



Capital Crescent Surface Trail Phase 2 (MR2020030), Capital Crescent Trail Under MD 355 (MR2022002)

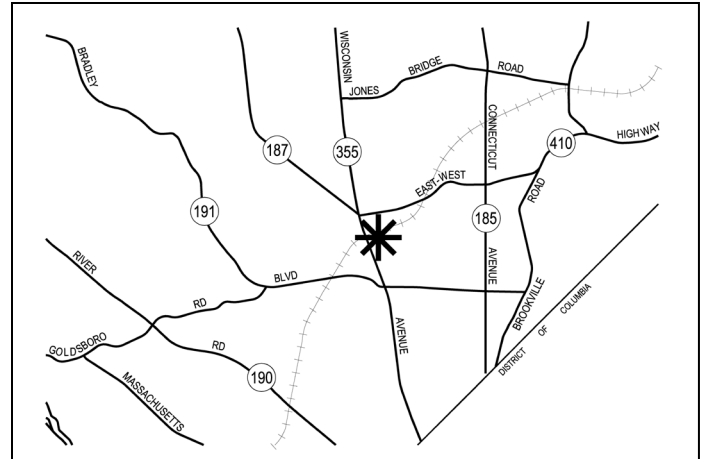
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Completed: 10.07.2021

Description

- The Capital Crescent Surface Trail Phase 2 project would construct a 10-foot-wide shared-use path along the east side of 47th Street from Willow Lane to Elm Street (F).
- The Capital Crescent Trail Under MD 355 Phase 1 would:
 - Complete a short segment of the Capital Crescent Trail to the west of the 7272 Wisconsin Avenue building. (G)
 - Fit-out a bicycle storage area in the 7272 Wisconsin Avenue building. (H)
 - Provide an interim trail connection between the Capital Crescent Surface Trail Phase 2 and the Capital Crescent Trail Mainline project under construction as part of the Purple Line project. (I)
 - Reconstruct the northern portion of Elm Street Park and the east/west promenade through the park. (J)
- The Capital Crescent Trail Under MD 355 Phase 2 would:
 - Construct a grade-separated crossing for the Capital Crescent Trail under Wisconsin Avenue that links the developer-built portion of the trail (beneath the 7272 Wisconsin Avenue building) with the Capital Crescent Trail Mainline and Capital Crescent Surface Trail Phase 2. (K)
 - Reconfigure the interim trail connection (I) between the Capital Crescent Surface Trail Phase 2 (F) and the Capital Crescent Trail Mainline to connect to the Capital Crescent Trail Under MD 355. (L)
 - Redevelop north side of Elm Street Park and the east / west promenade through the park. (M)



Applicant: Montgomery County Department of Transportation

Recommendation: Approval with comments

Summary

Staff recommends **approval with comments** for the Capital Crescent Surface Trail Phase 2 and Capital Crescent Trail Under MD 355 projects.

Attachment A shows how project components fit together.
Through the staff report, letters (A) through (M) correspond to project components.

CONTENTS

MANDATORY REFERRAL PROCESS OVERVIEW	2
SECTION 1: RECOMMENDATION SUMMARY	3
SECTION 2: BACKGROUND	5
SECTION 3: RECENT PROJECTS	8
SECTION 4: CAPITAL CRESCENT SURFACE TRAIL PHASE 2.....	10
SECTION 5: CAPITAL CRESCENT TRAIL UNDER MD 355.....	16
SECTION 6: CONCLUSION	27
ATTACHMENTS	28

MANDATORY REFERRAL PROCESS OVERVIEW

This proposal for the construction of the Capital Crescent Trail is required to undergo the Mandatory Referral review process under the Montgomery County Planning Department’s Uniform Standards for Mandatory Referral Review. State law requires all federal, state, and local governments and public utilities to submit proposed projects for a Mandatory Referral review by the Commission. The law requires the Planning Board to review and approve the proposed location, character, grade and extent of any road, park, public way or ground, public (including federal) building or structure, or public utility (whether publicly or privately owned) prior to the project being located, constructed or authorized. This review is typically performed in context with the relevant master plans, guidelines and policies in effect.

SECTION 1: RECOMMENDATION SUMMARY

Capital Crescent Surface Trail Phase 2 (MR2020030)

Staff recommends **approval with comments** of the Capital Crescent Surface Trail Phase 2 project.

General Recommendations

1. Design all sidewalks and curb ramps to the design standards shown on pages 48-50 and 54-55 of the 2020 *Bethesda Downtown Streetscape Standards*.
2. Underground the utility poles along 47th Street.
3. Obtain a Park Permit for Construction prior to beginning construction.
4. Reconcile the differences in the design of the Capital Crescent Surface Trail Phase 2 with the Capital Crescent Trail Under MD 355 Phase 1 where they merge at the intersection of 47th Street and Elm Street: 1) extend the curb along 47th Street at the Promenade to the corner of the Air Rights Building loading dock area, 2) coordinate the alignment and grading of the trail. Relocate the manhole for the sewer out of the pedestrian plaza area.
5. Convert northern section of the mountable truck apron to a landscaped street buffer with and relocate utility pole to this area.

Street Trees

6. Revise the plan to remove all trees on park property that would be impacted by the demolition and new trail construction, including Tree #44, 45, 46, 54, 55, 58, and 59. Root prune around Tree #61 and 65.
7. Plant a row of 3 to 3.5-inch caliper Frontier Elms, 30 feet on center, east of the Capital Crescent Trail along 47th Street frontage between Willow Street and the new pedestrian plaza area.

Streetlights and Utility Poles

8. Per the 2020 *Bethesda Downtown Streetscape Standards*, provide 60-foot spacing between streetlight poles along 47th Street.
9. Where feasible, locate streetlight poles in the street buffer between 47th Street and the Capital Crescent Surface Trail.
10. Provide a 2-foot-wide buffer between the trail and all utility poles.

Capital Crescent Trail Under MD 355 (MR2022002)

Staff recommends **approval with comments** of the Capital Crescent Trail Under MD 355 project.

General Recommendations

1. Design all sidewalks and curb ramps to the design standards shown on pages 48-50 and 54-55 of the 2020 *Bethesda Downtown Streetscape Standards*.
2. Underground the utility poles along 47th Street.

Bicycle Parking Station

3. Provide stacked bicycle racks with lift assist.
4. Provide changing rooms and showers.
5. Provide secure access to the long-term bicycle parking area with CCTV security cameras, blue light phones in the bicycle parking area and access by key fob or other means.

Elm Street Park

6. Obtain a Park Permit for Construction prior to beginning construction.
7. Revise the permit chart to show that a Park Permit for Construction is required prior to the onset of construction for both Phase 1 and Phase 2 of the Capital Crescent Trail Under MD 355 project. The permit set will include an Existing Conditions plan and a Demolition plan.
8. If a percentage of the project cost is required to be spent on public art, then include a public art component on the tunnel portal in Elm Street Park.
9. Continue working with the Parks Department to finalize the design improvements to Elm Street Park including, but not limited to, the pedestrian plaza at Elm Street and 47th Street, Capital Crescent Trail crossing of the plaza, the Elm Street Promenade, playground, and outdoor gym.

Capital Crescent Surface Trail

10. Design the Capital Crescent Surface Trail north of the Promenade with a maximum running slope of 4.5% and a maximum cross slope of 1.5% to allow for construction tolerance in asphalt construction.
11. Reconcile the differences in the design of the Capital Crescent Surface Trail Phase 2 with the Capital Crescent Trail Under MD 355 Phase 1 where they merge at the intersection of 47th Street and Elm Street: 1) extend the curb along 47th Street at the Promenade to the corner of the Air Rights Building loading dock area, 2) coordinate the alignment and grading of the trail. Relocate the manhole for the sewer out of the pedestrian plaza area.

Capital Crescent Trail Civic Green Connector

12. Match the Capital Crescent Trail paving pattern of the Capital Crescent Civic Green Connector to the pattern in front of 4735 Bethesda Avenue.

SECTION 2: BACKGROUND

The Capital Crescent Trail is an off-road trail that forms a crescent as it travels from Georgetown to Silver Spring via Bethesda (see Figure 1). Montgomery County purchased the right-of-way between the District of Columbia and the CSX tracks just west of Silver Spring in 1988. M-NCPPC has jurisdiction over the portion between the DC Line and Bethesda and MCDOT has jurisdiction over the portion between Bethesda and Silver Spring. In 1990, the National Park Service acquired the Georgetown Branch from Georgetown to Montgomery County.



Figure 1: Capital Crescent Trail Map

The Capital Crescent Trail is currently paved from Georgetown to Bethesda Avenue in Bethesda. Between Elm Street Park in Bethesda and the Silver Spring Transit Center, the trail is under construction as part of the Purple Line light rail project. This segment will typically be 12 feet wide with two-foot-wide shoulders on each side. The Capital Crescent Surface Trail Phase 1 is currently under construction by MCDOT on Bethesda Avenue and Willow Lane in Downtown Bethesda.

The Capital Crescent Surface Trail Phase 2 and Capital Crescent Trail Under MD 355 projects (“Subject Mandatory Referral” projects) would provide the final segments of the trail in Downtown Bethesda, between Bethesda Avenue and Elm Street Park.

The proposed designs of the Subject Mandatory Referral projects are a result of nearly 30 years of planning for the trail and what is now known as the Purple Line light rail. The 1990 *Georgetown Branch Master Plan*

Amendment was the first master plan to include a trail in the county's master plans, recommending the construction of both a trail and light rail within the Georgetown Branch and Metropolitan Branch rights-of-way between downtown Bethesda and downtown Silver Spring. The light rail was conceived largely as a single-track transit line, with double tracks at the stations to enable passing.

The 1994 *Bethesda CBD Sector Plan* anticipated the challenge of accommodating both the light rail and a trail in an existing tunnel beneath 7272 Wisconsin Avenue (formerly known as the Apex Building, now redeveloped as The Wilson and The Elm) and therefore recommended two trails: a "tunnel" route under Wisconsin Avenue and a "surface" route along Bethesda Avenue, Willow Lane and along Elm Street Park. The plan stated on page 156:

"The tunnel area for the CCT may be greatly reduced or perhaps eliminated if double tracks for the trolley are needed there. In the event that the CCT does not run through the tunnel, the CCT will follow only a street level route."

Over the years the light rail alignment was extended to New Carrollton in Prince George's County and the need for a double-track system became more important. The 2010 *Purple Line Functional Plan* modified county policy to extend the Purple Line as a dual-track system. To fit two tracks in the tunnel under Wisconsin Avenue, the plan also recommended elevating the Capital Crescent Trail above the Purple Line transitway in the tunnel to accommodate both a high-quality transitway and high-quality trail in this constrained segment within the overall alignment.

In response to the 2010 *Purple Line Functional Plan's* recommendation to elevate the trail above the transitway, the Maryland Transit Administration (MTA) analyzed that option in fall 2011, and determined that elevating the trail in this manner would substantially increase the cost of the trail project and could threaten the structural integrity of the Apex Building. In 2012, the County Council recommended against constructing a trail in a shared tunnel with the Purple Line and instead focus on constructing a high-quality surface trail.

In an effort to incentivize redevelopment of the Apex Building to occur in tandem with the Purple Line construction, which would enable MTA to construct a wider Purple Line station platform, a new tunnel for the Capital Crescent Trail, and to provide a bicycle parking station, the County Council approved the 2013 *Bethesda Purple Line Station Minor Master Plan Amendment*. The Apex Building has now been redeveloped as The Wilson and The Elm and provides space for a portion of the future trail in a new tunnel adjacent to the Purple Line station platform. The Subject Mandatory Referral projects would complete the vision of the Capital Crescent Trail.

Figure 2 shows the location of the Purple Line, the Capital Crescent Trail Mainline, the Capital Crescent Trail "Tunnel Route," and the Capital Crescent Trail "Surface Route."

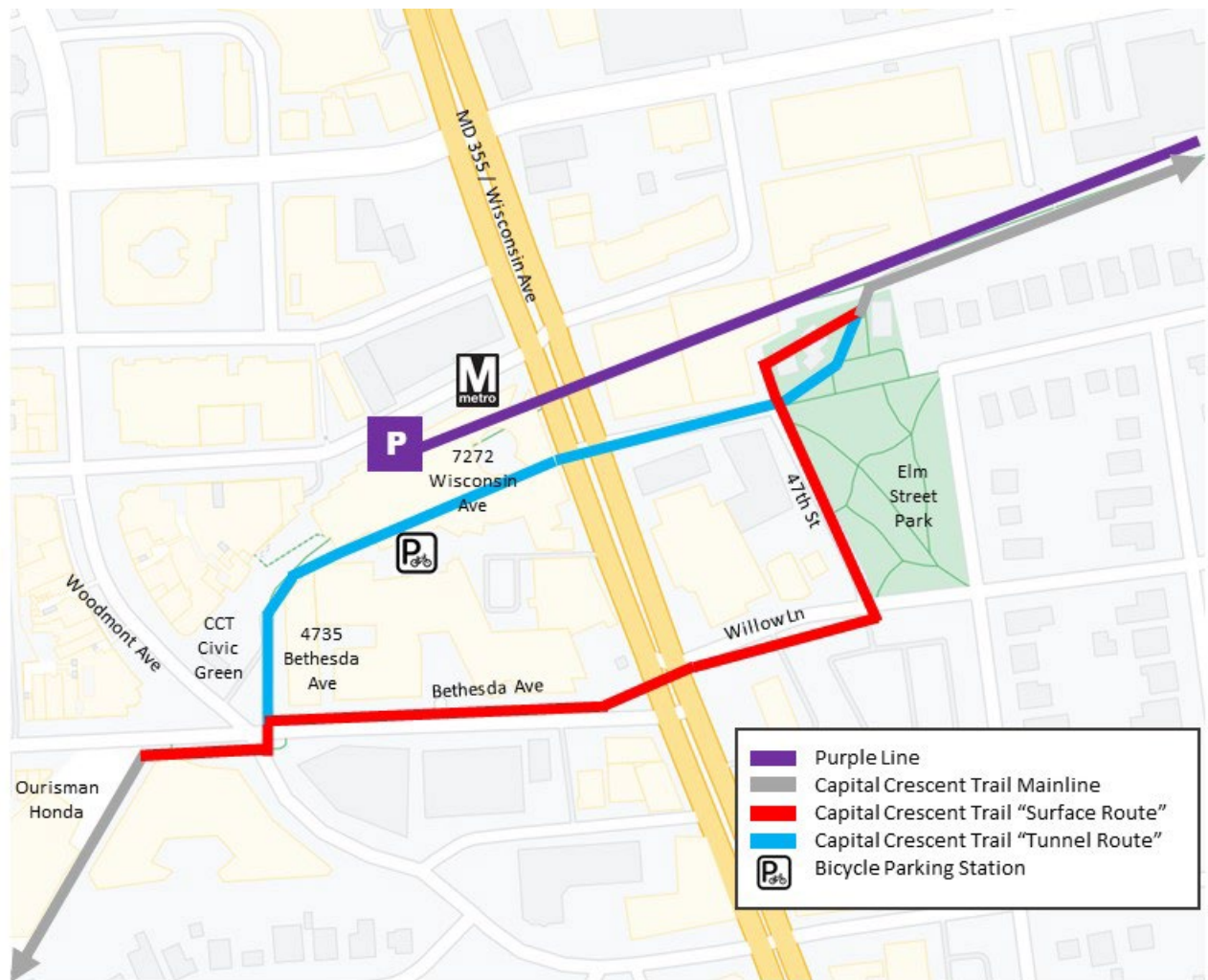


Figure 2: Capital Crescent Trail Alignments through Downtown Bethesda

SECTION 3: RECENT PROJECTS

Completion of the Capital Crescent Trail in Downtown Bethesda has occurred through a combination of development projects, state projects and county projects. Projects that have recently been completed or are currently under construction are listed below and shown in Attachment A.

Ourisman Honda (A): As part of a settlement with the county due to its encroachment into the Georgetown Branch right-of-way, Ourisman Honda completed upgrades to the Capital Crescent Trail along a 300-foot segment to the south of Bethesda Avenue in 2019 (see Figure 3). This project was approved by the Planning Board on July 20, 2017 as mandatory referral MR2017015.



Figure 3: Capital Crescent Trail along Ourisman Honda

4735 Bethesda Avenue (B): In 2019, JBG/Woodmont II, LLC completed a 14-foot-wide, 160-foot-long section of the Capital Crescent Trail along the former Reed Street right-of-way, between Bethesda Avenue and the future Purple Line station (see Figure 4). This project was the subject of an agreement between Montgomery County and JBG/Woodmont II, LLC on August 17, 2016 (see Book 52645, pages 24-28).



Figure 4: Capital Crescent Trail along 4735 Bethesda Avenue

7272 Wisconsin Avenue (C): The former Apex Building was redeveloped by Carr Properties into The Wilson and The Elm at 7272 Wisconsin Avenue. Within the basement level of this building, space was reserved for future implementation of the Purple Line Bethesda Station and tracks. Separate spaces were also constructed within the basement level for the Capital Crescent Trail tunnel and a two-story below-grade structure designated for bicycle parking. This bicycle parking station is conveniently located near the Purple Line and WMATA Red Line Bethesda Stations, Capital Crescent Trail and Downtown Bethesda. This project was approved by the Planning Board on January 5, 2017 and was completed in 2021.

Capital Crescent Surface Trail Phase 1 (D): MCDOT is completing construction of the Capital Crescent Surface Trail Phase 1, which starts at the intersection of Woodmont Avenue and Bethesda Avenue, travels along the north side of Bethesda Avenue, crossing MD 355 and then travels along the south side of Willow Lane, terminating at the intersection with 47th Street. That project was the subject of mandatory referral MR2019004, which the Planning Board reviewed on October 25, 2018.

Capital Crescent Trail (E): As part of the Purple Line project, the Maryland Transit Administration is constructing the Capital Crescent Trail between Elm Street Park in Bethesda and the Silver Spring Transit Center, as well as a 50-foot-long segment of the trail west of 7272 Wisconsin Avenue. Construction of the Purple Line and Capital Crescent Trail largely ceased in fall 2020 but is anticipated to resume in early 2022. The Planning Board reviewed mandatory referral MR2014035 on March 20, 2014.

SECTION 4: CAPITAL CRESCENT SURFACE TRAIL PHASE 2

PROJECT DESCRIPTION

The **Capital Crescent Trail Phase 2 (F)** would construct a 10-foot-wide shared-use path along the east side of 47th Street from Willow Lane to Elm Street. It would connect the Capital Crescent Surface Trail Phase 1 at Willow Lane to the Capital Crescent Trail Under MD 355 Phase 1. The project includes a few features:

- A 10-foot-wide trail along the east side of 47th Street.
- A raised crossing of Willow Lane would reduce the speed of motor vehicles crossing the trail and improve the visibility of trail users.
- An 11-foot-wide buffer from traffic in the form of a mountable truck apron, loading zone, fire lane and street buffer.

Most of the space for the street buffer and trail is reallocated from the existing sidewalk and street buffer on the east side of 47th Street and by narrowing 47th Street from 24 feet to 12 feet. To achieve this dimension while enabling trucks to negotiate turns onto 47th Street and to provide space for emergency vehicles, the project incorporates a mountable truck apron on the southern end of 47th Street (shown with the salmon color on the left side of Figure 5) and a truck loading zone / emergency vehicle response area (shown in light grey in the middle of Figure 5). The truck loading zone is approximately 50 feet long and is adjacent to an emergency vehicle response area which is also approximately 50 feet long.

Much of this project is located within the Town of Chevy Chase and will require a memorandum of understanding between MCDOT and the Town prior to construction.

Design Plans for this project are located at:

<https://eplans.montgomeryplanning.org/daiclinks/pdodlinks.aspx?apno=MR2020030&proiname=Capital%20Crescent%20Surface%20Trail%20-%20Phase%202>



Figure 5: Capital Crescent Surface Trail Phase 2 along 47th Street

MASTER PLAN CONSISTENCY

The Capital Crescent Surface Trail Phase 2 project is consistent with the applicable master and sector plans:

- The 2018 *Bicycle Master Plan* recommends a sidepath on the east side of 47th Street.
- The 2017 *Bethesda Downtown Plan* identifies 47th Street as Business District Street with a 60-foot-wide right-of-way and a target speed of 25 mph.

ANALYSIS

Trail Design

The Capital Crescent Surface Trail Phase 2 project would complete the “surface trail” between Downtown Bethesda and Elm Street Park. It would serve as the main connection for the Capital Crescent Trail through Downtown Bethesda before the Capital Crescent Trail tunnel is complete and would help to relieve some of the congestion that can be expected in the Capital Crescent Trail tunnel, once that project is complete. The project creates a safe environment for pedestrians and bicyclists by providing a raised crossing of Willow Lane and narrowing 47th Street from 24 feet to 12 feet, which would reduce the speed of motor vehicles along Elm Street. The trail width of 10 feet meets minimum standards in the Complete Streets Design Guide for a shared use path. The street buffer varies and is 11 feet wide at the northern end where adjacent to the street, 4 feet when adjacent to the mountable truck apron and 3 feet when adjacent to the loading and emergency vehicle areas, which meets the requirements in the Complete Streets Design Guide.

47th Street

Per the 2020 *Bethesda Streetscape Standards*, 47th Street is a Neighborhood Local Street and therefore requires a 6- to 10-foot-wide pedestrian through zone and a 5- to 8-foot-wide planting zone. While the pedestrian through zone dimensions are achieved with the trail, the planting zone dimensions are unachievable for most of the street due to the need for a loading zone and a mountable truck apron.

Elm Street Park

The proposed alignment of the Capital Crescent Trail runs along the entire western frontage of Elm Street Park within the Town of Chevy Chase’s 47th Street right-of-way. Three electric utility poles with overhead crossbars and a sanitary sewer line would be relocated to the landscape strip. The overhead wires are located on the outer ends of the crossbars placing the electric lines directly over the Capital Crescent Trail for its entire length along the park frontage. The narrow width of the landscape buffer strip and the relocated utility lines eliminate the opportunity to provide shade trees on the west side of the trail as depicted in Figure 5 above and also creates a conflict with any shade trees proposed for the west side of the park. This project provides the best, and perhaps only opportunity to underground the overhead electric lines in this section of downtown Bethesda and it is noted that one of the three poles is identified to be removed and the lines undergrounded as part of the future Capital Crescent Trail tunnel project.

Approximately seven trees along the park’s frontage would be significantly impacted by the trail construction and should be removed as part of this project. It is recommended that an additional two trees be root pruned prior to

construction, to limit the impact to their critical root zones. As mitigation, MCDOT should plant a row of Frontier Elms approximately 30 feet on-center along the east side of the new trail within Elm Street Park.

Additional coordination between the Capital Crescent Surface Trail Phase 2 and the Capital Crescent Trail Under MD 355 Phase 1 projects is necessary to resolve differences in the plans, particularly in the area at the western terminus of the “promenade” through Elm Street Park. MCDOT and Department of Parks staff will need to continue to work cooperatively to complete the design and construction details of the trail and park improvements. A Park Permit for Construction is required to ensure appropriate transitions to parkland and for necessary tree removals and plantings.

Environmental

Environmental Guidelines

This project is located primarily within the right-of-way along 47th Street and Willow Lane in Downtown Bethesda and within the Rock Creek and Little Falls watershed. The project area consists of soils identified as urban land and Glenelg soil, which are characteristically well drained and not considered highly erodible or otherwise sensitive or protected according to the Montgomery County Environmental Guidelines. There are no wetlands, streams and/or associated buffers, 100-year floodplains, or rare/threatened/endangered species within the study area.

There is no forest on or adjacent to the site, however many street trees run parallel to the site area ranging in size from 2 inches to 35 inches in diameter at breast height (DBH); on average, trees are sized from 12 to 24 inches DBH. In the locations where trees lie near the Limit of Disturbance, tree protection measures have been proposed. In compliance with the Montgomery County Roadside Tree Law, any trees removed will be replaced with a mitigation ratio of 3:1 along the county right-of-way and at 1:1 along the local right-of-way; this applies to street trees of any size, resulting in the removal of 16 trees in total and mitigation planting of 27 trees. With the proposed tree protection measures and mitigation plantings, the project is in conformance with the Montgomery County Environmental Guidelines.

Forest Conservation

This Application is subject to Chapter 22A Forest Conservation Law but is exempt from the requirement to submit a Forest Conservation Plan as a Linear Project not subject to Applicability under Section 22A-4. Mandatory referrals must address forest conservation law when submitted for a property larger than 40,000 sf and/or for more than 5,000 square feet of proposed cutting, clearing, or grading. For mandatory referrals proposing less than 5,000 square feet of disturbance on properties smaller than 40,000 square feet, forest conservation law does not apply.

The subject Application, MR2020030 for Capital Crescent Surface Trail Phase 2, consists of a tract area of less than 40,000 square feet with less than 5,000 square feet of proposed cutting, clearing, or grading; therefore, this Application is not subject to the requirement to submit a Forest Conservation Plan.

Stormwater Management

The Project must comply with the requirements of Chapter 19 of the Montgomery County Code. As described in the Stormwater Concept Approval letter from the Montgomery County Department of Permitting services, dated

March 11, 2020, due to the project scope, this application qualifies for the small land disturbance category and is eligible for a waiver of quality and quantity for on-site stormwater management. The concept approval is based on all stormwater management structures being located outside of the public utility easement, the public improvement easement, and the public right of way. With this qualification, the Applicant will meet all applicable requirements of Chapter 19 of the Montgomery County Code.

Historic Properties

This project has no impacts to historic resources.

RECOMMENDATIONS

General Recommendations

1. **Design all sidewalks and curb ramps to the design standards shown on pages 48-50 and 54-55 of the 2020 *Bethesda Downtown Streetscape Standards*.**

The 2020 *Bethesda Downtown Streetscape Standards* provide requirements for the design of sidewalks and curb ramps in Downtown Bethesda, as shown in Figure 6.

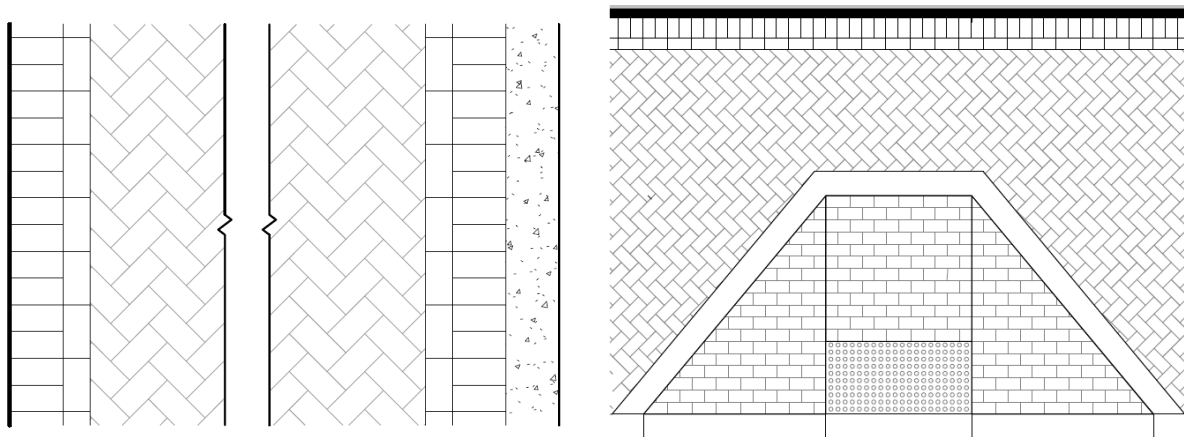


Figure 6: Sidewalks (left) and Curb Ramp (right) Design Standards

2. **Underground the utility poles along 47th Street.**

The narrow width of the street buffer and the relocated utility lines eliminate the opportunity to provide shade trees on the west side of the trail as depicted above and also creates a conflict with any shade trees proposed for the west side of the park. The Capital Crescent Trail projects provide the best, and perhaps only opportunity to underground the overhead electric lines in this section of Downtown Bethesda and it is noted that one of the three poles is identified to be removed and the lines undergrounded as part of the future Capital Crescent Trail tunnel project.

3. **Obtain a Park Permit for Construction prior to beginning construction.**
4. **Reconcile the differences in the design of the Capital Crescent Surface Trail Phase 2 with the Capital Crescent Trail Under MD 355 Phase 1 where they merge at the intersection of 47th Street and Elm Street: 1) extend the curb along 47th Street at the Promenade to the corner of the Air Rights Building loading dock area, 2)**

coordinate the alignment and grading of the trail. Relocate the manhole for the sewer out of the pedestrian plaza area.

As the plans for the Capital Crescent Surface Trail Phase 2 were completed in advance of the Capital Crescent Trail Under MD 355 project, there are small differences between the two designs that need to be reconciled at the intersection of 47th Street and Elm Street. These include the location of the curb line on the east side of 47th Street and the alignment and grading of the trail.

5. Convert northern section of the mountable truck apron to a landscaped street buffer with and relocate utility pole to this area.

The turn templates prepared for this project (see Figure 7) show that a WB-40 truck turning left from eastbound Willow Lane to northbound 47th Street does not need to use the full mountable truck apron. Reducing the length of the mountable truck apron to approximately Station 50+90 would create additional space for plantings and poles, providing adequate separation between the trail and poles, and reduce the potential for illegal parking.

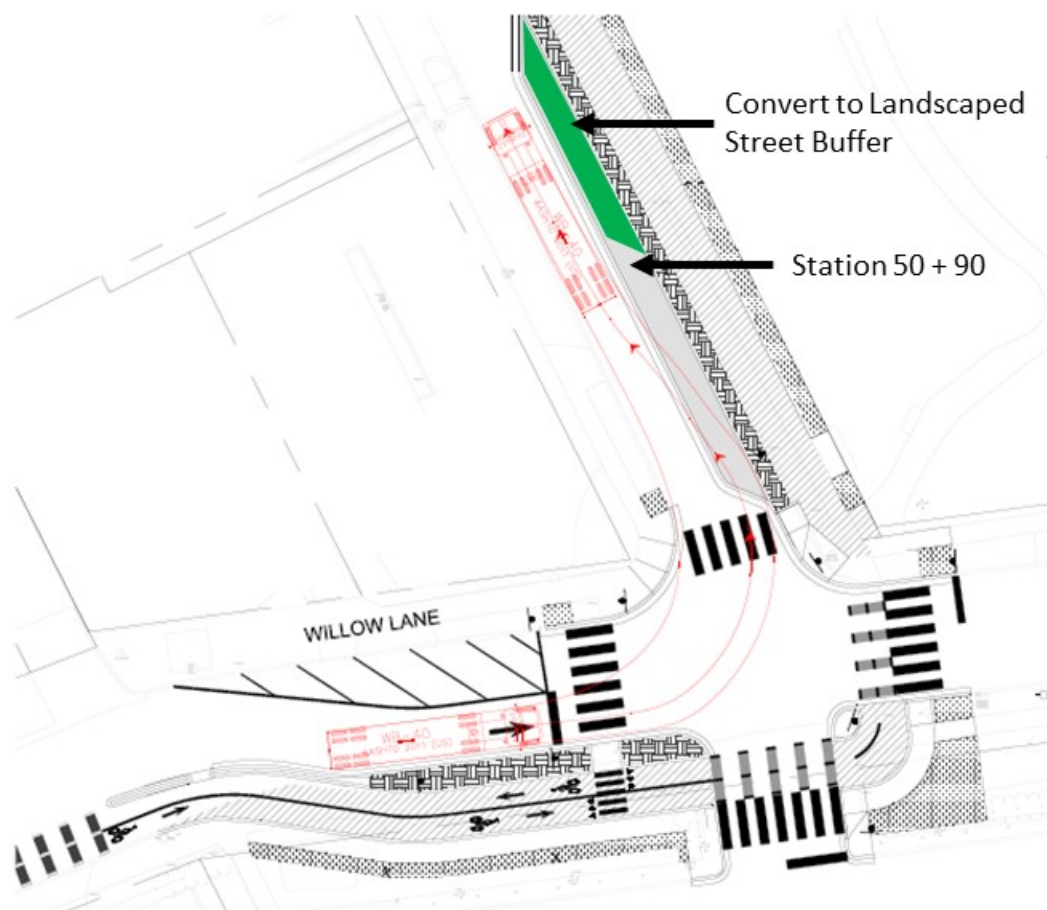


Figure 7: Turn Template for WB-40 Left Turn onto 47th Street

Street Trees

6. **Revise the plan to remove all trees on park property that would be impacted by the demolition and new trail construction, including Tree #44, 45, 46, 54, 55, 58, and 59. Root prune around Tree #61 and 65.**
7. **Plant a row of 3 to 3.5-inch caliper Frontier Elms, 30 feet on center, east of the Capital Crescent Trail along 47th Street frontage between Willow Street and the new pedestrian plaza area.**

Streetlights and Utility Poles

8. **Per the 2020 *Bethesda Downtown Streetscape Standards*, provide 60-foot spacing between streetlight poles along 47th Street.**
9. **Where feasible, locate streetlight poles in the street buffer between 47th Street and the Capital Crescent Surface Trail.**

Locating streetlight poles in the street buffer would reduce the impacts to Elm Street Park.

10. **Provide a 2-foot-wide buffer between the trail and all utility poles.**

The *AASHTO Guide for the Development of Bicycle Facilities*, Fourth Edition, requires a minimum of 2 feet between shared use paths and vertical obstructions, including poles, as pedestrians and bicyclists tend to “shy” away from obstructions to avoid hitting them.

SECTION 5: CAPITAL CRESCENT TRAIL UNDER MD 355

PROJECT DESCRIPTION

The Capital Crescent Trail Under MD 355 project would complete the final link in the Capital Crescent Trail, a regional trail that will ultimately extend from Georgetown to Silver Spring. It would create a high-quality transportation hub that connects the surrounding communities to the commercial core in Downtown Bethesda, the future entrance to the Red Line station, the future Purple Line station, and a bicycle parking station. Due to the high cost of the project, it can be completed in two phases if necessary. Phase 1 would ensure that the existing section of the Capital Crescent Trail between Georgetown and Bethesda Avenue is connected to the Purple Line section of the Capital Crescent Trail between Elm Street Park and the Silver Spring Transit Center, upon completion of the Purple Line. Phase 2 would provide a more direct connection through Downtown Bethesda via the construction of a new tunnel under MD 355. If funding becomes available, MCDOT may decide to construct the project all in a single phase. In this event, some elements of Phase 1 would be dropped from the project scope, as described in the next section.

Design Plans for this project are located at:

<https://eplans.montgomeryplanning.org/daiclinks/pdoxlinks.aspx?apno=MR2022002&projname=Capital%20Crescent%20Trail%20Under%20MD%20355>

Capital Crescent Trail Under MD 355 Phase 1

Phase 1 of the project includes four components:

Capital Crescent Civic Green Connector (G): The project would construct a 12-foot-wide, 100-foot-long segment of the Capital Crescent Trail that would connect the existing trail adjacent to 4735 Bethesda Avenue with the future Red Line station entrance, Purple Line, and the bicycle parking station.

Bicycle Parking Station Completion (H): The project includes the fit-out of a bicycle storage area in the 7272 Wisconsin Avenue building. The 7272 Wisconsin Ave project constructed a shell for a bicycle parking station directly adjacent to the Capital Crescent Trail and Bethesda Purple Line station. The Capital Crescent Trail Under MD 355 project would outfit the bicycle storage area within the 7272 Wisconsin Avenue building with bike racks, lighting and other finishings (see Figure 8). The bicycle storage area would provide parking for approximately 460 bicycles. The bottom level of the bicycle storage area would be a secured, long-term, bicycle parking area with space for 330 bicycles. The upper level of the bicycle storage area would be an unsecured, short-term, bicycle parking area with spaces for approximately 130 bicycles.



Figure 8: Bicycle Parking Station

Capital Crescent Surface Trail Interim Extension (I): The project would construct an interim extension of the Capital Crescent Surface Trail that links the Capital Crescent Surface Trail Phase 2 to the Capital Crescent Trail Mainline project under construction as part of the Purple Line project. This section of trail would ensure that the Capital Crescent Trail is complete between Downtown Bethesda and Downtown Silver Spring, once the Purple Line is completed, prior to completion of the “tunnel” beneath MD 355.

As this project traverses the northern section Elm Street Park, it triggers the need to redevelop the park, as described in “Elm Street Park Redevelopment (J)” below.

If construction of the Capital Crescent Trail Under MD 355 occurs in one combined phase, this element of the project would be eliminated.

Elm Street Park Redevelopment (J): The project would redevelop the northern portion of Elm Street Park to accommodate the Capital Crescent Surface Trail Interim Extension (I), including the Elm Street right-of-way, referred to as the “promenade”. All facilities will be designed to be ADA compliant. The park will contain a new multi-age playground with separate areas for younger and older children, an outdoor fitness area, a variety of seating areas, accessible walkways, a drinking fountain, bike racks, lighting, landscape planting, fencing and stormwater management. The west end of the existing “promenade” would be reconstructed to include an expanded pedestrian plaza area. The current plans include the undergrounding of the existing utility poles which line the promenade and the installation of new lighting.

If construction of the Capital Crescent Trail Under MD 355 occurs in one combined phase, the project would proceed directly to implementing the redevelopment of Elm Street Park as envisioned in Phase 2, skipping the redevelopment of Elm Street Park envisioned in Phase 1.

Capital Crescent Trail Under MD 355 Phase 2

Phase 2 of the project includes three components:

Capital Crescent Trail Tunnel (K): The project would construct a grade-separated crossing for the Capital Crescent Trail under MD 355 that links the developer-built portion of the trail (beneath the 7272 Wisconsin Avenue building) with the Capital Crescent Trail Mainline and Capital Crescent Surface Trail Phase 2. This approximately 1,000-foot-long segment of the trail (shown in Figure 9) would be 16 feet wide and 12 feet high. The tunnel would include LED lighting, CCTV security cameras, cellular phone coverage and blue light phones, among other things.

As this project traverses the northern section Elm Street Park, it triggers the need to redevelop the park, as described in “Elm Street Park Redevelopment (M)” below.



Figure 9: The Capital Crescent Trail Tunnel

The Capital Crescent Trail Under MD 355 project would completely reconstruct Elm Street between MD 355 and 47th Street. To comply with Fire Life Safety code requirements, an egress point from the tunnel is required within Elm Street and would be located in the north sidewalk, at the eastern end of Elm Street. At the street level, the exit from the egress stairs would be an emergency hatch door. A metal railing will be added around three sides of the egress stair emergency hatch door to prevent pedestrians or vehicles from stopping on top of the hatch. As the emergency egress hatch must be located within the Elm Street sidewalk, the north curb line at the east side of Elm Street would be pushed to the south. This would reduce the Elm Street roadway curb-to-curb width to 27 feet between 47th Street and the entrance to the Air Rights Parking Garage. This portion of Elm Street would consist of a single 20-foot-wide westbound travel lane with a 7-foot-wide parking lane on the south side of Elm Street. As shown in Figure 10, the tunnel egress point would be located in the space occupied by parked cars. All of the trees on the north side of Elm Street would be removed.



Figure 10: Location of the Proposed Tunnel Egress Point on North Side of Elm Street

Capital Crescent Surface Trail Permanent Extension (L): The project would modify the Capital Crescent Trail extension in Elm Street Park to tie into the “tunnel” route, as shown in Figure 11.



Figure 11: Connection between the Tunnel Route and Surface Route in Elm Street Park

Elm Street Park Redevelopment (M): Construction of the Capital Crescent Trail Tunnel (K) within Elm Street Park would necessitate the reconstruction of the northern portion of the park and the promenade. The existing grade

around the tunnel would be raised to better integrate the tunnel within the site and provide more useable area for recreation. The resulting slope from the top of the tunnel would be incorporated into the design of an exciting fully accessible, multi-age, themed playground. Using the new topography as an opportunity to reinforce the playground theme, the older children's play area is envisioned as a crater mountain with a series of climbing rocks, ropes and slides. The younger children's play area is designed with a crater lake theme and includes a play structure boat for imaginary play and a variety of play elements including slides and bouncing and swinging elements. Both play areas are designed to be ADA compliant. The proposed permanent redevelopment of Elm Street Park is shown in Figure 12. Other facilities include a rebuilt promenade with seating, an outdoor gym, drinking fountain, walkways, lighting, bike racks, landscape planting, and stormwater management.



Figure 12: Elm Street Park Aerial View

MASTER PLAN CONSISTENCY

The Capital Crescent Trail Under MD 355 project is consistent with the applicable master and sector plans.

The 2018 *Bicycle Master Plan* identifies the Capital Crescent Trail as part of the Breezeway Network of arterial bikeways with a tunnel under MD 355. The plan also recommends a bicycle parking station with 330 long-term spaces and 130 short-term spaces.

The 2017 *Bethesda Downtown Plan* identifies Elm Street as Business District Street with a 60-foot-wide right-of-way and a target speed of 25 mph.

ANALYSIS

The Capital Crescent Trail Under MD 355 is the result of over three years of collaboration between MCDOT, the Planning Department and the Parks Department and would provide the final link in the Capital Crescent Trail. The

result is a high-quality trail that balances the needs of trails users, the redevelopment of Elm Street Park and requirements of emergency responders.

Trail Design

Grade Separation

The most important element of the project is the grade-separated connection beneath MD 355. A grade-separated crossing at this location is consistent with the design of the rest of the Capital Crescent Trail, which includes existing grade-separated crossings of MacArthur Boulevard, Bradley Boulevard, Massachusetts Avenue, River Road and planned grade-separated crossings at East-West Highway, Connecticut Avenue, Jones Mill Road, Lyttonsville Place, 16th Street, Spring Street and US 29.

Trail Width

The 16-foot width of the tunnel provides an effective width of 12 feet, given that pedestrians and bicyclists tend to “shy” away from walls. This width is sufficient to enable two pedestrians or bicyclists to travel side-by-side while passed by a bicyclist, which is important given the anticipated high usage of the trail (see Figure 13). It also matches the width of the Capital Crescent Trail Mainline, from Elm Street Park to the Silver Spring Transit Center.

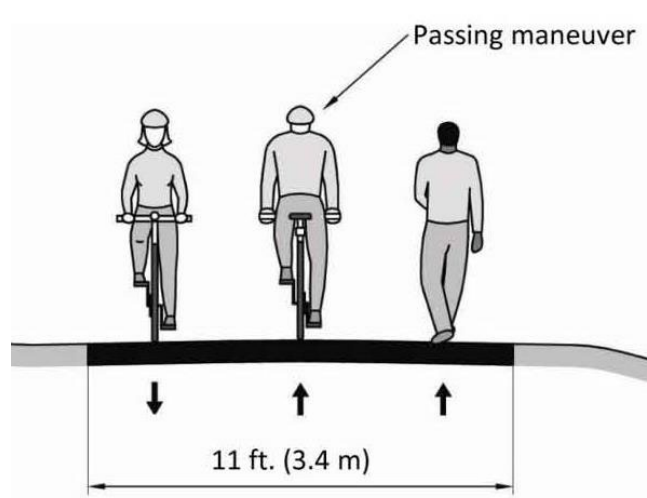


Figure 13: Trail Width Required to Enable Passing

Trail Height

The 14-foot height of the tunnel provides an effective height of 12 feet, after accounting for a 2-foot drop ceiling that would hide most of the electrical, security and communication conduits and fire suppression pipes running along the length of the tunnel. This height would create the impression of a more spacious tunnel.

Trail Alignment

While the tunnel includes a short curve as it emerges in Elm Street Park, the curve is necessary to avoid bisecting the park.

Trail Grade

ADA requirements require shared use paths to have grades less than 5.0%, except for short distances. The Capital Crescent Trail meets this requirement. One of the advantages of a longer tunnel is that it allows for a gentler slope overall, though the slope does reach 4.90% as the trail emerges from the portal in Elm Street Park.

Trail Lighting

Linear LED wall wash lighting would be mounted to the tunnel ceiling, above the edges of the drop ceiling, and would be oriented to illuminate the white wall tile.

Elm Street Reconstruction

Per the 2020 *Bethesda Streetscape Standards*, Elm Street is a Downtown Mixed-Use Street and therefore requires an 8- to 12-foot-wide pedestrian through zone and a 5- to 8-foot-wide planting zone. While the pedestrian through zone dimensions are achieved with this project, the planting zone dimensions are unachievable for most of the street due to provision of on-street parking on the north side of the street.

While Elm Street is proposed to be a single lane road that is 20 feet wide, exceeding the dimensions for a Downtown Street in the Complete Streets Design Guide, this dimension is required by Montgomery County Fire and Rescue Service.

Bicycle Parking Station

While bicycle parking stations exist at several Metrorail stations in the region, including Union Station, Vienna Station, College Park Station and Wiehle-Reston East Station, the bicycle parking station in Bethesda would create the first such facility in Montgomery County. The proposed design would create a high-quality station, directly adjacent to the Red Line and future Purple Line station and in the heart of Downtown Bethesda.

Elm Street Park

Park and Planning staff are working closely with MCDOT staff, consultants, and members of the community on the design of the intersection of the Capital Crescent Trail and the pedestrian plaza area. The pedestrian plaza area would be intersected by the Capital Crescent Surface Trail in the interim and post-tunnel conditions. This location is receiving careful design attention because of potential conflicts between the anticipated high volume of trail users traveling north and south, and people traveling east and west between Chevy Chase and Bethesda, including to and from Metrorail and the future Purple Line. The project team is studying options and design strategies to narrow trail crossing locations to limit crossing conflicts and make crossing movements more predictable.

Staff has met several times with ADA professionals, consultants, and members of the disability community, including people who are blind or visually impaired, to work through design strategies that minimize conflicts and improve safety for all users. Two design meetings were held via Teams on March 11, 2021 and April 27, 2021 during which several possible design approaches were presented and discussed. At the request of the community, a site visit took place on July 21, 2021. During the meeting, the importance of maintaining the east-west pedestrian circulation route to the sidewalk along the north side of Elm Street to the existing Metrorail entrance was discussed. The project team will continue to work towards developing and completing the trail and park designs that best meet the needs of all park and trail users.

Environmental

Environmental Guidelines

A Natural Resource Inventory/Forest Stand Delineation (NRI/FSD), designated no. 420201600, was approved for the Subject Property on June 2, 2020. The approved NRI/FSD describes the existing and natural features of the site including an inventory of significant and mature trees measuring 24 inches or greater in diameter-at-breast height (DBH). Those trees which are 30 inches DBH and above are subject to the Variance provision of the Forest Conservation Law for any proposed impacts and/or removals.

The Project area contains no forest, however there are many mature trees of a variety of species. Specimen/Significant trees range in size from 28 inches up to 49.5 inches while most street trees range generally from 8 to 20 inches. There are minor slopes on the site as it drains towards the south; the soils onsite are classified as urban land and Glenelg loam, neither of which are environmentally sensitive. There are no streams, stream buffers, or wetlands onsite.

Forest Conservation

Although there is no forest onsite, this Application is subject to Chapter 22A Forest Conservation Law and as such, the Applicant has submitted a Preliminary Forest Conservation Plan along with the Mandatory Referral Application; the Preliminary Forest Conservation Plan is described in a separate report and includes conditions of approval which will ensure all applicable requirements of Chapter 22A Forest Conservation Law are met.

Stormwater Management

The Project must comply with the requirements of Chapter 19 of the Montgomery County Code. The Application received approval of a Stormwater Management Concept/Site Development Stormwater Management Plan from the Department of Permitting Services on June 29, 2021. The plan demonstrates that stormwater management goals will be met via environmental site design (ESD) consisting of micro-bioretenion facilities and porous surfaces. Additionally, a waiver has been granted, due to space constraints, for two areas within the right-of-way. A detailed review of stormwater management will occur at the time of detailed plan review. With this approval, the Applicant will meet all applicable requirements of Chapter 19 of the Montgomery County Code.

Historic Properties

This project has no impacts to historic resources.

RECOMMENDATIONS

General Recommendations

1. **Design all sidewalks and curb ramps to the design standards shown on pages 48-50 and 54-55 of the 2020 Bethesda Downtown Streetscape Standards.**

The 2020 Bethesda Downtown Streetscape Standards provide requirements for the design of sidewalks and curb ramps in Downtown Bethesda, as shown in Figure 14.

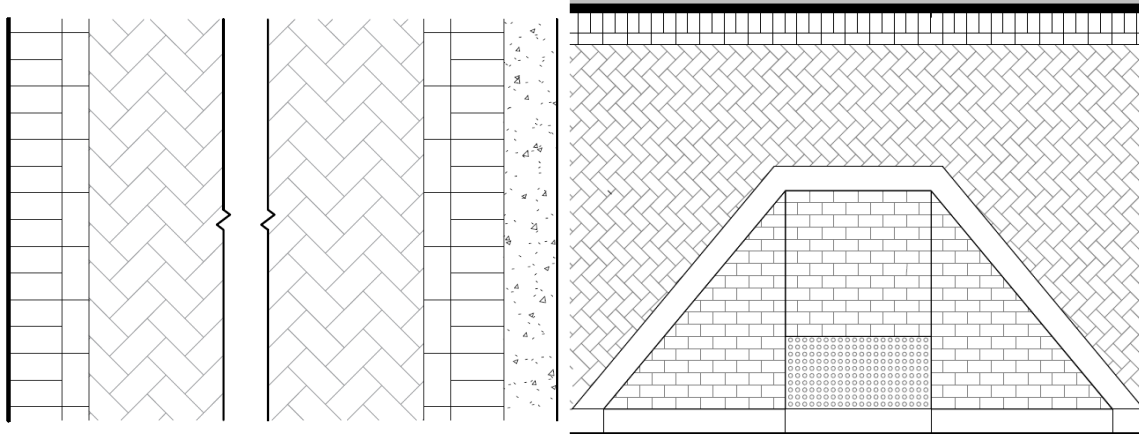


Figure 14: Sidewalks (left) and Curb Ramp (right)

2. **Underground the utility poles along 47th Street.**

The narrow width of the street buffer and the relocated utility lines eliminate the opportunity to provide shade trees on the west side of the trail as depicted above and also creates a conflict with any shade trees proposed for the west side of the park. The Capital Crescent Trail projects provide the best, and perhaps only opportunity to underground the overhead electric lines in this section of Downtown Bethesda and it is noted that one of the three poles is identified to be removed and the lines undergrounded as part of the future Capital Crescent Trail tunnel project.

Bicycle Parking Station

3. **Provide stacked bicycle racks with lift assist.**

Stacked bike racks with lift assist enable racks to be available to individuals of all heights and physical abilities. Users pull the second tier out, slide it down a few inches above the ground and then load their bikes onto the second tier (see Figure 15). The tray helps lift the bike back to the second level.



Figure 15: A two-tier bike rack with one rack lower to the ground

4. Provide changing rooms and showers.

Providing changing rooms and showers increases the likelihood that commuters will bicycle to work. A study from 2012 found that: “Compared to individuals without any bicycle facilities at work, commuters with cyclist showers, clothes lockers, and bike parking at work are associated with a 4.86 greater likelihood to commute by bicycle. Individuals with bike parking, but no showers and lockers at the workplace, are associated with 1.78 times greater odds to cycle to work than those without trip-end facilities.”¹ While staff has not verified that water hook up exists in the bicycle parking area, Condition 11e of the resolution for 7272 Wisconsin Ave states that: “The Applicant must construct the space for bicycle parking and maintenance area, as illustrated on the Certified Site Plan, with final fit-out to be provided by the Montgomery County Department of Transportation or their designee before the Purple Line Station is open for use. The Applicant must provide water, sewer, electrical, and fiber-optic utility connections available for use by the bicycle parking and maintenance area.”

5. Provide secure access to the long-term bicycle parking area with CCTV security cameras, blue light phones in the bicycle parking area and access by key fob or other means.

The main difference between long-term and short-term bicycle parking is the degree of security provided. Long-term bicycle parking provides higher levels of security as bicycles are stored for longer periods of time. WMATA maintains several “Bike & Ride” stations in the Metrorail system, including the College Park and Vienna stations. Their facilities provide security features such as 24/7 video monitoring, entry through registered SmarTrip cards, emergency call boxes, and bright LED lighting. With these new features, customers can feel more confident storing their bikes at Metro stations.

Elm Street Park

6. Obtain a Park Permit for Construction prior to beginning construction.

7. Revise the permit chart to show that a Park Permit for Construction is required prior to the onset of construction for both Phase 1 and Phase 2 of the Capital Crescent Trail Under MD 355 project. The permit set will include an Existing Conditions plan and a Demolition plan.

8. If a percentage of the project cost is required to be spent on public art, then include a public art component on the tunnel portal in Elm Street Park.

9. Continue working with the Parks Department to finalize the design improvements to Elm Street Park including, but not limited to, the pedestrian plaza at Elm Street and 47th Street, Capital Crescent Trail crossing of the plaza, the Elm Street Promenade, playground, and outdoor gym.

Capital Crescent Surface Trail

10. Design the Capital Crescent Surface Trail north of the Promenade with a maximum running slope of 4.5% and a maximum cross slope of 1.5% to allow for construction tolerance in asphalt construction.

While a maximum running slope of 5.0% and a maximum cross slope of 2.0% meets the requirements of

¹ Beuhler, R., *Determinants of bicycle commuting in the Washington, DC region: The Role of Bicycle Parking, Cyclist Showers, and Free Car Parking at Work*, Transportation Research Part D: Transport and Environment, 2012.

the American with Disabilities Act, in the experience of M-NCPPC, planning for slightly gentler slopes ensures that in construction, the final slope does not exceed federal requirements.

- 11. Reconcile the differences in the design of the Capital Crescent Surface Trail Phase 2 with the Capital Crescent Trail Under MD 355 Phase 1 where they merge at the intersection of 47th Street and Elm Street: 1) extend the curb along 47th Street at the Promenade to the corner of the Air Rights Building loading dock area, 2) coordinate the alignment and grading of the trail. Relocate the manhole for the sewer out of the pedestrian plaza area.**

As the plans for the Capital Crescent Surface Trail Phase 2 were completed in advance of the Capital Crescent Trail Under MD 355 project, there are small differences between the two designs that need to be reconciled at the intersection of 47th Street and Elm Street. These include the location of the curb line on the east side of 47th Street and the alignment and grading of the trail.

Capital Crescent Trail Civic Green Connector

- 12. Match the Capital Crescent Trail paving pattern of the Capital Crescent Civic Green Connector to the pattern in front of 4735 Bethesda Avenue.**

Currently, the paving material for the Capital Crescent Civic Green Connector is shown to be concrete. As the Capital Crescent Civic Green Connector would be a continuation of the trail adjacent to 4735 Bethesda Avenue, it should use the same paving materials and pattern shown in Figure 4.

SECTION 6: CONCLUSION

Community Outreach

MCDOT conducted a public hearing on several bikeways in Downtown Bethesda, including the Capital Crescent Surface Trail and Capital Crescent Trail Under MD 355, on Tuesday, October 9, 2018. A meeting focused on the Capital Crescent Trail Under MD 355 project occurred on Wednesday, January 29, 2020.

Conclusion

The Mandatory Referral applications for the Capital Crescent Surface Trail Phase 2, Mandatory Referral No. MR2020030 and the Capital Crescent Trail Under MD 355, Mandatory Referral No. MR2022002, are consistent with the specific recommendations in the 2018 *Bicycle Master Plan* and the 2017 *Bethesda Downtown Plan*. Staff recommends approval of the Mandatory Referral with the recommendations cited above and transmittal of comments to the Montgomery County Department of Transportation.

ATTACHMENTS

Attachment A: Build Out of the Capital Crescent Trail

Attachment B: Design Plans for Capital Crescent Surface Trail Phase 2

Attachment C: Design Plans for Capital Crescent Trail Under MD 355 2 Phase 1

Attachment D: Design Plans for Capital Crescent Trail Under MD 355 2 Phase 2