Schematic Design Recommendations

The following summarizes the site specific design recommendations that are incorporated into the facility plan as shown on the 1"=50'-0" scale schematic design drawings. Portions of the drawings have been reproduced as plan details below to illustrate concepts.

Jones Mill Road Crossing

This section describes the recommendations for crossing Jones Mill Road when the Rock Creek Trestle is reopened to trail users and trail use increases significantly.

Once the Rock Creek Trestle is reopened, it will be difficult to keep trail users from crossing Jones Mill Road directly at the trail (see Figure 18). Appropriate sidewalk widths, crosswalks, clear sight lines, and timing of pedestrian signals will need to be addressed.

Existing Conditions/Issues

Currently, the existing Georgetown Branch Trail users are directed to the existing crosswalks at the signalized intersection of Jones Mill Road and Jones Bridge Road. There is a push button for pedestrians. However, the timing of the signal change is not frequent enough to keep trail users from jaywalking.

When the Rock Creek Trestle is reopened, there will be a large increase in the number of trail users desiring to cross Jones Mill Road directly at the existing Georgetown Branch Trail right-of-way. However, southbound motorists on Jones Bridge Road turning right on to Jones Mill Road cannot see the trail intersection (Figure 15).

There is an existing sidewalk on the southbound side of Jones Mill Road leading up to the existing crosswalks. However, there is no sidewalk or shoulder connecting the existing crosswalk back to the trail on the northbound side of Jones Mill Road (Figure 16). Currently trail users head north to the intersection of Jones Mill and Jones Bridge for a short distance and cross at the signal to Susanna Lane and into Rock Creek Park (see Figure 17).
Figure 18: Existing Intersection Conditions (inset) and Proposed Intersection Enlargement

- Enlarged Jones Mill Road Intersection
- Two existing crosswalks with push buttons and pedestrian signals
- New signal for trail users
- Move vehicle stop line back behind trail crossing and provide new signal on mast arm behind crosswalk
- Existing Trail Route (Susanna Lane)
- Susanna Lane
- Bad Sight Lines

Prepared by Daniel Consultants, Inc.
Options Considered
Two options were considered for addressing the intersection issues at Jones Bridge Road: directing trail users to the existing intersection, or expanding the intersection to incorporate the trail crossing. A pedestrian crossing or underpass was also considered, but ultimately rejected due to the uncertainty of the future Transitway design and the desire of the trail users to eliminate unnecessary changes in grade. A ramp system with undesirable visual impacts and right-of-way requirements from adjoining property owners would have been required.

Option 1: Barrier Directing Trail Users to Existing Crossing
This option directs trail users to the existing crosswalk by constructing physical barriers (42" high minimum) to deter them from crossing the street directly at the Georgetown Branch Trail crossing of Jones Mill Road. This option would require that the existing connecting sidewalk on the west (southbound) side of Jones Mill Road be utilized and that a new connecting sidewalk be constructed on the east (northbound) side of Jones Mill Road (requiring the construction of a timber retaining wall).

The existing signal would need to be modified to lengthen the 'WALK' phase of the signal. The existing intersection traffic volume data would need to be examined to determine the feasibility of modifying the pedestrian phase of the signal and its impact on level-of-service.

Additional modifications to accommodate the increased number of trail users at the existing crosswalks include:
- Accessible curb ramps (2)
- Relocate northbound and southbound signal poles to make room for trail users waiting to cross
- Painted crosswalks with longitudinal lines for added visibility

Option 2: Redesign (Expand) the Intersection to Incorporate the Trail Crossing
The second option is to redesign (expand) the intersection to include the trail entrance to the intersection so that the trail users can cross Jones Mill Road directly. The same issues of the impact on intersection level-of-service will need to be examined for this option.

Proposed Improvements
Preferred Route (Option 2)
The recommended route is to redesign (expand) the intersection so that the trail users can cross Jones Mill Road directly. This will require changes to the signal to allow for dedicated pedestrian crossing time that is long enough in duration and frequent enough for

Figure 19: Plan detail showing preferred and alternate routes for Jones Mill Road Crossing. The existing Susanna Lane route is shown as the dashed line leaving the intersection to the north.
trail users without backing up traffic. The timing of the signal should be designed to accommodate 500 users per hour at peak weekend and summer evening use.

In addition to the signalization changes, surface markings and signage would be required according to the Manual of Uniform Traffic Control Devices (MUTCD) guidelines. These markings and signage include:

- "Pedestrian Crossing" warning signs (on all three approaches to the intersection)
- "Bike Route" marking signs (2)
- Painted crosswalk with longitudinal lines for added visibility
- "Pedestrian Signal" regulatory signs (2) at the trail crossing
- Concrete aprons at the trail crossing where it meets the roadway travel lane.

Alternate (Option 1)

If an agreement with MCDPWT cannot be worked out regarding the signal, then barriers will need to be constructed to direct trail users to the existing crossing. Barriers will need to be of sufficient size (42" high) to keep trail users from crossing over the top and must meet County roadway design guidelines.

Over time, pressure may increase for a dedicated pedestrian phase (all red lights) at this intersection. To accommodate this potential change, the guardrail should be designed so that an opening could be created for the trail, leaving the rest of the guardrail in place. The guardrail will then continue to protect the approach sections to the trail, making it safer to access the trail from neighborhoods to the north and south.

Relationship to Proposed Transitway

The Transitway/Trail Draft Environmental Impact Statement (DEIS) indicated the use of depressed grades to allow for a below grade Transitway and trail crossing of Jones Mill Road.

During construction of the Transitway, a construction bypass route will be needed west of Jones Mill Road (beyond the scope of this study.)

The existing Susanna Lane/Rock Creek Trail
Jones Mill Road - Stewart Avenue

This section describes the recommendations for improvements to the existing Georgetown Branch Trail that will be needed once the Rock Creek Trestle is opened (beyond those that will be included with the Rock Creek Trestle reconstruction project).

Existing Conditions/Issues

The existing trestle (Figures 20 and 21) will be replaced with a prefabricated bridge structure built on existing piers and footings. The project will be bid out in early 2001 as a design build project. It is anticipated that the design/build project will include any surface and safety improvements needed to accommodate an anticipated level of peak use at 500 users/hour.

When the Trestle reopens, it will raise a number of issues that will need to be addressed immediately including the Jones Mill Road crossing discussed above:

- Drainage problems east of the bridge caused a washout of the trail.
- The surface will need to be improved to accommodate the full range of users that are anticipated. This may require a temporary asphalt surface that will require less maintenance than a crushed stone surface. The crushed stone surface on existing portions of the Capital Crescent Trail do not receive adequate maintenance to ensure safety.
- An overlook and rest stop with seating should be created as part of the permanent trail design to take advantage of the attractive views and provide opportunity for interpretation of the Rock Creek Valley and the history of the Georgetown Branch Railroad.
- A linkage is needed to connect the trail to Rock Creek Park. The permanent Transitway/Trail alignment will be located on the south side of the proposed Transitway, and therefore, the linkage will need to also be constructed on the south side to avoid potential Transitway and trail user conflicts.

The current interim trail connects to the Georgetown Branch Trail at the intersection of Terrace Drive and Grubb Road. This access point should remain and the interim trail (an on-road bikeway) converted to a community linkage.

Between Grubb Road and Stewart Avenue, the following conditions should be addressed:

- There are extensive amounts of debris and litter along the trail between Lyttonsville Place and Stewart Ave.
- There are many tow trucks and delivery trucks crossing the trail using the existing right-of-way. There is not an adequate sight distance for the vehicles crossing the trail to see oncoming trail users (bicyclists). This should be corrected in the interim by first placing stop signs for trail users and second, providing "bicycle crossing" warning signs for vehicular traffic on the driveways. A permanent solution should be incorporated into the Transitway/Trail project design.
- Drainage improvements should be made in the washed out areas near the County salt domes (Figure 22).
A concern was raised about the aesthetic and environmental quality of the industrial area between Lyttonsville Road and Stewart Ave. Due to the proximity of the Transitway, the aesthetic enhancements will need to be designed and constructed as part of the Transitway/Trail project. There is not enough room to make these improvements now without having to remove them later. There is not enough information known about the final alignment of the Transitway (1- or 2-track, etc.) to prepare a design. However, aesthetic enhancements in this area are critical to improving the overall quality of the trail experience and they should be included in the final Transitway/Trail design.

Proposed Improvements

Interim improvements included with the opening of the Rock Creek Trestle (by MCDPWT)

The interim trail will be opened with only minor modification to the existing trail surface as needed to make the trail safe. Debris will need to be removed, drainage problems fixed, and the surface made usable for a peak anticipated use of over 500 users/hour.

Surface

Overall, it is recommended that the interim trail for the Capital Crescent Trail be constructed utilizing a temporary 2-inch asphalt surface along with minor modifications to the existing ballast to support the trail, as discussed in the General Design Recommendations on page 9. Asphalt is recommended over crushed stone. Asphalt will be easier to maintain and safer to use than the crushed stone surface, and will be more cost effective over the temporary period between the opening of the Trestle and the construction of the Transitway.

This would provide a much safer and more family oriented temporary surface for trail users. If the Transitway is not funded for construction, then the asphalt surface can be repaired and resealed. The crushed stone surface would require annual maintenance and would not be suitable for all types of users, such as young children, roller bladers, strollers, etc. Nor would it be ideal for users in wheelchairs.

The County Council will have to approve the use of the asphalt and stipulate that it will be a temporary surface. This would have to be implemented separately from the Rock Creek Trestle Design/BUILD project due to budget. However, the asphalt could simply be laid over the top of the prepared surface that resulted from the design/build project. Stormwater management will also have to be incorporated into the design of the asphalt overlay. Drainage should be considered as part of the Rock Creek Trestle design/build project.
**Figure 24:**
Plan detail showing location of Rock Creek Trail linkage

**Figure 25:**
Section showing existing conditions and location of interim trail

**Figure 26:**
Section showing proposed linkage to Rock Creek Park and the Permanent Transitway/Trail

Facility Plan for the Capital Crescent and Metropolitan Branch Trails
A temporary, prefabricated bridge is to be placed on the existing piers that are aligned with the existing rail line. This structure will be replaced with a permanent structure as part of the Transitway/Trail project.

**Rock Creek Linkage**

The linkage to Rock Creek Park can be achieved by constructing a switchback along the entire portion of the existing County right-of-way utilizing a 5% maximum slope switching back at the east end of the right-of-way and then descending down on a 5% slope path to the park property. Most trees can be preserved by utilizing a switchback to minimize cut and fill needed to accommodate the trail linkage.

**Temporary Trailhead at Lyttonsville Place**

An interim parking lot should be constructed at Lyttonsville Place on existing M-NCPDC property at the corner of Lyttonsville Place and Brookville Road. The DEIS indicates that a future Transitway station will be located there. The future station site would be a good place for an interim parking lot. The nearest parking is at Rock Creek Park and is used by joint agreement with the Synagogue. The temporary trailhead should include a kiosk, pay telephone and water fountain. These should be located so that they do not have to be moved at a later date.

**Trail Crossing of Industrial Driveway**

The trail should be on a raised “speed table” where the industrial driveway crosses the trail. A speed table is a raised platform longer than a vehicle designed to slow drivers down to an acceptable speed (usually less than 15 mph). Signs should be placed to warn drivers of the crossing and speed table.

At the same time, stop signs should be installed for trail users, including a warning sign, stop bar, concrete apron, bollards, and crosswalk striping with longitudinal markings to increase visibility.

This dual approach clearly gives the vehicles the right-of-way at the intersection, but slows them down to a point at which they can react and drive defensively through the intersection.

**Relationship to Proposed Transitway/Trail (Permanent Alignment)**

The Transitway alignment shown in the DEIS is proposed to run along the same alignment as the existing interim trail. The permanent alignment of the trail is envisioned to be off-center along the southern edge of the right-of-

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**Figure 27:** Plan detail of the trails intersection with Lyttonsville Place.
way on a lower terrace. This necessitates the construction of retaining walls to accommodate both the Transitway and the permanent alignment of the trail within the available right-of-way. Therefore, a permanent trail cannot be constructed between Jones Mill Road and Stewart Ave. until the retaining walls are designed as part of the Transitway/Trail design phase.

Construction Bypass
A bypass will be needed during the construction phase of the Transitway/Trail project to maintain continuity along the Capital Crescent Trail. It is recommended that the existing interim route from Susanna Lane to the Rock Creek Trail connecting through Rock Creek Park to Freyman and Terrace Drives could be used again as a construction bypass (pink dashed line on the Facility Plan, Figure 5).

The Transitway/Trail DEIS indicates that the Rock Creek Trail which crosses under the Rock Creek Trestle would have to be closed during construction. Alternate approaches to construction management should be considered to keep the trail open as much as possible.

From the Terrace Drive access, the County owned right-of-way is wide enough to construct a permanent section of the trail as a "construction bypass" to connect with the Washington Suburban Sanitation Commission (WSSC) property on Lyttonsville Road. A trail connection could be incorporated into existing property setbacks (either along the north or west side of the property, connecting to Lyttonsville Road through the WSSC property).

This then connects with the Rosemary Hills Recreation Center providing access to Lanier Drive and the Talbot Avenue Bridge. Temporary "Share the Road" and "Bicycle Route" signs should be placed along the construction bypass route as part of the Transitway design.

Community Linkages
A permanent, off-road, shared-use sidewalk is proposed as a community linkage to connect the Capital Crescent Trail with the Gwendolyn Coffield Community Center. This linkage could be constructed prior to the Transitway/Trail project. A portion of this linkage could be used as a construction bypass for the Transitway project. The linkage would utilize the east side of Lyttonsville Place and the north side of Lyttonsville Road. It would cross the street at mid-block between the intersection of Lyttonsville Road/Lyttonsville Place and Michigan Avenue.

An easement would be required along the edge of Lyttonsville Place along with a timber retaining wall. The westbound curb along Lyttonsville Road should be extended outward to widen the available space for the connect-
ing linkage, and to protect the existing street trees. Accessible curb ramps, painted crosswalks with longitudinal lines for greater visibility, along with hazard identification beacons would be needed for the mid-block pedestrian crossing. Located along the low volume section of Lyttonsville Road, this section provides a safer place to cross to get to the Rosemary Hills Recreation Center than at the intersection of Lyttonsville Road and Lyttonsville Place (with its continuous right turn allowed without stopping).

The community linkage crosses two driveways, requiring the installation of new curb ramps. No utility poles would have to be relocated to accommodate the community linkage.

**Coordination Issues**
- The interim trail alignment should be reviewed by the Mass Transit Administration (MTA) to ensure coordination with the Transitway/Trail project.
- The existing interim trail (Susanna Lane connecting to Rock Creek Park to Terrace Drive/Grubb Road) will need to be used as a construction bypass for the Transitway/Trail project.
- The Rock Creek Trestle design/build contract should include all of the measures necessary to create the interim trail between Jones Mill Road and Terrace Rd./Grubb Rd. access point. This includes repairing the subgrade by removing debris and directing runoff away from the trail.
- Right-of-way would be needed along the east side of Lyttonsville Place to construct the community linkage from the trail to the Rosemary Hills Recreation Center.
- Aesthetic enhancements should be programmed into the Transitway/Trail Final Environmental Impact Statement (FEIS) process through the industrial sections of the area. This requires coordination between the Facility Plan and adjacent industrial property owners during the FEIS process.
Stewart Avenue - Talbot Ave. Bridge
This section describes the recommended approach to relocating the existing Georgetown Branch Interim Trail off Brookville Road and addresses the issue of right-of-way at the CSX Siding.

Existing Conditions/Issues
The County right-of-way ends (Georgetown Branch) and the CSX right-of-way (referred to as the CSX Siding) begins just east of Stewart Avenue. Currently the Georgetown Branch Trail Interim Route follows Brookville Road to connect with 2nd Avenue. The Brookville Road section is unsuitable for bicycle use due to the extensive number of driveways that must be crossed, many of which are industrial and have vehicles stacked, blocking progress for the trail users. This section of the existing interim route should be replaced as soon as possible.

There appears to be enough room on the south side of the CSX Siding to construct the trail without impeding the future construction of the Transitway. However, there also appears to be some right-of-way encroachments at the Kansas Avenue end that will need to be addressed prior to construction. The MTA will also need to confirm that they can construct the Transitway while reserving a 12-18' wide trail corridor right-of-way and by building a construction fence to protect trail users.

The little-used siding is owned by CSX. The recycling center on the north side is the most recent user of the railroad siding. The siding does not appear to have been used for over a year as it is overgrown with woody plants. Flexible office space and industrial uses are found on the south side. The CSX Siding merges with the CSX main line at the end of Kansas Ave. Right-of-way is needed from CSX to construct the trail along the siding and to access the sloping wooded hillside connecting the siding at Kansas Ave. to Talbot Ave.

Options Considered
Three options were considered as a means of addressing the right-of-way issues associated with the CSX Siding segment:

- constructing the permanent alignment along the southern edge of the CSX Siding right-of-way and linking to Talbot Ave through the CSX parcel at the end of Kansas Avenue;
- bypassing the siding by utilizing the abandoned right-of-way at the end of Stewart Ave. and utilizing Kansas, Pennsylvania, and Michigan Avenues to connect with Talbot Avenue; and,
- bypassing both the CSX Siding and Stewart Avenue abandoned right-of-way by utilizing Lyttonsville Place, Lyttonsville Road, Gwendolyn Coffield Community Center, and Lanier to connect with Talbot Avenue.

Proposed Improvements
Preferred Design: Use CSX Siding/Talbot Ave. Permanent Alignment
The recommended option is to use the CSX Siding if right-of-way can be obtained from CSX and the encroachment from the adjoining industrial property on the siding at the end of Kansas Ave can be resolved. CSX also owns

Figure 30: View of CSX Siding looking east from Stewart Avenue.
the six parcels between Kansas Ave. and Talbot Ave. The plan recommends proceeding with the design and construction of a permanent trail within the CSX Siding right-of-way. The route then connects up to Talbot Ave and the Talbot Ave. Bridge in the same location as the proposed permanent alignment. A suitable barrier fence will be needed as part of the design to allow Transitway construction to proceed unimpeded and later to serve as a barrier between trail users and the Transitway (Figure 32).

The construction of the Kansas to Talbot segment would require a timber retaining wall along the northern side of the trail just after the intersection of Talbot and Michigan.

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Use of the timber retaining wall also keeps the trail within the public right-of-way and more than 50' from a live CSX rail line.

Alternate: Use Stewart Ave. to Kansas Ave. as Interim Trail
If the right-of-way cannot be obtained from CSX, then it is recommended that an interim trail be constructed along the southbound side of Stewart Ave. to Kansas Ave. utilizing an existing right-of-way at the parking lot at the end of Stewart Ave. to connect to Kansas. This involves reconstructing and extending the curb and gutter along Stewart Ave. a total of twelve feet to make room for a 10-foot wide shared use pathway (narrowing Stewart Avenue). The existing brick wall, now partially crumbling, would have to be opened up and repaired at the ends.

The curb extension should be constructed up to Brookville Rd. to avoid having to stripe and narrow the roadway approaching the trail. Encouraging the turning traffic to move over immediately would have the eventual benefit of narrowing the crossing width for the permanent Transitway/Trail project – for both the Transitway and trail users. The resulting cross section of Stewart Avenue would retain two 7-foot parking lanes and two 11-foot travel lanes (36 foot total) compared to the current excessive 48’ total width (Figure 35).

The use of Kansas Avenue as an on-street bike route would require the placement of “Share the Road” signs approaching the trail portion of the on-street route from both directions (Maine and Pennsylvania Avenues.)

An on-street route through Pennsylvania and Michigan Avenues will be utilized to access Talbot Ave. and the Talbot Ave. Bridge on an interim basis until the permanent trail alignment is constructed along the CSX Siding.

Gwendolyn Coffield Community Center Linkage
If right-of-way cannot be negotiated from either CSX or for the end of Stewart Avenue,
then the Gwendolyn Coffield Community Center linkage should be constructed as an interim trail. The ultimate goal is to remove the interim trail from Brookville Road as soon as possible.

Relationship to Transitway
The permanent trail can be built immediately if CSX right-of-way can be obtained and MTA agrees that the Transitway construction can take place adjacent to the existing trail without damaging the constructed trail (with appropriate protection measures). The permanent alignment of the trail climbs up to Talbot Ave. through the CSX parcels at the end of Kansas and is located well above the location of the adjacent live rail (more than 50’ away).

Construction Bypass
Since the construction bypass will already be utilizing a section of the Gwendolyn Coffield Community Center linkage, the entire construction area near the CSX Siding could be bypassed by continuing the linkage through the Rosemary Hills Park, down Lanier Ave, and finally linking up to the proposed Talbot Ave. Bridge.

Community Linkages
The Stewart Avenue/Kansas Avenue linkage, if constructed as an interim trail would make an appropriate community linkage to the trail from the adjoining neighborhoods and commercial buildings. The Rosemary Hills Recreation Center community linkage, if constructed, would also make an appropriate construction bypass route. Therefore, both of these initial investments in an interim trail would have permanent benefits to the Community.

Coordination Issues
- The Stewart Avenue to Kansas alternate requires sorting out the ownership of the vacated right-of-way at the end of Stewart Avenue. Apparently, the right-of-way was never legally vacated, yet the perception is that it was vacated. This may create a legal issue for the County in trying to reclaim the vacated right-of-way.
- The Stewart Avenue to Kansas alternate also requires approval by MCDPWT to designate Kansas, Pennsylvania and Michigan Avenues as on-street bicycle routes.
- The preferred permanent trail alignment must be reviewed by MTA to ensure coordination with the Transitway/Trail project.
- The preferred route through the CSX Siding area requires right-of-way from CSX and resolution of the encroachment by an adjoining owner near Kansas Avenue.
Talbot Ave. Bridge - 16th St.
This section describes the preferred interim route needed to bypass the steep slopes adjacent to Woodside Mews.

Existing Conditions/Issues
Right-of-way issues, neighborhood concerns and physical constraints found in the vicinity of the Talbot Ave. Bridge and Woodside Mews require the use of an interim trail alignment. Issues include:

- Steeply sloping grades between Woodside Mews and the CSX right-of-way require the use of very high retaining walls to fit both the trail and Transitway. Therefore the permanent trail alignment must be constructed in tandem with the Transitway to avoid reconstructing the trail when the Transitway is constructed.
- Several residents along Grace Church Road expressed concerns about the safety of trail users and their children playing in the yards along Grace Church Road. This is due to the number of vehicles that turn left illegally onto the Talbot Avenue Bridge from Grace Church Road. Grace Church Road contains speed bumps already. The recommended solution endorsed by the large majority of residents along this street is to make Grace Church Road a one-way northbound route between 3rd and 4th. This will reinforce the desired turning movements onto the Talbot Avenue Bridge. The design also recommends creating a separate pedestrian/bicycle span that can be constructed as part of the interim trail but serve as the permanent crossing of the CSX right-of-way.
- An existing right-of-way along 3rd Ave.

Figure 38: View east from Talbot Avenue Bridge looking towards trees in front of Woodside Mews (left)

Figure 39: Plan and section detail showing preferred location and required clearances for the proposed Talbot Avenue Pedestrian and Bicycle Bridge
Alternatives Considered

Five options were considered for addressing the complex set of issues found between the Talbot Avenue Bridge and 16th Street:

- **Option 1 - Use of Grace Church Road:**
  - Use of Grace Church Road, the paper street (an unbuilt public road) combined with WSSC right-of-way is needed to provide access from Grace Church Road through to Lyttonsville Road. A mature specimen maple tree must be preserved in this right-of-way.
  - Lyttonsville Road is 48' wide. Only 36' are necessary to accommodate two travel lanes and two parking lanes. The remainder of the road can be reallocated to trail use.
  - Crossing 16th Street is difficult due to pavement width and traffic speed (possibly requiring a pedestrian activated light).
  - Once on the east side of 16th Street, there is limited right-of-way at the end of Noyes Lane. Use of this side of the street may require a construction easement and repair of landscape disturbed by construction.
  - On the west side of 16th, the alignment would need to stay behind the guardrail on 16th St., utilizing a wide level terrace. It would then descend the wooded hillside past the Park Sutton pool to get under 16th Street (there will be an impact to trees near the underpass).
  - The Park Sutton parking lot presents an option to reduce the impact to trees, but will require ADA accessible ramps to build up enough elevation to get under the bridge.
right-of-way) and the WSSC water line easement at 3rd Ave. to Lyttonsville Road and crossing at its intersection with 16th to utilize the east side of 16th Street;

- Option 2 - Use of Grace Church Road, the paper street and water line easement at 3rd Ave. to Lyttonsville Road, the west side of 16th Street staying high on the slope until past the pool, and crossing under 16th Street using a fill section behind the bridge’s crash barrier;

- Option 3 - Use of Grace Church Road, to the existing signalized intersection at 2nd Ave. and 16th Street.

- Option 4 - Use of Grace Church Road, the paper street and water line easement at 3rd Ave connecting to the area behind the Park Sutton apartments and obtaining an easement from Park Sutton to get under the 16th Street Bridge utilizing a cut section behind the crash barrier;

- Option 5 - Constructing the retaining wall required at Woodside Mews to accommodate the trail and the Transitway as part of the permanent alignment and connecting to the back side of the parking lot at Park Sutton to get under the 16th Street Bridge (utilizing a cut section behind the crash barrier).

The first four options share a common element in the use of Grace Church Road and the existing right-of-way and waterline easement to connect to Lyttonsville Road. The first two options continue on Lyttonsville Road by extending the curb out 12’ and reallocating the right-of-way for use as the interim trail. The third option uses Grace Church Road to connect to the existing signal at 2nd Ave. instead of crossing at 16th. The fourth and fifth options share the use of a cut section to gain access under the 16th Street Bridge.

Proposed Improvements

Preferred Design: Utilizing the East Side of 16th Street

A permanent section of the trail is recommended to continue from Talbot Ave. up to and including a new pedestrian span adjacent to the Talbot Ave. Bridge (lined up with Grace Church Road). The design of the span will need to meet the CSX requirements for crossing a live freight rail and leave room for future transit construction.

After crossing to the north side of the tracks at Talbot, the preferred design is to widen the existing sidewalk along Grace Church Road and convert Grace Church Road to a one-way route between 3rd and 4th Avenues. A petition in support of the one-way conversion signed by 11 out of 13 owners on Grace Church Road was submitted at the November 15 public meeting. Widening the existing sidewalk to 10 feet would leave room for a 16 foot wide travel lane (one-way). This would require two crosswalks and stop controls for both bicyclists and cars at the intersection of Grace Church Road and 3rd Avenue, and Grace Church Road and 4th Avenue.

Alternatively an 8’ trail could be painted on the east side of Grace Church Road and separated by a 2’ raised concrete rumble strip. This would leave an 11-foot travel lane and the existing 5’ sidewalk with no on-street parking allowed. A third alternate for continued consideration is a one-way pair of on-road
Figure 45:
View looking east showing location of Lyttonsville Road curb extension

Figure 46:
Cross-section showing Lyttonsville Road curb extension (looking east)

bikeways using Hanover southbound and Grace Church Road northbound.

A final design decision will be made in consultation with MCDPWT and the residents of Grace Church Road as part of the final design phase of the project.

The interim route will connect to Lyttonsville Road through the extended right-of-way on 3rd Avenue. Additional right-of-way will need to be obtained from a private parcel, or by utilizing the existing water line easement. The route will cross Lyttonsville Road east of the entrance to the Park Sutton parking lot. Lyttonsville Road will be narrowed to 36 feet while maintaining existing parking. The existing sidewalk would be maintained along with the new 10' wide trail which will be constructed 5 feet from the proposed new curb.

The preferred interim route then crosses 16th Street at Lyttonsville Road and utilizes the available right-of-way on the east side of 16th. However, the State Highway Administration must agree to install a pedestrian activated signal with enough crossing time and frequency to meet users' needs. This intersection already serves as a Metro bus stop and a school bus stop (both north and southbound), yet pedestrian needs to safely cross the street at this location are not currently met.

The route on the east side of 16th Street can be accommodated within the existing right-of-way by maintaining a 5' landscape strip between the existing curb and a 10' asphalt trail. Guy wires on one utility pole would need to be relocated to accommodate the trail. Once the permanent alignment is constructed

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under the 16th Street Bridge, the pedestrian signal will continue to serve the needs of pedestrians requiring safer access to the bus stops.

**First Alternate**
If suitable pedestrian time cannot be obtained, then right-of-way will need to be obtained from CSX and Park Sutton to utilize the west side of 16th Street and crossing underneath the 16th Street bridge utilizing a fill section behind the CSX crash wall (at elevation 330 feet).

**Second Alternate**
If CSX or Park Sutton right-of-way cannot be obtained, then the interim route should go up Grace Church Road to 2nd Ave. and cross at the existing signal. The trail could then utilize 2nd Ave. to connect to the Silver Spring Green Trail as an on-road bikeway. Alternatively,
the trail could utilize the 3rd Street extended right-of-way to connect to Elkhart and then to 2nd Ave.

Community Linkages/Construction Bypass
Construction under the 16th Street Bridge for the Transitway would prohibit use of the underpass during the construction period. This makes the crossing at Lyttonsville Road and 16th Street serve the dual function of providing a construction bypass and serving the adjacent residents who use the bus stop on the east side of 16th Street.

Relationship to Transitway
Starting from the north side of a newly constructed pedestrian bridge adjacent to the existing Talbot Ave. Bridge, the permanent trail alignment would run along the Transitway alignment and under the 16th Street Bridge. This will require extensive use of retaining walls to accommodate the trail. The preferred alternate along the east side would not require a construction bypass to accommodate the Transitway/Trail construction.

Coordination Issues
- Pursue pedestrian activated signal at 16th and Lyttonsville Road from SHA - serving both the adjacent residents accessing the bus stops and interim trail users. This crossing would also be needed to maintain trail continuity during the Transitway/Trail construction period.
- Pursue right-of-way from CSX, WMATA and Park Sutton for west side route if signalization cannot be obtained. It may be useful to pursue both the right-of-way and the signalization changes at the same time, since both would benefit the neighborhood and the future permanent alignment of the trail.
- Use of the existing waterline easement (WSSC) or obtaining right-of-way from Woodside Mews between the 3rd Ave. paper street and Lyttonsville Road.
- Approval by MCDPWT for the conversion of Grace Church Road to one-way between 3rd and 4th
- Approval for pedestrian bridge crossing at Talbot - coordination with MTA to assure adequate clearances for both CSX and the future Transitway.
- Review by Rosemary Hills Elementary School regarding placement of the trail adjacent to the school (not on school property, but requiring retaining wall adjacent to school and a temporary construction easement).
16th Street - Spring Street
This section describes a permanent section of trail that can be built along existing public right-of-ways without impacting the construction of the Transitway.

Existing Conditions
The proposed alignment between 16th Street and Spring Street follows existing "paper" streets allowing the route to be constructed in its permanent location. Several issues were raised during the public meeting process that are addressed as part of the plan:

- CSX maintenance access must be maintained from the end of Noyes Lane along a steep path under the 3rd Street Bridge. This path is also the proposed location of the permanent alignment and one of the alternates described above.
- Access to recently constructed homes at the end of Ballard Street was provided by a private drive on the public right-of-way with an agreement by owners to maintain the drive. A planted berm was constructed to buffer the railroad that will need to be preserved or replaced. Access to lots beyond the length of the private drive should also be maintained.
- There are no driveways that utilize the portions of the built streets along 3rd Avenue between Noyes Lane and South Springwood. Therefore, portions of these streets could be closed or narrowed to accommodate the trail without impacting existing residential access from 2nd Avenue.
- Storm drainage along these existing streets will need to be modified to accommodate the trail.

Proposed Improvements

Permanent Trail Improvements
The plan recommends closing a portion of 3rd Avenue between Noyes Drive and North Springwood. Residential and emergency access would be maintained by maintaining loop roads between Noyes Lane and Noyes Drive (18' travel lane width could accommodate 2-way travel) and between North and South Springwood (14' travel lane requires one-way travel). The 14' travel lane would be separated from the trail by reinforced turf that can be driven on by fire trucks. These roads have extremely low volume, providing access to only a few houses. Third Avenue between South Springwood and Ballard is not currently paved.

Figure 51 illustrates how the trail would be constructed at the intersection of Noyes Lane and 3rd Avenue. A low timber retaining wall would need to be constructed to support Noyes Lane. Figure 53 illustrates how the trail would be constructed between North and South Springwood. New trees would be planted to replace any trees removed as a result of construction. The drawing illustrates the desired cross section to maintain the existing character of the street.

The trail would need to be regraded to a maximum of 5% slope between the closed portion of 3rd Avenue (between Noyes Drive and North Springwood). Storm drainage would need to be reconstructed between Noyes Lane and South Springwood including the placement of new concrete curbs, drain inlets and a 24" pipe to collect stormwater.

Community Linkages/Construction Bypass
It is not possible to construct a permanent section of the trail under the Spring Street Bridge until the Transitway/Trail is designed. The interim trail would be constructed at grade behind the crash wall. The Transitway and the trail will need to be accommodated behind the crash wall according to the DEIS. Ballard Street and 2nd Avenue should be used as a temporary on-street construction bypass during the time in which the Transitway/Trail is being constructed.

Figure 49: View northwest from Spring Street Bridge
Fig. 50: Plan detail showing 3rd Avenue road abandonment to accommodate trail alignment.

Fig. 51: View northwest showing Noyes Lane intersection with 3rd Avenue.

Fig. 52: Cross section at Noyes Lane showing proposed timber retaining wall and adjustments to Noyes Lane (looking northwest).

MAINTAIN ACCESS TO CSX RIGHT-OF-WAY

12' PATHWAY 5' STRIP 18' ROADWAY
Coordination Issues

- A construction fence will need to be built along the south side of the trail (2' minimum clearance between the trail and the construction fence). Prior to preparing final landscape drawings for the trail-related improvements described above, MTA will need to determine how much space will be needed for construction access and if the construction fence can be moved further south to protect proposed replacement plantings along the south side of the trail. If not, then the Transitway will need to include the landscape plantings as part of its construction plans.

- Closure of 3rd Avenue between Noyes Drive and South Springwood along with the narrowing of the remainder of 3rd Avenue to accommodate the trail will need to be reviewed to ensure adequate emergency access can be maintained and approved by the MCDPWT.

- CSX and WMATA will need to review the plans to ensure that their access requirements are still maintained at the end of Noyes Drive.

Figure 53: View west at the intersection of South Springwood and 3rd Avenue

Figure 54: Cross section at intersection of South Springwood showing changes to existing road needed to accommodate the trail (looking west)