This plan combines the Regional Plan, the Metropolitan Transportation Plan (MTP), and the Comprehensive Economic Development Strategy (CEDS) into one integrated plan.

For a healthy, inclusive, and prosperous community.

Adopted 6/19/2013
3.1 Scenario Planning Review – Choices for the Future

Since 2008 CCRPC (and former CCMPO) has conducted three levels of scenario planning analysis which are reflected in the section which follows. From 2008 to 2010, CCRPC (CCMPO at the time) conducted a Land Use scenario planning process to analyze land use patterns that either follow trend development, or deviate from it by concentrating development in our centers and villages, or deviate from it to increase density in the Burlington area. These land use scenarios coupled with various transportation alternatives helped stakeholders focus their discussions on various options to improve long term sustainability. This effort incorporated substantial public input (over 900 people participated in our workshops and follow up survey) to increase our understanding of the community’s broad range of concerns and aspirations for the future with particular focus on our development patterns and transportation system. Please see the Chittenden County Historic Development and Future Land Use/Transportation Analysis report (ecosproject.com/analysis) for more information.

The second scenario planning process analyzed three distinctive Transportation scenarios utilizing the land use scenario selected from the Land Use scenario planning process described above. The three Transportation scenarios analyzed included Basic Transportation/Constrained Funding, Energy Conservation/Social Equity, and Enhanced Road Capacity transportation investment scenarios. The outcomes of these comparisons are outlined in the following section.

The final scenario planning process compared the Transportation scenarios above with the anticipated results of the transportation future selected for implementation in the Metropolitan Transportation Plan 2015-2035 as detailed in Chapter 4 of this document. As is outlined in this section, the use of scenario planning provides a tool to gauge the costs and benefits of implementing a diversity of potential land use and transportation programs.

Land Use Scenarios

The scenario planning effort resulted in a recommended Land Use Plan and strategy that mirrors the plans adopted by the municipalities in the region and is consistent with the State’s legislated goal to “plan the development so as to maintain the historic settlement pattern of compact village and urban centers separated by rural countryside” (24 VSA 4302(c)(1)). The local Land Use Plans are reflected in the regional Future Land Use Planning map.

The recommended future regional Land Use Plan seeks to have 80% of our future growth happen in the 15% of the County that has existing infrastructure and services. This percentage reflects our historic distribution of development prior to 1970. From 1970 to 2005, the percentage of development in our urban center and villages decreased to about 65%. From 2005 to 2010, that trend reversed and we again achieved 80% of new development in our urban center and villages.

What are the implications of achieving this development pattern?

According to our scenario planning analysis, if we concentrate future homes and jobs in our currently existing and planned communities which make up 15% of Chittenden County’s land area, we will:
- Only use 25 square miles of land (4.7% of the total County) within and adjacent to currently developed urban center and villages;
- Have more jobs and housing located in our urban and village centers;
- Reduce greenhouse gas emissions by at least 50 tons per day; and
- Potentially triple transit ridership.

If we continue on the path that we were on from 1970 to 2005, we will:

- Use 99 square miles – in contrast to the 25 in the concentrated scenario above - (18.5% of the total County) of our rural landscape for housing and jobs;
- Increase the pressure on neighboring counties to absorb demand for homes thereby increasing driving; Increase greenhouse gas emissions; and
- Not have as many transit riders.

**Transportation Scenarios**

The regional Land Use Plan scenario was used to evaluate contrasting alternative transportation scenarios. The details of these scenarios and their results can be found in the Chittenden County Historic Development and Future Land Use/Transportation Analysis report ([ecosproject.com/analysis](ecosproject.com/analysis)). The components of the three transportation scenarios are repeated here for reference, including rough cost estimates.

<table>
<thead>
<tr>
<th>Scenario Name</th>
<th>Scenario Elements</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Basic Transportation/</td>
<td>This is the existing transportation system plus permitted projects – those identified in the MPO’S Transportation Improvement Program (TIP) that have also completed permitting. Not included are major road projects such as the Champlain Parkway (Southern Connector), which has not completed the permitting process and the Circumferential Highway which is not slated to be constructed as originally planned.</td>
</tr>
<tr>
<td>Constrained Funding</td>
<td>Approx. $114 million</td>
</tr>
</tbody>
</table>
| 2. Energy conservation/Social equity | All of #1 above, plus...  
- Transit intensive – full implementation of CTTA’s 2010 Transit Development Plan (TDP) - More services to more places more frequently  
- CCMPB bike/pedestrian Plan build out – More sidewalks, shared use paths and on-road bike lanes  
- Transportation Demand Management – Employer incentive programs to encourage transportation alternatives (similar to CATMA but more widespread around the County), implementation of extensive park and ride facilities per 2011 CCMPB Park & Ride Plan  
- Intelligent Transportation Systems (ITS) improvements to reduce delays on key highways and provide better experiences for transit users.  
- Passenger and commuter rail - Connecting North, East and South  
- Expanded Carshare – to less urban locations  
- A ten-fold increase in the per-mile operating costs for automobiles reflecting an assumption of a significant increase in fuel and energy costs. |
| Approx. $550-767 million     |                                                                                                                                                                                                              |
| 3. Enhanced Road Capacity   | All of #1 above plus...                                                                                                                                                                                          |
|                              |                                                                                                                                                                                                              |
What are the results from the analysis of scenarios compared to the Basic Transportation alternative?

If we invest in the Enhanced Road Capacity, as depicted is scenario 3, we will:
- have an increased amount of travel on our roads
- gain a small reduction in greenhouse gas emissions
- not increase our transit usage
- decrease afternoon commuter traffic congestion by 25-30%
- spend about $400 million more than the Basic Transportation/Constrained Funding scenario

If we invest in the Energy Conservation/Social Equity scenario investments we will:
- reduce travel on our roads by 15-20%
- decrease greenhouse gas emissions by 20%
- increase daily transit usage by 1,000%
- decrease afternoon commuter traffic congestion by 30-35%
- spend about $450 million more than the Basic Transportation/Constrained Funding scenario

These future scenarios are starkly different from one another, vastly different than past historical transportation investment strategies, and unlikely to proceed in the manner outlined in the Scenario exercise. The results from this exercise, however, lay the groundwork for our transportation implementation strategies and actions that are identified in the Metropolitan Transportation Plan (MTP) components of this document (see Chapter 4) which combine those elements of the scenarios outlined above into a more balanced and sustainable future transportation program.

See synopsis of the MTP below.
Numerous (many minor) roadway investments to improve system efficiency and safety
- Increase investments in walking and biking infrastructure.
- Expanded Transportation Demand Management (TDM) efforts to reduce single occupancy vehicle (SOV) work trips

**FIGURE 2 - MTP SYNOPSIS**

While the improvements from the MTP scenario do not match those from the Energy Conservation alternative (see Future Transportations discussion on page 157 of ECOS Chapter 4), they make their positive contributions for less than half the cost and within the allotted transportation budget. The program of projects and strategies is rooted in both the ECOS goals and the reality of existing transportation funding streams. Additionally the MTP 2015-2035, if implemented as planned, will advance the two primary transportation indicators: increasing non-single occupancy vehicle work trips and reducing vehicle miles traveled/capita. The transportation projects are prioritized based on funding category taking into consideration the ECOS Criteria see Appendix B).

In the next section, we look at the recommended strategies and actions to achieve our goals.