



Public Workshop #3
Balancing Land Use & Transportation
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Introduction

[INTRO SLIDE]

The Newburgh Area Transportation & Land Use Study has been a 2.5 year study initiated by the Orange County Transportation Council – a group comprising representatives of municipalities and representatives of transportation agencies – to identify key priorities for creating integrated solutions for transportation and land use within the northeastern portion of Orange County.

We have intended this public meeting as a capstone of the project. We will review the overall path of the Study and identify our key findings and recommendations. Through some facilitated break-outs we hope to engage you in dialogue about these findings and recommendations to make sure they meet your expectations and that we have not overlooked any key elements. We will use the feedback you provide us tonight to finalize the report we will prepare. That report can be used by the OCTC and its individual member communities and planning agencies to identify and prioritize projects and actions that can help guide and manage new residential and economic development.

Study Elements and Study Context

[STUDY AREA MAP]

The Study Area comprised the City of Newburgh, Towns of Newburgh, Montgomery, New Windsor, and Cornwall, and the Villages of Walden, Montgomery, Maybrook, and Cornwall-on-Hudson. The Study Area also focused on key corridors: Route 17K, Route 32, Route 52, Route 207, Route 9W, and Route 300.

[PRIMARY ELEMENTS]

The primary elements of the Study were:

- A land use build-out to look at growth patterns in the future combined with a regional Travel Demand Model to assess future traffic flows and patterns;
- A series of corridor studies looking at land use and roadway conditions and identifying where strategic investments could be made to improve traffic flow;
- A transit study looking at short-term and longer-term options given existing needs and potential future needs;



- A bicycle/pedestrian study that sought new opportunities for improving connections for non-motorized trips.
- Illustrative examples of what a Smart Growth land use pattern would look like in the Study Area communities.

[STUDY CONTEXT]

The overall context of the Study recognizes the potential for growth in this key portion of the County stemming from:

- its strategic location along two major interstates (I-84 and I-87) and the revised interchange of those two roadways that makes this area a crossroads for freight travel (and jobs);
- the proximity of Stewart Airport and the potential for increased utilization of the airport for passenger and freight services as well as the attendant economic development that might serve the different needs of those user groups;
- other regional transportation studies that are seeking to improve connections with the downstate and New York metropolitan regions through transit access and/or improvements to the Tappan Zee Bridge;
- the County's own comprehensive planning efforts that focus on Priority Growth Areas, Open Space protection, water supply, and congestion management; and
- the comprehensive plans of each of the communities in the Study Area that each look to promote revitalization of existing centers and improvement of the quality-of-life for area residents.

[SMART GROWTH/SUSTAINABLE GRAPHIC]

The Study Team comprised a group of planners, engineers, and transportation experts who were guided by interaction with each of the Study Area municipalities and the general public through a series of focused interviews, roundtable discussions, and public design workshops and open houses.

We started the process of the Study by reviewing numerous Comprehensive Plans and previous planning studies provided to us by the towns and villages. We also met with elected officials, local planners and engineers, and members of the interested public to understand key concerns of the community.

Overall, we had several hundred individuals participating in meetings of one form or another – and many of those individuals participated at more than one meeting. We had nearly 500 people on our mailing list receiving updates and notifications for upcoming meetings. People were also able to obtain project information from the Study website: newburghareastudy.info.

At the core of the Study Team's integrated transportation and land use planning process were the principles of Smart Growth and Sustainable Development – both of which seek to encourage appropriate levels of investment in roadway, infrastructure, and land development based upon existing patterns of development



and desirable patterns of development that seek to minimize costs to the community and costs to the environment while enhancing the quality-of-life for the community.

Key Findings

[EXISTING LOCAL SERVICE MAP]

Transit

While the Study Area is served by a variety of transit options providing service within the Study Area and between the Study Area and surrounding counties and New York metropolitan region, it was clear early on that several factors made it difficult for residents to make use of these services.

- Uncertainty of where the bus stopped or when it would run.
- Brand identity and visibility.
- The route of the buses relative to locations people needed to get to for work, shopping trips, or doctors visits was a final key factor.
- The time of day the bus ran.
- And a land use pattern that scattered lower-density destinations over a broad area making it hard to link one location to the next using transit.

Because of these factors, many people ended up driving to their destinations. In downtown Newburgh, many people who don't own cars had to rely on local taxi service as the easiest form of public transportation.

We conducted a detailed investigation of demographics of Study Area residents and generators of transit trips (job centers, shopping centers, and medical service providers) and conducted interviews with transit operators and transit users to come up with a proposed short-term solution for Newburgh local bus service – including the Newburgh-Beacon shuttle that operates between the Beacon train station, the Newburgh downtown, and Stewart Airport.

[PROPOSED SHORT-TERM MAP]

From that investigation we developed a proposal that transforms the existing two-routes serving downtown Newburgh, the shopping areas on Route 300, and Vails Gate with buses that run every two hours into three-routes that allow more frequent service along Broadway in downtown Newburgh and that better penetrate into the neighborhoods north and south of Broadway and extends to Newburgh's waterfront and St. Luke's Hospital in Cornwall. The new service would also have extended hours to better serve the wider range of trips that people are making.

We should also note that we are aware that the City of Newburgh has designated the triangular area between Broadway, Washington Terrace, and Lake Street as a potential "Mid-Broadway Transit Node" in its current draft Future Land Use Plan. The proposed route map is consistent with that concept with both the Northside



and Southside routes serving that location. A secondary hub at Liberty Street could be created where the Northside and Southside routes also intersect with the Mid-Valley/Vails Gate route. That hub could be implemented through streetscape improvements and signage.

[BUS PHOTO]

Orange County has already placed an order for six to eight new hybrid fuel buses that would be needed to serve these three routes and has a Federal grant application pending to help pay for the new service. Orange County will also be working to make improvements to shelters and signs to make the new service more visible and accessible. The County's Transit Orange initiative will help raise awareness of transit services throughout the County and increase the appeal and accessibility of local bus service.

[POTENTIAL LONG-TERM MAP]

We also looked into the future based on projected demand for transit service with additional residents and economic activity in the Study Area. A potential longer-term plan could add two routes that would: 1) provide service to Woodbury Common from downtown Newburgh along Route 32; and 2) provide service along Route 17K to the villages in the western portion of the Study Area. The County is also planning other intra-county routes.

Light-Rail

We are aware of previous suggestions about bringing back a streetcar or light-rail to Broadway that might run from the Newburgh waterfront to Stewart Airport. When we met with residents to discuss the future of Broadway, many people were excited by this possibility as a way to enhance downtown redevelopment activities while recognizing the historic and essential role that Newburgh serves as an economic center for this area. While we agree that light-rail can serve a role in downtown revitalization, we want to caution residents that implementing a light-rail solution is quite costly and that making improvements in bus service in the near term is a better way to invest scarce resources.

A US General Accounting Office report on mass transit options surveyed a number of different bus transit and light rail transit projects throughout the country. Based on those surveys, the average cost per mile of a light-rail system today would be between \$30 million and \$50 million per mile. A street-car system might cost between \$5 million and \$10 million per mile. Compare that to estimates for bus transit, which ranged depending on whether buses ran along arterials (less than \$1 million per mile), in HOV lanes (about \$10 million per mile), or in dedicated busways (about \$15 million per mile). You can get a sense of the order of magnitude difference between running buses on an existing right-of-way and creating new light-rail lines. Where no new right-of-way or structures are involved, costs are considerably less expensive.

Investments in bus service, or other improvements to the streetscape in downtown Newburgh, would in no way preclude the community from implementing a light-rail solution in the future if the demand for transit and the availability of funding should be there.



During the breakout discussions, Walt Cherwony will be available to provide more detail on our analysis and some of the proposed or potential routing of new bus lines.

[BIKE/PED COLLAGE]

Bicycle/Pedestrian Network

We heard from a number of people that opportunities for bicycle use or walking just weren't present along Study Area roadways – and our own observations proved that. While many of the existing centers do have networks of sidewalks, of the seven NYSDOT designated bicycle routes, only two had any formal signage and none had any pavement markings or other devices to indicate that the road was used by both bicycles and cars. Further, many of the roads along which these bike routes ran often times had traffic volumes or speeds that were not conducive to safe bicycle use.

Orange County Planning mapped the existing route network and the Study Team assessed where users were most interested in improving these networks or making new connections. Important to the identification of these opportunities was an understanding of where existing and potential transit connections are, or could be located, and where centers of land use are or could be located.

[BIKE/PED OPTIONS]

Some of the recommendations could be implemented with low-cost signage or road painting to indicate the location of the bike routes or modifications to traffic signals to provide protection for turning cyclists. Other routes may require modest investments to widening of shoulders or repaving of roads to make the routes safer for the bicyclists. Finally, higher-cost improvements may be necessary where existing or proposed bike routes coincide with higher volume or higher speed traffic.

[PROPOSED ROUTE MAP]

One example of a fairly easy solution to implement would be to bypass the bike route between Walden, Montgomery, and Maybrook that currently runs along NY 208 and create a safer route along River Road (CR 29) south from Walden, onto NY 211 and Boyd Street in Montgomery, and then Beaver Dam Road and Clark Place into Walden. These roads are not only less trafficked, but also more scenic, and the new route could link each of the three villages together in a safe manner.

[PROPOSED IMPROVEMENT FIGURE]

Another example that addresses pedestrian safety concerns within the Village of Cornwall-on-Hudson are modest improvements to the intersection of NY Route 218 and Academy Avenue. Here, addition of curb extensions, realigning one leg of the intersection through a new painted yellow line, and relocating crosswalks would calm traffic and improve sight-lines to make pedestrian crossings at this intersection much safer.



During the breakout discussions, Janet Jenkins will be available to discuss improvements to the bicycle/pedestrian network in more detail.

[CORRIDOR COLLAGE]

Corridor Improvements

The analysis of roadway corridor improvements was quite an involved undertaking. The Study Team conducted inventories and observations of the major study corridors and the patterns of traffic flow on those roads. We consulted previous studies conducted by other traffic engineers as part of project approvals and we conducted our own traffic counts and observations where we needed to fill gaps.

We also prepared a regional land use build-out for the Study Area using information obtained from each of the comprehensive plans and zoning codes and GIS data on current land use and environmentally sensitive lands.

We used population projections from Orange County that indicate that the Study Area will likely see the need for another 13,000 new housing units and about 15,000 new jobs over the next 25 years.

We considered several different land use scenarios: a “business as usual” scenario that followed existing zoning codes and patterns of recent development, and two different “Smart Growth” scenarios that looked at an alternate pattern based on the stated vision of community comprehensive plans and a possible modification to those comprehensive plans to further enhance development within existing centers. This build-out analysis helped us to identify where new residential and commercial growth is likely to occur and how many people might be living, working, and shopping in different areas of the region.

One item of note: following the current Comprehensive Plans and Zoning of the communities in the Study Area, only 4,500 dwelling units of the projected 13,000 new units would be located within existing centers. The rest would have to be in areas outside of the centers on land that is now used for agriculture.

The second Smart Growth scenario we ran sought to locate more of the housing units within existing centers or close to those existing centers. We were able to place about 6,750 dwelling units in centers. One of the most interesting discussions we held with residents and stakeholders was how to identify locations where the remaining 6,250 housing units could go.

This information was fed into a Travel Demand Model maintained by the County to help it in planning for transportation investments and air quality modeling. That model uses information about regional demographics and the locations of jobs and shopping centers to predict where current and future traffic will be going and to predict where “hot spots” of congestion might appear.

[V/C RATIO DIAGRAM]

We were able to translate results of that mathematical model into graphics that helped us identify locations of potential congestion and 18 “hot spots” for additional traffic analysis.



[HOT SPOT MAP]

Many of the hot spots predicted by the model were the same locations we had observed in the field or that stakeholders had pointed us to.

These hot spots represented either known locations of congestion, or potential locations of congestion given future development or changes in travel patterns. Given their geographic diversity we also felt these were the locations that were most representative of the entire study area.

[TABLE OF INVESTMENTS]

By studying the projected future traffic volumes at each of these locations, we were able to determine where different levels of investment in the roadway system might be required.

Four of the analysis locations could require few or only minor improvements. Those **Low-level investments** might be accomplished through signal retiming or lane re-stripings and cost on the order of \$250,000 or less. Such an improvement could be made at the intersection of Route 9W and Fostertown Road – an intersection that regularly sees congestion.

Ten locations could require **Modest-level investments** that might include expansion of shoulders and modest widening of roadway width to provide a turning lane or travel lane. Those improvements might cost between \$250,000 and \$10 million.

Eight locations were identified that could require more **capital-intensive improvements** that might include right-of-way acquisition or utility relocation to significantly widen existing roadways. Those would cost over \$10 million.

Finally, at a smaller number of locations, engineering feasibility issues, community or environmental concerns, or cost considerations may preclude the implementation of a sufficient level of roadway improvements.

I should put those cost estimates into some context. Currently, there is approximately \$500 million in State and Federal highway construction funding for projects within Orange County over the next five years. So figure about \$100 million per year to keep the current roadway network in a state of good repair and to address priority problems.

The recent I-84/I-87 interchange improvements cost approximately \$121 million. The Robinson Avenue reconstruction cost approximately \$12 million.

This Study was tasked with identifying potential locations and ranges of possible investment. We did not develop detailed studies of feasibility, but did develop schematic level improvements as a way to estimate cost and for decision-makers to weigh which improvements might be prioritized for additional study and investigation.



[17K/211 SCHEMATIC]

A schematic low-level investment could be made where Route 17K intersects Route 211 in the Village of Montgomery. Here, some restriping and minor widening of the shoulder at the north side of Route 17K could improve overall function of this intersection with minor or no impacts to the environment or community character and even some benefits to the pedestrian crossing. Our initial estimate of this improvement is approximately \$250,000.

[INTERNAL CONNECTION FIGURE]

One investment that costs almost nothing to implement is identification of internal connections between adjacent residential neighborhoods or between neighborhoods and village centers. By making these connections as subdivisions are approved or by keeping them open even when residents clamor against “cut-through” traffic, you are keeping the options for how people move through the community open thereby taking pressure off the main roads.

[17K/ROCK CUT SCHEMATIC]

A schematic medium-level of investment could be made where Route 17K intersects Rock Cut Road in the Town of Montgomery. Here, modest widening of the roadway could accommodate turning lanes and a bike lane with only a small amount of work outside the current highway right-of-way and possible environmental effects. Our initial estimate of this improvement is approximately \$1.1 million.

[207/300 SCHEMATIC]

One high-level investment that we think is almost essential to managing future growth within the Study Area is the widening of the Route 207 underpass under the New York State Thruway. This intersection at Route 300 is congested due in part to the limited width of the underpass and the queuing that occurs along Route 207. Traffic operations at this location could be improved by widening of this underpass to allow for additional thru lanes and travel lanes. Of course, this improvement would have to undergo specific engineering studies and environmental studies to determine what impacts might exist and what the total cost would be. Our initial estimate of cost is approximately \$11.5 million.

It should also be noted that operations along Route 207 could be further enhanced, especially with projected changes in land use within the corridor, by widening of the roadway between Route 300 and Route 747. However, this improvement could cost anywhere from \$20 million to \$30 million – without considering any land acquisition that might be required. Add into that improvements at 207 and 747 (\$2 million) and 207 and 300 (\$2 million) and the total cost for improvements in this corridor run to over \$40 million.



[17K/300 SCHEMATIC]

We did look at the intersection of Route 17K and Route 300. This is clearly an intersection with significant congestion at all hours of the day – primarily due to the concentration of retail uses in the vicinity but also because of the general orientation of the major roadways in the Study Area that cause many of the trips within the Study Area to pass through this intersection.

While it would be possible to add another lane in each direction, at the cost of approximately \$1.3 million, that investment might yield only marginal returns in improved operations and there is a question as to whether we want to keep adding lanes ad nauseum into the future. This intersection already has 18 travel lanes along four approaches; do we really want to go to 22 lanes? And after that do we keep going to 24 or 26? A more substantial investment (such as an overpass or underpass) would have to be made – and may not even be feasible without a dramatic change to the character of the intersection and/or access to local businesses – in order to see any improvements in operations.

[VAILS GATE SCHEMATIC]

Another location where high-level investment would be required to see improvements in operations is Vails Gate where Route 300, Route 32, Route 94 converge. Standard Traffic System Management solutions at Vails Gate are unlikely to yield benefits due to the high volumes of flow through the intersection and complexity of the five-legged intersection. Removing one leg from the intersection could result in improvements with only minor effects on existing land use. However, a more radical transformation of land use at this location could create an opportunity for mixed-uses which would diminish vehicular trips.

During the breakout discussions, Marty Taub and Kyle Snyder will be available to provide more detail on this analysis and some of the schematic improvements we have identified.

VISSIM

Hopefully during the Open House you had the chance to view the animations we prepared showing the Route 300 corridor. If not, I welcome you to take some time during the breakout sessions to take a look.

These animations were produced using the Travel Demand Model and a tool called micro-simulation that adds more detail to the Travel Demand Model for a specific corridor. The micro-simulation shows what a corridor would look like with actual vehicles moving through it, although the animation is shown at twice the normal speed.

We chose the Route 300 corridor from Route 207 north to Route 52 because of the primary role that corridor plays in moving traffic within and through the Study Area. In addition to the future traffic projected from the land use build-out, we included potential traffic generated by additional passengers at Stewart airport and anticipated traffic associated with the Marketplace project on Route 300 just north of I-84. We also included the new internal roadway system planned for the Marketplace project, including the roundabout at Route 52 and Meadow Hill Road.



We have two simulations to show you tonight:

- 1) The first shows future conditions in the year 2035 if several major investments are made to the roadway network. Here, we are testing whether widening of the Route 207 underpass near Route 300, as well as widening of Route 207, and adding additional turn lanes at the intersection of Route 17K and Route 300 would have any benefit overall.
- 2) The second shows future conditions in the year 2035 if those major investments are NOT made, but the minor and medium investments are completed, AND that a new parallel route to Route 300 is completed that would link Route 32 north of I-84 with Old Little Britain Road south of Route 17K. The purpose of this new roadway would be to test whether an alternative route around the intersection of 17K and 300 would have any regional benefit.

What these simulations show us is that even with major investments in the form of improvements at existing intersections or the creation of a new roadway, congestion from future development (including the Marketplace mall) will remain on Route 300.

[VILLAGE CENTER COLLAGE]

The Message

So what does that tell us?

- 1) It confirms the standard wisdom that we can't build enough capacity in the roadways to solve all of our problems;
- 2) We need to make strategic investments in transit and bicycle/pedestrian facilities to provide real alternatives to using automobiles; and
- 3) We need to embrace land use patterns that support mixed-use development and shorter trips by non-motorized means.

It means that while we can still have development, we need to be smart about that development and we need to properly plan for it. It won't just happen on its own.

In fact, we have to recognize that even if our comprehensive plans say all the right things about mixed-use and sustainable development, if our land use codes don't allow for it, Smart Growth won't happen.

We also have to recognize that Smart Growth needs substantial levels of support at all levels of government in order for it to happen in the right way.

I'm sure everyone in this room can tell a great (or maybe not so great) story about the project that came before their Planning Board that was possibly going to transform their community for the better and how the residents rallied against the project on the grounds of density and traffic congestion and inadequate infrastructure and new school children. That type of environment doesn't lead to Smart Growth. It doesn't even lead to No Growth. It just leads to a business-as-usual Sprawl pattern of development that will continue



to lead us down the rabbit hole of more and more congestion – no matter how many dollars we throw into paving roadways.

The best way to manage future congestion is to find a better balance between investments in roadway infrastructure, water supply and wastewater infrastructure, and mixed land uses in priority growth areas.

By providing for and investing in this balance of housing, shopping, and jobs within our centers we can take the pressure off the main arteries and improve the flow of economic activity into our communities where it belongs.

Economic development can AND MUST happen, but we would strongly argue that it not be at the expense of community character, the environment, and our ability to pay for it. It also means that key investments might be in the form of land use plans and water and wastewater infrastructure and not just roadway improvements.

During the breakout discussions, David Kooris will be describing some of the ways that new development can happen within the Study Area through Village Infill, Village Extensions, Corridor Redevelopment, and place-making. These are real methods for creating quality communities that many other regions in our country are following to great success. However, they have been slow to catch on in our region because of incorrect assumptions and preconceived notions of growth and community impact.

Implementing the Plan

One last word on implementation. Once this Study is done and the Final Report has been finished, there will be a number of different actions that will have to be taken.

- 1) the County will continue to work with local transit providers to implement the Short-Term plan and enhancements to the “Transit Orange” system;
- 2) communities should continue to evaluate their comprehensive plans to identify where zoning does not match the stated vision and then work to amend the zoning to be more consistent with the plans or even to find additional locations where Smart Growth can occur;
- 3) the OCTC should evaluate the schematic roadway improvements to see which deserve further study and which can be prioritized to move forward for funding
- 4) and the residents should continue to have a dialogue with elected officials on what Smart Growth means and how it can be implemented in your communities.