

Tri-Town Unified Development Vision

WILMINGTON :: ANDOVER :: TEWKSBURY

Preferred Access Alternative

Tri-Town Task Force



Prepared by:
The Cecil Group

November 15, 2007

Agenda for Preferred Access Alternative

- Performance Standards
- Choices
- Mitigation

Standards for Performance

Possible Standards:

- Accessibility
- Mobility
- Relief of Congestion

Performance Standards

Tewksbury:

- Block new traffic on to South Street
- Provide access to developable commercial/ industrial land
- Provide access for Sutton Brook clean-up

Performance Standards

Andover:

- Provide immediate and direct access to existing businesses
- Improve traffic conditions in existing, adjacent neighborhoods and on collector roads
- Avoid deterioration of level of service at other highway improvements – e.g. Rt.125 slip ramp
- Avoid excessive local construction and maintenance costs

Performance Standards

Wilmington:

- No impacts to Salem Street
- Provide access to developable commercial/ industrial land
- Enhance potential for Haverhill Commuter Rail
- Maximize smart growth

Performance Standards

Junction Interchange Study (IJR):

- Reduce congestion around the Rt 125 interchange/ Exit 41
- Reduce traffic at Dascomb Rd interchange / Exit 42
- Provide full I-93 access to/from Lowell Junction, including access for and between existing commercial/ industrial lands, and access for undeveloped commercial /industrial land

Performance Standards

Junction Interchange Study:

- Reduce traffic flow on residential streets in BallardVale
- Provide access for Sutton Brook clean-up
- Provide access for potential commuter rail station on west side of I-93, including a park-and-ride facility

Performance Standards

FHWA:

Interstate Access Modification Policy -

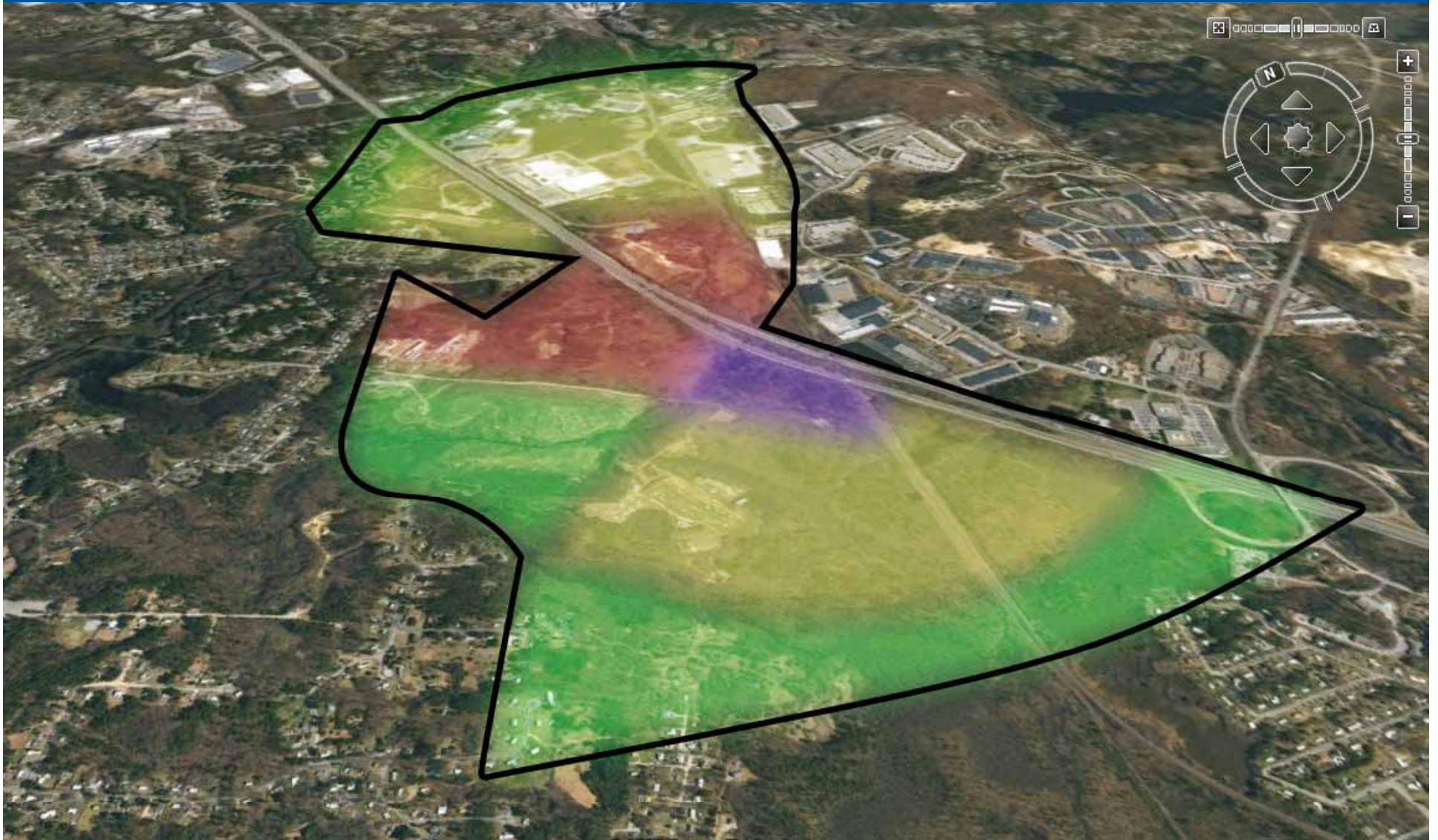
- Existing roadways, even if improved, can not provide the “access intended by the proposal”
- All reasonable alternatives are assessed
- Does not impact safety and operation of I-93
- Access connects to a public road only

Performance Standards

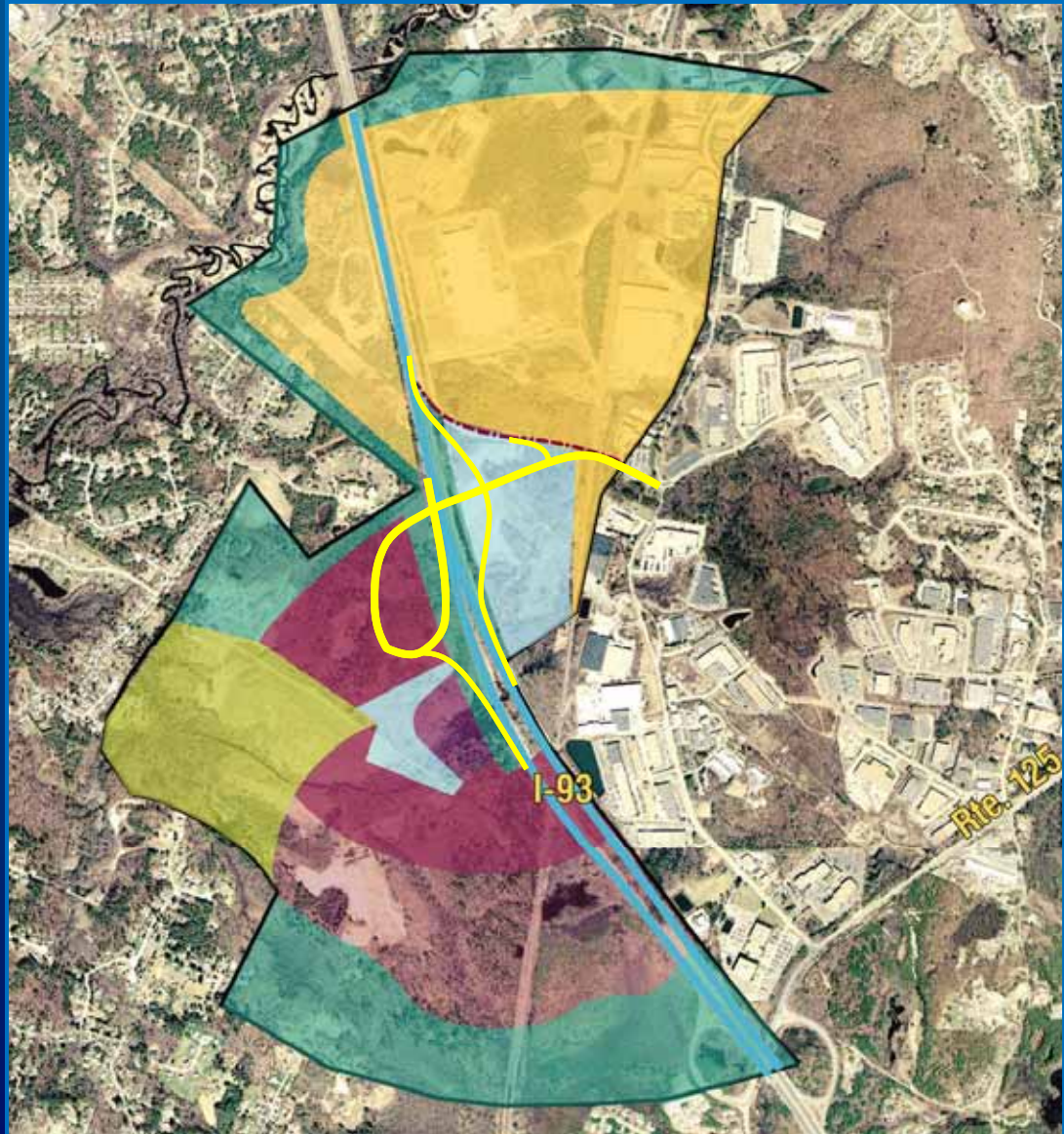
Interstate Access Modification Policy:

- Proposal is consistent with local land use and transportation plans
- New development is coordinated with transportation system improvements
- Environmental processing information is included

Choices



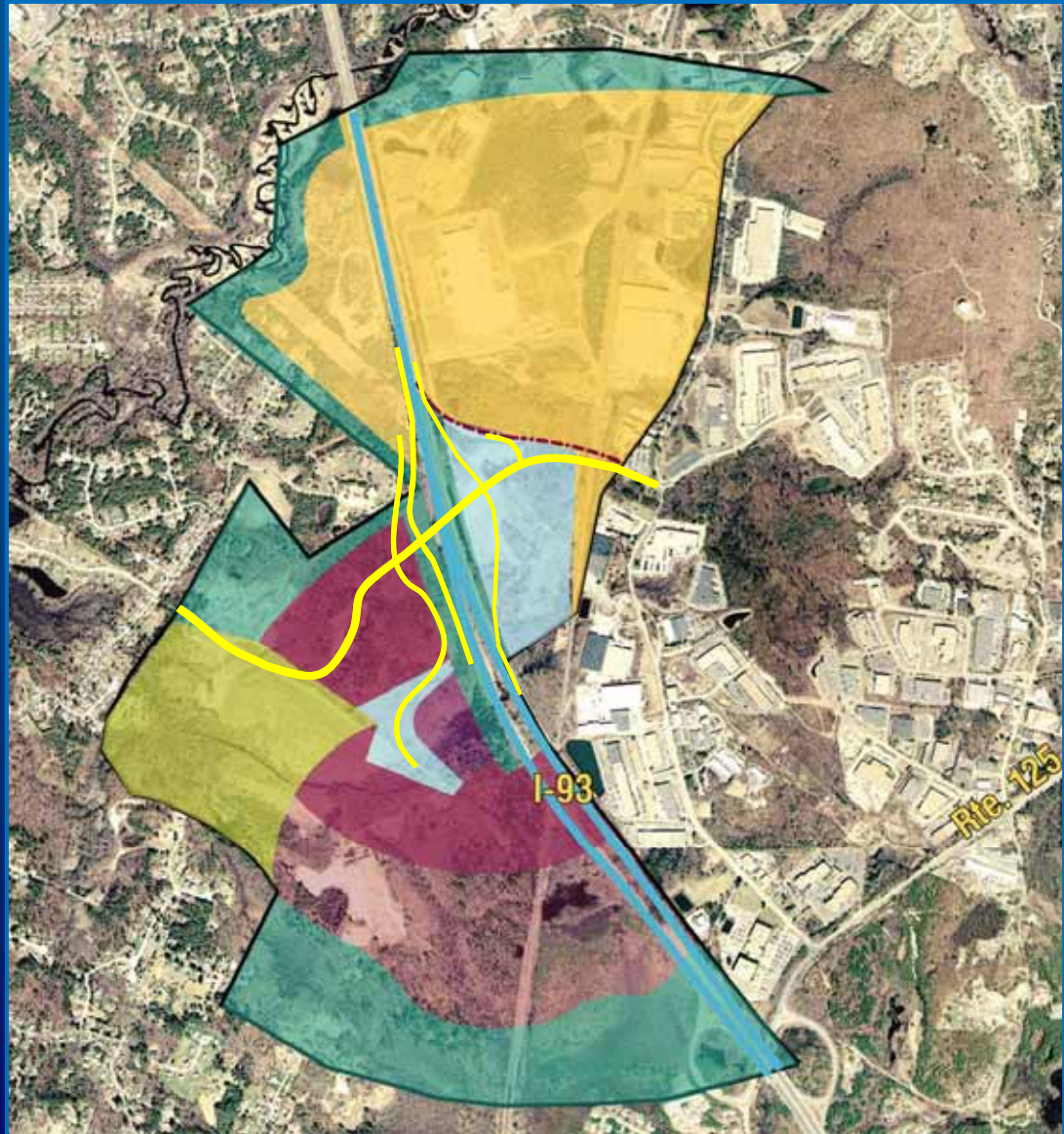
Interchange Alternative 3



Interchange Alternative 3



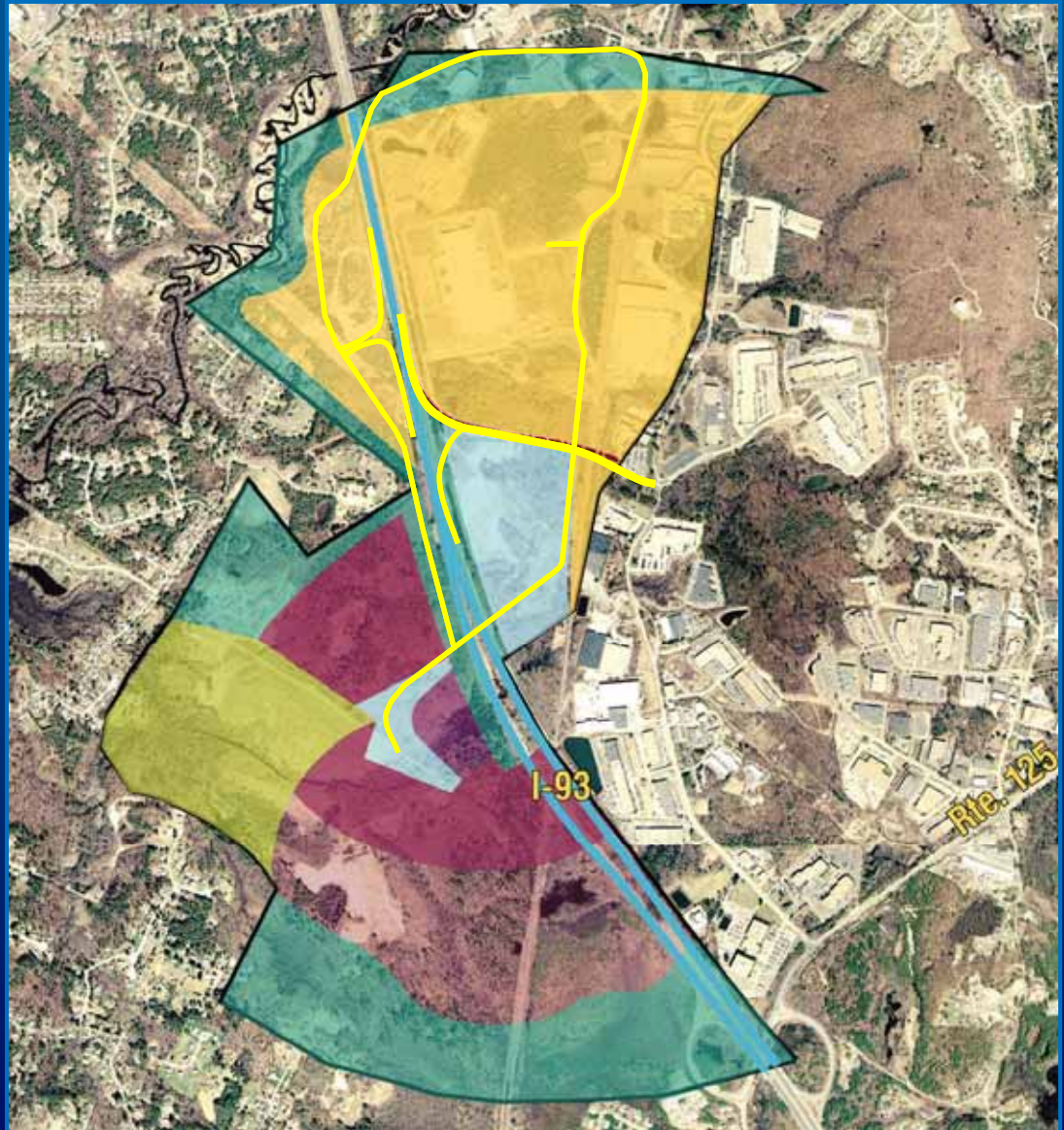
Interchange Alternative 4



Interchange Alternative 4



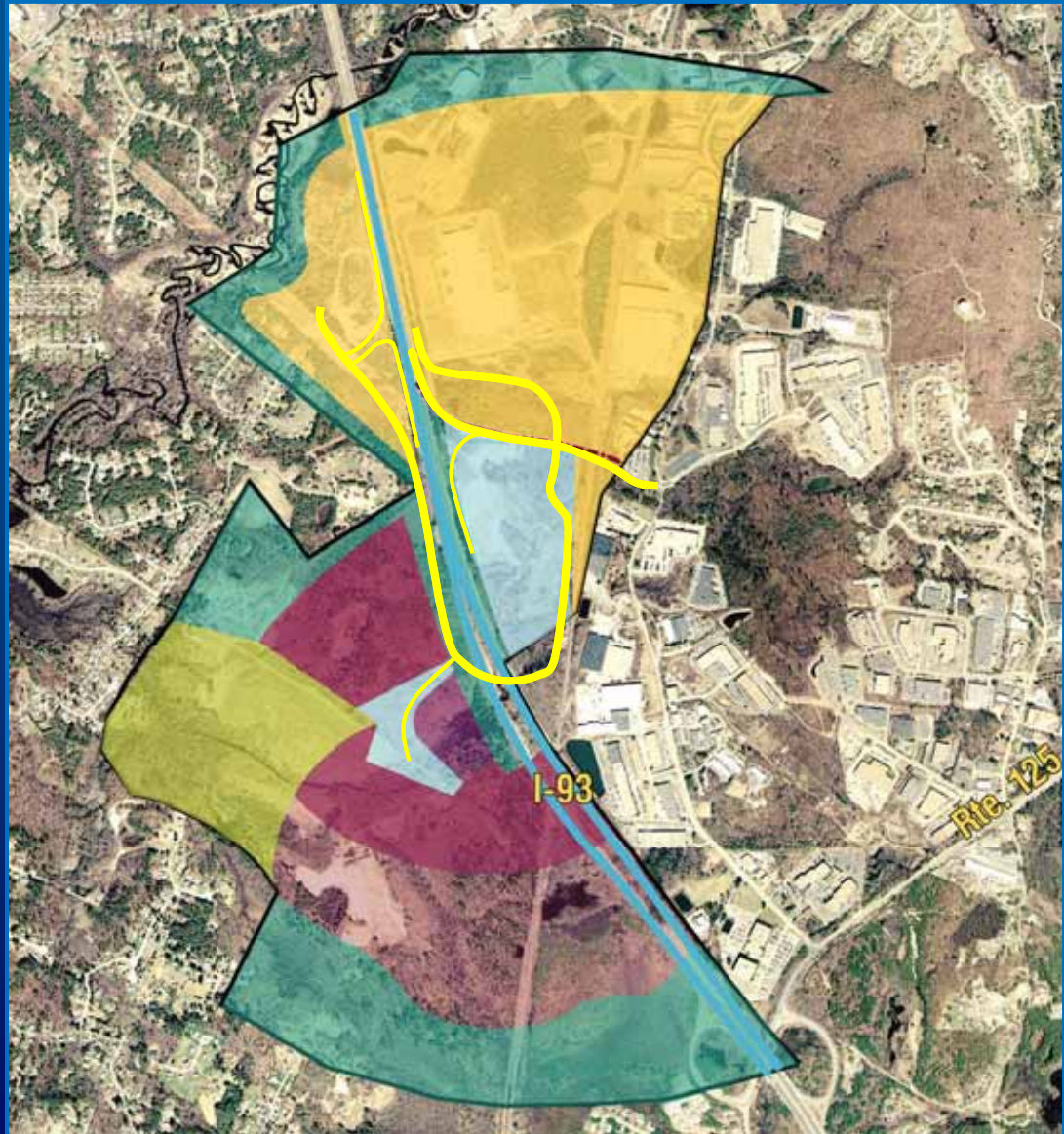
Interchange Alternative 7



Interchange Alternative 7



Interchange Alternative 9



Interchange Alternative 9



Choices

Tewksbury:

- Alternatives 7 and 9
- Alternative 4 has significant costs and impacts

Choices

Wilmington:

- Alternatives 4, 7, and 9
- Alternatives 2 and 3 do not provide desired access

Choices

Andover:

- Alternatives 3, 4, and 9
- All other alternatives rejected

Choices

Lowell Junction Interchange Study (IJR):

- Alternatives 3, 4 or 9

Choices

FHWA: (as of April 27, 2007)

- Only Alternative 3
- Not alternatives 4 or 9

Choices

Alternative

	Wilmington	Andover	Tewksbury	FHWA	IJR
3	★	★	★	★	★
4	★	★	★	★	★
7	★	★	★		
9	★	★	★	★	★



3



4



7

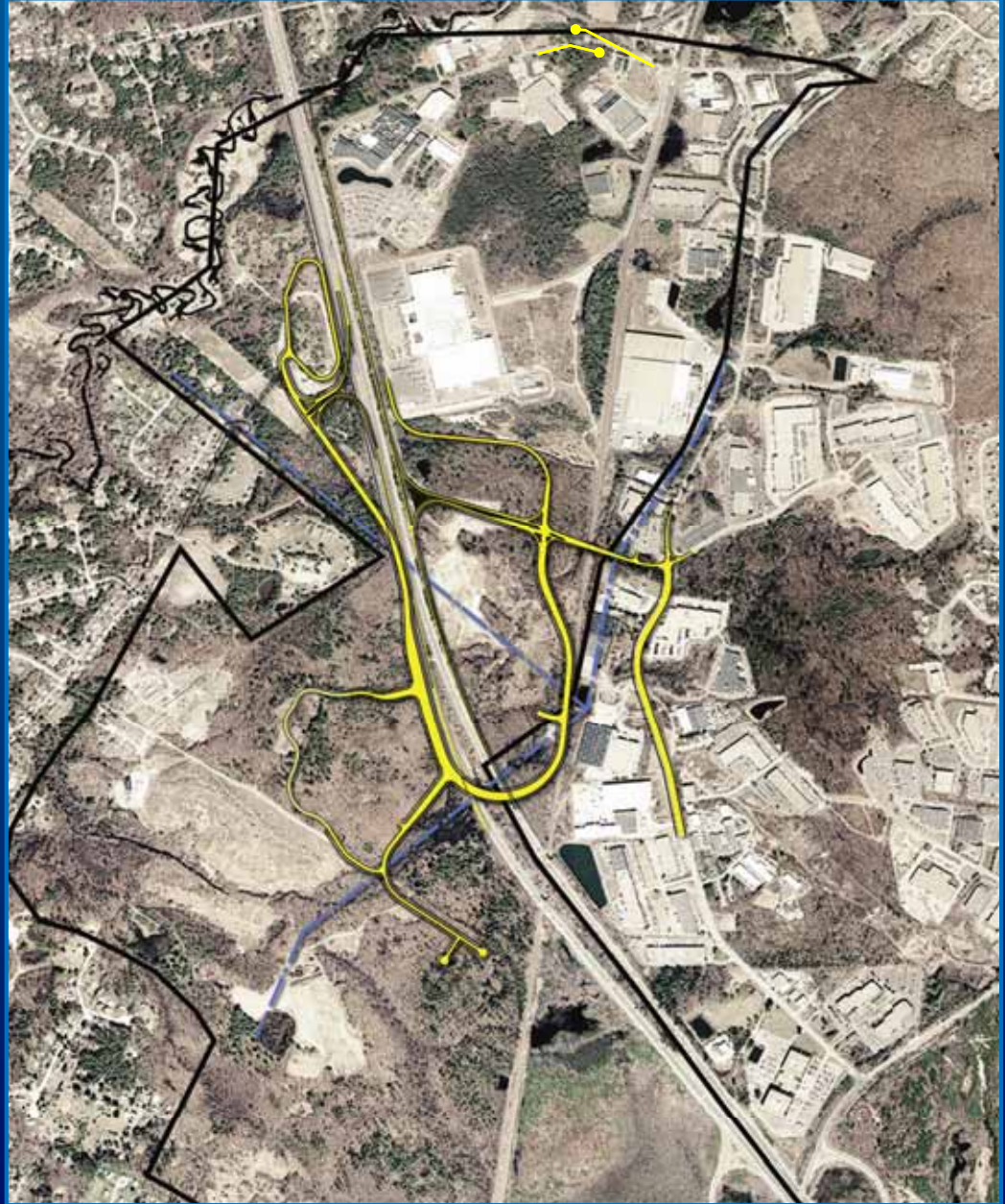


9

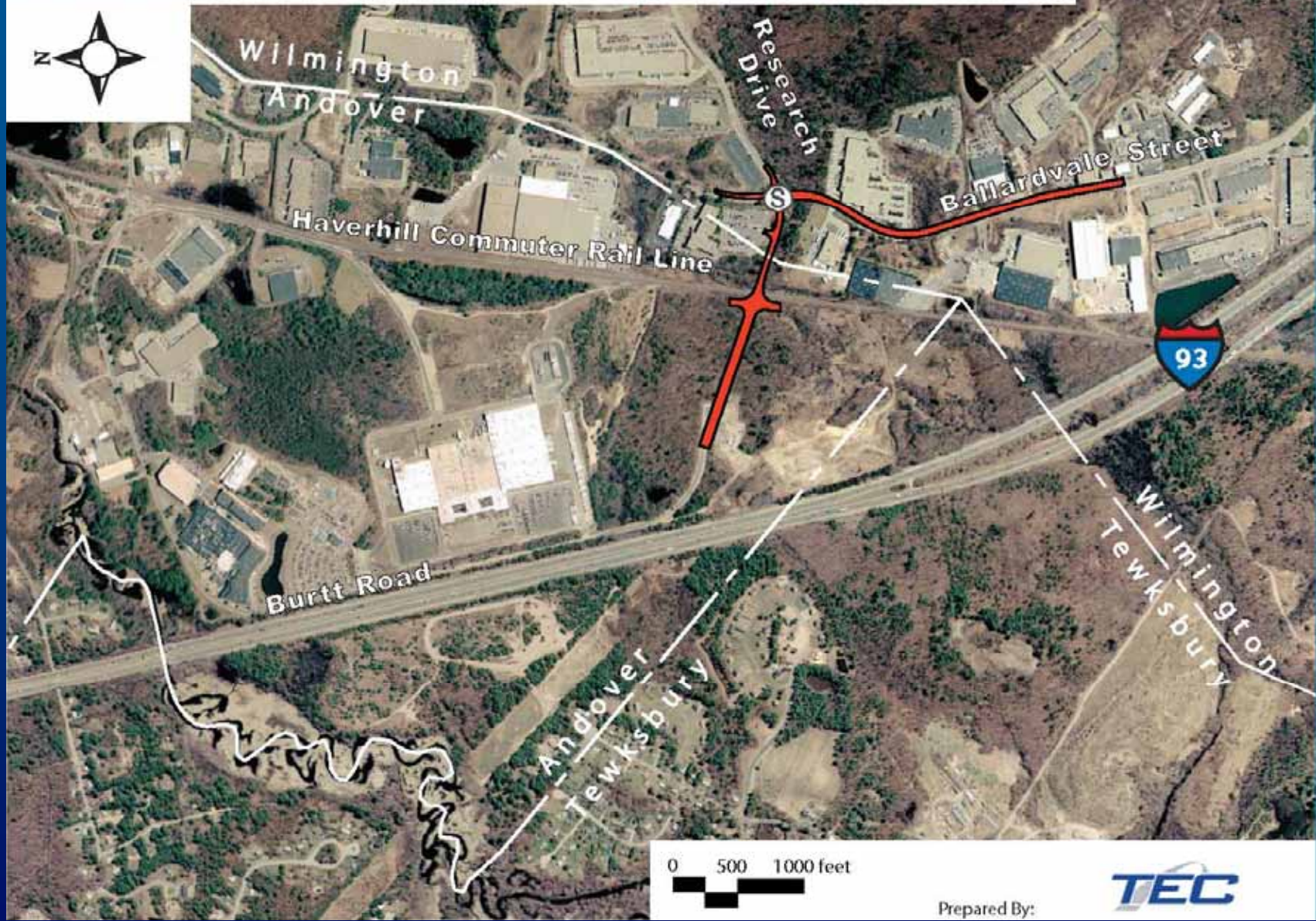
Comparison [from 7/2006 IJR]

Criteria	Alternative 4	Alternative 9
Local road impacts (LOS)	2/3 deficient intersections (AM/PM)	2/4 deficient intersections (AM/PM)
Potential mitigation	South St improvements	BallardVale traffic calming
Wetland impacts	5.3 ac	6.0 ac
New development	East and west sides	East and west sides
New jobs and taxes	Many/moderate	Most/most
Land use impacts	Jennies Way	Jennies Way
Potential for rail and park and ride	Yes	Yes

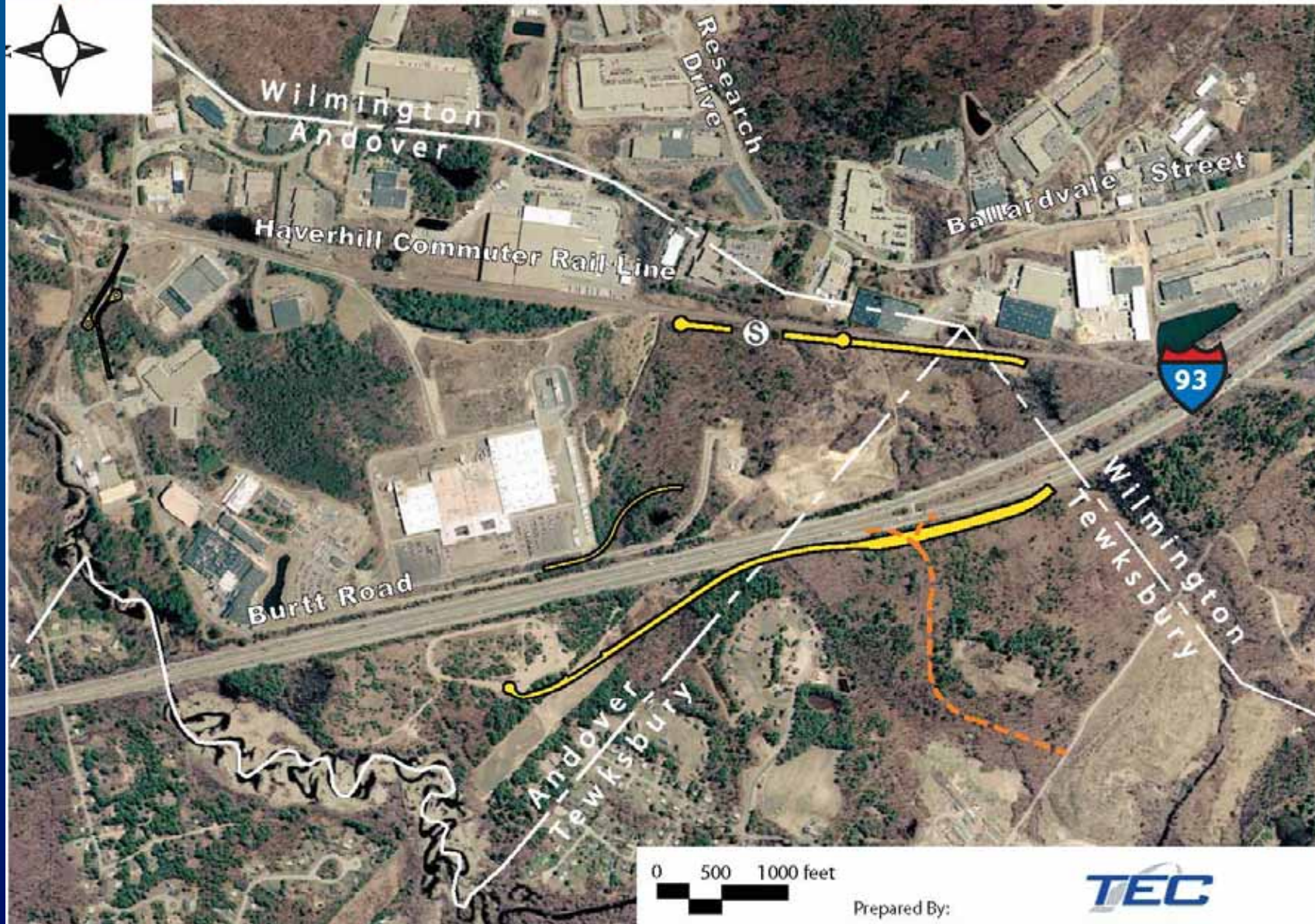
Interchange Alternative 9B



Public Works/Economic Development Project (PWED)



Supporting Infrastructure - Local Arterials



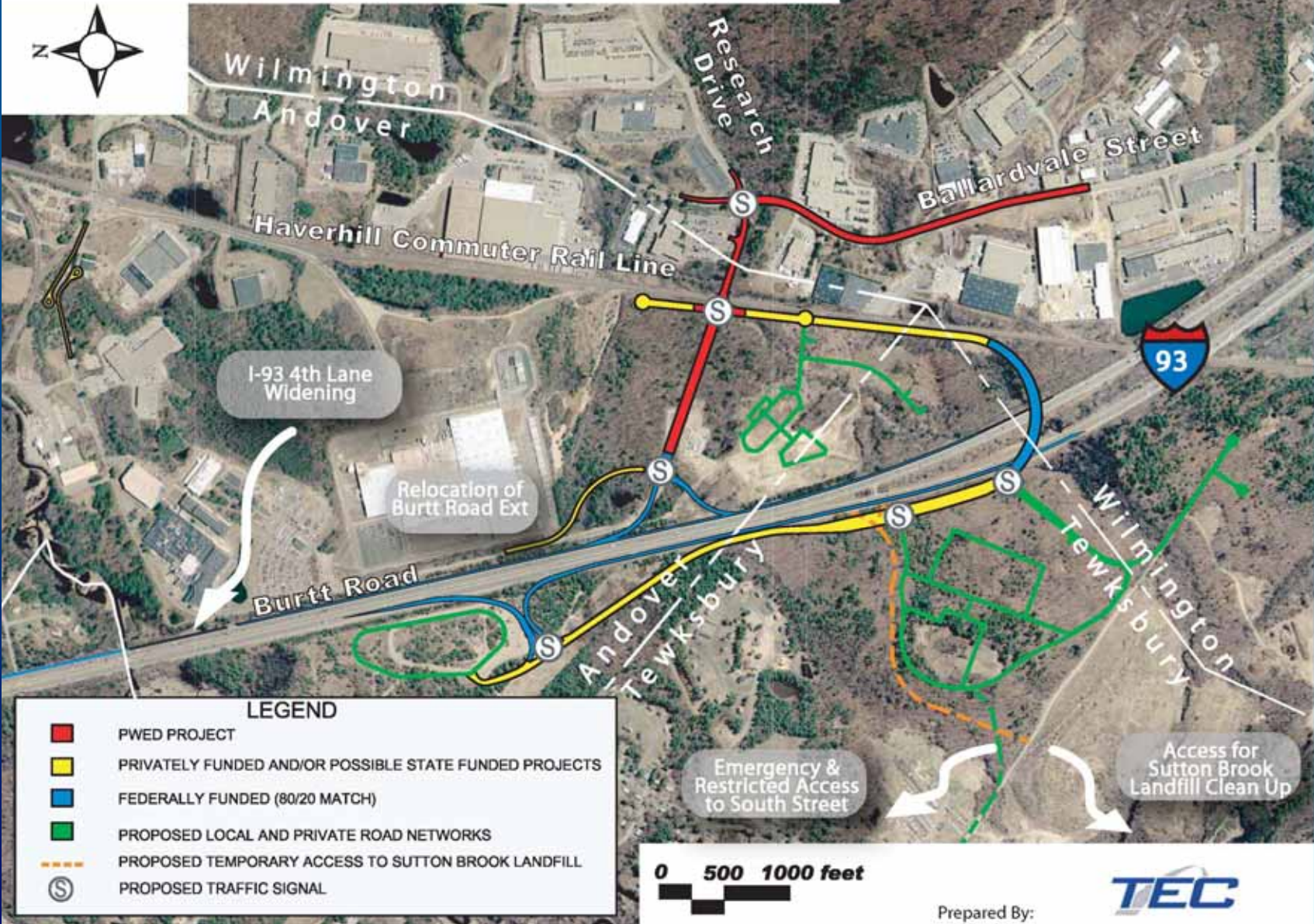
Interstate Project



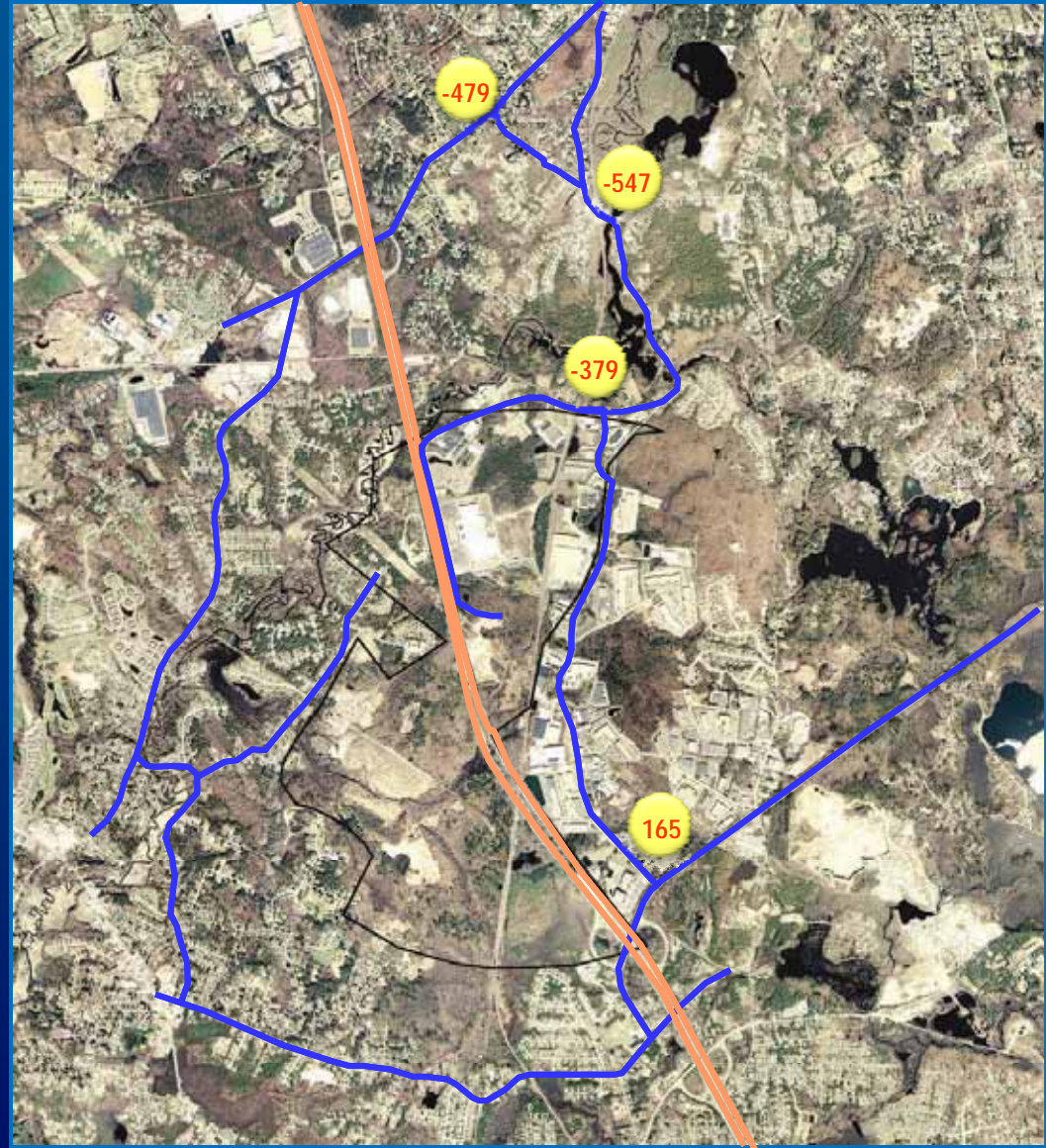
Local and Private Roadways



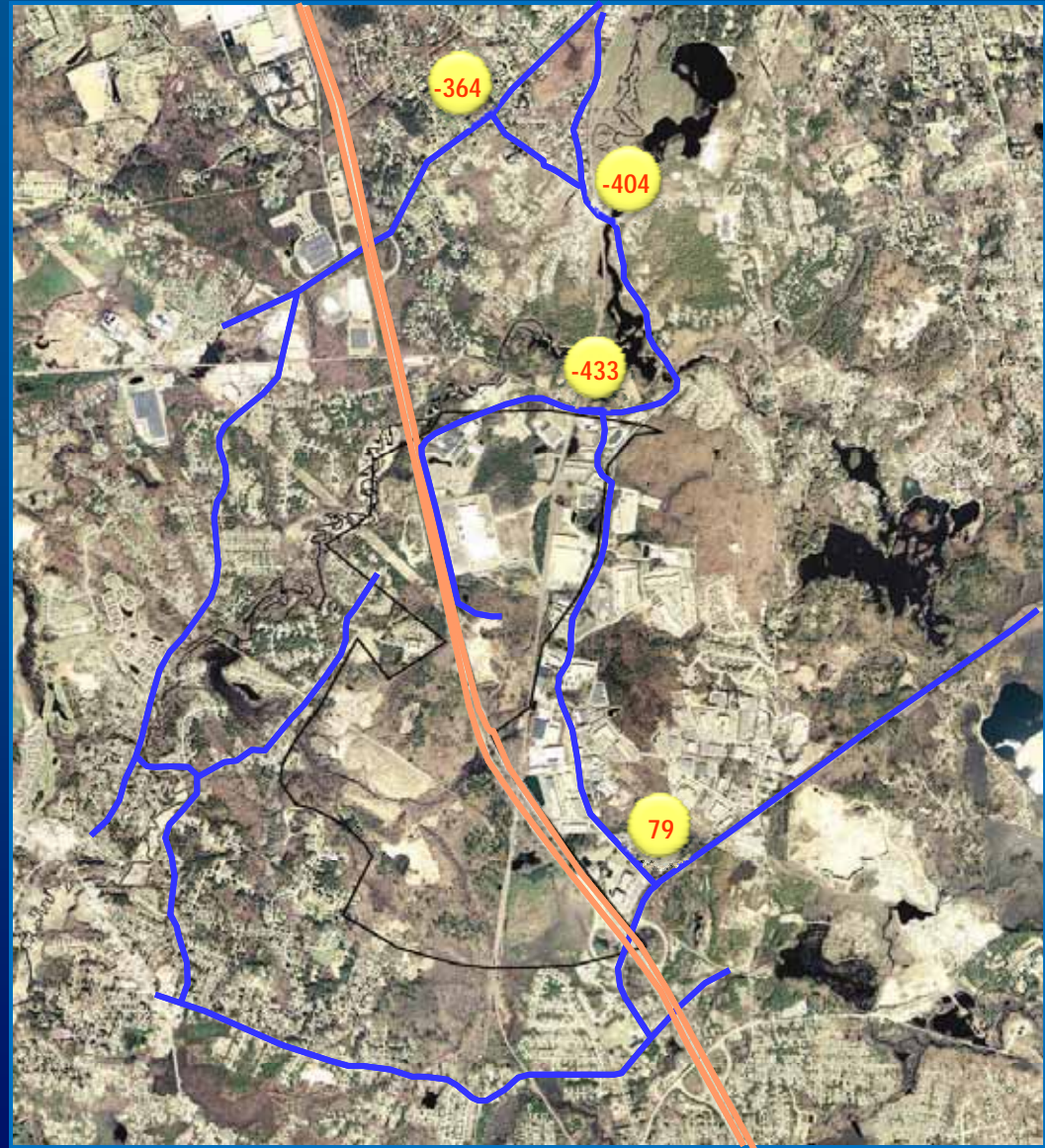
Lowell Junction Interchange



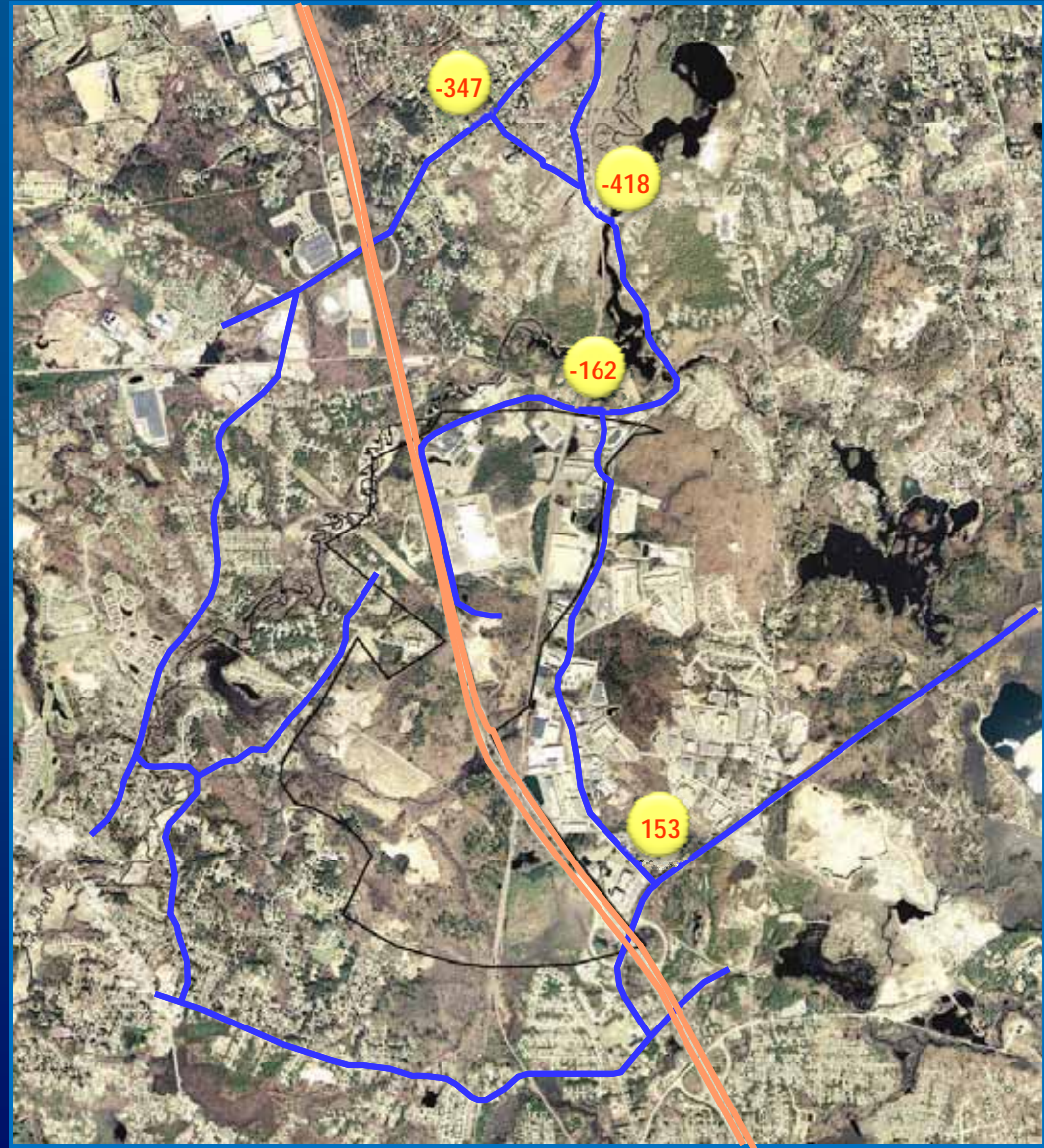
Alternative 4 Revised AM Peak



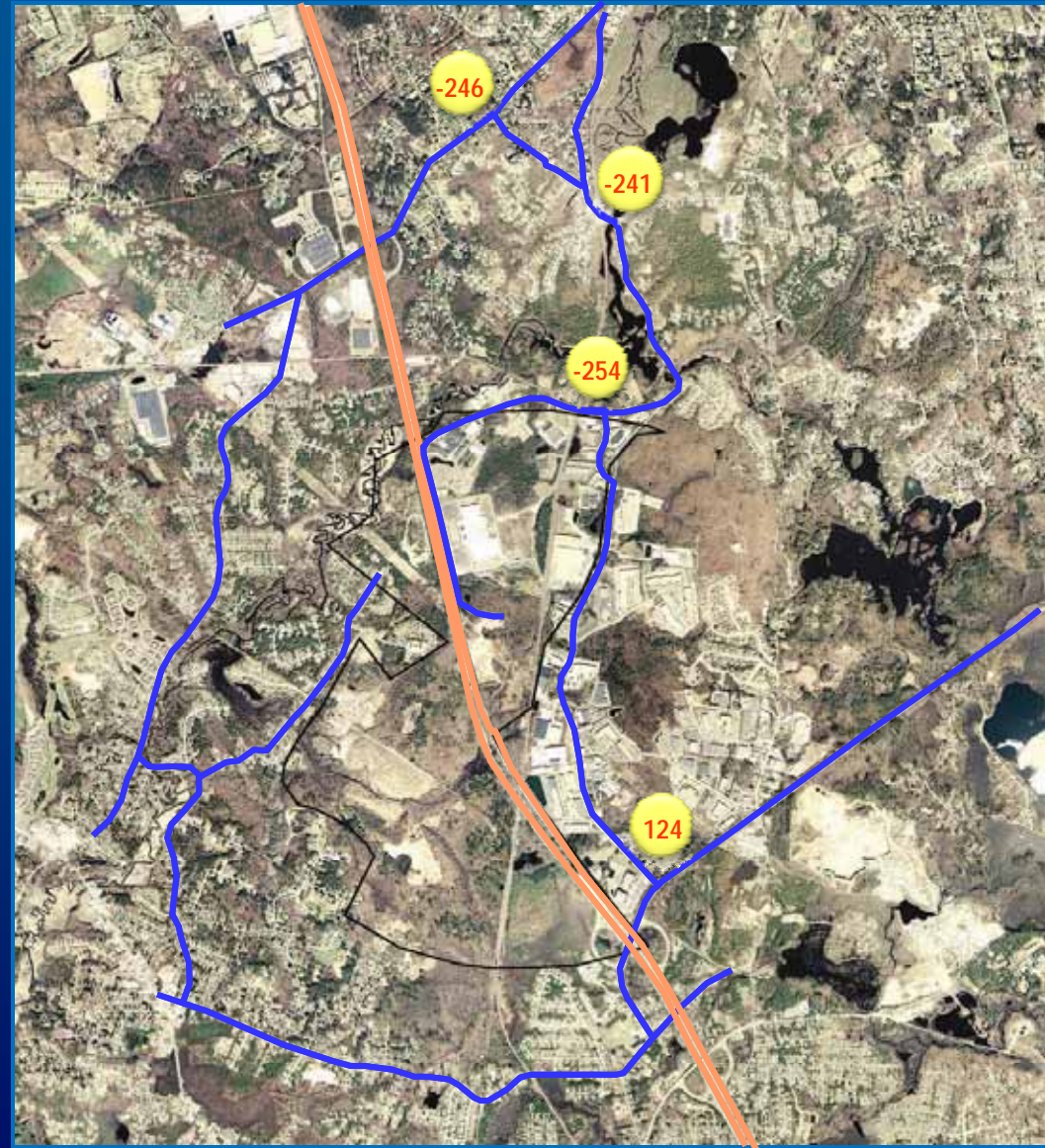
Alternative 9B AM Peak Hour



Alternative 4 Revised PM Peak Hour



Alternative 9B PM Peak Hour



Design Alternatives

New Alternative Comparisons

	Morning Peak Hour			
Location	Alternative 4 Revised	Alternative 4B	Alternative 9 Revised	Alternative 9B
Route 125 east of Ballardvale	(+7.1%) +165	(+3.8%) +97	(+7.9%) +183	(+3.1%) +79
Clark Road	(-45.0%) -479	(-40.3%) -432	(-31.3%) -333	(-34.1%) -364
Andover Street	(-31.1%) -547	(-23.3%) -410	(-16.4%) -288	(-23.3%) -404
River Street	(-25.8%) -379	(-24.8%) -282	(-21.6%) -317	(-29.5%) -433

	Evening Peak Hour			
Location	Alternative 4 Revised	Alternative 4B	Alternative 9 Revised	Alternative 9B
Route 125 east of Ballardvale	(+6.6%) +153	(+5.6%) +129	(+6.1%) +140	(+5.3%) +124
Clark Road	(-37.1%) -347	(-25.1%) -235	(-20.1%) -195	(-26.3%) -246
Andover Street	(-24.1%) -418	(-15.3%) -265	(-10.0%) -173	(-13.9%) -241
River Street	(-13.7%) -162	(-13.7%) -156	(-7.7%) -88	(-22.3%) -254

Source: VHB

Mitigation

- At the interchange
- Off-site

Mitigation

- I-93 Widening
- Interchange improvements at exits 43, 44, 46, 47/48
- Intersection signal timing changes at exits 42 (for LOS F to A/B), 43, 45, 46, 47
- Haverhill Commuter Rail (double track)
- Bus on I-93 and monitor Anderson RTC
- TDM

Additional Material Not Shown at Meeting



Design Alternatives

Revised Volume Comparison

Location	Morning Peak Hour			
	Alternative 4 March 2006	Alternative 4B	Alternative 9 March 2006	Alternative 9B
Ballardvale North of 125	(-18.2%) -307	(-46.3%) -1188	(-1.6%) -27	(-37.3%) -957
125 EB to Ballardvale NB	(-7.3%) -72	(-51.2%) -952	(-8.2%) -80	(-51.6%) -960
Clark Road	(-38.5%) -367	(-45.0%) -479	(-23.2%) -221	(-31.3%) -333
Andover Street	(-26.4%) -434	(-31.1%) -547	(-10.7%) -176	(-16.4%) -288
River Street	(-19.6%) -266	(-25.8%) -379	(-15.1%) -205	(-21.6%) -317

Location	Evening Peak Hour			
	Alternative 4 March 2006	Alternative 4B	Alternative 9 March 2006	Alternative 9B
Ballardvale North of 125	(-9.7%) -262	(-46.3%) -1380	(-34.7%) -935	(-40.8%) -1216
Ballardvale SB to 125 WB	(-66.4%) -340	(-49.1%) -680	(-52.4%) -269	(-42.9%) -594
Clark Road	(-37.1%) -347	(-37.1%) -347	(-20.1%) -195	(-20.1%) -195
Andover Street	(-24.1%) -418	(-24.1%) -418	(-10.0%) -173	(-10.0%) -173
River Street	(-13.7%) -162	(-13.7%) -162	(-7.7%) -88	(-7.7%) -88

Design Alternatives

Existing, No-Build and Build Volumes in BallardVale

	Route 125 (e. of Rt 28)	Clark Road	Andover Street	River Street	Route 28	Gould Road	Wildwood Road	Salem Street
AM								
Existing		696	1,038	831				
No-Build	735	1,065	1,759	1,468	1,110	55	295	115
Alternative 4	770	586	1,212	1,089	1,140	55	280	110
Alternative 4B	770	633	1,349	1,186	1,140	55	280	110
Alternative 9	780	732	1,417	1,151	1,065	55	290	110
Alternative 9B	780	701	1,355	1,035	1,065	55	290	110
PM								
Existing		561	998	647				
No-Build	1,035	935	1,735	1,138	1,470	60	390	155
Alternative 4	1,175	588	1,317	976	1,510	60	340	160
Alternative 4B	1,175	700	1,470	982	1,510	60	340	160
Alternative 9	1,150	740	1,562	1,050	1,490	60	360	155
Alternative 9B	1,150	689	1,494	884	1,490	60	360	155

Note: Shaded areas represent unadjusted model volumes. Data collection currently underway will be used to calibrate these volumes.

Design Alternatives

Comparison of Alternatives 4 and 4B¹ Volumes in BallardVale

Roadway	No-Build	Alternative 4	Change	Alternative 4B	Change
Clark Road					
AM	1,065	586	-479	633	-432
PM	935	588	-347	700	-235
Andover Street					
AM	1,759	1,212	-547	1,349	-410
PM	1,735	1,317	-418	1,470	-265
River Street					
AM	1,468	1,089	-379	1,186	-282
PM	1,138	976	-162	982	-156

1. Alternative 4B does not include any connection to local roadways on the west side of I-93

Design Alternatives

Comparison of Alternatives 9 and 9B¹ Volumes in BallardVale

Roadway	No-Build	Alternative 9	Change	Alternative 9B	Change
Clark Road					
AM	1,065	732	-333	701	-364
PM	935	740	-195	689	-246
Andover Street					
AM	1,759	1,471	-288	1,355	-404
PM	1,735	1,562	-173	1,494	-241
River Street					
AM	1,468	1,151	-317	1,035	-433
PM	1,138	1,050	-88	884	-254

1. Alternative 10 includes restrictions on access to Wyeth and Gillette via Lowell Junction Road

Design Alternatives

Interchange Task Force Table - Revised

Location	Morning Peak Hour			
	Alternative 4 Revised	Alternative 4B	Alternative 9 Revised	Alternative 9B
Ballardvale North of 125	(-46.3%) -1188		(-37.3%) -957	
Ballardvale at 125 EB	(-51.2%) -952		(-51.6%) -960	
Route 125 west of I-93	(+2.3%) +20		(+34.3%) +296	
Dascomb east of I-93	(-12.1%) -201		(-15.0%) -250	
Dascomb west of I-93	(-6.8%) -147		(-1.0%) -22	
Clark Road	(-45.0%) -479	(-40.3%) -432	(-31.3%) -333	(-34.1%) -364
Andover Street	(-31.1%) -547	(-23.3%) -410	(-16.4%) -288	(-23.3%) -404
River Street	(-25.8%) -379	(-24.8%) -282	(-21.6%) -317	(-29.5%) -433

Location	Evening Peak Hour			
	Alternative 4 Revised	Alternative 4B	Alternative 9 Revised	Alternative 9B
Ballardvale North of 125	(-46.3%) -1380		(-40.8%) -1216	
Ballardvale at 125 EB	(-49.1%) -680		(-42.9%) -594	
Route 125 west of I-93	(-24.8%) -378		(-7.9%) -121	
Dascomb east of I-93	(-10.6%) -175		(-12.4%) -204	
Dascomb west of I-93	(-6.6%) -131		(-1.6%) -32	
Clark Road	(-37.1%) -347	(-25.1%) -235	(-20.1%) -195	(-26.3%) -246
Andover Street	(-24.1%) -418	(-15.3%) -265	(-10.0%) -173	(-13.9%) -241
River Street	(-13.7%) -162	(-13.7%) -156	(-7.7%) -88	(-22.3%) -254

Interchange Design: Loop v. Diamond

