



Mead
& Hunt

FEASIBILITY STUDY

Myersville to Middleton Trail

December 2023



Executive Summary

- This report is intended to address the feasibility and advance consideration of a trail between Middletown and Myersville as called for in the 2018 Frederick County Trails and Bikeways Plan.
- Evaluation criteria for potential trail alignments include safety and user experience; directness of the route and connectivity to points of interest along the route; property and environmental impacts; and cost and constructibility.
- The study area was separated into five segments with 29 alternatives among them. A trail alignment that just follows roadways between Myersville and Middletown would be difficult to achieve because of narrow right of way, topography, utility impacts, and traffic/user safety. Off-street alignments that follow creeks and streams, utility corridors, and parklands are considered as well.
- Any trail alignment will have environmental impacts, most of which will be minimal but will require avoidance, minimization, or mitigation. For example, alignments in stream valleys will need to be placed outside of the 50' stream buffer and in some cases placed on boardwalk or footbridges.
- Public interest and concern regarding the project were high. Many participants expressed concern regarding property rights; environmental and farming impacts; overall need for the trail relative to other investments priorities and other planned or existing trails in the region; safety of the public living along the trail; and interference with hunting grounds. Support for the project was also expressed at public meetings and through an online survey.
- The study recommends an alignment that begins in Myersville and traverses Bullivant Park, Catoctin Creek, Old Hagerstown Road, the former F&P trolley line (now a utility corridor), and Wiles Branch into Middletown where it would connect with on-street bike facilities.
- The estimated cost range of the 5.4 mile trail is \$16.1 to \$21.8 million in 2023 dollars. This includes a 50% contingency budget as design development continues and further construction details are known. It is estimated that \$3.4 million will be needed for Preliminary and final engineering, environmental permitting, and construction management.
- The study recommends that the best path forward may be:
 - A local land trust should take the lead to gain voluntary conservation easements allowing for a trail to be constructed.
 - Future development in Middletown where the trail is planned should be conditioned on right of way dedication for the trail.
 - Further study with the State Highway Administration of design assumptions of a pathway being constructed under I-70 along Catoctin Creek.
 - Work closely with the Town of Myersville to integrate the trail into planning for Bullivant Park.

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1. Purpose of Report

The purpose of this report is to document the existing conditions, alternatives considered, and preferred alternatives for a hard surface trail between Middletown and Myersville in Frederick County, Maryland (referred throughout as the "M/M Trail" or "Trail.") Accompanying this narrative report is a set of concept-level engineering plans commonly referred based on desktop review of existing conditions, limited field inspection, and input from stakeholders. Issues for further evaluation during final design are identified in the discussion of the preferred alternative. While not specifically intended to satisfy all requirements of an action under the National Environmental Policy Act (NEPA), this document it does meet its basic purposes of defining a project purpose and need, establishing evaluation criteria, identifying reasonable alternatives, receiving public and agency input on those alternatives, screening and evaluating the alternatives, and selecting a preferred alternative.

1.1 Project Purpose and Need

The Frederick County Comprehensive Plan known as "Livable Frederick" strongly embraces an expanded trail network through following specific actions:

- Increase the percentage of individuals in the county who live close to a location for physical activity, such as parks, hiking and biking trails, health clubs, fitness centers, and recreational centers.
- Systematically prioritize bicycle and pedestrian network implementation as identified in the Bikeways and Trails Master Plan.
- Maintain and expand the county's recreational areas, parks, bike and walking trails, and other recreational infrastructure that contributes toward improving county residents' physical and mental health and promotes economic opportunities associated with recreational activity.

Livable Frederick also includes by reference the 2018 Bikeways and Trails Plan; the proposed M/M Trail is one of 10 segments totaling 80.7 miles throughout Frederick County. The vision for the trail network as articulated in plan the is for "Frederick County [to be] a community where bicycling and walking are viable modes of travel for recreation and transportation purposes. A network of bikeways and multi-use trails are safe and convenient connections between municipalities through improved access to recreational, historical/cultural, commercial, and employment areas."¹ The plan makes little distinction between trails for transportation or "utilitarian"

transportation purposes and recreational purposes is blurry at best because the same transportation system can be used for both purposes. Just as roads are designed for various motor vehicle trip purposes, roads and pathways should be designed to facilitate various bicycle trip purposes.²

In the above context, the purpose of the proposed M/M Trail is to connect communities, parks and recreation facilities, schools, and points of interest between the two municipalities for both transportation and recreational purposes. The trail should be accessible to users of all ages and abilities, buffered from traffic wherever possible, and connect with other existing and planned county and municipal trails; impacts to the natural environment should be avoided, minimized, and mitigated.

The need for a multi-use has been articulated in several previous studies:

1999 Frederick County Bikeways & Trails Plan

The 1999 original plan described the proposed Middletown to Myersville trail as part of a connection to Frederick and would circle the Town of Middletown instead of following the old trolley alignment on Main Street in Middletown and then travel north of Middletown on the old trolley alignment through off-road primarily agricultural areas. This plan raised uncertainty if the trail was still protected as an electrical utility right-of-way.

2010 Middletown Comprehensive Plan

The Town of Middletown's comprehensive plan states, "Greenways would surround the town and connect with proposed county paths following the Catoctin Creek and following trolley lines from Myersville" and that the Town would encourage shared use paths to Frederick, Myersville, and along Catoctin Creek.

¹2018 Trails and Bikeways Plan, Page 9

²Ibid, Page 14

1. Purpose of Report

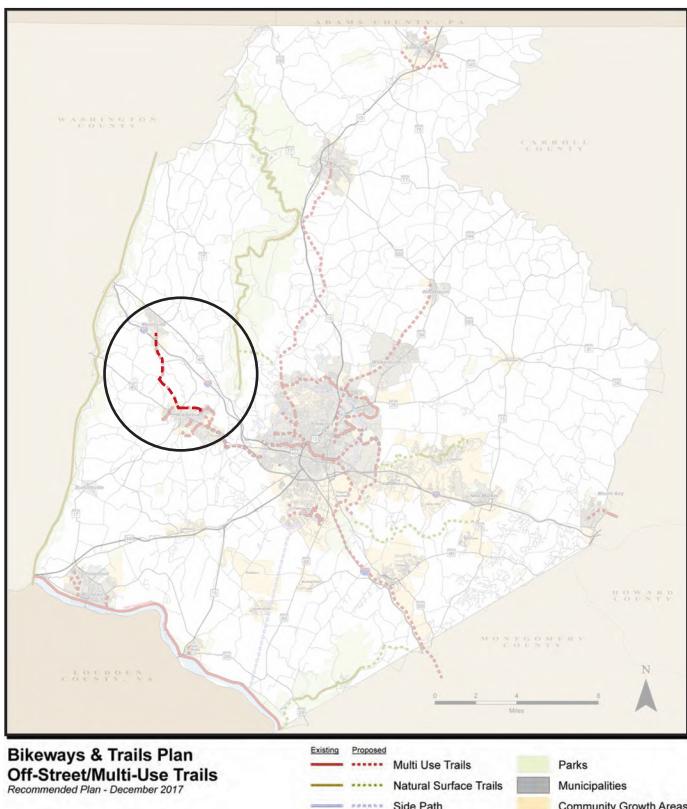


Figure 1. Bikeways & Trails Plan Off-Street/Multi-Use Trails

2018 Frederick County Bikeways & Trails Plan

The 2018 plan removed some bikeways and multi-use trails listed in the 1999 plan. The Middletown-Myersville Trail is described in the 2018 plan as a 10-mile multi-use trail that would connect to another proposed multi-use trail from Middletown to Frederick as part of a Rails to Trails planned network.

The plan describes two options for the Middletown to Myersville bike trail: one marked as an on-street bicycle facility, and another marked as off-road trail. Both envision a portion traveling on Old Hagerstown Road and the on-street bicycle facility continuing along Old Hagerstown Rd while off-road would follow a path off Old Hagerstown Road southwest towards Middletown along the former trolley alignment through agricultural areas.

2022 Frederick County Complete And Green Streets Plan

This plan shows the same proposed on-street bicycle facility and off-road trail as the 2018 Bikeways & Trails Plan and identifies further guidelines for bicycle and shared-use facilities in the County.

2023 Myersville Town Comprehensive Plan

The Town of Myersville adopted its Comprehensive Plan for 2022-42 in January 2023. The plan speaks both broadly about the need for pedestrian improvements including sidewalks, safe crossings of roadways, and trails among various community facilities. Related to the Myersville-Middletown corridor, the Comprehensive Plan calls for the town to "explore the possibility of extending sidewalks to the SHA Park and Ride facility on Ventrie Court. This would allow commuters who choose to walk to the bus stop the opportunity to do so, providing a healthier alternative to driving to the Maryland Transportation Authority (sic) (MTA) bus stop." A trail along MD 17 from Canada Hill Rd in the north to Transdara Court/Eagle Bay Drive in the south as an "Existing Concrete" sidewalk trail and proposes MD 17 south of Transdara Court as a "Future Concrete" sidewalk trail. In the last ten years, Maryland SHA and Myersville partnered to retrofit the portion of MD 17 near I-70 with ADA-compliant sidewalks. The "Future Concrete" trail appears to be a suggested alignment for the proposed Myersville to Middletown trail.

1. Purpose of Report

1.2 Evaluation Criteria

Critical to this feasibility study is to identify those segments that can best meet the design criteria (grade, curve radii, etc. as described in Section 3) and evaluation criteria which are based on the county's goals and plans.

Safety and User Experience

Is the alignment segment suitable to users of all ages and abilities through separation from auto traffic? Are vertical grades comfortable? Does the segment provide scenic views and access to natural environmental features? Is there a location for a trailhead and parking?

Directness and Connectivity

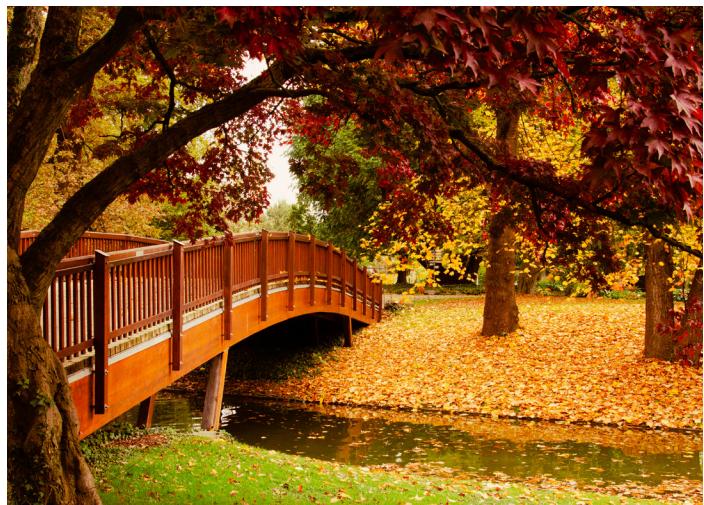
Does the alignment segment provide a reasonably direct connection between Myersville and Middletown? Does the segment provide connections to neighborhoods, schools, and points of interest?

Property and Environmental Impacts

Is there sufficient right of way along the adjacent roadway or does the alignment necessitate the acquisition of private property? Can the property impacts be minimized or mitigated to the satisfaction of the affected property owner? Are there environmental impacts that would require mitigation (reforestation, stream restoration, etc.)?

Cost and Constructability

Are there significant obstacles to be overcome on the alignment that would drive the cost higher (bridges and retaining walls, utility relocation)?



2. Corridor Description

This section describes the Myersville to Middletown corridor in terms of its land uses, demographics, environmental, and transportation conditions.

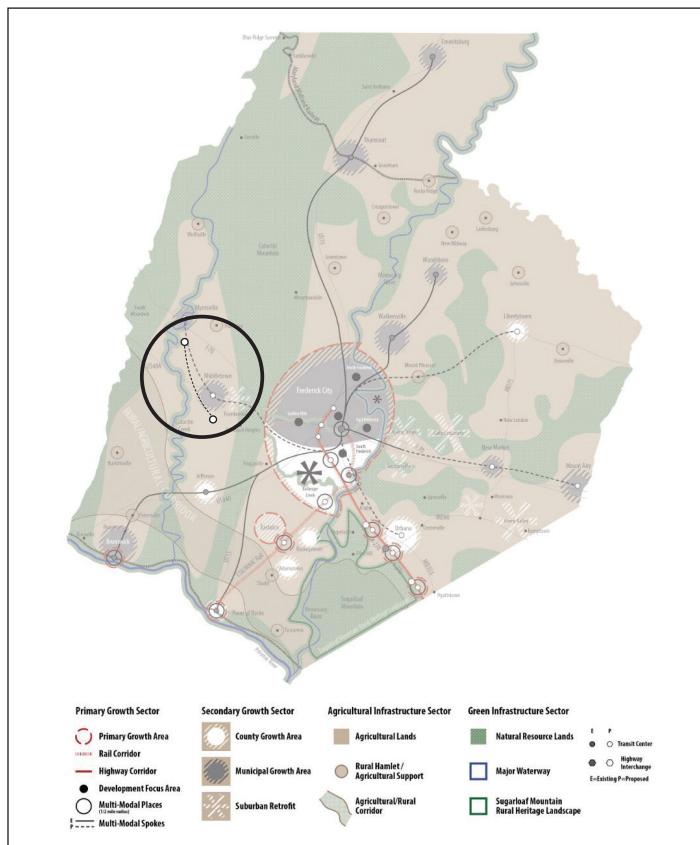


Figure 2. Land use policy framework as shown in Livable Frederick.

2.1 Land Use

The Livable Frederick plan describes the Myersville to Middletown corridor as a spoke to the central growth area around Frederick. The area between the towns are described mostly as an agricultural land with the towns of Myersville and Middletown being described in their respective Municipal Growth Areas. The area around Myersville in the Catoctin Creek valley is described as a Natural Resources Land.

Most of the area between Middletown and Myersville is zoned as Agricultural/Rural with some pockets of subdivisions of residential housing. At the southern end of Myersville, the northern end of segment 1D is zoned as Light Industrial. There is subdivision located along the east side of Old Hagerstown known as Middletown Heights. Another subdivision along Old Hagerstown Rd. from Pete Wiles Rd. to Cutoff Rd. known as Lockwood Heights and another in the middle of Pete Wiles Rd. known as Westchester. In Middletown, the trail would end at a medium-density residential area.

2.2 Demographics

The population of the area around the proposed trail is approximately 7,500. The 2020 Census listed the Town of Myersville as having 1,748 people and the town of Middletown having 4,943 people. About 900 people live in the rural area between Myersville and Middletown (Block Group 3, Tract 7707). The area between Myersville and Middletown skews older than the two towns with 30 percent of the population being over 65 compared to 15 percent in Middletown and 8 percent in Myersville. The under 18 population is 28 percent in Middletown and 37 percent in Myersville, greater than Frederick County's 23 percent but only 14 percent is under 18 in the area between the towns. Poverty is low in the area compared to other parts of the county.

2.3 Community Facilities

Community facilities can serve as potential trip generators for a trail. Myersville has an elementary school while Middletown has the area's middle and high schools. Both Middletown and Myersville have a branch of the Frederick County Public Library. Both towns also have a volunteer fire company and contract with Frederick County Sheriff's Office for additional police services. Both towns have a grocery store (Safeway in Middletown and Martin's Farm Market in Myersville). Myersville also has a weekly (biweekly in winter) farmer's market. Middletown features Richland Golf Club.

2.4 Transportation Facilities

MD 17 (Myersville Road)

MD 17 (Myersville Rd) is a mostly two-lane rural major collector connecting Myersville to Middletown. It is main artery of Myersville where it is a three-lane road. MD 17 is briefly a four-lane road on and near its bridge crossing I-70. As of 2022, it has an Average Annual Daily Traffic (AADT) of about 6,000 at the southern edge of Myersville, 3,500 from I-70 to Old Hagerstown Rd, and 2,900 from Old Hagerstown Rd. into Middletown. Traveling on MD 17 south from I-70, Old Hagerstown Rd forks off from MD 17 just south of Catoctin Creek. There are no bicycle facilities or pedestrian facilities along MD 17 except within the municipal limits of Myersville. There is a very limited shoulder in places along MD 17; the posted speed limit is 40 mph.

2. Corridor Description

Old Hagerstown Road

Old Hagerstown Rd. is a 2-lane rural minor collector connecting from MD 17 to US Alt. 40 at the western edge of Middletown with an AADT of 1,000 in 2022. Old Hagerstown Road is a hilly, winding road without a sidewalk or a shoulder. The posted speed limit is 40 mph from MD 17 to just north of the Middletown Heights subdivision and 30 mph south of the subdivision.

Pete Wiles Road

Pete Wiles Rd. is a 2-lane rural minor collector connecting Old Hagerstown Road and MD 17. From its western terminus at the southern edge of a subdivision known as Lockwood Heights, it winds through the rural area south of I-70 between Middletown and Myersville. It traverses mainly farms and the residential subdivision of Westchester. As of 2019, it has an AADT of under 1,000 and a posted speed limit of 35 mph.

Myersville Park & Ride

The Myersville Park & Ride is located on Ventrie Court just south of I-70. It is served weekdays by the Maryland Transit Administration's 505 commuter bus. The 505 bus provides morning southbound trips from Hagerstown to stops in Montgomery County with its only southbound stop at the Myersville Park & Ride in Frederick County and afternoon northbound trips from the same stops in Montgomery County to Hagerstown. There are 24 electric charging stations at the facility with 170 parking spaces. In 2016, an estimated 76 spaces were used on average.

2. Corridor Description

Bicycling Conditions from Middletown to Myersville

The Level of Traffic Stress (LTS), a metric for comfort level for bicyclists on a roadway, calculated by factors including vehicle AADT, posted vehicle speed, number of travelling lanes, and bicycling facilities, among other factors, is graded by a 1-4 scale, 1 being the least stressful and 4 the most stressful. Currently, the primary roads connecting Myersville and Middletown do not have bicycling facilities or sidewalks.

Table 1a: Bicycle Level of Traffic Stress Description

Level of Traffic Stress	Bicycle Facility Characteristics
1	Strong separation from all except low speed, low volume traffic. Simple crossings. Suitable for children.
2	Except in low speed/low volume traffic situations, cyclists have their own place ride that keeps them from having to interact with traffic except at formal crossings. Crossings that are easy for an adult to navigate. A level of traffic stress that non-regular adult bikers can tolerate.
3	Involves interaction with moderate speed or multilane traffic, or close proximity to higher speed. A level of traffic stress acceptable to confident adult bike riders.
4	Involves interaction with higher speed traffic or close proximity to high-speed traffic. A level of stress acceptable only to those classified as "strong and fearless."

Table 1b: Level of Traffic Stress Based on AADT and MPH

Lanes per Direction	ADT	20	25	30	35	40	45	50+
Unlaned yet two-way	0-750	1	1	2	2	3	3	3
	751-1500	1	1	2	3	3	3	4
	1501-3000	2	2	2	3	4	4	4
	3000+	2	3	3	3	4	4	4
1	0-750	1	1	2	2	3	3	3
	751-1500	2	2	2	3	3	3	4
	1501-3000	2	3	3	3	4	4	4
	3000+	3	3	3	3	4	4	4
2	0-8000	3	3	3	3	4	4	4
	8001+	3	3	4	4	4	4	4
3	any ADT	3	3	4	4	4	4	4

● 1 ● 2 ● 3 ● 4

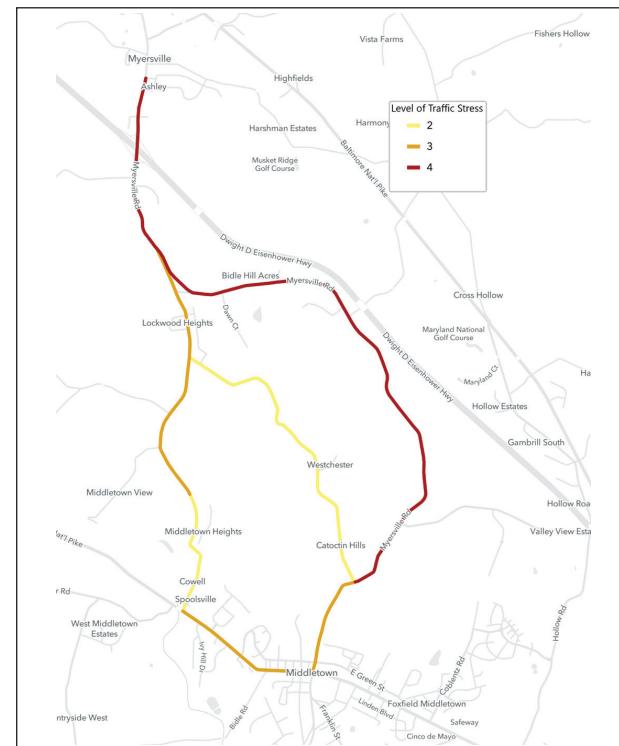


Figure 3. Bicycle Level of Traffic Stress on primary roadways between Middletown and Myersville.

2. Corridor Description

2.5 Corridor Environmental Characteristics and Requirements in General

This section describes general environmental characteristics in the study area. More detailed review of environmental characteristics for the preferred alternative is contained in a memorandum prepared by environmental subconsultant Coastal Resources, Inc. in Appendix 6. Further information on general considerations when planning trails in environmentally sensitive areas can also be found in the Rails to Trails Conservancy publication Developing Trails in Sensitive Areas. This section also describes in general terms the environmental planning and permitting requirements for any type of infrastructure or development project in the corridor.

Surface Waters

There are three primary streams in the corridor. From north to south, they are the Little Catoctin Creek, Catoctin Creek, and the Wiles Branch. The former are classified by the Maryland Department of Environment as Class III-P (nontidal cold water and public water supply). Wiles Branch is classified as Class I-P (water contact recreation, protection of aquatic life, and public water supply). The ecological health of surface waters is displayed in Table 2. No state-designated Scenic and Wild Rivers are located within the study area.

Table 2: Catoctin Creek Watershed Health Scores³ (Round 2 Sampling 2013-2016)

Category	Score	Maximum Possible Score	Ranking
Benthic Index of Biotic Integrity (BIBI)	2.9	5.0	Poor
Physical Habitat Indicator (PHI)	68.1	100	Fair
Riparian Buffers	52.5	60 or greater	Fair
Trash	16.8	20	Good
Erosion	1.2	3 or greater	Fair

Forests

Forest within the M/M trail study area is associated with the riparian areas of Catoctin Creek, Little Catoctin Creek, and Wiles Branch. Based on aerial imagery these forests appear to be deciduous in the mid-successional to late successional stage. Forest habitat can also support various species of bats and interior dwelling species (FIDS) during the summer active season. Potential FIDS habitat is mapped around Catoctin Creek at the northern end of the study area. Other smaller, forested areas are also present in the study area. Two forest conservation easements are located within the study area, one is county-held and one is held by the town of Middletown. There are no state-held forest conservation easements located within the study area. Trails are permitted within forest conservation easements subject to the Forest Conservation Act requirements.

Wetlands And Waters of The United States

There are no tidal areas within the study area. Consequently, federal and state regulations pertaining to tidal waters of the U.S. do not apply to the project and are therefore not discussed in this document.

There are non-tidal mapped wetlands and streams within and adjacent to the study area. In the northern portion of the study area is the Catoctin Creek and two unnamed tributaries to Catoctin Creek as well as a forested non-tidal wetland. At the southern end of the study area, is an unnamed tributary to Little Catoctin Creek before crossing Little Catoctin Creek and another unnamed tributary. On the eastern side of the study area along I-70, mapped wetlands existing along both embankments of the roadway and into the adjacent forested areas.

³ Existing water quality and aquatic community data were compiled from the Frederick County Division of Energy and Environment (FCOEE) which has established a rigorous monitoring program in the vicinity of the M/M trail study area through the Frederick County Stream Survey. The most recent sampling events with published compiled scores for the Catoctin Creek watershed occurred during the period between 2013-2016 (Round 2); Round 3 data was compiled from 2018 – 2022, however the result scores are not yet published.

2. Corridor Description

Floodplains

Floodplains within the M/M trail study area were identified using Flood Insurance Rate Maps (FIRM) produced by the Federal Emergency Management Agency (FEMA) (DHS 2016). Along the Little Catoctin Creek and Catoctin Creek are Zone A floodplain areas with a 1% annual chance of flooding. Flood Zone A refers to low-lying areas close to lakes, ponds and other large bodies of water. Trails may be built in flood zones with special measures to prevent washout and limit risk to other properties. Frederick County addresses floodplain districts in detail in Section 1-19-326 and 327 of the County Zoning Ordinance. Currently, these sections of the ordinances state that a minimum set back of 25 feet shall be provided from all floodplain boundaries, or 50 feet from the bank of any perennial or intermittent stream, whichever is greater (see Figure 1). The 50-foot setback is required by the county as a stream buffer.

Conservation Easements

Properties in conservation easements under the Maryland Rural Legacy program are located at the northeast corner of where Myersville and Old Hagerstown Roads meet and along the western side of segment 4-B with a 45-acre Maryland Environmental Trust easement property located directly north of Segment 4-B's rural legacy properties. In general, trails are a "conservation purpose" under Section 170(h) of the Internal Revenue Code which allows for the preservation of land areas for outdoor recreation among other purposes.

Rare, Threatened And Endangered Species

A project review online through the USFWS Information for Planning and Consultation (IPaC) was completed for the study area and identifies two endangered mammals, the Indiana Bat (*Myotis sodalis*) and Northern Long-eared Bat (*Myotis septentrionalis*), one proposed threatened clam, the green floater (*Lasmigona subviridis*), and one candidate species insect, the monarch butterfly (*Danaus plexippus*) which have habitat the lie wholly or partially within the study area. There are no Sensitive Species Project Review Areas (SSPRA) within the M/M trail study area. At a later stage of project development, coordination with DNR-Wildlife and Heritage and USFWS is necessary to confirm the potential impacts and permitting requirements.

Topography

The topography of the corridor is generally rolling hills which descend into stream valleys. Myersville sits approximately 160' feet higher than Middletown. The maximum grade change in any given half-mile segment is 9.7%.



Figure 4. Elevation profile along midpoint of trail alternatives.
(Source: Google Earth)

Geology and Soils

Most soils in the study area are of Hydrologic Group B which are soils having moderate infiltration rates and consists of moderately deep to deep, moderately well to well drained soils with fine to moderately coarse textures. Nine soils within the study area are classified as highly erodible. Six prime farmland soil map units were identified within the study area. These soils are nearly Prime Farmland and economically produce high yields of crops when treated and managed according to acceptable farming methods.

During later stages of the project a more detailed assessment of the potential project effects on infiltration rate will be completed. Identification of soil types is also necessary to calculate and design stormwater management facilities, bridges, and retaining walls.

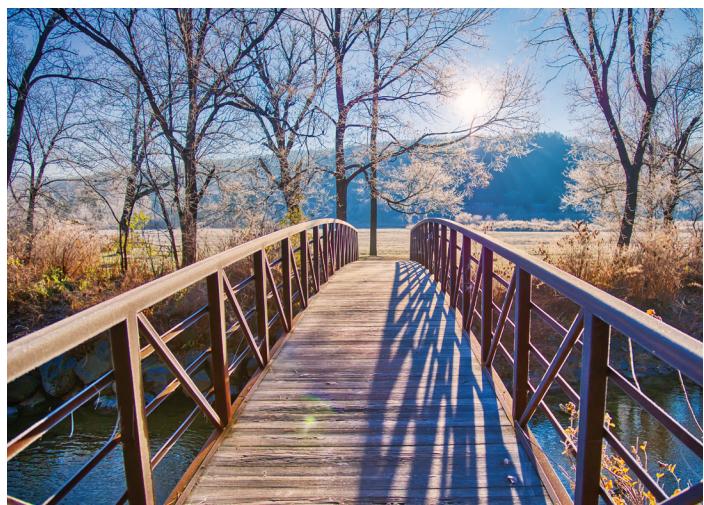


2. Corridor Description

2.6 Recent, Ongoing, and Upcoming Projects in the Corridor

Bullivant Park Trail & Property Acquisition

At the southern end of Myersville, the Town constructed a 6' shared-used asphalt trail in 2022/2023 from the Bullivant Nature Trail east of Myersville Rd (MD 17) through a wooded area extending to a subdivision at Ashley Court. The Town is also acquiring the remaining 60 acres of the Bullivant property west of I-70 to Catoctin Creek using funds from Maryland Program Open Space (POS). The Town intends to develop a plan for the property in 2025 – 2026 and noted in its POS funding application to the Department of Natural Resources that "there are no anticipated limitations to access for recreational use." (See Appendix 1 for POS Application)



Wiles Branch Trail

The Town of Middletown constructed 0.79 miles of Wiles Branch Trail south of W Main St along Wiles Branch. Middletown is working on completing the trail on the north side of W Main St. that will extend along Wiles Branch to Myersville Rd (MD 17). The future trail will provide a possible northern entryway to Middletown to start the trail to Myersville. The Town's comprehensive plan also shows extending two other trails: Foxfield Trail on the north side of the town and Remsberg Park Connector Trail on the south side of town. Middletown's trail system currently has four trails (Cone Branch, Foxfield, Remsberg Park, and Wiles Branch) with Foxfield and Wiles Branch being potential connections to the future Middletown to Myersville trail.

3. Overview of Bicycle/Pedestrian Facility Design

3.1 Bicycle/Pedestrian Facility Types

There are five types of bicycle facilities typically used: off-street or shared use paths, protected bike lanes, striped bike lanes, bike-on-shoulder, and “sharrows.” This section describes each and if/how they might be suitable for the study area, considerations used when applying those facilities, and design standards used in developing the concept plans.



Off-Street Trail/Shared-Use Path

Off-street trails or shared-use pathways are bicycle- and pedestrian-specific transportation corridors. Pathways are ideally 10 to 12 feet wide to accommodate bidirectional walking and bicycling, with 2-foot-wide grass shoulder areas. Adjacent to roadways, they are called sidepaths and typically require at least a 5-foot landscaped buffer from the roadway. In the Myersville to Middletown corridor, shared use paths/trails may be appropriate for the Bullivant Park area, along stream valleys or utility corridors, or where wide rights of way are adjacent to roadways. An off-street trail or shared use path most clearly aligns with the purpose and need for the project.



Protected Bike Lane

Bike lanes are “protected” when they provide physical separation between motor vehicles and bicycles. One-way protected bike lanes are usually at least 5 feet wide and two-way lanes are 8 to 10 feet wide, with at least a 2-foot-wide buffer with delineators such as flex posts (as shown here), parking stops, precast curbs, planter boxes, or “armadillos.” In the Myersville to Middletown corridor, protected bike lanes may be appropriate across the I-70 bridge or within Middletown. Except in these areas, a protected bike lane does not align with the purpose and need for the project.



Bike Lane

Bike lanes are roadway lanes that provide designated space for people bicycling but do not provide any physical separation or protection between motor vehicles and bicycles. Bike lanes are typically 5 to 6 feet wide. If 7 feet or more is available, a buffer should be provided, instead of a very wide bike lane, to discourage driving or parking in the bike lane. Other than bridge over I-70, there are no four-lane roadway sections that could be converted to a single travel lane with bicycle lane; except in this area, a protected bike lane does not align with the purpose and need for the project. Although it may be possible to create a bike lane along this portion of MD 17, paved shoulders would not meet the purpose and need test of being buffered from traffic and provide a safe experience for users of all ages and abilities.

3. Overview of Bicycle/Pedestrian Facility Design



Paved Shoulder

Paved Shoulders are a paved space beyond the edge line of a roadway's travel lanes. They provide space for bicycling outside the usual path of motor vehicles, but also provide clear space (a "recovery area") for motorists and accommodate drainage and emergency stopping. Except in the first quarter mile of MD 17 south of I-70, there are no paved shoulders in the study corridor. Although it may be possible to pave shoulders along MD 17, paved shoulders would not meet the purpose and need test of being buffered from traffic and provide a safe experience for users of all ages and abilities.



Shared Lane Marking ("Sharrow")

Sharrows are bike icons with chevrons marked in roadway lanes that advise motorists that bicyclists may be present and indicate to bicyclists where to position themselves within a travel lane. Except along very low speed, low volume roads like Ifert Drive, Sharrows would not meet the purpose and need test of being buffered from traffic and provide a safe experience for users of all ages and abilities.

3.2 General Design Requirements and Assumptions

In general, the feasibility study assumes that the trail will follow the design guidance and standards in the following documents. At the feasibility study level, the most generous standards are used; however, as design progresses it often becomes necessary to deviate from the standards in response to localized conditions such as right of way constraints, topography, utilities, etc.

- Frederick County Parklands Bikeway and Trail Design Standards and Planning Guidelines 2003
- Bicycle Policy & Design Guidelines Maryland State Highway Administration 2013
- Frederick County Bikeway and Trails Plan 1999
- Guide for the Development of Bicycle Facilities American Association of State Highway and Transportation Officials (AASHTO) 1999
- Designing Sidewalks and Trails for Access: Part II of II: Best Practices Design Guide, Federal Highway Administration (FHWA) 2001
- Maryland Manual Uniform Traffic Control Devices

Design assumptions and deviations specific to this project are described below.

Pathway Geometry

Curves and longitudinal slope will generally follow the adjacent roadway, with deviations as needed to match topography and reduce impacts to trees, utilities, monument signs, and other features. Horizontal curves not associated with the roadway alignment generally have a minimum radius of 60 feet, corresponding to a design speed of 12 miles per hour.

Design Speed and Curve Radius

As a shared use path for both pedestrians and bicycle riders of all ages and abilities, the project is to be designed for bicycle users traveling at 12 mph. As such, the minimum curve radius is planned at 36'. Curve radii smaller than recommended may be used due to narrow right of way, topography, or other considerations. Standard curve warning signs and pavement markings should be installed.

3. Overview of Bicycle/Pedestrian Facility Design

Vertical Grade

Vertical grades should be a maximum 5% when possible. Where grades must exceed 5%, the AASHTO bicycle design guide recommends as follows:

- 5 to 6% for up to 800 feet
- 7% for up to 400 feet
- 8% for up to 300 feet
- 9% for up to 200 feet
- 10% for up to 100 feet
- 11%+ for up to 50 feet

Typical Section (Trail Width)

The preferred trail width is a minimum 10' wide asphalt pathway (with 12' preferred) with a maximum cross slope of 2%. A minimum 5' clear zone on each side of the trail is preferred.

Examples of typical sections are shown below:

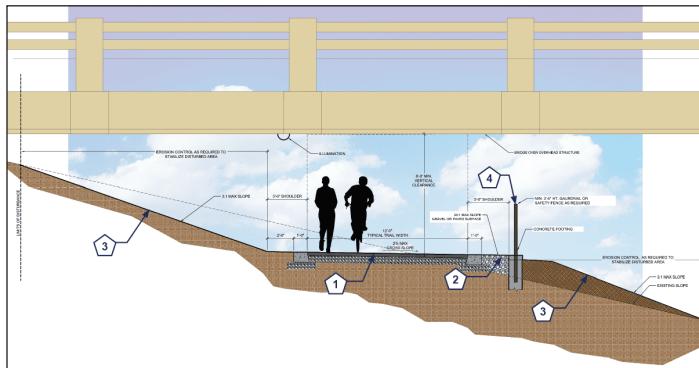


Figure 5. Crossing under I-70 at the south end of Bullivant Park.

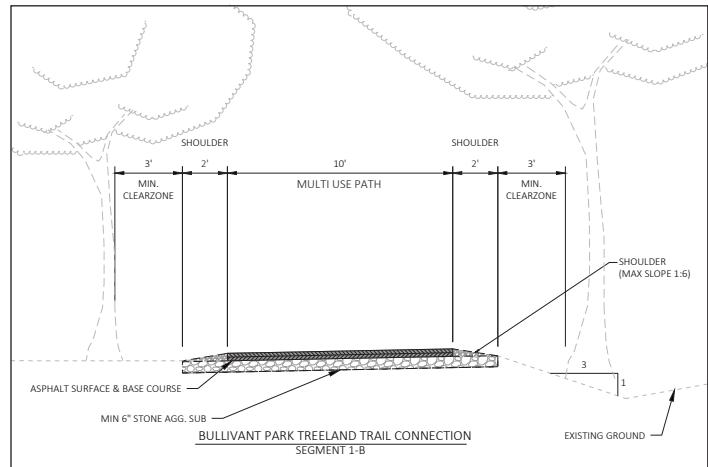


Figure 6. Along Bullivant Park Treeland Trail

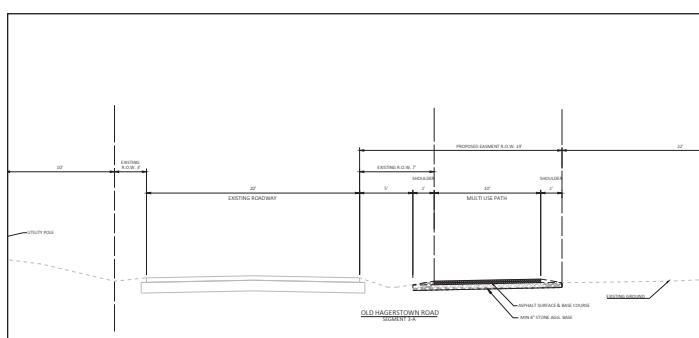


Figure 7. Along Old Hagerstown Rd.

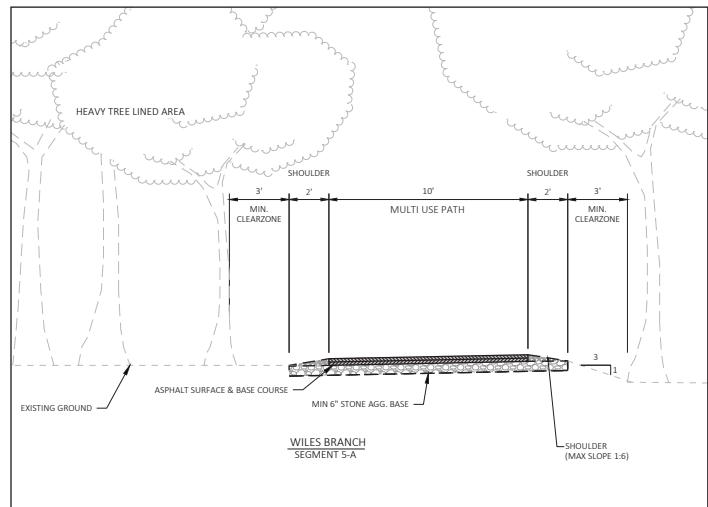


Figure 8. Along Wiles Branch

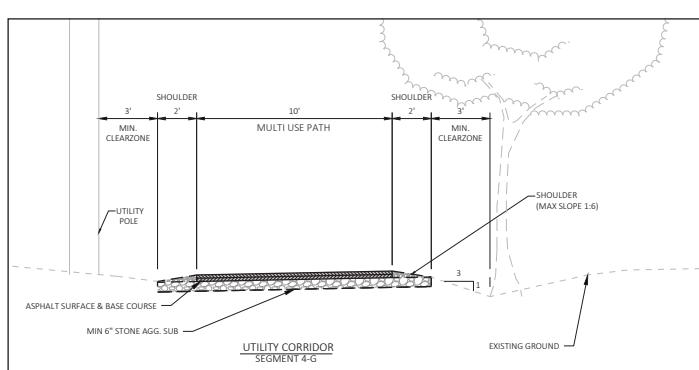


Figure 9. Along utility corridor east of MD 17.

4. Alignment Alternatives Considered in the Myersville to Middletown Corridor

To develop alignment alternatives for the M/M Trail, the corridor was divided into five north to south segments along the ~5-mile corridor. Individual segments following natural features, transportation and utility corridors were then identified and assessed through a high-level screening related to the evaluation criteria listed in Section 1.2.

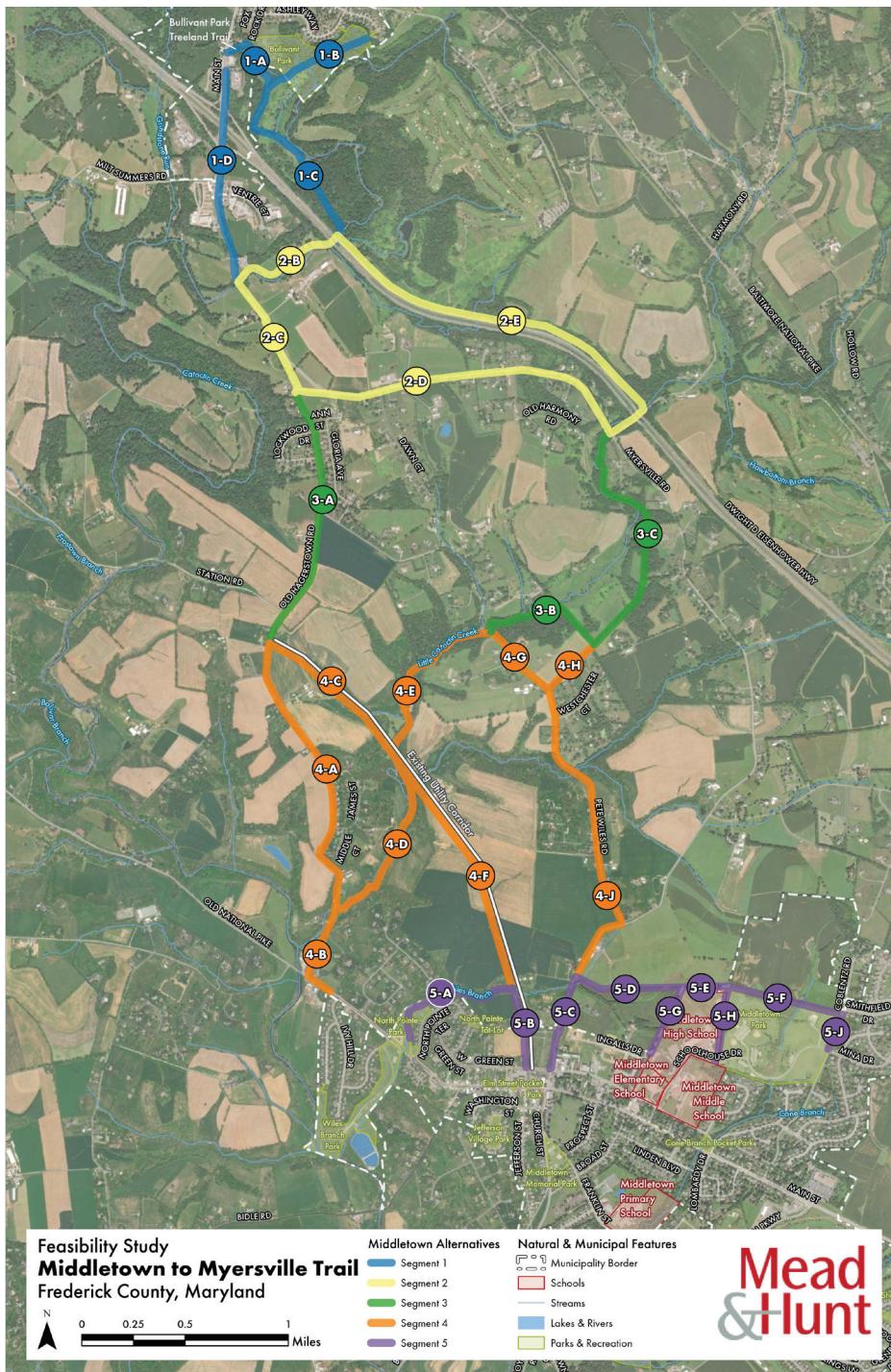


Figure 10. All Alternatives Considered for the the M/M Trail

Every alignment alternative in the corridor has challenges. Some alternatives require significant right of way acquisition, other alternatives would require significant land disturbance to achieve a pathway that has suitable grades or curves to meet design requirements and be comfortable for users of all ages and abilities. Some alignments would require construction in the floodplain, on active farmland, or across regulated wetlands. The maps included indicate some of the challenges associated with each of the alternatives.

4. Alignment Alternatives Considered in the Myersville to Middletown Corridor

Alignments Removed from Consideration

Myersville Area (Segment 1)

Although the Town of Myersville's comprehensive plan calls for a sidewalk to be installed from just north of MD 17 to Ventrie Court, this same alignment would be very difficult to place a shared use path for users of all ages and abilities. As shown in Figure 2, creating the M/M Trail in a way that is separated from traffic would require conversion of one travel lane (suggested as the easternmost lane traveling north). It is uncertain whether travel demand could be met in this area without causing significant delay to motorist delays. In addition, crossing the MD 17 bridge has inherent conflict zones for bicyclists and pedestrians at each of the ramps to and from I-70.

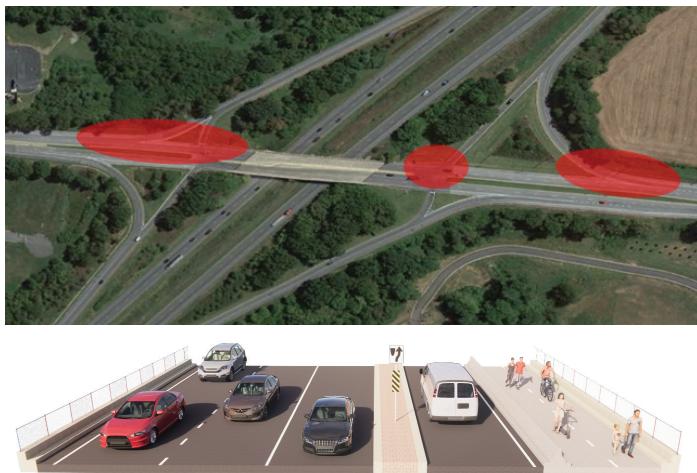


Figure 11. Conflict zones for bicyclists and pedestrians along MD 17 over I-70 and a potential reconfiguration alternative to meet the M/M purpose and need

Once south of I-70, the grade to Little Catoctin Creek drops approximately 6.7% and tree clearing, grading, and retaining walls would be necessary to keep the M/M trail on the east side of MD 17 to access the MTA Park and Ride on Ventrie Court.



Figure 12. Grading and retaining wall required along MD 17 South of I-70

Eastern Alignments (Segments 2 – 4)

Alternatives 2D and 2E were removed from consideration as they track too far east to provide a reasonably direct connection between Middletown and Myersville and have challenging roadway conditions. While the first three-quarters of a mile of MD 17 east of Old Hagerstown Road has a flat and wide area to lay a trail, much of the trail would be in front of residences and requiring a 15 – 20' right of way acquisition. East of Bidle Hill Court, MD 17 becomes much narrower with less generous terrain that would require regrading of drainage ditches and installation of retaining walls. Alignment 2E runs parallel to I-70 on its eastern side which is forested and has wetlands along much of the area north of Harmony Road, and this would require significant environmental mitigation.



Figure 13. Segment 2d - MD 17 looking Southeast near Bidle Court

4. Alignment Alternatives Considered in the Myersville to Middletown Corridor



Figure 14. Segment 2a looking East along Harmony Road from MD 17



Figure 16. Alignment 4J - Looking South from the 8400 block of Pete Wiles Road

With removal of alternatives 2D and 2E, other alignments to the east (3B, 3C, 4E, 4G, 4H, and 4J) are impractical as there is no other natural corridor to follow north towards Myersville once beyond Little Catoctin Creek. In addition, the roadway conditions along the eastern alternatives in segments 3 and 4 would occur along very narrow roadways with no clear zone on either side of the road. Adding a trail along this area would require significant right of way acquisition, regrading of drainage ditches, installation of culverts, and/or relocation of above-ground utility poles in several locations. Together, the eastern alignments in segments 2, 3, and 4 would add between 1.1 and 1.3 miles of paved surface more than a western alignment in the same segments, affect a greater amount of wetlands, and require greater tree clearing.



Figure 15. Segment 3c Looking South Along MD 17 Approximately 1/4 Mile South Of Harmony Road

Middletown Alignments

Alignments within Middletown (5A, C – J) were removed from consideration as they are located within Town boundaries and already noted in the Town's comprehensive plan for future design and construction by the Town or by developers of new subdivisions in the area.

4. Alignment Alternatives Considered in the Myersville to Middletown Corridor

4.1 Segment 1 – Myersville to Catoctin Creek

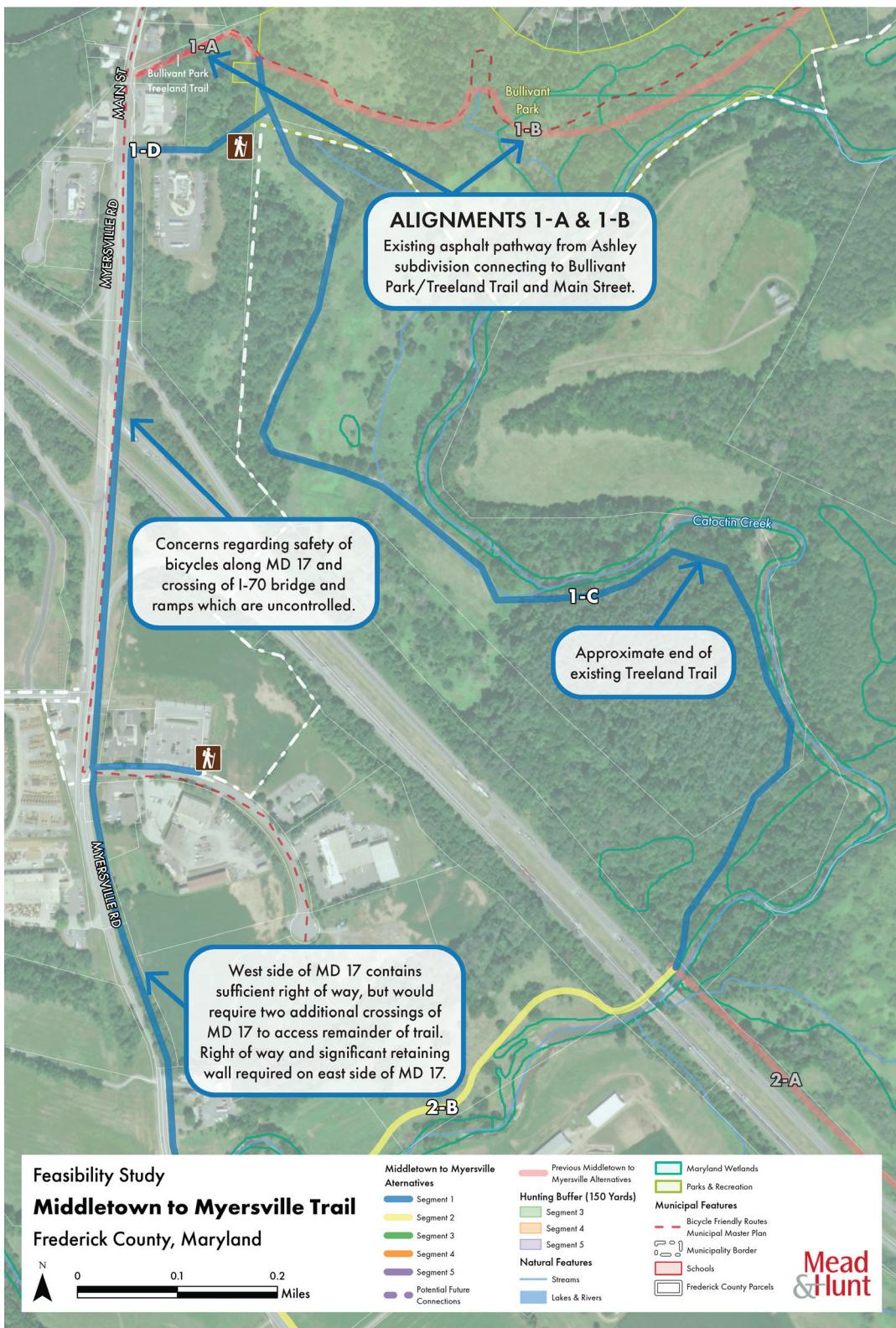


Figure 17. Segment 1 – Myersville to Catoctin Creek

4. Alignment Alternatives Considered in the Myersville to Middletown Corridor

4.2 Segment 2 - Catoctin Creek to Pete Wiles Road

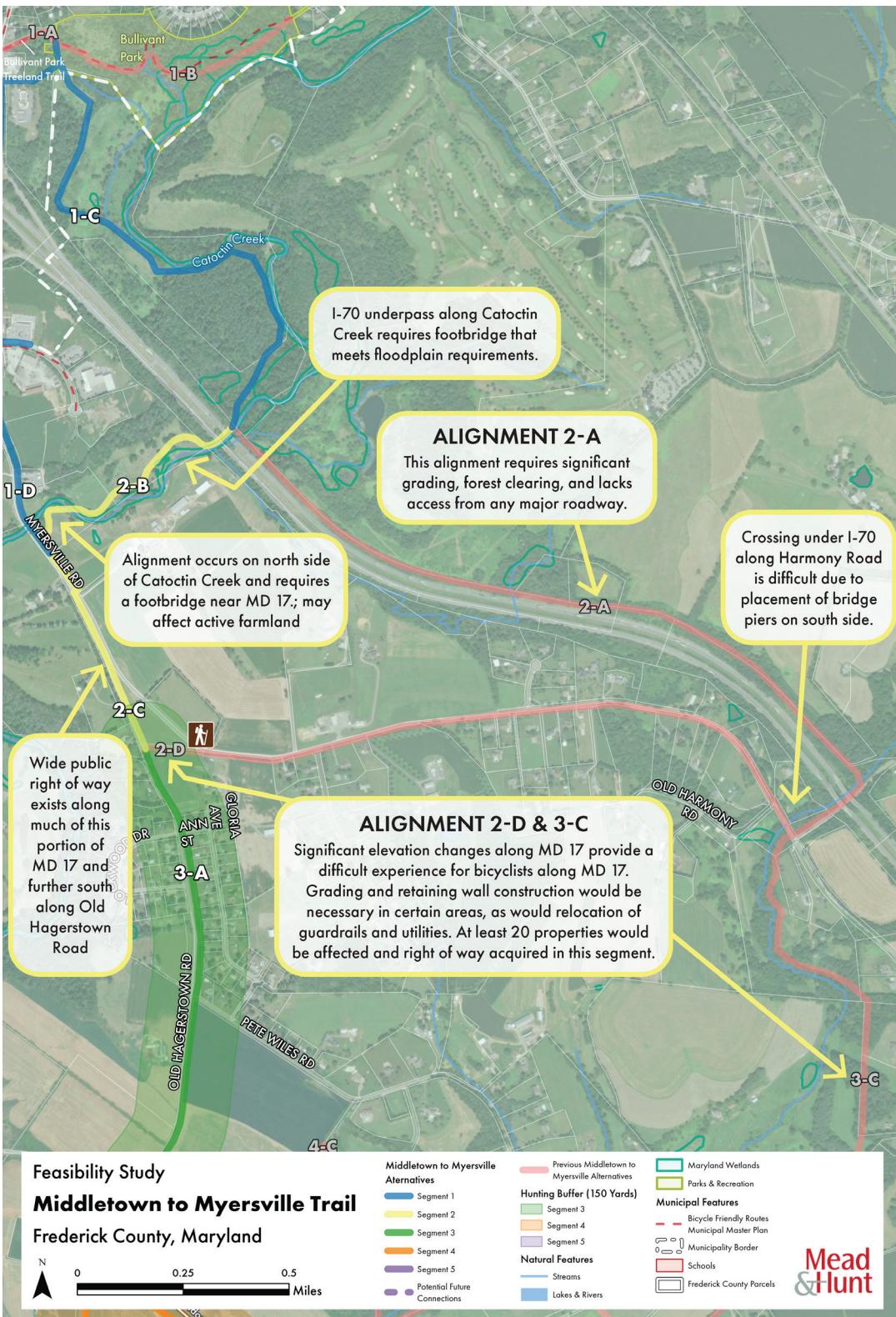


Figure 18. Segment 2 – Catoctin Creek to Pete Wiles Road

4. Alignment Alternatives Considered in the Myersville to Middletown Corridor

4.3 Segment 3 – Pete Wiles Road to Utility Corridor

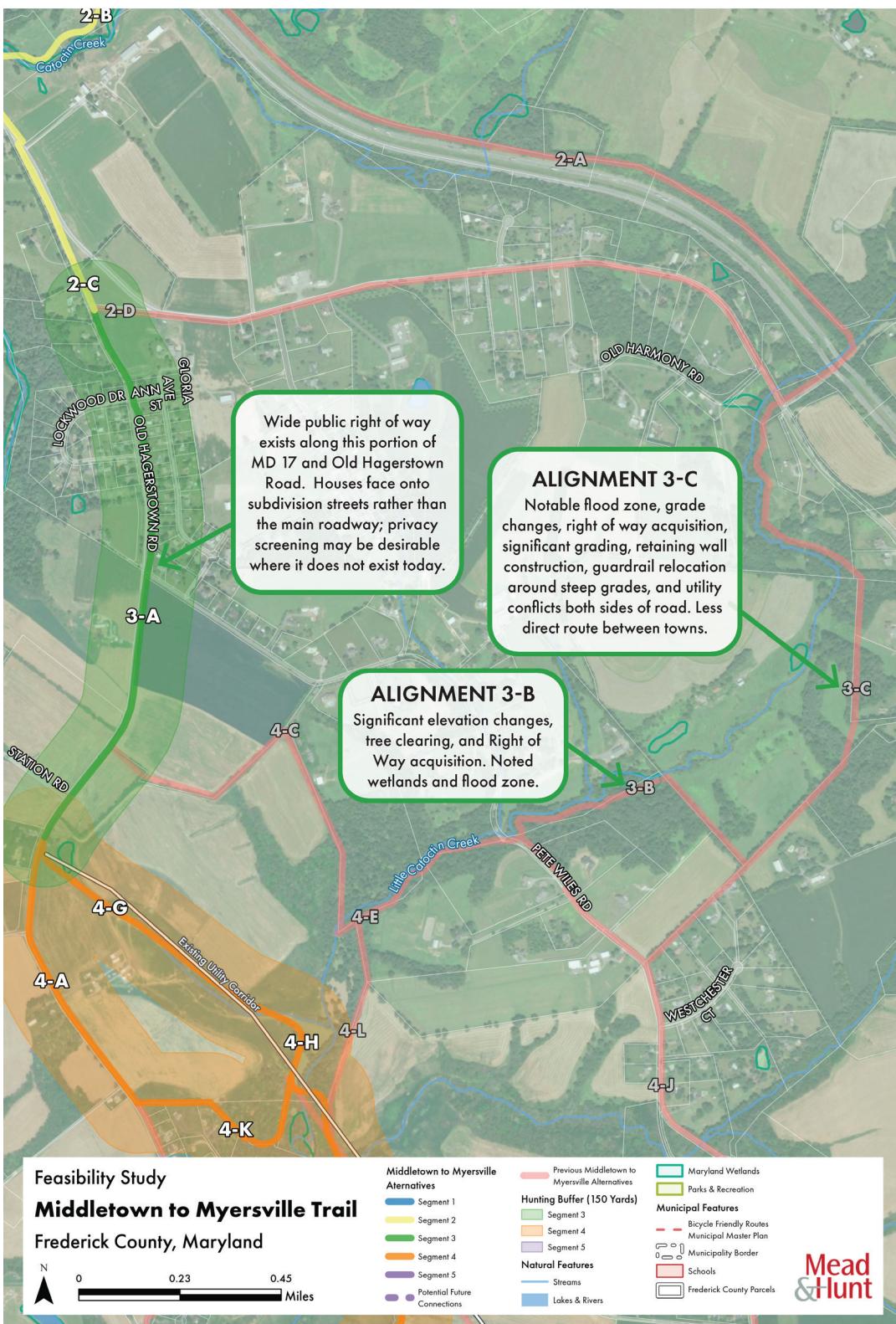


Figure 19. Segment 3 – Pete Wiles Road to Utility Corridor

4. Alignment Alternatives Considered in the Myersville to Middletown Corridor

4.4 Segment 4 – Utility Corridor to James Street

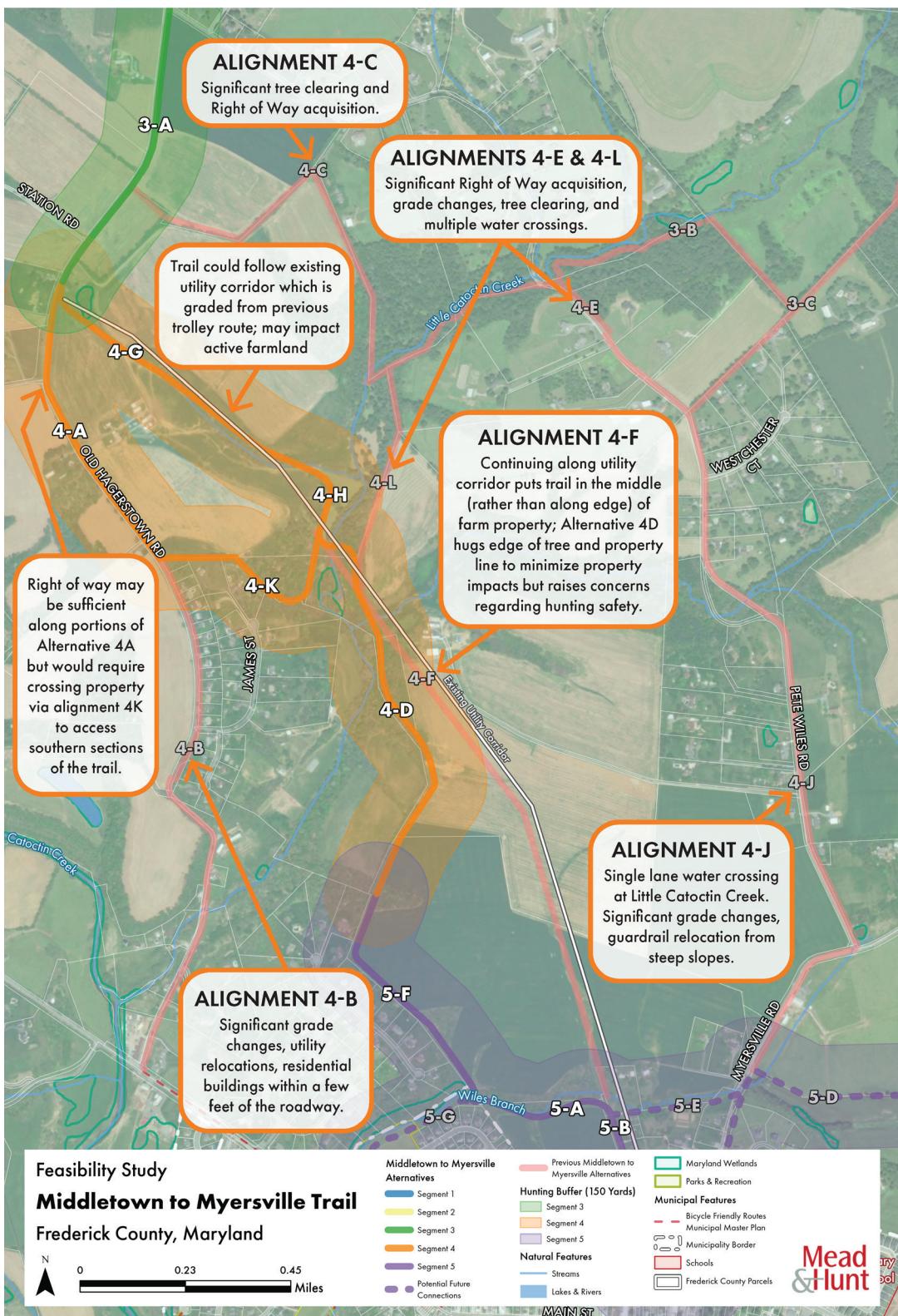


Figure 20. Segment 4 – Utility Corridor to James Street

4. Alignment Alternatives Considered in the Myersville to Middletown Corridor

4.5 Segment 5 – James Street to Middletown

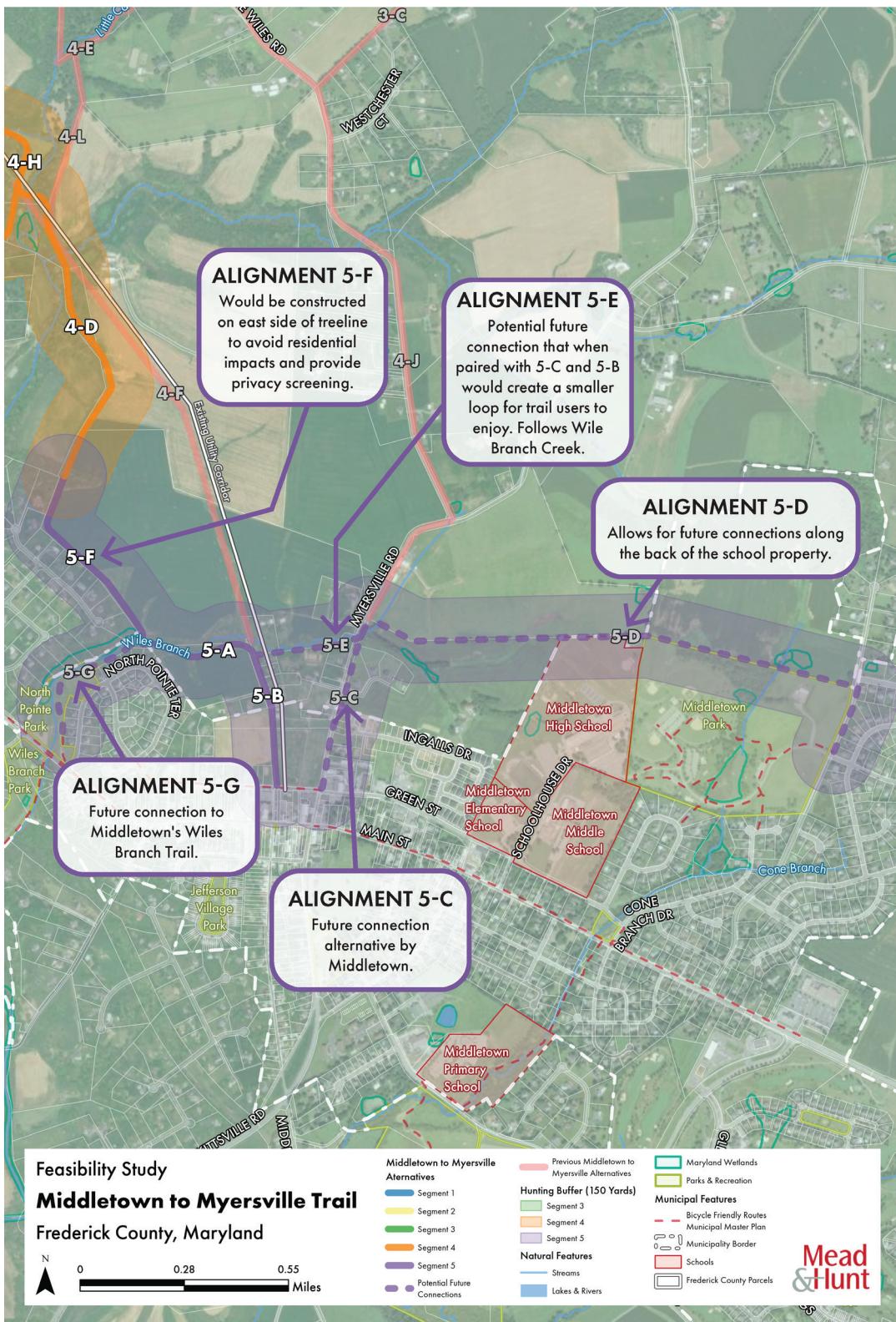


Figure 21. Segment 5 – James Street to Middletown

5. Agency Coordination

Municipalities, county, and state agencies were invited to participate in the study once a wide range of alternatives was developed to receive constructive feedback. Comments from agencies are described below.

5.1 Town of Myersville

Staff from the Town of Myersville participated in a briefing for all agencies on June 5, 2023 and in a Myersville-specific review meeting on July 7, 2023. Town staff expressed to the study team that Town of Myersville does not believe that designing and constructing a recreational trail that connects to Middletown is fiscally responsible. Rather, the Town's master plan sets as a priority to create a path along MD 17 to cross over I-70 and to the park and ride lot on Venturi Court. (Alternative 1D was subsequently amended to include the connection from MD 17 to the MTA park and ride.)

Town staff expressed overall concerns about municipal-county relations and the lack of consultation on a potential trail prior to alignment alternatives being developed and shared with the municipalities. It is the view of the Town that there is not community support for a trail project.

On behalf of Myersville's elected officials, Town staff expressed the following specific concerns were raised regarding Alternative 1C:

- The Town is acquiring Bullivant Park and does not yet have a plan for the 60.63 acre tract. A planning process for the property is not anticipated until at least 2025. It is unknown whether a trail would be a compatible use until a plan is developed.
- The Town is not interested in the County installing infrastructure on Town-owned property and would not accept maintenance responsibility if a trail were built through the Town.
- There is no viable parking area for trail users other than the three spaces already established. (Upon further review of the Bullivant Park trailhead, Alternative 1C was amended to include parking for 20 – 30 vehicles on a parcel owned by McDonald's near the trail.)

5.2 Town of Middletown

Staff from the Town of Middletown participated in a briefing for all agencies on June 5, 2023, and in a Myersville-specific review meeting on July 7, 2023. Town staff expressed support for a trail project between Middletown and Myersville and provided the following specific observations:

- The Town desires to see east-west connectivity (platted in part as Wiles Lane) from the planned reconstruction of the Middletown Elementary and Middle School to MD 17 so that all traffic is not directed to a single connection at Green Street.
- The trails element of the Town's draft comprehensive plan shows a trail following the former trolley corridor through the Topper property. If the County's preferred trail alignment is along the western edge of the property, the Town's draft comprehensive plan could be adjusted, and any annexation of the Topper property would need to make provision for the trail alignment.
- The Town would be supportive of an alignment along the Wiles Branch and Little Catoctin Creek which would connect with the Town's planned trails.

5.3 MDOT State Highway Administration

Staff from MDOT SHA (Regional and Intermodal Planning Division and District 7) participated in a briefing for all agencies on June 5, 2023 and provided other information as requested by the study team. SHA expressed no views on any of the alignments proposed and desired to continue receiving information on the project as plans develop. SHA staff encouraged the study team to be mindful of MDOT's bicycle and pedestrian design guidelines as a plan is developed.

MDOT SHA also supplied plans for the I-70 bridges over Catoctin Creek which are attached as Appendix 3.

6. Public Engagement

Frederick County is committed to an open and transparent feasibility analysis of the Myersville to Middletown Trail and in further design development activities. Several opportunities were presented for the public to review and comment on the potential trail alignments. Comments on the proposed M/M Trail were wide-ranging and are summarized below.

6.1 Opportunities for Review and Comment

Open House Meetings

Public open house meetings were held on September 18, 2023 at the Myersville Library and on September 19, 2023 at the Middletown Town Hall. Both events were held from 5 – 7 PM and included display boards of the alternatives retained for detailed consideration. Project staff was in attendance to answer questions and receive comments. Approximately 80 people attended public meetings.



Project Website and Survey

The Frederick County home page contained project information including a map of alternatives and a project survey. There were 86 respondents to the survey. A summary of responses is contained in Appendix 4.

Property Owner Notification

Approximately 80 property owners along all segments actively considered for the M/M Trail were notified by mail of the project. A copy of the letter is included in Appendix 5.⁴ Several property owners called the project team for additional information or to make comments on the project, which are noted below.

6.2 Summary of Public Comments

More than 100 comments were received from interested parties and are summarized in the categories below.

Property Rights

Many potentially affected property owners expressed opposition to the trail and more specifically, the potential use of eminent domain to acquire land for the trail. Other property owners were concerned that the trail would impact their privacy even if fences were erected or trees were planted between the trail and the resident's property. Some farmland owners were concerned that they would have a loss of economic value of their land.

RESPONSE: *Acquisition of land by eminent domain has never been used to construct a trail project in Frederick County. The County does not intend to acquire property for the M/M trail except by negotiation with and consent of the affected property owner.*

Public Safety

Several property owners were concerned that the trail would bring vagrancy, crime, underage drinking, and other nuisances adjacent to their property, especially because there would be easy access to the trailhead from I-70. Commenters believe that the County Sheriff's office is unequipped to patrol the proposed trail and that access to certain parts of the trail would be difficult for emergency vehicles.

RESPONSE: *Crime prevention measures would be considered in the final design of any project and could include call boxes, lighting of select areas, closed-circuit cameras, and other measures. Most trails include intermediate access points for maintenance and emergency access; such access points would be identified in later stages of design.*

Environmental Impacts and Farming

Some commenters were concerned about how the trail could impact farmland and animal life in a rural area, including reducing the fertility of land they depend on for income and affecting native species. Other commenters thought a trail would help reduce greenhouse gas emissions and encourage greater connection to the local environment and increase

⁴Appendix 5 also contains a listing of properties potentially affected by the recommended alternative.

6. Public Engagement

stewardship in Catoctin Creek. Concerns were raised about portions of segments 1C, 2B, and 4G that have experienced flooding and would require elevated boardwalk segments.

RESPONSE: *There is an extensive regulatory framework that governs projects such as the M/M Trail. Project funding would be dependent on completion and approval of environmental documentation pursuant to the National Environmental Policy Act (NEPA) which considers the effects of projects on land use; waterways; rare, threatened, and endangered species; historic and cultural resources, etc.*

Need for Trail

Many commenters thought the trail should not be constructed while the area between Middletown and Myersville remains completely rural and agricultural; a similar sentiment was expressed that a trail project as proposed is better suited for more urbanized and suburban areas of Frederick County. Several commenters felt the Myersville to Middletown trail is unnecessary when other trails for recreation are nearby such as the Appalachian Trail and Wiles Branch Trail, as well as trails within county and state parks; other commenters felt there were not enough trails in Frederick County when compared to neighboring areas. Some commenters doubted the suggested benefit that Myersville students would use the 5-mile trail to commute to Middletown High School; and argued that resources could be better used for smaller safe areas for children and teens such as playgrounds, skate parks, etc. Several commenters were concerned about the need for parking to access the trail, which could lead to illegal parking along MD 17 and Old Hagerstown Road. Some commenters saw benefit to the M/M Trail if it were part of a larger trail system that connects to other parts of the county like Brunswick.

RESPONSE: *The M/M Trail is envisioned for multiple trip types and recreational purposes and is part of a network of planned trails described in the 2018 Bikeways and Trails Plan.*

Hunting

Several commenters noted many areas in Segments 3-5 are active hunting grounds and trail users could scare away game and/or be in the line of fire.

RESPONSE: *In general, hunting by firearm is prohibited within 150 yards of a building or developed recreation site. The safety zone for archery hunters in Frederick County is 50 yards. The potential impacts to hunting areas are shown in the maps in Section 4 of this report are considered in the analysis.*

Bicycle and Pedestrian Safety

Several commenters expressed concern about using on-road segments, particularly Segment 1D, due to the high speed of drivers on MD 17 and Old Hagerstown Road in particular, as well as potential conflicts between drivers and bicyclists at the ramps to and from I-70. Other commenters urged that the trail be wide enough for both bikers to easily pass walkers without issue.

RESPONSE: *The goal is for the M/M Trail to be accessible to people of all ages and abilities. On-road segments generally do not fit this definition and are thus not recommended for the M/M Trail. Typical trail width is a minimum 10' with a 5' clear zone on either side.*



7. Recommended Alternative

The recommended alternative is shown in Figure 22 and is generally described below. Significant issues remain to be worked through if design development progresses. All references to specific properties are for informational and descriptive purposes only and do not represent the consent of the property owner. Concept design sheets can be found in Appendix 6.

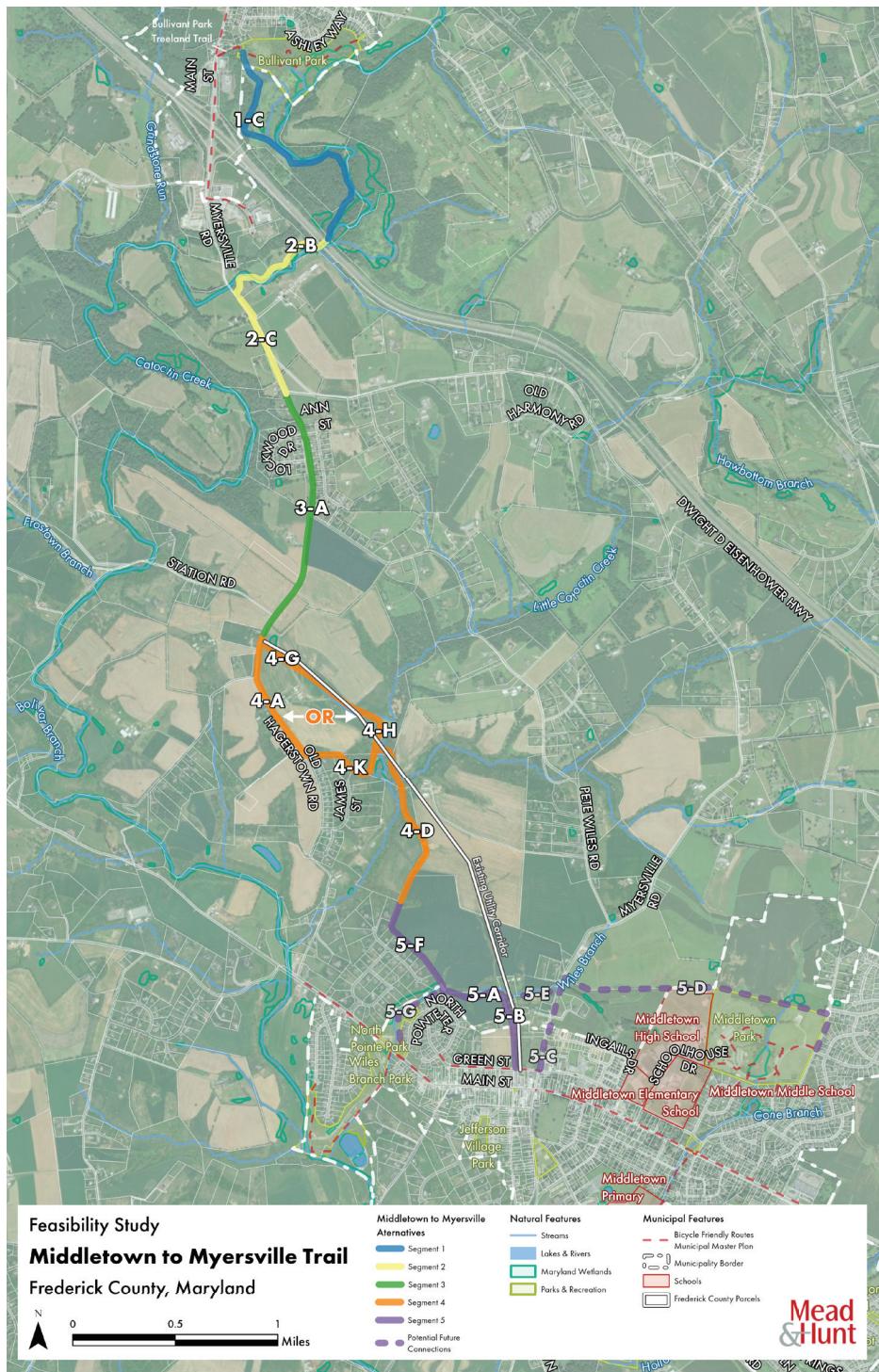


Figure 22: Recommended Alternative

7. Recommended Alternative

Segment 1 – Myersville to Catoctin Creek

Beginning at a trailhead and small parking lot on property currently owned by the McDonald's Corporation, the northernmost portion of the proposed M/M Trail would follow the existing Bullivant Park Treeland Trail for approximately ½ mile and then follow along the north side of Catoctin Creek to I-70. Through most of this area, there is a gentle slope descending into the stream valley.

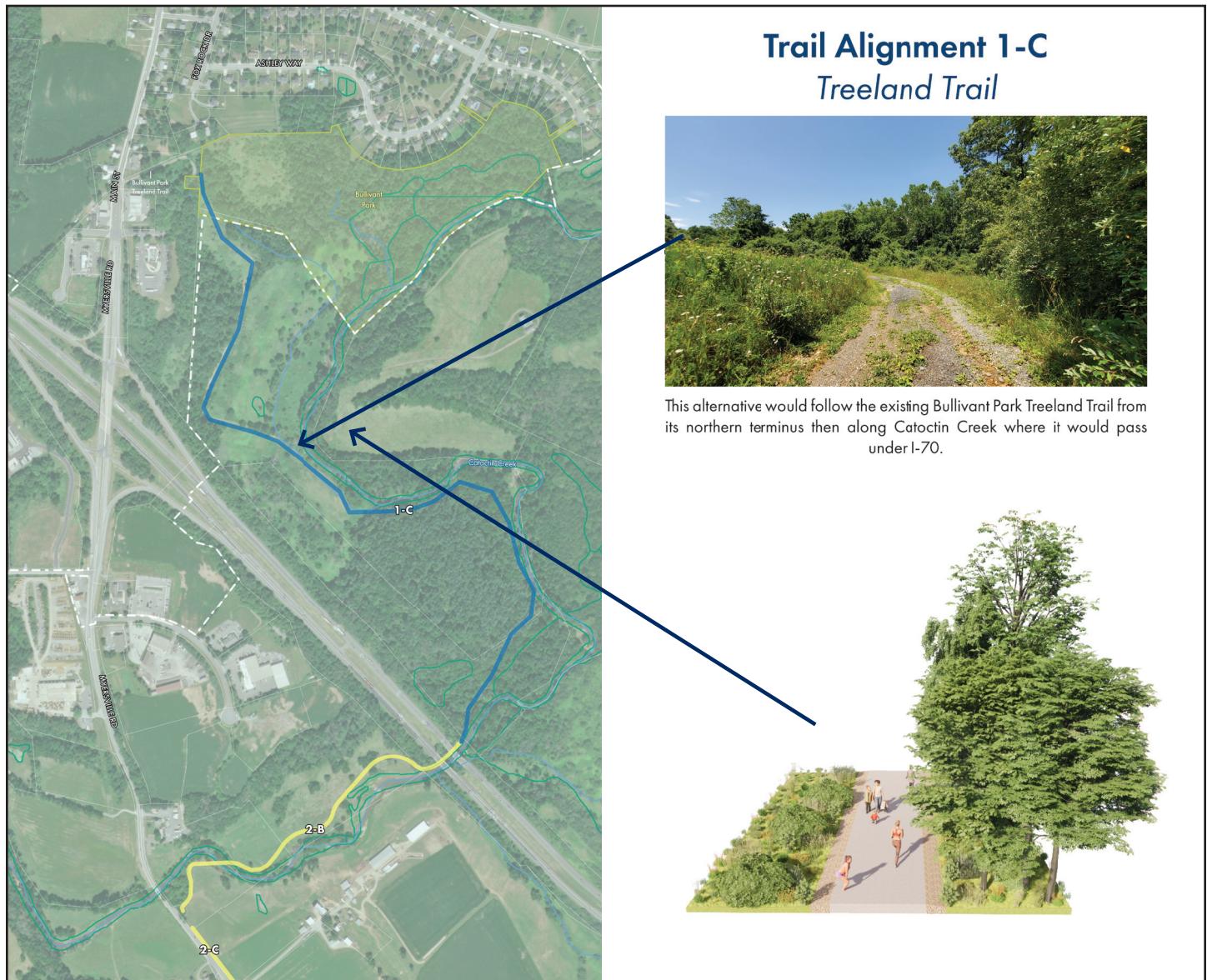


Figure 23: Segment 1 – Myersville to Catoctin Creek

As the trail reaches I-70, the asphalt pathway would transition to a timber structure with three spans of approximately 60 feet, 40 feet, and 60 feet in length. Conceptually, the structure would be supported by timber piles that are driven into the ground at regular intervals. The piles would be connected by timber beams and joists that form the framework of the boardwalk. The surface and railings would be made of timber

planks for safety and aesthetic purposes. The goals of the proposed construction method are to prevent interference with the concrete slope that supports I-70, specifically by eliminating the need for changes to drainage and vegetation. The timber structure also has several advantages over a precast concrete structure in terms of constructability, including the ease of transportation to and installation in tight spaces.

7. Recommended Alternative

Segment 2 & 3 – Catoctin Creek to Cutoff Road

The M/M trail would remain on the north side of Catoctin Creek approaching MD 17 where a footbridge would carry the trail over the creek, then south along the east side of MD 17 to the split with Old Hagerstown Road. Through this area the right of way line is unclear but active farming is set back approximately 100' from the edge of MD 17.

This segment is the most challenging from an environment permitting perspective as it falls entirely within the 100-year floodplain. Unavoidable impacts to wetlands and other waters of the U.S. are subject to a Section 404 permit from the USACE and a non-tidal wetlands permit from the Maryland Department of Natural Resources. The portion of Alignment 2-B near I-70 falls within forest, some of which is mapped as FIDS habitat, will require coordination under Frederick County's Forest Resource Ordinance.

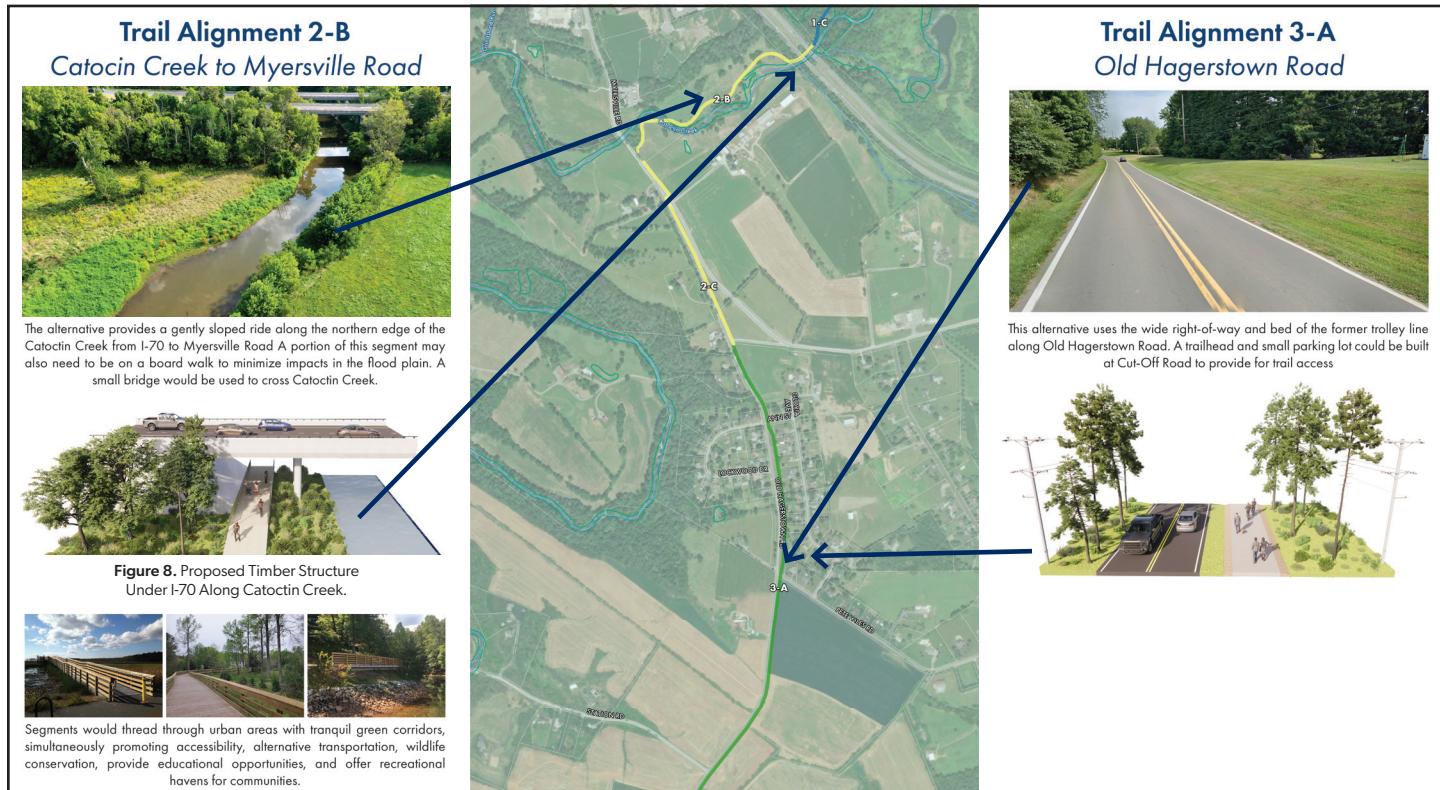


Figure 24: Segment 2 & 3 – Catoctin Creek to Cutoff Road

7. Recommended Alternative

Segment 4- Old Hagerstown Road

Where MD 17 and Old Hagerstown Road diverge, the trail would cross into the remnant parcel and continue to Cutoff Road. Advance warning notifications of a trail crossing are advisable and would need to be agreed upon with SHA. A trailhead and small parking area could be possible at this location.

South of Cutoff Road, the trail would remain on the east side of Old Hagerstown Road in the wide public right of way that also contains power lines. All the houses in the adjacent subdivisions face onto Gloria Avenue, and some property owners have installed privacy fences to shield their homes from passing traffic. Additional landscaping may be warranted parallel to the trail to delineate public from private property.

The trail would then pass Pete Wiles Road and continue along the east side of Old Hagerstown Road. Approaching Station Road, **two alternatives are provided subject to further discussion** with the owner of Pleasant Valley Properties LLC at 8401 Old Hagerstown Road:

- The first option would bear south along the utility lines following what was once the pathway of the Hagerstown and Frederick Railway. This segment remains graded as it was for the railway and provides for a gentle slope into the Little Catoctin Creek stream valley.
- The second option would remain along MD 17 to the southern edge of 8401 Old Hagerstown where it would follow the tree line into the Little Catoctin Creek stream valley.

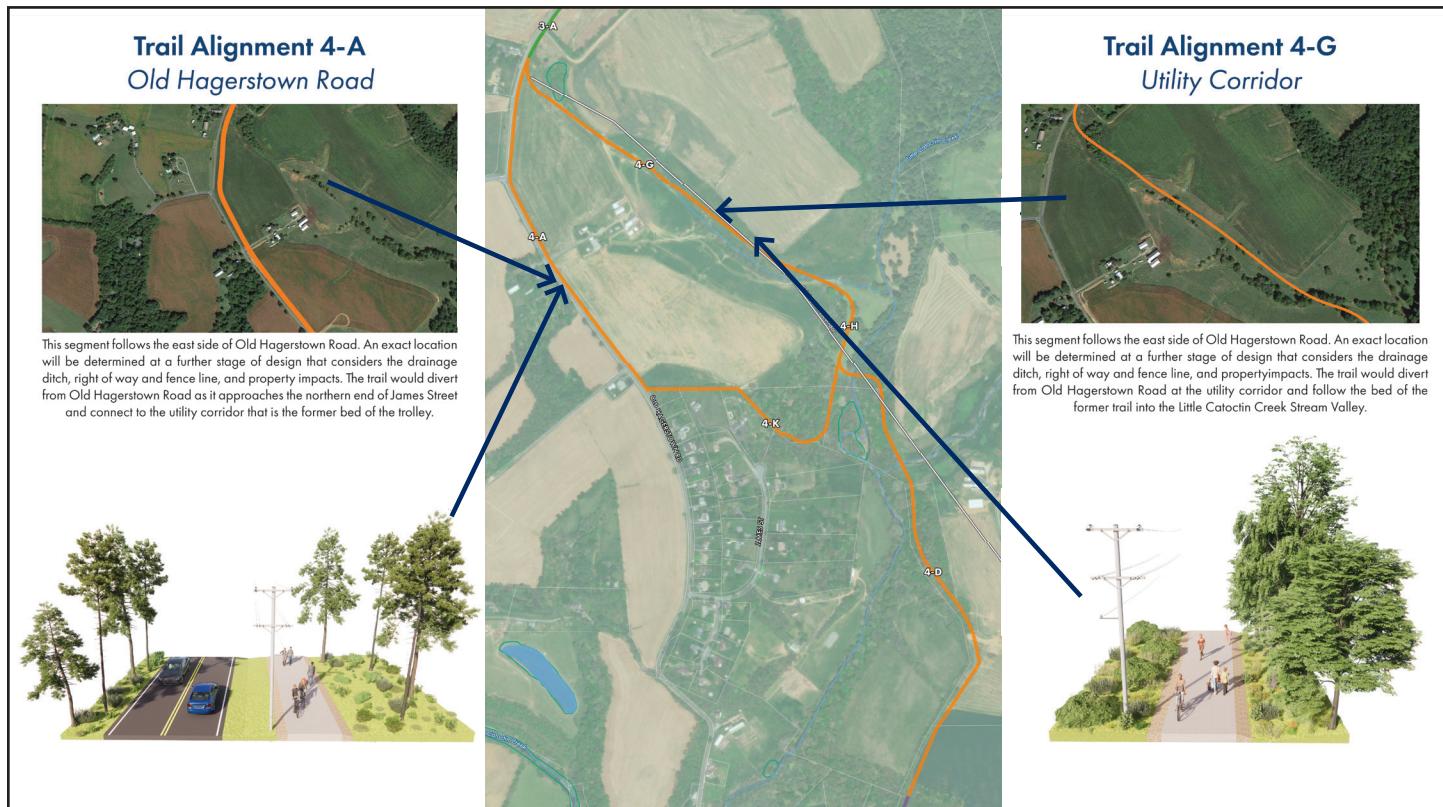


Figure 25: Segment 4- Old Hagerstown Road

Once past 8401 Old Hagerstown Road, the trail would continue along the tree line approximately 250 yards east of Catoctin Creek shown above as Alignment 4-D, and along the east side the tree line that separates agricultural land from the Brookridge and North Pointe subdivisions (Alignment 5-F). Some residents have expressed concern that the area along Alignment 4-D is within active hunting grounds. This needs to be explored more fully at a later stage of design.

7. Recommended Alternative

Segment 5 – Middletown

At the North Pointe subdivision, the trail would turn east and follow the Wiles Branch creek to Ifert Drive. Along Ifert Drive, the trail would follow in the roadway which is very low volume and low speed and can safely accommodate users of all ages and abilities with enhanced signs and markings. At the southern end of Ifert Drive, the trail would link to on-street bike lanes, parking, and easy access to Main Street.

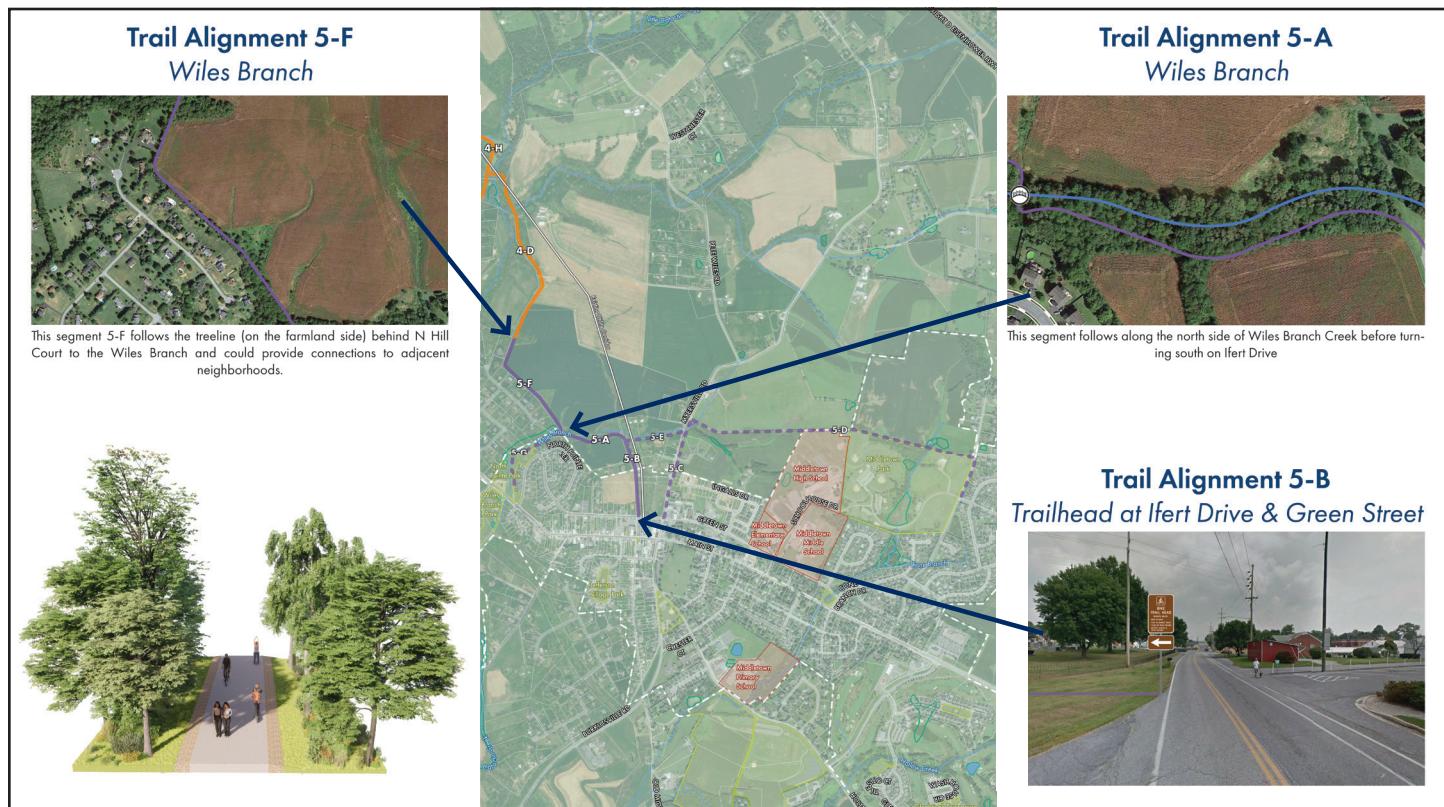


Figure 26: Segment 5 – Middletown

8. Environmental Effects of Recommended Alternative

Every infrastructure project has near-term construction impacts and long-term impacts. The U.S. Council on Environmental Quality regulations describe the following hierarchy to address those impacts:

- Avoid an impact by not taking a certain action or parts of an action;
- Minimize an impact by limiting the degree or magnitude of the action and its implementation
- Rectify an impact by repairing, rehabilitating, or restoring the affected environment.
- Reduce or eliminate an impact over time, through preservation and maintenance operations during the life of the action
- Compensate for an impact by replacing or providing substitute resources or environments.

To identify and assess the potential impacts of the preferred alternative for the M/M Trail, Coastal Resources, Inc. conducted a desktop analysis using readily available public datasets, along with limited windshield surveys and field walks with the project team. A 100-foot study area, centered over the proposed trail alignment, was defined as the area of maximum potential effect. At future design stages, field surveys and additional data collection will be necessary to refine and/or enhance the information presented below. The full environmental analysis can be found in Appendix 7.

Soils & Geology

Minor impacts and/or changes to topography and geology are anticipated from the preferred alternative. Local topography would be altered by excavation and grading that would be necessary for the trail construction. Soil impacts would result from soil removal or alterations to the soil profile and structure due to construction activities. Removal of vegetation would result in increased exposure of soils to weather and runoff potential. The preferred alternative may impact prime farmland soils and soils of statewide importance. Coordination with U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) will be necessary, and a Farmland Conversion Impact Rating Form (NRCS-CPA-106) may be required as part of that coordination.

Surface Waters

The preferred alternative of the M/M trail may affect surface waters and water quality within the study area. Impacts would be associated with the construction of the trail, the potential for accidental spills or sediment releases, increased impervious,

Table 3: Potential Natural Resource Impacts

Segment	Wetland, Wetland Buffer or Waters of US	Floodplain	Forest and/or Forest Interior Dwelling Species	Prime Farmland or Statewide Soils of Importance
1-C	x	x	x	x
2-B	x	x	x	x
2-C				x
3-A				x
4-A				x
4-D	x	x		x
4-G			x	x
4-H	x	x		x
4-K			x	x
5-A	x			x
5-B				x
5-F			x	x

Based on desktop review using Maryland's Environmental Resources and Land Information Network (MERLIN) published by the Department of Natural Resources

and added stormwater. Potential impacts to aquatic biota from the preferred alternative could range from mortality of aquatic organisms during construction, loss of natural habitat from the placement of instream structures at proposed stream crossings, to more gradual changes in stream conditions that affect aquatic communities. The preferred alternative may impact tributaries of the Potomac River which is designated as State-listed Scenic River. These impacts would be to Catoctin Creek, Little Catoctin Creeks, Wiles Branch and potential other unnamed tributaries to these streams. The exact type and quantity of impacts to surface waters and water quality will not be fully known until later project design stages. Coordination with the Maryland Department of the Environment will be necessary.

Wetlands and Other Waters of the United States

The preferred alternative would result in direct impact to nontidal waters of the U.S., including wetlands. Anticipated impacts to regulated waters of the U.S., including wetlands, will require permits from MDE and the USACE. Avoidance and minimization efforts would continue during more detailed phases of project design. As part of the permitting process, mitigation of unavoidable impacts to wetlands and stream channels will be required. All mitigation measures employed to compensate for unavoidable project impacts to waters of the U.S. would follow the federal Compensatory Mitigation Rule (33 CFR Part 325 and 40 CFR Part 230), and other

8. Environmental Effects of Recommended Alternative

state compensatory mitigation guidelines, as well as other recommendations from federal and state resource agencies. When unavoidable impacts have been avoided and minimized to the greatest extent practicable, mitigation may be required in the form of establishment/creation, enhancement, or preservation to replace the loss of wetland, stream, and/or other aquatic resource functions. The federal mitigation rule and state guidance establishes a hierarchy for mitigation options with the purchase of credits from an approved mitigation bank as the preferred mitigation approach over other options such as permittee-responsible mitigation. The exact type and quantity of impacts to wetlands and other waters of the U.S. will not be fully known until later project design stages.

Terrestrial Vegetation and Wildlife

The preferred alternative will impact forest resources, primarily those associated with the riparian areas of Catoctin Creek, Little Catoctin Creek, and Wiles Branch. The preparation of a forest stand delineation (FSD) and forest conservation plan (FCP), in accordance with the Frederick County FRO, may be required for impacts to forest, specimen trees, and forest conservation easements with the study area. Impacts to trees within the roadway right-of-way may require a Roadside Tree Permit. Avoidance and minimization efforts would continue during more detailed phases of project design. As part of the permitting process, mitigation of unavoidable impacts to forests may be required in the form of on-site preservation, on-site planting, off-site planting, purchasing of credits from an approved bank, or a fee-in-lieu payment. The exact type and quantity of impacts to forest, specimen trees, and roadside trees will not be fully known until later project design stages. Wildlife impacts from the preferred alternative could occur as

a result of habitat disturbance and/or loss during construction. Impacts to wildlife will not be fully known until later project design stages.

Rare, Threatened, and Endangered (RTE) Species

The preferred alternative may impact RTE or other sensitive species within the study area. Coordination with DNR-WHS and USFWS is necessary to confirm the potential impacts and permitting requirements. There are no Sensitive Species Project Review Areas (SSPRA) within the M/M trail study area. At later project stages, project review request letters will need to be sent to the DNR – Wildlife and Heritage Service (WHS) to request information on the potential presence of state-listed rare, threatened, or endangered species (RTE) within the study area. Additional coordination with USFWS is necessary to define the potential project impacts on federally-listed RTE species.

Floodplains

The preferred alternative will occur within regulated floodplains. Longitudinal floodplain encroachments and transverse floodplain crossings are anticipated. During later design stages detailed hydrologic and hydraulic studies will be undertaken to confirm the floodplain impacts. The MDE is responsible for coordination of all state floodplain programs. Floodplains are also governed by local Flood Insurance Programs administered by localities and supervised by FEMA (FEMA 2015). Frederick County addresses floodplain districts in detail in Section 1-19-326 and 327 of the County Zoning Ordinance. Currently, these sections of the ordinances state that a minimum set back of 25 feet shall be provided from all floodplains.

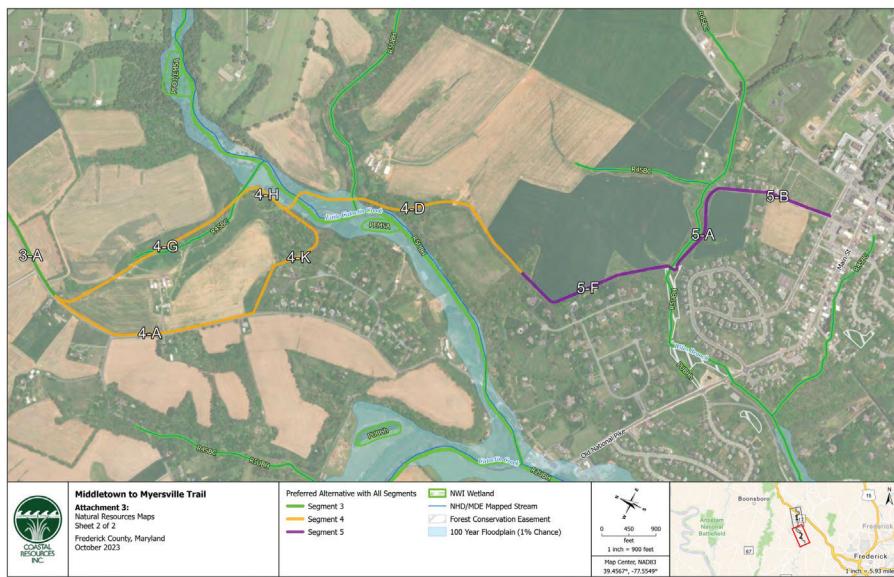


Figure 27: Environmental Resources in Segments 4 and 5

9. Cost Estimate

High level cost estimates are developed at the concept planning/feasibility analysis stage to help project sponsors develop a budget and determine if the project is financially viable. Estimating the cost of any infrastructure project is difficult with limited information on scope and limited detailed design engineering data; however, for planning and budgeting purposes, agencies need at least a rough estimate or range of costs to begin financial programming from engineering through to construction.

The estimated cost range of the M/M Trail is \$16.1 to \$21.8 million in 2023 dollars.⁵ The estimated range includes engineering, environmental permitting and mitigation, construction, and construction inspection/management fees. A 50% cost contingency is included in the estimate to account for further design development. If a construction year of 2029 is assumed with 3% annual price escalation, the cost range would increase to \$17.7 to \$24 million. The cost to acquire right of way is not included in the estimate.

Major construction cost elements of the project include⁶:

- Approximately 5.4 miles of grading and asphalt paving. (\$4.2 million)
- Five prefabricated footbridges and one three-span timber bridge under I-70. (\$1.1 million)
- Drainage, stormwater management, and erosion and sediment control (\$1.03 million)
- Environmental mitigation and landscaping (\$1.03 million)

Preliminary and final engineering, environmental permitting, and construction management are estimated at \$3.4 million.

The full cost estimate can be found at Appendix 7.



⁵A 15% up or down variation is applied to the cost estimate of \$18.91 million.

⁶Costs in this section reflect the estimate without the above variation or 50% contingency.

10. Evaluation Findings & Recommendations

The proposed M/M Trail is an incredibly challenging project whether in the form of the recommended alternative alignment or through any of the alternatives considered. Returning to the evaluation criteria for the project, the following findings are offered.

Safety and User Experience

Is the alignment segment suitable to users of all ages and abilities through separation from auto traffic? Are vertical grades comfortable? Does the segment provide scenic views and access to natural environmental features? Is there a location for a trailhead and parking?

Finding #1: There is a viable alignment that is separated from auto traffic to accommodate users of all ages and abilities. The recommended alignment has acceptable grades that do not require switchbacks or wide radii curves. There are several scenic vistas along the recommended alignment, most notably along in Bullivant Park, along Catoctin Creek and along Old Hagerstown Road before descending into the Little Catoctin Creek. Potential parking and trailheads can be identified at the northern and southern ends of the trail.

Directness and Connectivity

Does the alignment segment provide a reasonably direct connection between Myersville and Middletown? Does the segment provide connections to neighborhoods, schools, and points of interest?

Finding #2: The recommended alignment is the most direct of all alternatives considered. Opportunities exist for connections to existing trails in Myersville and Middletown, to subdivisions on the northern edge of Middletown, and to schools and Main Street in Middletown are available.

Property and Environmental Impacts

Is there sufficient right of way along the adjacent roadway or does the alignment necessitate the acquisition of private property? Can the property impacts be minimized or mitigated to the satisfaction of the affected property owner? Are there environmental impacts that would require mitigation (reforestation, stream restoration, etc.)?

Finding #3: Limited public right of way and public lands exist in the corridor. Other than the approximately one-mile segment in Myersville's Bullivant Park and a one-half mile segment along Old Hagerstown Road between Cutoff Road and Pete Wiles Road, right of way would need to be acquired for the remaining ~3.9 miles of the M/M trail. Unfortunately, deed research indicates that the bed of former Hagerstown and Frederick Railway was not preserved for any purpose other than the running utility wires. Based on the concept design, approximately 16 parcels would be affected with a range of impacts. (See Appendix 5.) Frederick County's policy of not acquiring property by eminent domain for trail projects makes for a right of way acquisition a challenge in this corridor.

Finding #4: Prime agricultural lands would be affected. Under the recommended alignment, 6 farms in active production would be affected by the M/M Trail. Although the impact of the encroachments would be relatively minor as in most places the trail is envisioned along property edges, the areas affected are prime farming soils and removal of vegetation would result in increased exposure of soils to weather and runoff potential.

Finding #5: Hunting conflicts would be difficult to resolve. Even if property owners were amenable to allowing a trail along the edges of property in segment 4, the 150-yard required safety zone for hunting would render much of said land unusable for that purpose. Limiting trail use during hunting season, requiring bright orange safety clothing, and posting signage along the trail would mitigate potential impacts but may not provide comfort to hunters or trail users.

Finding #6: Compensatory mitigation for streams, wetlands and forests will likely be required. The extent of mitigation will not be known until later stages of design.

⁵A 15% up or down variation is applied to the cost estimate of \$18.91 million.

⁶Costs in this section reflect the estimate without the above variation or 50% contingency.

Cost and Constructability

Are there significant obstacles to be overcome on the alignment that would drive the cost higher (bridges and retaining walls, utility relocation)?

Finding #7: There are no significant constructability issues that are atypical of trail projects along the recommended alignment. When compared to the other alternatives considered, the recommended alignment has the fewest environmental and property impacts, would have the same or fewer structures (bridges, boardwalks, retaining walls), and the least land disturbance and paving required.



A Path Forward

The vision of a trail in the Myersville to Middletown corridor is embedded in the 2018 Bikeways and Trails Master Plan, although the plan notes significant challenges for the project. The best path forward for the M/M Trail may be:

- a concerted effort by a local land trust to gain voluntary conservation easements allowing for a trail to be constructed. Some county assistance for the easement acquisitions to occur may be required through further design development of the trail in certain areas.
- that if and as properties are annexed into Middletown, the Town should condition the annexation and future entitlements on constructing that portion of the proposed trail on the subject property.
- to further study design assumptions of a pathway being constructed under I-70 along Catoctin Creek in coordination with the State Highway Administration.
- to remain engaged with the Town of Myersville as it undertakes its planning effort for Bullivant Park to ensure that a feasible alignment is provided for the M/M Trail.

11. Feasibility Study Team

This feasibility study was prepared under the direction of the Frederick County Division of Planning and Permitting.

Mark Mishler, Chief, Transportation Engineering

Joe Kelly, Bicycle & Pedestrian Coordinator

Work was performed by a consultant team from Mead & Hunt with subconsultant services provided by Coastal Resources, Inc.* (environmental planning) and OR Colan, Inc.** (right of way research):

Jamie Kendrick, AICP, Project Manager

Fadi Alsharif, PE, Structural Engineer

Scott Fox, AICP, Project Planner

Allysha Lorber, ASLA, AICP, Technical Advisor

Ashley Pryzbysz, EIT, Project Engineer

Michael Robinson, Right of Way Advisor**

Heather Tatone, Environmental Planner*

Savannah Terrell, Urban Designer

The project team appreciates the assistance of Cindy Uganst and Brandon Boldyga, Town Planners for Middletown and Myersville, respectively, and Molly Porter, Statewide Bicycle and Pedestrian Planner for the State Highway Administration.

12. Appendices

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Appendix 1: Myersville Program Open Space Application for Bullivant Park

Maryland Department of Natural Resources Program Open Space Grant

Acquisition Application and Project Agreement

POS PROJECT # 

(DNR Use Only)

1. PROJECT INFORMATION: Please fill out all sections of the form completely unless otherwise indicated.

PARK NAME Bullivant Park

PROJECT NAME Myersville Tree-land Property Remainder

2. PROJECT LOCATION: Please identify all applicable parcels.

Street Address: 9649 Myersville Road

City/Town Myersville County Frederick Zip Code 21773

County Tax Map 46 Grid 14 Parcel 19 Lot 1

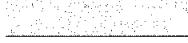
SDAT Account Identifier 16-345741 MD Legislative District 04

District-Subdivision-Account Number or Ward-Section-Block-Lot (as applicable)

Deed Liber/Folio 2149/0741 Is this project located in a Priority Funding Area? Yes No

3. PROJECT DESCRIPTION: Descriptions are written into the agenda item, which is presented to the Maryland Board of Public Works for approval. Please explain the proposed acquisition and be specific. Why is it being done (future recreation development, natural resource protection/conservation, etc.) and how does it relate to local recreation needs? Is it a new park or does it build upon an existing park area? Provide all of the information that you feel is necessary to explain and justify the project. Attach a separate sheet, if necessary.

This property has been held in private trust for use by the Treeland Foundation for philanthropic recreational activities. The Town purchased roughly 20 acres from the Trust through prior POS process to develop portion of the Myersville Greenway. The representatives have returned to express interest in selling the remainder. The area includes steep slopes, forested wetlands and bounded by the existing Town (Bullivant) Park, large stream area and I-70. Purchase of this property for recreational purposes would enhance the existing adjoining park experience and protect critical natural resources within the area.

4. PROJECT PERIOD: From:  Date of Letter of Acknowledgement or Letter of Concurrence (DNR Use Only)

To: 4/15/23 Estimated Date of Completion (Must be filled in by Applicant)

5. DESCRIPTION OF LAND TO BE ACQUIRED:

This is a(n): New Park Addition to an Existing Park Nearest town or community served: Myersville

Deed acres: 60.69 Ac. Acres to be acquired with this acquisition: 60.69 Ac.

Existing park acreage: 37.06 Ac. Planned ultimate acreage: 97.75 Ac.

How many acres are: Wooded 40 Ac. Agricultural Ac. Floodplain 20.69 Ac.

In the Critical Area No Ac. Non-Tidal Wetlands No Ac.

The topography is flat, steep, sloping or other (describe): Steep, sloping

Road Frontage: 0 Ft. Paved Unpaved

This property is: Improved Unimproved

If improved, list all current improvements – identify size, condition, and future use of each improvement:

11. Appendices

Appendix 1: Myersville Program Open Space Application for Bullivant Park

Acquisition Application and Project Agreement (Cont.)

POS Project # _____

5. DESCRIPTION OF LAND TO BE ACQUIRED (Cont.)

Explain Zoning: Resource Conservation

Current Land Use: Open Space

Is the property currently being utilized at its highest and best use? Yes _____ No

Highest and Best Use: Recreational area Developable potential - # of lots: 0

Subdivided? Yes No _____ If Yes, # of lots: 1 Average size of lots 60.69 acres

Utilities Available: Water Sewer Electric Gas _____ Phone _____

Environmental Hazards: Yes _____ No If there are any hazards, list them and identify how they will be addressed:

6. PROJECT DETAILS:

a. Benefits derived from this acquisition:

This property will enlarge the existing Bullivant Park, protect existing forested areas and steep slopes, provide improved pedestrian interconnectivity, and create access to nearby stream systems

b. What, if anything, makes this project unique?:

None

c. How is this project consistent with the County's Land Preservation, Parks and Recreation Plan (LPPRP)?

This project is consistent with the County's plan by focusing efforts on creating large contiguous recreational areas, protecting sensitive wooded areas, steep slopes, and stream systems.

d. Infrastructure: Will the development planned for this site result in an increased demand on existing infrastructure (roads, utilities, etc.)? Yes _____ No

If yes, please explain the impact on the infrastructure and how this will be addressed.

e. Potential Conflicts: Are there any potential conflicting uses or possible non-compatible uses being planned (e.g., road widening, utility easements, etc.) which might require a Land-Use Conversion? Yes _____ No

If yes, please explain the potential conflicting use and how this will be addressed.

f. Interim Use: Will there be an interim use on the property prior to park development, including rental, lease, and/or other management techniques? Yes _____ No

If yes, please describe the interim use in detail. (Note that any interim use must have prior approval by DNR.)

g. Please describe the public access that will be available on the property and note any restrictions or limitations, both prior and subsequent to park development:

Public access will include the interconnecting pedestrian hiker/biker path between the Ashley neighborhood, commercial areas, and Bullivant Park. There are no anticipated limitations to access for recreational use.

7. SELLER'S NAME: Tree-Land Foundation Inc.

8. TITLE WILL BE HELD BY: Town of Myersville

(Name of County/Municipality, Department)

Title will be held in fee simple? Yes No _____ If not, please describe: _____

11. Appendices

Appendix 1: Myersville Program Open Space Application for Bullivant Park

Acquisition Application and Project Agreement (Cont.)

POS Project # _____

9. APPRAISAL VALUES:

Bowers Appraisal Service	\$ 212,500.00	\$ 3,501.40	/ Acre	10/3/22
(Name of Appraiser)	(Appraisal Amount)			(Date of Appraisal)
William G. Bowen Inc.	\$ 150,000.00	\$ 2,471.58	/ Acre	8/19/22
(Name of Appraiser)	(Appraisal Amount)			(Date of Appraisal)

10. APPRAISAL EVALUATION:

a. Spread between appraisals: 34 %

If the value of the high appraisal is more than 20% greater than the low appraisal, please explain:

The Town has reviewed the appraisals with each independent appraiser and it appears the difference is created by the separate opinions of the appraisers of the potential value of a small area of the property which appears may be developable if certain development conditions would be met. Neither appraiser is amenable to changing their valuation based on this difference of opinion upon review of each with each respective appraiser. There is also a noted difference between appraisals with one noting portion of the land in Forest Conservation Area and the other not noting this. This area however is not the portion of land in dispute between the two of the area which may be developable.

b. Average of appraisals: \$ 182,500.00

If the cost of the acquisition is not equal to the average of the two appraisals, please explain:

c. Is the appraisal value reasonable relative to the area? Yes No If not, please explain:

d. Are the appraisals more than 12 months old? Yes No If yes, please explain:

e. The appraisals were performed by licensed real estate appraisers with qualifications consistent with industry standards and all applicable Local, State and Federal statutes and regulations. KBA Initial Here

11. PROJECT COSTS:

	<u>COST</u>	<u>POS AMOUNT</u>
a. LAND COST	\$ 182,500	\$ 182,500
b. COST OF IMPROVEMENTS (if not included in land costs)	\$ 0	\$ 0
c. INCIDENTAL COSTS (total from itemized list below)	\$ 16,000	\$ 16,000

Itemize incidental costs (appraisals, title work, surveys, etc.):

Note that incidental costs not listed may not be reimbursed. Prepaid taxes refunded to the seller is not an eligible incidental cost.

Appraisals	\$ 6,000
Title, Survey, Etc	\$ 10,000
	\$
	\$
	\$
	\$

d. TOTAL PROJECT COST \$ 198,500

e. TOTAL POS AMOUNT \$ 198,500

12. PROJECT FUNDING:

POS FUNDS REQUESTED: \$ 198,500 100 %

PRIOR POS FUNDS APPROVED: \$ 0 0 %

11. Appendices

Appendix 1: Myersville Program Open Space Application for Bullivant Park

Acquisition Application and Project Agreement (Cont.)	POS Project #
LOCAL FUNDS:	\$ 0 0 %
OTHER FUNDS:	\$ 0 0 % (Specify Source/Type)
TOTAL PROJECT COST:	\$ 198,500 100 %

13. FEDERAL FUNDS:

a. Has the applicant applied for federal funds for this project? (check one of the options below)

Yes _____

No _____

We certify that this project is not eligible for federal funding. _____

b. If yes, please provide the federal grant program name, the amount requested, and the date the grant was submitted:

c. Has the applicant received notification of federal approval or disapproval?

Yes, on the following date we received approval (please insert date): _____

No, we anticipate receiving a response by (please insert date): _____

14. APPLICANT INFORMATION: Note that the Applicant is also the County or Municipality that will be receiving the funding at reimbursement.

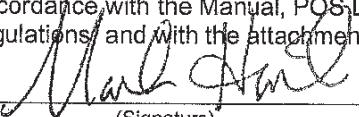
APPLICANT Town of Myersville	APPLICANT'S FEDERAL ID #	52-1458619
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15. LOCAL PROJECT COORDINATOR:

Kristin B. Aleshire (Print Name)	Town Manager (Title)	Administration (Department)	Town of Myersville (Organization)
301 Main Street, P.O. Box 295 (Mailing Address)		Myersville (City)	Maryland 21773 (State) (Zip)
301-392-4281 (Phone Number)	301-992-1861 (Mobile Number)		kaleshire@myersville.org (Email Address)

16. LOCAL GOVERNMENT AUTHORIZATION:

As the authorized representative of this Political Subdivision, I have read the terms of the "Project Agreement and General Conditions" of the Local Program Open Space (POS) Grants Manual and I agree to perform all work in accordance with the Manual, POS Law and Regulations, all applicable Local, State and Federal statutes and regulations, and with the attachments included herewith and made a part thereof.

 (Signature)	Mark Hinkle (Print Name)	Mayor, Town of Myersville (Title/Organization)	2/6/23 (Date)
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PROGRAM ADMINISTRATIVE REVIEW: (DNR Use Only)

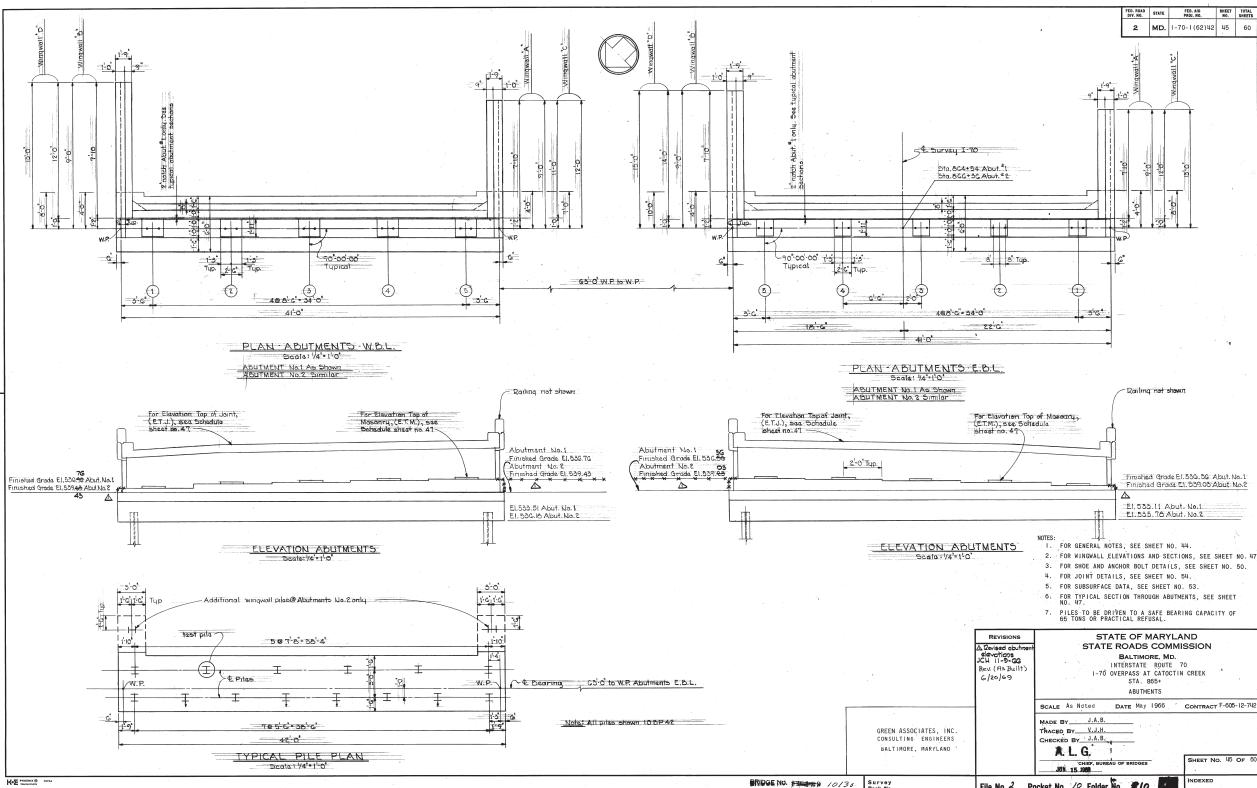
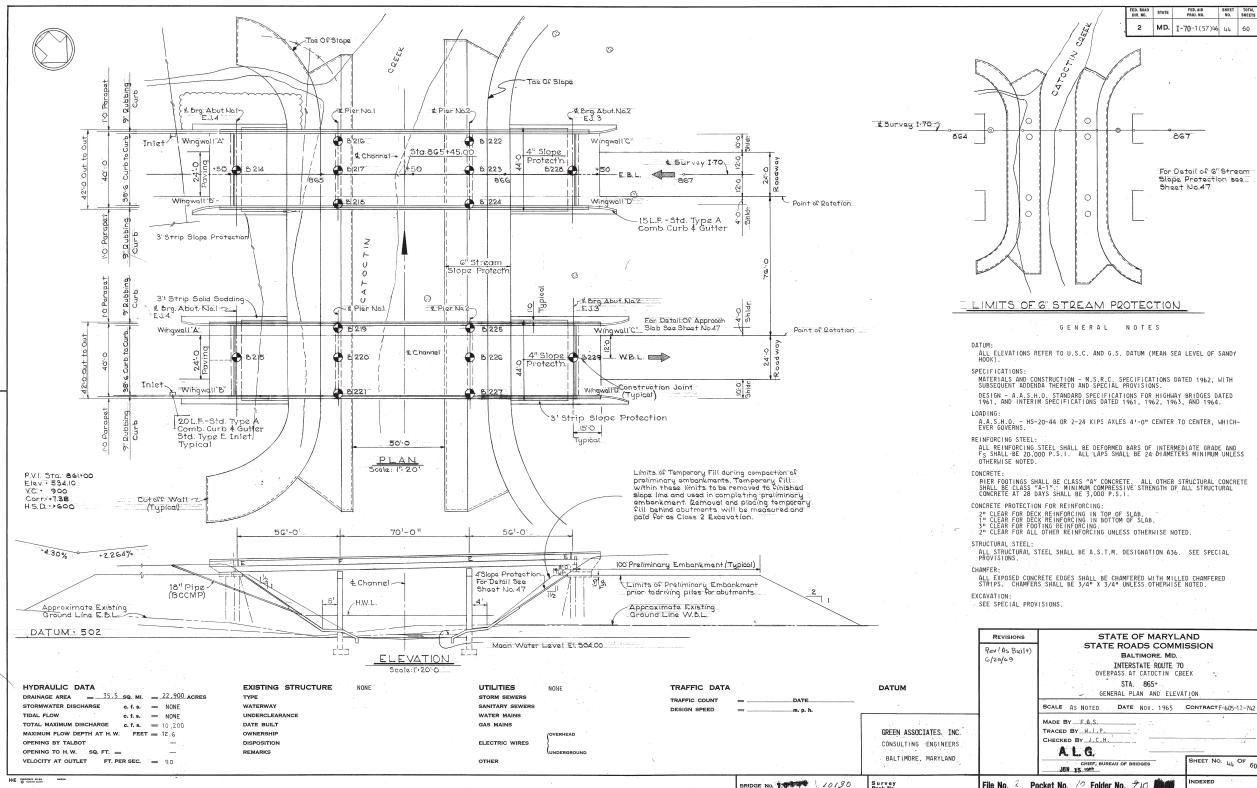
ON-SITE INSPECTION: DATE BY

DEPARTMENT OF NATURAL RESOURCES – PROGRAM OPEN SPACE APPROVAL:

(Signature)	(BPW Approval Date)	(BPW Agenda Item Number)
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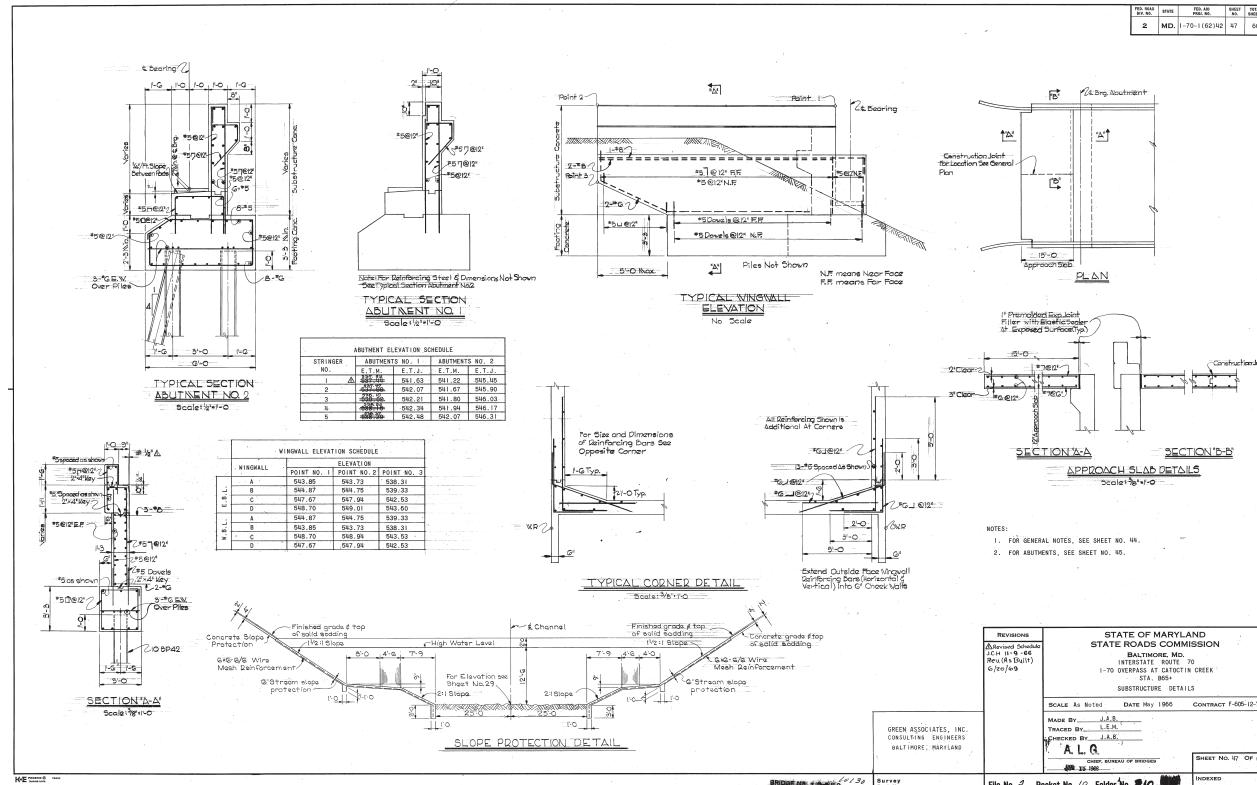
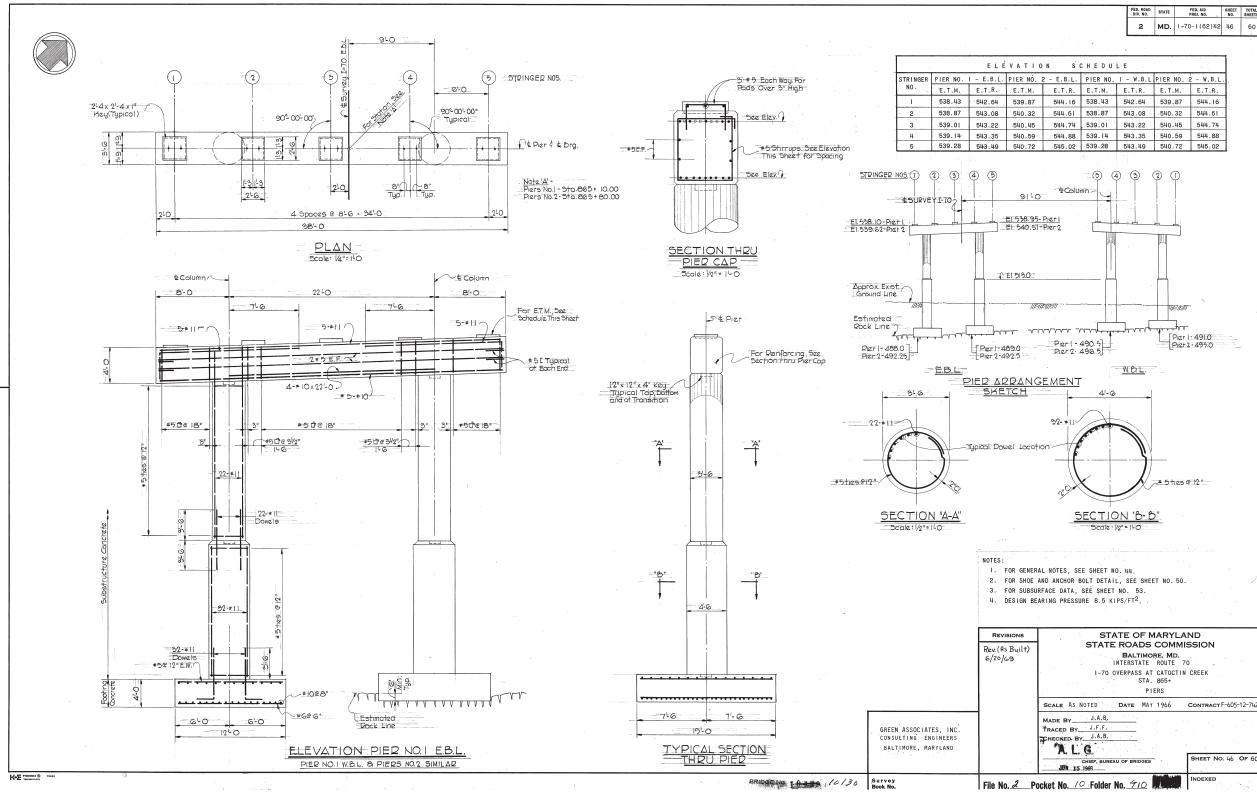
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Appendix 2: I-70 Bridges Over Catoctin Creek



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Appendix 2: I-70 Bridges Over Catoctin Creek



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Appendix 3: Website Survey Responses

Note: The number of “views” and “responses” relates to views or responses to individual questions on the survey. A single participant could have viewed or responded to approximately 16 different questions.

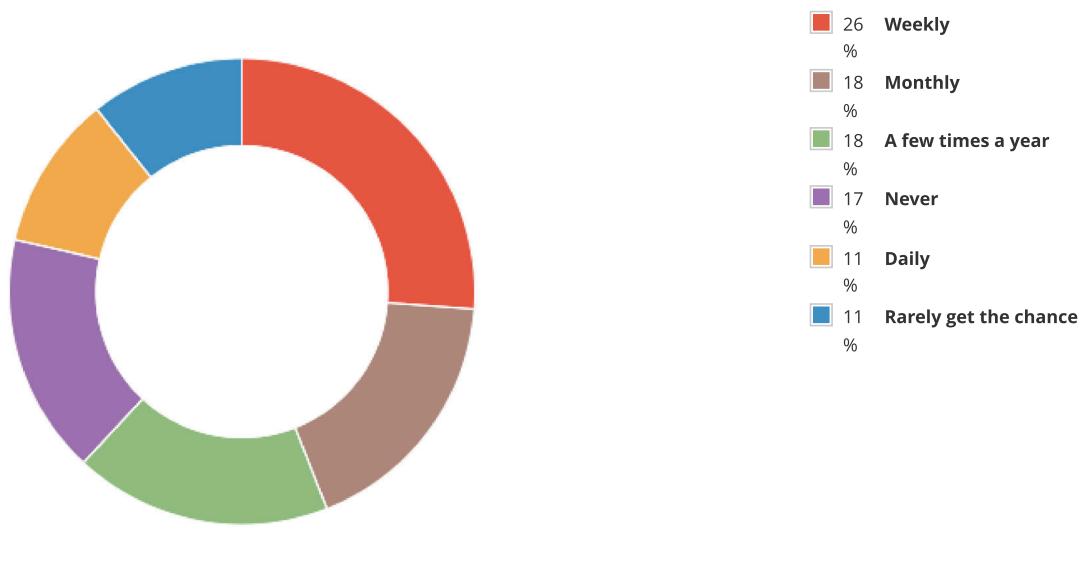
Material that is blacked out is personally identifying information of the commenter and thus redacted.

Middletown/Myersville Recreational Trail Planning Study

Project Engagement

VIEWS	PARTICIPANTS	RESPONSES	COMMENTS
1,922	86	1,100	99

On average, how often do you use trails? (select one)



84 respondents

For what purpose would you use a trail? (select all that apply)

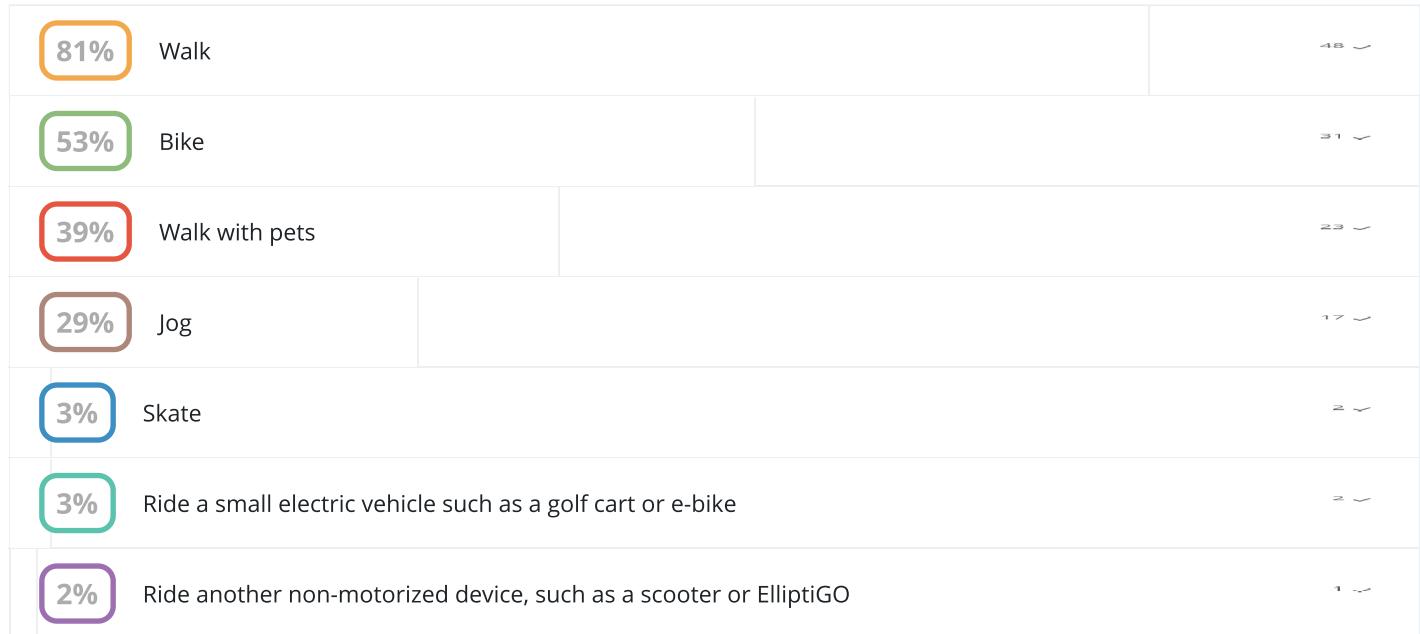
80%	For exercise	49 ✓
74%	For recreation	45 ✓
62%	To get fresh air	38 ✓
62%	To observe nature	38 ✓
25%	To get someplace I want or need to be	15 ✓

61 Respondents

11. Appendices

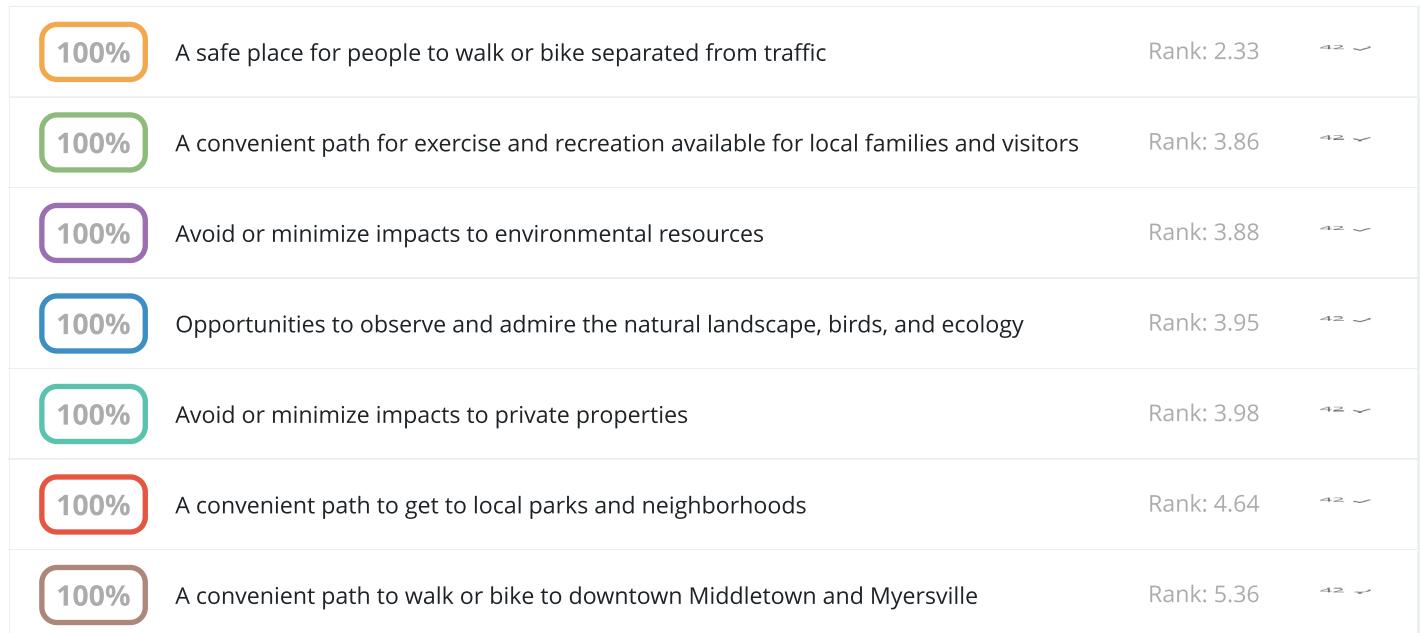
Appendix 3: Website Survey Responses

What would you do when using a trail? (select all that apply)



59 Respondents

What goals are important to achieve with a new trail? (rank from most to least important)



42 Respondents

11. Appendices

Appendix 3: Website Survey Responses

What amenities would you like added to a trail? (select all that apply)

66%	Benches	38 ✓
64%	Directional signs with distance to destinations	37 ✓
50%	Parking lots at trail heads	29 ✓
45%	Educational signs about local ecology and history	26 ✓
41%	Lighting	24 ✓
21%	Picnic areas	12 ✓
19%	Drinking water fountains	11 ✓
16%	Playgrounds	9 ✓
14%	Bird watching blinds	8 ✓
12%	Biking pump track	7 ✓
10%	Bike maintenance stand	6 ✓
9%	Exercising stations	5 ✓

58 Respondents

11. Appendices

Appendix 3: Website Survey Responses

What concerns do you have if there were a new trail built?

I support the idea of a trail -- I went to the Middletown meeting and was surprised to find the focus of the meeting on eminent domain. I do not support using eminent domain to get property or easements on property for a bike trail. Landowners at the meeting were understandably upset after they received a very poorly worded letter from the County implying that they would have no choice but to agree to have the trail on their land. I support having a trail, but only if it can be completed using only public land and private land whose owners are on board.

17 hours ago

Prioritize benefits to our entire communities, while taking into account landowners' concerns. Safe and accessible recreational and non-motorized transportation for people of all ages and abilities would be an amazing amenity for our communities!

22 hours ago

I can't understand why Myersville is against this project. A valuable asset for Myersville, which the county is willing to fund and maintain. Myersville has a shortage of county amenities and this will help eliminate that gap. The library (county funded) is sitting on town land.

10 days ago

None

17 days ago

Questions are mostly for after the decision is made to put in a trail or not- the real question is whether or not we should. My vote is no

19 days ago

Trail is a waste of money, time and resources

19 days ago

traffic from other areas, rape, motorized vehicle. Keep Myersville area a small community outside of the city like it should and stop trying to duplicate Montgomery County or DC

20 days ago

Not sure where or how a trail this trail can be build without impacting private property. Frankly, based on what we have seen, I don't even know why we are considering such a thing.

20 days ago

The largest concern is WHERE the trail will be built and to ensure that it has ZERO IMPACT on any private property. Based on what I am hearing around town, the proposal is assuming taking land from our neighbors. This is not okay and given the number of walking and hiking trails within a short distance, there is no justification.

20 days ago

I use trails for running often early in the morning when it's still dark out, so safety is a priority for me. I would like to feel safe by myself on this trail. I've previously come across a few homeless people on the trail behind the fire station (near the gazebo) which left me feeling unsafe. Now, if I'm by myself, I only stick to running along Main St when it's dark outside.

20 days ago

None. As a resident of Myersville, I would volunteer to help maintain this trail system.

20 days ago

11. Appendices

Appendix 3: Website Survey Responses

Absolutely not

21 days ago

Encroachment on private property, reduction of privacy, public access to private backyards

21 days ago

Impact on private homes/yards, public access to private backyards

21 days ago

I don't want a trail to be created by taking homeowners' land, regardless if homeowners are being "compensation" for the land utilized. It is an invasion of homeowners' land and their privacy.

21 days ago

Negative impact on private property and environmental resources,

21 days ago

That it be wide enough for bikes to pass walkers without conflict.

21 days ago

Impact to private property and wildlife

21 days ago

My biggest concern is the impact to private properties, property values, and safety of residents living in those properties due to trail layout and proximity to homes.

22 days ago

Protection of private property and to not reduce privacy or home values due to trail layout.

22 days ago

Taking peoples back yards

22 days ago

The ability to accommodate both bike and pedestrian traffic

22 days ago

Bigest concern is negative impact towards private properties, the trash and refuse those landowners would deal with, and their attitudes toward the community using the path after dealing with lowered value because of the inevitable consequences of having a public trail on/in their borders.

22 days ago

Private land owners should not have to give up their yard-space to accommodate strangers and the government. This proposed trail plan is unreasonable and unacceptable.

22 days ago

Property owners must have the right to decide whether this trail runs through their property with no coercion from the state. The letter we received implying eminent domain and other similar postings are outrageous. A trail running through my farm, through my pasture, would be devastating to our ability to farm. And for what? So a few people have yet one more trail? We have the blessing of being close to one of the most famous trails in the world not to mention several parks of various sizes. It's hard to understand why tax money is being spent to threaten private property for a discretionary use.

22 days ago

Negative impact on private property and environmental resources.

22 days ago

11. Appendices

Appendix 3: Website Survey Responses

Invasion of privacy, strangers coming too close to homes, noise, additional traffic, further development of homes nearby and strain on water resources.

22 days ago

Unpatrolled miles of trail increasing crime for locals.

22 days ago

How does this affect native species, particularly protected ones, in terms of their habitat and travel routes?

22 days ago

Privacy is a huge issue. Apparently the proposed trail will be close to homes.

22 days ago

Privacy is a huge issue. Bike paths are supposedly planned through areas where the public will be able close to homes.

22 days ago

I think this is a great idea.

22 days ago

Safety! Who is going to keep trail users and trail neighbors safe? Who is going to protect the trail from nefarious uses?

22 days ago

Safety

one month ago

I feel that it will invade private property, and eliminate farm ground, that will impact the working farmers. Not to mention it will take a lot of time and resources to complete this project that will take away from other pressing needs, such as keeping our roads clean and maintained. Additionally, Myersville and Middletown already has numerous parks and trails for public use.

one month ago

There is no, or inadequate parking, for the Myersville Trailhead area to accommodate the anticipated number of visitors-unless the Route 17 "D" option is chosen and the existing SHA Park and Ride parking lot is incorporated, which incidentally aligns with the current Myersville 20 Year Comprehensive Plan (please review it). Also, the alternative route "C" at the Myersville end indicates going "under" Interstate 70 along Middle Creek, an area with a significant history of flooding. This would present a significant flooding safety hazard unless an extreme elevated walkway/bridge etc. were constructed in that area.

one month ago

Impacts to private property. Cost of maintenance. Public Safety access and availability

one month ago

None

one month ago

That it will increase bicycle traffic on roads.

one month ago

11. Appendices

Appendix 3: Website Survey Responses

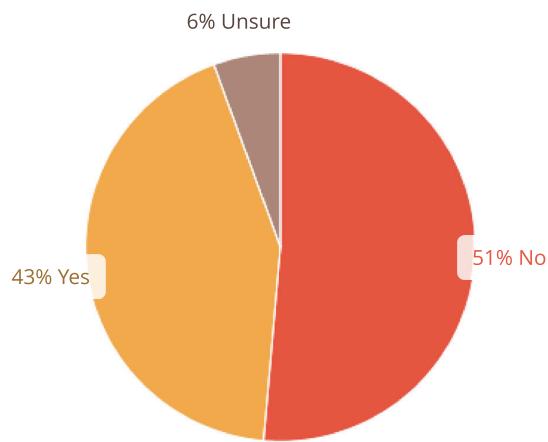
Much of the trail runs through private property. One of the proposed trails bisects my farm which is a huge problem. I will not allow it without a thorough and public legal fight. A sidewalk along Old Hagerstown Road is fine and may be useful.

one month ago

I live in North Fountaindale and I would love if the trail was extended to at least Hollow Road, or someplace within walking distance of the Fountaindale communities. North Fountaindale and South Fountaindale feel so isolated from historic Middletown and other areas of the town and personally, I think it would be wonderful to have a safe trail within safe walking distance that connects the Fountaindale area to this system.

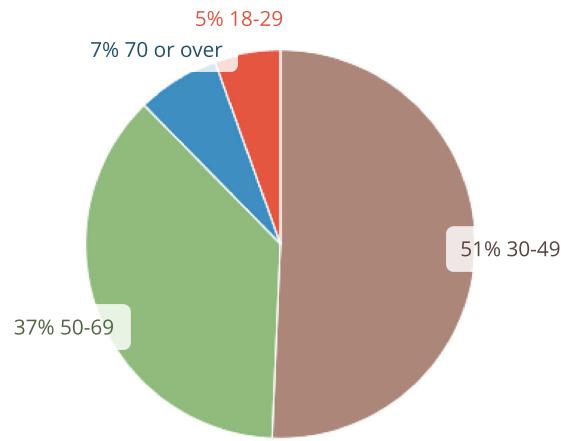
one month ago

Do you support having a new trail connecting between Middletown and Myersville?



72 respondents

What is your age range?

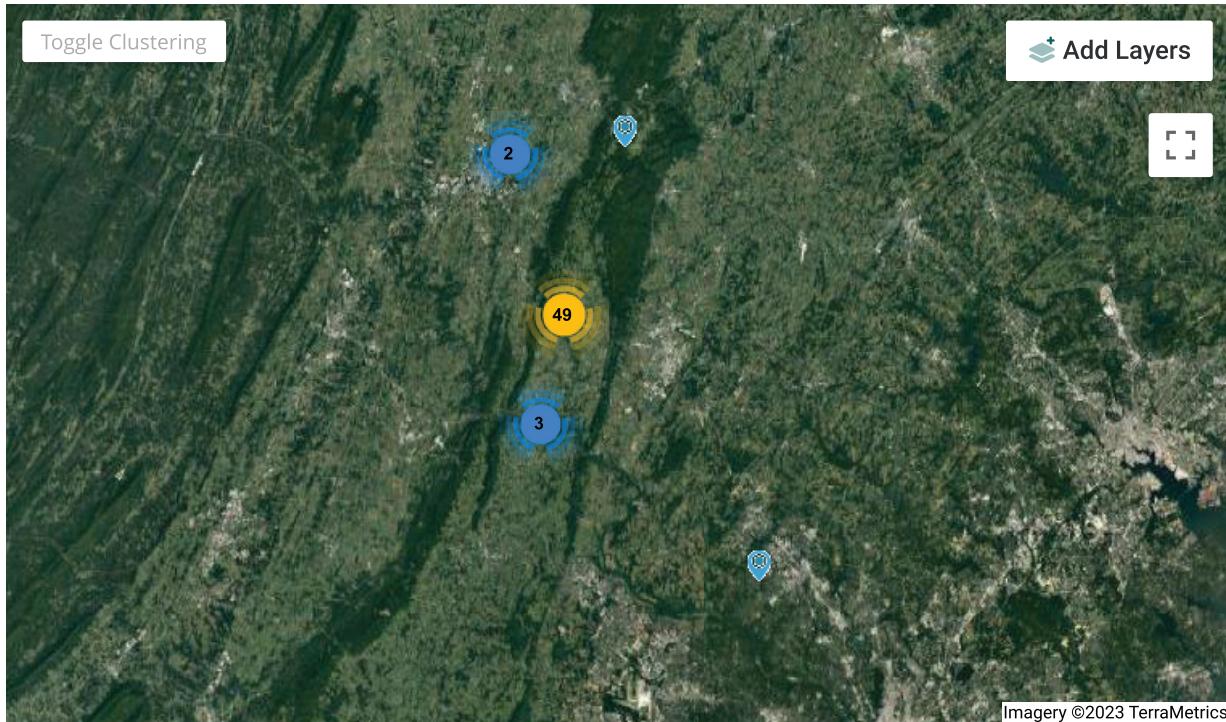


73 respondents

11. Appendices

Appendix 3: Website Survey Responses

What is your home zip code?



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Appendix 3: Website Survey Responses

Do you have comments you would like to share?

no

17 hours ago

We live in a beautiful region. Unfortunately it is too difficult or dangerous for most people to get out and enjoy the natural beauty of the area beyond the safety of their own yards. Please support this project so that all of our family, friends, and neighbors can safely get outside and experience the joys of walking and cycling together.

22 hours ago

We have the Appalachian trail. We do not need another nor do we want to be like Montgomery County.

10 days ago

I prefer the course across the Treeland property because of pedestrian safety. I have seen runners on our narrow ounty roads. It is so dangerous! We need a safe place for them to run. When my children were students at Middletown High School this would have been very useful for our family after sports practices. My high school granddaughter lives in the Netherlands. There aren't any school buses. Students ride long distances on their bikes on special bike lanes. It works! Why not here?

10 days ago

A survey should be sent to ALL residents of Myersville/Middletown. This is not a viable source of thecture temperature of entire community of Myersville or Middletown.

16 days ago

So long as the project respects private property owners and protects the environment, I see only positive impacts.

17 days ago

My family doesn't get the chance to walk places due to inaccessibility of sidewalks. Perhaps this would make Myersville more walkable and better connect our community.

17 days ago

No

17 days ago

I am strongly in favor of this.

17 days ago

I think this is truly needed in these communities as there are very few trails that connect places to each other and the entire valley is so scenic. Having this provides an opportunity to get out and enjoy.

17 days ago

Connecting local communities with off road trails is a very worthwhile endeavor.

18 days ago

It would be great to have a way to get between Myersville and Middletown other than the roads.

18 days ago

This trail is not necessary and very impactful to the residents that live along the proposal and impactful to farmers. Frederick County has a responsibility to protect the farmers and the land that they farm.

18 days ago

11. Appendices

Appendix 3: Website Survey Responses

Totally against the trail. This has been hashed over numerous times and this e pushing for the trail simply won't let it go. Just stop, the answer had been no many times.

19 days ago

Great opportunity to give our youth some places to safely bike as well as bring in visitors to support our local businesses/future businesses!

20 days ago

don't really see the need for this

20 days ago

No

20 days ago

keep Myersville a small private community

20 days ago

Certainly there is better use of time and funds then building more parks and recreation areas. And if rumors are true that this trail will impact private property, then my vote is a NO.

20 days ago

If the Middletown Burgess and commissioners are supporting such a project that threatens private property, we need to consider retiring them from their positions. I live on the golf course and like to run. We have plenty of options for long runs and bike rides that don't mandate taking private property.

20 days ago

I am extremely disappointed that our city and county officials are considering taking private property for such a frivolous project. I thought eminent domain was for public NEED, not public WANT. And the want of just a few elite folks who probably won't even use the path...and that carry no burden in this decision. I strongly encourage our city officials to try to refocus these efforts and funds to the local foodbank and those underserved residents who need real help.

20 days ago

This trail offers numerous benefits that would greatly enrich our community. Research and experience have shown that well-designed trails not only enhance our quality of life but also contribute to the overall well-being of our residents.

20 days ago

No

20 days ago

This trail would give kids/parents access to Middletown schools without relying on a school bus.

20 days ago

Don't take someone's land, even with compensation, even if legal, it's not right and not how our community leaders should operate.

21 days ago

Don't steal land

21 days ago

11. Appendices

Appendix 3: Website Survey Responses



When we purchased our home in 2022, one of the main appeals was the backyard and privacy it offered (in a private neighborhood, far from any public roads).

It is our preference that a public walking/biking path is not built behind our home, running adjacent to our backyard. If it is, we urge you to consider expanding the distance between the end of the tree line and the start of the path barrier area by an additional 10 feet, and planting evergreen trees in an appropriate location along the path to ensure year round privacy.

We understand and appreciate the need and benefits of the proposed path, but don't want to sacrifice our privacy at the same time. We feel confident there is a way for both to be accomplished.

21 days ago

Please do not put this trail on homeowners' land. Find a way to put it on public land and existing easements if it is needed.

21 days ago

Please do not put this trail on existing land.

21 days ago

I have thought about the desirability and feasibility of this pathway for a long time, and hope that it will come to fruition as soon as possible.

21 days ago

As a local resident who would be impacted, I believe we have enough walking trails already in our area.

21 days ago

Yes, There are enough trails in Maryland for gosh sakes! You need to put your mind on something else!

22 days ago

I don't think this is a good use of town resources per the benefit. I would much rather see areas for youth to utilize and congregate safely. Family areas, splash pads, skate parks, etc.

22 days ago

I believe that the town's resources could be used in a better manner to add things such as safe areas for children, teens, and families to socialize within the Myersville/Middletown area with having a lesser impact on private property and privacy.

22 days ago

Town people don't want this through there back yard.

22 days ago

We built bike trails on our roadways with taxpayer dollars. That was stupid. And feeling like there is a need to connect Myersville to Middletown now with a "trail" is also stupid. How many parks does Middletown already have? 3 at least. Those aren't overcrowded. I know because I've been at each of them, a lot. Same for Myersville - one nice park. If you want to bike ride long distances go up in the watershed. Explore Wolfsville and other beautiful, more remote locations like that. But stop intruding on private property all the time. Use the marked bike paths now on our roadways since we had to have these (that I see NOBODY using - Stupid!). And by all means lets not encourage even more people to come to Middletown - our water resources and infrastructure just can't support it.

22 days ago

Another trail connecting Myersville to Middletown would be excellent

22 days ago

I really support this idea, mainly for biking

22 days ago

11. Appendices

Appendix 3: Website Survey Responses

Pushing eminent domain to force landowners to give away peace of mind for their families safety and security for the sake of "convenience" is ridiculous and shortsighted. Allowing the general public the right to traverse on the edges of properties encourages littering, drug paraphernalia to be tossed, and an increase of animal attacks between landowners and visitors who wouldn't otherwise have been in the same vicinity.

There's 30mph roads surrounding most of Middletown and Myersville that can safely support a multi-use path without encroaching on private property.

22 days ago

Government intervention sucks

22 days ago

Respectfully I do not give permission to use my property for this trail.

22 days ago

Protect and preserve this valley's unique natural beauty. Let the construction projects happen elsewhere.

22 days ago

no

22 days ago

Keep the focus of feasibility on the RIGHTS of the individuals who make up this community, not the WANTS of those with an agenda.

22 days ago

Sooner the better

one month ago

I do not feel this is a great use of resources.

one month ago

No

one month ago

I proposed and supported other like opinions of this idea many years ago, as the Mayor of Myersville. The interest was not as elevated as it is today. I still support the concept plan today, but there is much work to be done and feasibility studies to complete and something of this size and scope will need Federal monies to be realized. Also, when all else is resolved to final agreement beginning at the Middletown Trailhead and all County property owners up to the Myersville Town limits, Myersville elected and appointed leadership will likely be inclined to wait for engagement. In the interim, Myersville will follow and plan around the existing approved 20 Year Comprehensive Plan.

one month ago

The Bikeway link is not working.

one month ago

N/A

one month ago

Really, really excited about this project. We need more trails all over Frederick County. I am hopeful that one day, this trail could even extend down to Brunswick.

one month ago

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Appendix 3: Website Survey Responses

I live off of Rt 17/Wolfsville Road. The number of bicyclist on this road, Harmony, and adjoining roads is greatly increasing. It is SO VERY DANGEROUS on these roads as there is no shoulder. A driver comes around a turn and there is a bicyclist in front of them--you cannot see around the many hills and turns! A long bike path for larger groups of bicyclists would be wonderful as I fear someone will be killed on the winding, curved roads in the Myersville area. I ride the Western Rail Trail in Hancock. Hope to see Frederick County create a similar place for riders that is long and safe.

one month ago

Please keep bicycles off of roadways.

one month ago

Waste of taxpayer money

one month ago

N/A

one month ago

N/

one month ago

Please consider a way to try to connect the Fountaindale communities to this system as well.

one month ago

On average, how often do you use trails? (select one)

No data to display...

For what purpose would you use a trail? (select all that apply)

No data to display...

What would you do when using a trail? (select all that apply)

No data to display...

What goals are important to achieve with a new trail? (rank from most to least important)

No data to display...

What amenities would you like added to a trail? (select all that apply)

No data to display...

Do you support having a new trail connecting between Middletown and Myersville?

No data to display...

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Appendix 4: Property Owner Notification Letter and Potentially Affected Properties on the Recommended Alternative

LETTER TO POTENTIALLY AFFECTED PROPERTY OWNERS – SEPTEMBER 2023

Dear Property Owner:

The Frederick County Department of Planning and Permitting is developing concepts for a hiker-biker trail between Middletown and Myersville. Your property at «Premises_Address», «City_», «State» has been identified as potentially being impacted by the project. No decisions have been made as to the alignment and your input will be given great consideration as a final alignment for the trail is selected. If a portion of your property is necessary for the project, you will be afforded just compensation or you may choose to donate the property as a permanent easement to the County or a local land trust.

We would appreciate the opportunity to discuss the Middletown to Myersville trail directly with you or your representative so that we can find a trail alignment that best suits our community and respects your rights as a property owner. You can also learn more about the project by attending a community meeting (see enclosure for details).

The County has contracted with Mead & Hunt, a local engineering firm, to conduct the trail planning study. Please contact Mr. Scott Fox at 443-741-3650 or scott.fox@meadhunt.com to discuss this matter further.

Kind Regards,

Mark Mishler
Transportation Engineering Supervisor

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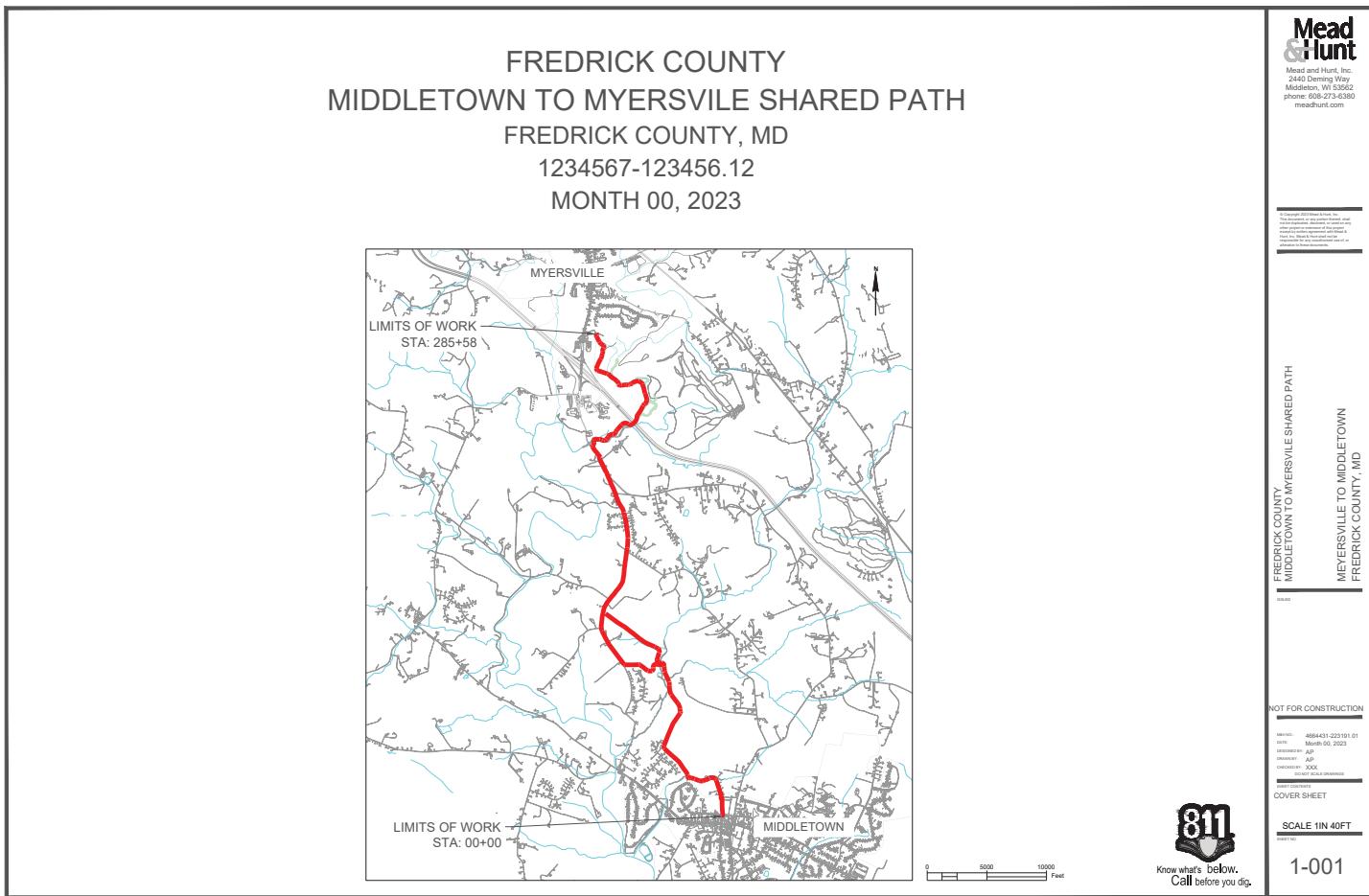
Appendix 4: Property Owner Notification Letter and Potentially Affected Properties on the Recommended Alternative

Calculated by: AP
Date: 10/13/2023

RIGHT OF WAY	QUANTITY	UNITS
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9419 MYERSVILLE RD TAX ID: 1116357278		
1 MAIN ST TAX ID: 1116593397		
JEFFERSON ST TAX ID: 1103130371		
3059 VENTRIE CT TAX ID: 1116356085		
3555 BRETHREN CHURCH RD TAX ID: 1116365939		
N JEFFERSON ST TAX ID: 1103140547		
N JEFFERSON ST TAX ID: 1103124681		
8100 PETE WILES RD TAX ID: 1103124665		
8401 OLD HAGERSTOWN RD TAX ID: 1103134156		
8730 OLD HAGERSTOWN RD TAX ID: 1103149544		
9092 GLORIA AVE TAX ID: 1103149994		
9148 OLD HAGERSTOWN RD TAX ID: 1116345539		
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MYERSVILLE RD TAX ID: 1116356409		
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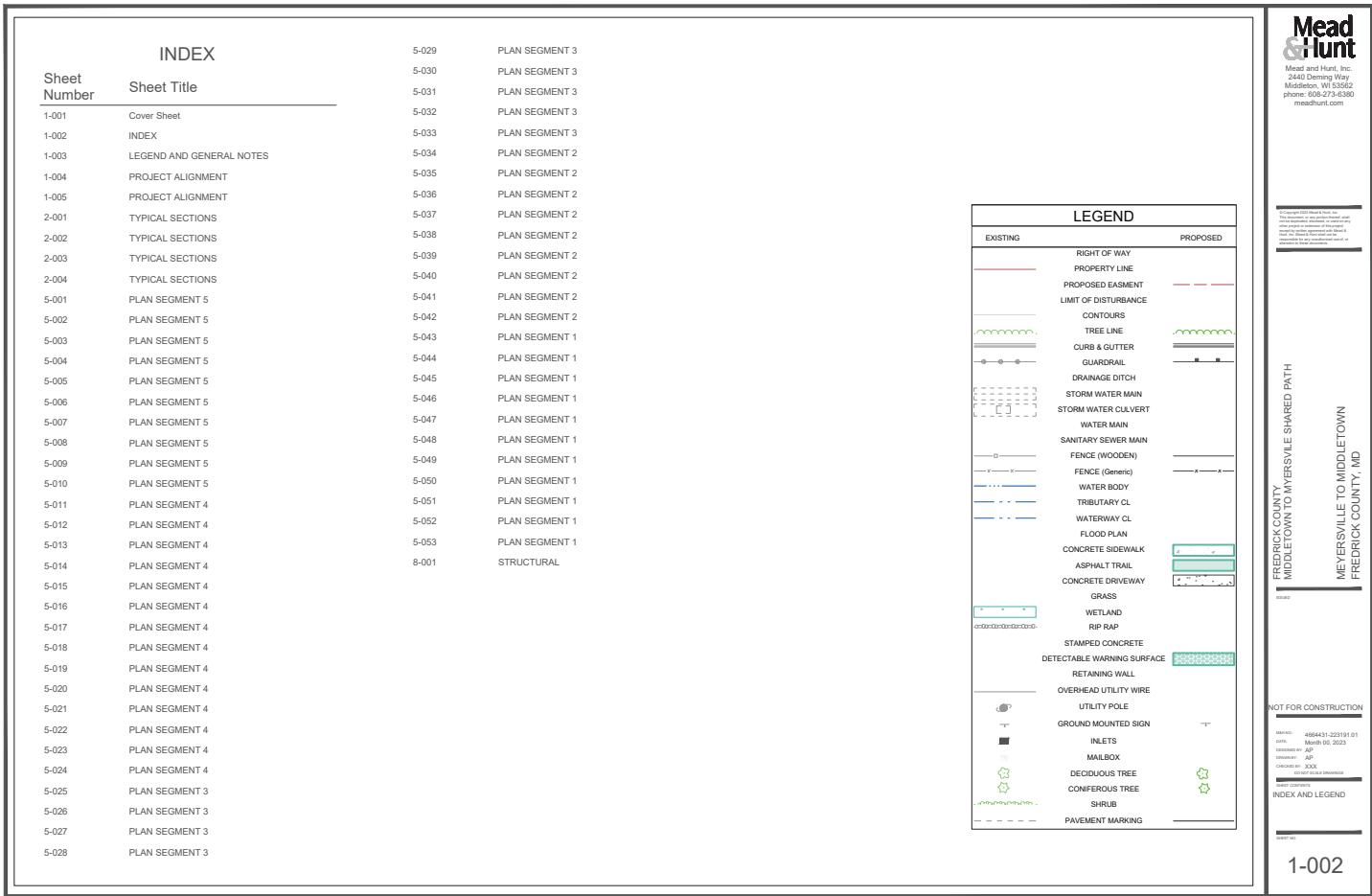
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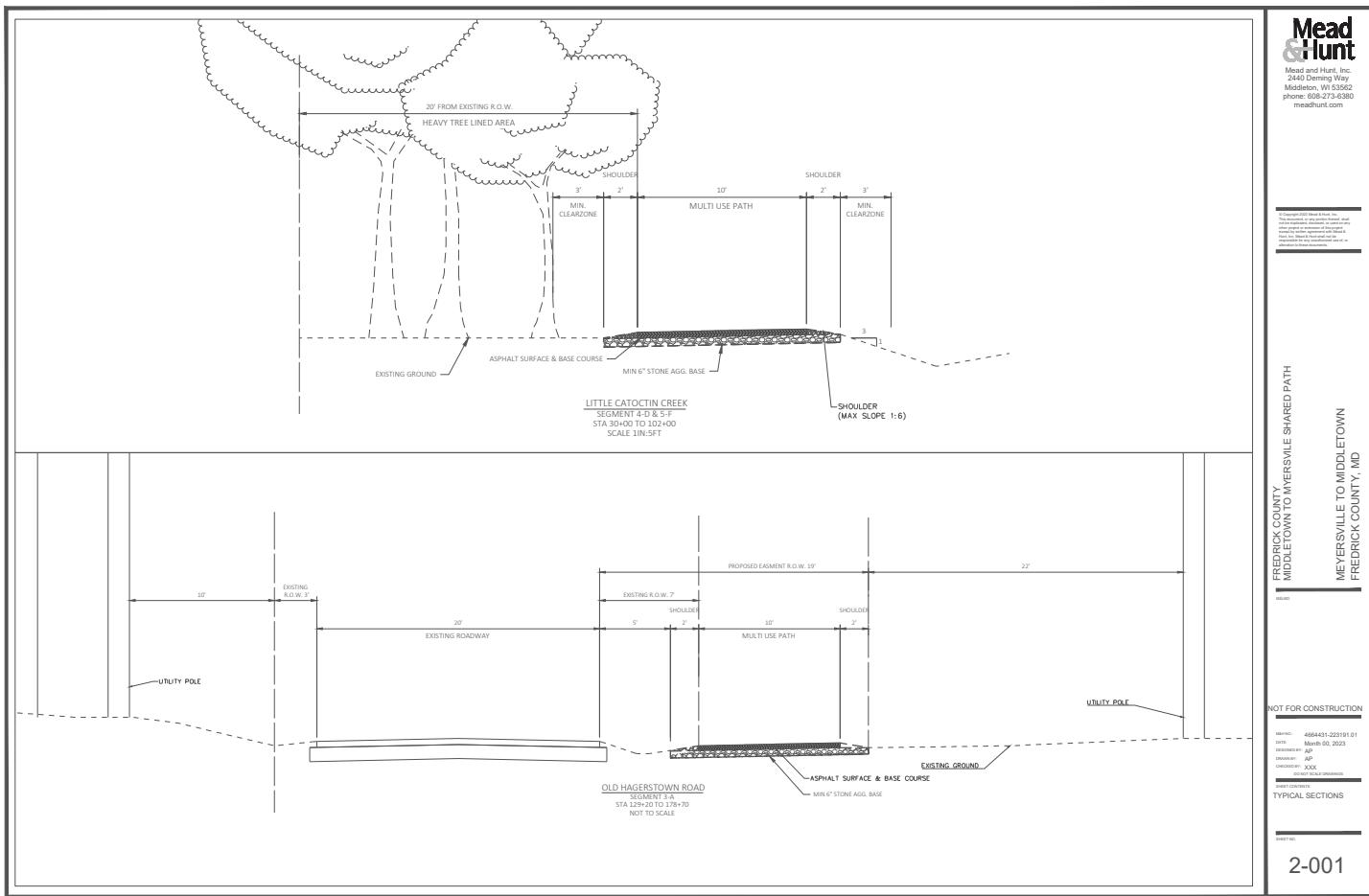
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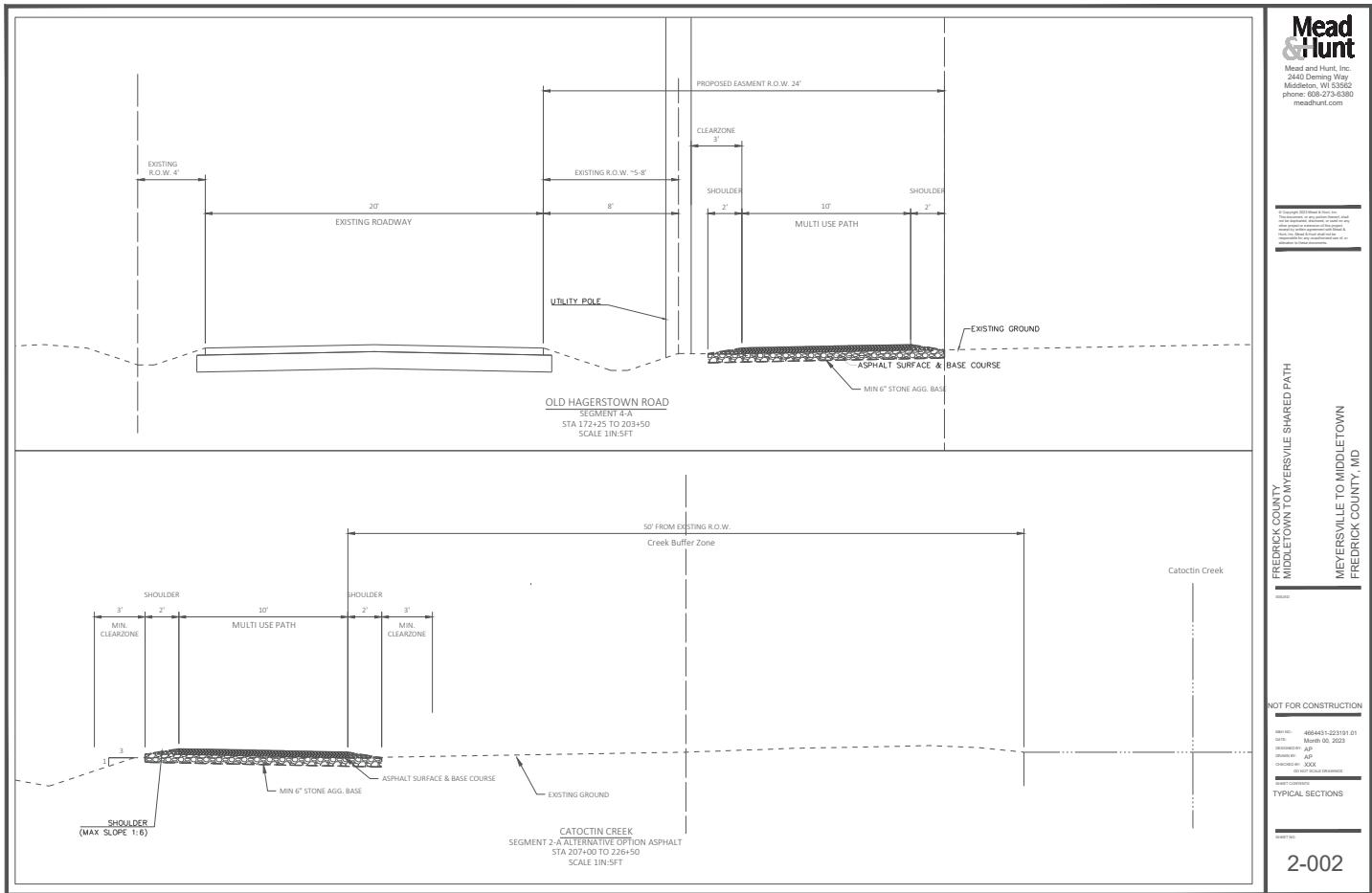
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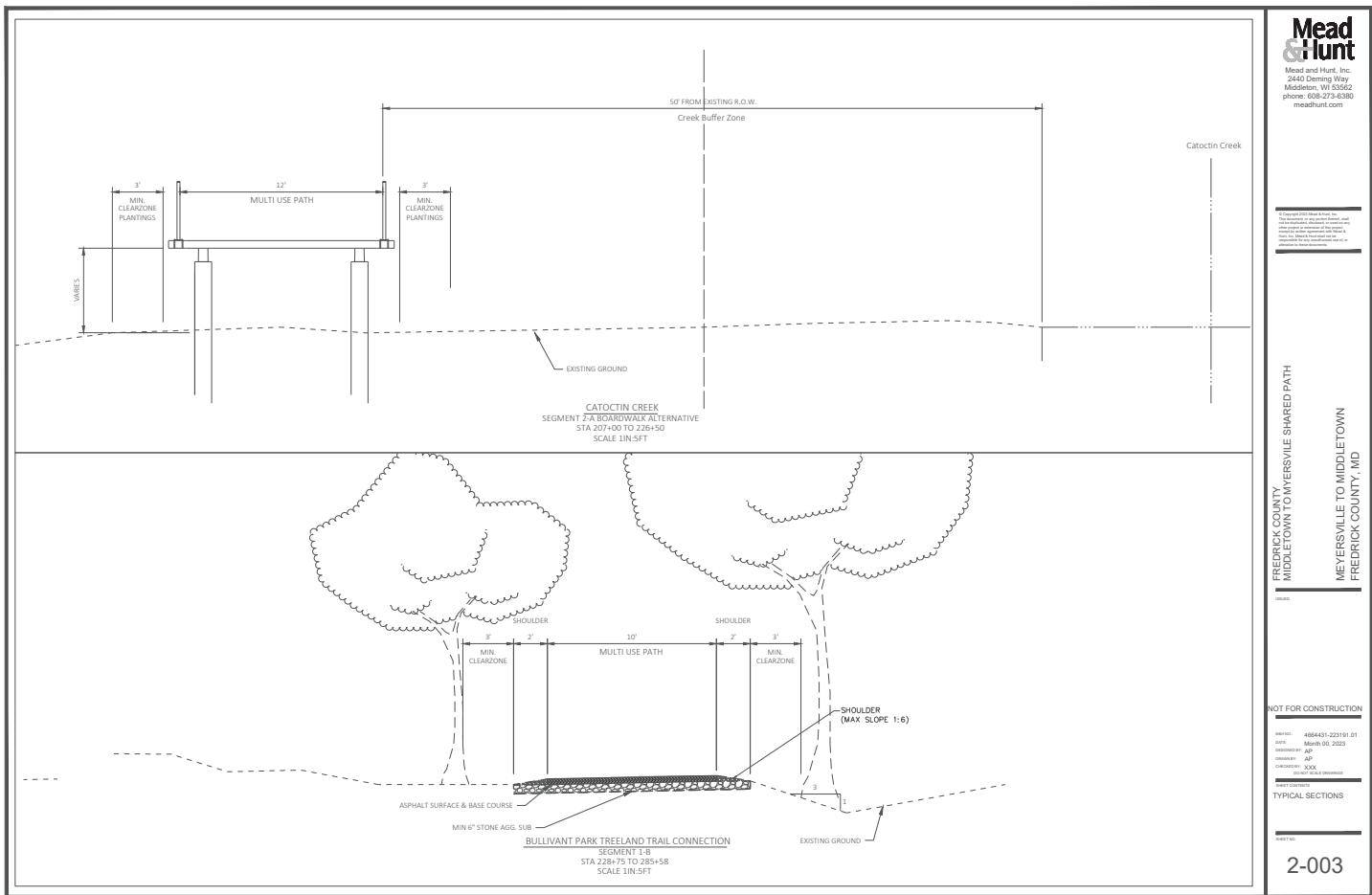
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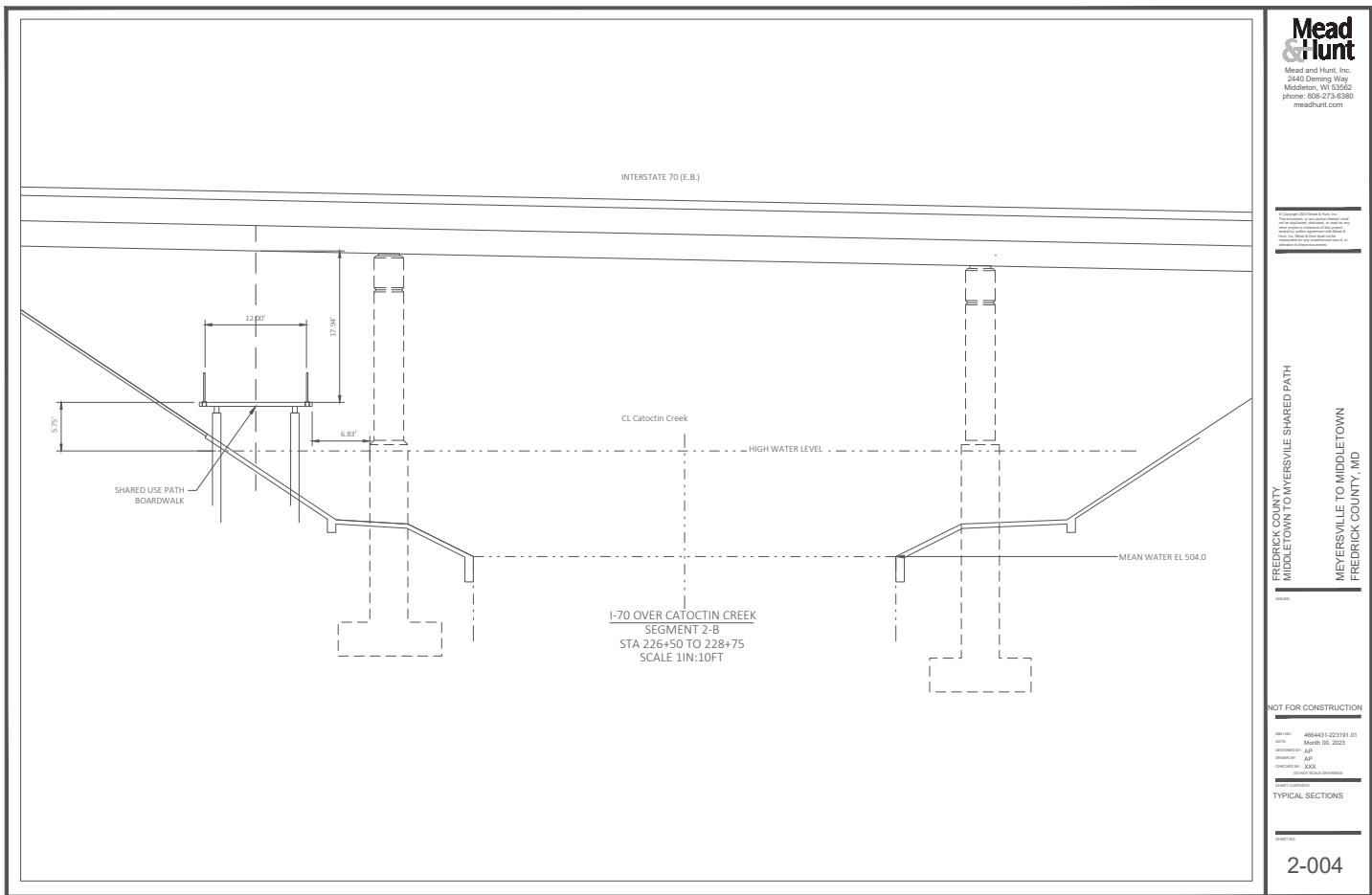
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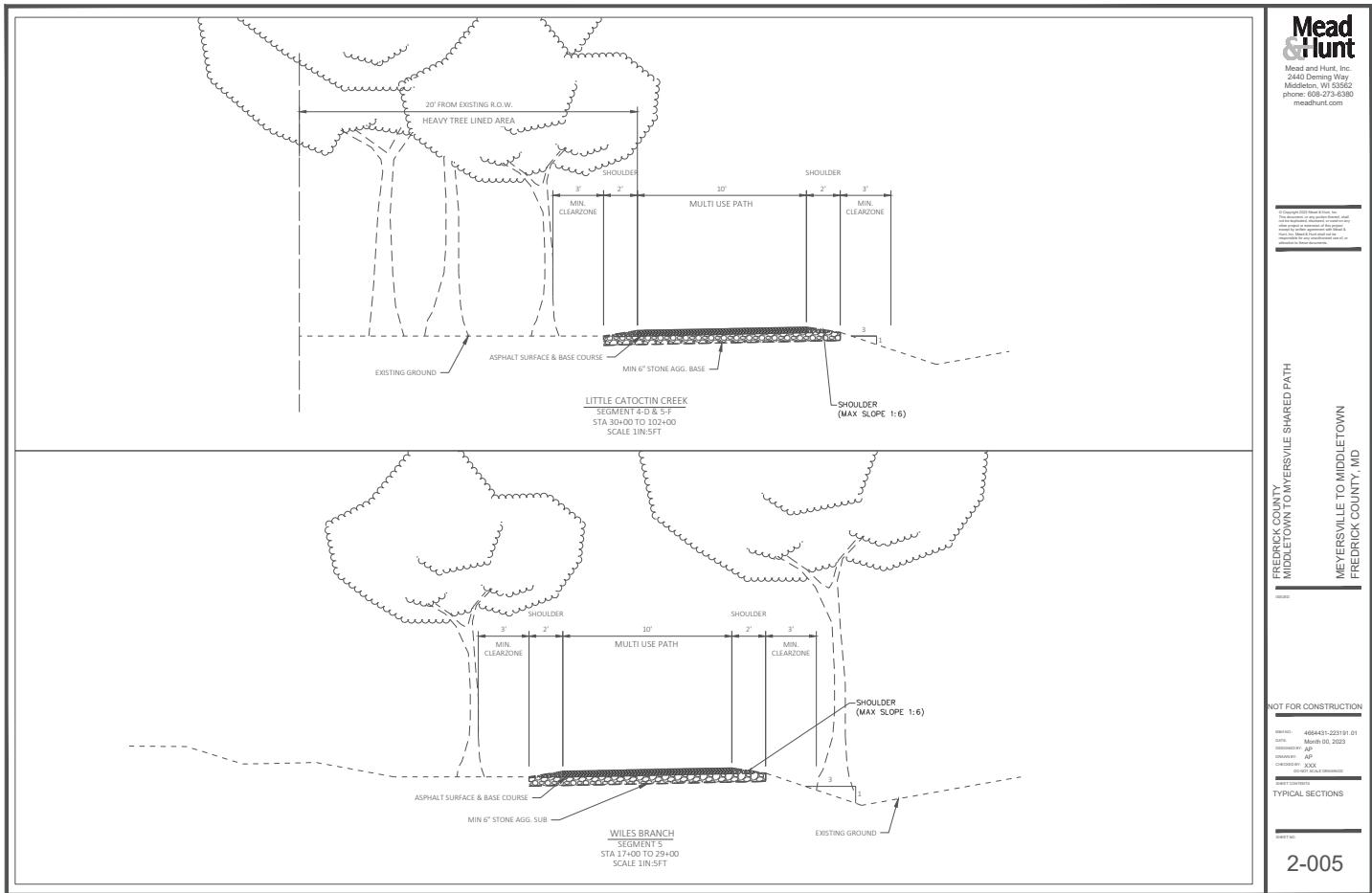
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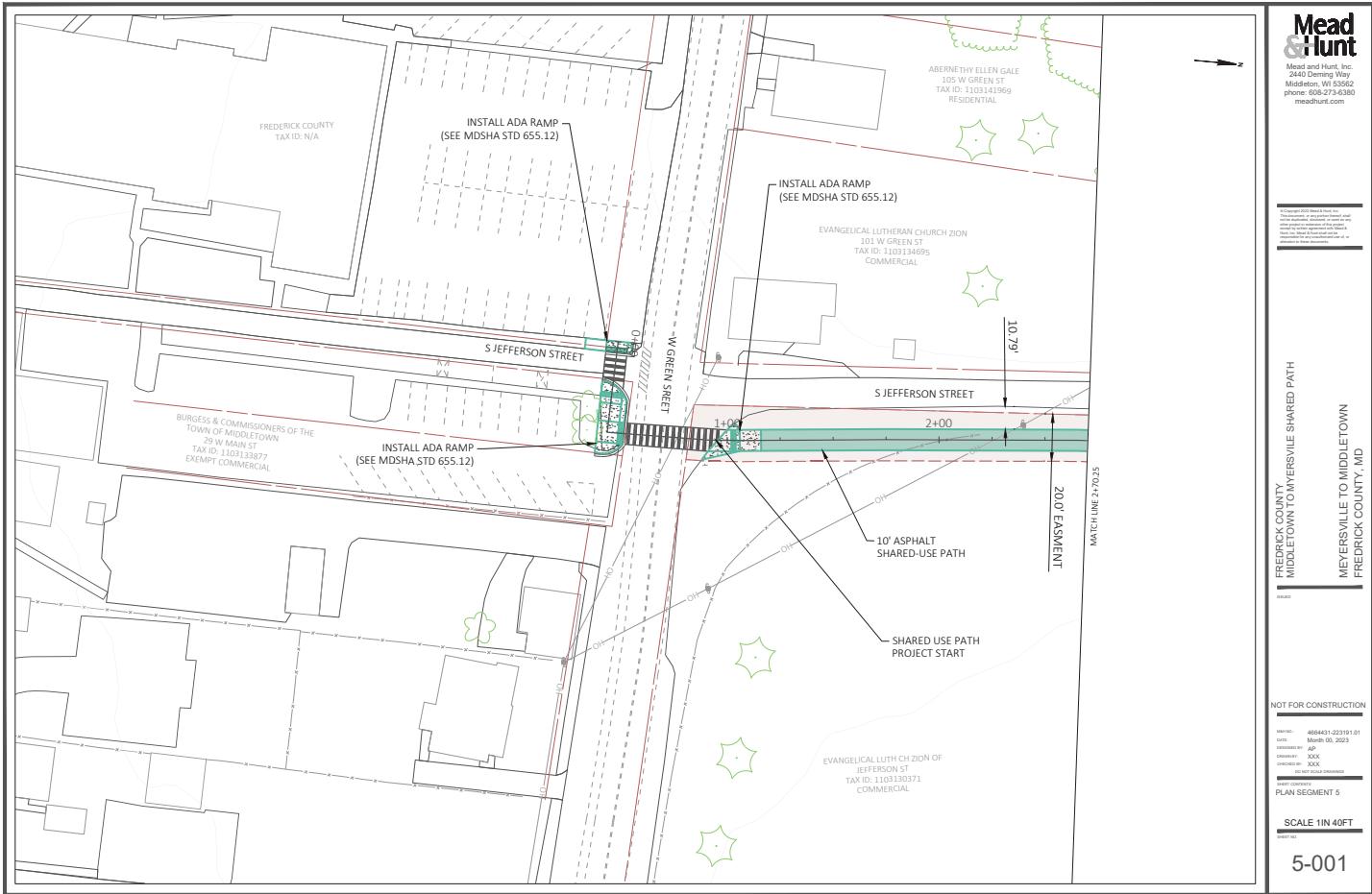
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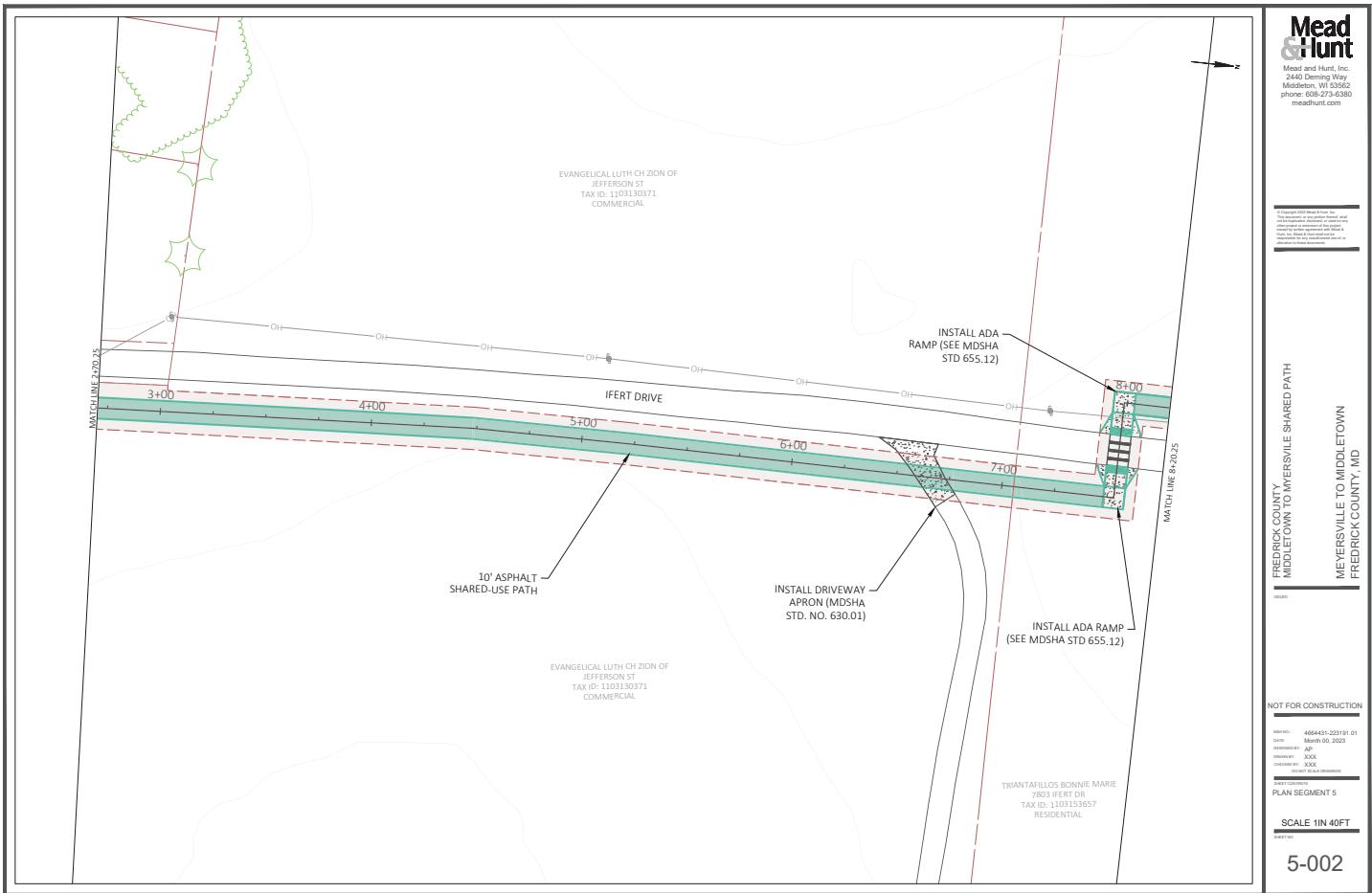
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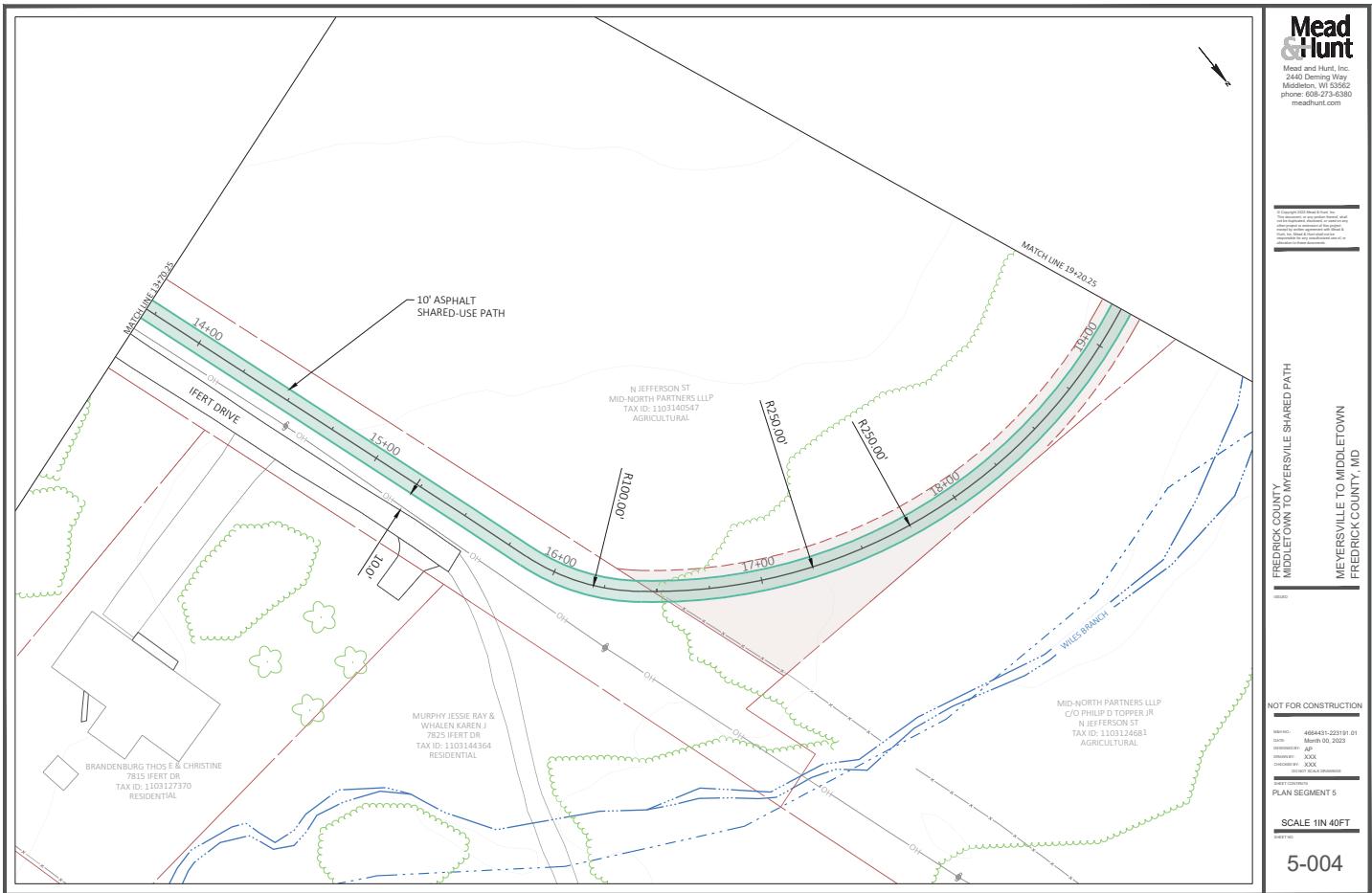
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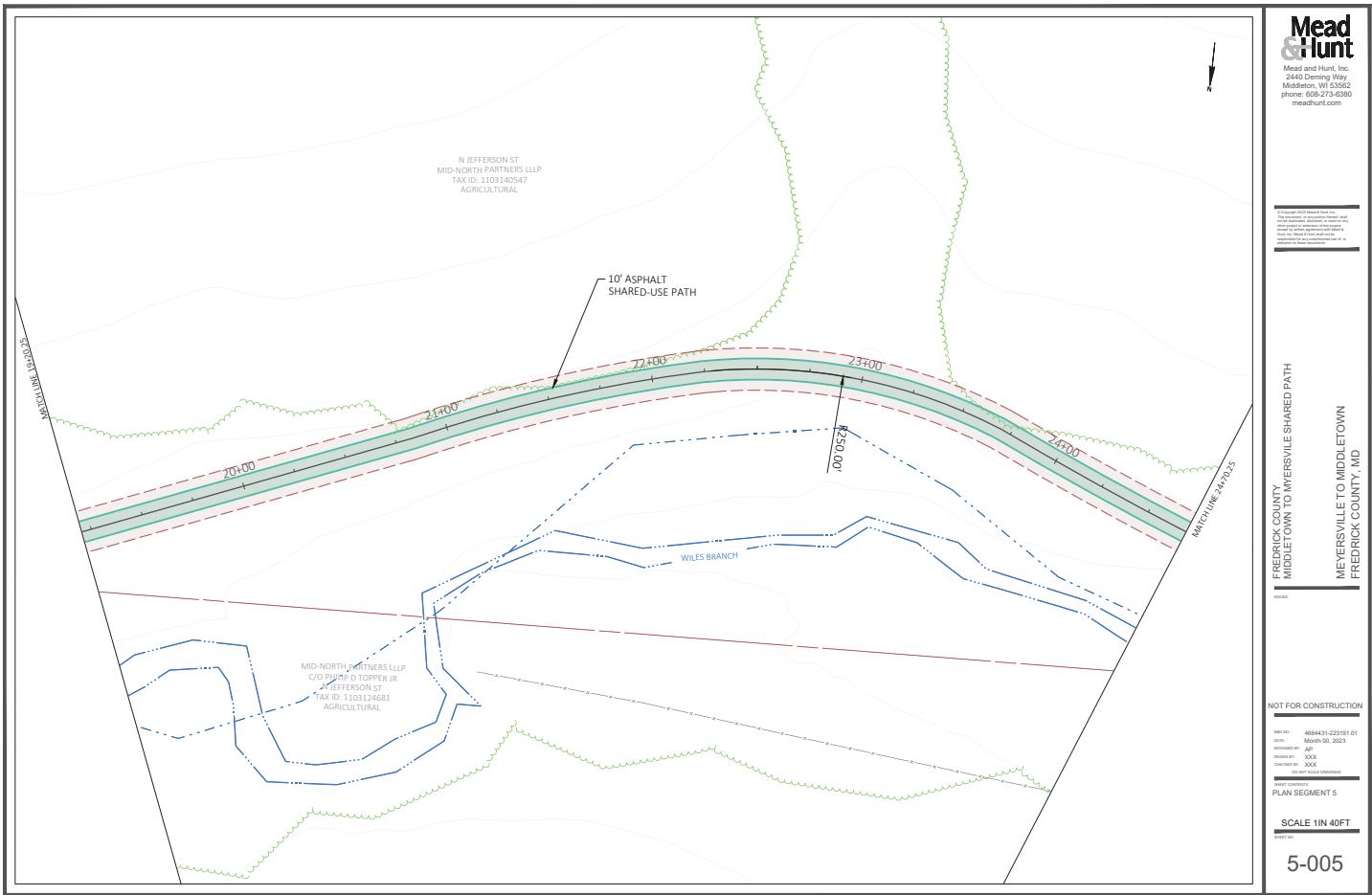
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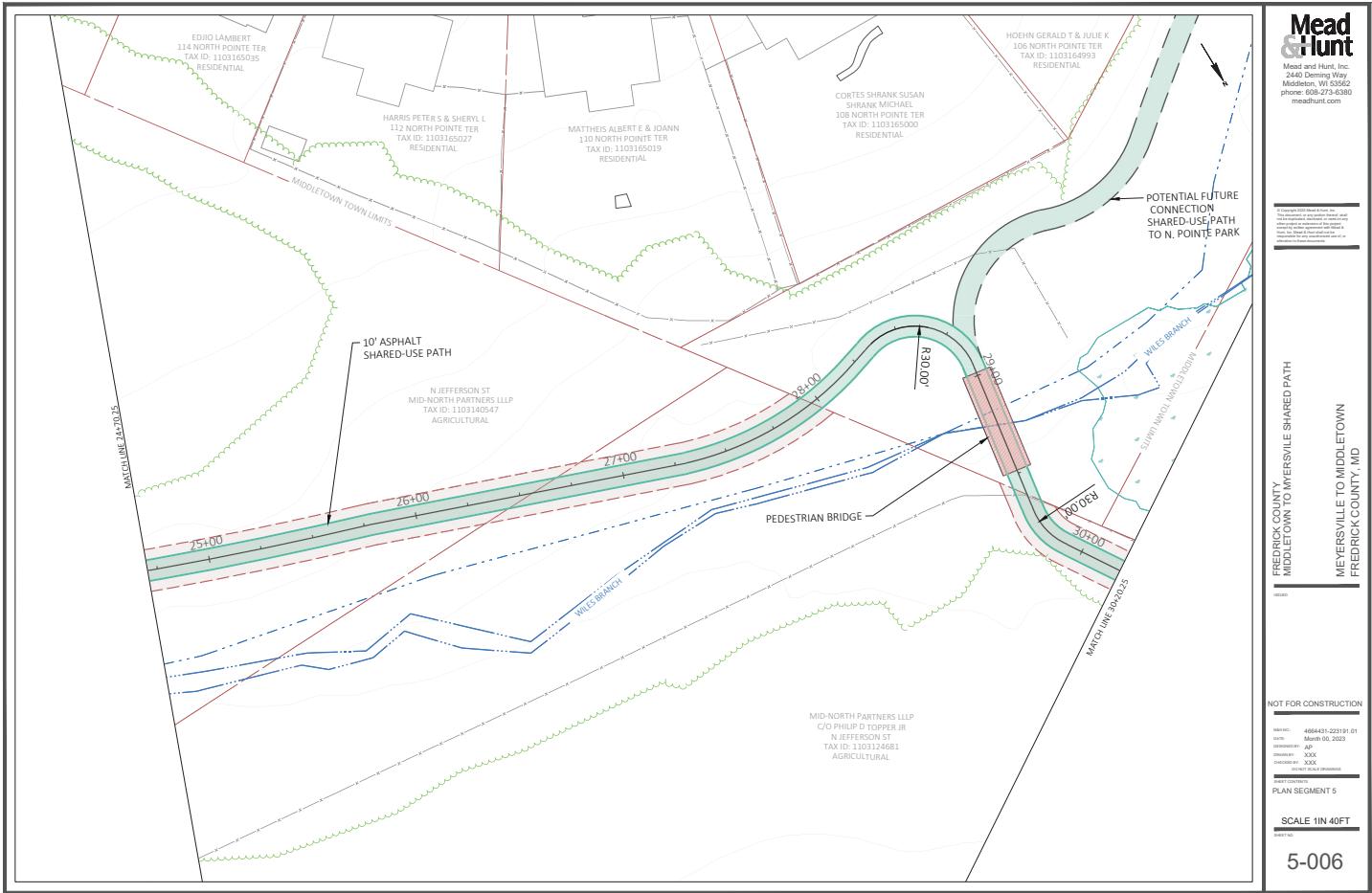
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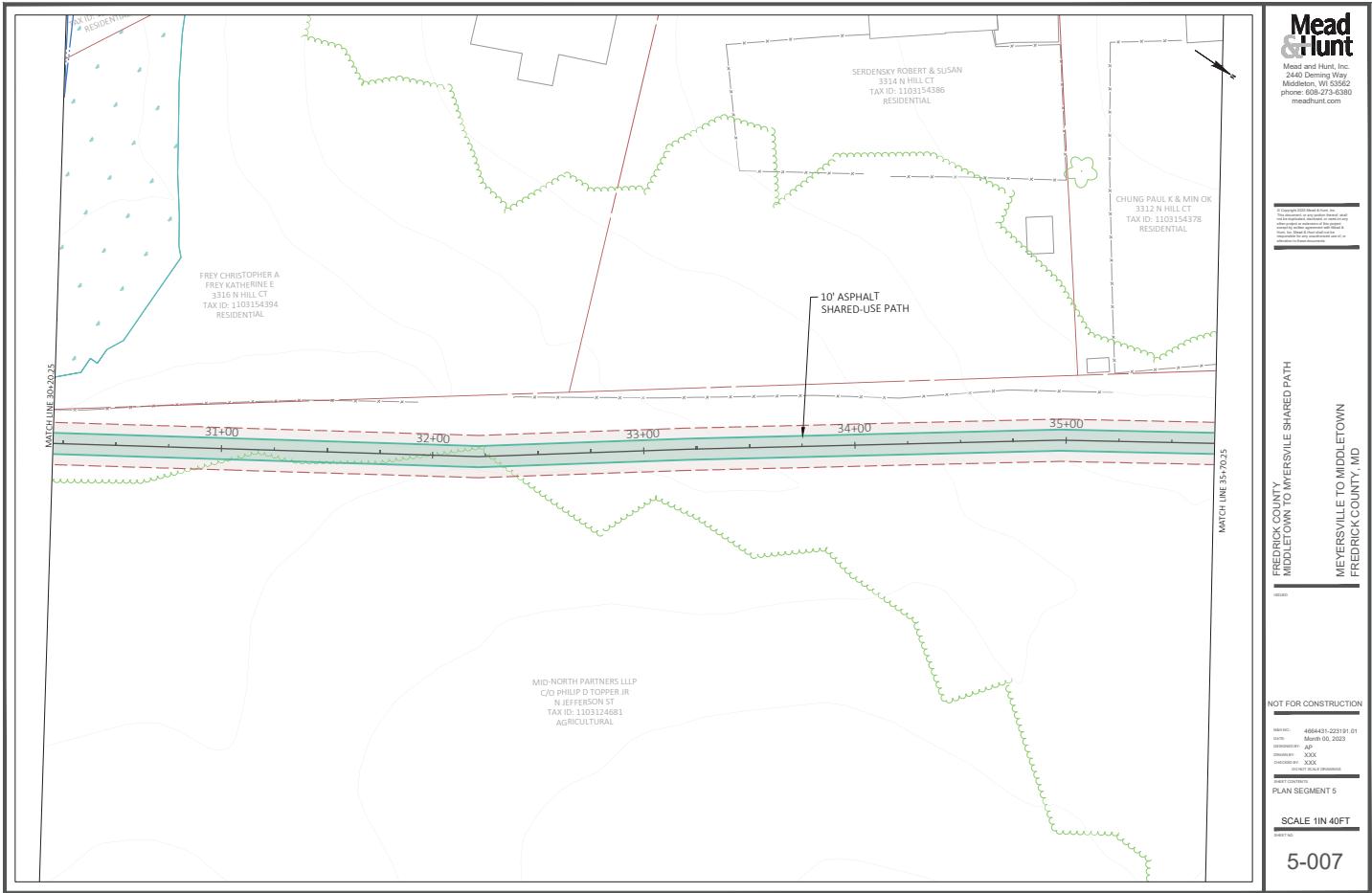
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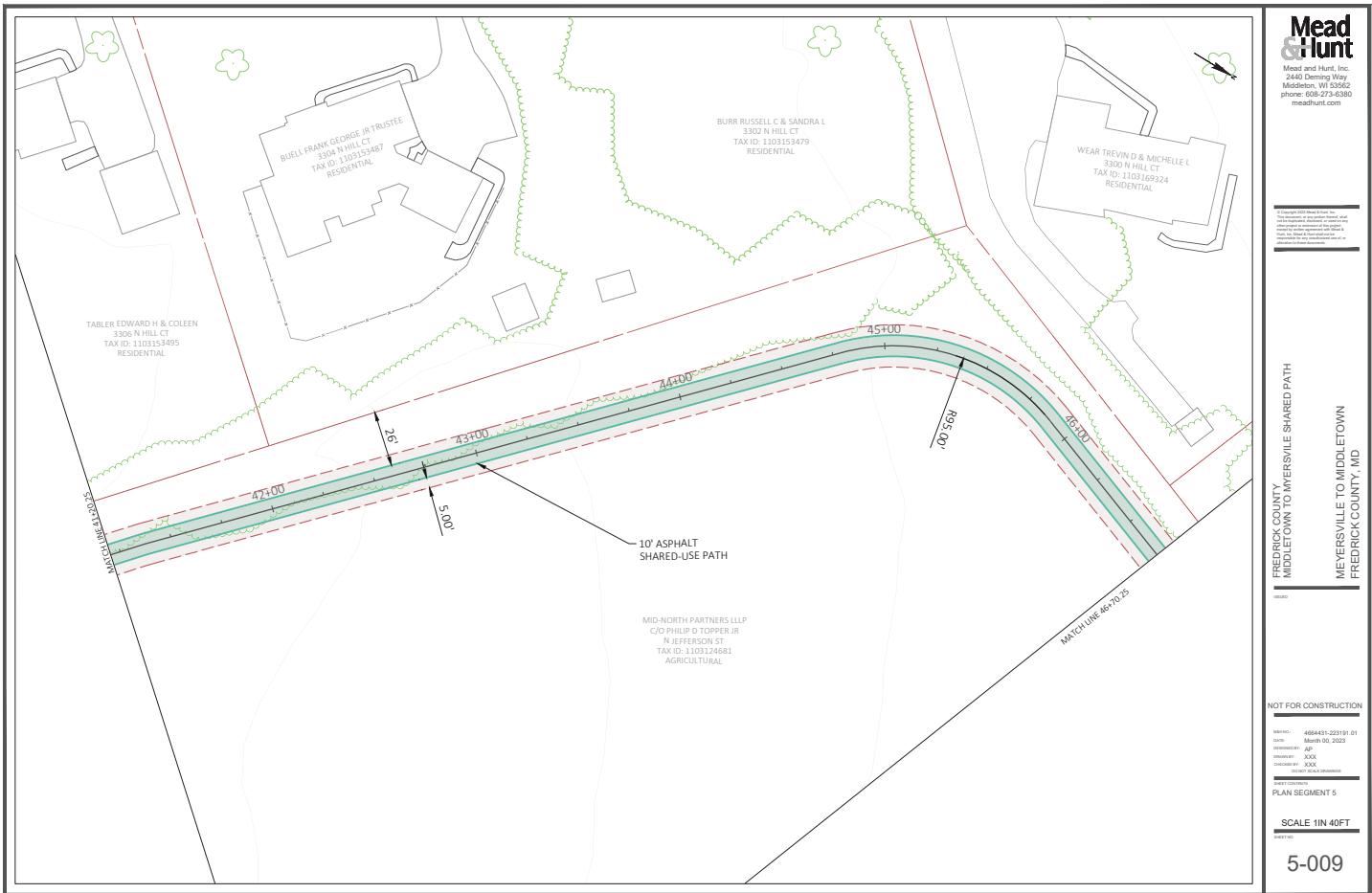
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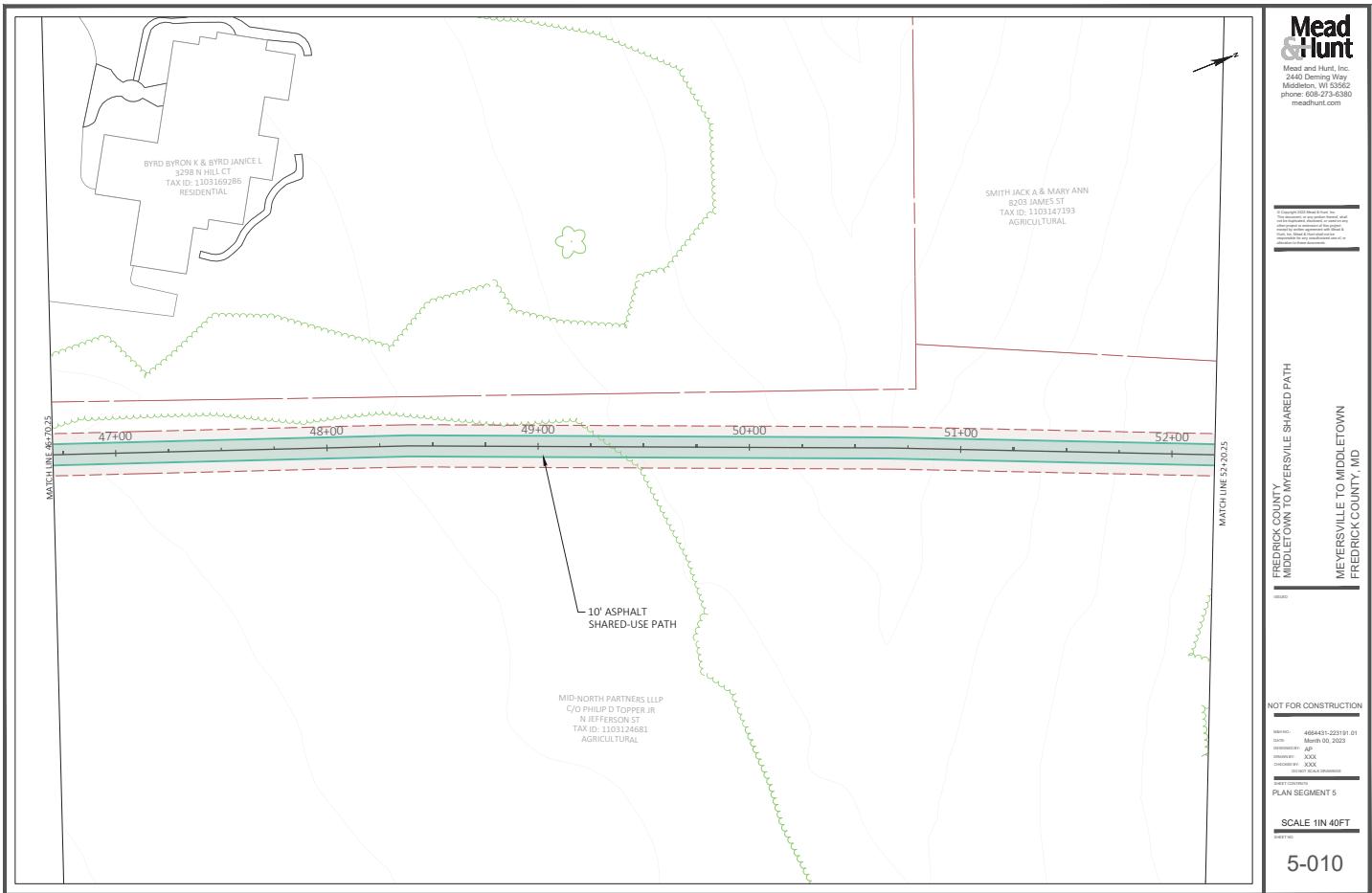
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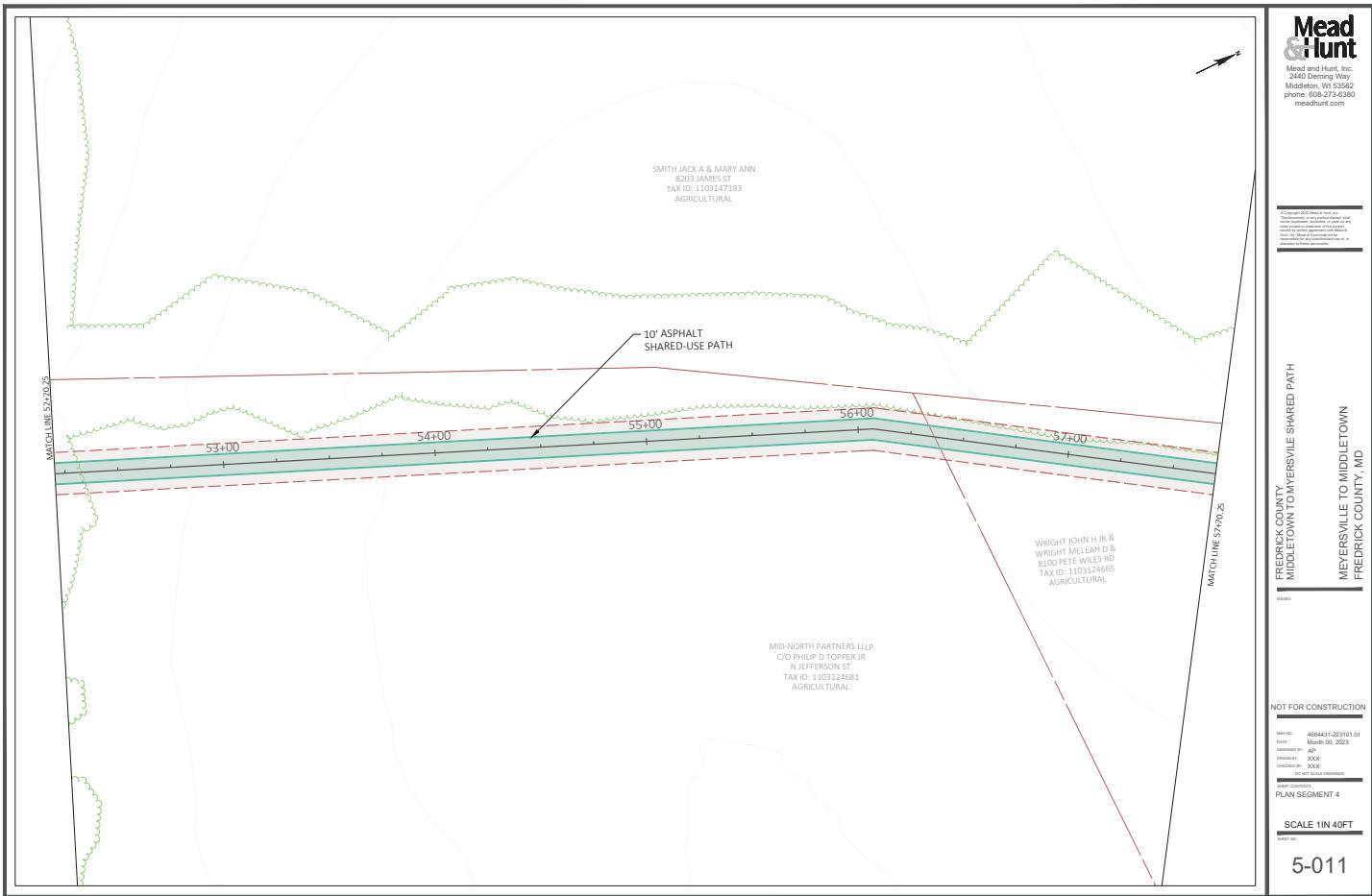
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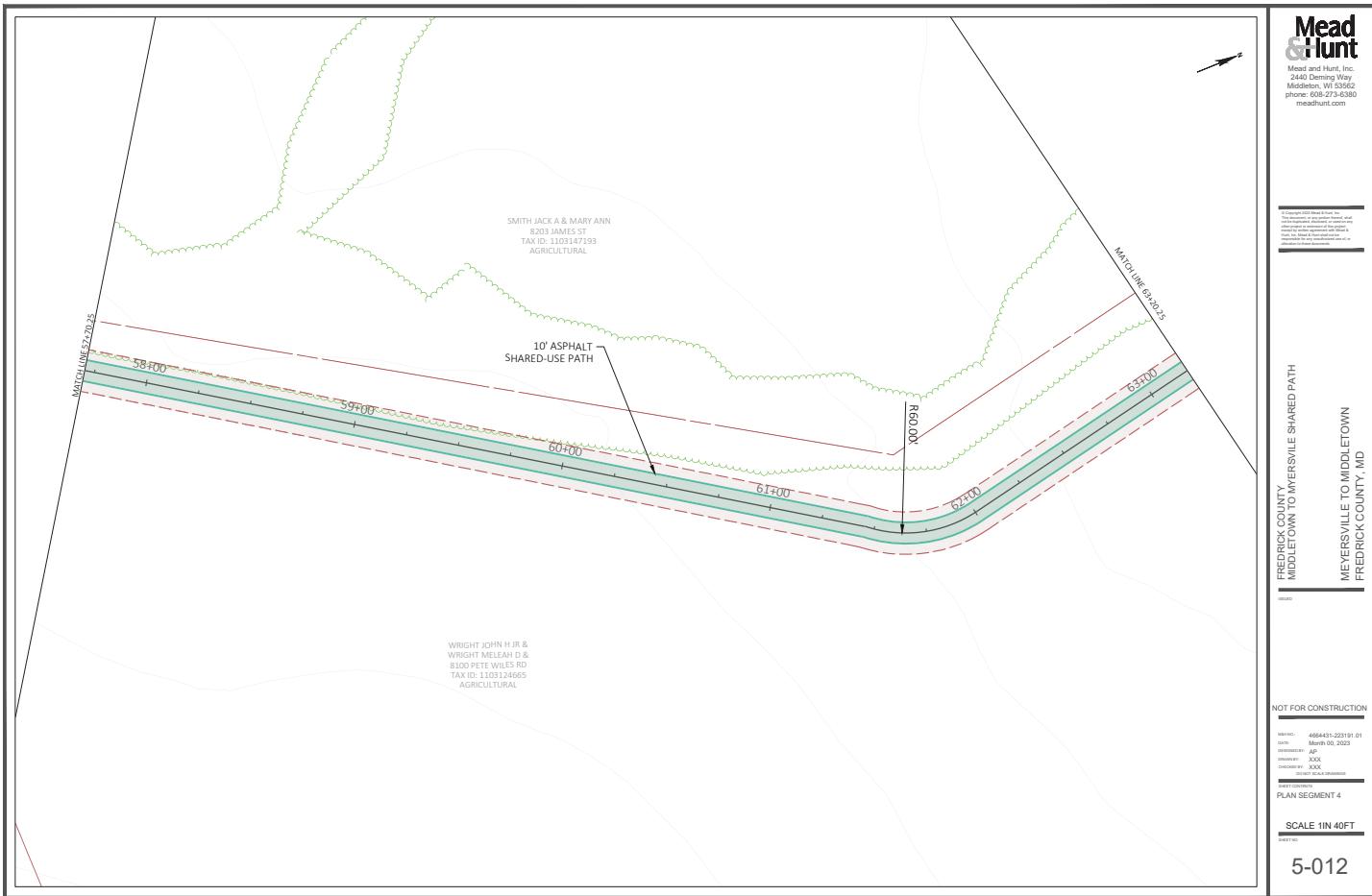
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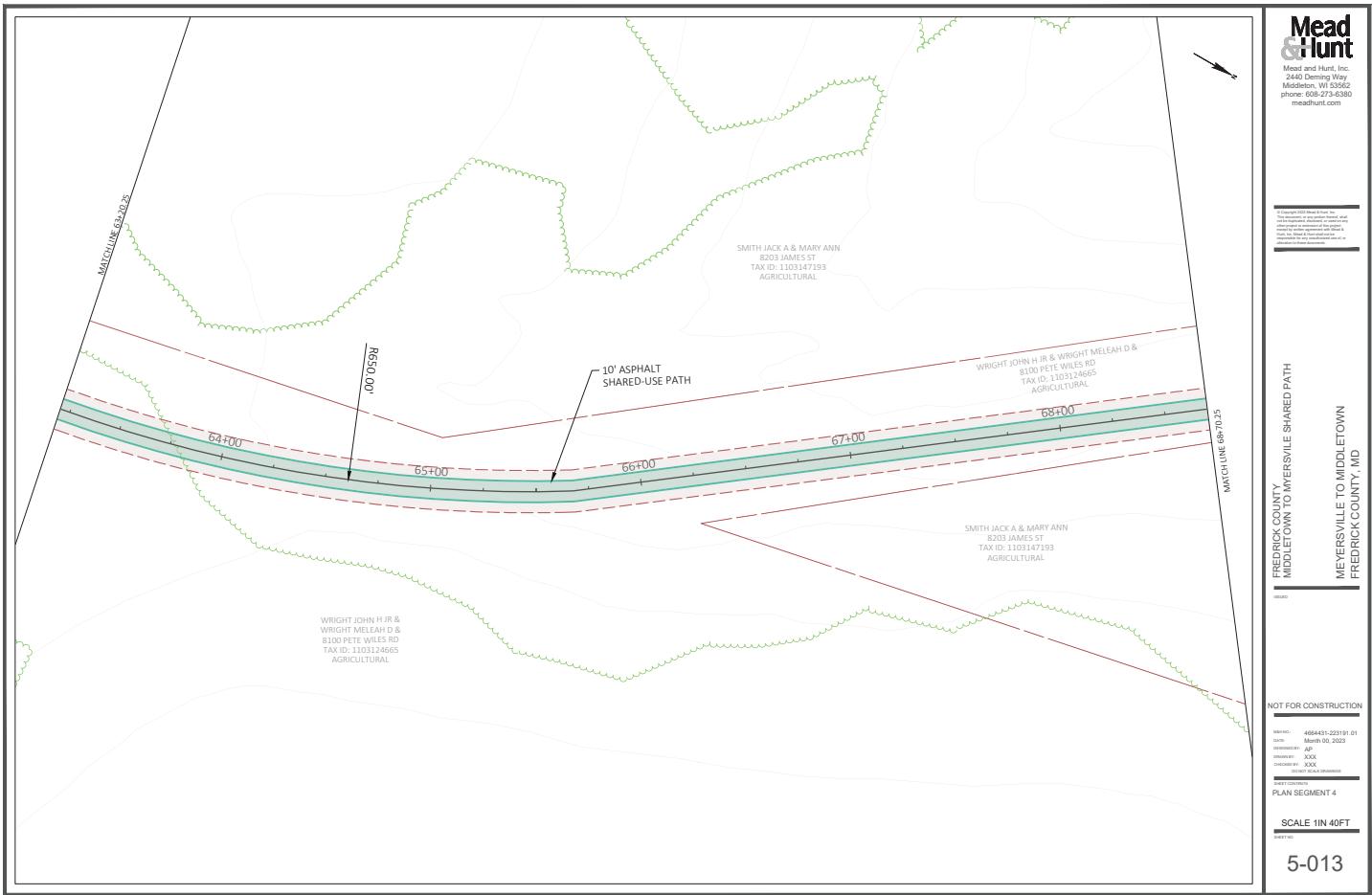
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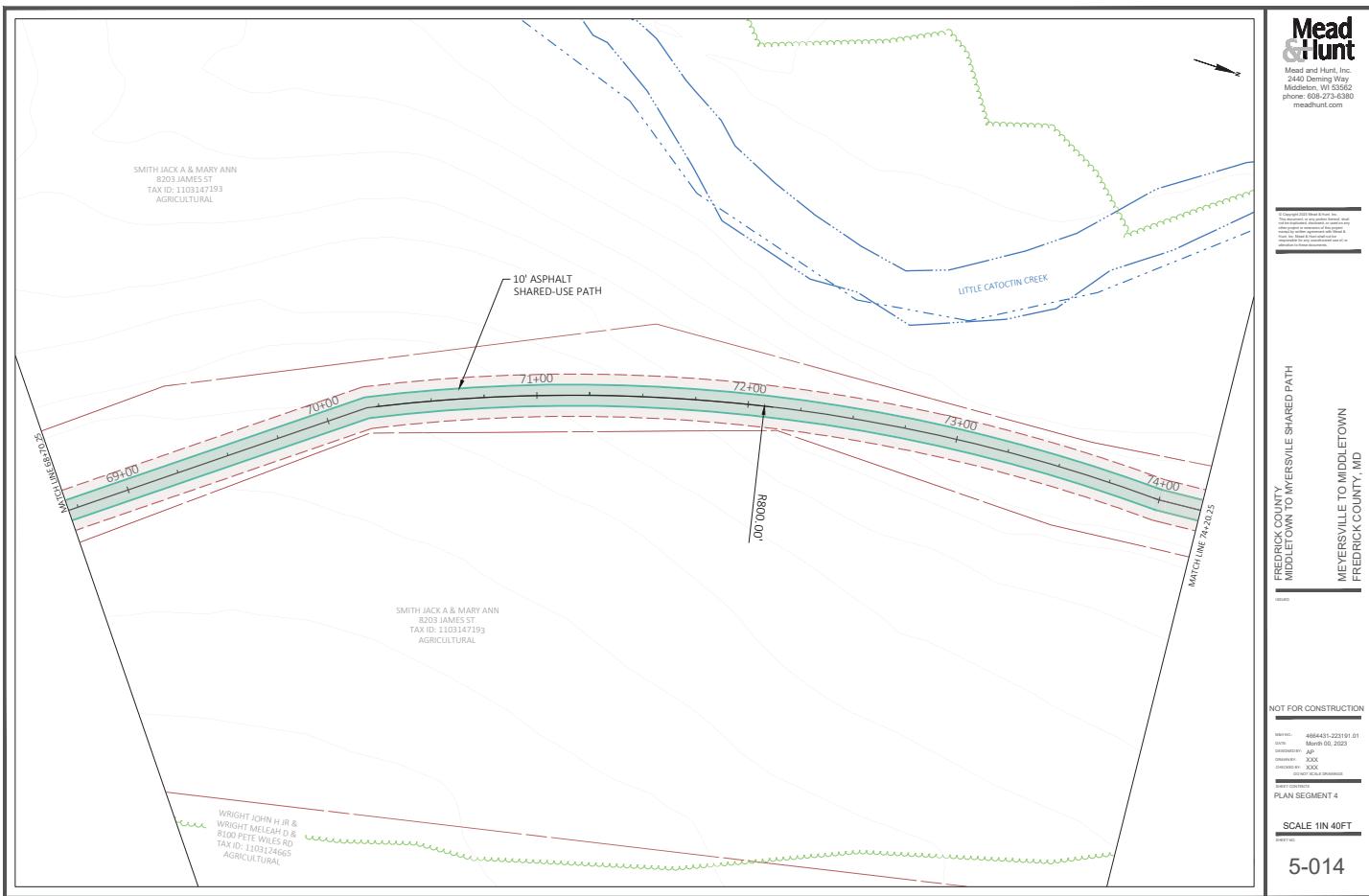
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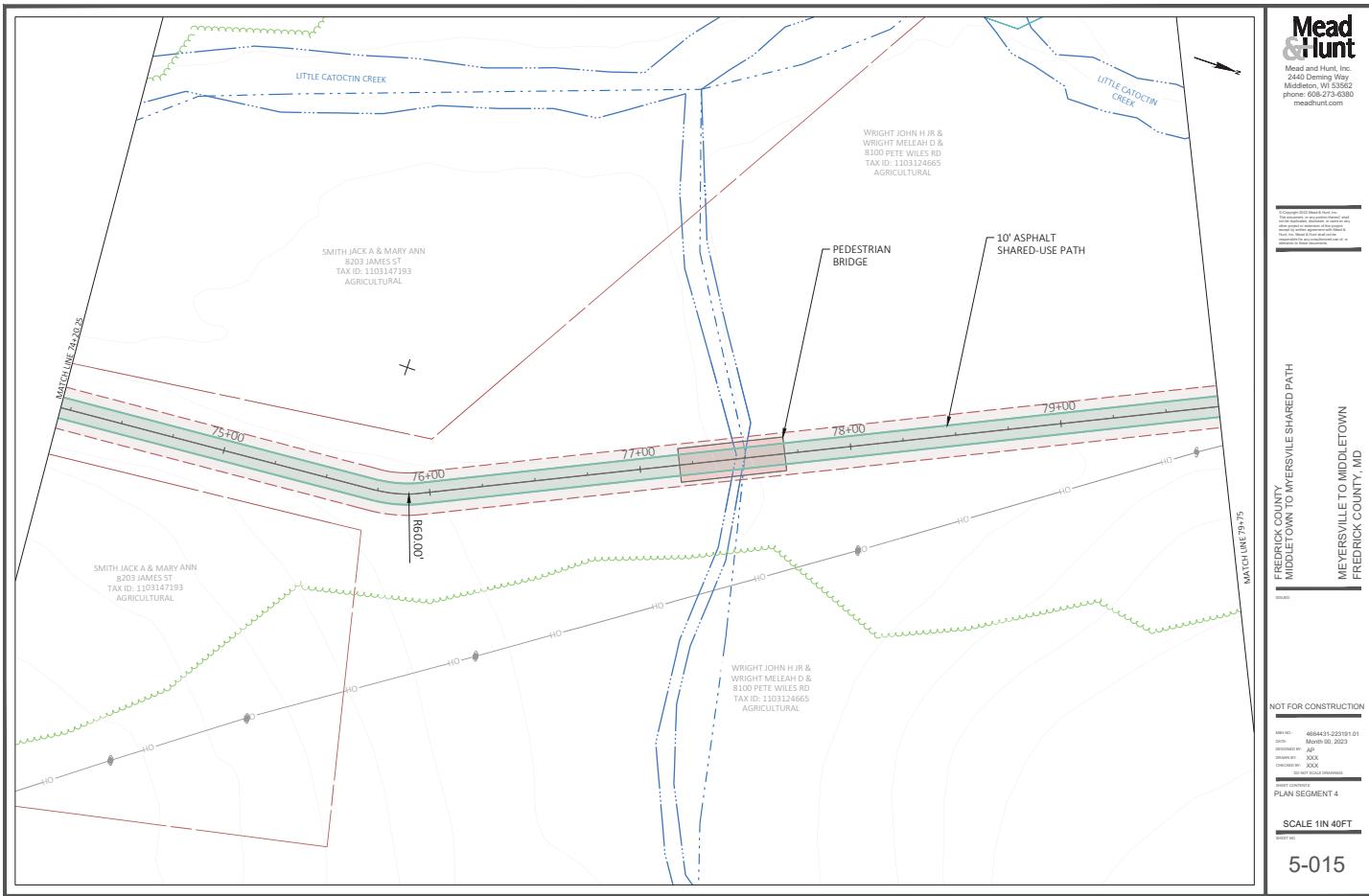
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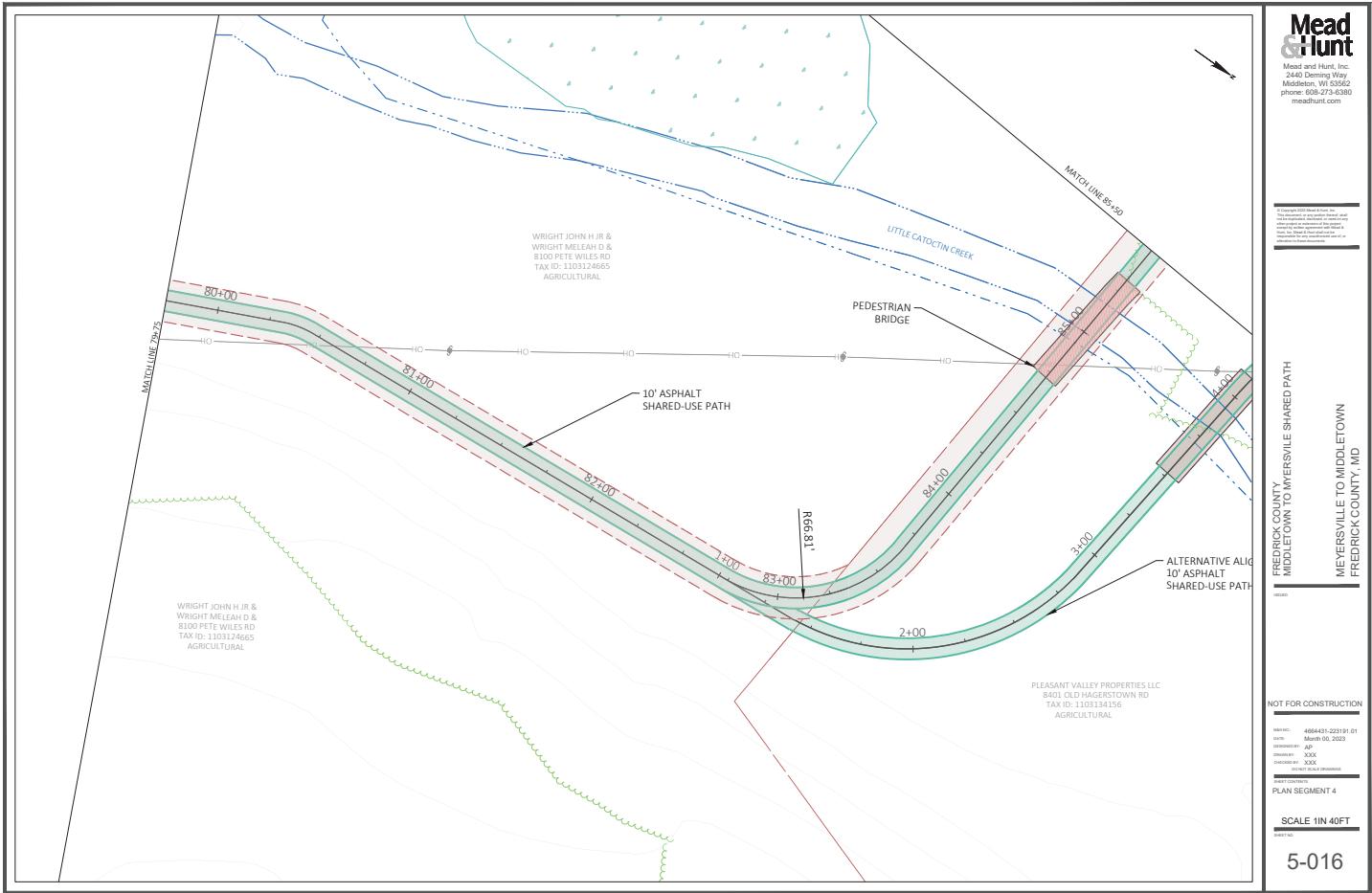
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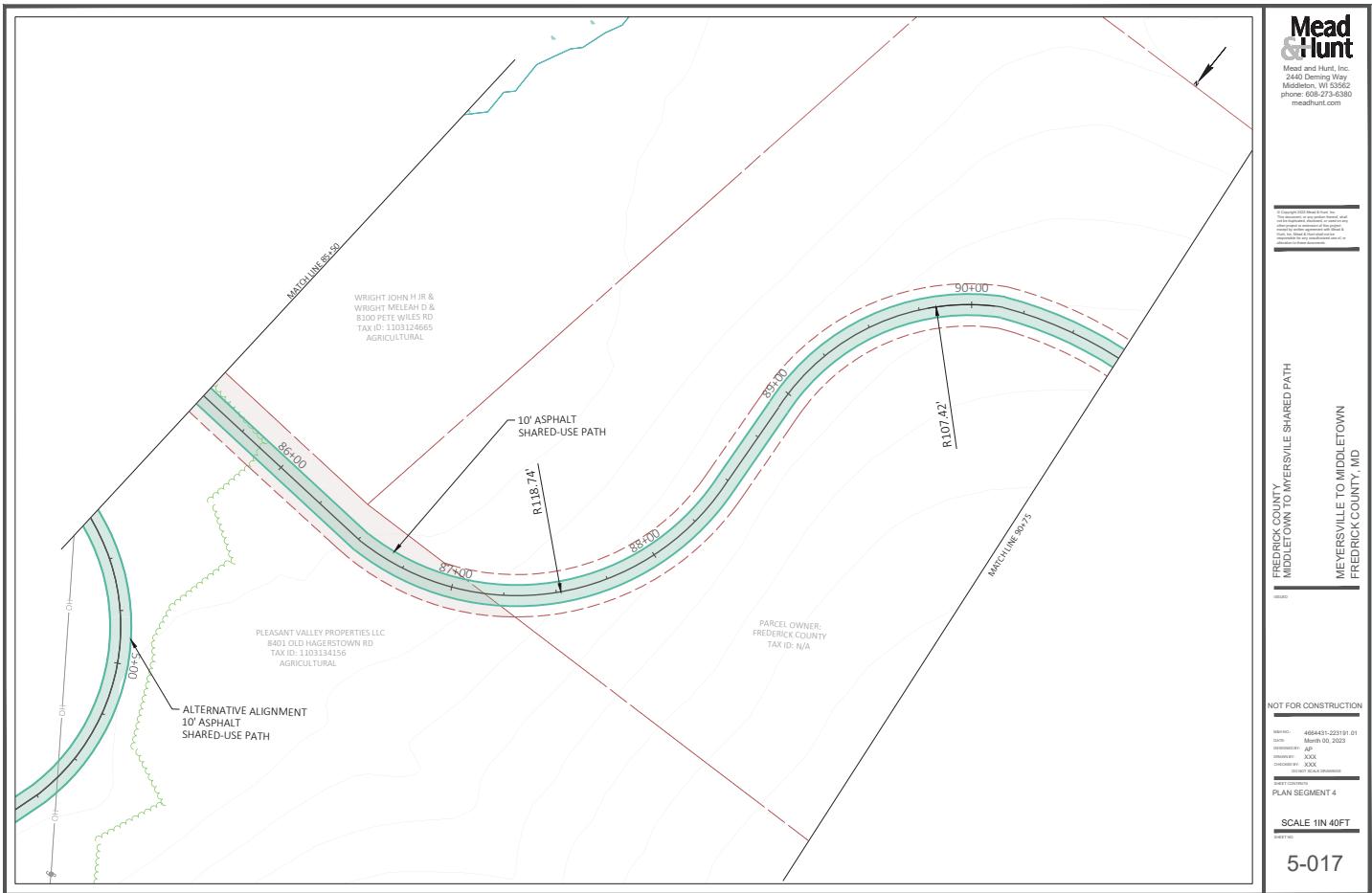
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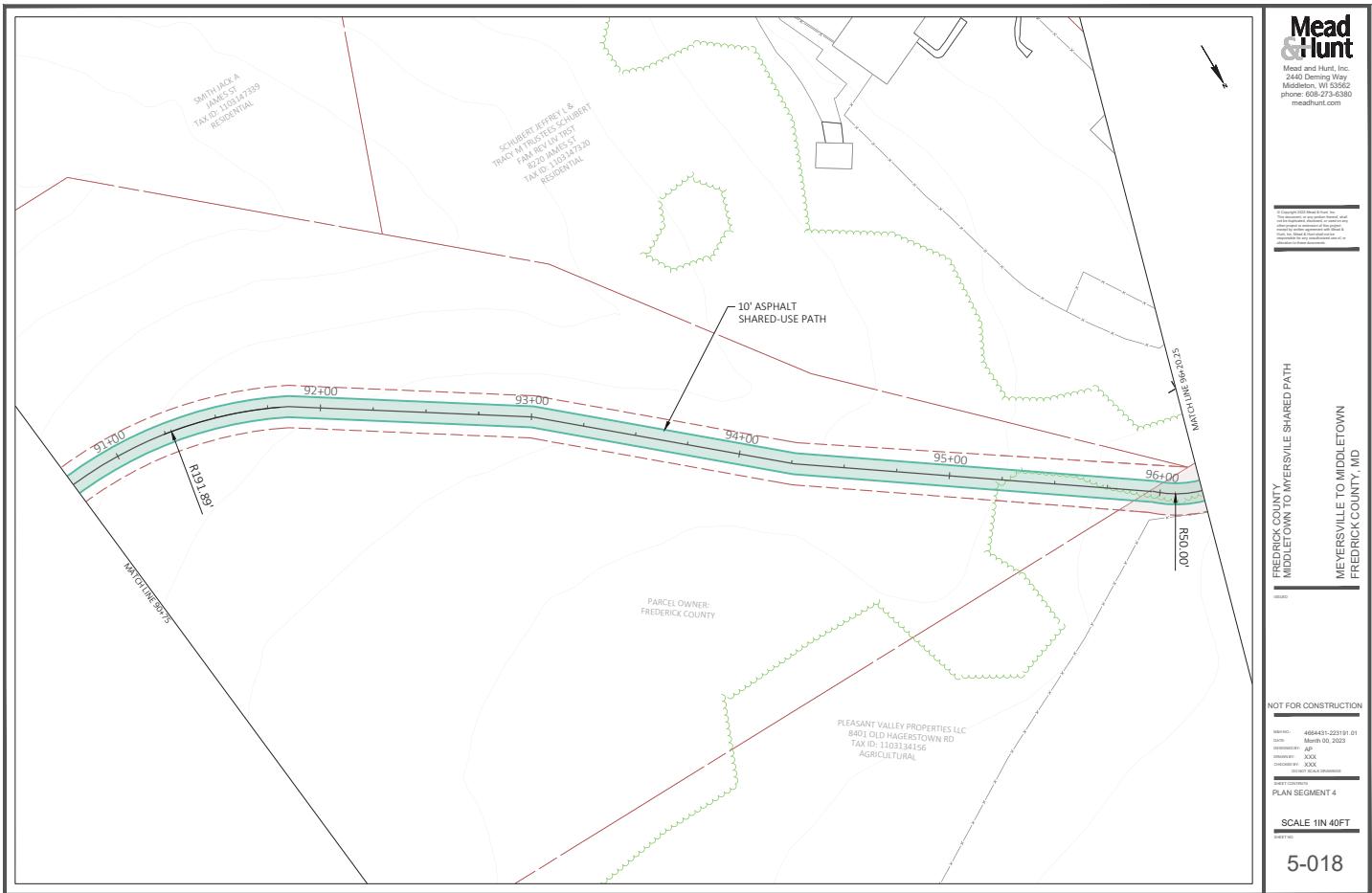
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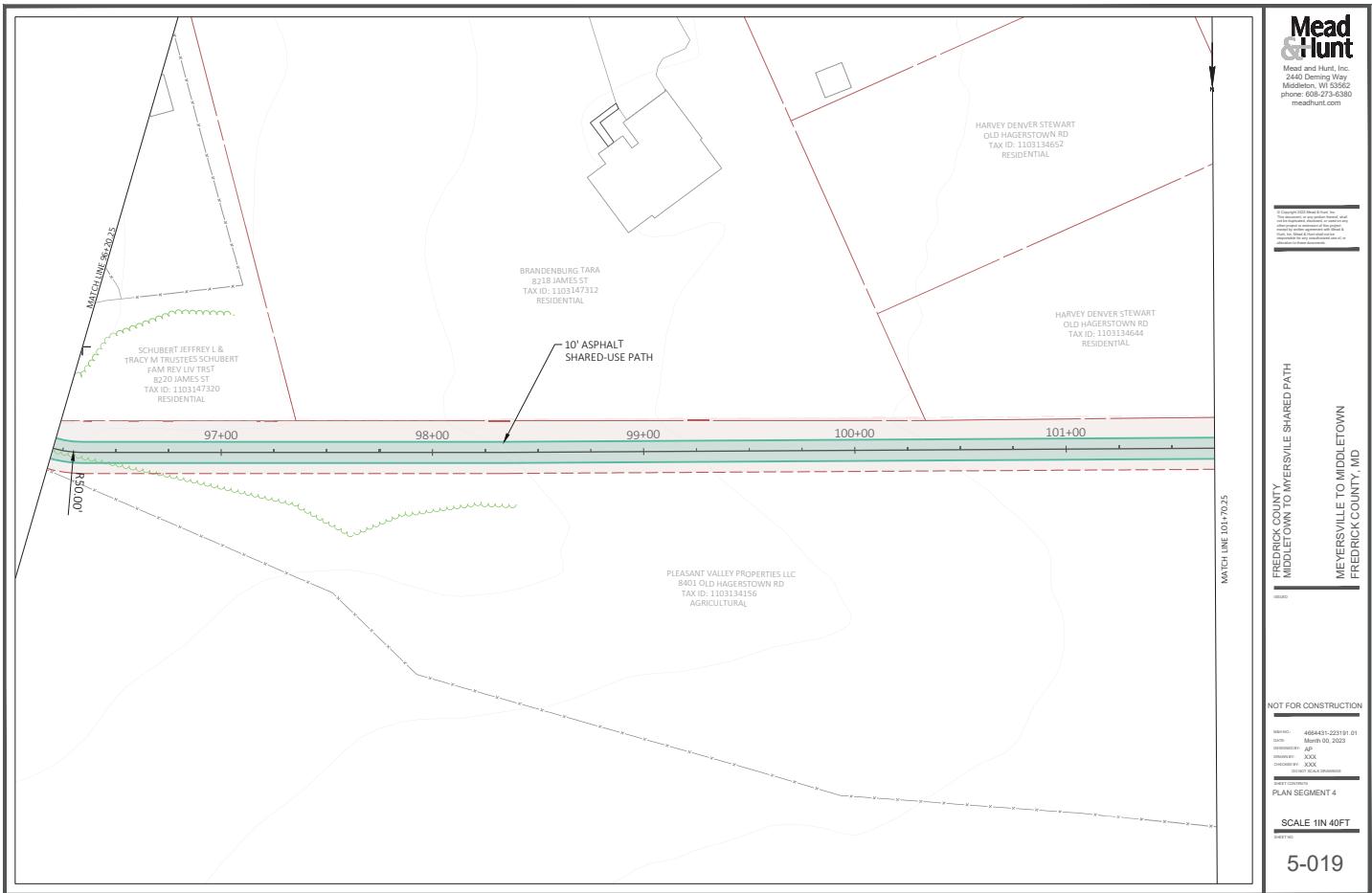
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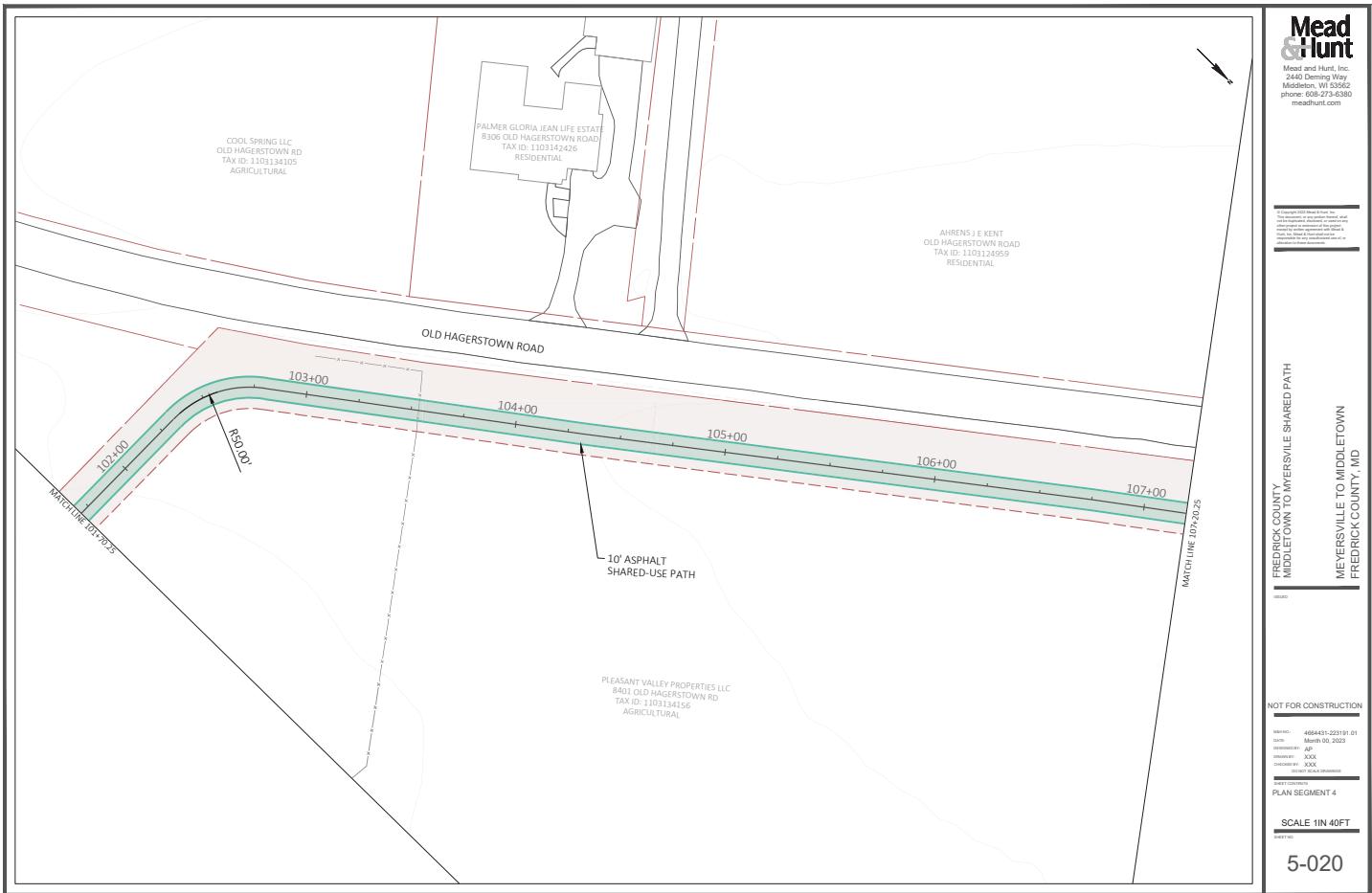
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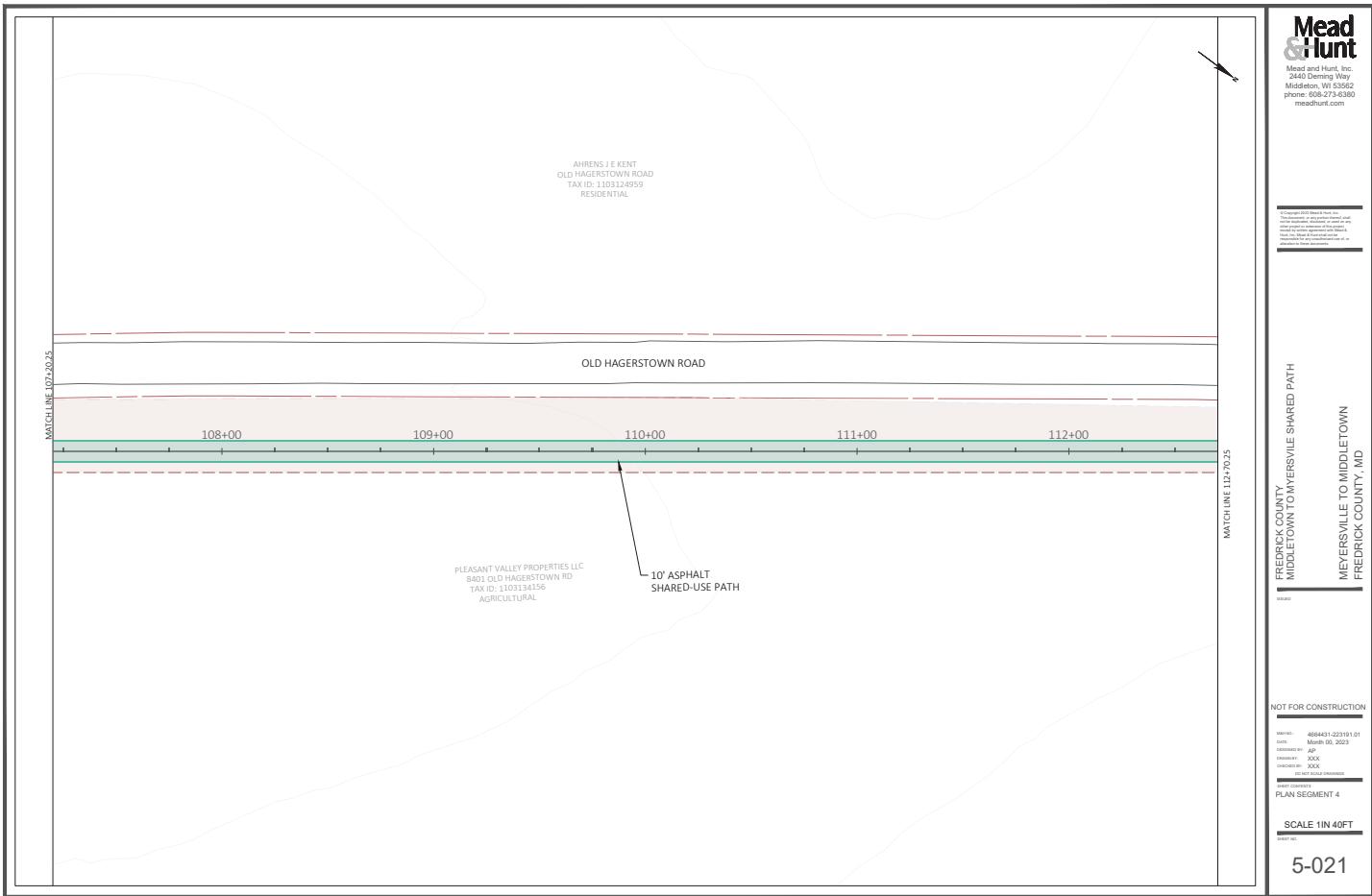
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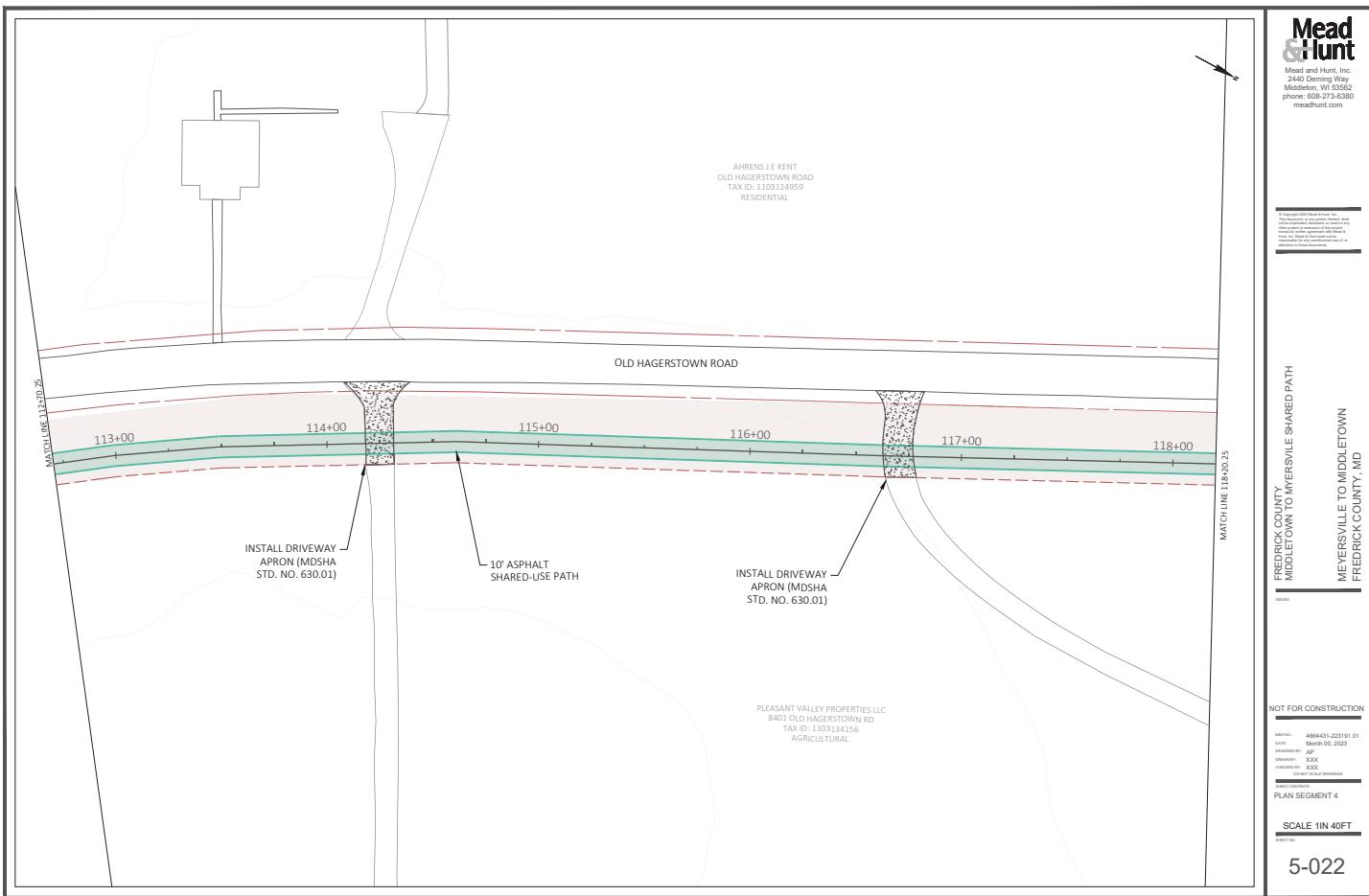
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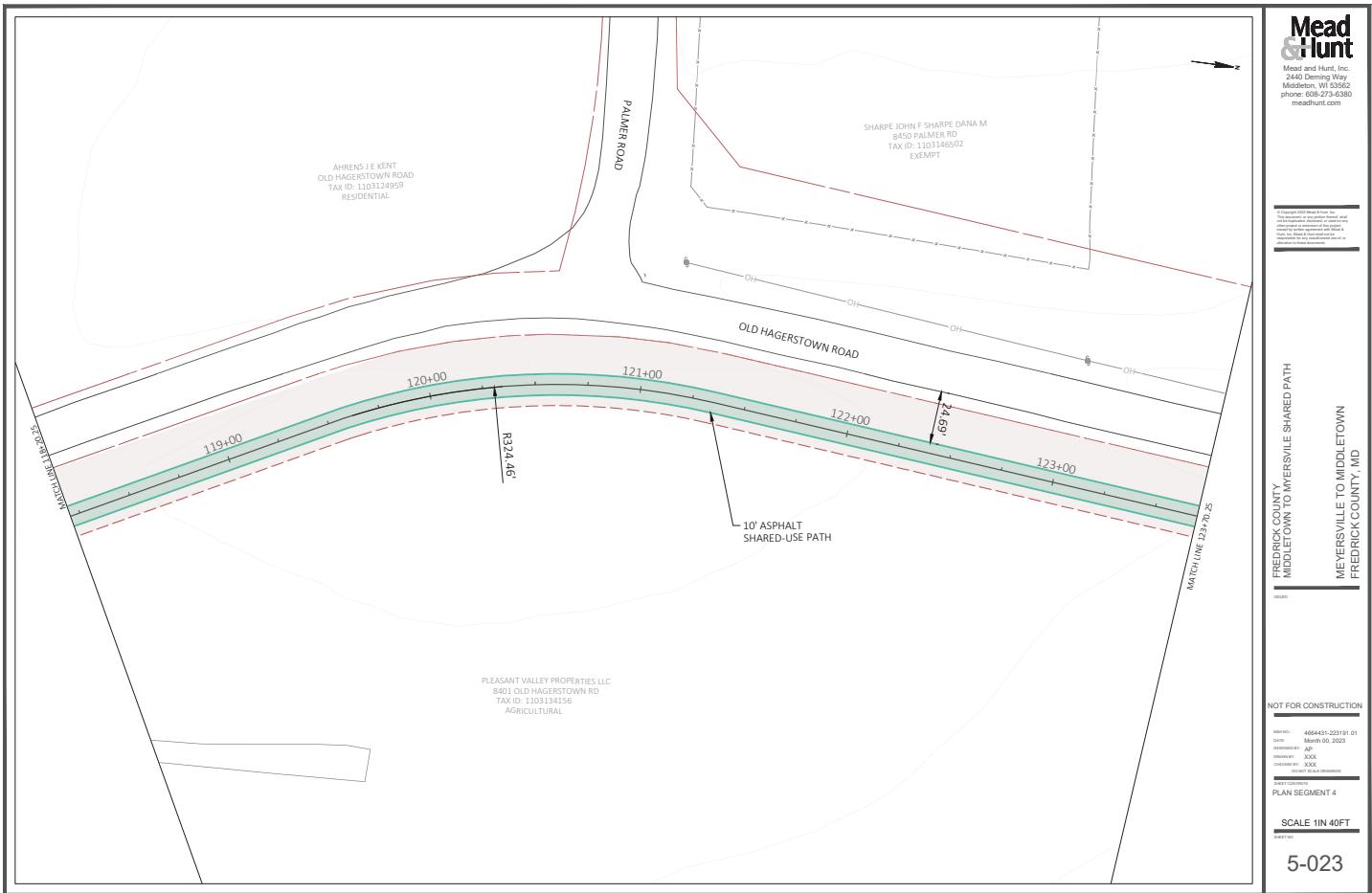
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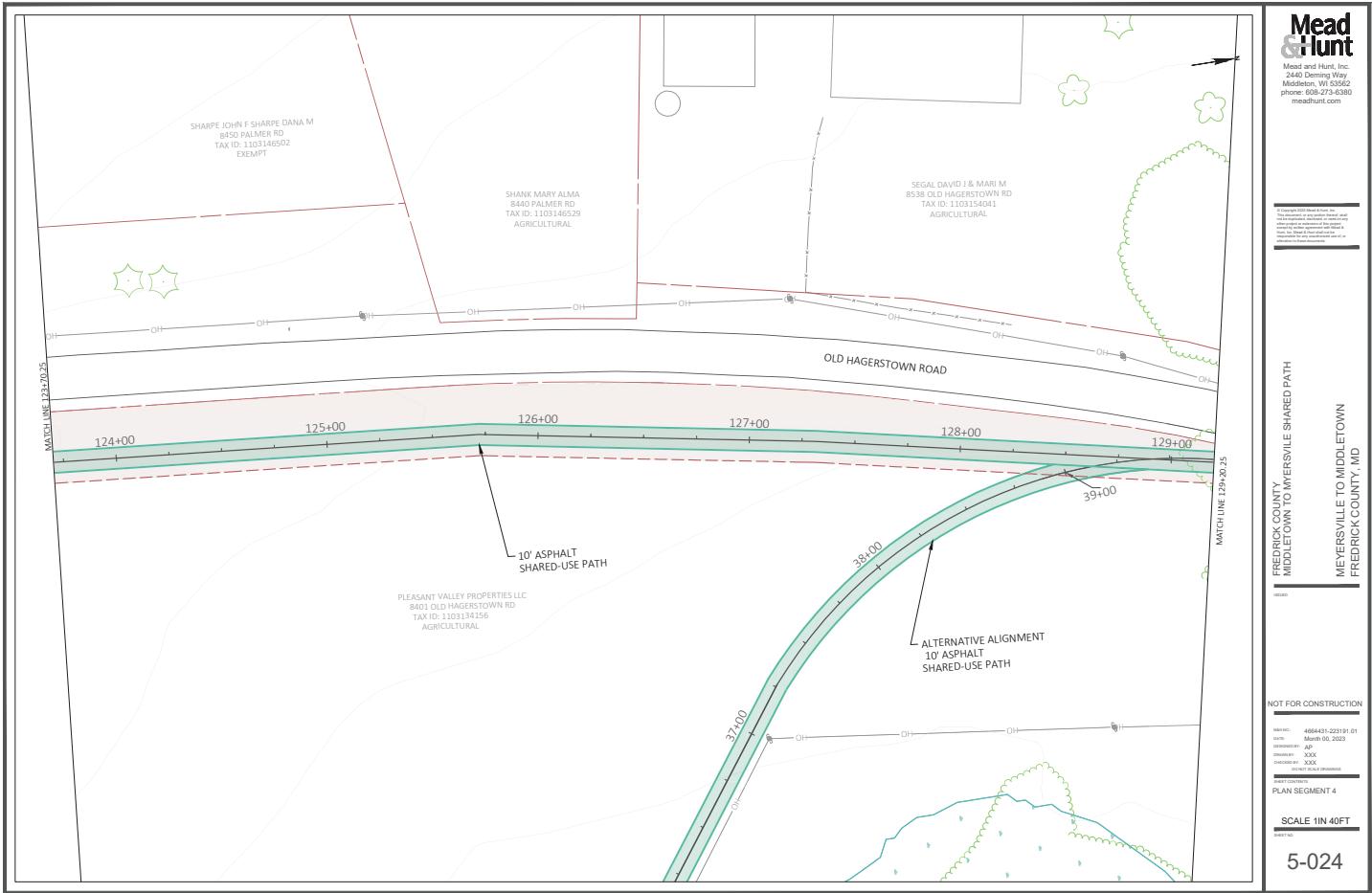
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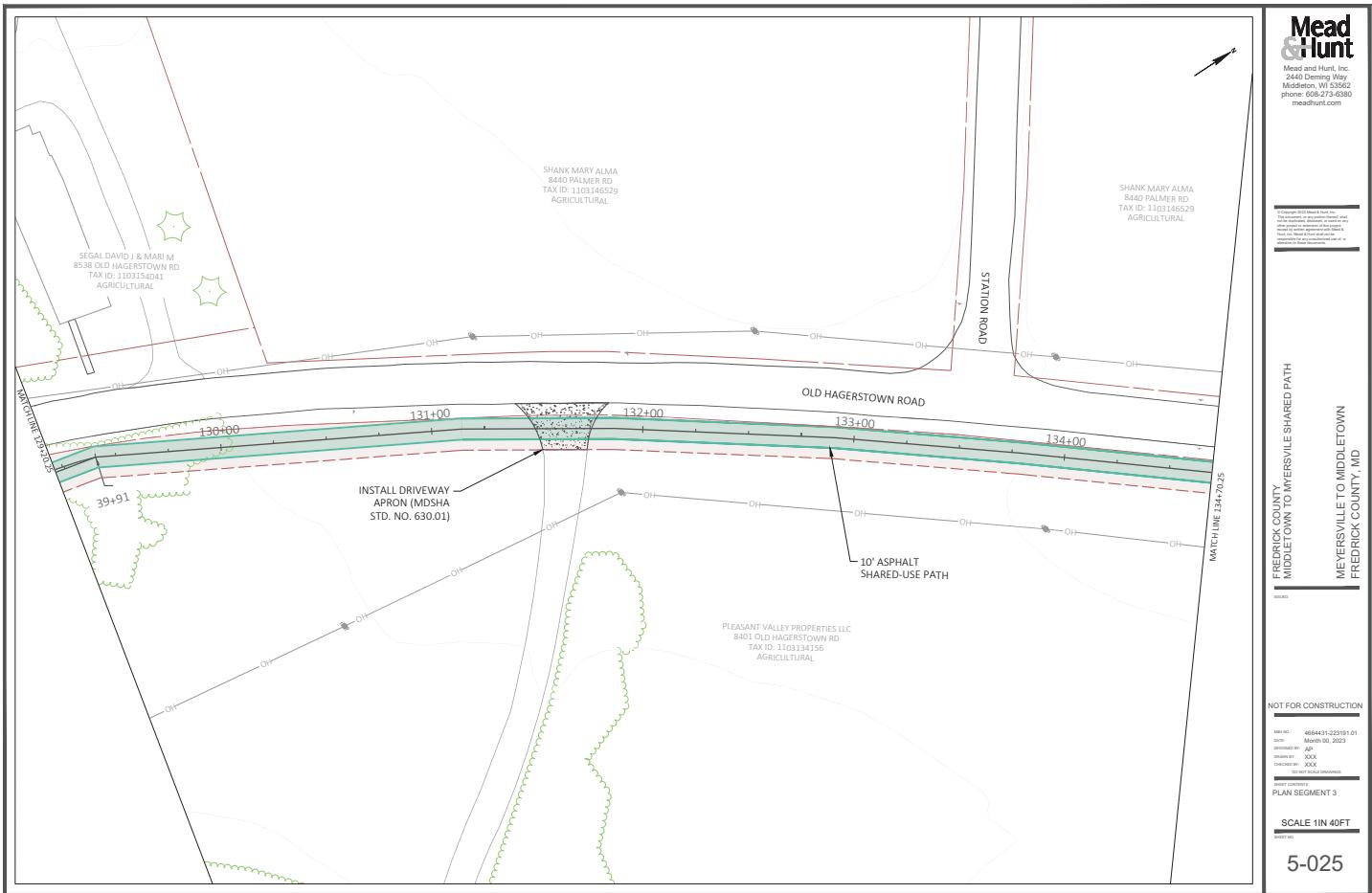
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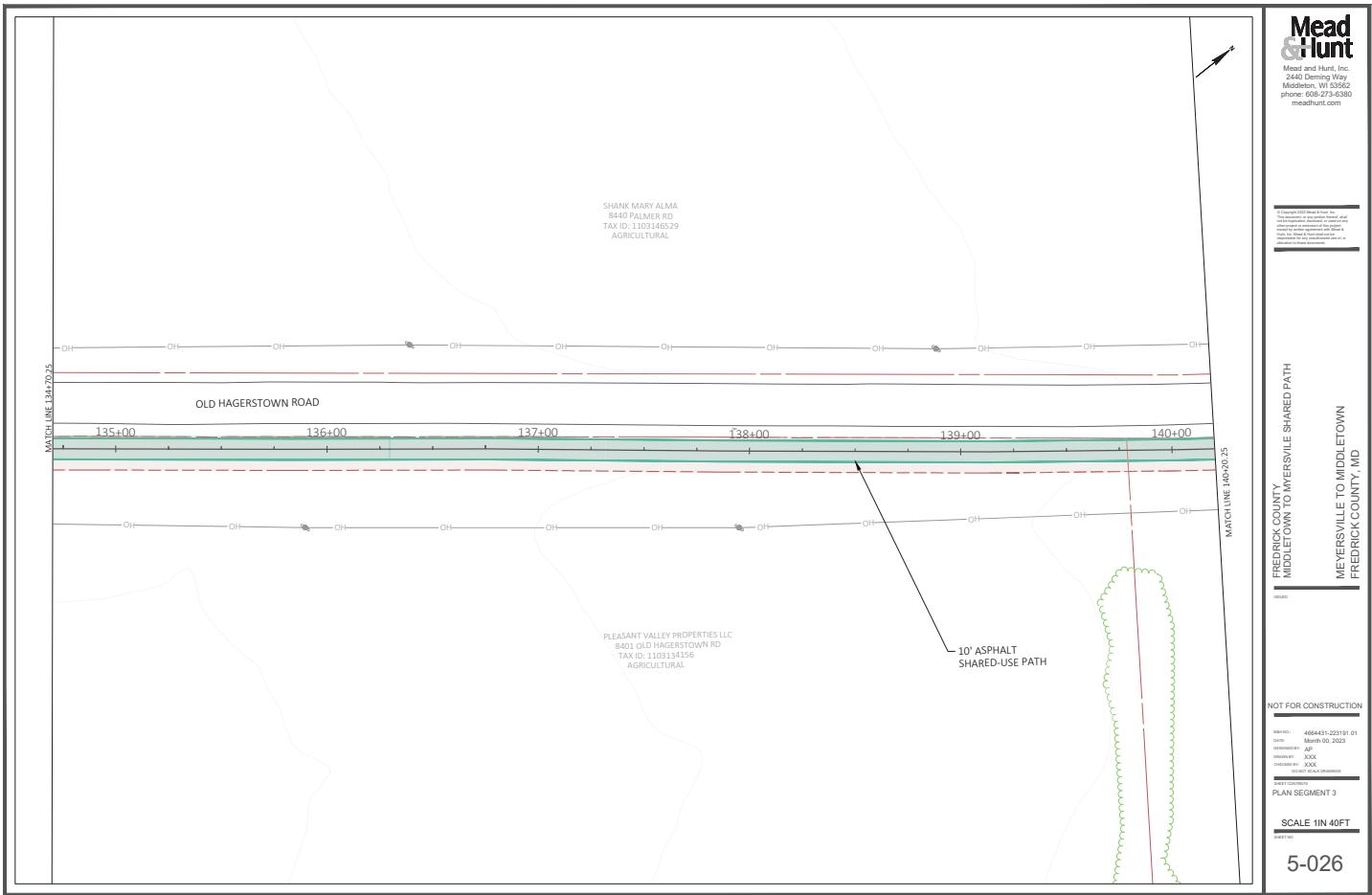
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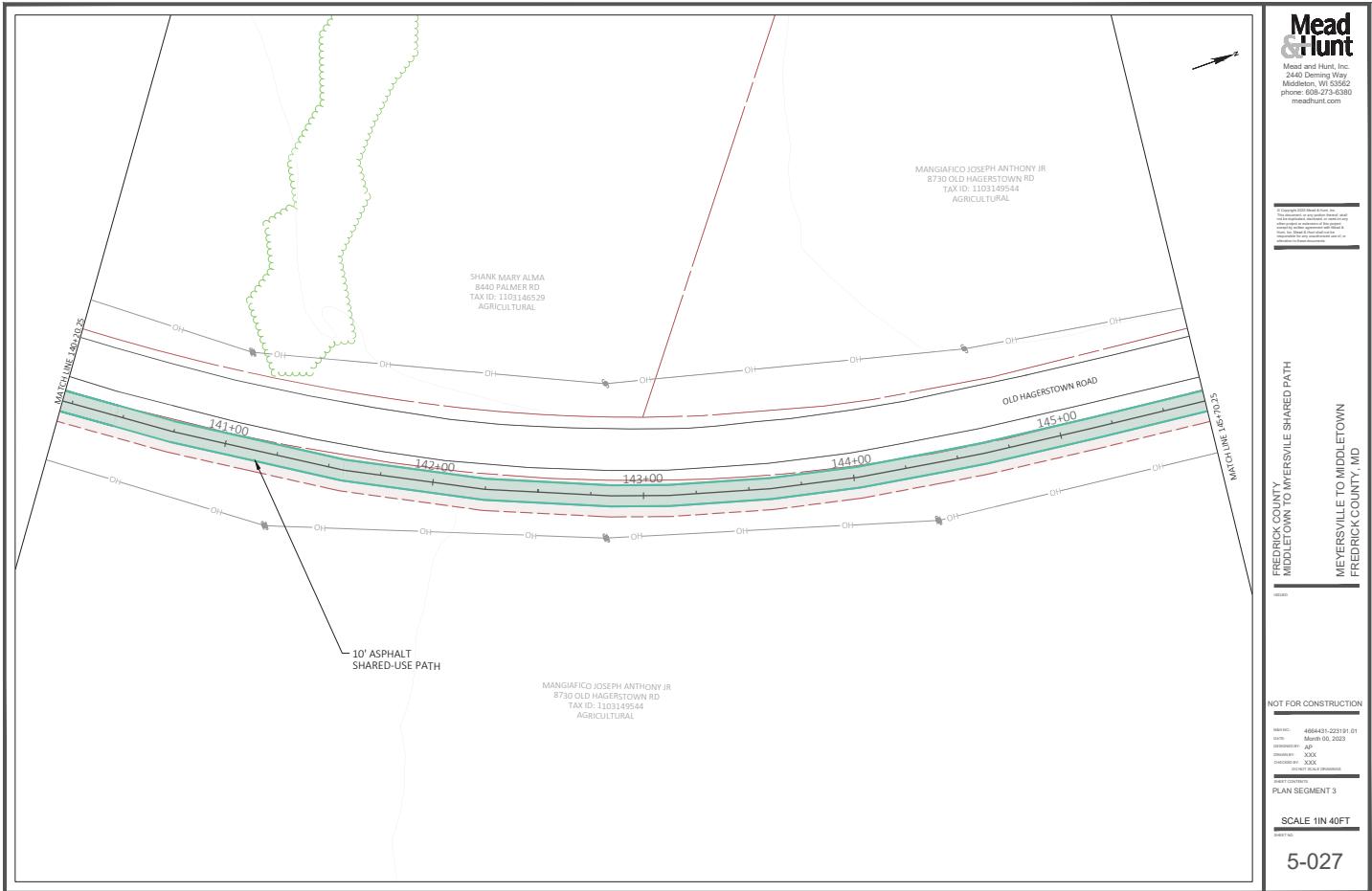
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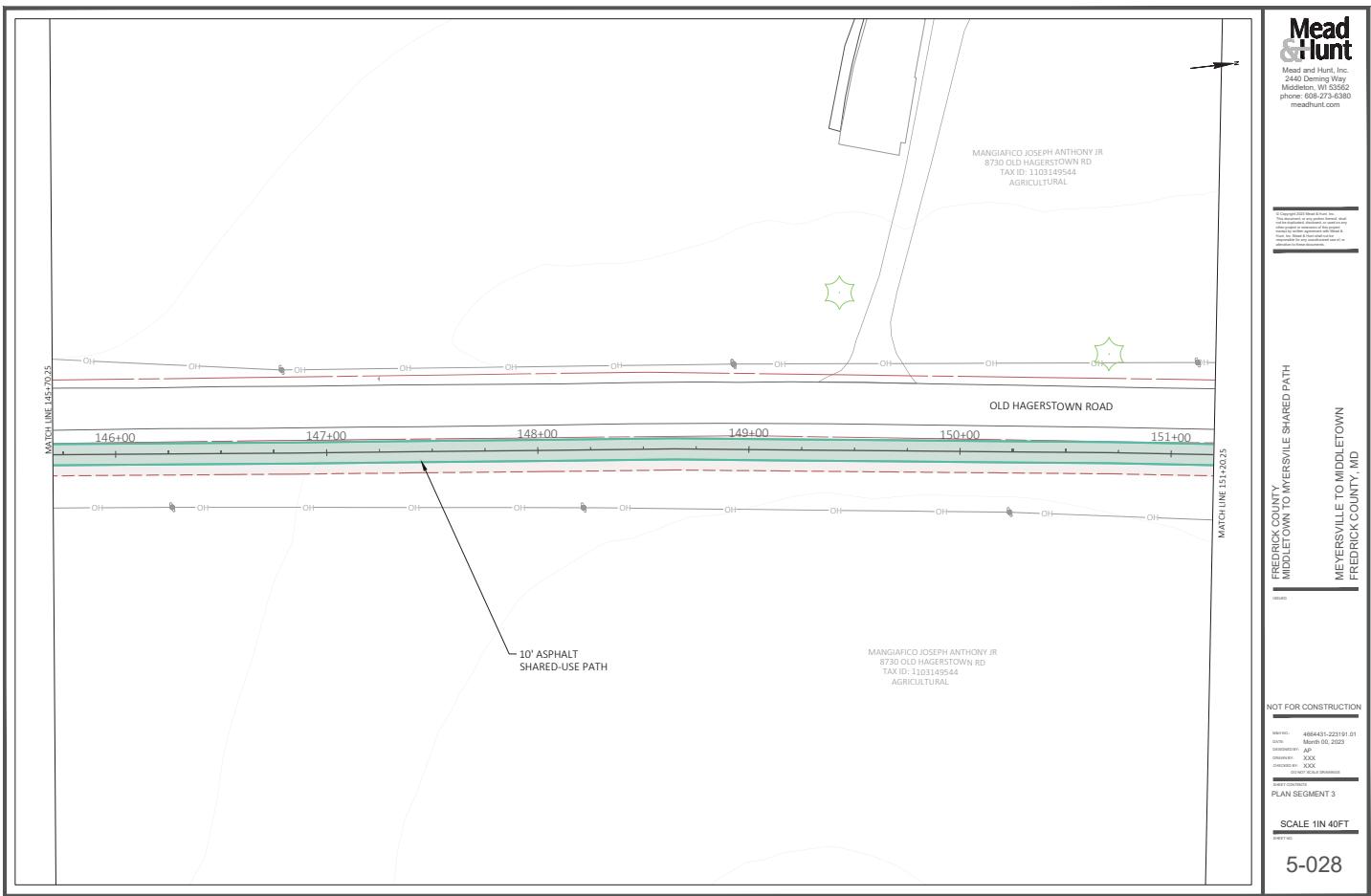
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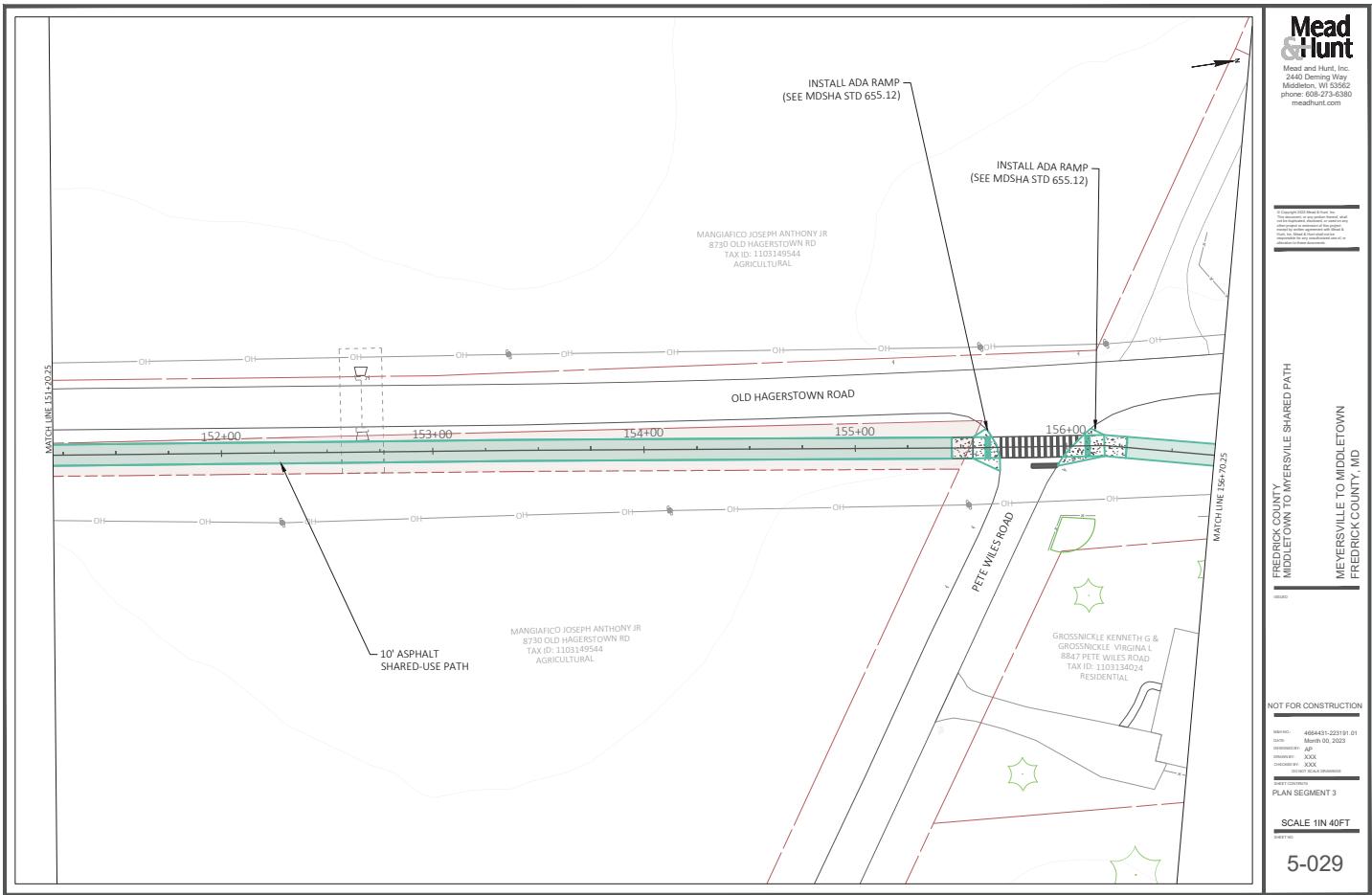
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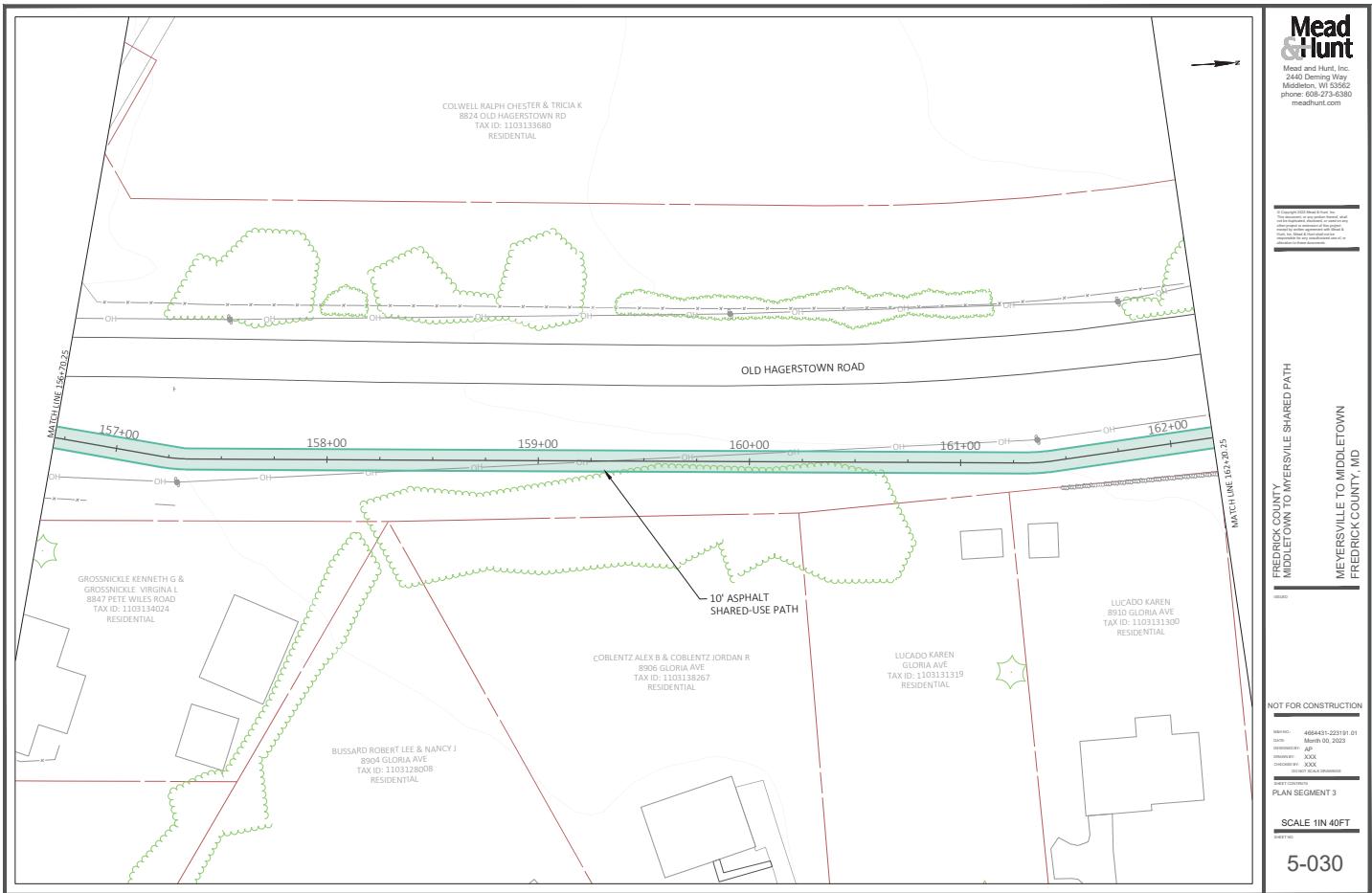
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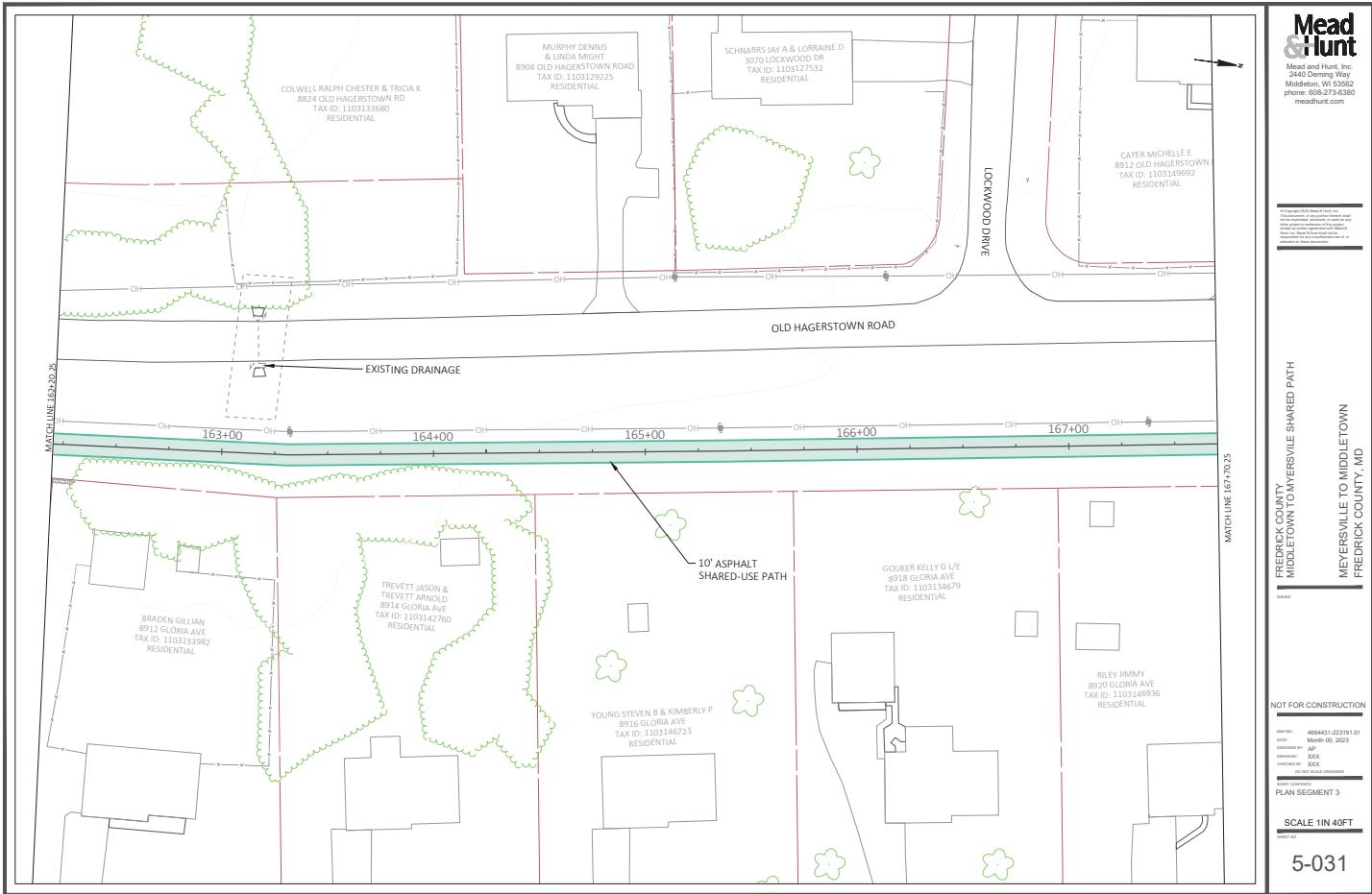
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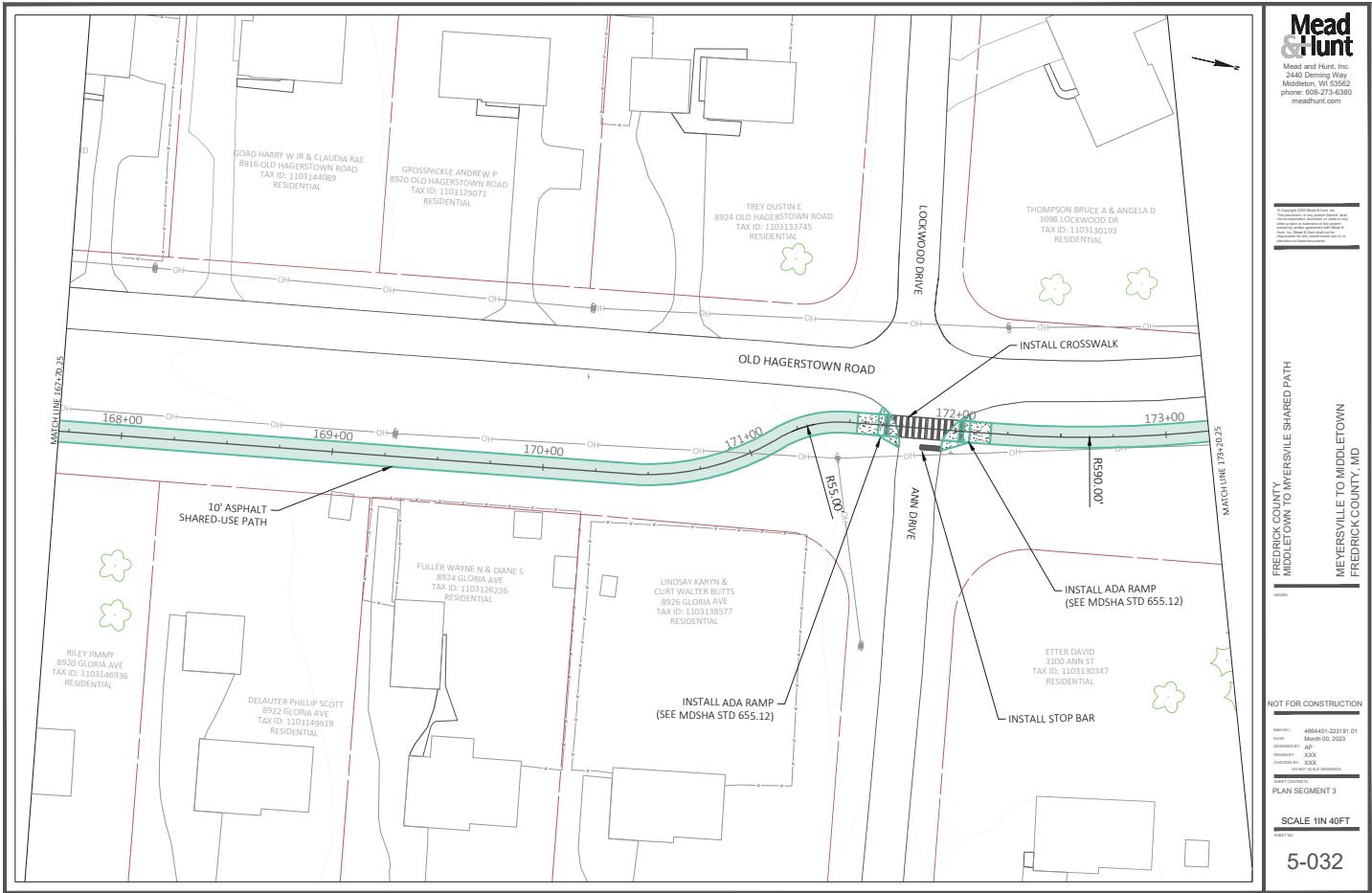
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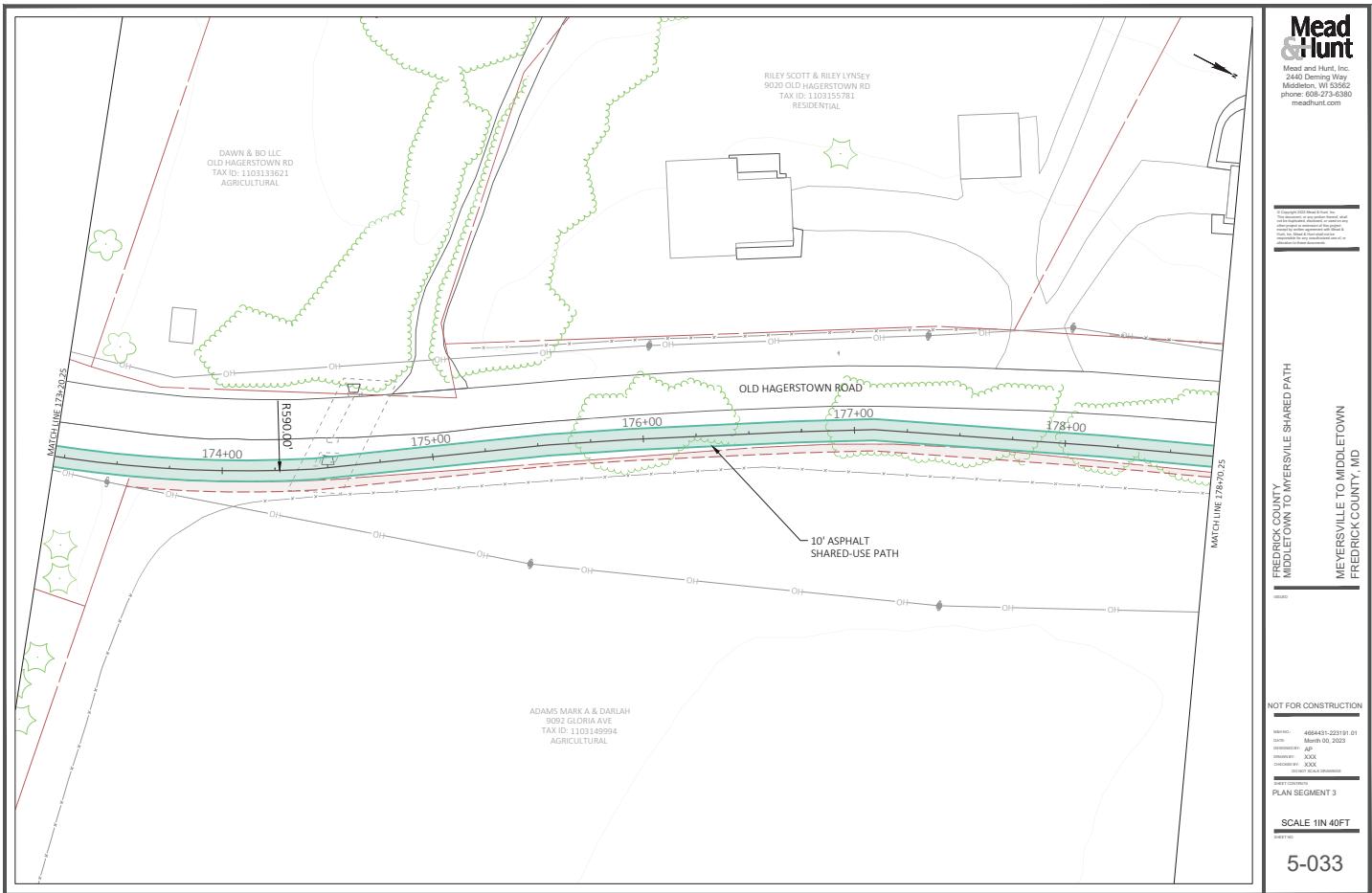
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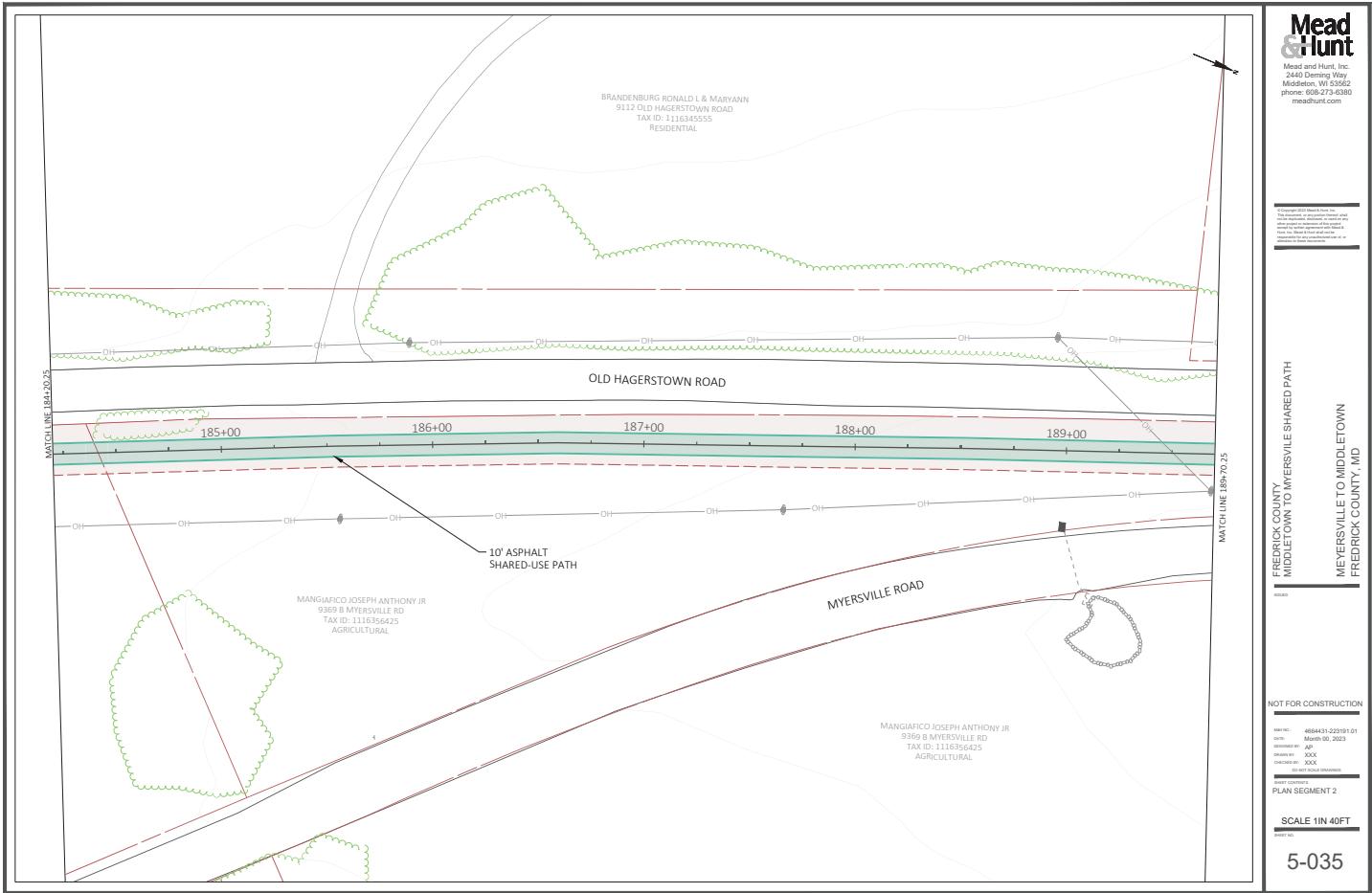
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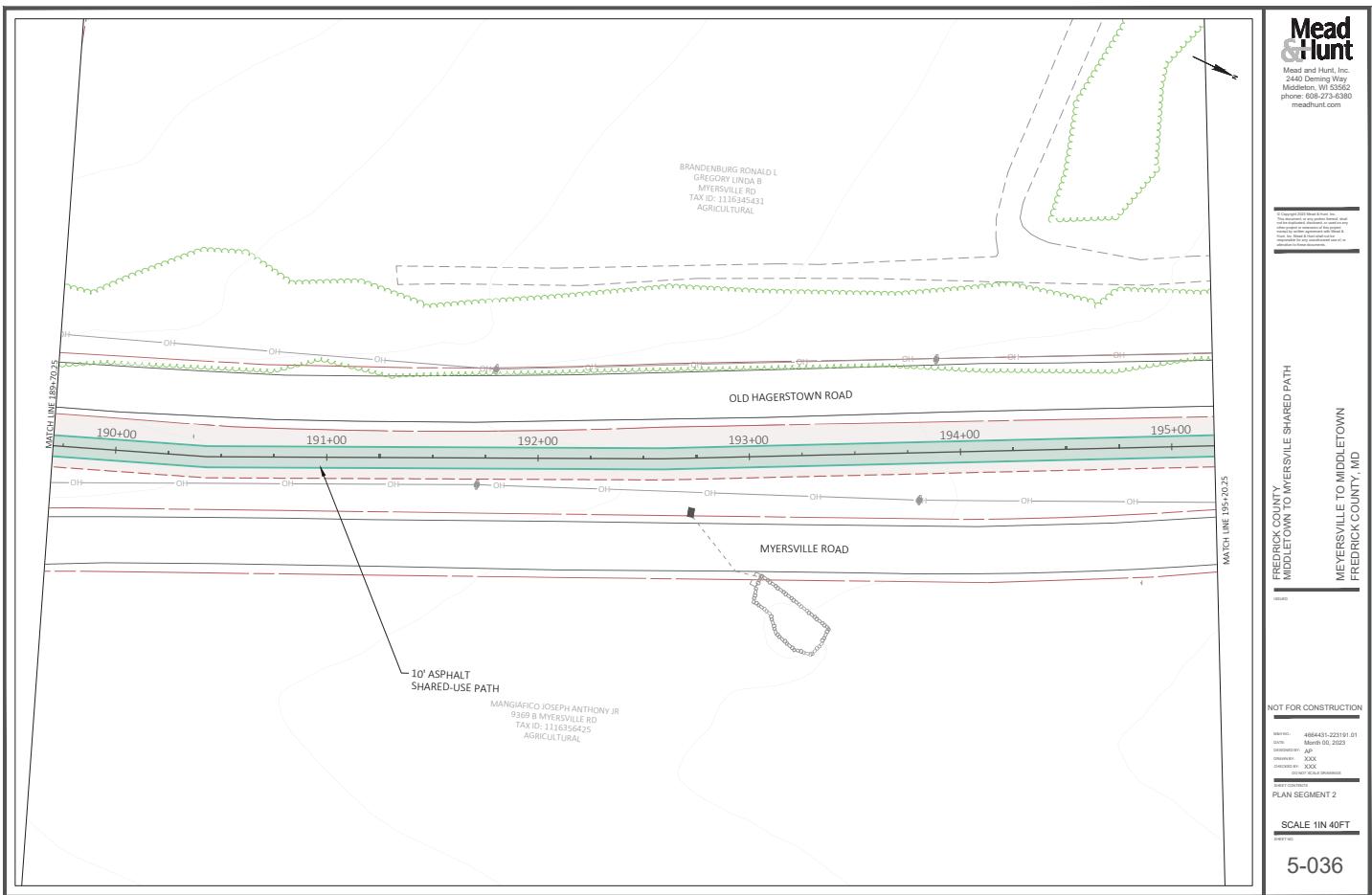
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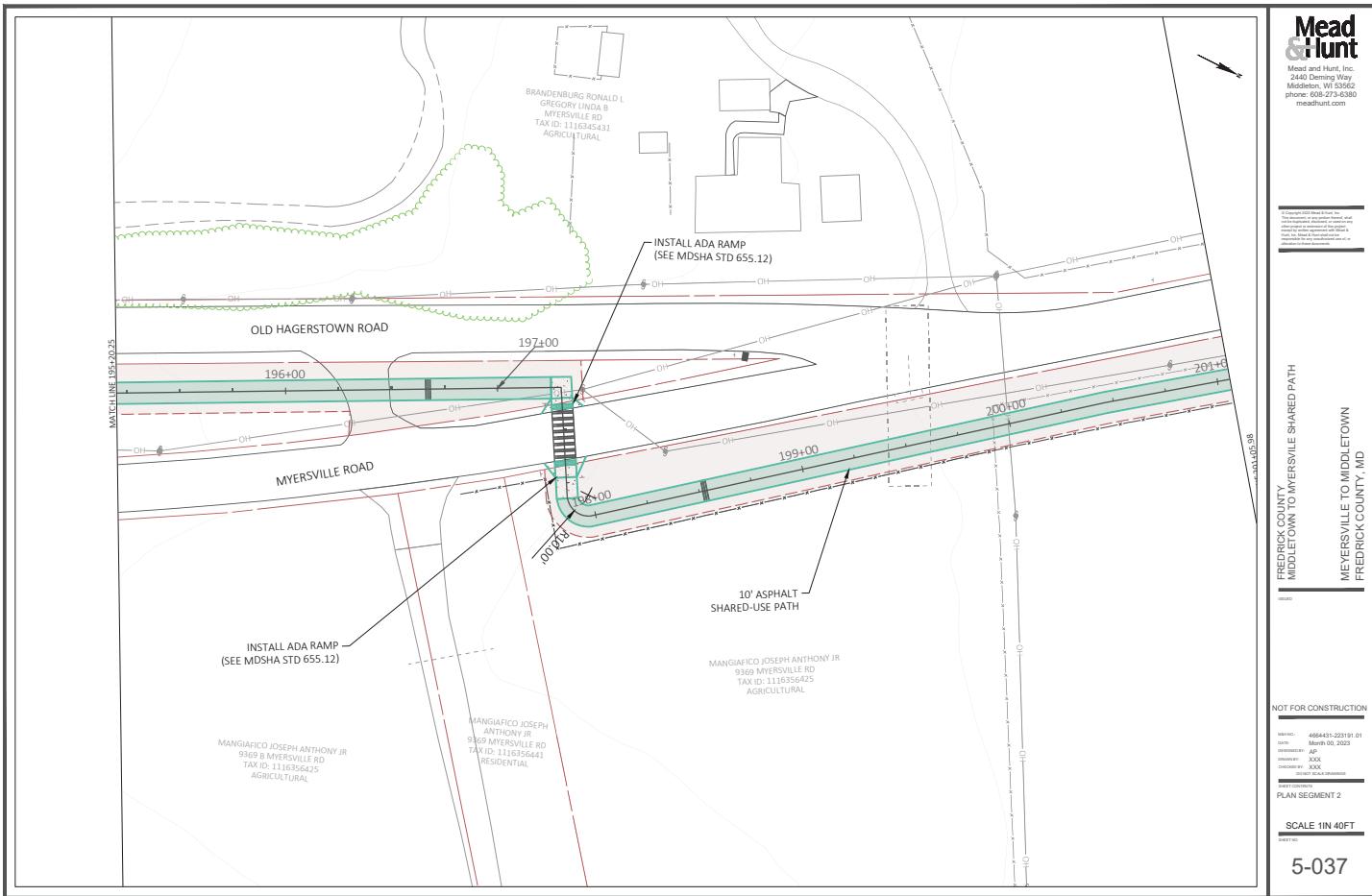
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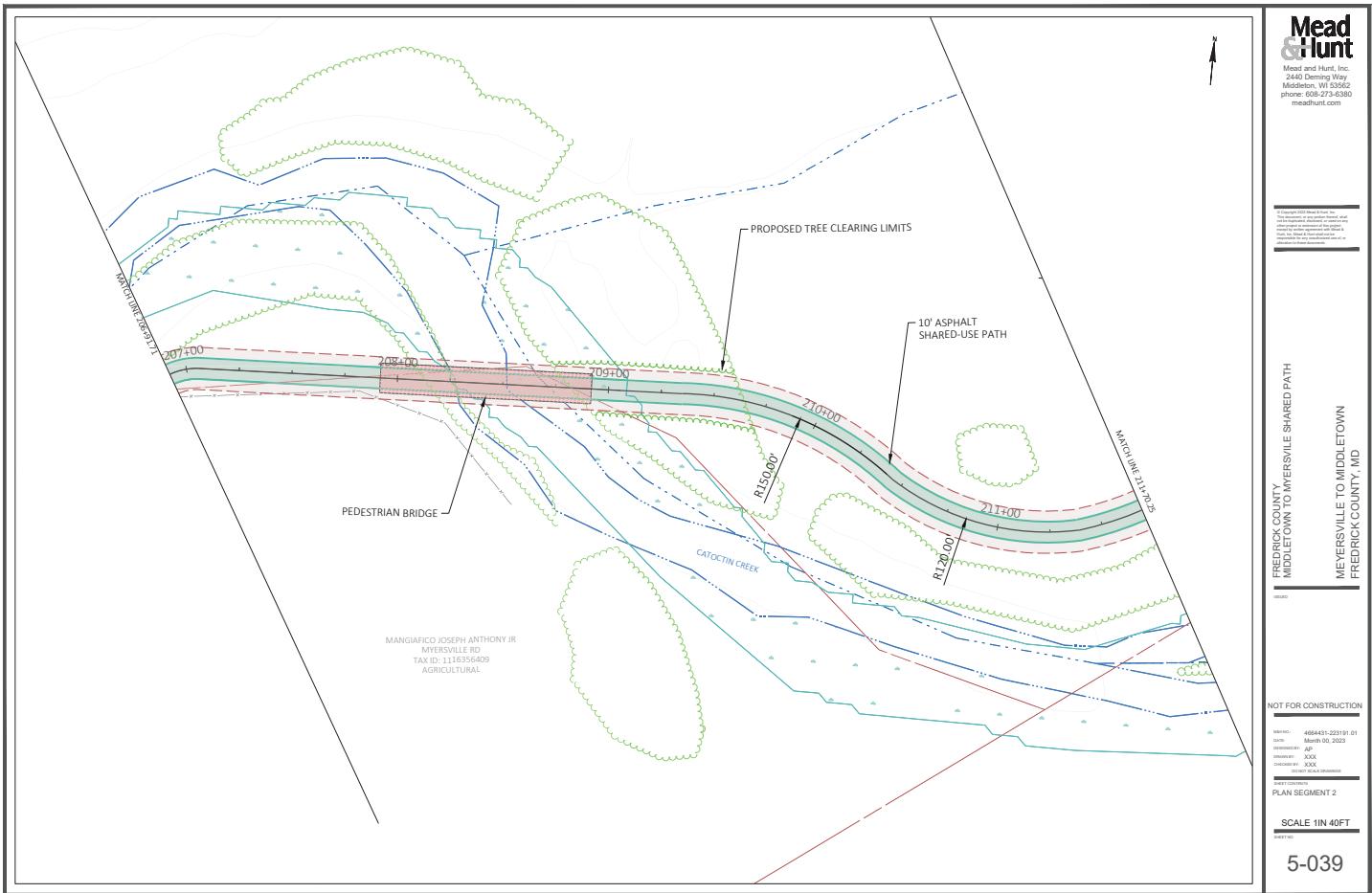
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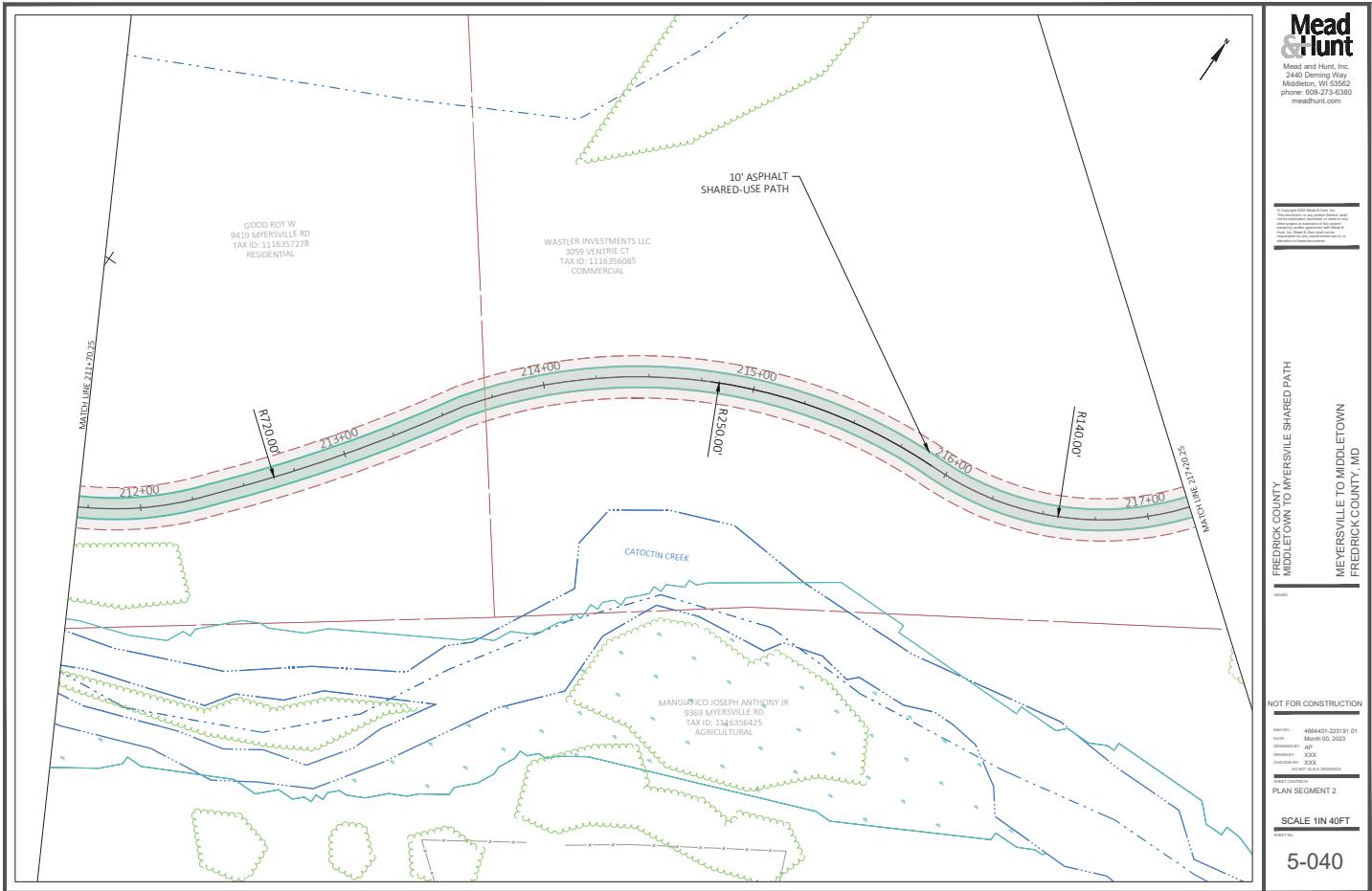
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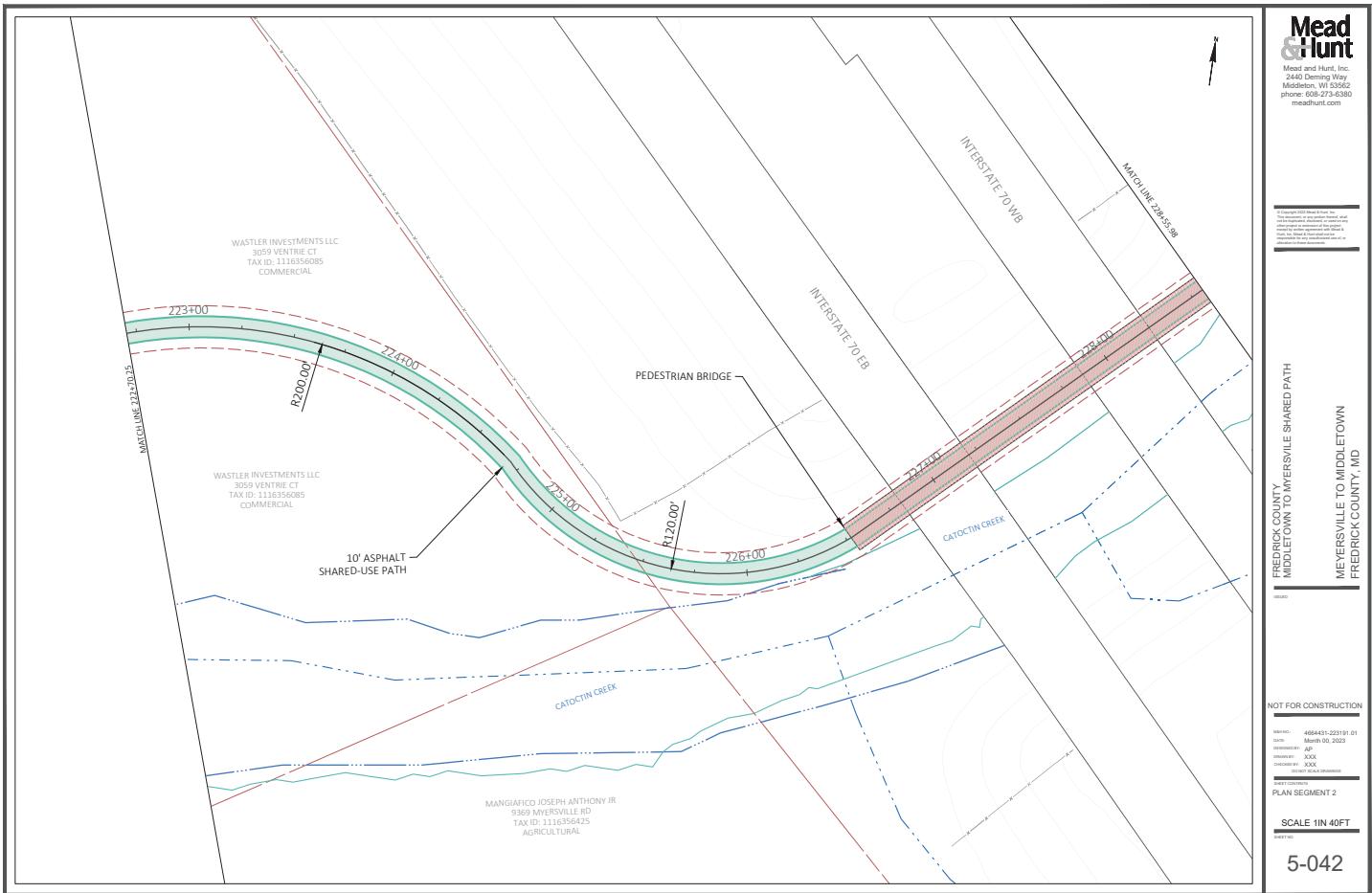
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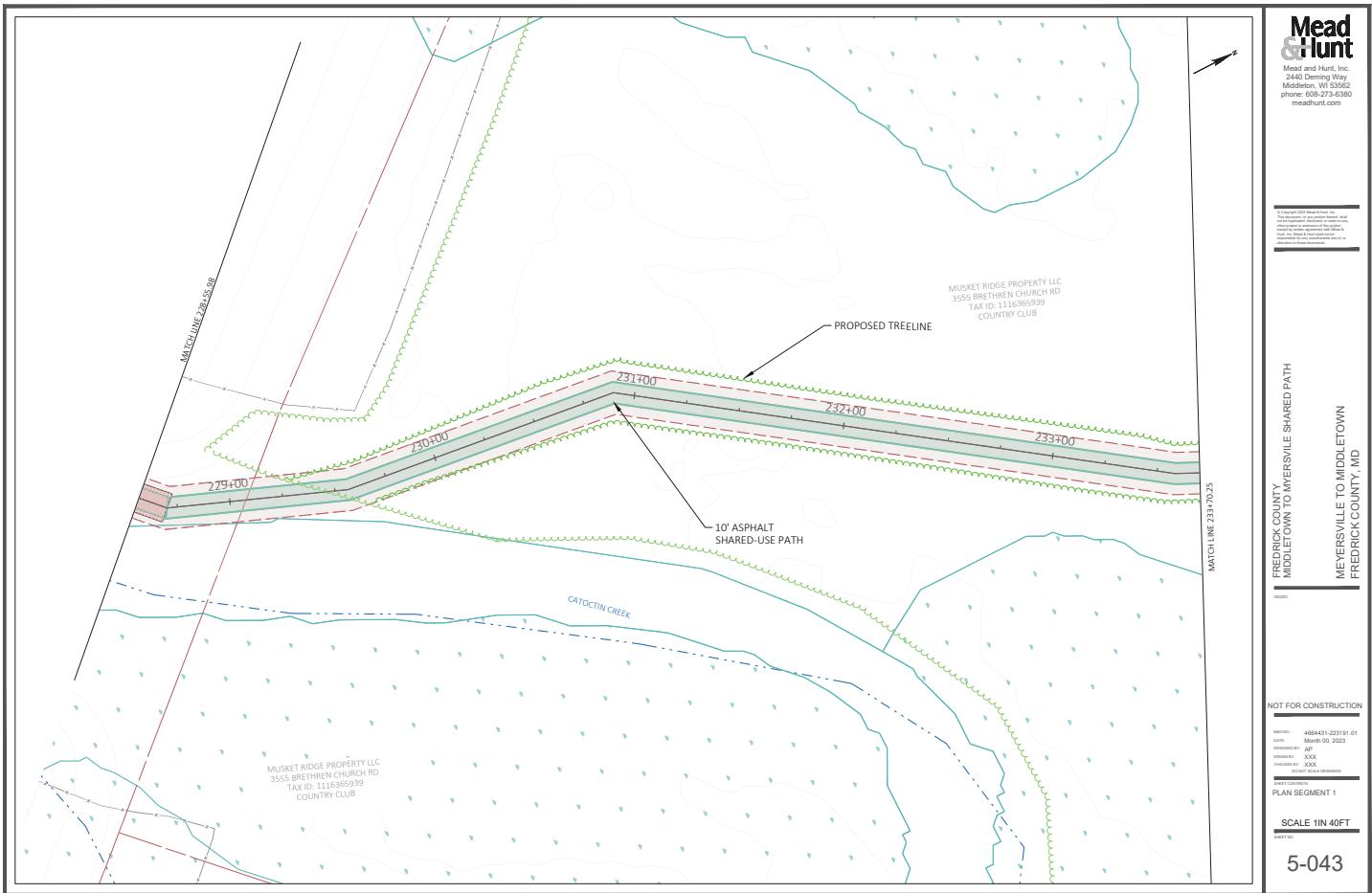
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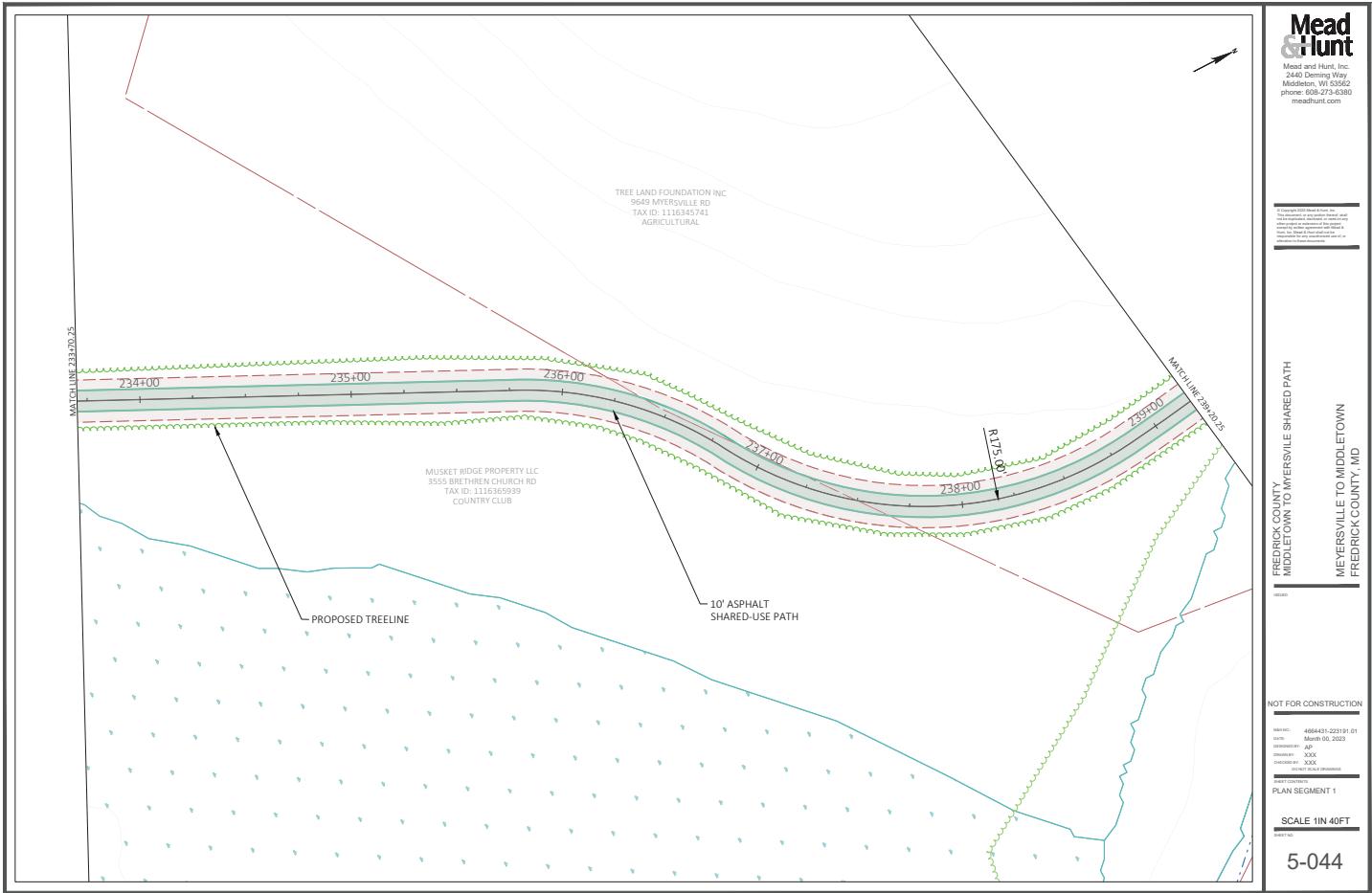
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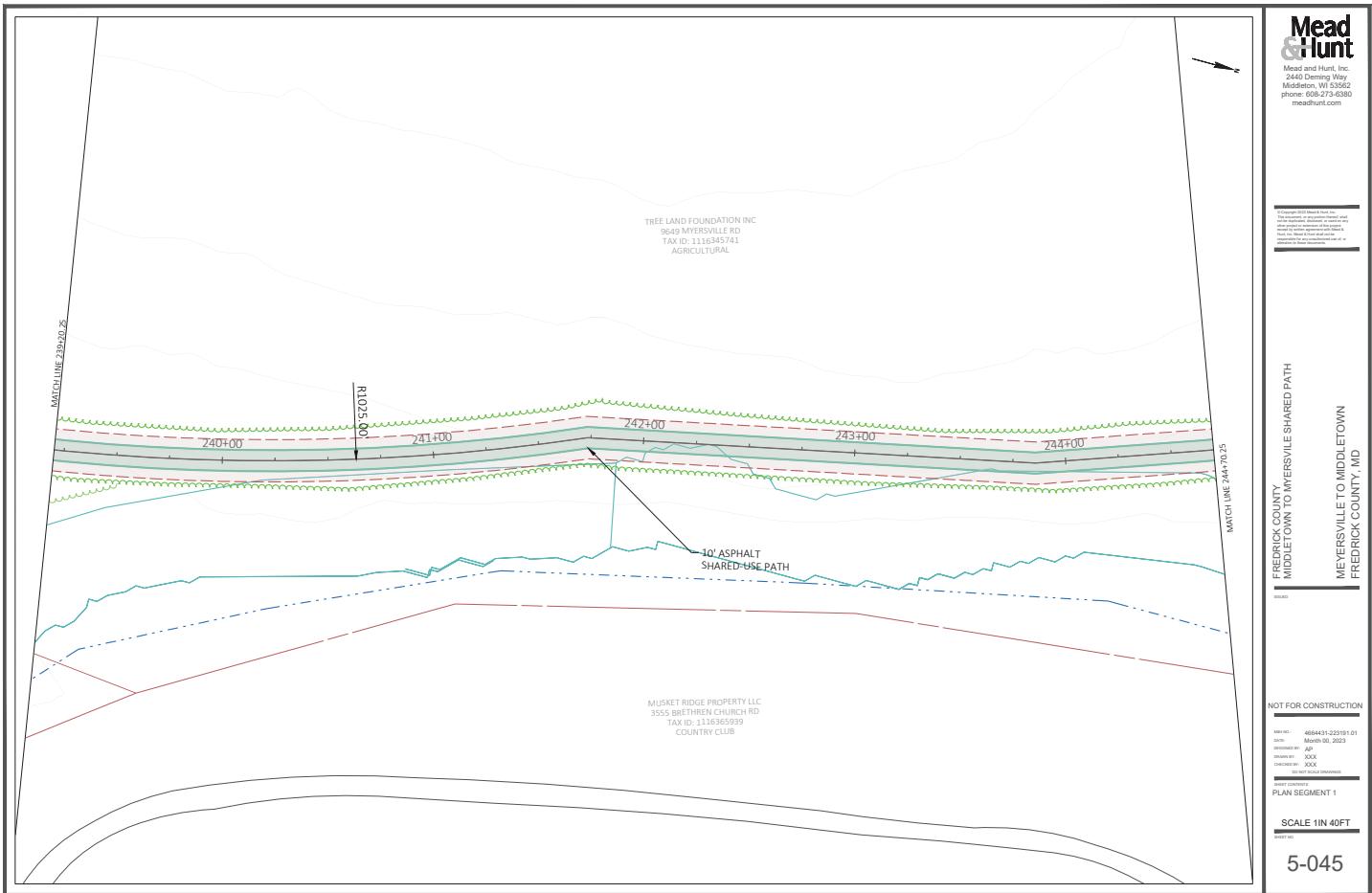
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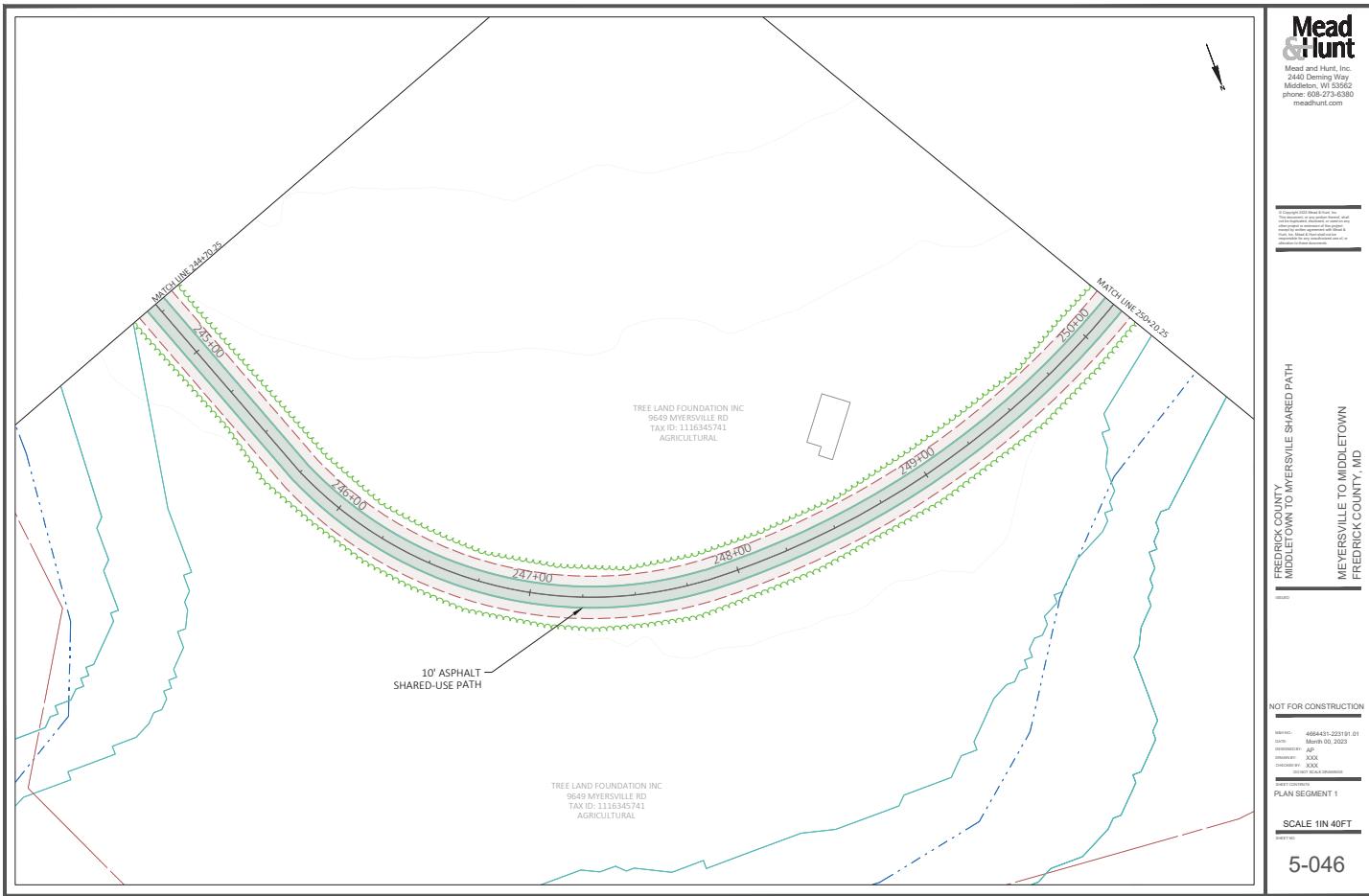
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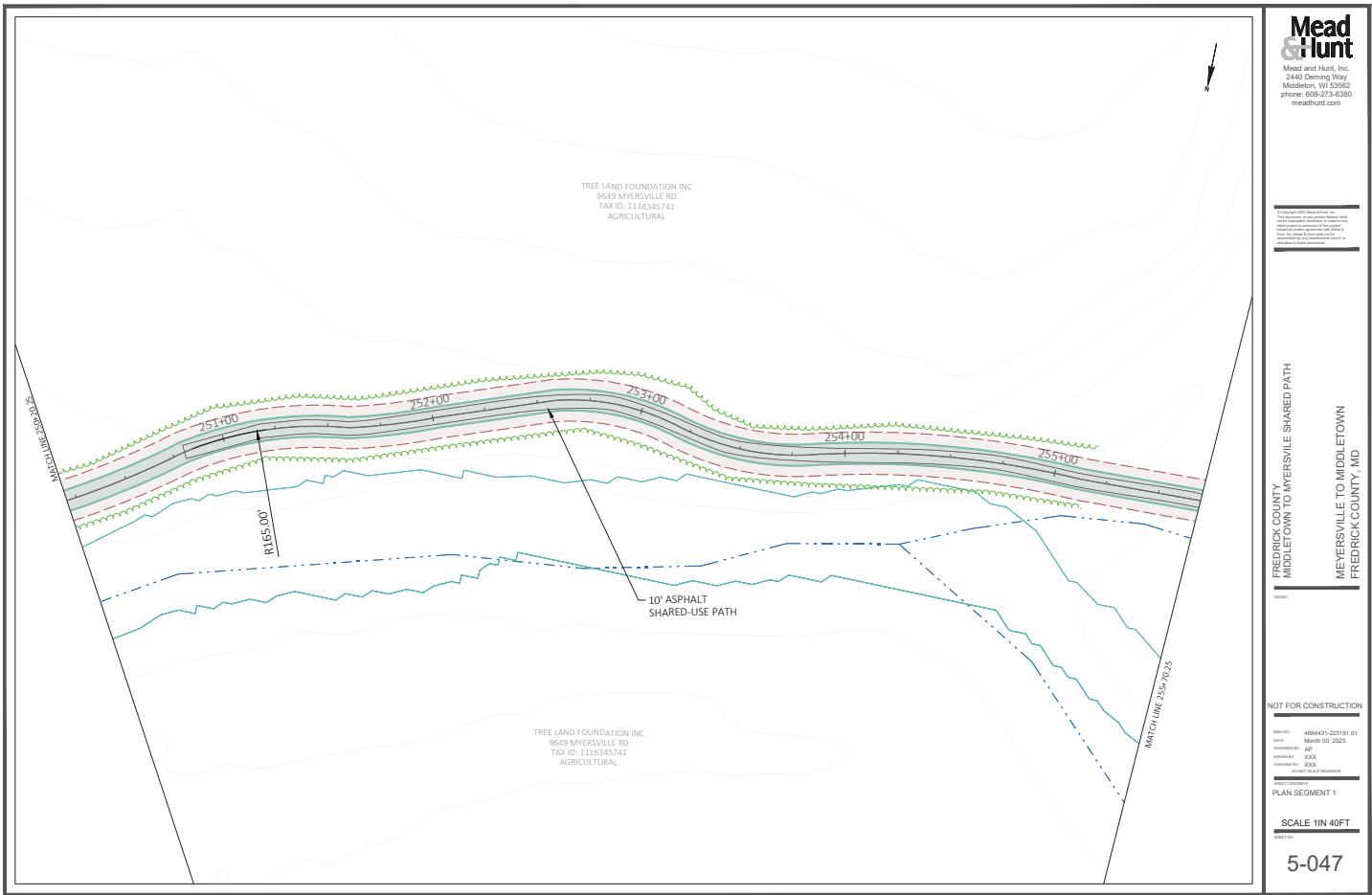
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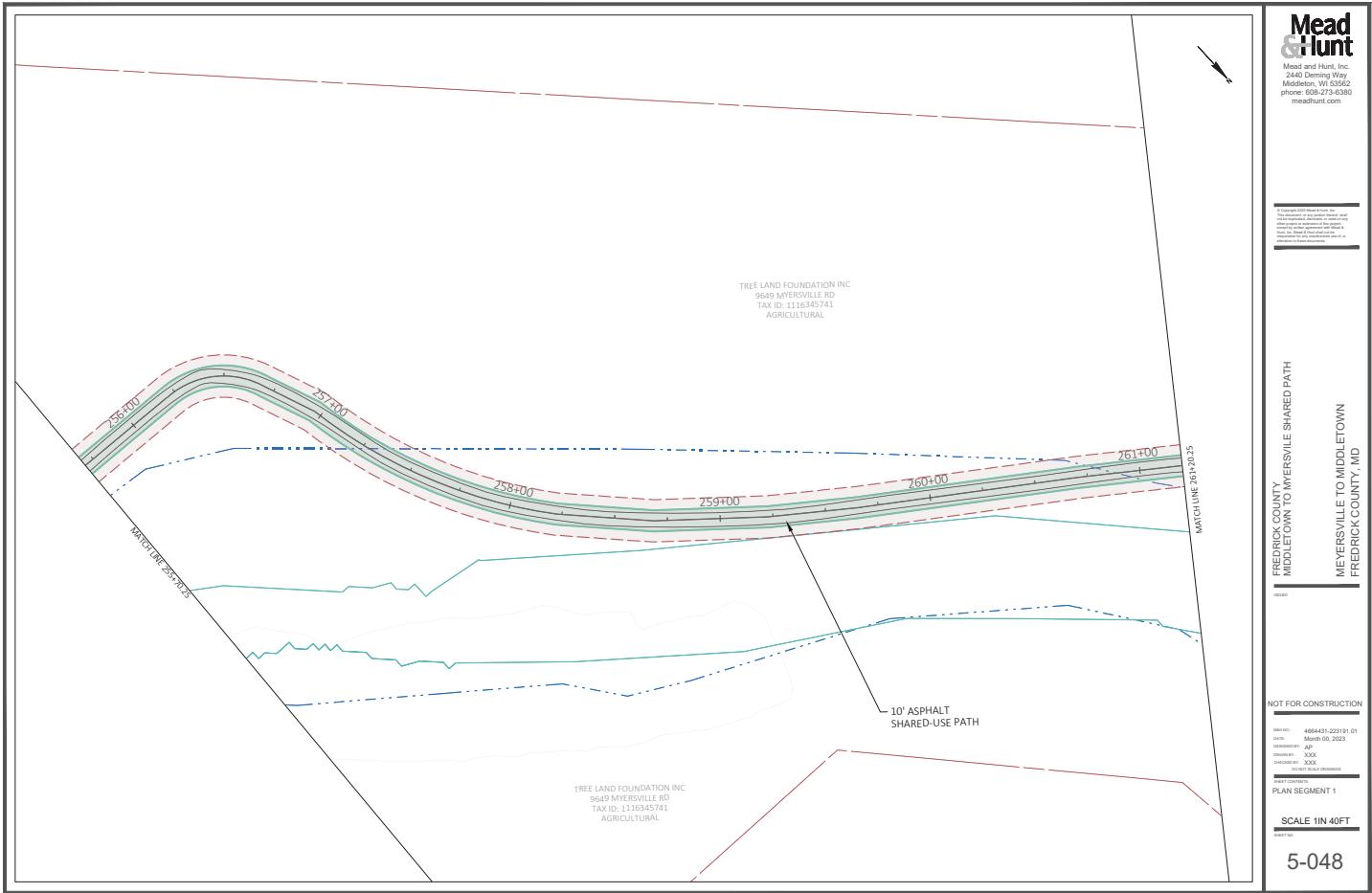
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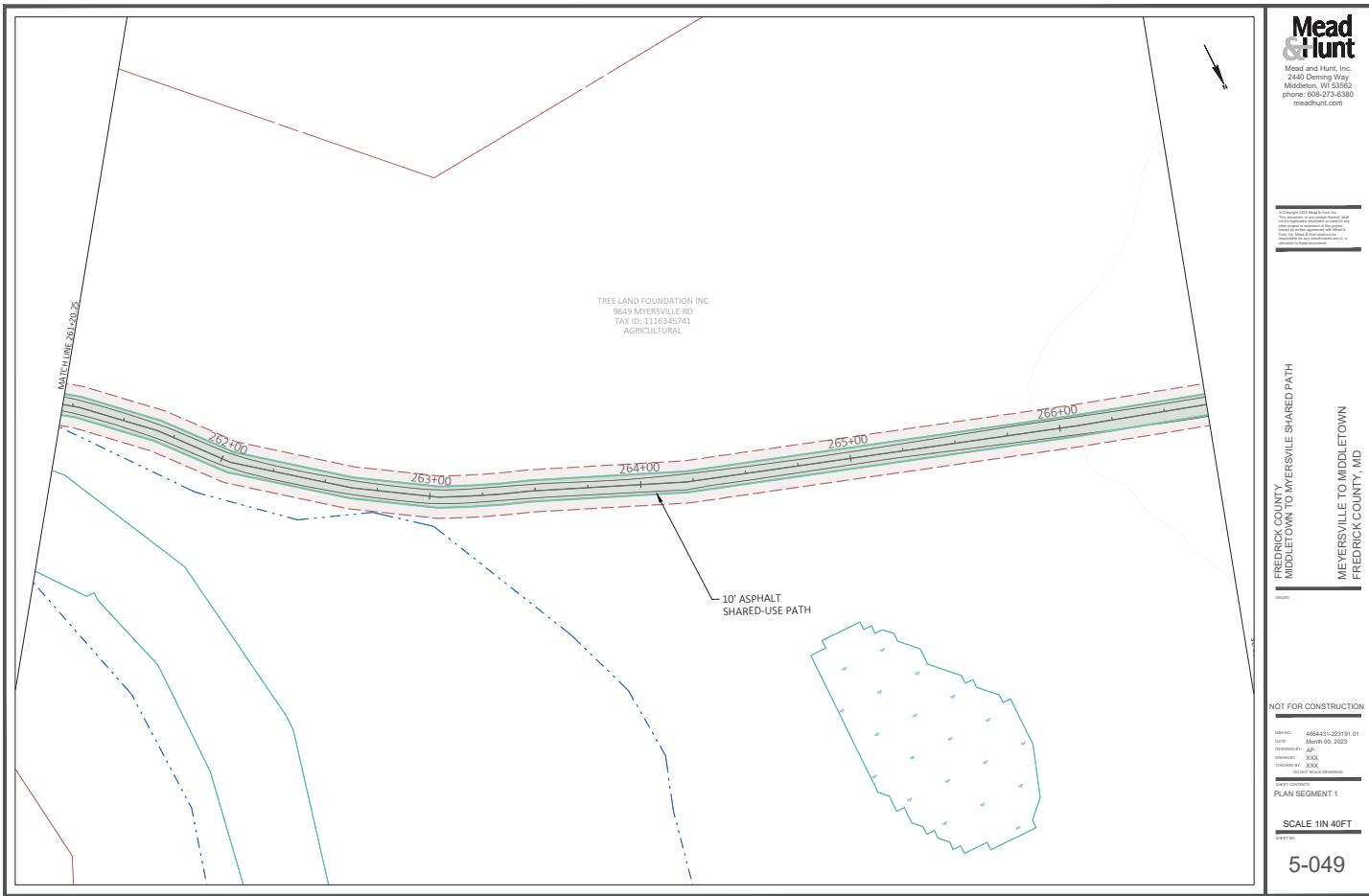
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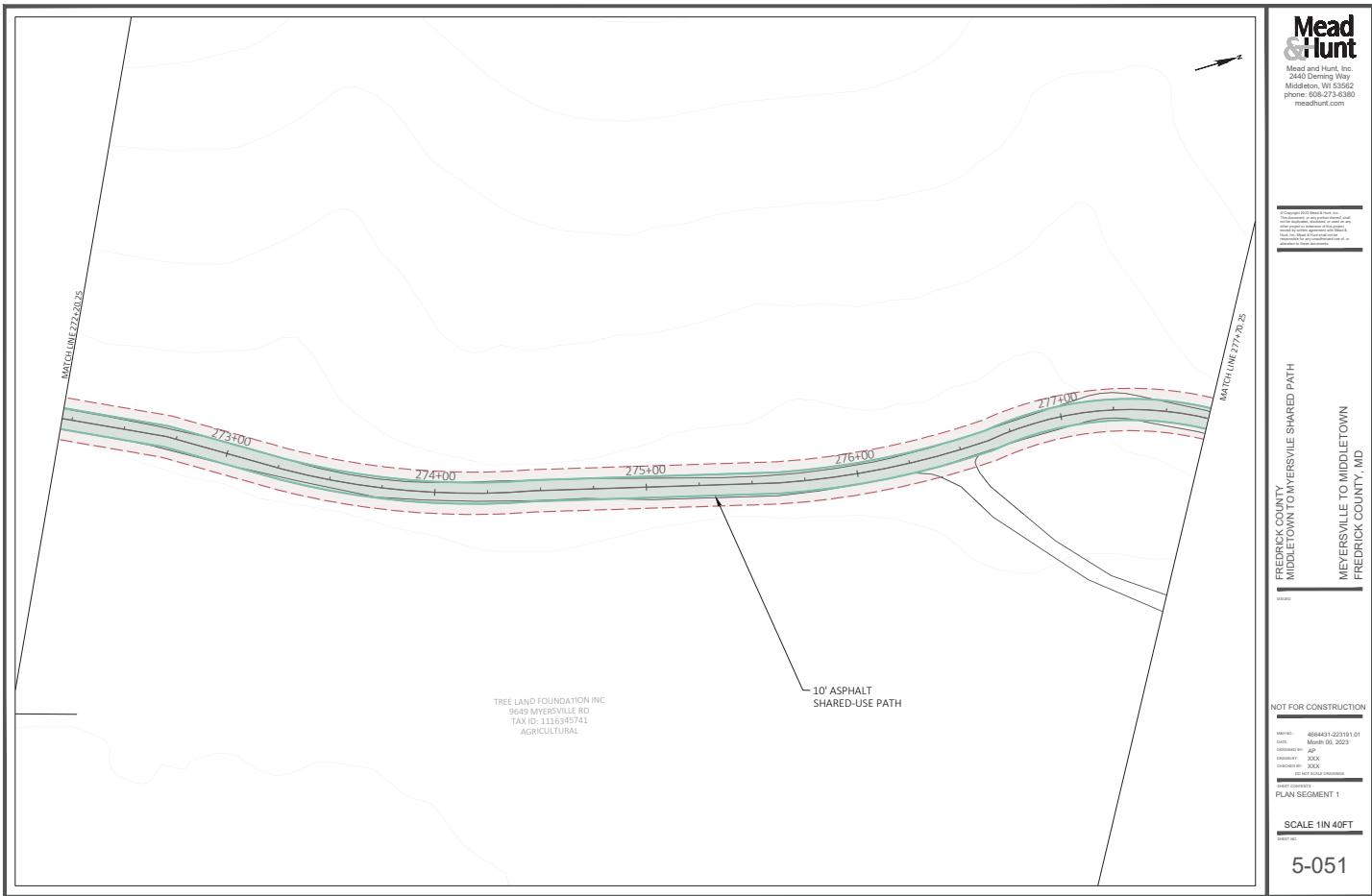
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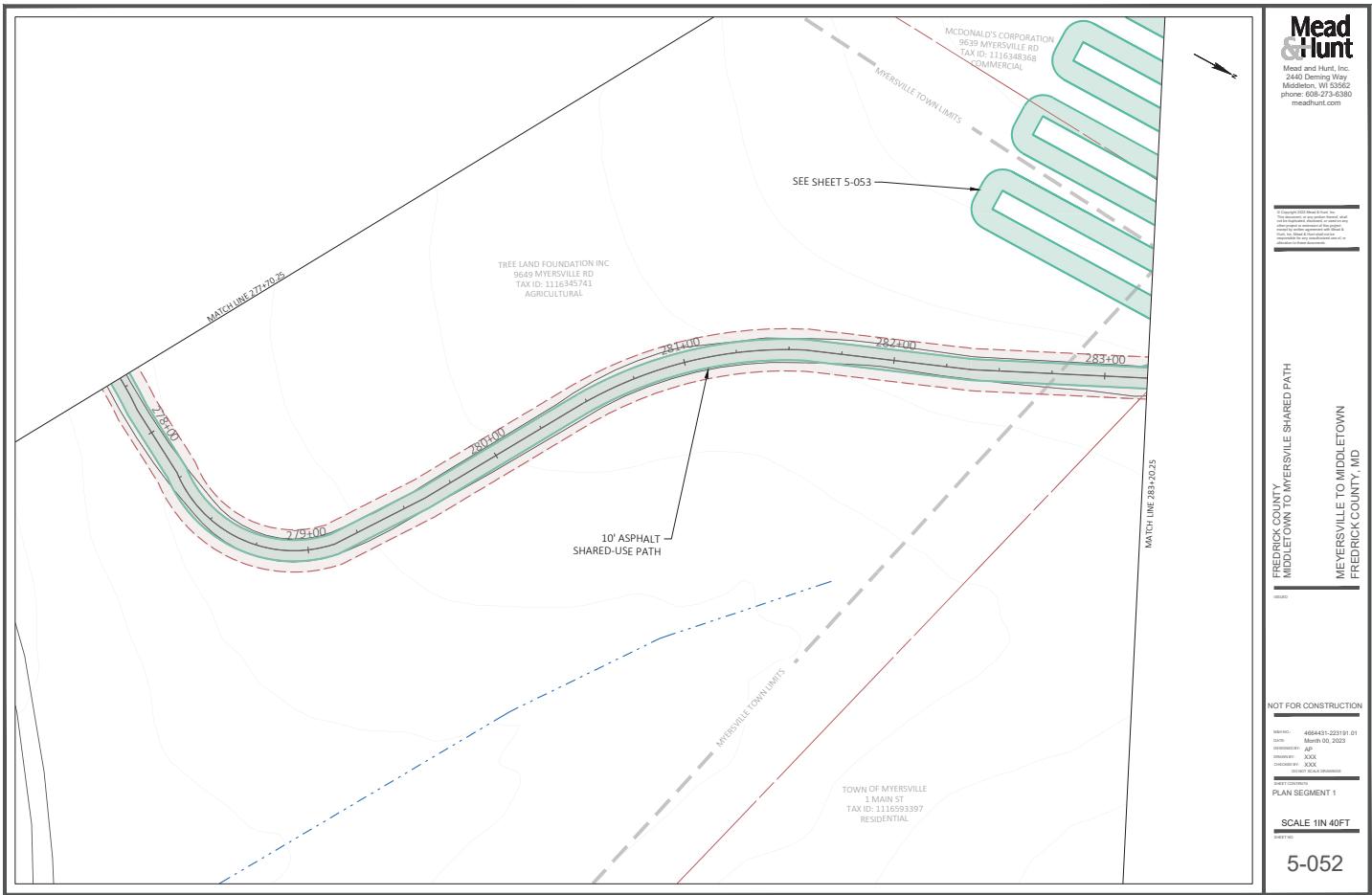
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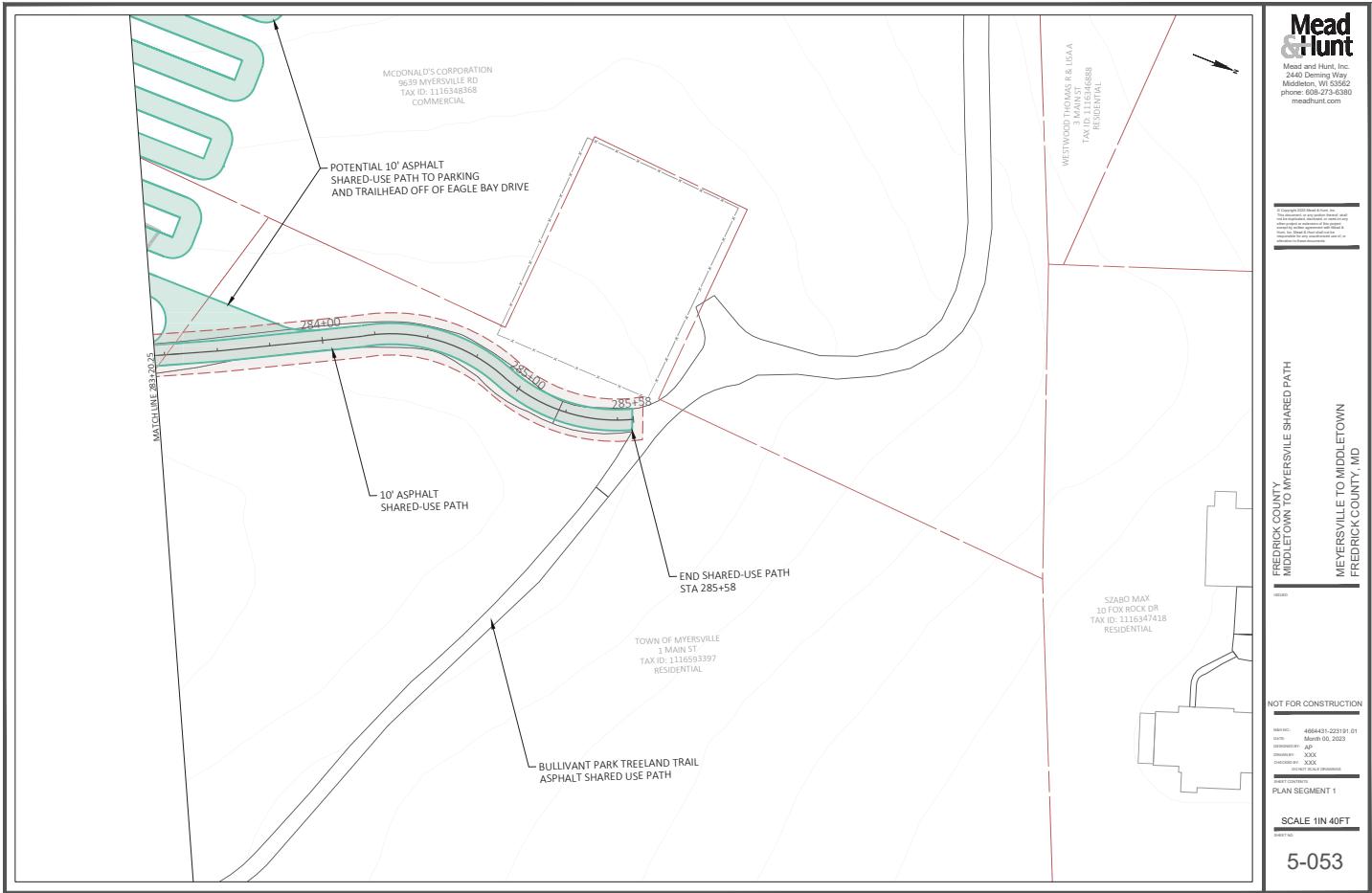
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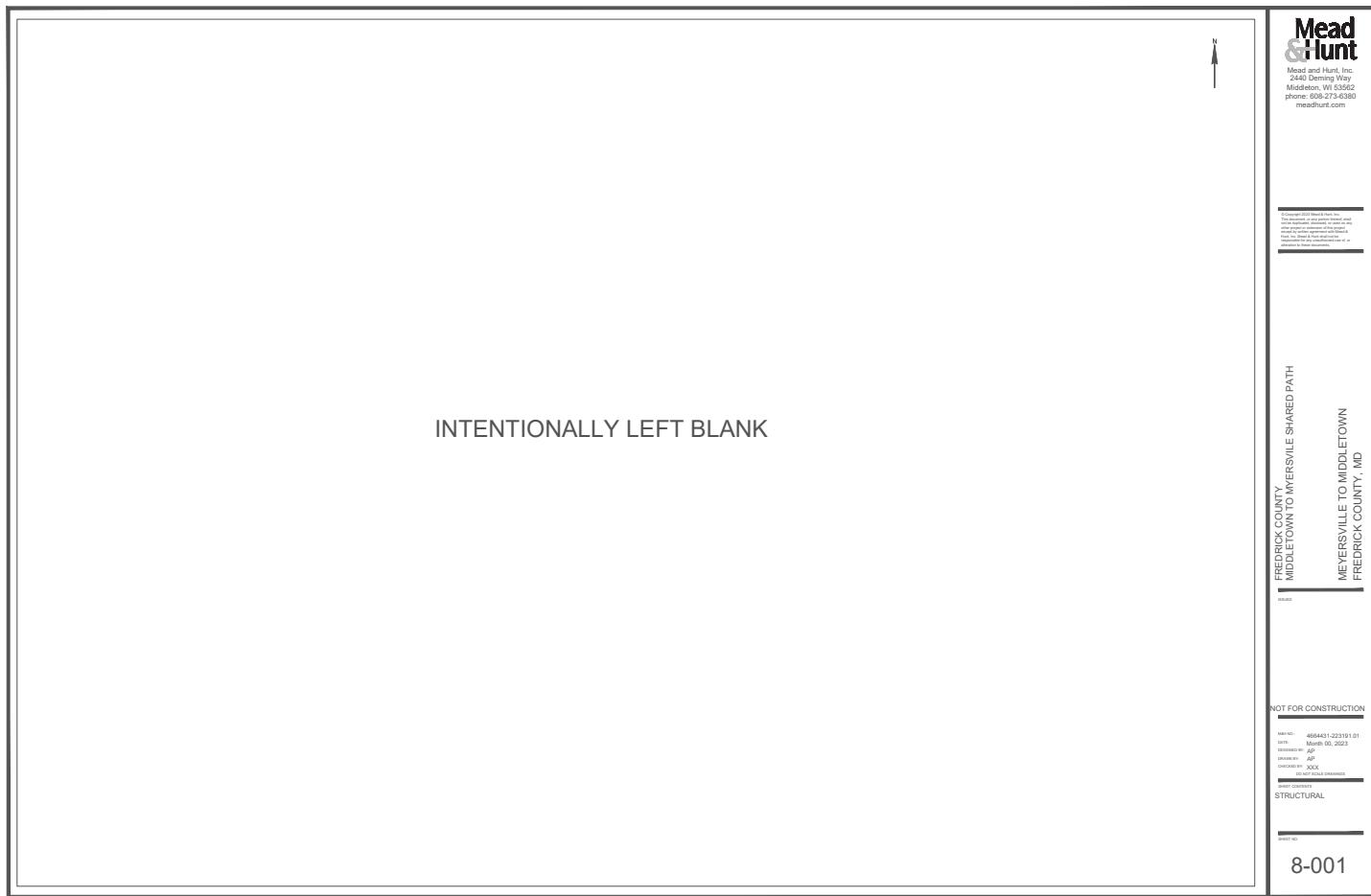
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Appendix 6: Environmental Analysis



COASTAL RESOURCES INC.

25 Old Solomons Island Road, Annapolis, Maryland 21401

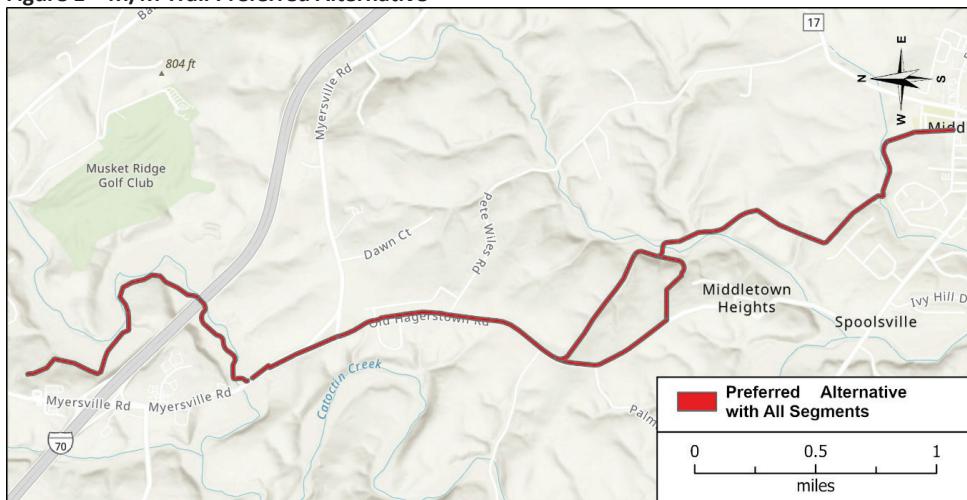
MEMORANDUM

DATE: October 10, 2023
TO: Mead and Hunt
FROM: Coastal Resources, Inc
SUBJECT: Middletown to Myersville Trail – Environmental Effects

1.0 Introduction

Frederick County is currently proposing an expanded trail network. One proposed multi-use trail will connect the towns of Middletown and Myersville primarily along MD 17 (Old Hagerstown Road) using portions of the electric right-of-way where possible along the 10-mile connection (see **Figure 1** and **Attachment 1**). Terrain along the proposed corridor is generally rolling hills which descend into stream valleys. Existing land use within and adjacent to the proposed Middletown to Myersville (M/M) trail study area includes very low, low, medium, and high density residential; commercial; institutional; agriculture; forest; transportation; and other developed lands. Residential, forest, and agriculture land use areas are scattered throughout the extent of the study area. Commercial land use areas are concentrated at the northern and southern ends of the study area, and the area classified as other developed lands consists of a cemetery just east of the southern point of the study area.

Figure 1 – M/M Trail Preferred Alternative



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2.0 Methodology

A review of desktop data and other readily available, public data was used to prepare this memo. A 100-foot study area, centered over the proposed trail alignment, was used to gather data. At future design stages, field surveys and additional data collection will be necessary to refine and/or enhance the information provided here.

3.0 Results

3.1 Topography, Geology, and Soils

3.1.1 Regulatory Context

The Farmland Protection Policy Act (FPPA) subtitle I of Title XV, Section 1539-1549 of the Agriculture and Food Act of 1981 aims to protect important agricultural lands from loss due to federal actions that lead to the conversion of important farmlands to nonagricultural land. Actions that result in the conversion of prime or unique farmland not already committed to urban development or water storage are reviewed for compliance with the FPPA. The potential effects to prime farmland soils and soils of statewide importance are evaluated to help identify the potential for impacts to important farmlands. Compliance is coordinated with the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS).

3.1.2 Existing Conditions

Topography and Geology

Topography, geology, and soils were examined using a desktop review to determine the existing conditions within the project study area. Sources of background and geospatial information included the United States Geological Survey (USGS), the Maryland Geological Survey (MGS), Maryland Department of the Environment (MDE), and the NRCS.

The M/M trail study area is situated within the Northern Blue Ridge Section of the Blue Ridge physiographic province. The study area falls within the Lower Middletown Valley District of the Middletown Valley Region, consisting of a moderately rolling valley floor with an overall bowl-shaped transverse profile, punctuated by the incised valley of Catoctin Creek (MGS 2016). Depth to bedrock in Frederick County ranges from zero to 200 feet, dependent on the underlying geologic group. The rocks of the South Mountain Anticlinorium and Frederick Valley that are found within the study area include Metarhyolite and Associated Pyroclastic Sediments; Catoctin Metabasalt; and Swift Run Formation (MGS 1968). During later phases of the project, geotechnical investigations would be undertaken, if necessary, to determine detailed subsurface conditions that could affect design and construction of the proposed trail and ancillary facilities (e.g. stormwater management). These investigations may include depth to bedrock, rock/soil stability, strength, cohesion, and other characteristics specific to the study area.

Soils

All soils in the M/M trail study area have developed from the weathering of underlying parent material. Weathering of these deposits over time by precipitation and biotic action has created some old, deep soils



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that are in equilibrium and some very new evolving alluvial soils. **Table 1** shows the 16 soil map units and their specific characteristics that fall within the study area.

Table 1: Soil Types within the M/M Trail Study Area

Soil Map Unit Symbol	Soil Map Unit Name	Hydrologic Group	Drainage Class	Frost Action	Erodibility (Kf)	Highly Erodible	Prime Farmland or Soil of Statewide Importance
CdE	Catoctin-Highfield complex, 25 to 45 percent slopes, very rocky	B	Well drained	Low	0.32	Y	Not prime farmland
CeD	Catoctin-Spoolsville complex, 15 to 25 percent slopes	B	Well drained	Low	0.32	Y	Not prime farmland
CeE	Catoctin-Spoolsville complex, 25 to 45 percent slopes	B	Well drained	Low	0.32	Y	Not prime farmland
CgA	Codorus and Hatboro silt loams, 0 to 3 percent slopes	C	Moderately well drained	High	0.32	N	Farmland soil of statewide importance
DoB	Downsville gravelly loam, 3 to 8 percent slopes	C	Moderately well drained	Moderate	0.37	Y	All areas are prime farmland
MmB	Mt. Zion gravelly silt loam, 3 to 8 percent slopes	C	Moderately well drained	Moderate	0.37	Y	Farmland soil of statewide importance
MmC	Mt. Zion gravelly silt loam, 8 to 15 percent slopes	C	Moderately well drained	Moderate	0.37	Y	Farmland soil of statewide importance
MnB	Mt. Zion-Rohrersville complex, 3 to 8 percent slopes	C	Moderately well drained	Moderate	0.37	Y	Farmland soil of statewide importance
MoB	Mt. Zion-Codorus complex, 0 to 8 percent slopes	C	Moderately well drained	Moderate	0.37	Y	All areas are prime farmland
MvA	Myersville silt loam, 0 to 3 percent slopes	B	Well drained	Moderate	0.32	N	All areas are prime farmland
MvB	Myersville silt loam, 3 to 8 percent slopes	B	Well drained	Moderate	0.32	N	All areas are prime farmland
MvC	Myersville silt loam, 8 to 15 percent slopes	B	Well drained	Moderate	0.32	N	Farmland soil of statewide importance
MyB	Myersville-Catoctin-Urban land complex, 3 to 8 percent slopes	B	Well drained	Moderate	0.32	N	Not prime farmland
SdC	Spoolsville-Catoctin complex, 8 to 15 percent slopes	B	Well drained	Moderate	0.32	N	Farmland soil of statewide importance
SeA	Spoolsville silt loam, 0 to 3 percent slopes	B	Well drained	Moderate	0.43	N	All areas are prime farmland
SeB	Spoolsville silt loam, 3 to 8 percent slopes	B	Well drained	Moderate	0.43	Y	All areas are prime farmland



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Designations of "hydrologic soil groups" are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration that is expected to occur when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms. Most soils in the study area are of Hydrologic Group B which are soils having moderate infiltration rates and consists of moderately deep to deep, moderately well to well drained soils with fine to moderately coarse textures. During later stages of the project a more detailed assessment of the potential project effects on infiltration rate will be completed.

"Drainage class" refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. The ability of a soil to drain dictates ponding, including wetland formation, and flooding in that soil unit. Seven classes of natural soil drainage are recognized: excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained, and very poorly drained (NRCS 2016). All 16 of the soil map units within the study area are either well drained or moderately well drained.

Potential for frost action is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing. Frost action occurs when moisture moves into the freezing zone of the soil. Of the 16 soil units in the study area, one map unit has a high susceptibility to frost action, 12 map units have moderate susceptibility, and three map units have low susceptibility.

Highly erodible soils are potentially more prone to erosion from wind, rain, and disturbance. The Code of Maryland Regulations (COMAR) defines "highly erodible soils" as soils with a slope greater than 15 percent, or those soils with a soil erodibility factor (Kf) greater than 0.35 and with slopes greater than five percent (COMAR 26.17.01). Based on this definition, nine soils within the study area are classified as highly erodible. During later stages of the project, a more detailed assessment of the risk of soil erosion within the project corridor both during and after construction will be completed.

Prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and is also available for these uses. Prime farmland has the soil quality, growing season, and moisture supply needed to economically produce sustained high yields of crops when treated and managed, including water management, according to acceptable farming methods (NRCS 2016). Six prime farmland soil map units were identified within the study area, as listed in **Table 1**, and illustrated on the soils mapping in **Attachment 2**.

Soils of statewide importance, also referred to as farmland soil of statewide importance, include those soils in Land Use Capability Class II and Class III that do not meet Prime Farmland criteria. Class II contains soils having some limitations for cultivation and Class III contains soils having severe limitations for cultivation. These soils are nearly Prime Farmland and economically produce high yields of crops when treated and managed according to acceptable farming methods. Six soil map units designated as soils of statewide importance were identified within the study area (see **Table 1** and **Attachment 2**).

When Prime Farmland soils and Soils of Statewide Importance are developed and can no longer be cultivated, they are no longer considered Prime Farmland or Soils of Statewide Importance. Based on aerial imagery, the predominant land use within the study area is agricultural and forest, with smaller areas of residential. Any areas already developed as an urban land use are no longer considered to be Prime Farmlands or Soils of Statewide Importance. On a given soil map unit, impervious and developed surface footprint will change only the soil under that footprint.



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3.1.3 Potential Effects

Minor impacts and/or changes to topography and geology are anticipated from the preferred alternative. Local topography would be altered by excavation and grading that would be necessary for the trail construction. Soil impacts would result from soil removal or alterations to the soil profile and structure due to construction activities. Removal of vegetation would result in increased exposure of soils to weather and runoff potential. The preferred alternative may impact prime farmland soils and soils of statewide importance. Coordination with NRCS will be necessary and a Farmland Conversion Impact Rating Form (NRCS-CPA-106) may be required as part of that coordination.

3.2 Surface Waters

3.2.1 Regulatory Context

Section 401 and Section 402 of the federal Clean Water Act (CWA) (33 U.S.C. 1344) regulate water quality and the introduction of contaminants to waterbodies. In Maryland, MDE is the regulatory agency responsible for ensuring adherence to water quality standards.

Under COMAR: Title 26 Department of the Environment, Subtitle 08 Water Pollution, Chapter 02 Water Quality (26.08.02), the State has adopted water quality standards to enhance and protect water resources and meet the requirements of the federal CWA. The water quality standards designate uses to the waters of the State and set criteria by which these “Designated Uses” are protected and maintained. Coordination with the Maryland Department of Natural Resources (DNR) Environmental Review Unit is necessary to determine regulations for the waters crossed by the alignments. Streams crossed by the project study area are designated by the state of Maryland as either Use I-P or Use III-P waters. Use I-P waters are protected for water contact recreation, protection of nontidal warmwater aquatic life, and public water supply. Use III-P waters are protected for water contact recreation, protection of nontidal cold water aquatic life, growth and propagation of trout, and public water supply.

In compliance with CWA Sections 303(d), 305(b), and 314 and the Safe Drinking Water Act (SDWA), states develop a prioritized list of waterbodies that currently do not meet water quality standards. The 303(d) prioritized list includes those waterbodies and watersheds that exhibit levels of impairment requiring further investigation or restoration. MDE uses monitoring data to compare stream conditions to water quality standards and determine which streams should be listed. The waterbodies on this list are subject to a total maximum daily load (TMDL) of these constituents. A TMDL is a calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards.

The Federal Wild and Scenic Rivers system was created to protect “rivers of the nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values” (16 U.S. Code § 1271). The system is administered by four lead federal agencies—the Bureau of Land Management (BLM), National Park Service (NPS), US Forest Service (USFS) and US Fish and Wildlife Service (USFWS). The Maryland Scenic and Wild Rivers Act of 1968 established the Maryland Scenic and Wild Rivers System to preserve and protect the natural values and enhance the water quality of rivers, or segments of rivers, which possess outstanding scenic, geologic, ecologic, historic, recreational, agricultural, fish, wildlife, cultural, and other similar resource values.



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3.2.2 Existing Conditions

Surface Waters and Watershed Characteristics

The M/M trail study area is located entirely within the MDE 8-digit Catoctin Creek watershed (MDE 8-digit 02140305), which falls within the larger Middle Potomac River drainage basin. The study area parallels Catoctin Creek in the northern area and crosses Little Catoctin Creek and Wiles Branch in the southern portion of the study area. The Catoctin Creek Watershed predominantly consists of urban (24%), agricultural (47%), and forest (28%) land use classifications. A review of the online DNR Aquatic Resources Pre-Screening Tool demonstrates that protected land categories adjacent to the study area include Rural Legacy properties, Maryland Environmental Trust easements, and Forest Conservation Act easements.

Impervious surfaces do not allow rainwater to absorb into the ground, and include structures such as roads, sidewalks, parking lots, and buildings. The amount of impervious surface in a watershed can often be used as an indicator of water quality, as water quality in streams tends to decline as the impervious land cover percentage approaches the 10 percent threshold level, with notable degradation expected when impervious surface exceeds 25 percent (Allen and Weber 2007; Uphoff *et al.* 2010). Guidelines developed by DNR caution that in certain highly sensitive watersheds, impacts to aquatic biodiversity can occur at impervious surfaces as low as two percent, and that impacts to biodiversity and fisheries are apparent between five and 10 percent impervious surface. The Catoctin Creek Watershed consists of 4% impervious surface (FCSS 2019).

Only two designated uses are present for streams within the study area. Catoctin Creek in the northern portion of the study area and Little Catoctin Creek in the central portion of the study area are designated as Use III-P (nontidal cold water and public water supply), while Wiles Branch in the southern portion of the study area is designated as Use I-P (water contact recreation, protection of aquatic life, and public water supply).

Surface Water Quality and Aquatic Communities

Existing water quality and aquatic community data were compiled from the Frederick County Division of Energy and Environment (FCOEE) which has established a rigorous monitoring program in the vicinity of the M/M trail study area through the Frederick County Stream Survey. Ecological health scores are developed using water samples, plant and aquatic insect population inventories, and habitat assessments. The most recent sampling events with published compiled scores for the Catoctin Creek watershed occurred during the period between 2013-2016 (Round 2). Stream scores are developed for five categories: riparian buffer, erosion, habitat, trash, and benthic macroinvertebrates. Scores fall into one of four rankings: good, fair, poor, or very poor. Round 3 Survey Results will be compiled from 2018-2022 surveys, however the result scores are not yet published. The scores for each category from Round 2 are outlined in **Table 2** (FCSS 2016).

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Table 2 - Catoctin Creek Watershed Health Scores (Round 2 Sampling 2013-2016)

Category	Score	Maximum Possible Score	Ranking
Benthic Index of Biotic Integrity (BIBI)	2.9	5.0	Poor
Physical Habitat Indicator (PHI)	68.1	100	Fair
Riparian Buffers	52.5	60 or greater	Fair
Trash	16.8	20	Good
Erosion	1.2	3 or greater	Fair

Scenic and Wild Rivers

According to the National Wild and Scenic River System website, there are no federally-designated Wild and Scenic Rivers within the study area (IWSRCC 2023). According to the DNR Scenic and Wild Rivers Program website no state-designated Scenic and Wild Rivers are located within the study area (DNR 2023); The Potomac River, is designated as Scenic under the Maryland Scenic and Wild Rivers Act (DNR 2023). A Scenic River is defined as a “free-flowing river whose shoreline and related land are predominantly forested, agricultural, grassland, marshland, or swampland with a minimum development for at least two miles of the river length.” There are no state-designated Wild Rivers within the study area, but Catoctin Creek and its tributaries which occur within the M/M trail study area flow into the protected, Scenic segment of the Potomac River.

3.2.2 Potential Effects

The preferred alternative of the M/M trail may affect surface waters and water quality within the study area. Impacts would be associated with the construction of the trail, the potential for accidental spills or sediment releases, increased impervious, and added stormwater. Potential impacts to aquatic biota from the preferred alternative could range from mortality of aquatic organisms during construction, loss of natural habitat from the placement of instream structures at proposed stream crossings, to more gradual changes in stream conditions that affect aquatic communities. The preferred alternative may impact tributaries of the Potomac River which is designated as State-listed Scenic River. These impacts would be to Catoctin Creek, Little Catoctin Creeks, Wiles Branch and potential other unnamed tributaries to these streams. The exact type and quantity of impacts to surfaces waters and water quality will not be fully known until later project design stages.

3.3 Wetlands and Other Waters of the U.S.

3.3.1 Regulatory Context

Waters of the U.S., including wetlands, are subject to regulatory jurisdiction under Section 404 of the CWA (33 U.S.C. 1344) and Section 10 of the Rivers and Harbors Act (33 U.S.C. 403). Executive Order (E.O.) 11990 of the Federal Register (FR) (42 FR 26961, E.O. 11990, May 1977), entitled *Protection of Wetlands*, was enacted to avoid to the extent possible the long- and short-term adverse impacts associated with the destruction or modification of wetlands, to avoid direct or indirect support of new construction in

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wetlands wherever there is a practicable alternative, and to ensure that proposed construction incorporates all possible measures to limit harm to the wetland. Wetlands are jointly defined by the EPA and the U.S. Army Corps of Engineers (USACE) as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and that under normal circumstances do support a prevalence of vegetation typically adapted to life in saturated soil conditions” (EPA, 40 CFR 230.3 and USACE, 33 CFR 328.3). Unavoidable impacts to wetlands and other waters of the U.S. are subject to a Section 404 permit from the USACE for the discharge of dredge or fill material.

Wetlands and their buffers are also protected by the State of Maryland under Maryland Environment Article Title 5, Subtitles 5 and 9 and the Maryland Nontidal Wetlands Protection Act (COMAR 26.23.01). Buffers are defined in COMAR 26.23.01.01 as a regulated area, 25 feet in width, surrounding a nontidal wetland, measured from the outer edge of the nontidal wetland. Waterways regulated by the State are defined in COMAR 26.17.04.02 as Waters of the State and include the 100-year floodplain. Impacts to waterways, 100-year floodplains, nontidal wetlands, 25-foot nontidal wetland buffers, require a Maryland Nontidal Wetlands and Waterways Permit. Additionally, a Section 401 Water Quality Certificate from MDE is required for any impacts to waterways or wetlands requiring a USACE Section 404 permit.

There are no tidal areas within the study area. Consequently, federal and state regulations pertaining to tidal waters of the U.S. do not apply to the project and are therefore not discussed in this document.

3.3.2 Existing Conditions

Potential nontidal wetlands and other waters of the U.S. within the M/M trail study area were identified from desktop data including the United States Fish and Wildlife (USFWS) National Wetland Inventory (NWI) wetland maps. There are NWI mapped wetlands and streams within and adjacent to the study area. In the northern portion of the study area the preferred alternative parallels and crosses Catoctin Creek. Two unnamed tributaries to Catoctin Creek as well as a forested non-tidal wetland are also mapped in this area. At the southern end of the study area, the preferred alternative parallels an unnamed tributary to Little Catoctin Creek before crossing Little Catoctin Creek and another unnamed tributary. The preferred alternative crosses Wiles Branch, which included adjacent mapped wetlands at the southern end of the study area. The locations of the wetlands and watercourses identified are shown on the detailed map provided in **Attachment 3**. At later project stages detailed field studies will be completed to delineate the boundaries of all regulated waters of the U.S., including wetlands.

3.3.3 Potential Effects

The preferred alternative would result in direct impact to nontidal waters of the U.S., including wetlands. Anticipated impacts to regulated waters of the U.S., including wetlands, will require permits from MDE and the USACE. Avoidance and minimization efforts would continue during more detailed phases of project design. As part of the permitting process, mitigation of unavoidable impacts to wetlands and stream channels will be required. All mitigation measures employed to compensate for unavoidable project impacts to waters of the U.S. would follow the federal Compensatory Mitigation Rule (33 CFR Part 325 and 40 CFR Part 230), and other state compensatory mitigation guidelines, as well as other recommendations from federal and state resource agencies. When unavoidable impacts have been avoided and minimized to the greatest extent practicable, mitigation may be required in the form of establishment/creation, enhancement, or preservation to replace the loss of wetland, stream, and/or other aquatic resource functions. The federal mitigation rule and state guidance establishes a hierarchy for mitigation options with the purchase of credits from an approved mitigation bank as the preferred



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mitigation approach over other options such as permittee-responsible mitigation. The exact type and quantity of impacts to wetlands and other waters of the U.S. will not be fully known until later project design stages.

3.4 Terrestrial Vegetation and Wildlife

3.4.1 Regulatory Context

The Maryland Forest Conservation Act (FCA) regulates any activity requiring an application for a subdivision, grading permit, or sediment erosion control permit on areas 40,000 square feet or greater. As defined by COMAR, a forest is “a biological community dominated by trees and other woody plants covering a land area of 10,000 square feet or larger. It includes areas that have at least 100 trees per acre with at least 50 percent of those having a two-inch or greater diameter at breast height (DBH) and forest areas that have been cut but not cleared (08.19.03.01, Article 2.17).” The Forest Resource Ordinance (FRO) was enacted by Frederick County in 1992 as a response to the FCA and protects and enhances forest resources at the County level (FCMG 2012). Tree and/or forest impacts within public roadway right-of-way are regulated by the Maryland Roadside Tree Law.

Terrestrial wildlife in Maryland is regulated under several provisions. The take of all migratory birds is governed by the Migratory Bird Treaty Act (16 U.S.C. 703-712). Under the Migratory Bird Treaty Act, it is illegal to “take, kill, possess, transport, or import migratory birds or any part, nest, or egg of any such bird” unless authorized by a valid permit (16 U.S.C. 703). Additionally, the bald eagle (*Haliaeetus leucocephalus*) is protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c). The Bald and Golden Eagle Protection Act prohibits the take, possession, sale, purchase, barter, transport, export, or import of any bald or golden eagle (*Aquila chrysaetos*) (alive or dead), including any part, nest, or egg without a valid permit issued by the Secretary of the Interior (50 CFR 22.3). The Act prohibits disturbing any bald or golden eagle.

Another potential wildlife species of concern include Forest Interior Dwelling Bird Species (FIDS) which require large areas of forest habitat. Although only regulated in the Chesapeake Bay Critical Area, which does not occur in the M/M trail study area, DNR encourages avoidance of impacts to FIDS habitat throughout the state. Regulated FIDS habitat includes documented FIDS breeding areas within existing riparian forests that are at least 300 feet in width and that occur adjacent to streams, wetlands, or the Chesapeake Bay shoreline, and other forest areas used as breeding areas by forest interior dwelling birds (Jones et al., 2000).

3.4.2 Existing Conditions

Forest within the M/M trail study area is associated with the riparian areas of Catoctin Creek, Little Catoctin Creek, and Wiles Branch. Based on aerial imagery these forests appear to be deciduous in the mid-successional to late successional stage. Potential FIDS habitat is mapped around Catoctin Creek at the northern end of the study area. Other smaller, forested areas are also present in the study area. Two forest conservation easements are located within the study area, one is county-held and one is held by the town of Middletown (see [Attachment 3](#)). There are no state-held forest conservation easements located within the study area. The county-held easement is in the floodplain of Catoctin Creek. The town-held easement is in the riparian area of Wiles Branch. At later project stages, detailed field surveys will be required to characterize the composition and quality of forests within the study area. A specimen tree



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survey will be conducted to document the location, size, species, and condition of all specimen trees within the study area.

Forest habitat can also support various species of bats during the summer active season. Many bat species that could occur within the study area hibernate during the winter months in caves or rock crevices, while others migrate to southern localities. During summer, these bats roost and raise young within the dense foliage of trees.

Terrestrial wildlife expected within the M/M trail study area reflect the availability and quality of various natural and man-modified habitats. At later project stages, additional information will be gathered on known and potential wildlife within the study area.

3.4.3 Potential Effects

The preferred alternative will impact forest resources, primarily those associated with the riparian areas of Catoctin Creek, Little Catoctin Creek, and Wiles Branch. The preparation of a forest stand delineation (FSD) and forest conservation plan (FCP), in accordance with the Frederick County FRO, may be required for impacts to forest, specimen trees, and forest conservation easements with the study area. Impacts to trees within the roadway right-of-way may require a Roadside Tree Permit. Avoidance and minimization efforts would continue during more detailed phases of project design. As part of the permitting process, mitigation of unavoidable impacts to forests may be required in the form of on-site preservation, on-site planting, off-site planting, purchasing of credits from an approved bank, or a fee-in-lieu payment. The exact type and quantity of impacts to forest, specimen trees, and roadside trees will not be fully known until later project design stages.

Wildlife impacts from the preferred alternative could occur as a result of habitat disturbance and/or loss during construction. Impacts to wildlife will not be fully known until later project design stages.

3.5 Rare, Threatened, and Endangered Species

3.5.1 Regulatory Context

The state Nongame Endangered Species Conservation Act (Annotated Code of Maryland 10-2A-01) regulates activities that affect the habitats of plants and animals listed on the Maryland Threatened and Endangered Species list. Any constructing agency (federal, state, local, or private) is required to cooperate and consult with DNR regarding: the presence of listed species within a study area, field verification of habitat and/or populations of listed species, and avoidance and minimization efforts as appropriate. At the federal level, the USFWS regulates effects to listed threatened or endangered species or critical habitat listed for any species under Section 7 of the Endangered Species Act (ESA) of 1973 (16 U.S.C. 35).

3.5.2 Existing Conditions

A project review online through the USFWS Information for Planning and Consultation (IPaC) was completed for the M/M trail study area, and a species list was generated (see **Attachment 4**). The IPaC species list stated that two endangered mammals, the Indiana Bat (*Myotis sodalis*) and Northern Long-eared bat (*Myotis septentrionalis*), one proposed threatened clam, the green floater (*Lasmigona subviridis*), and one candidate species insect, the monarch butterfly (*Danaus plexippus*) have habitat that lie wholly or partially within the study area. There are no Sensitive Species Project Review Areas (SSPRA) within the M/M trail study area. At later project stages, project review request letters will need to be sent

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to the DNR – Wildlife and Heritage Service (WHS) to request information on the potential presence of state-listed rare, threatened, or endangered species (RTE) within the study area. Additional coordination with USFWS is necessary to define the potential project impacts on federally-listed RTE species.

3.5.3 Potential Effects

The preferred alternative may impact RTE or other sensitive species within the study area. Coordination with DNR-WHS and USFWS is necessary to confirm the potential impacts and permitting requirements.

3.6 Floodplains

3.6.1 Regulatory Context

Executive Order 11988 (amended January 29, 2015), U.S. Department of Transportation (USDOT) Order 5650.2, entitled the “Floodplain Management and Protection” and the National Flood Insurance Act of 1968 govern the act of fill and construction in floodplains to ensure that proper consideration is given to the avoidance, minimization, and mitigation of adverse floodplain effects. The MDE is responsible for coordination of all state floodplain programs. Floodplains are also governed by local Flood Insurance Programs administered by localities and supervised by FEMA (FEMA 2015). Frederick County addresses floodplain districts in detail in Section 1-19-326 and 327 of the County Zoning Ordinance. Currently, these sections of the ordinances state that a minimum set back of 25 feet shall be provided from all floodplains.

3.6.2 Existing Conditions

Floodplains within the M/M trail study area were identified using *Flood Insurance Rate Maps* (FIRM) produced by the Federal Emergency Management Agency (FEMA) (DHS 2016), using an overlay of the FEMA maps on the preferred alternative in a GIS. The 100-year floodplain occurs in two locations within the study area (see **Attachment 3**). In the northern portion of the study area, there is a 100-year floodplain associated with Catoctin Creek. The preferred alternative parallels the west side of Catoctin Creek, within the 100-year floodplain until it crosses it just east of Myersville Road. The floodplain in this area includes forest and agricultural fields. The preferred alternative also crosses the floodplain of Little Catoctin Creek northeast of James Street. The floodplain in this area includes forest and agricultural fields.

3.6.3 Potential Effects

The preferred alternative will occur within regulated floodplains. Longitudinal floodplain encroachments and transverse floodplain crossings are anticipated. During later design stages detailed hydrologic and hydraulic studies will be undertaken to confirm the floodplain impacts.

4.0 Conclusion

This memo evaluates the existing condition of natural resources potentially impacted by the preferred alternative of the proposed M/M trail. Detailed field surveys and additional desktop analysis are necessary to better clarify the extent of these natural resources within the study area and to define the potential impacts.



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Memorandum Middletown to Myersville Trail – Environmental Effects

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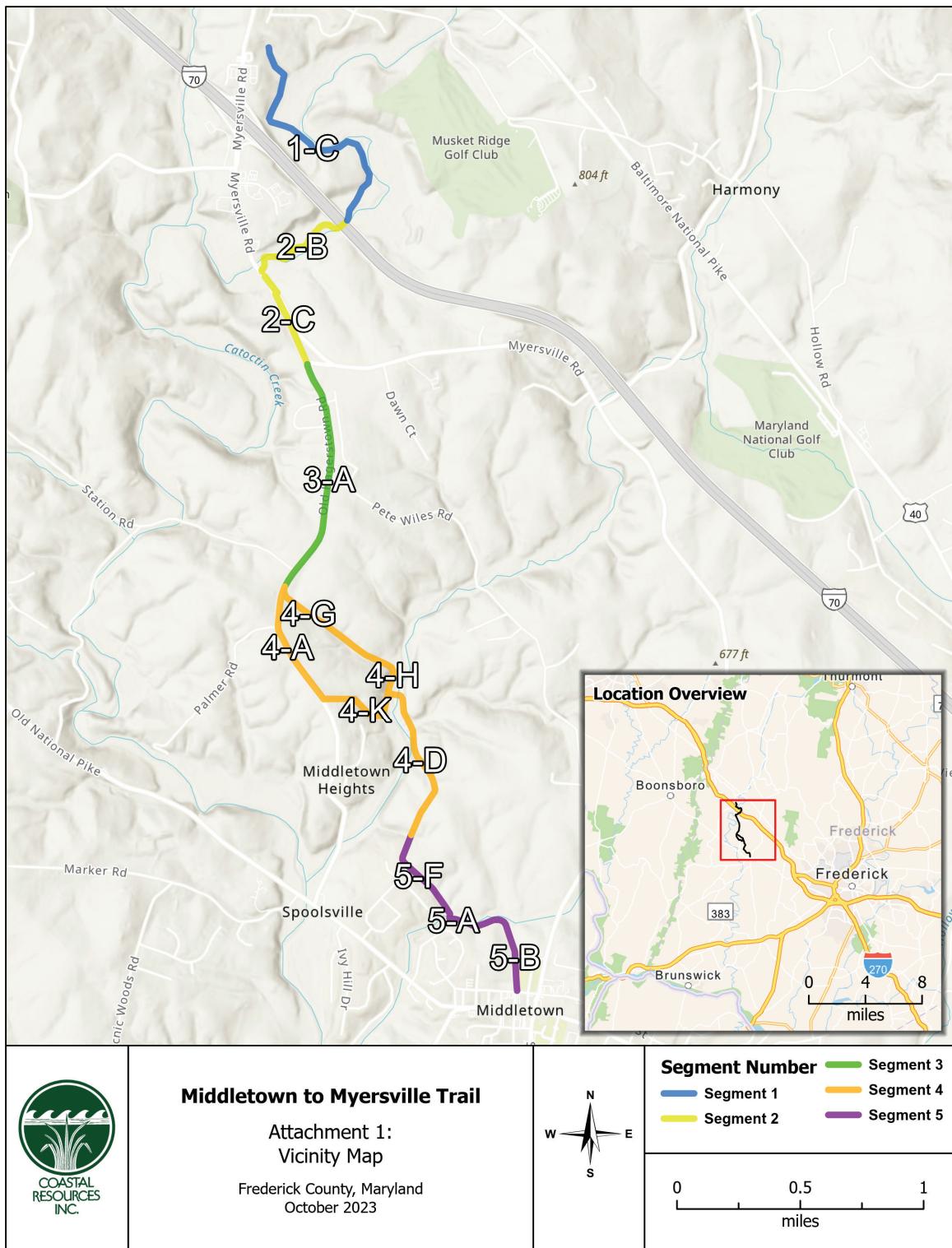
Memorandum Middletown to Myersville Trail – Environmental Effects

ATTACHMENT 1: VICINITY MAP



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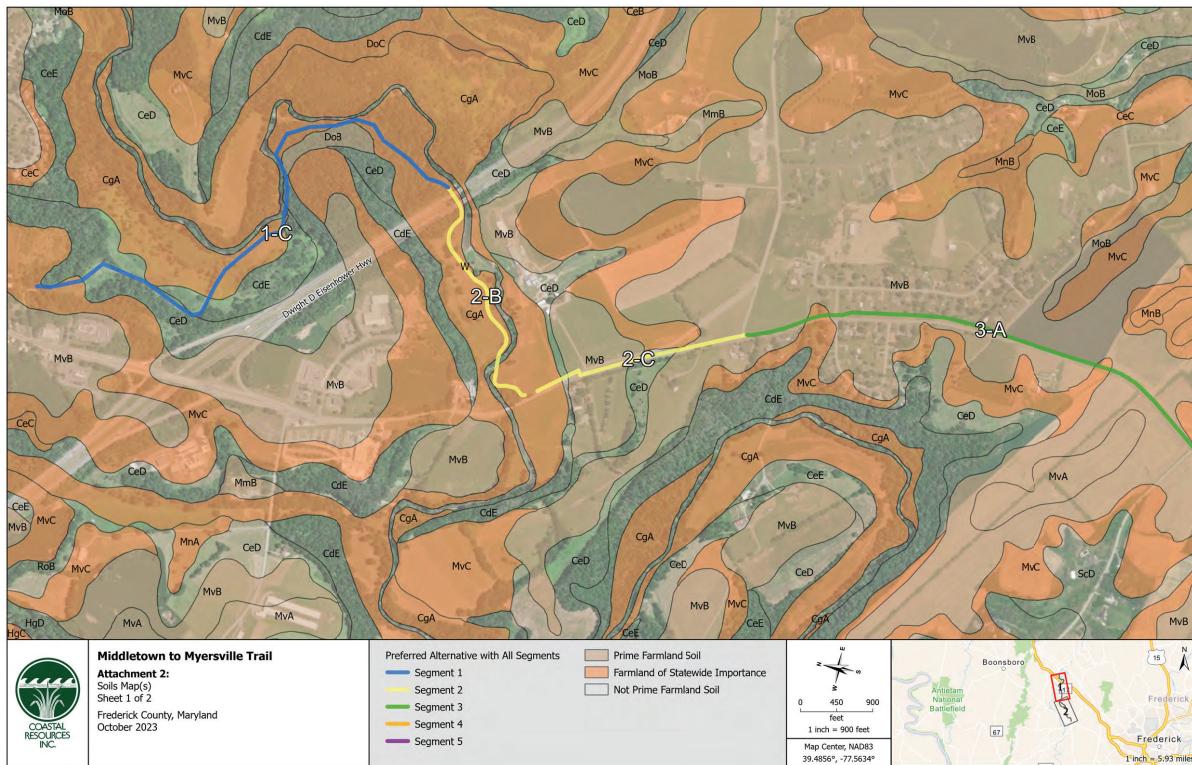
ATTACHMENT 2: SOILS MAP



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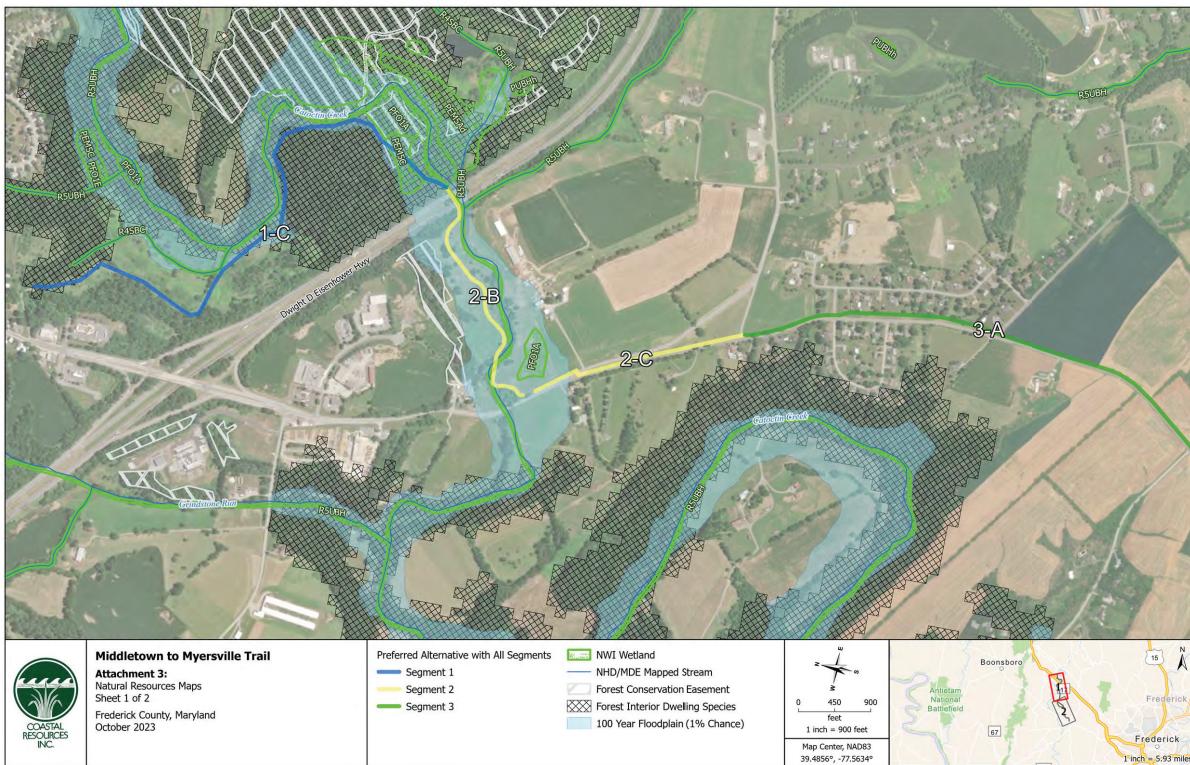
ATTACHMENT 3: NATURAL RESOURCES MAP



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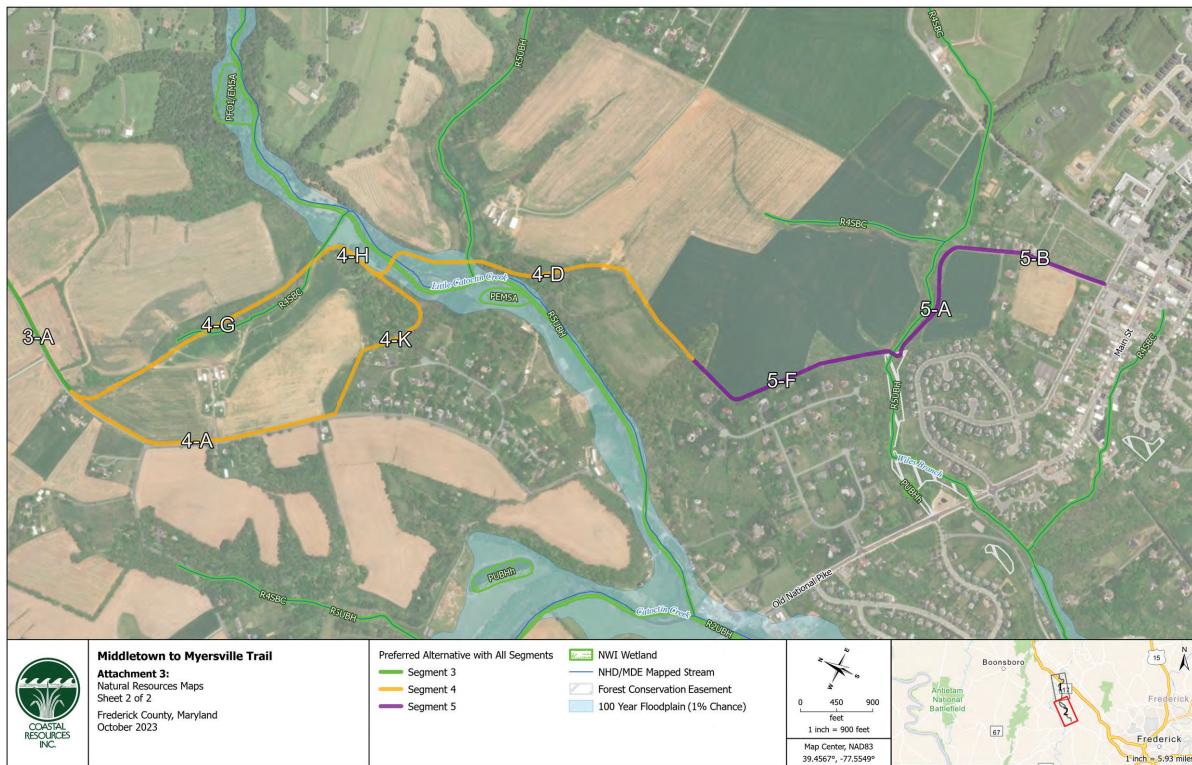
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ATTACHMENT 4: USFWS IPaC



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United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
Phone: (410) 573-4599 Fax: (410) 266-9127



In Reply Refer To:

September 27, 2023

Project Code: 2023-0133820

Project Name: Myersville to Middletown

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

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evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf>

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see <https://www.fws.gov/program/migratory-bird-permit/what-we-do>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see <https://www.fws.gov/library/collections/threats-birds>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/partner/council-conservation-migratory-birds>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

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Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Wetlands

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
(410) 573-4599

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PROJECT SUMMARY

Project Code: 2023-0133820

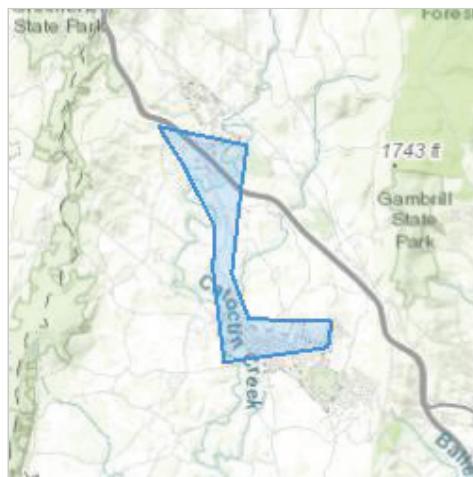
Project Name: Myersville to Middletown

Project Type: New Constr - Above Ground

Project Description: Trail construction.

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@39.47085364999995,-77.56226968574333,14z>



Counties: Frederick County, Maryland

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ENDANGERED SPECIES ACT SPECIES

There is a total of 4 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Indiana Bat <i>Myotis sodalis</i>	Endangered
Northern Long-eared Bat <i>Myotis septentrionalis</i>	Endangered

Indiana Bat *Myotis sodalis*
There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
This species only needs to be considered under the following conditions:

- Consultation in this area is only required for wind power projects.

Species profile: <https://ecos.fws.gov/ecp/species/5949>

Northern Long-eared Bat *Myotis septentrionalis*
No critical habitat has been designated for this species.
Species profile: <https://ecos.fws.gov/ecp/species/9045>

CLAMS

NAME	STATUS
Green Floater <i>Lasmigona subviridis</i>	Proposed Threatened

Green Floater *Lasmigona subviridis*
There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat.
Species profile: <https://ecos.fws.gov/ecp/species/7541>

INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i>	Candidate

Monarch Butterfly *Danaus plexippus*
No critical habitat has been designated for this species.
Species profile: <https://ecos.fws.gov/ecp/species/9743>

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CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

WETLANDS

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

FRESHWATER POND

- [PUBHh](#)

RIVERINE

- [R4SBC](#)
- [R2UBH](#)
- [R5UBH](#)

FRESHWATER EMERGENT WETLAND

- [PEM5C](#)
- [PEM5Ad](#)
- [PEM5A](#)

FRESHWATER FORESTED/SHRUB WETLAND

- [PFO1A](#)
- [PSS1A](#)
- [PFO1E](#)

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IPAC USER CONTACT INFORMATION

Agency: Coastal Resources Inc.
Name: Emily Murrell
Address: 25 Old Solomons Island Road
City: Annapolis
State: MD
Zip: 21401
Email: emilym@cri.biz
Phone: 4109569000

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Appendix 7: Cost Estimate

SHARED-USE PATH CONCEPT COST ESTIMATER: Middletown to Myersville						
Project: Segment:			Computed By: Date: 10/13/2023	AP	Checked By: Date:	Checked By: Date:
Length (Miles)	5.4					
Width (feet)	10					
Total Linear Ft.		28512 LF				
Total Square Ft.		285120 SF				
CONSTRUCTION ACTIVITIES			COST PER	UNIT	COST	COST
Top Soil (2" Depth)	38016		\$16 SY		\$608,256	\$608,256
Soil Stabilization	38016		\$6 SY		\$228,096	\$228,096
Asphalt Pavement	285120		\$8 SF		\$2,280,960	\$2,280,960
ADA Ramps	14.00		\$3,500 EA		\$49,000	\$49,000
Concrete Driveway Apron	2,727.00		\$100 SF		\$272,700	\$272,700
Concrete Curb and Gutter	75.00		\$55 LF		\$4,125	\$4,125
Lane Striping	75.00		\$2 LF		\$150	\$150
Crosswalk	185.00		\$30 LF		\$5,550	\$5,550
Bollard (Precast Concrete)	0.00		\$750 EA		\$0	\$0
Refuge Island	0.00		\$50 LF		\$0	\$0
Trail Gateway/Wayside Areas	2.00		\$ 15,000 EA		\$30,000	\$30,000
Bench	0.00		\$2,200 EA		\$0	\$0
Fence	333.00		\$55 LF		\$18,315	\$18,315
Gate	1.00		\$4,000 EA		\$4,000	\$4,000
Lighting	7.00		\$4,000 EA		\$28,000	\$28,000
					\$3,529,152	\$3,529,152
						Subtotal 1
STRUCTURES			COST	COST	NOTES:	
Bridge	5		\$ 120,000 LS		\$600,000	Engineers Concept Estimate
Boardwalk	0		\$ - LS		\$500,000	under I-70
Retaining Wall	0		\$ 25 SF		\$0	Precast modular block up to 3' Height
					\$600,000	\$1,100,000
						Subtotal 2
CONTINGENT CATEGORIES			COST	COST	NOTES:	
Mobilization / MOT	5% (5% to 20% depending on complexity)		\$206,458	\$206,458	Percent of Subtotal 1 & 2	
Erosion / Sediment Control	5% (5% to 10% depending on complexity)		\$206,458	\$206,458	Percent of Subtotal 1 & 2	
Drainage and SWM	30% (10% to 30% depending on complexity)		\$1,238,746	\$825,830	reduced to 20%	
Traffic Markings and Signage	1% (1% to 5% depending on complexity)		\$41,292	\$41,292	Percent of Subtotal 1 & 2	
Utilities and Conduit	1% (1% to 10% depending on complexity)		\$41,292	\$41,292	Percent of Subtotal 1 & 2	
Landscape Enhancements	5% (2% to 15% depending on complexity)		\$206,458	\$412,915	increased to 10%	
Environmental Mitigation	10% (1% to 15% depending on complexity)		\$412,915	\$619,373	increased to 15%	
					\$2,353,617	\$2,353,617
						Subtotal 3
CONSTRUCTION COST			COST	COST	NOTES:	
Neat Construction Cost			\$6,482,769	\$6,482,769	Sum of Subtotals 1, 2 and 3	
Construction Contingency	50%		\$3,241,384	\$3,241,384		
Escalation	19.4% (Add 3% per year from 2023 to 2029)		\$1,886,486	\$1,886,486		
					\$11,610,639	\$11,610,639
						Subtotal 4
DESIGN, PERMITTING & CONSTRUCTION MANAGEMENT			COST	COST	NOTES:	
Preliminary Design	7.5% (5% to 10% depending on complexity)		\$870,798	\$580,532	reduced to 5%	
Environmental Permitting	7.5% (5% to 10% depending on complexity)		\$870,798	\$580,532	reduced to 5%	
Final Design	12.5% (10% to 15% depending on complexity)		\$1,451,330	\$1,106,614	reduced to 10%	
Construction Management	12.5% (10% to 15% depending on complexity)		\$1,451,330	\$1,106,614	reduced to 10%	
					\$4,644,255	\$3,374,292
						Subtotal 5
RIGHT OF WAY			COST	COST	NOTES:	
Residential	0.49787 AC	21687 SF	EASMT	\$20.00 SF	\$433,740	*fee simple (multiply by half if easement)
Commercial	1.21933 AC	53114 SF	EASMT	\$19.00 SF	\$1,009,166	
Agricultural	10.17631 AC	443280 SF	EASMT	\$2.00 SF	\$886,560	
					\$2,329,466	
						Subtotal 6
TOTAL SEGMENT COST			COST	COST		
			\$24,467,129	\$20,867,699	Total Cost	
					\$17,737,544.32	
					\$23,997,854.08	