



I-293 EXIT 6 & 7 (PART B)

Technical Advisory Committee (TAC)
July 21, 2016



I-293 EXITS 6 & 7 – PART B

(MANCHESTER #16099)

New Hampshire Department of Transportation (NH DOT)

Project Team

Vanasse Hangen Brustlin, Inc. (VHB)

Southern New Hampshire Planning Commission (SNHPC)

RKG Associates

Independent Archaeological Consulting, LLC (IAC)

ARCADIS

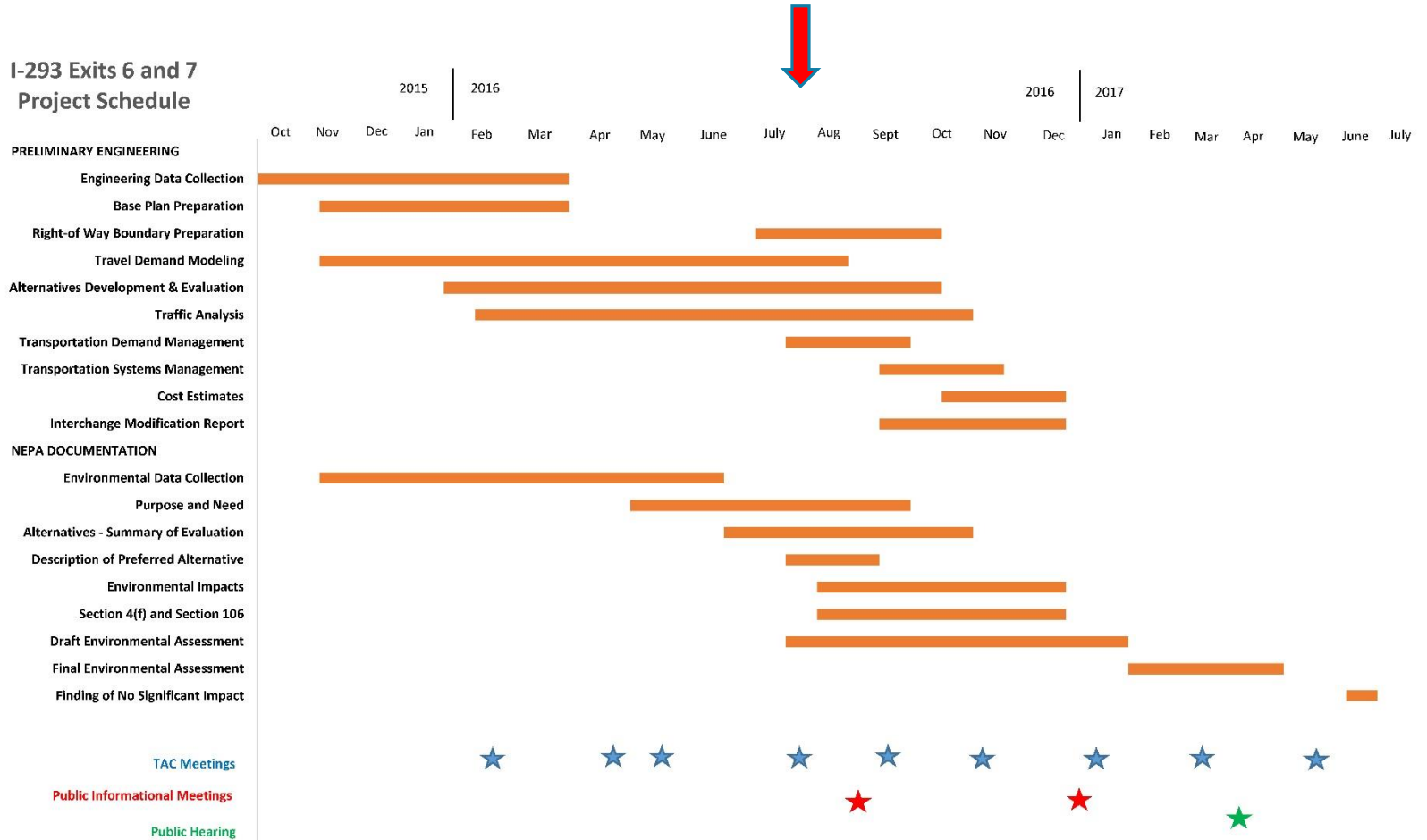
TODAY'S AGENDA

- Updated Schedule
- Environmental Resources
- Preliminary Traffic Model Results
- Purpose and Need Statement
- Public Informational Meeting

UPDATED PROJECT SCHEDULE

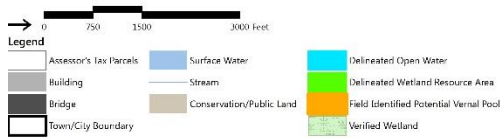
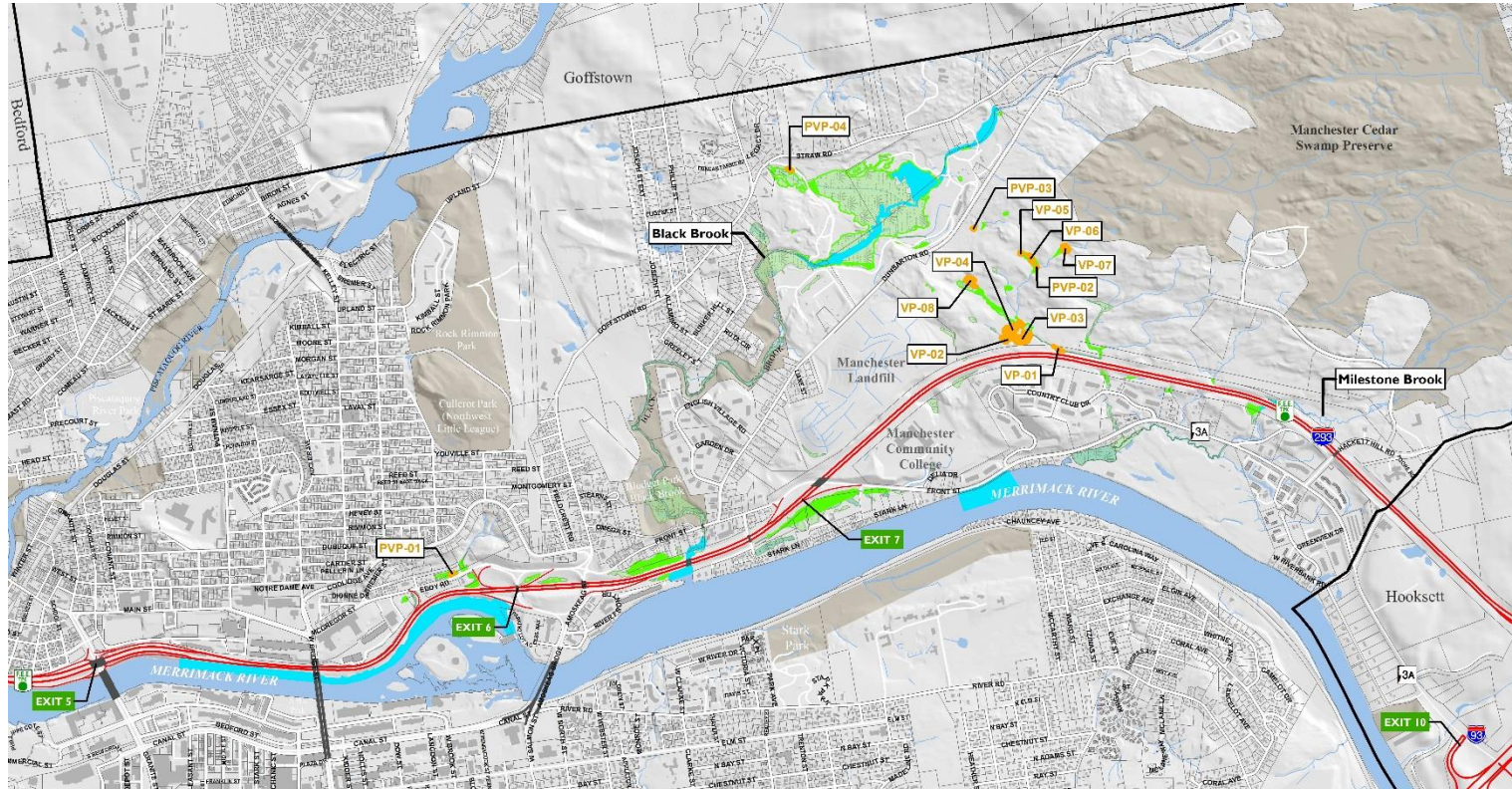
PROJECT SCHEDULE

I-293 Exits 6 and 7 Project Schedule

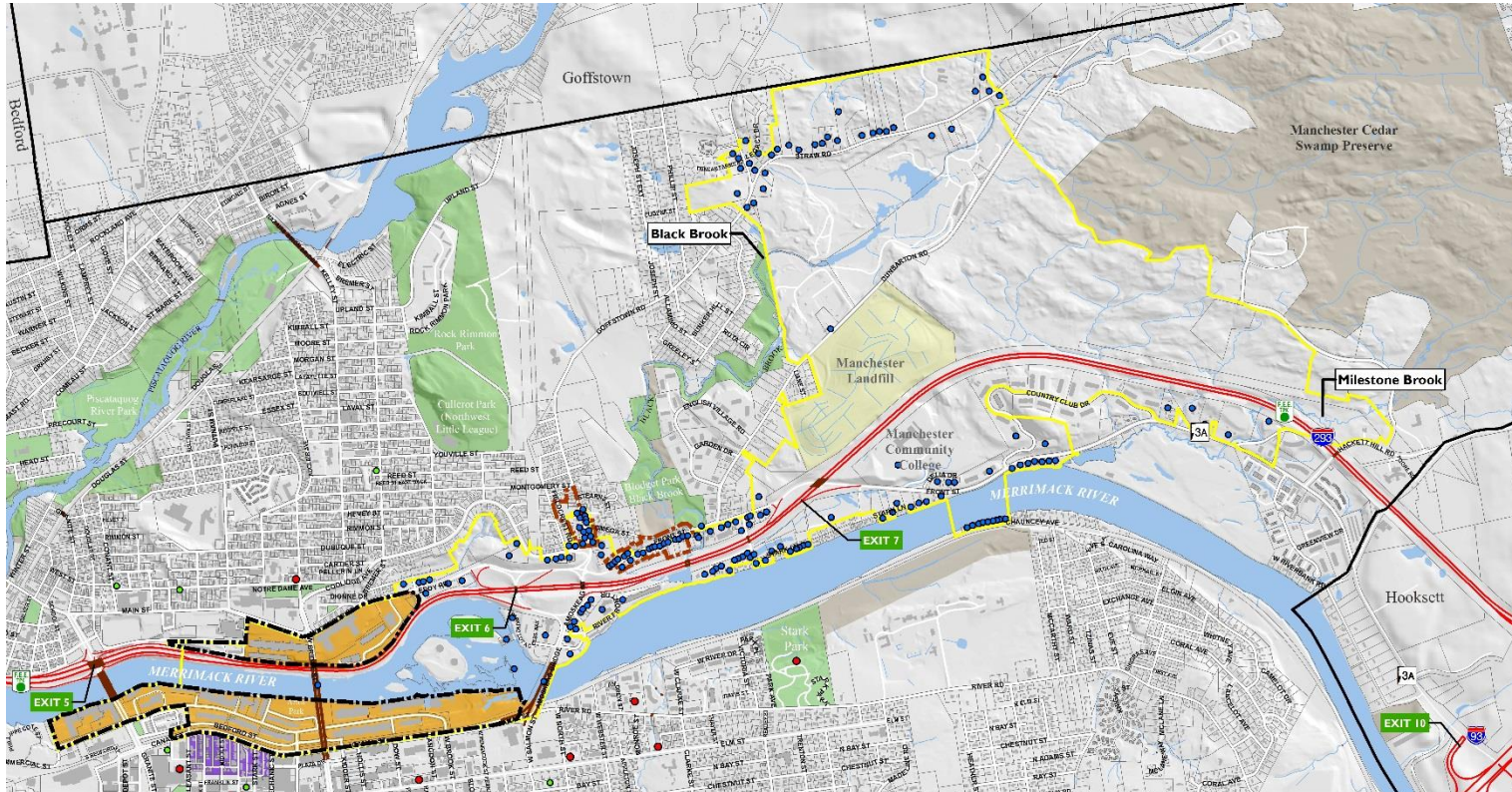


ENVIRONMENTAL RESOURCES

WETLAND RESOURCES



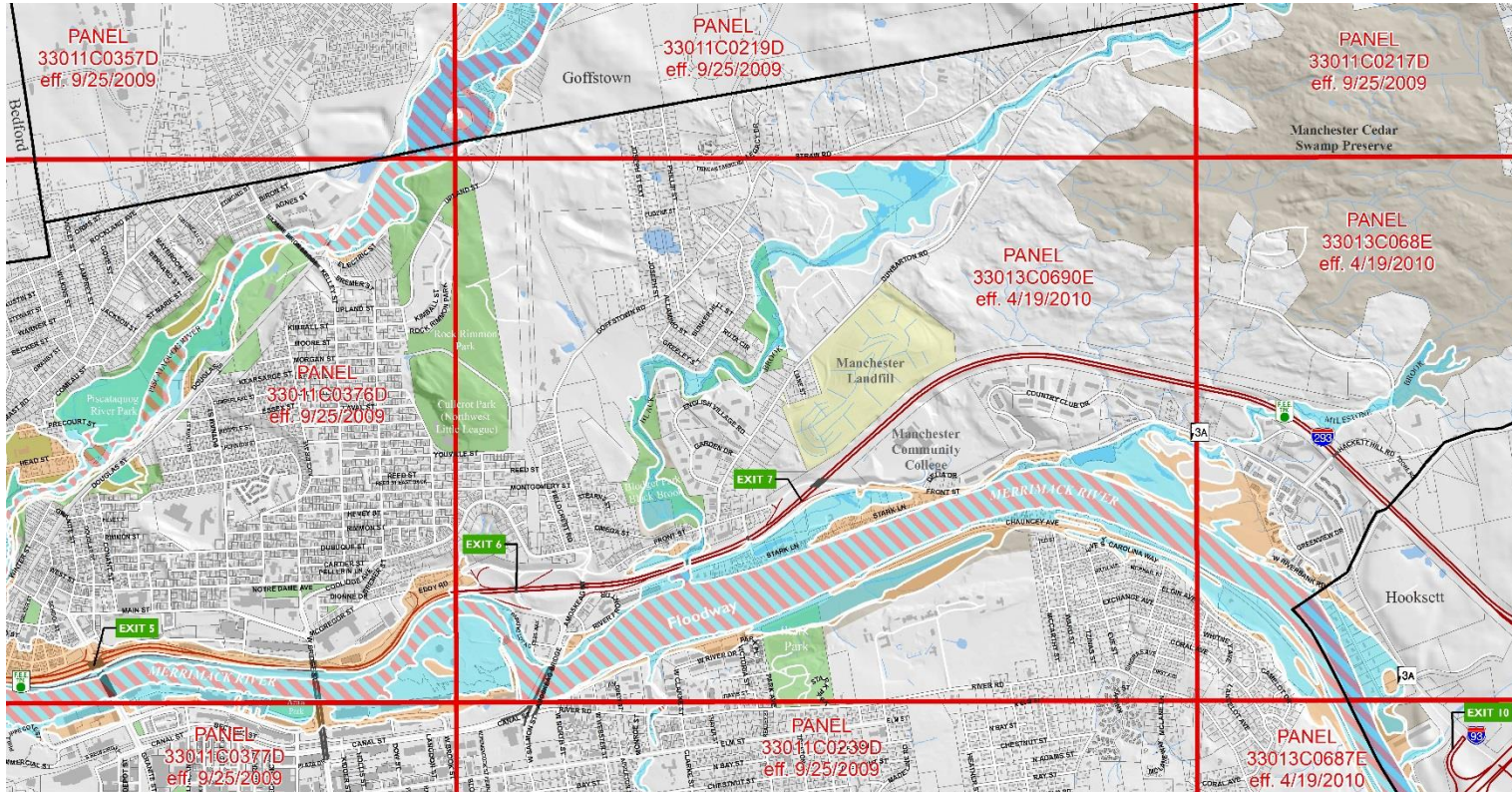
CULTURAL RESOURCES



Legend

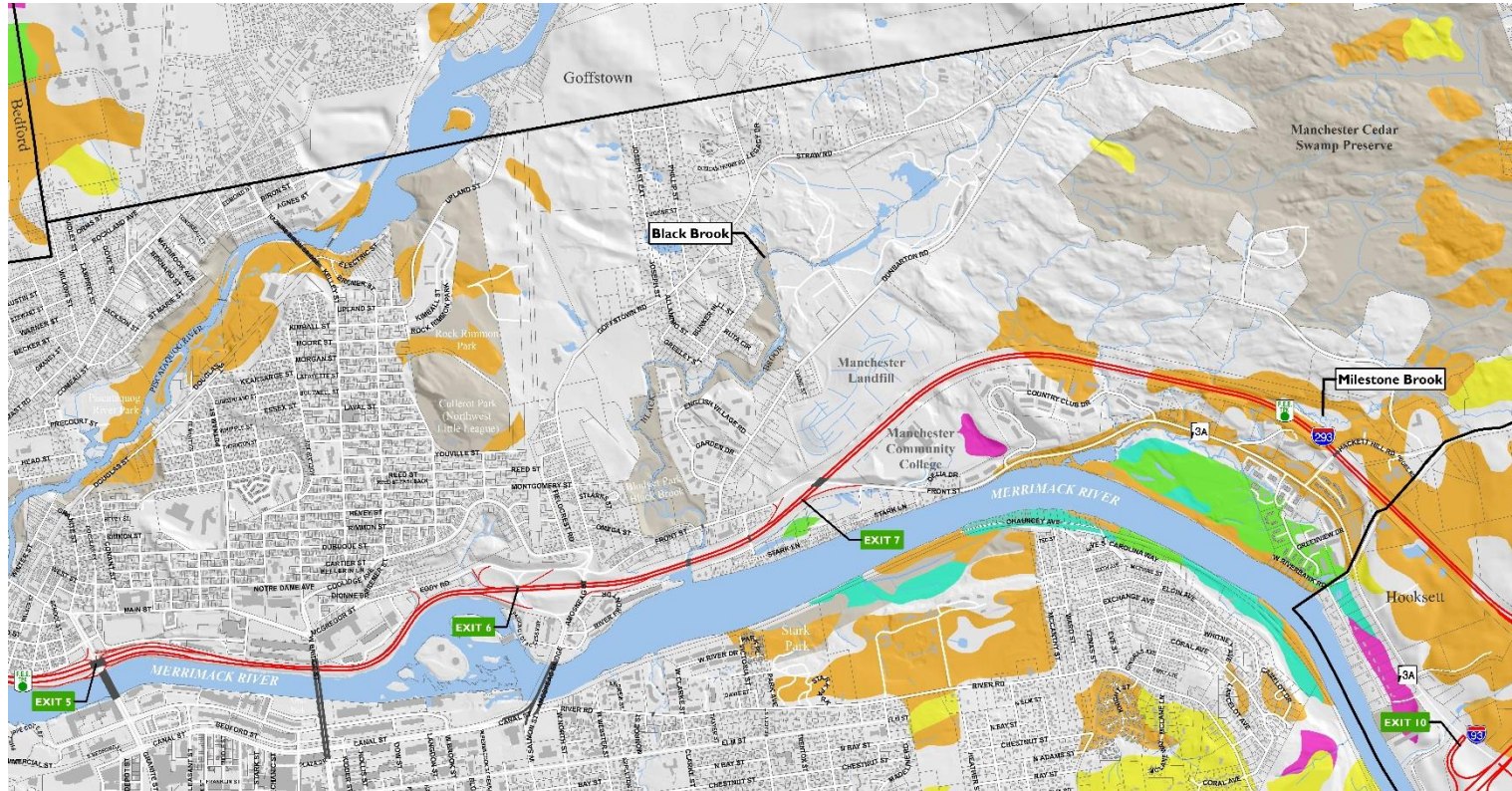
- | | | | | |
|--|---|---|---|---|
| <ul style="list-style-type: none"> Assessor's Tax Parcels Building Bridge Town/City Boundary | <ul style="list-style-type: none"> Surface Water Stream City Park Land Conservation/Public Land | <ul style="list-style-type: none"> Surveyed APE Properties Potential Historic District Historic District Area of Potential Effect | <p>City of Manchester Identified Historic Sites</p> <ul style="list-style-type: none"> NR Listed NR Eligible (Recommended Eligible by Preparer of Documentation) | <p>City of Manchester Districts Under Zoning Ordinance</p> <ul style="list-style-type: none"> Amoskeag Corporation Housing Historic District Amoskeag Millyard Historic District |
|--|---|---|---|---|

FLOODPLAINS



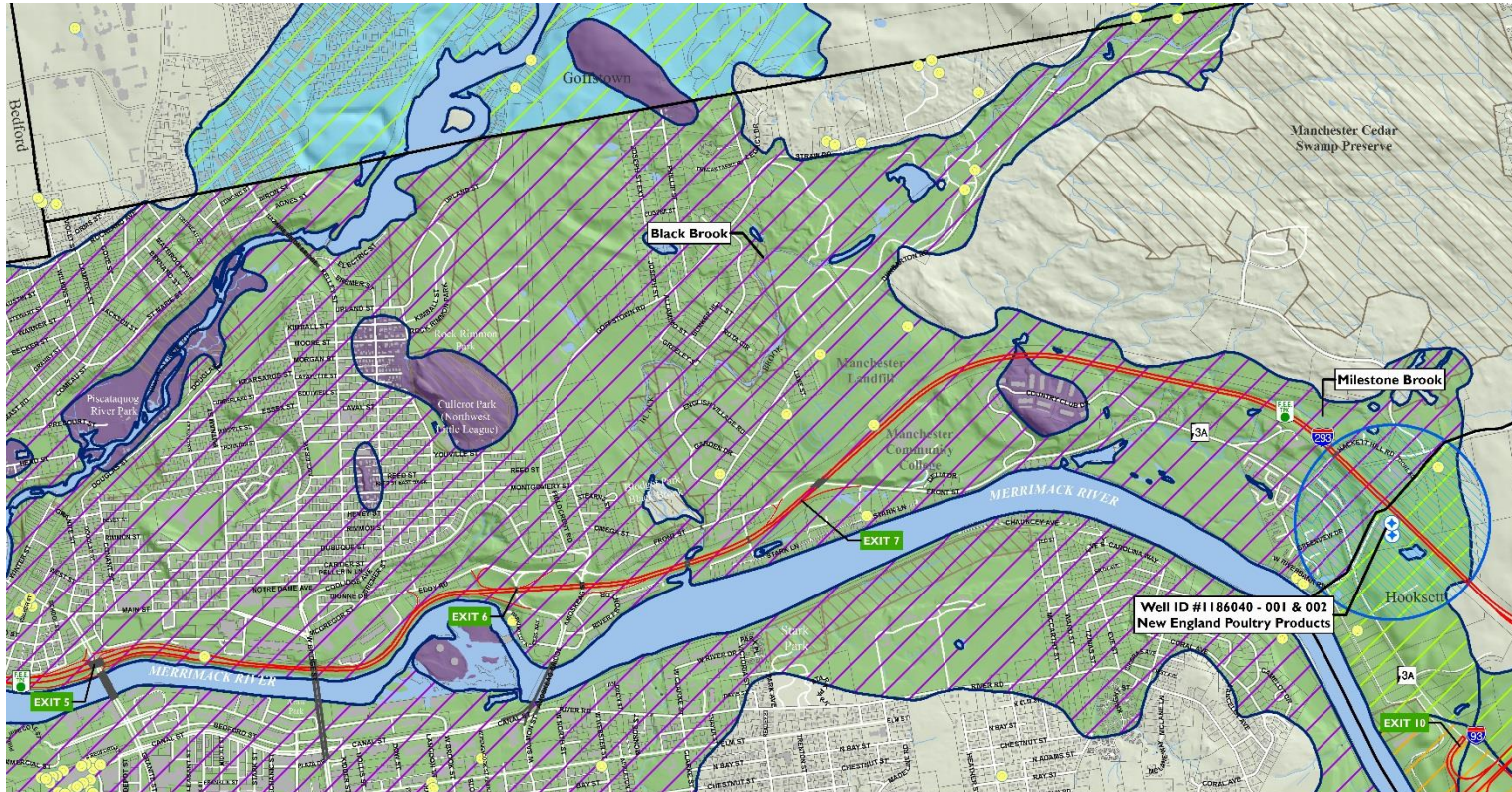
Legend	
Assessor's Tax Parcels	Surface Water
Building	Stream
Bridge	City Park Land
Town/City Boundary	Conservation/Public Land
FIRM Panels	1% Annual Chance Flood Hazard
Base Flood Elevations	Regulatory Floodway
	Special Floodway
	Area of Undetermined Flood Hazard
	0.2% Annual Chance Flood Hazard
	Future Conditions 1% Annual Chance Flood Hazard
	Area with Reduced Risk Due to Levee

FARMLAND SOILS



<ul style="list-style-type: none"> Assessor's Tax Parcels Building Bridge Town/City Boundary 	<ul style="list-style-type: none"> Surface Water Stream Conservation/Public Land 	<p>Soils</p> <ul style="list-style-type: none"> All areas are prime farmland Farmland of local importance 	<ul style="list-style-type: none"> Farmland of statewide importance Prime farmland if drained Prime farmland if protected from flooding or not frequently flooded during the growing season
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GROUNDWATER RESOURCES



Note: The entire City of Manchester is located in the Source Water Protection Area (SWPA).



Legend

- Assessor's Tax Parcels
- Building
- Bridge
- Town/City Boundary
- Surface Water
- Stream
- Conservation/Public Land
- Public Water Supply
- Private Well Inventory
- Well Head Protection Area

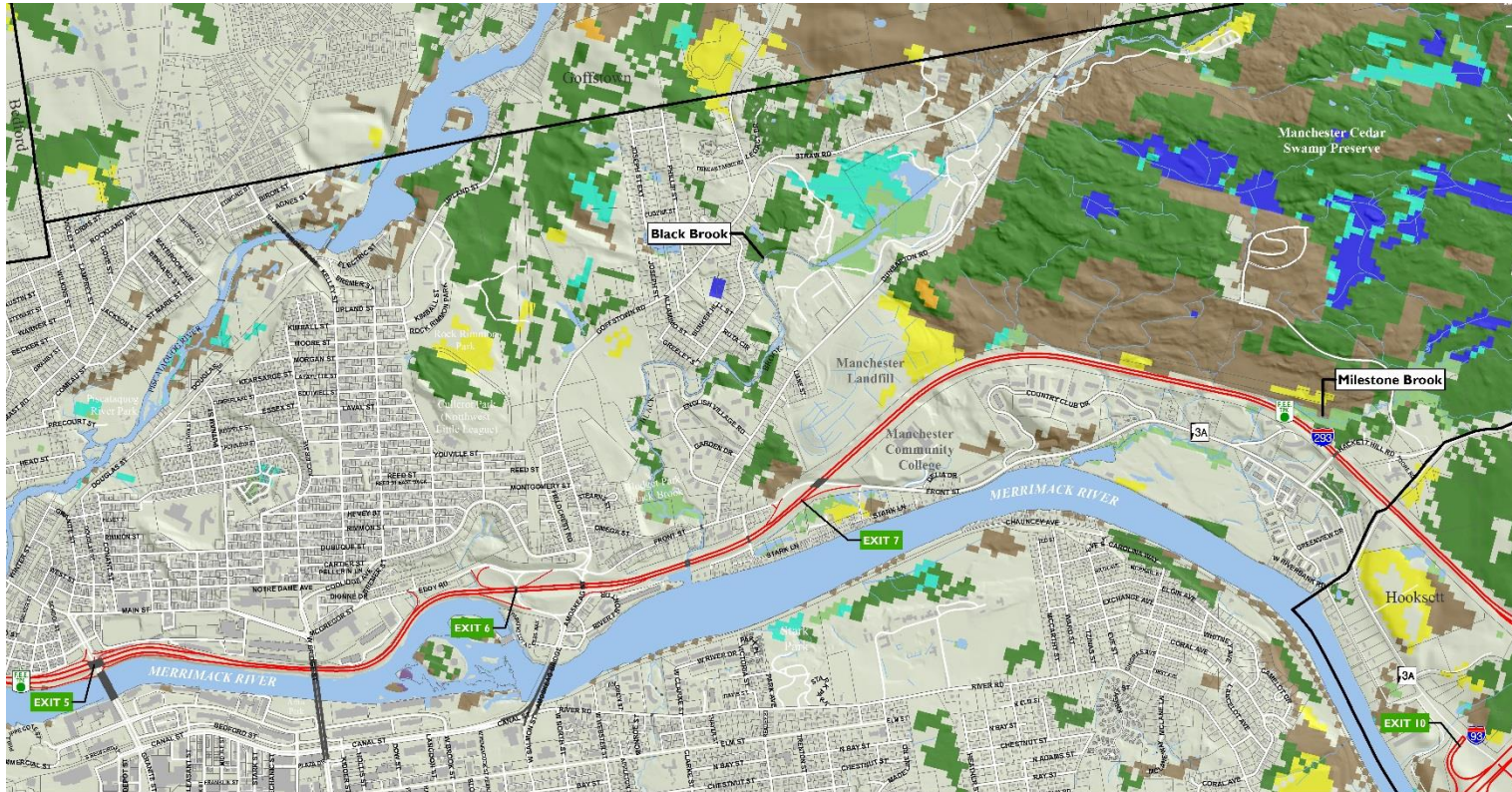
USGS Aquifer Boundaries

- Glacial Lake Bottom Deposits
- Stratified drift
- Till
- Non Aquifer Area

Aquifer Transmissivity (sq.ft./day)

- 0
- 1 - 1000
- 1001 - 2000
- 4001 - 99999

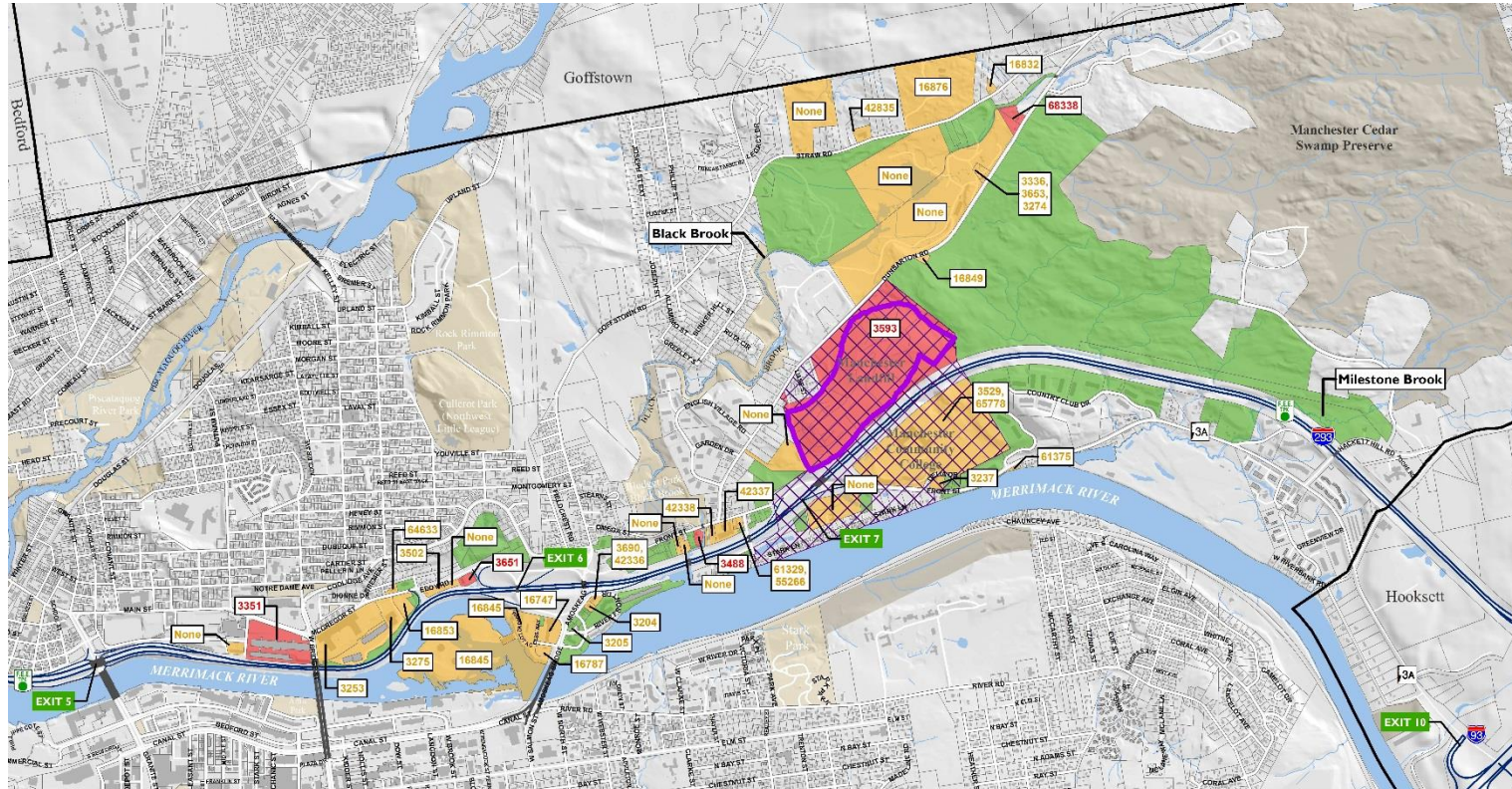
WILDLIFE ACTION PLAN HABITATS



Legend

- | | | | | |
|------------------------|---------------|--|--------------------------|--|
| Assessor's Tax Parcels | Surface Water | New Hampshire Fish & Game Wildlife Action Plan Habitats | Wetland | Area not considered to be priority habitat |
| Building | Stream | Appalachian oak pine | Rocky ridge | |
| Bridge | | Floodplain forest | Temperate swamp | |
| Town/City Boundary | | Grassland | Wet meadow/shrub wetland | |
| | | Hemlock hardwood pine | | |

HAZARDOUS SITES



Legend

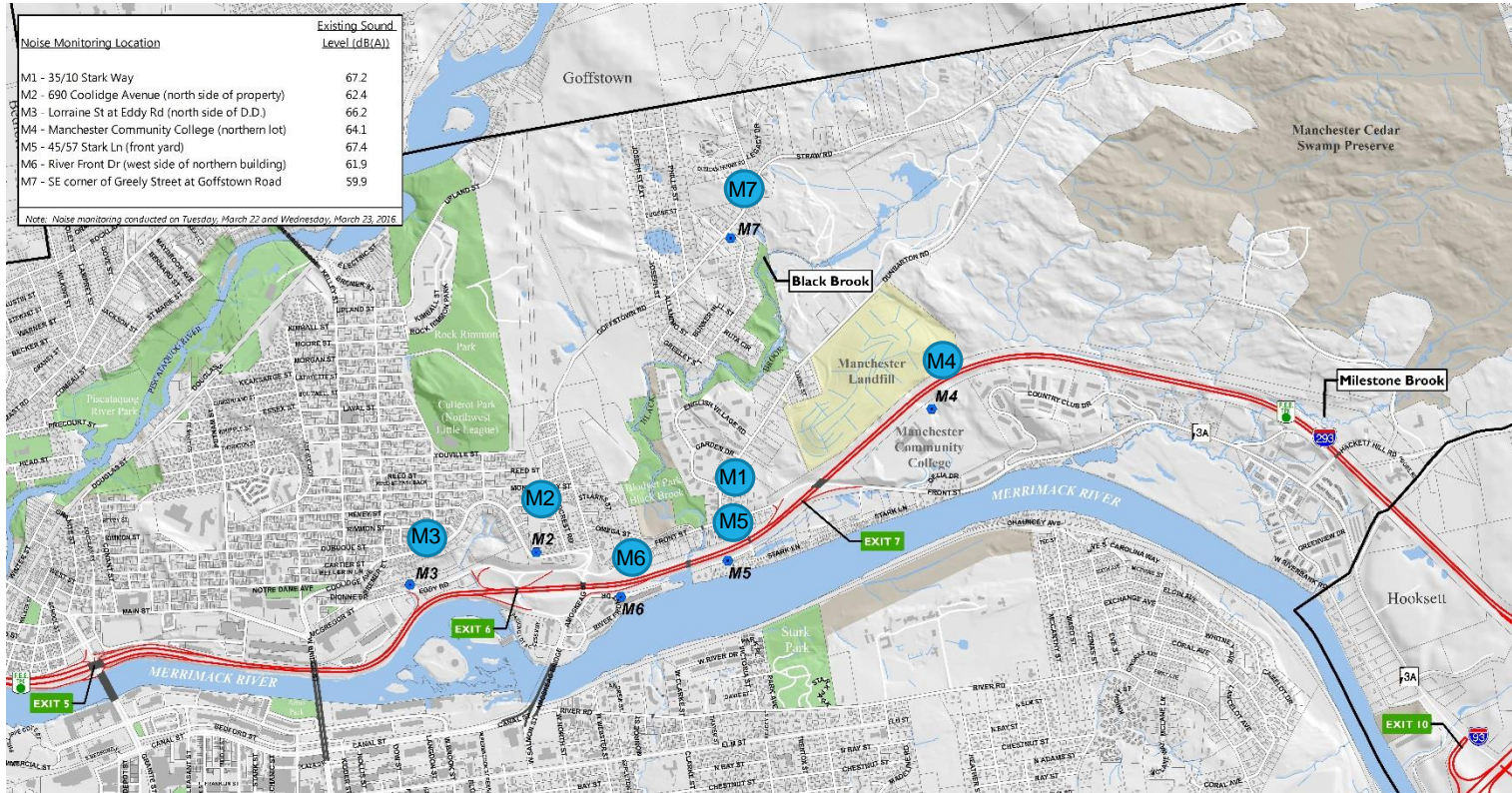
- Assessor's Tax Parcels
- Building
- Bridge
- Town/City Boundary
- Surface Water
- Stream
- City Park Land
- Conservation/Public Land

- landfill
- landfill Groundwater Management Zone

Findings Summary

- Likely to impact the Project
- Potential to impact the Project
- Unlikely to impact the Project

NOISE MONITORING LOCATIONS



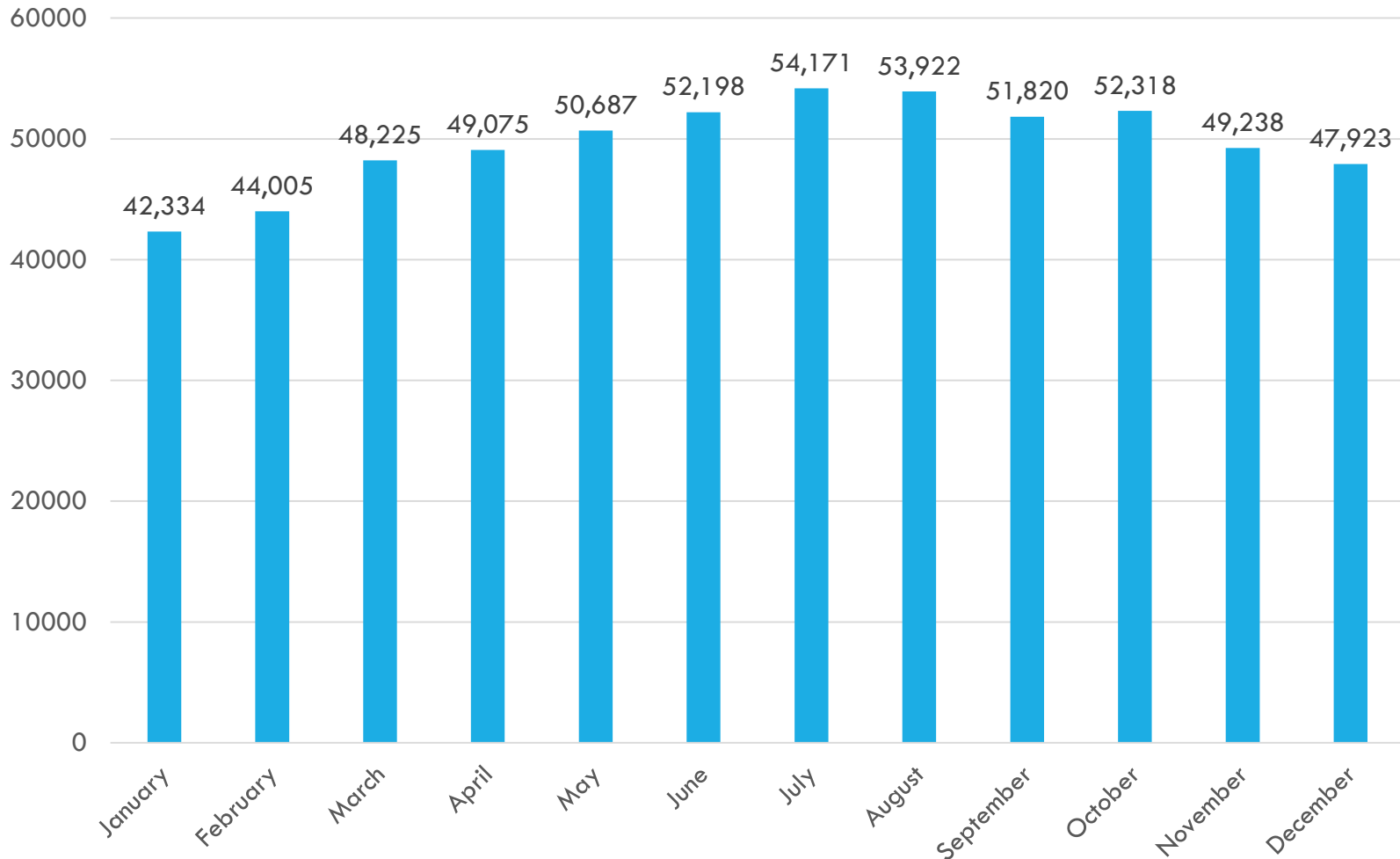
OTHER ENVIRONMENTAL RESOURCES

- Socio-Economic
- Air Quality
- Public Recreation and Conservation Lands
- Visual Resources

PRELIMINARY TRAFFIC MODEL RESULTS

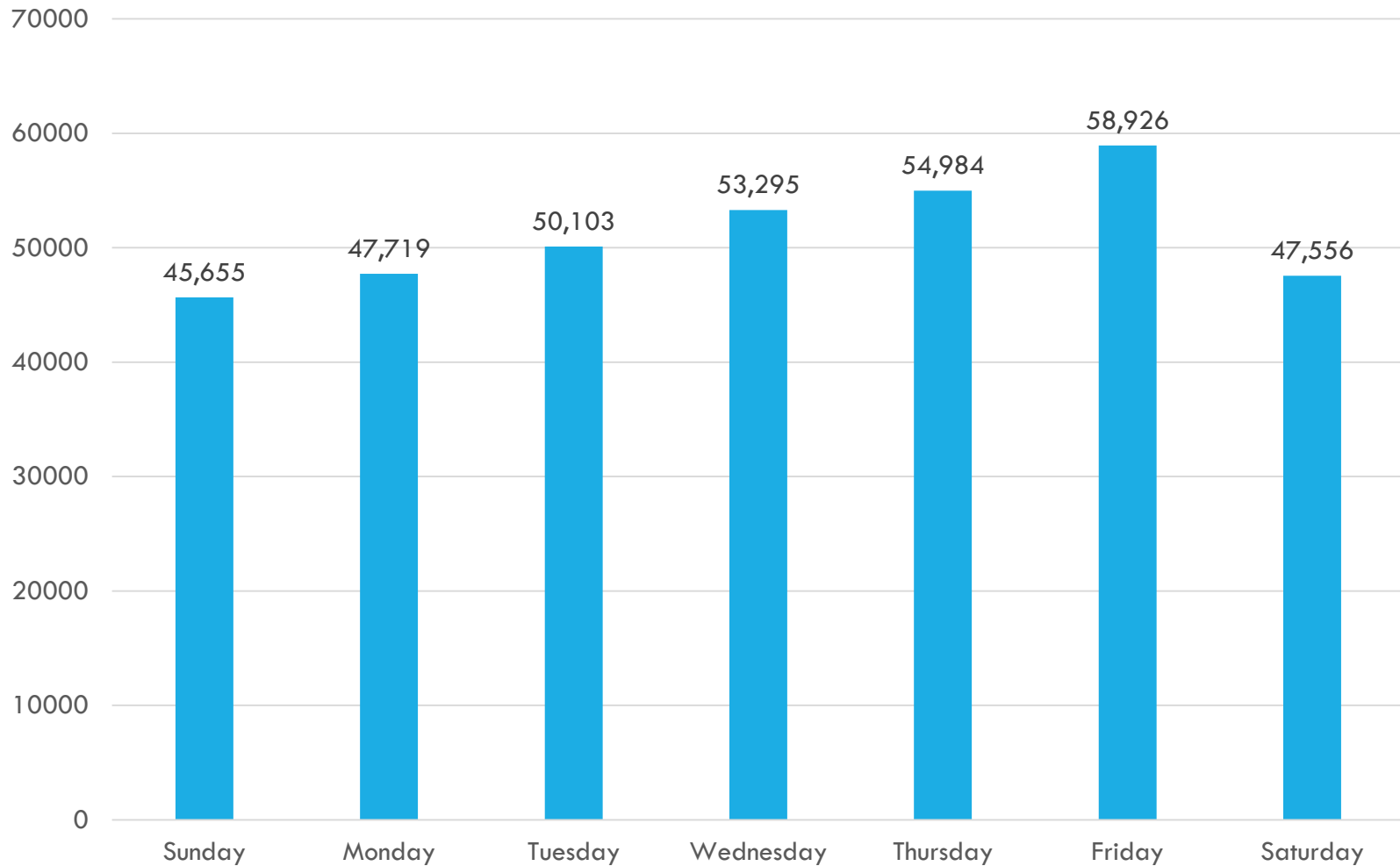
I-293 MONTHLY VOLUMES

2015 AT BEDFORD TOLLS — AVERAGE WEEKDAY



I-293 DAILY VOLUMES

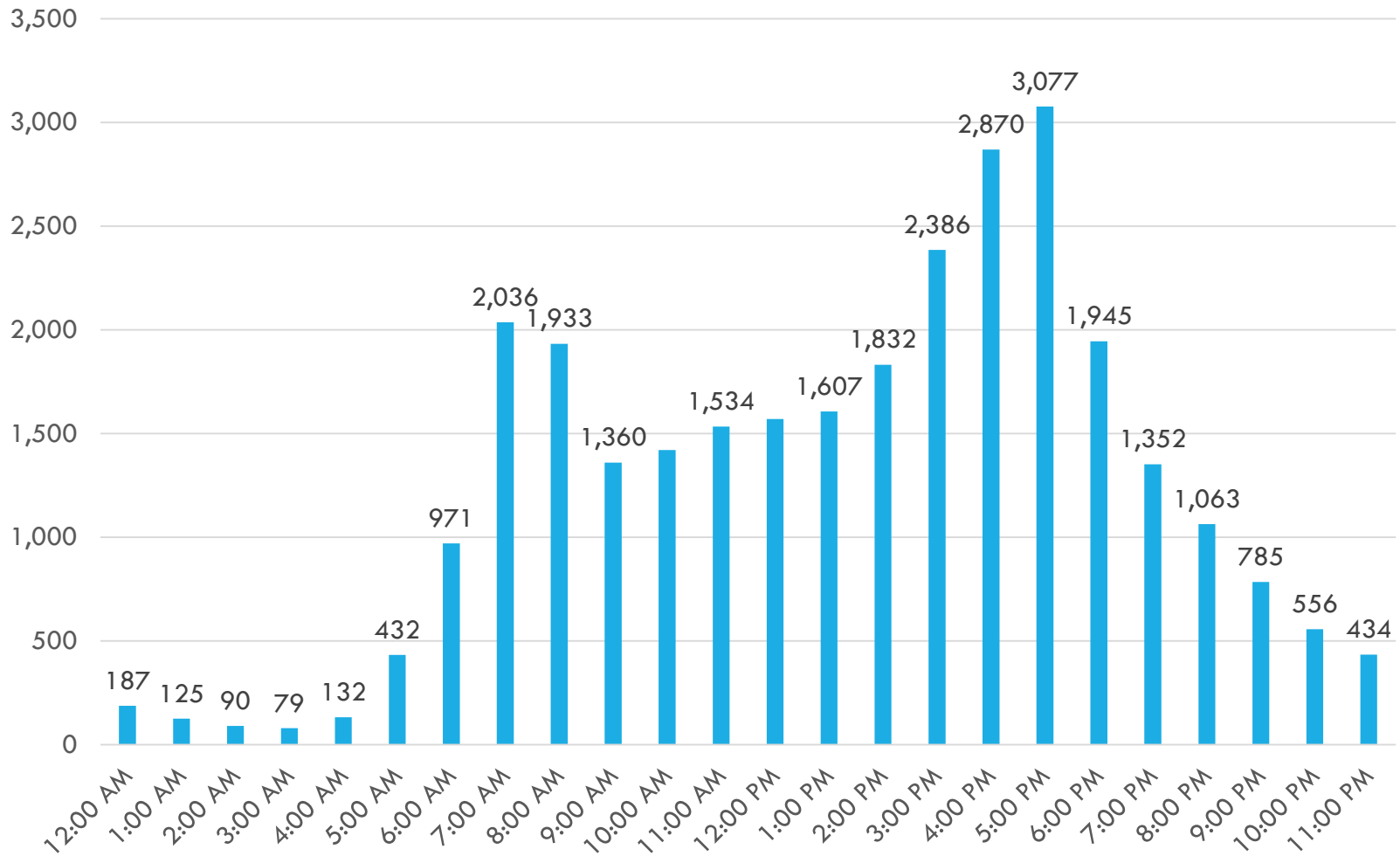
JUNE 2015 AT BEDFORD TOLLS



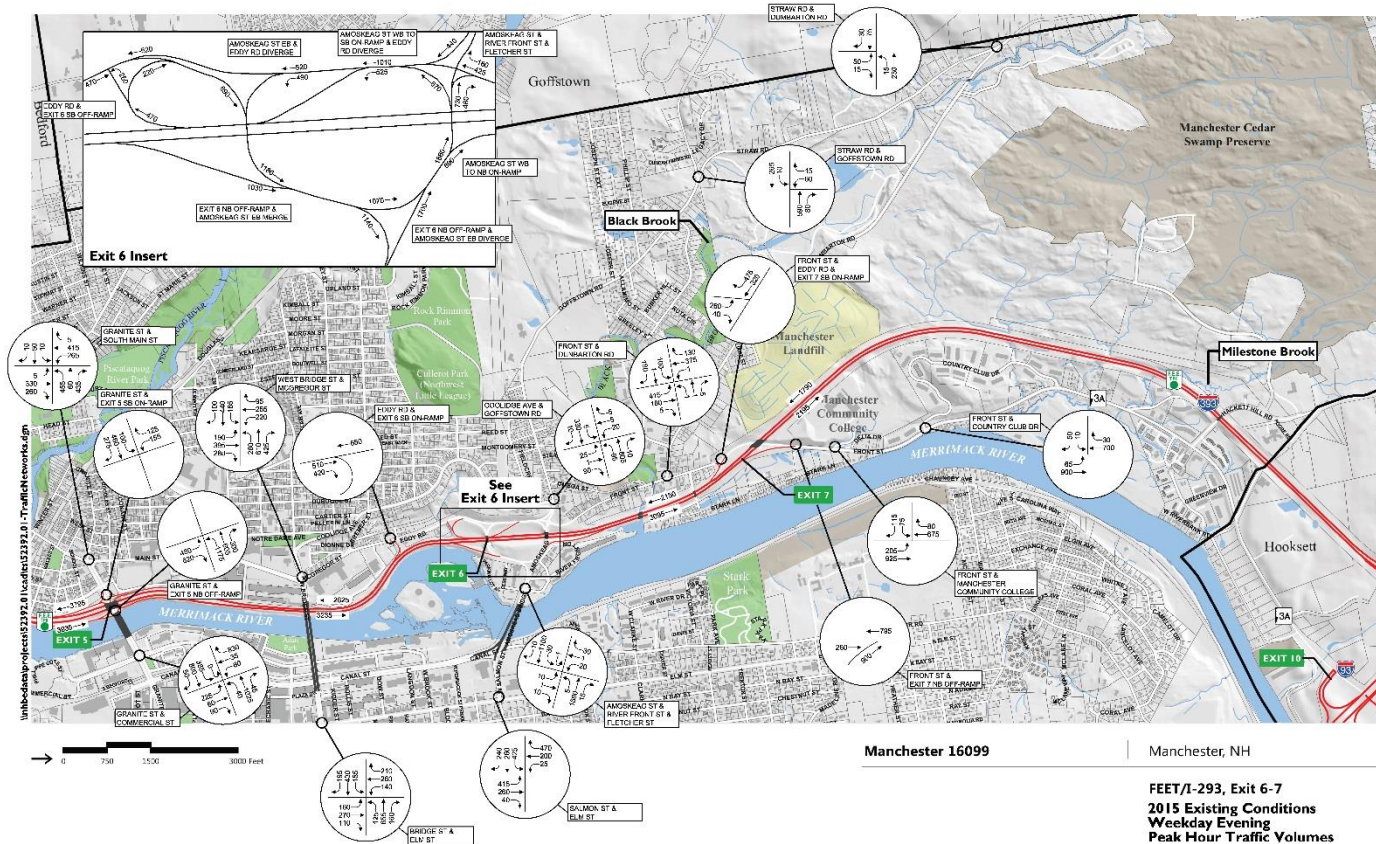
I-293 HOURLY VOLUMES (NORTHBOUND)

BETWEEN EXITS 5 AND 6

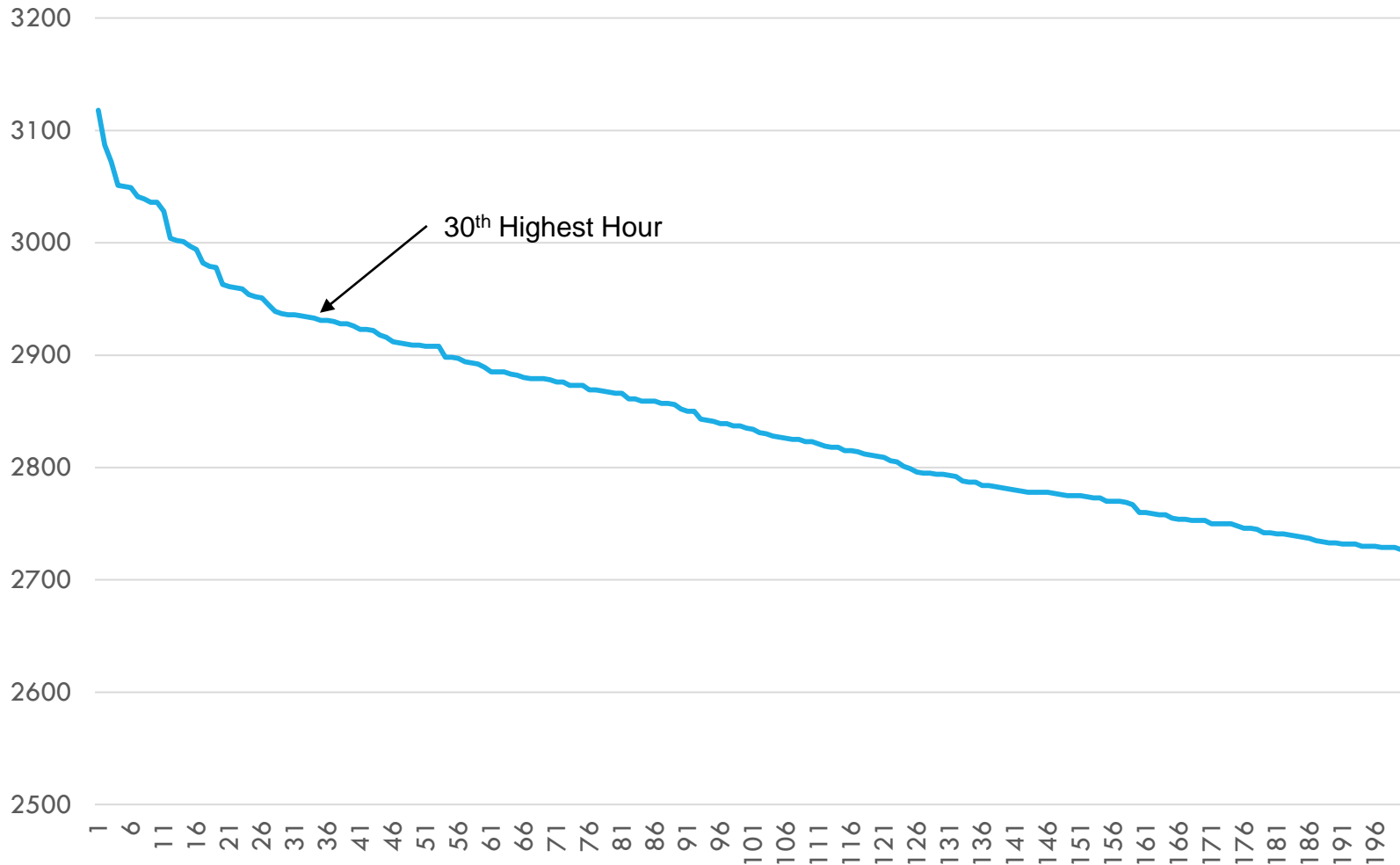
TUESDAY AUGUST 18, 2015



EXISTING WEEKDAY PM PEAK HOUR



DESIGN HOUR VOLUME (DHV)

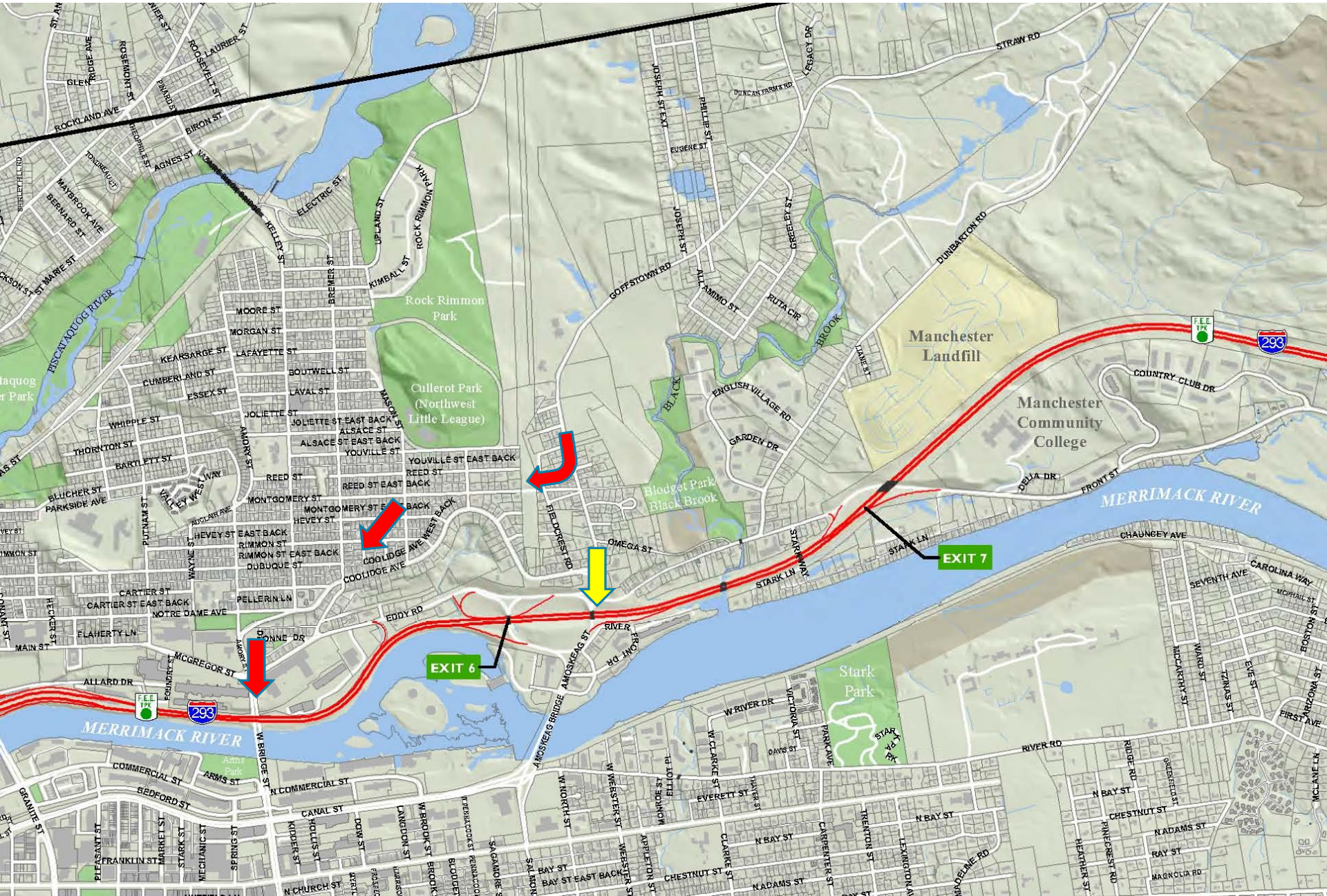


PRELIMINARY TRAFFIC MODEL RESULTS DIVERSIONARY EFFECTS

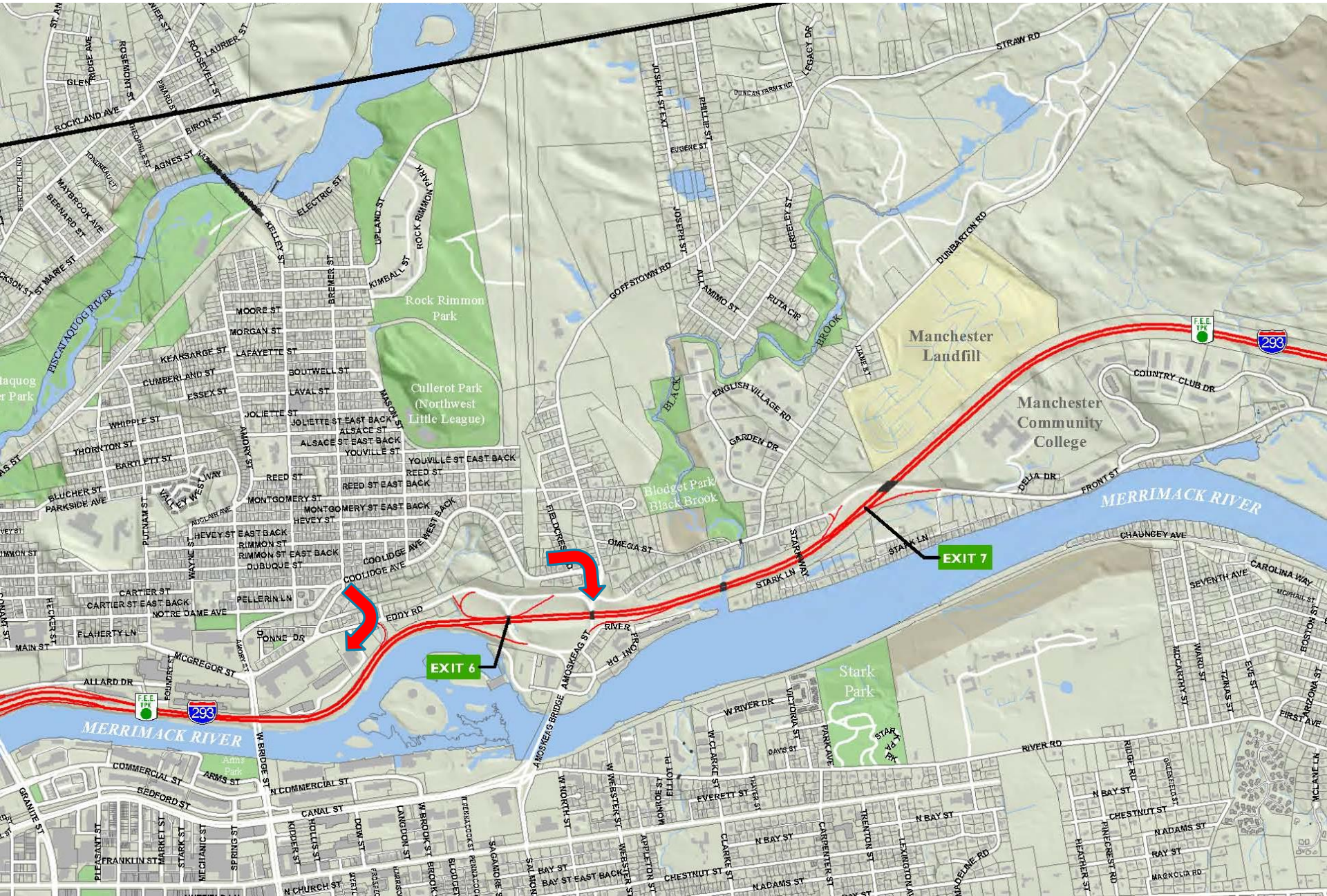
What happens when we upgrade Exit 6?

1. Reduced Congestion and Delay
2. Diversion of traffic flow within west side neighborhood

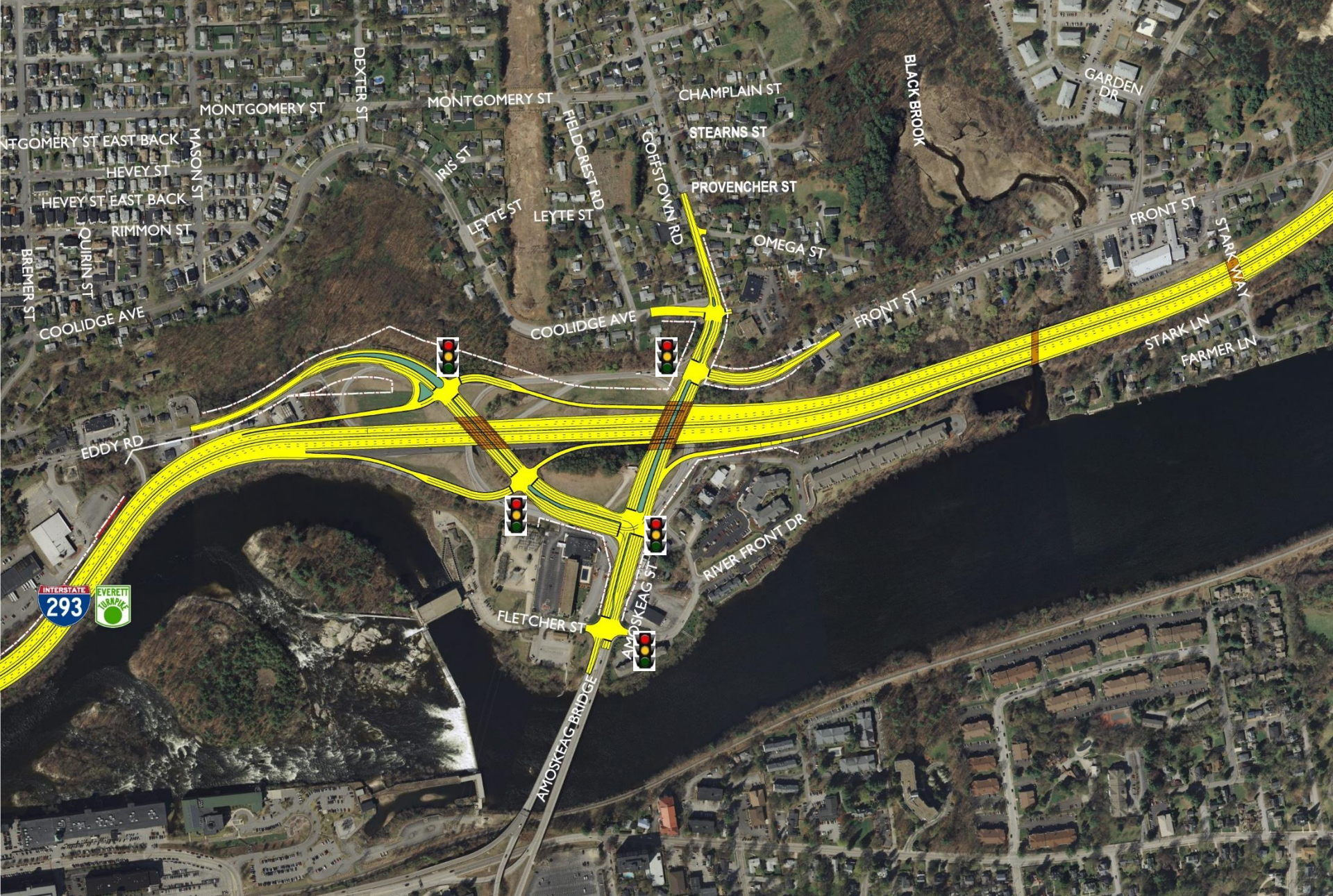
Study Corridor



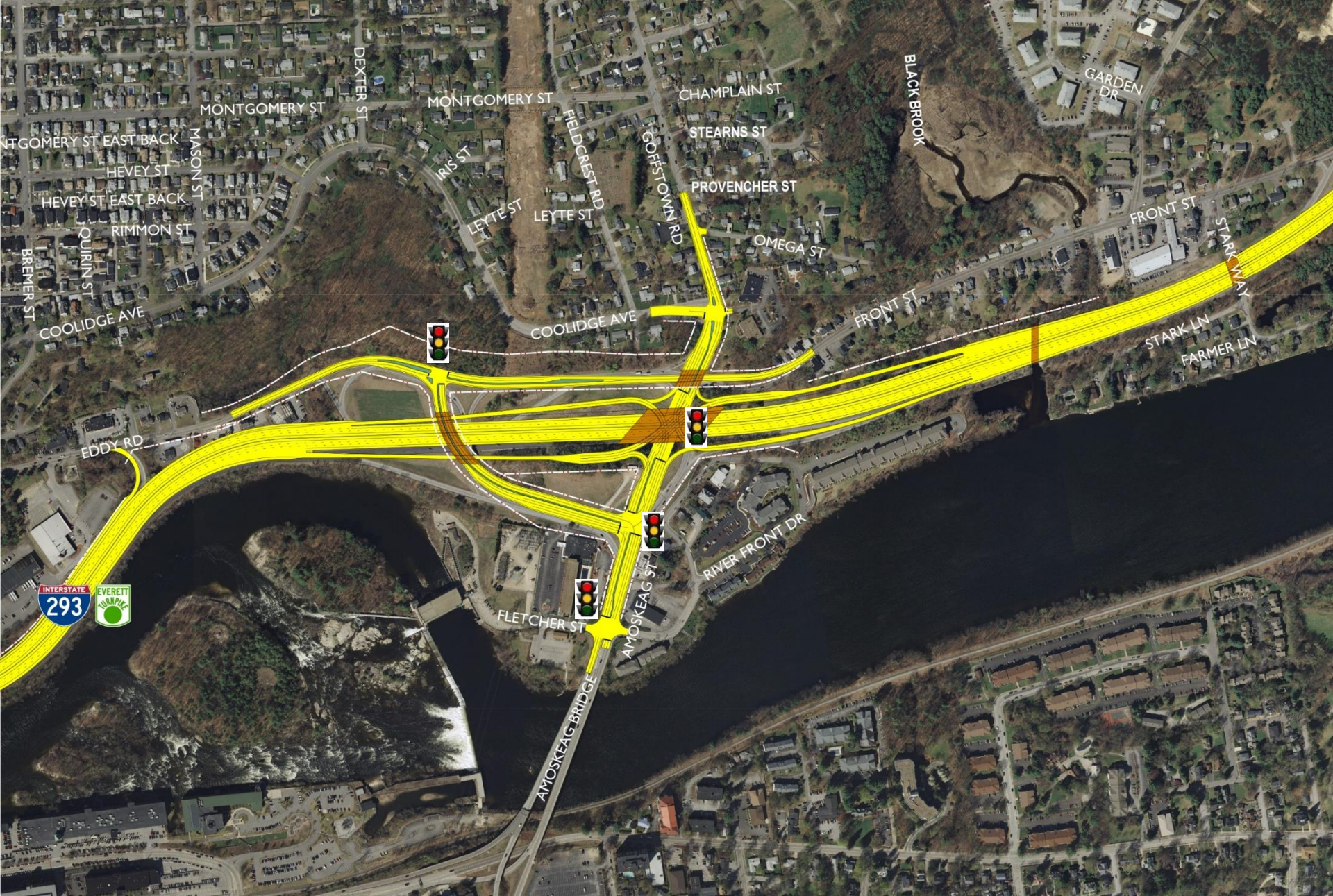
Study Corridor



Exit 6 – Diamond Interchange



Exit 6 – Single Point Urban Interchange (SPUI)



PRELIMINARY TRAFFIC MODEL RESULTS DIVERSIONARY EFFECTS

What happens when we provide a full interchange at the existing Exit 7 location?

Exit 7 – Diamond Interchange (Current Location)



Manchester
Landfill

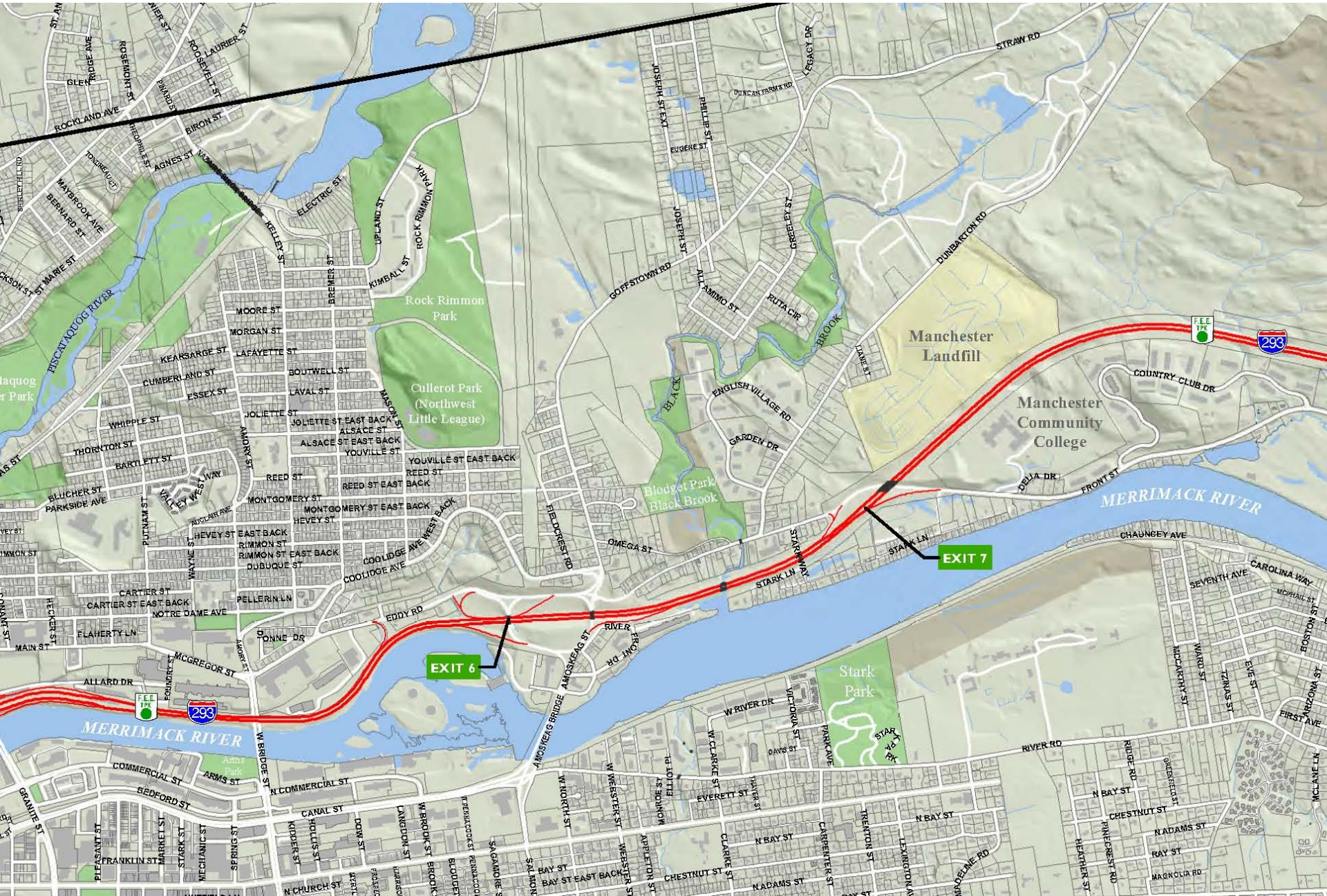
Manchester
Community
College

293
TURNPIKE

BL
ENGLISH VILLAGE RD
DUNBARTON RD
LOUISE ST
GARDEN DR
GARDEN DR
FRONT ST
STARKWAY
STARK LN
FARMER LN

DELIA DR
FRONT ST
STARK LN

Study Corridor



PRELIMINARY TRAFFIC MODEL RESULTS DIVERSIONARY EFFECTS

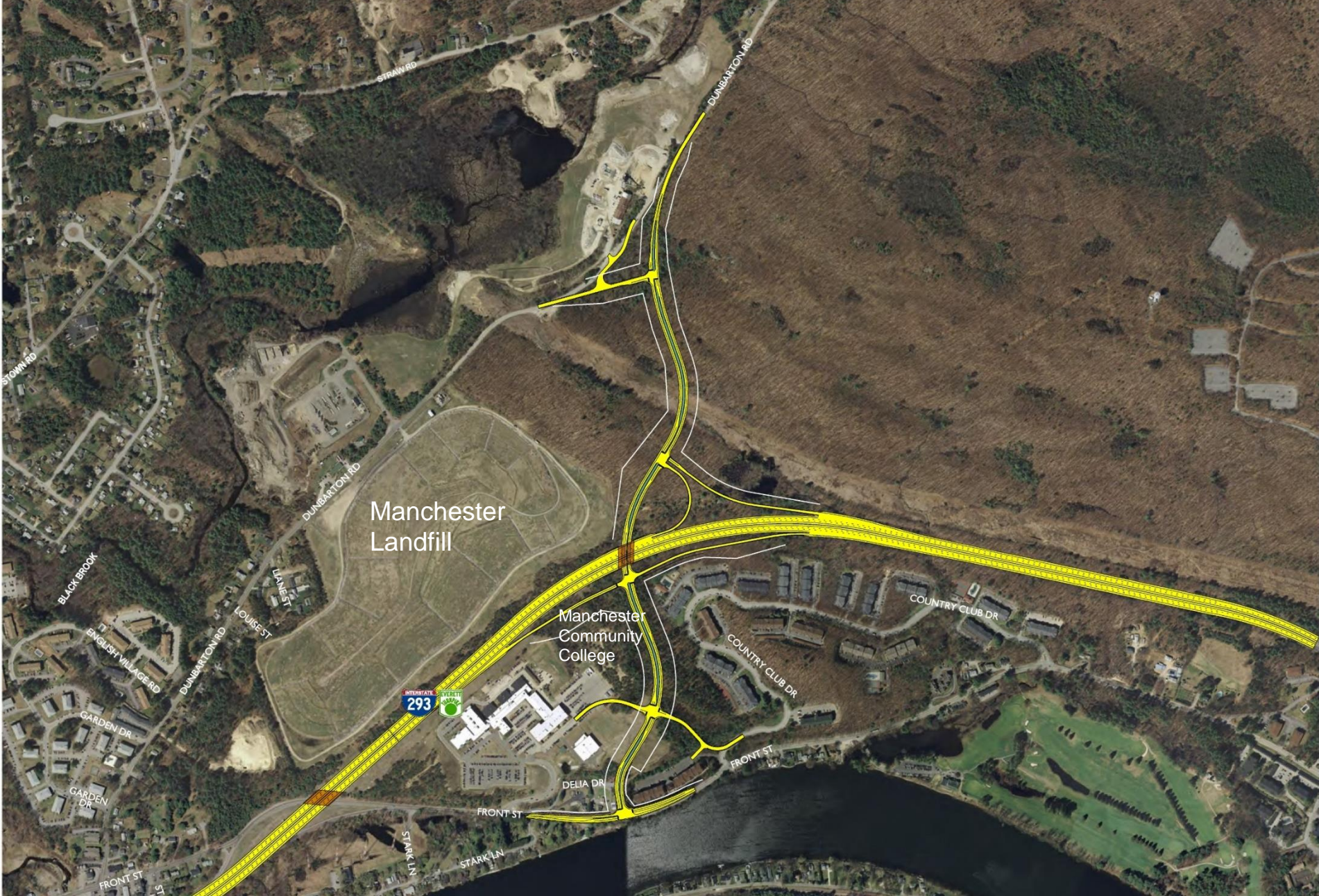
What happens when we relocate Exit 7 to the north?

1. Improved access to Hackett Hill Master Plan Area
2. Reduction of traffic on Goffstown Road

335 vph in AM (24%)

260 vph in PM (19%)

Exit 7 – Potential New Location for Interchange



PRELIMINARY TRAFFIC MODEL RESULTS DIVERSIONARY EFFECTS

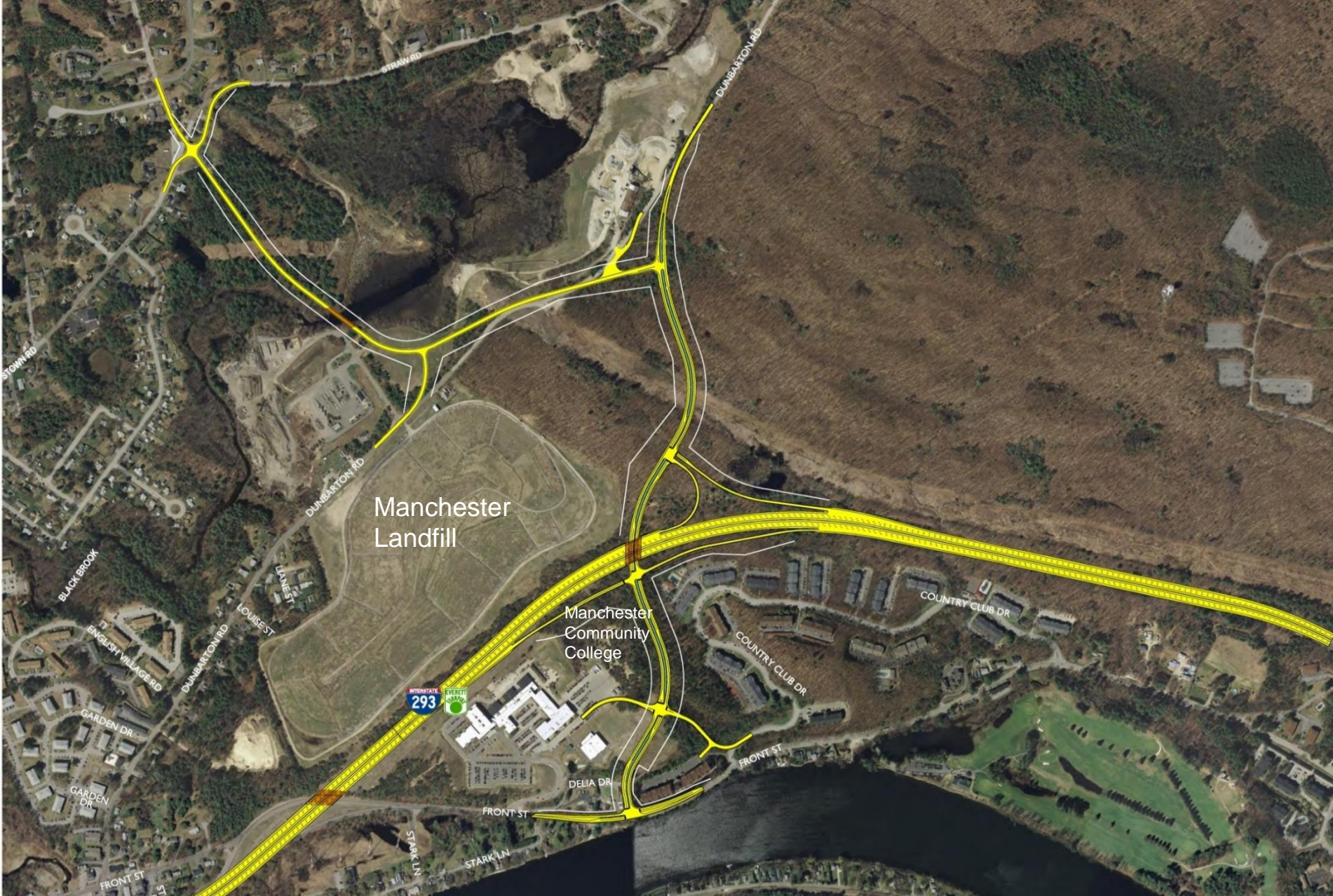
What happens when we relocate Exit 7 to the north and provide a connection across the Black Brook?

1. Improved access to Goffstown's industrial zoned land
2. Reduction of traffic on Goffstown Road

435 vph in AM (32%)

455 vph in PM (32%)

Exit 7- Potential Northerly Alignment



PURPOSE AND NEED

WHAT IS A PURPOSE AND NEED STATEMENT?

A Purpose and Need Statement establishes a basis for the development of a reasonable range of alternatives and assists with the selection of a proposed action.

The statement may describe roadway, operational, safety, or system connectivity deficiencies, and may describe consistency with regional or community planning, social demands or economic development.

PURPOSE

The purpose of the project is to address capacity, safety, and access related deficiencies along a 3.5-mile portion of I-293 beginning north of Exit 5 and ending north of Exit 7 by:

- Correcting geometric and safety deficiencies while reducing congestion at problem locations;
- Accommodating future traffic growth related to commuter trips and the transportation of commercial goods and services through the corridor; and
- Improving access to the highway consistent with the long-term vision of the communities of Manchester and Goffstown.

NEED

Geometric and Safety Deficiencies

- Mainline curve south of Exit 6/sight line issues
- Backups, weaving, short tapers at Exit 6 ramps
- Short SB on-ramp from Eddy Road
- Congestion at Amoskeag Circle
- Lack of northbound connections at Exit 7
- Poor ramp configurations at Exit 7

NEED (CONTINUED)

Accommodating Future Growth

- Poor operating conditions (LOS E and F) for 2035 future year

Highway Access and Compatibility with Community's Vision

- Poor connectivity limits regional economic growth
- Existing interchange configurations limits connectivity to Manchester's Hackett Hill master plan area and to Goffstown's industrial-zoned land

PUBLIC INFORMATIONAL MEETING

Wednesday August 10, 2016

7:00 PM

Manchester Community College

Room 100 (Auditorium)

1066 Front Street

Manchester, NH



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