



Middlebury Bridge & Rail Project

PRESENTED TO
Town of Middlebury, VT

PRESENTED BY
VTrans, VHB, and Kubricky Construction

June 4, 2019



Community Project Goals

- Protect safety of the community: people, property, environment
- Minimize project impact on vitality of the downtown community: businesses, residents, institutions
- Maintain traffic flow and pedestrian access
- Develop and maintain a credible schedule
- Engage with the local community and facilitate clear communication with all stakeholders



Introductions



U.S. Department
of Transportation

**Federal Highway
Administration**



KUBRICKY CONSTRUCTION CORP.



Project Overview

Project Dimensions

Overall length: 3,550 feet

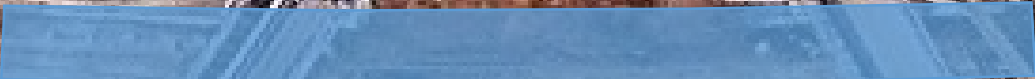
Tunnel length: 360 feet

Construction Area: 6.1 Acres



Merchants Row

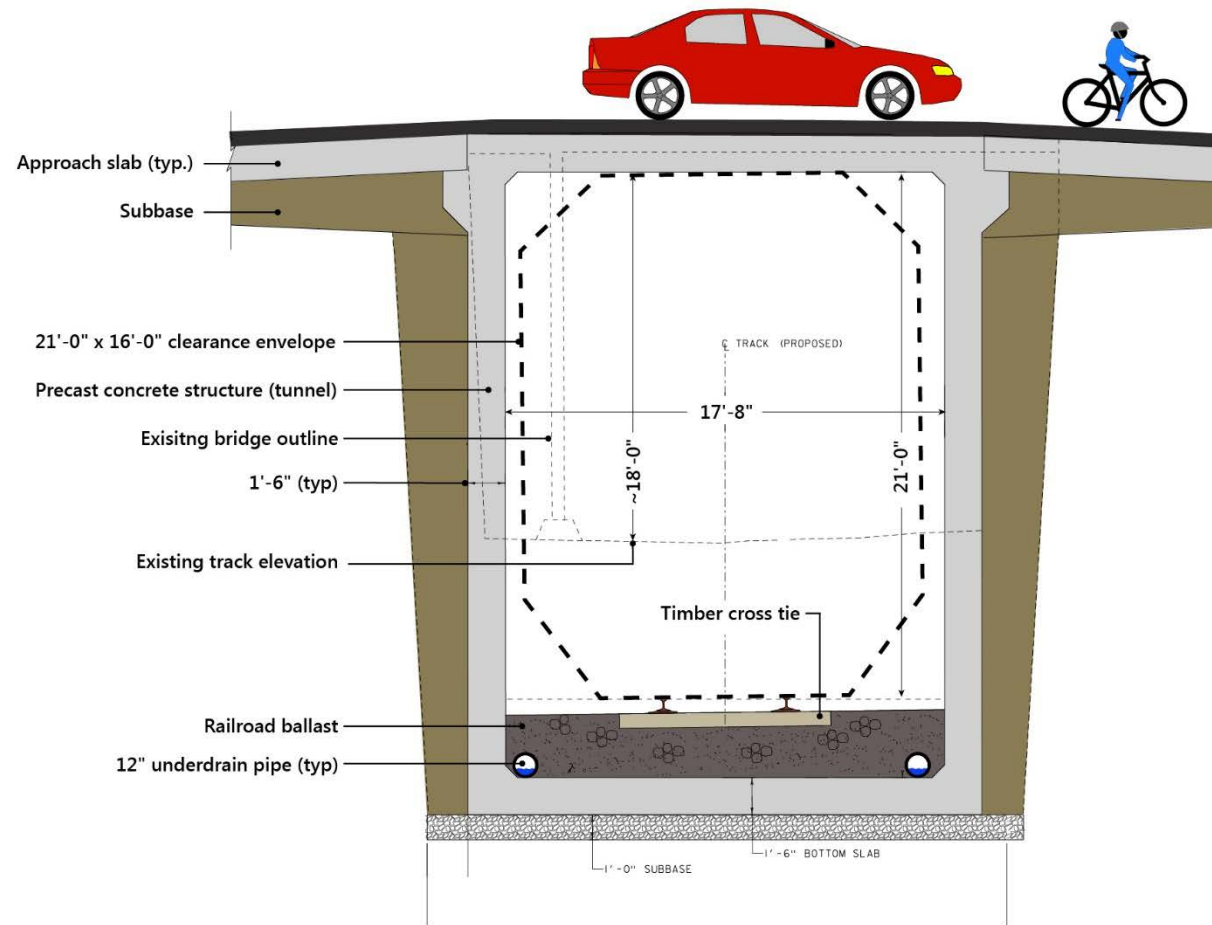
Main Street



Proposed Tunnel Location



New Tunnel Design





New Tunnel Design

- Closed box structure
- 100-year design service life
- Design based on current design codes and standards
- Plan for future potential uses – highway and railroad



Current Project Status

- ✓ Early Work Package 1 Construction - 2017
- ✓ Early Work Package 2 Construction - 2018
- ✓ Project Design - 2019
 - **Main Project Construction to Begin – July 2019**



2018 Construction Summary

- Temporary access roads
- Microtunneling for drainage system
- Underground utility infrastructure
- Tree Cutting

Temporary access road



2017

2018

2019

2020

2021

2018 Drainage system installation

Drainage outfall/
receiving shaft 1

Drive 1

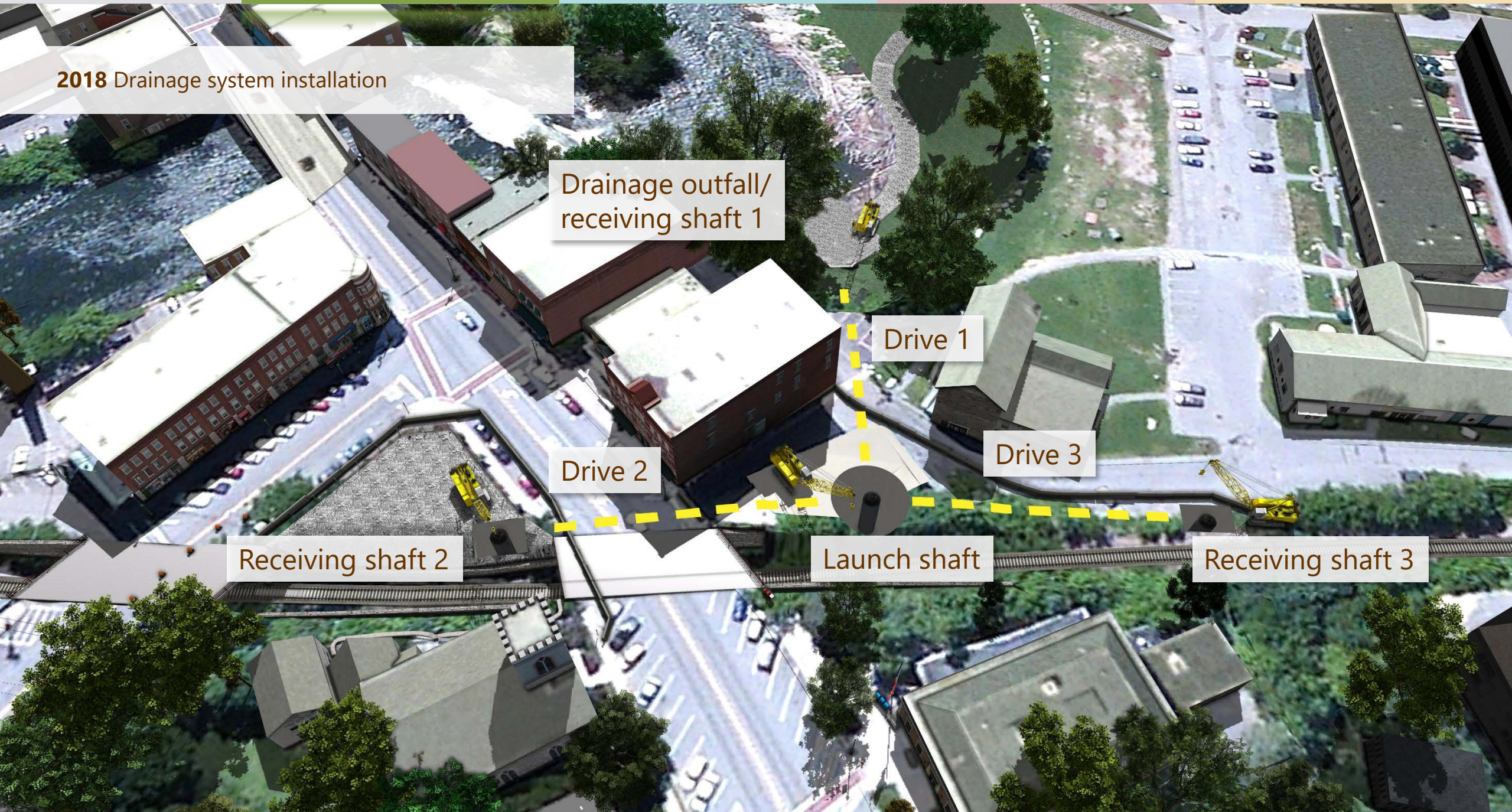
Drive 2

Drive 3

Receiving shaft 2

Launch shaft

Receiving shaft 3





Microtunneling Launch Shaft Construction



Microtunneling Launch Shaft Construction



Microtunneling Drill Rig



Microtunneling Drill Rig



Microtunneling Launch



Microtunneling Drive 1 Complete

Drainage Outfall





Launch Shaft Drainage Manhole



Utility Undergrounding



Tree Removal

2018 Project Accomplishments

- Microtunneling drainage components completed
- New drainage outfall constructed below Otter Creek Falls
- Access Roads Constructed – Battell Block and Outfall
- Utility Undergrounding in Printer's Alley
- Project clearing completed
- Project Design Completed – Including Landscape Design Public Spaces
- We've set the stage for the Main Project Construction

2019 Planned Construction Activity

- Water, sewer, and storm drainage utility construction
- Support of excavation installation along railroad corridor
- Targeted areas of blasting along the railroad corridor

2017

2018

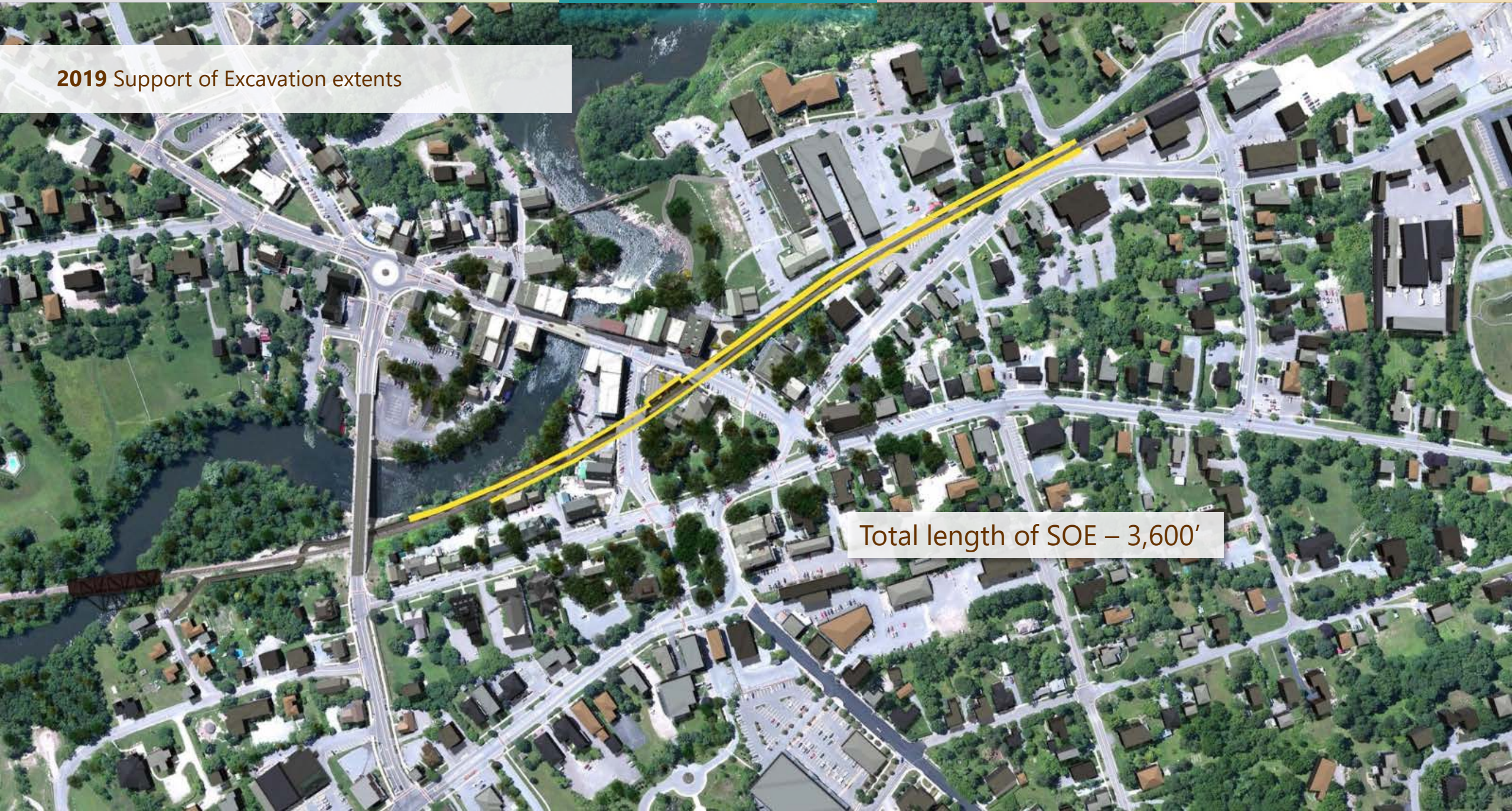
2019

2020

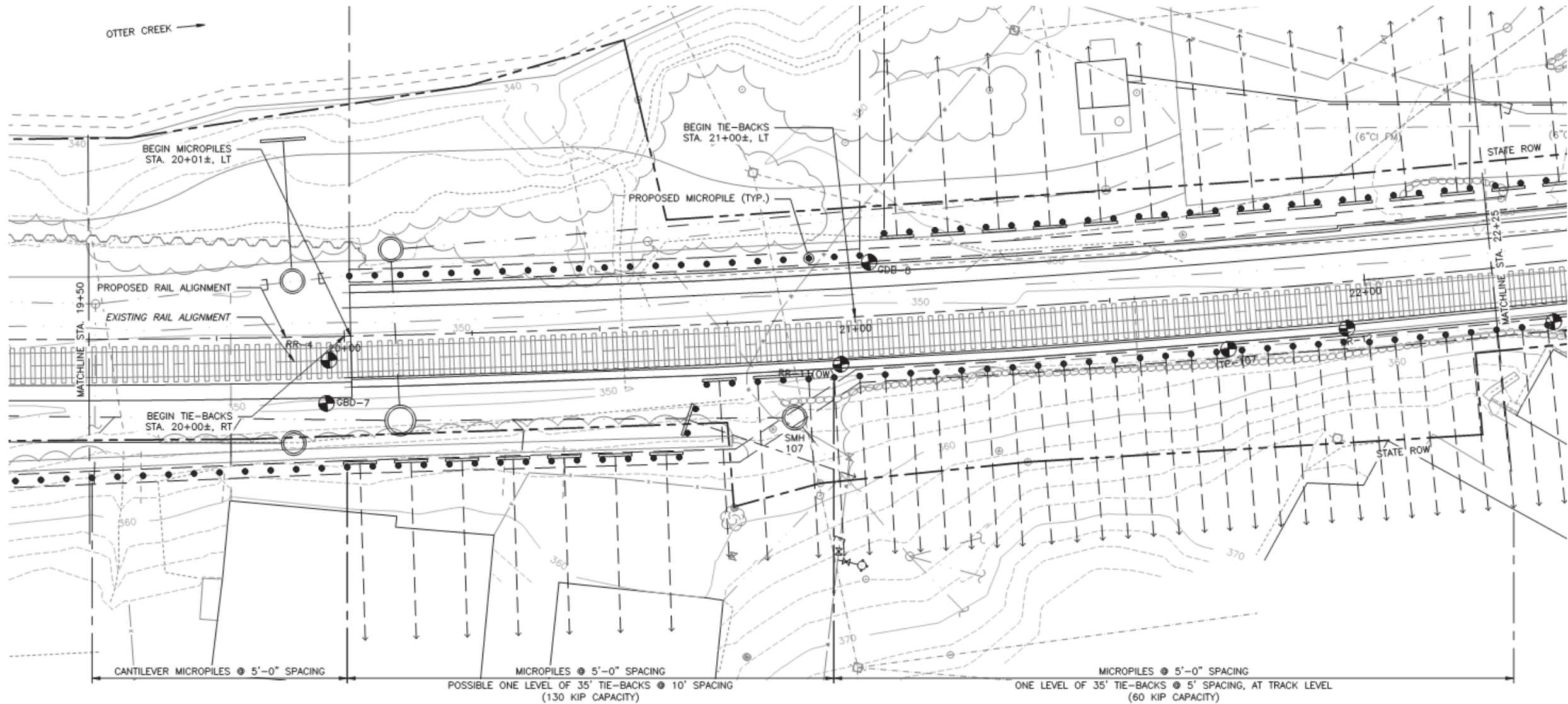
2021

2019 Support of Excavation extents

Total length of SOE – 3,600'

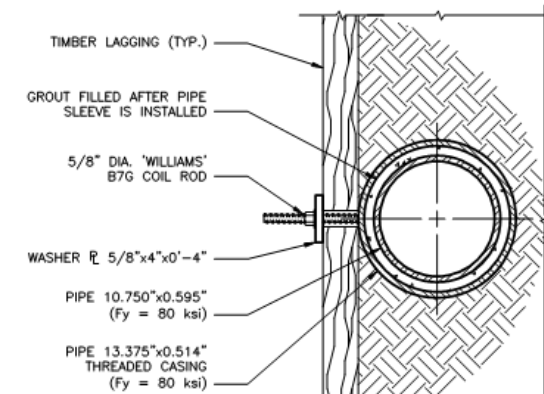
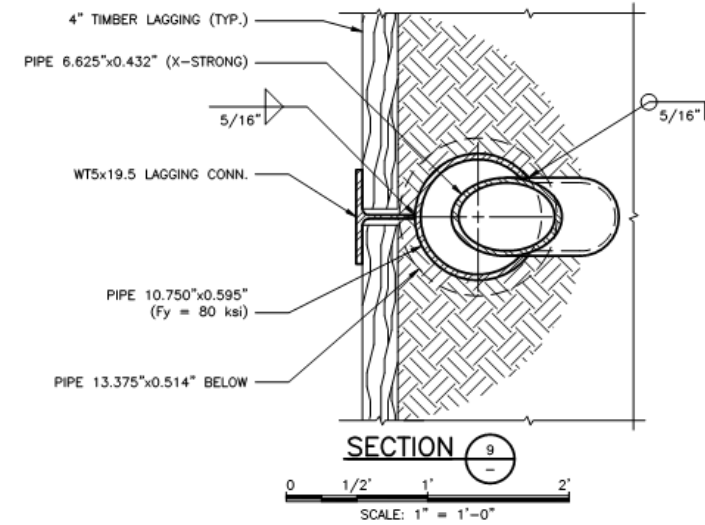
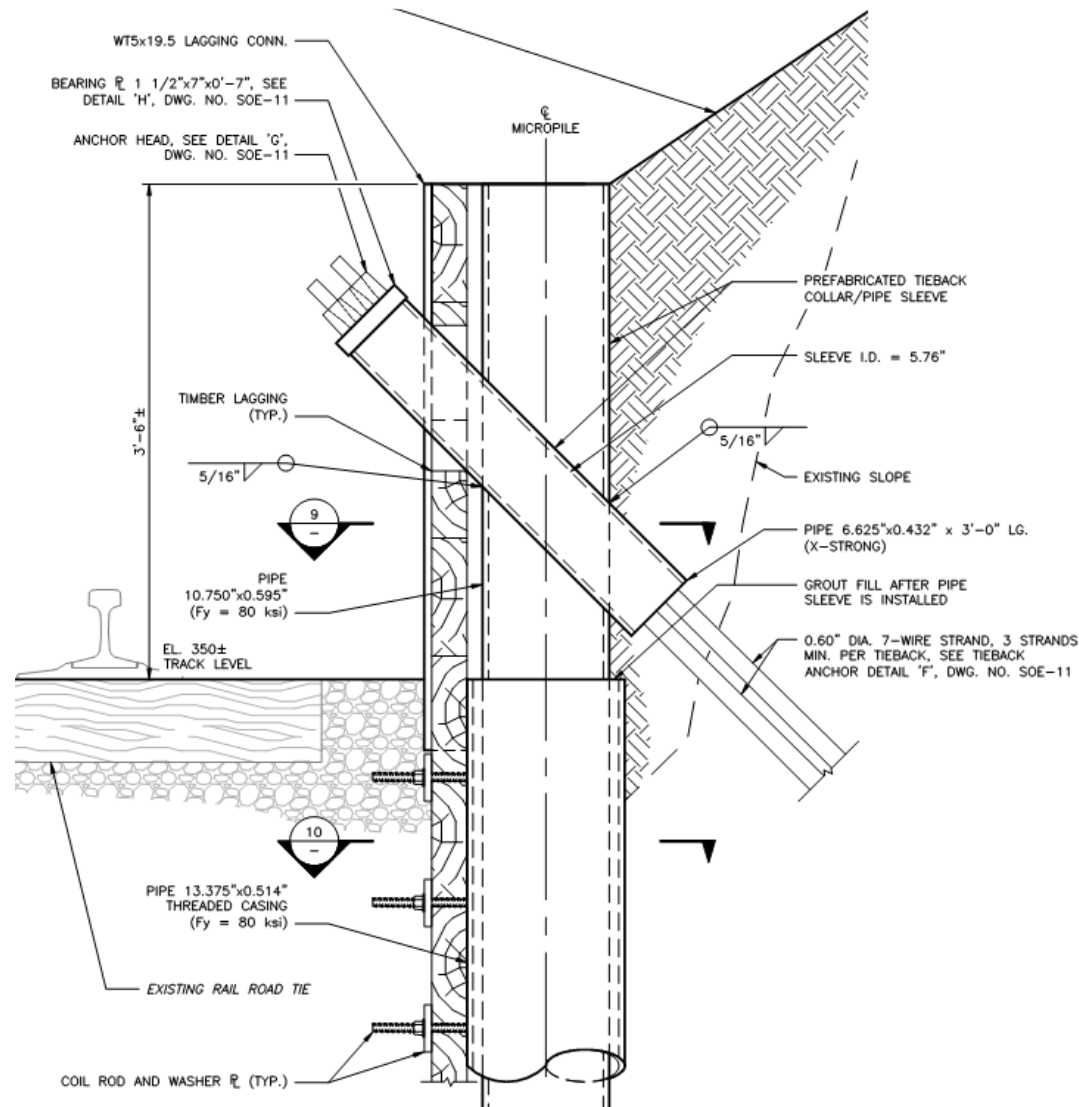


2019 Support of Excavation Construction



Temporary Support of Excavation Example

2019 Support of Excavation Construction



Temporary Support of Excavation Example

2017

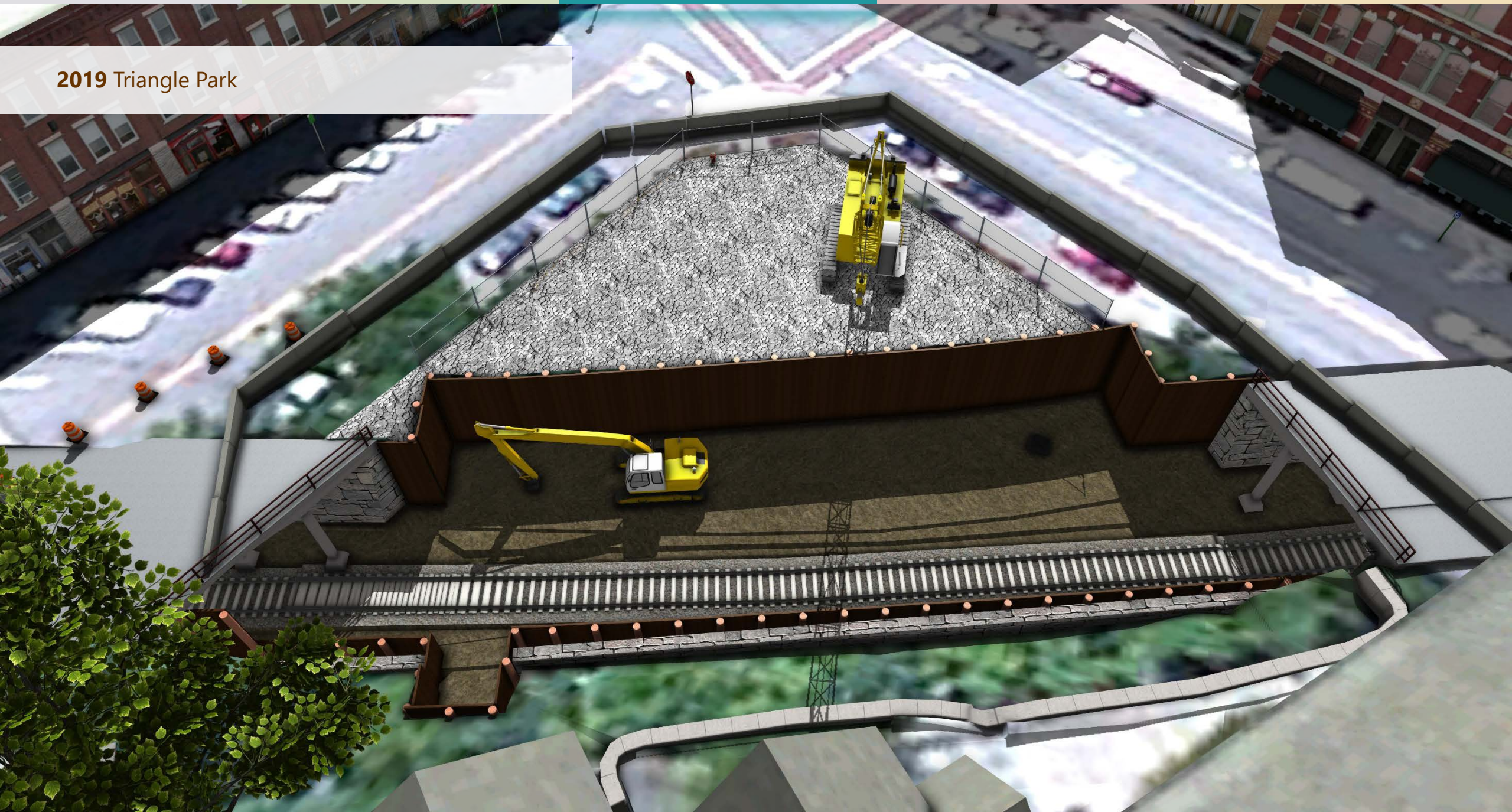
2018

2019

2020




















2021

2019 Triangle Park



2019 Timeline and Hours of Operation

2019 Calendar Year

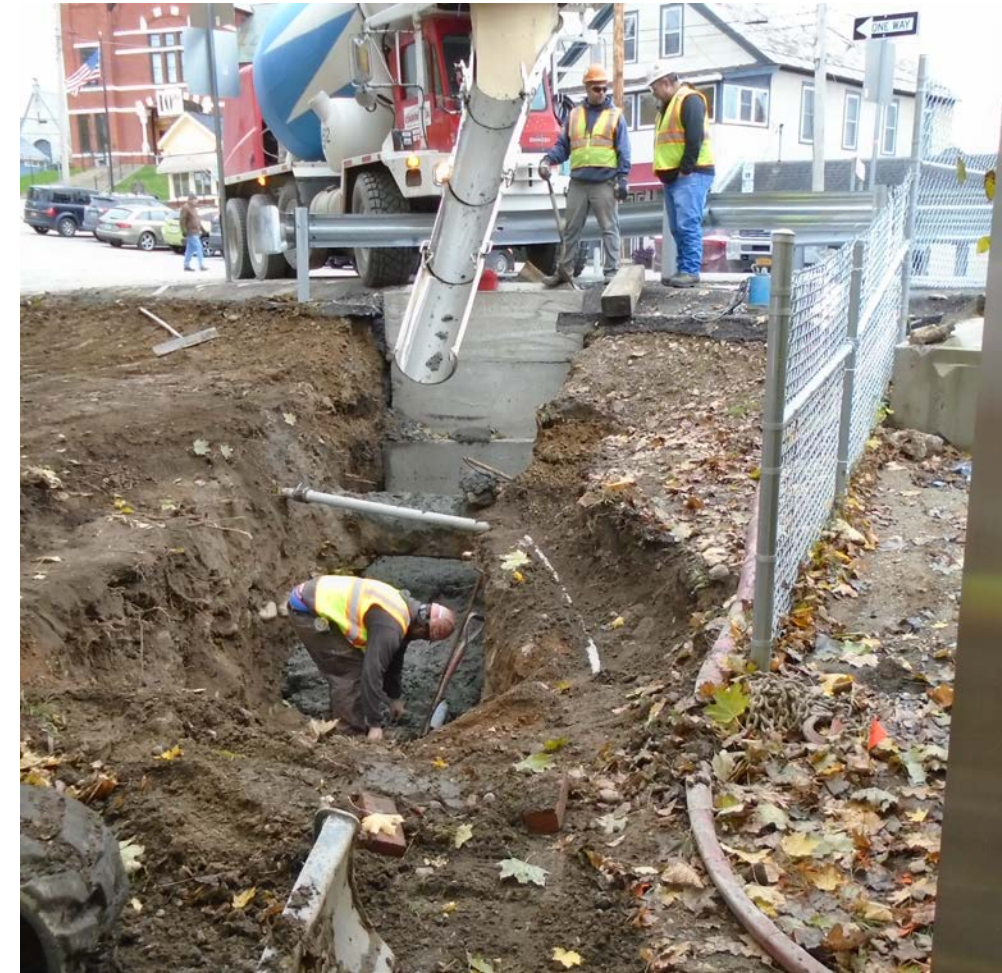
	July	August	September	October	November	December
Drilling and Blasting (Sept 13 - Sept 16)						
Drilling and Blasting (Oct 11 - Oct 14)						
Drilling and Blasting (Nov 8 - Nov 11)						
Drilling and Blasting (Dec 6 - Dec 9)						
Mobilization						
Temporary Support of Excavation						
Sanitary Sewer Construction						
Storm Drainage Construction						
Watermain Construction						

■ Working hours

- Anticipated weekday 7:00am–5:00pm (July)
- Anticipated weekday 7:00am–9:00pm (August through December)
- Anticipated 24 hours per day (weekend drilling and blasting periods)

2019 Merchant's Row Impacts

- 5 day closure – late summer of 2019 – installation of sewer and water line crossings
- 5 day closure – fall of 2019 – installation of stormwater catch basins and pipe crossing



2019 Main Street Lane Closures

- 3 night closure (reopen during the daytime) – Fall of 2019 – Installation of new sewer manholes and pipes
- 3-5 day lane closure – Late Fall of 2019 – Installation of Post Office sewer service, stormwater catch basins, and pipe crossings

2019 Printer's Alley Closures

- 1 week closure – Fall of 2019 –
Installation of new sewer
manhole and sewer main



2019 Battell Block Driveway Closures

- 1 week closure –Late summer – Installation of Water and Sewer lines
- 2 separate 1 week closures – Late summer & Early Fall – Installation of support of excavation
- Temporary access road will be open during these timeframes
- Pedestrian access from Merchant's Row to lower parking lot to be maintained during these timeframes

2019 Other Anticipated Impacts

- Installing temporary support of excavation will create noise and vibrations near construction operations
- Increased construction traffic – truck traffic and equipment
- Limited parking impacts associated with construction activities – contractor parking will be offsite and workers will be shuttled into Downtown Middlebury

2019 Downtown Impacts

- 2019 downtown impacts will be similar to 2018
- On street impacts are limited to utility crossings on Main Street and Merchants Row
- Focused efforts to work along the railroad corridor
- All work during 2019 is geared toward preparing for 2020 shutdown

2019 Downtown Community Events

- Peasant Market – July 6
- Festival on the Green – July 7 – July 13
- Lions Club Auction – July 17
- Middlebury New Filmmakers Festival – August 22 – August 25



2019 Questions and Thoughts

Selectboard and Public Input Encouraged!



2020 Construction Activity

- **Pre-closure** (April)
- **Merchant's Row Closure** (May 4 – May 22)
- **Full Closure** (May 27 – August 5)
 - Main Street and Merchants Row closures
 - Railroad detour
- **Post-closure** (August - December)

Pre-Closure

- Mobilization of Equipment and Materials
- Staging area setup
- Delivery of Precast Concrete to Staging Area
- Crane Setup in Triangle Park, Marble Works, and Battell Block

2017

2018

2019

2020

2021

Middlebury Staging Areas

Vermont Route 30

2020 Pre-Closure

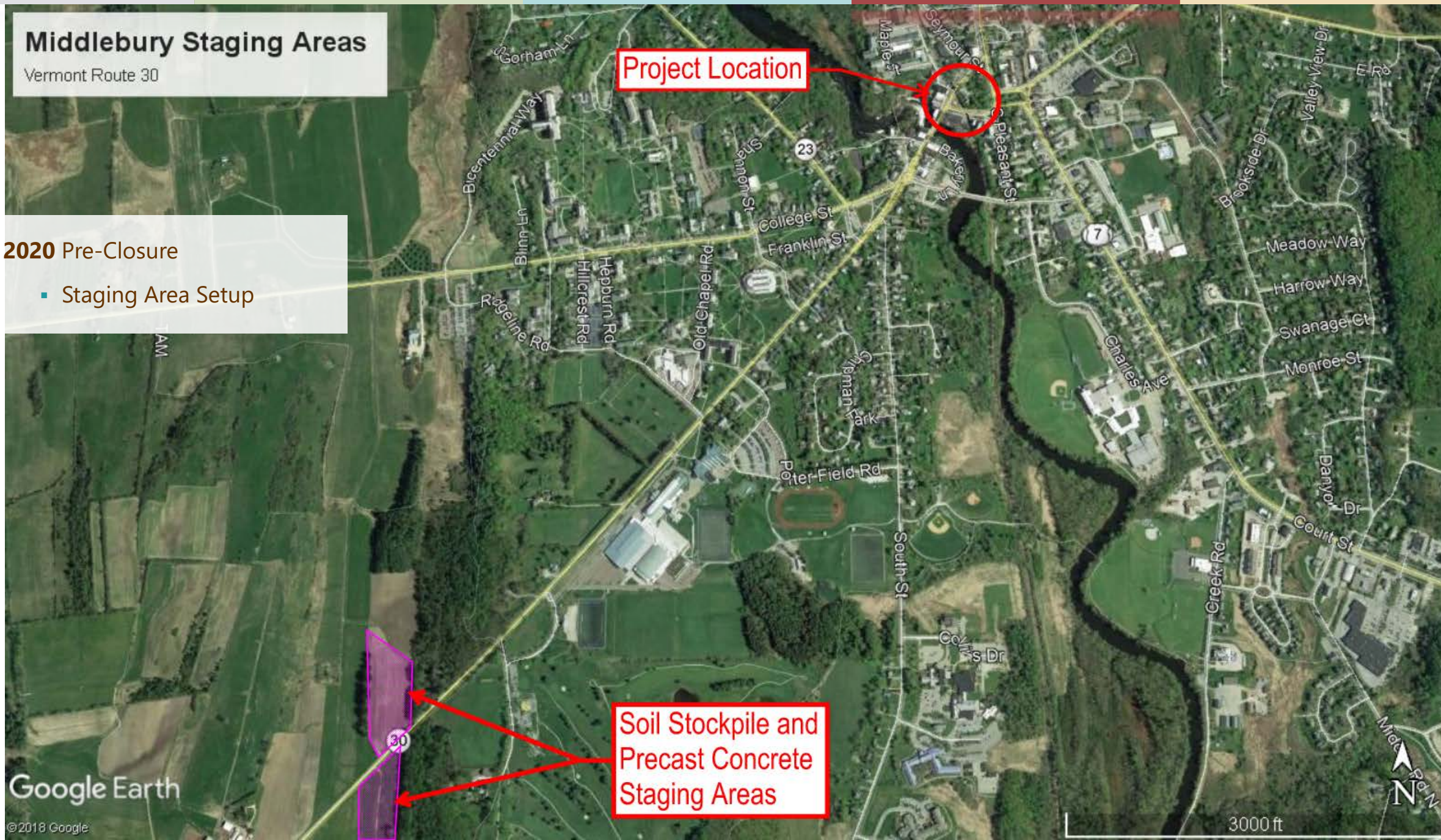
- Staging Area Setup

Project Location

Soil Stockpile and
Precast Concrete
Staging Areas

Google Earth

©2018 Google



2017

2018

2019

2020

2021



2020 Pre-Closure

- Assembly of Cranes



Merchant's Row Closure (May 4 ,2020 – May 22, 2020)

- Merchant's Row Closed and Temporary Bridge Removed
- Installation of Temporary Support of Excavation
- Demolition of Bridge Abutments/Ashlar Block Walls
- Merchant's Row Open May 23-May 26 (no temporary bridge)

2020 Closure Activity (10 Weeks) (May 27, 2020 – August 5, 2020)

- Track removal/Main Street temporary bridge removal
- Excavation and Support of Excavation
- Pre-Cast Concrete Installation
- Roadway Reconstruction and Paving
- Railroad Track Reinstallation

2017

2018

2019

2020

2021

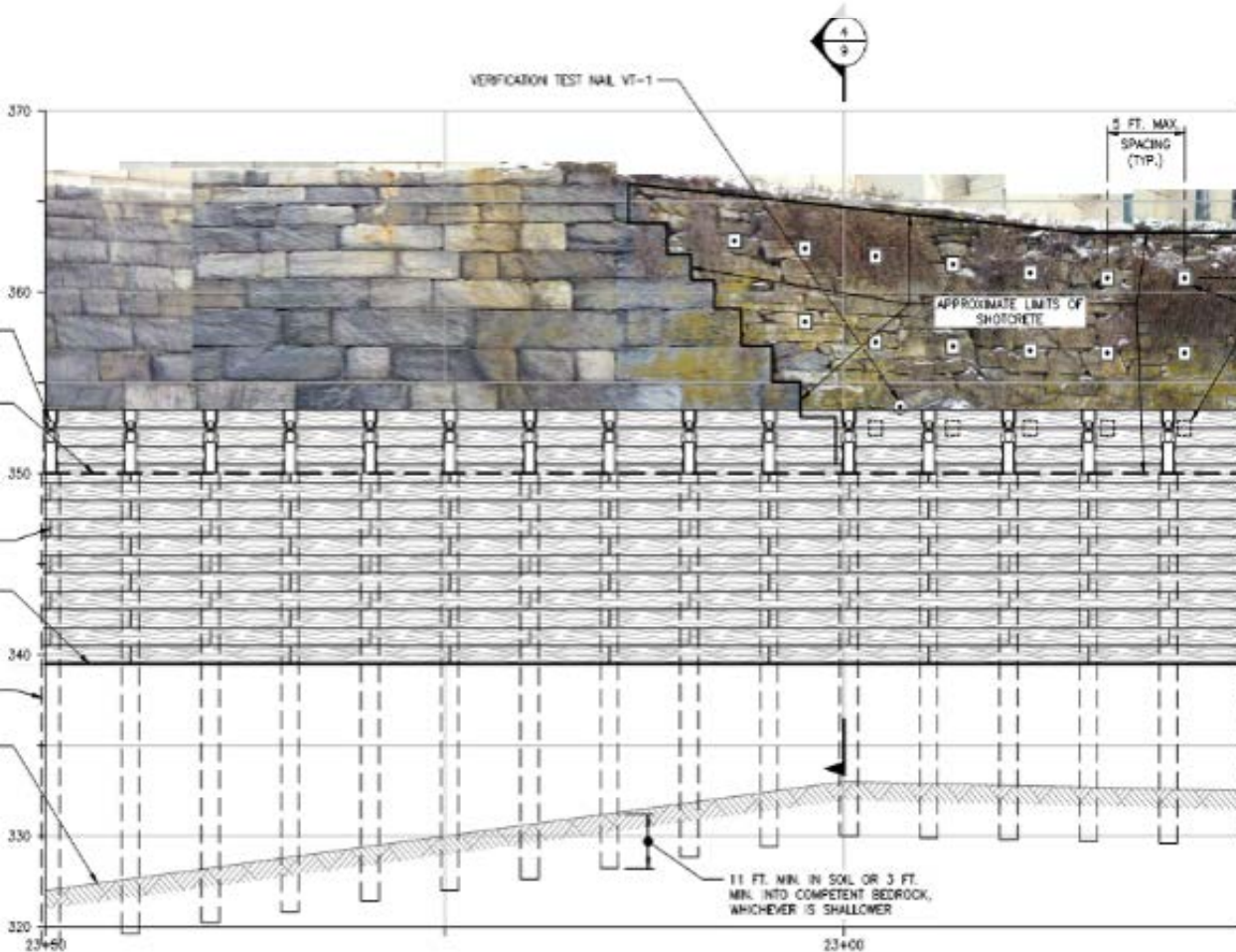
2020 Closure

- Removal of Main Street temporary bridge
- Railroad corridor excavation
- Support of Excavation Lagging



2020 Excavation and Support of Excavation

- Railroad corridor excavation
- Support of Excavation Lagging



2017

2018

2019

2020

2021

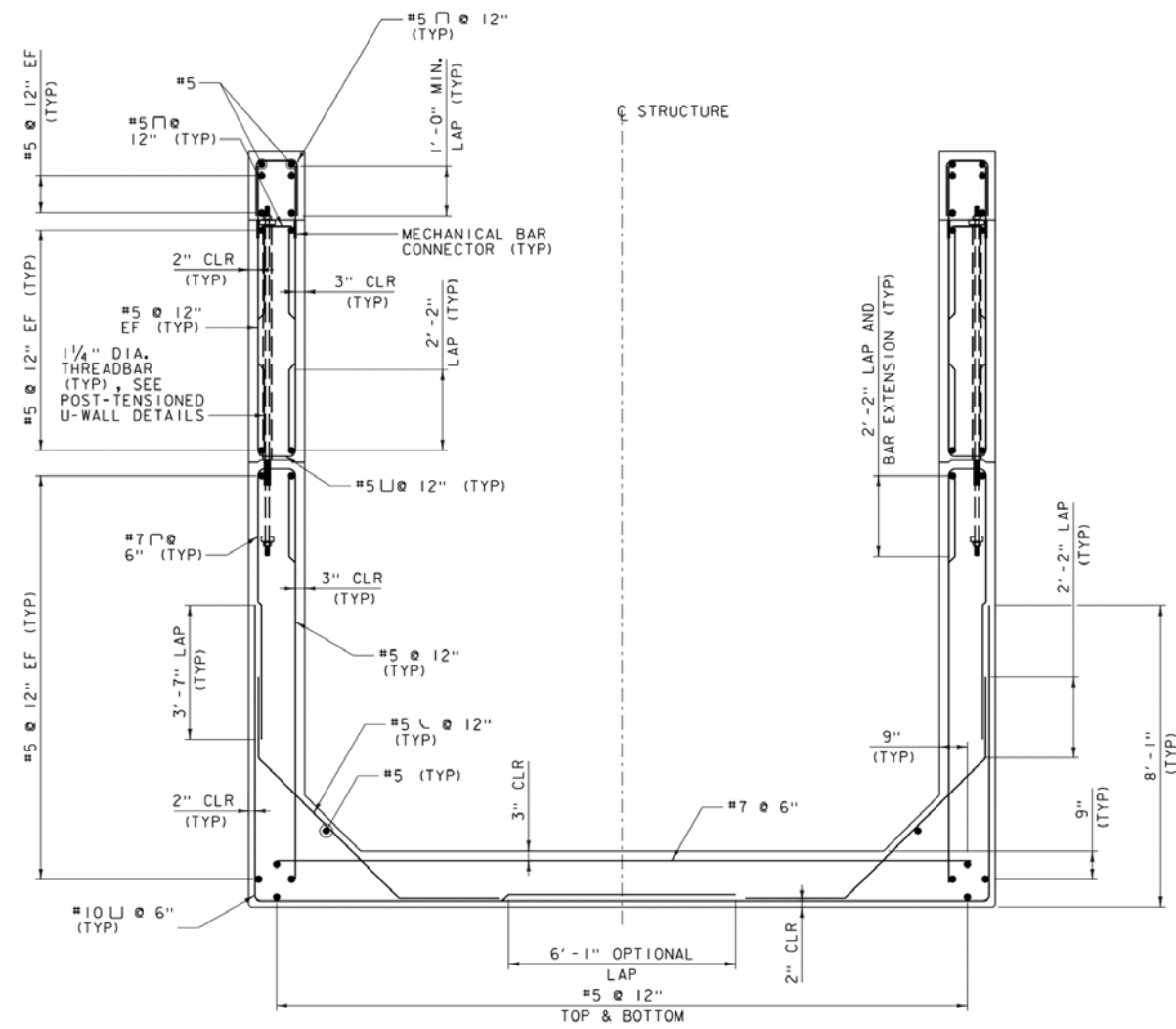
2020 Closure

- Precast Concrete Installation

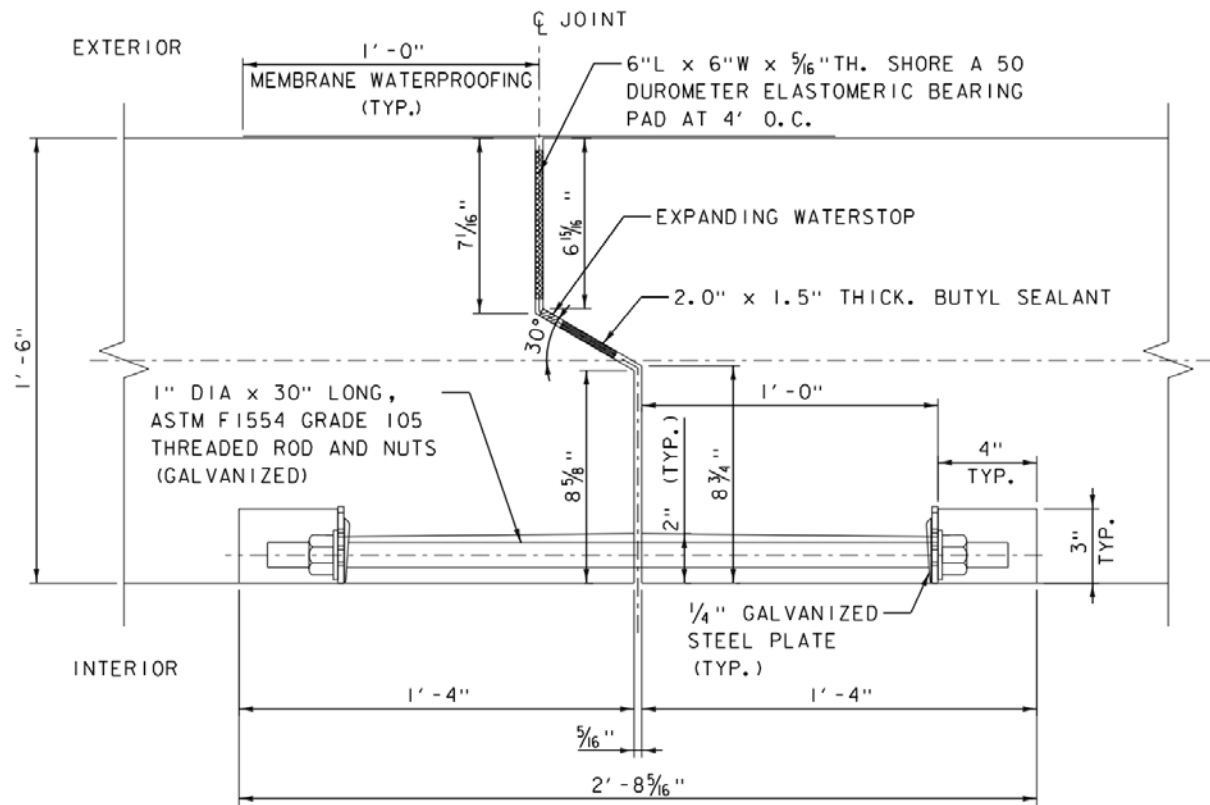


2020 Closure: Precast Concrete Installation

- 1.5 mile trip from staging area to downtown
- 300+ pieces to individually install
- Installing approximately 1 piece per hour

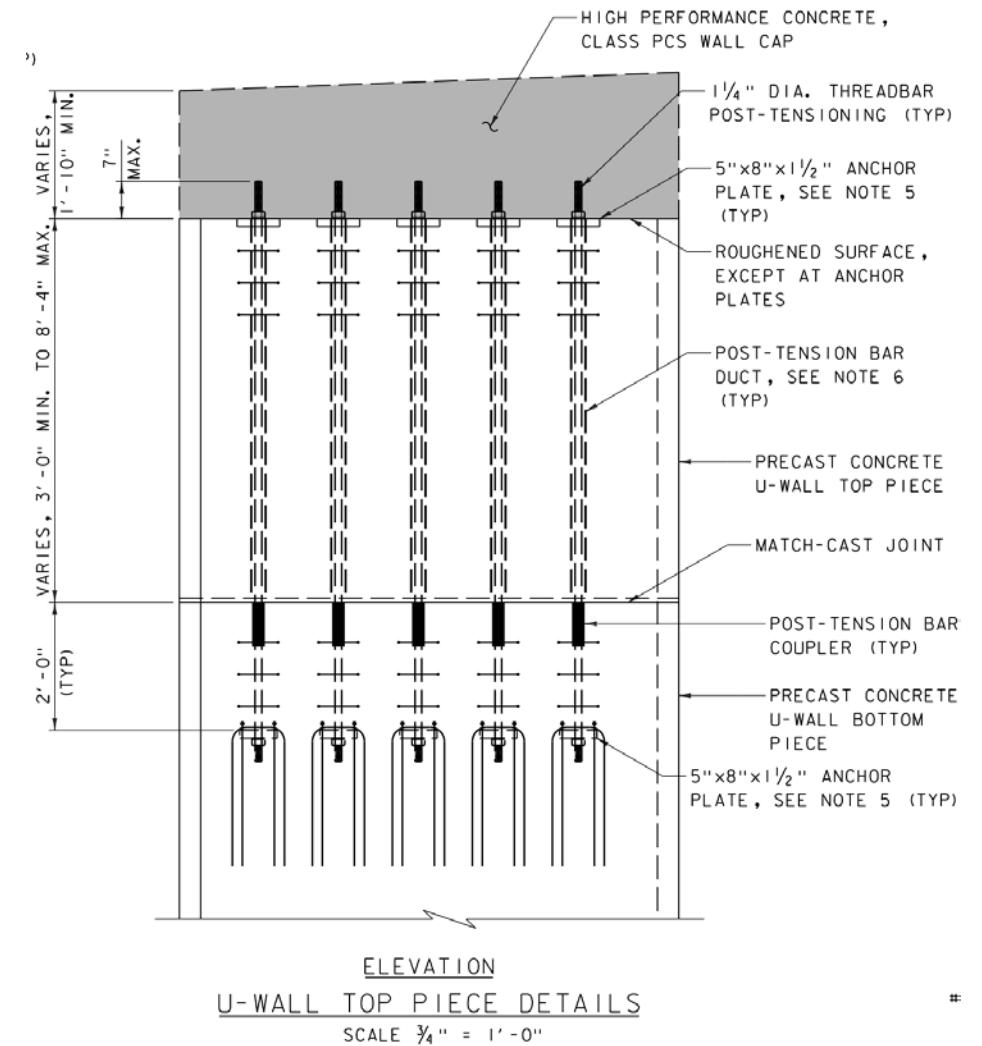


MID-HEIGHT U-WALL SECTION - REINFORCING
SCALE $\frac{1}{2}" = 1' - 0"$



NOTE: THE TRANSVERSE VERTICAL JOINT AT BOTTOM SLAB SIMILAR
TRANSVERSE VERTICAL JOINT AT WALL

SCALE: 3" = 1'-0"



ELEVATION
U-WALL TOP PIECE DETAILS
SCALE 3/4" = 1'-0"

2017

2018

2019

2020

2021

2020 Closure

- Tunnel backfill
- Roadway Reconstruction



2017

2018

2019

2020

2021

2020 Closure

- Tunnel complete
- Railroad Track Reinstallation
- Main Street and Merchants Row open to vehicle and pedestrian use



2020 Post-Closure Activity

- Continuous Welded Rail Construction
- Railroad Surface and Final Grading
- U-Wall Cast-in-Place Concrete Caps and Pedestrian Railing Installation
- Fencing Installation
- Site Grading/Initial Planting and Vegetation

2020 Timeline and Hours of Operation

2020 Calendar Year							
	April	May	June	July	August	September	October
Merchants Row Closed (May 4 - May 22)							
Main Street and Merchants Row Closed (May 27 - August 5)							
Temporary Support of Excavation							
Track Removal and Main Street Temporary Bridge Removal							
Excavation and Support of Excavation							
Precast Concrete Installation							
Roadway Reconstruction and Paving							
Cast-In-Place Concrete U-Wall Caps							
Sidewalk Reconstruction and Railings							
Railroad Track Reconstruction							
Fencing Installation							
Surface Restoration and Sign Installation							
Initial Landscaping and Planting							

- Anticipated weekday 7:00am–5:00pm (April)
- Anticipated weekday 7:00am–9:00pm (May 4 – May 22)
- Anticipated 24 hours per day (May 27 – August 5)

2020 Pre-Closure Impacts

- 3 night closure of Main Street for crane assembly
- Increased truck traffic on Route 30 south of Middlebury for precast concrete deliveries

2020 Merchant's Row Closure Impacts

- Starting May 4, 2020 the temporary bridge will be removed resulting in discontinuity of vehicular and pedestrian traffic across the railroad
- Reduced parking capacity along Merchant's Row
- Construction will pause from May 23 – May 26 and most of Merchant's Row will reopen, including parking areas

2020 Closure Impacts: Track Removal and Main St Temporary Bridge Removal

- Main Street and Merchant's Row will be closed through the Project area starting May 27, 2020
- Railroad Tracks and ties will be disassembled and removed from the railroad corridor

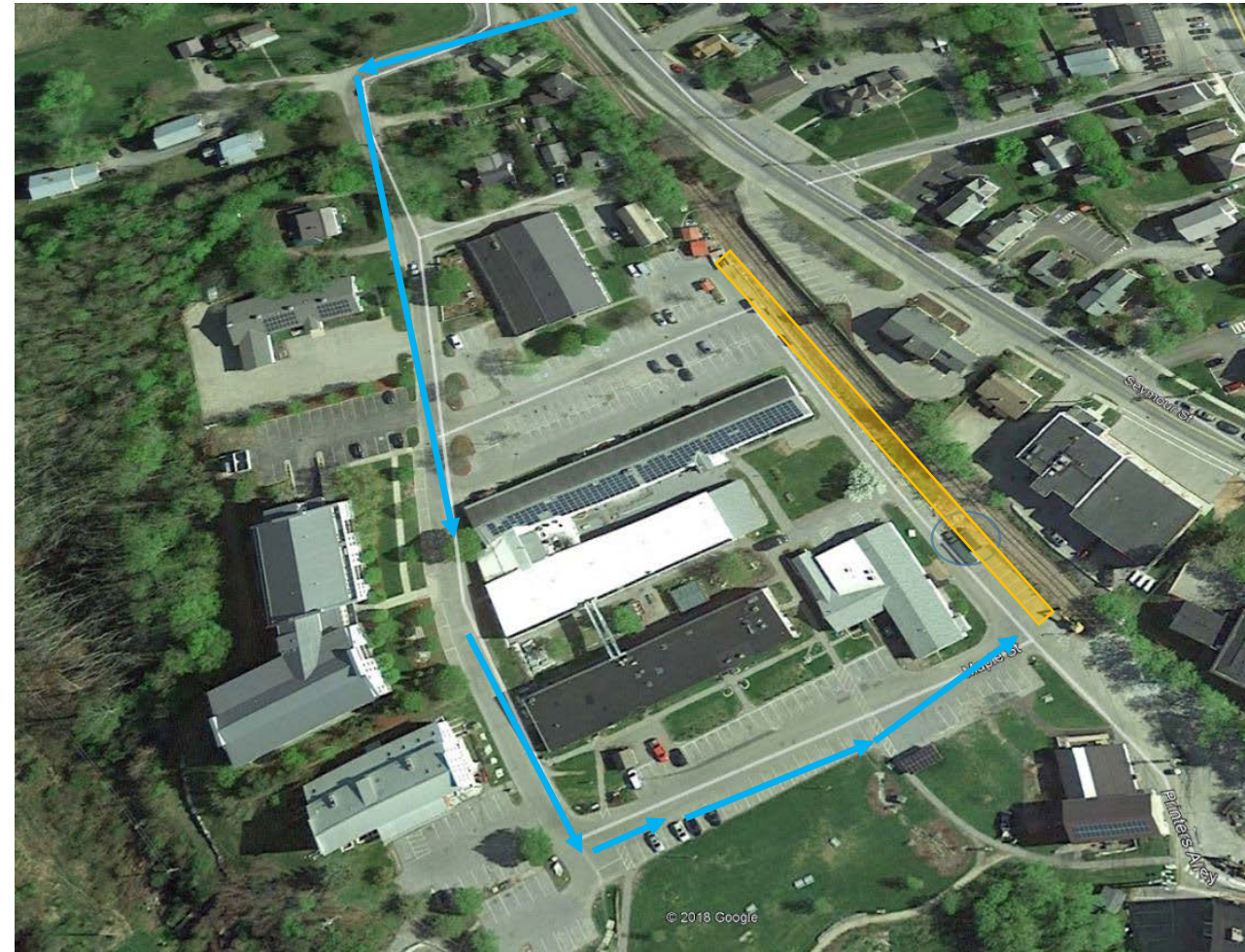
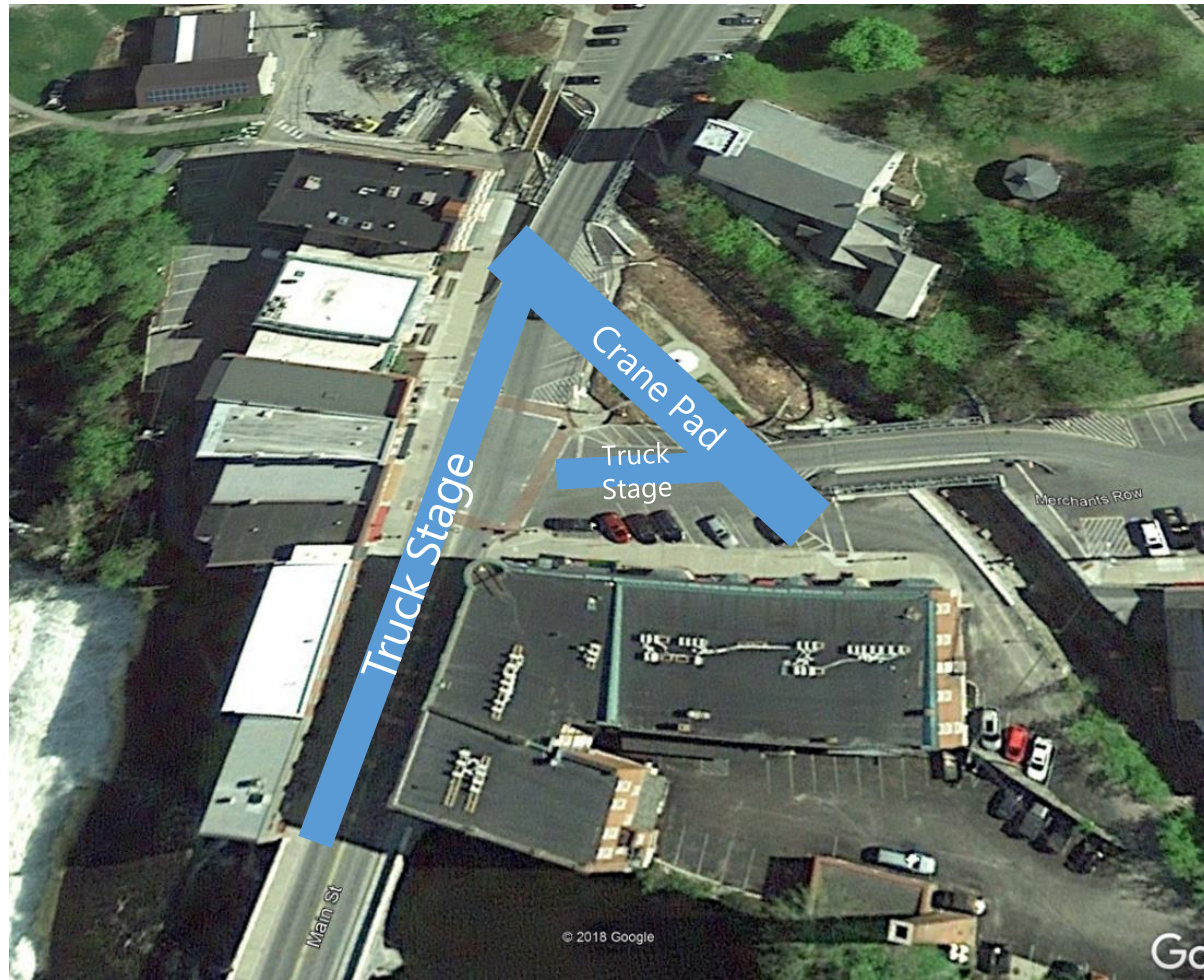
2020 Closure Impacts: Excavation and Support of Excavation

- Excavating 27,000 cubic yards of soil from the railroad corridor
- Increased truck traffic to haul soils – approximately 1800 truck trips
- Delivery of timber lagging – 30,000 square feet

2020 Closure Impacts: Precast Concrete Installation

- 300+ pieces of precast concrete to install
- Increased truck traffic along Route 30 for delivery of precast
- Precast will be delivered to Main/Merchants intersection, Marble Works, and Seymour Street

2020 Closure Impacts: Precast Concrete Installation



2020 Closure Impacts: Roadway Reconstruction and Paving

- Main Street and Merchant's Row excavation, subbase replacement, sidewalk reconstruction
- Phased sidewalk reconstruction to continue to allow pedestrian access to residences and business locations
- Base course of paving within the Project limits
- Main Street and Merchant' Row to reopen on August 5, 2020

2017

2018

2019

2020

2021



2020 Road closures

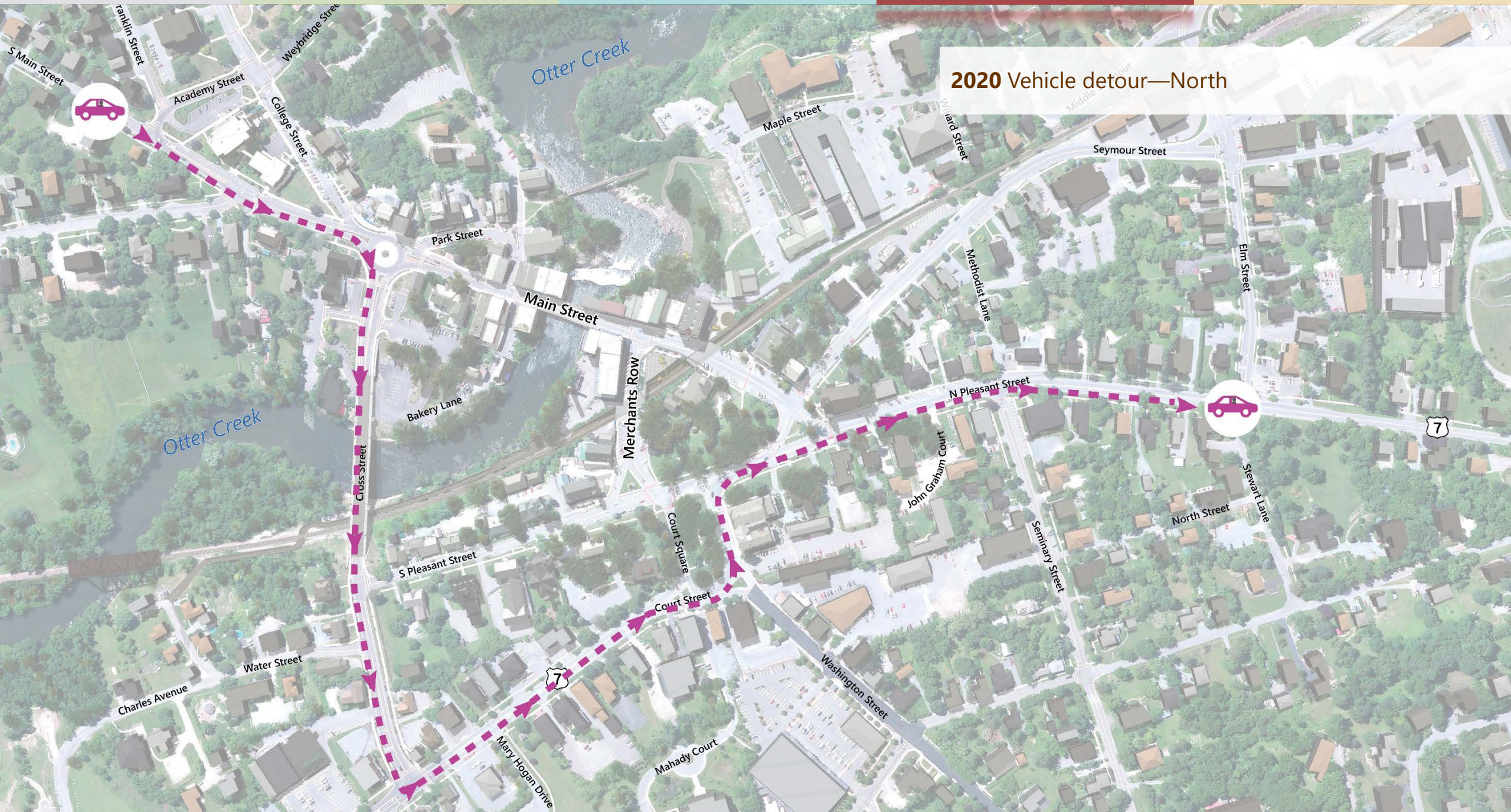
2017

2018

2019

2020

2021



2020 Vehicle detour—North

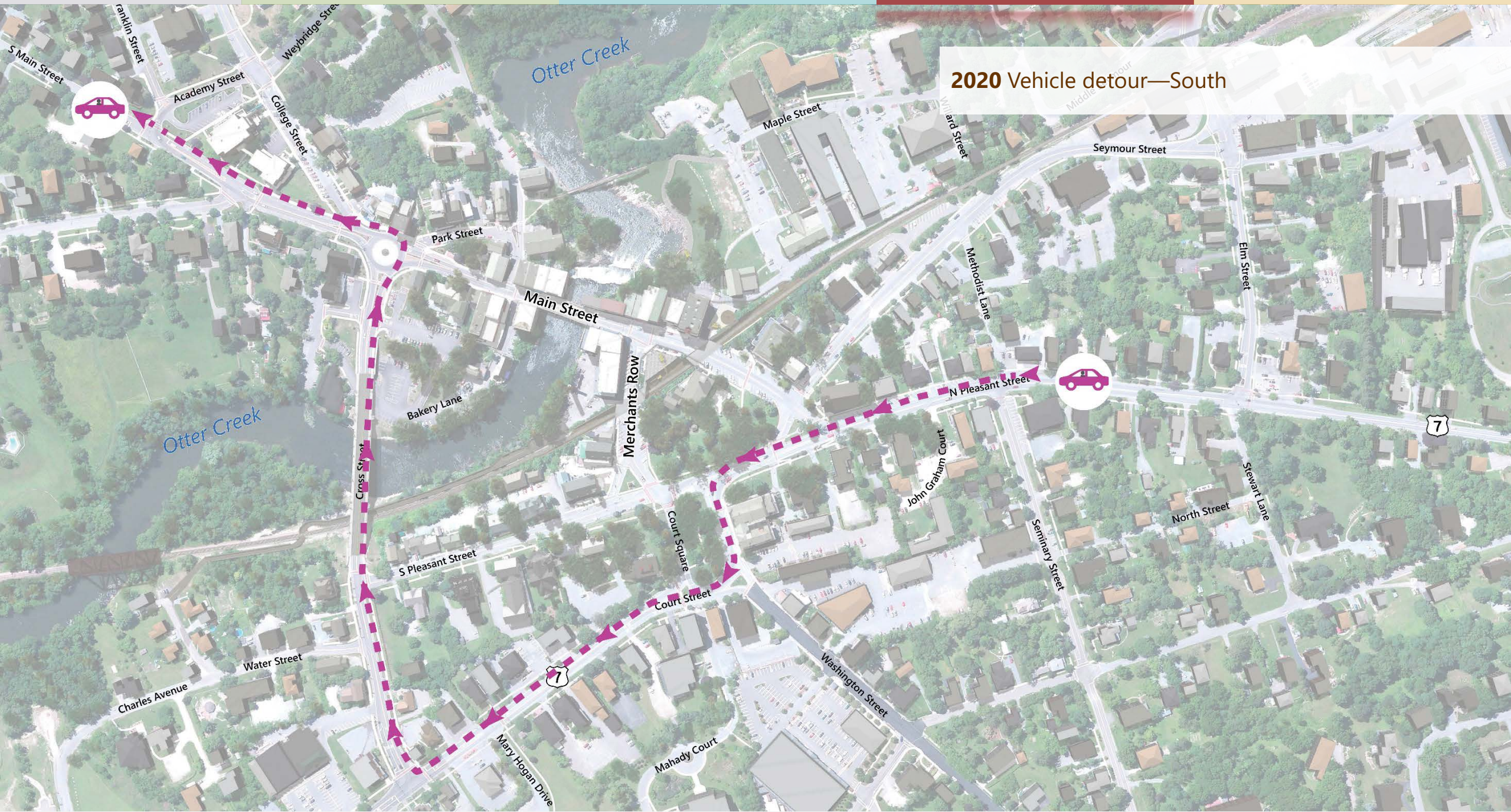
2017

2018

2019

2020

2021



2020 Vehicle detour—South

2017

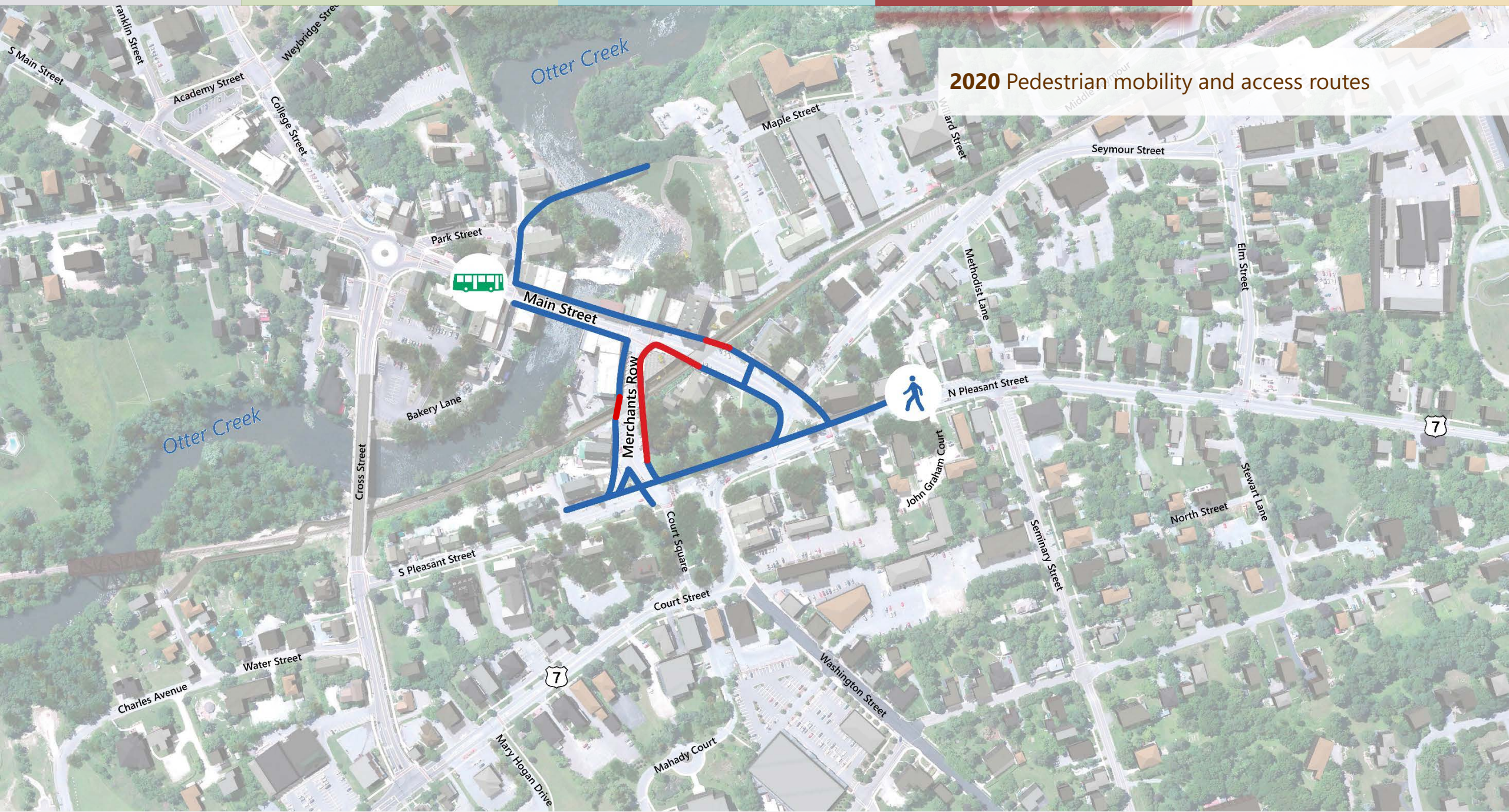
2018

2019

2020

2021

2020 Pedestrian mobility and access routes



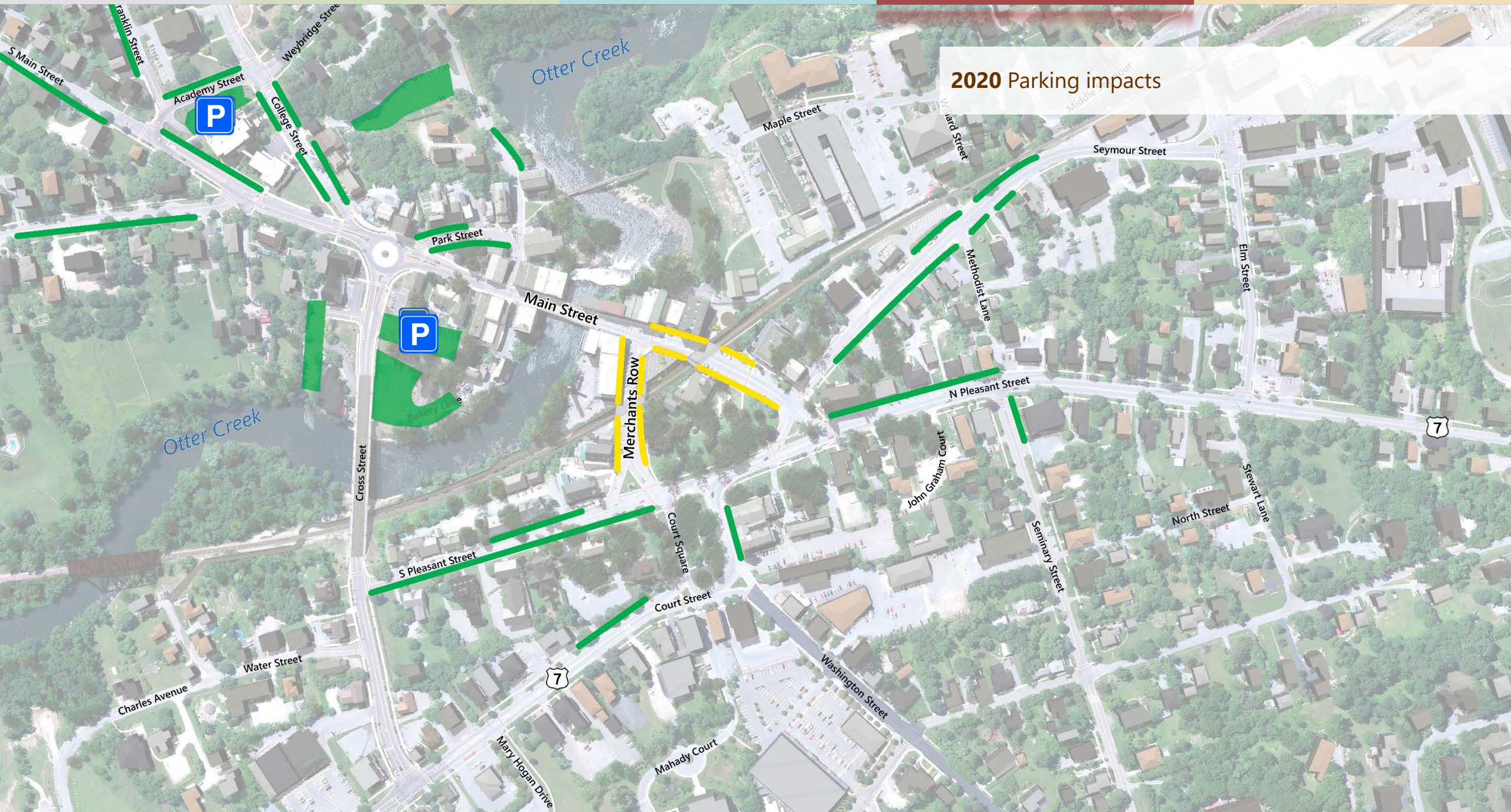
2017

2018

2019

2020

2021



2020 Parking impacts

2020 Post-Closure Impacts

- Intermittent short term lane closures on Main Street and Merchant's Row to facilitate site grading and landscaping
- Triangle Park area remains closed for landscaping
- Temporary sidewalk closures for sidewalk reconstruction

2020 Challenges

- Traffic Control
 - Cross and Court intersection
 - Roundabout
 - Delivery vehicles to downtown businesses
- Construction Site Constraints
 - Limited room for storing materials onsite
 - Offsite stockpiles result in increased truck traffic

2020 Challenges

- Unpredictable Weather
 - Construction limitations during inclement weather
- Working at Night
 - Lighting and noise limitations
 - Anticipated slower construction progress

2020 Downtown Accessibility

- Pedestrian shuttle service
- Phased sidewalk construction
- Middlebury Marketing Grant
- Neighbors, Together
 - Pop-Up Event Space “Bundle”
 - Special Events
 - Shop Local Campaign
 - Midd Money
 - Visitors Center



2020 Downtown Community Events

- Vermont Walk/Bike Summit – May 8
- Middlebury New Filmmakers Festival – August 27 – August 30
- Be on the lookout for Neighbors, Together events



2020 Questions and Thoughts

Selectboard and Public Input Encouraged!



2021 Construction Activity

- Printers Alley Reconstruction
- Final Paving
- Landscaping
- Project Cleanup and Completion!

2021 Project Impacts

- Intermittent short term lane closures on Main Street and Merchant's Row to facilitate site grading and landscaping
- Lane closures for final paving
- Triangle Park area closed for landscaping
- Working hours
 - Anticipated 7:00am–5:00pm



KEY DESIGN CONSIDERATIONS:

- Flexibility of use as a public gathering space / plaza
- Connectivity of both parks to the Riverfront Park and Marble Works
- Connectivity to the existing Green
- Inclusion of the historic fountain
- Integration of the Church Memorial Garden concept

VILLAGE GREEN - Triangle Park

- Park is graded as a level surface to provide maximum flexibility of use
- Hard surface plaza and large canopy street trees define the streetscape edge of the park, providing spatial enclosure and human scale. The scale of the hardscape plaza will be comfortable when lightly populated while accommodating larger gatherings
- Historic large ashlar stone blocks provide seating
- Historic fountain as focal point in hardscape plaza
- Large level lawn areas for casual seating and flexibility of use
- Ashlar seating blocks and small flowering trees provide a sense of privacy and enclosure for the Church Memorial Garden area.
- The smaller flowering trees allow views of the stone architecture of St Stephens Church to be the dominant visual element enclosing the park
- Connectivity to the existing Green is provided

LAZARUS PARK - Printers Alley

- Simple arcing path provides direct connection to Riverside Park and Marble Works area. ADA ramp access provided.
- Circular hardscape seating area located at the bottom of the slope and is defined by the ashlar block seating wall
- Large canopy street trees and masses of plant material provide a backdrop for seating area
- Visibility into the Park space is provided from Printers Alley

Middlebury Parks Recommended Alternative

2017

2018

2019

2020

2021

2021 Project completion



2017

2018

2019

2020

2021

2021 Project completion



2017

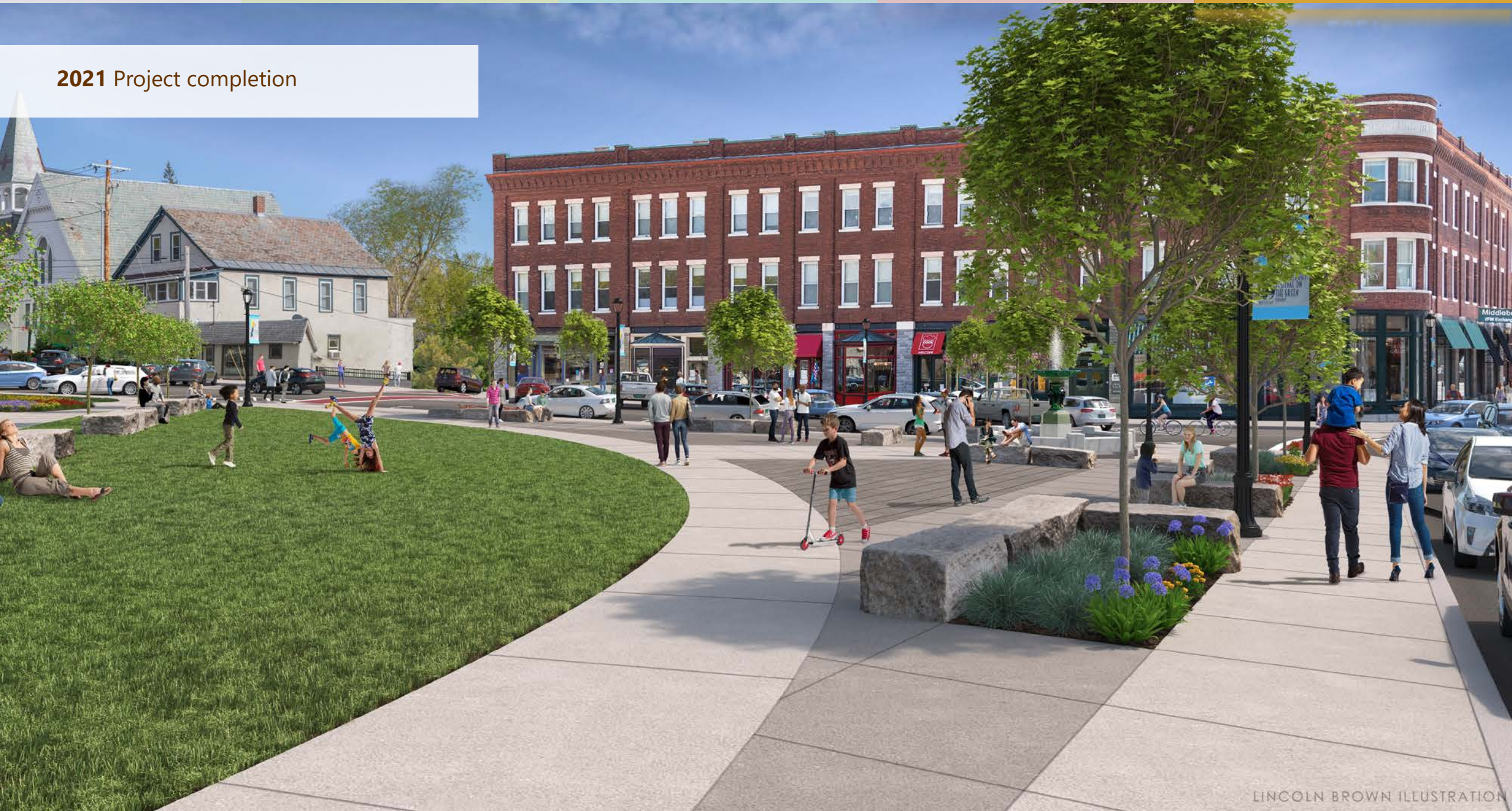
2018

2019

2020

2021

2021 Project completion



2017

2018

2019

2020

2021

2021 Project completion



2017

2018

2019

2020

2021

2021 Project completion



LINCOLN BROWN ILLUSTRATION



2021 Questions and Thoughts

Selectboard and Public Input Encouraged!





vtrans.vermont.gov/projects/middlebury

http://vtrans.vermont.gov/projects/middlebury



VERMONT OFFICIAL STATE WEBSITE



STATE OF VERMONT

Agency of Transportation

About the Project

Schedule

Documents Library

FAQs

Contact Us



ABOUT THE PROJECT

The Vermont Agency of Transportation (VTrans), in collaboration with the Town of Middlebury, is undertaking a project to replace two nearly 100 year old rail bridges in the center of Middlebury with a tunnel by the summer of 2020. The two bridges are about 300 feet apart, with one located on Main Street/VT 30 and the other on Merchants Row.

Project Status Update

November:

Public Meeting: November 17th at Town Hall Theater, Middlebury

December:

Tree clearing along rail line scheduled.





Project Questions

Selectboard and Public Input Encouraged!

