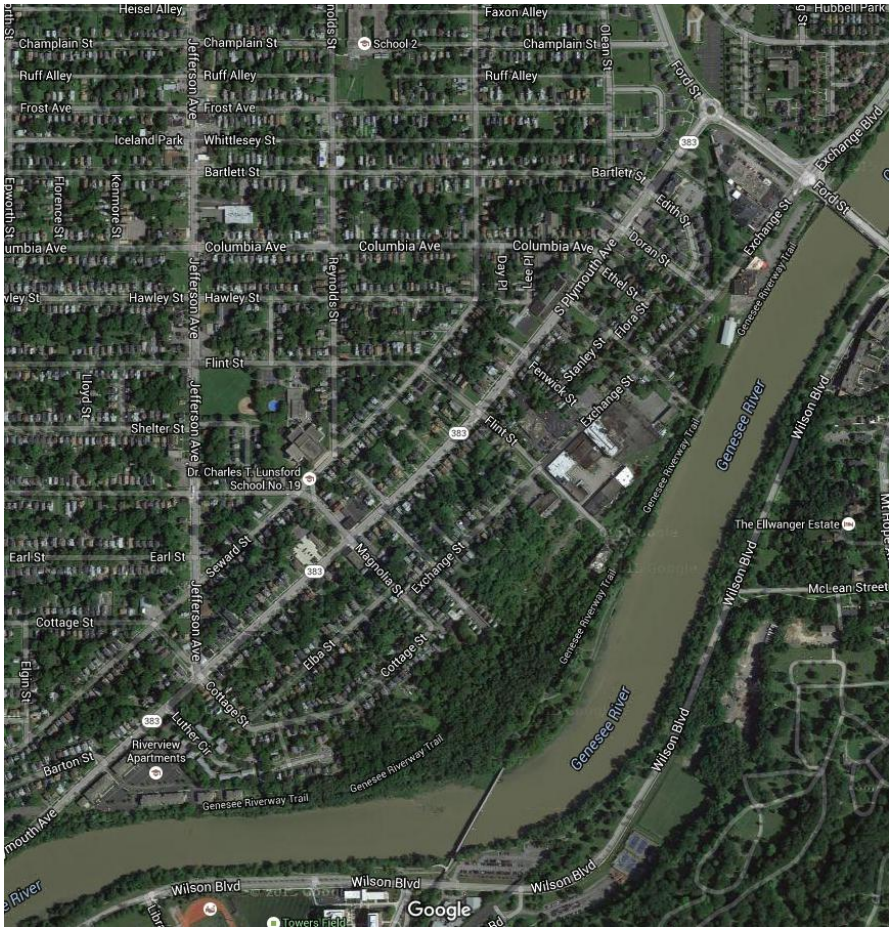
Vacuum Oil Brownfield Opportunity Area Implementation Strategy

NYSDOS Contract C1000362 / City Project. No. 127366



Traffic Analysis Report

February 2016

City of Rochester
Bureau of Architecture and Engineering Services
City Hall, Room 300 B
30 Church Street
Rochester, NY 14614

Prepared by:

Bergmann associates
architects // engineers // planners

This document was prepared for the City of Rochester and New York State Department of State with funds provided through the Brownfield Opportunity Area Program.

TABLE OF CONTENTS

APPENDICES

Introduction

The purpose of the traffic analysis is to determine the impacts of development planned for the Vacuum Oil BOA (Brownfield Opportunity Area) in the City of Rochester. The level of BOA development is expected to have an impact on the following corridors:

- Plymouth Avenue from Ford Street to Barton Street
- Exchange Street from Ford Street to Magnolia Street

The following systematic procedure was used:

1. Obtain roadway geometrics, observe traffic operations and obtain Synchro models from the Monroe County Department of Transportation (MCDOT).
2. Obtain turning movement counts at intersections. The counts were conducted on Monday, November 10th, 2014. Determine the existing weekday AM, Mid-Day, and PM peak hour turning movements at the intersections.
3. Define the trips generated by the proposed developments.
4. Distribute the new trips through the study area.
5. Estimate projected future traffic at the intersections for each phase of development.
6. Evaluate traffic operations at the subject intersections under:
    - Existing (2014) conditions
    - No Build (2035) conditions
    - Phase I Build (2022) conditions (with development traffic)
    - Phase II Build (2030) conditions (with development traffic)
    - Full Build (2035) conditions (with development traffic)
    - Build conditions with mitigation, if needed.

The traffic analyses and evaluations have been performed using standard traffic engineering methodologies in accordance with the 9th edition Institute of Transportation Engineers (ITE) Trip Generation Manual. Data used in the traffic analysis has been collected from field investigations, field visits, intersection traffic counts, BOA build-out concept plans, and the MCDOT.

Methodology of Analysis

Level of Service (LOS) analysis is a means of determining the ability of an intersection to accommodate traffic volumes. The analysis is based on intersection street geometry, traffic controls and traffic maneuvers. Geometry of an intersection includes the width of each lane, the number of lanes for each movement (generally for left, through and right movements), and if the lane is exclusive to one movement or shared by two or more movements. The analysis produces an indication of the Level of Service at which an intersection is functioning or is expected to function for future conditions.

The Level of Service procedures are provided in the Highway Capacity Manual (HCM) published by the Transportation Research Board, 2010. Version 8 of Synchro was utilized to determine the LOS for the subject intersections using the HCM 2010 methodology. Synchro (explained in greater detail below) implements the methods of the HCM for signalized and unsignalized intersection analyses.

Level of Service is defined by letter characters that range from A to F, with A representing the best traffic operating conditions that have little or no delay and F characterizing the worst conditions that have significant delay. For signalized intersections LOS A through D are usually

considered acceptable and LOS E is usually considered representative of conditions where improvements are needed, unless only one lane of an approach is LOS E and the approach is LOS D or better overall. LOS F operating conditions are typically unacceptable, and improvements are needed in the form of traffic control, geometric changes or a combination of both. For unsignalized intersections LOS A through LOS E are usually considered acceptable.

Levels of service for intersections are identified by the average control delay experienced by vehicles in seconds/vehicle. LOS for signalized intersections is determined for each traffic movement and the total intersection. Full definitions of levels of service for signalized intersections are included in Appendix B. Table 1 shows the range of delay defining LOS for signalized intersections.

Table 1. Level of Service Ranges for Signalized Intersections

LOS	CONTROL DELAY PER VEHICLE (sec)
A	Less than or equal to 10.0
B	Greater than 10.0 to no more than 20.0
C	Greater than 20.0 to no more than 35.0
D	Greater than 35.0 to no more than 55.0
E	Greater than 55.0 to no more than 80.0
F	Greater than 80.0

The software program Synchro, developed by Trafficware, was used to analyze traffic under existing traffic signal operating conditions and to evaluate future mitigation measures required to mitigate traffic congestion under the full build-out condition.

Synchro is a software program utilized in the traffic engineering discipline. It is recommended by the MCDOT and the New York State Department of Transportation (NYSDOT), and considered an industry-approved method to assess existing traffic signal operations, determine the optimum signal operations for individual intersections and determine the optimum coordination system for a series of signals along a corridor.

The program utilizes the existing geometrics, hourly volumes by vehicle type (auto, pedestrians, buses, and heavy trucks), signal phasing, timings and offsets between intersections to establish the best scenario of coordination to minimize vehicle stops and delays and therefore, vehicle fuel consumption. The process of optimizing signal operations utilizes a vehicle simulation technique whereby each vehicle is accounted for as it progresses along the street corridor. Vehicle travel time and stops are recorded and summarized to determine the overall number of stops and delay. Various scenarios of signal phasing and timing at each signalized intersection is evaluated. Through the series of options of phasing and timing in concert with the offset of signal timing between each signal, the optimum signal operation is determined to best serve the road users as they progress along the corridor. Information on the existing traffic signal timing, phasing, and coordination was obtained from the MCDOT Synchro models and from field observations.

Existing (2014) Traffic Operations

Intersection turn counts were collected at the twelve (12) intersections listed below during Monday November 10th, 2014. Recorded was the number of vehicles making turning maneuvers from each intersection approach during peak weekday time periods. The turning movement counts were collected in 15-minute increments to determine peaking characteristics within the peak hours to be included in the analysis. The counts were comprehensive, including pedestrians, bikes, and classifying vehicles into passenger cars and heavy trucks. Figure 1 shows the location of the 12 intersections. Appendix A contains the Existing Peak Hour Intersection Turning Movements Figure for the AM, Mid-Day and PM peaks.

Figure 1. Location map of study intersections

Intersections:

Plymouth Avenue at	**Exchange Street at**
- Ford Street	- Ford Street
- Doran Street	- Doran Street
- Columbia Street	- Violetta Street
- Flint Street	- Flint Street
- Magnolia Street	- Magnolia Street
- Jefferson Street	
- Barton Street	

The existing traffic operations during the peak hours at the subject intersections range from LOS A to D for all traffic movements according to Synchro HCM 2010 analysis except the following movements:

- **The southbound left turn movement at Exchange Street and Ford Street during the AM peak, exhibiting LOS F.** The left turn movement LOS is poor due to the amount of green time allocated for the volume of traffic and the heavy traffic on other movements during the same time period.
- **The northbound thru/right lane at Exchange Street and Ford Street during the AM and PM peak hours, exhibiting LOS E.** The LOS of the shared thru/right lane is poor due to the amount of green time allocated for the volume of traffic and the heavy traffic on other movements during the same time period.

Overall intersection level of service results are provided in Table 2 and detailed LOS results for each intersection lane are contained in Appendix B.

Table 2. Levels of Service for Existing and No-Build Roadway System

Intersection	2014 Existing			2035 No Build		
	Peak Hour			Peak Hour		
	AM	Mid-Day	PM	AM	Mid-Day	PM
Plymouth Avenue at Ford Street	A	A	A	A	A	B
Plymouth Avenue at Doran Street	A	A	A	A	A	A
Plymouth Avenue at Columbia Street	A	A	A	A	A	A
Plymouth Avenue at Flint Street	A	A	A	A	A	A
Plymouth Avenue at Magnolia Street	A	A	A	A	A	A
Plymouth Avenue at Jefferson Street	B	A	B	B	B	B
Plymouth Avenue at Barton Street	A	A	A	A	A	A
Plymouth Avenue at Bartlett Street	A	A	A	A	A	A
Exchange Street at Ford Street	D	C	C	E	C	C
Exchange Street at Doran Street	A	A	A	A	A	A
Exchange Street at Violetta Street	A	A	A	A	A	A
Exchange Street at Flint Street	A	A	A	A	A	A
Exchange Street at Magnolia Street	A	A	A	A	A	A

= One or more lanes operate at LOS F at intersection

Future Traffic Operations

The future traffic analysis includes the 2035 full build-out scenario referred to as "Full Build" and the baseline scenario of "No Build" which includes none of the BOA development. Also included are the 2022 Phase I build-out and 2030 Phase 2 build-out analyses. Appendix C contains maps of the BOA Vision Plan for each of the three phases of development and tables showing the size and type of land uses planned for each BOA site.

To project the 2035 No Build peak hour traffic volumes (background traffic), the existing peak hour volumes were increased by 1.0% per year (not compounded) to account for normal traffic growth and any development outside the area of study, based on a review of the historic traffic volume trends and MCDOT recommendations.

The planned development sites will offer multiple land uses that are expected to "share" a percentage of the total base number of vehicle-trips between uses due to the urban setting of the development area. The Internal Trip Capture Estimation Tool from the National Cooperative Highway Research Program (NCHRP) Report 684 was used to determine trip sharing credit by land use and also the mode split of trips by land use. This analysis is shown in Appendix D. A base transit trip percentage of 7% was used due to the proximity of the development area to the bus route on Plymouth Avenue with stops at Strong Memorial Hospital, the University of Rochester, Downtown Rochester and the RTS (Regional Transit Service) Transit Center. The base non-motorized trip percentage was determined for each land use separately as residential and retail developments are expected to draw a greater percentage of this mode type relative to hotel and light industrial. The network of sidewalks and pathways interconnect the development area with the University of Rochester and Downtown. Appendix D provides the vehicle-trip credits by land use, which were then used in the vehicle trip generation analysis provided in Appendix E.

The vehicle traffic volumes for the Full Build condition were determined by adding the No Build traffic to the traffic expected from build-out of all the BOA sites. This was accomplished by analyzing the full build-out plan to estimate the trip generation for each BOA site and assigning the trips to the roadway system based on existing and expected travel patterns both inside and outside the study area. Then the trips for each site were superimposed on top of the background traffic. The 9th edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual (latest edition - 2012) was used to determine the trip estimate for the BOA sites. Calculations for the trip generation can be found in Appendix E. The next step was to assign the trips to the study area street network based on the distribution shown in Appendix A, developed using existing and expected future traffic patterns for this area of the City, located south of Downtown and west of the Genesee River.

2035 No Build

The projected 2035 No Build traffic operations during the peak hours at the subject intersections range from LOS A to D for all traffic movements according to Synchro except for the following movements:

- **The southbound left turn movement at Exchange Street and Ford Street during the AM peak, exhibiting LOS F.** The LOS of the left turn movement is poor due to the amount of green time allocated for the volume of traffic and the heavy traffic on other movements during the same time period.
- **The northbound thru/right lane at Exchange Street and Ford Street during the AM and PM peak hours, exhibiting LOS E.** The LOS of the shared thru/right lane is poor

due to the amount of green time allocated for the volume of traffic and the heavy traffic on other movements during the same time period.

The LOS are very similar to existing conditions and represent conditions expected in 2035 with no build-out of the BOA included. Overall intersection level of service results are provided in Table 2 and detailed LOS results for each intersection lane are contained in Appendix B.

2022 Phase 1 Build

The Phase 1 Build condition includes the development during the first 7 years and includes parcels 1 through 13, as shown in Appendix C. When comparing the LOS to the Existing Condition, overall intersection LOS remained the same. The overall LOS is shown in Table 3 and Appendix F contains the LOS by lane at the intersections.

Table 3. Phase 1 and Phase 2 Overall Levels of Service

Intersection	2022 Phase 1 Build			2030 Phase 2 Build		
	Peak Hour			Peak Hour		
	AM	Mid-Day	PM	AM	Mid-Day	PM
Plymouth Avenue at Ford Street	A	A	B	A	A	C
Plymouth Avenue at Doran Street	A	A	A	A	A	A
Plymouth Avenue at Columbia Street	A	A	A	A	A	A
Plymouth Avenue at Flint Street	A	A	A	A	A	A
Plymouth Avenue at Magnolia Street	A	A	A	B	A	B
Plymouth Avenue at Jefferson Street	B	A	B	B	B	B
Plymouth Avenue at Barton Street	A	A	A	A	A	A
Plymouth Avenue at Bartlett Street	A	A	A	A	A	A
Exchange Street at Ford Street	E	C	D	E	C	F
Exchange Street at Doran Street	A	A	A	A	A	A
Exchange Street at Violetta Street	A	A	A	A	A	A
Exchange Street at Flint Street	A	A	A	A	A	A
Exchange Street at Magnolia Street	A	A	A	A	A	A
Flint Street at Proposed New Street	A	A	A	A	A	A

= One or more lanes are expected to operate at LOS F at intersection

2030 Phase 2 Build

The Phase 2 Build condition includes development through year 15 and includes parcels 1 through 23. Greater than 50% of the Full Build trips are generated during this phase and therefore traffic impacts compared to Phase I are greater as shown in Table 3 and Appendix F. The intersection of Exchange at Ford is expected to degrade from LOS D to LOS E during the AM peak hour and from LOS C to LOS F during the PM peak hour.

2035 Full Build

The projected 2035 Full Build traffic operations during the peak hours are expected to range from LOS A to F, as shown in Table 4 with acceptable intersection service levels except at the intersection of Exchange Street and Ford Street. The existing roadway system with no mitigating measures implemented is expected to exhibit overall service levels of E and F for the intersection of Exchange Street at Ford Street during the AM and PM peak hours. The following three unsignalized intersections show approaches operating at LOS E, yet LOS E is acceptable for unsignalized intersections:

- Westbound Ford Street at Plymouth Avenue
- Eastbound Columbia Avenue at Plymouth Avenue
- Both Barton Street approaches to Plymouth Avenue

Table 4. 2035 Full Build Levels of Service

Intersection	2035 Build		
	Peak Hour		
	AM	Mid-Day	PM
Plymouth Avenue at Ford Street	A	A	D
Plymouth Avenue at Doran Street	A	A	A
Plymouth Avenue at Columbia Street	A	A	A
Plymouth Avenue at Flint Street	A	A	A
Plymouth Avenue at Magnolia Street	B	A	C
Plymouth Avenue at Jefferson Street	B	B	B
Plymouth Avenue at Barton Street	A	A	A
Plymouth Avenue at Bartlett Street	A	A	B
Exchange Street at Ford Street	E	C	F
Exchange Street at Doran Street	A	A	A
Exchange Street at Violetta Street	A	A	A
Exchange Street at Flint Street	A	A	B
Exchange Street at Magnolia Street	A	A	A
Flint Street at Proposed New Street	A	A	A

= One or more lanes are expected to operate at LOS F at intersection

2035 Full Build with Mitigation

The Full Build with mitigation alternative consists of the full build-out plan for the BOA with mitigation measures as described below to provide reasonable improvements that are expected to accommodate the traffic generated as part of this plan. The overall LOS results are shown in Table 5 and detailed LOS results are contained in Appendix G.

The build-out plan is an estimate and therefore planning for the next 20 years is not exact down to the car, however it is a good estimate following industry standards. As the analysis of the trip generation and trip distribution is somewhat conservative and the results indicate some minor congestion, the mitigation measures for Full Build are a good approximation of what will be required for construction improvements based on a roadway system service life of 20 years which is the typical design for roadways.

Table 5. 2035 Full Build with Mitigation Levels of Service

Intersection	2035 Build			2035 Build with Mitigation		
	Peak Hour			Peak Hour		
	AM	Mid-Day	PM	AM	Mid-Day	PM
Exchange Street at Ford Street	E	C	F	D	C	E

= One or more lanes are expected to operate at LOS F at intersection

Mitigation measures included in the Full Build with Mitigation analysis are potential solutions to be part of a comprehensive study in the future, as these mitigation measures may have impacts outside the study area to the east on Ford Street and Mt. Hope Avenue where the two eastbound lanes on the Ford Street Bridge transition to one lane for the heavy right turn to go south on Mt. Hope Avenue. Based on the LOS results the delayed movements at the intersection of Exchange Street at Ford Street with the greatest potential for causing rerouted traffic are: the southbound left, westbound right and westbound through movements. This is commuter traffic passing by the Vacuum Oil area (background traffic) that may choose to reroute to streets to the east such as Mt. Hope Avenue, South Avenue and Clinton Avenue.

The following mitigation measures are recommended solutions for detailed study early in Phase II (Vision Plan Years 8-15) to achieve better overall intersection service levels shown in Table 5:

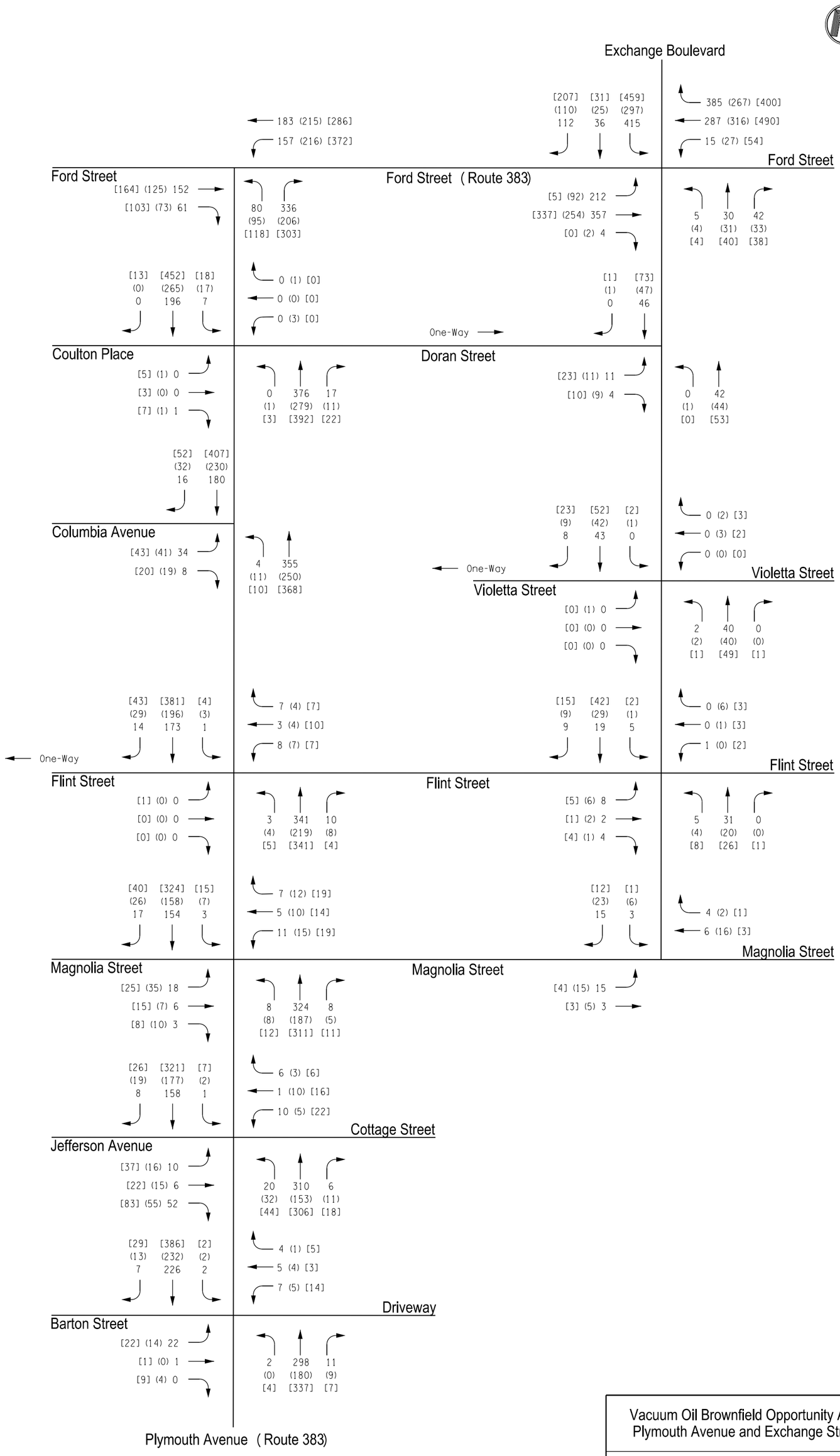
- Modify the southbound Exchange Boulevard approach to Ford Street from one left turn lane and two through lanes to two left turn lanes and one through lane
- Modify Exchange/Ford traffic signal to protected only phasing for the double southbound left turn lanes, a change from the existing protected then permissive phasing
- Add a northbound right turn lane on the Exchange Street approach to Ford Street
- Optimize the phase split times at the intersection of Exchange Street and Ford Street
- Prohibit parking in the following locations:
    - Exchange Street between Magnolia Street and Doran Street
    - Magnolia Street between Plymouth Street and Cottage Street
    - Flint Street between Plymouth Street and Exchange Street

Appendix A

Traffic Figures

- 2014 Existing
- 2035 No Build
- Trip Distribution
- 2022 Phase 1 Build
- 2030 Phase 2 Build
- 2035 Full Build

Bergmann associates



LEGEND:

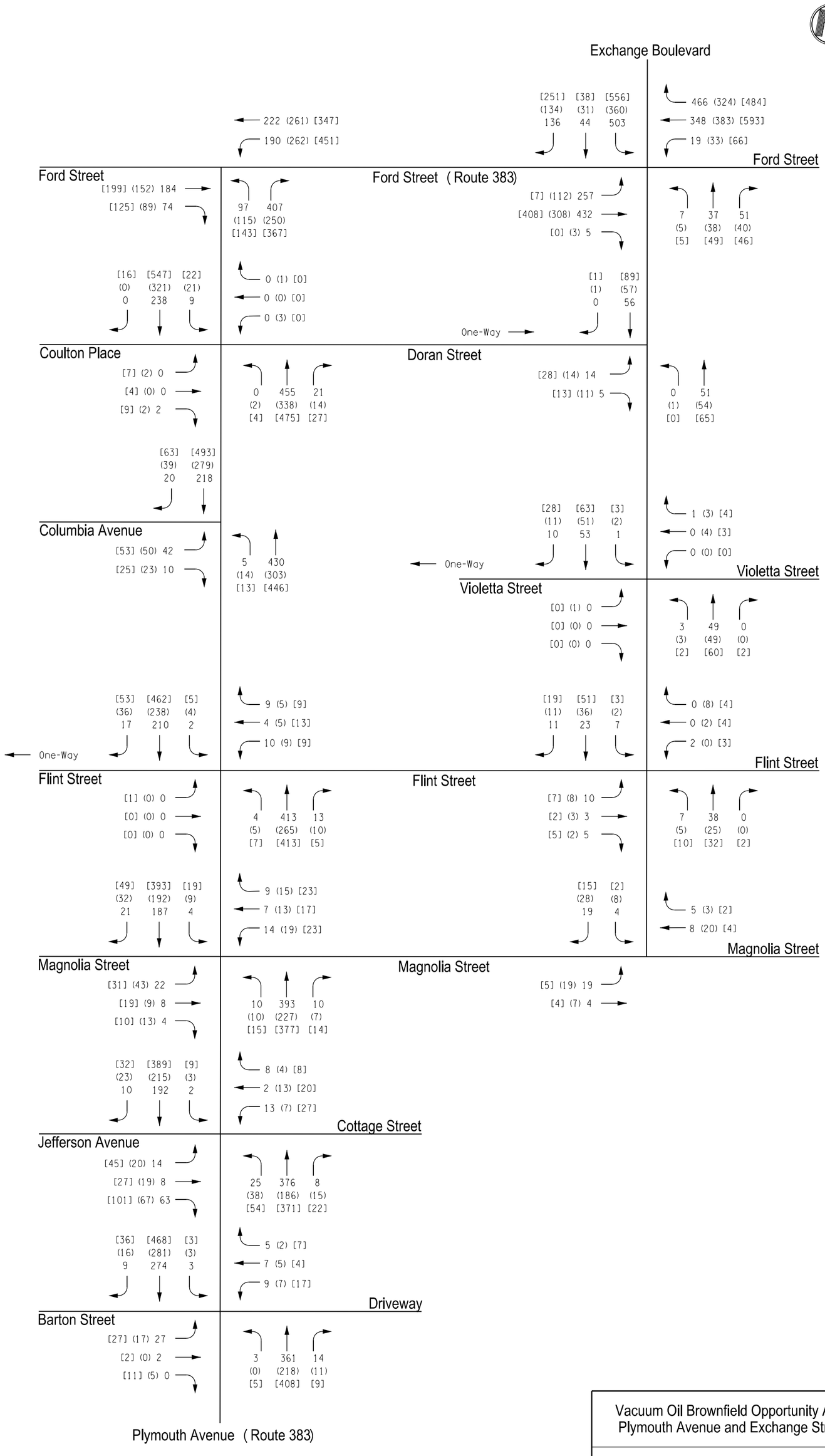
XXX - Weekday AM Peak Hour Traffic
(XXX) - Weekday Mid-Day Peak Hour Traffic
[XXX] - Weekday PM Peak Hour Traffic

Vacuum Oil Brownfield Opportunity Area
Plymouth Avenue and Exchange Street

2014 Existing Traffic Volumes
Peak Hour Turning Movements

FIGURE NO.	SCALE	DATE
1	No Scale	11/14

Bergmann associates



LEGEND:

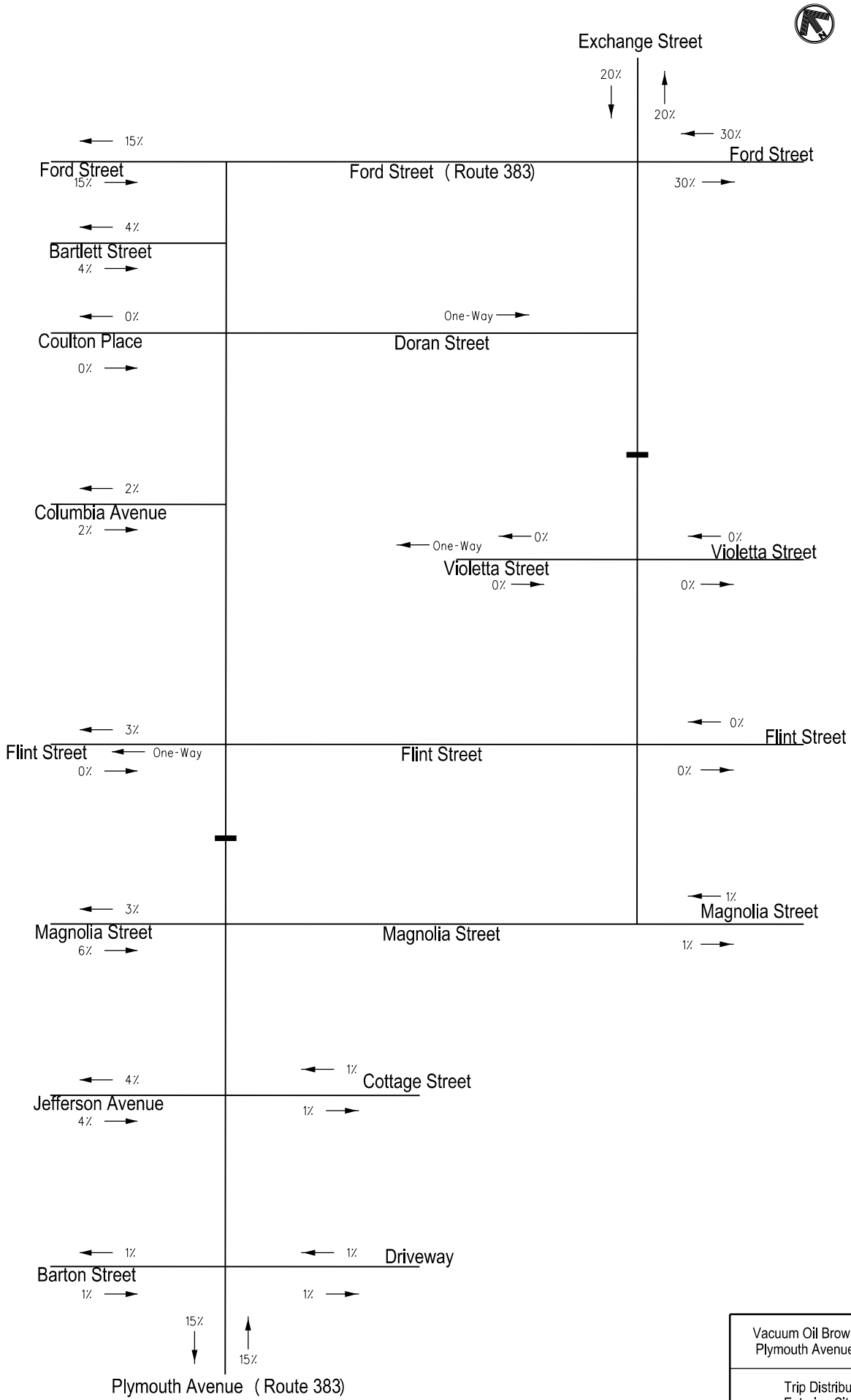
XXX - Weekday AM Peak Hour Traffic
(XXX) - Weekday Mid-Day Peak Hour Traffic
[XXX] - Weekday PM Peak Hour Traffic

Vacuum Oil Brownfield Opportunity Area
Plymouth Avenue and Exchange Street

2035 No Build Traffic Volumes
Peak Hour Turning Movements

FIGURE NO.	SCALE	DATE
2	No Scale	08/15

Bergmann associates



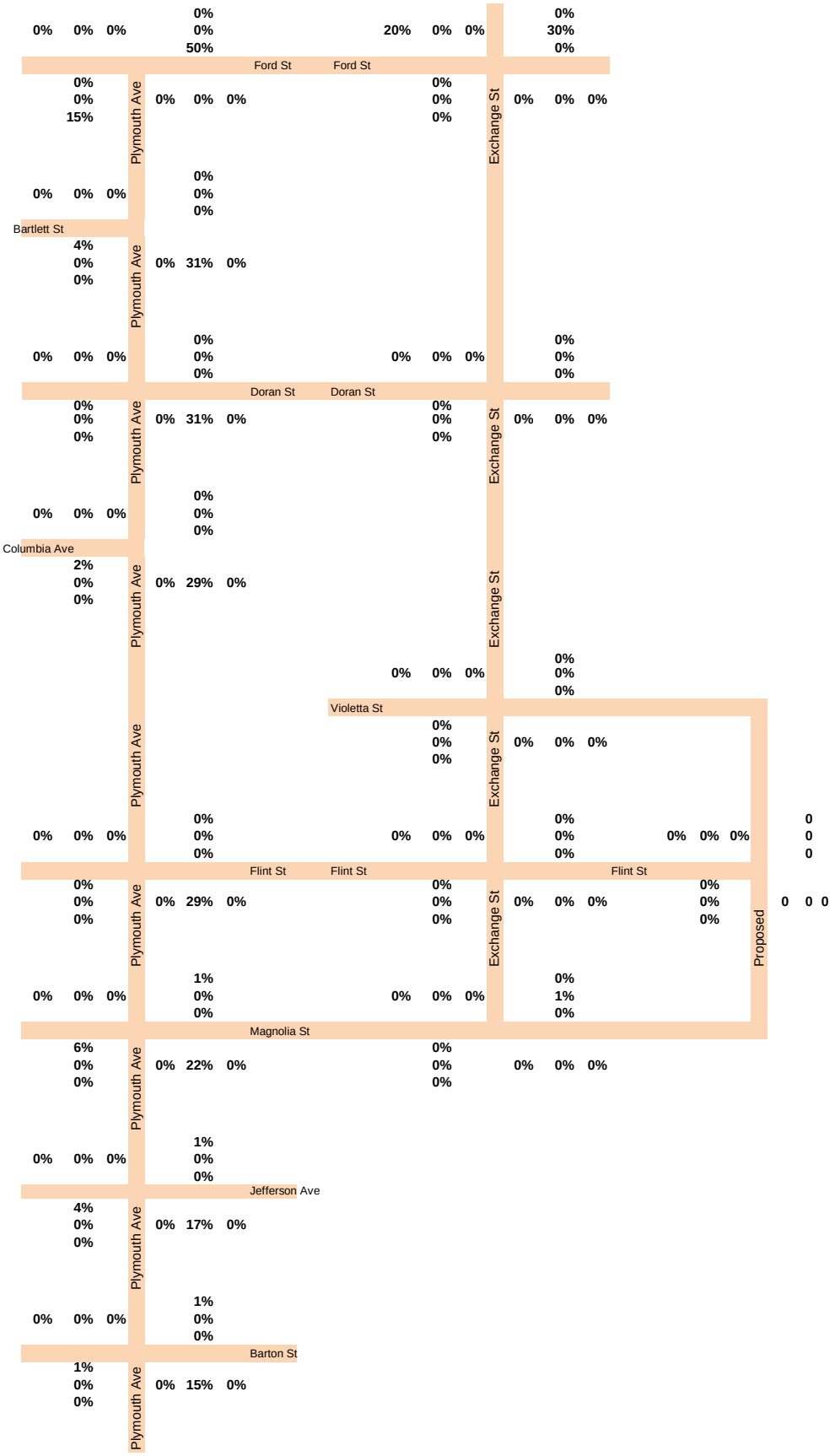
Vacuum Oil Brownfield Opportunity Area
Plymouth Avenue and Exchange Street

Trip Distribution Percentages
Entering Site and Exiting Site

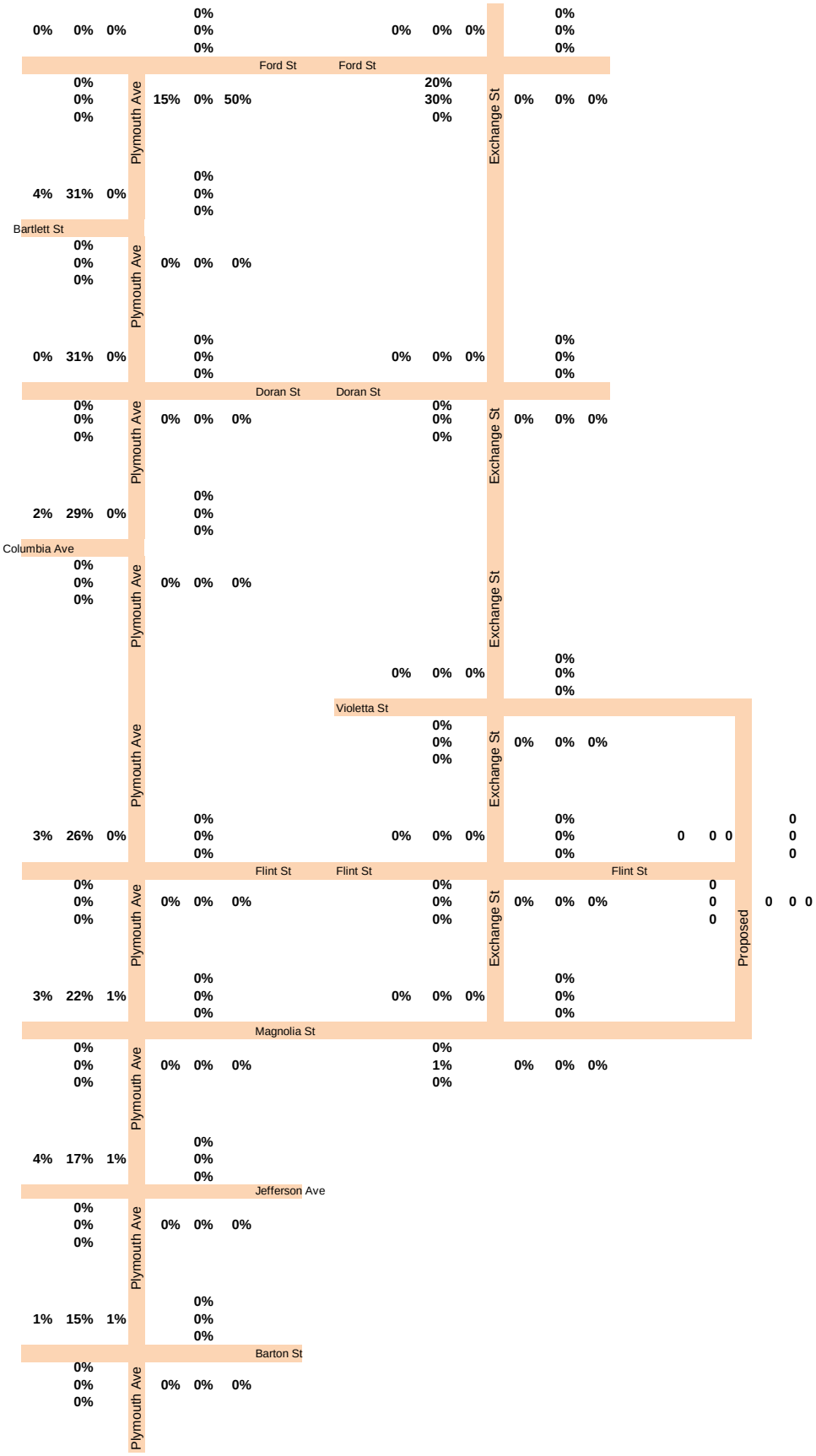
FIGURE NO.	SCALE	DATE
2	No Scale	08/15

Bergmann associates

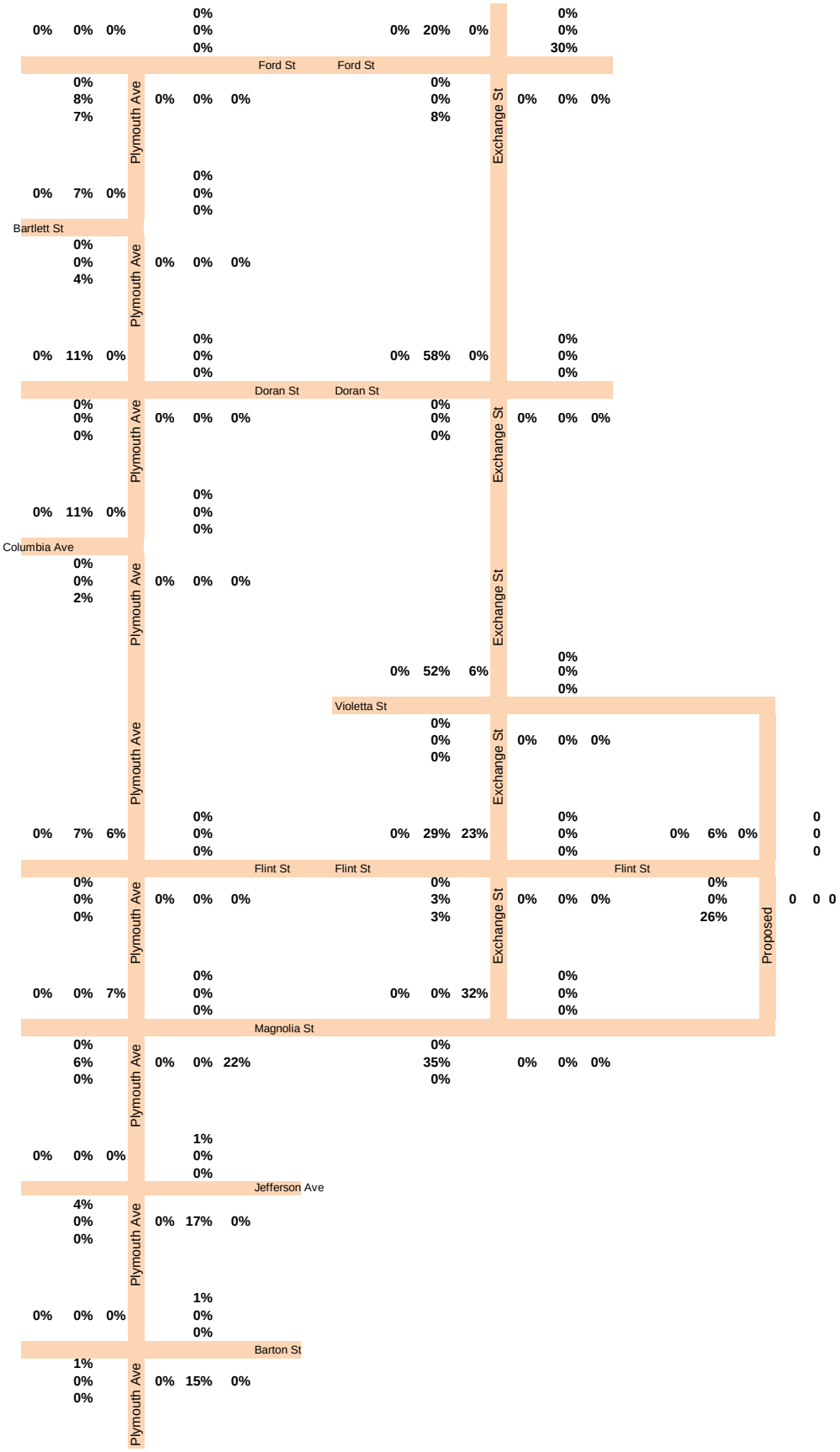
Entering Trip Distribution for Site 1



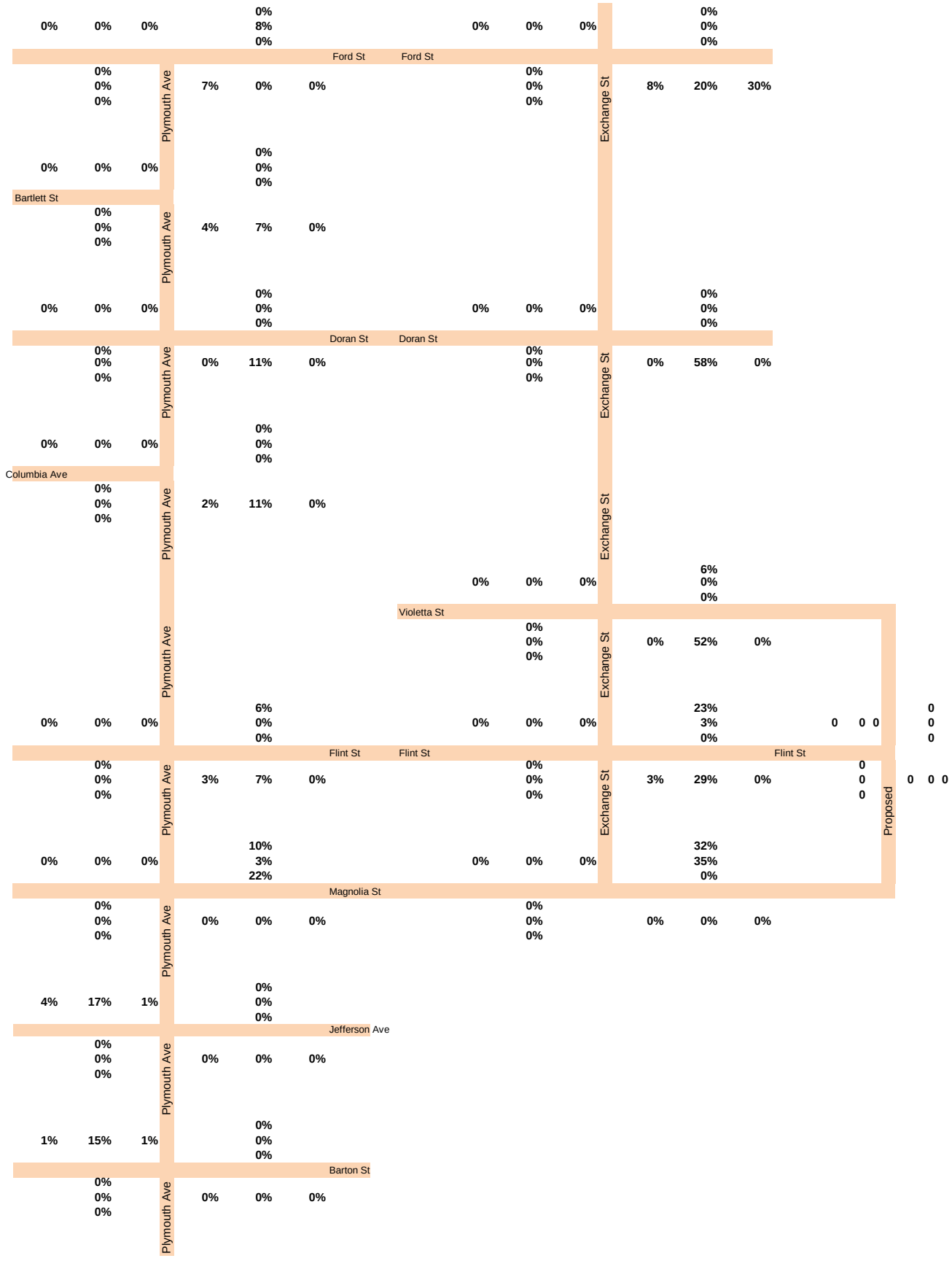
Exiting Trip Distribution for Site 1



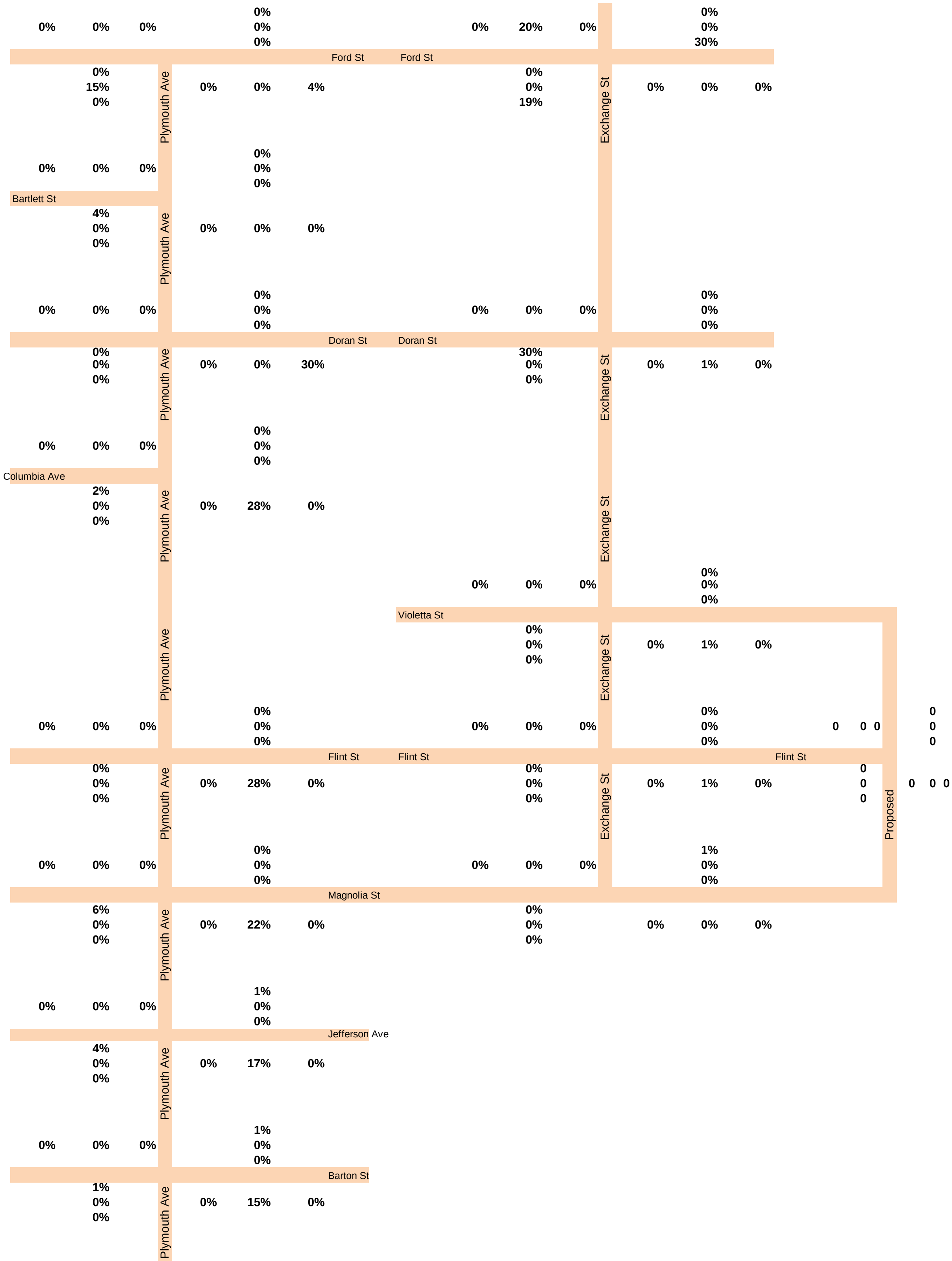
Entering Trip Distribution for Sites 6,9,19,20,23



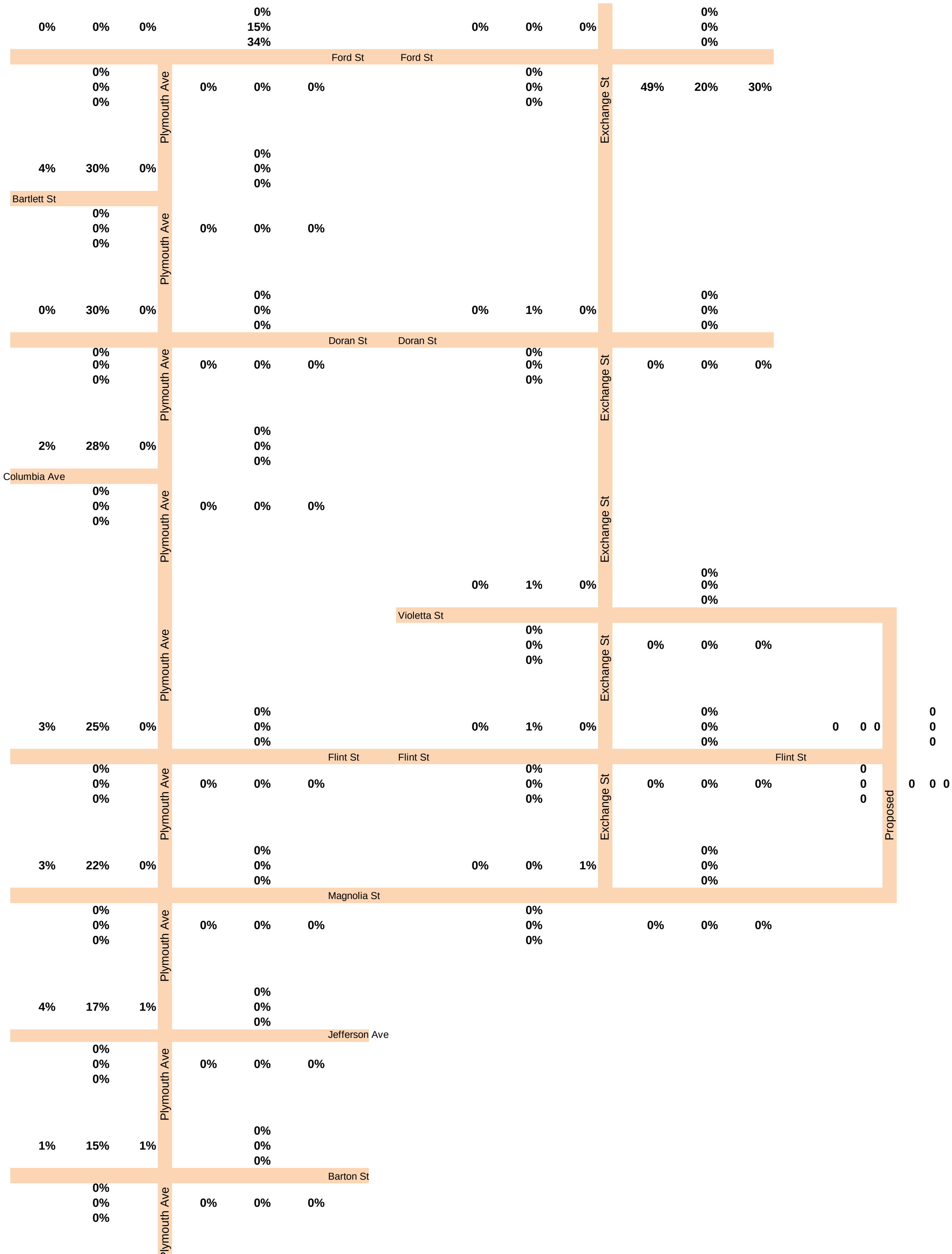
Exiting Trip Distribution for Sites 6,9,19,20,23



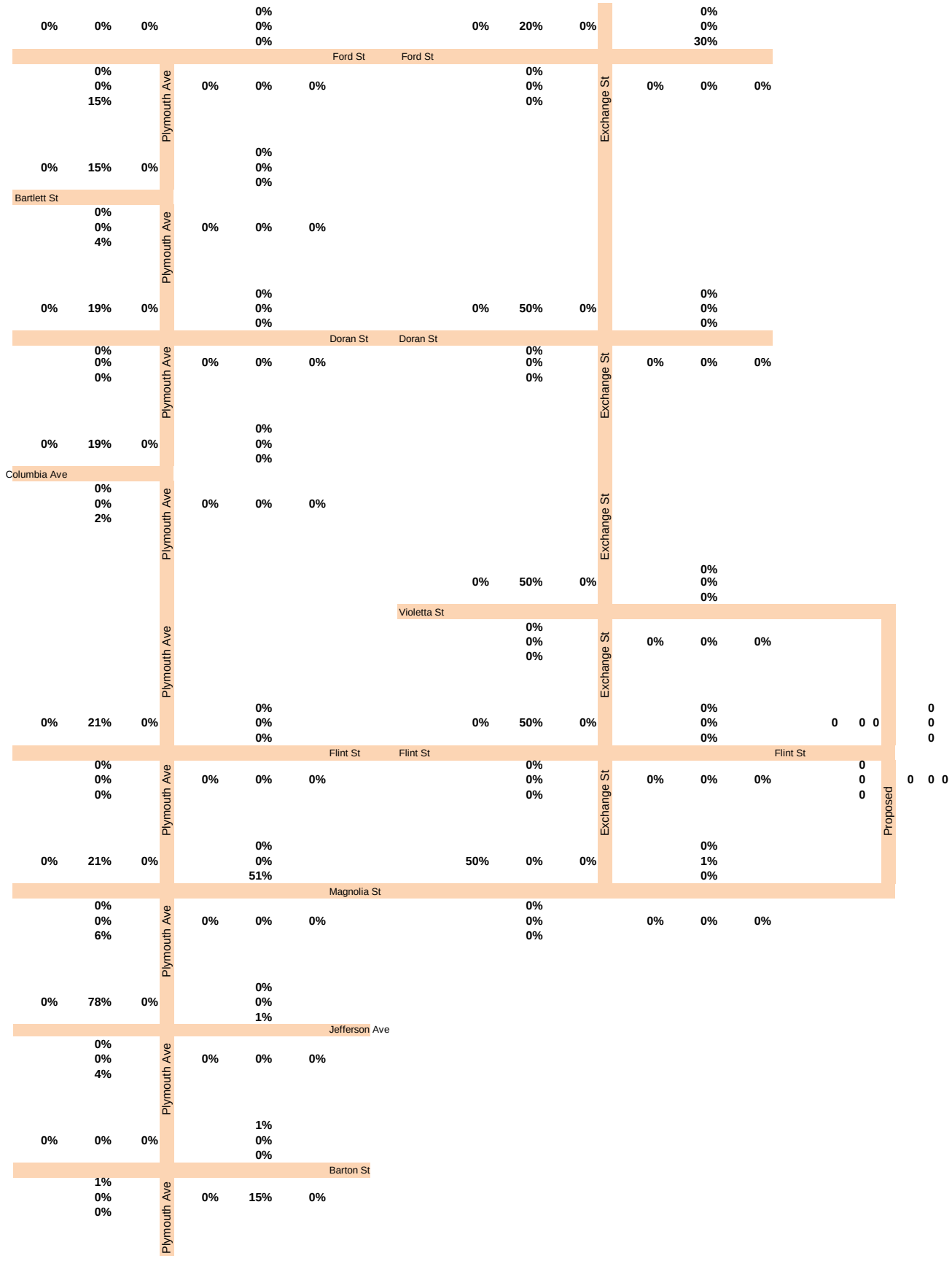
Entering Trip Distribution for Sites 12,13



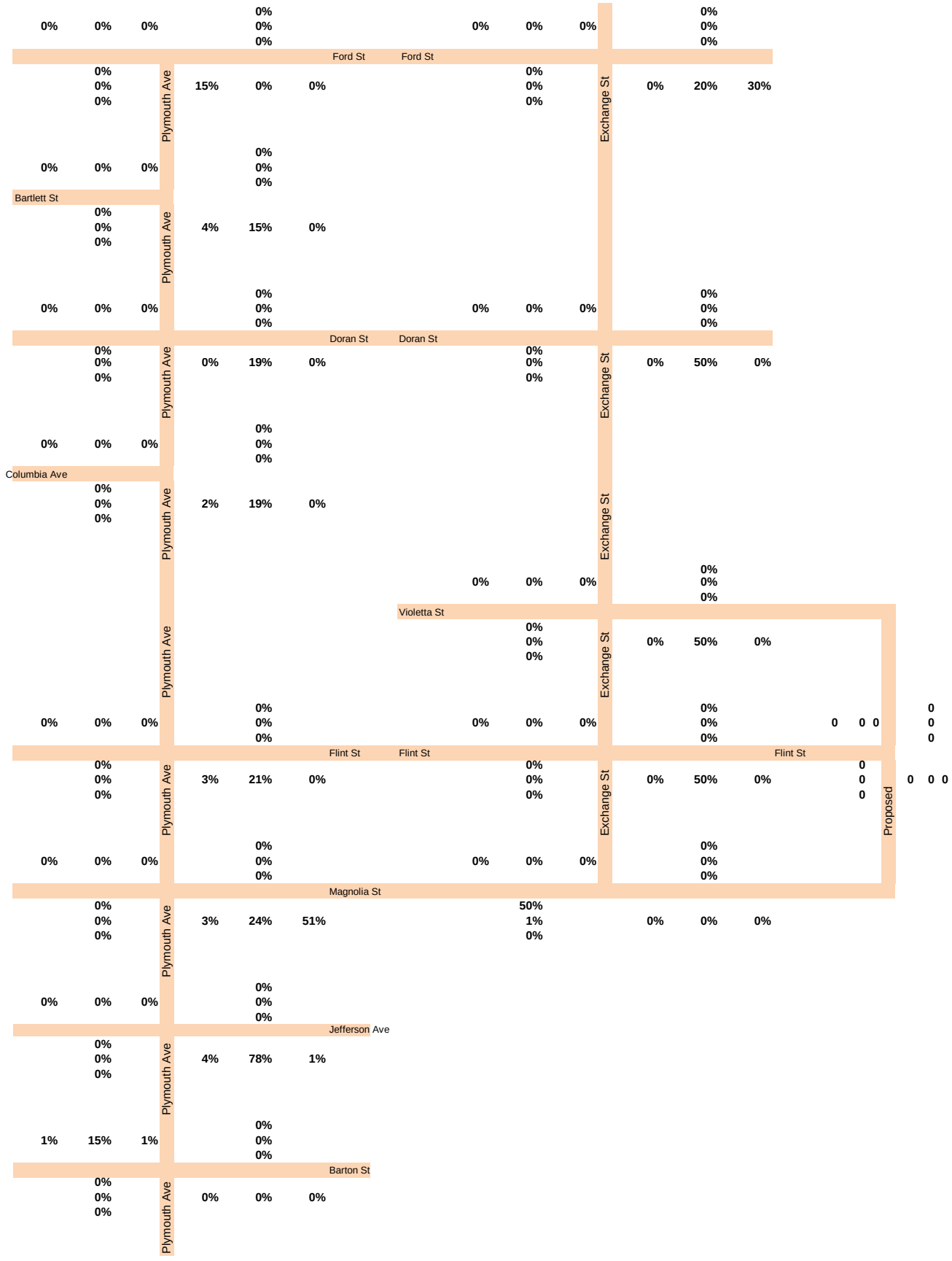
Exiting Trip Distribution for Sites 12,13



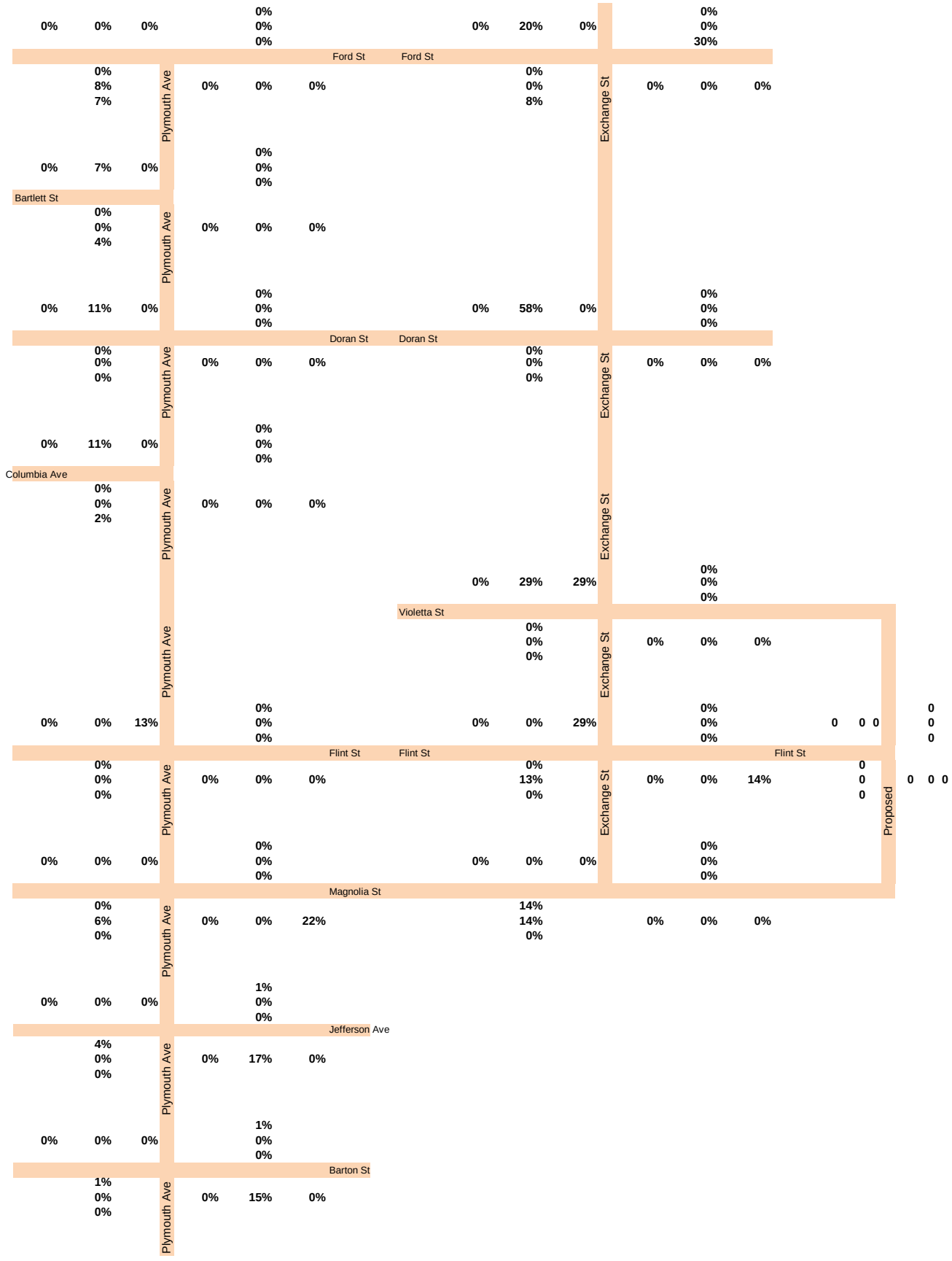
Entering Trip Distribution for Site 5



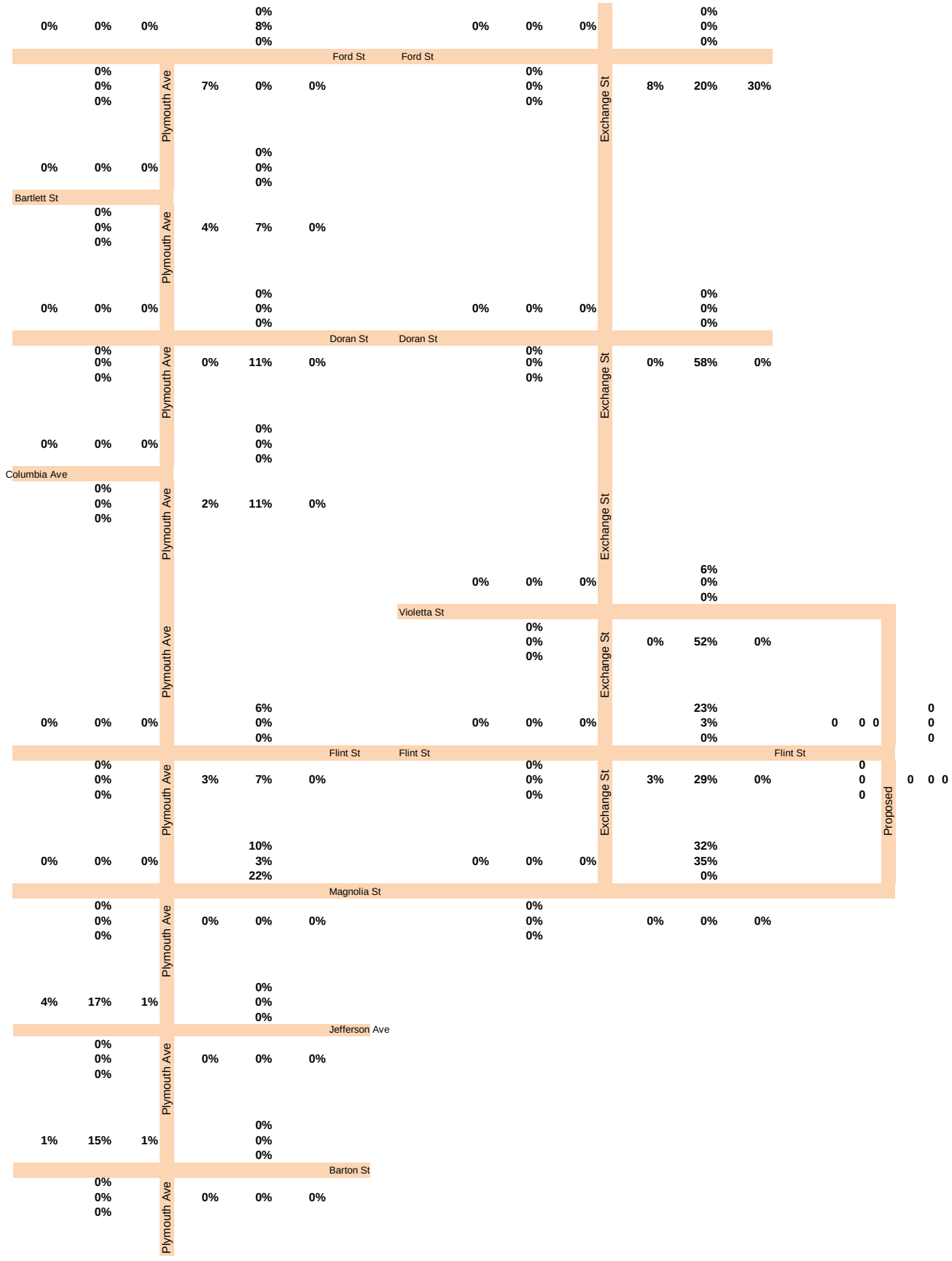
Exiting Trip Distribution for Site 5



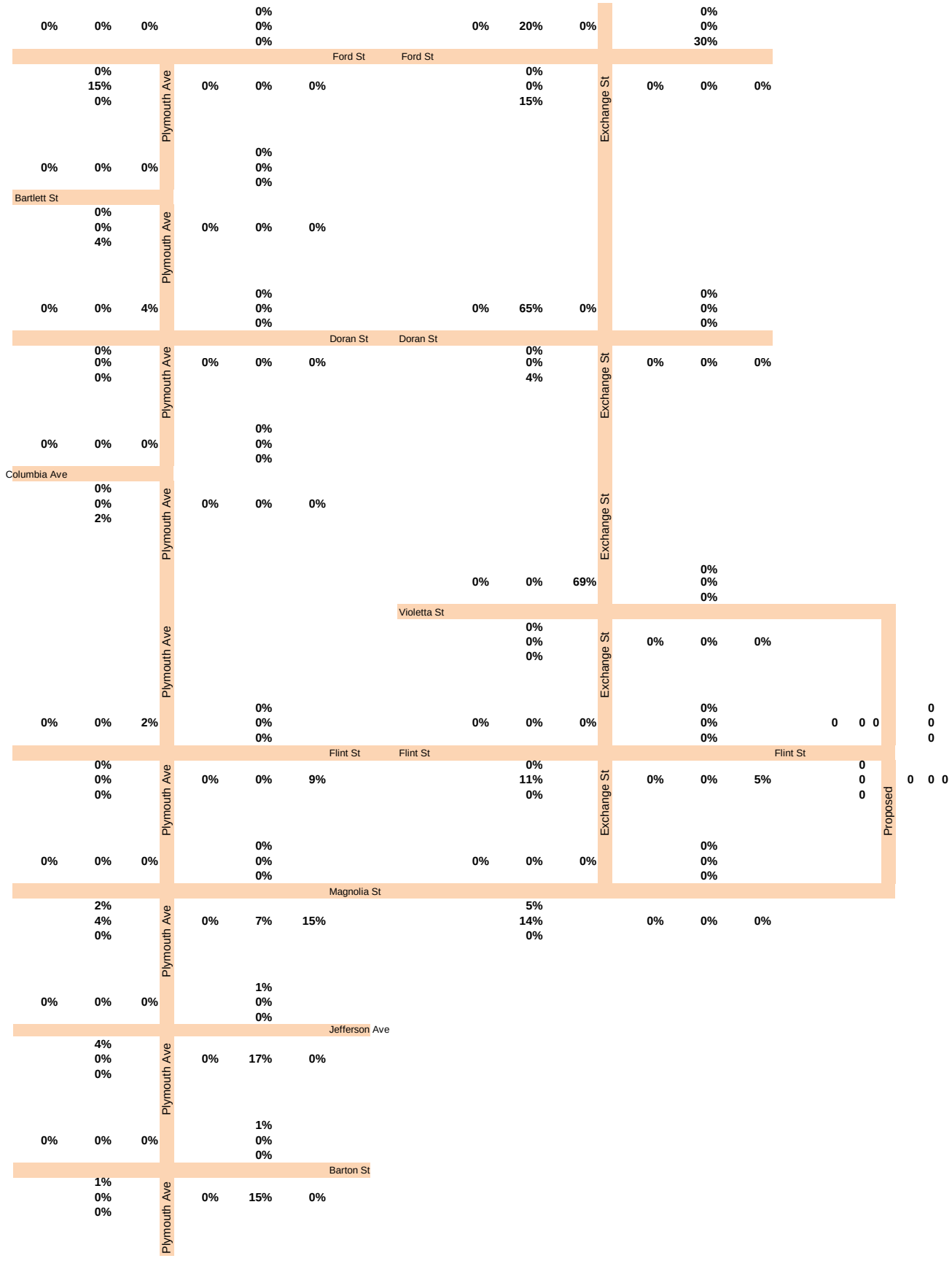
Entering Trip Distribution for Sites 7,17,18,21



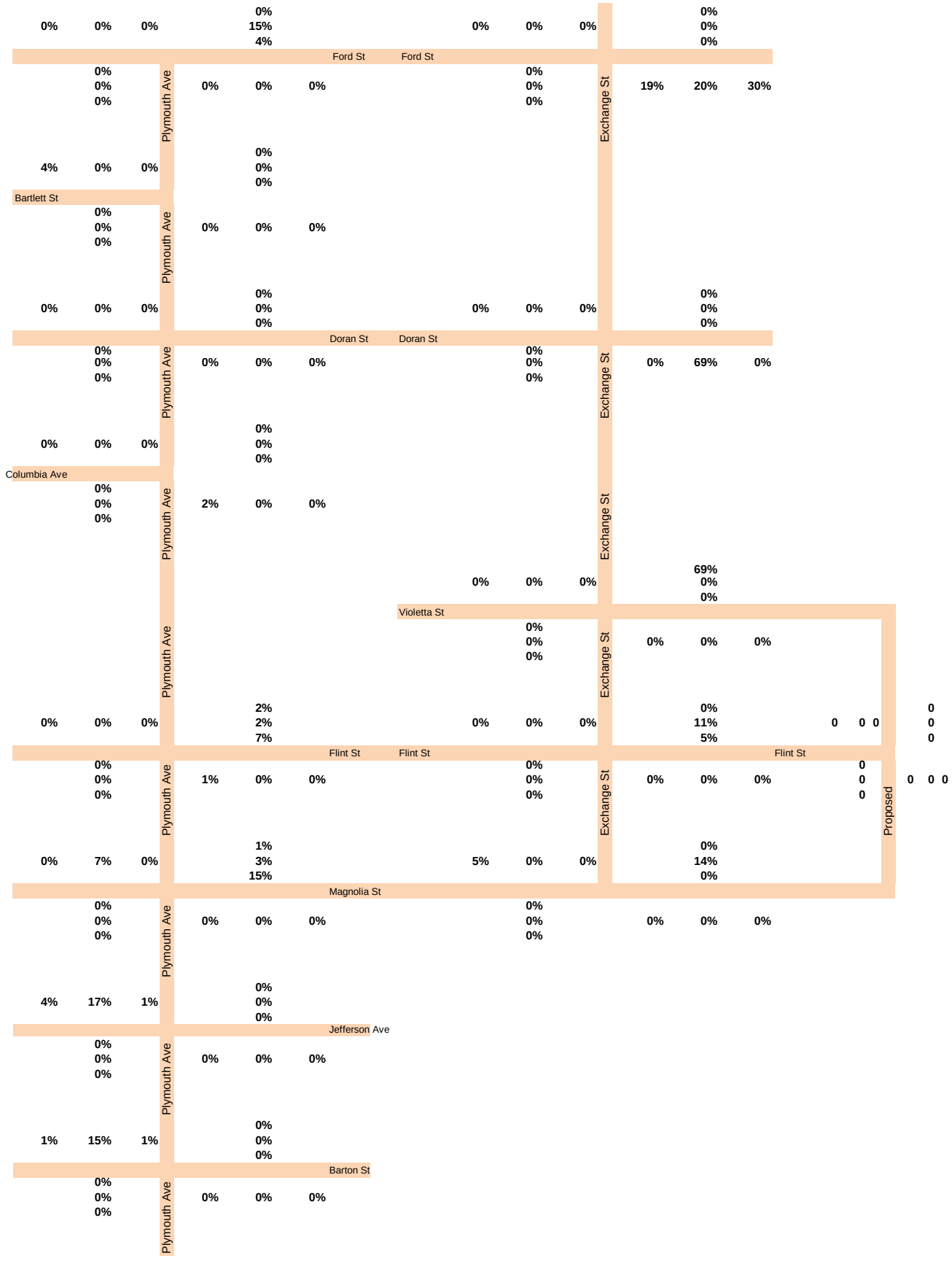
Exiting Trip Distribution for Sites 7,17,18,21



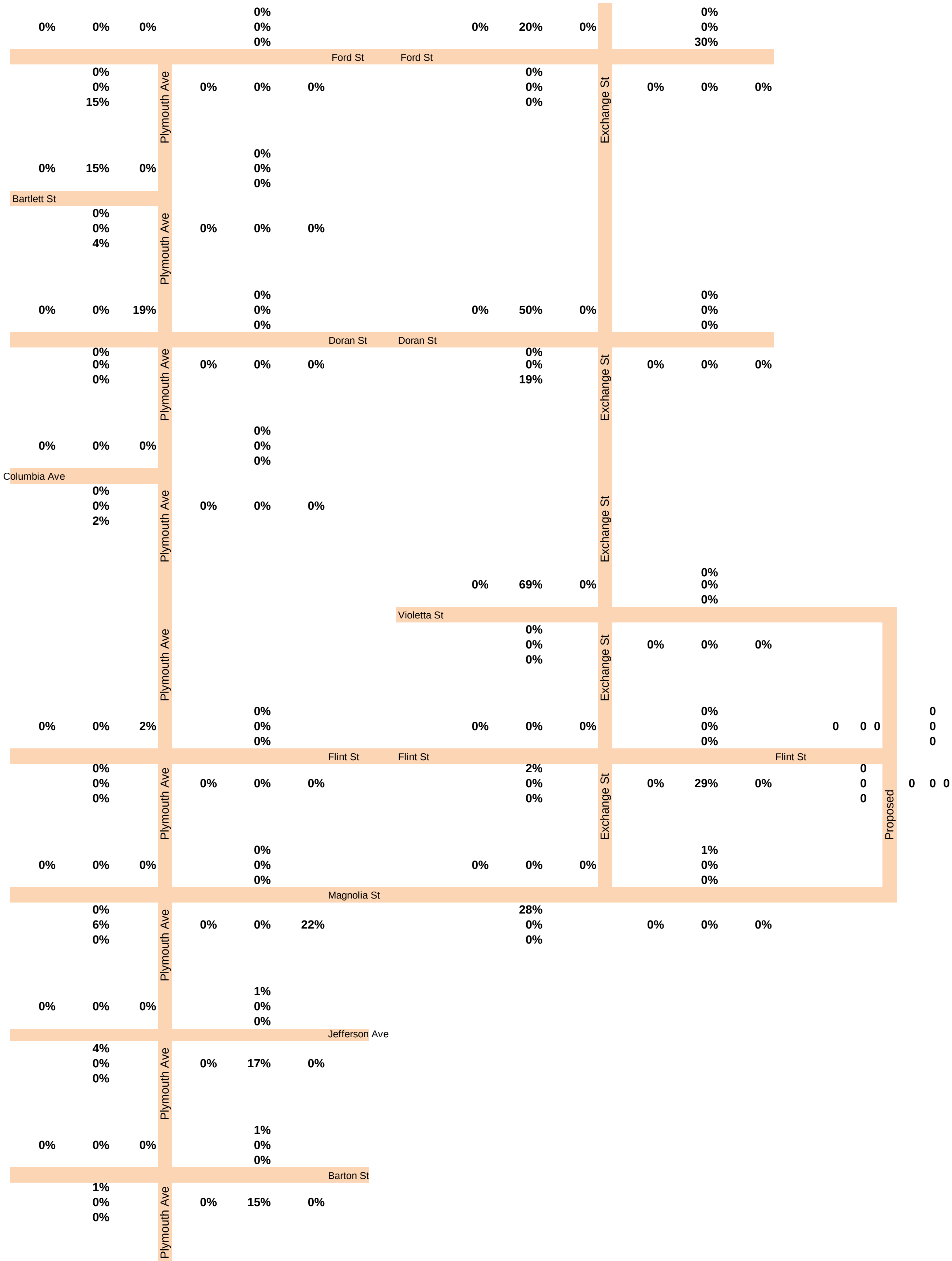
Entering Trip Distribution for Sites 11,22,24



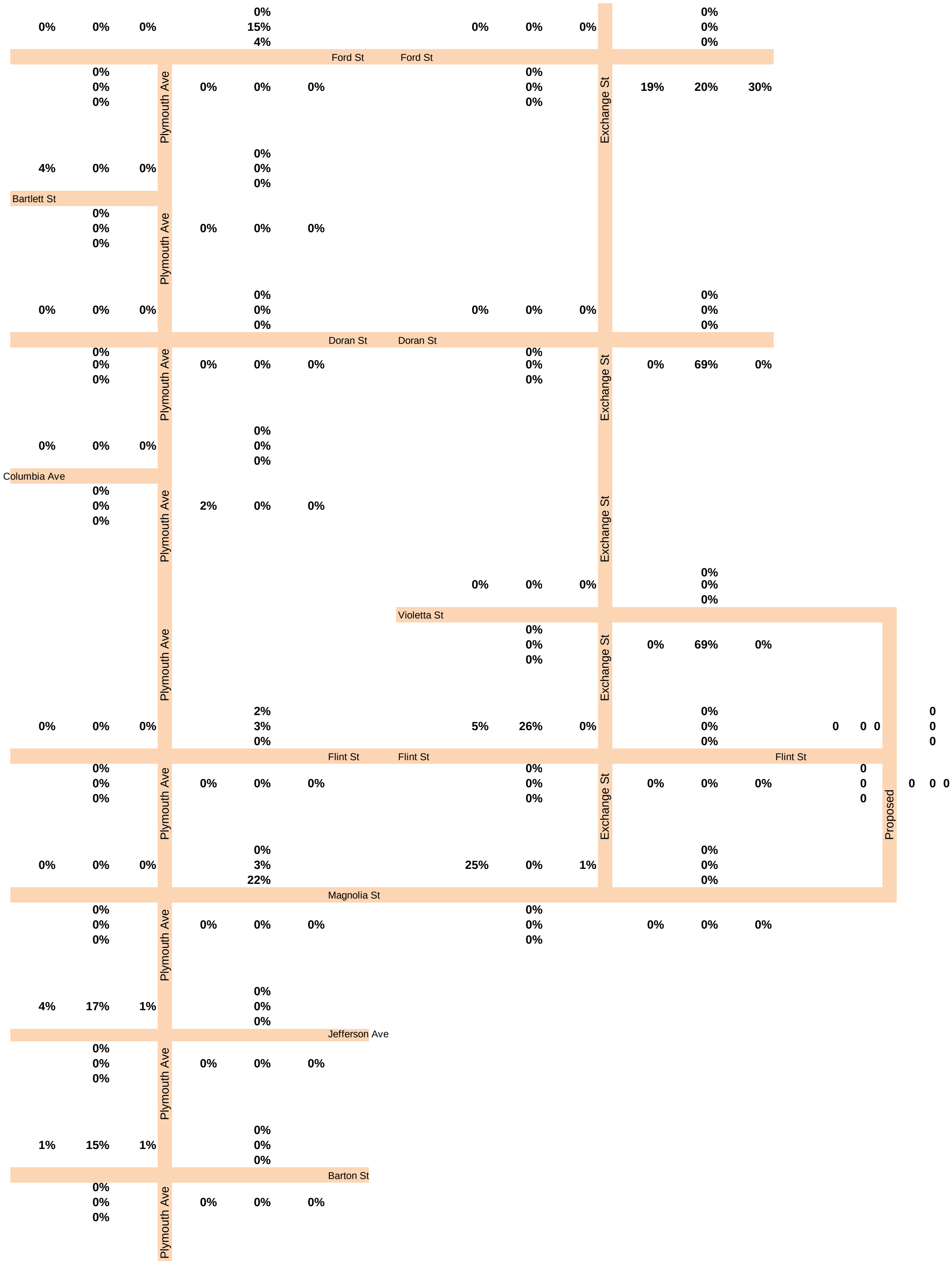
Exiting Trip Distribution for Sites 11,22,24



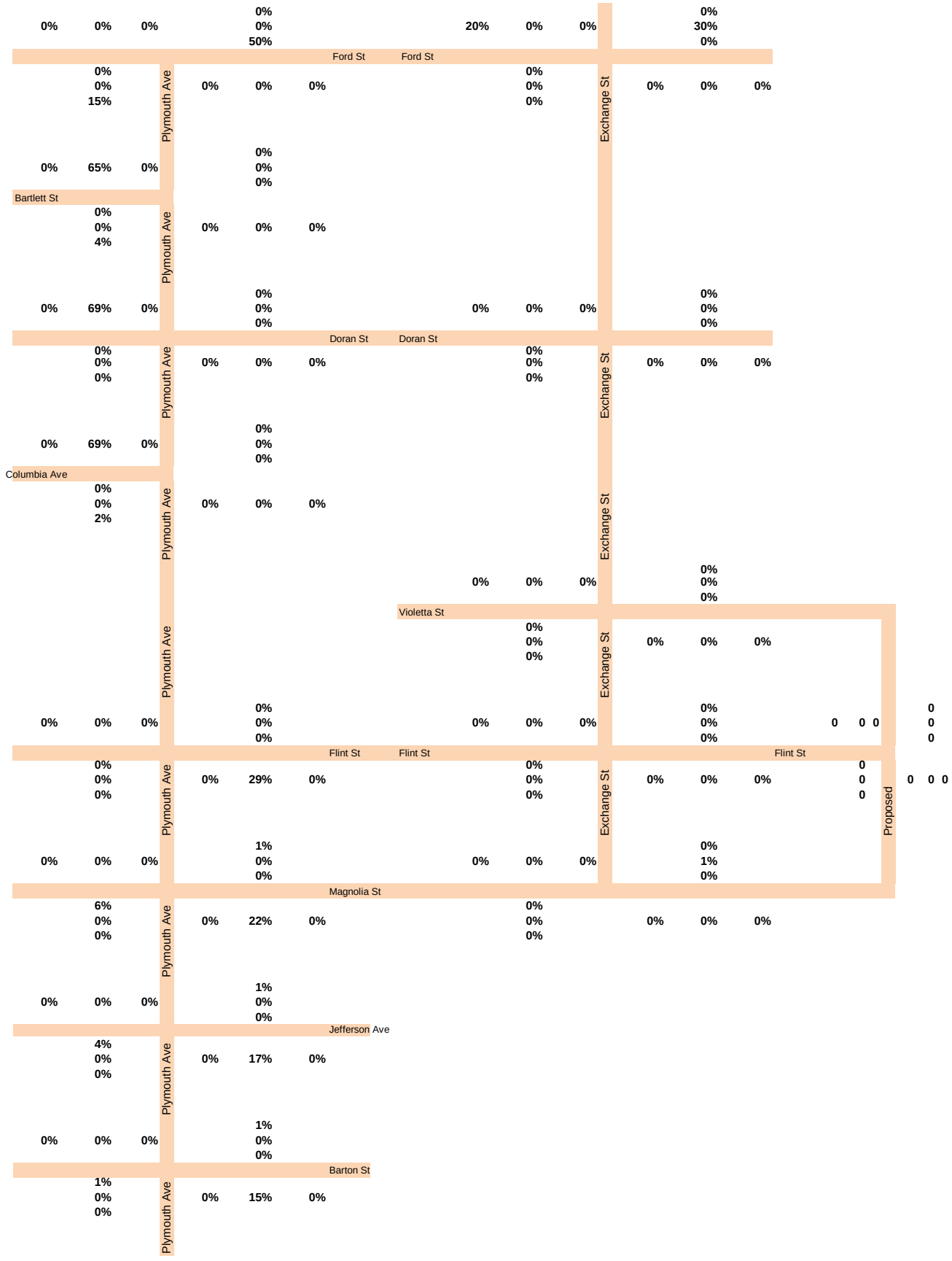
Entering Trip Distribution for Sites 15,16,25



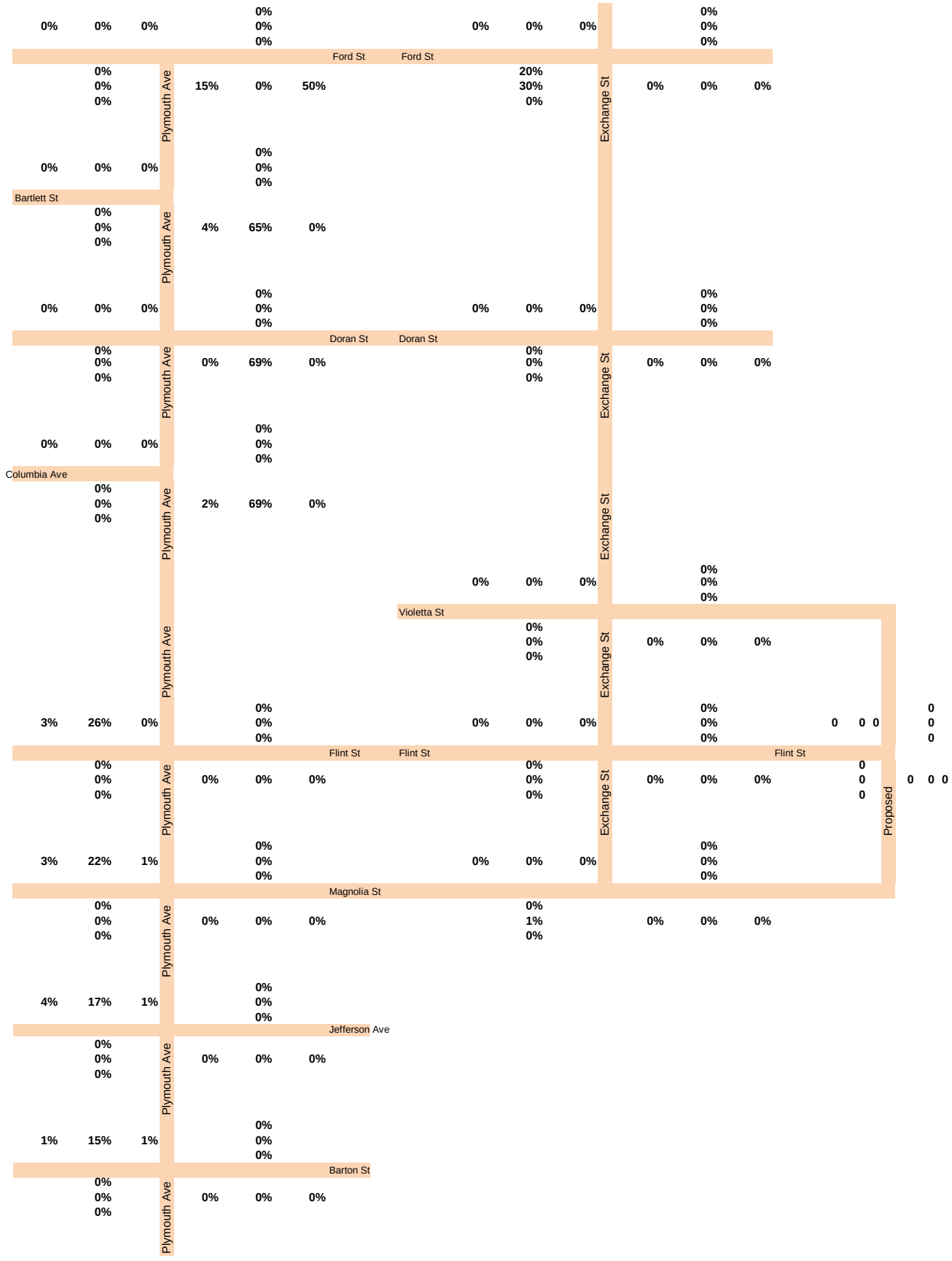
Exiting Trip Distribution for Sites 15,16,25



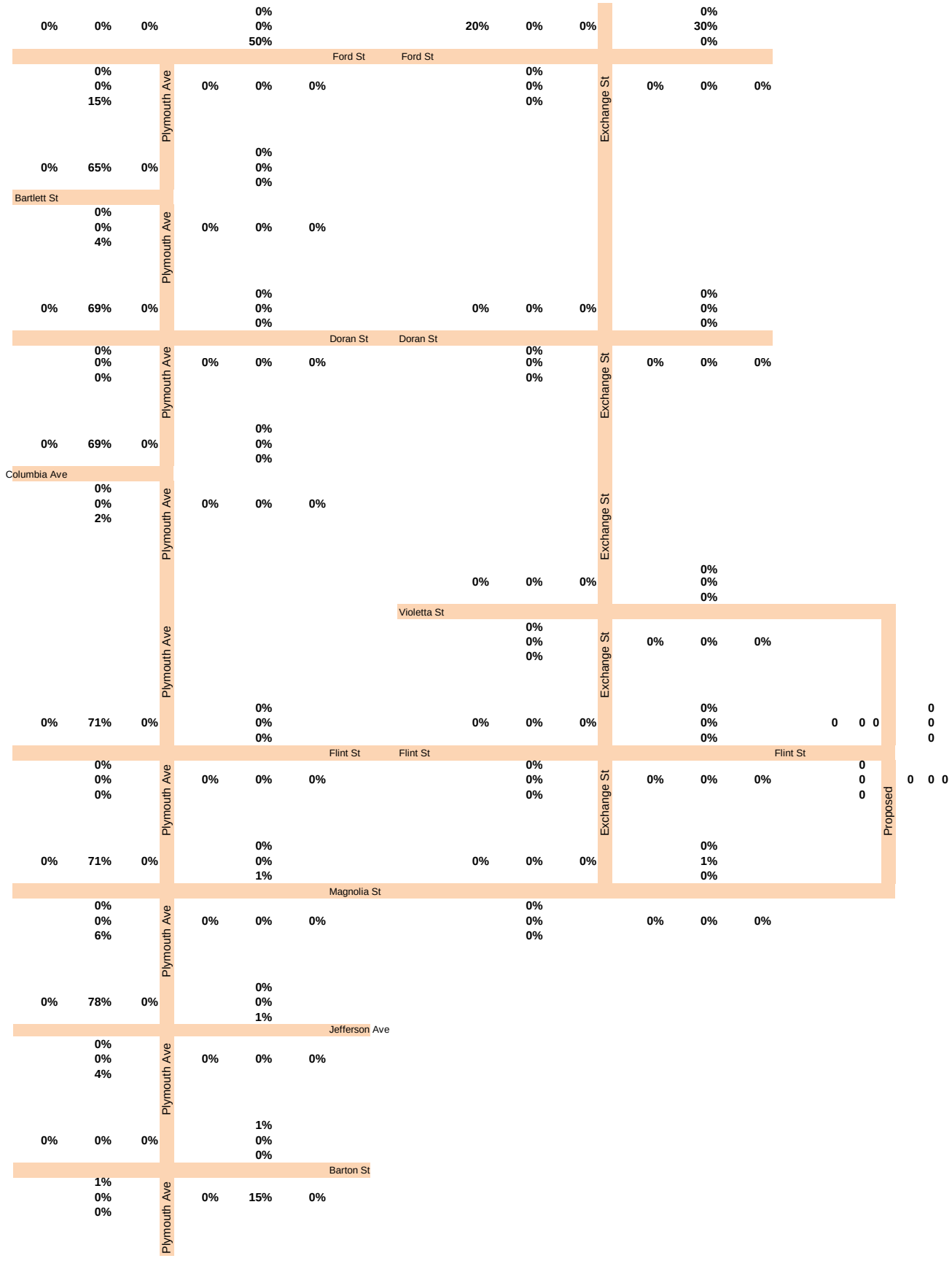
Entering Trip Distribution for Sites 3,4



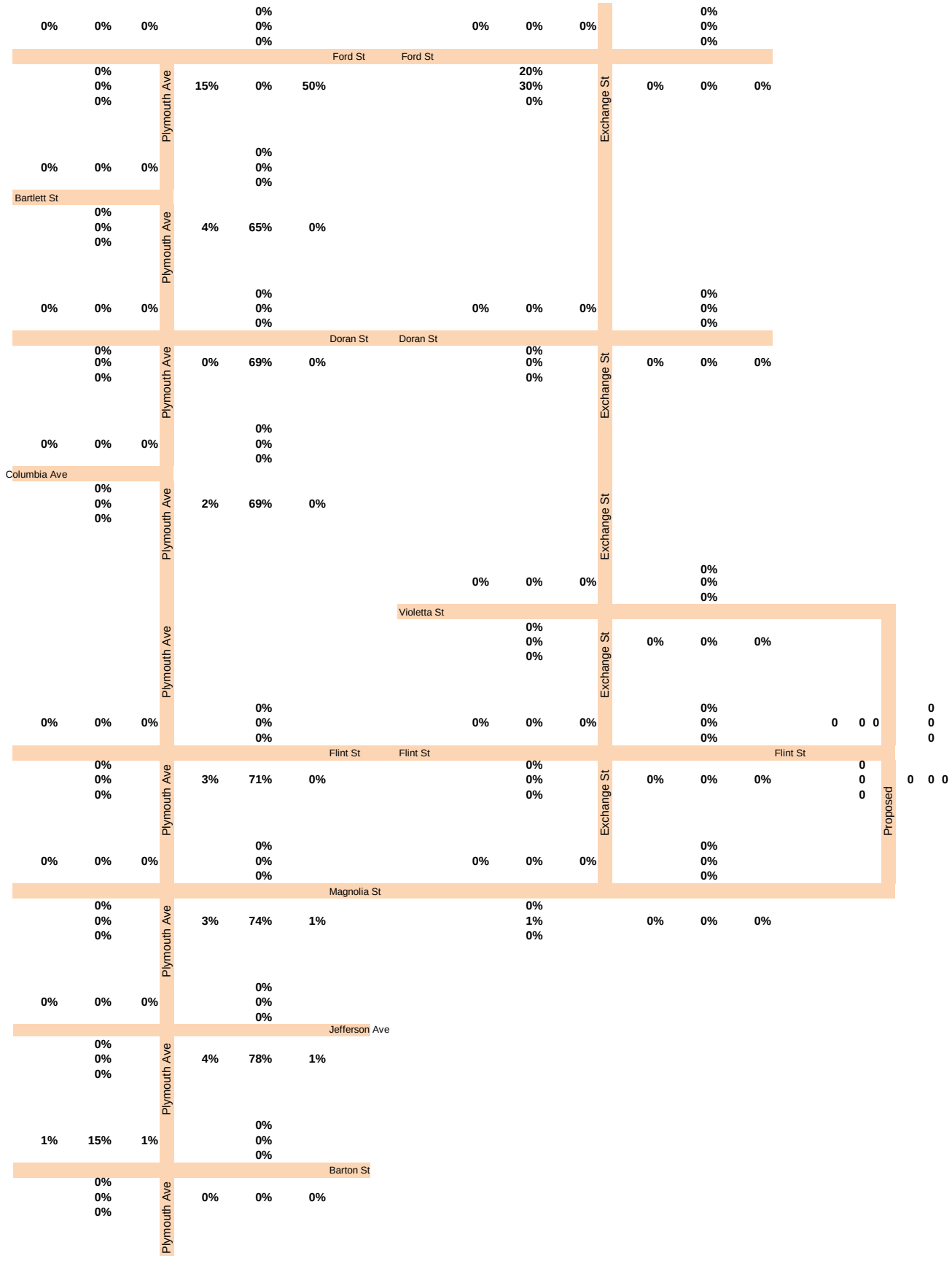
Exiting Trip Distribution for Sites 3,4



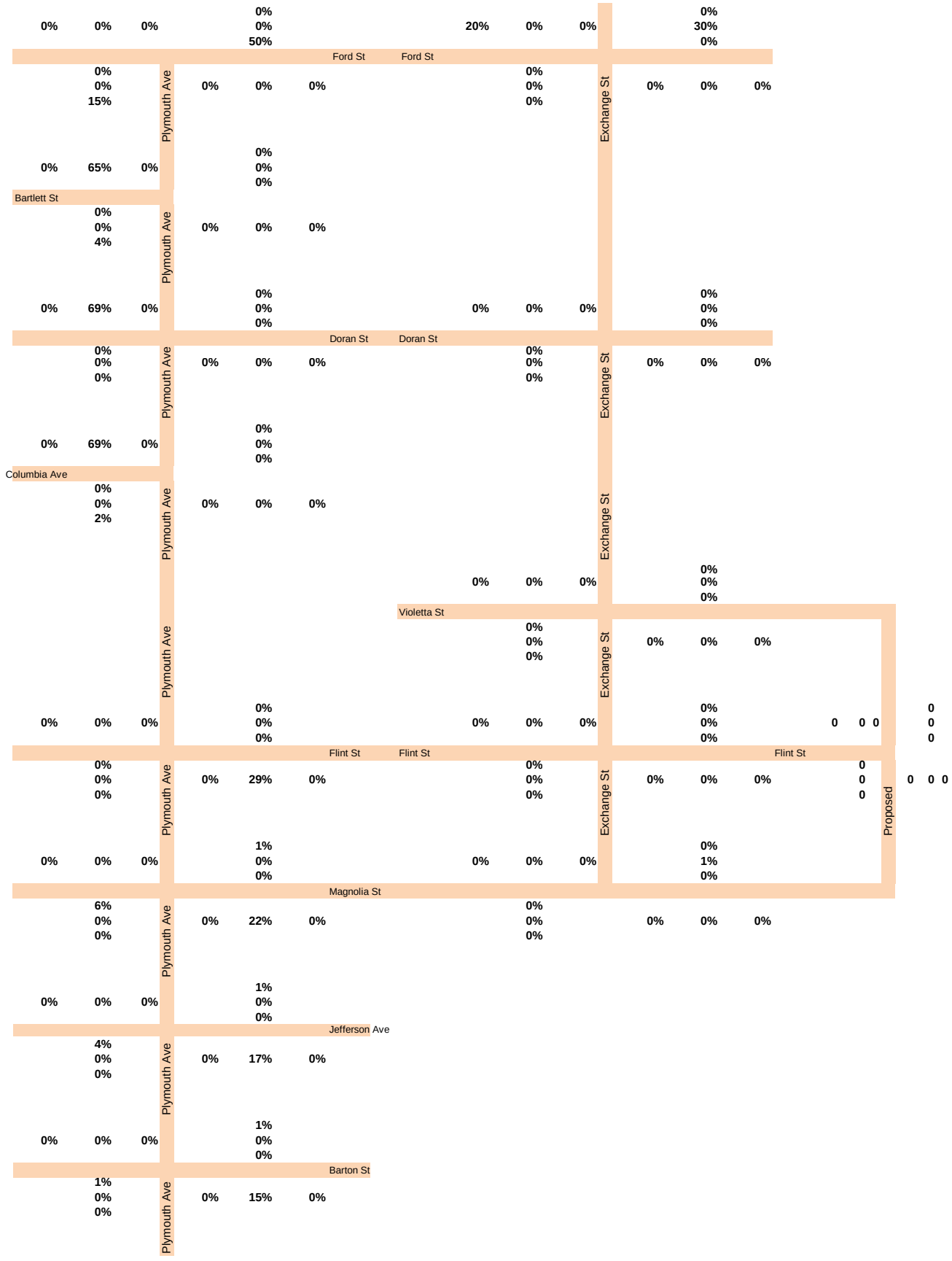
Entering Trip Distribution for Site 2



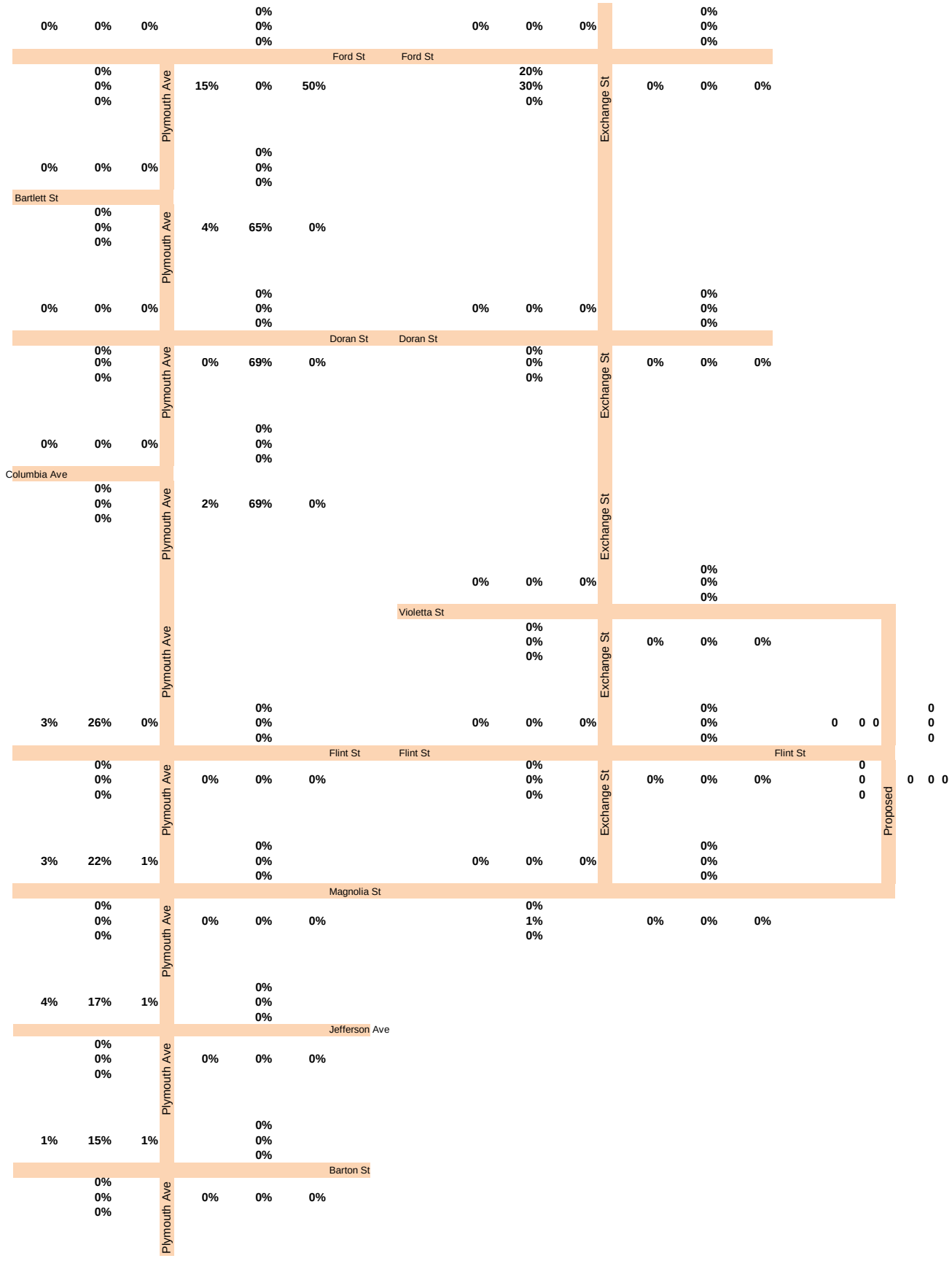
Exiting Trip Distribution for Site 2



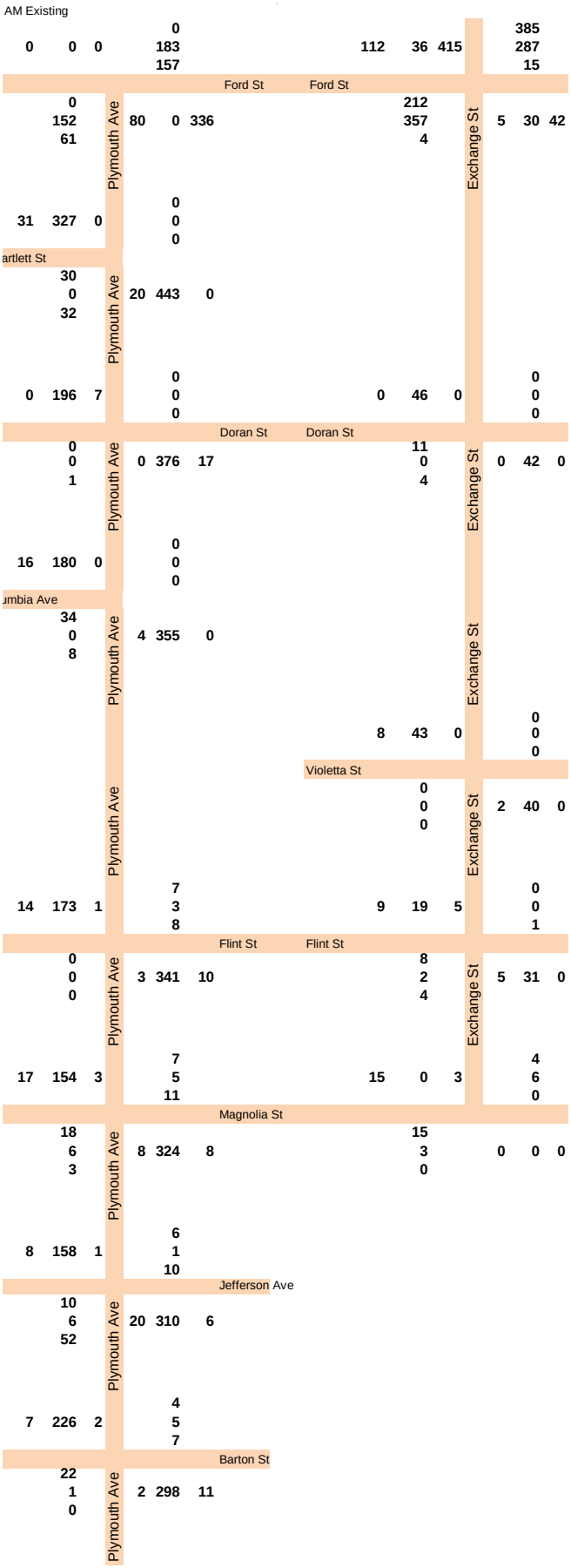
Entering Trip Distribution for Site 14



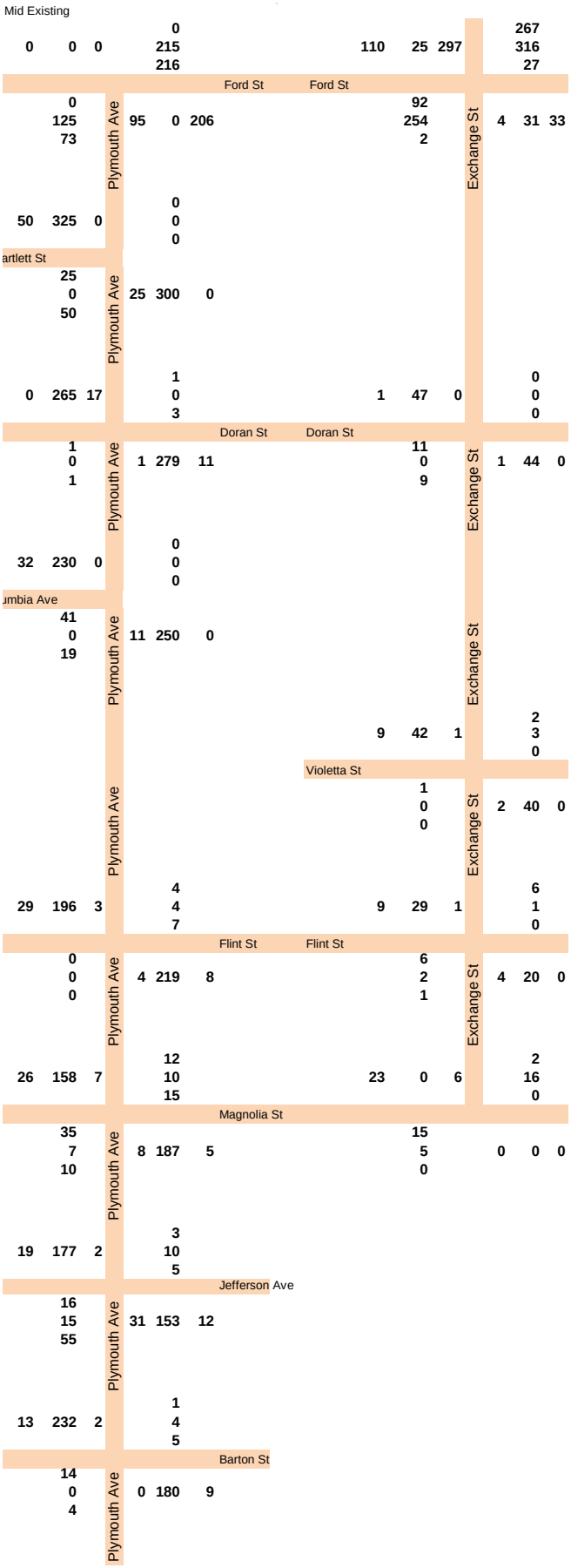
Exiting Trip Distribution for Site 14



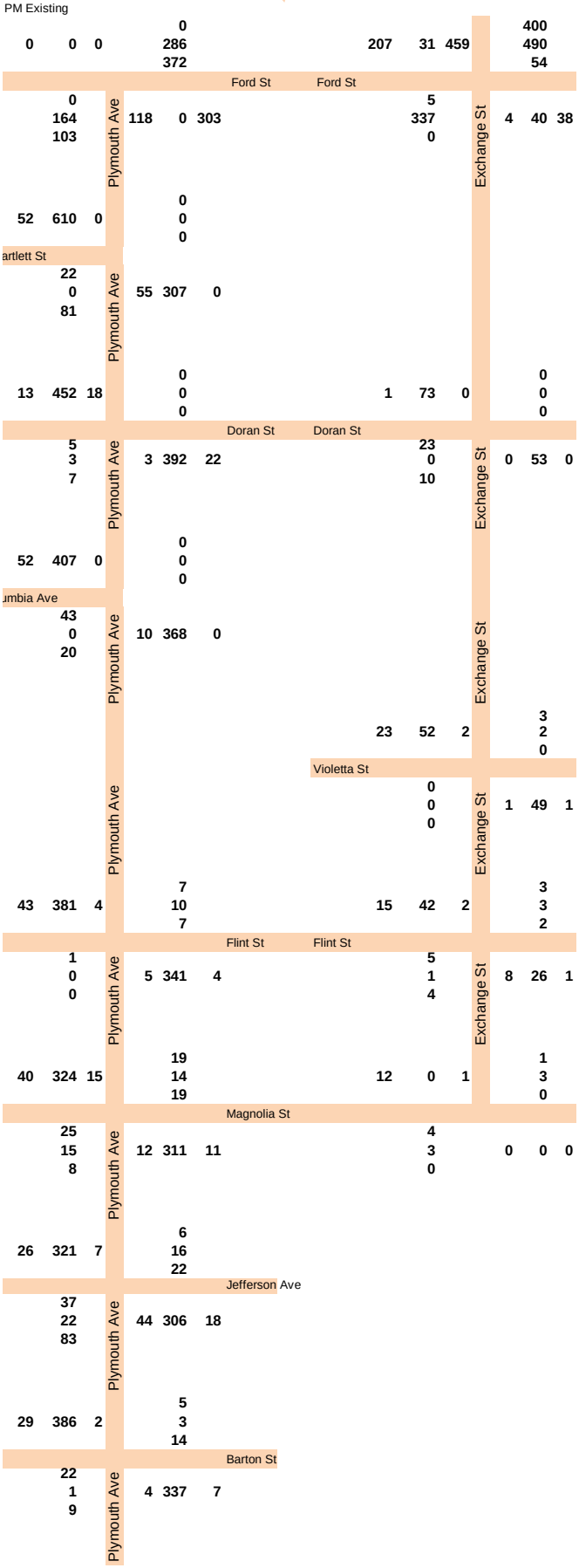
AM Existing


0
0 0 0 183 112 36 415 385
157 287
15
Ford St
Ford St
0
152 80 0 336 212 357 5 30 42
61 4
Plymouth Ave
Exchange St
0
31 327 0 0
0
artlett St
30
0 20 443 0
32
Plymouth Ave
0
0 196 7 0 46 0 0
0
0
Doran St
Doran St
0
0 0 376 17 11 0 0 42 0
1 4
Plymouth Ave
Exchange St
0
16 180 0 0
0
umbia Ave
34
0 4 355 0
8
Plymouth Ave
Exchange St
0
8 43 0 0
0
Violetta St
0
0 2 40 0
0
Plymouth Ave
Exchange St
7
14 173 1 3 9 19 5 0
8 1
Flint St
Flint St
0
0 3 341 10 8 5 31 0
0 2 4
Plymouth Ave
Exchange St
7
17 154 3 5 15 0 3 4 6
11 0
Magnolia St
18
6 8 324 8 15 0 0 0
3 3 0
Plymouth Ave
6
8 158 1 1
10
Jefferson Ave
10
6 20 310 6
52
Plymouth Ave
4
7 226 2 5
7
Barton St
22
1 2 298 11
0
Plymouth Ave

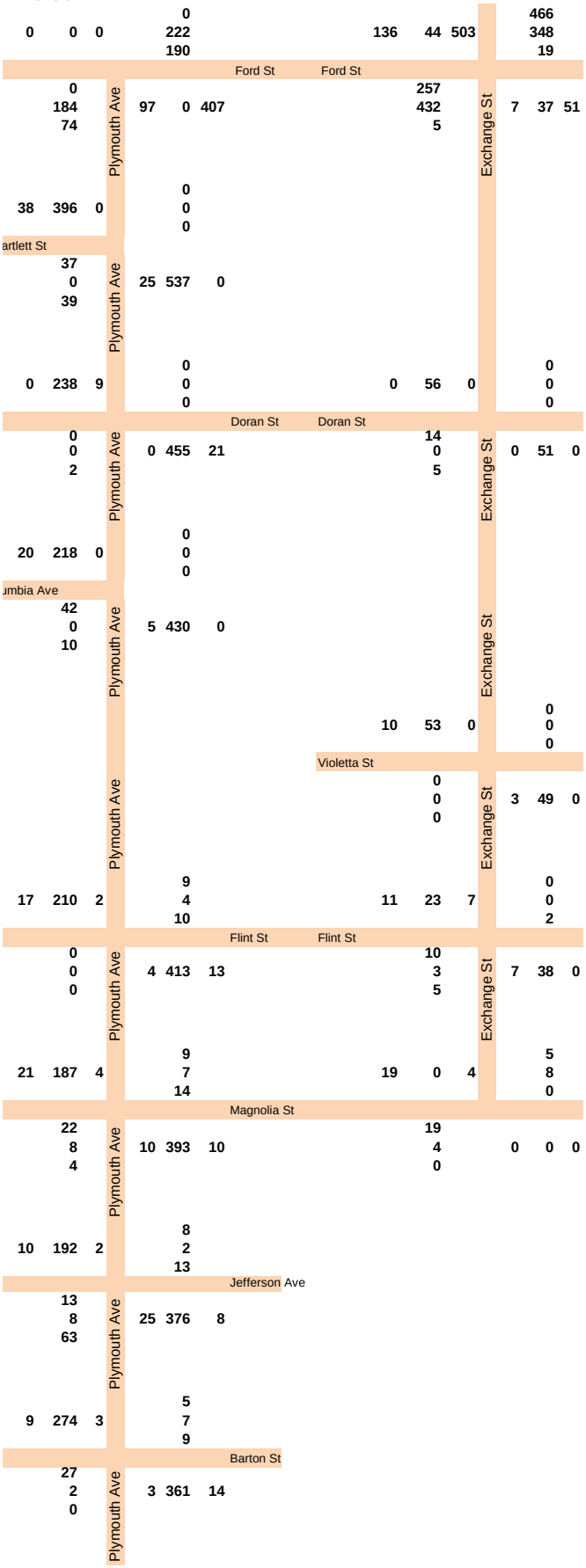
Mid Existing



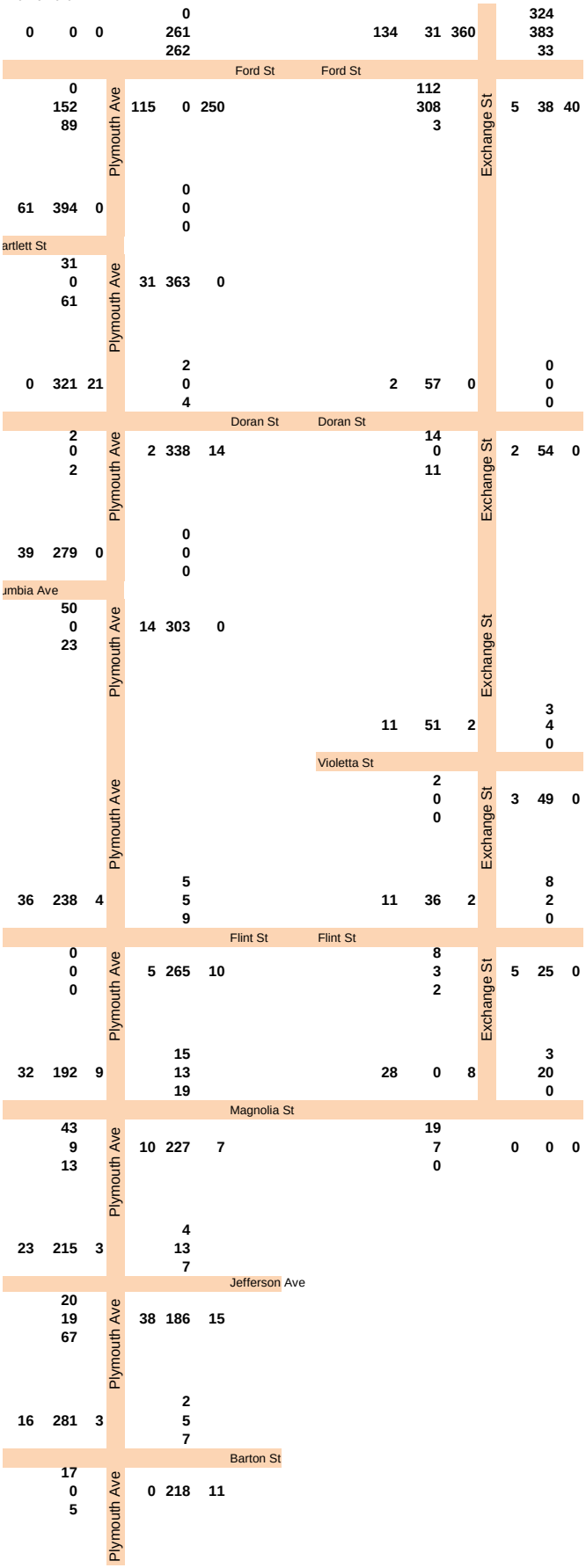
PM Existing


0
0 0 0
286
372
207 31 459
400
490
54
Ford St
Ford St
0
164
103
118 0 303
5
337
0
4 40 38
Plymouth Ave
Exchange St
0
52 610 0
0
0
artlett St
22
0
81
55 307 0
0
0
0
13 452 18
1 73 0
0
0
0
Doran St
Doran St
5
3
7
3 392 22
23
0
10
0 53 0
Plymouth Ave
Exchange St
0
52 407 0
0
0
umbia Ave
43
0
20
10 368 0
3
2
0
23 52 2
Violetta St
0
0
0
1 49 1
Plymouth Ave
Exchange St
7
43 381 4
10
7
15 42 2
3
3
2
Flint St
Flint St
1
0
0
5 341 4
5
1
4
8 26 1
Plymouth Ave
Exchange St
19
40 324 15
14
19
12 0 1
1
3
0
Magnolia St
25
15
8
12 311 11
4
3
0
0 0 0
Plymouth Ave
6
26 321 7
16
22
Jefferson Ave
37
22
83
44 306 18
Plymouth Ave
5
29 386 2
3
14
Barton St
22
1
9
4 337 7
Plymouth Ave

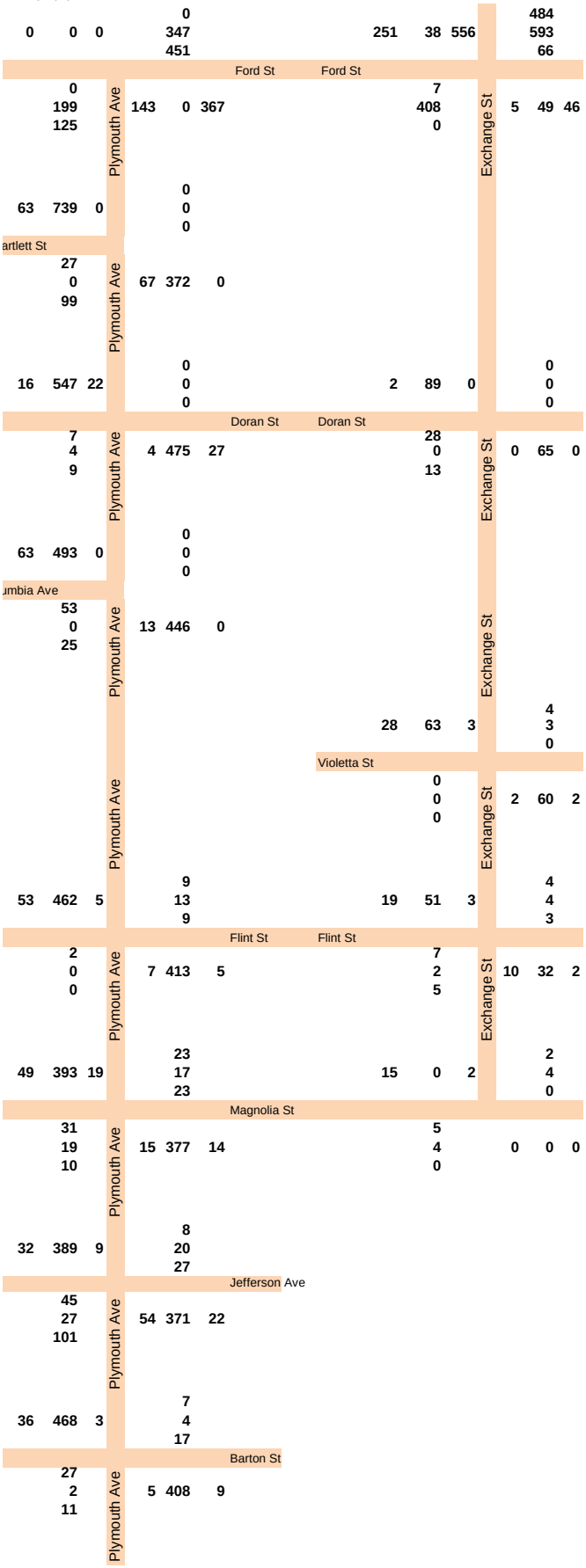
AM No Build


0
0 0 0
0
222
190
136 44 503
466
348
19
Ford St
Ford St
0
184
74
97 0 407
257
432
5
7 37 51
Plymouth Ave
Exchange St
0
38 396 0
0
0
0
artlett St
37
0
39
25 537 0
Plymouth Ave
0
0 238 9
0
0
0
0 56 0
0
0
0
Doran St
Doran St
0
0
2
0 455 21
14
0
5
0 51 0
Plymouth Ave
Exchange St
0
20 218 0
0
0
0
umbia Ave
42
0
10
5 430 0
Plymouth Ave
Exchange St
0
10 53 0
0
0
Violetta St
0
0
0
3 49 0
Plymouth Ave
Exchange St
9
17 210 2
4
10
11 23 7
0
0
2
Flint St
Flint St
0
0
0
4 413 13
10
3
5
7 38 0
Plymouth Ave
Exchange St
9
21 187 4
7
14
19 0 4
5
8
0
Magnolia St
22
8
4
10 393 10
19
4
0
0 0 0
Plymouth Ave
8
10 192 2
2
13
Jefferson Ave
13
8
63
25 376 8
Plymouth Ave
5
9 274 3
7
9
Barton St
27
2
0
3 361 14
Plymouth Ave

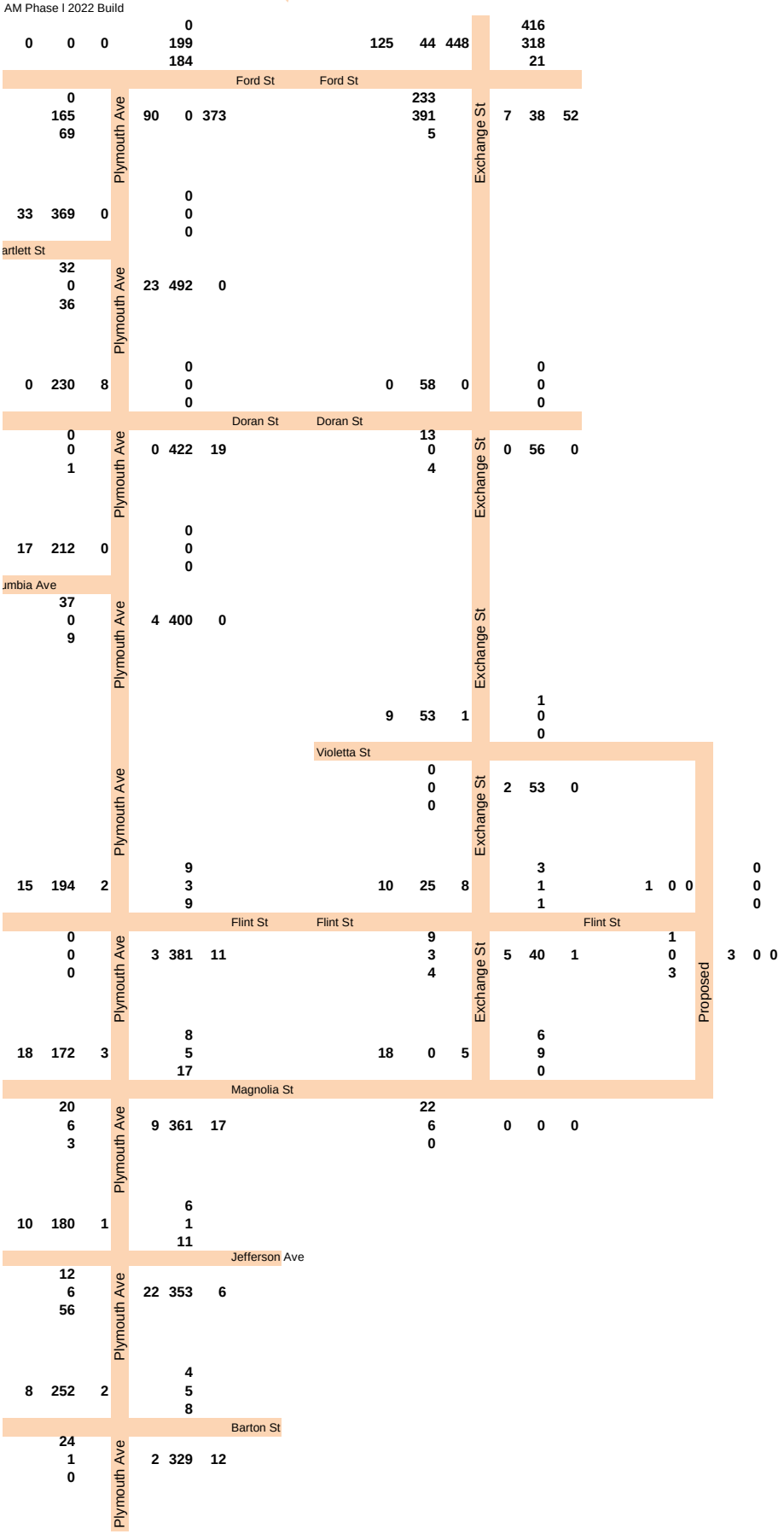
Mid No Build


0
0 0 0
261
262
134 31 360
324
383
33
Ford St
Ford St
0
152
89
Plymouth Ave
115 0 250
112
308
3
Exchange St
5 38 40
0
61 394 0
0
0
artlett St
31
0
61
Plymouth Ave
31 363 0
2
0 321 21
0
4
2 57 0
0
0
0
Doran St
Doran St
2
0
2
Plymouth Ave
2 338 14
14
0
11
Exchange St
2 54 0
0
39 279 0
0
0
umbia Ave
50
0
23
Plymouth Ave
14 303 0
Exchange St
3
11 51 2
4
0
Violetta St
2
0
0
Plymouth Ave
3 49 0
Exchange St
5
36 238 4
5
9
11 36 2
8
2
0
Flint St
Flint St
0
0
0
Plymouth Ave
5 265 10
8
3
2
Exchange St
5 25 0
15
32 192 9
13
19
28 0 8
3
20
0
Magnolia St
43
9
13
Plymouth Ave
10 227 7
19
7
0
0 0 0
4
23 215 3
13
7
Jefferson Ave
20
19
67
Plymouth Ave
38 186 15
2
16 281 3
5
7
Barton St
17
0
5
Plymouth Ave
0 218 11

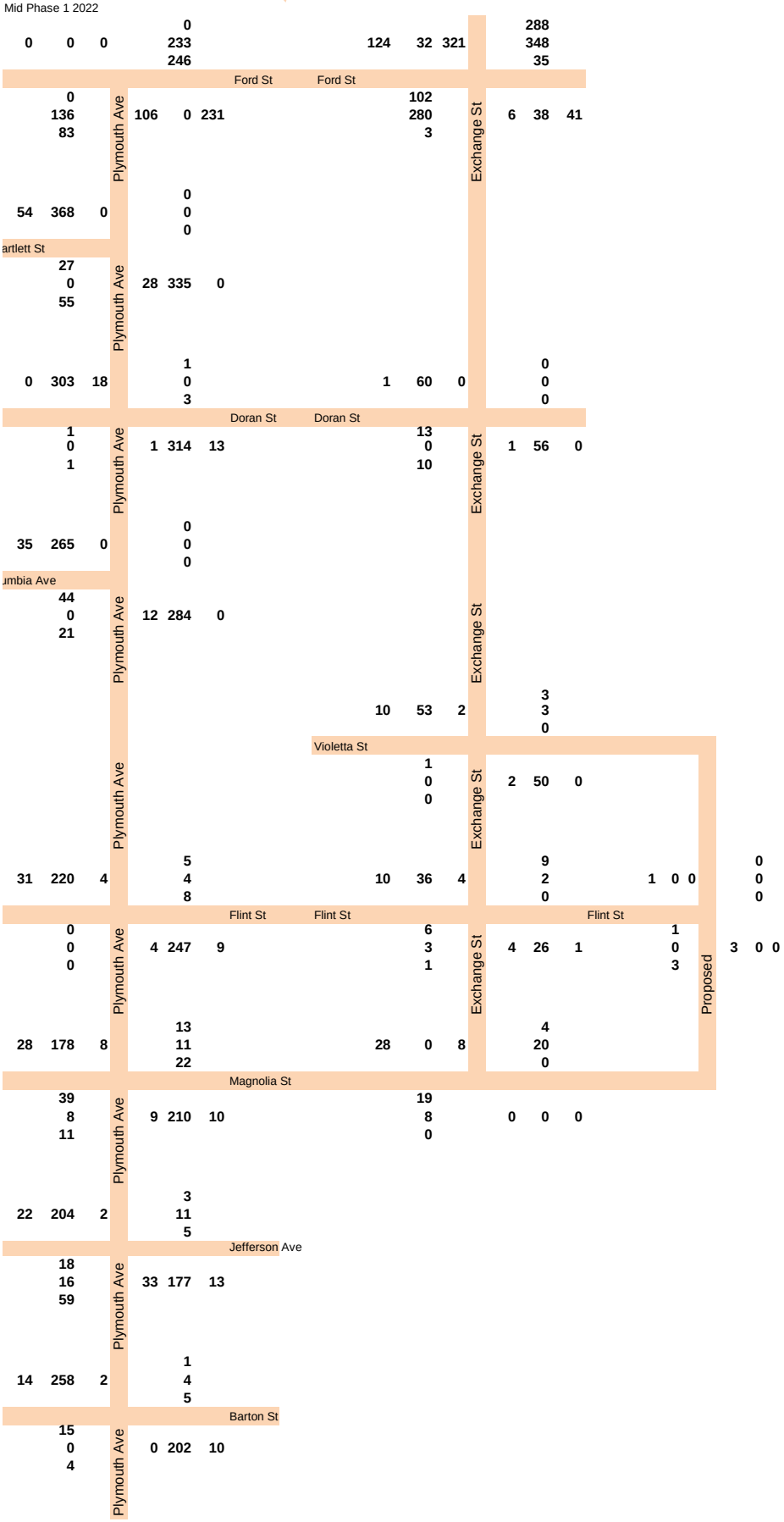
PM No Build


0
0 0 0
347
451
484
593
66
Ford St
Ford St
0
199
125
143 0 367
7
408
0
5 49 46
Plymouth Ave
Exchange St
0
63 739 0
0
0
artlett St
27
0
99
67 372 0
Plymouth Ave
0
16 547 22
0
0
2 89 0
0
0
0
Doran St
Doran St
7
4
9
4 475 27
28
0
13
0 65 0
Plymouth Ave
Exchange St
0
63 493 0
0
0
umbia Ave
53
0
25
13 446 0
Plymouth Ave
Exchange St
28 63 3
4
3
0
Violetta St
0
0
0
2 60 2
Plymouth Ave
Exchange St
9
53 462 5
13
9
19 51 3
4
4
3
Flint St
Flint St
2
0
0
7 413 5
7
2
5
10 32 2
Plymouth Ave
Exchange St
23
49 393 19
17
23
15 0 2
2
4
0
Magnolia St
31
19
10
15 377 14
5
4
0
0 0 0
Plymouth Ave
8
32 389 9
20
27
Jefferson Ave
45
27
101
54 371 22
Plymouth Ave
7
36 468 3
4
17
Barton St
27
2
11
5 408 9
Plymouth Ave

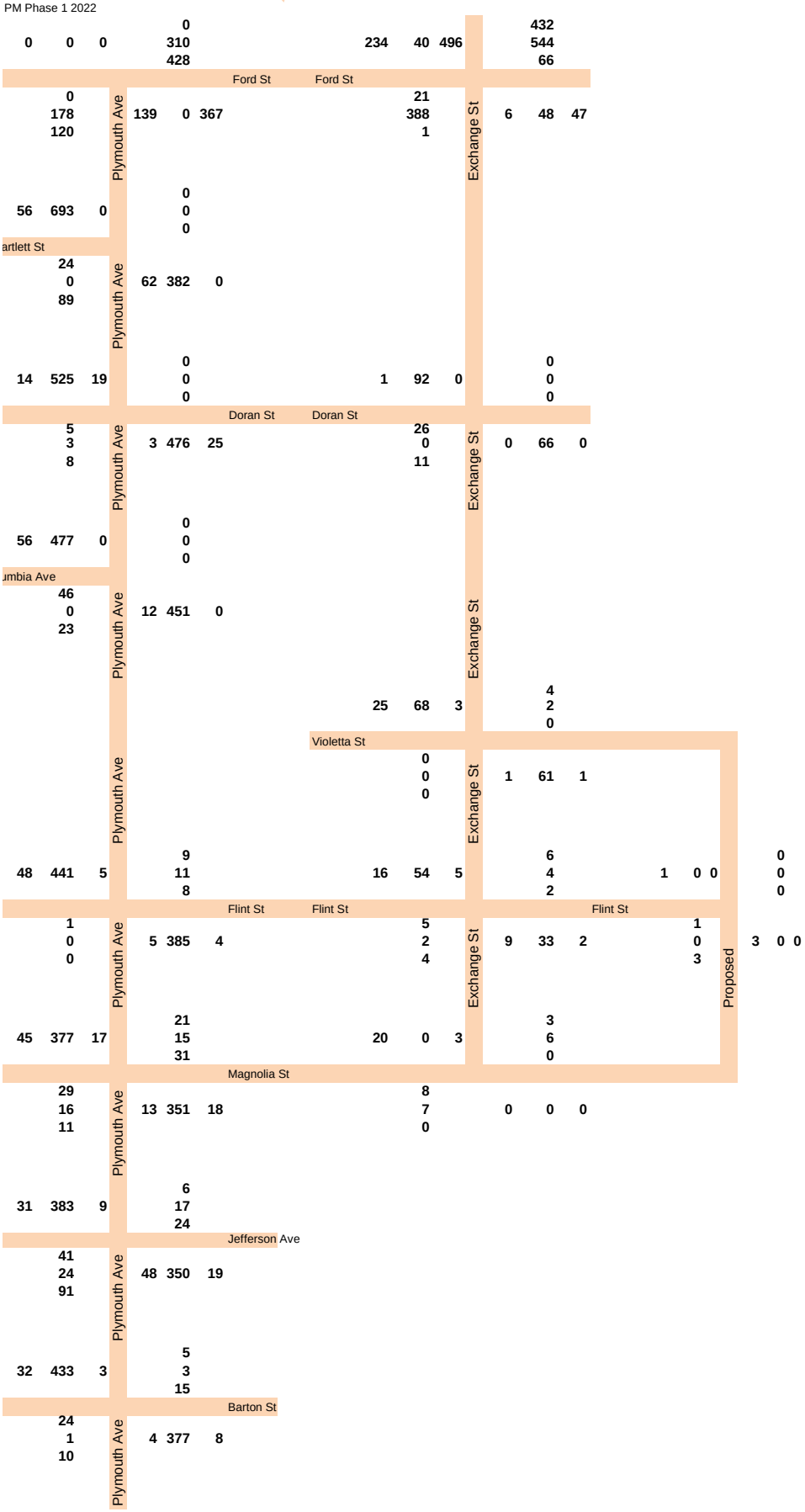
AM Phase I 2022 Build



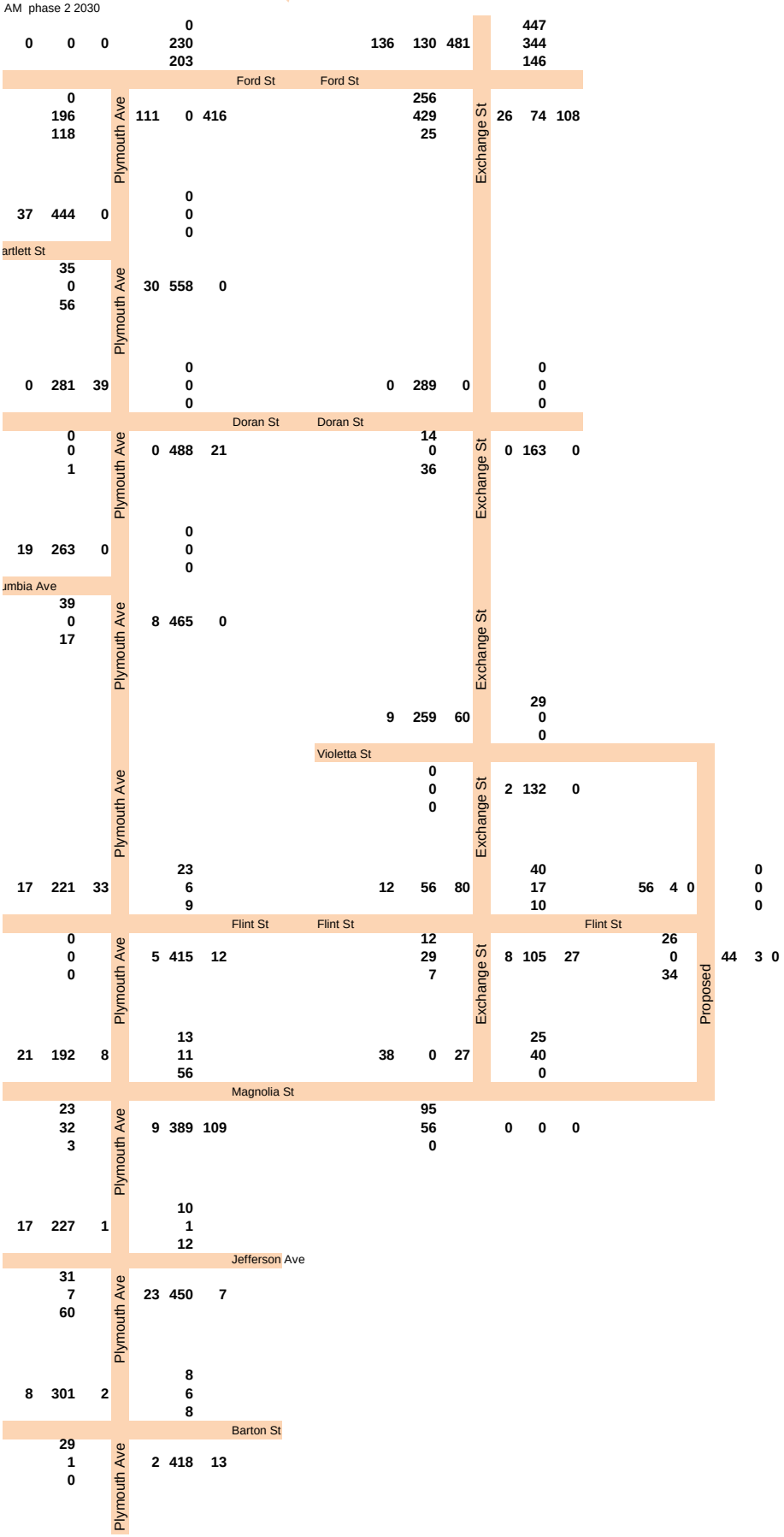
Mid Phase 1 2022



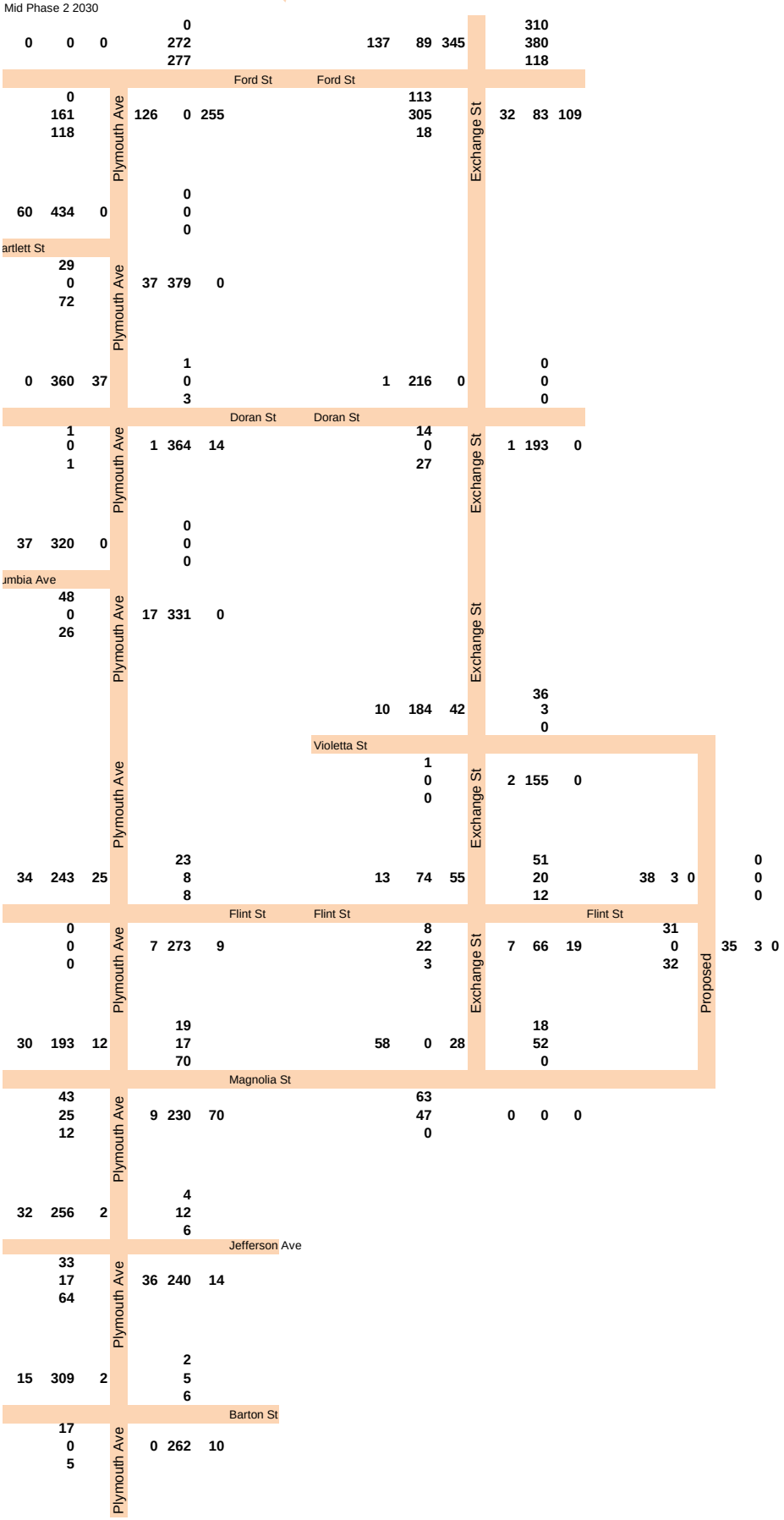
PM Phase 1 2022



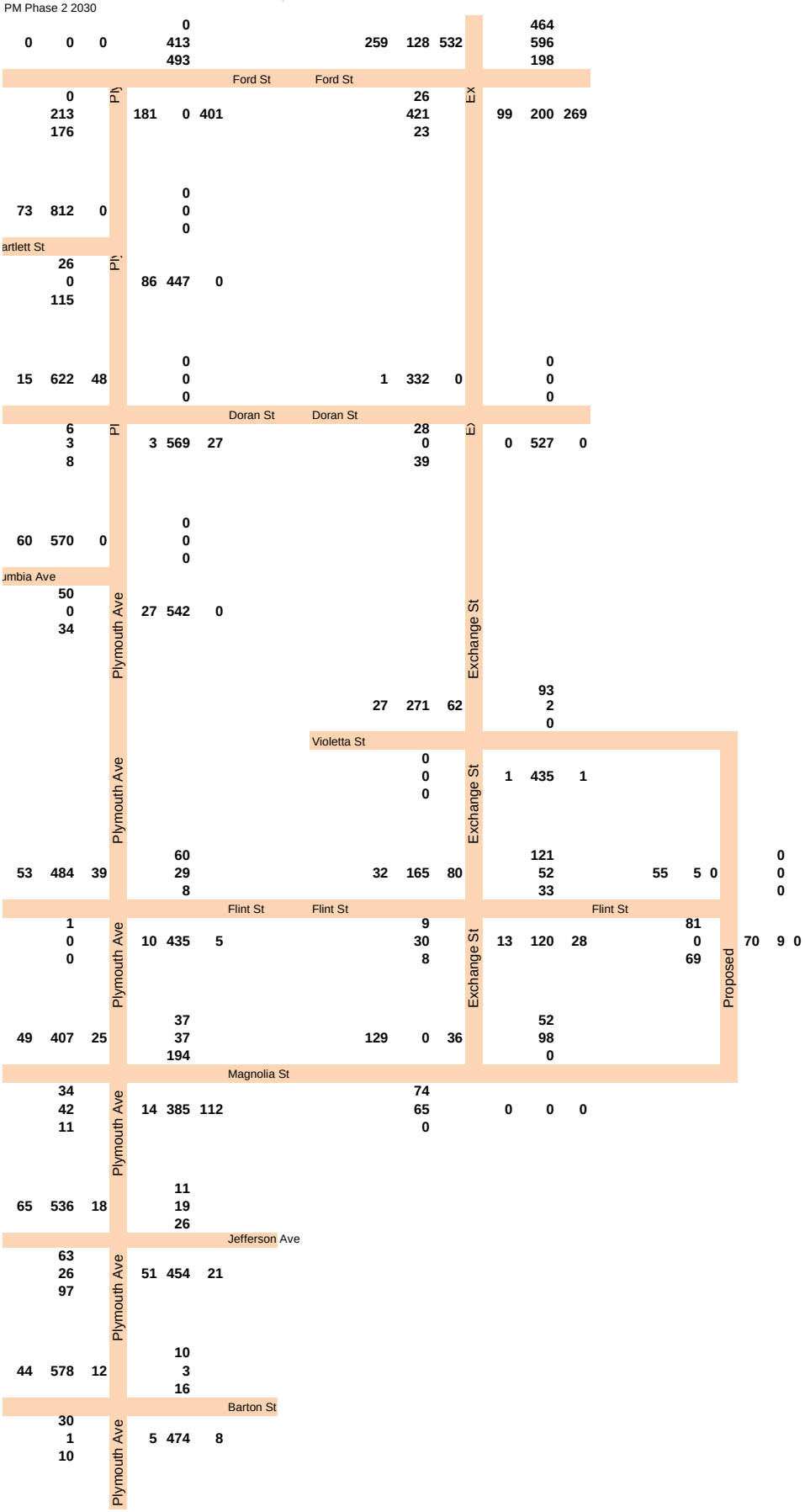
AM phase 2 2030

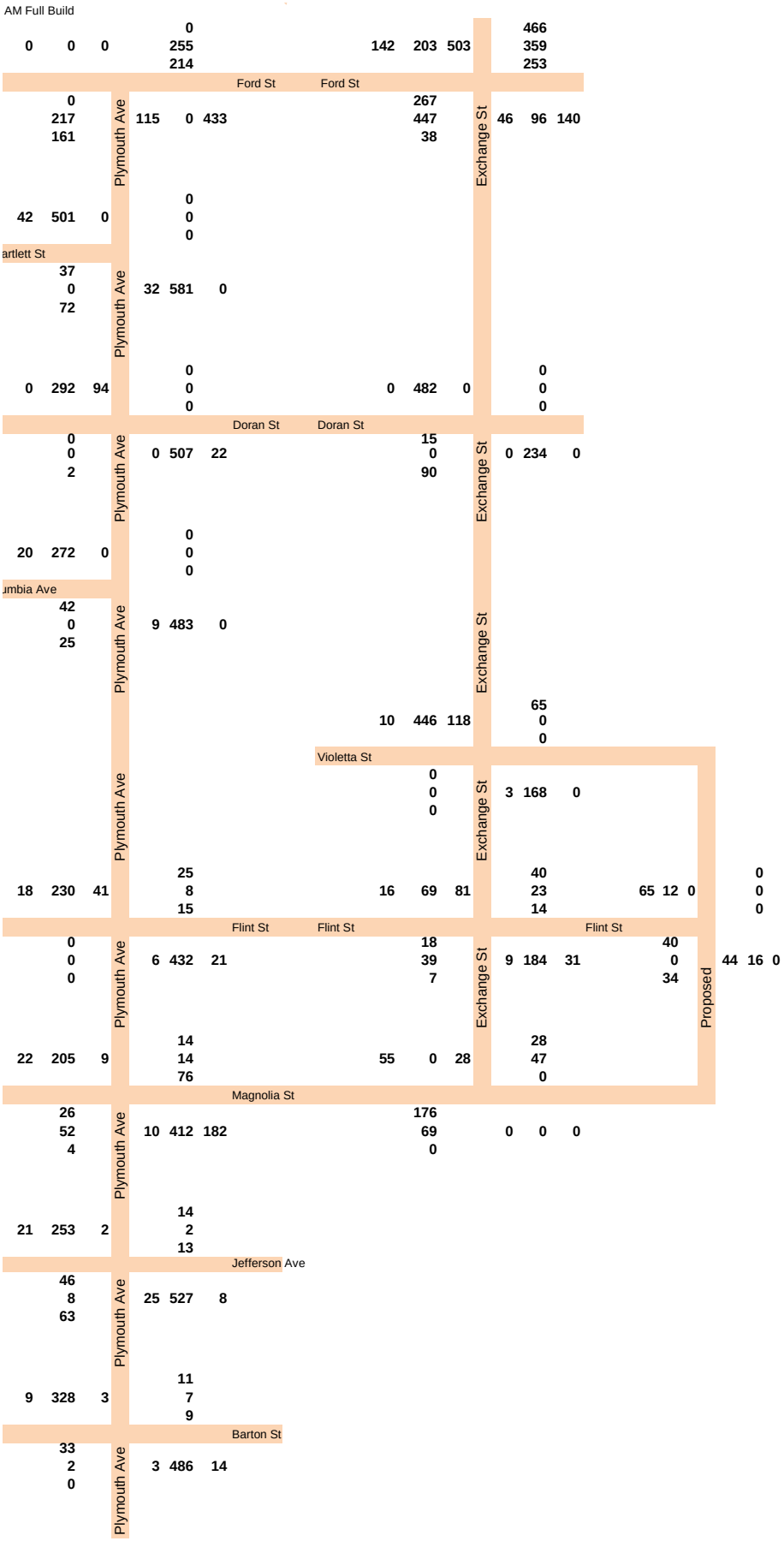


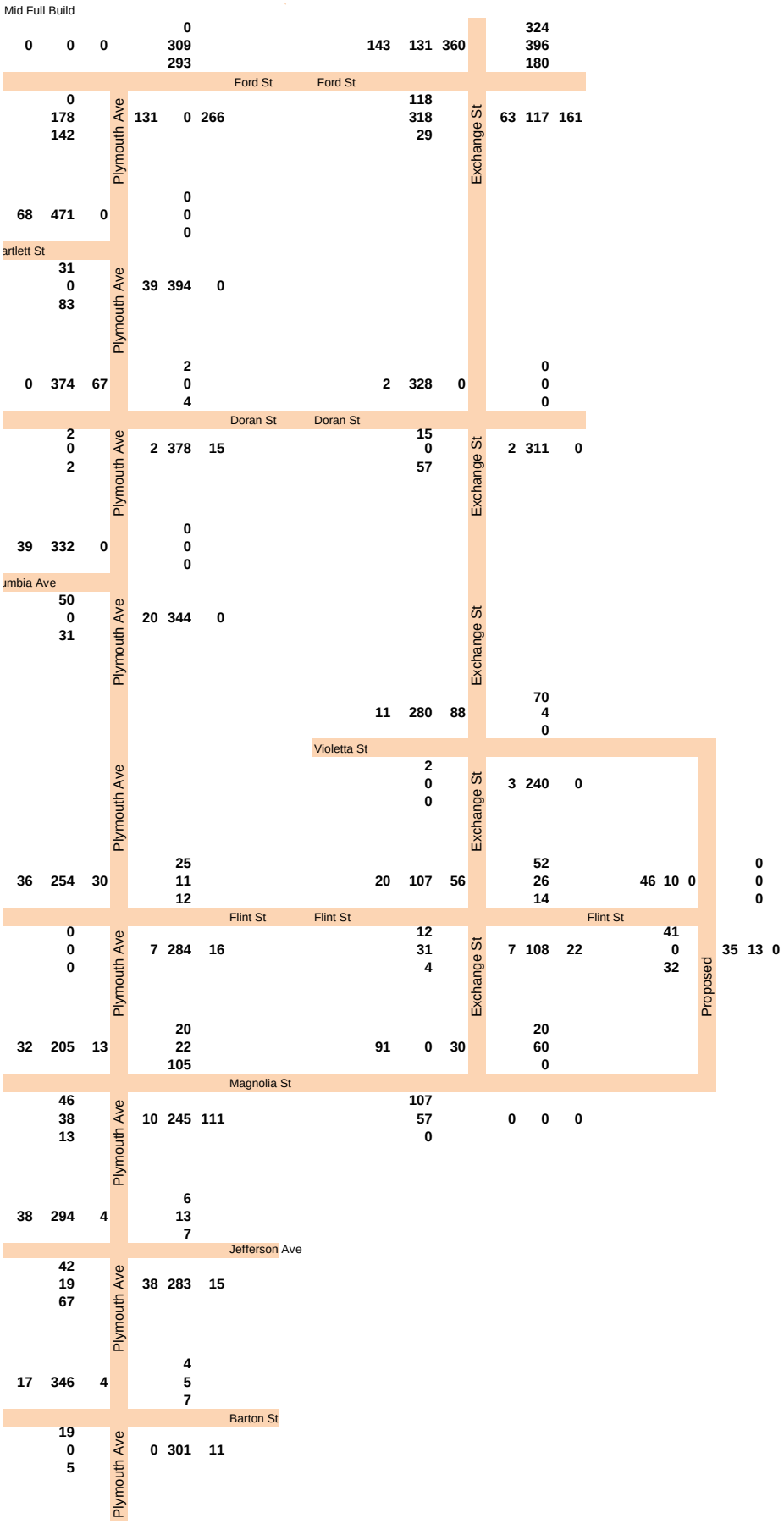
Mid Phase 2 2030

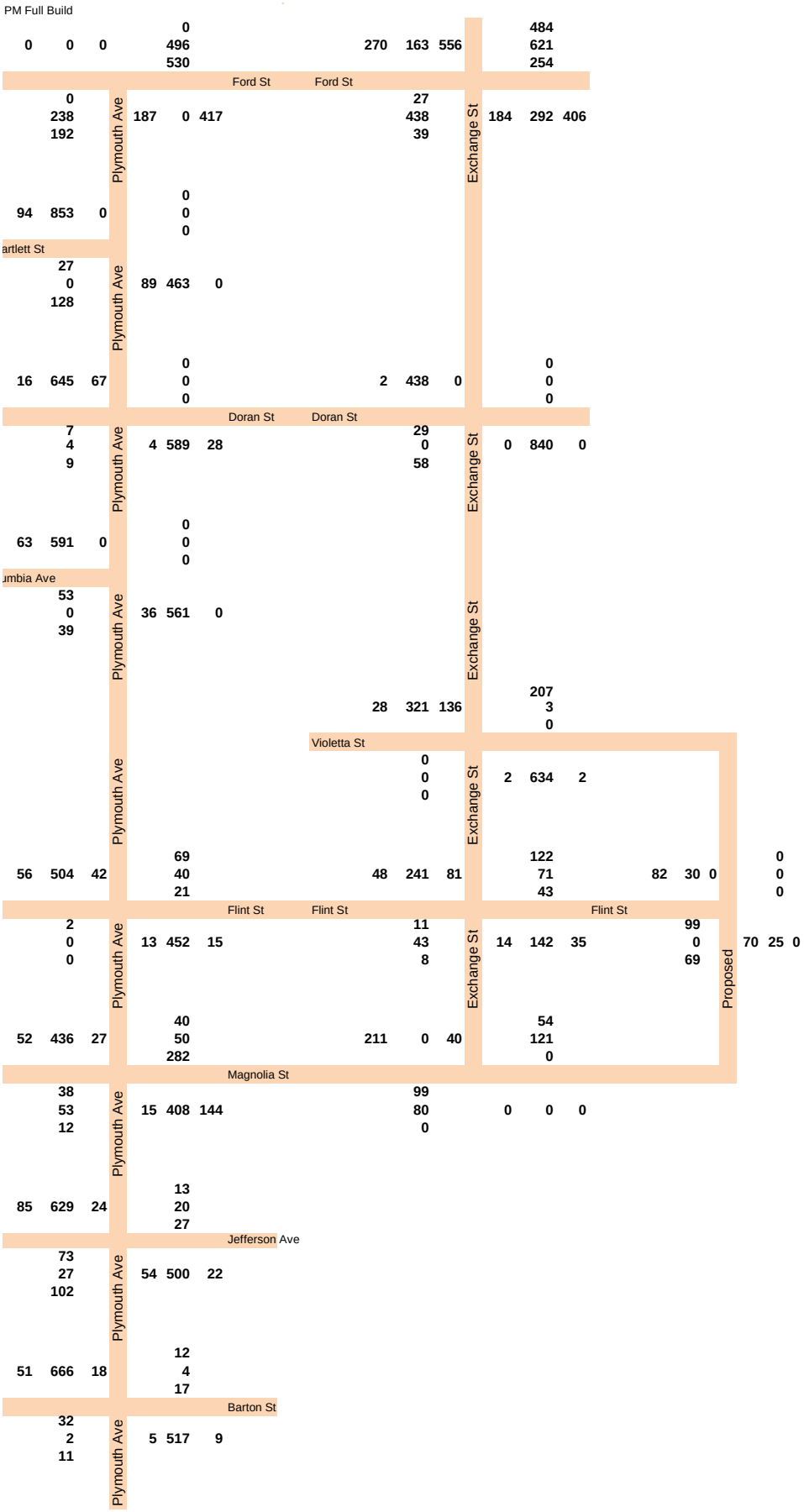


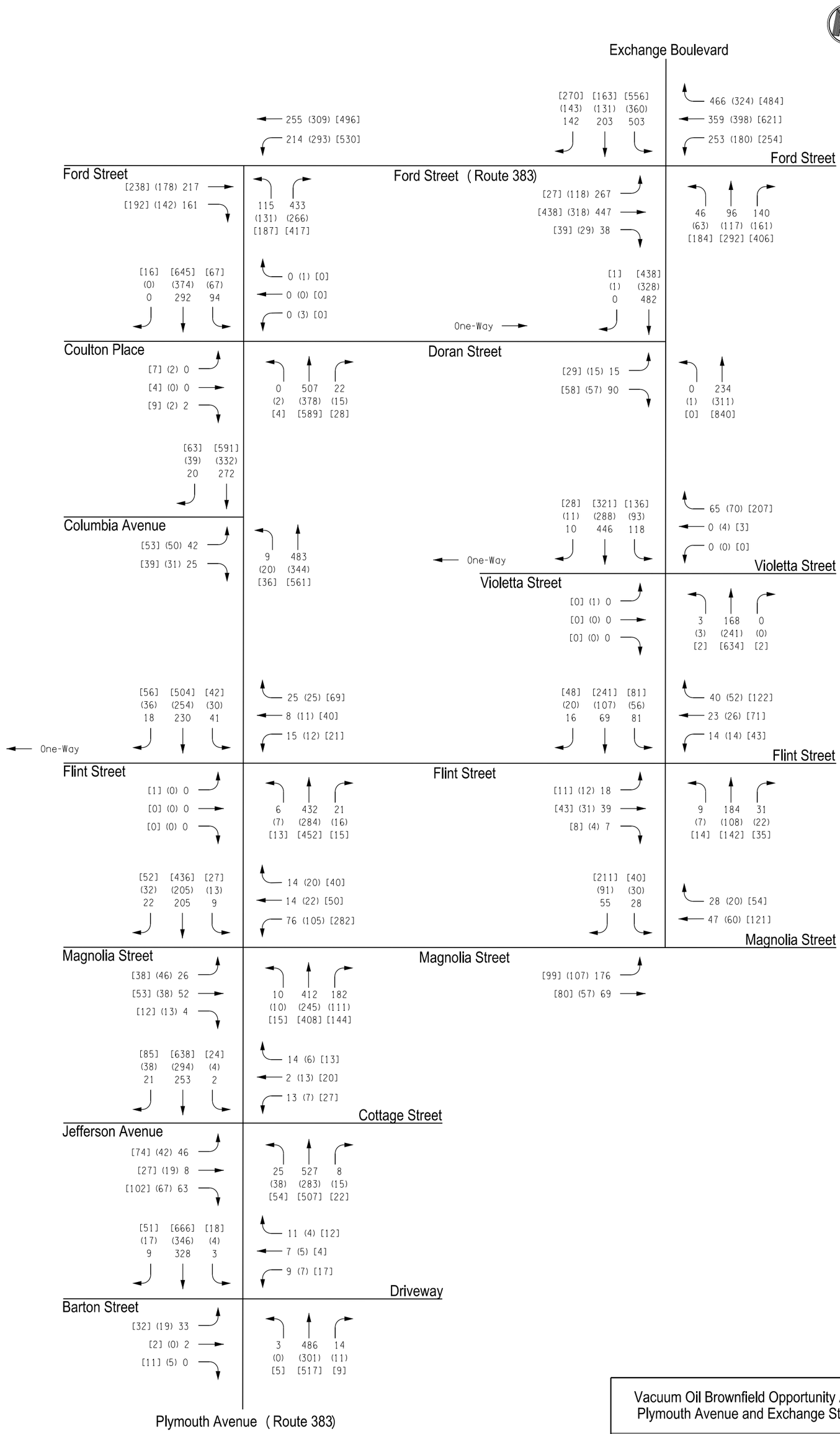
PM Phase 2 2030




AM Full Build
Ford St
Ford St
Plymouth Ave
Exchange St
artlett St
Doran St
Doran St
umbia Ave
Violetta St
Flint St
Flint St
Flint St
Proposed
Magnolia St
Jefferson Ave
Barton St


Mid Full Build
0
0 0 0
309
293
143 131 360
324
396
180
Ford St
Ford St
0
178
142
131 0 266
118
318
29
63 117 161
Plymouth Ave
Exchange St
0
68 471 0
0
0
artlett St
31
0
83
39 394 0
2
0 374 67
0
4
2 328 0
0
0
0
Doran St
Doran St
2
0
2
2 378 15
15
0
57
2 311 0
0
39 332 0
0
umbia Ave
50
0
31
20 344 0
70
4
0
11 280 88
Violetta St
2
0
0
3 240 0
25
11
12
20 107 56
52
26
14
46 10 0
0
0
0
Flint St
Flint St
Flint St
0
0
0
7 284 16
12
31
4
7 108 22
41
0
32
35 13 0
Proposed
20
22
105
91 0 30
20
60
0
Magnolia St
46
38
13
10 245 111
107
57
0
0 0 0
6
13
7
38 294 4
Jefferson Ave
42
19
67
38 283 15
4
5
7
17 346 4
Barton St
19
0
5
0 301 11


PM Full Build
0
0 0 0
496
530
270 163 556
484
621
254
Ford St
Ford St
0
238
192
187 0 417
27
438
39
184 292 406
Plymouth Ave
Exchange St
0
94 853 0
0
0
artlett St
27
0
128
89 463 0
0
0
0
16 645 67
0
0
0
2 438 0
0
0
0
Doran St
Doran St
7
4
9
4 589 28
29
0
58
0 840 0
0
0
0
63 591 0
0
0
umbia Ave
53
0
39
36 561 0
207
3
0
28 321 136
Violetta St
0
0
0
2 634 2
69
40
21
122
71
43
56 504 42
48 241 81
82 30 0
0
0
0
Flint St
Flint St
Flint St
2
0
0
13 452 15
11
43
8
14 142 35
99
0
69
70 25 0
Proposed
40
50
282
54
121
0
52 436 27
211 0 40
Magnolia St
38
53
12
15 408 144
99
80
0
0 0 0
13
20
27
85 629 24
Jefferson Ave
73
27
102
54 500 22
12
4
17
51 666 18
Barton St
32
2
11
5 517 9



LEGEND:

XXX - Weekday AM Peak Hour Traffic
(XXX) - Weekday Mid-Day Peak Hour Traffic
[XXX] - Weekday PM Peak Hour Traffic

Vacuum Oil Brownfield Opportunity Area
Plymouth Avenue and Exchange Street

2035 Full Build Traffic Volumes
Peak Hour Turning Movements

FIGURE NO.	SCALE	DATE
2	No Scale	10/15

Bergmann associates

Appendix B

Level of Service Analysis Results

- **2014 Existing**
- **2035 No Build**

DEFINITION OF LEVEL OF SERVICE FOR

SIGNALIZED INTERSECTIONS

Level of service for signalized intersections is defined in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. The delay experienced by a motorist is made up of a number of factors that relate to control, geometrics, traffic, and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during ideal conditions: in the absence of traffic control, in the absence of geometric delay, in the absence of any incidents and when there are no other vehicles on the road. Only the portion of total delay attributed to the control facility is quantified. This delay is called *control delay.* Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay.

Specifically, LOS criteria for traffic signals are stated in terms of the average control delay per vehicle, typically for a 15-minute analysis period. The criteria are given in the following table. Delay is a complex measure and is dependent on a number of variables, including the quality of progression, the cycle length, the green ratio, and the v/c ratio for the lane group in question.

LEVEL OF SERVICE	CONTROL DELAY PER VEHICLE (sec)
A	Less than or equal to 10.0
B	Greater than 10.0 to no more than 20.0
C	Greater than 20.0 to no more than 35.0
D	Greater than 35.0 to no more than 55.0
E	Greater than 55.0 to no more than 80.0
F	Greater than 80.0

Level Of Service A describes operations with very low control delay, up to 10 seconds per vehicle. This level of service occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.

Level Of Service B describes operations with control delay greater than 10 and up to 20 seconds per vehicle. This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of average delay.

Level Of Service C describes operations with control delay greater than 20 and up to 35 seconds per vehicle. These higher delays may result form fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.

Level Of Service D describes operations with control delay greater than 35 and up to 55 seconds per vehicle. At level D, the influence of congestion becomes more noticeable. Longer delays may result form some combination of unfavorable progression, long cycle lengths, or high *v/c* ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.

Level Of Service E describes operations with control delay greater than 55 and up to 80 seconds per vehicle. This level is considered by many agencies to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent occurrences.

Level Of Service F describes operations with control delay in excess of 80 seconds per vehicle. This level, considered to be unacceptable to most drivers, often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the intersection. It may also occur at high v/c ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing factors to such delay levels.

DEFINITION OF LEVEL OF SERVICE FOR

UNSIGNALIZED INTERSECTIONS

The level of service for a Two-Way-Stop-Control (TWSC) intersection is determined by the computed or measured control delay and is defined for each minor movement. Level of service is not defined for the intersection as a whole. LOS criteria are given in the accompanying table.

LEVEL OF SERVICE	CONTROL DELAY PER VEHICLE (sec)
A	Less than or equal to 10.0
B	Greater than 10.0 to no more than 15.0
C	Greater than 15.0 to no more than 25.0
D	Greater than 25.0 to no more than 35.0
E	Greater than 35.0 to no more than 50.0
F	Greater than 50.0

The LOS criteria for TWSC intersections are somewhat different than the criteria used for signalized intersections. The primary reason for this difference is that drivers expect different levels of performance from different kinds of transportation facilities. The expectation is that a signalized intersection would be designed to carry higher traffic volumes than an unsignalized intersection. In addition, a number of driver behavior considerations combine to make delays at signalized intersections less onerous than delays at unsignalized intersections. Also, there is often much more variability in the amount of delay experienced by individual drivers at an unsignalized intersection versus that at signalized intersections. For these reasons, it is considered that the control delay threshold for any given level of service would be less for an unsignalized intersection than it would be for a signalized intersection.

The delay experienced by a motorist is made up of a number of factors that relate to control, geometrics, traffic, and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during conditions with ideal geometrics and in the absence of incidents, control and traffic. This delay is called *control delay*. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay.

In the performance evaluation of TWSC intersections, it is important to consider other measures of effectiveness (MOE's) in addition to delay, such as v/c ratios for individual movements, average queue lengths, and 95th percentile queue lengths. By focusing on a single MOE for the worst movement only, such as delay for the minor-street left turn, inappropriate traffic control decisions may be made.

Intersection	Approach			2014 Existing						2035 No Build					
				Weekday AM Peak Hour		Weekday Mid Peak Hour		Weekday PM Peak Hour		Weekday AM Peak Hour		Weekday Mid Peak Hour		Weekday PM Peak Hour	
				LOS	Control Delay (sec/veh)	LOS	Control Delay (sec/veh)	LOS	Control Delay (sec/veh)	LOS	Control Delay (sec/veh)	LOS	Control Delay (sec/veh	LOS	Control Delay (sec/veh)
Plymouth Avenue at Ford Street	Ford Street	Eastbound	TR	A	5.4	A	5.0	A	7.0	A	6.2	A	5.8	A	8.9
	Ford Street	Eastbound	Approach	A	5.4	A	5.0	A	7.0	A	6.2	A	5.8	A	8.9
	Ford Street	Westbound	LT	A	5.7	A	6.5	A	9.7	A	6.7	A	7.8	B	13.8
Unsignalized	Ford Street	Westbound	Approach	A	5.7	A	6.5	A	9.7	A	6.7	A	7.8	B	13.8
	Plymouth	Northbound	LR	A	7.4	A	5.4	A	7.0	A	9.4	A	6.2	A	8.7
	Plymouth	Northbound	Approach	A	7.4	A	5.4	A	7.0	A	9.4	A	6.2	A	8.7
		Overall		A	6.4	A	5.8	A	8.3	A	7.8	A	6.9	B	11.2
Plymouth Avenue at Doran Street	Coulton Pl	Eastbound	LTR	A	9.4	B	11.8	B	14.8	A	9.6	B	13.0	C	17.9
	Coulton Pl	Eastbound	Approach	A	9.4	B	11.8	B	14.8	A	9.6	B	13.0	C	17.9
	Plymouth	Northbound	LTR	A	0.0	A	0.0	A	0.1	A	0.0	A	0.0	A	0.1
Unsignalized	Plymouth	Northbound	Approach	A	0.0	A	0.0	A	0.1	A	0.0	A	0.0	A	0.1
	Plymouth	Southbound	LTR	A	0.3	A	0.5	A	0.3	A	0.3	A	0.5	A	0.3
Doran Street is one-way eastbound	Plymouth	Southbound	Approach	A	0.3	A	0.5	A	0.3	A	0.3	A	0.5	A	0.3
		Overall		A	0.1	A	0.3	A	0.4	A	0.1	A	0.3	A	0.5
Plymouth Avenue at Columbia Avenue	Columbia	Eastbound	LR	B	12.7	B	13.1	C	17.2	B	14.4	C	15.0	C	22.7
	Columbia	Eastbound	Approach	B	12.7	B	13.1	C	17.2	B	14.4	C	15.0	C	22.7
	Plymouth	Northbound	LT	A	0.1	A	0.3	A	0.2	A	0.1	A	0.4	A	0.2
Unsignalized	Plymouth	Northbound	Approach	A	0.1	A	0.3	A	0.2	A	0.1	A	0.4	A	0.2
	Plymouth	Southbound	TR	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0
	Plymouth	Southbound	Approach	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0
		Overall		A	1.0	A	1.5	A	1.3	A	1.1	A	1.7	A	1.7
Plymouth Avenue at Flint Street	Flint Street	Westbound	LTR	B	12.3	B	11.1	B	13.7	B	13.6	B	12.0	C	16.2
	Flint Street	Westbound	Approach	B	12.3	B	11.1	B	13.7	B	13.6	B	12.0	C	16.2
	Plymouth	Northbound	LTR	A	0.1	A	0.1	A	0.1	A	0.1	A	0.1	A	0.1
Unsignalized	Plymouth	Northbound	Approach	A	0.1	A	0.1	A	0.1	A	0.1	A	0.1	A	0.1
	Plymouth	Southbound	LTR	A	0.0	A	0.1	A	0.1	A	0.1	A	0.1	A	0.1
Flint Street is one-way westbound (west of Plymouth Ave)	Plymouth	Southbound	Approach	A	0.0	A	0.1	A	0.1	A	0.1	A	0.1	A	0.1
		Overall		A	0.5	A	0.4	A	0.5	A	0.6	A	0.5	A	0.6
Plymouth Avenue at Magnolia Street	Magnolia St	Eastbound	LTR	C	25.7	C	24.4	C	22.0	C	25.3	C	24.3	C	22.1
	Magnolia St	Eastbound	Approach	C	25.7	C	24.4	C	22.0	C	25.3	C	24.3	C	22.1
	Magnolia St	Westbound	LTR	C	25.7	C	24.3	C	22.3	C	25.4	C	24.1	C	22.2
Signalized	Magnolia St	Westbound	Approach	C	25.7	C	24.3	C	22.3	C	25.4	C	24.1	C	22.2
	Plymouth	Northbound	LTR	B	10.2	A	2.7	B	10.2	B	10.8	A	2.9	B	10.8
	Plymouth	Northbound	Approach	B	10.2	A	2.7	B	10.2	B	10.8	A	2.9	B	10.8
	Plymouth	Southbound	LTR	A	0.9	A	0.2	A	1.9	A	1.0	A	0.3	A	2.6
	Plymouth	Southbound	Approach	A	0.9	A	0.2	A	1.9	A	1.0	A	0.3	A	2.6
		Overall		A	8.7	A	5.8	A	7.8	A	9.2	A	5.9	A	8.4
Plymouth Avenue at Jefferson Avenue	Jefferson	Eastbound	LTR	C	26.5	C	24.8	C	25.1	C	26.6	C	25.0	C	24.6
	Jefferson	Eastbound	Approach	C	26.5	C	24.8	C	25.1	C	26.6	C	25.0	C	24.6
	Cottage St	Westbound	LTR	C	24.4	C	23.4	C	22.4	C	24.1	C	23.1	C	21.5
Signalized	Cottage St	Westbound	Approach	C	24.4	C	23.4	C	22.4	C	24.1	C	23.1	C	21.5
	Plymouth	Northbound	LTR	B	11.1	A	2.9	B	11.4	B	11.9	A	3.2	B	12.5
	Plymouth	Northbound	Approach	B	11.1	A	2.9	B	11.4	B	11.9	A	3.2	B	12.5
	Plymouth	Southbound	LTR	A	1.5	A	8.7	A	2.3	A	1.7	A	9.3	A	2.8
	Plymouth	Southbound	Approach	A	1.5	A	8.7	A	2.3	A	1.7	A	9.3	A	2.8
		Overall		B	10.6	A	9.7	B	10.5	B	11.1	B	10.2	B	11.0
Plymouth Avenue at Barton Street	Barton St	Eastbound	LTR	C	15.3	B	11.9	C	17.0	C	18.4	B	13.1	C	21.8
	Barton St	Eastbound	Approach	C	15.3	B	11.9	C	17.0	C	18.4	B	13.1	C	21.8
	Driveway	Westbound	LTR	B	14.5	B	12.8	C	17.5	C	17.0	B	13.9	C	22.1
Unsignalized	Driveway	Westbound	Approach	B	14.5	B	12.8	C	17.5	C	17.0	B	13.9	C	22.1
	Plymouth	Northbound	LTR	A	0.1	A	0.0	A	0.1	A	0.1	A	0.0	A	0.1
	Plymouth	Northbound	Approach	A	0.1	A	0.0	A	0.1	A	0.1	A	0.0	A	0.1
	Plymouth	Southbound	LTR	A	0.1	A	0.1	A	0.0	A	0.1	A	0.1	A	0.0
	Plymouth	Southbound	Approach	A	0.1	A	0.1	A	0.0	A	0.1	A	0.1	A	0.0
		Overall		A	1.1	A	0.8	A	1.2	A	1.3	A	0.9	A	1.5

Intersection	Approach			2014 Existing						2035 No Build					
				Weekday AM Peak Hour		Weekday Mid Peak Hour		Weekday PM Peak Hour		Weekday AM Peak Hour		Weekday Mid Peak Hour		Weekday PM Peak Hour	
				LOS	Control Delay (sec/veh)	LOS	Control Delay (sec/veh)	LOS	Control Delay (sec/veh)	LOS	Control Delay (sec/veh)	LOS	Control Delay (sec/veh)	LOS	Control Delay (sec/veh)
Exchange Street at Ford Street	Ford Street	Eastbound	L	B	11.3	B	10.2	B	15.6	B	12.6	B	11.2	B	19.3
	Ford Street	Eastbound	T	A	9.7	A	8.9	B	14.8	B	10.6	A	9.7	B	18.4
	Ford Street	Eastbound	TR	A	9.6	A	8.9	B	14.8	B	10.6	A	9.7	B	18.4
Signalized	Ford Street	Eastbound	Approach	B	10.3	A	9.2	B	14.8	B	11.3	B	10.1	B	18.4
	Ford Street	Westbound	LT	B	16.3	B	14.6	C	20.3	B	18.7	B	16.1	C	26.4
	Ford Street	Westbound	TR	B	16.5	B	14.9	C	20.8	B	19.0	B	16.5	C	27.2
	Ford Street	Westbound	Approach	B	16.4	B	14.8	C	20.6	B	18.9	B	16.3	C	26.8
	Exchange St	Northbound	L	D	51.1	D	42.2	D	50.4	D	50.0	D	41.3	D	49.2
	Exchange St	Northbound	TR	E	60.3	D	47.8	E	58.6	E	60.0	D	47.6	E	58.4
	Exchange St	Northbound	Approach	E	59.7	D	47.5	E	58.2	E	59.3	D	47.2	E	58.0
	Exchange St	Southbound	L	F	104.5	D	36.3	D	42.8	F	187.9	D	45.9	D	51.1
	Exchange St	Southbound	T T	C	30.7	C	24.7	C	23.0	C	29.8	C	23.8	B	19.8
	Exchange St	Southbound	R	C	30.7	C	24.7	C	23.0	C	29.8	C	23.8	B	19.8
	Exchange St	Southbound	Approach	F	98.5	D	35.4	D	41.5	F	175.1	D	44.1	D	49.1
		Overall		D	42.7	C	21.2	C	28.4	E	68.3	C	24.5	C	34.1
Exchange Street at Doran Street	Doran St	Eastbound	LR	A	9.2	A	9.0	A	9.3	A	9.3	A	9.2	A	9.6
	Doran St	Eastbound	Approach	A	9.2	A	9.0	A	9.3	A	9.3	A	9.2	A	9.6
	Exchange St	Northbound	T	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0
Unsignalized	Exchange St	Northbound	Approach	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0
	Exchange St	Southbound	T	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0
Doran Street is one-way eastbound	Exchange St	Southbound	Approach	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0
		Overall		A	1.3	A	1.6	A	1.9	A	1.4	A	1.7	A	2.0
Exchange Street at Violetta Street	Violetta St	Westbound	LTR	A	0.0	A	8.6	A	8.7	A	0.0	A	8.7	A	8.7
	Violetta St	Westbound	Approach	A	0.0	A	8.6	A	8.7	A	0.0	A	8.7	A	8.7
	Exchange St	Northbound	LTR	A	0.3	A	0.3	A	0.1	A	0.4	A	0.4	A	0.2
Unsignalized	Exchange St	Northbound	Approach	A	0.3	A	0.3	A	0.1	A	0.4	A	0.4	A	0.2
	Exchange St	Southbound	LTR	A	0.0	A	0.1	A	0.2	A	0.0	A	0.2	A	0.2
Violetta Street is one-way westbound (west of Exchange St)	Exchange St	Southbound	Approach	A	0.0	A	0.1	A	0.2	A	0.0	A	0.2	A	0.2
		Overall		A	0.1	A	0.6	A	0.5	A	0.2	A	0.8	A	0.6
Exchange Street at Flint Street	Flint Street	Eastbound	LTR	A	9.0	A	9.3	A	9.1	A	9.2	A	9.5	A	9.3
	Flint Street	Eastbound	Approach	A	9.0	A	9.3	A	9.1	A	9.2	A	9.5	A	9.3
	Flint Street	Westbound	LTR	A	9.1	A	8.6	A	9.4	A	9.3	A	8.8	A	9.6
Unsignalized	Flint Street	Westbound	Approach	A	9.1	A	8.6	A	9.4	A	9.3	A	8.8	A	9.6
	Exchange St	Northbound	LTR	A	1.1	A	1.2	A	1.7	A	1.2	A	1.2	A	1.7
	Exchange St	Northbound	Approach	A	1.1	A	1.2	A	1.7	A	1.2	A	1.2	A	1.7
	Exchange St	Southbound	LTR	A	1.1	A	0.2	A	0.3	A	1.2	A	0.3	A	0.3
	Exchange St	Southbound	Approach	A	1.1	A	0.2	A	0.3	A	1.2	A	0.3	A	0.3
		Overall		A	2.5	A	2.3	A	2.2	A	2.7	A	2.6	A	2.3
Exchange Street at Magnolia Street	Magnolia St	Eastbound	LT	A	6.1	A	5.5	A	4.4	A	6.1	A	5.3	A	4.3
	Magnolia St	Eastbound	Approach	A	6.1	A	5.5	A	4.4	A	6.1	A	5.3	A	4.3
	Magnolia St	Westbound	TR	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0
Unsignalized	Magnolia St	Westbound	Approach	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0
	Exchange St	Southbound	LR	A	8.6	A	8.6	A	8.9	A	8.7	A	8.7	A	9.0
	Exchange St	Southbound	Approach	A	8.6	A	8.6	A	8.9	A	8.7	A	8.7	A	9.0
		Overall		A	5.8	A	5.4	A	6.1	A	5.8	A	5.3	A	6.0
Plymouth Avenue at Bartlett Street	Bartlett St	Eastbound	LR	C	31.2	C	31.9	D	35.3	C	31.7	C	33.2	C	33.2
	Bartlett St	Eastbound	Approach	C	31.2	C	31.9	D	35.3	C	31.7	C	33.2	C	33.2
	Plymouth	Northbound	LT	A	2.7	A	0.4	A	3.0	A	3.3	A	0.5	A	4.1
Signalized	Plymouth	Northbound	Approach	A	2.7	A	0.4	A	3.0	A	3.3	A	0.5	A	4.1
	Plymouth	Southbound	TR	A	2.5	A	2.7	A	4.4	A	2.9	A	3.2	A	6.3
	Plymouth	Southbound	Approach	A	2.5	A	2.7	A	4.4	A	2.9	A	3.2	A	6.3
		Overall		A	4.7	A	4.6	A	6.8	A	5.2	A	5.0	A	8.1

Appendix C

Vision Plans and Build-Out Analysis Tables

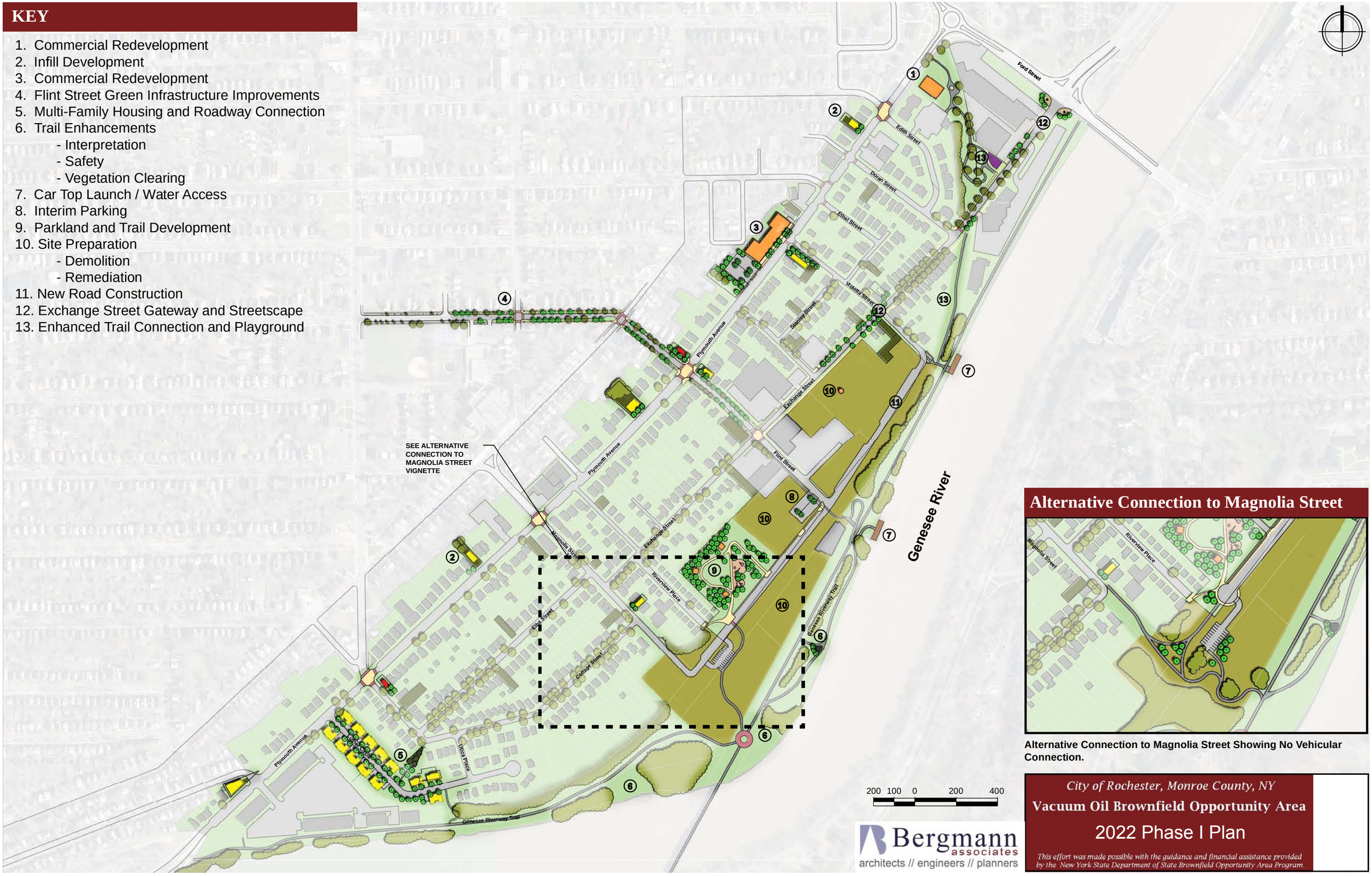
Bergmann associates

2022 Phase I Vision Plan

Bergmann associates

KEY

1. Commercial Redevelopment
2. Infill Development
3. Commercial Redevelopment
4. Flint Street Green Infrastructure Improvements
5. Multi-Family Housing and Roadway Connection
6. Trail Enhancements
   - Interpretation
   - Safety
   - Vegetation Clearing
7. Car Top Launch / Water Access
8. Interim Parking
9. Parkland and Trail Development
10. Site Preparation
    - Demolition
    - Remediation
11. New Road Construction
12. Exchange Street Gateway and Streetscape
13. Enhanced Trail Connection and Playground



Alternative Connection to Magnolia Street

Alternative Connection to Magnolia Street Showing No Vehicular Connection.

Bergmann associates
architects // engineers // planners

City of Rochester, Monroe County, NY

Vacuum Oil Brownfield Opportunity Area

2022 Phase I Plan

This effort was made possible with the guidance and financial assistance provided by the New York State Department of State Brownfield Opportunity Area Program.

2030 Phase II Vision Plan

Bergmann associates

KEY

1. Commercial Redevelopment
2. Infill Development
3. Commercial Redevelopment
4. Flint Street Green Infrastructure Improvements
5. Multi-Family Housing and Roadway Connection
6. Trail Enhancements
   - Interpretation
   - Safety
   - Vegetation Clearing
7. Car Top Launch / Water Access
8. *Interim Parking Removed in 8-15 Year Plan*
9. Parkland and Trail Development
10. *Site Preparation Completed in 0-7 Year Plan*
11. New Road Construction
12. Exchange Street Gateway and Streetscape
13. Enhanced Trail Connection and Playground
14. Housing Redevelopment
15. Mixed Use Development
16. Foodlink Redevelopment
17. Mixed Use Development
18. Waterfront Mixed Use
    - Adaptive Reuse of 5 Flint Street
19. Waterfront Mixed Use with Structured Parking
20. Waterfront Amphitheater
21. Public Gathering / Event Space
22. Canal Interpretation / Water Feature
23. Wetland Interpretation and Nature Trail

Bergmann associates
architects // engineers // planners

City of Rochester, Monroe County, NY

Vacuum Oil Brownfield Opportunity Area

2030 Phase II Plan

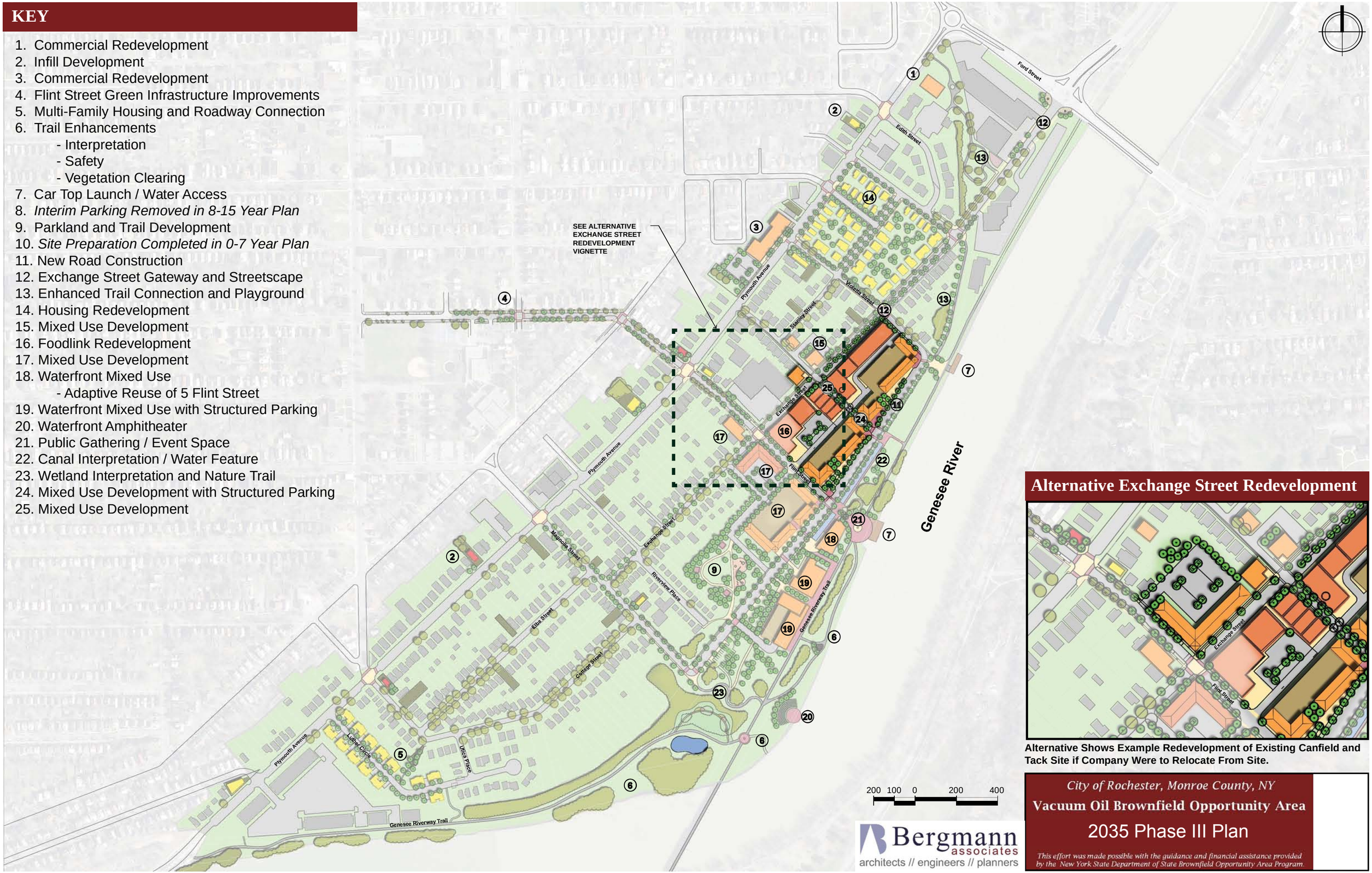
This effort was made possible with the guidance and financial assistance provided by the New York State Department of State Brownfield Opportunity Area Program.

2035 Phase III Vision Plan

Bergmann associates

KEY

1. Commercial Redevelopment
2. Infill Development
3. Commercial Redevelopment
4. Flint Street Green Infrastructure Improvements
5. Multi-Family Housing and Roadway Connection
6. Trail Enhancements
   - Interpretation
   - Safety
   - Vegetation Clearing
7. Car Top Launch / Water Access
8. *Interim Parking Removed in 8-15 Year Plan*
9. Parkland and Trail Development
10. *Site Preparation Completed in 0-7 Year Plan*
11. New Road Construction
12. Exchange Street Gateway and Streetscape
13. Enhanced Trail Connection and Playground
14. Housing Redevelopment
15. Mixed Use Development
16. Foodlink Redevelopment
17. Mixed Use Development
18. Waterfront Mixed Use
    - Adaptive Reuse of 5 Flint Street
19. Waterfront Mixed Use with Structured Parking
20. Waterfront Amphitheater
21. Public Gathering / Event Space
22. Canal Interpretation / Water Feature
23. Wetland Interpretation and Nature Trail
24. Mixed Use Development with Structured Parking
25. Mixed Use Development



Alternative Exchange Street Redevelopment

Alternative Shows Example Redevelopment of Existing Canfield and Tack Site if Company Were to Relocate From Site.

Bergmann associates
architects // engineers // planners

City of Rochester, Monroe County, NY

Vacuum Oil Brownfield Opportunity Area

2035 Phase III Plan

This effort was made possible with the guidance and financial assistance provided by the New York State Department of State Brownfield Opportunity Area Program.

2035 Full Build-Out Vision Plan

Bergmann associates

KEY

1. Commercial Redevelopment
2. Infill Development
3. Commercial Redevelopment
4. Flint Street Green Infrastructure Improvements
5. Multi-Family Housing and Roadway Connection
6. Trail Enhancements
   - Interpretation
   - Safety
   - Vegetation Clearing
7. Car Top Launch / Water Access
8. *Interim Parking Removed in 8-15 Year Plan*
9. Parkland and Trail Development
10. *Site Preparation Completed in 0-7 Year Plan*
11. New Road Construction
12. Exchange Street Gateway and Streetscape
13. Enhanced Trail Connection and Playground
14. Housing Redevelopment
15. Mixed Use Development
16. Foodlink Redevelopment
17. Mixed Use Development
18. Waterfront Mixed Use
    - Adaptive Reuse of 5 Flint Street
19. Waterfront Mixed Use with Structured Parking
20. Waterfront Amphitheater
21. Public Gathering / Event Space
22. Canal Interpretation / Water Feature
23. Wetland Interpretation and Nature Trail
24. Mixed Use Development with Structured Parking
25. Mixed Use Development

Bergmann associates
architects // engineers // planners

City of Rochester, Monroe County, NY

Vacuum Oil Brownfield Opportunity Area

2035 Full Build-Out Plan

This effort was made possible with the guidance and financial assistance provided by the New York State Department of State Brownfield Opportunity Area Program.

Site 1

Commercial Redevelopment

			Building Space Allocation													
			Basement		Basement		Groundfloor		2nd Floor		3rd Floor		4th Floor		5th Floor	Total Floor Area	
			0%		0%		100%		0%		0%		0%		0%	1	FAR
Gross Footprint		7,000	0		0		7000		0		0		0		0	7,000	Gross Floor Area
																5,950	Leasable Floor Area
Land Use			0%	0	0%	0	100%	5,950	0%	0	6%	0	0%	0	0%	0	Employment
Office	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Retail	*100%*	*5,950*	*0*		*0*		*100%*	*5,950*	*0*		*0*		*0*		*0*	*5,950*	12
Restaurant	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Flex/Industrial	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Cultural	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Parking	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	
Hotel	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Residential	0%	*0*	*0*		*0*		*0*		*0*		*6%*	*0*	*0*		*0*	*0*	
Apartment/Condo Units	#####	0															
Triplex Bldgs	0	0															
Duplex Bldgs	0	0															
Townhouse/Single Family Bldgs	0	0															
Total Leasable Floor Area		5,950															
Total Residential Units		0					0		0		0		0		0		
Total Restaurant Seats		0					0		0		0		0		0		
Total Structured Parking		0															
Total Hotel Keys		0															
Total Employment		12															

Site 2

Infill Development

			Building Space Allocation													
			Basement		Basement		Groundfloor		2nd Floor		3rd Floor		4th Floor		5th Floor	Total Floor Area	
			0%		0%		100%		100%				0%		0%	2	FAR
Gross Footprint		3,350	0		0		3350		3350		0		0		0	6,700	Gross Floor Area
																5,025	Leasable Floor Area
Land Use			0%	0	0%	0	100%	2,513	100%	2,513	0%	0	0%	0	0%	0	Employment
Office	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Retail	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Restaurant	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Flex/Industrial	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Cultural	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Parking	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	
Hotel	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Residential	*43%*	*5,025*	*0*		*0*		*100%*	*2,513*	*100%*	*2,513*	*0*		*0*		*0*	*5,025*	
Apartment/Condo Units	58%	6															
Triplex Bldgs		0															
Duplex Bldgs	2	4															
Townhouse/Single Family Bldgs	0	0															
Total Leasable Floor Area		5,025															
Total Residential Units		10					3		3		0		0		0		
Total Restaurant Seats		0					0		0		0		0		0		
Total Structured Parking		0															
Total Hotel Keys		0															
Total Employment		0															

Site 3

Commercial Redevelopment

			Building Space Allocation													
			Basement		Basement		Groundfloor		2nd Floor		3rd Floor		4th Floor		5th Floor	Total Floor Area	
			0%		0%		100%		100%		0%		0%		0%	2	FAR
Gross Footprint		18,000	0		0		18000		18000		0		0		0	36,000	Gross Floor Area
																27,675	Leasable Floor Area
Land Use			0%	0	0%	0	100%	14,175	100%	13,500	0%	0	0%	0	0%	0	Employment
Office	*14%*	*3,825*	*0*		*0*		*25%*	*3,825*	*0*		*0*		*0*		*0*	*3,825*	13
Retail	*28%*	*7,650*	*0*		*0*		*50%*	*7,650*	*0*		*0*		*0*		*0*	*7,650*	15
Restaurant	*10%*	*2,700*	*0*		*0*		*25%*	*2,700*	*0*		*0*		*0*		*0*	*2,700*	14
Flex/Industrial	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Cultural	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Parking	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	
Hotel	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Residential	*49%*	*13,500*	*0*		*0*		*0*		*100%*	*13,500*	*0*		*0*		*0*	*13,500*	
Apartment/Condo Units	100%	15															
Triplex Bldgs	0	0															
Duplex Bldgs	0	0															
Townhouse/Single Family Bldgs	0	0															
Total Leasable Floor Area		27,675															
Total Residential Units		15					0		15		0		0		0		
Total Restaurant Seats		68					68		0		0		0		0		
Total Structured Parking		0															
Total Hotel Keys		0															
Total Employment		42															

Site 5

Multifamily Housing

			Building Space Allocation													
			Basement		Basement		Groundfloor		2nd Floor		3rd Floor		4th Floor		5th Floor	Total Floor Area	
			0%		0%		100%		100%		100%		0%		0%	#DIV/0!	FAR
Gross Footprint		0	0		0		0		0		0		0		0	0	Gross Floor Area
																0	Leasable Floor Area
Land Use			0%	0	0%	0	0%	0	0%	0	6%	0	0%	0	0%	0	Employment
Office	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Retail	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Restaurant	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Flex/Industrial	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Cultural	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Parking	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	
Hotel	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Residential	0%	*0*	*0*		*0*		*0*		*0*		*6%*	*0*	*0*		*0*	*0*	
Apartment/Condo Units	0	0															
Triplex Bldgs	0	0															
Duplex Bldgs	13	26															
Townhouse/Single Family Bldgs	0	0															
Total Leasable Floor Area		0															
Total Residential Units		26					0		0		0		0		0		
Total Restaurant Seats		0					0		0		0		0		0		
Total Structured Parking		0															
Total Hotel Keys		0															
Total Employment		0															

Site 14

Housing Redevelopment

			Building Space Allocation													
			Basement		Basement		Groundfloor		2nd Floor		3rd Floor		4th Floor		5th Floor	Total Floor Area	
			0%		0%		100%		100%		100%		0%		0%	#DIV/0!	FAR
Gross Footprint		0	0		0		0		0		0		0		0	0	Gross Floor Area
																0	Leasable Floor Area
Land Use			0%	0	0%	0	0%	0	0%	0	6%	0	0%	0	0%	0	Employment
Office	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Retail	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Restaurant	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Flex/Industrial	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Cultural	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Parking	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	
Hotel	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Residential	0%	*0*	*0*		*0*		*0*		*0*		6%	*0*	*0*		*0*	*0*	
Apartment/Condo Units	0	0															
Triplex Bldgs	6	18															
Duplex Bldgs	12	24															
Townhouse/Single Family Bldgs	21	21															
Total Leasable Floor Area		0															
Total Residential Units		63					0		0		0		0		0		
Total Restaurant Seats		0					0		0		0		0		0		
Total Structured Parking		0															
Total Hotel Keys		0															
Total Employment		0															

Site 15a

Mixed Use Gateway Development

			Building Space Allocation													
			Basement		Basement		Groundfloor		2nd Floor		3rd Floor		4th Floor		5th Floor	Total Floor Area	
			0%		0%		100%		100%		100%		0%		0%	3	FAR
Gross Footprint		4,750	0		0		4750		4750		4750		0		0	14,250	Gross Floor Area
																10,450	Leasable Floor Area
Land Use			0%	0	0%	0	100%	2,850	100%	4,038	100%	3,563	0%	0	0%	0	Employment
Office	35%	*4,038*	*0*		*0*		*0*		*100%*	*4,038*	*0*		*0*		*0*	*4,038*	13
Retail	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Restaurant	24%	*2,850*	*0*		*0*		*100%*	*2,850*	*0*		*0*		*0*		*0*	*2,850*	14
Flex/Industrial	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Cultural	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Parking	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	
Hotel	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Residential	31%	*3,563*	*0*		*0*		*0*		*0*		*100%*	*3,563*	*0*		*0*	*3,563*	
Apartment/Condo Units	100%	4															
Townhouse/Single Family Units	0%	0															
Total Leasable Floor Area		10,450															
Total Residential Units		4					0		0		4		0		0		
Total Restaurant Seats		71					71		0		0		0		0		
Total Structured Parking		0															
Total Hotel Keys		0															
Total Employment		28															

Site 15b

Mixed Use Gateway Development

			Building Space Allocation													
			Basement		Basement		Groundfloor		2nd Floor		3rd Floor		4th Floor		5th Floor	Total Floor Area	
			0%		0%		100%		100%		100%		0%		0%	3	FAR
Gross Footprint		4,750	0		0		4750		4750		4750		0		0	14,250	Gross Floor Area
																11,638	Leasable Floor Area
Land Use			0%	0	0%	0	100%	4,038	100%	4,038	100%	3,563	0%	0	0%	0	Employment
Office	52%	*6,056*	*0*		*0*		*50%*	*2,019*	*100%*	*4,038*	*0*		*0*		*0*	*6,056*	20
Retail	17%	*2,019*	*0*		*0*		*50%*	*2,019*	*0*		*0*		*0*		*0*	*2,019*	4
Restaurant	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Flex/Industrial	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Cultural	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Parking	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	
Hotel	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Residential	31%	*3,563*	*0*		*0*		*0*		*0*		*100%*	*3,563*	*0*		*0*	*3,563*	
Apartment/Condo Units	100%	4															
Townhouse/Single Family Units	0%	0															
Total Leasable Floor Area		11,638															
Total Residential Units		4					0		0		4		0		0		
Total Restaurant Seats		0					0		0		0		0		0		
Total Structured Parking		0															
Total Hotel Keys		0															
Total Employment		24															

Site 16a

Foodlink Adapative Reuse

			Building Space Allocation													
			Basement		Basement		Groundfloor		2nd Floor		3rd Floor		4th Floor		5th Floor	Total Floor Area	
			0%		0%		100%		100%		100%		0%		0%	3	FAR
Gross Footprint		15,500	0		0		15500		15500		15500		0		0	46,500	Gross Floor Area
																41,463	Leasable Floor Area
Land Use			0%	0	0%	0	100%	15,500	100%	14,338	100%	11,625	0%	0	0%	0	Employment
Office	16%	*6,588*	*0*		*0*		*0*		*50%*	*6,588*	*0*		*0*		*0*	*6,588*	22
Retail	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Restaurant	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Flex/Industrial	56%	*23,250*	*0*		*0*		*100%*	*15,500*	*50%*	*7,750*	*0*		*0*		*0*	*23,250*	12
Cultural	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Parking	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	
Hotel	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Residential	28%	*11,625*	*0*		*0*		*0*		*0*		*100%*	*11,625*	*0*		*0*	*11,625*	
Apartment/Condo Units	100%	13															
Townhouse/Single Family Units	0%	0															
Total Leasable Floor Area		41,463															
Total Residential Units		13					0		0		13		0		0		
Total Restaurant Seats		0					0		0		0		0		0		
Total Structured Parking		0															
Total Hotel Keys		0															
Total Employment		34															

Site 16b

Foodlink Site Redevelopment

			Building Space Allocation													
			Basement		Basement		Groundfloor		2nd Floor		3rd Floor		4th Floor		5th Floor	Total Floor Area	
			0%		0%		100%		100%		60%		0%		0%	2.6	FAR
Gross Footprint		10,000	0		0		10000		10000		6000		0		0	26,000	Gross Floor Area
																24,350	Leasable Floor Area
Land Use			0%	0	0%	0	100%	10,000	100%	9,250	100%	5,100	0%	0	0%	0	Employment
Office	38%	*9,350*	*0*		*0*		*0*		*50%*	*4,250*	*100%*	*5,100*	*0*		*0*	*9,350*	31
Retail	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Restaurant	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Flex/Industrial	62%	*15,000*	*0*		*0*		*100%*	*10,000*	*50%*	*5,000*	*0*		*0*		*0*	*15,000*	8
Cultural	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Parking	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	
Hotel	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Residential	0%	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	
Apartment/Condo Units	100%	0															
Townhouse/Single Family Units	0%	0															
Total Leasable Floor Area		24,350															
Total Residential Units		0					0		0		0		0		0		
Total Restaurant Seats		0					0		0		0		0		0		
Total Structured Parking		0															
Total Hotel Keys		0															
Total Employment		39															

Site 17a

Mixed Use Development

			Building Space Allocation								
			Basement	Basement	Groundfloor	2nd Floor	3rd Floor	4th Floor	5th Floor	Total Floor Area	
			0%	0%	100%	100%	100%	0%	0%	3	FAR
Gross Footprint		6,800	0	0	6800	6800	6800	0	0	20,400	Gross Floor Area
										15,470	Leasable Floor Area
Land Use			0% 0	0% 0	100% 4,930	100% 5,440	100% 5,100	0% 0	0% 0		Employment
Office	*19%*	*2,890*	*0*	*0*	*0*	*50% 2,890*	*0*	*0*	*0*	*2,890*	10
Retail	*19%*	*2,890*	*0*	*0*	*50% 2,890*	*0*	*0*	*0*	*0*	*2,890*	6
Restaurant	*13%*	*2,040*	*0*	*0*	*50% 2,040*	*0*	*0*	*0*	*0*	*2,040*	10
Flex/Industrial	*0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	0
Cultural	*0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	0
Parking	*0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Hotel	*0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	0
Residential	*49%*	*7,650*	*0*	*0*	*0*	*50% 2,550*	*100% 5,100*	*0*	*0*	*7,650*	
Apartment/Condo Units	100%	9									
Townhouse/Single Family Units	0%	0									
Total Leasable Floor Area		15,470									
Total Residential Units		9			0	3	6	0	0		
Total Restaurant Seats		51			51	0	0	0	0		
Total Structured Parking		0									
Total Hotel Keys		0									
Total Employment		26									

Site 17b

Mixed Use Business Incubator & Workforce Training Hub

			Building Space Allocation								
			Basement	Basement	Groundfloor	2nd Floor	3rd Floor	4th Floor	5th Floor	Total Floor Area	
			0%	0%	100%	100%	100%	0%	0%	3	FAR
Gross Footprint		14,000	0	0	14000	14000	14000	0	0	42,000	Gross Floor Area
										35,700	Leasable Floor Area
Land Use			0% 0	0% 0	100% 14,000	100% 11,200	100% 10,500	0% 0	0% 0		Employment
Office	*17%*	*5,950*	*0*	*0*	*0*	*50% 5,950*	*0*	*0*	*0*	*5,950*	20
Retail	*0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	0
Restaurant	*0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	0
Flex/Industrial	*39%*	*14,000*	*0*	*0*	*100% 14,000*	*0*	*0*	*0*	*0*	*14,000*	7
Cultural	*0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	0
Parking	*0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Hotel	*0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	0
Residential	*44%*	*15,750*	*0*	*0*	*0*	*50% 5,250*	*100% 10,500*	*0*	*0*	*15,750*	
Apartment/Condo Units	100%	18									
Townhouse/Single Family Units	0%	0									
Total Leasable Floor Area		35,700									
Total Residential Units		18			0	6	12	0	0		
Total Restaurant Seats		0			0	0	0	0	0		
Total Structured Parking		0									
Total Hotel Keys		0									
Total Employment		27									

Site 17c

Mixed Use Development

			Building Space Allocation								
			Basement	Basement	Groundfloor	2nd Floor	3rd Floor	4th Floor	5th Floor	Total Floor Area	
			0%	0%	100%	100%	100%	50%	25%	3.75	FAR
Gross Footprint		28,500	0	0	28500	28500	28500	14250	7125	106,875	Gross Floor Area
										83,505	Leasable Floor Area
Land Use			0% 0	0% 0	100% 21,874	100% 24,225	100% 21,375	100% 10,688	100% 5,344		Employment
Office	*34%*	*28,343*	*0*	*0*	*17% 4,118*	*100% 24,225*	*0*	*0*	*0*	*28,343*	94
Retail	*15%*	*12,113*	*0*	*0*	*50% 12,113*	*0*	*0*	*0*	*0*	*12,113*	24
Restaurant	*7%*	*5,643*	*0*	*0*	*33% 5,643*	*0*	*0*	*0*	*0*	*5,643*	28
Flex/Industrial	*0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	0
Cultural	*0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	0
Parking	*0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Hotel	*0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	0
Residential	*45%*	*37,406*	*0*	*0*	*0*	*0*	*100% 21,375*	*100% 10,688*	*100% 5,344*	*37,406*	
Apartment/Condo Units	100%	42									
Townhouse/Single Family Units	0%	0									
Total Leasable Floor Area		83,505									
Total Residential Units		42			0	0	24	12	6		
Total Restaurant Seats		141			141	0	0	0	0		
Total Structured Parking		0									
Total Hotel Keys		0									
Total Employment		147									

Site 17d

Structured Parking

			Building Space Allocation								
			Basement L2	Basement L1	Groundfloor	2nd Floor	3rd Floor	4th Floor	5th Floor	Total Floor Area	
			0%	0%	100%	100%	100%	0%	0%	3	FAR
Gross Footprint		36,000	0	0	36000	36000	36000	0	0	108,000	Gross Floor Area
										108,000	Leasable Floor Area
Land Use			0% 0	0% 0	100% 36,000	100% 36,000	100% 36,000	0% 0	0% 0		Employment
Office	*0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	0
Retail	*0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	0
Restaurant	*0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	0
Flex/Industrial	*0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	0
Cultural	*0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	0
Parking	*100%*	*108,000*	*0*	*0*	*100% 36,000*	*100% 36,000*	*100% 36,000*	*0*	*0*	*108,000*	
Hotel	*0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	0
Residential	*0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Apartment/Condo Units	100%	0									
Townhouse/Single Family Units	0%	0									
Total Leasable Floor Area		108,000									
Total Residential Units		0			0	0	0	0	0		
Total Restaurant Seats		0			0	0	0	0	0		
Total Structured Parking		248	0	0	83	83	83	0	0		
Total Hotel Keys		0									
Total Employment		0									

Site 17 DHD

DHD Buildings 4, 5, 6a, 6b, 7a, 7b

			Building Space Allocation								
			Basement	Basement	Groundfloor	2nd Floor	3rd Floor	4th Floor	5th Floor	Total Floor Area	
			0%	0%	0%	0%	0%	0%	0%	#DIV/0!	FAR
Gross Footprint		0	0	0	0	0	0	0	0	0	Gross Floor Area
										0	Leasable Floor Area
Land Use			0% 0	0% 0	0% 0	0% 0	0% 0	0% 0	0% 0		Employment
Office	*0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	0
Retail	*0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	0
Restaurant	*0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	0
Flex/Industrial	*0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	0
Cultural	*0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	0
Parking	*0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Hotel	*0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	0
Residential	*0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Student Housing		*108*									
Apartment/Condo Units	100%	36									
Townhouse/Single Family Units	0%	0									
Total Leasable Floor Area		0									
Total Residential Units		144			0	0	0	0	0		
Total Restaurant Seats		0			0	0	0	0	0		
Total Structured Parking		250									
Total Hotel Keys		0									
Total Employment		0									

Site 18

5 Flint Street Adaptive Reuse

			Building Space Allocation															
			Basement		Basement		Groundfloor		2nd Floor		3rd Floor		4th Floor		5th Floor		Total Floor Area	
			0%		0%		100%		100%		100%		0%		0%		3	FAR
Gross Footprint		11,900	0		0		11900		11900		11900		0		0		35,700	Gross Floor Area
																	25,883	Leasable Floor Area
Land Use			0%	0	0%	0	100%	8,033	100%	8,925	100%	8,925	0%	0	0%	0		Employment
Office	0%	*0*	*0*	*0*	*0*	*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Retail	0%	*0*	*0*	*0*	*0*	*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Restaurant	*14%*	*3,570*	*0*	*0*	*0*	*0*	*50%*	*3,570*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*3,570*	18
Flex/Industrial	0%	*0*	*0*	*0*	*0*	*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Cultural	*17%*	*4,463*	*0*	*0*	*0*	*0*	*50%*	*4,463*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*4,463*	1.4875
Parking	0%	*0*	*0*	*0*	*0*	*0*		*0*		*0*		*0*		*0*		*0*	*0*	
Hotel	0%	*0*	*0*	*0*	*0*	*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Residential	*69%*	*17,850*	*0*	*0*	*0*	*0*		*0*	*100%*	*8,925*	*100%*	*8,925*		*0*		*0*	*17,850*	
Apartment/Condo Units	100%	20																
Townhouse/Single Family Units	0%	0																
Total Leasable Floor Area		25,883																
Total Residential Units		20					0		10		10		0		0			
Total Restaurant Seats		89					89		0		0		0		0			
Total Structured Parking		0	0		0		0		0		0		0		0			
Total Hotel Keys		0																
Total Employment		19																

Site 18 DHD

DHD Building 1

			Building Space Allocation															
			Basement		Basement		Groundfloor		2nd Floor		3rd Floor		4th Floor		5th Floor		Total Floor Area	
			0%		0%		100%		100%		100%		100%		0%		4	FAR
Gross Footprint		11,900	0		0		11900		11900		11900		11900		0		47,600	Gross Floor Area
																	35,700	Leasable Floor Area
Land Use			0%	0	0%	0	100%	8,925	100%	8,925	100%	8,925	100%	8,925	0%	0		Employment
Office	0%	*0*	*0*	*0*	*0*	*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Retail	0%	*0*	*0*	*0*	*0*	*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Restaurant	0%	*0*	*0*	*0*	*0*	*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Flex/Industrial	0%	*0*	*0*	*0*	*0*	*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Cultural	*25%*	*8,925*	*0*	*0*	*0*	*0*	*100%*	*8,925*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*8,925*	2.975
Parking	0%	*0*	*0*	*0*	*0*	*0*		*0*		*0*		*0*		*0*		*0*	*0*	
Hotel	0%	*0*	*0*	*0*	*0*	*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Residential	*75%*	*26,775*	*0*	*0*	*0*	*0*		*0*	*100%*	*8,925*	*100%*	*8,925*	*100%*	*8,925*		*0*	*26,775*	
Apartment/Condo Units	100%	15																
Townhouse/Single Family Units	0%	0																
Total Leasable Floor Area		35,700																
Total Residential Units		15					0		10		10		10		0			
Total Restaurant Seats		0					0		0		0		0		0			
Total Structured Parking		0	0		0		0		0		0		0		0			
Total Hotel Keys		0																
Total Employment		3																

Site 19a

Waterfront Mixed Use with Structured Parking

			Building Space Allocation															
			Basement L2		Basement L1		Groundfloor		2nd Floor		3rd Floor		4th Floor		5th Floor		Total Floor Area	
			100%		100%		100%		100%		100%		75%		0%		5.75	FAR
Gross Footprint		18,300	18300		18300		18300		18300		18300		13725		0		105,225	Gross Floor Area
																	91,203	Leasable Floor Area
Land Use			100%	18,300	100%	18,300	100%	15,555	100%	14,640	100%	13,725	100%	10,294	0%	0		Employment
Office	9%	*7,778*	*0*	*0*	*0*	*0*		*0*	*50%*	*7,778*		*0*		*0*		*0*	*7,778*	26
Retail	3%	*3,111*	*0*	*0*	*0*	*0*	*20%*	*3,111*		*0*		*0*		*0*		*0*	*3,111*	6
Restaurant	4%	*3,294*	*0*	*0*	*0*	*0*	30%	*3,294*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*3,294*	16
Flex/Industrial	0%	*0*	*0*	*0*	*0*	*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Cultural	0%	*0*	*0*	*0*	*0*	*0*		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	0
Parking	*50%*	*45,750*	*100%*	*18,300*	*100%*	*18,300*	*50%*	*9,150*		*0*		*0*		*0*		*0*	*45,750*	
Hotel	0%	*0*	*0*	*0*	*0*	*0*		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	0
Residential	*34%*	*31,270*	*0*	*0*	*0*	*0*		*0*	*50%*	*6,863*	*100%*	*13,725*	*100%*	*10,294*		*0*	*31,270*	
Apartment/Condo Units	100%	35																
Townhouse/Single Family Units	0%	0																
Total Leasable Floor Area		91,203																
Total Residential Units		34					0		8		15		11		0			
Total Restaurant Seats		82					82		0		0		0		0			
Total Structured Parking		105	42		42		21		0		0		0		0			
Total Hotel Keys		0																
Total Employment		49																

Site 19b

Waterfront Mixed Use with Structured Parking

			Building Space Allocation															
			Basement L2		Basement L1		Groundfloor		2nd Floor		3rd Floor		4th Floor		5th Floor		Total Floor Area	
			100%		100%		100%		100%		100%		100%		35%		6.35	FAR
Gross Footprint		24,000	24000		24000		24000		24000		24000		24000		8400		152,400	Gross Floor Area
																	129,900	Leasable Floor Area
Land Use			100%	24,000	100%	24,000	100%	20,400	100%	19,200	100%	18,000	100%	18,000	100%	6,300		Employment
Office	8%	*10,200*	*0*	*0*	*0*	*0*		*0*	*50%*	*10,200*		*0*		*0*		*0*	*10,200*	34
Retail	3%	*4,080*	*0*	*0*	*0*	*0*	*20%*	*4,080*		*0*		*0*		*0*		*0*	*4,080*	8
Restaurant	3%	*4,320*	*0*	*0*	*0*	*0*	30%	*4,320*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*4,320*	22
Flex/Industrial	0%	*0*	*0*	*0*	*0*	*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Cultural	0%	*0*	*0*	*0*	*0*	*0*		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	0
Parking	*46%*	*60,000*	*100%*	*24,000*	*100%*	*24,000*	*50%*	*12,000*		*0*		*0*		*0*		*0*	*60,000*	
Hotel	0%	*0*	*0*	*0*	*0*	*0*		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	0
Residential	*39%*	*51,300*	*0*	*0*	*0*	*0*		*0*	*50%*	*9,000*	*100%*	*18,000*	*100%*	*18,000*	*100%*	*6,300*	*51,300*	
Apartment/Condo Units	100%	57																
Townhouse/Single Family Units	0%	0																
Total Leasable Floor Area		129,900																
Total Residential Units		57					0		10		20		20		7			
Total Restaurant Seats		108					108		0		0		0		0			
Total Structured Parking		138	55		55		28		0		0		0		0			
Total Hotel Keys		0																
Total Employment		64																

Site 19c

Structured Parking

			Building Space Allocation															
			Basement L2		Basement L1		Groundfloor		2nd Floor		3rd Floor		4th Floor		5th Floor		Total Floor Area	
			100%		100%		100%		100%		100%						5	FAR
Gross Footprint		11,500	11500		11500		11500		11500		11500		0		0		57,500	Gross Floor Area
																	57,500	Leasable Floor Area
Land Use			100%	11,500	100%	11,500	100%	11,500	100%	11,500	100%	11,500	0%	0	0%	0		Employment
Office	0%	*0*	*0*	*0*	*0*	*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Retail	0%	*0*	*0*	*0*	*0*	*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Restaurant	0%	*0*	*0*	*0*	*0*	*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Flex/Industrial	0%	*0*	*0*	*0*	*0*	*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Cultural	0%	*0*	*0*	*0*	*0*	*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Parking	*44%*	*57,500*	*100%*	*11,500*	*100%*	*11,500*	*100%*	*11,500*	*100%*	*11,500*	*100%*	*11,500*		*0*		*0*	*57,500*	
Hotel	0%	*0*	*0*	*0*	*0*	*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Residential	0%	*0*	*0*	*0*	*0*	*0*		*0*		*0*		*0*		*0*		*0*	*0*	
Apartment/Condo Units	100%	0																
Townhouse/Single Family Units	0%	0																
Total Leasable Floor Area		57,500																
Total Residential Units		0					0		0		0		0		0			
Total Restaurant Seats		0					0		0		0		0		0			
Total Structured Parking		132	26		26		26		26		26		0		0			
Total Hotel Keys		0																
Total Employment		0																

Site 19 DHD

DHD Buildings 2 & 3

			Building Space Allocation																
			Basement L2		Basement L1		Groundfloor		2nd Floor		3rd Floor		4th Floor		5th Floor		Total Floor Area	
			0%		0%		0%		0%		0%		0%		0%		#DIV/0!	FAR
Gross Footprint		0	0		0		0		0		0		0		0		0	Gross Floor Area
																	0	Leasable Floor Area
Land Use			0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0		Employment
Office	*0%*	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*		*0*	0
Retail	*0%*	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*		*0*	0
Restaurant	*0%*	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*		*0*	0
Flex/Industrial	*0%*	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*		*0*	0
Cultural	*0%*	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*		*0*	0
Parking	*0%*	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*		*0*	
Hotel	*0%*	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*		*0*	0
Residential	*0%*	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*		*0*	
Apartment/Condo Units	100%	100																
Townhouse/Single Family Units	0%	0																
Total Leasable Floor Area		0																
Total Residential Units		100						0		0		0		0		0		
Total Restaurant Seats		0						0		0		0		0		0		
Total Structured Parking		200		0		0		0		0		0		0		0		
Total Hotel Keys		0																
Total Employment		0																

Site 24a

Mixed Use Development with Structured Parking

			Building Space Allocation																
			Basement L2		Basement L1		Groundfloor		2nd Floor		3rd Floor		4th Floor		5th Floor		Total Floor Area	
			100%		100%		100%		100%		100%		100%		100%		7	FAR
Gross Footprint		16,700	16700		16700		16700		16700		16700		16700		16700		116,900	Gross Floor Area
																	98,739	Leasable Floor Area
Land Use			100%	16,700	100%	16,700	100%	14,404	100%	13,360	100%	12,525	100%	12,525	100%	12,525		Employment
Office	*5%*	*7,098*	*0*		*0*		*0*		*50%*	*7,098*	*0*		*0*		*0*		*7,098*	24
Retail	*3%*	*3,549*	*0*		*0*		*25%*	*3,549*	*0*		*0*		*0*		*0*		*3,549*	7
Restaurant	*2%*	*2,505*	*0*		*0*		*25%*	*2,505*	*0*		*0*		*0*		*0*		*2,505*	13
Flex/Industrial	*0%*	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*		*0*	0
Cultural	*0%*	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*		*0*	0
Parking	*32%*	*41,750*	*100%*	*16,700*	*100%*	*16,700*	*50%*	*8,350*	*0*		*0*		*0*		*0*		*41,750*	
Hotel	*0%*	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*		*0*	0
Residential	*34%*	*43,838*	*0*		*0*		*0*		*50%*	*6,263*	*100%*	*12,525*	*100%*	*12,525*	*100%*	*12,525*	*43,838*	
Apartment/Condo Units	100%	49																
Townhouse/Single Family Units	0%	0																
Total Leasable Floor Area		98,739																
Total Residential Units		49						0		7		14		14		14		
Total Restaurant Seats		63						63		0		0		0		0		
Total Structured Parking		96		38		38		19		0		0		0		0		
Total Hotel Keys		0																
Total Employment		43																

Site 24b

Mixed Use Development with Structured Parking

			Building Space Allocation																
			Basement L2		Basement L1		Groundfloor		2nd Floor		3rd Floor		4th Floor		5th Floor		Total Floor Area	
			100%		100%		100%		100%		100%		100%		100%		7	FAR
Gross Footprint		6,800	6800		6800		6800		6800		6800		6800		6800		47,600	Gross Floor Area
																	39,695	Leasable Floor Area
Land Use			100%	6,800	100%	6,800	100%	5,355	100%	5,440	100%	5,100	100%	5,100	100%	5,100		Employment
Office	*4%*	*5,780*	*0*		*0*		*50%*	*2,890*	*50%*	*2,890*	*0*		*0*		*0*		*5,780*	19
Retail	*1%*	*1,445*	*0*		*0*		*25%*	*1,445*	*0*		*0*		*0*		*0*		*1,445*	3
Restaurant	*1%*	*1,020*	*0*		*0*		*25%*	*1,020*	*0*		*0*		*0*		*0*		*1,020*	5
Flex/Industrial	*0%*	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*		*0*	0
Cultural	*0%*	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*		*0*	0
Parking	*10%*	*13,600*	*100%*	*6,800*	*100%*	*6,800*	*0*		*0*		*0*		*0*		*0*		*13,600*	
Hotel	*0%*	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*		*0*	0
Residential	*14%*	*17,850*	*0*		*0*		*0*		*50%*	*2,550*	*100%*	*5,100*	*100%*	*5,100*	*100%*	*5,100*	*17,850*	
Apartment/Condo Units	100%	20																
Townhouse/Single Family Units	0%	0																
Total Leasable Floor Area		39,695																
Total Residential Units		20						0		3		6		6		6		
Total Restaurant Seats		26						26		0		0		0		0		
Total Structured Parking		31		16		16		0		0		0		0		0		
Total Hotel Keys		0																
Total Employment		27																

Site 24c

Boutique Hotel with Structured Parking

			Building Space Allocation																
			Basement L2		Basement L1		Groundfloor		2nd Floor		3rd Floor		4th Floor		5th Floor		Total Floor Area	
			100%		100%		100%		100%		100%		100%		50%		6.5	FAR
Gross Footprint		13,900	13900		13900		13900		13900		13900		13900		6950		90,350	Gross Floor Area
																	84,964	Leasable Floor Area
Land Use			100%	13,900	100%	13,900	100%	11,989	100%	13,900	100%	13,900	100%	13,900	50%	3,475		Employment
Office	*0%*	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*		*0*	0
Retail	*3%*	*2,954*	*0*		*0*		*25%*	*2,954*	*0*		*0*		*0*		*0*		*2,954*	6
Restaurant	*2%*	*2,085*	*0*		*0*		*25%*	*2,085*	*0*		*0*		*0*		*0*		*2,085*	10
Flex/Industrial	*0%*	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*		*0*	0
Cultural	*0%*	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*		*0*	0
Parking	*33%*	*27,800*	*100%*	*13,900*	*100%*	*13,900*	*0*		*0*		*0*		*0*		*0*		*27,800*	
Hotel	*61%*	*52,125*	*0*		*0*		*50%*	*6,950*	*100%*	*13,900*	*100%*	*13,900*	*100%*	*13,900*	*50%*	*3,475*	*52,125*	64
Residential	*0%*	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*		*0*	
Apartment/Condo Units	100%	0																
Townhouse/Single Family Units	0%	0																
Total Leasable Floor Area		84,964																
Total Residential Units		0						0		0		0		0		0		
Total Restaurant Seats		52						52		0		0		0		0		
Total Structured Parking		64		32		32		0		0		0		0		0		
Total Hotel Keys		80																
Total Employment		80																

Site 24d

Executive Hotel with Structured Parking

			Building Space Allocation																
			Basement L2		Basement L1		Groundfloor		2nd Floor		3rd Floor		4th Floor		5th Floor		Total Floor Area	
			100%		100%		100%		100%		100%						5	FAR
Gross Footprint		8,900	8900		8900		8900		8900		8900		0		0		44,500	Gross Floor Area
																	40,606	Leasable Floor Area
Land Use			100%	8,900	100%	8,900	100%	7,231	100%	8,900	100%	6,675	0%	0	0%	0		Employment
Office	*0%*	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*		*0*	0
Retail	*0%*	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*		*0*	0
Restaurant	*0%*	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*		*0*	0
Flex/Industrial	*0%*	*0*	*0*		*0*		*0*		*0*		*0*		*0*		*0*		*0*	0
Meeting Space	*12%*	*5,006*	*0*		*0*		*75%*	*5,006*	*0*		*0*		*0*		*0*		*5,006*	1.66875
Parking	*44%*	*17,800*	*100%*	*8,900*	*100%*	*8,900*	*0*		*0*		*0*		*0*		*0*		*17,800*	
Hotel	*27%*	*11,125*	*0*		*0*		*25%*	*2,225*	*100%*	*8,900*	*0*		*0*		*0*		*11,125*	14
Residential	*16%*	*6,675*	*0*		*0*		*0*		*0*		*100%*	*6,675*	*0*		*0*		*6,675*	
Apartment/Condo Units	100%	7																
Townhouse/Single Family Units	0%	0																
Total Leasable Floor Area		40,606																
Total Residential Units		7						0		0		7		0		0		
Total Restaurant Seats		0						0		0		0		0		0		
Total Structured Parking		41		20		20		0		0		0		0		0		
Total Hotel Keys		17																
Total Employment		15																

Site 24e

Structured Parking

			Building Space Allocation															
			Basement L2		Basement L1		Groundfloor		2nd Floor		3rd Floor		4th Floor		5th Floor		Total Floor Area	
			100%		100%		100%		100%		100%		50%				5.5	FAR
Gross Footprint		19,500	19500		19500		19500		19500		19500		9750		0		107,250	Gross Floor Area
																	107,250	Leasable Floor Area
Land Use			100%	19,500	100%	19,500	100%	19,500	100%	19,500	100%	19,500	100%	9,750	0%	0		Employment
Office	*0%*	*0*		*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Retail	*0%*	*0*		*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Restaurant	*0%*	*0*		*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Flex/Industrial	*0%*	*0*		*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Cultural	*0%*	*0*		*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Parking	*100%*	*107,250*	*100%*	*19,500*	*100%*	*19,500*	*100%*	*19,500*	*100%*	*19,500*	*100%*	*19,500*	*100%*	*9,750*		*0*	*107,250*	
Hotel	*0%*	*0*		*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Residential	*0%*	*0*		*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	
Apartment/Condo Units	100%	0																
Townhouse/Single Family Units	0%	0																
Total Leasable Floor Area		107,250																
Total Residential Units		0						0		0		0		0		0		
Total Restaurant Seats		0						0		0		0		0		0		
Total Structured Parking		247		45		45		45		45		45		22		0		
Total Hotel Keys		0																
Total Employment		0																

Site 25a

Mixed Office & Business Services

			Building Space Allocation															
			Basement L2		Basement L1		Groundfloor		2nd Floor		3rd Floor		4th Floor		5th Floor		Total Floor Area	
			0%		0%		100%		100%		100%		0%		0%		3	FAR
Gross Footprint		34,000	0		0		34000		34000		34000		0		0		102,000	Gross Floor Area
																	90,950	Leasable Floor Area
Land Use			0%	0	0%	0	100%	30,600	100%	31,450	100%	28,900	0%	0	0%	0		Employment
Office	*56%*	*50,575*		*0*		*0*	*25%*	*7,225*	*50%*	*14,450*	*100%*	*28,900*		*0*		*0*	*50,575*	169
Retail	*5%*	*4,335*		*0*		*0*	*15%*	*4,335*		*0*		*0*		*0*		*0*	*4,335*	9
Restaurant	*2%*	*2,040*		*0*		*0*	*10%*	*2,040*		*0*		*0*		*0*		*0*	*2,040*	10
Flex/Industrial	*37%*	*34,000*		*0*		*0*	*50%*	*17,000*	*50%*	*17,000*		*0*		*0*		*0*	*34,000*	17
Cultural	*0%*	*0*		*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Parking	*0%*	*0*		*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	
Hotel	*0%*	*0*		*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Residential	*0%*	*0*		*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	
Apartment/Condo Units	100%	0																
Townhouse/Single Family Units	0%	0																
Total Leasable Floor Area		90,950																
Total Residential Units		0						0		0		0		0		0		
Total Restaurant Seats		51						51		0		0		0		0		
Total Structured Parking		0		0		0		0		0		0		0		0		
Total Hotel Keys		0																
Total Employment		204																

Site 25b

Townhouses

			Building Space Allocation															
			Basement L2		Basement L1		Groundfloor		2nd Floor		3rd Floor		4th Floor		5th Floor		Total Floor Area	
			0%		0%		100%		100%		100%		0%		0%		3	FAR
Gross Footprint		12,800	0		0		12800		12800		12800		0		0		38,400	Gross Floor Area
																	0	Leasable Floor Area
Land Use			0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0		Employment
Office	*0%*	*0*		*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Retail	*0%*	*0*		*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Restaurant	*0%*	*0*		*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Flex/Industrial	*0%*	*0*		*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Cultural	*0%*	*0*		*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Parking	*0%*	*0*		*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	
Hotel	*0%*	*0*		*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	0
Residential	*0%*	*0*		*0*		*0*		*0*		*0*		*0*		*0*		*0*	*0*	
Apartment/Condo Units	0%	0																
Townhouse/Single Family Units	100%	26																
Total Leasable Floor Area		0																
Total Residential Units		26						0		0		0		0		0		
Total Restaurant Seats		0						0		0		0		0		0		
Total Structured Parking		0		0		0		0		0		0		0		0		
Total Hotel Keys		0																
Total Employment		0																

Appendix D

Internal Trip Capture Worksheets

Bergmann associates

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	City of Rochester BOA	**Organization:**	Bergmann Associates
Project Location:	Rochester, NY	**Performed By:**	BJH
Scenario Description:	Full Build	**Date:**	
Analysis Year:		**Checked By:**	JCE
Analysis Period:	**AM Street Peak Hour**	**Date:**	8/26/2015

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office	710	148.471	KSF	411	368	43
Retail	820	50.196	KSF	48	34	14
Restaurant	932	802	Units	377	202	175
Cinema/Entertainment	NA	0	0	0	0	0
Residential	220	418	Units	304	65	239
Hotel	310	97	Keys	51	31	20
All Other Land Uses[2]	110	86.25	KSF	514	436	78
				1,705	1,136	569

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office	1.50	7%	7%	1.50	7%	7%
Retail	1.50	7%	10%	1.50	7%	10%
Restaurant	1.50	7%	12%	1.50	7%	12%
Cinema/Entertainment	1.50	7%	5%	1.50	7%	5%
Residential	1.50	7%	15%	1.50	7%	15%
Hotel	1.50	7%	5%	1.50	7%	5%
All Other Land Uses[2]	1.50	7%	5%	1.50	7%	5%

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		16	41	0	0	0
Retail	6		3	0	2	0
Restaurant	77	4		0	5	2
Cinema/Entertainment	0	0	0		0	0
Residential	7	4	61	0		0
Hotel	17	2	3	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	2,560	1,705	855
Internal Capture Percentage	20%	15%	29%
External Vehicle-Trips[5]	1,157	830	327
External Transit-Trips[6]	145	102	43
External Non-Motorized Trips[6]	178	106	72

Table 6-A: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	19%	88%
Retail	51%	52%
Restaurant	36%	33%
Cinema/Entertainment	N/A	N/A
Residential	7%	20%
Hotel	4%	73%

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-A vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-A, 9-A (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

Project Name:	City of Rochester BOA
Analysis Period:	**AM Street Peak Hour**

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.50	368	552	1.50	43	65
Retail	1.50	34	51	1.50	14	21
Restaurant	1.50	202	303	1.50	175	263
Cinema/Entertainment	1.50	0	0	1.50	0	0
Residential	1.50	65	98	1.50	239	359
Hotel	1.50	31	47	1.50	20	30

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		18	41	0	1	0
Retail	6		3	0	3	0
Restaurant	82	37		0	11	8
Cinema/Entertainment	0	0	0		0	0
Residential	7	4	72	0		0
Hotel	23	4	3	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		16	70	0	0	0
Retail	22		152	0	2	0
Restaurant	77	4		0	5	2
Cinema/Entertainment	0	0	0		0	0
Residential	17	9	61	0		0
Hotel	17	2	18	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	107	445	552	255	31	31
Retail	26	25	51	13	2	3
Restaurant	108	195	303	105	14	23
Cinema/Entertainment	0	0	0	0	0	0
Residential	7	91	98	47	6	14
Hotel	2	45	47	27	3	2
All Other Land Uses[3]	0	654	654	383	46	33

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	57	8	65	4	1	1
Retail	11	10	21	5	1	1
Restaurant	88	175	263	95	12	21
Cinema/Entertainment	0	0	0	0	0	0
Residential	72	287	359	149	20	43
Hotel	22	8	30	5	1	0
All Other Land Uses[3]	0	117	117	69	8	6

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	City of Rochester BOA	**Organization:**	Bergmann Associates
Project Location:	Rochester, NY	**Performed By:**	BJH
Scenario Description:	Full Build	**Date:**	
Analysis Year:		**Checked By:**	JCE
Analysis Period:	**PM Street Peak Hour**	**Date:**	8/26/2015

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office	710	148.471	KSF	1,186	208	978
Retail	820	50.196	KSF	186	95	91
Restaurant	932	802	Units	329	192	137
Cinema/Entertainment	NA	0	0	0		
Residential	220	418	Units	547	370	177
Hotel	310	97	Keys	58	31	27
All Other Land Uses[2]	110	86.25	KSF	501	165	336
				2,807	1,061	1,746

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office	1.50	7%	7%	1.50	7%	7%
Retail	1.50	7%	10%	1.50	7%	10%
Restaurant	1.50	7%	12%	1.50	7%	12%
Cinema/Entertainment	1.50	7%	5%	1.50	7%	5%
Residential	1.50	7%	15%	1.50	7%	15%
Hotel	1.50	7%	5%	1.50	7%	5%
All Other Land Uses[2]	1.50	7%	5%	1.50	7%	5%

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		500	500		500	
Retail					500	
Restaurant					500	
Cinema/Entertainment					500	
Residential		500	500			
Hotel					500	

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		10	5	0	22	0
Retail	3		40	0	36	7
Restaurant	6	72		0	37	14
Cinema/Entertainment	0	0	0		0	0
Residential	11	13	37	0		6
Hotel	0	3	14	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	4,214	1,593	2,621
Internal Capture Percentage	16%	21%	13%
External Vehicle-Trips[5]	1,997	694	1,303
External Transit-Trips[6]	246	86	160
External Non-Motorized Trips[6]	300	130	170

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	6%	3%
Retail	69%	63%
Restaurant	33%	63%
Cinema/Entertainment	N/A	N/A
Residential	17%	25%
Hotel	57%	41%

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-P vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

Project Name:	City of Rochester BOA
Analysis Period:	**PM Street Peak Hour**

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.50	208	312	1.50	978	1467
Retail	1.50	95	143	1.50	91	137
Restaurant	1.50	192	288	1.50	137	206
Cinema/Entertainment	1.50	0	0	1.50	0	0
Residential	1.50	370	555	1.50	177	266
Hotel	1.50	31	47	1.50	27	41

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		267	53	0	29	0
Retail	3		40	5	36	7
Restaurant	6	84		16	37	14
Cinema/Entertainment	0	0	0		0	0
Residential	11	102	51	0		8
Hotel	0	7	28	0	1	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		10	5	0	22	0
Retail	97		84	0	255	8
Restaurant	94	72		0	89	33
Cinema/Entertainment	19	6	9		22	0
Residential	178	13	37	0		6
Hotel	0	3	14	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	20	292	312	168	20	20
Retail	98	45	143	25	3	5
Restaurant	96	192	288	104	13	23
Cinema/Entertainment	0	0	0	0	0	0
Residential	95	460	555	239	32	69
Hotel	27	20	47	12	1	1
All Other Land Uses[3]	0	248	248	146	17	12

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	37	1430	1467	820	100	100
Retail	86	51	137	28	4	5
Restaurant	129	77	206	42	5	9
Cinema/Entertainment	0	0	0	0	0	0
Residential	67	199	266	103	14	30
Hotel	17	24	41	14	2	1
All Other Land Uses[3]	0	504	504	296	35	25

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

Land Use	AM Entering	AM Exiting	PM Entering	PM Exiting	Mid Day Entering	Mid Day Exiting
Office	19	88	6	3	13	46
Retail	51	52	69	63	60	58
Restaurant	36	33	33	63	35	48
Cinema/Entertainment	N/A	N/A	N/A	N/A	N/A	N/A
Residential	7	20	17	25	12	23
Hotel	4	73	57	41	31	57

Appendix E

Trip Generation Calculations

Bergmann associates

City of Rochester

8/19/2015

Code	LAND USE (ITE CODE)		SIZE	NOTES	ITE Trip Generation AM Peak	ITE Trip Generation Mid	ITE Trip Generation PM Peak	TRIP TYPE	AM PEAK HOUR TRIPS	MID	PM PEAK HOUR TRIPS	AM Peak Enter	AM Peak Exit	Mid Enter	Mid Exit	PM Peak Enter	PM Peak Exit
1	Retail	Commercial Redevelopment	6 KSF		62% Avg. Rate=0.96	50% T= average AM and PM	48% Avg. Rate=3.71	Total	6	14	22	4	2	7	7	11	11
								Shared/Pass By	3	10	16	2	1	5	5	8	8
								External Vehicle Tri	3	4	6	2	1	2	2	3	3
2	Apartment/Condo Residential	Infill Development	10 Units	LU 220, LU 220	20% T = 0.49 (x) + 3.73 Avg. Rate=0.51	50% T=.8 * AM	65% T = 0.55 (x) + 17.65 Avg. Rate=0.62	Total	9	7	23	2	7	4	3	15	8
								Shared/Transit/Non	4	2	8	1	3	1	1	5	3
								External Vehicle Tri	5	5	15	1	4	3	2	10	5
3	General Office Building (710)	Commercial Redevelopment	3.825 KSF		88% Ln(T) = 0.80 Ln(x) + 1.57 Avg. Rate=1.56	50% T=.8 * AM	17% T = 1.12 (x) + 78.45 Avg. Rate=1.49	Total	14	11	83	13	1	6	5	15	68
								Shared/Transit/Non	5	5	15	4	1	2	3	3	12
								External Vehicle Tri	9	6	68	9	0	4	2	12	56
	Apartment/Condo Residential		15 Units	LU 220, LU 220	20% T = 0.49 (x) + 3.73 Avg. Rate=0.51	50% T=.8 * AM	65% T = 0.55 (x) + 17.65 Avg. Rate=0.62	Total	11	9	26	3	8	5	4	17	9
								Shared/Transit/Non	4	4	10	1	3	2	2	6	4
								External Vehicle Tri	7	5	16	2	5	3	2	11	5
	High Turnover (Sit-Down) Restaurant (932)		68 Seats		52% Avg. Rate = 0.47	50% T= average AM and PM	57% Avg. Rate = 0.41	Total	32	30	28	17	15	15	15	16	12
								Shared/Transit/Non	15	16	15	8	7	7	9	7	8
								External Vehicle Tri	17	14	13	9	8	8	6	9	4
	Retail		8 KSF		62% Avg. Rate=0.96	50% T= average AM and PM	48% Avg. Rate=3.71	Total	7	18	29	5	2	9	9	14	15
								Shared/Pass By	4	12	21	3	1	6	6	10	11
								External Vehicle Tri	3	6	8	2	1	3	3	4	4
	TOTAL								64	68	166	38	26	35	33	62	104
								TOTAL	28	37	61	16	12	17	20	26	35
									36	31	105	22	14	18	13	36	69
5	Apartment/Condo Residential	Multifamily Housing	26 Units	LU 220, LU 220	20% T = 0.49 (x) + 3.73 Avg. Rate=0.51	50% T=.8 * AM	65% T = 0.55 (x) + 17.65 Avg. Rate=0.62	Total	18	14	32	4	14	8	6	21	11
								Shared/Transit/Non	6	5	12	1	5	2	3	7	5
								External Vehicle Tri	12	9	20	3	9	6	3	14	6
14	Single/TH Residential	Housing Redevelopment	21 Units	LU 210, LU 210	25% T = 0.70 (x) +9.74 Avg. Rate = 0.75	50% T=.8 * AM	63% Ln(T) = 0.90 Ln(x) +0.51 Avg. Rate = 1.00	Total	24	19	26	6	18	10	9	17	9
								Shared	9	7	10	2	7	3	4	6	4
								External Vehicle Tri	15	12	16	4	11	7	5	11	5
	Apartment/Condo Residential		42 Units	LU 220, LU 220	20% T = 0.49 (x) + 3.73 Avg. Rate=0.51	50% T=.8 * AM	65% T = 0.55 (x) + 17.65 Avg. Rate=0.62	Total	26	21	41	6	20	11	10	27	14
								Shared	10	7	15	2	8	3	4	9	6
								External Vehicle Tri	16	14	26	4	12	8	6	18	8
	TOTAL								50	40	67	16	52	29	25	65	34
								TOTAL	19	14	25	5	20	8	11	22	15
									31	26	42	11	32	21	14	43	19
15a	General Office Building (710)	Mixed Used Gateway Development	4.038 KSF		88% Ln(T) = 0.80 Ln(x) + 1.57 Avg. Rate=1.56	50% T=.8 * AM	17% T = 1.12 (x) + 78.45 Avg. Rate=1.49	Total	15	12	83	14	1	6	6	15	68
								Shared/Transit/Non	5	5	15	4	1	2	3	3	12
								External Vehicle Tri	10	7	68	10	0	4	3	12	56
	Apartment/Condo Residential		4 Units	LU 220, LU 220	17% Ln(T) = 0.80 Ln(x) + 0.26 Ave. Rate=0.44	50% T=.8 * AM	67% Ln(T) = 0.82 Ln(x) +0.32 Ave. Rate=0.52	Total	6	5	20	2	4	3	2	14	6
								Shared/Transit/Non	3	2	7	1	2	1	1	5	2
								External Vehicle Tri	3	3	13	1	2	2	1	9	4
	High Turnover (Sit-Down) Restaurant (932)		71 Seats		52% Avg. Rate = 0.47	50% T= average AM and PM	57% Avg. Rate = 0.41	Total	33	31	29	18	15	16	15	17	12
								Shared/Transit/Non	16	17	16	9	7	8	9	8	8
								External Vehicle Tri	17	14	13	9	8	8	6	9	4
	TOTAL								54	48	132	34	20	25	23	46	86
								TOTAL	24	24	38	14	10	11	13	16	22
									30	24	94	20	10	14	10	30	64
15b	General Office Building (710)	Mixed Use Gateway Development	6.056 KSF		88% Ln(T) = 0.80 Ln(x) + 1.57 Avg. Rate=1.56	50% T=.8 * AM	17% T = 1.12 (x) + 78.45 Avg. Rate=1.49	Total	20	16	85	18	2	8	8	15	70
								Shared/Transit/Non	8	6	15	6	2	2	4	3	12
								External Vehicle Tri	12	10	70	12	0	6	4	12	58
	Apartment/Condo Residential		4 Units	LU 220, LU 220	17% Ln(T) = 0.80 Ln(x) + 0.26 Ave. Rate=0.44	50% T=.8 * AM	67% Ln(T) = 0.82 Ln(x) +0.32 Ave. Rate=0.52	Total	6	5	20	2	4	3	2	14	6
								Shared/Transit/Non	3	2	7	1	2	1	1	5	2
								External Vehicle Tri	3	3	13	1	2	2	1	9	4
	Retail		2.019 KSF		62% Avg. Rate=0.96	50% T= average AM and PM	48% Avg. Rate=3.71	Total	2	5	7	2	0	3	2	4	3
								Shared	1	3	5	1	0	2	1	3	2
								External Vehicle Tri	1	2	2	1	0	1	1	1	1
	TOTAL								28	25	112	22	6	14	11	33	79
								TOTAL	12	11	27	8	4	5	6	11	16

										16	14	85	14	2	9	5	22	63
16a	General Office Building (710)	Foodlink Adaptive Reuse	6.588 KSF		88% Ln(T) = 0.80 Ln(x) + 1.57 Avg. Rate=1.56	50% T=.8 * AM	17% T = 1.12 (x) + 78.45 Avg. Rate=1.49	Total	22	18	86	20	2	9	9	15	71
								Shared/Transit/Non	8	7	15	6	2	2	5	3	12
								External Vehicle Tri	14	11	71	14	0	7	4	12	59
	Apartment/Condo Residential		13 Units	LU 220, LU 220	17% Ln(T) = 0.80 Ln(x) + 0.26 Ave. Rate=0.44	50% T=.8 * AM	67% Ln(T) = 0.82 Ln(x) +0.32 Ave. Rate=0.52	Total	10	8	25	2	8	4	4	17	8
								Shared/Transit/Non	4	3	9	1	3	1	2	6	3
								External Vehicle Tri	6	5	16	1	5	3	2	11	5
	General Light Industrial (110)		23.25 KSF		88% T = 1.18(X) - 89.28 Avg. Rate = 0.92	50% T=.8 * AM	12% T = 1.43(X) - 157.36 Avg. Rate = 0.97	Total	21	17	23	19	2	9	8	3	20
								Shared/Transit/Non	3	3	4	3	0	2	1	1	3
								External Vehicle Tri	18	14	19	16	2	7	7	2	17
	TOTAL								53	42	134	41	12	22	20	35	99
								TOTAL	15	13	28	10	5	5	8	10	18
									38	29	106	31	7	17	12	25	81
16b	General Office Building (710)	Foodlink Adaptive Reuse	9.35 KSF		88% Ln(T) = 0.80 Ln(x) + 1.57 Avg. Rate=1.56	50% T=.8 * AM	17% T = 1.12 (x) + 78.45 Avg. Rate=1.49	Total	29	23	89	26	3	12	11	16	73
								Shared/Transit/Non	11	9	15	8	3	3	6	3	12
								External Vehicle Tri	18	14	74	18	0	9	5	13	61
	General Light Industrial (110)		15 KSF		83% Avg. Rate = 7.51	50% T=.8 * AM	57% Avg. Rate = 7.26	Total	113	90	109	94	19	46	44	63	46
								Shared/Transit/Non	19	16	19	16	3	8	8	11	8
								External Vehicle Tri	94	74	90	78	16	38	36	52	38
	TOTAL								142	114	198	120	22	58	56	79	119
								TOTAL	30	25	34	24	6	11	14	14	20
									112	89	164	96	16	47	42	65	99
17a	General Office Building (710)	Mixed Use Development	2.89 KSF		88% Ln(T) = 0.80 Ln(x) + 1.57 Avg. Rate=1.56	50% T=.8 * AM	17% T = 1.12 (x) + 78.45 Avg. Rate=1.49	Total	11	9	82	10	1	5	4	14	68
								Shared/Transit/Non	4	3	15	3	1	1	2	3	12
								External Vehicle Tri	7	6	67	7	0	4	2	11	56
	Apartment/Condo Residential		9 Units	LU 220, LU 220	17% Ln(T) = 0.80 Ln(x) + 0.26 Ave. Rate=0.44	50% T=.8 * AM	67% Ln(T) = 0.82 Ln(x) +0.32 Ave. Rate=0.52	Total	8	6	23	2	6	4	2	16	7
								Shared/Transit/Non	3	2	9	1	2	1	1	6	3
								External Vehicle Tri	5	4	14	1	4	3	1	10	4
	High Turnover (Sit-Down) Restaurant (932)		51 Seats		52% Avg. Rate = 0.47	50% T= average AM and PM	57% Avg. Rate = 0.41	Total	24	23	21	13	11	12	11	12	9
								Shared/Transit/Non	11	12	12	6	5	6	6	6	6
								External Vehicle Tri	13	11	9	7	6	6	5	6	3
	Retail		2.89 KSF		62% Avg. Rate=0.96	50% T= average AM and PM	48% Avg. Rate=3.71	Total	3	7	11	2	1	4	3	6	5
								Shared	2	5	8	1	1	3	2	4	4
								External Vehicle Tri	1	2	3	1	0	1	1	2	1
	TOTAL								46	45	137	27	19	25	20	48	89
								TOTAL	20	22	44	11	9	11	11	19	25
									26	23	93	16	10	14	9	29	64
17b	General Office Building (710)	Mixed Use Development	5.95 KSF		88% Ln(T) = 0.80 Ln(x) + 1.57 Avg. Rate=1.56	50% T=.8 * AM	17% T = 1.12 (x) + 78.45 Avg. Rate=1.49	Total	20	16	85	18	2	8	8	15	70
								Shared/Transit/Non	8	6	15	6	2	2	4	3	12
								External Vehicle Tri	12	10	70	12	0	6	4	12	58
	Apartment/Condo Residential		18 Units	LU 220, LU 220	17% Ln(T) = 0.80 Ln(x) + 0.26 Ave. Rate=0.44	50% T=.8 * AM	67% Ln(T) = 0.82 Ln(x) +0.32 Ave. Rate=0.52	Total	13	10	28	3	10	6	4	19	9
								Shared/Transit/Non	5	4	11	1	4	2	2	7	4
								External Vehicle Tri	8	6	17	2	6	4	2	12	5
	General Light Industrial (110)		14 KSF		83% Avg. Rate = 7.51	50% T=.8 * AM	57% Avg. Rate = 7.26	Total	105	84	102	88	17	42	42	59	43
								Shared/Transit/Non	18	14	17	15	3	7	7	10	7
								External Vehicle Tri	87	70	85	73	14	35	35	49	36
	TOTAL								138	110	215	109	29	56	54	93	122
								TOTAL	31	24	43	22	9	11	13	20	23
									107	86	172	87	20	45	41	73	99
17c	General Office Building (710)	Mixed Use Development	28.343 KSF		88% Ln(T) = 0.80 Ln(x) + 1.57 Avg. Rate=1.56	50% T=.8 * AM	17% T = 1.12 (x) + 78.45 Avg. Rate=1.49	Total	70	56	110	62	8	28	28	19	91
								Shared/Transit/Non	26	22	18	19	7	7	15	3	15
								External Vehicle Tri	44	34	92	43	1	21	13	16	76
	Apartment/Condo Residential		42 Units	LU 220, LU 220	17% Ln(T) = 0.80 Ln(x) + 0.26 Ave. Rate=0.44	50% T=.8 * AM	67% Ln(T) = 0.82 Ln(x) +0.32 Ave. Rate=0.52	Total	26	21	41	5	21	11	10	28	13
								Shared/Transit/Non	9	7	15	1	8	3	4	10	5
								External Vehicle Tri	17	14	26	4	13	8	6	18	8
	High Turnover (Sit-Down) Restaurant (932)		141 Seats		52% Avg. Rate = 0.47	50% T= average AM and PM	57% Avg. Rate = 0.41	Total	66	62	58	35	31	31	31	34	24
								Shared/Transit/Non	31	33	33	17	14	15	18	16	17
								External Vehicle Tri	35	29	25	18	17	16	13	18	7
	Retail		12.113 KSF		62% Avg. Rate=0.96	50% T= average AM and PM	48% Avg. Rate=3.71	Total	12	29	45	8	4	15	14	22	23
								Shared	7	19	32	5	2	10	9	16	16
								External Vehicle Tri	5	10	13	3	2	5	5	6	7

	TOTAL								174	167	254	110	64	85	82	103	151
								TOTAL	73	81	98	42	31	35	46	45	53
									101	86	156	68	33	50	36	58	98
17d	Structured Parking	Structured Parking	3 KSF	No New Trips				Total	0	0	0	0	0	0	0	0	0
								Shared/Transit/Non	0	0	0	0	0	0	0	0	0
								External Vehicle Tri	0	0	0	0	0	0	0	0	0
18	Cultural	Flint Street Adaptive Reuse	4.463 KSF	Assume 10 trips	50% Ln(T) = 0.80 Ln(x) + 1.57 Avg. Rate=1.56	50% T=.8 * AM	50% T = 1.12 (x) + 78.45 Avg. Rate=1.49	Total	10	10	10	5	5	5	5	5	5
								Shared/Transit/Non	2	2	2	1	1	1	1	1	1
								External Vehicle Tri	8	8	8	4	4	4	4	4	4
	Apartment/Condo Residential		20 Units	LU 220, LU 220	17% Ln(T) = 0.80 Ln(x) + 0.26 Ave. Rate=0.44	50% T=.8 * AM	67% Ln(T) = 0.82 Ln(x) +0.32 Ave. Rate=0.52	Total	14	11	29	3	11	6	5	20	9
								Shared/Transit/Non	5	4	11	1	4	2	2	7	4
								External Vehicle Tri	9	7	18	2	7	4	3	13	5
	High Turnover (Sit-Down) Restaurant (932)		89 Seats		52% Avg. Rate = 0.47	50% T= average AM and PM	57% Avg. Rate = 0.41	Total	42	39	36	22	20	20	19	21	15
								Shared/Transit/Non	20	21	20	11	9	10	11	10	10
								External Vehicle Tri	22	18	16	11	11	10	8	11	5
	TOTAL								66	60	75	30	36	31	29	46	29
								TOTAL	27	27	33	13	14	13	14	18	15
									39	33	42	17	22	18	15	28	14
19a	General Office Building (710)	Waterfront Mixed use with Structured Parking	7.778 KSF		88% Ln(T) = 0.80 Ln(x) + 1.57 Avg. Rate=1.56	50% T=.8 * AM	17% T = 1.12 (x) + 78.45 Avg. Rate=1.49	Total	25	20	87	22	3	10	10	15	72
								Shared/Transit/Non	10	8	15	7	3	3	5	3	12
								External Vehicle Tri	15	12	72	15	0	7	5	12	60
	Parking		0 Units	Assume 0 trips	17% Ln(T) = 0.80 Ln(x) + 0.26 Ave. Rate=0.44	50% T=.8 * AM	67% Ln(T) = 0.82 Ln(x) +0.32 Ave. Rate=0.52	Total	0	0	0	0	0	0	0	0	0
								Shared/Transit/Non	0	0	0	0	0	0	0	0	0
								External Vehicle Tri	0	0	0	0	0	0	0	0	0
	Apartment/Condo Residential		35 Units	LU 220, LU 220	17% Ln(T) = 0.80 Ln(x) + 0.26 Ave. Rate=0.44	50% T=.8 * AM	67% Ln(T) = 0.82 Ln(x) +0.32 Ave. Rate=0.52	Total	22	18	37	4	18	9	9	25	12
								Shared/Transit/Non	8	6	14	1	7	3	3	9	5
								External Vehicle Tri	14	12	23	3	11	6	6	16	7
	High Turnover (Sit-Down) Restaurant (932)		82 Seats		52% Avg. Rate = 0.47	50% T= average AM and PM	57% Avg. Rate = 0.41	Total	39	37	34	21	18	19	18	20	14
								Shared/Transit/Non	18	19	19	10	8	9	10	9	10
								External Vehicle Tri	21	18	15	11	10	10	8	11	4
	Retail		3.111 KSF		62% Avg. Rate=0.96	50% T= average AM and PM	48% Avg. Rate=3.71	Total	3	8	12	2	1	4	4	6	6
								Shared	2	5	8	1	1	3	2	4	4
								External Vehicle Tri	1	3	4	1	0	1	2	2	2
	TOTAL								89	82	170	49	40	42	40	66	104
								TOTAL	38	38	56	19	19	18	20	25	31
									51	44	114	30	21	24	20	41	73
19b	General Office Building (710)	Waterfront Mixed use with Structured Parking	10.2 KSF		88% Ln(T) = 0.80 Ln(x) + 1.57 Avg. Rate=1.56	50% T=.8 * AM	17% T = 1.12 (x) + 78.45 Avg. Rate=1.49	Total	31	25	90	28	3	13	12	16	74
								Shared/Transit/Non	12	9	16	9	3	3	6	3	13
								External Vehicle Tri	19	16	74	19	0	10	6	13	61
	Parking		60 KSF	Assume 0 trips	50% Ln(T) = 0.80 Ln(x) + 0.26 Ave. Rate=0.44	50% T=.8 * AM	50% Ln(T) = 0.82 Ln(x) +0.32 Ave. Rate=0.52	Total	0	0	0	0	0	0	0	0	0
								Shared/Transit/Non	0	0	0	0	0	0	0	0	0
								External Vehicle Tri	0	0	0	0	0	0	0	0	0
	Apartment/Condo Residential		57 Units	LU 220, LU 220	17% Ln(T) = 0.80 Ln(x) + 0.26 Ave. Rate=0.44	50% T=.8 * AM	67% Ln(T) = 0.82 Ln(x) +0.32 Ave. Rate=0.52	Total	33	26	49	6	27	14	12	33	16
								Shared/Transit/Non	12	9	19	2	10	4	5	12	7
								External Vehicle Tri	21	17	30	4	17	10	7	21	9
	High Turnover (Sit-Down) Restaurant (932)		108 Seats		52% Avg. Rate = 0.47	50% T= average AM and PM	57% Avg. Rate = 0.41	Total	51	48	44	27	24	24	24	26	18
								Shared/Transit/Non	24	25	24	13	11	12	13	12	12
								External Vehicle Tri	27	23	20	14	13	12	11	14	6
	Retail		4.08 KSF		62% Avg. Rate=0.96	50% T= average AM and PM	48% Avg. Rate=3.71	Total	4	10	15	3	1	5	5	8	7
								Shared	3	6	11	2	1	3	3	6	5
								External Vehicle Tri	1	4	4	1	0	2	2	2	2
	TOTAL								119	108	198	64	55	56	52	83	115
								TOTAL	51	49	70	26	25	22	27	33	37
									68	59	128	38	30	34	25	50	78
19c	Parking	Structured Parking	58 KSF	Assume 0 trips	50% Ln(T) = 0.80 Ln(x) + 1.57 Avg. Rate=1.56	50% T=.8 * AM	50% T = 1.12 (x) + 78.45 Avg. Rate=1.49	Total	0	0	0	0	0	0	0	0	0
								Shared/Transit/Non	0	0	0	0	0	0	0	0	0
								External Vehicle Tri	0	0	0	0	0	0	0	0	0
	General Office Building (710)		7.098 KSF		88% Ln(T) = 0.80 Ln(x) + 1.57 Avg. Rate=1.56	50% T=.8 * AM	17% T = 1.12 (x) + 78.45 Avg. Rate=1.49	Total	23	23	86	21	2	12	11	15	71
								Shared/Transit/Non	9	9	15	7	2	3	6	3	12
								External Vehicle Tri	14	14	71	14	0	9	5	12	59
	Parking		41.75 KSF	Assume 0 trips	17% Ln(T) = 0.80 Ln(x) + 0.26	50% T=.8 * AM	67% Ln(T) = 0.82 Ln(x) +0.32	Total	0	0	0	0	0	0	0	0	0
								Shared/Transit/Non	0	0	0	0	0	0	0	0	0

24a		Mixed Use Development with Structured Parking			Ave. Rate=0.44		Ave. Rate=0.52	External Vehicle Tri	0	0	0	0	0	0	0	0	0
	Apartment/Condo Residential		49 Units	LU 220, LU 220	17% Ln(T) = 0.80 Ln(x) + 0.26 Ave. Rate=0.44	50% T=.8 * AM	67% Ln(T) = 0.82 Ln(x) +0.32 Ave. Rate=0.52	Total	29	23	45	5	24	12	11	31	14
								Shared/Transit/Non	10	8	17	1	9	4	4	11	6
								External Vehicle Tri	19	15	28	4	15	8	7	20	8
	High Turnover (Sit-Down) Restaurant (932)		63 Seats		52% Avg. Rate = 0.47	50% T= average AM and PM	57% Avg. Rate = 0.41	Total	30	28	26	16	14	14	14	15	11
								Shared/Transit/Non	14	15	15	8	6	7	8	7	8
								External Vehicle Tri	16	13	11	8	8	7	6	8	3
	Retail		3.549 KSF		62% Avg. Rate=0.96	50% T= average AM and PM	48% Avg. Rate=3.71	Total	3	8	13	2	1	4	4	7	6
								Shared	2	6	9	1	1	3	3	5	4
								External Vehicle Tri	1	2	4	1	0	1	1	2	2
	TOTAL								85	82	170	44	41	42	40	68	102
								TOTAL	35	38	56	17	18	17	21	26	30
									50	44	114	27	23	25	19	42	72
24b	General Office Building (710)	Mixed Use Development with Structured Parking	5.78 KSF		88% Ln(T) = 0.80 Ln(x) + 1.57 Avg. Rate=1.56	50% T=.8 * AM	17% T = 1.12 (x) + 78.45 Avg. Rate=1.49	Total	20	16	85	18	2	8	8	15	70
								Shared/Transit/Non	8	6	15	6	2	2	4	3	12
								External Vehicle Tri	12	10	70	12	0	6	4	12	58
	Parking		31 Spaces	Assume 0 trips	17% Ln(T) = 0.80 Ln(x) + 0.26 Ave. Rate=0.44	50% T=.8 * AM	67% Ln(T) = 0.82 Ln(x) +0.32 Ave. Rate=0.52	Total	0	0	0	0	0	0	0	0	0
								Shared/Transit/Non	0	0	0	0	0	0	0	0	0
								External Vehicle Tri	0	0	0	0	0	0	0	0	0
	Apartment/Condo Residential		20 Units	LU 220, LU 220	17% Ln(T) = 0.80 Ln(x) + 0.26 Ave. Rate=0.44	50% T=.8 * AM	67% Ln(T) = 0.82 Ln(x) +0.32 Ave. Rate=0.52	Total	14	11	29	3	11	6	5	20	9
								Shared/Transit/Non	5	4	11	1	4	2	2	7	4
								External Vehicle Tri	9	7	18	2	7	4	3	13	5
	High Turnover (Sit-Down) Restaurant (932)		26 Seats		52% Avg. Rate = 0.47	50% T= average AM and PM	57% Avg. Rate = 0.41	Total	12	12	11	7	5	6	6	7	4
								Shared/Transit/Non	5	6	6	3	2	3	3	3	3
								External Vehicle Tri	7	6	5	4	3	3	3	4	1
	Retail		1.445 KSF		62% Avg. Rate=0.96	50% T= average AM and PM	48% Avg. Rate=3.71	Total	1	3	5	1	0	2	1	3	2
								Shared	1	2	3	1	0	1	1	2	1
								External Vehicle Tri	0	1	2	0	0	1	0	1	1
	TOTAL								47	42	130	29	18	22	20	45	85
								TOTAL	19	18	35	11	8	8	10	15	20
									28	24	95	18	10	14	10	30	65
24c	Parking	Boutique Hotel with Structured Parking	64 Spaces	Assume 0 trips	50% Ln(T) = 0.80 Ln(x) + 1.57 Avg. Rate=1.56	50% T=.8 * AM	50% T = 1.12 (x) + 78.45 Avg. Rate=1.49	Total	0	0	0	0	0	0	0	0	0
								Shared/Transit/Non	0	0	0	0	0	0	0	0	0
								External Vehicle Tri	0	0	0	0	0	0	0	0	0
	Hotel (310)		80 Keys		59% Avg. Rate=0.53	50% T=.8 * AM	51% Avg. Rate=0.60	Total	42	34	48	25	17	17	17	25	23
								Shared/Transit/Non	17	17	27	4	13	7	10	16	11
								External Vehicle Tri	25	17	21	21	4	10	7	9	12
	High Turnover (Sit-Down) Restaurant (932)		52 Seats		52% Avg. Rate = 0.47	50% T= average AM and PM	57% Avg. Rate = 0.41	Total	24	23	21	13	11	12	11	12	9
								Shared/Transit/Non	11	12	12	6	5	6	6	6	6
								External Vehicle Tri	13	11	9	7	6	6	5	6	3
	Retail		2.954 KSF		62% Avg. Rate=0.96	50% T= average AM and PM	48% Avg. Rate=3.71	Total	3	7	11	2	1	4	3	6	5
								Shared	2	5	8	1	1	3	2	4	4
								External Vehicle Tri	1	2	3	1	0	1	1	2	1
	TOTAL								69	63	80	40	29	33	30	43	37
								TOTAL	30	34	47	11	19	16	18	26	21
									39	29	33	29	10	17	12	17	16
24d	Hotel (310)	Executive Hotel with Structured Parking	17 Keys		59% Avg. Rate=0.53	50% T=.8 * AM	51% Avg. Rate=0.60	Total	9	7	10	6	3	4	3	6	4
								Shared/Transit/Non	3	4	6	1	2	2	2	4	2
								External Vehicle Tri	6	3	4	5	1	2	1	2	2
	Parking		41 Spaces	Assume 0 trips	17% Ln(T) = 0.80 Ln(x) + 0.26 Ave. Rate=0.44	50% T=.8 * AM	67% Ln(T) = 0.82 Ln(x) +0.32 Ave. Rate=0.52	Total	0	0	0	0	0	0	0	0	0
								Shared/Transit/Non	0	0	0	0	0	0	0	0	0
								External Vehicle Tri	0	0	0	0	0	0	0	0	0
	Apartment/Condo Residential		7 Units	LU 220, LU 220	17% Ln(T) = 0.80 Ln(x) + 0.26 Ave. Rate=0.44	50% T=.8 * AM	67% Ln(T) = 0.82 Ln(x) +0.32 Ave. Rate=0.52	Total	7	6	22	2	5	3	3	15	7
								Shared/Transit/Non	3	2	8	1	2	1	1	5	3
								External Vehicle Tri	4	4	14	1	3	2	2	10	4
	Event/Meeting Space		5 KSF	Assume 10 trips - LU 310 includes some meeting space	50%	50% T=.8 * AM	50%	Total	10	10	10	5	5	5	5	5	5
								Shared/Transit/Non	2	2	2	1	1	1	1	1	1
								External Vehicle Tri	8	8	8	4	4	4	4	4	4
	TOTAL								26	23	42	13	13	12	11	26	16
								TOTAL	8	8	16	3	5	4	4	10	6
									18	15	26	10	8	8	7	16	10
					50%	50%	50%	Total	0	0	0	0	0	0	0	0	0

24e	Parking	Structured Parking	107 KSF	Assume 0 trips	Ln(T) = 0.80 Ln(x) + 1.57 Avg. Rate=1.56	T=.8 * AM	T = 1.12 (x) + 78.45 Avg. Rate=1.49	Shared/Transit/Non	0	0	0	0	0	0	0	0	0	0
								External Vehicle Tri	0	0	0	0	0	0	0	0	0	0
25a	General Office Building (710)	Mixed Office & Businesss Services	50.575 KSF		88% Ln(T) = 0.80 Ln(x) + 1.57 Avg. Rate=1.56	50% T=.8 * AM	17% T = 1.12 (x) + 78.45 Avg. Rate=1.49	Total	111	89	135	98	13	45	44	23	112	
								Shared/Transit/Non	42	35	23	30	12	11	24	4	19	
								External Vehicle Tri	69	54	112	68	1	34	20	19	93	
	General Light Industrial (110)		34 KSF		88% T = 1.18 (x) - 89.28 0.92	50% T=.8 * AM	12% T = 1.43 (x) - 157.36 0.97	Total	255	204	247	225	30	102	102	30	217	
								Shared/Transit/Non	43	34	42	38	5	17	17	5	37	
								External Vehicle Tri	212	170	205	187	25	85	85	25	180	
	High Turnover (Sit-Down) Restaurant (932)		51 Seats		52% Avg. Rate = 0.47	50% T= average AM and PM	57% Avg. Rate = 0.41	Total	24	23	21	13	11	12	11	12	9	
								Shared/Transit/Non	11	12	12	6	5	6	6	6	6	
								External Vehicle Tri	13	11	9	7	6	6	5	6	3	
	Retail		4.335 KSF		62% Avg. Rate=0.96	50% T= average AM and PM	48% Avg. Rate=3.71	Total	4	10	16	3	1	5	5	8	8	
								Shared	3	6	12	2	1	3	3	6	6	
								External Vehicle Tri	1	4	4	1	0	2	2	2	2	
	TOTAL								394	325	419	339	55	164	161	73	346	
								TOTAL	99	87	89	76	23	37	50	21	68	
									295	238	330	263	32	127	111	52	278	
25b	Single/TH Residential	Townhouses	26 Units	LU 210, LU 210	17% Ln(T) = 0.80 Ln(x) + 0.26 Ave. Rate=0.44	50% T=.8 * AM	67% Ln(T) = 0.82 Ln(x) +0.32 Ave. Rate=0.52	Total	28	22	31	5	23	12	10	21	10	
								Shared/Transit/Non	8	6	9	1	7	3	3	5	4	
								External Vehicle Tri	20	16	22	4	16	9	7	16	6	
6	Trail Enhancements	Trail Enhancements		Assume 10 trips	50%	50% T=.8 * AM	50%	Total	10	10	10	5	5	5	5	5	5	
								Shared/Transit/Non	2	2	2	1	1	1	1	1	1	
								External Vehicle Tri	8	8	8	4	4	4	4	4	4	
7	Car Top Launch/ Water Access	Car Top Launch/ Water Access		Assume 10 trips	50%	50% T=.8 * AM	50%	Total	10	10	10	5	5	5	5	5	5	
								Shared/Transit/Non	2	2	2	1	1	1	1	1	1	
								External Vehicle Tri	8	8	8	4	4	4	4	4	4	
9	Parkland and Trail Developments	Parkland and Trail Developments		Assume 10 trips	50%	50% T=.8 * AM	50%	Total	10	10	10	5	5	5	5	5	5	
								Shared/Transit/Non	2	2	2	1	1	1	1	1	1	
								External Vehicle Tri	8	8	8	4	4	4	4	4	4	
13	Enhanced Trail Connection and Playground	Enhanced Trail Connection and Playground		Assume 10 trips	50%	50% T=.8 * AM	50%	Total	10	10	10	5	5	5	5	5	5	
								Shared/Transit/Non	2	2	2	1	1	1	1	1	1	
								External Vehicle Tri	8	8	8	4	4	4	4	4	4	
	FINAL TOTAL						**Total**	**Total**	**1,705**	**1,503**	**2,807**	**1,140**	**583**	**782**	**735**	**1,082**	**1,757**	
								Shared/Transit/No	**580**	**573**	**845**	**333**	**253**	**260**	**318**	**382**	**475**	
								External Vehicle T	**1,125**	**930**	**1,962**	**807**	**330**	**522**	**417**	**700**	**1,282**	

NOTES: For AM residential LU Code 210 always has the highest number of trips and therefor that Enter/Exit percentage is used. For PM when above 27.5 units LU Code 210 has the highest number of trips and when below 28 units LU Code 220 has the highest number of trips and the respective Enter/Exit percentage values should be used.

Where the type of residential use is not specified the land use with the higher estimate of trips was used.
Assumed 50% for Mid day peak Enter/Exit Distribution and used specified number of trips based on the AM and PM values

Totals by Phase

	Phase 1 Total	0 to 7 Years		Parcel 1-Parcel 13			**Total**	**Total**	**137**	**144**	**283**	% Total	% Total	% Total
								Shared/Transit/No	**49**	**62**	**105**			
								External Vehicle T	**88**	**82**	**178**	7.61%	8.49%	8.93%
	Phase 2 Total	8 to 15 Years		Parcel 14-Parcel 23			**Total**	**Total**	**959**	**842**	**1,692**			
								Shared/Transit/No	**340**	**328**	**496**			
								External Vehicle T	**619**	**514**	**1,196**	53.50%	53.40%	59.98%
	Phase 3 Total	15+ Years		Parcel 24-Parcel 25			**Total**	**Total**	**649**	**558**	**872**			
								Shared/Transit/No	**199**	**191**	**252**			
								External Vehicle T	**450**	**367**	**620**	38.89%	38.11%	31.09%

Appendix F

Level of Service Analysis Results

- **2022 Phase 1 Build**
- **2030 Phase 2 Build**

Bergmann associates

Intersection	Approach			2022 Build Phase I						2030 Build Phase II					
				Weekday AM Peak Hour		Weekday Mid Peak Hour		Weekday PM Peak Hour		Weekday AM Peak Hour		Weekday Mid Peak Hour		Weekday PM Peak Hour	
				LOS	Control Delay (sec/veh)	LOS	Control Delay (sec/veh)	LOS	Control Delay (sec/veh)	LOS	Control Delay (sec/veh)	LOS	Control Delay (sec/veh	LOS	Control Delay (sec/veh)
Plymouth Avenue at Ford Street	Ford Street	Eastbound	TR	A	5.9	A	5.4	A	8.1	A	7.1	A	6.4	B	11.2
	Ford Street	Eastbound	Approach	A	5.9	A	5.4	A	8.1	A	7.1	A	6.4	B	11.2
	Ford Street	Westbound	LT	A	6.2	A	7.1	B	11.9	A	7.1	A	8.3	D	22.0
Unsignalized	Ford Street	Westbound	Approach	A	6.2	A	7.1	B	11.9	A	7.1	A	8.3	D	22.0
	Plymouth	Northbound	LR	A	8.3	A	5.8	A	8.3	B	10.2	A	6.5	B	10.3
	Plymouth	Northbound	Approach	A	8.3	A	5.8	A	8.3	B	10.2	A	6.5	B	10.3
		Overall		A	7.1	A	6.3	A	10.0	A	8.4	A	7.3	C	16.1
Plymouth Avenue at Doran Street	Coulton Pl	Eastbound	LTR	A	9.6	B	12.5	C	16.6	A	9.9	B	14.0	C	22.2
	Coulton Pl	Eastbound	Approach	A	9.6	B	12.5	C	16.6	A	9.9	B	14.0	C	22.2
	Plymouth	Northbound	LTR	A	0.0	A	0.0	A	0.1	A	0.0	A	0.0	A	0.0
Unsignalized	Plymouth	Northbound	Approach	A	0.0	A	0.0	A	0.1	A	0.0	A	0.0	A	0.0
	Plymouth	Southbound	LTR	A	0.3	A	0.5	A	0.3	A	1.1	A	0.8	A	0.6
Doran Street is one-way eastbound	Plymouth	Southbound	Approach	A	0.3	A	0.5	A	0.3	A	1.1	A	0.8	A	0.6
		Overall		A	0.1	A	0.3	A	0.4	A	0.4	A	0.4	A	0.6
Plymouth Avenue at Columbia Avenue	Columbia	Eastbound	LR	B	13.7	C	14.1	C	21.1	C	15.0	C	16.2	D	30.4
	Columbia	Eastbound	Approach	B	13.7	C	14.1	C	21.1	C	15.0	C	16.2	D	30.4
	Plymouth	Northbound	LT	A	0.1	A	0.3	A	0.2	A	0.1	A	0.4	A	0.4
Unsignalized	Plymouth	Northbound	Approach	A	0.1	A	0.3	A	0.2	A	0.1	A	0.4	A	0.4
	Plymouth	Southbound	TR	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0
	Plymouth	Southbound	Approach	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0
		Overall		A	1.0	A	1.5	A	1.5	A	1.1	A	1.7	A	2.2
Plymouth Avenue at Flint Street	Flint Street	Westbound	LTR	B	12.9	B	11.6	B	14.9	B	13.3	B	11.4	B	14.9
	Flint Street	Westbound	Approach	B	12.9	B	11.6	B	14.9	B	13.3	B	11.4	B	14.9
	Plymouth	Northbound	LTR	A	0.1	A	0.1	A	0.1	A	0.1	A	0.2	A	0.2
Unsignalized	Plymouth	Northbound	Approach	A	0.1	A	0.1	A	0.1	A	0.1	A	0.2	A	0.2
	Plymouth	Southbound	LTR	A	0.1	A	0.1	A	0.1	A	1.0	A	0.7	A	0.6
Flint Street is one-way westbound (west of Plymouth Ave)	Plymouth	Southbound	Approach	A	0.1	A	0.1	A	0.1	A	1.0	A	0.7	A	0.6
		Overall		A	0.5	A	0.5	A	0.6	A	1.1	A	1.1	A	1.7
Plymouth Avenue at Magnolia Street	Magnolia St	Eastbound	LTR	C	25.3	C	24.2	C	22.0	C	24.9	C	24.1	B	17.7
	Magnolia St	Eastbound	Approach	C	25.3	C	24.2	C	22.0	C	24.9	C	24.1	B	17.7
	Magnolia St	Westbound	LTR	C	25.5	C	24.1	C	22.3	C	25.2	C	24.6	C	22.0
Signalized	Magnolia St	Westbound	Approach	C	25.5	C	24.1	C	22.3	C	25.2	C	24.6	C	22.0
	Plymouth	Northbound	LTR	B	10.6	A	2.9	B	10.6	B	12.5	A	3.4	B	12.5
	Plymouth	Northbound	Approach	B	10.6	A	2.9	B	10.6	B	12.5	A	3.4	B	12.5
	Plymouth	Southbound	LTR	A	1.0	A	0.2	A	2.4	A	1.1	A	0.3	C	21.7
	Plymouth	Southbound	Approach	A	1.0	A	0.2	A	2.4	A	1.1	A	0.3	C	21.7
		Overall		A	9.1	A	5.9	A	8.3	B	11.6	A	7.7	B	18.0
Plymouth Avenue at Jefferson Avenue	Jefferson	Eastbound	LTR	C	26.6	C	24.9	C	24.9	C	26.0	C	24.8	C	24.4
	Jefferson	Eastbound	Approach	C	26.6	C	24.9	C	24.9	C	26.0	C	24.8	C	24.4
	Cottage St	Westbound	LTR	C	24.3	C	23.3	C	21.9	C	23.1	C	22.8	C	21.0
Signalized	Cottage St	Westbound	Approach	C	24.3	C	23.3	C	21.9	C	23.1	C	22.8	C	21.0
	Plymouth	Northbound	LTR	B	11.6	A	3.0	B	11.9	B	13.0	A	3.5	B	14.3
	Plymouth	Northbound	Approach	B	11.6	A	3.0	B	11.9	B	13.0	A	3.5	B	14.3
	Plymouth	Southbound	LTR	A	1.6	A	9.1	A	2.7	A	1.8	B	10.1	A	4.8
	Plymouth	Southbound	Approach	A	1.6	A	9.1	A	2.7	A	1.8	B	10.1	A	4.8
		Overall		B	10.7	A	9.8	B	10.6	B	11.6	B	10.1	B	11.7
Plymouth Avenue at Barton Street	Barton St	Eastbound	LTR	C	16.6	B	12.5	C	19.3	C	20.9	B	14.0	D	31.6
	Barton St	Eastbound	Approach	C	16.6	B	12.5	C	19.3	C	20.9	B	14.0	D	31.6
	Driveway	Westbound	LTR	C	15.5	B	13.5	C	19.9	C	17.5	B	14.9	D	27.4
Unsignalized	Driveway	Westbound	Approach	C	15.5	B	13.5	C	19.9	C	17.5	B	14.9	D	27.4
	Plymouth	Northbound	LTR	A	0.0	A	0.0	A	0.1	A	0.0	A	0.0	A	0.1
	Plymouth	Northbound	Approach	A	0.0	A	0.0	A	0.1	A	0.0	A	0.0	A	0.1
	Plymouth	Southbound	LTR	A	0.1	A	0.1	A	0.1	A	0.1	A	0.0	A	0.2
	Plymouth	Southbound	Approach	A	0.1	A	0.1	A	0.1	A	0.1	A	0.0	A	0.2
		Overall		A	1.1	A	0.8	A	1.3	A	1.3	A	0.8	A	1.9

Intersection	Approach			2022 Build Phase I						2030 Build Phase II					
				Weekday AM Peak Hour		Weekday Mid Peak Hour		Weekday PM Peak Hour		Weekday AM Peak Hour		Weekday Mid Peak Hour		Weekday PM Peak Hour	
				LOS	Control Delay (sec/veh)	LOS	Control Delay (sec/veh)	LOS	Control Delay (sec/veh)	LOS	Control Delay (sec/veh)	LOS	Control Delay (sec/veh)	LOS	Control Delay (sec/veh)
Exchange Street at Ford Street	Ford Street	Eastbound	L	B	12.3	B	11.1	B	17.9	B	17.7	B	15.5	C	32.1
	Ford Street	Eastbound	T	B	10.5	A	9.7	B	17.1	B	14.4	B	13.5	C	28.3
	Ford Street	Eastbound	TR	B	10.5	A	9.6	B	17.0	B	14.4	B	13.5	C	28.3
Signalized	Ford Street	Eastbound	Approach	B	11.1	A	10.0	B	17.1	B	15.6	B	14.0	C	28.5
	Ford Street	Westbound	LT	B	18.0	B	15.8	C	25.2	C	28.5	C	22.6	F	93.0
	Ford Street	Westbound	TR	B	18.3	B	16.2	C	25.8	C	27.8	C	23.0	E	77.7
	Ford Street	Westbound	Approach	B	18.1	B	16.0	C	25.5	C	28.1	C	22.8	F	84.4
	Exchange St	Northbound	L	D	49.9	D	41.2	D	49.3	D	44.7	D	35.9	D	42.0
	Exchange St	Northbound	TR	E	60.0	D	47.5	E	58.4	E	62.1	D	46.5	F	289.4
	Exchange St	Northbound	Approach	E	59.3	D	47.1	E	57.8	E	60.0	D	45.0	F	246.1
	Exchange St	Southbound	L	F	132.7	D	37.7	D	44.3	F	164.0	D	37.8	E	61.5
	Exchange St	Southbound	T T	C	29.7	C	23.7	C	21.2	C	25.5	B	19.4	B	13.3
	Exchange St	Southbound	R	C	29.7	C	23.7	C	21.2	C	25.5	B	19.4	B	13.3
	Exchange St	Southbound	Approach	F	123.5	D	36.5	D	42.6	F	134.6	D	34.0	D	52.1
		Overall		D	51.2	C	22.3	C	30.9	E	59.2	C	26.6	F	102.1
Exchange Street at Doran Street	Doran St	Eastbound	LR	A	9.4	A	9.2	A	9.6	B	12.5	B	11.4	C	15.8
	Doran St	Eastbound	Approach	A	9.4	A	9.2	A	9.6	B	12.5	B	11.4	C	15.8
	Exchange St	Northbound	T	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0
Unsignalized	Exchange St	Northbound	Approach	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0
	Exchange St	Southbound	T	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0
Doran Street is one-way eastbound	Exchange St	Southbound	Approach	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0
		Overall		A	1.2	A	1.5	A	1.8	A	1.2	A	1.0	A	1.1
Exchange Street at Violetta Street	Violetta St	Westbound	LTR	A	8.6	A	8.7	A	8.7	A	9.3	B	9.6	C	14.1
	Violetta St	Westbound	Approach	A	8.6	A	8.7	A	8.7	A	9.3	B	9.6	C	14.1
	Exchange St	Northbound	LTR	A	0.3	A	0.3	A	0.1	A	0.1	A	0.1	A	0.0
Unsignalized	Exchange St	Northbound	Approach	A	0.3	A	0.3	A	0.1	A	0.1	A	0.1	A	0.0
	Exchange St	Southbound	LTR	A	0.1	A	0.2	A	0.2	A	1.4	A	1.4	A	1.5
Violetta Street is one-way westbound (west of Exchange St)	Exchange St	Southbound	Approach	A	0.1	A	0.2	A	0.2	A	1.4	A	1.4	A	1.5
		Overall		A	0.3	A	0.7	A	0.5	A	1.5	A	1.7	A	2.1
Exchange Street at Flint Street	Flint Street	Eastbound	LTR	A	9.3	A	9.5	A	9.4	B	13.6	B	12.9	C	15.7
	Flint Street	Eastbound	Approach	A	9.3	A	9.5	A	9.4	B	13.6	B	12.9	C	15.7
	Flint Street	Westbound	LTR	A	9.0	A	8.8	A	9.4	B	11.5	B	11.1	C	16.9
Unsignalized	Flint Street	Westbound	Approach	A	9.0	A	8.8	A	9.4	B	11.5	B	11.1	C	16.9
	Exchange St	Northbound	LTR	A	0.9	A	0.9	A	1.5	A	0.5	A	0.6	A	0.6
	Exchange St	Northbound	Approach	A	0.9	A	0.9	A	1.5	A	0.5	A	0.6	A	0.6
	Exchange St	Southbound	LTR	A	1.4	A	0.6	A	0.5	A	4.2	A	2.9	A	2.4
	Exchange St	Southbound	Approach	A	1.4	A	0.6	A	0.5	A	4.2	A	2.9	A	2.4
		Overall		A	2.7	A	2.4	A	2.3	A	5.2	A	5.2	A	7.2
Exchange Street at Magnolia Street	Magnolia St	Eastbound	LT	A	5.8	A	5.1	A	4.1	A	4.9	A	4.3	A	4.4
	Magnolia St	Eastbound	Approach	A	5.8	A	5.1	A	4.1	A	4.9	A	4.3	A	4.4
	Magnolia St	Westbound	TR	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0
Unsignalized	Magnolia St	Westbound	Approach	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0
	Exchange St	Southbound	LR	A	8.8	A	8.7	A	9.1	B	11.1	A	9.9	B	12.2
	Exchange St	Southbound	Approach	A	8.8	A	8.7	A	9.1	B	11.1	A	9.9	B	12.2
		Overall		A	5.5	A	5.2	A	5.8	A	5.2	A	5.0	A	5.8
Plymouth Avenue at Bartlett Street	Bartlett St	Eastbound	LR	C	31.4	C	32.3	C	34.2	C	33.0	C	34.6	C	32.3
	Bartlett St	Eastbound	Approach	C	31.4	C	32.3	C	34.2	C	33.0	C	34.6	C	32.3
	Plymouth	Northbound	LT	A	3.0	A	0.4	A	3.5	A	3.6	A	0.6	A	6.6
Signalized	Plymouth	Northbound	Approach	A	3.0	A	0.4	A	3.5	A	3.6	A	0.6	A	6.6
	Plymouth	Southbound	TR	A	2.7	A	2.9	A	5.3	A	3.3	A	3.4	A	8.0
	Plymouth	Southbound	Approach	A	2.7	A	2.9	A	5.3	A	3.3	A	3.4	A	8.0
		Overall		A	4.9	A	4.7	A	7.2	A	5.8	A	5.4	A	9.7
Flint Street at Proposed St	Flint St	Eastbound	LR	A	6.6	A	6.6	A	6.6	A	7.2	A	7.2	A	8.1
	Flint St	Eastbound	Approach	A	6.6	A	6.6	A	6.6	A	7.2	A	7.2	A	8.1
	Proposed	Northbound	LT	A	7.2	A	7.2	A	7.2	A	7.6	A	7.5	A	8.1
Unsignalized	Proposed	Northbound	Approach	A	7.2	A	7.2	A	7.2	A	7.6	A	7.5	A	8.1
	Proposed	Southbound	TR	A	6.3	A	6.3	A	6.3	A	6.8	A	6.7	A	7.1
	Proposed	Southbound	Approach	A	6.3	A	6.3	A	6.3	A	6.8	A	6.7	A	7.1
		Overall		A	6.8	A	6.8	A	6.8	A	7.2	A	7.1	A	7.9

Appendix G

Level of Service Analysis Results

- 2035 Full Build
- 2035 Full Build with Mitigation

Bergmann associates

Intersection	Approach			2035 Full Build					
				Weekday AM Peak Hour		Weekday Mid Peak Hour		Weekday PM Peak Hour	
				LOS	Control Delay (sec/veh)	LOS	Control Delay (sec/veh)	LOS	Control Delay (sec/veh)
Plymouth Avenue at Ford Street	Ford Street	Eastbound	TR	A	8.3	A	7.1	B	13.6
	Ford Street	Eastbound	Approach	A	8.3	A	7.1	B	13.6
	Ford Street	Westbound	LT	A	7.6	A	9.3	E	38.7
Unsignalized	Ford Street	Westbound	Approach	A	7.6	A	9.3	E	38.7
	Plymouth	Northbound	LR	A	11.3	A	6.9	B	11.3
	Plymouth	Northbound	Approach	A	11.3	A	6.9	B	11.3
		Overall		A	9.2	A	8.0	D	25.4
Plymouth Avenue at Doran Street	Coulton Pl	Eastbound	LTR	B	10.0	C	15.3	D	25.4
	Coulton Pl	Eastbound	Approach	B	10.0	C	15.3	D	25.4
	Plymouth	Northbound	LTR	A	0.0	A	0.0	A	0.1
Unsignalized	Plymouth	Northbound	Approach	A	0.0	A	0.0	A	0.1
	Plymouth	Southbound	LTR	A	2.3	A	1.3	A	0.9
Doran Street is one-way eastbound	Plymouth	Southbound	Approach	A	2.3	A	1.3	A	0.9
		Overall		A	1.0	A	0.8	A	0.9
Plymouth Avenue at Columbia Avenue	Columbia	Eastbound	LR	C	15.2	C	16.8	E	35.3
	Columbia	Eastbound	Approach	C	15.2	C	16.8	E	35.3
	Plymouth	Northbound	LT	A	0.2	A	0.5	A	0.6
Unsignalized	Plymouth	Northbound	Approach	A	0.2	A	0.5	A	0.6
	Plymouth	Southbound	TR	A	0.0	A	0.0	A	0.0
	Plymouth	Southbound	Approach	A	0.0	A	0.0	A	0.0
		Overall		A	1.3	A	1.9	A	2.7
Plymouth Avenue at Flint Street	Flint Street	Westbound	LTR	C	14.9	B	12.1	C	20.3
	Flint Street	Westbound	Approach	C	14.9	B	12.1	C	20.3
	Plymouth	Northbound	LTR	A	0.1	A	0.2	A	0.2
Unsignalized	Plymouth	Northbound	Approach	A	0.1	A	0.2	A	0.2
	Plymouth	Southbound	LTR	A	1.2	A	0.8	A	0.6
Flint Street is one-way westbound (west of Plymouth Ave)	Plymouth	Southbound	Approach	A	1.2	A	0.8	A	0.6
		Overall		A	1.4	A	1.3	A	2.6
Plymouth Avenue at Magnolia Street	Magnolia St	Eastbound	LTR	C	24.9	C	22.8	B	15.1
	Magnolia St	Eastbound	Approach	C	24.9	C	22.8	B	15.1
	Magnolia St	Westbound	LTR	C	25.0	C	23.9	C	23.7
Signalized	Magnolia St	Westbound	Approach	C	25.0	C	23.9	C	23.7
	Plymouth	Northbound	LTR	B	15.5	A	4.3	B	13.7
	Plymouth	Northbound	Approach	B	15.5	A	4.3	B	13.7
	Plymouth	Southbound	LTR	A	1.1	A	0.3	C	22.6
	Plymouth	Southbound	Approach	A	1.1	A	0.3	C	22.6
		Overall		B	13.9	A	8.6	C	19.1
Plymouth Avenue at Jefferson Avenue	Jefferson	Eastbound	LTR	C	25.4	C	24.5	C	24.1
	Jefferson	Eastbound	Approach	C	25.4	C	24.5	C	24.1
	Cottage St	Westbound	LTR	C	22.0	C	22.4	C	20.5
Signalized	Cottage St	Westbound	Approach	C	22.0	C	22.4	C	20.5
	Plymouth	Northbound	LTR	B	14.8	A	3.9	B	16.5
	Plymouth	Northbound	Approach	B	14.8	A	3.9	B	16.5
	Plymouth	Southbound	LTR	A	2.0	B	10.9	B	8.3
	Plymouth	Southbound	Approach	A	2.0	B	10.9	B	8.3
		Overall		B	12.7	B	10.5	B	13.8
Plymouth Avenue at Barton Street	Barton St	Eastbound	LTR	D	25.6	C	15.5	E	45.0
	Barton St	Eastbound	Approach	D	25.6	C	15.5	E	45.0
	Driveway	Westbound	LTR	C	19.8	C	15.6	E	36.0
Unsignalized	Driveway	Westbound	Approach	C	19.8	C	15.6	E	36.0
	Plymouth	Northbound	LTR	A	0.0	A	0.0	A	0.1
	Plymouth	Northbound	Approach	A	0.0	A	0.0	A	0.1
	Plymouth	Southbound	LTR	A	0.1	A	0.1	A	0.2
	Plymouth	Southbound	Approach	A	0.1	A	0.1	A	0.2
		Overall		A	1.6	A	0.9	A	2.5

Intersection	Approach			2035 Full Build						2035 Full Build with Mitigation			
				Weekday AM Peak Hour		Weekday Mid Peak Hour		Weekday PM Peak Hour		Weekday AM Peak Hour		Weekday PM Peak Hour	
				LOS	Control Delay (sec/veh)	LOS	Control Delay (sec/veh)	LOS	Control Delay (sec/veh)	LOS	Control Delay (sec/veh)	LOS	Control Delay (sec/veh)
Exchange Street at Ford Street	Ford Street	Eastbound	L	C	22.7	B	19.4	C	32.3	B	15.4	C	31.1
	Ford Street	Eastbound	T	B	16.9	B	16.5	C	29.0	B	11.2	C	25.8
	Ford Street	Eastbound	TR	B	16.9	B	16.5	C	29.0	B	11.2	C	25.8
Signalized	Ford Street	Eastbound	Approach	B	19.0	B	17.2	C	29.2	B	12.7	C	26.1
	Ford Street	Westbound	LT	D	43.1	C	30.8	F	157.9	C	26.1	F	105.7
	Ford Street	Westbound	TR	D	37.7	C	30.4	F	122.8	C	23.2	F	83.7
	Ford Street	Westbound	Approach	D	39.9	C	30.6	F	137.5	C	24.4	F	92.9
	Exchange St	Northbound	L	D	42.8	C	32.9	D	49.8	D	48.3	D	36.3
	Exchange St	Northbound	TR	E	69.7	D	54.2	F	616.9	D	49.3	D	37.3
	Exchange St	Northbound	(R)	NA	NA	NA	NA	NA	NA	D	54.1	F	80.9
	Exchange St	Northbound	Approach	E	65.3	D	50.3	F	498.5	D	51.5	E	57.1
	Exchange St	Southbound	L	F	194.4	D	42.5	F	71.9	F	155.7	F	87.3
	Exchange St	Southbound	T T	C	23.5	B	16.7	B	13.3	C	33.5	B	16.3
	Exchange St	Southbound	R	C	23.5	B	16.7	B	13.3	C	33.5	B	16.3
	Exchange St	Southbound	Approach	F	145.4	D	35.7	E	58.6	F	120.6	E	71.2
		Overall		E	67.9	C	32.2	F	207.0	D	52.8	E	65.8
Exchange Street at Doran Street	Doran St	Eastbound	LR	C	19.1	C	14.0	C	23.3				
	Doran St	Eastbound	Approach	C	19.1	C	14.0	C	23.3				
	Exchange St	Northbound	T	A	0.0	A	0.0	A	0.0				
Unsignalized	Exchange St	Northbound	Approach	A	0.0	A	0.0	A	0.0				
	Exchange St	Southbound	T	A	0.0	A	0.0	A	0.0				
Doran Street is one-way eastbound	Exchange St	Southbound	Approach	A	0.0	A	0.0	A	0.0				
		Overall		A	2.4	A	1.4	A	1.5				
Exchange Street at Violetta Street	Violetta St	Westbound	LTR	A	9.8	B	10.8	C	22.7				
	Violetta St	Westbound	Approach	A	9.8	B	10.8	C	22.7				
	Exchange St	Northbound	LTR	A	0.2	A	0.1	A	0.0				
Unsignalized	Exchange St	Northbound	Approach	A	0.2	A	0.1	A	0.0				
	Exchange St	Southbound	LTR	A	1.6	A	1.9	A	2.8				
Violetta Street is one-way westbound (west of Exchange St)	Exchange St	Southbound	Approach	A	1.6	A	1.9	A	2.8				
		Overall		A	2.0	A	2.2	A	4.6				
Exchange Street at Flint Street	Flint Street	Eastbound	LTR	C	16.9	C	15.3	C	20.1				
	Flint Street	Eastbound	Approach	C	16.9	C	15.3	C	20.1				
	Flint Street	Westbound	LTR	B	13.9	B	12.7	D	27.6				
Unsignalized	Flint Street	Westbound	Approach	B	13.9	B	12.7	D	27.6				
	Exchange St	Northbound	LTR	A	0.3	A	0.4	A	0.6				
	Exchange St	Northbound	Approach	A	0.3	A	0.4	A	0.6				
	Exchange St	Southbound	LTR	A	3.9	A	2.4	A	1.9				
	Exchange St	Southbound	Approach	A	3.9	A	2.4	A	1.9				
		Overall		A	5.4	A	5.2	B	10.0				
Exchange Street at Magnolia Street	Magnolia St	Eastbound	LT	A	5.8	A	5.0	A	4.7				
	Magnolia St	Eastbound	Approach	A	5.8	A	5.0	A	4.7				
	Magnolia St	Westbound	TR	A	0.0	A	0.0	A	0.0				
Unsignalized	Magnolia St	Westbound	Approach	A	0.0	A	0.0	A	0.0				
	Exchange St	Southbound	LR	C	13.6	B	10.7	C	14.3				
	Exchange St	Southbound	Approach	C	13.6	B	10.7	C	14.3				
		Overall		A	6.3	A	5.8	A	7.3				
Plymouth Avenue at Bartlett Street	Bartlett St	Eastbound	LR	C	34.1	C	33.6	C	31.5				
	Bartlett St	Eastbound	Approach	C	34.1	C	33.6	C	31.5				
	Plymouth	Northbound	LT	A	3.9	A	0.7	A	9.5				
Signalized	Plymouth	Northbound	Approach	A	3.9	A	0.7	A	9.5				
	Plymouth	Southbound	TR	A	3.8	A	3.9	B	10.1				
	Plymouth	Southbound	Approach	A	3.8	A	3.9	B	10.1				
		Overall		A	6.5	A	5.8	B	11.9				
Flint Street at Proposed St	Flint St	Eastbound	LR	A	7.5	A	7.4	A	8.6				
	Flint St	Eastbound	Approach	A	7.5	A	7.4	A	8.6				
	Proposed	Northbound	LT	A	7.7	A	7.6	A	8.4				
Unsignalized	Proposed	Northbound	Approach	A	7.7	A	7.6	A	8.4				
	Proposed	Southbound	TR	A	7.0	A	6.9	A	7.7				
	Proposed	Southbound	Approach	A	7.0	A	6.9	A	7.7				
		Overall		A	7.4	A	7.3	A	8.3				