

The CRD Regional Transportation Model

The CRD Regional Transportation Model is an analytical tool used to evaluate the impacts of growth and development forecasts on overall travel behavior. A transportation model can show the direct relation between the number of trips taken by various modes of travel and forecast changes to regional land-use patterns and transportation networks. This ability provides valuable assistance to Transportation Planners in evaluating future growth options and assessing the impacts of major transportation investments.

CRD Regional Planning Services has had a regional transportation model since 1992 which has been applied to various regional initiatives such as:

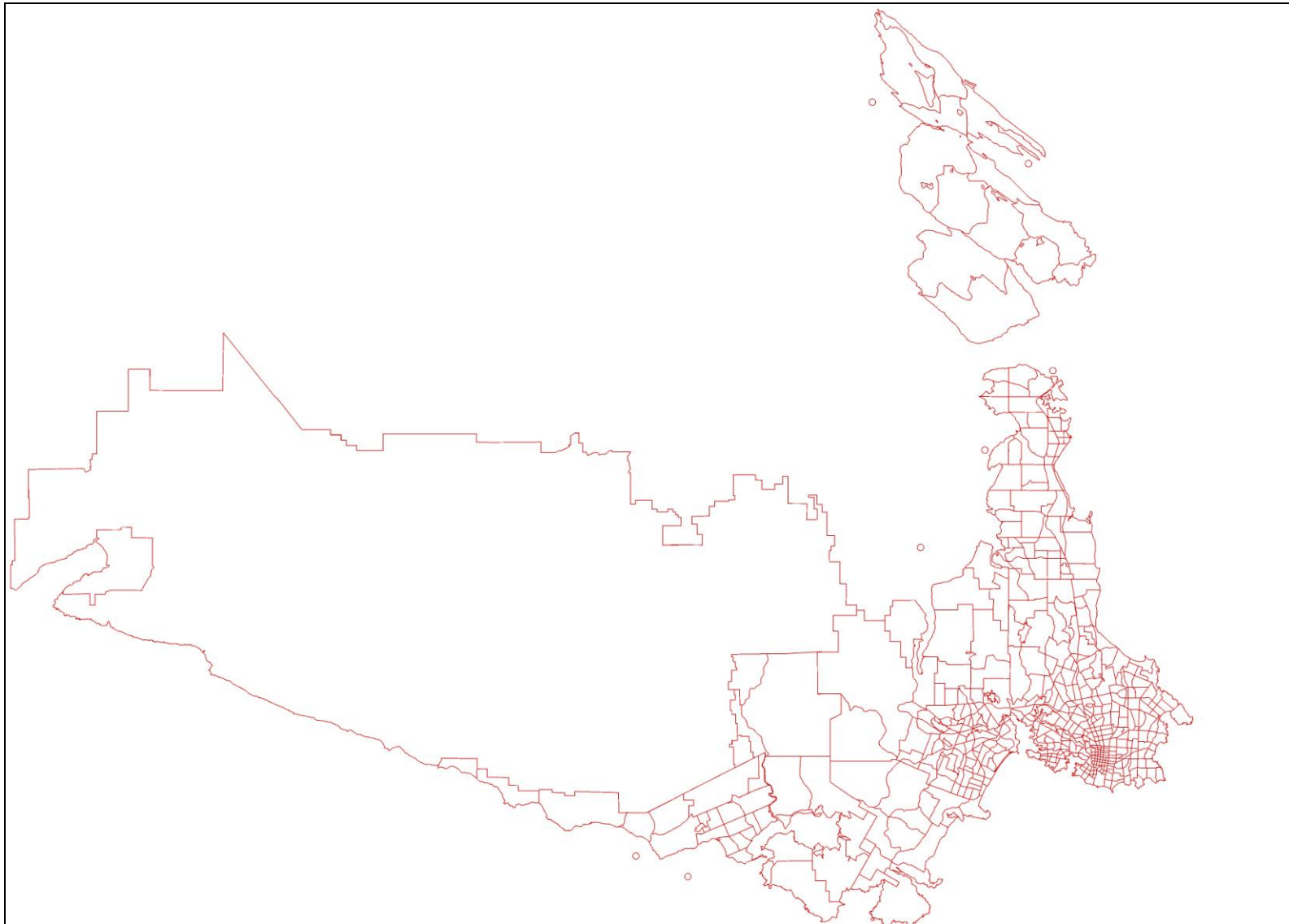
- The 1996 *LRT Feasibility Study* to estimate ridership for rapid transit options between Downtown and West Shore.
- *The Regional Growth Strategy* in 2003, to estimate the impacts on regional travel behavior of various future growth and development options
- The [TravelChoices Implementation and Investment Plan](#) (TIIP) in 2007, to evaluate and rank transportation proposals in terms of regional sustainability goals.

Transportation Model Components and Processes

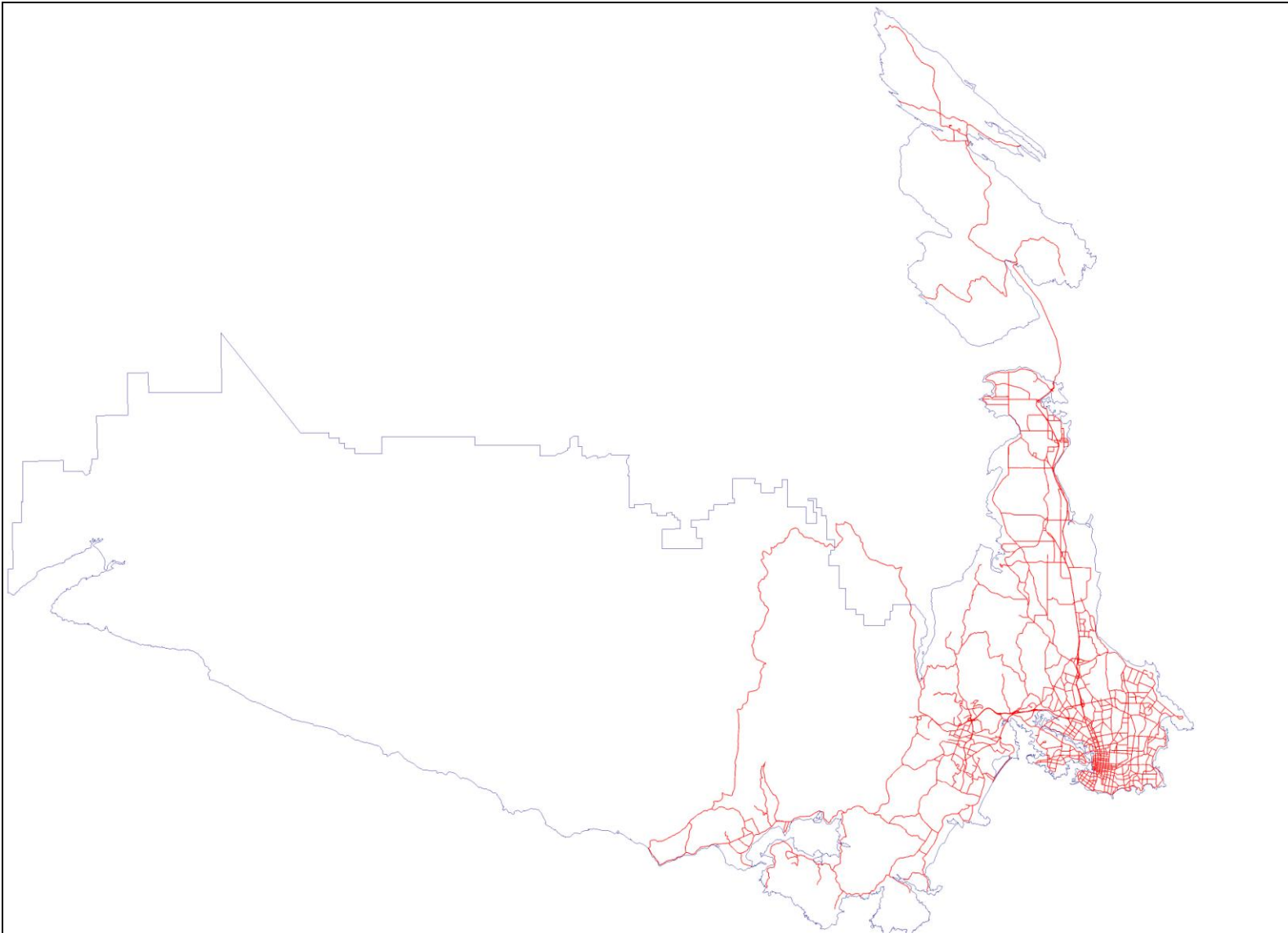
The three components of a typical regional transportation model are:

- A geographic zone system with associated population and employment data. The Current model has 512 zones covering the CRD with the exception of the Southern Gulf Islands EA. Each Zone has population by age group provided by Statistics Canada Census data, and employment by sector from the CRD's own surveys.
- A base transportation network. This includes the highways, major arterials and some collector streets. The public transit system is also represented.
- A four stage procedure to estimate the number of trips by mode. This consists of mathematical procedures to estimate:
 1. The number of trips generated by each zone based on population and employment characteristic
 2. The number of trips between each pair of zones based on the distance, and zonal population and employment
 3. The number of trips taken by each mode of travel (auto driver, auto passenger, public transit, bike and walk) based on time and costs
 4. The assignment of automobile and transit trips to the model road network.

CRD Transportation Model — Analyses Zones

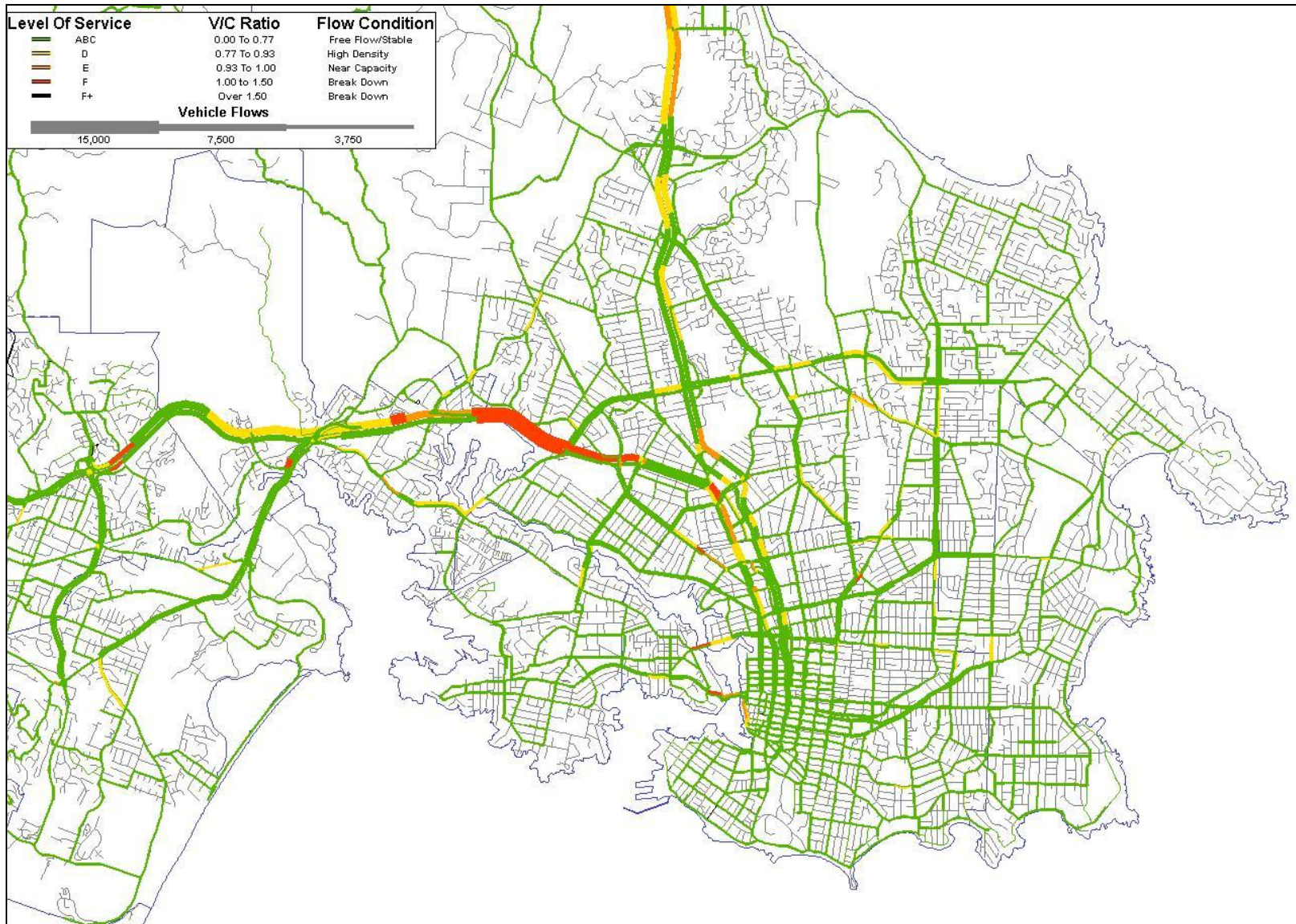


CRD Transportation Model — Base Road Network



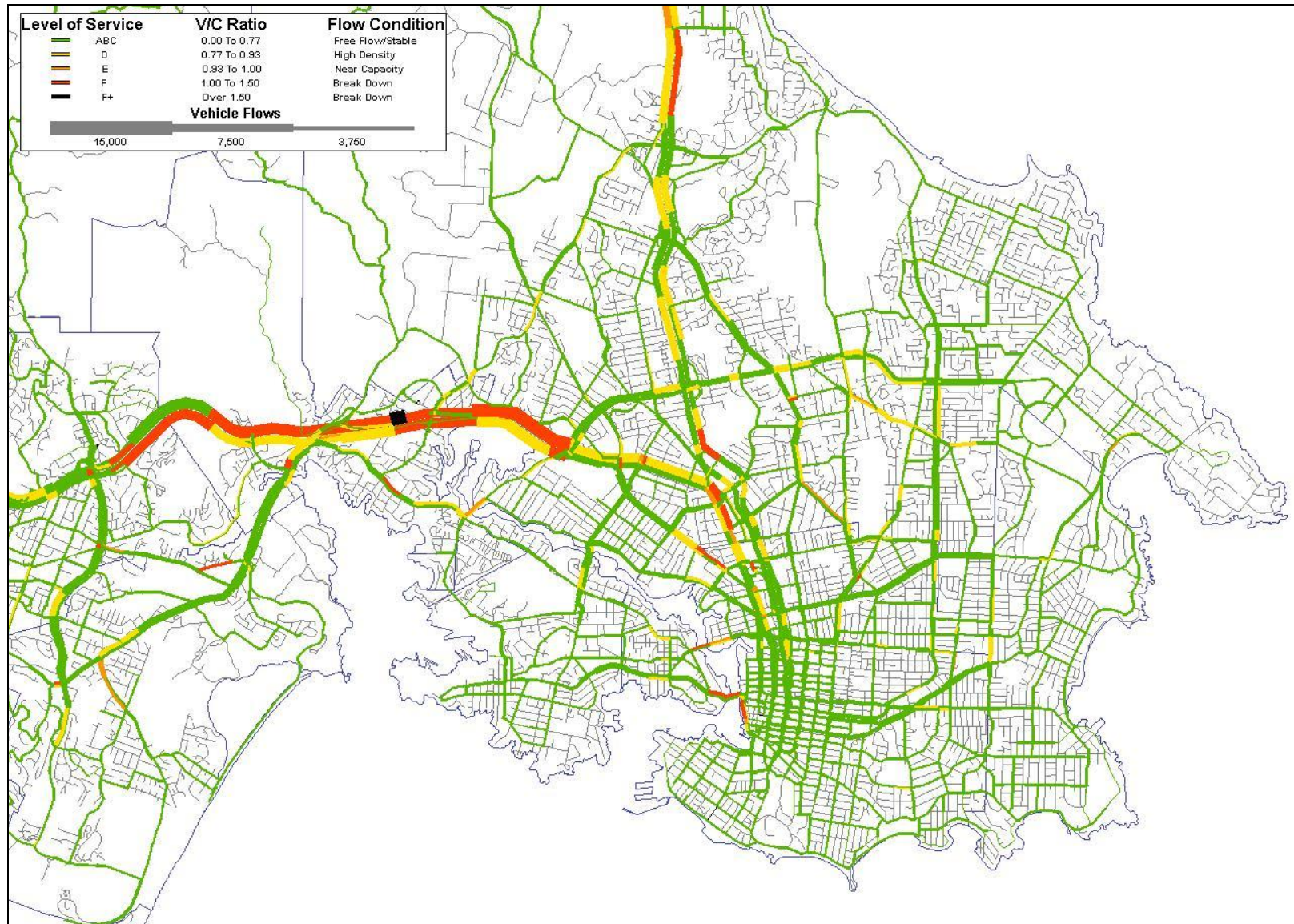
CRD Transportation Model — Traffic Flows and Levels of Congestion

PM Peak 2006



CRD Transportation Model — Traffic Flows and Levels of Congestion

PM Peak Forecast 2036 'Do Little' Scenario



An adequately calibrated transportation model can provide a credible reflection of current conditions on the region's transportation network, and a good basis for forecasting the impacts of transportation investments and development patterns.

Current and Future Initiatives

The Victoria Regional Rapid Transit Plan

The regional transportation model will be applied to assess ridership on proposed [rapid transit](#) alignments between Downtown and West Shore.

The CRD Corridor Management Plan

Now in the preliminary stages. The transportation model will be applied to evaluate infrastructure and development proposals along the region's major transportation corridors.

The CRD Regional Sustainability Strategy

The transportation model will be applied to evaluate the transportation impacts of different growth and development scenarios for 2036. For example, unplanned growth according to current trends, versus growth focused on the designated Regional Growth Centres.