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# Shepway Transport Model Merge and Diverge Appraisal

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## Quality information

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## 1. Introduction

## **Background**

AECOM (formerly known as Scott Wilson and URS) prepared the Transport Strategy that formed part of the evidence base for the Core Strategy. The Transport Strategy was supported by a transport spreadsheet model ('Shepway Transport Model') which was produced for Shepway District Council (SDC), now Folkestone and Hythe District Council (FHDC).

The Transport Strategy work, including the spreadsheet model, was carried out during 2010 and completed in 2011. The model has since been updated at various points to inform local modelling and impact assessments of development options. In 2016, AECOM was commissioned by SDC to undertake a comprehensive update of the Shepway Transport Model, incorporating the latest available data since the 2011 model was completed.

As part of the feedback on this work, Highways England has requested that merge and diverge appraisals are completed for any slip roads within the model which connect with the strategic highway network. A review of the Shepway Transport Model revealed that five of the seven junctions, previously modelled for Highways England, require merge and diverge appraisals, as follows:

Table 1-1 Summary of Merge / Diverge Assessment Requirements

Report ID	Model ID	Junction	Merge / Diverge Assessment
3	134	A260 Spitfire Way / White Horse Hill / A260 / A20 Slip Roads	Yes
4	136	Alkham Valley Road / A20 Off Slip / A20 On Slip	Yes
5	135	A260 / Alkham Valley Road	No
6	26	A20 / M20 / B2064 Cheriton Interchange	Yes
7	124	A2034 / A20 / A259 / M20 On Slip / M20 Off Slip (Castle Hill Interchange)	Yes
21	4	M20 / A20 / B2068 Roundabout	Yes
34	20	A259 / A259 Straight Lane / B2080 / A2070	No

To appraise the ability of vehicles to safely enter and exit the strategic network in both the 2031 and 2037 future year scenarios with and without development, merge and diverge assessments have been completed on the basis of DMRB guidance 'All-purpose merging and diverging diagrams' (Volume 6, Section 2, Part 1 TD 22/06). Relevant data has been extracted from the Shepway Transport Model for the five junctions listed above, supplemented with data from WebTRIS where required. This has been compared to the DMRB's all-purpose road merging and diverging diagrams to ascertain the most suitable layout for that location

The remainder of this note sets out the methodology employed and the results of the assessment.

## 2. Methodology

To appraise whether the existing merge or diverge arrangement is appropriate for the flows forecast in each future year scenario, the Shepway Transport Model was first reviewed to identify any gaps in data availability. The results are shown in **Table 2.1**.

**Table 2-1 Summary of Data Availability** 

Report Mode		Junction	Data Availability			
ID	IID	Junction	Slip Roads	Mainline Flows		
3	134	A260 Spitfire Way / White Horse Hill / A260 / A20 Slip Roads	Shepway Model	WebTRIS		
4	136	Alkham Valley Road / A20 Off Slip / A20 On Slip	Shepway Model	WebTRIS		
6	26	A20 / M20 / B2064 Cheriton Interchange	Shepway Model	Shepway Model		
7	124	A2034 / A20 / A259 / M20 On Slip / M20 Off Slip (Castle Hill Interchange)	Shepway Model	WebTRIS		
21	4	M20 / A20 / B2068 Roundabout	Shepway Model	Shepway Model		

For those locations where mainline data was not available, traffic counts were selected from WebTRIS in order to derive the required mainline traffic flows during a neutral month (September) in the vicinity of each junction. These traffic flows were then factored up to 2031, using growth factors from 2016 to 2031 covering a 15 year period. The appropriate growth factors were applied regardless of whether the WebTRIS flows were extracted for September 2016 or September 2017. This was to provide a robust approach.

Following the collation of the future year baseline mainline and slip road flows, the proposed committed and non-committed development flows from the spreadsheet model were added to arrive at the required scenario for the AM and PM peak hours. The scenarios covered as part of this assessment include the following:

- 2031 Do Minimum and 2031 Do Minimum Alternative (ALT)
- 2031 Do Something Places and Policies Local Plan (PPLP)
- 2037 Do Minimum and 2037 Do Minimum Alternative (ALT)
- 2037 Do Something Core Strategy Review (CSR) (+ 6500 Homes)
- 2037 Do Something CSR (+ 8000 Homes)

The calculated traffic flows for each slip road and mainline carriageway have then been compared to the DMRB's (TD 22/06) Motorway or All-Purpose Road Merging and Diverging Diagrams to ascertain the appropriate layout for that location in the future case. Where the intersection point (between the mainline and slip road) falls outside of a defined category, the closest arrangement to that intersection point has been selected. The existing and forecast layouts for each junction are detailed below in **Chapter 3**.

## 3. Merge and Diverge Appraisal

## 3.1.1 2031 Scenarios

The results for the merge / diverge assessments for the 2031 Do Minimum, 2031 Do Minimum Alternative (ALT) and 2031 Do Something Do Something Places and Policies Local Plan (PPLP) scenarios are set out below by junction, with the accompanying flows presented in **Appendix A** and outputs **in Appendix B**.

#### 3.1.1.1 A260 Spitfire Way / White Horse Hill / A260 / A20 Slip Road

**Table 3.1** sets out the results of the merge and diverge appraisal for the A260 Spitfire Way / White Horse Hill / A260 / A20 Slip Roads. The results for this junction indicate the following:

- EB Diverge An upgrade to a Ghost Island Diverge for the existing Taper Diverge is likely to be required by the 2031 DM and 2031 DM ALT case. No further upgrades are required for the 2031 PPLP scenario.
- EB Merge The assessment identifies the requirement for a Lane Gain (with one lane upstream and two lanes downstream) in all scenarios. However, no amendments to the existing Taper Merge arrangement are likely to be required for any of the scenarios given that the existing Taper Merge (two lanes upstream and two lanes downstream) provides greater capacity and the EB Diverge does not require a Lane Drop at this location.

Table 3-1 2031 Merge/Diverge Appraisal (A260 Spitfire Way / White Horse Hill / A260 / A20 Slip Road

Slip Roads	Existing	2031 DM		2031 DM ALT		2031 DS PPLP	
	Layout	AM	PM	AM	PM	AM	РМ
A20 EB Diverge	Taper Diverge	Taper Diverge	Ghost Island Diverge	Taper Diverge	Ghost Island Diverge	Taper Diverge	Ghost Island Diverge
A20 EB Merge	Taper Merge	Lane Gain	Lane Gain	Lane Gain	Lane Gain	Lane Gain	Lane Gain

#### 3.1.1.2 Alkham Valley Road / A20 Off Slip / A20 On Slip

**Table 3.2** sets out the results of the merge and diverge appraisal for the Alkham Valley Road / A20 Slip Roads. The results for this junction indicate the following:

- WB Diverge No amendments to the existing Taper Diverge arrangement are likely to be required for any of the scenarios.
- WB Merge The assessment concludes that a Lane Gain with Ghost Island Merge is required to accommodate the most onerous 2031 DM and 2031 DM ALT scenario comprising the AM peak. No further upgrades are required for the 2031 PPLP scenario.

Table 3-2 2031 Merge/Diverge Appraisal (Alkham Valley Road / A20 Off Slip / A20 On Slip

Slip Roads	Existing	2031 DM		2031 DM A	2031 DS PPLP		
	Layout	АМ	PM	AM	РМ	АМ	PM
A20 WB Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge
A20 WB Merge	Taper Merge	Lane Gain with Ghost Island Merge	Lane Gain	Lane Gain with Ghost Island Merge	Lane Gain	Lane Gain with Ghost Island Merge	Lane Gain

#### 3.1.1.3 A20 / M20 / B2064 (Cheriton Interchange, M20 Junction 12)

**Table 3.3** sets out the results of the merge and diverge appraisal for the M20 Junction 12 (Cheriton Interchange) Slip Roads. The results for this junction indicate the following:

- EB Diverge No amendments to the existing Taper Diverge arrangement are likely to be required for any of the scenarios.
- EB Merge No amendments to the existing Taper Merge arrangement (two lanes upstream, two lanes downstream) are likely to be required for any of the scenarios based on the most onerous time period (PM peak). The assessment identifies the requirement for a Lane Gain (with one lane upstream and two lanes downstream) in the AM peak.
- WB Diverge No amendments to the existing Taper Diverge arrangement are likely to be required for any of the scenarios.
- WB Merge No amendments to the existing Lane Gain arrangement are likely to be required for any of the scenarios.

**Table 3-3 2031 Merge/Diverge Appraisal (Cheriton Interchange, M20 Junction 12)** 

Slip Roads	Existing	203	2031 DM		OM ALT	2031 DS PPLP	
Slip Roads	Layout	AM	PM	AM	PM	AM	РМ
M20 Jct 12 EB Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge
M20 Jct 12 EB Merge	Taper Merge	Lane Gain	Taper Merge	Lane Gain	Taper Merge	Lane Gain	Taper Merge
M20 Jct 12 WB Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge
M20 Jct 12 WB Merge	Lane Gain	Taper Merge	Lane Gain	Taper Merge	Lane Gain	Taper Merge	Lane Gain

# 3.1.1.4 A2034 / A20 / A259 / M20 On Slip / M20 Off Slip (Castle Hill Interchange, M20 Jct 13)

**Table 3.4** sets out the results of the merge and diverge appraisal for the M20 Junction 13 (Castle Hill Interchange) Slip Roads. The results for this junction indicate the following:

- EB Diverge No amendments to the existing Taper Diverge arrangement are likely to be required for any of the scenarios.
- EB Merge No amendments to the existing Taper Merge arrangement (two lanes upstream, two lanes downstream) are likely to be required for any of the scenarios based on the most onerous time period (PM peak). The assessment identifies the requirement for a Lane Gain (with one lane upstream and two lanes downstream) in the AM peak.
- WB Diverge No amendments to the existing Taper Diverge arrangement are likely to be required for any of the scenarios.
- WB Merge An upgrade to the existing Taper Merge is required in the AM peak in the 2031 DM and 2031 DM ALT case. The most extensive upgrade is in the AM peak to a Lane Gain with Ghost Island Merge. No further upgrades are required for the 2031 PPLP scenario.

Table 3-4 2031 Merge/Diverge Appraisal (Castle Hill Interchange, M20 Junction 13)

Slip Roads	Existing	2031 DM		2031 D	M ALT	2031 DS PPLP		
Slip Roads	Layout	AM	PM	AM	PM	AM	РМ	
M20 Jct 13 EB Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge	
M20 Jct 13 EB Merge	Taper Merge	Lane Gain	Taper Merge	Lane Gain Taper Merge		Lane Gain	Taper Merge	
M20 Jct 13 WB Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge	
M20 Jct 13 WB Merge	Ghost Is		Lane Gain with Ghost Island Merge*					

<sup>\*</sup>Assumed Lane Gain with Ghost Island Merge based on intersection Point falling in line with Area of Uncertainty

#### 3.1.1.5 M20 / A20 / B2068 Roundabout (M20 Junction 11)

**Table 3.5** sets out the results of the merge and diverge appraisal for the M20 Junction 11 Slip Roads. The results for this junction indicate the following:

- EB Diverge No amendments to the existing Taper Diverge arrangement are likely to be required for any of the scenarios.
- EB Merge In the 2031 DM case and 2031 DS PPLP scenarios, an upgrade from the existing Taper Merge arrangement to a Parallel Merge is required based on the most onerous time period (PM peak). No upgrades are required for the 2031 DM ALT.
- WB Diverge No amendments to the existing Taper Diverge arrangement are likely to be required for any of the scenarios.
- WB Merge No amendments to the existing Taper Merge arrangement are likely to be required for any of the scenarios.

**Table 3-5 2031 Merge/Diverge Appraisal (M20 Junction 11)** 

Slip Roads	Existing Layout	2031 DM		2031 D	M ALT	<b>2031 DS PPLP</b>	
Slip Roads		AM	PM	AM	PM	AM	PM
M20 Jct 11	Taper	Taper	Taper	Taper	Taper	Taper	Taper
EB Diverge	Diverge	Diverge	Diverge	Diverge	Diverge	Diverge	Diverge
M20 Jct 11	Taper	Taper	Parallel	Taper	Taper	Taper	Parallel
EB Merge	Merge	Merge	Merge	Merge	Merge	Merge	Merge
M20 Jct 11	Taper	Taper	Taper	Taper	Taper	Taper	Taper
WB Diverge	Diverge	Diverge	Diverge	Diverge	Diverge	Diverge	Diverge
M20 Jct 11	Taper	Taper	Taper	Taper	Taper	Taper	Taper
WB Merge	Merge	Merge	Merge	Merge	Merge	Merge	Merge

#### 3.1.2 2037 Scenarios

The results for the merge / diverge assessments for the 2037 Do Minimum, 2037 Do Minimum Alternative, 2037 Do Something Core Strategy Review (CSR) (+6500) and 2037 Do Something CSR (+8000) scenarios are set out below by junction, with the accompanying flows presented in **Appendix A** and outputs presented in **Appendix C**.

#### 3.1.2.1 A260 Spitfire Way / White Horse Hill / A260 / A20 Slip Road

**Table 3.6** sets out the results of the merge and diverge appraisal for the A260 Spitfire Way / White Horse Hill / A260 / A20 Slip Roads. The results for this junction indicate the following:

- EB Diverge An upgrade from the existing Taper Diverge to a Ghost Island Diverge is likely to be required for all scenarios in 2037. No further upgrades are likely to be required due to the addition of traffic associated with the CSR.
- EB Merge The assessment identifies the requirement for a Lane Gain (with one lane upstream and two lanes downstream) in all scenarios. However, no amendments to the existing Taper Merge arrangement are likely to be required for any of the scenarios given that the existing Taper Merge (two lanes upstream and two lanes downstream) provides greater capacity and the EB Diverge does not require a Lane Drop at this location.

Table 3-6 2037 Merge/Diverge Appraisal (A260 Spitfire Way / White Horse Hill / A260 / A20 Slip Road

Slip Roads	Existing	2037 DM		2037 DM ALT		2037 DS CSR (+6500)		2037 DS CSR (+8000)	
	Layout	AM	PM	AM	PM	AM	PM	AM	РМ
A20 EB Diverge	Taper Diverge	Taper Diverge	Ghost Island Diverge	Taper Diverge	Ghost Island Diverge	Taper Diverge	Ghost Island Diverge	Taper Diverge	Ghost Island Diverge
A20 EB Merge	Taper Merge	Lane Gain	Lane Gain	Lane Gain	Lane Gain	Lane Gain	Lane Gain	Lane Gain	Lane Gain

#### 3.1.2.2 Alkham Valley Road / A20 Off Slip / A20 On Slip

**Table 3.7** sets out the results of the merge and diverge appraisal for the Alkham Valley Road / A20 Slip Roads. The results for this junction indicate the following:

- WB Diverge No amendments to the existing Taper Diverge arrangement are likely to be required in 2037 based on the modelled scenario results.
- WB Merge The assessment concludes that a Lane Gain with Ghost Island Merge is required to
  accommodate the most onerous 2037 DM and 2037 DM ALT time period comprising the AM peak. No
  further upgrades are required to accommodate the additional traffic associated with the CSR.

Table 3-7 2037 Merge/Diverge Appraisal (Alkham Valley Road / A20 Off Slip / A20 On Slip)

Slip	Existing	2037 DM		<b>2037 DM ALT</b>		2037 DS CSR (+6500)		2037 DS CSR (+8000)	
Roads	Layout	AM	PM	AM	PM	AM	PM	AM	PM
A20 WB Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge
A20 WB Merge	Taper Merge	Lane Gain with Ghost Island Merge	Lane Gain	Lane Gain with Ghost Island Merge	Lane Gain	Lane Gain with Ghost Island Merge	Lane Gain	Lane Gain with Ghost Island Merge	Lane Gain

#### 3.1.2.3 A20 / M20 / B2064 (Cheriton Interchange, M20 Junction 12)

**Table 3.8** sets out the results of the merge and diverge appraisal for the M20 Junction 12 (Cheriton Interchange) Slip Roads. The results for this junction indicate the following:

- EB Diverge The existing Taper Diverge arrangement is appropriate for each of the scenarios modelled.
  - EB Merge No amendments to the existing Taper Merge arrangement (two lanes upstream, two lanes downstream) are likely to be required for the 2037 DM ALT scenario based on the most onerous time period (PM peak). An amendment to a Parallel Merge would be required in the 2037 DM, 2037 DS CSR (+6500) and 2037 DS CSR (+8000) scenarios based on the most onerous time period (PM peak).
- WB Diverge No amendments to the existing Taper Diverge arrangement are likely to be required for any of the scenarios.
- WB Merge No amendments to the existing Lane Gain arrangement are likely to be required for any of the scenarios with the existing Lane Gain arrangement providing greater capacity than the flows appraised.

Table 3-8 2037 Merge/Diverge Appraisal (Cheriton Interchange, M20 Junction 12)

Clin Danda	Existing	2037 DM		2037 🛭	OM ALT	2037 DS C	SR (+6500)	2037 DS CSR (+8000)		
Slip Roads	Layout	AM	PM	AM	PM	AM	PM	AM	PM	
M20 Jct 12 EB Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge	
M20 Jct 12 EB Merge	Taper Merge	Lane Gain	Parallel Merge	Lane Gain	Taper Merge	Taper Merge	Parallel Merge	Taper Merge	Parallel Merge	
M20 Jct 12 WB Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge	
M20 Jct 12 WB Merge	Lane Gain	Taper Merge	Lane Gain	Taper Merge	Lane Gain	Taper Merge	Taper Merge	Taper Merge	Taper Merge	

## 3.1.2.4 A2034 / A20 / A259 / M20 On Slip / M20 Off Slip (Castle Hill Interchange, M20 Jct 13)

**Table 3.9** sets out the results of the merge and diverge appraisal for the M20 Junction 13 (Castle Hill Interchange) Slip Roads. The results for this junction indicate the following:

- EB Diverge An upgrade to a Ghost Island Diverge from the existing Taper Diverge is likely to be required based on the most onerous time period (PM peak) for the 2037 DM case and 2037 DS CSR scenarios. No upgrade is required for the 2037 DM ALT scenario.
- EB Merge No amendments to the existing Taper Merge arrangement (two lanes upstream, two lanes downstream) is likely to be required for any of the scenarios based on the most onerous time period (PM peak). The assessment identifies the requirement for a Lane Gain (with one lane upstream and two lanes downstream) in the AM peak.
- WB Diverge No amendments to the existing Taper Diverge arrangement is likely to be required for any of the scenarios.
- WB Merge An upgrade to the existing Taper Merge is required in the AM peak in the 2037 DM and 2037 DM ALT case to a Lane Gain with Ghost Island Merge. No further upgrades are required for the 2037 CSR scenarios.

Table 3-9 2031 Merge/Diverge Appraisal (Castle Hill Interchange, M20 Junction 13)

Slip I	Existing	2037	7 DM	2037 D	M ALT	2037 DS C	SR (+6500)	2037 DS CSR (+8000)		
Roads	Layout	AM	PM	AM	PM	AM	PM	AM	PM	
M20 Jct 13 EB Diverge	Taper Diverge	Ghost Island Diverge	Ghost Island Diverge	Taper Diverge	Taper Diverge	island		Ghost Island Diverge	Ghost Island Diverge	
M20 Jct 13 EB Merge	Taper Merge	Lane Gain	Taper Merge	Taper Lane Gain Merge		Lane Gain Taper Merge		Lane Gain	Taper Merge	
M20 Jct 13 WB Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge	
M20 Jct 13 WB Merge	Lane Gain	Lane Gain with Ghost Island Merge	Lane Gain with Ghost Island Merge	Lane Gain with Ghost Island Merge	Lane Gain with Ghost Island Merge*	Lane Gain with Ghost Island Merge*	Lane Gain with Ghost Island Merge	Lane Gain with Ghost Island Merge	Lane Gain with Ghost Island Merge	

<sup>\*</sup>Assumed Lane Gain with Ghost Island Merge based on intersection Point falling in line with Area of Uncertainty

#### 3.1.2.5 M20 / A20 / B2068 Roundabout (M20 Junction 11)

**Table 3.10** sets out the results of the merge and diverge appraisal for the M20 Junction 11 Slip Roads. The results for this junction indicate the following:

- EB Diverge An upgrade to a Lane Drop at Taper Diverge from the existing Taper Diverge arrangement is likely to be required for the 2037 DM case. A further upgrade is likely to be required for the 2037 CSR scenarios to a Ghost Island Diverge for Lane Drop.
- EB Merge An upgrade to a Parallel Merge from the existing Taper Merge arrangement is required in the 2037 DM case. A further upgrade to a Lane Gain is required to accommodate traffic associated with the 2037 CSR scenarios in the most onerous time period (PM peak).
- WB Diverge No amendments to the existing Taper Diverge arrangement are likely to be required for the 2037 DM, 2037 DM ALT and 2037 DS CSR (+6500) scenarios. A Lane Gain with Ghost Island Diverge would be required to accommodate the traffic flows associated with both the 2037 DS CSR (+8000) scenario.
- WB Merge An upgrade to a Parallel Merge from the existing Taper Merge arrangement is required for the 2037 DM and 2037 CSR DS (+6500) case. A further upgrade to a Lane Gain with Ghost Island Merge is required for the 2037 DS CSR (+8000) scenario.

Table 3-10 2037 Merge/Diverge Appraisal (M20 Junction 11)

Clin Deede	Existing	2037	7 DM	2037 DM ALT		2037 DS	CSR (+6500)	2037 DS CSR (+8000)		
Slip Roads	Layout	AM	PM	PM AM PM AM		AM	PM	AM	PM	
M20 Jct 11 EB Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Ghost Island Diverge for Lane Drop	Taper Diverge	Ghost Island Diverge for Lane Drop	
M20 Jct 11 EB Merge	Taper Merge	Taper Merge	Parallel Merge	Taper Merge	Taper Merge	Parallel Merge	Lane Gain	Parallel Merge	Lane Gain	
M20 Jct 11 WB Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Taper Diverge	Ghost Island Diverge	
M20 Jct 11 WB Merge	Taper Merge	Parallel Merge	Taper Merge	Taper Merge	Taper Merge	Parallel Merge	Taper Merge	Lane Gain with Ghost Island Merge	Taper Merge	

## 4. Summary

In order to summarise the results, **Table 4.1** and **Table 4.2** (on the following page) presents where changes to the merge and diverge arrangements may be required for each scenario in 2031 and 2037. Green indicates no change, amber indicates an upgrade is required and red indicates an alternative/different upgrade is required relative to the other scenarios.

Overall, the results indicate the increase in traffic arising from the Places and Policies Local Plan in 2031 is unlikely to warrant any further upgrades to slip road infrastructure beyond what would have been required through background growth. In 2037, and with the introduction of traffic associated with the Core Strategy Review (including Otterpool Park), further upgrade to slip road infrastructure, beyond that required in the Do Minimum, may be required at all M20 Junction 11 slip roads in the CSR (+8000) scenario, but only the WB Merge and Diverge in the CSR (+6500) scenario.

Table 4-1 2031 Summary of Merge and Diverge Appraisal

Junction	Slip Road	Existing Layout	2031 DM	2031 DM ALT	2031 PPLP		
A260 Spitfire Way / White Horse Hill / A260 / A20	A20 EB Diverge	Taper Diverge	Ghost Island Diverge	Ghost Island Diverge	Ghost Island Diverge		
Slip Roads	A20 EB Merge	Taper Merge	No Change	No Change	No Change		
	A20 WB Diverge	Taper Diverge	No Change	No Change	No Change		
Alkham Valley Road / A20 Off Slip / A20 On Slip	A20 WB Merge	Taper Merge	Lane Gain with Ghost Island Merge	and Bhost Island B	Lane Gain with Ghost Island Merge		
	M20 Jct 12 EB Diverge	Taper Diverge	No Change	No Change	No Change		
A20 / M20 / B2064	M20 Jct 12 EB Merge	Taper Merge	No Change	No Change	No Change		
(Cheriton Interchange, M20 Junction 12)	M20 Jct 12 WB Diverge	Taper Diverge	No Change	No Change	No Change		
	M20 Jct 12 WB Merge	Lane Gain	No Change	No Change	No Change		
	M20 Jct 13 EB Diverge	Taper Diverge	No Change	No Change	No Change		
A2034 / A20 / A259 / M20	M20 Jct 13 EB Merge	Taper Merge	No Change	No Change	No Change		
On Slip / M20 Off Slip (Castle Hill Interchange,	M20 Jct 13 WB Diverge	Taper Diverge	No Change	nd Ghost Island Diverge Diverse  e No Change No Chase No Change No	No Change		
M20 Junction 13)	M20 Jct 13 WB Merge	Taper Merge	Lane Gain with Ghost Island Merge	Ghost Island	Lane Gain with Ghost Island Merge		
	M20 Jct 11 EB Diverge	Taper Diverge	No Change	No Change	No Change		
M20 / A20 / B2068	M20 Jct 11 EB Merge	Taper Merge	Parallel Merge	No Change	Parallel Merge		
Roundabout (M20 Junction 11)	M20 Jct 11 WB Diverge	Taper Diverge	No Change	No Change	No Change		
	M20 Jct 11 WB Merge	Taper Merge	No Change	No Change	No Change		

Table 4-2 2037 Summary of Merge and Diverge Appraisal

Junction	Slip Road	<b>Existing Layout</b>	2037 DM	2037 DM ALT	2037 CSR (+6500)	2037 CSR (+8000)
A260 Spitfire Way / White Horse Hill /	A20 EB Diverge	Taper Diverge	Ghost Island Diverge	Ghost Island Diverge	Ghost Island Diverge	Ghost Island Diverge
A260 / A20 Slip Roads	A20 EB Merge	Taper Merge	No Change	No Change	No Change	No Change
Allaham Vallau Daad / A20 Off Clin /	A20 WB Diverge	Taper Diverge	No Change	No Change	No Change	No Change
A20 On Slip	A20 WB Merge	Taper Merge	Lane Gain with Ghost Island Merge	Lane Gain with Ghost Island Merge	Lane Gain with Ghost Island Merge	Lane Gain with Ghost Island Merge
	M20 Jct 12 EB Diverge	Taper Diverge	No Change	Ghost Island Diverge Ghost Island Diverge No Change Island Merge Island Merge No Change Ghost Island Diverge for Lane Drop Lane Drop Lane Drop No Change No Change No Change No Change No Change Ghost Island Diverge for Lane Gain Lane Gain Lane Gain No Change Shost Island Diverge Lane Drop Lane Dr	No Change	
A20 / M20 / B2064 (Cheriton	M20 Jct 12 EB Merge	Taper Merge	Parallel Merge	sland Diverge Ghost Island Diverge Ochange No Change Island Merge Island Merge Island Merge Island Merge No Change No Change No Change No Change No Change No Change Parallel Merge Parallel Merge No Change Ghost Island Diverge for Lane Drop Lane Drop Lane Drop Lane Drop Lane Drop Lane Drop Lane Gain with Ghost Island Diverge Ghost Island Dive	Parallel Merge	
Interchange, M20 Junction 12)	M20 Jct 12 WB Diverge	Taper Diverge	No Change	No Change	No Change	No Change
	M20 Jct 12 WB Merge	Lane Gain	No Change	No Change	No Change	No Change
	M20 Jct 13 EB Diverge	Taper Diverge	Ghost Island Diverge	No Change	Ghost Island Diverge	Ghost Island Diverge
A2034 / A20 / A259 / M20 On Slip /	M20 Jct 13 EB Merge	Taper Merge	No Change	No Change	No Change	No Change
M20 Off Slip (Castle Hill Interchange,	M20 Jct 13 WB Diverge	Taper Diverge	No Change	No Change	No Change	No Change
M20 Junction 13)	M20 Jct 13 WB Merge	Taper Merge	Lane Gain with Ghost Island Merge			Lane Gain with Ghost Island Merge
	M20 Jct 11 EB Diverge	Taper Diverge	No Change	No Change	ĕ	Ghost Island Diverge for Lane Drop
A260 / A20 Slip Roads  A20 EB Merge Taper Merge No Change No Change No Change  A20 WB Diverge Taper Diverge No Change No Change No Change  A20 WB Merge Taper Merge Lane Gain with Ghost Island Merge Island Merge  A20 WB Merge Taper Diverge No Change No Change No Change  A20 / M20 / B2064 (Cheriton M20 Jct 12 EB Diverge Taper Diverge No Change No Change No Change No Change M20 Jct 12 WB Merge Taper Diverge No Change No Change No Change No Change M20 Jct 12 WB Merge Lane Gain No Change No Change No Change No Change M20 Jct 12 WB Merge Lane Gain No Change No Change No Change No Change M20 Jct 12 WB Merge Lane Gain No Change No Change No Change No Change No Change No Change M20 Jct 13 WB Merge Taper Diverge Ghost Island Diverge No Change No Change M20 Jct 13 WB Merge Taper Merge No Change No Change No Change M20 Jct 13 WB Merge Taper Diverge No Change No Change No Change M20 Jct 13 WB Merge Taper Merge No Change No Change No Change M20 Jct 13 WB Merge Taper Diverge No Change No Change No Change No Change M20 Jct 13 WB Merge Taper Merge No Change No Change No Change No Change M20 Jct 13 WB Merge Taper Merge No Change No Change No Change No Change No Change M20 Jct 13 WB Merge Taper Diverge No Change No Change No Change No Change No Change M20 Jct 13 WB Merge Taper Diverge No Change	Lane Gain	Lane Gain				
Junction 11)	M20 Jct 11 WB Diverge	Taper Diverge	No Change	No Change	Ghost Island Diverge	Ghost Island Diverge
	M20 Jct 11 WB Merge	Taper Merge	Parallel Merge	No Change	Parallel Merge	Lane Gain with Ghost Island Merge

# **Appendix A Mainline and Slip Road Flows**

## 2031 Mainline and Slip-Road Flows

			2031 DM (Fo	recast Flows)			2031 D	OM ALT		2031 PPLP			
Junction	Slip Roads	Mainline Total AM	Slip Road AM	Mainline Total PM	Slip Road PM	Mainline Total AM	Slip Road AM	Mainline Total PM	Slip Road PM	Mainline Total AM	Slip Road AM	Mainline Total PM	Slip Road PM
A260 Spitfire Way / White Horse Hill / A260 / A20 Slip Roads	A20 EB Diverge	902	731	1039	1421	898	728	1034	1415	904	736	1038	1420
	A20 EB Merge	902	151	1039	66	898	150	1034	66	904	150	1038	66
Alkham Valley Road / A20 Off Slip / A20 On	A20 WB Diverge	979	80	900	114	975	80	896	114	978	80	902	114
Slip	A20 WB Merge	979	1618	900	906	975	1611	896	902	978	1615	902	911
A20 / M20 / B2064 (Cheriton Interchange, M20 Junction 12)	M20 Jct 12 EB Diverge	1534	522	2121	827	1527	520	2111	824	1542	520	2120	824
	M20 Jct 12 EB Merge	1534	763	2121	992	1527	760	2111	988	1542	760	2120	988
	M20 Jct 12 WB Diverge	2099	1117	1676	803	2090	1112	1669	799	2097	1112	1684	799
	M20 Jct 12 WB Merge	2099	698	1676	540	2090	695	1669	538	2097	695	1684	538
	M20 Jct 13 EB Diverge	1209	1319	1871	1332	1204	1314	1863	1327	1218	1314	1872	1327
A2034 / A20 / A259 / M20 On Slip / M20 Off Slip	M20 Jct 13 EB Merge	1209	404	1871	622	1204	402	1863	619	1218	402	1872	619
(Castle Hill Interchange, M20 Junction 13)	M20 Jct 13 WB Diverge	1755	721	1287	555	1748	718	1282	552	1754	718	1297	552
	M20 Jct 13 WB Merge	1755	1795	1287	1736	1748	1788	1282	1728	1754	1788	1297	1728
	M20 Jct 11 EB Diverge	1926	555	2573	879	1918	553	2563	875	1918	565	2563	902
	M20 Jct 11 EB Merge	1926	663	2573	813	1918	660	2563	810	1918	675	2563	819
M20 / A20 / B2068 Roundabout (M20 Junction 11)	M20 Jct 11 WB Diverge	2322	884	2147	660	2313	881	2138	657	2313	888	2138	672
	M20 Jct 11 WB Merge	2322	793	2147	595	2313	790	2138	593	2313	815	2138	609

## 2037 Mainline and Slip-road Flows

		2037 DM (Forecast Flows)			2037 DM ALT				2037 DS CSR (+6500)				2037 DS CSR (+8000)				
Junction	Slip Roads	Mainline Total AM	Slip Road AM	Mainline Total PM	Slip Road PM	Mainline Total AM	Slip Road AM	Mainline Total PM	Slip Road PM	Mainline Total AM	Slip Road AM	Mainline Total PM	Slip Road PM	Mainline Total AM	Slip Road AM	Mainline Total PM	Slip Road PM
A260 Spitfire Way / White Horse Hill	A20 EB Diverge	953	780	1087	1487	881	724	1004	1376	1022	948	1103	1532	1054	998	1125	1567
/ A260 / A20 Slip Roads	A20 EB Merge	953	156	1087	68	881	146	1004	64	1022	146	1103	64	1054	146	1125	64
Alkham Valley Road / A20 Off Slip /	A20 WB Diverge	1026	83	947	118	946	77	877	110	1024	77	1024	110	1042	77	1057	110
A20 On Slip	A20 WB Merge	1026	1694	947	960	946	1563	877	890	1024	1687	1024	1123	1042	1715	1057	1175
A20 / M20 / B2064 (Cheriton Interchange, M20 Junction 12)	M20 Jct 12 EB Diverge	1605	542	2212	857	1474	505	2038	801	1960	559	2377	838	2069	572	2454	847
	M20 Jct 12 EB Merge	1605	827	2212	1048	1474	767	2038	968	1960	767	2377	968	2069	767	2454	968
	M20 Jct 12 WB Diverge	2193	1176	1747	864	2020	1083	1611	801	2402	1083	2195	801	2490	1083	2327	801
	M20 Jct 12 WB Merge	2193	723	1747	559	2020	676	1611	522	2402	706	2195	578	2490	713	2327	591
	M20 Jct 13 EB Diverge	1292	1377	1962	1384	1197	1270	1814	1285	1562	1445	2069	1407	1643	1485	2126	1436
A2034 / A20 / A259 / M20 On Slip / M20	M20 Jct 13 EB Merge	1292	420	1962	648	1197	390	1814	598	1562	390	2069	598	1643	390	2126	598
Off Slip (Castle Hill Interchange, M20 Junction 13)	M20 Jct 13 WB Diverge	1840	754	1368	577	1699	694	1268	535	1902	694	1647	535	1947	694	1732	535
	M20 Jct 13 WB Merge	1840	1871	1368	1807	1699	1730	1268	1671	1902	1940	1647	1931	1947	1989	1732	1992
	M20 Jct 11 EB Diverge	2039	590	2691	961	1888	553	2493	898	1888	816	2493	1392	1888	875	2493	1500
M20 / A20 / B2068 Roundabout (M20	M20 Jct 11 EB Merge	2039	690	2691	840	1888	640	2493	788	1888	1234	2493	1203	1888	1368	2493	1298
Junction 11)	M20 Jct 11 WB Diverge	2429	917	2263	685	2248	857	2096	637	2248	1187	2096	1254	2248	1263	2096	1393
	M20 Jct 11 WB Merge	2429	877	2263	640	2248	821	2096	601	2248	1296	2096	932	2248	1400	2096	1005

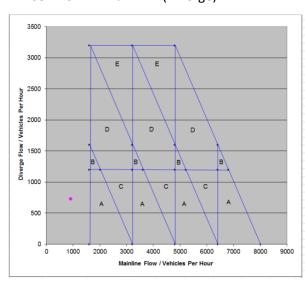
# **Appendix B 2031 Merge and Diverge Outputs**

## **Merge and Diverge Appraisal**

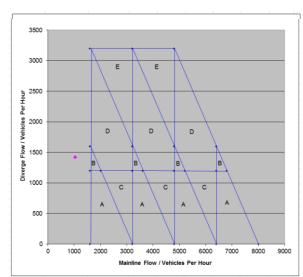
## **2031 Scenarios**

## A260 Spitfire Way / White Horse Hill / A260 / A20 Slip Road

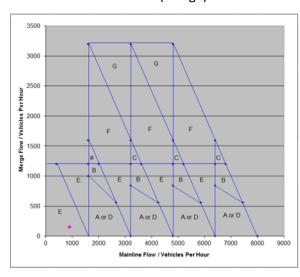
2031 Do Minimum AM (Diverge)



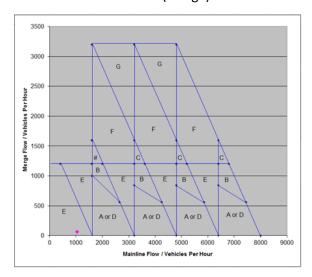
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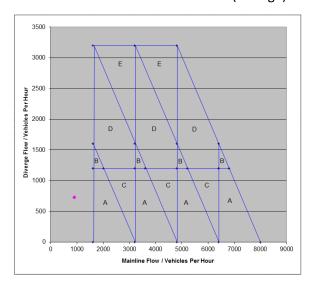
2031 Do Minimum AM (Merge)



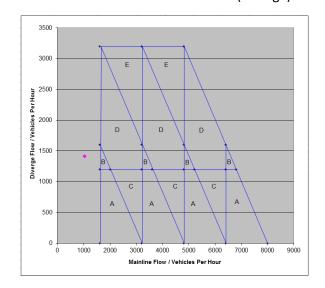
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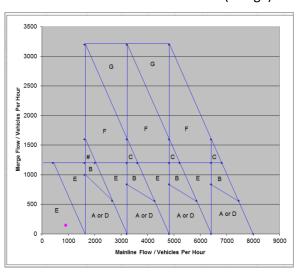
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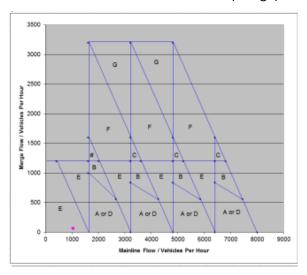
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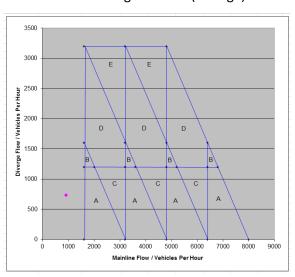
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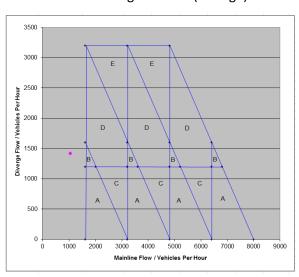
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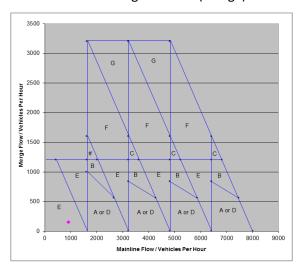
2031 Do Something PPLP AM (Diverge)



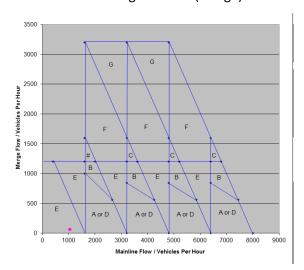
## 2031 Do Something PPLP PM (Diverge)



## 2031 Do Something PPLP AM (Merge)

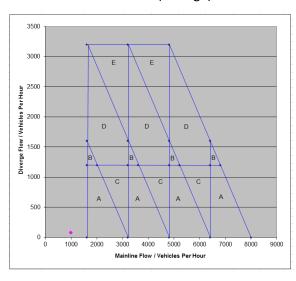


## 2031 Do Something PPLP PM (Merge)

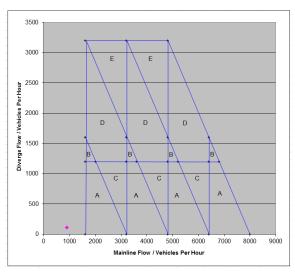


## Alkham Valley Road / A20 Off Slip / A20 On Slip

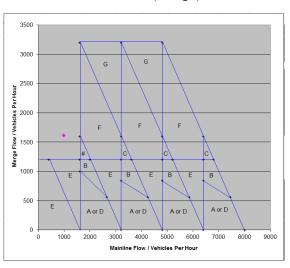
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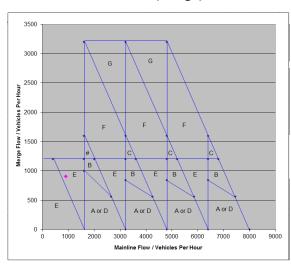
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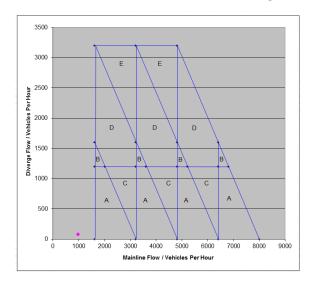
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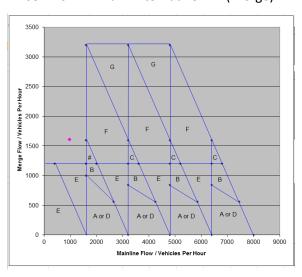
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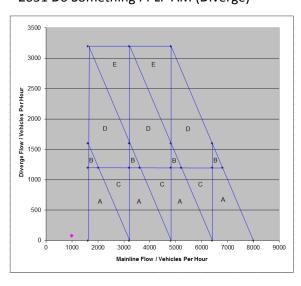
## 2031 Do Minimum Alternative AM (Diverge)



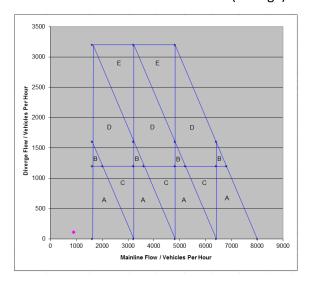
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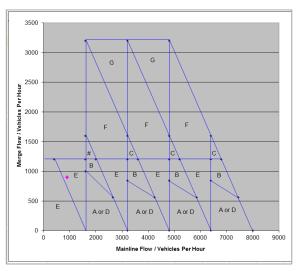
## 2031 Do Something PPLP AM (Diverge)



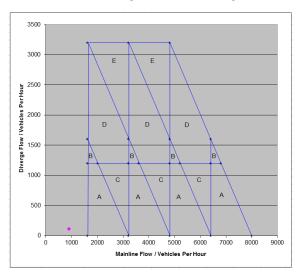
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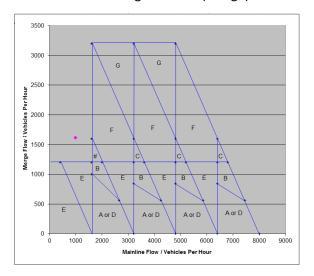
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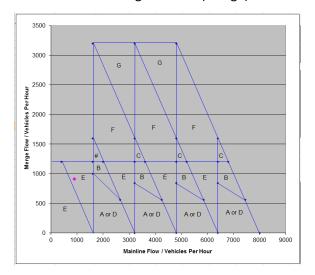
## 2031 Do Something PPLP PM (Diverge)



## 2031 Do Something PPLP AM (Merge)



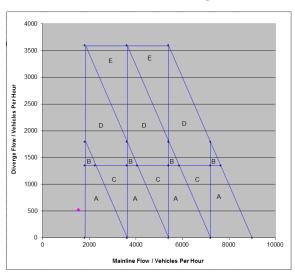
## 2031 Do Something PPLP PM (Merge)



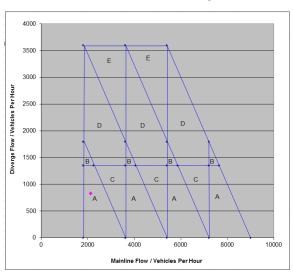
## A20 / M20 / B2064 (Cheriton Interchange, M20 Junction 12)

#### **Eastbound**

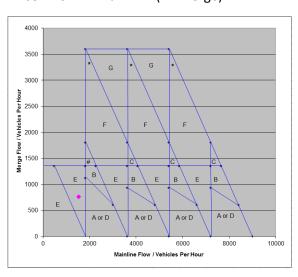
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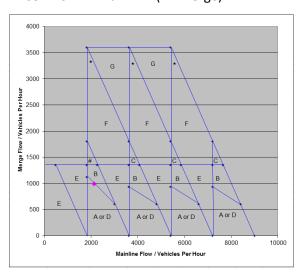
2031 Do Minimum PM (EB Diverge)



2031 Do Minimum AM (EB Merge)

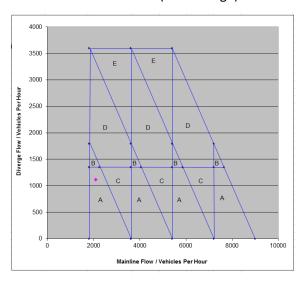


2031 Do Minimum PM (EB Merge)

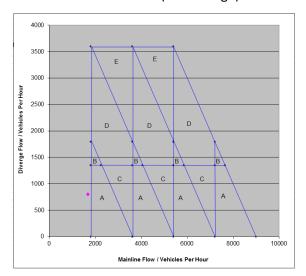


#### Westbound

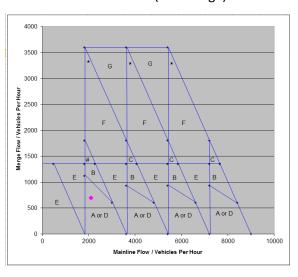
2031 Do Minimum AM (WB Diverge)



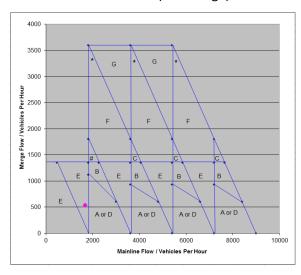
2031 Do Minimum PM (WB Diverge)



2031 Do Minimum AM (WB Merge)

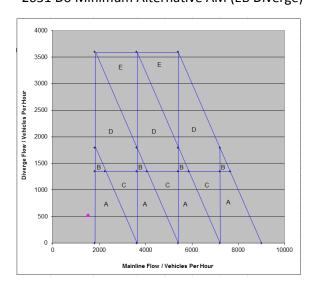


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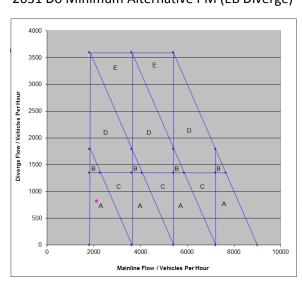


**Eastbound** 

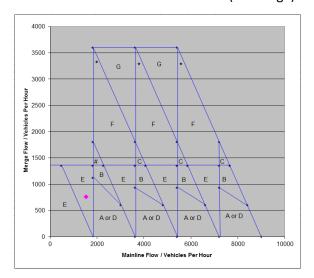
2031 Do Minimum Alternative AM (EB Diverge)



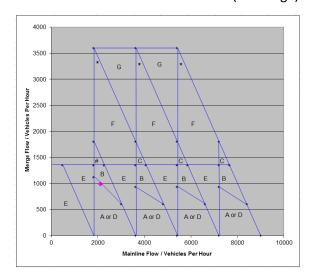
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## 2031 Do Minimum Alternative AM (EB Merge)

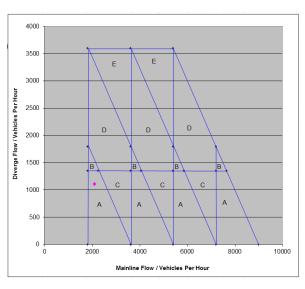


## 2031 Do Minimum Alternative PM (EB Merge)

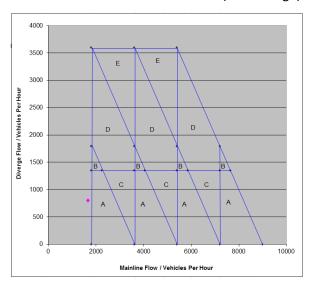


#### Westbound

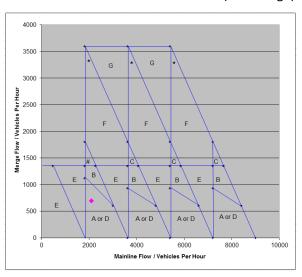
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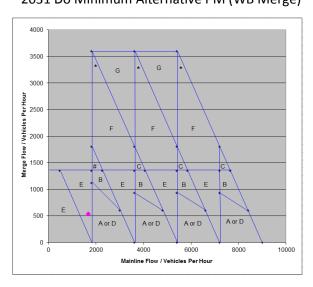
2031 Do Minimum Alternative PM (WB Diverge)



2031 Do Minimum Alternative AM (WB Merge)

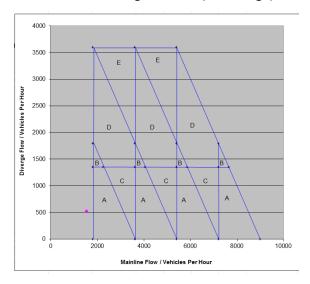


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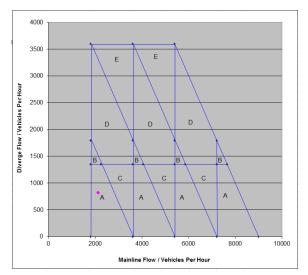


#### **Eastbound**

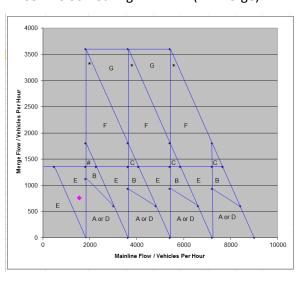
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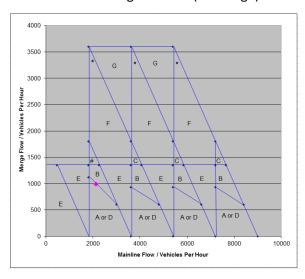
## 2031 Do Something PPLP PM (EB Diverge)



2031 Do Something PPLP AM (EB Merge)

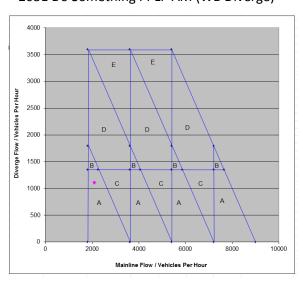


2031 Do Something PPLP PM (EB Merge)

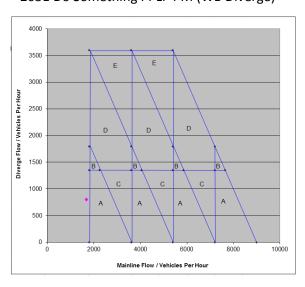


#### Westbound

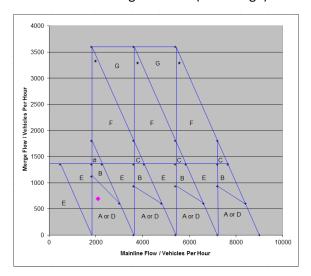
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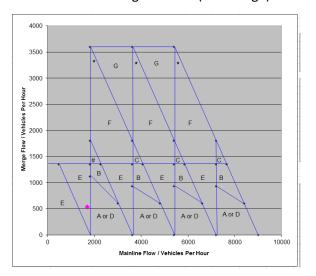
## 2031 Do Something PPLP PM (WB Diverge)



## 2031 Do Something PPLP AM (WB Merge)



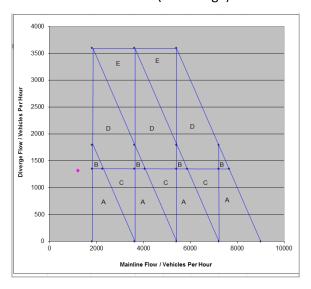
## 2031 Do Something PPLP PM (WB Merge)



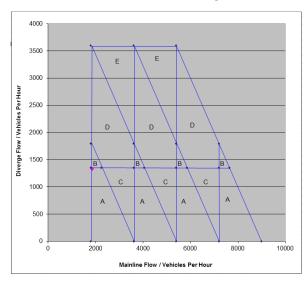
## A2034 / A20 / A259 / M20 On Slip / M20 Off Slip (Castle Hill Interchange, M20 Jct 13)

#### **Eastbound**

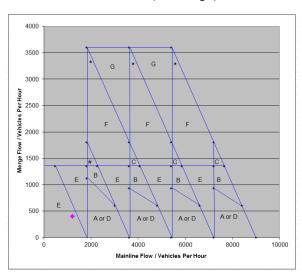
2031 Do Minimum AM (EB Diverge)



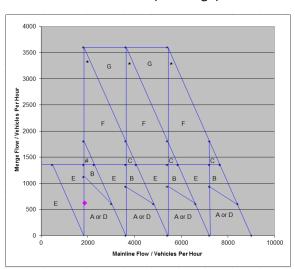
2031 Do Minimum PM (EB Diverge)



2031 Do Minimum AM (EB Merge)

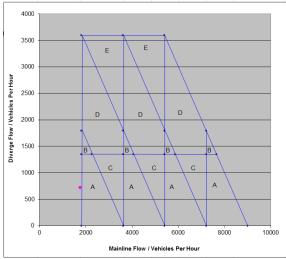


2031 Do Minimum PM (EB Merge)

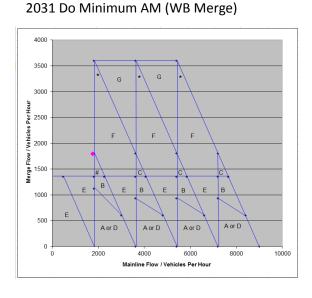


#### Westbound

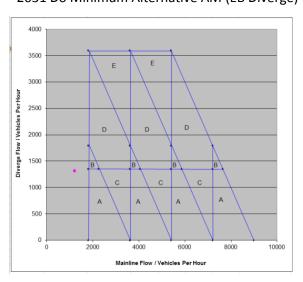
## 2031 Do Minimum AM (WB Diverge)



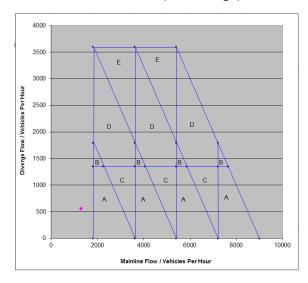
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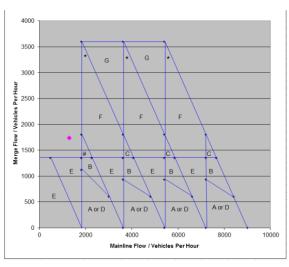
Eastbound
2031 Do Minimum Alternative AM (EB Diverge)



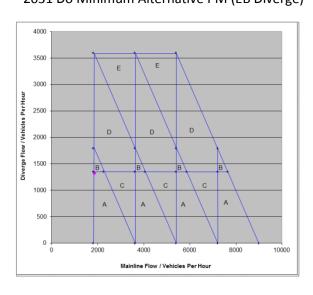
#### 2031 Do Minimum PM (WB Diverge)



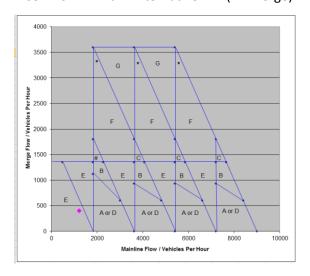
2031 Do Minimum PM (WB Merge)



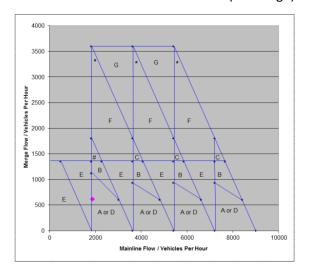
2031 Do Minimum Alternative PM (EB Diverge)



## 2031 Do Minimum Alternative AM (EB Merge)

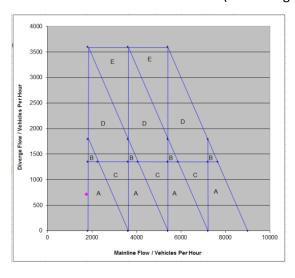


## 2031 Do Minimum Alternative PM (EB Merge)

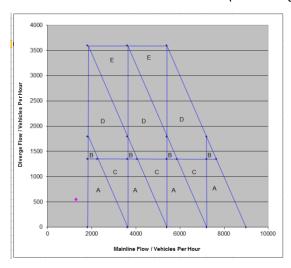


#### Westbound

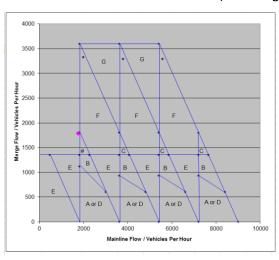
## 2031 Do Minimum Alternative AM (WB Diverge)



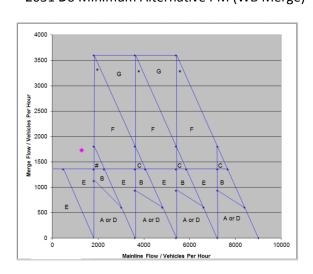
#### 2031 Do Minimum Alternative PM (WB Diverge)



## 2031 Do Minimum Alternative AM (WB Merge)

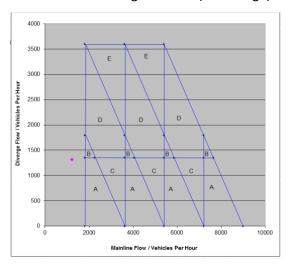


## 2031 Do Minimum Alternative PM (WB Merge)

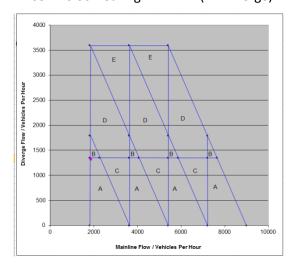


#### **Eastbound**

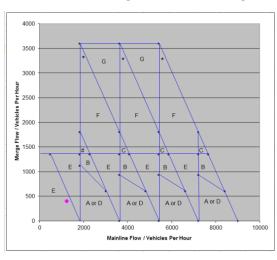
## 2031 Do Something PPLP AM (EB Diverge)



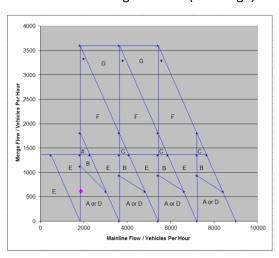
## 2031 Do Something PPLP PM (EB Diverge)



2031 Do Something PPLP AM (EB Merge)

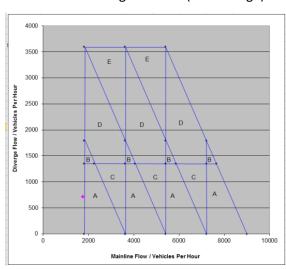


2031 Do Something PPLP PM (EB Merge)

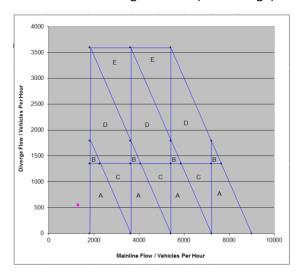


#### Westbound

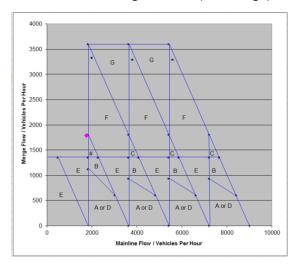
## 2031 Do Something PPLP AM (WB Diverge)



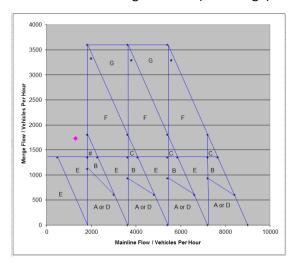
## 2031 Do Something PPLP PM (WB Diverge)



## 2031 Do Something PPLP AM (WB Merge)

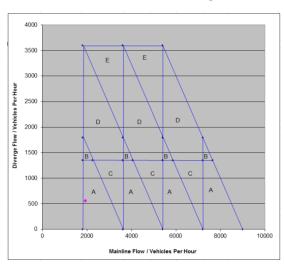


## 2031 Do Something PPLP PM (WB Merge)

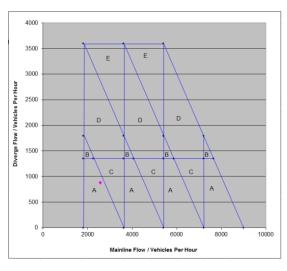


## M20 / A20 / B2068 Roundabout (M20 Junction 11) Eastbound

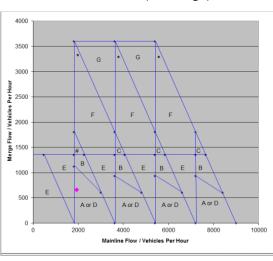
## 2031 Do Minimum AM (EB Diverge)



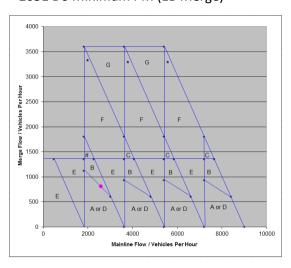
## 2031 Do Minimum PM (EB Diverge)



## 2031 Do Minimum AM (EB Merge)

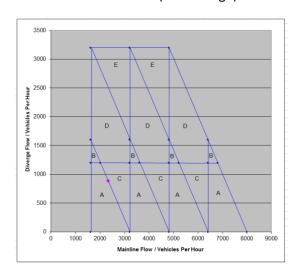


## 2031 Do Minimum PM (EB Merge)

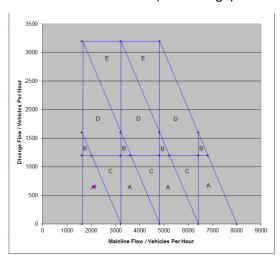


#### Westbound

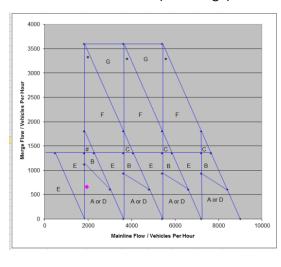
#### 2031 Do Minimum AM (WB Diverge)



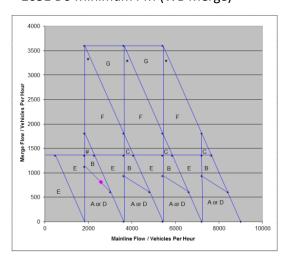
## 2031 Do Minimum PM (WB Diverge)



2031 Do Minimum AM (WB Merge)

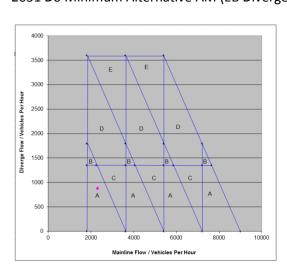


2031 Do Minimum PM (WB Merge)

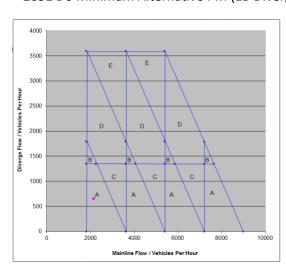


#### **Eastbound**

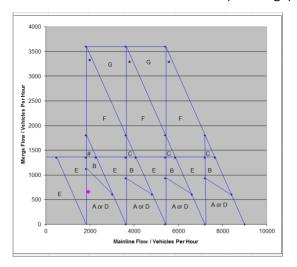
## 2031 Do Minimum Alternative AM (EB Diverge)



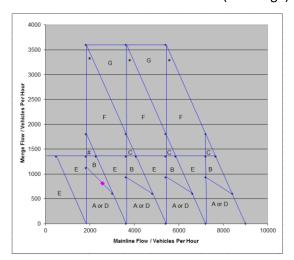
## 2031 Do Minimum Alternative PM (EB Diverge)



## 2031 Do Minimum Alternative AM (EB Merge)

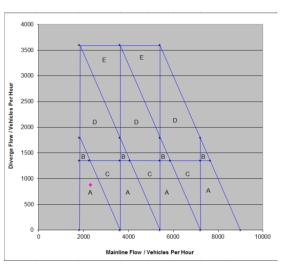


## 2031 Do Minimum Alternative PM (EB Merge)

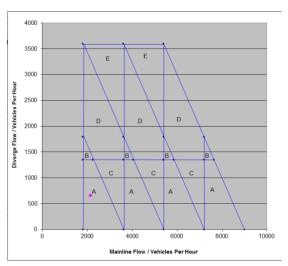


#### Westbound

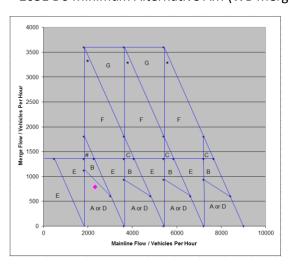
## 2031 Do Minimum Alternative AM (WB Diverge)



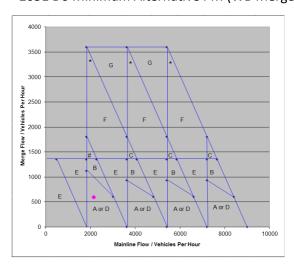
2031 Do Minimum Alternative PM (WB Diverge)



2031 Do Minimum Alternative AM (WB Merge)

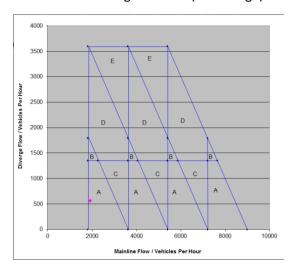


2031 Do Minimum Alternative PM (WB Merge)

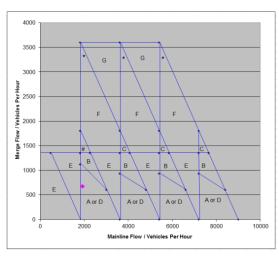


#### **Eastbound**

## 2031 Do Something PPLP AM (EB Diverge)

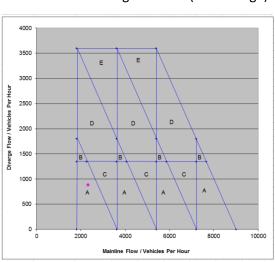


## 2031 Do Something PPLP AM (EB Merge)

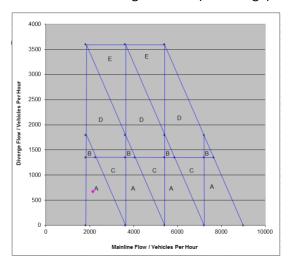


#### Westbound

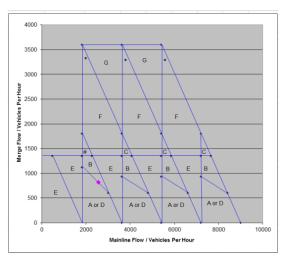
## 2031 Do Something PPLP AM (WB Diverge)



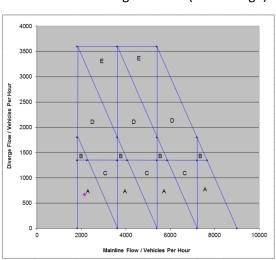
## 2031 Do Something PPLP PM (EB Diverge)



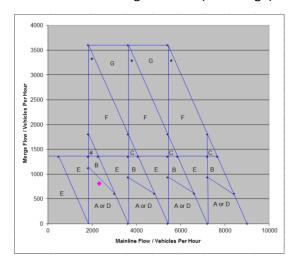
## 2031 Do Something PPLP PM (EB Merge)



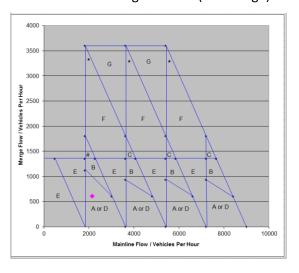
## 2031 Do Something PPLP PM (WB Diverge)



## 2031 Do Something PPLP AM (WB Merge)



## 2031 Do Something PPLP PM (WB Merge)



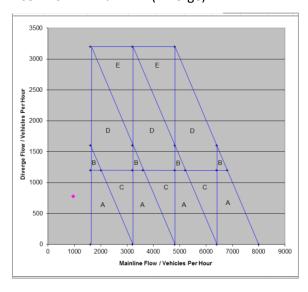
# **Appendix C 2037 Merge and Diverge Outputs**

## **Merge and Diverge Appraisal**

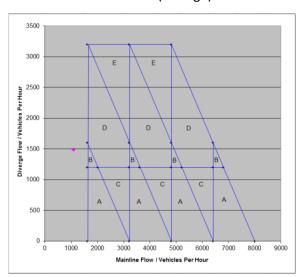
## 2037 Scenarios

## A260 Spitfire Way / White Horse Hill / A260 / A20 Slip Road

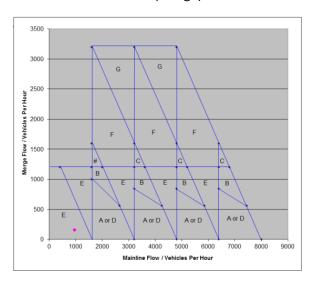
## 2037 Do Minimum AM (Diverge)



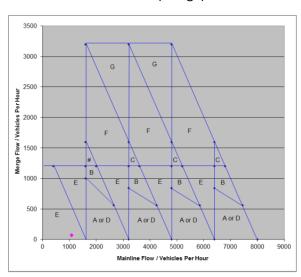
## 2037 Do Minimum PM (Diverge)



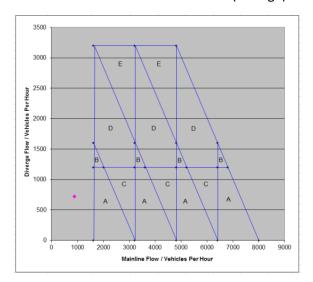
## 2037 Do Minimum AM (Merge)



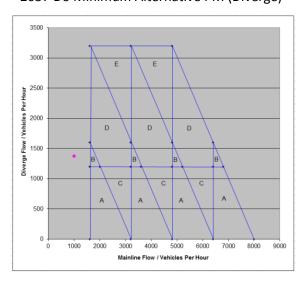
## 2037 Do Minimum PM (Merge)



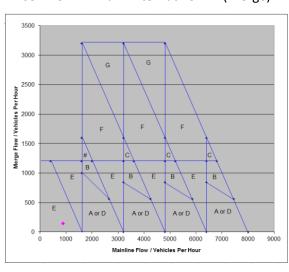
#### 2037 Do Minimum Alternative AM (Diverge)



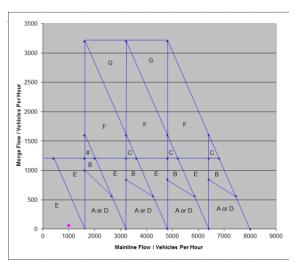
#### 2037 Do Minimum Alternative PM (Diverge)



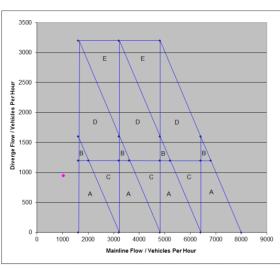
2037 Do Minimum Alternative AM (Merge)



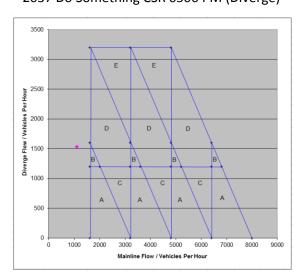
2037 Do Minimum Alternative PM (Merge)



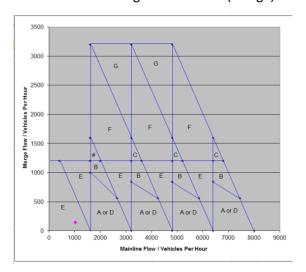
2037 Do Something CSR 6500 AM (Diverge)



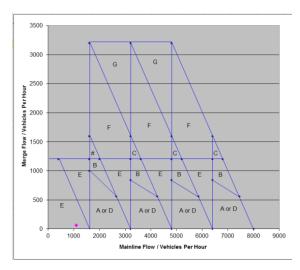
2037 Do Something CSR 6500 PM (Diverge)



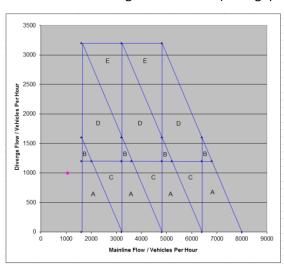
#### 2037 Do Something CSR 6500 AM (Merge)



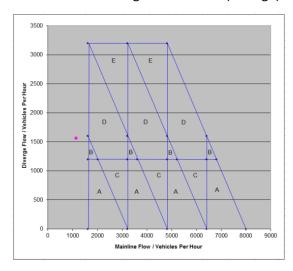
# 2037 Do Something CSR 6500 PM (Merge)



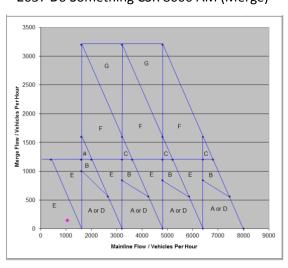
2037 Do Something CSR 8000 AM (Diverge)



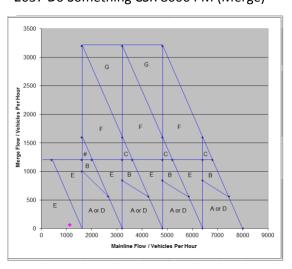
2037 Do Something CSR 8000 PM (Diverge)



2037 Do Something CSR 8000 AM (Merge)

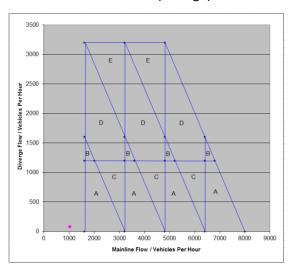


2037 Do Something CSR 8000 PM (Merge)

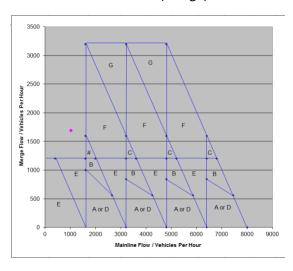


# Alkham Valley Road / A20 Off Slip / A20 On Slip

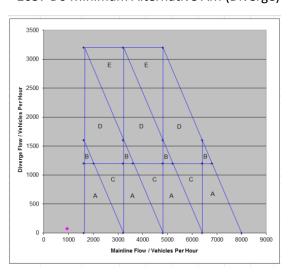
#### 2037 Do Minimum AM (Diverge)



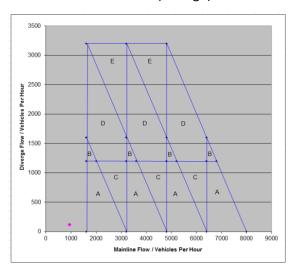
#### 2037 Do Minimum AM (Merge)



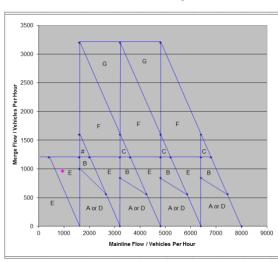
2037 Do Minimum Alternative AM (Diverge)



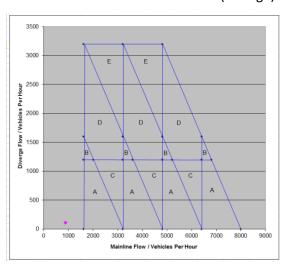
#### 2037 Do Minimum PM (Diverge)



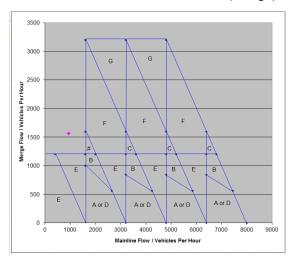
2037 Do Minimum PM (Merge)



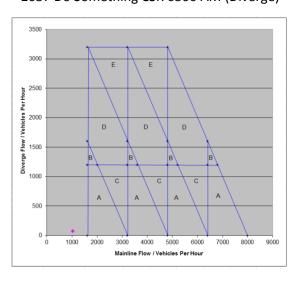
2037 Do Minimum Alternative PM (Diverge)



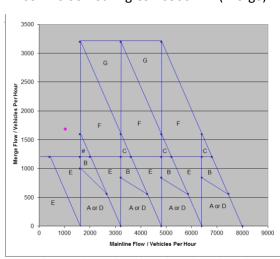
# 2037 Do Minimum Alternative AM (Merge)



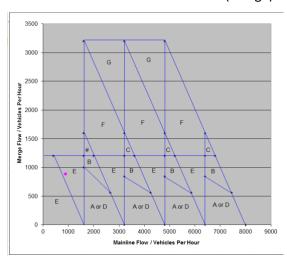
# 2037 Do Something CSR 6500 AM (Diverge)



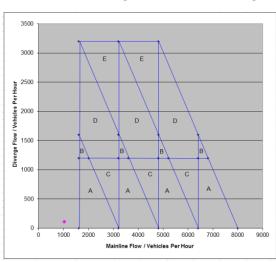
# 2037 Do Something CSR 6500 AM (Merge)



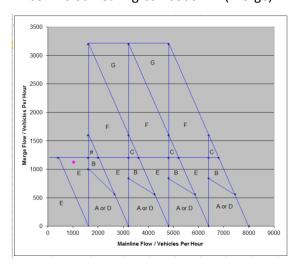
# 2037 Do Minimum Alternative PM (Merge)



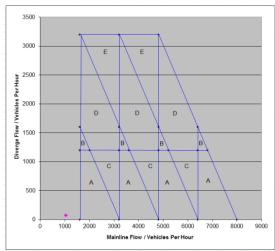
# 2037 Do Something CSR 6500 PM (Diverge)

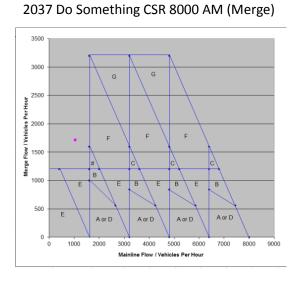


# 2037 Do Something CSR 6500 PM (Merge)

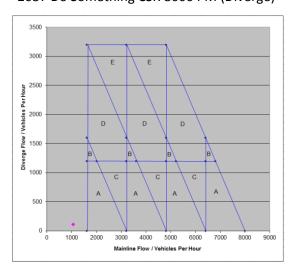


# 2037 Do Something CSR 8000 AM (Diverge)

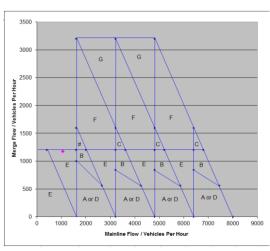




# 2037 Do Something CSR 8000 PM (Diverge)



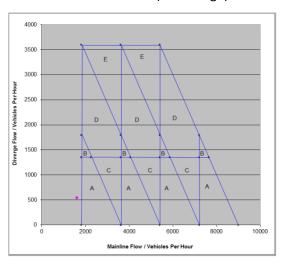
## 2037 Do Something CSR 8000 PM (Merge)



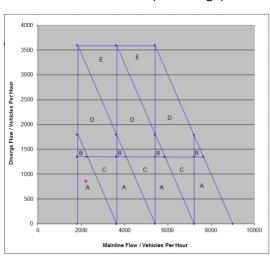
# A20 / M20 / B2064 (Cheriton Interchange, M20 Junction 12)

#### **Eastbound**

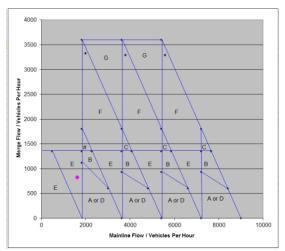
#### 2037 Do Minimum AM (EB Diverge)



#### 2037 Do Minimum PM (EB Diverge)

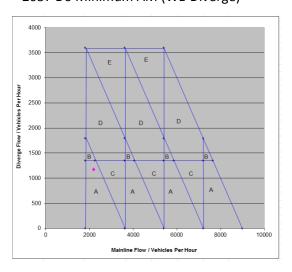


#### 2037 Do Minimum AM (EB Merge)

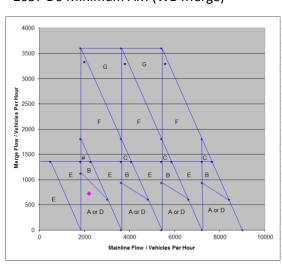


#### Westbound

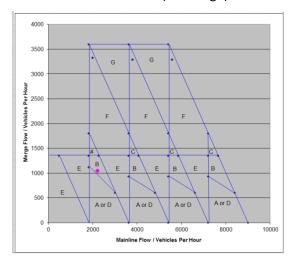
#### 2037 Do Minimum AM (WB Diverge)



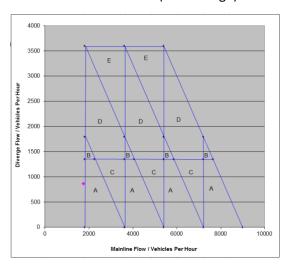
# 2037 Do Minimum AM (WB Merge)



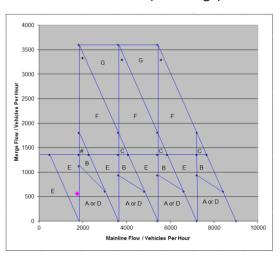
#### 2037 Do Minimum PM (EB Merge)



#### 2037 Do Minimum PM (WB Diverge)



#### 2037 Do Minimum PM (WB Merge)

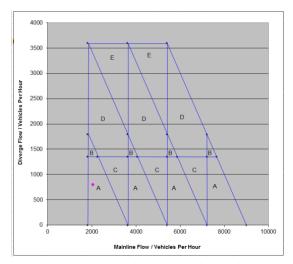


#### **Eastbound**

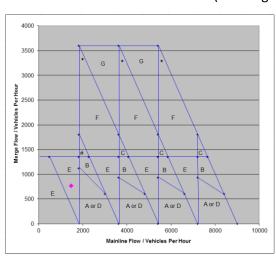
#### 2037 Do Minimum Alternative AM (EB Diverge)

# 

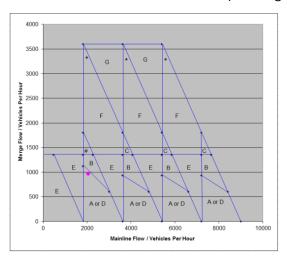
# 2037 Do Minimum Alternative PM (EB Diverge)



2037 Do Minimum Alternative AM (EB Merge)

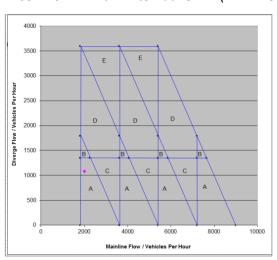


2037 Do Minimum Alternative PM (EB Merge)

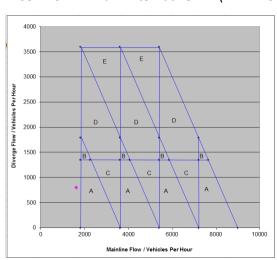


#### Westbound

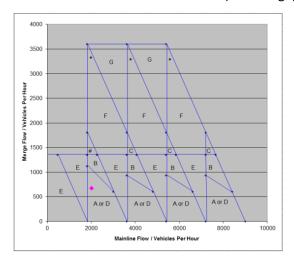
#### 2037 Do Minimum Alternative AM (WB Diverge)



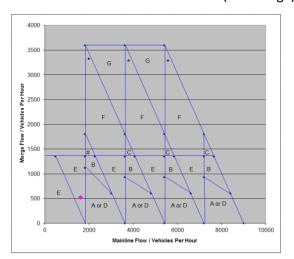
#### 2037 Do Minimum Alternative PM (WB Diverge)



#### 2037 Do Minimum Alternative AM (WB Merge)

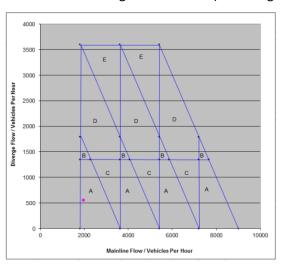


#### 2037 Do Minimum Alternative PM (WB Merge)

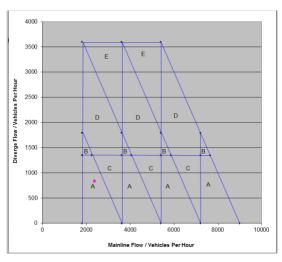


#### **Eastbound**

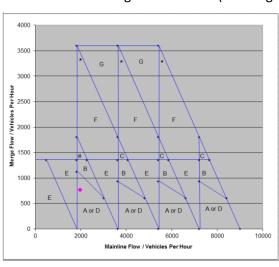
2037 Do Something CSR 6500 AM (EB Diverge)



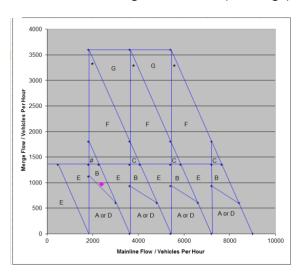
2037 Do Something CSR 6500 PM (EB Diverge)



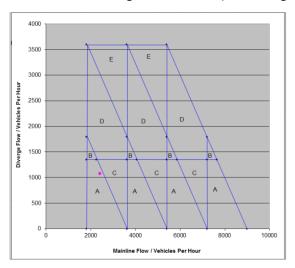
2037 Do Something CSR 6500 AM (EB Merge)



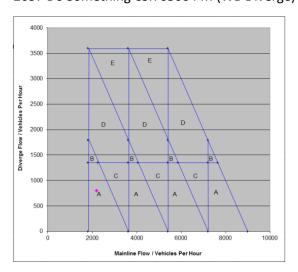
2037 Do Something CSR 6500 PM (EB Merge)



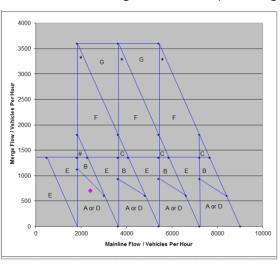
#### 2037 Do Something CSR 6500 AM (WB Diverge)



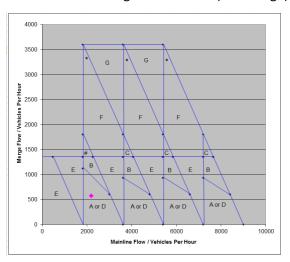
#### 2037 Do Something CSR 6500 PM (WB Diverge)



2037 Do Something CSR 6500 AM (WB Merge)

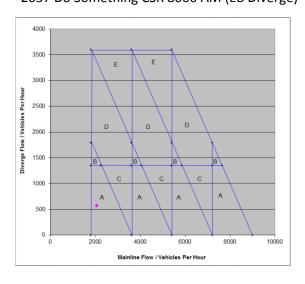


2037 Do Something CSR 6500 PM (WB Merge)

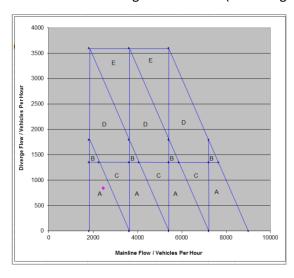


# **Eastbound**

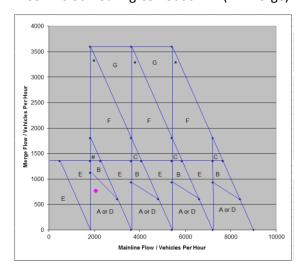
# 2037 Do Something CSR 8000 AM (EB Diverge)



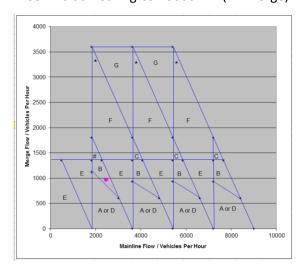
2037 Do Something CSR 8000 PM (EB Diverge)



#### 2037 Do Something CSR 8000 AM (EB Merge)

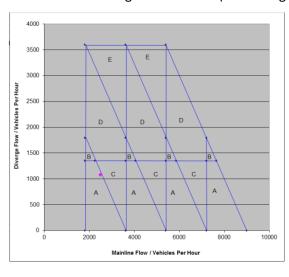


#### 2037 Do Something CSR 8000 PM (EB Merge)

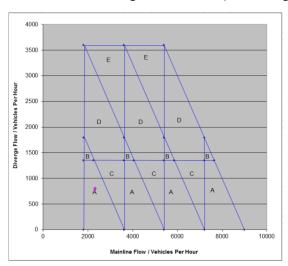


#### Westbound

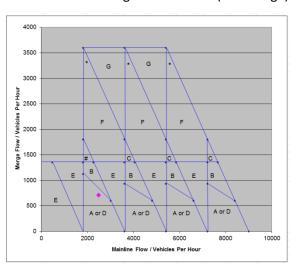
2037 Do Something CSR 8000 AM (WB Diverge)



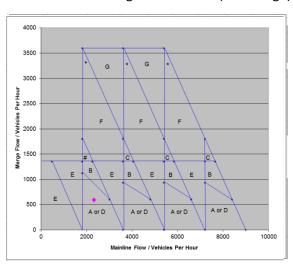
2037 Do Something CSR 8000 PM (WB Diverge)



2037 Do Something CSR 8000 AM (WB Merge)



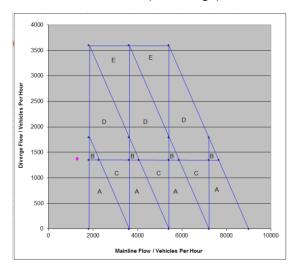
2037 Do Something CSR 8000 PM (WB Merge)



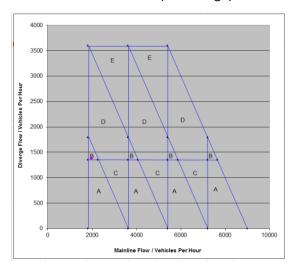
# A2034 / A20 / A259 / M20 On Slip / M20 Off Slip (Castle Hill Interchange, M20 Jct 13)

#### **Eastbound**

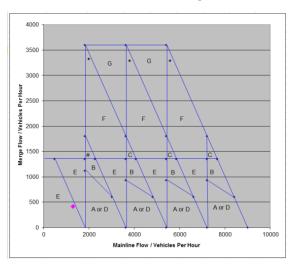
#### 2037 Do Minimum AM (EB Diverge)



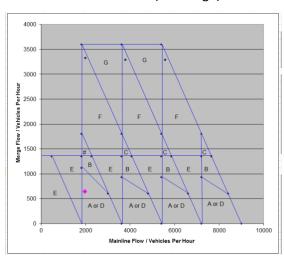
#### 2037 Do Minimum PM (EB Diverge)



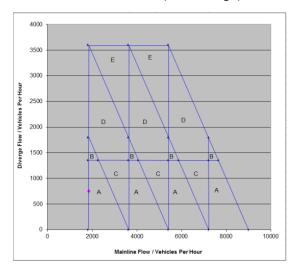
2037 Do Minimum AM (EB Merge)



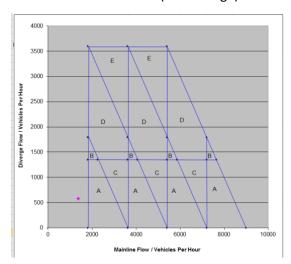
#### 2037 Do Minimum PM (EB Merge)



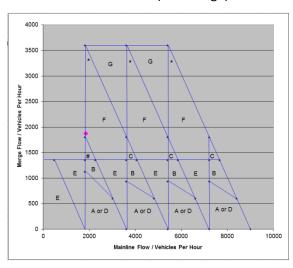
#### 2037 Do Minimum AM (WB Diverge)



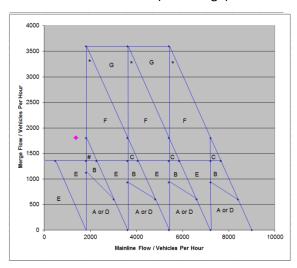
#### 2037 Do Minimum PM (WB Diverge)



2037 Do Minimum AM (WB Merge)

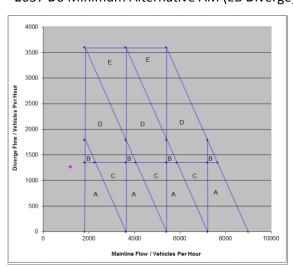


2037 Do Minimum PM (WB Merge)

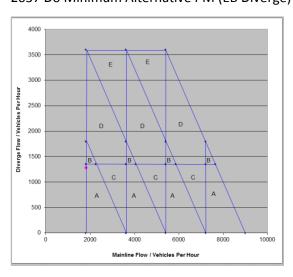


#### **Eastbound**

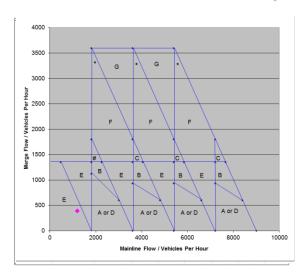
#### 2037 Do Minimum Alternative AM (EB Diverge)



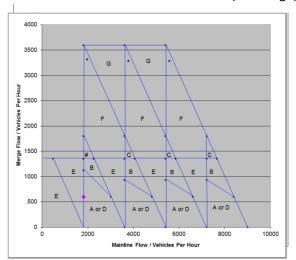
# 2037 Do Minimum Alternative PM (EB Diverge)



#### 2037 Do Minimum Alternative AM (EB Merge)

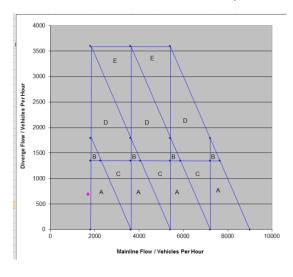


#### 2037 Do Minimum Alternative PM (EB Merge)

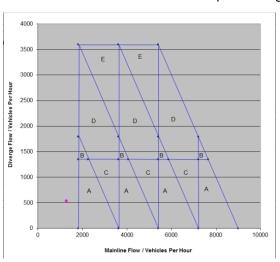


#### Westbound

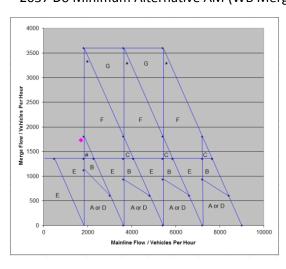
#### 2037 Do Minimum Alternative AM (WB Diverge)



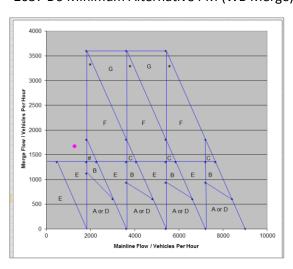
2037 Do Minimum Alternative PM (WB Diverge)



2037 Do Minimum Alternative AM (WB Merge)

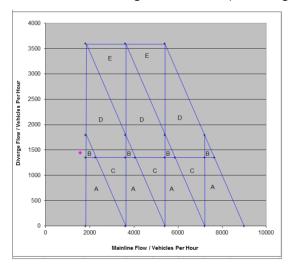


2037 Do Minimum Alternative PM (WB Merge)

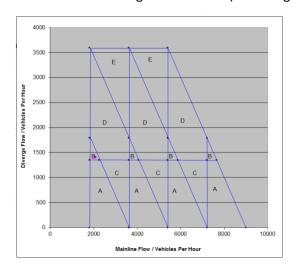


#### **Eastbound**

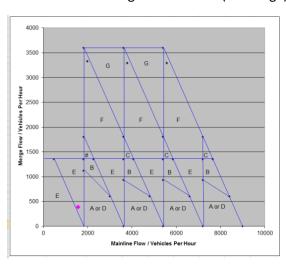
#### 2037 Do Something CSR 6500 AM (EB Diverge)



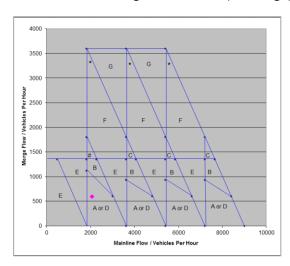
## 2037 Do Something CSR 6500 PM (EB Diverge)



2037 Do Something CSR 6500 AM (EB Merge)

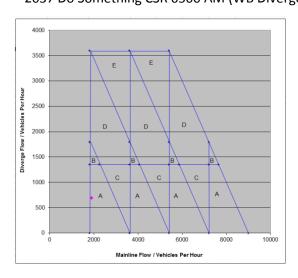


2037 Do Something CSR 6500 PM (EB Merge)

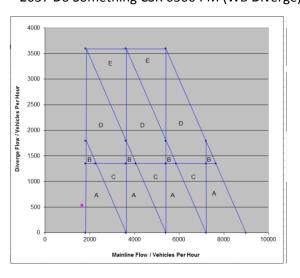


## Westbound

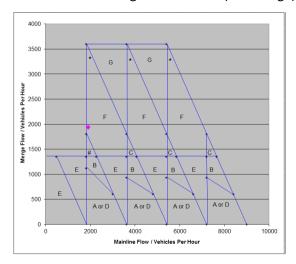
# 2037 Do Something CSR 6500 AM (WB Diverge)



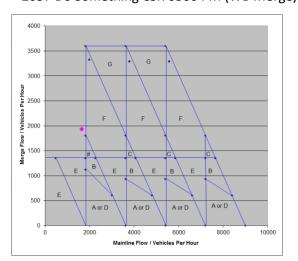
#### 2037 Do Something CSR 6500 PM (WB Diverge)



2037 Do Something CSR 6500 AM (WB Merge)

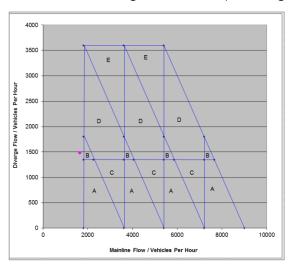


2037 Do Something CSR 6500 PM (WB Merge)

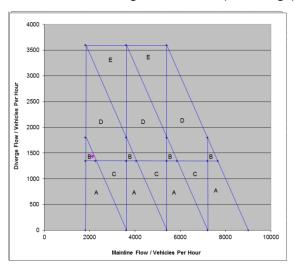


#### **Eastbound**

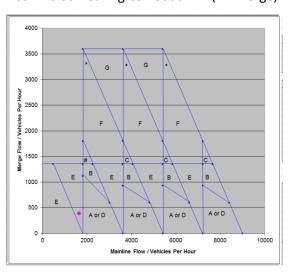
2037 Do Something CSR 8000 AM (EB Diverge)



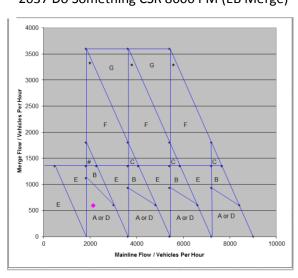
2037 Do Something CSR 8000 PM (EB Diverge)



2037 Do Something CSR 8000 AM (EB Merge)



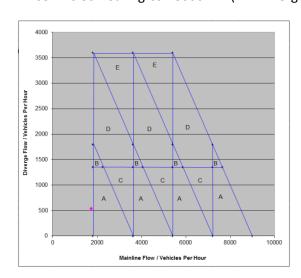
2037 Do Something CSR 8000 PM (EB Merge)



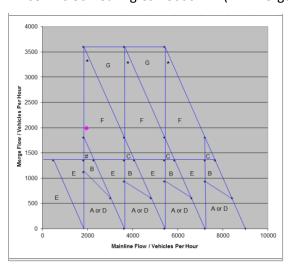
# 2037 Do Something CSR 8000 AM (WB Diverge)

# 

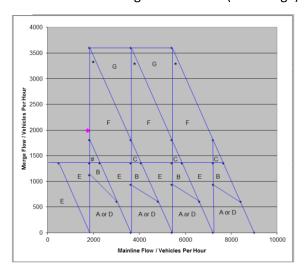
# 2037 Do Something CSR 8000 PM (WB Diverge)



2037 Do Something CSR 8000 AM (WB Merge)



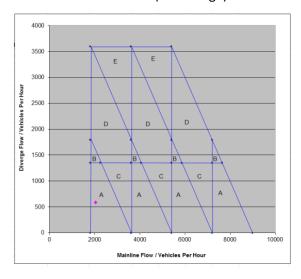
2037 Do Something CSR 8000 PM (WB Merge)



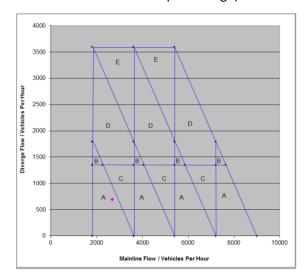
# M20 / A20 / B2068 Roundabout (M20 Junction 11)

#### **Eastbound**

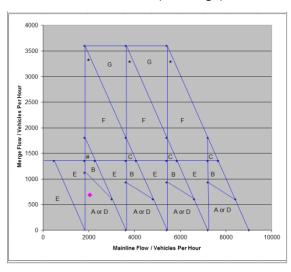
#### 2037 Do Minimum AM (EB Diverge)



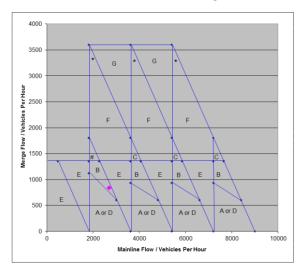
#### 2037 Do Minimum PM (EB Diverge)



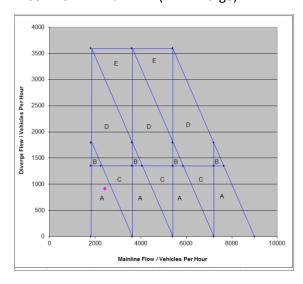
2037 Do Minimum AM (EB Merge)



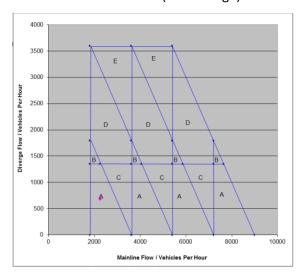
#### 2037 Do Minimum PM (EB Merge)



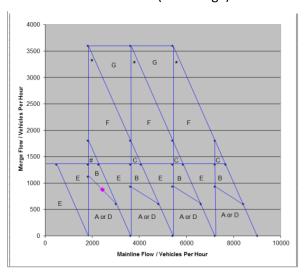
# 2037 Do Minimum AM (WB Diverge)



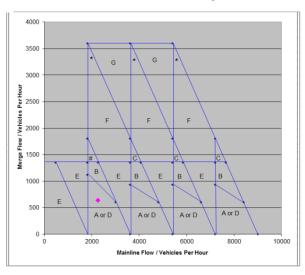
# 2037 Do Minimum PM (WB Diverge)



2037 Do Minimum AM (WB Merge)

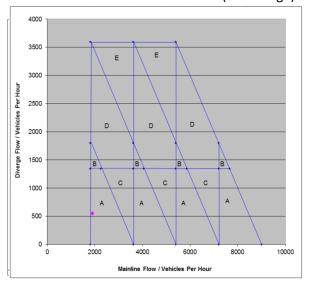


2037 Do Minimum PM (WB Merge)

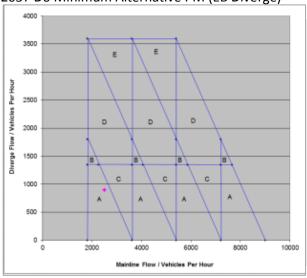


#### **Eastbound**

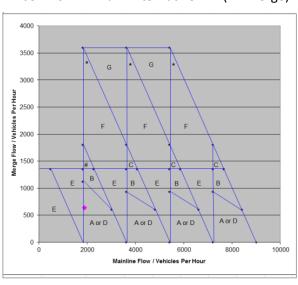
2037 Do Minimum Alternative AM (EB Diverge)



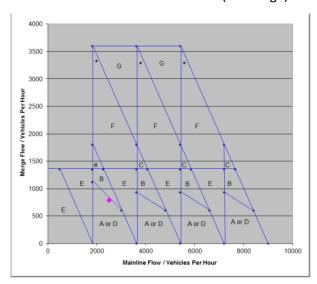
2037 Do Minimum Alternative PM (EB Diverge)



2037 Do Minimum Alternative AM (EB Merge)

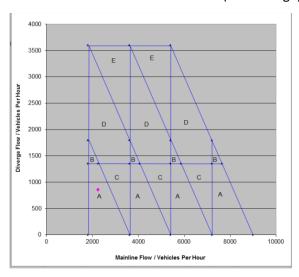


2037 Do Minimum Alternative PM (EB Merge)

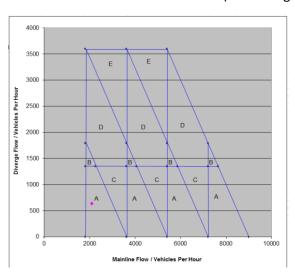


#### Westbound

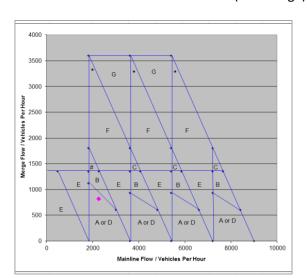
2037 Do Minimum Alternative AM (WB Diverge)



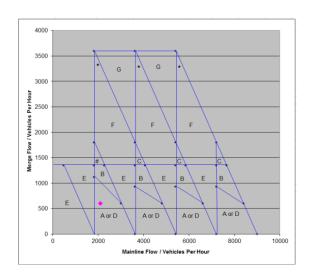
2037 Do Minimum Alternative PM (WB Diverge)



#### 2037 Do Minimum Alternative AM (WB Merge)

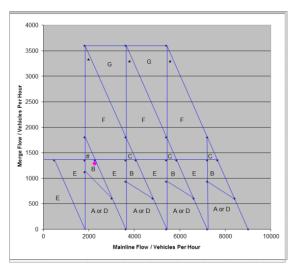


#### 2037 Do Minimum Alternative PM (WB Merge)

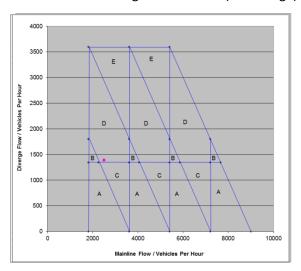


#### **Eastbound**

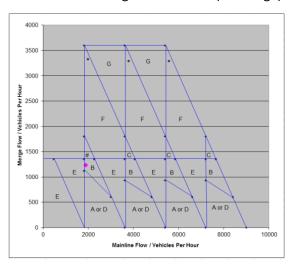
2037 Do Something CSR 6500 AM (EB Diverge)



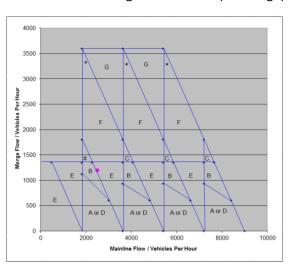
2037 Do Something CSR 6500 PM (EB Diverge)



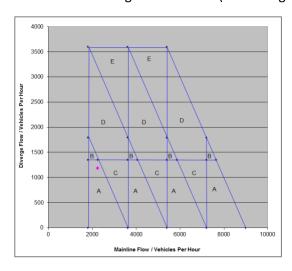
2037 Do Something CSR 6500 AM (EB Merge)



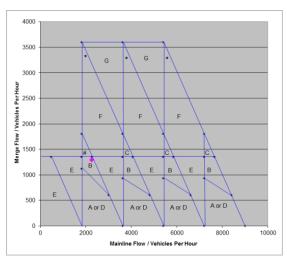
2037 Do Something CSR 6500 PM (EB Merge)



#### 2037 Do Something CSR 6500 AM (WB Diverge)

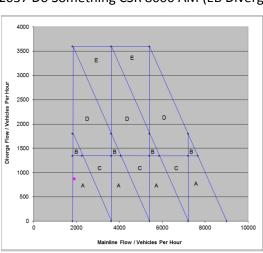


#### 2037 Do Something CSR 6500 AM (WB Merge)

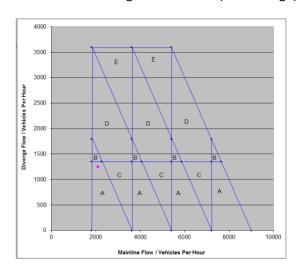


#### **Eastbound**

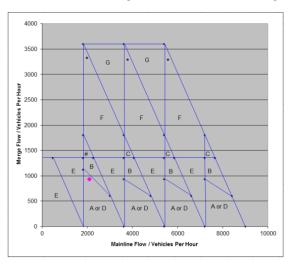
#### 2037 Do Something CSR 8000 AM (EB Diverge)



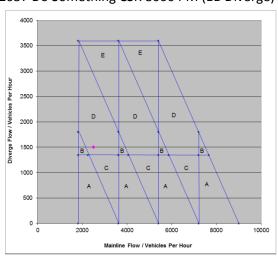
#### 2037 Do Something CSR 6500 PM (WB Diverge)



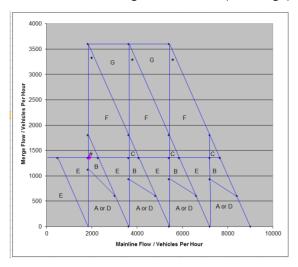
2037 Do Something CSR 6500 PM (WB Merge)



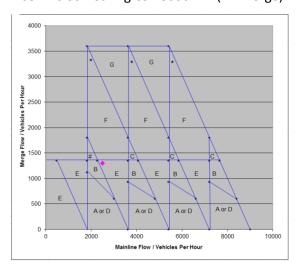
#### 2037 Do Something CSR 8000 PM (EB Diverge)



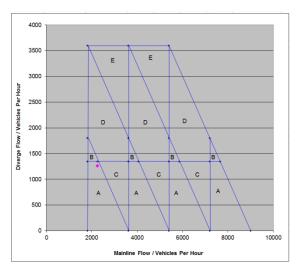
2037 Do Something CSR 8000 AM (EB Merge)



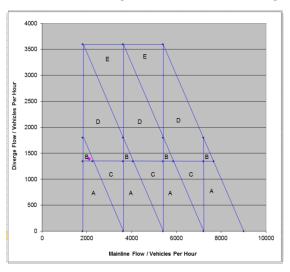
2037 Do Something CSR 8000 PM (EB Merge)



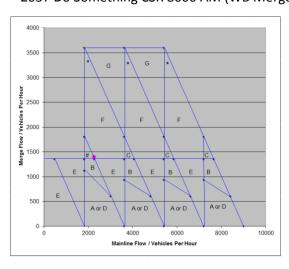
2037 Do Something CSR 8000 AM (WB Diverge)



2037 Do Something CSR 8000 PM (WB Diverge)



2037 Do Something CSR 8000 AM (WB Merge)



2037 Do Something CSR 8000 PM (WB Merge)

