M-NCPPC

MONTGOMERY COUNTY DEPARTMENT OF PARK & PLANNING

THE MARYLAND-NATIONAL CAPITAL
PARK AND PLANNING COMMISSION

8787 Georgia Avenue
Silver Spring, Maryland 20910-3760

MCPB
Item No. 11
3-27-03

March 21, 2003

MEMORANDUM

TO: Montgomery County Planning Board

VIA: Richard C. Hawthorne, Chief DCH for
Transportation Planning
County-wide Planning Division

Khalid Afzal, Team Leader KA
Georgia Avenue Corridor Team
Community Based Planning Division

FROM: Daniel K. Hardy, Supervisor (301) 495-4530 DKH
Transportation Planning
County-wide Planning Division

SUBJECT: MD 28 at MD 97 Intersection Improvement Study Recommendations

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Recommendation: Transmit the following comments to the State Highway Administration

1. The Montgomery County Planning Board recommends that the State Highway Administration (SHA) select Alternative 7 Enhanced as the preferred alternative for the MD 28 at MD 97 Intersection Improvement project planning study.

2. SHA shall enter into a Memorandum of Understanding (MOU) with The Maryland-National Capital Park and Planning Commission (M-NCPPC), which shall include but not be limited to provisions to (a) compensate M-NCPPC for costs of designing a soccer field at an alternate location and (b) transfer land to M-NCPPC at a location to be agreed upon between M-NCPPC and SHA staff, in an amount equal to that portion of land that is both conveyed for public use as a condition of Smalls Nursery subdivision approval and reasonably anticipated to be impacted by the construction of MD 28 at MD 97 intersection improvements.

3. SHA should continue to coordinate with the Maryland Transit Administration (MTA) and the Washington Area Metropolitan Transit Authority (WMATA) regarding project planning for the Georgia Avenue Busway, particularly regarding station design and access.

4. Subsequent project planning and design activities should incorporate the following prior to mandatory referral:

   a. Widen landscape panels to a minimum of six feet where feasible
   b. Review means to improve the safety of the shared-use path crossing of the Norbeck Road ramps
   c. Develop a reforestation plan that complements the Small's Nursery forest conservation plan
   d. Review alternative stormwater management concepts to minimize adverse effects on wetlands
   e. Develop landscaping plans that enhance the master plan concept of Georgia Avenue north of Norbeck Road as a low-density transition area and a gateway to Olney

ORGANIZATION OF THIS REPORT

The remainder of this report is organized into seven sections:

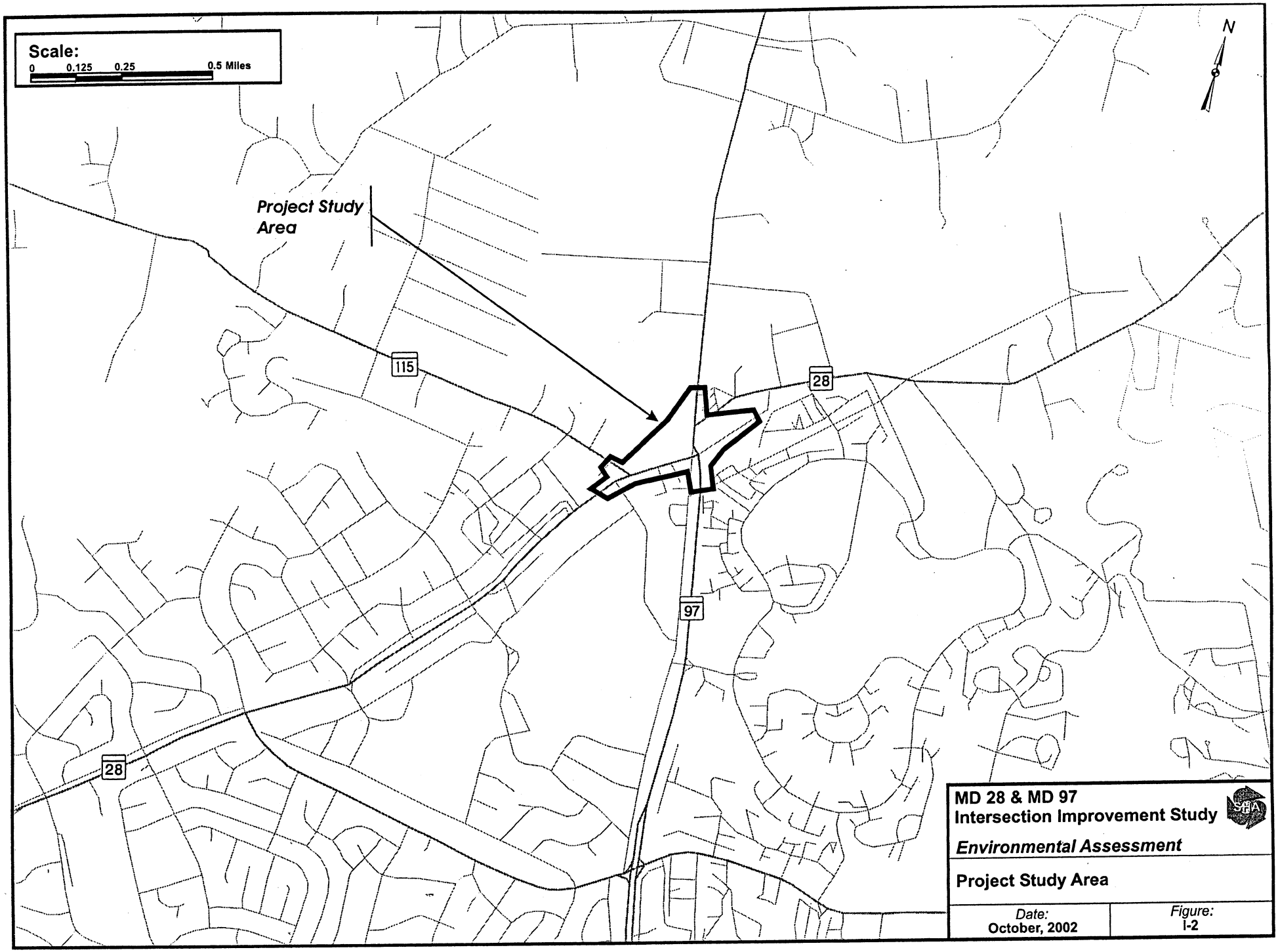
- Purpose of the briefing
- Study background
- Description of Alternative 7 Enhanced
- Development of staff comments
- Comparison of alternatives
- Relationship to other transportation projects
- Next steps

PURPOSE OF BRIEFING

The purpose of this briefing is to provide comments to State Highway Administration in the selection of a preferred alternative for the MD 28 at MD 97 Intersection Improvement Study. The study location is shown in Exhibit 1.

SHA completed an Environmental Assessment (EA) in October 2002 and held a Location and Design Public Hearing on December 9, 2002. The EA findings are summarized in the Public Hearing Brochure, attached to copies of this memorandum distributed to Planning Board members. Others may pick up the Brochure at Room 105 in the Montgomery Regional Office, 8787 Georgia Avenue in Silver Spring or request the Brochure from SHA's project manager, R. Suseela Rajan, at 1-800-548-5026.

EXHIBIT 1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N
Project Study Area
115
28
97
28
MD 28 & MD 97
Intersection Improvement Study
Environmental Assessment
Project Study Area
Date:
October, 2002
Figure:
I-2

Nine alternatives are described in the EA, described below according to four basic configurations:

- The **No-Build Alternative** (Alternative 1) consists of no improvements.

- An **at-grade intersection improvement** (Alternative 5) was examined to determine the extent to which forecast travel demand could be accommodated by adding through lanes and turning lanes to the existing intersection. This alternative is shown in Attachment A.

- An **urban diamond interchange** configuration (Alternatives 2 and 4) would allow north-south traffic to travel along Georgia Avenue without passing through a traffic signal. Turns to and from Georgia Avenue would be made on ramps parallel to Georgia Avenue and controlled by a traffic signal on Norbeck Road. The only difference between Alternatives 2 and 4 is whether the through lanes on Georgia Avenue are raised above (Alternative 2) or depressed below (Alternative 4) Norbeck Road. Alternative 2 is shown in Attachment B.

- A **Relocation of MD 28** to carry east-west traffic on a new roadway that bypasses the existing traffic signal. The new roadway would cross Georgia Avenue either raised above (Alternative 3 and Alternative 3 Modified) or depressed below (Alternative 6, Alternative 6 Modified, and Alternative 7) Georgia Avenue approximately 700 feet north of the existing intersection. Turns between Georgia Avenue and Norbeck Road would be made at the existing intersection. The alternatives using this configuration evolved during the course of the study. **Alternative 7 Enhanced, the study team's recommended alternative, is shown in Attachment C.**

SHA held a Location and Design Public Hearing on December 9, 2002. A summary of oral and written Public Hearing testimony is shown in Exhibit 2. The public testimony was generally split between those who favor the No-Build Alternative and those who favor Alternative 7.

SHA has also maintained a Focus Group of local residents, business, and civic representatives. The Focus Group has met on an approximately bi-monthly basis during the past several years.

STUDY BACKGROUND

The 1994 Aspen Hill Master Plan recommends limited widening of the intersection of MD 28 and MD 97 and does not recommend an interchange at this location. The recommendation for a grade-separated interchange is therefore not consistent with the 1994 Aspen Hill Master Plan.

The Aspen Hill Master Plan was adopted while SHA was conducting preliminary studies for the 1997 Intercounty Connector (ICC) Draft Environmental Impact Statement (DEIS). The Master Plan suggested that the DEIS would confirm that the ICC would address the

Exhibit 2

MD 28/MD 97 Intersection Improvement Study
Location Design Public Hearing
December 9, 2002

Summary of Comments

Position	# of Comments
Support No Build Alternative	9
Stop or Delay this project until ICC plans are finalized	4
Support Alternative 7 (VE Mod.)	11
Support the project, no preference of alternatives	5
Other issues	6

Specific Comments:

- Concerns about pedestrian and bicycle safety
- Concerns about traffic increase on Norbeck Road
- Questions the eligibility of White's Hardware Store as historic site
- This improvement does not address congestion problems at adjacent intersections along MD 28 and MD 97.
- Stop spending money on this project until ICC plans are clear.
- Defer action until ICC is built.
- Need a total solution for the whole Norbeck area.
- Concerns about impacts to St. Patrick's Church's access and parking
- The "Norbeck Road" sign missing on northbound MD 97
- 50 mph posted speed is too high for MD 97 with 5 signals between Norbeck Road and Connecticut Ave.
- Make minor interim improvements such as signal timing, changing lane configurations and safety improvements.
- The access to Manor Park at the Rossmoor Blvd/MD 97 intersection is extremely dangerous. Allow "left-turn only" on green or close the access to Manor Park.
- Concerns about impacts to businesses
- Safety issues associated with Thistle Bridge Road access onto MD 97.
- Will a traffic signal be considered at Carrollton Road and Westbury Road? It is hard to get in and out of the Flower Valley Neighborhood.
- Concerned about impacts to the forest conservation area and the property dedicated by the developer for annexation to the Norbeck Park
- An interchange at this location is not consistent with the master plans.

Delegate Petzold commented and congratulated the Study Team on the Focus Group's work and the development of a compromise alternative, Alt. 7 (VE Mod.).

needs for substantial capacity improvements on the County's arterial street network in this area.

However, four studies conducted subsequent to the Aspen Hill Master Plan have all demonstrated the need for an interchange at this location.

- The 1997 SHA *ICC DEIS* demonstrated that, regardless of which ICC alternative was selected (the No-Build alternative or one of four build alternatives), travel demand at the MD 28 intersection with MD 97 would substantially exceed capacity.

- The Planning Board's January 2002 *Transportation Policy Report* recommended a grade-separated interchange at this location.

- The Environmental Assessment for the current SHA project documented that at-grade improvements would not provide sufficient capacity to address the study purpose and need.

- The staff analyses for the Olney Master Plan confirmed the findings of the SHA travel demand projections, and the **Olney Master Plan staff draft, to be released in April 2003, will recommend a grade-separated interchange.** This staff recommendation was presented to the public at Olney Master Plan public forums during autumn 2002.

DESCRIPTION OF ALTERNATIVE 7 ENHANCED

Alternative 7 consists of the construction of a new east-west roadway, called Relocated MD 28, that would carry east-west thru traffic below Georgia Avenue approximately 700 feet to the north of the current intersection of MD 97 and MD 28. The alignment of existing MD 28 would be reconstructed to serve turning movements between the two state highways, as well as continue to provide access to the Norbeck Center businesses and the park-and-ride lot.

The project team enhanced Alternative 7 based on public and agency comments received during and after the December 2002 public hearing. The recommended alternative, shown in Attachment C, is therefore described as Alternative 7 Enhanced. The enhancements include:

- Restoring access to the Manor Park community at the signalized intersection of Norbeck Road and Muncaster Mill Road

- Revising access to the Small's Nursery community through four design changes:
  - Allowing left turns onto Relocated MD 28 from the new community access point
  - Restoring two-way traffic on the service road (MD 655) along the west side of Georgia Avenue between Thistlebridge Drive and the Norbeck Avenue median break to the north

- Reducing the length of the southbound right-turn lane from Georgia Avenue to Norbeck Road
- Eliminating the northbound left turn from Georgia Avenue to Thistlebridge Drive.

- Formalizing the off-road (Class I) shared-use path along the western side of Georgia Avenue through the project limits

- Revising the alignment of the service road within the Norbeck Center to reduce operational conflicts associated with delivery trucks negotiating the 90-degree turns.

During the development of Alternative 7 Enhanced, additional potential stormwater management pond locations were also identified.

DEVELOPMENT OF STAFF COMMENTS

The following paragraphs describe the basis for the staff comments described in the recommendations portion of this memorandum.

Purpose of Memorandum of Understanding (MOU)

Alternative 7 Enhanced requires right-of-way from property once envisioned as an expansion of Norbeck-Muncaster Mill Neighborhood Park (Neighborhood Park). Staff at SHA and M-NCPPC have jointly proposed a means by which the park can be expanded in a slightly different configuration than previously envisioned. This expansion plan involves property transfers between the applicant of the Small's Nursery subdivision, the SHA, and M-NCPPC.

The Planning Board, through its conditions of approval of the Small's Nursery subdivision application (Small's Nursery), required the developer of Small's Nursery, the Tower Construction Company (Tower), to, among other things: dedicate approximately 5.4 acres of land to M-NCPPC toward the expansion of the Neighborhood Park and design and construct a soccer field and associated parking and access at the Neighborhood Park. (The Small's Nursery subdivision includes Preliminary Plan No. 1-94011, as amended, and Site Plan No. 8-95015, as amended). As required by the conditions of approval of its application, Tower completed its design of the soccer field for the Neighborhood Park; however, pursuant to requests by SHA, M-NCPPC decided to delay the dedication of land and construction of the soccer field at the Neighborhood Park.

The implementation of Relocated MD 28 as envisioned in Alternative 7 Enhanced precludes development of the soccer field envisioned in the Small's Nursery subdivision cases. Furthermore, should either the soccer field construction or parkland dedication have occurred as conditioned under Preliminary Plan No. 1-94011R, these areas would have been viewed as Section 4(f) resources by federal agencies. Following coordination with SHA and M-NCPPC staff, the Tower Company requested revisions to the prior conditions of approval of its subdivision application in order to release it from the

obligation to construct the soccer field at the Neighborhood Park as a prerequisite to obtaining release of certain building permits. The Planning Board approved Tower's application condition upon, among other things: the payment of Two Hundred Thirty-Four Thousand Dollars ($234,000) to M-NCPPC, in lieu of the requirement to construct the soccer field at Neighborhood Park, and the dedication of 5.4 acres to M-NCPPC or SHA, as determined by the Director of Park and Planning. However, the above payment does not reflect the costs to M-NCPPC of designing the field at another location.

As a consequence of the anticipated intersection improvements and to serve community needs, M-NCPPC has decided to construct the soccer field as part of the expansion of East Norbeck Local Park, approximately one mile to the east of the Neighborhood Park. Consequently, the completed soccer field design for the Neighborhood Park is not useable. Therefore, M-NCPPC and SHA staff have resolved to enter into an MOU that will, among other things, provide for: payment to M-NCPPC of the amount of Forty-Six Thousand, Eight Hundred Dollars ($46,800) for costs of designing a soccer field at East Norbeck Local Park, and transfer of land to M-NCPPC, at a location to be agreed upon between M-NCPPC and SHA staff, in an amount equal to that portion of land that is both conveyed for public use as a condition of Smalls Nursery subdivision approval and reasonably anticipated to be impacted by the construction of MD 28 at MD 97 intersection improvements.

Recommendations for Further Refinement During Detailed Design

Staff recommends the following considerations for landscape panel widths, bicycle path crosswalks, reforestation plans, and landscaping concepts be incorporated into the subsequent design process.

Landscape Panel Widths

SHA has recommended a minimum panel width of two feet to allow for sign placement. M-NCPPC staff concurs that the minimum two-foot width is sufficient where right-of-way expansion would have an adverse effect on businesses, environmental resources, historic property, or other resources valued by the community, such as the forested buffer between existing MD 28 and Leisure World.

However, **where feasible, landscape panel widths should be increased to a minimum of six feet** to enhance the separation of pedestrian and vehicular traffic flows and allow placement of street trees. This recommendation applies to the northern edge of Relocated MD 28 and the portions of MD 97 north of Relocated MD 28.

Pedestrian and Bicycle Facilities

In general, Alternative 7 Enhanced substantially improves pedestrian and bicyclist safety and accessibility in the study area. The project would provide sidewalks or bicycle paths on both sides of all state roadways within the study area and the implementation of Relocated MD 28 provides pedestrians the ability to cross Georgia Avenue below grade.

Alternative 7 Enhanced also provides connections between the master planned bicycle facilities on each of the three state highways that meet at this junction. The outside travel lanes on all state facilities are designed to accommodate the on-road bicyclist. Along Norbeck Road (including the new Relocated MD 28), these travel lanes will be striped to provide on-road (Class II) bike lanes as described in the Aspen Hill Master Plan. The project implements the shared-use (Class I) path along the west side of Georgia Avenue, connecting the two portions of this path located along the service road to the north and south of Norbeck Road. The project implements the southernmost portion of the proposed shared-use (Class I) path along the eastern side of Muncaster Mill Road (MD 115).

Staff recommends, however, that **further review be conducted to improve the design of the crosswalk carrying the off-road shared use (Class I) path along the western side of Georgia Avenue across the Norbeck Road ramps.**

The study team has considered a number of treatment options for the shared-use path crossing of the Norbeck Road ramps, including:

- vertical separation at the proposed crossing location via a bridge or tunnel
- path realignment to either one of the signalized intersections or a mid-block crossing point
- reduction of the number of turning lanes from southbound Georgia Avenue from two to one
- implementation of a traffic signal at the proposed crossing location.

None of these options are preferred, however. Vertical separation would adversely affect the White's Hardware historic property. Realignment would substantially increase travel distance, meaning that most pathway users would still attempt the more direct crossing at the ramp terminals. Two right turn lanes are required to accommodate travel demand. A signalized crossing would violate motorist expectancy, likely degrading rather than improving safety.

Staff recommends that the crossing shown in Alternative 7 Enhanced is at the optimal location. During detailed design, however, alternative crosswalk treatments, including geometric design and signing and marking should be investigated.

Reforestation Plans

Alternative 7 Enhanced includes approximately 8.9 acres of woodland impacts, primarily associated with the construction of Relocated MD 28. Residents of The Preserve at Small's Nursery have expressed concerns regarding both the environmental and visual effects of the forest stand loss, recognizing that the Forest Conservation Plan (FCP) for the Small's Nursery subdivision preserved the forested areas along Thistlebridge Drive. As the SHA develops a reforestation plan to mitigate woodlands impacts, **consideration should be given to forestation in areas that would complement the Small's Nursery subdivision FCP.**

Stormwater Management Concepts

SHA has identified several candidate locations for stormwater management facilities as indicated in Attachment C. The primary challenge in stormwater management will involve handling runoff on the portion of Relocated MD 28 that travels below Georgia Avenue. Options will include piping this drainage to the south along Georgia Avenue (as Norbeck Road is a ridge road) or sending a portion of the stormwater into the Rock Creek tributary to the northwest, through a wetlands area. **Additional review of alternative stormwater management concepts to minimize adverse effects on wetlands should be conducted during detailed design.**

Landscaping Concepts

In the study area, Norbeck Road serves as the boundary between the Olney and Aspen Hill Planning Areas. The 1980 Olney Plan envisions Georgia Avenue at this location as a low-density buffer area and rural gateway to Olney. The proposed staff draft for the Olney Master Plan will confirm the 1980 Plan concept and emphasize that the portion of Georgia Avenue north of Norbeck Road should have a character that enhances the transition from Aspen Hill to rural Olney. **During the detailed design process, SHA should consider landscaping treatments that can enhance the Olney gateway concept.**

COMPARISON OF ALTERNATIVES

As previously described, the Environmental Assessment evaluated nine different study alternatives that can be grouped into four categories. The quantitative results of the evaluation process are summarized in Exhibit 3 and the primary distinguishing characteristics of each alternative are briefly described below.

The No-Build Alternative (Alternative 1)

Currently, the intersection experiences congestion during both the morning and evening peak hours, with volume-to-capacity (V/C) ratios of 1.07 and 1.13 during the morning and evening weekday peak periods, respectively. By the year 2020, travel demand is forecast to increase by roughly 50%, resulting in forecast V/C ratios exceeding 1.50, as indicated in Exhibit 4. The No-Build Alternative does not provide any relief to forecast traffic congestion and therefore does not address the study purpose and need.

At-Grade Alternative (Alternative 5)

The At-Grade Alternative maximizes expansion of the existing intersection, retaining existing traffic patterns, and not disturbing local community access patterns. It is the least expensive of the build alternatives, costing about $32 million. However, the alternative only provides a minor improvement in roadway capacity and safety, with V/C ratios of 1.39 during both morning and evening peak periods. The at-grade alternative also heavily impacts the forest buffer on the north edge of Leisure World and the gas station and apartment parking area in the Manor Village community.

EXHIBIT 3

TABLE 1
MD 28/MD 97 Intersection Improvements
Summary of Impacts and Costs

Impacts		Alternative								
		1 No-Build	2	3	3-Mod	4	5	6	6-Mod	7
Displacements	Residential	0	0	0	0	0	0	0	0	0
	Commercial	0	1	5	5	1	1	4	4	3
	Total	**0**	**1**	**5**	**5**	**1**	**1**	**4**	**4**	**3**
Properties Affected	Undeveloped	0	9	12	10	9	7	14	12	11
	Residential	0	6	7	7	7	6	7	7	5
	Commercial	0	10	6	6	11	5	6	6	5
	Religious	0	1	1	1	1	0	1	1	1
	Parkland (Norbeck Park)	0	0	0	0	0	0	0	0	0
	Total	**0**	**26**	**26**	**24**	**28**	**18**	**28**	**26**	**22**
Right-Of-Way Required (Acres)	Undeveloped	0.0	1.1	6.1	3.9	1.1	0.6	5.5	4.3	4.8
	Residential	0.0	0.9	0.3	0.3	1.1	0.4	0.3	0.3	0.2
	Commercial	0.0	1.5	3.9	3.1	1.5	0.8	3.8	3.4	3.7
	Religious	0.0	0.1	0.3	0.3	0.1	0.0	0.3	0.3	0.2
	Parkland (Norbeck Park)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Total	**0.0**	**3.6**	**10.6**	**7.6**	**3.8**	**1.8**	**9.9**	**8.3**	**8.9**
Natural Resources	Wetlands (acres)	0.0	0.3	0.4	0.2	0.3	0.2	0.4	0.2	0.2
	Waters of the US (linear feet)	0	320	335	320	320	320	320	320	320
	Stream Crossings	0	0	1	0	0	0	1	0	0
	100-yr Floodplain (acres)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Woodlands (acres)	0.0	11.4	11.7	9.6	11.4	8.9	11.7	9.6	8.3
Cultural Resources	Historic Sites Affected	0	1	1	1	0	0	1	1	1
	Historic Properties R.O.W. Required (acres)	0	0	0	0	0	0	0	0	0
	Archeological Sites Affected	0	0	0	0	0	0	0	0	0
Total Costs	($Millions)	$0	$142 - $145	$85 - $88	$70 - $73	$123 - $126	$33 - $36	$75 - $78	$68 - $71	$77 - $80

D. Effects on Traffic Operations

A Level-of-Service (LOS) analysis was performed for the proposed alternatives using peak hour volume projections for the design year 2020. Table III-1 compares the LOS calculations (with volume/capacity ratios) for both the AM and the PM peak hours, for all alternatives being carried forward.

TABLE III-1
LEVEL-OF-SERVICE (LOS) COMPARISONS[1]

ALTERNATIVE	LOCATION[2]					
	MD 97 @ MD 28		MD 28 @ MD 115		MD 28 @ Relocated MD 28	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
1998 EXISTING	F (1.07)	F (1.13)	C (0.75)	C (0.78)	n/a	n/a
2020 ALTERNATIVE 1 (No-Build)	F (1.55)	F (1.62)	E (0.95)	F (1.01)	n/a	n/a
2020 ALTERNATIVE 2	C (0.76)[3]	D (0.85)[3]	E (0.94)	E (0.93)	n/a	n/a
2020 ALTERNATIVE 3	D (0.84)	D (0.89)	D (0.88)	D (0.88)	C (0.78)	E (0.92)
2020 ALTERNATIVE 3-MODIFIED	D (0.84)	D (0.89)	D (0.88)	D (0.88)	C (0.78)	E (0.92)
2020 ALTERNATIVE 4	C (0.76)[3]	D (0.85)[3]	E (0.94)	E (0.93)	n/a	n/a
2020 ALTERNATIVE 5	F (1.39)	F (1.39)	E (0.94)	E (0.99)	n/a	n/a
2020 ALTERNATIVE 6	D (0.84)	D (0.89)	D (0.88)	D (0.88)	C (0.78)	E (0.92)
2020 ALTERNATIVE 6-MODIFIED	D (0.84)	D (0.89)	D (0.88)	D (0.88)	C (0.78)	E (0.92)
2020 ALTERNATIVE 7	n/a[4]	n/a[4]	D (0.82)	D (0.87)	A (0.56)	B (0.65)

[1] Traffic analysis was completed using the SHA critical lane volume methodology, 2020 traffic forecasts provided by SHA Travel Forecasting, and lane configurations shown on the Alternatives mapping dated April 3, 2002.
[2] Volume distribution assumes that Thistlebridge Rd access is maintained on MD 97.
[3] Assumes free right turn from southbound MD 97 to westbound MD 28.
[4] This movement is dispersed through the two 'Tee' intersections, located east and west of MD 97. The levels of service range from C(0.72) for the AM peak east of MD 97, to E(0.92) for the PM peak west of MD 97.

Urban Diamond Interchange Alternatives (Alternatives 2 and 4)

This interchange configuration requires a significant amount of widening along Georgia Avenue, outside of the practical limits of the existing right-of-way and with impacts to the adjacent communities. The urban diamond interchange also requires extensive, lengthy retaining walls to accommodate the ramps along the edges of Georgia Avenue. Combined, these factors would substantially increase the degree to which Georgia Avenue is viewed as a barrier between adjacent communities.

The existing forest buffer area for Leisure World along the south side of Norbeck Road would be disturbed and tree buffers would be completely removed along Georgia Avenue.

While this alternative improves traffic operations at MD 97 and MD 28, conditions at MD 115 and MD 28 are projected to be about the same as that for the 'no build.' Both Manor House Terrace and Thistlebridge Drive have to be modified in this alternative, impacting and inconveniencing these local communities. This configuration is the most expensive to construct, at $120-$140 million.

Relocated MD 28 (Alternatives 3 and 3 Modified, 6 and 6 Modified, and 7)

The relocation of MD 28 to the north, either over or under Georgia Avenue, significantly improves projected traffic operations at both the intersections of MD 28 at MD 97 and MD 28 at MD 115.

This suite of alternatives was developed in three stages:

- Alternative 3 and Alternative 6 included a direct access ramp (Ramp "A") from southbound MD 97 to westbound MD 28 in the northwest quadrant of the study area, requiring either a grade-separated crossing of Thistlebridge Drive or else relocation of the Thistlebridge Drive access to MD 97.

- Alternative 3 Modified and Alternative 6 Modified functionally replaced Ramp "A" by increasing the capacity of the signalized intersections. The most significant community access issue with these alternatives concerns the Norbeck Center business community. This alternative has a greater degree of impact on commercial and undeveloped property for right-of-way needs. Access to the commercial area is also impacted due to the elimination of left turns at MD 97 and the relocation of MD 28, bypassing the business area.

- Alternative 7 incorporates several specific modifications which address particular concerns associated with Alternative 6. These include adding a direct road connection from Thistlebridge Drive to Relocated MD 28 and addition of direct access from Relocated MD 28 into the commercial center. These additions improve access options to and from these areas. This alternative also eliminates the signal and cross traffic at the existing MD 28/MD 97 intersection, further eliminating delays and traffic conflicts. Finally, the alignment of existing MD 28 is modified to eliminate disturbance to vegetative buffer along the edge of Leisure

World. The cost of construction for this alternative, incorporating the several enhancements to improve upon Alternative 3/6, is about $76 million.

The quantitative differences between Alternative 7 and Alternative 7 Enhanced are relatively minor. SHA estimates that these differences, associated primarily with additional candidate stormwater management pond locations, include:

- Approximately 0.9 acres of additional right-of-way
- Approximately 0.5 acres of additional woodlands impact
- Approximately $5M greater total cost

RELATIONSHIP TO OTHER TRANSPORTATION PROJECTS

Staff and public comment on the project is influenced by the project's relationship to three other projects in varied stages of facility planning: the Intercounty Connector EIS, the Georgia Avenue Busway study, and the MD 28/MD 198 Corridor Study.

Intercounty Connector

The MD 28 intersection with MD 97 is located approximately one-half mile south of the location where the ICC right-of-way crosses Georgia Avenue. SHA has determined that Alternative 7 is compatible with the interchange designs considered during the development of the ICC DEIS. The locations of turning movements between MD 28 and MD 97 in Alternative 7 are all essentially at the current intersection location. Therefore, Alternative 7 does not introduce any new operational concern relating to potential ICC ramp locations.

In general, the ICC would be expected to slightly reduce east-west traffic crossing MD 97 along MD 28, but slightly increase traffic along MD 97 just north of MD 28 (due to traffic accessing the ICC). SHA has examined the sensitivity of traffic volumes at the junction of MD 97 and MD 28 depending upon the different ICC alternatives examined in the 1997 ICC DEIS. Regardless of the ICC alternative considered, the year 2025 volume-to-capacity (V/C) ratio for the No-Build Alternative ranges from 1.31 to 1.61 and the highest V/C ratio among the study area intersections for Alternative 7 ranges from 0.79 to 0.96.

Georgia Avenue Busway

The Georgia Avenue Busway is a master-planned, two-lane roadway for buses in the Georgia Avenue median between the Glenmont Metrorail station and the Olney town center. The 1998 *Georgia Avenue Busway Study* recommended that the Norbeck Road park-and-ride lot serve as a station location for express bus service on the busway. All build alternatives for the SHA project preserved the 54-foot-wide existing median to facilitate future busway construction.

SHA should continue to coordinate with MTA and WMATA staff on the subsequent Georgia Avenue Busway project planning study, with a focus on station design and access. Alternative 7 could further enhance busway use by

facilitating pedestrian access between the park-and-ride lot on the east side of Georgia Avenue and bus stations located in the median. Patrons could use the sidewalk along Relocated MD 28 to access busway stations in the Georgia Avenue median below grade.

The Washington Metropolitan Area Transit Authority (WMATA) staff completed an in-house Georgia Avenue Busway study in November 2002 for the Maryland Transit Administration (MTA). This study envisioned an above-grade pedestrian connection between the park-and-ride lot and a station in the Georgia Avenue median.

The WMATA study is a precursor to a future MTA project planning study for the Georgia Avenue busway. This future study has not yet been funded. During subsequent busway study, consideration should be given to both above grade and below grade access between the park-and-ride lot and the busway.

MD 28/MD 198 Corridor Study

The MD 28/MD 198 Corridor Study is evaluating the master-planned widening of Norbeck Road (MD 28), Norbeck Road Extended, and Spencerville Road (MD 198) to four lanes between Georgia Avenue and I-95 in Prince George's County. The project is midway through the planning process, with a Location and Design Public Hearing anticipated during 2004.

MD 115 Safety Improvement Project

The SHA has a construction project to implement spot safety improvements along Muncaster Mill Road (MD 115) between Woodfield Road (MD 124) and Norbeck Road (MD 28). These improvements are scheduled to be completed by 2006. None of the candidate locations are within the MD 28 at MD 97 intersection improvement project study area.

NEXT STEPS

The remaining steps in the implementation process include:

- Development of agency consensus on a preferred alternative during spring 2003, including:
  - Presentation to the County Council (scheduled for March 25)
  - Formal designation of a preferred alternative by the SHA Administrator (April 2003)
  - Completion of a Finding of No Significant Impact (FONSI) (Summer 2003)
  - Location and Design Approval of the preferred alternative by the Federal Highway Administration (Autumn 2003)
- Engineering, expected to take two to three years, and
- Construction, expected to take two years

The project has been funded for project planning and engineering. Right-of-way acquisition and construction will require additional funding through the state's Consolidated Transportation Plan adoption process.

DKH:kcw
Attachments

mmo to mcpb re md 28 @ md 97.doc