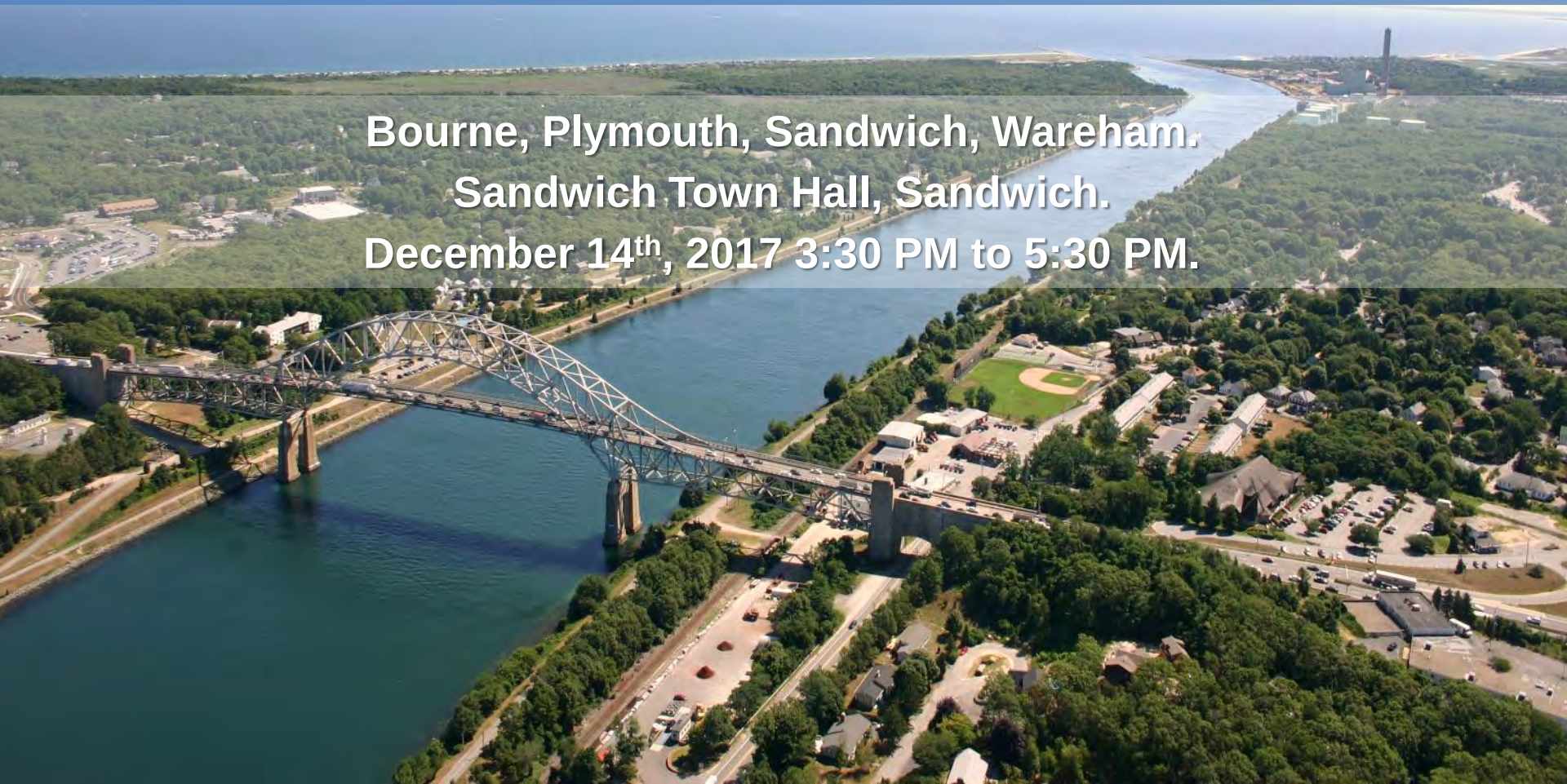
Cape Cod Canal Transportation Study, 9th Working Group Meeting.



Bourne, Plymouth, Sandwich, Wareham.

Sandwich Town Hall, Sandwich.

December 14th, 2017 3:30 PM to 5:30 PM.

Welcome and Introductions.

- MassDOT:
  - Ethan Britland – Project Manager.
  - Michael Clark - Deputy Project Manager.
- US Army Corps of Engineers.
  - Craig Martin – Project Manager.
- Study Team:
  - Bill Reed, P.E. – Principal in Charge (Stantec).
  - Michael Paiewonsky, AICP – Team Project Manager (Stantec).
  - Fred Moseley, P.E. – Transportation Engineer (Stantec).
  - Jennifer Siciliano, AICP – Public Engagement (Harriman).
  - Sudhir Murthy, P.E. – PTOE – Trans. Modeler (TrafInfo).
  - Frank Mahady – Socio-Economic (FXM Associates).

WG Meeting #9 Agenda.

1. Background: Travel Demand Model (TDM)
2. Original and New TDM Cases
3. Summary: Origin-Destination Study and Travel Time Analysis
4. Schedule and Next Steps

Alternatives Development and Analysis.

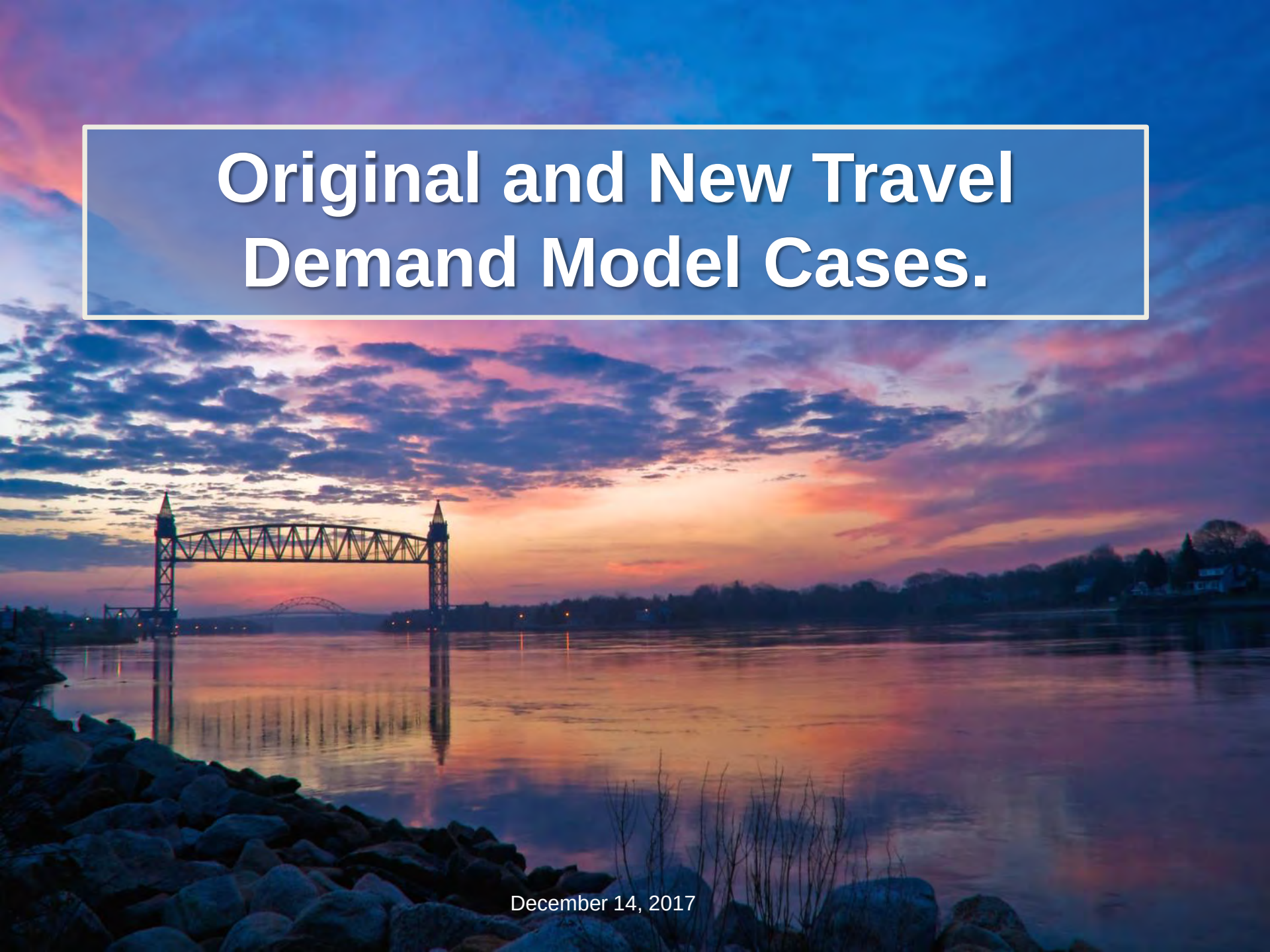
December 14, 2017

Evaluation of Alternatives - Travel Demand Model.

- Combinations of improvements (known as ‘cases’) evaluated.
- Cases selected provide logical and comprehensive groups of improvements.
- Travel demand model will reveal modified travel patterns given the transportation system alternatives.
- Seeking improved future traffic conditions, focusing on the fall PM (daily commuting).

Additional Analysis Since Last Meeting.

- In response to the results of original Case analysis and comments received from Working Group:
  - Model inputs refined.
  - Three new cases evaluated.
  - Sagamore Bridge approach analysis.
  - Origin-Destination Study.



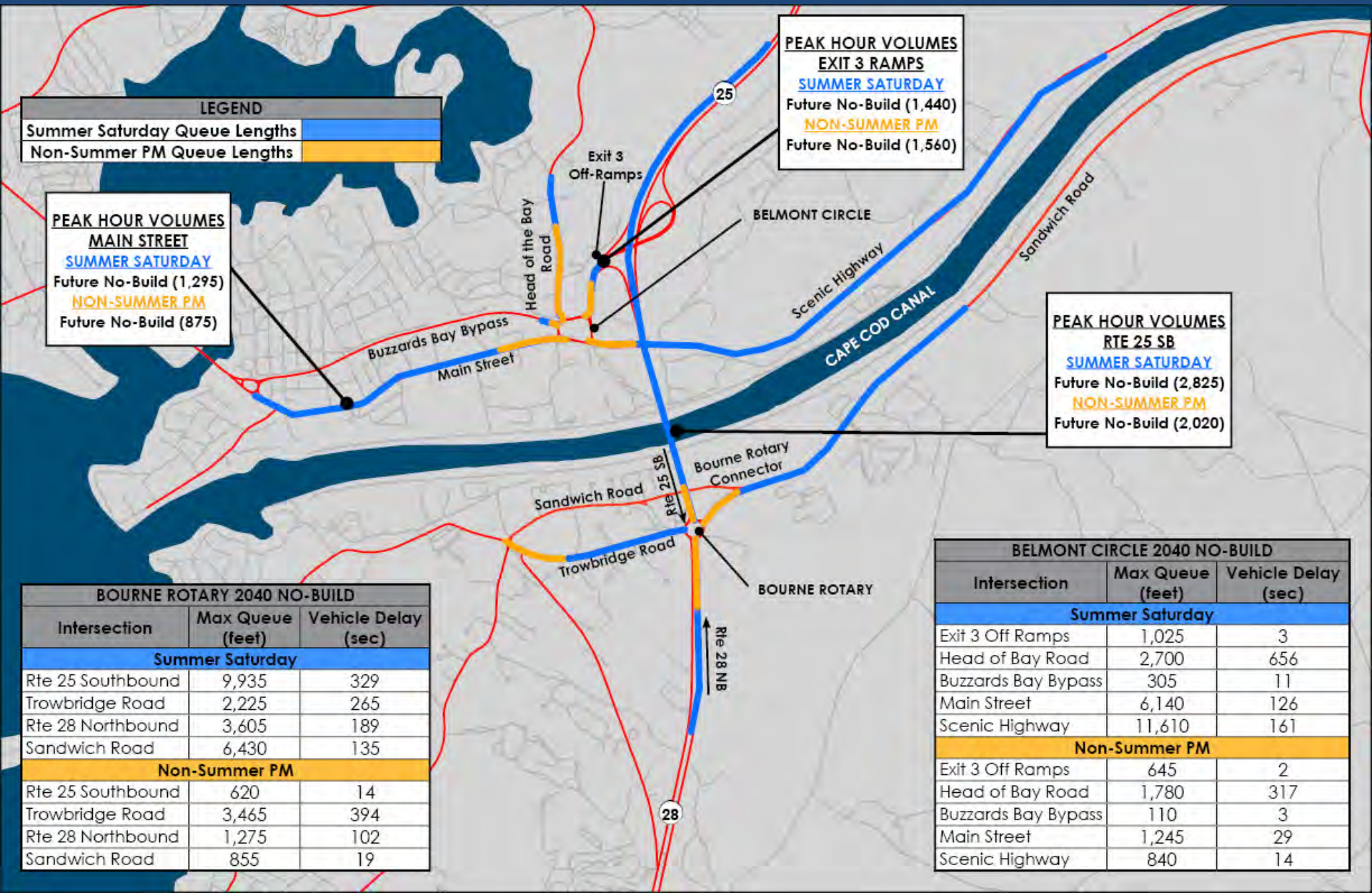
Original and New Travel Demand Model Cases.

December 14, 2017

7 Cases Evaluated.

TRAVEL DEMAND MODEL CASE IMPROVEMENTS								
Map Location	Improvements	Case 1	Case 1A (NEW)	Case 1B (NEW)	Case 2	Case 2B (NEW)	Case 3	Case 3A
A	Scenic Highway to Rte 25 Westbound On-Ramp	●	●	●	●	●	●	●
B	Rte 6 Exit 1C Relocation	●			●	●	●	●
C	Rte 28 Northbound Ramp to Sandwich Road		●	●	●	●	●	
D	Bourne Rotary (Three New Signalized Intersections)			●	●	●	●	
E	Belmont Circle (3 Leg Roundabout plus Signalized Intersection)				●		●	●
F	Belmont Circle with Rte 25 Eastbound Fly-over					●		
G	New Bridges (Bourne and Sagamore)						●	●
H	Rte 6 Eastbound Travel Lane from Exit 1A to Exit 2						●	●
I	Bourne Rotary with Highway Interchange							●

2040 Future No-Build Analysis



BOURNE ROTARY 2040 NO-BUILD

Intersection	Max Queue (feet)	Vehicle Delay (sec)
Summer Saturday		
Rte 25 Southbound	9,935	329
Trowbridge Road	2,225	265
Rte 28 Northbound	3,605	189
Sandwich Road	6,430	135
Non-Summer PM		
Rte 25 Southbound	620	14
Trowbridge Road	3,465	394
Rte 28 Northbound	1,275	102
Sandwich Road	855	19

BELMONT CIRCLE 2040 NO-BUILD

Intersection	Max Queue (feet)	Vehicle Delay (sec)
Summer Saturday		
Exit 3 Off Ramps	1,025	3
Head of Bay Road	2,700	656
Buzzards Bay Bypass	305	11
Main Street	6,140	126
Scenic Highway	11,610	161
Non-Summer PM		
Exit 3 Off Ramps	645	2
Head of Bay Road	1,780	317
Buzzards Bay Bypass	110	3
Main Street	1,245	29
Scenic Highway	840	14

Travel Demand Model
Case 1
Mid-Term Alternatives
(5-8 years For Design and Permitting)

December 14, 2017

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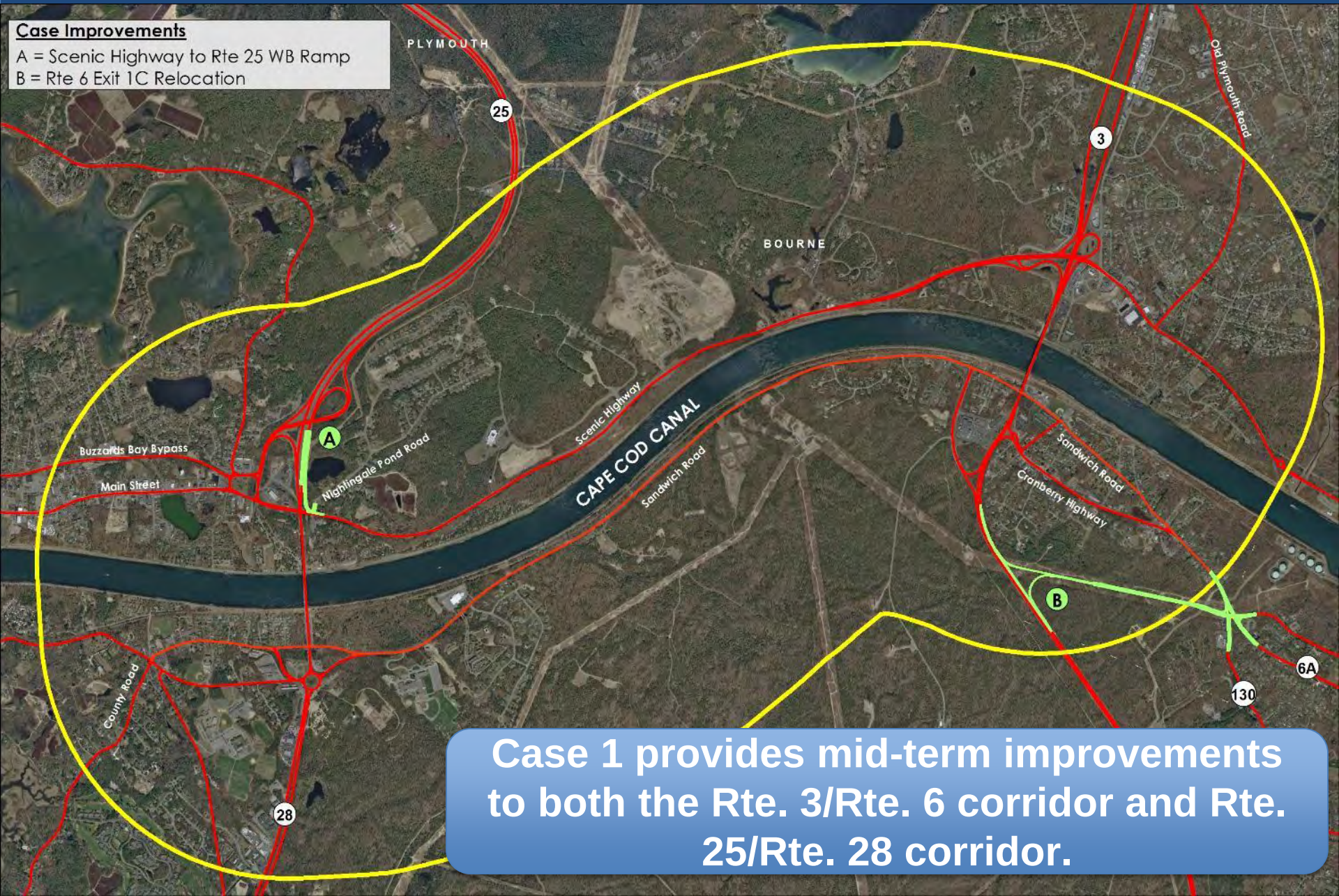
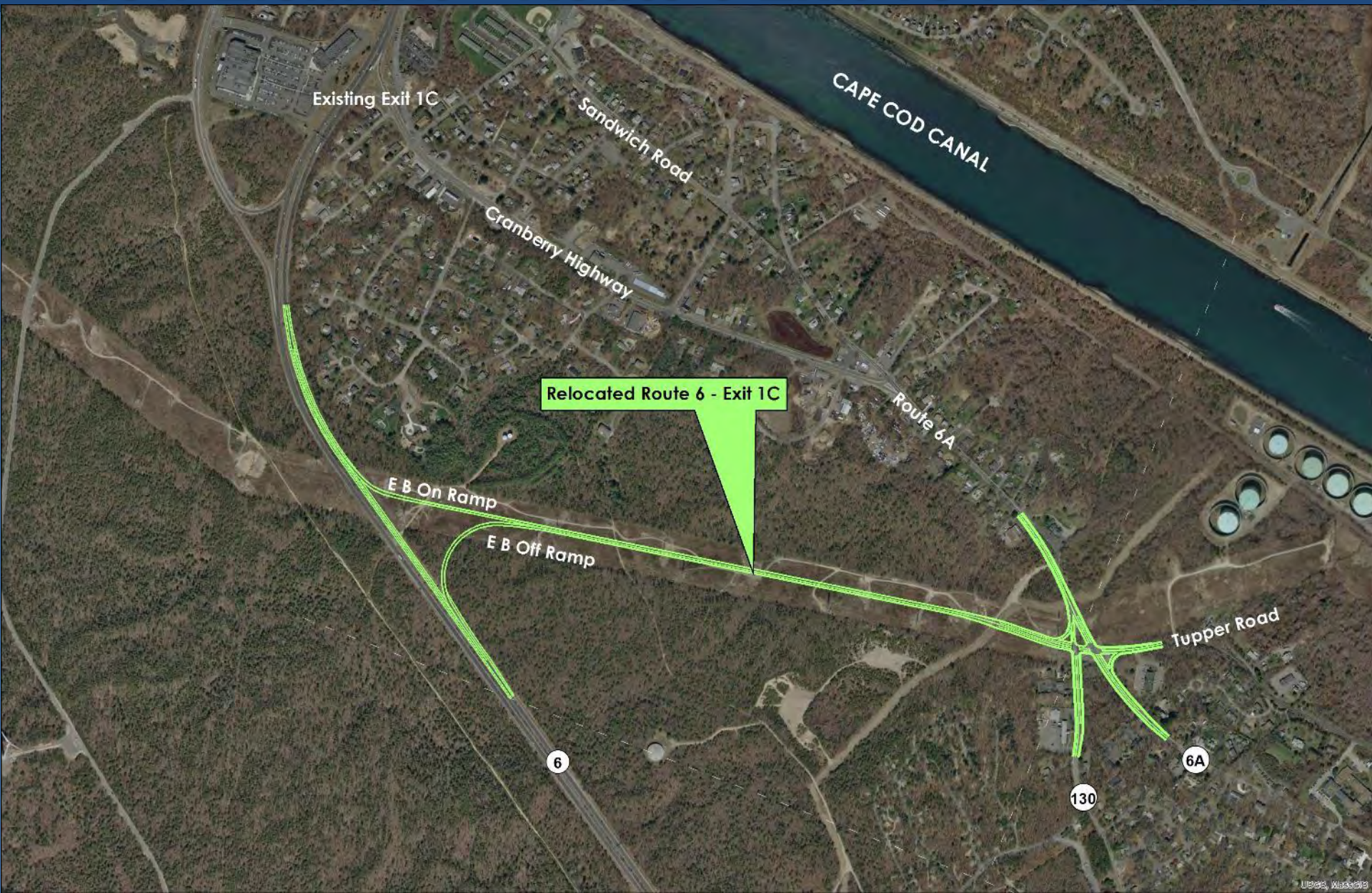
Travel Model Case 1.



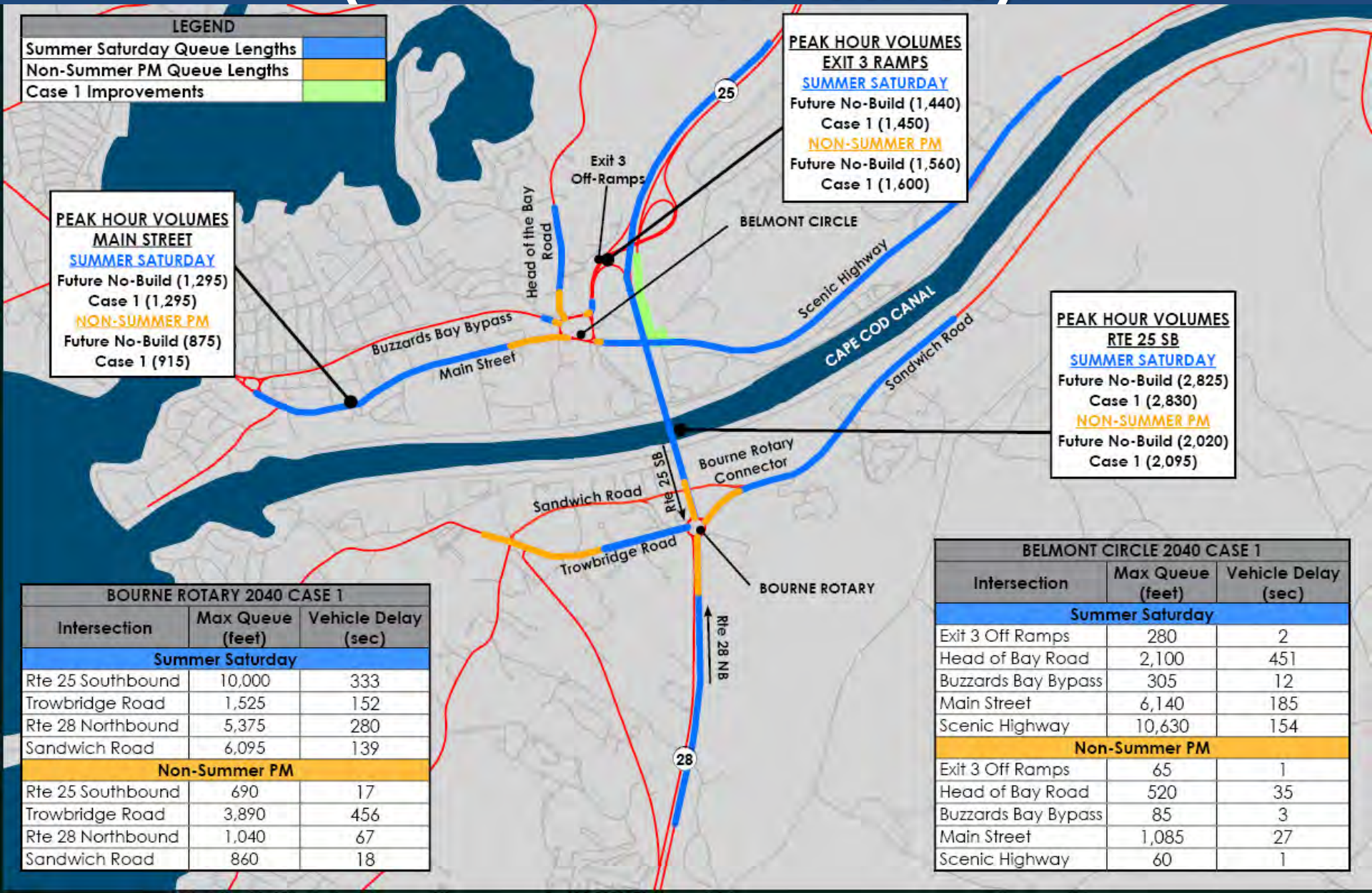
Case 1 provides mid-term improvements to both the Rte. 3/Rte. 6 corridor and Rte. 25/Rte. 28 corridor.

Travel Demand Model Case 1
New Element – Scenic Highway Ramp.

Travel Demand Model Case 1
New Element – Route 6 Exit 1C Relocation.



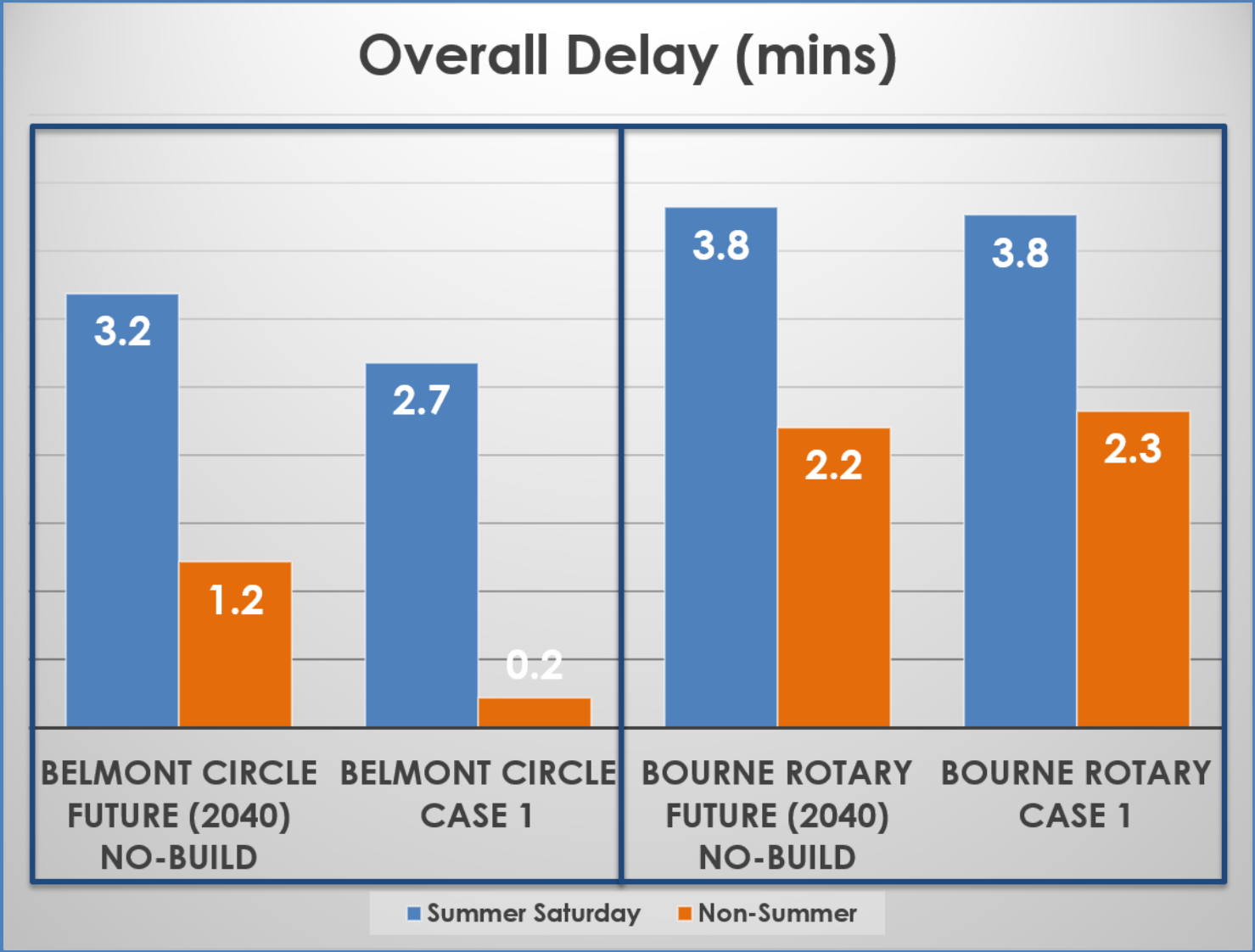
Travel Model Case 1 Analysis (Mid-Term Alternatives).



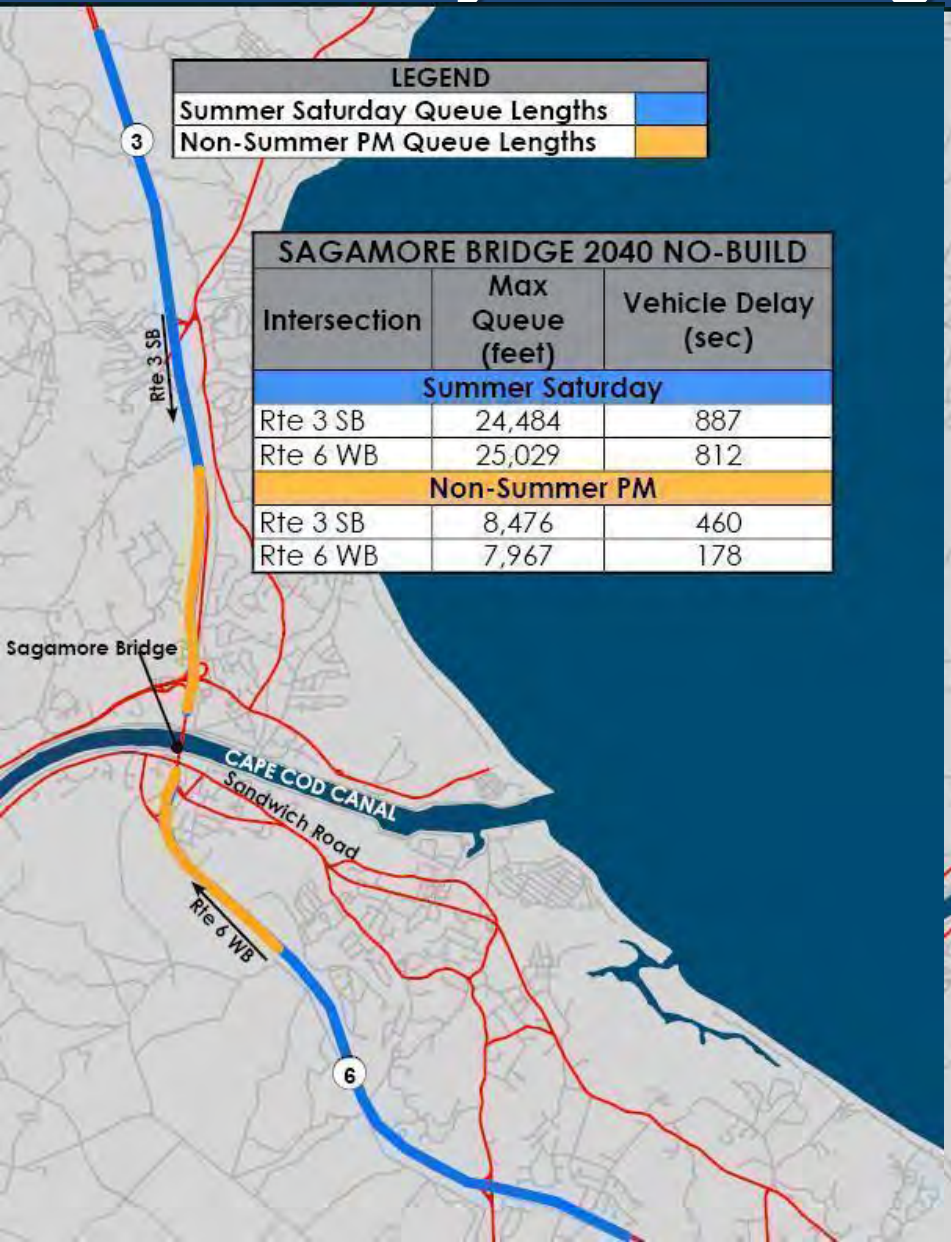
BOURNE ROTARY 2040 CASE 1		
Intersection	Max Queue (feet)	Vehicle Delay (sec)
Summer Saturday		
Rte 25 Southbound	10,000	333
Trowbridge Road	1,525	152
Rte 28 Northbound	5,375	280
Sandwich Road	6,095	139
Non-Summer PM		
Rte 25 Southbound	690	17
Trowbridge Road	3,890	456
Rte 28 Northbound	1,040	67
Sandwich Road	860	18

BELMONT CIRCLE 2040 CASE 1		
Intersection	Max Queue (feet)	Vehicle Delay (sec)
Summer Saturday		
Exit 3 Off Ramps	280	2
Head of Bay Road	2,100	451
Buzzards Bay Bypass	305	12
Main Street	6,140	185
Scenic Highway	10,630	154
Non-Summer PM		
Exit 3 Off Ramps	65	1
Head of Bay Road	520	35
Buzzards Bay Bypass	85	3
Main Street	1,085	27
Scenic Highway	60	1

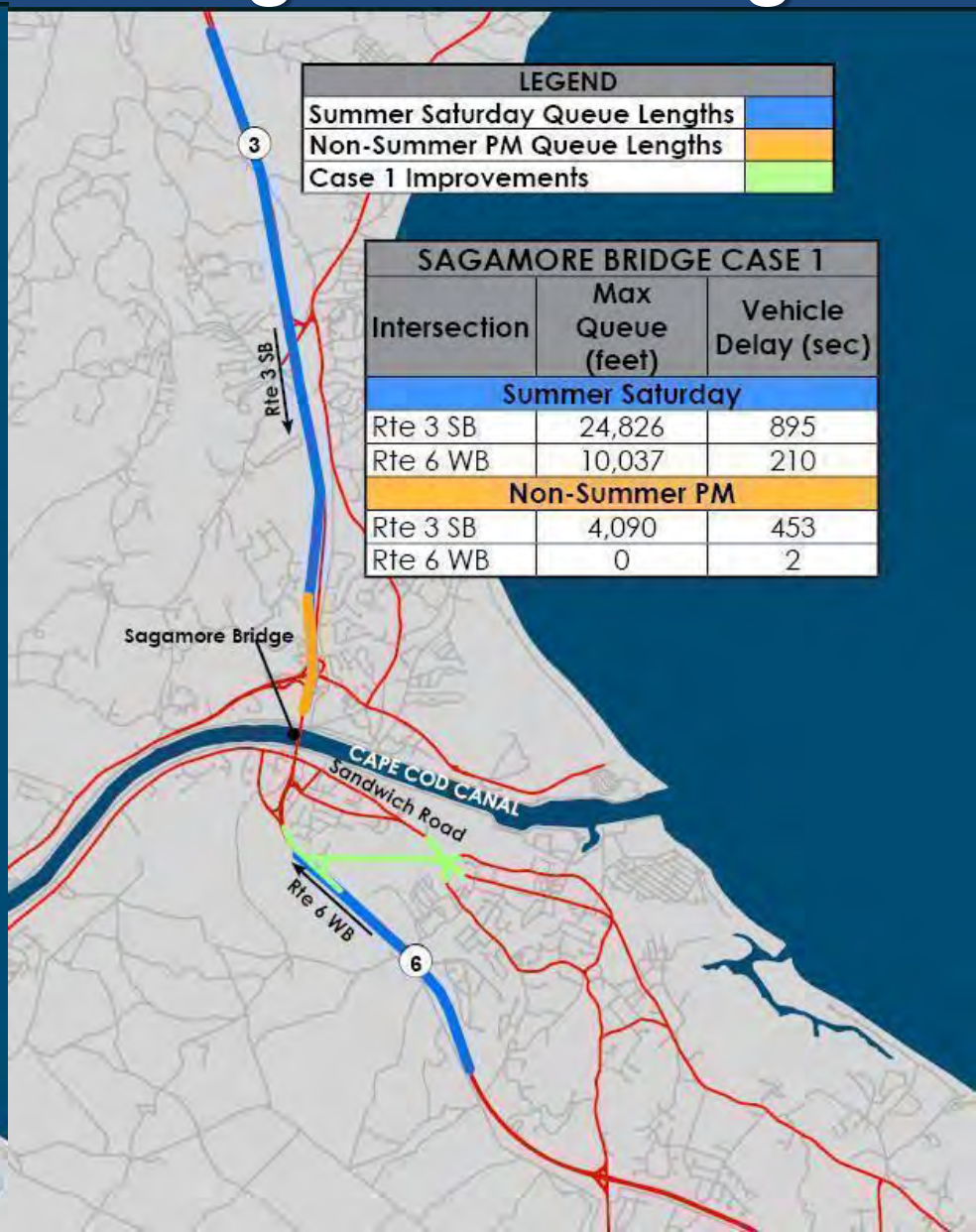
Travel Model Case 1 Overall Delay (Mid-Term Alternatives).



Travel Model Case 1
Summary of Findings – Sagamore Bridge.

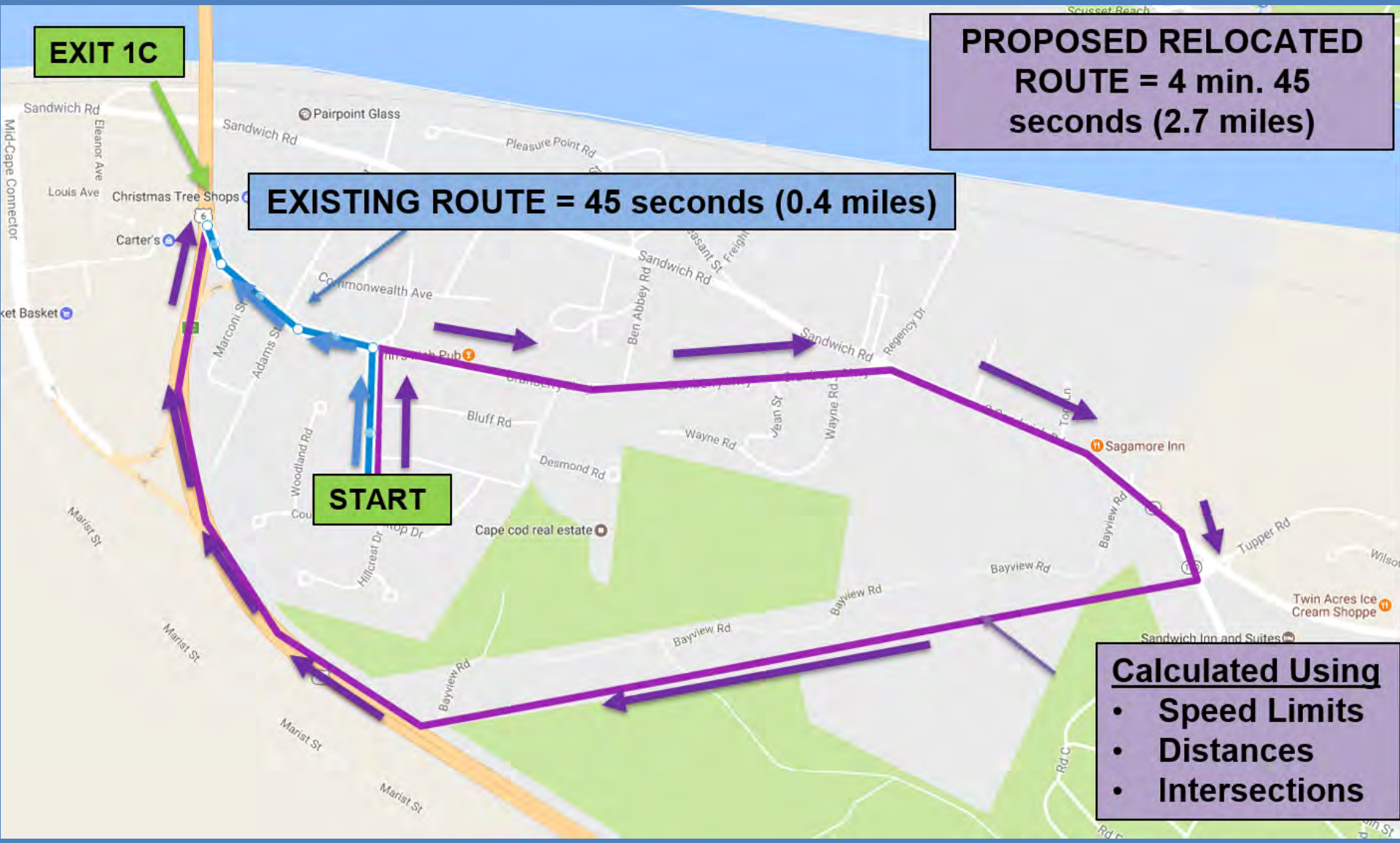


SAGAMORE BRIDGE 2040 NO-BUILD		
Intersection	Max Queue (feet)	Vehicle Delay (sec)
Summer Saturday		
Rte 3 SB	24,484	887
Rte 6 WB	25,029	812
Non-Summer PM		
Rte 3 SB	8,476	460
Rte 6 WB	7,967	178



SAGAMORE BRIDGE CASE 1		
Intersection	Max Queue (feet)	Vehicle Delay (sec)
Summer Saturday		
Rte 3 SB	24,826	895
Rte 6 WB	10,037	210
Non-Summer PM		
Rte 3 SB	4,090	453
Rte 6 WB	0	2

Effect of New Exit 1C on Off-Season Travel Times from Area Neighborhoods.



Travel Model Case 1 Summary of Findings.

Belmont Circle:

Summer: Modest reduction in delay (esp. Route 25 Exit 3 ramp & Head of the Bay Road).
Non-Summer: Substantial reduction in delay (Head of the Bay Road).

Remaining delay locations: Scenic Hwy and Main Street (summer).

Why? New ramp results in fewer vehicles entering east side of Circle, reducing conflict at Exit 3 ramp and Head of the Bay Road. In summer, this benefit is lost for other approaches.

Travel Model Case 1 Summary of Findings.

Bourne Rotary: No change in delay times.

Remaining delay locations: Route 28 NB & SB and Sandwich Road.

Why? Roadway design at Bourne Rotary remains unchanged and there is no change in traffic volumes.

Travel Model Case 1 Summary of Findings.

Sagamore Bridge:

- Route 6 westbound – substantial reduction in delay during both summer and non-summer.

Why? Longer acceleration/deceleration lanes (less turbulence at bridge), reduced Exit 1C volumes.

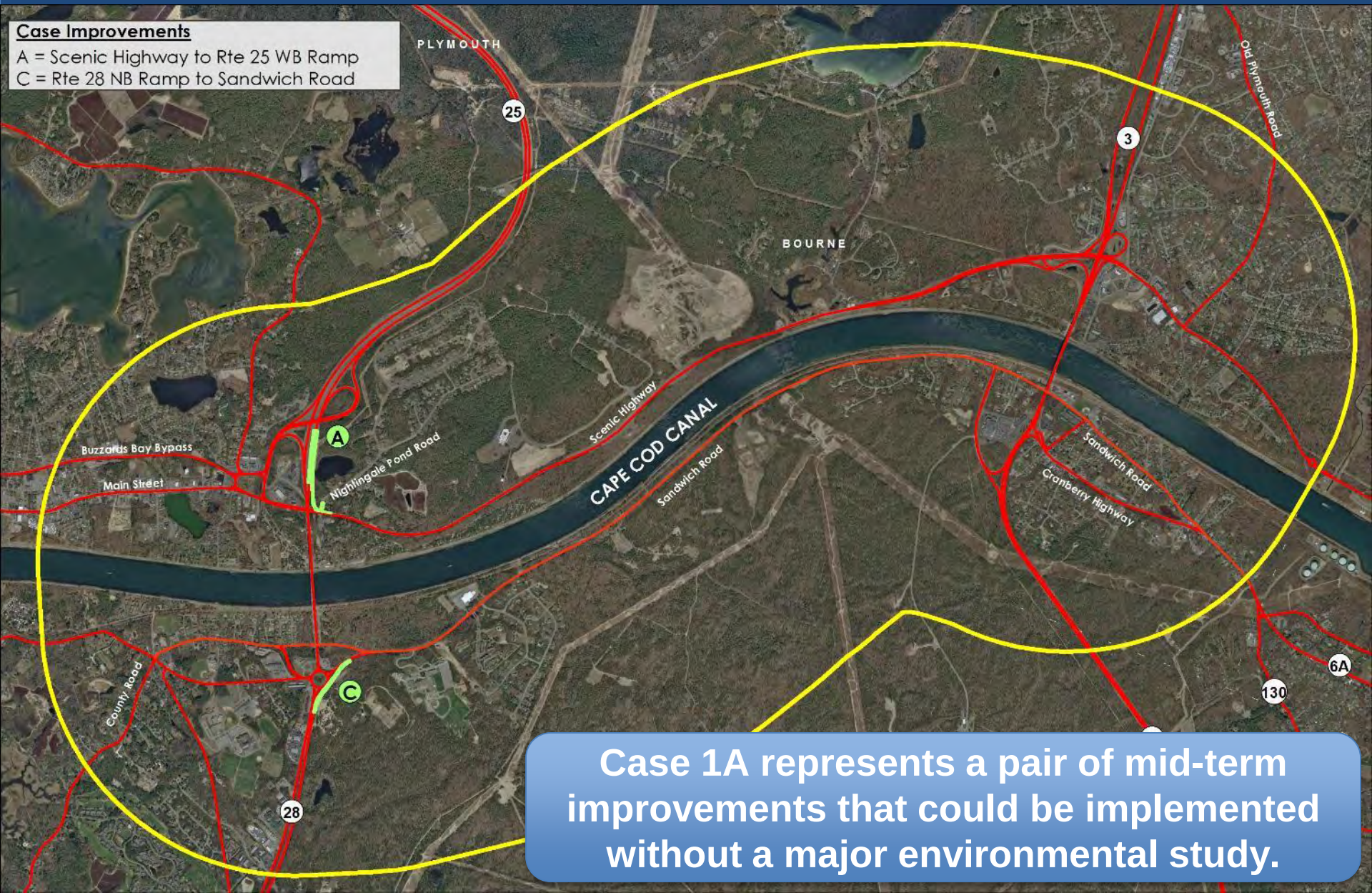
- Route 3 southbound – modest reduction in delay during non-summer. No summer time delay reduction.

Why? Fewer vehicles entering Route 3 from Scenic Hwy reduces queues.

Travel Demand Model
Case 1A (NEW!)
Mid-Term Alternatives
(5-8 years For Design and Permitting)

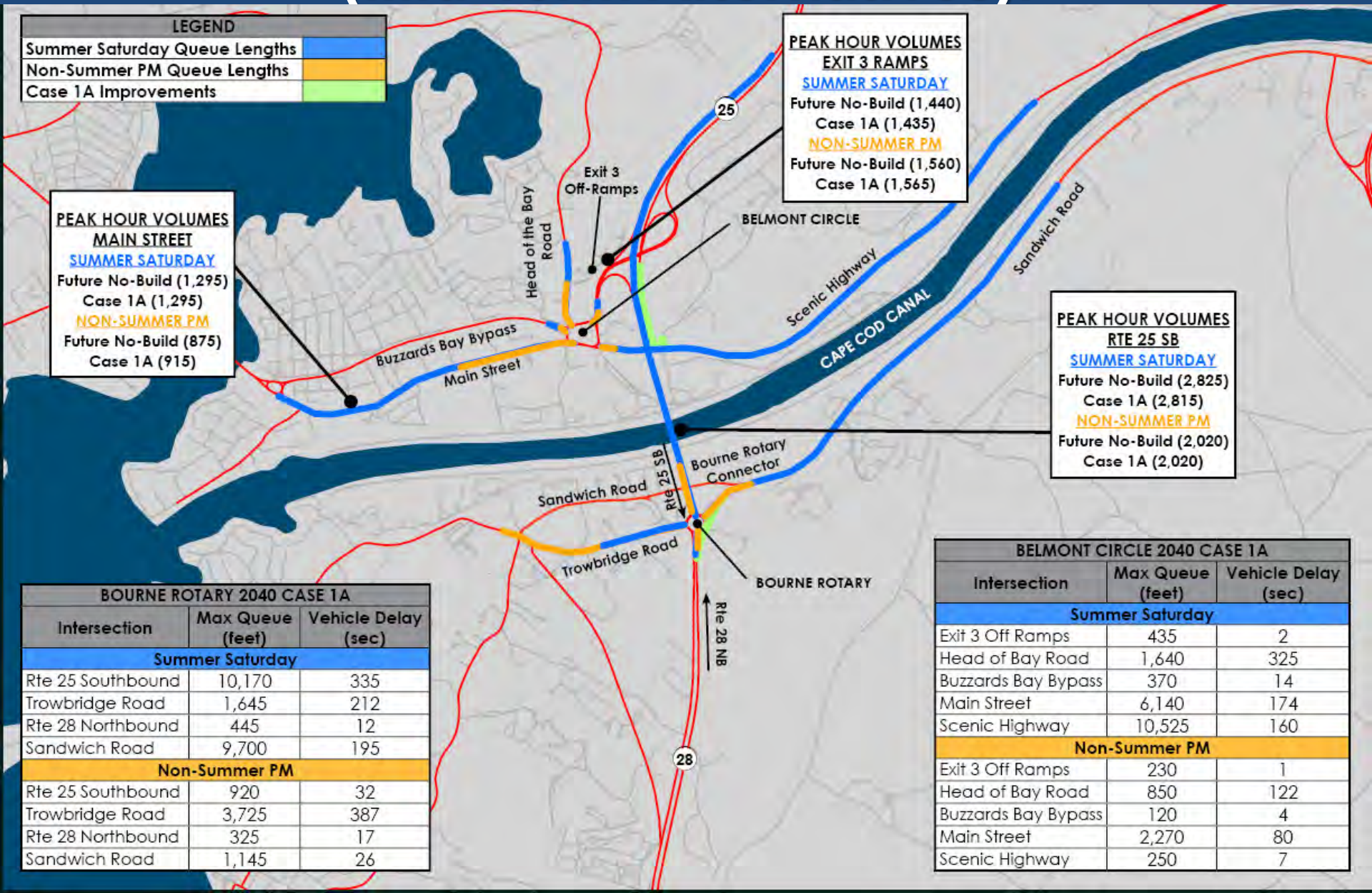
December 14, 2017

Travel Model Case 1A.



Case 1A represents a pair of mid-term improvements that could be implemented without a major environmental study.

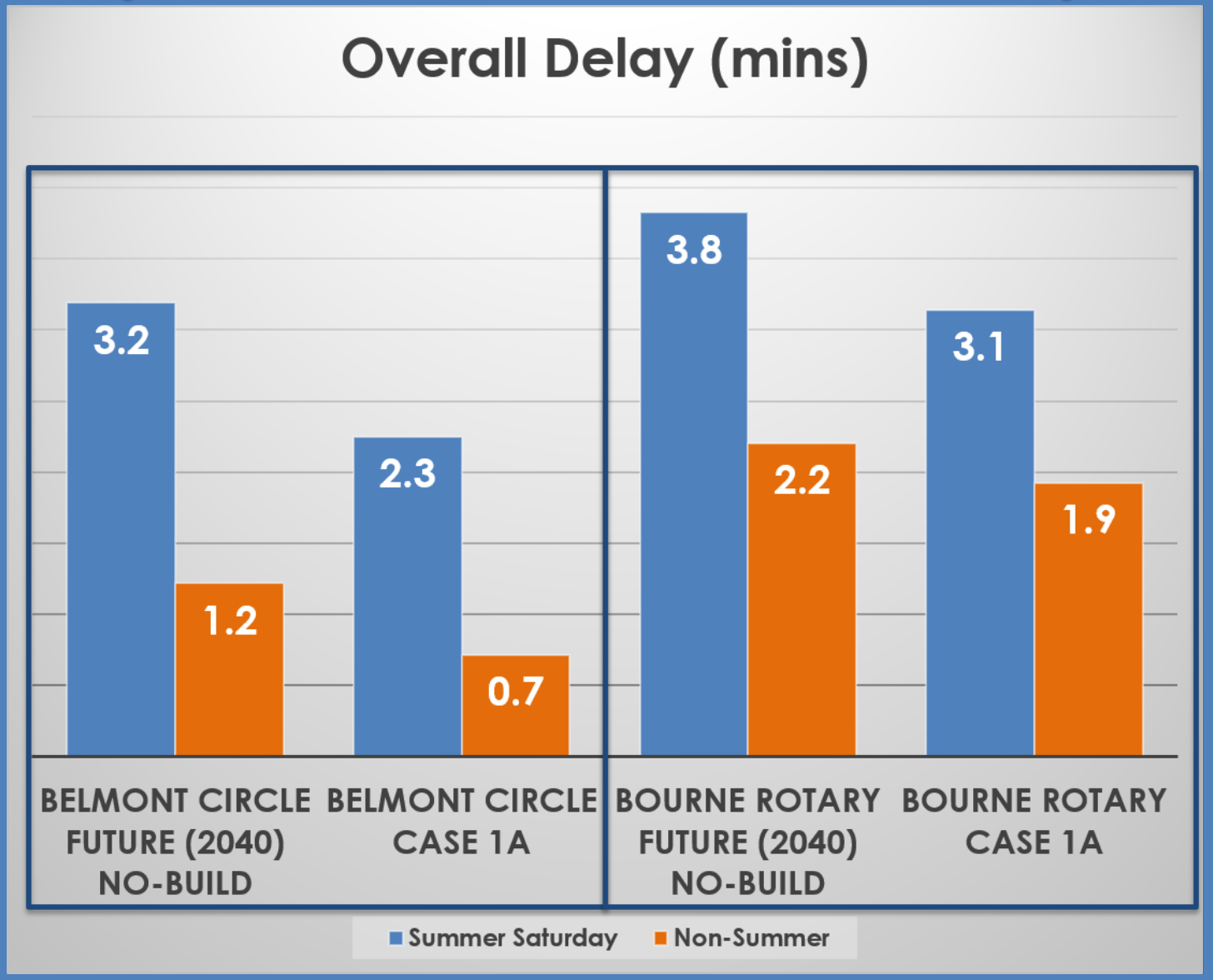
Travel Model Case 1A Analysis (Mid-Term Alternatives).



BOURNE ROTARY 2040 CASE 1A		
Intersection	Max Queue (feet)	Vehicle Delay (sec)
Summer Saturday		
Rte 25 Southbound	10,170	335
Trowbridge Road	1,645	212
Rte 28 Northbound	445	12
Sandwich Road	9,700	195
Non-Summer PM		
Rte 25 Southbound	920	32
Trowbridge Road	3,725	387
Rte 28 Northbound	325	17
Sandwich Road	1,145	26

BELMONT CIRCLE 2040 CASE 1A		
Intersection	Max Queue (feet)	Vehicle Delay (sec)
Summer Saturday		
Exit 3 Off Ramps	435	2
Head of Bay Road	1,640	325
Buzzards Bay Bypass	370	14
Main Street	6,140	174
Scenic Highway	10,525	160
Non-Summer PM		
Exit 3 Off Ramps	230	1
Head of Bay Road	850	122
Buzzards Bay Bypass	120	4
Main Street	2,270	80
Scenic Highway	250	7

Travel Model Case 1A (Mid-Term Alternatives).



Travel Model Case 1A Summary of Findings.

Belmont Circle:

Summer: Moderate reduction in delay.
(esp. Head of the Bay Road)
Non-Summer: Substantial reduction in delay
(Route 25 Exit 3 and Head of the Bay Road).

Remaining delay locations: Main St. (esp. summer).

Why? Year round - fewer vehicles entering Circle from east reduces conflicts at Exit 3 ramp and Head of Bay Road. During summer, delay time at Scenic Hwy is reduced by 50%. Numerous destinations on Main St. attracts high traffic volumes (3 minute summer delay).

Travel Model Case 1A Summary of Findings.

Bourne Rotary: Overall modest delay reduction

Summer: Route 28 NB queues/delay is substantially reduced. No improvement at other approaches

Non-Summer: Moderate reduction in Route 28 NB queue. No changes elsewhere

Remaining delay locations: Route 28 SB, Trowbridge Road (3-5 min delay), Sandwich Road (3 min. summer delay)

Why? Year round - new ramp is effective at reducing queues on Route 28 northbound. During summer Sandwich Road degrades because of increased traffic entering Sandwich/Old Sandwich Road intersection.

Travel Demand Model
Case 1B (NEW!)
Mid-Term Alternatives
(5-8 years For Design and Permitting)

December 14, 2017

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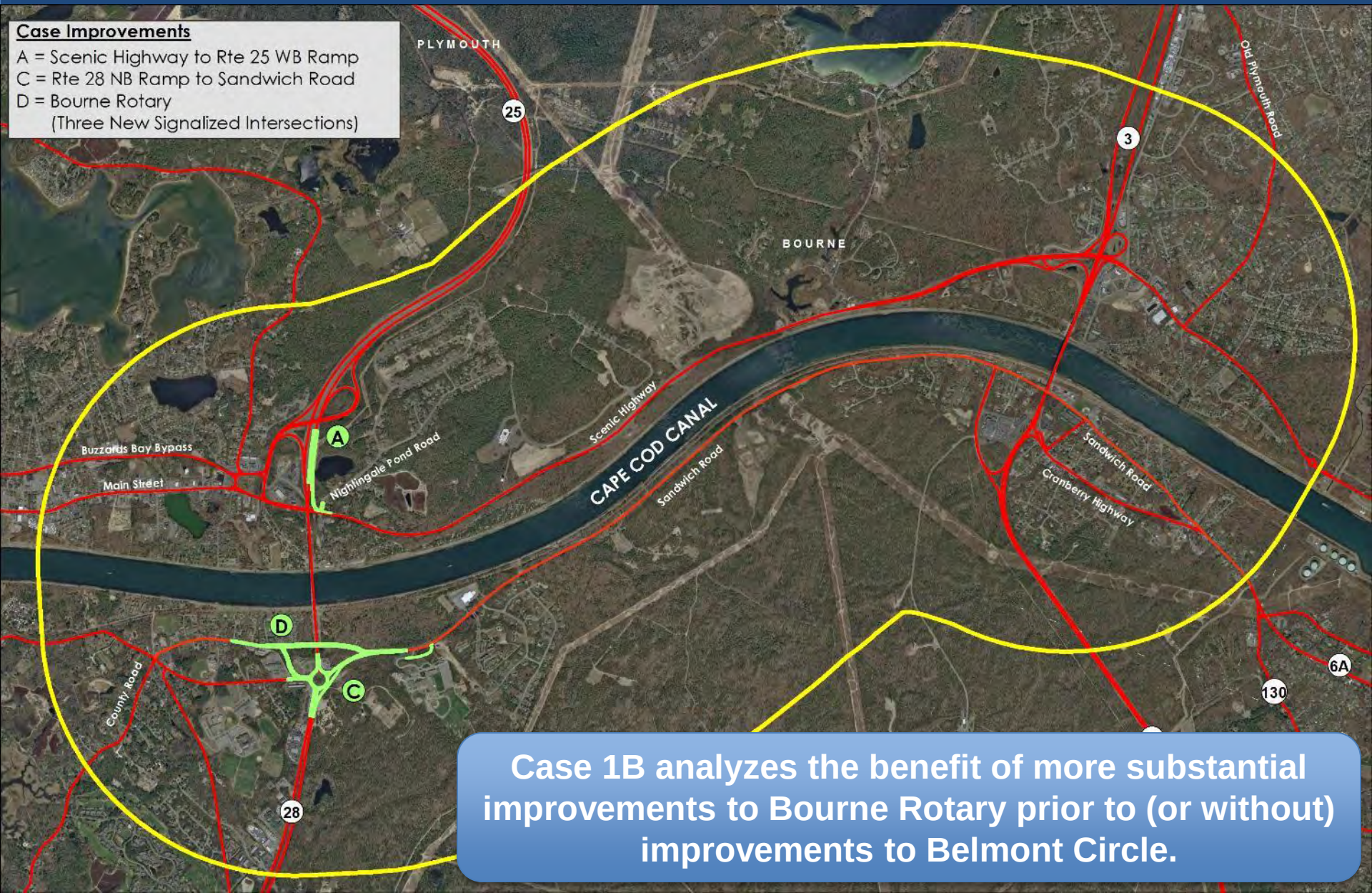
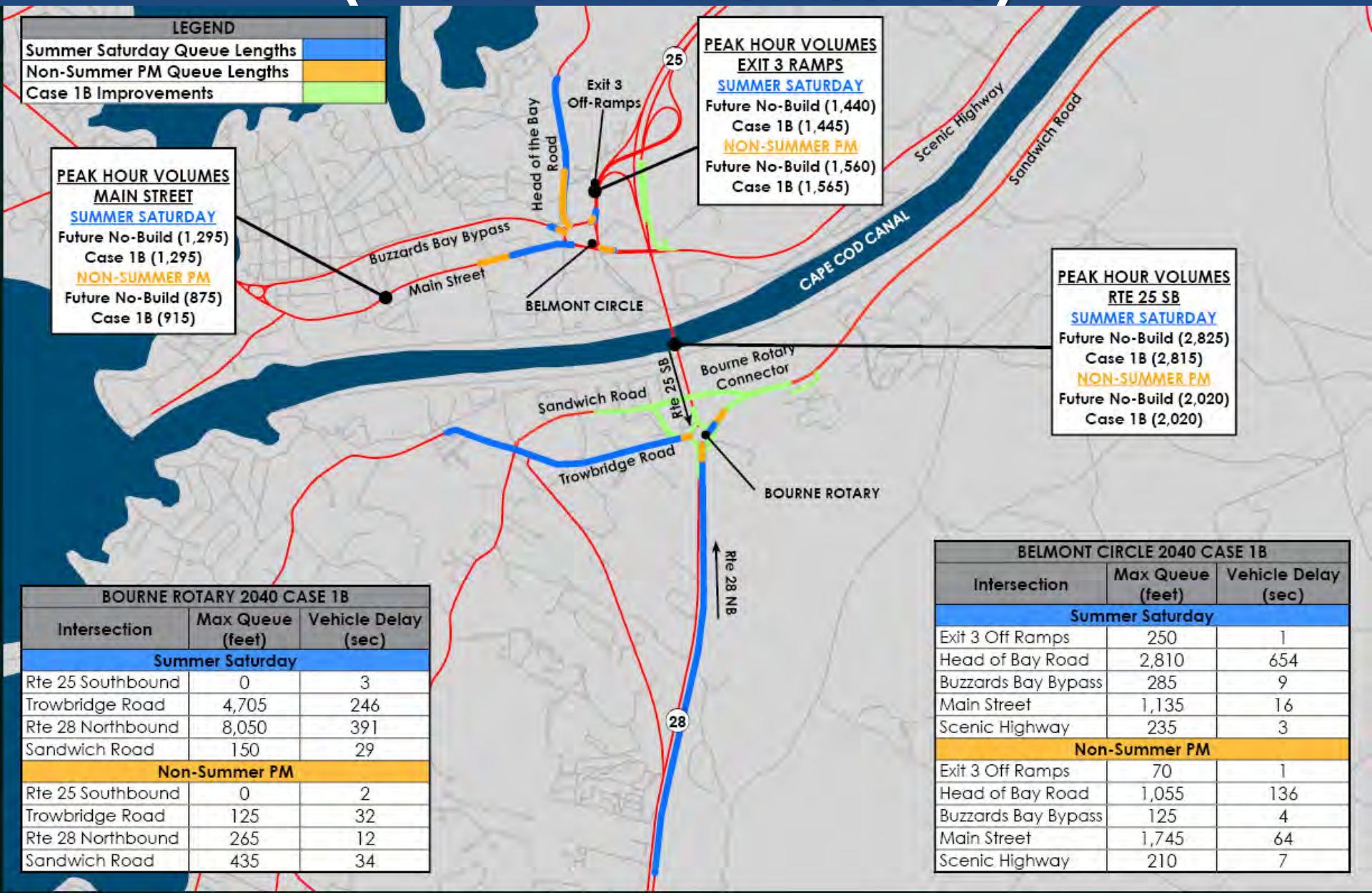
Travel Model Case 1B.



Case 1B analyzes the benefit of more substantial improvements to Bourne Rotary prior to (or without) improvements to Belmont Circle.

Travel Demand Model Case 1B
New Element – Bourne Rotary

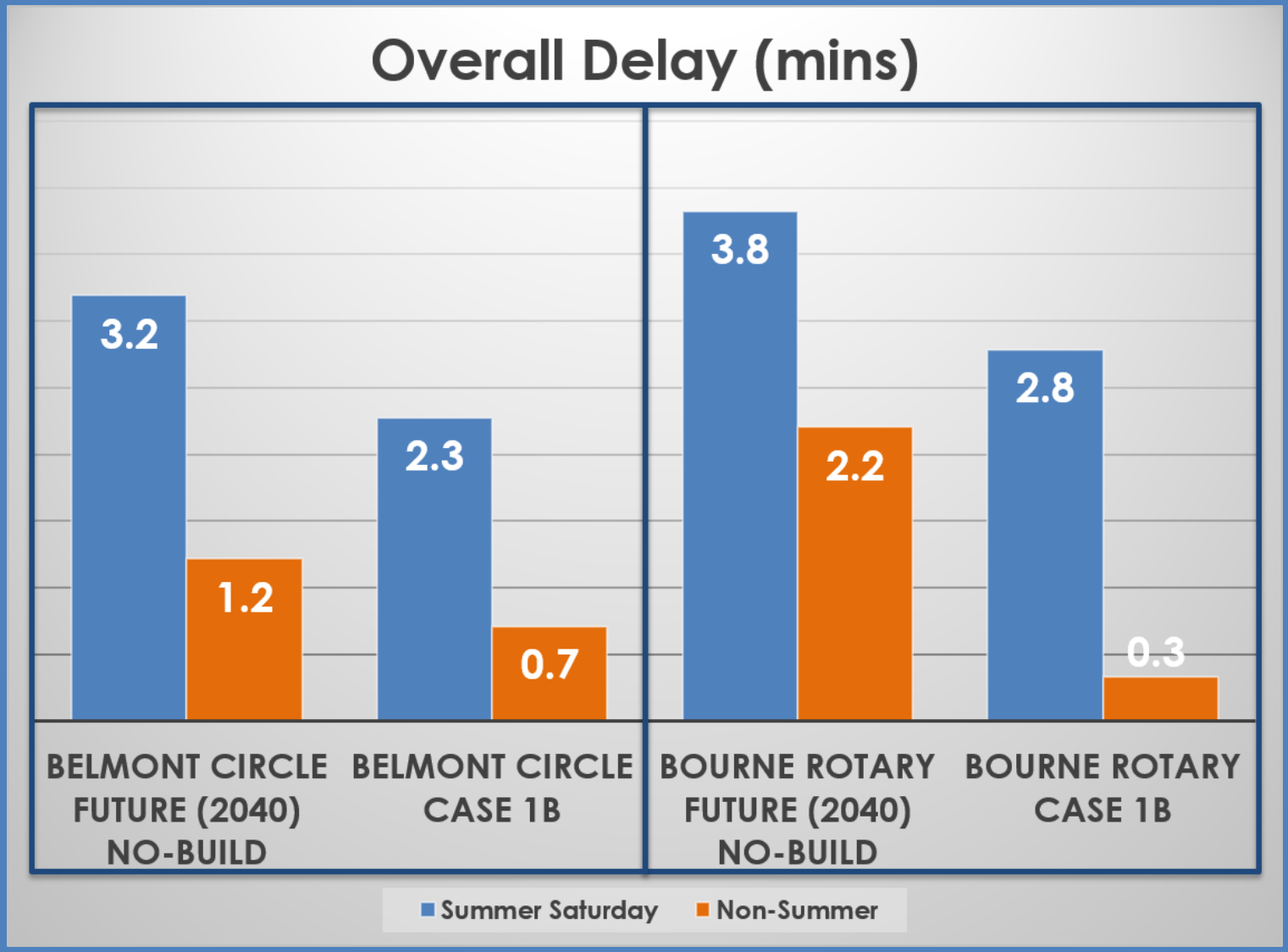
Travel Model Case 1B Analysis (Mid-Term Alternatives).



BOURNE ROTARY 2040 CASE 1B		
Intersection	Max Queue (feet)	Vehicle Delay (sec)
Summer Saturday		
Rte 25 Southbound	0	3
Trowbridge Road	4,705	246
Rte 28 Northbound	8,050	391
Sandwich Road	150	29
Non-Summer PM		
Rte 25 Southbound	0	2
Trowbridge Road	125	32
Rte 28 Northbound	265	12
Sandwich Road	435	34

BELMONT CIRCLE 2040 CASE 1B		
Intersection	Max Queue (feet)	Vehicle Delay (sec)
Summer Saturday		
Exit 3 Off Ramps	250	1
Head of Bay Road	2,810	654
Buzzards Bay Bypass	285	9
Main Street	1,135	16
Scenic Highway	235	3
Non-Summer PM		
Exit 3 Off Ramps	70	1
Head of Bay Road	1,055	136
Buzzards Bay Bypass	125	4
Main Street	1,745	64
Scenic Highway	210	7

Travel Model Case 1B (Mid-Term Alternatives).



Travel Model Case 1B Summary of Findings.

Belmont Circle:

Summer: Moderate reduction in delay (slightly better than Case 1A, esp. Main Street & Scenic Hwy)
Non-Summer: Substantial reduction in delay (same as 1A).

Remaining delay locations: Head of the Bay Road (1-11 min delay) & Main Street (non-summer only).

Why? Year round - reduced queues on Route 25 southbound improves operations from Exit 3 into Belmont Circle all year. During summer, destinations on Main Street continue to attract many trips but average delay reduced to 16 seconds.

Travel Model Case 1B Summary of Findings.

Bourne Rotary: Overall modest delay reduction

Summer: Moderate reduction in delay (Main St, Scenic Hwy)

Non-Summer: Substantial reduction in delay.

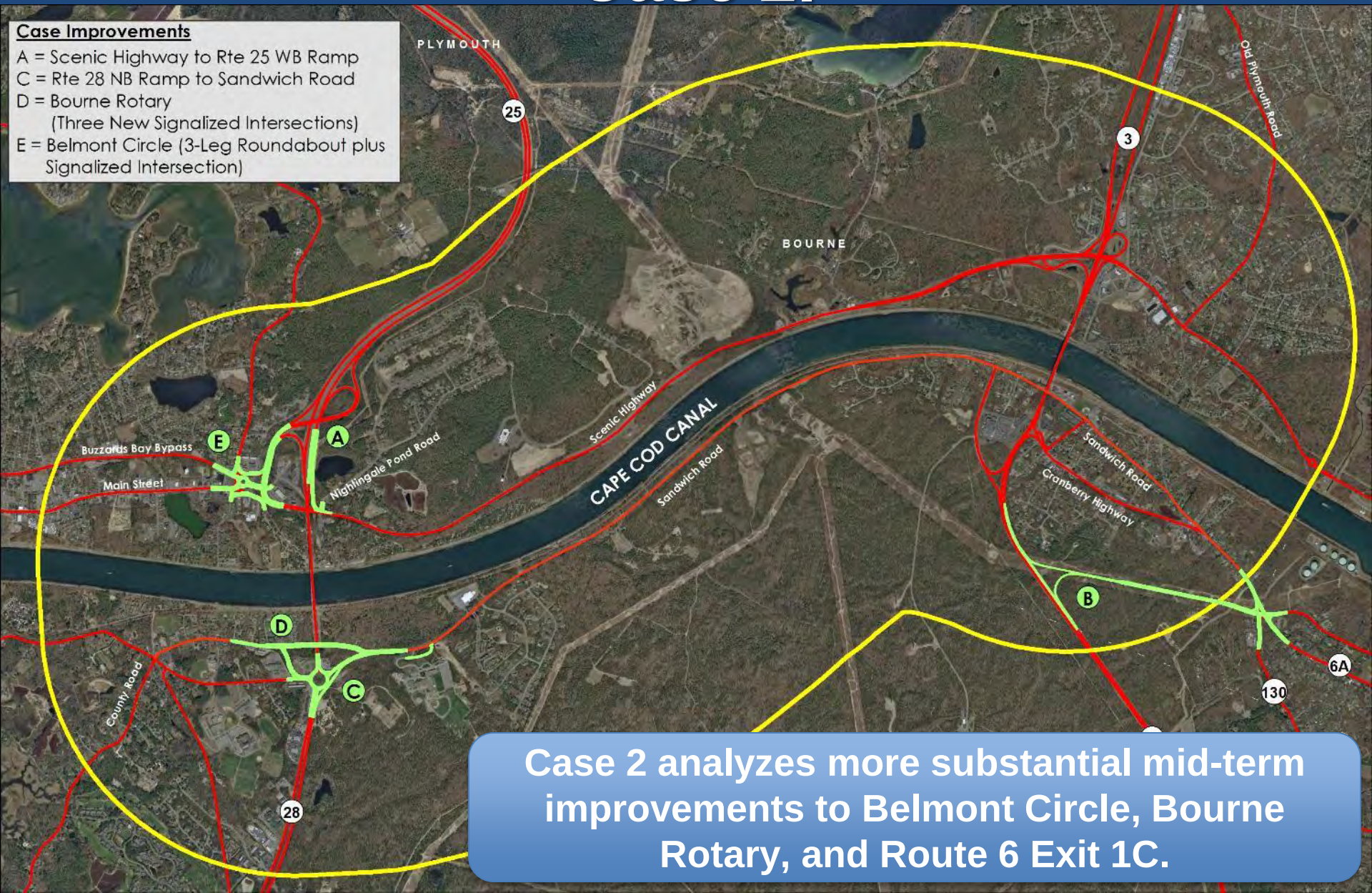
Remaining delay locations: Route 28 NB and Trowbridge Road (summer only).

Why? During summer, new configuration of Rotary improves overall operations but results in fewer gaps for vehicles entering from Route 28 northbound and Trowbridge Road, inhibiting delay reductions.

Travel Demand Model
Case 2
Mid-Term Alternatives
(5-8 years For Design and Permitting)

December 14, 2017

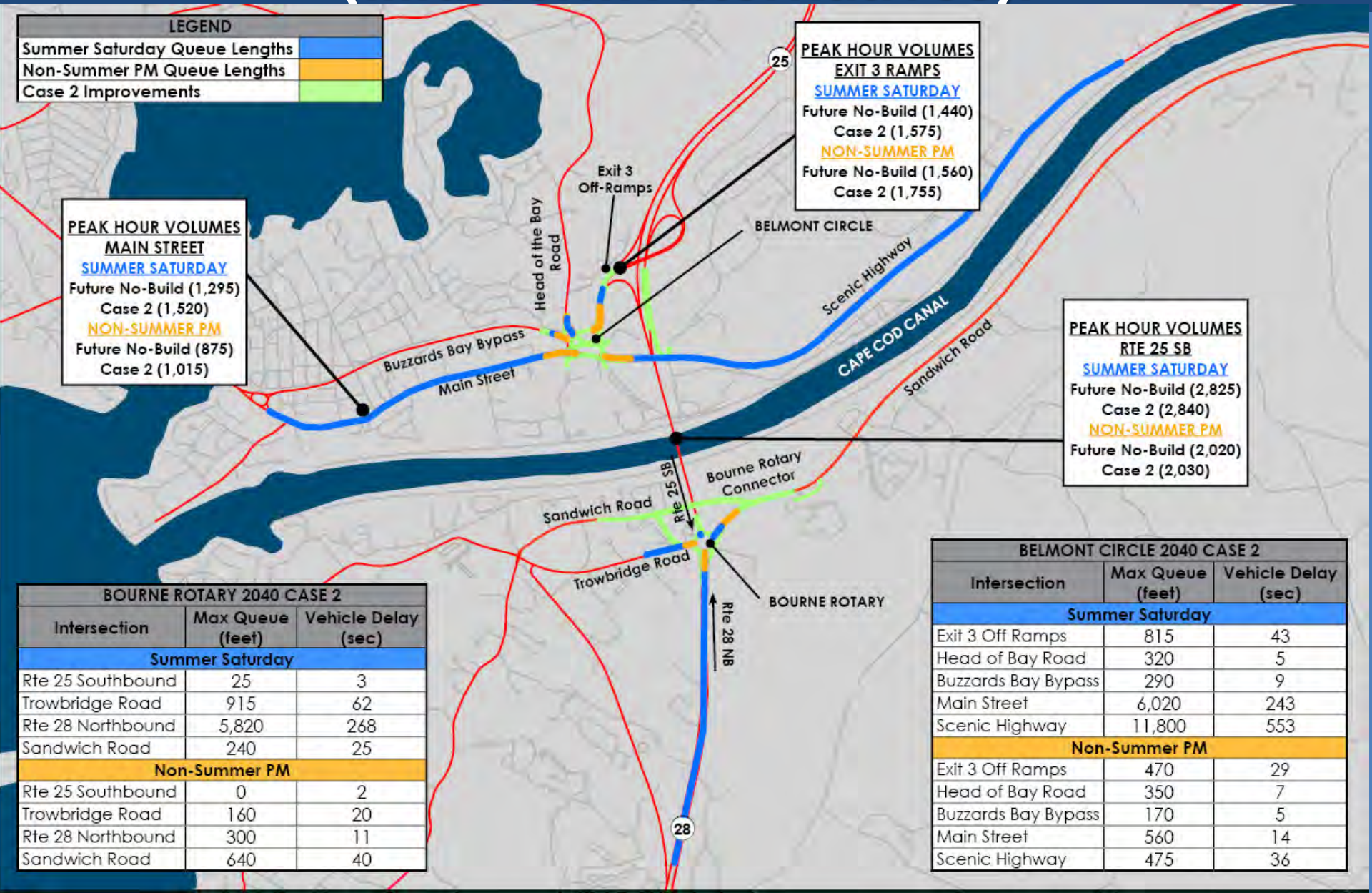
Travel Demand Model
Case 2.



Case 2 analyzes more substantial mid-term improvements to Belmont Circle, Bourne Rotary, and Route 6 Exit 1C.

Travel Demand Model Case 2
New Element – Belmont Circle.

Travel Model Case 2 Analysis (Mid-Term Alternatives).



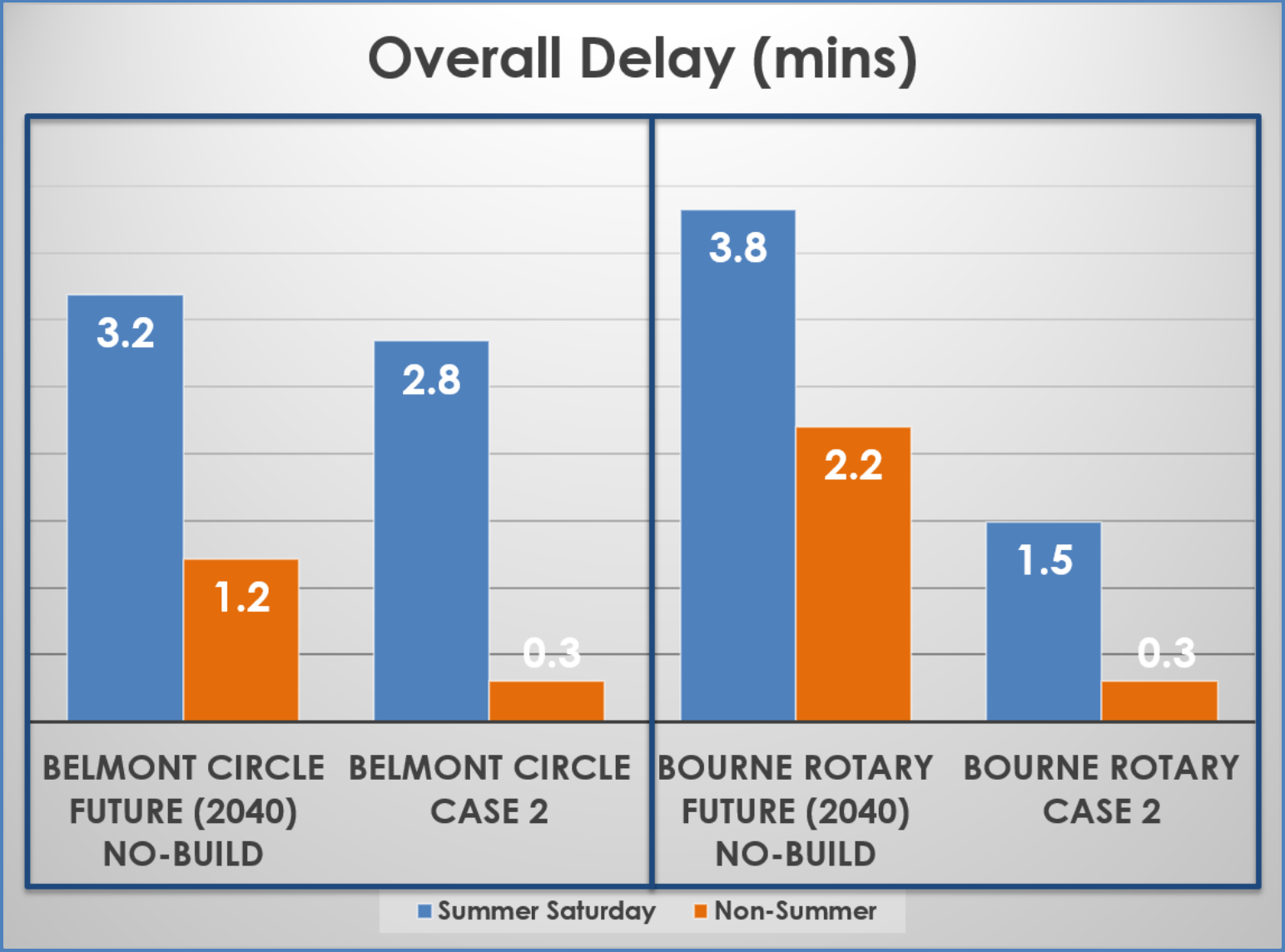
BOURNE ROTARY 2040 CASE 2

Intersection	Max Queue (feet)	Vehicle Delay (sec)
Summer Saturday		
Rte 25 Southbound	25	3
Trowbridge Road	915	62
Rte 28 Northbound	5,820	268
Sandwich Road	240	25
Non-Summer PM		
Rte 25 Southbound	0	2
Trowbridge Road	160	20
Rte 28 Northbound	300	11
Sandwich Road	640	40

BELMONT CIRCLE 2040 CASE 2

Intersection	Max Queue (feet)	Vehicle Delay (sec)
Summer Saturday		
Exit 3 Off Ramps	815	43
Head of Bay Road	320	5
Buzzards Bay Bypass	290	9
Main Street	6,020	243
Scenic Highway	11,800	553
Non-Summer PM		
Exit 3 Off Ramps	470	29
Head of Bay Road	350	7
Buzzards Bay Bypass	170	5
Main Street	560	14
Scenic Highway	475	36

Travel Model Case 2 (Mid-Term Alternatives).



Travel Model Case 2 Summary of Findings.

Belmont Circle:

Summer: Moderate reduction in delay (somewhat less effective than Case 1B, esp. Main Street and Scenic Highway)
Non-Summer: Substantial reduction in delay (esp Head of the Bay Road).
Remaining delay locations: Scenic Hwy, Main St. (summer only).

Why? During Summer - reduced delay on Route 25 SB attracts more people to travel through Belmont Circle especially on Scenic Hwy and Main St, inhibiting delay reductions.

Travel Model Case 2 Summary of Findings.

Bourne Rotary: Substantial delay reduction

Summer: Substantial reduction in delay (esp. Route 25 southbound, Sandwich Road).

Non-Summer: Substantial reduction in delay.

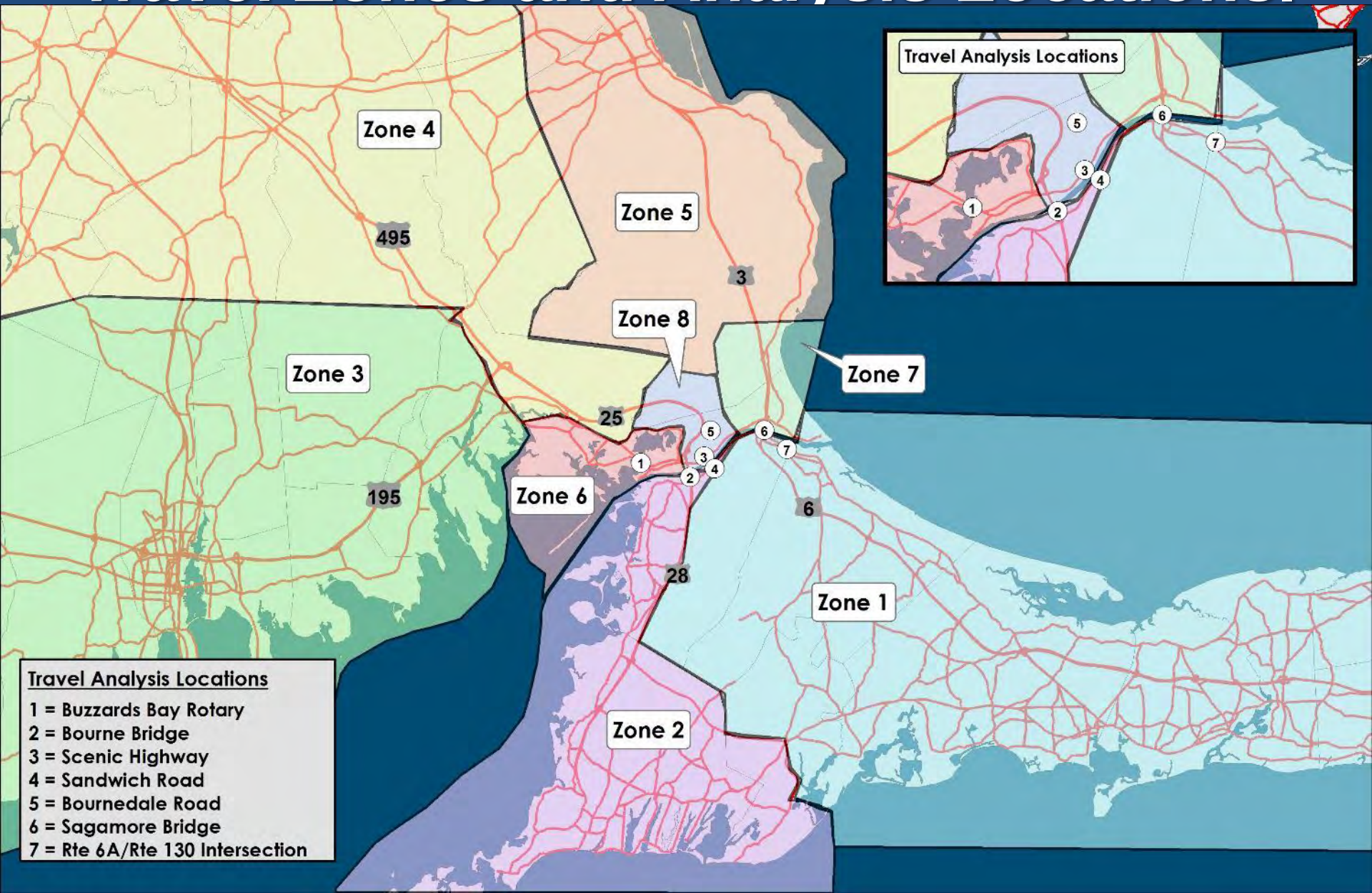
Remaining delay locations: Route 28 NB (summer only).

Why? During Summer, new configuration of Rotary improves overall operations but results in fewer gaps for vehicles entering from Route 28 northbound, inhibiting delay reductions.

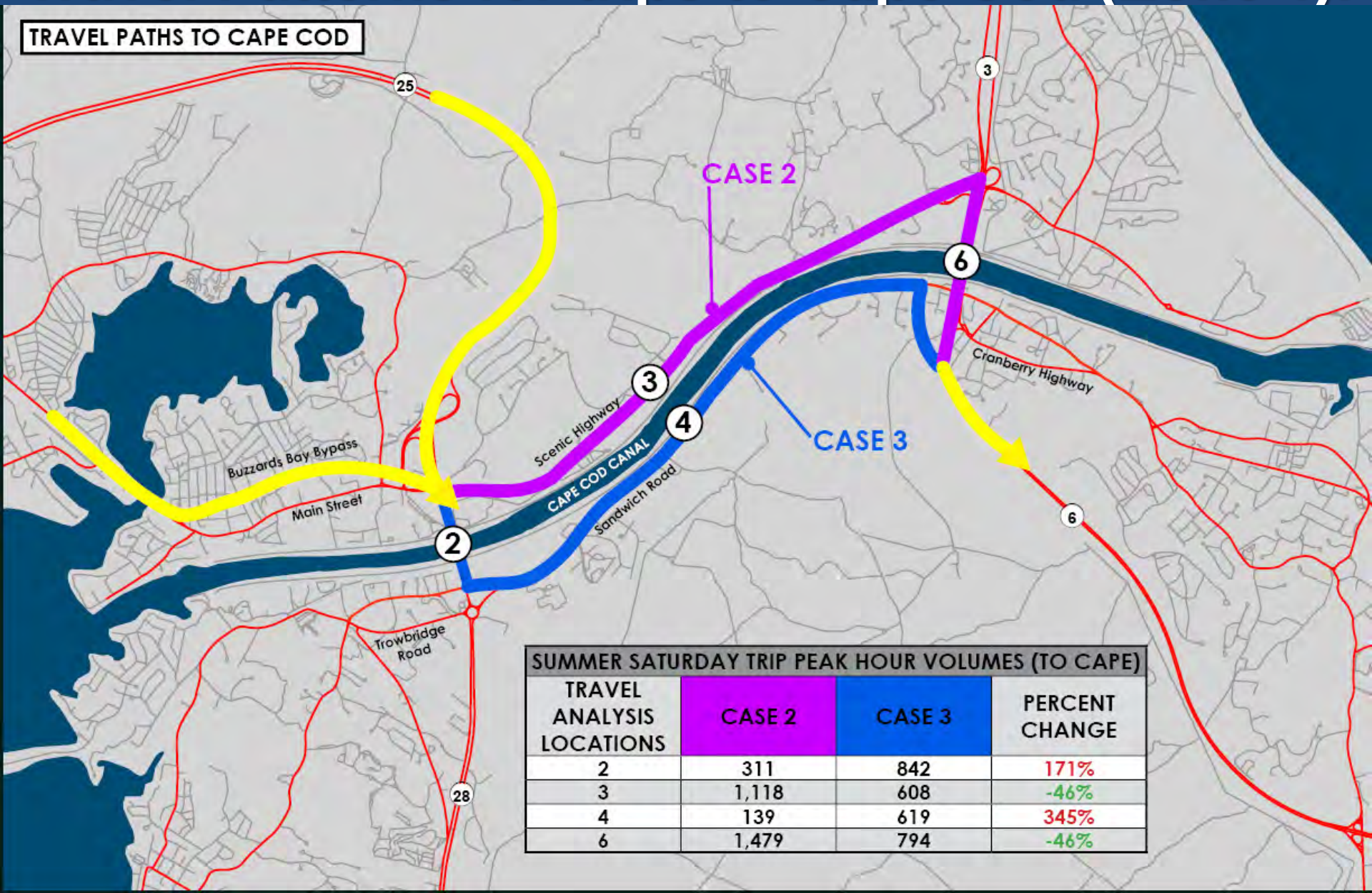
Origin-Destination Study and Travel Time Analysis

December 14, 2017

Origin-Destination Study
Travel Zones and Analysis Locations.

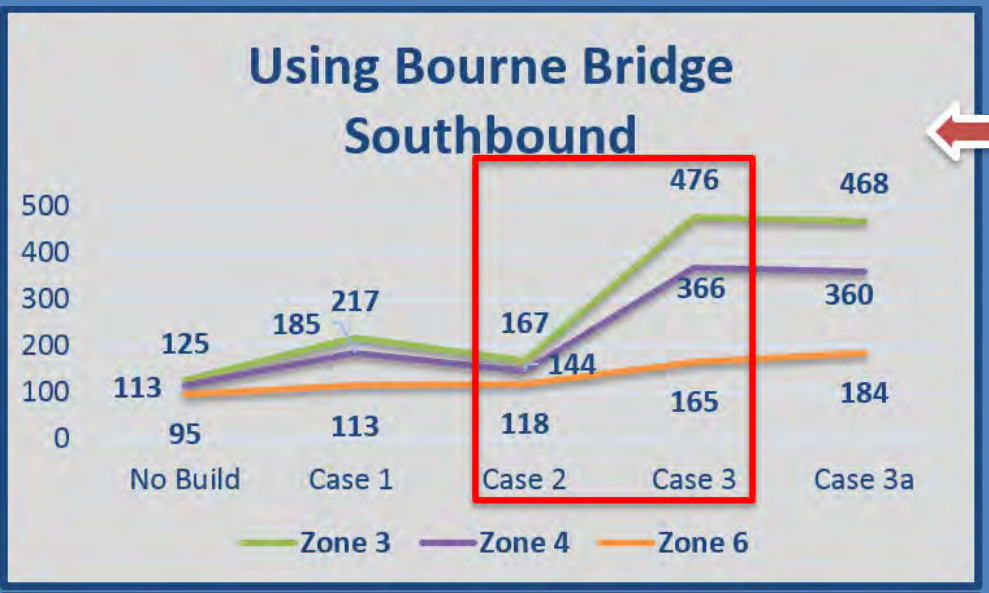


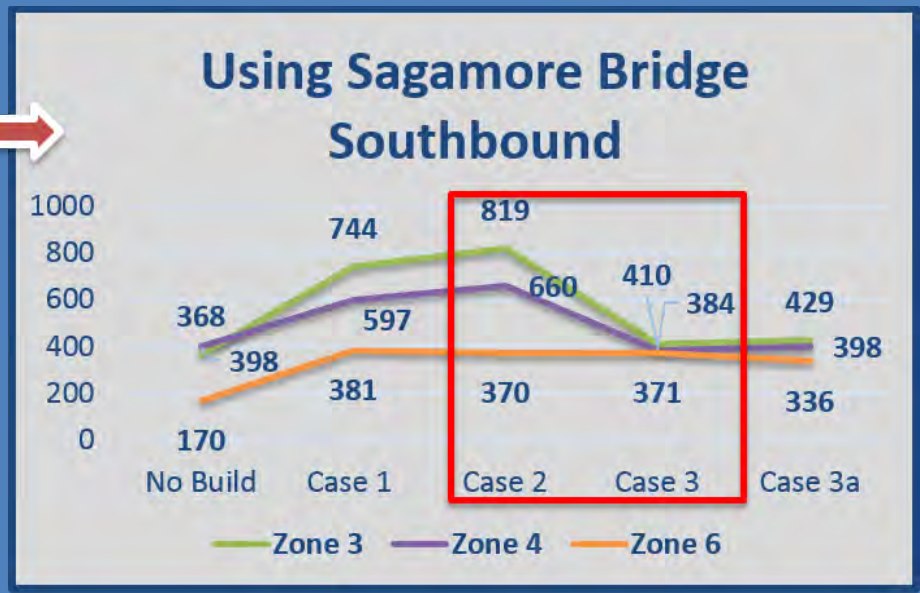
Summer: Origin-Destination Study
Travel Patterns for trips to Cape Cod (Zone 1).

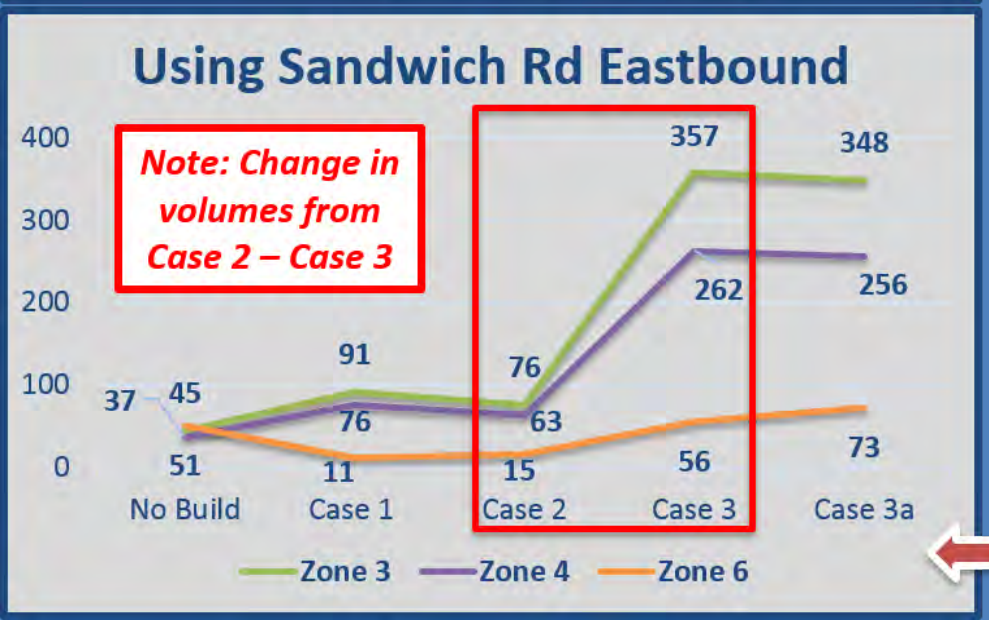


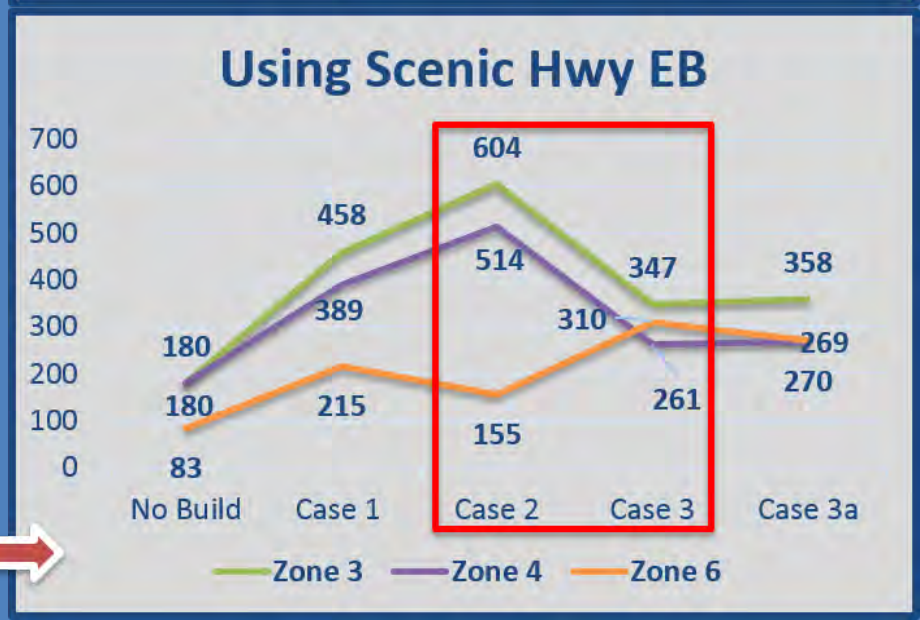
SUMMER SATURDAY TRIP PEAK HOUR VOLUMES (TO CAPE)			
TRAVEL ANALYSIS LOCATIONS	CASE 2	CASE 3	PERCENT CHANGE
2	311	842	171%
3	1,118	608	-46%
4	139	619	345%
6	1,479	794	-46%

Summer: Origin-Destination Study
Travel Patterns for trips to Cape Cod (Zone 1).

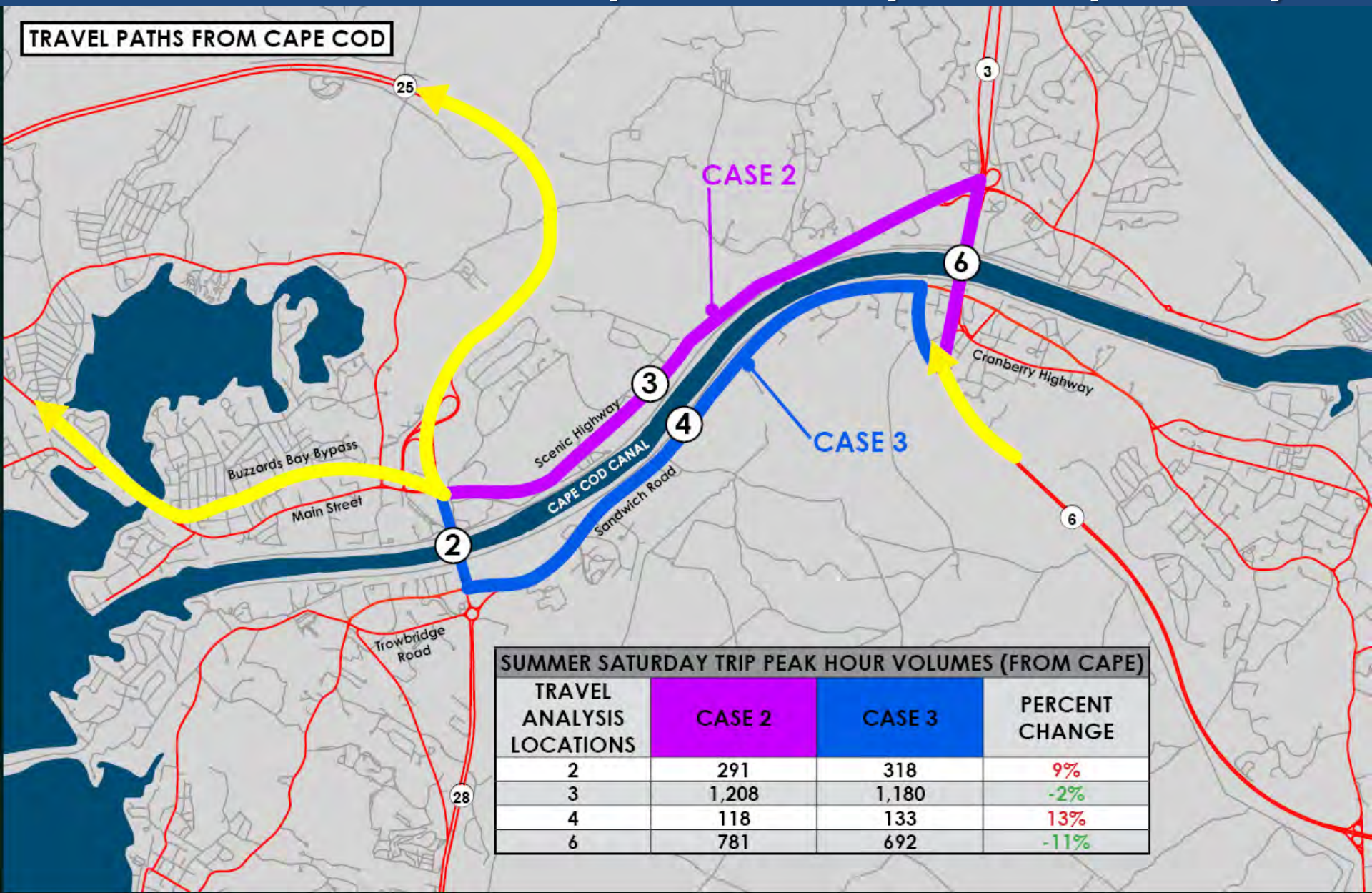






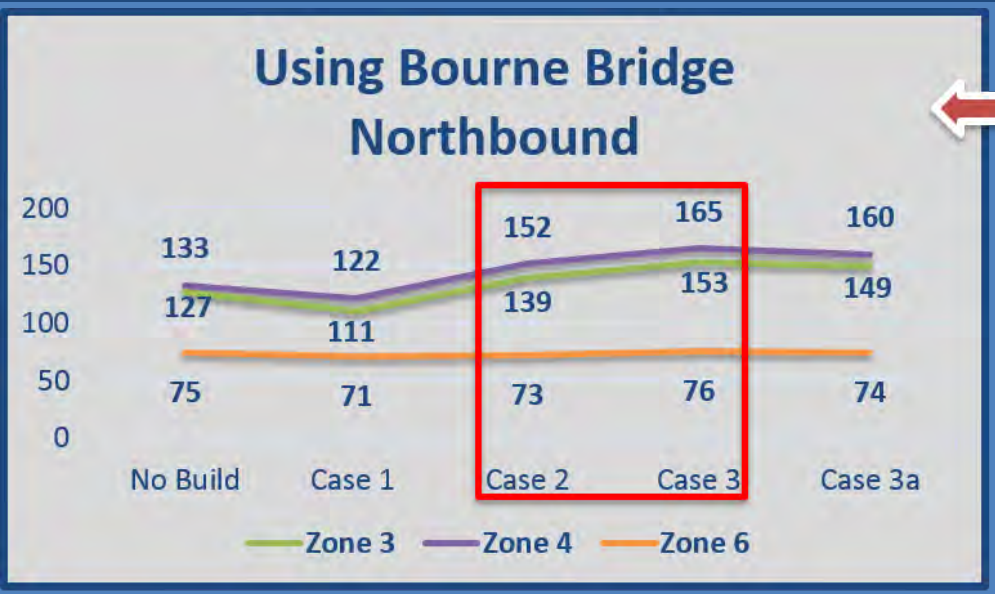


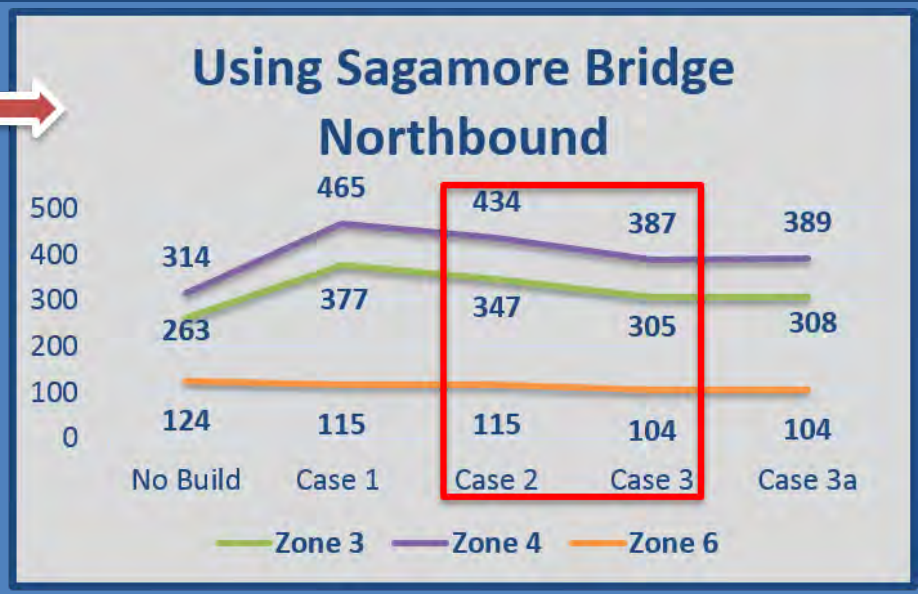
Summer: Origin-Destination Study
Travel Patterns for trips from Cape Cod (Zone 1).

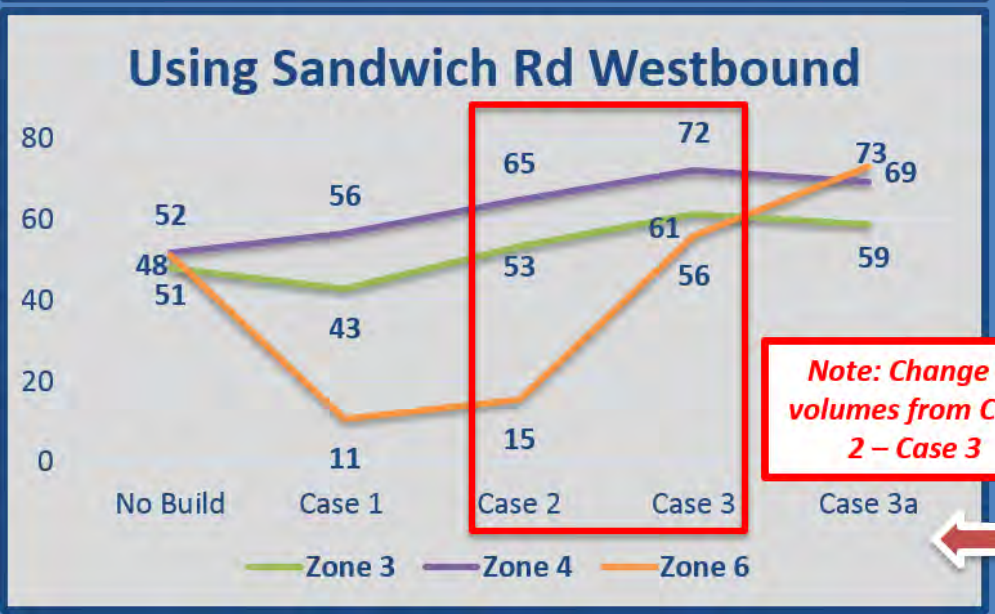


SUMMER SATURDAY TRIP PEAK HOUR VOLUMES (FROM CAPE)			
TRAVEL ANALYSIS LOCATIONS	CASE 2	CASE 3	PERCENT CHANGE
2	291	318	9%
3	1,208	1,180	-2%
4	118	133	13%
6	781	692	-11%

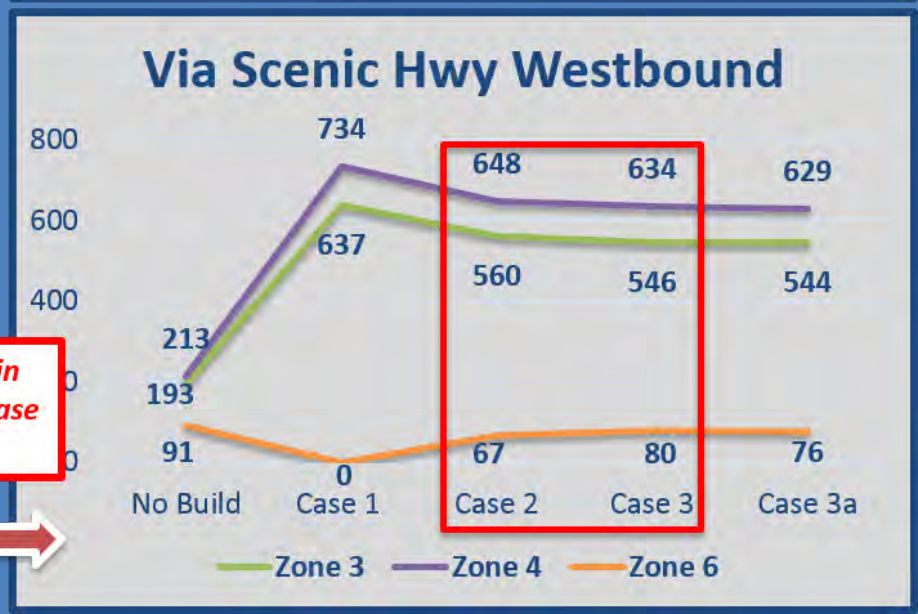
Summer: Origin-Destination Study
Travel Patterns for trips from Cape Cod (Zone 1).







Note: Change in volumes from Case 2 – Case 3



Origin-Destination Study Summary of Findings.

- Currently, congested operations at Belmont Circle and Bourne Rotary discourage use of the Bourne Bridge.
- As operations improve at Belmont Circle and Bourne Rotary, traffic shifts to the more direct route on the Bourne Bridge. This is especially noticeable during summer with new bridge construction (Case 3 and Case 3A).

Origin-Destination Study Summary of Findings.

This shift to the Bourne Bridge results in increased traffic on:

- Belmont Circle (esp. Main Street, Route 25),
- Sandwich Road.

increased traffic on:

- Sagamore Bridge,
- Scenic Highway.

Travel Demand Model
Case 2B (NEW!)
Mid-Term Alternatives
(5-8 years For Design and Permitting)

December 14, 2017

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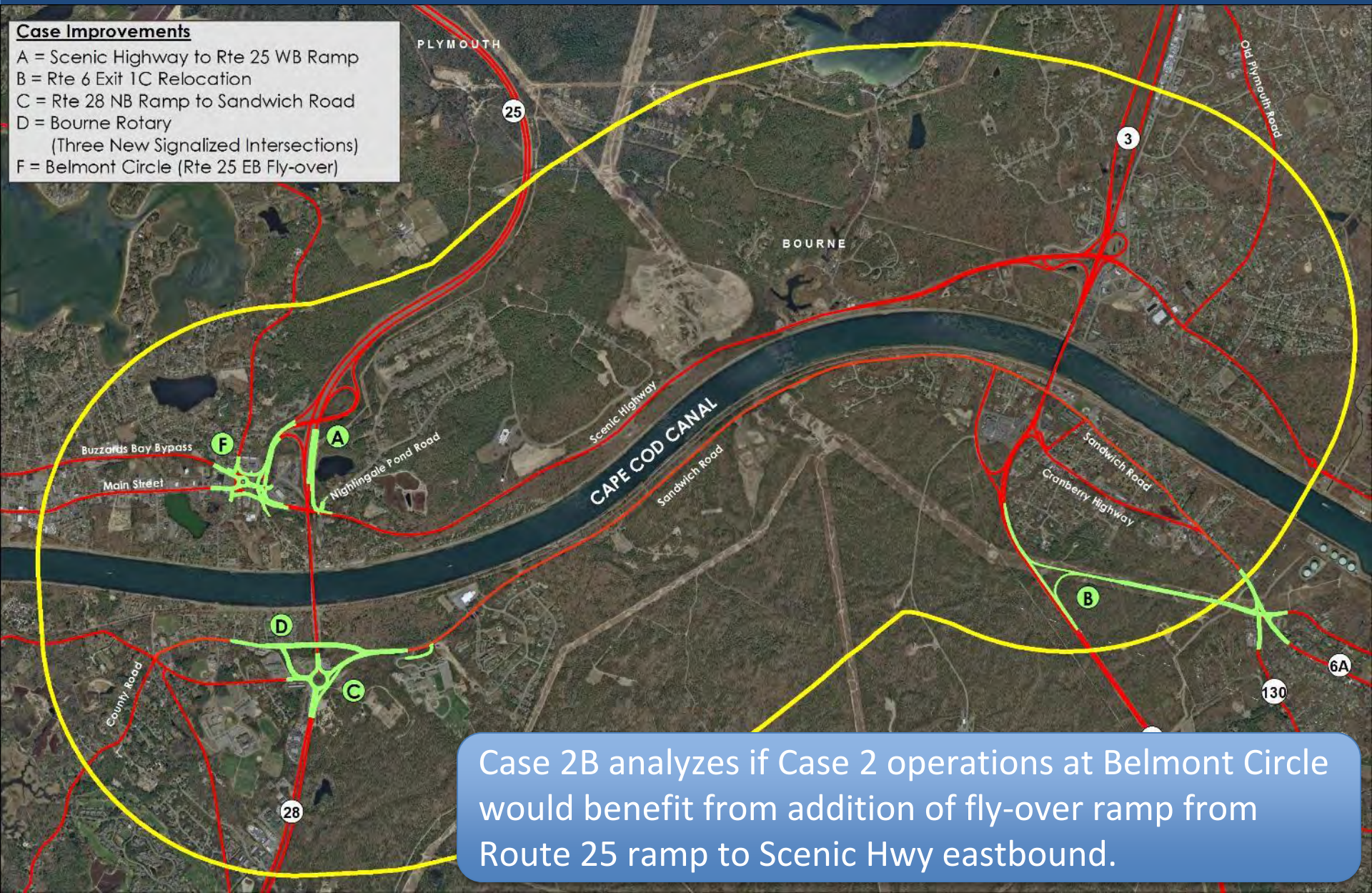
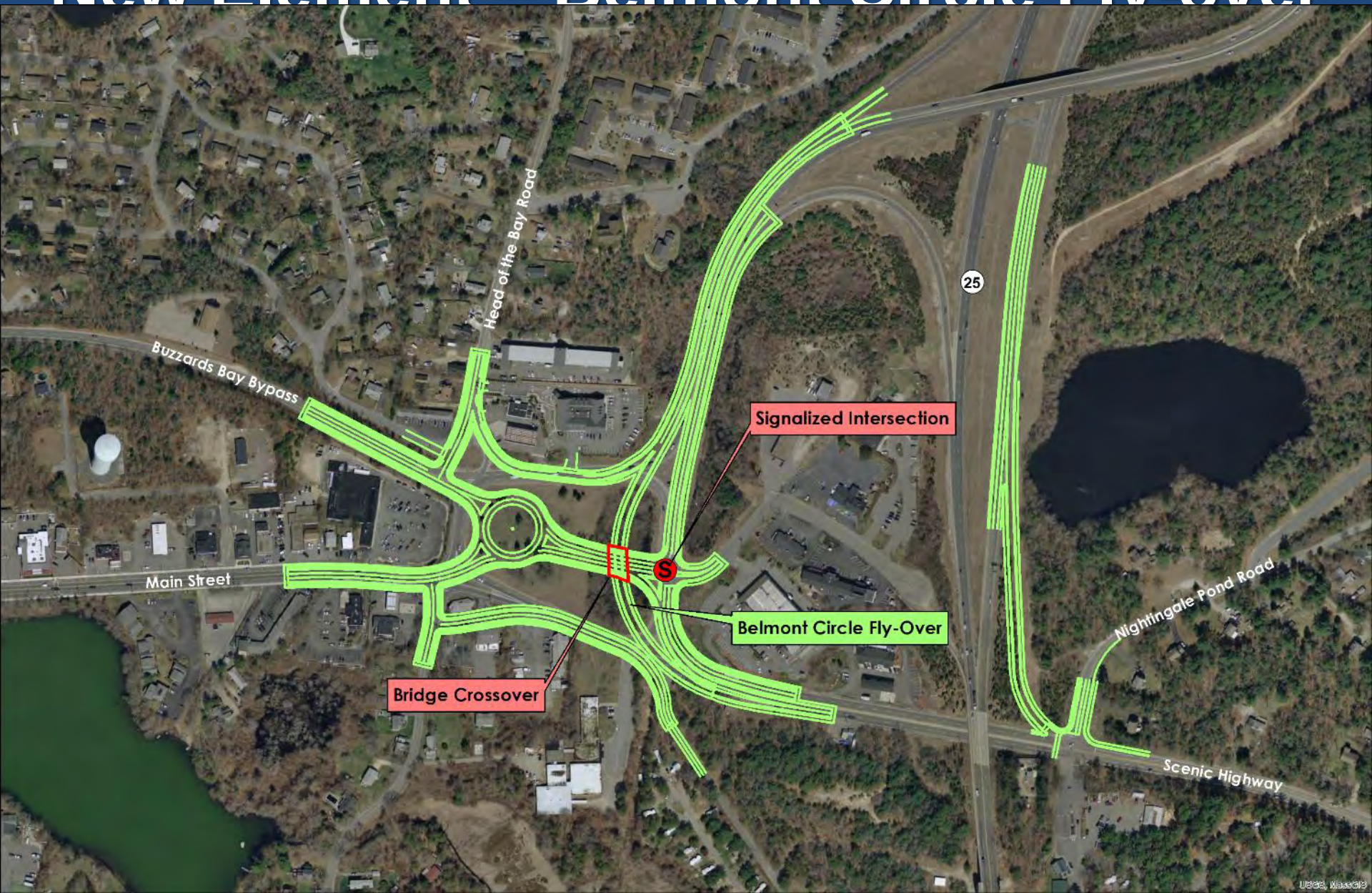
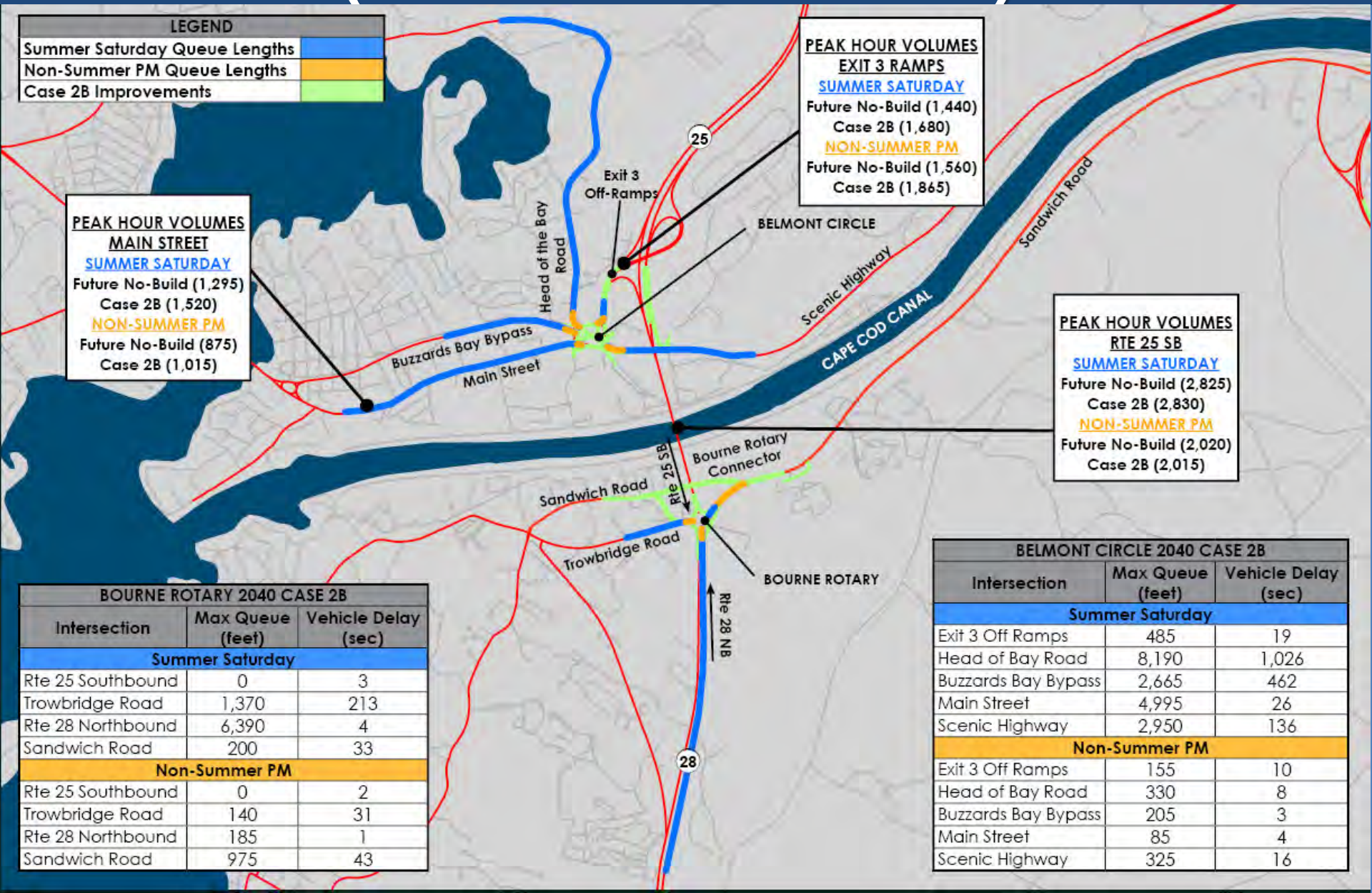
Travel Model Case 2B.



Travel Model Case 2B.
New Element – Belmont Circle Fly-over



Travel Model Case 2B Analysis (Mid-Term Alternatives).



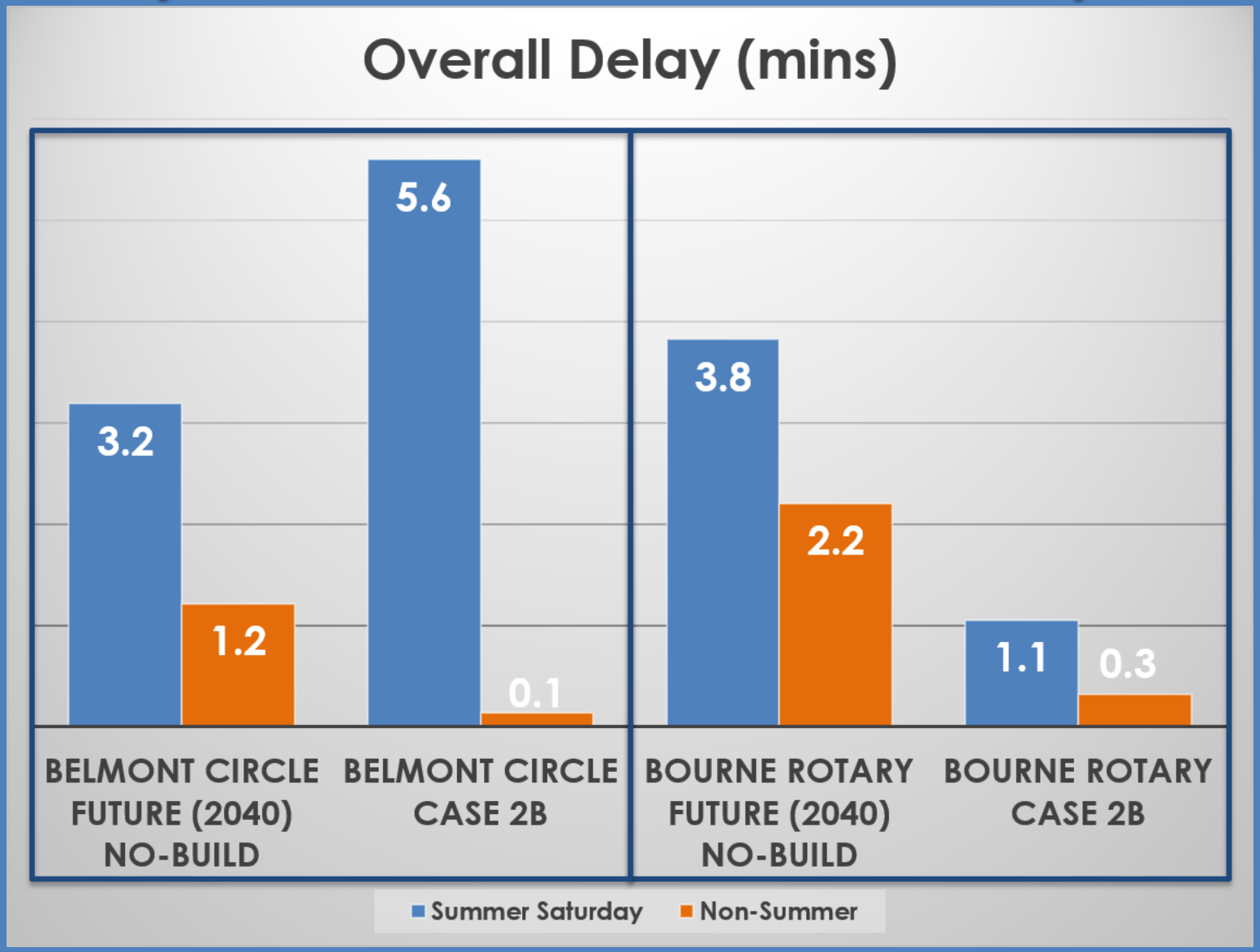
BOURNE ROTARY 2040 CASE 2B

Intersection	Max Queue (feet)	Vehicle Delay (sec)
Summer Saturday		
Rte 25 Southbound	0	3
Trowbridge Road	1,370	213
Rte 28 Northbound	6,390	4
Sandwich Road	200	33
Non-Summer PM		
Rte 25 Southbound	0	2
Trowbridge Road	140	31
Rte 28 Northbound	185	1
Sandwich Road	975	43

BELMONT CIRCLE 2040 CASE 2B

Intersection	Max Queue (feet)	Vehicle Delay (sec)
Summer Saturday		
Exit 3 Off Ramps	485	19
Head of Bay Road	8,190	1,026
Buzzards Bay Bypass	2,665	462
Main Street	4,995	26
Scenic Highway	2,950	136
Non-Summer PM		
Exit 3 Off Ramps	155	10
Head of Bay Road	330	8
Buzzards Bay Bypass	205	3
Main Street	85	4
Scenic Highway	325	16

Travel Model Case 2B (Mid-Term Alternatives).



Travel Model Case 2B Summary of Findings.

Belmont Circle:

Summer: No overall delay reduction
(not as effective as Case 1B or Case 2)

Increased delays at Head of the Bay Road and Buzzards Bay Bypass.

Non-Summer: Substantial reduction in delay.

- Remaining delay locations: Head of Bay Road and Buzzards Bay Bypass (summer only).

Why? Year round - many more vehicles attracted to Circle area. During Summer more freely flowing traffic in roundabout increases difficulty for vehicles entering from Main St. Head of Bay Road, Buzzards Bay Bypass.

Travel Model Case 2B Summary of Findings.

Bourne Rotary: Substantial delay reduction (better than Case 1B or Case 2).

Summer: Substantial reduction in delay.
Non-Summer: Substantial reduction in delay.

Remaining delay locations: Route 28 NB, Trowbridge Road (summer only).

Why? Change in Rotary design allows increased traffic flow from Route 28 SB. This increases difficulty for vehicles entering from Route 28 NB and Trowbridge Road.

Travel Demand Model
Case 3
Long-Term Alternatives
(8+ years For Design and Permitting)

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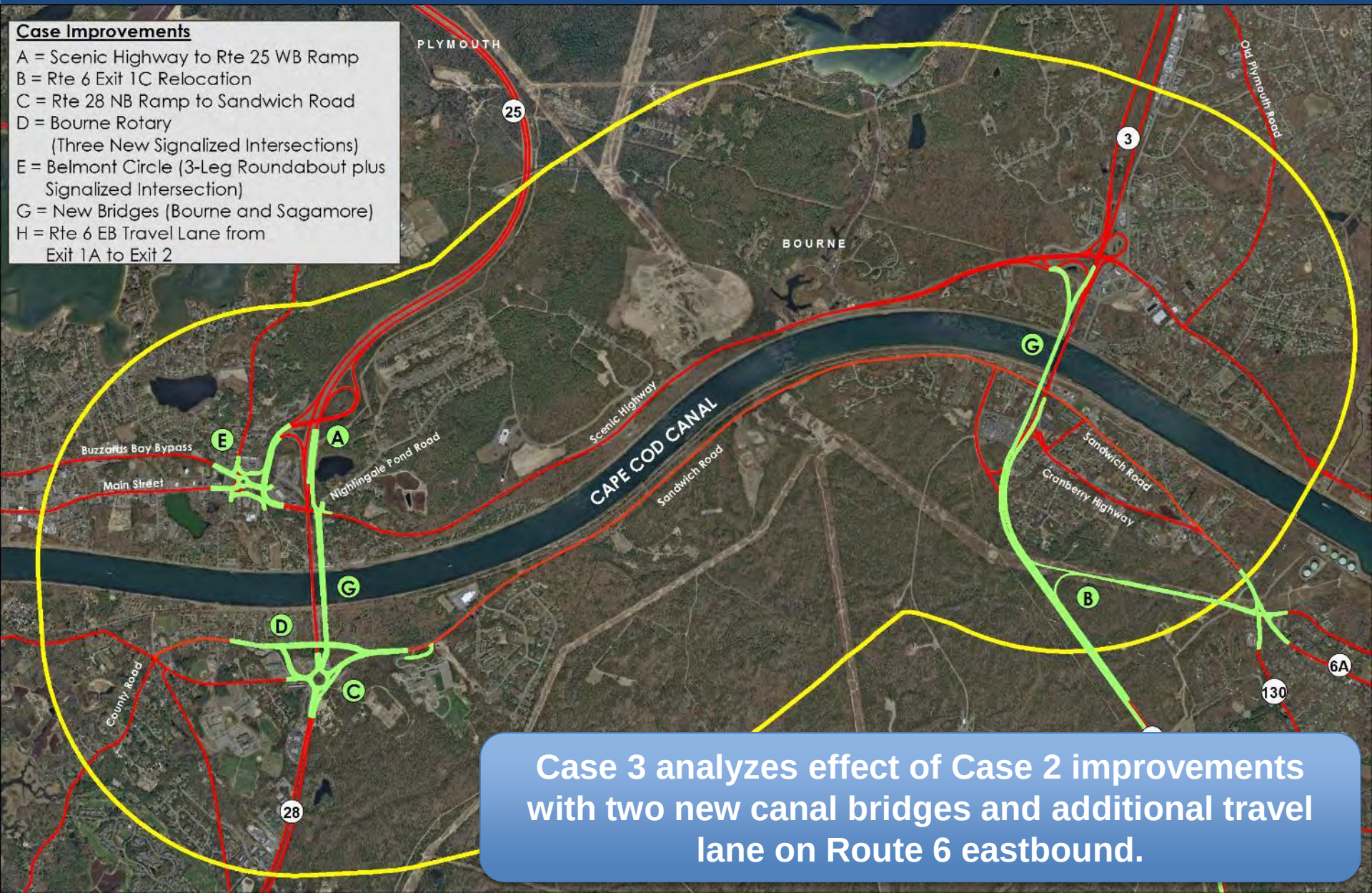
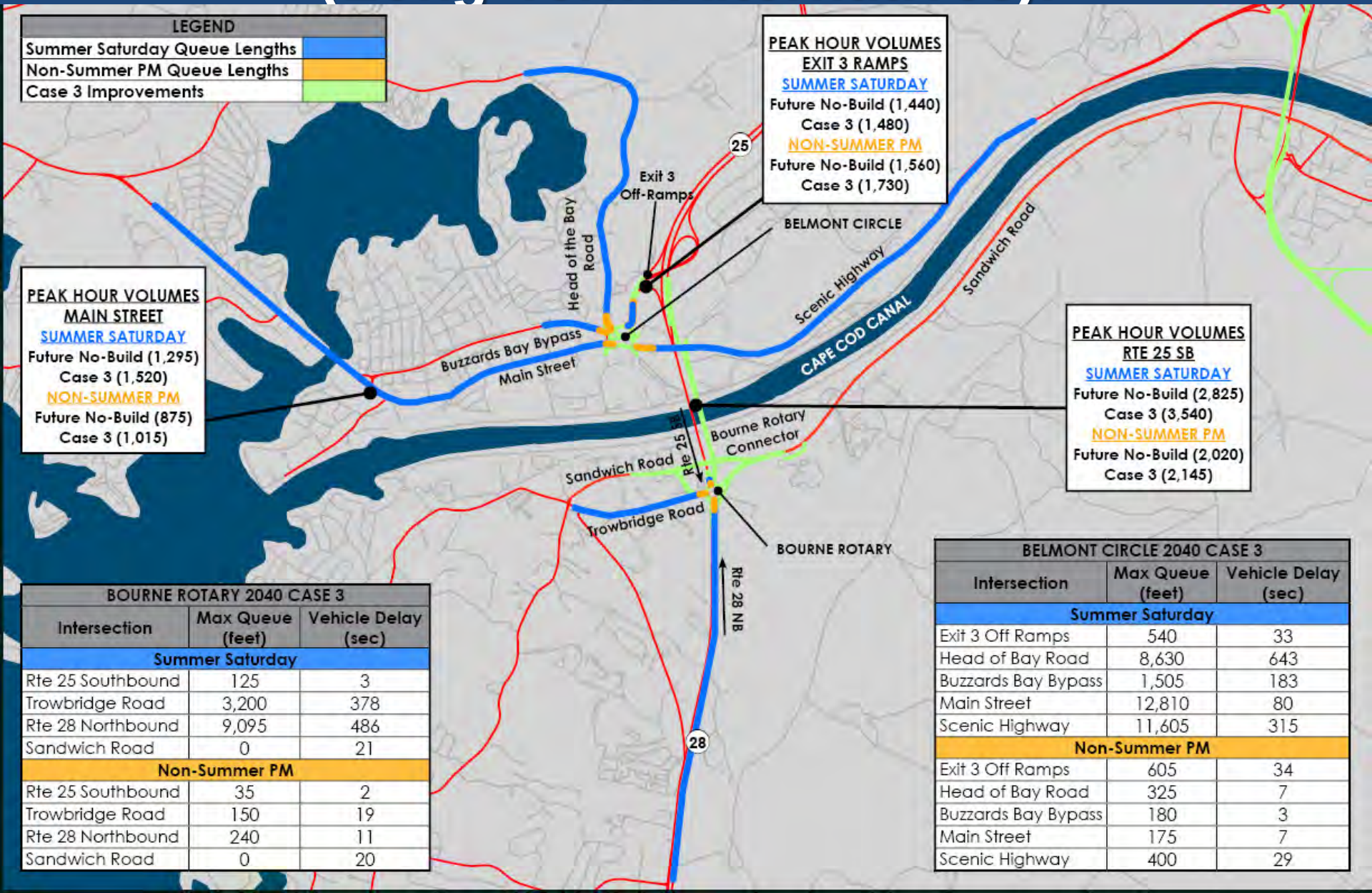
Travel Model Case 3.



Travel Model Case 3 Analysis (Long-Term Alternatives).



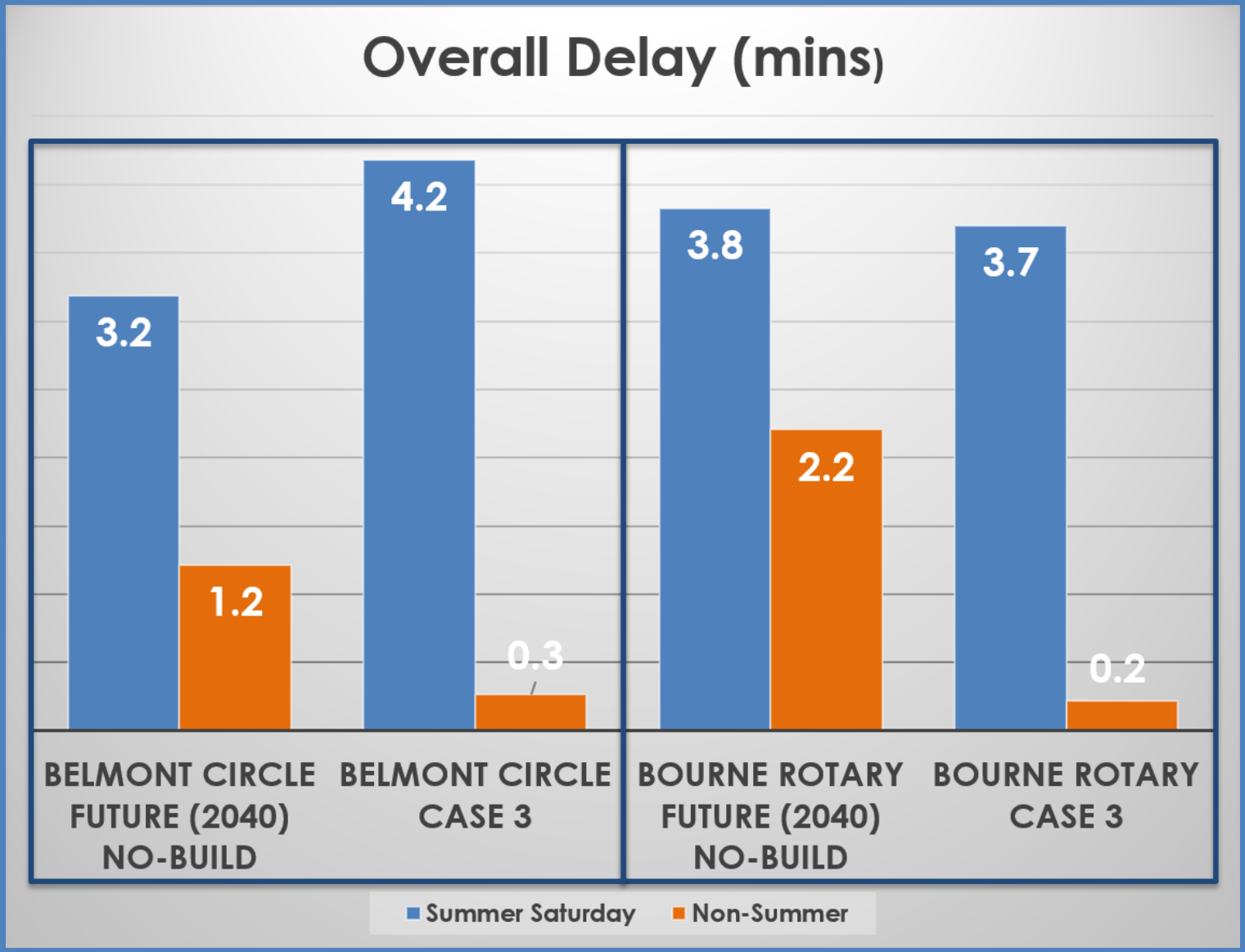
BOURNE ROTARY 2040 CASE 3

Intersection	Max Queue (feet)	Vehicle Delay (sec)
Summer Saturday		
Rte 25 Southbound	125	3
Trowbridge Road	3,200	378
Rte 28 Northbound	9,095	486
Sandwich Road	0	21
Non-Summer PM		
Rte 25 Southbound	35	2
Trowbridge Road	150	19
Rte 28 Northbound	240	11
Sandwich Road	0	20

BELMONT CIRCLE 2040 CASE 3

Intersection	Max Queue (feet)	Vehicle Delay (sec)
Summer Saturday		
Exit 3 Off Ramps	540	33
Head of Bay Road	8,630	643
Buzzards Bay Bypass	1,505	183
Main Street	12,810	80
Scenic Highway	11,605	315
Non-Summer PM		
Exit 3 Off Ramps	605	34
Head of Bay Road	325	7
Buzzards Bay Bypass	180	3
Main Street	175	7
Scenic Highway	400	29

Travel Model Case 3 (Long-Term Alternatives).



Travel Model Case 3 Summary of Findings.

Belmont Circle:

Summer: Overall, no delay reduction.

Non-Summer: Substantial reduction in delay.

- Remaining delay locations: Head of Bay Road, Buzzards Bay Bypass, Main St. (summer only).

Why? More vehicles attracted to Belmont Circle area with new bridge (esp. Main Street, +225 in peak hour). Heavier traffic volumes in roundabout delays vehicles entering from other approaches.

Travel Model Case 3 Summary of Findings.

Bourne Rotary:

Summer: Varying improvements based on approach.
- Route 28 South/ Sandwich Road – Minor delay.
- Route 28 North/Trowbridge Road – Longer delay.

Non-Summer: Substantial reduction in delay.

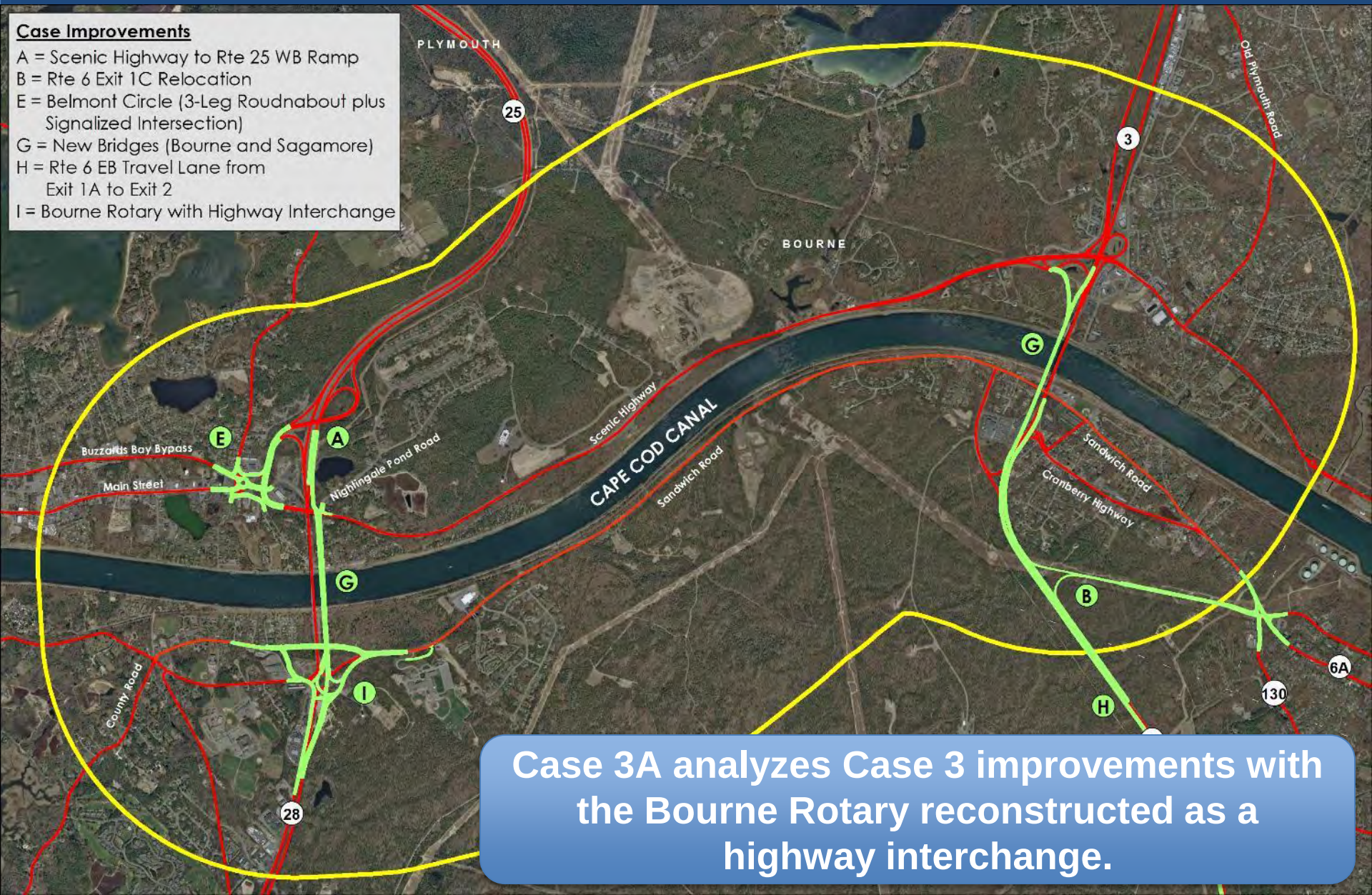
Remaining delay locations: Trowbridge Rd (summer only).

Why? – During summer, additional traffic attracted to new bridge (+715 in peak hour) results in delays at signalized intersections as difficulty in entering rotary increases.

Travel Demand Model
Case 3A
Long-Term Alternatives
(8+ years For Design and Permitting)

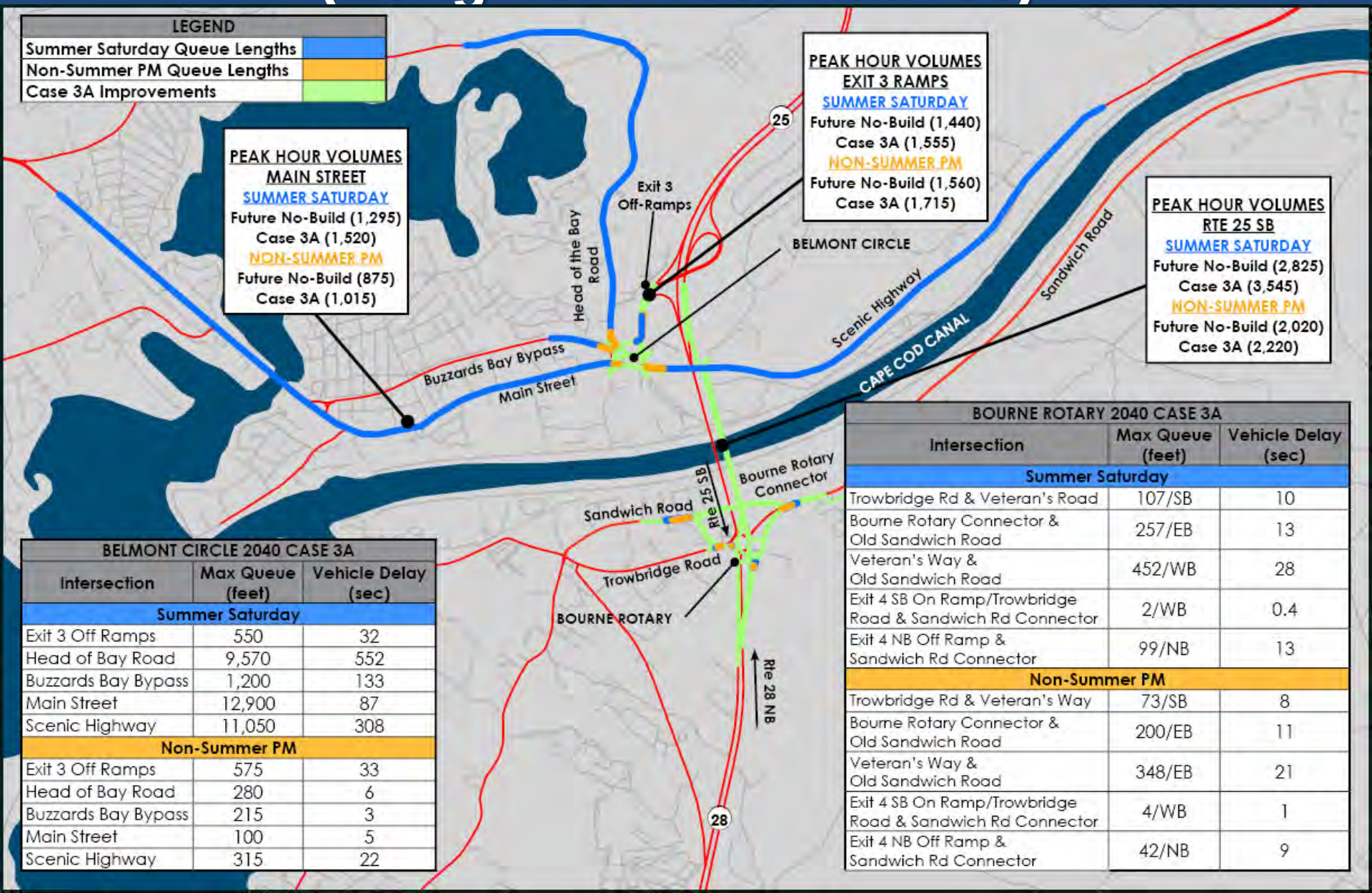
December 14, 2017

Travel Model Case 3A.



Travel Demand Model Case 3A
New Element – Bourne Rotary Highway Interchange.

Travel Model Case 3A Analysis (Long-Term Alternatives).



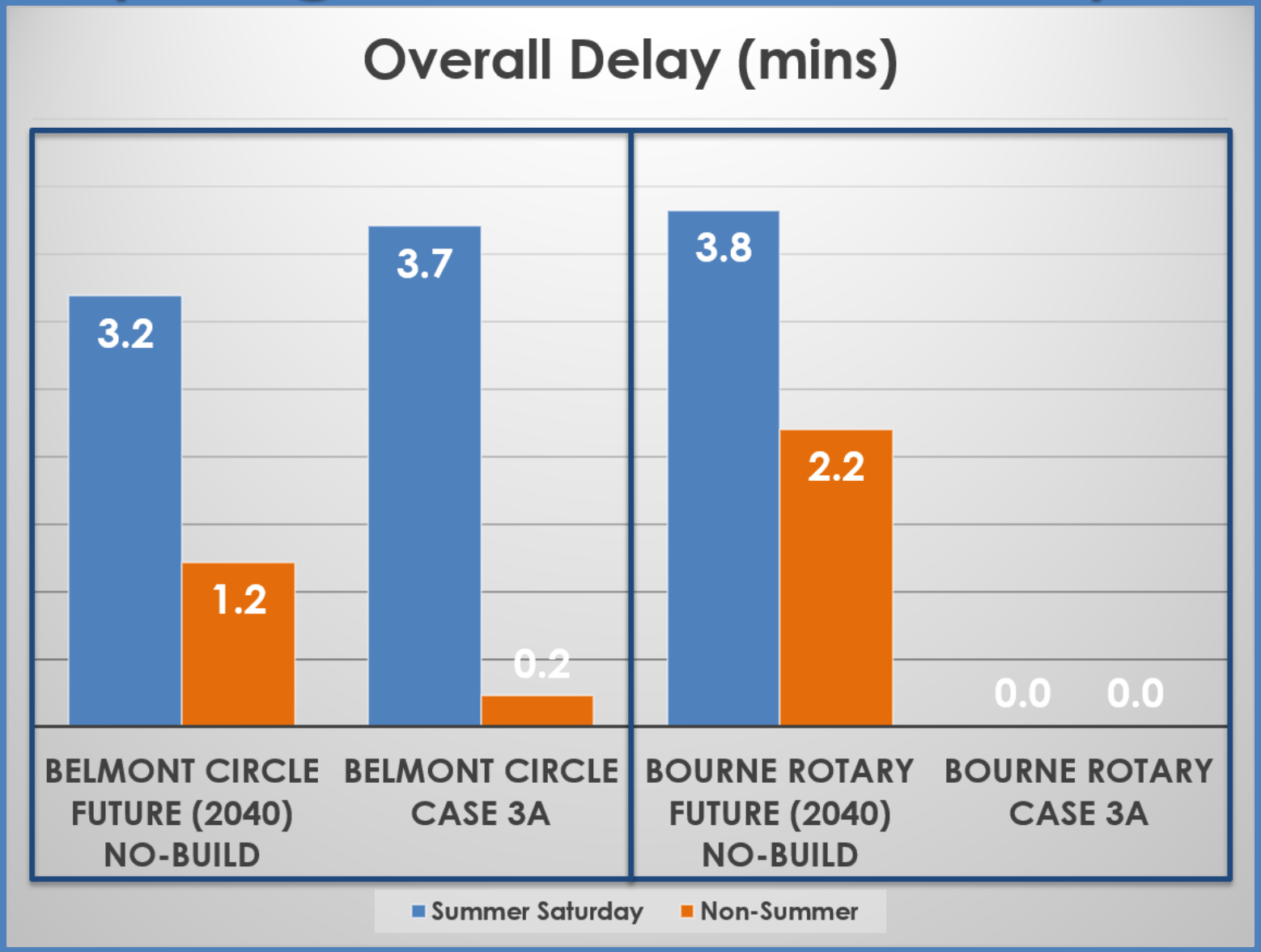
BELMONT CIRCLE 2040 CASE 3A

Intersection	Max Queue (feet)	Vehicle Delay (sec)
Summer Saturday		
Exit 3 Off Ramps	550	32
Head of Bay Road	9,570	552
Buzzards Bay Bypass	1,200	133
Main Street	12,900	87
Scenic Highway	11,050	308
Non-Summer PM		
Exit 3 Off Ramps	575	33
Head of Bay Road	280	6
Buzzards Bay Bypass	215	3
Main Street	100	5
Scenic Highway	315	22

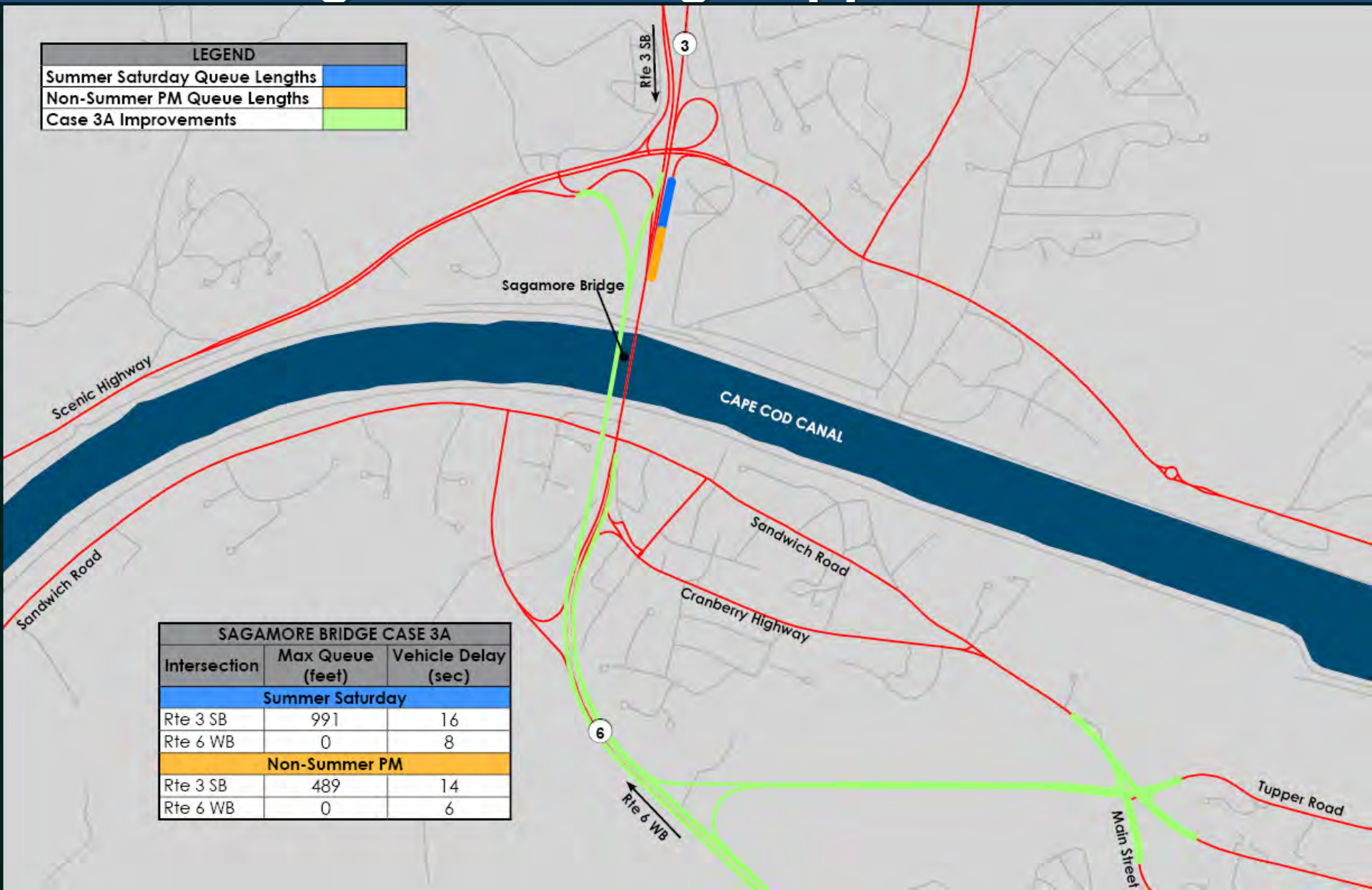
BOURNE ROTARY 2040 CASE 3A

Intersection	Max Queue (feet)	Vehicle Delay (sec)
Summer Saturday		
Trowbridge Rd & Veteran's Road	107/SB	10
Bourne Rotary Connector & Old Sandwich Road	257/EB	13
Veteran's Way & Old Sandwich Road	452/WB	28
Exit 4 SB On Ramp/Trowbridge Road & Sandwich Rd Connector	2/WB	0.4
Exit 4 NB Off Ramp & Sandwich Rd Connector	99/NB	13
Non-Summer PM		
Trowbridge Rd & Veteran's Way	73/SB	8
Bourne Rotary Connector & Old Sandwich Road	200/EB	11
Veteran's Way & Old Sandwich Road	348/EB	21
Exit 4 SB On Ramp/Trowbridge Road & Sandwich Rd Connector	4/WB	1
Exit 4 NB Off Ramp & Sandwich Rd Connector	42/NB	9

Travel Model Case 3A (Long-Term Alternatives).



Travel Model Case 3A
Sagamore Bridge Approaches.



SAGAMORE BRIDGE CASE 3A		
Intersection	Max Queue (feet)	Vehicle Delay (sec)
Summer Saturday		
Rte 3 SB	991	16
Rte 6 WB	0	8
Non-Summer PM		
Rte 3 SB	489	14
Rte 6 WB	0	6

Travel Model Case 3A Summary of Findings.

Belmont Circle:

Summer: Overall, minor delay reduction (esp. Main Street).
Non-Summer: Substantial reduction in delay (esp. Head of Bay Road, Main Street).

Remaining delay locations: Head of Bay Road, Scenic Hwy, Main St. (summer only).

Why? During Summer - Improvements to Bourne Rotary make Belmont Circle area even more attractive. Heavier volumes on Circle approaches (Main Street +225 in peak hour) results in delay at roundabout.

Travel Model Case 3A Summary of Findings.

Bourne Rotary: Substantial delay reduction

Summer: Minor delays at intersections.
Non-Summer: Few delays along highway or at intersections.

Remaining delay locations: None

Why? Reconstruction of Bourne Rotary as a highway interchange allows traffic to flow freely during summer and non-summer.

Travel Model Case 3A Summary of Findings.

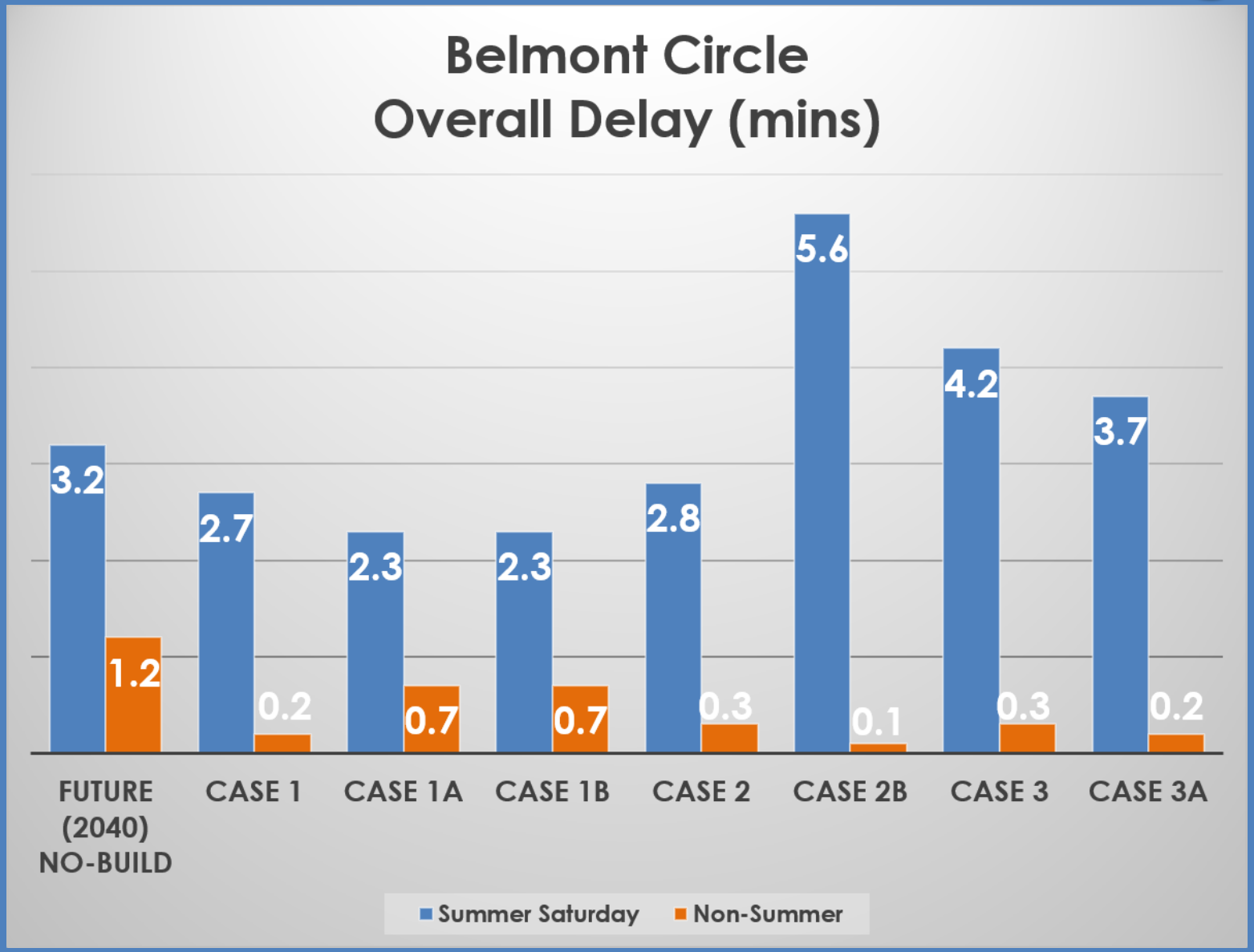
Sagamore Bridge:

Route 6 westbound – minor delays in summer and non-summer periods (8-16 seconds).

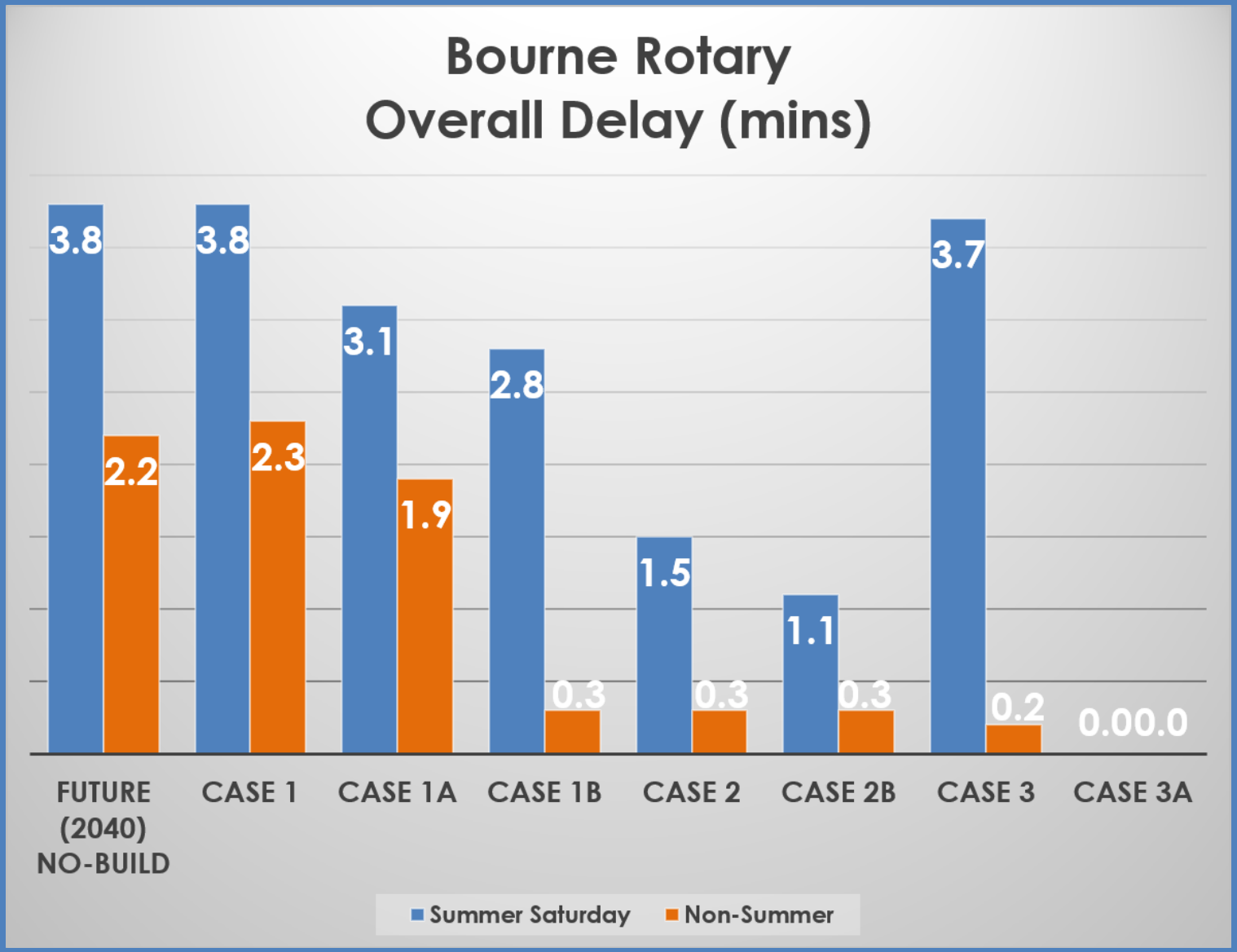
Route 3 southbound – No delay during summer and non-summer periods.

Why? Construction of new Sagamore Bridge with accessory lanes and Route 6 eastbound lane to
Exit 2 alleviates nearly all delay during summer and non-summer.

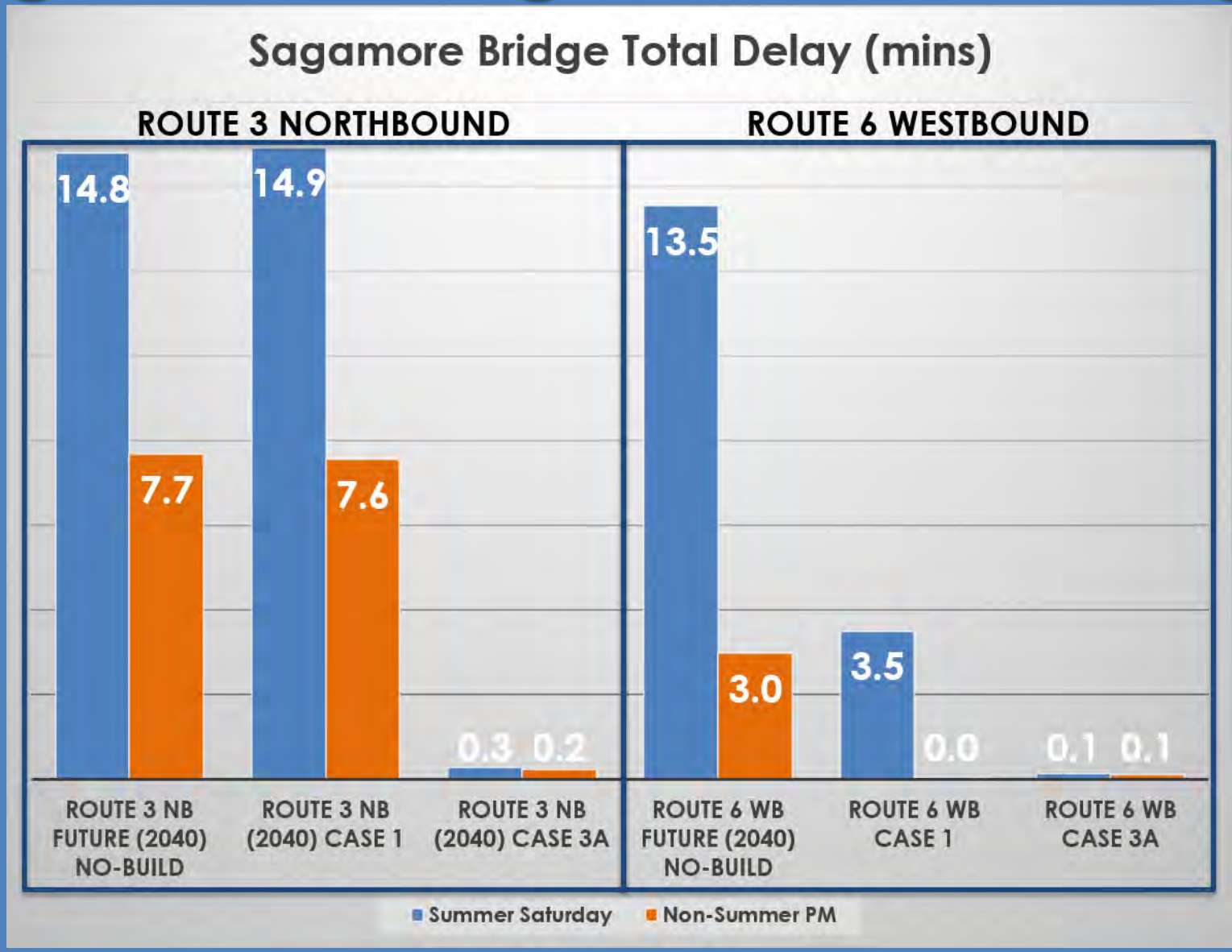
Travel Demand Model
Belmont Circle Overall Findings.



Travel Demand Model
Bourne Rotary Overall Findings.



Travel Demand Model
Sagamore Bridge Overall Findings.



Travel Demand Model Overall Findings.

- Notable reductions in delay during the non-summer period can be achieved with mid-term improvements (up to Case 2) at Belmont Circle and Bourne Rotary.

- As traffic conditions improve, especially in Case 3 and 3A, traffic shifts from Sagamore Bridge to Bourne Bridge. For this reason, Belmont Circle improvements remain a challenge during the summer.

Travel Demand Model Overall Findings.

- Case 1B (Bourne Rotary Reconstruction and Scenic Hwy to Route 25 WB ramp) effective at reducing delay at both Bourne Rotary and Belmont Circle during non-summer.
- Case 2 somewhat more effective than Case 1B in Belmont Circle in non-summer although summer delays remain as more vehicles attracted to Bourne Bridge area.

Travel Demand Model Overall Findings.

- Case 3A - Construction of highway interchange at Bourne Rotary (concurrent with new Bourne Bridge) would be necessary to reduce delay.

- Reduction delay along Route 3/Route 6 corridor not achieved until long-term improvements (Case 3 and 3A - new canal bridges and new Route 6 eastbound lane) are constructed.

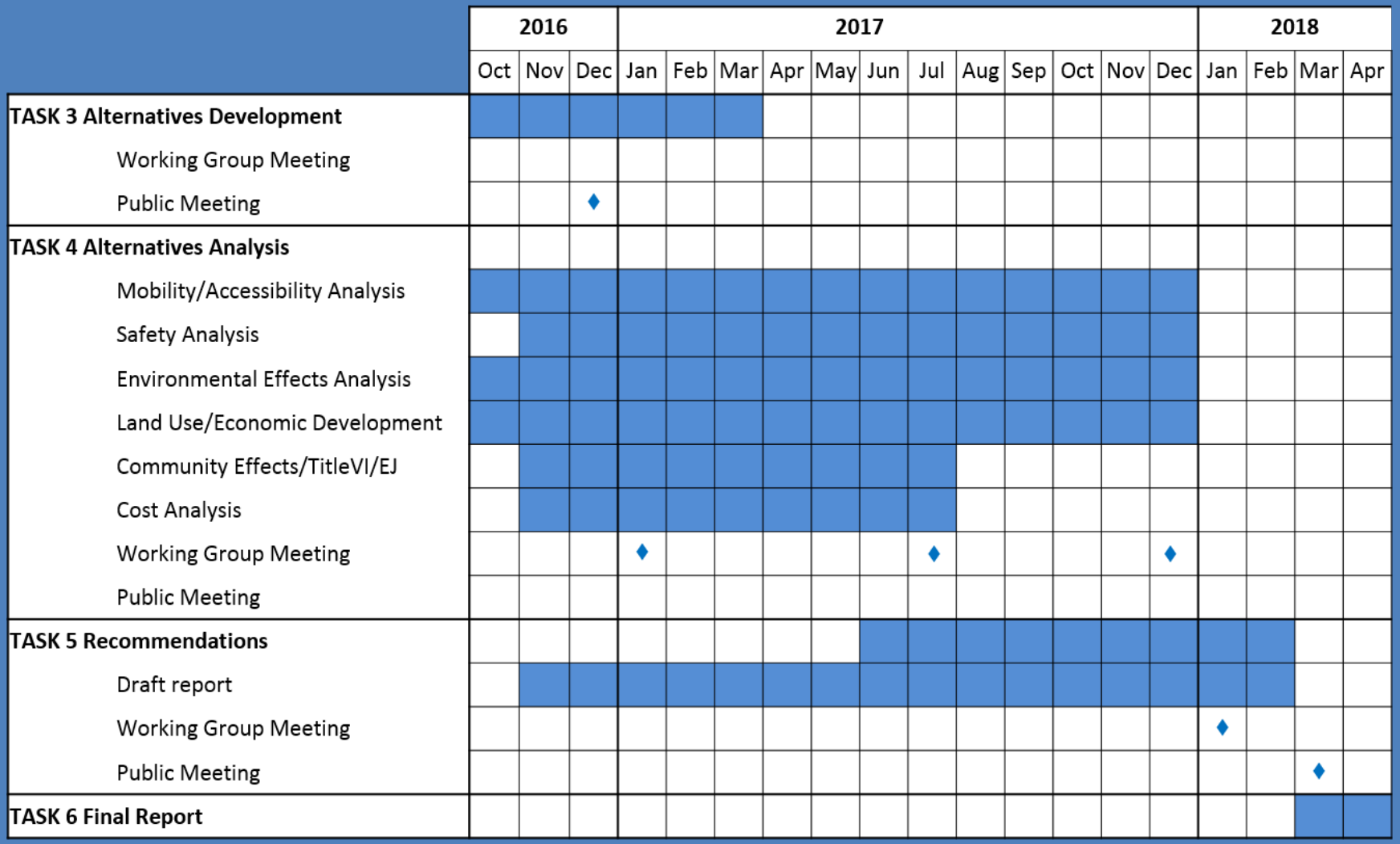
Schedule and Next Steps.

December 14, 2017

Next Steps.

- Next Working Group Meeting
  - Cost Estimates
  - Highway Noise
  - Economic Analysis
  - Matrix of Study Findings
  - Study Recommendations
- Draft Study Report – March 2018

Study Schedule.



Questions?

Comments and feedback can be emailed to:

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