



ERIE ZOO TRAIL

FEASIBILITY STUDY AND ALTERNATIVE ANALYSIS

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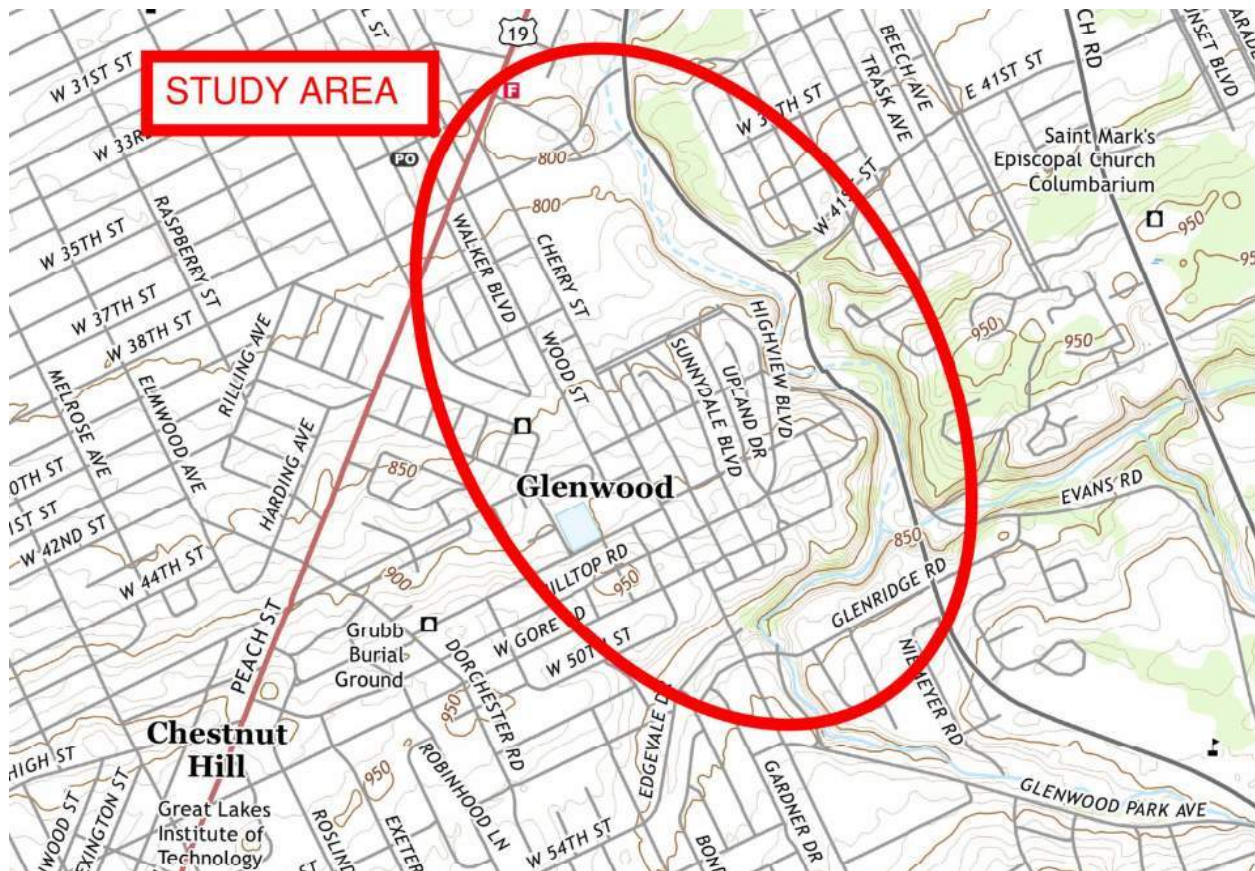
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PROJECT BACKGROUND AND PURPOSE

The Erie Zoo (Zoo) developed a plan titled “Potential Route for Walking/Running Trail” to outline its efforts to create a formal pedestrian trail loop near the Zoo and surrounding neighborhoods. The study area is shown on **Figure 1** below. The Zoo proposed the use of existing sidewalks and paths to create a 2-mile loop trail.

Utilizing the Zoo’s “Potential Route for Walking/Running Trail” study and plan as the framework of a potential multimodal trail, Pennsylvania Department of Transportation Bureau of Public Transportation (BPT) initiated a feasibility study and alternatives analysis to explore the potential of improvements to the multimodal and transit connections (EMTA Bus Routes 1, 3, 15, and 17 – see **Figure 4** on page 5) around the Zoo and surrounding neighborhoods and community assets including the YMCA Glenwood Park Branch, Flo Fabrizio Ice Center, J.C. Martin Golf Course, and Glenwood Park (see **Figure 2** on next page for locations).

The study area can generally be described as beginning at the intersection of West 38th Street (SR 4016) and Cherry Street and being bound by Cherry Street on the west; West Grandview Boulevard and Glen Drive on the south; Glenwood Park Avenue (SR 505) on the east; and West 38th Street (SR 4016) on the north.



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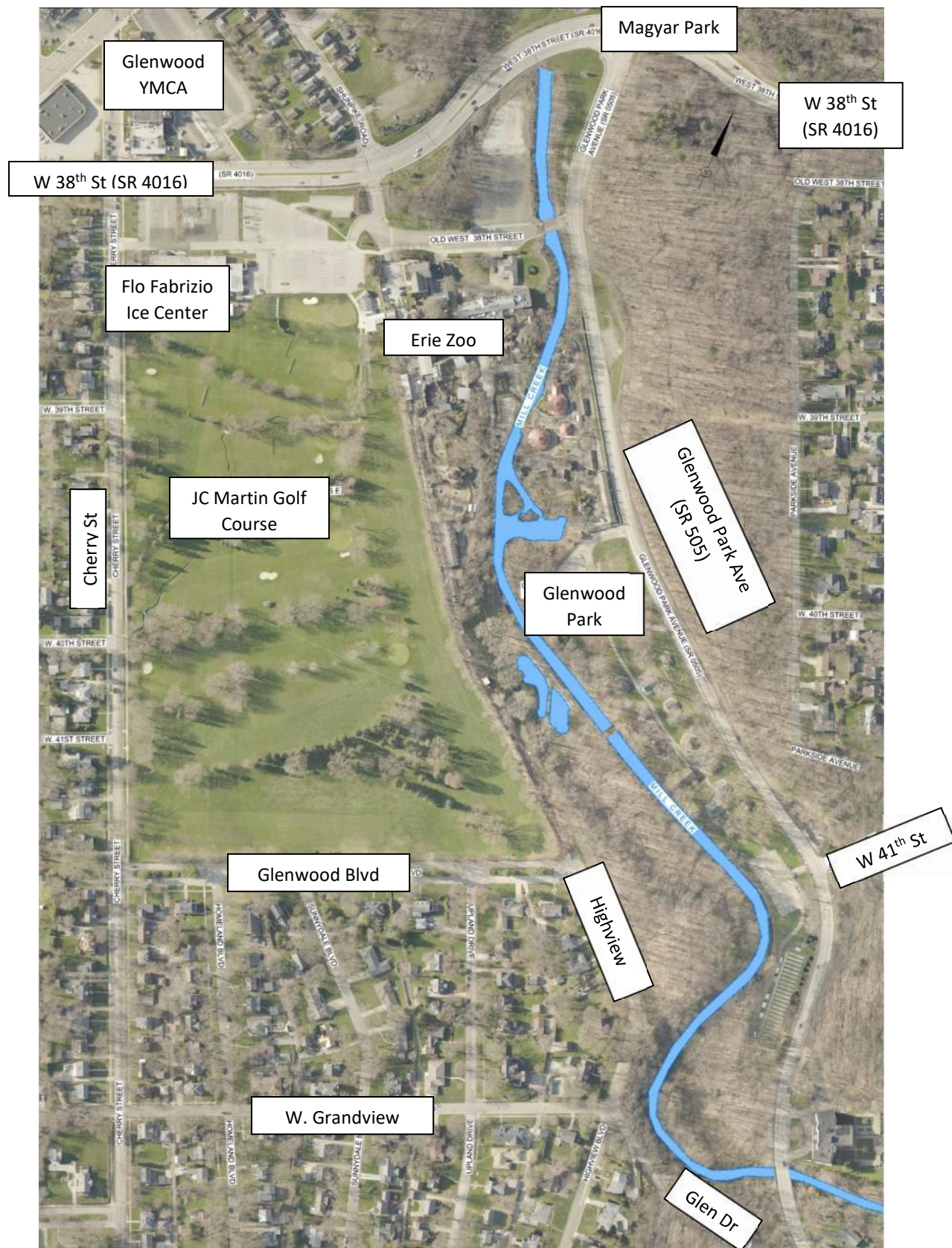


Figure 2 - Study area and facilities.

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Additional alternatives were developed on other streets and park areas during the study, including Glenwood Boulevard, Highview Boulevard, and a larger alternative loop comprised of Cherry Street south of West Grandview and Gore Road, Bladen Road/Glenridge Road, the old Glenwood Park Avenue right-of-way, and Glenwood Park Avenue (SR 505).

A copy of the alternative sketch plans and typical sections are in Appendix A.

HISTORY AND EXISTING PLANS

Recent studies and planning documents in the City of Erie and Erie County have discussed the need for promoting alternative modes of transportation and better connections to community assets and neighborhoods.

In March 2016, CZB Consulting prepared the **Erie Refocused: Comprehensive Plan and Decision-Making Guide** for the City of Erie which acknowledged the needs to maintain sidewalks and bicycle infrastructure and create special amenities and facilities for pedestrians and bicycles as *“essential to attracting and retaining”* residents in the West Bayfront but adding that the West Bayfront could become a *“a city-wide model for pedestrian and bicycle safety and convenience.”*

Erie City Council adopted the **Active Erie Transportation Plan** (prepared by Whitman, Requardt & Associates, LLP) by resolution on February 3, 2021. This is *“a plan for people who walk and bike in the Erie, Pennsylvania.”* This plan *“focuses on building a network of pedestrian and bicycle facilities throughout the City of Erie that are safe for all users ...”* The plan refers to the Erie County 2042 Long Range Transportation Plan from 2017, which discussed the creation of an Erie Loop Bikeway, that would include an east-west bikeway on 38th Street (SR 4016) between Greengarden Boulevard and the Bayfront Parkway (SR 4034).

The Erie Metropolitan Planning Organization (Erie MPO) updated **2050 Long Range Transportation Plan** (March 2022) noted that *“Active transportation considers multiple modes of transportation, such as walking, biking, ... Various mobility options benefit residents and visitors. Three Erie County municipalities— City of Corry, City of Erie and Union City Borough—created active transportation plans in 2021 to identify the needs of non-motorized travel. Getting around by bicycle continues to get easier with the growing number of bicycle routes, trails, and paths throughout the county.”*

Residents also value safety when walking or biking, as highlighted by a comment from the Erie MPO 2050 “Wikimap” in which one person commented specifically about a road in the study area: *“Pedestrians walking from Glenwood neighborhood and South to Glenwood Park have to walk in unprotected shoulder on 505. Very dangerous, high speed section with curves. A walking path could be added for the segment of 505 from Glen Dr. or Glenridge to the Glenwood Park walking path to ensure safety of the pedestrians who are trying to walk to the park.”*

The creation of accessible walking and biking facilities is a well-documented goal that has been discussed and recommended in recent years in multiple planning documents and aligns well with the goals of this study to look at the feasibility of a variety of trail alternatives near the Erie Zoo and its surrounding neighborhoods.

PLANNED MULTIMODAL USES

As noted, the City of Erie adopted the **Active Erie Transportation Plan** in 2021. The plan includes bikeways along five east-west corridors in Erie. One of the planned bike routes is along 38th Street (SR 4016), which defines the northern boundary of this trail study area and is shown in **Figure 3** below.

“Destinations along the 38th Street Bikeway include Erie Heights Park, Grover Cleveland Elementary School, Liberty Center Shopping Mall, Glenwood Park, Erie VA Medical Center, Jefferson Elementary School, Mercyhurst University, and JoAnna Connell Elementary School.”

East/West Bikeways

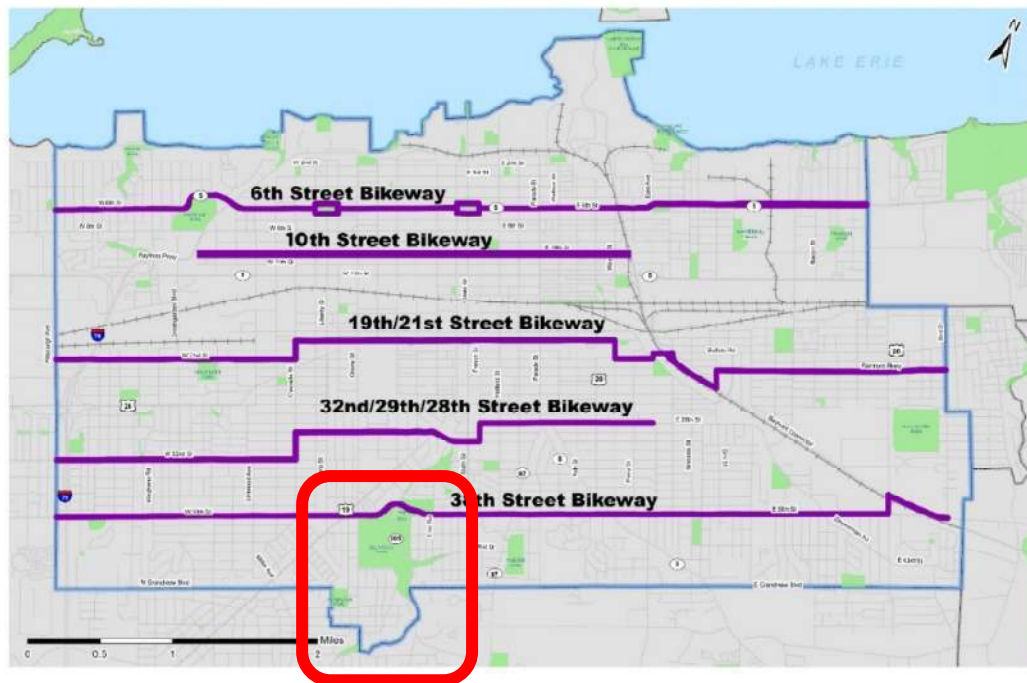


Figure 3 – Planned bikeways from "Active Erie Transportation Plan"

The typical roadway section of 38th Street (SR 4016) includes two travel lanes in each direction with additional turning lanes and traffic signals at Cherry Street, Shunpike Road, and Glenwood Park Avenue (SR 505). Due to 38th Street's high traffic volumes, significant number of signalized intersections, and complexity of the route, the Plan notes that *"All high-stress street crossings are currently signalized. This is a complex and busy corridor, so potential recommendations shown in the table below may serve as a starting point for consideration."*

The Plan suggests *"potential recommendations include road diet or shared use pathway in the Study Area."*

The **Active Erie Transportation Plan** also includes several north-south bikeway corridors, although none are in the study area. The closest planned north-south bikeways are Cascade Street, 0.4-miles to the west, and French Street, 0.6 miles to the east. If completed, the north-south corridors would be accessible via connection to a completed 38th Street bikeway through the study area.

ENVIRONMENTAL AND CULTURAL RESOURCES IN THE STUDY AREA

A copy of the Environmental and Cultural Resources memorandum is available in Appendix B.

Environmental Resources

No wetlands are present in the vicinity of the study area according to The US Fish and Wildlife Service National Wetlands Inventory NWI Mapper website. A formal field view of an alternative selected for further development is suggested for a review of potential wetlands impacts during future preliminary design efforts.

Mill Creek flows along the eastern portion of the study area between Glenwood Park Avenue (SR 505) and the Erie Zoo, the J.C. Martin Golf Course, and the Glenwood neighborhood. FEMA Zone A, which is defined as the “1% Annual Chance Flood Hazard” zone is located immediately adjacent to Mill Creek and includes areas east of Mill Creek in both the Erie Zoo and Glenwood Park. Generally, the proposed trail alignment west of Mill Creek lies in Zone X, which FEMA defines as an “Area of Minimal Flood Hazard.” If bridges are to be constructed, rehabilitated, or replaced as part of a future alternative, appropriate permits would be obtained during preliminary design.

Mill Creek is designated by PA Code Chapter 93 as Water Uses Protected Warm Water Fishes and Migratory Fish. According to eMapPA, Mill Creek is an impaired stream and the sources of impairment include “urban runoff/storm sewers – siltation” and “source unknown – pathogens.”

The Pennsylvania Conservation Explorer and PNDI receipt indicate that there are “No Known Impact” and “No Further Review Required” for threatened and endangered species within the study area.

Public Facilities and Parks

The study area includes several parks and other public facilities.

The Erie Zoo, J.C. Martin Golf Course, and Flo Fabrizio Ice Center are located on the south side of West 38th Street (SR 4016) between Cherry Street and Glenwood Park Avenue (SR 505).

Other parks include Glenwood Park and Glenwood Hills Nature Trail, both located on Glenwood Park Avenue (SR 505). Glenwood Park is located on the west side of Glenwood Park Avenue (SR 505) between the roadway and Mill Creek and includes picnic pavilions, playgrounds, and horseshoe pits for recreation. Glenwood Hills Nature Trail is located on the east side of Glenwood Park Avenue (SR 505) and includes walking trails on the wooded hillside. The parks are owned by the City of Erie.

Three (3) park and recreation areas owned by the City of Erie that meet the Section 4(f) applicability criteria set forth in 23 CFR 774.11 are located with the project area, including Glenwood Park, J.C. Martin Golf Course, and the Glenwood Hills Nature Trail, located on the east side of Glenwood Park Avenue (SR 505). Additional coordination with the City as the official with jurisdiction will be needed to definitively delineate the resources’ boundaries.

Land and Water Conservation Funds (LWCF) were provided to the City of Erie for the Erie Zoo in 1981 for zoo expansion. (See map below.) Additional coordination with the Pennsylvania Department of Conservation and Natural Resources (DCNR), the LWCF State Liaison, would be needed to receive the

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official Section 6(f) boundary. Because of the scope of this project as a trail project to benefit the zoo with trails for visitors, no Section 6(f) conversion is anticipated.

Magyar Park is located at the northwest corner of West 38th Street (SR 4016) and Glenwood Park Avenue (SR 505). The park is a private monument dedicated to the 1956 Hungarian Revolution and is open to the public.

Cultural Resources

A review of Pennsylvania's Historic & Archaeological Resource Exchange (PA-SHARE) indicates that there are no National Register of Historic Places (NRHP) listed or eligible resources in the project area.

A review of PA-SHARE displays 22 archaeological surveys have been conducted within a 3.0-mile radius of the project area, with only two surveys having been conducted within a 2.0-mile radius. No archaeological surveys have been conducted within or adjacent to the project area. There are 30 previously recorded archaeological sites within a 3.0-mile radius of the project APE.

Traffic Volumes and Considerations

Two state routes within the study area carry significant traffic volumes.

West 38th Street (SR 4016) is classified as a principal arterial and has an AADT of approximately 16,000 vehicles per day. The posted speed limit is 25 mph.

Glenwood Park Avenue (SR 505) is classified as a minor arterial and has an AADT of approximately 9,100 vehicles per day. The posted speed limit is 35 mph.

The intersections of West 38th Street (SR 4016) at Glenwood Park Avenue (SR 505) and West 38th Street (SR 4016) at Cherry Street each have multiple recorded crashes in the past 5 years. Additionally, there have been crashes on West 38th Street (SR 4016) between Cherry Street and Glenwood Park Avenue (SR 505), including several at the YMCA driveway and at Shunpike Road, a signalized intersection providing access to the Erie Zoo.

Glenwood Park Avenue (SR 505) has a crash history at West 41st Street, an unsignalized intersection located at a horizontal curve.

Figure 5 on the next page shows the approximate location of crashes from the most recent 5-year crash history on the Pennsylvania Crash Information Tool (PCIT).

Speed studies and safety audits should be conducted on Glenwood Park Avenue (SR 505) and West 38th Street (SR 4016) when considering alternative routes during preliminary engineering.

According to the PennDOT One Map (as of October 2023), there are Transportation Improvement Program (TIP) projects in the areas of Glenwood Park Avenue (SR 505) or West 38th Street (SR 4016).

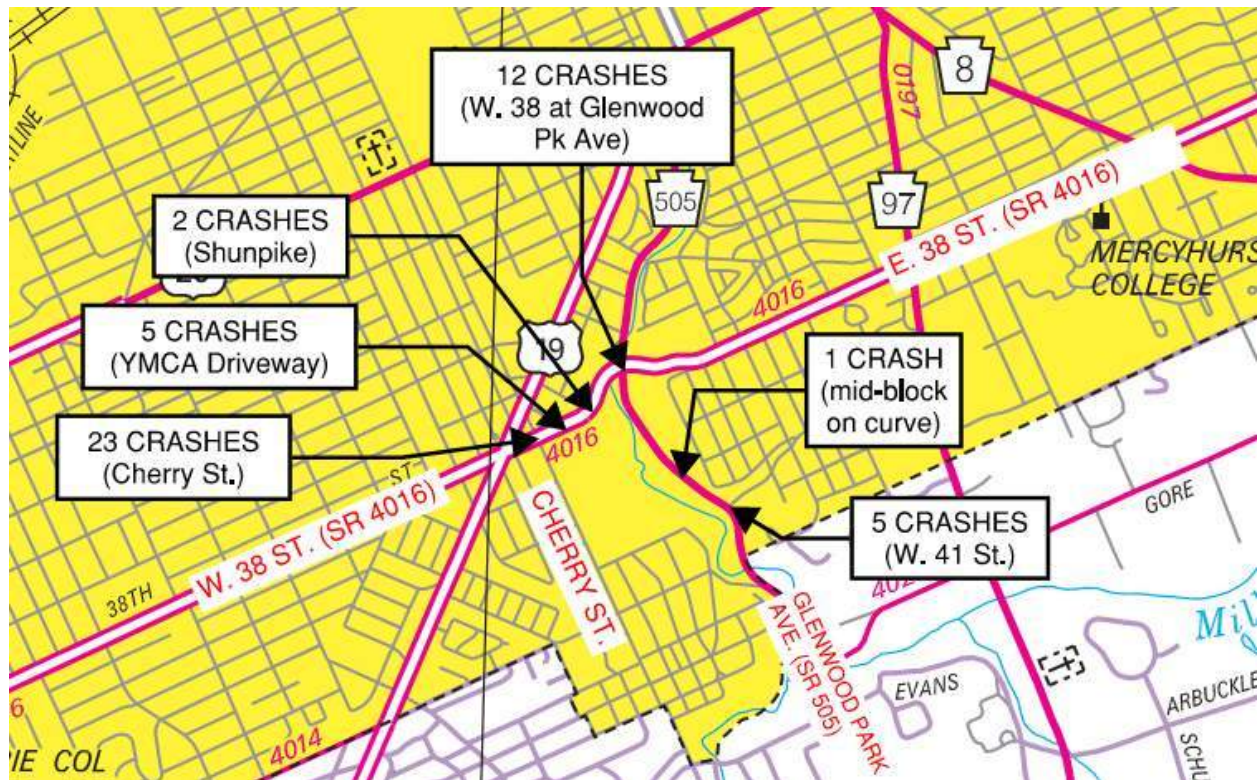


Figure 5 - Crash History Schematic adapted from PCIT data over most recent 5-year period.

Trail Design Guidelines and Criteria

Trail design criteria varies depending on the intended users, anticipated volumes, and direction of travel.

PennDOT Publication 13, DM Part 2-Contextual Roadway Design (September 2023 Edition, Change No. 4) recommends the following criteria when developing a trail:

- Shared-use trail width of 10-feet, with a width of 12-feet recommended if heavy use is anticipated (Section 14.6.1 – General Design Practices),
- 8-feet is the minimum allowed for a two-way shared-use path, and only allowed if low-volume bicycle use with occasional pedestrian use (Section 14.6.1 – General Design Practices),
- Provide 2-ft. lateral/shoulder clearance on both sides,
- Provide 3-ft. lateral/shoulder clearance for areas with sign installation,
- Overhead clearance should be at least 8-feet and 10-feet is recommended,
- Local Neighborhood Accessways width of 10-feet to 14-feet to accommodate emergency vehicles but allows for less than 8-feet if necessary to avoid mature trees Section 14.6.3.

PennDOT Publication 13, DM-2 Highway Design (February 2023 Edition-Change No. 9) provides design guidelines for a pedestrian access route (PAR) in Chapter 6.5. Design guidelines include longitudinal slope 5.0% maximum (or match adjacent roadway slope); cross slope 2.0% maximum (or match street grade at crossings); and an unobstructed width 48-inch minimum.

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The US Access Board Guide to the ADA Accessibility Standards public right-of-way accessibility guidelines (PROWAG) requires sidewalks or access paths to have either a 60-inch minimum width or a minimum 48-inch width with passing areas of 60-inch by 60-inch every 200-feet.

PROWAG guidance for longitudinal slopes states that where a pedestrian access route is contained within a highway right-of-way, the grade of the pedestrian access route shall not exceed 1:20 (5.0%). An exception applies where the grade established for the adjacent street exceeds 1:20 (5.0%), then the grade of the pedestrian access route shall not exceed the grade established for the adjacent street.

For Alternative 1 and 3A on Cherry Street and Alternative 4 on Glen Drive (see Appendix A for Alternative Sketch Plans), the roadway slope exceeds 5% in some areas, so the pedestrian access route could match the adjacent roadway slope and meet ADA accessibility requirements. Alternatively, a series of ramps and landings may be used to provide an accessible path with a maximum ramp slope of up to 1:12 (8.3%). The ramp requires level landings for a rise of 30-inches. Level landings shall be 60-inches by 60-inches with maximum spacing of approximately 30-feet.

For areas not adjacent to a roadway and exceeding 5%, such as Alternative 18 (see Appendix A), the boardwalk down the wooded, steep slope, an ADA accessible route with maximum slope of 5% would need to be constructed, or a route could utilize maximum ramp slope of up to 1:12 (8.3%) if level landings are installed for every vertical rise of 30-inches. Level landings must be 60-inches by 60-inches with maximum spacing of approximately 30-feet. Level landings should also be provided at each change of direction at switchback locations. For Alternative 18, the total rise is approximately 60-feet, which would require between 800 and 1,200-feet, depending on the proposed slope and landings required, to meet ADA accessibility requirements.

SUMMARY OF STAKEHOLDER OUTREACH MEETINGS

As included in the scope of this study, seven stakeholder meetings were held to share study alternatives and gather input and ideas from a variety of stakeholders, including Erie Zoo staff, PennDOT District 1, Mayor Schember and the City of Erie, Erie City Council, Millcreek Township, local public officials, EMTA, YMCA Glenwood Park Branch, Visit Erie, and neighborhood and community groups.

March 21, 2023 – Field view with Erie Zoo Staff and City of Erie Engineer

Urban Engineers, Inc. staff met with Scott Mitchell, Development Director, and Roo Kojancie, Chief Operations Officer, of the Erie Zoo and Jason Sayers, P.E., the City of Erie Engineer, to walk the route described in the Zoo's planning document titled "Potential Route for Walking/Running Trail."

During this field view, additional alternatives to the route described in the Zoo planning document were discussed, including a trail through the woods near Highview and a trail down the slope east of Highview and extending to an existing bridge over Mill Creek and accessing Glenwood Park.

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Photo 1 – Unused, existing bridge over Mill Creek connecting to Glenwood Park.

Mr. Mitchell shared information about the Zoo's Draft Master Planning efforts, which include a new giraffe exhibit located at the present site of the Zoo's parking lot across the street from the main entrance and west of the old 38th Street bridge and discuss the use of the pedestrian over Mill Creek as an alternative to connect Zoo patrons.

A copy of the meeting minutes is in Appendix C.

June 15, 2023 - Virtual Meeting with PennDOT District 1

Urban Engineers, Inc. and McCormick Taylor staff met with PennDOT District 1 representatives, Saxon Daugherty (Safety Press Officer), Jill Harry (Community Relations Coordinator), Autumn Kelley (Environmental Staff), Courtney Lyle (Planning and Programming Manager), Tom McClelland (ADE Design), Ken Sanoski (Bridge Engineer), and Jim Shaut (Erie County Maintenance Manager). Urban provided an overview of the study area and alternative routes described in the Erie Zoo's document "Potential Route for Walking/Running Trail."

PennDOT staff noted the additional width requirements for a shared-use trail but suggested that bicycle use not be ruled out for the study. A pedestrian-only trail could be 6-feet wide (or less) but shared-use with bicycles would require 8- to 10-feet, depending on predicted volume of trail traffic.

PennDOT staff provided feedback on alternatives along Glenwood Park Avenue (SR 505), specifically use of the shoulder on the west side of the existing bridge over Mill Creek. They suggested investigating a separate pedestrian bridge location on the downstream side of the road bridge because of safety concerns related to the narrow shoulder of the bridge, vehicle speeds on the road, and location relative to the roadway horizontal geometry.

There was additional discussion regarding the potential installation of a mid-block crossing at West 41st Street and Glenwood Park Avenue (SR 505). This location is near the middle of City-owned Glenwood Park and a marked or signalized mid-block crossing would allow safer crossing of Glenwood Park Avenue (SR 505) to access the park.

Finally, PennDOT staff (Erie County Maintenance Direct Jim Shaut) suggested investigating the use of the Old Glenwood Park Avenue alignment, south of the study area. The old roadway alignment remains City of Erie right-of-way and could provide an alternative route for connecting the Glenwood neighborhood to Glenwood Park Avenue (SR 505) and Glenwood Park.

A copy of the meeting minutes is in Appendix C.

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June 22, 2023 – Public Officials Meeting

Urban Engineers, Inc. and McCormick Taylor staff met with local public officials including Emily Aloiz from the Erie County MPO, Jason Sayers the City of Erie Engineer, and Emily Walsh legislative aide to Representative Bob Merski. The meeting was hosted by the Erie Zoo. Scott Mitchell from the Erie Zoo also attended the meeting and provided a project overview and vision related to the Zoo's Master Plan.

Emily Aloiz stated that Erie County has recently completed the Corry to Erie plan, which is part of a larger Erie to Pittsburgh network of trails. The Corry to Erie plan included future connections to Grandview Boulevard, Mercyhurst University, 38th Street (SR 4016), and French Street to connect to downtown Erie. The Zoo trail alternatives could be connected to this network of bike trails. Emily also noted that a recent study conducted by WRA recommended a road diet for 38th Street (SR 4016) in this project study area. The road diet would allow space for a separate bike lane on 38th Street (SR 4016).

Jason Sayers provided information about the old 38th Street bridge on the east side of the Zoo. The bridge is owned by the City of Erie and was closed to vehicles in 2017. It is inspected every 2 years and remains open to pedestrians. The group discussed bridge replacement options for pedestrian use with limited vehicle use for the Zoo to access future development for animal feed deliveries on the west side of Mill Creek.

Emily Walsh shared that Rep. Merski is interested in the possibility of using the old Glenwood Park Avenue roadway right-of-way as an alternative for this trail study. This alternative could also provide a connection to Bladen/Edgevale Park located in Millcreek Township. Urban noted that PennDOT District 1 staff had suggested the investigation of the same potential trail route connection during an earlier meeting. Emily also shared Rep. Merski's concern about high vehicle speeds on Cherry Street. She discussed the use of removable speed bumps, similar to what is used at the entrance to Presque Isle State Park.

A copy of the meeting minutes is in Appendix C.

June 26, 2023 – Community Stakeholder Meeting

Urban Engineers, Inc. and McCormick Taylor staff met with community stakeholders, including Erie Zoo staff, EMTA representatives, VisitErie, YMCA Glenwood Branch, and neighbors from Glenwood Hills.

The types of potential trail users to be accommodated were discussed with the group. The general preference was a pedestrian-only trail. Some neighbors stated that the hills and steep slopes on some of the alternatives being considered in the study area would not be good for bicycle use due to the difficulty of riding up the hills or the speed difference between bicycles and pedestrians on other sections.

If bicycle use was incorporated into the trail, stakeholders suggested avoiding West 38th Street (SR 4016) unless a separate, protected bike lane could be provided.

Vehicle speeds on roadways in the study area were a concern for many of the stakeholders, especially on Cherry Street and Glenwood Park Avenue (SR 505). It was noted that the posted speed limit on Glenwood Park Avenue (SR 505) is 35 mph, but vehicles regularly exceed the limit. It was also noted that Millcreek Township police were increasing enforcement of speed limits south of the study area. The high speeds on Glenwood Park Avenue (SR 505) made many stakeholders concerned about a trail alternative

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that would use the shoulder of Glenwood Park Avenue (SR 505). Urban noted that PennDOT suggested an alternative alignment away from the road and use of a separate pedestrian bridge over Mill Creek to provide separation between trail users and roadway vehicles.

Speeding concerns were also raised at the intersection of Glenwood Park Avenue (SR 505) and West 41st Street. The addition of a safer, mid-block crossing with a crosswalk and flashing beacon signal were suggested.

Stakeholders discussed trail alternatives on Glenwood Boulevard and generally preferred the use of the westbound lane of the boulevard over a trail upgrading and connecting existing sidewalk on the south side of the road. They were concerned that homeowners would not want trail traffic in front of their homes.

Stakeholders preferred the alternatives using the wooded area along Highview Boulevard and boardwalk or trail to connect to the existing bridge over Mill Creek and Glenwood Park. This would avoid Glen Drive and some of the horizontal curves on Glenwood Park Avenue (SR 505) on the roadway bridge (see photo below). If this alternative is selected, avoidance of tree removal or efforts to minimize tree removal was encouraged by the stakeholders.



Photo 2 - Looking north along shoulder of Glenwood Park Avenue (SR 505) and bridge over Mill Creek, north of Glen Drive.

The use of minimal signage and sufficient trash cans were also suggested by stakeholders.

EMTA noted that the bus routes on Cherry Street are among the most used in the system due to connections to upper Peach Street and the Millcreek Mall. EMTA was concerned with alternatives that would utilize street space for trail users because bus drivers already have struggles with traffic, speeds, and safely stopping to pick up riders in this area.

A copy of the meeting minutes is in Appendix C.

August 3, 2023 – Meeting with Mayor Schember and Staff

Urban Engineers, Inc. met with Mayor Joe Schember and staff members from various City departments, including Engineering, Planning, and Public Works.

Public Works Director Chuck Zysk shared information about the old Glenwood Park Avenue roadway and right-of-way. Mr. Zysk noted that the City would like to see this included in the study alternatives. The City-owned right-of-way which still has a paved bituminous cartway width of 23-feet.

Mr. Zysk preferred a trail design that could accommodate both bicyclists and pedestrians.

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In the Highview Boulevard to Glenwood Park area, City officials preferred alternative incorporating of a boardwalk trail with switchbacks and use of the existing bridge over Mill Creek to Glenwood Park. There was some concern about safety and security in this area, as it is secluded and isolated. The addition of lighting throughout the trail or emergency call boxes were discussed. Long term maintenance concerns were discussed for a boardwalk trail option.

The inclusion of a pedestrian bridge in the alternative to connect a trail from Glen Drive to Glenwood Park was discussed. The City staff noted they would be willing to accept the bridge and its maintenance if this alternative was selected and constructed.

Safety and speeding concerns at the intersection of Glenwood Park Avenue (SR 505) and West 41st Street were also raised. Urban noted that this was also a topic of discussion during the Community Stakeholders meeting. The City staff discussed options such as a flashing beacon and marked crosswalk for a mid-block crossing. Future upgrades and a roundabout at the intersection were also discussed.

Attendees: Mayor Joe Schember, Chief of Staff Renée Lamis, City Engineer Jason Sayers, Public Works Director Chuck Zysk, Assistant Public Works Director A.J. Antolik, ARP Program Manager Jackie Spry, Urban Engineers (Bill Petit and Andrew Holland).

August 24, 2023 – City of Erie: City Council Study Session

Urban Engineers, Inc. attended an Erie City Council study session to present information about the trail study.

City Council favored a trail designed to accommodate both pedestrian and bicycle users because, in their opinion, there is no effective way to restrict bicycles from using a trail. Signage was not seen as an effective deterrent. Designing a proposed trail route for bicycle usage would be safer, especially with increased use of e-bikes. Ms. Flores noted that additional winter maintenance may be required for year-round bicycle use.

Ms. Faulkner suggested installing emergency call boxes and lighting to provide additional safety and security measures along the trail, especially if wooded trail alternatives are chosen.

The trail alternative using the old Glenwood Park Avenue roadway and right-of-way was discussed. Mr. Zysk noted that there is approximately 23-feet of bituminous cartway along the old trail with some areas in poor condition and overgrown. Mr. Brzezinski did not favor use of the old trail. Ms. Faulkner suggested an out and back trail beginning at the intersection of Old Glenwood Park Avenue and Glenwood Park Avenue (SR 505) and utilizing the old roadway south to Bladen Road/Glenridge Road to avoid than using Cherry Street and Bladen Road to access the old roadway.

Council members asked that they be informed and invited to future meetings or public forums.

Attendees: Council Members Jasmine Flores, Ed Brzezinski, Susannah Faulkner, Maurice Tropp, and Mel Witherspoon, Public Works Director Chuck Zysk, City Traffic Engineer LeAnn Parmenter, Mayor Joe Schember (via video link), Urban Engineers (Bill Petit and Andrew Holland).

October 5, 2023 – Old Glenwood Park Avenue Trail Virtual Meeting

A virtual meeting was held to discuss the Old Glenwood Park Avenue trail alternative that stakeholders had expressed interest in during previous meetings. Urban Engineers, Inc. and McCormick Taylor staff

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met with City of Erie Mayor Joe Schember, Chief of Staff Renée Lamis, and City Engineer Jason Sayers; Zoo staff Roo Kojancie and Scott Mitchell; and Millcreek Township representatives: Planning and Development Director Matt Waldinger, Parks Director Ashley Marsteller, and Township Engineer Rob Rodemoyer.

Because the alternative's location abuts the border of the City of Erie and Millcreek Township, the meeting was an opportunity to get input from Millcreek regarding their nearby parks and recreation facilities and future development considerations that may provide future connections to trail alternatives in the study area. Millcreek's current comprehensive plan does not include a trail consideration in this area.

Millcreek staff expressed interest in the study and the trail alternatives and acknowledged the challenges posed by the existing conditions to connect to the old Glenwood Park Avenue right-of-way, including limited right-of-way's alignment, steep terrain, and lack of existing sidewalks. Millcreek does not have any current connections to this alternative but noted that they have looked at possible trails or connections from near J.S. Wilson Middle School and Chestnut Hill Elementary School, as there are young, active families in that area.

Mr. Waldinger noted that if a future project is developed from this study, he would discuss supporting future efforts, including multi-municipal grant applications, with the Millcreek Township Supervisors. He also asked to be invited to any future meetings and offered to help advertise the meeting on Millcreek Township's website or other social media outlets.

Public Forum

A final public forum will be scheduled for late October 2023 to share the alternatives and study information and gather input with stakeholders and interested public.

EXISTING CONDITIONS OF TRAIL ALTERNATIVE COMPONENT ROUTES

The following section describes the existing conditions of the study area. Beginning at the intersection of West 38th Street (SR 4016) and Cherry Street, the roadways, sidewalks, and adjacent study areas are described in a counterclockwise direction from the west side of the study area to south side, east side, and north side.

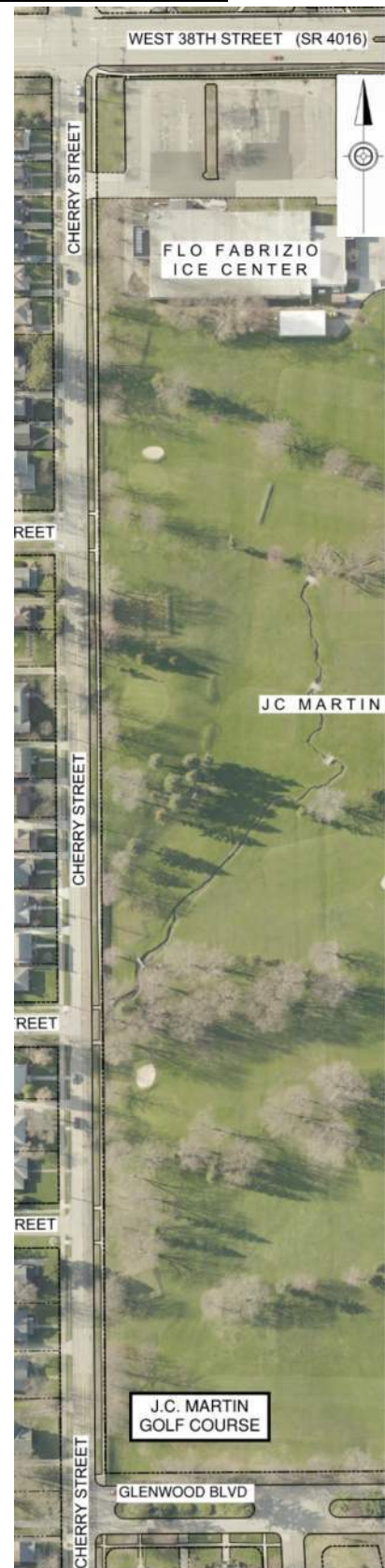
CHERRY STREET FROM WEST 38TH STREET (SR 4016) TO GLENWOOD BOULEVARD

On Cherry Street, the length of sidewalk from West 38th Street (SR 4016) to Glenwood Boulevard is approximately 1,900-feet. The average longitudinal slope is 3.9%, with some sections exceeding 5.0%. Some sections of the existing sidewalk are cracked or otherwise damaged and in need of repair or replacement.

The entrance driveway to the Flo Fabrizio Ice Center and J.C. Martin Golf Course is located approximately 150-feet south of West 38th Street (SR 4016). There is a concrete sidewalk on the east side of Cherry Street, from West 38th Street (SR 4016) to Glenwood Boulevard, adjacent to the golf course. The sidewalk is typically 5 to 6-feet wide and has intermittent trees on both sides.



Photo 3 - Looking south along typical sidewalk on east side of Cherry Street with J.C. Martin Golf Course left of the sidewalk. Residential area on west side (right) of Cherry Street.



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GLENWOOD BOULEVARD

Glenwood Boulevard is 1,260-feet long with an average longitudinal slope of 3.3%. The north and south lanes vary in width from 20 to 22-feet and are separated by a 22-foot-wide central median with grass and trees. The south side of the boulevard (the eastbound direction) includes 240-feet of existing concrete sidewalk from Cherry Street to Homeland Boulevard with no sidewalk for the remaining 1,000-feet of the road. The sidewalk width varies from 4.5-feet to 5.5-feet.



Photo 4 - Looking east along Glenwood Boulevard. J.C. Martin Golf Course on the north side (left). No existing concrete sidewalk on the south side (right).

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HIGHVIEW BOULEVARD

Highview Boulevard is 725-feet long with an average longitudinal slope of 2.9%. The roadway varies in width from 24 to 26 feet. The roadway connects Glenwood Boulevard on the north to Glen Drive on the south. There is no existing sidewalk on this road. Highview Boulevard has existing utility poles adjacent to the east side of roadway.



Photo 5 - Highview Boulevard looking south.



CHERRY STREET FROM GLENWOOD BOULEVARD TO WEST GRANDVIEW BOULEVARD

Cherry Street from Glenwood Boulevard to West Grandview Boulevard is 735-feet long with an average longitudinal slope of 4.5% with some sections exceeding 5.0%. The sidewalk is typically 4.5-feet to 5-feet wide. Some sections of the existing sidewalk are cracked or otherwise damaged and in need of repair or replacement. There are mature trees lining the area between the existing sidewalk and roadway. There is an 8-foot wide parking lane adjacent to the curb of the northbound traffic lane.



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WEST GRANDVIEW BOULEVARD

From Cherry Street to Glen Drive on West Grandview Boulevard the distance is approximately 1,375-feet. The existing sidewalk is not uniform along West Grandview, with width varying between 4.5-feet and 6-feet. There are several gaps with no sidewalk between Cherry Street and Glen Drive on both the north and south sides of the road.



There is sidewalk for 250-feet on the north and south sides of the road from Cherry Street to Homeland Boulevard. There is 135-feet of sidewalk on the south side of the road from Sunnydale Boulevard to an alley to the east. There is 180-feet of sidewalk on the north and south sides of the road from Upland Drive to an alley between Upland and Highview. There is sidewalk for 165-feet on the south side of the road from the alley to Highview Boulevard.



Photo 6 - West Grandview Boulevard, looking east near Upland Drive.

GLEN DRIVE

Glen Drive is 730-feet long with an average longitudinal slope of 4.5% with some sections as steep as 8.0% to 10.0%. The existing roadway varies between 18-feet and 20-feet wide with concrete blocks placed along the south side of the roadway. The roadway is a one-way road with travel in the eastbound direction. Glen Drive has no existing sidewalk.

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Photo 7 - Glen Drive, looking east toward Glenwood Park Avenue (SR 505).



GLENWOOD PARK AVENUE (SR 505) – SOUTH OF GLENWOOD PARK

Glenwood Park Avenue (SR 505) from the intersection of Glenwood Park Avenue (SR 505) and Glen Drive north to Glenwood Park is 620-feet long with an average longitudinal slope of 1.9%. The existing bituminous shoulder along the roadway ranges from 6-feet to 8-feet wide and traverses an existing roadway bridge that spans Mill Creek. This section of roadway is superelevated and is located on the

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outside of a horizontal curve with vertical curves on the bridge. Sight distances on the curves are near minimums.



Photo 8 - Glenwood Park Avenue (SR 505), looking north along shoulder on approach to bridge over Mill Creek.

GLENWOOD PARK

The existing paved bituminous path through Glenwood Park is 1,830-feet in length with an average slope of 1.6%. The existing path is typically 10-feet wide and generally in good condition with some cracking. The existing path intersects and passes through two existing parking lots. One parking lot is located near the middle of the park and opposite the intersection of Glenwood Park Avenue (SR 505) and West 41st Street, and the other parking lot is located at the north end of the park adjacent to the Erie Zoo.

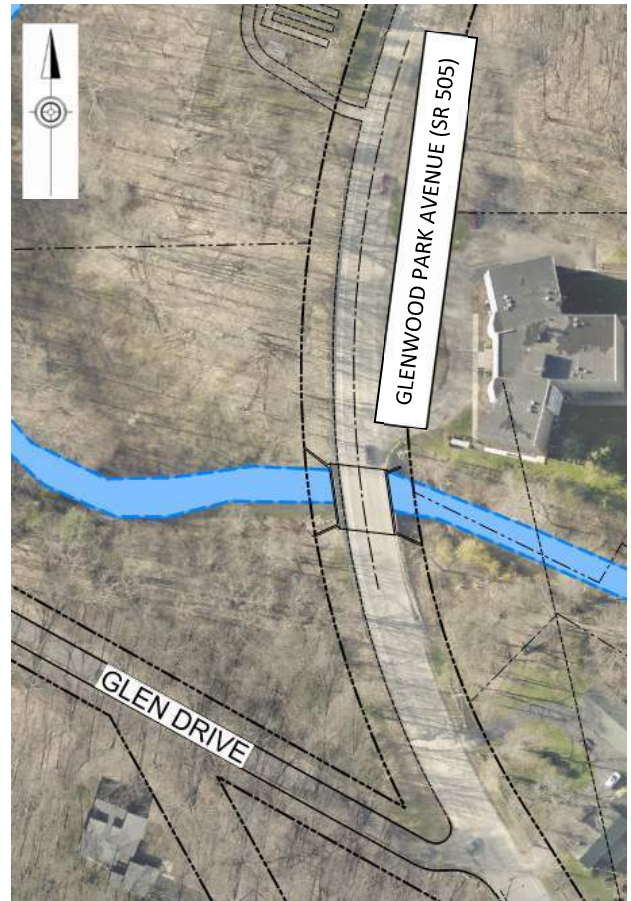


Photo 9 - Bituminous trail through Glenwood Park, looking north near horseshoe pits.



Photo 10 - Looking north on bituminous trail in Glenwood Park at chain across trail at parking lot.

GLENWOOD PARK AVENUE (SR 505) – NORTH OF GLENWOOD PARK

The existing sidewalk along Glenwood Park Avenue from the south side of the Erie Zoo heading north along Glenwood Park Avenue (SR 505) to the old 38th Street Bridge is approximately 985-feet in length with an average longitudinal slope of 3.3%. The existing sidewalk on the south end of this section is approximately 715-feet in length and 6-feet in wide concrete.



Photo 11 - Glenwood Park Avenue (SR 505), looking north along concrete sidewalk and wall/fence on east side of Erie Zoo.

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The final 270-feet of existing sidewalk to the old 38th Street bridge is 4-feet to 5-feet wide and constructed of bituminous pavement with a well-trodden dirt path adjacent to the path. To the west of the path is a chain-link fence beyond which is a steep slope to Mill Creek.



Photo 12 - Glenwood Park Avenue (SR 505), looking north along bituminous path and fence on east side of Erie Zoo.



OLD 38TH STREET BRIDGE AND ZOO PARKING LOT

From the sidewalk on the west side of Glenwood Park Avenue (SR 505), the old, structurally deficient 38th Street bridge crosses Mill Creek to the Erie Zoo and its parking lot. The bridge is currently closed to vehicles but open to pedestrian traffic.



Photo 13 - Looking west across old 38th Street bridge over Mill Creek. Open to pedestrians and closed to vehicles since 2017.

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After crossing over Mill Creek, a proposed alternative would follow the perimeter of the existing parking lot north of the Zoo and connect to the existing sidewalk in front of the current main entrance to the Erie Zoo. The existing parking lot surface is paved with bituminous pavement with varying width. The parking lot perimeter's length is 930-feet.

The parking lot area may be part of a future giraffe exhibit for the Zoo, as documented in the recent Erie Zoo Draft Master Plan for future improvements as shown in **Figure 6** below. The Zoo has stated that should a trail be constructed in this area; the Master Plan could be revised to include changes necessary to accommodate the trail.



Figure 6 - Screenshot of Erie Zoo DRAFT Master Plan Document (prepared by WDM Architects, as provided by Scott Mitchell from the Erie Zoo)

ZOO ENTRANCE DRIVE SIDEWALK

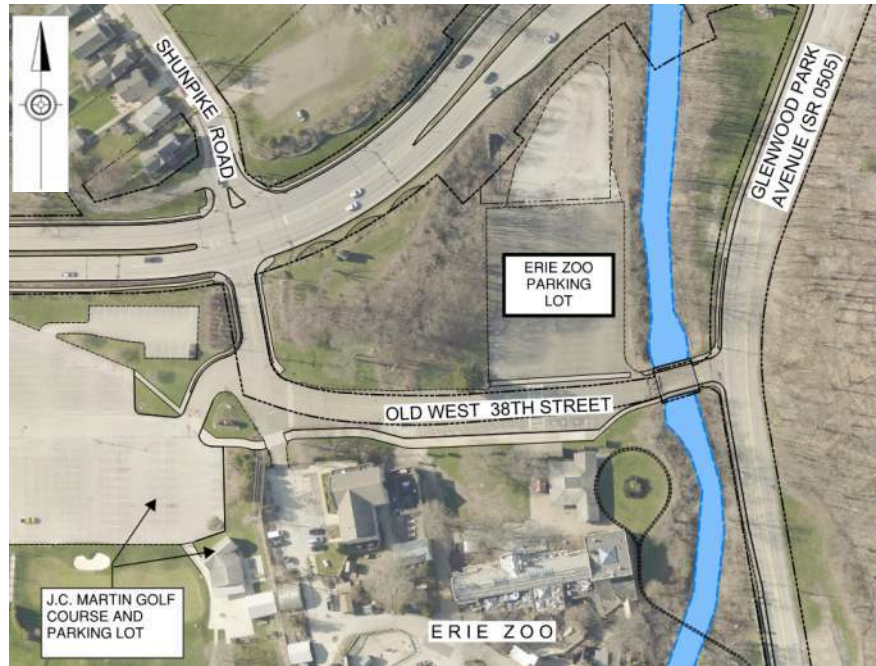


Photo 14 - Looking west along sidewalk in front of Erie Zoo, near main entrance.

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The existing sidewalk on the north side of the Zoo, from near the main entrance and old 38th Street bridge to Shunpike Road and the J.C. Martin Golf Course parking lot area, is concrete in fair condition with a width of 10-feet to 12-feet wide. This sidewalk is 350-feet long with a longitudinal slope greater than 5.0% in some areas.

From the east side of the parking lot of the J.C. Martin Golf Course there are two options: 1.) crossing the parking lot to Cherry Street, or 2.) following the existing sidewalk along the south side of West 38th Street (SR 4016) to Cherry Street.



J.C. MARTIN GOLF COURSE AND FLO FABRIZIO ICE CENTER

An existing path through the parking lot areas of both facilities is partly striped with 4" white pavement markings, creating a 5-foot-wide walkway and is generally flat with a bituminous surface in generally good condition. From east to west, the parking lots are 680-feet long and end at the driveway entrance to Flo Fabrizio Ice Center at Cherry Street. See Option 1 in red below.





Photo 15 - Looking west through parking lot near Flo Fabrizio Ice Center.

ZOO ENTRANCE DRIVE SIDEWALK TO WEST 38TH STREET (SR 4016)

The existing sidewalk from the west side of the existing Zoo Drive to the sidewalk on the south side of West 38th Street (SR 4016) is 225-feet in length, and consists of 4-foot wide concrete sidewalk with 2-foot wide brick area adjacent to the drive curb. See Option 2 in green on previous page.



Photo 16 - Looking north along concrete sidewalk and brick pavers at the Zoo entrance drive toward West 38th Street at Shunpike Road.

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GLENWOOD PARK AVENUE (SR 505) AT OLD 38TH STREET BRIDGE TO WEST 38TH STREET (SR 4016)



Photo 17 - Looking north along Glenwood Park Avenue (SR 505) toward West 38th Street (SR 4016), north of old 38th Street bridge.

The distance from the old 38th Street bridge north along Glenwood Park Avenue (SR 505) to the north side of West 38th Street (SR 4016) is 650-feet long and contains sidewalk with an average longitudinal slope of 2.0%. The existing sidewalk is 4-feet wide concrete with an additional 2-feet of brick adjacent to the roadway curb. There are curb ramps, crosswalks, and pedestrian signals and push buttons at the crossing from the south to north side of West 38th Street (SR 4016).

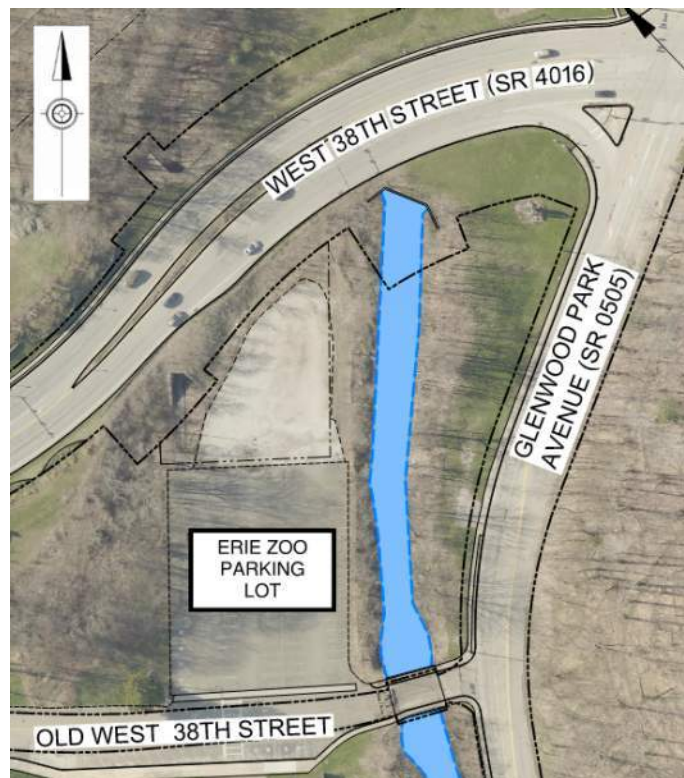




Photo 18 - Looking north at Glenwood Park Avenue (SR 505) intersection with West 38th Street (SR 4016). Pedestrian cross walk and signals.

WEST 38TH STREET (SR 4016) FROM GLENWOOD PARK AVENUE (SR 505) TO SHUNPIKE ROAD AND CHERRY STREET

The existing sidewalk on the north side of West 38th Street (SR 4016) from Glenwood Park Avenue (SR 505) to Shunpike Road consists of 4-feet wide concrete and 2-feet wide brick adjacent to the roadway curb. The brick area of the sidewalk is uneven with both the concrete sidewalk and curb. The distance from Glenwood Park Avenue (SR 505) to Shunpike Road is 870-feet.



An existing sidewalk on the north side of West 38th Street (SR 4016) from Shunpike Road to Cherry Street is 650-feet in length, and passes the Glenwood Park YMCA.



Photo 19 - Looking west along sidewalk on West 38 Street (SR 4016) , west of intersection with Glenwood Park Avenue (SR 505).



Photo 20 - Looking west at Cherry Street along West 38th Street (SR 4016). YMCA Glenwood Park Branch on right (north).

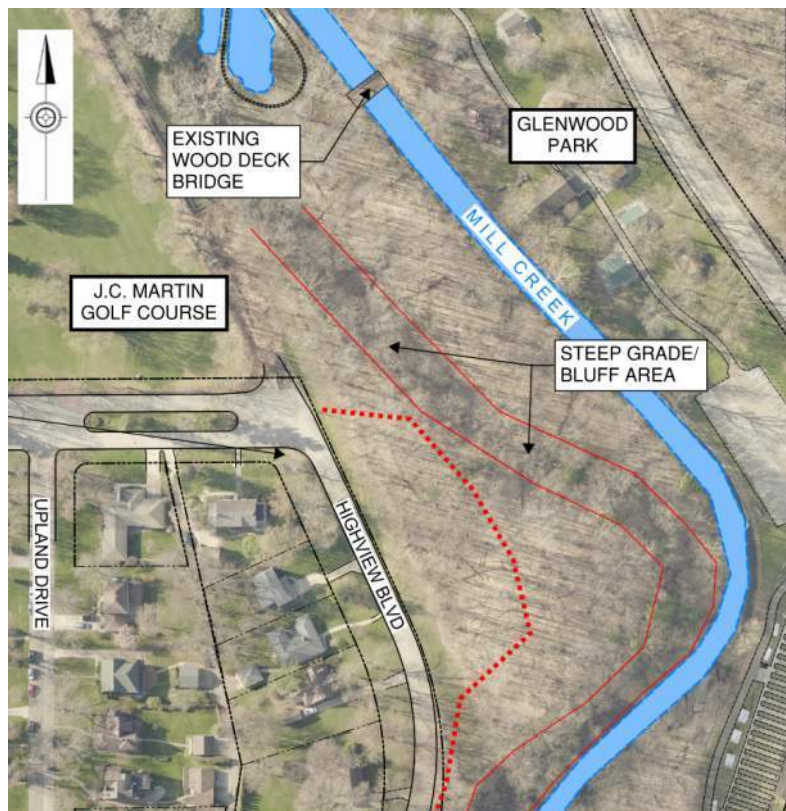
There is a pedestrian crossing of West 38th Street (SR 4016) at Shunpike Road with curb ramps and pedestrian signals. The existing sidewalk along the south side of West 38th Street (SR 4016) from Shunpike Road and Cherry Street is 5-feet wide, lined with shrubs and a fence on the north side and with trees and lighting on the south side. There is also a mast arm sign foundation midway between Shunpike Road and Cherry Street. The distance from Shunpike Road to Cherry Street is 675-feet.



Photo 21 - Looking west along sidewalk on south side of West 38th Street (SR 4016).

WOODED AREA EAST OF HIGHVIEW BOULEVARD, STEEP SLOPE, AND EXISTING BRIDGE

Two other areas were viewed and considered for possible trail alternatives east of Highview Boulevard to Glenwood Park.



The first is an existing foot trail through a wooded area east of Highview Boulevard beginning near its intersection with Glenwood Boulevard. The informal foot trail appears to be used by walkers along the top off the steep slope before rejoining Highview Boulevard near Glen Drive.



Photo 22 - Existing trail through wooded area, east of Highview Boulevard.

The second area is east of Glenwood Boulevard at Highview Boulevard and includes a steep grade down a steep slope and through the wooded area adjacent to Mill Creek to an existing wood bridge over Mill Creek to Glenwood Park. The bridge was constructed by the Zoo for potential future train expansion and connects to Glenwood Park on the east side of the bridge. No path currently exists down the steep slope to the bridge.

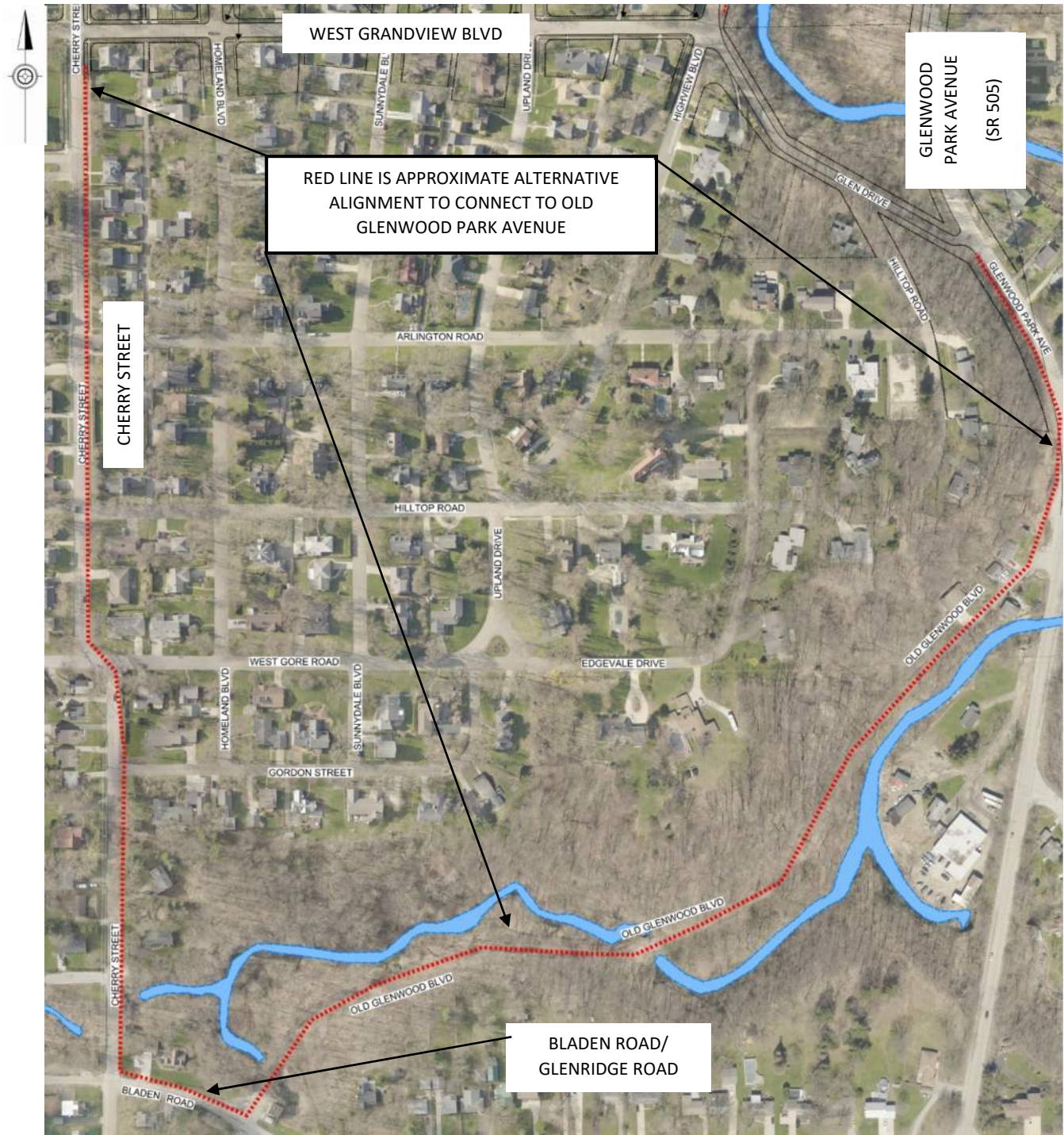


Photo 23 - Looking north from top of steep slope toward Mill Creek and existing Zoo bridge.

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OLD GLENWOOD PARK AVENUE TRAIL

The old Glenwood Park Avenue roadway and right-of-way was added to the study after multiple stakeholders suggested its potential use. The alternative would include Cherry Street (south of West Grandview Boulevard), Bladen Road/Glenridge Road, the old Glenwood Park Avenue right-of-way, and Glenwood Park Avenue (SR 505).



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Cherry Street



Photo 24 - Utility pole on west side of Cherry Street near Edgevale Drive.

From the intersection of Cherry Street and West Grandview Boulevard south to Hilltop Road, there is a 4.5-ft. to 5-ft. wide concrete sidewalk along the east side of Cherry Street with trees and utility poles in the grass strip between the sidewalk and the road. Cherry Street pavement is approximately 30-feet wide and there is a striped parking lane adjacent to the east curb line.

South of Hilltop Road, there are no existing sidewalks on the east side of Cherry Street. There are several utility poles along the east side of the road between Hilltop Road and Gore Road, as well as a large, mature tree. There is an EMTA bus stop located on the east side of Cherry Street north of Gore Road.

From Gore Road south to Bladen Road, Cherry Street pavement is approximately 26-ft. wide. Several utility poles line both sides of the street. The utility poles on the west side of the street appear to carry several overhead lines, while the poles on the east side have fewer lines and may connect residential service. The berm areas adjacent to Cherry Street slope up from the road on both sides of the street with banks and steep slopes extending into nearby

properties.



Photo 25 - Steep slope on east side of Cherry Street south of Gordon Lane.

A short section of 4-ft. wide concrete sidewalk is located on the east side of the street about 160 feet north of Edgevale Drive. The sidewalk does not connect to anything and there are no other sidewalks in this area. There is a culvert crossing near the intersection with Bladen Road with steep drop offs on both sides, with a chain link fence located about 3 to 4-feet from the curb line on both sides of the road.



Photo 26 - Looking north on Cherry Street at culvert with chain link fence on east side.

From the intersection of Cherry Street and Bladen Road, it is approximately 300-feet to connect to the old Glenwood Park Avenue right-of-way. Bladen Road, which becomes Glenridge Road to the east, is approximately 25-feet wide with no sidewalks in this area. There is a utility pole on the north side of the road and several trees along the south side of the road.

Old Glenwood Park Avenue provides over 2,200 feet of former road within its right-of-way. The old road's bituminous pavement remains in place with an approximate paved cartway width of 23-feet. The condition of the pavement varies widely along the right-of-way with some sections in good condition and others overgrown and damaged. The northern 300 feet of pavement has been maintained as it serves seven (7) residences on the north side of the road. There is one large culvert crossing under the old roadway, which carries an unnamed tributary to Mill Creek.



Photo 27 - Old Glenwood Park Avenue bituminous cartway with extensive overgrowth.



Photo 28 - Old Glenwood Park Avenue bituminous cartway.

Glen Drive is located approximately 750-feet north of Old Glenwood Park Avenue. Glenwood Park Avenue (SR 505) has a 5 to 6-ft. wide paved shoulder on the west side of the road with a steep, wooded slope and utility poles immediately west of the roadway.



Photo 29 - Looking north on Glenwood Park Avenue (SR 505), north of old Glenwood Park Avenue.

POTENTIAL TRAIL ALTERNATIVE COMPONENT ROUTES

In general, where there is existing concrete sidewalk, the alternatives considered in-kind improvement or replacement with concrete sidewalks. Likewise, existing bituminous trail considered in-kind improvements or replacements with bituminous pavement. Concrete sidewalk or trail construction is more expensive than bituminous pavement construction with the cost of concrete sidewalk and trail construction approximately 30 to 40% higher for the same width.

ALTERNATIVE 1 - CHERRY STREET

Cherry Street from West 38th Street (SR 4016) south to Glenwood Boulevard

The trail alignment from West 38th Street (SR 4016) to Glenwood Boulevard on Cherry Street could utilize existing concrete sidewalks. The existing sidewalk is typically 6-feet in width. Some sections of the sidewalks are in poor condition and would warrant replacement. A conservative assessment assumes replacement of approximately 30% of the 1,900-feet of existing sidewalk, or 570-feet.

Alternatives considered to using a majority of the 6-ft. wide existing sidewalk include: 1.) full replacement with a new 6-ft. wide concrete sidewalk; 2.) replacement or widening of the existing sidewalk to 8-ft. in width to upgrade to the minimum shared-use width guidelines; or, 3.) replacement or widening of the existing sidewalk to 10-ft. width. The 8-ft. or 10-ft. width would accommodate a shared-use path for use by bicyclists and pedestrians.

Cherry Street is lined with many trees on the east side of the street and adjacent to the J.C. Martin Golf Course. If an option to widen the sidewalk/trail to 8-ft. to 10-ft. is preferred for use by pedestrians and bicyclists, a more detailed examination of tree locations and trail alignment would need to be performed to avoid or minimize impacting trees. Additionally, right-of-way acquisitions or easements may be required to accommodate a wider and/or realigned trail. This would be determined more definitively during any future preliminary engineering studies.

Potential Impacts or Challenges:

- Limited width to widen existing concrete sidewalk without impacting existing trees and/or golf course.
- Avoid impacts to existing trees on both sides of sidewalk.
- Proximity to public golf course limits the ability to widen on the east side.



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- Widening the existing sidewalk creates an additional concrete longitudinal joint, which could be tripping hazard or problematic for bicycles.

Alternative Costs:

1. Replacement of damaged sidewalk only, 6-ft. width: \$95,000
 - Assume replacement of 30% existing sidewalk.
2. Remove existing sidewalk and construct new concrete sidewalk, 6-ft. width: \$330,000
3. Remove existing sidewalk and construct new concrete sidewalk, 8-ft. width: \$440,000
4. Remove existing sidewalk and construct new concrete sidewalk, 10-ft. width: \$550,000

ALTERNATIVE 2A - GLENWOOD BOULEVARD

Glenwood Boulevard from Cherry Street to Highview Boulevard



The intersection of Cherry Street and Glenwood Boulevard is the first decision point for alternative trail alignments. The Zoo’s “Potential Route for Walking/Running Trail” followed Cherry Street south to West Grandview Boulevard. During a field view conducted with Zoo staff and the City Engineer, the use of Glenwood Boulevard was discussed as an alternative alignment to be added to the current study area.

The westbound lane of Glenwood Boulevard abuts the southern limit of the J.C. Martin Golf Course with a row of trees and bushes between the road and golf course. The westbound lane is approximately 20-ft. to 22-feet in width. A trail alternative in this area could utilize an 8-ft. to 10-ft. wide section of the existing lane width, delineated by line striping and ground mounted flexible post delineators with the remaining 12-ft. to 14-ft. lane width retained for vehicular traffic.

The eastbound, southern side of the roadway is located adjacent to a residential area.

The eastbound pavement width is also approximately 20-ft. to 22-ft. It is envisioned a trail alternative 8-ft. to 10-ft. in width even delineated only with striping would meet with extensive resident resistance given that the eastbound roadway is adjacent to residences. There is a sidewalk in this area from Cherry Street east for 250-feet to Homeland Boulevard. As an alternative to utilizing the westbound side of the boulevard, the trail could use the existing sidewalk with a new sidewalk constructed for the remaining 1,000-feet from Homeland Boulevard to Highview Boulevard.

Potential Impacts or Challenges:

- Westbound lane – Adjacent to golf course.

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- Eastbound/Westbound lane – Sharing existing roadway with vehicles. Impact to on-street parking.
- Eastbound sidewalk – Trail width limitations due to right-of-way width.
- Potential right-of-way impact to widen existing sidewalk or construct new trail 8-ft. or 10-ft. wide.

Alternative Costs:

1. Westbound striping and ground mounted flexible post delineators: \$20,000
2. Westbound and Eastbound lanes, line paint, and ground mounted flexible post delineators: \$40,000
3. Eastbound sidewalk: Remove existing sidewalk and construct new concrete sidewalk, 6-foot width: \$160,000
4. Eastbound sidewalk: Remove existing sidewalk and construct new concrete sidewalk, 8-foot width: \$267,000
5. Eastbound sidewalk: Remove existing sidewalk and construct new concrete sidewalk, 10-foot width: \$334,000

ALTERNATIVE 2B - HIGHVIEW BOULEVARD

Highview Boulevard from Glenwood Boulevard to Glen Drive

Highview Boulevard is a continuation of the Glenwood Boulevard (Alternative 2A) alternative alignment and is not included in the Zoo's original study. Highview Boulevard is located at the east end of Glenwood Boulevard, along the top of a steep slope above Mill Creek. The grass area on the east side of Highview Boulevard is envisioned to be used for construction of the trail from Glenwood Boulevard and continuing south for 500 feet to Glen Drive.

As this trail section approaches West Grandview Boulevard and Glen Drive, there is limited space on the east side of the road for the final 250 to 300 feet of trail to the intersection. If implemented, this alternative may include tree clearing, fill slopes, retaining walls, and railings. It may also include a combination of roadway and slope usage to minimize disturbance.

A trail on the east side of the road in this area may require construction beyond the road right-of-way. The property adjacent to the road right-of-way is owned by the City of Erie.

A trail on the west side of Highview Boulevard could potentially be constructed within existing right-of-way but would be located in the front yards of existing residential properties on Highview Boulevard and therefore is envisioned to be met with some opposition from the property owners.

Potential Impacts or Challenges:



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- Potential encroachment beyond existing right-of-way to construct trail on east side of roadway.
- Utility poles adjacent to right-of-way.
- Limited space on the east side of the road at the approach to Glen Drive and West Grandview may require a fill slope and/or retaining wall to provide sufficient width for a trail.
- A trail on the west side of Highview Boulevard could potentially be constructed within existing right-of-way but would be in the front yards of existing residential properties on Highview Boulevard and therefore is envisioned to be met with some opposition from the property owners.
- Selective tree clearing for trail in area of fill slope and/or retaining wall.

Alternative Costs:

1. 6-foot wide bituminous trail on east side of Highview: \$95,000 (includes tree clearing and retaining wall).
2. 8-foot wide bituminous trail on east side of Highview: \$110,000 (includes tree clearing and retaining wall).
3. 10-foot wide bituminous trail on east side of Highview: \$121,000 (includes tree clearing and retaining wall).

ALTERNATIVE 3A – CHERRY STREET

Cherry Street from Glenwood Boulevard to West Grandview Boulevard

Another trail option to the route from Alternatives 2A and 2B is continuing south on Cherry Street to



West Grandview. Existing sidewalks in this area are typically 5-feet in width. Some sections of the sidewalks are in poor condition and would be recommended to be replaced and additional widening would be necessary to provide a minimum 6-ft. trail width.

Alternatives include construction of new trail of 6-, 8-, or 10-feet widths. Like the section of Cherry Street from West 38th Street (SR 4016) to Glenwood Boulevard, there are mature trees and utility poles adjacent to the west side of the sidewalk. Tree impacts were stated as a concern by neighborhood and community stakeholders and should be avoided, when possible, although their avoidance may limit trail widths that can be constructed.

Cherry Street's existing right-of-way line is located immediately adjacent to the existing sidewalk edge, so any widening would preferably occur on the west side of the sidewalk to avoid potential property impacts.

Additionally, the east side of Cherry Street in this area is residential.

Potential Impacts or Challenges:

- Potential right-of-way impacts to construct trail on east side of roadway.
- Avoidance of existing mature trees and utility poles.
- Limited right-of-way width adjacent to a residential area.

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Alternative Costs:

1. Remove existing sidewalk and construct new concrete sidewalk, 6-ft. width: \$110,000
2. Remove existing sidewalk and construct new concrete sidewalk, 8-ft. width: \$145,000
3. Remove existing sidewalk and construct new concrete sidewalk, 10-ft. width: \$180,000

ALTERNATIVE 3B - WEST GRANDVIEW BOULEVARD

West Grandview Boulevard from Cherry Street to Glen Drive



From Cherry Street, east along West Grandview Boulevard, the alternative includes constructing new sidewalks to fill gaps in the existing sidewalk, or new sidewalks along the entire north or south side of West Grandview Boulevard.

The north side of the street has less existing sidewalk than the south side, along with the potential for both tree and utility pole conflicts. Due to these additional potential conflicts and more required sidewalk, the alternative on the north side of the road was not investigated further.

Potential Impacts or Challenges:

- Potential right-of-way encroachment to widen existing sidewalk or construct new trail of 8- or 10-ft. wide.
- Potential tree removal.
- Utility pole conflict near alley between Upland Drive and Highview Boulevard.

Alternative Costs:

1. New concrete sidewalk to connect gaps in existing sidewalk: \$90,000
2. Remove existing sidewalk and construct new concrete sidewalk, 6-ft. width: \$215,000
3. Remove existing sidewalk and construct new concrete sidewalk, 8-ft. width: \$285,000
4. Remove existing sidewalk and construct new concrete sidewalk, 10-ft. width: \$355,000

ALTERNATIVE 4 – GLEN DRIVE

Glen Drive from West Grandview Boulevard to Glenwood Park Avenue (SR 505)

Glen Drive poses challenges due to the steep roadway grades, as well as steep terrain and slopes on both sides of the roadway. The pavement width is 18 to 20-feet for this one-way street, so it has been deemed possible to create space for a trail while allowing for vehicular traffic within the existing pavement width or with minor pavement widening.



The first option for the Glen Drive portion of the trail is to use paint lines and install ground mounted flexible delineator posts to create a trail space on the roadway pavement. A 12-foot wide travel lane for vehicles would remain while allowing for a 6 to 8-foot wide trail. A 10-ft. width was not considered due to limited width and existing slopes. Additional

width for the trail could be potentially created by cutting back the slope on the south side of the road and adding pavement, along with resetting existing concrete blocks.

Additional separation of the vehicle traffic and trail could be created by constructing a concrete curb and sidewalk on the upslope side of the road. The south side of the road could be cut, and the concrete blocks reset.

Based on feedback provided during the neighborhood and community stakeholders meeting, attendees did not feel comfortable with the idea of riding a bike up or down Glen Drive due to the steepness of the existing roadway.

Accessibility challenges are present due to the steepness of the road. Additional consideration would need to be given to the construction of ramps and landings for sections of the existing road that exceed maximum accessible grade. The ramps and landings may need to cut into slope adjacent to the road.

Potential Impacts or Challenges:

- Remove and replace non-standard guiderail on north side of road.
- Drainage from the south slope seeping onto trail and road.
- Removing and resetting existing concrete blocks and steep slope grading.
- Accessibility challenges. Ramps and landings to meet slope requirements.

Alternative Costs:

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1. Line painting and ground mounted flexible delineator posts. Cut back slope and reset concrete blocks. Replace guiderail. \$70,000.
2. Install concrete curb and sidewalk (6-feet wide). Cut back slope and reset concrete blocks. Replace guiderail. \$250,000.
3. Install concrete curb and sidewalk (8-feet wide). Cut back slope and reset concrete blocks. Replace guiderail. \$300,000.

ALTERNATIVE 5 - GLENWOOD PARK AVENUE (SR 505)

Glenwood Park Avenue (SR 505) from Glen Drive to Glenwood Park Path

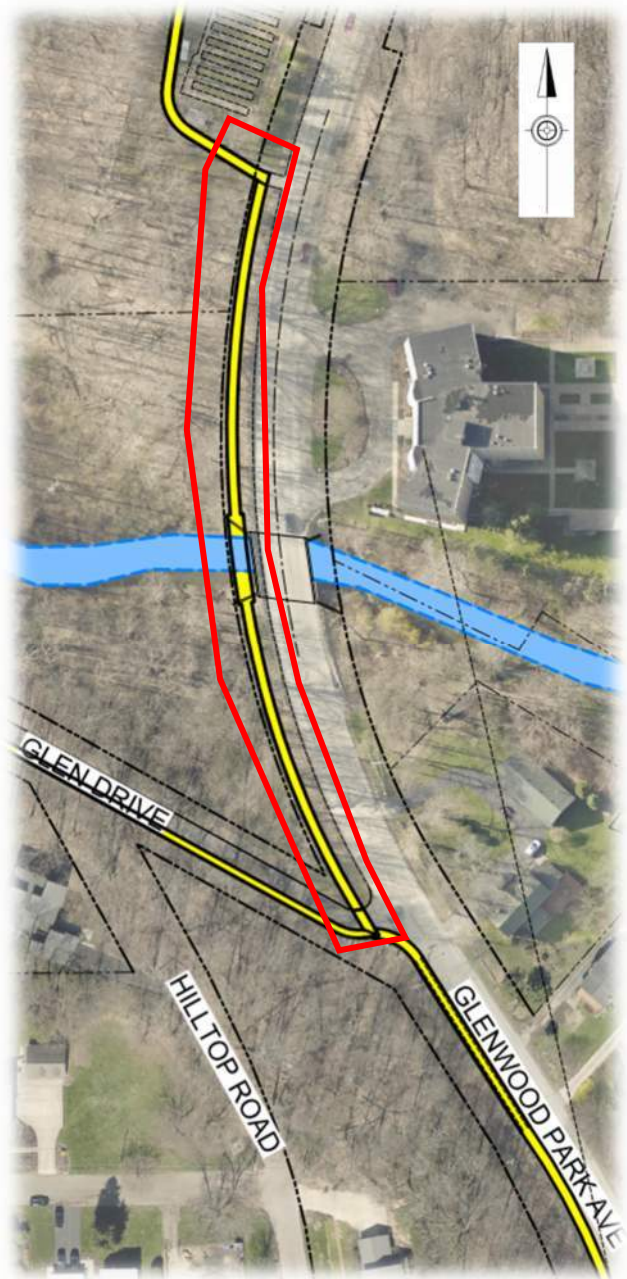
From Glen Drive to the existing Glenwood Park path, the alignment length is 600-feet. The previously referenced Zoo's plan for "Potential Route for Walking/Running Trail" envisioned the use of the existing shoulder of Glenwood Park Avenue (SR 505) for the trail. While this alignment may be the shortest and most economical route, the placement of pedestrians on a trail immediately adjacent to traffic was not a preferred scenario for the community and neighborhood stakeholders or the PennDOT District 1 representatives due to safety concerns.

The neighborhood stakeholders repeatedly expressed concerns about the speed of vehicles on Glenwood Park Avenue (SR 505) and noted that many drivers do not follow the posted 35 mph speed limit. Both the stakeholders and PennDOT District 1 expressed a desire to see the trail located off the Glenwood Park Avenue (SR 505) roadway, on a parallel alignment to the roadway but separated and with its own bridge crossing of Mill Creek.

Based on the foregoing, it is recommended that the alternative for this area should only include a trail separated from the existing roadway with a separate pedestrian bridge over Mill Creek.

Potential Impacts or Challenges:

- Pedestrian safety if existing roadway should be used.
 - Limited existing shoulder width.
 - High speed of vehicles.



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- Trail location on outside of curve.
- Permitting requirements for new pedestrian bridge crossing Mill Creek.
- Construction costs for a new pedestrian bridge crossing Mill Creek.
- Right-of-way or easement requirements for trail and new pedestrian bridge crossing of Mill Creek.
- Maintenance agreement with the City of Erie.

Alternative Costs:

1. Offline trail with pedestrian bridge: \$750,000

ALTERNATIVE 6 – GLENWOOD PARK TRAIL

Glenwood Park trail through Glenwood Park

The existing bituminous 10-ft. wide trail through Glenwood Park is generally in good condition with cracking pavement in some areas. Milling and paving of the existing trail could be considered to improve the pavement condition to provide a smoother and more level surface for trail users.

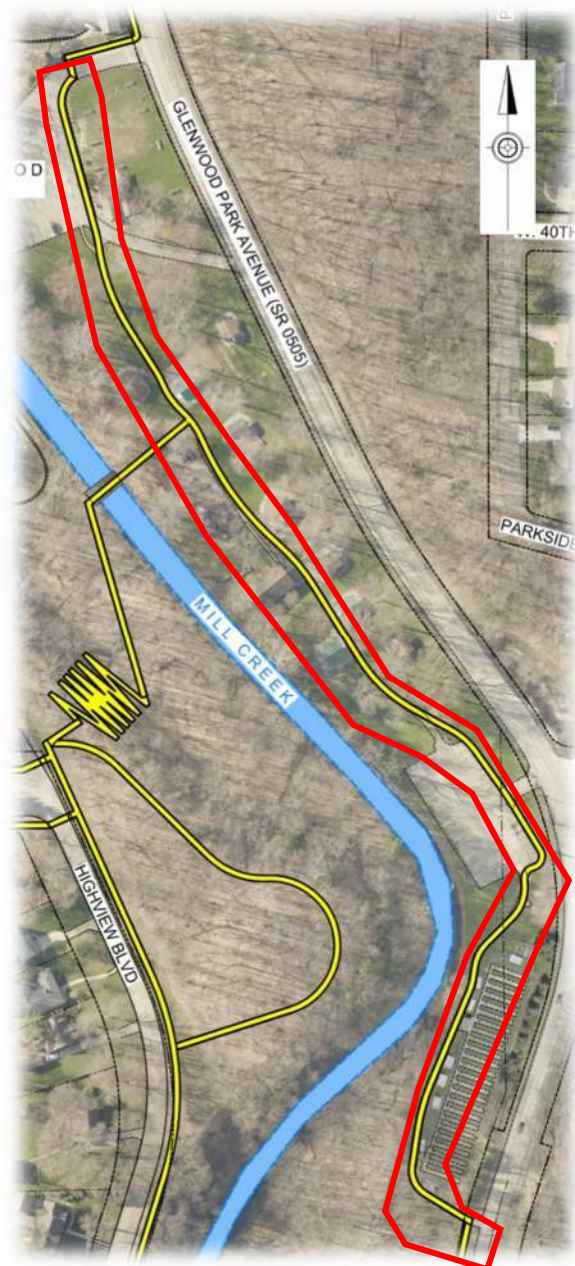
In the existing parking areas, trail delineation outside of traffic aisles where parking maneuvers would be more problematic, or a new bituminous trail outside the existing pavement areas, warrant consideration to provide separation between trail users and vehicles parking.

Potential Impacts or Challenges:

- Conflicts and available space for realigning trail route through or around parking lots.

Alternative Costs:

1. New bituminous trail construction for alignments around 2 existing parking lots: \$50,000
2. Repaving existing trail through Glenwood Park: \$55,000
3. Mill and repave existing trail through Glenwood Park combined with new trail alignment to separate from parking lots: \$105,000



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ALTERNATIVE 7 (combined with Alternative 6)

ALTERNATIVE 8 – GLENWOOD PARK AVENUE (SR 505)

Glenwood Park Avenue (SR 505) – from Glenwood Park to Old 38th Street bridge (Park Drive)



This alternative would follow the existing sidewalk from the north end of Glenwood Park along the east side of the Zoo property, north to the old 38th Street bridge. Due to an existing wall and landscaping, there is limited space to widen the sidewalk for the first 600-feet from the north end of Glenwood Park.

Proposed sidewalk or trail widening on the west side of the alignment would require major impacts to the existing wall along the east side of the Zoo and adjacent exhibits. Widening on the east side of the sidewalk would require Glenwood Park Avenue (SR 505) roadway impacts, potentially including lane shifting or road realignment to accommodate a wider sidewalk or trail section. Due to the severity of the potential major impacts, widening in this section was not considered.

The final 250-feet of this alternative is an existing bituminous walkway adjacent to a chain link fence and Mill Creek. Options considered for this section include replacement of the existing sidewalks with a 6, 8, or 10-foot wide concrete sidewalk or bituminous pavement. In the proximity of the fence and Mill Creek, a short retaining wall could be considered to allow for widening the width of the trail from minimum width requirements.

Potential Impacts or Challenges:

- Limited space to widen due to existing fence and landscaped wall along the eastern perimeter of the Zoo property and Glenwood Park Avenue (SR 505).
- Proximity to Mill Creek and steep slope may require retaining wall for placement of fill for trail widening.

Alternative Costs:

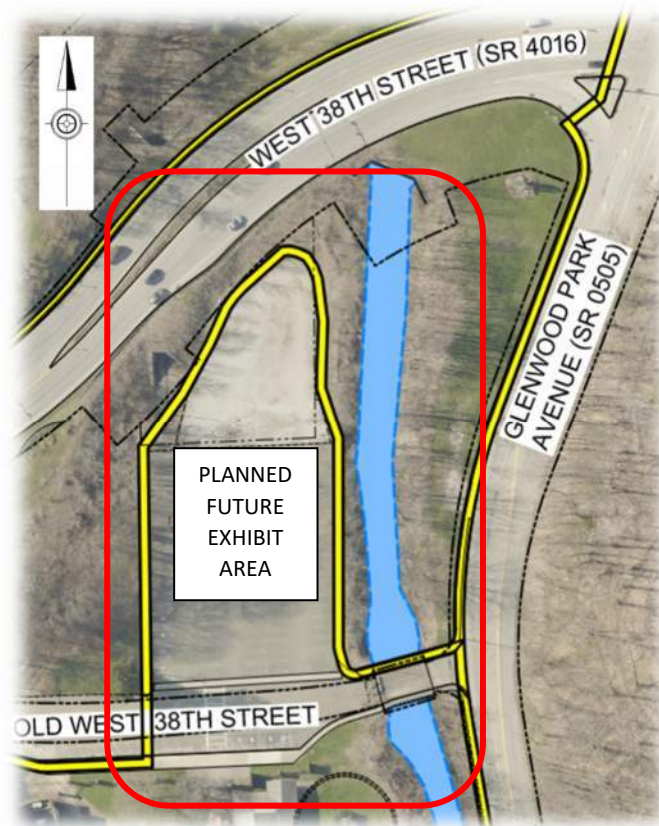
1. Construct new 6-foot wide concrete sidewalk to replace existing bituminous path (270 LF): \$50,000.
2. Construct new 8-foot wide concrete sidewalk to replace existing bituminous path (270 LF). Includes tree clearing and retaining wall: \$140,000.
3. Construct new 10-foot wide concrete sidewalk to replace existing bituminous path (270 LF). Includes tree clearing and retaining wall: \$155,000.

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4. Widen existing bituminous path from 6-feet to 8-feet. Includes tree clearing and retaining wall: \$100,000.
5. Widen existing bituminous path from 6-feet to 10-feet. Includes tree clearing and retaining wall: \$105,000.

ALTERNATIVE 9A – NEW PEDESTRIAN BRIDGE AT OLD 38TH STREET AND TRAIL AROUND EXISTING ZOO PARKING LOT

Replacement Bridge over Mill Creek and Trail around Zoo Parking Area/Future Exhibit Area – Glenwood Park Avenue (SR 505) to Zoo Entrance



A key component of the trail alignment is the bridge crossing Mill Creek at old 38th Street. The bridge is currently closed to vehicular traffic, but pedestrian access has been maintained. A replacement bridge for pedestrian and limited vehicular access (Zoo deliveries for a planned new exhibit area shown on their draft Master Plan) from Glenwood Park Avenue (SR 505) to the Zoo could be constructed as a “Gateway” feature on the east side of the Zoo property.

During stakeholder meetings held, Urban shared that consideration was being given to a pedestrian bridge replacement being named in honor of Bonney C. Daupenspeck. Ms. Daupenspeck worked in various capacities related to transportation and served the Erie area, northwest Pennsylvania, and the entire state. She was a board member for the Erie-Western Pennsylvania Port Authority, Erie Zoological Society, Pennsylvania State Transportation

Commission, and Pennsylvania Turnpike Commission.

After crossing Mill Creek, a 6-foot, 8-foot, or 10-foot wide bituminous trail around the existing Zoo parking area could be constructed. The Zoo Master Plans consider the use of the tunnel under West 38th Street (SR 4016) as a future Zoo entrance with parking on the north side West 38th Street (SR 4016) to this parking area, which could connect to this alternative. The new trail would then connect users to the revised Zoo parking lot and Zoo entrance.

Potential Impacts or Challenges:

- Bridge permitting.
- Flood zone and environmental impacts, if any, must be minimized.
- Consideration of current Zoo Master Plan and future changes to the existing Zoo parking area.

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Alternative Costs - Trail:

1. New trail construction, 6-foot wide bituminous trail: \$50,000
2. New trail construction, 8-foot wide bituminous trail: \$65,000
3. New trail construction, 10-foot wide bituminous trail: \$80,000

Alternative Costs – Bridge Options (Construction costs only. Additional design and permitting costs not included):

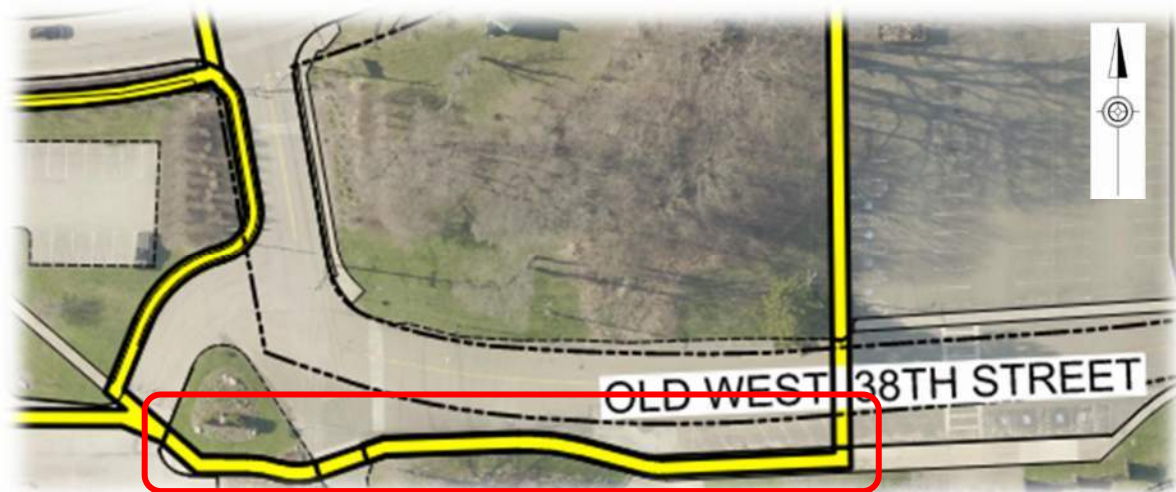
1. Aluminum Box Culvert: \$315,000
2. Prefabricated Girder Bridge: \$375,000
3. Prefabricated Arch Bridge: \$440,000

ALTERNATIVES 9B through 9E – ZOO ENTRANCE TO CHERRY STREET

Connection from existing Zoo Entrance to Cherry Street

Multiple alternatives for a trail from the existing Zoo Entrance to Cherry Street were considered for this study.

ALTERNATIVE 9B – EXISTING ZOO SIDEWALK



This alternative would utilize 350 feet of existing concrete sidewalk on the south side of the Old 38th Street from the Zoo Entrance to the parking lot of J.C. Martin Golf Course. The existing sidewalk varies from 10- to 12-feet in width.

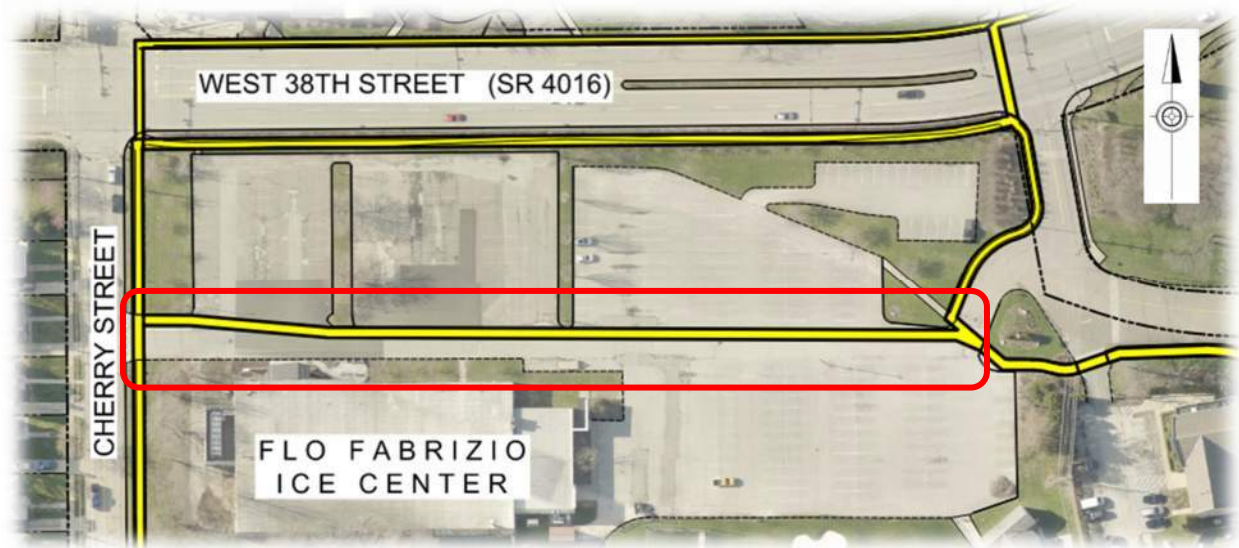
Potential Impacts or Challenges:

- Managing traffic and maintaining access during construction.
- Steep slope of existing roadway and sidewalk.

Alternative Costs:

1. Replace damaged sections of existing 10-foot wide concrete sidewalk (assume 30% replacement): \$33,000.
2. Remove existing sidewalk and construct new concrete sidewalk, 10-ft. width: \$105,000.

ALTERNATIVE 9C – TRAIL THROUGH PARKING LOT



Continuing from the end of Alternative 9B, the trail would proceed west through parking lots for the J.C. Martin Golf Course and Flo Fabrizio Ice Center to Cherry Street. Currently, the Erie Zoo has used line striping to create a walkway along the parking lot's driveway to allow pedestrians to traverse the parking lot to access the Flo Fabrizio Ice Center, J.C. Martin Golf Course, or Erie Zoo.

Potential Impacts or Challenges:

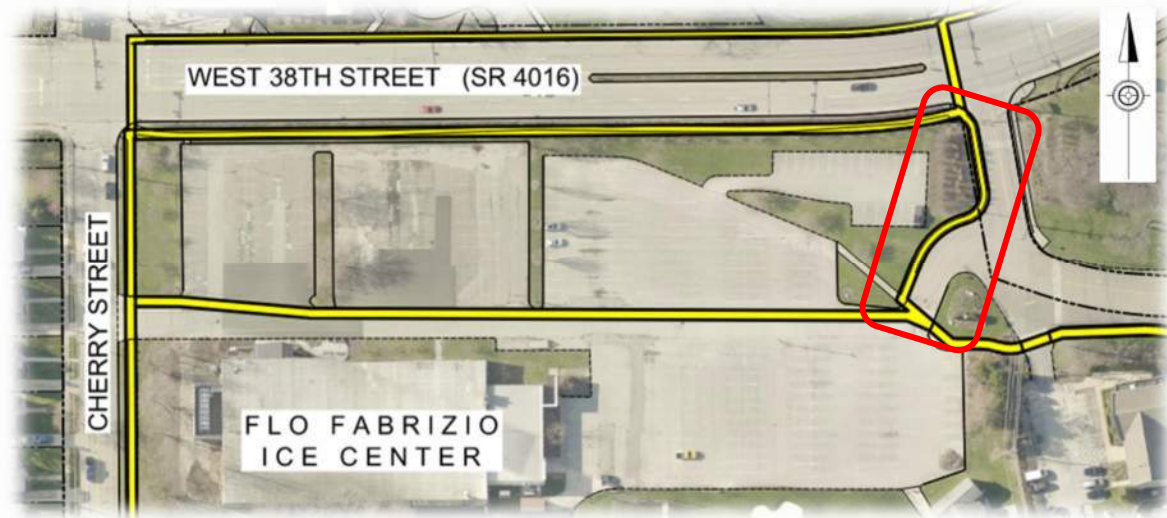
- Safety considerations. Minimal separation from vehicles through the parking lots. Multiple potential conflict points between vehicles and trail users.
- Conflicts with existing parking spaces, curbs, and light poles.

Alternative Costs:

1. Line painting and ground mounted flexible delineator posts: \$20,000.

ALTERNATIVE 9D – SIDEWALK TO WEST 38TH STREET (SR 4016) AND SHUNPIKE ROAD INTERSECTION

Another route from the end of Alternative 9B is the existing sidewalk to the intersection of West 38th Street (SR 4016) and Shunpike Road on the west side of the entrance road to the Zoo. The existing sidewalk is typically 6-feet wide and comprised of 4-feet concrete sidewalk with 2-feet wide brick pavers adjacent to the concrete curb. The brick paver section of the sidewalk has settled in some areas and has grass and weeds growing through the open joint areas. Existing landscaping, signage, and light poles could be removed or relocated to allow for widening of the sidewalk or trail.



Potential Impacts or Challenges:

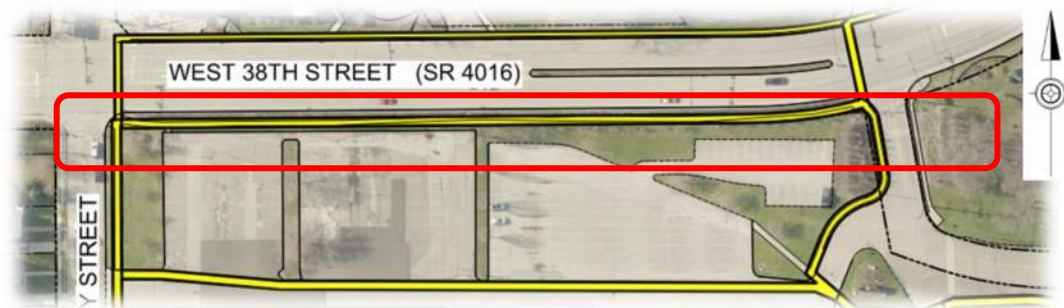
- Steep slope of existing roadway and sidewalk.
- Impact to existing landscaping, signage, and light poles for widening of trail.
- Widening the existing sidewalk creates additional concrete longitudinal joint, which could be tripping hazard or problematic for bicycles.

Alternative Costs:

1. Widen existing concrete sidewalk to 8-ft. width: \$15,000
2. Widen existing concrete sidewalk to 10-ft. width: \$25,000
3. Remove existing sidewalk and construct new concrete sidewalk, 8-ft. width: \$50,000
4. Remove existing sidewalk and construct new concrete sidewalk, 10-ft. width: \$62,000

ALTERNATIVE 9E – SOUTH SIDE OF WEST 38TH STREET (SR 4016)

South side of West 38th Street (SR 4016) from Shunpike Road to Cherry Street



For this trail alternative, encompassing the area west of the intersection of Shunpike Road and West 38th Street (SR 4016), trail users would follow an existing sidewalk on the south side of West 38th Street (SR 4016) west to Cherry Street, connecting to the beginning of the trail at Alternative 1.

Existing light poles, traffic signal poles, and signage are 1 to 2-feet from the edge of existing sidewalk and would limit the widening of the sidewalk to provide a width required for a shared-use trail.

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Consideration could be given to providing a widened trail with tapered areas (reduced width) to avoid conflicts with existing poles.

Alternatively, trail users could cross West 38th Street (SR 4016) and follow the sidewalk on the north side of West 38th Street (See Alternative 11).

Potential Impacts or Challenges:

- Impact to existing landscaping, signage, and light poles for widening of trail.
- Existing lights poles, traffic signal poles, and signage limit widening of existing sidewalk.

Alternative Costs:

1. Widen existing concrete sidewalk 2-ft. to provide 8-ft. total width: \$40,000
2. Widen existing concrete sidewalk 4-ft. to provide 10-ft. total width: \$80,000
3. Remove existing sidewalk and construct new concrete sidewalk, 8-ft. width: \$151,000
4. Remove existing sidewalk and construct new concrete sidewalk, 10-ft. width: \$190,000
5. Traffic signal equipment upgrades at West 38th Street (SR 4016) and Shunpike Road: \$35,000.

ALTERNATIVE 10 – GLENWOOD PARK AVENUE (SR 505)

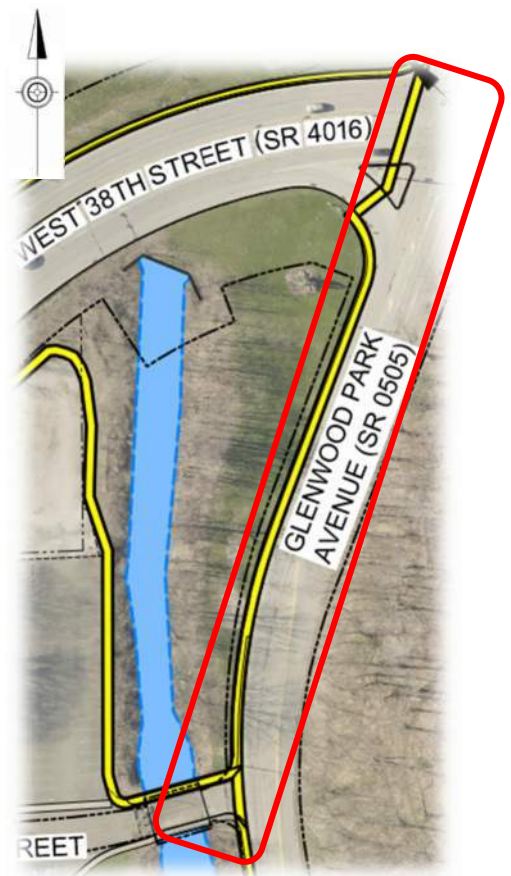
Glenwood Park Avenue (SR 505) – from Old 38th Street bridge (Park Drive) to West 38th Street (SR 4016)

In this alternative's area, the existing sidewalk is typically 6-feet wide and comprised of 4-feet concrete sidewalk with 2-feet wide brick pavers adjacent to the concrete curb. The brick paver section of the sidewalk has settled in some areas and has grass and weeds growing through the open joint areas.

Replacement of the brick pavers could be considered to allow for a more uniform surface and slope and to eliminate tripping hazards in sections of brick that have settled.

This alternative travels through the intersection of West 38th Street (SR 4016) and Glenwood Park Avenue (SR 505), which is heavily traveled and signalized. There are pedestrian signals, crosswalks, and refuge islands for pedestrians to cross West 38th Street (SR 4016) from south to north. Existing sidewalk runs along the north side of West 38th Street (SR 4016) to connect west to Cherry Street (see Alternative 11). Additionally, there is an existing sidewalk continuing north along Glenwood Park Avenue (SR 505) and a pedestrian signal and crosswalk to cross Glenwood Park Avenue (SR 505) to travel east on existing sidewalk on the north side of West 38th Street (SR 4016).

Potential Impacts or Challenges:



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- Crossing of high traffic volume West 38th Street (SR 4016) at Glenwood Park Avenue (SR 505) intersection.

Alternative Costs:

1. Widen existing sidewalk 2-ft. to 8-ft. total width: \$28,000
2. Widen existing sidewalk 4-ft. to 10-ft. total width: \$55,000
3. Remove existing sidewalk and construct new concrete sidewalk, 8-ft. width: \$111,000
4. Remove existing sidewalk and construct new concrete sidewalk, 10-ft. width: \$140,000
5. Traffic signal equipment upgrades at West 38th Street (SR 4016) and Glenwood Park Avenue (SR 505): \$35,000

ALTERNATIVE 11 – WEST 38TH STREET (SR 4016)

North side of West 38th Street (SR 4016) from Glenwood Park Avenue (SR 505) to Shunpike Road and Cherry Street



There is an existing sidewalk along the north side of West 38th Street (SR 4016) from Glenwood Park Avenue (SR 505) to Cherry Street. The existing sidewalk is typically 6-feet wide and comprised of 4-feet concrete sidewalk with 2-feet wide brick pavers adjacent to the concrete curb. The brick paver section of the sidewalk has settled in some areas and has grass and weeds growing through the open joint areas.

Replacement of the brick pavers could be considered to allow for a more uniform surface and slope and to eliminate tripping hazards in sections of brick that have settled.

Existing light poles, traffic signal poles, and signage are 1 to 2-feet from the edge of existing sidewalk and would limit the widening of the sidewalk to provide a width required for a shared-use trail. Consideration could be given to providing a widened trail with tapered areas (reduced width) to avoid conflicts with existing poles.

From Shunpike Road to Cherry Street, the sidewalk abuts an existing alley and the YMCA Glenwood Park Branch for approximately 700-feet. From Cherry Street to approximately 100-ft. east Cherry, there is limited space to widen in front of the YMCA building due to existing steps, ramps, and landscape features.

Potential Impacts or Challenges:

E05403, Work Order 4 – Erie Zoo Trail Study

- Existing guiderail would need to be removed and reset to widen the existing sidewalk to the north between Glenwood Park Avenue (SR 505) and Shunpike Road.
- Limited right-of-way from Shunpike Road to Cherry Street near alley and YMCA to widen existing sidewalk to provide 8-ft. to 10-ft. trail width.
- Existing lights, traffic signals, and sign poles limit widening of existing sidewalk.

Alternative Costs:

1. Widen existing sidewalk 2-ft. to provide 8-ft. total width: \$90,000
2. Widen existing sidewalk 4-ft. to provide 10-ft. total width: \$180,000
3. Remove existing sidewalk and construct new concrete sidewalk, 8-ft. width: \$360,000
4. Remove existing sidewalk and construct new concrete sidewalk, 10-ft. width: \$450,000
5. Traffic signal equipment upgrades at West 38th Street (SR 4016) and Cherry Street, Shunpike Road, Glenwood Park Ave (SR 505): \$100,000.

ALTERNATIVE 12 (combined with Alternative 1)

ALTERNATIVES 13A THROUGH 16 – OLD GLENWOOD PARK AVENUE TRAIL

Based upon feedback and comments received from meetings with stakeholders and PennDOT District 1, the study's scope of work was expanded to include additional areas to the south of the original study limits to include consideration of the old Glenwood Park Avenue right-of-way.

As noted, the old Glenwood Park Avenue right-of-way and abandoned roadway area was brought up by participants in several stakeholder meetings and added to the study scope of work for evaluation. Connecting a proposed trail alternative to this old roadway corridor would be challenging. Limited existing sidewalks and lack of existing bike lanes on both Cherry Street from West Grandview Boulevard to Old Glenwood Park Avenue, and Glenwood Park Avenue (SR 505) from Old Glenwood Park Avenue to Glen Drive, would require extensive improvements to Cherry Street and Glenwood Park Avenue (SR 505), as well as Old Glenwood Park Avenue.

To connect to the Old Glenwood Park Avenue from the northern trail alternatives on Cherry Street at West Grandview Boulevard, the existing sidewalk, new trail construction, and/or a converted parking lane on Cherry Street south of West Grandview Boulevard to Gore Road would be utilized.

From Gore Road to Bladen Road/Glenridge Road, new trail construction would be required, as there is no existing sidewalk. The steep terrain and existing utilities present major challenges to trail location and construction. Both sides of Cherry Street have utility poles and adjacent banks or steep sloped yards. The utility poles on the east side of Cherry Street appear to be ancillary support or residential service poles with only a few overhead line connections and therefore may be easier to relocate to allow sufficient space for trail construction. The east side of the road would need to be extensively regraded and may require a retaining wall(s) to create adequate width for construction of the trail. It is anticipated that right-of-way and/or easements may be necessary as well.

Cherry Street travels over an existing culvert located south of Edgevale Drive. There is limited space on both the east and west sides of the roadway on which to construct a trail. Adjacent to roadside fences, there are near vertical, steep slopes to a tributary to Mill Creek below.

E05403, Work Order 4 – Erie Zoo Trail Study

South of the culvert, the trail would follow Bladen Road/Glenridge Road to the Old Glenwood Park Avenue right-of-way.

Old Glenwood Park Avenue provides over 2,000 feet of former road right-of-way for trail use. The old road pavement is still in place with an approximate paved cartway width of 23-feet. From visual observation, significant sections of the old roadway pavement would warrant repair or replacement. There is one large culvert crossing under the old roadway, which carries an unnamed tributary to Mill Creek. The condition of the culvert was not reviewed as part of this study.

Connection of the trail to Glen Drive to the north would require use of the southbound shoulder areas of Glenwood Park Avenue (SR 505), or construction of an offline trail separated from the roadway. There is a steep wooded slope and utility poles immediately west of the roadway in this area. Construction of a trail on the side of the slope would require retaining walls and railing or guiderail to provide trail users separation from the roadway.

Based upon comments received from stakeholders and PennDOT District 1 for Alternative 5 along Glenwood Park Avenue (SR 505) further to the north, it would be recommended that the alternative for this area should only include a trail separated from the existing roadway.

Potential Impacts or Challenges:

- Accessibility challenges with steep longitudinal slope on Cherry Street south of Gore Road, and on old Glenwood Park Avenue right-of-way.
- Tree impacts.
- Lack of existing sidewalks.
- Utility poles along east and west sides of Cherry Street from Gore Road to Bladen Road.
- Steep slopes in adjacent yards along Cherry Street south of Gore Road.
- Right-of-way and easements required to construct new trail or sidewalk on Cherry Street.
- Limited width of existing culvert crossing on Cherry Street.
- Narrow shoulder and vehicle speeds on Glenwood Park Avenue (SR 505).
- Steep slope along west shoulder of Glenwood Park Avenue (SR 505).

Alternative Costs from Cherry Street at West Grandview south to Bladen/Glenridge Road, connection to old Glenwood Park Avenue right-of-way, and north on Glenwood Park Avenue (SR 505) to Glen Drive:

1. Construct 6-ft. trail option, includes new concrete sidewalk trail for Cherry Street and Bladen Road, rehabilitated bituminous trail for old Glenwood Park Avenue, and concrete sidewalk trail with retaining wall along Glenwood Park Avenue (SR 505): \$800,000+
2. Construct 8-ft. trail option, includes new concrete sidewalk trail for Cherry Street and Bladen Road, rehabilitated bituminous trail for old Glenwood Park Avenue, and concrete sidewalk trail with retaining wall along Glenwood Park Avenue (SR 505): \$980,000+
3. Construct 10-ft. trail option, includes new concrete sidewalk trail for Cherry Street and Bladen Road, rehabilitated bituminous trail for old Glenwood Park Avenue, and concrete sidewalk trail with retaining wall along Glenwood Park Avenue (SR 505): \$1,250,000+

ADDITIONAL ALTERNATIVES FOR AREAS EAST OF HIGHVIEW BOULEVARD

From the east end of Glenwood Boulevard, Alternative 2A, two (2) additional alternatives were considered using the wooded, natural area east of Highview Boulevard.

ALTERNATIVE 17 – Trail through Woods east of Highview Boulevard

The first alternative path travels from the east end Glenwood Boulevard, crossing Highview Boulevard to a wooded area east of Highview Boulevard. The trail continues south parallel to Highview Boulevard before reaching Glen Drive.

Constructing a trail area through the woods presents challenges with ADA accessible standards. Pennsylvania DCNR has developed guidelines for hiking trails, which are contained in its publication “Trail Design & Development Principles Guidelines for Sustainable, Non-motorized Trails. That publication’s Chapter 2 – Design Needs for Specific Non-Motorized Trail User Groups, includes a section defining “Sustainable and Accessible Hiking Trail Guidelines and Considerations,” which states that “no more than 30% of the total trail length may exceed a trail grade of 8.33%.”

This alternative would connect to Alternative 2B Highview Boulevard and Alternative 4 Glen Drive.

From Glen Drive to approximately 200-feet south on Highview, there is limited space between the back of curb on Highview Boulevard and the steep slope adjacent to the road. Trail alternatives in this area may require construction of a retaining wall with railing to provide space for a trail wide enough to accommodate pedestrians and cyclists.

Selective tree clearing and creation of a paved or gravel trail through the woods could be considered as a supplement to a main trail adjacent to Highview Boulevard for users who would prefer to experience more nature in the wooded area.

Potential Impacts or Challenges:

- Accessibility of trail.
- Tree removal.

Costs:

1. Bituminous trail through wooded area east of Highview, 6-ft. width: \$60,000
2. Bituminous trail through wooded area east of Highview, 8-ft. width: \$75,000
3. Bituminous trail through wooded area east of Highview, 10-ft. width: \$90,000



ALTERNATIVE 18 – SWITCHBACKS AND EXISTING BRIDGE

The second alternative path east of Highview Boulevard travels from Glenwood Boulevard down the steep slope above Mill Creek and would utilize an existing bridge to cross Mill Creek and connect to Glenwood Park. To create an ADA accessible path down the existing steep grade, a series of switchbacks constructed on an elevated boardwalk would be utilized to meet grade requirements. The elevation difference from top to bottom of slope is greater than 60-feet and would require 800 to 1,200 linear feet of boardwalk to achieve a slope of 5.0% or less or require ramps of up to 8.3% and level landings to achieve ADA accessibility requirements.

For safety purposes, it may be appropriate to advise cyclists to walk their bike on the boardwalk and its switchback areas, as tight turns and limited space will make riding a safety concern.

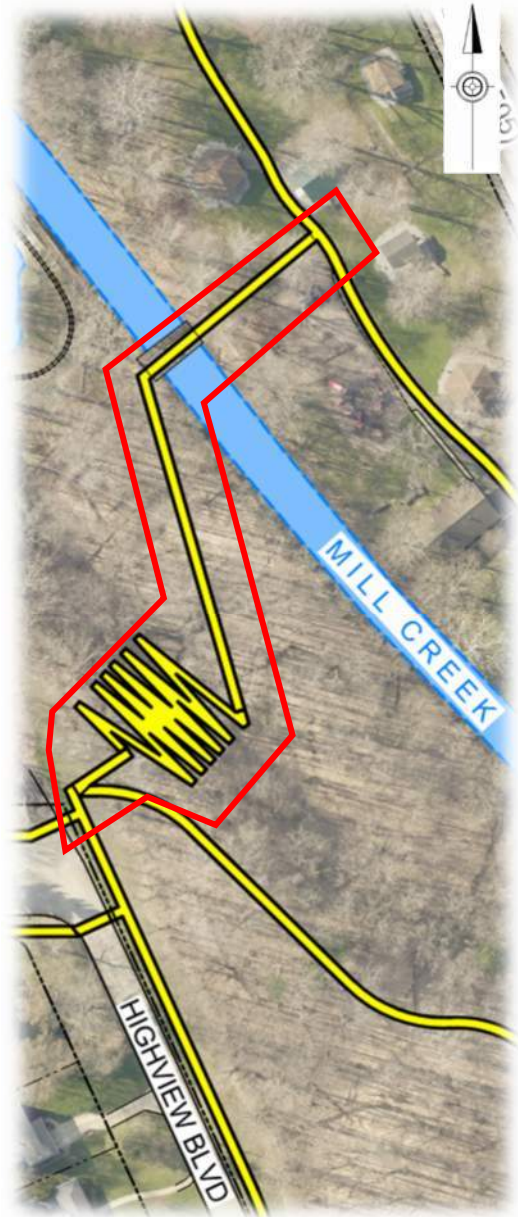
From the bottom of the slope the trail would traverse wooded areas, which lie within a FEMA Zone A Flood Hazard, before connecting to an existing, unused bridge over Mill Creek (previously constructed by the Zoo for potential future train expansion) and joining the existing trail in Glenwood Park proper.

Potential Impacts or Challenges:

- Accessibility challenges.
- Steep slope to traverse.
- High cost, difficult construction, and long-term maintenance of boardwalk.
- Security concerns associated with wooded, secluded location.
- Zone A Flood Hazard area at base of steep slope adjacent to Mill Creek.

Alternative Costs:

1. Construct 1,200-feet of 6-ft. wide boardwalk with switchbacks and connect trail to existing bridge over Mill Creek: \$2,000,000 to 3,000,000+



SUMMARY OF ALTERNATIVES COST RANGES

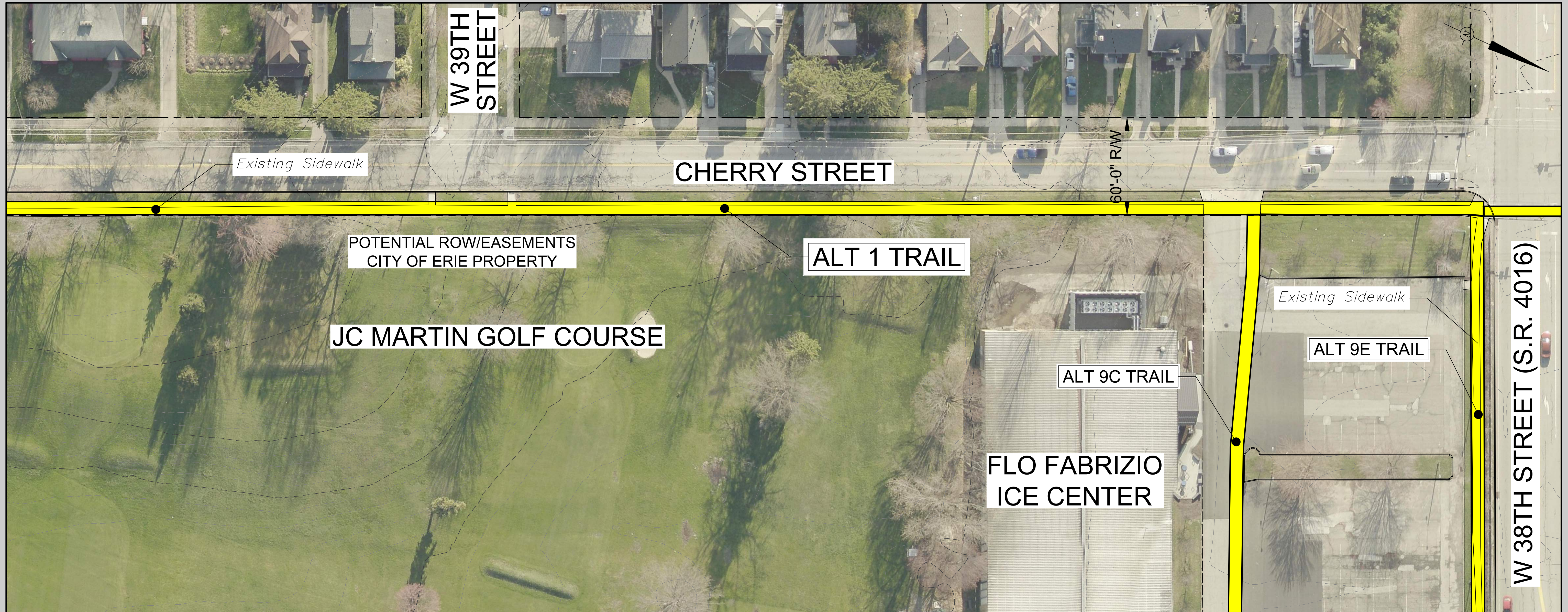
The overall alternatives analysis considered Alternative 1 through Alternative 18. Some alternatives had multiple parts and all alternatives considered multiple options for the trail. Options for the alternatives included the type of trail material, concrete or bituminous, and proposed trail widths from 6-feet wide to 10-feet wide.

Depending on the alternatives selected costs varied from approximately \$2.5-million on the low end to over \$7-million on the high end.

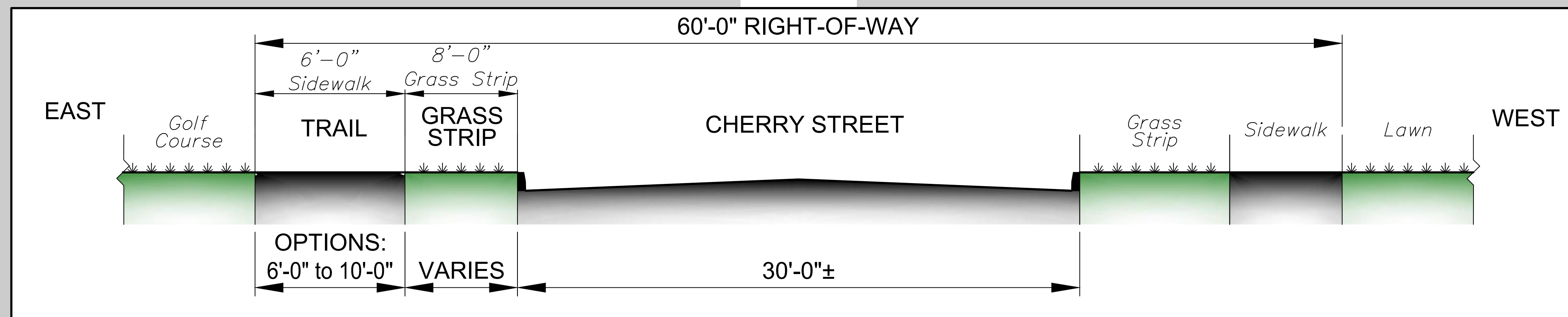
An alternatives matrix and cost summary is provided in Appendix B. The matrix provides a menu of the different alternatives, options and associated costs for the alternative, and challenges and impacts identified for the alternative.

APPENDIX A
ALTERNATIVE SKETCH PLANS

MATCH TO ALT 1 CHERRY STREET-2



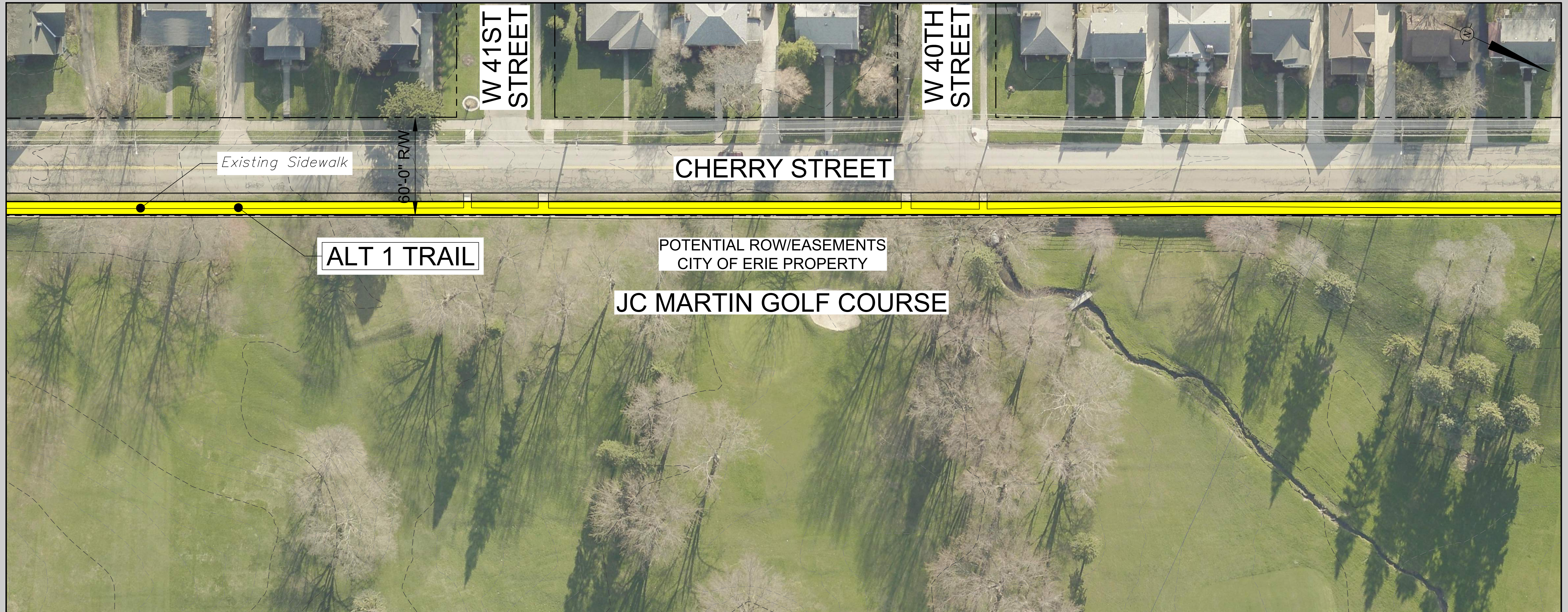
PLAN



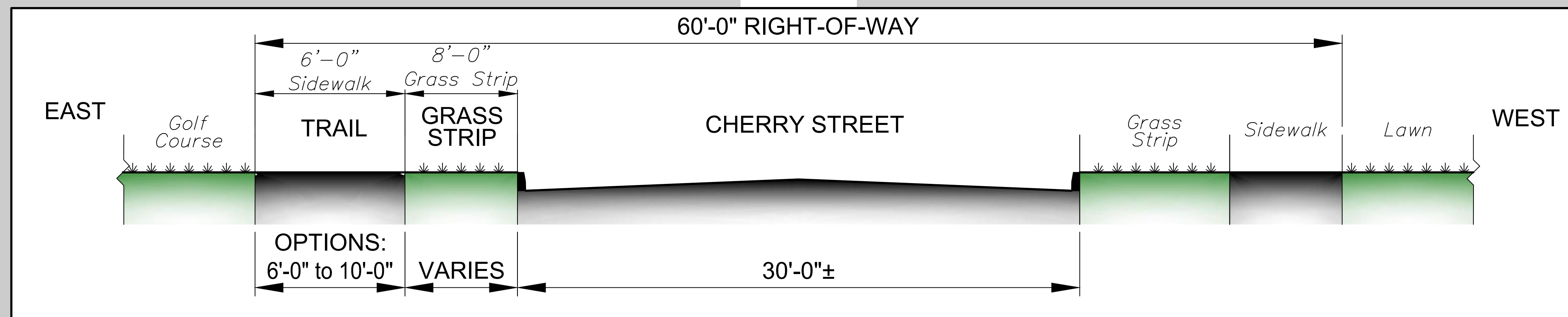
TYPICAL SECTION

ALTERNATIVE 1: CHERRY STREET-1

MATCH TO ALT 1 CHERRY STREET-2

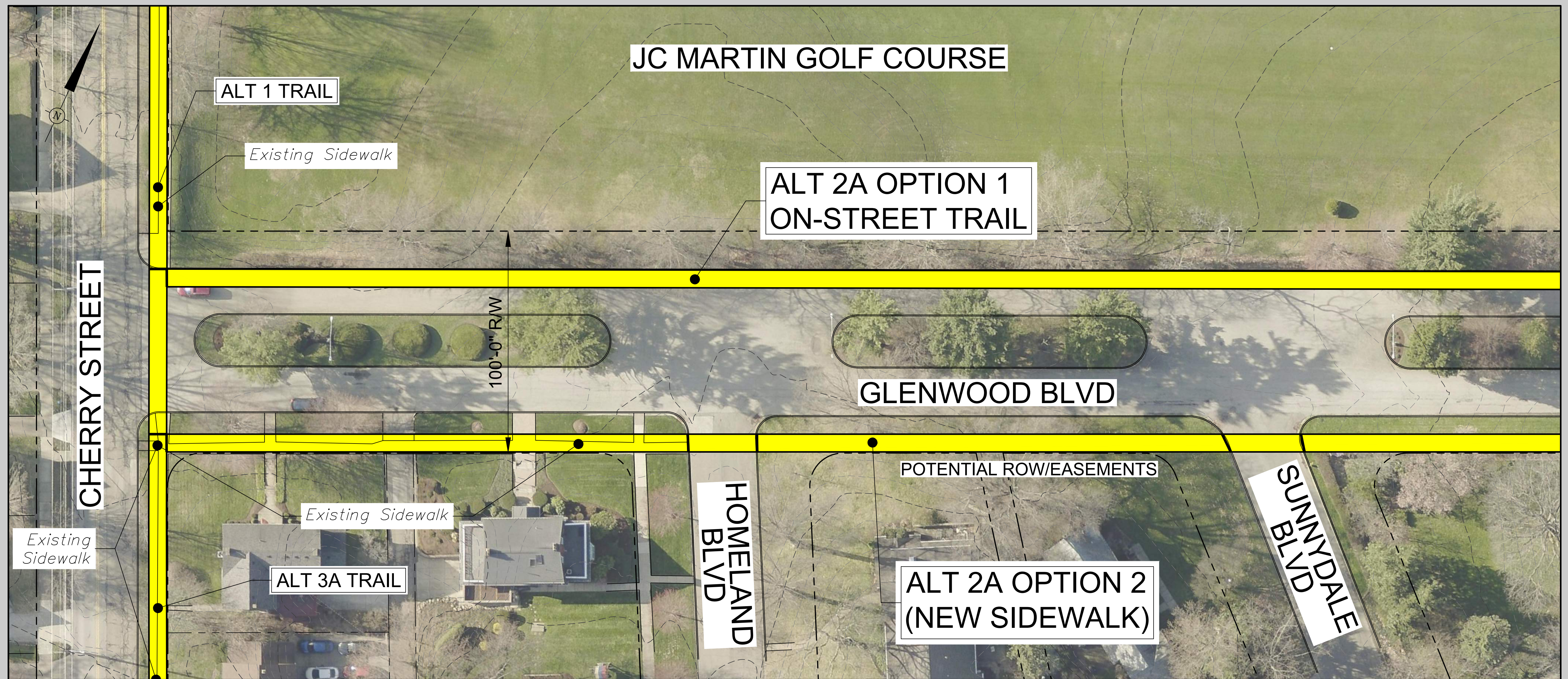


PLAN



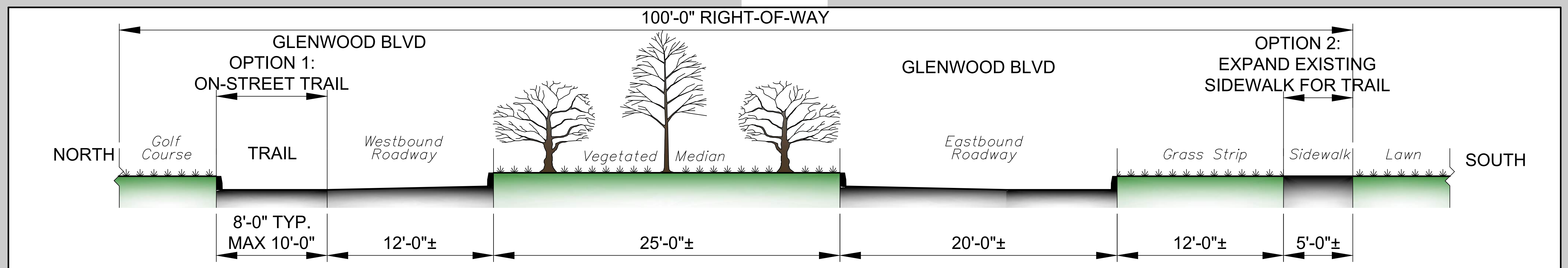
TYPICAL SECTION

ALTERNATIVE 1: CHERRY STREET-2



MATCH TO ALT 2A GLENWOOD BLVD-2

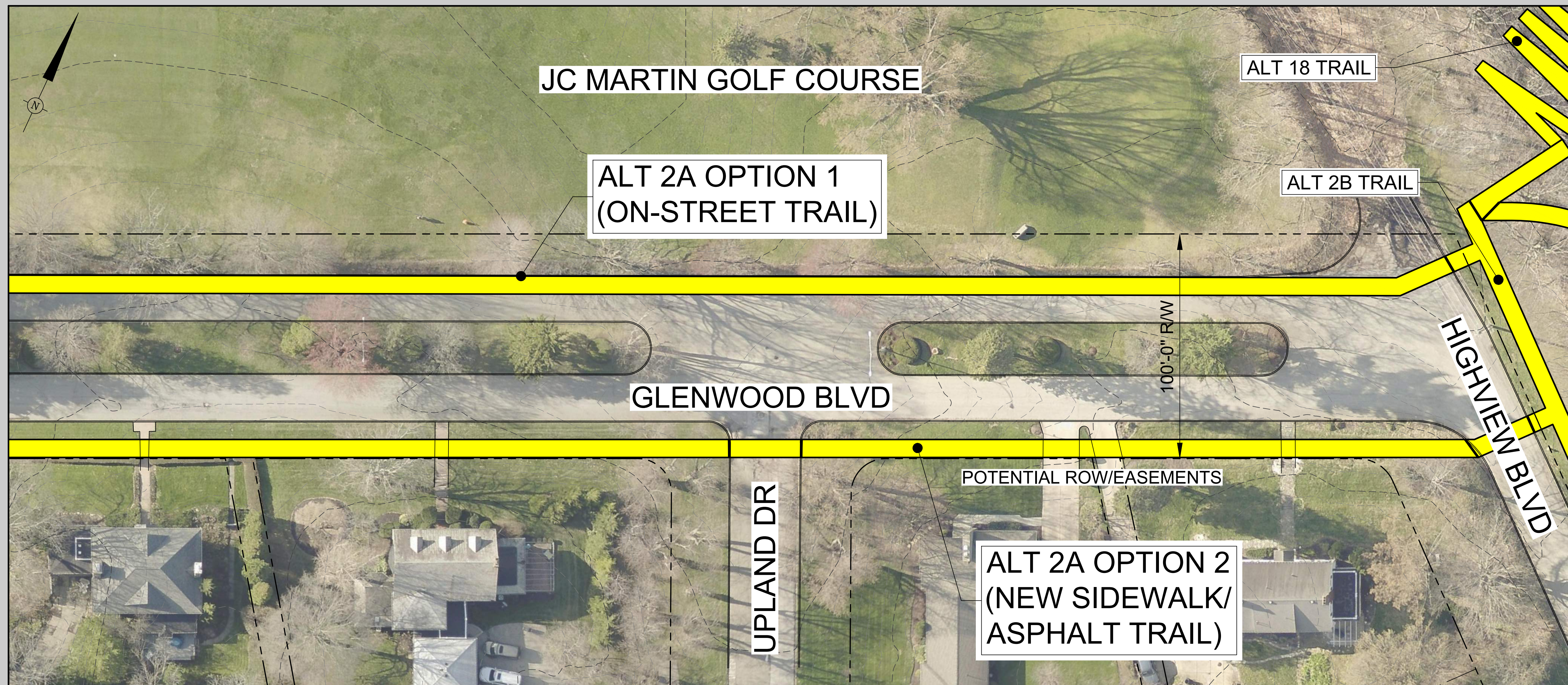
PLAN



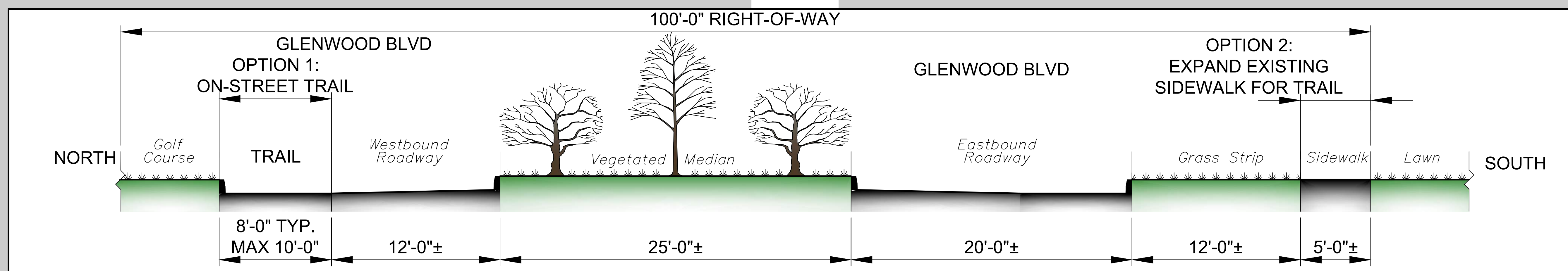
TYPICAL SECTION

ALTERNATIVE 2A: GLENWOOD BOULEVARD-1

MATCH TO ALT 2A GLENWOOD BLVD-1



PLAN



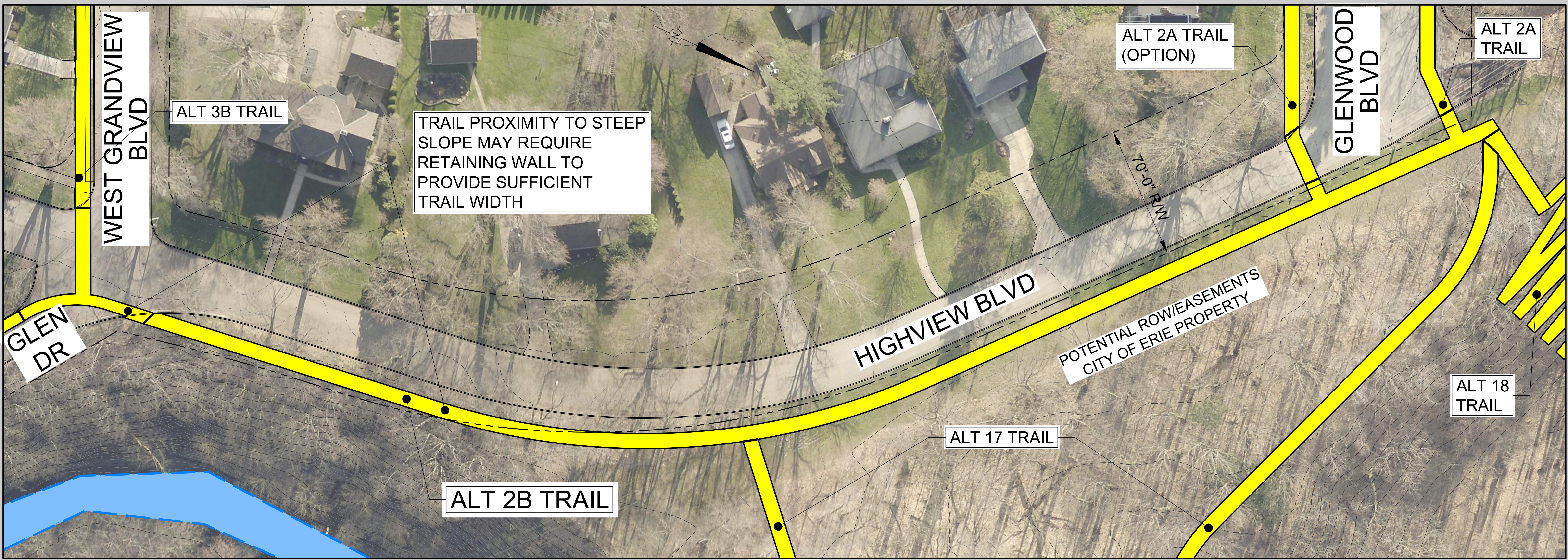
TYPICAL SECTION

ALTERNATIVE 2A: GLENWOOD BOULEVARD-2

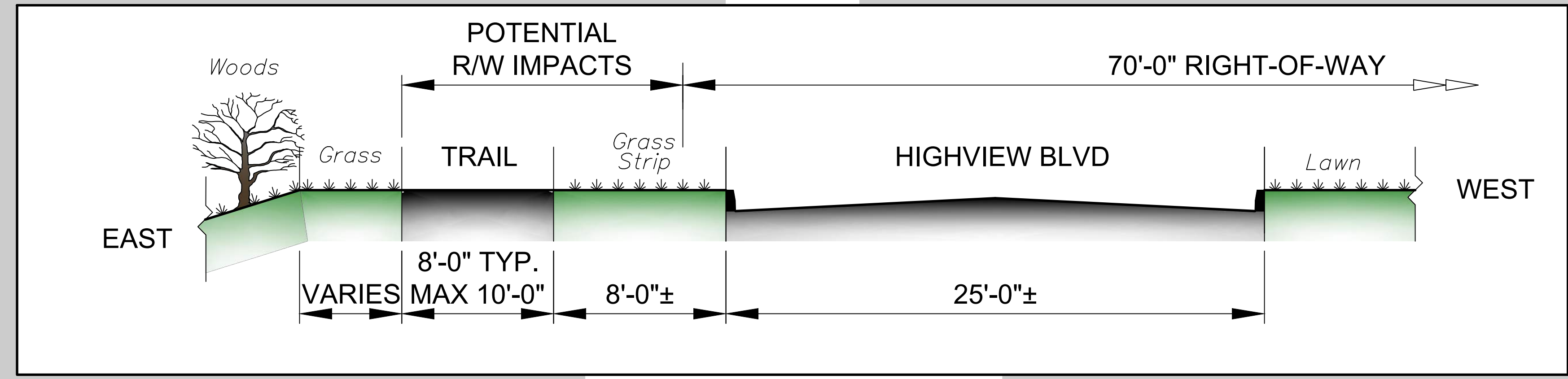
MATCHLINE TO ALT 3B

MATCHLINE TO ALT 2A

MATCHLINE TO ALT 4

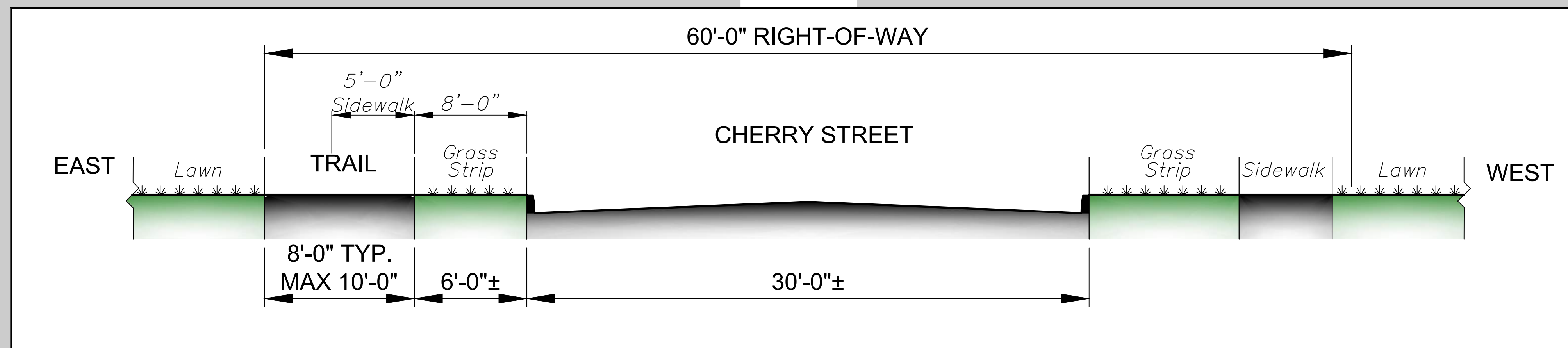
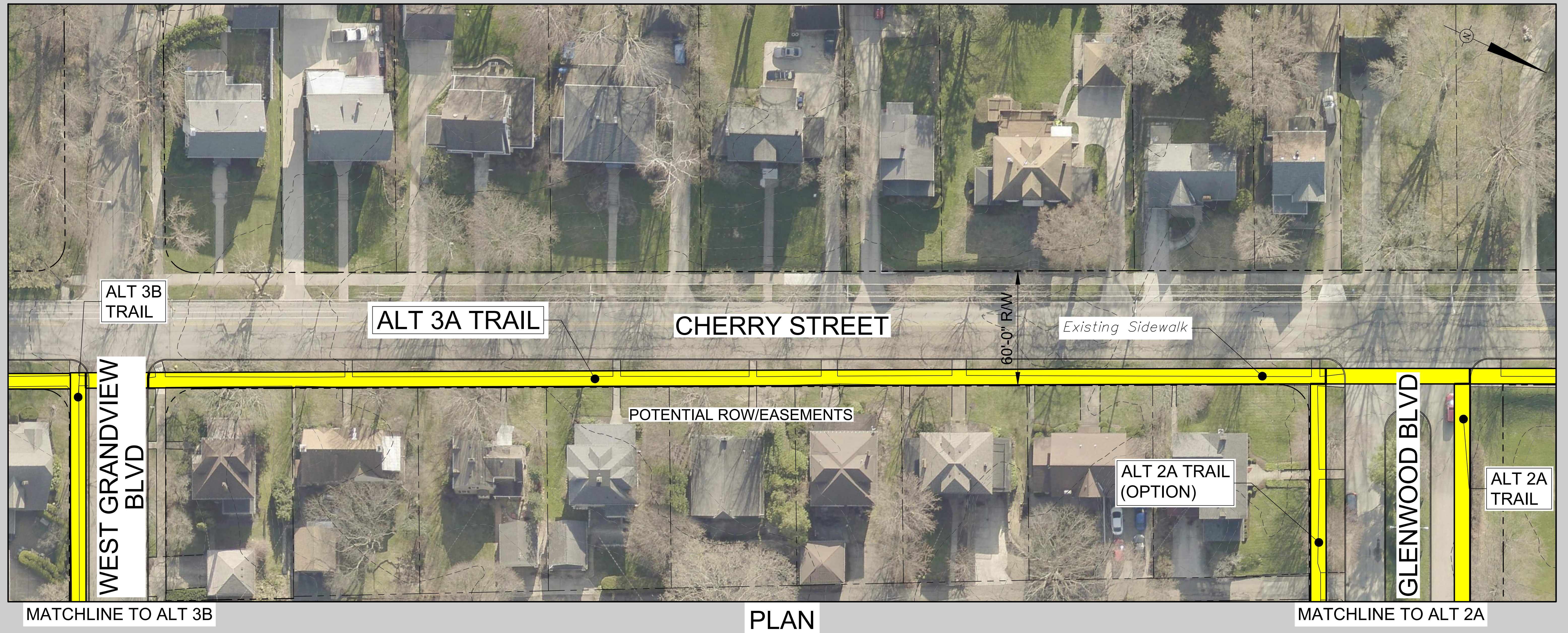


PLAN



TYPICAL SECTION

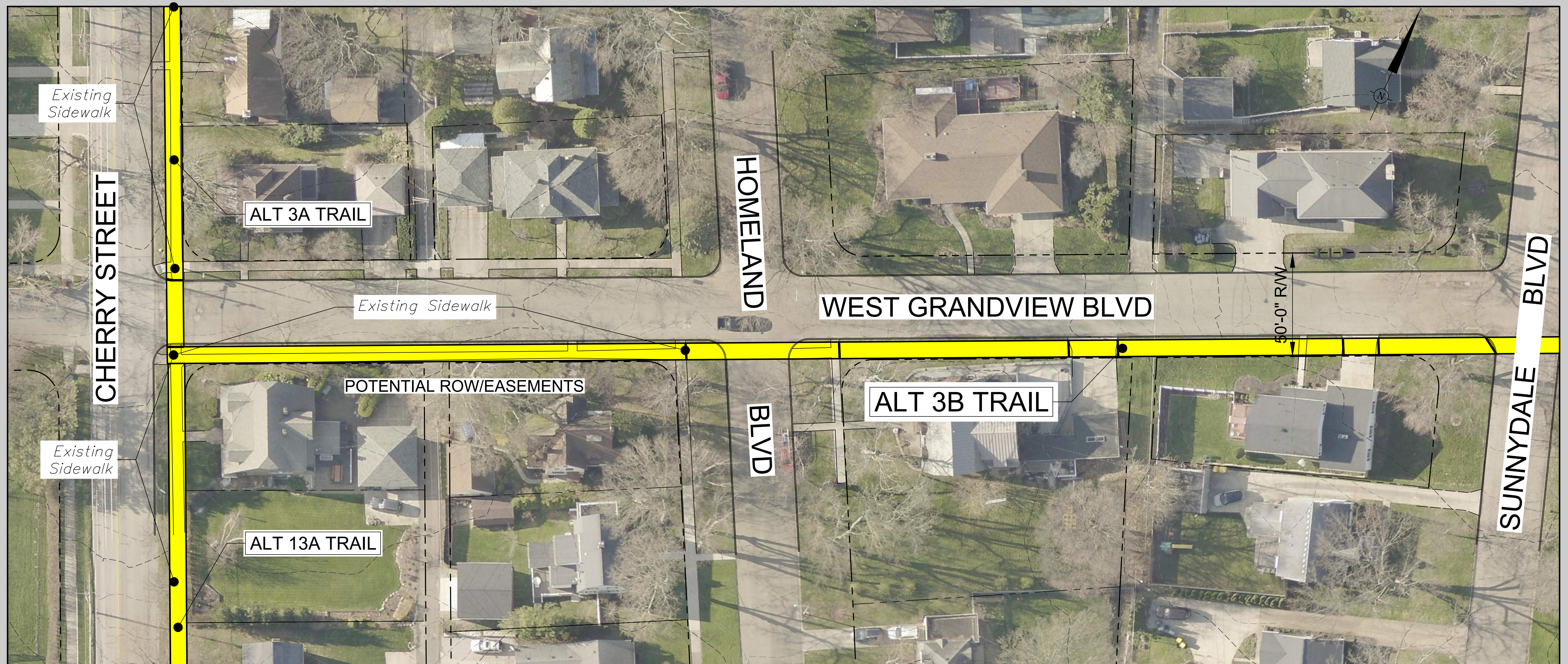
ALTERNATIVE 2B: HIGHVIEW BLVD



TYPICAL SECTION

ALTERNATIVE 3A: CHERRY STREET

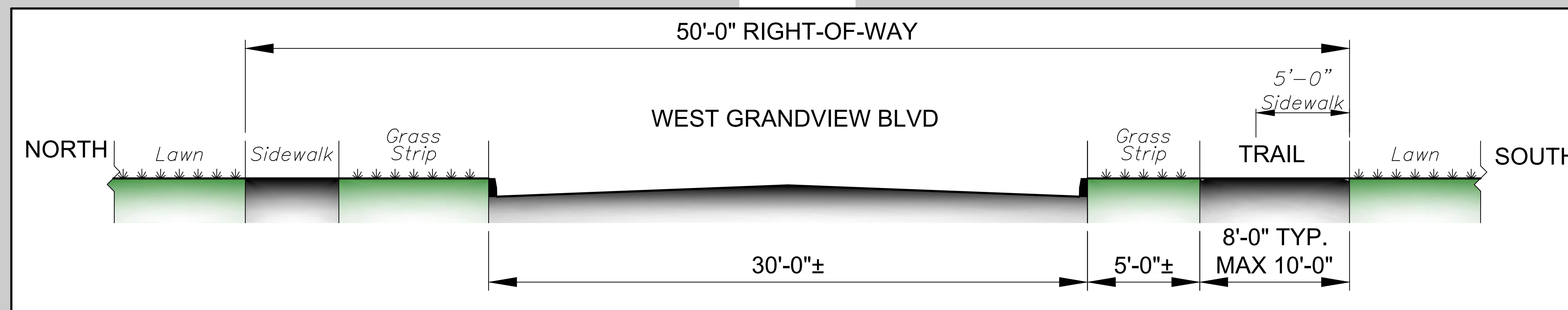
MATCHLINE TO ALT 3A



MATCH TO ALT 3B WEST GRANDVIEW BLVD-2

MATCHLINE TO ALT 13A

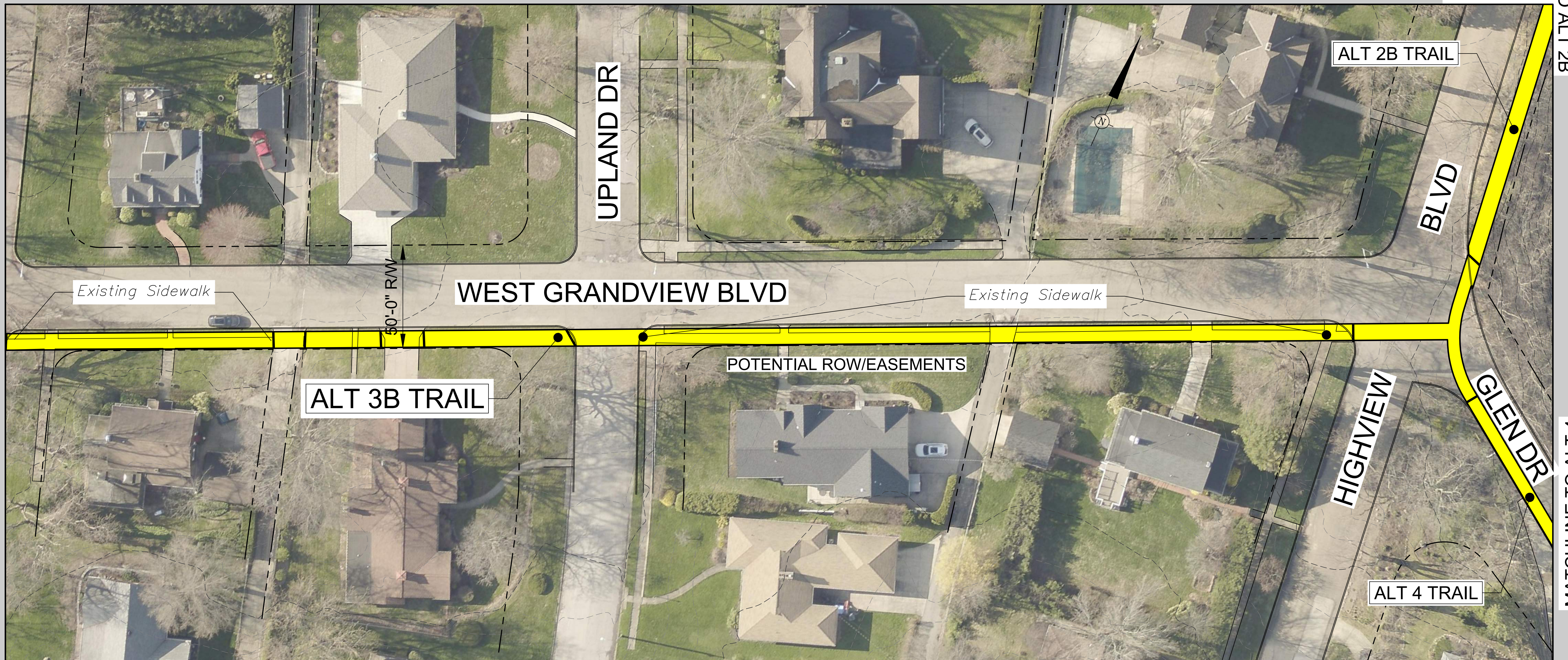
PLAN



TYPICAL SECTION

ALTERNATIVE 3B: WEST GRANDVIEW BLVD-1

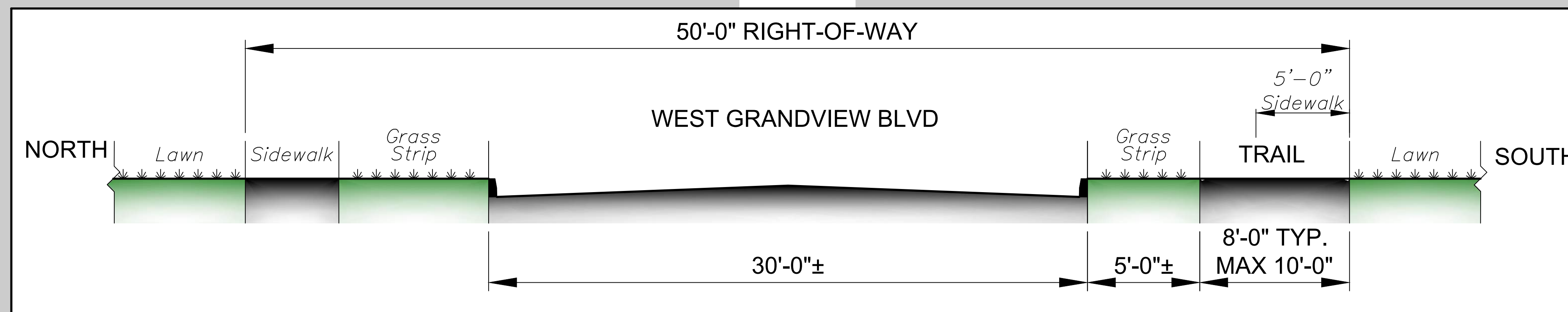
MATCH TO ALT 3B WEST GRANDVIEW BLVD-1



TO ALT 2B

MATCHLINE TO ALT 4

PLAN

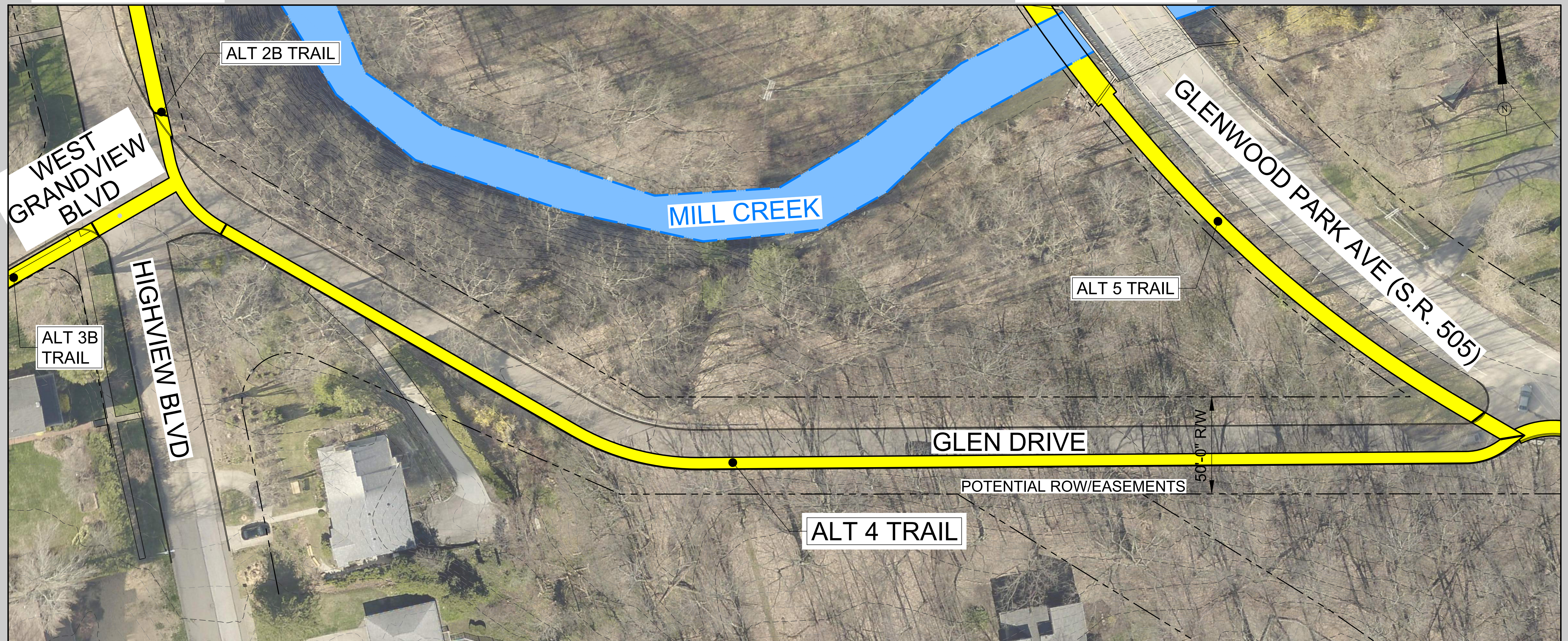


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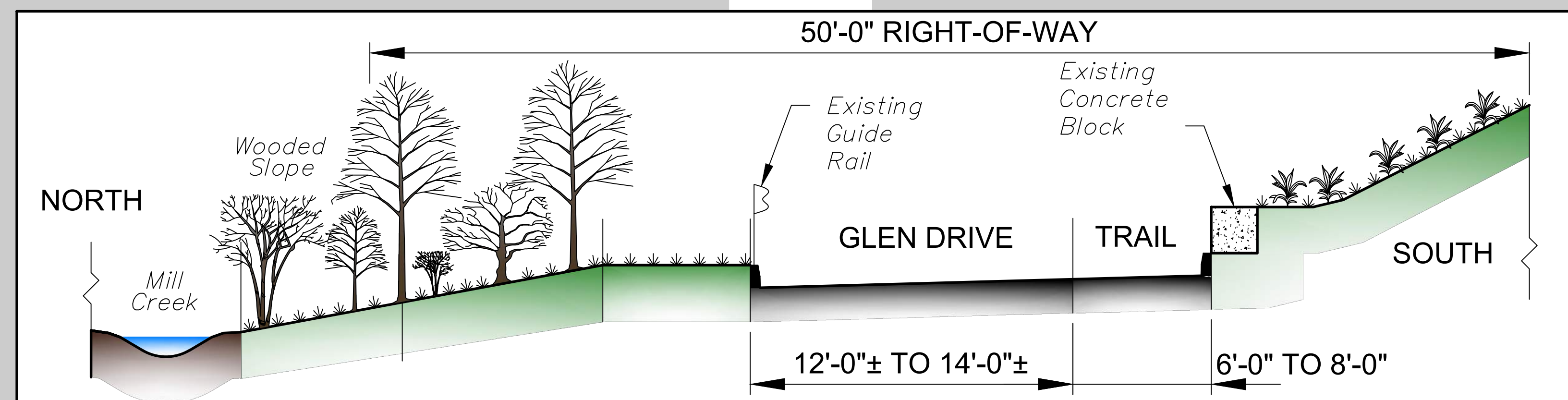
ALTERNATIVE 3B: WEST GRANDVIEW BLVD-2

MATCHLINE TO ALT 2B

MATCHLINE TO ALT 5



PLAN



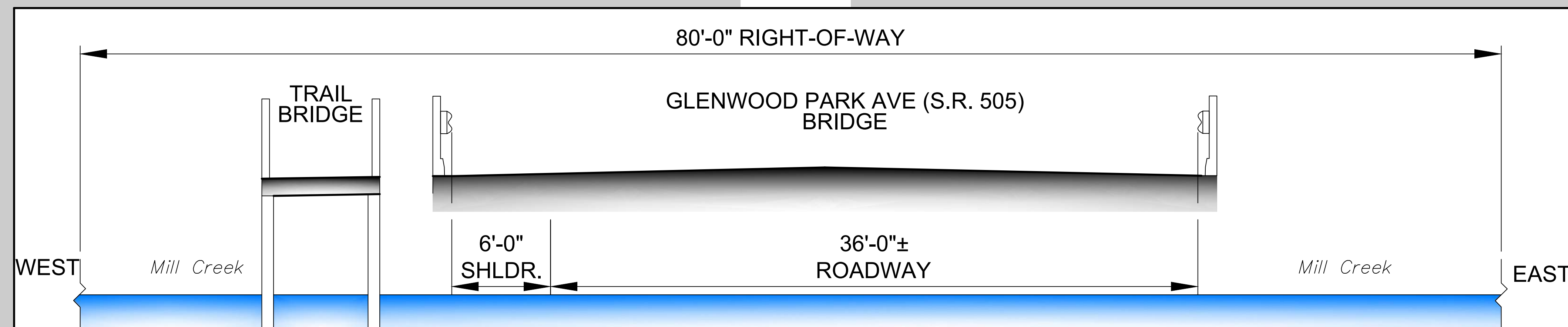
TYPICAL SECTION

ALTERNATIVE 4: GLEN DRIVE

MATCHLINE TO ALT 4



PLAN

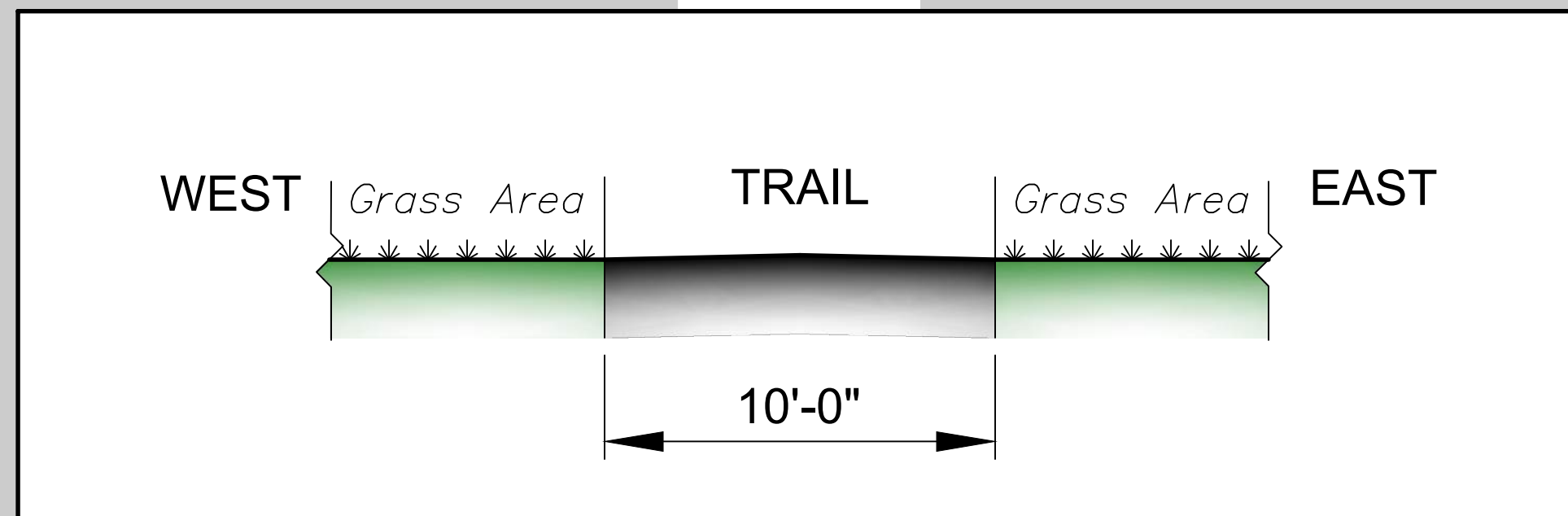


TYPICAL SECTION

ALTERNATIVE 5: GLENWOOD PARK AVENUE



PLAN



TYPICAL SECTION

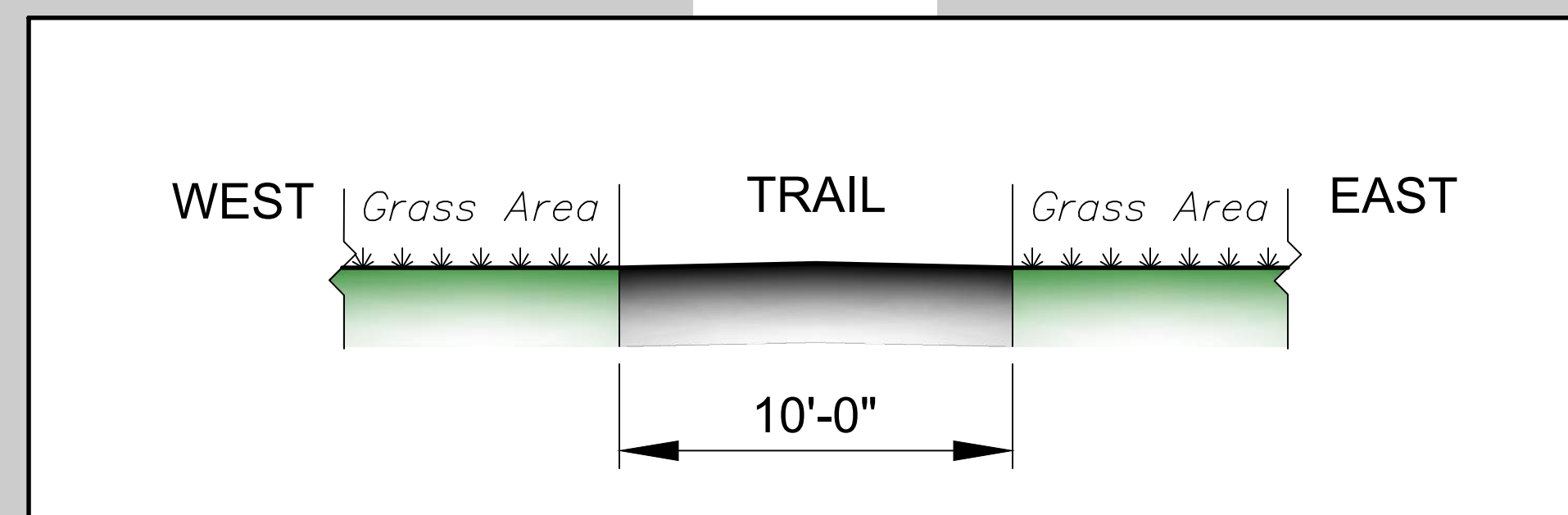
ALTERNATIVE 6: GLENWOOD PARK-1

MATCH TO ALT 6 GLENWOOD PARK-1

MATCH TO ALT 6 GLENWOOD PARK-3



PLAN



TYPICAL SECTION

ALTERNATIVE 6: GLENWOOD PARK-2

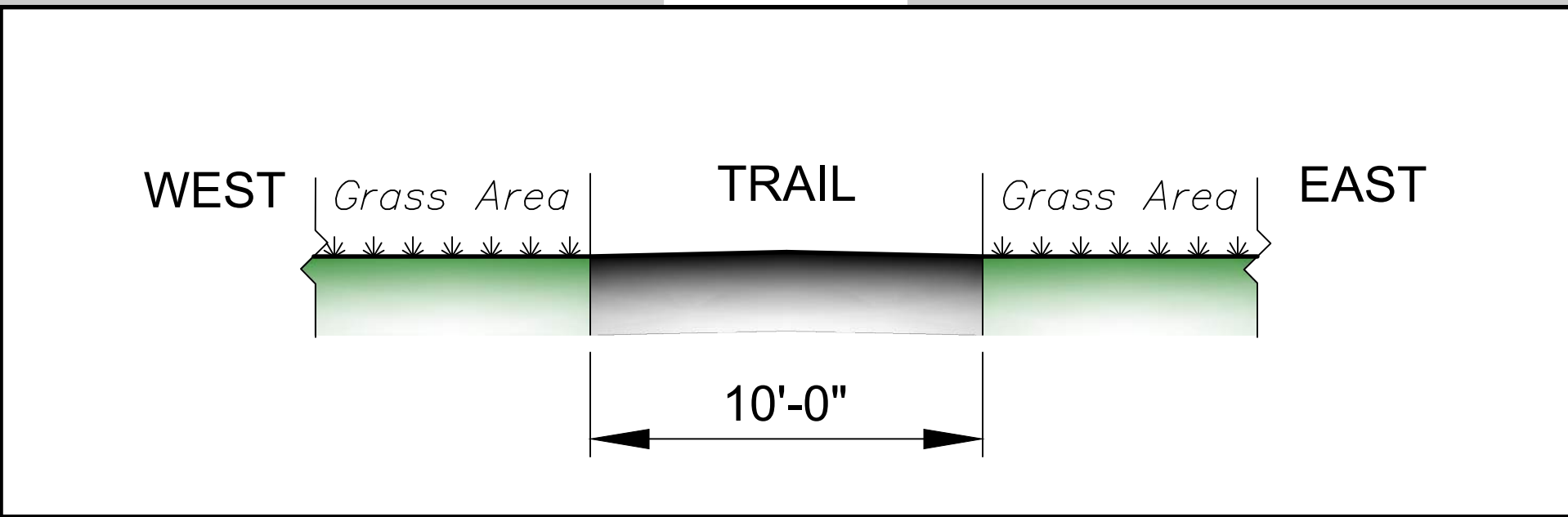
MATCHLINE TO BRIDGE TRAIL

MATCH TO ALT 6 GLENWOOD PARK-2



MATCHLINE TO ALT 8

PLAN

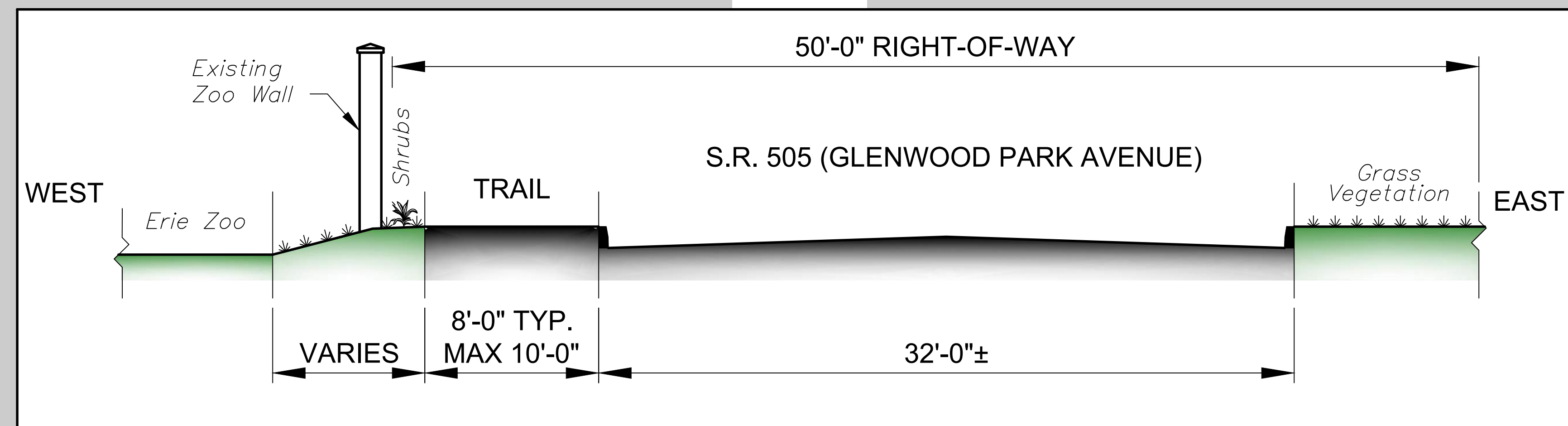


TYPICAL SECTION

ALTERNATIVE 6: GLENWOOD PARK-3

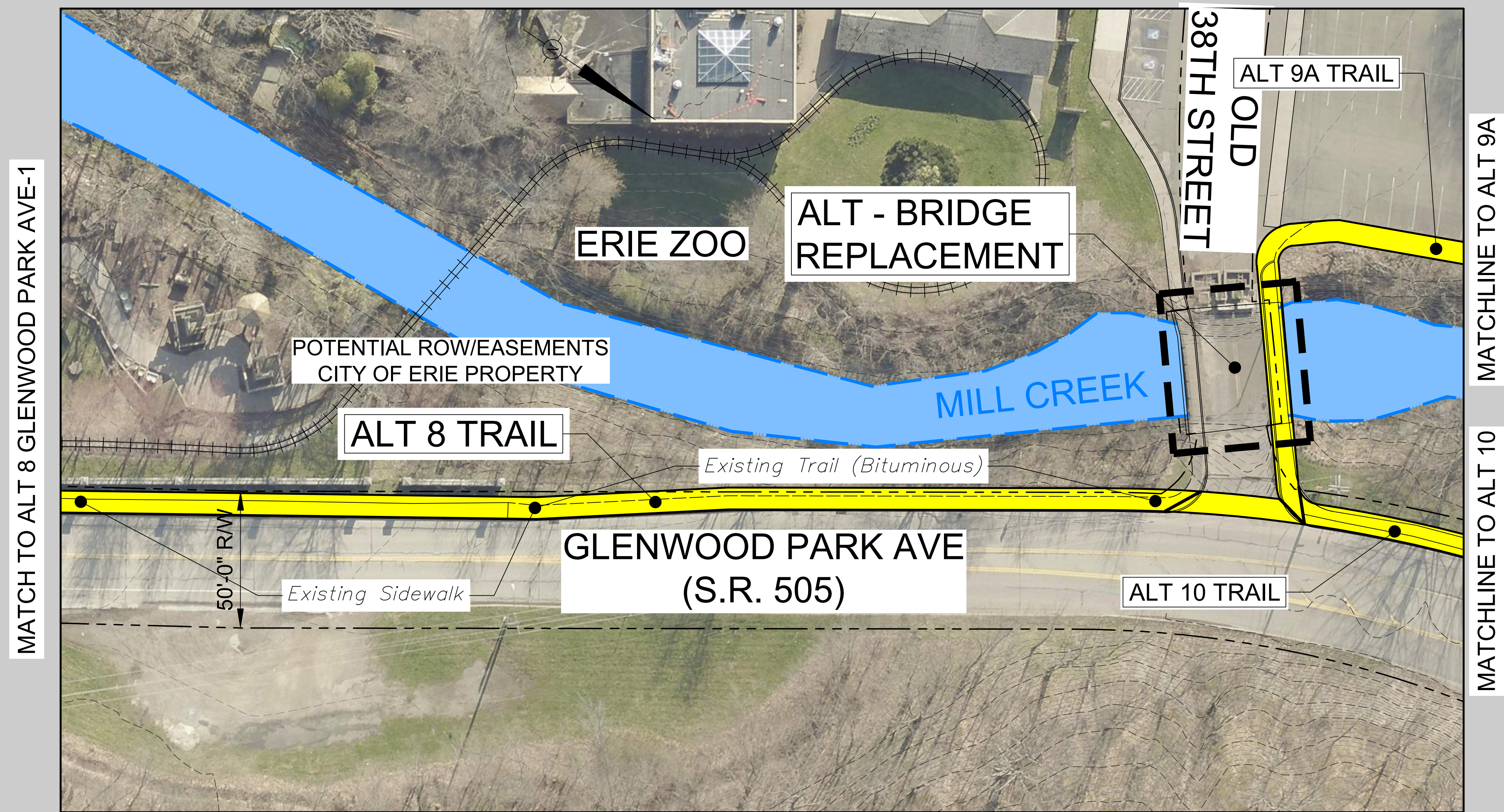


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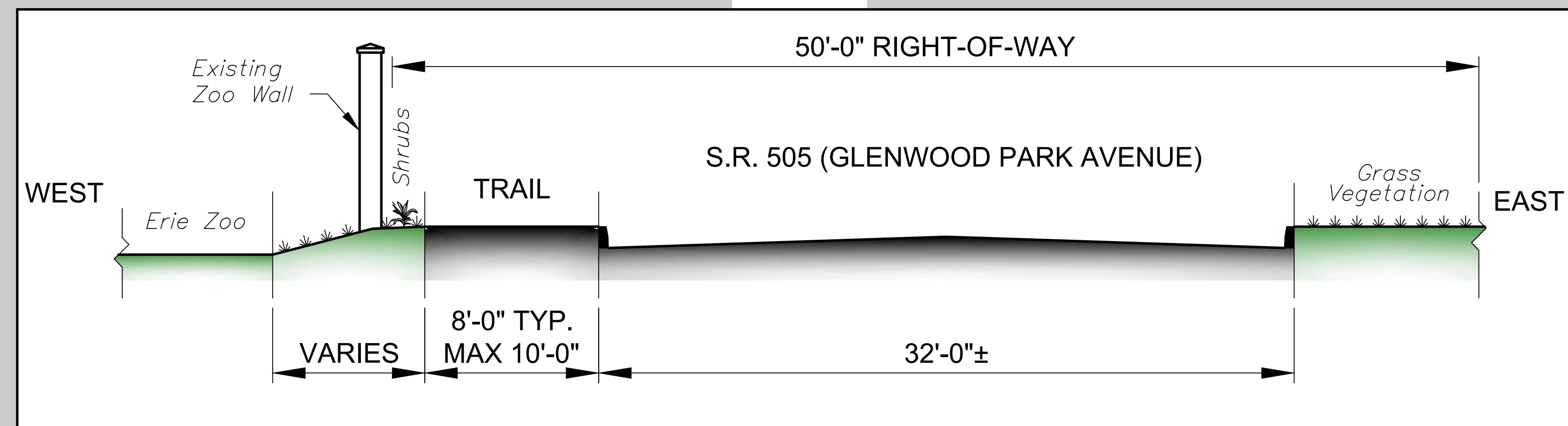


TYPICAL SECTION

ALTERNATIVE 8: GLENWOOD PARK AVENUE-1

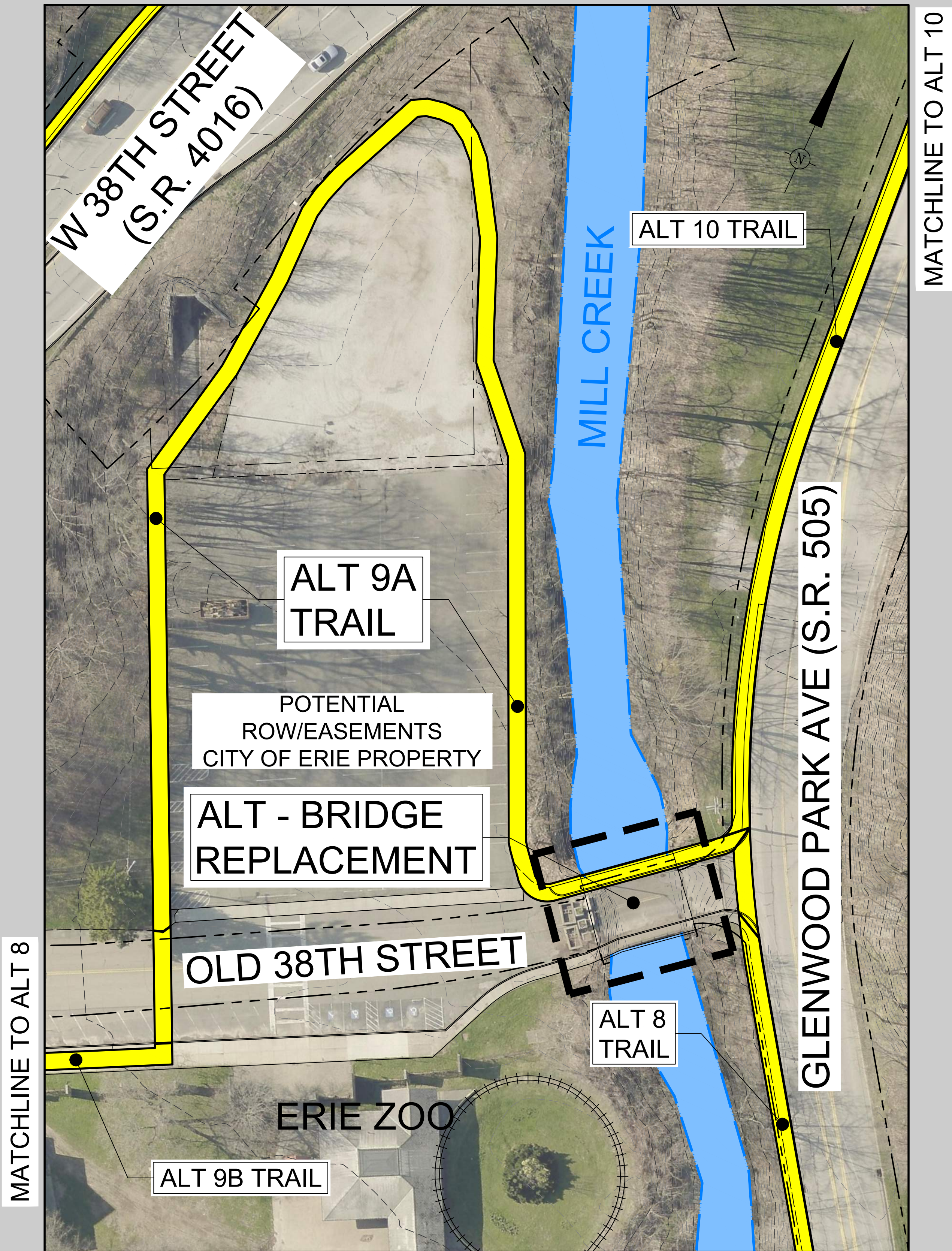


PLAN

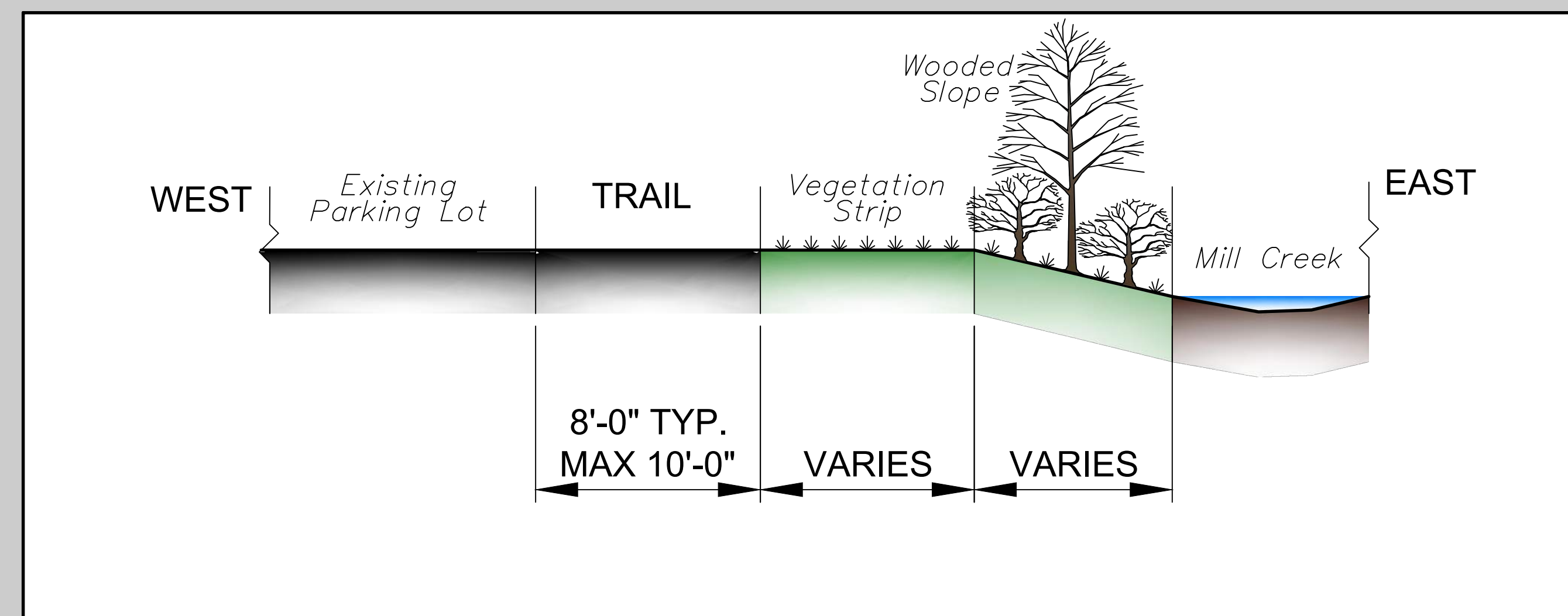


TYPICAL SECTION

ALTERNATIVE 8: GLENWOOD PARK AVENUE-2

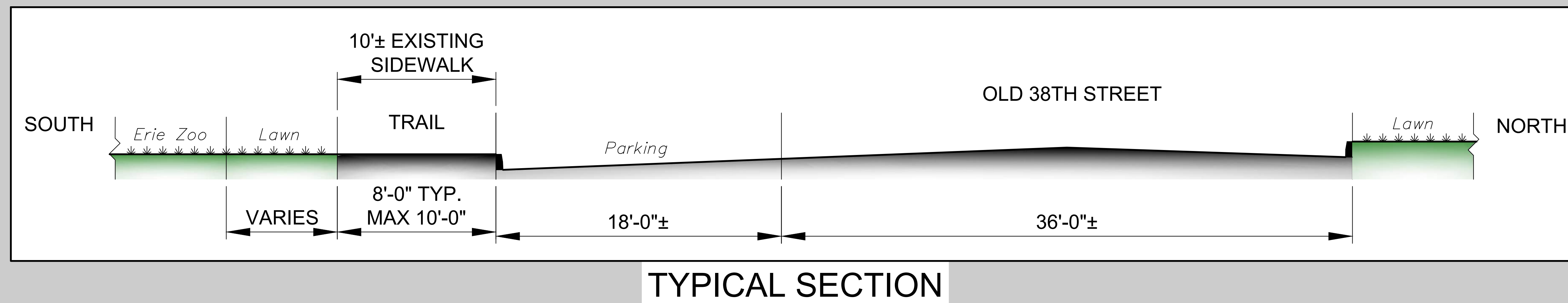


PLAN



TYPICAL SECTION

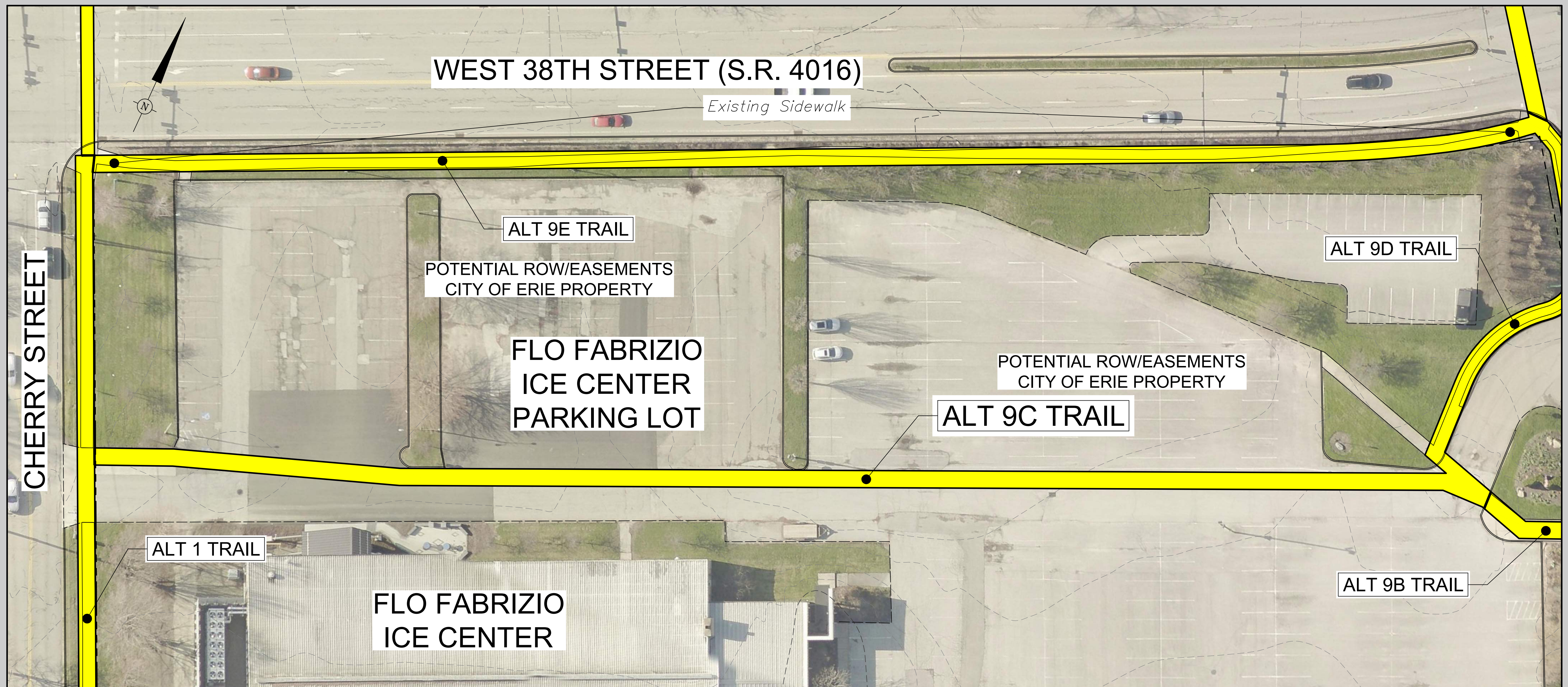
ALTERNATIVE 9A: ZOO PARKING LOT PERIMETER



ALTERNATIVE 9B: OLD WEST 38TH STREET

MATCHLINE TO ALT 11

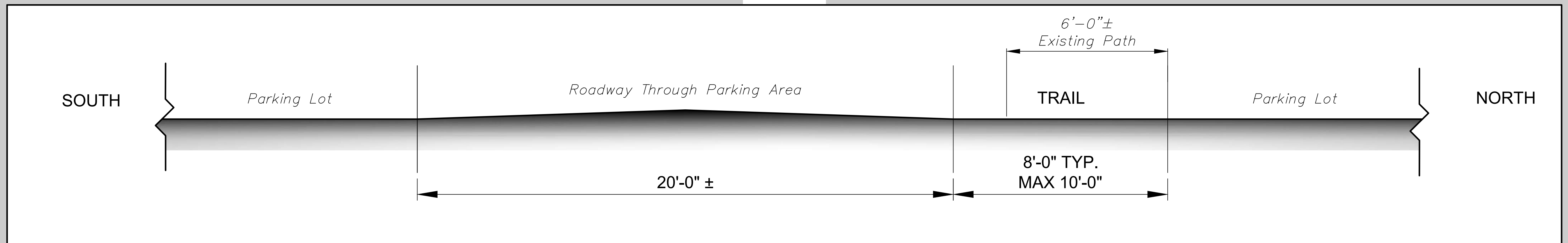
MATCHLINE TO ALT 11



MATCHLINE TO ALT 1

PLAN

MATCHLINE TO ALT 9B



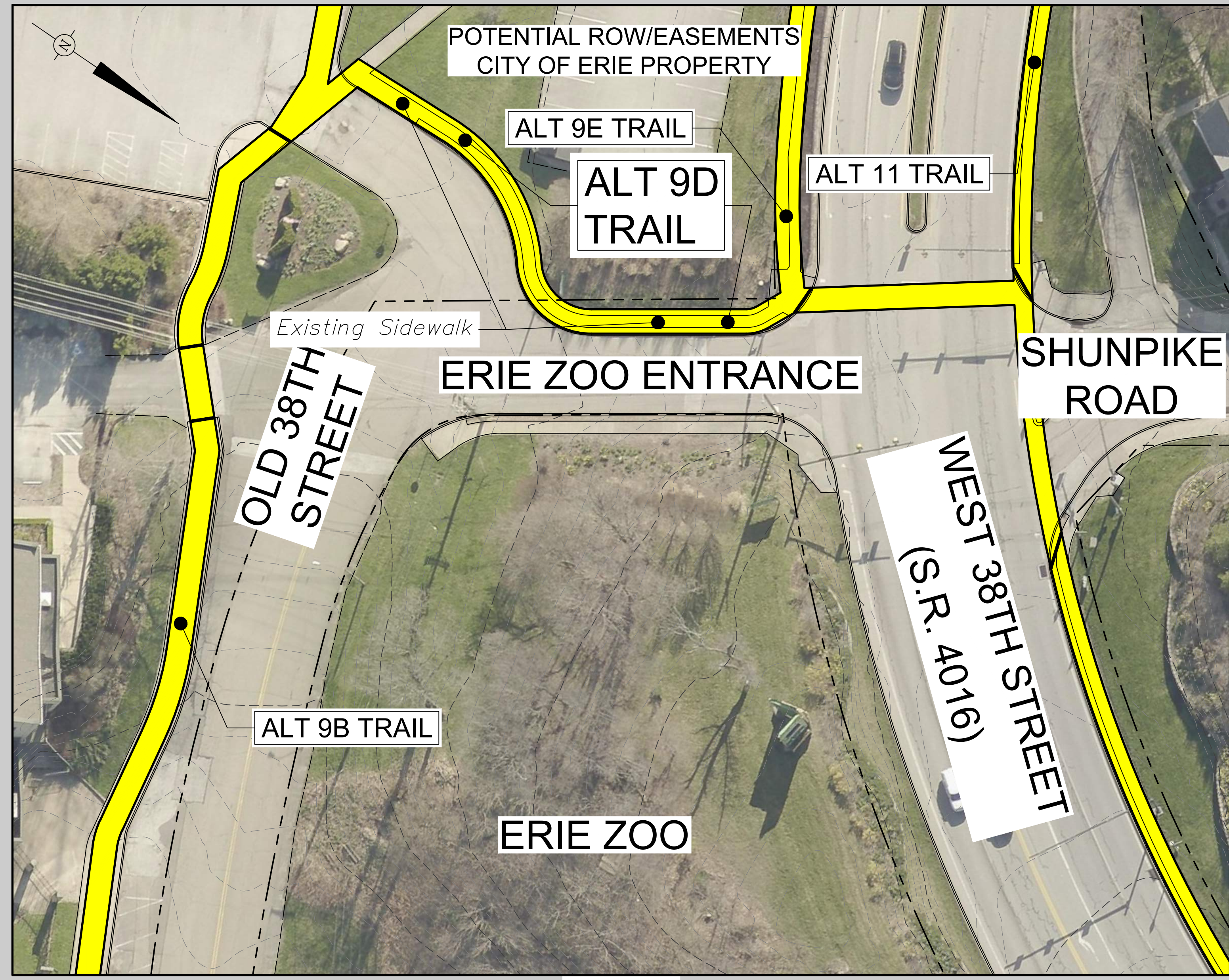
TYPICAL SECTION

ALTERNATIVE 9C: FLO FABRIZIO ICE CENTER PARKING LOT

MATCHLINE TO ALT 9C

MATCHLINE
TO ALT 9E

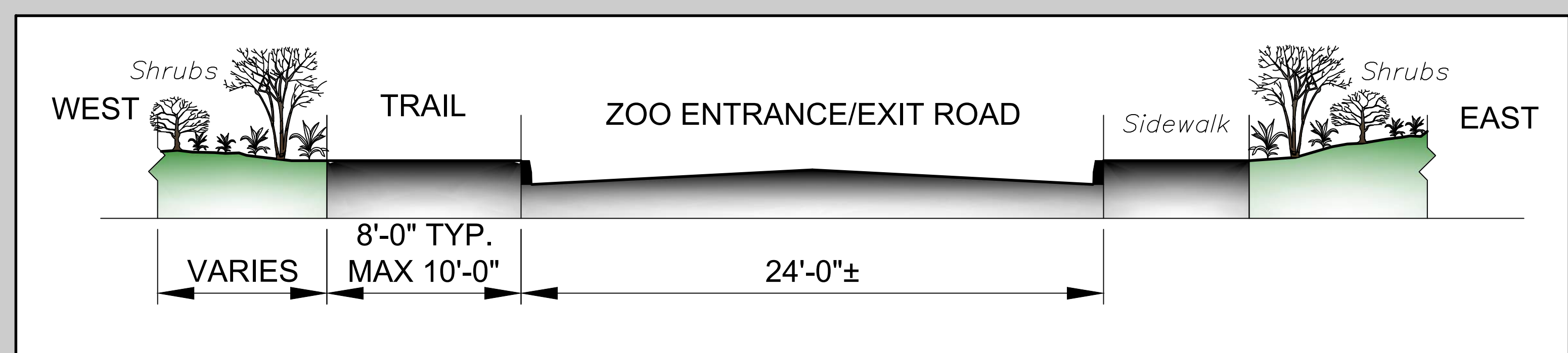
MATCHLINE
TO ALT 11



MATCHLINE TO ALT 9B

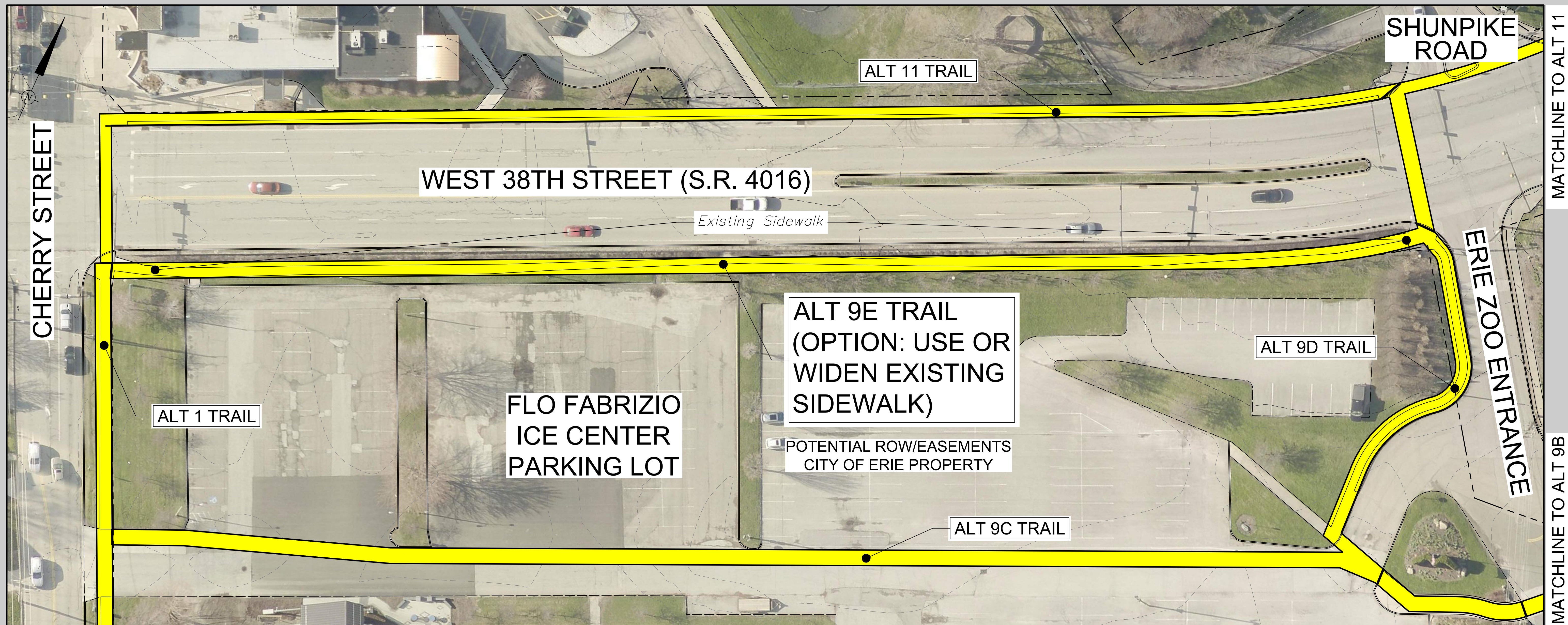
PLAN

MATCHLINE TO ALT 11A

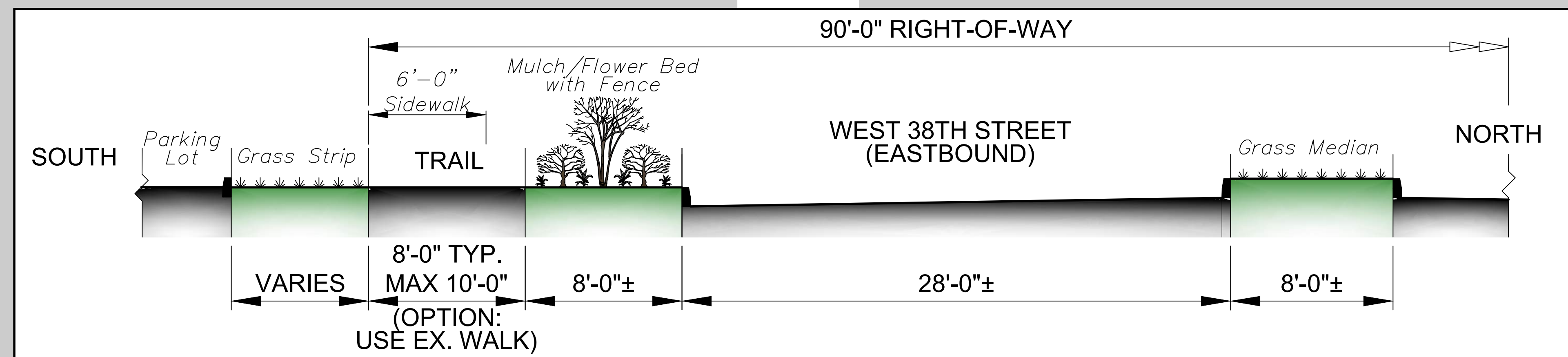


TYPICAL SECTION

ALTERNATIVE 9D: ERIE ZOO ENTRANCE ROAD



PLAN

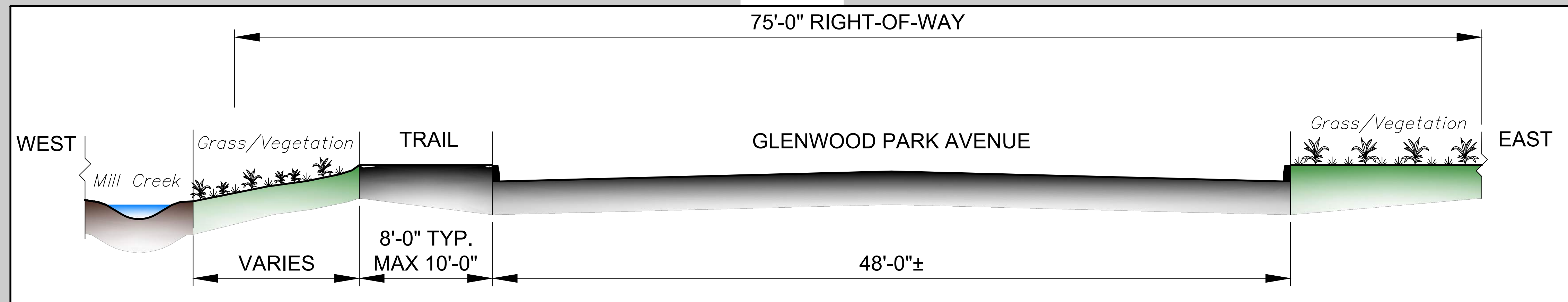


TYPICAL SECTION

ALTERNATIVE 9E: SOUTH SIDE WEST 38TH STREET

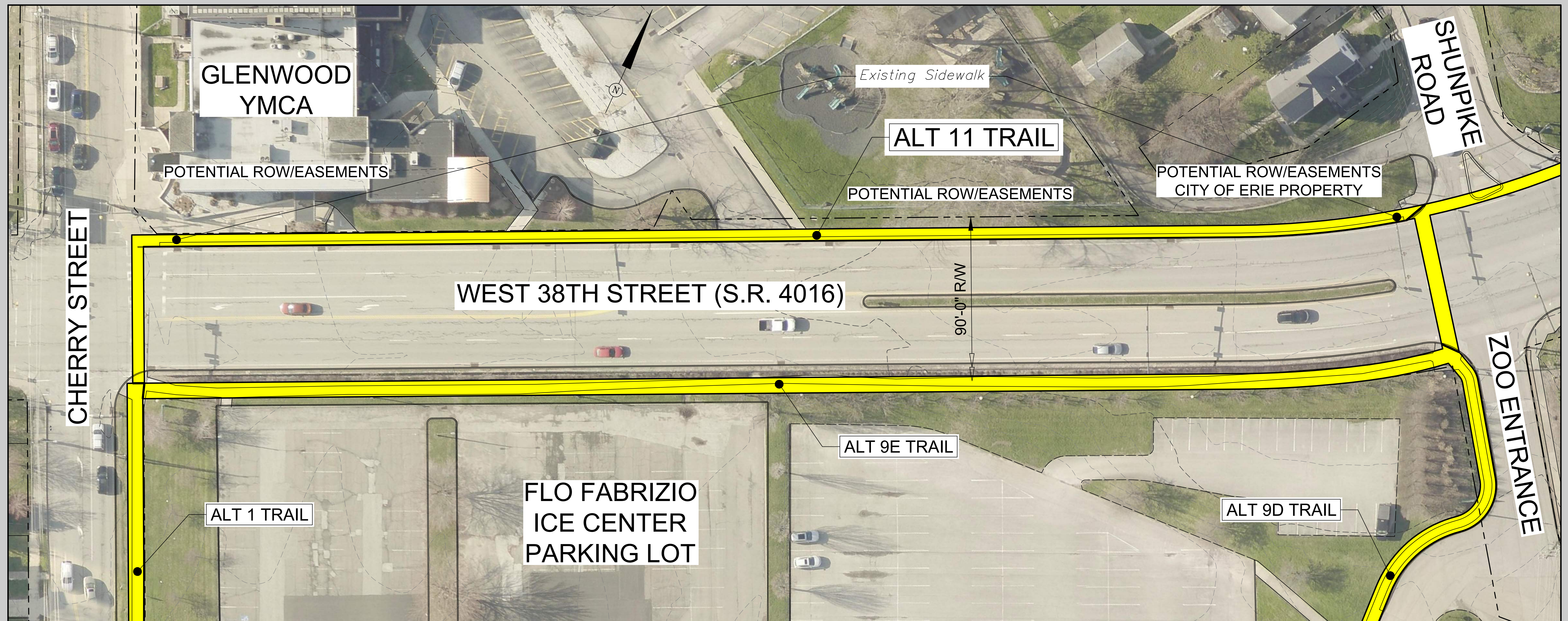


PLAN



TYPICAL SECTION

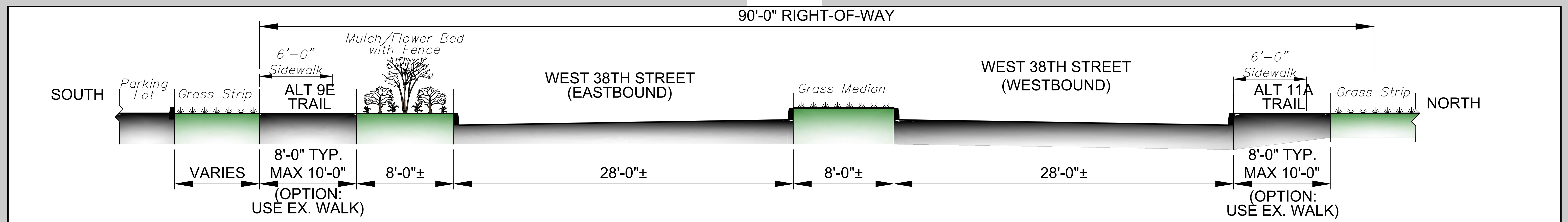
ALTERNATIVE 10: GLENWOOD PARK AVENUE



MATCHLINE TO ALT 1

PLAN

MATCHLINE TO ALT 9D

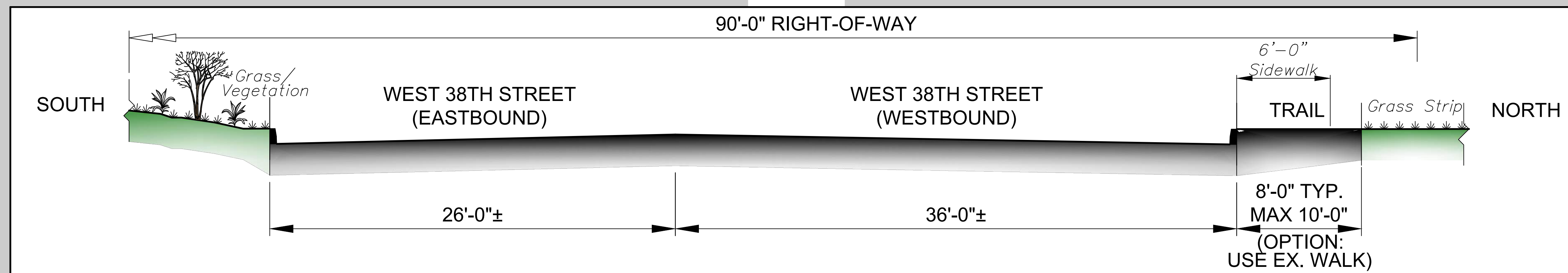


TYPICAL SECTION

ALTERNATIVE 11: WEST 38TH STREET-1



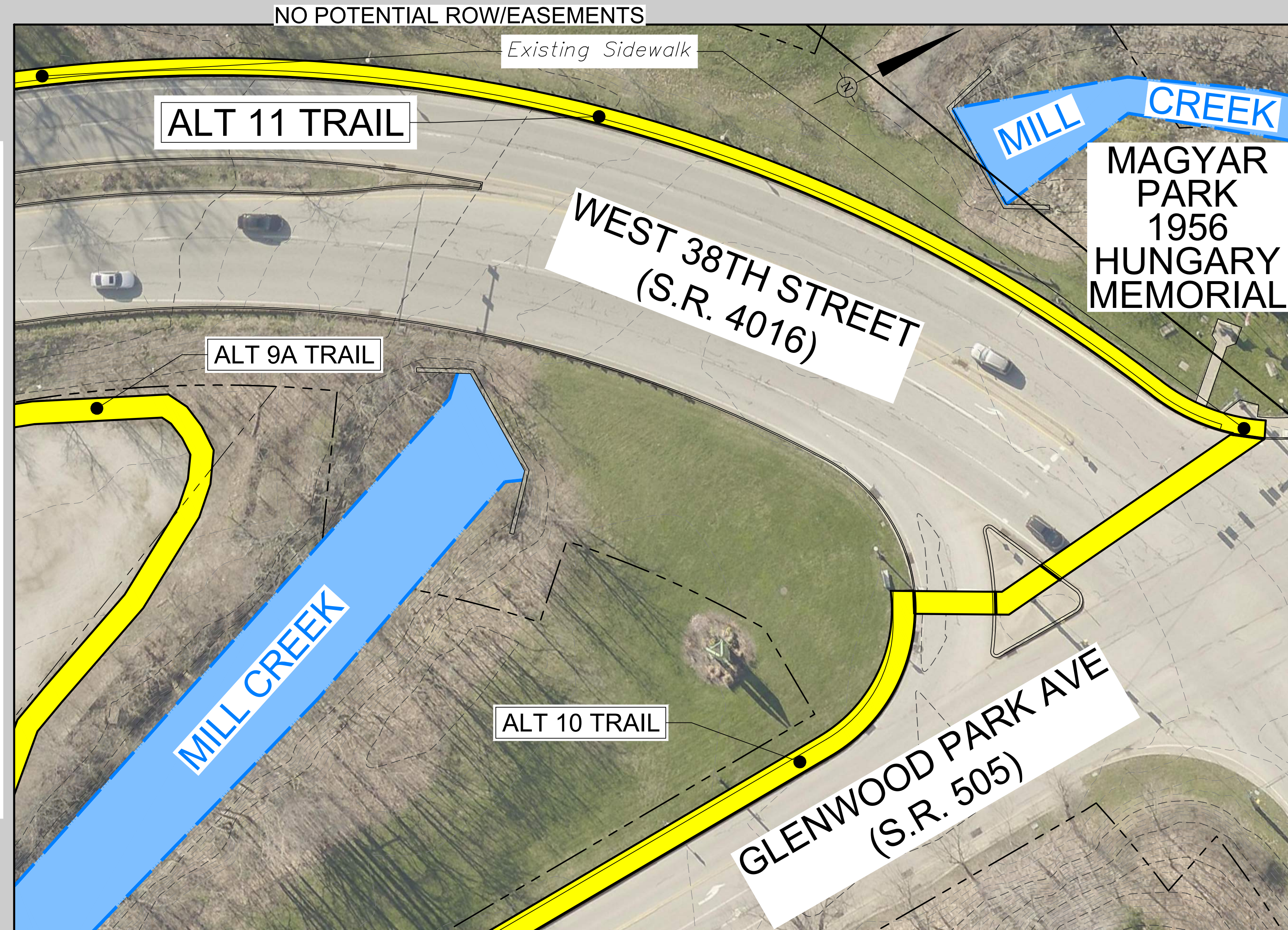
PLAN



TYPICAL SECTION

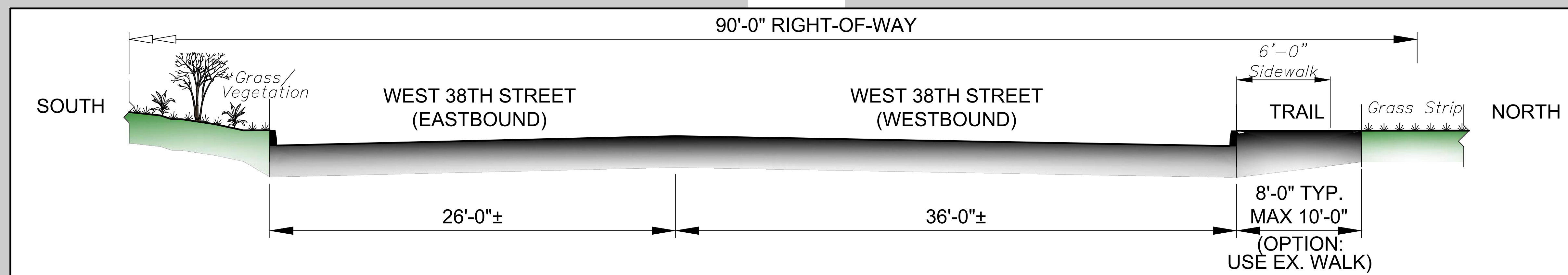
ALTERNATIVE 11: WEST 38TH STREET-2

MATCH TO ALT 11 NORTH SIDE WEST 38TH STREET-2



MATCHLINE TO ALT 10

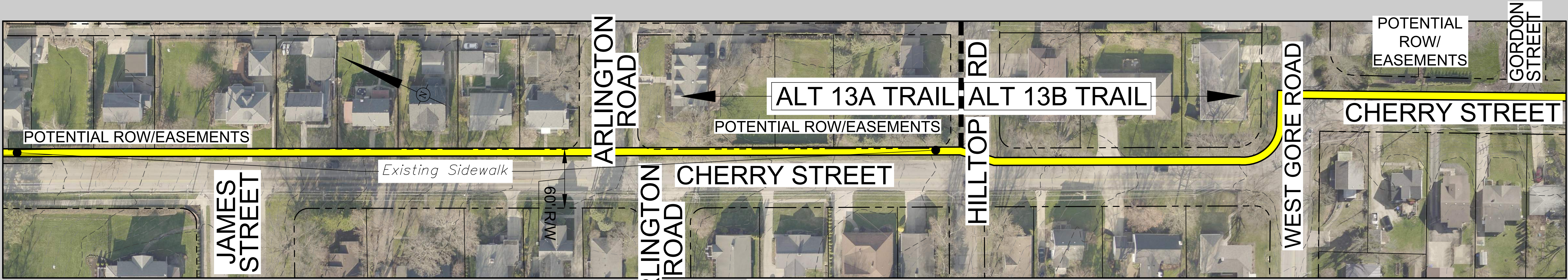
PLAN



TYPICAL SECTION

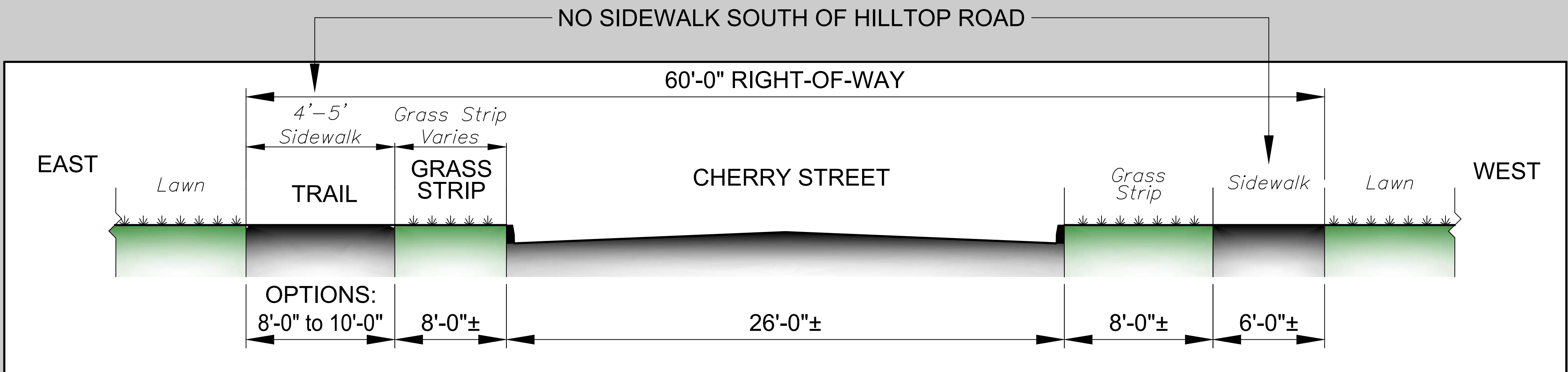
ALTERNATIVE 11: WEST 38TH STREET-3

MATCH TO ALT 3A

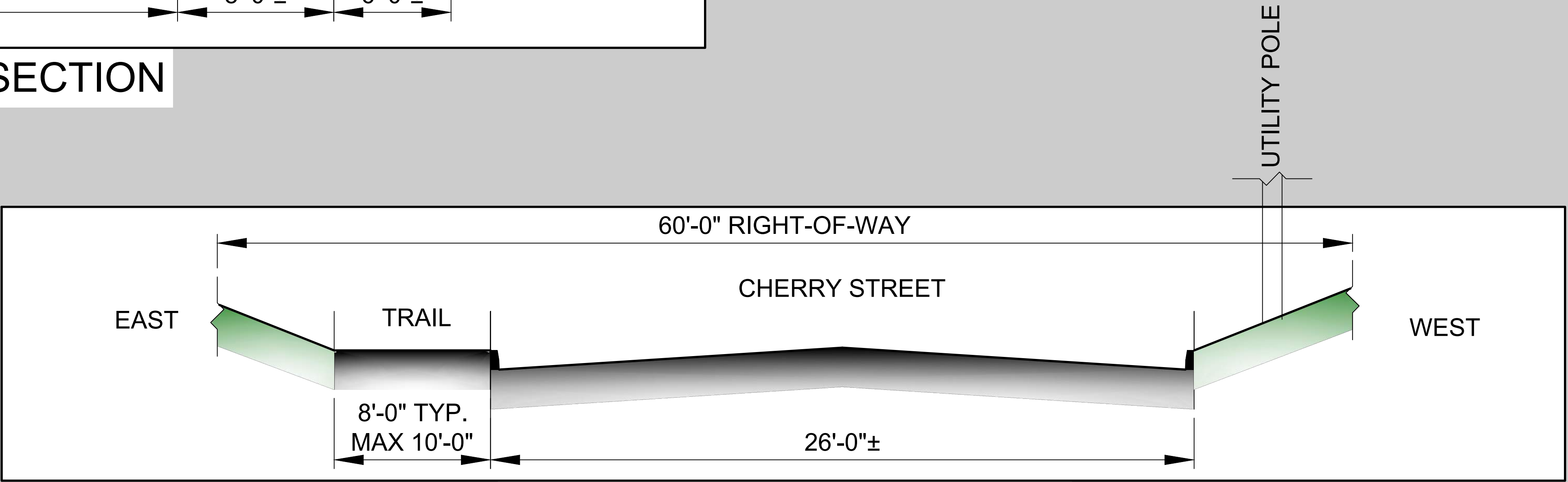


MATCH TO ALT 13B

PLAN

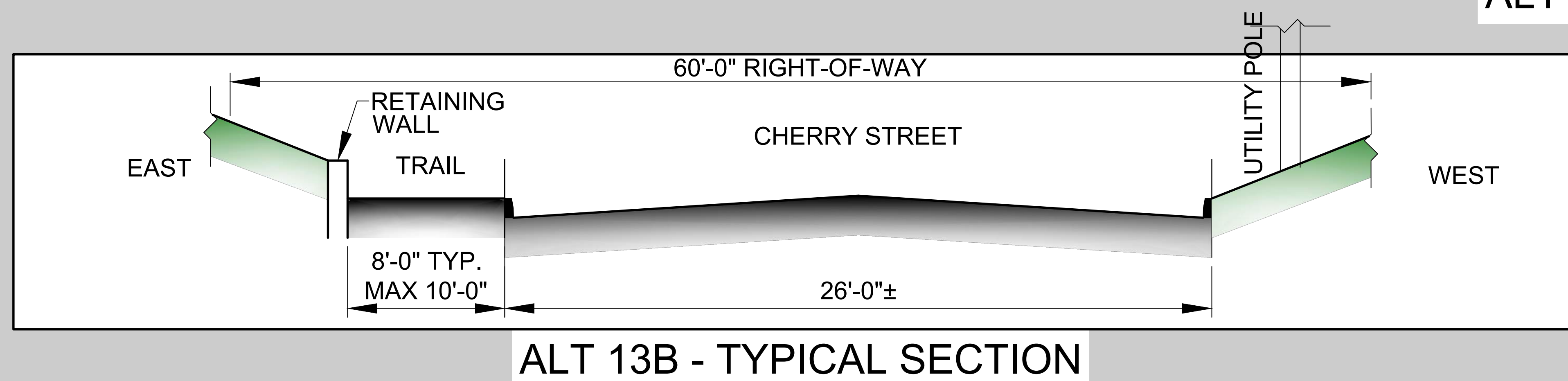
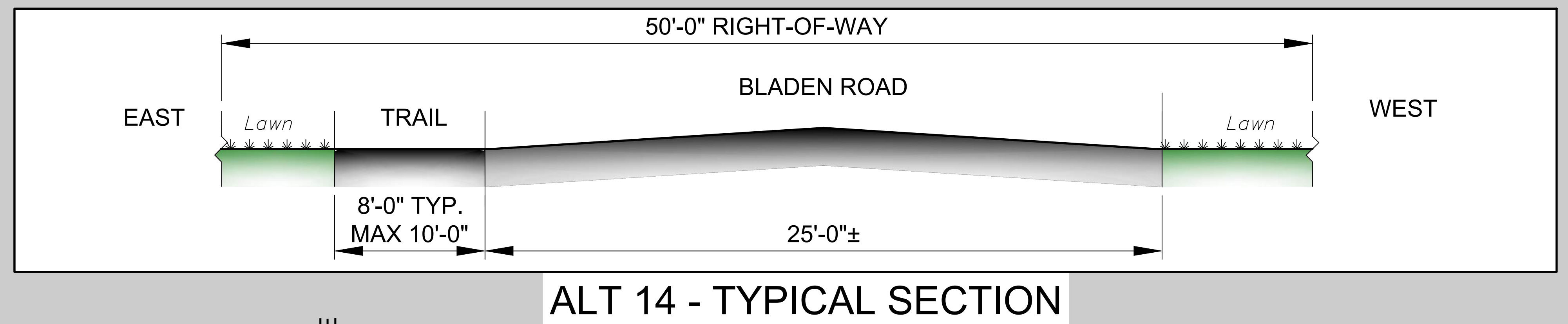
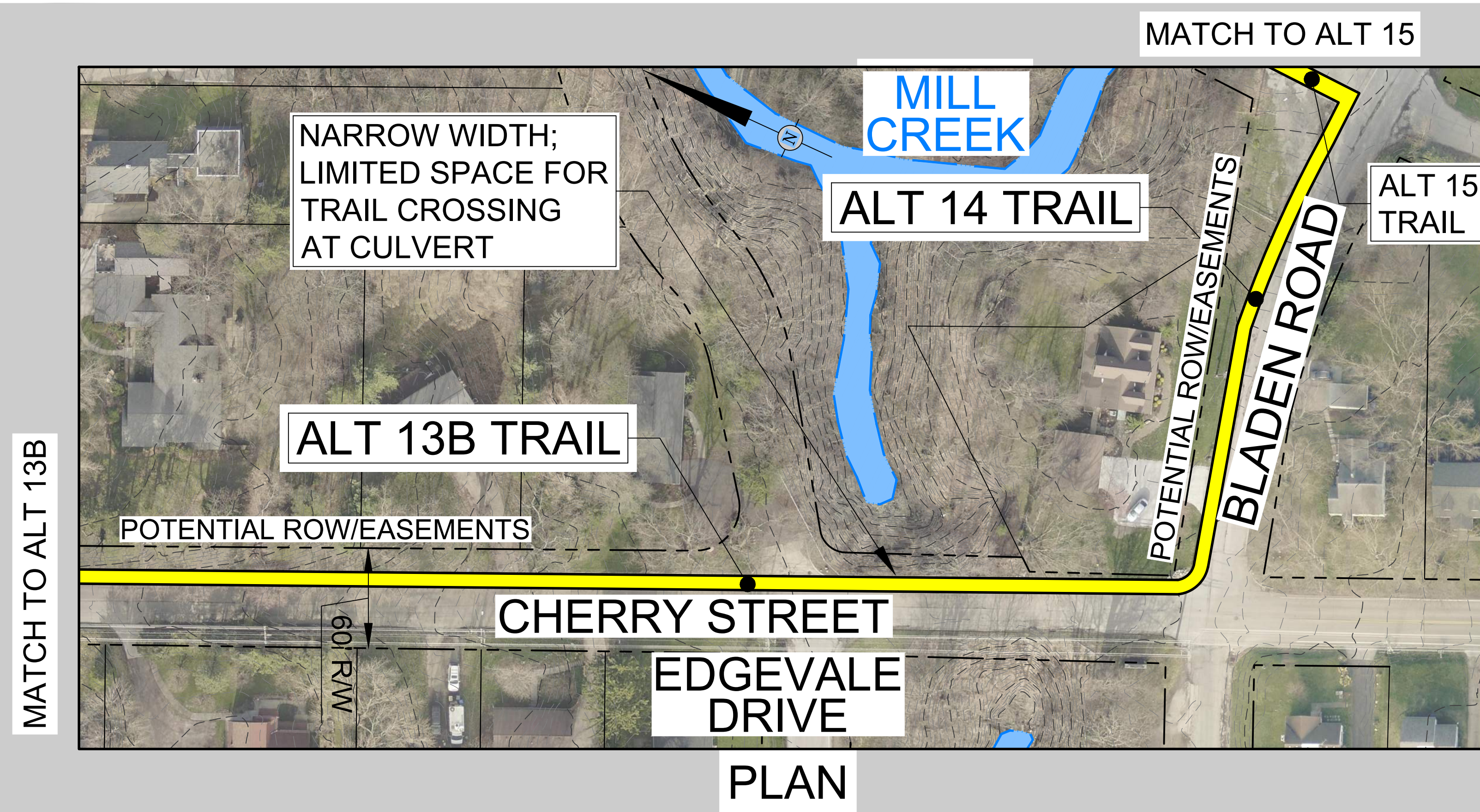


ALT 13A - TYPICAL SECTION

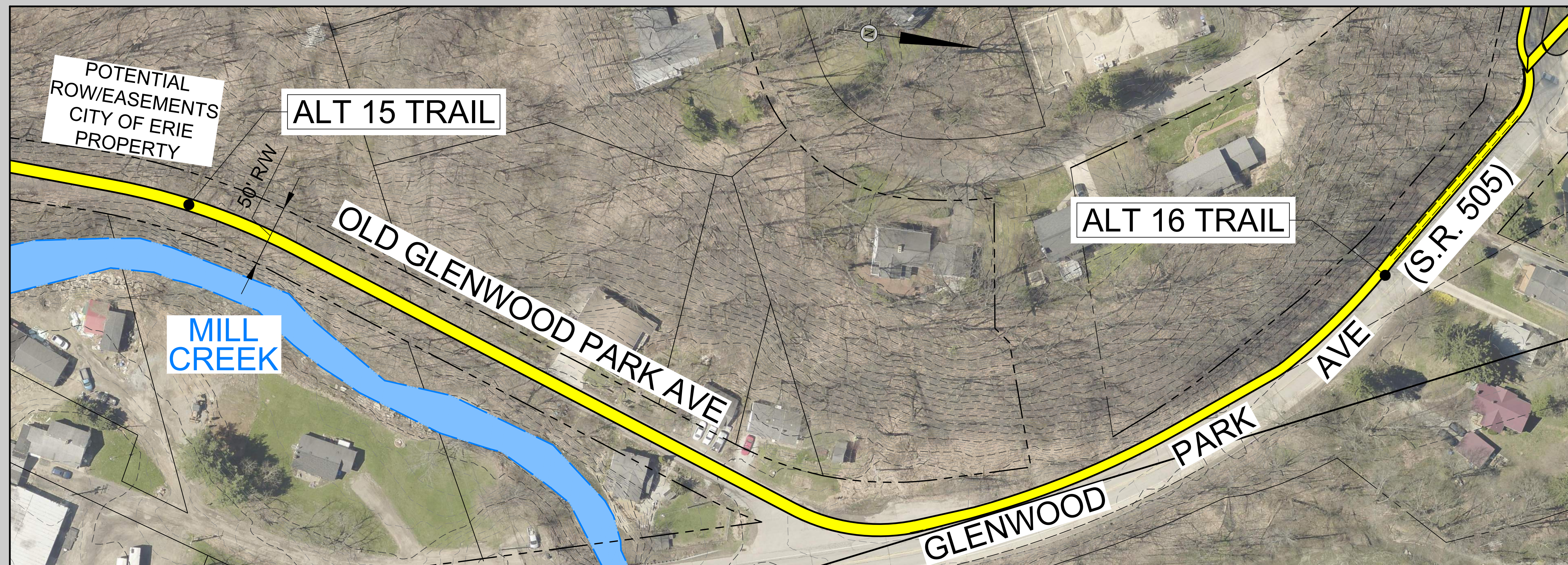


ALT 13B - TYPICAL SECTION

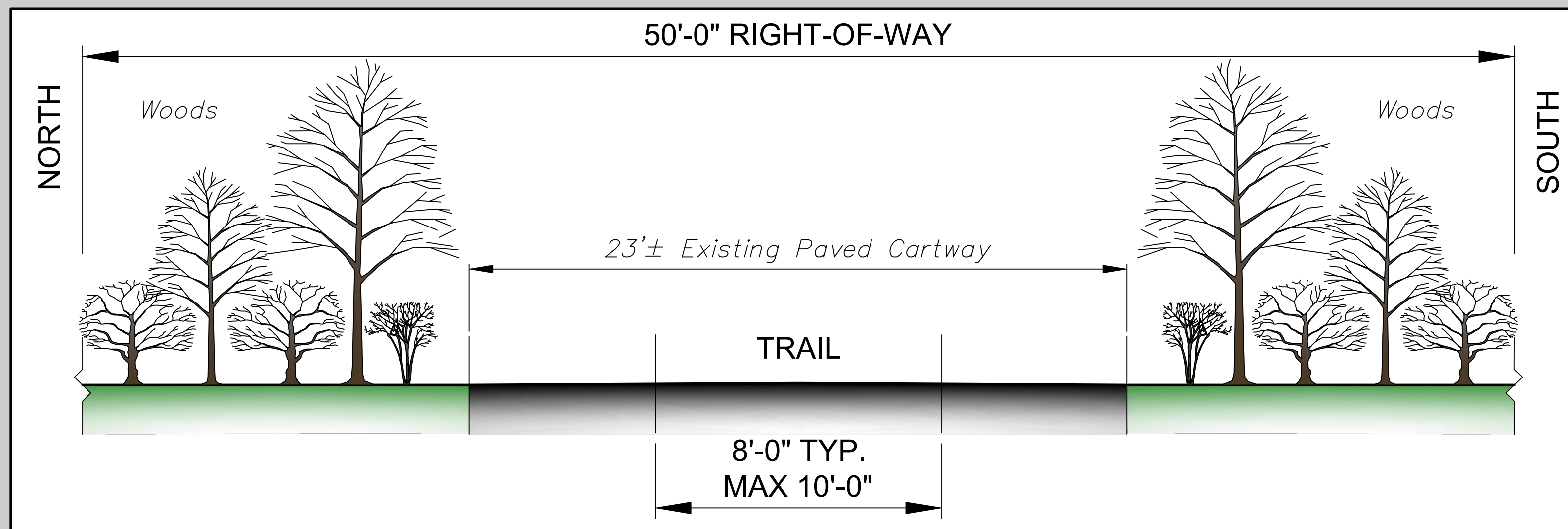
ALTERNATIVES 13A and 13B: CHERRY STREET



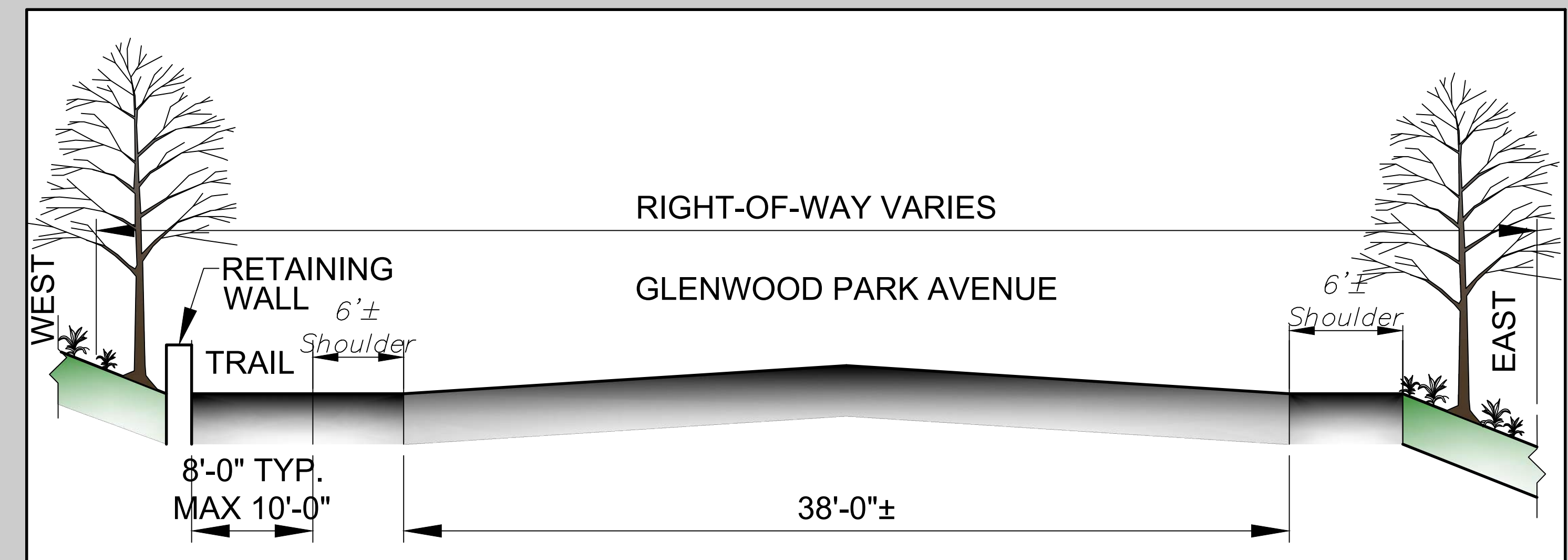
ALTERNATIVES 13B and 14: CHERRY STREET and BLADEN ROAD



PLAN



ALT 15 - TYPICAL SECTION

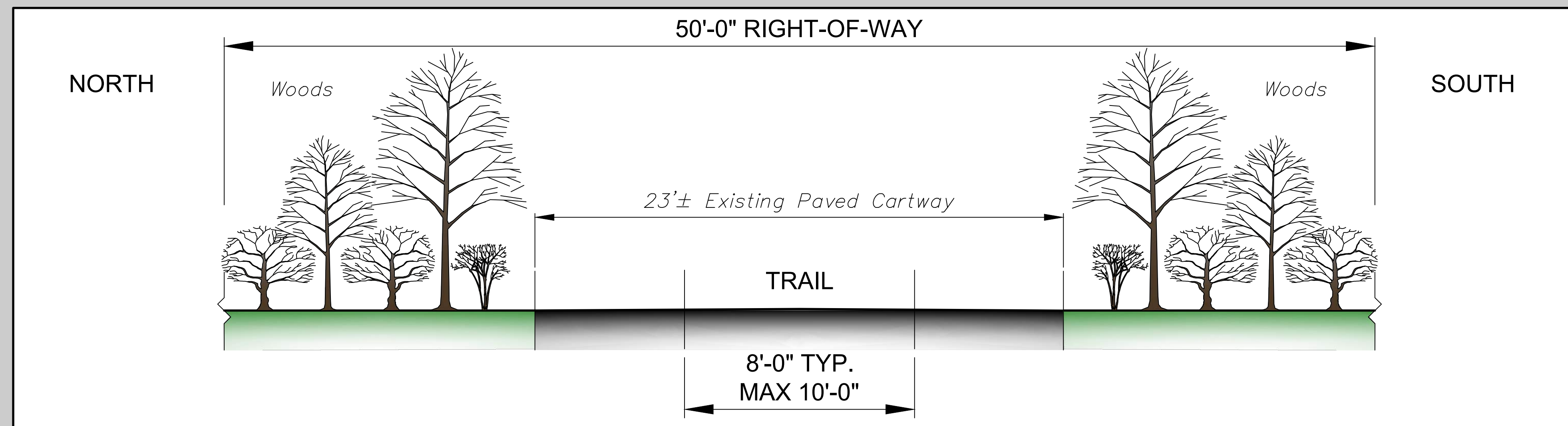


ALT 16 - TYPICAL SECTION

ALTERNATIVE 15 and 16: OLD GLENWOOD PARK AVENUE and GLENWOOD PARK AVENUE (S.R. 505)



PLAN

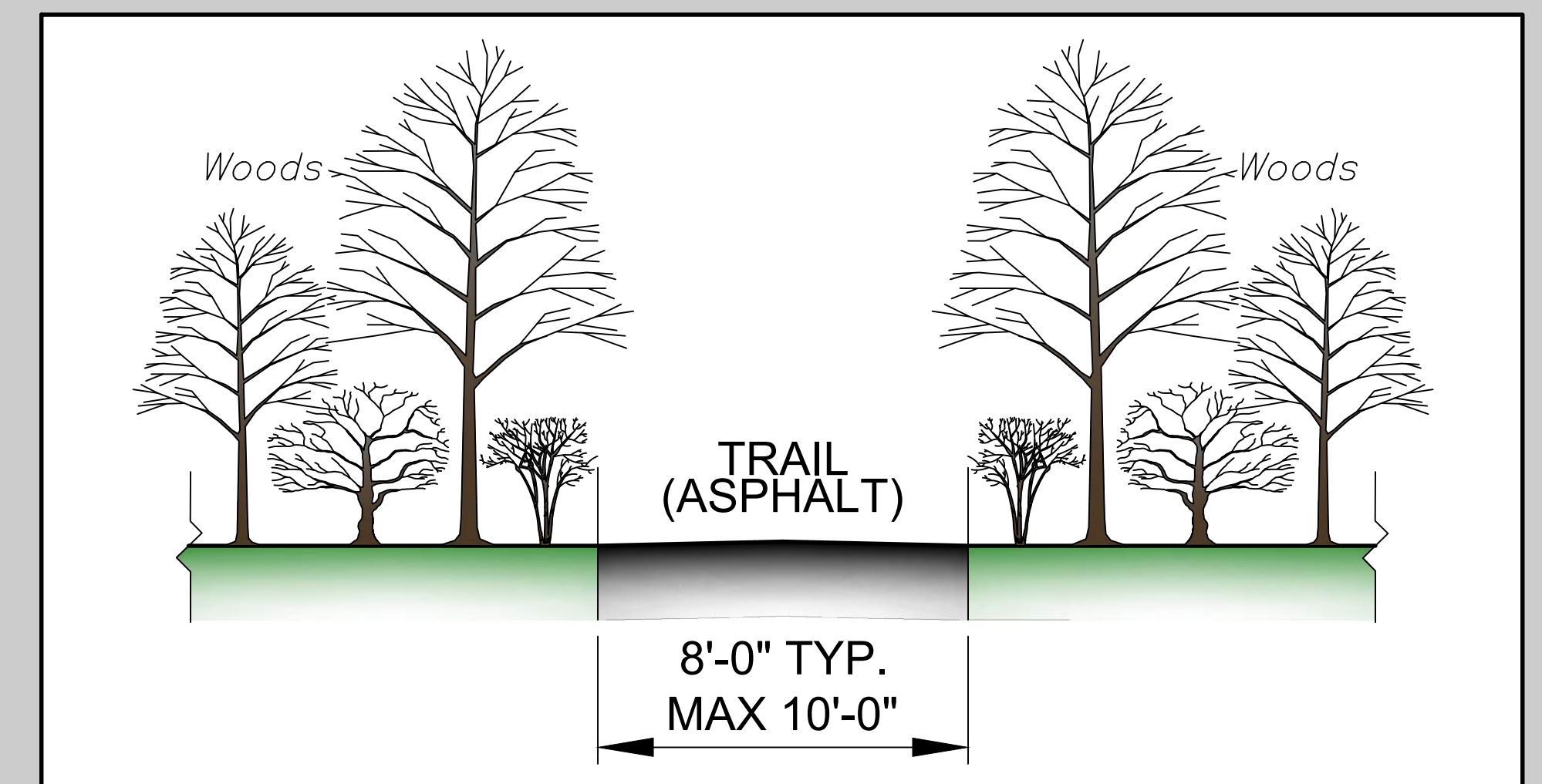
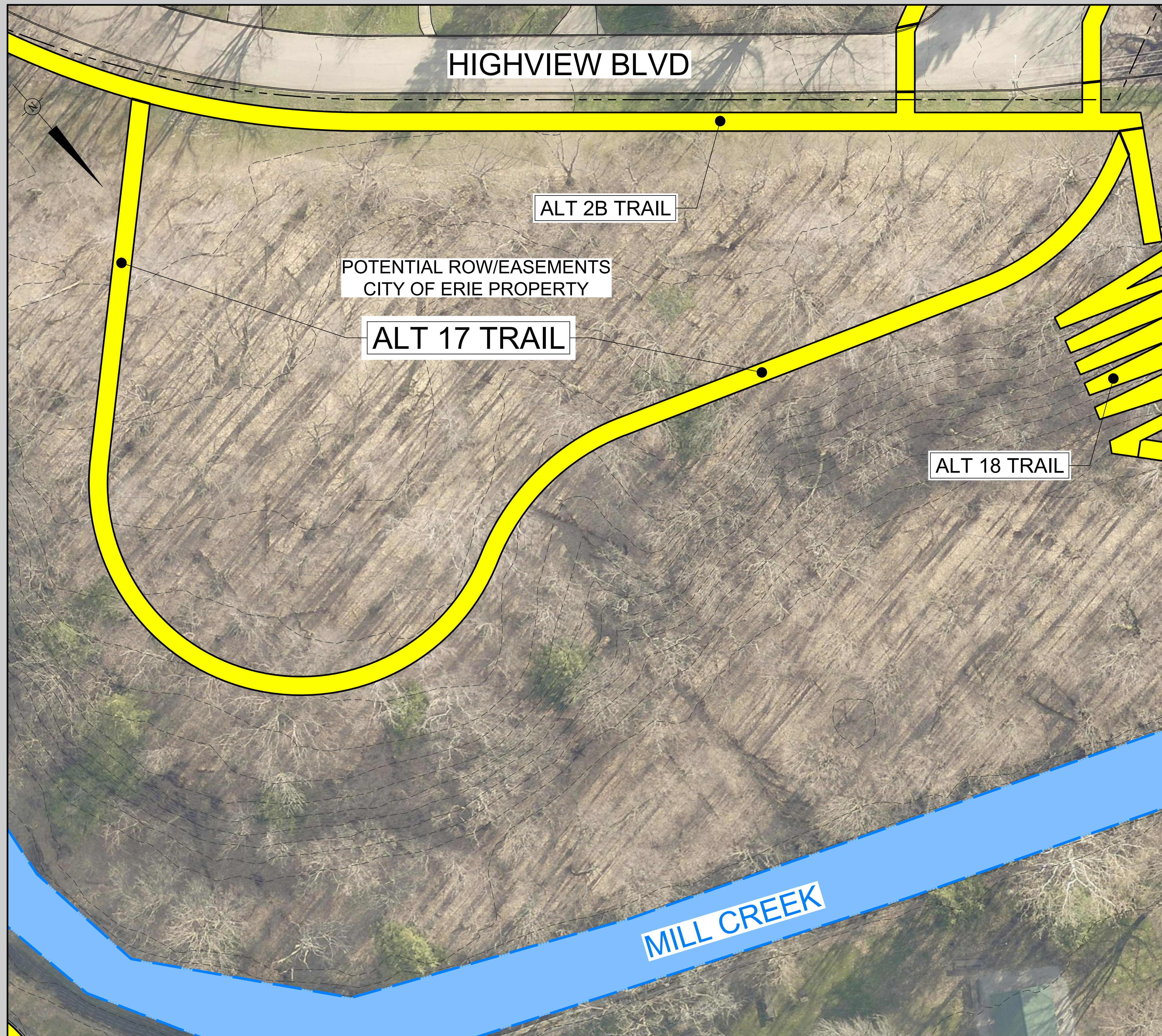


ALT 15 - TYPICAL SECTION

ALTERNATIVE 15: OLD GLENWOOD PARK AVENUE

MATCHLINE TO ALT 2A

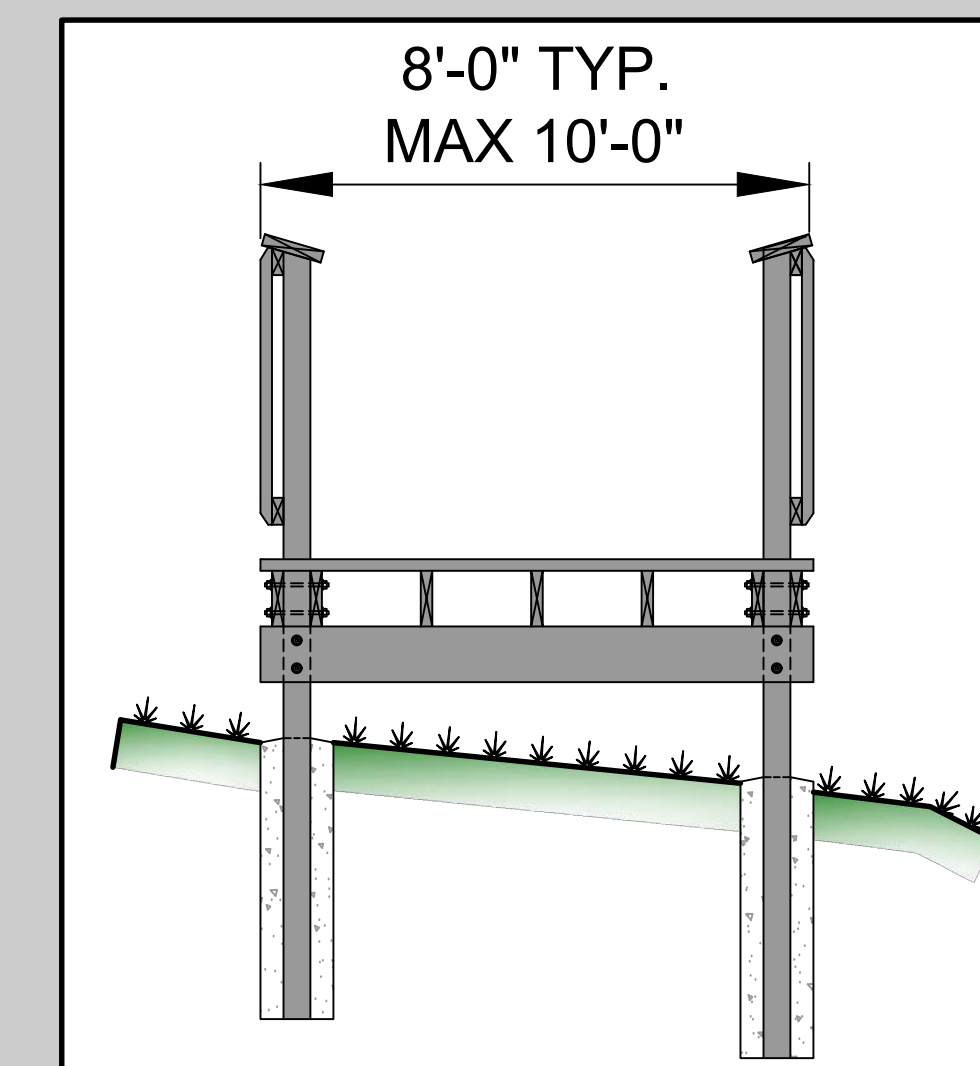
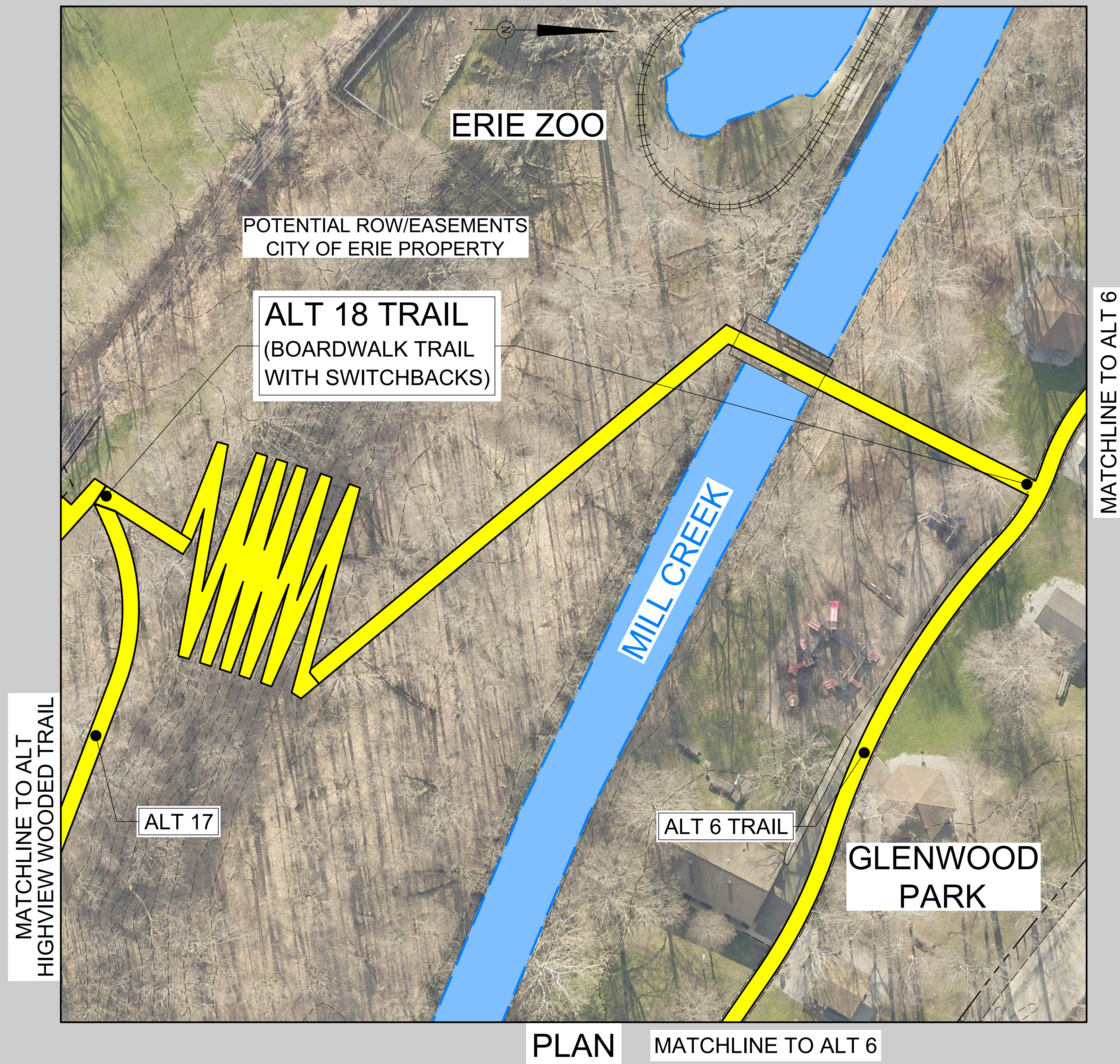
MATCHLINE TO ALT 2B



TYPICAL SECTION

PLAN

ALTERNATIVE 17: HIGHVIEW WOODED TRAIL



TYPICAL SECTION
(BOARDWALK TRAIL
WITH SWITCHBACKS)

ALTERNATIVE 18: FROM HIGHVIEW BLVD TO GLENWOOD PARK PATH

APPENDIX B

ALTERNATIVES MATRIX

Alternative Number	Alternative Description	Line striping and Ground Mounted Flexible Post Delineators	Partial replacement of existing concrete sidewalk/trail	New 6-ft. wide concrete sidewalk/trail	New 8-ft. wide concrete sidewalk/trail (Bicycle Compatible)	New 10-ft. wide concrete sidewalk/trail (Bicycle Compatible)	Widening Existing Concrete Sidewalk/Trail	New 6-ft. wide asphalt trail	New 8-ft. wide asphalt trail (Bicycle Compatible)	New 10-ft. wide asphalt trail (Bicycle Compatible)	Pedestrian Bridge and Separate Trail	Bridge Options	Pedestrian Signal Equipment Upgrade	Boardwalk Switchback	ROW/ Easement Considerations	Enhanced Maintenance Considerations	Utility Considerations	Challenges and Impacts
1	Cherry Street from West 38th Street to Glenwood Boulevard (Existing concrete sidewalk, 6-ft. wide)		\$95,000.00	\$330,000.00	\$440,000.00	\$550,000.00									X			- Limited width to widen existing concrete sidewalk without impacting existing trees and/or golf course. - Avoid impacts to existing trees on both sides of sidewalk. - Proximity to public golf course limits ability to widen on the east side. - Widening existing sidewalk creates an additional concrete longitudinal joint, which could be tripping hazard or problematic for bicycles.
2A	Glenwood Boulevard from Cherry Street to Highview (~250-feet of existing concrete sidewalk from Cherry Street to Homeland Blvd, varies, 4.5 to 5-foot wide)	\$20,000.00		\$160,000.00	\$270,000.00	\$335,000.00									X			- Westbound lane – Adjacent to golf course. - Westbound lane – Sharing existing roadway with vehicles. - Eastbound sidewalk – Trail width limitations due to right-of-way width. - Potential right-of-way impact to widen existing sidewalk or construct new trail 8-ft. or 10-ft. wide.
2B	Highview Boulevard from Glenwood Boulevard to Glen Drive (no existing concrete sidewalk or asphalt trail)							\$95,000.00	\$110,000.00	\$121,000.00					X		X	- Potential encroachment beyond existing right-of-way to construct trail on east side of roadway. - Utility poles adjacent to right-of-way. - Limited space on the east side of the road at the approach to Glen Drive and West Grandview may require a fill slope and/or retaining wall to provide sufficient width for a trail. - A trail on the west side of Highview Boulevard could potentially be constructed within existing right-of-way but would be located in the front yards of existing residential properties on Highview Boulevard and therefore is envisioned to be met with some opposition form the property owners. - Selective tree clearing for trail in area of fill slope and/or retaining wall.
3A	Cherry Street from Glenwood Boulevard to West Grandview Blvd. (Existing concrete sidewalk, 4.5-5-ft. wide)			\$110,000.00	\$145,000.00	\$180,000.00									X		X	- Potential right-of-way impacts to construct trail on east side of roadway. - Avoidance of existing mature trees and utility poles. - Limited right-of-way width adjacent to a residential area.
3B	West Grandview Boulevard from Cherry Street to Glen Drive		\$90,000.00	\$215,000.00	\$285,000.00	\$355,000.00									X		X	- Potential right-of-way encroachment to widen existing sidewalk or construct new trail of 8- or 10-ft. wide. - Potential tree removal. - Utility pole conflict near alley between Upland Drive and Highview Boulevard.
4	Glen Drive from Highview to Glenwood Park Avenue (SR 505)	\$70,000.00		\$250,000.00	\$300,000.00										X	X	X	- Remove and replace non-standard guiderail on north side of road. - Drainage from south slope seeping onto trail and road. - Removing and resetting existing concrete blocks and steep slope grading. - Accessibility challenges. Ramps and landings to meet slope requirements. - Existing street lights - avoid or relocate
5	Glenwood Park Avenue (SR 505) from Glen Drive to Glenwood Park trail (south end) - Pedestrian Bridge										\$750,000.00				X	X	X	- Pedestrian safety if existing roadway should be used. - Limited existing shoulder width. - High speed of vehicles. - Trail location on outside of curve. - Permitting requirements for new pedestrian bridge crossing Mill Creek. - Construction costs for a new pedestrian bridge crossing Mill Creek. - Right-of-way or easement requirements for trail and new pedestrian bridge crossing of Mill Creek. - Maintenance agreement with the City of Erie.
6	Glenwood Park Trail									\$50,000 to \$105,000					X			Conflicts and available space for realigning trail route through or around parking lots.
8	Glenwood Park Avenue (SR 505) from Glenwood Park trail (north end) to old 38th Street Bridge			\$50,000.00	\$140,000.00	\$155,000.00			\$100,000.00	\$105,000.00					X	X		- Limited space to widen due to existing fence and landscaped wall along the eastern perimeter of the Zoo property and Glenwood Park Avenue (SR 505). - Proximity to Mill Creek and steep slope may require retaining wall for placement of fill for trail widening.
9A	Old 38th Street Bridge - Pedestrian Bridge											\$315,000 to \$440,000			X	X	X	- Bridge permitting. - Flood zone and environmental impacts, if any, must be minimized. - Consideration of current Zoo Master Plan and future changes to the existing Zoo parking area.

APPENDIX C
STAKEHOLDER MEETING MINUTES



1319 Sassafra Street
Erie, PA 16501
814.453.5702

Meeting Minutes - March 21, 2023 at 1:00PM-3:00PM
Stakeholder Discussion and Study Area/Site Walk
PennDOT BPT – E05403, Erie Zoo Trail Study

Attendees:

Roo Kojancie - Erie Zoo (Zoo)
Scott Mitchell - Erie Zoo (Zoo)
Jason Sayers, PE - City of Erie, Bureau of Engineering (City)
Brent Aller, EIT - Urban Engineers, Inc. (Urban)
Tom Podskalny, PE - Urban Engineers, Inc. (Urban)
Andrew Holland, PE - Urban Engineers, Inc. (Urban)
Bill Petit, PE - Urban Engineers, Inc. (Urban) (attended part time)

Introductions

Attendees introduced themselves and their roles.

Project Scope/Overview

Mr. Holland explained the project is a feasibility study and an alternatives analysis for a multi-purpose trail funded by PennDOT Bureau of Public Transportation (BPT) and based in part on the Zoo's "Potential Route for Walking/Running Trail" document (Zoo Document). Urban is investigating the potential trail components, alternative alignments, transit connections, potential right-of-way impacts, potential environmental and cultural resource impacts, and seeking public and stakeholder input. The project area and trail study includes the following segments:

- NORTHERN LEG – West 38th Street or closed 38th Street bridge from Glenwood Park Avenue to Cherry Street;
- WESTERN LEG-Cherry Street from West 38th Street to West Grandview Boulevard or Glenwood Boulevard;
- SOUTHERN LEG – Glenwood and Highview Boulevards or West Grandview Boulevard from Cherry Street to Glen Drive and Glenwood Park Avenue;
- EASTERN LEG – Glenwood Park Avenue from Glen Drive to West 38th Street or Erie Zoo Drive/Closed 38th Street bridge.

The key project stakeholders include the Erie Zoo, City of Erie, Glenwood Park YMCA and Glenwood Residential and Recreational Region (GRRR), Erie Metropolitan Transit Authority (EMTA), Erie County (MPO), Erie Federal Credit Union, Glenwood Association, and others.

Mr. Mitchell noted that the Erie Zoo Master Plan documents have gone through many iterations, and that the plan provided to Urban via email on March 14, 2023, is subject to additional changes.

Site Walk and Discussion

Attendees walked the route, as presented in the Zoo Document, in a counterclockwise direction beginning at the entrance to the Zoo.



Mr. Mitchell noted that a future giraffe exhibit would be located at the present location of the parking lot north of the existing main Zoo entrance. The potential trail route could be aligned around the outside perimeter of the new exhibit adjacent to Mill Creek and south of the toe of slope of the eastbound lanes of West 38th Street, then reconnecting to existing sidewalk along the existing Zoo Drive near the existing main entrance to the Zoo. Mr. Mitchell explained that the parking lot area and slope adjacent to West 38th Street included the remnants of several parcels owned by the Zoo which were left over after the realignment and construction of West 38th Street from Peach to State Street (2003-04). The parcels are not consolidated.

An existing sidewalk connects the existing Zoo entrance to the parking lot for the J.C. Martin Golf Course and the Flo Fabrizio Ice Arena, as well as a sidewalk immediately adjacent to West 38th Street. Mr. Mitchell noted that the Zoo had painted a pedestrian lane in the parking lot, but the lane only extends from the existing sidewalk at the Zoo entrance drive to half-way across the parking lot and not all the way west to Cherry Street. Options were discussed for potentially directing the trail route to the existing sidewalk along the southside of West 38th Street or creating a walking route across the full width of the parking lot.

Mr. Mitchell explained that the parking lots are under the operational control of the Zoo by agreement with the City. The parking lots are shared by the Zoo, J.C. Martin Golf Course, Flo Fabrizio Ice Arena, and the Northwest PA Pet Emergency Center.

The intersection of the west Ice Arena parking lot entrance/exit and Cherry Street would be a starting point for trail users from the Glenwood Park YMCA, which is located approximately 200-feet north at the northeast corner of West 38th Street and Cherry Street. The existing sidewalk on the east side of Cherry Street from West 38th Street south to Glenwood Boulevard is 6-feet in width. Some sections of the sidewalk are cracked and spalling and in poor condition. Trail options to be evaluated would include widening the sidewalks to 8-feet (minimum) and possibly 10-feet (preferred) to accommodate design guidelines for shared-use two-way trail routes. New concrete or asphalt trail options will be considered. Efforts will be made to minimize impacts to the J.C. Martin golf course and mature trees on the east side of the sidewalk.

Some sections of Cherry Street and other potential route segments exceed maximum accessible slope guidelines for multi-purpose trails and shared-use paths (typically 5.0% longitudinal); however, exceptions are permitted if the existing roadway slope exceeds 5.0%.

The Zoo Document proposed following Cherry Street to West Grandview Boulevard before turning east. West Grandview Boulevard has a gap in the existing sidewalk of approximately 700-feet and travels through the middle of the Glenwood residential neighborhood.

Urban discussed an alternative route using the north side of Glenwood Boulevard, along the south edge of the golf course and extending to Highview Boulevard. The westbound lane of Glenwood Boulevard is approximately 20-feet wide and could be delineated or otherwise separated to provide a walking/running/biking trail route.



At Highview Boulevard, the option of a trail or path alignment through a grass and wooded area on the east side of the road was discussed. There is currently an informal footpath along the top of the ravine above Mill Creek. The group discussed improvement of the path in the wooded area as a potential option for users to separate from the roadway. Accessibility in this wooded area would be more difficult, but an option to maintain an accessible path along the roadway could be used in conjunction with a separate trail/path through the wooded area.

An alternative alignment for the trail down the ravine to an existing bridge across Mill Creek was also discussed. Mr. Mitchell explained the existing bridge, located near the playground in Glenwood Park, was constructed by the Zoo approximately 30 years ago for public access to a possible extension of the Zoo's train route. This train route extension has not been completed and the bridge has not been used to date and is currently closed with fencing. Due to the steep terrain of the ravine, creating a path down to the bridge in the hillside would be difficult. Options to build a timber ramp, or other means of access to the bottom, were discussed and will be included in the feasibility study.

The next section of a potential route is along Glen Drive, which begins at the intersection of Highview and West Grandview Boulevards and travels east downhill to Glenwood Park Avenue. Glen Drive is one-way, eastbound and downhill, west to east. The road exceeds 5.0% longitudinal slope. Concrete curb and (non-standard) guiderail on the downhill (north) side of the road and a row of concrete (mafia) blocks on the uphill (south) side of the road beginning 250-feet from the top of the hill are in place. The existing road varies in width from 18 feet to 20 feet. Trail options discussed include filling on the downhill side of the road to create space for a trail, or adjusting or removing the concrete blocks to widen the uphill side.

From the bottom of Glen Drive, the potential trail alignment would utilize the existing southbound shoulder of Glenwood Park Avenue for approximately 600-feet until connecting to an existing asphalt path through Glenwood Park. The existing shoulder has a paved width of 6 feet to 7 feet and an additional 2 feet to 3 feet unpaved area to the guiderail. This section includes a roadway bridge over Mill Creek.

Once in the Glenwood Park area, the existing asphalt path width is 10-feet with slight variations. The pavement condition is generally good with some cracking and tree root incursions. The potential trail route intersects and passes through two existing parking lots. Urban will review alternatives to separate the potential trail from the parking lots to avoid possible pedestrian and vehicle conflicts.

Mr. Mitchell and Ms. Kojancie noted that runners and walkers have connected to the existing Glenwood Park path from West 41st Street to the east, including runners from the Mercyhurst Prep and/or Mercyhurst University track/cross country teams. There is also a wooded area, Glenwood Hills Nature Trail, located on the east side of Glenwood Park Avenue that has some informal trails. Possible connections to the potential multi-purpose trail both West 41st Street and the trail network will be investigated as part of the study efforts.

The potential trail section from the north end of Glenwood Park north toward West 38th Street would follow existing concrete and asphalt sidewalk to the old, now closed-to-through-traffic, 38th Street



bridge. The sidewalk continues north from the old 38th Street bridge to West 38th Street. The Zoo Document included replacement of existing asphalt with concrete sidewalk and new fencing for consideration.

The group did not walk to the intersection of Glenwood Park Avenue and West 38th street, but noted that there is an existing sidewalk on the north side of West 38th Street that could be used to close the trail loop.

The closed 38th Street bridge is the final significant feature. Mr. Podskalny reinforced the inclusion of the bridge as a major component of the study. Mr. Mitchell acknowledged the bridge as a necessary component to the potential multi-purpose trail, as noted at the beginning of the walk. Mr. Mitchell and Ms. Kojancie also noted that the Zoo would like to be able to use the bridge to access the proposed giraffe exhibit in the future. The Zoo would use the bridge to deliver feed for the giraffes with a large pick-up with trailer or box truck.

Mr. Sayers said he would review City records for a copy of the most recent inspection report from November 2021 of the existing 38th Street bridge.

Conclusion

Mr. Holland and the Urban Team thanked all attendees for their input. Additional coordination and stakeholder meetings will be scheduled in the coming weeks and months to further develop alternatives.

cc: Rick Shannon, McCormick Taylor

PennDOT District 1/Bureau of Public Transportation Coordination Meeting Summary

Thursday, June 15, 2023
1:00 p.m.

Introductions

Carrie Machuga, McCormick Taylor, opened the meeting with introductions around the virtual 'room'. The following individuals were in attendance:

PennDOT District 1:

Saxon Daugherty
Jill Harry
Autumn Kelley
Courtney Lyle
Tom McClelland
Ken Sanoski
Jim Shaut

Urban Engineers:

Brian Aller
Andrew Holland
Bill Petit
Tom Podskalny
Charity Stover

McCormick Taylor:

Celia Kottakis
Carrie Machuga

Welcome/Opening Remarks

Bill Petit, Urban Engineers, provided opening remarks on behalf of the PennDOT Bureau of Public Transportation, and gave a short background of the initiation of this study. The BPT has advanced this study after discussions with the Erie Zoo, District 1 District Executive Brian McNulty, and Sharon Knoll, State Transportation Commission member.

Active transportation in this area has support from the community and local planning documents. In the public comments related to the Erie MPO 2050 Long Range Transportation Plan (March 2022) noted pedestrians using SR 505 to access Glenwood Park and suggested a walk path on SR 505 from Glen Drive or Glenridge to the park to increase safety.

The joint Active Erie Transportation Plan from the City of Erie and Erie MPO proposed additional, separated bicycle facilities on 38th Street adjacent to the Zoo through implementation of a road diet.

The Erie Metropolitan Transit Authority (EMTA) operates four routes in the area. Routes 1 and 3 operate on Cherry Street, and Routes 15 and 17 operate on 38th Street.

Current average annual daily traffic on West 38th Street (SR 4016) is approximately 16,000 and on Glenwood Park Avenue (SR 505) is approximately 9,100.

The team highlighted a few locations in the study area with elevated crash history, including the intersection of West 38th and Cherry Streets.

A potential route for a walking/running trail around the Zoo property appeared in an Erie Zoo document, highlighting coordination between other community organizations include the Glenwood Park YMCA, the Erie Federal Credit Union, and local neighborhoods.

Project Overview

Andrew Holland, Urban Engineers, then reviewed the study area and outlined the proposed trail alignment and possible challenges. In general the study area is bounded by West 38th Street on the north; Glenwood Park Avenue on the east; Glen Avenue and West Grandview Boulevard on the south; and Cherry Street on the west. The areas highlighted and discussed among the group include:

Cherry Street

There are some existing sidewalk facilities on Cherry Street between 38th and Glenwood Boulevard, but it is not continuous and needs repairs or replacement in many areas. If the sidewalk area needed to be widened, there are concerns about many mature trees that could be impacted.

Glenwood Blvd/W. Grandview Blvd

Similarly, Glenwood and West Grandview Boulevards have inconsistent sidewalks that are in poor condition.

Highview Blvd

There are no sidewalks on Highview Boulevard, but there are wide clear zones next to the roadway which could be used for a trail/path. There is an informal or unposted trail through the woods east of Highview Boulevard which seems to be well-used and could also be leveraged as part of this trail system.

From Highview Boulevard, this future trail could move down the bluff through the woods to an existing bridge over Mill Creek on Zoo property. This bridge was built for an expansion of the Zoo train which was never constructed. This option would create accessibility challenges, as the slope down the bluff is very steep, and could require complicated switchbacks.

Glen Drive

The alternate route from Highview to Glenwood Park Avenue would use Glen Drive, which also raises accessibility concerns. Glen Drive is also very steep, varies in width, and is in need of guiderail repair and replacement along the roadway.

Glenwood Park Avenue (SR 505)

If Glen Drive was utilized, the trail would follow SR 505 for about 600 feet before Glenwood Park. The existing shoulder is between six and eight feet wide on the bridge carrying SR 505 over Mill Creek. Nearby residents have noted speed and safety concerns on the curve near that bridge.

- The District suggested some kind of separation on the bridge and the curve on either side of the bridge to ensure safety of peds/bikes.
- Separation could include a ped/bike bridge could be built next to the roadway bridge or raised sidewalk with a curb on shoulder.
- Bill Petit suggested that these separated facilities could be something similar to those along the Bayfront Parkway near West 8th Street:





- The District noted that SR 505 was recently paved in 2022.
- MaintenanceIQ shows that the bridge over Mill Creek was built in 1952.
- The District will check to see when it may be scheduled for rehabilitation or other maintenance.

Another discussion topic along SR 505 is the intersection with 41st Street, just across from Glenwood Park. This intersection is used by neighborhood residents and Mercyhurst Prep and Mercyhurst University students to access the park. The project team would like to investigate the possibility of a mid-block crossing at that location.

Glenwood Park

The proposed trail alignment would join an existing trail in Glenwood Park with some minor adjustments. The trail currently travels through a parking lot which could create some safety issues and conflicts between pedestrians and cars, and the proposed trail would be routed around the exterior of the parking lot.

W. 38th Street (SR 4016)

There are some sidewalks along West 38th Street, but they are inconsistent widths and conditions.

Old W. 38th Street bridge over Mill Creek

This bridge is owned by City of Erie and was closed to vehicle traffic in 2017. This trail alternative includes a replacement bridge for pedestrian-only crossing. Options to be considered for replacement bridge include:

- Use existing abutments with new superstructure
- Install pre-fabricated pedestrian bridge
- Construct three-sided arch culvert with roadway

Erie Zoo DRAFT Master Plan includes the future consideration of the area on the west side of the bridge for development of a new giraffe house/exhibit. The new bridge is proposed to be designed to allow for limited vehicle crossings to Zoo property and facilities for maintenance and animal feed delivery.

If the bridge was reopened for trail use, the project team proposes to name it in memory of Bonny Daubenspeck, who was a passionate advocate for transportation in northwestern Pennsylvania and served on the boards of the Erie Zoo, Erie-Western Pennsylvania Port Authority, the PA State Transportation Commission, and the PA Turnpike Commission.

Erie Zoo Drive; Flo Fabrizio Ice Center; JC Martin Golf Course driveways and parking lots

The trail would then follow the perimeter of the existing parking lot north of Old West 38th Street. This would be the location of the future giraffe exhibit according to the Zoo Master Plan noted above. The trail could utilize the existing sidewalk near the current Zoo entrance and traverse the J.C. Martin Golf Course and Flo

Fabrizio Ice Center driveway and parking lots. There are some areas within the parking lots have striping for crosswalks to provide safe places for pedestrians to walk between the parking lots and the buildings.

Glenwood Park Avenue to W. 38th and W. 38th to Shunpike Road

Existing sidewalks in these areas are inconsistent widths and include varying materials. For example, some portions have brick sections between the concrete sidewalk and the street. These sidewalks may need to be upgraded to serve as part of this trail, and Tom McClelland noted that it should be the same material (instead of concrete and brick) to provide a smooth riding surface for bicyclists.

W. 38th Street from Shunpike Road to Cherry Street

This portion of West 38th Street also has sidewalks similar to the previous section which would need to be upgraded.

Environmental & Cultural Resources Review

The project team conducted study-level environmental reviews. Using the NWI Mapper, no wetland was shown in the study area. Zone A floodplains exist in areas adjacent to Mill Creek, and Mill Creek is home to Warm Water Fishes and Migratory Fish. No threatened or endangered species were identified with a PNDI search.

Section 4(f) properties in the area include: Glenwood Park, James C. Martin Golf Course, Glenwood Hills Nature Trail. This project would be completed in partnership with City of Erie (the owner of the parks) and is recreational in nature. Therefore, it would be considered an enhancement project and probably would not require mitigation for impacts. Other parks not meeting 4(f) requirements include Magyar Park and the Erie Zoo.

The project team will need additional coordination of the Section 6(f) boundary. This would include the properties purchased with Land & Water Conservation Funds received by the City of Erie in 1981. The scope of the project would be a benefit to the Zoo, so no Section 6(f) conversion is anticipated.

Trail Considerations

Bill and Andrew reviewed the key considerations that have been reviewed during the early part of their analysis:

- Pedestrians and Runners
- Bicycle Users
 - Potential user conflicts
- Trail width guidelines
 - Shoulder/clear zone
- Overhead obstructions (trees, signs, etc.)
- Accessibility
 - Longitudinal Slopes of Existing Roadways and Sidewalks
 - Cross slopes
 - Public Right-of-Way Accessibility Guidelines (PROWAG)
- Compatibility with other assets in the area.
- Making meaningful connections.
- Enhancing existing facilities and resources.
- Minimizing impacts to environment, landscape, utilities.

Design Criteria

The team asked for District input on the trail design guidelines that should be applied to this project. PennDOT's Publication 13 and Publication 13M include several sets of guidance which the team has considered:

Shared-Use Paths:

- Width: 8-ft Min, 10-ft Recommended, 12-ft. for Heavy Use
- 2-ft lateral/shoulder clearance on both sides
- 3-ft lateral/shoulder clearance for areas with sign installation

Local Neighborhood Accessways:

- Open to public
- Trail pavement width 10 to 14-ft to accommodate emergency vehicles
- Less than 8-ft if necessary to avoid mature trees

Pedestrian Access Route (PAR)

- Longitudinal slope 5.0% max. or match adjacent roadway slope.
- Cross slope 2.0% max or match street grade at crossings.
- Unobstructed width 48-inch minimum

Sidewalk Design Criteria

- 60-inch min. width
- Separated from vehicular travel lanes by curbs, planting strips or other barriers

Meeting attendees discussed the differences in these criteria, and it was agreed that a 10-foot path would be sufficient.

Other Considerations

Users – Pedestrian-only or multi-modal

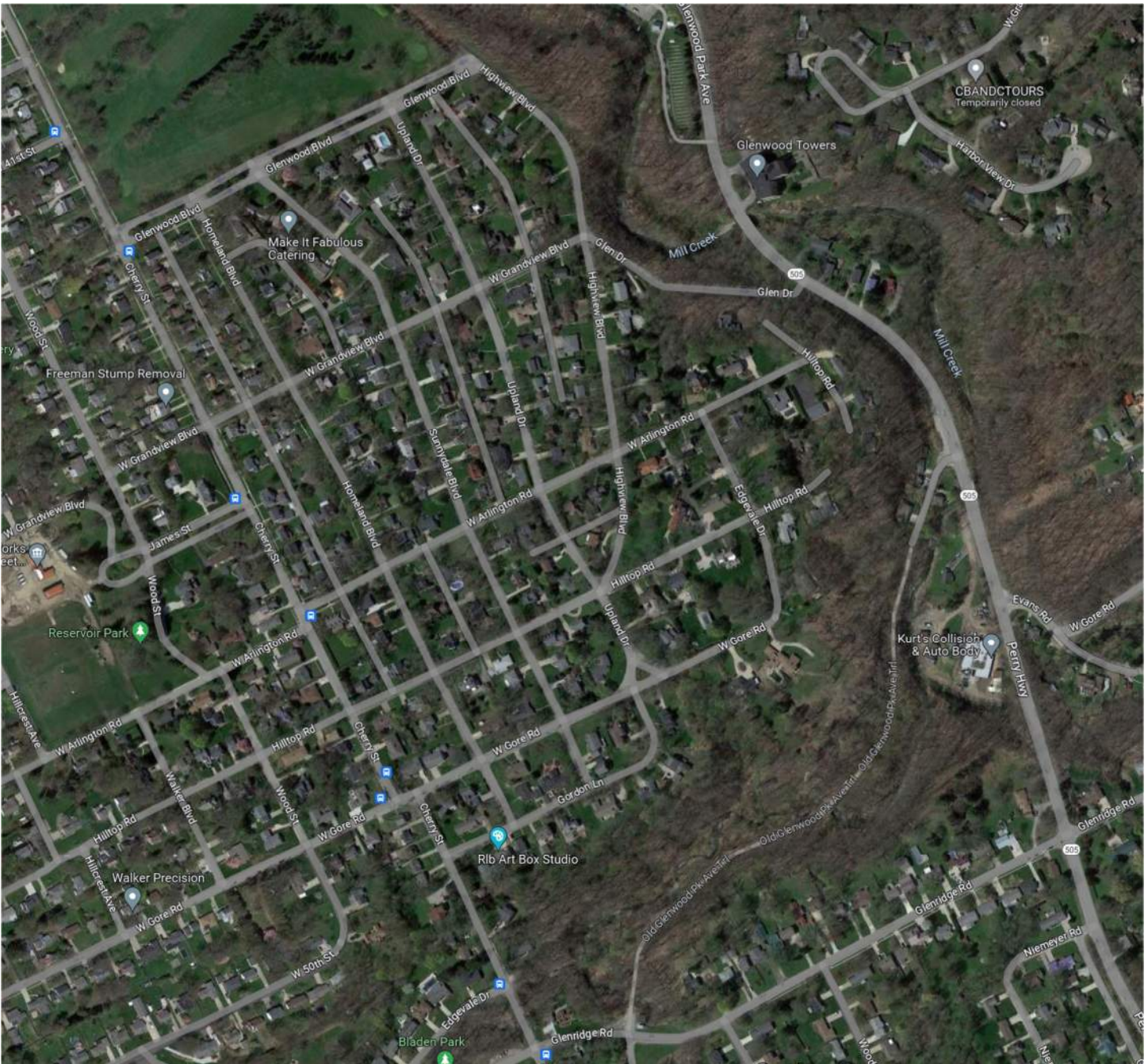
Tom McClelland suggests not ruling out bicycle use during the study.

Emergency Services

Most of the trail would be either on or adjacent to existing roadways, so emergency services would not need to be accommodated on the trail itself.

Alternate Routes

On aerial mapping, there appears to be an abandoned street to the south and east of the study area, shown on Google Maps/Google Earth as Old Glenwood Park Avenue Trail (see image on follow page). The District suggested investigating this as an option to bring the trail down the bluff without the steep grades on Glen Drive or on Zoo property as discussed above.



Next Steps

To close the meeting, Bill Petit noted that the team will meet with local elected officials and community stakeholders through the end of June. The team will collect input from these other groups in addition to the information collected from the District and make adjustments to the alignment as needed. The draft trail alignment concept will be presented to the larger community at a public meeting later in the summer.

Public Officials' Meeting Summary

Thursday, June 22, 2023
2:00 p.m.

Attendance

The following individuals were in attendance:

Public Officials:

Emily Aloiz, Erie County
Scott Mitchell, Erie Zoo
Jason Sayers, City of Erie
Emily Walsh, Office of Rep. Merski

Urban Engineers:

Andrew Holland
Bill Petit
Tom Podskalny

McCormick Taylor:

Carrie Machuga

Welcome/Opening Remarks

Scott Mitchell, Erie Zoo, opened the meeting with a brief overview of the initiation of this project. A possible walking/running trail around the Zoo property and the adjacent neighborhoods was identified as an opportunity during the Zoo's master planning process. The Zoo would also undertake related efforts to redevelop the existing parking lot into a new exhibit and utilize other property on the other side of West 38th Street as parking. Visitors would utilize the existing tunnel under 38th Street to access the Zoo and a new entrance near the new exhibit (current parking lot). The proposed trail would follow the exterior of the new exhibit and connect with the path from the new parking area to a new entrance. Some coordination has already occurred between the Zoo and other community organizations including the Glenwood Park YMCA, the Erie Federal Credit Union, and local neighborhoods.

Bill Petit, Urban Engineers, highlighted some other local information related to a potential trail in the area.

Active transportation in this part of Erie has support from the community and local planning documents. Public comments related to the Erie MPO 2050 Long Range Transportation Plan (March 2022) noted pedestrians using SR 505 to access Glenwood Park and suggested a walking path on SR 505 from Glen Drive or Glenridge to the park to increase safety.

The joint Active Erie Transportation Plan from the City of Erie and Erie MPO proposed additional, separated bicycle facilities on 38th Street adjacent to the Zoo through implementation of a road diet.

The Erie Metropolitan Transit Authority (EMTA) operates four routes in the area. Routes 1 and 3 operate on Cherry Street, and Routes 15 and 17 operate on 38th Street.

Current average annual daily traffic on West 38th Street (SR 4016) is approximately 16,000 and on Glenwood Park Avenue (SR 505) is approximately 9,100.

A potential route for a walking/running trail around the Zoo property appeared in an Erie Zoo document, highlighting coordination between other community organizations include the Glenwood Park YMCA, the Erie Federal Credit Union, and local neighborhoods.

Project Overview

Andrew Holland, Urban Engineers, then reviewed the study area and outlined the proposed trail alignment and possible challenges. In general, the study area is bounded by West 38th Street on the north; Glenwood Park Avenue on the east; Glen Avenue and West Grandview Boulevard on the south; and Cherry Street on the west. The areas highlighted and discussed among the group include:

Cherry Street

There are some existing sidewalk facilities on Cherry Street between 38th and Glenwood Boulevard, but it is not continuous and needs repairs or replacement in many areas. If the sidewalk area needed to be widened, there are concerns about many mature trees that could be impacted. Emily Walsh of Rep. Merski's office confirmed that any impact to trees, especially on Cherry Street, would be a major concern of the neighbors in that area.

Glenwood Blvd/W. Grandview Blvd

Similarly, Glenwood and West Grandview Boulevards have inconsistent sidewalks that are in poor condition. The Zoo's initial plan for this trail utilized Grandview Boulevard, but the team suggested that Glenwood may be a better option. Each side of the boulevard is 22 feet wide, which would provide ample space for a trail and vehicle traffic. Glenwood Boulevard also abuts the golf course property which would create a more 'scenic' walking experience.

Highview Blvd

There are no sidewalks on Highview Boulevard, but there are wide clear zones next to the roadway which could be used for a trail/path. There is an informal or unposted trail through the woods east of Highview Boulevard which seems to be well-used and could also be leveraged as part of this trail system.

From Highview Boulevard, this future trail could move down the bluff through the woods to an existing bridge over Mill Creek on Zoo property. This bridge was built for an expansion of the Zoo train which was never constructed. This option would create accessibility challenges, as the slope down the bluff is very steep, and could require complicated switchbacks.

Glen Drive

The alternate route from Highview to Glenwood Park Avenue would use Glen Drive, which also raises accessibility concerns. Glen Drive is also very steep, varies in width, and is in need of guiderail repair and replacement along the roadway.

Glenwood Park Avenue (SR 505)

If Glen Drive was utilized, the trail would follow SR 505 for about 600 feet before Glenwood Park. The existing shoulder is between six and eight feet wide on the bridge carrying SR 505 over Mill Creek. Nearby residents have noted speed and safety concerns on the curve near that bridge.

The team noted that PennDOT District 1 suggested some kind of separation on the bridge and the curve on either side of the bridge to ensure safety of peds/bikes. Separation could include a ped/bike bridge could be built next to the roadway bridge or raised sidewalk with a curb on shoulder, but more work needs to be done to determine what is most feasible.

Another discussion topic along SR 505 is the intersection with 41st Street, just across from Glenwood Park. This intersection is used by neighborhood residents and Mercyhurst Prep and Mercyhurst University students to access the park. The project team would like to investigate the possibility of a mid-block crossing at that location.

- Emily Aloiz stated that the County recently completed a Corry to Erie bike plan, which would complete that portion of the Erie to Pittsburgh trail. The Corry to Erie plan included connections to Grandview Boulevard and Mercyhurst University to West 38th Street and down French Street to downtown Erie.

Glenwood Park

The proposed trail alignment would join an existing trail in Glenwood Park with some minor adjustments. The trail currently travels through a parking lot which could create some safety issues and conflicts between

pedestrians and cars, and the proposed trail would be routed around the exterior of the parking lot to eliminate those conflicts.

W. 38th Street (SR 4016)

There are some sidewalks along West 38th Street, but they are inconsistent widths and conditions.

Old W. 38th Street bridge over Mill Creek

This bridge is owned by City of Erie and was closed to vehicle traffic in 2017. This trail alternative includes a replacement bridge for pedestrian-only crossing. The preferred option by PennDOT would be a prefabricated bridge with new abutments behind the existing abutments. The footings of the current abutments are exposed and should not be reused.

Erie Zoo DRAFT Master Plan includes the future consideration of the area on the west side of the bridge for development of a new giraffe house/exhibit. The new bridge is proposed to be designed to allow for limited vehicle crossings to Zoo property and facilities for maintenance and animal feed delivery.

- Jason Sayers asked whether there would be any concerns about flooding from Mill Creek near the north end of the current parking lot.
 - The team expects that the trail would be built at the same elevation as the parking lot and would not impact the creek or raise any additional flooding issues.

If the bridge was reopened for trail use, the project team proposes to name it in memory of Bonny Daubenspeck, who was a passionate advocate for transportation in northwestern Pennsylvania and served on the boards of the Erie Zoo, Erie-Western Pennsylvania Port Authority, the PA State Transportation Commission, and the PA Turnpike Commission.

- Jason Sayers noted that this bridge is currently owned by the City and is listed as 'closed' in BMS.
- The City inspects the bridge every two years.
- Jason also noted that there is a sewage pipe that travels under the bridge.
- The group discussed how this new bridge would be classified (pedestrian-use only or for vehicular use) and the implications for funding, inspection, and maintenance.
 - The team will investigate the load criteria that differentiates a pedestrian bridge and a vehicular bridge and whether a bridge that would carry occasional Zoo vehicles could still be considered a pedestrian bridge.
 - A bridge that is only for pedestrian use would not qualify for county funding, because it would need to be open for public, vehicular use to qualify for the available funding.
 - Scott Mitchell stated that the Zoo could take over winter maintenance of the bridge in future, since it would be used primarily by pedestrians and Zoo vehicles.

Erie Zoo Drive; Flo Fabrizio Ice Center; JC Martin Golf Course driveways and parking lots

The trail would then follow the perimeter of the existing parking lot north of Old West 38th Street. This would be the location of the future giraffe exhibit according to the Zoo Master Plan noted above. The trail could utilize the existing sidewalk near the current Zoo entrance and traverse the J.C. Martin Golf Course and Flo Fabrizio Ice Center driveway and parking lots. There are some areas within the parking lots have striping for crosswalks to provide safe places for pedestrians to walk between the parking lots and the buildings.

Glenwood Park Avenue to W. 38th and W. 38th to Shunpike Road

Existing sidewalks in these areas are inconsistent widths and include varying materials. For example, some portions have brick sections between the concrete sidewalk and the street. These sidewalks may need to be upgraded to serve as part of this trail.

W. 38th Street from Shunpike Road to Cherry Street

This portion of West 38th Street also has sidewalks similar to the previous section which would need to be upgraded.

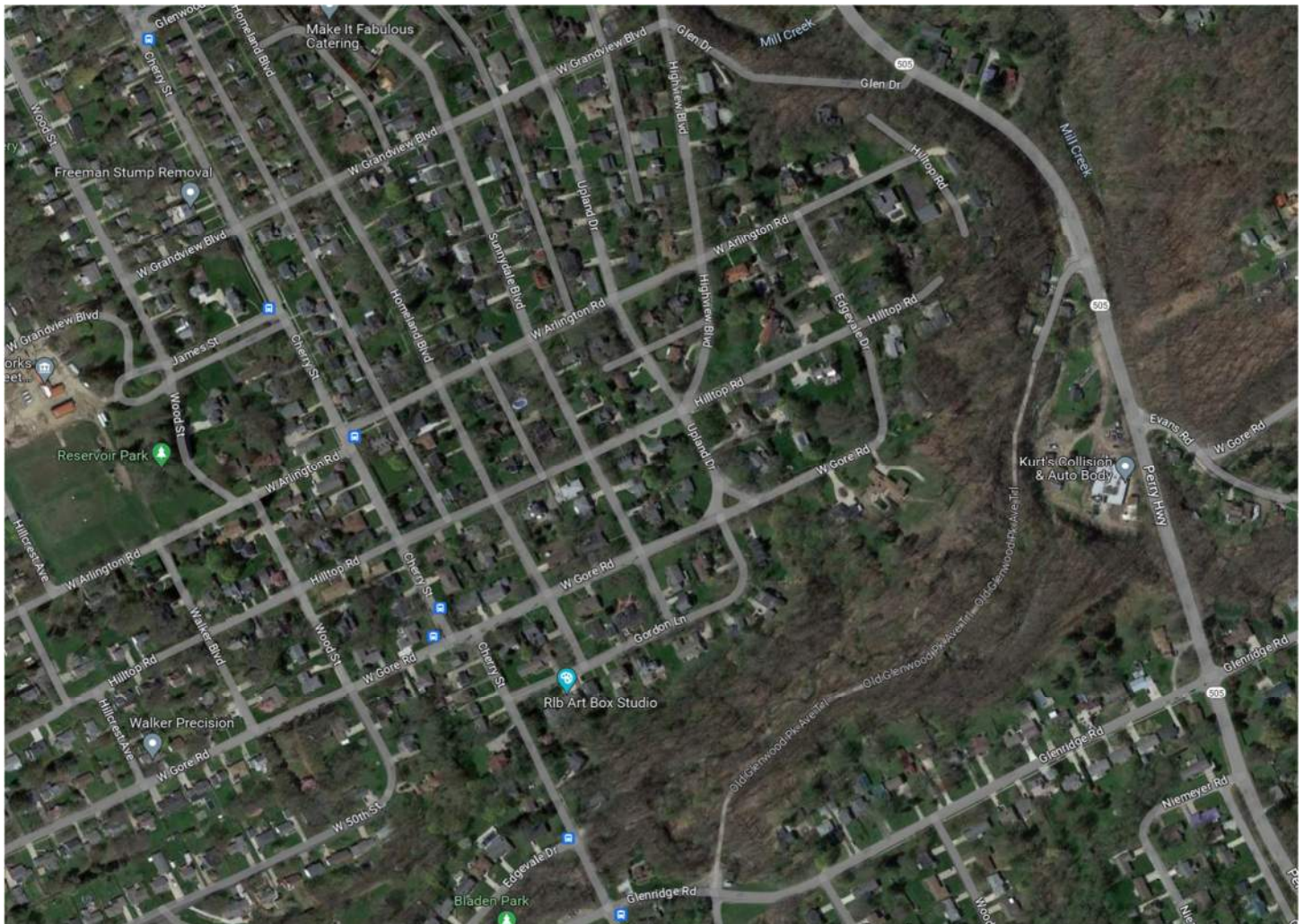
- Emily Aloiz noted that the County conducted a study with consultant WRA that recommended a 'road diet' on West 38th which would allow space for a separated bike lane.

Other Discussion:

Alternate Routes

On aerial mapping, there appears to be an abandoned street to the south and east of the study area, shown on Google Maps/Google Earth as Old Glenwood Park Avenue Trail (see image on follow page). This option would bring the trail down the bluff without the steep grades on Glen Drive or on Zoo property as discussed above. This was suggested by PennDOT District 1 at a previous meeting and by Emily Walsh on behalf of Rep. Merski. Emily also noted an opportunity to make a local history connection to Bladen Park which is at the west end of that abandoned trail, named for Bo Bladen, a famous local African American, whose farm extended to the border of Glenwood Park.

Concerns about this route include additional coordination with Millcreek Township, the needs for the trail to traverse SR 505 for a much greater distance, and increased design and construction costs to extend the trail that distance. Urban Engineers will coordinate with PennDOT Bureau of Public Transportation about extending the scope of work and study area to include this option.



Another alternate route discussed at the meeting included the use of a portion of the existing informal or unposted trail through the woods east of Highview Boulevard which follows the natural ridge of the bluff to make a smoother transition down to the park property rather than the more direct route that would require a lot of switchbacks. This would avoid the need to use SR 505 and the safety mitigations that would be required.

Safety

Rep. Merski is concerned about speeds on Cherry Street. He would like to see removable speed bumps (similar to those installed at the entrance to Presque Isle). Bill Petit raised some concerns that PennDOT seen with those, including pavement damage from removing and replacing them each fall and spring. Bill suggested that this trail project could include some traffic calming measures, but since the trail would likely be off of the roadway itself, extensive speed mitigation will not be included.

The intersection of Cherry and West 38th Streets was noted as a high crash area by the project team and the officials in attendance, and all parties agreed that a future trail should avoid that intersection.

Emily Aloiz asked about the purpose of an existing chain link fence along Mill Creek in Glenwood Park and whether that fence would need to be extended or replaced if a trail was built down the bluff and across the creek as discussed. The team will need to coordinate with the City Public Works Director to determine the current purpose of that fence and any other changes that would need to be made on park property as a result of this project.

Additional Coordination

Jason Sayers asked for a copy of the presentation shared at the meeting to discuss with the Mayor and his staff. He will also coordinate with the team at Urban Engineers to schedule a study session with City Council.

Next Steps

To close the meeting, Bill Petit noted that the team will meet with community stakeholders on June 26. The team will collect input from these other groups in addition to the information collected from the officials and PennDOT District 1 and make adjustments to the alignment as needed. The draft trail alignment concept will be presented to the larger community at a public meeting later in the summer.

Community Stakeholders Meeting Summary

Monday, June 26, 2023

5:30 p.m.

Attendance

The following individuals were in attendance:

Erie Zoo

Scott Mitchell
Roo Kojancie

Urban Engineers:

Andrew Holland
Bill Petit
Tom Podskalny

McCormick Taylor:

Carrie Machuga
Celia Kottakis

Glenwood Hills:

Stacey Gaudette
Patty Williams
David Ulich
Rich Knecht

Erie Metropolitan Transit Authority:

Rebecca Gathers
Matt Sanfilippo

VisitErie:

John Oliver

YMCA Glenwood Branch:

Jim McEldowney

Welcome/Opening Remarks

Scott Mitchell and Roo Kojancie, Erie Zoo, opened the meeting with a brief overview of the initiation of this project. A possible walking/running trail around the Zoo property and the adjacent neighborhoods was identified as an opportunity during the Zoo's master planning process. The Zoo would also undertake related efforts to redevelop the existing parking lot into a new exhibit and utilize other property on the other side of West 38th Street as parking. Visitors would utilize the existing tunnel under 38th Street to access the Zoo and a new entrance near the new exhibit (current parking lot). The proposed trail would follow the exterior of the new exhibit and connect with the path from the new parking area to a new entrance. Some coordination has already occurred between the Zoo and other community organizations including the Glenwood Park YMCA, the Erie Federal Credit Union, and local neighborhoods.

Bill Petit, Urban Engineers, highlighted some other local information related to a potential trail in the area.

Active transportation in this part of Erie has support from the community and local planning documents. Public comments related to the Erie MPO 2050 Long Range Transportation Plan (March 2022) noted pedestrians using SR 505 to access Glenwood Park and suggested a walking path on SR 505 from Glen Drive or Glenridge to the park to increase safety.

The joint Active Erie Transportation Plan from the City of Erie and Erie MPO proposed additional, separated bicycle facilities on 38th Street adjacent to the Zoo through implementation of a road diet.

The Erie Metropolitan Transit Authority (EMTA) operates four routes in the area. Routes 1 and 3 operate on Cherry Street, and Routes 15 and 17 operate on 38th Street.

Current average annual daily traffic on West 38th Street (SR 4016) is approximately 16,000 and on Glenwood Park Avenue (SR 505) is approximately 9,100.

A potential route for a walking/running trail around the Zoo property appeared in an Erie Zoo document, highlighting coordination between other community organizations include the Glenwood Park YMCA, the Erie Federal Credit Union, and local neighborhoods.

Project Overview

Andrew Holland, Urban Engineers, then reviewed the study area and outlined the proposed trail alignment and possible challenges. In general, the study area is bounded by West 38th Street on the north; Glenwood Park Avenue on the east; Glen Avenue and West Grandview Boulevard on the south; and Cherry Street on the west. The areas highlighted and discussed among the group include:

Cherry Street

There are some existing sidewalk facilities on Cherry Street between 38th and Glenwood Boulevard, but it is not continuous and needs repairs or replacement in many areas. If the sidewalk area needed to be widened, there are concerns about many mature trees that could be impacted.

Glenwood Blvd/W. Grandview Blvd

Similarly, Glenwood and West Grandview Boulevards have inconsistent sidewalks that are in poor condition. The Zoo's initial plan for this trail utilized Grandview Boulevard, but the team suggested that Glenwood may be a better option. Each side of the boulevard is 22 feet wide, which would provide ample space for a trail and vehicle traffic. Glenwood Boulevard also abuts the golf course property which would create a more 'scenic' walking experience.

Highview Blvd

There are no sidewalks on Highview Boulevard, but there are wide clear zones next to the roadway which could be used for a trail/path. There is an informal or unposted trail through the woods east of Highview Boulevard which seems to be well-used and could also be leveraged as part of this trail system.

From Highview Boulevard, this future trail could move down the bluff through the woods to an existing bridge over Mill Creek on Zoo property. This bridge was built for an expansion of the Zoo train which was never constructed. This option would create accessibility challenges, as the slope down the bluff is very steep, and could require complicated switchbacks.

Glen Drive

The alternate route from Highview to Glenwood Park Avenue would use Glen Drive, which also raises accessibility concerns. Glen Drive is also very steep, varies in width, and is in need of guiderail repair and replacement along the roadway.

Glenwood Park Avenue (SR 505)

If Glen Drive was utilized, the trail would follow SR 505 for about 600 feet before Glenwood Park. The existing shoulder is between six and eight feet wide on the bridge carrying SR 505 over Mill Creek. Nearby residents noted speed and safety concerns on the curve near that bridge.

The team noted that PennDOT District 1 suggested some kind of separation on the bridge and the curve on either side of the bridge to ensure safety of peds/bikes. Separation could include a ped/bike bridge could be built next to the roadway bridge or raised sidewalk with a curb on shoulder, but more work needs to be done to determine what is most feasible.

Another discussion topic along SR 505 is the intersection with 41st Street, just across from Glenwood Park. This intersection is used by neighborhood residents and Mercyhurst Prep and Mercyhurst University students to access the park. The project team may investigate the possibility of a mid-block crossing at that location.

Glenwood Park

The proposed trail alignment would join an existing trail in Glenwood Park with some minor adjustments. The trail currently travels through a parking lot which could create some safety issues and conflicts between pedestrians and cars, and the proposed trail would be routed around the exterior of the parking lot to eliminate those conflicts.

W. 38th Street (SR 4016)

There are some sidewalks along West 38th Street, but they have inconsistent widths and conditions.

Old W. 38th Street bridge over Mill Creek

This bridge is owned by the City of Erie and was closed to vehicle traffic in 2017. This trail alternative includes a replacement bridge for a pedestrian-only crossing. The preferred option by PennDOT would be a prefabricated bridge with new abutments behind the existing abutments.

Erie Zoo draft Master Plan includes the future consideration of the area on the west side of the bridge for development of a new giraffe house/exhibit as noted above. The new bridge is proposed to be designed to allow for limited vehicle crossings to Zoo property and facilities for maintenance and animal feed delivery.

Erie Zoo Drive; Flo Fabrizio Ice Center; JC Martin Golf Course driveways and parking lots

The trail could utilize the existing sidewalk near the current Zoo entrance and traverse the J.C. Martin Golf Course and Flo Fabrizio Ice Center driveway and parking lots. There are some areas within the parking lots that have striping for crosswalks to provide safe places for pedestrians to walk between the parking lots and the buildings.

Glenwood Park Avenue to W. 38th and W. 38th to Shunpike Road

Existing sidewalks in these areas are inconsistent widths and include varying materials. For example, some portions have brick sections between the concrete sidewalk and the street. These sidewalks may need to be upgraded to serve as part of this trail.

W. 38th Street from Shunpike Road to Cherry Street

This portion of West 38th Street also has sidewalks similar to the previous section which would need to be upgraded.

Open Discussion:

The following topics and concerns were discussed with the community stakeholders throughout the meeting.

Trail Use/Design Criteria:

- Community stakeholders prefer a pedestrian-only path and to preserve as much landscaping/tress as possible.
- PennDOT District 1 agreed that a path would not need to be wider than 10 feet.

Safety Concerns:

- Speeding on SR 505 was a concern from all stakeholders engaged in this study.
 - PennDOT District 1 suggested that if the trail were to use SR 505, it should be separated from the roadway, especially on the bridge over Mill Creek where they suggested a dedicated pedestrian bridge next to the roadway bridge.
 - Neighbors reported that Millcreek Police were increasing speed enforcement just south of the study area.
- 41st Street Intersection
 - Speeding is the main concern at this intersection. Stakeholders were cautious of encouraging people to cross SR 505 at this location.
 - Drivers use the right shoulder to drive around cars waiting to turn left from SR 505 to 41st Street.

Trail Alignment/Location:

- Community stakeholders suggest using the north side (westbound) of Glenwood Boulevard adjacent to the golf course, rather than West Grandview, to avoid building additional sidewalks in front of homes where residents may not want them.
 - There were some concerns about the safety of walkers along the golf course, and the possibility of signage to alert walkers of the possibility of flying golf balls was raised.
- Stakeholders generally preferred a long, sloping path through the woods over using Glen Drive and SR 505.
 - They also preferred a gravel trail rather than asphalt to be easier to maintain, more environmentally friendly, and to fit in better with the natural setting.
- Stakeholders also preferred to avoid West 38th Street, but if the trail would follow 38th Street, they would want the trail to be separated and/or protected from traffic.
 - EMTA also preferred a separated bike path, rather than utilizing street space, to avoid conflicts between cyclists and buses/bus stops.
 - Public officials also suggested avoiding the intersection of Cherry and West 38th Street due to high crash rates and safety concerns.
- Stakeholders like the idea of reopening the closed Old 38th Street bridge and carrying the trail through the Zoo and ice arena property, rather than using 38th Street.
 - PennDOT District 1 prefers the option of placing a new pre-fabricated pedestrian bridge in that location.
- PennDOT District 1 and Representative Merski suggested investigating the abandoned roadway, now appearing on the map as Old Glenwood Park Trail, to make it easier to come down the bluff, rather than the steeper grades on Glen Drive or through the woods by Highview.
 - Representative Merski's office also noted that this could provide a connection to Bladen Park south of the Zoo on Cherry Street. Community stakeholders from the Glenwood area were not familiar with the park and had not used it.

Trail Signage/Amenities:

- Stakeholders suggested providing plenty of trash cans along the trail to prevent people leaving trash around the neighborhood or park.
- Community stakeholders would like to see minimal trail signage, perhaps just one or two trail maps directing walkers around the loop.

Transit Impacts:

- EMTA noted that their routes on Cherry Street are among the highest used as they connect to Peach Street and the mall.
- EMTA had concerns for utilizing street space, especially on West 38th and Cherry Streets, for a trail, because their drivers already struggle to safely stop and pick up passengers in that area.

Next Steps

To close the meeting, Bill Petit noted that the team will make adjustments to the alignment as needed based on the input collected from public officials, PennDOT District 1, and community stakeholders. He thanked attendees for their time and participation, and noted the draft trail alignment concept will be presented to the larger community at a public meeting later in the summer.

APPENDIX D
ENVIRONMENTAL
AND
CULTURAL RESOURCES MEMORANDUM



1319 Sassafra Street
Erie, PA 16501
814.453.5702

Memorandum

To: Pennsylvania Department of Transportation – Bureau of Public Transportation
From: Urban Engineers, Inc. and McCormick Taylor
Date: April 10, 2023
Subject: Agreement 05403 – Work Order #4 Erie Zoo Trail Study
Task 1.5 - Environmental and Cultural Resources, Public Facilities

The following memorandum provides a summary of potential impacts to environmental resources, cultural resources, and public facilities. This summary is based on a “desktop” level review of environmental and cultural resources and public facilities within the project area. When applicable, agencies with jurisdiction of resources will be identified for future coordination; however, coordination with local, state, and federal agencies was not performed at this preliminary stage of analysis.

A project location map is included in Appendix A.

Environmental Resources

Wetland

No wetlands are present in the vicinity of the project area according to The US Fish and Wildlife Service National Wetlands Inventory NWI Mapper website. Upon selection of a preferred alternative for the trail, a formal field view of the preferred alignment is suggested for a review of potential wetlands.

A Copy of the NWI Mapper is included in Appendix B.

Floodplains

Mill Creek flows along the eastern portion of the proposed trail alignment between SR 505 (Glenwood Park Avenue) and the Erie Zoo, the James C. Martin Golf Course, and the Glenwood neighborhood. FEMA Zone A, which is defined as the “1% Annual Chance Flood Hazard” zone is located immediately adjacent to Mill Creek and includes areas east of Mill Creek in both the Erie Zoo and Glenwood Park. The FEMA maps of Zone A in this area do not include a defined base flood elevation. Generally, the proposed trail alignment west of Mill Creek lies in Zone X, which FEMA defines as an “Area of Minimal Flood Hazard.”

If bridges are to be constructed, rehabilitated, or replaced as part of a preferred alternative, appropriate permits will be obtained during a final design process.

Copies of the FEMA Firmette Maps are included in Appendix C.

Streams

The only stream or water resource in the study area is Mill Creek. Mill Creek is designated by PA Code Chapter 93 as Water Uses Protected Warm Water Fishes and Migratory Fish. According to eMapPA, Mill Creek is an impaired stream and the sources of impairment include “urban runoff/storm sewers – siltation” and “source unknown – pathogens.”

A copy of the page from PA Code Chapter 93 with Mill Creek is included in Appendix D.

Threatened and Endangered Species

The Pennsylvania Conservation Explorer and PNDI receipt indicate that there are “No Known Impact” and “No Further Review Required” for threatened and endangered species within the study area.

A screen shot of the Conservation Explorer and the Final PNDI Receipt are included in Appendix E.

Section 4(f) and Section 6(f) Properties

The project area includes several properties owned by the City of Erie, including Glenwood Park, the Erie Zoo, Magyar Park, the James C. Martin Golf Course, and the Glenwood Hills Nature Trail, located on the east side of Glenwood Park Avenue.

Section 4(f):

Three (3) park and recreation areas owned by the City of Erie that meet the Section 4(f) applicability criteria set forth in 23 CFR 774.11 are located with the project area, including Glenwood Park, James C. Martin Golf Course, and the Glenwood Hills Nature Trail, located on the east side of Glenwood Park Avenue. Additional coordination with the City as the official with jurisdiction will be needed to definitively delineate the resources’ boundaries.

While publicly owned and open to the public, Magyar Park, a monument to the 1956 Hungarian Revolution located at the northwest corner of West 38th Street and Glenwood Park Avenue, likely does not meet Section 4(f) applicability criteria. While called a park, incidental, secondary, occasional, or dispersed activities similar to park or recreational activities do not constitute a primary purpose within the context of Section 4(f). For the Erie Zoo, publicly owned zoos are not normally considered parks, recreation areas, or wildlife and waterfowl refuges but may provide additional park or recreational opportunities. This zoo will need to be evaluated to determine if the primary purpose of the resource is to serve as a significant park or recreation area rather than education. (See *FHWA Policy Paper*, Question 19.) While still important properties, they are likely not considered Section 4(f) pending further coordination with the City, the official with jurisdiction over both resources.

This study is being performed to evaluate trail options for public recreation and use, which will complement the current use of parks and recreation areas in the study area. Proposed alignment alternatives may travel through or around these park areas, but will generally use existing sidewalks, roads or shoulders, and trails. Possible realignment of an existing asphalt trail through Glenwood Park will be included in the alternatives. The existing trail intersects existing parking lots without any separate trail alignment or delineation through the parking area. No alternatives are proposed in the area of the Glenwood Hills Nature Trail; however, possible connections to this nature area may be investigated as alternatives are developed.

Because this project is being completed in partnership with the City of Erie and is recreational in nature within City-owned park/recreational Section 4(f) properties, there would be no Section 4(f) use as per an exception for enhancement projects (23 CFR 774.113(g)).

Section 6(f):

Land and Water Conservation Funds (LWCF) were provided to the City of Erie for the Erie Zoo in 1981 for zoo expansion (See map in Appendix F). Additional coordination with the Pennsylvania Department of Conservation and Natural Resources (DCNR), the LWCF State Liaison, would be needed to receive the

official Section 6(f) boundary. Because of the scope of this project as a trail project to benefit the zoo with trails for visitors, no Section 6(f) conversion is anticipated.

Cultural Resources

Above Ground Resources:

A review of Pennsylvania's Historic & Archaeological Resource Exchange (PA-SHARE) indicates that there are no National Register of Historic Places (NRHP) listed or eligible resources in the project area. A total of four (4) previously identified resources are found within, or immediately adjacent, to the project area. The four resources were previously determined not eligible for the NRHP and include Glenwood Park Historic District (2001RE01451), Flo Fabrizio Ice Center at the Zoo (formerly JMC Ice Arena) (2019RE03313), Glenwood Zoo District (1999RE00965), and SR 505 Bridge over Mill Creek (2004RE06826). The West 38th Street Bridge was built in 1934 and is located adjacent to Glenwood Park Boulevard, within the Erie Zoo. The bridge was previously determined not eligible for the NRHP but does not appear in PA-SHARE and was not included in the above four previously identified resources.

The project area extends along West Grandview Boulevard and Cherry Street, south and west of the J.C. Martin Golf Course. The area bound by Glenwood Boulevard, Highview Boulevard, and West Grandview Boulevard, and Cherry Street is part of an early-to-mid-twentieth century residential neighborhood. The neighborhood includes examples of the Colonial Revival, Bungalow, Craftsman, Ranch, Tudor Revival, and other architectural styles from the early to mid-twentieth century. The area has not been evaluated for the National Register but does include numerous properties that are 50 years of age or older. The area is part of the Glenwood Subdivision and has potential to be eligible for the NRHP as an early twentieth century planned residential subdivision, similar to the NRHP eligible Glenwood Hill Historic District. The neighborhood west of Cherry Street also consists of early-to-mid twentieth century residential properties and may have potential as a residential development. If the project has potential to affect the early-to-mid twentieth century residential housing and its setting, further investigations may be required.

Archaeology:

A review of PA-SHARE displays 22 archaeological surveys have been conducted within a 3.0-mile radius of the project area, with only two surveys having been conducted within a 2.0-mile radius. No archaeological surveys have been conducted within or adjacent to the project area. There are 30 previously recorded archaeological sites within a 3.0-mile radius of the project APE. Within a 2-mile radius there are zero previously recorded sites with the closest known site (36ER0014) recorded 2.08 miles to the northwest. A review of Statewide Pre-Contact Probability Model (SPPM) shows the vast majority of the proposed project's archaeological area of potential effects (APE) is identified as low probability for containing pre-contact archaeological resources. Areas not considered low probability are listed as moderate probability; however, the entire project area is unlikely to contain intact pre-contact archaeological deposits and can be considered low potential and even no potential.

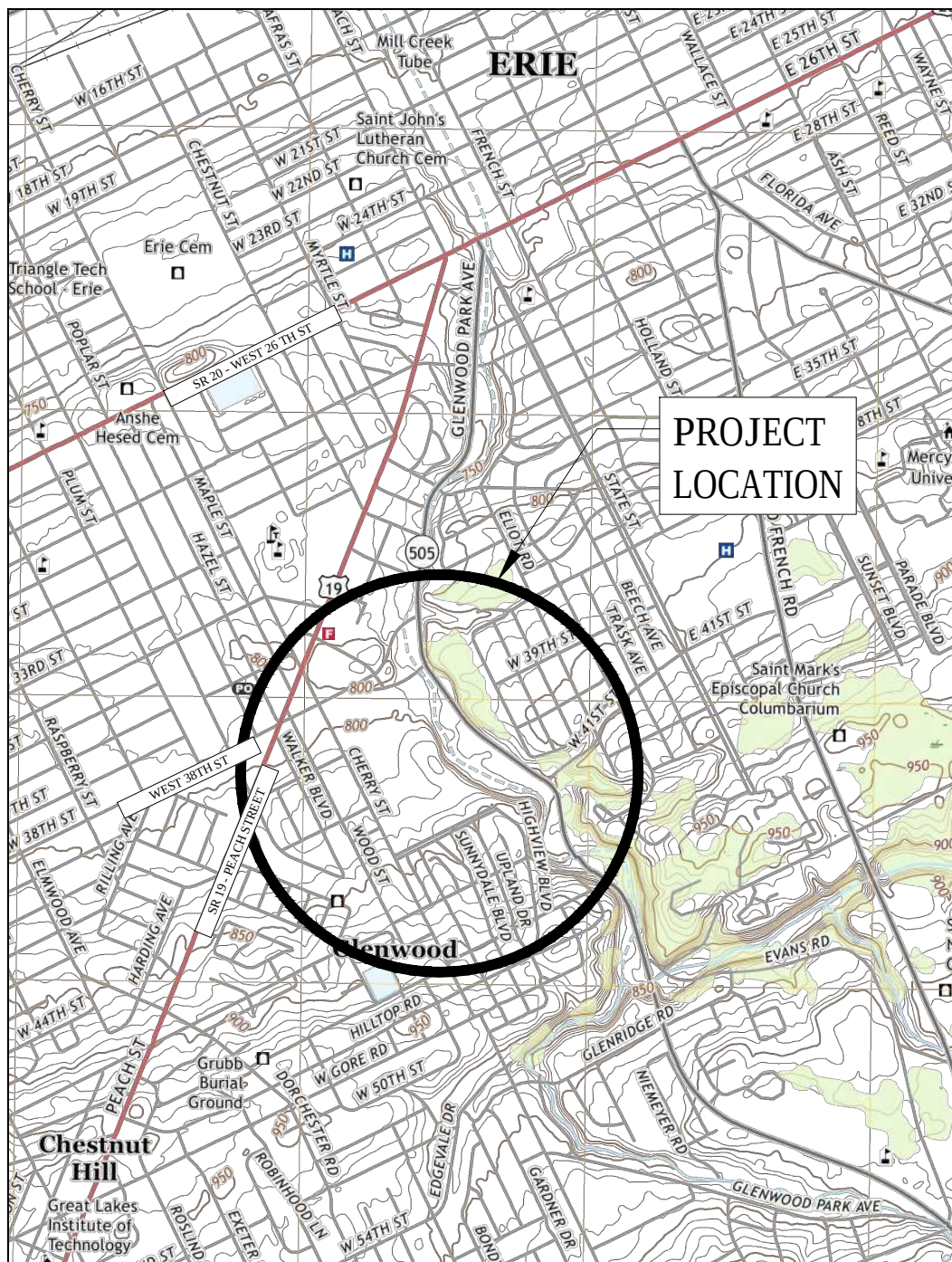
A review of historic mapping, topographic maps, and aerials shows that the project area has changed over the past 120 years. The modern Cherry Street and West 38th Street alignments are present on mapping in 1900 and it isn't until the mid to late 1950s that the neighborhoods around them began to be built up including streets Glenwood Boulevard and West Grandview Boulevard and the residential areas between them. The Erie Zoo (formerly the Erie Zoological Park and Botanical Garden of Northwestern Pennsylvania) was established around 1930 and has grown to include approximately 15 acres of land bounded by West

38th Street to the north, Glenwood Park Avenue to the east, Glenwood Park to the south, and the former Highview Boulevard right-of-way and J.C. Martin Golf Course to the west.

Much of the likely archaeological APE is located within existing sidewalk right-of-way and transportation facilities on Cherry Street, Glen Drive, Glenwood Boulevard, Glenwood Park Avenue, Highview Boulevard, West Grandview Boulevard, West 38th Street, and an unnamed road between Cherry Street and the Erie Zoo including the Old 38th Street Bridge. Mill Creek, a 3rd order stream, transects the APE through Glenwood Park and the Erie Zoo. It is unclear how much of Mill Creek has been channelized and disturbed; however, the project is not expected to require any deep soil impacts. A small railroad right-of-way is located within the Erie Zoo that crosses Mill Creek at two points.

The limited nature of the project's impact on intact soils by constructing new or expanding existing trails and sidewalks has a low potential to encounter unrecorded archaeological resources.

APPENDIX A
PROJECT LOCATION MAP



Adapted from the U.S.G.S. "ERIE SOUTH, PA"
7.5 Minute Quadrangle Map

Scale: 1" = 2000'



1319 Sassafraz Street, Erie, PA 16501-1720
814.453.5702 (ph) 814.453.2020 (fax)

PROJECT LOCATION MAP
ERIE ZOO MULTI-PURPOSE TRAIL STUDY
City of Erie, Erie County, Pennsylvania

Project Location Map

APRIL 2023

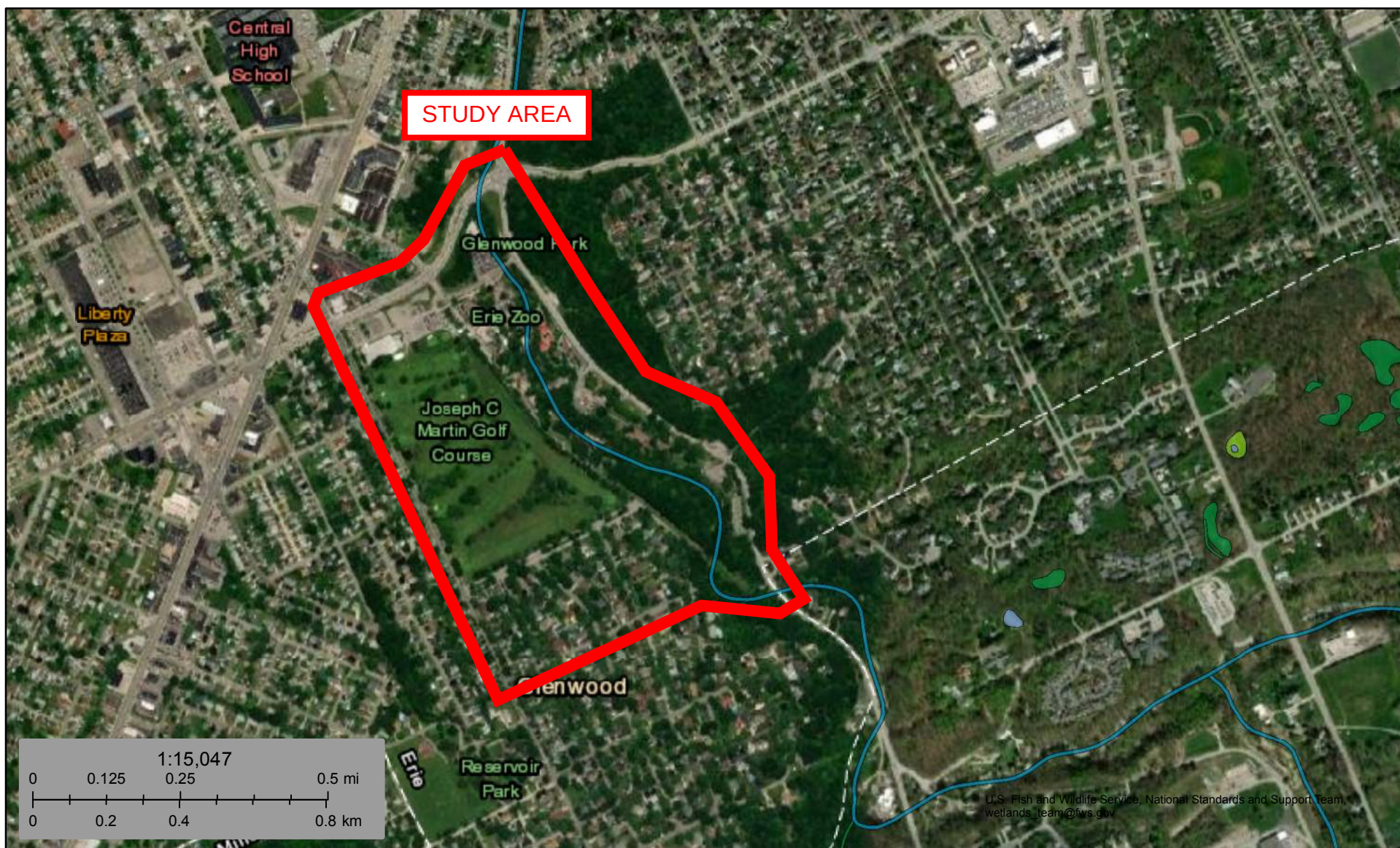
APPENDIX B
NWI MAPPER – WETLANDS



U.S. Fish and Wildlife Service

National Wetlands Inventory

ERIE ZOO MULTI-PURPOSE TRAIL STUDY



March 8, 2023

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond

- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

APPENDIX C
FLOODPLAINS – FEMA FIRMETTE

National Flood Hazard Layer FIRMMette



80°5'3"W 42°6'4"N



0 250 500 1,000 1,500 2,000 Feet 1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
		Area of Undetermined Flood Hazard Zone D
GENERAL STRUCTURES		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 3/9/2023 at 1:50 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

National Flood Hazard Layer FIRMette



80°4'49"W 42°5'57"N



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard Zone D
		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
		Profile Baseline
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **3/9/2023 at 1:49 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

0 250 500 1,000 1,500 2,000 Feet 1:6,000

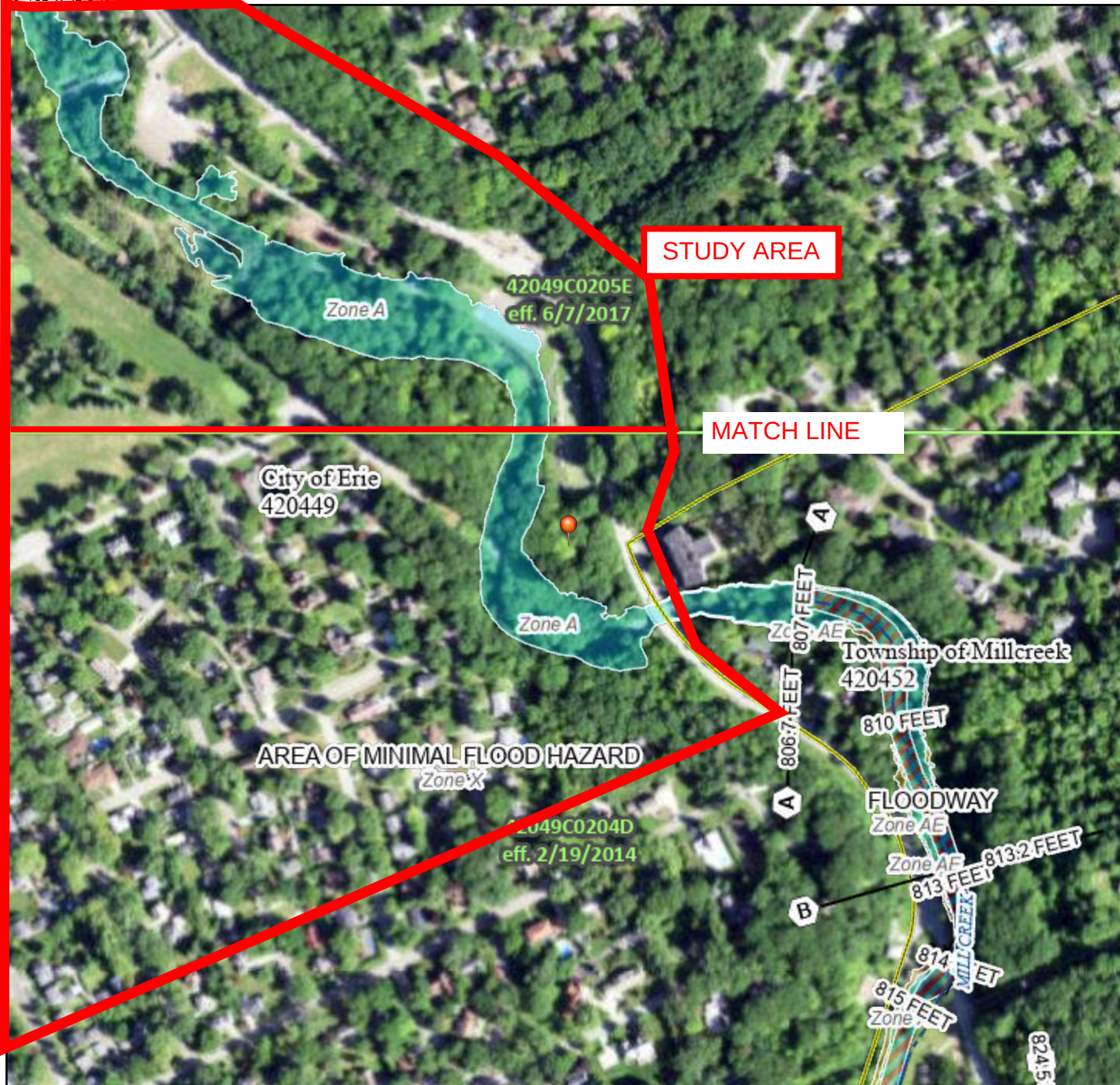
Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

80°4'12"W 42°5'31"N

National Flood Hazard Layer FIRMette



80°4'32"W 42°5'48"N



0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard Zone D
		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
MAP PANELS		Jurisdiction Boundary
		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature
		Digital Data Available
		No Digital Data Available
		Unmapped



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **3/9/2023 at 1:47 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

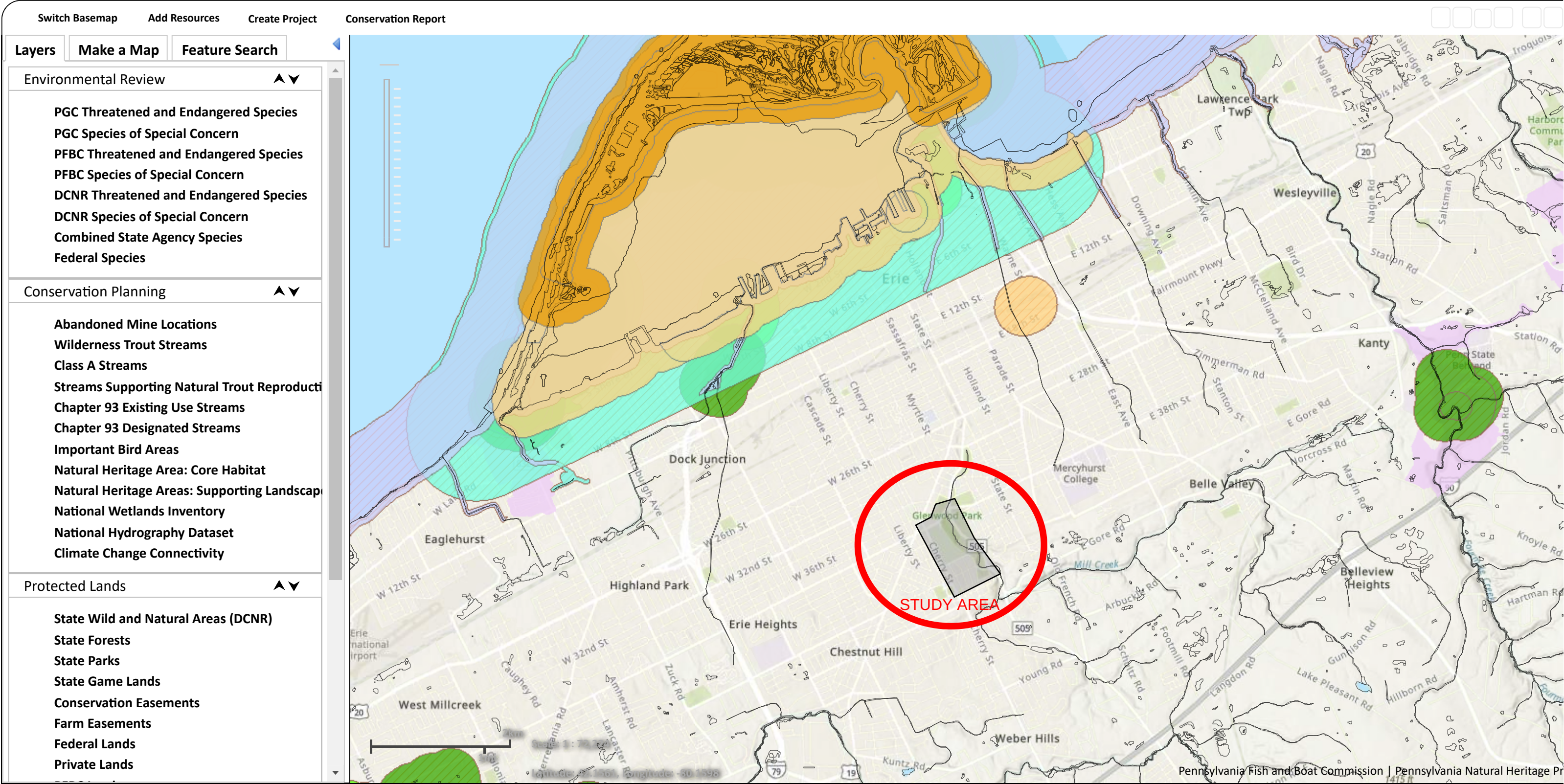
APPENDIX D

STREAMS – PA CODE CH. 93 DESIGNATION

Stream	Zone	County	Water Uses Protected	Exceptions To Specific Criteria
2—Raccoon Creek	Basin	Erie	CWF, MF	None
2—Crooked Creek	Basin	Erie	HQ-CWF, MF	None
2—Elk Creek	Main Stem	Erie	WWF, MF	Delete DO ₂ and Temp ₂ Add DO ₁ and Temp ₁
3—Unnamed Tributaries to Elk Creek	Basins	Erie	CWF, MF	None
3—Lamson Run	Basin	Erie	CWF, MF	None
3—Goodban Run	Basin	Erie	CWF, MF	None
3—Falk Run	Basin	Erie	CWF, MF	None
3—Little Elk Creek	Basin	Erie	CWF, MF	None
3—Brandy Run	Basin	Erie	CWF, MF	None
3—Halls Run	Basin	Erie	CWF, MF	None
2—Godfrey Run	Basin	Erie	HQ-CWF, MF	None
2—Trout Run	Basin	Erie	CWF, MF	None
2—Walnut Creek	Main Stem	Erie	CWF, MF	None
3—Unnamed Tributaries to Walnut Creek	Basins	Erie	CWF, MF	None
3—Bear Run	Basin	Erie	CWF, MF	None
3—Thomas Run	Basin	Erie	HQ-CWF, MF	None
2—Unnamed Tributaries to Lake Erie	Basins, Presque Isle to Unnamed Tributary at RM 23.22	Erie	WWF, MF	None
2—Unnamed Tributary to Lake Erie at RM 23.22	Basin	Erie	CWF, MF	None
2—Unnamed Tributaries to Lake Erie	Basins, Unnamed Tributary at RM 23.22 to Longitude 80°01'50"	Erie	WWF, MF	None
2—Cascade Creek	Basin	Erie	WWF, MF	None
2—Mill Creek	Basin	Erie	WWF, MF	None
2—Fourmile Creek	Basin	Erie	WWF, MF	Delete DO ₂ and Temp ₂ Add DO ₁ and Temp ₁
2—Unnamed Tributaries to Lake Erie	Basins, Longitude 80°01'50" to PA-NY State Border	Erie	CWF, MF	None
2—Sixmile Creek	Basin	Erie	CWF, MF	None
2—Sevenmile Creek	Basin	Erie	CWF, MF	None

APPENDIX E

THREATENED AND ENDANGERED SPECIES – PNDI RECEIPT



Introduction

This Conservation Planning Report compiles names, descriptions, maps, locations, measurements, links and references for Natural Heritage Areas (core and supporting habitats), Important Bird Areas, State Lands, and agency designated water resources that are coincident with an area of interest defined by the user of the Pennsylvania Conservation Explorer tool. For an overview and additional details, please be sure to visit the website at www.naturalheritage.state.pa.us and download the applicable County Natural Heritage Inventory report(s).

Site Area: 1,813.11 acres

County(s): Erie

Township/Municipality(s): ERIE; MILLCREEK

Quadrangle Name(s): ERIE SOUTH

Watersheds HUC 8: Chautauqua-Conneaut

Watersheds HUC 12: Presque Isle Bay-Frontal Lake Erie

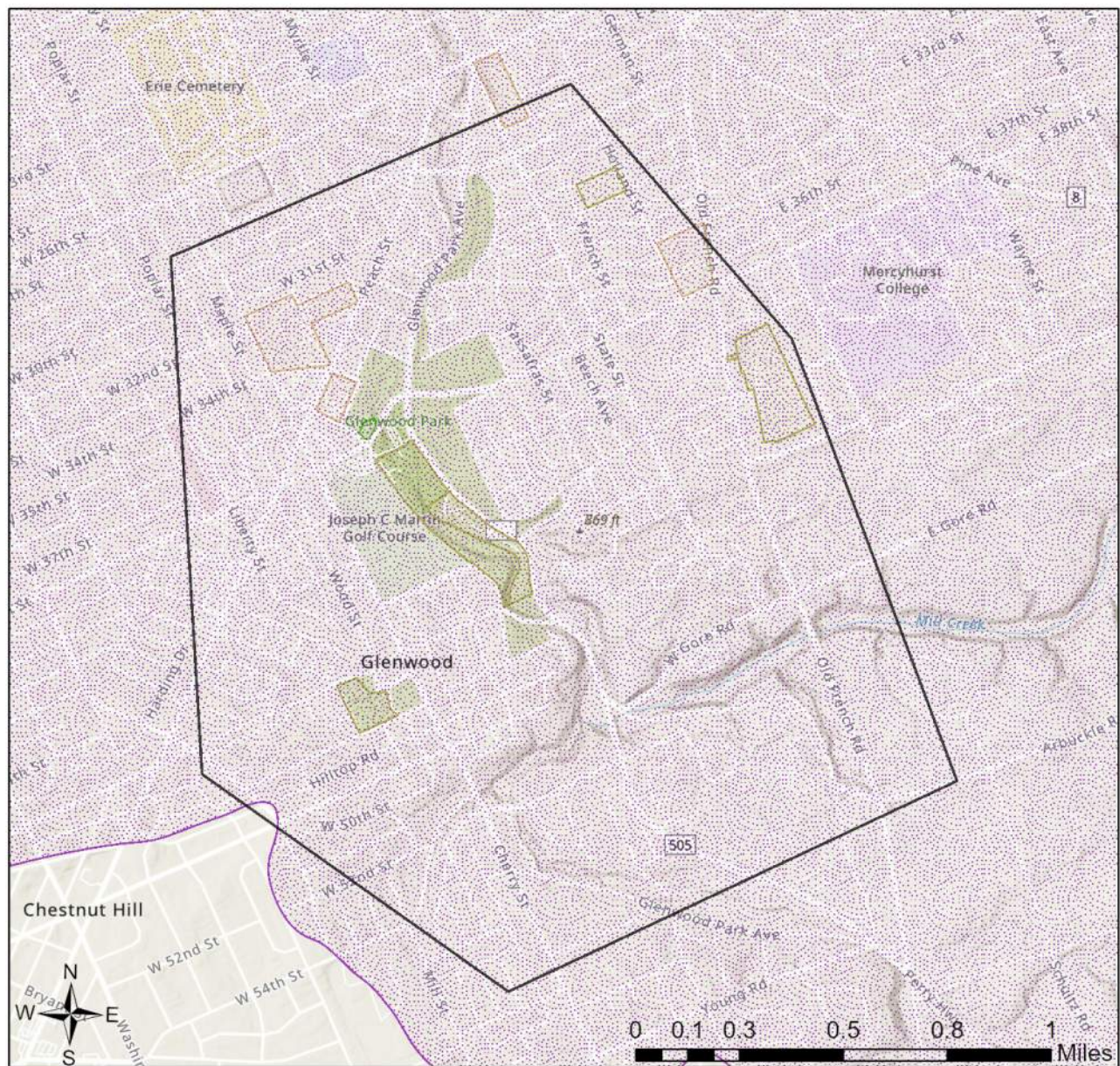
Decimal Degrees: 42.094475 N, -80.070336 W

Degrees Minutes Seconds: 42° 5' 40.1116" N, 80° 4' 13.2112" W

SEARCH RESULT SUMMARY

Conservation Planning Category	Detected Area Summary
Protected Lands	6 tracts; 60.66 acres

test



-  Protected Areas
 State Lands
 Local Parks
 Supporting Landscapes
 Project_Boundary



Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community

Protected Lands

Protected lands or conservation areas are locations which receive protection, through legal or other means, because of their recognized natural, ecological and/or cultural values.

Name	Description	Owner	Website	Total Acres
Baker Field	Athletic Field	Erie		4.00
Erie Zoo	Park	Erie		21.00
Glenwood Park	Park	Erie		10.00
Hillside Park	Park	Erie		19.00
Reservoir Park	Park	Erie		7.00
Shunpike Rd	Park	Erie		1.00

Local Parks

A local park is a publicly owned and publicly accessible park or natural area that engages participants of all ages in outdoor recreational experiences. Local parks and open spaces connect citizens to close-to-home outdoor recreation opportunities for play and physical activities; promote health and wellness, and environmental stewardship.

Local Park	Park Type	County	State or Federal Grant Funding
Reservoir Park	Neighborhood Parks	Erie	No
Academy High School	School Parks	Erie	No
Jefferson Elementary School	School Parks	Erie	No
Hillside Park	Neighborhood Parks	Erie	No
Erie Zoo	Community Parks	Erie	Yes, click here for more information.
Glenwood Park	Neighborhood Parks	Erie	No
Glenwood Elementary School	School Parks	Erie	No
Memorial Technical High School	School Parks	Erie	No
Baker Field	Neighborhood Parks	Erie	No

For additional information about the Pennsylvania Natural Heritage Program, visit the website at www.naturalheritage.state.pa.us or you can email your questions and comments to RA-HeritageReview@pa.gov.

1. PROJECT INFORMATION

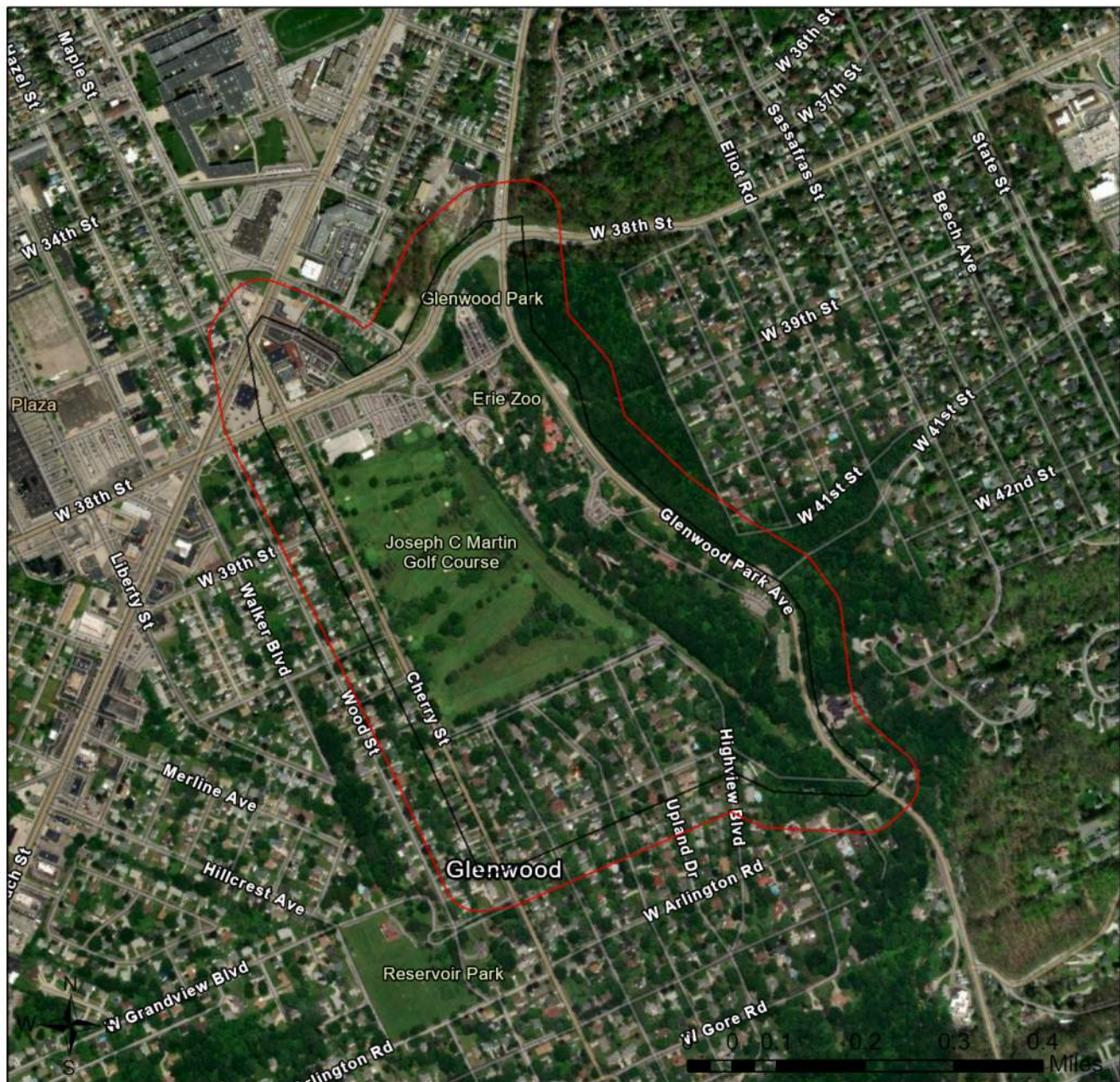
Project Name: **Erie Zoo Multi-purpose Trail Study**
Date of Review: **3/28/2023 08:21:14 AM**
Project Category: **Transportation, Other**
Project Area: **131.55 acres**
County(s): **Erie**
Township/Municipality(s): **ERIE; MILLCREEK TOWNSHIP**
ZIP Code:
Quadrangle Name(s): **ERIE SOUTH**
Watersheds HUC 8: **Chautauqua-Conneaut**
Watersheds HUC 12: **Presque Isle Bay-Frontal Lake Erie**
Decimal Degrees: **42.094863, -80.075326**
Degrees Minutes Seconds: **42° 5' 41.5078" N, 80° 4' 31.1718" W**

2. SEARCH RESULTS

Agency	Results	Response
PA Game Commission	No Known Impact	No Further Review Required
PA Department of Conservation and Natural Resources	No Known Impact	No Further Review Required
PA Fish and Boat Commission	No Known Impact	No Further Review Required
U.S. Fish and Wildlife Service	No Known Impact	No Further Review Required

As summarized above, Pennsylvania Natural Diversity Inventory (PNDI) records indicate no known impacts to threatened and endangered species and/or special concern species and resources within the project area. Therefore, based on the information you provided, no further coordination is required with the jurisdictional agencies. This response does not reflect potential agency concerns regarding impacts to other ecological resources, such as wetlands.

Erie Zoo Multi-purpose Trail Study

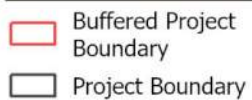


-  Buffered Project Boundary
 Project Boundary



Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community

Erie Zoo Multi-purpose Trail Study



Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community

RESPONSE TO QUESTION(S) ASKED

Q1: The proposed project is in the range of the Indiana bat. Describe how the project will affect bat habitat (forests, woodlots and trees) and indicate what measures will be taken in consideration of this. Round acreages up to the nearest acre (e.g., 0.2 acres = 1 acre).

Your answer is: The project will affect 1 to 39 acres of forests, woodlots and trees.

Q2: Is tree removal, tree cutting or forest clearing of 40 acres or more necessary to implement all aspects of this project?

Your answer is: No

3. AGENCY COMMENTS

Regardless of whether a DEP permit is necessary for this proposed project, any potential impacts to threatened and endangered species and/or special concern species and resources must be resolved with the appropriate jurisdictional agency. In some cases, a permit or authorization from the jurisdictional agency may be needed if adverse impacts to these species and habitats cannot be avoided.

These agency determinations and responses are **valid for two years** (from the date of the review), and are based on the project information that was provided, including the exact project location; the project type, description, and features; and any responses to questions that were generated during this search. If any of the following change: 1) project location, 2) project size or configuration, 3) project type, or 4) responses to the questions that were asked during the online review, the results of this review are not valid, and the review must be searched again via the PNDI Environmental Review Tool and resubmitted to the jurisdictional agencies. The PNDI tool is a primary screening tool, and a desktop review may reveal more or fewer impacts than what is listed on this PNDI receipt. The jurisdictional agencies **strongly advise against** conducting surveys for the species listed on the receipt prior to consultation with the agencies.

PA Game Commission

RESPONSE:

No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

PA Department of Conservation and Natural Resources

RESPONSE:

No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

PA Fish and Boat Commission

RESPONSE:

No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

U.S. Fish and Wildlife Service

RESPONSE:

No impacts to **federally** listed or proposed species are anticipated. Therefore, no further consultation/coordination under the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq. is required. Because no take of federally listed species is anticipated, none is authorized. This response does not reflect potential Fish and Wildlife Service concerns under the Fish and Wildlife Coordination Act or other authorities.

4. DEP INFORMATION

The Pa Department of Environmental Protection (DEP) requires that a signed copy of this receipt, along with any required documentation from jurisdictional agencies concerning resolution of potential impacts, be submitted with applications for permits requiring PNDI review. Two review options are available to permit applicants for handling PNDI coordination in conjunction with DEP's permit review process involving either T&E Species or species of special concern. Under sequential review, the permit applicant performs a PNDI screening and completes all coordination with the appropriate jurisdictional agencies prior to submitting the permit application. The applicant will include with its application, both a PNDI receipt and/or a clearance letter from the jurisdictional agency if the PNDI Receipt shows a Potential Impact to a species or the applicant chooses to obtain letters directly from the jurisdictional agencies. Under concurrent review, DEP, where feasible, will allow technical review of the permit to occur concurrently with the T&E species consultation with the jurisdictional agency. The applicant must still supply a copy of the PNDI Receipt with its permit application. The PNDI Receipt should also be submitted to the appropriate agency according to directions on the PNDI Receipt. The applicant and the jurisdictional agency will work together to resolve the potential impact(s). See the DEP PNDI policy at <https://conservationexplorer.dcnr.pa.gov/content/resources>.



5. ADDITIONAL INFORMATION

The PNDI environmental review website is a preliminary screening tool. There are often delays in updating species status classifications. Because the proposed status represents the best available information regarding the conservation status of the species, state jurisdictional agency staff give the proposed statuses at least the same consideration as the current legal status. If surveys or further information reveal that a threatened and endangered and/or special concern species and resources exist in your project area, contact the appropriate jurisdictional agency/agencies immediately to identify and resolve any impacts.

For a list of species known to occur in the county where your project is located, please see the species lists by county found on the PA Natural Heritage Program (PNHP) home page (www.naturalheritage.state.pa.us). Also note that the PNDI Environmental Review Tool only contains information about species occurrences that have actually been reported to the PNHP.

6. AGENCY CONTACT INFORMATION

PA Department of Conservation and Natural Resources

Bureau of Forestry, Ecological Services Section
400 Market Street, PO Box 8552
Harrisburg, PA 17105-8552
Email: RA-HeritageReview@pa.gov

PA Fish and Boat Commission

Division of Environmental Services
595 E. Rolling Ridge Dr., Bellefonte, PA 16823
Email: RA-FBPACENOTIFY@pa.gov

U.S. Fish and Wildlife Service

Pennsylvania Field Office
Endangered Species Section
110 Radnor Rd; Suite 101
State College, PA 16801
Email: IR1_ESPenn@fws.gov
NO Faxes Please

PA Game Commission

Bureau of Wildlife Management
Division of Environmental Review
2001 Elmerton Avenue, Harrisburg, PA 17110-9797
Email: RA-PGC_PNDI@pa.gov
NO Faxes Please

7. PROJECT CONTACT INFORMATION

Name: ANDREW R. HOLLAND, P.E.
Company/Business Name: URBAN ENGINEERS, INC.
Address: 1319 SASSAFRAS STREET
City, State, Zip: ERIE, PA 16501
Phone: (814) 453-5702 Fax: ()
Email: ARHOLLAND@URBANENGINEERS.COM

8. CERTIFICATION

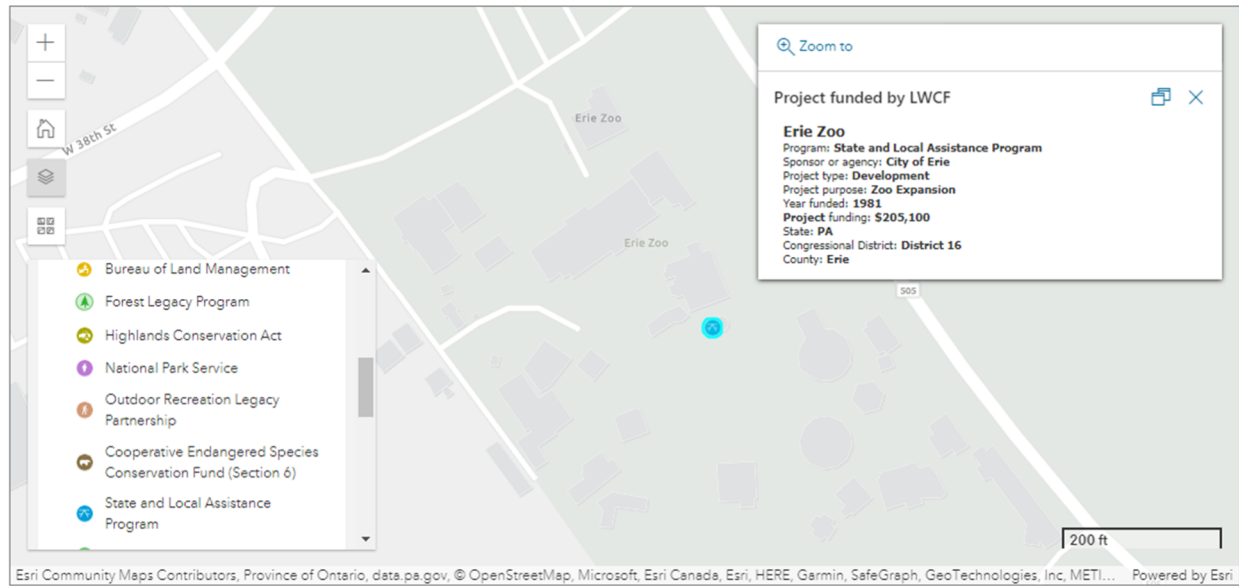
I certify that ALL of the project information contained in this receipt (including project location, project size/configuration, project type, answers to questions) is true, accurate and complete. In addition, if the project type, location, size or configuration changes, or if the answers to any questions that were asked during this online review change, I agree to re-do the online environmental review.

applicant/project proponent signature

date

APPENDIX F

**TRUST FOR PUBLIC LAND'S THE LAND AND WATER CONSERVATION
FUND MAPPER**



Source: Trust for Public Land's The Land and Water Conservation Fund mapper
(<https://lwcf.tplgis.org/mappast/>)