

The Town of East Bloomfield Nature Trails



This work was developed by a Student Team as part of the RIT Civil Engineering Technology Department Capstone Class. This work has only been reviewed in accordance with the course required elements and is intended for EDUCATIONAL PURPOSES ONLY.

Flower City Engineers



Brianna Ellis
CAD Specialist



Nick Gearin
Engineer



David Gurman
Project Engineer



Martin Sosa
Structural Engineer

Town Board



Town Board



Fred Willie - Town Supervisor
Mark Falsone - Village Mayor
Scott Kimball - Highway Department
Chauncey Young - Volunteer Trail Maintenance
Dave Wright - Volunteer Trail Maintenance

The Need for a Nature Trail

1. Community interest in creating Nature Trails
2. Create a connection between Boughton Park and Veteran's Park
3. Increase local businesses at the 4 Corners with Nature Trail traffic



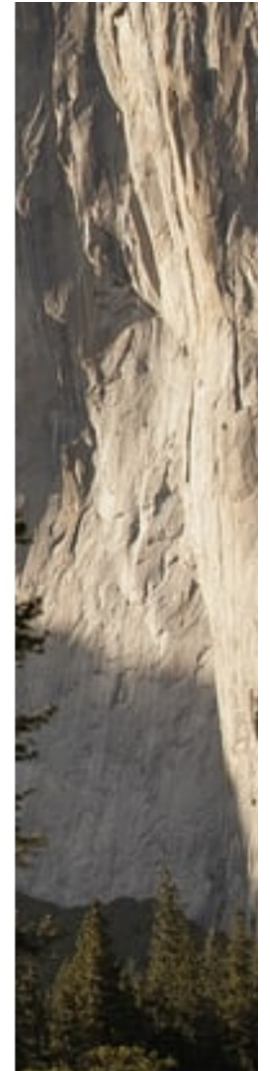
**Nature Trail
Description**

Phase 1

Phase 2

**Trail
Construction**

d



Scope of Nature Trail

- The entire trail will be a total of 4.05 mi from Boughton Park to Veteran's Park
- This will be a two phase project to help with funding

Phase 1

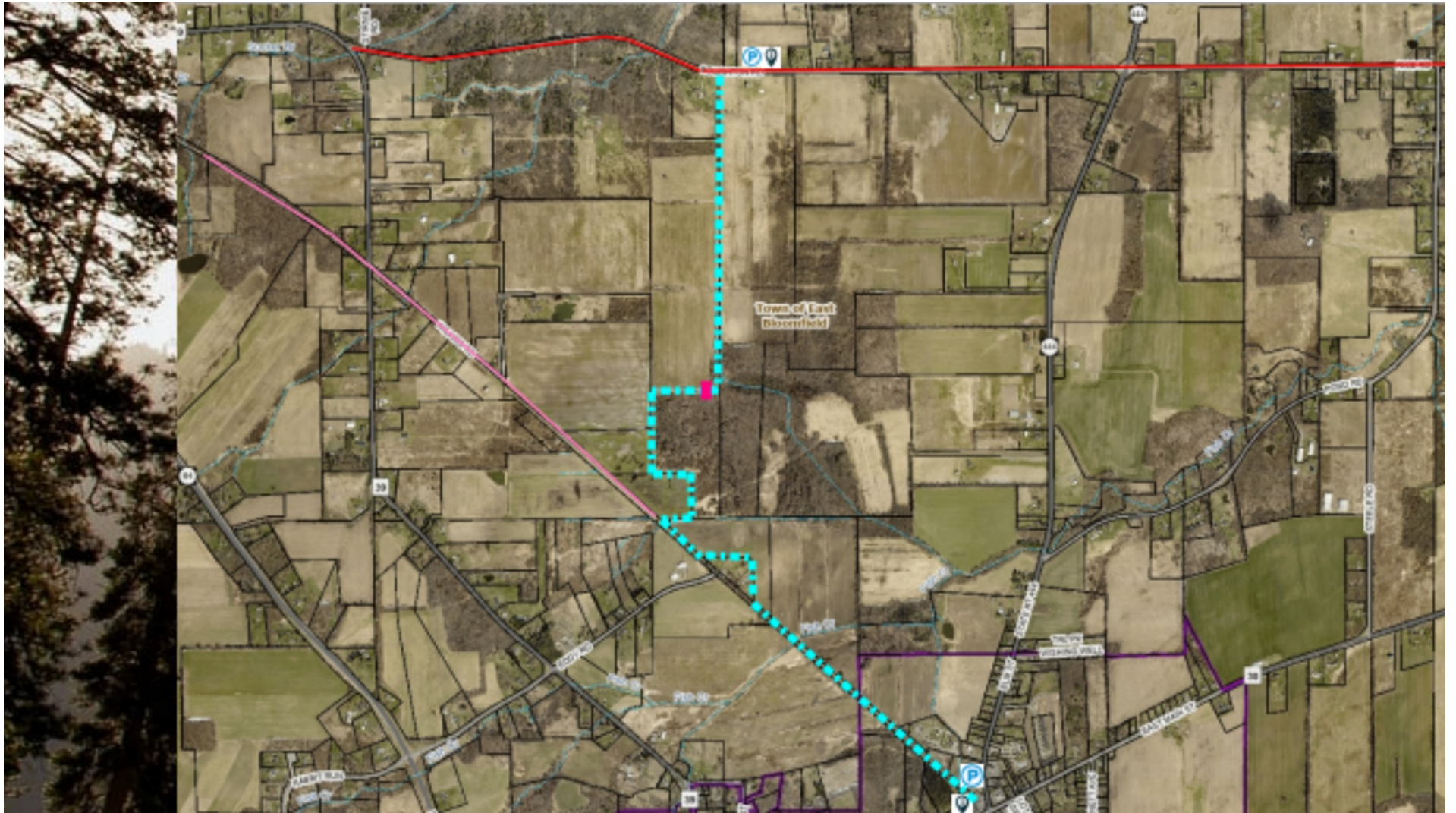
- Starting point will be at Boughton Park to 4 Corners

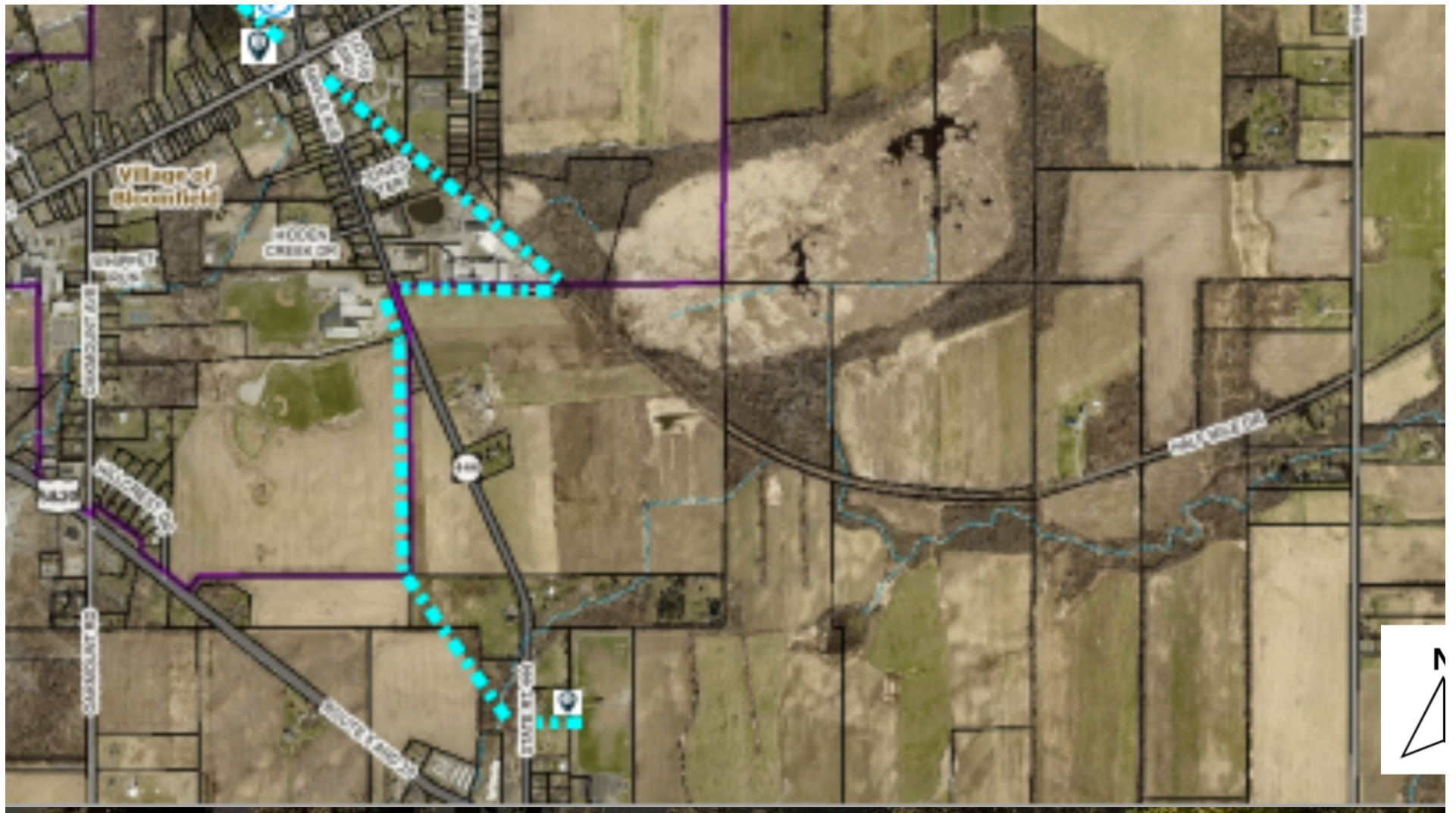
Phase 2

- From 4 Corners to Veteran's Park







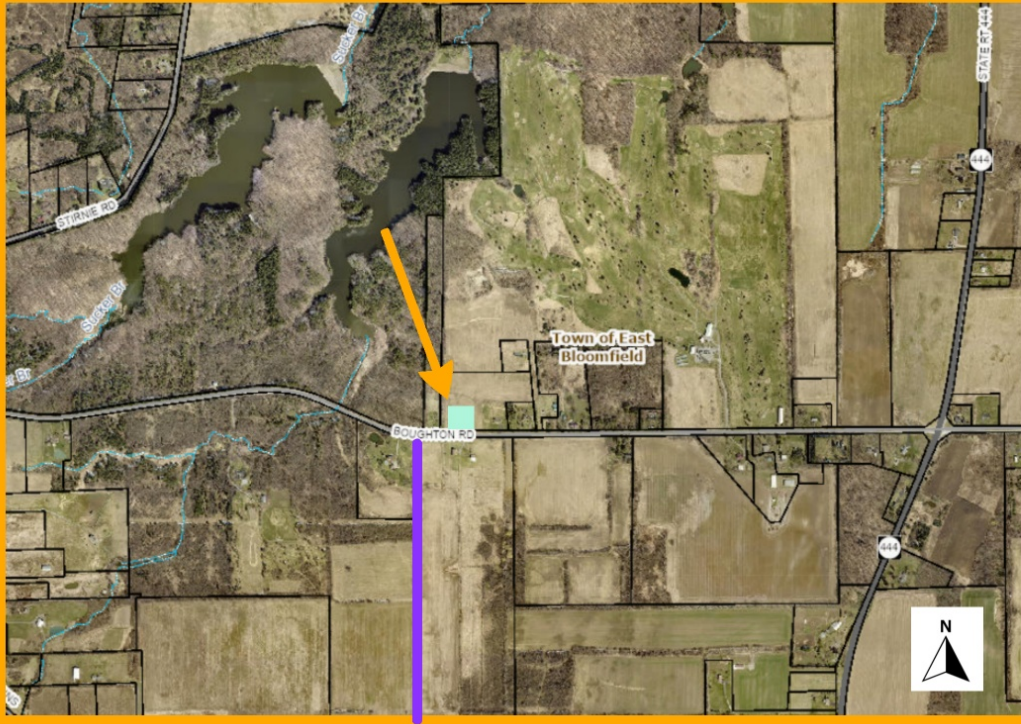


Phase 1 - 2.54 mi



Starting at Boughton Park to 4 Corners
Proposed parking at trial-head

Boughton Park - Proposed Parking Lot



Asphalt Parking Lot - Dimensions

20 Spaces - ADA accessible

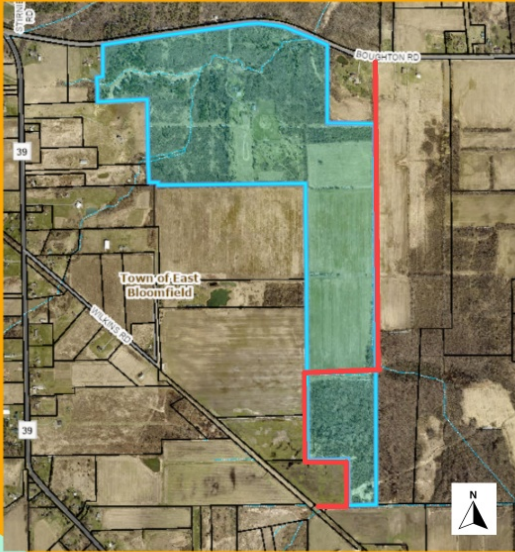
Provide Access to both Boughton Park
and new Trails

Phase 1 - 2.54 mi

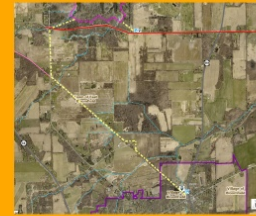
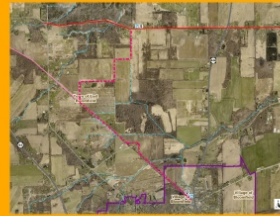
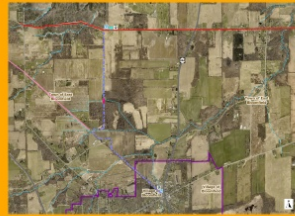


Starting at Boughton Park to 4 Corners
Proposed parking at trial-head

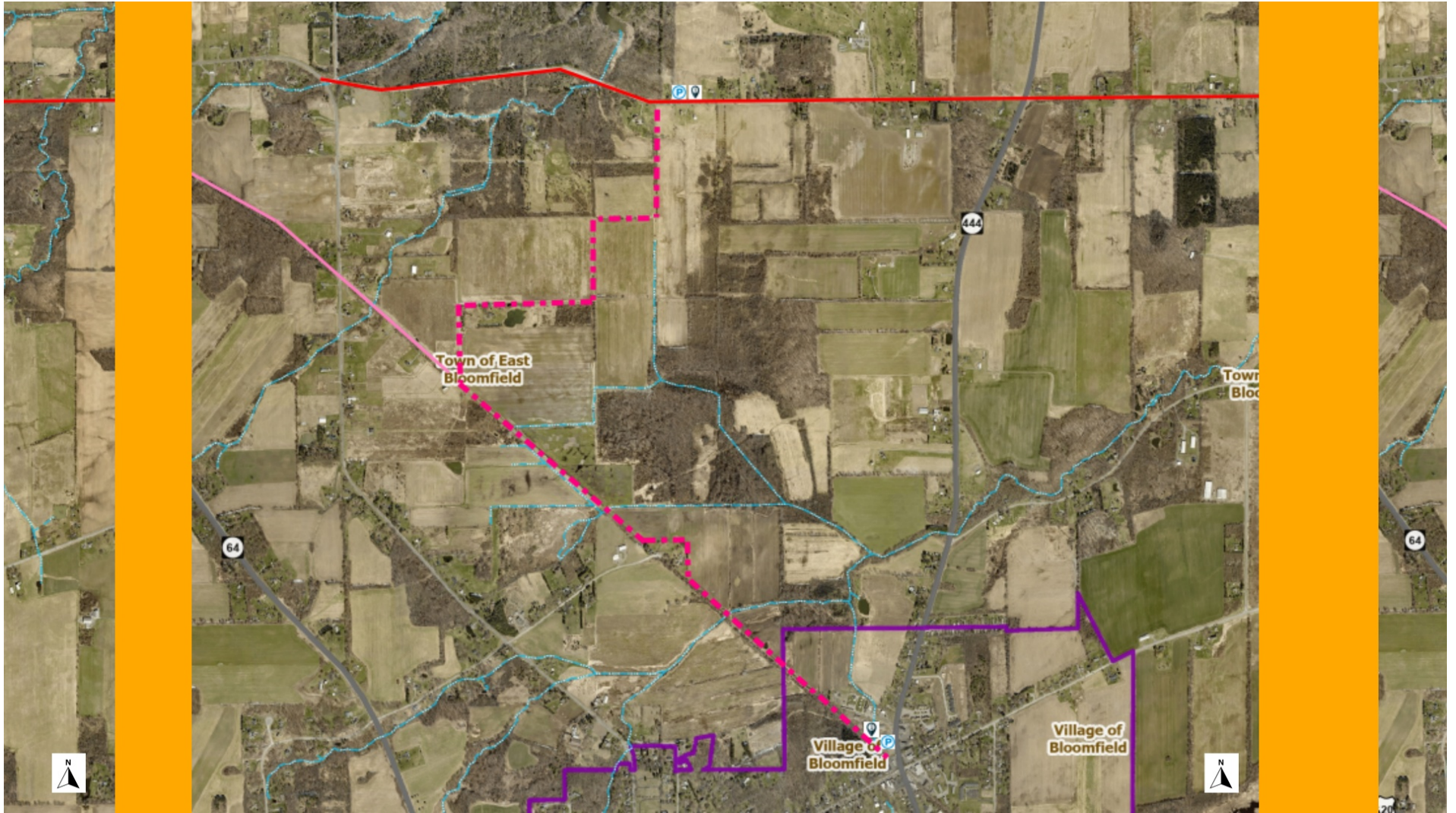
Alternates - Phase 1



- The Town has expressed the possible unwillingness to give up land for Nature Trail







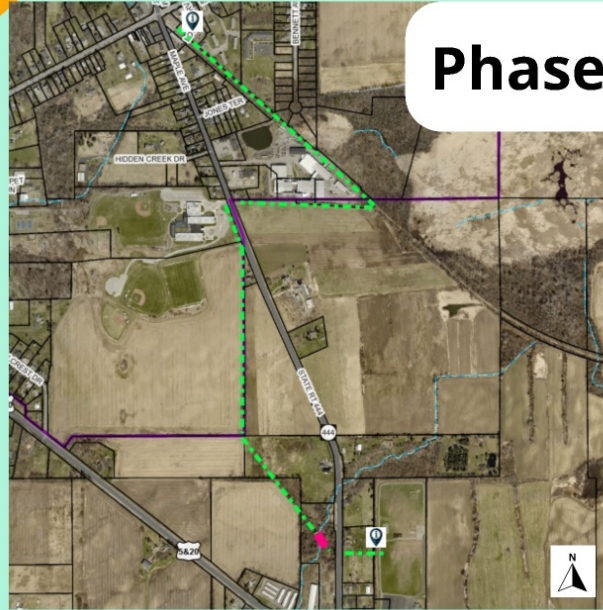


Phase 1 - 2.54 mi



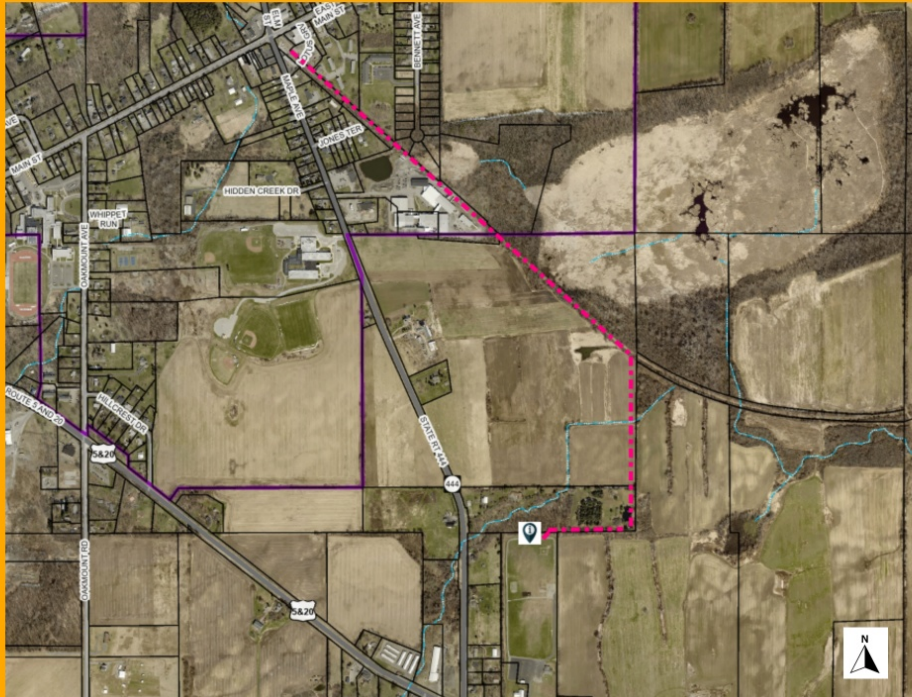
Starting at Boughton Park to 4 Corners
Proposed parking at trial-head

Phase 2 - 1.5 mi



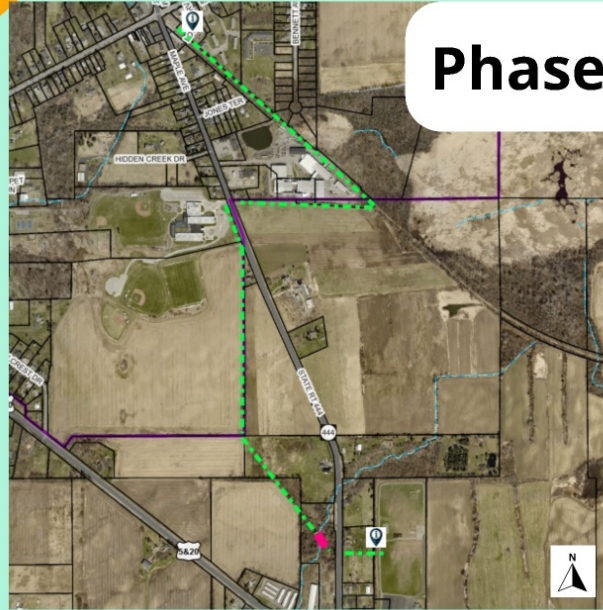
Ranging from 4 Corners to Veteran's Park
Utilizing the abandoned railroad

Alternates - Phase 2



Total length 1.25 mi

Phase 2 - 1.5 mi



Ranging from 4 Corners to Veteran's Park
Utilizing the abandoned railroad

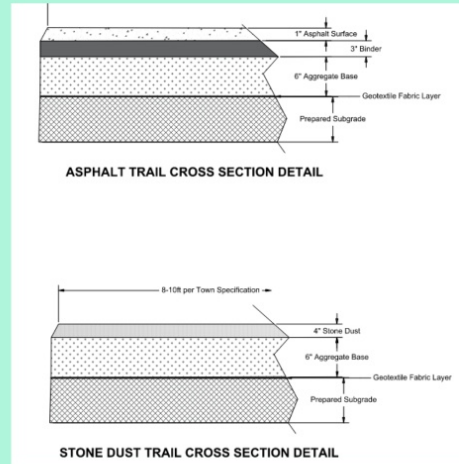
Kiosk

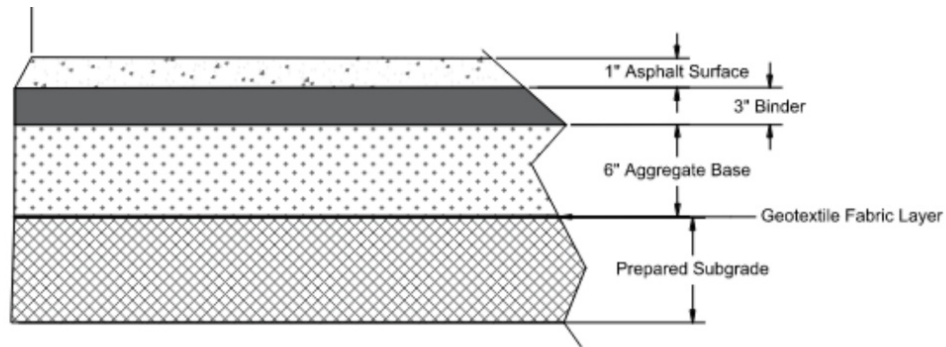
Primary Trail Construction

**Prefab
Bridge**

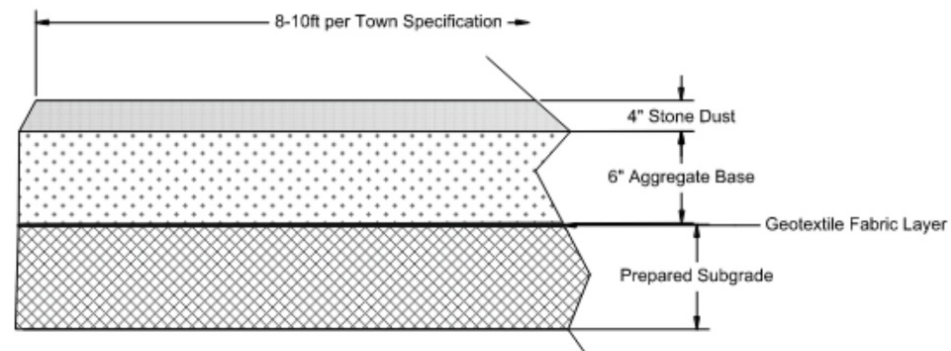
Culvert

Pavilion

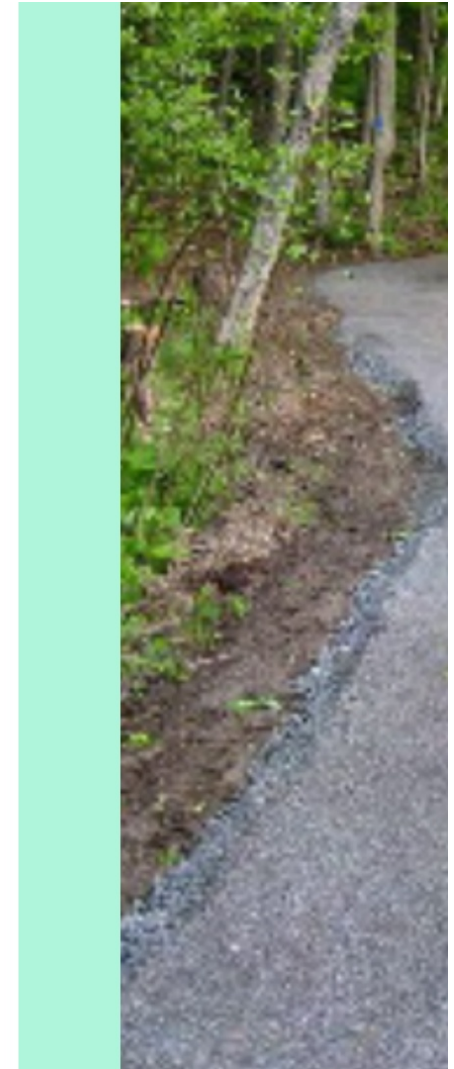




ASPHALT TRAIL CROSS SECTION DETAIL



STONE DUST TRAIL CROSS SECTION DETAIL

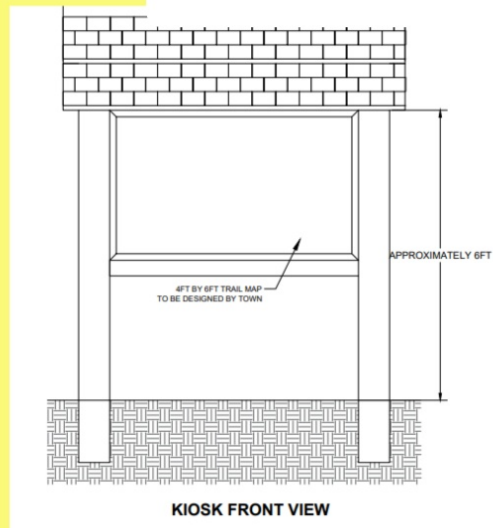


face
 ↓
 3" Binder
 ↓
 base
 — Geotextile Fabric Layer
 Subgrade

Dust
 1 1/2" Base
 — Geotextile Fabric Layer
 Subgrade

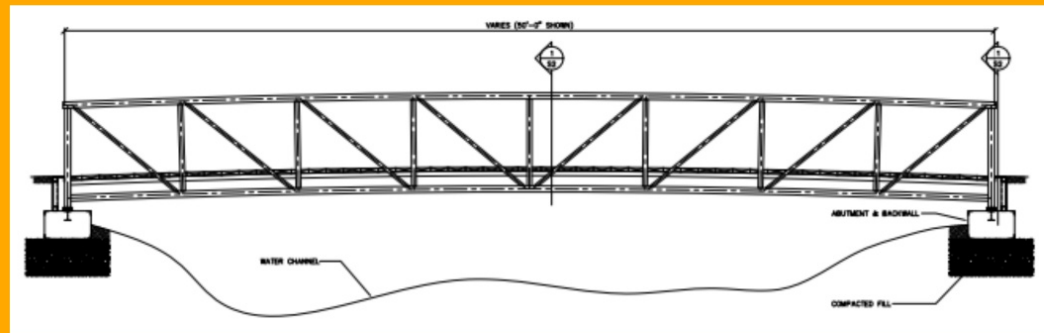


Kiosk Construction

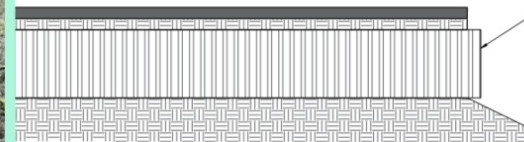


Prefabricated Bridge

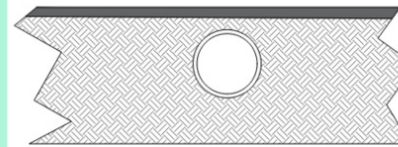
Piles- HP12X63



Culvert Typical

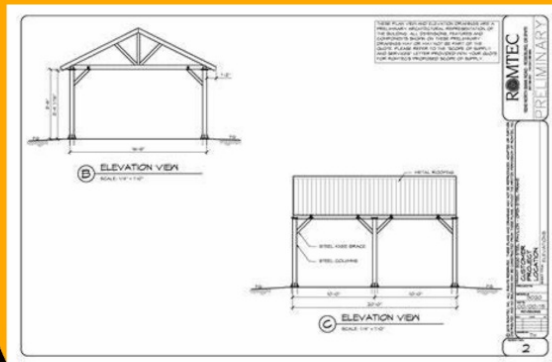


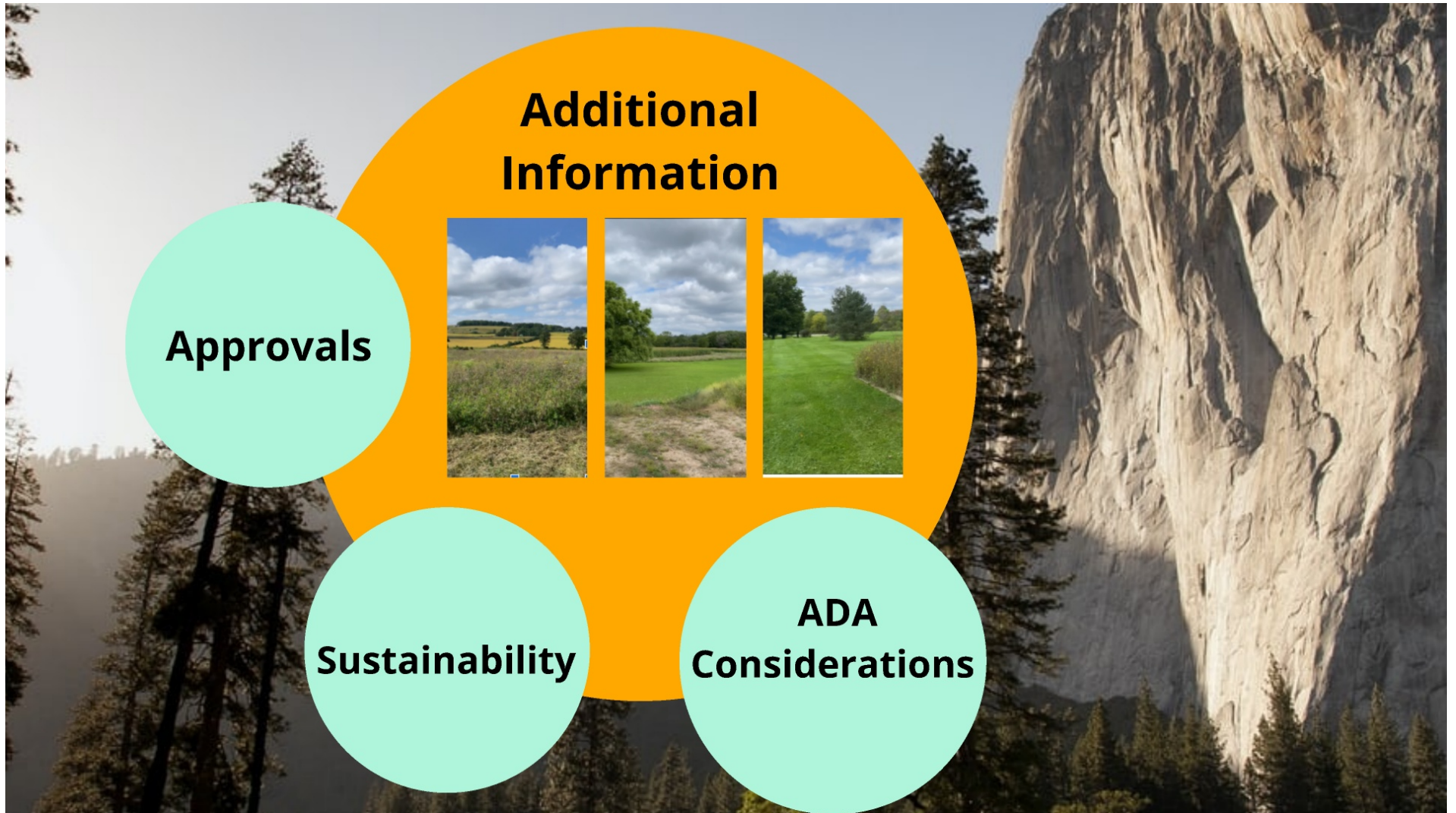
CULVERT SIDE VIEW



CULVERT FRONT VIEW

Pavilion







Approvals

- Request Project Build on Land Easement
- Town Permit Exemption

**Land
Acquisition**

Permits

**Press Release
& Handout**

Permission Letter



Flower City Engineers • 1 Lomb Memorial Dr • Rochester NY 14623

September 28th 2021

Residents Property Permission Letter

Supervisor Fred Wille and Town Board Members
Town of East Bloomfield, PO Box 83
East Bloomfield, NY 14443

RE: Permission To Use Resident's Property For East Bloomfield Nature Trail

Dear Residents and Property Owners:

Our team from Flower City Engineers are here to inform you that the Town of East Bloomfield has requested to design a recreational trail that runs from one end of town to the other. Our design for the Town of East Bloomfield Recreational Trails may potentially cross within property and we ask for your permission to build our proposed trail over your property.

The recreational nature trail(s) project are broken into two phases:

- Phase 1 consists of building a parking lot and information kiosk over part of the existing corn field and east of the existing Boughton Park parking lot off of Boughton Rd. The trails will begin Southeast of Boughton Park and run south into the Village of East Bloomfield.
- Phase 2 consists of continuing the trail from the Village of East Bloomfield and into Veterans Park. Additional information kiosks will be placed accordingly. Refer to the proposed trail outline marked in red attached below.

The trials widths and composites are still under consideration but we propose a typical 8 foot wide trial consisting of asphalt and/or stone dust material and these trials will be maintained by the Town of East Bloomfield Trial Volunteers.

These trails will be accessible for those interested in hiking, jogging, bicycling, cross county running and skiing. No Motorized Vehicles are permitted on these trails. These trials will allow town residents and visitors to stay healthy, active and access to the village, supporting the local businesses and providing funding for developing future town projects.

The project will continue with its construction at the start of March 2022.

Please contact the town clerk's office at (585) 657-6515 before November 31, 2021 for any concerns or questions regarding the project. If we do not hear from you, we will assume there are no concerns and continue with the recreational trail development.

Thank you for your time and consideration.

Sincerely, Flower City Engineers

Necessary Permits

- NYS Department of Environmental Conservation
 - Freshwater Wetlands Permits
 - State Environmental Quality Review (SEQR)
- Building/SWPPP Permits



Nature Trail Press Release & Handout

**Press
Release**

Handout

Town of East Bloomfield - Nature Trail Project

The Town of East Bloomfield Supervisor Fred Wille and Town Board Members, are looking to expand on the existing nature trails in Boughton Park. The scope of work is to complete a full scale, 10' wide trail, ranging from Boughton Park to Veterans Park, in the Village of East Bloomfield the trail will range a total of 4.05 miles, but will be broken down into two phases, Phase 1 & Phase 2. Phase 1 will consist of the trail starting at Boughton Park, where a proposed parking lot is recommended, and travels down to the center of the village (4 corners). Phase 2 will pick up at the center of the village (4 corners), and end at Veterans Park. This trail will utilize an existing abandoned trail which will cut down on costs and schedule. Not only will the scope of this project consist of new nature trails, but it will also allow access to the existing trails at Boughton Park, and the new trails through the proposed parking lot.



The Town of East Bloomfield nature trails are going to be bid as a two Phase project. The bid process on Phase 1 will take 4 months. The start date of Phase 1 construction will begin on April 3, 2023. The total construction time on Phase 1 will be completed in 5 months. Funding and grants for Phase 2 will be completed by January 15, 2024. The Total construction time of Phase 2 will be 3 months and the scope of work is far less extensive.

The Town of East Bloomfield nature trail cost for both Phase 1 & 2 is \$1,127,859. The Town will be applying for funding and grants to help mitigate the cost of the project. The grant will be maxed at \$500,000, which will reduce the amount of the project cost, it then comes to cost around \$627,859. There will be some options for bonds for the Town of East Bloomfield, the first with an interest rate of 2.0% for 10 years and the second at 5.0% for 25 years. The values for the estimated tax rates for the respective bond options are 0.2275 for (2% for 10 years) and 0.1450 for (5% for 25 years). The cost of an average home will be \$38 (2% for 10 years) and \$24 (5% for 25 years).

Contact Information:

Supervisor Fred Wille

supervisorfwille@townofeastbloomfield.org

Date and Time of Presentation:

Friday, December 10th @ 8:00 am

Project Team:

Flower City Engineers

1 Lomb Memorial Drive, Rochester NY 14623

Contact Information:

Client: The Town of East Bloomfield

Address: 99 Main Street, East Bloomfield,
NY, 14443

Phone: (585) 657-6515

Fred Willie - Town Supervisor

Mark Falsone - Village Mayor

Scott Kimball - Highway Department

Chancey Young - Volunteer Trail Maintenance

Dave Wright - Volunteer Trail Maintenance

Engineers:

Rochester Institute of Technology

Address: 1 Lomb Memorial Drive, Rochester
NY 14623

ABOUT

FLOWER CITY ENGINEERS

Flower City Engineers was established by four promising Rochester Institute of Technology students all majoring in Civil Engineering Technology, these students are:

BRIANNA ELLIS



NICK GEARIN



DAVID GURMAN



MARTIN SOSA



TOWN OF EAST BLOOMFIELD NATURE TRAILS



PROJECT PRESENTATION:
MAX LOWENTHAL HALL (012) ROOM 1135
FRIDAY, DECEMBER 10TH, 2021 @ 8AM

The Town of East Bloomfield Nature Trail

A NEW OPPORTUNITY FOR COMMUNITY GROWTH AND ADVENTURE

PROJECT DESCRIPTION

The Town of East Bloomfield's goal is to connect Boughton Park to the four corners then to veterans park. This trail will help boost the town economy by allowing an easy route to the town center. Additionally, connecting to Boughton park allows connection to the existing trails there. The scope of work is to complete a 10' wide trail starting from Boughton Park to Veterans Park. This trail will be approximately 4 miles long, but will be broken down into two phases. Phase 1 will consist of the trail starting at Boughton Park, where a proposed parking lot is recommended, and travel down into the Village of East bloomfield (aka 4 Corners). Phase 2 will pick up at from the village (4 Corners), and end at Veterans Park. This trail will utilize an existing abandoned railroad bed which will cut down on costs and schedule. Not only will the scope of this project consist of new nature trails, but it will also allow access to the existing trails at Boughton Park, and the new trails through the proposed parking lot.

✓ Trail Design



✓ Pedestrian Bridge



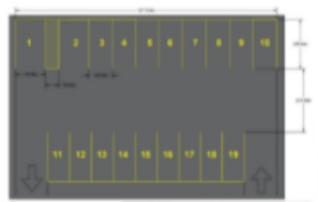
✓ Kiosk



✓ Culvert



✓ Parking Lot



✓ Pavilion



TRAIL MAP FROM BOUGHTON PARK TO FOUR CORNERS TOWN CENTER TO VETERANS PARK



PROJECT SCHEDULE

Phase 1: Boughton Park to 4 Corners

Preliminary Design: 3 months (December 2021 - March 2022)

Engineering Design: 9 months (March 2022 - January 2023)

Bidding: 3 months (January 2023 - March 2023)

Pre-Construction: 1 month (March 2023 - April 2023)

Construction: 5 months (April 2023 - September 2023)

PROJECT SCHEDULE

Phase 2: 4 Corners to Veterans Park

Preliminary Design: 2 months (July 2023 - September 2023)

Engineering Design: 4 months (September 2023 - January 2024)

Bidding: 2 months (January 2024 - March 2024)

Pre-Construction: 1 month (March 2024 - April 2024)

Construction: 4 months (April 2024 - August 2024)

PUBLIC IMPACT

The trail will cross into some residents' property but the vast majority of the trail will be within the easements obtained by the town and on the existing railroad bed.

The trail will boost town economy, provide transportation route, and increase interest in the community.

PROJECT COST

Total Project Cost: \$1,127,859

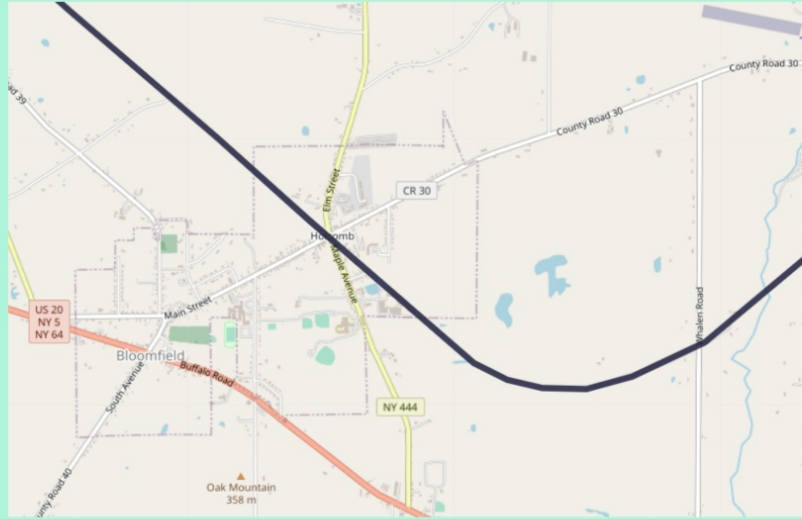
Anticipated Grant: \$500,000

Cost to Town: \$627,859

Annual Cost Per Town Residence: \$24

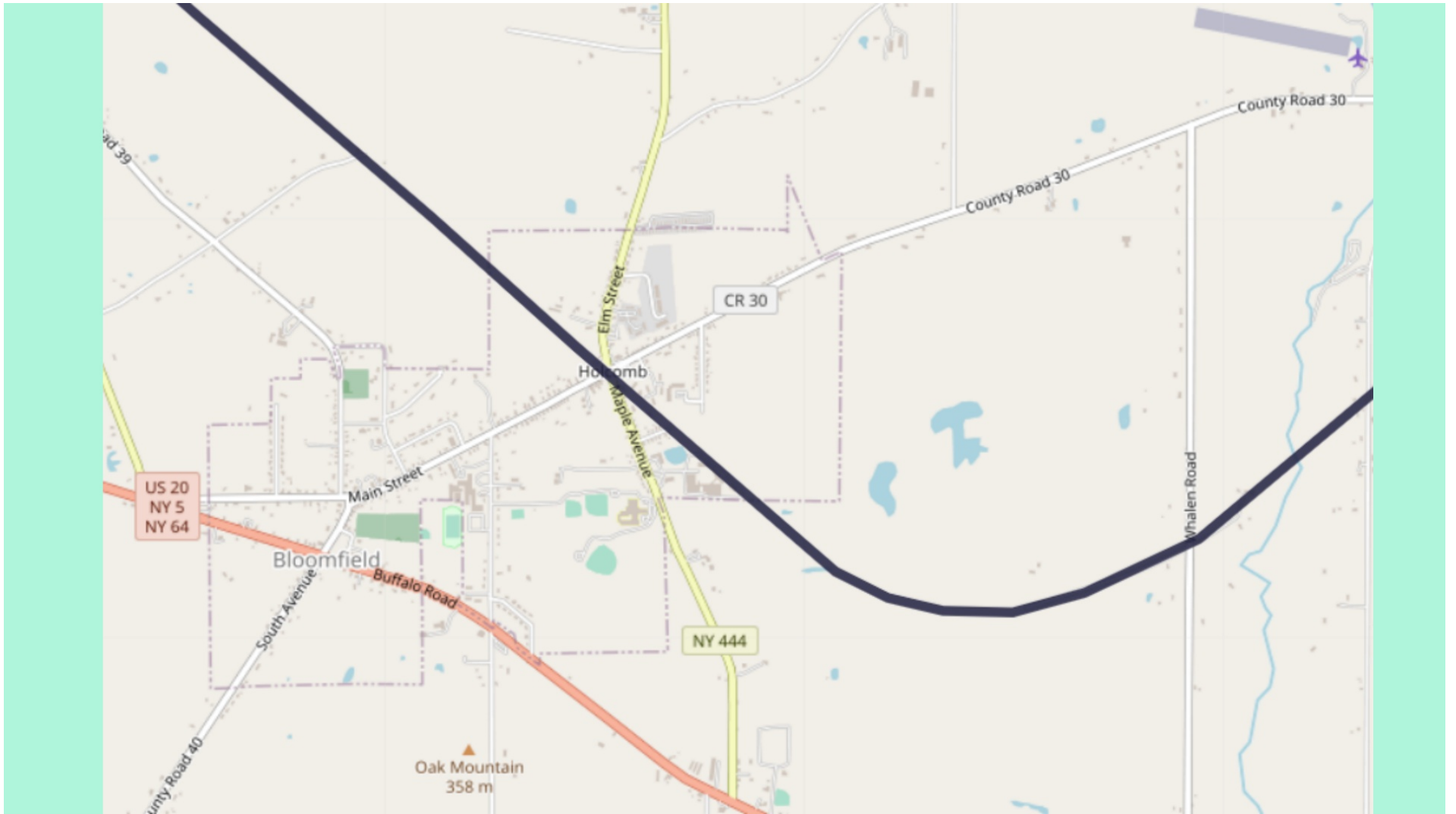


Sustainability



**Bicycle
Rack**

**Local
Suppliers**







**Material
Donation
Request**



Flower City Engineers • 1 Lomb Memorial Dr • Rochester NY 14623

[Date Sent]

[Recipient Name]

[Recipient Address]

Dear [Recipient Name]:

An exciting new feature is coming to The Town of East Bloomfield. A new nature project is in the works to connect Boughton Park to the Town Center then to Veterans Park. After a survey was taken by the people of East Bloomfield, the one recreational feature they requested most in the community was added nature trails. This trail will boost community tourism and commerce in the town while giving residents an exciting new trail to traverse through all seasons. For more information about this coming project please see the handout provided.

Donations of materials and/or money are welcomed by the Town to reduce costs. All Donors will be commemorated somewhere along the trail. If you wish to donate please contact [Designated town contact person] or visit [website] to make a monetary donation. All donations are eligible for tax write off. should you have any questions, please contact [Designated town contact person].

Sincerely,

[Sign from mayor or supervisor]

Sustainability



**Bicycle
Rack**

**Local
Suppliers**

American with Disabilities Act

- Parking Lot Design
- Handicap Spots



Boughton Rd Parking Lot



American with Disabilities Act

- Parking Lot Design
- Handicap Spots



Financial Details

This will cover all of the financial details for the Town of East Bloomfield Nature Trail Project.

Project Costs

**Taxable
Assessed
Valuation**

Tax Rate

**Single-Family
Home Value**

**Cost per
single-Family
Home**

**Financial
Analysis**



Project Costs

Cost-Stone Dust Trail

Subtotal for Phase 1 is \$487,567.

Subtotal for Phase 2 is \$306,243.

Total cost for phase 1 & 2 is \$1,127,859.

Cost- Asphalt Trail

Subtotal for Phase 1 is \$618,550

Subtotal for Phase 2 is \$350,376

Taxable Assessed Valuation

Total Assessed Taxable Valuation of
the Town of East Bloomfield
is \$307,227,266.

Tax Rate

With Grant Money

Annual Debt Service (2.0% for 10 years) is \$69,900 yearly

Annual Debt Service (5.0% for 25 years) is \$44,547 yearly

Without Grant Money

Annual Debt Service (2.0% for 10 years) is \$125,565 yearly

Annual Debt Service (5.0% for 25 years) is \$80,022 yearly

Single-Family Home Value

The average single-family home value is \$167,000.



Cost per single-family Home

Average Cost/Year for an Average home with Grants

Annual Debt Service (2.0% for 10 years)= \$38.00

Annual Debt Service (5.0% for 25 years)= \$24.21

Average Cost/Year for an Average home without Grants

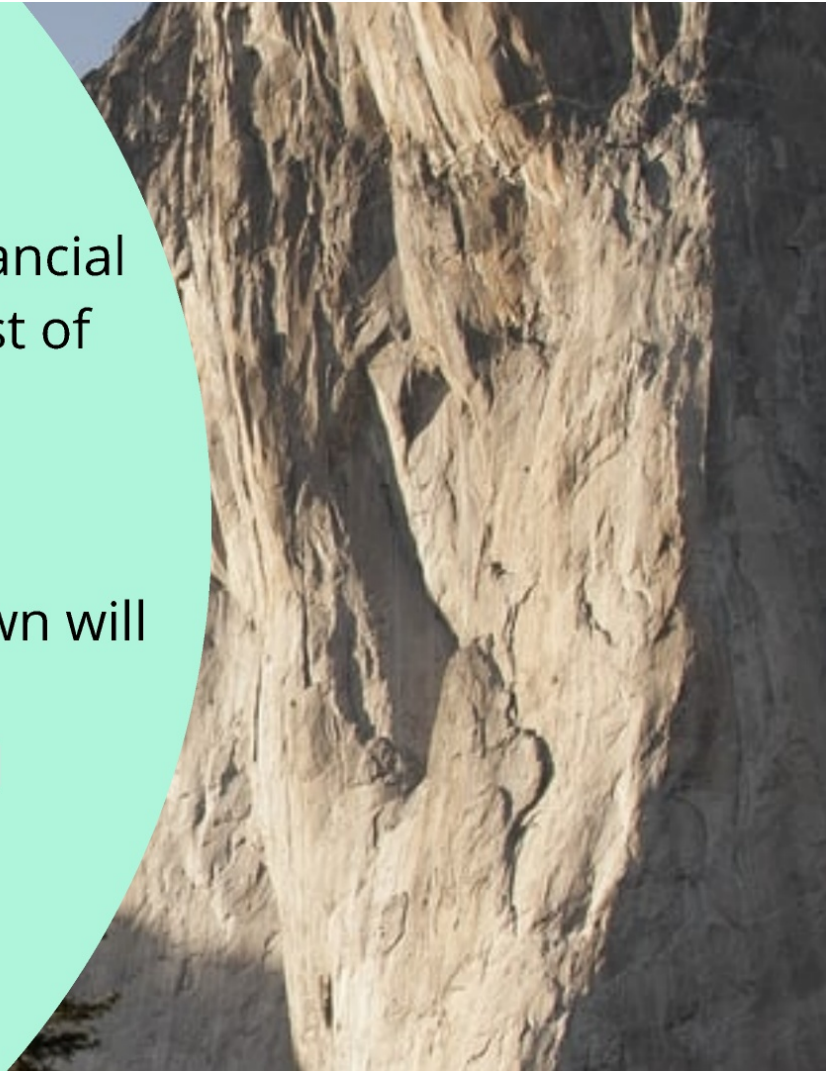
Annual Debt Service (2.0% for 10 years)= \$68.25

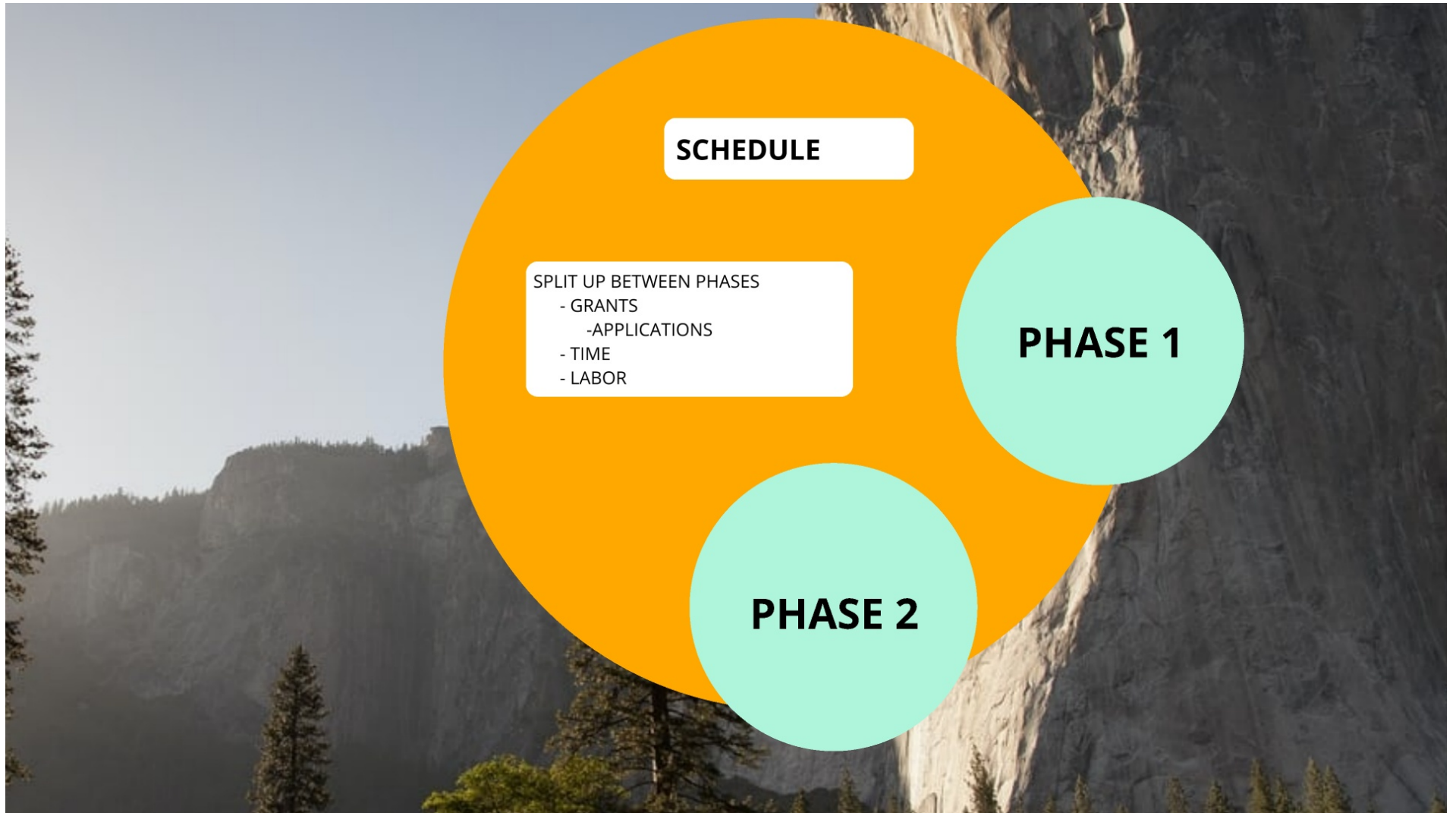
Annual Debt Service (5.0% for 25 years)= \$43.50



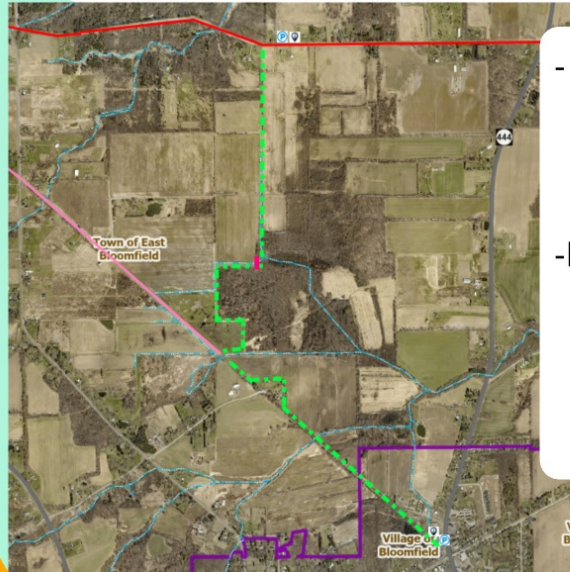
Financial Analysis

- Some of assumptions used for this financial analysis was the assumption of the cost of the bridge and pavilion.
- The cost for this project is based on assumptions because currently the town will work on grants to raise money for the budget to work on this project so it will be based on other trail projects.



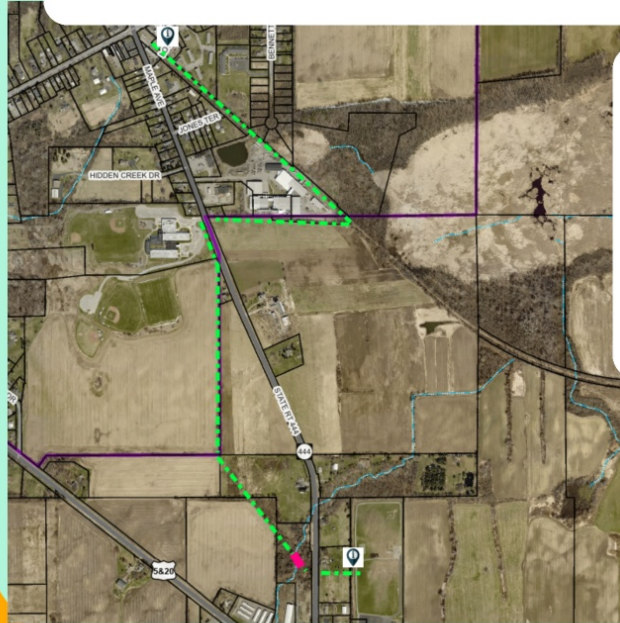


PHASE 1



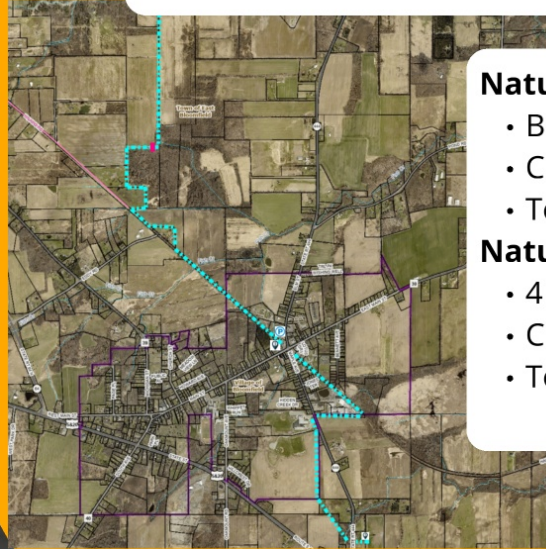
- PROJECT START DATE FEB, 5 2023
 - BID PROCESS FEB, 6 to APR 4
 - BID AWARD MAR 31 to APR 4
- PHASE 1 CONSTRUCTION
 - MOBILIZATION START APR 4
 - COMPLETION JULY 15
 - APPROX 23 WEEKS TOTAL

PHASE 2



- PROJECT START DATE FEB, 5 2024
- BID PROCESS FEB, 5 to APR 1
- BID AWARD MAR 31 to APR 1
- PHASE 2 CONSTRUCTION
- MOBILIZATION START APR 2
- COMPLETION JUNE 3
- APPROX 19 WEEKS

Summary



Nature Trail Phase 1

- Boughton Park to 4 Corners
- Construction Schedule of 23 wk
- Total Cost - \$487,000

Nature Trail Phase 2

- 4 Corners to Veterans Park
- Construction Schedule 19 wk
- Total Cost - \$311,000

Next Steps

Conclusion

- Approval of construction on residents land
- Federal Funding/Grants
- A complete Preliminary Engineering Report has been created that goes into further detail, of scope, costs, and schedule