

6.4 Alternatives Analysis

In order to address the statement as expressed in the Goals and Objectives, the Capital Area MPO, in conjunction with the Durham-Chapel Hill-Carrboro MPO developed and evaluated several alternatives in the process to create the 2035 Long Range Transportation Plan. Each alternative was a combination of a transportation system, which includes a set of highway, transit and other transportation improvements; and a land use scenario that distributes the forecasted population and employment for the Year 2035. These alternatives were run on the Triangle Regional Model (TRM) to produce a set of transportation performance measures that described how the transportation system will handle the travel demand generated by a particular population and employment distribution in the year 2035. These performance measures, such as the level of roadway congestion, average travel time, and transit ridership, were used to evaluate and compare the various alternatives. No alternative in its entirety was advanced as the “Preferred Option.” The alternatives were designed to emphasize a particular mode in meeting the future travel demands so that the technical staff and public can understand how well that specific mode addresses travel demand and can choose various projects to create the final 2035 LRTP. Figure 6.4.1 is a list of the combinations of transportation systems and land used to create the Alternatives that were analyzed for the developing the final 2035 LRTP. In some cases, the examination extended beyond this set of alternatives – the DCHC MPO analyzed fifteen alternatives during its Alternatives Analysis phase.

Figure 6.4.1: Alternatives Evaluated

No.	Transportation System	Land Use Assumption
1	Adopted 2030 LRTP – Includes abundant highway improvements such as I-40 HOV; rail transit between Chapel Hill, Durham, RTP and Raleigh; and, major bus expansion and improvements.	Baseline – Population and employment growth occurs based on current land use plans and policies of the jurisdictions and counties.
2	Intensive Highway – Includes abundant highway improvements such as I-40 HOV and interstate and freeway widenings; no rail transit; moderate bus transit improvements.	Baseline – Population and employment growth occurs based on current land use plans and policies of the jurisdictions and counties.
3	Intensive Highway – Includes abundant highway improvements such as I-40 HOV and interstate and freeway widenings; no rail transit; moderate bus transit improvements.	Constrained – New requirements in development ordinances constrains current growth pattern, resulting in less population and employment growth than Baseline.
4	Intensive Fixed Guideway – Includes moderate highway improvements; light rail transit between Chapel Hill, Durham, RTP and Raleigh; and, major bus transit improvements, including feeder service to light rail stations.	Transit Node – Changes in development ordinances and policies encourages more population and employment development adjacent to future rail transit stations than Baseline, but overall regional growth is same as Baseline.
5	Intensive Bus Transit – Includes moderate highway improvements; no rail transit; major bus transit expansion and improvements.	Travel Corridor – Changes in development ordinances and policies encourages more population and employment development along major arterial roadways than Baseline, but overall regional growth is same as Baseline.
6	Moderate Multimodal – Includes moderate highway improvements; commuter rail between Burlington, Durham, RTP and Raleigh; moderate bus transit improvements.	Transit Node – Changes in development ordinances and policies encourages more population and employment development adjacent to future rail transit stations than Baseline, but overall regional growth is same as Baseline.

#1 = Benchmark alternative depicting a continuation of current land use and transportation patterns and planning.

#2 though #6 = Change alternatives depicting changes to current design of the transportation system and current growth patterns.