



2008 James City County Comprehensive Plan

## MEMORANDUM

**DATE:** April 1, 2009

**TO:** Members of Steering Committee

George Billups	Jack Fraley	Chris Henderson
Mary Jones	Rich Krapf	Ruth Larson
Julie Leverenz	Vaughn Poller	Bill Porter
Tom Tingle	Mark Wenger	

**FROM:** Luke Vinciguerra, Planner

**SUBJECT:** April 6, 2009 Steering Committee Meeting

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Since the last transportation meeting, staff and the URS consultant have refined the traffic projections, analyzed possible congestion mitigation opportunities, considered land use designation change applications (Attachments 2 and 3), and reviewed the effect of widening on specific road segments (Attachments 4-17). The results of these efforts are shown on the attachments and discussed below. The consultant has also prepared a memo explaining URS's analysis in greater detail (Attachment 1).

On Attachments 2 and 3, Community Character Corridor road segments are highlighted in purple and other analyzed roads are shown in white in the first column. The remaining columns are the traffic predictions for the four land use scenarios: build-out by zoning, build-out by Comprehensive Plan, build-out by Comprehensive Plan with a commerce park style development at Hill Pleasant Farm, and build-out by Comprehensive Plan with a transit oriented style development at Hill Pleasant Farm (although no trips have actually been assigned to transit). The commerce park and transit oriented predictions also consider the land use change applications that the Committee asked to be included in the traffic modeling, and assume the construction of the proposed Mooretown Road extension. Transportation Analysis Zone (TAZ) data from the City of Williamsburg and York County have also been added to reflect the Marquis and Quarterpath developments in all scenarios.

Also in Attachment 2, the road segments highlighted in orange and labeled "IMPROVED" are road segments that at build-out are predicted to be so congested that other smaller roads would be greatly affected as motorists attempt to find alternative routes. One example, Cranston's Mill Pond Road, was shown to need widening to four lanes from such trip diversions. To remedy this, the consultant identified routes where the model was reassigning a significant amount of

trips due to congestion and asked the model to assume that the congested road was improved. Pocahontas Trail was also widened to demonstrate the effect of Route 60 relocated. Attachment 3 shows the traffic projections without any improvements.

The Average Daily Traffic (ADT) of many road segments in the Comprehensive Plan with Commerce Park and Transit Oriented scenarios are significantly less than projected ADT by the Comprehensive Plan build-out scenario. This is due to trip reassignments associated with the gravity model. The logic is that trips generated from the northern end of the County heading toward an office/retail use in the southern end of the County would no longer need to drive as far to obtain a service as a closer option became available. It also assumes the completion of Mooretown Road extended. High intensity land uses should not be considered a tool to mitigate traffic. A site specific traffic study is recommended as a follow-up to this or any other significant land use applications to more accurately calculate the effects of development at the time of development, including changes in Level of Service for roads, intersections, and entrances in the immediate area. In contrast, the gravity model assumes conditions at build-out with significant changes in current trip generation patterns.

At the last transportation meeting, the Committee directed staff to find alternatives to road widening, including density changes and new parallel roads. Staff, the consultant, and VDOT have met to discuss these possibilities. Staff identified the possibility of short road segments between various collectors, but they were found to have negligible effect on traffic volumes. The biggest obstacle would be obtaining right of way through built-out or already master planned development in the path of any proposed new road. In the western end of the County, significant Resource Protection Area (RPA) and other water bodies limit options. Though it is sometimes permissible to build roads over RPA, it would come at significant cost as bridges would need to be built. Staff also researched what would happen if adjoining developments were connected; however, URS advised that their software could not model that type of inquiry. Based on these investigations, no single solution emerged to reducing congestion to roads in the PSA that could be included in the model. Additional discussions will occur during the Transportation/Land Use Technical Report review on other potential tools to mitigate traffic impacts, such as access management, subdivision street acceptance requirements, and road impact fees.

Based on this information, staff recommends the Committee consider and provide feedback on the traffic projections. Staff will then begin to create a Comprehensive Plan “watch list,” use the cost projections to satisfy the VDOT Comprehensive Plan cost estimate requirements, and devise a plan to address the most congested roads. Staff also requests the Committee provide preliminary guidance to staff on the following:

- Roads the Committee finds a priority for widening or other improvements;
- Road segments that are projected to need improvements that should not be widened for Community Character, space, or other limitations;

- Road expansions the Committee finds appropriate to illustrate on the Comprehensive Plan;
- Particular visions for any Community Character Corridor or other road in the County.

Staff will use the Committee's feedback on the aforementioned items in writing the Transportation Technical Report which will be presented at a later meeting. Once the Committee has selected a final land use scenario, the consultant will run a final model showing build-out with all recommended improvements.

#### Attachments

1. URS Memo
2. Traffic predictions at build-out with improvements
3. Traffic predictions at build-out without improvements
- 4-17. Corridor maps of possible road widening projects