

AVIVA Investors Ltd

Victoria Road Retail Park

Date: 19th November 2014

Ref: N02-AW- Post Application Response

Introduction

1. Vectos have been retained by AVIVA Investors Ltd to provide traffic and transport advice for the proposed refurbishment and variation in range of goods restriction of two A1 retail units at Victoria Road Retail Park, South Ruislip.
2. A planning application was submitted (Ref: 64445/APP/2014/2467) to the London Borough of Hillingdon (LBH) for the proposed development and was supported by a Transport Statement (TS) prepared by Vectos (July 2014).
3. Following submission of the planning application, a number of comments have been received from the LBH. This Technical Note has been produced in response to these comments.

Response to London Borough of Hillingdon

Traffic Distribution

4. The LBH have requested clarification regarding the methodology used to determine the vehicle trips identified within the TS, specifically in relation to the amount (31%) of transfer trips travelling eastbound along Victoria Road.
5. It should be noted, the direction of travel noted within the submitted TS is incorrect. In line with the applied methodology, the correct direction of travel is westbound.
6. Within the submitted TS, an assumption was derived from analysis extracted from the ARLA site TA regarding traffic generation and transfer trips to Unit 2. The submitted TS assumed that 31% of transfer trips travelling westbound on Victoria Way would already be travelling through the site access junction and therefore are implicit within base traffic flows and should not be considered new trips at the junction.
7. The methodology applied within the approved ARLA Food site TA assumed that 65% of vehicle trips to the foodstore element of the scheme would be transfer trips. From the traffic flow data (Figures F219, F220, F228 & F229 – **Appendix A**) within the ARLA TA it is possible to calculate the percentage distribution of transfer trips arriving and departing from the south-east to the ARLA site .i.e. 31%.

8. Data showing the traffic distribution methodology can be viewed at **Appendix A**.

Traffic Generation

Unit 1

9. The LBH have raised concerns regarding the vehicle trip rates applied to the proposed retail units within the supporting TS.
10. For Unit 1 (a proposed discount food store), the LBH have noted that the trip rates applied within the supporting TS only considered discount food stores. LBH assert that the end occupier of the unit cannot be controlled; therefore, they have requested that trip rates applied to the proposed Sainsbury's extension (Ref: 33667/APP/2012/3214) are used in relation to the proposal.
11. It is considered that the proposed size and format of the unit would not suit larger non-discount food retailers. In light of this, it is considered unlikely that a non-discount food retailer would occupy the unit. Therefore, it is considered applying the vehicle trip rates used within the Sainsbury's TA would not be representative of the number of trips generated by the unit.
12. Notwithstanding the above, to provide a robust assessment of the development, **Table 1** below summarises the trip rates applied within the submitted TS and the Sainsbury's trip rates and associated traffic generation.

Table 1: Unit 1 (Food Retail) Trip Rates & Generation Comparison

	Friday Peak			Saturday Peak		
	Arrive	Depart	Total	Arrive	Depart	Total
TS Trip Rates	3.497	3.54	7.037	4.253	4.374	8.627
TS Trip Generation	53	53	106	64	66	130
Sainsbury's Trip Rates	4.9	5.1	10	5.4	5.1	10.5
Sainsbury's Trip Generation	74	77	151	81	77	158
Trip Generation Difference	21	24	45	17	11	28

13. The data in **Table 1** shows that application of the Sainsbury's trip rates would result in an increase in the likely number of total trips generated by Unit 1. When applying pass-by and transfer trip factors, the impact on the road network is unlikely to be significant.
14. As noted within the submitted TS, it is recognised that supermarkets attract vehicle trips rather than generate trips. Applying the methodology applied within the TA, **Table 2** summarises the number of vehicle trips generated by Unit 1 by type.

Table 2: Unit 1 - Vehicle Trip Generation by Type

Period	New		Pass-by		Diverted		Transfer	
	Arr	Dep	Arr	Dep	Arr	Dep	Arr	Dep
PM Peak	4	4	15	15	7	8	48	50
Saturday Peak	4	4	16	15	8	8	53	50

15. In line with the Arla Food site TA, within the TS it was assumed that 65% of trips generated by the site would be transferred trips. Further analysis undertaken as part of the TS calculated that approximately 31% of transferred trips would already be travelling through the site access junction. Therefore, these trips would be considered within the base traffic flows and not considered 'additional' trips at the junction. **Table 3** summarises the resultant traffic flows.

Table 3: Unit 1 - Total Number of 'Additional' Vehicle Trips

Period	New		Diverted		Transfer	
	Arr	Dep	Arr	Dep	Arr	Dep
PM Peak	4	4	7	8	23	24
Saturday Peak	4	4	8	8	24	23

Unit 2

16. The LBH have also raised concerns regarding the trip rates applied to Unit 2, noting that the sites used to derive the trip rates are not representative due to the nature of goods sold. As noted within the supporting TS, the food retail aspect of B&M is likely to be a relatively small proportion of the overall sales area. Within the TS, this element of food retail was considered ancillary to the overall sales area and unlikely to generate any vehicle trips in its own right, especially when considering the proposed food store next door.
17. Therefore, it is considered that the sites used to derive the trip rates applied within the TS are appropriate to assess the likely impact of the development on the local highway network.
18. Notwithstanding the above, an assessment has been undertaken to identify the difference in vehicle trips generated by applying new trip rates. Within the LBH response, the LBH request that trip rates used in relation to the extant planning consent for Unit 1 (Ref: 64445/APP/2013/1050) are used. **Table 4** below shows the trips generated by the submitted TS and the trip rates applied as part of the extant permission.

Table 4: Unit 2 (Non-Food) Trip Rates & Generation Comparison

	Friday Peak			Saturday Peak		
	Arrive	Depart	Total	Arrive	Depart	Total
TS Trip Rates	1.362	1.555	2.917	3.032	2.997	6.029
TS Trip Generation	31	35	66	68	68	136
Consented Trip Rates	1.976	1.948	3.924	3.586	2.993	6.579
Consented Trip Generation	45	44	89	81	68	148
Difference	14	9	23	13	0	12

19. The data in **Table 4** indicates that the consented trip rates result in a minor increase in vehicle trips associated with the unit.

20. As noted within the submitted TS, not all traffic generated by either unit will be 'new' to the local highway network. In line with the assumptions applied within the submitted TS, 20% of trips to Unit 2 are considered linked trips and will be deducted from the total traffic generation. **Table 4** below summarises the resulting traffic generation.

Table 5: Unit 2 - Vehicle Trip Generation – 20% Linked Trip Factor

Units	Friday Peak			Saturday Peak		
	Arrive	Depart	Total	Arrive	Depart	Total
Submitted TS	24	28	52	54	54	108
Post Application (Worst Case)	36	35	71	65	54	119
Difference	12	7	19	11	0	11

21. The data in **Table 5** indicates with the inclusion of linked trips, the number of additional trips generated by the proposed development will be minimal.

Total Traffic Generation

22. **Table 6** below summarises the total increase in vehicle trips generated by the revised trip rates compared to the submitted trip generation.

Table 6: Total Development Traffic Generation

Units	Friday Peak			Saturday Peak		
	Arrive	Depart	Total	Arrive	Depart	Total
Submitted TS	83	88	172	133	134	266
Post Application (Worst Case)	118	121	239	162	144	307
Difference	35	32	67	30	11	41

23. The data in **Table 6** shows that the application of the revised trip rates is likely to result in 67 additional two-way trips during the PM peak and 41 two-way trips during the Saturday peak.
24. The site has planning consent (Ref: 64445/APP/2013/1050) for the refurbishment and partial demolition of Unit A. To determine the likely impact of the proposed development, trips generated by the proposed development will be compared to trips generated by the consented scheme. **Table 7** below summarises the vehicle trips extracted from the consented TA compared to those generated by the proposed development

Table 7: Vehicle Trip Generation Comparison – Consented vs Proposed

Time Period	Friday Peak		Saturday Peak	
	Arrivals	Departures	Arrivals	Departures
Proposed Development	70	71	101	88
Consented Scheme	58	58	117	99
Difference	12	13	-16	-11

25. The data in **Table 7** shows that the proposed development using the worst case trip rate would result in a minor increase in trips during the Friday peak period and a reduction in trips during the Saturday peak. It is considered that the proposed increase shown during the Friday peak will have a minor impact on the site access junction and a negligible impact once distributed around the local highway network.

Highway Impact

26. The LBH have requested clarification on how the existing signal controlled junction that provides access to the site would operate following the proposed development.
27. Following further discussions with the LBH, it is our understanding that's works associated with the adjacent Arla site will begin in January 2015. As noted within the supporting TS, when the Arla site comes forward, the Arla scheme proposes improvements of the existing shared site access/Victoria Road junction. In addition, the approved Arla scheme proposes to stop up the existing access into the site from the Victoria Road/West Mead signalised junction.
28. In light of the above, it has been agreed with the LBH that an assessment of the likely impact of the proposed development on the proposed Arla access arrangement should be undertaken to ascertain the likely impact.
29. Within the approved Arla TA, traffic generated by the existing site was considered within their junction impact assessment. **Table 8** summarises the number of vehicle trips applied within the Arla TA compared to those noted above in **Table 7** for the proposed scheme.

Table 8: Proposed vs Arla Application – Traffic Generation

Time Period	Friday Peak		Saturday Peak	
	Arrivals	Departures	Arrivals	Departures
Proposed Development	70	71	101	88
Arla Application	42	43	136	109
Difference	28	28	-35	-21

30. The data summarised in **Table 8** shows that compared to the vehicle trips applied within the Arla TA, the proposed development results in a minor increase in vehicle trips during the Friday peak. However, as shown, the proposed development is likely to result in a reduction in vehicle trips during the Saturday peak.
31. On the basis that the vehicle trip generation assessment indicates there will only be an increase in vehicle trips during the Friday peak, this is the only peak period assessed as part of this assessment.
32. Figure 268 within the approved Arla TA (**Appendix B**) identifies the traffic flows at the site access junction for the '2015+Aviva+Committed+Development' scenario. Based on the total traffic flows at the junction, the increase in vehicles as a result of the proposed development (**Table 8**) represents a 3% increase in traffic flows at the junction.

33. As part of the Arla TA, the operation of the revised Victoria Road/Site Access junction was assessed. The results for the Friday peak period have been extracted from the Arla TA and are summarised in **Table 9** below.

Table 9: Proposed Site Access with Committed Development + Development

Link	Friday Peak	
	DoS	MMQ
Victoria Road – Left/Ahead (NB)	59%	6
Victoria Road – Right/Ahead (NB)	72%	10
Arla egress left	23.9%	3
Arla egress right	60.6%	8

34. As summarised in **Table 9**, the junction is expected to operate well within capacity. In light of this, it is considered the minor increase in traffic flows at the junction as a result of the proposed development would have a minimal impact on junction operation.

Car Parking

35. It should be noted that the site already contains 218 parking spaces and there is a consented scheme for 3,119sqm GIA of non-food retail on the site which also contains 218 spaces.
36. Notwithstanding this, in light of comments raised by Transport for London and the Greater London Authority, we're currently making some minor alterations to the car park to enhance its appearance, improve connectivity from Victoria Road and provide electric vehicle charging points.
37. We will forward the revised car park layout shortly for your comment.

Swept Path Analysis

38. It should be noted that swept path plots using AutoTrack are already considered to include a margin of error. In line with comments received from the LBH, a further 300mm margin of error has been applied to the submitted vehicle track plots. The revised drawings showing a 16.5m articulated vehicle entering and exiting both Units A and B can be viewed at **Drawing 130938A_AT_B01**.
39. The revised track plots show that servicing of the units can still be undertaken safely with the inclusion of the margin of error.

DRAWINGS

APPENDIX A

Vehicle Trip Generation by Trip Type - Unit A

(Table 5.4 within TA)

Period	New		Passby		Diverted		*Transfer				Total
							Sainsbury's		Other		
	Arr	Dep	Arr	Dep	Arr	Dep	Arr	Dep			
PM Peak	4	4	15	15	7	8	33	35	15	15	151
Saturday Peak	4	4	16	15	8	8	37	35	16	15	158

* Transfer Trips - In line with the ARLA TA, it has been assumed that 45% of transfer trips will come from Sainsbury's and 20% from other food stores.

Check - % Transfer

Arrive	Depart	Total	% Transfer
48	50	98	65%
53	50	103	65%

Total Number of 'New' Trips at the Junction

(Table 5.5 in TA)

Period	New		Passby		Diverted		Transfer				Total
							Sainsbury's		Other		
	Arr	Dep	Arr	Dep	Arr	Dep	Arr	Dep			
PM Peak	4	4			7	8	18	18	6	6	71
Saturday Peak	4	4			8	8	17	16	7	7	71

Other Foodstores Transfer Distribution

Extracted from F228+F229 ARLA TA

	Arrive	Depart	Total	
Friday	50	33	83	40%
Saturday	53	43	96	45%

Total Transfer Trips

Arrive	Depart	Total	% Transfer
23	24	48	32%
24	23	47	30%

31%

Unit B Trip Generation

Friday			Saturday		
Arrive	Depart	Total	Arrive	Depart	Total
36	35	71	65	54	119

Unit A Trip Generation

Friday			Saturday		
Arrive	Depart	Total	Arrive	Depart	Total
35	36	71	36	34	71

Total (adjusted)

	Friday			Saturday		
	Arrive	Depart	Total	Arrive	Depart	Total
Post App	70	71	141	101	88	189
Arila	42	43	85	136	109	245
Difference	28	28	56	-35	-21	-56

Post Application Vehicle Trip Generation (Not Adjusted)

Land Use	Friday PM Peak (16:00-17:00)			Saturday Peak (13:00-14:00)		
	Arr	Dep	Tot	Arr	Dep	Tot
Discount Food	74	77	151	81	77	158
Non-Food Retail	45	44	89	81	68	148
Total	118	121	239	162	144	307

Difference - TA vs Post-App

Friday			Saturday		
Arrive	Depart	Total	Arrive	Depart	Total
22	18	40	19	5	24

Discount Food Store 1507 sqm
Non-Food Retail 2257 sqm

USED WITHIN SUBMITTED TA

Trip Rates

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Discount Food	3.497	3.54	7.037	4.253	4.374	8.627
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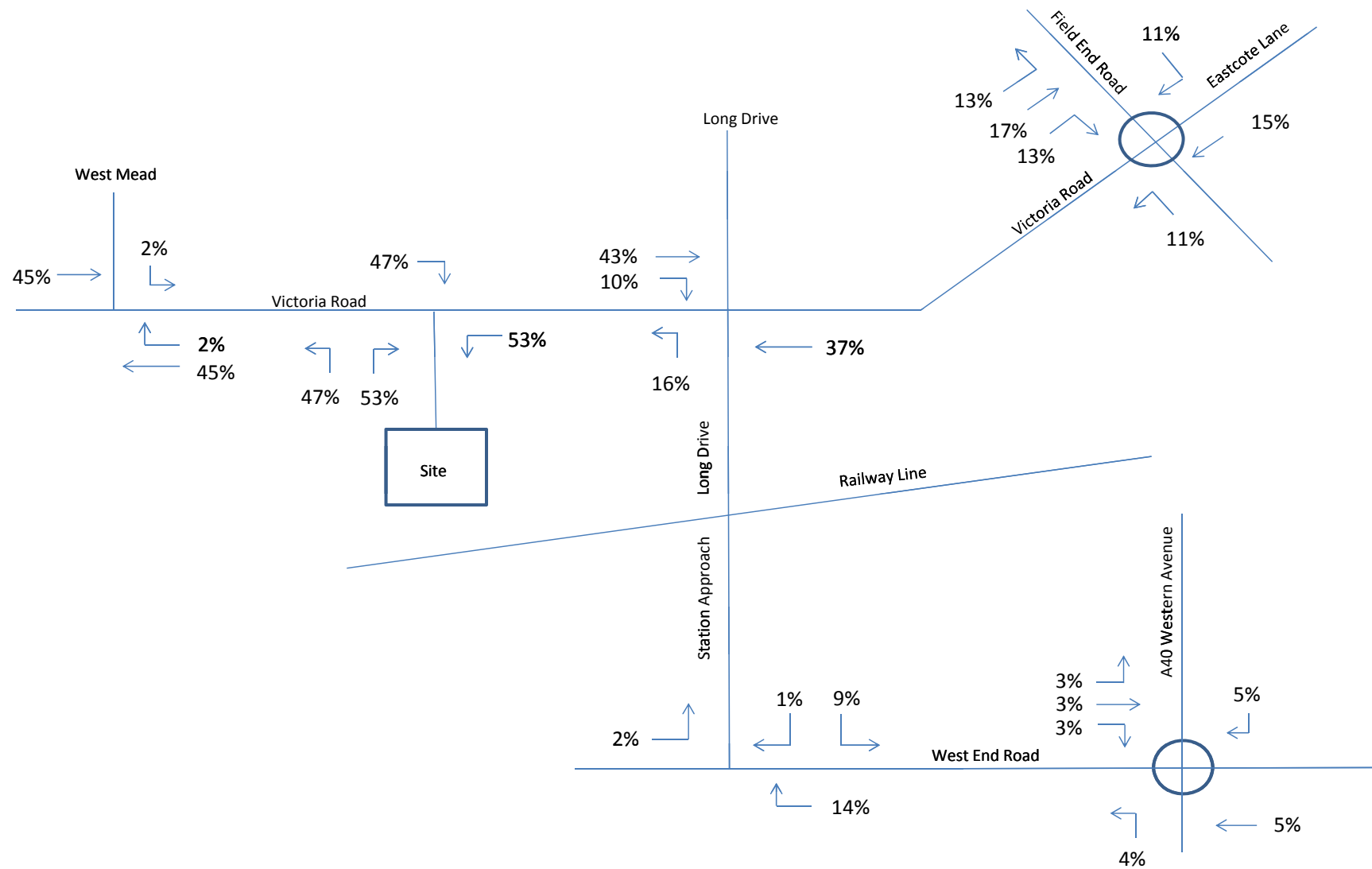
POST APPLICATION

Trip Rates

Land Use	Friday PM Peak			Saturday Peak		
	Arr	Dep	Tot	Arr	Dep	Tot
SSL trip rates	4.9	5.1	10	5.4	5.1	10.5
Non-Food Retail	1.976	1.948	3.924	3.586	2.993	6.579

Trip Generation

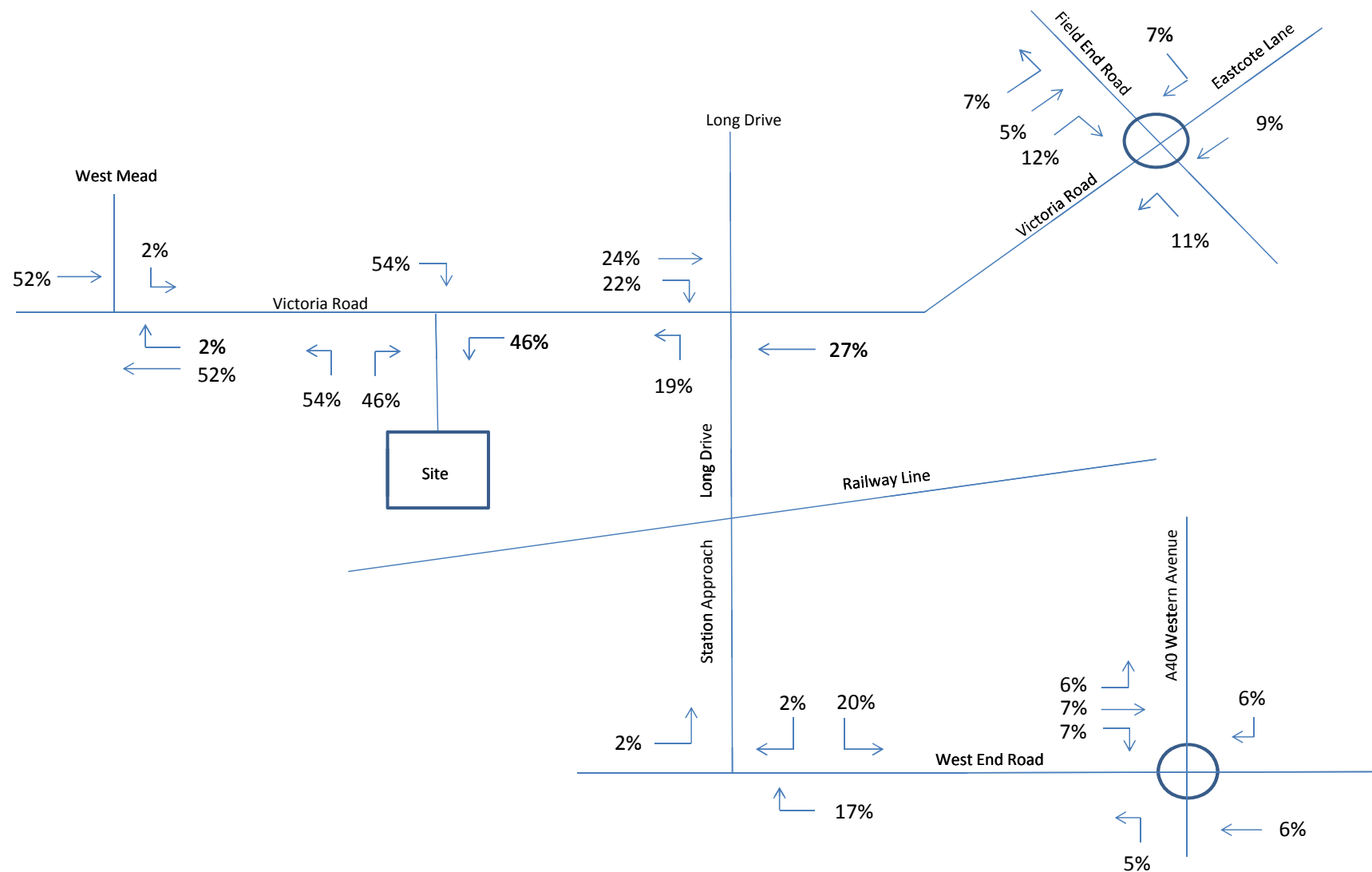
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NOTE: AM percentage network distribution assumed same as PM

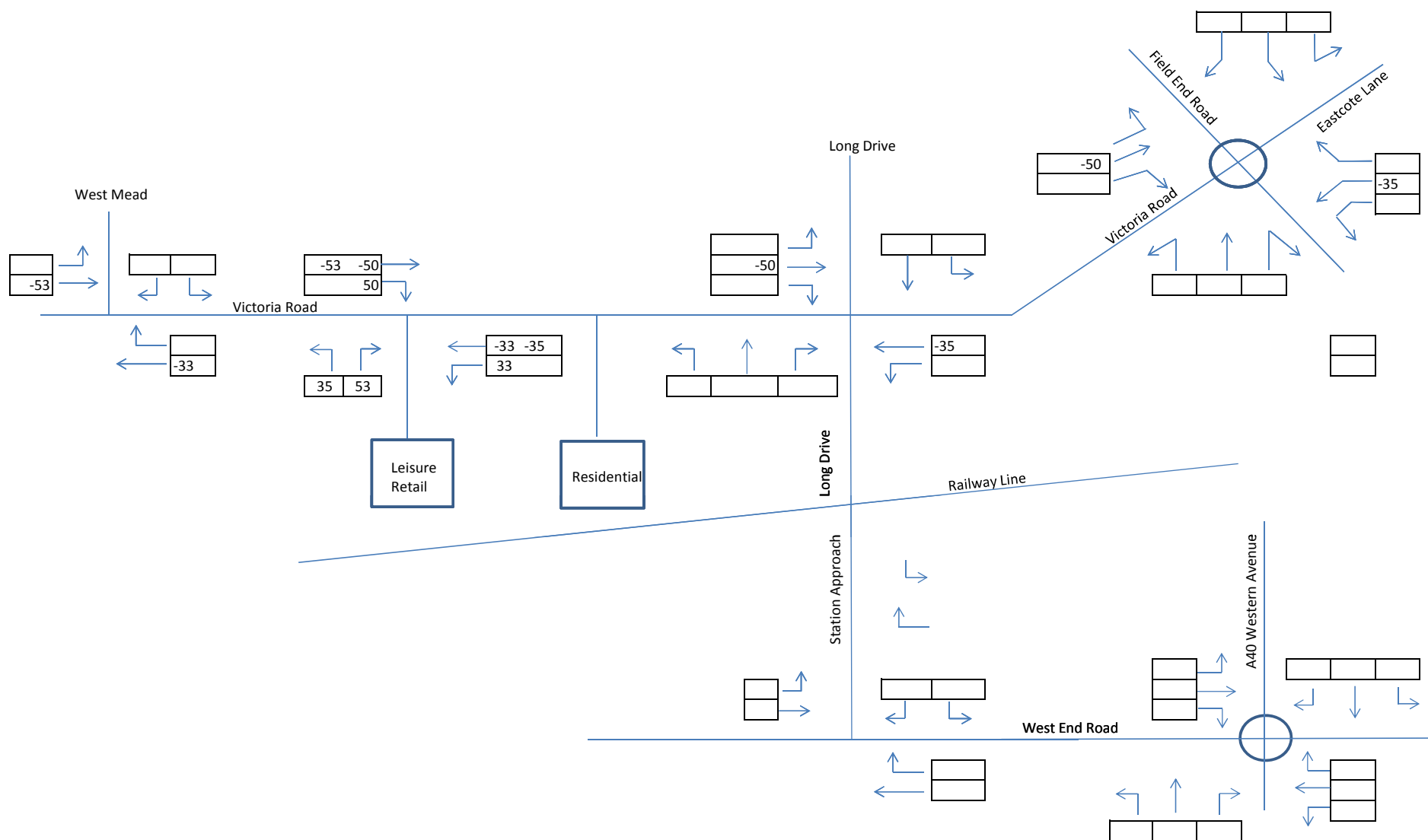
ARLA DAIRY SITE, SOUTH RUISLIP
FOODSTORE WEEKDAY (AM/PM) PERCENTAGE NETWORK DISTRIBUTION - SAINBSURY'S MODEL

FIGURE F219



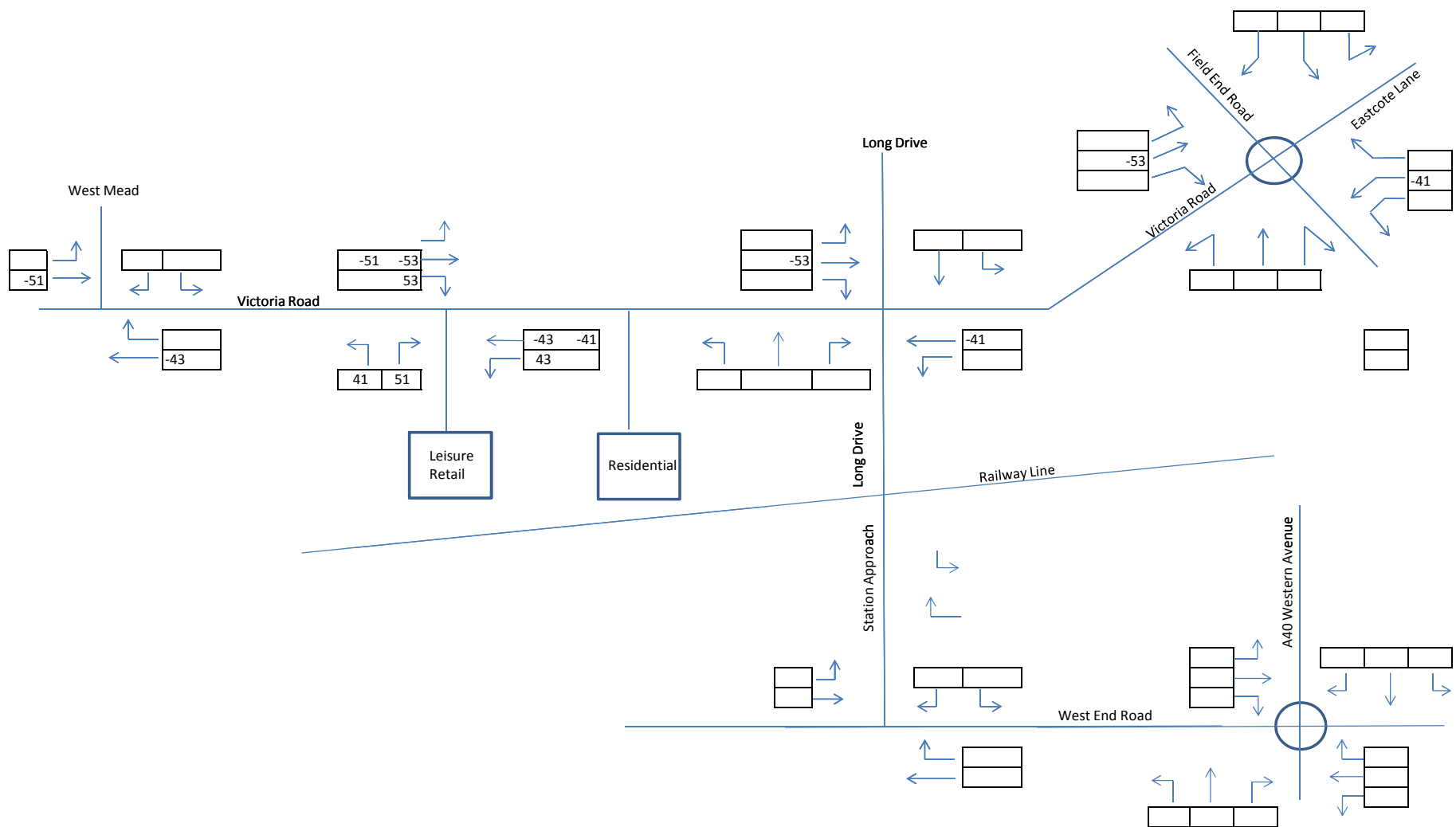
ARLA DAIRY SITE, SOUTH RUISLIP
FOODSTORE SATURDAY PERCENTAGE NETWORK DISTRIBUTION - SAINSBURY'S MODEL

FIGURE F220



ARLA DAIRY SITE, SOUTH RUISLIP
 FRIDAY PM 1700-1800HRS - FOODSTORE PRIMARY TRANSFER TRIPS (OTHER FOODSTORES) - VEHICLE DISTRIBUTION

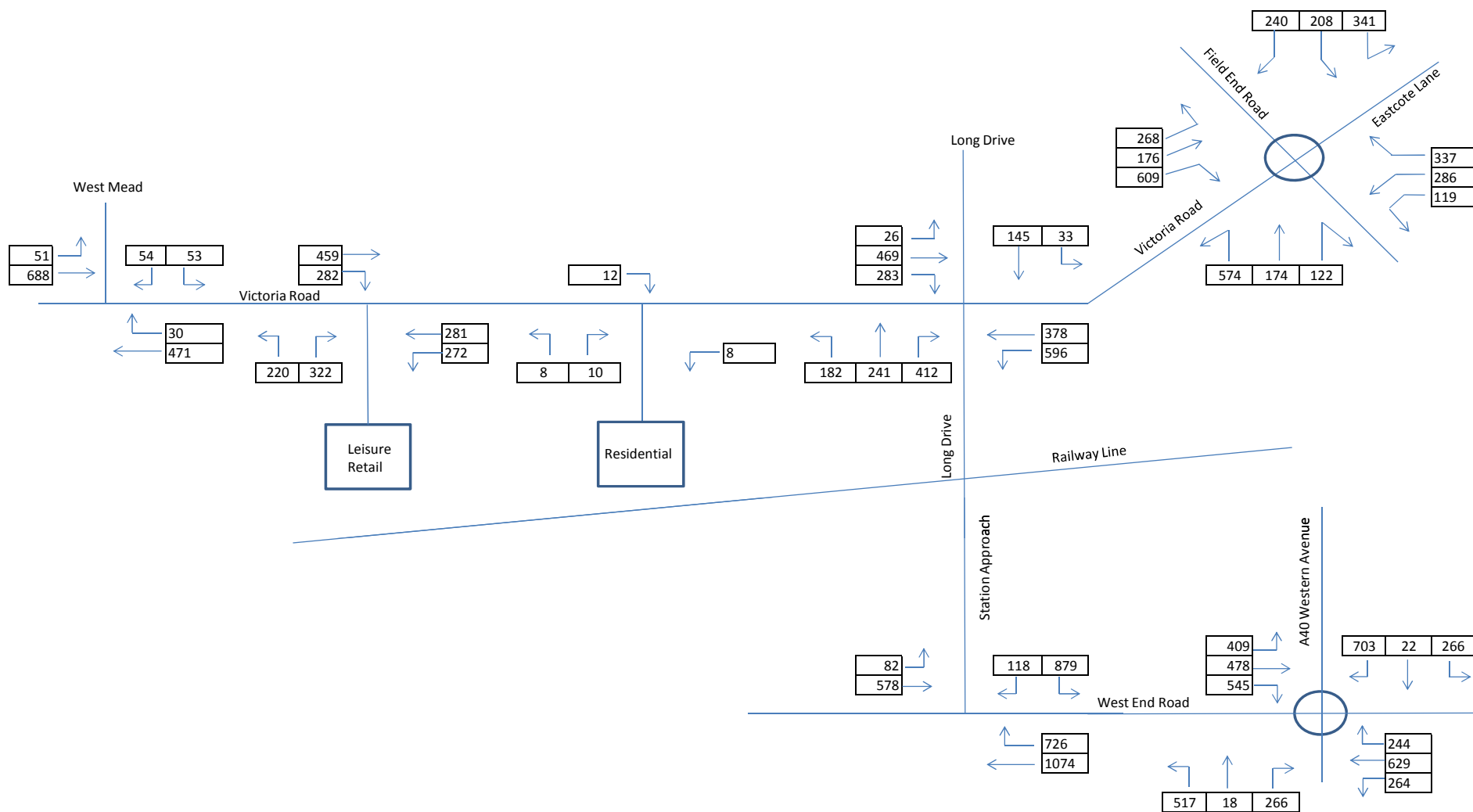
FIGURE F228



ARLA DAIRY SITE, SOUTH RUISLIP
SATURDAY 1200-1300HRS - FOODSTORE PRIMARY TRANSFER TRIPS (OTHER FOODSTORES) - VEHICLE DISTRIBUTION

FIGURE F229

APPENDIX B



$$F268 = F259 + F265$$