APPENDIX A

Street Inventory

APPENDIX A
BEND CENTRAL AREA PLAN
STREET SYSTEM INVENTORY

Street Name	Begin	End	Jurisdiction	Functional Classification	ROW Width (feet)	Paved Width (feet)	Number of Lanes	Pavement Type	Pavement Condition (PCI)	Curb	Bike Lane	Sidewalk	Data Source
US 97	Cooley Road	Highway 20	ODOT	Expressway	100-210	74	5	AC	VG	Y	Y	N	TSP
US 97	Highway 20	South of study area	ODOT	Expressway	160	80	5	AC	P-F	N	Y	N	TSP
Highway 20	Empire Avenue	Division Street	ODOT	Principal Arterial	100-130	72-86	5	AC	VG	Y	Y	P	TSP
Highway 20	Division Street	Revere Avenue	ODOT	Principal Arterial	80-135	54-64	4-5	AC	VG	P	N	P	TSP
Highway 20	Revere Avenue	Greenwood Avenue	ODOT	Principal Arterial	80	64	5	AC	VG	Y	N	Y	TSP
Highway 20	3rd Street	4th Street	ODOT	Principal Arterial	80	66	5	AC	VP	Y	N	Y	TSP
Highway 20	4th Street	8th Street	ODOT	Principal Arterial	80	66	5	AC	F	Y	Y	Y	TSP
3rd Street	Greenwood Avenue	Franklin Avenue	ODOT	Principal Arterial	80	64	5	AC	VG	Y	N	Y	TSP
3rd Street	Franklin Avenue	Wilson Avenue	ODOT	Principal Arterial	80-110	64	5	AC	VG	Y	N	Y	TSP
4th Street	Butler Market Road	Addison Avenue	City	Minor Arterial	60-70	40	2-3	AC	67	N	N	N	TSP&Database
4th Street	Addison Avenue	Xerxes Avenue	City	Minor Arterial	60	36	2	AC	67	P	Y	P	TSP&Database
4th Street	Xerxes Avenue	Webster Avenue	City	Minor Arterial	60	40	2	AC	42	P	Y	P	TSP&Database
4th Street	Webster Avenue	Webster Avenue	City	Minor Arterial	60	40	2	AC	69	P	Y	P	TSP&Database
4th Street	Webster Avenue	Vail Avenue	City	Minor Arterial	60	40	2	AC	57	P	Y	P	TSP&Database
4th Street	Vail Avenue	Underwood Avenue	City	Minor Arterial	60	40	2	AC	37	P	Y	P	TSP&Database
4th Street	Underwood Avenue	Studio Road	City	Minor Arterial	60	40	2	AC	58	P	Y	P	TSP&Database
4th Street	Studio Road	Seward Avenue	City	Minor Arterial	60	40	2-3	AC	36	P	Y	P	TSP&Database
4th Street	Seward Avenue	Revere Avenue	City	Minor Arterial	60	40	2-3	AC	19	P	Y	P	TSP&Database
4th Street	Revere Avenue	Quimby Avenue	City	Minor Arterial	60	40	2	AC	71	Y	N	P	TSP&Database
4th Street	Quimby Avenue	Penn Avenue	City	Minor Arterial	60	40	2	AC	83	Y	N	P	TSP&Database
4th Street	Penn Avenue	Olney Avenue	City	Minor Arterial	60	40	2	AC	89	Y	N	P	TSP&Database
4th Street	Olney Avenue	Norton Avenue	City	Minor Arterial	60	40	2	AC	80	Y	N	P	TSP&Database
4th Street	Norton Avenue	Marshall Avenue	City	Minor Arterial	60	40	2	AC	80	Y	N	P	TSP&Database
4th Street	Marshall Avenue	Lafayette Avenue	City	Minor Arterial	60	40	2	AC	73	Y	N	P	TSP&Database
4th Street	Lafayette Avenue	Kearney Avenue	City	Minor Arterial	60	40	2	AC	85	Y	N	P	TSP&Database
4th Street	Kearney Avenue	Greenwood Avenue	City	Minor Arterial	60	40	2	AC	80	Y	N	P	TSP&Database
4th Street	Greenwood Avenue	Irving Avenue	City	Minor Arterial	60	30	2	AC	80	Y	N	P	TSP&Database
4th Street	Irving Avenue	Hawthorne Avenue	City	Minor Arterial	60	40	2-3	AC	79	Y	N	P	TSP&Database
4th Street	Hawthorne Avenue	Greeley Avenue	City	Minor Arterial	60	40	2-3	AC	81	Y	N	P	TSP&Database
4th Street	Greeley Avenue	Franklin Avenue	City	Minor Arterial	60	40	2-3	AC	74	Y	N	P	TSP&Database
4th Street	Franklin Avenue	Emerson Avenue	City	Major Collector	60	37	2	AC	85	Y	N	N	TSP&Database
4th Street	Emerson Avenue	Dekalb Avenue	City	Major Collector	60	37	2	AC	77	Y	N	N	TSP&Database
4th Street	Dekalb Avenue	Clay Avenue	City	Major Collector	60	37	2	AC	76	Y	N	N	TSP&Database
4th Street	Clay Avenue	Burnside Avenue	City	Major Collector	60	37	2	AC	83	Y	N	N	TSP&Database
4th Street	Burnside Avenue	Alden Avenue	City	Major Collector	60	34	2	PCC	80	Y	N	N	TSP&Database
Bond Street	Wall Street	Greenwood Avenue	City	Minor Arterial	80	58	2	AC	75	Y	N	Y	TSP&Database

Street Name	Begin	End	Jurisdiction	Functional Classification	ROW Width (feet)	Paved Width (feet)	Number of Lanes	Pavement Type	Pavement Condition (PCI)	Curb	Bike Lane	Sidewalk	Data Source
Bond Street	Greenwood Avenue	Oregon Avenue	City	Major Collector	80	56	2-3	AC/AC	90	Y	N	Y	TSP&Database
Bond Street	Oregon Avenue	Minnesota Avenue	City	Major Collector	80	56	2-3	AC/AC	90	Y	N	Y	TSP&Database
Bond Street	Minnesota Avenue	Franklin Avenue	City	Major Collector	80	56	2-3	AC/AC	92	Y	N	Y	TSP&Database
Bond Street	Franklin Avenue	Louisiana Avenue	City	Major Collector	60-80	36	2-3	AC	72	Y	N	Y	TSP&Database
Bond Street	Louisiana Avenue	Kansas Avenue	City	Major Collector	60-80	56	2-3	AC	81	Y	N	Y	TSP&Database
Bond Street	Kansas Avenue	Idaho Avenue	City	Major Collector	60-80	36	2-3	AC	81	Y	N	Y	TSP&Database
Bond Street	Idaho Avenue	Georgia Avenue	City	Major Collector	60-80	36	2-3	AC	80	Y	N	Y	TSP&Database
Bond Street	Georgia Avenue	Florida Avenue	City	Major Collector	60-80	36	2-3	AC	81	Y	N	Y	TSP&Database
Bond Street	Florida Avenue	Delaware Avenue	City	Major Collector	60-80	36	2-3	AC	80	Y	N	Y	TSP&Database
Bond Street	Delaware Avenue	Colorado Avenue	City	Major Collector	60-80	36	2-3	AC	85	Y	N	Y	TSP&Database
Bond Street	Colorado Avenue	Arizona Avenue	City	Major Collector		36	2-3	AC	89	Y	N	Y	TSP&Database
Bond Street	Arizona Avenue	Industrial Way	City	Major Collector		36	2-3	AC	90	Y	N	Y	TSP&Database
Colorado Avenue	Simpson Avenue	Industrial Way	City	Minor Arterial	80	32	2	AC	80	Y	P	P	TSP&Database
Colorado Avenue	Industrial Way	Wall Street	City	Minor Arterial	80	40	3	AC	83	Y	P	P	TSP&Database
Colorado Avenue	Wall Street	Sisemore Street	City	Minor Arterial	60	42	2	AC	77	Y	N	Y	TSP&Database
Colorado Avenue	Sisemore Street	US 97 Off-Ramp	City	Minor Arterial	60	42	2	AC	74	Y	N	Y	TSP&Database
Colorado Avenue	Harriman Street	Dead End West	City	Minor Arterial	60	40	2	AC	75	Y	N	Y	TSP&Database
Division Street	US 97	576 ft. s/o US 97	City	Minor Arterial	60-100	36	3	AC	76	Y	Y	P	TSP&Database
Division Street	576 ft. s/o US 97	Yale Avenue	City	Minor Arterial	60-100	48	3	AC	75	Y	Y	P	TSP&Database
Division Street	Yale Avenue	Xerxes Avenue	City	Minor Arterial	60-100	48	3	AC	83	Y	Y	P	TSP&Database
Division Street	Xerxes Avenue	Webster Avenue	City	Minor Arterial	60-100	48	3	AC	80	Y	Y	P	TSP&Database
Division Street	Webster Avenue	Vail Avenue	City	Minor Arterial	60-100	48	3	AC	79	Y	Y	P	TSP&Database
Division Street	Vail Avenue	Underwood Avenue	City	Minor Arterial	60-100	48	3	AC	77	Y	Y	P	TSP&Database
Division Street	Underwood Avenue	Thurston Avenue	City	Minor Arterial	60-100	48	3	AC	80	Y	Y	Y	TSP&Database
Division Street	Thurston Avenue	Revere Avenue	City	Minor Arterial	60-100	48	3	AC	61	Y	Y	Y	TSP&Database
Franklin Avenue	Broadway Street	Wall Street	City	Minor Arterial		45	2	AC	55	Y	N	Y	TSP&Database
Franklin Avenue	Wall Street	Bond Street	City	Minor Arterial	80	45	3-4	AC	56	Y	N	Y	TSP&Database
Franklin Avenue	Bond Street	Lava Road	City	Minor Arterial	80	45	3-4	AC/AC	75	Y	N	Y	TSP&Database
Franklin Avenue	Lava Road	Sisemore Street	City	Minor Arterial	80	43	3-4	AC/AC	81	Y	N	Y	TSP&Database
Franklin Avenue	Sisemore Street	Harriman Street	City	Minor Arterial	80	43	3-4	AC/AC	81	Y	N	Y	TSP&Database
Franklin Avenue	Harriman Street	Hill Street	City	Minor Arterial	80	56	3-4	AC	78	Y	N	Y	TSP&Database
Franklin Avenue	Hill Street	Division Street	City	Minor Arterial	80	44	3-4	AC	71	Y	N	Y	TSP&Database
Franklin Avenue	Division Street	1st Street	City	Minor Arterial	80	43	3-4	AC	80	Y	N	Y	TSP&Database
Franklin Avenue	1st Street	2nd Street	City	Minor Arterial	80	44	3-4	AC	73	Y	N	Y	TSP&Database
Franklin Avenue	2nd Street	3rd Street	City	Minor Arterial	80	44	3-4	AC	71	Y	N	Y	TSP&Database
Franklin Avenue	3rd Street	4th Street	City	Minor Arterial	80	44	3	AC	80	Y	N	Y	TSP&Database
Greenwood Avenue	Wall Street	Bond Street	City	Minor Arterial	80	64	4	AC	41	Y	N	Y	TSP&Database
Greenwood Avenue	Bond Street	Harriman Street	City	Minor Arterial	80	64	4	AC	39	Y	N	Y	TSP&Database

Street Name	Begin	End	Jurisdiction	Functional Classification	ROW Width (feet)	Paved Width (feet)	Number of Lanes	Pavement Type	Pavement Condition (PCI)	Curb	Bike Lane	Sidewalk	Data Source
Greenwood Avenue	Harriman Street	Hill Street	City	Minor Arterial	80	64	4	AC	33	Y	N	Y	TSP&Database
Greenwood Avenue	Hill Street	Parkway	City	Minor Arterial	80	64	4	AC	64	Y	N	Y	TSP&Database
Greenwood Avenue	Parkway	3rd Street	City	Minor Arterial	80	56	4	AC		Y	N	Y	TSP&Database
Hill Street	Revere Avenue	Portland Avenue	City	Minor Arterial	60-80	60	3-4	AC	83	Y	Y	P	TSP&Database
Hill Street	Portland Avenue	Norton Avenue	City	Minor Arterial	80-85	60	2-3	AC	84	Y	Y	P	TSP&Database
Newport Avenue	3rd Street	Awbrey Road	City	Minor Arterial	60-80	36	2-3	AC	84	Y	Y	Y	TSP&Database
Newport Avenue	Awbrey Road	Drake Road	City	Minor Arterial	60	36	2-3	AC	78	Y	Y	Y	TSP&Database
Newport Avenue	Drake Road	Brooks Street	City	Minor Arterial	60	36	2-3	AC	15	Y	Y	Y	TSP&Database
Newport Avenue	Brooks Street	Walls Street	City	Minor Arterial	60	56	2-3	AC	40	Y	Y	Y	TSP&Database
Olney Avenue	Hill Street	1st Street	City	Minor Arterial	60	48	2-3	AC	73	Y	Y	Y	TSP&Database
Olney Avenue	1st Street	2nd Street	City	Minor Arterial	60	46	2-3	AC	74	Y	Y	Y	TSP&Database
Olney Avenue	2nd Street	3rd Street	City	Minor Arterial	60	46	2-3	AC	90	Y	Y	Y	TSP&Database
Olney Avenue	3rd Street	4th Street	City	Minor Arterial	60	36	2	AC	89	Y	Y	N	TSP&Database
Olney Avenue	4th Street	5th Street	City	Minor Arterial	60	36	2	AC	89	Y	Y	N	TSP&Database
Portland Avenue	Steidl Road	Hill Street	City	Major Collector	60-80	36	2	AC/AC	70	Y	N	P	TSP&Database
Revere Avenue	Beginning of Pvmt	Harriman Street	City	Minor Arterial		16	2	AC	83	N	N	N	TSP&Database
Revere Avenue	Harriman Street	Hill Street	City	Minor Arterial		36	2	AC	21	N	N	N	TSP&Database
Revere Avenue	Hill Street	Parkway	City	Minor Arterial	80	65	4	AC	70	Y	Y	Y	TSP&Database
Revere Avenue	Parkway	Division Street	City	Minor Arterial	80	65	4	AC	74	Y	Y	Y	TSP&Database
Revere Avenue	Division Street	Lytle Street	City	Minor Arterial	80	48	4-5	AC	72	Y	N	Y	TSP&Database
Revere Avenue	Lytle Street	2nd Street	City	Minor Arterial	80	60	4-5	AC	83	Y	N	Y	TSP&Database
Revere Avenue	2nd Street	3rd Street	City	Minor Arterial	80	60	4-5	AC	81	Y	N	Y	TSP&Database
Revere Avenue	3rd Street	4th Street	City	Minor Arterial	80	60	4-5	AC	83	Y	N	Y	TSP&Database
Revere Avenue	4th Street	5th Street	City	Minor Arterial	80	36	2	AC	87	N	Y	P	TSP&Database
Riverside Avenue	Broadway Street	Louisiana Avenue	City	Minor Arterial	80	40	2	AC	84	P	Y	P	TSP&Database
Riverside Avenue	Louisiana Avenue	Kansas Avenue	City	Minor Arterial	80	40	2	AC	81	P	Y	P	TSP&Database
Riverside Avenue	Kansas Avenue	Idaho Avenue	City	Minor Arterial	80	40	2	AC	83	P	Y	P	TSP&Database
Riverside Avenue	Idaho Avenue	Tumalo Avenue	City	Minor Arterial	80	40	2	AC	81	P	Y	P	TSP&Database
Wall Street	Norton Avenue	Lafayette Avenue	City	Minor Arterial	80-85	56	2-3	AC/AC	91	Y	Y	P	TSP&Database
Wall Street	Lafayette Avenue	Bond Street	City	Minor Arterial	80-85	56	2-3	AC/AC	92	Y	Y	P	TSP&Database
Wall Street	Bond Street	Greenwood Avenue	City	Minor Arterial	80-85	56	2-3	AC/AC	93	Y	Y	P	TSP&Database
Wall Street	Greenwood Avenue	Oregon Avenue	City	Minor Arterial	80	56	2-3	AC/AC	91	Y	N	Y	TSP&Database
Wall Street	Oregon Avenue	Minnesota Avenue	City	Minor Arterial	80	56	2-3	AC/AC	91	Y	N	Y	TSP&Database
Wall Street	Minnesota Avenue	Franklin Avenue	City	Minor Arterial	80	56	2-3	AC/AC	90	Y	N	Y	TSP&Database
Wall Street	Franklin Avenue	Louisiana Avenue	City	Major Collector	60-80	56	2	AC	83	Y	N	Y	TSP&Database
Wall Street	Louisiana Avenue	Kansas Avenue	City	Major Collector	60-80	56	2	AC	89	Y	N	Y	TSP&Database
Wall Street	Kansas Avenue	Idaho Avenue	City	Major Collector	60-80	56	2	AC	89	Y	N	Y	TSP&Database
Wall Street	Idaho Avenue	Georgia Avenue	City	Major Collector	60-80	30	2	AC	89	Y	N	Y	TSP&Database

Street Name	Begin	End	Jurisdiction	Functional Classification	ROW Width (feet)	Paved Width (feet)	Number of Lanes	Pavement Type	Pavement Condition (PCI)	Curb	Bike Lane	Sidewalk	Data Source
Wall Street	Georgia Avenue	Florida Avenue	City	Major Collector	60-80	30	2	AC	85	Y	N	Y	TSP&Database
Wall Street	Florida Avenue	Delaware Avenue	City	Major Collector	60-80	36	2	AC	85	Y	N	Y	TSP&Database
Wall Street	Delaware Avenue	Colorado Avenue	City	Major Collector	60-80	36	2	AC	78	Y	N	Y	TSP&Database
Wall Street	Colorado Avenue	Arizona Avenue	City	Major Collector	60-80	36	2	AC	90	Y	N	Y	TSP&Database
Wall Street	Arizona Avenue	Industrial Way	City	Major Collector	60-80	36	2	AC	95	Y	N	Y	TSP&Database

APPENDIX B

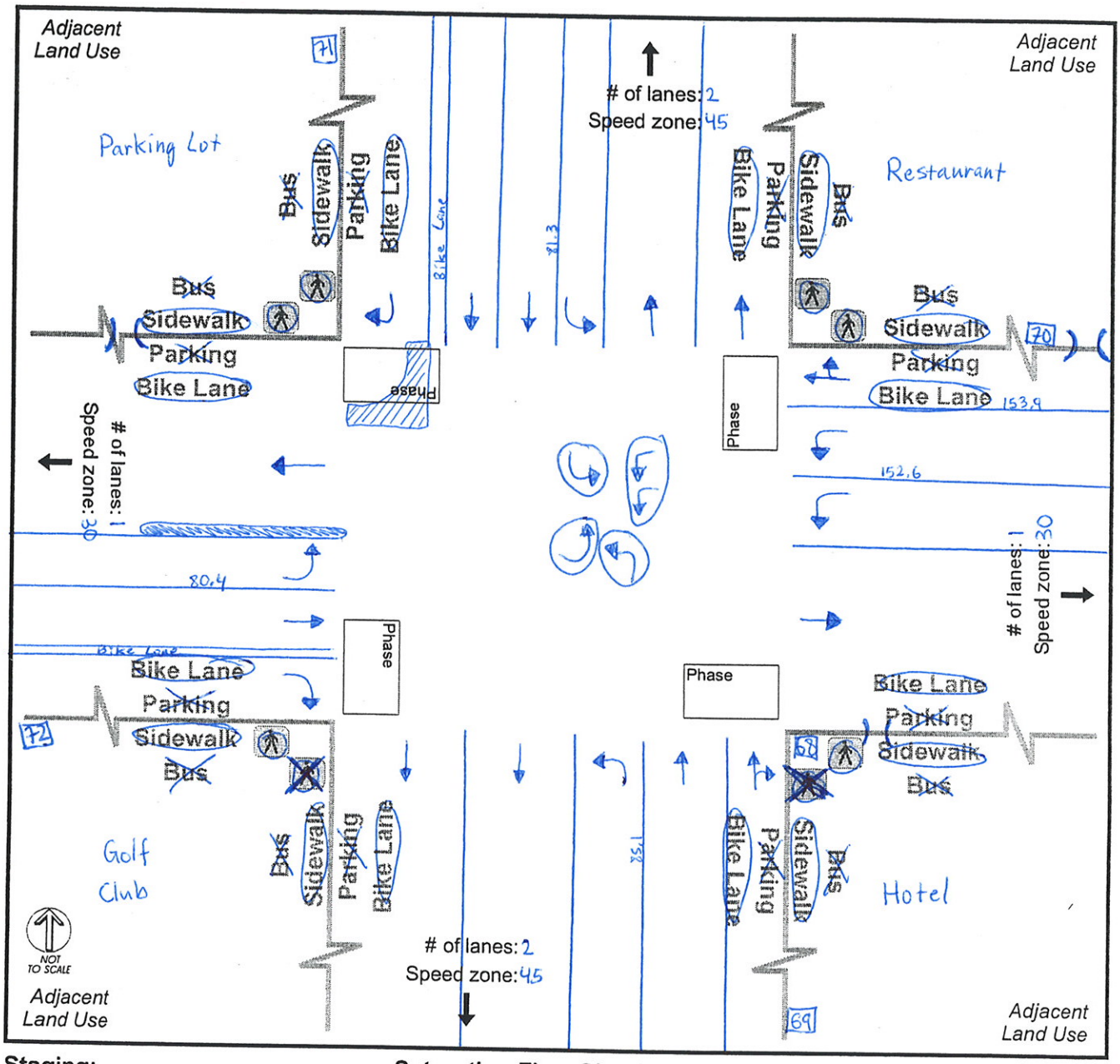
Existing Intersection Geometrics

LANE GEOMETRY

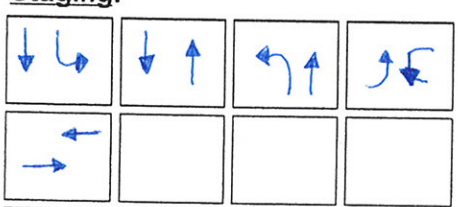
Date: 1/9/07

Time: _____

Intersection Name: US 97/20 and Butler Market Road



Staging:



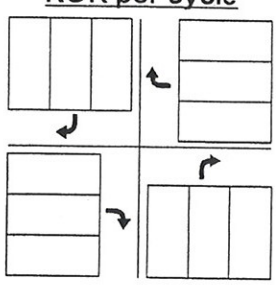
Queuing Problems:

Saturation Flow Check

Direction	Vehicles	Seconds	Lanes

	green	red
Cycle Length:	53.63	41.74
Cycle Length:	44.06	38.28
Cycle Length:	48.68	52.86

ROR per cycle



Perceived LOS

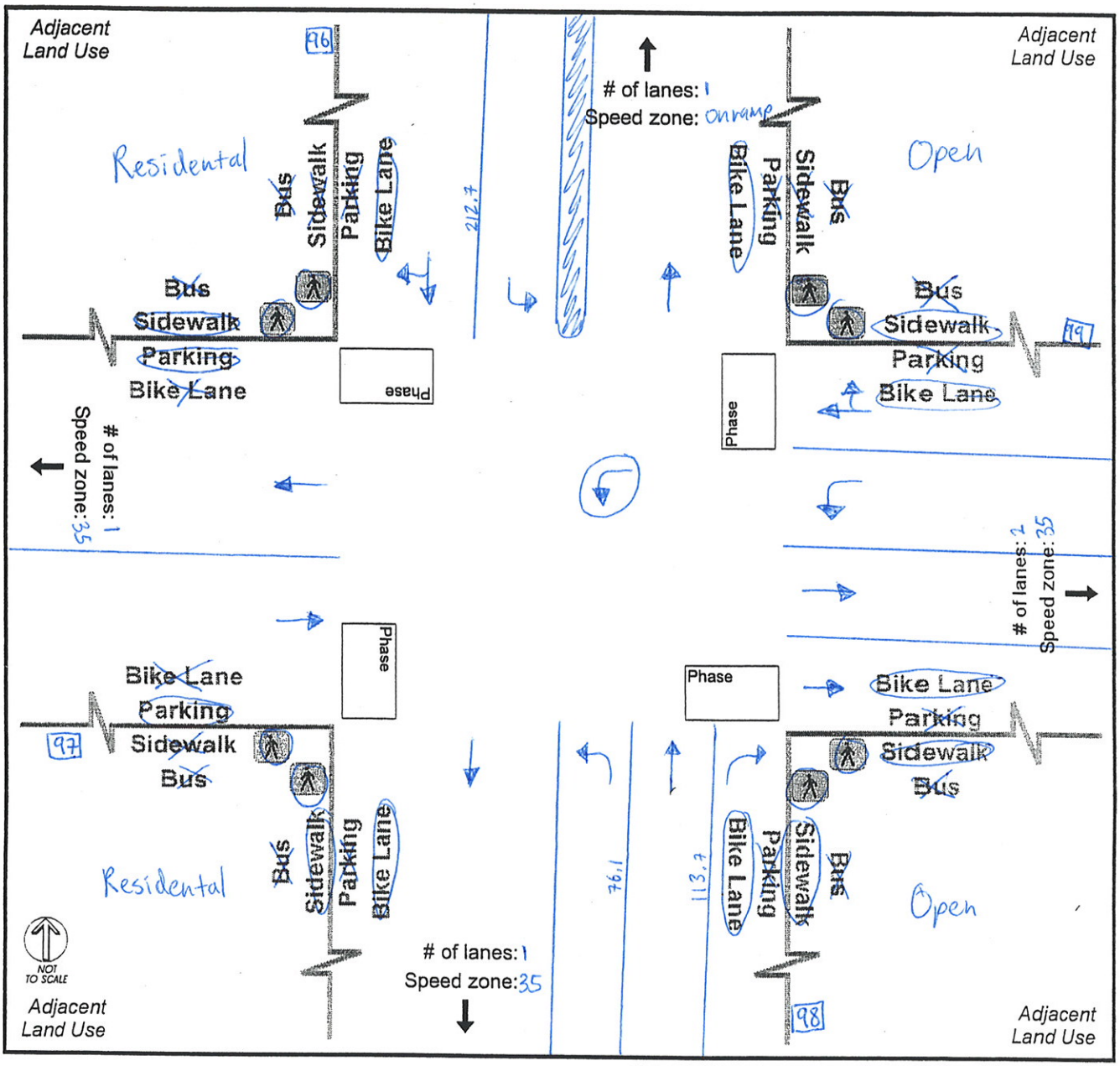
A	B	C	D	E	F

LANE GEOMETRY

Date: 1/9/07

Time: _____

Intersection Name: Parkway SB Ramp and Revere Avenue



Staging:

Queuing Problems:

Saturation Flow Check

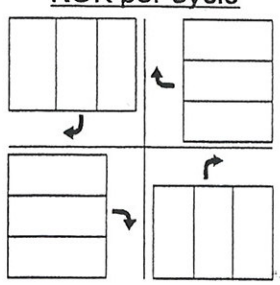
Direction	Vehicles	Seconds	Lanes

Cycle Length:

Cycle Length:

Cycle Length:

ROR per cycle



Perceived LOS

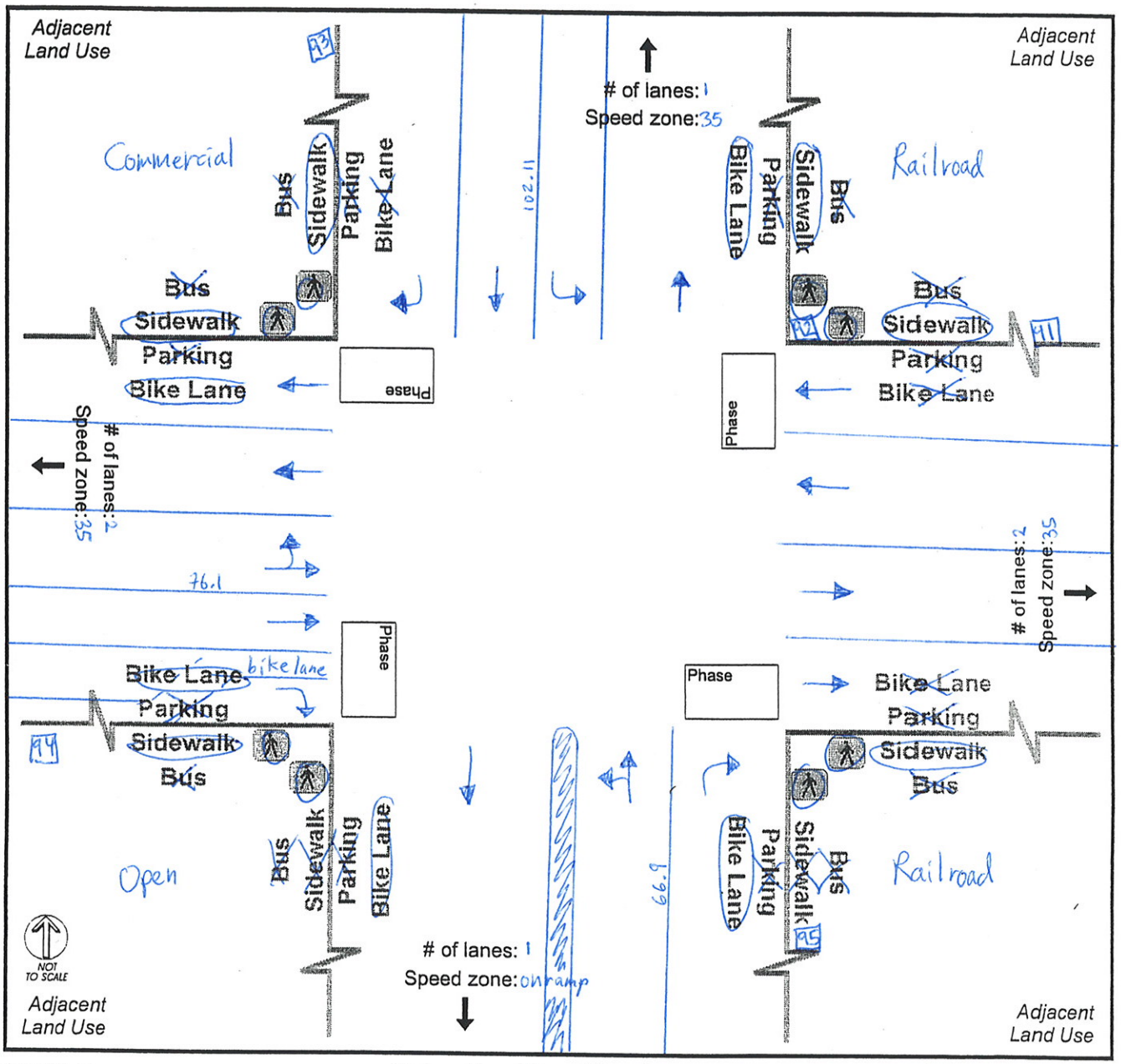
A B C D E F

LANE GEOMETRY

Date: 1/8/07

Time: _____

Intersection Name: Parkway NB Ramp and Revere Avenue



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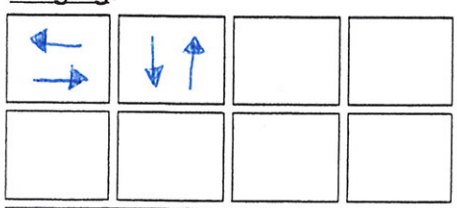


Queuing Problems:

Saturation Flow Check

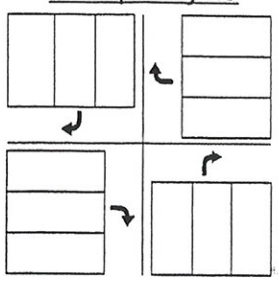
Direction	Vehicles	Seconds	Lanes

Cycle Length:

Cycle Length:

Cycle Length:

ROR per cycle



Perceived LOS

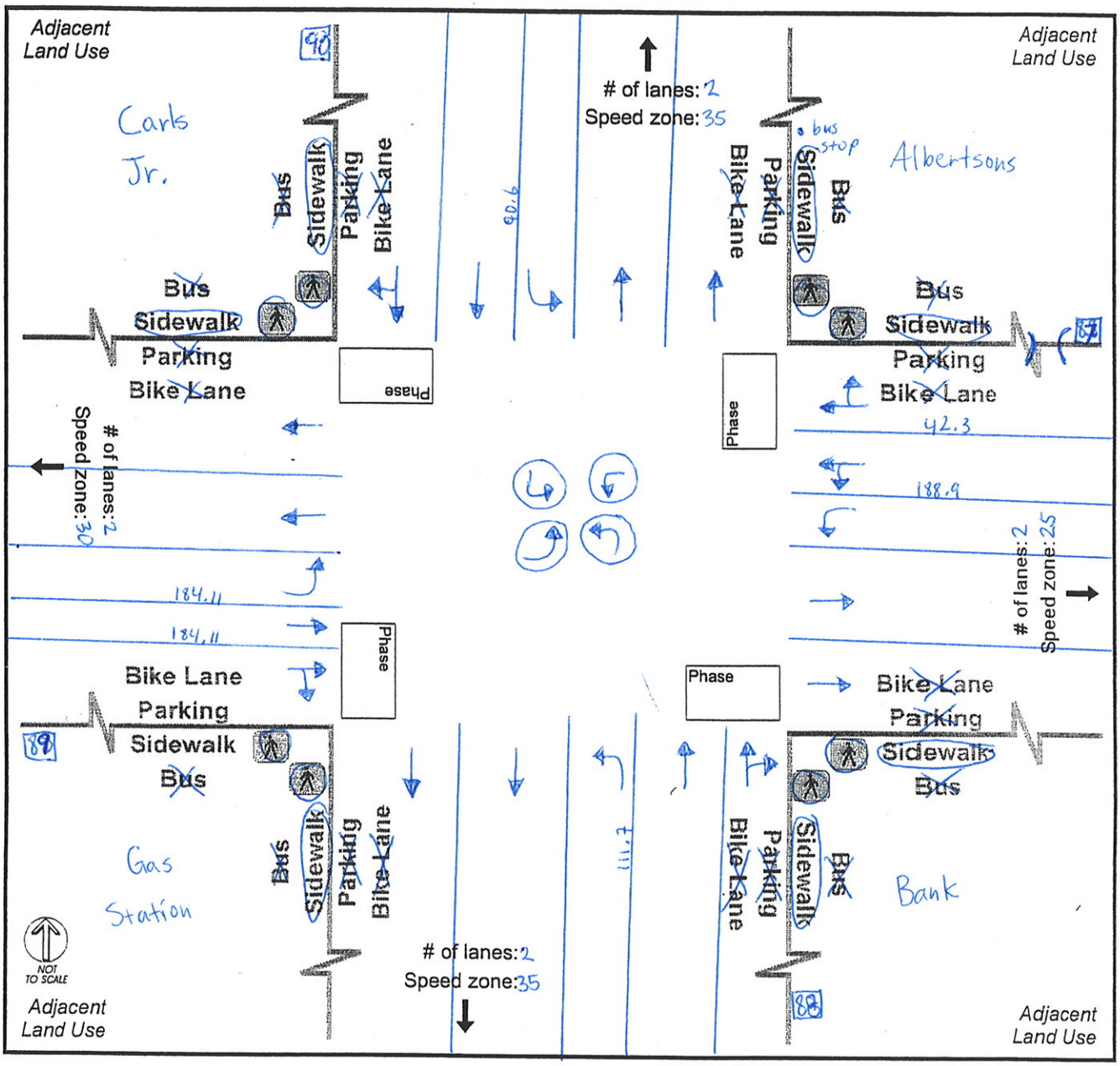
A B C D E F

LANE GEOMETRY

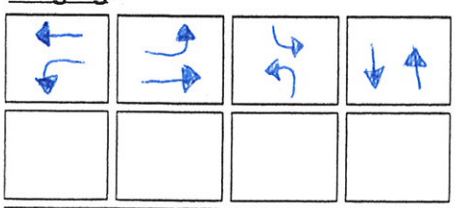
Date: 1/9/07

Time: _____

Intersection Name: 3rd Street and Revere Avenue



Staging:



Queuing Problems:

Saturation Flow Check

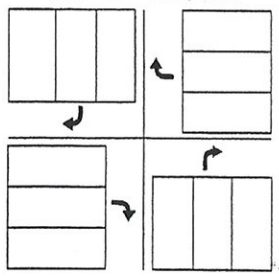
Direction	Vehicles	Seconds	Lanes

Cycle Length:

Cycle Length:

Cycle Length:

ROR per cycle



Perceived LOS

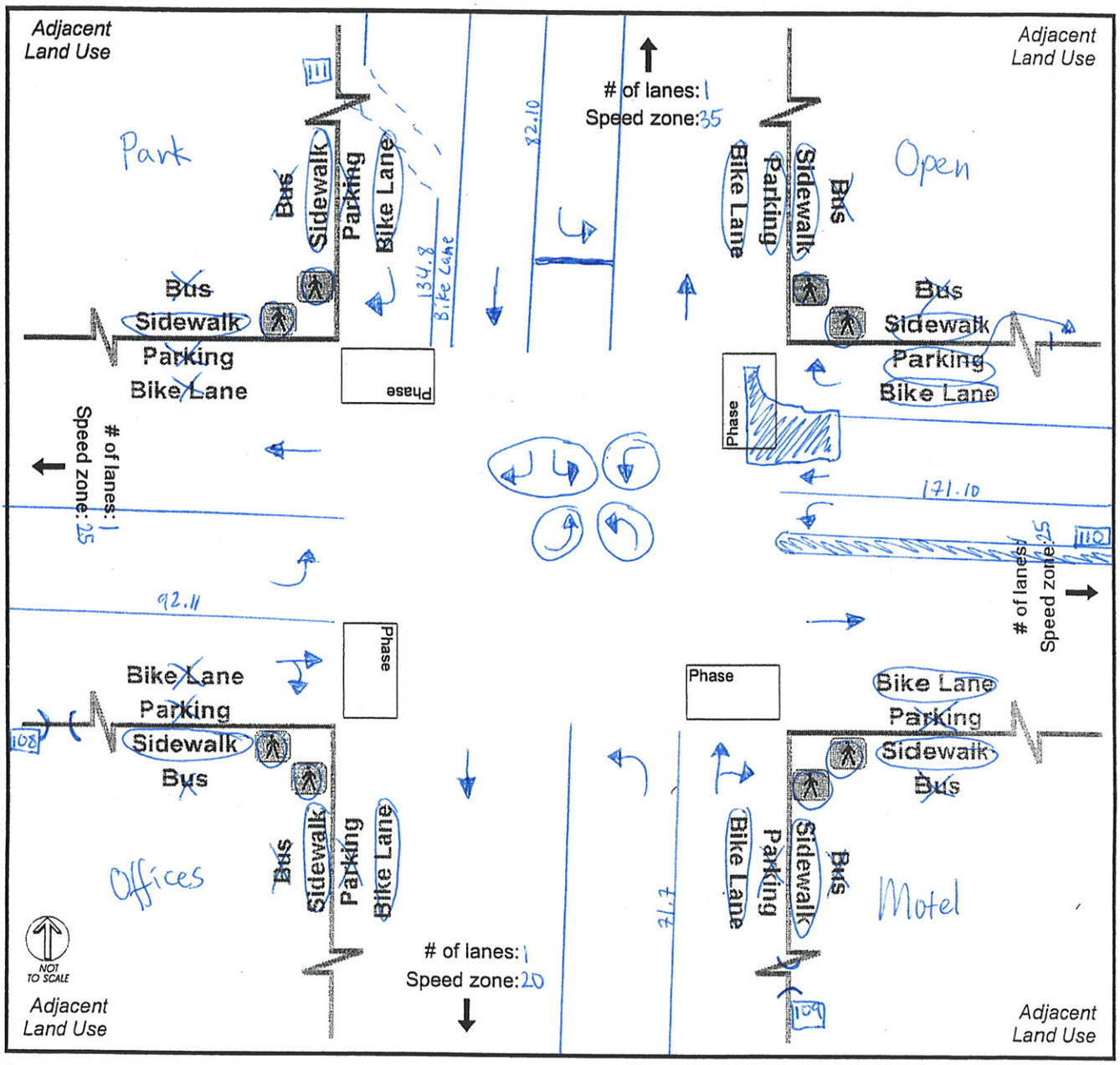
A B C D E F

LANE GEOMETRY

Date: 1/a/07

Time: _____

Intersection Name: Portland Avenue and Hill Street



Staging:

Queuing Problems:

Saturation Flow Check

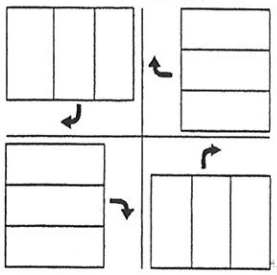
Direction	Vehicles	Seconds	Lanes

Cycle Length:

Cycle Length:

Cycle Length:

ROR per cycle



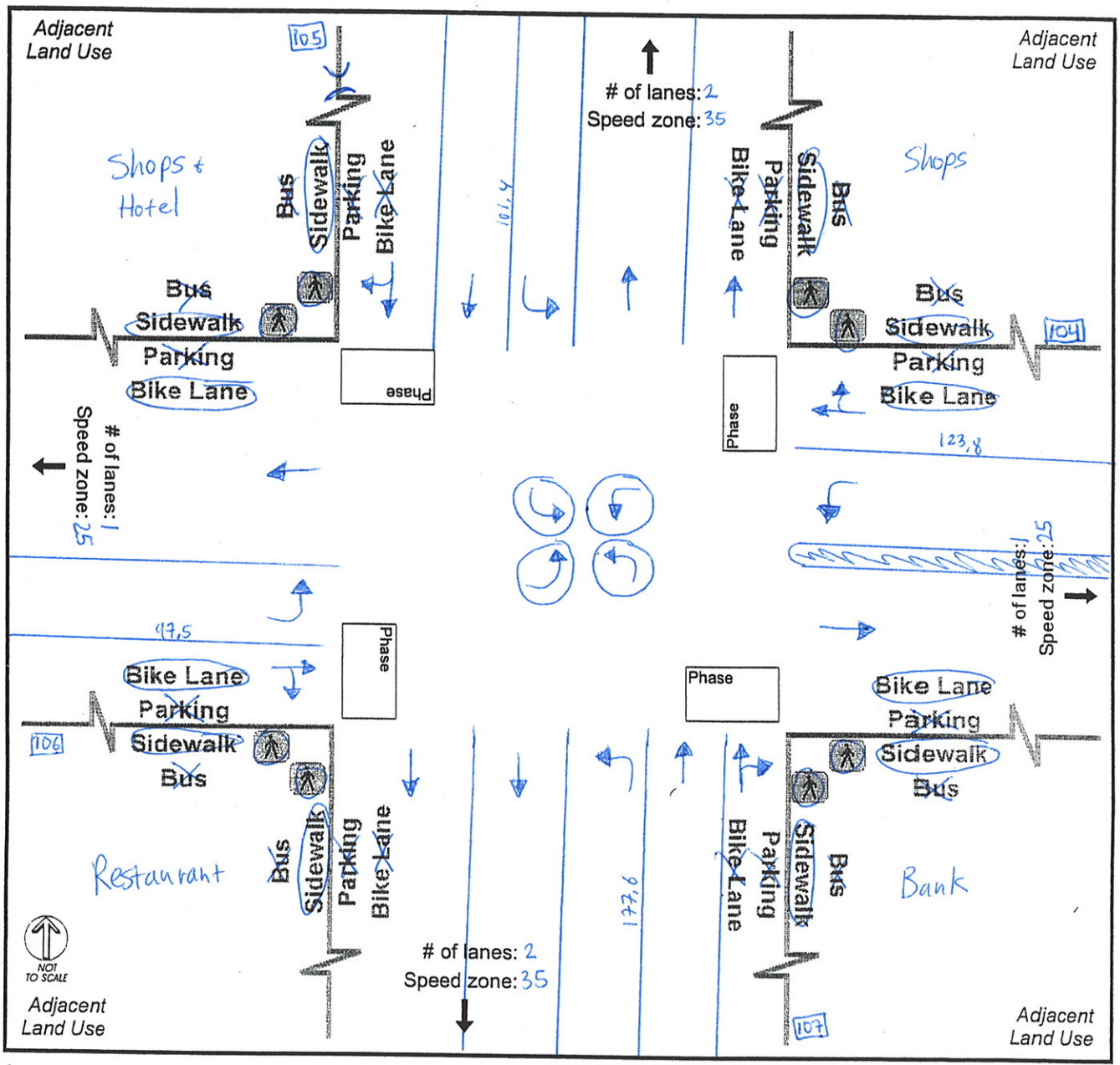
Perceived LOS					
A	B	C	D	E	F

LANE GEOMETRY

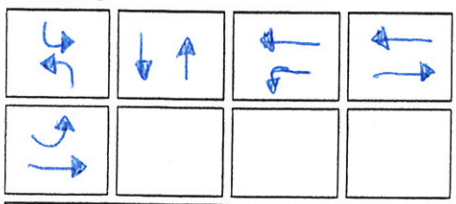
Date: 1/a/07

Time: _____

Intersection Name: 3rd Street and Olney Avenue



Staging:



Queuing Problems:

Saturation Flow Check

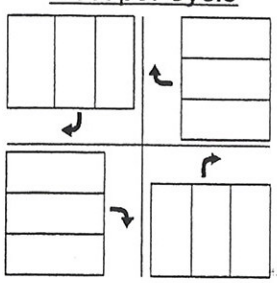
Direction	Vehicles	Seconds	Lanes

Cycle Length:

Cycle Length:

Cycle Length:

ROR per cycle



Perceived LOS

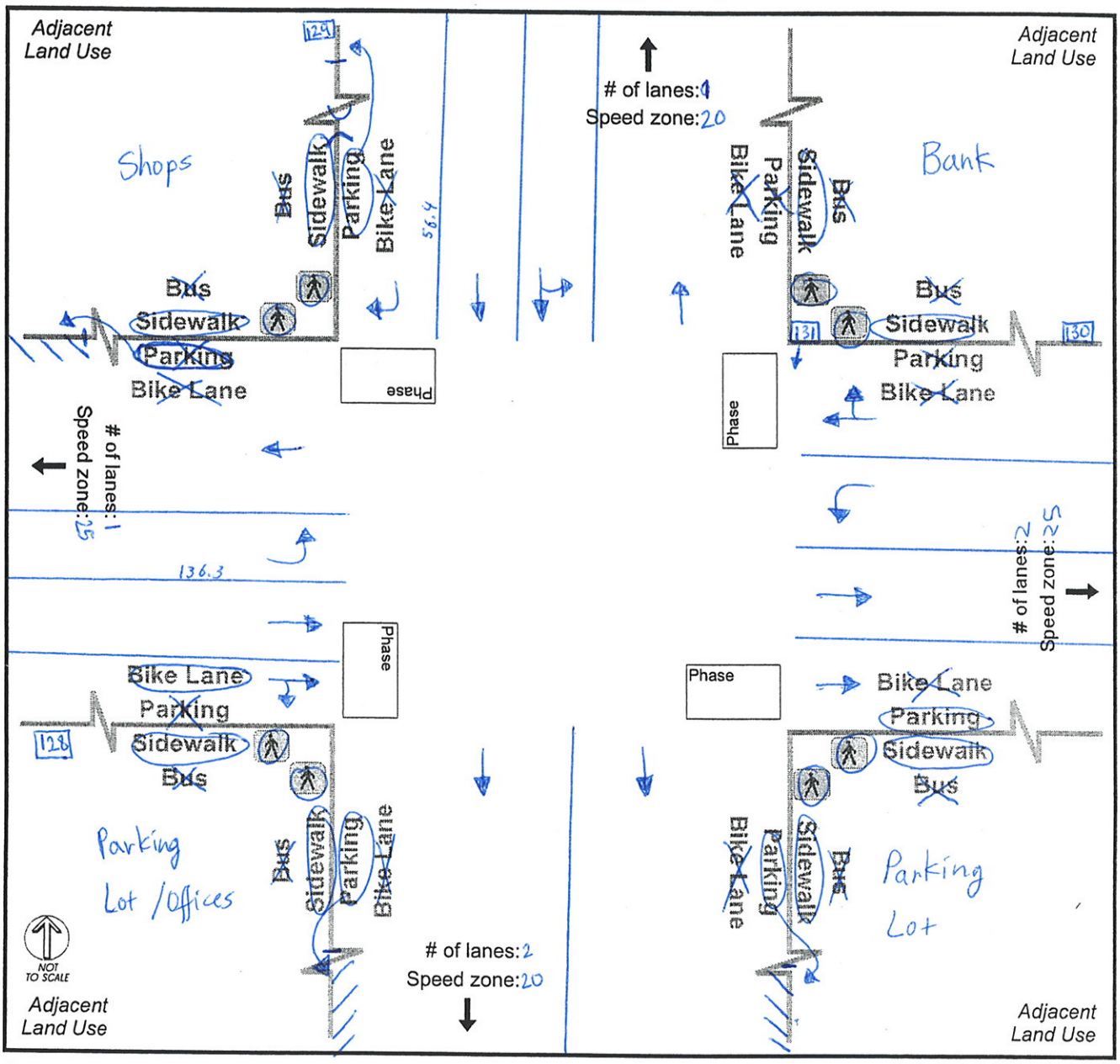
A B C D E F

LANE GEOMETRY

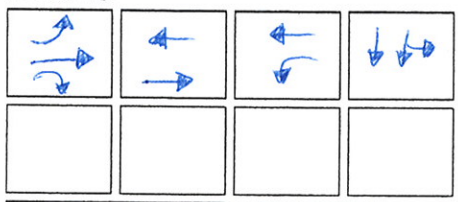
Date: 1/9/07

Time: _____

Intersection Name: Greenwood Avenue and Wall Street



Staging:



Queuing Problems:

Saturation Flow Check

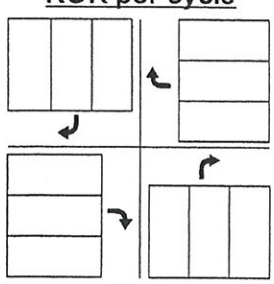
Direction	Vehicles	Seconds	Lanes

Cycle Length:

Cycle Length:

Cycle Length:

ROR per cycle



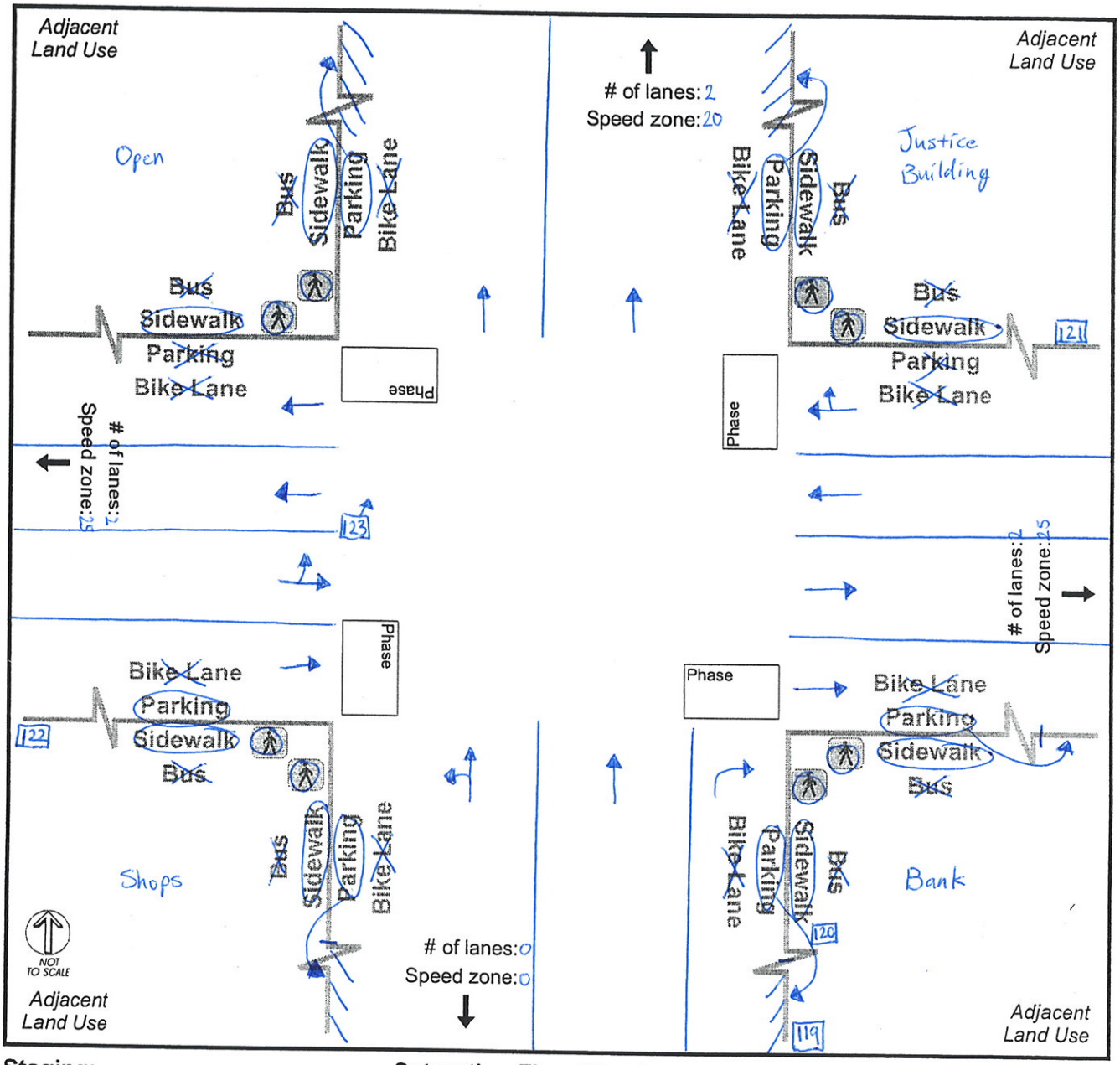
Perceived LOS					
A	B	C	D	E	F

LANE GEOMETRY

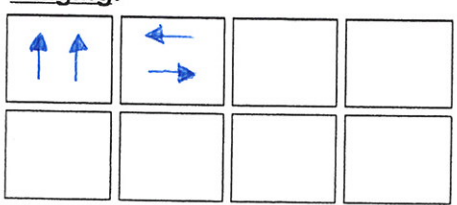
Date: 1/9/07

Time: _____

Intersection Name: Greenwood Avenue and Bond Street



Staging:



Queuing Problems:

Saturation Flow Check

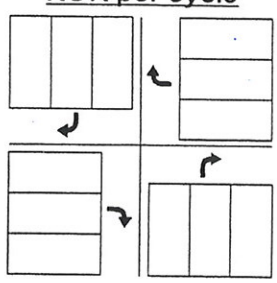
Direction	Vehicles	Seconds	Lanes

Cycle Length:

Cycle Length:

Cycle Length:

ROR per cycle



Perceived LOS

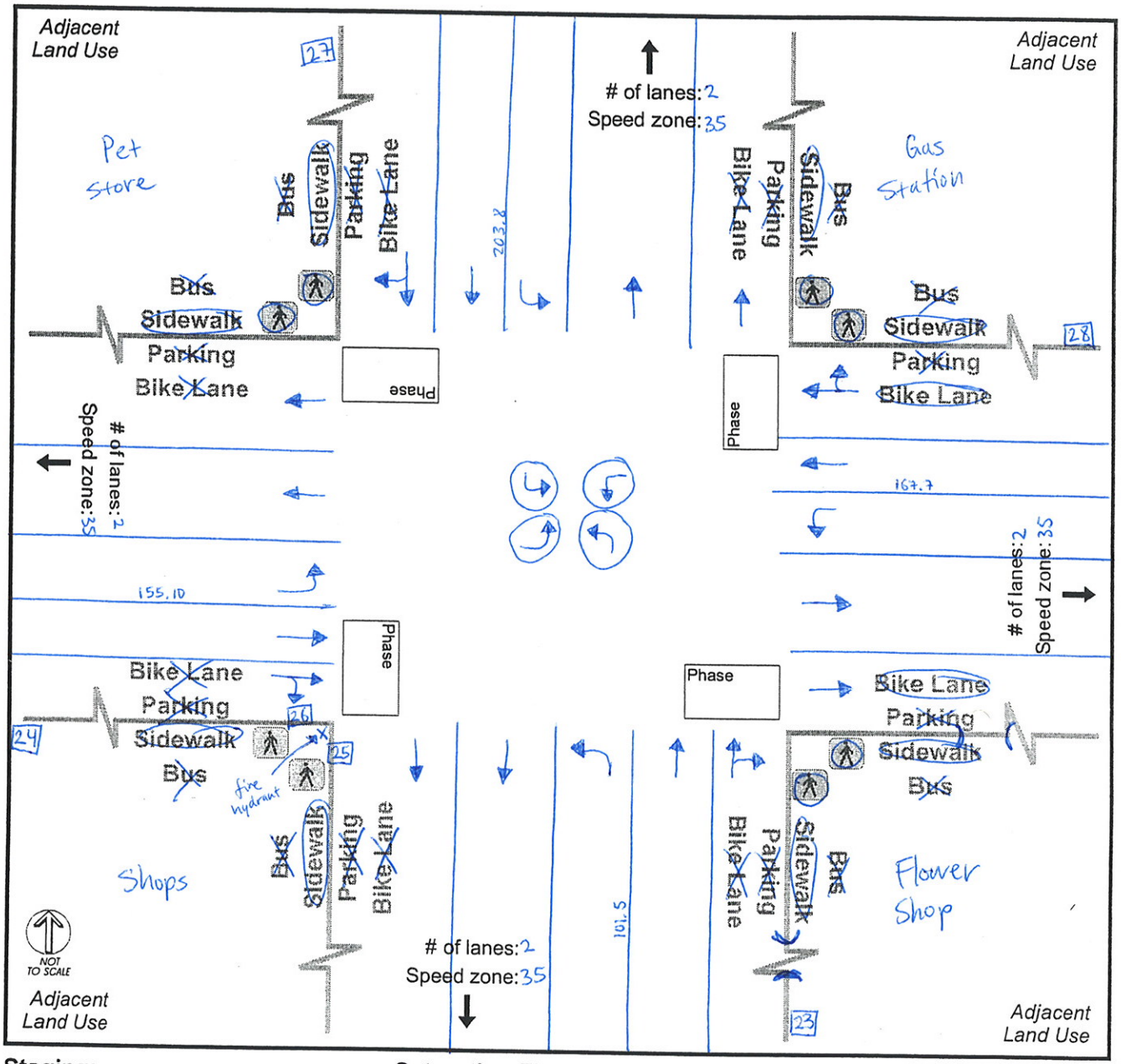
A B C D E F

LANE GEOMETRY

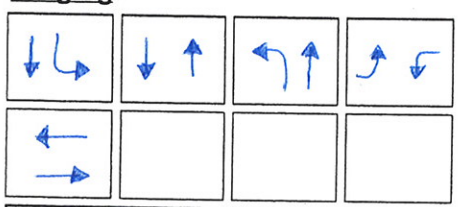
Date: 1/9/07

Time: _____

Intersection Name: Greenwood Avenue and 3rd Street



Staging:



Queuing Problems:

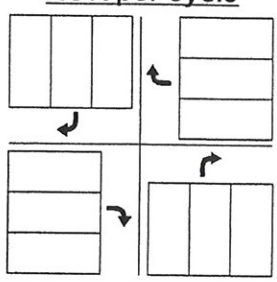
* right turn lane light are on poles in west and south directions

Saturation Flow Check

Direction	Vehicles	Seconds	Lanes

	green	red
Cycle Length:	23, 23	1:37.13
Cycle Length:	20.25	1:35.81
Cycle Length:	21.72	1:58.10

ROR per cycle



Perceived LOS

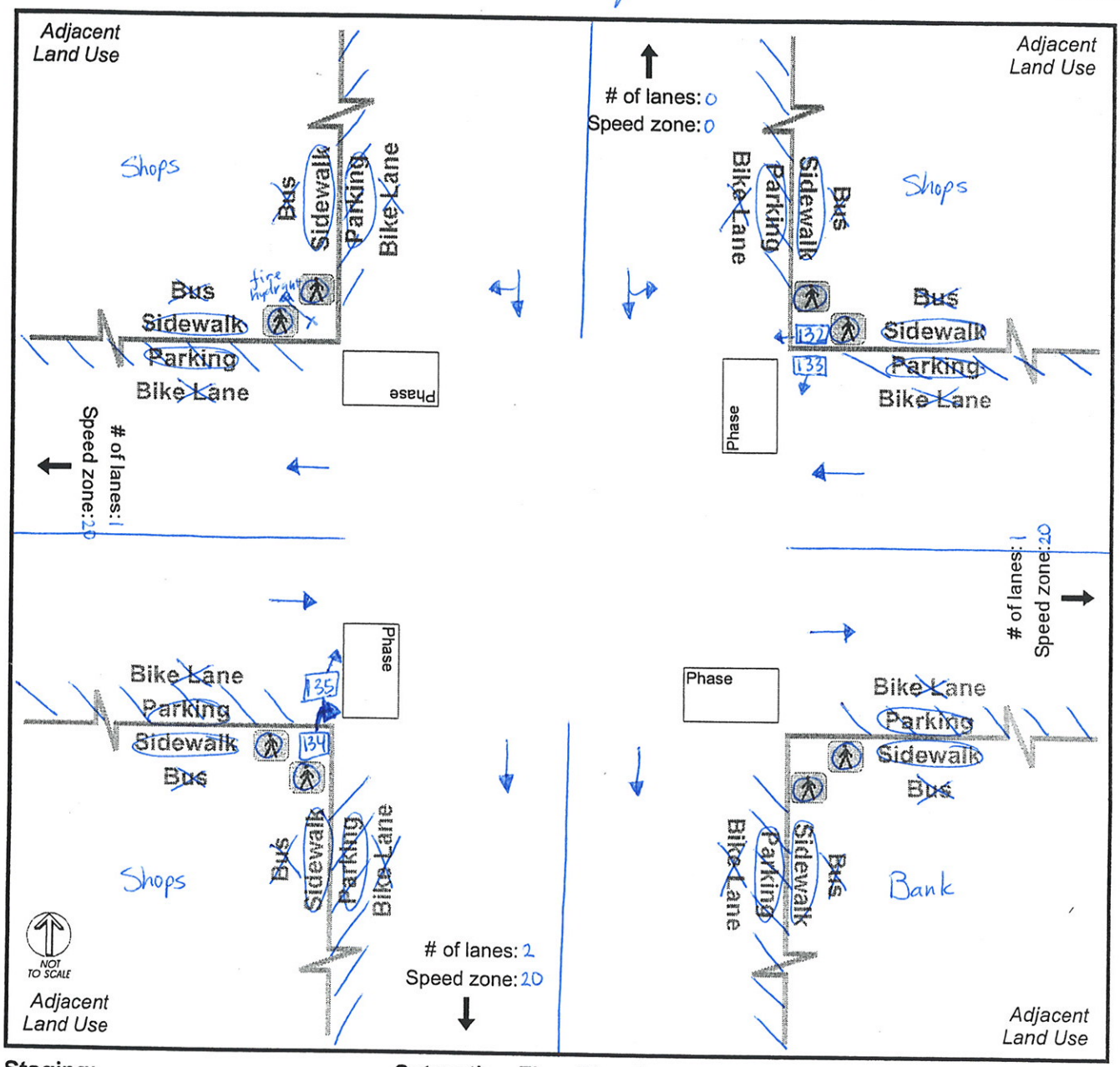
A B C D E F

LANE GEOMETRY

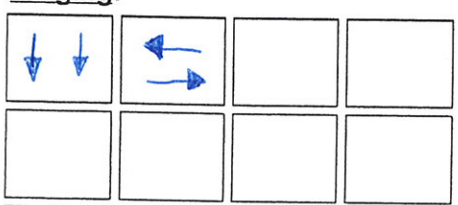
Date: 1/9/07

Time: _____

Intersection Name: Wall Street and Oregon Street



Staging:



Queuing Problems:

Saturation Flow Check

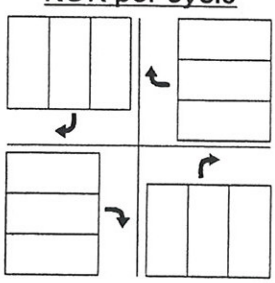
Direction	Vehicles	Seconds	Lanes

Cycle Length:

Cycle Length:

Cycle Length:

ROR per cycle



Perceived LOS

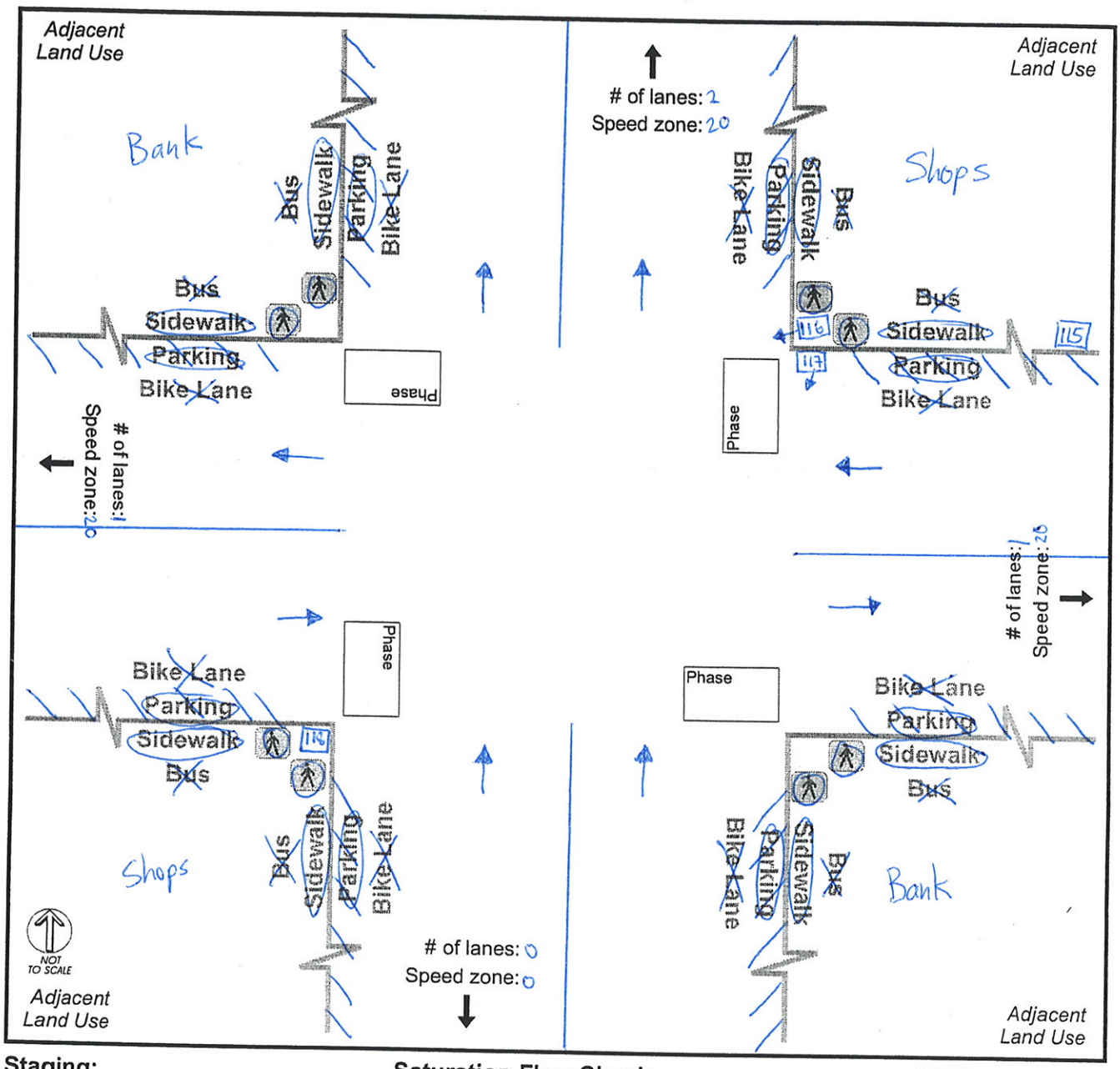
A B C D E F

LANE GEOMETRY

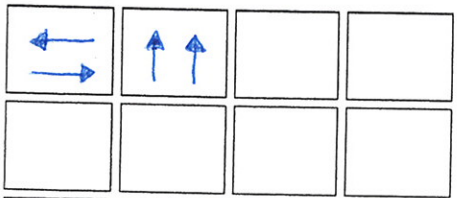
Date: 1/9/07

Time: _____

Intersection Name: Bond Street and Oregon Avenue



Staging:



Queuing Problems:

Saturation Flow Check

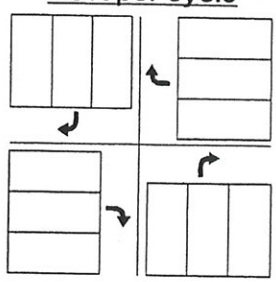
Direction	Vehicles	Seconds	Lanes

Cycle Length:

Cycle Length:

Cycle Length:

ROR per cycle



Perceived LOS

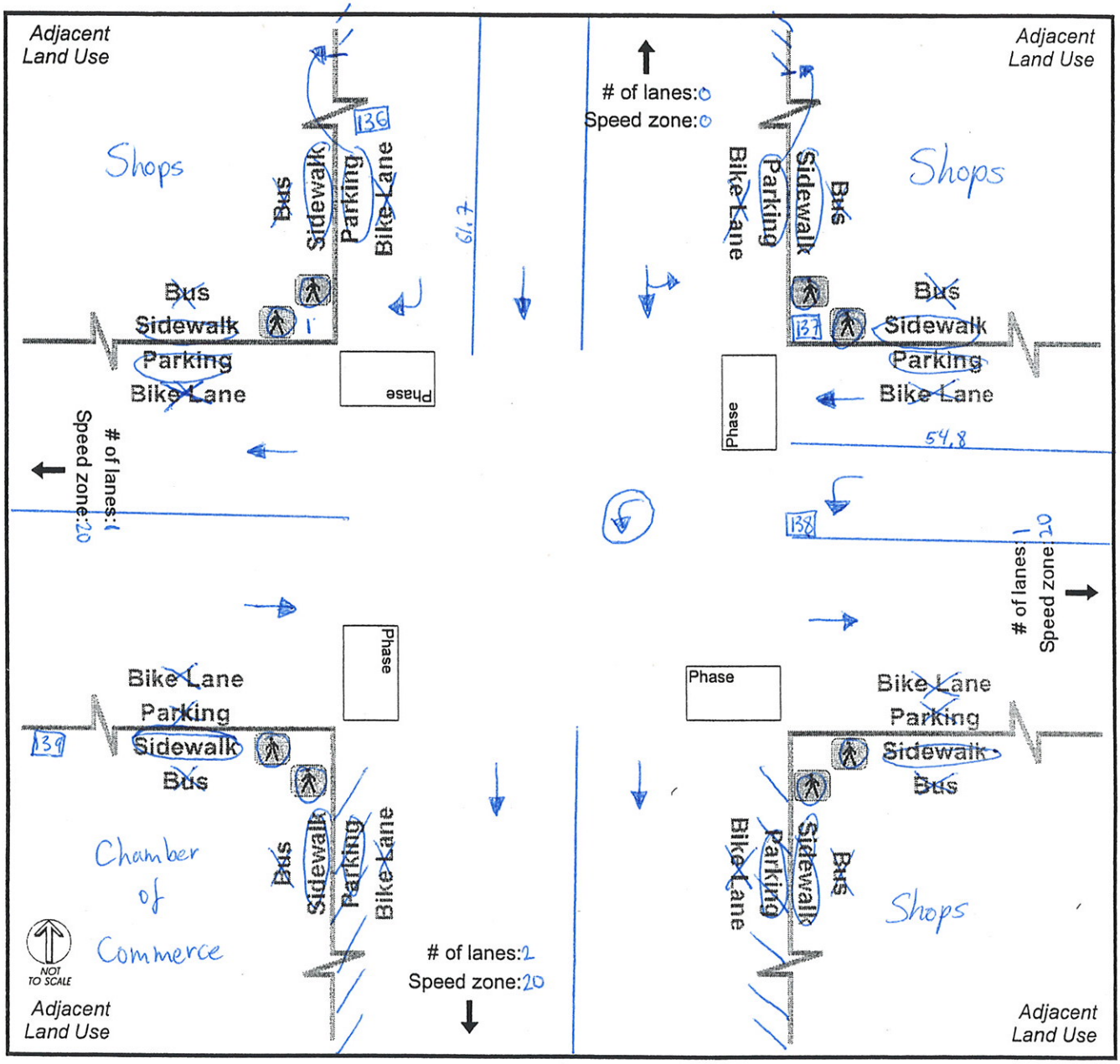
A B C D E F

LANE GEOMETRY

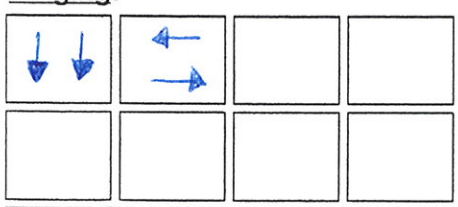
Date: 1/9/07

Time: _____

Intersection Name: Franklin Avenue and Wall Street



Staging:



Queuing Problems:

Saturation Flow Check

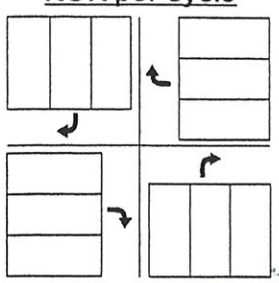
Direction	Vehicles	Seconds	Lanes

Cycle Length:

Cycle Length:

Cycle Length:

ROR per cycle



Perceived LOS

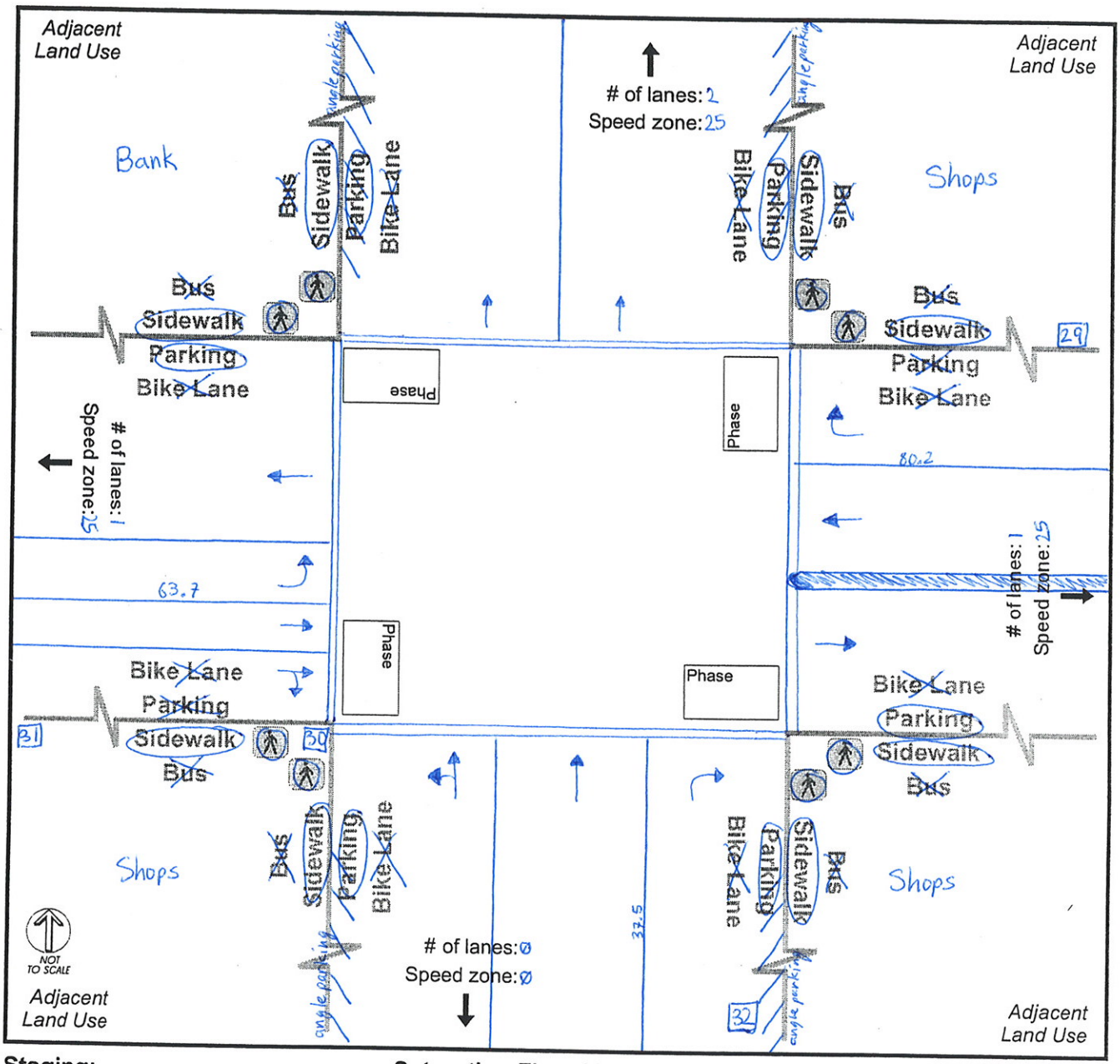
A B C D E F

LANE GEOMETRY

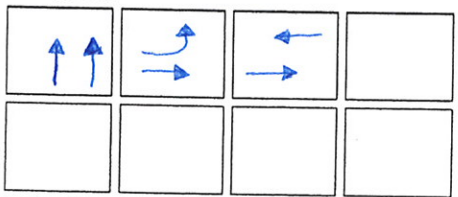
Date: 1/8/07

Time: _____

Intersection Name: Franklin Avenue and Bond Street



Staging:



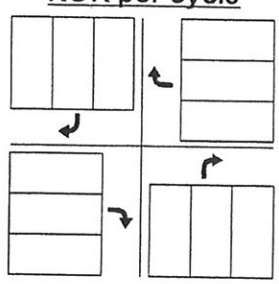
Queuing Problems:

Saturation Flow Check

Direction	Vehicles	Seconds	Lanes

	green	red
Cycle Length:	25.44	53.44
Cycle Length:	24.39	53.79
Cycle Length:	25.12	53.99

ROR per cycle



Perceived LOS

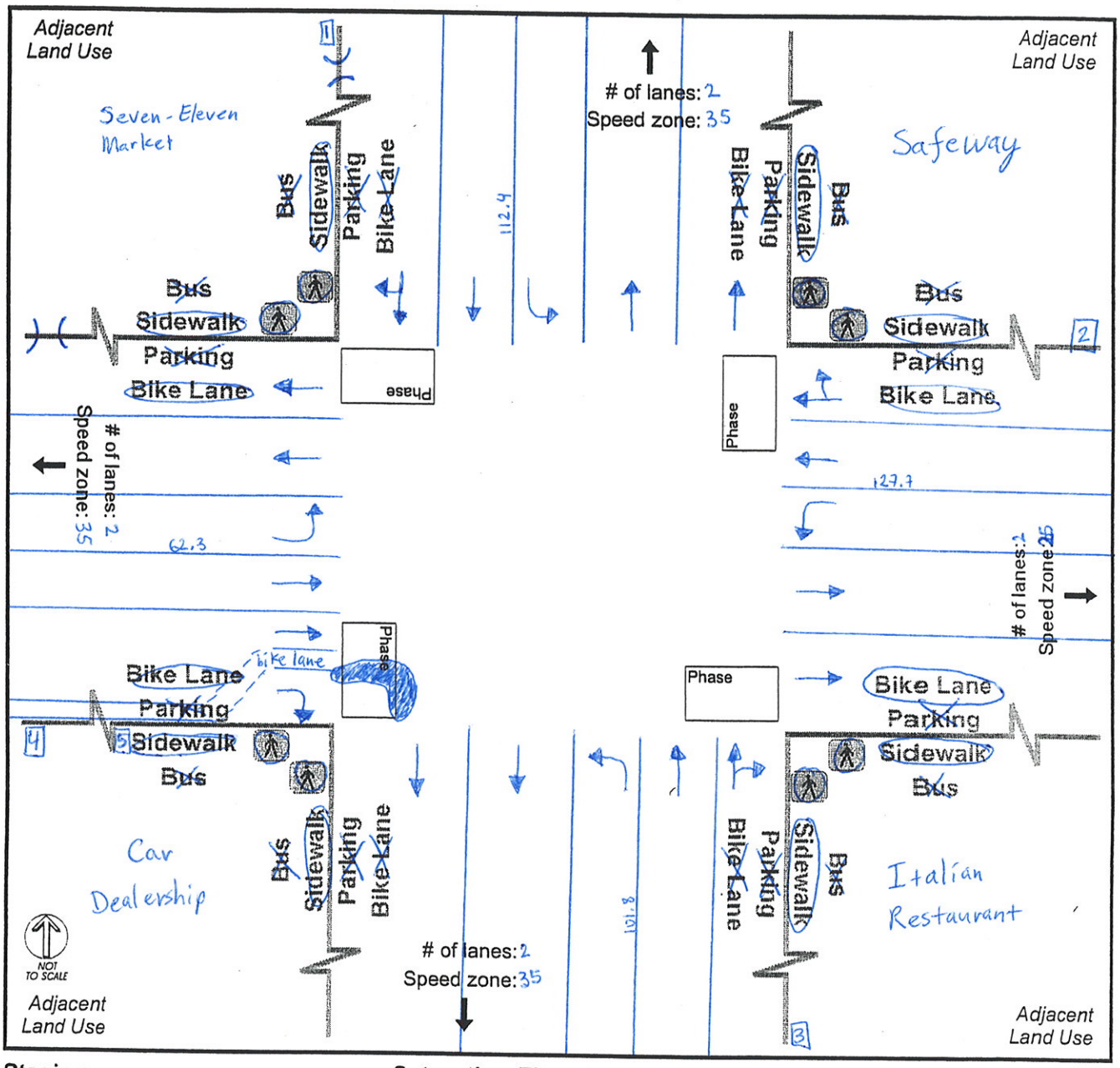
A B C D E F

LANE GEOMETRY

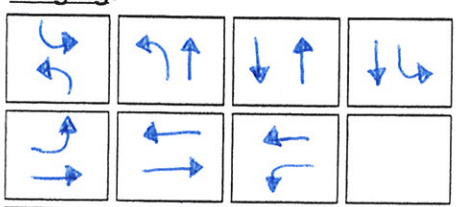
Date: 1/8/07

Time: _____

Intersection Name: Franklin Avenue and 3rd Street



Staging:



Queuing Problems:

Saturation Flow Check

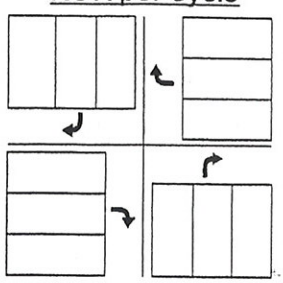
Direction	Vehicles	Seconds	Lanes

Cycle Length: green 52.73 red 1:21.69

Cycle Length: 54.07 1:10.70

Cycle Length: 54.87 1:18.69

ROR per cycle



Perceived LOS

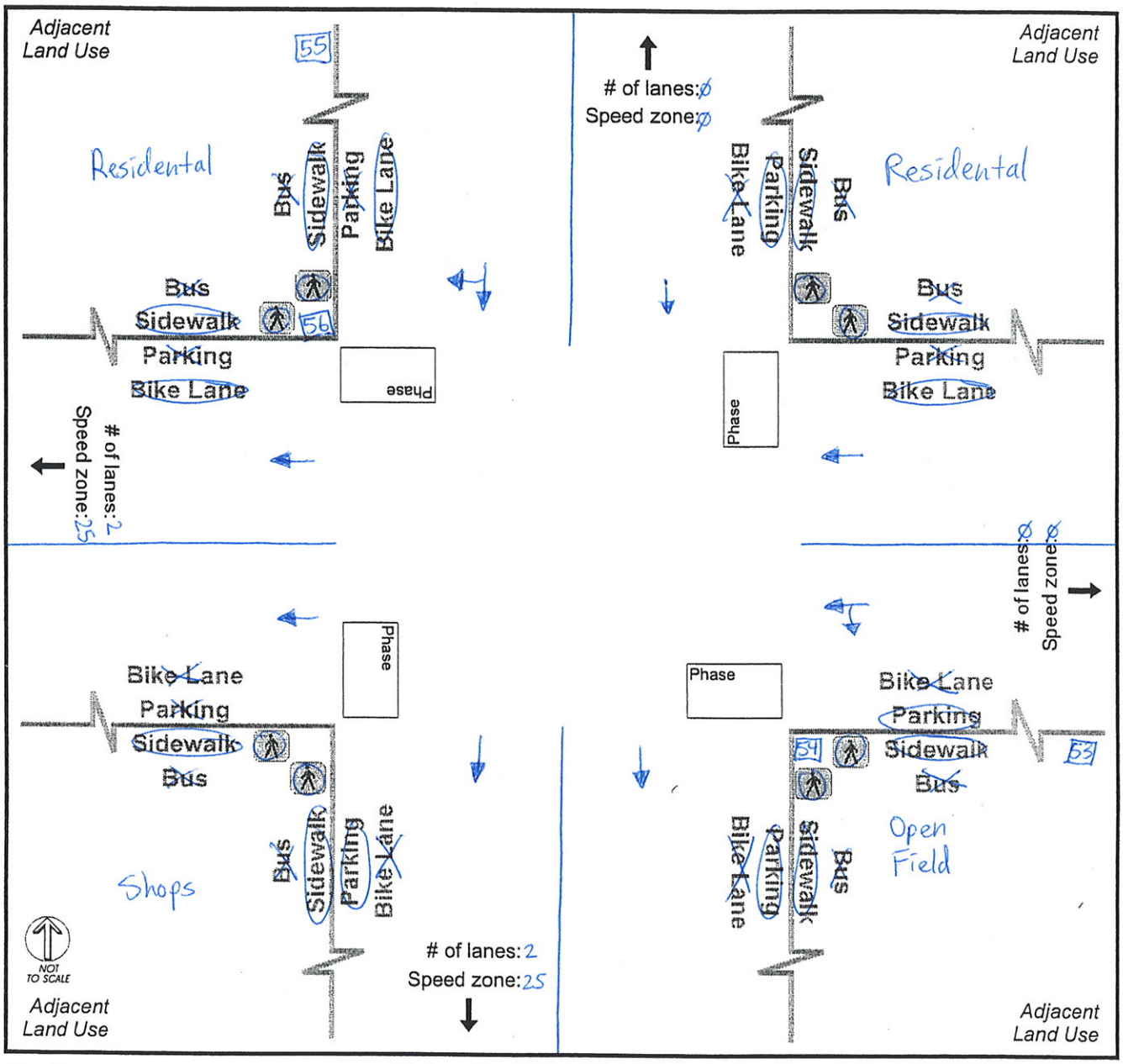
A	B	C	D	E	F

LANE GEOMETRY

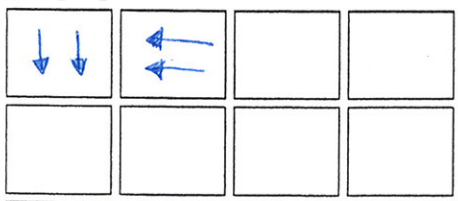
Date: 1/8/07

Time: _____

Intersection Name: Colorado Avenue and Wall Street



Staging:



Queuing Problems:

Saturation Flow Check

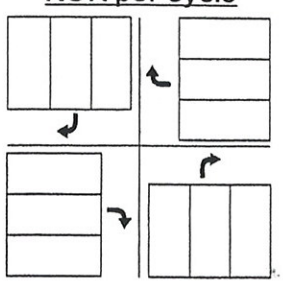
Direction	Vehicles	Seconds	Lanes

Cycle Length:

Cycle Length:

Cycle Length:

ROR per cycle



Perceived LOS

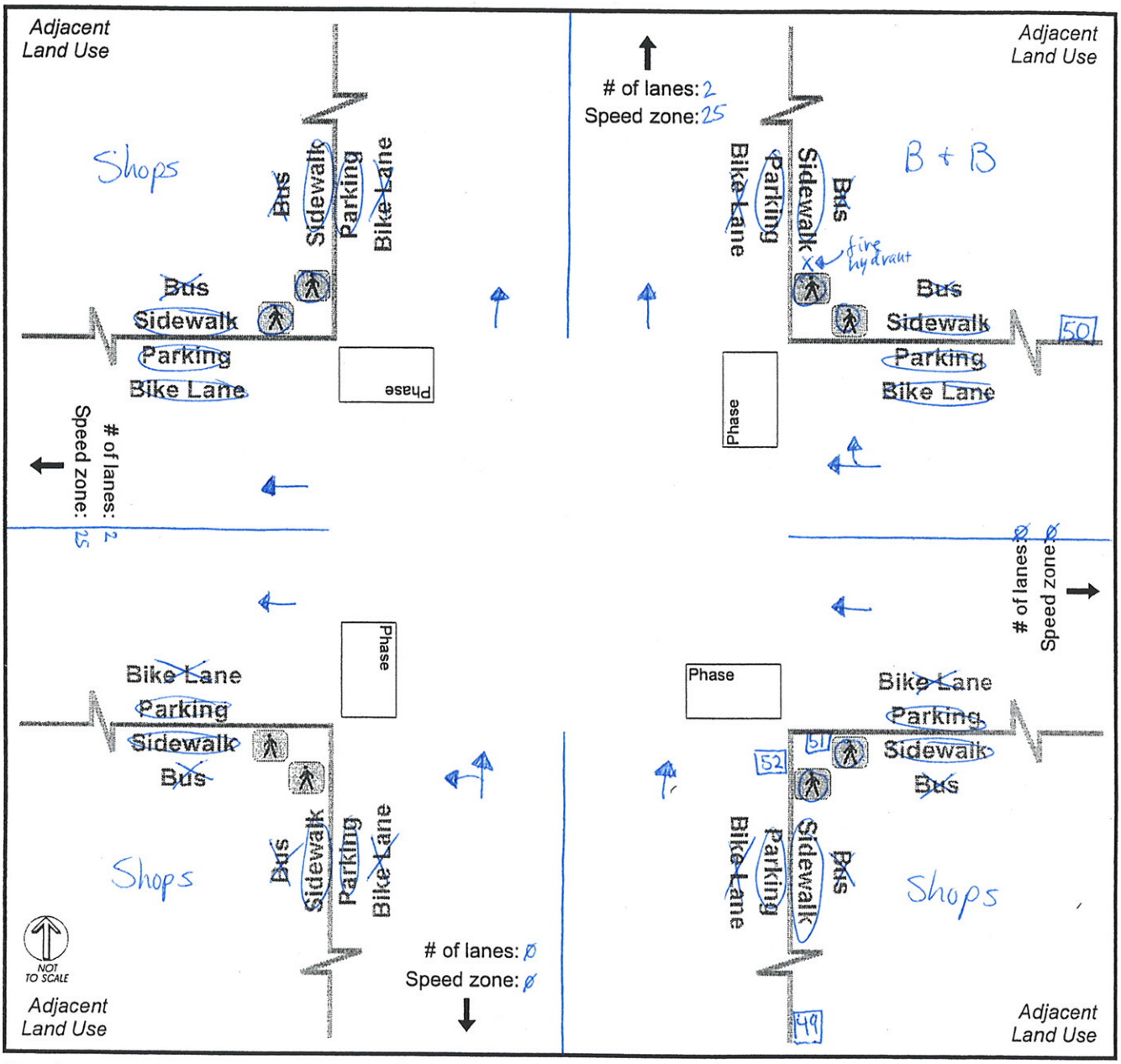
A B C D E F

LANE GEOMETRY

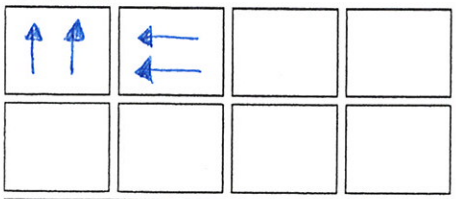
Date: 1/8/07

Time: _____

Intersection Name: Colorado Avenue and Bond Street



Staging:



Queuing Problems:

Saturation Flow Check

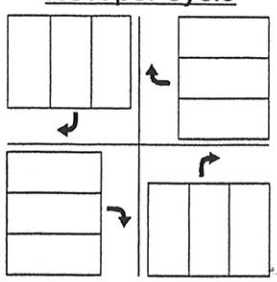
Direction	Vehicles	Seconds	Lanes

Cycle Length:

Cycle Length:

Cycle Length:

ROR per cycle



Perceived LOS

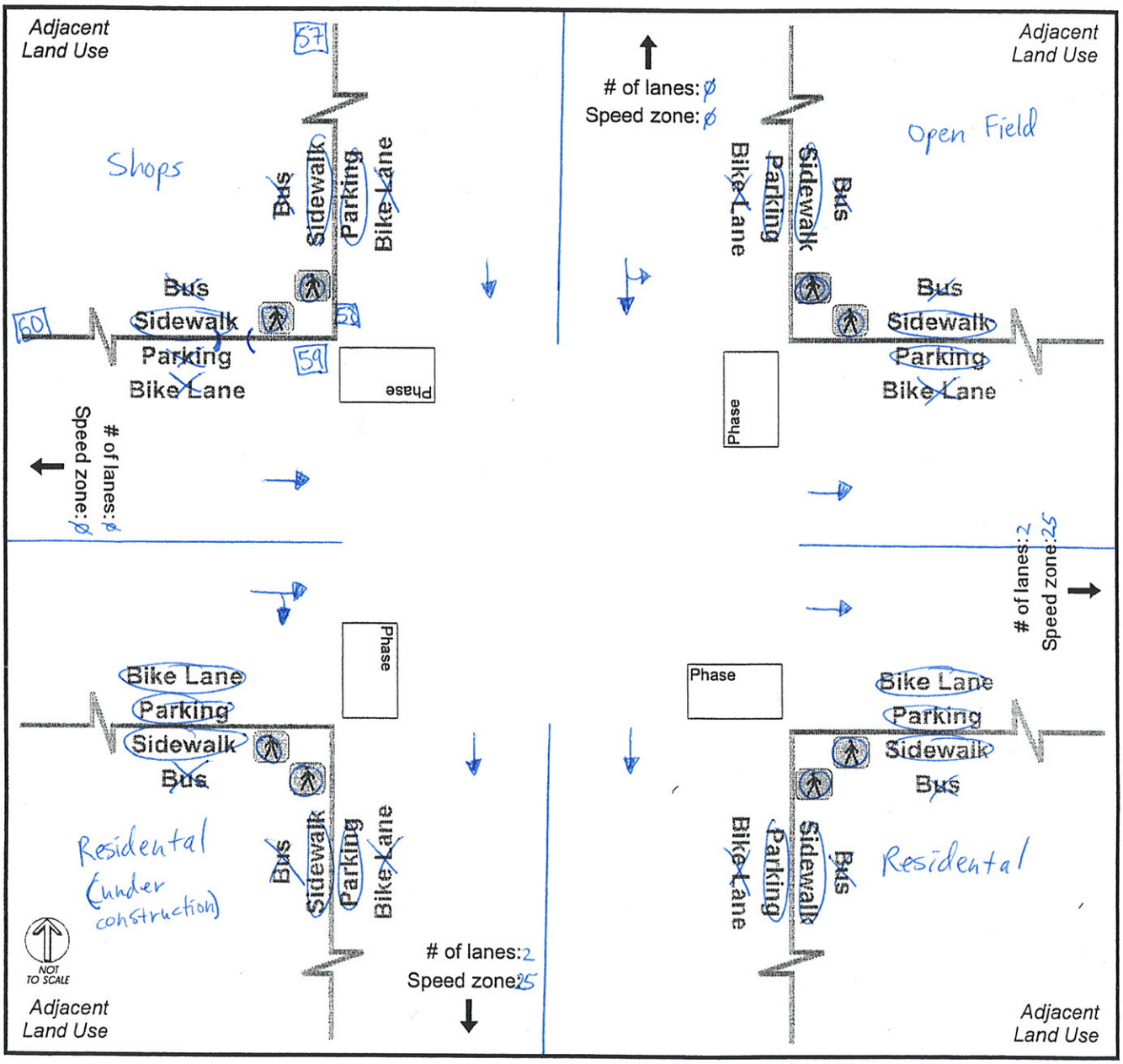
A B C D E F

LANE GEOMETRY

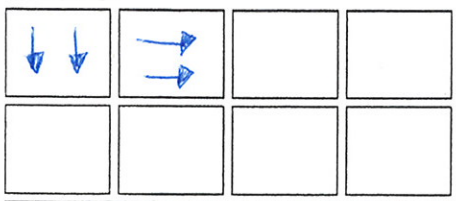
Date: 1/8/07

Time: _____

Intersection Name: Arizona Avenue and Wall Street



Staging:



Queuing Problems:

Saturation Flow Check

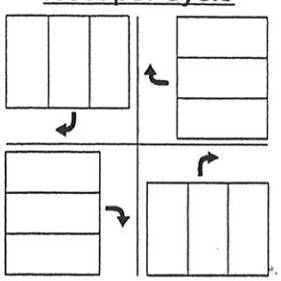
Direction	Vehicles	Seconds	Lanes

Cycle Length:

Cycle Length:

Cycle Length:

ROR per cycle



Perceived LOS

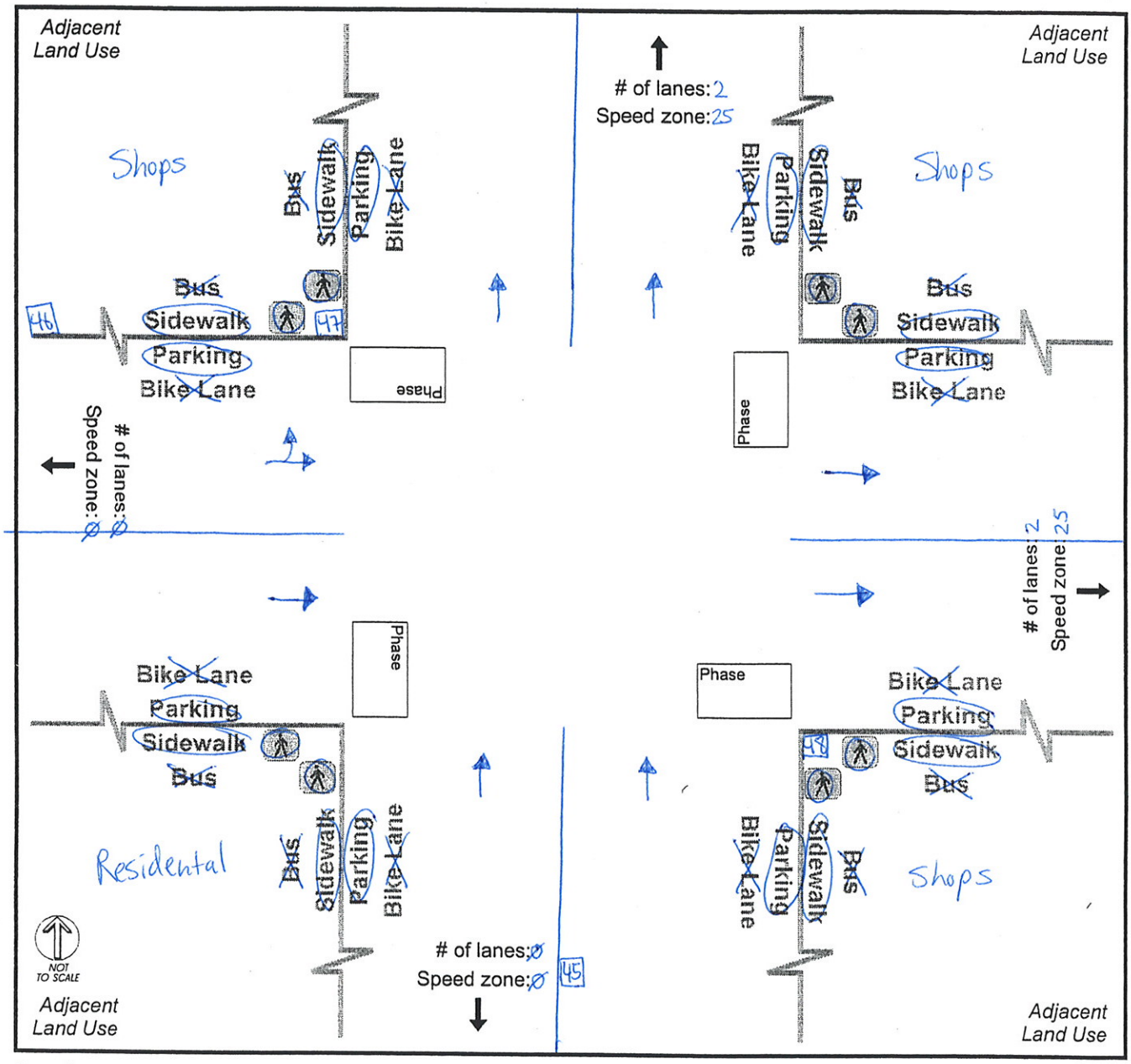
A	B	C	D	E	F

LANE GEOMETRY

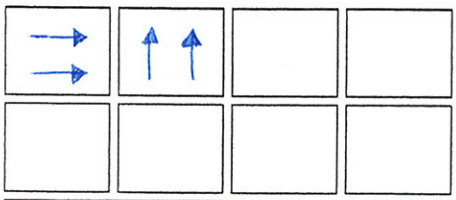
Date: 1/8/07

Time: _____

Intersection Name: Arizona Avenue and Bond Street



Staging:



Queuing Problems:

Saturation Flow Check

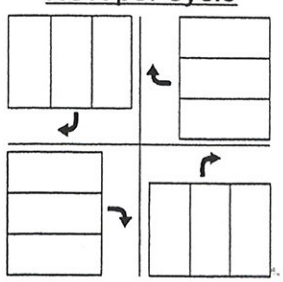
Direction	Vehicles	Seconds	Lanes

Cycle Length:

Cycle Length:

Cycle Length:

ROR per cycle



Perceived LOS

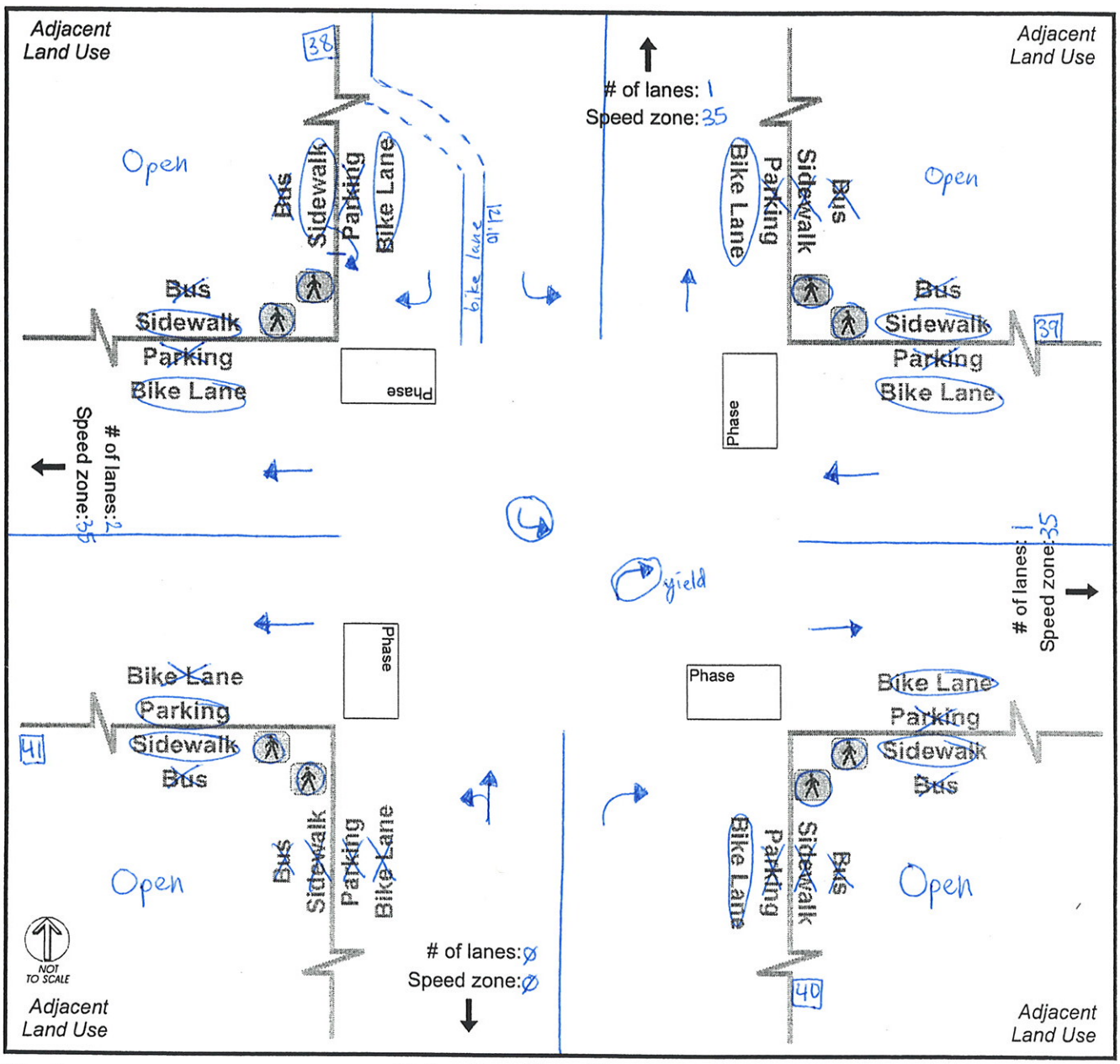
A	B	C	D	E	F

LANE GEOMETRY

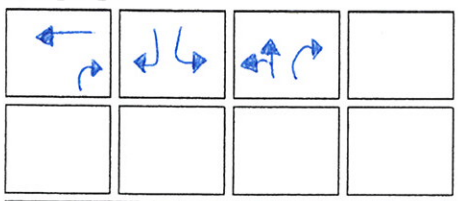
Date: 1/8/07

Time: _____

Intersection Name: Parkway SB Ramp and Colorado Avenue



Staging:



Queuing Problems:

Saturation Flow Check

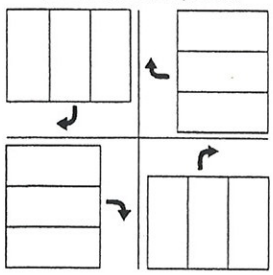
Direction	Vehicles	Seconds	Lanes

Cycle Length:

Cycle Length:

Cycle Length:

ROR per cycle



Perceived LOS

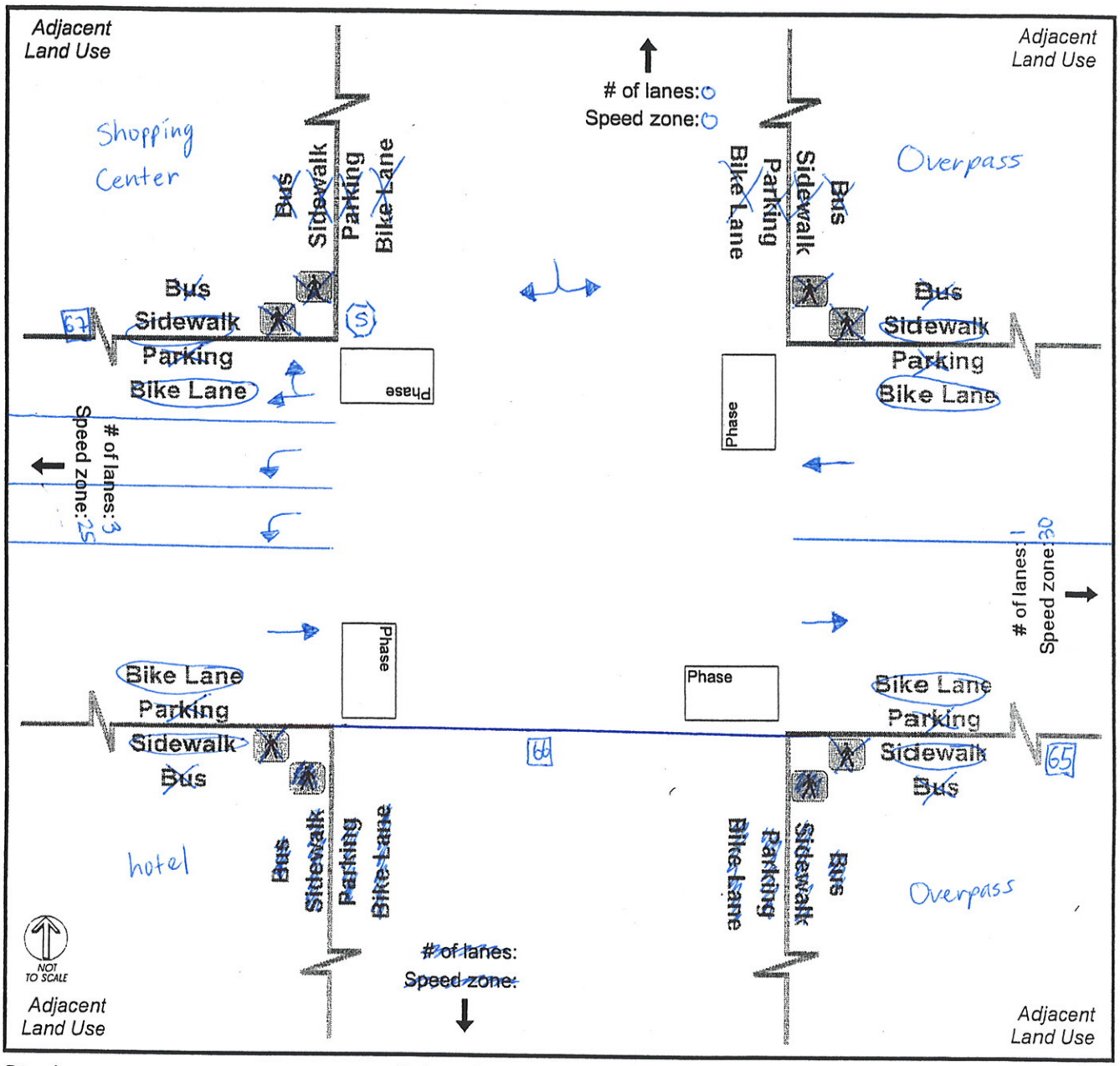
A B C D E F

LANE GEOMETRY

Date: 1/8/07

Time: _____

Intersection Name: Butler Market Road and Parkway SB Ramp



Staging:

Queuing Problems:

Saturation Flow Check

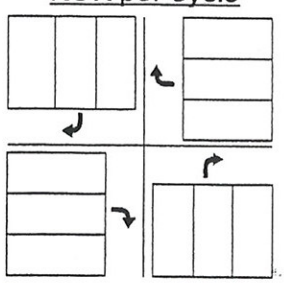
Direction	Vehicles	Seconds	Lanes

Cycle Length:

Cycle Length:

Cycle Length:

ROR per cycle



Perceived LOS

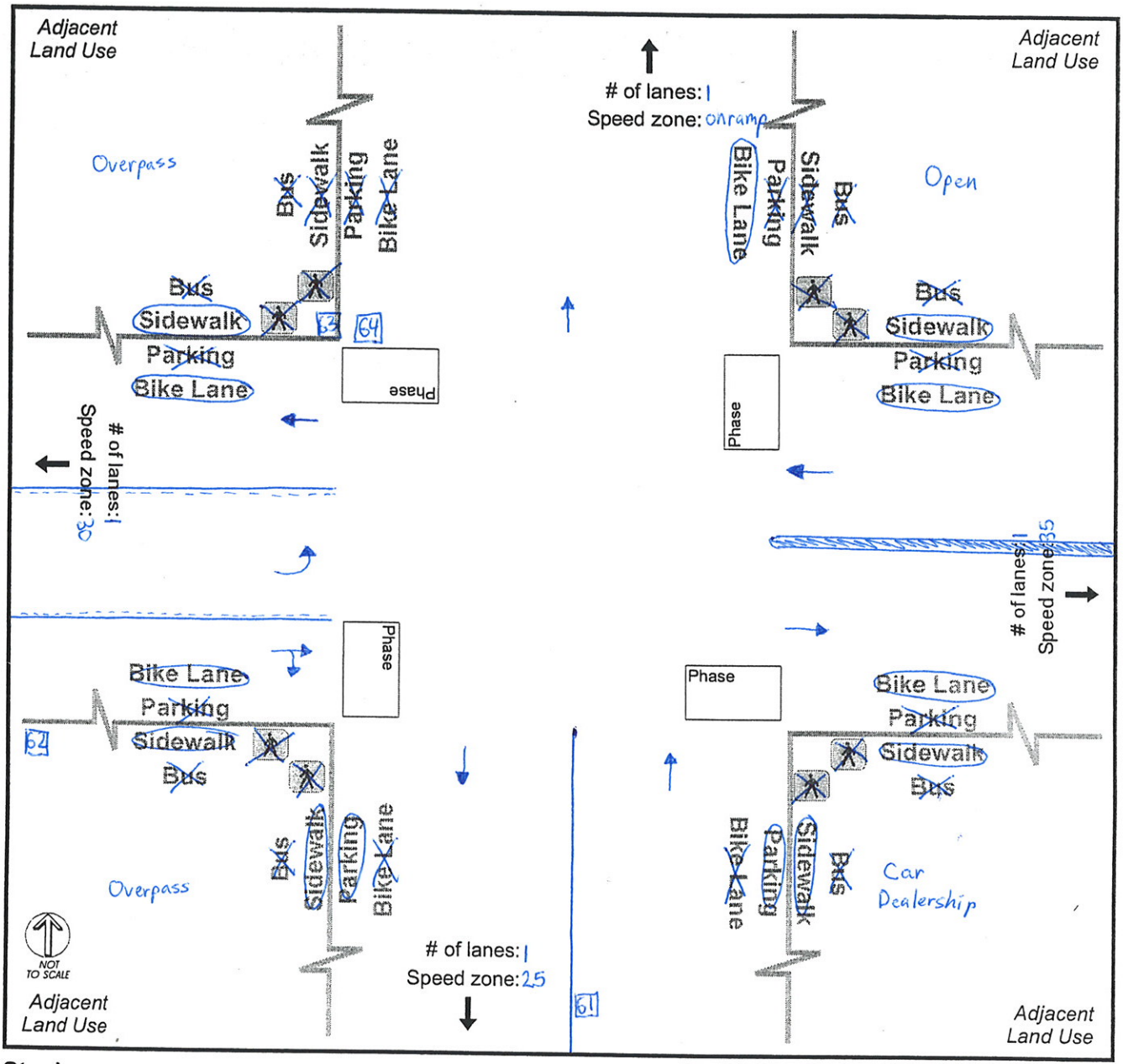
A B C D E F

LANE GEOMETRY

Date: 1/9/07

Time: _____

Intersection Name: Parkway NB Ramp and Butler Market Road



Staging:

Queuing Problems:

Saturation Flow Check

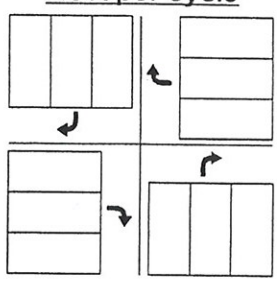
Direction	Vehicles	Seconds	Lanes

Cycle Length:

Cycle Length:

Cycle Length:

ROR per cycle



Perceived LOS

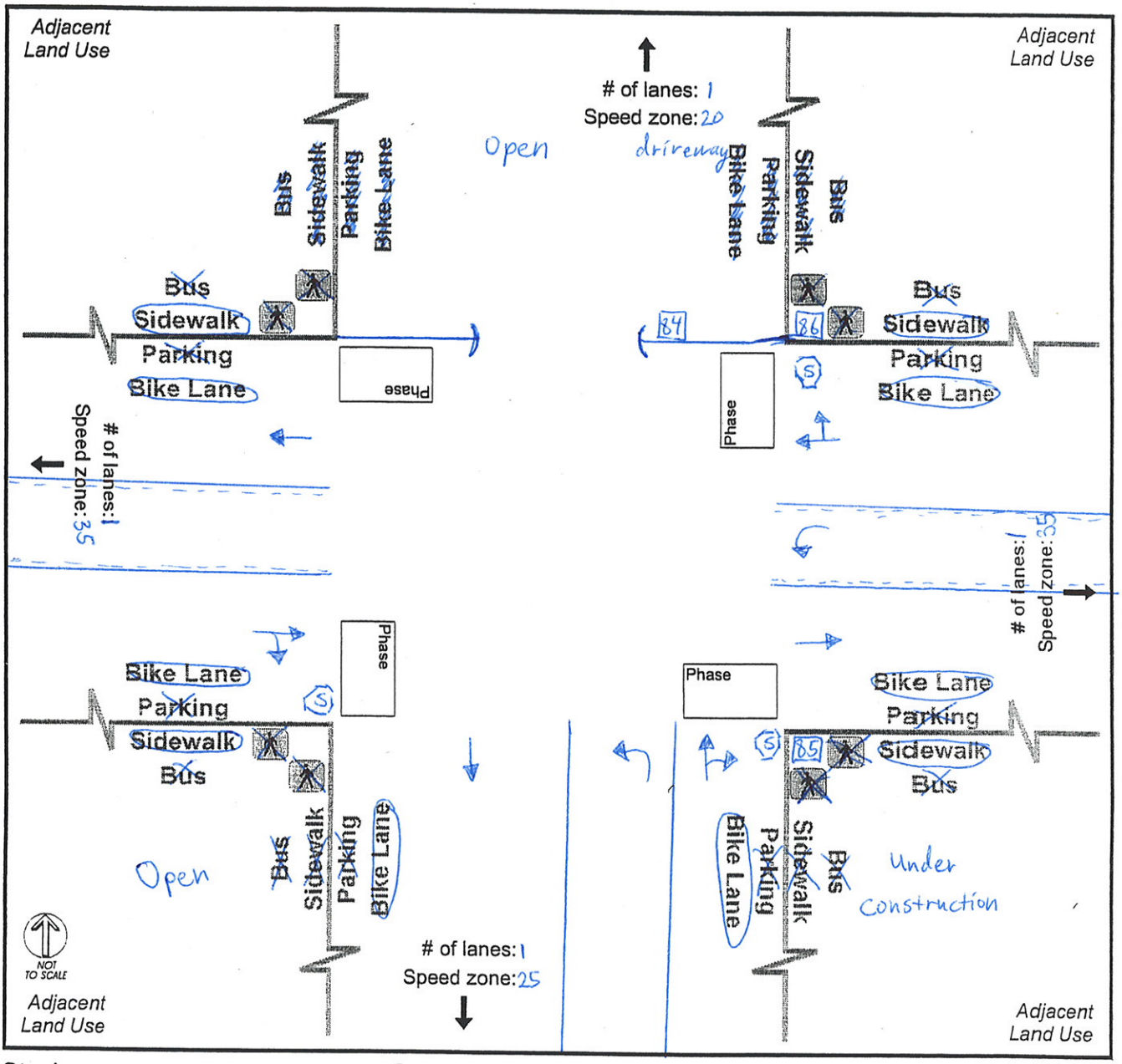
A	B	C	D	E	F

LANE GEOMETRY

Date: 1/9/07

Time: _____

Intersection Name: 4th Street and Butler Market Road



Staging:

Queuing Problems:

Saturation Flow Check

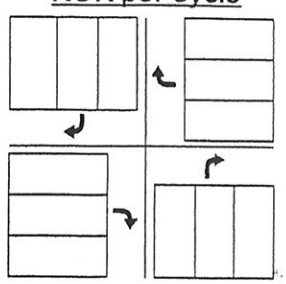
Direction	Vehicles	Seconds	Lanes

Cycle Length:

Cycle Length:

Cycle Length:

ROR per cycle



Perceived LOS

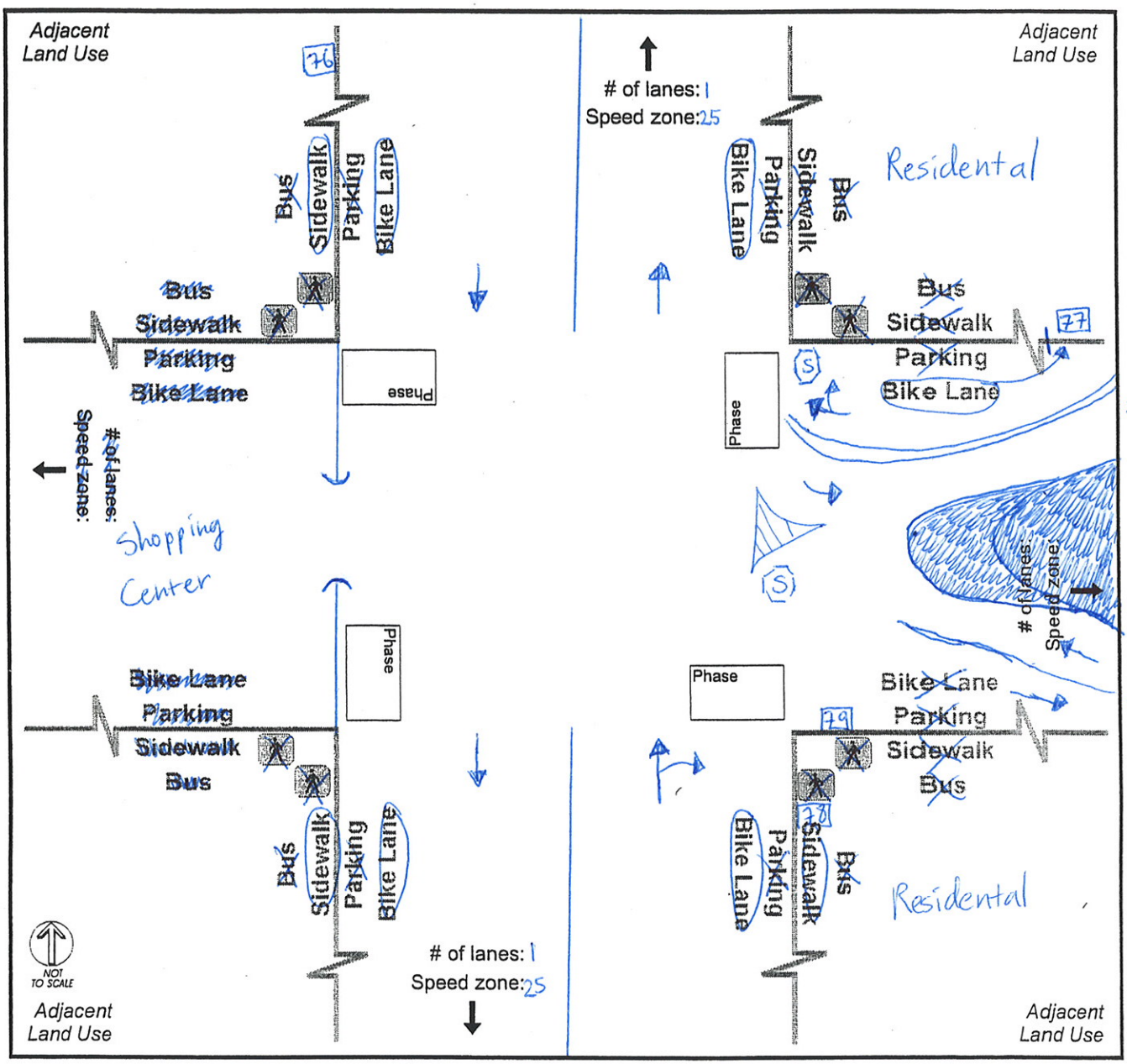
A B C D E F

LANE GEOMETRY

Date: 1/9/07

Time: _____

Intersection Name: 4th Street and Studio Road



Staging:

Queuing Problems:

Saturation Flow Check

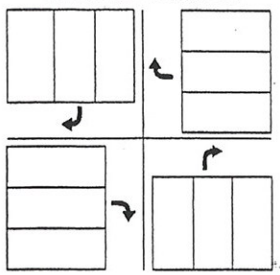
Direction	Vehicles	Seconds	Lanes

Cycle Length:

Cycle Length:

Cycle Length:

ROR per cycle



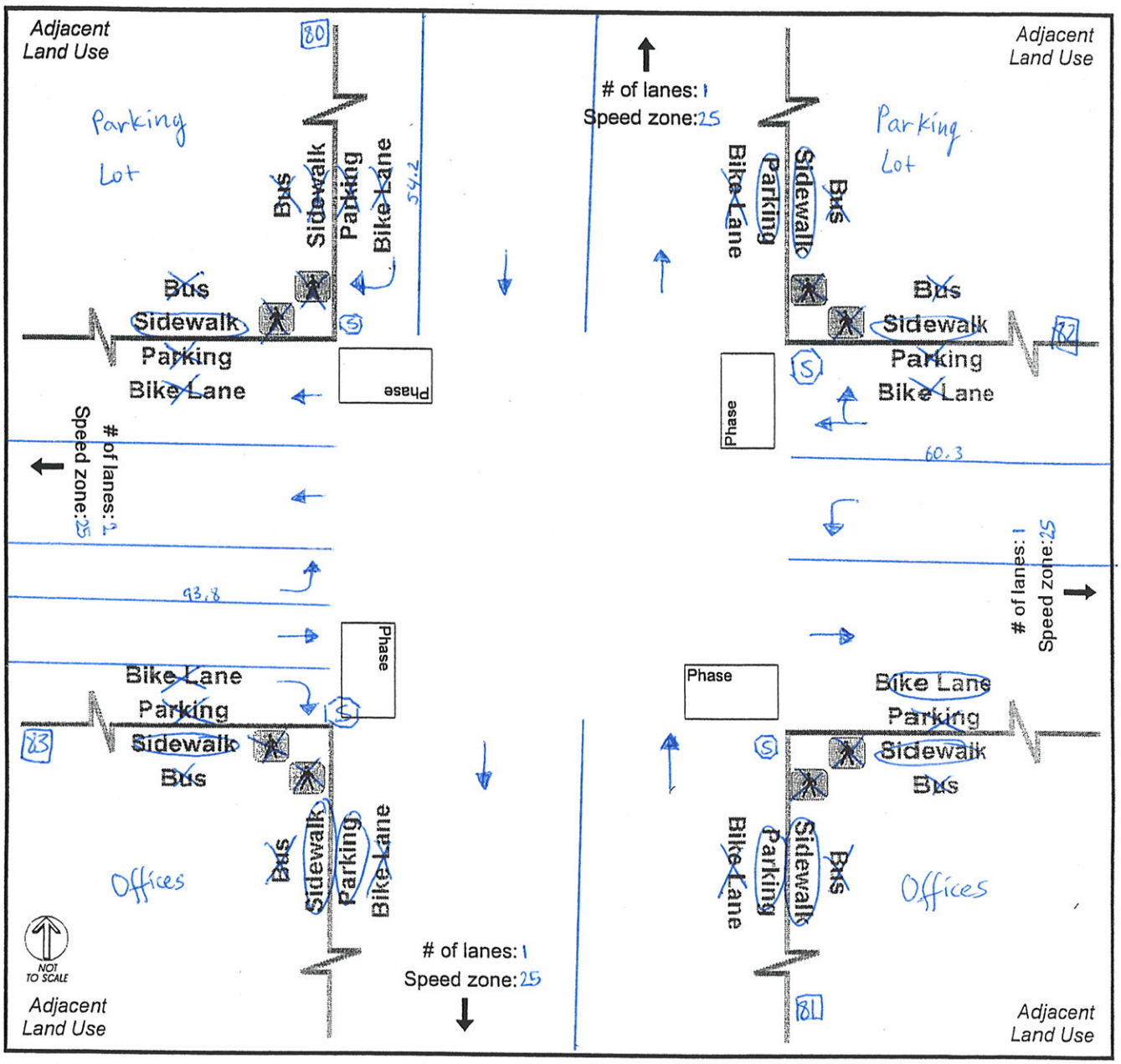
Perceived LOS					
A	B	C	D	E	F

LANE GEOMETRY

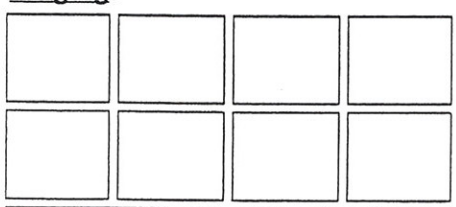
Date: 1/9/07

Time: _____

Intersection Name: 4th Street and Revere Avenue



Staging:



Queuing Problems:

Saturation Flow Check

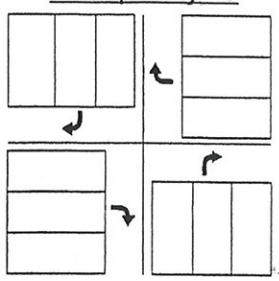
Direction	Vehicles	Seconds	Lanes

Cycle Length:

Cycle Length:

Cycle Length:

ROR per cycle



Perceived LOS

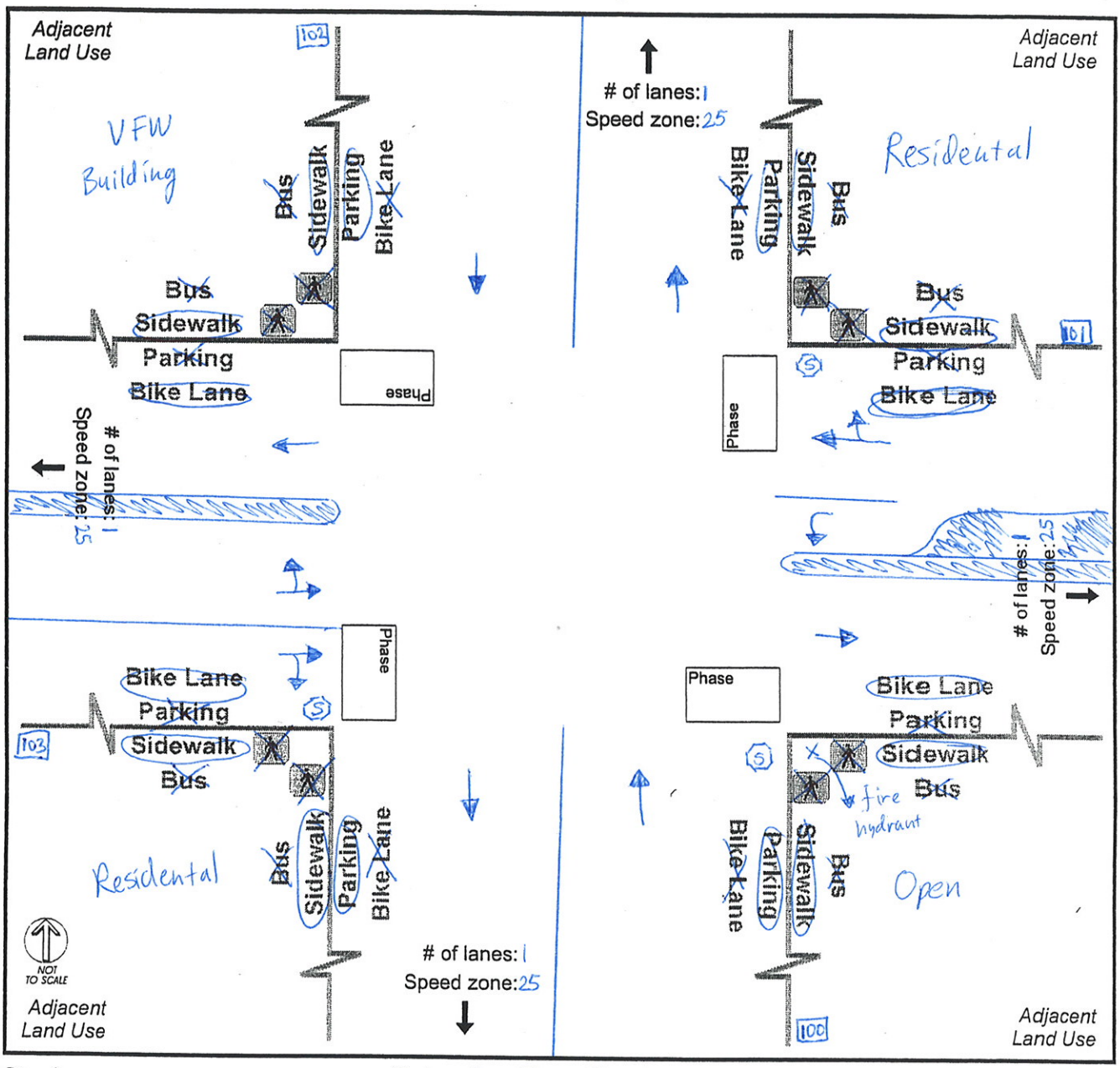
A	B	C	D	E	F

LANE GEOMETRY

Date: 1/9/07

Time: _____

Intersection Name: 4th Street and Olney Avenue



Staging:

Queuing Problems:

Saturation Flow Check

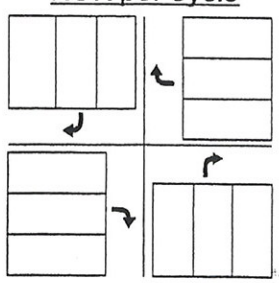
Direction	Vehicles	Seconds	Lanes

Cycle Length:

Cycle Length:

Cycle Length:

ROR per cycle



Perceived LOS

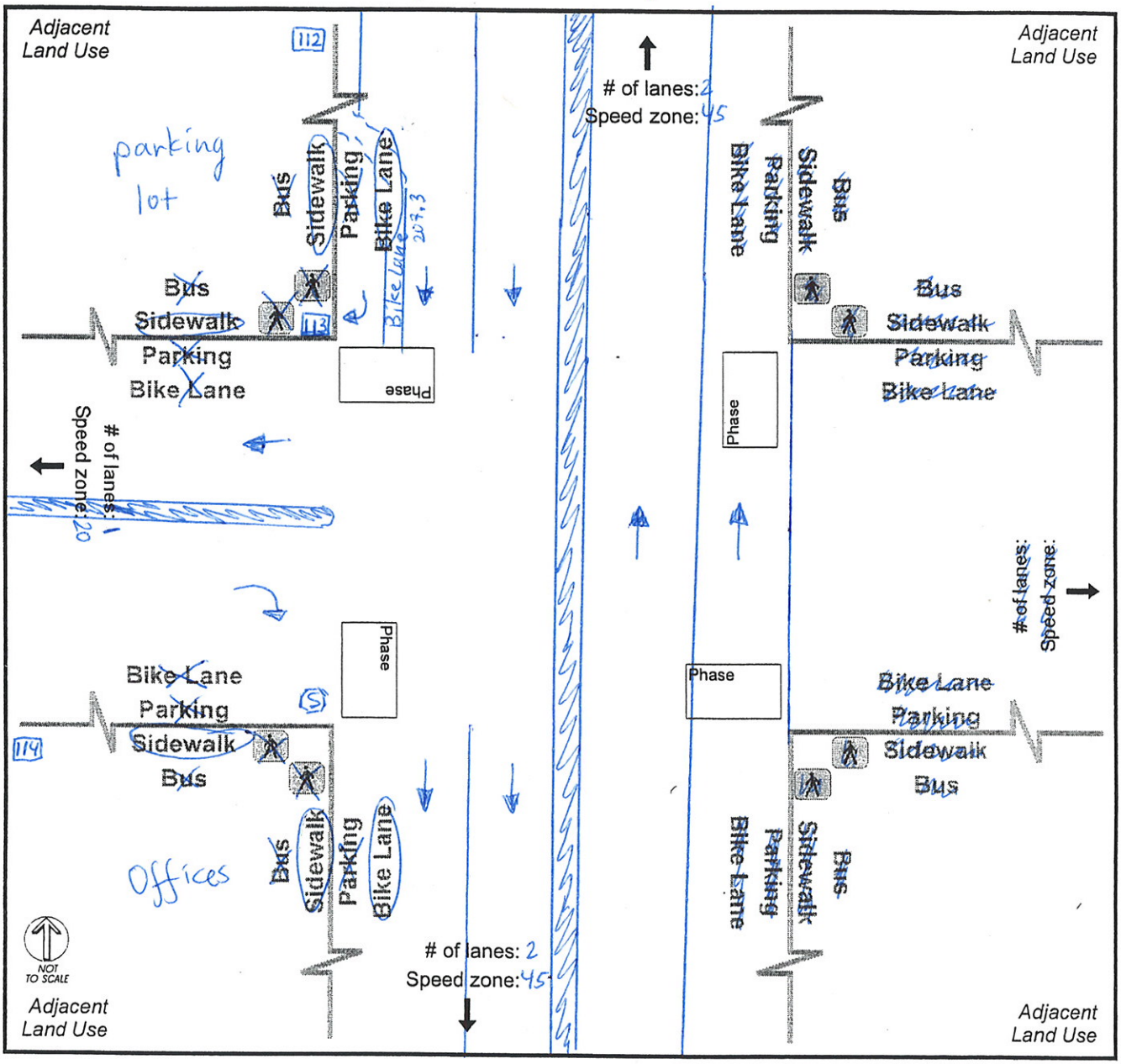
A B C D E F

LANE GEOMETRY

Date: 1/9/07

Time: _____

Intersection Name: Parkway SB and Lafayette Avenue



Staging:

Queuing Problems:

Saturation Flow Check

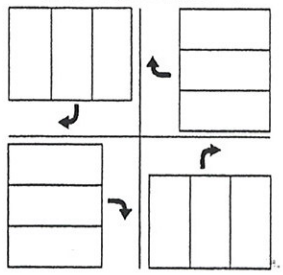
Direction	Vehicles	Seconds	Lanes

Cycle Length:

Cycle Length:

Cycle Length:

ROR per cycle



Perceived LOS

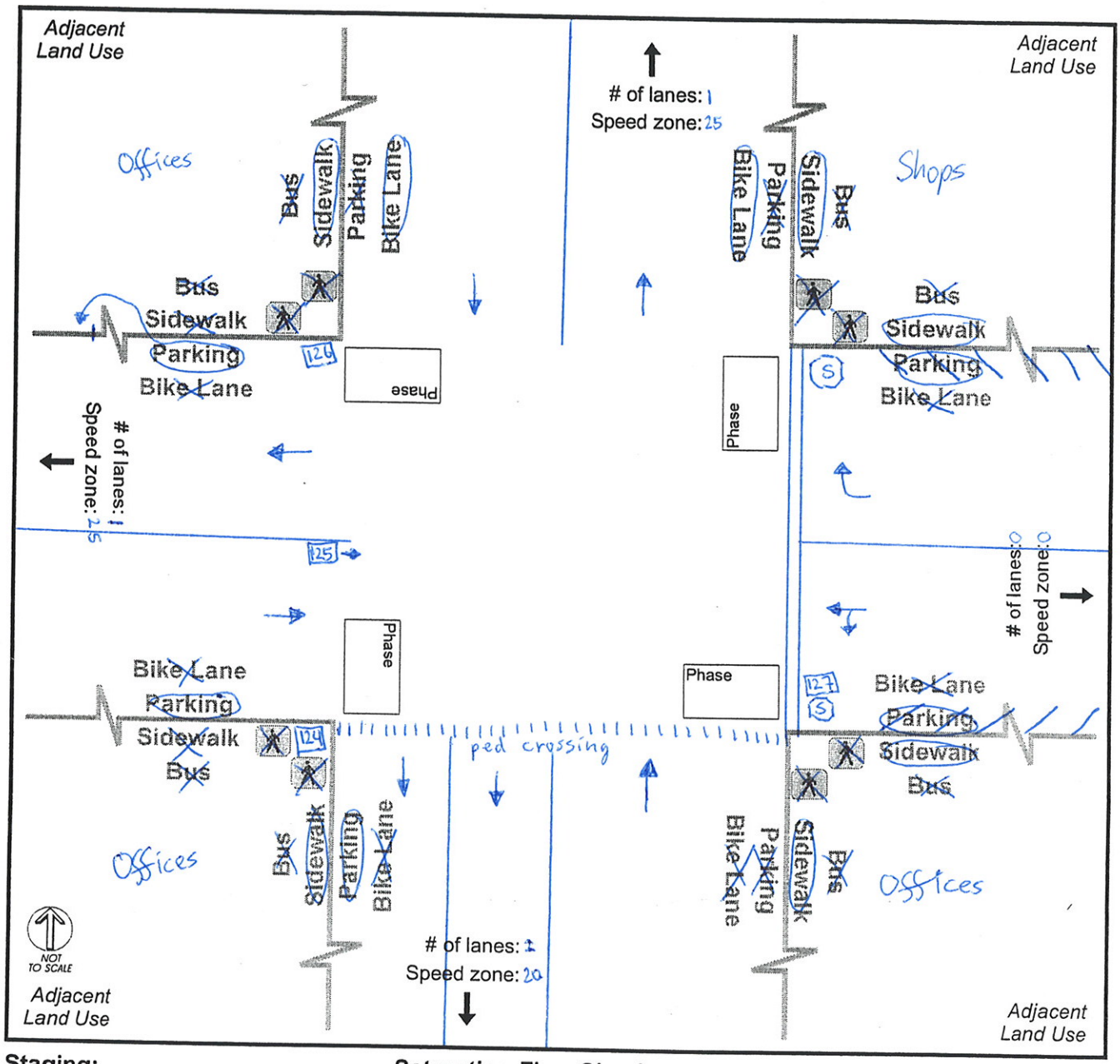
A B C D E F

LANE GEOMETRY

Date: 1/9/07

Time: _____

Intersection Name: Wall Street and Bond Street



Staging:

Queuing Problems:

Saturation Flow Check

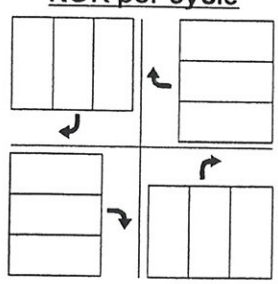
Direction	Vehicles	Seconds	Lanes

Cycle Length:

Cycle Length:

Cycle Length:

ROR per cycle



Perceived LOS

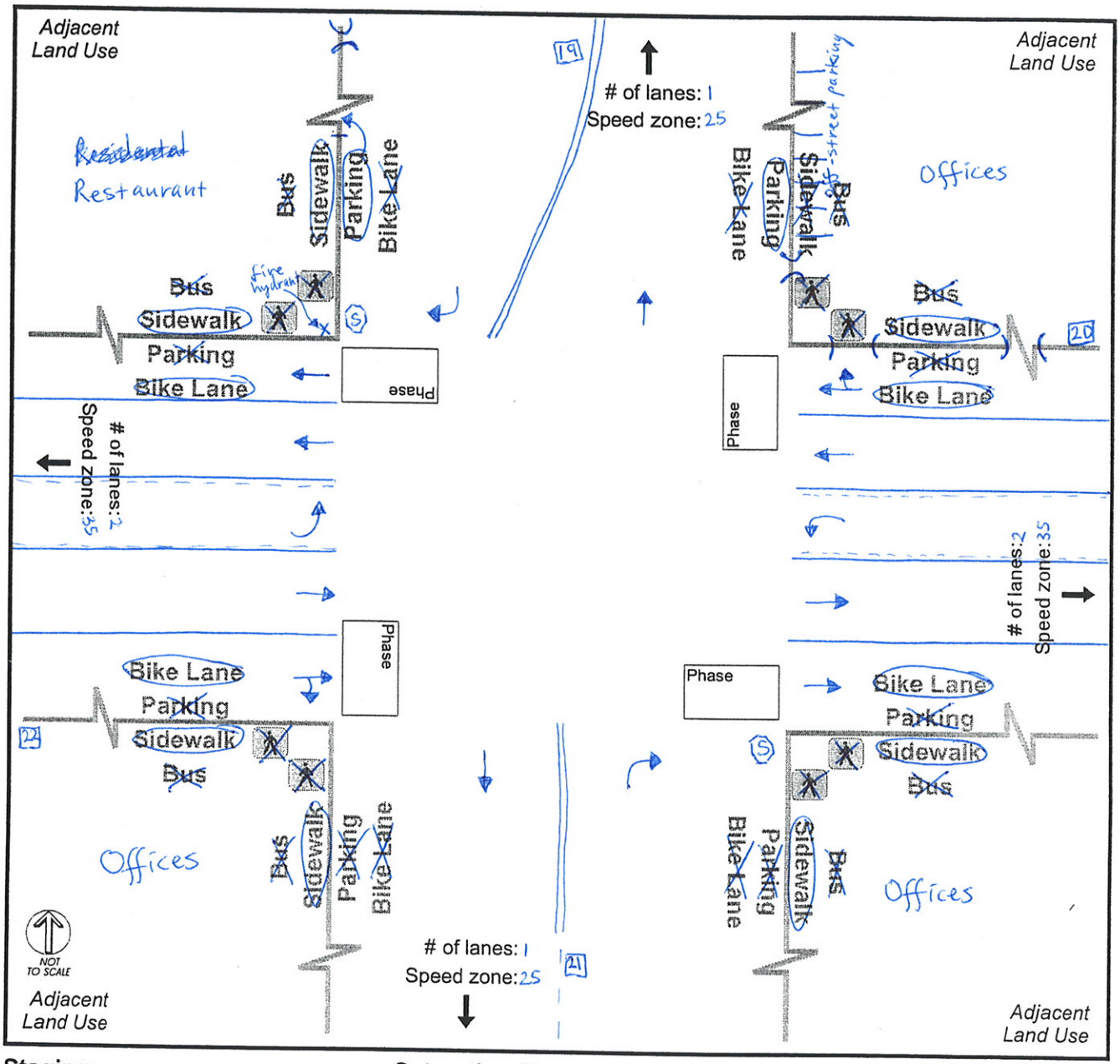
A B C D E F

LANE GEOMETRY

Date: 1/8/07

Time: _____

Intersection Name: Greenwood Avenue and 4th Street



Staging:

Queuing Problems:

Saturation Flow Check

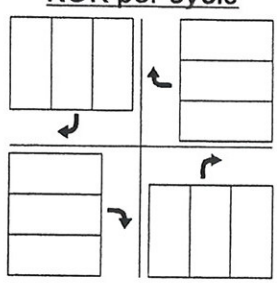
Direction	Vehicles	Seconds	Lanes

Cycle Length:

Cycle Length:

Cycle Length:

ROR per cycle



Perceived LOS

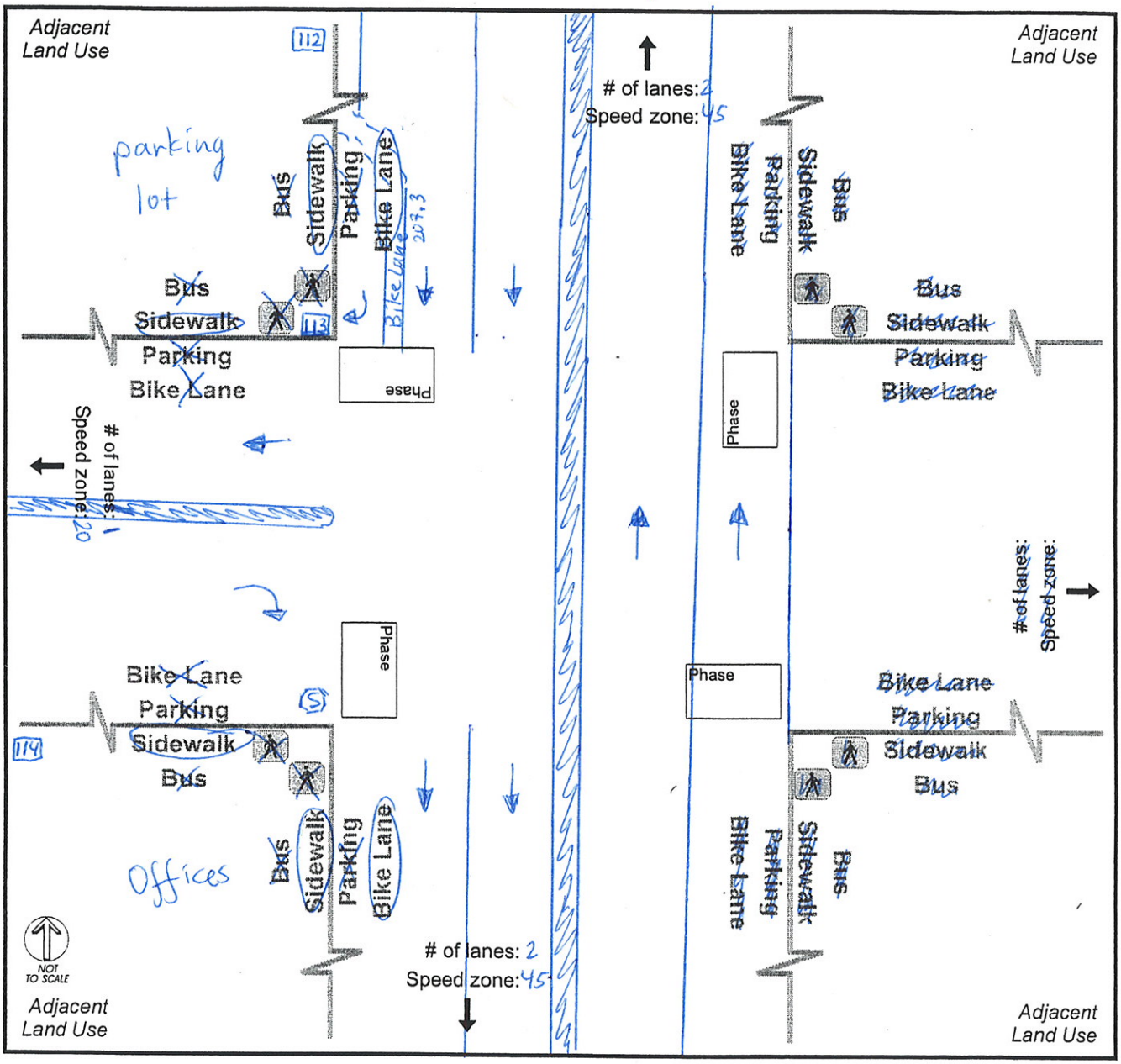
A B C D E F

LANE GEOMETRY

Date: 1/9/07

Time: _____

Intersection Name: Parkway SB and Lafayette Avenue



Staging:

Queuing Problems:

Saturation Flow Check

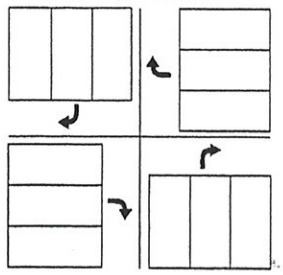
Direction	Vehicles	Seconds	Lanes

Cycle Length:

Cycle Length:

Cycle Length:

ROR per cycle



Perceived LOS

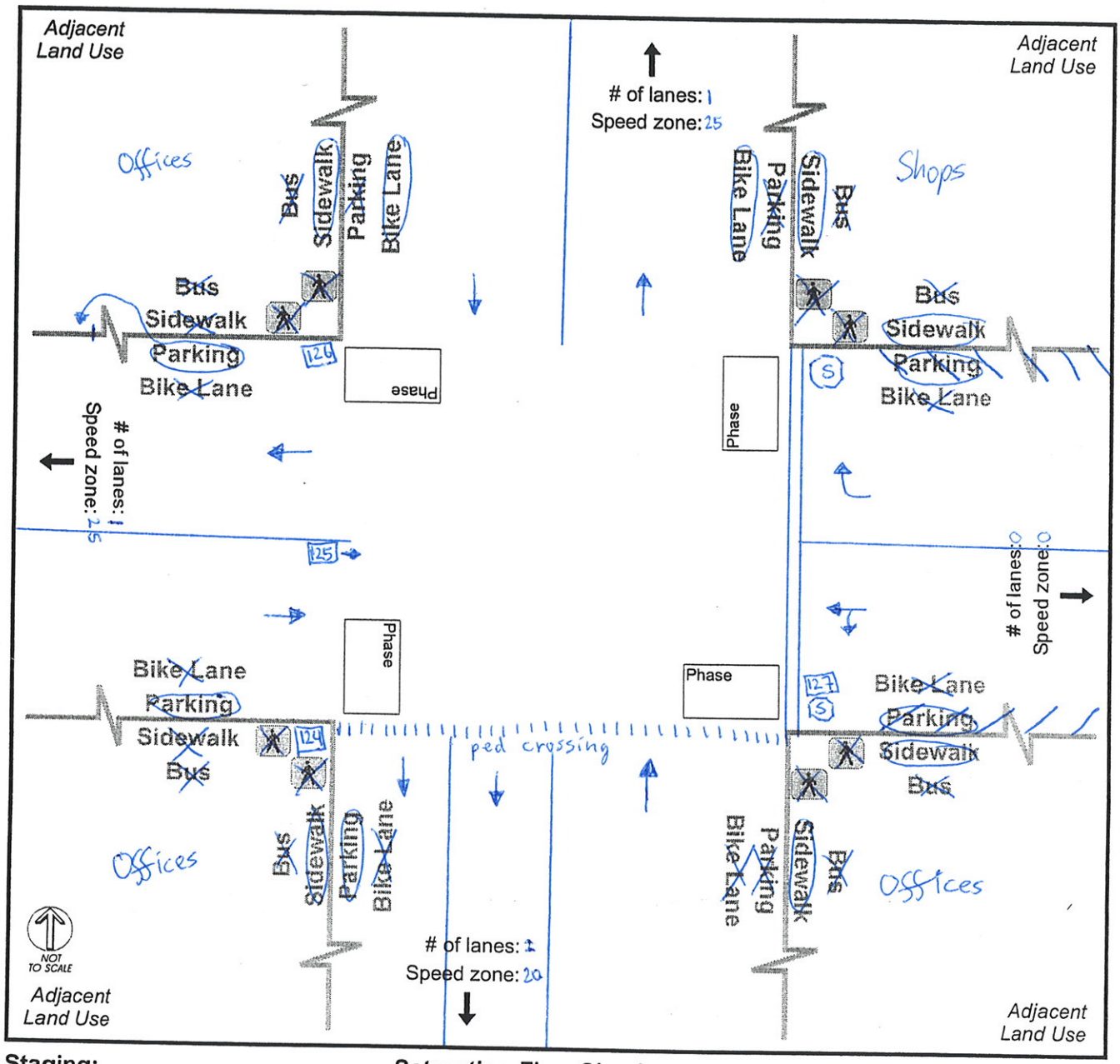
A B C D E F

LANE GEOMETRY

Date: 1/9/07

Time: _____

Intersection Name: Wall Street and Bond Street



Staging:

Queuing Problems:

Saturation Flow Check

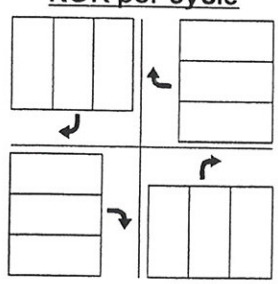
Direction	Vehicles	Seconds	Lanes

Cycle Length:

Cycle Length:

Cycle Length:

ROR per cycle



Perceived LOS

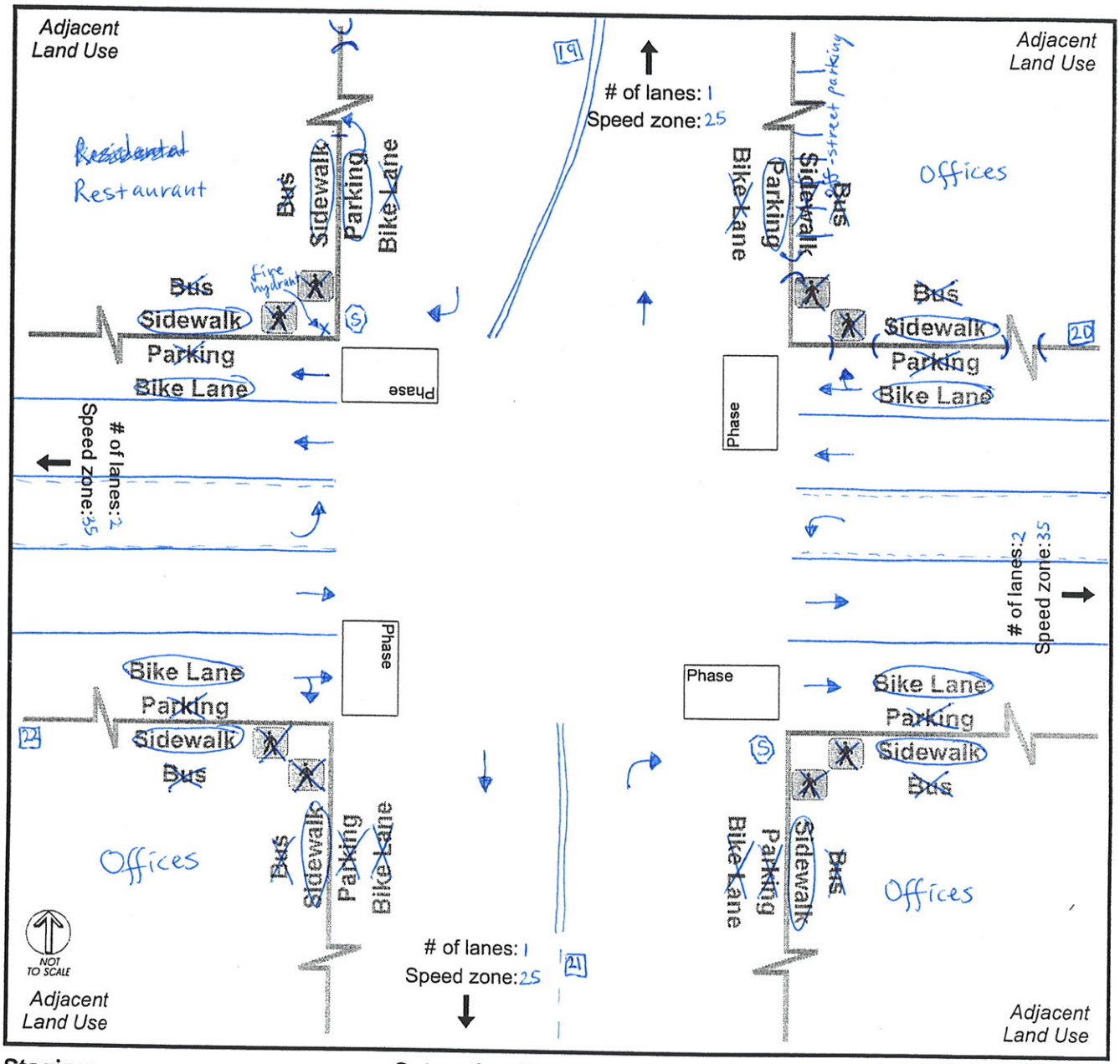
A B C D E F

LANE GEOMETRY

Date: 1/8/07

Time: _____

Intersection Name: Greenwood Avenue and 4th Street



Staging:

Queuing Problems:

Saturation Flow Check

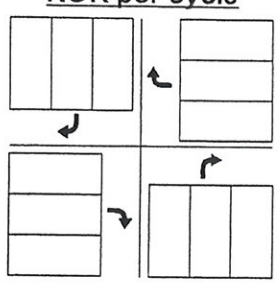
Direction	Vehicles	Seconds	Lanes

Cycle Length:

Cycle Length:

Cycle Length:

ROR per cycle



Perceived LOS

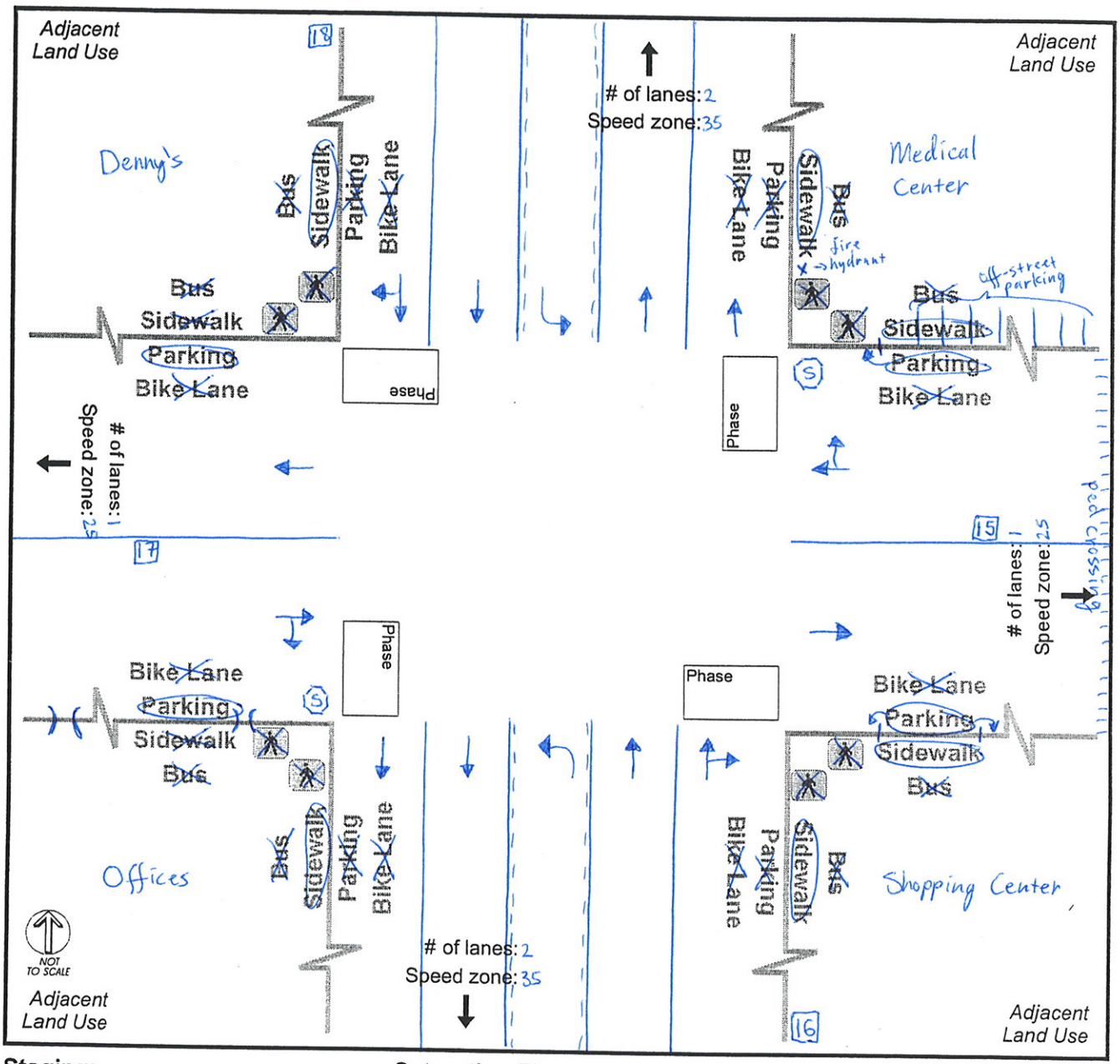
A B C D E F

LANE GEOMETRY

Date: 1/8/07

Time: _____

Intersection Name: Hawthorne Avenue and 3rd Street



Staging:

Queuing Problems:

Saturation Flow Check

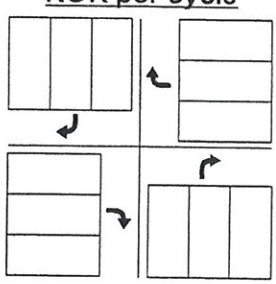
Direction	Vehicles	Seconds	Lanes

Cycle Length:

Cycle Length:

Cycle Length:

ROR per cycle



Perceived LOS

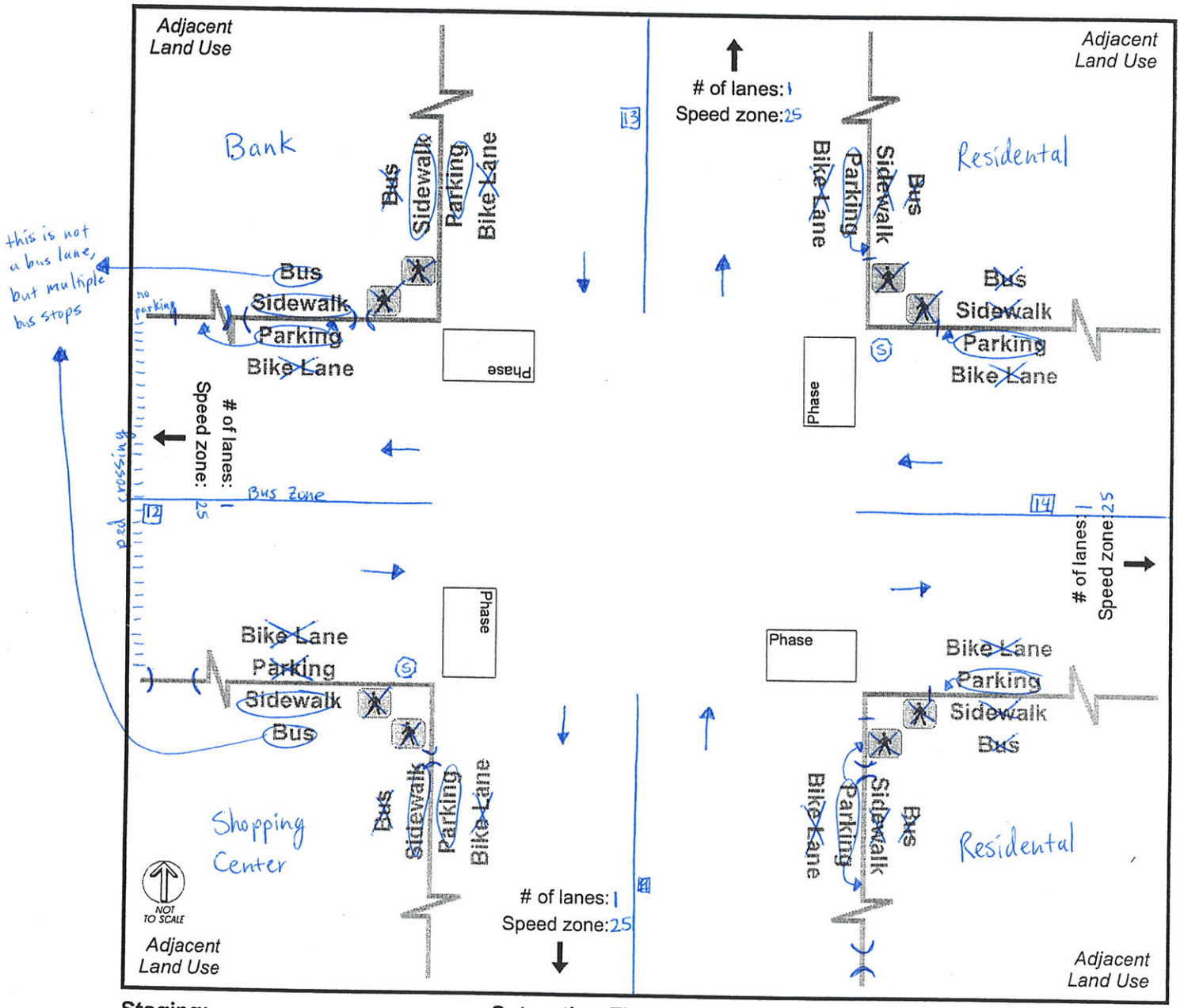
A B C D E F

LANE GEOMETRY

Date: 1/8/07

Time: _____

Intersection Name: Hawthorne Avenue and 4th Street



Staging:

Queuing Problems:

Saturation Flow Check

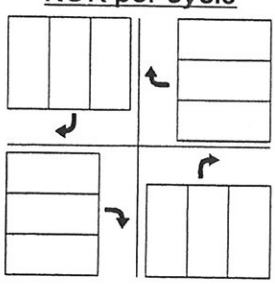
Direction	Vehicles	Seconds	Lanes

Cycle Length:

Cycle Length:

Cycle Length:

ROR per cycle



Perceived LOS

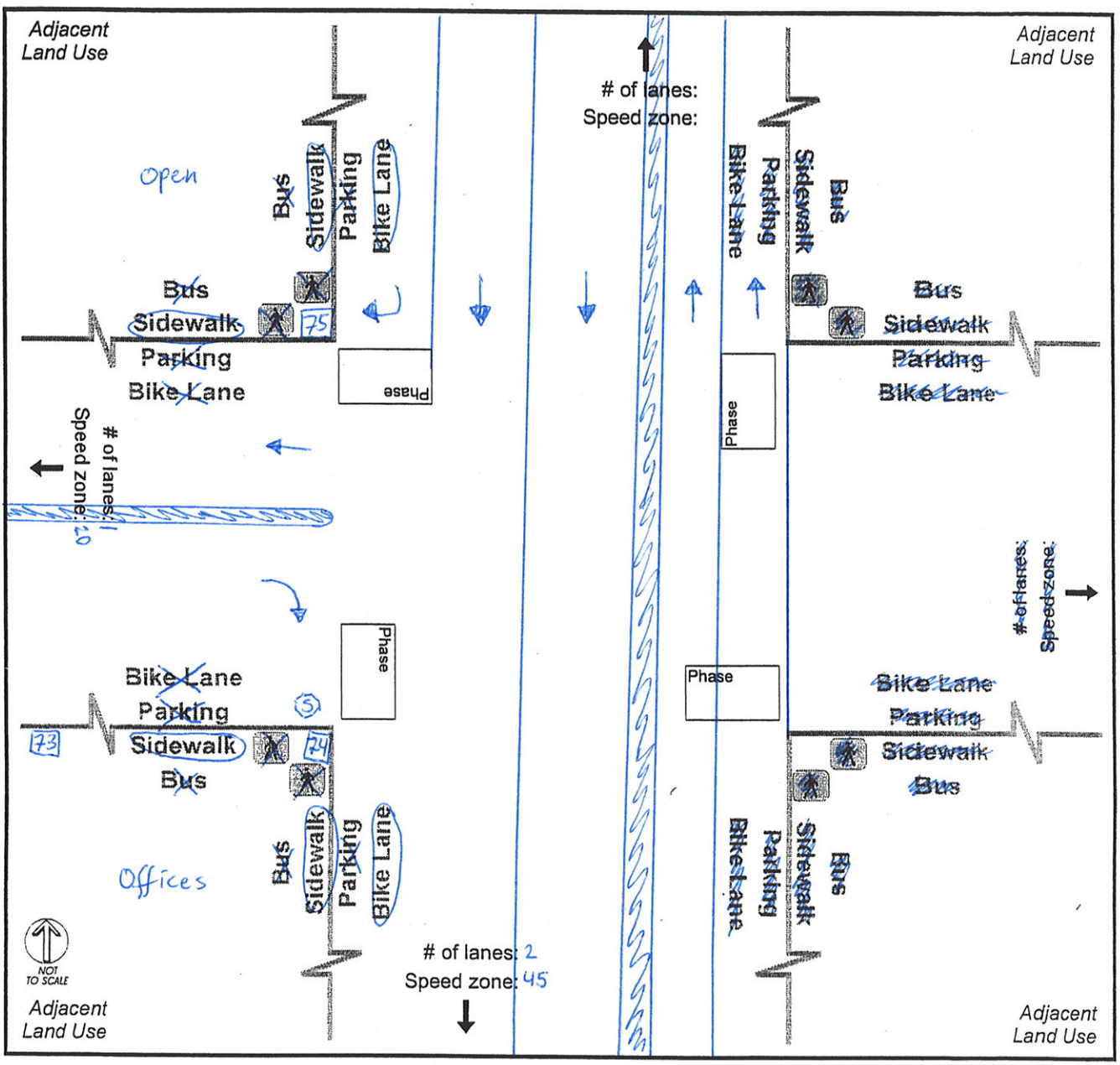
A B C D E F

LANE GEOMETRY

Date: 1/8/09

Time: _____

Intersection Name: SB Parkway and Hawthorne Avenue



Staging:

Queuing Problems:

Saturation Flow Check

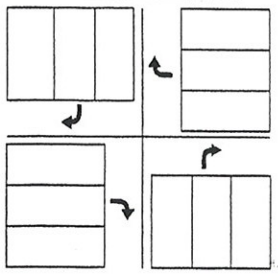
Direction	Vehicles	Seconds	Lanes

Cycle Length:

Cycle Length:

Cycle Length:

ROR per cycle



Perceived LOS

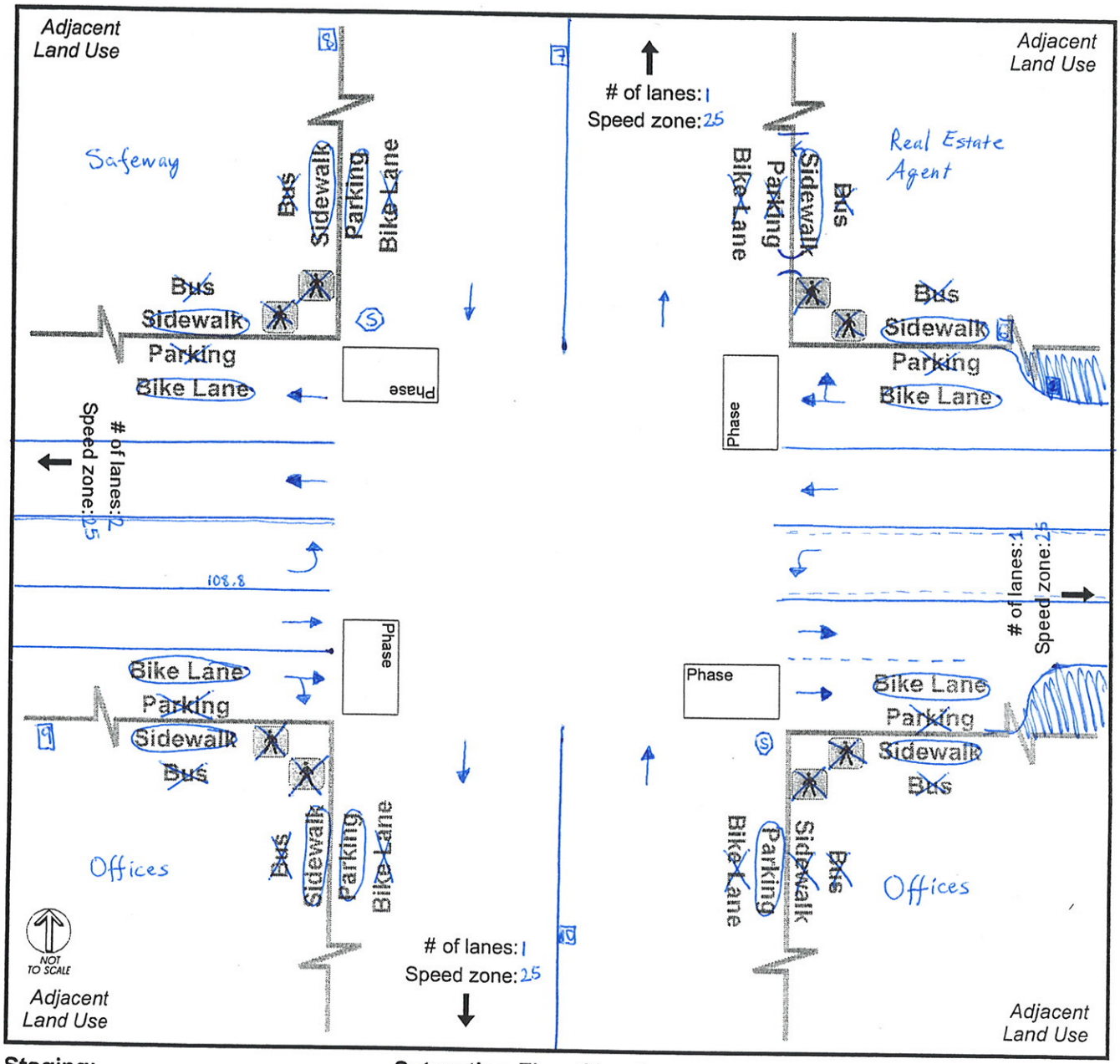
A B C D E F

LANE GEOMETRY

Date: 1/8/07

Time: _____

Intersection Name: NE 4th Street and NE Franklin Avenue



Staging:

Queuing Problems:

Saturation Flow Check

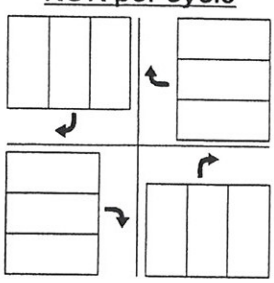
Direction	Vehicles	Seconds	Lanes

Cycle Length:

Cycle Length:

Cycle Length:

ROR per cycle



Perceived LOS

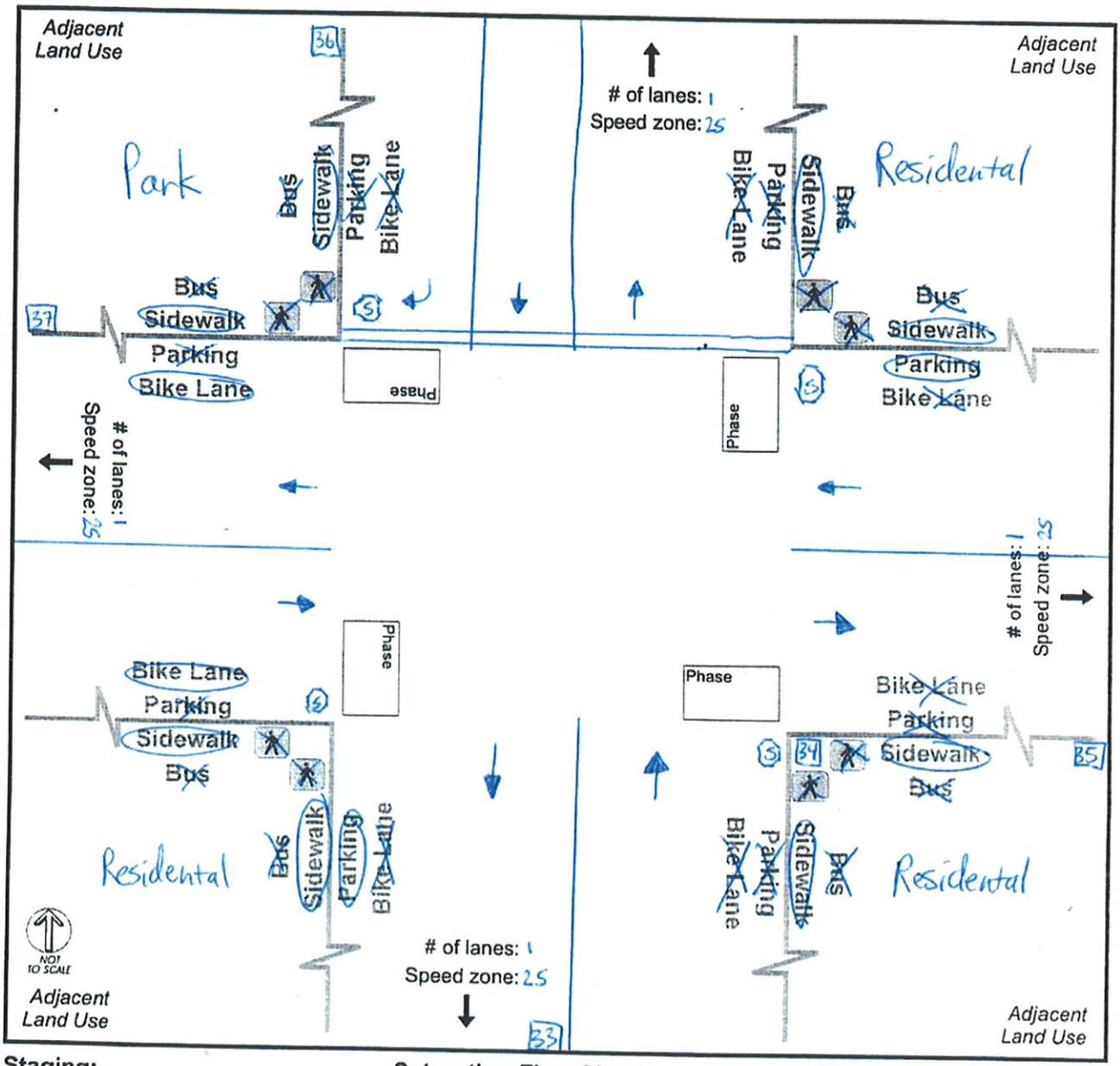
A B C D E F

LANE GEOMETRY

Date: 1/8/07

Time: _____

Intersection Name: Riverside Drive and Tumalo Avenue



Staging:

Queuing Problems:

Saturation Flow Check

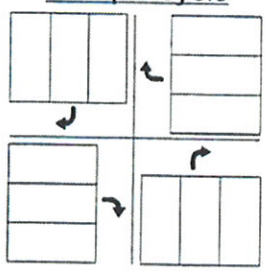
Direction	Vehicles	Seconds	Lanes

Cycle Length:

Cycle Length:

Cycle Length:

ROR per cycle



Perceived LOS

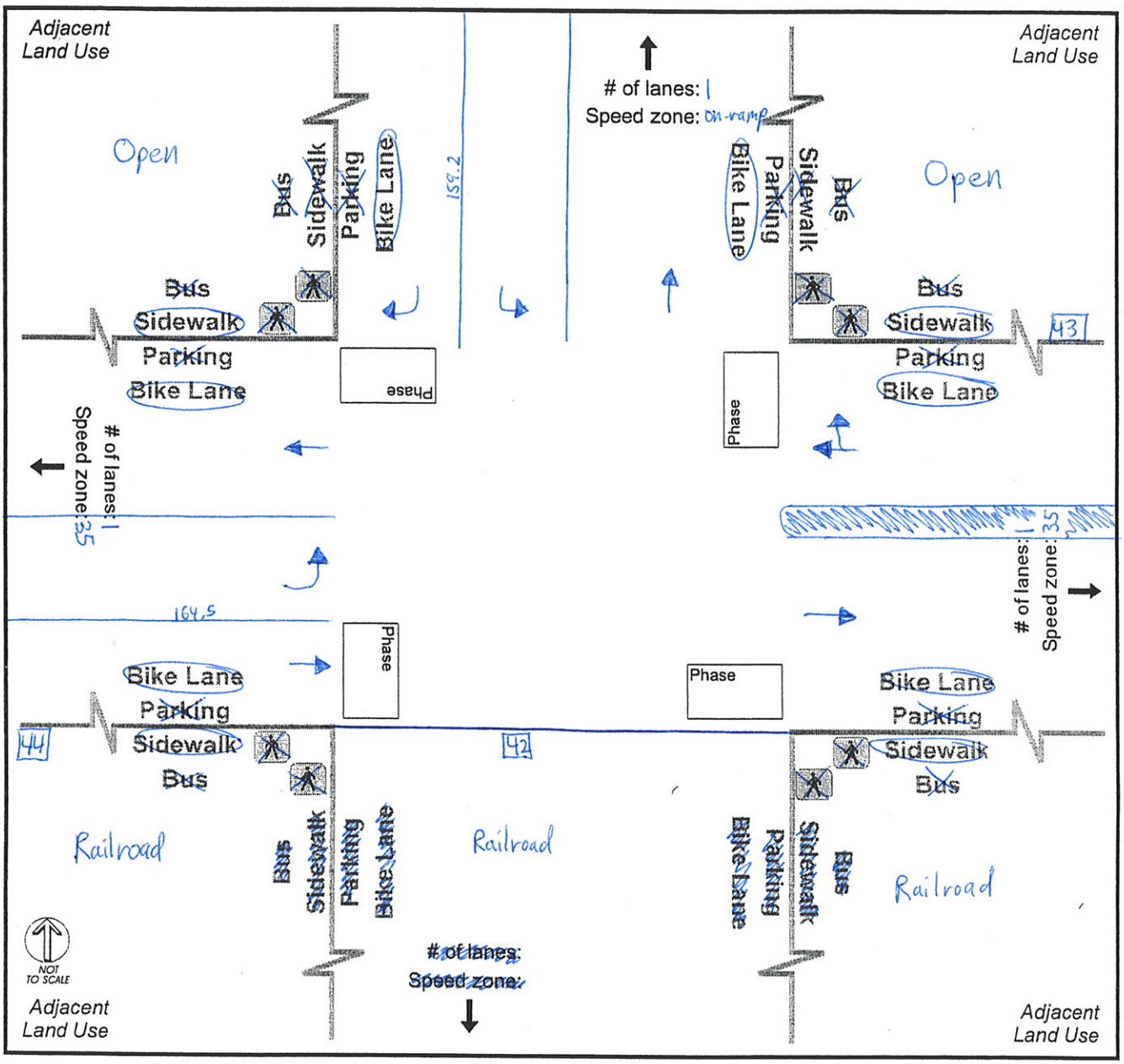
A B C D E F

LANE GEOMETRY

Date: 1/8/07

Time: _____

Intersection Name: Parkway NB Ramp and Colorado Avenue



Staging:

Queuing Problems:

Saturation Flow Check

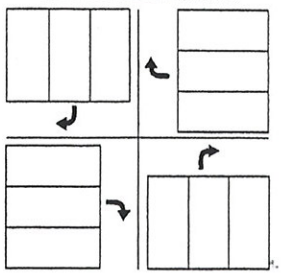
Direction	Vehicles	Seconds	Lanes

Cycle Length:

Cycle Length:

Cycle Length:

ROR per cycle



Perceived LOS					
A	B	C	D	E	F

APPENDIX C

Existing Intersection Photographs

Arizona Avenue @ Wall Street:
Looking north through intersection from the west side of Wall Street.
bend 057.jpg

Arizona Avenue @ Wall Street:
Looking south through intersection from northwest corner.
bend 058.jpg

Arizona Avenue @ Wall Street:
Looking east through intersection from south side of Arizona Avenue.
bend 059.jpg

Arizona Avenue @ Wall Street:
Looking east through intersection along north side of Arizona Avenue.
bend 060.jpg

Arizona Avenue @ Bond Street:
Looking north through intersection from along Bond Street.
bend 045.jpg

Arizona Avenue @ Bond Street:
Looking west along north side of Arizona Avenue.
bend 046.jpg

Arizona Avenue @ Bond Street:
Looking east through intersection from northwest corner.
bend 047.jpg

Arizona Avenue @ Bond Street:
Looking north through intersection from southeast corner.
bend 048.jpg

Butler Market Road @ US 97/20:
Looking north through intersection from east side of US 97/20.
bend 069.jpg

Butler Market Road @ US 97/20:
Looking west along Butler Market Road from north side.
bend 070.jpg

Butler Market Road @ US 97/20:
Looking south through intersection from northwest side of US 97/20.
bend 071.jpg

Butler Market Road @ US 97/20:
Looking east through intersection from south side of Butler Market Road.
bend 072.jpg

Butler Market Road @ Parkway SB Ramp:
Looking west through intersection from south east corner of intersection.
bend 065.jpg

Butler Market Road @ Parkway SB Ramp:
Looking north through intersection from south side of Butler Market Road.
bend 066.jpg

Butler Market Road @ Parkway SB Ramp:
Looking east through intersection from north side of Butler Market Road.
bend 067.jpg

Butler Market Road @ US 97/20:
Looking west through intersection from southeast corner.
bend 068.jpg

Butler Market Road @ Parkway NB Ramp:
Looking north through intersection from south of intersection.
bend 061.jpg

Butler Market Road @ Parkway NB Ramp:
Looking east through intersection from south side of Butler Market Road.
bend 062.jpg

Butler Market Road @ Parkway NB Ramp:
Looking east through intersection from the northwest corner.
bend 063.jpg

Butler Market Road @ Parkway NB Ramp:
Close-up looking east through intersection the northwest corner.
bend 064.jpg

Butler Market Road @ 4th Street:
Looking south through intersection along 4th Street.
bend 085.jpg

Butler Market Road @ 4th Street:
Looking east through intersection from north side of Butler Market Road.
bend 086.jpg

Butler Market Road @ 4th Street:
Looking south through intersection from northeast corner.
bend 084.jpg

Colorado Avenue @ Wall Street:
Looking east through intersection from south side of Colorado Avenue.
bend 053.jpg

Colorado Avenue @ Wall Street:
Looking west through intersection from southeast corner.
bend 054.jpg

Colorado Avenue @ Wall Street:
Looking north through intersection along west side of Wall Street.
bend 055.jpg

Colorado Avenue @ Wall Street:
Looking south through intersection from northwest corner.
bend 056.jpg

Colorado Avenue @ Bond Street:
Looking north through intersection from east side of Bond Street.
bend 049.jpg

Colorado Avenue @ Bond Street:
Looking west through intersection from south side of Colorado Avenue.
bend 050.jpg

Colorado Avenue @ Bond Street:
Looking north through intersection from southeast corner.
bend 051.jpg

Colorado Avenue @ Bond Street:
Looking east through intersection from south side of Colorado Avenue.
bend 052.jpg

Colorado Avenue @ Parkway SB Ramp:
Looking south into intersection from west side ramp.
bend 038.jpg

Colorado Avenue @ Parkway SB Ramp:
Looking west into intersection from north side of Colorado Avenue.
bend 039.jpg

Colorado Avenue @ Parkway SB Ramp:
Looking north into intersection from southeast corner.
bend 040.jpg

Colorado Avenue @ Parkway SB Ramp:
Looking east through intersection along south side of Colorado Avenue.
bend 041.jpg

Colorado Avenue @ Parkway NB Ramp:
Looking north through intersection from south side of Colorado Avenue.
bend 042.jpg

Colorado Avenue @ Parkway NB Ramp:
Looking east through intersection from southwest corner.
bend 044.jpg

Colorado Avenue @ Parkway NB Ramp:
Looking west through intersection from northwest corner.
bend 043.jpg

Franklin Avenue @ Wall Street:
Looking south through intersection from west side of Wall Street.
bend 136.jpg

Franklin Avenue @ Wall Street:
Looking west through intersection from northeast corner.
bend 137.jpg

Franklin Avenue @ Wall Street:
Looking south into intersection from east side of Wall Street.
bend 138.jpg

Franklin Avenue @ Wall Street:
Looking east into intersection from south side of Franklin Avenue.
bend 139.jpg

Franklin Avenue @ Bond Street:
Looking west across intersection from northeast side of Franklin Avenue.
bend 029.jpg

Franklin Avenue @ Bond Street:
Looking north through intersection from southwest corner.
bend 030.jpg

Franklin Avenue @ Bond Street:
Looking east through intersection along southwest side of Franklin Avenue.
bend 031.jpg

Franklin Avenue @ Bond Street:
Looking north across intersection from east side of Bond Street.
bend 032.jpg

Franklin Avenue @ 3rd Street:
Looking south through intersection from northwest corner.
bend 001.jpg

Franklin Avenue @ 3rd Street:
Looking west through intersection from northeast corner.
bend 002.jpg

Franklin Avenue @ 3rd Street:
Looking north through intersection from southeast corner.
bend 003.jpg

Franklin Avenue @ 3rd Street:
Looking east through intersection from southwest corner.
bend 004.jpg

Franklin Avenue @ 3rd Street:
Looking east at right turn lane from southwest corner.
bend 005.jpg

Franklin Avenue @ 4th Street:
Looking west through intersection from northeast corner.
bend 006.jpg

Franklin Avenue @ 4th Street:
Looking south through intersection from north of intersection.
bend 007.jpg

Franklin Avenue @ 4th Street:
Looking south through intersection from northwest corner.
bend 008.jpg

Franklin Avenue @ 4th Street:
Looking west through intersection from southwest corner.
bend 009.jpg

Franklin Avenue @ 4th Street:
Looking north through intersection from the south.
bend 010.jpg

Greenwood Avenue @ Wall Street:
Looking east through intersection from southwest side of Greenwood Avenue.
bend 128.jpg

Greenwood Avenue @ Wall Street:
Looking south through intersection from northwest side of Wall Street.
bend 129.jpg

Greenwood Avenue @ Wall Street:
Looking west through intersection from north side of Greenwood Avenue.
bend 130.jpg

Greenwood Avenue @ Wall Street:
Looking north through intersection from east side of Wall Street.
bend 131.jpg

Greenwood Avenue @ Bond Street:
Looking northwest through intersection from east side of Bond Street.
bend 119.jpg

Greenwood Avenue @ Bond Street:
Looking north through intersection from east side of Bond Street.
bend 120.jpg

Greenwood Avenue @ Bond Street:
Looking west through intersection from north side of Greenwood Avenue.
bend 121.jpg

Greenwood Avenue @ Bond Street:
Looking east into intersection from south side of Greenwood Avenue.
bend 122.jpg

Greenwood Avenue @ Bond Street:
Looking north into intersection from west side of intersection.
bend 123.jpg

Greenwood Avenue @ 3rd Street:
Looking north through intersection from east side of 3rd Street.
bend 023.jpg

Greenwood Avenue @ 3rd Street:
Looking east through intersection along south side of Greenwood Avenue.
bend 024.jpg

Greenwood Avenue @ 3rd Street:
Sidewalk obstruction looking east along Greenwood Avenue.
bend 025.jpg

Greenwood Avenue @ 3rd Street:
Side walk obstruction looking west along Greenwood Avenue.
bend 026.jpg

Greenwood Avenue @ 3rd Street:
Sidewalk obstruction looking south through intersection from northwest side of 3rd Street.
bend 027.jpg

Greenwood Avenue @ 3rd Street:
Looking west through intersection from northeast side of Greenwood Avenue.
bend 028.jpg

Greenwood Avenue @ 4th Street:
Looking south through intersection from the north corner.
bend 019.jpg

Greenwood Avenue @ 4th Street:
Looking west through intersection along north side of Greenwood Avenue.
bend 020.jpg

Greenwood Avenue @ 4th Street:
Looking north through intersection from the south.
bend 021.jpg

Greenwood Avenue @ 4th Street:
Looking east through intersection along south side of Greenwood Avenue
bend 022.jpg

Hawthorne Avenue @ SB Parkway:
Looking east through intersection from south side of Hawthorne Avenue.
bend 073.jpg

Hawthorne Avenue @ SB Parkway:
Looking north through intersection from southwest corner.
bend 074.jpg

Hawthorne Avenue @ SB Parkway:
Looking south through intersection from northwest corner.
bend 075.jpg

Hawthorne Avenue @ 3rd Street:
Looking west through intersection along Hawthorne Avenue.
bend 015.jpg

Hawthorne Avenue @ 3rd Street:
Looking north through intersection along east side of 3rd Street.
bend 016.jpg

Hawthorne Avenue @ 3rd Street:
Looking east through intersection from west of intersection.
bend 017.jpg

Hawthorne Avenue @ 3rd Street:
Looking southeast through intersection from northwest corner.
bend 018.jpg

Hawthorne Avenue @ 4th Street:
Looking north through intersection from the south.
bend 011.jpg

Hawthorne Avenue @ 4th Street:
Looking east through intersection along 4th Street.
bend 012.jpg

Hawthorne Avenue @ 4th Street:
Looking south through intersection from the north.
bend 013.jpg

Hawthorne Avenue @ 4th Street:
Looking west through intersection along Hawthorne Avenue.
bend 014.jpg

Lafayette Avenue @ Parkway SB Ramp:
Looking south through intersection from west side of the Parkway.
bend 112.jpg

Lafayette Avenue @ Parkway SB Ramp:
Looking south through intersection from northwest corner of Lafayette Avenue.
bend 113.jpg

Lafayette Avenue @ Parkway SB Ramp Lafayette Avenue:
Looking east into intersection from south side of Lafayette Avenue.
bend 114.jpg

Olney Avenue @ BNSF Railroad Crossing:
Looking east through crossing along Olney Avenue.
bend 143.jpg

Olney Avenue @ 3rd Street:
Looking west through intersection from north side of Olney Avenue.
bend 104.jpg

Olney Avenue @ 3rd Street:
Looking south through intersection from northwest side of 3rd Street.
bend 105.jpg

Olney Avenue @ 3rd Street:
Looking east into intersection from south side Olney Avenue.
bend 106.jpg

Olney Avenue @ 3rd Street:
Looking north into intersection from east side of Olney Avenue.
bend 107.jpg

Olney Avenue @ 4th Street:
Looking north into intersection from southeast side of 4th Street.
bend 100.jpg

Olney Avenue @ 4th Street:
Looking west through intersection along north side of Olney Avenue.
bend 101.jpg

Olney Avenue @ 4th Street:
Looking south through intersection from west side of 4th Street.
bend 102.jpg

Olney Avenue @ 4th Street:
Looking east through intersection from south side of Olney Avenue.
bend 103.jpg

Oregon Avenue @ Wall Street:
Looking west into intersection from northeast corner.
bend 132.jpg

Oregon Avenue @ Wall Street:
Looking south through intersection from northeast corner.
bend 133.jpg

Oregon Avenue @ Wall Street:
Looking east through intersection from southwest corner.
bend 134.jpg

Oregon Avenue @ Wall Street:
Looking north through intersection from southwest corner.
bend 135.jpg

Oregon Avenue @ Bond Street:
Looking west into intersection from north side of Oregon Avenue.
bend 115.jpg

Oregon Avenue @ Bond Street:
Looking west into intersection from northeast corner.
bend 116.jpg

Oregon Avenue @ Bond Street:
Looking south through intersection from east side of Oregon Avenue.
bend 117.jpg

Oregon Avenue @ Bond Street:
Looking north through intersection from southwest corner of Oregon Avenue.
bend 140.jpg

Oregon Avenue @ Bond Street:
Looking north through intersection from southwest corner of Oregon Avenue.
bend 118.jpg

Portland Avenue @ Hill Street:
Looking east into intersection from south side of Portland Avenue.
bend 108.jpg

Portland Avenue @ Hill Street:
Looking north through intersection from the south.
bend 142.jpg

Portland Avenue @ Hill Street:
Looking north through intersection along east side of Hill Street.
bend 109.jpg

Portland Avenue @ Hill Street:
Looking east along Olney Avenue approaching the Parkway.
bend 141.jpg

Portland Avenue @ Hill Street:
Looking west through intersection from the median of Portland Avenue.
bend 110.jpg

Portland Avenue @ Hill Street:
Looking south through intersection from west side of Hill Street.
bend 111.jpg

Parkway SB Ramp @ Revere Avenue:
Looking west toward intersection while approaching the Parkway.
bend 144.jpg

Revere Avenue @ Parkway SB Ramp:
Looking west into intersection from north side of Revere Avenue.
bend 099.jpg

Revere Avenue @ Parkway SB Ramp:
Looking south through intersection from west of ramp.
bend 096.jpg

Revere Avenue @ Parkway SB Ramp:
Looking east through intersection from southwest side of Revere Avenue.
bend 097.jpg

Revere Avenue @ Parkway SB Ramp:
Looking north into intersection from east side.
bend 098.jpg

Revere Avenue @ Parkway NB Ramp:
Looking west into intersection from north side of Revere Avenue.
bend 091.jpg

Revere Avenue @ Parkway NB Ramp:
Looking south into ramp from northeast corner.
bend 092.jpg

Revere Avenue @ Parkway NB Ramp:
Looking south through intersection from the north.
bend 093.jpg

Revere Avenue @ Parkway NB Ramp:
Looking east through intersection from south side of Revere Avenue.
bend 094.jpg

Revere Avenue @ Parkway NB Ramp:
Looking south through intersection from ramp.
bend 095.jpg

Revere Avenue @ Parkway NB Ramp:
Looking west toward BNSF Railroad Crossing from north side of Revere Avenue.
bend 145.jpg

Revere Avenue @ 3rd Street:
Looking west through intersection from north side of Revere Avenue.
bend 087.jpg

Revere Avenue @ 3rd Street:
Looking north through intersection from east side of 3rd Street.
bend 088.jpg

Revere Avenue @ 3rd Street:
Looking east through intersection from south side of Revere Avenue.
bend 089.jpg

Revere Avenue @ 3rd Street:
Looking south into intersection from west side 3rd Street.
bend 090.jpg

Revere Avenue @ 4th Street:
Looking north through intersection from along Revere Avenue.
bend 081.jpg

Revere Avenue @ 4th Street:
Looking west through intersection from north side of Revere Avenue.
bend 082.jpg

Revere Avenue @ 4th Street:
Looking east through intersection from south side of Revere Avenue.
bend 083.jpg

Revere Avenue @ 4th Street:
Looking south through intersection along west side 4th Street.
bend 080.jpg

Riverside Boulevard @ Tumalo Avenue:
Looking north through intersection along Riverside Boulevard.
bend 033.jpg

Riverside Boulevard @ Tumalo Avenue:
Looking east along east side of Tumalo Avenue.
bend 034.jpg

Riverside Boulevard @ Tumalo Avenue:
Looking west through intersection along south side of Tumalo Avenue.
bend 035.jpg

Riverside Boulevard @ Tumalo Avenue:
Looking south through intersection along west side Riverside Boulevard.
bend 036.jpg

Riverside Boulevard @ Tumalo Avenue:
Looking east through intersection from northwest side of Tumalo Avenue.
bend 037.jpg

Studio Road @ 4th Street:
Looking south through intersection from west side of 4th Street.
bend 076.jpg

Studio Road @ 4th Street:
Looking southwest through intersection along Studio Road.
bend 077.jpg

Studio Road @ 4th Street:
Looking north through intersection along east side of 4th Street.
bend 078.jpg

Studio Road @ 4th Street:
Looking northeast through intersection from southeast corner.
bend 079.jpg

Wall Street @ Bond Avenue:
Looking north into intersection from southwest corner.
bend 124.jpg

Wall Street @ Bond Avenue:
Looking east through intersection from pedestrian crossing.
bend 125.jpg

Wall Street @ Bond Avenue:
Looking south through intersection from west side of Wall Street.
bend 126.jpg

Wall Street @ Bond Avenue:
Looking west through intersection from east side of intersection.
bend 127.jpg

APPENDIX D

2006 PM Peak Hour Traffic Counts

TRAFSTATS
PO Box 13699
Salem, OR 97309
Tel: (503) 646-2942
Fax: (503) 526-0628

Intersection Turning Movement

Summary Report

Location BUTLER MARKET ROAD AT US 97/20
Date 1/2/2007
Day of Week Tuesday
Time Begin 16:00
Reviewed By: JW

	Eastbound			Westbound			Northbound			Southbound			
Time Period	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
16:00 - 16:15	24	290	33	33	161	18	25	36	10	32	15	67	744
16:15 - 16:30	14	270	30	25	207	18	28	20	18	32	24	74	760
16:30 - 16:45	15	252	46	24	145	16	38	29	17	30	29	76	717
16:45 - 17:00	22	216	38	24	183	25	19	21	15	42	20	66	691
17:00 - 17:15	11	227	39	39	171	25	21	31	11	29	35	75	714
17:15 - 17:30	27	215	38	30	180	19	27	19	13	23	21	47	659
17:30 - 17:45	12	188	32	31	130	18	20	15	9	30	20	60	565
17:45 - 18:00	16	169	21	26	127	20	14	14	16	23	16	52	514
Movement Totals	141	1827	277	232	1304	159	192	185	109	241	180	517	5364
Enter Totals	2245			1695			486			938			
Exit Totals	2536			1654			694			480			

Two-Hour Totals

Light Trucks	1	23	0	2	17	0	4	4	0	0	0	7	58
Medium Trucks	1	4	1	1	0	0	0	0	0	1	0	0	8
Heavy Trucks	0	16	4	1	4	0	1	0	0	1	0	5	32
% Trucks	1.4%	2.4%	1.8%	1.7%	1.6%	0.0%	2.6%	2.2%	0.0%	0.8%	0.0%	2.3%	1.8%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	2	1	0	0	0	0	0	0	0	1	0	4

	South	West	East	North	
Pedestrians	7	0	0	0	7

Peak Hour Information

Peak Hour 16:00 17:00

	Eastbound			Westbound			Northbound			Southbound			
	Right	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
Movement Total	75	1028	147	106	696	77	110	106	60	136	88	283	2912
Peak Hour Factor	0.78	0.89	0.80	0.80	0.84	0.77	0.72	0.74	0.83	0.81	0.76	0.93	0.96
Enter Totals	1250			879			276			507			
Peak Hour Factor	0.90			0.88			0.82			0.94			
Exit Totals	1421			892			359			240			
Peak Hour Factor	0.93			0.87			0.88			0.90			
Light Trucks	0	13	0	1	7	0	1	2	0	0	0	6	30
Medium Trucks	0	2	1	0	0	0	0	0	0	1	0	0	4
Heavy Trucks	0	10	1	1	1	0	1	0	0	1	0	2	17
% Trucks	0.0%	2.4%	1.4%	1.9%	1.1%	0.0%	1.8%	1.9%	0.0%	1.5%	0.0%	2.8%	1.8%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	1	1	0	0	0	0	0	0	0	1	0	3

	South	West	East	North	
Pedestrians	5	0	0	0	5

TRAFSTATS
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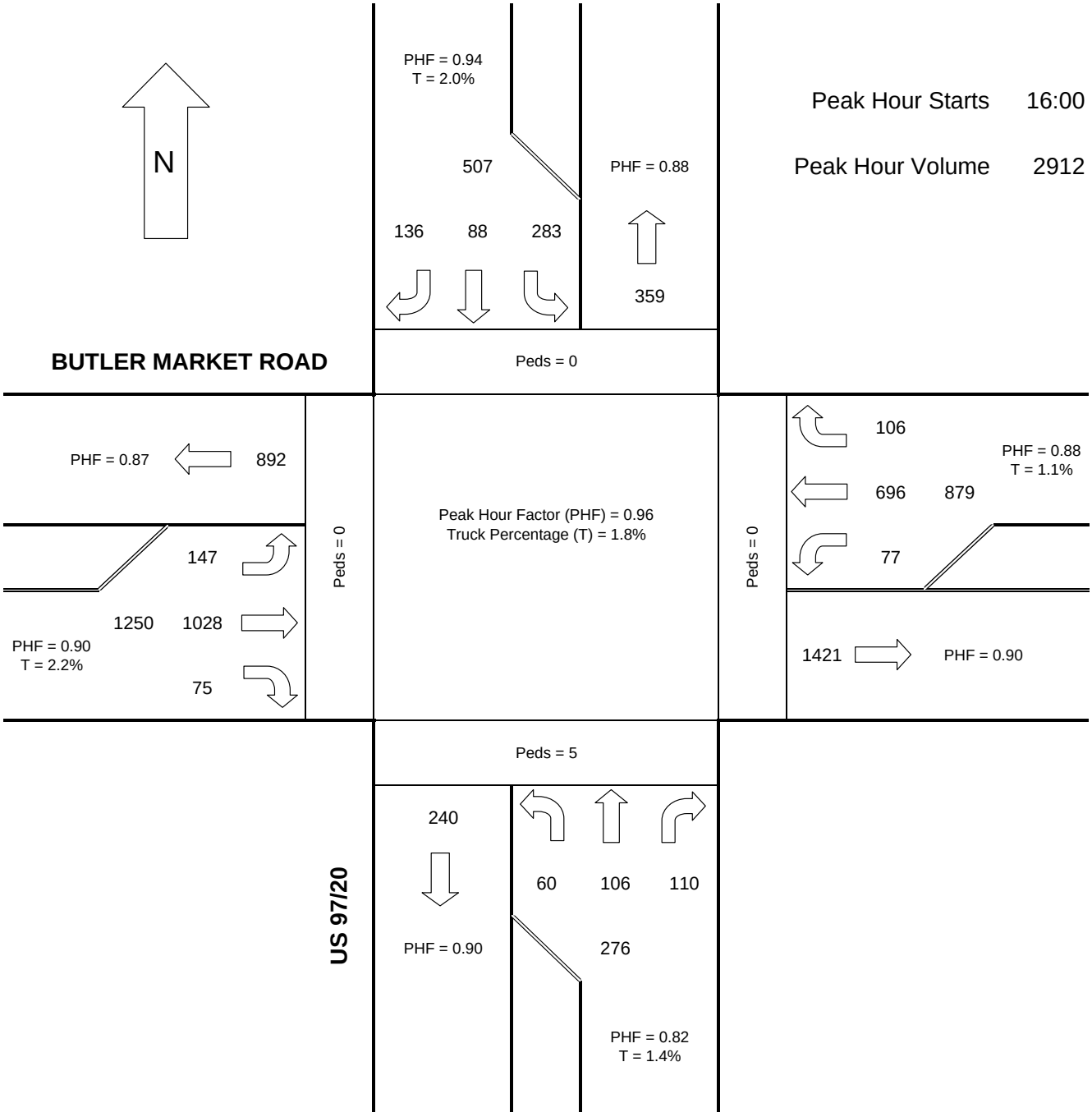
Intersection Turning Movement

Peak Hour Diagram

Location BUTLER MARKET ROAD AT US 97/20
Date 1/2/2007
Day of Week Tuesday
Time Begin 16:00
Reviewed By: JW



Peak Hour Starts 16:00

Peak Hour Volume 2912

TRAFSTATS
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Intersection Turning Movement

Summary Report

Location NE REVERE AVENUE AT BEND PARKWAY SB RAMPS
Date 1/2/2007
Day of Week Tuesday
Time Begin 16:00
Reviewed By: BM

	Eastbound			Westbound			Northbound			Southbound			
Time Period	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
16:00 - 16:15	0	7	1	68	11	102	126	26	0	2	37	41	421
16:15 - 16:30	2	4	4	68	6	98	119	24	2	4	49	30	410
16:30 - 16:45	1	1	4	58	5	139	99	16	1	0	47	29	400
16:45 - 17:00	1	1	1	57	3	87	113	21	4	0	37	34	359
17:00 - 17:15	2	4	0	69	2	109	164	21	4	0	31	47	453
17:15 - 17:30	4	3	3	58	9	85	132	30	2	4	53	30	413
17:30 - 17:45	1	2	1	55	2	77	114	16	4	0	45	31	348
17:45 - 18:00	2	7	0	31	15	94	81	8	11	0	52	22	323
Movement Totals	13	29	14	464	53	791	948	162	28	10	351	264	3127
Enter Totals	56			1308			1138			625			
Exit Totals	1241			91			640			1155			

Two-Hour Totals

Light Trucks	0	0	0	4	0	7	9	1	0	0	1	2	24
Medium Trucks	0	0	0	0	0	0	0	0	0	0	0	1	1
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	2	2
% Trucks	0.0%	0.0%	0.0%	0.9%	0.0%	0.9%	0.9%	0.6%	0.0%	0.0%	0.3%	1.9%	0.9%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	2	0	0	4	0	0	0	0	0	0	0	6

	South	West	East	North	
Pedestrians	0	2	2	5	9

Peak Hour Information

Peak Hour 16:30 17:30

	Eastbound			Westbound			Northbound			Southbound			
	Right	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
Movement Total	8	9	8	242	19	420	508	88	11	4	168	140	1625
Peak Hour Factor	0.50	0.56	0.50	0.88	0.53	0.76	0.77	0.73	0.69	0.25	0.79	0.74	0.90

Enter Totals	25	681	607	312
Peak Hour Factor	0.63	0.84	0.80	0.90

Exit Totals	657	34	338	596
Peak Hour Factor	0.76	0.57	0.93	0.80

Light Trucks	0	0	0	3	0	2	4	0	0	0	0	1	10
Medium Trucks	0	0	0	0	0	0	0	0	0	0	0	1	1
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Trucks	0.0%	0.0%	0.0%	1.2%	0.0%	0.5%	0.8%	0.0%	0.0%	0.0%	0.0%	1.4%	0.7%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	1	0	0	0	0	0	0	0	1

	South	West	East	North	
Pedestrians	0	0	2	1	3

TRAFSTATS
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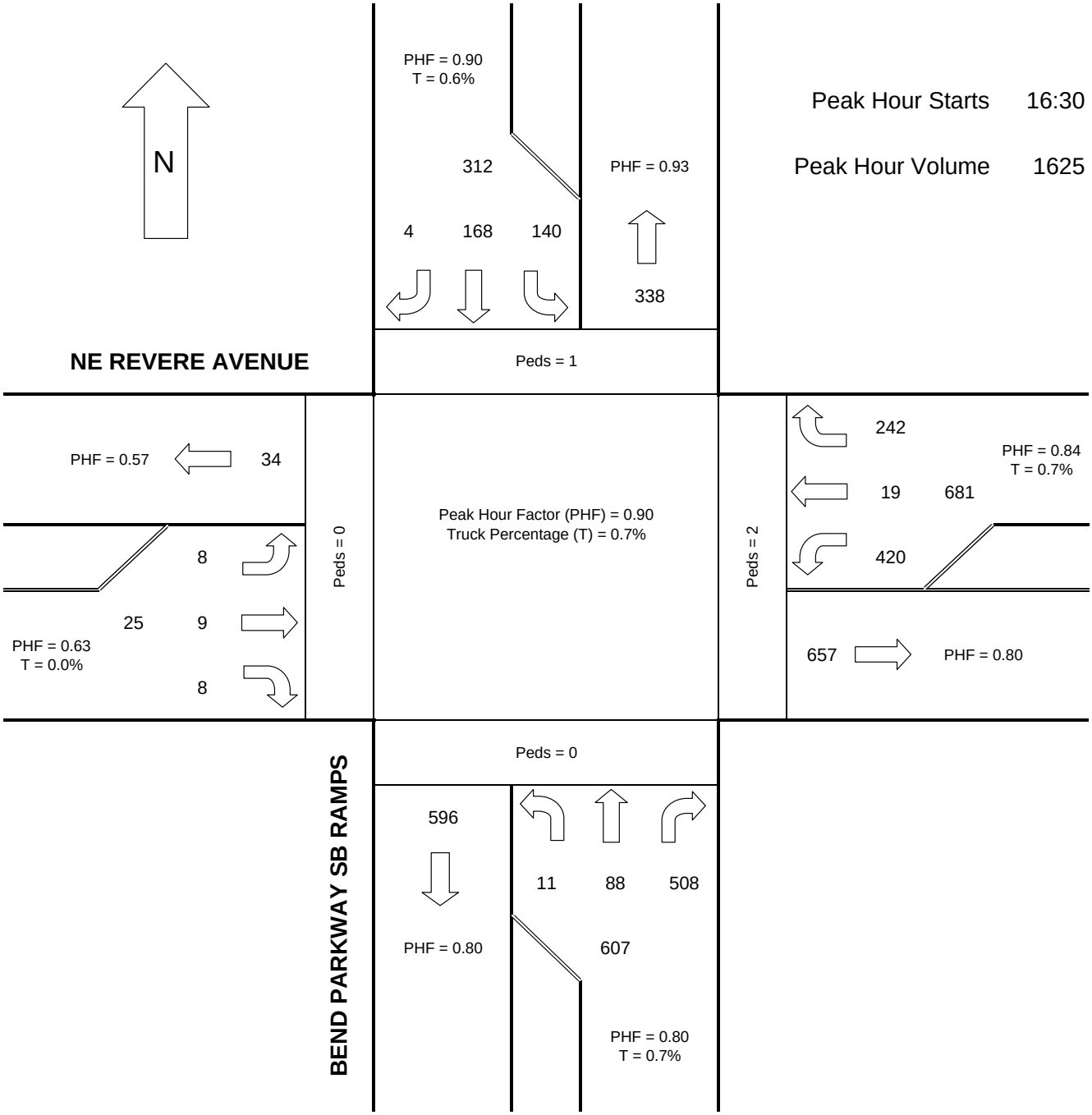
Intersection Turning Movement

Peak Hour Diagram

Location NE REVERE AVENUE AT BEND PARKWAY SB RAMPS
Date 1/2/2007
Day of Week Tuesday
Time Begin 16:00
Reviewed By: BM



Peak Hour Starts	16:30
Peak Hour Volume	1625

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Intersection Turning Movement

Summary Report

Location NE REVERE AVENUE AT BEND PARKWAY NB RAMPS
Date 1/2/2007
Day of Week Tuesday
Time Begin 16:00
Reviewed By: TM

	Eastbound			Westbound			Northbound			Southbound			
Time Period	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
16:00 - 16:15	63	82	26	13	92	12	85	40	20	56	2	21	512
16:15 - 16:30	71	59	33	17	81	4	88	31	19	53	3	21	480
16:30 - 16:45	72	66	21	20	97	13	98	46	32	60	2	23	550
16:45 - 17:00	66	59	33	26	70	9	98	52	16	50	0	22	501
17:00 - 17:15	107	81	34	25	100	9	116	72	15	52	0	22	633
17:15 - 17:30	67	75	18	24	99	8	93	65	16	37	1	21	524
17:30 - 17:45	53	63	32	19	61	5	68	46	15	47	2	10	421
17:45 - 18:00	52	43	21	12	55	4	54	40	14	57	1	6	359
Movement Totals	551	528	218	156	655	64	700	392	147	412	11	146	3980
Enter Totals	1297			875			1239			569			
Exit Totals	1374			1214			766			626			

Two-Hour Totals

Light Trucks	12	9	12	8	12	0	17	16	0	9	1	5	101
Medium Trucks	0	2	0	0	1	0	4	0	0	0	0	0	7
Heavy Trucks	0	2	0	0	0	0	0	1	0	0	1	0	4
% Trucks	2.2%	2.5%	5.5%	5.1%	2.0%	0.0%	3.0%	4.3%	0.0%	2.2%	18.2%	3.4%	2.8%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	1	0	0	1	0	0	0	0	0	2

	South	West	East	North	
Pedestrians	0	0	0	0	0

Peak Hour Information

Peak Hour 16:30 17:30

	Eastbound			Westbound			Northbound			Southbound			
	Right	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
Movement Total	312	281	106	95	366	39	405	235	79	199	3	88	2208
Peak Hour Factor	0.73	0.87	0.78	0.91	0.92	0.75	0.87	0.82	0.62	0.83	0.38	0.96	0.87
Enter Totals	699			500			719			290			
Peak Hour Factor	0.79			0.93			0.89			0.85			
Exit Totals	774			644			436			354			
Peak Hour Factor	0.88			0.85			0.83			0.76			
Light Trucks	2	7	7	4	6	0	11	8	0	3	0	3	51
Medium Trucks	0	1	0	0	1	0	2	0	0	0	0	0	4
Heavy Trucks	0	0	0	0	0	0	0	1	0	0	1	0	2
% Trucks	0.6%	2.8%	6.6%	4.2%	1.9%	0.0%	3.2%	3.8%	0.0%	1.5%	33.3%	3.4%	2.6%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	1	0	0	1	0	0	0	0	0	2

	South	West	East	North	
Pedestrians	0	0	0	0	0

TRAFSTATS
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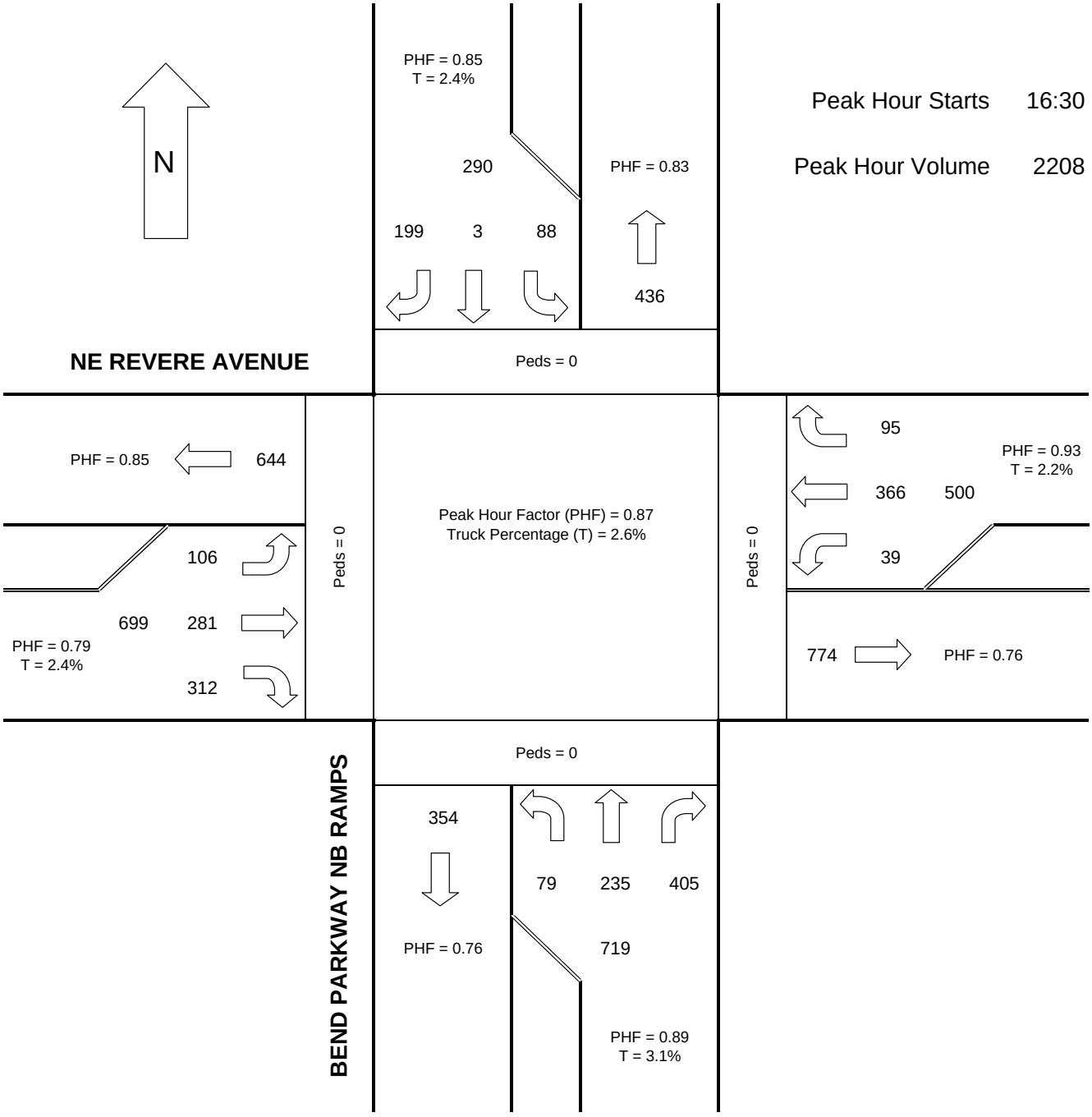
Intersection Turning Movement

Peak Hour Diagram

Location NE REVERE AVENUE AT BEND PARKWAY NB RAMPS
Date 1/2/2007
Day of Week Tuesday
Time Begin 16:00
Reviewed By: TM



Peak Hour Starts 16:30

Peak Hour Volume 2208

TRAFSTATS
PO Box 13699
Salem, OR 97309
Tel: (503) 646-2942
Fax: (503) 526-0628

Intersection Turning Movement

Summary Report

Location NE REVERE AVENUE AT NE 3RD STREET
Date 1/2/2007
Day of Week Tuesday
Time Begin 16:00
Reviewed By: JW

	Eastbound			Westbound			Northbound			Southbound			
Time Period	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
16:00 - 16:15	46	98	53	8	61	38	31	261	25	17	187	14	839
16:15 - 16:30	34	89	53	11	71	44	11	256	22	13	149	13	766
16:30 - 16:45	51	86	46	14	65	37	18	226	25	8	154	13	743
16:45 - 17:00	44	91	38	15	65	38	18	213	17	14	131	16	700
17:00 - 17:15	48	128	53	6	61	51	24	214	24	11	145	12	777
17:15 - 17:30	42	101	48	9	54	29	25	235	22	16	98	12	691
17:30 - 17:45	41	52	44	9	47	44	25	199	17	8	103	7	596
17:45 - 18:00	20	58	32	12	39	31	22	166	14	6	90	11	501
Movement Totals	326	703	367	84	463	312	174	1770	166	93	1057	98	5613
Enter Totals	1396			859			2110			1248			
Exit Totals	975			722			2221			1695			

Two-Hour Totals

Light Trucks	1	5	2	1	5	2	0	24	2	0	20	0	62
Medium Trucks	1	1	0	0	0	0	0	1	1	0	2	0	6
Heavy Trucks	1	4	0	0	0	1	0	15	0	0	16	0	37
% Trucks	0.9%	1.4%	0.5%	1.2%	1.1%	1.0%	0.0%	2.3%	1.8%	0.0%	3.6%	0.0%	1.9%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	2	0	0	2	0	0	0	0	0	0	0	4

	South	West	East	North	
Pedestrians	9	3	3	4	19

Peak Hour Information

Peak Hour 16:00 17:00

	Eastbound			Westbound			Northbound			Southbound			
	Right	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
Movement Total	175	364	190	48	262	157	78	956	89	52	621	56	3048
Peak Hour Factor	0.86	0.93	0.90	0.80	0.92	0.89	0.63	0.92	0.89	0.76	0.83	0.88	0.91

Enter Totals	729	467	1123	729
Peak Hour Factor	0.93	0.93	0.89	0.84

Exit Totals	498	403	1194	953
Peak Hour Factor	0.87	0.95	0.93	0.88

Light Trucks	1	3	2	1	1	2	0	14	1	0	10	0	35
Medium Trucks	1	1	0	0	0	0	0	1	1	0	1	0	5
Heavy Trucks	1	2	0	0	0	1	0	8	0	0	10	0	22
% Trucks	1.7%	1.6%	1.1%	2.1%	0.4%	1.9%	0.0%	2.4%	2.2%	0.0%	3.4%	0.0%	2.0%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	2	0	0	1	0	0	0	0	0	0	0	3

	South	West	East	North	
Pedestrians	9	3	2	3	17

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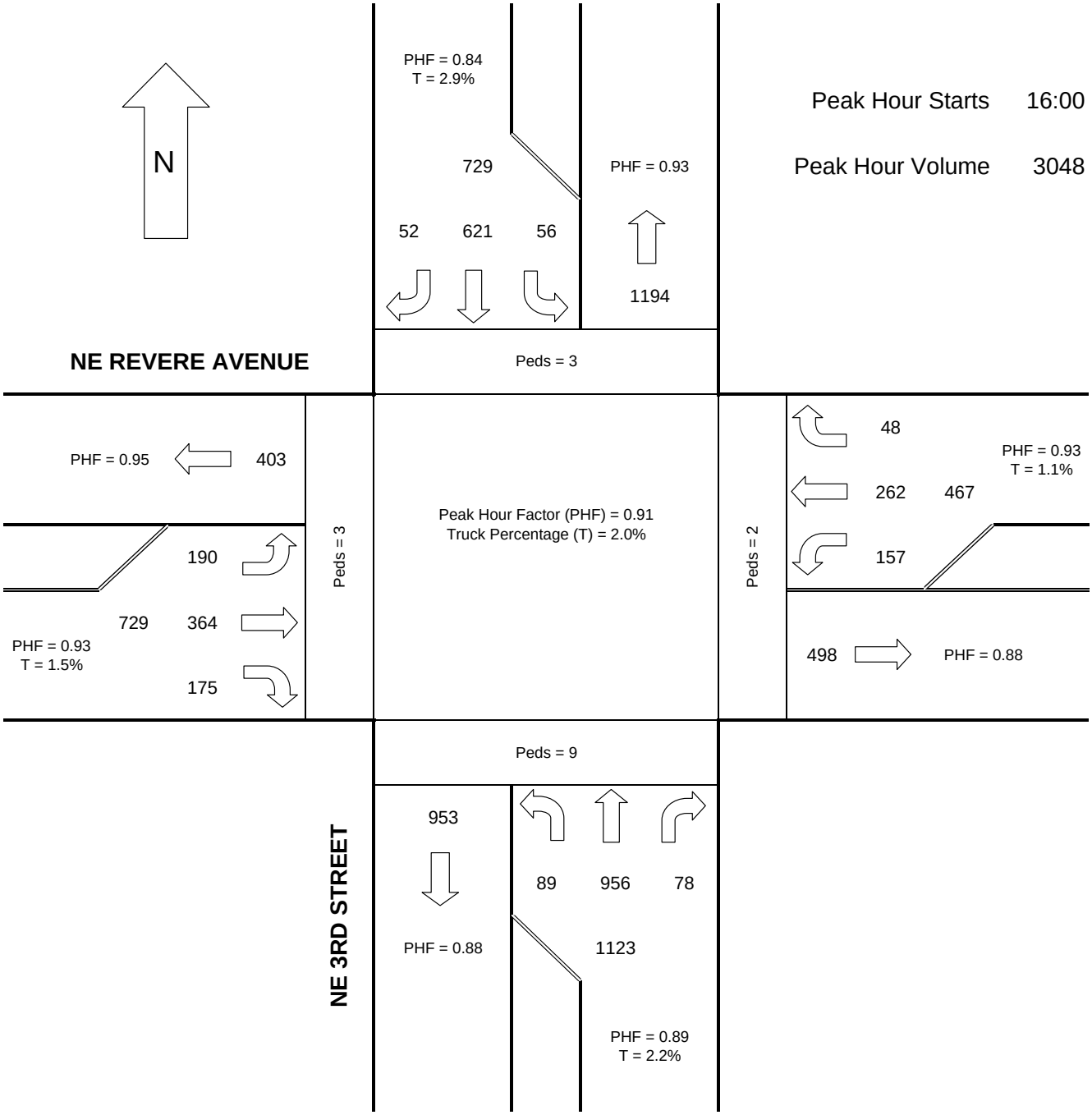
Intersection Turning Movement

Peak Hour Diagram

Location NE REVERE AVENUE AT NE 3RD STREET
Date 1/2/2007
Day of Week Tuesday
Time Begin 16:00
Reviewed By: JW



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Intersection Turning Movement

Summary Report

Location NW PORTLAND AVENUE AT NW HILL STREET
Date 1/2/2007
Day of Week Tuesday
Time Begin 16:00
Reviewed By: JW

	Eastbound			Westbound			Northbound			Southbound			
Time Period	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
16:00 - 16:15	24	50	41	21	48	9	27	81	20	59	72	12	464
16:15 - 16:30	23	47	61	17	54	17	25	86	28	61	65	5	489
16:30 - 16:45	22	31	47	12	45	15	24	73	23	87	73	8	460
16:45 - 17:00	17	30	51	20	34	17	18	86	32	70	56	7	438
17:00 - 17:15	19	48	67	25	78	7	12	122	30	70	54	7	539
17:15 - 17:30	10	46	59	20	52	19	15	90	23	67	62	8	471
17:30 - 17:45	11	38	31	16	51	8	12	80	14	59	51	7	378
17:45 - 18:00	13	27	28	11	56	14	12	62	21	70	60	9	383
Movement Totals	139	317	385	142	418	106	145	680	191	543	493	63	3622
Enter Totals	841			666			1016			1099			
Exit Totals	525			1152			1207			738			

Two-Hour Totals

Light Trucks	0	0	4	1	0	0	3	4	0	1	4	0	17
Medium Trucks	0	1	0	0	0	0	0	0	0	0	0	0	1
Heavy Trucks	0	0	0	0	0	0	1	0	0	0	0	0	1
% Trucks	0.0%	0.3%	1.0%	0.7%	0.0%	0.0%	2.8%	0.6%	0.0%	0.2%	0.8%	0.0%	0.5%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	2	0	0	5	0	1	1	0	2	3	0	14

	South	West	East	North	
Pedestrians	6	8	3	5	22

Peak Hour Information

Peak Hour 16:15 17:15

	Eastbound			Westbound			Northbound			Southbound			
	Right	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
Movement Total	81	156	226	74	211	56	79	367	113	288	248	27	1926
Peak Hour Factor	0.88	0.81	0.84	0.74	0.68	0.82	0.79	0.75	0.88	0.83	0.85	0.84	0.89

Enter Totals	463	341	559	563
Peak Hour Factor	0.86	0.78	0.85	0.84

Exit Totals	262	612	667	385
Peak Hour Factor	0.85	0.86	0.78	0.88

Light Trucks	0	0	2	1	0	0	2	2	0	0	2	0	9
Medium Trucks	0	1	0	0	0	0	0	0	0	0	0	0	1
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Trucks	0.0%	0.6%	0.9%	1.4%	0.0%	0.0%	2.5%	0.5%	0.0%	0.0%	0.8%	0.0%	0.5%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	1	0	0	4	0	1	1	0	1	2	0	10

	South	West	East	North	
Pedestrians	4	6	3	4	17

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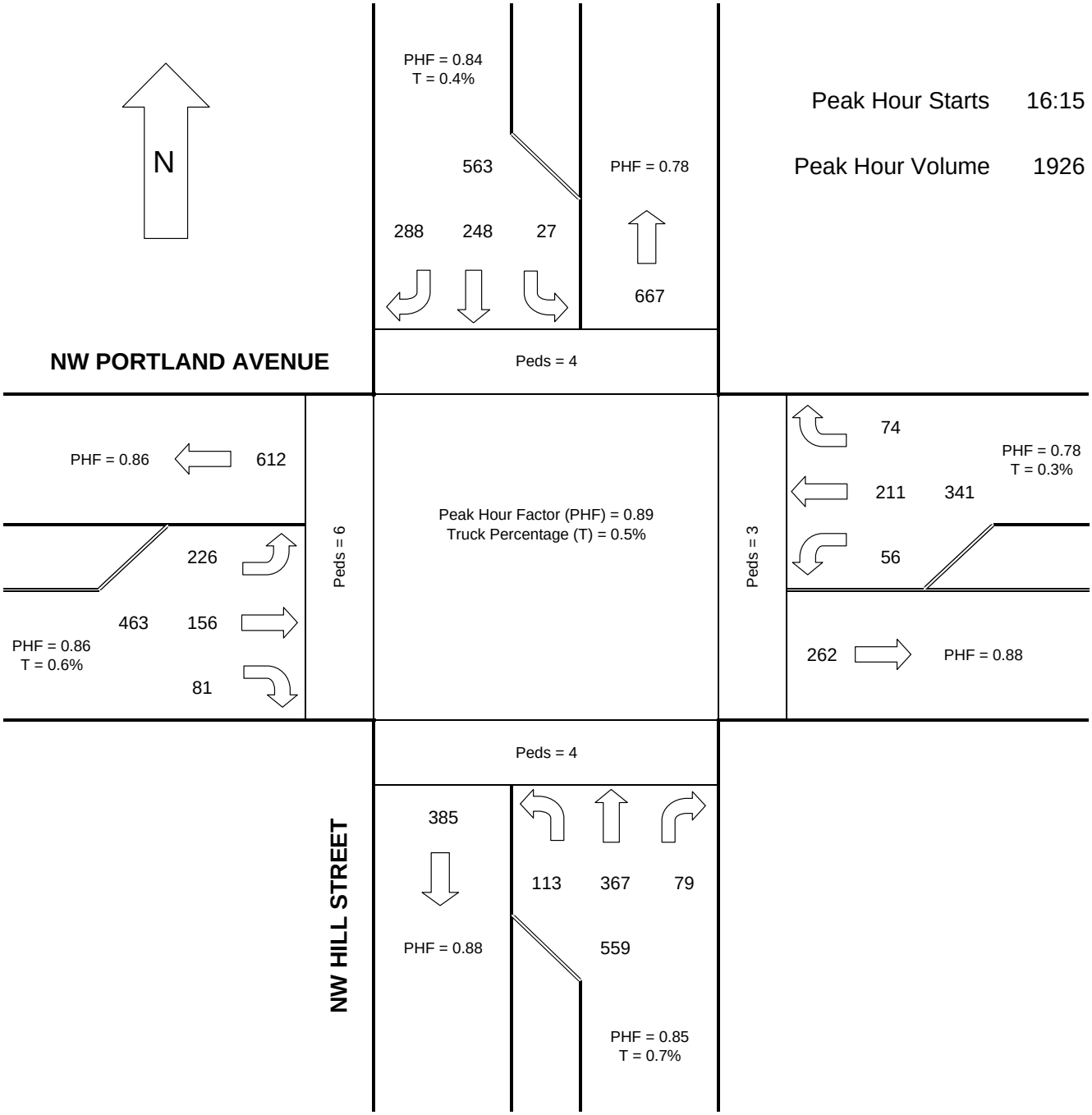
Intersection Turning Movement

Peak Hour Diagram

Location NW PORTLAND AVENUE AT NW HILL STREET
Date 1/2/2007
Day of Week Tuesday
Time Begin 16:00
Reviewed By: JW



Peak Hour Starts 16:15

Peak Hour Volume 1926

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Intersection Turning Movement

Summary Report

Location NE OLNEY AVENUE AT NE 3RD STREET
Date 1/2/2007
Day of Week Tuesday
Time Begin 16:00
Reviewed By: BM

	Eastbound			Westbound			Northbound			Southbound			
Time Period	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
16:00 - 16:15	21	299	14	4	218	21	18	40	26	14	42	27	744
16:15 - 16:30	15	273	16	5	206	25	20	74	28	11	55	30	758
16:30 - 16:45	20	260	13	6	223	15	19	52	24	20	45	22	719
16:45 - 17:00	20	250	21	4	184	29	21	43	20	12	37	16	657
17:00 - 17:15	27	251	19	1	169	30	18	60	21	18	62	24	700
17:15 - 17:30	11	320	17	4	178	27	17	62	21	15	45	31	748
17:30 - 17:45	17	253	21	5	152	15	14	43	23	18	38	15	614
17:45 - 18:00	21	201	17	7	142	13	25	43	17	9	37	12	544
Movement Totals	152	2107	138	36	1472	175	152	417	180	117	361	177	5484
Enter Totals	2397			1683			749			655			
Exit Totals	2436			1769			591			688			

Two-Hour Totals

Light Trucks	6	25	0	0	24	1	0	1	7	0	2	1	67
Medium Trucks	0	1	0	0	0	0	0	0	0	0	0	0	1
Heavy Trucks	0	15	0	0	22	0	0	0	0	0	0	1	38
% Trucks	3.9%	1.9%	0.0%	0.0%	3.1%	0.6%	0.0%	0.2%	3.9%	0.0%	0.6%	1.1%	1.9%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	1	0	0	1	0	0	4	0	6

	South	West	East	North	
Pedestrians	4	0	5	2	11

Peak Hour Information

Peak Hour 16:00 17:00

	Eastbound			Westbound			Northbound			Southbound			
	Right	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
Movement Total	76	1082	64	19	831	90	78	209	98	57	179	95	2878
Peak Hour Factor	0.90	0.90	0.76	0.79	0.93	0.78	0.93	0.71	0.88	0.71	0.81	0.79	0.95

Enter Totals	1222	940	385	331
Peak Hour Factor	0.91	0.96	0.79	0.86

Exit Totals	1255	986	292	345
Peak Hour Factor	0.91	0.92	0.77	0.91

Light Trucks	2	15	0	0	14	0	0	0	4	0	1	1	37
Medium Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Trucks	0	7	0	0	15	0	0	0	0	0	0	1	23
% Trucks	2.6%	2.0%	0.0%	0.0%	3.5%	0.0%	0.0%	0.0%	4.1%	0.0%	0.6%	2.1%	2.1%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	1	0	0	1	0	0	4	0	6

	South	West	East	North	
Pedestrians	2	0	0	1	3

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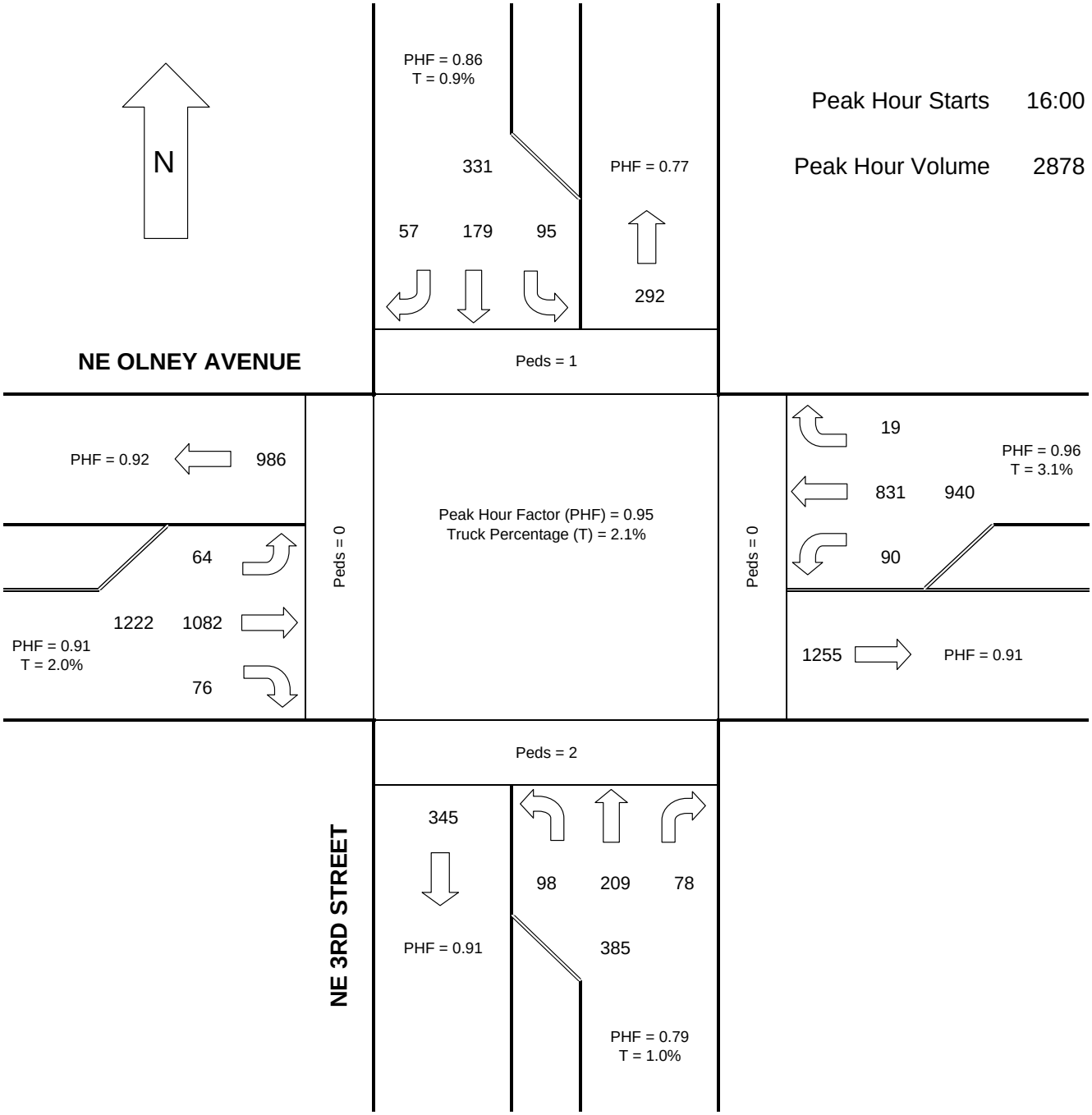
Intersection Turning Movement

Peak Hour Diagram

Location NE OLNEY AVENUE AT NE 3RD STREET
Date 1/2/2007
Day of Week Tuesday
Time Begin 16:00
Reviewed By: BM



Peak Hour Starts 16:00

Peak Hour Volume 2878

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Intersection Turning Movement

Summary Report

Location NEWPORT AVE-GREENWOOD AVENUE AT WALL STREET
Date 1/4/2007
Day of Week Thursday
Time Begin 16:00
Reviewed By: BV

	Eastbound			Westbound			Northbound			Southbound			
Time Period	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
16:00 - 16:15	15	52	22	6	49	40	0	0	0	20	49	6	259
16:15 - 16:30	28	61	33	8	73	51	0	0	0	23	88	14	379
16:30 - 16:45	37	70	25	8	92	47	0	0	0	25	96	24	424
16:45 - 17:00	22	78	29	6	82	45	0	0	0	37	75	22	396
17:00 - 17:15	25	81	20	2	112	63	0	0	0	39	75	22	439
17:15 - 17:30	24	67	23	3	110	52	0	0	0	36	65	18	398
17:30 - 17:45	29	63	24	4	86	47	0	0	0	29	65	14	361
17:45 - 18:00	24	59	15	1	94	46	0	0	0	27	62	11	339
Movement Totals	204	531	191	38	698	391	0	0	0	236	575	131	2995
Enter Totals		926			1127			0			942		
Exit Totals		662			934			229			1170		

Two-Hour Totals

Light Trucks	0	16	1	1	10	2	0	0	0	1	5	0	36
Medium Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Trucks	0.0%	3.0%	0.5%	2.6%	1.4%	0.5%	NA	NA	NA	0.4%	0.9%	0.0%	1.2%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

	South	West	East	North	
Pedestrians	5	10	13	15	43

Peak Hour Information

Peak Hour 16:30 17:30

	Eastbound			Westbound			Northbound			Southbound			
	Right	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
Movement Total	108	296	97	19	396	207	0	0	0	137	311	86	1657
Peak Hour Factor	0.73	0.91	0.84	0.59	0.88	0.82	NA	NA	NA	0.88	0.81	0.90	0.94

Enter Totals	501	622	0	534
Peak Hour Factor	0.95	0.88	NA	0.92

Exit Totals	382	533	116	626
Peak Hour Factor	0.93	0.88	0.83	0.87

Light Trucks	0	8	0	1	4	0	0	0	0	1	1	0	15
Medium Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Trucks	0.0%	2.7%	0.0%	5.3%	1.0%	0.0%	NA	NA	NA	0.7%	0.3%	0.0%	0.9%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

	South	West	East	North	
Pedestrians	1	6	2	6	15

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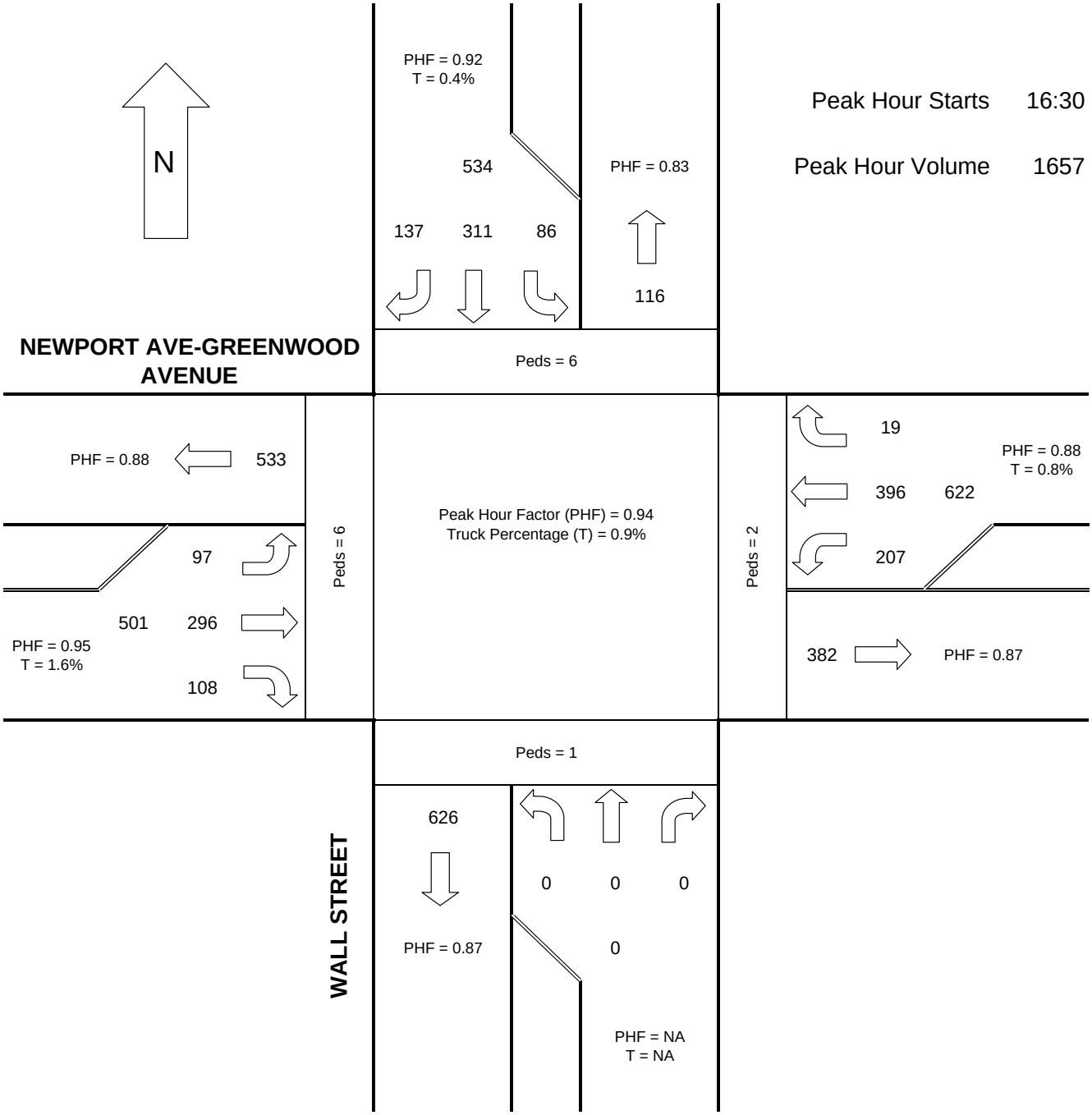
Intersection Turning Movement

Peak Hour Diagram

Location NEWPORT AVE-GREENWOOD AVENUE AT WALL STREET
Date 1/4/2007
Day of Week Thursday
Time Begin 16:00
Reviewed By: BV



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Intersection Turning Movement

Summary Report

Location GREENWOOD AVENUE AT BOND STREET
Date 1/3/2007
Day of Week Wednesday
Time Begin 16:00
Reviewed By: JW

	Eastbound			Westbound			Northbound			Southbound			
Time Period	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
16:00 - 16:15	0	70	2	14	114	0	66	79	41	0	0	0	386
16:15 - 16:30	0	87	3	12	116	0	66	86	44	0	0	0	414
16:30 - 16:45	0	76	2	10	134	0	60	76	37	0	0	0	395
16:45 - 17:00	0	97	0	14	100	0	59	73	44	0	0	0	387
17:00 - 17:15	0	86	4	8	141	0	66	73	45	0	0	0	423
17:15 - 17:30	0	71	2	12	101	0	57	63	45	0	0	0	351
17:30 - 17:45	0	78	1	11	98	0	50	40	38	0	0	0	316
17:45 - 18:00	0	49	1	4	93	0	46	42	48	0	0	0	283
Movement Totals	0	614	15	85	897	0	470	532	342	0	0	0	2955
Enter Totals		629			982			1344			0		
Exit Totals		1084			1239			632			0		

Two-Hour Totals

Light Trucks	0	8	0	0	8	0	4	5	1	0	0	0	26
Medium Trucks	0	2	0	0	0	0	0	1	0	0	0	0	3
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Trucks	NA	1.6%	0.0%	0.0%	0.9%	NA	0.9%	1.1%	0.3%	NA	NA	NA	1.0%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

	South	West	East	North	
Pedestrians	11	5	18	5	39

Peak Hour Information

Peak Hour 16:15 17:15

	Eastbound			Westbound			Northbound			Southbound			
	Right	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
Movement Total	0	346	9	44	491	0	251	308	170	0	0	0	1619
Peak Hour Factor	NA	0.89	0.56	0.79	0.87	NA	0.95	0.90	0.94	NA	NA	NA	0.96

Enter Totals	355	535	729	0
Peak Hour Factor	0.91	0.90	0.93	NA
Exit Totals	597	661	361	0
Peak Hour Factor	0.96	0.89	0.89	NA

Light Trucks	0	5	0	0	5	0	4	3	0	0	0	0	17
Medium Trucks	0	1	0	0	0	0	0	0	0	0	0	0	1
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Trucks	NA	1.7%	0.0%	0.0%	1.0%	NA	1.6%	1.0%	0.0%	NA	NA	NA	1.1%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

	South	West	East	North	
Pedestrians	8	4	11	5	28

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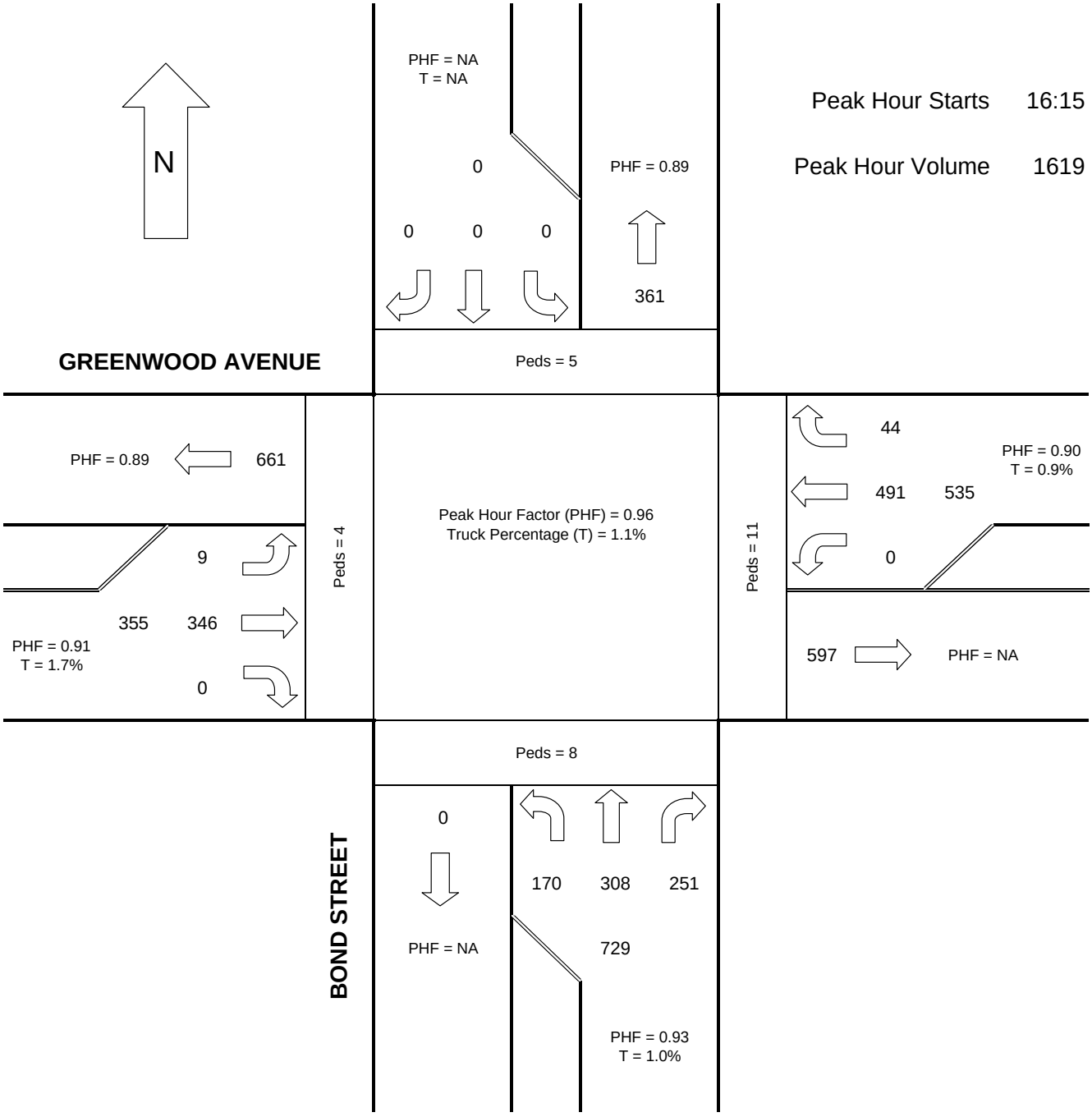
Intersection Turning Movement

Peak Hour Diagram

Location GREENWOOD AVENUE AT BOND STREET
Date 1/3/2007
Day of Week Wednesday
Time Begin 16:00
Reviewed By: JW



Peak Hour Starts 16:15

Peak Hour Volume 1619

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Intersection Turning Movement

Summary Report

Location NE GREENWOOD AVENUE AT NE 3RD STREET
Date 1/4/2007
Day of Week Thursday
Time Begin 16:00
Reviewed By: BV

	Eastbound			Westbound			Northbound			Southbound			
Time Period	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
16:00 - 16:15	21	121	50	59	100	60	51	167	21	30	152	62	894
16:15 - 16:30	25	123	58	57	100	66	50	163	28	25	128	47	870
16:30 - 16:45	27	129	48	61	99	48	46	170	32	17	148	56	881
16:45 - 17:00	23	138	54	41	99	48	60	169	32	19	110	56	849
17:00 - 17:15	21	178	59	50	116	49	47	156	15	15	118	60	884
17:15 - 17:30	18	136	55	53	93	55	37	155	32	10	108	43	795
17:30 - 17:45	20	113	39	62	107	40	42	142	24	18	113	50	770
17:45 - 18:00	16	94	33	64	89	32	48	117	19	20	119	46	697
Movement Totals	171	1032	396	447	803	398	381	1239	203	154	996	420	6640
Enter Totals	1599			1648			1823			1570			
Exit Totals	1833			1160			2082			1565			

Two-Hour Totals

Light Trucks	3	23	8	5	5	3	3	20	4	1	20	13	108
Medium Trucks	0	0	1	0	2	2	0	1	0	0	1	1	8
Heavy Trucks	0	1	1	11	0	2	2	3	0	0	0	10	30
% Trucks	1.8%	2.3%	2.5%	3.6%	0.9%	1.8%	1.3%	1.9%	2.0%	0.6%	2.1%	5.7%	2.2%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

	South	West	East	North	
Pedestrians	5	1	4	1	11

Peak Hour Information

Peak Hour 16:00 17:00

	Eastbound			Westbound			Northbound			Southbound			
	Right	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
Movement Total	96	511	210	218	398	222	207	669	113	91	538	221	3494
Peak Hour Factor	0.89	0.93	0.91	0.89	1.00	0.84	0.86	0.98	0.88	0.76	0.88	0.89	0.98
Enter Totals	817			838			989			850			
Peak Hour Factor	0.95			0.94			0.95			0.87			
Exit Totals	939			602			1097			856			
Peak Hour Factor	0.92			0.98			0.98			0.92			
Light Trucks	3	14	5	2	5	2	2	11	2	1	11	6	64
Medium Trucks	0	0	0	0	1	2	0	1	0	0	0	0	4
Heavy Trucks	0	1	1	5	0	1	1	3	0	0	0	2	14
% Trucks	3.1%	2.9%	2.9%	3.2%	1.5%	2.3%	1.4%	2.2%	1.8%	1.1%	2.0%	3.6%	2.3%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

	South	West	East	North	
Pedestrians	4	1	2	1	8

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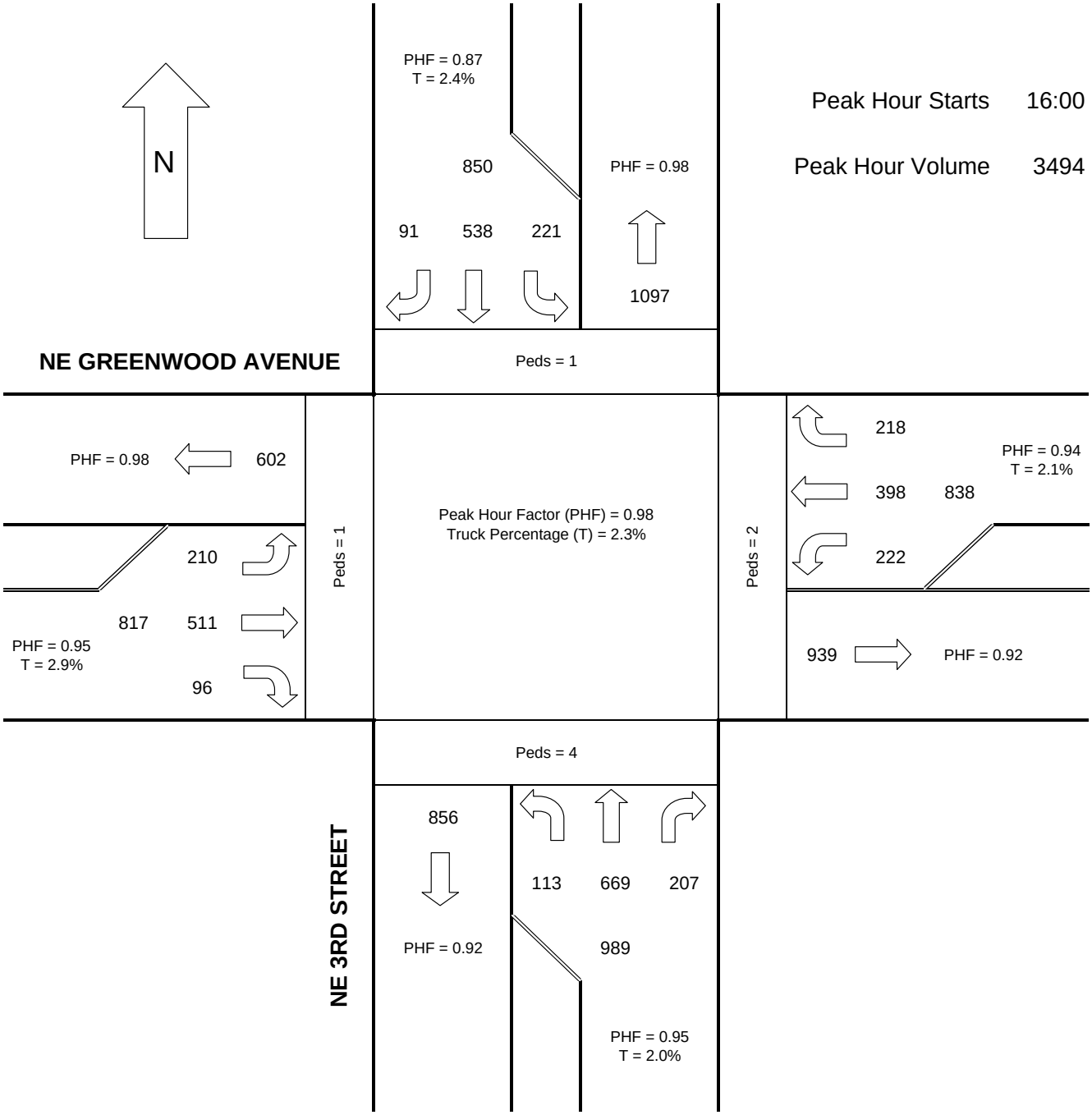
Intersection Turning Movement

Peak Hour Diagram

Location NE GREENWOOD AVENUE AT NE 3RD STREET
Date 1/4/2007
Day of Week Thursday
Time Begin 16:00
Reviewed By: BV



Peak Hour Starts 16:00

Peak Hour Volume 3494

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Salem, OR 97309
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Fax: (503) 526-0628

Intersection Turning Movement

Summary Report

Location NW OREGON AVENUE AT NW WALL STREET
Date 1/3/2007
Day of Week Wednesday
Time Begin 16:00
Reviewed By: TM

	Eastbound			Westbound			Northbound			Southbound			
Time Period	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
16:00 - 16:15	3	3	0	0	7	40	1	0	0	13	134	17	218
16:15 - 16:30	1	7	0	0	13	30	0	0	0	10	132	30	223
16:30 - 16:45	6	6	0	0	15	36	0	0	0	6	152	17	238
16:45 - 17:00	4	2	0	0	8	52	0	0	0	11	145	28	250
17:00 - 17:15	7	3	0	0	12	33	0	0	0	9	164	17	245
17:15 - 17:30	6	3	0	0	12	38	0	0	0	11	119	16	205
17:30 - 17:45	6	7	0	0	4	26	0	0	0	9	101	11	164
17:45 - 18:00	7	5	0	0	9	20	0	0	0	10	97	16	164
Movement Totals	40	36	0	0	80	275	1	0	0	79	1044	152	1707
Enter Totals	76			355			1			1275			
Exit Totals	189			159			0			1359			

Two-Hour Totals

Light Trucks	0	0	0	0	0	9	0	0	0	2	25	4	40
Medium Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Trucks	0.0%	0.0%	NA	NA	0.0%	3.3%	0.0%	NA	NA	2.5%	2.4%	2.6%	2.3%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

	South	West	East	North	
Pedestrians	0	1	0	0	1

Peak Hour Information

Peak Hour 16:15 17:15

	Eastbound			Westbound			Northbound			Southbound			
	Right	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
Movement Total	18	18	0	0	48	151	0	0	0	36	593	92	956
Peak Hour Factor	0.64	0.64	NA	NA	0.80	0.73	NA	NA	NA	0.82	0.90	0.77	0.96

Enter Totals	36	199	0	721
Peak Hour Factor	0.75	0.83	NA	0.95

Exit Totals	110	84	0	762
Peak Hour Factor	0.74	0.91	NA	0.93

Light Trucks	0	0	0	0	0	7	0	0	0	1	11	1	20
Medium Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Trucks	0.0%	0.0%	NA	NA	0.0%	4.6%	NA	NA	NA	2.8%	1.9%	1.1%	2.1%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

	South	West	East	North	
Pedestrians	0	0	0	0	0

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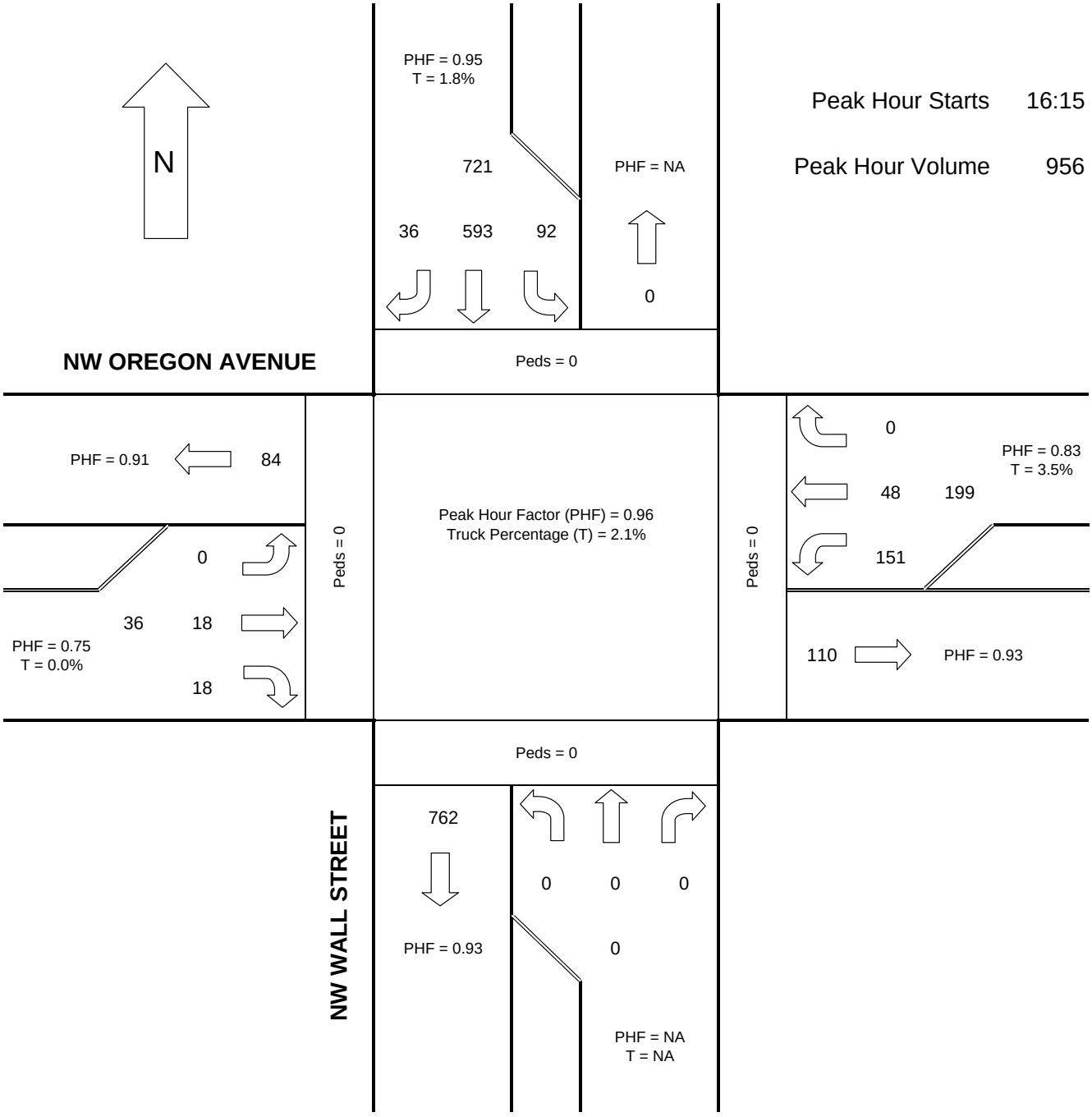
Intersection Turning Movement

Peak Hour Diagram

Location NW OREGON AVENUE AT NW WALL STREET
Date 1/3/2007
Day of Week Wednesday
Time Begin 16:00
Reviewed By: TM



Peak Hour Starts 16:15

Peak Hour Volume 956

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Intersection Turning Movement

Summary Report

Location NW OREGON AVENUE AT NW BOND STREET
Date 1/3/2007
Day of Week Wednesday
Time Begin 16:00
Reviewed By: BV

	Eastbound			Westbound			Northbound			Southbound			
Time Period	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
16:00 - 16:15	0	15	20	25	19	0	27	144	29	0	0	0	279
16:15 - 16:30	0	24	23	27	16	0	27	152	26	0	0	0	295
16:30 - 16:45	0	18	17	27	12	0	13	147	42	0	0	0	276
16:45 - 17:00	0	26	25	31	19	0	20	139	37	0	0	0	297
17:00 - 17:15	0	14	12	35	22	0	17	137	23	0	0	0	260
17:15 - 17:30	0	7	15	19	24	0	8	125	35	0	0	0	233
17:30 - 17:45	0	8	27	26	9	0	9	102	17	0	0	0	198
17:45 - 18:00	0	9	15	24	13	0	3	116	20	0	0	0	200
Movement Totals	0	121	154	214	134	0	124	1062	229	0	0	0	2038
Enter Totals		275			348			1415			0		
Exit Totals		245			363			1430			0		

Two-Hour Totals

Light Trucks	0	0	0	6	0	0	1	10	0	0	0	0	17
Medium Trucks	0	0	0	0	0	0	0	1	0	0	0	0	1
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Trucks	NA	0.0%	0.0%	2.8%	0.0%	NA	0.8%	1.0%	0.0%	NA	NA	NA	0.9%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

	South	West	East	North	
Pedestrians	49	56	89	32	226

Peak Hour Information

Peak Hour 16:00 17:00

	Eastbound			Westbound			Northbound			Southbound			
	Right	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
Movement Total	0	83	85	110	66	0	87	582	134	0	0	0	1147
Peak Hour Factor	NA	0.80	0.85	0.89	0.87	NA	0.81	0.96	0.80	NA	NA	NA	0.97

Enter Totals	168	176	803	0
Peak Hour Factor	0.82	0.88	0.98	NA
Exit Totals	170	200	777	0
Peak Hour Factor	0.83	0.89	0.96	NA

Light Trucks	0	0	0	4	0	0	0	9	0	0	0	0	13
Medium Trucks	0	0	0	0	0	0	0	1	0	0	0	0	1
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Trucks	NA	0.0%	0.0%	3.6%	0.0%	NA	0.0%	1.7%	0.0%	NA	NA	NA	1.2%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

	South	West	East	North	
Pedestrians	32	33	56	13	134

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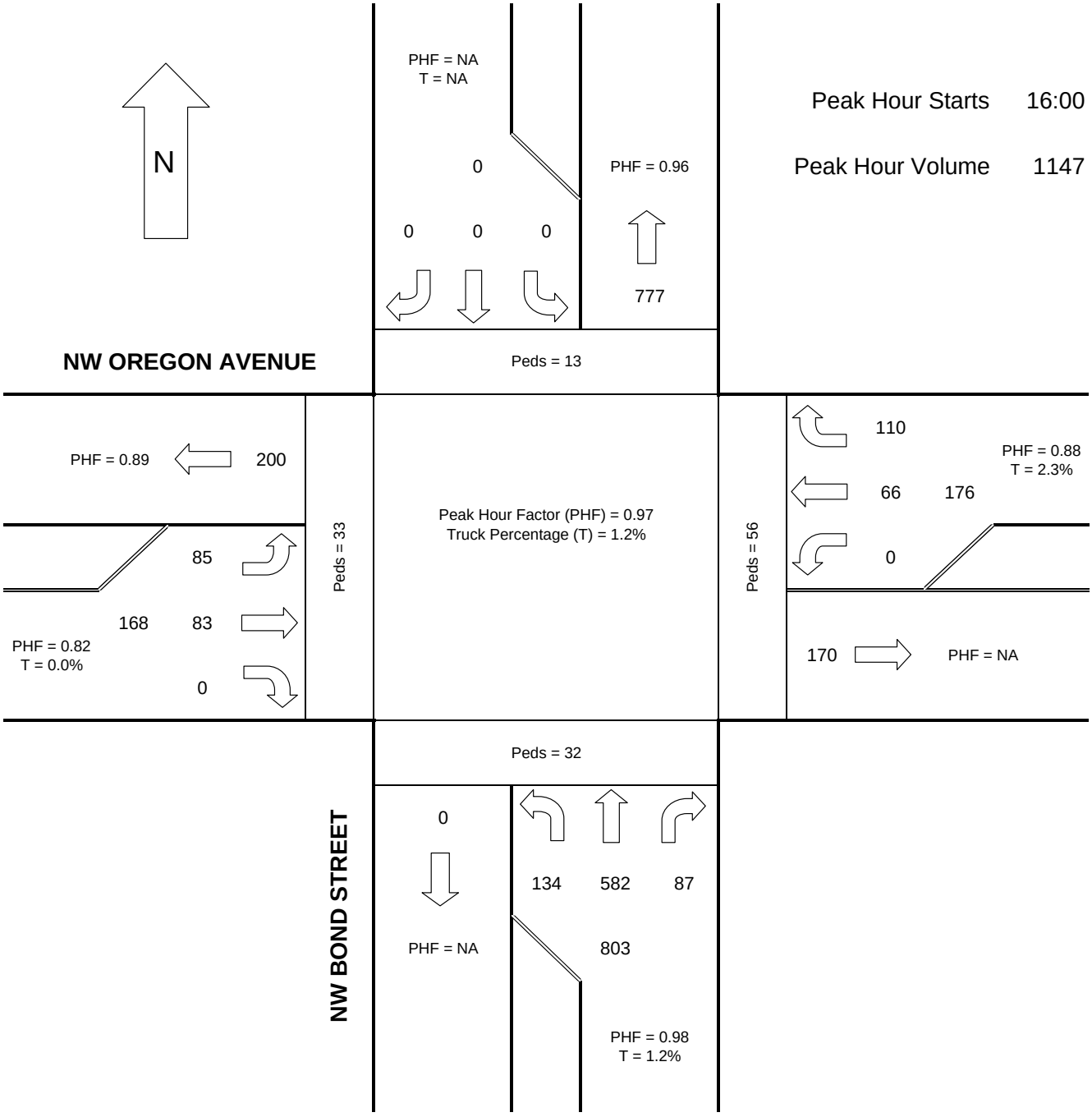
Intersection Turning Movement

Peak Hour Diagram

Location NW OREGON AVENUE AT NW BOND STREET
Date 1/3/2007
Day of Week Wednesday
Time Begin 16:00
Reviewed By: BV



Peak Hour Starts 16:00

Peak Hour Volume 1147

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Intersection Turning Movement

Summary Report

Location NW FRANKLIN AVENUE AT NW WALL STREET
Date 1/3/2007
Day of Week Wednesday
Time Begin 16:00
Reviewed By: JW

	Eastbound			Westbound			Northbound			Southbound			
Time Period	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
16:00 - 16:15	1	87	0	0	58	49	0	0	0	47	85	36	363
16:15 - 16:30	5	76	0	0	69	30	0	0	0	42	81	36	339
16:30 - 16:45	5	99	0	0	66	30	0	0	0	41	73	39	353
16:45 - 17:00	6	76	0	0	66	30	0	0	0	67	91	36	372
17:00 - 17:15	5	78	0	0	77	34	0	0	0	43	104	49	390
17:15 - 17:30	2	87	0	0	68	35	0	0	0	39	72	35	338
17:30 - 17:45	8	59	0	0	69	34	0	0	0	40	62	32	304
17:45 - 18:00	7	63	0	0	43	30	0	0	0	37	54	22	256
Movement Totals	39	625	0	0	516	272	0	0	0	356	622	285	2715
Enter Totals		664			788			0			1263		
Exit Totals		910			872			0			933		

Two-Hour Totals

Light Trucks	1	10	0	0	6	5	0	0	0	4	3	2	31
Medium Trucks	0	1	0	0	0	0	0	0	0	0	0	0	1
Heavy Trucks	0	0	0	0	1	1	0	0	0	0	0	0	2
% Trucks	2.6%	1.8%	NA	NA	1.4%	2.2%	NA	NA	NA	1.1%	0.5%	0.7%	1.3%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	2	0	0	0	0	1	2	0	5

	South	West	East	North	
Pedestrians	22	10	56	79	167

Peak Hour Information

Peak Hour 16:15 17:15

	Eastbound			Westbound			Northbound			Southbound			
	Right	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
Movement Total	21	329	0	0	278	124	0	0	0	193	349	160	1454
Peak Hour Factor	0.88	0.83	NA	NA	0.90	0.91	NA	NA	NA	0.72	0.84	0.82	0.93
Enter Totals		350			402			0			702		
Peak Hour Factor		0.84			0.91			NA			0.90		
Exit Totals		489			471			0			494		
Peak Hour Factor		0.89			0.89			NA			0.86		
Light Trucks	1	7	0	0	3	2	0	0	0	2	1	1	17
Medium Trucks	0	1	0	0	0	0	0	0	0	0	0	0	1
Heavy Trucks	0	0	0	0	1	1	0	0	0	0	0	0	2
% Trucks	4.8%	2.4%	NA	NA	1.4%	2.4%	NA	NA	NA	1.0%	0.3%	0.6%	1.4%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

	South	West	East	North	
Pedestrians	15	5	30	38	88

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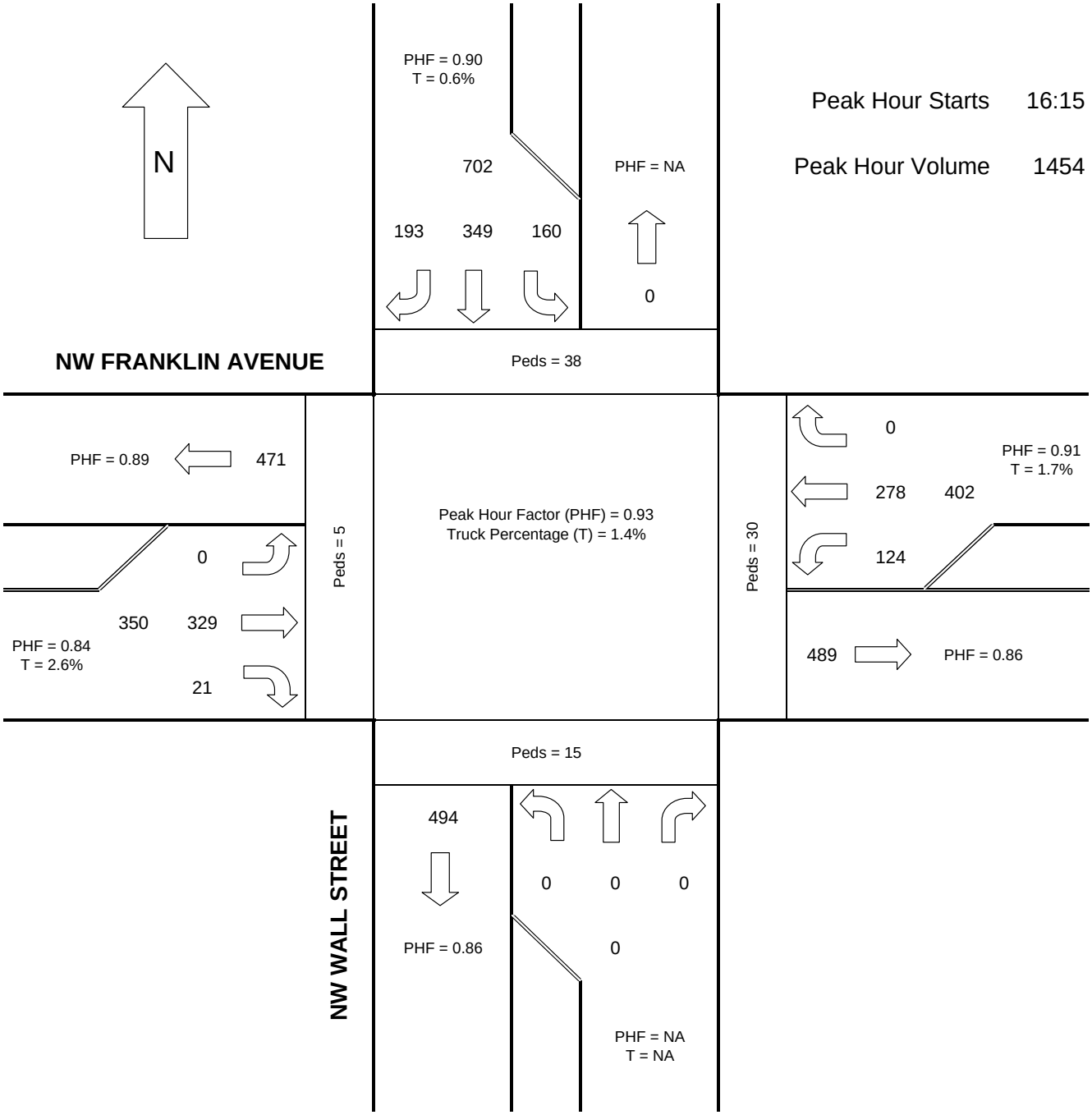
Intersection Turning Movement

Peak Hour Diagram

Location NW FRANKLIN AVENUE AT NW WALL STREET
Date 1/3/2007
Day of Week Wednesday
Time Begin 16:00
Reviewed By: JW



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Intersection Turning Movement

Summary Report

Location NE FRANKLIN AVENUE AT NW BOND STREET
Date 1/3/2007
Day of Week Wednesday
Time Begin 16:00
Reviewed By: JW

	Eastbound			Westbound			Northbound			Southbound			
Time Period	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
16:00 - 16:15	0	65	52	20	98	0	62	118	14	0	0	0	429
16:15 - 16:30	0	71	45	23	85	0	52	122	10	0	0	0	408
16:30 - 16:45	0	89	46	23	86	0	55	128	8	0	0	0	435
16:45 - 17:00	0	66	51	17	84	0	42	101	18	0	0	0	379
17:00 - 17:15	0	81	40	19	103	0	54	126	8	0	0	0	431
17:15 - 17:30	0	76	47	11	88	0	46	96	13	0	0	0	377
17:30 - 17:45	0	59	34	15	88	0	33	83	10	0	0	0	322
17:45 - 18:00	0	52	26	11	67	0	30	78	12	0	0	0	276
Movement Totals	0	559	341	139	699	0	374	852	93	0	0	0	3057
Enter Totals		900			838			1319			0		
Exit Totals		933			792			1332			0		

Two-Hour Totals

Light Trucks	0	8	2	0	11	0	8	4	0	0	0	0	33
Medium Trucks	0	1	0	0	0	0	0	1	0	0	0	0	2
Heavy Trucks	0	0	0	0	1	0	0	0	0	0	0	0	1
% Trucks	NA	1.6%	0.6%	0.0%	1.7%	NA	2.1%	0.6%	0.0%	NA	NA	NA	1.2%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	1	0	0	0	0	0	0	0	1

	South	West	East	North	
Pedestrians	16	38	45	32	131

Peak Hour Information

Peak Hour 16:15 17:15

	Eastbound			Westbound			Northbound			Southbound			
	Right	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
Movement Total	0	307	182	82	358	0	203	477	44	0	0	0	1653
Peak Hour Factor	NA	0.86	0.89	0.89	0.87	NA	0.92	0.93	0.61	NA	NA	NA	0.95
Enter Totals		489			440			724			0		
Peak Hour Factor		0.91			0.90			0.95			NA		
Exit Totals		510			402			741			0		
Peak Hour Factor		0.89			0.91			0.94			NA		
Light Trucks	0	5	1	0	5	0	5	3	0	0	0	0	19
Medium Trucks	0	1	0	0	0	0	0	0	0	0	0	0	1
Heavy Trucks	0	0	0	0	1	0	0	0	0	0	0	0	1
% Trucks	NA	2.0%	0.5%	0.0%	1.7%	NA	2.5%	0.6%	0.0%	NA	NA	NA	1.3%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

	South	West	East	North	
Pedestrians	9	18	19	13	59

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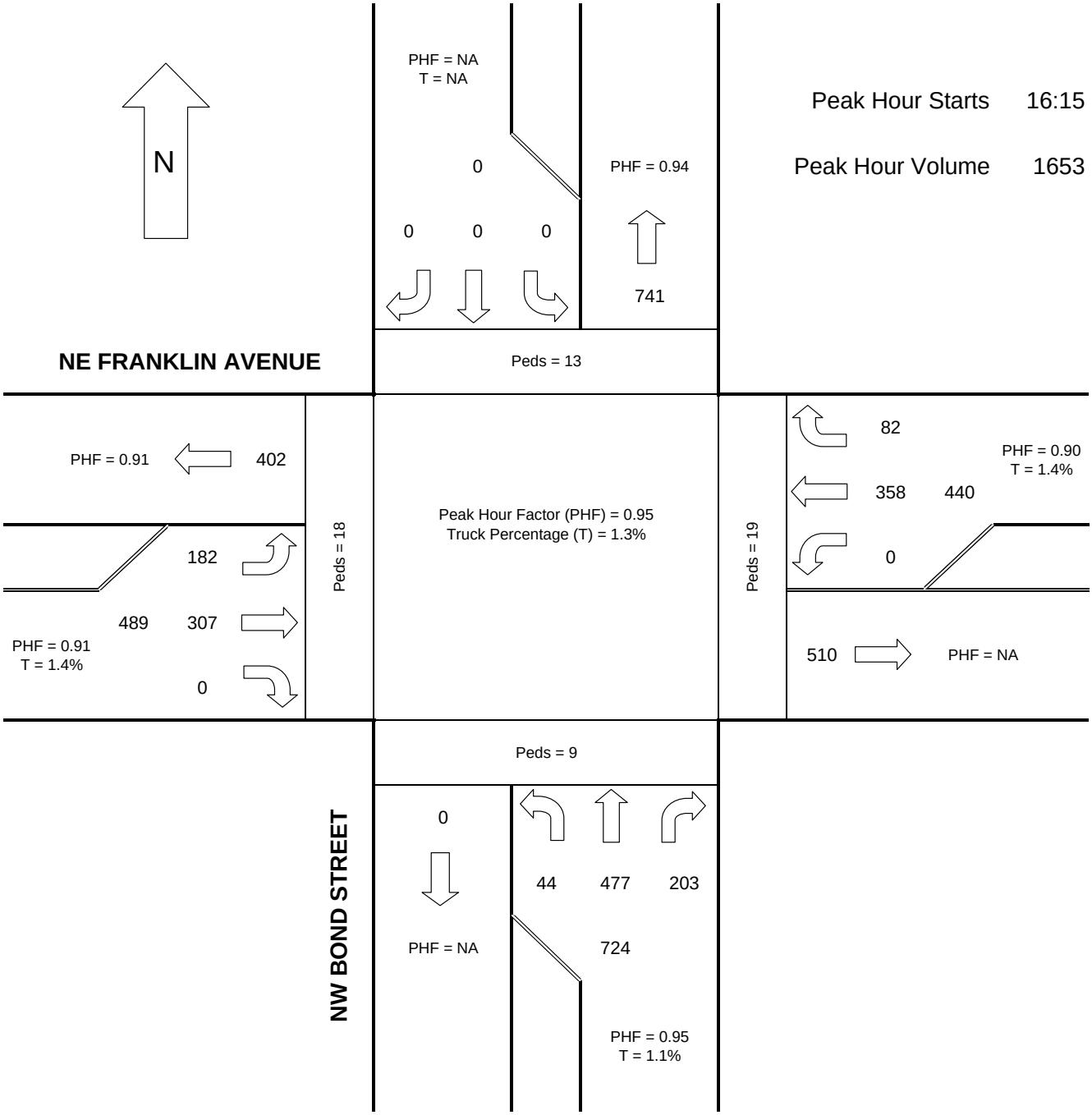
Intersection Turning Movement

Peak Hour Diagram

Location NE FRANKLIN AVENUE AT NW BOND STREET
Date 1/3/2007
Day of Week Wednesday
Time Begin 16:00
Reviewed By: JW



Peak Hour Starts 16:15

Peak Hour Volume 1653

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Intersection Turning Movement

Summary Report

Location NE FRANKLIN AVENUE AT NE 3RD STREET
Date 1/4/2007
Day of Week Thursday
Time Begin 16:00
Reviewed By: TM

	Eastbound			Westbound			Northbound			Southbound			
Time Period	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
16:00 - 16:15	24	93	64	9	75	41	14	176	26	26	203	16	767
16:15 - 16:30	20	110	64	12	70	21	5	147	33	24	197	17	720
16:30 - 16:45	23	102	67	17	66	32	5	244	26	27	230	21	860
16:45 - 17:00	17	88	53	12	77	28	9	181	30	16	174	12	697
17:00 - 17:15	23	162	59	7	88	45	13	161	35	25	170	29	817
17:15 - 17:30	15	99	55	10	76	27	8	124	17	20	109	17	577
17:30 - 17:45	10	71	51	13	57	39	9	159	15	20	146	11	601
17:45 - 18:00	21	51	37	11	45	28	5	166	20	12	125	8	529
Movement Totals	153	776	450	91	554	261	68	1358	202	170	1354	131	5568
Enter Totals	1379			906			1628			1655			
Exit Totals	975			926			1899			1768			

Two-Hour Totals

Light Trucks	8	22	29	0	19	7	2	32	12	5	31	13	180
Medium Trucks	0	0	0	0	1	0	0	1	0	0	1	1	4
Heavy Trucks	0	0	1	0	0	0	0	6	3	0	4	0	14
% Trucks	5.2%	2.8%	6.7%	0.0%	3.6%	2.7%	2.9%	2.9%	7.4%	2.9%	2.7%	10.7%	3.6%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	1	0	0	0	0	0	1	0	2

	South	West	East	North	
Pedestrians	0	0	0	0	0

Peak Hour Information

Peak Hour 16:15 17:15

	Eastbound			Westbound			Northbound			Southbound			
	Right	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
Movement Total	83	462	243	48	301	126	32	733	124	92	771	79	3094
Peak Hour Factor	0.90	0.71	0.91	0.71	0.86	0.70	0.62	0.75	0.89	0.85	0.84	0.68	0.90
Enter Totals	788			475			889			942			
Peak Hour Factor	0.81			0.85			0.81			0.85			
Exit Totals	573			517			1024			980			
Peak Hour Factor	0.70			0.87			0.78			0.86			

Light Trucks	6	15	16	0	11	3	2	14	6	3	15	9	100
Medium Trucks	0	0	0	0	1	0	0	1	0	0	1	1	4
Heavy Trucks	0	0	1	0	0	0	0	6	1	0	3	0	11
% Trucks	7.2%	3.2%	7.0%	0.0%	4.0%	2.4%	6.3%	2.9%	5.6%	3.3%	2.5%	12.7%	3.7%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	1	0	0	0	0	0	1	0	2

	South	West	East	North	
Pedestrians	0	0	0	0	0

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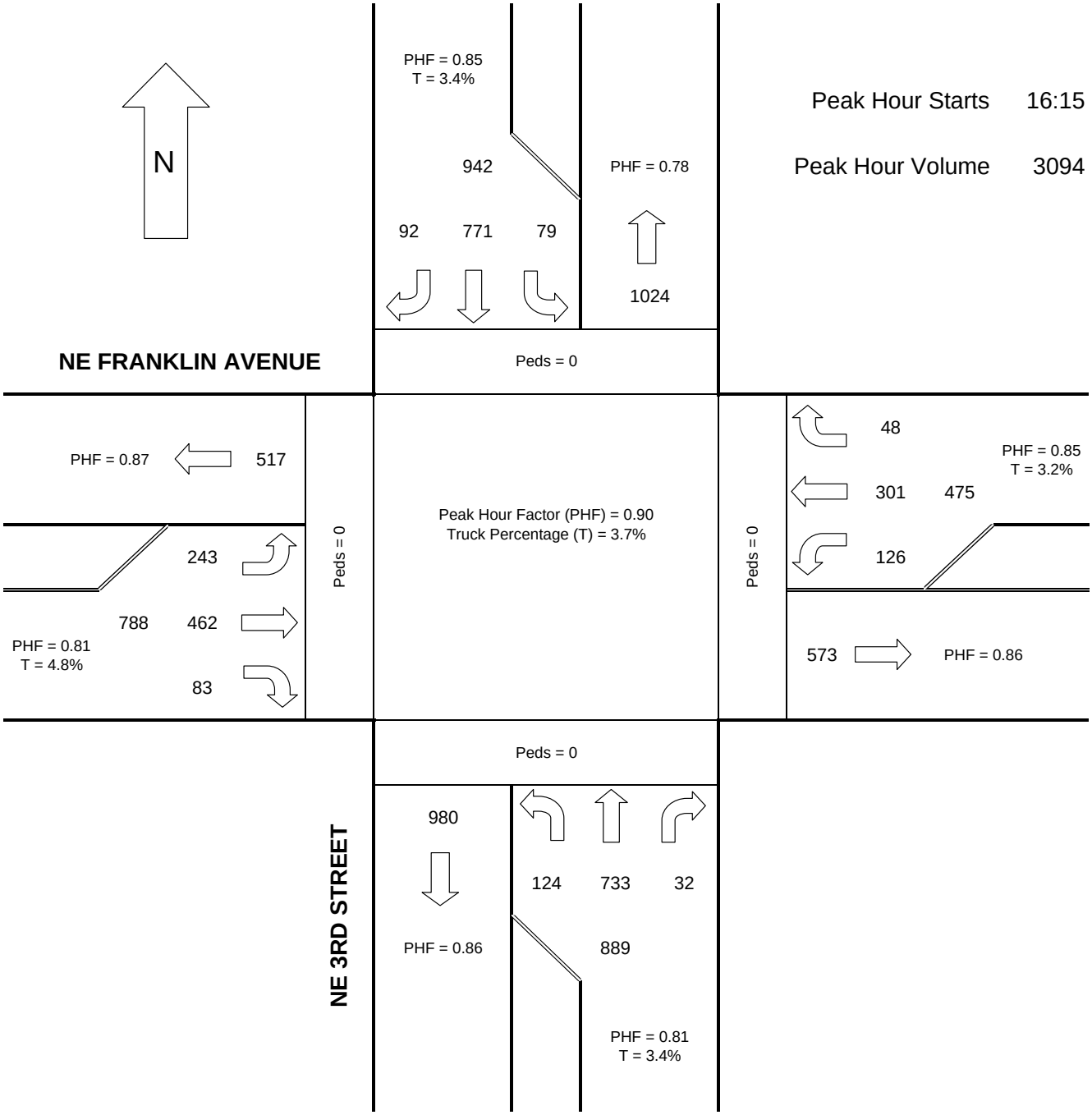
Intersection Turning Movement

Peak Hour Diagram

Location NE FRANKLIN AVENUE AT NE 3RD STREET
Date 1/4/2007
Day of Week Thursday
Time Begin 16:00
Reviewed By: TM



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Intersection Turning Movement

Summary Report

Location COLORADO AVENUE AT WALL STREET
Date 1/3/2007
Day of Week Wednesday
Time Begin 16:00
Reviewed By: TM

	Eastbound			Westbound			Northbound			Southbound			
Time Period	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
16:00 - 16:15	0	0	0	0	96	28	0	0	0	40	95	0	259
16:15 - 16:30	0	0	0	0	108	20	0	0	0	29	80	0	237
16:30 - 16:45	0	0	0	0	106	18	0	0	0	26	77	0	227
16:45 - 17:00	0	0	0	0	103	22	0	0	0	30	71	0	226
17:00 - 17:15	0	0	0	0	120	21	0	0	0	29	109	0	279
17:15 - 17:30	0	0	0	0	111	11	0	0	0	35	70	0	227
17:30 - 17:45	0	0	0	0	78	17	0	0	0	25	80	0	200
17:45 - 18:00	0	0	0	0	61	11	0	0	0	19	59	0	150
Movement Totals	0	0	0	0	783	148	0	0	0	233	641	0	1805
Enter Totals	0			931			0			874			
Exit Totals	0			1016			0			789			

Two-Hour Totals

Light Trucks	0	0	0	0	20	3	0	0	0	4	17	0	44
Medium Trucks	0	0	0	0	2	0	0	0	0	0	0	0	2
Heavy Trucks	0	0	0	0	1	0	0	0	0	0	0	0	1
% Trucks	NA	NA	NA	NA	2.9%	2.0%	NA	NA	NA	1.7%	2.7%	NA	2.6%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

	South	West	East	North	
Pedestrians	0	0	0	0	0

Peak Hour Information

Peak Hour 16:15 17:15

	Eastbound			Westbound			Northbound			Southbound			
	Right	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
Movement Total	0	0	0	0	437	81	0	0	0	114	337	0	969
Peak Hour Factor	NA	NA	NA	NA	0.91	0.92	NA	NA	NA	0.95	0.77	NA	0.87
Enter Totals	0			518			0			451			
Peak Hour Factor	NA			0.92			NA			0.82			
Exit Totals	0			551			0			418			
Peak Hour Factor	NA			0.92			NA			0.80			

Light Trucks	0	0	0	0	11	1	0	0	0	4	9	0	25
Medium Trucks	0	0	0	0	1	0	0	0	0	0	0	0	1
Heavy Trucks	0	0	0	0	1	0	0	0	0	0	0	0	1
% Trucks	NA	NA	NA	NA	3.0%	1.2%	NA	NA	NA	3.5%	2.7%	NA	2.8%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

	South	West	East	North	
Pedestrians	0	0	0	0	0

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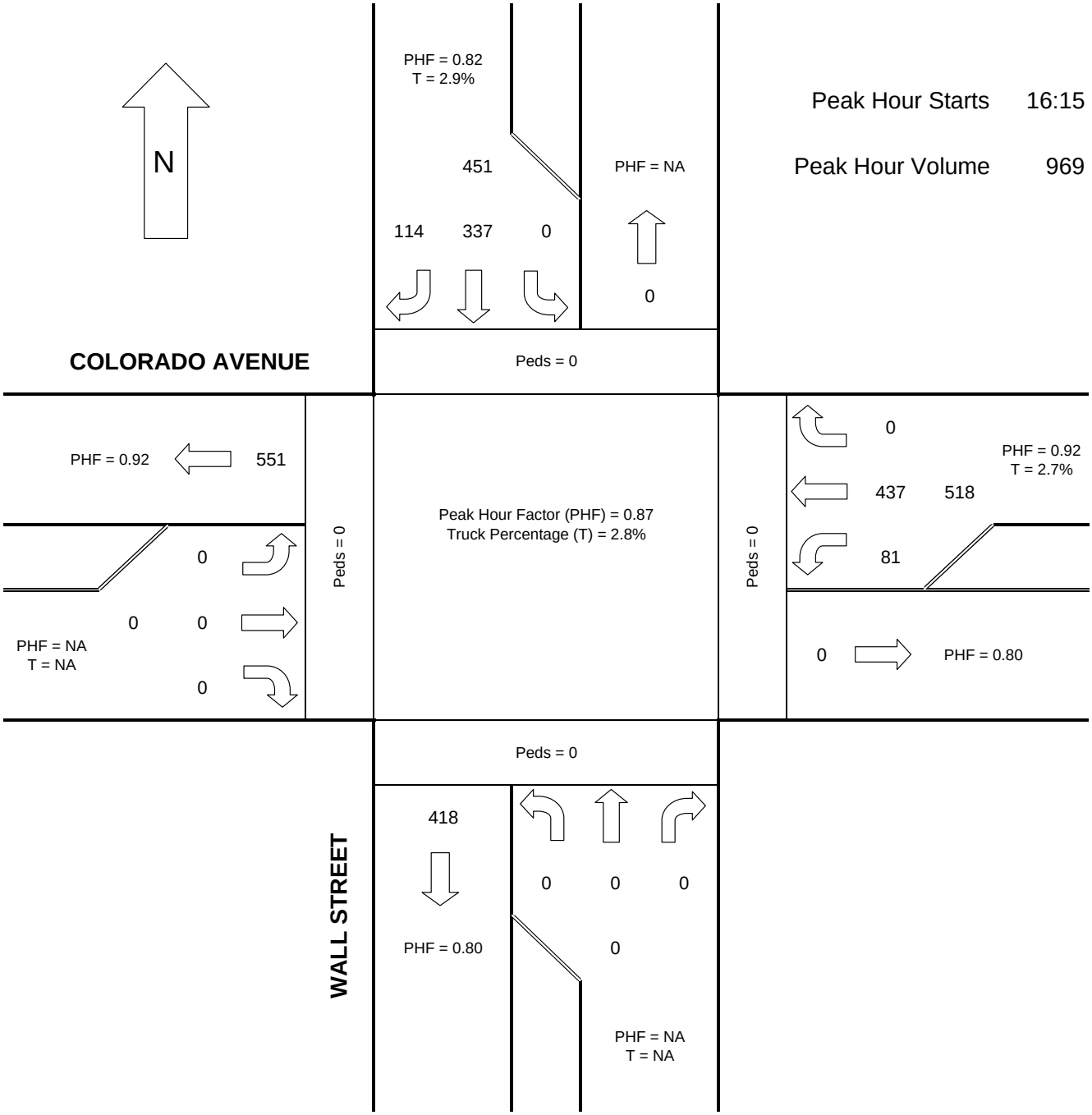
Intersection Turning Movement

Peak Hour Diagram

Location COLORADO AVENUE AT WALL STREET
Date 1/3/2007
Day of Week Wednesday
Time Begin 16:00
Reviewed By: TM



Peak Hour Starts	16:15
Peak Hour Volume	969

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Intersection Turning Movement

Summary Report

Location COLORADO AVENUE AT BOND STREET
Date 1/3/2007
Day of Week Wednesday
Time Begin 16:00
Reviewed By: TM

	Eastbound			Westbound			Northbound			Southbound			
Time Period	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
16:00 - 16:15	0	0	0	29	108	0	0	110	9	0	0	0	256
16:15 - 16:30	0	0	0	23	119	0	0	122	18	0	0	0	282
16:30 - 16:45	0	0	0	25	105	0	0	142	12	0	0	0	284
16:45 - 17:00	0	0	0	25	108	0	0	104	12	0	0	0	249
17:00 - 17:15	0	0	0	30	122	0	0	155	14	0	0	0	321
17:15 - 17:30	0	0	0	33	104	0	0	110	16	0	0	0	263
17:30 - 17:45	0	0	0	16	77	0	0	73	10	0	0	0	176
17:45 - 18:00	0	0	0	25	64	0	0	75	9	0	0	0	173
Movement Totals	0	0	0	206	807	0	0	891	100	0	0	0	2004
Enter Totals		0			1013			991			0		
Exit Totals		0			907			1097			0		

Two-Hour Totals

Light Trucks	0	0	0	3	22	0	0	21	2	0	0	0	48
Medium Trucks	0	0	0	0	1	0	0	0	0	0	0	0	1
Heavy Trucks	0	0	0	0	2	0	0	0	0	0	0	0	2
% Trucks	NA	NA	NA	1.5%	3.1%	NA	NA	2.4%	2.0%	NA	NA	NA	2.5%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	1	0	0	0	0	0	0	0	1

	South	West	East	North	
Pedestrians	0	0	0	0	0

Peak Hour Information

Peak Hour 16:15 17:15

	Eastbound			Westbound			Northbound			Southbound			
	Right	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
Movement Total	0	0	0	103	454	0	0	523	56	0	0	0	1136
Peak Hour Factor	NA	NA	NA	0.86	0.93	NA	NA	0.84	0.78	NA	NA	NA	0.88

Enter Totals		0			557			579			0		
Peak Hour Factor		NA			0.92			0.86			NA		
Exit Totals		0			510			626			0		
Peak Hour Factor		NA			0.93			0.85			NA		
Light Trucks	0	0	0	1	15	0	0	13	1	0	0	0	30
Medium Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Trucks	0	0	0	0	2	0	0	0	0	0	0	0	2
% Trucks	NA	NA	NA	1.0%	3.7%	NA	NA	2.5%	1.8%	NA	NA	NA	2.8%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

	South	West	East	North	
Pedestrians	0	0	0	0	0

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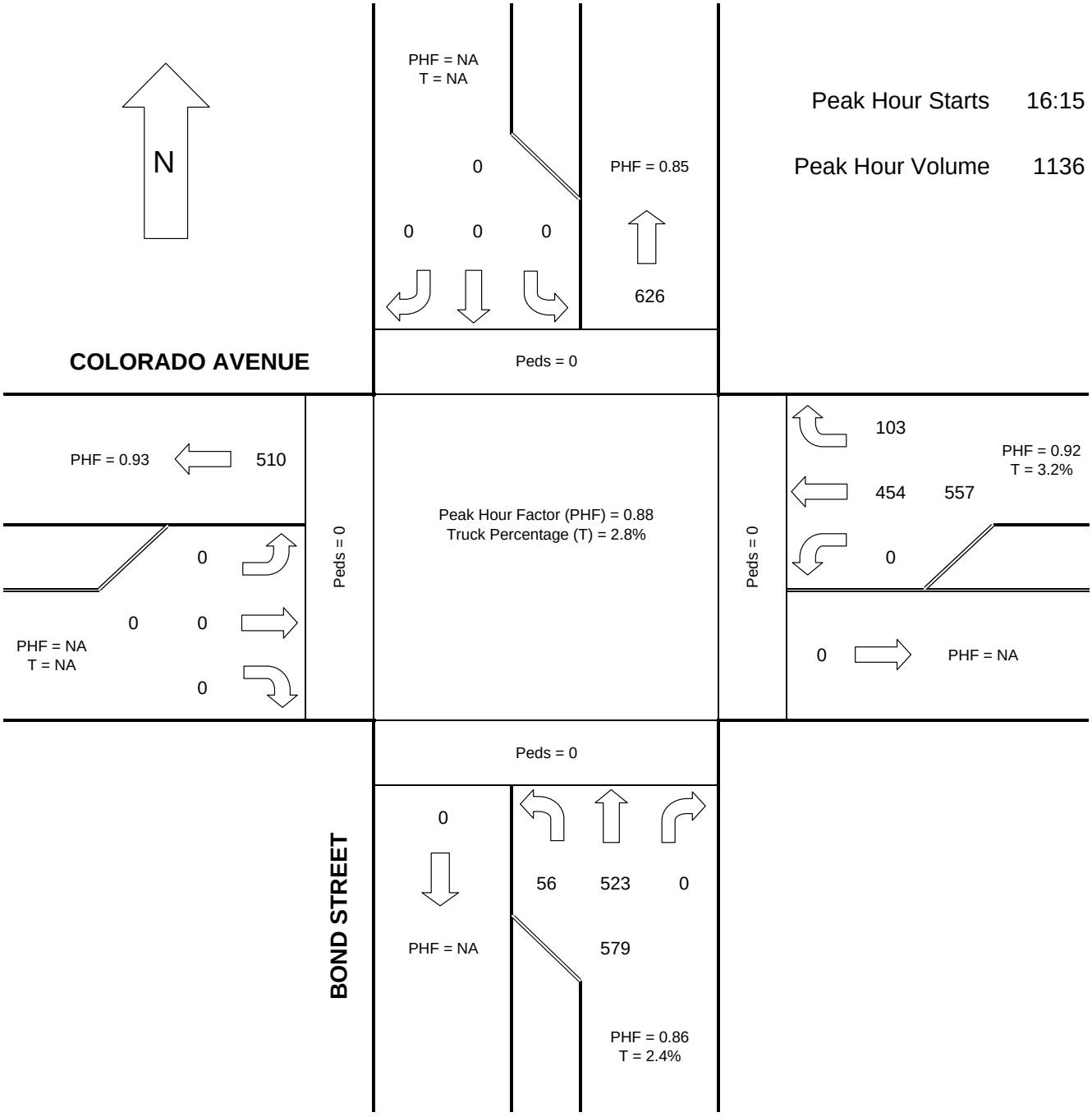
Intersection Turning Movement

Peak Hour Diagram

Location COLORADO AVENUE AT BOND STREET
Date 1/3/2007
Day of Week Wednesday
Time Begin 16:00
Reviewed By: TM



Peak Hour Starts 16:15

Peak Hour Volume 1136

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Intersection Turning Movement

Summary Report

Location ARIZONA AVENUE AT WALL STREET
Date 1/3/2007
Day of Week Wednesday
Time Begin 16:00
Reviewed By: TM

	Eastbound			Westbound			Northbound			Southbound			
Time Period	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
16:00 - 16:15	11	175	0	0	0	0	0	0	0	0	87	29	302
16:15 - 16:30	5	171	0	0	0	0	0	0	0	0	63	45	284
16:30 - 16:45	6	193	0	0	0	0	0	0	0	0	66	32	297
16:45 - 17:00	4	193	0	0	0	0	0	0	0	0	69	27	293
17:00 - 17:15	4	278	0	0	0	0	0	0	0	0	78	52	412
17:15 - 17:30	5	194	0	0	0	0	0	0	0	0	52	33	284
17:30 - 17:45	6	142	0	0	0	0	0	0	0	0	64	34	246
17:45 - 18:00	4	100	0	0	0	0	0	0	0	0	52	14	170
Movement Totals	45	1446	0	0	0	0	0	0	0	0	531	266	2288
Enter Totals		1491			0			0			797		
Exit Totals		1712			0			0			576		

Two-Hour Totals

Light Trucks	0	22	0	0	0	0	0	0	0	0	14	1	37
Medium Trucks	0	9	0	0	0	0	0	0	0	0	0	0	9
Heavy Trucks	0	4	0	0	0	0	0	0	0	0	0	0	4
% Trucks	0.0%	2.4%	NA	NA	NA	NA	NA	NA	NA	NA	2.6%	0.4%	2.2%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

	South	West	East	North	
Pedestrians	0	0	0	0	0

Peak Hour Information

Peak Hour 16:15 17:15

	Eastbound			Westbound			Northbound			Southbound			
	Right	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
Movement Total	19	835	0	0	0	0	0	0	0	0	276	156	1286
Peak Hour Factor	0.79	0.75	NA	NA	NA	NA	NA	NA	NA	NA	0.88	0.75	0.78

Enter Totals	854	0	0	432
Peak Hour Factor	0.76	NA	NA	0.83

Exit Totals	991	0	0	295
Peak Hour Factor	0.75	NA	NA	0.90

Light Trucks	0	16	0	0	0	0	0	0	0	0	7	1	24
Medium Trucks	0	6	0	0	0	0	0	0	0	0	0	0	6
Heavy Trucks	0	4	0	0	0	0	0	0	0	0	0	0	4
% Trucks	0.0%	3.1%	NA	NA	NA	NA	NA	NA	NA	NA	2.5%	0.6%	2.6%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

	South	West	East	North	
Pedestrians	0	0	0	0	0

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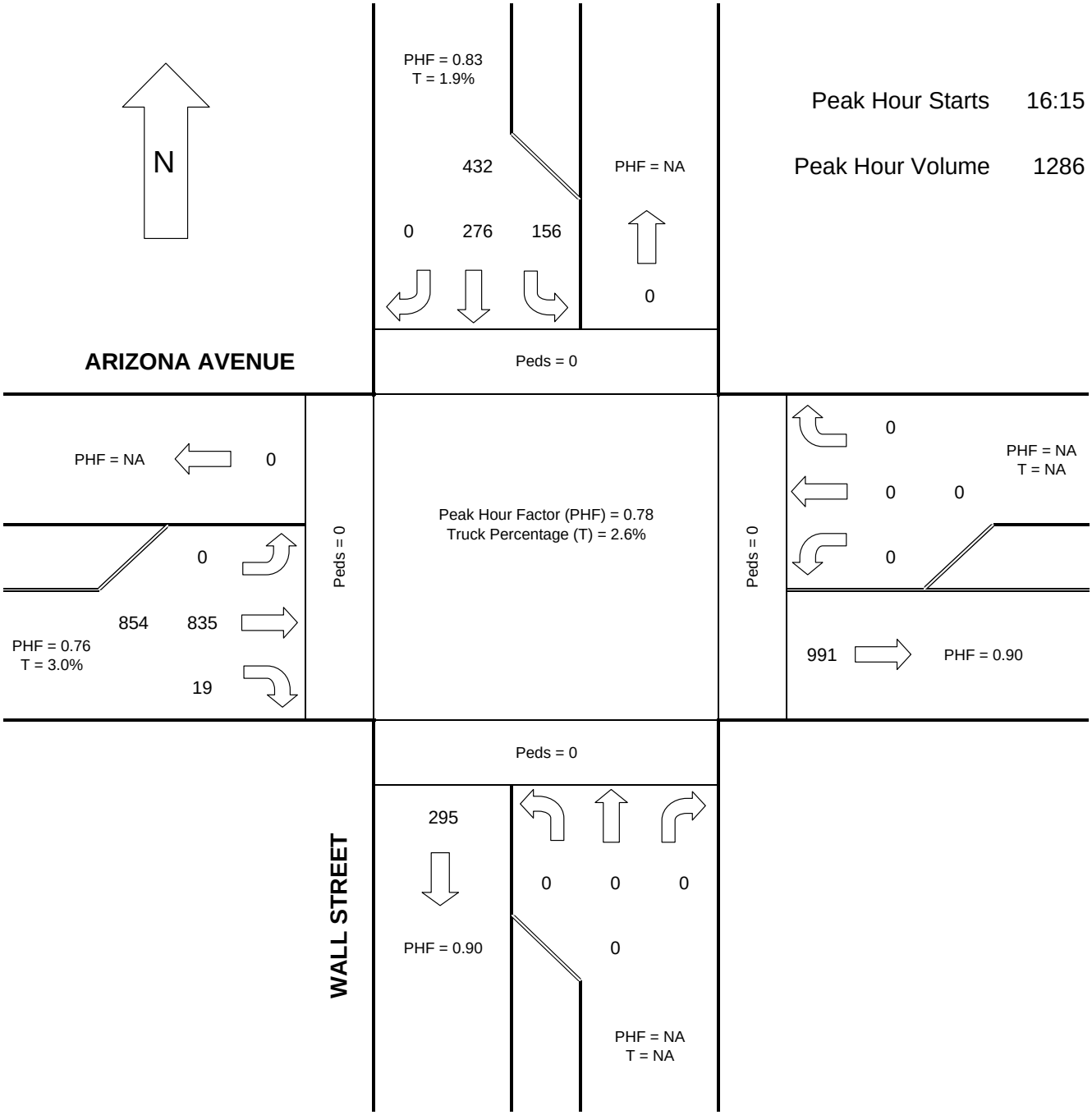
Intersection Turning Movement

Peak Hour Diagram

Location ARIZONA AVENUE AT WALL STREET
Date 1/3/2007
Day of Week Wednesday
Time Begin 16:00
Reviewed By: TM



Peak Hour Starts 16:15

Peak Hour Volume 1286

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Intersection Turning Movement

Summary Report

Location ARIZONA AVENUE AT BOND STREET
Date 1/3/2007
Day of Week Wednesday
Time Begin 16:00
Reviewed By: TM

	Eastbound			Westbound			Northbound			Southbound			
Time Period	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
16:00 - 16:15	0	161	52	0	0	0	32	64	0	0	0	0	309
16:15 - 16:30	0	158	63	0	0	0	29	74	0	0	0	0	324
16:30 - 16:45	0	156	74	0	0	0	27	80	0	0	0	0	337
16:45 - 17:00	0	147	48	0	0	0	32	80	0	0	0	0	307
17:00 - 17:15	0	239	87	0	0	0	26	71	0	0	0	0	423
17:15 - 17:30	0	165	62	0	0	0	20	66	0	0	0	0	313
17:30 - 17:45	0	140	38	0	0	0	16	55	0	0	0	0	249
17:45 - 18:00	0	81	34	0	0	0	12	46	0	0	0	0	173
Movement Totals	0	1247	458	0	0	0	194	536	0	0	0	0	2435
Enter Totals		1705			0			730			0		
Exit Totals		1441			0			994			0		

Two-Hour Totals

Light Trucks	0	24	8	0	0	0	6	14	0	0	0	0	52
Medium Trucks	0	8	1	0	0	0	0	0	0	0	0	0	9
Heavy Trucks	0	3	0	0	0	0	0	0	0	0	0	0	3
% Trucks	NA	2.8%	2.0%	NA	NA	NA	3.1%	2.6%	NA	NA	NA	NA	2.6%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

	South	West	East	North	
Pedestrians	0	0	0	0	0

Peak Hour Information

Peak Hour 16:15 17:15

	Eastbound			Westbound			Northbound			Southbound			
	Right	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
Movement Total	0	700	272	0	0	0	114	305	0	0	0	0	1391
Peak Hour Factor	NA	0.73	0.78	NA	NA	NA	0.89	0.95	NA	NA	NA	NA	0.82

Enter Totals	972	0	419	0	
Peak Hour Factor	0.75	NA	0.94	NA	
Exit Totals	814	0	577	0	
Peak Hour Factor	0.77	NA	0.91	NA	

Light Trucks	0	19	5	0	0	0	4	9	0	0	0	0	37
Medium Trucks	0	6	0	0	0	0	0	0	0	0	0	0	6
Heavy Trucks	0	3	0	0	0	0	0	0	0	0	0	0	3
% Trucks	NA	4.0%	1.8%	NA	NA	NA	3.5%	3.0%	NA	NA	NA	NA	3.3%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

	South	West	East	North	
Pedestrians	0	0	0	0	0

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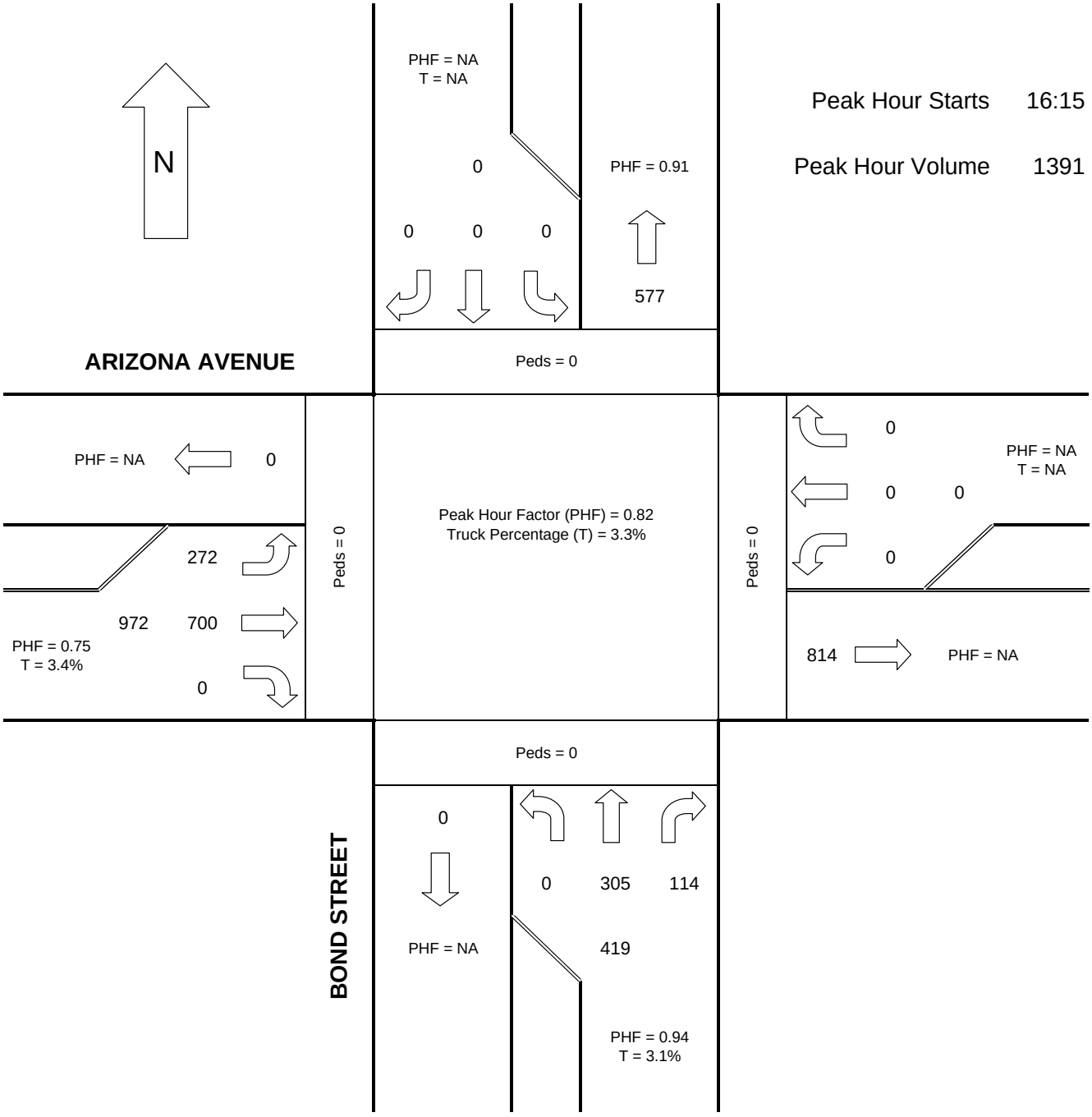
Intersection Turning Movement

Peak Hour Diagram

Location ARIZONA AVENUE AT BOND STREET
Date 1/3/2007
Day of Week Wednesday
Time Begin 16:00
Reviewed By: TM



Peak Hour Starts 16:15

Peak Hour Volume 1391

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Intersection Turning Movement

Summary Report

Location COLORADO AVENUE AT BEND PARKWAY-SB RAMP
Date 1/3/2007
Day of Week Wednesday
Time Begin 16:00
Reviewed By: TM

	Eastbound			Westbound			Northbound			Southbound			
Time Period	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
16:00 - 16:15	0	0	0	6	63	1	155	26	4	76	0	18	349
16:15 - 16:30	0	1	0	9	63	0	153	21	0	62	0	21	330
16:30 - 16:45	0	0	0	9	80	2	155	33	0	57	0	14	350
16:45 - 17:00	0	1	0	13	66	0	140	26	1	55	0	15	317
17:00 - 17:15	0	0	0	15	74	1	214	64	5	72	1	21	467
17:15 - 17:30	0	0	1	3	63	0	169	39	3	78	1	22	379
17:30 - 17:45	0	0	0	3	26	0	53	11	0	23	0	9	125
17:45 - 18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
Movement Totals	0	2	1	58	435	4	1039	220	13	423	2	120	2317
Enter Totals	3			497			1272			545			
Exit Totals	1161			871			279			6			

Two-Hour Totals

Light Trucks	0	0	0	0	8	0	23	3	0	15	0	4	53
Medium Trucks	0	0	0	0	0	0	1	0	0	1	0	0	2
Heavy Trucks	0	0	0	0	0	0	4	0	0	0	0	2	6
% Trucks	NA	0.0%	0.0%	0.0%	1.8%	0.0%	2.7%	1.4%	0.0%	3.8%	0.0%	5.0%	2.6%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

	South	West	East	North	
Pedestrians	0	0	0	0	0

Peak Hour Information

Peak Hour 16:30 17:30

	Eastbound			Westbound			Northbound			Southbound			
	Right	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
Movement Total	0	1	1	40	283	3	678	162	9	262	2	72	1513
Peak Hour Factor	NA	0.25	0.25	0.67	0.88	0.38	0.79	0.63	0.45	0.84	0.50	0.82	0.81
Enter Totals	2			326			849			336			
Peak Hour Factor	0.50			0.90			0.75			0.83			
Exit Totals	751			554			203			5			
Peak Hour Factor	0.80			0.92			0.64			0.63			

Light Trucks	0	0	0	0	3	0	16	3	0	6	0	2	30
Medium Trucks	0	0	0	0	0	0	1	0	0	1	0	0	2
Heavy Trucks	0	0	0	0	0	0	4	0	0	0	0	2	6
% Trucks	NA	0.0%	0.0%	0.0%	1.1%	0.0%	3.1%	1.9%	0.0%	2.7%	0.0%	5.6%	2.5%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

	South	West	East	North	
Pedestrians	0	0	0	0	0

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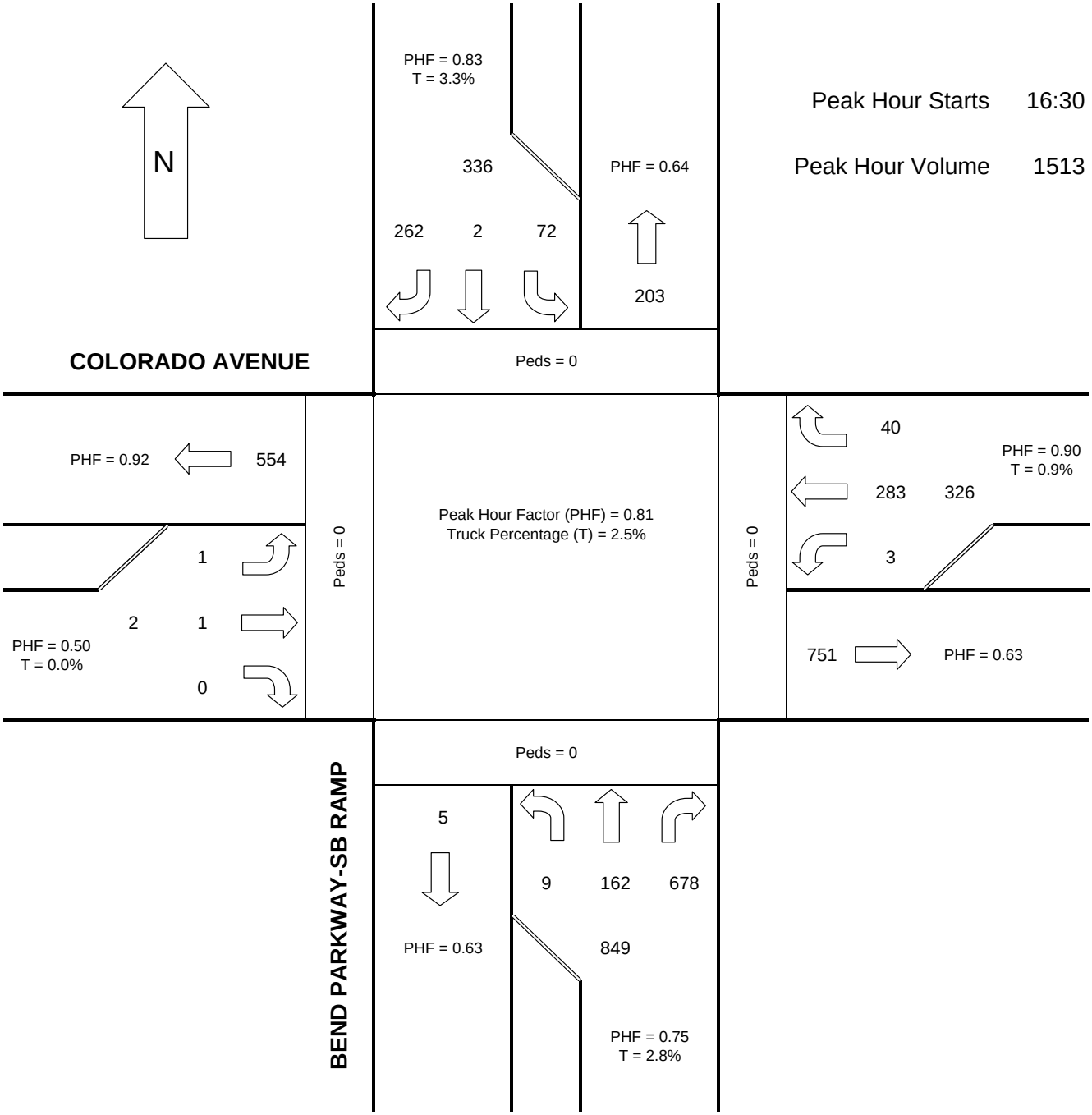
Intersection Turning Movement

Peak Hour Diagram

Location COLORADO AVENUE AT BEND PARKWAY-SB RAMP
Date 1/3/2007
Day of Week Wednesday
Time Begin 16:00
Reviewed By: TM



Peak Hour Starts 16:30

Peak Hour Volume 1513

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Intersection Turning Movement

Summary Report

Location BUTLER MARKET ROAD AT BEND PARKWAY-SB RAMP
Date 1/2/2007
Day of Week Tuesday
Time Begin 16:00
Reviewed By: TM

	Eastbound			Westbound			Northbound			Southbound			
Time Period	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
16:00 - 16:15	0	108	0	0	103	0	0	0	0	22	0	45	278
16:15 - 16:30	0	92	0	0	118	0	0	0	0	18	0	38	266
16:30 - 16:45	0	109	0	0	134	0	0	0	0	24	0	49	316
16:45 - 17:00	0	106	0	0	131	0	0	0	0	31	0	39	307
17:00 - 17:15	0	132	0	0	128	0	0	0	0	15	0	50	325
17:15 - 17:30	0	110	0	0	106	0	0	0	0	19	0	38	273
17:30 - 17:45	0	90	0	0	97	0	0	0	0	12	0	39	238
17:45 - 18:00	0	71	0	0	75	0	0	0	0	13	0	28	187
Movement Totals	0	818	0	0	892	0	0	0	0	154	0	326	2190
Enter Totals		818			892			0			480		
Exit Totals		1144			1046			0			0		

Two-Hour Totals

Light Trucks	0	32	0	0	13	0	0	0	0	4	0	15	64
Medium Trucks	0	2	0	0	2	0	0	0	0	0	0	0	4
Heavy Trucks	0	3	0	0	2	0	0	0	0	2	0	2	9
% Trucks	NA	4.5%	NA	NA	1.9%	NA	NA	NA	NA	3.9%	NA	5.2%	3.5%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	1	0	0	0	0	0	0	0	1	0	0	2

	South	West	East	North	
Pedestrians	0	0	0	0	0

Peak Hour Information

Peak Hour 16:30 17:30

	Eastbound			Westbound			Northbound			Southbound			
	Right	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
Movement Total	0	457	0	0	499	0	0	0	0	89	0	176	1221
Peak Hour Factor	NA	0.87	NA	NA	0.93	NA	NA	NA	NA	0.72	NA	0.88	0.94

Enter Totals	457	499	0	265
Peak Hour Factor	0.87	0.93	NA	0.91

Exit Totals	633	588	0	0
Peak Hour Factor	0.87	0.91	NA	NA

Light Trucks	0	16	0	0	8	0	0	0	0	2	0	7	33
Medium Trucks	0	1	0	0	1	0	0	0	0	0	0	0	2
Heavy Trucks	0	1	0	0	0	0	0	0	0	2	0	2	5
% Trucks	NA	3.9%	NA	NA	1.8%	NA	NA	NA	NA	4.5%	NA	5.1%	3.3%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	1	0	0	0	0	0	0	0	0	0	0	1

	South	West	East	North	
Pedestrians	0	0	0	0	0

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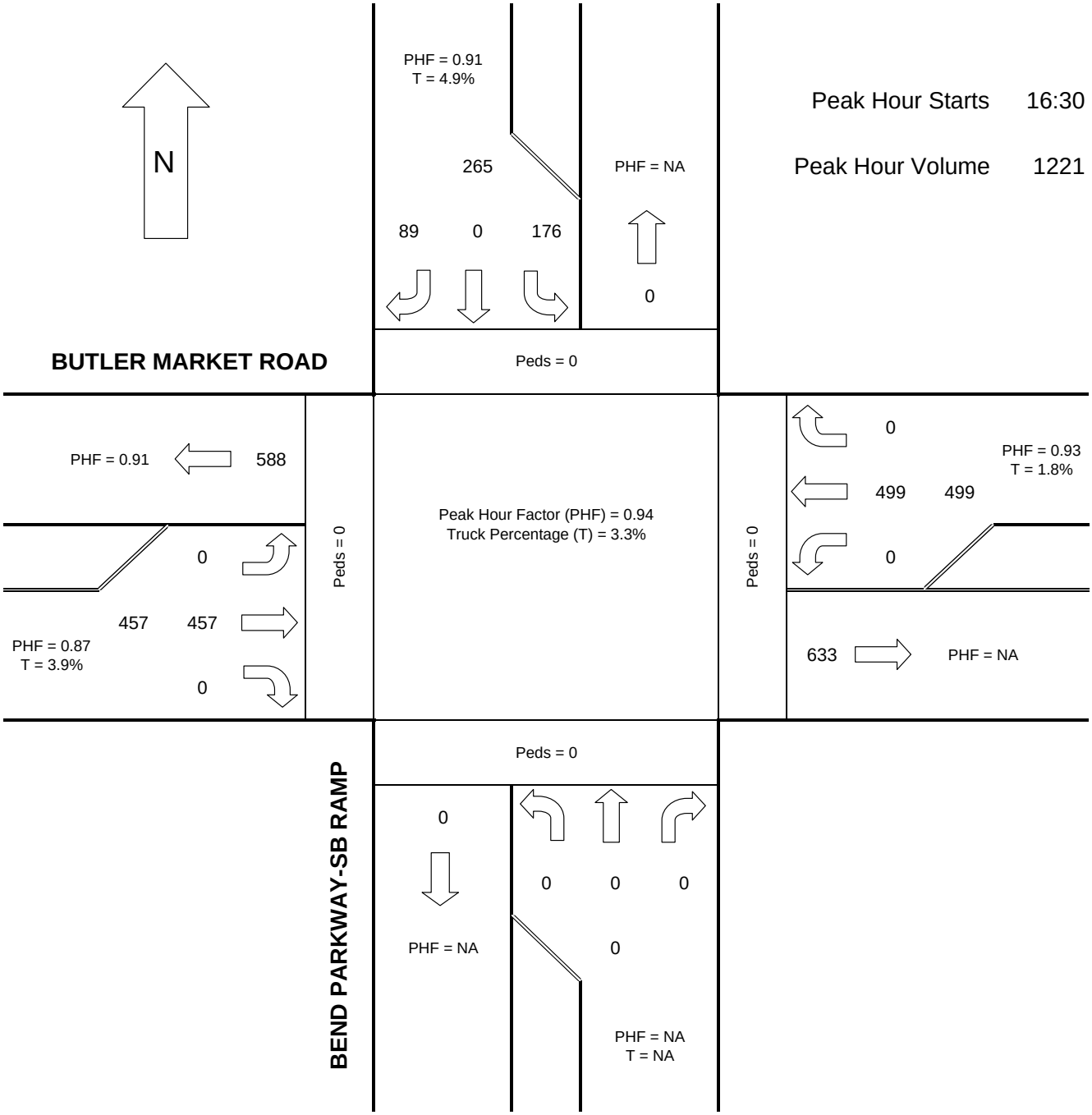
Intersection Turning Movement

Peak Hour Diagram

Location BUTLER MARKET ROAD AT BEND PARKWAY-SB RAMP
Date 1/2/2007
Day of Week Tuesday
Time Begin 16:00
Reviewed By: TM



Peak Hour Starts 16:30

Peak Hour Volume 1221

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Intersection Turning Movement

Summary Report

Location BUTLER MARKET ROAD AT BEND PARKWAY-NB RAMP
Date 1/2/2007
Day of Week Tuesday
Time Begin 16:00
Reviewed By: TM

	Eastbound			Westbound			Northbound			Southbound			
Time Period	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
16:00 - 16:15	2	128	23	51	95	2	5	0	1	0	0	0	307
16:15 - 16:30	5	116	11	38	117	0	1	0	1	0	0	0	289
16:30 - 16:45	1	144	12	47	128	3	5	1	2	0	0	0	343
16:45 - 17:00	0	133	12	44	170	2	3	1	6	0	0	0	371
17:00 - 17:15	2	169	20	57	137	3	5	3	4	0	0	0	400
17:15 - 17:30	2	131	11	56	101	1	1	1	2	0	0	0	306
17:30 - 17:45	0	113	12	45	101	2	1	2	0	0	0	0	276
17:45 - 18:00	1	92	4	30	79	2	3	0	0	0	0	0	211
Movement Totals	13	1026	105	368	928	15	24	8	16	0	0	0	2503
Enter Totals		1144			1311			48			0		
Exit Totals		1050			944			481			28		

Two-Hour Totals

Light Trucks	1	34	5	10	14	1	0	0	2	0	0	0	67
Medium Trucks	1	1	0	0	3	0	0	0	0	0	0	0	5
Heavy Trucks	0	6	0	4	1	0	0	0	0	0	0	0	11
% Trucks	15.4%	4.0%	4.8%	3.8%	1.9%	6.7%	0.0%	0.0%	12.5%	NA	NA	NA	3.3%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	1	0	0	0	0	0	0	0	0	0	0	1

	South	West	East	North	
Pedestrians	0	0	0	0	0

Peak Hour Information

Peak Hour 16:30 17:30

	Eastbound			Westbound			Northbound			Southbound			
	Right	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
Movement Total	5	577	55	204	536	9	14	6	14	0	0	0	1420
Peak Hour Factor	0.63	0.85	0.69	0.89	0.79	0.75	0.70	0.50	0.58	NA	NA	NA	0.89
Enter Totals		637			749			34			0		
Peak Hour Factor		0.83			0.87			0.71			NA		
Exit Totals		591			550			265			14		
Peak Hour Factor		0.85			0.78			0.83			0.70		
Light Trucks	0	13	3	8	9	1	0	0	2	0	0	0	36
Medium Trucks	1	0	0	0	1	0	0	0	0	0	0	0	2
Heavy Trucks	0	4	0	1	0	0	0	0	0	0	0	0	5
% Trucks	20.0%	2.9%	5.5%	4.4%	1.9%	11.1%	0.0%	0.0%	14.3%	NA	NA	NA	3.0%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	1	0	0	0	0	0	0	0	0	0	0	1

	South	West	East	North	
Pedestrians	0	0	0	0	0

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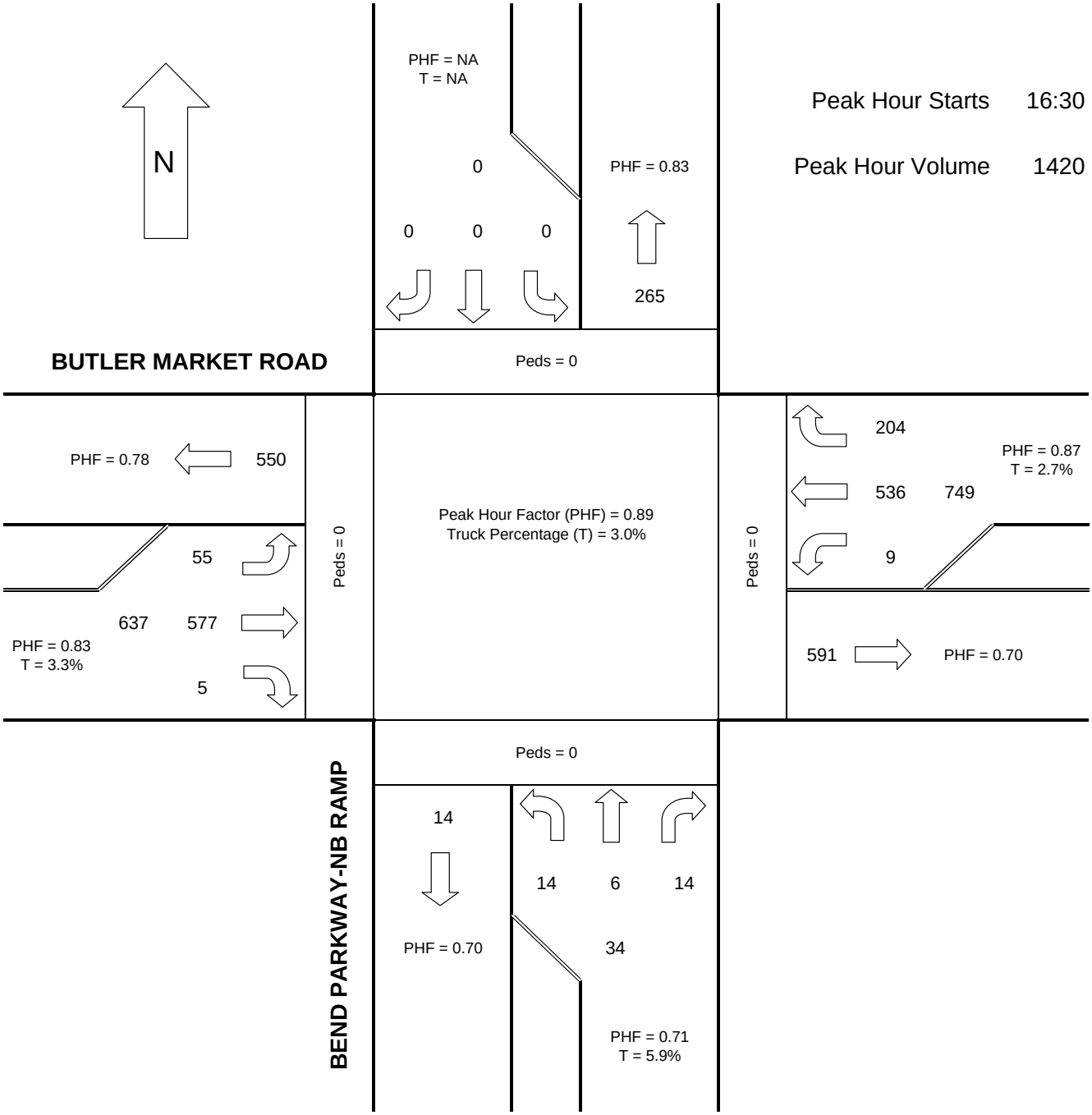
Intersection Turning Movement

Peak Hour Diagram

Location BUTLER MARKET ROAD AT BEND PARKWAY-NB RAMP
Date 1/2/2007
Day of Week Tuesday
Time Begin 16:00
Reviewed By: TM



Peak Hour Starts 16:30

Peak Hour Volume 1420

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Intersection Turning Movement

Summary Report

Location BUTLER MARKET ROAD AT NE 4TH STREET
Date 1/2/2007
Day of Week Tuesday
Time Begin 16:00
Reviewed By: BV

	Eastbound			Westbound			Northbound			Southbound			
Time Period	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
16:00 - 16:15	26	109	3	1	97	18	15	0	43	11	5	1	329
16:15 - 16:30	28	84	0	1	93	11	16	0	43	13	1	0	290
16:30 - 16:45	28	116	0	0	123	13	10	0	41	5	3	0	339
16:45 - 17:00	23	108	0	0	112	22	16	0	62	5	1	0	349
17:00 - 17:15	28	130	1	0	112	23	19	0	53	8	0	0	374
17:15 - 17:30	16	109	1	0	99	9	15	0	46	5	1	0	301
17:30 - 17:45	18	98	0	0	101	11	9	1	37	4	1	0	280
17:45 - 18:00	16	81	0	0	73	10	7	1	31	1	0	0	220
Movement Totals	183	835	5	2	810	117	107	2	356	52	12	1	2482
Enter Totals	1023			929			465			65			
Exit Totals	943			1218			9			312			

Two-Hour Totals

Light Trucks	6	14	0	0	12	2	2	0	3	0	0	0	39
Medium Trucks	0	1	0	0	1	0	0	0	1	0	0	0	3
Heavy Trucks	4	1	1	0	2	0	0	0	3	1	0	0	12
% Trucks	5.5%	1.9%	20.0%	0.0%	1.9%	1.7%	1.9%	0.0%	2.0%	1.9%	0.0%	0.0%	2.2%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

	South	West	East	North	
Pedestrians	0	0	0	3	3

Peak Hour Information

Peak Hour 16:30 17:30

	Eastbound			Westbound			Northbound			Southbound			
	Right	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
Movement Total	95	463	2	0	446	67	60	0	202	23	5	0	1363
Peak Hour Factor	0.85	0.89	0.50	NA	0.91	0.73	0.79	NA	0.81	0.72	0.42	NA	0.91

Enter Totals	560	513	262	28
Peak Hour Factor	0.88	0.94	0.84	0.88

Exit Totals	523	671	2	167
Peak Hour Factor	0.88	0.94	0.50	0.82

Light Trucks	5	3	0	0	5	1	1	0	1	0	0	0	16
Medium Trucks	0	0	0	0	1	0	0	0	0	0	0	0	1
Heavy Trucks	3	0	1	0	0	0	0	0	0	1	0	0	5
% Trucks	8.4%	0.6%	50.0%	NA	1.3%	1.5%	1.7%	NA	0.5%	4.3%	0.0%	NA	1.6%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

	South	West	East	North	
Pedestrians	0	0	0	3	3

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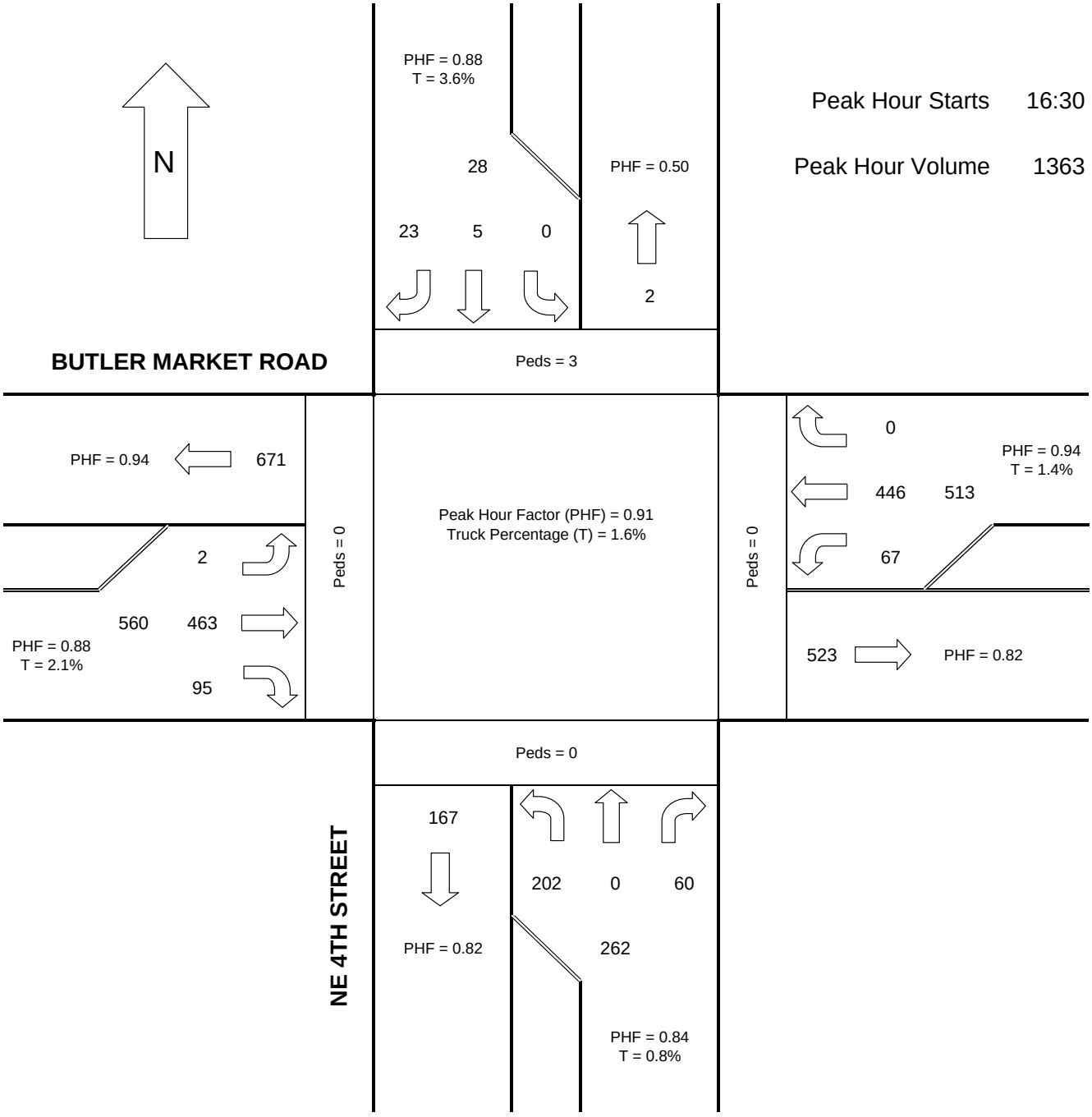
Intersection Turning Movement

Peak Hour Diagram

Location BUTLER MARKET ROAD AT NE 4TH STREET
Date 1/2/2007
Day of Week Tuesday
Time Begin 16:00
Reviewed By: BV



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Intersection Turning Movement

Summary Report

Location NE STUDIO ROAD AT NE 4TH STREET
Date 1/2/2007
Day of Week Tuesday
Time Begin 16:00
Reviewed By: BM

	Eastbound			Westbound			Northbound			Southbound			
Time Period	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
16:00 - 16:15	0	0	0	7	0	28	53	75	0	0	103	14	280
16:15 - 16:30	2	4	1	6	4	26	35	72	0	0	93	16	259
16:30 - 16:45	2	2	1	5	2	27	45	56	0	0	93	11	244
16:45 - 17:00	1	2	0	8	0	25	62	71	0	0	82	17	268
17:00 - 17:15	0	0	0	3	1	31	57	90	0	0	76	13	271
17:15 - 17:30	0	0	0	3	0	22	65	71	0	0	80	12	253
17:30 - 17:45	0	0	0	7	0	31	46	59	0	0	64	14	221
17:45 - 18:00	0	0	0	8	0	24	42	51	0	0	44	22	191
Movement Totals	5	8	2	47	7	214	405	545	0	0	635	119	1987
Enter Totals	15			268			950			754			
Exit Totals	532			7			594			854			

Two-Hour Totals

Light Trucks	0	0	0	0	0	6	10	5	0	0	7	0	28
Medium Trucks	0	0	0	0	0	0	2	0	0	0	0	0	2
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	1	0	1
% Trucks	0.0%	0.0%	0.0%	0.0%	0.0%	2.8%	3.0%	0.9%	NA	NA	1.3%	0.0%	1.6%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	8	0	0	7	1	1	1	0	0	4	0	22

	South	West	East	North	
Pedestrians	27	0	0	0	27

Peak Hour Information

Peak Hour 16:00 17:00

	Eastbound			Westbound			Northbound			Southbound			
	Right	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
Movement Total	5	8	2	26	6	106	195	274	0	0	371	58	1051
Peak Hour Factor	0.63	0.50	0.50	0.81	0.38	0.95	0.79	0.91	NA	NA	0.90	0.85	0.94
Enter Totals	15			138			469			429			
Peak Hour Factor	0.54			0.96			0.88			0.92			
Exit Totals	261			6			302			482			
Peak Hour Factor	0.81			0.38			0.92			0.92			
Light Trucks	0	0	0	0	0	3	6	4	0	0	6	0	19
Medium Trucks	0	0	0	0	0	0	2	0	0	0	0	0	2
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	1	0	1
% Trucks	0.0%	0.0%	0.0%	0.0%	0.0%	2.8%	4.1%	1.5%	NA	NA	1.9%	0.0%	2.1%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	8	0	0	6	1	0	1	0	0	2	0	18

	South	West	East	North	
Pedestrians	14	0	0	0	14

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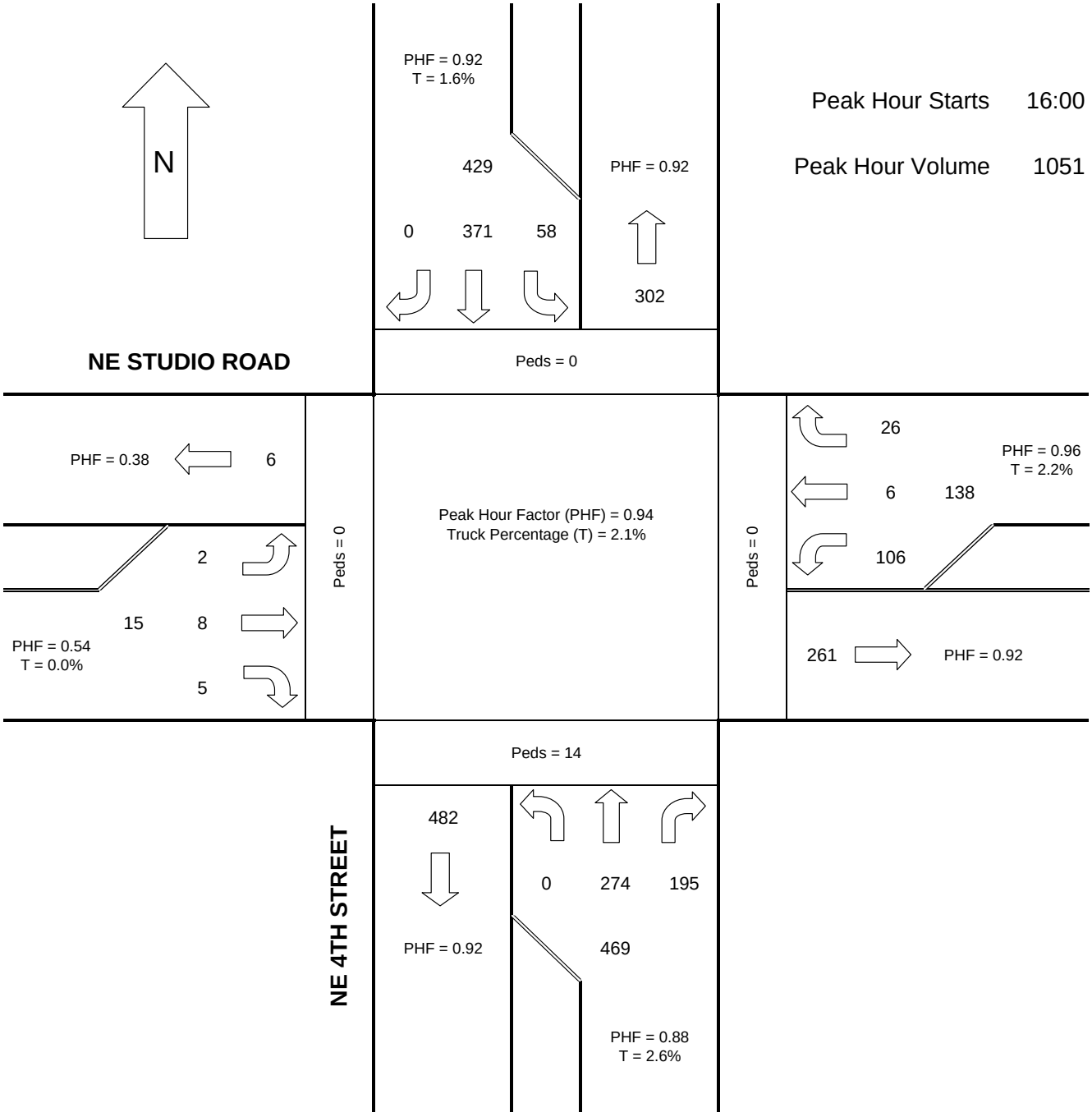
Intersection Turning Movement

Peak Hour Diagram

Location NE STUDIO ROAD AT NE 4TH STREET
Date 1/2/2007
Day of Week Tuesday
Time Begin 16:00
Reviewed By: BM



Peak Hour Starts 16:00

Peak Hour Volume 1051

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Intersection Turning Movement

Summary Report

Location NE REVERE AVENUE AT NE 4TH STREET
Date 1/2/2007
Day of Week Tuesday
Time Begin 16:00
Reviewed By: BV

	Eastbound			Westbound			Northbound			Southbound			
Time Period	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
16:00 - 16:15	23	67	49	29	50	3	7	42	13	52	46	28	409
16:15 - 16:30	30	68	45	25	49	4	8	38	11	46	39	29	392
16:30 - 16:45	15	61	44	20	62	4	6	33	12	51	35	36	379
16:45 - 17:00	17	52	51	22	67	3	4	51	17	47	27	29	387
17:00 - 17:15	37	71	57	18	66	8	13	53	15	54	29	26	447
17:15 - 17:30	23	79	70	24	56	5	15	43	10	36	35	33	429
17:30 - 17:45	5	43	40	16	43	2	6	37	12	43	19	33	299
17:45 - 18:00	7	43	35	17	41	5	7	30	8	27	28	26	274
Movement Totals	157	484	391	171	434	34	66	327	98	356	258	240	3016
Enter Totals	1032			639			491			854			
Exit Totals	790			888			889			449			

Two-Hour Totals

Light Trucks	2	1	5	1	3	0	0	9	1	4	12	3	41
Medium Trucks	0	0	3	0	0	0	0	0	0	0	0	0	3
Heavy Trucks	0	0	1	0	0	0	0	0	0	1	0	0	2
% Trucks	1.3%	0.2%	2.3%	0.6%	0.7%	0.0%	0.0%	2.8%	1.0%	1.4%	4.7%	1.3%	1.5%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

	South	West	East	North	
Pedestrians	0	4	1	3	8

Peak Hour Information

Peak Hour 16:30 17:30

	Eastbound			Westbound			Northbound			Southbound			
	Right	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
Movement Total	92	263	222	84	251	20	38	180	54	188	126	124	1642
Peak Hour Factor	0.62	0.83	0.79	0.88	0.94	0.63	0.63	0.85	0.79	0.87	0.90	0.86	0.92

Enter Totals	577	355	272	438
Peak Hour Factor	0.84	0.96	0.84	0.90

Exit Totals	425	493	486	238
Peak Hour Factor	0.84	0.91	0.89	0.80

Light Trucks	2	1	4	1	2	0	0	3	1	4	6	2	26
Medium Trucks	0	0	2	0	0	0	0	0	0	0	0	0	2
Heavy Trucks	0	0	0	0	0	0	0	0	0	1	0	0	1
% Trucks	2.2%	0.4%	2.7%	1.2%	0.8%	0.0%	0.0%	1.7%	1.9%	2.7%	4.8%	1.6%	1.8%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

	South	West	East	North	
Pedestrians	0	1	1	1	3

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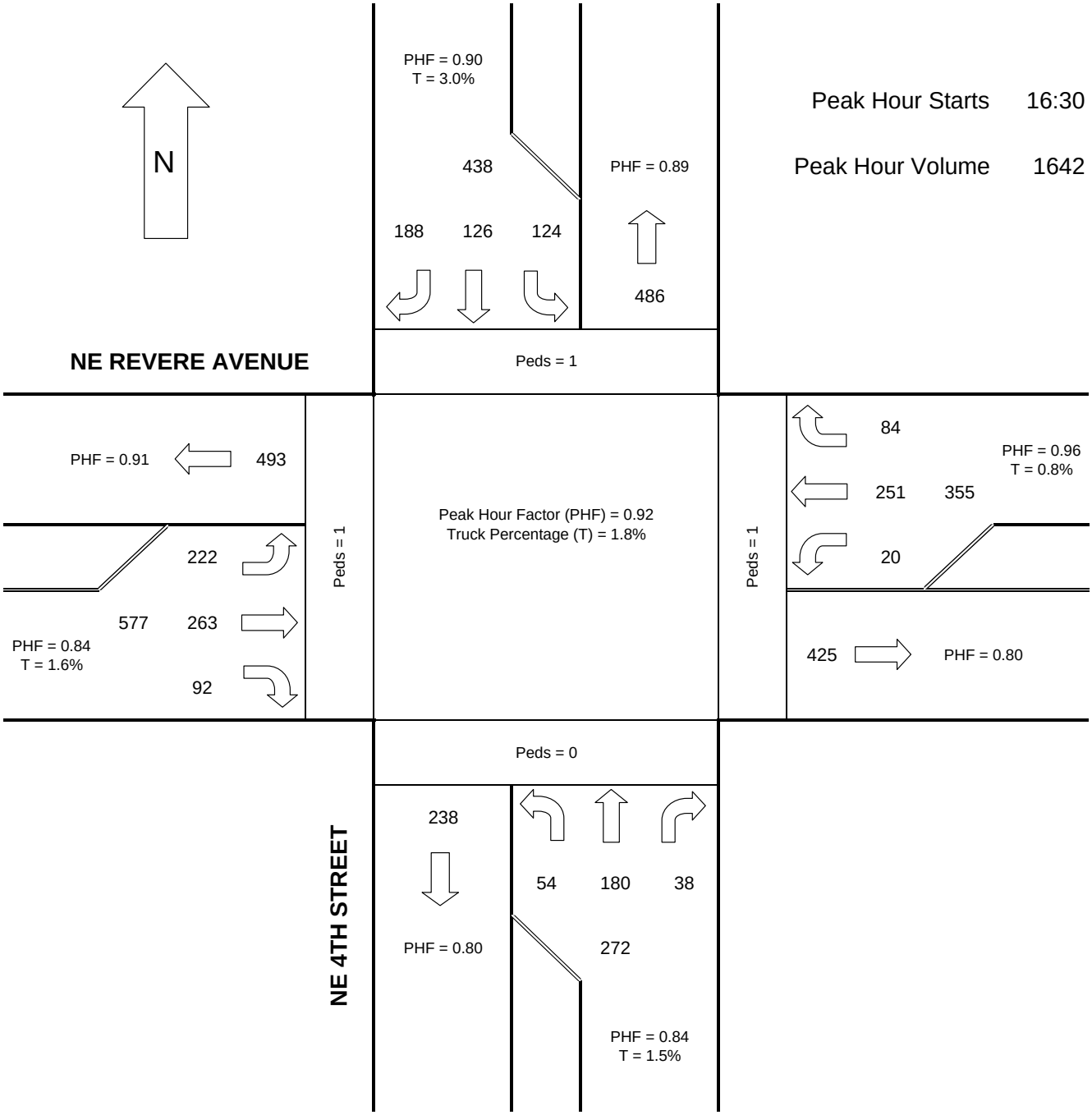
Intersection Turning Movement

Peak Hour Diagram

Location NE REVERE AVENUE AT NE 4TH STREET
Date 1/2/2007
Day of Week Tuesday
Time Begin 16:00
Reviewed By: BV



Peak Hour Starts 16:30

Peak Hour Volume 1642

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Intersection Turning Movement

Summary Report

Location OLNEY AVENUE AT 4TH STREET
Date 1/2/2007
Day of Week Tuesday
Time Begin 16:00
Reviewed By: BV

	Eastbound			Westbound			Northbound			Southbound			
Time Period	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
16:00 - 16:15	6	78	14	5	72	10	8	35	6	25	36	24	319
16:15 - 16:30	4	66	18	11	61	8	18	40	12	22	32	29	321
16:30 - 16:45	8	49	13	7	61	14	20	29	4	17	22	14	258
16:45 - 17:00	6	67	17	5	55	5	8	42	10	13	22	25	275
17:00 - 17:15	9	76	26	10	78	8	8	54	7	12	24	32	344
17:15 - 17:30	3	71	16	3	65	5	10	35	4	14	26	29	281
17:30 - 17:45	3	58	8	8	67	9	4	27	6	12	18	18	238
17:45 - 18:00	3	48	11	4	72	7	4	20	3	11	19	10	212
Movement Totals	42	513	123	53	531	66	80	282	52	126	199	181	2248
Enter Totals		678			650			414			506		
Exit Totals		774			709			458			307		

Two-Hour Totals

Light Trucks	0	2	5	0	2	0	0	3	0	6	4	3	25
Medium Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Trucks	0.0%	0.4%	4.1%	0.0%	0.4%	0.0%	0.0%	1.1%	0.0%	4.8%	2.0%	1.7%	1.1%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

	South	West	East	North	
Pedestrians	6	6	4	10	26

Peak Hour Information

Peak Hour 16:15 17:15

	Eastbound			Westbound			Northbound			Southbound			
	Right	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
Movement Total	27	258	74	33	255	35	54	165	33	64	100	100	1198
Peak Hour Factor	0.75	0.85	0.71	0.75	0.82	0.63	0.68	0.76	0.69	0.73	0.78	0.78	0.87

Enter Totals	359	323	252	264
Peak Hour Factor	0.81	0.84	0.90	0.80

Exit Totals	412	352	272	162
Peak Hour Factor	0.89	0.91	0.76	0.92

Light Trucks	0	1	2	0	0	0	0	2	0	3	2	0	10
Medium Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Trucks	0.0%	0.4%	2.7%	0.0%	0.0%	0.0%	0.0%	1.2%	0.0%	4.7%	2.0%	0.0%	0.8%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

	South	West	East	North	
Pedestrians	4	4	2	6	16

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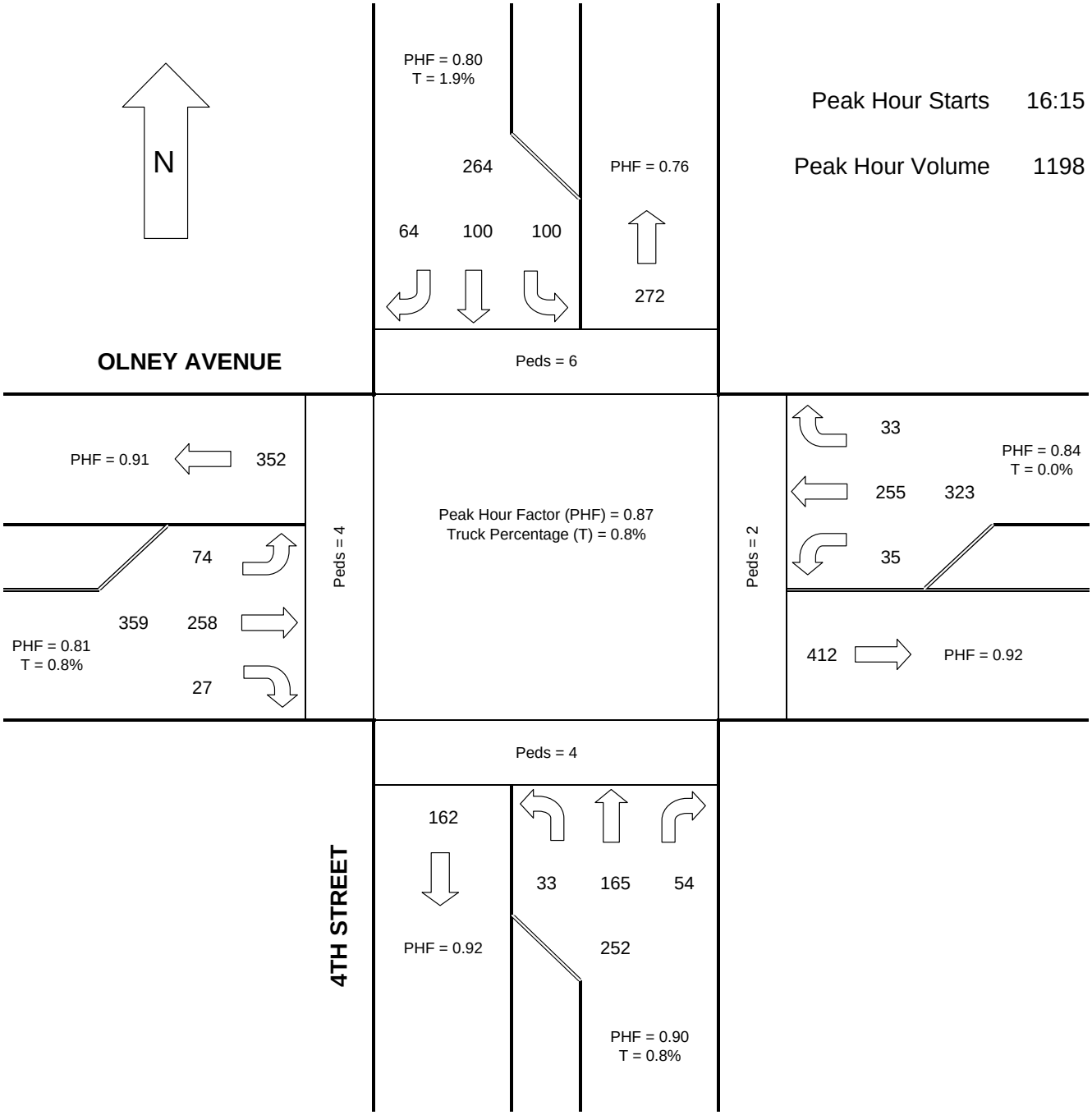
Intersection Turning Movement

Peak Hour Diagram

Location OLNEY AVENUE AT 4TH STREET
Date 1/2/2007
Day of Week Tuesday
Time Begin 16:00
Reviewed By: BV



Peak Hour Starts 16:15

Peak Hour Volume 1198

TRAFSTATS
PO Box 13699
Salem, OR 97309
Tel: (503) 646-2942
Fax: (503) 526-0628

Intersection Turning Movement

Summary Report

Location NW LAFAYETTE AVENUE AT BEND PARKWAY
Date 1/3/2007
Day of Week Wednesday
Time Begin 16:00
Reviewed By: TM

	Eastbound			Westbound			Northbound			Southbound			
Time Period	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
16:00 - 16:15	19	0	0	0	0	0	0	468	0	12	486	0	985
16:15 - 16:30	12	0	0	0	0	0	0	409	0	14	421	0	856
16:30 - 16:45	22	0	0	0	0	0	0	451	0	17	474	0	964
16:45 - 17:00	14	0	0	0	0	0	0	417	0	12	487	0	930
17:00 - 17:15	41	0	0	0	0	0	0	561	0	9	550	0	1161
17:15 - 17:30	21	0	0	0	0	0	0	463	0	14	498	0	996
17:30 - 17:45	26	0	0	0	0	0	0	337	0	6	437	0	806
17:45 - 18:00	11	0	0	0	0	0	0	313	0	11	366	0	701
Movement Totals	166	0	0	0	0	0	0	3419	0	95	3719	0	7399
Enter Totals	166			0			3419			3814			
Exit Totals	0			95			3419			3885			

Two-Hour Totals

Light Trucks	3	0	0	0	0	0	0	104	0	3	118	0	228
Medium Trucks	0	0	0	0	0	0	0	10	0	0	15	0	25
Heavy Trucks	0	0	0	0	0	0	0	38	0	0	72	0	110
% Trucks	1.8%	NA	NA	NA	NA	NA	NA	4.4%	NA	3.2%	5.5%	NA	4.9%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

	South	West	East	North	
Pedestrians	0	0	0	0	0

Peak Hour Information

Peak Hour 16:30 17:30

	Eastbound			Westbound			Northbound			Southbound			
	Right	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
Movement Total	98	0	0	0	0	0	0	1892	0	52	2009	0	4051
Peak Hour Factor	0.60	NA	NA	NA	NA	NA	NA	0.84	NA	0.76	0.91	NA	0.87
Enter Totals	98			0			1892			2061			
Peak Hour Factor	0.60			NA			0.84			0.92			
Exit Totals	0			52			1892			2107			
Peak Hour Factor	NA			0.76			0.84			0.89			
Light Trucks	1	0	0	0	0	0	0	40	0	2	49	0	92
Medium Trucks	0	0	0	0	0	0	0	5	0	0	4	0	9
Heavy Trucks	0	0	0	0	0	0	0	22	0	0	34	0	56
% Trucks	1.0%	NA	NA	NA	NA	NA	NA	3.5%	NA	3.8%	4.3%	NA	3.9%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

	South	West	East	North	
Pedestrians	0	0	0	0	0

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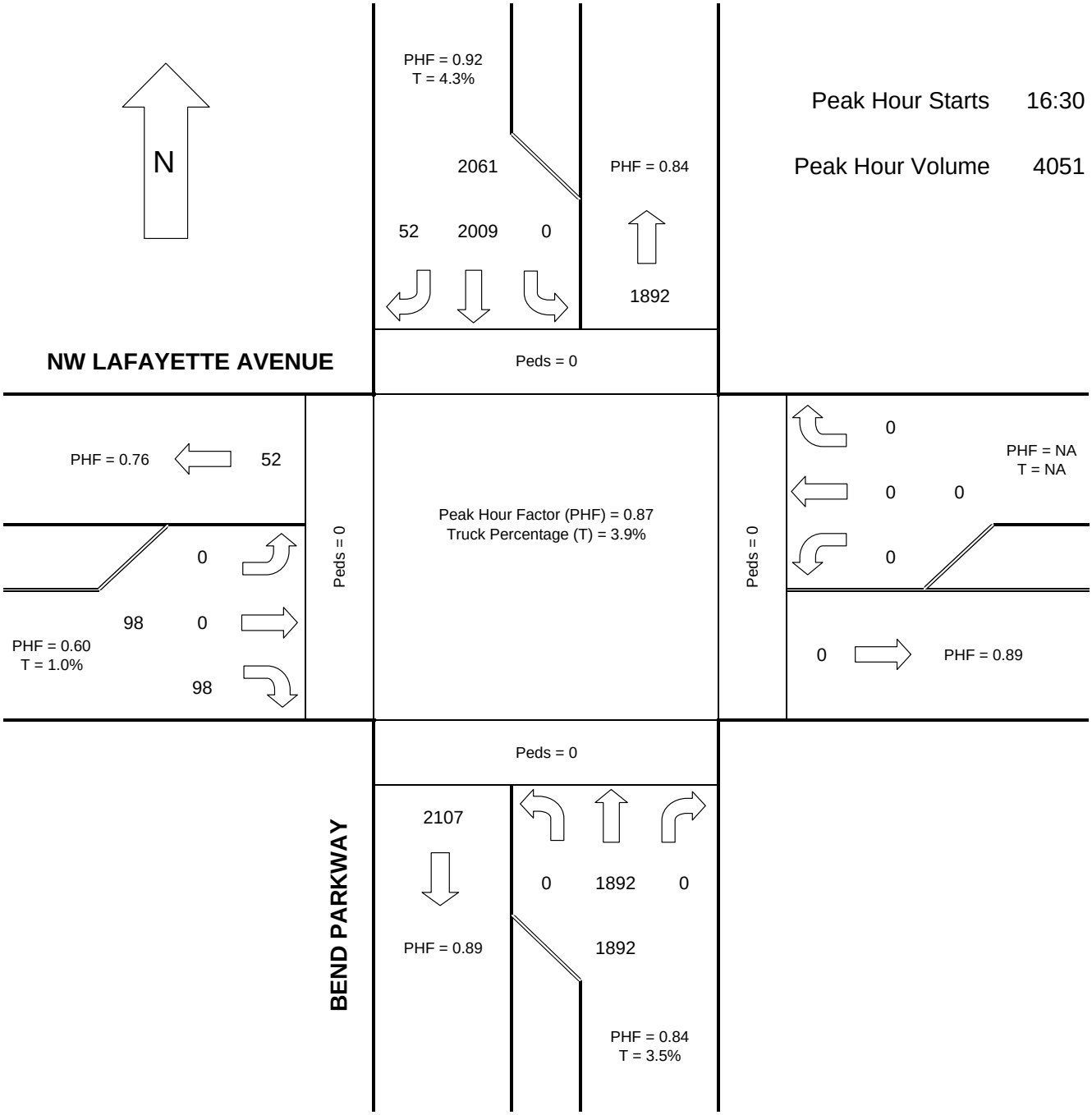
Intersection Turning Movement

Peak Hour Diagram

Location NW LAFAYETTE AVENUE AT BEND PARKWAY
Date 1/3/2007
Day of Week Wednesday
Time Begin 16:00
Reviewed By: TM



Peak Hour Starts 16:30

Peak Hour Volume 4051

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Intersection Turning Movement

Summary Report

Location WALL STREET AT BOND STREET
Date 1/2/2007
Day of Week Tuesday
Time Begin 16:00
Reviewed By: BV

	Eastbound			Westbound			Northbound			Southbound			
Time Period	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
16:00 - 16:15	0	25	0	4	95	0	84	0	13	6	0	0	227
16:15 - 16:30	1	43	3	4	106	0	87	1	12	2	0	3	262
16:30 - 16:45	0	29	3	2	114	0	66	2	8	10	0	3	237
16:45 - 17:00	0	33	1	2	93	0	64	1	10	7	0	3	214
17:00 - 17:15	0	28	1	0	91	0	92	2	12	8	0	5	239
17:15 - 17:30	0	23	1	0	102	0	76	1	17	6	0	2	228
17:30 - 17:45	0	28	1	0	76	0	68	0	5	3	0	1	182
17:45 - 18:00	0	27	2	1	89	0	52	0	6	3	0	2	182
Movement Totals	1	236	12	13	766	0	589	7	83	45	0	19	1771
Enter Totals	249			779			679			64			
Exit Totals	844			894			32			1			

Two-Hour Totals

Light Trucks	0	2	0	0	5	0	5	0	0	0	0	0	12
Medium Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Trucks	0.0%	0.8%	0.0%	0.0%	0.7%	NA	0.8%	0.0%	0.0%	0.0%	NA	0.0%	0.7%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

	South	West	East	North	
Pedestrians	8	2	0	13	23

Peak Hour Information

Peak Hour 16:15 17:15

	Eastbound			Westbound			Northbound			Southbound			
	Right	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
Movement Total	1	133	8	8	404	0	309	6	42	27	0	14	952
Peak Hour Factor	0.25	0.77	0.67	0.50	0.89	NA	0.84	0.75	0.88	0.68	NA	0.70	0.91
Enter Totals	142			412			357			41			
Peak Hour Factor	0.76			0.89			0.84			0.79			
Exit Totals	456			473			22			1			
Peak Hour Factor	0.86			0.90			0.69			0.25			
Light Trucks	0	2	0	0	4	0	3	0	0	0	0	0	9
Medium Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Trucks	0.0%	1.5%	0.0%	0.0%	1.0%	NA	1.0%	0.0%	0.0%	0.0%	NA	0.0%	0.9%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

	South	West	East	North	
Pedestrians	2	2	0	7	11

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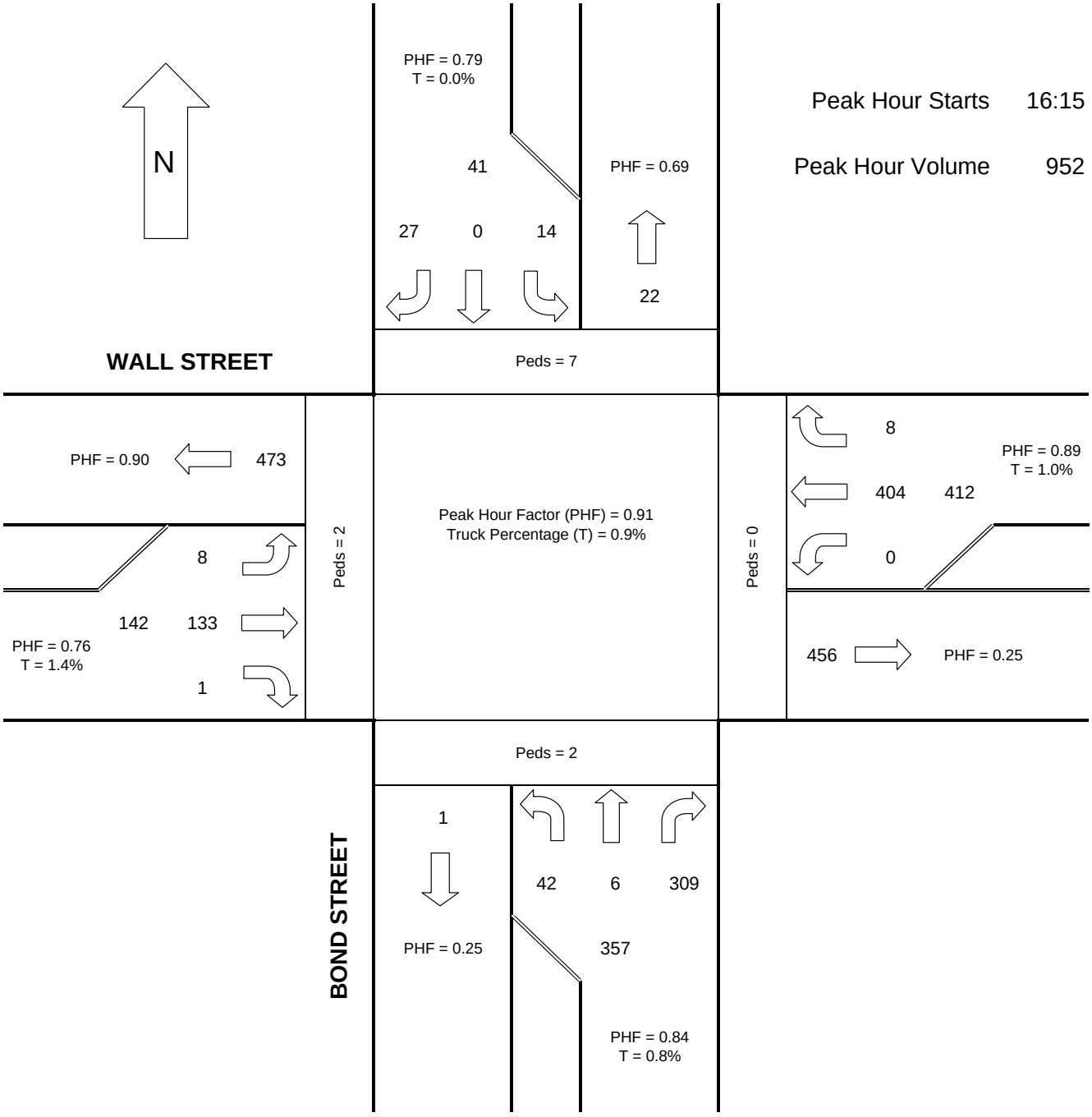
Intersection Turning Movement

Peak Hour Diagram

Location WALL STREET AT BOND STREET
Date 1/2/2007
Day of Week Tuesday
Time Begin 16:00
Reviewed By: BV



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Intersection Turning Movement

Summary Report

Location NE GREENWOOD AVENUE AT NE 4TH STREET
Date 1/4/2007
Day of Week Thursday
Time Begin 16:00
Reviewed By: BV

	Eastbound			Westbound			Northbound			Southbound			
Time Period	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
16:00 - 16:15	0	205	1	22	207	13	17	0	0	20	0	0	485
16:15 - 16:30	4	242	4	31	198	10	23	0	0	31	0	0	543
16:30 - 16:45	4	205	4	22	192	12	16	1	0	16	0	0	472
16:45 - 17:00	4	253	2	18	180	13	28	0	0	27	1	1	527
17:00 - 17:15	4	243	12	27	177	13	25	1	0	37	0	0	539
17:15 - 17:30	6	244	7	22	206	10	47	0	0	13	0	0	555
17:30 - 17:45	0	203	5	17	191	10	18	0	0	15	2	0	461
17:45 - 18:00	4	185	1	7	186	10	14	0	0	6	0	0	413
Movement Totals	26	1780	36	166	1537	91	188	2	0	165	3	1	3995
Enter Totals		1842			1794			190			169		
Exit Totals		1969			1702			204			120		

Two-Hour Totals

Light Trucks	6	25	1	4	11	1	1	0	0	5	0	0	54
Medium Trucks	0	0	0	0	4	0	0	0	0	0	0	0	4
Heavy Trucks	0	12	0	0	12	0	0	0	0	0	0	0	24
% Trucks	23.1%	2.1%	2.8%	2.4%	1.8%	1.1%	0.5%	0.0%	NA	3.0%	0.0%	0.0%	2.1%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

	South	West	East	North	
Pedestrians	3	4	0	6	13

Peak Hour Information

Peak Hour 16:30 17:30

	Eastbound			Westbound			Northbound			Southbound			
	Right	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
Movement Total	18	945	25	89	755	48	116	2	0	93	1	1	2093
Peak Hour Factor	0.75	0.93	0.52	0.82	0.92	0.92	0.62	0.50	NA	0.63	0.25	0.25	0.94

Enter Totals	988	892	118	95
Peak Hour Factor	0.95	0.94	0.63	0.64

Exit Totals	1062	848	116	67
Peak Hour Factor	0.91	0.97	0.73	0.93

Light Trucks	2	12	1	2	7	0	1	0	0	2	0	0	27
Medium Trucks	0	0	0	0	3	0	0	0	0	0	0	0	3
Heavy Trucks	0	9	0	0	9	0	0	0	0	0	0	0	18
% Trucks	11.1%	2.2%	4.0%	2.2%	2.5%	0.0%	0.9%	0.0%	NA	2.2%	0.0%	0.0%	2.3%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

	South	West	East	North	
Pedestrians	2	4	0	2	8

TRAFSTATS
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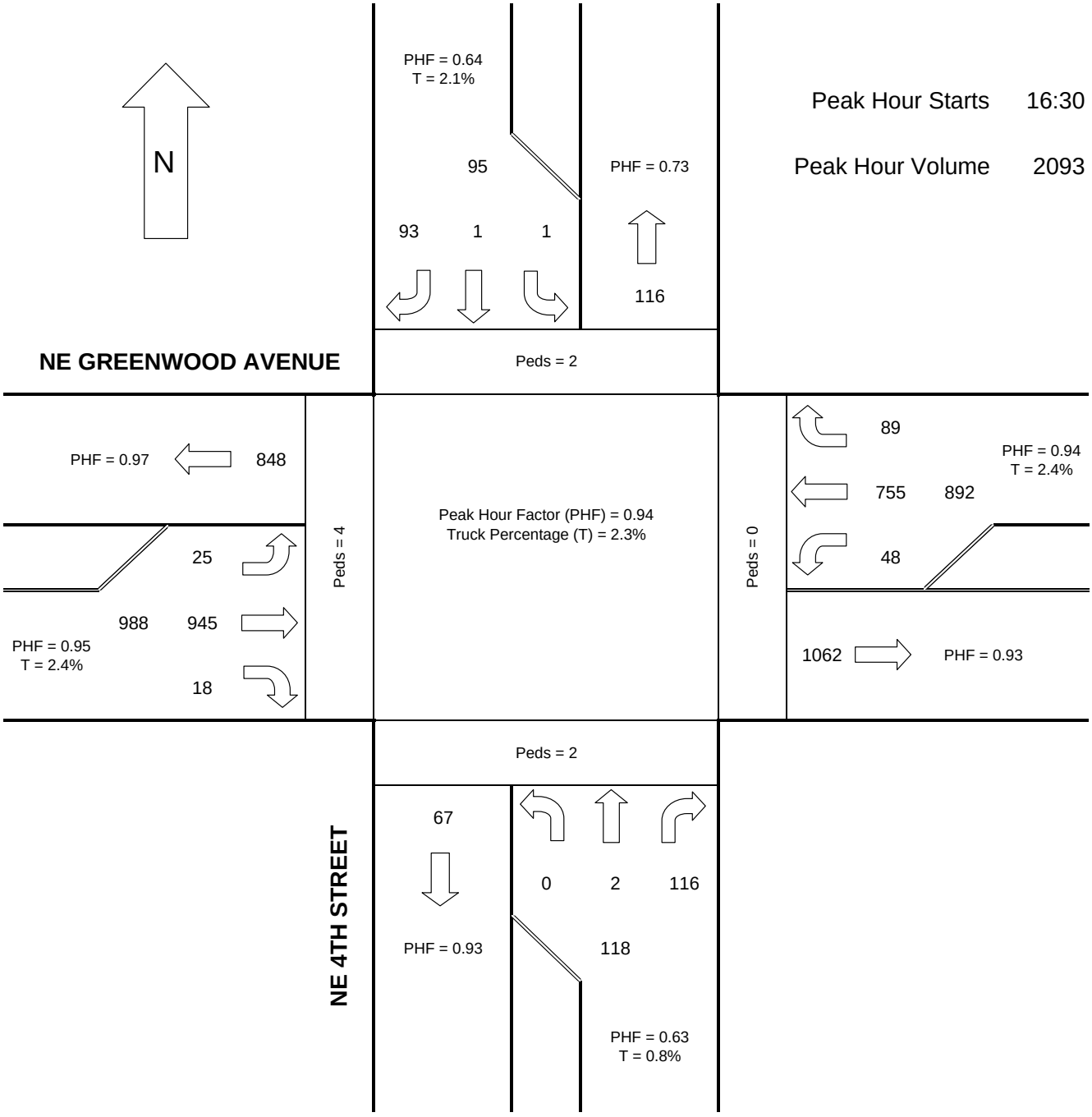
Intersection Turning Movement

Peak Hour Diagram

Location NE GREENWOOD AVENUE AT NE 4TH STREET
Date 1/4/2007
Day of Week Thursday
Time Begin 16:00
Reviewed By: BV



Peak Hour Starts 16:30

Peak Hour Volume 2093

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Intersection Turning Movement

Summary Report

Location NE HAWTHORNE AVENUE AT NE 3RD STREET
Date 1/4/2007
Day of Week Thursday
Time Begin 16:00
Reviewed By: TM

	Eastbound			Westbound			Northbound			Southbound			
Time Period	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
16:00 - 16:15	8	0	0	11	0	0	2	239	3	6	223	6	498
16:15 - 16:30	6	0	3	6	3	0	7	246	2	6	219	6	504
16:30 - 16:45	9	1	1	13	0	0	6	249	1	4	206	8	498
16:45 - 17:00	7	0	0	6	0	0	7	253	1	4	182	5	465
17:00 - 17:15	7	1	6	13	0	0	4	235	3	4	191	7	471
17:15 - 17:30	7	0	1	15	0	1	2	242	2	3	198	10	481
17:30 - 17:45	5	0	1	9	0	0	5	253	2	0	243	6	524
17:45 - 18:00	0	0	1	8	0	1	4	193	1	0	161	2	371
Movement Totals	49	2	13	81	3	2	37	1910	15	27	1623	50	3812
Enter Totals	64			86			1962			1700			
Exit Totals	89			45			2004			1674			

Two-Hour Totals

Light Trucks	3	0	0	14	0	0	13	48	3	0	38	4	123
Medium Trucks	0	0	0	0	0	0	1	0	0	0	2	0	3
Heavy Trucks	0	0	0	0	0	0	0	7	0	0	5	0	12
% Trucks	6.1%	0.0%	0.0%	17.3%	0.0%	0.0%	37.8%	2.9%	20.0%	0.0%	2.8%	8.0%	3.6%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	1	0	1

	South	West	East	North	
Pedestrians	0	0	0	0	0

Peak Hour Information

Peak Hour 16:00 17:00

	Eastbound			Westbound			Northbound			Southbound			
	Right	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
Movement Total	30	1	4	36	3	0	22	987	7	20	830	25	1965
Peak Hour Factor	0.83	0.25	0.33	0.69	0.25	NA	0.79	0.98	0.58	0.83	0.93	0.78	0.97

Enter Totals	35	39	1016	875
Peak Hour Factor	0.80	0.75	0.97	0.93

Exit Totals	48	30	1027	860
Peak Hour Factor	0.80	0.68	0.98	0.93

Light Trucks	3	0	0	6	0	0	6	34	2	0	32	1	84
Medium Trucks	0	0	0	0	0	0	1	0	0	0	1	0	2
Heavy Trucks	0	0	0	0	0	0	0	6	0	0	3	0	9
% Trucks	10.0%	0.0%	0.0%	16.7%	0.0%	NA	31.8%	4.1%	28.6%	0.0%	4.3%	4.0%	4.8%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	1	0	1

	South	West	East	North	
Pedestrians	0	0	0	0	0

TRAFSTATS
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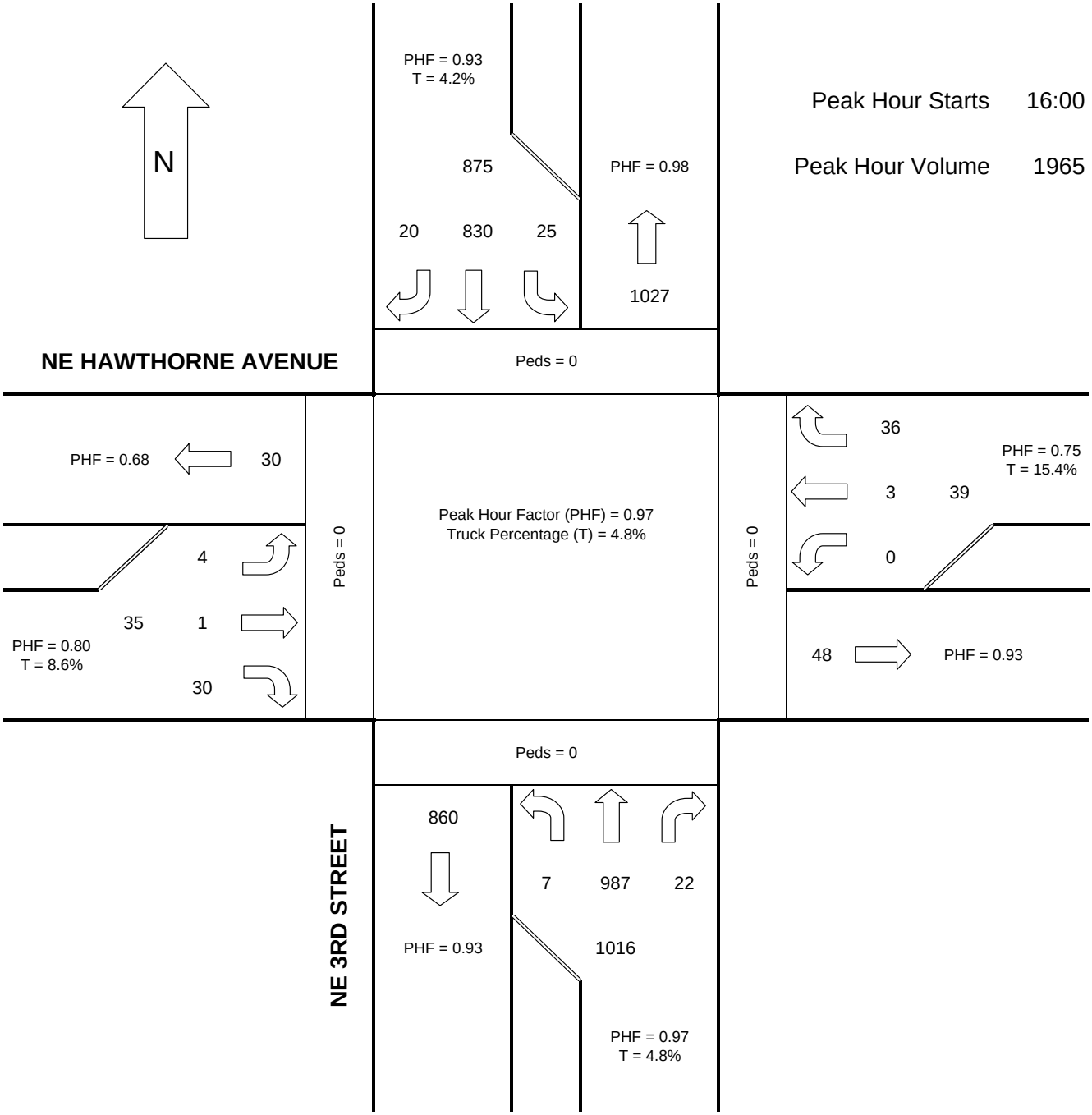
Intersection Turning Movement

Peak Hour Diagram

Location NE HAWTHORNE AVENUE AT NE 3RD STREET
Date 1/4/2007
Day of Week Thursday
Time Begin 16:00
Reviewed By: TM



Peak Hour Starts 16:00

Peak Hour Volume 1965

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Intersection Turning Movement

Summary Report

Location NE HAWTHORNE AVENUE AT NE 4TH STREET
Date 1/4/2007
Day of Week Thursday
Time Begin 16:00
Reviewed By: BV

	Eastbound			Westbound			Northbound			Southbound			
Time Period	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
16:00 - 16:15	1	5	5	0	1	0	0	13	3	4	26	0	58
16:15 - 16:30	6	6	8	1	3	1	1	14	2	7	18	2	69
16:30 - 16:45	6	3	5	1	1	0	1	18	2	7	26	1	71
16:45 - 17:00	3	7	8	0	1	2	0	12	3	4	25	2	67
17:00 - 17:15	6	7	15	1	3	1	1	20	3	6	24	2	89
17:15 - 17:30	5	2	9	0	5	1	0	15	5	7	15	1	65
17:30 - 17:45	4	6	9	0	5	0	0	8	4	3	11	1	51
17:45 - 18:00	3	2	4	0	3	0	1	7	1	3	16	0	40
Movement Totals	34	38	63	3	22	5	4	107	23	41	161	9	510
Enter Totals	135			30			134			211			
Exit Totals	51			86			173			200			

Two-Hour Totals

Light Trucks	12	4	1	0	0	0	0	1	4	7	0	0	29
Medium Trucks	1	0	0	0	0	0	0	0	0	0	0	0	1
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Trucks	38.2%	10.5%	1.6%	0.0%	0.0%	0.0%	0.0%	0.9%	17.4%	17.1%	0.0%	0.0%	5.9%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

	South	West	East	North	
Pedestrians	0	4	0	4	8

Peak Hour Information

Peak Hour 16:15 17:15

	Eastbound			Westbound			Northbound			Southbound			
	Right	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
Movement Total	21	23	36	3	8	4	3	64	10	24	93	7	296
Peak Hour Factor	0.88	0.82	0.60	0.75	0.67	0.50	0.75	0.80	0.83	0.86	0.89	0.88	0.83
Enter Totals	80			15			77			124			
Peak Hour Factor	0.71			0.75			0.80			0.91			
Exit Totals	33			42			103			118			
Peak Hour Factor	0.83			0.88			0.72			0.92			
Light Trucks	6	2	0	0	0	0	0	0	2	4	0	0	14
Medium Trucks	1	0	0	0	0	0	0	0	0	0	0	0	1
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Trucks	33.3%	8.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	20.0%	16.7%	0.0%	0.0%	5.1%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

	South	West	East	North	
Pedestrians	0	3	0	4	7

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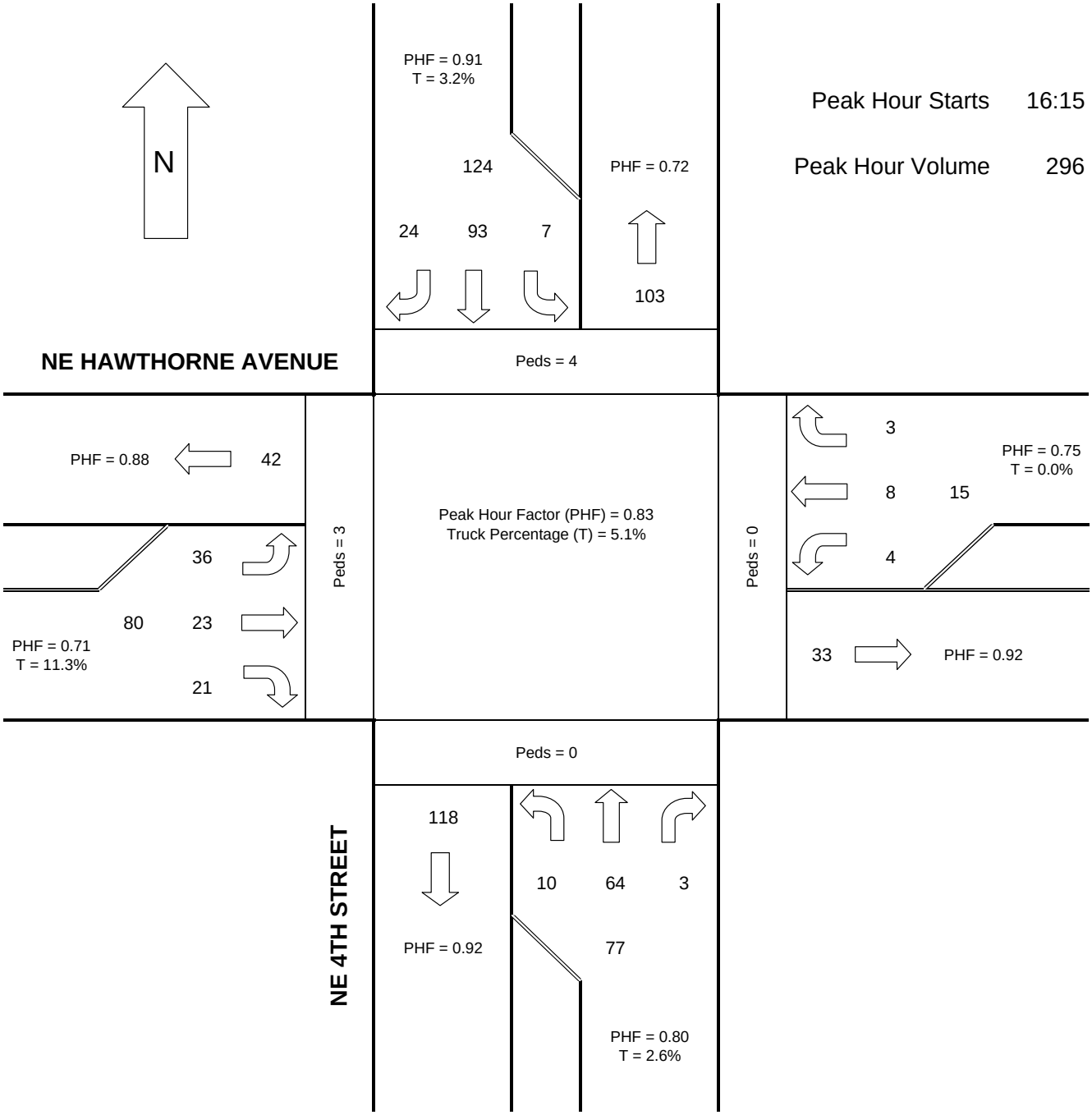
Intersection Turning Movement

Peak Hour Diagram

Location NE HAWTHORNE AVENUE AT NE 4TH STREET
Date 1/4/2007
Day of Week Thursday
Time Begin 16:00
Reviewed By: BV



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Intersection Turning Movement

Summary Report

Location NW HAWTHORNE AVENUE AT BEND PARKWAY
Date 1/3/2007
Day of Week Wednesday
Time Begin 16:00
Reviewed By: BV

	Eastbound			Westbound			Northbound			Southbound			
Time Period	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
16:00 - 16:15	44	0	0	0	0	0	0	469	0	49	481	0	1043
16:15 - 16:30	38	0	0	0	0	0	0	452	0	36	443	0	969
16:30 - 16:45	38	0	0	0	0	0	0	438	0	41	461	0	978
16:45 - 17:00	35	0	0	0	0	0	0	416	0	43	454	0	948
17:00 - 17:15	61	0	0	0	0	0	0	545	0	37	552	0	1195
17:15 - 17:30	40	0	0	0	0	0	0	462	0	41	474	0	1017
17:30 - 17:45	50	0	0	0	0	0	0	331	0	42	425	0	848
17:45 - 18:00	34	0	0	0	0	0	0	306	0	43	333	0	716
Movement Totals	340	0	0	0	0	0	0	3419	0	332	3623	0	7714
Enter Totals	340			0			3419			3955			
Exit Totals	0			332			3419			3963			

Two-Hour Totals

Light Trucks	1	0	0	0	0	0	0	56	0	15	57	0	129
Medium Trucks	0	0	0	0	0	0	0	16	0	2	19	0	37
Heavy Trucks	0	0	0	0	0	0	0	36	0	1	70	0	107
% Trucks	0.3%	NA	NA	NA	NA	NA	NA	3.2%	NA	5.4%	4.0%	NA	3.5%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

	South	West	East	North	
Pedestrians	0	0	0	0	0

Peak Hour Information

Peak Hour 16:30 17:30

	Eastbound			Westbound			Northbound			Southbound			
	Right	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
Movement Total	174	0	0	0	0	0	0	1861	0	162	1941	0	4138
Peak Hour Factor	0.71	NA	NA	NA	NA	NA	NA	0.85	NA	0.94	0.88	NA	0.87

Enter Totals	174	0	1861	2103
Peak Hour Factor	0.71	NA	0.85	0.89

Exit Totals	0	162	1861	2115
Peak Hour Factor	NA	0.94	0.85	0.86

Light Trucks	1	0	0	0	0	0	0	24	0	4	26	0	55
Medium Trucks	0	0	0	0	0	0	0	10	0	0	8	0	18
Heavy Trucks	0	0	0	0	0	0	0	21	0	1	33	0	55
% Trucks	0.6%	NA	NA	NA	NA	NA	NA	3.0%	NA	3.1%	3.5%	NA	3.1%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

	South	West	East	North	
Pedestrians	0	0	0	0	0

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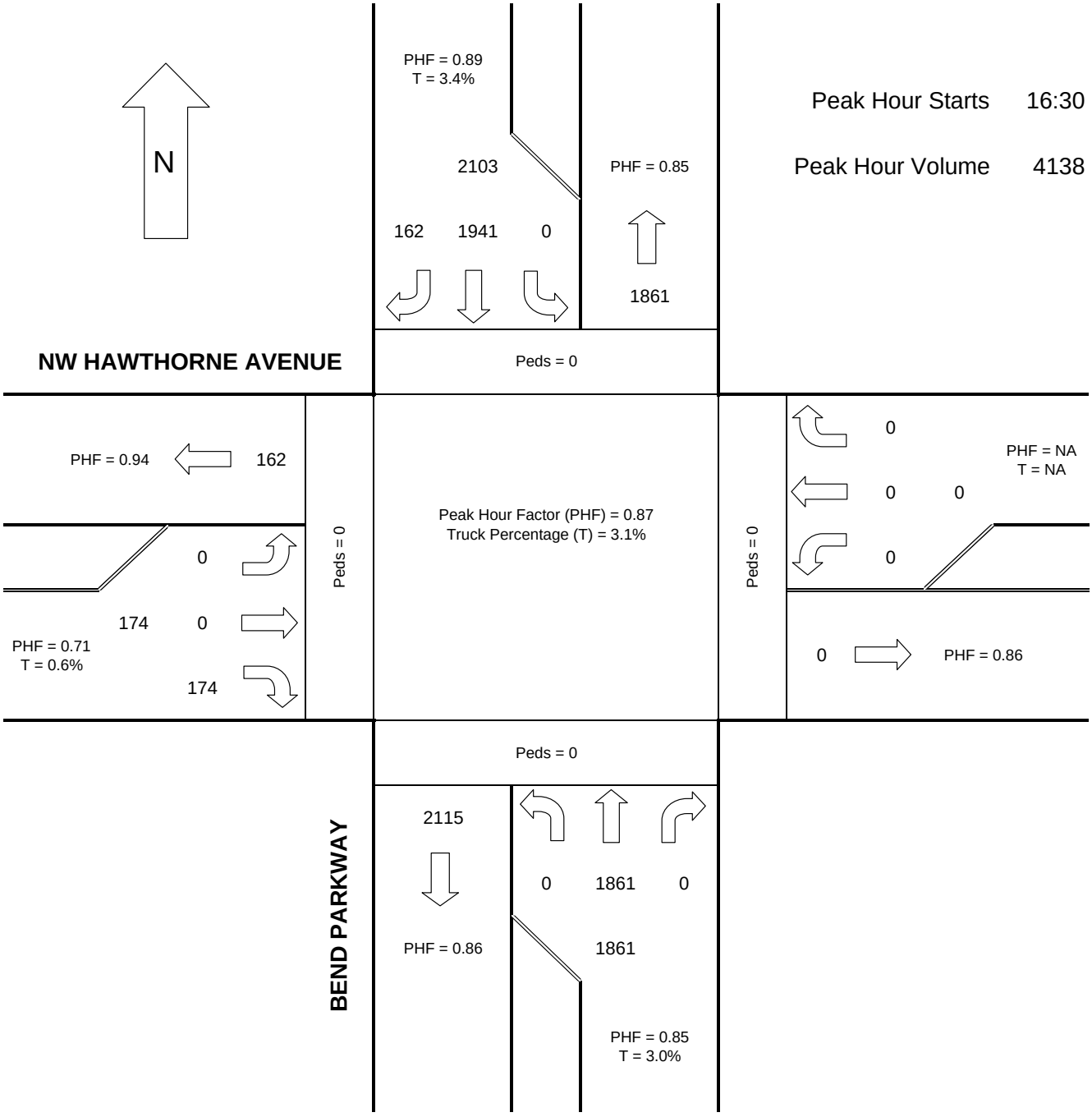
Intersection Turning Movement

Peak Hour Diagram

Location NW HAWTHORNE AVENUE AT BEND PARKWAY
Date 1/3/2007
Day of Week Wednesday
Time Begin 16:00
Reviewed By: BV



Peak Hour Starts	16:30
Peak Hour Volume	4138

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Intersection Turning Movement

Summary Report

Location NE FRANKLIN AVENUE AT NE 4TH STREET
Date 1/4/2007
Day of Week Thursday
Time Begin 16:00
Reviewed By: BV

	Eastbound			Westbound			Northbound			Southbound			
Time Period	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
16:00 - 16:15	9	121	8	1	89	1	7	2	4	25	5	1	273
16:15 - 16:30	8	109	9	5	75	6	5	4	5	16	1	3	246
16:30 - 16:45	9	124	13	2	84	6	11	4	5	28	4	4	294
16:45 - 17:00	5	90	12	3	81	3	5	4	4	21	3	2	233
17:00 - 17:15	10	139	14	2	87	4	12	6	5	38	2	2	321
17:15 - 17:30	5	133	14	1	88	1	3	3	6	18	1	3	276
17:30 - 17:45	4	90	13	2	72	3	12	3	4	23	2	1	229
17:45 - 18:00	3	75	6	2	52	2	5	2	5	22	2	3	179
Movement Totals	53	881	89	18	628	26	60	28	38	191	20	19	2051
Enter Totals	1023			672			126			230			
Exit Totals	960			857			135			99			

Two-Hour Totals

Light Trucks	0	8	0	4	4	0	2	0	1	13	0	0	32
Medium Trucks	1	1	0	0	1	0	0	0	0	0	1	0	4
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Trucks	1.9%	1.0%	0.0%	22.2%	0.8%	0.0%	3.3%	0.0%	2.6%	6.8%	5.0%	0.0%	1.8%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

	South	West	East	North	
Pedestrians	0	6	0	3	9

Peak Hour Information

Peak Hour 16:30 17:30

	Eastbound			Westbound			Northbound			Southbound			
	Right	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
Movement Total	29	486	53	8	340	14	31	17	20	105	10	11	1124
Peak Hour Factor	0.73	0.87	0.95	0.67	0.97	0.58	0.65	0.71	0.83	0.69	0.63	0.69	0.88

Enter Totals	568	362	68	126
Peak Hour Factor	0.87	0.97	0.74	0.75

Exit Totals	528	465	78	53
Peak Hour Factor	0.86	0.89	0.89	0.70

Light Trucks	0	5	0	1	2	0	1	0	0	6	0	0	15
Medium Trucks	1	0	0	0	1	0	0	0	0	0	1	0	3
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Trucks	3.4%	1.0%	0.0%	12.5%	0.9%	0.0%	3.2%	0.0%	0.0%	5.7%	10.0%	0.0%	1.6%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

	South	West	East	North	
Pedestrians	0	2	0	1	3

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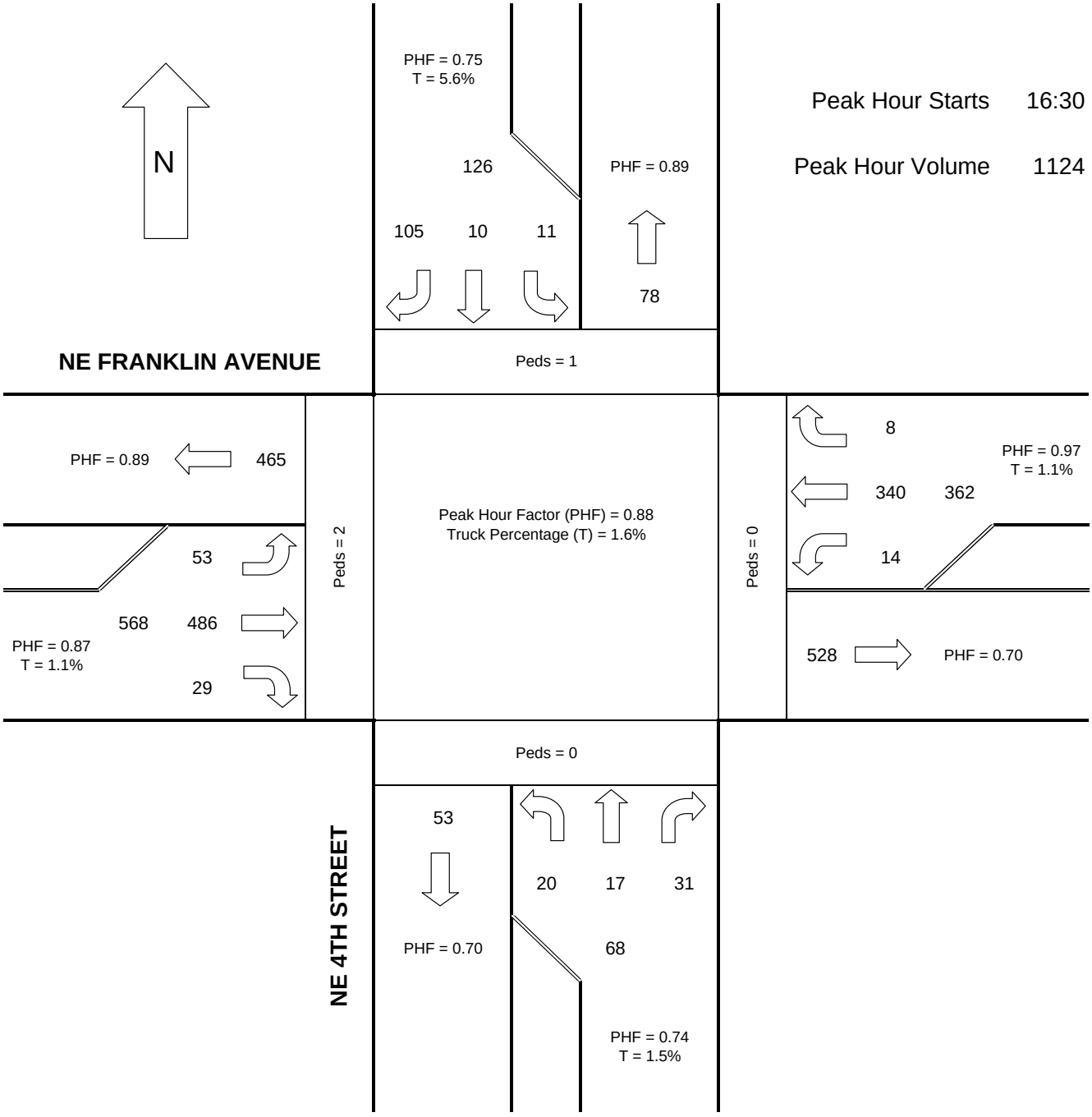
Intersection Turning Movement

Peak Hour Diagram

Location NE FRANKLIN AVENUE AT NE 4TH STREET
Date 1/4/2007
Day of Week Thursday
Time Begin 16:00
Reviewed By: BV



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Intersection Turning Movement

Summary Report

Location TUMALO AVENUE AT NW RIVERSIDE BOULEVARD
Date 1/3/2007
Day of Week Wednesday
Time Begin 16:00
Reviewed By: TM

	Eastbound			Westbound			Northbound			Southbound			
Time Period	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
16:00 - 16:15	1	32	68	0	23	1	0	2	2	78	2	3	212
16:15 - 16:30	4	31	58	0	36	0	0	2	9	99	5	0	244
16:30 - 16:45	6	40	66	0	32	0	1	1	7	100	6	6	265
16:45 - 17:00	4	38	50	2	28	0	1	1	9	111	8	2	254
17:00 - 17:15	7	37	50	1	52	1	0	1	11	93	4	1	258
17:15 - 17:30	7	35	70	0	47	0	0	1	14	88	6	1	269
17:30 - 17:45	6	35	45	0	40	0	1	4	12	80	6	4	233
17:45 - 18:00	5	27	52	1	26	1	1	1	5	63	7	1	190
Movement Totals	40	275	459	4	284	3	4	13	69	712	44	18	1925
Enter Totals		774			291			86			774		
Exit Totals		297			1065			476			87		

Two-Hour Totals

Light Trucks	0	3	23	0	2	0	0	0	1	14	1	1	45
Medium Trucks	0	0	1	0	0	0	0	0	0	0	0	0	1
Heavy Trucks	0	0	0	0	0	0	0	0	0	1	0	0	1
% Trucks	0.0%	1.1%	5.2%	0.0%	0.7%	0.0%	0.0%	0.0%	1.4%	2.1%	2.3%	5.6%	2.4%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

	South	West	East	North	
Pedestrians	0	0	0	0	0

Peak Hour Information

Peak Hour 16:30 17:30

	Eastbound			Westbound			Northbound			Southbound			
	Right	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
Movement Total	24	150	236	3	159	1	2	4	41	392	24	10	1046
Peak Hour Factor	0.86	0.94	0.84	0.38	0.76	0.25	0.50	1.00	0.73	0.88	0.75	0.42	0.97

Enter Totals	410	163	47	426
Peak Hour Factor	0.92	0.75	0.78	0.88

Exit Totals	162	592	243	49
Peak Hour Factor	0.86	0.95	0.86	0.94

Light Trucks	0	2	14	0	0	0	0	0	1	8	1	0	26
Medium Trucks	0	0	1	0	0	0	0	0	0	0	0	0	1
Heavy Trucks	0	0	0	0	0	0	0	0	0	1	0	0	1
% Trucks	0.0%	1.3%	6.4%	0.0%	0.0%	0.0%	0.0%	0.0%	2.4%	2.3%	4.2%	0.0%	2.7%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

	South	West	East	North	
Pedestrians	0	0	0	0	0

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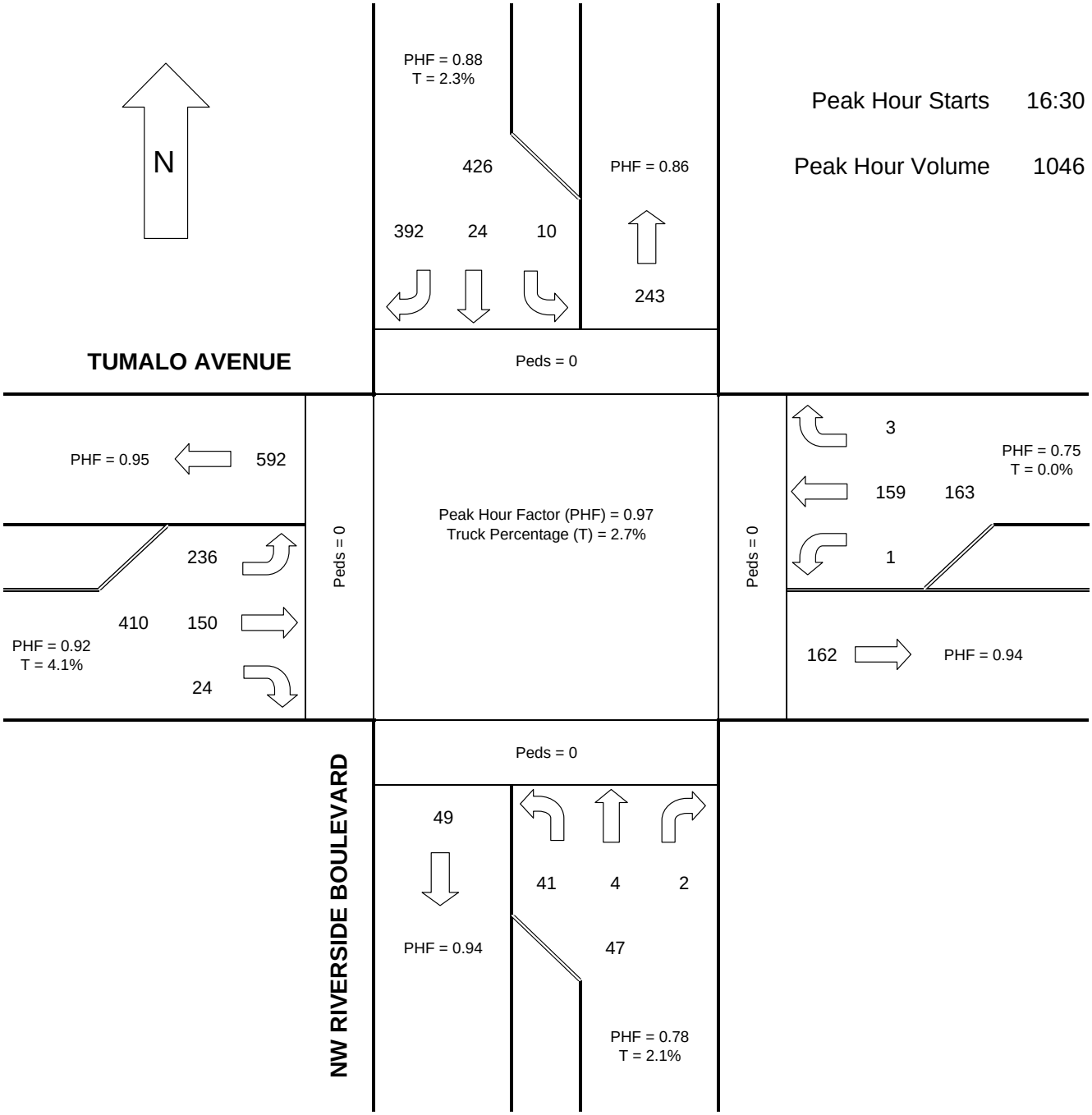
Intersection Turning Movement

Peak Hour Diagram

Location TUMALO AVENUE AT NW RIVERSIDE BOULEVARD
Date 1/3/2007
Day of Week Wednesday
Time Begin 16:00
Reviewed By: TM



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Intersection Turning Movement

Summary Report

Location COLORADO AVENUE AT BEND PARKWAY-NB RAMP
Date 1/3/2007
Day of Week Wednesday
Time Begin 16:00
Reviewed By: TM

	Eastbound			Westbound			Northbound			Southbound			
Time Period	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
16:00 - 16:15	0	36	141	69	31	0	0	0	0	34	0	3	314
16:15 - 16:30	0	47	135	67	31	0	0	0	0	42	0	5	327
16:30 - 16:45	0	34	121	78	43	0	0	0	0	48	0	1	325
16:45 - 17:00	0	33	119	63	37	0	0	0	0	39	0	4	295
17:00 - 17:15	0	44	179	129	50	0	0	0	0	39	0	1	442
17:15 - 17:30	0	49	167	69	21	0	0	0	0	39	0	4	349
17:30 - 17:45	0	36	103	53	31	0	0	0	0	28	0	0	251
17:45 - 18:00	0	26	64	44	20	0	0	0	0	28	0	5	187
Movement Totals	0	305	1029	572	264	0	0	0	0	297	0	23	2490
Enter Totals		1334			836			0			320		
Exit Totals		328			561			1601			0		

Two-Hour Totals

Light Trucks	0	13	23	23	9	0	0	0	0	6	0	2	76
Medium Trucks	0	2	8	0	0	0	0	0	0	0	0	1	11
Heavy Trucks	0	2	3	3	1	0	0	0	0	0	0	0	9
% Trucks	NA	5.6%	3.3%	4.5%	3.8%	NA	NA	NA	NA	2.0%	NA	13.0%	3.9%
Stopped Buses	0	0	1	0	0	0	0	0	0	0	0	0	1
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

	South	West	East	North	
Pedestrians	0	0	0	0	0

Peak Hour Information

Peak Hour 16:30 17:30

	Eastbound			Westbound			Northbound			Southbound			
	Right	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Totals**
Movement Total	0	160	586	339	151	0	0	0	0	165	0	10	1411
Peak Hour Factor	NA	0.82	0.82	0.66	0.76	NA	NA	NA	NA	0.86	NA	0.63	0.80
Enter Totals		746			490			0			175		
Peak Hour Factor		0.84			0.68			NA			0.89		
Exit Totals		170			316			925			0		
Peak Hour Factor		0.80			0.87			0.75			NA		
Light Trucks	0	8	13	9	3	0	0	0	0	1	0	1	35
Medium Trucks	0	1	3	0	0	0	0	0	0	0	0	0	4
Heavy Trucks	0	2	1	1	0	0	0	0	0	0	0	0	4
% Trucks	NA	6.9%	2.9%	2.9%	2.0%	NA	NA	NA	NA	0.6%	NA	10.0%	3.0%
Stopped Buses	0	0	1	0	0	0	0	0	0	0	0	0	1
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

	South	West	East	North	
Pedestrians	0	0	0	0	0

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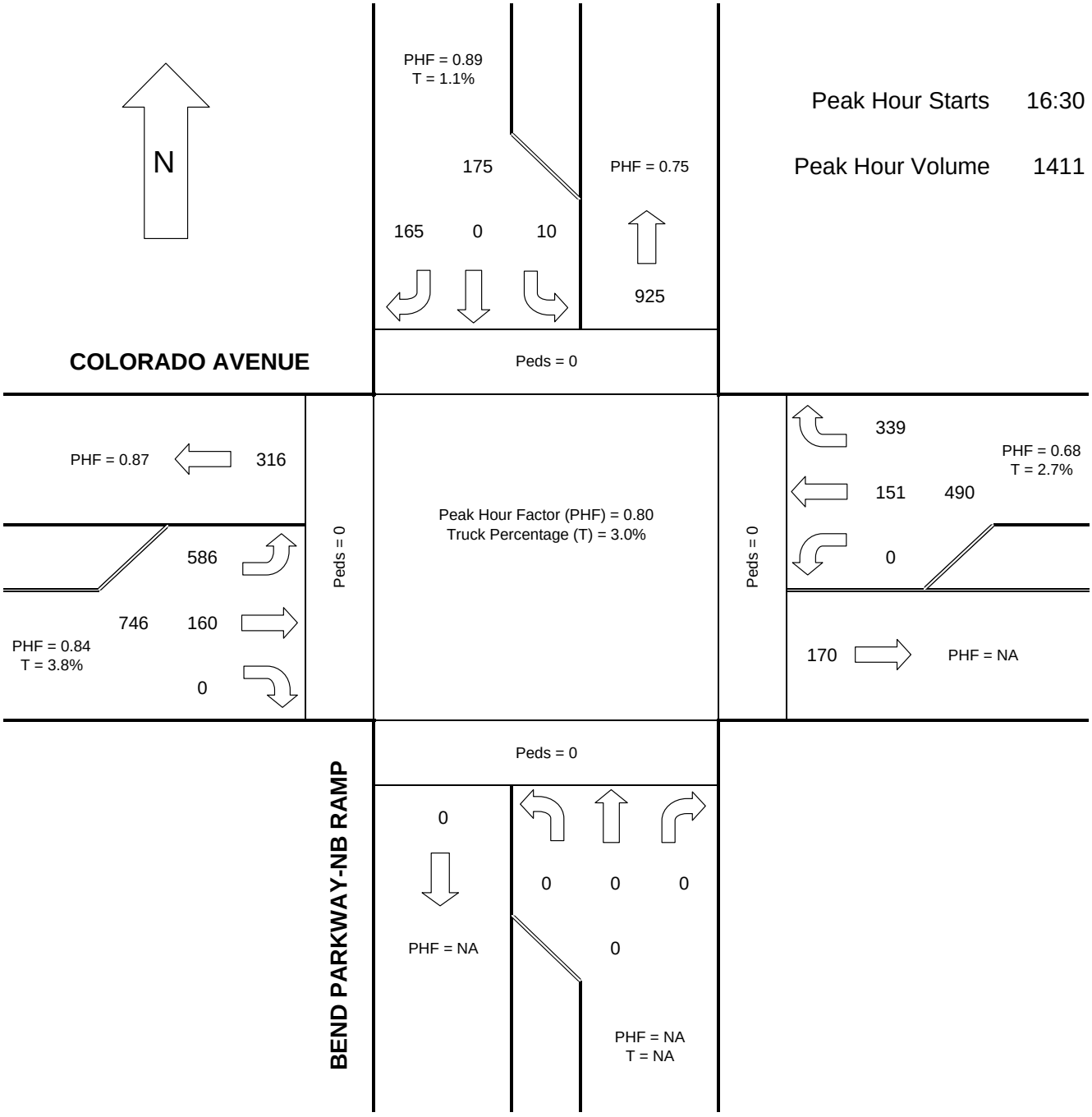
Intersection Turning Movement

Peak Hour Diagram

Location COLORADO AVENUE AT BEND PARKWAY-NB RAMP
Date 1/3/2007
Day of Week Wednesday
Time Begin 16:00
Reviewed By: TM



Peak Hour Starts 16:30

Peak Hour Volume 1411

APPENDIX E

Seasonal Adjustments to Traffic Counts

Turning Movement Count 2007 HV Unbalanced
60 Minute Counts

DATE	TIME	INTID	INTNAME	EB-R	EB-T	EB-L	WB-R	WB-T	WB-L	NB-R	NB-T	NB-L	SB-R
1/2/2007	1615	101	Butler Market Rd & US 20	150	140	85	190	150	410	160	995	120	85
1/2/2007	1615	102	Butler Mkt Rd & Bend Pkway SB Ramp	0	620	0	0	720	0	0	0	0	125
1/2/2007	1615	103	Butler Mkt Rd & Bend Pkwy NB Ramp	10	795	80	260	780	10	20	5	20	0
1/3/2007	1615	104	Butler Mkt Rd & 4th St	150	620	0	0	620	95	85	0	280	45
1/2/2007	1615	105	Studio Rd & 4th St	5	10	5	30	10	155	280	410	0	0
1/2/2007	1615	106	Revere Ave & Bend Pkway SB Ramp	10	15	15	355	25	610	700	115	15	5
1/2/2007	1615	107	Revere Ave & Bend Pkwy NB Ramp	445	375	170	125	490	50	565	285	115	305
1/2/2007	1615	108	Revere Ave & 3rd St	250	555	270	65	370	240	100	1280	125	65
1/2/2007	1615	109	Revere Ave & 4th St	140	355	280	120	345	25	45	245	80	280
1/2/2007	1615	110	Portland Ave & Hill St	115	220	320	105	300	80	110	520	160	405
1/2/2007	1615	111	Olney Ave & 3rd St	85	280	130	110	325	135	115	1460	95	25
1/2/2007	1615	112	Olney Ave & 4th St	40	365	105	45	360	50	75	235	45	90
1/3/2007	1615	113	Lafayette Ave & Bend Pkwy SB Ramp	125	0	0	0	0	0	0	2590	0	75
1/2/2007	1615	114	**Bond St & Wall St.**	0	190	10	10	570	0	435	10	60	40
1/4/2007	1615	115	**Newport Ave & Wall St.**	160	410	150	35	505	290	0	0	0	175
1/3/2007	1615	116	**Newport Ave & Bond St**	0	490	15	60	690	0	355	435	240	0
1/4/2007	1615	117	Greenwood Ave & 3rd St	135	800	310	295	585	300	285	930	150	105
1/4/2007	1615	118	Greenwood Ave & 4th St	25	1330	30	140	1055	70	130	5	0	155
1/4/2007	1615	119	Hawthorne Ave & 3rd St	40	5	15	55	5	0	35	1385	10	25
1/4/2007	1615	120	Hawthorne Ave & 4th St	30	30	50	5	10	5	5	90	15	35
1/3/2007	1615	121	**Oregon St & Wall St.**	25	25	0	0	70	215	0	0	0	50
1/3/2007	1615	122	**Oregon St & Bond St**	0	115	110	170	95	0	110	810	180	0
1/3/2007	1615	123	Hawthorne Ave & Bend Pkwy SB Ramp	245	0	0	0	0	0	0	2610	0	220
1/3/2007	1615	124	**Franklin Ave & Wall St.**	30	465	0	0	390	175	0	0	0	270
1/3/2007	1615	125	**Franklin Ave & Bond St**	0	435	255	115	505	0	285	675	60	0
1/4/2007	1615	126	Franklin Ave & 3rd St	115	650	345	70	425	180	45	1035	175	130
1/4/2007	1615	127	Franklin Ave & 4th St	45	650	70	15	460	25	45	25	25	145
1/3/2007	1615	128	Tumalo Ave & Riverside Dr	30	205	315	5	210	0	5	5	50	570
1/3/2007	1615	129	**Colorado Ave & Wall St**	0	0	0	0	615	115	0	0	0	160
1/3/2007	1615	130	Colorado Ave & Bond St	0	0	0	145	640	0	0	740	80	0
1/3/2007	1615	131	Arizona Ave & Wall St	25	1180	0	0	0	0	0	0	0	0
1/3/2007	1615	132	Arizona Ave & Bond St	0	985	385	0	0	0	160	430	0	0
1/3/2007	1615	133	Colorado Ave & Bend Pkway SB Ramp	0	0	0	65	400	5	935	205	10	345
1/3/2007	1615	134	Colorado Ave & Bend Pkwy NB Ramp	0	225	780	475	225	0	0	0	0	235

Seasonal Adjustment for 30HV

US 97 Dalles-California Hwy		Hwy 04
ATR 09-0 Summer		Weekday
Seasonal Factor Peak Period		
0.8378		
Count Date Factor		
1-Jan	1.1815	
Adjustment Factor =Count Date Factor/ Seasonal Peak Period Factor		
	1.4102	

Turning Movement Count 2007 HV Balanced
60 Minute Counts

DATE	TIME	INTID	INTNAME	EBR	EBT	EBL	WBR	WBT	WBL	NBR	NBT	NBL	SBR	SBT	SBL
1/2/2007	1615	101	Butler Market Rd & US 20	150	140	85	190	150	410	160	995	120	85	1360	215
1/2/2007	1615	102	Butler Mkt Rd & Bend Pkway SB Ramp	0	620	0	0	760	0	0	0	0	125	0	255
1/2/2007	1615	103	Butler Mkt Rd & Bend Pkwy NB Ramp	10	785	80	255	760	10	20	5	20	0	0	0
1/3/2007	1615	104	Butler Mkt Rd & 4th St	155	635	0	0	655	95	85	0	295	45	5	0
1/2/2007	1615	105	Studio Rd & 4th St	5	10	5	30	10	155	280	410	0	0	485	80
1/2/2007	1615	106	Revere Ave & Bend Pkway SB Ramp	10	15	15	350	25	595	730	115	15	5	230	205
1/2/2007	1615	107	Revere Ave & Bend Pkwy NB Ramp	440	365	160	125	510	50	585	285	120	315	5	140
1/2/2007	1615	108	Revere Ave & 3rd St	250	565	270	65	395	240	105	1365	135	70	815	80
1/2/2007	1615	109	Revere Ave & 4th St	140	350	275	120	345	25	45	245	80	280	185	170
1/2/2007	1615	110	Portland Ave & Hill St	115	220	320	105	300	80	110	520	160	405	350	40
1/2/2007	1615	111	Olney Ave & 3rd St	85	280	130	105	315	130	115	1460	95	25	1105	140
1/2/2007	1615	112	Olney Ave & 4th St	40	385	105	45	385	50	75	235	45	100	140	140
1/3/2007	1615	113	Lafayette Ave & Bend Pkwy SB Ramp	125	0	0	0	0	0	0	2610	0	75	2725	0
1/2/2007	1615	114	**Bond St & Wall St.**	0	190	10	10	605	0	435	10	65	45	0	20
1/4/2007	1615	115	**Newport Ave & Wall St.**	160	410	150	40	565	325	0	0	0	170	455	115
1/3/2007	1615	116	**Newport Ave & Bond St**	0	510	15	60	690	0	370	450	240	0	0	0
1/4/2007	1615	117	Greenwood Ave & 3rd St	135	775	310	295	585	300	295	960	150	110	745	325
1/4/2007	1615	118	Greenwood Ave & 4th St	25	1330	30	140	1055	70	130	5	0	155	0	0
1/4/2007	1615	119	Hawthorne Ave & 3rd St	45	5	15	55	5	0	35	1385	10	25	1220	35
1/4/2007	1615	120	Hawthorne Ave & 4th St	30	30	50	5	10	5	5	90	15	35	130	10
1/3/2007	1615	121	**Oregon St & Wall St.**	25	25	0	0	70	205	0	0	0	20	835	140
1/3/2007	1615	122	**Oregon St & Bond St**	0	100	100	165	95	0	110	795	175	0	0	0
1/3/2007	1615	123	Hawthorne Ave & Bend Pkwy SB Ramp	245	0	0	0	0	0	0	2610	0	220	2695	0
1/3/2007	1615	124	**Franklin Ave & Wall St.**	30	465	0	0	390	175	0	0	0	280	510	235
1/3/2007	1615	125	**Franklin Ave & Bond St**	0	435	260	115	505	0	285	690	60	0	0	0
1/4/2007	1615	126	Franklin Ave & 3rd St	115	640	345	70	415	180	45	1035	175	125	1045	105
1/4/2007	1615	127	Franklin Ave & 4th St	45	660	70	15	470	25	45	25	25	145	15	15
1/3/2007	1615	128	Tumalo Ave & Riverside Dr	30	205	315	5	210	0	5	5	50	570	30	15
1/3/2007	1615	129	**Colorado Ave & Wall St**	0	0	0	0	615	115	0	0	0	160	485	0
1/3/2007	1615	130	Colorado Ave & Bond St	0	0	0	145	640	0	0	740	80	0	0	0
1/3/2007	1615	131	Arizona Ave & Wall St	25	1170	0	0	0	0	0	0	0	0	390	220
1/3/2007	1615	132	Arizona Ave & Bond St	0	990	390	0	0	0	160	430	0	0	0	0
1/3/2007	1615	133	Colorado Ave & Bend Pkway SB Ramp	0	0	0	65	400	5	930	205	10	345	0	95
1/3/2007	1615	134	Colorado Ave & Bend Pkwy NB Ramp	0	230	795	475	230	0	0	0	0	240	0	15

Turning Movement Count 2007 Raw Counts
60Minute Counts

DATE	TIME	INTID	INTNAME	EB-R	EB-T	EB-L	WB-R	WB-T	WB-L	NB-R	NB-T	NB-L	SB-R	SB-T	SB-L
1/2/2007	1615	101	Butler Market Rd & US 20	106	101	61	133	108	291	112	706	84	62	965	153
1/2/2007	1615	102	Butler Mkt Rd & Bend Pkway SB Ramp	0	439	0	0	511	0	0	0	0	88	0	176
1/2/2007	1615	103	Butler Mkt Rd & Bend Pkwy NB Ramp	8	562	55	186	552	8	14	5	13	0	0	0
1/3/2007	1615	104	Butler Mkt Rd & 4th St	107	438	1	1	440	69	61	0	199	31	5	0
1/2/2007	1615	105	Studio Rd & 4th St	5	8	2	22	7	109	199	289	0	0	344	57
1/2/2007	1615	106	Revere Ave & Bend Pkway SB Ramp	6	10	9	252	16	433	495	82	11	4	164	140
1/2/2007	1615	107	Revere Ave & Bend Pkwy NB Ramp	316	265	121	88	348	35	400	201	82	215	5	88
1/2/2007	1615	108	Revere Ave & 3rd St	177	394	190	46	262	170	71	909	88	46	579	54
1/2/2007	1615	109	Revere Ave & 4th St	99	252	197	85	244	19	31	175	55	198	130	120
1/2/2007	1615	110	Portland Ave & Hill St	81	156	226	74	211	56	79	367	113	288	248	27
1/2/2007	1615	111	Olney Ave & 3rd St	61	199	92	78	229	96	82	1034	69	16	782	99
1/2/2007	1615	112	Olney Ave & 4th St	27	258	74	33	255	35	54	165	33	64	100	100
1/3/2007	1615	113	Lafayette Ave & Bend Pkwy SB Ramp	89	0	0	0	0	0	0	1838	0	52	1932	0
1/2/2007	1615	114	**Bond St & Wall St.**	1	133	8	8	404	0	309	6	42	27	0	14
1/4/2007	1615	115	**Newport Ave & Wall St.**	112	290	107	24	359	206	0	0	0	124	334	82
1/3/2007	1615	116	**Newport Ave & Bond St**	0	346	9	44	491	0	251	308	170	0	0	0
1/4/2007	1615	117	Greenwood Ave & 3rd St	96	568	219	209	414	211	203	658	107	76	504	219
1/4/2007	1615	118	Greenwood Ave & 4th St	16	943	22	98	747	48	92	2	0	111	1	1
1/4/2007	1615	119	Hawthorne Ave & 3rd St	29	2	10	38	3	0	24	983	7	18	798	26
1/4/2007	1615	120	Hawthorne Ave & 4th St	21	23	36	3	8	4	3	64	10	24	93	7
1/3/2007	1615	121	**Oregon St & Wall St.**	18	18	0	0	48	151	0	0	0	36	593	92
1/3/2007	1615	122	**Oregon St & Bond St**	0	82	77	120	69	0	77	575	128	0	0	0
1/3/2007	1615	123	Hawthorne Ave & Bend Pkwy SB Ramp	172	0	0	0	0	0	0	1851	0	157	1910	0
1/3/2007	1615	124	**Franklin Ave & Wall St.**	21	329	0	0	278	124	0	0	0	193	349	160
1/3/2007	1615	125	**Franklin Ave & Bond St**	0	307	182	82	358	0	203	477	44	0	0	0
1/4/2007	1615	126	Franklin Ave & 3rd St	83	462	243	48	301	126	32	733	124	92	771	79
1/4/2007	1615	127	Franklin Ave & 4th St	32	462	48	12	327	19	33	18	19	103	10	11
1/3/2007	1615	128	Tumalo Ave & Riverside Dr	21	146	224	3	148	1	2	5	36	403	23	9
1/3/2007	1615	129	**Colorado Ave & Wall St**	0	0	0	0	437	81	0	0	0	114	337	0
1/3/2007	1615	130	Colorado Ave & Bond St	0	0	0	103	454	0	0	523	56	0	0	0
1/3/2007	1615	131	Arizona Ave & Wall St	19	835	0	0	0	0	0	0	0	0	276	156
1/3/2007	1615	132	Arizona Ave & Bond St	0	700	272	0	0	0	114	305	0	0	0	0
1/3/2007	1615	133	Colorado Ave & Bend Pkway SB Ramp	0	0	0	46	283	3	662	144	6	246	1	71
1/3/2007	1615	134	Colorado Ave & Bend Pkwy NB Ramp	0	158	554	337	161	0	0	0	0	168	0	11

APPENDIX F

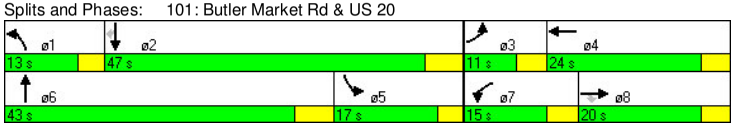
2006 Intersection Traffic Operations Analysis Worksheets

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Volume (vph)	85	140	150	410	150	120	995	215	1360	85
Lane Group Flow (vph)	92	152	163	446	370	130	1256	234	1478	92
Turn Type	Prot		Perm	Prot		Prot		Prot		Perm
Protected Phases	3	8		7	4	1	6	5	2	
Permitted Phases			8							2
Detector Phases	3	8	8	7	4	1	6	5	2	2
Minimum Initial (s)	6.0	8.0	8.0	6.0	5.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.0	12.0	12.0	10.0	25.0	8.5	31.0	8.5	31.0	31.0
Total Split (s)	11.0	20.0	20.0	15.0	24.0	13.0	43.0	17.0	47.0	47.0
Total Split (%)	11.6%	21.1%	21.1%	15.8%	25.3%	13.7%	45.3%	17.9%	49.5%	49.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	3.5	5.0	3.5	5.0	5.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max
v/c Ratio	0.71	0.48	0.41	1.12	0.91	0.77	0.87	0.97	0.92	0.12
Control Delay	72.4	41.7	9.1	122.1	58.8	72.3	33.6	92.8	35.5	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.4	41.7	9.1	122.1	58.8	72.3	33.6	92.8	35.5	4.0
Queue Length 50th (ft)	55	84	0	~161	186	78	352	142	426	1
Queue Length 95th (ft)	#133	146	54	#257	#357	#173	#461	#290	#585	27
Internal Link Dist (ft)		466			381		888		693	
Turn Bay Length (ft)										
Base Capacity (vph)	130	314	402	398	407	168	1436	242	1602	766
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.71	0.48	0.41	1.12	0.91	0.77	0.87	0.97	0.92	0.12

Intersection Summary

Cycle Length: 95
Actuated Cycle Length: 95
Offset: 13 (14%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 90
Control Type: Pretimed
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 101: Butler Market Rd & US 20



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00		1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.92		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	3433	1706		1770	3466		1770	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1863	1583	3433	1706		1770	3466		1770	3539	1583
Volume (vph)	85	140	150	410	150	190	120	995	160	215	1360	85
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	92	152	163	446	163	207	130	1082	174	234	1478	92
RTOR Reduction (vph)	0	0	136	0	48	0	0	14	0	0	0	49
Lane Group Flow (vph)	92	152	27	446	322	0	130	1242	0	234	1478	43
Turn Type	Prot		Perm	Prot			Prot			Prot		Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8									2
Actuated Green, G (s)	7.0	16.0	16.0	11.0	20.0		9.5	38.0		13.5	42.0	42.0
Effective Green, g (s)	7.0	16.0	16.0	11.0	20.0		9.0	39.0		13.0	43.0	43.0
Actuated g/C Ratio	0.07	0.17	0.17	0.12	0.21		0.09	0.41		0.14	0.45	0.45
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		3.5	5.0		3.5	5.0	5.0
Lane Grp Cap (vph)	130	314	267	398	359		168	1423		242	1602	717
v/s Ratio Prot	0.05	0.08		c0.13	c0.19		0.07	c0.36		0.13	c0.42	
v/s Ratio Perm			0.02									0.03
v/c Ratio	0.71	0.48	0.10	1.12	0.90		0.77	0.87		0.97	0.92	0.06
Uniform Delay, d1	43.0	35.8	33.4	42.0	36.5		42.0	25.7		40.8	24.4	14.6
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	27.7	5.3	0.8	82.1	27.4		28.6	7.7		49.9	10.3	0.2
Delay (s)	70.7	41.0	34.2	124.1	63.9		70.6	33.4		90.7	34.8	14.8
Level of Service	E	D	C	F	E		E	C		F	C	B
Approach Delay (s)		45.0			96.8			36.9			41.0	
Approach LOS		D			F			D			D	

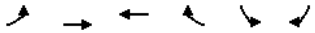
Intersection Summary

HCM Average Control Delay	50.4	HCM Level of Service		D	
HCM Volume to Capacity ratio	0.97				
Actuated Cycle Length (s)	95.0	Sum of lost time (s)		16.0	
Intersection Capacity Utilization	82.4%	ICU Level of Service		E	
Analysis Period (min)	15				

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
102: Butler Mkt Rd & Bend Pkway SB Ramp

Baseline
2007 PM Peak Hour



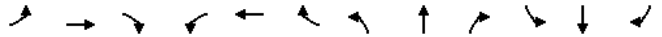
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	0	620	760	0	255	125
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	674	826	0	277	136
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					TWLTL	
Median storage veh)					1	
Upstream signal (ft)		461				
pX, platoon unblocked					0.93	
vC, conflicting volume	826				1500	826
vC1, stage 1 conf vol					826	
vC2, stage 2 conf vol					674	
vCu, unblocked vol	826				1535	826
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)	2.2				3.5	3.3
p0 queue free %	100				0	63
cM capacity (veh/h)	805				262	372

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	674	826	413
Volume Left	0	0	277
Volume Right	0	0	136
cSH	1700	1700	290
Volume to Capacity	0.40	0.49	1.42
Queue Length 95th (ft)	0	0	557
Control Delay (s)	0.0	0.0	242.5
Lane LOS			F
Approach Delay (s)	0.0	0.0	242.5
Approach LOS			F

Intersection Summary			
Average Delay	52.4		
Intersection Capacity Utilization	68.4%	ICU Level of Service	C
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
103: Butler Mkt Rd & Bend Pkwy NB Ramp

Baseline
2007 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	80	785	10	10	760	255	20	5	20	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	87	853	11	11	826	277	22	5	22	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								TWLTL			None	
Median storage veh)								1				
Upstream signal (ft)		910										
pX, platoon unblocked				0.98			0.98	0.98	0.98	0.98	0.98	
vC, conflicting volume	1103			864			1880	2158	859	2038	2024	965
vC1, stage 1 conf vol							1033	1033				
vC2, stage 2 conf vol							848	1125				
vCu, unblocked vol	1103			861			1901	2185	855	2062	2048	965
tC, single (s)	4.1			4.1			*6.4	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							5.4	5.5				
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	86			99			87	95	94	100	100	100
cM capacity (veh/h)	633			763			171	117	350	32	46	309

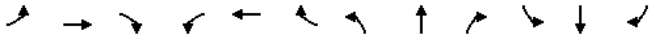
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	87	864	11	1103	49
Volume Left	87	0	11	0	22
Volume Right	0	11	0	277	22
cSH	633	1700	763	1700	207
Volume to Capacity	0.14	0.51	0.01	0.65	0.24
Queue Length 95th (ft)	12	0	1	0	22
Control Delay (s)	11.6	0.0	9.8	0.0	27.6
Lane LOS	B		A		D
Approach Delay (s)	1.1		0.1		27.6
Approach LOS					D

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	73.3%	ICU Level of Service	D
Analysis Period (min)	15		

* User Entered Value

HCM Unsignalized Intersection Capacity Analysis
104: Butler Mkt Rd & 4th St

Baseline
2007 PM Peak Hour



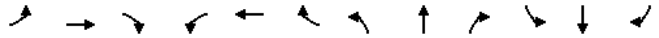
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	635	155	95	655	0	295	0	85	0	5	45
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	690	168	103	712	0	321	0	92	0	5	49
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								TWLTL			None	
Median storage veh)								1				
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	712			859			1745	1693	774	1701	1777	712
vC1, stage 1 conf vol							774	774				
vC2, stage 2 conf vol							970	918				
vCu, unblocked vol	712			859			1745	1693	774	1701	1777	712
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5				
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			87			0	100	77	100	92	89
cM capacity (veh/h)	888			782			148	195	398	50	72	432

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total	0	859	103	712	321	92	54
Volume Left	0	0	103	0	321	0	0
Volume Right	0	168	0	0	0	92	49
cSH	1700	1700	782	1700	148	398	287
Volume to Capacity	0.00	0.51	0.13	0.42	2.16	0.23	0.19
Queue Length 95th (ft)	0	0	11	0	654	22	17
Control Delay (s)	0.0	0.0	10.3	0.0	595.2	16.8	20.4
Lane LOS			B		F	C	C
Approach Delay (s)	0.0		1.3		465.8		20.4
Approach LOS					F		C

Intersection Summary					
Average Delay	90.9				
Intersection Capacity Utilization	81.1%	ICU Level of Service		D	
Analysis Period (min)	15				

HCM Unsignalized Intersection Capacity Analysis
105: Studio Rd & 4th St

Baseline
2007 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	5	10	5	155	10	30	0	410	280	80	485	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	11	5	168	11	33	0	446	304	87	527	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1337	1451	527	1310	1299	598	527			750		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1337	1451	527	1310	1299	598	527			750		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	95	91	99	0	93	94	100			90		
cM capacity (veh/h)	106	117	551	116	145	502	1040			859		

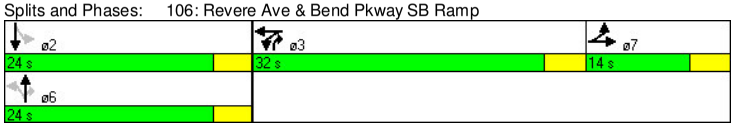
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	22	212	750	614
Volume Left	5	168	0	87
Volume Right	5	33	304	0
cSH	141	133	1040	859
Volume to Capacity	0.15	1.60	0.00	0.10
Queue Length 95th (ft)	13	379	0	8
Control Delay (s)	35.0	360.3	0.0	2.6
Lane LOS	E	F		A
Approach Delay (s)	35.0	360.3	0.0	2.6
Approach LOS	E	F		

Intersection Summary					
Average Delay	49.3				
Intersection Capacity Utilization	96.2%	ICU Level of Service		F	
Analysis Period (min)	15				

Lane Group	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations								
Volume (vph)	15	595	25	15	115	730	205	230
Lane Group Flow (vph)	43	647	407	16	125	793	223	255
Turn Type		Split		Perm		pm+ov	Perm	
Protected Phases	7	3	3		6	3		2
Permitted Phases				6		6	2	
Detector Phases	7	3	3	6	6	3	2	2
Minimum Initial (s)	10.0	6.0	6.0	10.0	10.0	6.0	10.0	10.0
Minimum Split (s)	14.0	27.0	27.0	24.0	24.0	27.0	24.0	24.0
Total Split (s)	14.0	32.0	32.0	24.0	24.0	32.0	24.0	24.0
Total Split (%)	20.0%	45.7%	45.7%	34.3%	34.3%	45.7%	34.3%	34.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	Max	Max	None	Min	Min
v/c Ratio	0.16	0.89	0.46	0.05	0.20	0.54	0.53	0.41
Control Delay	22.8	36.0	4.3	19.1	19.3	1.8	25.5	21.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.8	36.0	4.3	19.1	19.3	1.8	25.5	21.2
Queue Length 50th (ft)	12	255	7	5	41	0	83	90
Queue Length 95th (ft)	39	#457	57	19	81	21	154	155
Internal Link Dist (ft)	273		685		1215			572
Turn Bay Length (ft)								
Base Capacity (vph)	274	779	918	296	626	1461	424	624
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.83	0.44	0.05	0.20	0.54	0.53	0.41

Intersection Summary
Cycle Length: 70
Actuated Cycle Length: 61.5
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 106: Revere Ave & Bend Pkway SB Ramp



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt		0.97		1.00	0.86		1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1766		1770	1602		1770	1863	1583	1770	1857	
Flt Permitted		0.98		0.95	1.00		0.51	1.00	1.00	0.68	1.00	
Satd. Flow (perm)		1766		1770	1602		957	1863	1583	1261	1857	
Volume (vph)	15	15	10	595	25	350	15	115	730	205	230	5
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	16	16	11	647	27	380	16	125	793	223	250	5
RTOR Reduction (vph)	0	10	0	0	228	0	0	0	217	0	1	0
Lane Group Flow (vph)	0	33	0	647	179	0	16	125	576	223	254	0
Turn Type	Split			Split			Perm		pm+ov	Perm		
Protected Phases	7	7		3	3			6	3		2	
Permitted Phases							6		6	2		
Actuated Green, G (s)		5.3		25.2	25.2		20.7	20.7	45.9	20.7	20.7	
Effective Green, g (s)		5.3		25.2	25.2		20.7	20.7	45.9	20.7	20.7	
Actuated g/C Ratio		0.08		0.40	0.40		0.33	0.33	0.73	0.33	0.33	
Clearance Time (s)		4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)		2.5		2.5	2.5		4.3	4.3	2.5	4.3	4.3	
Lane Grp Cap (vph)		148		706	639		313	610	1250	413	608	
v/s Ratio Prot		c0.02		c0.37	0.11			0.07	0.18		0.14	
v/s Ratio Perm							0.02		0.18	c0.18		
v/c Ratio		0.22		0.92	0.28		0.05	0.20	0.46	0.54	0.42	
Uniform Delay, d1		27.0		18.0	12.9		14.5	15.3	3.6	17.4	16.6	
Progression Factor		1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.6		16.6	0.2		0.3	0.8	0.2	2.0	0.7	
Delay (s)		27.6		34.6	13.0		14.8	16.1	3.8	19.3	17.3	
Level of Service		C		C	B		B	B	A	B	B	
Approach Delay (s)		27.6			26.3			5.6			18.2	
Approach LOS		C			C			A			B	

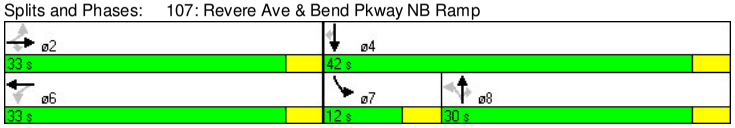
Intersection Summary				
HCM Average Control Delay	17.1	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.69			
Actuated Cycle Length (s)	63.2	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	74.9%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Volume (vph)	160	365	440	50	510	120	285	585	140	5	315
Lane Group Flow (vph)	0	571	478	0	744	0	440	636	152	5	342
Turn Type	Perm		Perm	Perm		Perm		Perm	Prot		Perm
Protected Phases		2			6		8		7	4	
Permitted Phases	2		2	6		8		8			4
Detector Phases	2	2	2	6	6	8	8	8	7	4	4
Minimum Initial (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Split (s)	32.0	32.0	32.0	26.0	26.0	28.0	28.0	28.0	8.0	28.0	28.0
Total Split (s)	33.0	33.0	33.0	33.0	33.0	30.0	30.0	30.0	12.0	42.0	42.0
Total Split (%)	44.0%	44.0%	44.0%	44.0%	44.0%	40.0%	40.0%	40.0%	16.0%	56.0%	56.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lead/Lag						Lag	Lag	Lag	Lead		
Lead-Lag Optimize?						Yes	Yes	Yes	Yes		
Recall Mode	Min	Min	Min	Min	Min	None	None	None	None	None	None
v/c Ratio		1.02dl	0.55		0.68		0.75	0.88	0.68	0.01	0.40
Control Delay		29.2	4.4		20.2		29.5	28.9	50.3	9.0	6.9
Queue Delay		0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		29.2	4.4		20.2		29.5	28.9	50.3	9.0	6.9
Queue Length 50th (ft)		117	0		135		164	155	67	1	38
Queue Length 95th (ft)		179	55		192		#315	#379	#167	6	95
Internal Link Dist (ft)		685			811		202			274	
Turn Bay Length (ft)											
Base Capacity (vph)		883	968		1360		698	810	241	1056	969
Starvation Cap Reductn		0	0		0		0	0	0	0	0
Spillback Cap Reductn		0	0		0		0	0	0	0	0
Storage Cap Reductn		0	0		0		0	0	0	0	0
Reduced v/c Ratio		0.65	0.49		0.55		0.63	0.79	0.63	0.00	0.35

Intersection Summary

Cycle Length: 75
Actuated Cycle Length: 60.9
Natural Cycle: 75
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 107: Revere Ave & Bend Pkway NB Ramp



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0			4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		0.95	1.00		0.95			1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		0.97			1.00	0.85	1.00	1.00	0.85
Flt Protected		0.98	1.00		1.00			0.99	1.00	0.95	1.00	1.00
Satd. Flow (prot)		3486	1583		3430			1836	1583	1770	1863	1583
Flt Permitted		0.57	1.00		0.88			0.90	1.00	0.95	1.00	1.00
Satd. Flow (perm)		2004	1583		3021			1684	1583	1770	1863	1583
Volume (vph)	160	365	440	50	510	125	120	285	585	140	5	315
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	174	397	478	54	554	136	130	310	636	152	5	342
RTOR Reduction (vph)	0	0	307	0	27	0	0	0	170	0	0	81
Lane Group Flow (vph)	0	571	171	0	717	0	0	440	466	152	5	261
Turn Type	Perm		Perm	Perm			Perm		Perm	Prot		Perm
Protected Phases		2			6			8		7	4	
Permitted Phases	2		2	6			8		8			4
Actuated Green, G (s)		21.7	21.7		21.7			21.2	21.2	5.6	30.8	30.8
Effective Green, g (s)		21.7	21.7		21.7			21.2	21.2	5.6	30.8	30.8
Actuated g/C Ratio		0.36	0.36		0.36			0.35	0.35	0.09	0.51	0.51
Clearance Time (s)		4.0	4.0		4.0			4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)		2.5	2.5		2.5			2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)		719	568		1084			590	555	164	948	806
v/s Ratio Prot										c0.09	0.00	
v/s Ratio Perm		c0.28	0.11		0.24			0.26	c0.29			0.16
v/c Ratio		1.02dl	0.30		0.66			0.75	0.84	0.93	0.01	0.32
Uniform Delay, d1		17.4	14.0		16.3			17.3	18.1	27.2	7.3	8.7
Progression Factor		1.00	1.00		1.00			1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		5.9	0.2		1.4			4.5	10.6	48.3	0.0	0.1
Delay (s)		23.2	14.2		17.7			21.8	28.7	75.5	7.3	8.8
Level of Service		C	B		B			C	C	E	A	A
Approach Delay (s)		19.1			17.7			25.9			29.1	
Approach LOS		B			B			C			C	

Intersection Summary

HCM Average Control Delay	22.4	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.83			
Actuated Cycle Length (s)	60.5	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	77.0%	ICU Level of Service	D	
Analysis Period (min)	15			

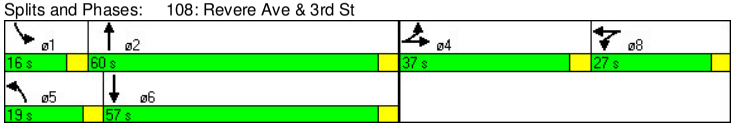
dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	270	565	240	395	135	1365	80	815
Lane Group Flow (vph)	293	886	246	515	147	1598	87	962
Turn Type	Split		Split		Prot		Prot	
Protected Phases	4	4	8	8	5	2	1	6
Permitted Phases								
Detector Phases	4	4	8	8	5	2	1	6
Minimum Initial (s)	10.0	10.0	6.0	6.0	6.0	10.0	6.0	10.0
Minimum Split (s)	27.0	27.0	27.0	27.0	10.0	24.0	10.0	24.0
Total Split (s)	37.0	37.0	27.0	27.0	19.0	60.0	16.0	57.0
Total Split (%)	26.4%	26.4%	19.3%	19.3%	13.6%	42.9%	11.4%	40.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
v/c Ratio	0.70	1.06	0.94	0.94	0.82	1.10	0.66	0.71
Control Delay	59.3	97.7	99.8	83.2	94.6	95.5	85.6	39.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.3	97.7	99.8	83.2	94.6	95.5	85.6	39.8
Queue Length 50th (ft)	246	~450	246	252	133	~887	78	390
Queue Length 95th (ft)	353	#586	#429	#368	#242	#1033	138	471
Internal Link Dist (ft)		811		432		924		603
Turn Bay Length (ft)								
Base Capacity (vph)	417	832	265	553	190	1450	152	1357
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	1.06	0.93	0.93	0.77	1.10	0.57	0.71

Intersection Summary

Cycle Length: 140
Actuated Cycle Length: 140
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 140
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 108: Revere Ave & 3rd St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		0.91	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.95		1.00	0.98		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3376		1610	3315		1770	3501		1770	3497	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3376		1610	3315		1770	3501		1770	3497	
Volume (vph)	270	565	250	240	395	65	135	1365	105	80	815	70
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	293	614	272	261	429	71	147	1484	114	87	886	76
RTOR Reduction (vph)	0	36	0	0	8	0	0	4	0	0	4	0
Lane Group Flow (vph)	293	850	0	246	507	0	147	1594	0	87	958	0
Turn Type	Split			Split			Prot			Prot		
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	33.0	33.0		22.7	22.7		14.1	57.8		10.5	54.2	
Effective Green, g (s)	33.0	33.0		22.7	22.7		14.1	57.8		10.5	54.2	
Actuated g/C Ratio	0.24	0.24		0.16	0.16		0.10	0.41		0.08	0.39	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	2.5	2.5		2.5	2.5		2.5	4.3		2.5	4.3	
Lane Grp Cap (vph)	417	796		261	538		178	1445		133	1354	
v/s Ratio Prot	0.17	c0.25		0.15	c0.15		c0.08	c0.46		0.05	0.27	
v/s Ratio Perm												
v/c Ratio	0.70	1.07		0.94	0.94		0.83	1.10		0.65	0.71	
Uniform Delay, d1	49.0	53.5		58.0	58.0		61.7	41.1		63.0	36.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.9	51.6		40.1	25.0		25.2	57.2		9.9	3.1	
Delay (s)	53.9	105.1		98.1	83.0		87.0	98.3		72.9	39.3	
Level of Service	D	F		F	F		F	F		E	D	
Approach Delay (s)		92.4			87.9			97.3			42.1	
Approach LOS		F			F			F			D	

Intersection Summary

HCM Average Control Delay	82.3	HCM Level of Service	F	
HCM Volume to Capacity ratio	1.05			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	96.3%	ICU Level of Service	F	
Analysis Period (min)	15			

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis — Baseline
109: Revere Ave & 4th St — 2007 PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	275	350	140	25	345	120	80	245	45	170	185	280
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	299	380	152	27	375	130	87	266	49	185	201	304

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total (vph)	299	533	27	505	402	386	304
Volume Left (vph)	299	0	27	0	87	185	0
Volume Right (vph)	0	152	0	130	49	0	304
Hadj (s)	0.53	-0.17	0.53	-0.15	0.00	0.27	-0.67
Departure Headway (s)	10.1	9.4	10.3	9.6	9.9	9.8	8.9
Degree Utilization, x	0.84	1.39	0.08	1.35	1.11	1.06	0.75
Capacity (veh/h)	353	392	345	383	373	371	397
Control Delay (s)	47.2	216.4	12.9	199.0	111.0	93.5	33.4
Approach Delay (s)	155.6		189.5		111.0	67.0	
Approach LOS	F		F		F	F	

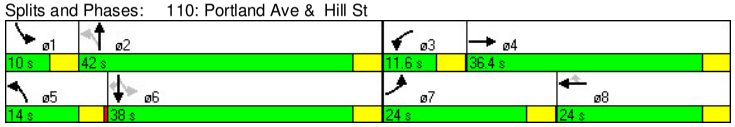
Intersection Summary				
Delay	130.7			
HCM Level of Service	F			
Intersection Capacity Utilization	93.2%	ICU Level of Service	F	
Analysis Period (min)	15			

Timings — Baseline
110: Portland Ave & Hill St — 2007 PM Peak Hour

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Volume (vph)	320	220	80	300	105	160	520	40	350	405
Lane Group Flow (vph)	348	364	87	326	114	174	685	43	380	440
Turn Type	Prot		Prot		Perm	pm+pt		pm+pt		Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8	2		6		6
Detector Phases	7	4	3	8	8	5	2	1	6	6
Minimum Initial (s)	5.0	6.0	5.0	10.0	10.0	4.0	10.0	6.0	8.0	8.0
Minimum Split (s)	9.2	23.0	9.2	24.0	24.0	8.0	21.0	10.0	23.0	23.0
Total Split (s)	24.0	36.4	11.6	24.0	24.0	14.0	42.0	10.0	38.0	38.0
Total Split (%)	24.0%	36.4%	11.6%	24.0%	24.0%	14.0%	42.0%	10.0%	38.0%	38.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	3.5	4.0	4.0	4.0	4.0
All-Red Time (s)	0.2	0.0	0.2	0.0	0.0	0.5	0.0	0.0	0.0	0.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min	Min
v/c Ratio	0.92	0.56	0.65	0.88	0.28	0.47	0.94	0.24	0.65	0.55
Control Delay	68.2	28.2	67.2	63.7	8.7	19.8	50.5	18.4	33.5	5.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.2	28.2	67.2	63.7	8.7	19.8	50.5	18.4	33.5	5.3
Queue Length 50th (ft)	223	180	55	203	0	62	420	14	199	0
Queue Length 95th (ft)	#403	278	#125	#357	45	104	#667	33	297	65
Internal Link Dist (ft)		940		1316			946		1215	
Turn Bay Length (ft)										
Base Capacity (vph)	380	656	141	393	424	375	740	176	647	837
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.55	0.62	0.83	0.27	0.46	0.93	0.24	0.59	0.53

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 93.8
Natural Cycle: 100
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 110: Portland Ave & Hill St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.95		1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1767		1770	1863	1583	1770	1814		1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.27	1.00		0.13	1.00	1.00
Satd. Flow (perm)	1770	1767		1770	1863	1583	509	1814		237	1863	1583
Volume (vph)	320	220	115	80	300	105	160	520	110	40	350	405
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	348	239	125	87	326	114	174	565	120	43	380	440
RTOR Reduction (vph)	0	18	0	0	0	91	0	7	0	0	0	296
Lane Group Flow (vph)	348	346	0	87	326	23	174	678	0	43	380	144
Turn Type	Prot			Prot		Perm	pm+pt			pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8	2			6		6
Actuated Green, G (s)	20.0	33.8		5.7	19.5	19.5	44.8	37.4		34.9	31.5	31.5
Effective Green, g (s)	20.2	33.8		5.9	19.5	19.5	44.8	37.4		34.9	31.5	31.5
Actuated g/C Ratio	0.21	0.35		0.06	0.20	0.20	0.46	0.39		0.36	0.33	0.33
Clearance Time (s)	4.2	4.0		4.2	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	3.0	4.2		2.5	4.2	4.2
Lane Grp Cap (vph)	371	619		108	376	320	358	703		140	608	517
v/s Ratio Prot	c0.20	0.20		0.05	c0.18		c0.05	c0.37		0.01	0.20	
v/s Ratio Perm						0.01	0.18			0.10		0.09
v/c Ratio	0.94	0.56		0.81	0.87	0.07	0.49	0.96		0.31	0.62	0.28
Uniform Delay, d1	37.5	25.3		44.7	37.2	31.2	17.3	28.9		23.9	27.5	24.1
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	30.9	0.9		33.1	18.3	0.1	1.0	25.3		0.9	2.4	0.4
Delay (s)	68.5	26.2		77.8	55.6	31.2	18.3	54.2		24.8	29.9	24.5
Level of Service	E	C		E	E	C	B	D		C	C	C
Approach Delay (s)		46.9			54.0			46.9			26.9	
Approach LOS		D			D			D			C	

Intersection Summary				
HCM Average Control Delay	42.3	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.92			
Actuated Cycle Length (s)	96.5	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	85.9%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	130	280	130	315	95	1460	140	1105
Lane Group Flow (vph)	141	396	141	456	103	1712	152	1228
Turn Type	Prot		Prot		Prot		Prot	
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phases	7	4	3	8	5	2	1	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	24.0	8.0	24.0	8.0	25.0	8.0	25.0
Total Split (s)	12.0	27.0	13.0	28.0	13.0	53.0	13.0	53.0
Total Split (%)	11.3%	25.5%	12.3%	26.4%	12.3%	50.0%	12.3%	50.0%
Yellow Time (s)	3.5	4.0	3.5	4.0	3.5	4.0	3.5	4.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
v/c Ratio	1.05	0.99	0.94	1.09	0.73	1.05	1.01	0.74
Control Delay	140.8	83.8	108.8	110.1	76.2	67.1	126.5	26.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	140.8	83.8	108.8	110.1	76.2	67.1	126.5	26.6
Queue Length 50th (ft)	~105	262	97	~343	69	~671	~106	350
Queue Length 95th (ft)	#231	#461	#220	#544	#149	#812	#238	435
Internal Link Dist (ft)		300		422		1798		924
Turn Bay Length (ft)								
Base Capacity (vph)	134	400	150	417	150	1623	150	1650
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.05	0.99	0.94	1.09	0.69	1.05	1.01	0.74

Intersection Summary
Cycle Length: 106
Actuated Cycle Length: 106
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 120
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 111: Olney Ave & 3rd St

HCM Signalized Intersection Capacity Analysis
111: Olney Ave & 3rd St

Baseline
2007 PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.97		1.00	0.96		1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1798		1770	1793		1770	3500		1770	3528	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1798		1770	1793		1770	3500		1770	3528	
Volume (vph)	130	280	85	130	315	105	95	1460	115	140	1105	25
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	141	304	92	141	342	114	103	1587	125	152	1201	27
RTOR Reduction (vph)	0	10	0	0	12	0	0	5	0	0	2	0
Lane Group Flow (vph)	141	386	0	141	444	0	103	1707	0	152	1226	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	8.5	23.0		9.5	24.0		9.0	48.0		9.5	48.5	
Effective Green, g (s)	8.0	23.0		9.0	24.0		8.5	49.0		9.0	49.5	
Actuated g/C Ratio	0.08	0.22		0.08	0.23		0.08	0.46		0.08	0.47	
Clearance Time (s)	3.5	4.0		3.5	4.0		3.5	5.0		3.5	5.0	
Vehicle Extension (s)	2.5	2.5		2.5	2.5		2.5	4.8		2.5	4.8	
Lane Grp Cap (vph)	134	390		150	406		142	1618		150	1648	
v/s Ratio Prot	0.08	c0.21		0.08	c0.25		0.06	c0.49		c0.09	0.35	
v/s Ratio Perm												
v/c Ratio	1.05	0.99		0.94	1.09		0.73	1.05		1.01	0.74	
Uniform Delay, d1	49.0	41.4		48.2	41.0		47.6	28.5		48.5	23.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	92.4	42.3		55.6	72.6		15.8	38.4		77.0	3.1	
Delay (s)	141.4	83.6		103.8	113.6		63.4	66.9		125.5	26.2	
Level of Service	F	F		F	F		E	E		F	C	
Approach Delay (s)		98.8			111.3			66.7			37.1	
Approach LOS		F			F			E			D	

Intersection Summary				
HCM Average Control Delay	67.4	HCM Level of Service	E	
HCM Volume to Capacity ratio	1.04			
Actuated Cycle Length (s)	106.0	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	95.3%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				

HCM Unsignalized Intersection Capacity Analysis
112: Olney Ave & 4th St

Baseline
2007 PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	105	385	40	50	385	45	45	235	75	140	140	100
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	114	418	43	54	418	49	49	255	82	152	152	109

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	114	462	54	467	386	413
Volume Left (vph)	114	0	54	0	49	152
Volume Right (vph)	0	43	0	49	82	109
Hadj (s)	0.53	-0.03	0.53	-0.04	-0.07	-0.05
Departure Headway (s)	10.2	9.6	10.2	9.6	9.4	9.4
Degree Utilization, x	0.32	1.23	0.15	1.24	1.01	1.08
Capacity (veh/h)	351	381	350	381	386	390
Control Delay (s)	16.7	153.1	13.8	158.2	79.1	100.2
Approach Delay (s)	126.1		143.2		79.1	100.2
Approach LOS	F		F		F	F

Intersection Summary					
Delay	115.6				
HCM Level of Service	F				
Intersection Capacity Utilization	82.8%	ICU Level of Service		E	
Analysis Period (min)	15				

HCM Unsignalized Intersection Capacity Analysis
113: Lafayette Ave & Bend Pkwy SB Ramp

Baseline
2007 PM Peak Hour

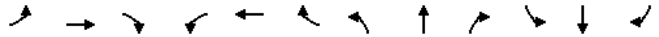
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	125	0	2610	2725	75
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	136	0	2837	2962	82
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)				740		
pX, platoon unblocked						
vC, conflicting volume	4380	1481	3043			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	4380	1481	3043			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	0	100			
cM capacity (veh/h)	1	114	109			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	136	1418	1418	1481	1481	82
Volume Left	0	0	0	0	0	0
Volume Right	136	0	0	0	0	82
cSH	114	1700	1700	1700	1700	1700
Volume to Capacity	1.19	0.83	0.83	0.87	0.87	0.05
Queue Length 95th (ft)	215	0	0	0	0	0
Control Delay (s)	214.9	0.0	0.0	0.0	0.0	0.0
Lane LOS	F					
Approach Delay (s)	214.9	0.0		0.0		
Approach LOS	F					

Intersection Summary				
Average Delay	4.9			
Intersection Capacity Utilization	89.7%	ICU Level of Service		E
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
114: Wall St. & Bond St

Baseline
2007 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	10	190	0	0	605	10	65	10	435	20	0	45
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	207	0	0	658	11	71	11	473	22	0	49
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		563			155							
pX, platoon unblocked												
vC, conflicting volume	668			207			940	897	207	1370	891	663
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	668			207			940	897	207	1370	891	663
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			67	96	43	58	100	89
cM capacity (veh/h)	921			1365			216	276	834	51	278	461

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	217	668	82	473	71
Volume Left	11	0	71	0	22
Volume Right	0	11	0	473	49
cSH	921	1700	222	834	134
Volume to Capacity	0.01	0.39	0.37	0.57	0.53
Queue Length 95th (ft)	1	0	40	91	64
Control Delay (s)	0.6	0.0	30.3	14.8	58.7
Lane LOS	A		D	B	F
Approach Delay (s)	0.6	0.0	17.1		58.7
Approach LOS			C		F

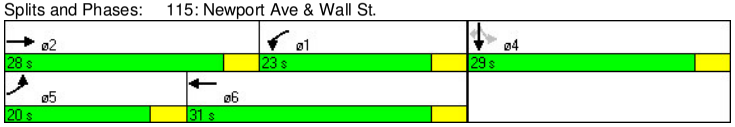
Intersection Summary				
Average Delay	9.1			
Intersection Capacity Utilization	51.4%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBL	EBT	WBL	WBT	SBT	SBR
Lane Configurations						
Volume (vph)	150	410	325	565	455	170
Lane Group Flow (vph)	163	620	353	657	620	185
Turn Type	Prot		Prot			Perm
Protected Phases	5	2	1	6	4	
Permitted Phases						4
Detector Phases	5	2	1	6	4	4
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.0	20.0	10.0	24.0	29.0	29.0
Total Split (s)	20.0	28.0	23.0	31.0	29.0	29.0
Total Split (%)	25.0%	35.0%	28.8%	38.8%	36.3%	36.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0
Lead/Lag	Lead	Lead	Lag	Lag		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes		
Recall Mode	Max	Max	Max	Max	Max	Max
v/c Ratio	0.46	0.58	0.84	1.05	0.57	0.30
Control Delay	33.1	23.3	49.2	77.4	25.4	4.8
Queue Delay	0.0	0.0	0.0	43.6	0.6	0.0
Total Delay	33.1	23.3	49.2	121.0	26.0	4.8
Queue Length 50th (ft)	72	120	180	~369	134	0
Queue Length 95th (ft)	131	173	m#316	#576	187	43
Internal Link Dist (ft)		429		314	483	
Turn Bay Length (ft)						
Base Capacity (vph)	354	1069	420	626	1095	622
Starvation Cap Reductn	0	0	0	59	0	0
Spillback Cap Reductn	0	1	0	0	184	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.58	0.84	1.16	0.68	0.30

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 80
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 75
Control Type: Pretimed
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 115: Newport Ave & Wall St.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0						4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	1.00						0.95	1.00
Frt	1.00	0.96		1.00	0.99						1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00						0.99	1.00
Satd. Flow (prot)	1770	3390		1770	1844						3504	1583
Flt Permitted	0.95	1.00		0.95	1.00						0.99	1.00
Satd. Flow (perm)	1770	3390		1770	1844						3504	1583
Volume (vph)	150	410	160	325	565	40	0	0	0	115	455	170
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	163	446	174	353	614	43	0	0	0	125	495	185
RTOR Reduction (vph)	0	52	0	0	3	0	0	0	0	0	0	127
Lane Group Flow (vph)	163	568	0	353	654	0	0	0	0	0	620	58
Turn Type	Prot			Prot						Perm		Perm
Protected Phases	5	2		1	6						4	
Permitted Phases										4		4
Actuated Green, G (s)	16.0	24.0		19.0	27.0						25.0	25.0
Effective Green, g (s)	16.0	24.0		19.0	27.0						25.0	25.0
Actuated g/C Ratio	0.20	0.30		0.24	0.34						0.31	0.31
Clearance Time (s)	4.0	4.0		4.0	4.0						4.0	4.0
Lane Grp Cap (vph)	354	1017		420	622						1095	495
v/s Ratio Prot	0.09	c0.17		0.20	c0.35							
v/s Ratio Perm											0.18	0.04
v/c Ratio	0.46	0.56		0.84	1.05						0.57	0.12
Uniform Delay, d1	28.2	23.5		29.1	26.5						23.0	19.6
Progression Factor	1.00	1.00		1.11	1.13						1.00	1.00
Incremental Delay, d2	4.3	2.2		15.3	46.9						2.1	0.5
Delay (s)	32.5	25.8		47.5	76.8						25.1	20.1
Level of Service	C	C		D	E						C	C
Approach Delay (s)		27.2			66.6			0.0			23.9	
Approach LOS		C			E			A			C	

Intersection Summary

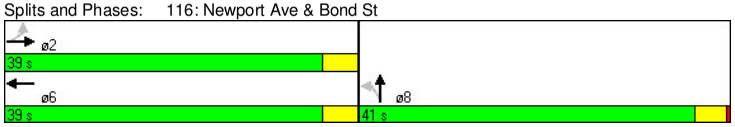
HCM Average Control Delay	41.5	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.77			
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	66.4%	ICU Level of Service	C	
Analysis Period (min)	15			

c Critical Lane Group

Lane Group	EBL	EBT	WBT	NBT
Lane Configurations				
Volume (vph)	15	510	690	450
Lane Group Flow (vph)	0	570	815	1152
Turn Type	Perm			
Protected Phases		2	6	8
Permitted Phases	2			
Detector Phases	2	2	6	8
Minimum Initial (s)	6.0	6.0	6.0	4.0
Minimum Split (s)	28.0	28.0	29.0	20.0
Total Split (s)	39.0	39.0	39.0	41.0
Total Split (%)	48.8%	48.8%	48.8%	51.3%
Yellow Time (s)	4.0	4.0	4.0	3.5
All-Red Time (s)	0.0	0.0	0.0	0.5
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	Max	Max	Max	Max
v/c Ratio		0.40	0.53	0.71
Control Delay		22.9	17.7	20.9
Queue Delay		0.0	0.1	2.9
Total Delay		22.9	17.9	23.8
Queue Length 50th (ft)		88	148	193
Queue Length 95th (ft)		141	201	232
Internal Link Dist (ft)		314	1020	356
Turn Bay Length (ft)				
Base Capacity (vph)		1435	1538	1623
Starvation Cap Reductn		0	0	62
Spillback Cap Reductn		0	131	350
Storage Cap Reductn		0	0	0
Reduced v/c Ratio		0.40	0.58	0.90

Intersection Summary
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 38 (48%), Referenced to phase 2:EBTL and 6:WBT, Start of Green
Natural Cycle: 55
Control Type: Pretimed

Splits and Phases: 116: Newport Ave & Bond St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		0.95			0.95			0.95				
Frt		1.00			0.99			0.95				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		3534			3497			3316				
Flt Permitted		0.93			1.00			0.99				
Satd. Flow (perm)		3279			3497			3316				
Volume (vph)	15	510	0	0	690	60	240	450	370	0	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	16	554	0	0	750	65	261	489	402	0	0	0
RTOR Reduction (vph)	0	0	0	0	8	0	0	89	0	0	0	0
Lane Group Flow (vph)	0	570	0	0	807	0	0	1063	0	0	0	0
Turn Type	Perm						Perm					
Protected Phases		2			6			8				
Permitted Phases	2						8					
Actuated Green, G (s)		35.0			35.0			37.0				
Effective Green, g (s)		35.0			35.0			37.0				
Actuated g/C Ratio		0.44			0.44			0.46				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		1435			1530			1534				
v/s Ratio Prot					c0.23							
v/s Ratio Perm		0.17						0.32				
v/c Ratio		0.40			0.53			0.69				
Uniform Delay, d1		15.3			16.5			17.0				
Progression Factor		1.43			1.00			1.26				
Incremental Delay, d2		0.7			1.3			2.1				
Delay (s)		22.6			17.8			23.6				
Level of Service		C			B			C				
Approach Delay (s)		22.6			17.8			23.6			0.0	
Approach LOS		C			B			C			A	

Intersection Summary				
HCM Average Control Delay	21.5	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.61			
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	62.9%	ICU Level of Service	B	
Analysis Period (min)	15			

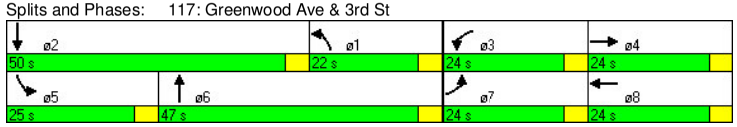
c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	310	775	300	585	150	960	325	745
Lane Group Flow (vph)	337	989	326	957	163	1364	353	930
Turn Type	Prot		Prot		Prot		Prot	
Protected Phases	7	4	3	8	1	6	5	2
Permitted Phases								
Detector Phases	7	4	3	8	1	6	5	2
Minimum Initial (s)	5.0	8.0	5.0	8.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.0	27.0	9.0	27.0	9.0	24.0	9.0	24.0
Total Split (s)	24.0	24.0	24.0	24.0	22.0	47.0	25.0	50.0
Total Split (%)	20.0%	20.0%	20.0%	20.0%	18.3%	39.2%	20.8%	41.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Ped	None	None	None	Min	None	C-Min
v/c Ratio	1.14	1.68	1.11	1.56	0.42	1.09	1.14	0.85
Control Delay	141.6	344.7	129.9	292.7	34.0	74.7	138.8	45.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	141.6	344.7	129.9	292.7	34.0	74.7	138.8	45.5
Queue Length 50th (ft)	~305	~590	~288	~533	73	~599	~319	350
Queue Length 95th (ft)	#491	#724	#471	#667	m133	m#633	#508	387
Internal Link Dist (ft)		1176		415		654		1798
Turn Bay Length (ft)								
Base Capacity (vph)	295	589	295	613	390	1248	310	1341
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.14	1.68	1.11	1.56	0.42	1.09	1.14	0.69

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 43 (36%), Referenced to phase 2:SBT, Start of Green
Natural Cycle: 130
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 117: Greenwood Ave & 3rd St



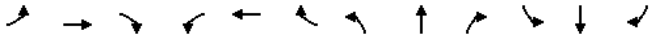
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	0.95		1.00	0.96		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3460		1770	3361		1770	3414		1770	3471	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3460		1770	3361		1770	3414		1770	3471	
Volume (vph)	310	775	135	300	585	295	150	960	295	325	745	110
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	337	842	147	326	636	321	163	1043	321	353	810	120
RTOR Reduction (vph)	0	12	0	0	53	0	0	24	0	0	11	0
Lane Group Flow (vph)	337	977	0	326	905	0	163	1340	0	353	919	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases												
Actuated Green, G (s)	20.0	20.0		20.0	20.0		26.4	43.0		21.0	37.6	
Effective Green, g (s)	20.0	20.0		20.0	20.0		26.4	43.0		21.0	37.6	
Actuated g/C Ratio	0.17	0.17		0.17	0.17		0.22	0.36		0.18	0.31	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	2.5	2.5		2.5	2.5		2.5	4.3		2.5	4.3	
Lane Grp Cap (vph)	295	577		295	560		389	1223		310	1088	
v/s Ratio Prot	c0.19	c0.28		0.18	0.27		0.09	c0.39		c0.20	0.26	
v/s Ratio Perm												
v/c Ratio	1.14	1.69		1.11	1.62		0.42	1.10		1.14	0.84	
Uniform Delay, d1	50.0	50.0		50.0	50.0		40.2	38.5		49.5	38.5	
Progression Factor	1.00	1.00		1.00	1.00		0.75	0.66		1.00	1.00	
Incremental Delay, d2	96.6	319.7		83.6	285.0		0.3	50.0		94.1	8.1	
Delay (s)	146.6	369.7		133.6	335.0		30.6	75.6		143.6	46.5	
Level of Service	F	F		F	F		C	E		F	D	
Approach Delay (s)		313.0			283.8			70.8			73.2	
Approach LOS		F			F			E			E	

Intersection Summary

HCM Average Control Delay	181.1	HCM Level of Service	F	
HCM Volume to Capacity ratio	1.23			
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	110.1%	ICU Level of Service	H	
Analysis Period (min)	15			

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis — Baseline
118: Greenwood Ave & 4th St — 2007 PM Peak Hour

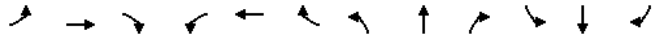


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	30	1330	25	70	1055	140	0	0	130	0	0	155
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	33	1446	27	76	1147	152	0	0	141	0	0	168
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		495										
pX, platoon unblocked				0.84			0.84	0.84	0.84	0.84	0.84	
vC, conflicting volume	1299			1473			2418	2976	736	2304	2913	649
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1299			1375			2496	3157	501	2361	3083	649
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	94			82			100	100	67	100	100	59
cM capacity (veh/h)	529			417			6	7	434	9	8	412

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	33	964	509	76	764	534	141	168
Volume Left	33	0	0	76	0	0	0	0
Volume Right	0	0	27	0	0	152	141	168
cSH	529	1700	1700	417	1700	1700	434	412
Volume to Capacity	0.06	0.57	0.30	0.18	0.45	0.31	0.33	0.41
Queue Length 95th (ft)	5	0	0	16	0	0	35	49
Control Delay (s)	12.2	0.0	0.0	15.5	0.0	0.0	17.2	19.6
Lane LOS	B			C			C	C
Approach Delay (s)	0.3			0.9			17.2	19.6
Approach LOS							C	C

Intersection Summary				
Average Delay	2.3			
Intersection Capacity Utilization	52.3%	ICU Level of Service	A	
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis — Baseline
119: Hawthorne Ave & 3rd St — 2007 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	15	5	45	0	5	55	10	1385	35	35	1220	25
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	5	49	0	5	60	11	1505	38	38	1326	27
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		1			1							
Upstream signal (ft)								745			734	
pX, platoon unblocked	0.84	0.84	0.77	0.84	0.84	0.73	0.77			0.73		
vC, conflicting volume	2253	2981	677	2337	2976	772	1353			1543		
vC1, stage 1 conf vol	1416	1416		1546	1546							
vC2, stage 2 conf vol	837	1565		791	1429							
vCu, unblocked vol	1475	2340	278	1575	2334	308	1158			1371		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	84	92	91	100	93	88	98			89		
cM capacity (veh/h)	103	71	553	90	82	499	460			360		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	71	65	11	1004	540	38	884	469
Volume Left	16	0	11	0	0	38	0	0
Volume Right	49	60	0	0	38	0	0	27
cSH	218	350	460	1700	1700	360	1700	1700
Volume to Capacity	0.32	0.19	0.02	0.59	0.32	0.11	0.52	0.28
Queue Length 95th (ft)	33	17	2	0	0	9	0	0
Control Delay (s)	29.2	17.6	13.0	0.0	0.0	16.2	0.0	0.0
Lane LOS	D	C	B			C		
Approach Delay (s)	29.2	17.6	0.1			0.4		
Approach LOS	D	C						

Intersection Summary				
Average Delay	1.3			
Intersection Capacity Utilization	56.6%	ICU Level of Service	B	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	50	30	30	5	10	5	15	90	5	10	130	35
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	54	33	33	5	11	5	16	98	5	11	141	38
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	326	318	160	364	334	101	179			103		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	326	318	160	364	334	101	179			103		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	91	94	96	99	98	99	99			99		
cM capacity (veh/h)	606	587	885	538	575	955	1396			1489		

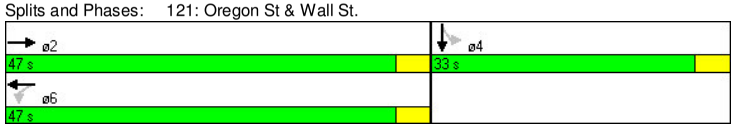
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	120	22	120	190
Volume Left	54	5	16	11
Volume Right	33	5	5	38
cSH	656	627	1396	1489
Volume to Capacity	0.18	0.03	0.01	0.01
Queue Length 95th (ft)	17	3	1	1
Control Delay (s)	11.7	11.0	1.1	0.5
Lane LOS	B	B	A	A
Approach Delay (s)	11.7	11.0	1.1	0.5
Approach LOS	B	B		

Intersection Summary												
Average Delay			4.1									
Intersection Capacity Utilization			28.3%		ICU Level of Service				A			
Analysis Period (min)			15									

Lane Group	EBT	WBL	WBT	SBT
Lane Configurations				
Volume (vph)	25	205	70	835
Lane Group Flow (vph)	54	0	299	1082
Turn Type		Perm		
Protected Phases	2		6	4
Permitted Phases		6		
Detector Phases	2	6	6	4
Minimum Initial (s)	4.0	4.0	4.0	4.0
Minimum Split (s)	20.5	20.5	20.5	20.5
Total Split (s)	47.0	47.0	47.0	33.0
Total Split (%)	58.8%	58.8%	58.8%	41.3%
Yellow Time (s)	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	0.0	0.0	0.0
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	Max	Max	Max	Max
v/c Ratio	0.07		0.46	0.93
Control Delay	5.6		15.4	27.7
Queue Delay	0.0		0.0	1.3
Total Delay	5.6		15.4	28.9
Queue Length 50th (ft)	6		107	178
Queue Length 95th (ft)	22		181	m#382
Internal Link Dist (ft)	126		313	295
Turn Bay Length (ft)				
Base Capacity (vph)	820		646	1164
Starvation Cap Reductn	0		0	20
Spillback Cap Reductn	0		0	0
Storage Cap Reductn	0		0	0
Reduced v/c Ratio	0.07		0.46	0.95

Intersection Summary
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 61 (76%), Referenced to phase 2:EBT, Start of Green
Natural Cycle: 50
Control Type: Pretimed
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 121: Oregon St & Wall St.



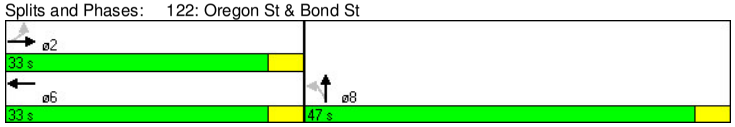
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0						4.0	
Lane Util. Factor		1.00			1.00						0.95	
Frt		0.93			1.00						1.00	
Flt Protected		1.00			0.96						0.99	
Satd. Flow (prot)		1503			1553						3206	
Flt Permitted		1.00			0.75						0.99	
Satd. Flow (perm)		1503			1203						3206	
Volume (vph)	0	25	25	205	70	0	0	0	0	140	835	20
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	27	27	223	76	0	0	0	0	152	908	22
RTOR Reduction (vph)	0	12	0	0	0	0	0	0	0	0	2	0
Lane Group Flow (vph)	0	42	0	0	299	0	0	0	0	0	1080	0
Parking (#/hr)	7	7	7	7	7	7				14	14	14
Turn Type				Perm						Perm		
Protected Phases		2			6						4	
Permitted Phases				6						4		
Actuated Green, G (s)		43.0			43.0						29.0	
Effective Green, g (s)		43.0			43.0						29.0	
Actuated g/C Ratio		0.54			0.54						0.36	
Clearance Time (s)		4.0			4.0						4.0	
Lane Grp Cap (vph)		808			647						1162	
v/s Ratio Prot		0.03										
v/s Ratio Perm					c0.25						0.34	
v/c Ratio		0.05			0.46						0.93	
Uniform Delay, d1		8.8			11.4						24.5	
Progression Factor		1.00			1.12						0.58	
Incremental Delay, d2		0.1			2.0						11.6	
Delay (s)		8.9			14.7						25.9	
Level of Service		A			B						C	
Approach Delay (s)		8.9			14.7			0.0			25.9	
Approach LOS		A			B			A			C	

Intersection Summary				
HCM Average Control Delay	22.9	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.65			
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	56.2%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	WBT	NBT
Lane Configurations				
Volume (vph)	100	100	95	795
Lane Group Flow (vph)	0	218	282	1174
Turn Type	Perm			
Protected Phases		2	6	8
Permitted Phases	2			
Detector Phases	2	2	6	8
Minimum Initial (s)	4.0	4.0	4.0	4.0
Minimum Split (s)	20.5	20.5	20.5	20.5
Total Split (s)	33.0	33.0	33.0	47.0
Total Split (%)	41.3%	41.3%	41.3%	58.8%
Yellow Time (s)	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	0.0	0.0	0.0
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	Max	Max	Max	Max
v/c Ratio		0.49	0.41	0.63
Control Delay		13.6	12.4	10.7
Queue Delay		0.0	0.0	0.0
Total Delay		13.6	12.4	10.8
Queue Length 50th (ft)		67	55	127
Queue Length 95th (ft)		m86	117	m161
Internal Link Dist (ft)		313	523	693
Turn Bay Length (ft)				
Base Capacity (vph)		442	696	1869
Starvation Cap Reductn		0	0	0
Spillback Cap Reductn		0	0	8
Storage Cap Reductn		0	0	0
Reduced v/c Ratio		0.49	0.41	0.63

Intersection Summary
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 51 (64%), Referenced to phase 2:EBTL and 6:WBT, Start of Green
Natural Cycle: 45
Control Type: Pretimed
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 122: Oregon St & Bond St



HCM Signalized Intersection Capacity Analysis
122: Oregon St & Bond St

Baseline
2007 PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			0.95				
Frt		1.00			0.91			0.98				
Flt Protected		0.98			1.00			0.99				
Satd. Flow (prot)		1817			1703			3457				
Flt Permitted		0.65			1.00			0.99				
Satd. Flow (perm)		1220			1703			3457				
Volume (vph)	100	100	0	0	95	165	175	795	110	0	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	109	109	0	0	103	179	190	864	120	0	0	0
RTOR Reduction (vph)	0	0	0	0	78	0	0	11	0	0	0	0
Lane Group Flow (vph)	0	218	0	0	204	0	0	1163	0	0	0	0
Turn Type	Perm						Perm					
Protected Phases		2			6			8				
Permitted Phases	2						8					
Actuated Green, G (s)		29.0			29.0			43.0				
Effective Green, g (s)		29.0			29.0			43.0				
Actuated g/C Ratio		0.36			0.36			0.54				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		442			617			1858				
v/s Ratio Prot					0.12							
v/s Ratio Perm		c0.18						0.34				
v/c Ratio		0.49			0.33			0.63				
Uniform Delay, d1		19.8			18.5			12.9				
Progression Factor		0.52			1.00			0.73				
Incremental Delay, d2		2.9			1.4			1.3				
Delay (s)		13.2			19.9			10.7				
Level of Service		B			B			B				
Approach Delay (s)		13.2			19.9			10.7			0.0	
Approach LOS		B			B			B			A	

Intersection Summary				
HCM Average Control Delay	12.6	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.57			
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	66.5%	ICU Level of Service	C	
Analysis Period (min)	15			

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
123: Oregon St & Bend Pkwy SB Ramp

Baseline
2007 PM Peak Hour

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	245	0	2610	2695	220
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	266	0	2837	2929	239
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)				773	710	
pX, platoon unblocked						
vC, conflicting volume	4348	1465	3168			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	4348	1465	3168			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	0	100			
cM capacity (veh/h)	1	117	97			

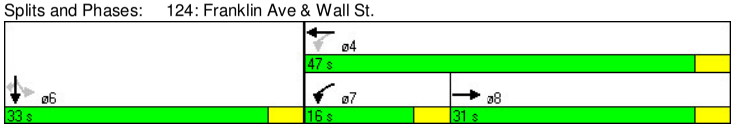
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	266	1418	1418	1465	1465	239
Volume Left	0	0	0	0	0	0
Volume Right	266	0	0	0	0	239
cSH	117	1700	1700	1700	1700	1700
Volume to Capacity	2.27	0.83	0.83	0.86	0.86	0.14
Queue Length 95th (ft)	574	0	0	0	0	0
Control Delay (s)	656.8	0.0	0.0	0.0	0.0	0.0
Lane LOS	F					
Approach Delay (s)	656.8	0.0		0.0		
Approach LOS	F					

Intersection Summary					
Average Delay	27.9				
Intersection Capacity Utilization	96.3%	ICU Level of Service		F	
Analysis Period (min)	15				

Lane Group	EBT	WBL	WBT	SBT	SBR
Lane Configurations					
Volume (vph)	465	175	390	510	280
Lane Group Flow (vph)	538	190	424	809	304
Turn Type		pm+pt			Perm
Protected Phases	8	7	4	6	
Permitted Phases		4			6
Detector Phases	8	7	4	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.5	8.5	20.5	20.5	20.5
Total Split (s)	31.0	16.0	47.0	33.0	33.0
Total Split (%)	38.8%	20.0%	58.8%	41.3%	41.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0
Lead/Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes			
Recall Mode	Max	Max	Max	Max	Max
v/c Ratio	0.86	0.53	0.42	0.64	0.40
Control Delay	40.4	19.7	2.4	23.3	6.6
Queue Delay	0.0	0.0	0.9	0.0	0.0
Total Delay	40.4	19.7	3.3	23.3	6.6
Queue Length 50th (ft)	246	23	14	126	22
Queue Length 95th (ft)	#425	m41	m19	m153	m37
Internal Link Dist (ft)	420		308	677	
Turn Bay Length (ft)					
Base Capacity (vph)	626	359	1001	1263	768
Starvation Cap Reductn	0	0	317	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.86	0.53	0.62	0.64	0.40

Intersection Summary
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 0 (0%), Referenced to phase 4:WBTL and 8:EBT, Start of Green
Natural Cycle: 60
Control Type: Pretimed
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 124: Franklin Ave & Wall St.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0						4.0	4.0
Lane Util. Factor		1.00		1.00	1.00						0.95	1.00
Frt		0.99		1.00	1.00						1.00	0.85
Flt Protected		1.00		0.95	1.00						0.98	1.00
Satd. Flow (prot)		1847		1770	1863						3484	1583
Flt Permitted		1.00		0.13	1.00						0.98	1.00
Satd. Flow (perm)		1847		240	1863						3484	1583
Volume (vph)	0	465	30	175	390	0	0	0	0	235	510	280
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	505	33	190	424	0	0	0	0	255	554	304
RTOR Reduction (vph)	0	3	0	0	0	0	0	0	0	0	0	194
Lane Group Flow (vph)	0	535	0	190	424	0	0	0	0	0	809	110
Turn Type				pm+pt						Perm		Perm
Protected Phases		8		7	4						6	
Permitted Phases				4						6		6
Actuated Green, G (s)		27.0		43.0	43.0						29.0	29.0
Effective Green, g (s)		27.0		43.0	43.0						29.0	29.0
Actuated g/C Ratio		0.34		0.54	0.54						0.36	0.36
Clearance Time (s)		4.0		4.0	4.0						4.0	4.0
Lane Grp Cap (vph)		623		359	1001						1263	574
v/s Ratio Prot		c0.29		c0.08	0.23							
v/s Ratio Perm				0.21							0.23	0.07
v/c Ratio		0.86		0.53	0.42						0.64	0.19
Uniform Delay, d1		24.7		13.6	11.1						21.2	17.5
Progression Factor		1.00		1.46	0.15						1.02	2.32
Incremental Delay, d2		14.4		2.8	0.7						1.4	0.4
Delay (s)		39.1		22.7	2.4						22.9	40.9
Level of Service		D		C	A						C	D
Approach Delay (s)		39.1			8.7			0.0			27.8	
Approach LOS		D			A			A			C	

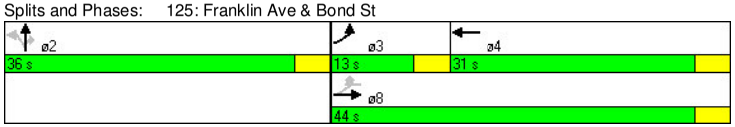
Intersection Summary					
HCM Average Control Delay	25.3	HCM Level of Service		C	
HCM Volume to Capacity ratio	0.71				
Actuated Cycle Length (s)	80.0	Sum of lost time (s)		12.0	
Intersection Capacity Utilization	71.8%	ICU Level of Service		C	
Analysis Period (min)	15				

c Critical Lane Group

Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Volume (vph)	260	435	505	115	690	285
Lane Group Flow (vph)	283	473	549	125	815	310
Turn Type	pm+pt			custom		Perm
Protected Phases	3	8	4		2	
Permitted Phases	8			8		2
Detector Phases	3	8	4	8	2	2
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.5	20.5	20.5	20.5	20.5
Total Split (s)	13.0	44.0	31.0	44.0	36.0	36.0
Total Split (%)	16.3%	55.0%	38.8%	55.0%	45.0%	45.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	Max	Max	Max	Max	Max	Max
v/c Ratio	0.97	0.27	0.87	0.15	0.58	0.38
Control Delay	62.0	21.2	42.0	4.5	20.8	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.0	21.2	42.0	4.5	20.8	3.5
Queue Length 50th (ft)	134	114	254	8	162	0
Queue Length 95th (ft)	m#176	m137	#436	34	219	46
Internal Link Dist (ft)		308	596		574	
Turn Bay Length (ft)						
Base Capacity (vph)	292	1770	629	837	1410	819
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.97	0.27	0.87	0.15	0.58	0.38

Intersection Summary
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 59 (74%), Referenced to phase 4:WBT and 8:EBTL, Start of Green
Natural Cycle: 55
Control Type: Pretimed
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 125: Franklin Ave & Bond St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95			1.00	1.00		0.95	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		1.00	1.00			
Satd. Flow (prot)	1770	3539			1863	1583		3525	1583			
Flt Permitted	0.13	1.00			1.00	1.00		1.00	1.00			
Satd. Flow (perm)	240	3539			1863	1583		3525	1583			
Volume (vph)	260	435	0	0	505	115	60	690	285	0	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	283	473	0	0	549	125	65	750	310	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	45	0	0	186	0	0	0
Lane Group Flow (vph)	283	473	0	0	549	80	0	815	124	0	0	0
Turn Type	pm+pt					custom	Perm		Perm			
Protected Phases	3	8			4			2				
Permitted Phases	8					8	2		2			
Actuated Green, G (s)	40.0	40.0			27.0	40.0		32.0	32.0			
Effective Green, g (s)	40.0	40.0			27.0	40.0		32.0	32.0			
Actuated g/C Ratio	0.50	0.50			0.34	0.50		0.40	0.40			
Clearance Time (s)	4.0	4.0			4.0	4.0		4.0	4.0			
Lane Grp Cap (vph)	292	1770			629	792		1410	633			
v/s Ratio Prot	c0.11	0.13			0.29							
v/s Ratio Perm	c0.37					0.05		0.23	0.08			
v/c Ratio	0.97	0.27			0.87	0.10		0.58	0.20			
Uniform Delay, d1	19.4	11.5			24.9	10.5		18.7	15.6			
Progression Factor	1.61	1.80			1.00	1.00		1.00	1.00			
Incremental Delay, d2	33.6	0.2			15.5	0.3		1.7	0.7			
Delay (s)	64.9	21.0			40.3	10.8		20.5	16.3			
Level of Service	E	C			D	B		C	B			
Approach Delay (s)		37.4			34.9			19.3			0.0	
Approach LOS		D			C			B			A	

Intersection Summary				
HCM Average Control Delay	28.8	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.78			
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	71.8%	ICU Level of Service	C	
Analysis Period (min)	15			

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Volume (vph)	345	640	115	180	415	175	1035	105	1045
Lane Group Flow (vph)	375	696	125	196	527	190	1174	114	1272
Turn Type	Prot		Perm	Prot		Prot		Prot	
Protected Phases	7	4		3	8	1	6	5	2
Permitted Phases			4						
Detector Phases	7	4	4	3	8	1	6	5	2
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.0	26.0	26.0	9.0	26.0	9.0	24.0	9.0	24.0
Total Split (s)	22.0	40.0	40.0	10.0	28.0	17.0	58.0	12.0	53.0
Total Split (%)	18.3%	33.3%	33.3%	8.3%	23.3%	14.2%	48.3%	10.0%	44.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max	Max
v/c Ratio	1.41	0.66	0.22	2.20	0.75	0.99	0.74	0.97	0.89
Control Delay	243.4	40.1	6.4	602.4	51.5	116.2	30.6	91.6	23.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	243.4	40.1	6.4	602.4	51.5	116.2	30.6	91.6	23.9
Queue Length 50th (ft)	~390	246	0	~245	198	149	384	94	525
Queue Length 95th (ft)	#582	314	44	#396	262	#302	470	m#111	m412
Internal Link Dist (ft)		1152			410		1273		665
Turn Bay Length (ft)									
Base Capacity (vph)	266	1062	562	89	703	192	1586	118	1430
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.41	0.66	0.22	2.20	0.75	0.99	0.74	0.97	0.89

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 49 (41%), Referenced to phase 6:NBT, Start of Green
Natural Cycle: 120
Control Type: Pretimed
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 126: Franklin Ave & 3rd St

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3463		1770	3517		1770	3482	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3463		1770	3517		1770	3482	
Volume (vph)	345	640	115	180	415	70	175	1035	45	105	1045	125
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	375	696	125	196	451	76	190	1125	49	114	1136	136
RTOR Reduction (vph)	0	0	88	0	11	0	0	3	0	0	8	0
Lane Group Flow (vph)	375	696	38	196	516	0	190	1171	0	114	1264	0
Turn Type	Prot		Perm	Prot			Prot			Prot		
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases			4									
Actuated Green, G (s)	18.0	36.0	36.0	6.0	24.0		13.0	54.0		8.0	49.0	
Effective Green, g (s)	18.0	36.0	36.0	6.0	24.0		13.0	54.0		8.0	49.0	
Actuated g/C Ratio	0.15	0.30	0.30	0.05	0.20		0.11	0.45		0.07	0.41	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	266	1062	475	89	693		192	1583		118	1422	
v/s Ratio Prot	c0.21	0.20		c0.11	c0.15		c0.11	0.33		0.06	c0.36	
v/s Ratio Perm			0.02									
v/c Ratio	1.41	0.66	0.08	2.20	0.74		0.99	0.74		0.97	0.89	
Uniform Delay, d1	51.0	36.6	30.1	57.0	45.1		53.4	27.2		55.9	33.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		0.76	0.59	
Incremental Delay, d2	205.3	3.2	0.3	575.8	7.1		62.3	3.1		46.5	4.1	
Delay (s)	256.3	39.8	30.4	632.8	52.2		115.7	30.4		88.8	23.4	
Level of Service	F	D	C	F	D		F	C		F	C	
Approach Delay (s)		106.7			209.6			42.3			28.8	
Approach LOS		F			F			D			C	

Intersection Summary

HCM Average Control Delay	80.7	HCM Level of Service	F
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	88.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis — Baseline
127: Franklin Ave & 4th St — 2007 PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	70	660	45	25	470	15	25	25	45	15	15	145
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	76	717	49	27	511	16	27	27	49	16	16	158
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		490										
pX, platoon unblocked				0.84			0.84	0.84	0.84	0.84	0.84	
vC, conflicting volume	527			766			1370	1476	383	1147	1492	264
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	527			533			1250	1376	77	985	1396	264
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	93			97			61	75	94	86	85	79
cM capacity (veh/h)	1036			867			69	109	814	119	106	735

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	76	478	288	27	341	187	103	190
Volume Left	76	0	0	27	0	0	27	16
Volume Right	0	0	49	0	0	16	49	158
cSH	1036	1700	1700	867	1700	1700	147	376
Volume to Capacity	0.07	0.28	0.17	0.03	0.20	0.11	0.70	0.51
Queue Length 95th (ft)	6	0	0	2	0	0	101	69
Control Delay (s)	8.8	0.0	0.0	9.3	0.0	0.0	72.9	23.9
Lane LOS	A			A			F	C
Approach Delay (s)	0.8			0.5			72.9	23.9
Approach LOS							F	C

Intersection Summary					
Average Delay	7.7				
Intersection Capacity Utilization	44.8%	ICU Level of Service		A	
Analysis Period (min)	15				

HCM Unsignalized Intersection Capacity Analysis — Baseline
128: Tumalo Ave & Riverside Dr — 2007 PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	315	205	30	0	210	5	50	5	5	15	30	570
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	342	223	33	0	228	5	54	5	5	16	33	620

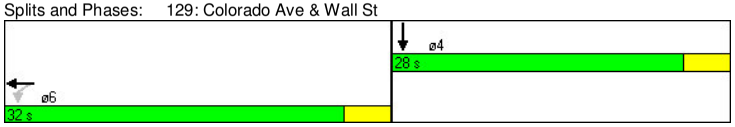
Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	598	234	65	49	620
Volume Left (vph)	342	0	54	16	0
Volume Right (vph)	33	5	5	0	620
Hadj (s)	0.12	0.02	0.15	0.20	-0.67
Departure Headway (s)	6.7	7.4	8.4	7.4	6.5
Degree Utilization, x	1.12	0.48	0.15	0.10	1.12
Capacity (veh/h)	540	480	406	476	555
Control Delay (s)	99.8	17.0	13.0	10.0	100.1
Approach Delay (s)	99.8	17.0	13.0	93.6	
Approach LOS	F	C	B	F	

Intersection Summary					
Delay	81.1				
HCM Level of Service	F				
Intersection Capacity Utilization	61.4%	ICU Level of Service		B	
Analysis Period (min)	15				

Lane Group	WBT	SBT
Lane Configurations		
Volume (vph)	615	485
Lane Group Flow (vph)	793	701
Turn Type		
Protected Phases	6	4
Permitted Phases		
Detector Phases	6	4
Minimum Initial (s)	4.0	4.0
Minimum Split (s)	20.5	20.5
Total Split (s)	32.0	28.0
Total Split (%)	53.3%	46.7%
Yellow Time (s)	4.0	4.0
All-Red Time (s)	0.0	0.0
Lead/Lag		
Lead-Lag Optimize?		
Recall Mode	Max	Max
v/c Ratio	0.51	0.53
Control Delay	4.7	13.5
Queue Delay	0.1	0.0
Total Delay	4.8	13.5
Queue Length 50th (ft)	20	83
Queue Length 95th (ft)	26	128
Internal Link Dist (ft)	229	1179
Turn Bay Length (ft)		
Base Capacity (vph)	1561	1331
Starvation Cap Reductn	161	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.57	0.53

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 10 (17%), Referenced to phase 6:WBTL, Start of Green
Natural Cycle: 45
Control Type: Pretimed

Splits and Phases: 129: Colorado Ave & Wall St



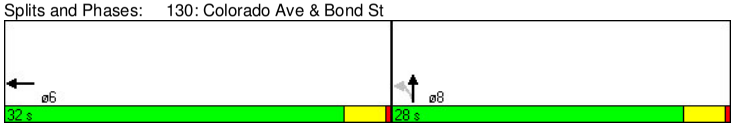
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0						4.0	
Lane Util. Factor					0.95						0.95	
Frt					1.00						0.96	
Flt Protected					0.99						1.00	
Satd. Flow (prot)					3292						3194	
Flt Permitted					0.99						1.00	
Satd. Flow (perm)					3292						3194	
Volume (vph)	0	0	0	115	615	0	0	0	0	0	485	160
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	125	668	0	0	0	0	0	527	174
RTOR Reduction (vph)	0	0	0	0	26	0	0	0	0	0	53	0
Lane Group Flow (vph)	0	0	0	0	767	0	0	0	0	0	648	0
Parking (#/hr)				5	5					5	5	
Turn Type				Perm								
Protected Phases					6						4	
Permitted Phases				6								
Actuated Green, G (s)					28.0						24.0	
Effective Green, g (s)					28.0						24.0	
Actuated g/C Ratio					0.47						0.40	
Clearance Time (s)					4.0						4.0	
Lane Grp Cap (vph)					1536						1278	
v/s Ratio Prot											c0.20	
v/s Ratio Perm					0.23							
v/c Ratio					0.50						0.51	
Uniform Delay, d1					11.1						13.5	
Progression Factor					0.35						1.00	
Incremental Delay, d2					1.0						1.4	
Delay (s)					4.8						15.0	
Level of Service					A						B	
Approach Delay (s)		0.0			4.8			0.0			15.0	
Approach LOS		A			A			A			B	

Intersection Summary				
HCM Average Control Delay	9.6	HCM Level of Service	A	
HCM Volume to Capacity ratio	0.50			
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	45.5%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	WBT	NBT
Lane Configurations		
Volume (vph)	640	740
Lane Group Flow (vph)	854	891
Turn Type		
Protected Phases	6	8
Permitted Phases		
Detector Phases	6	8
Minimum Initial (s)	4.0	4.0
Minimum Split (s)	20.0	20.0
Total Split (s)	32.0	28.0
Total Split (%)	53.3%	46.7%
Yellow Time (s)	3.5	3.5
All-Red Time (s)	0.5	0.5
Lead/Lag		
Lead-Lag Optimize?		
Recall Mode	Max	Max
v/c Ratio	0.56	0.68
Control Delay	12.4	17.3
Queue Delay	0.0	0.7
Total Delay	12.4	17.9
Queue Length 50th (ft)	101	123
Queue Length 95th (ft)	150	m167
Internal Link Dist (ft)	1497	225
Turn Bay Length (ft)		
Base Capacity (vph)	1517	1317
Starvation Cap Reductn	0	155
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.56	0.77

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 0 (0%), Referenced to phase 6:WBT, Start of Green
Natural Cycle: 40
Control Type: Pretimed
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 130: Colorado Ave & Bond St



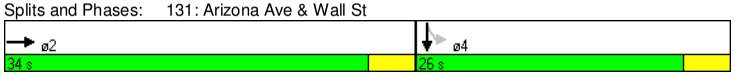
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0			4.0				
Lane Util. Factor					0.95			0.95				
Frt					0.97			1.00				
Flt Protected					1.00			1.00				
Satd. Flow (prot)					3183			3258				
Flt Permitted					1.00			1.00				
Satd. Flow (perm)					3183			3258				
Volume (vph)	0	0	0	0	640	145	80	740	0	0	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	696	158	87	804	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	33	0	0	14	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	821	0	0	877	0	0	0	0
Parking (#/hr)				10	10	10	10	10	10			
Turn Type							Perm					
Protected Phases					6			8				
Permitted Phases							8					
Actuated Green, G (s)					28.0			24.0				
Effective Green, g (s)					28.0			24.0				
Actuated g/C Ratio					0.47			0.40				
Clearance Time (s)					4.0			4.0				
Lane Grp Cap (vph)					1485			1303				
v/s Ratio Prot					c0.26							
v/s Ratio Perm								0.27				
v/c Ratio					0.55			0.67				
Uniform Delay, d1					11.5			14.8				
Progression Factor					1.00			1.04				
Incremental Delay, d2					1.5			1.9				
Delay (s)					13.0			17.3				
Level of Service					B			B				
Approach Delay (s)		0.0			13.0			17.3			0.0	
Approach LOS		A			B			B			A	

Intersection Summary				
HCM Average Control Delay	15.2	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.61			
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	51.8%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBT	SBT
Lane Configurations		
Volume (vph)	1170	390
Lane Group Flow (vph)	1299	663
Turn Type		
Protected Phases	2	4
Permitted Phases		
Detector Phases	2	4
Minimum Initial (s)	4.0	4.0
Minimum Split (s)	20.5	20.5
Total Split (s)	34.0	26.0
Total Split (%)	56.7%	43.3%
Yellow Time (s)	4.0	4.0
All-Red Time (s)	0.0	0.0
Lead/Lag		
Lead-Lag Optimize?		
Recall Mode	Max	Max
v/c Ratio	0.78	0.55
Control Delay	11.5	9.2
Queue Delay	26.8	0.1
Total Delay	38.3	9.3
Queue Length 50th (ft)	103	34
Queue Length 95th (ft)	132	45
Internal Link Dist (ft)	228	224
Turn Bay Length (ft)		
Base Capacity (vph)	1657	1201
Starvation Cap Reductn	0	53
Spillback Cap Reductn	415	2
Storage Cap Reductn	0	0
Reduced v/c Ratio	1.05	0.58

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 17 (28%), Referenced to phase 2:EBT, Start of Green
Natural Cycle: 55
Control Type: Pretimed

Splits and Phases: 131: Arizona Ave & Wall St



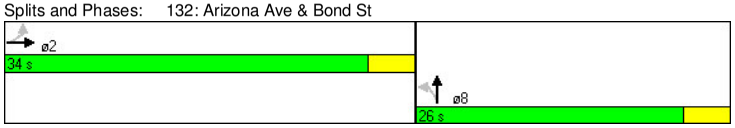
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0									4.0	
Lane Util. Factor		0.95									0.95	
Frt		1.00									1.00	
Flt Protected		1.00									0.98	
Satd. Flow (prot)		3308									3216	
Flt Permitted		1.00									0.98	
Satd. Flow (perm)		3308									3216	
Volume (vph)	0	1170	25	0	0	0	0	0	0	220	390	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1272	27	0	0	0	0	0	0	239	424	0
RTOR Reduction (vph)	0	3	0	0	0	0	0	0	0	0	22	0
Lane Group Flow (vph)	0	1297	0	0	0	0	0	0	0	0	641	0
Parking (#/hr)		5	5							10	10	10
Turn Type										Perm		
Protected Phases		2									4	
Permitted Phases										4		
Actuated Green, G (s)		30.0									22.0	
Effective Green, g (s)		30.0									22.0	
Actuated g/C Ratio		0.50									0.37	
Clearance Time (s)		4.0									4.0	
Lane Grp Cap (vph)		1654									1179	
v/s Ratio Prot		c0.39										
v/s Ratio Perm											0.20	
v/c Ratio		0.78									0.54	
Uniform Delay, d1		12.3									15.0	
Progression Factor		0.62									0.52	
Incremental Delay, d2		3.7									1.6	
Delay (s)		11.3									9.4	
Level of Service		B									A	
Approach Delay (s)		11.3			0.0			0.0			9.4	
Approach LOS		B			A			A			A	

Intersection Summary				
HCM Average Control Delay	10.7	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.68			
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	57.0%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBT	NBT
Lane Configurations		
Volume (vph)	990	430
Lane Group Flow (vph)	1500	641
Turn Type		
Protected Phases	2	8
Permitted Phases		
Detector Phases	2	8
Minimum Initial (s)	4.0	4.0
Minimum Split (s)	20.5	20.5
Total Split (s)	34.0	26.0
Total Split (%)	56.7%	43.3%
Yellow Time (s)	4.0	4.0
All-Red Time (s)	0.0	0.0
Lead/Lag		
Lead-Lag Optimize?		
Recall Mode	Max	Max
v/c Ratio	0.93	0.54
Control Delay	18.5	15.5
Queue Delay	17.4	0.0
Total Delay	35.9	15.5
Queue Length 50th (ft)	298	83
Queue Length 95th (ft)	#422	128
Internal Link Dist (ft)	217	324
Turn Bay Length (ft)		
Base Capacity (vph)	1614	1190
Starvation Cap Reductn	157	0
Spillback Cap Reductn	6	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	1.03	0.54

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 28 (47%), Referenced to phase 2:EBTL, Start of Green
Natural Cycle: 60
Control Type: Pretimed
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 132: Arizona Ave & Bond St



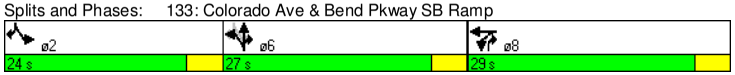
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0				
Lane Util. Factor		0.95						0.95				
Frt		1.00						0.96				
Flt Protected		0.99						1.00				
Satd. Flow (prot)		3228						3140				
Flt Permitted		0.99						1.00				
Satd. Flow (perm)		3228						3140				
Volume (vph)	390	990	0	0	0	0	0	430	160	0	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	424	1076	0	0	0	0	0	467	174	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	39	0	0	0	0
Lane Group Flow (vph)	0	1500	0	0	0	0	0	602	0	0	0	0
Parking (#/hr)	10	10	10				10	10	10			
Turn Type	Perm						Perm					
Protected Phases		2						8				
Permitted Phases	2						8					
Actuated Green, G (s)		30.0						22.0				
Effective Green, g (s)		30.0						22.0				
Actuated g/C Ratio		0.50						0.37				
Clearance Time (s)		4.0						4.0				
Lane Grp Cap (vph)		1614						1151				
v/s Ratio Prot								c0.19				
v/s Ratio Perm		0.46										
v/c Ratio		0.93						0.52				
Uniform Delay, d1		14.0						14.9				
Progression Factor		0.63						1.00				
Incremental Delay, d2		7.6						1.7				
Delay (s)		16.5						16.6				
Level of Service		B						B				
Approach Delay (s)		16.5			0.0			16.6			0.0	
Approach LOS		B			A			B			A	

Intersection Summary				
HCM Average Control Delay	16.5	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.76			
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	62.4%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	WBT	NBT	NBR	SBL	SBR
Lane Configurations					
Volume (vph)	400	205	930	95	345
Lane Group Flow (vph)	511	234	1011	103	375
Turn Type			custom	D.P+P	custom
Protected Phases	8	6	6 8	2	2
Permitted Phases			6 8	6	6
Detector Phases	8	6	6 8	2	2
Minimum Initial (s)	4.0	4.0		4.0	4.0
Minimum Split (s)	29.0	27.0		24.0	24.0
Total Split (s)	29.0	27.0	56.0	24.0	24.0
Total Split (%)	36.3%	33.8%	70.0%	30.0%	30.0%
Yellow Time (s)	4.0	4.0		4.0	4.0
All-Red Time (s)	0.0	0.0		0.0	0.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None		Max	Max
v/c Ratio	0.86	0.54	0.79	0.15	0.38
Control Delay	40.4	29.2	7.5	8.1	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	40.4	29.2	7.5	8.1	5.7
Queue Length 50th (ft)	219	95	40	21	43
Queue Length 95th (ft)	#416	160	156	41	89
Internal Link Dist (ft)	738	1505			
Turn Bay Length (ft)					
Base Capacity (vph)	623	545	1304	706	975
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.82	0.43	0.78	0.15	0.38

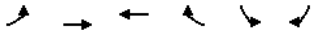
Intersection Summary
Cycle Length: 80
Actuated Cycle Length: 73.1
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 133: Colorado Ave & Bend Pkway SB Ramp



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0			4.0	4.0	4.0		4.0
Lane Util. Factor					1.00			1.00	1.00	1.00		1.00
Frt					0.98			1.00	0.85	1.00		0.85
Flt Protected					1.00			1.00	1.00	0.95		1.00
Satd. Flow (prot)					1827			1858	1583	1770		1583
Flt Permitted					1.00			1.00	1.00	0.46		1.00
Satd. Flow (perm)					1827			1858	1583	854		1583
Volume (vph)	0	0	0	5	400	65	10	205	930	95	0	345
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	5	435	71	11	223	1011	103	0	375
RTOR Reduction (vph)	0	0	0	0	7	0	0	0	305	0	0	86
Lane Group Flow (vph)	0	0	0	0	504	0	0	234	706	103	0	289
Turn Type				custom			Split		custom	D.P+P		custom
Protected Phases				8	8		6	6	6 8	2		2
Permitted Phases				8					6 8	6		6
Actuated Green, G (s)					23.5			17.2	44.7	37.5		37.5
Effective Green, g (s)					23.5			17.2	44.7	37.5		37.5
Actuated g/C Ratio					0.32			0.24	0.61	0.51		0.51
Clearance Time (s)					4.0			4.0		4.0		4.0
Vehicle Extension (s)					3.0			3.0		3.0		3.0
Lane Grp Cap (vph)					588			438	969	693		900
v/s Ratio Prot					c0.28			0.13	c0.45	0.04		c0.09
v/s Ratio Perm										0.04		0.09
v/c Ratio					0.86			0.53	0.73	0.15		0.32
Uniform Delay, d1					23.2			24.4	9.9	9.3		10.3
Progression Factor					1.00			1.00	1.00	1.00		1.00
Incremental Delay, d2					11.7			1.3	2.8	0.1		0.2
Delay (s)					34.9			25.7	12.7	9.4		10.5
Level of Service					C			C	B	A		B
Approach Delay (s)		0.0			34.9			15.1			10.3	
Approach LOS		A			C			B			B	

Intersection Summary				
HCM Average Control Delay	18.6	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.67			
Actuated Cycle Length (s)	73.0	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	69.5%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	795	230	230	475	15	240
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	864	250	250	516	16	261
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)		818				
pX, platoon unblocked						
vC, conflicting volume	766				2486	508
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	766				2486	508
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	0				0	54
cM capacity (veh/h)	847				0	565

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	864	250	766	16	261
Volume Left	864	0	0	16	0
Volume Right	0	0	516	0	261
cSH	847	1700	1700	0	565
Volume to Capacity	1.02	0.15	0.45	Err	0.46
Queue Length 95th (ft)	477	0	0	Err	61
Control Delay (s)	58.2	0.0	0.0	Err	16.7
Lane LOS	F			F	C
Approach Delay (s)	45.1		0.0	Err	
Approach LOS				F	

Intersection Summary			
Average Delay		Err	
Intersection Capacity Utilization	98.7%	ICU Level of Service	F
Analysis Period (min)	15		