Title slide.
The presentation will describe the transportation data collected to date and how we are using it to predict future conditions.
The first part of the presentation focuses on how we establish existing traffic conditions.
Many elements of data that go into the forecasting of future travel.
The locations where traffic counts were done in Rockland County, supplementing the counts available from other government agencies. The counts were concentrated on I-287 and Route 59.
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The locations where traffic counts were done in Westchester County. The counts were concentrated on I-287, Route 119 and Route 120A.
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Surveys were done to collect data on current travel. The following slides show some of the results. The transit survey included all buses crossing the river and train passengers on the Port Jervis and Pascack Valley Lines. The truck survey investigated the impact of congestion pricing tolls. The stated preference survey examined how residents and travelers in the corridor viewed alternative transit modes.
Based on a survey of automobiles passing through the Tappan Zee Bridge toll plaza, the graph shows the origins on the west side of the Hudson and the destinations on the east side.
The graph shows all Hudson River crossings to NYC for average weekday trips from Rockland & Orange Counties.
This part of the presentation focuses on how we use our data on existing conditions to predict future conditions.
The procedure we follow is to systematically look at the variables in the future and see what impact they had on travel.
Forecasts of population and employment are developed by the New York Metropolitan Transportation Council (NYMTC) with the cooperation of the counties it serves. Capital projects are all projects funded in the Transportation Improvement Programs adopted by the metropolitan planning organization.
Population forecast by five-year increments.
The NYMTC forecasts currently are to 2030. Forecasts for 2035 are projections based on growth rates by zone between 2025 and 2030.
Employment forecasts were treated the same way as population forecasts. Note that employment in Westchester is growing faster than the population.
The forecasts consider all approved capital projects.
Establishing Future Operating Conditions.
HOT lanes are a means of fully utilizing lanes set aside for high occupancy vehicles (HOVs) by allowing other vehicles in the lanes, for a toll, limited to the number that can operate without causing problems.
This diagram shows the bus routes using the BRT facilities across the corridor, but extending, in mixed traffic, to points north and south of the corridor, including Bergen County, Stamford, Yonkers and the Bronx.
This diagram illustrates stop pattern and frequency of service for existing and proposed services. Green columns are rail services down the western shore to Hoboken and Penn Station, orange columns are services from Rockland and Orange Counties to Grand Central, and blue columns are cross-corridor service from Port Jervis and Hillburn to White Plains and Stamford.
The same diagrams are shown for Alternatives 4B and 4C, without cross-corridor rail service. Note that all trains crossing the river would stop at the proposed Tappan Zee Station.
The service plan for light rail is simple, with one route stopping at all stops.
The bus route diagram for Alternative 4C, where fewer routes serve Rockland County due to the rail service to the Hudson Line.
The BPM Model

• We’re using the NYMTC Best Practice Model to forecast future travel
  – Covers 28 counties and is the adopted model for the region
  – Has several elements and is a state-of-the-art urban travel model
  – Splits trips between highway and transit

The basic travel forecasting model being used is the state-of-the-art Best Practice Model (BPM), a model developed especially for the New York metropolitan area.
BPM takes socio-economic data and uses it to forecast future travel and determine its mode and route.
The sequence of computer programs that make up the Best Practice Model
An illustration of the level of detail in the BPM highway network which includes all freeways (red) parkways (green) and most major arterials and collector routes (blue) but not all streets.
This illustration shows the level of detail of the transit network, which includes all commuter rail lines (red), express bus routes (yellow), and local bus routes (green).
BPM has four transit modes, three auto modes, taxi and three commercial vehicle modes.
Before we applied BPM to future conditions, we calibrated it for 2005 based on existing count and travel data.
We’re using it to test six alternatives and some options within each alternative.
An example of an option being evaluated with BPM, showing the possible BRT route from Suffern to Airmont Road using the Piermont right-of-way as an exclusive busway.
• We’re using Paramics to forecast and analyze future traffic
  – Used for the corridor, divided between Rockland and Westchester County
  – Uses trip tables [travel forecasts between zones] from BPM
  – Can analyze interchanges, intersections, HOT lanes, climbing lanes and traffic/transit interface
  – Produces Levels of Service for roadway segments and interchanges/intersections

While BPM forecasts travel, by all modes, we use Paramics to analyze traffic on the roadways, based on forecasts from BPM.
Traffic is measured using levels of service – a standardized method developed by the Federal Highway Administration.
Like BPM, we have to calibrate the Paramics model to current conditions before applying it in the future.
As an example, we are using Paramics to analyze the impact of a reconfigured interchange at Interchange 11 in Nyack.
An example of options being evaluated using Paramics, showing alternative interchange configurations at Interchange 11 in Nyack.
A listing of possible topics to be presented in future meetings.