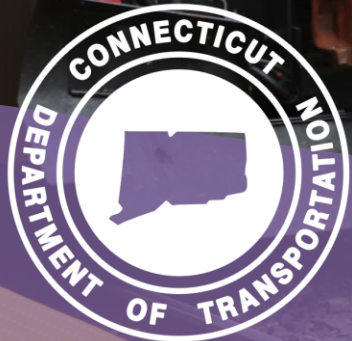


Eastern CT Corridor Rail and Transit Feasibility Study



Welcome

**Public Information Meeting
September 2023**



Introductions



Eastern CT Corridor Rail and Transit Feasibility Study (ECRTS)



Title VI: Your Civil Rights



- No Person shall, on the basis of race, color or national origin, be excluded from participation or subject to discrimination in the development of this project.
- Title VI Rights:
<https://portal.ct.gov/DOT/Business/Office-of-Equity/Title-VI-Page>
- Voluntary Post-Meeting Survey: <https://portal.ct.gov/ctdotsurvey>
- A recording of the formal presentation will be posted to YouTube after the live event. Closed captioning, including non-English translations options, will be available on YouTube.





Connecticut Department of Transportation

Title VI Notice to the Public

- ◇ The Connecticut Department of Transportation (CTDOT) operates its programs and services without regard to race, color, and national origin in accordance with Title VI of the Civil Rights Act. Any person who believes she or he has been aggrieved by any unlawful discriminatory practice under Title VI may file a complaint with the CTDOT.
- ◇ For more information on the CTDOT's civil rights program, and the procedures to file a complaint, contact the CTDOT Title VI Coordinator at (860) 594-2169, TRS 711; Debra.Goss@ct.gov; or visit our administrative office at 2800 Berlin Turnpike, Newington, CT 06131. For more information, visit www.ct.gov/dot
- ◇ A complainant may file a complaint directly with the Federal Transit Administration by filing a complaint with the FTA Office of Civil Rights, Attention: Title VI Program Coordinator, East Building, 5th Floor-TCR, 1200 New Jersey Ave., SE, Washington, DC 20590
- ◇ A complainant may file a complaint directly with the Federal Highway Administration by filing a complaint with the FHWA Office of Civil Rights, Attention: Title VI Program Coordinator, 8th Floor E81-105, 1200 New Jersey Ave., SE, Washington, DC 20590

如需更多信息或免费语言协助，请致电 (860) 594-2109

Para información adicional, o asistencia lingüística gratuita, por favor llame al (860) 594-2109

Per informazioni aggiuntive o assistenza linguistica gratuita, chiamare il numero (860) 594-2109

Para obter mais informações, ou para auxílio gratuito em outro idioma, ligue para (860) 594-2109

Aby uzyskać dodatkowe informacje lub bezpłatną pomoc tłumacza, proszę dzwonić pod numer (860) 594-2109

Для получения подробной информации или бесплатных услуг перевода звоните по телефону (860) 594-2109

Pou jwenn plis enfòmasyon, oswa asistans ak lang gratis, ranpri rele (860) 594-2109

(860) 594-2109 لمزيد من المعلومات أو للحصول على مساعدة لغوية مجانية، يرجى الاتصال بالرقم

Si vous souhaitez en savoir plus ou bénéficier d'une assistance linguistique gratuite, merci de composer le numéro suivant (860) 594-2109

अधिक जानकारी या निःशुल्क भाषा संबंधी सहायता के लिए कृपया (860) 594-2109 पर कॉल करें।

추가 정보가 필요하거나 무료 언어 지원이 필요하시면 (860) 594-2109로 전화하십시오

Để có thêm thông tin hoặc hỗ trợ ngôn ngữ miễn phí, vui lòng gọi (860) 594-2109



Departamento de Transporte de Connecticut

Título VI Aviso al Público

- ◇ El Departamento de Transporte de Connecticut (CTDOT) se compromete a asegurar que ninguna persona sea excluida de participar en, o le sean negados los beneficios de, sus servicios de transporte basándose en la raza, color o país de origen de la persona protegida por el Título VI de la Ley de los Derechos Civiles. Si a usted le parece que ha sido objeto de discriminación en lo que corresponde al Título VI, puede presentar una queja al CTDOT.
- ◇ Para más información sobre el programa de derechos civiles del CTDOT y el proceso de presentar una queja, comuníquese con el Coordinadora del Título VI del CTDOT al teléfono (860) 594-2169, TRS 711; Debra.Goss@ct.gov. También puede visitar nuestra oficina administrativa en 2800 Berlin Turnpike, Newington, CT 06131. Para más información, visite www.ct.gov/dot.
- ◇ Un denunciante puede presentar una queja directamente ante la Federal Transit Administration si lo hace ante la FTA Office of Civil Rights, Attention: Title VI Program Coordinator, East Building, 5th Floor-TCR, 1200 New Jersey Ave., SE, Washington, DC 20590.
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- ◇ Para recibir más información o ayuda gratuita en otros idiomas, llame al (860) 594-2109.

Presentation Outline



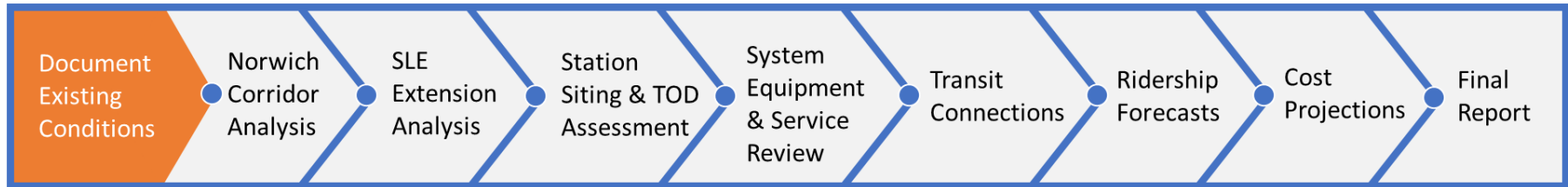
- Study Overview
- Existing Conditions & Public Transportation Market
- Preliminary Feasibility Assessment Strategies
- Corridor/Station Refinements, Service Strategies, Costs, Revenues, Ridership Projections, GHG Reductions, Economic Benefits
- Feasibility Study Conclusion
- Question and Answer Session

Study Overview and Legislative Direction



- Legislative study with direction to investigate the **feasibility of and market for**:
 - extending the Shore Line East rail service to the State of Rhode Island
 - establishing a new passenger rail service from the City of New London to the City of Norwich
 - establishing a new passenger train station in the Town of Groton and Stonington Borough
 - extending other ground transportation systems in the eastern region of the state and provide interconnectivity between such systems and rail lines
- A **feasibility study** is the first step in evaluating the viability of potential service. Then, depending on the findings, further, increasingly detailed studies and designs may follow.

Study Process



Engagement Activities

- 2 Steering Committee Meetings
- 4 Working Groups
- Public Survey & Meeting
- Interviews with Major Employers & Institutions

Study Corridor Characteristics

- Demographics
- Employment
- Major Trip Generators
- Travel Patterns
- Existing Transit

Path Forward for Additional Study Tasks

Preliminary Feasibility Assessment

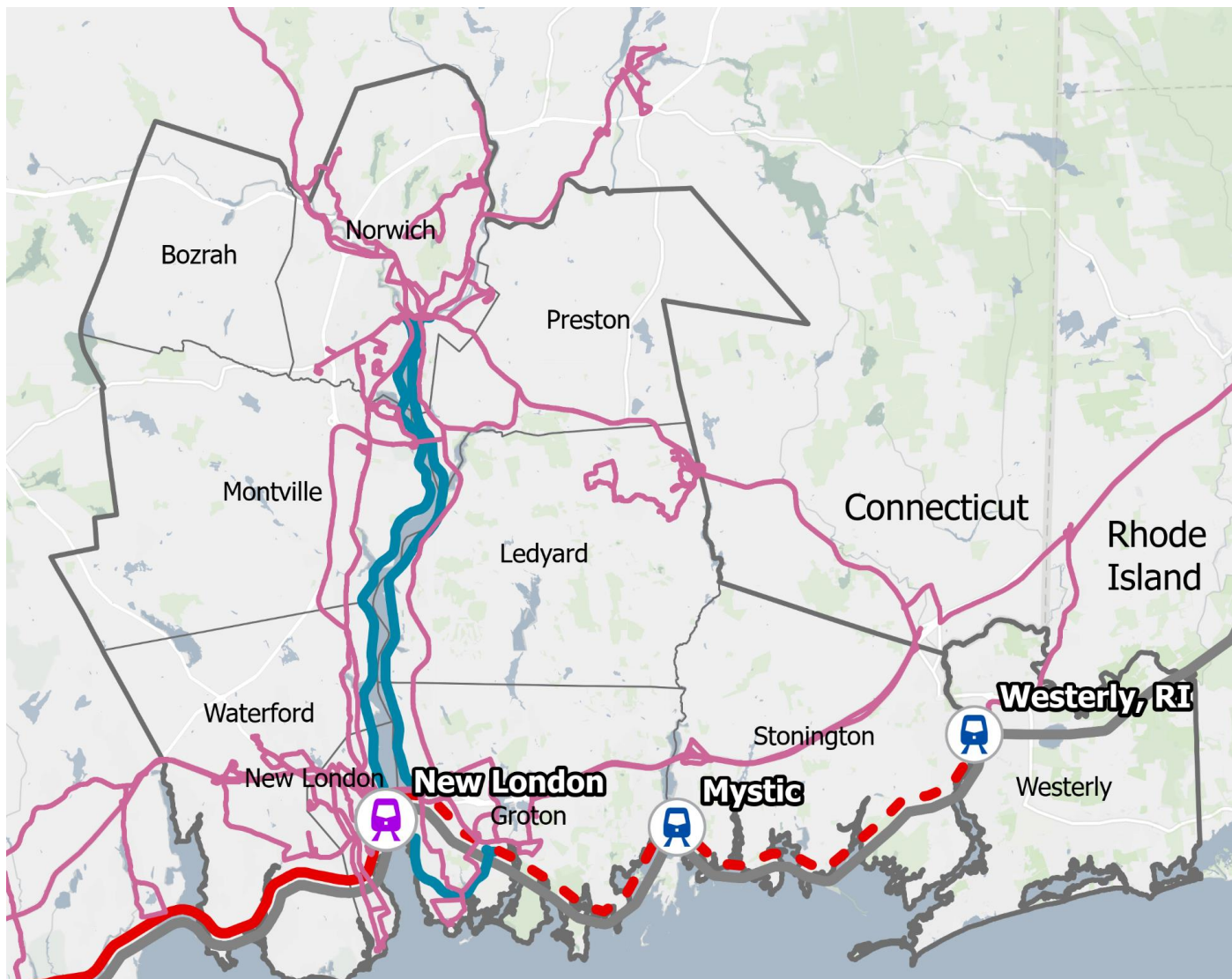
- Infrastructure
- Corridor Capacity
- Possible Station Locations
- Transit Market

Preliminary Feasibility Assessment

Refined Set of Options/Path Forward includes:

- 1 Thames River Corridor Alignment
- 1 Mainline Corridor Alignment
- 7 Stations
- Ground Transportation Solutions

Rail Corridors



Legend

-  Existing Amtrak Station Only
-  Existing Shore Line East/Amtrak Station
-  Existing Shore Line East Rail Line
-  Potential Shore Line East Extension
-  Transit Routes
-  Possible Conversion to Passenger Rail
-  Northeast Corridor (Amtrak)
-  Study Area Town

Transit Services



7

Transit Providers Operate in the Area

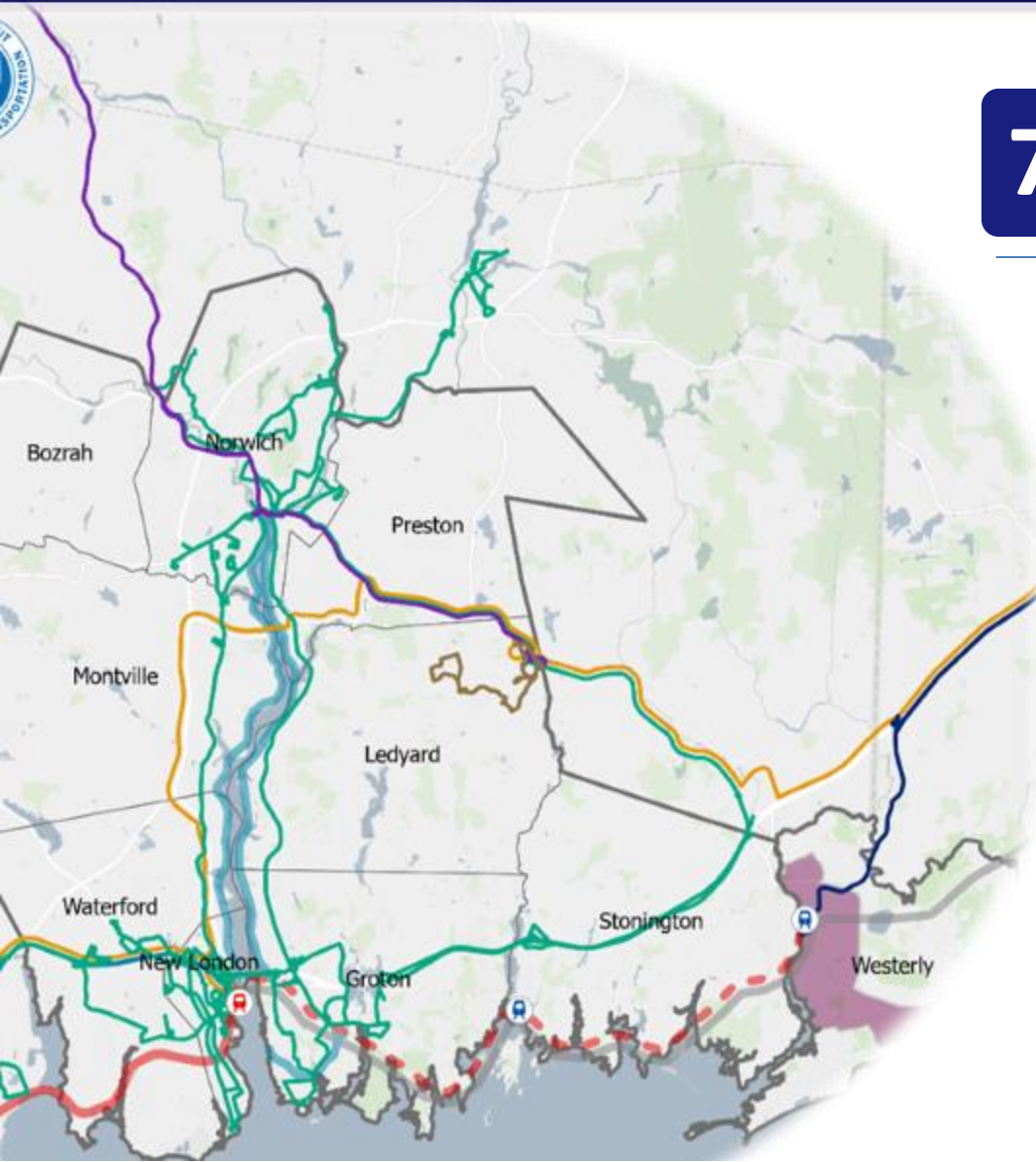
- 21 bus routes
- 3 on-demand services
- 2 intercity bus routes
- 4 ferry routes



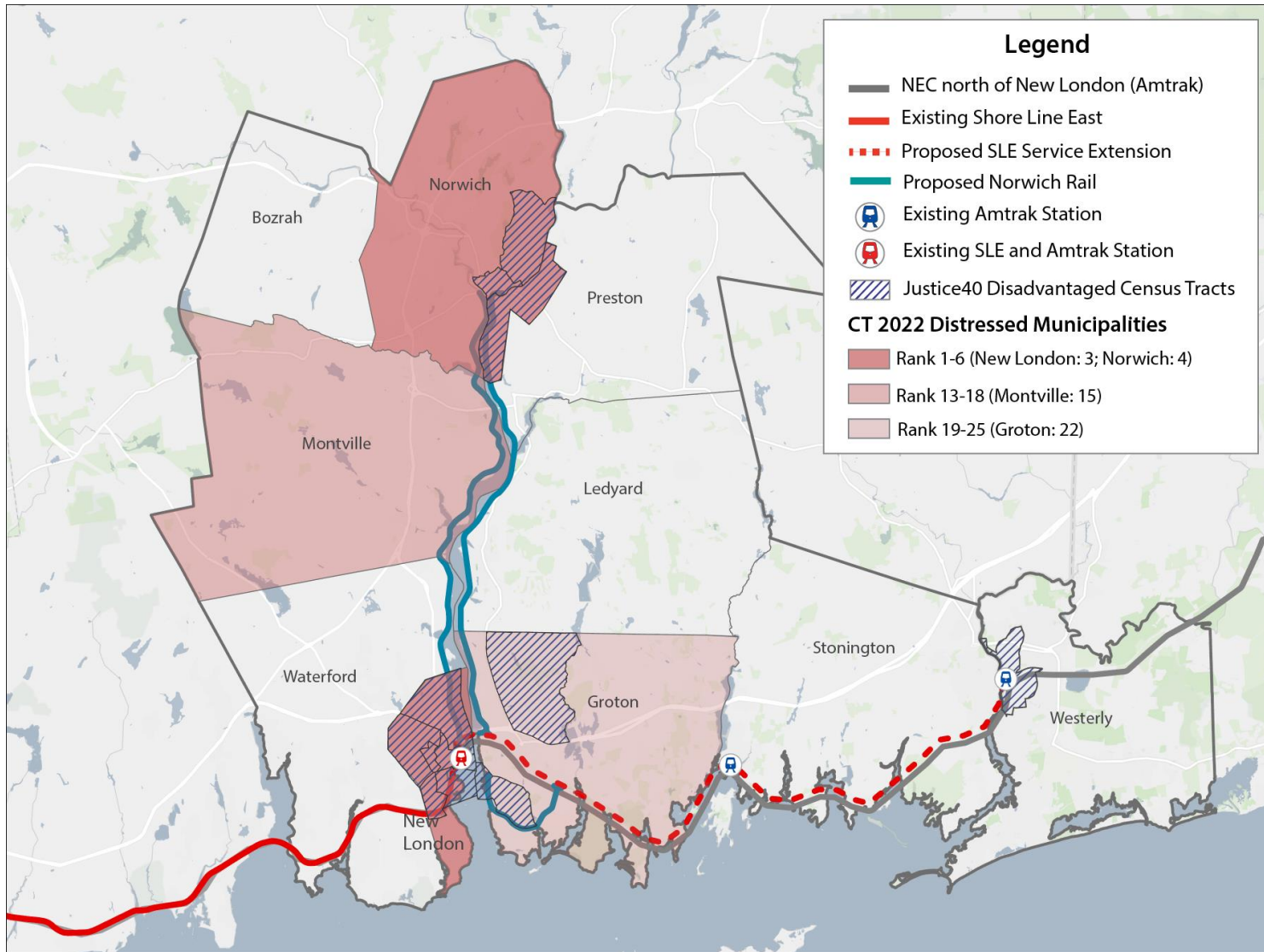
Active Transportation



- Multi-use trail in Norwich
- On-road bike paths in the downtown New London and Groton areas



Justice40 Disadvantaged Census Tracts and CT 2022 Distressed Municipalities in the Study Area



Regional Travel Patterns



Eastern Connecticut Rail Study

Employment Destination Mapping

Legend

Study Area

Study Area

Existing Stations

Shore Line East Station
Amtrak Station

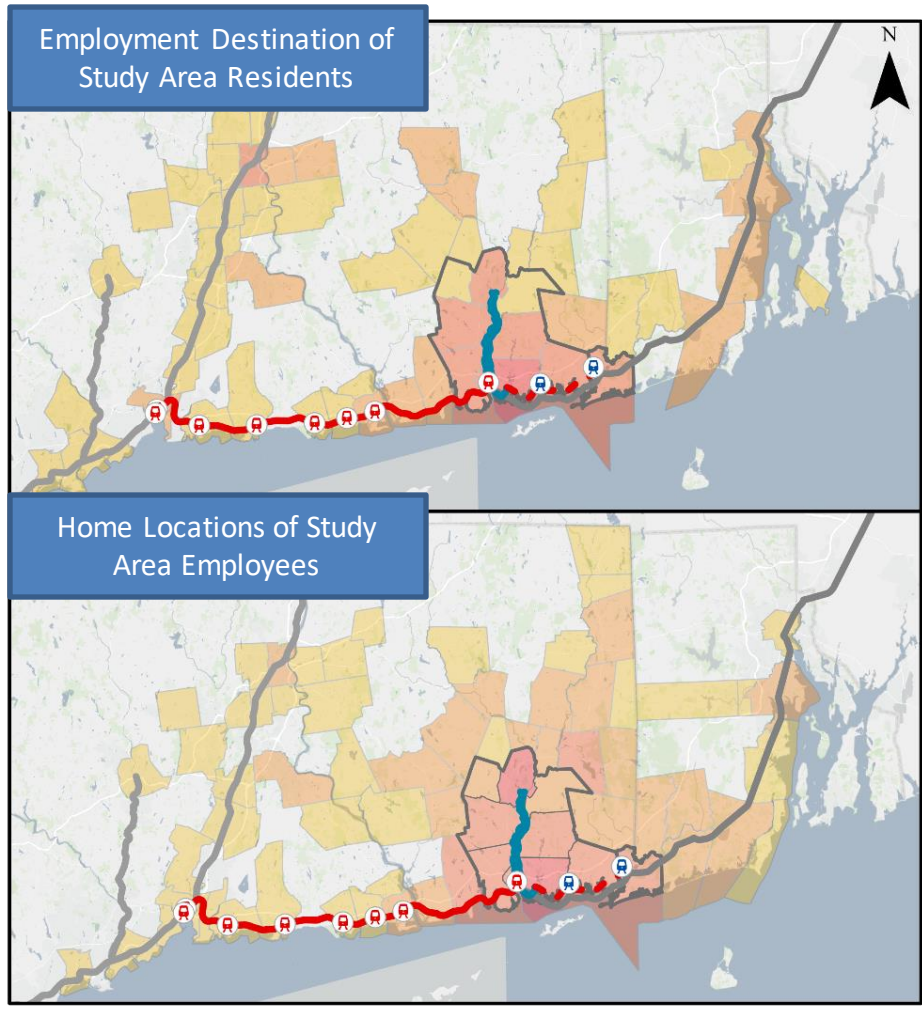
Rail Lines

Proposed Service Extension
Shore Line East
Proposed Norwich Rail
Northeast Corridor

Employment Destination Mapping (employees)

≤200
201 - 500
501 - 2,000
2,001 - 8,000
>8,000

0 10 20 40 Miles

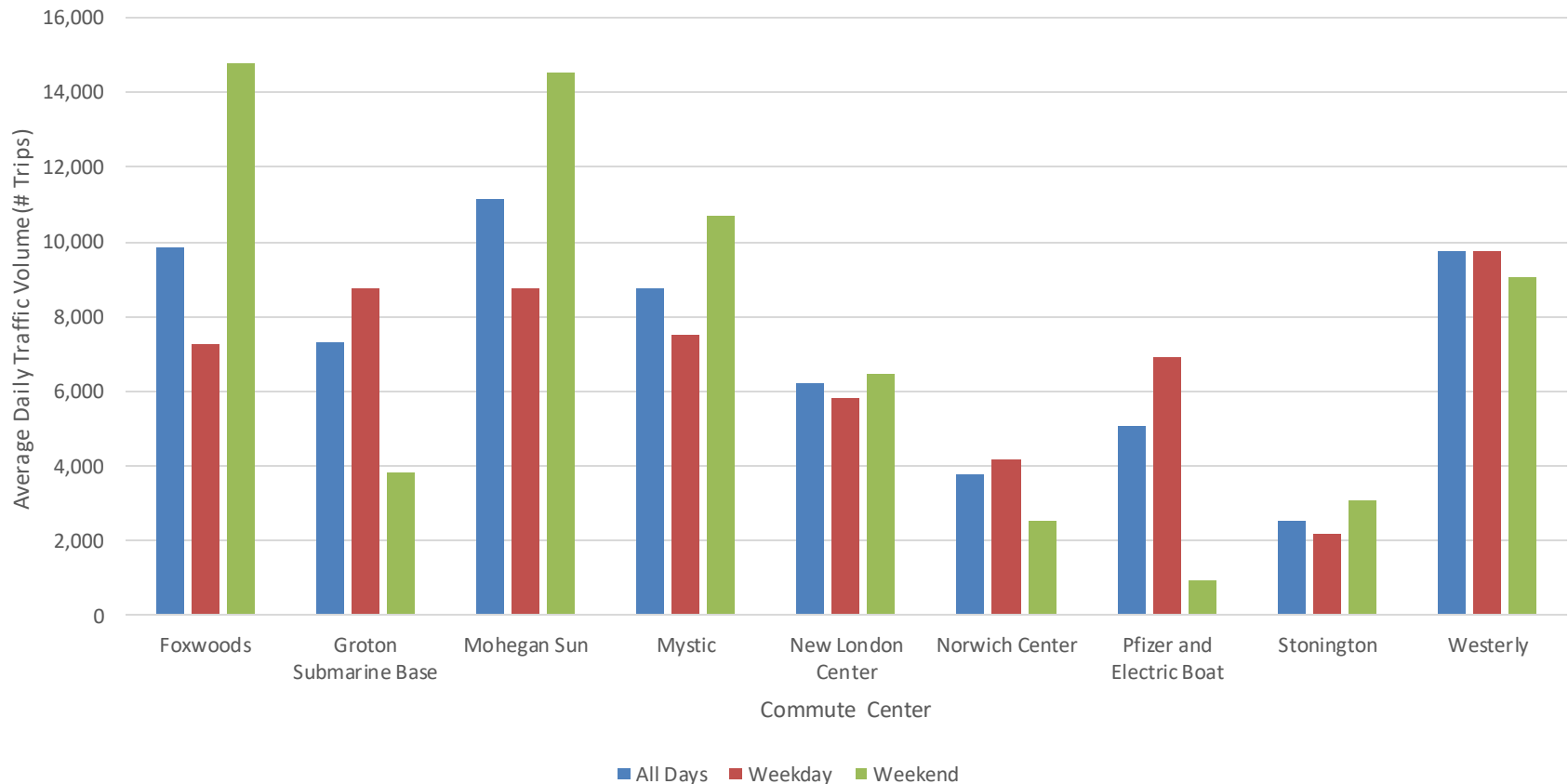


- People live and work in the study area and adjacent communities
- Outside the study area:
- Residents work north of the study area and in the Hartford and Providence metro areas
- Employees are coming from areas north/northeast of the study area and from the Hartford and Providence metro areas

Activity Center Travel Patterns



Activity Center Average Daily Traffic Volumes



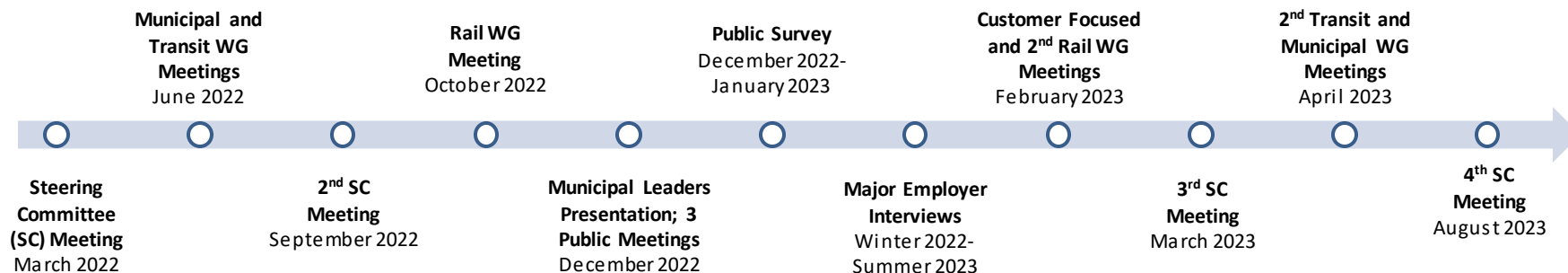
Stakeholder Engagement



Engagement Details

Outreach Effort	Engagement	Topics
Steering Committee	Milestone meetings (4 total), presentations, and discussions	Project goals, framework for future decision-making
Working Groups	Presentations and discussions involving customer-focused, municipal, rail, and transit working groups	Equity and customer needs; economic development and station siting; rail data, alignments, projections; ground transportation options and connectivity; etc
Major Employers and Anchor Institutions	Individual interviews (15-20)	Transit demand, employee TDM benefits, parking, future plans, employee travel patterns
General Public	<ul style="list-style-type: none"> 2 in-person public meetings (Norwich and Groton) 1 virtual public meeting Public survey 	Input on proposed transit and rail improvements; survey of where people live, common travel destinations, desirable additions to the public transportation network

Engagement Timeline

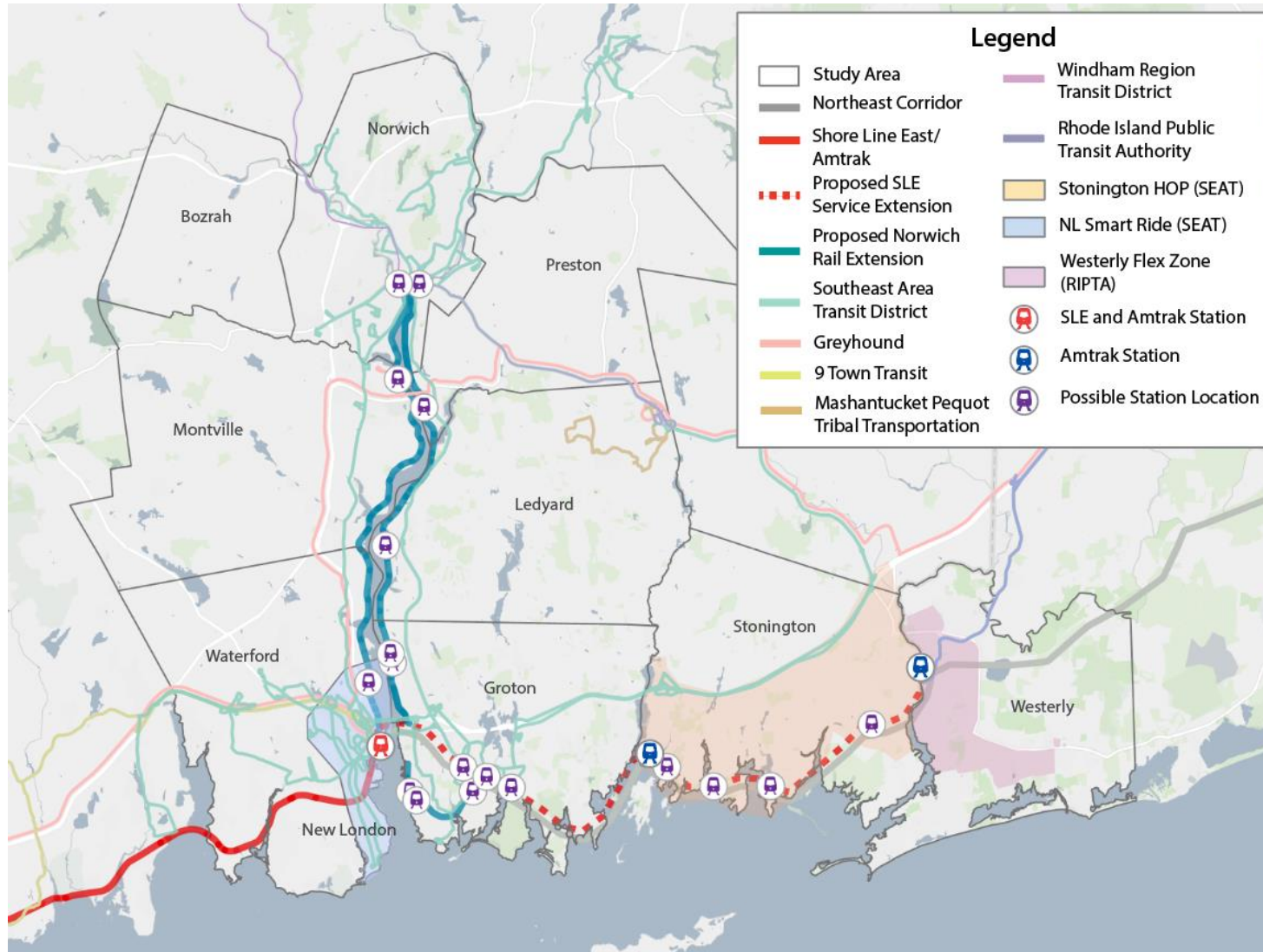


Preliminary Feasibility Assessment

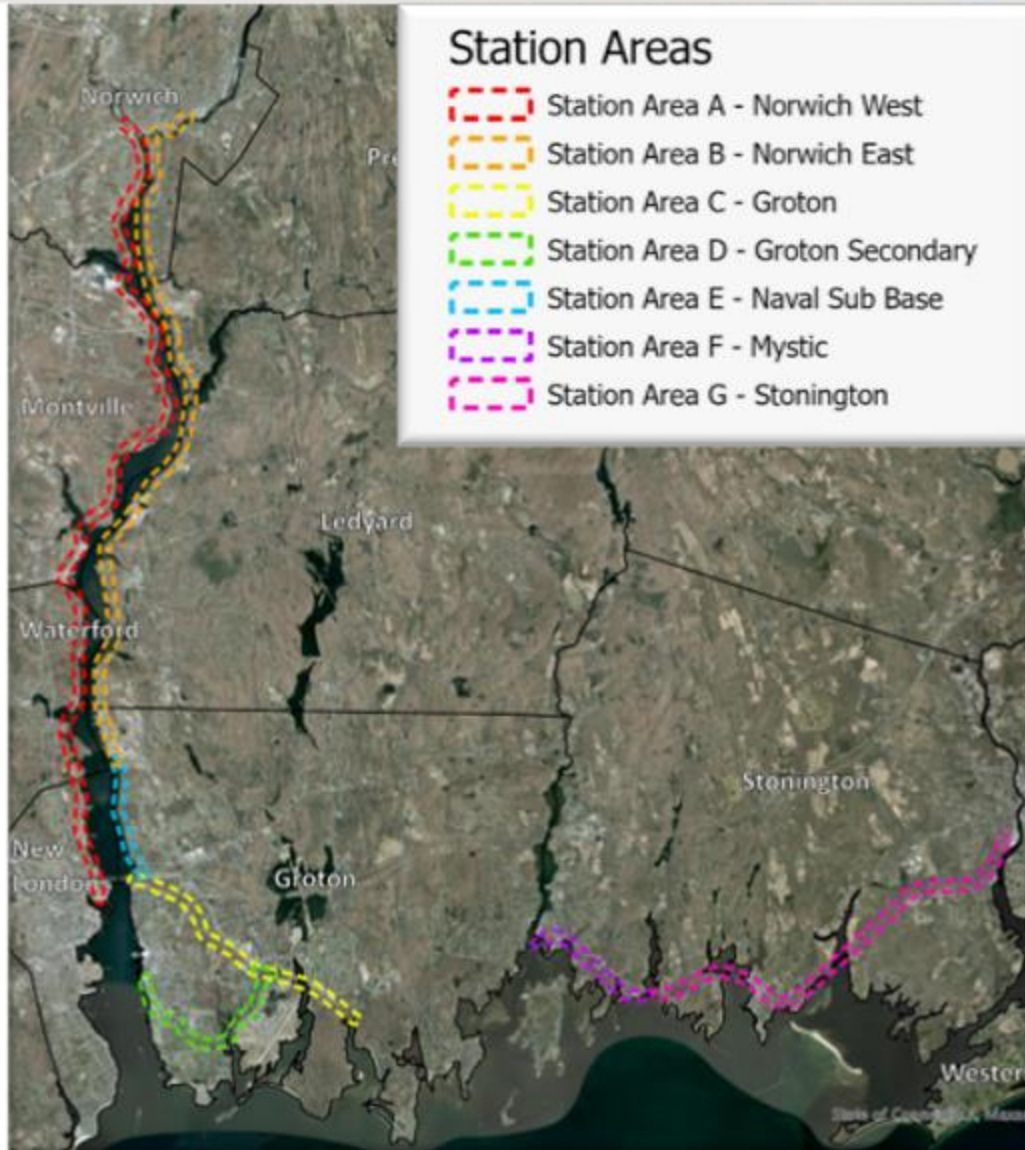


Thames River Moveable Bridge

Study Corridors, Alignments, Stations

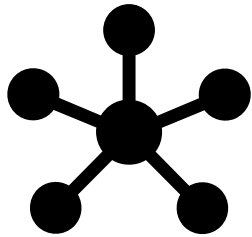


Conceptual Station Review



- Identified seven distinct station area zones.
- Identified potential terminus and/or intermediate stop locations within each station area zone.
- Conducted initial existing conditions assessment of selected locations and compiled high level site data.

Conceptual Station Review



Site Constraints



Compatibility with Surrounding Land Uses



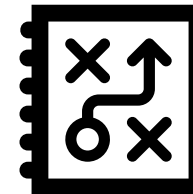
Market Development Potential



Environmental Considerations



Transit-Supportive Land Use



Operational Feasibility

Preliminary Feasibility Assessment

Primary Constraints



Thames River Moveable Bridge



CTrail Shore Line East Train

Constraints

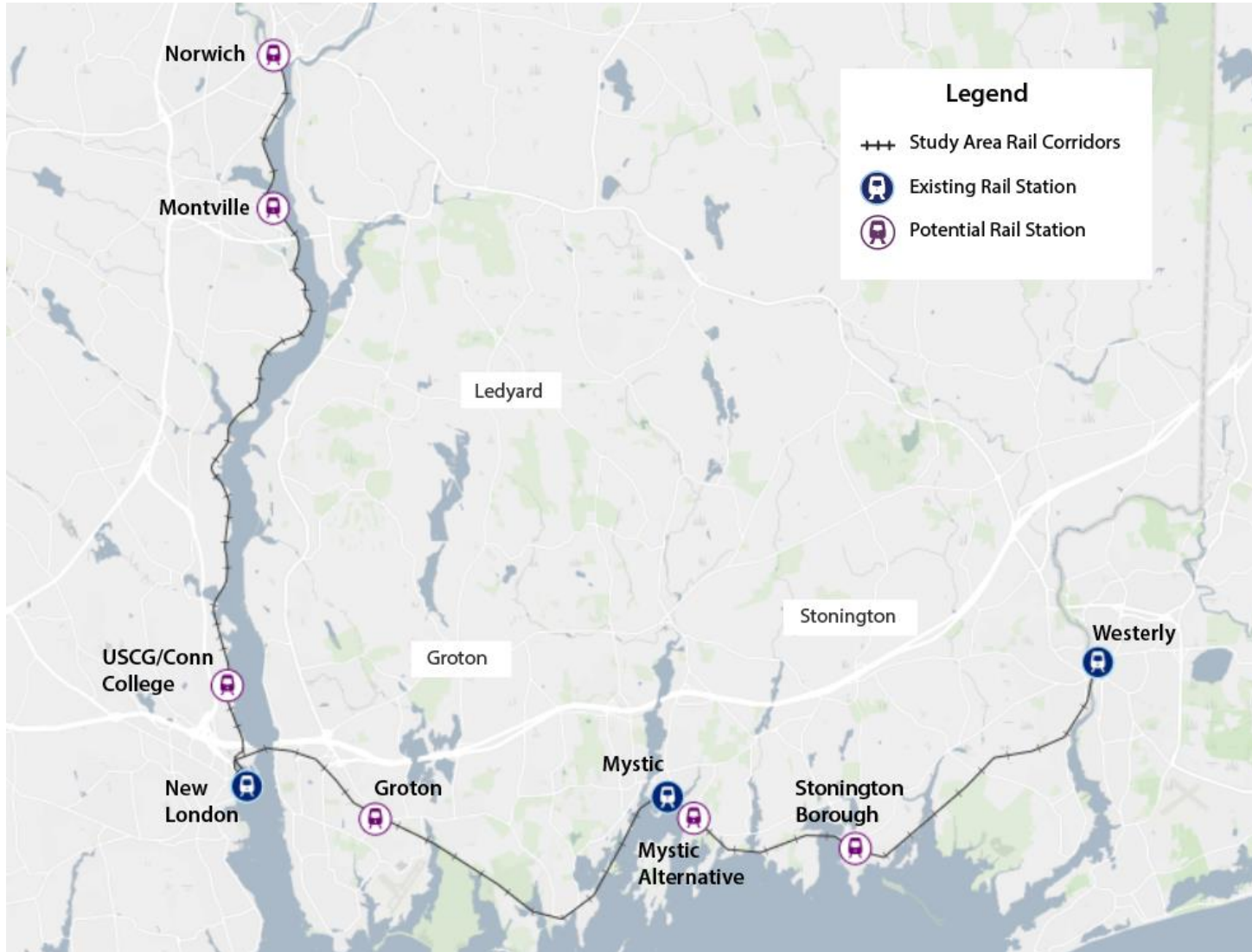
Coordinating schedules with movable bridges and other operators

Constructing high-level platforms at each station to accommodate M-8 high-level boarding

Constructing new/alternate station locations along the extension

Developing yard/storage space for equipment

Corridors and Stations for Further Analysis

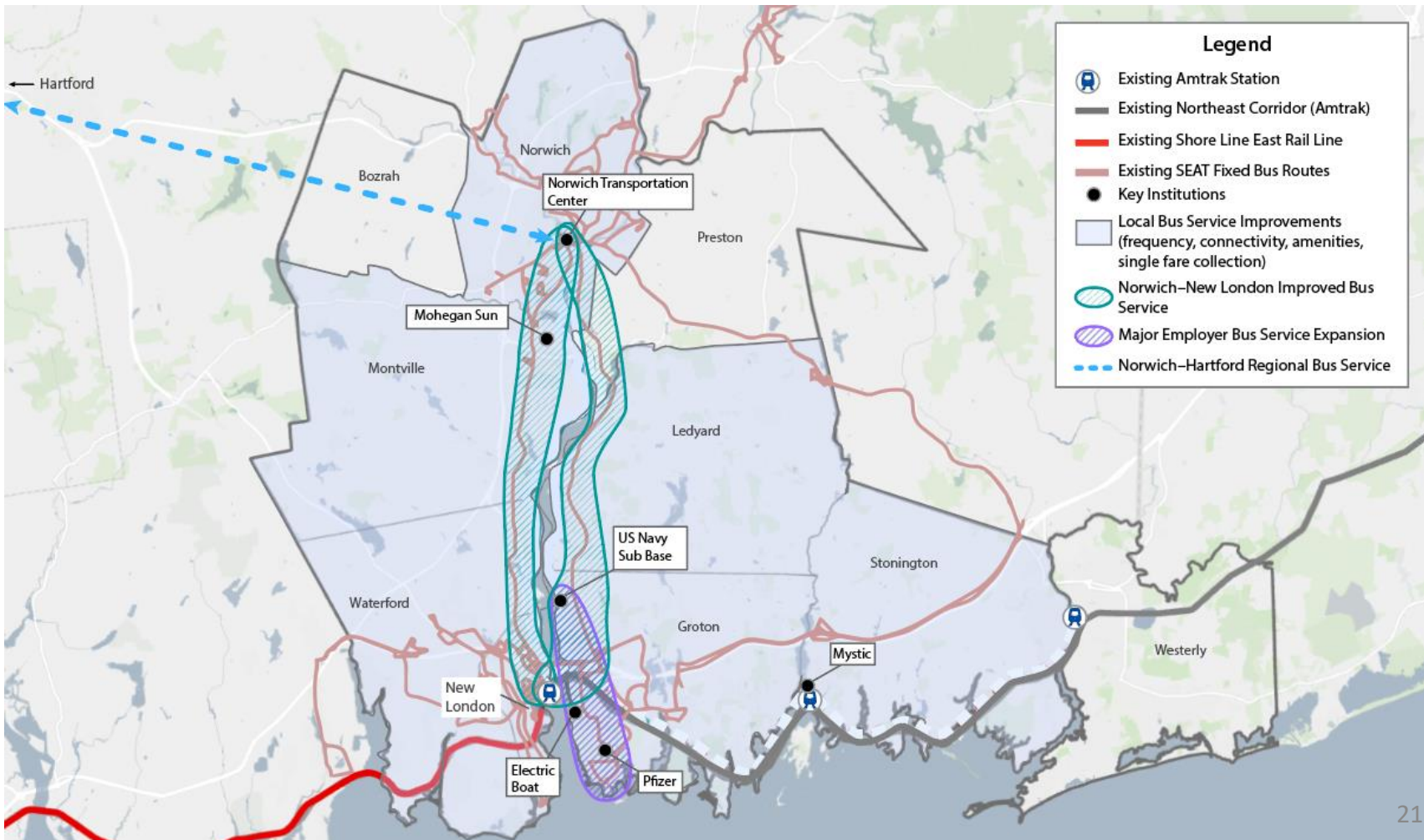


Preliminary Feasibility Assessment Outcomes

Shorter Term Strategies



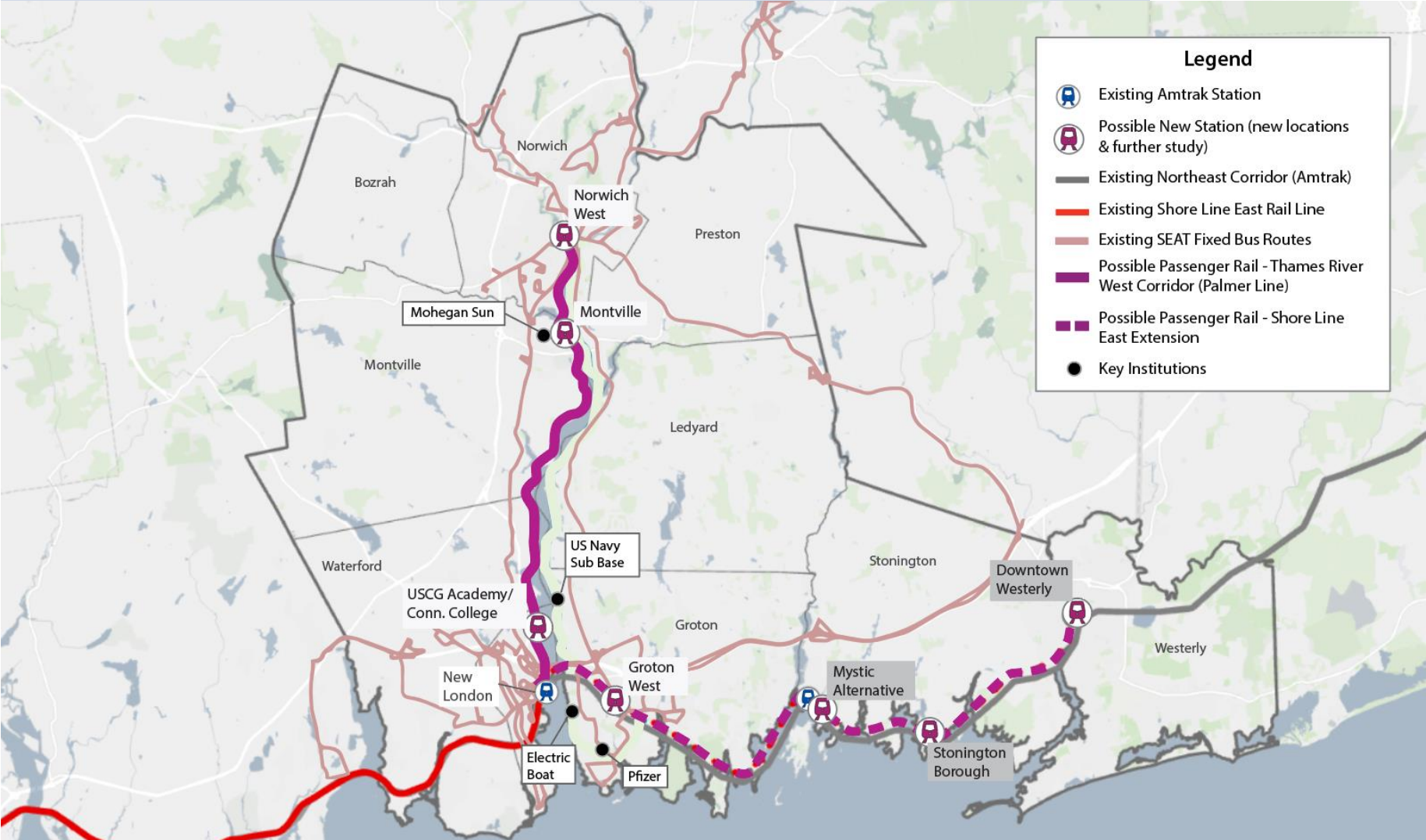
Expand and Enhance Bus and Ground Transportation Services



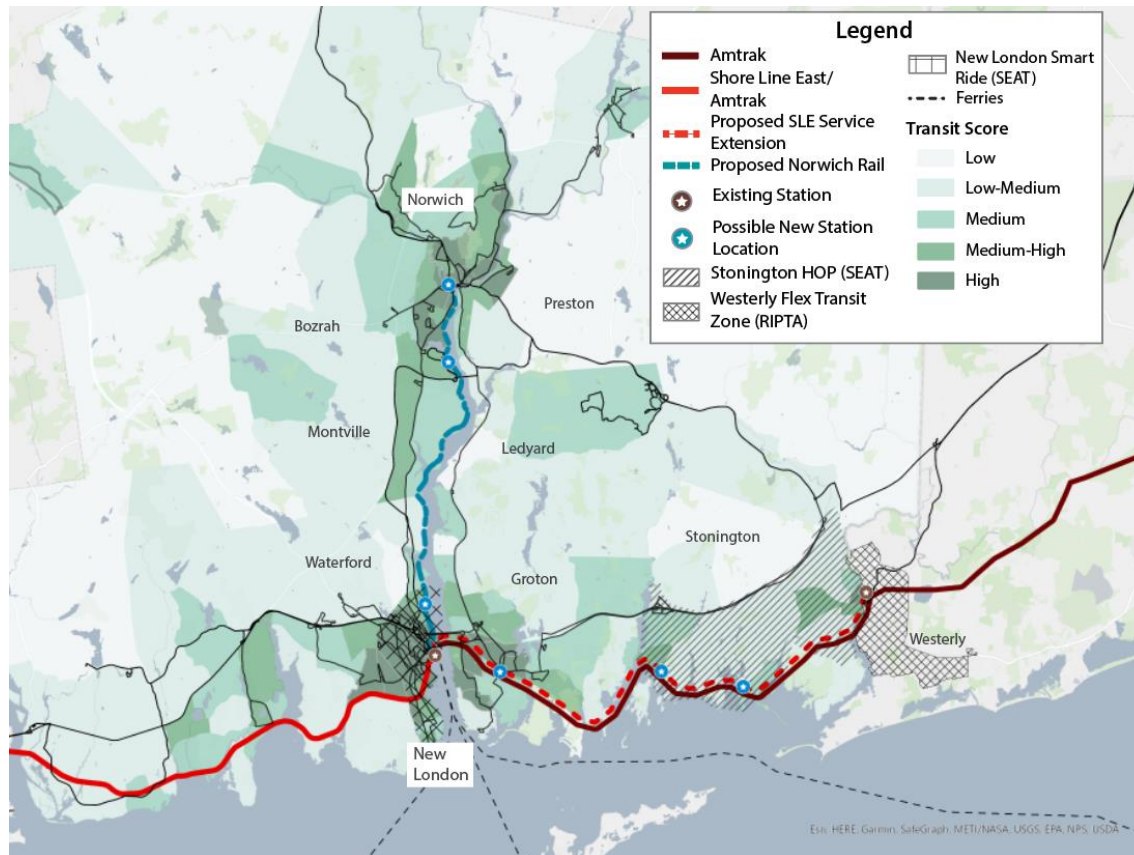
Long Term Strategies



Expand and Enhance Passenger Rail Service



Corridor/Station Refinements, Service Strategies, Costs, Revenues, Ridership Projections, GHG Reductions



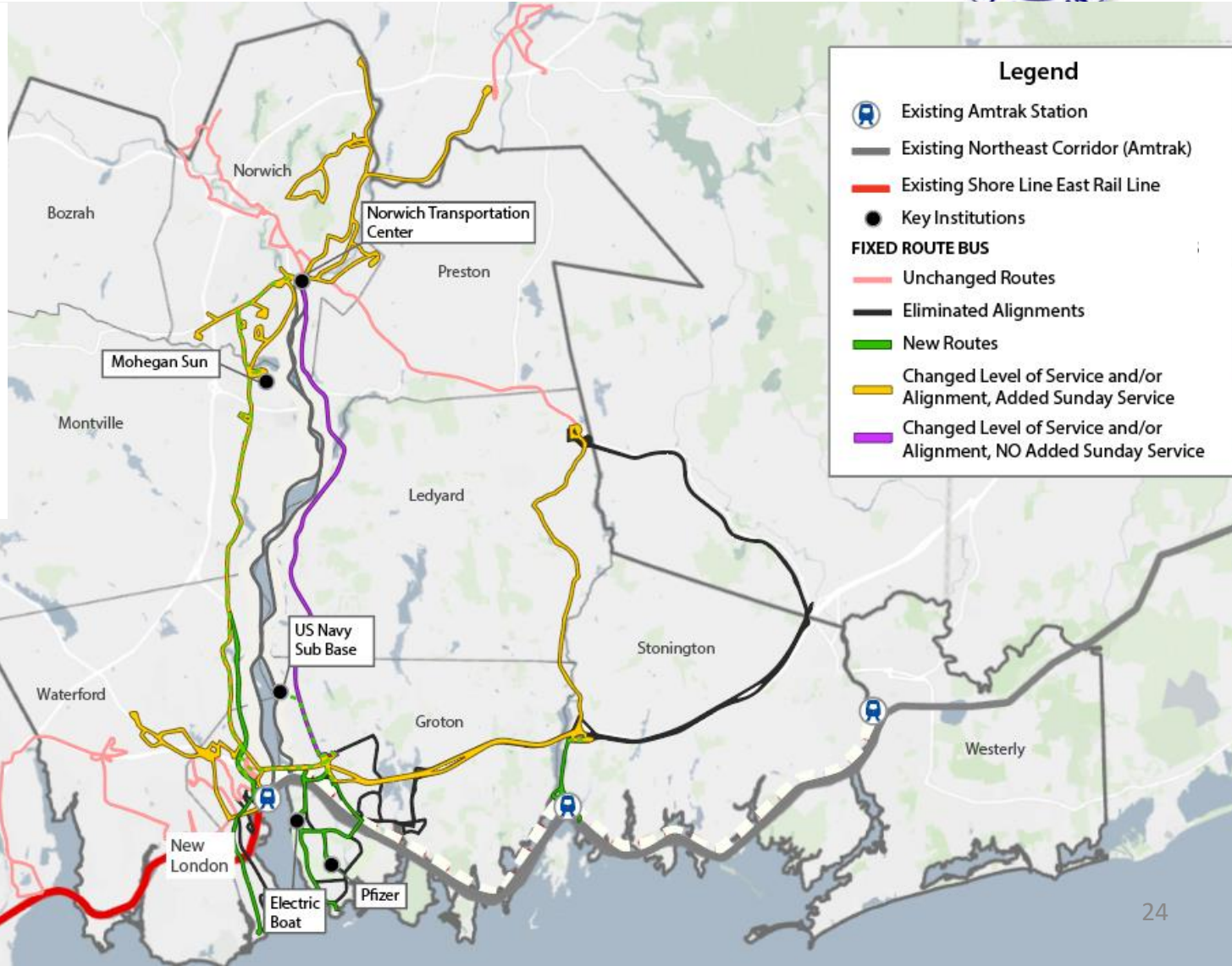
Fixed Route Services



- Strategies are independent of new rail service except: Route 1E is a standalone bus strategy; Sunday service for Norwich and NL local routes is a bus + rail strategy

- Pre-rail net vehicle count: **+6**

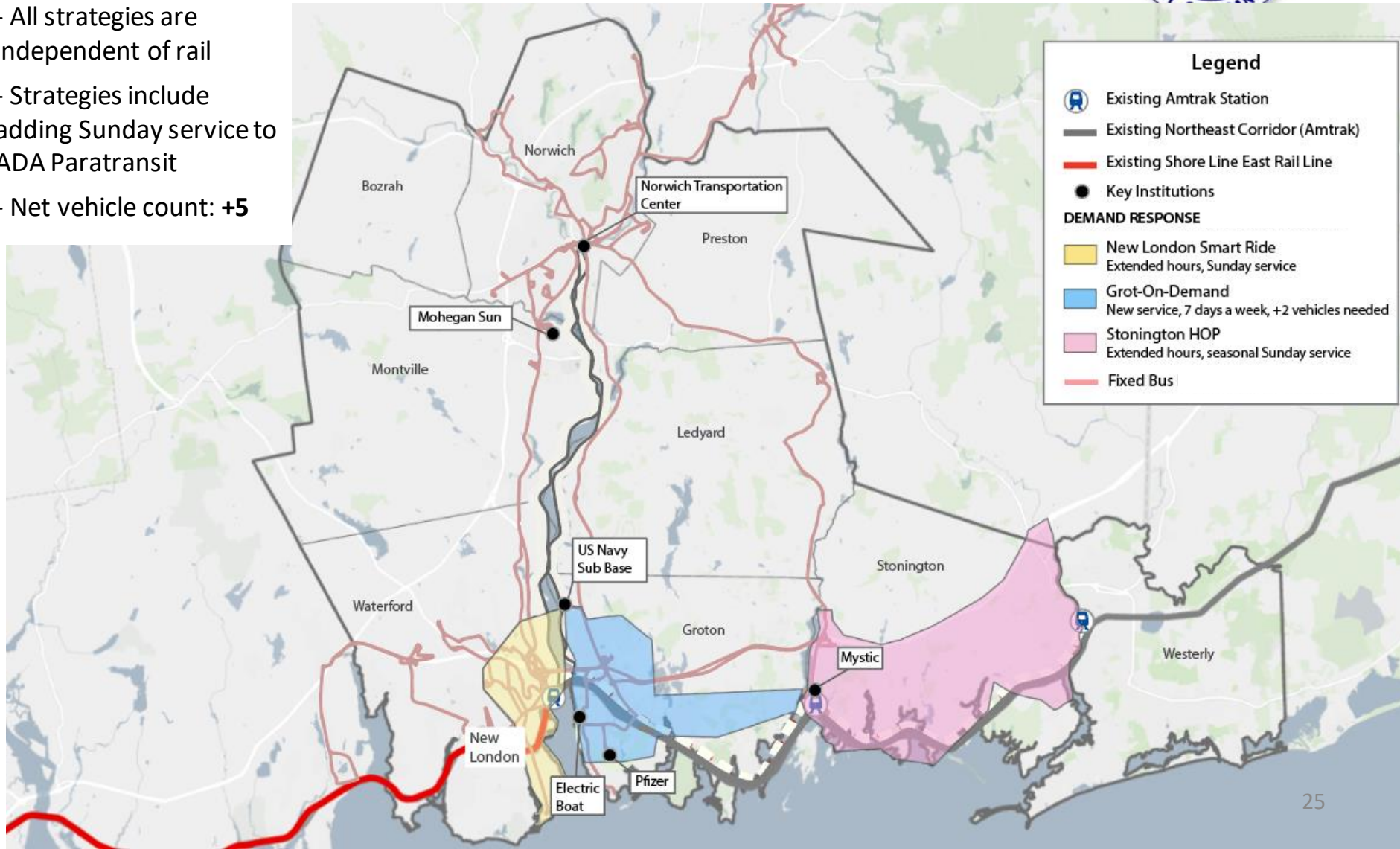
- Post-rail net vehicle count: **+5**



Demand Response Services



- All strategies are independent of rail
- Strategies include adding Sunday service to ADA Paratransit
- Net vehicle count: +5



Ridership, VMT and GHG Reduction Projections



Under the proposed SEAT 2028 and 2035 expansion models:

Annual vehicle revenue hours (VRH) may increase by nearly **53%**

Transit Implementation Scenario	Ridership New riders/year	VMT Reduction Miles/year	GHG Reduction due to Service Changes Only* Tons/year
Bus Standalone (2028)	300,000 (+25%)**	3.0 million	1,200
Bus + Rail (2035)	265,000 (+22%)**	2.6 million	1,000

**Assuming an all-diesel fleet – significantly more GHG reduction independent of these recommended bus service changes would come from the grant received to rebuild and electrify the SEAT garage and electrify the fleet*

***Compared to current levels*

Operating Cost Estimates



Fixed Route Cost Estimates

	Current	Service Strategy: Standalone Bus	Service Strategy: Bus + Rail
Annual VRH	67,000	92,000	86,000
Estimated Operational Cost (2023\$)	\$7,000,000	\$9,500,000	\$9,000,000
Estimated Operational Cost Increase (2023\$)	--	\$2,500,000 (+35%)	\$2,000,000 (+29%)

Demand Response Costs Estimates

	Current	Service Strategy: Standalone Bus / Bus + Rail
Annual VRH	16,000	36,000
Estimated Operational Cost (2023\$)	\$1,300,000	\$2,800,000
Estimated Operational Cost Increase (2023\$)	--	\$1,500,000 (+115%)

Policy Changes & Capital Cost Estimates

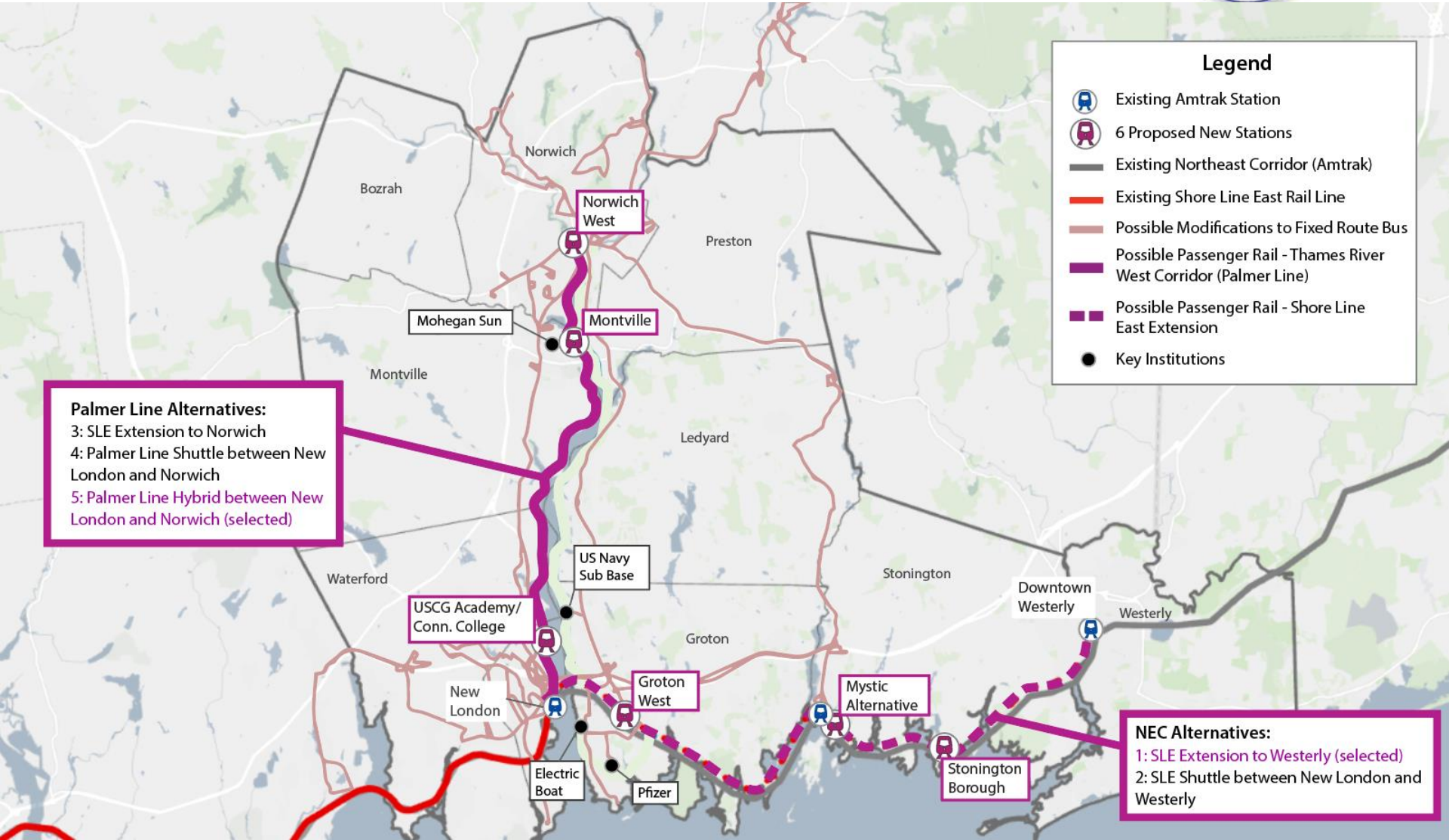


Additional Strategies:

- Policy Changes
 - Stop Inventory and Consolidation
 - Flag Policy
- Transit Signal Priority (TSP)
- Bus Stop Infrastructure

	Total Estimated Cost (2023 Dollars, Rounded)
Vehicle Procurement (5 Buses & 5 Demand Response Vehicles)	\$6,000,000
TSP, Queue Jumps, & Roadway Reconfiguration	\$2,000,000 to \$3,000,000
Bus Shelter, Signage, & Pedestrian Improvements	\$1,000,000
Total:	\$9,000,000 to \$10,000,000

Potential Rail Service & New Stations



Legend

- Existing Amtrak Station
- 6 Proposed New Stations
- Existing Northeast Corridor (Amtrak)
- Existing Shore Line East Rail Line
- Possible Modifications to Fixed Route Bus
- Possible Passenger Rail - Thames River West Corridor (Palmer Line)
- Possible Passenger Rail - Shore Line East Extension
- Key Institutions

Palmer Line Alternatives:

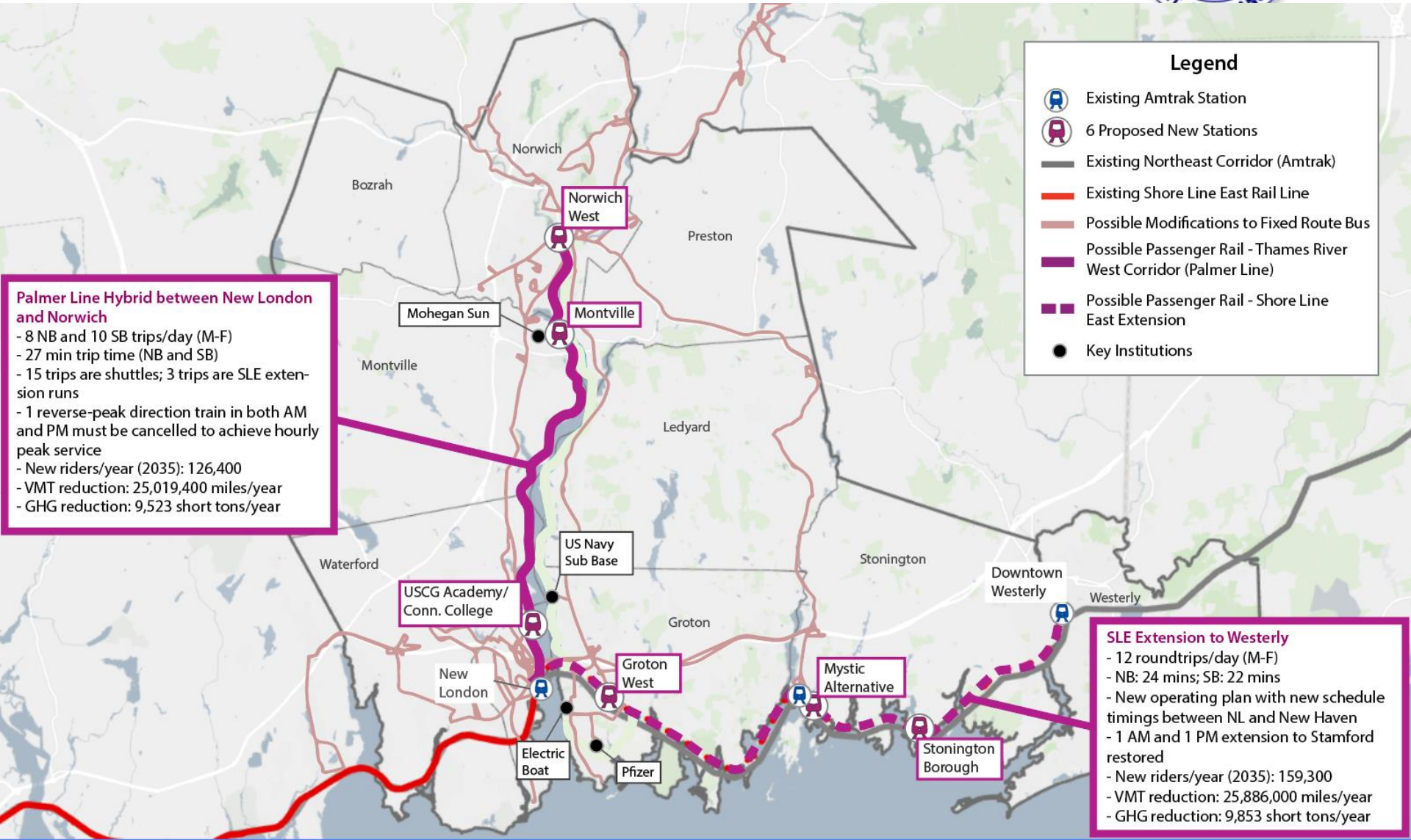
- 3: SLE Extension to Norwich
- 4: Palmer Line Shuttle between New London and Norwich
- 5: Palmer Line Hybrid between New London and Norwich (selected)

NEC Alternatives:

- 1: SLE Extension to Westerly (selected)
- 2: SLE Shuttle between New London and Westerly

Rail Service Plan

Service Strategies & Projected Outcomes



Legend

- Existing Amtrak Station
- 6 Proposed New Stations
- Existing Northeast Corridor (Amtrak)
- Existing Shore Line East Rail Line
- Possible Modifications to Fixed Route Bus
- Possible Passenger Rail - Thames River West Corridor (Palmer Line)
- Possible Passenger Rail - Shore Line East Extension
- Key Institutions

Palmer Line Hybrid between New London and Norwich

- 8 NB and 10 SB trips/day (M-F)
- 27 min trip time (NB and SB)
- 15 trips are shuttles; 3 trips are SLE extension runs
- 1 reverse-peak direction train in both AM and PM must be cancelled to achieve hourly peak service
- New riders/year (2035): 126,400
- VMT reduction: 25,019,400 miles/year
- GHG reduction: 9,523 short tons/year

SLE Extension to Westerly

- 12 roundtrips/day (M-F)
- NB: 24 mins; SB: 22 mins
- New operating plan with new schedule timings between NL and New Haven
- 1 AM and 1 PM extension to Stamford restored
- New riders/year (2035): 159,300
- VMT reduction: 25,886,000 miles/year
- GHG reduction: 9,853 short tons/year

Rail Service Plan

Infrastructure & Capital Cost Estimates



	Component	Description	Quantity	Unit	Unit Cost (M)	Total Cost (M)
NEC/SLE Extension (Alternative 1)	New Stations	Groton West, Mystic Alternative, Stonington Borough	3	EA	\$52.0	\$156.0
	High-Level Boarding Platforms	Westerly Station, Madison Station	2	EA	\$16.0	\$32.0
	Electrifying Storage Rail	Westerly Station – assumes poles are needed	1	EA	\$2.8	\$2.8
	Upgrading Track	Groton, MP124 to MP128, includes electrification	1	EA	\$33.9	\$33.9
	Turning Track	High St. Interlocking	1	EA	\$0.4	\$0.4
	M8 Trainset	4-Car	1	EA	\$18.1	\$18.1
	Total Estimated Cost:					
Palmer Line (Alternative 5)	Corridor Improvements	Ballast, Structures, ROW, Track, Grade Crossings, PTC	1	EA	\$388.7	\$388.7
	New Stations	Connecticut College/ US Coast Guard Academy, Mohegan Sun, Norwich Intermodal Center	3	EA	\$65.0	\$156.0
	Yard Space	New London	1	EA	\$75.0	\$75.0
	Trainset	GP40 Diesel	1	EA	\$16.0	\$16.0
	Total Estimated Cost:					

Operating Cost Estimates & Forecasted Revenue



Estimated Operating Costs

Scenario	Description	Cost per Train Mile	Train Miles Per Weekday	Estimated Cost per Weekday	Annualized Cost (2023 Dollars)
Baseline	SLE Schedule (as of June 2023)	\$98	1,114	\$109,000	\$26.2 Million
Alternative 1	Extension to Westerly, RI	\$98	2,224	\$218,000	\$52.3 Million
Alternative 5	New London to Norwich Hybrid Service	\$98/\$124	1,074/260	\$137,000	\$33 Million

Forecasted Ridership, GHG Reduction and Revenue

- 285,700 new trips
- VMT reduction of 50.9 million miles/year
- GHG reduction of 19,376 tons/year
- \$2.42M in additional revenue in 2035

Realizing Economic Benefits



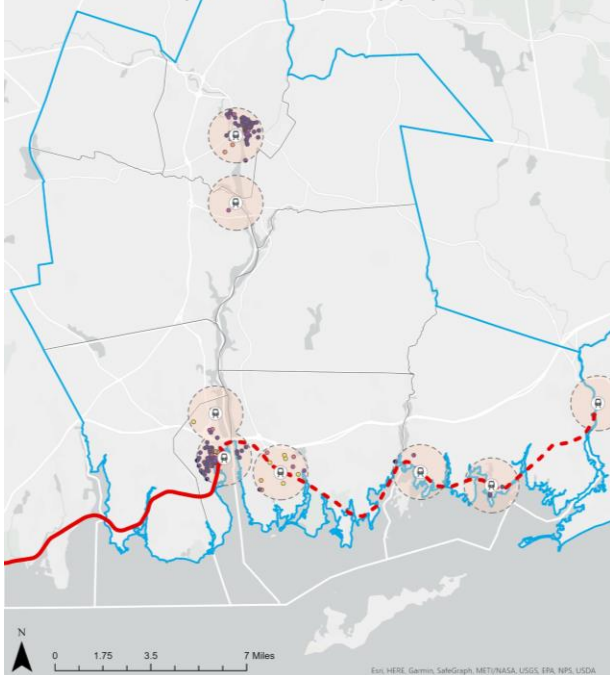
- Pairing transit and rail investment with land use policies that promote density, walkability, and multimodal connectivity
- Improved access to higher-paying jobs for lower-income residents
- Developing affordable housing options
- Encouraging long-term TOD across considerable underutilized and vacant parcels results in benefits from property and sales tax revenue
- Short-term benefits from creation of construction jobs

Transit Oriented Development (TOD)

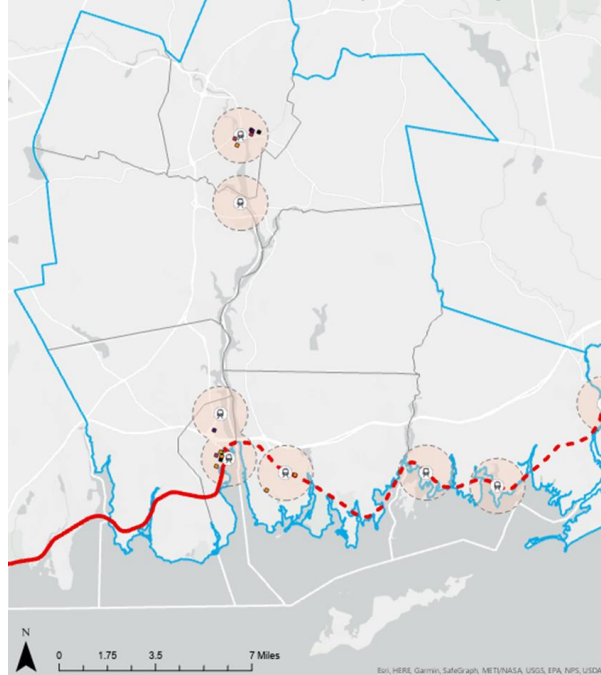


- Compared to benchmark cities, the Study Area has:
 - lower median income
 - less job growth
 - smaller share of professional jobs
 - seen a smaller improvement in poverty
- The Study Area has a housing affordability challenge:
 - 44% of all renters are cost-burdened (paying more than 30% towards housing)
 - 25% of jobs pay a salary that make homeownership unattainable

Multifamily Housing Supply



Affordable Multifamily Housing



The Thames River Corridor is a good candidate for TOD with associated changes to zoning to enable it.

- Nearly 1,000 vacant housing units
- Demographic propensity for transit ridership

Feasibility Study Conclusion

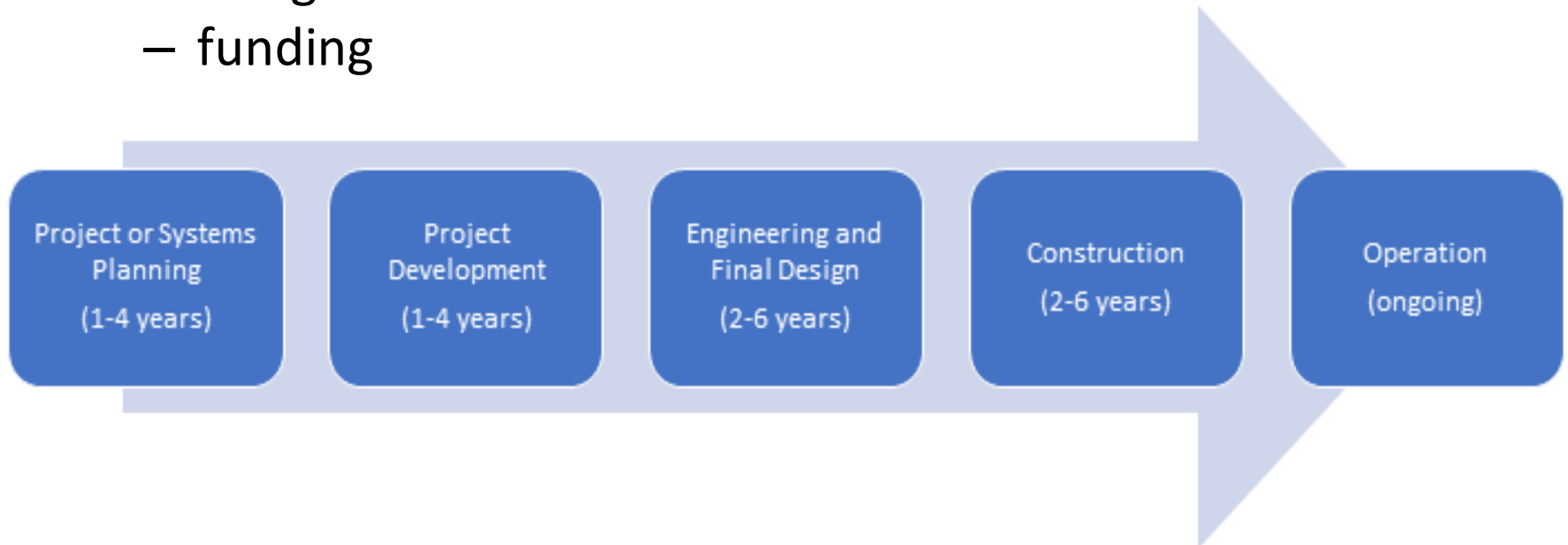


- Transit strategies could be implemented and satisfy short- and long-term needs along the Thames River Corridor
- In the future, rail strategies may be viable along the Northeast Corridor
- Additional studies/designs are needed for rail and transit strategies to be implemented
- Any next steps are currently unfunded

Project Lifecycle Timeline



- Steps needed to advance project development include:
 - additional study
 - planning
 - permitting
 - design
 - funding



Phasing



- If one strategy or a combination of strategies were to be identified as viable upon further study, that strategy could move forward independently and be incrementally phased.
 - The strategy would be considered an individual project and proceed through the project lifecycle stages.
- **Example:** The Hartford Line Rail Program is being implemented using a phased approach.

CTrail Hartford Line Service



In subsequent phases, more trains per day and service to additional stations will be operated.

What's Next for ECRTS?



2023

Public Meetings:
Sept 19 & 20

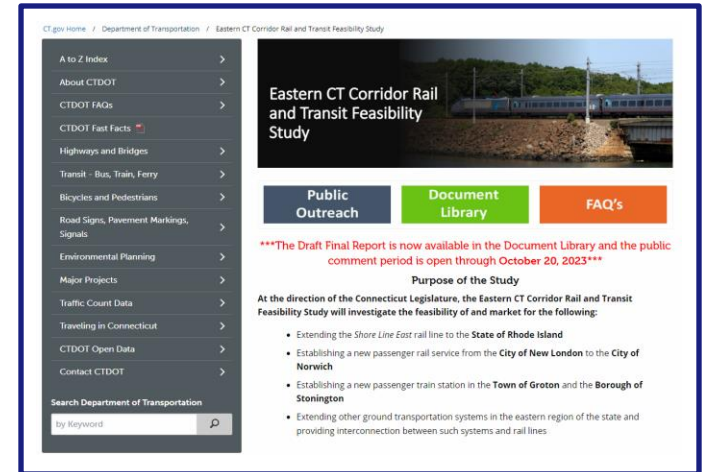
Public Comment
Period Ends: Oct
20

Final Report:
Nov 30

ECRTS Report Structure



- Final Report
- Appendices
 - Appendix A: Existing Conditions Report
 - Appendix B: TOD Corridor Scan
 - Appendix C: Previous Report Review
 - Appendix D: Thames River Assessment
 - Appendix E: Corridor Capacity
 - Appendix F: Potential Station Sites
 - Appendix G: Public Survey Report
 - Appendix H: Preliminary Feasibility Assessment Summary Report
 - Appendix I: Transit Service Plan
 - Appendix J: Rail Service Plan
 - Appendix K: Conceptual Stations
 - Appendix L: Economic Market Analysis
 - Appendix M: Engagement Summary



Question & Answer Session



- The public comment period is open through **October 20, 2023**. Comments and questions may be submitted by:
 - Email DOTplanning@ct.gov
 - Leave a voicemail at +1 (860) 594-2020
- More information is available on the Study Website:
<https://portal.ct.gov/Eastern-CT-Rail>

