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8/29/25

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Subject: Virginia Street Pedestrian Study
Technical Memorandum

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Appendix A: Roadway Exhibits

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Section 1.0: Introduction

Stakeholder Meeting

B&N met virtually with representatives from the City of Oak Hill and the Fayette Raleigh Metropolitan Planning Organization (FRMPO) on June 25th, 2025, to discuss the needs of the Virginia Street corridor from a pedestrian access and safety perspective. At the time of the meeting there was already a project in progress to investigate potential options to widen the sidewalk on the north side of Virgina Street. The purpose of this study evaluated potential pedestrian safety and accessibility improvements for crossing locations along the Virginia Street corridor in the City of Oak Hill. With the help of the stakeholders, seven locations were identified where crossing improvements would enhance the connectivity between residential neighborhoods and key destinations such as the White Oak Rail Trail, the Oak Hill City Park, the Oak Hill Educational complex, and local businesses. These locations are listed below and shown in *Figure 1.1*:

Location 1: Jones Avenue Crossing

Location 2: Duncan Avenue Crossing

Location 3: Mankin Avenue Crossing

Location 4: Central Avenue Crossing

Location 5: Midblock Crossing between Fayco Drive & Pacwood Drive

Location 6: White Oak Rail Trail Crossing near Pacwood Drive

Location 7: Oyler Avenue Crossing

Four of the selected locations are existing crosswalks that would benefit from safety enhancements. The other three locations are at intersections where installing a new crosswalk connects existing sidewalk to trail networks. The cost of implementing a crosswalk due to factors such as grading, the spacing of the crosswalks relative to each other, and current pedestrian and bicyclist trends were all considered when selecting the seven crossing locations. Potential crosswalk enhancements were discussed with the stakeholders to ensure the community would be comfortable with the proposed improvements.

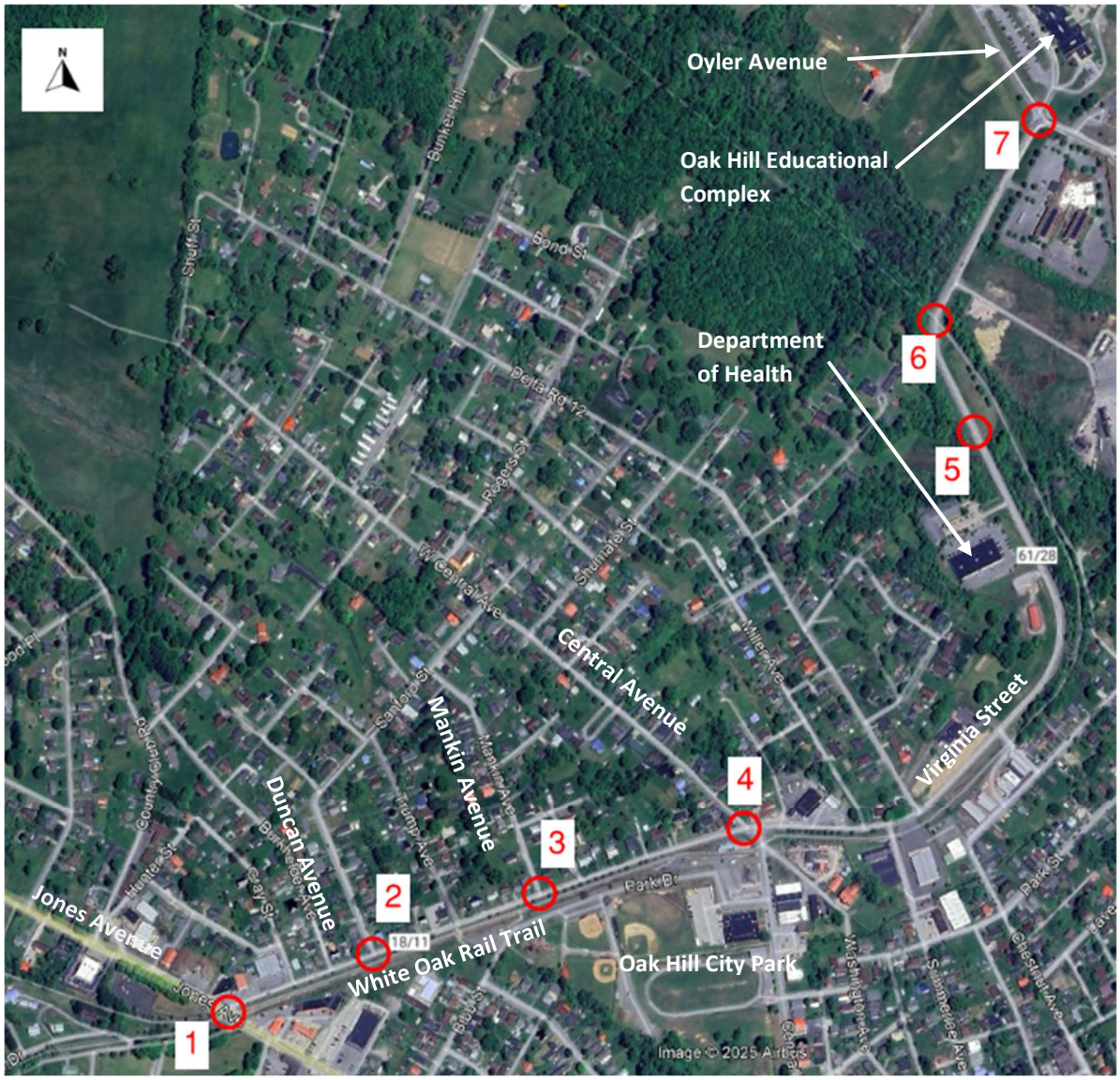


Figure 1.1 – Study Crossing Locations (Google Earth)

Section 2.0: Existing Conditions

Aerial imagery of Fayette County was obtained from the West Virginia GIS Technical Center Imagery Basemap Database. The imagery was recorded in 2020 and was supplemented with present day aerial imagery of several key locations taken via drone by the City of Oak Hill staff and provided to B&N. Additionally, property lines were obtained through the West Virginia GIS Technical Center.

Virginia Street

Virginia Street begins at the intersection with Jones Avenue and runs northeast through the City of Oak Hill to the intersection of Oyler Avenue (approximately 6500' or 1.2 miles). From Gray Street to the midblock crossing, (Location 5, located 600 feet north of the Department of Health and Human Resources (DHHR)), the sidewalk on the north/west side of Virginia Street is heavily deteriorated. North of the midblock crossing (location 5) the sidewalk continues on the south/east side of Virginia Street to Oyler Avenue and is in good condition. The deteriorated sections of sidewalk are an insufficient width (approximately 4') and have many

overhead electric poles located in the walkway, often limiting usable width to less than 2 feet. There are no marked crosswalks on Virginia Street from its origin at Jones Avenue to the midblock crossing, presenting an accessibility and safety issue. Because of this, residents in the surrounding residential neighborhoods do not have an ADA compliant way to access the White Oak Rail Trail or reach any of the destinations along Virginia Street, such as businesses or the Oak Hill Educational Complex.

White Oak Rail Trail

The White Oak Rail Trail crosses Jones Avenue and runs parallel to Virginia Street until crossing Virginia Street and running northwest for several more miles. The trail is asphalt pavement with a typical width of 10' and lies on a former railbed. The Oak Hill City Park, located between Trump Avenue and Central Avenue, is a key destination along the trail. A new skate park was recently constructed at the park and generates many pedestrian trips.

Section 3.0: Proposed Enhancements

RRFB Crossing Treatment

This study proposes several Rectangular Rapid Flashing Beacons (RRFBs) as a crossing enhancement. RRFBs are crosswalk signs with user-activated warning lights to alert drivers when there is a pedestrian entering a crosswalk, typically at a mid-block crossing or trail crossings. The high intensity flashing lights are designed to capture a driver's attention, increasing driver yield rates and pedestrian visibility, while improving pedestrian safety. According to the U.S DOT – Federal Highway Administration, RRFBs can reduce pedestrian crashes by up to 47% and can increase motorist yielding rates up to 98% (varies by speed limit, number of lanes, crossing distance, and time of day). RRFBs are installed with curb ramps and high-visibility crosswalk markings, as shown in ***Photo 3.1***, creating an accessible way for all trail and sidewalk users to cross the street.

Photo 3.1 – RRFB Crossing (photo credit: City of Hilliard)

Cost Estimate Summary

Cost estimates were constructed for each potential improvement location discussed in this study.

A table summarizing the construction cost estimate of each crossing location is provided below in *Table 3.1 and* individual cost estimates broken down by item type are shown in section 4.0 in *Tables 4.1-4.7*.

Table 3.1 – Comparison of Construction Cost Estimates

Crossing Location	Cost (2028 Dollars)
Jones Avenue Crossing	$125,000.00
Duncan Avenue Crossing	$85,000.00
Mankin Avenue Crossing	$81,000.00
Central Avenue Crossing	$69,000.00
Midblock Crossing between Fayco Drive & Pacwood Drive	$47,000.00
White Oak Rail Trail Crossing Near Pacwood Drive	$96,000.00
Oyler Avenue Crossing	$83,000.00

Quantities in the roadway, pavement, and drainage categories were estimated from CADD basemaps while the maintenance of traffic, traffic control, and incidentals categories were estimated as lump sums with costs coming from previous projects of similar scale. Specific items and unit costs were pulled from the West Virginia DOT 2024 bid data, and pavement costs were calculated by summing the unit costs of all items used for full depth pavement or resurfacing in the West Virginia DOT typical sections.

A breakdown of items included in each category is as follows:

Roadway Items: excavation, detectable warning, curb ramps, and sidewalk.

Pavement Items: full depth asphalt pavement, asphalt resurfacing, concrete curb, and shared use path pavement.

Drainage Items: 18” pipe for when there is proposed improvements over an existing ditch.

Maintenance of Traffic Items: A lump sum item to account for any MOT items needed during construction.

Traffic Control Items: RRFBs, and a lump sum item to account for signing and striping.

A preliminary engineering contingency of 30% was added to each estimate to account for details developed during detailed design, while an inflation of 12% was added to adjust for an estimated 2028 construction date. The estimate does not account for right-of-way acquisition costs, utility relocations, force account, or an engineering design fee. Each estimate’s final cost was reported in 2028 dollars.

Section 4.0: Crossing Locations

Jones Avenue Crossing

Existing Condition

Virginia Street and Sunny Side Drive intersect Jones Avenue approximately 140’ apart at two separate stop-controlled T-intersections. Jones Avenue is free flowing through the intersection, and a parking lot entrance is located across from the Virginia Street intersection. The southern curb return of Virginia Street has a 40-foot radius, which increases the crossing distance for pedestrians and encourages higher right turning vehicle speeds.

The White Oak Rail Trail crosses Jones Avenue at two separate locations approximately 10 feet apart. There are no existing crosswalk markings for either of the trail crossings and no detectable warnings or curb ramps, though there are pedestrian crossing signs. On the north side of Jones Avenue, one leg of the trail crossing continues northeast while the second trail crossing

immediately terminates into a dirt path. On the south side, both trail crossings continue as paved asphalt trails with one running west and the other running southwest. For an aerial photograph of the intersection see *Photo 4.1* below.

Photo 4.1 – Jones Avenue Intersection, Facing West (photo credit: City of Oak Hill)

Proposed Improvements

The proposed improvements to the White Oak Rail Trail crossing at Jones Avenue include a RRFB with high visibility crosswalk markings, yield lines, and detectable warnings. On the west side of Jones Avenue, the two branches of the White Oak Rail Trail are merged into one path, so that only a single crosswalk is provided across Jones Avenue. The sidewalks on either side of the south leg of Jones Avenue will be extended to connect to the trail, and a crosswalk will be added across Sunnyside Drive. New curb is proposed with a smaller 25-foot radius return for the southern corner of the Jones Avenue and Virginia Street intersection to reduce the crossing distance and encourage lower turning speeds. The intersection will be resurfaced with new striping added, and minimal full depth pavement where required due to new or repaired curb.

An exhibit showing the proposed changes can be found in **Appendix A** and the full itemized construction cost estimate can be found in **Appendix B.**

The construction cost for the Jones Avenue Crossing improvements are summarized below in *Table 4.1*.

Table 4.1 – Jones Avenue Crossing Construction Cost

	Jones Avenue Crossing
Roadway	$26,600
Pavement	$27,600
Maintenance of Traffic	$10,000
Traffic Control	$22,000
Incidentals	$7,000
25% Contingency	$23,300
9% Inflation	$8,388
2028 Cost	$125,000

Duncan Avenue Crossing

Existing Condition

The Duncan Avenue Crossing is located at the intersection of Duncan Avenue and Virginia Street. On the north side of Virginia Street there is a deteriorated sidewalk and curb, while the south side of Virginia Street has an 18' grass buffer that separates Virginia Street from the White Oak Rail Trail. The trail is nearly at grade with Virginia Street at this location. There is an overhead electric pole that currently sits at the edge of walk at the northeast corner of Virginia Street and Duncan Avenue which restricts the pedestrian access route. The Virginia Street legs of this intersection are free flowing, and there is no ADA compliant access to the White Oak Rail Trail from the sidewalk along Virginia Street due to the absence of a crosswalk or curb ramps.

For a 2021 street-view level photograph of the intersection see *Photo 4.2* below.

Photo 4.2 – Duncan Avenue Intersection, Facing Northeast (photo credit: Google Maps)

Proposed Improvements

The Duncan Avenue Crossing is located evenly between the Jones Avenue and Mankin Avenue crossings, on the east side of Duncan Avenue. The proposed improvements are a RRFB, a high visibility crosswalk, and a curb bump out. The curb bump out allows for adequate space to build an ADA compliant curb ramp on the north side of Virginia Street and will reduce the southwest-bound lane from 10' to 12'. South of Virginia Street a proposed asphalt pavement extension to the trail provides a connection to the crosswalk.

An exhibit showing the proposed changes can be found in **Appendix A** while the full itemized construction cost estimate can be found in **Appendix B.**

The construction cost for the Duncan Avenue Crossing improvements are summarized below in *Table 4.2*.

Table 4.2 – Duncan Avenue Crossing Construction Cost

	Duncan Avenue Crossing
Roadway	$21,400
Pavement	$8,500
Drainage	3,000
Maintenance of Traffic	$5,000
Traffic Control	$21,000
Incidentals	$4,000
25% Contingency	$15,725
9% Inflation	$5,661
2028 Cost	$85,000

Mankin Avenue Crossing

Existing Condition

The Mankin Avenue Crossing is located at the intersection of Mankin Avenue and Virginia Street. This location shares many characteristics with the Duncan Avenue Crossing including the proximity to the sidewalk and trail, and lack of crosswalk and curb ramps. The Oak Hil City Park is located approximately 100' south of the trail, and there is a pedestrian ramp 115' south of Mankin Avenue connecting the trail to the park which includes a playground, skate park, and the sports fields. Establishing an accessible connection between this ramp and the sidewalk located on the opposite side of Virginia Street would provide a vital ADA connection to this area.

For a present-day aerial photograph of the intersection see *Photo 4.3* below.

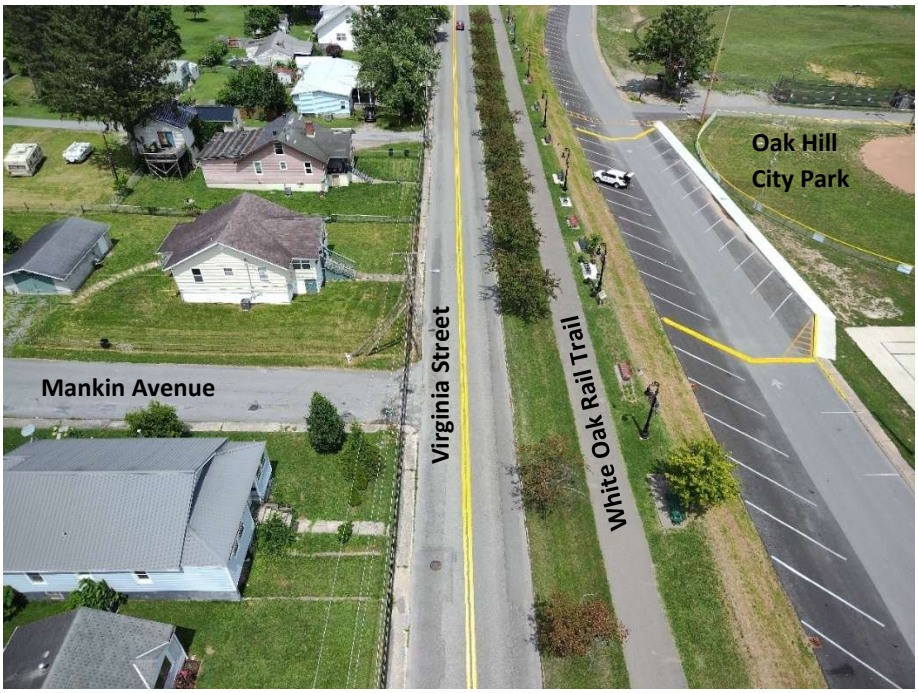


Photo 4.3 – Mankin Avenue Intersection, Facing Northeast (photo credit: City of Oak Hill)

Proposed Improvements

The proposed improvements to the Mankin Avenue Crossing provide access from the Virginia Street and Mankin Avenue sidewalks to the White Oak Rail Trail and the Oak Hill City Park. Mankin Avenue was chosen as a potential crossing location due to the minimal elevation difference between Virginia Street and the trail which allows for an ADA compliant connection, reduces costs, and provides even spacing of crossings along Virginia Street. Mankin Avenue only has a sidewalk on the west side of the street, so the crossing, including a RRFB and high visibility crosswalk, are proposed for the west side of the intersection. A curb bump out onto Virginia Street is proposed to give the north side adequate space for an ADA compliant curb ramp and avoid any property acquisition. This curb bump out reduces the southwest bound lane to 10' from 12'. On the south side of Virginia Street, a curb ramp with a 12' asphalt pavement connection to the White Oak Rail Trail is proposed.

An exhibit showing the proposed changes can be found in **Appendix A** while the full itemized construction cost estimate can be found in **Appendix B.**

The construction cost for the Mankin Avenue Crossing improvements are summarized below in *Table 4.3*.

Table 4.3 – Mankin Avenue Crossing Construction Cost

	Mankin Avenue Crossing
Roadway	$19,000
Pavement	$8,100
Drainage	$3,000
Maintenance of Traffic	$5,000
Traffic Control	$21,000
Incidentals	$4,000
25% Contingency	$15,025
9% Inflation	$5,409
2028 Cost	$81,000

Central Avenue Crossing

Existing Condition

The Central Avenue Crossing is located at the intersection of Central Avenue and Virginia Street, with Central Avenue stop controlled and Virginia Street free flowing. The White Oak Rail Trail crosses Central Avenue 70' south of Virginia Street. There is sidewalk in fair condition on the north side of Virginia Street that connects to the sidewalk running northeast along Central Avenue, but there are no crossing accommodations such as a crosswalk or curb ramps to cross Virginia Street. The Historic Oak Hill Depot is a historic destination on the south side of Virginia Street west of Central Avenue that offers a showcase for local artisans and acts as a halfway point along the White Oak Rail Trail. The Oak Hill City Park is just west of the Central Avenue crossing.

For a present-day aerial photograph of the intersection see *Photo 4.4* below.

Photo 4.4 – Central Avenue Intersection, Facing North (photo credit: City of Oak Hill)

Proposed Improvements

The proposed improvements at the Central Avenue Crossing include a RRFB and high visibility crosswalk on the east side of Central Avenue, approximately 20' from the Central Avenue curb return. Two new curb ramps are proposed, one parallel curb ramp on the north side of Virginia Street and another on the south side of Virginia Street to connect the crosswalk to a new 20-foot long path which provides a tie-in to the White Oak Rail Trail. This location was chosen due to the minimal elevation change from the trail to Virginia Street and the prevalence of nearby connections such as the Oak Hill City Park, several private businesses, and the Lewis Christian Community Center.

An exhibit showing the proposed changes can be found in **Appendix A** while the full itemized construction cost estimate can be found in **Appendix B.**

The construction cost for the Central Avenue improvements are summarized below in *Table 4.4*.

Table 4.4 – Central Avenue Crossing Construction Cost

	Central Avenue Crossing
Roadway	$17,200
Pavement	$3,700
Maintenance of Traffic	$5,000
Traffic Control	$21,000
Incidentals	$4,000
25% Contingency	$12,725
9% Inflation	$4,581
2028 Cost	$69,000

Midblock Crossing between Fayco Drive & Pacwood Drive

Existing Condition

The Midblock Crossing is located approximately 2700' north of the Central Avenue Crossing. At the Midblock Crossing there is an existing crosswalk on Virginia Street that connects the sidewalk on the west side to the sidewalk on the east side. There are crosswalk signs, but the crosswalk striping is faded. There are existing curb ramps and detectable warnings on both sides of Virginia Street.

For a present-day aerial photograph of the intersection see *Photo 4.5* below.

Photo 4.5* – Midblock Crossing between Fayco Drive & Pacwood Drive, *Facing Southeast (photo credit: City of Oak Hill)

Proposed Improvements

The improvements to the Midblock Crossing include adding a RRFB, a high visibility crosswalk, and rebuilding the curb ramps to be ADA compliant. The curb ramps do not need to be reconstructed if they are found to be compliant, these improvements are proposed to be built in the footprint of the existing crossing. The high intensity flashing lights of the RRFB will alert drivers that there is a pedestrian entering the crosswalk, increasing driver yield rates and improving pedestrian safety.

An exhibit showing the proposed changes can be found in **Appendix A** while the full itemized construction cost estimate can be found in **Appendix B.**

The construction cost for the Midblock Crossing improvements are summarized below in *Table 4.5*.

Table 4.5* – Midblock Crossing between Fayco Drive & Pacwood Drive *Construction Cost

	Midblock Crossing between Fayco Drive & Pacwood Drive
Roadway	$15,500
Pavement	$3,100
Maintenance of Traffic	$5,000
Traffic Control	$21,000
Incidentals	$4,000
25% Contingency	$8,650
9% Inflation	$3,114
2028 Cost	$47,000

White Oak Rail Trail Crossing near Pacwood Drive

Existing Condition

Currently, the White Oak Rail Trail crosses Virginia Street with an at grade crossing at a 30-degree skew. There are no crosswalks or pavement markings and one “yield to pedestrian” sign for each direction. During the stakeholder meeting, concerns about sight distance were noted as a reason for the lack of pavement markings at the crosswalk. There is a steep embankment 15’ from the edge of pavement on the west side of Virginia Street, and on the east side there is a sidewalk in good condition with detectable warnings that the White Oak Rail Trail Crosses.

For a present-day aerial photograph of the intersection see *Photo 4.6* below.

Photo 4.6 – White Oak Rail Trail Crossing near Pacwood Drive, Facing North (photo credit: City of Oak Hill)

Proposed Improvements

The proposed improvements to the White Oak Rail Trail Crossing are intended to address the safety issues that exist due to sight distance, the lack of a crosswalk, and the lack of warning signage. The first proposed improvement is realigning the trail crossing to be perpendicular to Virginia Street while also moving it approximately 50' south. This change reduces the crossing distance and improves driver sight lines by putting the crosswalk in the middle of the horizontal curve and pulls the trail crossing away from the end of the guardrail, which could block trail users from driver sight lines. On the west side of Virginia Street, the trail will run alongside Virginia Street with a 4' buffer. The existing ditch along Virginia Street will be piped to maintain the existing drainage pattern. A RRFB, high visibility crosswalk, and detectable warnings are also proposed. Curb ramps will be necessary where the trail crosses the existing sidewalk, and sidewalk repair will be required to remove the existing detectable warnings.

An exhibit showing the proposed changes can be found in **Appendix A** while the full itemized construction cost estimate can be found in **Appendix B.**

The construction cost for the White Oak Rail Trail Crossing improvements are summarized below in *Table 4.6*.

Table 4.6 – White Oak Rail Trail Crossing near Pacwood Drive Construction Cost

	White Oak Rail Trail Crossing near Pacwood Drive
Roadway	$18,500
Pavement	$10,700
Drainage	$12,000
Maintenance of Traffic	$5,000
Traffic Control	$21,000
Incidentals	$4,000
25% Contingency	$17,800
9% Inflation	$6,408
2028 Cost	$96,000

Oyler Avenue Crossing

Existing Condition

The Oyler Avenue Crossing is located at the northern terminus of Virginia Street where it intersects Oyler Avenue. This intersection is a three way stop with a fourth leg that is a one-way entrance to the Oak Hill Educational Complex. There is a marked crosswalk connecting the sidewalk on the east side of Virginia Street to the educational complex as well as a crosswalk crossing the entrance to the complex with detectable warnings and curb ramps on both sides of both crosswalks. However, these crosswalks have long crossing distances due to their locations along the curb returns, and the detectable warnings are not aligned with the direction of the crosswalks.

For a present-day aerial photograph of the intersection see *Photo 4.7* below.

Photo 4.7 – Oyler Avenue Intersection, Facing Northeast (photo credit: City of Oak Hill)

Proposed Improvements

The improvements at the Oyler Avenue Crossing include moving the Oyler Avenue crosswalk further east to reduce the crossing distance and to allow for parallel curb ramps. Similarly, a new crossing further north is proposed for the education complex entrance. This new crossing will require a sidewalk and curb extension on the west side of the entrance driveway as well as new parallel curb ramps. New high visibility crosswalks are proposed for both crossing relocations.

An exhibit showing the proposed changes can be found in **Appendix A** while the full itemized construction cost estimate can be found in **Appendix B.**

The construction cost for the Oyler Avenue Crossing improvements are summarized below in *Table 4.7*.

Table 4.7 – Oyler Avenue Crossing Construction Cost

	Oyler Avenue Crossing
Roadway	$37,500
Pavement	$6,400
Maintenance of Traffic	$10,000
Traffic Control	$2,000
Incidentals	$6,000
25% Contingency	$15,475
9% Inflation	$5,571
2028 Cost	$83,000

Appendix A

Roadway Exhibits

LOCATION 1: JONES AVENUE CROSSING

LEGEND

- CONCRETE SIDEWALK
- ASPHALT RESURFACING
- FULL DEPTH ASPHALT PAVEMENT
- ASPHALT MULTI-USE TRAIL
- SEEDING AND MULCHING

VIRGINIA STREET

WHITE OAK RAIL TRAIL

JONES AVE

SUNNYSIDE DRIVE

10.0'

5.0'

5.0'

HORIZONTAL SCALE IN FEET
0 5 10 20

VIRGINIA STREET STUDY
JONES AVENUE CROSSING

DESIGN AGENCY
B&N
burgessniple.com

DESIGNER
ITB

REVIEWER
NJL

PROJECT ID

SHEET 1 TOTAL 7

LOCATION 2: DUNCAN AVENUE CROSSING

LEGEND

- CONCRETE SIDEWALK
- ASPHALT RESURFACING
- FULL DEPTH ASPHALT PAVEMENT
- ASPHALT MULTI-USE TRAIL

HORIZONTAL SCALE IN FEET
0 5 10 10

VIRGINIA STREET STUDY
DUNCAN AVENUE CROSSING

CTY-RTE-SECTION

DESIGN AGENCY
B&N
burgessniple.com

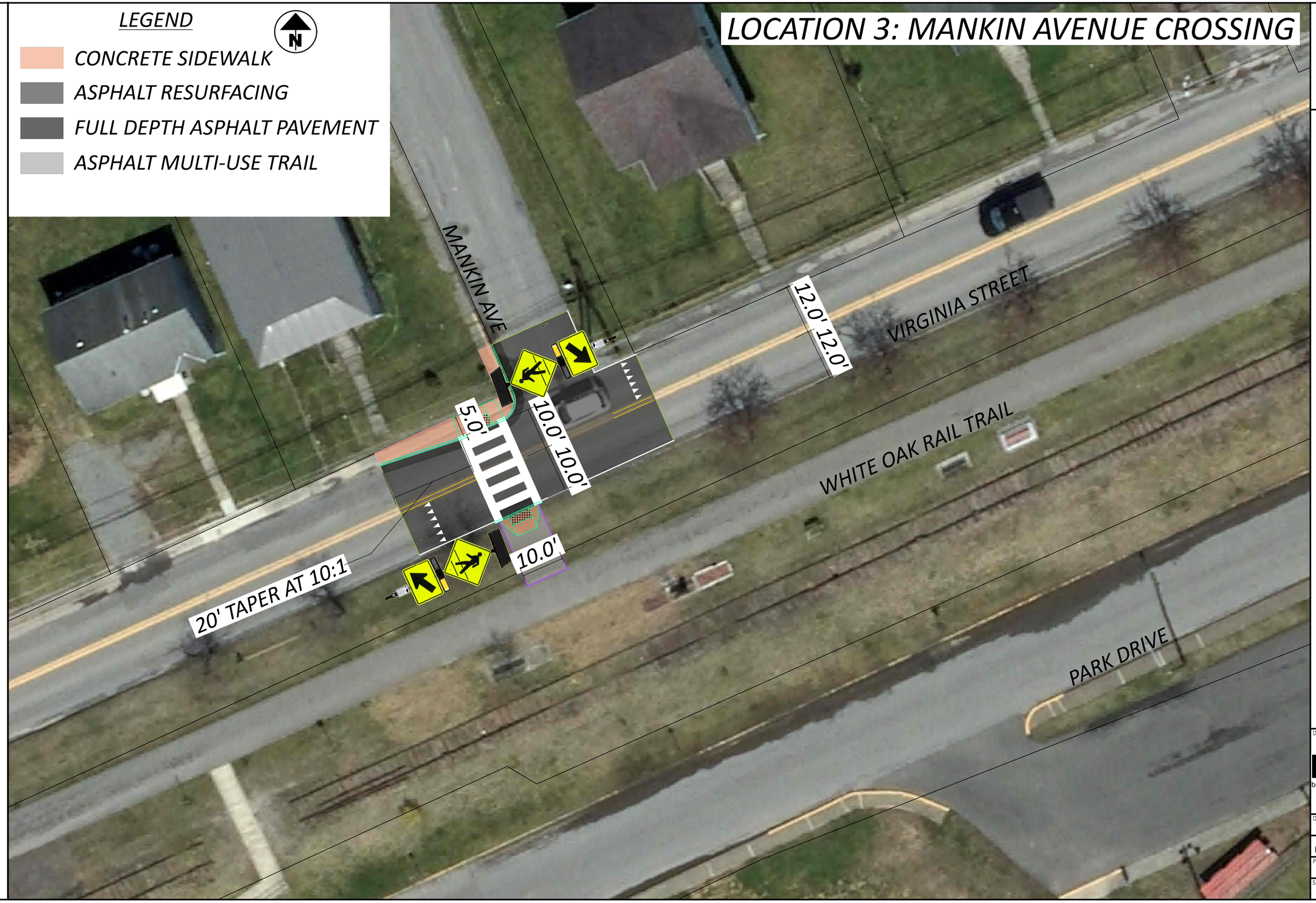
DESIGNER ITB
REVIEWER NJL
PROJECT ID

SHEET 2 | TOTAL 7

LOCATION 3: MANKIN AVENUE CROSSING

LEGEND

- CONCRETE SIDEWALK
- ASPHALT RESURFACING
- FULL DEPTH ASPHALT PAVEMENT
- ASPHALT MULTI-USE TRAIL



HORIZONTAL SCALE IN FEET
0 5 10 20

VIRGINIA STREET STUDY
MANKIN AVENUE CROSSING

DESIGN AGENCY
B&N
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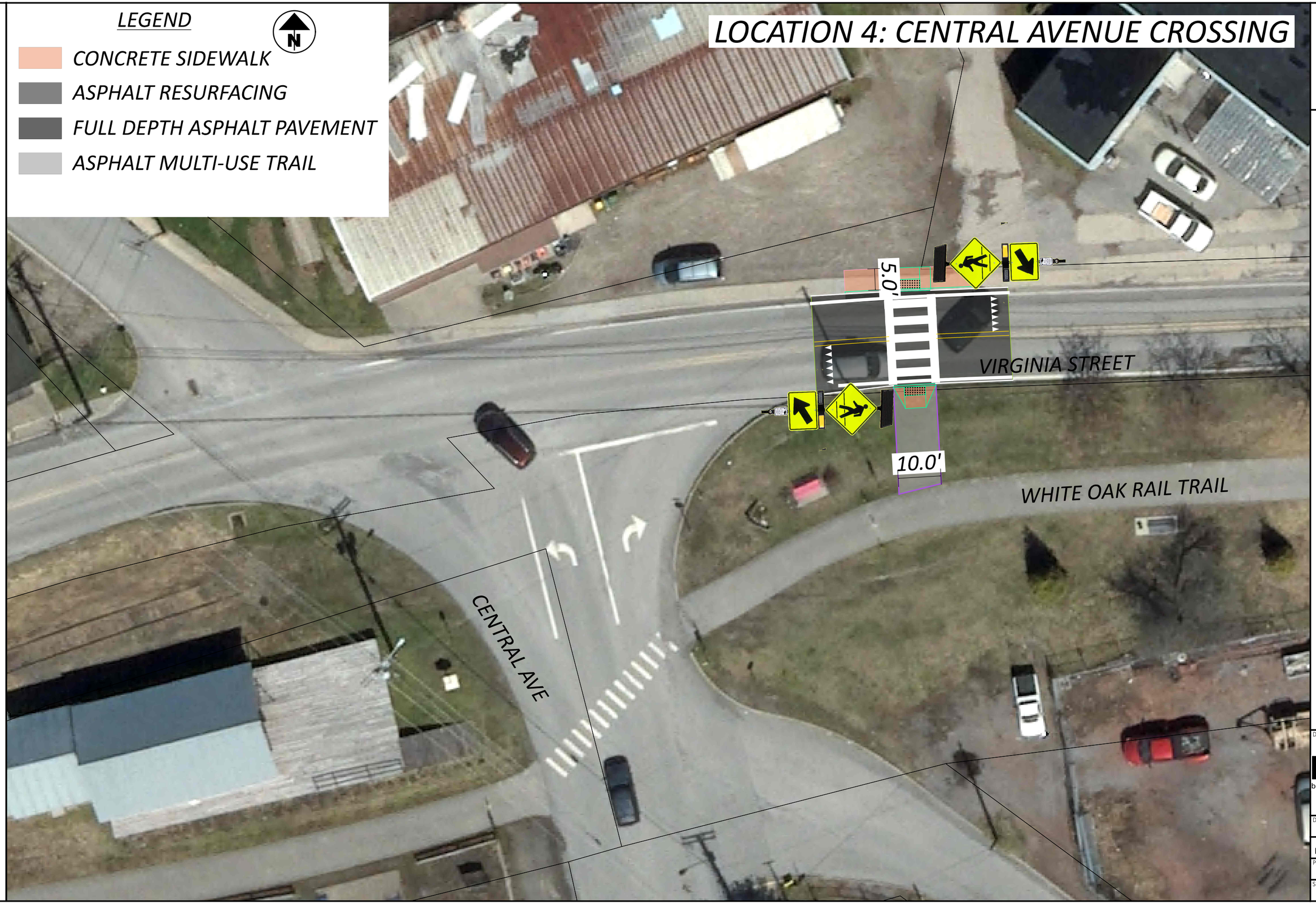
DESIGNER ITB
REVIEWER NJL
PROJECT ID

SHEET 3 | TOTAL 7

LOCATION 4: CENTRAL AVENUE CROSSING

LEGEND

- CONCRETE SIDEWALK
- ASPHALT RESURFACING
- FULL DEPTH ASPHALT PAVEMENT
- ASPHALT MULTI-USE TRAIL



HORIZONTAL SCALE IN FEET
0 5 10 20

VIRGINIA STREET STUDY
CENTRAL AVENUE CROSSING

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PROJECT ID
SHEET 4 TOTAL 7

LOCATION 5: MIDBLOCK CROSSING BETWEEN FAYCO DRIVE & PACWOOD DRIVE

LEGEND

- CONCRETE SIDEWALK
- ASPHALT RESURFACING
- FULL DEPTH ASPHALT PAVEMENT

HORIZONTAL SCALE IN FEET
0 5 10 20

VIRGINIA STREET STUDY
MIDBLOCK CROSSING BETWEEN FAYCO DRIVE & PACWOOD DRIVE

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SHEET 5 TOTAL 7

LOCATION 6: WHITE OAK RAIL TRAIL CROSSING NEAR PACWOOD DRIVE

LEGEND

- CONCRETE SIDEWALK
- ASPHALT RESURFACING
- FULL DEPTH ASPHALT PAVEMENT
- ASPHALT MULTI-USE TRAIL
- SEEDING AND MULCHING

VIRGINIA STREET

10.0'

5.0'

10.0'

WHITE OAK RAIL TRAIL

HORIZONTAL SCALE IN FEET
0 5 10 20

VIRGINIA STREET STUDY
WHITE OAK RAIL TRAIL CROSSING NEAR PACWOOD DRIVE

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SHEET 6 | TOTAL 7

LOCATION 7: OYLER AVENUE CROSSING

LEGEND

- CONCRETE SIDEWALK
- ASPHALT RESURFACING
- FULL DEPTH ASPHALT PAVEMENT
- ASPHALT MULTI-USE TRAIL

N

6.0'

ENTRANCE TO OAK HILL EDUCATIONAL COMPLEX

STOP

STOP

STOP

VIRGINIA STREET

OYLER AVE

HORIZONTAL SCALE IN FEET
0 5 10 20

VIRGINIA STREET STUDY
OYLER AVENUE CROSSING

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ITB

REVIEWER
NJL

PROJECT ID

SHEET 7 | TOTAL 7

Appendix B

Construction Cost Estimate

Virginia Street Study

Jones Avenue Crossing
08/27/25

DESCRIPTION	TOTAL QUANTITY	UNIT	UNIT PRICE	TOTAL PRICE (2025 dollars)
ROADWAY				
Seed Mixture	20	POUNDS	$2.00	$40
Detectable Warning	60	SQ FT	$45.00	$2,700
Unclassified Excavation	200	CU YD	$20.00	$4,000
Borrow Excavation	100	CU YD	$60.00	$6,000
Concrete Sidewalk	66	SQ YD	$140.00	$9,302
Curb Ramp	1	EACH	$5,500.00	$5,500
			ROADWAY SUBTOTAL	**$27,600**
PAVEMENT				
Full Depth Asphalt Pavement	37	SQ YD	$74.39	$2,736
Asphalt Resurfacing	539	SQ YD	$21.79	$11,754
Plain Concrete Curbing Type 1	166	FT	$50.00	$8,300
Shared Use Path Pavement	106	SQ YD	$45.00	$4,785
			PAVEMENT SUBTOTAL	**$27,600**
MAINTENTANCE OF TRAFFIC				
MOT	1	LUMP	$10,000.00	$10,000
			MAINTENANCE OF TRAFFIC SUBTOTAL	**$10,000**
TRAFFIC CONTROL				
Traffic Control	1	LUMP	$2,000.00	$2,000
Rectangular Rapid Flashing Beacon Assembly	2	EACH	$20,000.00	$40,000
			TRAFFIC CONTROL SUBTOTAL	**$42,000**
INCIDENTALS				
Construction Layout Stakes	1	LUMP	$2,000.00	$2,000
Mobilization	1	LUMP	$25,000.00	$25,000
			INCIDENTALS SUBTOTAL	**$27,000**
			CONSTRUCTION COST SUBTOTAL, 2025	**$134,200**
Inflation 2025 to 2028	12.0%			$16,104
Cost Contingency - Preliminary Engineering	30.0%			$40,260
CONSTRUCTION COST, 2028 DOLLARS				**$191,000**

-ESTIMATE DOES NOT INCLUDE COSTS FOR UTILITY RELOCATIONS

Virginia Street Study

Duncan Avenue Crossing
08/27/25

DESCRIPTION	TOTAL QUANTITY	UNIT	UNIT PRICE	TOTAL PRICE (2025 dollars)
ROADWAY				
Seed Mixture	5	POUNDS	$2.00	$10
Detectable Warning	20	SQ FT	$45.00	$900
Unclassified Excavation	90	CU YD	$20.00	$1,800
Borrow Excavation	50	CU YD	$60.00	$3,000
Concrete Sidewalk	34	SQ YD	$140.00	$4,698
Curb Ramp	2	EACH	$5,500.00	$11,000
			ROADWAY SUBTOTAL	**$21,500**
PAVEMENT				
Full Depth Asphalt Pavement	16	SQ YD	$74.39	$1,215
Asphalt Resurfacing	172	SQ YD	$21.79	$3,758
Plain Concrete Curbing Type 1	53	FT	$50.00	$2,650
Shared Use Path Pavement	19	SQ YD	$45.00	$860
			PAVEMENT SUBTOTAL	**$8,500**
DRAINAGE				
18" High Density Polyethylene Pipe	20	FT	$180.00	$3,600
			DRAINAGE SUBTOTAL	**$3,600**
MAINTENTANCE OF TRAFFIC				
MOT	1	LUMP	$5,000.00	$5,000
			MAINTENANCE OF TRAFFIC SUBTOTAL	**$5,000**
TRAFFIC CONTROL				
Traffic Control	1	LUMP	$1,000.00	$1,000
Rectangular Rapid Flashing Beacon Assembly	2	EACH	$20,000.00	$40,000
			TRAFFIC CONTROL SUBTOTAL	**$41,000**
INCIDENTALS				
Construction Layout Stakes	1	LUMP	$2,000.00	$2,000
Mobilization	1	LUMP	$25,000.00	$25,000
			INCIDENTALS SUBTOTAL	**$27,000**
			CONSTRUCTION COST SUBTOTAL, 2025	**$106,600**
Inflation 2025 to 2028	12.0%			$12,792
Cost Contingency - Preliminary Engineering	25.0%			$26,650
CONSTRUCTION COST, 2028 DOLLARS				**$147,000**

Virginia Street Study

Mankin Avenue Crossing
08/27/25

DESCRIPTION	TOTAL QUANTITY	UNIT	UNIT PRICE	TOTAL PRICE (2025 dollars)
ROADWAY				
Seed Mixture	5	POUNDS	$2.00	$10
Detectable Warning	20	SQ FT	$45.00	$900
Unclassified Excavation	89	CU YD	$20.00	$1,778
Borrow Excavation	50	CU YD	$60.00	$3,000
Concrete Sidewalk	17	SQ YD	$140.00	$2,349
Curb Ramp	2	EACH	$5,500.00	$11,000
			ROADWAY SUBTOTAL	**$19,100**
PAVEMENT				
Full Depth Asphalt Pavement	12	SQ YD	$74.39	$868
Asphalt Resurfacing	180	SQ YD	$21.79	$3,925
Plain Concrete Curbing Type 1	51	FT	$50.00	$2,550
Shared Use Path Pavement	16	SQ YD	$45.00	$700
			PAVEMENT SUBTOTAL	**$8,100**
DRAINAGE				
18" High Density Polyethylene Pipe	20	FT	$180.00	$3,600
			DRAINAGE SUBTOTAL	**$3,600**
MAINTENTANCE OF TRAFFIC				
MOT	1	LUMP	$5,000.00	$5,000
			MAINTENANCE OF TRAFFIC SUBTOTAL	**$5,000**
TRAFFIC CONTROL				
Traffic Control	1	LUMP	$1,000.00	$1,000
Rectangular Rapid Flashing Beacon Assembly	2	EACH	$20,000.00	$40,000
			TRAFFIC CONTROL SUBTOTAL	**$41,000**
INCIDENTALS				
Construction Layout Stakes	1	LUMP	$2,000.00	$2,000
Mobilization	1	LUMP	$25,000.00	$25,000
			INCIDENTALS SUBTOTAL	**$27,000**
			CONSTRUCTION COST SUBTOTAL, 2025	**$103,800**
Inflation 2025 to 2028	12.0%			$12,456
Cost Contingency - Preliminary Engineering	25.0%			$25,950
CONSTRUCTION COST, 2028 DOLLARS				**$143,000**

Virginia Street Study

Central Avenue Crossing
08/27/25

DESCRIPTION	TOTAL QUANTITY	UNIT	UNIT PRICE	TOTAL PRICE (2025 dollars)
ROADWAY				
Seed Mixture	5	POUNDS	$2.00	$10
Detectable Warning	20	SQ FT	$45.00	$900
Unclassified Excavation	50	CU YD	$20.00	$1,000
Borrow Excavation	50	CU YD	$60.00	$3,000
Concrete Sidewalk	9	SQ YD	$140.00	$1,260
Curb Ramp	2	EACH	$5,500.00	$11,000
			ROADWAY SUBTOTAL	**$17,200**
PAVEMENT				
Full Depth Asphalt Pavement	6	SQ YD	$74.39	$413
Asphalt Resurfacing	89	SQ YD	$21.79	$1,932
Plain Concrete Curbing Type 1		FT	$50.00	$0
Shared Use Path Pavement	30	SQ YD	$45.00	$1,340
			PAVEMENT SUBTOTAL	**$3,700**
MAINTENTANCE OF TRAFFIC				
MOT	1	LUMP	$5,000.00	$5,000
			MAINTENANCE OF TRAFFIC SUBTOTAL	**$5,000**
TRAFFIC CONTROL				
Traffic Control	1	LUMP	$1,000.00	$1,000
Rectangular Rapid Flashing Beacon Assembly	2	EACH	$20,000.00	$40,000
			TRAFFIC CONTROL SUBTOTAL	**$41,000**
INCIDENTALS				
Construction Layout Stakes	1	LUMP	$2,000.00	$2,000
Mobilization	1	LUMP	$25,000.00	$25,000
			INCIDENTALS SUBTOTAL	**$27,000**
			CONSTRUCTION COST SUBTOTAL, 2025	**$93,900**
Inflation 2025 to 2028	12.0%			$11,268
Cost Contingency - Preliminary Engineering	25.0%			$23,475
CONSTRUCTION COST, 2028 DOLLARS				**$129,000**

Virginia Street Study

Midblock Crossing between Fayco Drive & Pacwood Drive
08/27/25

DESCRIPTION	TOTAL QUANTITY	UNIT	UNIT PRICE	TOTAL PRICE (2025 dollars)
ROADWAY				
Seed Mixture	5	POUNDS	$2.00	$10
Detectable Warning	32	SQ FT	$45.00	$1,440
Unclassified Excavation	50	CU YD	$20.00	$1,000
Borrow Excavation	25	CU YD	$60.00	$1,500
Concrete Sidewalk	8	SQ YD	$140.00	$1,120
Curb Ramp	2	EACH	$5,500.00	$11,000
			ROADWAY SUBTOTAL	**$16,100**
PAVEMENT				
Full Depth Asphalt Pavement	5	SQ YD	$74.39	$397
Asphalt Resurfacing	120	SQ YD	$21.79	$2,622
			PAVEMENT SUBTOTAL	**$3,100**
MAINTENTANCE OF TRAFFIC				
MOT	1	LUMP	$5,000.00	$5,000
			MAINTENANCE OF TRAFFIC SUBTOTAL	**$5,000**
TRAFFIC CONTROL				
Traffic Control	1	LUMP	$1,000.00	$1,000
Rectangular Rapid Flashing Beacon Assembly	2	EACH	$20,000.00	$40,000
			TRAFFIC CONTROL SUBTOTAL	**$41,000**
INCIDENTALS				
Construction Layout Stakes	1	LUMP	$2,000.00	$2,000
Mobilization	1	LUMP	$25,000.00	$25,000
			INCIDENTALS SUBTOTAL	**$27,000**
			CONSTRUCTION COST SUBTOTAL, 2025	**$77,600**
Inflation 2025 to 2028	12.0%			$9,312
Cost Contingency - Preliminary Engineering	25.0%			$19,400
CONSTRUCTION COST, 2028 DOLLARS				**$107,000**

Virginia Street Study

White Oak Rail Trail Crossing near Pacwood Drive
08/27/25

DESCRIPTION	TOTAL QUANTITY	UNIT	UNIT PRICE	TOTAL PRICE (2025 dollars)
ROADWAY				
Seed Mixture	20	POUNDS	$2.00	$40
Detectable Warning	40	SQ FT	$45.00	$1,800
Unclassified Excavation	50	CU YD	$20.00	$1,000
Borrow Excavation	100	CU YD	$60.00	$6,000
Curb Ramp	1	EACH	$5,500.00	$5,500
Concrete Sidewalk	36	SQ YD	$140.00	$5,040
			ROADWAY SUBTOTAL	**$19,400**
PAVEMENT				
Full Depth Asphalt Pavement	2	SQ YD	$74.39	$174
Asphalt Resurfacing	128	SQ YD	$21.79	$2,787
Shared Use Path Pavement	172	SQ YD	$45.00	$7,720
			PAVEMENT SUBTOTAL	**$10,700**
DRAINAGE				
18" High Density Polyethylene Pipe	80	FT	$180.00	$14,400
			DRAINAGE SUBTOTAL	**$14,400**
MAINTENTANCE OF TRAFFIC				
MOT	1	LUMP	$5,000.00	$5,000
			MAINTENANCE OF TRAFFIC SUBTOTAL	**$5,000**
TRAFFIC CONTROL				
Traffic Control	1	LUMP	$1,000.00	$1,000
Rectangular Rapid Flashing Beacon Assembly	2	EACH	$20,000.00	$40,000
			TRAFFIC CONTROL SUBTOTAL	**$41,000**
INCIDENTALS				
Construction Layout Stakes	1	LUMP	$2,000.00	$2,000
Mobilization	1	LUMP	$25,000.00	$25,000
			INCIDENTALS SUBTOTAL	**$27,000**
			CONSTRUCTION COST SUBTOTAL, 2025	**$117,500**
Inflation 2025 to 2028	12.0%			$14,100
Cost Contingency - Preliminary Engineering	25.0%			$29,375
CONSTRUCTION COST, 2028 DOLLARS				**$161,000**

Virginia Street Study

Oyler Avenue Crossing
08/27/25

DESCRIPTION	TOTAL QUANTITY	UNIT	UNIT PRICE	TOTAL PRICE (2025 dollars)
ROADWAY				
Seed Mixture	20	POUNDS	$2.00	$40
Detectable Warning	50	SQ FT	$45.00	$2,250
Unclassified Excavation	200	CU YD	$20.00	$4,000
Borrow Excavation	100	CU YD	$60.00	$6,000
Concrete Sidewalk	27	SQ YD	$140.00	$3,733
Curb Ramp	4	EACH	$5,500.00	$22,000
			ROADWAY SUBTOTAL	**$38,100**
PAVEMENT				
Full Depth Asphalt Pavement	18	SQ YD	$74.39	$1,306
Asphalt Resurfacing	97	SQ YD	$21.79	$2,121
Plain Concrete Curbing Type 1	59	FT	$50.00	$2,950
			PAVEMENT SUBTOTAL	**$6,400**
MAINTENTANCE OF TRAFFIC				
MOT	1	LUMP	$10,000.00	$10,000
			MAINTENANCE OF TRAFFIC SUBTOTAL	**$10,000**
TRAFFIC CONTROL				
Traffic Control	1	LUMP	$2,000.00	$2,000
			TRAFFIC CONTROL SUBTOTAL	**$2,000**
INCIDENTALS				
Construction Layout Stakes	1	LUMP	$2,000.00	$2,000
Mobilization	1	LUMP	$25,000.00	$25,000
			INCIDENTALS SUBTOTAL	**$27,000**
			CONSTRUCTION COST SUBTOTAL, 2025	**$83,500**
Inflation 2025 to 2028	12.0%			$10,020
Cost Contingency - Preliminary Engineering	25.0%			$20,875
CONSTRUCTION COST, 2028 DOLLARS				**$115,000**

VIRGINIA STREET STUDY	
Crossing Location	**Cost (2028 Dollars)**
Jones Avenue Crossing	$191,000.00
Duncan Avenue Crossing	$147,000.00
Mankin Avenue Crossing	$143,000.00
Central Avenue Crossing	$129,000.00
Midblock Crossing between Fayco Drive & Pacwood Drive	$107,000.00
White Oak Trail Crossing near Pacwood Drive	$161,000.00
Oyler Avenue Crossing	$115,000.00

NOTE: This does not include the costs for right-of-way and utility relocations

NOTE: This assumes that the projects will be constructed as stand alone projects. If combined, there would be savings seen through unit prices and incidentals.