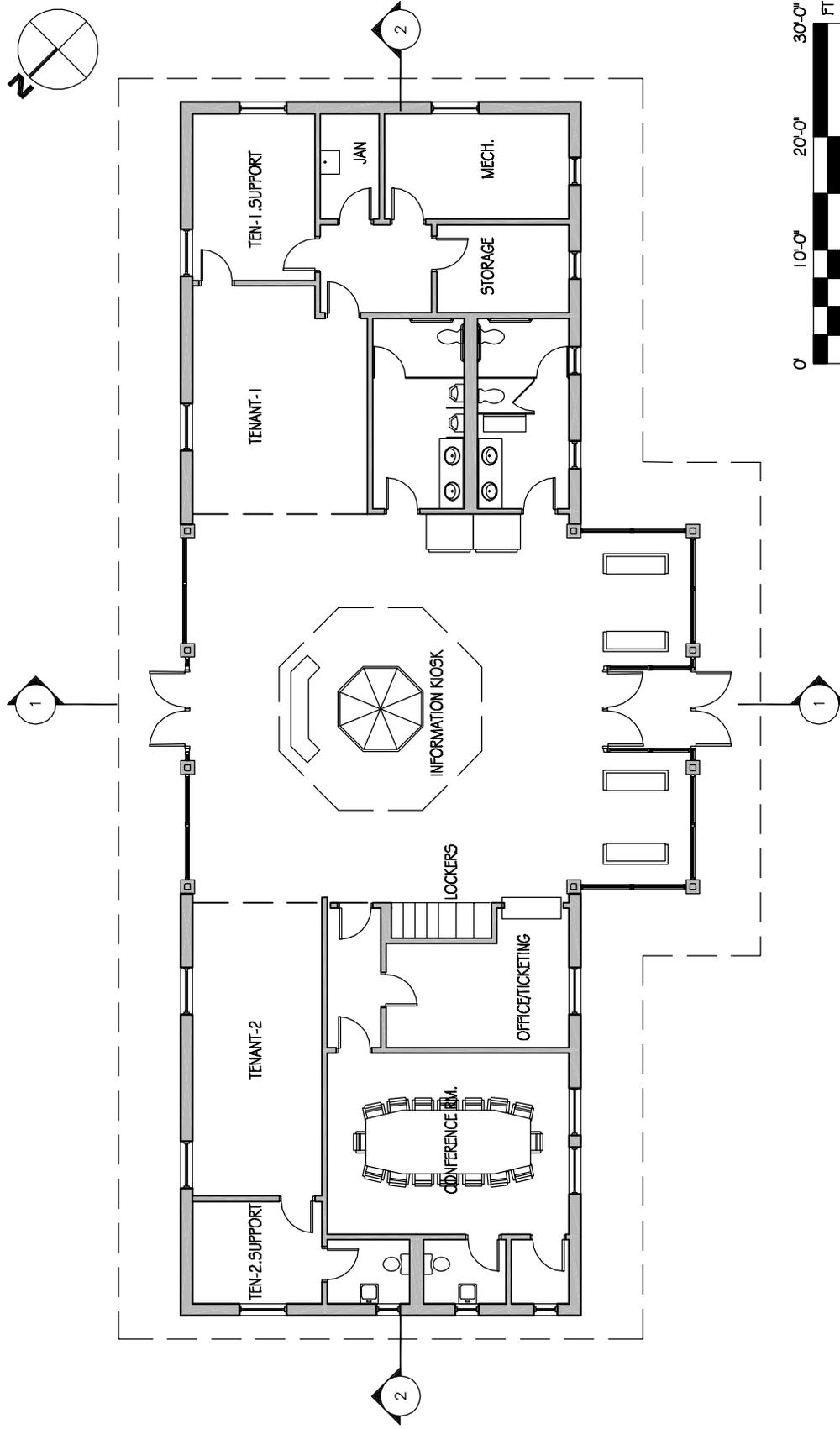
Option A: Perspective View from Rear



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Figure 6-9

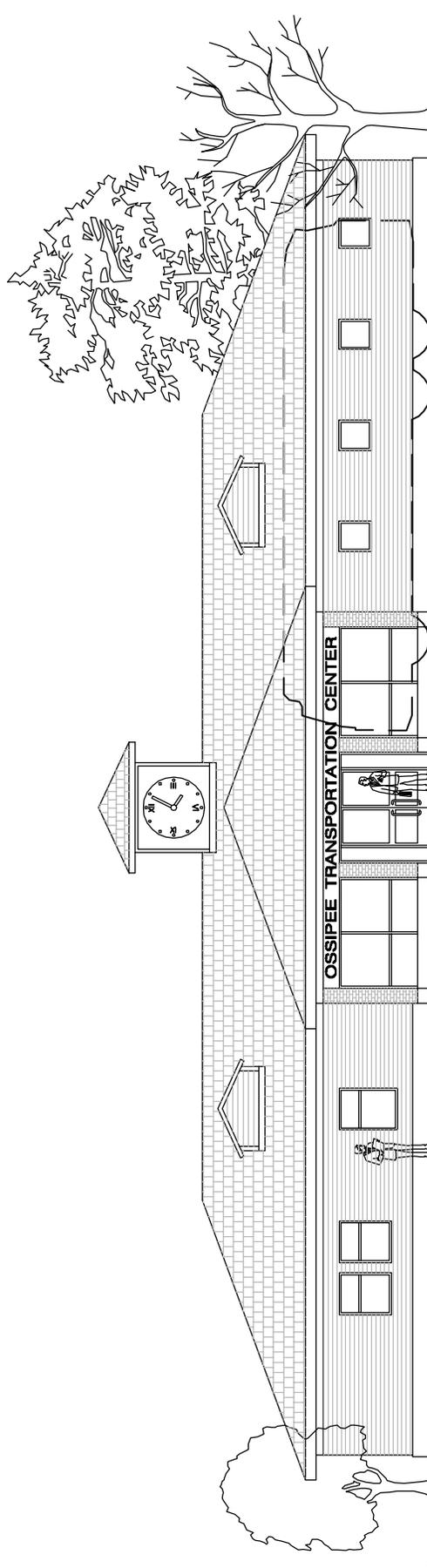
Option A: Perspective View from
Route 16



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Figure 6-10

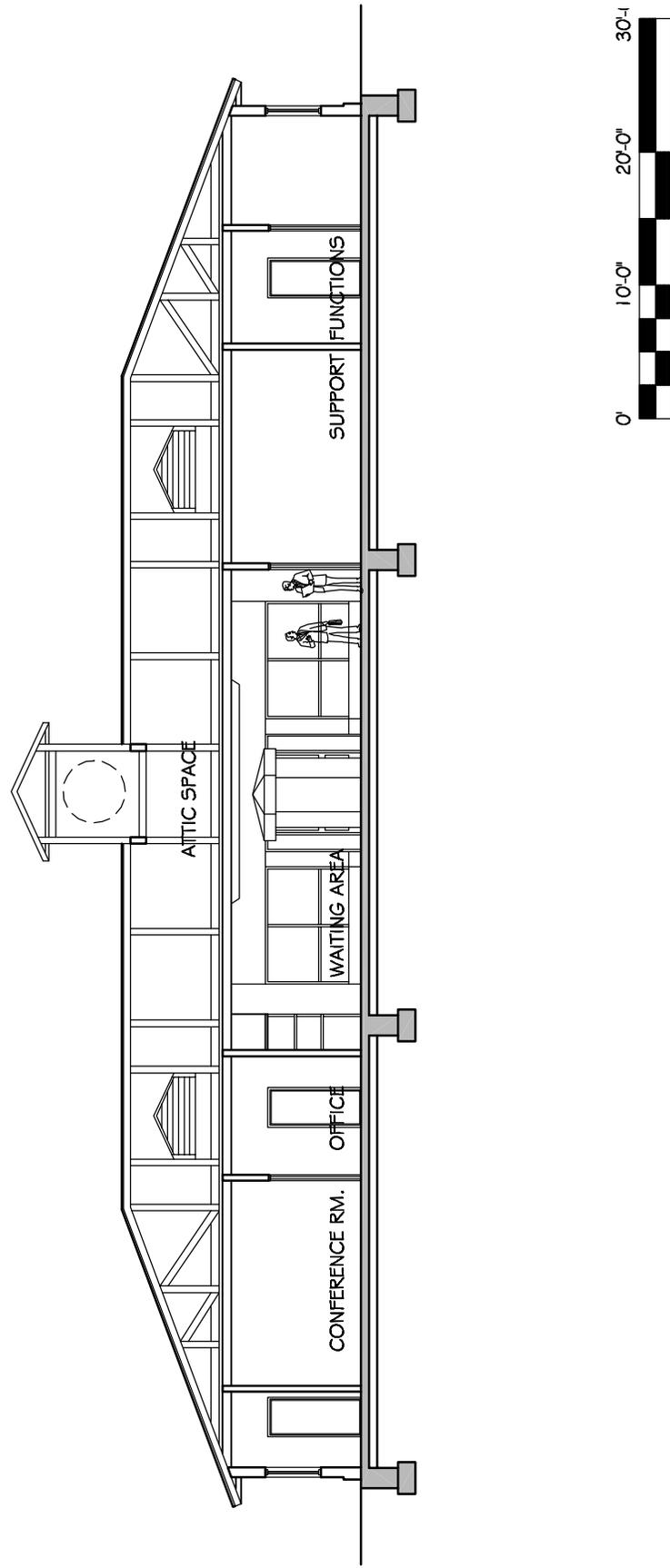
Option B: Building Floor Plan



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Figure 6-11

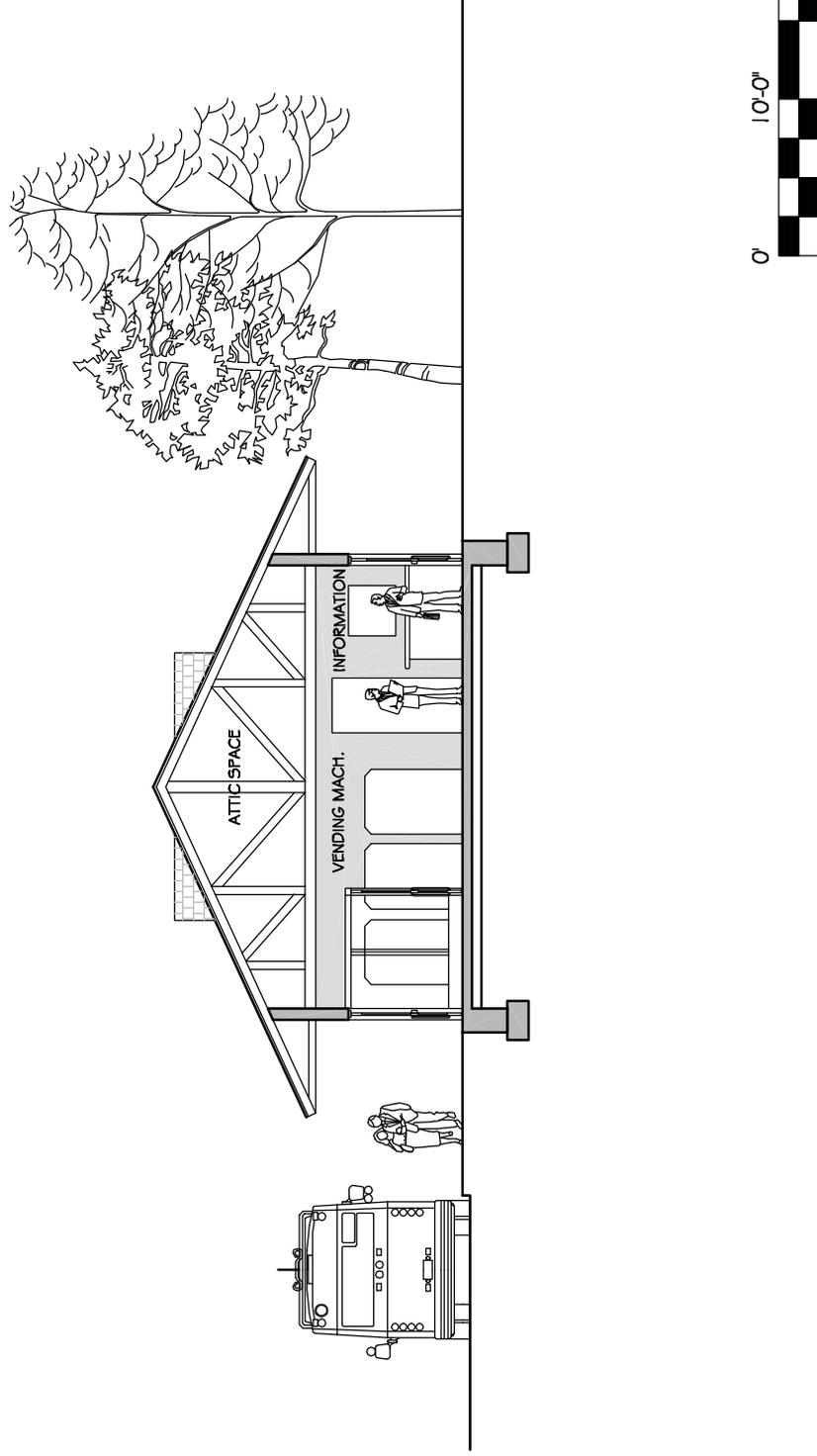
Option B: Building Elevation



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Figure 6-12

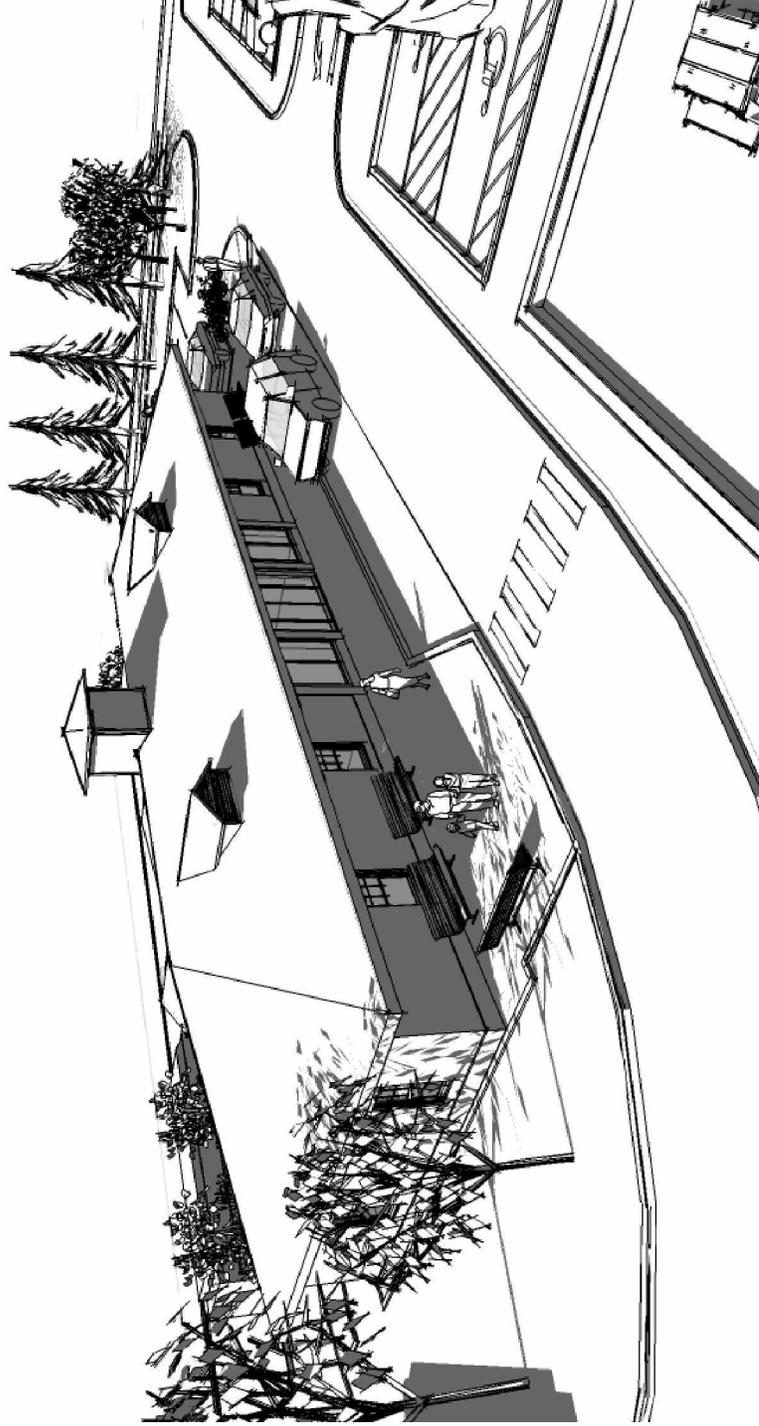
Option B: Longitudinal Section



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Figure 6-13

Option B: Transverse Section



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Figure 6-14

Option B: Perspective View from Rear



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Figure 6-15

Option B: Perspective View from
Route 16

6.5 Infrastructure and Utilities

The infrastructure and utility requirements for the Preferred Alternative are similar for Options A and B. These requirements are conceptual-level and are based on assumptions about the current infrastructure and utilities at Site 5. The infrastructure and utility requirements consist of the following main elements:

- Roadway Access: It was assumed that a two-lane entrance driveway would be established on Route 16 in both options. This driveway would be sufficiently wide to allow turning movements for buses and automobiles to and from Route 16. In both cases, the new driveway could replace or be combined with the existing lightly-used driveway at the southern end of the Tramway Marketplace parking lot, to ensure consistency with the Route 16 Corridor Study goal of minimizing the number of driveways on Route 16.
- Septic: It was assumed that a new on-site septic system would be constructed in both options, sized proportionately for the two building programs and levels of usage. In Option B, it is possible that a holding tank would be needed.
- Drainage: It was assumed that an on-site drainage system consisting of underground leaching basins and an oil-water separator would be required in both options.
- Water: It was assumed that the current well located on Parcel 45, which originally provided water to both Parcels 45 and 46, would be the source of water in both options. Connections to the well and a new pump would be required.
- Electric and Telephone: It was assumed that electric and telephone would be provided via overhead service from the utility lines on Route 16 in both options.
- Heating: It was assumed that oil heat would be used in both options. An above-ground oil storage tank would be located on site, consistent with the Ossipee Water Resources Protection District regulations.

6.6 Ownership and Operations

The viability of a project such as the proposed Ossipee Transportation Center is in large part determined by whether an appropriate ownership and operations arrangement can be established. An entity or entities must be willing to own and operate the facility, and must have the means and the track record to demonstrate that this arrangement is sustainable over the long term. The question of ownership and operations is closely tied to the costs and funding of the project. Issues related to ownership and operations are discussed in this section, and costs and funding sources are discussed in Chapter 7 of this report.

Based on the input received from the PAC and the general public through the study process, a number of possibilities for ownership and operation of the Ossipee

Transportation Center were explored. The following four potential owners for the proposed facility were identified:

- Town of Ossipee
- NHDOT
- Community services agency or non-profit
- Local transit agency

The following six entities that could operate the proposed facility were identified:

- Town of Ossipee
- NHDOT
- Private bus company
- Community services agency or non-profit
- Local transit agency
- Commercial/retail business

It was established during the study process that while only a single entity could own the Transportation Center, it might be possible for more than one entity to operate the facility jointly. For instance, if a private bus company were to commit to being the Fixed-Base Operator at the facility, which would involve bearing the operations and maintenance cost burden, a community services agency or non-profit could help provide additional staff for the facility.

Based on the input received from the PAC and the public, no entity was identified that would definitely own or operate the proposed Transportation Center. Several entities were identified as “Maybes” in this regard, and several others were identified as not being in the position to own or operate the facility. Table 6-4 summarizes the possible ownership and operations arrangements for the Ossipee Transportation Center.

Table 6-4: Possible Ownership and Operations Arrangements

		Operators					
		Town	NHDOT	Private Bus Carrier	Commercial Business	Community Agency/ Non-Profit	Transit Agency
Owners	Town of Ossipee	No	No*	No	Maybe	Maybe	No
	NHDOT	No	No*	No	Maybe	Maybe	No
	Community Agency/ Non-Profit	No	No	No	No	No	No
	Transit Agency	No	No	No	No	No	No

Notes:

*If the Transportation Center project were expanded to include a rest stop function, NHDOT indicated that there was a possibility that state highway funds could be used for operations. After FTA input was received on the project, NHDOT indicated a willingness to own and operate a starter facility consisting of a basic park-and-ride and bus shelter; refer to Chapter 8 for further information.

6.7 Potential Environmental Impacts and Permit Requirements

Since the proposed Ossipee Transportation Center would likely be constructed with Federal capital funding, it is defined as a “Federal action” and would require an appropriate level of NEPA environmental documentation. While this NEPA documentation is not included in the Feasibility Study process, at this stage it is appropriate to identify potential environmental impacts and permits that may be required if the project were to proceed to the NEPA stage. These findings are subject to further investigation and verification during the NEPA process. An Environmental Scientist on the Study Team conducted an initial field visit to identify the potential environmental impacts and permit requirements associated with the proposed Transportation Center in early November 2004. The following is a summary of the findings of this field visit. A more detailed Field Report Form from this visit is included in Appendix F.

- **Wetlands/Floodplains:** It appears that there are no wetlands or floodplains on either Parcel 45 or 46.
- **Hazardous Materials:** A review of the NHDES GIS website did not indicate any historical information showing the presence of spills, Underground Storage Tanks (USTs), or hazardous waste mitigation sites on Parcel 45 or 46.
- **Water Resource Protection:** Both Parcel 45 and 46 are located in Ossipee’s Water Resource Protection District, and the sand and gravel nature of the surface material on both parcels suggest that the area is in fact underlain by a stratified drift aquifer. Based on a review of the regulations associated with the Ossipee Water Resources Protection District, it appears that the project might require a Special Use Permit due to regulations regarding the percent of total lot area

rendered impervious, the storage of fuel oil on the site, and the sewage flow generated by the site. In addition, although the NHDES website does not show any Drinking Water Protection Areas (DWPAs) overlapping either parcel, good engineering practices would have to be followed in any later design efforts to ensure that the wells on Parcel 45 are protected from the threat of contamination.

- Wildlife: Due to the developed nature and previous history of the two parcels and the fact that there is very little natural vegetation left on either parcel, there should be no issues related to wildlife with the proposed project.
- Archeological/Historical: If the project were to be funded in whole or in part by Federal funding, a formal sign-off of the project would be necessary by the State Historic Preservation Office (SHPO) and the sponsoring agency, FTA. Although both parcels are disturbed, a walkover reconnaissance should be performed by a professional archaeologist. In addition, an architectural historian consultant will need to perform a survey to determine whether any structures “eligible for the National Register” are affected by the project. The Marketplace building is reported to be the former base lodge and tramway station for the former ski area that was once located on the opposite side of NH Route 16. The history of the two small buildings on both parcels will also have to be researched.
- Important Farmland Soil: Since both parcels are zoned for commercial development and are either currently developed or have a history of development, the project is not subject to Farmland Conversion analysis (through the Federal Department of Agriculture). Soils on both parcels are largely mineral, with no topsoil whatsoever on Parcel 46.
- NEPA Documentation: As noted above, the project would require an appropriate level of NEPA documentation if Federal funds are used. Based on a field review of the two parcels and an understanding of the project’s conceptual design, it appears that the project should qualify for a Categorical Exclusion (CE). Completion of NHDOT’s CE “Non-Programmatic Environmental Impact Summary” form, along with required agency coordination, will be necessary. Even though this is a Transportation Enhancement Activity, both the need to acquire property and the possible presence of historical buildings (even if not adversely affected) would exclude it from qualifying for a simple (2 page) “Programmatic CE.”

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7

Conceptual Costs and Funding Sources

This chapter summarizes the conceptual costs of the proposed Transportation Center including the capital cost of constructing the building and completing site improvements, and the ongoing costs of operations and maintenance. A discussion of potential sources of capital and operating funding is also provided.

7.1 Capital Costs

The capital costs of the proposed Transportation Center can be divided into two main categories: land acquisition costs, and building construction and site improvement costs. Land acquisition costs associated with the proposed project have not been identified at this time due to the early state of project development.

A conceptual-level capital cost estimate has been prepared by the Study Team based on the conceptual site plans and building plans developed for Options A and B of the Preferred Alternative. The first step in the cost estimating process is to develop unit cost data for the major components. These unit costs have been developed based on recent industry data. The cost estimate was developed using the FTA's recommended approach for project development. Cost estimates were developed in each of the major areas (building, site preparation, site improvements, site amenities, and utilities). In addition, a cost has been estimated for the general conditions at each site. The general conditions include all the contractors associated site management costs for trailers, supervision, on-site storage of materials, and special equipment. The cost survey, design, and construction services and for construction contingencies is added as a percentage of the total contract value. FTA allows up to a 30 percent adjustment for construction contingencies and up to 20 percent for survey, design, and construction services at this level of project development. For the development of the estimates for this study, the "add-ons" include a 20 percent adjustment for construction contingencies and 20 percent for survey, design, and construction services.

At this stage in project development, the soils and geotechnical conditions at each site, the locations and issues regarding utilities, and any potential building

relocation/demolition requirements are unknown. In addition, the conceptual-level capital cost estimates were based on the following assumptions:

- A slab-on-grade, shallow building foundation
- No contaminated soils
- No roadway modifications to Route 16
- No site fencing, minimal site landscaping (grass but no other plantings)
- No elevators or stairs
- No rock excavation
- Minimal site regrading (less than one foot)

In addition, the conceptual cost estimates have included only the costs necessary to construct the shell and a rough finish for all tenant spaces (including tenant support/storage areas, bathrooms, and the conference room in Option B), consistent with FTA capital funding guidelines. Table 7-1 provides a summary of the conceptual cost estimate for building construction and site improvements.

Table 7-1 Summary of the Capital Cost Estimate (2004 Dollars)

Elements	Order of Magnitude Cost	
	Concept A (2700 SF Center)	Concept B (3900 SF Center)
Building	\$570,300	\$815,400
Site Preparation	53,900	78,600
Site Improvements	83,100	122,500
Site Amenities	26,400	26,400
Utilities	53,200	62,600
General Conditions	286,700	316,100
Sub-Total	\$1,073,600	\$1,421,600
Survey/Design/Construction Services (20%)	214,700	284,300
Construction Contingency (20%)	214,700	284,300
Total	\$1,503,000	\$1,990,200

The following is a summary of what the cost items in Table 7-1 include:

- Building: All costs associated with the structure including foundation, enclosure, roof framing, roofing, porches, interior partitions, ceilings, finished floors, bathrooms, storage, finishes, HVAC, fire protection, and lighting
- Site Preparation: Minor grading and clearing
- Site Improvements: Driveways, parking, pedestrian walks, landscaping, and drainage
- Site Amenities: Exterior lighting, benches, trash cans

- Utilities: Electric, telephone, cable, propane, well (for water) and septic system
- General Conditions: Contractor costs for mobilization, on-site construction management materials (i.e. field trailer, storage trailers, temporary utilities), and personnel
- Survey/Design/Construction Services: An add-on cost that represents a percentage of the total construction value; it includes the cost of the required survey plans, development of the design plans and documents, and the project owner's construction services costs (i.e. agency costs to manage the FTA grant and the contractors work including scheduling, inspection, reporting, documentation, and administration)
- Construction Contingency: An add-on cost that represents a percentage of the total construction value; it is an allowance for issues or items that are not fully developed or known at this level of design (i.e. sub-surface conditions have not been explored on the site); the percent of the total construction value used to calculate this add-on reduces as the plans become more developed

7.2 Operations and Maintenance Costs

Operations and maintenance costs for a facility such as the proposed Ossipee Transportation Center include the following main elements:

- Utilities: Includes water, sewer/septic, oil/gas, electric, telephone, and fire alarm
- Routine maintenance – interior: Includes janitorial, supplies, minor repairs, and paint
- Routine maintenance – exterior: Includes mowing, snow removal, and minor repairs and paint
- Staffing: Generally includes at least one person on-site in the sales/information /security function
- Insurance: Operator costs generally include liability coverage
- Property Taxes: Generally any non-transit, private tenant in the facility may be required to pay property taxes or a payment in lieu of taxes, to be determined by the municipality

The Study Team estimated the conceptual operations and maintenance costs for the proposed Transportation Center using the following information sources:

- *The New Hampshire Statewide Intermodal Transportation Planning Study*, which included an estimate of the operating costs of the proposed Londonderry transportation center
- A feasibility study for an intermodal transportation center in Rockingham, VT, published in June 2002

- Estimated annual operations and maintenance costs for four intermodal transportation centers in Michigan, provided by Michigan Department of Transportation and a local transit agency

Table 7-2 provides a summary of the conceptual operations and maintenance cost estimate for the Ossipee Transportation Center. These costs assume a baseline level of staffing (one person, eight hours per day, 365 days per year) sufficient to operate the building during the current bus arrival and departure times. It is assumed that any additional staffing can be provided by volunteers or by the entities sharing space in the building.

Table 7-2 Conceptual Operations and Maintenance Cost Estimate (2004 Dollars)

Elements	Order of Magnitude Annual Cost	
	Concept A (2700 SF Center)	Concept B (3900 SF Center)
Utilities and Routine Maintenance	\$29,700	\$42,900
Staffing	43,800	43,800
Insurance	1,200	1,500
Property Tax	TBD	TBD
Total	\$74,700	\$88,200

7.3 Potential Funding Sources

As noted in Chapter 1, an earmark of FTA capital funds was secured for the proposed project. This earmark authorizes the use of nearly \$2 million in FTA capital grant funds for the Ossipee Transportation Center should the project be deemed feasible and receive the necessary environmental permits. The FTA capital funds can be used for the completion of the project planning and environmental documentation process; the acquisition of land; the preliminary and final design of the facility; and the construction of the building, parking lots, and all site improvements.

No parallel Federal source exists to pay the ongoing operations and maintenance costs of the facility, however. Typical sources of operating funding for transit projects such as Rural Transit Assistance or Congestion Management and Air Quality (CMAQ) improvement funds are not available in Ossipee because no local transit agency currently serves the Town, and the Town does not fall in a non-attainment area for air pollutants that would trigger the use of CMAQ funding. Therefore, operating funding for the project would have to come from the facility itself, plus any local entity that might become a partner in the operation of the facility.

There are four main sources of revenue that could be generated by the Transportation Center itself:

- Commission from intercity bus ticket sales
- Rent from ancillary users of the facility

- Advertising revenues
- Parking fees

Based on input from the PAC and the general public and information about rents from a New Hampshire-based economic analysis firm, the Study Team has estimated that the Ossipee Transportation Center might generate about \$16,000 in annual revenue in Option A and about \$24,000 in annual revenue in Option B. These order-of-magnitude figures are based on the following assumptions:

- Intercity bus ticket sales in West Ossipee double from their current level due to the increased visibility and parking availability at the new facility
- Fifteen percent of ticket sales are paid as commission and can be considered revenue for the Transportation Center
- Average commercial rents are about \$11/SF on a gross basis along Route 16 in Ossipee, and all tenant space is leased at this rate – i.e., that all ancillary users are charged a fair-market rent
- Advertising revenues of \$1,000/year at the facility
- No parking fees are instituted at the facility when it is opened

Considering the conceptual operating cost range of \$74,700 to \$88,200 annually and the conceptual operating revenue range of \$16,000 to \$24,000 annually, it is estimated that the Ossipee Transportation Center would have an operating budget shortfall of between \$58,700 and \$64,200 (2004 dollars) in its first year of operation. This deficit would need to be funded by a non-Federal entity in order to demonstrate the financial viability of the project over the long term.

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8

Conclusions and Recommendations

This chapter highlights the conclusions and recommendations of the study in three areas. First, it summarizes input received from the FTA during the study process regarding the viability of the project. Second, it presents findings regarding the feasibility of the Ossipee Transportation Center from a variety of perspectives: physical feasibility, operational feasibility, and financial sustainability. Finally, it offers conclusions and recommendations for possible next steps in the project development process.

8.1 FTA Input on Project Viability

In early November 2004, representatives of the Study Team, LRPC and NHDOT met with staff from the FTA in Cambridge, MA to discuss the findings of the feasibility study to date. The Study Team members summarized the project background, the study process, and the preliminary study findings. At this meeting, extensive discussion of the current transit need, current transit services, and the potential for future transit services in Ossipee took place. Following this meeting, FTA staff provided feedback and suggestions to NHDOT regarding the proposed Ossipee Transportation Center. The following is a summary of the input received:

- Serious reservations were expressed about the amount of capital expenditure associated with the proposed facility in relation to the level of transit service and usage in the area.
- Concerns were also raised about the lack of a transit provider other than Concord Trailways in Ossipee and the lack of any active plans to either expand intercity service or establish a local transit service in Ossipee.
- FTA staff suggested that the agency might be more amenable to spending a smaller amount of capital funding on a starter project to foster transit ridership in Ossipee and thus foster demand for a potential future Transportation Center. This starter facility would consist of a basic park-and-ride lot and bus shelter.

Specifically, FTA staff suggested the following alternative course of action might be feasible using FTA capital funding:

- The purchase of all or part of Parcel 46;
- Creation of a basic park-and-ride lot on the parcel to be served by Concord Trailways intercity buses; the size of the lot would need to be justified by an estimate of demand;
- Placement of a bus shelter, signage, and lighting on the site;
- FTA staff indicated the agency would expect a non-Federal entity or entities to own, operate, and cover operating costs of the starter facility, and would look for a letter of commitment from Concord Trailways indicating its intention to serve the new facility. FTA staff emphasized that if the starter facility does not include a transit component, the FTA funding will not be made available for the project.
- FTA staff suggested that the agency would be open to the idea of creating a facility serving both a transit and highway rest stop/visitor center function on the same site. However, highway funding would need to be secured to construct the portion of the facility serving highway travelers. FTA staff also indicated that they would be open to the possibility of the existing Tourist Information Booth being relocated to the starter facility site.

8.2 Physical Feasibility

From the standpoint of physical constraints, it is clear from the study process that establishing the proposed Ossipee Transportation Center appears to be physically feasible. There are a number of potential sites for the facility with ample land available to be developed, including the Preferred Alternative which emerged through the site identification and screening process. While environmental constraints do exist in the Town, in particular the Water Resources Protection District, it does not appear that these pose a barrier to development of the Transportation Center. Rather, these environmental constraints will shape how the proposed facility is configured, designed, and operated, should the project move forward.

8.3 Operational Feasibility

Unlike the physical constraints described above, arriving at an ownership and operations arrangement appears to pose a significant challenge to the development of the proposed Ossipee Transportation Center at this time. As noted earlier in this report, an extensive public participation and stakeholder outreach process was undertaken to determine if a local entity or organization was willing and able to take on the ownership or operation of the facility. Throughout the process, no entity indicated that it was definitely willing to become the owner of the full Transportation Center, and no entity indicated that it was definitely willing to become the operator

of the facility or to work out a joint operational arrangement. In the absence of an entity emerging in both areas, it appears that the proposed Ossipee Transportation Center is problematic from an ownership and operations perspective at this time. NHDOT indicated however, that it would be willing to own and maintain a starter facility consisting of a basic park-and-ride lot and bus shelter, as described in Section 8.1

8.4 Financial Sustainability

Related to the issue of ownership and operations, the question of the financial sustainability of the proposed Transportation Center was recognized to be a challenge throughout the study process. Fairly early in the study, it became clear that the proposed facility would not generate enough transit-related revenue to sustain itself. Various arrangements and mixes of ancillary users were discussed for the facility, but it was clear throughout the discussions that an additional source of revenue would be needed to cover the facility's annual operating deficit. In the public participation and stakeholder outreach process, no entity emerged that indicated a willingness or ability to cover this operating deficit, in whole or in part. Therefore, it appears that the proposed Ossipee Transportation Center is problematic from the perspective of financial sustainability at this time. NHDOT however, indicated that it would be willing to own and maintain a starter facility as described in Section 8.1, which would address its financial sustainability.

8.5 Study Conclusions

Based on the findings of the study regarding project feasibility and the input received from the FTA, the following are the study conclusions and recommendations for possible next steps in the project development process:

- It does not appear that a full Transportation Center is feasible in Ossipee at this time based on operational feasibility and financial sustainability constraints. However, it may be possible to establish a starter facility consisting of a basic park-and-ride lot and a bus shelter, as described in Section 8.1. The town of Ossipee and local stakeholders should decide whether to pursue the suggested starter facility on Parcel 46 in West Ossipee. This would not be possible without a commitment to serve the new facility from Concord Trailways, since some level of transit service is a pre-requisite for FTA funding. The company has indicated it prefers to continue an existing arrangement for ticketing and passenger service rather than use a new facility. Without a change in this position, the state would not be able to satisfy FTA's grant requirements to proceed with this project prior to September 2005, when the appropriated funds will lapse.
- The town of Ossipee, NHDOT, and local stakeholders should also decide whether to pursue highway funding, both capital and operating, to add a highway rest stop or visitor center component to the proposed starter facility or

to establish a stand-alone highway-oriented facility. The objective of this effort would be to continue to strive to meet the recommendations of the Route 16 Corridor Advisory Committee. If such funding is secured, a planning process similar to this Feasibility Study would need to be conducted for the alternate facility.

- If either of the above approaches is pursued and the ownership, operation and funding arrangements are secured, the projects would need to proceed through the Alternatives Analysis process, NEPA environmental process, and Preliminary and Final Engineering to prepare for construction.