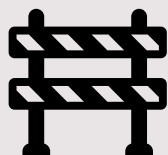




Exit 16 DDI

Diverging Diamond Interchange



CONSTRUCTION

May 27, 2025

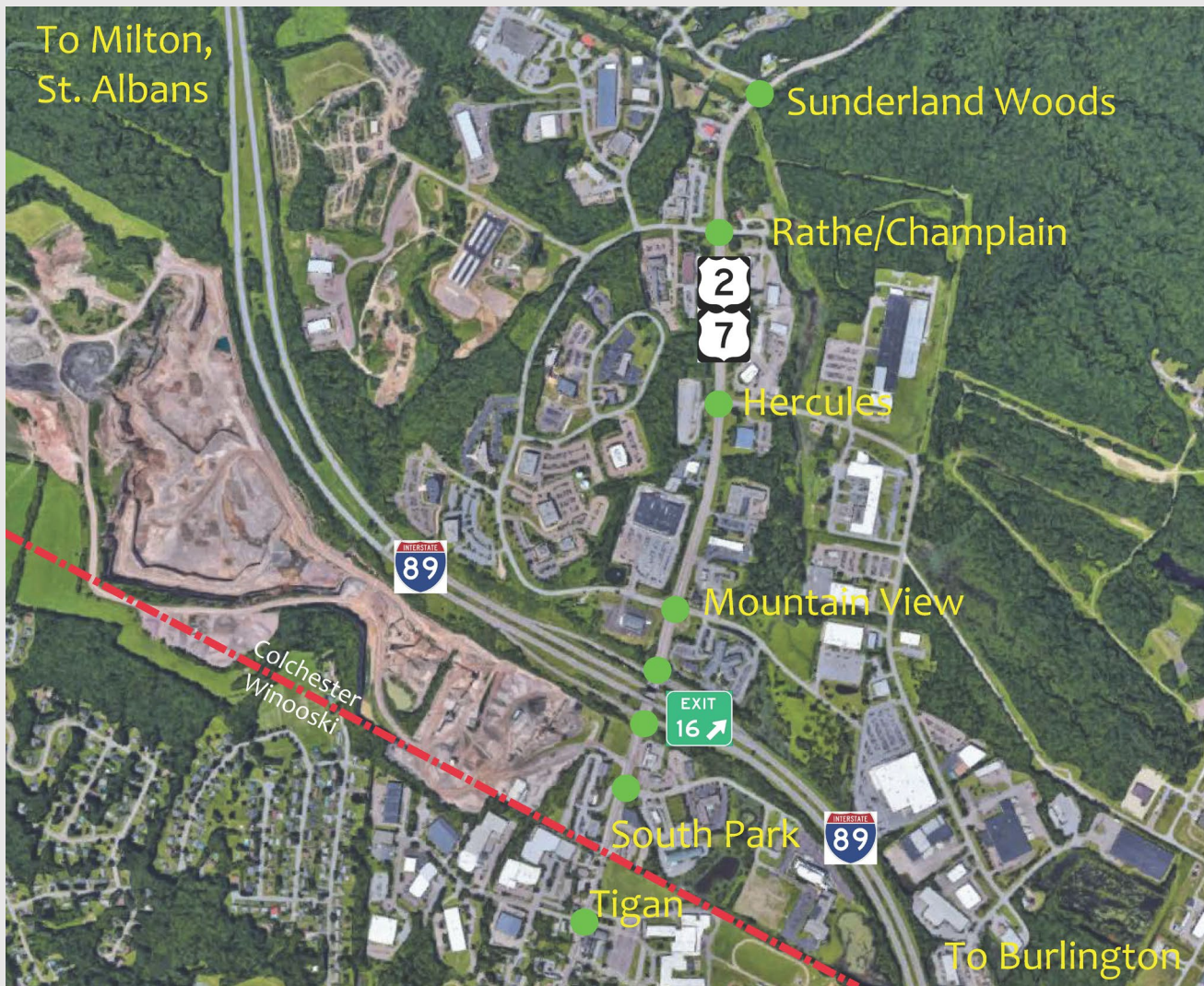
House Transportation
Committee



Today's Overview

- Project Scope
- Project History
- Project Status/Schedule
- Project Construction
- Project Challenges & Obstacles





Colchester HES NH 5600(14) Scope

US Route 2/7 Corridor – 1.05 miles

Including:

- South Park Drive/Highpoint Ctr.
- I-89 Exit 16
- Mountain View/Lwr. Mtn. View Drives
- Hercules Drive
- Rathe Road/Champlain Drive
- Sunderland Woods Road
- Tigan Street (Winooski):
 - Traffic Signal Only
 - Part of the Main St. Revitalization Project (Ongoing)

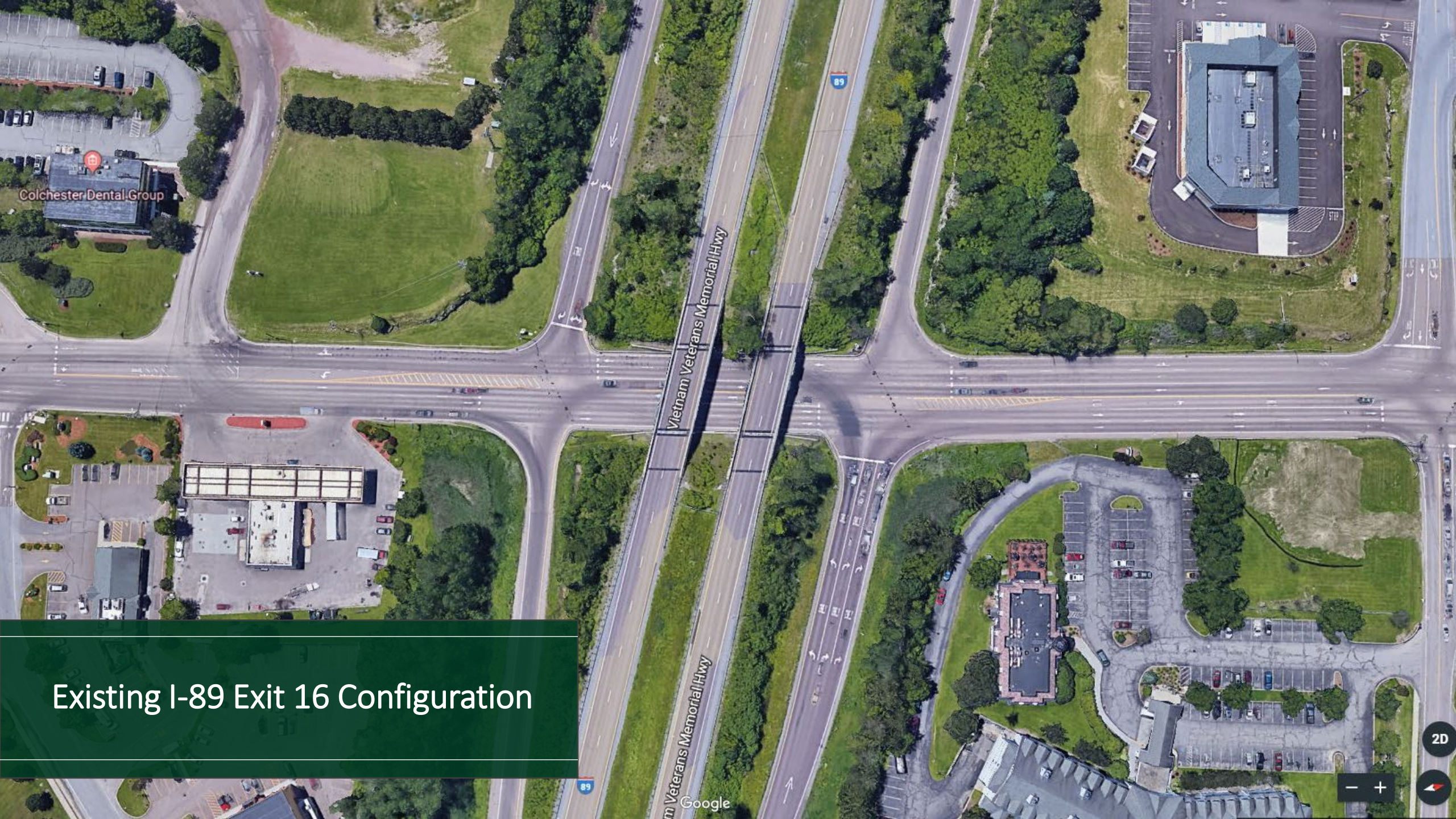




Colchester HES NH 5600(14) Scope

- Stormwater Treatment Infrastructure
 - 3 Ponds
 - 8 Grass Channels
- Roadway Banking Corrections
- New:
 - Signs
 - Pavement Markings
 - Traffic Signals
 - Roadway Drainage
- Reconfigured I-89 Exit 16 Interchange → **DDI**





Existing I-89 Exit 16 Configuration

COLCHESTER HES NH 5600(14) I-89 EXIT 16 DIVERGING DIAMOND



I-89 Exit 16 Re-configuration



I-89 Exit 16 Diverging Diamond Interchange

DDI Benefits

In over **125** Diverging Diamond Interchanges in the US, states have experienced:

- Over **37%** reduction in crashes, injurious/fatal by **54%**
- Over **50%** increase in vehicular throughput

How a DDI performs efficiently:

- Eliminates signalized left turn movements for vehicles.
- Left turning movements Yield Condition allows movements during conflicting traffic phases.

Testament: **22** DDIs currently under construction; another **66** planned!

DDIs in the Wintertime

- Of the 120+ DDIs active in the US & Canada, 68 are built in areas where snow is expected annually (~60%).
- Snow plowing happens normally.
- For some plow routes, use of the U-Turn on the Interstate will no longer be necessary.
- VTrans has discussed winter maintenance with Utah officials and concurred that the states share similar roadway clearing techniques.

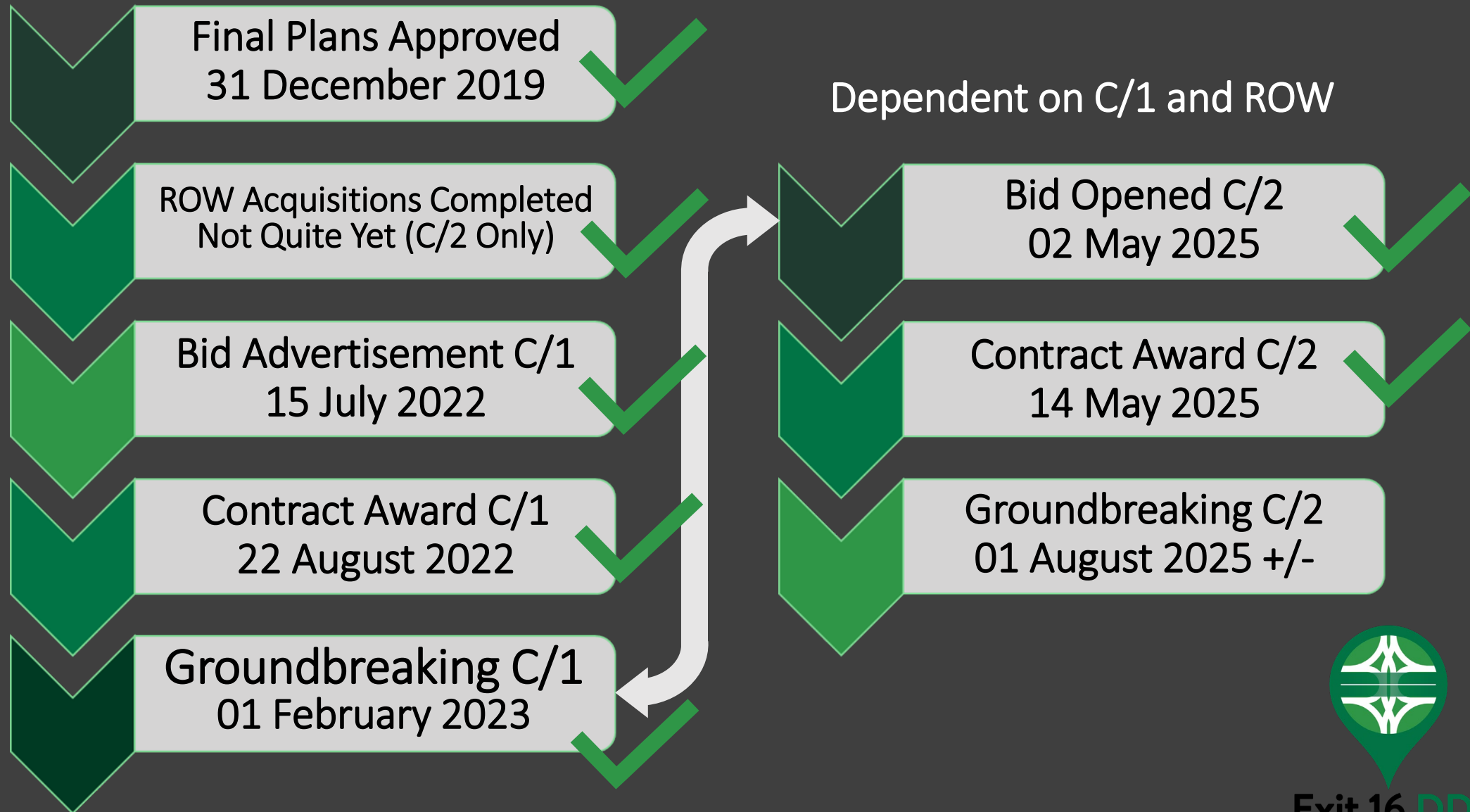




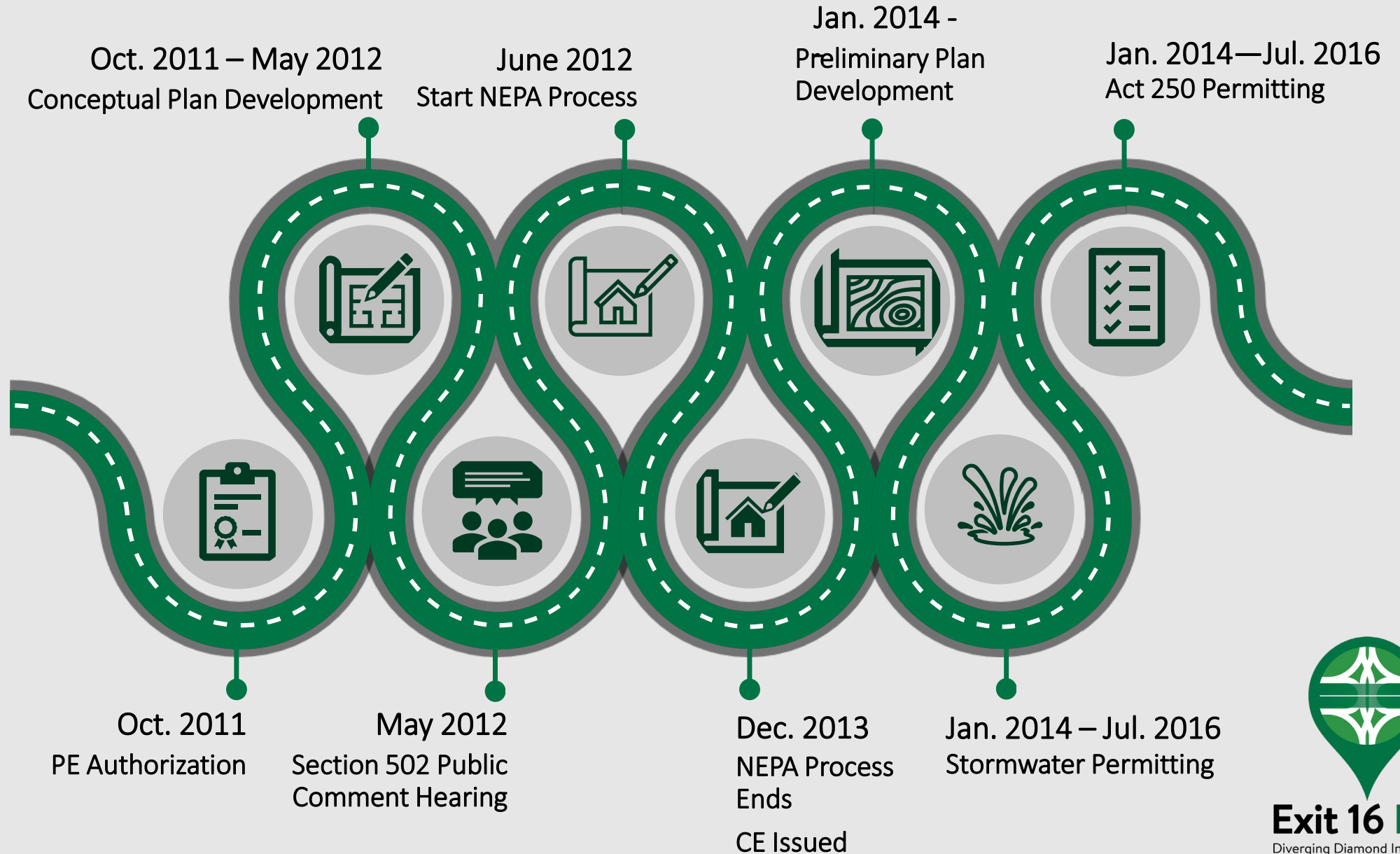
Robust Pavement Markings



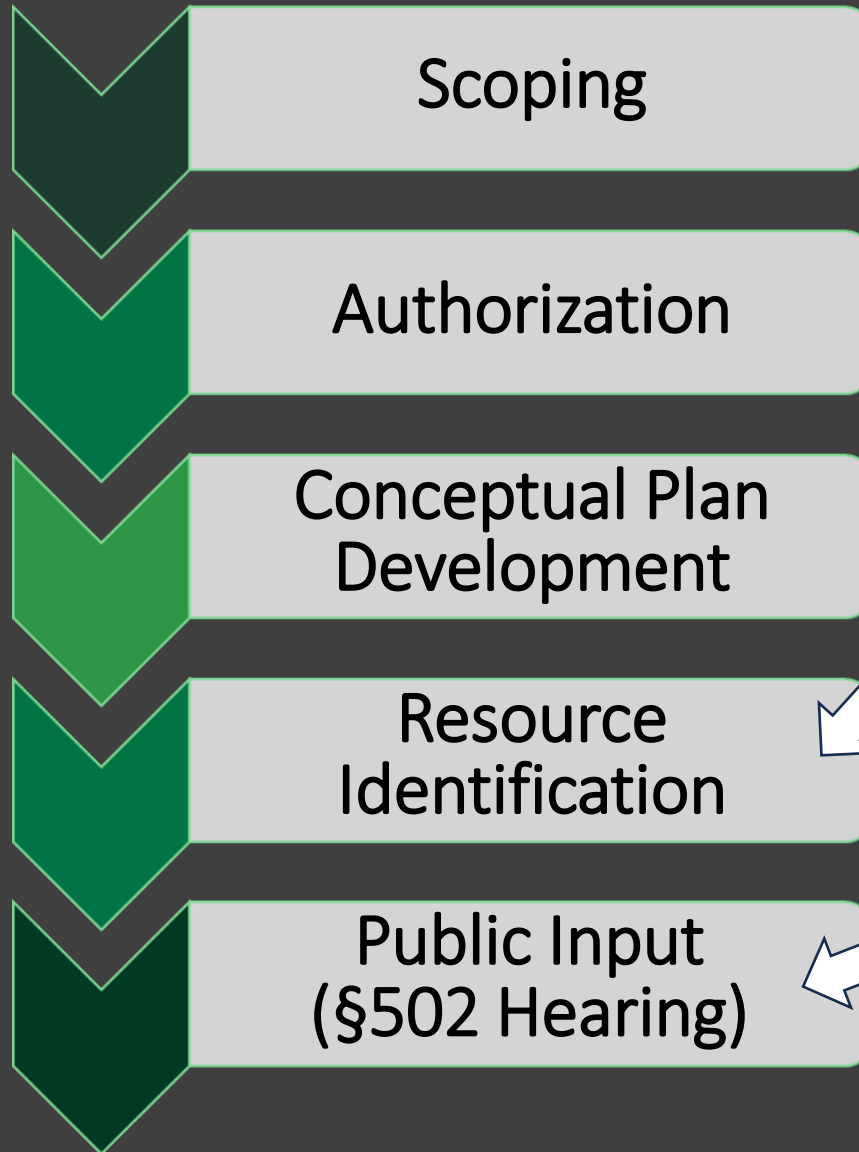
Project Status



Project History



Project Initiation



Signs of Obstacles Ahead:

Act 250 Requirements:

- Amend adjacent permits or...
- Get our own permit

Lawyers for Gas Stations:
Inquiring about NEPA



Project Design



Obstacles in Permitting:

- Stormwater Permitting
 - Future Chloride Impairment
 - TS4 (Transportation Separate Storm Sewer System) (DM&F)
- Act 250
 - Jurisdictional Area Concerns (+/- 10 Ac.)
 - Costco's Act 250 Permit:
 - Condition #29 requires improvements that are part of this project.
- NEPA
 - "Indirect Effects and Cumulative Impacts"

Obstacles in ROW:

Necessary acquisitions of lands & easements



Act 250: External / Regional Pressures

29. Permittees shall implement the following traffic mitigation measures:

- a. Permittees will construct or fund the construction of dual westbound left-turn lanes and an exclusive northbound right-turn lane at US Route 7/Lower Mountain View Drive, and a second right-turn lane on the eastbound approach of Upper Mountain View Drive. The storage length for the westbound through/right-turn lane shall be increased from 170' to 200'. Construction of the Lower Mountain View Drive and Upper Mountain View Drive improvements shall be made prior to occupancy of the warehouse expansion and utilization of the gas fueling stations unless the Exit 16 corridor improvements are under construction.
- b. The Permittees shall pay a proportional fair-share monetary contribution towards the preferred mitigation and improvement strategy for the US Route 7/I-89 interchange (also referred to as the Exit 16 corridor). The fair share calculation has been determined to be 11.4% of the cost of the improvements. The fair share cost will be based on the current Exit 16 corridor improvement project the cost of which has been estimated at \$5,100,000. Costs for the Lower Mountain View Drive and Upper Mountain View Drive improvements are part of the fair share monetary contribution. Any monies spent on the Lower Mountain View Drive and Upper Mountain View Drive improvements above the calculated fair share monetary contribution will be refunded to the Permittees by the Vermont Agency of Transportation after construction of the Exit 16 corridor improvements.
- c. The fair share monetary contribution shall be paid to an account with the Vermont Agency of Transportation before the commencement of construction of the warehouse expansion or the fuel pump station unless the Permittee is constructing the Lower Mountain View Drive and Upper Mountain View Drive improvements.

Land Use Permit #4C0288-19C
Page 7 of 8

- d. The Permittees can open the warehouse expansion or gas fuel pumps only after the Vermont Agency of Transportation has submitted a complete Act 250 application for construction of the Double Crossover Diamond improvements for the U.S. Route 2/7 corridor.
- e. If the Vermont Agency of Transportation has not commenced construction and made substantial progress toward completion of the Double Crossover Diamond improvements for the U.S. Route 2/7 corridor and the Permittees wish to open either the warehouse expansion or gas fuel pumps, then the Permittees shall pay for the evaluation and implementation of modified signal timings along the U.S. Route 2/7 corridor.

Act 250 Permit #4C0288-19C
Costco Warehouse Expansion
& Gas Pumps Installation



Exit 16 DDI
Diverging Diamond Interchange

Act 250: Additional Obstacles

1. “Involved Lands”:
 1. The definition of Involved Lands was being debated by legal staff.
 2. The project was close to the 10 AC threshold. Excluded was possible staging areas.
 3. NRB recommended AOT to just get the full permit.
2. District 4 commission gives everyone Party Status up front.
 1. Party Status property owners (Gas Stations) challenged the permit on Criterion:
 1. 1 – Undue Water Pollution
 2. 1B – Waste Disposal
 3. 1E – Streams
 4. 4 – Erosion
 5. 5A – Traffic
 6. 5B – Transit
 7. 8 – Aesthetics
 8. 9A – Impact of Growth
 9. 10 – Town Plans



OSW: Obstacles

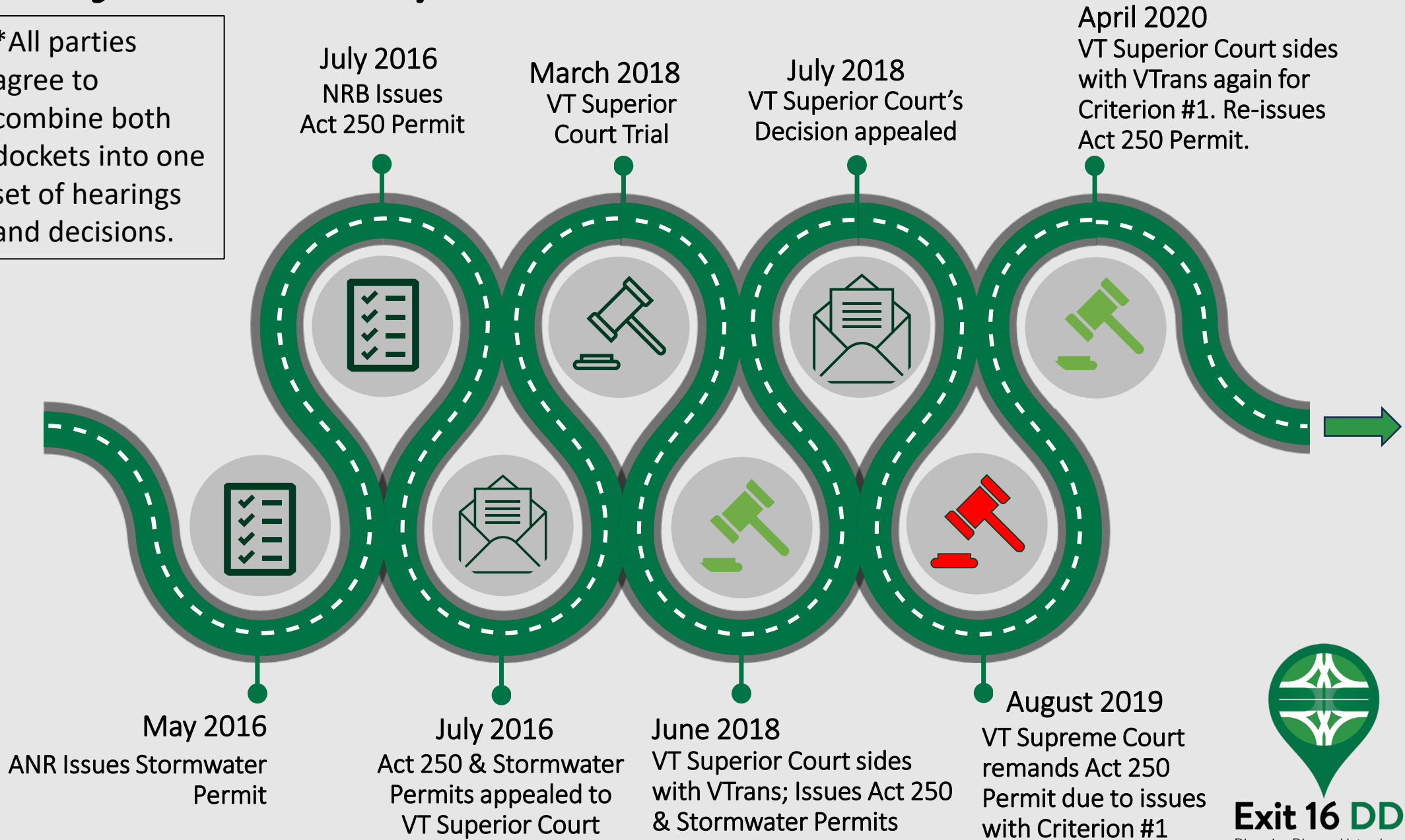
The Project's OSW Permit was challenged by project opponents (Gas Stations):

1. The project stormwater treatment practices (STPs) failed to meet Water Quality Standards of ANR's 2002 Stormwater Treatment Permit requirements **because there were other STPs available in industry that could perform better (despite not being an option to designers in the 2002 requirements).**
2. The project failed to plan for Chloride reduction/mitigation for the adjacent Sunnyside Brook, which at the time had only been on the 303(d) watershed WATCH list. **Sunnyside Brook was added to the 303 (d) impaired list AFTER OSW was issued to the project, AND no TMDL for Chloride for the watershed had been established.**
3. The project failed to plan for Phosphorus reduction/mitigation for the Lake Champlain Watershed. **These discharges are covered under MS4 and the future TS4 permitting.**

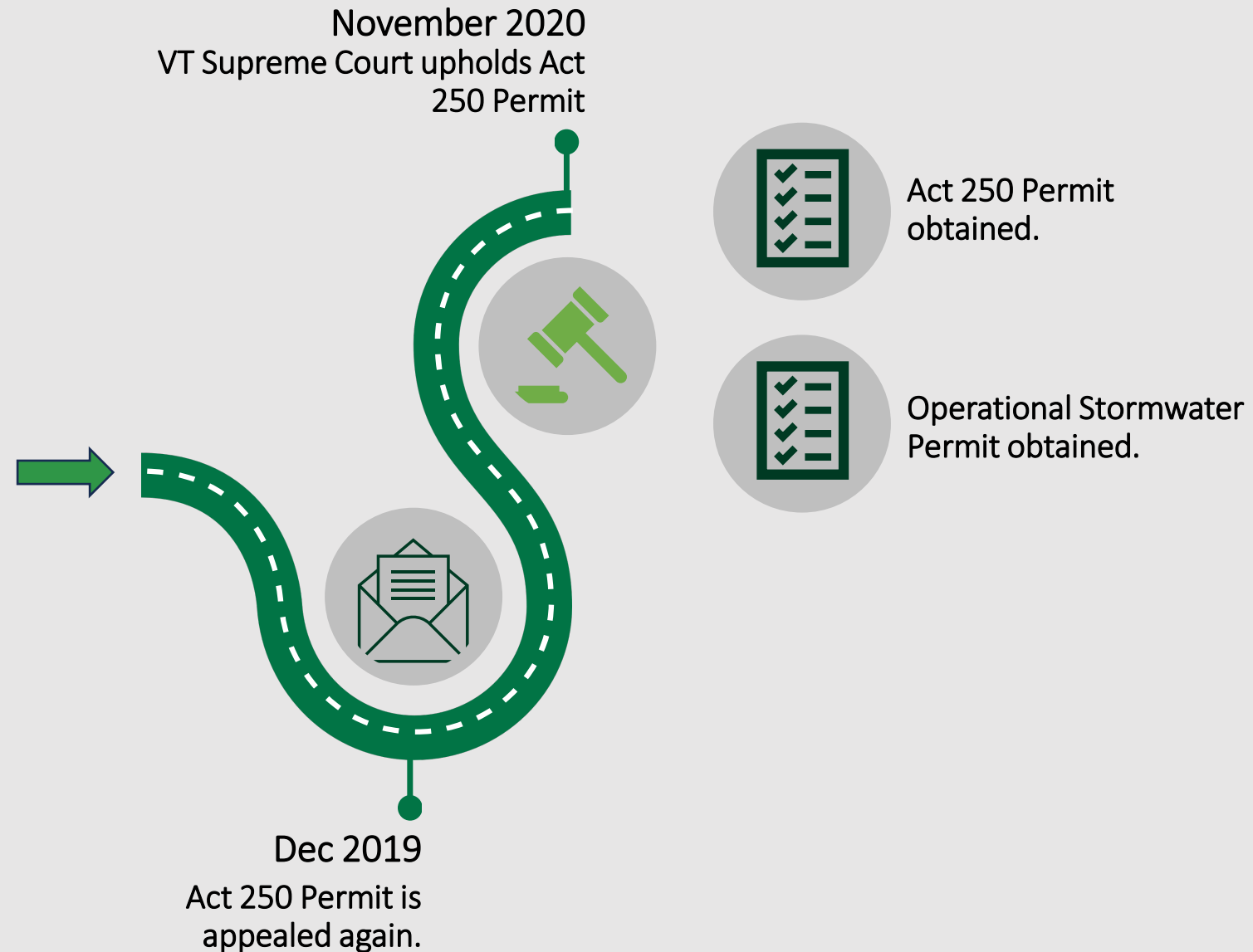


Project History: Stormwater & Act 250

*All parties agree to combine both dockets into one set of hearings and decisions.



Project History: Stormwater & Act 250 (cont'd)



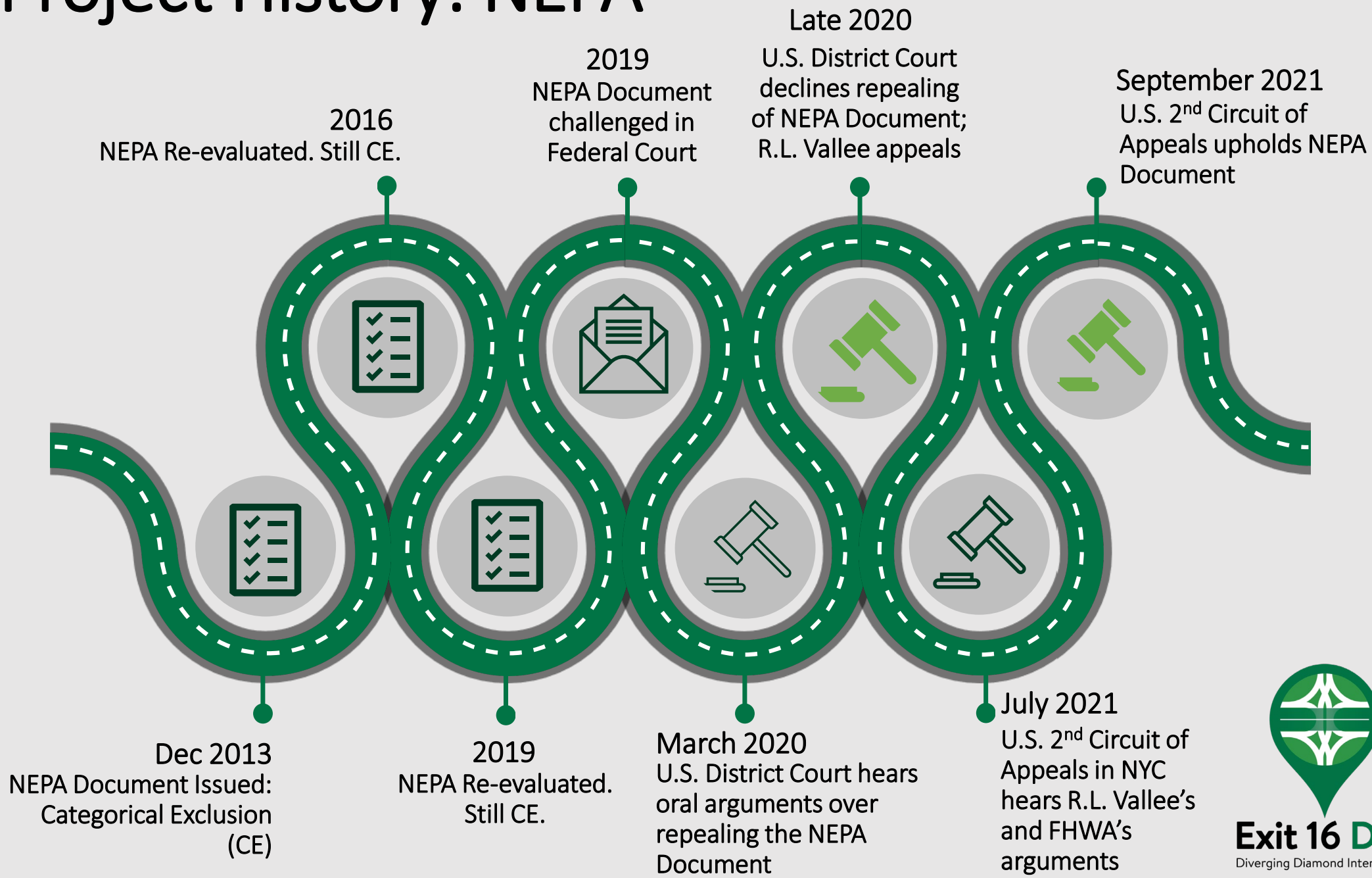
NEPA: Obstacles

The Project's NEPA Document was challenged by project opponents (Gas Stations):

1. The Project's NEPA document as a Categorical Exclusion (CE) should be revoked and an Environmental Assessment (EA) or full Environmental Impact Statement (EIS) should be required because of the project's "Indirect Effects and Cumulative Impacts". **Based on the thresholds within the CE's requirements, the Project did not meet the threshold to study in greater detail the Cumulative Effects on the Region.**



Project History: NEPA



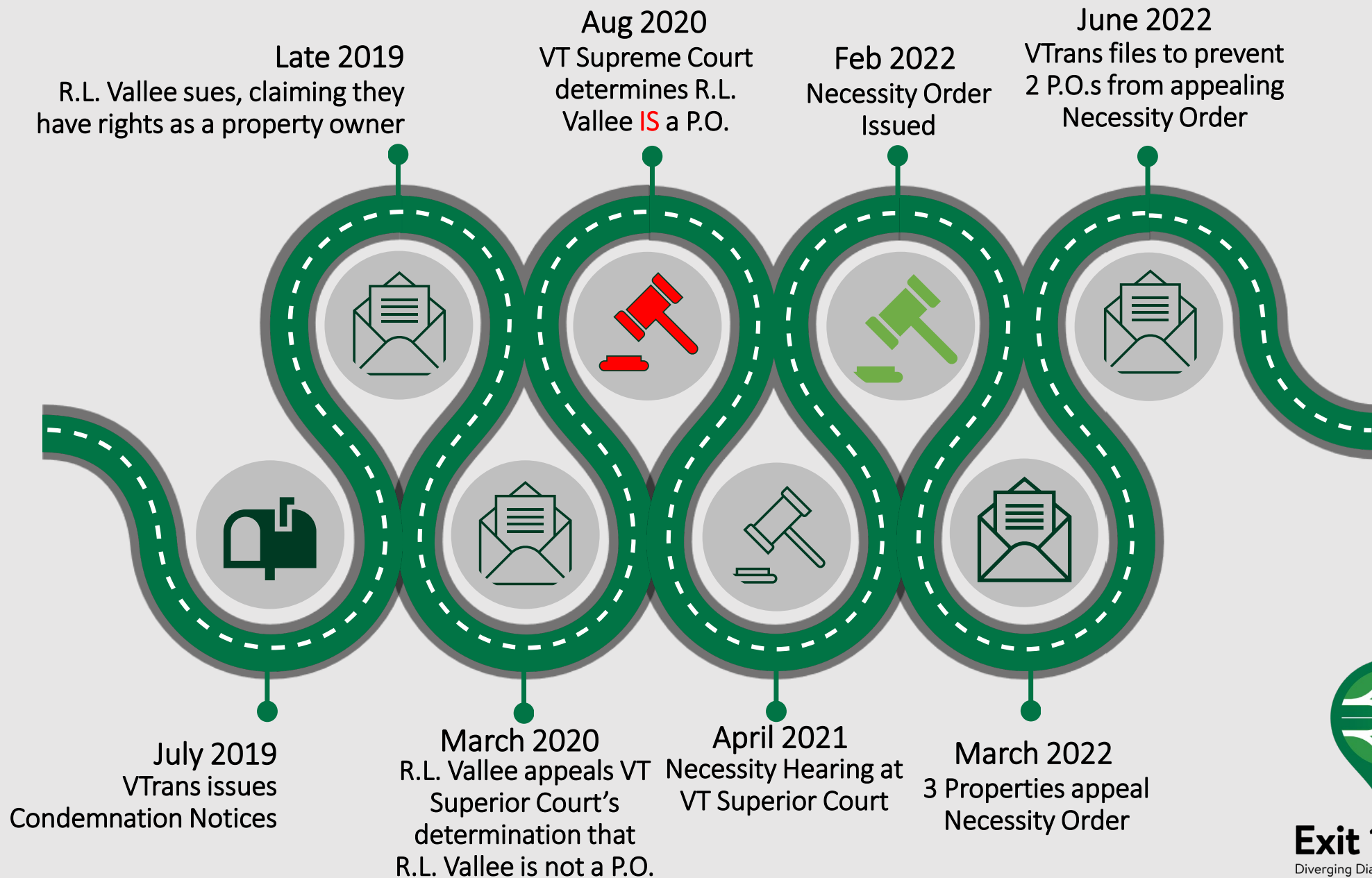
ROW: Obstacles

The Project's ROW Acquisition Process was challenged by project opponent (R.L. Vallee, Inc.):

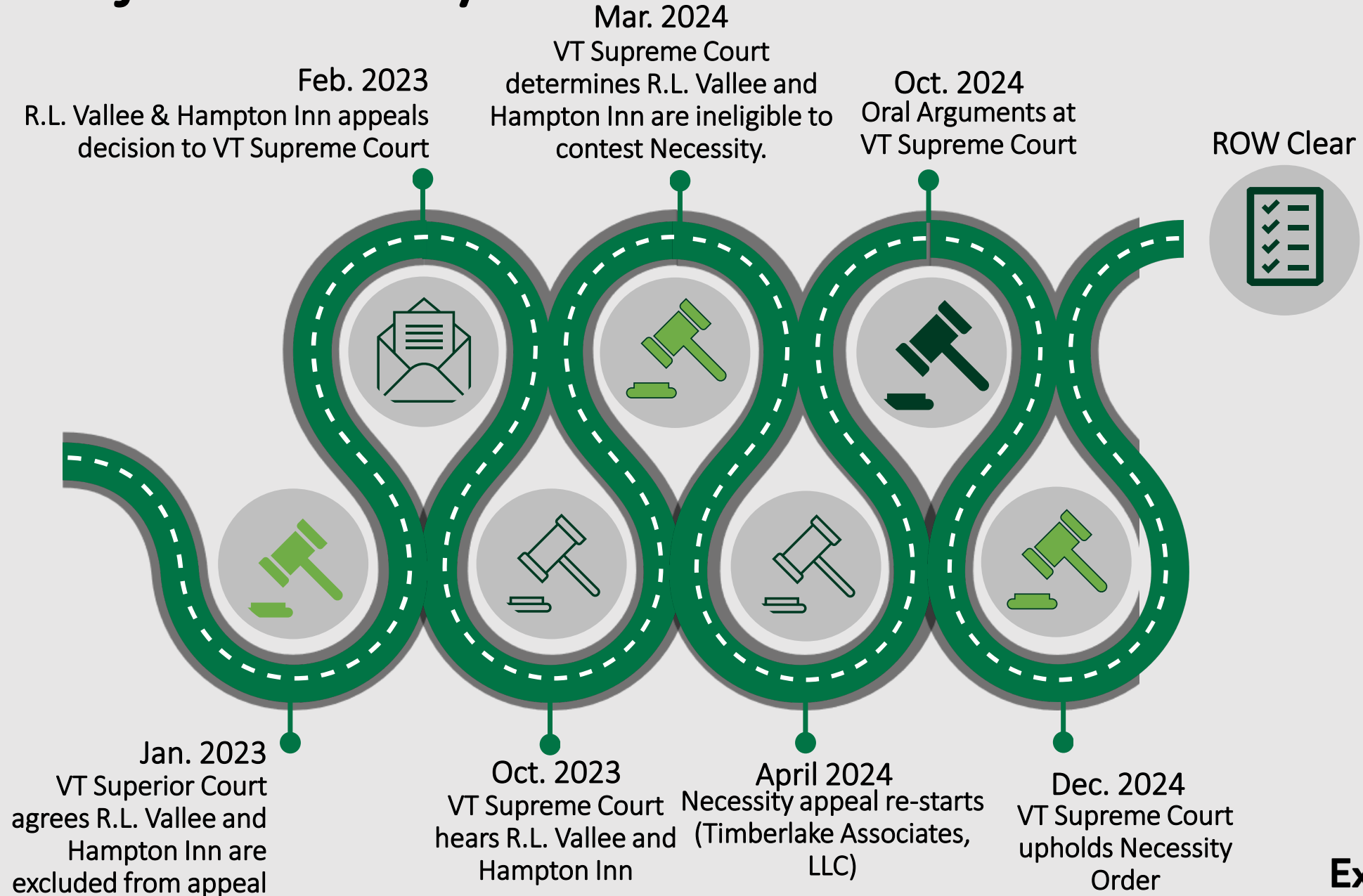
1. R.L. Vallee believed that as a Lessee of a property being condemned, not as the owner, that it should be entitled to the ability challenge a determination of Necessity, as determined by the Secretary and the Vermont Superior Court AND receive compensation for the impact created by the Project.
 - The language in Section 502 is vague on the differentiation for compensable parties and had never been challenged before.
2. VT Supreme Court sides with R.L. Vallee that Lessees are eligible to challenge and receive compensation.
3. Other general delays due to legal briefings, real estate appraisals, negotiations, mediation, and appeals.



Project History: ROW



Project History: ROW



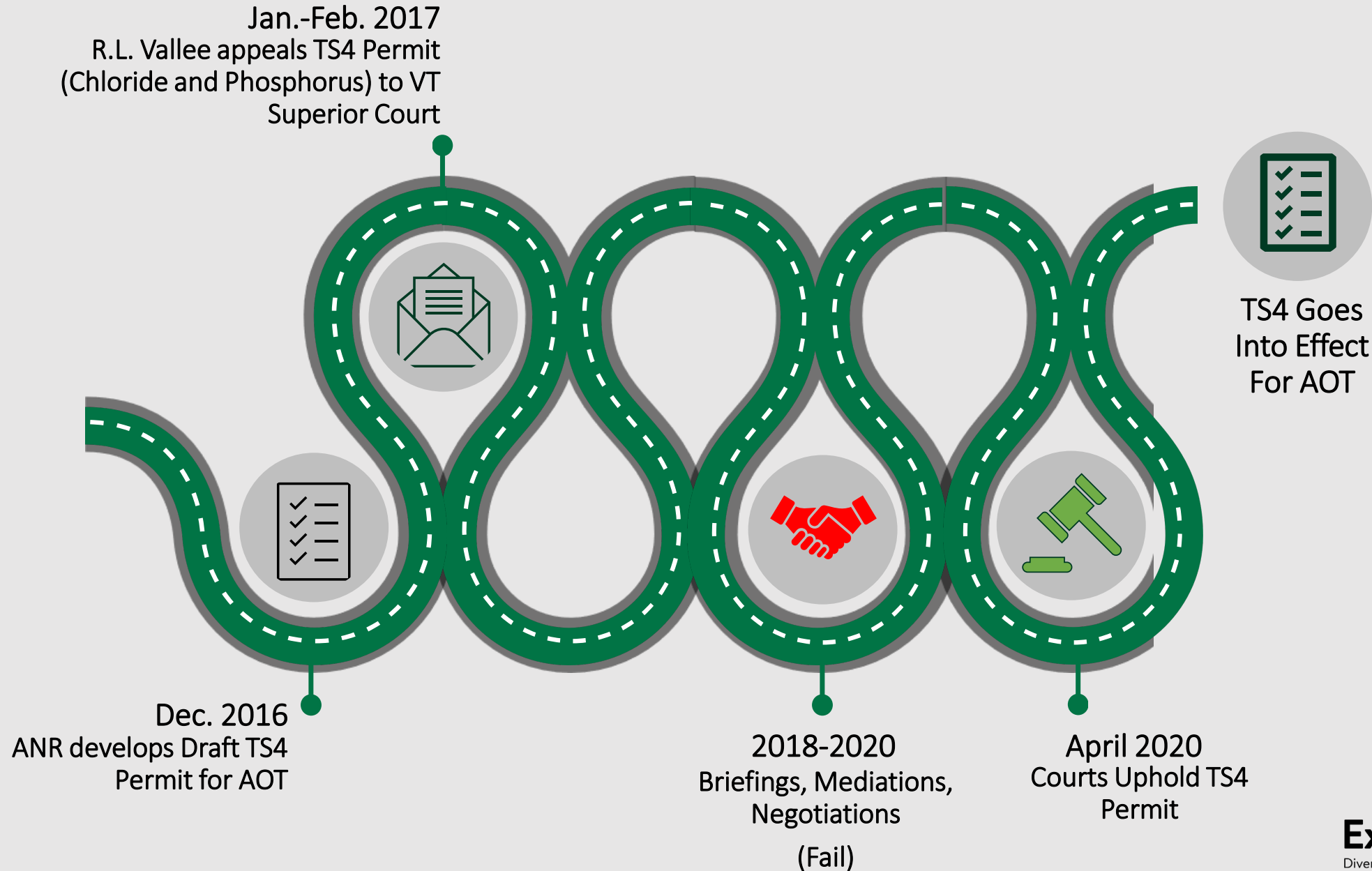
TS4: Obstacles

The Agency's TS4 Permit was challenged by project opponent (R.L. Vallee, Inc.):

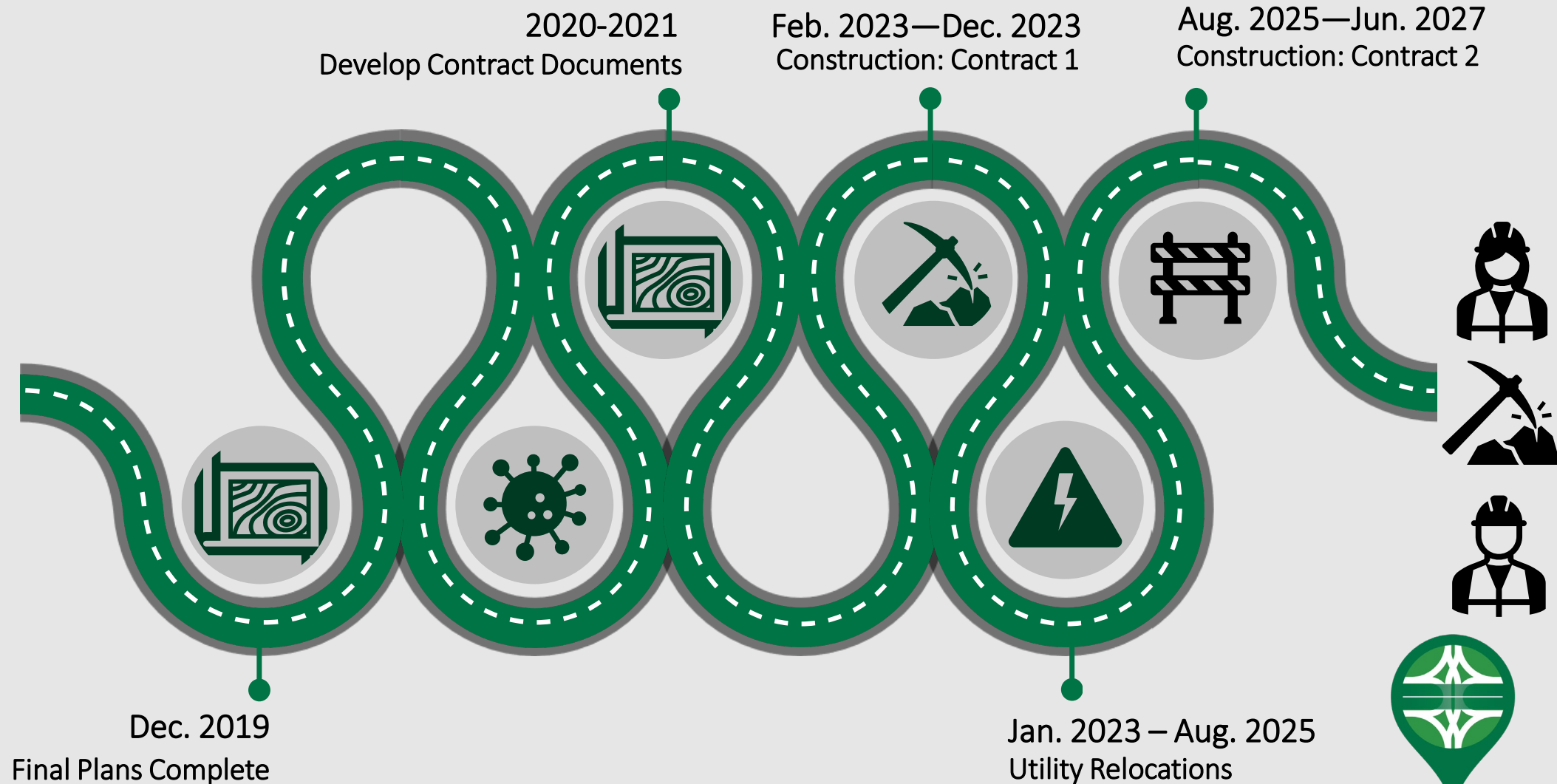
- Concurrently with the Exit 16 DDI, ANR required AOT to obtain a TS4 permit for stormwater treatment for all of its previously unpermitted surfaces in Vermont.
- Particularly focused on the Chloride impairment of Sunnyside Brook in Colchester and the Phosphorus impacts on Lake Champlain.
- Negotiations and mediation were held prior to the TS4 being re-issued by ANR.



Project History: TS4



Project History



Exit 16 DDI
Diverging Diamond Interchange

Contract 1

2023

- Utility Relocation
 - Buried Waterline
 - Buried Telecommunication Duct
 - Buried Gas Lines
- Ledge Removal
- Retaining Walls



Exit 16 DDI
Diverging Diamond Interchange

Project Construction

Contract 1



S.D. Ireland Brothers, Inc.
General Contractor/Site Work

Budget

Anticipated Costs:

Low Bid + CE + Contingency = **\$9,699,223**

Total Spent = **\$10,615,172**

Schedule

Begin Construction: **01 February 2023**
Substantial Completion: **27 November 2023**

Contract 2

Night Work = 7:00 PM – 6:00 AM



All traffic lanes must be open by 6:00 AM

2025-2027 (Q1+Q2)

- Roadway Work, including DDI; New signals, signs, lighting, sidewalks, pavement markings, stormwater treatment, etc.
- Businesses will be open; Drives and Accesses will be open
 - If a drive needs to be temporarily closed short-term, an alternate ingress/egress will be provided
- Daytime work will be allowed between and after the AM and PM Peak Traffic Windows. ALL work requiring the need to close more than one lane in each direction will be forced into Nighttime Work (see above).

Contract 2



S.D. Ireland Brothers, Inc.
General Contractor/Site Work

Budget

Anticipated Costs:

Low Bid + CE + Contingency = **\$25,845,100**

Total Spent = **\$ TBD**

Schedule

Begin Construction: **01 August 2025 (?)**

Contract Completion: **30 June 2027**

Public Outreach - Organization



Public Information Consultant
Megan Savage, Communications and Public Involvement Manager
Annabelle Dally, Senior Communications and Public Involvement Consultant



Stakeholders

Who are stakeholders?
Users. Residents. Businesses



CITY OF
WINOOSKI
VERMONT

Municipalities

Public Outreach - Scope



Information

- Project Scope
- Project Timeline & Schedule
- Construction Activities
- Traffic Updates
- Incident Management

Education

- Animations
- Videos
- Narratives
- Driving Simulator

Public Meetings, Event Booths, Website, Phone Hotline

Public Outreach

Multilingual Communications

- Arabic
- Bosnian/Serbian/Croatian
- Burmese
- French
- Kirundi
- Nepali
- Somali (Mai Mai)
- Spanish
- Swahili
- Pashto – **New!**

The Exit 16 DDI team continues to collaborate with City of Winooski and the Winooski School District to identify, manage, and coordinate communications with residents/users where English is not their primary language or written form of communication.



Exit 16 DDI
Diverging Diamond Interchange

Construction on the Exit 16 DDI Project is anticipated to begin in fall 2022 and continue through spring 2025. For additional information on the project, please visit the project website.

للحصول على معلومات إضافية حول المشروع، يرجى زيارة الموقع الإلكتروني للمشروع.

စီမံကိန်းများ ထပ်ဆင့်ချက်အလက်တွေအတွက် ကျေးဇူးပြု၍ ပရောဂျက် ဝက်ဘ်ဆိုက်ကို ဝင်ကြည့်ပါ။

Za dodatne informacije o projektu, posjetite web stranicu projekta.

Pour de plus amples informations sur le projet, veuillez consulter le site web du projet.

Para obtener más información sobre el proyecto, visite el sitio web del mismo.

परियोजनाको बारेमा थप जानकारीको लागि, कृपया परियोजनाको वेबसाइटमा जानुहोस्।

د پروژې په اړه د اضافي معلوماتو لپاره، مهرباني وکړئ د پروژې ویب پاڼه وگورئ.

Wixii macluumaad dheeraad ah oo ku saabsan mashruuca, fadlan booqo website-ka mashruuca.

有关该项目的其他信息，请访问该项目网站。

Kwa maelezo ya ziada kuhusu mradi huo, tafadhali tembelea tovuti ya mradi.

Để biết thêm thông tin về dự án, vui lòng truy cập trang web của dự án.

العربية Español Soomaaliga

မြန်မာ Kirundi 中文(简体)

Bosanski नेपाली Kiswahili

Français پښت Tiếng Việt

Vermont's First Diverging Diamond Interchange

Watch Educational Video

The Vermont Agency of Transportation (VTTrans) is improving the roadway

www.Exit16DDI.vtransprojects.vermont.gov
info@Exit16DDI.vtransprojects.vermont.gov
24-Hour Project Hotline: 1-802-595-4399

VERMONT
AGENCY OF TRANSPORTATION



Visit the project website:

www.Exit16DDI.VTransProjects.Vermont.gov



Call Our 24-Hour Project Hotline:

802-595-4399



Email Us:

info@Exit16DDI.VTransProjects.Vermont.gov