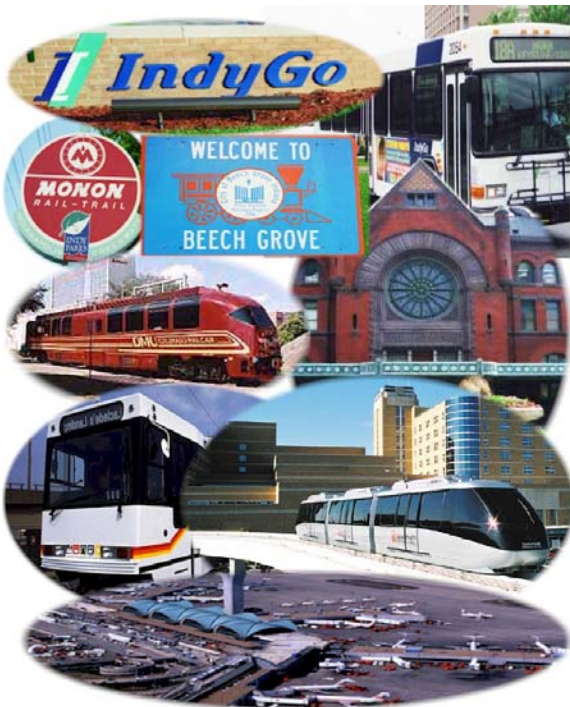




INDIANAPOLIS
METROPOLITAN PLANNING ORGANIZATION

Travel Demand Analysis/
Ridership Report

Indianapolis Metropolitan Area Rapid Transit Study



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I. Regional Model Analysis

To assist in the Regional Systems Evaluation, six patronage forecast were conducted to assess the ridership potential of each system plan. The first forecast, Alternative 1 - No Action, established the baseline to compare the other alternatives too. The "No Action" alternative is essentially the existing travel demand model using the forecast year population and employment. The other five models tested include the following:

- ❑ Alternative 2A – BRT, LRT and Express Bus
- ❑ Alternative 2B – BRT and Express Bus
- ❑ Alternative 3 – AGT, Commuter Rail, Express Bus
- ❑ Alternative 4 – Commuter Rail, LRT and Express Bus
- ❑ Alternative 5 – Commuter Rail, LRT and Express Bus

Results are summarized below in Table 1. Detailed results and illustrations are provided on subsequent pages.

Table 1
Summary of Patronage Forecasts

System Plan Alternatives	Linked Trips			Daily Boardings		
	Peak (work)	Midday (non-work)	Total	Peak (work)	Midday (non-work)	Total
Alternative 1 No Action	22,051	34,980	57,031	36,483	16,752	53,235
Alternative 2A LRT, BRT, Express Bus Change from No Action	53,903 17,420	46,088 9,605	99,991 63,508	102,741 66,258	71,544 35,061	174,285 137,802
Alternative 2B BRT, Express Bus Change from No Action	53,456 16,973	45,690 9,207	99,146 62,663	101,586 65,103	70,723 34,240	172,309 135,826
Alternative 3 AGT, Commuter Rail, Express Bus Change from No Action	55,192 18,709	45,268 8,785	100,460 63,977	107,962 71,479	71,622 35,139	179,584 143,101
Alternative 4 Commuter Rail, LRT, Express Bus Change from No Action	54,344 17,861	45,635 9,152	99,979 63,496	102,561 66,078	64,961 28,478	167,522 131,039
Alternative 5 Commuter Rail, LRT, Express Bus Change from No Action	53,309 16,826	48,539 12,056	101,848 65,365	101,525 65,042	71,463 34,980	172,988 136,505

The travel demand results detailed above present some potential issues to be resolved with the MPO and the FTA. The main concern is with drive-access trips. Preliminary model testing was performed by substituting Alternative 5's park-ride nodes into the No Action scenario. The modified No Action model resulted in another 33,000 daily trips (linked trips) to the No Action model. Again, only park-ride nodes and nothing else was added. The results are shown in Table 2A and 2B. While some increase is to be expected, the model appears to significantly overstate the transit market shares for drive-to-bus trips. Other concerns with the model are being reviewed and discussed with the FTA. Future efforts will detail the concerns with the regional travel demand model and the solutions reached.





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Table 2A
Alternative 1, No Action

Trip Purpose	Mode of Access	Transit Person Trips		
		Transit Mode		Total Daily
		Local Bus ¹	Premium Service ²	
Work	Walk	19,860	-	19,860
	Drive	2,191	-	2,191
Non-work	Walk	11,881	-	11,881
	Drive	524	-	524
Total Daily		34,456	-	34,456

Table 2B
Alternative 1, No Action with added Park-Ride

Trip Purpose	Mode of Access	Transit Person Trips		
		Transit Mode		Total Daily
		Local Bus ¹	Premium Service ²	
Work	Walk	16,744	-	16,744
	Drive	21,141	-	21,141
Non-work	Walk	11,039	-	11,039
	Drive	18,522	-	18,522
Total Daily		67,446	-	67,446

1) Linked transit trips for Local Bus use only bus.

2) Linked transit trips for Premium Service can use a Local Bus in conjunction with a premium service.





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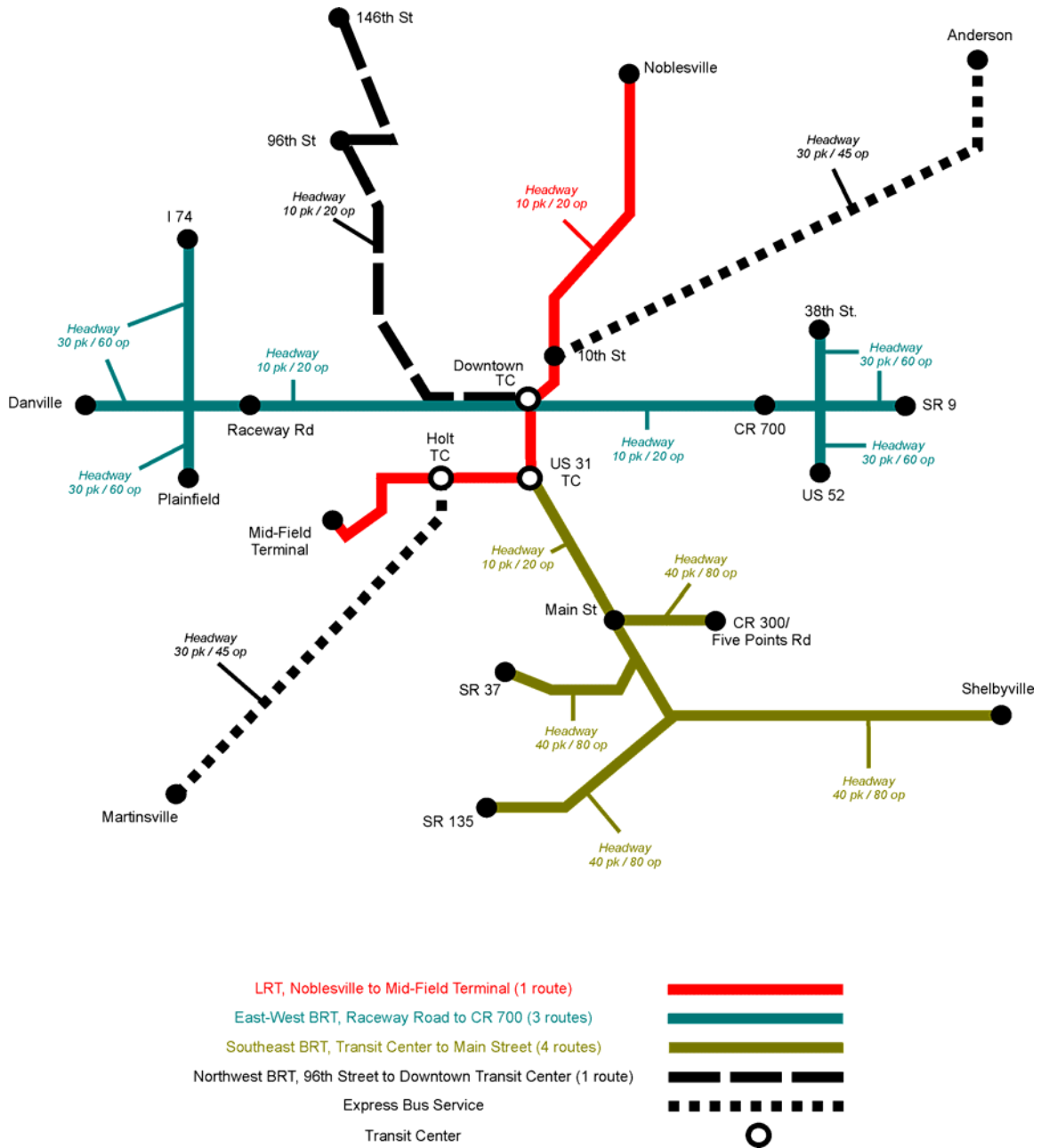


Figure 1
Alternative 2A
BRT, LRT and Express Bus





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Table 3A
Linked Trips
Alternative 2A

Trip Purpose	Mode of Access	Transit Person Trips		
		Transit Mode		Total Daily
		Local Bus ¹	Premium Service ²	
Work	Walk	15,901	1,954	17,855
	Drive	15,157	20,891	36,048
Non-work	Walk	10,981	947	11,928
	Drive	13,694	20,466	34,160
Total Daily		55,733	44,258	99,991

Change from Alternative 1, No Action 65,535

Table 3B
Boardings

Alternative 2A

ROUTES		BOARDINGS		
Technology	Segments	Peak (work)	Midday (non-work)	Total Daily
LRT	Noblesville to Mid-Field Terminal	12,329	5,498	17,827
East-West BRT	Danville to SR 9	2,968	4,164	7,132
	Plainfield to US 52	3,155	4,378	7,533
	I-74 to 38th Street	3,576	4,634	8,210
	EasttoWest BRT subtotal	9,699	18,674	28,373
Southeast BRT	CR 300/Five Points Road to US 31 Transit Center	337	192	529
	SR 37 to US 31 Transit Center	419	177	596
	SR 135 to US 31 Transit Center	433	183	616
	Shelbyville to US 31 Transit Center	369	217	586
	Southeast BRT subtotal	1,558	769	2,327
Northwest BRT	146th Street to Downtown Transit Center	3,662	4,752	8,414
SW Express Bus	Martinsville to Holt Transit Center	81	6	87
NE Express Bus	10th Street to Anderson	2,619	419	3,038
Downtown Circulators (two routes)		11,864	9,239	21,103
Clarion System		3,114	3,383	6,497
Other Local Bus		57,290	28,804	86,094
Other Express Bus		525	-	525
TOTALS		102,741	71,544	174,285

Change from Alternative 1, No Action 121,050

1) Linked transit trips for Local Bus use only bus.

2) Linked transit trips for Premium Service can use a Local Bus in conjunction with a premium service.





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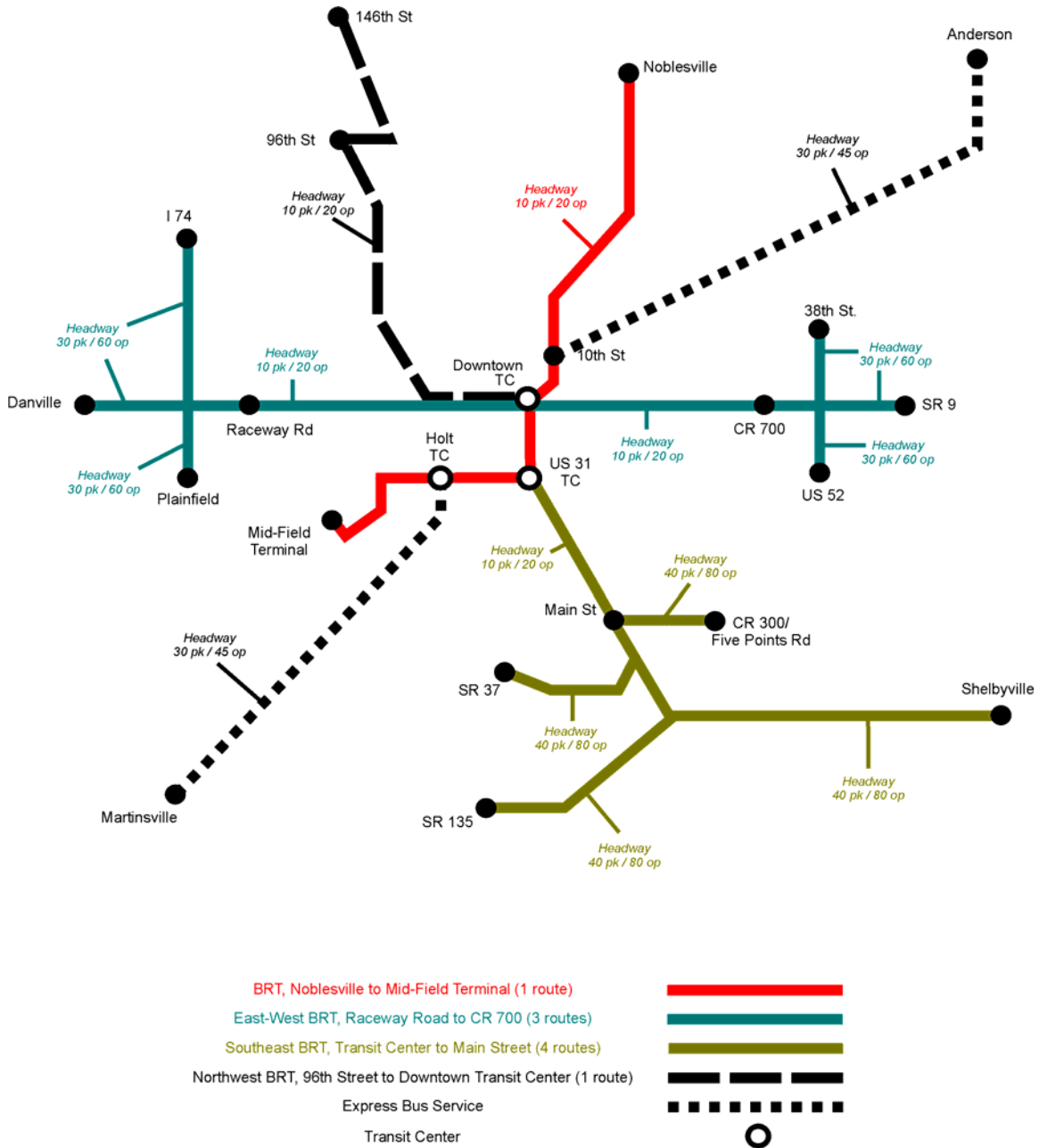


Figure 2
Alternative 2B
BRT and Express Bus





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Table 4A
Linked Trips
Alternative 2B

Trip Purpose	Mode of Access	Transit Person Trips		
		Transit Mode		Total Daily
		Local Bus ¹	Premium Service ²	
Work	Walk	15,913	1,927	17,840
	Drive	15,238	20,378	35,616
Non-work	Walk	10,985	928	11,913
	Drive	13,746	20,031	33,777
Total Daily		55,882	43,264	99,146

Change from Alternative 1, No Action 64,690

Table 4B
Boardings
Alternative 2B

ROUTES		BOARDINGS		
Technology	Segments	Peak (work)	Midday (non-work)	Total Daily
BRT	Noblesville to Mid-Field Terminal	11,735	4,993	16,728
East-West BRT	Danville to SR 9	2,975	4,113	7,088
	Plainfield to US 52	3,150	4,300	7,450
	I-74 to 38th Street	<u>3,577</u>	<u>4,585</u>	<u>8,162</u>
	EasttoWest BRT subtotal	9,702	17,991	27,693
Southeast BRT	CR 300/Five Points Road to US 31 Transit Center	317	188	505
	SR 37 to US 31 Transit Center	358	180	538
	SR 135 to US 31 Transit Center	389	173	562
	<u>Shelbyville to US 31 Transit Center</u>	<u>406</u>	<u>218</u>	<u>624</u>
	Southeast BRT subtotal	1,470	759	2,229
Northwest BRT	146th Street to Downtown Transit Center	3,597	4,713	8,310
SW Express Bus	Martinsville to Holt Transit Center	77	5	82
NE Express Bus	10th Street to Anderson	2,595	410	3,005
Downtown Circulators (two routes)		11,649	9,172	20,821
Clarion System		30,491	3,299	33,790
Other Local Bus		29,893	29,381	59,274
Other Express Bus		377	-	377
TOTALS		101,586	70,723	172,309

Change from Alternative 1, No Action 119,074

1) Linked transit trips for Local Bus use only bus.

2) Linked transit trips for Premium Service can use a Local Bus in conjunction with a premium service.





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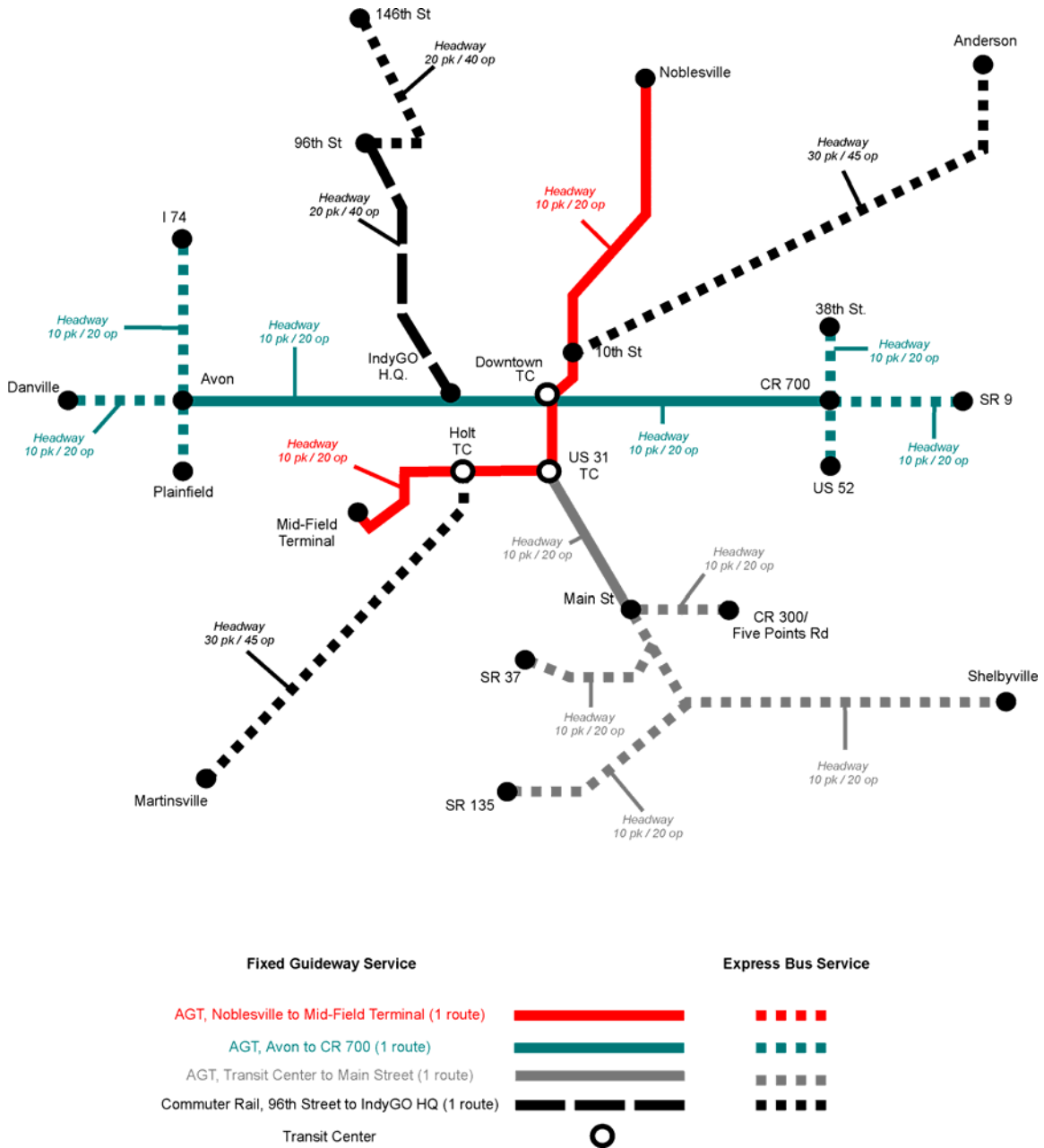


Figure 3
Alternative 3
AGT, Commuter Rail and Express Bus





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Table 5A
Linked Trips
Alternative 3

Trip Purpose	Mode of Access	Transit Person Trips		Total Daily
		Transit Mode		
		Local Bus ¹	Premium Service ²	
Work	Walk	15,894	1,941	17,835
	Drive	14,591	22,766	37,357
Non-work	Walk	10,994	970	11,964
	Drive	13,477	19,827	33,304
Total Daily		54,956	45,504	100,460

Change from Alternative 1, No Action 66,004

Table 5B
Boardings
Alternative 3

ROUTES		BOARDINGS		
Technology	Segments	Peak (work)	Midday (non-work)	Total Daily
AGT Express Bus	Noblesville to Mid-Field Terminal	11,570	5,722	17,292
	CR 300/Five Points Road to Main Street	80	91	171
	SR 37 to Main Street	197	45	242
	SR 135 to Main Street	208	38	246
	Shelbyville to Main Street	118	31	149
AGT Express Bus	Avon to CR 700	4,059	2,178	6,237
	Danville to Avon	22	8	30
	I-74 to Avon to Plainfield	352	428	780
	38th Street to CR 700 to US 52	148	19	167
	SR 9 to CR 700	177	13	190
AGT	Main Street to US 31 Transit Center	12,124	14,791	26,915
Commuter Rail Express Bus	96th Street to IndyGO Headquarters	1,294	979	2,273
	146th Street to 96th Street	57	-	57
SW Express Bus	Martinsville to Holt Transit Center	86	5	91
NE Express Bus	10th Street to Anderson	2,716	428	3,144
Downtown Circulators (two routes)		13,022	9,657	22,679
Clarion System		3,825	3,443	7,268
Other Local Bus		57,424	33,746	91,170
Other Express Bus		483	-	483
TOTALS		107,962	71,622	179,584

Change from Alternative 1, No Action 126,349

- 1) Linked transit trips for Local Bus use only bus.
- 2) Linked transit trips for Premium Service can use a Local Bus in conjunction with a premium service.





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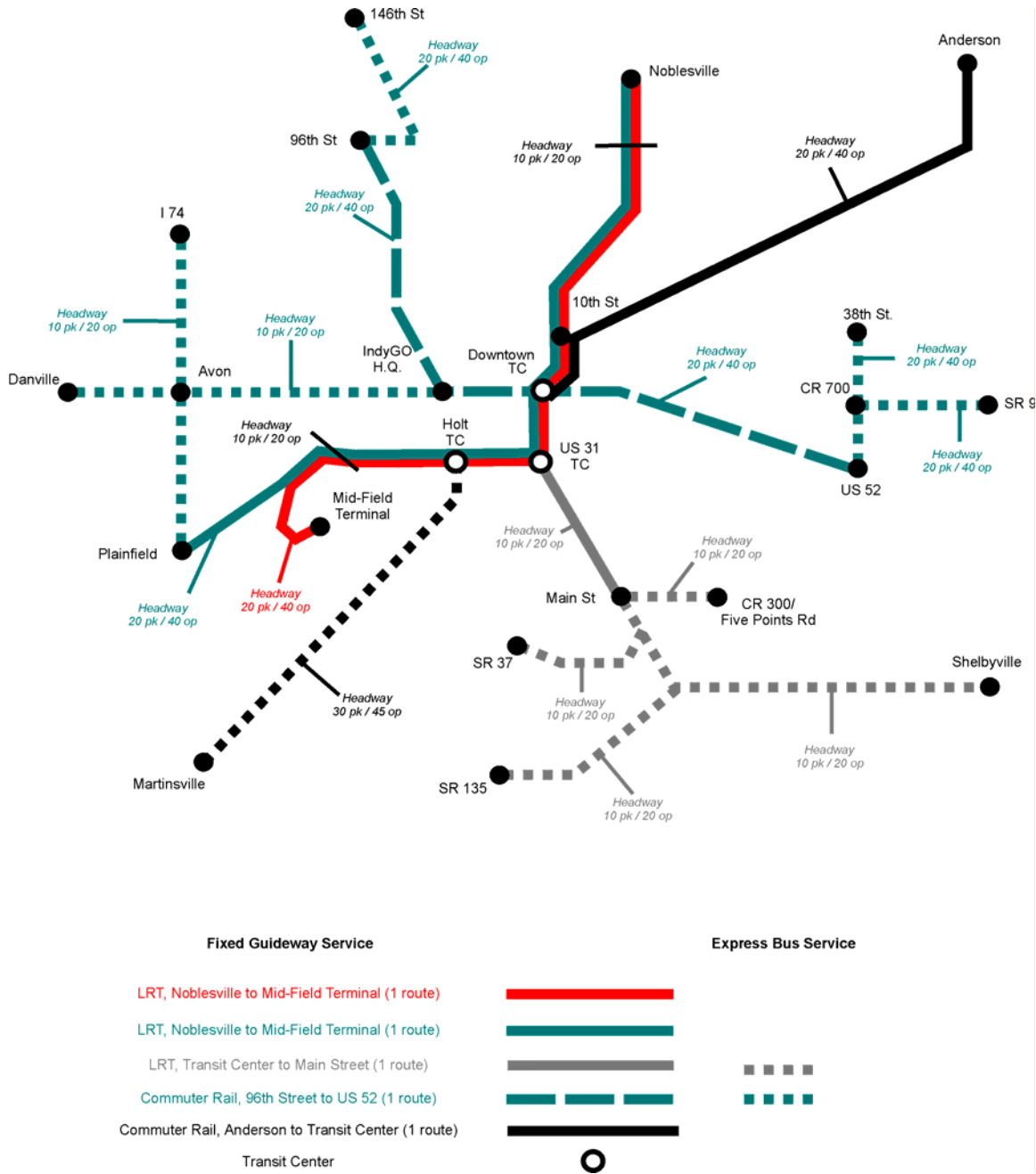


Figure 4
Alternative 4
Commuter Rail, LRT and Express Bus





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Table 6A
Linked Trips
Alternative 4

Trip Purpose	Mode of Access	Transit Person Trips		
		Transit Mode		Total Daily
		Local Bus ¹	Premium Service ²	
Work	Walk	15,423	1,914	17,337
	Drive	16,382	20,625	37,007
Non-work	Walk	10,994	917	11,911
	Drive	24,061	9,663	33,724
Total Daily		66,860	33,119	99,979

Change from Alternative 1, No Action 65,523

Table 6B
Boardings

Alternative 4

ROUTES		BOARDINGS		
Technology	Segments	Peak (work)	Midday (non-work)	Total Daily
LRT	Noblesville to Mid-Field Terminal	5,755	2,902	8,657
LRT	Noblesville to Plainfield	6,199	2,817	9,016
LRT Express Bus	Main Street to US 31 Transit Center	3,150	1,676	4,826
	CR 300/Five Points Road to Main Street	71	81	152
	SR 37 to Main Street	171	41	212
	SR 135 to Main Street	182	34	216
	Shelbyville to Main Street	89	27	116
Commuter Rail	Anderson to Downtown Transit Center	4,179	809	4,988
Commuter Rail Express Bus	96th Street to US 52 (New Palestine)	6,021	2,721	8,742
	38th Street to US 52	108	77	185
	Shelbyville to CR 700	20	1	21
Commuter Rail Express Bus	96th Street to US 52 (New Palestine)	1,294	979	2,273
	146th Street to 96th Street	68	-	68
West Express Bus	Danville to IndyGO Headquarters	2,988	9,922	12,910
	I-74 to Avon to Plainfield	296	479	775
SW Express Bus	Martinsville to Holt Transit Center	87	5	92
Downtown Circulators (two routes)		12,158	6,137	18,295
Clarion System		3,470	1,882	5,352
Other Local Bus		55,728	34,371	90,099
Other Express Bus		527	-	527
TOTALS		102,561	64,961	167,522

Change from Alternative 1, No Action 114,287

- 1) Linked transit trips for Local Bus use only bus.
- 2) Linked transit trips for Premium Service can use a Local Bus in conjunction with a premium service.





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Table 7A
Linked Trips
Alternative 5

Trip Purpose	Mode of Access	Transit Person Trips		
		Transit Mode		Total Daily
		Local Bus ¹	Premium Service ²	
Work	Walk	15,711	1,253	16,964
	Drive	19,227	17,118	36,345
Non-work	Walk	11,004	760	11,764
	Drive	24,620	12,155	36,775
Total Daily		70,562	31,286	101,848

Change from Alternative 1, No Action 67,392

Table 7B
Boardings
Alternative 5

ROUTES		BOARDINGS		
Technology	Segments	Peak (work)	Midday (non-work)	Total Daily
LRT	CR 700 to Mid-Field Terminal	6,723	3,477	10,200
Express Bus	SR 9 to CR 700	138	9	147
	38th Street to CR 700 to US 52	114	5	119
LRT	96th Street to Main Street	9,431	9,425	18,856
Express Bus	146th Street to 96th Street	127	3	130
	CR 300/Five Points Road to Main Street	68	86	154
	SR 37 to Main Street	176	41	217
	SR 135 to Main Street	184	33	217
	Shelbyville to Main Street	109	29	138
Commuter Rail	Noblesville to Downtown Transit Center	4,430	509	4,939
West Express Bus	Danville to IndyGO Headquarters	3,880	11,654	15,534
	I-74 to Avon to Plainfield	267	276	543
NE Express Bus	10th Street to Anderson	1,987	324	2,311
SW Express Bus	Martinsville to Holt Transit Center	2	1	3
Downtown Circulators (two routes)		11,460	7,384	18,844
Clarion System		2,661	2,185	4,846
Other Local Bus		59,284	36,022	95,306
Other Express Bus		484	-	484
TOTALS		101,525	71,463	172,988

Change from Alternative 1, No Action 119,753

- 1) Linked transit trips for Local Bus use only bus.
- 2) Linked transit trips for Premium Service can use a Local Bus in conjunction with a premium service.

