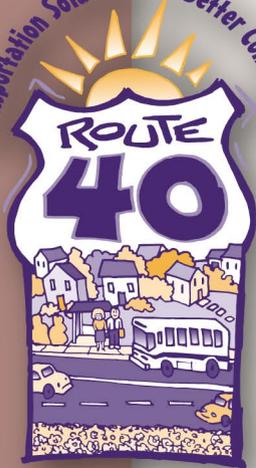


Transportation Solutions for Better Communities



2008 CORRIDOR MONITORING AND TRIGGERING REPORT

February 2009



SCHOOL RD ENTERPRISES, L.P.
P.O. BOX 407-123



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CONTACTS

Delaware Department of Transportation
Mark Tudor
800 Bay Road
Dover, DE 19901
mark.tudor@state.de.us

New Castle County
John Janowski
87 Reads Way
New Castle, Delaware 19720
jpjanowski@co.new-castle.de.us

Wilmington Area Planning Council
Dan Blevins
850 Library Avenue, Suite 100
Newark, Delaware 19711
dblevins@wilmapco.org

Delaware Transit Corporation
Catherine Smith
119 Lower Beech Street, Suite 100
Wilmington, Delaware 19805-4440
cathy.dennis@state.de.us

INTRODUCTION

The Route 40 Corridor Improvements Project was initiated by the Delaware Department of Transportation in partnership with New Castle County and WILMAPCO in September 1998. Completion of the first four steps of this project produced a community-supported 20-year transportation plan prepared under the direction of a Steering Committee composed of civic leaders, elected officials, and business interests. Technical support for plan development was provided by a project team, composed of the project partners' staffs and their planning and engineering consultants. The Route 40 Corridor 20-Year Transportation Plan (the Plan) was adopted on June 19, 2000.

The Plan addresses the conditions that are expected to result from projected growth in housing, employment and traffic over 20 years. The Plan contains projects, separated into three phases (Phase I 2000-2007, Phase II 2008-2013, Phase III 2014-2020), that address projected transportation problems. By phasing projects over 20 years and using a monitoring and triggering mechanism, projects will be built only as conditions dictate, addressing one of the main goals of Steering Committee.

The fifth and final step of the project, the implementation of the Plan recommendations, is now in its ninth year. With the beginning of Phase II, this ninth annual Corridor Monitoring and Triggering Report is an essential component of this step. To assure that all projects in the Plan are implemented as conditions dictate—neither prior to the anticipated need, nor subject to unnecessary delay after need is identified—the Plan included an implementation strategy consisting of five components:

- Corridor preservation
- Monitoring
- Triggering
- Citizen involvement
- Project implementation

Citizen involvement is accomplished through a Corridor Monitoring Committee. Until 2008, this committee typically met three or four times each year with the project team to review conditions in the corridor, which the project team monitored throughout the year. The monitoring efforts, which are summarized in this report, consider:

- Land development
- Traffic
- Corridor preservation
- Highway safety
- Transit service
- Project status
- Impact of completed projects

- Other projects in the region

Each of these factors is discussed in the following sections. The project team's assessment of these monitored conditions forms the basis for the triggering section of the report. Examples of triggering, as defined in the Plan, are listed below.

- Major land development activity would trigger immediate review of transportation needs: level of service implications and strategy, transit service needs or opportunities, safety concerns, and pedestrian and bicycle needs.
- Steady deterioration in level of service to D or worse would trigger a response in the form of strategies to stabilize/reduce demand (i.e. travel demand management measures or transit improvements) or increase capacity.
- Safety improvements recommended by the Highway Safety Improvements Program review team would trigger an evaluation by the project team of the compatibility of the proposed improvements with the Plan and of the need to make adjustments to the Plan.
- Transit service changes proposed by DTC would trigger an evaluation by the project team of any ancillary improvements needed to complement the service changes, such as sidewalks or shelters, that should be advanced in the Plan's implementation.
- Transportation improvements that are not part of the Plan but that impact the corridor and are proposed for implementation (for example, widening of Interstate 95) would trigger an evaluation by the project team. The evaluation would focus on compatibility of the proposed improvements with the Plan and the need to make adjustments to the Plan.

Assessment of these potential changes may trigger one of the following options to best respond to the new conditions:

- Continue with a Plan project or projects as currently scheduled in the TIP/CTP.
- Move a project(s) forward in the TIP/CTP schedule and determine appropriate level of effort for design activities.
- Move a project(s) back into the out years of the TIP/CTP schedule.

Note: Due to reduction in funding for Route 40 corridor planning activities starting in 2008, the Corridor Monitoring Committee did not have the opportunity to meet to review and approve this report.

MONITORING

Land Development

Site Review Team

Development activity is typically monitored through meetings of the site review team, which consists of representatives from DeIDOT, the New Castle County Department of Land Use, and the Delaware Transit Corporation. The site review team did not meet specifically about Route 40 projects in 2008; however, DeIDOT's Subdivision Section met on a monthly basis to review development proposals throughout New Castle County. Members of the Route 40 Project Team continue to review plans in the corridor for consistency with and impact to the Plan and provide comments to DeIDOT and New Castle County. The team's comments include recommendations in such areas as corridor preservation, access management, and cost-sharing opportunities.

Summary of Development Activity

During 2008, there were 27 new development plans (6 major, 10 minor, and 11 resubdivision/other) submitted to New Castle County for review in the Route 40 corridor. This level of development activity is less than last year. The number of new major plans submitted fell from ten in 2007 to six in 2008. Table 1 provides a description and status of the current major development proposals, as well as other previously-submitted major plans discussed during the year. Major development locations are shown in Figure 1.

Review of 20 major developments proposed before 2008 continued this year. Among those plans, three (Becks Woods Medical Plaza, La Grange, and Hershberger Property) were recorded during 2008. Among the remaining 17 major development plans, seven are in the record plan submittal stage, five are in the preliminary submittal stage, and five are in the exploratory submittal plan review stage. Additional impacts of other developments on the Plan are as follows:

- DeIDOT worked with the new Bear-Glasgow YMCA to complete construction of George Williams Way, a roadway segment providing a connection between LaGrange Avenue and the Bristol Place development.
- The proposed Lincoln Center development is located on a 56-acre portion of the property previously owned by JP Morgan Chase, adjacent to the core data center. The proposed

development includes 124 townhomes, 372 condominiums and approximately 700,000 square feet of retail. The plan also includes a park, early learning center, and Pencader community center. The historic house and cemetery on the site will be restored. The first phase will include the same amount of traffic proposed for the original First USA Bank proposal for the site. The developer will provide up to \$2.5 million for traffic mitigation both on- and off-site, along with monitoring to ensure the development meets its trip reduction goals. DeIDOT is still reviewing the potential phasing of the site as related to concurrency.

- The Whitewood Village subdivision is located on the 165-acre Sniadowski parcel on both sides of Reybold Road. A 209-lot townhouse community is proposed on the portion of the property north of the road. DeIDOT is working with the developer to include offsite transportation improvements along Reybold Road, including widening and constructing a segment of a shared-use bicycle/pedestrian path.
- Whittington Woods is a proposed 86-lot residential subdivision on two existing parcels totaling approximately 88 acres. The development is located on the former Whittington Sand and Gravel site approximately 2,500 feet west of Smalleys Dam Road. The property is surrounded by several existing subdivisions, including Calvarese Farms, where access will be provided. DeIDOT is working with the developer to construct a segment of the proposed Newtown Trail.
- School Bell Crossing is a proposed development located on the south side of Route 40 at the intersection of School Bell Road. The development will include a 70,000 SF supermarket and 41,800 SF of retail. As part of the proposal, the developer will add a fourth leg to the intersection of Route 40 and School Bell Road, along with an access road for existing development along the south side of Route 40.
- As part of the preliminary approval for the Meridian Crossing II site, the developer is required to provide roadway improvements along Old Porter Road near the site entrance. One of these improvements includes realignment of the curve east of Lauren Farms. Final design is almost complete but a construction schedule has not been established.

- The Vista at Red Lion is a two-phase development along Old Porter Road that includes 300 single family units and 304 age-restricted townhomes. DeIDOT is working with the developer to construct improvements that were recommended in Phase I of the Route 40 Plan.
- Among many of the minor development plans new for 2008 and previously reviewed, DeIDOT and New Castle County continue to consolidate access and recommend cross access agreements where feasible.

Table 1. Major Plans Received and/or Reviewed During 2008.

Site	Description	Remarks	New plan in 2008?
Becks Woods Medical Plaza	67,500 square feet medical office	Recorded	No
La Grange	224 lot commercial/residential	Recorded	No
Hershberger Property	84 apartments	Recorded	No
Bradford Pond/Bible Fellowship Church	26 lot age-restricted residential community & 21,917 square feet church expansion	Record Submittal	No
Christiana Self Storage	83,876 square feet self storage facility & 1,000 square feet office	Record Submittal	No
Whitewood Village	209 lot townhouse community	Record Submittal	No
Dover Federal Credit Union	Bank	Record Submittal	No
Whittington Woods	86 lot single family land development	Record Submittal	No
Thirteen Stars	Subdivide two parcels in 14 lots	Record Submittal	No
Old State Road Hotel	Rezone from S to CR	Record Submittal	No
Glasgow Commons/W.L. Gore Site	1,646,157 square feet industrial/office	Preliminary Submittal	No
Lincoln Center	Office, retail, and residential	Preliminary Submittal	No
Lighthouse Baptist Church	14,922 square feet church, 9,000 square feet multi-use building	Preliminary Submittal	No
School Bell Crossing Shopping Center	69,659 square feet supermarket, 2-story retail	Preliminary Submittal	No
Shuman Property	Create a title subdivision of 120,000 square feet	Preliminary Submittal	No
Vista at Red Lion Section Two	300 single family dwelling units	Preliminary Submittal	Yes
Dade Behring	150,000 square feet research & development building	Exploratory Submittal	No
Voice of Truth Church	Rezone from S to CR	Exploratory Submittal	No
Old State Road Self Storage	50,050 square feet self-storage, 600 square feet office, 5,000 square feet retail	Exploratory Submittal	No
Rockwood Parcel 1-B	60 apartments, 10,000 square feet daycare building, 21 storage units	Exploratory Submittal	No
Rockwood Parcel 1-C	90 apartment units, 5 storage buildings	Exploratory Submittal	No
Vista at Red Lion Section One	Subdivide 53.69 acres into 304 age-restricted townhomes	Exploratory Submittal	Yes
Farmington Phase 3	Subdivide lot no. 200 into 11 building lots	Exploratory Submittal	Yes
Maria's Court	19 townhouse lots for residential single family dwellings	Exploratory Submittal	Yes
Arbeiter Property	240 apartment units with associated parking	Exploratory Submittal	Yes
339 Old State Road	25,500 square feet of flex warehousing	Exploratory Submittal	Yes

Developer Agreements

In addition to those noted above, more than 35 land development projects in the Route 40 Corridor have developer agreements with the State or County regarding transportation improvements in the corridor. These improvements range from sidewalks to widening of roadways, signal agreements and significant right-of-way dedication. New Castle County continues to work with DeIDOT on a comprehensive tracking system for these agreements, which is used to coordinate private and DeIDOT-sponsored roadway improvements. Developer contributions throughout the corridor are highlighted in Figure 2.

TIS Waivers / Fair Share Contributions

In 2005, New Castle County added a provision to its Unified Development Code allowing a waiver from the traffic impact study (TIS) process based on certain conditions. The most recent waiver applies only in Transportation Improvement Districts where a plan is already in place. Although there are officially no Transportation Improvement Districts (TID) in Delaware, the Route 40 corridor has many of the characteristics of a TID. The intent of such a waiver is to use the long-range transportation plan, rather than a TIS, to determine which transportation improvements should be the developer's responsibility.

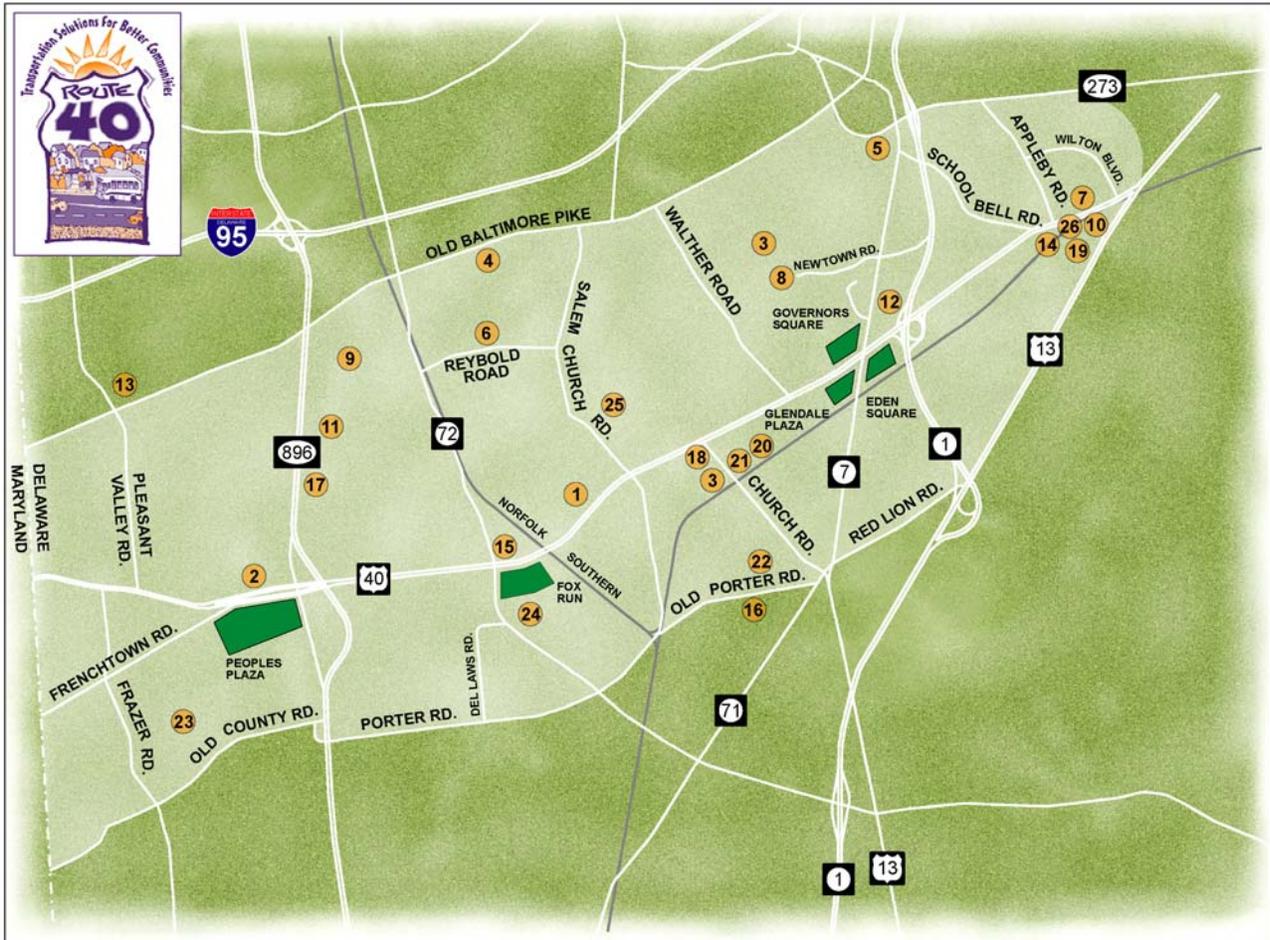
There have been a total of 15 development plans within the Route 40 corridor that have requested a TIS waiver. Of those, four have been approved, and the remaining 11 are listed below:

- Arbeiter Property
- Rockwood – Parcel 1-B and 1-C
- Old State Road Hotel
- Shuman Property Office/Warehouse
- School Bell Crossing Shopping Center
- Lighthouse Baptist Church
- Lincoln Center
- Whittington Woods
- Dover Federal Credit Union/
Shopping Center
- Whitewood Village
- W.L. Gore

In 2006, due to the continuing increase in the number of applications for TIS waivers, DeIDOT began discussions on developing a standardized approach to addressing TIS waivers and a method to determine developers' fair share contributions. This has become a more prevalent issue because of the reduced funding available for transportation projects. The purpose is to develop a simple, yet defensible, approach to determine fair share contributions. The goal is to have developers fund DeIDOT's portion of the costs for the remaining Route 40 corridor improvements.

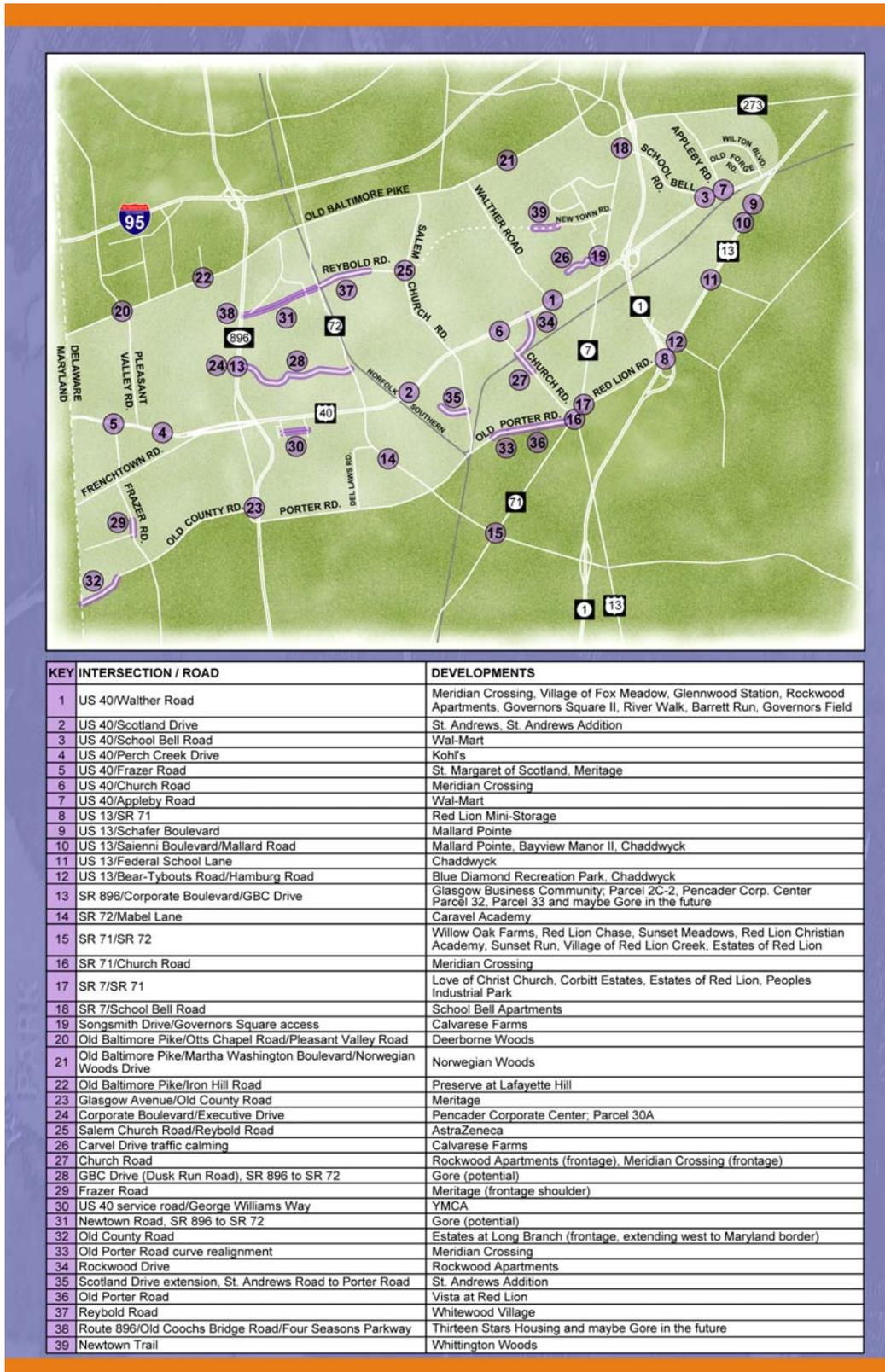
Traditionally, developer funded transportation improvements and contributions have been determined on a development-by-development or project-by-project basis. Previous studies completed to address this issue were focused on localized capacity improvements; however, the Route 40 corridor improvements are more comprehensive and regional. DeIDOT will continue to review its approach to fair share contributions on a development-by-development basis until a statewide methodology is established.

Figure 1. Major Development Location Map.



- | | |
|---|-----------------------------------|
| 1. Becks Woods Medical Plaza | 15. Shuman Property |
| 2. La Grange | 16. Vista at Red Lion Section Two |
| 3. Hershberger Property | 17. Dade Behring |
| 4. Bradford Pond/ Bible Fellowship Church | 18. Voice of Truth Church |
| 5. Christiana Self Storage | 19. Old State Road Self Storage |
| 6. Whitewood Village | 20. Rockwood Parcel 1-B |
| 7. Dover Federal Credit Union | 21. Rockwood Parcel 1-C |
| 8. Whittington Woods | 22. Vista at Red Lion Section One |
| 9. Thirteen Stars | 23. Farmington Phase 3 |
| 10. Old State Road Hotel | 24. Maria's Court |
| 11. Glasgow Commons/W.L. Gore Site | 25. Arbeiter Property |
| 12. Lincoln Center | 26. 339 Old State Road |
| 13. Lighthouse Baptist Church | |
| 14. School Bell Crossing Shopping Center | |

Figure 2. Developer Contributions.



Traffic

To monitor traffic growth, the project team conducted full-day traffic counts on five segments of Route 40 using automatic tube counters. These segment counts were used to monitor overall trends, as opposed to intersection counts, which were used to measure levels of service. The segment counts were compared with the traffic information utilized during development of the Plan, which was developed from counts conducted primarily in 1998 and 1999, as well as counts conducted for Corridor Monitoring and Triggering Reports during 2000 through 2007. Average daily traffic (ADT) volumes along Route 40 are summarized in Table 2.

The Route 40 Plan anticipated that at the five locations shown in Table 2, traffic would increase by an average of about 1.8 percent per year through 2020. Current data indicate growth rates less than what was originally anticipated (See Figure 4). At the five locations summarized in Table 2, the decrease in volumes as compared to the 2008 projections range from about 3.5 percent to almost 23 percent. This is not surprising considering the substantial increase in gasoline prices during much of 2008. As a result, the general growth trend through 2008 is about 1.5 percent annually.

To compare current levels of service for intersections along US 40 to the levels of service used during the Plan development process, the project team conducted intersection counts during peak traffic hours at all signalized intersections on US 40 in November 2008. Unsignalized intersections were not counted because no improvements are included at these intersections in the Plan. It is assumed that any future signalization of these intersections, whether required due to land development or traffic growth, will have to meet intersection signalization warrants as required by DeIDOT.

The traffic volumes collected at the signalized intersections were analyzed in a manner consistent with the traffic impact study process used by New Castle County and DeIDOT. The results of the level of service (LOS) analysis are summarized in Table 3. As indicated, four intersections had minor degradation in levels of service from 2007 and eight had slight improvement.

- The intersection of US 40 with Glasgow Avenue (north) improved to LOS C in the AM peak and LOS D in the PM peak after falling to LOS E in the PM peak of 2007.
- The intersection of US 40 and SR 896 fell to LOS E in the AM peak and remained at LOS E in the PM peak for the fourth consecutive year.
- The intersection of US 40 and SR 72 improved in the AM peak to LOS D and remained at LOS E in the PM peak for the fourth year in a row.
- The intersection of US 40 and Scotland Drive returned to LOS C in the PM peak after worsening in 2007. The intersection remained at LOS C in the AM peak.
- The intersection of US 40 and Salem Church Road / Porter Road remained at LOS D and LOS E in the AM and PM peaks, respectively.
- The intersection of US 40 and Governors Square remained at LOS C in the AM peak, but fell to LOS E in the PM peak.
- The intersection at US 40 and SR 7 improved to LOS C in the AM peak but remained at LOS D in the PM peak.
- All other signalized intersections on US 40 operated at acceptable levels of service (D or better) during both peak hours.

ROUTE 40 CORRIDOR IMPROVEMENTS

2008 Corridor Monitoring and Triggering Report

Table 2. Average Daily Traffic.

Location	Plan volumes (1998/1999)	2000 counts	2002 counts	2004 counts	2006 counts	2007 counts	Projected 2008 volumes	Actual 2008 volumes	Percentage over (under) projected	2020 forecast
East of Perch Creek Drive	34,000	29,000	36,800	37,100	39,600	38,778	40,364	38,958	-3.5%	48,000
West of SR 72	29,000	27,000	28,900	32,600	34,500	32,057	38,545	29,824	-22.6%	50,000
West of Salem Church Road	32,000	34,000	38,600	42,700	40,800	37,704	41,091	34,359	-16.4%	52,000
West of Walther Road	41,000	43,000	42,400	47,000	45,900	45,729	48,727	44,679	-8.3%	58,000
West of Wilton Boulevard	27,000	27,000	26,000	26,400	33,100	27,678	29,727	27,012	-9.1%	33,000

Table 3. Signalized Intersection Level of Service Summary.

INTERSECTION	PEAK HOUR LEVEL OF SERVICE															
	Base (1998/1999)		2000		2002		2004		2006		2007		2008		2020 w/o the Plan	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Frazer Road	-	-	-	-	-	-	C ¹	B ¹	C	B	C	B	C	B	-	-
Pleasant Valley Road	C	C	C	C	C	D	F	F	D	D	D	D	C	C	F	F
Perch Creek Drive	-	-	B	A	B	B	-	-	B	B	B	B	B	B	-	-
Peoples Plaza north	B	C	A	B	A	B	B	B	A	A	A	A	A	A	B	C
Peoples Plaza south	B	B	B	C	B	C	B	B	C	D	C	D	C	D	B	C
Glasgow Avenue north	C	C	C	C	C	C	C	C	D	D	D	E	C	D	C	F
Glasgow Avenue south	C	D	B	C	C	C	C	C	C	C	C	C	C	C	C	E
SR 896	D	D	D	E	D	D	F	F	D	E	D	E	E	E	F	F
Aiken Avenue	-	-	-	-	-	-	-	-	A	B	A	B	B	B	-	-
SR 72	D	D	E	E	E	E	F	F	E	E	E	E	D	E	F	F
Scotland Drive	C	B	B	B	C	C	D	D	C	C	C	D	C	C	D	E
Salem Church/Porter Road	C	C	D	D	D	C	D	D	D	F	D	E	D	E	D	F
Brookmont Drive	B	B	B	B	A	B	B	B	B	B	B	B	A	B	B	E
Church Road	D	C	D	C	D	D	E	E	D	C	C	C	C	C	E	F
Walther Road	C	D	D	D	D	D	F	F	C	D	C	C	C	C	F	F
Governors Square	B	C	C	C	C	C	C	C	C	D	C	D	C	E	C	E
SR 7/Eden Square	E	D	E	D	F	D	F	F	D	C	D	D	C	D	F	F
SR 1 SB Ramps	A	A	A	A	B	B	A	A	A	A	A	B	A	A	A	B
SR 1 NB Ramps	B	B	B	A	B	B	B	B	A	A	A	A	C	A	B	E
Buckley Boulevard	-	-	B	B	B	B	-	-	B	C	B	C	B	C	-	-
School Bell Road	B	B	C	A	B	B	B	B	A	A	A	A	A ²	A ²	B	C
Wilton Boulevard	B	B	C	C	B	B	C	C	B	C	B	C	B	C	C	F
US 13	D	B	C	B	C	C	F	F	C	E	C	C	B	C	F	F

Note: Red denotes a worse level of service than 2007; green denotes improvement in level of service over 2007.

¹ A traffic signal was installed at US 40 and Frazer Road in 2004.

² School Bell Road was under construction from June 2007 to October 2008.

Figure 3. Level of Service Comparison at Selected Intersections.

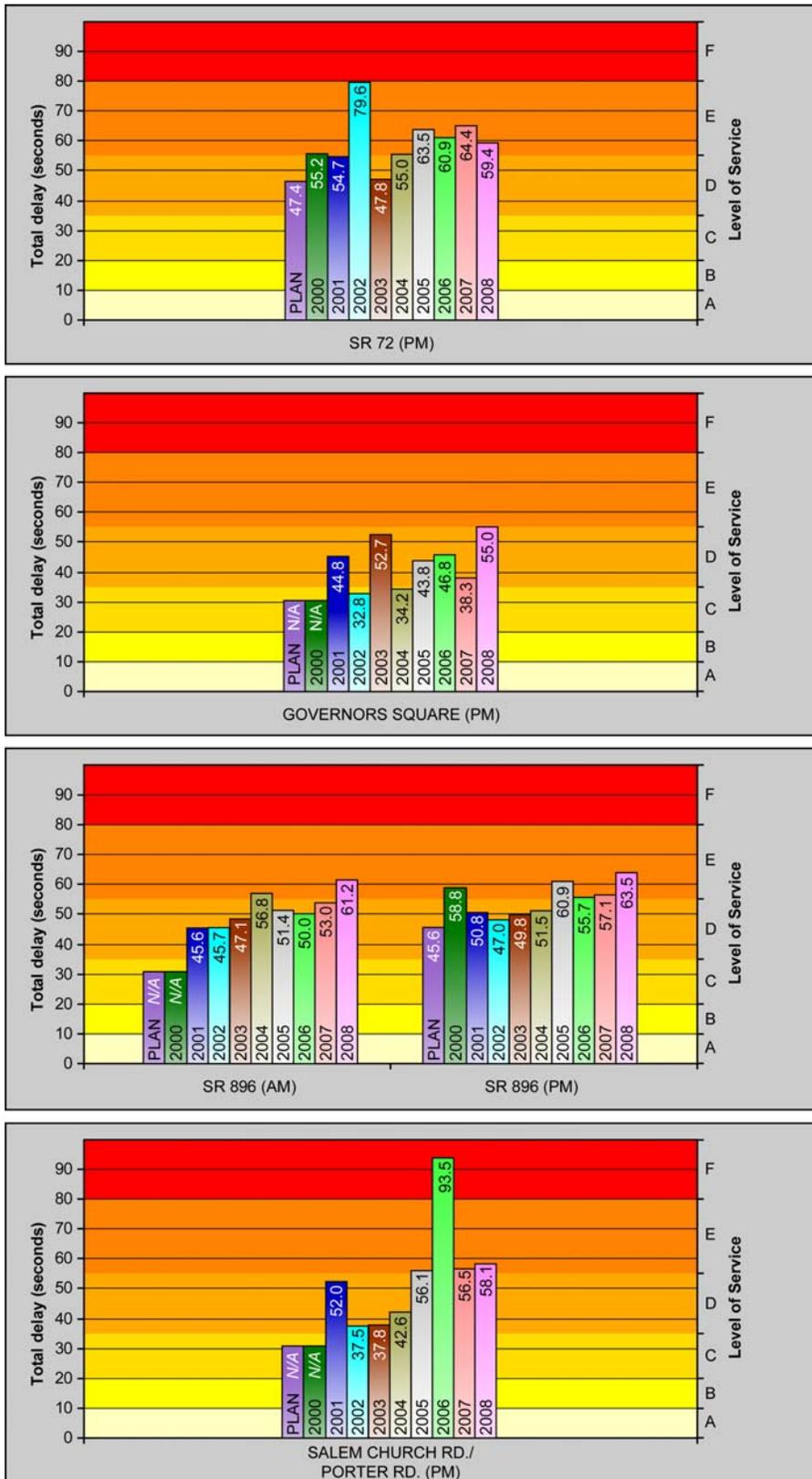
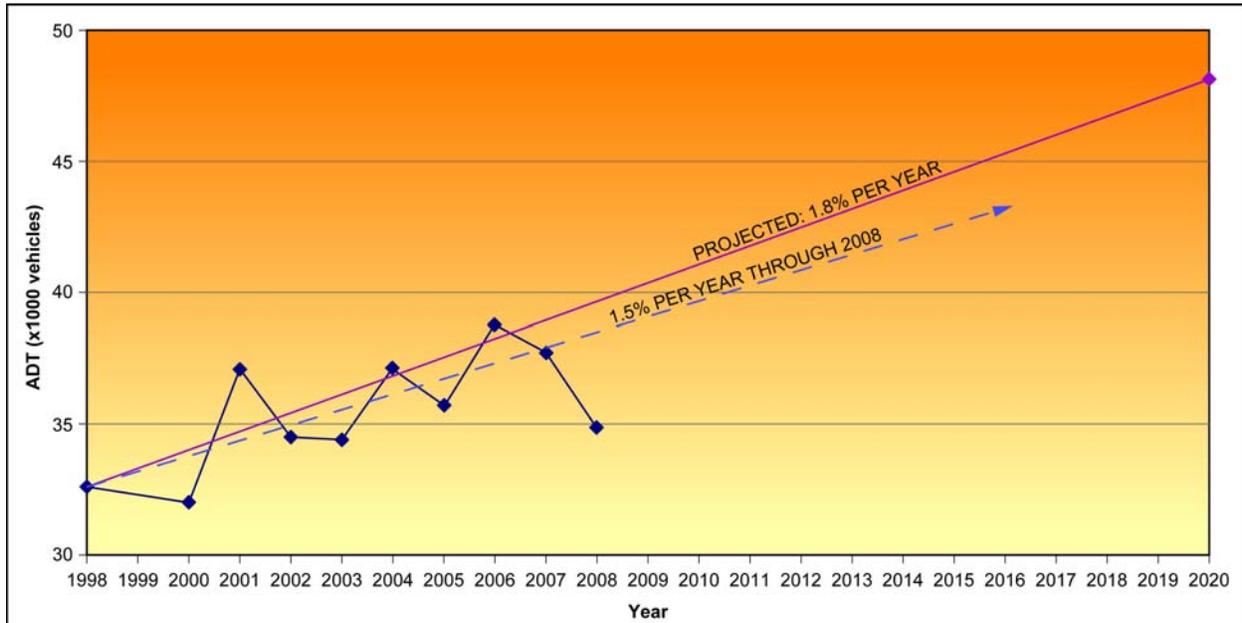


Figure 4. Traffic Growth Along US 40 (average of five count locations).



Corridor Preservation

As noted in the Land Development section, development proposals in the corridor are acted upon by the site review team. For projects on US 40, sufficient right of way is required to accommodate widening to the outside and to provide area for sidepaths for pedestrian and bicycle use. The following specific corridor preservation efforts were also undertaken.

Concept Design: The Plan recommended preparing all concept designs in the first stage of implementation to identify right of way needs. Since 2005, progress has been slowed by reduction of funds under DeIDOT’s capital program. Among the original projects proposed as part of the Plan, there are nine concept designs and four corridor studies that have not been completed. As part of the concept design for the US 40 widening from SR 896 to SR 1, preparation of an environmental assessment is in progress to obtain approval of the preferred alternative from federal and state agencies. When this document is completed and approved, right-of-way needs will be more clearly defined within the study area. Upon completion of ongoing environmental studies, a final workshop will be held to present the preferred alternative to the public. Concept design for the remaining projects in the Plan is currently on hold.

Access Management on Developing Properties:

One of the goals of the Route 40 Plan was improved access. Clearly defined, properly spaced driveways improve highway mobility and safety. The site review team has had success in providing improved and/or shared access through the development process.

Although fewer opportunities for access management have been available in recent years, this philosophy continues to guide the Route 40 team through the site review process.

Highway Safety

Review of Conditions in 2008

The goal of this report with respect to safety is to determine those intersections where crash rates increased in the past year, identify the reasons for those increases, and consider those sites for detailed study and improvement recommendations. To determine priorities for potential safety improvements, 13 years of crash summary data were analyzed for all roadways in the Route 40 corridor. The number of crashes in the past year at each intersection was compared to the average number of annual crashes at that same location for all previous study years.

The results of the analysis indicate that there were three intersections in the corridor in which the most recent crash totals were more than 50 percent higher than the previous 12-year average.

- US 40 @ Salem Church Road/Porter Road
- US 40 @ Peoples Plaza
- US 40 @ Wilton Boulevard

All three of these locations were identified by previous CMTR studies; however, an updated summary along with the most recent studies from 2007 are included below.

Table 4 shows the number of reported crashes annually at select intersections beginning in 2000. Results for 2005 cannot be directly compared to other years because of report delays caused by a system reporting upgrade. It is also important to note that these totals are approximated based on raw crash data summaries and not the actual reports. The number of crashes is determined based on the DelDOT mile posts at a particular intersection along US 40 and includes all crashes listed within 0.15 miles of the intersection. As previously demonstrated at several locations, these numbers may vary upon review of the detailed crash reports.

Results of Studies

US 40 at Salem Church Road/Porter Road

The intersection of US 40 at Salem Church Road and Porter Road was originally identified in the 2004 CMTR and a detailed intersection safety study was completed in June 2006. The results of the previous study included recommendations for signal phasing changes as well as modifications to the access for the Salem Center / Wawa development on the northeast corner of the intersection. The signal improvements

were implemented in March 2007 and DelDOT continues negotiations with the developer of the Salem Center to reconfigure access and install a signal at US 40 and Glasgow Avenue. Due to the increase in reported crashes following two consecutive years of decreases and its third highest total of the 13-year study period, crash reports were requested and reviewed for a three-year period, from October 2005 to September 2008.

The 2006 study included a total of 115 reported crashes during the three year period from January 2002 to December 2004. It is important to note that these crashes included the intersection at US 40 and Salem Church Road / Porter Road as well as the Salem Center / Wawa access to Salem Church Road north of US 40. During the current study period, there were a total of 89 reported crashes, which is almost a 23% decrease. There were 49 (55%) rear-end crashes, 29 angle crashes, and one crash that involved three pedestrians. There were 24 reported injuries and one fatal pedestrian crash. The fatal pedestrian crash occurred in June 2007 and the pedestrians involved were crossing through queued vehicles along the WB US 40 approach, east of the designated crosswalk. There were five northbound left-turn angle crashes compared to 15 from the previous three year study period. All of those occurred prior to the signal modifications completed in March 2007.

The intersection at Salem Church Road and the Salem Center / Wawa entrance continues to experience a cluster of angle crashes. The total reported crashes decreased from 22 in the 2006 report to 16 during the current study period. Although the total number of reported crashes has decreased, 12 (41%) of the 29 reported angle crashes in the study area occurred there. This includes eight crashes involving northbound Salem Church Road vehicles and vehicles entering or exiting the Salem Center / Wawa.

Overall, there has been a decrease in the total number of reported crashes since the previous study. More specifically, there has been a significant decrease (67%) in the number of reported northbound left-turn crashes at US 40 and Salem Church Road / Porter Road and none since January 2007. It is recommended that DelDOT continue negotiations with the developer of Salem Center to modify the Salem Church Road access and install the new signal at Glasgow Avenue. No additional studies are recommended at this time.

US 40 at Peoples Plaza

After being identified in the 2006 Corridor Monitoring and Triggering Report and studied as part of the 2007 CMTR, the intersection at US 40 and Peoples Plaza Shopping Center has experienced increasing crash rates for the fifth consecutive year.

Crash data were reviewed for the period between June 2004 and September 2008. During that time 37 crashes were reported, including 18 rear end and 16 angle crashes. There were seven reported injuries and no fatalities. Among the 16 angle crashes, 10 included eastbound/southbound vehicles. Seven of those crashes involved vehicles disregarding the eastbound US 40 red phase.

A crash summary by year is listed below:

- 2004 – 7 crashes (7 months)
- 2005 – 13 crashes
- 2006 – 3 crashes
- 2007 – 8 crashes
- 2008 – 6 crashes (9 months)

When comparing the total resulting from the crash summaries and a review of the detailed reports, the numbers are significantly different. One factor that may explain the differences is the proximity of access points to other developments in the median and along the south side of US 40.

Field observations were conducted in May 2008 to review existing conditions, including peak hour traffic, sight distance, vehicle speed, signing and striping, and pavement condition. The signing, striping and pavement at the intersection are in good condition. There were no observed sight distance restrictions and the intersection operates at LOS D or better during peak hours. The signal at US 40 and Peoples Plaza is separated by about 3,400 feet from the signal at Perch Creek Drive to the west. A speed study was conducted May 14, 2008 and the results indicated that the 85th percentile speed is 48 MPH for westbound US 40 and 49 MPH for eastbound US 40. In addition, approximately 68 percent of the observed eastbound vehicles were traveling above the posted speed limit of 40 MPH. West of Perch Creek Drive, the posted speed along US 40 is 55 MPH and it changes to 40 MPH about 550 feet west of Peoples Plaza with no warning signs indicating a posted speed reduction.

Based on the results of the crash data analysis and field observations, the following remedial improvements are recommended:

- Install oversize (48"x48") W3-5 Reduced Speed Ahead signs along eastbound US 40 approximately 1,350 feet west of the stop line at Peoples Plaza
- Install oversize (48"x60") R2-1-40 Speed Limit signs along eastbound US 40 approximately 1,000 feet west of the stop line at Peoples Plaza
- Install oversize (48"x48") W3-3 Signal Ahead signs along eastbound US 40 approximately 700 feet west of the stop line at Peoples Plaza

No additional studies are recommended at this time.

US 40 at Wilton Boulevard

The intersection of US 40 and Wilton Boulevard had an increase of reported crashes for the second year in a row and its second highest total during the 13-year study period. Pedestrian safety at this location was studied in 2007; however, detailed crash reports were reviewed in order to establish any additional crash trends.

During the three-year period between October 2005 and September 2008, there were a total of 52 reported crashes including 34 rear-end crashes, 12 angle crashes and three pedestrian related crashes. Two of the three pedestrian related crashes resulted in fatalities. Neither of the pedestrians involved used the crosswalk or pedestrian signals. In addition, there were 17 injuries, four resulting from angle crashes. Of the 12 total angle crashes, nine were the result of disregarded traffic signals. However, four of those nine crashes involved vehicle operators driving under the influence.

DelDOT has explored alternatives to prevent pedestrians from illegally crossing the railroad tracks along the south side of US 40 and mid-block crossings on either side of the intersection. DelDOT has also worked with developers to improve pedestrian access between US 13 and US 40. Installing a barrier to direct pedestrians around the railroad is cost prohibitive and does not ensure pedestrian compliance. Therefore, DelDOT has proposed to install lighting to improve visibility and improved signing to encourage pedestrians to use the signalized crossing at the intersection. No additional studies are recommended at this time.

US 40 at Frazer Road

The intersection at US 40 and Frazer Road, which was signalized in 2004, was identified in the 2007 CMTR because of the increase in reported crashes listed in the crash data summary. Detailed crash reports were obtained for the three year period between April 2005 and March 2008. Based on the

results of that review, it was determined that some of the crash reports did not use the correct location. Therefore, the crash totals were adjusted accordingly. There were 21 reported crashes during the study period:

- 2005 – 6 crashes (9 months)
- 2006 – 8 crashes
- 2007 – 7 crashes

There were no crashes reported during the first three months of 2008. Among the reported crashes, there were 16 (76%) rear end crashes and two reported injuries. Field observations were conducted in May 2008 to review existing conditions, including peak hour traffic, signing and striping, pavement condition and sight distance. The signing, striping and pavement at the intersection are in good condition. There were no observed sight distance restrictions and the intersection operates at LOS C. Based on field observations and lack of significant crash trends, no additional studies are recommended at this time.

US 40 at Scotland Drive

The intersection at US 40 and Scotland Drive was also identified in the 2007 CMTR because of the significant increase in reported crashes listed in the crash data summary. Based on the 2007 crash summary, the 28 reported crashes were the highest one year total at this intersection since the inception of the Route 40 Plan. Detailed crash reports were obtained for the three year period between April 2005 and March 2008. There were a total of 79 reported crashes during the study period and a breakdown by year is listed below:

- 2005 – 21 crashes (9 months)
- 2006 – 24 crashes
- 2007 – 29 crashes
- 2008 – 5 crashes (3 months)

Although there are some differences between the crash data summary and the detailed reports, there was a 21 percent increase in the total reported crashes from 2006 to 2007. There were 53 (67%) rear end crashes and 12 angle crashes with a total of 20 reported injuries. Among the angle crashes, nine reported “Disregard Traffic Signal” as the primary cause. In May 2005, a red light enforcement camera was installed along the eastbound US 40 approach to Scotland Drive. Since that time, there was one reported angle crash that listed disregarding the traffic signal along EB US 40 as the primary cause. As part of the Electronic Red Light Safety Program

(ERLSP), DeIDOT also monitors angle crash rates at each location and provides an annual summary report.

Field observations were conducted in August 2008, shortly after the completion of a pavement rehabilitation contract along this segment of Route 40. In addition to the new pavement and pavement markings, the two directional islands and pedestrian signals on the south leg were reconstructed to meet ADA standards. No additional issues related to signing or sight distance were observed and the intersection operates at LOS C during peak hours.

The 2008 crash summary data indicated a slight decrease in the number of reported crashes at this intersection. It is likely that the construction associated with the pavement rehabilitation contract had an effect on that data. Since DeIDOT will continue to monitor crash data and the function of the ERLSP cameras at the intersection, no additional studies are recommended at this time.

Highway Safety Improvement Program Sites

The following sites within the corridor were part of DeIDOT’s statewide 2008 Highway Safety Improvement Program (HSIP). Crash rates were based on events that took place during the three preceding calendar years (e.g. 2005 – 2007 for the 2008 HSIP). The recommendations from the HSIP review team and status of implementation are summarized below:

- 2008 Site C – SR 71, Red Lion Road from south of Old Porter Road to north of SR 7. The HSIP committee recommended trimming tree branches to improve sight distance, implementing miscellaneous signing and striping improvements at Old Porter Road and Church Road, and installing a traffic signal at SR 71 and Old Porter Road.

The HSIP committee also recommended some long-term solutions that should be considered by DeIDOT Project Development. These improvements include converting a segment of Church Road to one-way eastbound operation and installing protected-only left-turn phasing for all four approaches at the intersection of SR 71 and SR 7. It is important to note that these improvements should be tied to the pace of proposed development. There are no listed 2009 HSIP sites in the US 40 corridor.

Table 4. Intersection Crash Data Summary.

INTERSECTION	NUMBER OF REPORTED CRASHES								
	2000	2001	2002	2003	2004	2005*	2006	2007	2008
Frazer Road	3	4	17	8	6	8	4	12	6
Pleasant Valley Road	17	6	23	12	18	15	17	11	12
Perch Creek Drive	-	-	-	-	24	12	24	17	6
Frenchtown Road	7	7	11	7	2	8	3	2	5
Peoples Plaza	5	10	7	5	8	9	10	15	17
Glasgow Avenue	34	32	27	35	28	26	28	15	22
SR 896	26	27	38	40	48	36	31	35	36
LaGrange Avenue	-	-	-	-	0	1	8	9	9
SR 72	29	15	37	36	27	28	38	44	27
Scotland Drive	23	16	18	17	20	15	18	28	23
Salem Church/Porter Road	27	14	21	41	55	46	37	33	44
Glasgow Drive	12	4	6	7	7	7	4	4	9
Brookmont Drive	21	21	27	11	10	19	10	11	19
Church Road	28	11	14	21	34	17	18	15	16
Walther Road	31	12	14	20	25	28	16	10	21
SR 7	40	27	43	31	53	60	59	56	58
SR 1 SB	16	30	24	7	4	4	11	12	11
SR 1 NB	6	12	11	7	4	4	7	14	10
School Bell Road	3	8	7	7	12	10	2	9	9
Buckley Boulevard	-	-	-	-	3	16	13	13	7
Wilton Boulevard	10	7	4	14	17	26	12	20	21

*Note: 2005 was the first year of the new digital reporting format to the SDM (Safety Data Management) System - not all 2005 data was available at the time the report was published. Results for 2006 and 2007 included 12 full months of crash data.

Transit Service

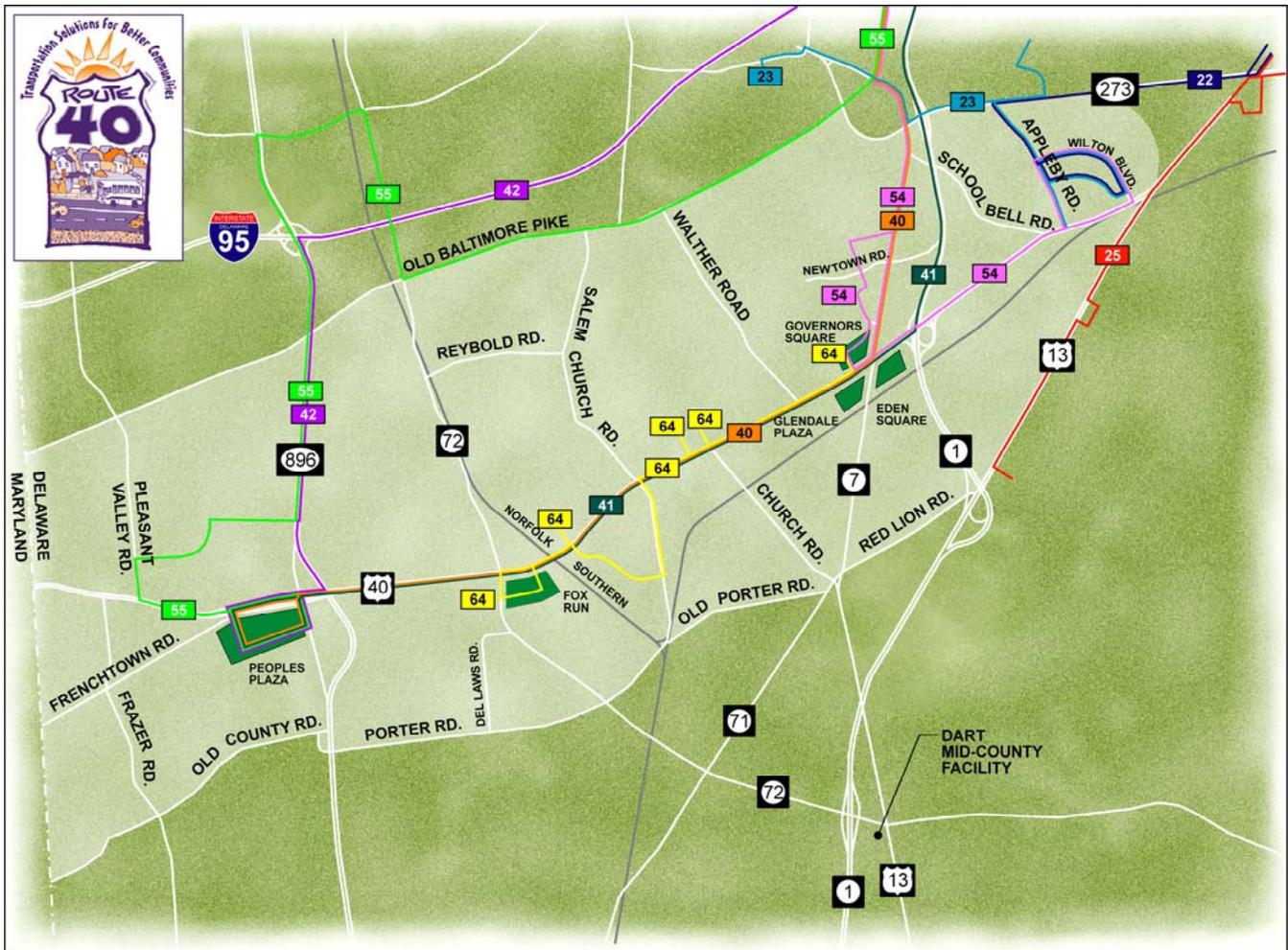
At the time of this report, transit ridership numbers were only available through June of 2008. Comparing the first six months of 2008 with those of 2007, statewide ridership increased by nearly eight percent with ridership in the US 40 corridor up approximately ten percent, likely due at least in part to substantial increases in gasoline prices. In the previous year, both experienced slight decreases in ridership.

Since the inception of the Route 40 Plan in 2000, statewide ridership had increased nearly nine and a half percent through 2007 and continued to grow during the first half of 2008. Ridership also continued to increase in the Route 40 corridor after increasing approximately 18 percent in 2007.

DART First State routes 40, 41, and 42 continue to provide service between Peoples Plaza and Wilmington, route 54 links the Taylortowne and Wilton areas with Christiana Mall, and route 55 connects Glasgow with Christiana Mall and downtown Wilmington via Old Baltimore Pike. Finally, route 64 provides local feeder service to neighborhoods along Route 40 between Governors Square and Fox Run. Ridership on route 41 increased about one percent after increasing nearly 20 percent in 2007. Route 64 experienced a decrease in ridership of nearly four percent, while the other routes in the corridor saw increases in ridership between 12 and 21 percent. See Figure 5 for route locations.

In spring 2008, a service change extended route 55 non-peak trips from Glasgow to Newark as requested by Senator Amick, the Pencader Hundred Community and the University of Delaware.

Figure 5. Transit Route Map.



Project Status

Progress continued on sixteen projects in the Route 40 corridor during 2008. Much of that progress relates to concept and final design for projects awaiting construction funding in the future. Figure 6 shows the status of projects in the corridor as of the end of 2008. Detailed descriptions of projects are provided below.

Bear Area Pedestrian Improvements

This project was added to the Route 40 program at the request of the Corridor Monitoring Committee in 2003. The original project scope involved the construction of sidewalks along Rivers End Drive and possibly along Providence Drive and Taylor Drive. A public workshop was held on July 15, 2004 to present the original project scope. As a result of the feedback received from the public workshop and a petition against sidewalks along Providence Drive from residents in the vicinity, Providence Drive was removed from the project scope. Taylor Drive remained in the project scope, however residents and DeIDOT agreed that sidewalk on both sides was not necessary. Smalleys Dam Road was added to the project scope at the request of Representative Melanie George Marshall. This portion of the project provides a connection among the Rivers End Drive and Taylor Drive sidewalks, recently-constructed sidewalks on Songsmith Drive, and the proposed Newtown Trail along Newtown Road. Construction was completed in January 2008.

School Bell Road, SR 1 to US 40

Safety concerns and geometric deficiencies were identified along School Bell Road between the SR 1 underpass and US 40. In response to public concerns, this project was accelerated from Phase II to Phase I of the Route 40 Plan. Final design is complete, utility relocations began in fall 2006 and construction began in June 2007. Construction was completed in October 2008.

Walther Road, North of US 40 to Old Baltimore Pike

Sidewalk has been built on both sides of the roadway from Old Baltimore Pike south to Glennwood Drive, where the proposed Newtown Trail (see below) will cross Walther Road. Sidewalk continues south along only the west side of the road as far as the Walther farm. Construction began in April 2007 and was completed in March 2008.

US 40, Bear-Glasgow Bus Stop Improvements

Final design of eight improved bus stops throughout the Route 40 corridor was completed in September 2008. The project includes bus stop improvements and associated sidewalk segments, crosswalks, and pedestrian signals to improve access to transit. Construction is scheduled to begin in spring 2009 with an estimated completion date of August 2009.

SR 7, Newtown Road to SR 273

In 2004, final design began for the widening of SR 7 to four lanes between Newtown Road and SR 273. These improvements will extend the widening between US 40 and Newtown Road, which was completed in 2006. Final design continues and is expected to be completed in 2009. Advanced utility construction is expected to begin in 2009 and construction could begin in spring 2010.

Eden Square Connector

A connection will be provided from SR 7 opposite the Glendale Connector to the rear of the Eden Square Shopping Center. This project will allow elimination of the left turn from Eden Square onto US 40, which is expected to improve traffic operations in the area. The project will include slight widening of the Glendale Connector, installation of a traffic signal at the SR 7 intersection, and reconfiguration of the access to the Eden Support Services Center (the former Leisure School). Final design was completed in October 2008. A construction schedule has not been established for this project.

Newtown Trail

- The Newtown Trail is a proposed bicycle and pedestrian path connecting Salem Church Road with SR 7. This trail provides a unique opportunity for bicycle and pedestrian transportation serving numerous residential communities, schools, parks, and employment centers between US 40 and Old Baltimore Pike. A public workshop was held on April 22, 2002 to introduce the project, and final design is on hold. Although a construction schedule has not been established for the majority of this project, the portion between Brookfield and SR 7 is completed as part of the Bear Area Pedestrian Improvements project, and negotiations are in progress to extend that segment to the west as part of the Whittington Woods development.

US 40 / SR 72 Intersection

- Widening of SR 72 at US 40 is needed to alleviate existing capacity and safety concerns. To provide appropriate capacity and traffic operations at the intersection, the SR 72 widening will extend from north of Mabel Lane to GBC Drive. Minor realignment of Del Laws Road is also proposed to match the proposed entrance to the Fox Run Business Center. A public workshop was held on July 19, 2005 to present four alternatives to the public. A preferred alternative was selected and final design began in 2008. Preliminary plans were submitted in May 2008 and the project is currently on hold.

Projects In Concept Design

Concept design is underway for the following projects.

- **US 40/Pleasant Valley Road intersection.** Phase II of the Route 40 Corridor 20-Year Transportation Plan calls for turn lane improvements at the intersection of US 40 and Pleasant Valley Road. Specifically, a second left turn lane and second right turn lane are anticipated on the southbound Pleasant Valley Road approach and a second eastbound left-turn lane on US 40. *Concept design is underway; design, right of way, and construction are not funded or scheduled.*
- **Church Road, Wynnefield to SR 71.** Phase III of the Route 40 Corridor 20-Year Transportation Plan calls for bike lane improvements to Church Road from the south end of the current improvement project to SR 71. *Concept design is underway; design, right of way, and construction are not funded or scheduled.*
- **US 40 Sidepaths, Maryland State Line to SR 896.** Phase III of the Route 40 Corridor 20-Year Transportation Plan calls for sidepaths along US 40 from the Maryland State Line to SR 896. *Concept design is underway; design, right of way, and construction are not funded or scheduled.*

Additional Planning Studies

- **McMullen Farm Park.** This project, which was previously planned under an agreement with JP Morgan Chase, included the purchase, at a discount rate, of 50 acres of the 153-acre JP Morgan Chase site as public parkland. In 2006, a portion of the development site was sold to a developer and now contains the proposed Lincoln Center development. DelDOT continues to work with the developer to include the parkland as originally planned, providing a public amenity for the surrounding community.
- **Glasgow Avenue “Main Street” study.** As recommended by the Steering Committee, this study will address means to make old SR 896 in Glasgow less of a through roadway and more of a “main street,” balancing transportation and community needs. At the conclusion of the study, recommendations may be programmed for design, right of way, and construction funding. Preliminary recommendations were developed in 2004 to coordinate with the development of Village of Long Creek, which constituted one of the last remaining undeveloped parcels in the area. As of the end of 2005, this study is on hold pending completion of other priorities in the Route 40 corridor. However, a developer has expressed interest in completing this study with private funds.

Impact of Projects Completed in 2008

Bear Area Pedestrian Improvements

Completed in January 2008, this project involved the construction of pedestrian and bicycle facilities and helped to improve transit access in a densely developed residential area. The project was completed ahead of schedule and awarded DelDOT’s Outstanding Multimodal Project for 2007. It was a vital part of an effort to increase mobility and interconnectivity in Bear.

Walther Road, North of US 40 to Old Baltimore Pike

Completed in March 2008, this project provided about 1.4 miles of new sidewalk, curb and drainage improvements. It also included an improved crossing of the Christina River where an existing bridge was widened to construct a new five-foot wide sidewalk.

School Bell Road, SR 1 to US 40

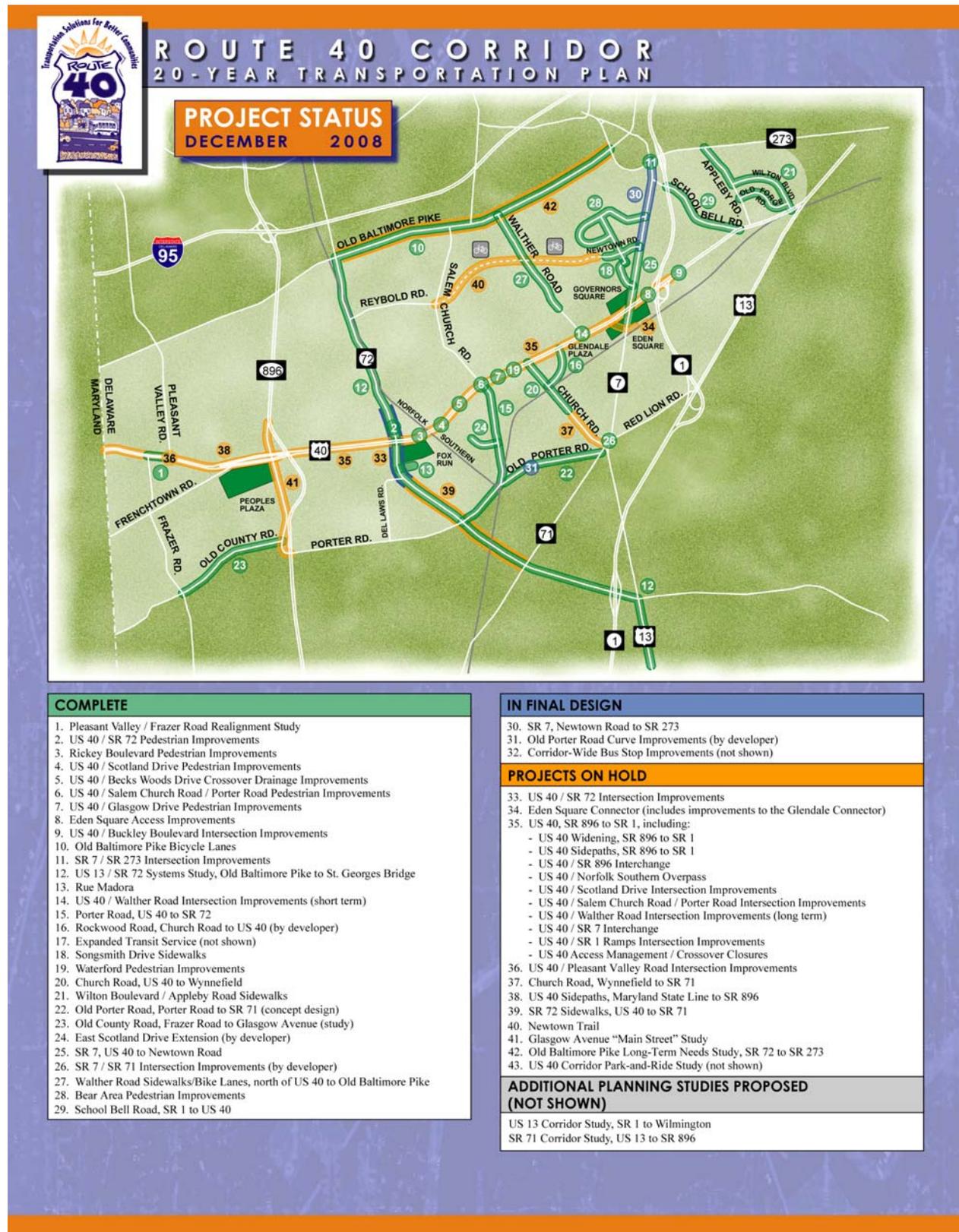
Completed in October 2008, this project was initially identified to address safety and geometric deficiencies along School Bell Road. Upon completion of construction, approximately one month ahead of schedule, the project also provided major drainage and stormwater management improvements along with sidewalks and a shared-use path along US 40.

Other Projects in the Region

As noted in previous Corridor Monitoring and Triggering Reports, two future regional projects may have an impact on the Route 40 corridor: widening of I-95 and the US 301 project. The status of these projects is summarized below.

- **Widening of I-95, SR 1 to I-295:** I-95 was widened from eight to ten lanes between SR 1 and SR 141, with construction completed in December 2008.
- **Widening of I-95, Maryland line to SR 1:** This segment of I-95 is not projected to be widened from eight to ten lanes until the 2016-2025 time period, based on the Regional Transportation Program (RTP).
- **I-95/SR 1 interchange improvements:** Planning was completed in 2004 for major interchange improvements, including two-lane ramps connecting the north leg of I-95 with the south leg of SR 1. Final design is underway and construction is funded to begin in 2011.
- **Widening of SR 1, US 13 to I-95:** This segment of SR 1 is not projected to be widened until the 2016-2025 time period, based on the RTP. The widening is projected to add one lane in each direction from US 13 to I-95. No planning or design is in progress.
- **US 301 Project:** The selected alternative for a new limited-access US 301 from the Maryland state line to the south end of the Roth Bridge was announced in May 2007. Final design began in late 2008 and is expected to be complete by 2011. Construction could begin on certain segments as early as 2011.

Figure 6. Project Status.



TRIGGERING

Assessment of Monitored Conditions

Generally, traffic congestion in the corridor did not increase substantially in 2008. Intersection levels of service, with the exception of the intersections of US 40 with SR 72, SR 896, Salem Church Road/Porter Road, and Governors Square, remained acceptable. Nine years of traffic data confirm that growth rates are slightly less than originally anticipated by the Plan, particularly based on the corridor-wide drop in traffic in 2008.

During 2008, there were 28 new development plans submitted to New Castle County for review in the Route 40 corridor. This level of development activity is significantly lower than last year. A total of twenty major development plans submitted prior to 2008 remained under review. For La Grange, Royal Farms, Meridian Crossing II, St. Andrews Addition, Calvarese Farms, Estates at Long Branch, YMCA, Village of Long Creek, Becks Woods Medical Plaza, Dasher Farms, Lincoln Center, W.L. Gore and School Bell Crossing there are either current commitments for developer-funded roadway improvements or studies underway to determine which development commitments will be appropriate.

Safety trends were studied and priorities identified for the next year. SR 71 was the only 2008 HSIP site under study in the Route 40 Corridor; short-term recommendations include installing a traffic signal at SR 71 and Old Porter Road. Additional long-term recommendations were provided to DelDOT and their progress will be monitored. There are no Route 40 Corridor sites on the 2009 HSIP list.

Through the first six months of 2008, ridership in the Route 40 Corridor is up approximately 10 percent when compared to the same period in 2007. Statewide ridership is also up about eight percent. The only service change was a modification to DART Route 55 completed in spring 2008.

Most projects comprising Phase I of the Route 40 Plan are in some phase of concept design, final design, construction, or completion.

There are no regional highway or transit projects planned that would trigger the need for improvements in the corridor. However, recently-completed improvements to I-95 will be monitored to determine their potential impacts to traffic along US 40.

Recommendations

General

- Continue to identify funding sources to implement as many of the recommendations below as possible and restore projects that have been placed on hold.

Land development

- Continue to monitor development activity to ensure compatibility with the Plan and maintain consistent developer contributions to transportation improvements.
- Monitor developer agreements for several major land developments to ensure the compatibility of developer-sponsored improvements with the Plan.

Corridor preservation

- Continue pursuing corridor preservation opportunities through the site review team process.

Highway safety

- Review crash data summary to identify any locations with significant increases in crash rates in 2009.

Transit

- Continue to track ridership in the corridor and provide service enhancements where appropriate.
- Continue participation in the site review team to identify opportunities for developer-funded transit improvements.

Planning, design, and construction

- Complete construction of the US 40, Bear-Glasgow bus stop improvements.
- Complete final design of SR 7 between Newtown Road and SR 273.
- To the extent funding can be made available, establish schedules for the following projects that are on hold:
 - Eden Square Connector (construction)
 - US 40 / SR 72 intersection improvements (final design)
 - Newtown Trail (final design)

- Reybold Road, SR 72 to Salem Church Road (final design)
- Old Porter Road, Porter Road to SR 71 (final design)
- US 40 / Pleasant Valley Road Intersection (concept design)
- Church Road, Wynnefield to SR 71 (concept design)
- US 40 sidepaths, Maryland State Line to SR 896 (concept design)
- US 40 environmental assessment, SR 896 and SR 1 (concept design)

PUBLIC INVOLVEMENT

Activities During 2008

In an ongoing effort to keep the residents of the Route 40 corridor informed of the decisions and progress made by the project team, the following public involvement initiatives were undertaken during 2008.

Public workshop—Corridor residents were given the opportunity to receive information and express their opinions at a public workshop held August 12, 2008 at the Bear Library to present results of the 2007 CMTR.

Public workshop mailings—Notice of the public workshop was sent to the Route 40 mailing list. This provided interested stakeholders an additional opportunity to attend and provide feedback to DelDOT about various projects.

Web site—The Route 40 corridor Web site can be accessed from the DelDOT Web site at:

<http://www.deldot.gov/information/projects/rt40/index.htm>

The Web site is updated regularly to provide the latest information on implementation of the Plan. The Web site contains information from newsletters, updates on project planning, design, and construction, and a schedule of public meetings and workshops.

Activities Planned For 2009

To ensure the community is kept up to date and involved in the progress of transportation improvements in the Route 40 corridor, the project team will continue the following communications initiatives for 2009:

Web site—The Route 40 Web site will continue to be maintained and updated on a regular basis.

Public workshop—If funding is in place to make significant progress on Plan implementation in 2009, a summer public workshop will be held. Interested stakeholders (the CMC, former Route 40 Steering Committee members, elected officials, civic associations and residents on the mailing list) will receive notice of that workshop.

E-mail, project mailing address and telephone hotline—Residents will still be able to communicate with the project team through various channels—e-mail, mailing address, or telephone.



WHITMAN, REQUARDT & ASSOCIATES, LLP
ENGINEERS ARCHITECTS PLANNERS
EST. 1915

THREE MILL ROAD, SUITE 309
WILMINGTON, DELAWARE 19806
302-571-9001
WRALLP.COM