Executive Summary

This Environmental Assessment (EA) has been prepared in accordance with the National Environmental Policy Act (NEPA) to evaluate the potential natural, cultural, and socioeconomic effects that may result from the proposed Corridor Cities Transitway (CCT) Project. The Maryland Department of Transportation Maryland Transit Administration (MDOT MTA) is the Project sponsor and the Federal Transit Administration (FTA) is the lead federal agency. The Environmental Protection Agency (EPA), the U.S. Army Corp of Engineers (USACE), the National Institute of Standards and Technology (NIST), and National Capital Planning Commission (NCPC) are cooperating agencies (**Appendix A**).

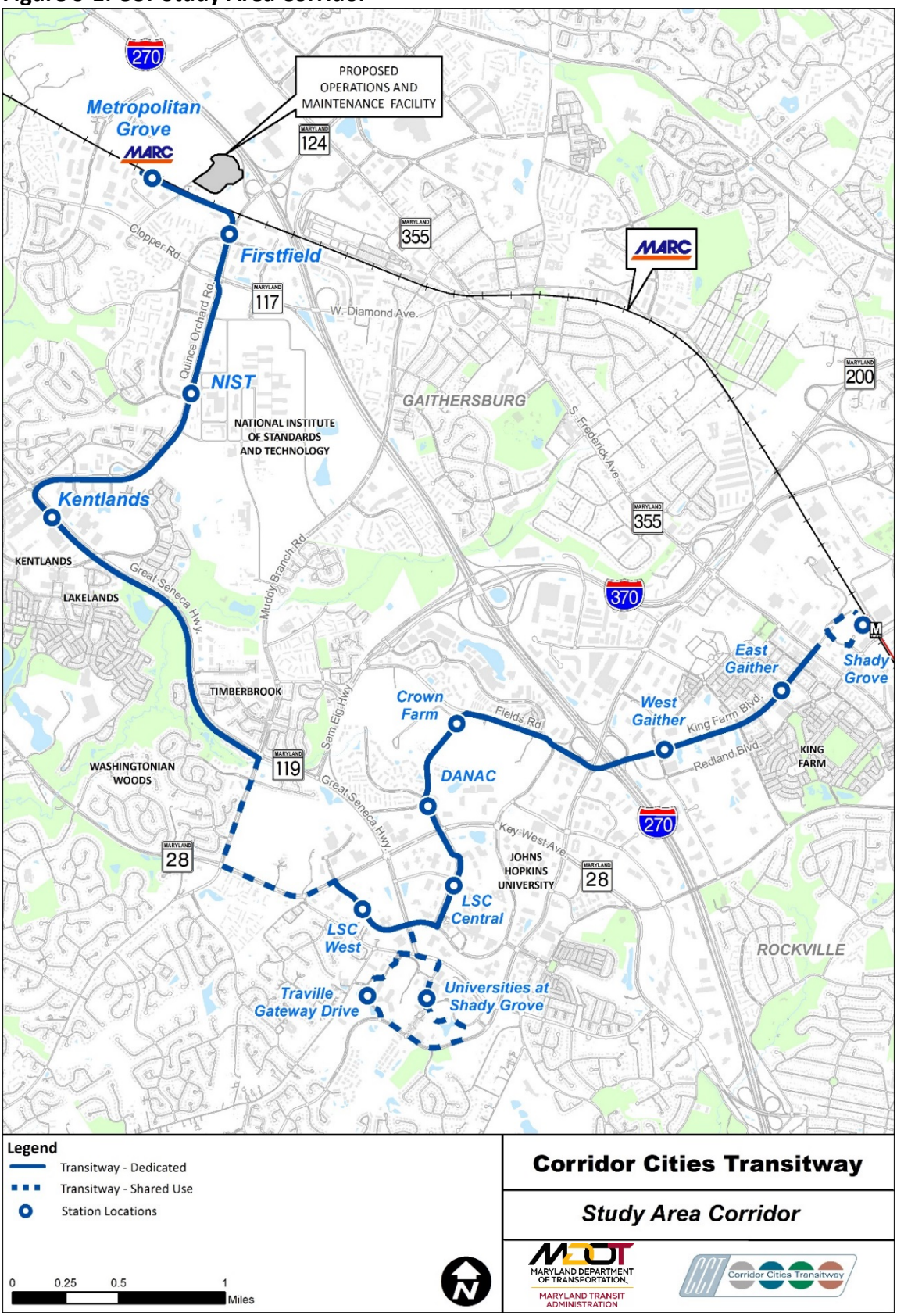
Funding for final design and construction, including right-of-way acquisition for the CCT, has been deferred until fiscal year (FY) 2023. Lower than expected fuel prices and gas tax collection resulted in a shortfall of $746 million in overall Maryland Department of Transportation (MDOT) revenue for state transportation projects. Of the $746 million shortfall, approximately $78 million was deferred, which had previously been allocated to fund CCT final design and right-of-way acquisition. If funding for the CCT becomes available via increased gas tax revenue, private interests, county or city funds, the CCT may move forward on finalizing the EA, updating the design, and entry into FTA's Capital Investment Grant Program, prior to FY 2023.

Description of Project

The CCT Project is a nine-mile bus rapid transit (BRT) line operating between the Metropolitan Grove MARC Station and the Shady Grove Metrorail Station. The transitway would travel adjacent to or in the median of existing and proposed roadways for the majority of the alignment with grade-separated crossings of selected roadways at busy intersections. The term **transitway** is used to describe the horizontal and vertical location of the BRT route proposed in the Build Alternative. The Build Alternative includes the transitway with 13 stations and an Operations and Maintenance (O&M) Facility.

Two CCT routes would operate along the transitway: CCT Direct Service and CCT via Universities and Shady Grove (USG) (**Figure S-1**). The CCT Direct Service route would operate between the Metropolitan Grove and Shady Grove Stations of the CCT, stopping at every station along the transitway. The CCT Service via USG would operate along the transitway, stopping at all stations, but would divert off the transitway to serve two additional stations. For example, buses traveling from the Shady Grove Station on this route would leave the transitway after the Life Sciences Center (LSC) Central Station, stop at the USG and Traville Gateway Drive Stations, return to the transitway, and stop at the LSC West Station and all stations to the Metropolitan Grove Station.

Figure S-1: CCT Study Area Corridor



The CCT Direct Service would operate on five-minute headways[1] during peak periods, six minutes during mid-day, and ten-minute headways during off-peak periods. The one-way travel time from Shady Grove Station to Metropolitan Grove Station would be approximately 42 minutes. The CCT via USG would operate on 15-minute headways during peak periods and 30 minute-headways during off-peak periods. The one-way travel time for CCT service via USG would be approximately 46 minutes.

The 13 stations for the CCT would be specially designed with CCT branding for easy recognition by transit users. Stations would include shelters, seating, fare machines, and both fixed and variable signage to provide customers with information on the CCT route and services, as well as current operations. Safe access for pedestrians and parking for bikes would be provided at all CCT stations. The 11 stations along the CCT Direct Service transitway include the following locations:

- Shady Grove
- East Gaither
- West Gaither
- Crown Farm
- DANAC
- LSC Central
- LSC West
- Kentlands
- NIST
- Firstfield
- Metropolitan Grove

On the CCT via USG, there will be two stations at the following locations:

- Universities at Shady Grove
- Traville Gateway Drive

The CCT would include parking at five stations: Shady Grove, Crown Farm, LSC West, Kentlands, and Metropolitan Grove. To maintain the CCT vehicles, an O&M Facility would be located near the Metropolitan Grove MARC Station.

All CCT service would operate seven days per week. The hours of operation would be consistent with the Washington Metropolitan Area Transit Authority's (WMATA) Red Line Metrorail service for weekday and weekend service. Metrorail service begins at 5 AM on weekdays and 7 AM on weekends, and ends at 12 AM on Sunday through Thursday or 3 AM on Friday and Saturday. The projected ridership on the CCT in 2035 is 30,429 trips per day.

Refer to **Chapter 2** for additional information on the proposed Project components of the Build Alternative.

[1] Headway is the time interval or distance between two vehicles, such as automobiles, buses, or railroad or subway cars, traveling in the same direction over the same route

Purpose and Need

The purpose of the CCT Project is to improve connectivity, mobility, and livability; increase transit capacity; and improve regional air quality by providing premium transit service in the corridor. The CCT Project would help to:

- Improve inter-modal connections in the corridor;
- Increase transit capacity and meet transit demand;
- Enhance mobility;
- Support economic development and local government master plans to enhance the livability of communities in the corridor; and
- Improve regional air quality by increasing transit use.

The need of the CCT Project results from:

- Lack of reliable connections among existing transit routes (including MARC, Metrorail, and local bus network);
- Existing transit service, which is at or near capacity and transit demand and ridership are forecasted to grow in the future;
- Roadway congestion, which contributes to unpredictable and slow travel times for automobiles and buses in the corridor;
- Demand for managed growth and economic development in the region which continues to grow; and
- A regional goal to improve air quality by providing alternatives to automobile usage.

Refer to **Chapter 1** of this EA document for additional information.

Alternatives Considered

Alternatives Evaluated Prior to this EA

Transportation studies for a CCT with transit along the I-270 corridor have been conducted since the 1970s. Preliminary concepts included both a stand-alone transit alignment and combined roadway and transit improvements. In 2011, Federal Highway Administration (FHWA) and FTA jointly concurred that the CCT transit improvements had independent utility from the highway components and the projects could proceed separately. In 2012, the State of Maryland announced the Locally Preferred Alternative (LPA) for the CCT corridor. The CCT LPA was identified as BRT service that extended a total of 15 miles, from the Shady Grove Metro Station to Communications Satellite Corporation (COMSAT). This EA document focuses on the nine-mile portion of the CCT alignment that extends from the Metropolitan Grove MARC Station to the Shady Grove Metro Station.

Subsequent to the announcement of the LPA in May 2012, the MDOT MTA has continued to refine the LPA alignment. These refinements were made based on additional engineering, stakeholder, and public input; additional station planning; and additional environmental analysis. These refinements have been incorporated into the Build Alternative that is described in this EA. Refer to **Chapter 2** for additional information on alternatives previously evaluated.

Alternatives Evaluated in this EA

This EA includes the evaluation of two alternatives: the No-Build Alternative and the Build Alternative. Refer to **Chapter 2** for the complete descriptions of these alternatives.

The **No-Build Alternative** assumes no new BRT transitway in the study area corridor and represents the future conditions of transportation facilities and service in 2035 if the CCT Project is not built. This alternative provides a baseline by which the environmental impacts of the Build Alternative are compared.

Under the **Build Alternative,** the BRT service would travel adjacent to or in the median of existing and proposed roadways for the majority of the alignment. The transitway would typically be 26 feet wide, with one 13-foot lane per direction, including the gutter. In areas with tight horizontal curves, the transitway width would be widened to 30 feet, with one 15-foot lane per direction. In general, the alignment was located to maximize area for stormwater management (SWM) bioretention facilities on one or both sides of the alignment, where feasible. Through the design process, the Build Alternative alignment has been modified in the following locations since the LPA was announced in May 2012:

- Along the CSX tracks by Metropolitan Grove, the transitway would shift from the north side of the tracks to the south side of the tracks.
- Along Muddy Branch Road and Darnestown Road, the transitway would be in shared-use lanes with vehicular traffic and avoid use of the Belward Farm property.
- Near Key West Avenue, the transitway alignment would shift from the east side to the west side of Broschart Road at an intersection with an existing driveway; it would then cross over Key West Avenue.

Environmental Effects

The No-Build Alternative would not result in any adverse natural or cultural resource effects as there will not be physical impact from this alternative. The No-Build Alternative could affect the land use, quality of life, and local economy in the study area corridor. The land use and zoning objectives would not be met and congestion could continue to worsen.

The Build Alternative for the CCT Project would not create significant environmental effects within the study area corridor. **Table S-1** relates the natural, socioeconomic, and cultural effects in the study area. Refer to **Chapter 3** for additional detail on the environmental resources and effects.

Table S-1: Summary of Environmental Effects and Mitigation and Minimization Measures

Resource Area	No-Build Alternative Effects	Build Alternative Effects	Mitigation and Minimization Measures
Land Use	May slow pace of development due to inadequate infrastructure	Convert 98 acres to transportation use from intuitional, commercial, residential, and industrial uses	None proposed
Neighborhoods	No change	Minor strip right-of-way takes, 1 displacement, low to moderate visual impacts since transitway would be compatible with existing transportation right-of-way; moderate noise impacts at Washingtonian Woods and the Vistas	Mitigation for visual impacts and noise impacts proposed (Section 3.27.1)
Community Facilities	No change	No effects	None proposed
Property Acquisitions, Displacements & Right-of-way	0 acres	108 acres (98 permanent; 10 temporary) 1 residential and 1 business displacement	Property acquisition activities, including relocations, will be performed in accordance with the *Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970* and applicable FTA requirements and state laws Displaced persons and businesses within the area needed for the Project may be eligible for benefits under Maryland's Relocation Assistance Program
Economy	Slow the pace and density of planned development that is tied to the implementation of the Build Alternative	1 business displacement; creation of permanent jobs associated with operating & maintaining the CCT; temporary construction jobs created; economic benefits from improved mobility and transit options for accessing jobs	Minimize disruption to businesses during construction and continue ongoing coordination with business in the corridor during design and construction.

Resource Area	No-Build Alternative Effects	Build Alternative Effects	Mitigation and Minimization Measures
Visual Resources	No change	Low to moderate visual landscape change, since transitway would be compatible with existing transportation right-of-way	Stations and lighting will be designed to minimize negative visual impacts; preserve existing tree buffers and replace removed trees.
Environmental Justice Populations	No change	No disproportionate high or adverse effect on EJ populations	None proposed
Parks and Recreational Facilities	0 acres	4.9 acres (0.7 acres from Washingtonian Woods Park & 4.2 acres from Muddy Branch Park)	To be determined with the City of Gaithersburg through on going coordination related to the *de minimis* request
Historic Properties	No change	No adverse effect	None proposed
Archeological Properties	No change	No impacts	None proposed
100-Year Floodplain	0 acres	1.0 acres (0.7 permanent; 0.3 temporary)	Compliance with SWM requirements
Streams/Waterways	0 linear feet	2,247 linear feet (2,102 permanent; 145 temporary)	Time of year restrictions for work in Use I and Use IV streams will be followed; compliance with SWM requirements; stream mitigation to be determined through coordination with MDE and USACE through development and approval of the Compensatory Mitigation Plan
Wetlands	0 acres	0.5 acres (0.4 permanent; 0.1 temporary)	Wetland mitigation to be determined through coordination with MDE and USACE through development and approval of the Compensatory Mitigation Plan
Forest Stands	0 acres	31 acres (28 permanent; 3 temporary)	1:1 reforestation required; no forest clearing between April 1 and August 31
Tree Cover	0 acres	7.9 acres (6.8 permanent; 1.1 temporary)	1:1 replacement

Resource Area	No-Build Alternative Effects	Build Alternative Effects	Mitigation and Minimization Measures
Hedgerows	0 acres	1.5 acres (1.3 permanent; 0.2 temporary)	Further minimization during design and protection fencing installed during construction
Specimen Trees	No change	256 trees (243 permanent; 13 temporary)	1:1 replacements
Street/Individual Trees	No change	1,890 trees (1,717 permanent; 173 temporary)	1:1 replacement
Rare, Threatened, and Endangered Species	No Change	No impacts	No forest clearing between April 1 and August 31 to avoid impacts to the habitat of the northern long-eared bat
Noise and Vibration	No change	Moderate impact at 3 receptor sites	2, 10-foot-high noise barriers for two clusters of residences along Great Seneca Highway
Air Quality	No improvement	Improvements - reduce regional pollutants between 0.1 to 0.2 percent; lower mobile source air toxins; no change in carbon monoxide levels; not a Project of air quality concern for $PM_{2.5}$; decrease in greenhouse gases	Mitigation measures to minimize air quality effects during construction (**Section 3.27.15**)
Energy	No change	Reduce regional energy use by 0.13%	None proposed
Hazardous Materials	No impact	No impact	During final design and construction, if contaminated soils are identified and encountered, off-site remediation, chemical stabilization, or other treatments and disposal options would be evaluated
Utilities	No impact	Relocations will be identified in Final Design; temporary outages are likely	Minimize disruptions during construction

Resource Area	No-Build Alternative Effects	Build Alternative Effects	Mitigation and Minimization Measures
Traffic and Transportation Network	Continued traffic increase and deterioration	Declines in levels of service at some intersections; new signals and modifications to existing signals proposed; changes to medians and entrances; changes to turn lanes; temporary impacts during construction; maintenance of traffic plans will be developed	MDOT MTA finalize the Transportation Management Plan and a Maintenance of Traffic Plan during final design
Pedestrian and Bicycle Facilities	No change	No permanent closures of existing pedestrian or bicycle facilities; proposed improvements with new and reconstructed sidewalks and paths	Facilities constructed in accordance with Americans with Disabilities Act (ADA)
Safety and Security	Not applicable	Designed to meet federal and state safety standards	None proposed
Indirect and Cumulative Effects	No beneficial indirect effects to employment and planned developments would not occur	Indirect benefits from planned developments and properties adjacent to proposed stations; minimal indirect and cumulative effects	None proposed

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Appendix D: Natural Resources Features Map Series including Wetlands, Waters of the US, Soils, Forests, Hedgerows, and Street Trees

Appendix E: Engineering Plans

Appendix F: Technical Studies - A DVD is included with this EA which contains the following technical reports and memorandums that were prepared in May 2014, unless otherwise noted where additional technical analysis was needed. The analysis presented in these technical studies was based on the 5 percent design. The technical studies on the DVD include:

- Air Quality Technical Report, 2015
- Alternatives Technical Report
- Energy Technical Memorandum, 2015
- Environmental Justice Technical Report, 2016
- Hazardous Materials Technical Report
- Indirect and Cumulative Effects Technical Report
- Natural Resources Technical Report
- Noise Technical Report, 2015
- Socioeconomic Technical Report
- Visual Analysis Technical Memorandum
- Identification and Evaluation of Historic Architectural Properties Technical Report
- Phase I Archaeological Survey Technical Report (redacted)

Abbreviations and Acronyms

AA/EA	Alternatives Analysis/Environmental Assessment
AACs	Area Advisory Committees
ACHP	Advisory Council on Historic Preservation
ACS	American Community Survey
ADA	Americans with Disabilities Act
APE	Area of Potential Effect
ASCE	American Society of Civil Engineers
ASCE SUE	American Society of Civil Engineers Subsurface Utility Engineering
AST	Aboveground Storage Tank
ASTM	American Society for Testing and Materials
B&O	Baltimore and Ohio
Block Group	Census Tract Block Group
BMC	Baltimore Metropolitan Council
BMP	Best Management Practice
BRT	Bus Rapid Transit
Btu	British thermal units
CAA	Clean Air Act
CBP	Chesapeake Bay Program
CCT	Corridor Cities Transitway
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulation
CLRP	Constrained Long Range Transportation Plan
CLV	Critical Lane Volume Analysis
CO	Carbon monoxide
CO2e	Carbon dioxide equivalent
COMAR	Code of Maryland Regulations
COMCOR	Code of Montgomery County Regulations
COMSAT	Communication Satellite Corporation
CPOC	Commercial Property Owners Coalition
CRZ	Critical Root Zone

CSX	Chessie-Seaboard Merger, Railway Transportation
CWA	Clean Water Act
DANAC	Real Estate Development Firm
dB	Decibels
dB(A)	A-weighted decibels
dbh	Diameter at Breast Height
DEIS	Draft Environmental Impact Statement
DHS	Department of Homeland Security
DOE	Determination of Eligibility
DOI	Department of Interior
EA	Environmental Assessment
EDR	Environmental Data Resources
EJ	Environmental Justice
EO	Executive Order
EPA	Environmental Protection Agency
ESA	Environmental Site Assessment
ETL	Express Toll Lane
FCP	Forest Conservation Plan
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIDS	Forest Interior Dwelling Species
FIRM	Flood Insurance Rate Maps
FONSI	Finding of No Significant Impact
FSD	Forest Stand Delineation
FTA	Federal Transit Administration
FY	Fiscal Year
GIS	Geographic Information System
GPS	Global Positioning System
GSA	US General Services Administration
GSSC	Great Seneca Science Corridor
HC	Hydrocarbon

HCM	Highway Capacity Manual
HHS	Health and Human Services
HOV	High Occupancy Vehicle
IPaC	Information, Planning and Conservation
IRM	Interagency Review Meeting
ITS	Intelligent Transportation Systems
Ldn	Day-night noise levels
Leq(h)	Hourly Equivalent Noise Level
LLC	Limited Liability Company
LNG	Liquefied Natural Gas
LOD	Limit of Disturbance
LOS	Level of Service
LPA	Locally Preferred Alternative
LRT	Light Rail Transit
LSC	Life Sciences Center
MARC	Maryland Area Regional Commuter
MBSS	Maryland Biological Stream Survey
MCDEP	Montgomery County Department of Environmental Protection
MDE	Maryland Department of the Environment
MDNR	Maryland Department of Natural Resources
MDOT	Maryland Department of Transportation
MDOT CTP	Maryland Department of Transportation Consolidated Transportation Plan
MDMUTCD	Maryland Manual on Uniform Traffic Control Devices
MHT	Maryland Historic Trust
MIHP	Maryland Inventory of Historic Places
MMBtu	One Million Btu
M-NCPPC	Maryland-National Capital Park & Planning Commission
MOA	Memorandum of Agreement
MOVES	Motor Vehicle Emission Simulator
MSAT	Mobile Source Air Toxins

MDOT MTA	Maryland Department of Transportation Maryland Transit Administration
MWAQC	Metropolitan Washington Air Quality Committee
MWCOG	Metropolitan Washington Council of Governments
NAA	Nonattainment Area
NAAQS	National Ambient Air Quality Standards
NCPC	National Capital Planning Commission
NEPA	National Environmental Protection Act
NETR	Natural Environmental Technical Report
NIST	National Institute of Standards and Technology
NO_x	Nitrogen Oxide
NO_2	Nitrogen dioxide
NRHP	National Register of Historic Places
NSA	Noise-Sensitive Area
NWI	National Wetlands Inventory
O&M	Operations and Maintenance
O_3	Ozone
Pb	Lead
PCB	Polychlorinated Biphenyl
PEM	Palustrine Emergent Wetland
PFO	Palustrine Forested Wetland
PM	Particulate Matter
$PM_{2.5}$	Particulate Matter less than 2.5 micrometers in diameter
PM_{10}	Particulate Matter less than 10 micrometers in diameter
POI	Point of Investigation
PSS	Palustrine Scrub-Shrub
PSTA	Public Safety Training Academy
RECs	Recognized Environmental Conditions
RTE	Rare, Threatened, and Endangered
SCC	Standard Cost Categories
SEA	Supplemental Environmental Assessment

SHA	State Highway Administration
SHPO	State Historic Preservation Officer
SO_x	Sulphur Oxides
SO_2	Sulphur dioxide
SSPP	System Safety Program Plan
SUE	Subsurface Utility Engineering
SWM	Stormwater Management
TAZ	Traffic Analysis Zones
TDM	Transportation Demand Management
TIP	Transportation Improvement Plan/Program
TMDL	Total Maximum Daily Load
TMP	Transportation Management Plan
TOD	Transit Oriented Development
TPB	Transportation Planning Board
TPH	Total Petroleum Hydrocarbons
TSM	Transportation Systems Management
TSP	Transit Signal Priority
TSS	Total Suspended Solid
TVM	Ticket Vending Machine
USACE	United States Army Corps of Engineers
USC	United States Code
USDA-NRCS	United States Department of Agriculture Natural Resource Conservation Service
USDOT	United States Department of Transportation
USFWS	United States Fish and Wildlife Service
USG	Universities at Shady Grove
USGS	United States Geological Survey
UST	Underground Storage Tank
VdB	Velocity decibels
VOC	Volatile Organic Compound
VMT	Vehicle Miles Traveled

WMATA	Washington Metropolitan Area Transit Authority
WQLs	Water Quality Limited segments
YOE	Year of Expenditure

1. Introduction

This EA describes the potential transportation and environmental effects from the construction and operation of the CCT Project. This document was prepared in accordance with the NEPA of 1969 and requirements of the U.S. Department of Transportation, FTA, and MDOT MTA. The FTA is the lead federal agency for this Project, while the MDOT MTA is the Project sponsor. The U.S. EPA, the NIST, the USACE, and the NCPC are cooperating agencies.

Funding for final design and construction, including right-of-way acquisition for the CCT, has been deferred until FY 2023. Lower than expected fuel prices and gas tax collection resulted in a shortfall of $746 million in overall MDOT revenue for state transportation projects. Of the $746 million shortfall, approximately $78 million was deferred, which had previously been allocated to fund CCT final design and right-of-way acquisition. If funding for the CCT becomes available via increased gas tax revenue, private interests, county or city funds, the CCT may move forward on finalizing the EA, updating design, and entry into FTA's Capital Investment Grant Program, prior to FY 2023.

1.1 Project Description

The CCT Project involves the operation of BRT service from the Metropolitan Grove MARC Station to the Shady Grove Metrorail Station. The study area corridor, shown in **Figure 1-1,** is located in Montgomery County, Maryland, within the I-270 corridor. The I-270 corridor serves commercial vehicles and commuters to Washington, DC, through the "Corridor Cities" of Gaithersburg, Rockville, and, ultimately, Germantown, Clarksburg, and Frederick.

The BRT service would operate for approximately nine miles and include 13 stations along the alignment. The CCT Project would operate at street level, separated from existing traffic, allowing for fast and reliable operation of service. The majority of the proposed alignment is located directly adjacent to or on existing transportation right-of-way that MDOT MTA has acquired or plans to acquire for the Project.

Why Bus Rapid Transit as the mode?
Bus Rapid Transit (BRT) systems take the benefits of light rail systems and combine them with affordability of bus technology. With their own dedicated roadways, lanes, efficient boarding aspects, and passing availabilities, BRT systems provide commuters with an efficient, affordable, and easy way to travel.

The CCT Project would provide fast and efficient travel along the I-270 corridor, serving both local trips and long-distance commutes. In particular, the Project would provide transit service to new and existing centers of commerce and residential development, including the transit-oriented mixed-use development of King Farm in the City of Rockville; and the Life Sciences Center community, Crown Farm, Metropolitan Grove (Watkins Mill), and Kentlands in the City of Gaithersburg. Furthermore, the CCT Project would provide direct connections with transit services extending into the District of Columbia and other regional destinations by way of the Metrorail Red Line at Shady Grove, the MARC Brunswick Line at Metropolitan Grove, and local bus service.

Figure 1-1: Study Area Corridor

1.2 Project Purpose and Need

1.2.1 Purpose

The purpose of the CCT Project is to improve connectivity, mobility, and livability; increase transit capacity; and improve regional air quality by providing premium transit service in the corridor. The CCT Project would help to:

- Improve inter-modal connections in the corridor;
- Increase transit capacity and meet transit demand;
- Enhance mobility;
- Support economic development and local government master plans to enhance the livability of communities in the corridor; and
- Improve regional air quality by increasing transit use.

1.2.2 Need

The need of the CCT Project results from:

- Lack of reliable connections among existing transit routes (including MARC, Metrorail, and local bus network);
- Existing transit service, which is at or near capacity and transit demand and ridership are forecasted to grow in the future;
- Roadway congestion, which contributes to unpredictable and slow travel times for automobiles and buses in the corridor;
- Demand for managed growth and economic development in the region which continues to grow; and
- A regional goal to improve air quality by providing alternatives to automobile usage.

Lack of connections among existing transit routes: The rapid growth and high-density development in the corridor have created the need for new connections among existing roadway and transit routes in the area. The study area corridor is currently served by WMATA Metrorail Red Line and MARC Brunswick Line rail services, as well as several bus services. Rail transit routes in the study area corridor were developed decades ago and continue to provide regional access to the urban employment center of Washington, DC. However, the growth in the corridor has occurred without new connections to or extensions of existing transit infrastructure. Consequently, transit has become increasingly difficult to access, hindered by the lack of connectivity between bus and rail transit.

Twelve bus lines, including ten Montgomery County Ride On routes, one MDOT MTA route, and one WMATA route, provide bus transit throughout the study area corridor. None of these bus lines provide direct, rapid access to the major activity centers of employment and residences along the study area corridor. Instead, the bus routes offer partial connectivity by reaching only select destinations and bypassing others. For instance, individual routes that depart from Shady Grove Metrorail Station typically reach only one or a few employment centers before returning to their origin. Many of the routes also circumvent large residential/mixed-use developments, such as Crown Farm and Kentlands, leaving many commuters living in the study area corridor with limited transit options for efficiently reaching the rail stations or other destinations within

the corridor. Lastly, there are no bus lines that directly connect to both the Metrorail and MARC station in the study area corridor, as the CCT Project would.

Existing transit service is at or near capacity and transit demand and ridership are forecasted to grow in the future: Demand for transit service and its related infrastructure is expected to grow substantially as planned growth in the study area corridor materializes over time. New residential neighborhoods and commercial centers, both planned and currently under construction, are expected to generate new demand for transit services. A larger population will result in more potential riders relying on existing transit routes, and new centers of employment and retail sales will result in more potential destinations located in the study area. Furthermore, increased vehicular traffic accompanying population and employment growth is expected to worsen congestion on study area corridor roadways, potentially influencing more people to choose transit as an alternative to driving.

There is substantial demand for existing bus service in the corridor, and ridership demand is expected to substantially increase for the existing 12 bus lines by 2035. Depending on the route, these increases range from about 30 percent to greater than 50 percent.

There is a high demand for existing rail transit service in the study area corridor; an average of over 13,000 people board the Metro Red Line every day at the Shady Grove Station. This number is expected to increase by 20 percent by 2035, resulting in over 2,600 new riders utilizing the service each day. The demand for transit in the study area is strong and is forecasted to continue to grow. The CCT would provide a more direct connection to the Shady Grove Metrorail Station. For commuters departing Shady Grove Metrorail Station desiring to reach destinations within the study area corridor, eight bus lines are available. However, only one bus line, WMATA J7/J9 (I-270 Express Line), travels through the corridor, but does not connect to any destinations within the study area corridor. Also, there are no bus lines that directly connect to both the Metrorail and MARC station in the study area corridor.

Roadway congestion which contributes to unpredictable and slow travel times for automobiles and buses in the corridor: Buses and automobiles traveling in the study area corridor are faced with daily congestion problems, and conditions are projected to worsen by 2035. Continuing development in the study area corridor would lead to new jobs and residences generating new trips, increasing the overall volume of vehicles on the study area roadways. According to U.S. Census American Community Survey (ACS) five-year estimates, approximately 80 percent of workers living in the study area corridor use private automobiles for their daily commutes—and just under 12 percent use public transportation.

While bus lines provide travelers with alternatives to single-occupancy vehicles, existing bus services must move in general traffic and are therefore subject to the same frequent delays from roadway congestion as single-occupancy vehicles. Congested roadways mean buses cannot consistently operate on schedule and travel times are not predictable; therefore, existing local bus routes are unable to compete with travel times of single-occupancy vehicles. This dilemma directly contributes to the majority of commuters' decisions to utilize single-occupancy vehicles on the road.

Because the study area corridor is largely developed, expanding or building new roadways to address the congested conditions on the existing roadway system would be difficult. The projected increases in employment and population will exacerbate the existing conditions. The impacts of these traffic conditions on bus service are already substantial, and future conditions will be worse.

Demand for managed growth and economic development in the region continues to grow: Montgomery County is expected to grow by nearly 100,000 new households between 2010 and 2035. This projection places Montgomery County second only to Fairfax County, Virginia for future growth in the DC Metropolitan region. Additionally, by 2035, County employment is projected to increase by nearly 40 percent from 506,000 employed residents to 703,000. These projections are displayed in **Table 1-1**.

Table 1-1: Montgomery County Forecasted Population Growth

Geographic Area	Category	2010	2035	Projected Increase 2010-2035 (%)
Montgomery County	Population	979,996	1,181,997	20.6
	Employment	506,000	703,000	38.9
	Households	360,500	453,000	25.7
Study Area Corridor (1/4 mile buffer)	Population	19,920	39,047	96.0
	Employment	31,204	60,411	93.6
	Households	7,921	16,998	114.6

Source: MWCOG Round 8.0 Cooperative Forecasts

Implementation of the CCT Project and other planned local and regional transportation projects establishes a foundation for economic development projects throughout the corridor. Within the study area corridor, with a current total of over 15 million square feet, more than 12,000 residential units, 29,000 office jobs, and 1,900 retail jobs have been approved for development. Much of this current and future economic and residential development is designed to be supported by transportation improvement projects like the CCT Project and several projects in the study area corridor have been specifically designed as transit-oriented development. Notable examples of these projects that emphasize high-density, mixed uses, and transit accessibility include Belward, Kentlands, Crown Farm, and Watkins Mill Town Center.

A regional goal to improve air quality by providing alternatives to automobile usage: Montgomery County is currently classified as an EPA Non-Attainment area for ground-level ozone. This designation indicates that the area falls short of EPA National Ambient Air Quality Standards (NAAQS), and could potentially pose harm to human health and livability. Ground-level ozone is the main component of smog, and is currently one of the Washington Metropolitan Region's most serious air pollution problems.

This harmful type of ozone is produced when vehicles emit volatile organic compounds (VOCs) and nitrogen oxides (NOx) that chemically react in sunlight. Because VOC and NOx emissions are greater at lower vehicle speeds, traffic congestion, especially on sunny, hot days, leads to higher levels of ground-level ozone and smog. Traffic congestion in the study area corridor contributes to these air quality problems, but transit can help reduce vehicle emissions by carrying more

passengers, using less fuel, and producing fewer emissions per traveler than cars. However, existing bus transit routes operating in mixed traffic are still regularly subject to traffic slowdowns which can result in higher air pollution emissions.

Under the federal Clean Air Act (CAA), the Metropolitan Washington Region's 2013 Constrained Long-Range Transportation Plan (CLRP) is required to conform to regional air quality improvement goals. Once the CLRP is drafted, it is analyzed via emissions modeling to ensure that the projects in the plan, when considered collectively, contribute to the air quality improvement goals embodied in the CAA Amendments of 1990. Clean air legislation provides that a metropolitan planning organization may not approve any transportation project that does not conform to the approved state implementation plan for the attainment of clean air standards. Federal activities may not cause or contribute to new violations of air quality standards, exacerbate existing violations, or interfere with timely attainment or required interim emission reductions towards attainment.

The CCT Project, along with numerous other transportation improvement projects throughout the Washington Metropolitan Region, is currently included in the most recent CLRP. According to the 2013 Metropolitan Washington Council of Governments (MWCOG) report, *Air Quality Conformity Determination of the 2013 CLRP and the FY2013-2018 Transportation Improvement Plan for the Washington Metropolitan Region*, mobile source emissions for each analysis year of the CLRP adhere to all ozone season VOC and NOx emissions budgets established by the Metropolitan Washington Air Quality Committee. The purpose and need focuses on meeting the current and future regional transportation needs of the area. The project is intended to contribute to achieving the region's air quality goals as part of an integrated, multi-modal regional transportation plan.

For additional details, refer to the CCT *Purpose and Need Statement* (**Appendix F**).

1.3 Applicable Laws and Regulations

The following laws, regulations, and executive orders are applicable to the CCT Project.

1.3.1 Laws

- National Environmental Policy Act of 1969 (42 U.S.C. § 4321 et seq)
- National Historic Preservation Act of 1966 (54 U.S.C. §300101 et seq)
- Endangered Species Act of 1973 (16 U.S.C. § 1531 et seq)
- Clean Air Act Amendments of 1990 (42 U.S.C. § 1251-1376)
- Federal Transit Laws [49 U.S.C. § 5301 et seq]
- U.S. Department of Transportation Act of 1966 (49 U.S.C. § 303 and 23 U.S.C. § 138)
- Land and Water Conservation Act of 1956 (16 U.S.C. § 460)
- Uniform Relocation Assistance and Real Property Act of 1970 (42 U.S.C. § 4601 et seq)
- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d-2000d-4)
- Americans with Disabilities Act of 1990 (42 U.S.C. § 12101 et seq)
- Clean Water Act of 1972 (33 U.S.C. §1251 et seq)

1.3.2 Regulations and Guidance

- The Council on Environmental Quality (CEQ) "*Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act*" (40 CFR, Parts 1500-1508)
- Advisory Council on Historical Preservation "*Protection of Historic and Cultural Properties*" (36 CFR, Part 800)
- FTA and FHWA "*Environmental Impact and Related Procedures*" (23 CFR, Part 771)
- FTA Circular 4703.1 "*Environmental Justice Policy Guidance for Federal Transit Administration Recipients*"
- FHWA "*Parks, Recreation Areas, Wildlife and Waterfowl Refuses, and Historic Sites*" [Section 4(f)] (23 CFR, Part 774)
- State of Maryland Tidal Wetlands Act
- State of Maryland Nontidal Wetlands Protection Act
- Code of Maryland Regulations (COMAR)

1.3.3 Executive Orders (EO)

- EO 11988, *Floodplain Management*. 42 FR 26951, Signed May 24, 1977 (Amended January 30, 2015)
- EO 11990, *Protection of Wetlands*. 43 FR 26961, Signed May 24, 1977
- EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*. 59 FR 7629, Signed February 11, 1994
- EO 13166, *Improving Access to Services for Persons with Limited English Proficiency*. 65 FR 50121, Signed August 11, 2000
- EO 13423, *Strengthening Federal Environmental, Energy, and Transportation Management*. 72 FR 33504, Signed January 24, 2077
- EO 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*. 74 FR 52117, Signed October 5, 2009

2. Alternatives Considered

2.1 Introduction

Various transit alternatives have been studied in the I-270 corridor for decades. This chapter explains the Project history of the alternatives relevant to the CCT Project that have been considered for transit in the I-270 corridor. In May 2012, the State of Maryland identified LPA of BRT based on an alternatives analysis included in prior NEPA documents. Following the identification of the LPA, the MDOT MTA prepared this Environmental Assessment and preliminary engineering of the current nine-mile CCT Project from the Metropolitan Grove MARC Station to the Shady Grove Metro Station. This chapter summarizes the previous alternatives analyzed and describes the No-Build and Build Alternatives that are analyzed in this EA. This chapter includes the following sections:

2.2 Project History

What does the term transitway mean?
Throughout this EA document, **transitway** is used to describe the horizontal and vertical location of the BRT route proposed in the Build Alternative.

Transportation studies for a transitway along the I-270 corridor have been conducted since the 1970s. **Figure 2-1** summarizes the NEPA Project history and major milestones that have occurred with the CCT Project. Early studies were initiated when the WMATA completed a sketch study in 1970 to identify the preliminary location for a Shady Grove to Metropolitan Grove transit alignment. In 1990, the MDOT Statewide Commuter Assistance Study identified multi-modal roadway and transit needs within the corridor. Also in 1990, Montgomery County and the Maryland-National Capital Park and Planning Commission (M-NCPPC) completed the I-270 Corridor Cities Transit Easement Study, which identified alternative transit alignments. In the mid-1990s, the MDOT Maryland State Highway Administration (SHA) and MDOT MTA initiated the I-270/US 15 Multi-Modal Corridor Study to consolidate roadway and transit studies.

In May 2002, the FHWA and FTA published a Draft Environmental Impact Statement (DEIS) for the I-270/US 15 Multi-Modal Corridor Study for public review and comment. The DEIS evaluated the impacts of 35 miles of highway improvements along the I-270/US 15 corridor and a 15-mile CCT for either BRT or light rail transit (LRT). Nine CCT alternatives were analyzed. (Refer to **Section 2.3.1** for additional information on the alternatives considered in the 2002 DEIS.)

In May 2009, the FHWA and FTA circulated an Alternatives Analysis / Environmental Assessment (AA/EA) that analyzed new highway alternatives, reviewed the previously studied CCT transit alternatives, and analyzed six additional CCT alternatives. (Refer to **Section 2.3.2** for additional information on the alternatives considered in the 2009 AA/EA.)

In November 2010, the MDOT MTA completed a Supplemental Environmental Assessment (SEA) to provide a more detailed environmental and engineering analysis on new CCT alternatives to better serve the proposed developments of Crown Farm, Life Sciences Center, and Kentlands. (Refer to **Section 2.3.3** for additional information on the alternatives considered in the 2010 SEA.)

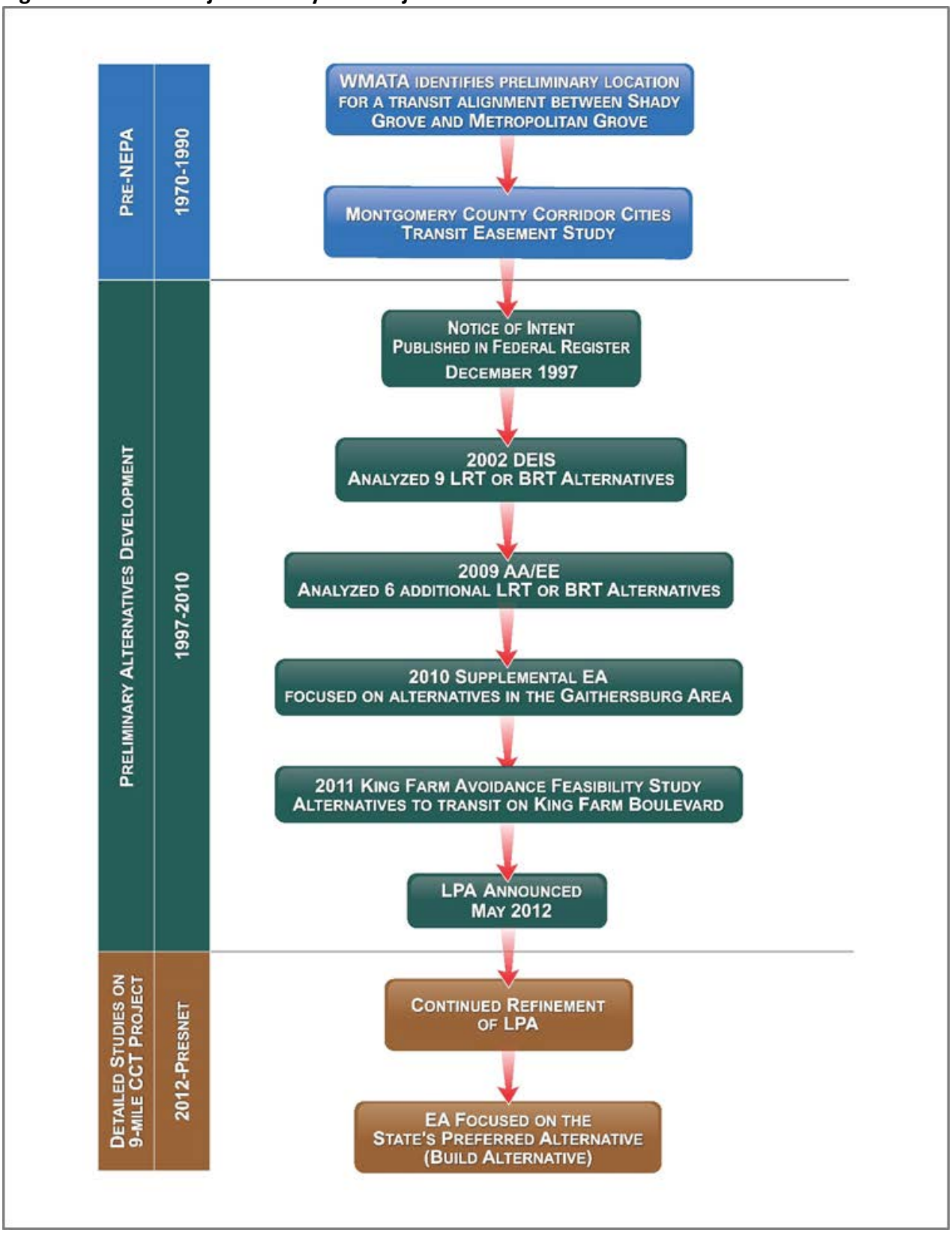
In December 2011, FHWA and FTA jointly concurred that the CCT had an independent utility from the highway components of the I-270/US 15 Multi-Modal Corridor Study and the CCT could proceed with NEPA compliance separate from the highway alternatives of the Multi-Modal Corridor Study. (Refer to **Appendix A** for a copy of this letter.)

In June 2011, the MDOT MTA studied the feasibility of alternative routes for the CCT alignment between the Shady Grove Metrorail Station and the proposed Crown Farm Station. The study was initiated following comments received at a December 2010 Open House / Public Hearing and a request by the City of Rockville to study two alternative CCT alignments operating along I-370 and Shady Grove Road instead of along King Farm Boulevard.

In May 2012, the State of Maryland announced the LPA for the CCT corridor. The State's LPA identified a BRT service that would extend the Shady Grove Metro Station to COMSAT for a total of 16 miles. The State's announcement separated the 16-mile corridor into two phases. This EA focuses on the southern nine-mile portion of the CCT alignment that extends from the Metropolitan Grove MARC Station to the Shady Grove Metro Station. (Refer to **Section 2.4** for additional information on the LPA.) The FTA and MDOT MTA are proceeding with preliminary design of this nine-mile portion of the CCT. For this Project, a funding source has not been identified to include a future extension from the Shady Grove Metro Station to COMSAT.

On February 7, 2014, FTA determined that the probable class of action pursuant to NEPA for the CCT project is an Environmental Assessment. Funding for final design and construction, including right-of-way acquisition for the CCT, has been deferred until FY 2023. Lower than expected fuel prices and gas tax collection resulted in a shortfall of $746 million in overall MDOT revenue for state transportation projects. Of the $746 million shortfall, approximately $78 million was deferred, which had previously been allocated to fund CCT final design and right-of-way acquisition. If funding for the CCT becomes available via increased gas tax revenue, private interests, county or city funds, the CCT may move forward on finalizing the EA, updating design, and entry into FTA's Capital Investment Grant Program, prior to FY 2023.

Figure 2-1: NEPA Project History and Major Milestones



2.3 Alternatives from Previous Studies

Alternatives for a transitway in the Project corridor were presented in each of the documents listed in **Table 2-1**. The descriptions presented in this section summarize the transit alternatives presented in each document.

Table 2-1: Alternatives Considered in Previous Studies

Document	Alternative	Description of Transit Component
2002 DEIS	1: No-Build Alternative	No transit or road improvements on the I-270/US 15 corridor
	2: Transportation System Management (TSM)/ Transportation Demand Management (TDM) Alternative	New bus service operating on local roads and serving stops similar to the CCT Stations
	3A: Master Plan High-Occupancy Vehicle (HOV)/LRT	Double-track LRT system
	3B: Master Plan HOV/BRT	Exclusive paved BRT transitway
	4A: Master Plan General-Purpose Lane with LRT	Double-track LRT system
	4B: Master Plan General- Purpose with BRT	Exclusive paved BRT transitway
	5A: Enhanced Master Plan HOV/ General-Purpose Lane with LRT	Double-track LRT system
	5B: Enhanced Master Plan HOV/ General-Purpose Lane with BRT	Exclusive paved BRT transitway
	5C: Enhanced Master Plan HOV/ General-Purpose Lane/ Premium Bus Alternative	Premium bus service on existing and proposed HOV lanes on I-270
2009 AA/EA	6.1: No-Build Transit	Existing transit service in the corridor and any programmed improvements
	6.2: Transit TSM	New bus service operating on local roads and serving stops similar to the CCT Stations
	6A: Enhanced Master Plan ETL with LRT	Includes express toll lanes (ETLs) instead of HOV lanes as the managed lane highway component and either LRT or BRT
	6B: Enhanced Master Plan ETL with BRT	
	7A: Enhanced Master Plan 2ETL with LRT	
	7B: Enhanced Master Plan 2ETL with BRT	
2010 SEA	Alignment S1: Crown Farm	Alignment modification to better serve new development
	Alignment S2 and S2c: Life Sciences Center	Alignments to serve the Belward Campus
	Alignment S3: Kentlands	Shifts alignment from one side of Great Seneca Highway to the other side to serve the Kentlands Shopping Center
King Farm Avoidance Feasibility Study	24 alternatives initially considered; 18 retained	Exclusive and shared lanes on various alignments between Shady Grove and Crown Farm Stations

The current LPA is based on the original 2002 DEIS alignment; 2010 SEA modifications at Crown Farm (S1), LSC/Belward (S2/S2c) and Kentlands (S3); and the Metropolitan Grove O&M Facility. Additional recent refinements to the LPA are discussed in **Section 2.4.2**.

2.3.1 Alternatives from the I-270/US 15 Multi-Modal Corridor Study DEIS, May 2002

The CCT was a transit component of the I-270/US 15 Multi-Modal Corridor Study. The discussion in this section focuses on the transit component of the I-270/US 15 Study. At that time, the CCT alignment was approximately 13.5 miles from the Shady Grove Metro Station in the south to the COMSAT facility in the north. This alignment, with subsequent modifications and refinements described in this section and **Section 2.4.2**, ultimately served as the basis of the LPA. The alternatives included the review of 18 CCT Station locations. Each alternative included an I-270 highway and a CCT transit component with multiple alignments. The alternatives considered in the 2002 DEIS are listed in **Table 2-1**.

Alternate 1: No-Build Alternate – Included elements adopted from the MWCOG 1997 CLRP with MARC commuter rail service from Point of Rocks in Frederick County to the City of Frederick and no major capacity improvements on I-270 or US 15.

The No-Build Alternative proposed no new BRT transitway in the study area corridor and represented the future conditions of transportation facilities and service in 2035 if the CCT were not built. Under the No-Build Alternative, travelers in the area would continue to rely on existing roadways, bus service, and rail stations as they are currently configured with no substantial changes. This alternative did not meet the Project's Purpose and Need, but served as a baseline for comparison of the proposed build alternatives. It was therefore carried forward throughout all subsequent studies.

Alternate 2: TSM/TDM Alternate – TSM measures included: increased and improved bus service within the corridor; integrated bus service and feeder/distributor service; enhanced feeder bus service to Metro and MARC Stations; and interactive transit information at major employment centers.

TDM measures included: additional park-and-ride spaces throughout the corridor; enhanced rideshare and vanpool programs; improved pedestrian access to the Shady Grove Metro and MARC Stations; completion of CLRP Bicycle Elements to provide for a fully-linked system throughout corridor; improved regional telecommuting program; and flexible work hours.

Common to Alternates 3A/B, 4A/B, and 5A/B/C[1] –

- Same TSM/TDM components as Alternative 2;
- Highway component with general-purpose, HOV and Collector -Distributor lanes, proposed/improved interchanges;
- LRT or BRT on the CCT; and

[1] The O&M Facility is included in all alternatives studied, with the exception of Alternative 5C.

- O&M Facility – a yard/shop facility that provides storage and maintenance facilities where transit vehicles are inspected, repaired, cleaned, and stored.

For the LRT option, a CCT rail yard would have been required for maintenance of track and vehicles and storage of up to 50 light rail vehicles. A CCT yard/shop facility would also be needed for BRT maintenance, possibly requiring additional storage capacity relative to the LRT option. A yard/shop or O&M Facility was considered in the following 15 approximate locations:

- Shady Grove Metro Station (3 of 5 individual sites retained for detailed study);
- Metropolitan Grove (3 of 6 individual sites retained for detailed study); and
- COMSAT (2 of 4 individual sites retained for detailed study).

Alternate 3A: Master Plan HOV/LRT Alternate – This LRT Alternate would include a double-tracked system, with track centers spaced approximately 14 feet apart, and an overall typical section width of between 50 to 75 feet. The right-of-way would also include an overhead catenary system. Bikeway and pedestrian access, as called for in the county master plans, would be provided along the transitway alignment under this alternative.

Alternate 3B: Master Plan HOV/BRT Alternate – This BRT Alternate would operate exclusively on a paved roadway, in two general formats: BRT service along the CCT and smaller feeder buses, which circulate through neighborhoods before using the transitway. BRT components included vehicles with low floors and multiple doors, and pre-paid fare collection. The CCT roadway would be one 12-foot lane in each direction, with a typical section of 45 to 70 feet. Bikeway and pedestrian access, as called for in the county master plans, would also be provided under this BRT alternative.

Alternate 4A: Master Plan General-Purpose/ LRT Alternate – The proposed transit component, O&M considerations, and cost were the same as described in Alternative 3A. The highway component included general-purpose lanes in place of the HOV lanes proposed under 3A/3B.

Alternate 4B: Master Plan General-Purpose/ BRT Alternate – The proposed transit component, O&M considerations, and cost were the same as described in Alternative 3B. The highway component included general-purpose lanes in place of the HOV lanes proposed in Alternates 3A and 3B.

Alternate 5A: Enhanced Master Plan HOV/ General-Purpose Lane/ LRT Alternate – The proposed transit component, maintenance yard considerations, and cost were the same as described in Alternative 3A. The highway component included one additional general-purpose lane in each direction in addition to the HOV lanes proposed in Alternates 3A and 3B.

Alternate 5B: Enhanced Master Plan HOV/ General-Purpose Lane/ BRT Alternate – The proposed transit component, maintenance yard considerations, and cost were the same as described in Alternative 3B. The highway component included one additional general-purpose lane in each direction in addition to the HOV lanes proposed in Alternates 3A and 3B.

Alternate 5C: Enhanced Master Plan HOV/ General-Purpose/ Premium Bus Alternate – Premium Bus service was considered at major activity centers and on the existing and proposed HOV lanes on I-270, including slip ramps for exclusive bus/HOV access from the HOV lanes to proposed intermodal stations. Express bus service would be provided along the I-270 HOV lanes in addition to an extended feeder bus system. It was assumed that premium bus service would be operated by a contractor, and this alternate would not require an O&M Facility. The highway component included one additional general-purpose lane in each direction in addition to the HOV lanes proposed in Alternates 3A and 3B.

2.3.2 Alternatives from the I-270/US 15 Multi-Modal Corridor Study AA/EA, May 2009

The May 2009 AA/EA served as a companion to the DEIS issued in 2002. New alternatives were examined to the same level of environmental review as the alternatives presented in the 2002 DEIS. The AA/EA was prepared in response to a decision made in 2004 to study two additional highway alternatives that included ETLs. The CCT followed the same 2002 DEIS alignment: 13.5 miles from the Shady Grove Metro Station in the south to the COMSAT facility in the north, which has ultimately served as the basis of the LPA (with subsequent modifications and refinements discussed in this section and **Section 2.4.2**). This alignment included 17 stations, as one was eliminated when Montgomery County approved a development that would preclude the previously identified site's use as a station. The alternatives included two transit mode components. The "A" represented LRT and the "B" represented BRT. The alternatives considered in the AA/EA are listed in **Table 2-1**.

The technical report completed by MDOT MTA in 2007, *Corridor Cities Transitway Operations and Maintenance Facilities Alternatives Development and Analysis*, analyzed the costs and service benefits associated with five O&M sites retained from the 15 presented in the 2002 DEIS. These were further analyzed for their environmental impacts and transportation benefits in the 2009 AA/EA. The evaluated sites included two Shady Grove area sites, two Metropolitan Grove area sites, and one COMSAT area site.

The transit components of the alternatives included in the AA/EA are described as follows:

Alternative 6.1: No-Build Transit – The No-Build Transit Alternative consisted of the continuation of existing transit services in the corridor and any improvements programmed in the fiscally constrained long-range transportation plan for the metropolitan Washington region.

Alternative 6.2: Transit TSM – The Transit TSM Alternative measures included: new bus service operating on local roads and serving stops comparable to CCT transit stations; new stations, park-and-ride facilities, and limited stop bus service between the Shady Grove Metrorail Station and COMSAT; Premium Bus service from Frederick County to major activity centers; enhanced feeder bus service to Metrorail and MARC Stations; and interactive transit information at major employment centers in the corridor.

Common to Alternatives 6A/B and 7A/B – Alternatives 6A/B and 7A/B include ETLs instead of HOV lanes as the managed lane component, plus the LRT or BRT transit mode on the CCT as the

transit component. These alternatives also included a dedicated transitway and all transit measures described in Alternative 6.2: Transit TSM.

2.3.3 Alternatives from the Supplemental Environmental Assessment, November 2010

The November 2010 SEA focused on a smaller subset area of the CCT corridor in the Gaithersburg area to consider three development areas under consideration for more direct service by the CCT. The SEA served as a companion to the 2002 DEIS and 2009 AA/EA. Three development areas identified from east to west included: Crown Farm, LSC, and Kentlands. The SEA analyzed the engineering and environmental impacts of three proposed modifications to the 2002 DEIS CCT alignment and new station locations to better serve these development areas, and two additional O&M Facility sites in the vicinities of COMSAT and Metropolitan Grove. The CCT alignments studied varied from 14 to 16 miles from the Shady Grove Metrorail Station in Rockville, Maryland to a terminus just south of Clarksburg, Maryland at the COMSAT facility. The CCT alignment modifications considered in the SEA are listed in **Table 2-1**. The SEA also included modified stations and O&M Facility locations.

Each of the alignment modifications and corresponding station modifications, with subsequent refinements as discussed in **Section 2.4.2**, were ultimately incorporated into the LPA.

Alignment Modifications from the DEIS

Alignment S1: Crown Farm – Alignment S1 shifted the CCT alignment to travel through Crown Farm along Decoverly Drive. The modification was proposed to better serve new development at the Crown Farm property (currently under construction), located within the City of Gaithersburg along Fields Road and Omega Drive.

Alignments S2 and S2c: Life Sciences Center – S2 and S2c were developed to better serve the LSC, a major expansion of the Shady Grove LSC, by diverting the alignment south from Great Seneca Highway and Decoverly Drive through Belward Farm and the LSC.

Alignment S2c was a slight variation of S2. Alignment S2 turned west from Broschart Road at a point between Blackwell Road and Medical Center Drive. Alignment S2c turned west on Medical Center Drive.

Alignment S3: Kentlands – This modification would shift the CCT alignment from one side of Great Seneca Highway to the other side to directly serve a proposed redevelopment of a shopping center to a mixed-use, transit-oriented destination located adjacent to the Kentlands.

Stations Modified from the DEIS

Alignment S1 – The Crown Farm Station and park-and-ride lot replaced the Washingtonian station.

Alignment S2 –

- Proposed stations included: LSC Central Station on Broschart Road; LSC West Station and park-and-ride lot on the Public Safety and Training Academy (PSTA) site; and LSC Belward on the Belward Campus.
- DANAC Station was relocated from Decoverly Drive to Diamondback Drive.
- Decoverly Station was eliminated.

Alignment S2c -

- Proposed stations included: LSC Central on Broschart Road; LSC West Station and park-and-ride lot on the PSTA site; and LSC Belward on the Belward Campus.
- DANAC Station was relocated from Decoverly Drive to Diamondback Drive.
- Decoverly Station was eliminated.

Alignment S3 -

- Proposed station: Kentlands at the Kentlands Square Shopping Center.
- Quince Orchard Station was eliminated.

O&M Facility Location Options

The LRT and BRT transit alternatives each required an O&M Facility. Two of the five locations studied in the AA/EA were included. These two sites were considered the most advantageous based on the analysis in the 2009 AA/EA and the supporting 2007 O&M Facility study.

- **Observation Drive O&M Facility –**This location is in the vicinity of the CCT northern terminus near COMSAT, and would be suitable only for BRT.
- **Metropolitan Grove O&M Facility –** This location would be suitable for either BRT or LRT alternatives. It is situated adjacent to the proposed Metropolitan Grove Station on land currently used as a police vehicle impound lot. This location is included as part of the LPA.

2.3.4 Alignments from the King Farm Avoidance Feasibility Study, June 2011

At the December 2010 hearing for the SEA, local residents of the King Farm community voiced concern about the proposed CCT alignment traversing through their neighborhood. Key issues raised included: the loss of the King Farm Boulevard landscaped median, street closures across King Farm Boulevard, the schedule and number of transit vehicles traveling through the community, transit vehicle-generated noise, pedestrian and vehicular travel pattern disruption, and aesthetic issues of locating the CCT along King Farm Boulevard. In response to these concerns, the MDOT MTA developed the *King Farm Feasibility Study, Full Report* (June 2011). The results of this study are summarized below and the report is available on the Project website.

The study limits extended from the Shady Grove Metrorail Station and continued to the proposed Crown Farm Station using either I-270 or Shady Grove Road as the primary alignment route. A total of 24 initial BRT and/or LRT alignments and typical section alternatives within the feasibility study limits were considered based on the CCT service concept, the potential for exclusive right-of-way (side-street running or median), and dedicated or shared lane operations. An engineering screening analysis was performed and the number of initial alignment and typical section alternatives were reduced to 18 potential alternatives.

The following 18 alternatives were studied:

- 1A: King Farm Boulevard Master Plan [median] Alignment (BRT or LRT, exclusive, at-grade)
- 2A-1: LRT or BRT exclusive at-grade lanes from the east side of Shady Grove Metrorail Station via Metro Access Road along the south side of Shady Grove Road to Crown Farm Station
- 2A-2: LRT or BRT exclusive aerial lanes from the east side of Shady Grove Metrorail Station via Metro Access Road in the median of Shady Grove Road to Crown Farm Station
- 2A-3: LRT or BRT exclusive at-grade lanes from the east side of Shady Grove Metrorail Station via Metro Access Road in the median of Shady Grove Road to Crown Farm Station
- 2B-1: LRT or BRT exclusive at-grade lanes from the west side of Shady Grove Metrorail Station along east side of MD 355 to south side of Shady Grove Road to Crown Farm Station
- 2B-2: LRT or BRT exclusive aerial lanes from the west side of Shady Grove Metrorail Station along east side of MD 355 to median of Shady Grove Road to Crown Farm Station
- 2B-3: LRT or BRT exclusive at-grade lanes from the west side of Shady Grove Metrorail Station along east side of MD 355 to median of Shady Grove Road to Crown Farm Station
- 2B-4: LRT or BRT exclusive at-grade lanes from the west side of Shady Grove Metrorail Station along median of MD 355 to median of Shady Grove Road to Crown Farm Station
- 2B-5: LRT or BRT shared lanes from the west side of Shady Grove Metrorail Station to MD 355 to Shady Grove Road to Crown Farm Station
- 2C-1: LRT or BRT exclusive at-grade lanes from the east side of Shady Grove Metrorail Station along Crabbs Branch Way to south side of Shady Grove Road to Crown Farm Station
- 2C-2: LRT or BRT exclusive aerial lanes from the east side of Shady Grove Metrorail Station along Crabbs Branch Way to south side of Shady Grove Road to Crown Farm Station
- 2C-3: LRT or BRT exclusive at-grade lanes from the east side of Shady Grove Metrorail Station along Crabbs Branch Way to median of Shady Grove Road to Crown Farm Station
- 2D-1: LRT or BRT exclusive at-grade lanes from the east side of Shady Grove Metrorail Station north along CSX right-of-way to south side of Shady Grove Road and to Crown Farm Station
- 2D-2: LRT or BRT exclusive aerial lanes from the east side of Shady Grove Metrorail Station north along CSX right-of-way to south side of Shady Grove Road and to Crown Farm Station
- 3A-1: BRT exclusive at-grade lanes from the east side of Shady Grove Metrorail Station in median of I-370 to Crown Farm Station

- 3A-2: BRT shared lanes from the east side of Shady Grove Metrorail Station along I-370 to Crown Farm Station
- 3B-1: BRT exclusive at-grade lanes from the west side of Shady Grove Metrorail Station via east side of MD 355 to I-370 to Crown Farm Station
- 3B-2: BRT shared lanes from the west side of Shady Grove Metrorail Station via MD 355 to I-370 to Crown Farm Station

MDOT MTA completed an analysis of these alignment options in comparison to the Master Plan alignment along the median of King Farm Boulevard. The Master Plan alignment (Alternative 1A) along King Farm Boulevard has been included in the City of Rockville master plans for over two decades and was preserved by the developers of King Farm in the community's design. For that reason, the alignment would result in minimal impacts to the human and natural environment, support the economic development goals of Montgomery County, and provide an economically and environmentally sustainable transportation option for connecting activity centers within Montgomery County. Additionally, as part of the goal to enhance mobility, the MDOT MTA intends to maximize transit performance quality whenever feasible, thus avoiding designs that would operate transit in mixed traffic or cross busy streets that could erode travel times and the reliability of service. Upon careful consideration of the analysis results, MDOT MTA determined that none of the 17 alignment modifications studied to avoid transit operations on King Farm Boulevard warrant further consideration in future phases of Project development. The Master Plan alignment in the median was therefore retained as part of the LPA.

2.4 Identification and Refinement of the Locally Preferred Alternative

In May 2012, the State of Maryland announced the LPA for the CCT. The 2012 LPA included BRT on a 15-mile corridor from the Shady Grove Metrorail Station to the COMSAT facility near Clarksburg in Montgomery County, including 16 stations. The LPA is based on the original 2002 DEIS alignment; 2010 SEA modifications at Crown Farm (S1), LSC/Belward (S2/S2c) and Kentlands (S3); and the Metropolitan Grove O&M Facility. Additional recent refinements to the LPA are discussed in **Section 2.4.2**. An O&M Facility site was also identified near the Metropolitan Grove MARC Station. The LPA announcement designated a nine-mile section between Shady Grove and Metropolitan Grove as the priority for Project development and construction, and is the focus of this EA document.

2.4.1 Rationale for Selecting the LPA

In selecting the LPA, the State made several important decisions: selecting BRT as the mode for the Project; identifying an alignment; prioritizing Phase I from Metropolitan Grove to Shady Grove; and locating the O&M Facility. The State's rationale for selecting the LPA is summarized below. For additional details, refer to **Appendix A** for the Briefing Memorandum (April 2012) and LPA Press Release Announcement (May 2012).

Mode

BRT was recommended as the transit mode for the CCT. The BRT would operate on an exclusive and dedicated right-of-way with grade separation at key roadway crossings and at-grade crossings at minor streets. BRT was selected for the CCT given its comparable ridership

performance and O&M costs, combined with substantially reduced capital costs compared with LRT. The 2010 SEA estimated that LRT, along what is now the LPA alignment, would result in capital cost nearly twice that of BRT. This significant increase in capital cost for LRT would result in only around 17 percent increase in estimated ridership relative to BRT. Furthermore, BRT is considered suitable for this corridor because it offers the flexibility for buses to directly serve surrounding communities as opposed to a fixed rail scenario with LRT. The surrounding land uses are less dense than other parts of Montgomery County, which warrants greater flexibility in operations with buses.

Alignment

The LPA alignment was based on various master plans in Montgomery County. The selection of the LPA solidifies the continuation of corridor preservation in those plans. The LPA alignment includes the Master Plan alignment with modifications through Crown Farm, LSC, and Kentlands. The selection of the LPA alignment was largely based on its ability to serve high ridership areas, as well as MDOT MTA's current understanding of issues raised during the public involvement process, including the public hearings held in conjunction with the completion of the I-270/US 15 Multimodal Corridor Study DEIS, the I-270/US 15 Multimodal Corridor Study AA/EA, and the Corridor Cities Transitway SEA. The 2010 SEA estimated that inclusion of the alignment modifications at Crown Farm, LSC, and Kentlands would increase ridership by around 40 percent relative to the original Master Plan alignment, while only increasing capital costs by around 15 percent.

Phasing

The LPA was recommended to be built in two phases: Phase I from Shady Grove to Metropolitan Grove and Phase II from Metropolitan Grove to COMSAT. The phasing recommendation was based on the existing planned development around the transitway alignment, which has occurred along the Phase I portion of the corridor. Montgomery County has focused development around most of the station areas between Shady Grove and Metropolitan Grove for many years. Densities are lower and some areas are not yet developed north of Metropolitan Grove.

Operations and Maintenance Facility

The LPA's recommended O&M Facility site is situated just south of the Metropolitan Grove station adjacent to the Montgomery County vehicle impound lot. Through the analysis presented in the previous studies outlined in **Section 2.3**, the list of 15 potential O&M Facility sites was gradually narrowed down to two sites: the LPA site at Metropolitan Grove and the Observation Drive site near the COMSAT facility. These two sites were carried forward from previous studies as the most advantageous to transit operations with the least environmental and community impacts. The Metropolitan Grove site, selected for the LPA, is suitably located in the Phase I section of the Project on a large parcel of undeveloped land adjacent to I-270.

2.4.2 LPA Refinement

The MDOT MTA has continued to refine the LPA since May 2012. These refinements were made based on additional engineering, stakeholder and public input, additional station planning, and additional environmental analysis. As the focus of this EA, these refinements have been incorporated into the Build Alternative that is described in **Section 2.5**.

The first refinement was the incorporation of an additional service into the LPA. This service, the CCT Service via USG, was developed to serve the USG campus and the surrounding community. The USG service would operate along the CCT dedicated transitway, then divert into mixed traffic to serve two stations: the USG station and the Traville Gateway Drive Station. **Section 2.5** describes the operation of the USG service in more detail.

Another refinement was the removal of alignment through the Belward Campus property which resulted from coordination with the FTA. The Build Alternative avoids the use of the Belward property by operating on a shared alignment on Muddy Branch Road and Darnestown Road.

Additional refinements to the LPA were also made subsequent to the preparation of two reports by MDOT MTA: the A*lternatives Analysis Report for Commercial Property Owners Coalition*, (April 2014) and the *Mission Hills Alternatives Report* (May 2014). A summary of each report is included below which highlights the recommendations from these reports that were incorporated into the current Build Alternative analyzed in this EA. The CPOC and Mission Hills Reports are available on the Project website, www.cctmaryland.com.

Commercial Property Owners Coalition Study

A group of businesses, institutional, and academic interests near the CCT, called the Commercial Property Owners Coalition (CPOC), commissioned a study to review the CCT LPA alignment and suggested alternative alignments. The suggested changes from their study sought to defer a portion of the high cost improvements and advance the construction and system opening operation to support economic development. The *Alternatives Analysis Report for Commercial Property Owners Coalition* (April 2014) summarizes the studies completed by the MDOT MTA for five segments of the CCT as discussed with the CPOC: CSX Corridor and Quince Orchard Road (MD 124), Great Seneca Highway (MD 119), Muddy Branch Road, Key West Avenue (MD 28) at Johns Hopkins Drive, and Key West Avenue at Broschart Road/Diamondback Drive. The modifications to the LPA adopted into the current Build Alternative include the following:

- From the proposed Metropolitan Grove Station, the transitway would be located along the south side of the CSX tracks, turn south and travel along the west side of Quince Orchard Road, cross Firstfield Road at-grade, rise on structure to span over Clopper Road/West Diamond Avenue and Quince Orchard Road, and then return to grade and travel along the east side of Quince Orchard Road.

- The transitway would travel on the east side of Broschart Road and cross diagonally at-grade through the first intersection south of Key West Avenue, then continue on the west side of Broschart Road, crossing under Key West Avenue via a tunnel parallel to Broschart Road/Diamondback Drive.

Mission Hills Study

On December 3, 2013, members of the MDOT MTA met with residents of Mission Hills to discuss their concerns about the transitway, its location relative to their homes, and vehicular access to their community. Residents expressed concern that the addition of the transitway, along with the existing congestion on Muddy Branch Road, would make it difficult to exit the community during morning and afternoon peak travel times. Mission Drive is the only access point to the Mission Hills community of 52 homes.

The MDOT MTA studied alternatives that would address these concerns. The *Mission Hills Alternatives Report* (May 2014) summarizes the studies that have been completed by the MDOT MTA for the CCT: along Muddy Branch Road and Belward Campus Drive. Five options were considered in the study. Option 1 would provide four travel lanes on Muddy Branch Road with the transitway in the median. The community supported this option when the results were presented at a community meeting on May 20, 2014.

Muddy Branch Avenue and Belward Farm

During preliminary design in support of this EA document, an alignment was considered in the median of Muddy Branch Road and through the Belward Campus. This alignment would have crossed southbound Muddy Branch Road at the intersection with Great Seneca Highway, continuing south in the median of Muddy Branch Road to the intersection of Muddy Branch Road, Midsommer Drive, and proposed Belward Campus Drive. Belward Campus Drive is a proposed roadway that would travel through the Belward Farm development connecting Muddy Branch Road to Johns Hopkins Drive. The CCT alignment would then have crossed from the median of Muddy Branch Road onto Belward Campus Drive and continued traveling east in the median of Belward Campus Drive for the entire length. A LSC Belward Station was proposed along Belward Campus Drive in the middle of the development. The alignment would then have turned south onto Johns Hopkins Drive and continue in the median of the roadway to the intersection with Key West Avenue crossing Key West Avenue and entering the PSTA property.

This alignment through the Belward Farm Campus was not accepted by the FTA during their review of the Draft Section 4(f) Analysis, which was part of the analysis completed in support of this EA document. The Ward/ Belward Farm is a historic property consisting of an approximately 107-acre farmstead and is eligible for listing on the National Register of Historic Places. The property is owned by Johns Hopkins University and is slated for development as part of the Johns Hopkins Belward Campus Expansion Project, which would convert the property to a mixed-use research campus.

Because the Belward property is historic, it is also subject to Section 4(f) of the US Department of Transportation Act, 49 U.S.C. 303(c) and FTA's Section 4(f) regulations in 23 CFR 774. Section 4(f) is a Federal Law that protects publicly-owned parks, recreation areas, wildlife and/or waterfowl refuges, or any significant historic sites, whether privately or publicly owned. Section 4(f) requirements apply to all transportation projects that require funding or other approvals by the USDOT. As a USDOT agency, FTA must comply with Section 4(f). FTA cannot approve a transportation project that uses a Section 4(f) property, unless:

- The FTA determines that there is no feasible and prudent avoidance alternative to the use of land from the property, and the action includes all possible planning to minimize harm to the property resulting from such use (23 CFR 774.3(a)); or
- The FTA determines that the use of Section 4(f) property, including any measures to minimize harm (such as avoidance, minimization, mitigation, or enhancements measures) committed to by the applicant, will have a *de minimis* impact on the property (23 CFR 774.3(b)).

In the case of the Belward Campus alignment, FTA determined that there was a feasible and prudent alternative which avoided use of the Belward Campus property. Therefore, this alignment was dropped from further consideration. The Build Alternative avoids the Belward property by operating on a shared alignment on Muddy Branch Road and Darnestown Road (**Section 2.5.2** describes the Build Alternative).

2.5 Alternatives Evaluated in the EA

2.5.1 No-Build Alternative

The No-Build Alternative proposes no new BRT transitway in the study area corridor and represents the future conditions of transportation facilities and service in 2035 if the CCT Project is not built. This alternative provides a baseline by which the environmental impacts of the Build Alternative are compared.

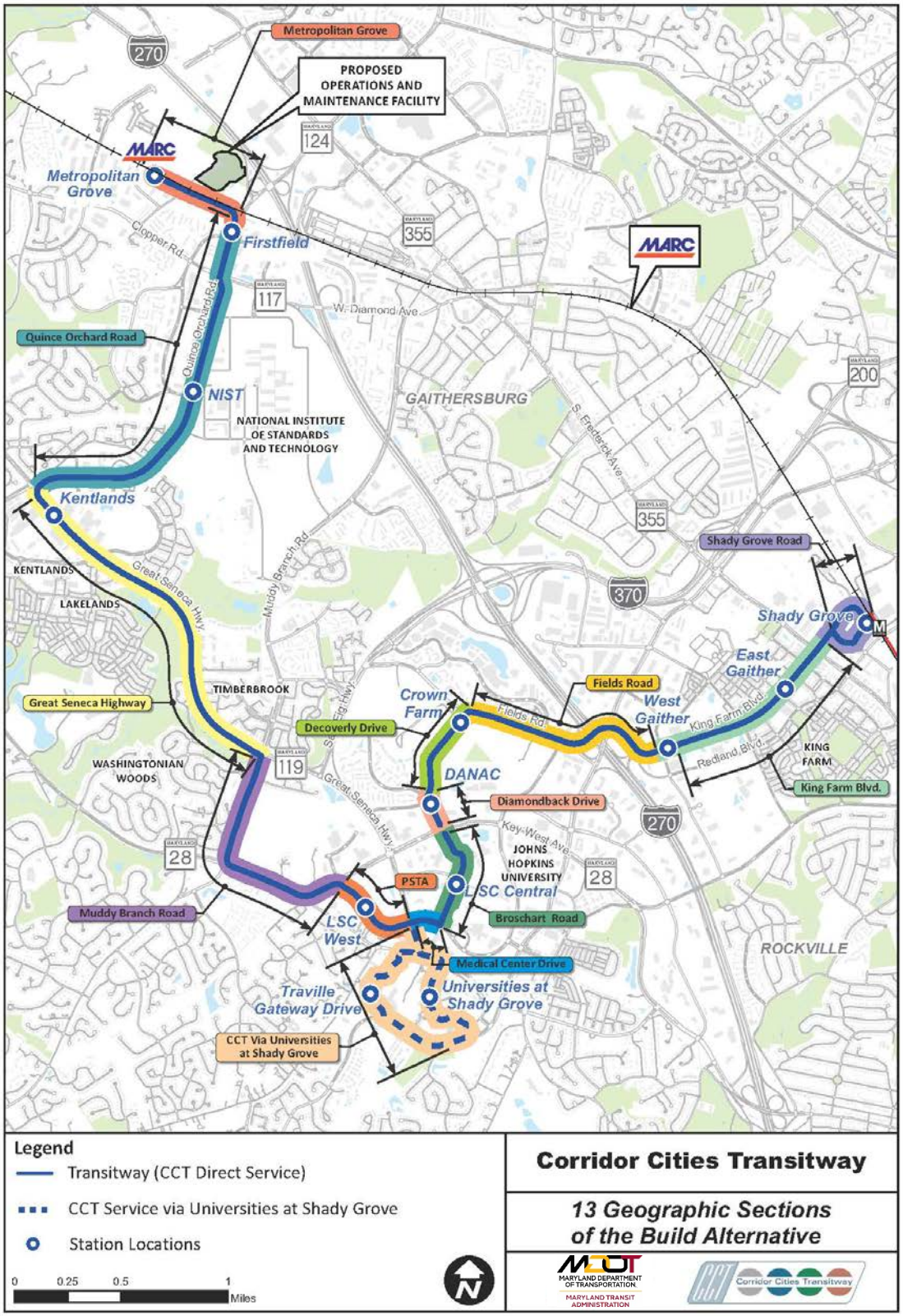
The No-Build Alternative assumes the existing highway and transit network, as well as planned and programmed (committed) transportation improvements that are included in the CLRP prepared by the National Capital Region Transportation Planning Board, with the exception of any proposed improvements associated with the CCT. The No-Build Alternative assumes the transit service levels, highway networks and traffic volumes, and forecasted demographics for the year 2035 from the CLRP without the CCT.

Under the No-Build Alternative, travelers in the area would continue to rely on existing and programmed roadways, bus service, and rail stations as they are currently configured with no substantial changes. The No-Build Alternative represents a continued investment in regional and local transportation projects, but does not address the Project's Purpose and Need.

2.5.2 Build Alternative

The Build Alternative consists of the LPA announced in May 2012 and the LPA refinements described in **Section 2.4.2.** The transitway would travel adjacent to or in the median of existing and proposed roadways for the majority of the alignment. The term **transitway** is used to describe the horizontal and vertical location of the BRT route proposed in the Build Alternative. The Build Alternative also includes 13 stations and an O&M Facility. The Build Alternative is based on 13 geographic sections starting at the northern terminus (Metropolitan Grove Station) and traveling generally south and east to the southern terminus (Shady Grove Station). Refer to **Figure 2-2** for an overview of the Project's 13 geographic sections. Refer to **Appendix E** for detailed engineering plans of the Build Alternative.

Figure 2-2: Station Locations and Geographic Sections of the Build Alternative



The majority of the transitway would be 26 feet wide, with one 13-foot lane per direction, including the gutter. In areas with horizontal curves tighter than a 500-foot radius, the transitway width would be widened to 30 feet, with one 15-foot lane per direction. In general, the alignment maximizes the area for stormwater management bioretention facilities on one or both sides of the alignment, where feasible.

2.5.3 Stations

The Build Alternative would include 13 stations: Metropolitan Grove, Firstfield, NIST, Kentlands, LSC West, Traville Gateway Drive, USG, LSC Central, DANAC, Crown Farm, West Gaither, East Gaither, and Shady Grove. The station locations are shown in **Figure 2-2**. Refer to **Figures 2-3 to 2-5** for illustrative renderings of prototypical stations. **Figure 2-3** illustrates the platform prototype, and **Figures 2-4** and **2-5** shows station examples. The extent, size, and location of station elements will be determined during the design phase based on current ridership projections.

All the stations, with the exception of the Traville Gateway Drive and USG Stations, would be equipped with a variety of amenities, including: trash and recycling receptacles, benches, emergency phones, ticket vending machines, map display cases, variable message signs, bike storage, and wind screens (**Figure 2-3**). Station signage would be branded to have a recognizable theme and logos. The signage would be integrated with the architecture and will meet Americans with Disabilities Act guidelines.

Three types of platform configurations are proposed for the CCT Stations: median platforms, side platforms, and aerial platforms. The platforms would be 14 inches high (above the adjacent transitway) and would contain slip-resistant coating and two-foot-wide detectable warning strips. All platforms would have an average canopy coverage of 60 percent of the platform area with a ten-foot clearance beneath. The median platform stations would be 18 feet wide, side platforms would be 12 feet wide, and aerial platforms would be 27 feet wide. All the stations would be 65 feet long with the exception of the terminus stations, and Kentlands, Crown Farm, and Gaither West Stations, which would be 125 feet long to serve anticipated ridership needs. At the 65-foot stations, additional space would be accommodated for expansion to 125 feet in the future, should ridership demands increase.

Figure 2-3: Station Platform Concept

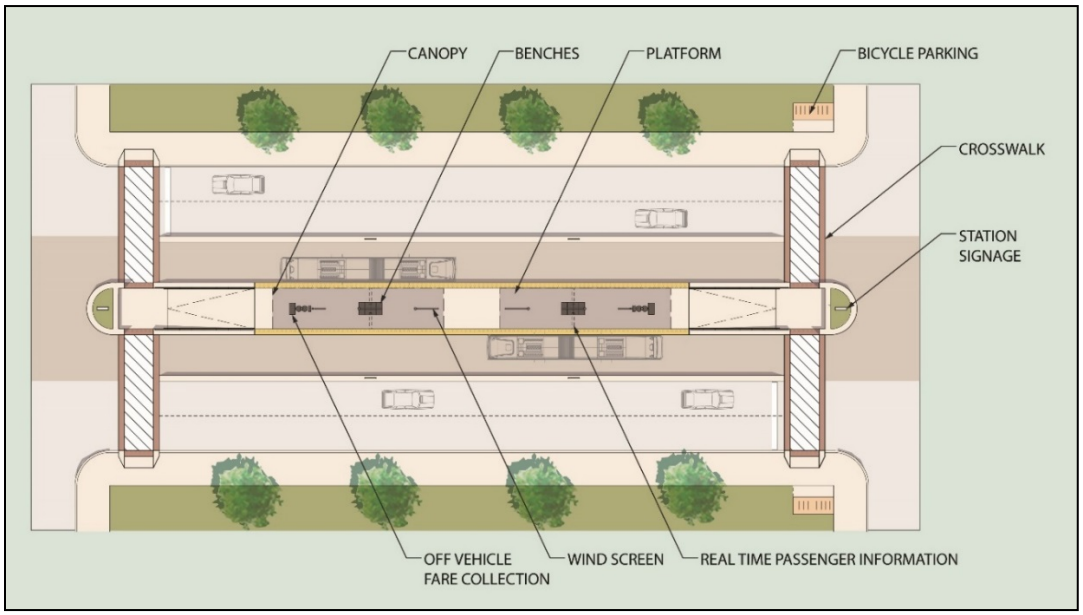


Figure 2-4: Representative Views of a Median Platform, East Gaither Station

Figure 2-5: Representative Views of the Aerial Platform, Kentlands Station

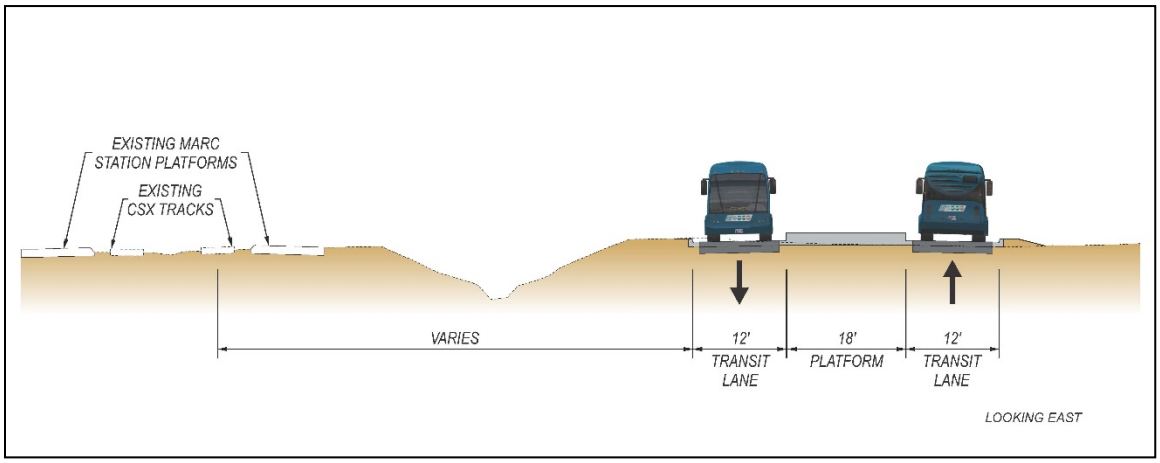
2.5.4 Alignment

Metropolitan Grove

The Build Alternative alignment would begin at the existing Metropolitan Grove MARC Station and would be located on the south side of the existing CSX tracks, which are also used by MARC (**Appendix E, Sheets 1-3**). The northern-most terminus station for the CCT Project would be the Metropolitan Grove Station, which would have a median platform. The existing parking lot at the MARC Station would be reconfigured to better serve the needs to both services. To maintain the CCT vehicles, an O&M Facility would be located near the Metropolitan Grove MARC Station as described in **Section 2.6.4**. The Build Alternative would travel east, parallel to the MARC tracks, and would turn south at Quince Orchard Road. Firstfield Station would be a median platform in the northwest corner of the intersection of Quince Orchard Road and Firstfield Road. Sidewalk would be provided between Quince Orchard Road and the platform to provide improved pedestrian access to the station. The alignment would continue at-grade across Firstfield Road, rise onto a bridge section to cross over Clopper Road, and then cross over Quince Orchard Road, just south of Clopper Road. The Build Alternative would return to grade on the east side of Quince Orchard Road near North Drive.

The lane widths would vary between 13 feet and 17 feet on the bridge section over Clopper Road and Quince Orchard Road to provide adequate horizontal sight distance. **Figure 2-6** presents a typical section of the Build Alternative at-grade between Metropolitan Grove Station and Quince Orchard Road.

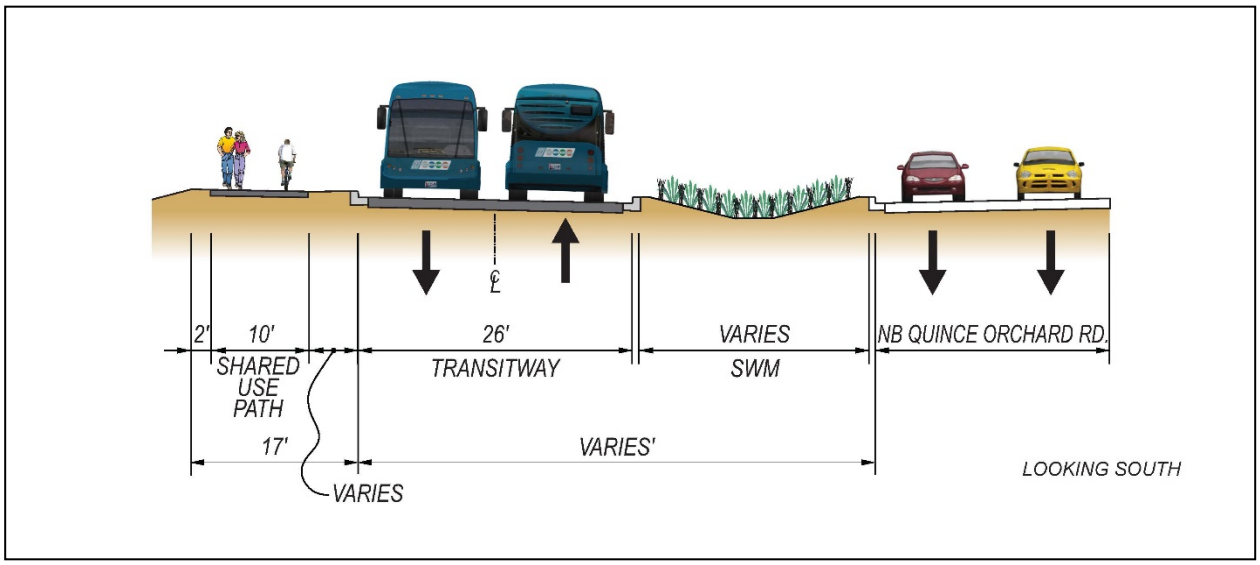
Figure 2-6: CCT Typical Section at Metropolitan Grove Station



Quince Orchard Road

The Build Alternative alignment would continue traveling south, parallel to and on the east side of Quince Orchard Road, at approximately the same elevation as the roadway (**Appendix E, Sheets 3-6**). A median platform station would be proposed northeast of the intersection of Quince Orchard Road and Quince Orchard Boulevard, near a proposed entrance to the NIST campus that would be constructed as part of this Project. The Build Alternative would continue south along Quince Orchard Road and cross Twin Lakes Drive and Orchard Ridge Drive. The Build Alternative would include a shared-use path on the east side. This shared-use path would replace an existing path (planned to be constructed by SHA) impacted by the Build Alternative. **Figure 2-7** provides a typical section along Quince Orchard Road.

Figure 2-7: CCT Typical Section Along Quince Orchard Road



Great Seneca Highway

South of the Orchard Ridge Drive intersection, the Build Alternative would rise on retaining walls to cross over Great Seneca Highway on a bridge structure. The alignment would turn south and continue on the west side of Great Seneca Highway (**Appendix E, Sheet 6**). The aerial platform at Kentlands Station would be located on structure west of Main Street (**Figure 2-5**). The Build Alternative would cross over Main Street on a bridge structure and return to the elevation of Great Seneca Highway on retaining walls. It would cross Kentlands Boulevard at-grade, and would continue parallel to and at the same elevation of Great Seneca Highway between Kentlands Boulevard and Lakelands Drive. South of Lakelands Drive, the Build Alternative would span the Muddy Branch stream on a new bridge, parallel to the existing bridge on Great Seneca Highway. The alignment would continue south on the west side of Great Seneca Highway to the intersection with Muddy Branch Road (**Appendix E, Sheets 6-9**).

In order to address concerns raised by the residents of the Washingtonian Woods community in the vicinity of Upshire Circle and Hillside Lake Terrace, the CCT was shifted closer to Great Seneca Highway, separating the transitway from the southbound travel lanes of Great Seneca Highway with a traffic barrier. This would allow the CCT to be moved ten feet further away from the Washingtonian Woods community.

Figure 2-8 provides a typical section along Great Seneca Highway between Main Street and Lakelands Drive. **Figure 2-9** provides a typical section along Great Seneca Highway in the vicinity of Upshire Circle. The lane widths would vary between 12 and 19 feet wide on the bridge over Great Seneca Highway to provide adequate horizontal sight distance. A ten-foot-wide shared-use path would be reconstructed east of the Build Alternative adjacent to Quince Orchard Road. A ten-foot-wide shared-use path would be constructed between Great Seneca Highway and the CCT from Quince Orchard Drive and Main Street and a five-foot-wide sidewalk would be reconstructed from Main Street to Lakelands Drive.

Figure 2-8: CCT Typical Section Along Great Seneca Highway

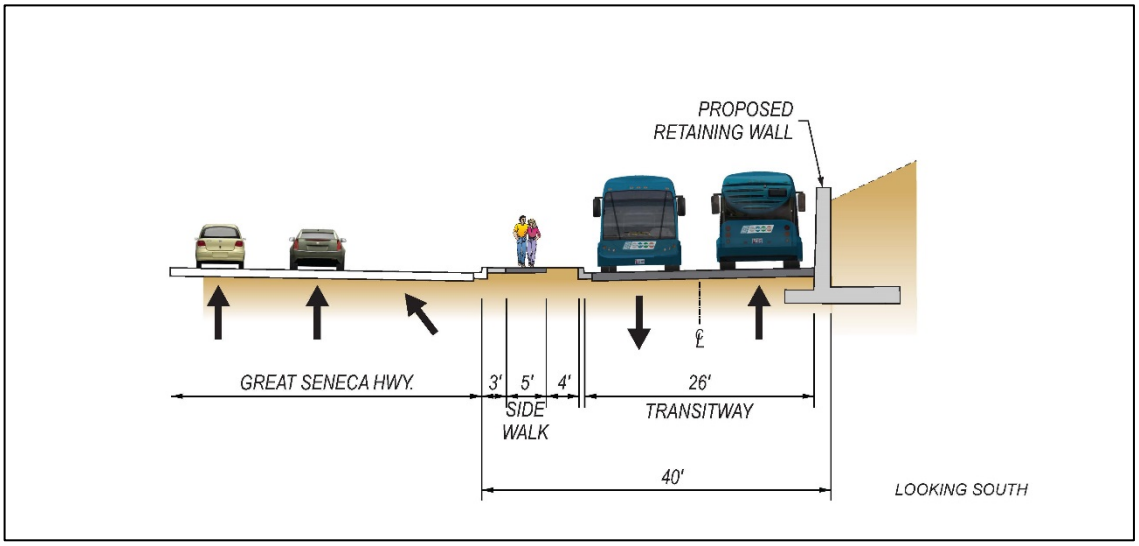
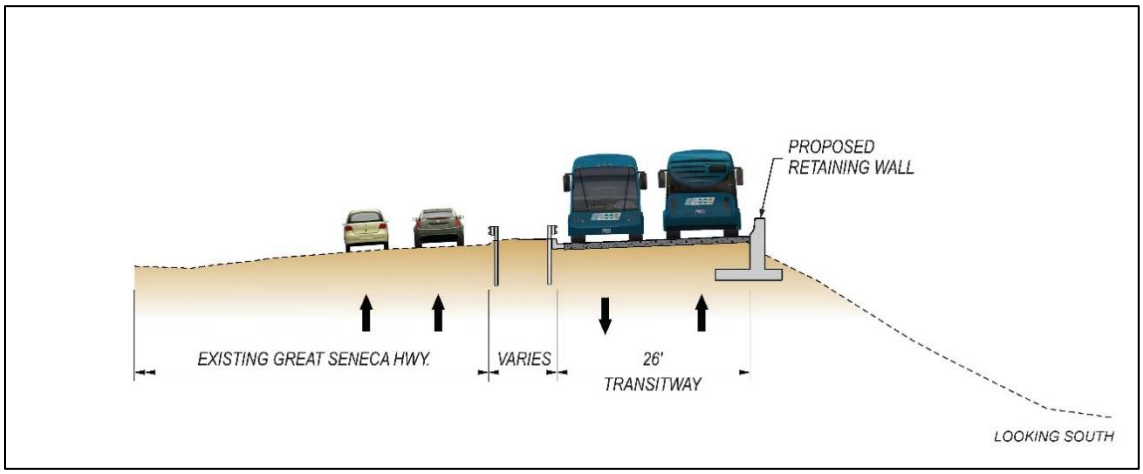


Figure 2-9: CCT Typical Section Along Great Seneca Highway near Upshire Circle



Muddy Branch Road

Once the CCT turns off of Great Seneca Highway onto Muddy Branch Road, it would transition into and operate in mixed traffic on Muddy Branch Road and Darnestown Road until it enters into the PSTA property.

Public Safety Training Academy

The Build Alternative alignment would cross Key West Avenue and enter the PSTA property on a proposed roadway that would continue through the site (**Appendix E, Sheets 10-11**). The PSTA site is currently being redeveloped. the Build Alternative would be located in the median of the proposed main roadway through the development. The LSC West Station would be located in the middle of the development.

CCT Service via Universities at Shady Grove

The CCT Service via USG would operate along the dedicated transitway of the Build Alternative, stopping at all stations, but it would divert off the dedicated transitway to serve two additional stations. The Build Alternative would leave the dedicated transitway at the intersection of Medical Center Drive and Great Seneca Highway and operate in mixed traffic continuing south on Great Seneca Highway (**Appendix E, Sheet 18**). The buses would turn east (left) along Darnestown Road and continue in mixed traffic. They would then turn south (right) onto Traville Gateway Drive (east portion). The Build Alternative would stop at the USG Station and then continue along Traville Gateway Drive. The Build Alternative alignment would turn east (left) along a proposed (new) connector road that would pass through the east side of the campus and connect to Shady Grove Road. The alignment would then turn west (right) onto Shady Grove Road and operate in mixed traffic, turning back onto Traville Gateway Drive (west portion) and stop at the Traville Gateway Drive Station near the office complex. The Build Alternative would continue to operate in mixed traffic along Traville Gateway Drive, turn east (right) onto Darnestown Road, and then north (left) onto Great Seneca Highway to return to the dedicated alignment of the Build Alternative.

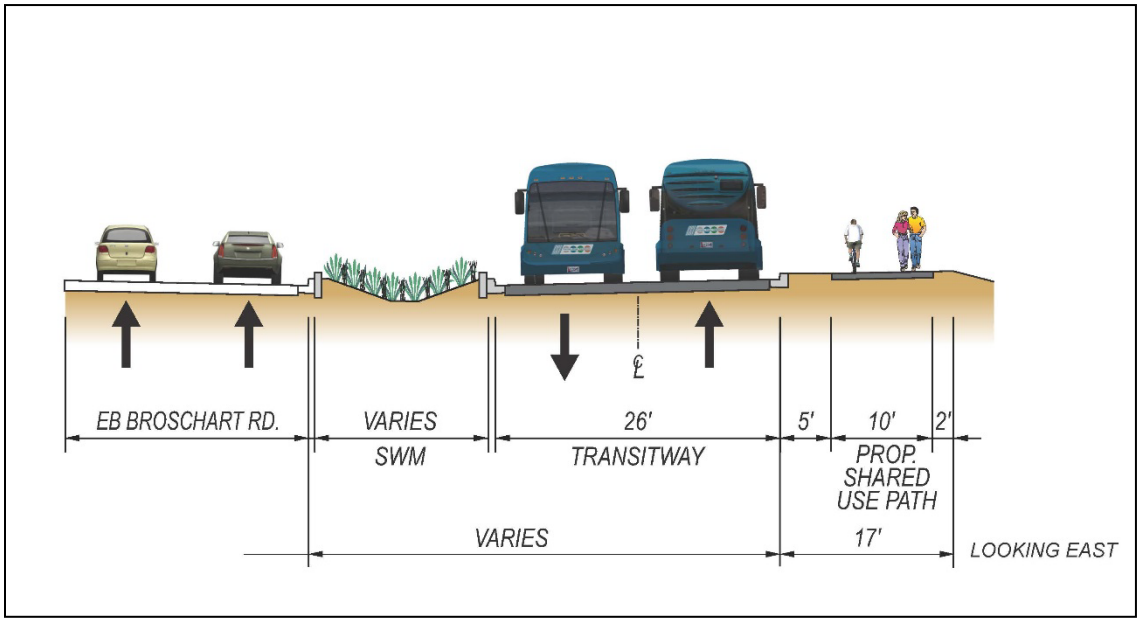
Medical Center Drive

The Build Alternative alignment would continue east along Medical Center Drive at the intersection with Great Seneca Highway (**Appendix E, Sheet 11**). It would travel in the median to the intersection with Broschart Road. A seven-foot-wide cycle track with a six-foot-wide buffer and a six-foot-wide sidewalk would be constructed on the south side of Medical Center Drive.

Broschart Road

The Build Alternative alignment would cross the intersection of Broschart Road and Medical Center Way and travel along the east side of Broschart Road to Blackwell Road (**Appendix E, Sheet 11**). The Build Alternative would then cross Broschart Road diagonally and continue along the west side to Key West Avenue (**Appendix E, Sheet 12**). The Build Alternative would then cross Key West Avenue at-grade. The median platform LSC Central Station would be located along Broschart Road south of Blackwell Road. **Figure 2-10** shows the typical section and the ten-foot-wide shared-use path that would be constructed on the east side of the transitway.

Figure 2-10: CCT Typical Section Along Broschart Road



Diamondback Drive

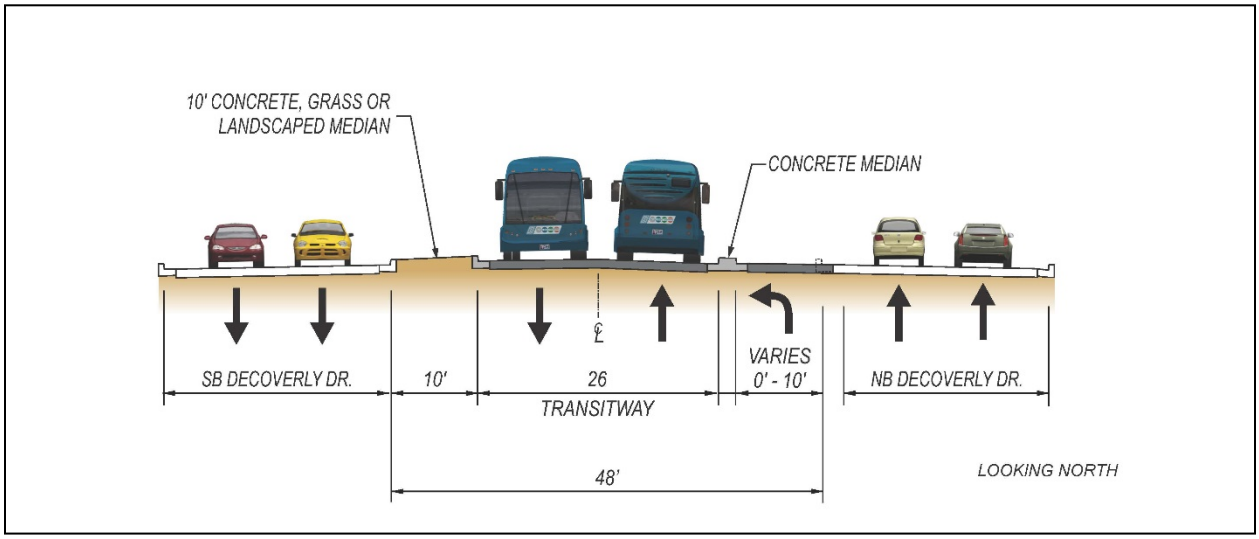
The Build Alternative alignment would cross Key West Avenue at-grade and continue along the west side of Diamondback Drive to Decoverly Drive (**Appendix E, Sheet 12**). The DANAC Station would include two side platforms and would be located along Diamondback Road just south of the intersection with Decoverly Drive. A retaining wall and sidewalk would be located between the transitway and Diamondback Drive. A shared-use path would be located between the outbound platform and the proposed DANAC development.

Decoverly Drive

The Build Alternative alignment would cross the intersection of Diamondback Drive and Decoverly Drive and continue in the median of Decoverly Drive to Fields Road through the Crown Farm development (**Appendix E, Sheets 12-13**). The Crown Farm Station would be located just south of the intersection with Fields Road. **Figure 2-11** shows the typical section with varying

width concrete, grass, or landscaped medians separating the transitway from the adjacent travel lanes. A seven-foot-wide cycle track with a six-foot-wide buffer and a ten-foot-wide shared-use path would be constructed on the east side of Decoverly Drive, south of Crown Park Drive.

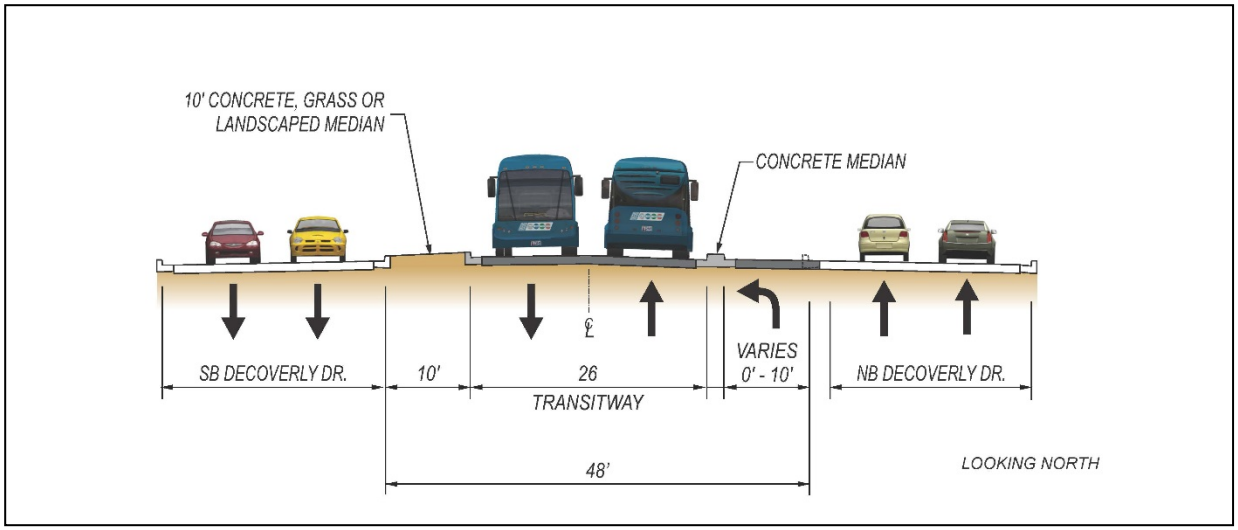
Figure 2-11: CCT Typical Section Along Decoverly Drive north of Crown Park Drive



Fields Road

The Build Alternative alignment would cross the intersection of Decoverly Drive and Fields Road, and continue in the proposed median of Fields Road. It would cross Washingtonian Boulevard and the I-270 exit ramp intersection with Fields Road at-grade, the would rise onto a bridge structure that would carry the transitway and a ten-foot-wide shared-use path over I-270 and Shady Grove Road (**Appendix E, Sheets 13-15**). After crossing over Shady Grove Road, the Build Alternative would return to grade near the roundabout at the west end of King Farm Boulevard. **Figure 2-12** shows the typical section rising on retaining walls prior to the bridge crossing over I-270.

Figure 2-12: Typical Section Along Fields Road



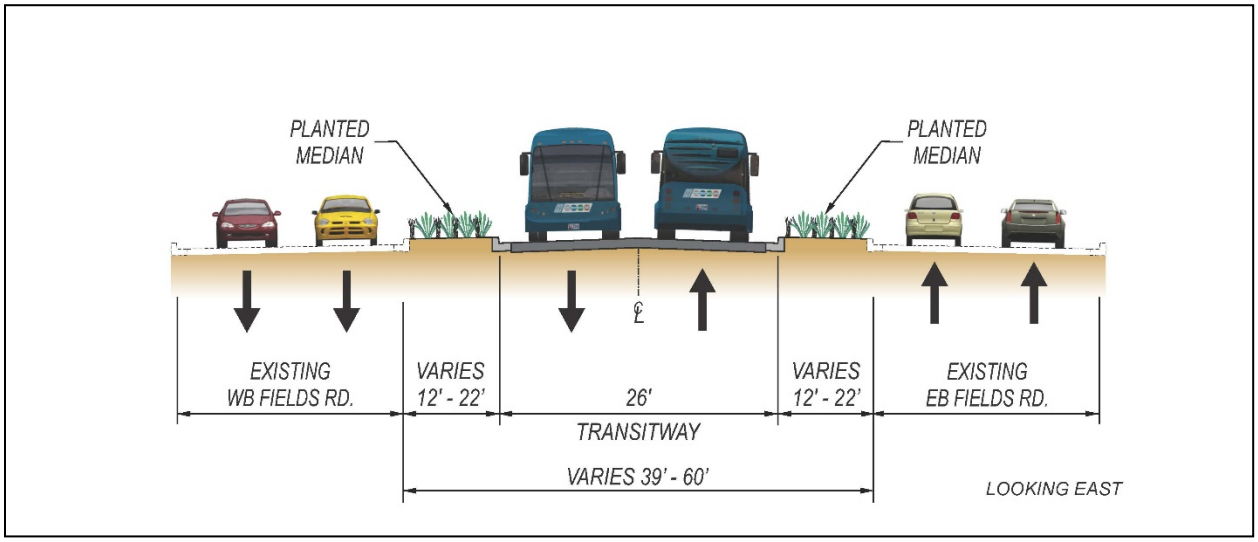
King Farm Boulevard

The Build Alternative alignment would continue along King Farm Boulevard east to MD 355 on lanes adjacent to the median and reserved for transitway use (**Appendix E, Sheets 15-16**). King Farm Boulevard was constructed as part of the greater King Farm development and was designed with a 52-foot-wide median intended to accommodate the future construction of the transitway. **Figure 2-13** shows the typical section of the transitway along King Farm Boulevard.

The standard typical section would not apply for this segment. The Build Alternative would consist of 13-foot-wide lanes located on either side of a narrowed existing median. The lanes would be adjacent to the existing King Farm Boulevard roadway with a concrete median separating the transitway near stations. The existing median would be narrowed to 26 feet and accommodate stormwater management facilities and green space.

Two median platform stations would be located along King Farm Boulevard: the West Gaither Station would be east of Piccard Drive and the East Gaither Station would be east of Pleasant Drive.

Figure 2-13: Typical Section Along King Farm Boulevard



Shady Grove Metro Access Road

The Build Alternative alignment would cross MD 355 and continue eastbound in mixed traffic along the Shady Grove Metro Access Road to enter the eastern terminus station–the Shady Grove Station, which would be located adjacent to the Shady Grove Metro Station (**Appendix E, Sheet 17**). East of the Access Road, the Build Alternative would utilize the existing ring road around the existing parking lot at the station. Westbound CCT buses exiting the Shady Grove Station would travel in mixed traffic along the Shady Grove Access Road. A sidewalk would be constructed on the west side of the Access Road and a ten-foot-wide shared-use trail would be constructed on both sides of the Access Road with three-foot buffers to separate them from the roadway.

2.6 Operations

2.6.1 Operations Plan

Two CCT routes would operate along the transitway: CCT Direct Service and CCT via USG. The CCT Direct Service route would operate between the Shady Grove and Metropolitan Grove Stations of the CCT, stopping at every station along the transitway. The CCT Service via USG will operate along the transitway, stopping at all stations, but will divert off the transitway to serve two additional stations.

The CCT Direct Service would operate on five-minute headways during peak periods, six minutes during mid-day and ten-minute headways during off-peak periods. The one-way travel time from Shady Grove to Metropolitan Grove would be approximately 42 minutes.

The CCT via USG would also operate along the CCT transitway between Metropolitan Grove and Shady Grove, but would provide additional local service to two activity centers: USG Station and Traville Gateway Drive Station. This service would operate on 15-minute headways during peak periods and 30-minute headways during off-peak periods. The one-way travel time for CCT service via USG would be approximately 46 minutes.

All CCT service would operate seven days per week. The hours of operation would be consistent with WMATA's Red Line Metrorail service for weekday and weekend service. Metrorail service begins at 5 am on weekdays and 7 am on weekends, and ends at 12 am on Sunday through Thursday or 3 am on Friday and Saturday. The projected ridership on the CCT in 2035 is 30,429 trips per day.

The estimated annual operations and maintenance costs for the CCT for the year 2035 operations is $23.5 million (2014 dollars). This projected operations and maintenance cost is for the total CCT service, both CCT Direct Service and CCT via USG Service.

CCT service would be integrated into the surrounding transit network. Some local bus service would continue to operate along streets adjacent to the CCT transitway to serve local bus stops and surrounding neighborhoods and businesses. Ride On routes would be re-routed to terminate at a CCT Station allowing passengers to easily transfer from local buses to the CCT.

Generally, MARC and WMATA Metrorail service would operate the same as existing service with the Build Alternative. Some changes may be made to existing MDOT MTA and WMATA services to provide timely connections to the CCT service and to utilize the CCT transitway. Transit schedules would be modified and local bus stops may be added to drop passengers off closer to the new CCT Stations.

As the Project continues to proceed through more detailed design, the proposed bus operations plan will be adjusted. Continuous refinements to the bus operations plan are anticipated until opening day of the CCT.

2.6.2 Parking

Parking for the CCT Project would be provided at five stations: Shady Grove, Crown Farm, LSC West, Kentlands, and Metropolitan Grove. Parking needs for the CCT transitway were identified based on the number of patrons accessing the CCT by automobile, but excluding other modes such as MARC. At this time, no additional parking spaces would be added at the Shady Grove Station for CCT patrons.

Based on 2035 ridership projections, the Build Alternative assumes the following number of parking spaces would be needed at these park-and-ride facilities:

- Metropolitan Grove Station: 260 spaces
- Kentlands Station: 240 spaces
- LSC West Station: 325 spaces
- Crown Farm Station: 430 spaces

2.6.3 System Elements

Vehicles

The proposed vehicle for the new CCT BRT service would be a 60-foot articulated vehicle, which would accommodate up to 90 passengers. The vehicle would be branded with a particular color and logo scheme, pending the final branding of the CCT. The CCT vehicles would have low floors enabling level boarding from the platform which would reduce boarding time and provide more comfortable and convenient access relative to standard buses for people with disabilities. Diesel-electric hybrid buses, which emit fewer pollutants than diesel buses, are planned for the CCT articulated vehicles. This technology has been applied in numerous local bus and BRT systems throughout the US.

The CCT vehicles would have several Intelligent Transportation Systems (ITS) components to facilitate operation, enhance passenger security, and improve passenger information. These components could include an automatic vehicle location system, real-time passenger information, and closed-circuit television cameras.

Fare Collection

A fare policy system for the CCT would be developed as Project development continues and as the future operating agency for the CCT is confirmed. At this time, a single fare is assumed, regardless of distance traveled or the time of day the CCT trip is taken, with integration into the regional fare system relative to smart card technology (or future adopted technologies) and mode-to-mode transfers. Off-board fare collection is intended, with on-board proof-of-payment, which would allow for all-door boarding. Cash also may be accepted in the final fare collection scheme.

With off-board fare collection, ticket vending machines would be provided at each CCT Station, along with ticket validation machines. Smart card readers would also be provided on the BRT vehicles. If cash is to be allowed, then a fare box would be provided at the front door of the vehicle.

2.6.4 Operations and Maintenance (O&M) Facility

An O&M Facility for the CCT would be required to store, maintain, and dispatch buses. The proposed O&M Facility location for the CCT is along Metropolitan Grove Road, southeast of Metropolitan Grove Station (**Appendix E, Sheet 2**). The majority of the proposed site consists of a heavily wooded area owned by the City of Gaithersburg and various parcels used to store truck trailers.

The O&M Facility design would accommodate administrative functions with a two-story Administration and Operations building. The site would also accommodate vehicle parking and service areas for bus storage and service vehicles. The maintenance features would include a bus service area with a wash-and-fuel lane, a chassis wash, and bypass and support spaces, and a bus maintenance facility with five bays, one pit bay, shops, and support spaces.

2.7 Construction Methods and Assumptions

MDOT MTA anticipates construction of the Build Alternatives for the CCT to take three to four years. The time to construct each Project area would differ based on the type of elements in the area, site characteristics, weather, structural design, and other factors, such as the relationship among the construction elements.

Construction activities are likely to begin simultaneously at several locations within the study area corridor to accommodate activities requiring lengthy construction times, such as structures. The time necessary for each activity would vary depending upon factors such as work hours, traffic restrictions, and contractors' means and methods. Other factors would include the number and type of utilities requiring relocation and the location and conditions of nearby surface and subsurface structures.

Typically, surface and above-ground construction activities would occur five days a week, eight hours per day. There would be instances when certain construction activities could take place during weekends or at night to minimize impacts to traffic.

A general discussion of the level and type of construction methods, assumptions, and anticipated impacts are presented in this section. These assumptions are based on the current 30 percent preliminary engineering design. Detailed design and construction information will continue to be developed as the Project advances and the construction contract delivery methods are identified.

Construction of the Build Alternative would involve the creation of a new travel surface for the BRT for the majority of the alignment. This could result in disruption and impacts to sidewalk areas and in some cases, properties adjacent to the transitway. Sidewalk and curb adjustments or reconstruction could be required to reduce or eliminate right-of-way needs. Ancillary construction could include: underground utility relocation and/or reconstruction; curb and sidewalk reconstruction; construction of new or modified storm drain systems; manhole structure repairs, cover adjustments, or relocations; roadway surface milling and repaving; temporary lane closures for construction and/or staging areas; and pavement marking/signage installation.

Temporary arrangements for pedestrian and vehicle access would be made with neighboring business owners and residents, where appropriate. Advanced warning for lane closures or detours would be provided and would adhere to state guidelines for temporary traffic control during construction.

Detailed discussions of the potential environmental effects that may be associated with construction activities and recommended measures to mitigate or minimize such effects are identified in **Chapter 3** of this EA document.

The following discussion describes the anticipated construction impacts of the Build Alternative based on the 30 percent design by ten areas, as listed in **Table 2-2**.

Table 2-2: Summary of Construction Activities by Construction Area

Construction Area	Limits & Length	Affected Roadways	Special Features
1	Metropolitan Grove MARC Station to Quince Orchard / Clopper Road Intersection	• Quince Orchard Blvd Crossing Roads / Signal Mod • Firstfield Rd • Metropolitan Grove Rd	• Metropolitan Grove MARC Train Facility • SHA facility • Metropolitan Grove Station • Firstfield Station
2	Quince Orchard /Clopper Road to Orchard Ridge Drive	• Quince Orchard Road Crossing Roads / Signal Mod • Clopper Road • North Drive • NIST Entrance Road • South Drive • Twin Lakes Drive • Orchard Ridge Drive	• NIST Station • Kentlands Station • Structure over Quince Orchard Blvd and Clopper Road
3	Orchard Ridge Drive / Great Seneca Highway to Muddy Branch Road	• Great Seneca Hwy • Muddy Branch Road • Kentlands Blvd • Lakelands Drive • Midsummer Drive	• Structure over Great Seneca Highway • Structure over Muddy Branch
4	Medical Center Drive extended from Key West Blvd. to Great Seneca Highway	• Medical Center Drive Crossing Roads/Signal Mod • Great Seneca Hwy • Key West Ave • Johns Hopkins Drive	• PSTA Site • LSC West Station
5	Medical Center Drive from Great Seneca Highway to past Broschart Road to Key West at Decoverly Drive	• Medical Center Drive • Broschart Road • Diamondback Drive Crossing Roads/Signal Mod • Medical Center Way • Blackwell Road • Key West Ave • Decoverly Drive	• LSC West Station • LSC Central Station • DANAC Station
6	Diamondback Drive and Decoverly Drive from Key West to Fields Road	• Decoverly Drive • Fields Rd Crossing Roads/Signal Mod • Diamondback Drive • Skyhill Way • Crown Park Ave • Hendrix Ave	• Crown Farm Station

Construction Area	Limits & Length	Affected Roadways	Special Features
		•	
7	Fields Road from Decoverly Drive	• Washingtonian Blvd Crossing Roads/Signal Mod Winners Drive Marathon Circle Case Street	•
8	I-270 Mainline and Ramps		• Structure 4: Bridge over I-270
9	King Farm Blvd	• King Farm Blvd Crossing Roads/Signal Mod • Sheraton Entrance • Piccard Drive • Central & eastern Ingleside entrance • Gaither Rd • Reserve Champion Drive • Crestfield Drive • Pleasant Drive • Grand Champion Drive • Elmcroft Blvd • MD 355	• West Gaither Station • East Gaither Station
10	Shady Grove Metro Station	• King Farm Blvd • Somerville Drive Crossing Roads / Signal Mod • MD 355	• Shady Grove Metro Station • Shady Grove Station

2.7.1 Construction Area 1

The alignment is along the south side of the CSX and MARC tracks and the west side of Quince Orchard Road. The transitway would be constructed outside the CSX right-of-way and would not affect rail operations. At the Metropolitan Grove MARC Station, the CCT Station would be constructed in the existing MARC parking lot. Parking could be temporarily impacted during construction but would still be accessible to MARC riders. Access to the MARC platform would be maintained at all times.

The CCT alignment would cross Metropolitan Grove Road, SHA Maintenance Facility, and Firstfield Road. Minor construction would be required on the cross roads; however, access will be maintained. The construction of the Firstfield Station would not further impact traffic, pedestrians, bicyclists, or the neighborhoods.

Sidewalks along the west side of Quince Orchard Boulevard would be temporarily closed during construction. Pedestrians, including residents at Orchard Pond Apartments, would be detoured to use the sidewalk along the east side of Orchard Ridge Drive.

2.7.2 Construction Area 2

The CCT would be on structure over Clopper Road and Quince Orchard Road, and then would run along the east side of Quince Orchard Road, south of Clopper Road. The CCT would be constructed outside the existing roadway and would not affect roadway operations. The majority

of the construction would occur outside the existing roadways; however, temporary road closures could be required when placing the structure over the roadway.

The CCT alignment crosses four access roads along the NIST property: North Drive, Sound Road, access drive to substation, and South Drive. The existing access and gates at North Drive and Sound Road would be closed. A new access and gate would be provided on the east leg of the Quince Orchard Boulevard / Quince Orchard Road intersection by connecting to the service drive. The NIST Station would be constructed adjacent to the new gate and would not further impact traffic, pedestrians, bicyclists, or the neighborhoods. North Drive and Sound Road would remain open while the new access road and gate are being constructed. The access road to the substation and South Drive would remain open during and after construction.

Minor construction would be required at the Twin Lakes Drive and Orchard Ridge Drive crossings; however, access would be maintained during construction.

Sidewalks along east side of Quince Orchard Boulevard would be temporarily closed during construction. Pedestrians, would be detoured to use the sidewalk along the west side of Quince Orchard Road.

2.7.3 Construction Area 3

The CCT alignment would turn from Quince Orchard Road to the west side of Great Seneca Highway on structure and would be constructed outside the existing roadway. However, temporary road closures could be required when placing the structure over the roadway. The Kentlands Station would be elevated above the adjacent shopping center parking lot. A portion of the parking lot would be closed during construction but the majority of the parking spaces would be maintained once the construction is complete.

The CCT alignment will cross Main Street, Kentlands Boulevard, and Lakelands Road. Minor construction would be required on the cross roads; however, access would be maintained. The structure over Muddy Branch would be constructed from the elevation of Great Seneca Highway to minimize impacts to Muddy Branch and the park.

The construction of the northbound left-turn lane would be constructed within the median of Muddy Branch Road with minimal traffic impacts.

The existing sidewalk along the west side of Great Seneca Highway from Quince Orchard Road to Lakelands Drive would be temporarily closed during construction. Pedestrians, including residents from Kentlands and Lakelands, will be detoured to use the sidewalk along the east side of Great Seneca Highway.

The residents of Washingtonian Woods and the Vistas would experience temporary construction impacts including noise, vibration, and changes in viewsheds.

2.7.4 Construction Area 4

The CCT alignment would travel through the soon-to-be vacant Montgomery County PSTA property and would not disturb adjacent properties. Vehicular access to the entrance of the PSTA at 9710 Great Seneca Highway would be temporarily limited, but access to the property during construction would still be provided. At the intersection of Medical Center Drive extended and Great Seneca Highway, the access from the government office building would be temporarily impacted during construction, but access would be provided at all times.

2.7.5 Construction Area 5

The CCT alignment would be constructed in the median of Medical Center Drive requiring the eastbound lanes to be reconstructed to the south. Eastbound traffic on Medical Center Drive would be minimally impacted during construction because the new travel lanes would be constructed outside the roadway and then traffic would be shifted to the new lanes. All travel lanes would remain open while the CCT is being constructed in the median.

No construction impacts or changes in access are anticipated at the Katherine Thomas School since the CCT and eastbound roadway construction are on the opposite side of Medical Center Drive.

Once the CCT alignment turns onto the east side of Broschart Road, it would be outside the existing roadway. At Blackwell Road, the alignment crosses to the west side of Broschart, completely outside the roadway. Through this section, the CCT alignment crosses Medical Center Way, two driveways to the Shady Grove Adventist Hospital parking lot, and a driveway to an office building. The two driveways to Shady Grove Adventist Hospital would be closed during and after construction; however, access would be provided via Medical Center Way and Blackwell Road.

The LSC Central Station would be constructed outside the roadway and would result in minimal traffic impacts. Sidewalks along the east side of Broschart Road will be temporarily closed during construction. Pedestrians will be detoured to use the sidewalk along the west side of Broschart Road.

2.7.6 Construction Area 6

The CCT alignment would continue across Key West Avenue on the west side of Diamondback Drive. Minor construction would be required to cross this road; however, access would be maintained. The DANAC Station would be constructed outside of the roadway adjacent to the parking garage. The station would require the closing of an existing access drive on the west side of Diamondback Drive; however, the redevelopment of this site would accommodate access elsewhere.

The impacted sidewalk on the west side of Diamondback Drive would be replaced with a new sidewalk and shared-use path between the transitway and Diamondback Drive. During construction, pedestrians and bicyclists would be redirected to the sidewalk on the east side of Diamondback Drive.

The CCT alignment continues across Diamondback Drive to the median of Decoverly Drive. Construction would take place on all four legs of the intersection and could result in a temporary reduction in lanes; however, access will be maintained at all times. From Diamondback Drive to just north of Skyhill Way, the northbound travel lanes and a shared-use path would be constructed on the east side to allow for a wider median for the construction of the CCT alignment. During and after construction, Skyhill Way and Steinbeck Avenue would be limited to right-in/right-out access points at Decoverly Drive. Access to Crown Park Avenue and Hendrix Avenue would be temporarily impacted during construction; however, access would be maintained.

The Crown Farm Station would be constructed in the median of Decoverly Drive and would result in minimal traffic impacts.

2.7.7 Construction Area 7

The CCT alignment would cross Fields Road at an existing traffic signal from the median of Decoverly Drive to the median of Fields Road. There would be limited impacts to traffic at this intersection. The CCT alignment would continue in the median of Fields Road. Winner Drive, Marathon Circle, and Case Street will remain right-in\right-out only from Fields Road. The CCT would cross through the intersection at Washingtonian Boulevard at an existing traffic signal and have minor impacts to traffic during construction.

2.7.8 Construction Area 8

The CCT alignment would stay in the median of Fields Road up to the new signal at Omega Drive, then it would continue east on a new structure over Shady Grove Road and I-270 mainline/ramps. It would tie down to existing ground at the west end of King Farm Boulevard. Temporary, off-peak road closures on Shady Grove and I-270 could be required when placing the structures over the roadway. A shared-use trail would be constructed adjacent to the transitway on the same structure.

2.7.9 Construction Area 9

The CCT alignment would continue in the median of King Farm Boulevard. The following cross streets would remain open, but traffic signals would be added or modified: Piccard Drive, central and east Ingleside entrances, Gaither Road, Reserve Champion Drive, Pleasant Drive, Grand Champion Drive, and MD 355. Access to these streets would temporarily be impacted during construction; however, access would be maintained. Cross streets Crestfield Drive and Elmcroft Boulevard would be modified to be right-in\right-out only. Access to the Sheraton Hotel driveway west of Piccard Drive would be temporarily impacted during construction; however, access would be maintained at all times.

Because the CCT would be in the median of King Farm Boulevard, there are no construction impacts anticipated to the sidewalks or at the stations.

2.7.10 Construction Area 10

The CCT alignment would operate in mixed traffic on King Farm Boulevard east of MD 355 and through the Shady Grove Metro Station. The roadway would be widened to the east to accommodate turn lanes onto MD 355 and Sommerville Drive. MDOT MTA would maintain access to the Metro Station during construction for local and commuter buses, kiss-and-ride, and parking for Metro. Close and careful coordination would take place with WMATA on the construction phasing at the Shady Grove Station.

2.7.11 Transportation Management Plan

A Draft Transportation Management Plan (TMP) has been developed based on the 30 percent design plans, in accordance with the MDOT SHA Guidelines for Development, Implementation, and Assessment of TMPs for major projects. The Draft TMP for the CCT Project was prepared to serve the mobility and safety needs of road users, highway workers, businesses, and the community that may be affected by the construction of the Project. The Draft TMP details work zone impact management strategies, including maintenance of traffic and public information, outreach strategies, and incident management during construction. It includes a Traffic Control Plan following guidance from SHA and federal standards, and addresses construction sequencing, traffic safety, and traffic control throughout the work zone. The TMP is a "living document" that will be continually updated during later stages of the Project, including detailed design and construction.

The MDOT MTA, in coordination with its contractor, would be responsible for the plan's Public Information and Outreach program, which is intended to inform motorists, residents, businesses, schools, emergency service and delivery providers, and the public regarding temporary changes to traffic patterns and detours. Changes in traffic, bicycle, and pedestrian routes would be announced in the print and electronic media. Appropriate lines of communication would be maintained with emergency service providers throughout construction regarding current and upcoming construction activities, potential issues, and planned route changes. Pedestrian access to adjacent properties and access to adjacent parking facilities would be maintained during construction. Whenever existing movements cannot be maintained, alternate routing would be designated with appropriate signing.

2.8 Capital Cost Estimate

2.8.1 Methodology

The Project definition of the Build Alternative that forms the basis of the capital cost estimate is defined and described in this chapter of the EA and the associated engineering plans that are included in **Appendix E**. The capital cost estimate includes all costs associated with the development of the CCT. The capital cost estimate is organized and formatted per the FTA Standard Cost Categories (SCC) for the estimate of capital costs. These categories, with a brief explanation of each are as follows:

- Category 10 – Guideway: Elements in this category include the construction of the transitway itself in three separate delineations: at-grade semi-exclusive, aerial structure, retained cut, and fill.

- Category 20 – Stations: Elements include all work associated with stations such as the platform itself, station amenities, parking areas for stations, and elevators and escalators, if needed.

- Category 30 – Bus Maintenance Facility: Elements include all requirements to store and maintain the fleet of buses for CCT operations including Maintenance and Administration buildings and exterior site improvements.

- Category 40 – Sitework: Elements include demolition; clearing; earthwork; site utilities and utility replacement; stormwater management; hazardous materials and groundwater treatment; environmental mitigation; reforestation; site structures, such as noise walls and retaining walls; pedestrian and bicycle facilities and access; landscaping; art in transit; and vehicular access needs.

- Category 50 – Systems: Elements include traffic signals (new or modified), transit signal priority, corridor signage, communications equipment, fare collection equipment, and operational equipment.

- Category 60 – Right-of –Way: Cost elements include the purchase of private right-of-way needed for the project, as well as relocation costs. Costs are not included for either publicly-owned right-of-way or private right-of-way dedicated to the CCT.

- Category 70 – Vehicles: The cost to purchase 39 new articulated buses for the CCT and associated spare parts.

- Category 80 – Professional Services: Elements include design engineering, project management and engineering during construction, construction administration and management, liability insurance, legal, permits, fees for other agencies, testing and inspection, and project start-up costs.

- Category 90 – Unallocated Contingency: Budget set aside for unknown conditions or project changes.

Costs for the nine categories above were developed based on quantities and unit costs developed in the 30 percent engineering effort. To date, allocated contingencies were included for all cost items, consistent with the level of detail accomplished in each category. Costs were initially calculated in 2016 dollars, the best available unit cost data. Costs were then escalated to Year of Expenditure (YOE) dollars. The YOE dollars are escalated from 2016 dollars to an estimated mid-point of construction at a three percent per year escalation rate. For the YOE estimate, the mid-point of construction was assumed to be 2019. If the Project were to be constructed on a different schedule, the YOE capital costs would need to be adjusted accordingly.

2.8.2 Cost Estimate

The capital cost estimate for the CCT in 2016 dollars is $698 Million. The YOE capital cost estimate is $776 Million. The breakdown by FTA SCC is provided in **Table 2-3**.

Table 2-3: Project Cost Estimate in 2016 and YOE Dollars by FTA Standard Cost Categories

FTA Standard Cost Category	2016 Dollars (in millions)	Year of Expenditure Dollars (in millions)
Category 10 – Guideway	$123	$136
Category 20 – Stations	$61	$68
Category 30 – Bus Maintenance Facility	$70	$77
Category 40 – Sitework	$162	$180
Category 50 – Systems	$21	$23
Category 60 – Right-of-Way	$69	$76
Category 70 – Vehicles	$50	$59
Category 80 – Professional Services	$115	$128
Category 90 – Unallocated Contingency	$27	$29
TOTAL	**$718**	**$776**

4. Public Outreach & Agency Coordination

Public involvement and agency coordination has played an important role in the development of the CCT Project. The public and interested stakeholders (station area residents, businesses, community organizations, and institutions) are encouraged to provide feedback during the planning and preliminary design of the Project as they are the experts about their communities and have first-hand knowledge and experiences to share.

MDOT MTA's goal for the CCT Public Involvement Program is to inform and educate the public and stakeholders about the Project. Since the announcement of the LPA in May 2012, the MDOT MTA has focused the CCT Public Involvement Program on educating the public and stakeholders about BRT characteristics, as well as solicit input regarding all aspects of the Project. In striving to achieve this goal, several initiatives were implemented to share information about the Project. These outreach efforts, since the LPA announcement in May 2012, are summarized in this chapter.

4.1 Project Website

The Project website is available at www.mta.maryland.gov/cct. The Project website includes Project information, - previous environmental documents, engineering terms and reports, proposed operational information, public meeting announcements, mapping of the alignment, and information on special reports and studies. The Project website also includes a comment form to submit comments or contact Project staff.

4.2 Community Presentations

MDOT MTA is steadfast in its commitment to educate and inform the public and stakeholders about the CCT Project. One approach was to present community presentations at regularly scheduled homeowner's association meetings to inform communities throughout the study area corridor and interested areas about the Project. These presentations were designed to encourage a targeted dialogue with the community about their concerns. Thus far, MDOT MTA has presented to approximately 40 community groups and organizations and is constantly reaching out to additional organizations for opportunities to present the Project. The scheduling of meetings is continuous as the goal is to inform as many stakeholders as possible of the Project.

A variety of questions and concerns have been discussed at these community presentations and some of the consistent themes include: noise, pedestrian and bicyclist facilities and safety, parking (which stations would have it, would riders take spaces away from residents), traffic impacts, stations, potential impacts to existing bus service, construction schedule (including funding), and potential impacts to the capacity at the Shady Grove Metro Station to carry additional commuters.

4.3 Neighborhood Events

In 2012, a refocus on neighborhood events was initiated as the MDOT MTA proactively started attending various events throughout the Project area to reach out to the public and inform more stakeholders about the Project. Since then, staff have participated in and informational tables have been included in approximately 40 events, including fairs, festivals, community days, and events displaying general Project information, newsletters, fact sheets, brochures, and sign-up sheets for the mailing list. At these events, staff also provided giveaway materials, including magnets, note pads, ink pens, fare card holders, lanyards, and reusable bags labeled with the CCT logo and website address.

4.4 Printed Materials

Traditionally, newsletters are mailed to stakeholders to provide project news and status updates. The MDOT MTA developed two newsletters; first to announce the LPA and second to describe the work of the Area Advisory Committee (AAC) and the 15 percent design plans. Both newsletters are available on the Project website. The last newsletter was distributed in early January 2015. The current mailing list includes approximately 2,500 addresses of citizens and stakeholders interested in receiving information about the Project.

Additionally, MDOT MTA has developed four fact sheets explaining both general Project information and specific topics that include: Frequently Asked Questions; Noise Analysis and Mitigation; How the VISSIM Model Works; and SWM Techniques. To educate the public about the new transit mode – BRT, the MDOT MTA published a brochure and fact card, in both English and Spanish, defining BRT and detailing the benefits, vehicles, running ways, and stations associated with BRT. The Project placed meeting advertisements in local newspapers including the *Washington Post Media - Local Living Montgomery County*, *Afro American - DC Edition*, *Montgomery County Gazette,* and the *Frederick News Post*. Advertisements were also placed in Spanish newspapers: the *Washington Hispanic* and *El Tiempo.* English and Spanish posters were posted throughout the corridor, such as the Rio Shopping Center, announcing the public meeting. Additionally, a video, showing examples of BRT in other US cities, was posted to the Project website to provide a unique perspective on how BRT would operate in the community. These materials have been developed and distributed at various events. All Project newsletters, fact sheets, and brochures are posted on the Project website.

4.5 Open House

Since the announcement of the LPA, one Open House meeting was held on Wednesday, October 30, 2013, and more than 130 residents, elected officials, and interested stakeholders were in attendance to learn more about the CCT Project. The Open House, held at the Universities at Shady Grove Conference Center, featured advanced design concepts for the Project. Engineers were on hand to walk interested attendees through aerial maps of the alignment and detailed typical sections. Display boards and other pertinent Project information were available for review. Attendees discussed and provided comments on a variety of topics, including noise, vehicle type, ridership, SWM options, and traffic operations. A limited number of concerns were identified by participants at the meeting including localized noise and parking impacts, a request for an alignment modification near Muddy Branch Road and Great Seneca Highway, and the need for public art as part of system amenities. The materials displayed at the meeting are available on the Project website. The Open House also served as the launch for the CCT AACs. Interested attendees asked questions about the process and took time to complete self-nomination forms.

4.6 Area Advisory Committees

A cornerstone of the MDOT MTA public involvement program is the establishment of the AACs in March 2014. They were established to provide stakeholders with an interest along the corridor and throughout the region with an opportunity to participate in the Project. The AACs were developed to encourage community involvement in the design and construction of the transitway. These AACs also provide community stakeholders the opportunity to participate in the process of designing how the proposed transit stations would be integrated into their communities. By working with designers, architects, and planners, these AACs will provide input to the MDOT MTA on: Traffic, Station Design and Amenities, SWM, Safety, Mobility (pedestrian/bicycle), and Sustainability.

More than 90 stakeholders submitted self-nomination forms for consideration. As a result, 46 stakeholders were selected and three AACs have been formed to cover the full Project length.

- AAC One encompasses the Metropolitan Grove, Firstfield, NIST, and Kentlands Stations.
- AAC Two includes LSC Belward, LSC West, Traville Gateway Drive, USG, LSC Central; DANAC, and the Crown Farm Stations.
- AAC Three consists of West Gaither, East Gaither, and the Shady Grove Stations.

The AACs met bi-monthly until June 2015 to discuss specific issues related to the design, construction, and operation of the CCT. Based on these discussions, the AACs were encouraged and charged with maintaining communication with the larger CCT community. This two-way feedback allowed the Project design team and the community to work together to develop the best project possible.

4.7 Agency Coordination

Local, state, and federal agency coordination has been an essential, ongoing component of the CCT Project development. After the transit component of the CCT Project was deemed to have independent utility in 2011 and the Project's LPA was announced in 2012, agency coordination was re-initiated.

Four federal resource agencies with potential interest in the CCT Project were invited by MDOT MTA, in coordination with FTA, to become cooperating agencies in the environmental review process: the EPA, the USACE, the NIST, and the NCPC. The first three invitations were sent on June 12, 2014, while the NCPC invitation was sent on September 8, 2014. EPA and NIST accepted the invitation to become cooperating agencies in writing (**Appendix A**).

Relevant local, state, and federal agencies were provided in-person Project updates at an Interagency Review Meeting (IRM) held on November 20, 2013 at the Maryland SHA headquarters. Eleven agencies, including the following, were present at the IRM:

- Baltimore Metropolitan Council (BMC)
- Maryland Department of Natural Resources (MD DNR)
- US Environmental Protection Agency (EPA)
- Federal Highway Administration (FHWA)
- Maryland Department of the Environment (MDE)
- Maryland Department of Planning (MDE)
    - Maryland Historic Trust (MHT)
- Maryland State Highway Administration (SHA)
- US Army Corps of Engineers (USACE)
- US Fish and Wildlife Service (USFWS)

A presentation provided an overview of the CCT Project history, proposed alignment, associated environmental studies, agency and public involvement efforts, and schedule. Agency representatives were invited to ask questions and provide input on the Project. Several agencies had questions answered related to agency coordination and potential environmental impacts, including the MDNR, USACE, EPA, and the MHT/SHPO.

Agency coordination was also important in terms of the documentation of cultural resources and natural resources. FTA initiated the Section 106 consultation process with the MHT via an invitation sent on April 18, 2014, and MHT confirmed the initiation with a response sent on June 10, 2014. Two days later, the following agencies and organizations were invited to act as Section 106 consulting parties: City of Gaithersburg Historic Preservation Advisory Committee, City of Gaithersburg, City of Rockville, Gaithersburg-North Potomac-Rockville Coalition, Gaithersburg Historical Association, Heritage Tourism Alliance of Montgomery County, Johns Hopkins Real Estate, M-NCPPC, Montgomery County Historical Society, Montgomery County Preservation, Inc., NIST (within the US Department of Commerce), Peerless Rockville, and Preservation Maryland. The consulting parties who accepted the invitation were provided the opportunity to

review Section 106 Project deliverables simultaneously with MHT, MDOT MTA, and FTA, before information was released to the public.

In order to identify and thoroughly document impacts to natural resources, MDOT MTA coordinated with both the MDNR and the USFWS. MDOT MTA requested information on state-listed RTE species in the Project area from the Maryland DNR Wildlife and Heritage Service via a letter sent on January 8, 2014. This letter also included a Coordination Sheet for information on fisheries resources, including anadromous fish, related to Project locations and study areas for the CCT, to be completed by the Maryland DNR Environmental Review Unit (this request was completed on December 4, 2013). MDNR Wildlife and Heritage Service responded on February 7, 2014, confirming that a portion of the CCT Project route has the potential to impact Potato Dandelion habitat. MDOT MTA replied to MDNR on April 14, 2014, stating that the LOD of the proposed transitway would not impact Potato Dandelion habitat. On May 29, 2014, MDNR Wildlife and Heritage Service replied that there were no further concerns for direct impacts to Potato Dandelion habitat. On March 28, 2014, MDNR's Environmental Review Unit provided a completed Coordination Sheet. (Refer to **Appendix A**.)

MDOT MTA submitted a request for RTE Information via the USFWS online Information, Planning, and Conservation (IPaC) System on January 8, 2014. The USFWS responded with an Online Certification Letter on February 18, 2014, stating that except for occasional transient individuals, no federally proposed or listed endangered or threatened species are known to exist within the CCT Project area. Additionally, MDOT MTA requested information from the USACE regarding the presence of waters of the United States within the study area via e-mail on October 21, 2014. The USACE responded on December 15, 2014 with a completed Preliminary Jurisdictional Determination Form. Lastly, FTA submitted a letter to USFWS on February 17, 2016 to request consultation of the potential impacts of the CCT Project to the threatened Northern Long-Eared Bat. In a letter dated March 14, 2016, the USFWS, determined the Project is not likely to adversely affect the Northern Long-Eared Bat. (Refer to **Appendix A**.)

Telephone correspondence and in-person meetings were conducted as necessary throughout the Project process. In addition to direct, interagency correspondence, agencies were invited to attend public meetings and submit comments throughout the Project process.

Appendix A:

Agency Correspondence

NEPA
Independent Utility Letter and Paper
Locally Preferred Alternative (LPA) Recommendation Memorandum
Press Release
MTA to EPA: Cooperating Agency Invitation and Acceptance
NIST to MTA: Acceptance of Invitation to be a Cooperating Agency
MTA to USACE: Cooperating Agency Invitation
MTA to NCPC: Cooperating Agency Invitation

Cultural
FTA to MHT: Section 106 Initiation Letter
MHT to FTA: Section 106 Initiation Letter Confirmation
MTA to Consulting Party Invitee: Sample Letter
NIST to MHT: Letter Regarding Determination of Eligibility
MHT to FTA: Section 106 Consultation- Identification and Evaluation of Historic Properties
MHT to FTA: Section 106 Effects Assessment and Section 4(f) Intent to Make De Minimis Finding

Natural Resources
MTA to MD DNR, Wildlife and Heritage Division and Environmental Review Unit: Request for RTE Information
MTA to USFWS: Online Request for RTE Information via USFWS IPAC System
MD DNR, Wildlife and Heritage Division, to MTA: Response to RTE Information Request
USFWS to MTA: Online Certification Letter
USFWS to FTA: No Likely to Adversely Affect Determination for Northern Long-Eared Bat
MTA to MD DNR, Wildlife and Heritage Division: Reply to RTE Information
MD DNR, Wildlife and Heritage Division, to MTA: Follow- Up to MTA Environmental Review
MD DNR, Environmental Review Unit, to MTA: Coordination Sheet
USACE to MTA: Preliminary Jurisdictional Determination Form

Martin O'Malley, *Governor*
Anthony G. Brown, *Lt. Governor*

State Highway Administration
Maryland Department of Transportation

Beverley K. Swaim-Staley, *Secretary*
Darrell B. Mobley, *Acting Administrator*

September 21, 2011

Ms. Brigid Hynes-Cherin
Acting Regional Administrator for Region III
Federal Transit Administration
Suite 500
1760 Market Street
Philadelphia PA 19103

Attn: Ms. Michele Destra
Ms. Gail McFadden- Roberts

Mr. Gregory Murrill
Division Administrator
Federal Highway Administration
Maryland Division
City Crescent Building
Suite 2450
10 South Howard Street
Baltimore MD 21201

Attn: Ms. Jeanette Mar
Mr. Jitesh Parikh

Dear Ms. Hynes-Cherin and Mr. Murrill:

The purpose of this letter is to request your joint written concurrence on the attached Independent Utility Paper for the Corridor Cities Transitway (CCT).

The Independent Utility Paper was prepared to demonstrate that the CCT can move forward as a breakout project from the I-270/US 15 Multimodal Corridor Study. The Maryland Transit Administration (MTA) and the State Highway Administration (SHA) have been working jointly on the I-270/US 15/CCT Multimodal Study for the past several years. The project extends from south of Shady Grove Road to north of Biggs Ford Road, approximately 30 miles in length. The purpose of the study is to investigate options to address congestion, improve mobility options, and to improve safety conditions along the corridor. Currently, SHA is waiting for additional funds to complete the study. While the study for highway improvements along this corridor is delayed, receiving your concurrence on the Independent Utility Paper will help us to advance the CCT as a separate project.

The final Independent Utility Paper with attachments, which has received preliminary concurrence from FHWA and FTA staff members, is included with this letter. Once we receive the letter of joint concurrence, MTA will proceed with the CCT as an independent transit project, develop a CCT Locally Preferred Alternative (LPA) and complete the Final Environmental Impact Statement (FEIS) for the CCT. As funds become available, SHA will move forward with additional engineering and mitigation analyses, identifying a preferred alternative for highway improvements and completing a Tier I FEIS.

Your approval of this Independent Utility Paper will help to separate the highway and transit studies and to move the CCT project forward. If you have any questions or comments, please contact the MTA Project Manager for the CCT project, Mr. Rick Kiegel at 410-767-1380 or at rkiegel@mta.maryland.gov, or the SHA Project Manager for the I-270 Multi-Modal Corridor Study, Ms. Sue Rajan at 410-545-8514 or at srajan@sha.state.md.us.

Sincerely,

Darrell B. Mobley
Acting State Highway Administrator

Sincerely,

Ralign T. Wells
Maryland Transit Administrator

We concur with the separating of the highway and transit studies and moving the CCT project forward as detailed in this letter.

Concurrence:

12-12-11

Ms. Brigid Hynes-Cherin
Acting Regional Administrator for Region III
Federal Transit Administration

10/14/11

Mr. Gregory Murrill
For Division Administrator
Federal Highway Administration

Attachments

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Corridor Cities Transitway

Montgomery County, Maryland

INDEPENDENT UTILITY DISCUSSION PAPER

Maryland State Highway Administration

Maryland Transit Administration

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INTRODUCTION

The National Environmental Policy Act (NEPA) of 1969 requires that projects cannot be "segmented" to avoid reviewing cumulative effects by dividing larger projects into smaller components of that project. Both 23 CFR 771.111(f) and Federal Highway Administration (FHWA) guidance on the development of Logical Termini and Independent Utility (November 1993) specify that in order to ensure meaningful evaluation of alternatives and to avoid commitments to transportation improvements before they are fully evaluated, the action evaluated in each EIS or finding of no significant impact (FONSI) shall:

1) Connect logical termini and be of sufficient length to address environmental matters on a broad scope;
2) Have independent utility or independent significance, i.e. be usable and be a reasonable expenditure even if no additional transportation improvements in the area are made; and
3) Not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.

The purpose of this paper is to demonstrate that the Corridor Cities Transitway (CCT) project meets the conditions for Independent Utility as a "breakout" project from the I-270/US 15 Multi-Modal Corridor Study. Also, this paper will show the CCT could be evaluated as a separate planning study by the Maryland Transit Administration (MTA) that would not be considered project segmentation.

The CCT is a 14 to 16-mile master planned, dedicated transit facility that will connect the cities of Gaithersburg, Germantown, and Clarksville in Montgomery County, Maryland. It is one of the many transportation improvements being studied as part of the larger I-270/US 15 Multi-Modal Corridor Study. Light rail and bus rapid transit service on a dedicated transitway facility are being studied as "build" alternatives for the CCT. The CCT build alternatives also include three new express bus routes operating in the I-270 corridor; a new bus service connecting Frederick with Shady Grove, one bus that originates in Frederick with stops at Metropolitan Grove and Shady Grove, and another bus originating in the Kemptown/Damascus area with stops at Metropolitan Grove and Shady Grove.

PROJECT BACKGROUND

The I-270/US 15 Multi-Modal Corridor Study was initiated as a feasibility study in 1988, and a NEPA study was started in 1994. The study is jointly led by the Maryland State Highway Administration (SHA) and MTA. The I-270/US 15 project study area spans over 30 miles, from south of Shady Grove Road near Rockville, Maryland to north of Biggs Ford Road near Walkersville, Maryland (**Figure 1**).

Travel demand models forecasted for the year 2030 were developed as part of the corridor feasibility study, and demonstrated the need for improvements in capacity and person-throughput along the corridor.

The project team used a focus group of agency and public stakeholders to establish the purpose and need and goals for the project. The purpose of the overall study is to investigate options to address congestion, improve mobility options, and improve safety conditions along the corridor. The need for the project results from the mobility challenges presented by the growing traffic congestion as a result of continued population and employment growth in Montgomery and Frederick counties. Even with the variety of multi-modal transportation options currently available in the corridor – such as interstate highway, high occupancy vehicle (HOV) lanes, commuter rail, and bus service – the corridor is highly congested at many locations within the project area. The five goals that the focus group identified with which to evaluate the proposed transportation strategies included: 1) support orderly economic growth, 2) enhance mobility, 3) improve goods movement, 4) preserve and protect the environment, and 5) optimize public investment.

As alternatives were being developed, the project team and focus group investigated both highway and transit solutions. Highway solutions included the addition of general purpose lanes, HOV lanes, and collector-distributor lanes. Transit solutions included the extension of the Metrorail Red Line northward, light rail, and enhanced bus service. The Metropolitan Washington Council of Governments (MWCOG) travel forecasting model results indicated that no highway or transit alternative would single-handedly meet the purpose and need or the goals of the project. The solutions that best satisfied the purpose and need were combinations of both highway and transit improvements.

Transit has long been identified as an important element of meeting the transportation needs in the corridor. Transit provides an important option for persons traveling to and between key activity centers within the rapidly growing Montgomery County portion of the I-270 corridor. Improving connections to existing transit services along the I-270 corridor at locations such as the Germantown Transit Center, Metropolitan Grove, and Shady Grove would provide improved mobility for those already taking transit and new travel options for those who typically drive. By providing travelers with mobility options, the CCT project would address the unmet travel needs of persons who now rely on congested highways or on other, less accessible, transit alternatives.

The I-270/US 15 Multi-Modal Corridor Study Draft Environmental Impact Statement (DEIS), signed in 2002, presented several "combination" alternatives of highway and transit improvements that addressed the project purpose and need and met the project goals within the immediate study area. Two additional alternatives for the highway improvements linked to the previously-developed transit options were later analyzed in the Alternatives Analysis / Environmental Assessment (AA/EA) issued in 2009. These two alternatives were recommended for inclusion in the study by the Maryland Department of Transportation (MDOT) and explored the use of Express Toll Lanes, or ETLs, for new capacity along I-270.

Proposed Alternatives

The combination alternatives currently under consideration consist of highway improvements that explore the use of general purpose and/or "managed lanes," such as HOV lanes or ETLs on I-270 and US 15, coupled with either a light rail or bus rapid transit connection on a dedicated facility (the CCT) extending from the Shady Grove Metrorail station to COMSAT, located south

of Clarksburg. Direct access interchanges from the managed lanes proposed as part of the I-270 highway alternatives would provide direct connections to the major stations along the CCT and access to major employment centers along the corridor. Three new express bus routes that connect Frederick and Kemptown to Shady Grove and Metropolitan Grove via I-270 are also proposed as part of the CCT improvements. The I-270 managed lanes and the CCT would essentially act as two transit "trunk lines" to serve not only commuter traffic bound for Washington, DC, but also to provide access to major employment centers along the I-270 Technology Corridor in Montgomery and Frederick Counties.

The combination alternatives include a highway improvement (which are numbered) and a transit improvement (which are lettered). Ultimately, if a build alternative is selected, it would include both a highway and transit choice, so they are paired (for example, "3B"). In brief format, these alternatives include:

Alternative 1: No-Build, which serves as the basis for measuring the effectiveness of the build alternatives. The No-Build Alternative assumes that the transportation improvements included in the most up-to-date Constrained Long Range Plan (CLRP) are constructed, with the exception of those proposed as part of the I-270/US 15 Multi-Modal Corridor Study. These programmed CLRP improvements include new interchanges at I-270 and Watkins Mill Road and I-270 and New Cut Road, near COMSAT.

Alternative 2: Transportation Systems Management/Travel Demand Management (TSM/TDM), which includes measures such as ramp metering, improved incident management, interactive highway and transit signage, and improved connections to existing transit systems in the corridor. The TSM/TDM option also includes promoting carpooling, flexible work hours, optimization of existing transit routes, and telecommuting.

Alternative 3A/3B: Adds one High Occupancy Vehicle (HOV) lane in each direction on I-270 north of MD 121, and extends the existing southbound HOV lane northward to meet the new lane. "Local" lanes on I-270 are extended to MD 27 in both the southbound and northbound directions. The CCT would use a light rail transit system with transit alternative "A" or bus rapid transit with alternative "B". This alternative includes a direct-access ramp from the HOV lane at New Cut Road and Metropolitan Grove Road Extended only.

Alternative 4A/4B: Adds one general purpose lane in each direction on I-270 north of MD 121, and extends the existing southbound HOV lane northward to MD 121. "Local" lanes on I-270 are extended to MD 27 in both the southbound and northbound directions. The CCT would use a light rail transit system with transit alternative "A" or bus rapid transit with alternative "B". This alternative does not include direct-access ramps from the median.

Alternative 5A/5B/5C: Adds both an HOV lane and a general purpose lane in each direction on I-270 north of MD 121, and extends the existing southbound HOV lane northward to MD 121. "Local" lanes on I-270 are extended to MD 27 in both the southbound and northbound directions up to MD 27. The transit alternatives coupled with this highway alternative include light rail transit or bus rapid transit on the CCT alignment, or the implementation of a "premium bus" service operating from the City of Frederick to the Shady Grove Metrorail Station on the I-

270 HOV lanes, which is labeled transit alternative "C". Alternatives 5A and 5B propose direct-access ramps from the HOV lane at New Cut Road and Metropolitan Grove Road Extended only. Alternative 5C also provides direct access ramps at I-370 (connecting the northern and eastern directions only) and MD 118 in Germantown.

The Express Toll Lane alternatives, Alternatives 6A/B and 7A/B and their associated impacts are presented in the 2009 AA/EA document. ETLs are new tolled highway lanes, constructed in the median of I-270 that will provide a congestion-free trip for the roadway user when travel time is critical. The limits of the ETLs extend from I-370 to just north of the MD 80 interchange near Urbana. The ETL alternatives include:

Alternative 6A/6B: Includes the construction of two barrier-separated ETLs in each direction on I-270 between south of I-370 and MD 121, which would reduce to a single ETL in each direction with a wide inside shoulder between MD 121 and north of MD 80. The ETL then transitions to a general purpose lane through the Monocacy National Battlefield and points north. The existing "local" lanes would be removed from the Shady Grove Road interchange northward. The CCT would use a light rail transit system with transit alternative "A" or bus rapid transit with alternative "B".

Alternative 7A/7B: Includes the construction of two barrier-separated ETLs in each direction on I-270 between south of I-370 and north of MD 80. Both ETLs would then transition into general purpose lanes through the Monocacy National Battlefield and points north. The existing "local" lanes would be removed from the Shady Grove Road interchange northward. The CCT would use a light rail transit system with transit alternative "A" or bus rapid transit with alternative "B".

Access to the ETL system occurs through "open access areas" north of MD 121, similar to the way that traffic enters and leaves the "local" lanes on I-270 in Montgomery County today. South of MD 121, access is gained via direct-access ramps. The direct access ramps will be located at the proposed New Cut Road (recently renamed Little Seneca Parkway) near COMSAT, at MD 118 near the Germantown Transit Center, at Metropolitan Grove Road Extended, and at I-370. The direct access ramp at I-370 will be a directional ramp from southbound I-270 to eastbound I-370 and westbound I-370 to northbound I-370 only. The study is also looking at a potential south-oriented ramp at MD 117, in the event that a managed lane strategy is ultimately considered south of I-370.

In most areas, the CCT is fully separated from vehicular traffic, either in the median, along one side of an existing roadway, or along new alignment. At-grade or overpass/underpass options exist for major roadway crossings. As proposed in the 2002 DEIS and 2009 AA/EA, the CCT includes up to 17 stations and provides direct transfers to the MARC Brunswick Line at Metropolitan Grove and the Metrorail Red Line at Shady Grove.

Existing interchanges would be upgraded or reconstructed and four new interchanges are proposed along I-270 and US 15 as part of the multi-modal project. Additional direct access ramps would also be considered for areas better served by transit pending the alternative selected and the transit mode choice.

CCT Alternative Alignments

The alignment for the CCT presented in the 2009 AA/EA document was the original Master Plan Alignment. MTA is currently investigating alternative alignments that deviate from this alignment at Crown Farm, Life Sciences Center, and Kentlands. The alternative alignments are being considered based on future land use considerations in these areas. The Crown Farm is being redeveloped into a mixed-use, transit-oriented development, and the Master Plan Alignment conflicts with a proposed site plan. The Great Seneca Science Corridor Master Plan (GSSCMP) was recently adopted, and the realignment of the CCT could potentially better serve the proposed "life sciences center" development and attract more riders. The Kentlands alignment shift to the south side of Great Seneca Highway would support proposed redevelopment near the Kentlands shopping center.

MTA completed a Supplemental Environmental Assessment (SEA) to document the environmental features and impacts of the three potential modifications of the CCT alignment in the fall of 2010. A public hearing was held in December 2010.

Preferred Alternative Selection Strategy / Separation of Highway and Transit Elements

The original intent of the I-270/US 15 Multi-Modal project team was to select a preferred alternative after the Location and Design Public Hearing (and subsequently, the 2009 AA/EA Public Hearings) that would include both the highway and transit elements of the project and then split the project into two independent studies. The SHA and MTA project teams would independently develop their own Final Environmental Impact Statement (FEIS). SHA would develop a Tier 1 FEIS and identify project segments or work elements to advance to the Tier 2 stage. MTA would submit a New Starts application, initiate preliminary engineering (pending approval), and complete an FEIS for the CCT. Both teams would still collaborate, but the projects would proceed independently. Both the Federal Transit Administration (FTA) and FHWA concurred with this approach.

Developing the Corridor Cities Transitway as a breakout project ***prior to*** selecting a combined preferred alternative is now needed, however, as MDOT is not prepared to recommend a preferred alternative for the highway improvements, but is prepared to recommend a mode, final alignment, and operations and maintenance facility for the CCT. SHA is completing the traffic analysis for different operational scenarios such as high-occupancy/toll (HOT) lanes and the use of a reversible managed lane system in the corridor in response to feedback received from local jurisdictions. Furthermore, SHA is developing minimization strategies for several areas along the highway corridor in response to comments received from agency partners, local jurisdictions, and communities adjacent to I-270 and US 15. While it is safe to assume that some sort of managed lane strategy will eventually be selected for the corridor, the details of the preferred alternative will be finalized later. Lastly, the CCT is currently funded for planning and preliminary engineering through FY 2014, whereas funding for the planning of the highway improvements is only programmed through FY 2011.

INDEPENDENT UTILITY DISCUSSION – CORRIDOR CITIES TRANSITWAY

In order to be separated from the I-270/US 15 Multi-Modal Study, the CCT must have logical termini and be of sufficient length to address environmental matters on a broad scope, be a usable and reasonable expenditure even if no additional transportation improvements are made, and be constructed such that it will not restrict consideration of alternatives for other reasonably foreseeable transportation improvements. An explanation of how the CCT meets these criteria, as well as a discussion of how the CCT helps to satisfy the purpose and need for the corridor study, is presented in the following sections.

Logical Termini

The project limits proposed for the CCT are:

- Shady Grove Metro station to the south, near MD 355 and Metro Drive;
- COMSAT Station to the north, approximately one-half mile north of West Old Baltimore Road.

The CCT has logical termini in that the project serves an identified need to provide a transit connection between the Metrorail Red Line terminus at Shady Grove and the cities of Gaithersburg, Germantown, and Clarksburg. The Montgomery County "On Wedges and Corridors" master plan identifies the CCT as an essential transit link to support existing and planned development in the I-270 Technology Corridor and the Shady Grove, Gaithersburg, and Germantown areas. The plan also notes that a major goal is to increase the mode share for all non-automobile uses (transit, bicycle, and pedestrian) within the study area. As a result, higher-density transit-oriented development is proposed in the vicinity of most CCT stations. The CCT has appeared on local master plans since the 1970s, and subsequent master plans have been adopted assuming the CCT is in place.

The I-270/US 15 Multi-Modal Study area is currently served by several transit amenities. The MARC Brunswick Line provides peak-hour, one-way weekday service from Frederick, Maryland and Martinsburg, West Virginia to downtown Washington, DC. The MTA operates the 991 commuter bus from Hagerstown on I-70 and I-270 to the Shady Grove Metrorail station and destinations in the Democracy Boulevard area, with stops at the Monocacy MARC Station and Urbana Park and Ride. In addition to MARC and commuter bus, Frederick County and the City of Frederick operates local transit service (named TransIT) that provides connections from the north and east to the Monocacy MARC station, and Montgomery County Ride-On has an extensive bus network that connects to MARC and the WMATA Metrorail Red Line at several locations within the corridor.

The CCT will enhance the extensive public transportation network that is in place in Montgomery County, with or without the I-270 improvements. To measure the effectiveness of the CCT both with and without the highway improvements, the project team modeled a transit-build, highway no-build scenario and compared the results to 1) a total no-build scenario and 2) the transit-build, highway-build, scenario presented in the 2009 AA/EA. The full build condition assumes that Alternative 7B is selected, where the barrier-separated ETLs and direct access ramps are constructed on I-270, the three proposed express bus routes are implemented in the corridor, and the CCT is built as a BRT system from Clarksburg to Shady Grove. Alternate 7B

is not necessarily the preferred alternative. Alternative 7B was chosen for the full-build condition because it provides the greatest interconnectivity between the I-270 improvements and the CCT. Alternative 7B provides the shortest travel time for those using the express bus routes from the north and the greatest amount of connectivity between I-270 and the CCT. The transit-build, highway no-build scenario assumes that the CCT is constructed as a BRT connection from Clarksburg to Shady Grove, the three proposed express bus routes are implemented in the corridor, and only roadway improvements that are currently in the development and evaluation pipeline are constructed. The roadway improvements would include new interchanges on I-270 at Watkins Mill Road (currently in design) and at I-270 and New Cut Road near COMSAT, which is currently ranked tenth on Montgomery County's transportation priority list. No mainline enhancements would be built on I-270, and there would be no direct access ramps from the median.

Vehicle miles traveled (VMT) on I-270 is only slightly reduced with the construction of the CCT in the transit-build, highway no-build scenario. The project team analyzed several segments between Germantown and Shady Grove, and the results when compared to the no-build condition indicate that there is a one to three percent decrease in VMT, depending on the segment of I-270 analyzed. VMT reduction on I-270 is not the only performance metric that should be considered when determining the effectiveness of the CCT and how it fulfills a transportation need in the corridor. The anticipated ridership is also an important factor.

The daily anticipated ridership on the CCT is dependent on the mode selected. It is anticipated that there will be approximately 28,000 to 32,000 daily trips with BRT and between 31,000 and 35,000 daily trips with LRT. The effect of the removal of the highway improvements on ridership is relatively small with respect to forecasted CCT boardings, the number of new transit riders, and the transit travel time savings in the study corridor. Tables 1 through 3 in **Appendix A** show the effect of removing highway improvements associated with Alternative 7B for the horizon year 2030. The tables provide a range of values to reflect the level of detail of the forecasts. "CCT Boardings" only include boardings at CCT stations located along the guideway or stations used in the definition of the TSM alternative; and these do not include patrons under the BRT alternative boarding other bus routes that then use the guideway to Shady Grove. **Appendix B** contains diagrams displaying boarding differences by CCT station, as well as line haul volume differences by segment.

The CCT study area is located within the corporate limits of the City of Rockville and City of Gaithersburg, which have been designated as Priority Funding Areas (PFA) under the State's Smart Growth legislation. The remaining area is included within Montgomery County's established PFA. Therefore the CCT study area, as shown in **Figure 2**, is located entirely within a PFA.

On May 4, 2010, the Montgomery County Council adopted the Great Seneca Science Corridor Master Plan, an amendment to the County's master plan that calls for the development of the Shady Grove Life Sciences Center (LSC) in the Gaithersburg area (but outside City of Gaithersburg city limits). This master plan calls for a revised CCT alignment to service the LSC, an ambitious mixed use community of residential, commercial, and office development oriented towards the growing biotechnology industry. Johns Hopkins University intends to develop a

108-acre parcel of currently undeveloped farm land that they own as key component of this development. The modified master plan and anticipated growth led the MTA to study the potential ridership, cost, and other performance of the modified alignments to determine whether they should be adopted into the CCT alignment. This analysis demonstrated considerable benefits associated with this modified alignment. In consultation with FTA, MTA pursued a more detailed environmental analysis to ensure that evaluation of potential impacts was consistent with the spirit and intent of NEPA.

The proposed master plan alignment and stations for the CCT are shown in **Figure 3.** The alternative alignments being considered at Crown Farm, the Shady Grove Life Sciences Center, and Kentlands are shown in **Figure 4.** The CCT, over most of its length, is proposed as a 30-foot wide typical section that would have two 12-foot wide lanes for bus rapid transit or a double-tracked light rail system. A 10-foot wide shared use bike/walk path, to be built by others, is proposed along the entire length of the CCT. The proposed typical sections for the CCT are shown in **Figure 5**. Most of the intersection crossings of the CCT would be constructed at-grade. Grade separation of the CCT is being considered, however, at highly congested intersections within the project area.

Independent Utility as a Usable and Reasonable Expenditure

Another criterion used to evaluate the independent utility of a proposed action is to determine whether the action is a usable and reasonable expenditure even if other proposed long-term actions are not implemented. The proposed CCT satisfies this criterion because it will improve person-throughput within the southern portion of the I-270 corridor regardless if the highway improvements are or are not constructed.

While the I-270 alternatives are intended to serve as a second "trunk line" for transit that would further improve the travel times of the three new express bus services that serve Frederick and Kemptown (as well as the existing 991 commuter bus from Hagerstown), the CCT fulfills a need in the middle and southern parts of Montgomery County that have been approved for higher densities of households and employment.

A measure of the effectiveness of the CCT is how it addresses the project goals for the overall I-270/US 15 Multi-Modal Study. These goals were developed very early in the study process in consultation with the multi-modal study focus group, approximately 20 individuals representing the various stakeholders in the project area. The focus group reviewed and offered input on the many transportation improvement options and evaluation measures. The project goals were purposely broadly defined to have a multi-modal application related to the transportation and related needs of the corridor. The various transit and highway capital investment alternatives that were analyzed over the full range of NEPA documents were defined and evaluated against these goals within the context of a full transportation network.

The transit improvements proposed with the CCT are an important component of the multi-modal strategy developed in consultation with Montgomery County, other local communities, agencies, and members of the public to meet the project goals. The following identifies the four goals of the I-270/US 15 Multi-Modal Corridor Study in which transit could play an important role in meeting.

Support Orderly Economic Growth. The CCT supports the orderly economic development of the I-270 corridor in Montgomery County, and is consistent with the adopted local government land use plans, as well as Maryland's Economic Growth, Resource Protection and Planning Act.

Enhance Mobility. The CCT, by providing new choices of transportation modes, provides enhanced traveler mobility in the I-270 corridor and Montgomery County and improves the overall efficiency of the transportation system.

Preserve and Protect the Environment. The CCT delivers transportation services in a manner that preserves, protects and enhances the quality of life and social, cultural and natural environment in the I-270/US 15 corridor. The CCT is typically situated in developed areas in the corridor, in many instances located in the median of streets that were constructed as part of approved developments.

Optimize Public Investment. The CCT provides a transportation improvement in the corridor that makes optimal use of existing transportation infrastructure while making cost effective investment in facilities and services that support other project goals. Much of the CCT is anticipated to be built in areas already reserved for its construction, and in areas that have greater densities of households and employment approved.

A fifth study goal, Improve Goods Movement, is not a goal that transit addresses directly because transit moves people, not goods. The modest decrease of VMT in the corridor as a result of the CCT being constructed will slightly improve goods movement by reducing travel times, however, the broad spectrum of solutions developed as part of the multi-modal study are really needed to fully address this goal.

Consideration of Other Projects

As a "breakout" project from the I-270/US 15 Multi-Modal Corridor Study, constructing the CCT would not force the construction of the highway improvements presented in the I-270/US 15 Multi-Modal Corridor 2002 DEIS or 2009 AA/EA.

In areas where the CCT parallels or crosses I-270, the CCT will be situated such as not to inhibit the construction of a future managed lane alternative on the I-270 mainline. Structures over I-270 could be constructed such that they accommodate the widest typical section of the proposed alternatives. The CCT is anticipated to cross I-270 twice; once near the Shady Grove Road interchange near the southern end of the project and also along the proposed extension of Dorsey Mill Road, just north of the MD 27 interchange. The CCT will parallel I-270 on the west side of the roadway between the Watkins Mill Road and Middlebrook Road interchanges, through Seneca Creek State Park. The anticipated impacts to the park and nearby residences are addressed in the AA/EA, and include the area required for the I-270 build alternatives.

As noted before, there are several projects within the limits of work of the CCT that were assumed to be complete and incorporated into the transportation and land use models that were used for the forecasts. The I-270/Watkins Mill Road interchange is a "breakout" project from

the Multi-Modal Study that is currently in design. It is one of Montgomery County's top priorities and is scheduled to be constructed by 2016. Once completed, this interchange would provide improved access to the proposed Metropolitan Grove station of the CCT.

The I-270/New Cut Road interchange project also appears on Montgomery County's priority list of projects to advance to the design and construction phases. Funding is not currently established for the design or construction of this interchange, however, when complete it would provide improved access to the northernmost station of the CCT at COMSAT.

CONCLUSION

All of the logical termini and independent utility issues and criteria are satisfied in the analysis of the CCT. The termini points of the Shady Grove Metrorail station to the south and the New Cut Road interchange to the north are justified due to the lack of potential traffic impacts on the roadway network beyond these project limits as a result of the CCT construction. Furthermore, the CCT has appeared in the Montgomery County master plan for several decades as a dedicated transitway alignment extending from Shady Grove to Clarksburg.

In addition, traffic volumes may be reduced on congested local roads in the southern portion of the study area with the construction of the CCT. Independent utility sufficiency is demonstrated by the travel demand forecasts which indicate that the construction of the CCT provides a transportation benefit even if the roadway improvements proposed in the combination alternatives in the 2002 DEIS and 2009 AA/EA are not implemented. While the construction of the entire range of work items considered as part of the I-270 Multi-Modal Study provides the greatest benefit to all corridor users, construction of the CCT neither forces the construction of the other corridor improvements nor prohibits planned improvements that are already in the pipeline from being constructed. The CCT could be constructed as a single project, whereas the other corridor improvements cannot be funded all at once, and are anticipated to be completed in several phases as funding becomes available.

It is therefore concluded that the proposed CCT does have logical termini, independent utility, and does not force or preclude consideration of other transportation projects.

APPENDIX A

Table 1
2030 CCT Demand and Benefits with Alternative 7B

Transit Alternative	CCT Boardings	New Riders	Travel Time Savings (hours)
TSM	6,000-7,000	7,100-8,900	6,000-7,500
LRT	25,000-31,000	14,300-17,900	11,800-14,700
BRT	22,000-27,000	15,000-18,800	12,300-15,400

Table 2
2030 CCT Demand and Benefits without Alternative 7B

Transit Alternative	CCT Boardings	New Riders	Travel Time Savings (hours)
TSM	6,000-8,000	6,900-8,600	5,800-7,200
LRT	26,000-32,000	14,700-18,300	12,100-15,000
BRT	25,000-31,000	14,400-18,000	11,800-14,700

Table 3
2030 CCT Demand and Benefits Difference (Table 2 results less Table 1 results)

Transit Alternative	CCT Boardings	New Riders	Travel Time Savings (hours)
TSM	0-1,000	(200)-(300)	(200)-(300)
LRT	1,000	400	300
BRT	3,000-4,000	(600)-(800)	(500)-(700)

Note: Numbers in parentheses, (200), are a negative value.

CCT Boardings increase without the highway improvements in place by less than 15% over the range of transit alternatives. The increase in boardings is due to the removal of Alternative 7 highway improvements, which increases congestion on I-270 and decreases highway travel speeds, making the CCT more attractive to the markets it serves. The change in new transit riders and in travel time savings for new and existing transit patrons varies at most by 9% over the range of transit alternatives.

APPENDIX B

I-270 Independent Utility Paper – Travel Time Savings

To validate the independent utility of the I-270/ US 15 highway alternatives and the Corridor City Transit (CCT) transit alternatives of the I-270/ US 15 Multimodal Corridor Study from a travel demand context, this analysis used the travel time outputs from the MTA MDAA(spell out) model for Year 2030 AM and PM peak hour conditions. The analysis focused on highway travel times in both directions on I-270 from north of MD 121 to south of MD 28.

The alternative with No-Build assumptions on both highway and transit side (referred as Transit NB + Hwy NB in this document) is used as the base case for this evaluation. The build highway alternatives evaluated are the Alternative 6 ETL and Alternative 7 ETL studied under the I-270/ US 15 Multi-Modal Corridor Study Alternatives Analysis/Environmental Assessment (EA/AA), May 2009 document, the supplemental to the DEIS (referred as Hwy Build 6 and Hwy Build 7 respectively in this document). The build transit alternatives considered in the analysis are the CCT-BRT and CCT-LRT alternatives. Here are the alternatives that have been studied as part of this evaluation:

- Transit NB + Hwy NB (Base Case)
- Transit LRT + Hwy NB
- Transit NB + Hwy Build 6
- Transit LRT + Hwy Build 7
- Transit BRT + Hwy Build 7

Tables 1 and 2 show the summary of the travel time information and the savings obtained from various alternatives for the southbound and northbound I-270 operations.

Table 1: 2030 Southbound I-270 (From MD 121 To MD 28) Travel Time Summary

	Total Travel Time		Travel Time Savings			
Alternatives	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**
	(minutes)		**(minutes)**			
Transit NB + Hwy NB (Base Case)	48.5	38.4				
Transit LRT + Hwy NB	47.8	37.1	0.7	1.3	1%	3%
Transit NB + Hwy Build 6	34.9	34.6	13.6	3.8	28%	10%
Transit LRT + Hwy Build 7	31.9	36.2	16.6	2.2	34%	6%
Transit BRT + Hwy Build 7	42.5	35.7	6.0	2.7	12%	7%

Travel times compiled from run of the MTA MDAA model outputs

Table 2: 2030 Northbound I-270 (From MD 28 To MD 121) Travel Time Summary

	Total Travel Time		Travel Time Savings			
	AM	PM	AM	PM	AM	PM
Alternatives	(minutes)		(minutes)			
Transit NB + Hwy NB (Base Case)	29.8	65.1				
Transit LRT + Hwy NB	28.8	64.8	1.0	0.3	3%	0%
Transit NB + Hwy Build 6	20.7	60.8	9.1	4.3	31%	7%
Transit LRT + Hwy Build 7	20.8	58.9	9.0	6.2	30%	10%
Transit BRT + Hwy Build 7	20.2	60.3	9.6	4.8	32%	7%

Travel times compiled from run of the MTA MDAA model outputs

As shown in Table 1 and 2 above, these are the findings and interpretation of results for the I-270 corridor limits between MD 121 and MD 28:

- There is significant improvement in travel times ranging from 2.2 minutes to 16.6 minutes (6% to 34%) in the highway build alternatives (Hwy Build 6 and Hwy Build 7) compared to the Highway No-Build alternative (Hwy NB). This is irrespective of the transit alternative chosen including No-Build Transit. This is a reasonable finding as the build alternatives on I-270 provide added capacity thereby improving operations and average speed compared to the No-Build conditions. Furthermore, it appears that the travel time savings for the highway build alternatives in the AM peak (average of about 11 minutes or, 28%) are significantly higher compared to the PM peak(average of about 4 minutes or 8%).
- With a Highway No-Build assumption, we see that the Transit LRT shows a marginal improvement in the travel time savings (0 to 3%) in both directions for both peak hours compared to the Transit No-Build alternative. We believe, that Tranist BRT related travel time savings on I-270 will be in the similar order of magnitude and will show marginal improvement over the Transit No-Build alternative. We also believe, similar trends will be observed for the build highway alternatives.
- The maximum travel time savings on I-270 is realized under the Transit LRT alternative with Hwy Build 7alternative scenario.

Conclusions

From the above analysis, it is evident that a build highway alternative would definitely result in travel time savings on I-270 within the CCT project limits irrespective of the transit alternative. Although minimal, there would be some savings on I-270 travel time if there is a Build Transit alternative in place. Although we believe, there will be a synergistic effect of a Build Highway and Transit alternative that would provide us the collective benefits, **the overall impacts on the**

highway travel times due to one transit alternative over the other is really marginal. We believe that there is sufficient reason to believe that the highway and transit alternatives can be furthered independent of each other.

MARYLAND TRANSIT ADMINISTRATION
MARYLAND DEPARTMENT OF TRANSPORTATION
Martin O'Malley, Governor • Anthony G. Brown, Lt. Governor
Beverley K. Swaim-Staley, Secretary • Ralign T. Wells, Administrator

BRIEFING MEMORANDUM

TO: Beverley K. Swaim-Staley
Secretary

FROM: Ralign T. Wells
Administrator

DATE: April 13, 2012

SUBJECT: Corridor Cities Transitway
Locally Preferred Alternative Recommendation

PURPOSE OF MEMORANDUM

This memorandum provides project status materials and Locally Preferred Alternative (LPA) recommendation information for Maryland Transit Administration's (MTA) Corridor Cities Transitway (CCT) project in advance of our meeting with you on April 17, 2012. At the meeting, we will explain our recommendation, discuss outstanding issues, and present a plan for next steps.

ANALYSIS/ SUMMARY

Project Definition

- 15-mile north-south transit line that would extend from the Shady Grove Metrorail Station to the COMSAT/Clarksburg area in Montgomery County MD
- A bus rapid transit or light rail transit line operating largely at street level on a fully dedicated right-of-way with no shared use segments. Fourteen stations are currently planned, with additional locations for future stations under consideration.
- Direct connections to the regional Metrorail system at Shady Grove, the MARC Brunswick line at Metropolitan Grove and local bus services along the corridor.
- The current capital program includes $21.6 million funding for the planning and the beginning of the preliminary engineering phases. Additional funding is not available for the remaining design, right of way or construction.

Project Status

- NEPA Documentation
  - 2002 Draft Environmental Impact Statement (five combination highway and transit alternatives)
  - 2009 Alternatives Analysis/Environmental Assessment (two additional highway alternatives for express toll lanes, no changes to transit alternatives)
  - 2010 Supplemental Environmental Assessment (no highway analysis, three alternative transit alignments – Crown Farm, Life Sciences Center, and Kentlands)
- Agreement from FTA and FHWA that the CCT can move forward independent of any planned highway improvements along I-270.
- Formal coordination with FTA has begun on the evaluation of travel forecasting results. MTA is utilizing the same enhanced regional model developed for the Purple Line and CCT with further refinements implements to accurately estimate ridership in this corridor. Latest results were received last week and continue to be analyzed.
- Project Schedule
  - May 2012 – LPA Announcement
  - June 2012 – Notify FTA of intent to enter the New Starts process
  - July 2012/March 2013 – Preparation of New Starts documentation and coordination with FTA Project Management Oversight Consultant
  - April 2013 – FTA Approval to Enter PE
  - January 2014 – PE/FEIS Complete

  Dependent on funding
  - April 2014 – Record of Decision
  - November 2014 – Initiate Final Design Activities
  - September 2015 – Receive Full Funding Grant Agreement
  - March 2018 – Begin R/W Acquisitions/Permitting/Agreements
  - September 2018 – Begin Construction

Why select an LPA now

- Alternative alignment studies and environmental evaluations for this phase of the project have been completed. The selection of a locally preferred alternative is the appropriate next step for the CCT and caps the work done to date.
- MTA is currently funded to complete the Project Planning in FY 2013 and begin Preliminary Engineering. To do so, the LPA needs to be finalized and entry into the FTA New Starts process must begin.
- The project is funded in the CTP for FY 2014 to continue Preliminary Engineering. No funding is allocated beyond FY 2014.
- The CCT has been included the Montgomery County Report and Recommendations of the County Executives Transit Task Force as a Phase I corridor. The Task Force and

Montgomery County has expressed an interest in promoting the CCT BRT as the first stage of the larger countywide BRT plan. Selection of the LPA allows the County to continue its planning efforts related to future development and a countywide BRT system.

- The CCT is included in the various master plans in Montgomery County and the selection of an LPA solidifies the continuation of corridor preservation in those plans.
- The continuation of the CCT into future phases is a condition of the Great Seneca Science Corridor Master Plan.
- Although future funding is uncertain at this time, the importance of the CCT in the overall county long range transit plans cannot be underestimated. The State/MDOT should not delay this important next step of selecting an LPA.

Locally Preferred Alternative Recommendation

- Mode: Bus Rapid Transit (BRT) - BRT would operate on an exclusive and dedicated right-of-way with grade separations at key roadway crossings and at-grade crossings at minor streets.

  BRT is suitable for this corridor because it offers the flexibility for some buses to directly serve surrounding communities by leaving the transitway at appropriate locations. Several Ride-On routes would be modified to utilize a portion of the transitway for its route or access the planned stations for easy transfers. Unlike the Red Line and Purple Line corridors, this area of Montgomery County is less dense and warrants greater flexibility in operations. BRT features include off-board fare collection; level floor, multiple door boarding; and stylized, alternative fuel, low floor vehicles.
- Alignment: Master Plan with alternative alignments through Crown Farm, Life Sciences Center and Kentlands. Master Plan alignment through King Farm. (map attached)
- Phasing: Recommended to be built in two phases – Phase I would be from Shady Grove to Metropolitan Grove and is 8.9 miles. Phase II would be from Metropolitan Grove to COMSAT and is 6.4 miles.

  Most of the development around the transitway has occurred in the lower portions of the corridor. Densities are lower and some areas are not yet developed north of Metropolitan Grove. Montgomery County has focused development around most of these station locations for many years. Some locations are developed already while others are planned in the near term

  Right-of-way in the Phase I segment is largely reserved or already protected.
- Operating and Maintenance Facility: Recommended site is situated just south of the Metropolitan Grove station that currently is utilized by Montgomery County's vehicle impound lot. This site is suitably located in the section proposed for the first phase of

construction. It is also situated away from any residential uses and has major roads and a railroad on three sides.

- The LPA route is summarized below:

  Phase I
  - Beginning at the Shady Grove Metro Station proceeding along the north side of the west parking lot
  - Median of Metro Access Road and continuing across Frederick road at-grade onto the median of King Farm Boulevard
  - Aerial over Shady Grove Road and I-270
  - Median of Fields Road and Decoverly Drive
  - West side of Diamondback Drive with a tunnel under Key West Avenue to the east side of Broschart Road
  - North side of Medical Center Drive
  - East side of Johns Hopkins Drive with a tunnel under Key West Avenue to west side of existing office building
  - North side of Belward Campus Drive
  - Median of Muddy Branch Road
  - West side of Great Seneca Highway
  - Aerial across Great Seneca Highway to the south side of Quince Orchard Road
  - Aerial structure at Clopper Road/Quince Orchard Road to the north side of Quince Orchard Road
  - Aerial on north side of Quince Orchard Road from Clopper Road intersection to east of CSX RR
  - At-grade and parallel to CSX right-of-way along the east side to Metropolitan Grove Station

  Phase II
  - Parallel the west side of I-270 from Metropolitan Grove Station to Middlebrook Road
  - Aerial crossing of Middlebrook Road and along the western edge of the Department of Energy
  - Tunnel under Germantown Road
  - Median of Century Boulevard
  - Median of Dorsey Mill Road
  - Median of Observation Drive to COMSAT Station

- Phase I Stations:
  - Shady Grove Metrorail Station
  - East Gaither (serving the residential part of King Farm)
  - West Gaither (serving the office park part of King Farm)
  - Crown Farm (residential and commercial development under construction)
  - DANAC

- Life Science Center (LSC) Central (existing Adventist Hospital and JHU campus, National Cancer Institute under construction, and planned growth related to Great Seneca Science Corridor Master Plan (GSSCMP))
- LSC West (planned growth related to GSSCMP)
- LSC Belward (planned growth related to GSSCMP)
- Kentlands (existing commercial and residential areas and planned redevelopment of commercial center)
- National Institute for Standards and Technology (N.I.S.T.)
- First Field
- Metropolitan Grove MARC Station (new development under construction)

Phase II

- Germantown (commercial hub for the community and master planned improvements)
- Cloverleaf
- Dorsey Mill
- COMSAT (terminal station with planned I-270 interchange nearby)

- The recommended LPA ridership and capital costs are shown below:

Ridership and Capital Costs

	BRT
LPA Recommendation (Shady Grove to COMSAT)	
Ridership (daily boardings)	38,000-47,700
Capital Cost (2012 $)	$828.09 million
Phase I Recommendation (Shady Grove to Metropolitan Grove)	
Ridership (daily boardings)	25,200-31,500
Capital Cost (2012 $)	$545.61 million

- MTA's LPA recommendation is based on the following considerations:
  - There are no significant differences in the design of the transitway between LRT and BRT other then vehicle type and transitway infrastructure (roadway vs. rail bed). Stations and other user amenities are identical for both modes.
  - The transitway itself would provide approximately the same travel speeds for either mode.

	BRT	LRT
Shady Grove to COMSAT	49.5 minutes	46.4 minutes
Shady Grove to Metropolitan Grove	32.6 minutes	30.2 minutes

  - Daily boardings for the Phase I segment are approximately 32 percent higher for LRT, but the capital cost for LRT is approximately 53 percent higher.

- The alternative alignments through Crown Farm, Life Sciences Center and Kentlands have a net positive effect on the CCT and should be adopted as the preferred alternative. Most property owners within the Crown Farm and Life Sciences Center segments have indicated their willingness to dedicate the needed right-of-way for the CCT. As such, right-of-way costs for the alternative alignments are expected to be minimal.
- BRT vehicles in production today offer many of the same amenities as light rail vehicles, including a streamlined appearance, large windows, level boarding, a smooth ride, and low emissions hybrid propulsion.
- Ride-On bus service is prevalent in the corridor. With the BRT mode, some Ride On buses could be rerouted onto the transitway and continue to their destination, taking advantage of the dedicated facility. Transit users would be provided more options to determine which single or combination of routes best meets their travel needs. The combination of CCT and Ride-On buses in the lower portions of the transitway would provide increased frequencies and more capacity where it would be needed most. A plan has been developed to provide additional local bus service in the corridor so that no community loses service and others gain new service.

The MTA team is prepared to present this recommendation in greater detail and discuss with you how best to move forward and at what pace. Please contact Diane Ratcliff at (410) 767-3787 if you wish to discuss any of this information prior to the meeting.

cc: Mr. Don Halligan, Director, Office of Planning and Capital Programming, MDOT
Ms. Simone Johnson, Chief of Staff, MTA
Mr. Henry Kay, Executive Director for Transit Development and Delivery. MTA
Mr. Rick Kiegel, P.E., MTA
Mr. Frank Principe, Chief of Staff, MDOT
Ms. Diane Ratcliff, Director of Planning, MTA
Mr. Simon Taylor, Deputy Administrator & Chief Administration Officer, MTA
Ms. Adrea Turner, Special Assistant to the Secretary, MDOT

Maryland Department of Transportation
The Secretary's Office

Martin O'Malley
Governor
Anthony G. Brown
Lt. Governor
Beverley K. Swaim-Staley
Secretary
Darrell B. Mobley
Deputy Secretary

FOR IMMEDIATE RELEASE

CONTACT: Jack Cahalan
Erin Henson
Office: 410-865-1025

GOVERNOR O'MALLEY ANNOUNCES LOCALLY PREFERRED ALTERNATIVE FOR THE CORRIDOR CITIES TRANSITWAY

New Bus Rapid Transit System to be a First for Maryland

HANOVER, MD (May 11, 2012) – Governor Martin O'Malley announced today that the locally preferred alternative (LPA) for the Corridor Cities Transitway (CCT) will be Maryland's first Bus Rapid Transit system operating along a 15-mile north-south corridor from the Shady Grove Metrorail station to the COMSAT facility near Clarksburg in Montgomery County. The Maryland Transit Administration (MTA) will now submit the project to the Federal Transit Administration (FTA) under its New Starts Program as the MTA prepares for the preliminary engineering phase of the project.

"The CCT Bus Rapid Transit line will provide easy, accessible, cost efficient transportation for Montgomery County's neighborhoods" said Governor O'Malley. "This north-south transitway line will reduce our dependence on cars as we continue our goal to double public transit use by 2020. The CCT will support nearly 15,000 jobs in the corridor, help facilitate smart growth through mixed used development and it can be built in a timely manner."

The preferred alternative will connect major employment, residential and activity centers in the corridor including Shady Grove, King Farm, Crown Farm, Life Sciences Center (LSC), Kentlands, National Institute of Standards and Technology, Metropolitan Grove, Germantown, and COMSAT. There will be direct connections to the Red Line at Shady Grove, the MARC Brunswick Line at Metropolitan Grove and local bus service throughout the corridor. The CCT has the support of Montgomery County Executive Isiah Leggett, as well as the Montgomery County Council, the Mayors of Gaithersburg and Rockville and many others along the 15-mile corridor.

"The significant economic advantages of implementing Bus Rapid Transit is not lost on Montgomery County," said County Executive Leggett. "Bus Rapid Transit can be built sooner and at a significantly lower cost while complementing our master plan. The design and construction of the CCT project is vital for the county and state, and we must collectively move forward to bring it into service as soon as possible."

(more)

Under this preferred alternative, the CCT, as proposed, will be a pedestrian friendly system with a total of 16 stations. It is projected to carry 47,700 boardings a day by 2035. The CCT will operate at street level on a fully dedicated right-of-way separate from existing traffic, allowing for fast and reliable operation. CCT stations will be located in or near dense residential communities or commercial and business centers putting the system within walking distance for many and making it easy to access. Parking will be available through existing and/or new Park and Rides at Shady Grove, Crown Farm, LSC West, Metropolitan Grove, Germantown, and COMSAT. The transitway is being designed to accommodate a future hiker/biker trail over its entire length.

"Modern, smart and efficient transportation infrastructure is critical to growing our communities, expanding our economy, creating jobs and protecting our environment," said Lt. Governor Anthony G. Brown, who earlier this month spoke at the National Bus Rapid Transit Institute Forum in College Park. "The CCT Bus Rapid Transit project will provide fast dependable travel time on a dedicated transitway while offering the flexibility for buses to directly serve surrounding communities. The choice of BRT is a good fit for the needs and resources of the corridor's communities, and it will help ensure that Montgomery County has a robust and diverse transportation infrastructure."

The CCT BRT service will feature innovative, stylized vehicles with low floors and multiple doors opening at sidewalk level allowing people to walk on and off as they do on the Metro subway. The vehicles use alternative clean fuels and state-of-the-art technology. Fares will be purchased before boarding, not onboard the vehicle. Concepts showing bus rapid transit can be found at http://www.mdot.maryland.gov/Bus_Rapid_Transit_Components.html.

The CCT will be constructed in two phases. Phase I will involve a 9-mile segment between Shady Grove and Metropolitan Grove. Phase II will be 6-miles long from Metropolitan Grove to COMSAT. The area encompassed by the Phase I segment has seen significant development over the past 20 years and has reserved transitway rights-of-way and will support the ridership to begin this service. Additional information on the CCT can be found at http://www.cctmaryland.com.

Planning for this project has included extensive public participation and the MTA has worked with local communities to develop a plan that provides the greatest benefits while minimizing adverse impacts. Public outreach and agency coordination will continue to be an integral part of the development of the final environmental impact statement, providing opportunities for local residents and stakeholders to contribute to the planning and design of the project.

CCT Bus Rapid Transit Key Facts

- Mode: Bus Rapid Transit
- Overall Length: 15 miles
- Stations: 16 proposed
- Average Daily Ridership: 47,700
- Maintenance Facility: Near Metropolitan Grove
- Bus Rapid Transit Vehicles: 68

(more)

Projected Capital Cost
- Total Project: $828 million
- Phase I: $545 million
- Phase II: $283 million

One-way Travel Time
- COMSAT to Shady Grove: 49 minutes
- Metropolitan Grove to Shady Grove: 33 minutes
- Frequency of service: 6 minutes during peak periods and 10 minutes off peak

Schedule
- Summer 2012 – begin New Starts process
- Spring 2013 – FTA Approval to Enter Preliminary Engineering

Dependent on Funding
- Winter 2014/2015: Initiate Final Design Activities
- Summer 2017: Receive Full Funding Grant Agreement from FTA
- Summer 2017: Begin Right-of-Way Acquisitions/Permitting/Agreements
- Fall 2018: Begin Construction
- 2020: Service begins

###

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RE: CCT invitation to be a cooperating agency

McCurdy, Alaina [McCurdy.Alaina@epa.gov]

Sent: Tuesday, July 15, 2014 4:54 PM
To: Dan Reagle; Rudnick, Barbara [Rudnick.Barbara@epa.gov]
Cc: 'daniel.koenig@dot.gov'; John Newton; Rick Kiegel

Dan,

EPA accepts your invitation to be a cooperating agency for the Corridor Cities Transitway (CCT) Environmental Assessment. EPA appreciates the opportunity to engage in the development of the documentation to satisfy the requirements of NEPA and the Clean Water Act, as a cooperating agency for the CCT project, while we retain our independent obligations under section 309 of the Clean Air Act to review and comment on environmental documents. If you have any questions, please feel free to contact either myself or Barbara Rudnick.

Sincerely,

Alaina

Alaina McCurdy
Office of Environmental Programs
U.S. EPA Region 3
1650 Arch Street
Philadelphia, PA 19103
phone: (215)814-2741
fax: (215)814-2783

From: Dan Reagle [mailto:DReagle1@mta.maryland.gov]
Sent: Thursday, June 12, 2014 3:06 PM
To: McCurdy, Alaina; Rudnick, Barbara
Cc: 'daniel.koenig@dot.gov'; John Newton; Rick Kiegel
Subject: CCT invitation to be a cooperating agency

Barbara and Alaina,

Please see the attached letter inviting you to be a cooperating agency on the EA for the Corridor Cities Transitway. A hard copy is in the mail.

Thank you,

Dan Reagle

Maryland Transit Administration | Office of Planning |6 St. Paul Street, Rm 923 | Baltimore, MD 21202 | 410.767.3771

Attachments must be <5MB.

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MARYLAND TRANSIT ADMINISTRATION
MARYLAND DEPARTMENT OF TRANSPORTATION
Martin O'Malley, Governor • Anthony G. Brown, Lt. Governor
James T. Smith, Jr., Secretary • Robert L. Smith, Administrator

June 12, 2014

Ms. Barbara Rudnick, NEPA Team Leader
Office of Environmental Programs (3EA30)
Environmental Assessment and Innovation Division
US EPA Region 3
1650 Arch St.
Philadelphia, PA 19103

Re: Invitation to Participate in the Environmental Review Process
Corridor Cities Transitway Bus Rapid Transit Project
Cities of Gaithersburg and Rockville, Montgomery County, Maryland

Dear Ms. Rudnick,

The Maryland Transit Administration (MTA), in coordination with the Federal Transit Administration (FTA), is initiating the preparation of an Environmental Assessment (EA) for the proposed Corridor Cities Transitway (CCT) project. The proposed action consists of Bus Rapid Transit (BRT) from the Metropolitan Grove MARC Station to the Shady Grove Metro Station in Montgomery County, Maryland. The purpose of the CCT is to enhance connectivity, mobility, and livability; increase transit capacity; and improve regional air quality by providing premium transit service in the I-270 corridor. The enclosed Project Information Packet provides additional details.

As part of the environmental review process for this project, the lead agency must identify, as early as practicable, any other Federal and non-Federal agencies that may have an interest in the project, and invite such agencies to become cooperating agencies in the environmental review process. The Environmental Protection Agency (EPA) has been identified as an agency that may have an interest in this project; accordingly, your agency is being extended this invitation to become actively involved as a cooperating agency in the environmental review process for the project.

Per *National Environmental Policy Act* (NEPA) regulations (40 CFR 1501.6), a cooperating agency, at the request of the lead agency, assumes responsibility for developing information and preparing environmental analyses, including portions of the environmental document concerning subjects in which the cooperating has special expertise. The cooperating agency also may adopt the environmental document of a lead agency when, after an independent review, the cooperating agency concludes that its comments and suggestions have been satisfied. In addition, your agency will be asked to:

- Provide input on the impact assessment methodologies and level of detail in your agency's area of expertise;
- Participate in coordination meetings, conference calls, and joint field reviews, as appropriate; and
- Review and comment on sections of the pre-draft or pre-final environmental documents to communicate any concerns of your agency on the adequacy of the document, the alternatives considered, and the anticipated impacts and mitigation.

Your agency does not have to accept this invitation. If your agency elects not to become a cooperating agency, your agency must decline this invitation in writing. The declination may be transmitted electronically to me (JNewton@mta.maryland.gov); please include the title of the official responding. **Your agency will be treated as a cooperating agency unless your written response declining such designation as outlined above is transmitted to this office not later than July 14, 2014.**

If your agency has questions regarding the proposed project or this invitation, please contact Dan Reagle at (410) 767-3771 or DReagle1@mta.maryland.gov. We appreciate your agency's consideration and we look forward to coordinating with your agency on this project.

Sincerely,

Mr. John Newton,
Manager, Environmental Planning Division
Maryland Transit Administration

Enclosure: Project Information Packet

cc: Mr. Rick Kiegel, Maryland Transit Administration
Mr. Dan Koenig, Federal Transit Administration
Mr. Dan Reagle, Maryland Transit Administration

Project Information Packet:
Corridor Cities Transitway

I. INTRODUCTION

The following Project Information Packet provides an overview to the Corridor Cities Transitway (CCT) project, including the project's background, history, purpose and needs, and proposed alternatives.

II. PROJECT BACKGROUND

The CCT study area is located within Montgomery County, Maryland. The study area is an intensely developed suburban corridor which includes portions of Rockville and Gaithersburg, roughly parallel to I-270. It is home to many commuters to Washington, DC and surrounding locations, and is also a rapidly growing employment center. The study area has experienced significant growth of employment, households, and population in recent decades. Forecasts predict these growth trends will continue into the foreseeable future.

The area currently suffers from substantial roadway congestion, and future growth is expected to create additional pressure on the transportation network. Metrorail and MARC rail lines serve passengers traveling to the Washington, DC area; however direct access to these lines is currently limited within the study area. Existing bus routes provide commuter connections but currently must travel in general traffic lanes and are thus subject to the same congestion delays as single-occupancy vehicles.

Ongoing development projects in the area have been increasingly dense and transit-oriented in anticipation of the CCT. New transit-oriented developments (TOD) such as Crown Farm, Watkins Mill Town Center, and the Johns Hopkins Belward Research Campus project are planned or under construction.

The corridor is home to several large employment centers including the Life Sciences Center (LSC) and the National Institute of Standards and Technology (NIST). Currently many of these concentrated employment centers are not directly accessible via mass transit, despite being relatively close to Metrorail and MARC rail stations.

III. PROJECT HISTORY

The CCT has long been envisioned as an important part of the transportation network of Montgomery County, as well as to support long-term economic development. The project was originally conceived as a light rail transitway, and later as a potential exclusive busway, designed to provide connections to established and new centers of commerce, industry and residential development in the County (the so- called "corridor cities" of the I-270 corridor). The CCT alignment was identified by Montgomery County in the early 1990s and adopted into the County master plan. Right-of-way for the transitway has been preserved by the County and integrated into private development plans.

In May 2002, the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) published a Draft Environmental Impact Statement (DEIS) for the I-270/US 15 Multi-

Modal Corridor Study for public review and comment. The DEIS evaluated the impacts of 35 miles of highway improvements along the I-270/US 15 corridor and a 15-mile long CCT. In May 2009, the FHWA and FTA circulated an Alternatives Analysis/Environmental Assessment that analyzed new highway alternatives and reviewed the previously studied CCT alternatives. In November 2010, the MTA completed a Supplemental EA (SEA) to provide more detailed environmental and engineering analysis for new CCT alternatives to better serve the proposed developments of Crown Farm, Life Sciences and Kentlands. In December 2011, FHWA and FTA jointly concurred that the CCT has independent utility from the I-270/US 15 Multi-Modal Corridor Study and the CCT would proceed with NEPA compliance separate from the highway alternatives of the Multi-Modal Corridor Study.

In May 2012, the State of Maryland announced the Locally Preferred Alternative (LPA) for the CCT corridor. The LPA includes bus rapid transit service which extends a total of 16 miles, from COMSAT to the Shady Grove Metro Station. The EA would assess the southern nine-miles of the preferred CCT alignment that extends from the Metropolitan Grove MARC Station to the Shady Grove Metro Station.

Additionally, the MTA met with the FTA on January 31, 2013 to provide a project update and discuss the history of the project, a path forward for the NEPA approach, project funding, and schedule. The Project Team led a sight tour of the corridor for FTA on April 22, 2013.

IV. PROJECT PURPOSE AND NEED

A. Purpose

The purpose of the CCT is to provide enhanced transit service in the I-270 corridor in Montgomery County. The CCT project would provide the following in the study area corridor (shown on **Figure 1**), which extends from the Metropolitan Grove MARC Station to the Shady Grove Metrorail Red Line Station:

- Improve inter-modal connections in the corridor;
- Increase transit capacity and meet transit demand;
- Enhance mobility and provide congestion relief;
- Support economic development and local government master plans to enhance the livability of communities in the corridor; and
- Improve regional air quality by increasing transit use.

B. Needs

Five specific needs to be addressed by this project:

- Lack of connections between existing transit routes (including MARC, Metrorail and the local bus network);
- Existing transit service is at or near capacity and transit demand and ridership are forecasted to grow in the future;
- Roadway congestion contributes to unpredictable and slow travel times for automobiles and buses in the corridor;

- Demand for managed growth and economic development in the region continues to grow in number of households and employment; and
- Regional goal to improve air quality by providing alternatives to automobile usage.

V. ALTERNATIVES EVALUATED

Two alternatives are being advanced for the CCT project: a No-Build and a Build Alternative. These alternatives will be evaluated and compared for their ability to address the project purpose and need and environmental impacts. These alternatives will be included in the Environmental Assessment which is being prepared pursuant to the National Environmental Policy Act (NEPA).

A. No-Build Alternative

The No-Build Alternative is the baseline against which the Build Alternative is compared. It consists of the existing road and transit network, as well as planned and programmed improvements in the approved regional plan. The No-Build Alternative represents the future conditions of transportation facilities and services in 2035 if the CCT is not built. Under the No-Build Alternative, travelers in the area would continue to rely on existing roadways, bus service, and rail stations as they are currently configured with no substantial changes. The No-Build Alternative provides a baseline by which the environmental impacts of the Build Alternative are compared.

B. Build Alternative

The Build Alternative includes Bus Rapid Transit (BRT) on the proposed CCT alignment. The transitway would primarily be surface running with grade-separated crossings of selected roadways at busy intersections as well as over the CSX railroad near Metropolitan Grove. Service on the CCT would be provided with two distinct bus routes. The CCT Direct Service route would operate between the Shady Grove and Metropolitan Grove stations of the CCT, stopping at every station along the transitway. It would operate on an exclusive, dedicated transitway. The CCT Service via Universities at Shady Grove (USG) would operate along the transitway, stopping at all stations, but would divert off the transitway to serve two additional stations using the existing roadway network.

VI. ALIGNMENT DESCRIPTION

As shown on **Figure 1**, the proposed route of the CCT transitway would begin at Metropolitan Grove MARC Station at-grade on the north side of the CSX right-of-way, turning southbound to cross over the CSX tracks to the west side of Quince Orchard Road before crossing to the east side of the road at the intersection of Clopper Road/West Diamond Avenue. The transitway would continue on the east side of Quince Orchard Road crossing over to the west side of Great Seneca Highway continuing to the east side of Muddy Branch Road. The transitway would turn east at the intersection of Muddy Branch Road and Belward Campus Drive, a road that is proposed to run through the Belward Farm development currently being considered. Continuing in the median of the Belward Campus Drive and John Hopkins Drive, the transitway would

continue across Key West Avenue to the median of a new roadway proposed through the Public Safety Training Academy (PSTA) redevelopment.

The transitway would cross Great Seneca Highway onto Medical Center Drive, then turn north on Broschart Road crossing Key West Avenue to the west side of Diamondback Drive. At the intersection of Diamondback Drive/Decoverly Drive, the transitway would move into the median of Decoverly Drive. The alignment continues north through Crown Farm development, which is currently under construction along Decoverly Drive. Turning east, the transitway would continue in the proposed median of Fields Road, and then proceed east onto an aerial structure which would carry the CCT over I-270 and Shady Grove Road. Once past Shady Grove Road, the alignment would return to grade before the entrance to the Sheraton Rockville and continue in the median of King Farm Boulevard. The transitway would cross MD 355 at-grade into the median of Shady Grove Metro Access Road. The transitway would then utilize the roadway around the existing parking lot at the Metro Station. The eastern terminus station for the CCT is the Shady Grove Station adjacent to the Shady Grove Metro Station.

The CCT Service via USG would operate along the CCT Direct Service transitway, stopping at all stations, but would divert off the transitway to serve two additional stations. This service via USG would operate as a one-way loop in mixed traffic beginning southbound on Great Seneca Highway, turning eastbound onto Darnestown Road, southbound on Traville Gateway Drive East, westbound Shady Grove Road, northbound on Traville Gateway Drive West, and northbound on Great Seneca Highway.

A. Stations

The fourteen stations for the CCT (shown on **Figure 1**) would be specially designed with CCT branding for easy recognition by transit users. Stations would include shelters, seating, fare machines, and both fixed and variable signage to provide customers with information on the CCT route and services as well as current operations. Safe access for pedestrians and parking for bikes would be provided at all CCT stations. The CCT would include parking at five stations: Shady Grove, Crown Farm, LSC West, Kentlands, and Metropolitan Grove.

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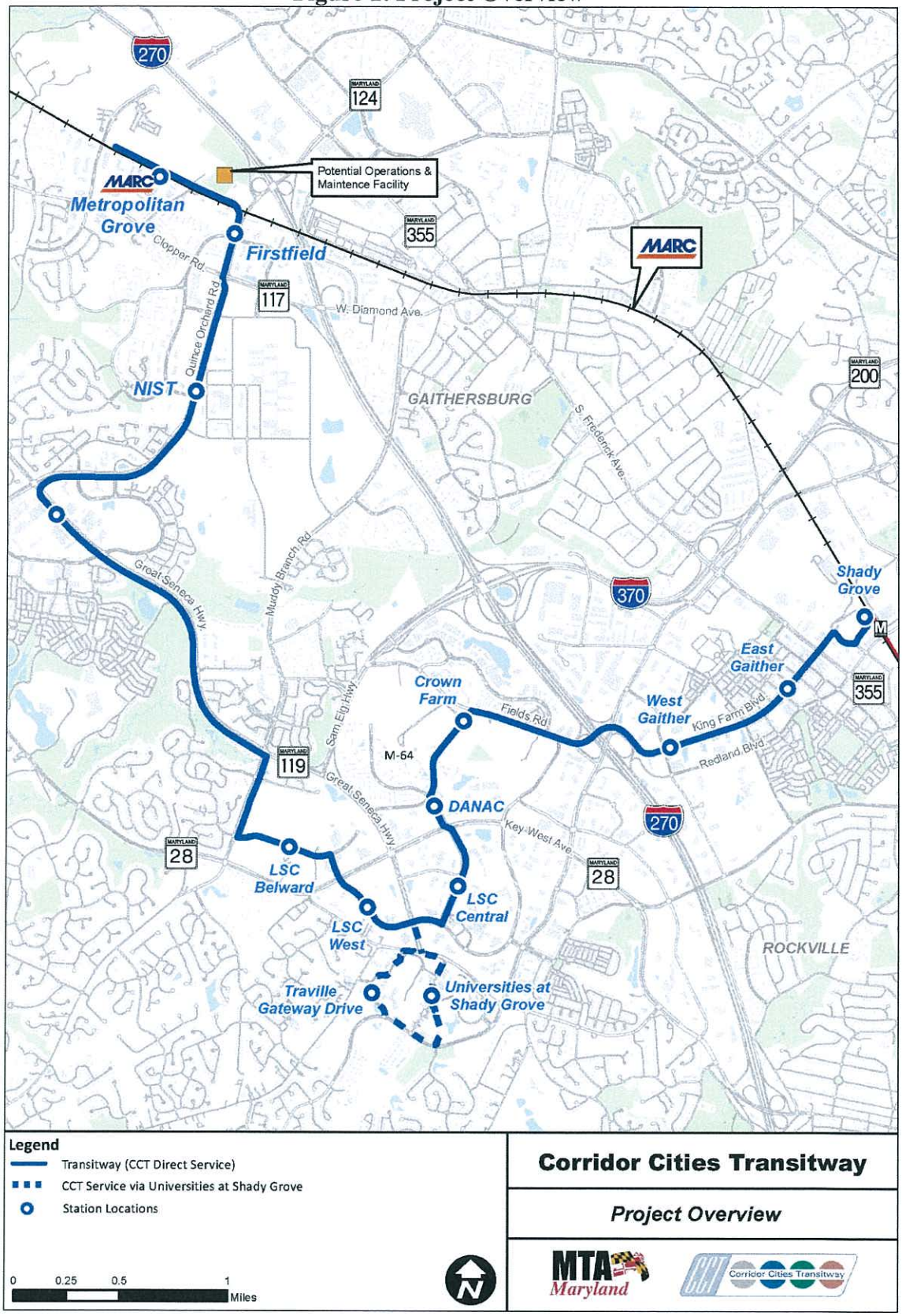
Figure 1: Project Overview



From:	Dan Reagle
To:	"Cantilli, Susan P"
Cc:	Daniel Koenig (daniel.koenig@dot.gov); kathleen.zubrzycki@dot.gov; John Newton (jnewton@mta.maryland.gov)
Subject:	RE: CCT invitation to be a cooperating agency
Date:	Thursday, July 31, 2014 3:00:00 PM

Susan,

Your email below is sufficient. Thank you!

Thank you,

Dan Reagle
Maryland Transit Administration | Office of Planning |6 St. Paul Street, Rm 923 | Baltimore, MD 21202 | 410.767.3771
Attachments must be <5MB.

From: Cantilli, Susan P [mailto:susan.cantilli@nist.gov]
Sent: Thursday, July 31, 2014 2:58 PM
To: Dan Reagle
Subject: RE: CCT invitation to be a cooperating agency

Hi Dan –

I did clear with others here that we want to be a cooperating party. However, I did not respond because the letter stated that NIST only needed to provide written notice if we wanted to decline the designation. Would you like a formal acceptance sent to John Newton?

Susan

From: Dan Reagle [mailto:DReagle1@mta.maryland.gov]
Sent: Thursday, June 12, 2014 3:03 PM
To: Cantilli, Susan P
Cc: 'daniel.koenig@dot.gov'; Rick Kiegel; John Newton
Subject: CCT invitation to be a cooperating agency

Susan,

Please see the attached letter inviting you to be a cooperating agency on the EA for the Corridor Cities Transitway. A hard copy is in the mail.

Thank you,

Dan Reagle

Maryland Transit Administration | Office of Planning |6 St. Paul Street, Rm 923 | Baltimore, MD 21202 | 410.767.3771

Attachments must be <5MB.

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MARYLAND TRANSIT ADMINISTRATION
MARYLAND DEPARTMENT OF TRANSPORTATION
Martin O'Malley, Governor • Anthony G. Brown, Lt. Governor
James T. Smith, Jr., Secretary • Robert L. Smith, Administrator

June 12, 2011

Mr. Joseph DaVia
Chief, Maryland Section North
US Army Corps of Engineers
CENAB-OP-RMN
P.O. Box 1715
Baltimore, MD 21203-1715

Re: Invitation to Participate in the Environmental Review Process
Corridor Cities Transitway Bus Rapid Transit Project
Cities of Gaithersburg and Rockville, Montgomery County, Maryland

Dear Mr. DaVia, Joe

The Maryland Transit Administration (MTA), in coordination with the Federal Transit Administration (FTA), is initiating the preparation of an Environmental Assessment (EA) for the proposed Corridor Cities Transitway (CCT) project. The proposed action consists of Bus Rapid Transit (BRT) from the Metropolitan Grove MARC Station to the Shady Grove Metro Station in Montgomery County, Maryland. The purpose of the CCT is to enhance connectivity, mobility, and livability; increase transit capacity; and improve regional air quality by providing premium transit service in the I-270 corridor. The enclosed Project Information Packet provides additional details.

As part of the environmental review process for this project, the lead agency must identify, as early as practicable, any other Federal and non-Federal agencies that may have an interest in the project, and invite such agencies to become cooperating agencies in the environmental review process. The United States Army Corps of Engineers (USACE) has been identified as an agency that may have an interest in this project, assuming an individual permit will be required for the project as impacts to Waters of the US, including wetlands, could exceed one acre of impacts. Accordingly, your agency is being extended this invitation to become actively involved as a cooperating agency in the environmental review process for the project.

Per *National Environmental Policy Act* (NEPA) regulations (40 CFR 1501.6), a cooperating agency, at the request of the lead agency, assumes responsibility for developing information and preparing environmental analyses, including portions of the environmental document concerning subjects in which the cooperating agency has special expertise. The cooperating agency also may adopt the environmental document of a lead agency when, after an independent review, the cooperating agency concludes that its comments and suggestions have been satisfied. In addition, your agency will be asked to:

- Provide input on the impact assessment methodologies and level of detail in your agency's area of expertise;
- Participate in coordination meetings, conference calls, and joint field reviews, as appropriate; and
- Review and comment on sections of the pre-draft or pre-final environmental documents to communicate any concerns of your agency on the adequacy of the document, the alternatives considered, and the anticipated impacts and mitigation.

Your agency does not have to accept this invitation. If your agency elects not to become a cooperating agency, your agency must decline this invitation in writing. The declination may be transmitted electronically to me (JNewton@mta.maryland.gov); please include the title of the official responding. **Your agency will be treated as a cooperating agency unless your written response declining such designation as outlined above is transmitted to this office not later than July 14, 2014**

If your agency has questions regarding the proposed project or this invitation, please contact Dan Reagle at (410) 767-3771 or DReagle1@mta.maryland.gov. We appreciate your agency's consideration and we look forward to coordinating with your agency on this project.

Sincerely,

John Newton
Manager, Environmental Planning Division
Maryland Transit Administration

Enclosure: Project Information Packet

cc: Mr. Rick Kiegel, Maryland Transit Administration
Mr. Dan Koenig, Federal Transit Administration
Mr. Dan Reagle, Maryland Transit Administration

Project Information Packet:
Corridor Cities Transitway

I. INTRODUCTION

The following Project Information Packet provides an overview to the Corridor Cities Transitway (CCT) project, including the project's background, history, purpose and needs, and proposed alternatives.

II. PROJECT BACKGROUND

The CCT study area is located within Montgomery County, Maryland. The study area is an intensely developed suburban corridor which includes portions of Rockville and Gaithersburg, roughly parallel to I-270. It is home to many commuters to Washington, DC and surrounding locations, and is also a rapidly growing employment center. The study area has experienced significant growth of employment, households, and population in recent decades. Forecasts predict these growth trends will continue into the foreseeable future.

The area currently suffers from substantial roadway congestion, and future growth is expected to create additional pressure on the transportation network. Metrorail and MARC rail lines serve passengers traveling to the Washington, DC area; however direct access to these lines is currently limited within the study area. Existing bus routes provide commuter connections but currently must travel in general traffic lanes and are thus subject to the same congestion delays as single-occupancy vehicles.

Ongoing development projects in the area have been increasingly dense and transit-oriented in anticipation of the CCT. New transit-oriented developments (TOD) such as Crown Farm, Watkins Mill Town Center, and the Johns Hopkins Belward Research Campus project are planned or under construction.

The corridor is home to several large employment centers including the Life Sciences Center (LSC) and the National Institute of Standards and Technology (NIST). Currently many of these concentrated employment centers are not directly accessible via mass transit, despite being relatively close to Metrorail and MARC rail stations.

III. PROJECT HISTORY

The CCT has long been envisioned as an important part of the transportation network of Montgomery County, as well as to support long-term economic development. The project was originally conceived as a light rail transitway, and later as a potential exclusive busway, designed to provide connections to established and new centers of commerce, industry and residential development in the County (the so- called "corridor cities" of the I-270 corridor). The CCT alignment was identified by Montgomery County in the early 1990s and adopted into the County master plan. Right-of-way for the transitway has been preserved by the County and integrated into private development plans.

In May 2002, the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) published a Draft Environmental Impact Statement (DEIS) for the I-270/US 15 Multi-

Modal Corridor Study for public review and comment. The DEIS evaluated the impacts of 35 miles of highway improvements along the I-270/US 15 corridor and a 15-mile long CCT. In May 2009, the FHWA and FTA circulated an Alternatives Analysis/Environmental Assessment that analyzed new highway alternatives and reviewed the previously studied CCT alternatives. In November 2010, the MTA completed a Supplemental EA (SEA) to provide more detailed environmental and engineering analysis for new CCT alternatives to better serve the proposed developments of Crown Farm, Life Sciences and Kentlands. In December 2011, FHWA and FTA jointly concurred that the CCT has independent utility from the I-270/US 15 Multi-Modal Corridor Study and the CCT would proceed with NEPA compliance separate from the highway alternatives of the Multi-Modal Corridor Study.

In May 2012, the State of Maryland announced the Locally Preferred Alternative (LPA) for the CCT corridor. The LPA includes bus rapid transit service which extends a total of 16 miles, from COMSAT to the Shady Grove Metro Station. The EA would assess the southern nine-miles of the preferred CCT alignment that extends from the Metropolitan Grove MARC Station to the Shady Grove Metro Station.

Additionally, the MTA met with the FTA on January 31, 2013 to provide a project update and discuss the history of the project, a path forward for the NEPA approach, project funding, and schedule. The Project Team led a sight tour of the corridor for FTA on April 22, 2013.

IV. PROJECT PURPOSE AND NEED

A. Purpose

The purpose of the CCT is to provide enhanced transit service in the I-270 corridor in Montgomery County. The CCT project would provide the following in the study area corridor (shown on **Figure 1**), which extends from the Metropolitan Grove MARC Station to the Shady Grove Metrorail Red Line Station:

- Improve inter-modal connections in the corridor;
- Increase transit capacity and meet transit demand;
- Enhance mobility and provide congestion relief;
- Support economic development and local government master plans to enhance the livability of communities in the corridor; and
- Improve regional air quality by increasing transit use.

B. Needs

Five specific needs to be addressed by this project:

- Lack of connections between existing transit routes (including MARC, Metrorail and the local bus network);
- Existing transit service is at or near capacity and transit demand and ridership are forecasted to grow in the future;
- Roadway congestion contributes to unpredictable and slow travel times for automobiles and buses in the corridor;

- Demand for managed growth and economic development in the region continues to grow in number of households and employment; and
- Regional goal to improve air quality by providing alternatives to automobile usage.

V. ALTERNATIVES EVALUATED

Two alternatives are being advanced for the CCT project: a No-Build and a Build Alternative. These alternatives will be evaluated and compared for their ability to address the project purpose and need and environmental impacts. These alternatives will be included in the Environmental Assessment which is being prepared pursuant to the National Environmental Policy Act (NEPA).

A. No-Build Alternative

The No-Build Alternative is the baseline against which the Build Alternative is compared. It consists of the existing road and transit network, as well as planned and programmed improvements in the approved regional plan. The No-Build Alternative represents the future conditions of transportation facilities and services in 2035 if the CCT is not built. Under the No-Build Alternative, travelers in the area would continue to rely on existing roadways, bus service, and rail stations as they are currently configured with no substantial changes. The No-Build Alternative provides a baseline by which the environmental impacts of the Build Alternative are compared.

B. Build Alternative

The Build Alternative includes Bus Rapid Transit (BRT) on the proposed CCT alignment. The transitway would primarily be surface running with grade-separated crossings of selected roadways at busy intersections as well as over the CSX railroad near Metropolitan Grove. Service on the CCT would be provided with two distinct bus routes. The CCT Direct Service route would operate between the Shady Grove and Metropolitan Grove stations of the CCT, stopping at every station along the transitway. It would operate on an exclusive, dedicated transitway. The CCT Service via Universities at Shady Grove (USG) would operate along the transitway, stopping at all stations, but would divert off the transitway to serve two additional stations using the existing roadway network.

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As shown on **Figure 1**, the proposed route of the CCT transitway would begin at Metropolitan Grove MARC Station at-grade on the north side of the CSX right-of-way, turning southbound to cross over the CSX tracks to the west side of Quince Orchard Road before crossing to the east side of the road at the intersection of Clopper Road/West Diamond Avenue. The transitway would continue on the east side of Quince Orchard Road crossing over to the west side of Great Seneca Highway continuing to the east side of Muddy Branch Road. The transitway would turn east at the intersection of Muddy Branch Road and Belward Campus Drive, a road that is proposed to run through the Belward Farm development currently being considered. Continuing in the median of the Belward Campus Drive and John Hopkins Drive, the transitway would

MARYLAND TRANSIT ADMINISTRATION
MARYLAND DEPARTMENT OF TRANSPORTATION
Martin O'Malley, Governor • Anthony G. Brown, Lt. Governor
James T. Smith, Jr., Secretary • Robert L. Smith, Administrator

September 8, 2014

Mr. Michael W. Weil
Urban Planner
National Capital Planning Commission
401 9th Street, NW
Suite 500
Washington, DC 20004

Re: Invitation to Participate in the Environmental Review Process
Corridor Cities Transitway Bus Rapid Transit Project
Cities of Gaithersburg and Rockville, Montgomery County, Maryland

Dear Mr. Weil,

The Maryland Transit Administration (MTA), in coordination with the Federal Transit Administration, is initiating the preparation of an Environmental Assessment (EA) for the proposed Corridor Cities Transitway (CCT) project. The proposed action consists of Bus Rapid Transit (BRT) from the Metropolitan Grove MARC Station to the Shady Grove Metro Station in Montgomery County, Maryland. The purpose of the CCT is to enhance connectivity, mobility, and livability; increase transit capacity; and improve regional air quality by providing premium transit service in the I-270 corridor. The enclosed Project Information Packet provides additional details.

As part of the environmental review process for this project, the lead agency must identify, as early as practicable, any other Federal and non-Federal agencies that may have an interest in the project, and invite such agencies to become cooperating agencies in the environmental review process. The National Capital Planning Commission may have an interest in this project, due to potential effects to the National Institute of Standards and Technology headquarters property. Accordingly, your agency is being extended this invitation to become actively involved as a cooperating agency in the environmental review process for the project.

Per *National Environmental Policy Act* (NEPA) regulations (40 CFR 1501.6), a cooperating agency, at the request of the lead agency, assumes responsibility for developing information and preparing environmental analyses, including portions of the environmental document concerning subjects in which the cooperating has special expertise. The cooperating agency also may adopt the environmental document of a lead agency when, after an independent review, the cooperating agency concludes that its comments and suggestions have been satisfied. In addition, your agency will be asked to:

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Your agency does not have to accept this invitation. If your agency elects not to become a cooperating agency, your agency must decline this invitation in writing. The declination may be transmitted electronically to me (JNewton@mta.maryland.gov); please include the title of the official responding. **Your agency will be treated as a cooperating agency unless your written response declining such designation as outlined above is transmitted to this office not later than October 8, 2014.**

If your agency has questions regarding the proposed project or this invitation, please contact Dan Reagle at (410) 767-3771 or DReagle1@mta.maryland.gov. We appreciate your agency's consideration and we look forward to coordinating with your agency on this project.

Sincerely,

John Newton
Manager, Environmental Planning Division
Maryland Transit Administration

Enclosure: Project Information Packet

cc: Mr. Rick Kiegel, Maryland Transit Administration
Mr. Dan Koenig, Federal Transit Administration
Ms. Elizabeth Patel, Federal Transit Administration
Mr. Dan Reagle, Maryland Transit Administration

Project Information Packet:
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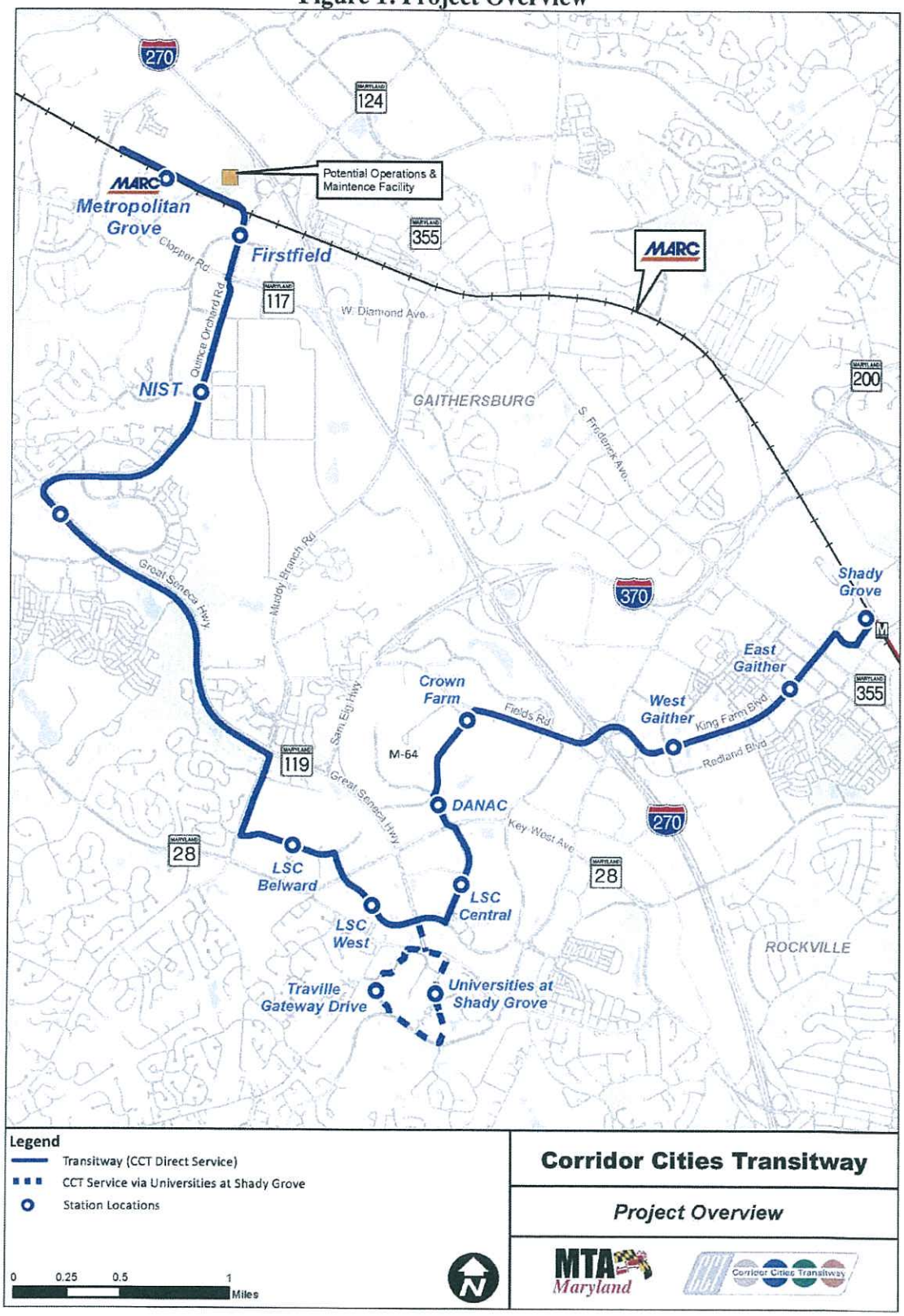


U.S. Department
of Transportation
Federal Transit Administration

REGION III
Delaware, District of
Columbia, Maryland,
Pennsylvania, Virginia,
West Virginia

1760 Market Street
Suite 500
Philadelphia, PA 19103-4124
215-656-7100
215-656-7260 (fax)

Ms. Elizabeth Cole
Administrator
Review and Compliance
Maryland Historical Trust
100 Community Place
Crownsville, MD 21032

APR 18 2014

Re: Section 106 Initiation for the Corridor Cities Transitway Bus Rapid Transit Project Cities of Gaithersburg and Rockville, Montgomery County, Maryland

Dear Ms. Cole:

The Federal Transit Administration (FTA), in coordination with the Maryland Transit Administration (MTA), is initiating consultation with the Maryland Historical Trust (MHT) for the Corridor Cities Transitway (CCT) Bus Rapid Transit project. This approximately nine-mile bus rapid transitway along the I-270 corridor would extend between the Shady Grove Metrorail Station in Rockville, Maryland and the Metropolitan Grove MARC Station in Gaithersburg, Maryland (see **Attachment A**). This project was originally part of the I-270/US 15 Multi-Modal Corridor Study, a multi-modal study that evaluated transit and highway improvements. The Corridor Study determined in 2011 that the CCT is a separate project with independent utility from the highway components. Located entirely within Montgomery County, Maryland, the CCT potentially involves federal funding from FTA and is therefore considered an undertaking per Section 106 of the National Historic Preservation Act, as amended, and its implementing regulations at 36 CFR Part 800.

The CCT would travel entirely on an exclusive transitway with stations and amenities very similar to light rail, serving both local trips and long distance commutes. The transitway would consist of two lanes that together are 28 feet in width from curb to curb. For the vast majority of the corridor, the alignment would run either adjacent to or in the median of the existing roadway. Enhanced bus stations would be specially designed for the CCT and include shelters, seating, fare machines, and both fixed and variable signage. Parking is planned for five of the stations, using existing lots and those associated with future private development. The project also includes an operations and maintenance facility located near the north end of the proposed transitway.

The CCT would provide transit service to new and existing centers of commerce and residential development such as the Life Sciences Center and King Farm in Rockville along twelve stations.

FTA is initiating the Section 106 process, and therefore, is requesting your comments and/or concurrence regarding the following: (1) the historic architectural and archeological APE (see **Attachments B** and **C**), (2) previously-identified resources within the APE (see **Attachment D, E,** and **F**), (3) recommendations for historic architectural the National Register of Historic Places (NHRP) evaluations (including the reevaluation and boundary revision of England/Crown Farm) (see **Attachment G**), and (4) identified consulting parties (see **Attachment F**), within 30 calendar days from the date of this letter.

Please contact Mr. Daniel Koenig, Environmental Protection Specialist, at (202) 219-3528 or daniel.koenig@dot.gov if you require further information or clarification. We look forward to receiving your comments and coordinating with you throughout the Section 106 process.

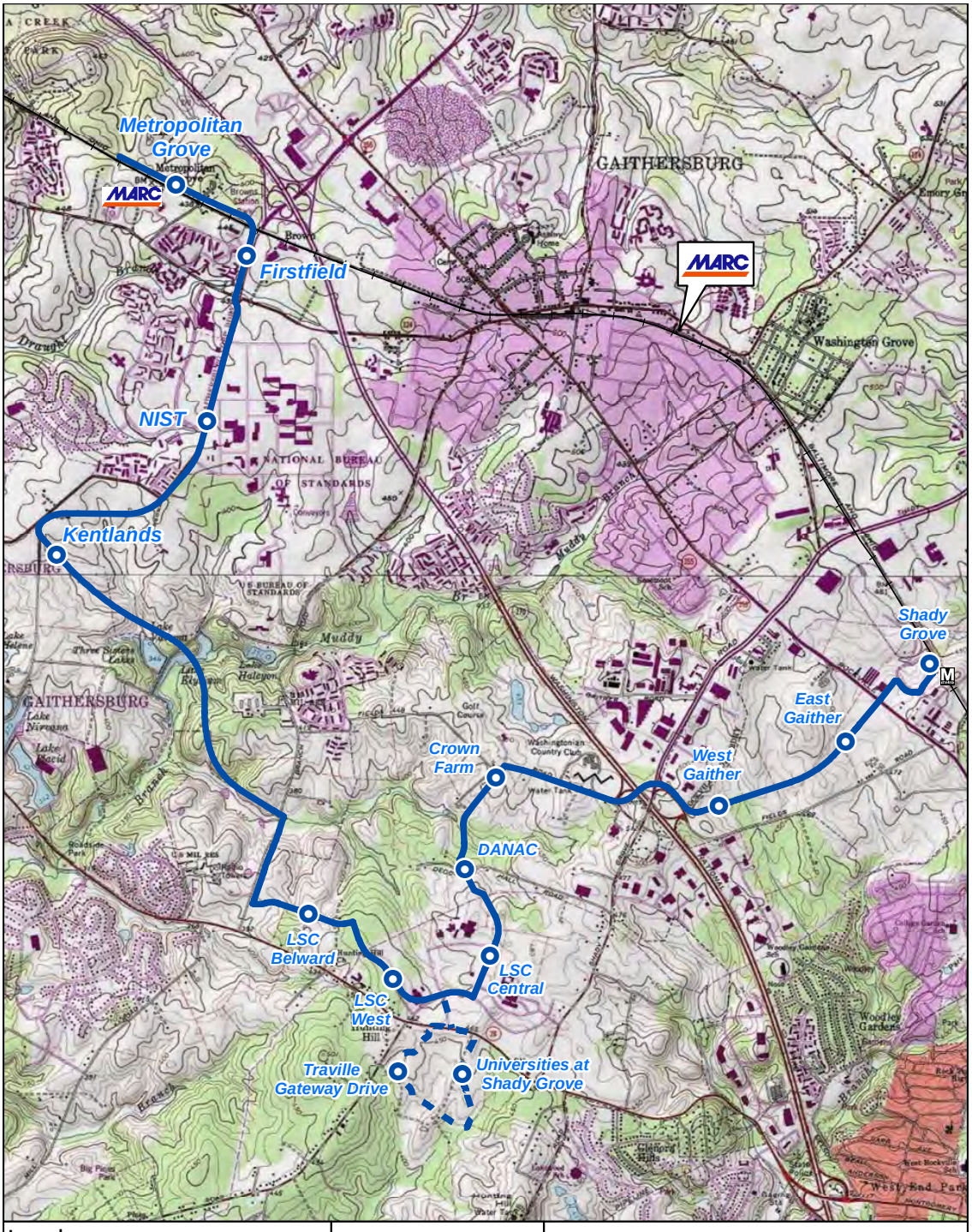
Sincerely,

Brigid Hynes-Cherin
Regional Administrator

Attachment A: Location Map
Attachment B: Map of Historic Architectural APE and Identified Properties
Attachment C: Map of the Proposed Archeological APE
Attachment D: Table 1-Previously Identified Architectural Resources
Table 2-Previously Identified Archeological Sites
Table 3-Additional Properties More Than 45 Years Old
Attachment E: Photographs and Bird's Eye Views of Additional Properties
Attachment F: APE Delineation
Attachment G: Potential Historic Properties
Attachment H: Identified Consulting Parties

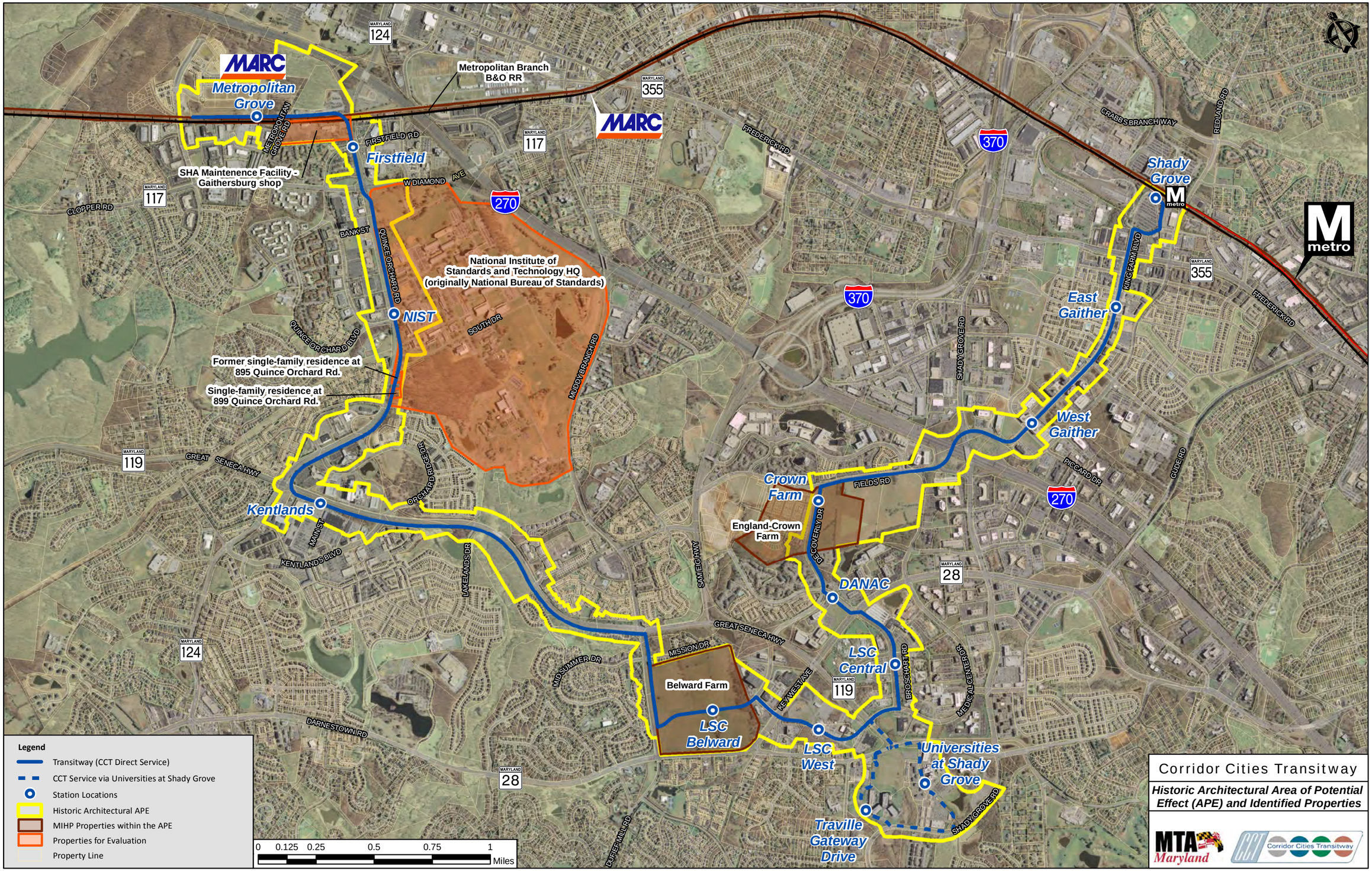
cc: Mr. Rick Kiegel, MTA
Mr. John Newton, MTA

ATTACHMENT A:
Location Map



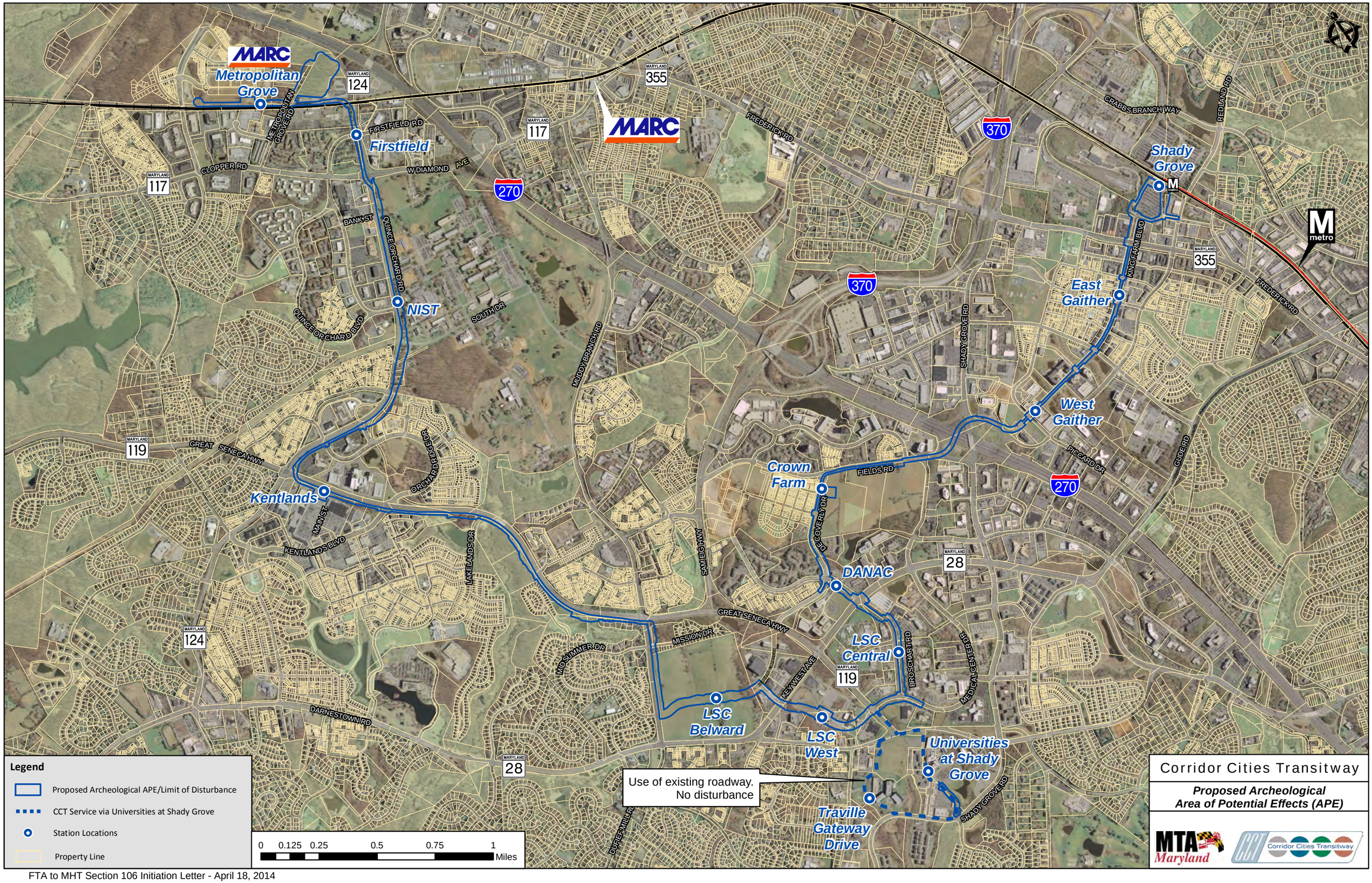
Source: Gaithersburg and Rockville USGS 7.5' DRG

ATTACHMENT B:
Map of Historic Architectural APE and Identified Properties



FTA to MHT Section 106 Initiation Letter - April 18, 2014

ATTACHMENT C:
Map of the Proposed Archeological APE


MARC
Metropolitan Grove
MARYLAND 124
METROPOLITAN GROVE RD
FIRSTFIELD RD
Firstfield
CLOPPER RD
W DIAMOND AVE
MARYLAND 117
BANK ST
QUINCE ORCHARD RD
NIST
SOUTH DR
QUINCE ORCHARD BLVD
MARYLAND 119
GREAT SENECA HWY
ORCHARD RIDGE DR
Kentlands
MAIN ST
KENTLANDS BLVD
LAKELANDS DR
MARYLAND 124
DARNESTOWN RD
MARYLAND 117
270
MARYLAND 355
MARC
FREDERICK RD
MUDDY BRANCH RD
SAM EIG HWY
MISSION DR
MIDSUMMER DR
LSC Belward
KEY WEST AVE
LSC West
LSC Central
BROSCHART RD
MEDICAL CENTER DR
MARYLAND 119
MARYLAND 28
DISCOVERY DR
FIELDS RD
Crown Farm
DANAC
DUFFIE MILL RD
Traville Gateway Drive
Use of existing roadway. No disturbance
Universities at Shady Grove
SHADY GROVE RD
SHADY GROVE RD
370
370
270
PICCARD DR
GUDE RD
West Gaither
East Gaither
KINGFARM BLVD
CRABBS BRANCH WAY
REDLAND RD
Shady Grove
M metro
M metro
FREDERICK RD
Legend
Proposed Archeological APE/Limit of Disturbance
CCT Service via Universities at Shady Grove
Station Locations
Property Line
0 0.125 0.25 0.5 0.75 1 Miles
Corridor Cities Transitway
Proposed Archeological Area of Potential Effects (APE)
MTA Maryland
CCT Corridor Cities Transitway

ATTACHMENT D:
Tables 1 to 3

Corridor Cities Transitway (Section 106)
Attachment D
Tables 1-3

Table 1: Previously Identified Architectural Resources				
MIHP#	*Name/Location*	*Description*	*NRHP Status and Significance*	*Post-Evaluation Alterations*
M:37-16	**Metropolitan Branch, Baltimore and Ohio (B&O) Railroad** *Extending through Montgomery County, from Takoma Park NW to Dickerson*	The principal rail route from Washington, DC to the west, the Metropolitan Branch (1866-1873) extends from Union Station through Montgomery and Frederick Counties to Point of Rocks where it connects with the original "main line" of the B&O Railroad. Currently owned and used by CSX Transportation, Inc.	**Eligible**-Criterion A (association with the transportation industry, as well as the agricultural and residential development of Montgomery County) and Criterion C (extant station buildings and engineering structures which are contributing elements to the significance of the rail line). *Evaluated: 2000*	
M:20-21	**Ward House/Belward Farm** *10425 Darnestown Road (MD 28) Rockville*	A former dairy farm, including a vernacular two-story late Victorian farmhouse (ca. 1891) with a frame structure and L-shaped plan. The property also has several agricultural ancillary buildings and structures.	**Eligible**-Criterion C as a good example of a 19th century farmhouse ornamented with high Victorian design aesthetics. *Evaluated: 1996*	The NRHP-eligible boundary was revised in 2008 due to property development by Johns Hopkins University.
M:20-17	**England/Crown Farm** *9800 Fields Road Gaithersburg*	A former farm complex including a late 19th century farmhouse, a 19th century log house, and several agricultural buildings and domestic outbuildings from the late 19th and early 20th centuries. The high Victorian vernacular farmhouse (ca. 1894) is a two-story, five-bay frame dwelling with a stucco finish, sheltered by a cross gable roof.	**Eligible**-Criteria A and C because the property is an intact and cohesive example of a small-scale dairy farm complex. The owner's move from a small, one-room log dwelling to the substantial and stylish Victorian farm house provides insight into the evolution of farm life from the early to mid-19th century into the late 20th century, while the house itself is a well-preserved example of high Victorian vernacular building forms of the period. *Evaluated: 1996*	The farm is in the process of being modified for private mixed-use development; the main farm house and log house are being rehabilitated. A 2011 fire destroyed a few NRHP contributing ancillary buildings. Because of these alterations, we will complete an addendum to reevaluate the property for the NRHP, and if eligible, revise the boundary.

Corridor Cities Transitway (Section 106)
Attachment D

Table 2: Previously Identified Archeological Sites					
Site No.	*Site Name*	*Cultural Period*	*Setting*	*Site Type*	*NR Status*
18MO25	Snyder	Unknown prehistoric/ historic	Hillslope in northeast corner of MD 28 and MD 124 intersection	Steatite quarry	Undetermined
18MO315	DeSellum Cemetery	Early 19th century	Hilltop/bluff overlooking tributary of Muddy Branch	Cemetery	Undetermined
18MO338	WP-01	Unknown prehistoric	Plowed interior flat 450 ft east of Travilah Road	Artifact scatter	Undetermined
18MO339	WP-02	20th century	Overgrown/wooded interior flat 500 ft east of Travilah Road	House ruin	Undetermined
18MO340	WP-03	Late 19th-early 20th century	Overgrown/wooded low terrace adjacent to Piney Branch	Barn ruin	Undetermined
18MO341	WP-04	19th or 20th century	Plowed/graded low terrace overlooking Piney Branch	Possible structure	Undetermined
18MO342	WP-05	19th century	Plowed low terrace overlooking Piney Branch	Artifact scatter	Undetermined
18MO405	Fields/King Farm	Possible 18th and 19th century	Plowed hillslope west of MD 355 and south of Fields Road	Farmstead	Undetermined
18MO406	King Block VI	Prehistoric and Terrestrial	Low terrace/hillslope overlooking a tributary of Watts Branch	Short-term camp	**Not eligible**
18MO468	Site 1	Late 19th-late 20th century	Upland flat adjacent to MD 28 and Muddy Branch Road	Mercantile/post office and house site	**Not eligible**
18MO473	Site 9	Unknown prehistoric	Plowed hillslope overlooking a tributary of Muddy Branch	Artifact scatter	**Not eligible**
18MO509	Quince Orchard Valley #1	Unknown prehistoric	Wooded floodplain of tributary to Great Seneca Creek	Artifact scatter	Undetermined
18MO553	Casey	Unknown prehistoric	Fallow hilltop overlooking a tributary of Great Seneca Creek	Artifact scatter	**Not eligible**
18MO554	McGown Site	Late Archaic	Flat summit of ridge nose overlooking a tributary of Great Seneca Creek	Artifact scatter	**Not eligible**
18MO651	Crown Site A	Unknown prehistoric	Plowed low ridge between Fields Road and a tributary of Muddy Branch	Artifact scatter	**Not eligible**
18MO652	Crown Site B	Late 19th-20th century	Overgrown hilltop	Domestic site	**Not eligible**

Corridor Cities Transitway (Section 106)
Attachment D

Table 3: Additional Properties More Than 45 Years Old			
Name/Address	*Year Built/Established*	*Description*	*Recommendation*
State Highway Administration (SHA) Maintenance Facility – Gaithersburg Shop *502 Quince Orchard Road Gaithersburg* (located between Metropolitan Grove Road, CSX railroad tracks, MD-124/Quince Orchard Road, and a housing development)	Complex established in 1965-66	The Gaithersburg shop for District 3 of the SHA was established with construction of a one-story, brick main building on the complex. The other buildings and structures on the property were constructed later.	***DOE Form*** – Coordinated this approach with SHA Senior Architectural Historian, Anne Bruder.
National Institute of Standards and Technology Headquarters (NIST) (originally National Bureau of Standards) *100 Bureau Drive Gaithersburg* (located generally between MD-124/Quince Orchard Road, North Drive, East Drive, Muddy Branch Road, and Conservation Lane)	Complex established in 1961	A US Department of Commerce complex on about 578 acres of land with about 55 buildings and structures; many appear to be from the 1960s. The property maintains standards for scientific research and houses the standard meter and kilogram to which all others are compared for accuracy.	***DOE Form*** – NIST also planned to evaluate this property for the NRHP. We will be coordinating the evaluation process with this Federal agency. Access to NIST has not yet taken place, but will be obtained during evaluation of this national security sensitive facility.
895 Quince Orchard Road *Gaithersburg*	1948	A 1 ½-story, stucco and vinyl siding clad single-family residence (currently commercial) in the Minimal Traditional style with a shed in the backyard.	***Short Forms for Ineligible Resources*** – Both are post-World War II single-family residences constructed in architectural styles popular at the time. The houses are routine examples of their style and type during this era, and not distinctive.
899 Quince Orchard Road *Gaithersburg*	1948	A 2-story, brick single-family residence in the Colonial Revival style with an attached two-car garage. Several small ancillary buildings are in the backyard.	

ATTACHMENT E:
Photographs and Bird's Eye Views of Additional Properties

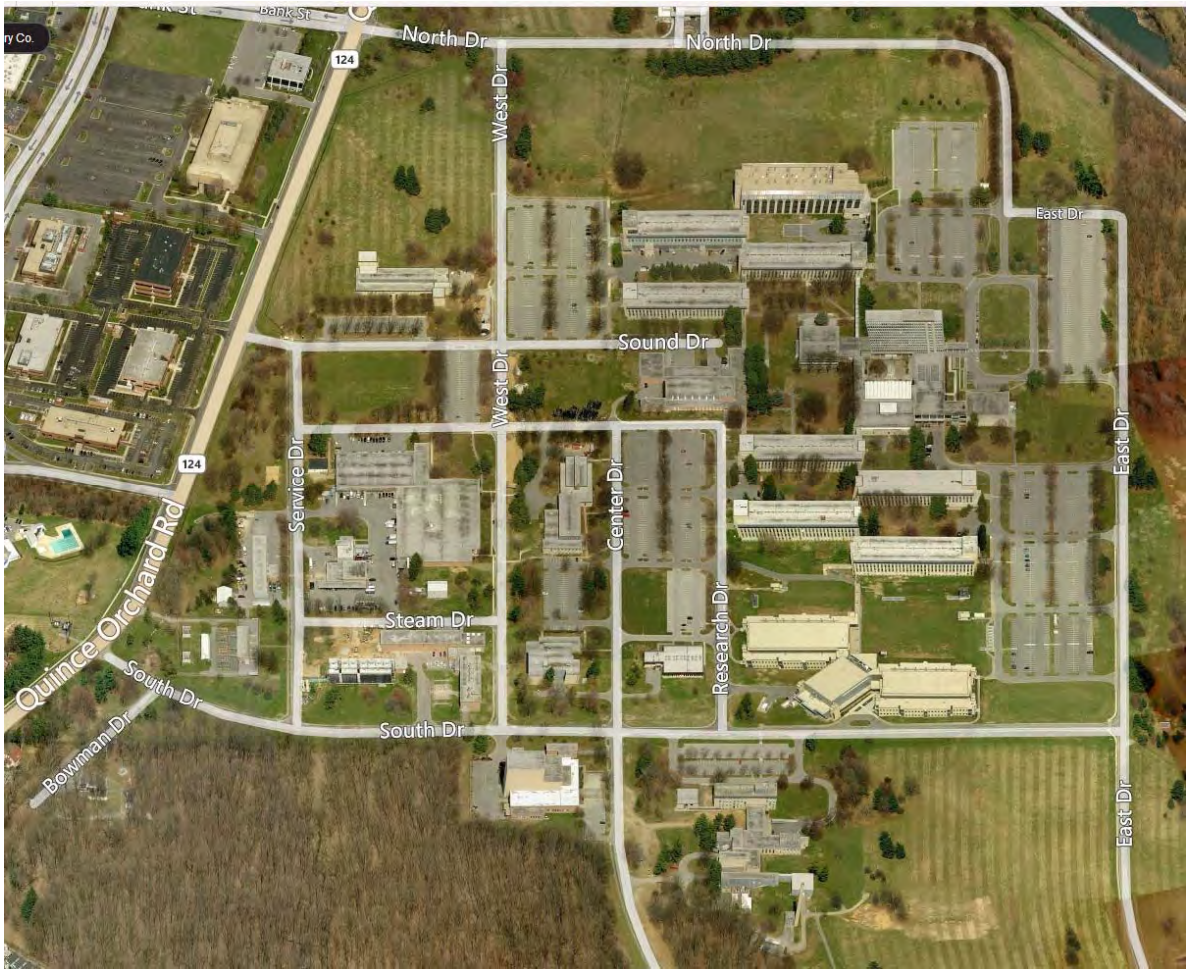
Corridor Cities Transitway (Section 106)
Attachment E
Photographs and Bird's Eye Views of Additional Properties

View north at the State Highway Administration Maintenance Facility – Gaithersburg Shop with an arrow points to the main and oldest building on the complex (image from Bing.com)


View southwest at the façade of the main and oldest building of the State Highway Administration Maintenance Facility – Gaithersburg Shop

View northwest at the south elevation of the main and oldest building of the State Highway Administration Maintenance Facility – Gaithersburg Shop

Corridor Cities Transitway (Section 106)
Attachment E



View north at the northern portion of the National Institute of Standards and Technology Headquarters (image from Bing.com)

View north at the southern portion of the National Institute of Standards and Technology Headquarters (image from Bing.com)

View east at 895 Quince Orchard Road

View south at 899 Quince Orchard Road

ATTACHMENT F:
APE Delineation

Corridor Cities Transitway (Section 106)
Attachment F
APE Delineation

APE Delineation

The APE is defined as the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties (36 CFR Part 800.16(d)). The **APE** was determined and documented (36 CFR Part 800.4(a)(1)) based on information and photographs gathered from field visits conducted in late 2013 and early 2014.

The historic architectural APE is based on the potential limit of disturbance (LOD) for the project, as well as the indirect effect potential, namely visual, atmospheric, and audible (see Attachment B). The generally heavily developed nature of the suburban and semi-urban communities in Gaithersburg and Rockville was taken into consideration. Due to this extensive development and also the generally horizontal nature of the undertaking, the historic architectural APE is relatively narrow. On average, the APE extends one tax parcel boundary depth, taking aerial crossings into consideration. However, in instances where parcels are very large, the APE boundary is reduced to reasonably reflect the undertaking's potential indirect effects. The APE at the western half of CCT Service via Universities at Shady Grove is narrower because the alignment would be entirely within the existing roadway alignment in that area. The APE includes undeveloped former agricultural fields near the Watkins Mill Town Center development, and the Ward House/Belward Farm and England/Crown Farm properties. While developed with buildings and structures, the Montgomery County Police/Fire Training Facility also consists of large open areas. Therefore, the historic architectural APE at these four properties is wider and is often the same as the property boundaries.

ATTACHMENT G:
Potential Historic Properties

Corridor Cities Transitway (Section 106)
Attachment G
Potential Historic Properties

Previously Identified Resources in the APE

Research material from the MHT Library (March 19, 2013 visit) and information from previous Section 106 documents, namely those for the I-270/US 15 Multi-Modal Corridor Study, were used to identify previously documented resources and any data concerning possible historic properties not yet identified within the APE (36 CFR Part 800.4(a)(2)). Three NRHP-eligible resources were identified within the APE: 1) *Metropolitan Branch, Baltimore and Ohio (B&O) Railroad* (M:37-16), 2) *Ward House/Belward Farm* (M:20-21), and 3) *England/Crown Farm* (M:20-17) (see Attachment B; Attachment D, Table 1). Field visits verified the existence, and current condition and integrity levels of these architectural resources.

Changes have occurred at the two farm properties since the original NRHP evaluations. The historic property boundary for Ward House/Belward Farm was revised from 124 acres to 107 acres due to property development by its current owner, Johns Hopkins University. MHT concurred with the new boundary on June 26, 2008. A tenant house, and its associated pumphouse, garage, shed and enclosed pen (all located on the east side of the Ward House/Belward Farm property), and some fencing north of the main farm complex, are within the project LOD. According to USGS topographic maps, the tenant house was constructed sometime between 1928 and 1944; it is located along the path of the proposed CCT alignment.

England/Crown Farm has been modified by private mixed-use development. During a site visit in late 2013, buildings were being built in former farm fields northwest of Decoverly Drive. While the southeast portion of the property is planned for later stages of development, this area was bordered by new fencing, and had a large fill pile and an excavation site for the development's communal building. Due to permitting requirements, the U.S. Army Corps of Engineers coordinated with MHT for this mixed-use project. This included a submittal of farmhouse and log house rehabilitation plans to MHT for certification that they conform to The Secretary of the Interior's Standards for the Treatment of Historic Properties. These were approved by MHT on August 22, 2012. During the site visit, the main farm house and the log house were being rehabilitated, to be sold and used for single-family residential use. A fire on May 29, 2011, destroyed the dairy barn, the hay barn, the milkhouse, the small barn, the feed chute/cow holding structure, and a shed. A lawn has been planted in their place. Because of these alterations, we will develop an addendum to the property's Determination of Eligibility form to reevaluate the property for the NRHP, and if eligible, revise the boundary.

A number of previously recorded archeological sites have been identified within the APE and just outside of it (see Attachment D, Table 2). As noted in Table 2, nine previously recorded archeological sites have not yet been evaluated for the NRHP, and seven have been determined not eligible.

The proposed archeological APE is based on the LOD where potential direct effects are anticipated to occur (**Attachment C**).

The APE may be revised as the alignment is refined or design of the undertaking advances.

Corridor Cities Transitway (Section 106)
Attachment G
Potential Historic Properties

Potential Historic Properties Identification

Properties greater than 45 years old, and not previously listed in or evaluated for the NRHP, were identified within the APE. The Secretary of the Interior guidelines for NRHP evaluation is for buildings, structures, objects, sites, or features 50 years of age or older. However, consistent with common cultural resource management practices, the age limit was lowered for this undertaking to include resources 45 years or older to account for lead-time between the preparation of environmental documentation and actual project construction.

Four properties were identified within the historic architectural APE. All are in Gaithersburg: 1) State Highway Administration (SHA) Maintenance Facility – Gaithersburg Shop, 2) National Institute of Standards and Technology (NIST) Headquarters (originally National Bureau of Standards), 3) a former single-family residence at 895 Quince Orchard Road, and 4) a single-family residence at 899 Quince Orchard Road (see Attachment D, Table 3). Build years were obtained from the Real Property database of the Maryland Department of Assessment & Taxation website, and by studying aerials and topographic maps at www.historicaerials.com. The properties are marked on the map in Attachment B and there are photographs and bird's eye views in Attachment E. Determination of Eligibility Forms are recommended for the SHA Maintenance Facility and NIST Headquarters, and a Short Forms for Ineligible Resources for each of the two residences.

A Phase I study is being conducted to identify archeological resources.

ATTACHMENT H:
Identified Consulting Parties

Corridor Cities Transitway (Section 106)
Attachment H
Identified Consulting Parties

Identified Consulting Parties

We have identified the following organizations and agencies to be additional consulting parties for this undertaking. Many were consulting parties during the I-270/US 15 Multi-Modal Corridor Study:

Identified Consulting Parties	
Agency/Organization	*Contact*
City of Gaithersburg	Mr. Matthew T. Bowling, Planner
City of Rockville	Ms. Robin Ziek, Preservation Planner
Gaithersburg-North Potomac-Rockville Coalition	Ms. Donna Baron, Coordinator
Gaithersburg Historical Association	Ms. Judy Christensen
Heritage Tourism Alliance of Montgomery County	Ms. Sarah L. Rogers, Executive Director
Johns Hopkins Real Estate	Mr. David M. McDonough, Senior Director
The Maryland-National Capital Park and Planning Commission (M-NCPPC)	Mr. Scott Whipple, Supervisor of Historic Preservation Section
Montgomery County Historical Society	Mr. Thomas Kuehhas, Executive Director
Montgomery Preservation, Inc.	Ms. Judith Christensen, Director
National Institute of Standards and Technology	Ms. Susan P. Cantilli, AIA, Planning and Space Management Group Leader
Peerless Rockville	Ms. Eileen McGuckian, Interim Executive Director
Preservation Maryland	Mr. Tyler Gearhart, Executive Director

FTA would like MHT's concurrence that these consulting parties may be appropriately invited to participate in the Section 106 process (36 CFR Part 800.3(f)).

MDP Sustain Attain
Maryland Department of Planning
Maryland Historical Trust

June 10, 2014

Brigid Hynes-Cherin
Regional Administrator
Federal Transit Administration, Region III
1760 Market St., Suite 500
Philadelphia, PA 19103-4124

Re: Corridor-Cities Transitway (CCT) Bus Rapid Transit Project
Montgomery County, Maryland
Initiation of Section 106 Consultation

Dear Ms. Hynes-Cherin:

Thank you for your recent letter, dated and received by the Maryland Historical Trust (Trust) on April 18, 2014, regarding the above-referenced project.

Your submittal formally initiated consultation with the Trust, Maryland's State Historic Preservation Office, pursuant to Section 106 of the National Historic Preservation Act, for this federally assisted undertaking. Trust staff appreciated the opportunity to meet with staff from the Federal Transit Administration (FTA), Maryland Transit Administration (MTA), and project consultants on May 12, 2014, to discuss the project's scope, schedule, and related historic preservation issues. Based on the discussions at our recent meeting, as well as our review of the submitted materials, we offer the following comments and concurrence.

Project Description: The project entails construction of an approximately nine-mile bus rapid transitway along the I-270 corridor extending between the Shady Grove Metrorail Station in Rockville, MD and the Metropolitan Grove MARC Station in Gaithersburg, MD. In addition to the exclusive transitway, the undertaking includes construction of related stations, parking lots, transit amenities, and an operations and maintenance facility. While the proposed transitway was originally part of the I-270/US 15 Multi-Modal Corridor Study, the current project has independent utility from the highway components and is proceeding as a standalone undertaking.

Area of Potential Effects: The Trust concurs with FTA/MTA's defined Area of Potential Effects (APE) for historic architectural and archeological resources, illustrated in Attachments B and C of FTA's submittal. We recognize that FTA/MTA may make further refinements to its APEs as planning proceeds - based on alignment changes, the addition of ancillary actions, or other modifications.

Identification and Evaluation of Historic Properties: The prior planning for the I-270/US 15 Multi-Modal Corridor Study generated useful information regarding known historic and archeological resources in the vicinity of the current undertaking. FTA/MTA reassessment of the APE identified four additional resources within the historic built environment that require evaluation for the National Register of Historic Places. The Trust agrees with the proposed survey treatment for these resources. We also agree that the England/Crown Farm (MIHP No. M: 20-17) warrants a reevaluation and boundary revision since the former agricultural property has recently undergone residential development. We understand that FTA/MTA has completed a Phase I archeological survey within those undisturbed sections of the APE likely to have a potential for the presence of archeological resources. We look forward to receiving a copy of the draft Phase I report for review and comment, when available.

Consulting Parties: We agree with the list of potential consulting parties for this undertaking, presented in Attachment H of FTA's submittal. As the Section 106 coordination and public outreach efforts progress, additional relevant parties may be identified and invited to participate in the consultation.

We look forward to ongoing consultation with FTA, MTA, and other involved parties to successfully complete the Section 106 consultation for this undertaking as project planning proceeds. If you have questions or need further assistance, please contact Tim Tamburrino (for historic structures) at tim.tamburrino@maryland.gov / 410-514-7637 or me (for archeology) at beth.cole@maryland.gov / 410-514-7631. Thank you for providing us this opportunity to comment.

Sincerely,

Beth Cole

Beth Cole
Administrator, Project Review and Compliance

BC/TJT/201401883
cc: Daniel Koenig (FTA DC)
Rick Kiegel (MTA)
John Newton (MTA)

MARYLAND TRANSIT ADMINISTRATION

MARYLAND DEPARTMENT OF TRANSPORTATION
Martin O'Malley, Governor • Anthony G. Brown, Lt. Governor
James T. Smith, Jr., Secretary • Robert L. Smith, Administrator

June 12, 2014

Mr. Matthew T. Bowling, Planner
City of Gaithersburg
Planning and Code Administration
Historic Preservation Advisory Committee
31 S. Summit Avenue
Gaithersburg, MD 20877

Re: Section 106 Consulting Party Invitation
Corridor Cities Transitway Bus Rapid Transit Project
Cities of Gaithersburg and Rockville, Montgomery County, Maryland

Dear Mr. Bowling:

The Maryland Transit Administration (MTA), in coordination with the Federal Transit Administration (FTA) as the lead Federal agency, is inviting your agency to participate as a consulting party in the Section 106 process for the Corridor Cities Transitway (CCT) Bus Rapid Transit project. This approximately nine-mile bus rapid transitway project would extend between the Shady Grove Metrorail Station in Rockville, Maryland, and the Metropolitan Grove MARC Station in Gaithersburg, Maryland (see **Attachment**). FTA has initiated formal Section 106 consultation with the Maryland State Historic Preservation Office (MD SHPO) for this project, in accordance with Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800, and as such, your agency has been identified as a potential consulting party.

The CCT would travel entirely on an exclusive transitway with stations and amenities very similar to light rail, and would consist of two lanes that together are 28 feet in width. For the vast majority of the corridor, the alignment would run either adjacent to or in the median of the existing roadway. Enhanced bus stations would be specially designed for the CCT and include shelters, seating, fare machines, and both fixed and variable signage. Parking is planned for five of the stations, using existing lots and those associated with future private development. The project also includes an operations and maintenance facility located near the north end of the proposed transitway. The CCT would provide transit service to new and existing centers of commerce and residential development such as the Life Sciences Center and King Farm in Rockville along twelve stations. The project website is www.mta.maryland.gov/cct.

Historic properties potentially affected by the undertaking are being identified along the CCT corridor (36 CFR Part 800.4). Tasks include the identification and National Register of Historic Places evaluation of potential historic properties, and the completion of an archaeological assessment and field survey. An assessment of effects on historic properties will be made to determine the need for a Memorandum of Agreement to resolve any adverse effects (36 CFR Part 800.5).

As a representative of local government, the City of Gaithersburg can have a consultative role in the Section 106 process for this undertaking (36 CFR Part 800.2(c)(3)). Therefore, MTA, on behalf of FTA, is inviting your agency to participate as a consulting party in the Section 106 process (36 CFR Part

800.3(f)), and therefore receive CCT documents and correspondence associated with historic properties from FTA, MTA, and the MD SHPO.

To accept this invitation, you can contact me at the address on this letterhead or jnewton@mta.maryland.gov. Please provide your response within 30 days of receipt of this letter. In addition, please provide any changes to the following information we have for your agency:

Agency Name	City of Gaithersburg
Contact Name	Mr. Matthew T. Bowling, Planner
Mailing Address	Planning and Code Administration Historic Preservation Advisory Committee 31 S. Summit Avenue Gaithersburg, MD 20877
Phone	(301) 258-6330
e-mail	mbowling@gaithersburgmd.gov

Please contact Dan Reagle on my staff at 410.767.3769 or DReagle1@mta.maryland.gov, if you have questions or comments about the project or your potential role as a consulting party.

Sincerely,

John Newton, Manager
Environmental Planning Division

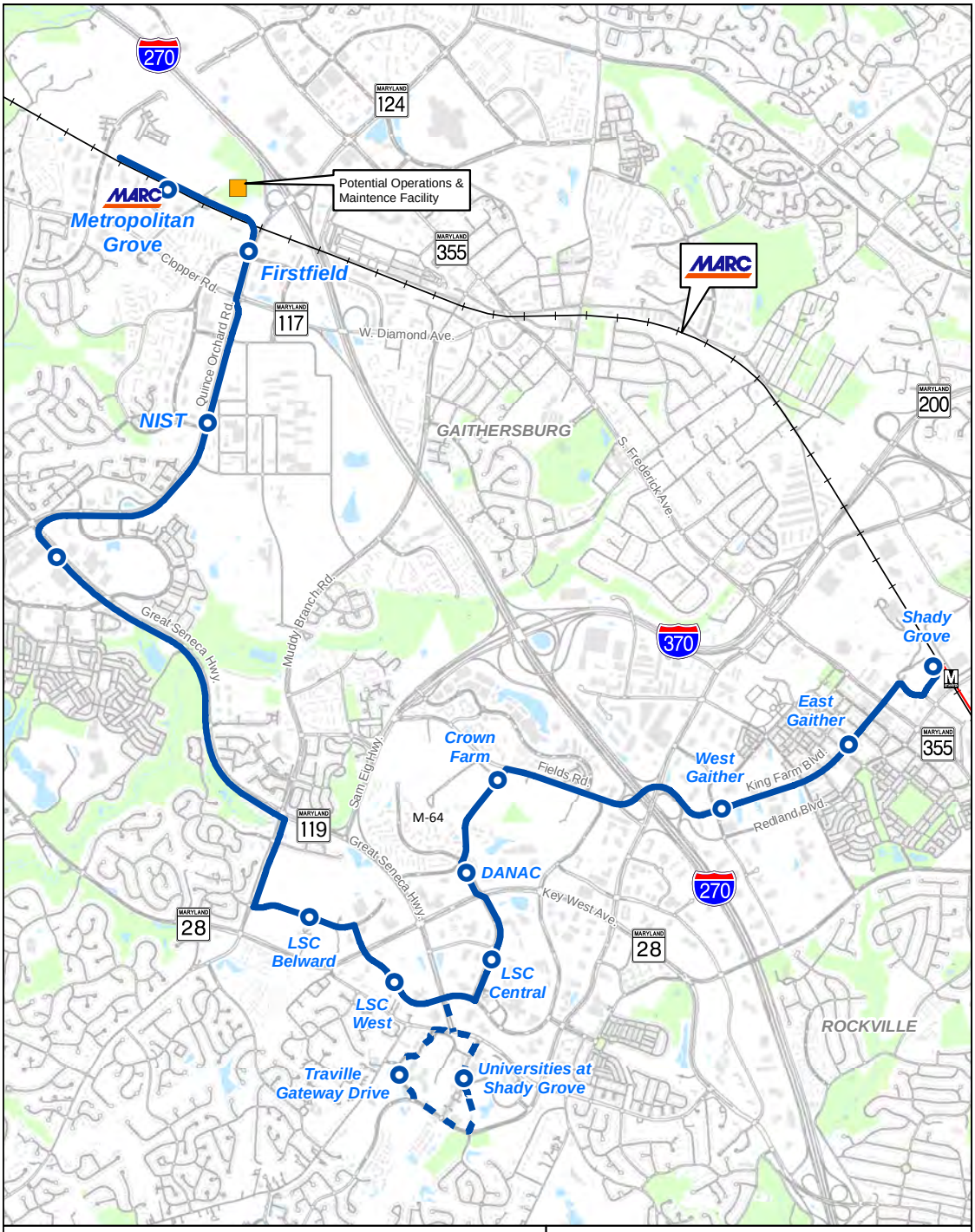
Attachment: Location Map

cc: Ms. Elizabeth Cole, Maryland Historical Trust
Mr. Rick Kiegel, Maryland Transit Administration
Mr. Dan Koenig, Federal Transit Administration
Mr. Dan Reagle, Maryland Transit Administration
Ms. Christeen Taniguchi, RK&K, LLP

Section 106 Consulting Party Invitees

- City of Gaithersburg
- City of Rockville
- Gaithersburg-North Potomac-Rockville Coalition
- Gaithersburg Historical Association
- Heritage Tourism Alliance of Montgomery County
- Johns Hopkins Real Estate
- The Maryland-National Capital Park and Planning Commission (M-NCPPC)
- Montgomery County Historical Society
- Montgomery Preservation, Inc.
- National Institute of Standards and Technology
- Peerless Rockville
- Preservation Maryland

ATTACHMENT:
Location Map



Legend

- Transitway (CCT Direct Service)
- CCT Service via Universities at Shady Grove
- Station Locations

0 0.25 0.5 1 Miles

Corridor Cities Transitway

Project Overview

MTA Maryland

Corridor Cities Transitway

UNITED STATES DEPARTMENT OF COMMERCE
National Institute of Standards and Technology
Gaithersburg, Maryland 20899-

Copy

December 11, 2014

Mr. J. Rodney Little
State Historic Preservation Officer
Maryland Historical Trust
100 Community Place
Crownsville, MD 21032-2023

RE: Identification and Evaluation of Historic Architectural Properties Technical Report
Corridor Cities Transitway Bus Rapid Transit Project
Cities of Gaithersburg and Rockville, Montgomery County, Maryland

Attention: Ms. Elizabeth Cole, MHT
Mr. Jonathan Sager, MHT

Dear Mr. Little:

The Federal Transit Administration (FTA), in coordination with the Maryland Transit Administration (MTA), recently submitted *the Identification and Evaluation of Historic Properties Technical Report for the Corridor Cities Transitway (CCT) Bus Rapid Transit project in Montgomery County* to the Maryland Historical Trust (MHT) for review and comment in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA). The Area of Potential Effects (APE) of the proposed undertaking includes a portion of the National Institute of Standards and Technology (NIST) campus in Gaithersburg and NIST is a consulting party to the Section 106 compliance process.

The documentation and assessment of the NIST campus was completed to support the FTA's identification of historic properties within the APE defined for the undertaking and is not a holistic investigation of the significance and integrity of the campus as a whole, or of its individual elements. While the FTA investigation recommended a historic district encompassing the 579-acre campus, in its entirety, documentation and analysis in the Determination of Eligibility (DOE) form is limited to seven (7) contributing and fourteen (14) non-contributing resources within the project APE. As stewards of the federal property, NIST is concerned over the depth of the documentation to support a determination of eligibility for the entire campus. Elizabeth Patel, FTA Environmental Protection Specialist, was advised that NIST does not support the analysis or conclusions in the draft NIST DOE related to the historic district in a September 23, 2014 email.

NIST requests that MHT delay any decision on a determination of eligibility for the NIST campus until we complete a comprehensive architectural investigation. As recently discussed with Jonathan Sager, MHT Preservation Officer, a NIST evaluation of the campus in accordance

NIST

with Section 110 of NHPA is underway and is scheduled for a summer 2015 completion. This investigation includes the development of the historic contexts appropriate to the evaluation of the property and its components applying the National Register Criteria for Evaluation (36 CFR 60 [a-d]). Boundaries for any historic property identified will be defined to encompass the full extent of significant resources that retain their integrity. The results of these investigations will be presented in a detailed technical report with accompanying Maryland Inventory of Historic Places (MIHP) and DOE forms.

We look forward to continued participation as a consulting party in the Section 106 process for the CCT.

Sincerely,

Stephen Salber
Chief Facilities Management Officer
Office of Facilities and Property Management

cc: Ms. Elizabeth Patel (FTA)
Mr. Dan Reagle, MTA
Ms. Virginia Holtzman-Bell, NIST
Mr. Clyde Messerly, NIST
Ms. Susan Cantilli, NIST

Maryland Department of Planning
Maryland Historical Trust

Sustainable Attainable

January 12, 2015

Reginald B. Lovelace
Deputy Regional Administrator
Federal Transit Administration, Region III
1760 Market St., Suite 500
Philadelphia, PA 19103-4124

Re: Corridor-Cities Transitway (CCT) Bus Rapid Transit Project
Montgomery County, Maryland
Section 106 Consultation – Identification and Evaluation of Historic Properties

Dear Mr. Lovelace:

Thank you for your recent letters, dated October 23, 2014 and received by the Maryland Historical Trust (Trust) on October 29, 2014, regarding the above-referenced project.

Your submittals provided the Trust with the results of FTA/MTA's efforts to identify and evaluate historic properties within the project's area of potential effects (APE), for review and concurrence. The Trust, Maryland's State Historic Preservation Office, reviewed the information pursuant to Section 106 of the National Historic Preservation Act. Based on careful consideration of the submitted documentation, we offer the comments and concurrence presented below and in the attachment to this letter.

Archeology: Trust staff reviewed the following draft report, prepared by RK&K: *Corridor Cities Transitway, Phase I Archeological Survey Technical Report, Montgomery County, Maryland* (Emory and Ross 2014). The report presents documentation on the goals, methods, results, and recommendations of Phase I archeological survey conducted within the project area. The archeological investigations and resulting report meet the specifications of the Trust's *Standards and Guidelines for Archeological Investigations in Maryland* (Shaffer and Cole 1994). Attachment 1 lists our specific comments on the draft report itself. We ask FTA/MTA to have the consultant address these issues in the preparation of the final document. We await receipt of two copies of the final report, along with an electronic copy of the report in PDF format on disk, for our library.

The Phase I survey identified six new archeological sites within and immediately adjacent to the study area. Site 18MO270 (CT M-4 site) represents the remains of outbuildings and resources associated with the late 19th – late 20th c. Warfield farmstead. Testing identified the remains of foundations to two small outbuildings, landscape features, and a low density artifact scatter. The survey also revealed disturbances from demolition, grading and filling actions, and subsequent refuse disposal. Site18MO722 (M-10 OMF site) consists of a low density of prehistoric lithics recovered from plowzone contexts. The site likely represents a short term camp used for lithic reduction and tool maintenance. Site 18MO723 (M-16 NIST site) consists of a scatter of late 19th – 20th c. domestic and architectural artifacts associated with refuse disposal from structures outside the APE and a single prehistoric flake. Site 18MO725 (M-50 Belward Farm Tenant site) encompasses a scatter of late 19th – mid 20th c. domestic, architectural and personal artifacts associated with two former tenant houses on the Belward Farm complex (M: 20-21). Testing also recovered a light scatter of prehistoric lithic artifacts from the plowzone suggesting short term use of the site for too manufacture/maintenance. The survey did not identify any intact features or cultural deposits with the potential to yield substantive information at these four sites. Various disturbances have also impacted the sites' integrity. Based on the study results, we concur with FTA/MTA that the following four sites do not meet the criteria for eligibility in the National Register of Historic Places given their lack of

integrity and inability to provide important information: 18MO720, 18MO722, 18MO723, 18MO725. Further consideration of these four sites is not warranted for this project.

Sites 18MO721 (M-6 Metropolitan Grove site) and 18MO724 (M-41 Rock Shelter site) are both located outside the current APE. Further investigation of these sites is not presently warranted and the sites' eligibility for the National Register remains unevaluated at this time. FTA/MTA may need to include site protection measures as part of its future construction contracts to ensure that the resources are not inadvertently damaged by project related activities and equipment.

Finally, FTA/MTA was not able to complete the survey efforts within a few small portions of the APE, (sections of M-10, M-17 and M-18) due to access denial issues. As noted in Attachment 1, FTA/MTA should determine whether or not field investigations are still warranted for those parcels, based on the results of the background research and testing within the other portions of the study area. We await ongoing consultation with FTA/MTA during project planning to address any additional identification efforts, if needed.

Historic Built Environment: Trust staff reviewed the following report prepared for FTA/MTA by RK&K, LLP: *Corridor Cities Transitway Identification and Evaluation of Historic Architectural Properties Technical Report* (RK&K 2014). The report and associated survey documentation are intended to update previous studies of the project area. New documentation was provided for six properties within the project's APE. Two existing National Register-eligible properties were revisited while four new resources were assessed for National Register eligibility. Our comments regarding the eligibility of historic properties for listing in the National Register are provided below.

Ward House / Belward Farm (MIHP No. M: 20-21): Updated information for this National Register-eligible property was provided on an Addendum Sheet. The Trust agrees that the property remains eligible for listing in the National Register of Historic Places with the historic boundary delineated in 2008. We also agree with FTA/MTA's assessment of contributing and non-contributing resources on the historic property.

England-Crown Farm (MIHP No. M: 20-17): Since the previous investigation of this historic resource property in 1996, the property has undergone several alterations including a fire and the transformation of the farm into a mixed-used development. The farmhouse and several outbuildings have been restored but the overall acreage of the property has been substantially reduced. The Trust agrees that the property remains eligible for listing in the National Register of Historic Places under Criterion C. It is the Trust's opinion that the historic boundary for the property be reduced in size from 47 acres to only include the tax parcel associated with 605 Steinbeck Avenue, its current street address.

National Institute of Standards and Technology (MIHP No. M: 20-47): The Trust agrees with FTA/MTA that this property is eligible for listing in the National Register of Historic Places under Criteria A and C. We also understand that the U.S. Department of Commerce is currently undertaking a separate identification and evaluation effort of the NIST property in accordance with Section 110(a)(2)(A). We look forward to receiving that documentation from the Department of Commerce and we will take the new information into consideration during future planning and decision-making efforts. In the meantime, we have accepted the results and conclusions presented in FTA/MTA's survey documentation.

SHA Gaithersburg Maintenance Facility (MIHP No. M: 21-263): The Trust agrees that this property is not eligible for listing in the National Register of Historic Places.

895 Quince Orchard Road, Gaithersburg, MD: The Trust agrees that this property is not eligible for listing in the National Register of Historic Places.

899 Quince Orchard Road, Gaithersburg, MD: The Trust agrees that this property is not eligible for listing in the National Register of Historic Places.

We look forward to ongoing consultation with FTA, MTA, and other involved parties to successfully complete the Section 106 consultation for this undertaking as project planning proceeds. If you have questions or need further assistance, please contact Beth Cole (for archeology) at beth.cole@maryland.gov / 410-514-7631 or Tim Tamburrino (for historic structures) at tim.tamburrino@maryland.gov / 410-514-7637. Thank you for providing us this opportunity to comment.

Sincerely,

Elizabeth Hughes
Acting Director/State Historic Preservation Officer

EH/BC/TJT/201405606
cc: Elizabeth Patel (FTA DC)
Rick Kiegel (MTA)
John Newton (MTA)
Julie Schablitsky (SHA)
Donna Baron (Gaithersburg-North Potomac-Rockville Coalition)
Susan P. Cantilli (NIST)
David M. McDonough (Johns Hopkins University)
Nancy Pickard (Peerless Rockville)
John Schlichting (City of Gaithersburg)
Scott Whipple (M-NCPPC)
Judith Christensen (MPI)
Nicholas Redding (Preservation Maryland)

ATTACHMENT 1
TRUST COMMENTS ON DRAFT PHASE I ARCHEOLOGY REPORT
CORRIDOR CITIES TRANSITWAY, MONTGOMERY COUNTY, MD

1. Add the location of archeological survey area M-17 to Figure 40.

2. Figure 46 should illustrate the limits of the parcels within archeological survey area M-10 where access was denied.

3. Figure 48 should label Areas 1, 2 and 3 within archeological survey area M-16.

4. Chapter V – Results of the Survey and Analysis should add brief sections for archeological survey areas M-17 and M-18 and note that no field work was done in these areas due to access denial. While no field work occurred in these areas, the report should discuss whether or not archeological investigations are still warranted, based on the results of the background research and testing within the other portions of the study area.

5. Add and label the site boundaries for 18MO725 on Figure 54.

6. The figure titles for the photographs, including artifact and site photos, should include the relevant archeological site number.

7. Chapter VI - Conclusions and Recommendations should address whether or not further archeological field investigations are warranted for those parcels where access was denied (sections of M-10, M-17 and M-18), based on the results of the background research and testing within the other portions of the study area. If testing is still recommended, the chapter should include a figure illustrating those parcels that need further investigation. In addition, the chapter should acknowledge that additional Phase I archeological investigations may be needed of additional areas identified for project alignment modifications, ancillary actions, or environmental mitigation. FTA/MTA will continue to consult with the Trust during project planning and address any additional identification, where needed.

8. The Artifact Catalog (Appendix D) should insert a line break or bold section break to differentiate between the various site numbers listed in the catalog. The table is difficult to read in its current format.

9. Add an appendix that contains a copy of the ARPA permit, or other form of access approval, for the archeological investigations conducted on the federal property owned by NIST.

10. Please provide two copies of the final report, along with an electronic copy of the report in PDF format on disk, for our library.

U.S. Department of Transportation
Federal Transit Administration

REGION III
Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, West Virginia

1760 Market Street
Suite 500
Philadelphia, PA 19103-4124
215-656-7100
215-656-7260 (fax)

April 14, 2016

Mr. David McDonough
Johns Hopkins Facilities and Real Estate
3910 Keswick Road, N3100
Baltimore, Maryland 21211

Re: Corridor Cities Transitway Project – Section 106 Effects Assessment

Dear Mr. McDonough:

Thank you for your February 26, 2016 letter regarding the Corridor Cities Transitway (CCT) project. FTA appreciates your participation in the Section 106 consultation process for this project and your review of FTA's eligibility determination and assessment of effects pursuant to Section 106 of the National Historic Preservation Act. After review of your comments from your February 26, 2016 letter, FTA maintains its previous National Register of Historic Places eligibility and effects determination with respect to the Ward House/Belward Farm property from our January 27, 2016 letter.

If you have any questions, please contact Mr. Daniel Koenig, Environmental Protection Specialist, at (202) 219-3528 or via email at daniel.koenig@dot.gov.

Sincerely,

Terry Garcia Crews
Regional Administrator

cc: Beth Cole, MHT
Jean Wolfers-Lawrence, MTA

Maryland Department of Planning
Maryland Historical Trust

March 8, 2016

Terry Garcia Crews
Regional Administrator
Federal Transit Administration, Region III
1760 Market St., Suite 500
Philadelphia, PA 19103-4124

Re: Corridor-Cities Transitway (CCT) Bus Rapid Transit Project
Montgomery County, Maryland
Section 106 Effects Assessment and Section 4(f) Intent to Make De Minimis Finding

Dear Ms. Crews:

Thank you for providing the Maryland Historical Trust (Trust) with the Federal Transit Administration's (FTA) assessment of effects on historic properties for the Corridor-Cities Transitway (CCT) Bus Rapid Transit Project. FTA's submittal represents ongoing consultation to assess the project's effects on historic properties, pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended, and the Maryland Historical Trust Act of 1985, as amended, State Finance and Procurement Article §§ 5A-325 and 5A-326 of the Annotated Code of Maryland. We conducted a thorough review of the materials and we are writing to provide our comments and concurrence.

Area of Potential Effects: The Trust concurs with FRA's refined Area of Potential Effects (APE) for historic architectural and archeological resources, as described in your cover letter and illustrated in Figure 1 of the *Section 106 Effects Report*. The revised APE reflects changes in the project design to avoid the Ward House/Belward Farm (MIHP No. M: 20-21). The CCT bus will operate within the existing shared lanes on Muddy Branch Road and Darnestown Road, thus eliminating the potential for direct or indirect effects on the Belward Farm.

Assessment of Effects: The FTA conducted multiple studies along the proposed CCT corridor to locate significant archeological sites and historic standing structures. These efforts resulted in the identification of three historic properties that are eligible for listing in the National Register of Historic Places within the Area of Potential Effects (APE) for this undertaking. They include the Metropolitan Branch of the Baltimore & Ohio Railroad (MIHP No. M: 37-16), the England/Crown Farm (MIHP No. M: 20-17) and the National Institute of Standards and Technology (NIST) Headquarters (MIHP No. M: 20-47).

The Trust completed a thorough review of the information presented in the *Section 106 Finding of Effects Report* and the *Corridor Cities Transitway Phase I Archeological Survey Technical Report* (Emory and Ross 2014) and took into consideration the views of the public and the Section 106 Consulting Parties. Based upon the results of the FTA's studies and consultation, the Trust agrees with the FTA that the undertaking will have a **no adverse effect** on historic properties.

De Minimis Impact Determination: The Trust acknowledges the FTA's intent to seek a de minimis impact finding pursuant to Section 4(f) of the Department of Transportation Act of 1966 for the Metropolitan Branch of the Baltimore & Ohio Railroad and the NIST Headquarters.

If you have questions or need further assistance, please contact Beth Cole (for archeology) at beth.cole@maryland.gov / 410-514-7631 or Tim Tamburrino (for historic structures) at tim.tamburrino@maryland.gov / 410-514-7637. Thank you for providing us this opportunity to comment.

Sincerely,

Elizabeth Hughes
Director/State Historic Preservation Officer

EH/TJT/201600462
cc: Kathleen Zubrycki (FTA)
Elizabeth Patel (FTA)
Dan Koenig (FTA)
Rick Kiegel (MTA)
Kelly Lyles (MTA)
Donna Baron (Gaithersburg-North Potomac-Rockville Coalition)
Susan P. Cantilli (NIST)
David M. McDonough (Johns Hopkins University)
Nancy Pickard (Peerless Rockville)
John Schlichting (City of Gaithersburg)
Scott Whipple (M-NCPPC)
Judith Christensen (MPI)
Nicholas Redding (Preservation Maryland)

MTA Maryland

MARYLAND TRANSIT ADMINISTRATION

MARYLAND DEPARTMENT OF TRANSPORTATION
Martin O'Malley, Governor • Anthony G. Brown, Lt. Governor
James T. Smith, Jr., Secretary • Robert L. Smith, Administrator

January 8, 2014

Ms. Lori Byrne
Wildlife and Heritage Division
Department of Natural Resources
580 Taylor Avenue
Tawes State Office Building, E-1
Annapolis, Maryland 21401

Project: Corridor Cities Transitway

Subject: Request for Information on State Listed Rare, Threatened, and Endangered Species

Dear Ms. Byrne, Lori

The Maryland Transit Administration (MTA) is proposing the Corridor Cities Transitway (CCT) project in Montgomery County, MD. The project spans nine miles from the MARC Metropolitan Grove Station to the METRO Shady Grove Station. The CCT project will expand the roadway along much of the project alignment to create a designated travel lane for the CCT rapid transit bus. The project will also call for construction of 14 stations across the alignment.

We are requesting information regarding the potential presence of listed rare, threatened or endangered species within or near the project area. A project vicinity map is enclosed to aid your review (Attachment 1).

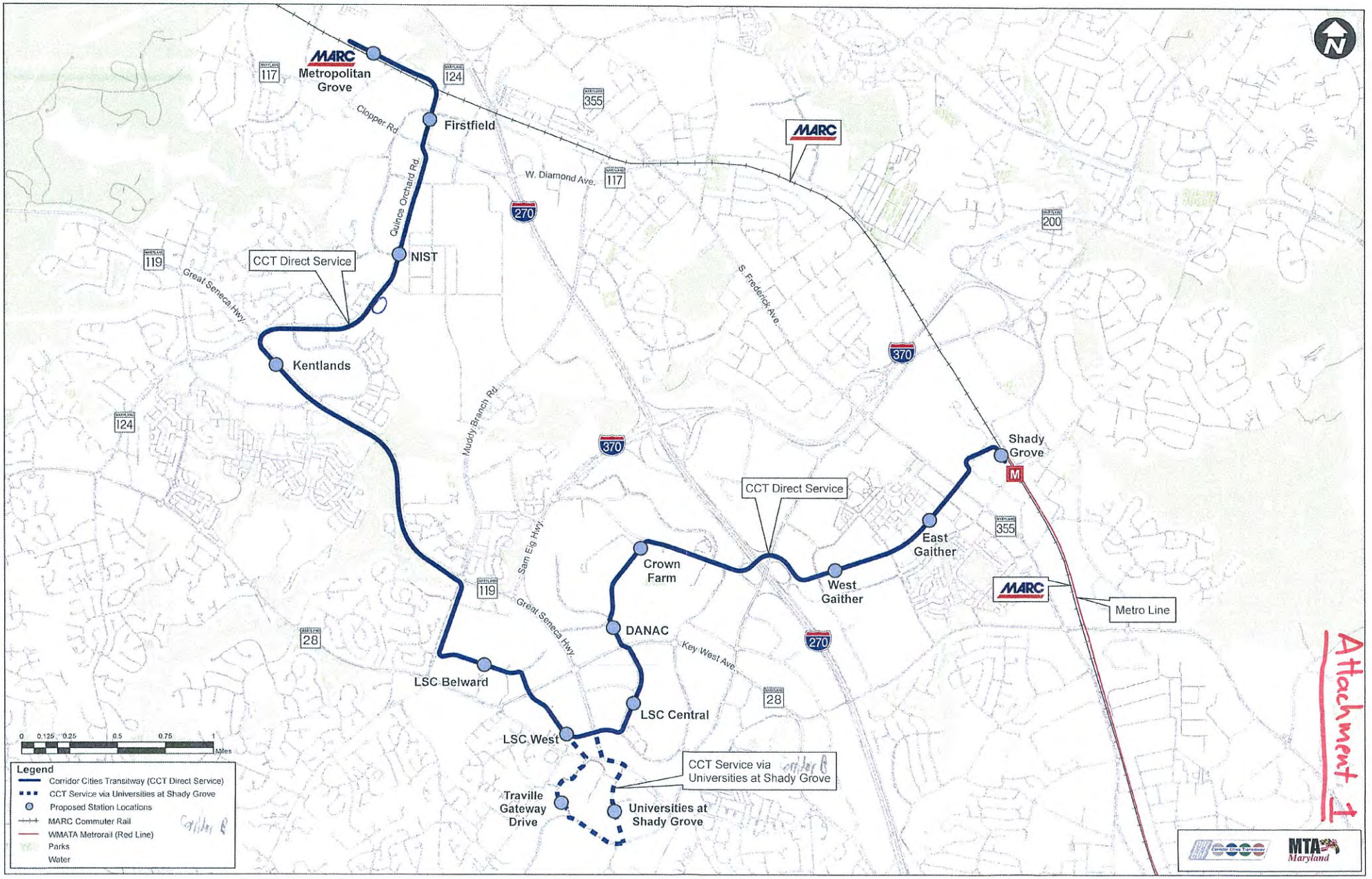
If you have any questions concerning this project, please contact me at JNewton@mta.maryland.gov or 410.767.3769. Thank you for your assistance.

Sincerely,

John Newton
Manager
Environmental Planning Division

Enclosure

cc: Eric Almquist, RK&K
Rick Kiegel, MTA
Erron Ramsey, RK&K



Attachment 1

Coordination Sheet for Maryland Department of Natural Resources, Environmental Review Unit information on fisheries resources, including anadromous fish, related to project locations and study areas

DATE OF REQUEST: **December 4, 2013**

PROJECT NAME AND LOCATION: **Corridor Cities Transitway (see enclosed Vicinity Map)**

NAME OF STREAM(S) (and MDE Use Classification) WITHIN THE STUDY AREA: Unnamed tributary to Watts Branch (Use I-P), 3 unnamed tributaries to Muddy Branch (between the headwaters and confluence with Rich Branch, Use I-P), Muddy Branch (section from headwaters to confluence with Rich Branch, Use I-P), unnamed tributary to Long Draught Branch (Use I-P), Long Draught Branch (confluent to Great Seneca Creek, Use I-P)

SUB-BASIN (6 digit watershed): 021402

DNR RESPONSE (sections below to be completed by MD DNR):

____Generally, no instream work is permitted in Use I streams during the period of March 1 through June 15, inclusive, during any year.

____Where presence of yellow perch has been documented in the vicinity of an instream project area, generally no instream work is permitted in Use I and Certain Use II waters during the period of February 15 through June 15, inclusive, during any year.

____Generally, no instream work is permitted in Use III streams during the period of October 1 through April 30, inclusive, during any year.

____Generally, no instream work is permitted in Use IV streams during the period of March 1 through May 31, inclusive, during any year.

____Other applicable site specific time of year restriction information:

ADDITIONAL FISHERIES RESOURCE NOTES:

ADDITIONAL COMMENTS ON BEST MANAGEMENT PRACTICES:

MD DNR, Environmental Review Unit signature

_____-

DATE: ----------
PHONE: 410-260-8334

U.S. Fish and Wildlife Service

Natural Resources of Concern

This resource list is to be used for planning purposes only — it is not an official species list.

Endangered Species Act species list information for your project is available online and listed below for the following FWS Field Offices:

CHESAPEAKE BAY ECOLOGICAL SERVICES FIELD OFFICE
177 ADMIRAL COCHRANE DRIVE
ANNAPOLIS, MD 21401
(410) 573-4500

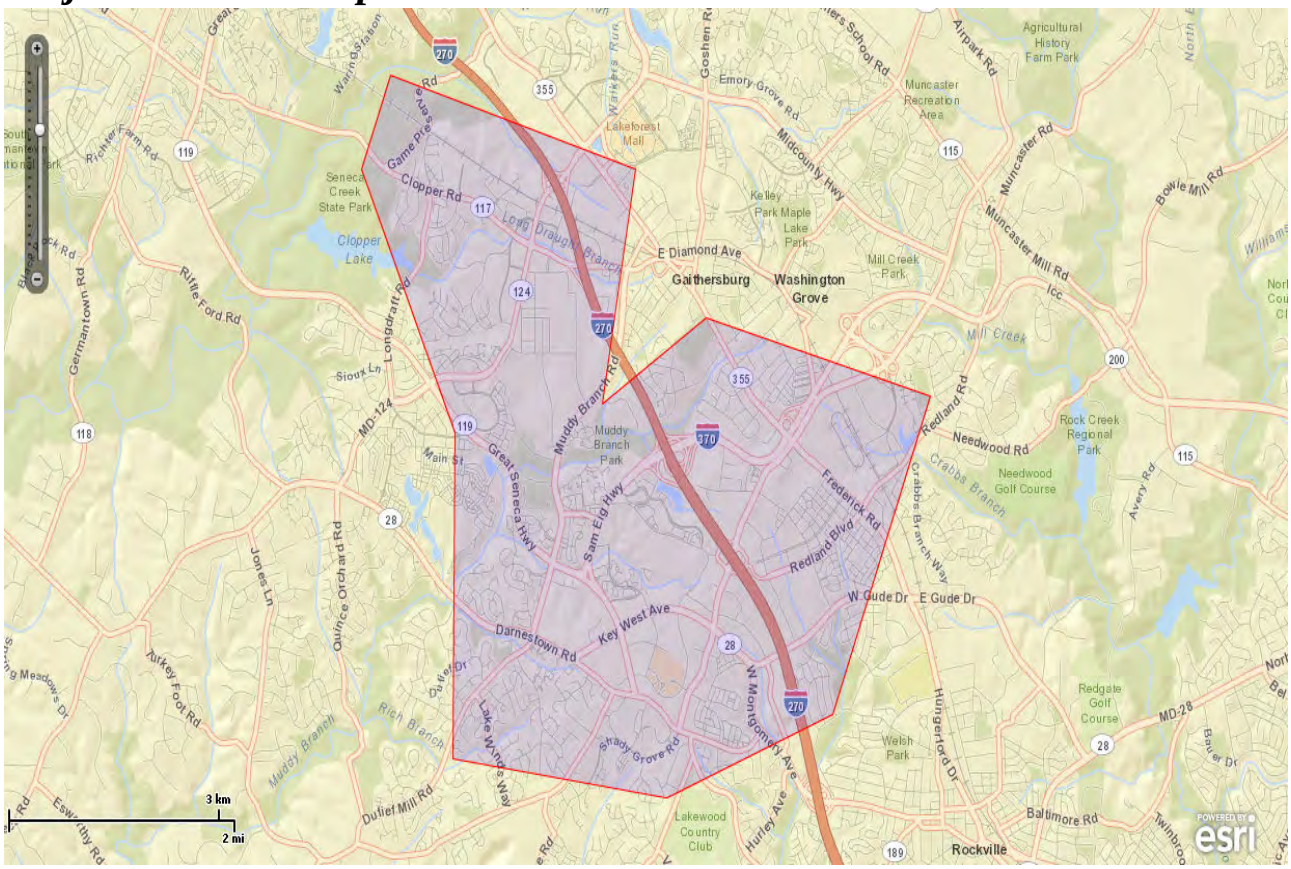
Project Name:

Corridor Cities Transitway

U.S. Fish and Wildlife Service

Natural Resources of Concern

Project Location Map:



Project Counties:

Montgomery, MD

Geographic coordinates (Open Geospatial Consortium Well-Known Text, NAD83):

MULTIPOLYGON (((-77.2488795 39.1502417, -77.244073 39.1598391, -77.2035609 39.150255, -77.2090541 39.1262889, -77.191888 39.1350774, -77.1548091 39.1270879, -77.1709453 39.0945879, -77.1984111 39.0860609, -77.2337733 39.0900447, -77.23343 39.1233592, -77.2488795 39.1502417)))

Project Type:

Transportation

U.S. Fish and Wildlife Service

Natural Resources of Concern

Endangered Species Act Species List (USFWS Endangered Species Program).

There are no listed species found within the vicinity of your project.

Critical habitats within your project area:

There are no critical habitats within your project area.

FWS National Wildlife Refuges (USFWS National Wildlife Refuges Program).

There are no refuges found within the vicinity of your project.

FWS Migratory Birds (USFWS Migratory Bird Program).

Most species of birds, including eagles and other raptors, are protected under the Migratory Bird Treaty Act (16 U.S.C. 703). Bald eagles and golden eagles receive additional protection under the Bald and Golden Eagle Protection Act (16 U.S.C. 668). The Service's Birds of Conservation Concern (2008) report identifies species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become listed under the Endangered Species Act as amended (16 U.S.C 1531 et seq.).

Migratory bird information is not available for your project location.

NWI Wetlands (USFWS National Wetlands Inventory).

The U.S. Fish and Wildlife Service is the principal Federal agency that provides information on the extent and status of wetlands in the U.S., via the National Wetlands Inventory Program (NWI). In addition to impacts to wetlands within your immediate project area, wetlands outside of your project area may need to be considered in any evaluation of project impacts, due to the hydrologic nature of wetlands (for example, project activities may affect local hydrology within, and outside of, your immediate project area). It may be helpful to refer to the USFWS National Wetland Inventory website. The designated FWS office can also assist you. Impacts to wetlands and other aquatic habitats from your project may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal Statutes. Project Proponents should discuss the relationship of these requirements to their project with the Regulatory Program of the appropriate

U.S. Fish and Wildlife Service

Natural Resources of Concern

U.S. Army Corps of Engineers District.

The following wetlands intersect your project area:

Wetland Types	NWI Classification Code	Approximate Acres
Freshwater Emergent Wetland	PEM1A	0.666152
Freshwater Forested/Shrub Wetland	PFO1A	2.316112
Freshwater Pond	PUBHh	1.560942
Freshwater Forested/Shrub Wetland	PFO1E	15.132668
Freshwater Emergent Wetland	PEM1A	2.479012
Freshwater Pond	PUBHh	0.85565
Freshwater Pond	PUBFx	0.980063
Freshwater Pond	PUBHh	1.894543
Freshwater Forested/Shrub Wetland	PFO/SS1E	0.923274
Freshwater Emergent Wetland	PEM5E	1.606411
Freshwater Pond	PUBHx	0.339117
Freshwater Forested/Shrub Wetland	PFO1A	5.000098
Freshwater Emergent Wetland	PEM1A	0.326624
Freshwater Forested/Shrub Wetland	PFO1A	19.484102
Freshwater Pond	PUBHh	0.182435
Freshwater Emergent Wetland	PEM1A	1.967328
Freshwater Pond	PUBHh	0.202728
Freshwater Pond	PUBHh	1.153446
Freshwater Forested/Shrub Wetland	PFO1A	5.619907
Freshwater Emergent Wetland	PEM5A	1.812367
Freshwater Forested/Shrub Wetland	PFO1A	1.191296
Freshwater Forested/Shrub Wetland	PSS1A	0.909008
Freshwater Forested/Shrub Wetland	PSS1A	1.323316
Freshwater Forested/Shrub Wetland	PFO1A	9.559569
Freshwater Forested/Shrub Wetland	PFO1A	7.259691
Freshwater Emergent Wetland	PEM1A	9.25329
Freshwater Pond	PUBFx	0.461493
Freshwater Pond	PUBHh	0.229678
Freshwater Pond	PUBHh	1.207757
Freshwater Pond	PUBHh	0.520271
Freshwater Pond	PUBHx	6.570629

Natural Resources of Concern

Freshwater Pond	PUBHx	1.407843
Freshwater Pond	PUBHh	1.442099
Freshwater Emergent Wetland	PEM5A	2.724424
Freshwater Emergent Wetland	PEM5EH	2.078704
Freshwater Forested/Shrub Wetland	PSS1A	0.460608
Freshwater Pond	PUBHh	1.574139
Freshwater Emergent Wetland	PEM1Eh	0.75254
Freshwater Pond	PUBHh	4.075595
Freshwater Forested/Shrub Wetland	PFO/SS1A	3.194732
Freshwater Emergent Wetland	PEM1A	0.636221
Freshwater Pond	PUBHx	0.840158
Freshwater Pond	PUBHh	0.362032
Freshwater Forested/Shrub Wetland	PFO1A	0.722557
Freshwater Pond	PUBHh	0.401485
Freshwater Pond	PUBHh	0.376842
Freshwater Pond	PUBHh	5.798001
Freshwater Forested/Shrub Wetland	PFO/SS1A	2.558844
Freshwater Pond	PUBHh	0.786013
Freshwater Emergent Wetland	PEM5A	0.534863
Freshwater Forested/Shrub Wetland	PFO1C	1.022742
Freshwater Emergent Wetland	PEM1A	2.887002
Freshwater Emergent Wetland	PEM1A	2.450097
Freshwater Forested/Shrub Wetland	PSS1/EM1Cx	1.622535
Freshwater Forested/Shrub Wetland	PFO1A	5.730317
Freshwater Pond	PUBHh	0.490199
Freshwater Pond	PUBHh	0.607035
Freshwater Forested/Shrub Wetland	PFO1A	3.49625
Freshwater Forested/Shrub Wetland	PFO1A	0.640373
Freshwater Pond	PUBHh	3.389435
Freshwater Pond	PUBHh	8.403631
Freshwater Forested/Shrub Wetland	PFO1A	3.629262
Freshwater Forested/Shrub Wetland	PSS1/EM1A	6.325264
Freshwater Pond	PUBHx	1.732226
Freshwater Forested/Shrub Wetland	PFO1A	1.517958
Freshwater Forested/Shrub Wetland	PFO1A	0.522834
Freshwater Forested/Shrub Wetland	PFO1/SS1A	3.115679

Natural Resources of Concern

Freshwater Forested/Shrub Wetland	PSS1A	2.620375
Freshwater Forested/Shrub Wetland	PFO1A	4.753885
Freshwater Pond	PUBHh	4.194381
Freshwater Forested/Shrub Wetland	PFO1A	7.900111
Freshwater Pond	PUBHh	0.471956
Freshwater Emergent Wetland	PEM1Fh	0.53153
Freshwater Emergent Wetland	PEM1Fx	0.725472
Freshwater Emergent Wetland	PEM5A	2.386348
Freshwater Forested/Shrub Wetland	PFO1A	1.980031
Lake	L1UBHh	86.242925
Lake	L1UBHh	0.922917
Freshwater Forested/Shrub Wetland	PSS1/EM1A	2.676354
Freshwater Forested/Shrub Wetland	PFO1A	0.816048
Freshwater Pond	PUBHh	0.228477
Freshwater Emergent Wetland	PEM1A	0.209565
Freshwater Pond	PUBHx	0.344828
Freshwater Emergent Wetland	PEM1Eh	0.570048

MARYLAND
DEPARTMENT OF
NATURAL RESOURCES

Martin O'Malley, Governor
Anthony G. Brown, Lt. Governor
Joseph P. Gill, Secretary
Frank W. Dawson III, Deputy Secretary

February 7, 2014

Mr. John Newton
Maryland Transit Administration
6 St. Paul Street
Baltimore, MD 21202-1614

RE: Environmental Review for Proposed Lane for CCT Rapid Transit Bus from MARC Metropolitan Grove Station to METRO Shady Grove Station, Plus 14 Stations, Montgomery County, Maryland.

Dear Mr. Newton:

The Wildlife and Heritage Service has determined that there is a portion of this project route that has potential concerns for rare, threatened or endangered species concerns, located near Traville Gateway Drive. There is a record for state-listed endangered Potato Dandelion (*Krigia dandelion*), known to occur within close proximity to the portion of the proposed track and station here. This species could potentially occur on the project site itself, in areas of appropriate habitat. Habitat for the Potato Dandelion is described as open-canopy forest, both moist and dry, with serpentine soils.

Thank you for allowing us the opportunity to review this project. If you should have any further questions regarding this information, please contact me at (410) 260-8573.

Sincerely,

Lori A. Byrne

Lori A. Byrne,
Environmental Review Coordinator
Wildlife and Heritage Service
MD Dept. of Natural Resources

ER# 2014.0067.mo
Cc: D. Brinker, DNR

MARYLAND TRANSIT ADMINISTRATION
MARYLAND DEPARTMENT OF TRANSPORTATION
Martin O'Malley, Governor • Anthony G. Brown, Lt. Governor
James T. Smith, Jr., Secretary • Robert L. Smith, Administrator

April 14, 2014

Ms. Lori Byrne
Wildlife and Heritage Division
Department of Natural Resources
580 Taylor Avenue, Tawes State Office Building, E-1
Annapolis, Maryland 21401

RE: Corridor Cities Transitway
Limits of Disturbance and the Endangered Potato Dandelion (*Krigia dandelion)*

Dear Ms. Byrne,

The Maryland Transit Administration (MTA) is in the planning stage for the Corridor Cities Transitway (CCT) project in Montgomery County, Maryland. In your Environmental Review letter for this project dated February 7, 2014, you notified the MTA that there is record for the state-listed endangered potato dandelion (*Krigia dandelion*) within close proximity to the proposed CCT alignment and station at Traville Gateway Drive.

The habitat for potato dandelion, according to Brown and Brown's Herbaceous Plants of Maryland (1964), is "fields and edges of wooded areas," and its habitat according to MDNR is "open canopy forest, both moist and dry with serpentine soils." The proposed CCT limit of disturbance (LOD) would not impact fields, edges of woods, or open canopy forest and the soils within the LOD in this location (as per the GIS NRCS soil classification) are Glenelg silt loam, not a serpentine soil. It is possible that your letter was referencing the nearby edge of woods along Traville Gateway Drive. Note, however, that our LOD is located wholly within existing pavement along Traville Gateway Drive, with the exception of the potential station location shown on the attached map. All impacts would be contained within landscaped areas adjacent to existing roadways, and therefore would not impact the potato dandelion habitat.

We hope that this additional information will remove any concern about this project potentially impacting the potato dandelion. If you have any questions concerning this project, please contact me at DReagle1@mta.maryland.gov or 410.767.3771.

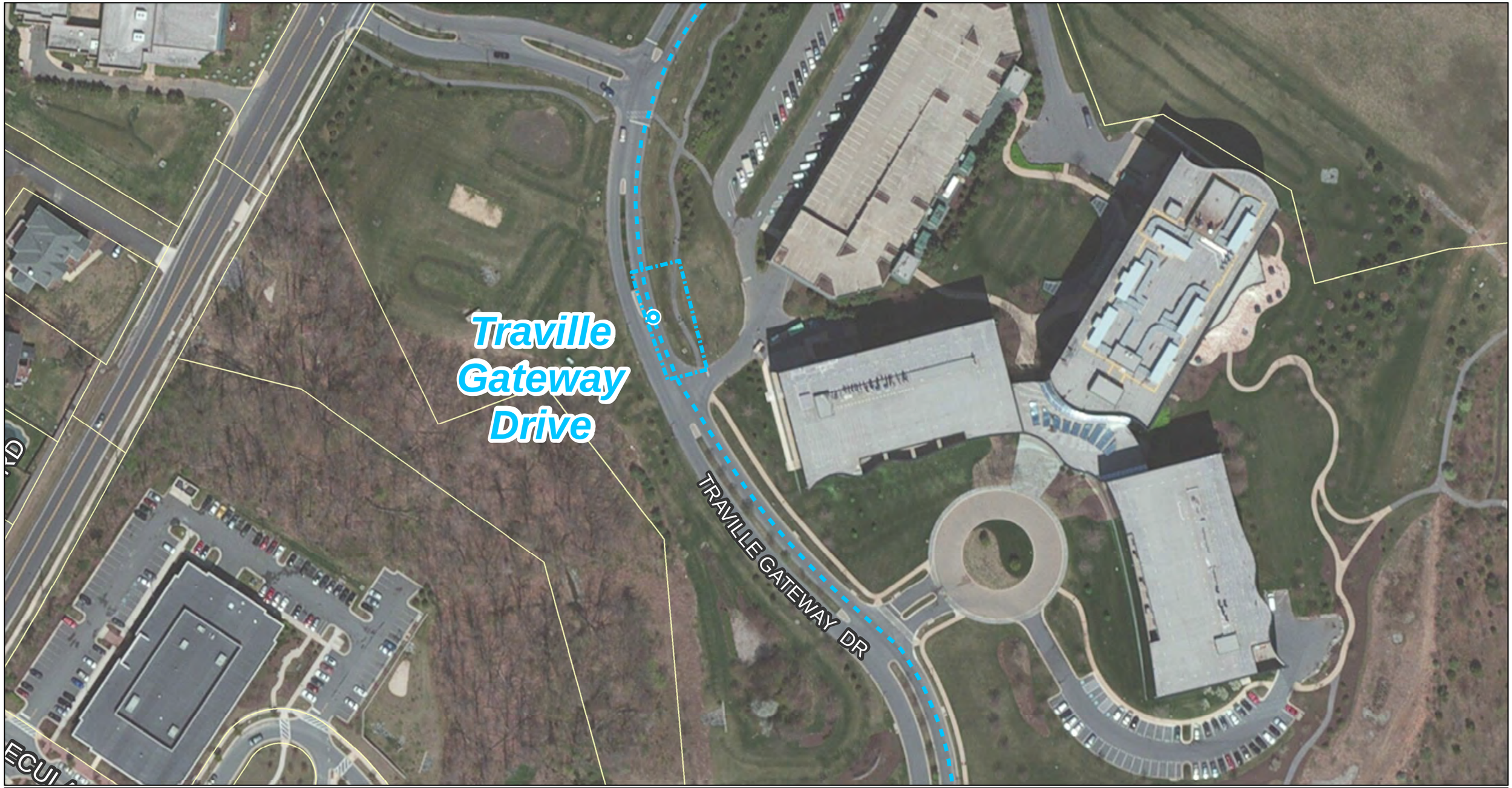
Sincerely,

Dan Reagle

Dan Reagle
Office of Planning

Enclosure

cc: Eric Almquist RK&K
Rick Kiegel, MTA



Legend

Proposed Alignment

Proposed Limits of Disturbance

Proposed Transitway

Proposed Station Location

MTA Maryland

0 25 50 100 150 200 Feet

N

CCT Corridor Cities Transitway

Environmental Features

Date: April 2014

MARYLAND
DEPARTMENT OF
NATURAL RESOURCES

Martin O'Malley, Governor
Anthony G. Brown, Lt. Governor
Joseph P. Gill, Secretary
Frank W. Dawson III, Deputy Secretary

May 29, 2014

Mr. Dan Reagle
Maryland Transit Administration
6 St. Paul Street
Baltimore, MD 21202-1614

RE: Follow-Up to Environmental Review for Corridor Cities Transitway, Montgomery County, Maryland.

Dear Mr. Reagle:

Thank you for providing us with April 14, 2014 letter clarifying the project's limits-of-disturbance in regard to the nearby occurrence of state-listed endangered Potato Dandelion (*Krigia dandelion*). Based on your description of the lack of suitable habitat within the LOD, we have no further concerns for direct impacts to this species from the proposed project.

Thank you for allowing us the opportunity to review this project. If you should have any further questions regarding this information, please contact me at (410) 260-8573.

Sincerely,

Lori A. Byrne

Lori A. Byrne,
Environmental Review Coordinator
Wildlife and Heritage Service
MD Dept. of Natural Resources

ER# 2014.0583.mo
Cc: D. Brinker, DNR
Environmental Review Unit, DNR

MARYLAND
DEPARTMENT OF
NATURAL RESOURCES

Martin O'Malley, Governor
Anthony G. Brown, Lt. Governor
Joseph P. Gill, Secretary
Frank W. Dawson III, Deputy Secretary

Coordination Sheet for Maryland Department of Natural Resources, Environmental Review Unit information on fisheries resources, including anadromous fish, related to project locations and study areas

DATE OF REQUEST: **December 4, 2013**

PROJECT NAME AND LOCATION: **Corridor Cities Transitway (see enclosed Vicinity Map); a transit project study area**

NAME OF STREAM(S) (and MDE Use Classification) WITHIN THE STUDY AREA: Unnamed tributary to Watts Branch (Use I-P), 3 unnamed tributaries to Muddy Branch (between the headwaters and confluence with Rich Branch, Use I-P), Muddy Branch (section from headwaters to confluence with Rich Branch, Use I-P), unnamed tributary to Long Draught Branch (Use I-P), Long Draught Branch (confluent to Great Seneca Creek, Use I-P)

SUB-BASIN (6 digit watershed): 021402

DNR RESPONSE (sections below to be completed by MD DNR):

__X__Generally, no instream work is permitted in Use I streams during the period of March 1 through June 15, inclusive, during any year.

ADDITIONAL FISHERIES RESOURCE NOTES:

Most of the streams in the study area are Use I-P streams, as referenced above. It is worth noting that portions of the Great Seneca Creek mainstem are Use IV-P (stocked trout and public water supply), and Crabbs Creek to the northeast of the Shady Grove Station is Use IV (stocked trout). These streams or their tributaries are near the borders of the study area. Great Seneca Creek does have adult trout stocked seasonally, for recreational fishing. Warmwater fish populations are expected, and in most cases documented, in all of the referenced streams in the study area. The time of year restriction listed above is applicable for the entire study area.

Regarding survey data: the streams in the area support many resident fish species documented by our Maryland Biological Stream Survey. There are Maryland Biological Stream Survey (MBSS) stations in the vicinity and general region. MBSS data can be accessed via the MDDNR web page at http://mdimap.towson.edu/streamhealth/, allowing access to resource surveys in neighboring tributaries.

ADDITIONAL COMMENTS ON BEST MANAGEMENT PRACTICES:

Given that the project study has much yet to accomplish, especially for any future engineering and design activities, we will keep to general terms in this response, but note that we are available for further review and coordination. Proactive and precautious stormwater management and sediment and erosion control strategies and techniques are essential to good project planning in this study area. Many current development aspects in the area have stressed the local streams for decades. Attention to good planning measures, and later implementation and inspection techniques, to protect water quality and aquatic habitat will be important for protecting these streams during any project construction. More specific environmental Best Management Practices can be developed as planning continues.

MD DNR, Environmental Review Unit signature

Gregory J Golden

DATE: ---------- 3/28/14 ----------
PHONE: 410-260-8331

United States Department of the Interior
U.S. Fish & Wildlife Service
Chesapeake Bay Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401
410/573 4575

Online Certification Letter

Today's date: 2/18/14

Project: Corridor Cities Transitway 05E2CB00-2014-SLI-0281

Dear Applicant for online certification:

Thank you for using the U.S. Fish and Wildlife Service (Service) Chesapeake Bay Field Office online project review process. By printing this letter in conjunction with your project review package, you are certifying that you have completed the online project review process for the referenced project in accordance with all instructions provided, using the best available information to reach your conclusions. This letter, and the enclosed project review package, completes the review of your project in accordance with the Endangered Species Act of 1973 (16 U.S.C. 1531-1544, 87 Stat. 884), as amended (ESA).This letter also provides information for your project review under the National Environmental Policy Act of 1969 (P.L. 91-190, 42 U.S.C. 4321-4347, 83 Stat. 852), as amended. A copy of this letter and the project review package must be submitted to this office for this certification to be valid. This letter and the project review package will be maintained in our records.

Based on this information and in accordance with section 7 of the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.), we certify that except for occasional transient individuals, no federally proposed or listed endangered or threatened species are known to exist within the project area. Therefore, no Biological Assessment or further section 7 consultation with the U.S. Fish and Wildlife Service is required. Should project plans change, or if additional information on the distribution of listed or proposed species becomes available, this determination may be reconsidered.

This response relates only to federally protected threatened or endangered species under our jurisdiction. For additional information on threatened or endangered species in Maryland, you should contact the Maryland Wildlife and Heritage Division at (410) 260-8540. For information in Delaware you should contact the Delaware Natural Heritage and Endangered Species Program, at (302) 653-2880. For information in the District of Columbia, you should contact the National Park Service at (202) 535-1739.

The U.S. Fish and Wildlife Service also works with other Federal agencies and states to minimize loss of wetlands, reduce impacts to fish and migratory birds, including bald eagles, and restore habitat for wildlife. Information on these conservation issues and how development projects can avoid affecting these resources can be found on our website (www.fws.gov/chesapeakebay)

We appreciate the opportunity to provide information relative to fish and wildlife issues, and

thank you for your interest in these resources. If you have any questions or need further assistance, please contact Chesapeake Bay Field Office Threatened and Endangered Species program at (410) 573-4527.

Sincerely,

Genevieve LaRouche
Field Supervisor

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Chesapeake Bay Field Office
177 Admiral Cochrane Drive
Annapolis, Maryland 21401
http://www.fws.gov/chesapeakebay

March 14, 2016

Mr. Daniel Koenig
Environmental Protection Specialist
Federal Transit Administration, Region 3
1990 K St. NW, Suite 510
Washington, DC 20006

Re: "Not likely to adversely affect" determination for northern long-eared bat for the Corridor Cities Transitway Bus Rapid Transit Project, Montgomery County, Maryland

Dear Mr. Koenig:

The U.S. Fish and Wildlife Service (Service) has received your February 17, 2016 letter requesting informal consultation regarding the potential impacts of the Corridor Cities Transitway Project to the threatened northern long-eared bat (*Myotis septentrionalis*). Information on the project was provided in the February 17, 2006 letter and through emailed information and phone conversations that began in July 2015. The Service has evaluated the potential effects of the Corridor Cities Project to the threatened northern long-eared bat. The comments provided below are in accordance with Section 7 of the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*).

The purpose of this proposed project is to construct a 9-mile bus transit way in Montgomery County, Maryland. It will be constructed along the I-270 corridor between the Shady Grove Metrorail Station in Rockville and the Metropolitan Grove MARC Station in Gaithersburg. The alignment would run either adjacent to or in the median of the existing roadway. The project would clear approximately 31 acres of forest in areas along the existing 9-miles of roadway. However, the forest clearing will occur outside of the period of April 1 to August 31.

The northern long-eared bat was listed April 2, 2015 and a final 4(d) rule was released on January 14, 2016. The northern long-eared bat is a temperate, insectivorous migratory bat that hibernates in mines and caves in the winter and summers in wooded areas. There is a concern that clearing of forests could destroy maternity colonies of this species. However, since the forest clearing for this proposed project will be conducted outside the period of April 1 to August 31 when female bats are raising young, we conclude that the project is not likely to adversely affect the northern long-eared bat.

We appreciate the opportunity to provide information relevant to threatened and endangered fish and wildlife resources. This Endangered Species Act determination does not exempt this project

from obtaining all other permits and approvals that may be required by other state or federal agencies. Should you have any questions or concerns regarding this letter, please contact Cherry Keller of my Endangered Species staff at (410) 573-4532 or by email at cherry_keller@fws.gov.

Sincerely,

Genevieve LaRouche
Field Supervisor

DEPARTMENT OF THE ARMY
BALTIMORE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 1715
BALTIMORE, MD 21203-1715

DEC 15 2014

Operations Division

Mr. Dan Reagle
Maryland Transit Administration
Office of Planning
6 St. Paul Street, Room 923
Baltimore, Maryland 21202

Dear Mr. Reagle:

This is in response to your e-mail dated October 21, 2014 requesting a preliminary determination of the presence or indications of the approximate location(s) of waters of the United States, including wetlands on your property located at along the southern portion of the proposed Corridor Cities Transit Way (CCT) alignment, in Montgomery County, Maryland. Your project has been assigned the file name, **CENAB-OP-RMN (MTA/Corridor Cities Transitway (CCT)/Preapp) 2012-02804-M15.**

Field inspections were conducted on May 14 and August 13, 2014 with representatives of MTA, RK&K, the Corps, and MDE. This preliminary jurisdictional determination finds that there "may be" waters of the United States, including wetlands within the review area as indicated by the approximate location(s) of waters of the United States, including wetlands within the review area on the enclosed drawing dated October 22, 2014 and identifies all potential jurisdictional waters and wetlands within the review area. These areas may be regulated by this office pursuant to Section 404 of the Clean Water Act.

This preliminary jurisdictional determination is based on the information included on the enclosed Preliminary Jurisdictional Determination Form and is not appealable. If you do not agree with the extent of waters or wetlands and this preliminary JD, you are hereby advised of your option to request and obtain an approved JD from this office at the address above. An approved JD is an official, written Corps determination stating the presence or absence of jurisdictional waters of the United States and identifies the limits of waters of the United States on a project site. An approved JD can be relied upon for a period of 5 years and can be appealed through the Corps' administrative appeal process set out at 33 CFR Part 331.

You are reminded that any grading or filling of waters of the United States, including wetlands, is subject to Department of the Army authorization. State and local authorizations may be required to conduct activities in these locations. Wetlands under the jurisdiction of the Maryland Department of the Environment (MDE) may be located on the parcel. You may contact the MDE for information regarding jurisdiction and permitting requirements at (410) 537-3768. In addition, the Interstate Land Sales Full Disclosure Act may require that prospective buyers be made aware, by the seller, of the Federal authority over any waters of the United States, including wetlands, being purchased.

In future correspondence and permit applications regarding this alignment, please include the file number located in the first paragraph of this letter.

If you have any questions concerning this matter, please call Mr. Jack Dinne of this office at 410 962-6005.

Sincerely,

Joseph P. DaVia
Chief, Maryland Section Northern

Enclosures

Cc:
Ms. Emily Dolbin, MDE-Nontidal Wetlands Division

To identify how we can better serve you, we need your help. Please take the time to fill out our new customer service survey at: http://www.nab.usace.army.mil/Missions/Regulatory.aspx

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL (NAO/NAP fact sheet & RFA form)

Applicant: Maryland Transit Administration	File Number: 2012-02804-M15	Date: DEC 15 2014
Attached is:		See Section below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
	PERMIT DENIAL	C
	APPROVED JURISDICTIONAL DETERMINATION	D
X	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://usace.army.mil/inet/functions/cw/cecwo/reg or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the Baltimore District Engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations (JD) associated with the permit.
- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the Baltimore District Engineer. Your objections must be received by the Baltimore District Engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the Baltimore District Engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the Baltimore District Engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the Baltimore District Engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the North Atlantic Division Engineer, ATTN: CENAD-PD-PSD-O, Fort Hamilton Military Community, Building 301, General Lee Avenue, Brooklyn, NY 11252-6700. This form must be received by the North Atlantic Division Engineer within 60 days of the date of this notice with a copy furnished to the Baltimore District Engineer.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the North Atlantic Division Engineer, ATTN: CENAD-PD-PSD-O, Fort Hamilton Military Community, Building 301, General Lee Avenue, Brooklyn, NY 11252-6700. This form must be received by the North Atlantic Division Engineer within 60 days of the date of this notice with a copy furnished to the Baltimore District Engineer.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the North Atlantic Division Engineer, ATTN: CENAD-PD-PSD-O, Fort Hamilton Military Community, Building 301, General Lee Avenue, Brooklyn, NY 11252-6700. This form must be received by the North Atlantic Division Engineer within 60 days of the date of this notice with a copy furnished to the Baltimore District Engineer.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

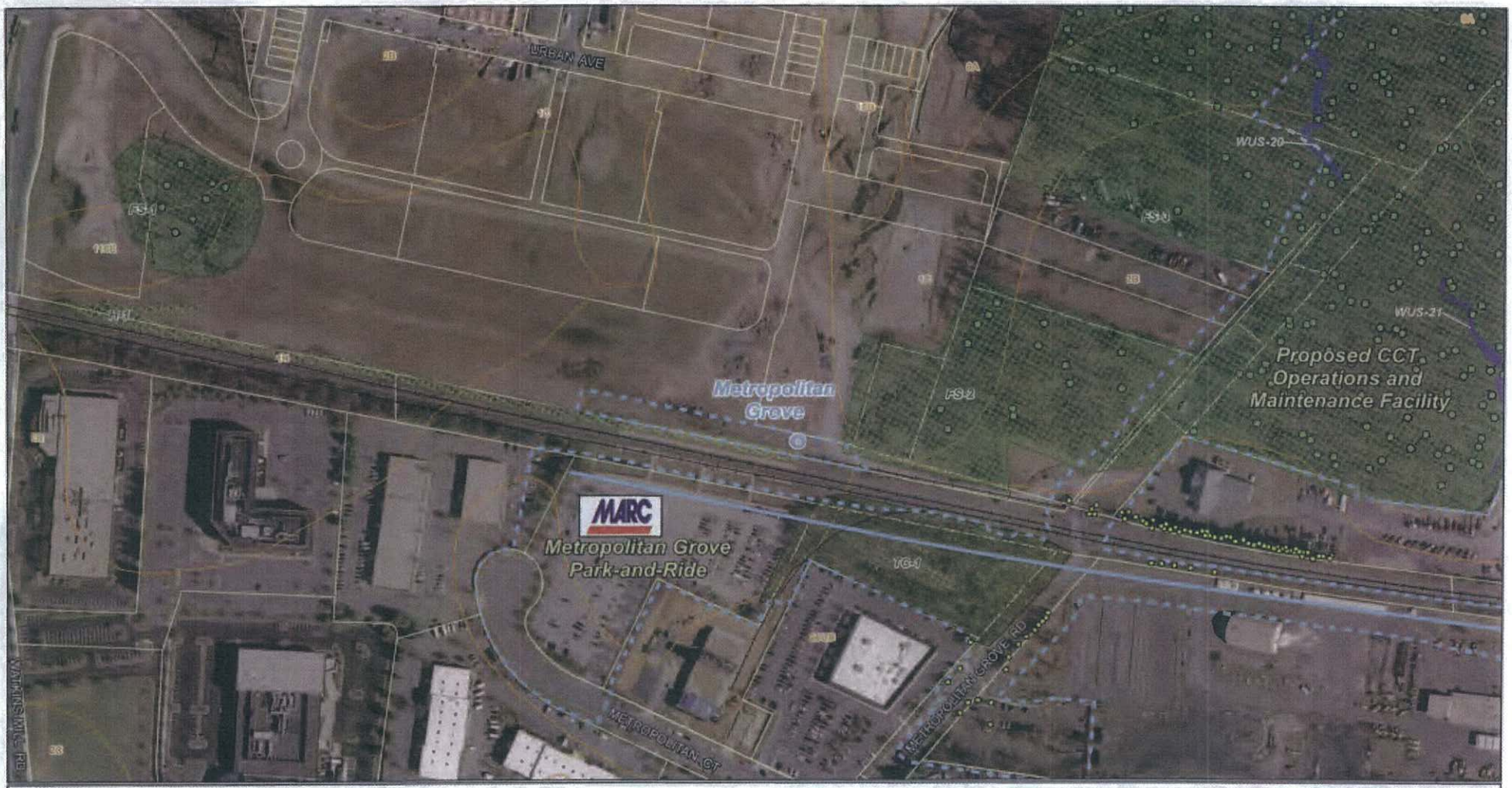
If you have questions regarding this decision and/or the appeal process you may contact:

Ms. Sandy Zelen
U.S. Army Corps of Engineers, Baltimore District
ATTN: CENAB-OP-R
Regulatory Branch, Baltimore District
Baltimore, MD 21203-1715
(410) 962-6028 or 3670

If you only have questions regarding the appeal process you may also contact:
Mr. James W. Haggerty
Administrative Appeals Review Officer
North Atlantic Division, Corps of Engineers Fort Hamilton
General Lee Avenue , Military Community Bldg. 301
Brooklyn, NY 11252-6700
Telephone: (718) 765-7163
Email: James.W.Haggerty@usace.army.mil

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

	Date:	Telephone number:
_____ Signature of appellant or agent.		

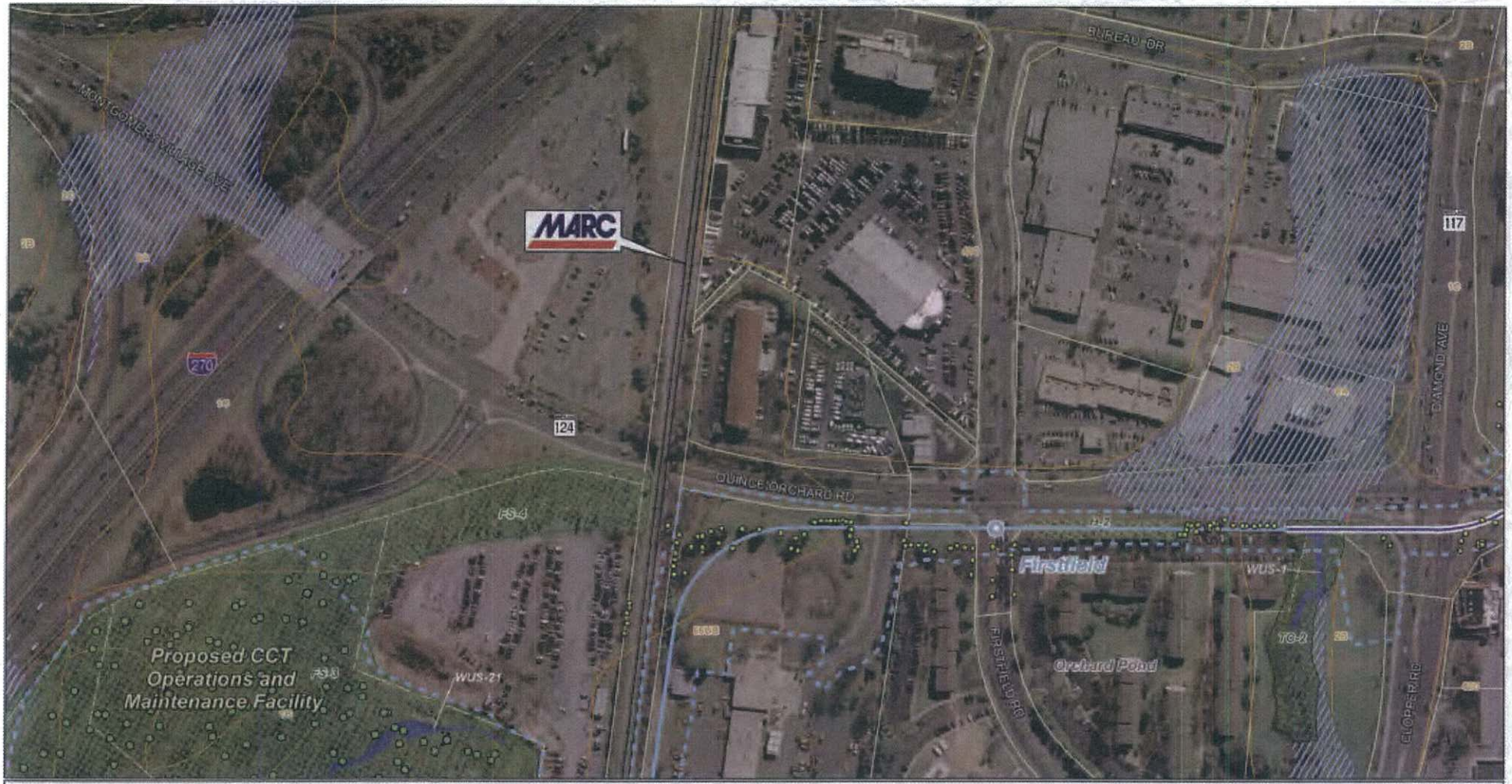


MTA Maryland

CCT Corridor Cities Transitway

Appendix B. Wetlands, Waters of the US, Soils, Forests, Hedgerows, and Street Trees

Date: 10/22/2014



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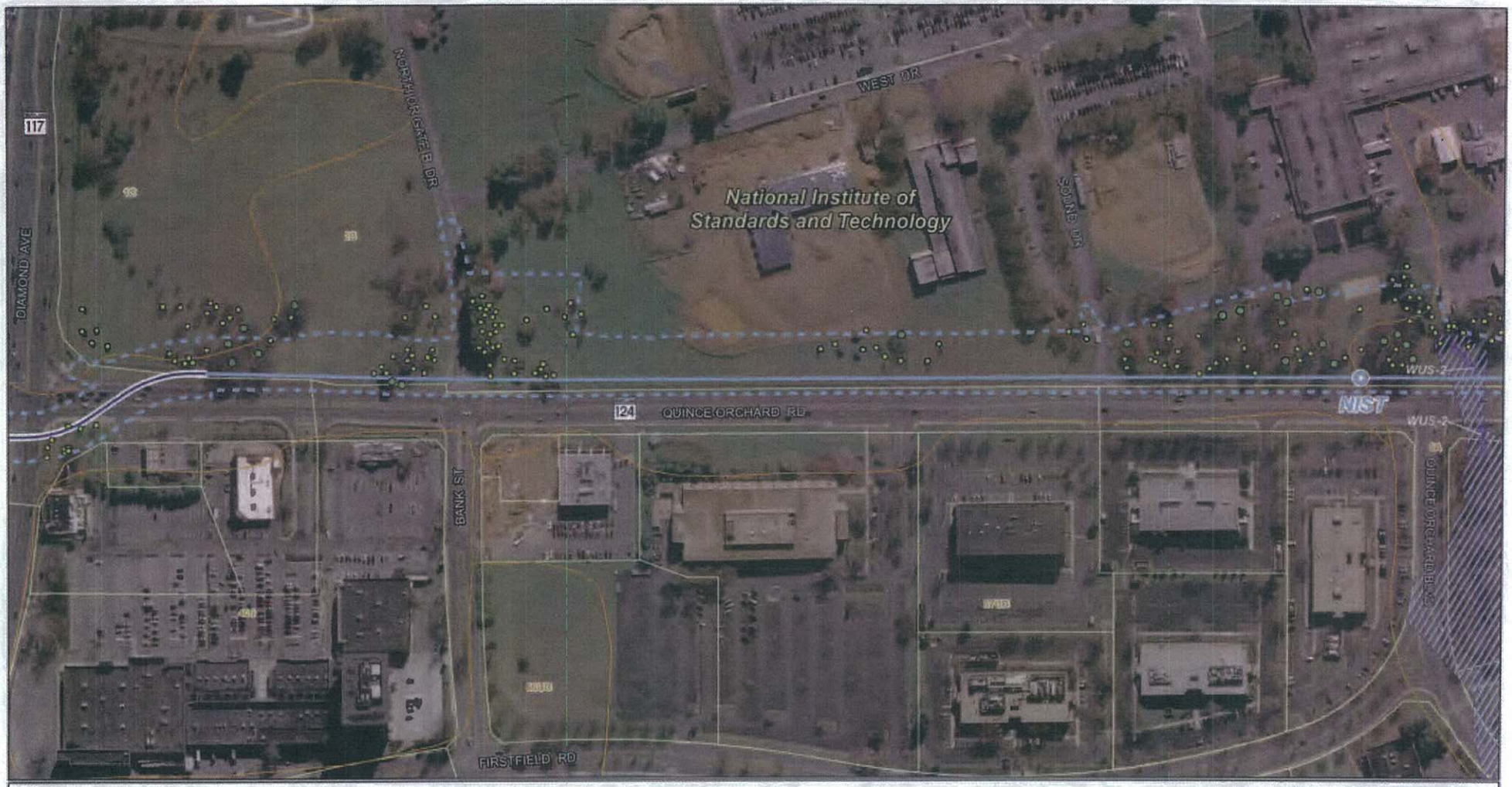

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Date: 10/22/2014

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- Station Locations
- Limits of Disturbance
- MCDEP Water Quality Sampling Stations
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- Waters of the US - Field Verified
- 100 Year Floodplain
- Soils
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MTA Maryland

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CCT Corridor Cities Transitway

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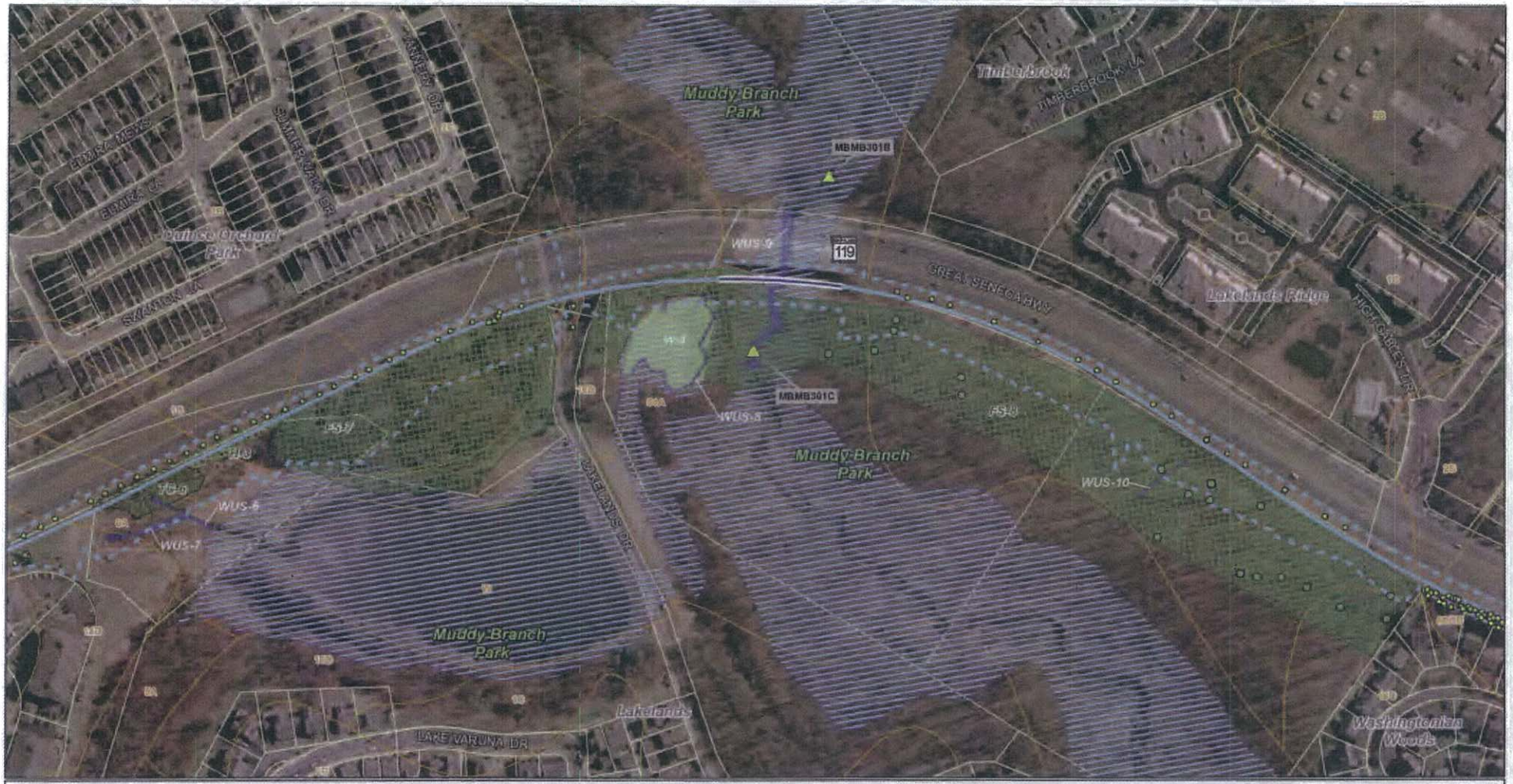

MTA Maryland

CCT Corridor Cities Transitway

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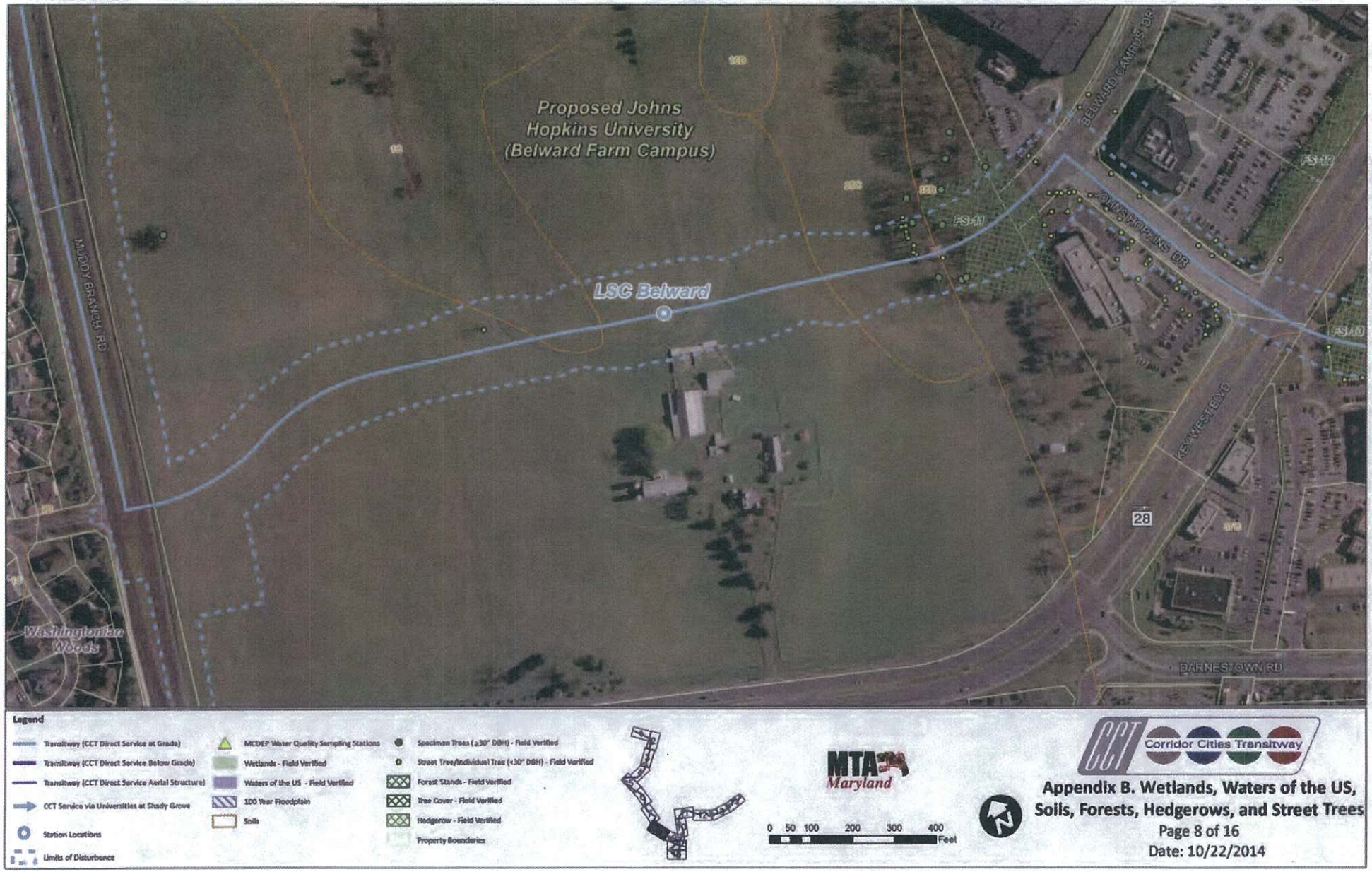

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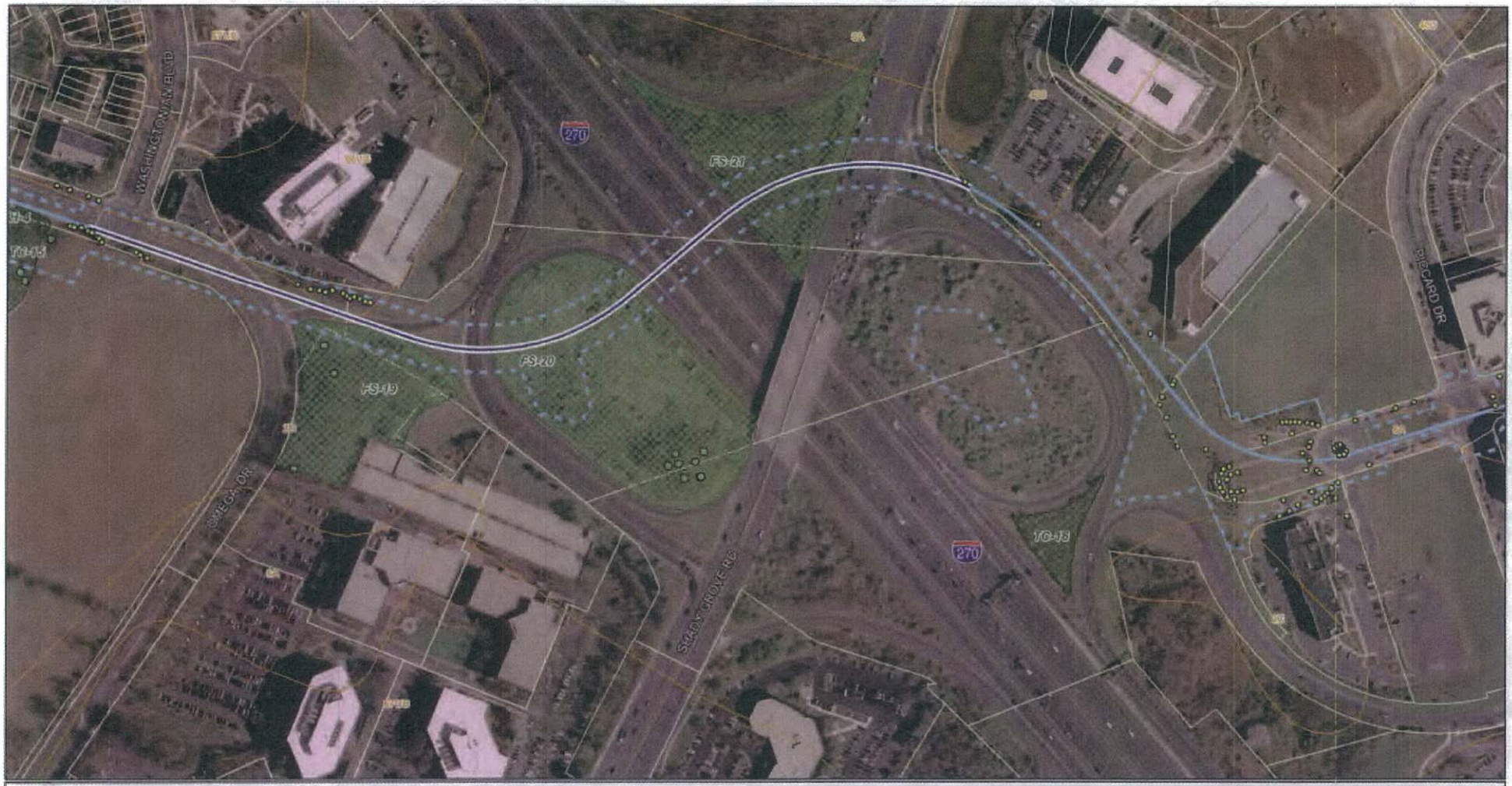

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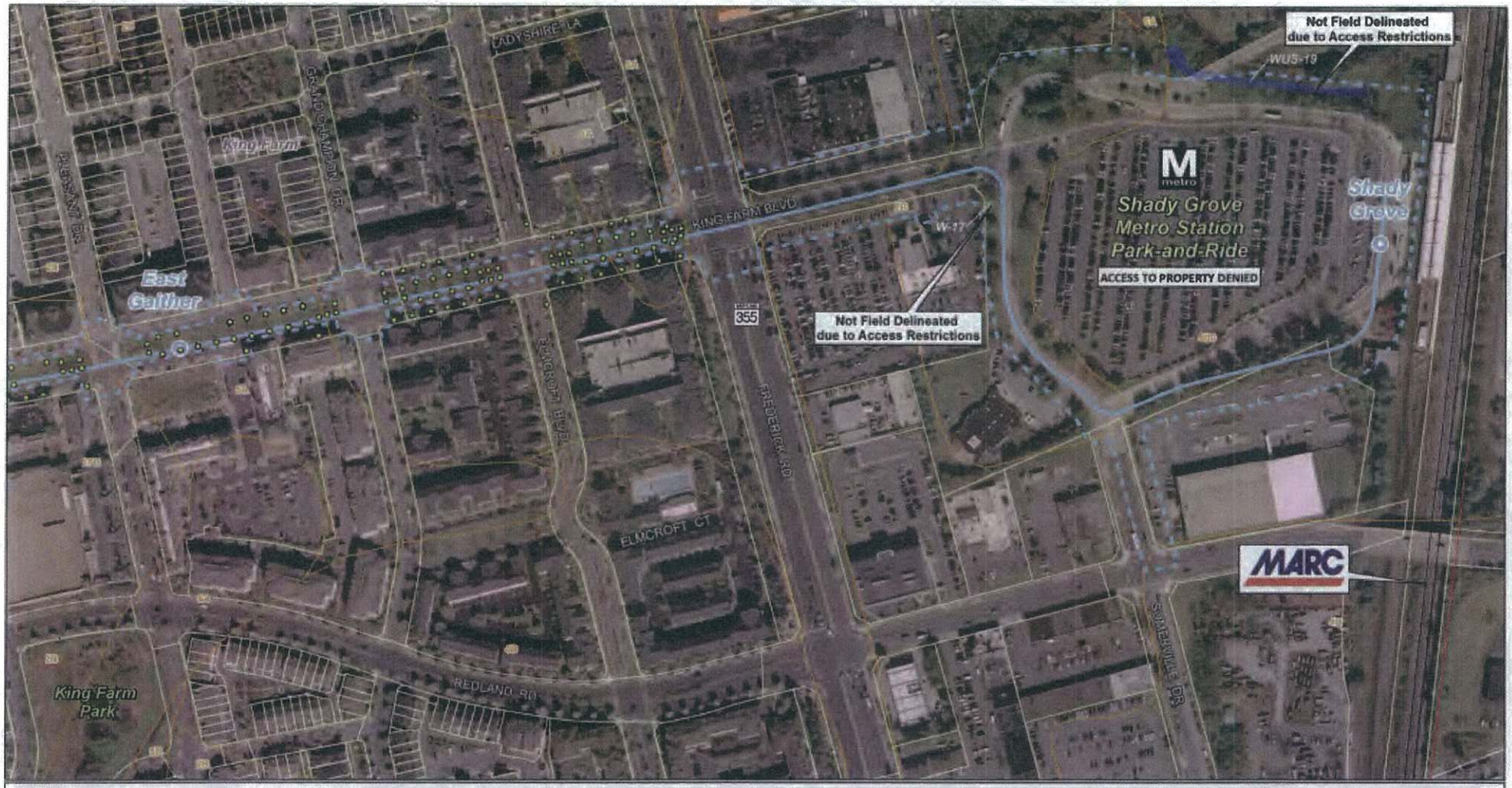

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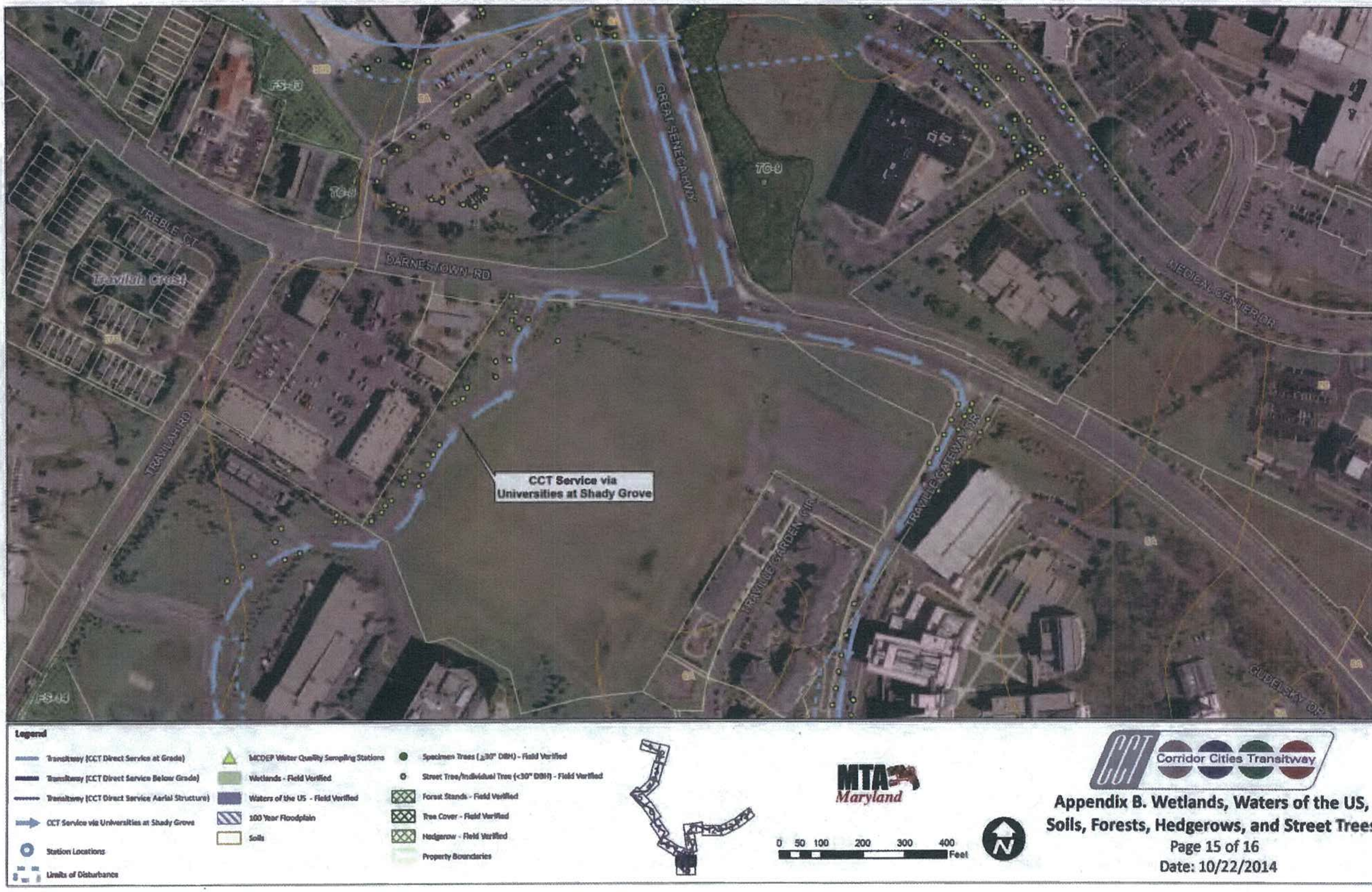

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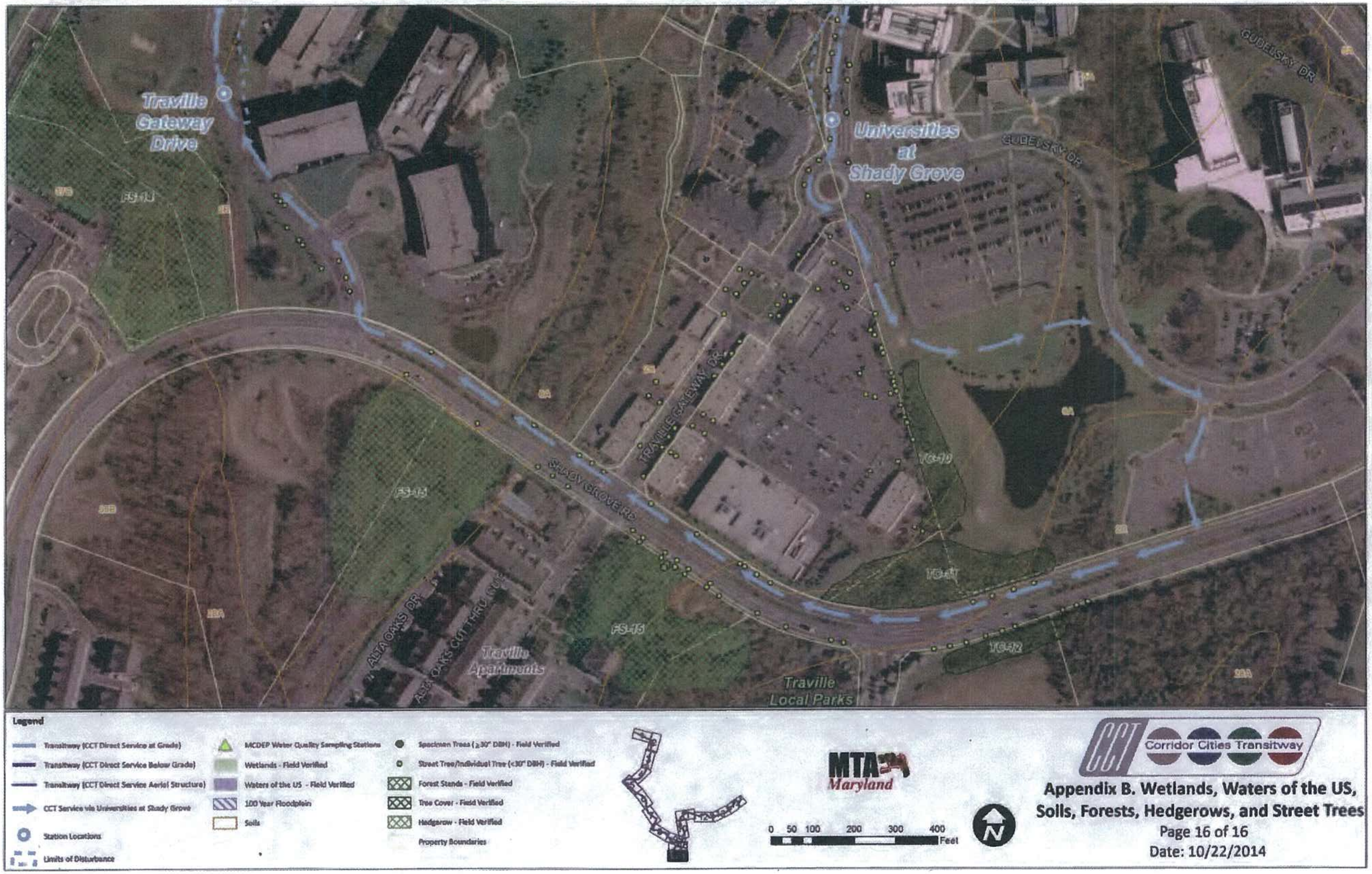
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GUDELSKY DR
TRAVILLE GATEWAY DR
SHADY GROVE RD
ALTA OAKS DR
ALTA OAKS CUT THRU CIR
Traville Apartments
Traville Local Parks
FS-14
FS-15
FS-16
TC-40
TC-41
TC-42
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0 50 100 200 300 400 Feet
N
CCT Corridor Cities Transitway
Appendix B. Wetlands, Waters of the US, Soils, Forests, Hedgerows, and Street Trees
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Date: 10/22/2014

Address	Current Land Use	Permanent ROW Required (Acres)	Temporary ROW Required (Acres)
15010 Broschart Rd, Gaithersburg, MD	Commercial	1.53	0.20
0 Corporate Blv, Rockville, MD	Commercial	0.53	0.15
9201 Corporate Blv, Rockville, MD	Commercial	0.05	0.07
0 Corporate Blv, Rockville, MD	Commercial	0.32	0.22
0 Diamondback Dr, Rockville, MD	Commercial	0.21	0.03
9401 Fields Rd, Gaithersburg, MD	Commercial	0.05	0.00
15931 Frederick Rd, Derwood, MD	Commercial	0.14	0.10
0 Great Seneca Hwy, Gaithersburg, MD	Commercial	0.21	0.00
0 Great Seneca Hwy, Gaithersburg, MD	Commercial	0.10	0.00
121 Kentlands Blvd, Gaithersburg, MD	Commercial	0.32	0.06
0 Key West Ave, Rockville, MD	Commercial	0.82	0.11
805 King Farm Blvd, Rockville, MD	Commercial	0.00	0.00
800 King Farm Blvd, Rockville, MD	Commercial	0.00	0.02
802 King Farm Blvd, Rockville, MD	Commercial	0.00	0.00
700 King Farm Blvd, Rockville, MD	Commercial	0.02	0.02
104 Main St, Gaithersburg, MD	Commercial	1.75	0.00
40 Market St, Gaithersburg, MD	Commercial	0.70	0.11
80 Market St, Gaithersburg, MD	Commercial	0.24	0.06
9901 Medical Center Dr, Rockville, MD	Commercial	1.84	0.37
5 Metropolitan Ct, Gaithersburg, MD	Commercial	0.27	0.05
15 Metropolitan Grove Rd, Gaithersburg, MD	Commercial	0.00	0.02
101 Orchard Ridge Dr, Gaithersburg, MD	Commercial	0.68	0.17
200 Orchard Ridge Dr, Gaithersburg, MD	Commercial	1.31	0.27
505 Quince Orchard Rd, Gaithersburg, MD	Commercial	0.00	0.01
600 Quince Orchard Rd, Gaithersburg, MD	Commercial	0.01	0.02
917 Quince Orchard Rd, Gaithersburg, MD	Commercial	1.21	0.01
0 Shady Grove Rd, Rockville, MD	Commercial	0.38	0.00
9711 Washingtonian Blv, Gaithersburg, MD	Commercial	0.01	0.00
801 King Farm Blvd, Rockville, MD	Mixed Commercial/ Residential	0.00	0.01
	Commerical Use Subtotal	**12.69**	**2.07**
0 Frederick Rd, Rockville, MD	Industrial	0.00	0.01
0 Frederick Rd, Rockville, MD	Industrial	0.53	0.04
9700 Great Seneca Hwy, Gaithersburg, MD	Industrial	0.16	0.00
9950 Medical Center Dr, Gaithersburg, MD	Industrial	1.05	0.27
9900 Medical Center Dr, Rockville, MD	Industrial	0.00	0.00
9900 Medical Center Dr, Rockville, MD	Industrial	0.01	0.00
1 Metropolitan Ct, Gaithersburg, MD	Industrial	0.07	0.12
0 Metropolitan Grove Rd, Gaithersburg, MD	Industrial	0.35	0.00
0 Metropolitan Grove Rd, Gaithersburg, MD	Industrial	0.54	0.00
0 Metropolitan Grove Rd, Gaithersburg, MD	Industrial	0.05	0.02
0 Metropolitan Grove Rd, Gaithersburg, MD	Industrial	0.04	0.02
0 Metropolitan Grove Rd, Gaithersburg, MD	Industrial	0.48	0.00

15830 Redland Rd, Rockville, MD	Industrial	0.00	0.00
15245 Shady Grove Rd, Rockville, MD	Industrial	0.03	0.00
15901 Somerville Dr, Rockville, MD	Industrial	0.40	0.13
Industrial Land Use Subtotal		**3.69**	**0.62**
15000 Broschart Rd, Gaithersburg, MD	Institutional	0.21	0.06
14910 Broschart Rd, Rockville, MD	Institutional	2.09	0.30
899 Clopper Rd, Gaithersburg, MD	Institutional	0.00	0.08
9710 Great Seneca Hwy, Rockville, MD	Institutional	1.82	0.00
9636 Gudelsky Dr, Rockville, MD	Institutional	0.30	0.00
9850 Key West Ave, Darnestown, MD	Institutional	0.15	0.13
9975 Medical Center Dr, Gaithersburg, MD	Institutional	0.00	0.00
18610 New Hampshire Ave, Ashton, MD	Institutional	0.01	0.00
601 Quince Orchard Rd, Gaithersburg, MD	Institutional	12.46	1.53
Institutional Land Use Subtotal		**17.04**	**2.11**
0 Chevy Chase St, Gaithersburg, MD	Recreation/Open Space	0.57	0.16
0 Chevy Chase St, Gaithersburg, MD	Recreation/Open Space	1.49	0.14
0 Darnestown Rd, Gaithersburg, MD	Recreation/Open Space	1.34	0.17
0 Decoverly Dr, Gaithersburg, MD	Recreation/Open Space	0.27	0.02
0 Foxborough Cir, Rockville, MD	Recreation/Open Space	0.14	0.06
0 Great Seneca Hwy, Gaithersburg, MD	Recreation/Open Space	1.29	0.21
0 Hillside Lake Ter, Gaithersburg, MD	Recreation/Open Space	0.08	0.03
0 King Farm Blvd, Rockville, MD	Recreation/Open Space	0.00	0.00
600 King Farm Blv, Rockville, MD	Recreation/Open Space	0.00	0.00
151 Lakelands Dr, Gaithersburg, MD	Recreation/Open Space	1.40	0.14
0 Lakelands Dr, Gaithersburg, MD	Recreation/Open Space	0.03	0.01
0 Muddy Branch Rd, Gaithersburg, MD	Recreation/Open Space	0.18	0.10
0 Muddy Branch Rd, Gaithersburg, MD	Recreation/Open Space	0.62	0.17
Recreation/Open Space Land Use Subtotal		**7.41**	**1.22**
164 Autumn View Dr, Gaithersburg, MD	Residential	0.36	0.12
893 Clopper Rd, Gaithersburg, MD	Residential	0.32	0.04
0 Decoverly Dr, Rockville, MD	Residential	0.71	0.11
9700 Decoverly Dr, Rockville, MD	Residential	0.60	0.13
0 Elmcroft Blvd, Rockville, MD	Residential	0.00	0.00
0 Firstfield Rd, Gaithersburg, MD	Residential	0.51	0.08
9800 Gable Ridge Ter, Gaithersburg, MD	Residential	0.19	0.10
0 Great Seneca Hwy, Gaithersburg, MD	Residential	0.02	0.02
0 Hillside Lake Terr, Gaithersburg, MD	Residential	0.14	0.01
0 Hillside Lake Terr, Gaithersburg, MD	Residential	0.13	0.02
0 Hillside Lake Terr, Gaithersburg, MD	Residential	0.13	0.00
0 Hillside Lake Terr, Gaithersburg, MD	Residential	0.11	0.00
0 Hillside Lake Terr, Gaithersburg, MD	Residential	0.12	0.00
0 Hillside Lake Terr, Gaithersburg, MD	Residential	0.12	0.00
0 Hillside Lake Terr, Gaithersburg, MD	Residential	0.14	0.01
502 King Farm Blvd, Rockville, MD	Residential	0.00	0.00

501 King Farm Blvd, Rockville, MD	Residential	0.00	0.00
100 King Farm Blvd, Rockville, MD	Residential	0.00	0.00
401 King Farm Blvd, Rockville, MD	Residential	0.00	0.00
327 King Farm Blvd, Rockville, MD	Residential	0.00	0.00
201 King Farm Blvd, Rockville, MD	Residential	0.00	0.01
201 King Farm Blvd, Rockville, MD	Residential	0.00	0.00
300 King Farm Blvd, Rockville, MD	Residential	0.00	0.00
301 King Farm Blvd, Rockville, MD	Residential	0.00	0.00
200 King Farm Blv, Rockville, MD	Residential	0.00	0.01
413 King Farm Blvd, Rockville, MD	Residential	0.00	0.00
701 King Farm Blvd, Rockville, MD	Residential	0.00	0.02
0 Metropolitan Grove Rd, Gaithersburg, MD	Residential	0.40	0.09
0 Metropolitan Grove Rd, Gaithersburg, MD	Residential	0.02	0.02
0 Piccard Dr, Rockville, MD	Residential	0.00	0.00
899 Quince Orchard Rd, Gaithersburg, MD	Residential	0.52	0.05
895 Quince Orchard Rd, Gaithersburg, MD	Residential	0.64	0.08
0 Reserve Champion Dr, Rockville, MD	Residential	0.00	0.00
805 Reserve Champion Dr, Rockville, MD	Residential	0.00	0.00
Residential Land Use Subtotal		**5.17**	**0.96**
CSX Railroad	Transportation/Utilities	0.72	0.48
CSX Railroad	Transportation/Utilities	0.21	0.15
0 Decoverly Dr, Rockville, MD	Transportation/Utilities	0.02	0.00
0 Elmcroft Blvd, Rockville, MD	Transportation/Utilities	0.00	0.01
0 Elmcroft Blvd, Rockville, MD	Transportation/Utilities	0.00	0.02
9250 Fields Rd, Gaithersburg, MD	Transportation/Utilities	0.20	0.06
0 Grand Champion Dr, Rockville, MD	Transportation/Utilities	0.00	0.00
0 Grand Champion Dr, Rockville, MD	Transportation/Utilities	0.00	0.00
0 Great Seneca Hwy, Gaithersburg, MD	Transportation/Utilities	0.55	0.00
0 Great Seneca Hwy, Gaithersburg, MD	Transportation/Utilities	0.14	0.00
0 Havencrest St, Rockville, MD	Transportation/Utilities	0.00	0.01
701 King Farm Blvd, Rockville, MD	Transportation/Utilities	0.01	0.01
305 Metropolitan Grove Rd, Gaithersburg, MD	Transportation/Utilities	0.05	0.12
0 Metropolitan Grove Rd, Gaithersburg, MD	Transportation/Utilities	6.62	0.50
0 Metropolitan Grove Rd, Gaithersburg, MD	Transportation/Utilities	4.22	0.07
913 Quince Orchard Rd, Gaithersburg, MD	Transportation/Utilities	1.23	0.01
0 Quince Orchard Rd, Gaithersburg, MD	Transportation/Utilities	0.11	0.00
0 Reserve Champion Dr, Rockville, MD	Transportation/Utilities	0.00	0.00
0 Somerville Dr, Gaithersburg, MD	Transportation/Utilities	14.24	0.48
Transporation/Utilities Land Use Subtotal		**28.32**	**1.93**
104 Autumn View Dr, Gaithersburg, MD	Vacant/Undeveloped	0.33	0.11
0 Clopper Rd, Gaithersburg, MD	Vacant/Undeveloped	0.36	0.07
0 Darnestown Rd, Gaithersburg, MD	Vacant/Undeveloped	0.15	0.00
9600 Fields Rd, Gaithersburg, MD	Vacant/Undeveloped	1.41	0.12
9410 Fields Rd, Gaithersburg, MD	Vacant/Undeveloped	0.03	0.00
9600 Fields Rd, Gaithersburg, MD	Vacant/Undeveloped	0.10	0.00

15955 Frederick Rd, Rockville, MD	Vacant/Undeveloped	0.01	0.08
0 Frederick Rd, Gaithersburg, MD	Vacant/Undeveloped	0.00	0.00
1050 Gaither Rd, Rockville, MD	Vacant/Undeveloped	0.00	0.00
0 King Farm Blvd, Rockville, MD	Vacant/Undeveloped	0.00	0.01
0 King Farm Blvd, Rockville, MD	Vacant/Undeveloped	0.23	0.03
801 King Farm Blvd, Rockville, MD	Vacant/Undeveloped	0.00	0.00
900 King Farm Blv, Rockville, MD	Vacant/Undeveloped	0.00	0.00
901 King Farm Blv, Rockville, MD	Vacant/Undeveloped	0.03	0.06
0 Metropolitan Grove Rd, Gaithersburg, MD	Vacant/Undeveloped	0.22	0.10
0 Metropolitan Grove Rd, Gaithersburg, MD	Vacant/Undeveloped	0.67	0.01
0 Metropolitan Grove Rd, Gaithersburg, MD	Vacant/Undeveloped	0.46	0.03
21 Metropolitan Grove Rd, Gaithersburg, MD	Vacant/Undeveloped	1.92	0.09
0 Metropolitan Grove Rd, Gaithersburg, MD	Vacant/Undeveloped	3.06	0.22
0 Orchard Ridge Dr, Gaithersburg, MD	Vacant/Undeveloped	0.63	0.02
0 Piccard Dr, Rockville, MD	Vacant/Undeveloped	0.00	0.00
0 Quince Orchard Rd, Gaithersburg, MD	Vacant/Undeveloped	12.46	0.32
0 Quince Orchard Dr, Gaithersburg, MD	Vacant/Undeveloped	0.52	0.00
0 Quince Orchard Rd, Gaithersburg, MD	Vacant/Undeveloped	0.47	0.04
0 Twin Lakes Dr, Gaithersburg, MD	Vacant/Undeveloped	0.36	0.02
0 Twin Lakes Dr, Gaithersburg, MD	Vacant/Undeveloped	0.13	0.00
Vacant/Undeveloped Land Use Subtotal		**23.54**	**1.33**
	TOTAL	**97.87**	**10.25**

Table 1: Environmental Justice-Related Outreach Efforts Since May 2012

Date	Meeting Type	Meeting Name	Meeting Location	Meeting Themes/Topics
Community Briefing				
09-05-2012	Community briefing	King Farm External Affairs Committee	Saddle Ridge Community Center, Rockville	Grass and tree impacts/landscaping plans; parking; impact on community shuttle bus service; construction phasing and schedule; traffic impacts/street closures; impacts to King Farm Boulevard; left turns; ridership; capacity/improvements at Shady Grove Metro Station; noise; BRT tax; station locations/footprint; process for community input
10-08-2012	Community briefing	Lakelands Community Association Board	Lakelands Community Association Management Office, Gaithersburg	Traffic impacts; transitway width; at-grade crossings; impacts on existing monuments; costs of moving community entryway; storm water management; sidewalk construction; parking; travel time; impact on current bus system
10-15-2012	Community briefing	Decoverly I Homeowners Association	University of Phoenix, Gaithersburg	Belward Farm litigation impacts; Montgomery County influence; impact of future development on alignment; coordination with Metro Rail; BRT vehicles; capacity at Shady Grove Metro station; traffic impacts; operations; impact on Ride On bus system; parking
10-18-2012	Community briefing	Amberfield Homeowners Association	Lakelands Ridge Community Clubhouse, Gaithersburg	Fares, station amenities; alignment; noise; traffic impacts; results of EIS; pollution; adverse impacts; station locations and travel times; hours of operation
10-23-2012	Community briefing	Washingtonian Woods Home Owners Association	Community Clubhouse, Gaithersburg	Traffic impacts; property acquisition; Belward Farm; pedestrian and bicycle access; impact on neighborhood access; influence by Johns Hopkins; optional alignments
11-12-2012	Community briefing	Decoverly IV Condominium Association	Stone Mill Elementary School, Rockville	Historic and environmental impacts; property acquisition; alignment; at-grade crossings; residential development; re-development of COMSAT site; impact on Ride On services
11-13-2012	Community briefing	Kentlands Citizens Assembly	Kentlands Clubhouse, Gaithersburg	Parking; shift in alignment from east to the west side of roadway; station location

Date	Meeting Type	Meeting Name	Meeting Location	Meeting Themes/Topics
11-14-2012	Community briefing	Decoverly IV Townhouses	Fields Road Elementary School, Gaithersburg	Schedule; parking; fares; public reception
12-4-2012	Community briefing	Montgomery Village Foundation Transportation, Development, and Public Facilities Committee	North Creek Community Center, Montgomery Village	Project alignment; coordination with developers; coordination with Montgomery County transit; operation schedule; impact on Metro capacity; type of vehicle; parking amenities; maintenance facility; impact on parkland
12-4-2012	Community briefing	Key West Condominiums	Home of the Association President on Diamond Cove Terrace, Rockville	Parking; BRT vehicles; impact on existing Ride On bus system
12-13-2012	Community briefing	Lakelands Community Association	Lakelands Community Clubhouse, Gaithersburg	Left turn lanes; parking; bicycle accommodations and paths; traffic impacts; pedestrian access and safety; at-grade crossings.
01-8-2013	Community briefing	Quince Orchard Park Homeowners Association	500 Highland Ridge Avenue, Gaithersburg	Connectivity with other local transit systems; parking; property acquisition; pedestrian bridge over Great Seneca Highway; fuel used by buses; request for more detailed map of alignment
01-30-2013	Community briefing	Washingtonian Woods Home Owners Association	Washingtonian Woods Clubhouse, Gaithersburg	Noise analysis and mitigation; traffic and operations; pedestrian safety and access to stations, community cohesion and impacts. Future traffic operations were illustrated through a computerized model
02-26-2013	Community briefing	Fireside Condominiums Homeowners Association	Community Clubhouse, Gaithersburg	Parking; construction phasing and schedule; fare pricing; I-270 Project Status
03-20-2013	Community briefing	Vistas at Washingtonian Woods Homeowners	Washingtonian Woods Clubhouse,	Noise analysis and mitigation; traffic and operations; pedestrian safety and access to stations; community cohesion and impacts

Date	Meeting Type	Meeting Name	Meeting Location	Meeting Themes/Topics
		Association	Gaithersburg	
04-2-2013	Community briefing	Milestone Homeowners Association	William B. Gibbs, Jr. Elementary School, Germantown	Why delay on Phase II of the project; plans for digital platform signage; BRT impact on traffic signal operations; cost estimates; communication of Area Advisory Committee process; fuel used by buses; relationship of CCT to Observation Drive extension; planned modifications to width of Observation Drive
05-01-2013	Community briefing	The Oaks at Washingtonian Woods Homeowners Association	Washingtonian Woods Clubhouse, Gaithersburg	Frequency of service; construction schedule; responsibility of design work; project funding; travel time; size of stations; inclusion of bike trails; construction impacts to traffic; hours of operation
12-5-2013	Community briefing	Mission Hills Homeowners Association	Church of Jesus Christ of the Latter Day Saints – Kentlands, Gaithersburg	Noise; traffic; access; alignment and; ridership
01-29-2014	Community briefing	Lakelands Homeowners Association	Lakelands Community Clubhouse, Gaithersburg	Noise; traffic; operations; access; alignment
05-20-2013	Community briefing	Mission Hills Homeowners Association	Church of Jesus Christ of the Latter Day Saints – Kentlands, Gaithersburg	Alignment; stormwater management; traffic movements
06-3-2014	Community briefing	Montgomery Village Foundation Transportation, Development, and Public Facilities Committee	North Creek Community Center, Gaithersburg	Integration with county BRT; alignment; cost (design, operating, overall)
07-24-2014	Community briefing	Decoverly I Homeowners	University of Phoenix,	Funding; parking; project timeline

Date	Meeting Type	Meeting Name	Meeting Location	Meeting Themes/Topics
		Association	Gaithersburg	
09-17-2014	Community briefing	Vistas at Washingtonian Woods Homeowners Association	Washingtonian Woods l Clubhouse, Gaithersburg	Alignment; noise
09-30-2014	Community briefing	Washingtonian Woods Homeowners Association	Washingtonian Woods Clubhouse, Gaithersburg	Alignment
Community Events				
09-16-2012	Community event	Celebrate Gaithersburg	Diamond and Summit Avenue intersection, Gaithersburg	Concerns about eliminating vehicle traffic lanes; project funding and federal funding commitment; travel times; odds of actually building project; appreciation for the availability of the commuter bus and MARC information
09-22-2012	Community event	Community Day at the Universities at Shady Grove	Universities at Shady Grove Campus, Rockville	Concerns about eliminating vehicle traffic lanes; project funding and federal funding commitment; appreciation expressed for the availability of the commuter bus and MARC information
10-13-2012	Community event	Montgomery Village Fall Festival	North Creek Community Center, Gaithersburg	Additional outreach requests from Montgomery County Council and Montgomery Village Foundation Board of Directors
10-14-2012	Community event	21st Annual Oktoberfest at the Kentlands	Main Street/Market Square, Gaithersburg	Definition and choice of BRT; impact to existing bus service to Shady Grove Metro
10-21-2012	Community event	King Farm Fall Festival	King Farm Saddle Ridge Community Center, Rockville	Alignment and traffic impacts on King Farm Boulevard; state share of project funding; doubts about project being built; convenience, positive comparison to BRT in other cities; preference of BRT over light rail; public transportation from Shady Grove to Johns Hopkins Hospital and University in Baltimore; references to recent articles in the Washington Post and Gazette newspapers casting doubt about the project

Date	Meeting Type	Meeting Name	Meeting Location	Meeting Themes/Topics
				funding and voicing community opposition.
11-17-2012	Community event	Montgomery County Thanksgiving Day Parade	Downtown Silver Spring	The event drew large crowds of people from the entire metropolitan area, particularly the Latino community, which had a large number of parade participants and watchers.
11-17-2012	Community event	Run Under the Lights/Winter Lights Festival in Seneca Creek Park	Seneca Creek State Park, Gaithersburg	Specific community request to provide information at their community event.
03-16-2013	Community event	Montgomery County Department of Environmental Protection and the Washington Suburban Sanitary Commission's H2O Summit	Activity Center at Bohrer Park, Rockville	Alignment clarification and selection; water run-off management; funding; I-270 congestion
04-6-2013	Community event	Lakelands Community Clean-Up Day	In front of Lakelands Clubhouse, Gaithersburg	Informal event provided a great opportunity to connect with the Lakelands community—In addition to dialogue with residents; information (newsletters, BRT cards) was displayed in the community clubhouse.
04-27-2013	Community event	Montgomery County Housing Fair and Financial Fitness Day	Activity Center at Bohrer Park, Rockville	Public transport into northern Montgomery and Frederick Counties; new state gasoline sales tax and CCT funding; more information was requested on ICC express bus routes; concerns were expressed regarding low ICC usage
05-4-2013	Community event	Kentlands Day	Downtown Kentlands, Gaithersburg	Why were buses the chosen mode of transportation; inclusion of bike trails; bus service to the area north of Metropolitan Grove; more awareness needed of bus route 201 (from Gaithersburg to BWI); need to improve travel time; how to keep informed about the project
05-6-2013	Community event	Active Aging Expo	Activity Center at Bohrer Park, Rockville	Support for the project; public transportation in general
07-6-2013	Community event	Quince Orchard	In front of	Mode selection (BRT vs LRT); location of Kentlands Station

Date	Meeting Type	Meeting Name	Meeting Location	Meeting Themes/Topics
		Independence Day Festival	Quince Orchard Park Community Center, Gaithersburg	
08-06-2013	Community event	National Night Out Observance at the Kentlands	Kentlands Clubhouse, Gaithersburg	Mode selection (BRT vs LRT); bicycle trails; project schedule; public information update.
08-(9-17)-2013	Community event	Montgomery County Agricultural Fair	Montgomery County Fairgrounds, Gaithersburg	Speed/travel time; schedule; costs to construct; traffic impacts; alignment; fare; current transit service; security
08-31-2013	Community event	Kentlands Community Foundation 5K	Kentlands Main Street/Market Square Plaza, Gaithersburg	Project schedule; alignment; neighborhood impacts
09-2-2013	Community event	Gaithersburg Labor Day Parade	Olde Towne area of Gaithersburg (E. Diamond Avenue)	Project schedule; alignment
10-6-2013	Community event	King Farm Festival	King Farm Saddle Ridge Community Center, Rockville	Alignment along King Farm Boulevard; project schedule; positive impact on property values; pedestrian safety
10-12-2013	Community event	Montgomery Village Fall Festival	North Creek Community Center, Gaithersburg	Riding time; addition of Lake Forest Mall Shuttle
10-13-2013	Community event	Oktoberfest at the Kentlands	Main Street/Market Square, Gaithersburg	Riding time; environmental impacts; positive real estate impact; schedule; fare; Ride On and WMATA bus considerations
03-15-2014	Community event	St. Patrick's Day Parade	Rockville	Timeline to completion; cost to ride

Date	Meeting Type	Meeting Name	Meeting Location	Meeting Themes/Topics
03-22-2014	Community event	Montgomery County Department of Environmental Protection and the Washington Suburban Sanitary Commission's H2O Summit	Activity Center at Bohrer Park, Rockville	Environmental impacts
05-3-2014	Community event	Kentlands Day	Downtown Kentlands, Gaithersburg	Project timeline; connection to MTA 201 bus; AAC process status
05-3-2014	Community event	Montgomery County Housing Fair and Financial Fitness Day	Activity Center at Bohrer Park, Rockville	Payment tender; smart cards; mode
05-5-2014	Community event	Active Aging Expo	Activity Center at Bohrer Park, Rockville	Ridership cost; station stop in/near Montgomery Village; project timeline
06-8-2014	Community event	Celebrate Gaithersburg	Diamond and Summit Avenue intersection, Gaithersburg	Project timeline; ridership cost; CCT vs Montgomery County Rapid Transit System
10-5-2014	Community event	King Farm Fall Festival	King Farm Saddle Ridge Community Center, Rockville	Funding; county approval; street closures; tree removal along King Farm Boulevard
10-11-2014	Community event	Montgomery Village Fall Festival	North Creek Community Center, Gaithersburg	Funding; connections with Ride On; public meeting accessibility to transit dependent community
10-12-2014	Community event	Oktoberfest at the Kentlands	Main Street/Market Square, Gaithersburg	Project timeline; alignment at intersections

Date	Meeting Type	Meeting Name	Meeting Location	Meeting Themes/Topics
07-4-2014	Community event	Montgomery Village 4th of July Celebration	Montgomery Village, Gaithersburg	Project costs; completion date; station stop in/near Montgomery Village
08-(8-16)-2014	Community event	Montgomery County Agricultural Fair	Montgomery County Fairgrounds, Gaithersburg	Vehicle type; timeline; AAC progress; coordination with County; integration with Ride On
09-01-2014	Community event	Gaithersburg Labor Day Parade	Olde Towne area of Gaithersburg (E. Diamond Avenue)	Timeline of project completion; funding; tax increase
Community Meeting				
01-28-2013	Community meeting	District Two Town Hall Meeting Presentation sponsored by Montgomery County Council Member Craig Rice	Black Rock Center for the Arts Main Theatre, Rockville	Why does alignment stop at COMSAT; progress of the schedule; environmental analysis of Phase II of the project
11-18-2013	Community meeting	Upcounty Advisory Board Meeting	Upcounty Regional Services Center, Germantown	Update attendees on the progress of the CCT.
09-9-2014	Community meeting	Great Seneca Science Corridor Master Plan Implementation Advisory Committee	Universities at Shady Grove Campus, Rockville	Overview of the CPOC; Mission Hills studies
10-14-2014	Community meeting	Great Seneca Science Corridor Master Plan Implementation Advisory Committee	Universities at Shady Grove Campus, Rockville	Detailed discussion of the CPOC and Mission Hills studies.
10-20-2014	Community meeting	Upcounty Citizens Advisory Board- Land	Upcounty Regional Services	Project update; alignment discussion

Date	Meeting Type	Meeting Name	Meeting Location	Meeting Themes/Topics
		Use Committee	Center, Germantown	
Area Advisory Committee				
03-06-2014	Community meeting	Area Advisory Committee One Meeting #1	Lakelands Clubhouse, Gaithersburg	Welcome and introduction to the AACs; developed topics for future discussion.
03-11-2014	Community meeting	Area Advisory Committee Three Meeting #1	Ingleside at King Farm, Rockville	Welcome and introduction to the AACs; developed topics for future discussion.
03-13-2014	Community meeting	Area Advisory Committee Two Meeting #1	Universities at Shady Grove, Rockville	Welcome and introduction to the AACs; developed topics for future discussion.
05-07-2014	Community meeting	Area Advisory Committee Two Meeting #2	Universities at Shady Grove, Rockville	Review of CCT Alignment.
05-13-2014	Community meeting	Area Advisory Committee Three Meeting #2	Ingleside at King Farm, Rockville	Review of CCT Alignment.
05-14-2017	Community meeting	Area Advisory Committee One Meeting #2	Lakelands Clubhouse, Gaithersburg	Review of CCT Alignment.
06-16-2014	Community meeting	Area Advisory Committee Three Walking Tour	701 King Farm Blvd, Rockville	Tour of the proposed alignment.
07-16-2014	Community meeting	Area Advisory Committee Two Meeting #3	Universities at Shady Grove, Rockville	Traffic Process Overview
07-23-2014	Community meeting	Area Advisory Committee One Meeting #3	Lakelands Clubhouse, Gaithersburg	Traffic Process Overview
08-25-2014	Community meeting	Area Advisory Committee Three Meeting #3	Ingleside at King Farm, Rockville	Traffic Process Overview

Date	Meeting Type	Meeting Name	Meeting Location	Meeting Themes/Topics
09-11-2014	Community meeting	Area Advisory Committee One Meeting #4	Lakelands Clubhouse, Gaithersburg	Urban design
09-17-2014	Community meeting	Area Advisory Committee Two Meeting #4	Universities at Shady Grove, Rockville	Urban Design
09-22-2014	Community meeting	Area Advisory Committee Three Meeting #4	Ingleside at King Farm, Rockville	Urban Design
Presentation				
10-24-2013	Presentation	Transportation Forum/ Gaithersburg-Germantown Chamber of Commerce	Gaithersburg	Update attendees on the progress of CCT.
Targeted EJ Outreach				
10-5-2013	EJ outreach	Giant #0150	Outside storefront, Gaithersburg	Grocery store outreach for upcoming CCT Open House
10-12-2013	EJ outreach	Giant #0320	Outside storefront, Gaithersburg	Grocery store outreach for upcoming CCT Open House
10-12-2013	EJ outreach	Giant #0368	Outside storefront, Gaithersburg	Grocery store outreach for upcoming CCT Open House
10-19-2013	EJ outreach	All African Food Stores, LLC	Outside storefront, Gaithersburg	Grocery store outreach for upcoming CCT Open House.
11-27-2013	EJ outreach	Giant #1050	Outside storefront, Gaithersburg	Grocery store outreach for inviting people to join an AAC
11-30-2013	EJ outreach	King Farm Safeway	Outside	Grocery store outreach for inviting people to join an AAC

Date	Meeting Type	Meeting Name	Meeting Location	Meeting Themes/Topics
			storefront, Rockville	
Open House Meetings				
10-30-2013	Public Open House	CCT Open House	Universities at Shady Grove Campus, Rockville	Update attendees on the progress of CCT. Themes: localized noise and parking impacts; request for alignment modifications near Muddy Branch Road and King Farm Boulevard; need for public art included in amenities.

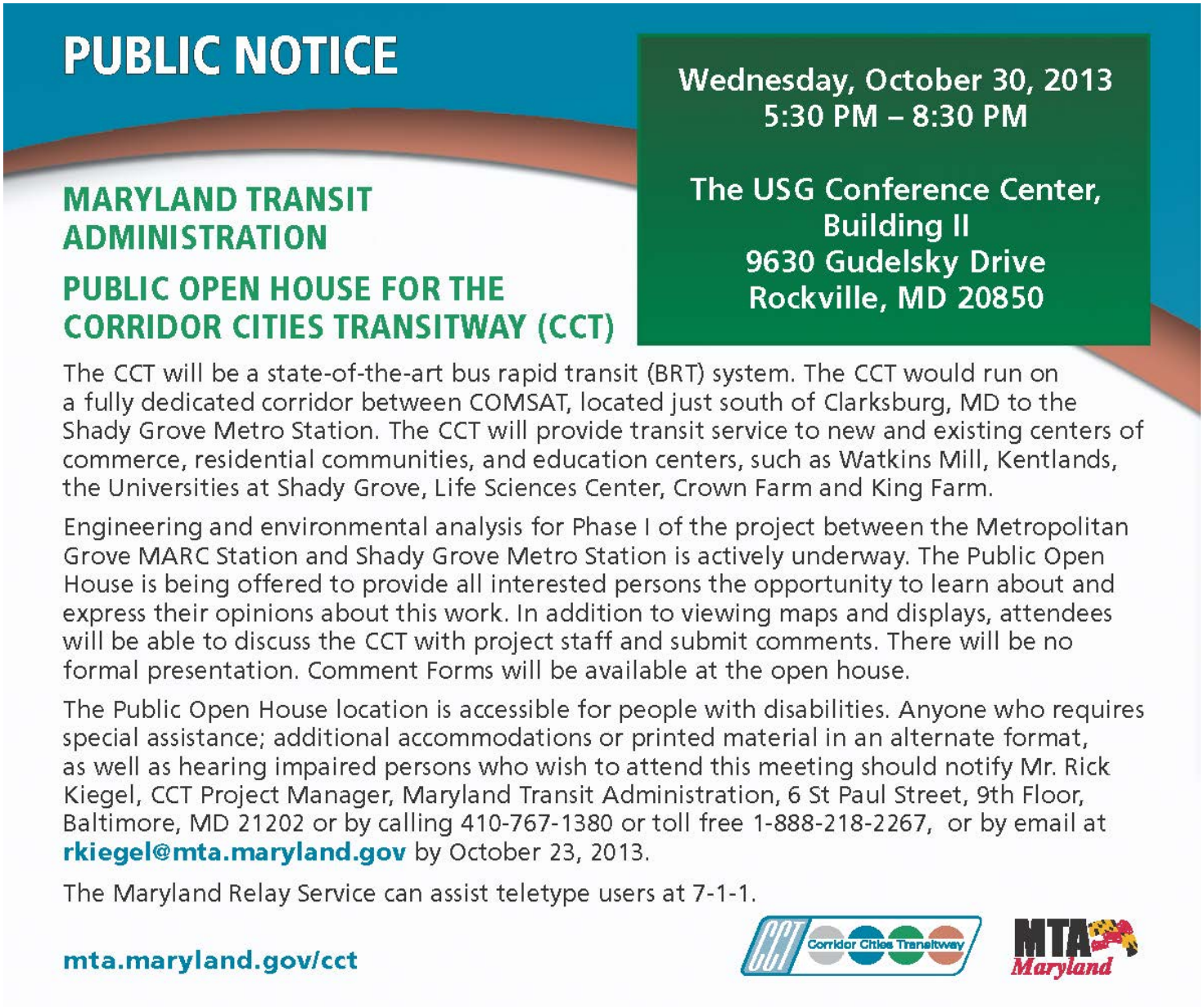
Table 2: EJ Community Concerns and MTA Actions and Responses

EJ Community	Representative Neighborhood(s)	Census Tract, Block Group	Issues/Concerns	MTA Actions and Responses
North Potomac	Stonebridge	7006.07 1	No specific issues	No action required
	Barrington			
	DuFief Mill	7006.07 2	• Impacts to Belward Farm	• Community meetings held and coordination with Montgomery County
	Hunting Hill Woods	7006.07 3	No specific issues	No action required
	Stonebridge			
	Garden Grove			
Metropolitan Grove	Caulfield	7007.06 1	No specific issues	No action required
	Orchard Pond		• Impacts of Watkins Mill Road Extension • Hiker/biker trail	• Watkins Mill Road is a SHA project. The SHA team was asked to attend the Public Open House Meeting to provide an update on the project.
	Clopper	7007.06 2	No specific issues	No action required
	Parkridge estates			
	Bennington			
	Dorsey estates			
Shady Grove Village	The Fields Germantown	7008.16 2	No specific issues	No action required
	The Reserve at Crown Point I			
Belward	Washingtonian Towns	7008.16 3	No specific issues	No action required
	The Reserve at Crown Point II		No specific issues	No action required
	The Greens at Warther		No specific issues	No action required
	Mission Hills		• Access to Muddy Branch	• MTA held multiple community

EJ Community	Representative Neighborhood(s)	Census Tract, Block Group	Issues/Concerns	MTA Actions and Responses
			• Noise Effects • Property Acquisition • Alignment Selection • Stormwater Management	meetings • Reviewed community presented alignment study for feasibility • Noise walls determined beneficial for Washingtonian Woods not Mission Hills • Community-wide Town Hall Meeting held to address concerns • Door-to-door outreach, postcards and newsletter used to encourage public comment
Park Summit	Park Summit	7008.16 4	No specific issues	No action required
Washingtonian Center	Gateway Park Townhouses	7008.17 1	No specific issues	No action required
	Avalon Fields Apartments			
Crown Farm	Decoverly I	7008.17 3	• Belward Farm litigation impacts • Impact of future development on alignment • Impact on Ride On bus system	• Community meetings held to discuss alignment • Coordination with RideOn service expanded to cover community concerns
	Decoverly II		No specific issues	No action required
	Decoverly condominiums		• Belward Farm impacts • Property acquisition • Impact on RideOn services	• Community meetings held to discuss alignment and ongoing litigation • Coordination with RideOn service expanded to cover community concerns •
	Avalon at Decoverly		• Public reception	• Community meetings held • Expanded outreach via community events in the corridor

EJ Community	Representative Neighborhood(s)	Census Tract, Block Group	Issues/Concerns	MTA Actions and Responses
Orchard Place	Pheasant Run	7008.2 1	• Location of Kentlands Station	• Community meetings held • Expanded outreach via community events in the corridor • Review of Kentland area development, proposed location confirmed
	Orchard Hills			
	Seneca Mews			
	Grove Park			
	Orchard Place	7008.22 1		
	Brown Station estates			
	Potomac Oaks condominiums			
Quince Orchard Park	Quince Orchard Park	7008.29 1	• Connectivity with other local transit systems • Property acquisition, • Pedestrian bridge over Great Seneca Highway	• Community meetings held • City of Gaithersburg has plans to construct a pedestrian bridge over Great Seneca Highway as a separate project
Universities at Shady Grove	The Willows	7012.21 2	• Concerns about eliminating vehicle traffic lanes • Access to CCT alignment	• Added an additional service, CCT Service via Universities at Shady Grove, to serve the campus and surrounding neighborhoods
	Avalon			
King Farm	King Farm, The Residences at King Farm	7007.18 1	• Closure of Reserve Champion • Noise • Alignment	• Traffic assessment was completed resulting in keeping Reserve Champion Drive open and closing another cross street • Additional noise monitoring locations considered, all resulted in no noise impacts per FTA guidance • MTA completed an alignment feasibility study, determined Master Plan Alignment was best location


NOTIFICACIÓN PÚBLICA
Miércoles 30 de octubre de 2013
5:30 PM – 8:30 PM
The USG Conference Center, Building II
9630 Gudelsky Drive
Rockville, MD 20850
ADMINISTRACIÓN DE TRÁNSITO DE MARYLAND
JORNADA PÚBLICA A PUERTAS ABIERTAS PARA LA VÍA DE TRANSPORTE DEL CORREDOR DE LA CIUDAD (CCT)
La Vía de Transporte del Corredor de la Ciudad (CCT, por sus siglas en inglés) consistirá en un sistema de vanguardia para el tránsito rápido de autobuses (BRT, por sus siglas en inglés). La CCT funcionará en un corredor plenamente dedicado entre COMSAT, ubicada justo al sur de Clarksburg, MD hasta la estación de subte de Shady Grove. La CCT proporcionará servicios de tránsito a centros comerciales, comunidades residenciales y centros educativos nuevos y existentes, tales como Watkins Mill, Kentlands, las universidades de Shady Grove, Life Sciences Center, Crown Farm y King Farm.
Se encuentran activamente en marcha la ingeniería y el análisis ambiental para la fase I del proyecto entre la estación Metropolitan Grove MARC y la estación de metro de Shady Grove. La jornada pública a puertas abiertas se ofrece para proporcionar a todas las personas interesadas la oportunidad de conocer aspectos de este trabajo y expresar sus opiniones al respecto. Además de ver mapas y presentaciones gráficas, los asistentes podrán analizar la CCT con el personal del proyecto y dejar sus comentarios. No habrá una presentación formal. Los formularios de comentarios estarán disponibles en la jornada a puertas abiertas.
La ubicación elegida para dicha jornada cuenta con espacios de acceso para las personas con discapacidades. Toda persona que requiera asistencia especial, adaptaciones adicionales o material impreso en un formato alternativo, así como las personas con problemas de audición que deseen asistir a esta reunión, deben notificárselo al Sr. Rick Kiegel por escrito a la siguiente dirección: CCT Project Manager, Maryland Transit Administration, 6 St Paul Street, 9th Floor, Baltimore, MD 21202; también pueden hacerlo por teléfono llamando al 410-767-1380 o al número gratuito 1-888-218-2267, o bien por mensaje de correo electrónico escribiendo a rkiegel@mta.maryland.gov antes del 23 de octubre de 2013.
El Servicio de transmisión de Maryland puede ayudar a los usuarios de teletipos llamando al 7-1-1.
mta.maryland.gov/cct
CCT Corridor Cities Transitway
MTA Maryland


PUBLIC NOTICE
Wednesday, October 30, 2013
5:30 PM – 8:30 PM
The USG Conference Center,
Building II
9630 Gudelsky Drive
Rockville, MD 20850
MARYLAND TRANSIT ADMINISTRATION
PUBLIC OPEN HOUSE FOR THE CORRIDOR CITIES TRANSITWAY (CCT)
The CCT will be a state-of-the-art bus rapid transit (BRT) system. The CCT would run on a fully dedicated corridor between COMSAT, located just south of Clarksburg, MD to the Shady Grove Metro Station. The CCT will provide transit service to new and existing centers of commerce, residential communities, and education centers, such as Watkins Mill, Kentlands, the Universities at Shady Grove, Life Sciences Center, Crown Farm and King Farm.
Engineering and environmental analysis for Phase I of the project between the Metropolitan Grove MARC Station and Shady Grove Metro Station is actively underway. The Public Open House is being offered to provide all interested persons the opportunity to learn about and express their opinions about this work. In addition to viewing maps and displays, attendees will be able to discuss the CCT with project staff and submit comments. There will be no formal presentation. Comment Forms will be available at the open house.
The Public Open House location is accessible for people with disabilities. Anyone who requires special assistance; additional accommodations or printed material in an alternate format, as well as hearing impaired persons who wish to attend this meeting should notify Mr. Rick Kiegel, CCT Project Manager, Maryland Transit Administration, 6 St Paul Street, 9th Floor, Baltimore, MD 21202 or by calling 410-767-1380 or toll free 1-888-218-2267, or by email at rkiegel@mta.maryland.gov by October 23, 2013.
The Maryland Relay Service can assist teletype users at 7-1-1.
mta.maryland.gov/cct
CCT Corridor Cities Transitway
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Legend

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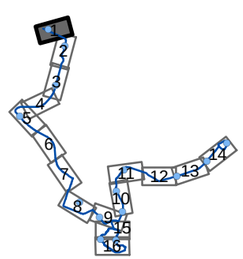

MTA Maryland

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CCT Corridor Cities Transitway

Appendix D. Wetlands, Waters of the US, Soils, Forests, Hedgerows, and Street Trees

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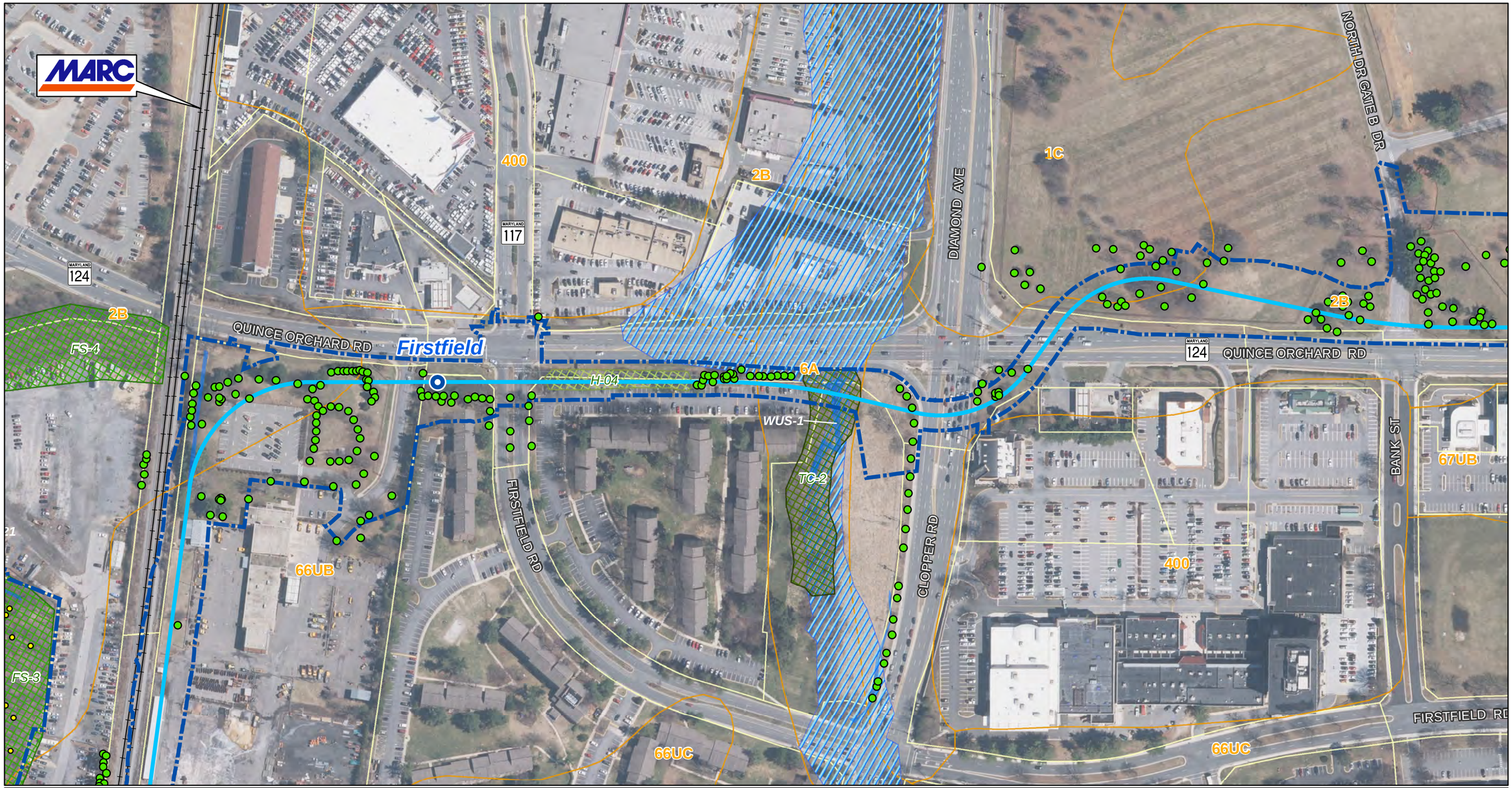

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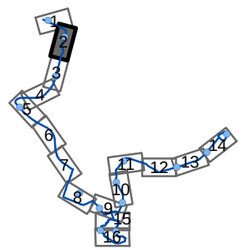

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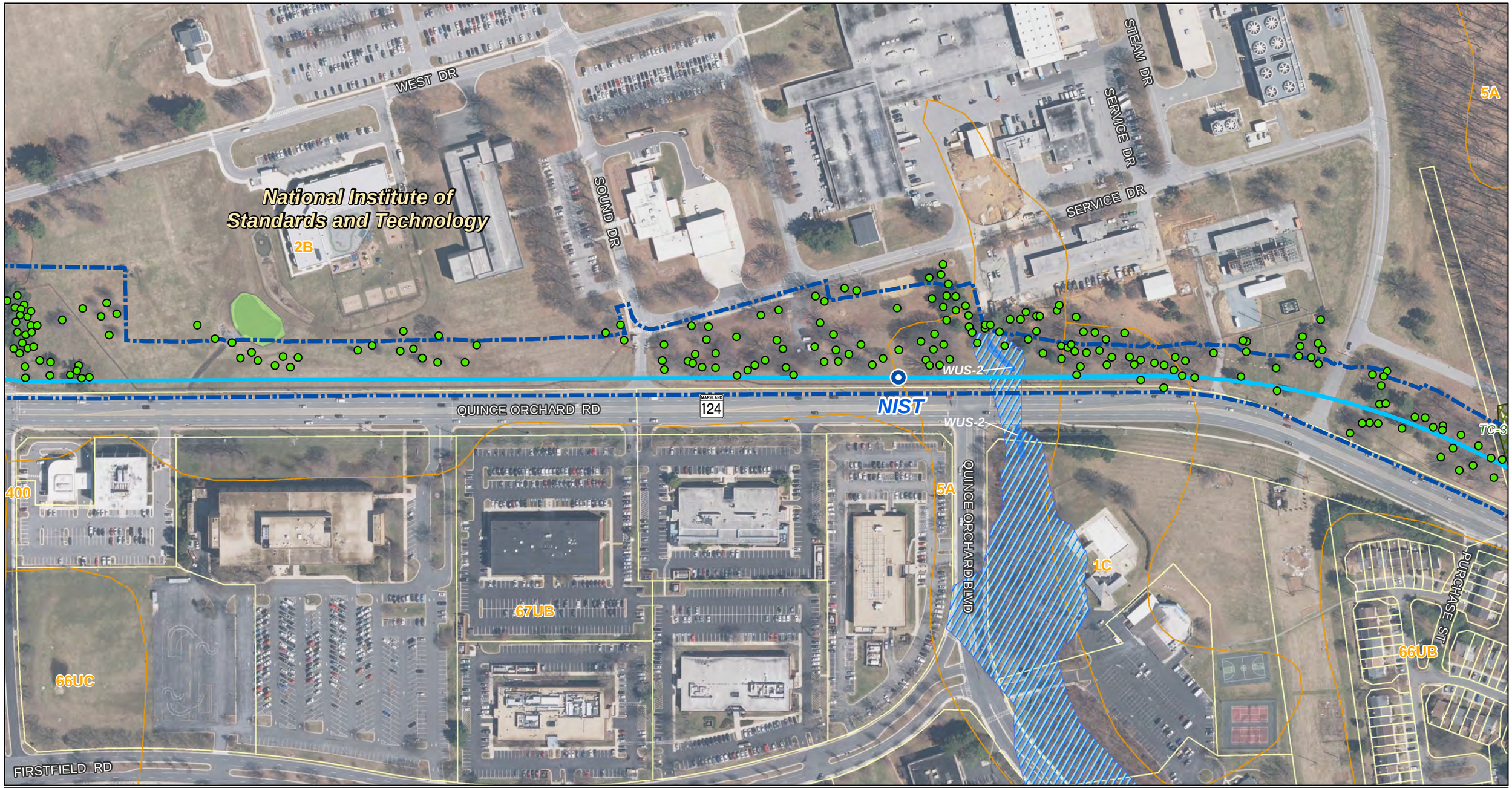

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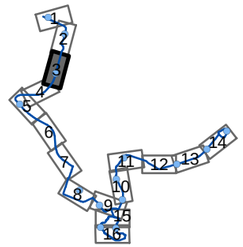

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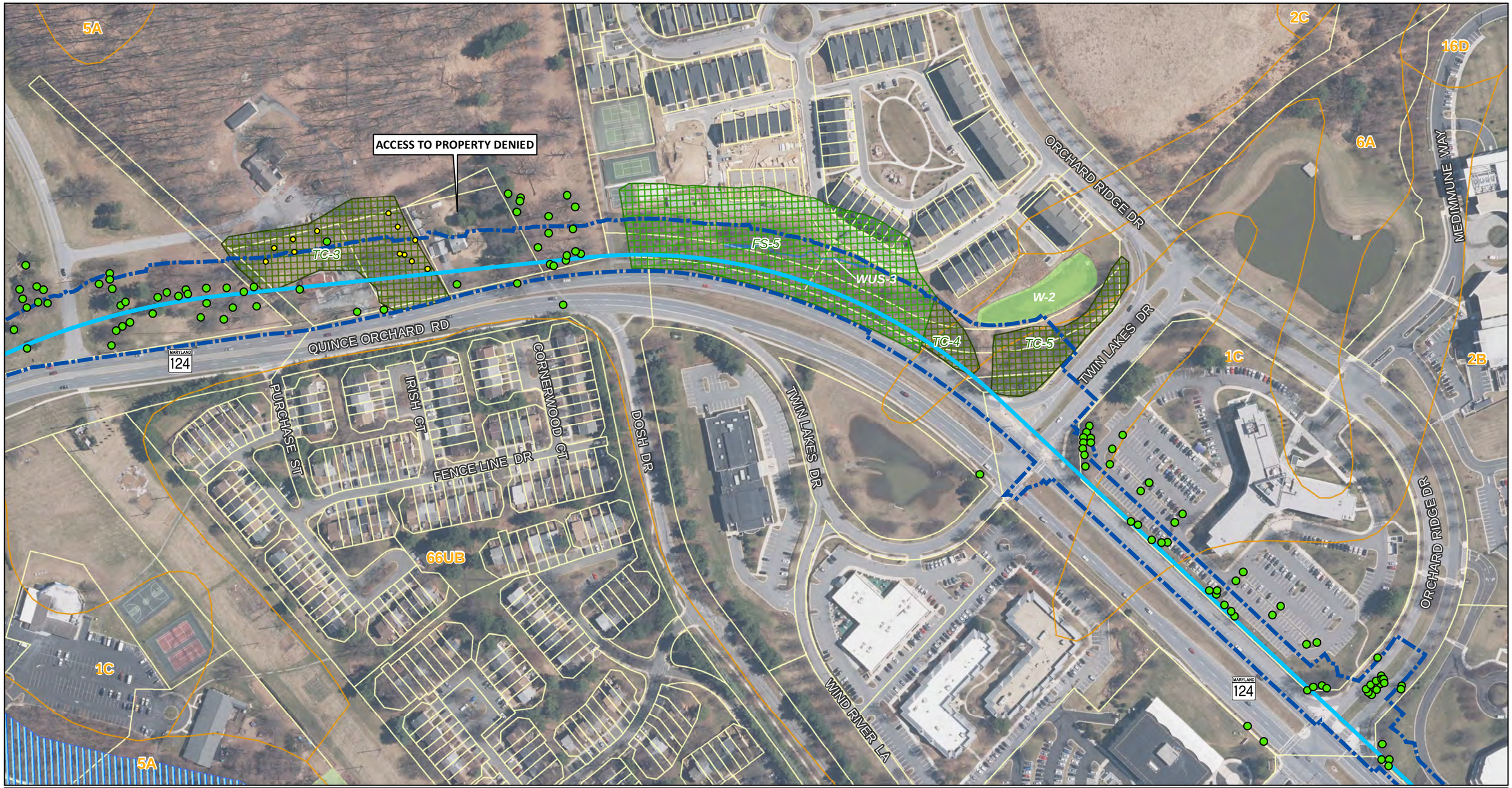

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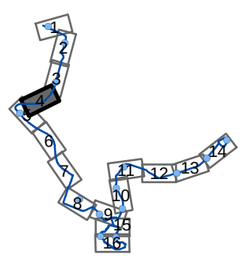

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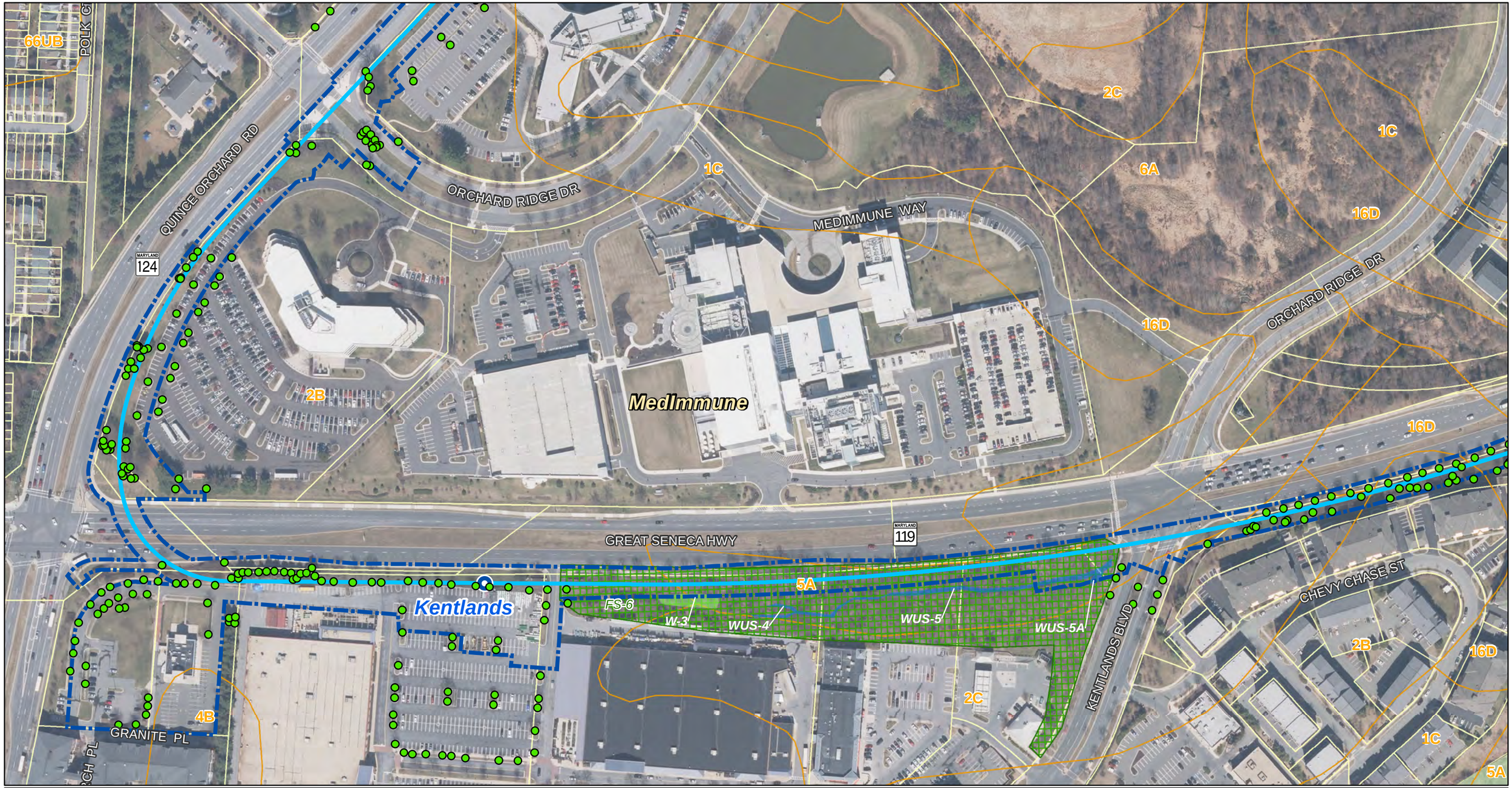

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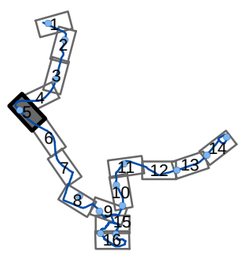

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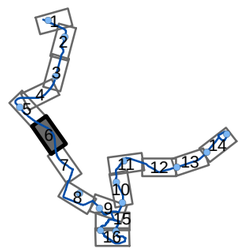

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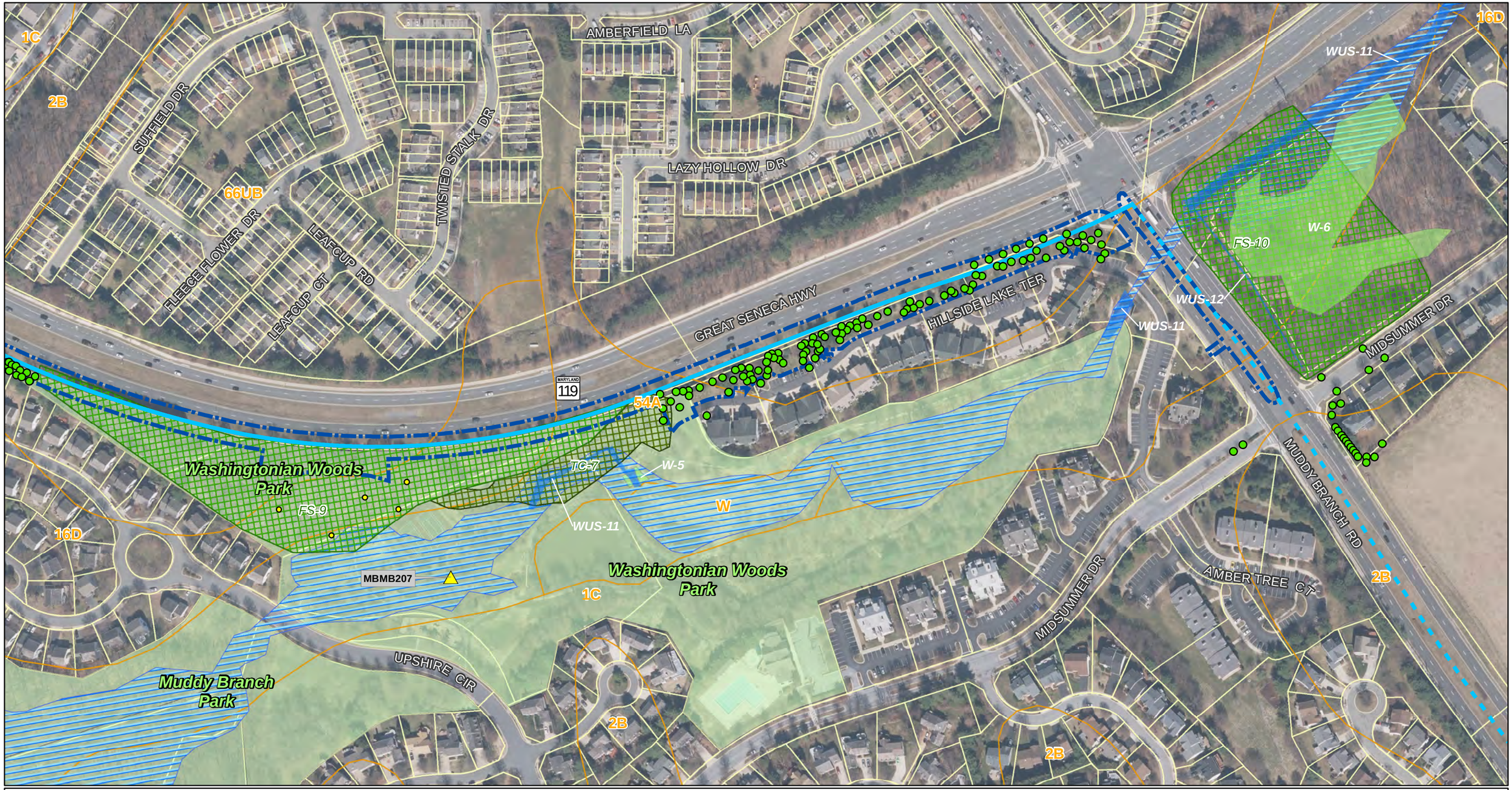

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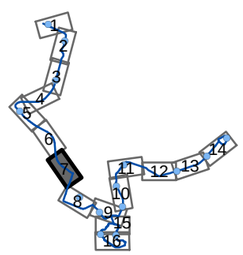

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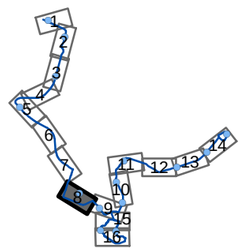

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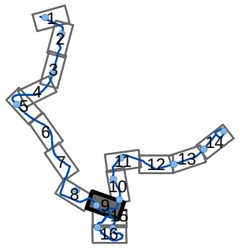

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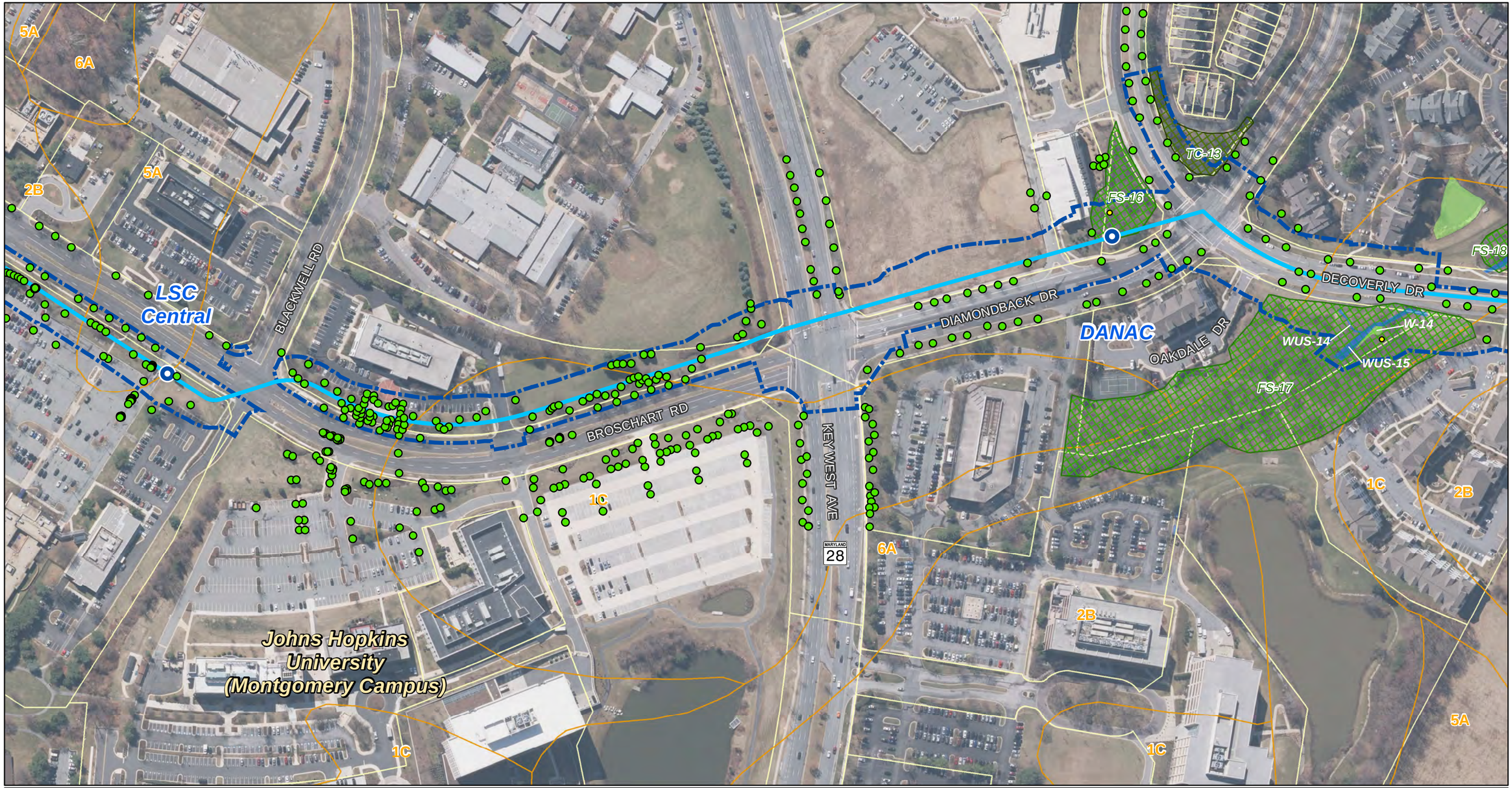

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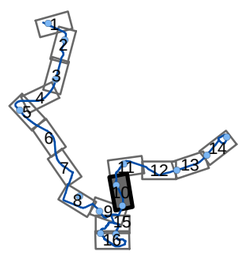

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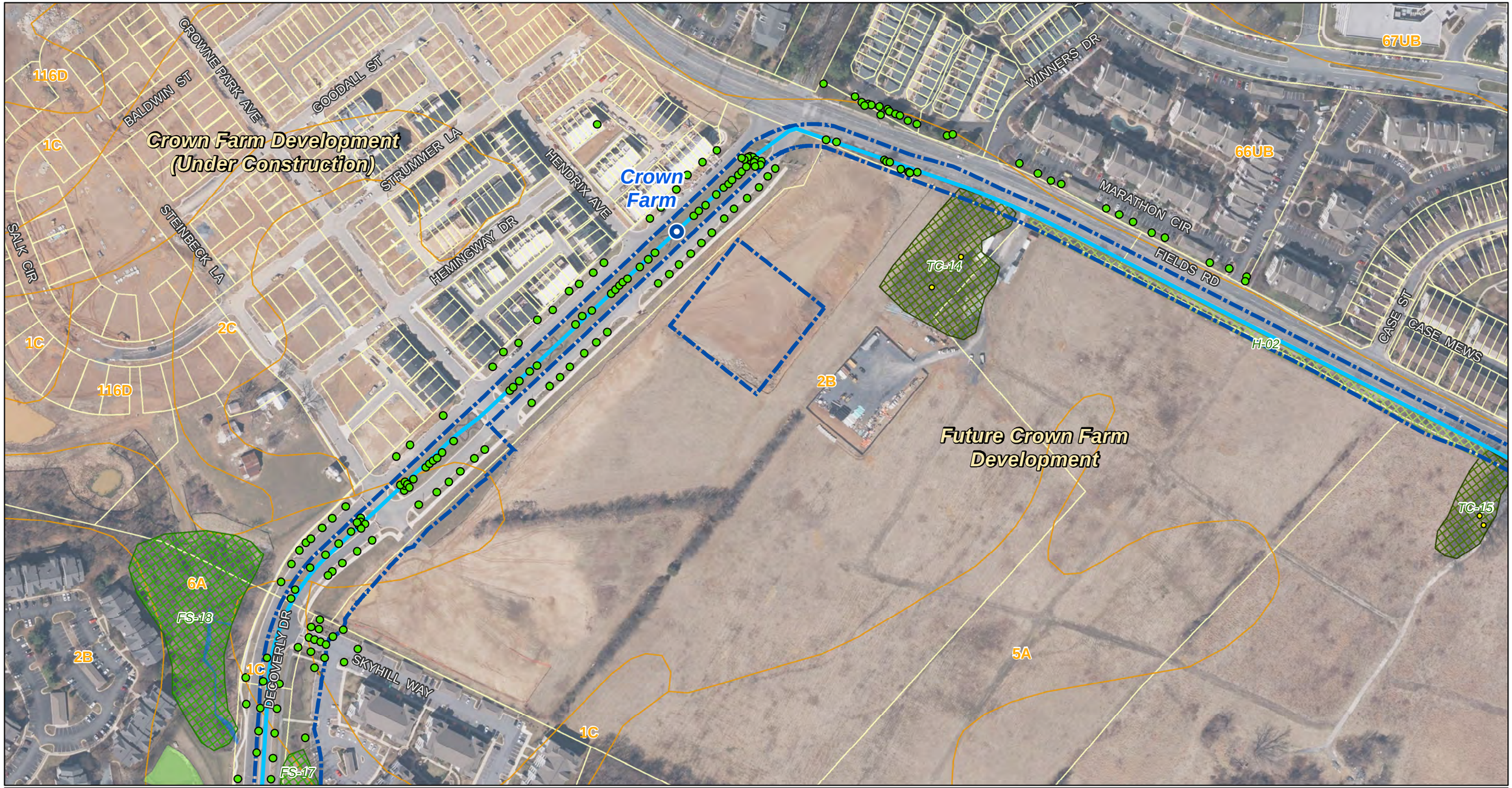

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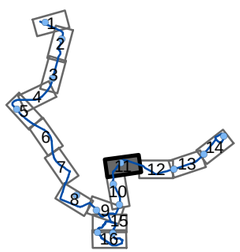

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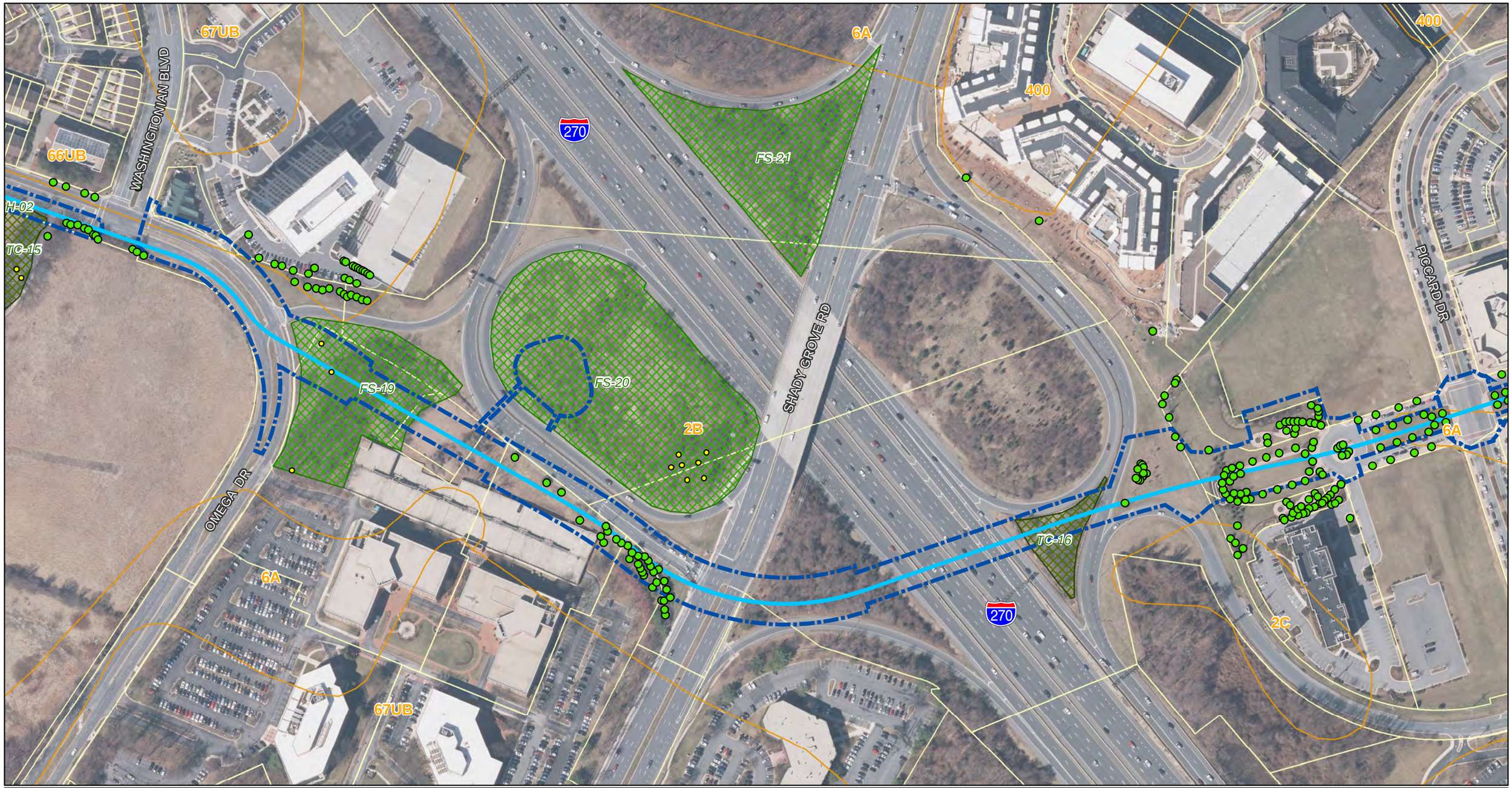

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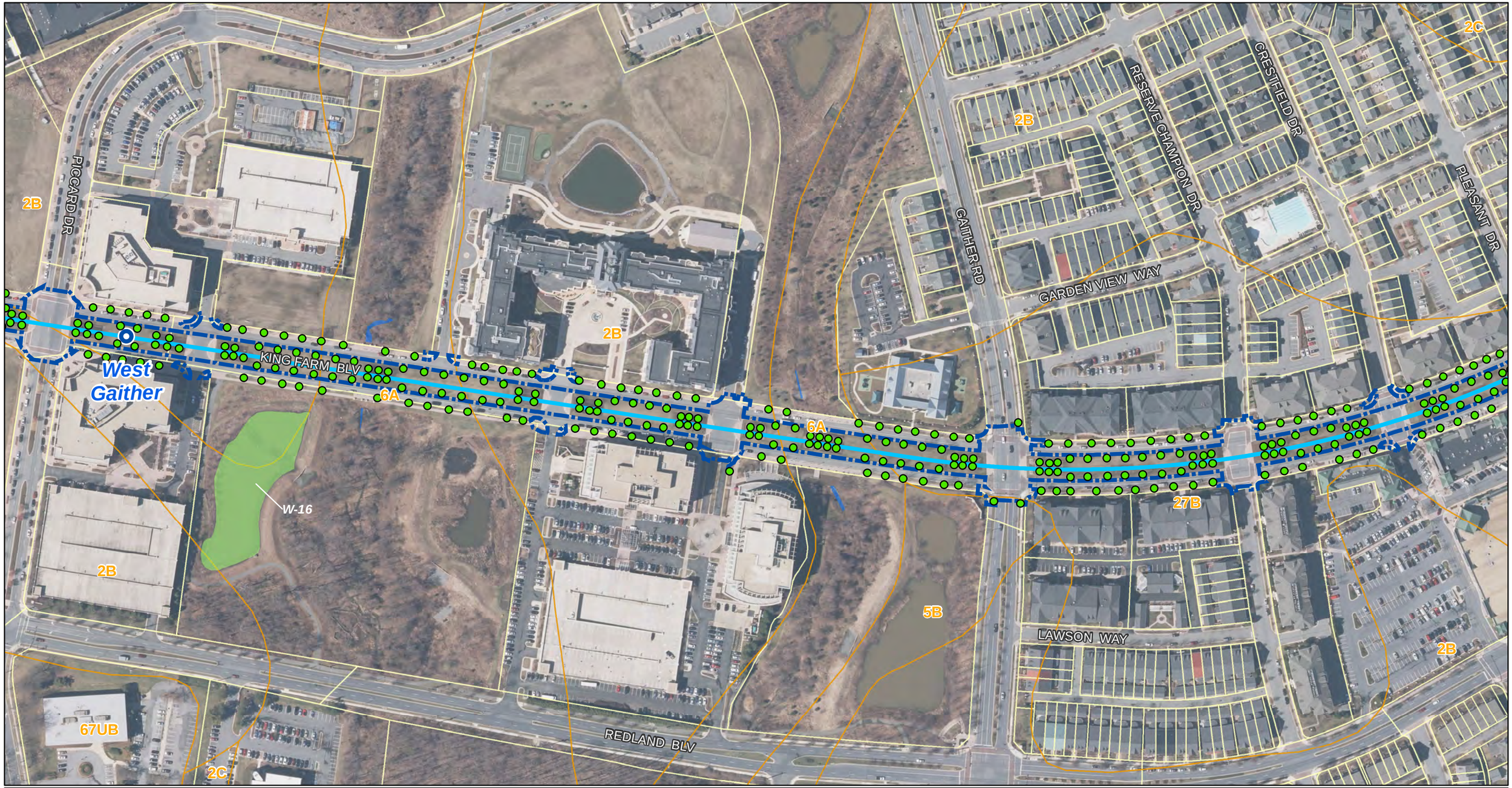

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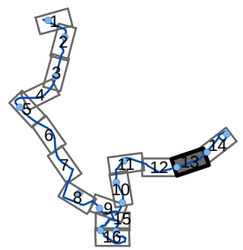

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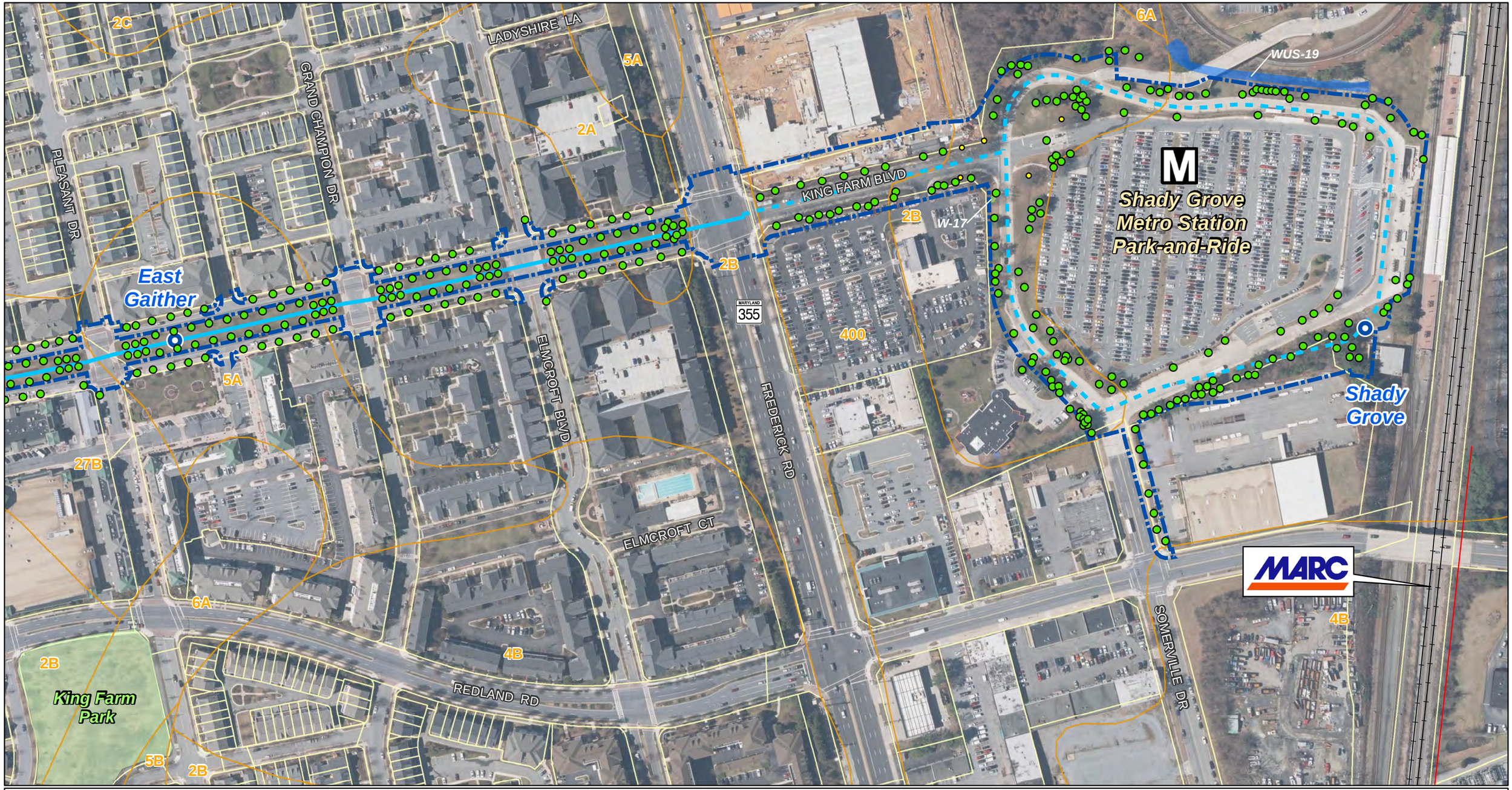

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- Street Tree/Individual Tree (<30" DBH) - Field Verified
- Forest Stands - Field Verified
- Tree Cover - Field Verified
- Hedgerow - Field Verified
- Property Boundaries

MTA Maryland

0 50 100 200 300 400 Feet

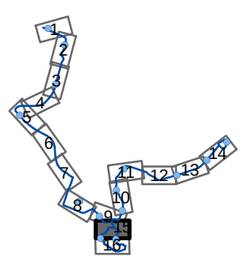
CCT Corridor Cities Transitway

Appendix D. Wetlands, Waters of the US, Soils, Forests, Hedgerows, and Street Trees

Date: 11/11/2015

Legend

- Transitway (CCT Direct Service at Grade)
- Transitway (CCT Direct Service Below Grade)
- Station Locations
- Limits of Disturbance
- MCDEP Water Quality Sampling Stations
- Wetlands - Field Verified
- Waters of the US - Field Verified
- 100 Year Floodplain
- Soils
- Specimen Trees (30" DBH) - Field Verified
- Street Tree/Individual Tree (<30" DBH) - Field Verified
- Forest Stands - Field Verified
- Tree Cover - Field Verified
- Hedgerow - Field Verified
- Property Boundaries



MTA Maryland

0 50 100 200 300 400 Feet

CCT Corridor Cities Transitway

Appendix D. Wetlands, Waters of the US, Soils, Forests, Hedgerows, and Street Trees

Date: 11/11/2015

Traville Gateway Drive

Universities at Shady Grove

Traville Local Parks

GUDELSKY DR

SHADY GROVE RD

TRAVILLE GATEWAY DR

ALTA OAKS DR

ALTA OAKS CUT THRU CUT

37B

35B

28A

2B

6A

5A

FS-14

FS-15

TC-10

TC-11

TC-12

Legend

- Transitway (CCT Direct Service at Grade)
- Transitway (CCT Direct Service Below Grade)
- Station Locations
- Limits of Disturbance
- MCDEP Water Quality Sampling Stations
- Wetlands - Field Verified
- Waters of the US - Field Verified
- 100 Year Floodplain
- Soils
- Specimen Trees (30" DBH) - Field Verified
- Street Tree/Individual Tree (<30" DBH) - Field Verified
- Forest Stands - Field Verified
- Tree Cover - Field Verified
- Hedgerow - Field Verified
- Property Boundaries

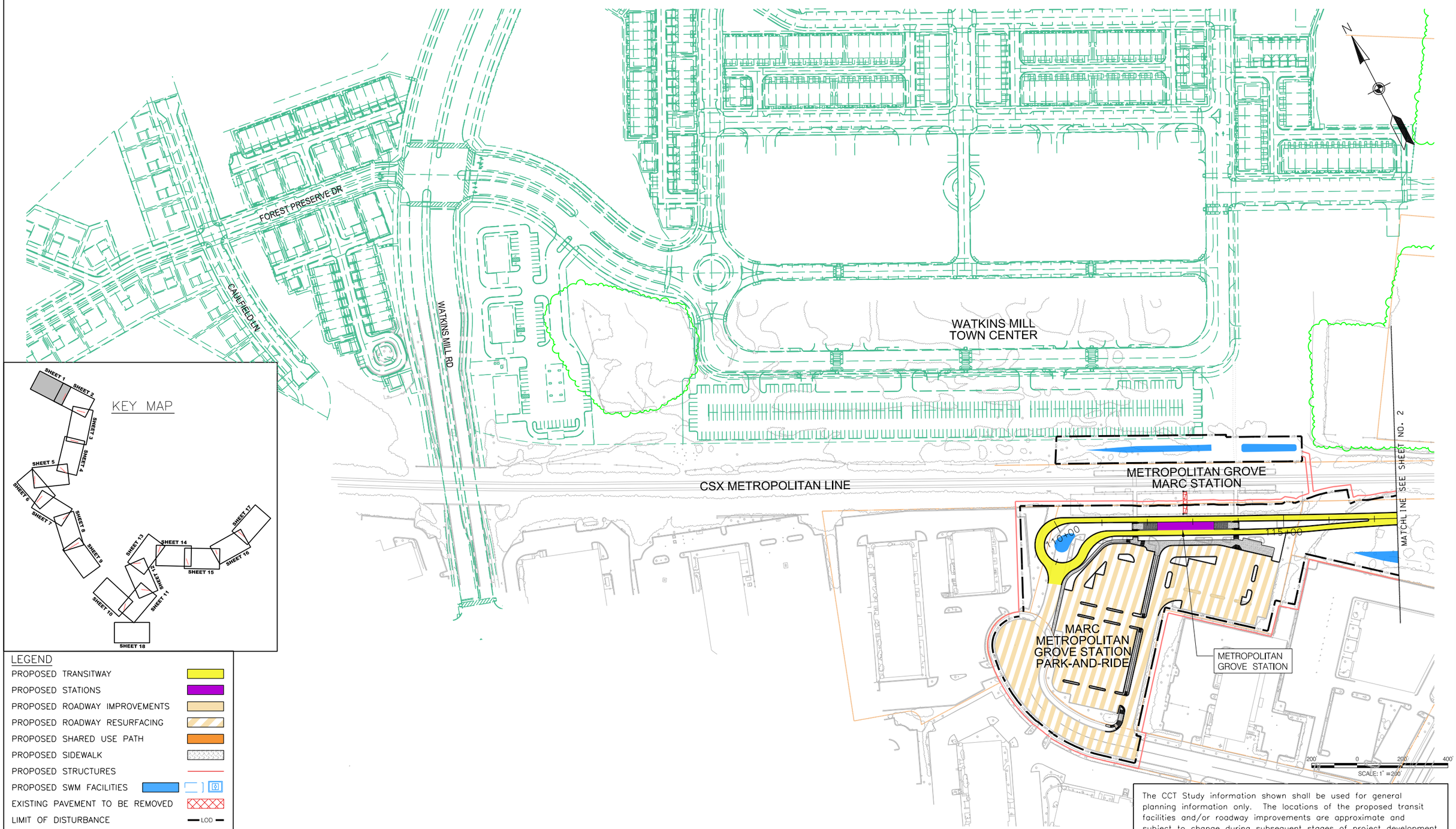
MTA Maryland

0 50 100 200 300 400 Feet

CCT Corridor Cities Transitway

Appendix D. Wetlands, Waters of the US, Soils, Forests, Hedgerows, and Street Trees

Date: 11/11/2015



KEY MAP

LEGEND

- PROPOSED TRANSITWAY
- PROPOSED STATIONS
- PROPOSED ROADWAY IMPROVEMENTS
- PROPOSED ROADWAY RESURFACING
- PROPOSED SHARED USE PATH
- PROPOSED SIDEWALK
- PROPOSED STRUCTURES
- PROPOSED SWM FACILITIES
- EXISTING PAVEMENT TO BE REMOVED
- LIMIT OF DISTURBANCE — LOD —
- TEMPORARY CONSTRUCTION EASEMENT
- PROPOSED DEVELOPMENT BY OTHERS
- EXISTING PROPERTY LINES
- EXISTING WATERS OF THE U.S.
- EXISTING WETLANDS
- PARKS
- FORESTLAND

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MARYLAND DEPARTMENT OF TRANSPORTATION

MARYLAND TRANSIT ADMINISTRATION

MTA Maryland

CCT Corridor Cities Transitway

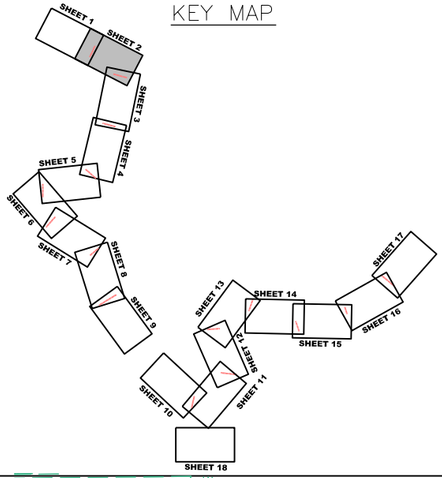
CORRIDOR CITIES TRANSITWAY ENVIRONMENTAL ASSESSMENT

STA 109+50 TO STA 117+50

DATE: APRIL 2017 SCALE: 1"=100'

APPENDIX D
SHEET NO.
1 of 18

KEY MAP



LEGEND

- PROPOSED TRANSITWAY
- PROPOSED STATIONS
- PROPOSED ROADWAY IMPROVEMENTS
- PROPOSED ROADWAY RESURFACING
- PROPOSED SHARED USE PATH
- PROPOSED SIDEWALK
- PROPOSED STRUCTURES
- PROPOSED SWM FACILITIES
- EXISTING PAVEMENT TO BE REMOVED
- LIMIT OF DISTURBANCE — LOD —
- TEMPORARY CONSTRUCTION EASEMENT
- PROPOSED DEVELOPMENT BY OTHERS
- EXISTING PROPERTY LINES
- EXISTING WATERS OF THE U.S.
- EXISTING WETLANDS
- PARKS
- FORESTLAND

200' 0 200' 400'
SCALE: 1" =200'

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MARYLAND DEPARTMENT OF TRANSPORTATION
MARYLAND TRANSIT ADMINISTRATION
MTA Maryland

CCT Corridor Cities Transitway

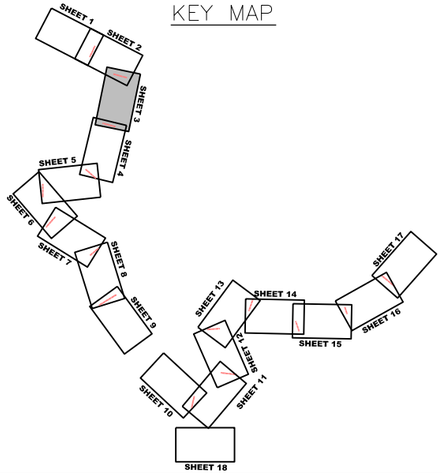
CORRIDOR CITIES TRANSITWAY
ENVIRONMENTAL ASSESSMENT

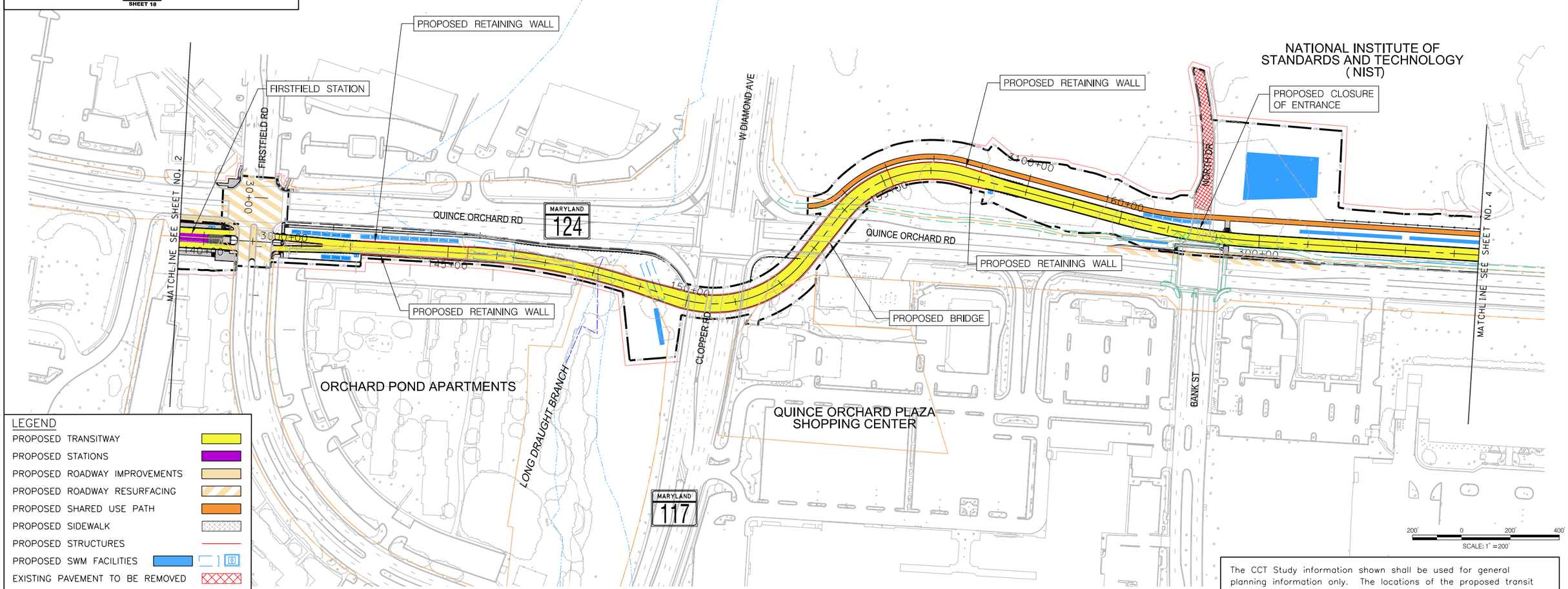
STA 117+50 TO STA 139+50

DATE: APRIL 2017 SCALE: 1"=100'

APPENDIX D
SHEET NO.
2 of 18

KEY MAP





LEGEND

- PROPOSED TRANSITWAY
- PROPOSED STATIONS
- PROPOSED ROADWAY IMPROVEMENTS
- PROPOSED ROADWAY RESURFACING
- PROPOSED SHARED USE PATH
- PROPOSED SIDEWALK
- PROPOSED STRUCTURES
- PROPOSED SWM FACILITIES
- EXISTING PAVEMENT TO BE REMOVED
- LIMIT OF DISTURBANCE — LOD —
- TEMPORARY CONSTRUCTION EASEMENT
- PROPOSED DEVELOPMENT BY OTHERS
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MARYLAND DEPARTMENT OF TRANSPORTATION
MARYLAND TRANSIT ADMINISTRATION
MTA Maryland

CCT Corridor Cities Transitway

CORRIDOR CITIES TRANSITWAY
ENVIRONMENTAL ASSESSMENT

STA 139+50 TO STA 304+50

DATE: APRIL 2017 SCALE: 1"=100'

APPENDIX D
SHEET NO.
3 of 18

NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY (NIST)

PROPOSED NIST ENTRANCE ROAD

SOUND RD

QUINCE ORCHARD RD

QUINCE ORCHARD BLVD

SOUTH DR

MARYLAND 124

N.I.S.T. STATION

PROPOSED CLOSURE OF INTERSECTION

MATCHLINE SEE SHEET NO. 3

MATCHLINE SEE SHEET NO. 5

305+00 310+00 315+00 320+00 325+00 330+00

N

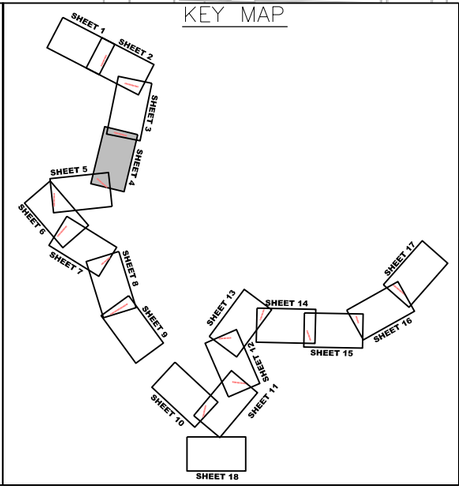
200' 0 200' 400'

SCALE: 1" =200'

LEGEND

- PROPOSED TRANSITWAY
- PROPOSED STATIONS
- PROPOSED ROADWAY IMPROVEMENTS
- PROPOSED ROADWAY RESURFACING
- PROPOSED SHARED USE PATH
- PROPOSED SIDEWALK
- PROPOSED STRUCTURES
- PROPOSED SWM FACILITIES
- EXISTING PAVEMENT TO BE REMOVED
- LIMIT OF DISTURBANCE — LOD —
- TEMPORARY CONSTRUCTION EASEMENT
- PROPOSED DEVELOPMENT BY OTHERS
- EXISTING PROPERTY LINES
- EXISTING WATERS OF THE U.S.
- EXISTING WETLANDS
- PARKS
- FORESTLAND

KEY MAP



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MARYLAND DEPARTMENT OF TRANSPORTATION

MARYLAND TRANSIT ADMINISTRATION

MTA Maryland

CCT Corridor Cities Transitway

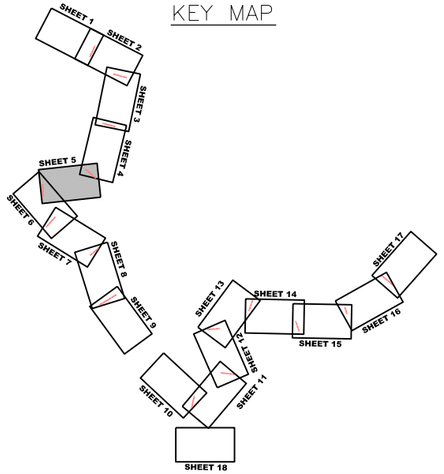
CORRIDOR CITIES TRANSITWAY ENVIRONMENTAL ASSESSMENT

STA 304+50 TO STA 332+50

DATE: APRIL 2017 SCALE: 1"=100'

APPENDIX D
SHEET NO.
4 of 18

KEY MAP



LEGEND

- PROPOSED TRANSITWAY
- PROPOSED STATIONS
- PROPOSED ROADWAY IMPROVEMENTS
- PROPOSED ROADWAY RESURFACING
- PROPOSED SHARED USE PATH
- PROPOSED SIDEWALK
- PROPOSED STRUCTURES
- PROPOSED SWM FACILITIES
- EXISTING PAVEMENT TO BE REMOVED
- LIMIT OF DISTURBANCE — LOD —
- TEMPORARY CONSTRUCTION EASEMENT
- PROPOSED DEVELOPMENT BY OTHERS
- EXISTING PROPERTY LINES
- EXISTING WATERS OF THE U.S.
- EXISTING WETLANDS
- PARKS
- FORESTLAND

200' 0 200' 400'
SCALE: 1" = 200'

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MARYLAND DEPARTMENT OF TRANSPORTATION
MARYLAND TRANSIT ADMINISTRATION
MTA Maryland

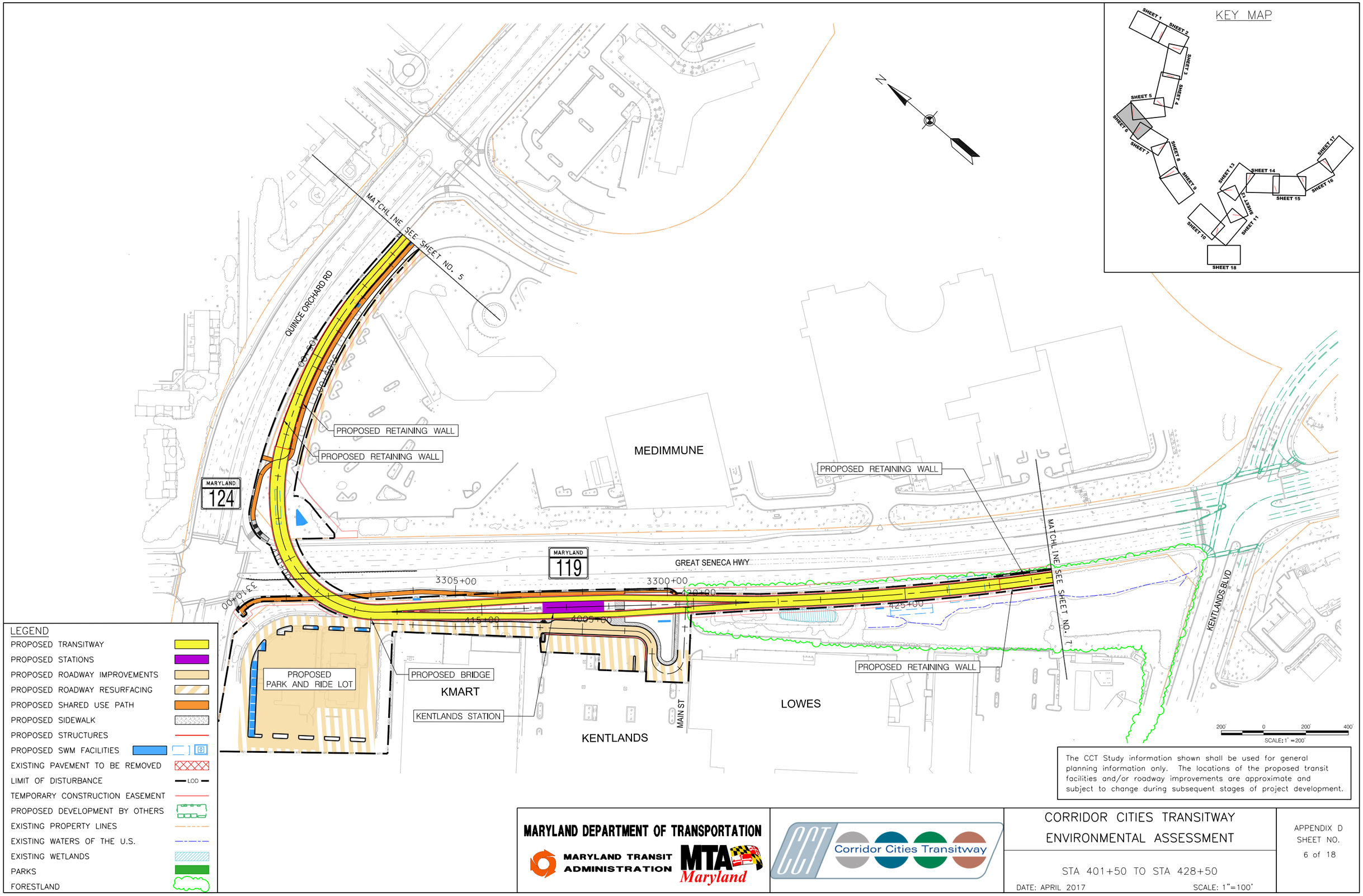
CCT Corridor Cities Transitway

CORRIDOR CITIES TRANSITWAY
ENVIRONMENTAL ASSESSMENT

STA 332+50 TO STA 401+50

DATE: APRIL 2017 SCALE: 1"=100'

APPENDIX D
SHEET NO.
5 of 18



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MARYLAND DEPARTMENT OF TRANSPORTATION
MARYLAND TRANSIT ADMINISTRATION
MTA Maryland

Corridor Cities Transitway

CORRIDOR CITIES TRANSITWAY ENVIRONMENTAL ASSESSMENT

STA 401+50 TO STA 428+50

DATE: APRIL 2017 SCALE: 1"=100'

APPENDIX D
SHEET NO.
6 of 18

MEDIMMUNE

PROPOSED RETAINING WALL

PROPOSED RETAINING WALL

PROPOSED RETAINING WALL

PROPOSED CULVERT EXTENSION

GREAT SENECA HWY

GREAT SENECA HWY

MARYLAND 119

SWANTON LN

TANNERY DR

ORCHARD RIDGE DR

CHEVY CHASE ST

KENTLANDS BLVD

LAKELANDS DR

MUDDY BRANCH PARK

MATCHLINE SEE SHEET NO. 6

MATCHLINE SEE SHEET NO. 8

3400+00

430+00

60+00

435+00

440+00

445+00

450+00

455+00

N

200' 0 200' 400'

SCALE: 1" = 200'

LEGEND

- PROPOSED TRANSITWAY
- PROPOSED STATIONS
- PROPOSED ROADWAY IMPROVEMENTS
- PROPOSED ROADWAY RESURFACING
- PROPOSED SHARED USE PATH
- PROPOSED SIDEWALK
- PROPOSED STRUCTURES
- PROPOSED SWM FACILITIES
- EXISTING PAVEMENT TO BE REMOVED
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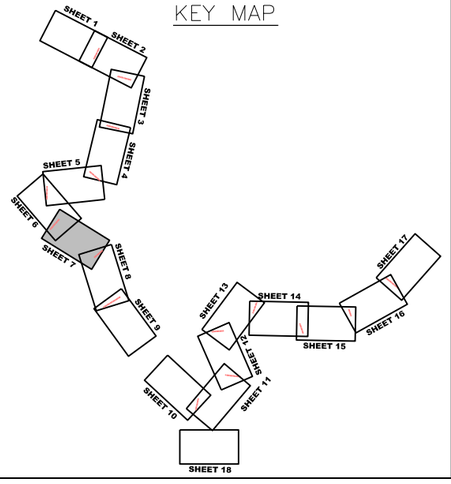
- PROPOSED DEVELOPMENT BY OTHERS
- EXISTING PROPERTY LINES
- EXISTING WATERS OF THE U.S.
- EXISTING WETLANDS
- PARKS
- FORESTLAND

KEY MAP



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MARYLAND DEPARTMENT OF TRANSPORTATION

MARYLAND TRANSIT ADMINISTRATION

MTA Maryland

CCT Corridor Cities Transitway

CORRIDOR CITIES TRANSITWAY ENVIRONMENTAL ASSESSMENT

STA 428+50 TO STA 456+50

DATE: APRIL 2017 SCALE: 1"=100'

APPENDIX D
SHEET NO.
7 of 18

EXISTING GREAT SENECA HIGHWAY BRIDGE (SHA STRUCTURE NO. 1517600)

PROPOSED BRIDGE

PROPOSED RETAINING WALL

PROPOSED RETAINING WALL

MATCHLINE SEE SHEET NO. 7

MATCHLINE SEE SHEET NO. 9

460+00

465+00

470+00

475+00

480+00

GREAT SENECA HWY

MARYLAND 119

HIGH GABLES DR

SHADOW GLEN CT

SUFFIELD DR

SMOOTHLEAF LN

UPSHIRE CIR

MUDDY BRANCH

MUDDY BRANCH PARK

WASHINGTONIAN WOODS

N

200' 0 200' 400'

SCALE: 1" =200'

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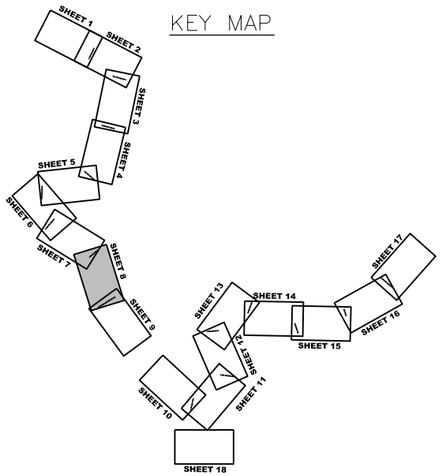
LEGEND

- PROPOSED TRANSITWAY
- PROPOSED STATIONS
- PROPOSED ROADWAY IMPROVEMENTS
- PROPOSED ROADWAY RESURFACING
- PROPOSED SHARED USE PATH
- PROPOSED SIDEWALK
- PROPOSED STRUCTURES
- PROPOSED SWM FACILITIES
- EXISTING PAVEMENT TO BE REMOVED
- LIMIT OF DISTURBANCE — LOD —
- TEMPORARY CONSTRUCTION EASEMENT
- PROPOSED DEVELOPMENT BY OTHERS
- EXISTING PROPERTY LINES
- EXISTING WATERS OF THE U.S.
- EXISTING WETLANDS
- PARKS
- FORESTLAND

KEY MAP



MARYLAND DEPARTMENT OF TRANSPORTATION

MARYLAND TRANSIT ADMINISTRATION

MTA Maryland

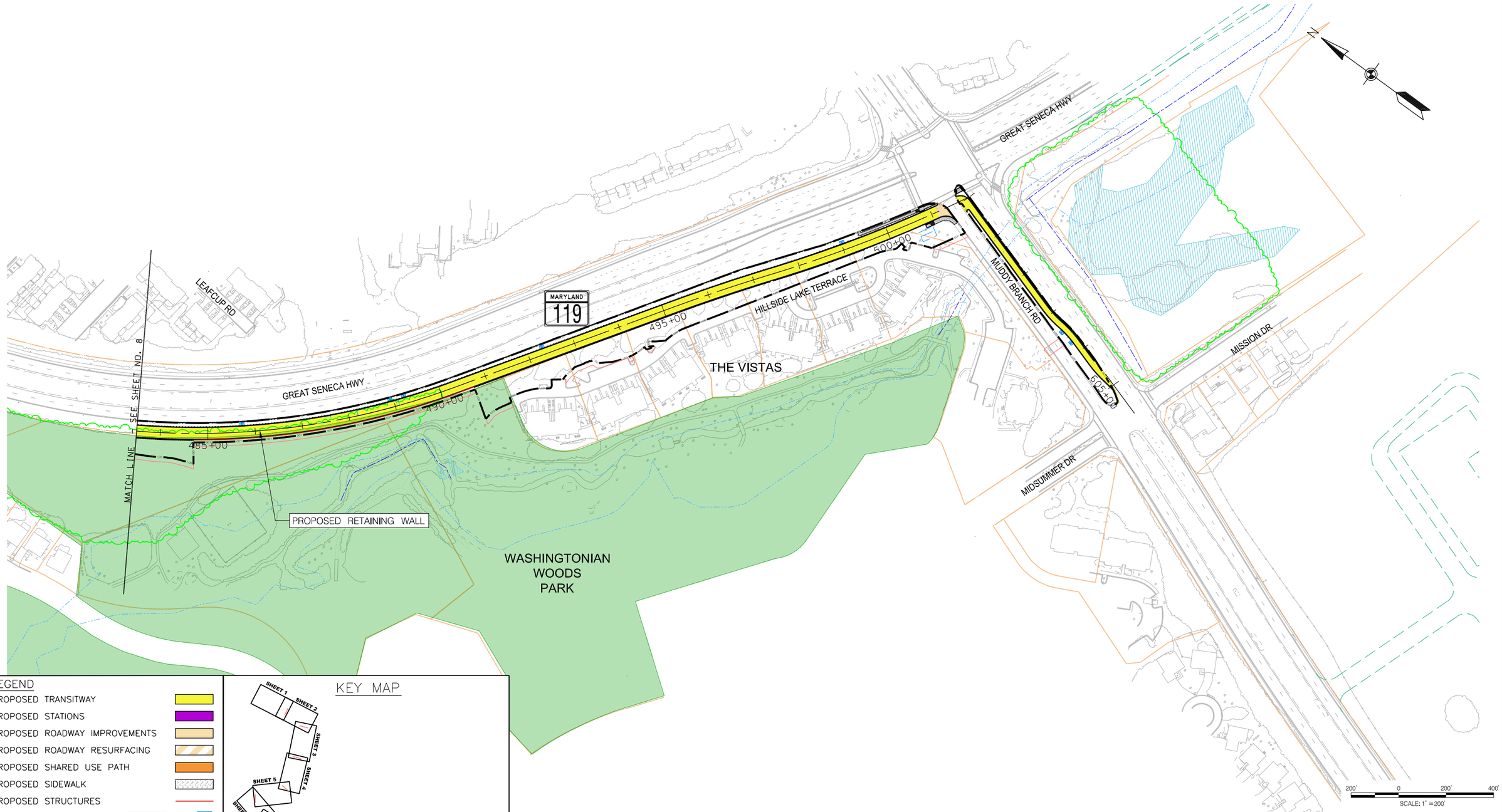
CCT Corridor Cities Transitway

CORRIDOR CITIES TRANSITWAY ENVIRONMENTAL ASSESSMENT

STA 456+50 TO STA 483+50

DATE: APRIL 2017 SCALE: 1"=100'

APPENDIX D
SHEET NO.
8 of 18



LEGEND

- PROPOSED TRANSITWAY
- PROPOSED STATIONS
- PROPOSED ROADWAY IMPROVEMENTS
- PROPOSED ROADWAY RESURFACING
- PROPOSED SHARED USE PATH
- PROPOSED SIDEWALK
- PROPOSED STRUCTURES
- PROPOSED SWM FACILITIES
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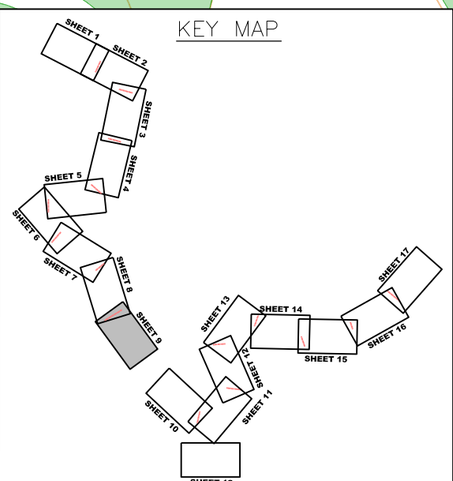
- PROPOSED DEVELOPMENT BY OTHERS
- EXISTING PROPERTY LINES
- EXISTING WATERS OF THE U.S.
- EXISTING WETLANDS
- PARKS
- FORESTLAND

KEY MAP



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MARYLAND DEPARTMENT OF TRANSPORTATION

MARYLAND TRANSIT ADMINISTRATION

MTA Maryland

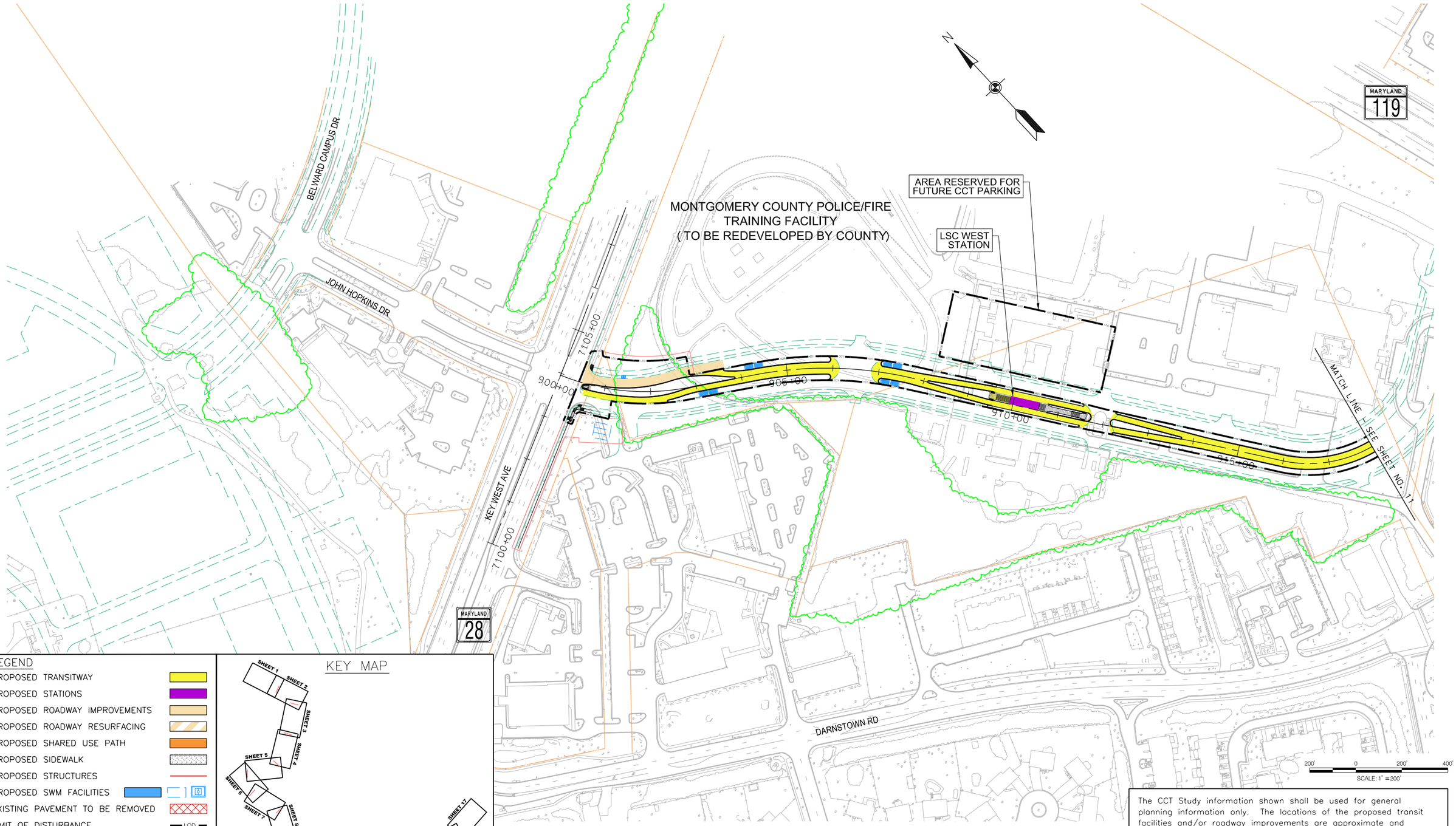
Corridor Cities Transitway

CORRIDOR CITIES TRANSITWAY ENVIRONMENTAL ASSESSMENT

STA 483+50 TO STA 605+00

DATE: APRIL 2017 SCALE: 1"=100'

APPENDIX D
SHEET NO.
9 of 18



LEGEND

- PROPOSED TRANSITWAY
- PROPOSED STATIONS
- PROPOSED ROADWAY IMPROVEMENTS
- PROPOSED ROADWAY RESURFACING
- PROPOSED SHARED USE PATH
- PROPOSED SIDEWALK
- PROPOSED STRUCTURES
- PROPOSED SWM FACILITIES
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- LIMIT OF DISTURBANCE — LOD —
- TEMPORARY CONSTRUCTION EASEMENT
- PROPOSED DEVELOPMENT BY OTHERS
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- EXISTING WETLANDS
- PARKS
- FORESTLAND

KEY MAP

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MARYLAND DEPARTMENT OF TRANSPORTATION

MARYLAND TRANSIT ADMINISTRATION

MTA Maryland

CCT Corridor Cities Transitway

CORRIDOR CITIES TRANSITWAY
ENVIRONMENTAL ASSESSMENT

STA 900+00 TO STA 918+00

DATE: APRIL 2017 SCALE: 1"=100'

APPENDIX D
SHEET NO.
10 of 18

MARYLAND 119

MATCH LINE - SEE SHEET NO. 10

MATCH LINE - SEE SHEET NO. 12

GREAT SENECA HWY

MEDICAL CENTER DR

MEDICAL CENTER WAY

BROSCHART RD

BLACKWELL RD

LSC CENTRAL STATION

KATHERINE THOMAS SCHOOL

SHADY GROVE ADVENTIST HOSPITAL

8100+00

8125+00

9000+00

9100+00

9200+00

1005+00

1100+00

1105+00

1115+00

10+00

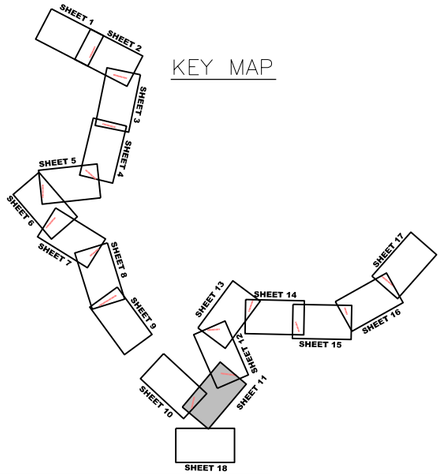
20+00

N

200' 0 200' 400'

SCALE: 1" =200'

KEY MAP



LEGEND

- PROPOSED TRANSITWAY
- PROPOSED STATIONS
- PROPOSED ROADWAY IMPROVEMENTS
- PROPOSED ROADWAY RESURFACING
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MARYLAND DEPARTMENT OF TRANSPORTATION

MARYLAND TRANSIT ADMINISTRATION

MTA Maryland

CCT Corridor Cities Transitway

CORRIDOR CITIES TRANSITWAY ENVIRONMENTAL ASSESSMENT

STA 918+00 TO STA 1116+00

DATE: APRIL 2017 SCALE: 1"=100'

APPENDIX D
SHEET NO.
11 of 18

PROPOSED DANAC
RESIDENTIAL DEVELOPMENT

DANAC STATION

PROPOSED CULVERT
EXTENSION

BROSCHART RD

DIAMONDBACK DR

DECOVERLY DR

OAKDALE DR

KEY WEST AVE

MATCH LINE - SEE SHEET NO. 11

MATCH LINE - SEE SHEET NO. 13

20+00
1120+00
1125+00
11005+00
1205+00
11010+00
1305+00
1310+00
1315+00

N

200' 0 200' 400'
SCALE: 1"=200'

LEGEND

- PROPOSED TRANSITWAY
- PROPOSED STATIONS
- PROPOSED ROADWAY IMPROVEMENTS
- PROPOSED ROADWAY RESURFACING
- PROPOSED SHARED USE PATH
- PROPOSED SIDEWALK
- PROPOSED STRUCTURES
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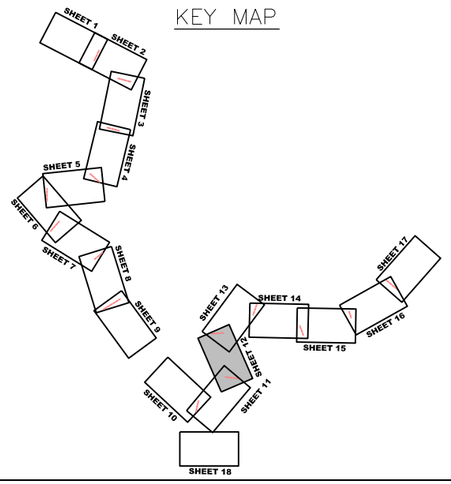
- EXISTING PROPERTY LINES
- EXISTING WATERS OF THE U.S.
- EXISTING WETLANDS
- PARKS
- FORESTLAND

KEY MAP



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MARYLAND DEPARTMENT OF TRANSPORTATION
MARYLAND TRANSIT ADMINISTRATION
MTA Maryland

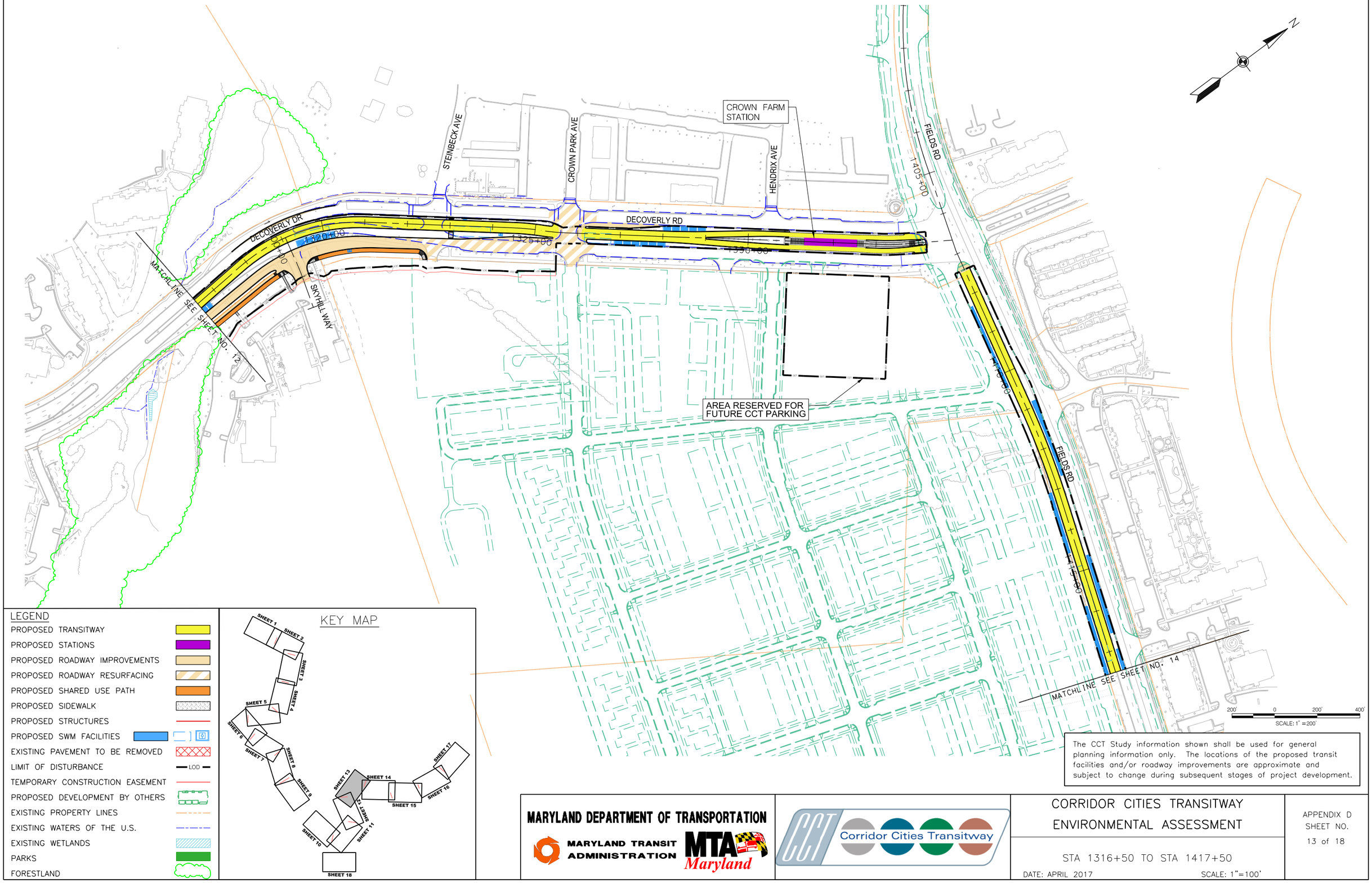
Corridor Cities Transitway

CORRIDOR CITIES TRANSITWAY
ENVIRONMENTAL ASSESSMENT

STA 1116+00 TO 1316+50

DATE: APRIL 2017 SCALE: 1"=100'

APPENDIX D
SHEET NO.
12 of 18



LEGEND

- PROPOSED TRANSITWAY
- PROPOSED STATIONS
- PROPOSED ROADWAY IMPROVEMENTS
- PROPOSED ROADWAY RESURFACING
- PROPOSED SHARED USE PATH
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- PARKS
- FORESTLAND

KEY MAP

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MARYLAND DEPARTMENT OF TRANSPORTATION

MARYLAND TRANSIT ADMINISTRATION

MTA Maryland

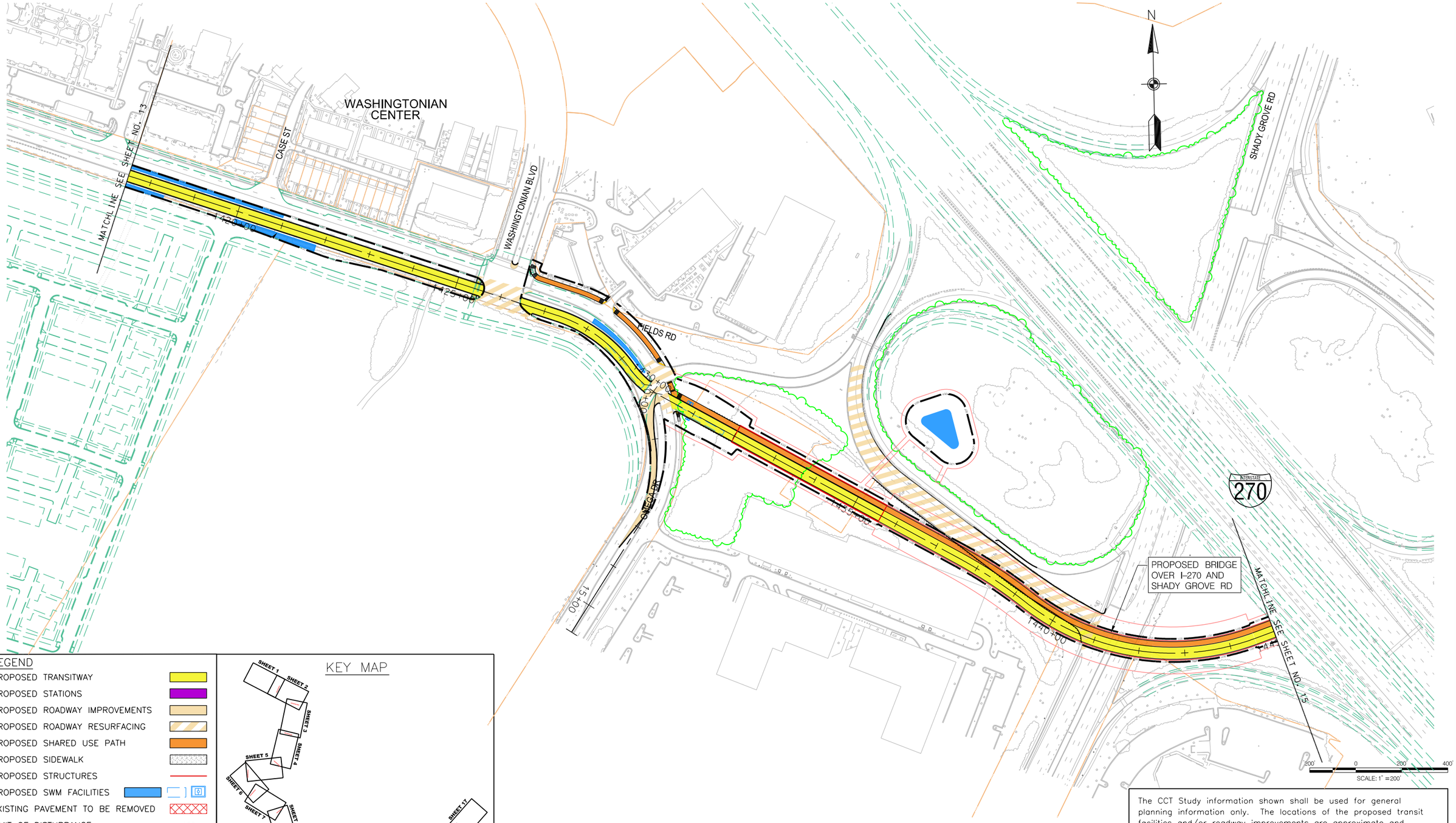
CCT Corridor Cities Transitway

CORRIDOR CITIES TRANSITWAY ENVIRONMENTAL ASSESSMENT

STA 1316+50 TO STA 1417+50

DATE: APRIL 2017 SCALE: 1"=100'

APPENDIX D
SHEET NO.
13 of 18



LEGEND

- PROPOSED TRANSITWAY
- PROPOSED STATIONS
- PROPOSED ROADWAY IMPROVEMENTS
- PROPOSED ROADWAY RESURFACING
- PROPOSED SHARED USE PATH
- PROPOSED SIDEWALK
- PROPOSED STRUCTURES
- PROPOSED SWM FACILITIES
- EXISTING PAVEMENT TO BE REMOVED
- LIMIT OF DISTURBANCE — LOD —
- TEMPORARY CONSTRUCTION EASEMENT
- PROPOSED DEVELOPMENT BY OTHERS
- EXISTING PROPERTY LINES
- EXISTING WATERS OF THE U.S.
- EXISTING WETLANDS
- PARKS
- FORESTLAND

KEY MAP

The CCT Study information shown shall be used for general planning information only. The locations of the proposed transit facilities and/or roadway improvements are approximate and subject to change during subsequent stages of project development.

MARYLAND DEPARTMENT OF TRANSPORTATION

MARYLAND TRANSIT ADMINISTRATION

MTA Maryland

CCT Corridor Cities Transitway

CORRIDOR CITIES TRANSITWAY ENVIRONMENTAL ASSESSMENT

STA 1417+50 TO STA 1445+00

DATE: APRIL 2017 SCALE: 1"=100'

APPENDIX D
SHEET NO.
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LEGEND

- PROPOSED TRANSITWAY
- PROPOSED STATIONS
- PROPOSED ROADWAY IMPROVEMENTS
- PROPOSED ROADWAY RESURFACING
- PROPOSED SHARED USE PATH
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KEY MAP

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200' 0 200' 400'
SCALE: 1" = 200'

MARYLAND DEPARTMENT OF TRANSPORTATION
MARYLAND TRANSIT ADMINISTRATION
MTA Maryland

CCT Corridor Cities Transitway

CORRIDOR CITIES TRANSITWAY
ENVIRONMENTAL ASSESSMENT

STA 1445+00 TO STA 1513+50

DATE: APRIL 2017 SCALE: 1"=100'

APPENDIX D
SHEET NO.
15 of 18

LEGEND

- PROPOSED TRANSITWAY
- PROPOSED STATIONS
- PROPOSED ROADWAY IMPROVEMENTS
- PROPOSED ROADWAY RESURFACING
- PROPOSED SHARED USE PATH
- PROPOSED SIDEWALK
- PROPOSED STRUCTURES
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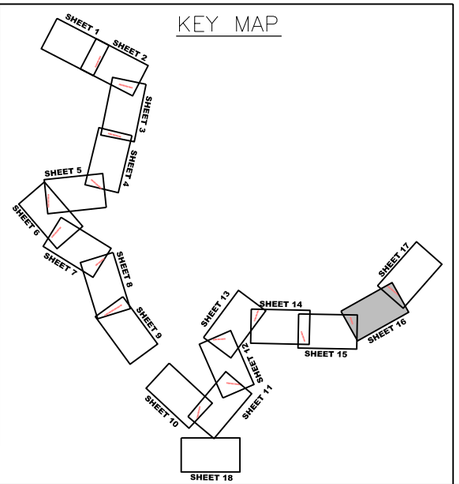
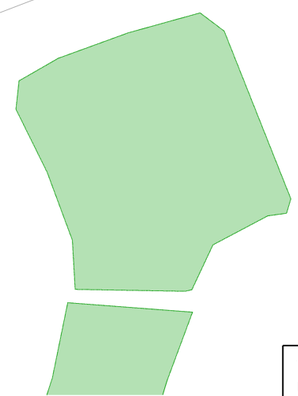
KEY MAP





200' 0 200' 400'
SCALE: 1" =200'

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MARYLAND DEPARTMENT OF TRANSPORTATION
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Corridor Cities Transitway

CORRIDOR CITIES TRANSITWAY
ENVIRONMENTAL ASSESSMENT

STA 1513+50 TO STA 1541+50

DATE: APRIL 2017 SCALE: 1"=100'

APPENDIX D
SHEET NO.
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MARYLAND 355

ELMCROFT BLVD

KING FARM BLVD

2540+00

2545+00

1600+00

1555+00

1540+00

1545+00

1525+00

MATCH LINE - SEE SHEET 16

N. FREDERICK RD

REED DODGE
(PROPOSED REDEVELOPMENT)

PROPOSED RETAINING WALL

SHADY GROVE STATION

SHADY GROVE METRO STATION PARK-AND-RIDE

SOMERVILLE DR

KISS-AND-RIDE

LOCAL BUSES

1620+00

1610+00

SHADY GROVE METRORAIL STATION

CSX - METROPOLITAN LINE

PROPOSED RETAINING WALL

SHADY GROVE STATION

REDLAND RD

200' 0 200' 400'

SCALE: 1" =200'

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KEY MAP

SHEET 1, SHEET 2, SHEET 3, SHEET 4, SHEET 5, SHEET 6, SHEET 7, SHEET 8, SHEET 9, SHEET 10, SHEET 11, SHEET 12, SHEET 13, SHEET 14, SHEET 15, SHEET 16, SHEET 17, SHEET 18

MARYLAND DEPARTMENT OF TRANSPORTATION

MARYLAND TRANSIT ADMINISTRATION

MTA Maryland

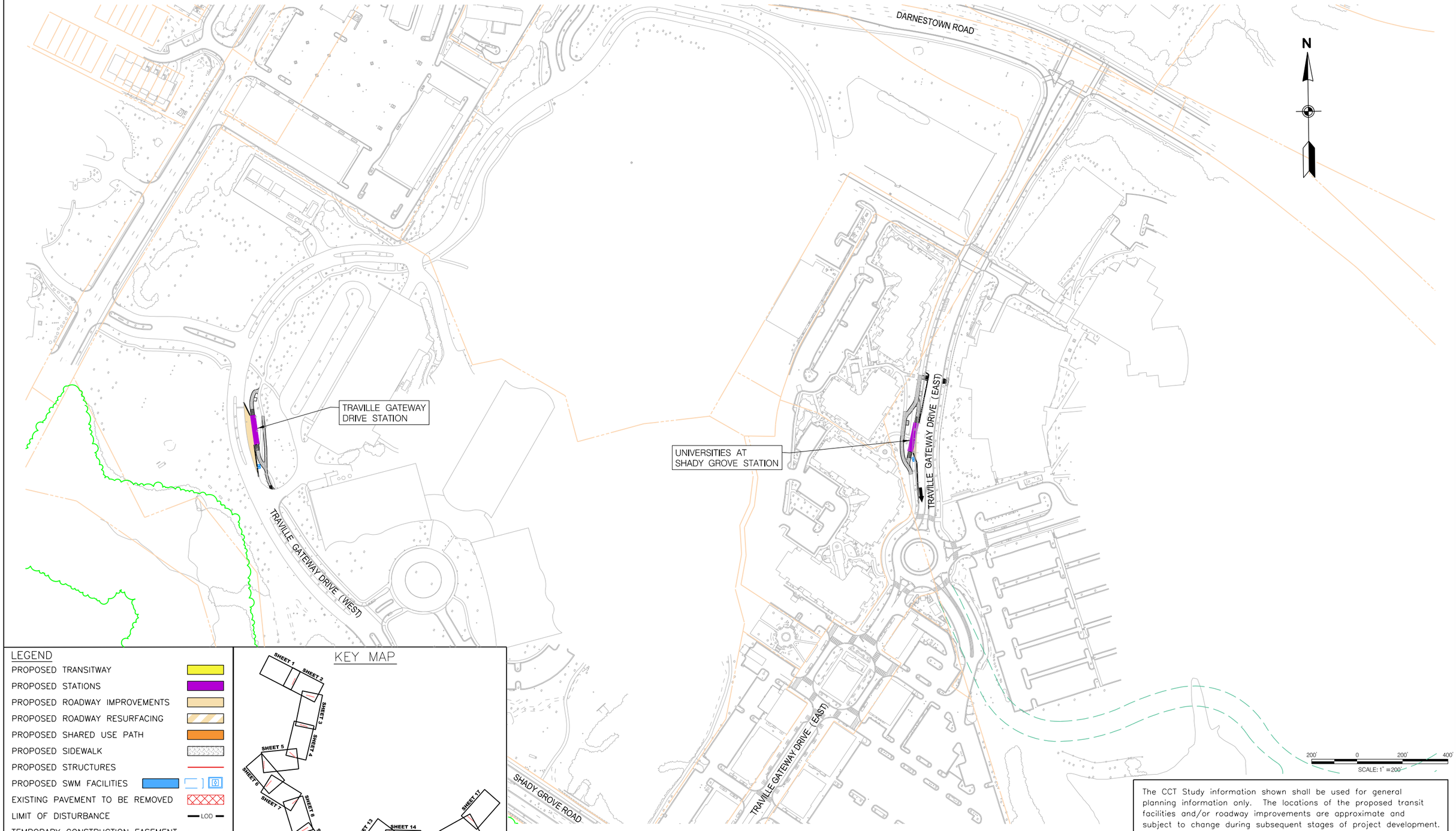
CCT Corridor Cities Transitway

CORRIDOR CITIES TRANSITWAY ENVIRONMENTAL ASSESSMENT

STA 1541+50 TO STA 1621+41

DATE: APRIL 2017 SCALE: 1"=100'

APPENDIX D
SHEET NO.
17 of 18



LEGEND

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CORRIDOR CITIES TRANSITWAY ENVIRONMENTAL ASSESSMENT

CCT VIA UNIVERSITIES AT SHADY GROVE

DATE: APRIL 2017 SCALE: 1"=100'

APPENDIX D
SHEET NO.
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