
To:	Station House HOA and other communities on Frontage Road	From:	Advanced Mobility Group
File:	Station House Preliminary Parking Study	Date:	May 15, 2018

Reference: Preliminary Parking Study for the Station House Residential Development in the City of Oakland

INTRODUCTION

This report presents the preliminary result of a parking study conducted for the residential development at 1401 Wood Street, in the City of Oakland (Project). The Project is located on the south side of Frontage Road between 14th Street and 16th Street in the West Oakland/Prescott district which consists primarily of industrial and residential properties. The Project is located approximately 0.66 miles from the West Oakland BART Station.

The completely built-out Project will consist of 171 Residential Town Homes, directly accessible by private alleyways. Currently, construction is nearing completion and most of the units have been sold and are occupied. Resident vehicles may enter through one of five driveways: three accessing 14th Street, one accessing Frontage Road and one accessing 16th Street.

The City of Oakland was consulted prior to the preparation of this study and provided input on the study's content.

PROJECT PARKING SUPPLY

The Project provides a total of 295 parking spaces on-site, which includes resident and visitor/guest parking. Providing 295 spaces for the 171 residential units yields a parking space provision rate of 1.72 spaces per unit. The parking provided at the Project site was determined through the approved Hunt, Hale, and Jones Station House Condominiums Phase II Plan Set, dated September 29, 2015.

Per Oakland Planning Department parking requirements, the Residential Town Home land use type requires a 1.1 space per unit rate provision. For the Project's 171 units, this rate yields a required provision of 189 parking spaces.

The above summarized parking supply and City requirement identifies the Project provides a surplus of 106 parking spaces.

PROJECT PARKING GENERATIONS

Parking generation is defined as the estimated demand for parking based on land use or project-type. Peak demand for parking typically occurs during the evening peak period from 7:00-9:00 PM.

The parking generation estimate for the Project was calculated using Parking Generation, 4th Edition, published by the Institute of Transportation Engineers (ITE). Using this method, the Project is estimated to generate demand for approximately 225 parking spaces during the evening peak, as shown in **Table 1**.

Reference: Preliminary Parking Study for the Station House Residential Development in the City of Oakland

Table 1 – Project Parking Generation

<i>Land Use (ITE Land Use Code)</i>	<i>Size</i>		<i>Rate per Unit</i>	<i>Total</i>
Residential Town Home (230)	171	Units	1.3	225

Sources: Parking Generation, 4th Edition, ITE; AMG, April 2018

The Project parking generation includes the estimated demand for both residents and non-residents (visitors/guests). Project residents with access to private garage spaces are assumed as the primary parking users and 287 of the 295 parking spaces provided are off-street in private residential garages and driveways. Additional parking could be provided for non-residents, such as visitors, deliveries and repair contractors, who may not be fully accommodated via private garages and on-street parking.

AMG conducted a field observation of the Project's parking conditions on April 18, 2018. Off-street parking was not observed as it is contained within private garages. Field review showed on-street parking in the Project vicinity is limited, and though there are over 50 on-street parking spaces available immediately adjacent to the site, these spaces are public and may be occupied by residents not associated with the Project.

There are similar residential developments located southwest of the Project with access to the public parking along 14th Street. Additional public on-street parking is found along streets adjacent to the Project. During the field visit, limited on-street parking was available.

EXISTING ROADWAY CONDITIONS

The Project is bound by Frontage Road, 14th Street, 16th Street, and Wood Street.

Frontage Road is a four-lane road with a posted speed limit of 35 MPH and classified as a major collector. There are two 8' shoulders and an approximately 16' striped median. Frontage Road provides access from 7th Street to West Grand Avenue and does not have marked bicycle facilities.

14th Street and 16th Street are minor residential streets and do not provide through access to Frontage Road and Wood Street. Both streets provide access to Project driveways.

Wood Street is a two-lane residential major collector which connects 7th Street to Emeryville.

As part of this study, vehicle data was collected along Frontage Road and at Project driveways. The 85th percentile speed for NB Frontage Road was recorded as 58 MPH and SB was 57 MPH which is significantly higher than the posted speed limit. The complete count data recorded is included in **Attachment A**.

Reference: Preliminary Parking Study for the Station House Residential Development in the City of Oakland

FRONTAGE ROAD PARKING RECOMMENDATIONS

Residents, visitors, and deliveries are restricted to a limited supply of on-street parking spaces, and additional parking supply could benefit homeowners and visitors. AMG has prepared preliminary parking recommendations on Frontage Road.

Frontage Road On-Street Parking Configuration

On-street parking stalls are typically configured as either angled parking stalls (30°, 45°, 60°, and 90°) or parallel stalls. Each configuration has associated advantages and disadvantages based on available roadway width, geometry, and characteristics. Angled parking requires stall depths between 16' and 20' from the face of curb, while parallel stalls require a width of 8' from the curb.

Angled parking would require substantial alteration of the existing roadway geometry, modifying the existing striped median, and potential impacts to the existing curb lines. However, the existing 8' wide shoulder along Frontage Road can be converted into a parking strip for parallel stalls (per City Detail T-7) with minimal roadway geometry adjustments. Parallel parking along Frontage Road is recommended as it would require fewer major impacts to roadway geometry and minimize impacts to traffic operations.

Parallel parking requires vehicles to stop in the travel lane prior to performing a parking maneuver. Though high speeds along Frontage Road are present, the provision of parallel parking could aid in slowing vehicles to allow for parking maneuvers. Additionally, with the provision of a parallel parking lane, it would be recommended to reduce lane widths to help further reduce the predominantly high speeds.

With appropriate roadway characteristics and sufficient sight distance, parallel parking would be a feasible approach to increase parking supply while also addressing an existing concern regarding vehicle speeds.

Frontage Road has two travel lanes in each direction and provides over 1000' of sight distance along the Project frontage. Per section 201 of the Caltrans HDM, vehicles traveling at 35 MPH and 60 MPH require 250' and 580' of sight distance, respectively, to safely come to a stop. Vehicles traveling along Frontage Road have more than sufficient sight distance to identify and react to vehicles entering a parking stall, and vehicles exiting parking stalls would have no line of sight constraints. Additionally, safety lighting is present along Frontage Road and at the Project site.

It is recommended that additional striping be provided to delineate the parking stalls from the travel way. In addition to City Detail T-7, the following criteria are recommended for parallel parking stalls along Frontage Road:

- Provide 22' long by 8' wide parallel parking stalls
- Provide 2' horizontal buffer for parking spaces
- Shift existing travel lanes as required to provide 12' wide lanes. There is currently a striped median that would allow for this shift
- Provide a stripe or raised bulb-out prior to the first parking stall (See Figure 1)

Reference: Preliminary Parking Study for the Station House Residential Development in the City of Oakland

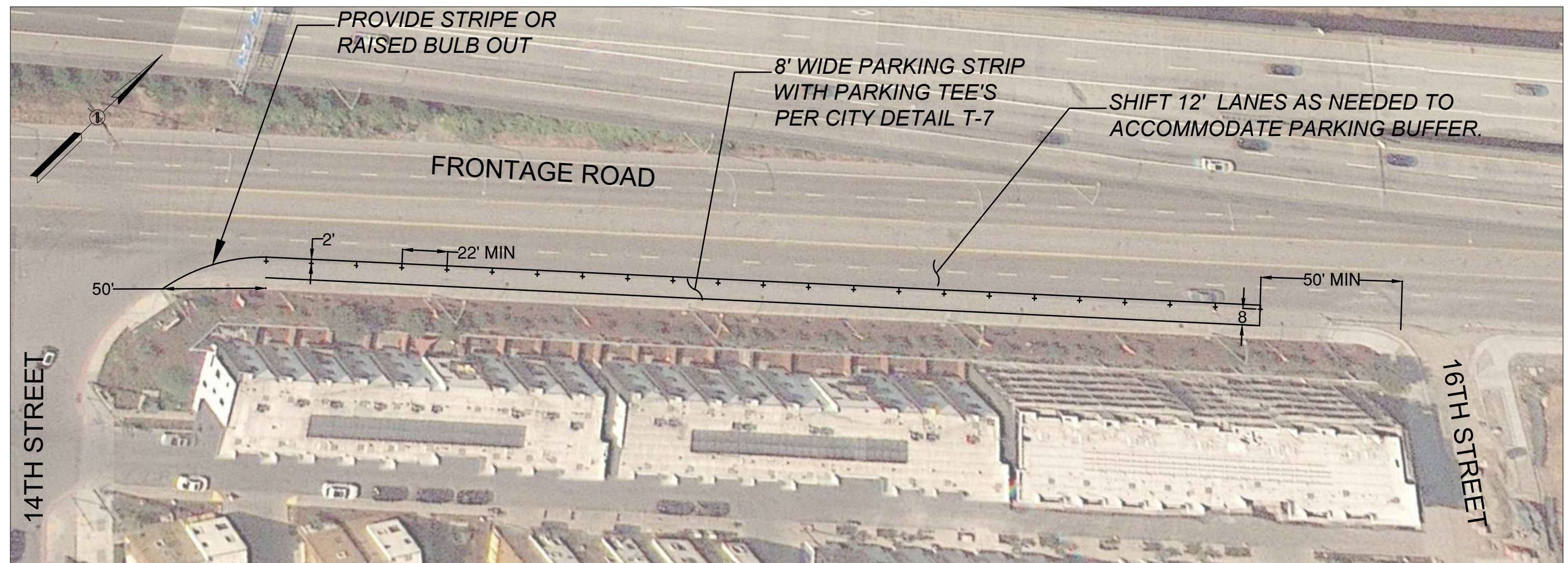
Approximately 22 parking stalls can be provided under these recommendations, as detailed in **Figure 1**.

These recommendations are based on vehicles traveling at the posted speed limit. This study assumes that the City would work to enforce the posted speed limit through law enforcement and install traffic calming measures such as narrowing roadway lanes and providing radar speed feedback signs. It should be noted that providing parking stalls and a bulb out would serve as a traffic calming measure and would be expected to aid in speed reduction along Frontage Road.

On-Street Parking Regulations

Current parking restrictions in the Project vicinity vary between “No Parking” restrictions, two-hour time limits, and monthly restrictions for street cleaning. The intent of providing parking spaces along Frontage Road is to provide additional public on-street parking supply to temporary visitors of the Project and other nearby residential units. As such, the following parking regulations are recommended along Frontage Road:

- One stall should be marked for 30-minute commercial loading Monday – Friday, 8:00 AM to 5:00 PM.
- Parking should prohibit overnight parking Monday – Friday, 11:00 PM to 4:00 AM.
- Parking should prohibit commercial and recreational vehicles over seven feet (7') in height from parking or idling at any time.
- Parking should prohibit the storage of infrequently used vehicles.



PARKING RECOMMENDATIONS
FRONTAGE ROAD

N.T.S
4/20/18

FIGURE 1

Reference: Preliminary Parking Study for the Station House Residential Development in the City of Oakland

CONCLUSIONS

Any changes to parking along Frontage Road must be coordinated with and reviewed by the City of Oakland.

The recorded 85th percentile speed of Frontage Road is significantly higher than the posted speed limit. This study assumes the City of Oakland would be able to provide speed enforcement and install traffic calming measures to aid in vehicle speed reduction.

AMG has reached the following conclusions regarding the Project's parking demand:

- The Project is expected to provide sufficient parking spaces for residents via off-street residential garages and it meets the City's parking requirements
- The available on-street parking supply is currently utilized by the surrounding neighborhood residents. Additional parking could be added to increase supply and provide more convenient parking.
- Frontage Road provides adequate right-of-way to convert the existing shoulder into parking stalls along the Project Frontage

Parking Recommendations

Parallel parking stalls may be provided along Frontage Road with the following conditions met:

- The 85th percentile speed reduces towards the posted speed limited of 35 MPH
- Parallel parking stalls are 22' long by 8'
- A 2' horizontal buffer for parking spaces is provided
- Travel lane widths are reduced to 12' wide
- A striped or raised bulb-out prior to the first parking stall is provided (See Figure 1)

We hope this memorandum provides sufficient insight to the current parking trends in the vicinity of 1401 Wood Street, and that our recommendations will facilitate an increase in available on-street parking supply while aiding in reducing vehicle speeds along Frontage Road. Please feel free to contact us with any questions or concerns regarding this study.

Advanced Mobility Group



Joy Bhattacharya, PE, PTOE
Vice President

Attachment A

SPEED

Frontage Rd Bet. 16th St & 14th St

Day: Tuesday

Date: 4/10/2018

City: Oakland

Project #: CA18_8155_001n

North Bound

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	0	0	0	0	2	2	4	6	3	2	6	2	1	28
01:00	0	0	0	0	2	3	2	4	9	2	3	1	1	27
02:00	0	0	0	0	0	2	7	6	8	7	4	1	0	35
03:00	0	0	0	0	1	5	4	2	1	7	3	2	0	25
04:00	0	0	0	1	1	5	10	19	9	12	4	5	1	67
05:00	0	0	0	0	7	15	31	26	21	11	8	5	1	125
06:00	0	0	1	0	8	25	20	34	41	33	11	6	1	180
07:00	2	1	1	9	13	24	36	52	45	35	8	1	2	229
08:00	0	0	0	4	16	23	38	61	56	28	18	3	2	249
09:00	4	0	2	5	23	48	62	60	34	13	2	1	2	256
10:00	1	0	1	2	12	22	39	46	39	23	13	3	2	203
11:00	1	0	1	3	14	20	36	56	48	30	9	5	3	226
12:00 PM	0	0	2	1	10	24	43	61	46	24	6	3	1	221
13:00	1	0	0	5	13	23	48	52	49	36	10	3	1	241
14:00	0	0	1	2	9	23	41	40	53	30	18	6	3	226
15:00	0	0	0	0	8	11	25	55	59	59	24	8	4	253
16:00	0	0	2	2	11	16	24	56	56	46	34	13	4	264
17:00	1	0	1	0	5	17	23	48	73	59	22	13	4	266
18:00	0	0	0	1	12	17	20	35	45	32	13	10	2	187
19:00	1	1	0	1	10	13	11	31	39	25	11	5	2	150
20:00	0	0	1	3	5	10	14	28	13	15	2	2	1	94
21:00	0	1	0	2	11	10	19	30	16	9	7	0	0	105
22:00	0	0	0	2	6	5	8	21	13	15	6	3	0	79
23:00	0	0	0	1	5	4	7	9	10	12	9	1	0	58
Totals	11	3	13	44	204	367	572	838	786	565	251	102	38	3794
% of Totals	0%	0%	0%	1%	5%	10%	15%	22%	21%	15%	7%	3%	1%	100%

AM Volumes	8	1	6	24	99	194	289	372	314	203	89	35	16	1650
% AM	0%	0%	0%	1%	3%	5%	8%	10%	8%	5%	2%	1%	0%	43%
AM Peak Hour	09:00	07:00	09:00	07:00	09:00	09:00	09:00	08:00	08:00	07:00	08:00	06:00	11:00	09:00
Volume	4	1	2	9	23	48	62	61	56	35	18	6	3	256
PM Volumes	3	2	7	20	105	173	283	466	472	362	162	67	22	2144
% PM	0%	0%	0%	1%	3%	5%	7%	12%	12%	10%	4%	2%	1%	57%
PM Peak Hour	13:00	19:00	12:00	13:00	13:00	12:00	13:00	12:00	17:00	15:00	16:00	16:00	15:00	17:00
Volume	1	1	2	5	13	24	48	61	73	59	34	13	4	266
Directional Peak Periods All Speeds			AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
			Volume	%		Volume	%		Volume	%		Volume	%	
			478	↔	13%	462	↔	12%	530	↔	14%	2324	↔	61%

Street Name	Direction	Percentiles					
		15th	50th	Average	85th	95th	ADT
Frontage Rd	North Bound	39	49	49	58	64	3794
Frontage Rd	South Bound	40	48	48	57	63	1715

SPEED

Frontage Rd Bet. 16th St & 14th St

Day: Tuesday

Date: 4/10/2018

City: Oakland

Project #: CA18_8155_001s

South Bound

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	0	0	0	0	1	1	3	2	3	1	0	0	0	11
01:00	0	0	0	0	0	2	2	0	2	1	0	0	1	8
02:00	0	0	0	0	1	1	3	3	5	0	1	2	0	16
03:00	0	0	0	0	0	0	2	0	5	1	1	0	0	9
04:00	0	0	0	0	1	5	10	14	7	6	1	2	0	46
05:00	0	0	0	0	0	6	27	19	15	15	5	1	2	90
06:00	0	0	0	1	1	11	22	30	21	16	12	4	0	118
07:00	0	0	0	0	4	14	19	17	18	19	5	3	1	100
08:00	0	0	0	0	5	18	32	23	19	11	2	2	1	113
09:00	0	0	0	0	5	15	30	28	20	7	1	0	0	106
10:00	0	0	0	0	6	26	35	32	20	10	2	5	1	137
11:00	0	0	0	0	3	8	28	38	20	14	3	0	0	114
12:00 PM	0	0	0	0	4	8	30	32	24	15	1	4	1	119
13:00	0	0	0	1	7	16	31	33	19	7	6	4	0	124
14:00	0	0	0	1	1	14	17	23	23	5	7	3	2	96
15:00	0	0	0	0	1	5	25	18	13	15	4	0	1	82
16:00	0	0	0	0	0	6	10	9	16	10	7	1	2	61
17:00	0	0	0	0	2	5	14	22	22	13	6	3	1	88
18:00	0	0	0	0	0	10	8	12	17	8	7	2	1	65
19:00	0	0	0	0	1	5	22	13	10	3	0	4	0	58
20:00	0	0	0	0	1	6	10	20	6	6	1	2	1	53
21:00	0	0	0	0	1	7	13	11	8	2	3	1	0	46
22:00	0	0	0	0	2	1	8	13	9	4	3	0	1	41
23:00	0	0	0	0	0	3	0	3	5	2	0	1	0	14
Totals				3	47	193	401	415	327	191	78	44	16	1715
% of Totals				0%	3%	11%	23%	24%	19%	11%	5%	3%	1%	100%

AM Volumes	0	0	0	1	27	107	213	206	155	101	33	19	6	868
% AM				0%	2%	6%	12%	12%	9%	6%	2%	1%	0%	51%
AM Peak Hour				06:00	10:00	10:00	10:00	11:00	06:00	07:00	06:00	10:00	05:00	10:00
Volume				1	6	26	35	38	21	19	12	5	2	137
PM Volumes	0	0	0	2	20	86	188	209	172	90	45	25	10	847
% PM				0%	1%	5%	11%	12%	10%	5%	3%	1%	1%	49%
PM Peak Hour				13:00	13:00	13:00	13:00	13:00	12:00	12:00	14:00	12:00	14:00	13:00
Volume				1	7	16	31	33	24	15	7	4	2	124
Directional Peak Periods All Speeds			AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
			Volume			Volume			Volume			Volume		
			213 ↔ 12%			243 ↔ 14%			149 ↔ 9%			1110 ↔ 65%		

Street Name	Direction	Percentiles					
		15th	50th	Average	85th	95th	ADT
Frontage Rd	North Bound	39	49	49	58	64	3794
Frontage Rd	South Bound	40	48	48	57	63	1715

VOLUME

Frontage Rd Bet. 16th St & 14th St

Day: Thursday
Date: 4/12/2018

City: Oakland
Project #: CA18_8155_001

DAILY TOTALS	NB	SB	EB		WB	Total
	7,300	4,755	0	0		12,055

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	22		11						33		12:00	125		83						208	
00:15	9		14						23		12:15	110		84						194	
00:30	27		12						39		12:30	118		92						210	
00:45	11	69	12	49					23	118	12:45	100	453	67	326					167	779
01:00	17		11						28		13:00	109		103						212	
01:15	15		14						29		13:15	111		95						206	
01:30	20		13						33		13:30	128		108						236	
01:45	15	67	13	51					28	118	13:45	142	490	90	396					232	886
02:00	15		16						31		14:00	119		69						188	
02:15	15		14						29		14:15	108		71						179	
02:30	37		21						58		14:30	134		48						182	
02:45	22	89	19	70					41	159	14:45	126	487	79	267					205	754
03:00	15		15						30		15:00	132		60						192	
03:15	22		14						36		15:15	98		73						171	
03:30	27		12						39		15:30	116		52						168	
03:45	20	84	23	64					43	148	15:45	111	457	62	247					173	704
04:00	44		29						73		16:00	123		59						182	
04:15	32		23						55		16:15	123		41						164	
04:30	33		33						66		16:30	129		44						173	
04:45	35	144	45	130					80	274	16:45	127	502	46	190					173	692
05:00	67		21						88		17:00	104		70						174	
05:15	56		44						100		17:15	108		58						166	
05:30	90		44						134		17:30	93		69						162	
05:45	74	287	72	181					146	468	17:45	89	394	67	264					156	658
06:00	70		55						125		18:00	73		60						133	
06:15	76		42						118		18:15	79		57						136	
06:30	106		68						174		18:30	71		60						131	
06:45	72	324	74	239					146	563	18:45	79	302	51	228					130	530
07:00	96		59						155		19:00	72		47						119	
07:15	83		46						129		19:15	62		51						113	
07:30	113		45						158		19:30	52		67						119	
07:45	116	408	59	209					175	617	19:45	57	243	49	214					106	457
08:00	120		68						188		20:00	53		48						101	
08:15	103		59						162		20:15	44		58						102	
08:30	116		53						169		20:30	38		33						71	
08:45	112	451	69	249					181	700	20:45	40	175	43	182					83	357
09:00	126		62						188		21:00	50		34						84	
09:15	162		59						221		21:15	43		39						82	
09:30	156		53						209		21:30	45		26						71	
09:45	120	564	71	245					191	809	21:45	30	168	48	147					78	315
10:00	116		77						193		22:00	38		46						84	
10:15	99		76						175		22:15	36		25						61	
10:30	90		73						163		22:30	66		32						98	
10:45	96	401	65	291					161	692	22:45	28	168	30	133					58	301
11:00	125		73						198		23:00	26		21						47	
11:15	96		75						171		23:15	24		14						38	
11:30	134		94						228		23:30	23		17						40	
11:45	116	471	75	317					191	788	23:45	29	102	14	66					43	168
TOTALS	3359		2095						5454		TOTALS	3941		2660						6601	
SPLIT %	61.6%		38.4%						45.2%		SPLIT %	59.7%		40.3%						54.8%	

DAILY TOTALS	NB	SB	EB		WB	Total
	7,300	4,755	0	0		12,055

AM Peak Hour	09:00	11:30			11:30	PM Peak Hour	13:45	13:00			13:00
AM Pk Volume	564	336			821	PM Pk Volume	503	396			886
Pk Hr Factor	0.870	0.894			0.900	Pk Hr Factor	0.886	0.917			0.939
7 - 9 Volume	859	458	0	0	1317	4 - 6 Volume	896	454	0	0	1350
7 - 9 Peak Hour	07:45	08:00			08:00	4 - 6 Peak Hour	16:00	17:00			16:00
7 - 9 Pk Volume	455	249	0	0	700	4 - 6 Pk Volume	502	264	0	0	692
Pk Hr Factor	0.948	0.902	0.000	0.000	0.931	Pk Hr Factor	0.973	0.943	0.000	0.000	0.951

CLASSIFICATION

Frontage Rd Bet. 16th St & 14th St

Day: Tuesday

Date: 4/10/2018

City: Oakland

Project #: CA18_8155_001n

North Bound

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	27	0	0	1	0	0	0	0	0	0	0	0	28
01:00	1	20	1	1	0	1	0	2	1	0	0	0	0	27
02:00	0	29	3	0	1	1	0	1	0	0	0	0	0	35
03:00	0	14	3	0	3	0	0	2	3	0	0	0	0	25
04:00	1	34	9	3	6	1	0	3	8	0	2	0	0	67
05:00	0	69	8	1	11	20	0	2	12	0	2	0	0	125
06:00	0	115	21	4	16	11	0	1	10	0	2	0	0	180
07:00	2	151	27	2	17	10	1	2	14	0	3	0	0	229
08:00	2	169	23	1	12	6	2	7	26	1	0	0	0	249
09:00	5	119	27	4	28	18	0	8	45	1	1	0	0	256
10:00	2	111	31	6	18	8	0	4	19	2	2	0	0	203
11:00	1	133	23	3	20	6	0	3	31	3	3	0	0	226
12:00 PM	0	119	26	8	24	11	2	6	21	2	2	0	0	221
13:00	1	146	24	1	22	6	1	12	27	0	1	0	0	241
14:00	1	117	29	4	20	16	0	8	30	1	0	0	0	226
15:00	1	169	26	2	24	8	0	4	15	4	0	0	0	253
16:00	1	179	19	2	12	15	0	7	27	2	0	0	0	264
17:00	4	222	15	1	13	4	0	2	4	1	0	0	0	266
18:00	1	152	13	0	4	8	0	1	6	1	1	0	0	187
19:00	1	119	13	1	10	1	0	2	2	1	0	0	0	150
20:00	0	80	4	0	2	2	0	0	6	0	0	0	0	94
21:00	0	90	5	0	2	3	0	0	5	0	0	0	0	105
22:00	0	72	3	0	2	0	0	0	2	0	0	0	0	79
23:00	0	51	3	0	2	0	0	1	1	0	0	0	0	58
Totals	24	2507	356	44	270	156	6	78	315	19	19			3794
% of Totals	1%	66%	9%	1%	7%	4%	0%	2%	8%	1%	1%			100%

AM Volumes	14	991	176	25	133	82	3	35	169	7	15	0	0	1650
% AM	0%	26%	5%	1%	4%	2%	0%	1%	4%	0%	0%			43%
AM Peak Hour	09:00	08:00	10:00	10:00	09:00	05:00	08:00	09:00	09:00	11:00	07:00			09:00
Volume	5	169	31	6	28	20	2	8	45	3	3			256
PM Volumes	10	1516	180	19	137	74	3	43	146	12	4	0	0	2144
% PM	0%	40%	5%	1%	4%	2%	0%	1%	4%	0%	0%			57%
PM Peak Hour	17:00	17:00	14:00	12:00	12:00	14:00	12:00	13:00	14:00	15:00	12:00			17:00
Volume	4	222	29	8	24	16	2	12	30	4	2			266
Directional Peak Periods All Classes			AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
			Volume			%	Volume			%	Volume			%
			478	↔		13%	462	↔		12%	530	↔		14%
											2324	↔		61%

Classification Definitions

1 Motorcycles	4 Buses	7 >=4-Axle Single Units	10 >=6-Axle Single Trailers	13 >=7-Axle Multi-Trailers
2 Passenger Cars	5 2-Axle, 6-Tire Single Units	8 <=4-Axle Single Trailers	11 <=5-Axle Multi-Trailers	
3 2-Axle, 4-Tire Single Units	6 3-Axle Single Units	9 5-Axle Single Trailers	12 6-Axle Multi-Trailers	

CLASSIFICATION

Frontage Rd Bet. 16th St & 14th St

Day: Tuesday

Date: 4/10/2018

City: Oakland

Project #: CA18_8155_001s

South Bound

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	6	0	0	1	0	0	1	3	0	0	0	0	11
01:00	0	4	1	0	0	1	0	1	1	0	0	0	0	8
02:00	0	8	1	0	0	0	0	3	3	0	1	0	0	16
03:00	0	6	0	0	2	0	0	1	0	0	0	0	0	9
04:00	0	20	2	0	4	2	0	3	14	1	0	0	0	46
05:00	0	38	8	0	11	5	0	4	22	1	1	0	0	90
06:00	0	47	9	0	16	9	1	2	32	2	0	0	0	118
07:00	1	33	9	1	10	7	0	5	34	0	0	0	0	100
08:00	0	20	8	1	15	7	0	6	51	4	1	0	0	113
09:00	0	23	7	2	8	5	0	9	51	1	0	0	0	106
10:00	0	31	17	1	14	6	0	5	60	2	1	0	0	137
11:00	1	33	15	2	5	2	0	6	48	2	0	0	0	114
12:00 PM	0	40	13	2	11	6	0	5	40	2	0	0	0	119
13:00	0	35	8	4	5	5	0	4	59	3	1	0	0	124
14:00	0	41	10	1	12	6	0	4	22	0	0	0	0	96
15:00	0	34	8	0	9	2	0	7	20	1	1	0	0	82
16:00	0	33	8	1	9	4	0	2	4	0	0	0	0	61
17:00	1	57	7	2	6	1	0	3	11	0	0	0	0	88
18:00	1	41	5	2	0	2	0	4	10	0	0	0	0	65
19:00	0	41	2	0	1	3	0	1	10	0	0	0	0	58
20:00	1	35	5	0	2	2	0	1	7	0	0	0	0	53
21:00	1	32	4	0	3	0	0	0	6	0	0	0	0	46
22:00	0	32	0	0	2	0	0	0	7	0	0	0	0	41
23:00	0	11	0	0	0	1	0	2	0	0	0	0	0	14
Totals	6	701	147	19	146	76	1	79	515	19	6			1715
% of Totals	0%	41%	9%	1%	9%	4%	0%	5%	30%	1%	0%			100%

AM Volumes	2	269	77	7	86	44	1	46	319	13	4	0	0	868
% AM	0%	16%	4%	0%	5%	3%	0%	3%	19%	1%	0%			51%
AM Peak Hour	07:00	06:00	10:00	09:00	06:00	06:00	06:00	09:00	10:00	08:00	02:00			10:00
Volume	1	47	17	2	16	9	1	9	60	4	1			137
PM Volumes	4	432	70	12	60	32	0	33	196	6	2	0	0	847
% PM	0%	25%	4%	1%	3%	2%		2%	11%	0%	0%			49%
PM Peak Hour	17:00	17:00	12:00	13:00	14:00	12:00		15:00	13:00	13:00	13:00			13:00
Volume	1	57	13	4	12	6		7	59	3	1			124
Directional Peak Periods			AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Classes			Volume		%	Volume		%	Volume		%	Volume		%
			213	↔	12%	243	↔	14%	149	↔	9%	1110	↔	65%

Classification Definitions

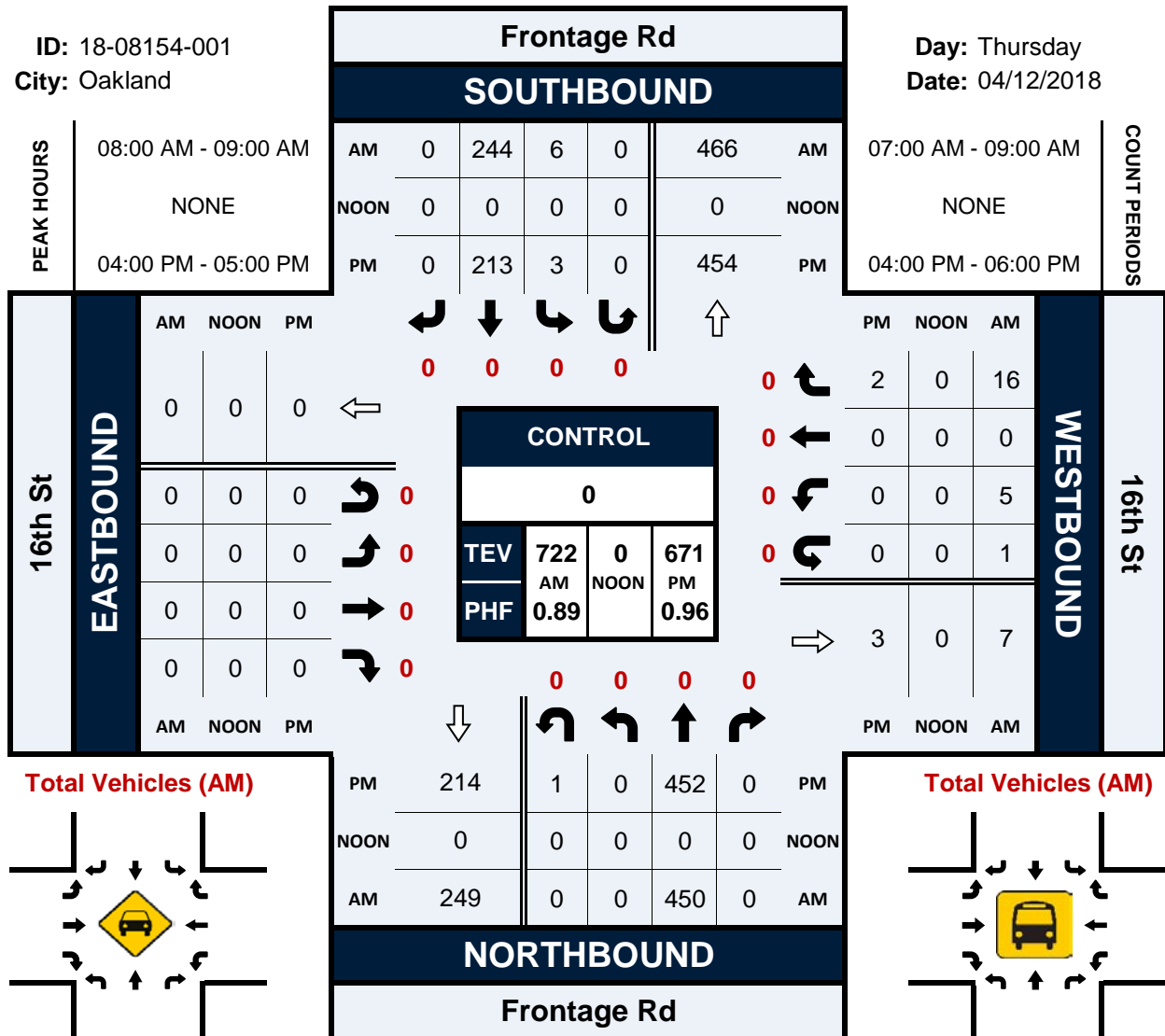
1 Motorcycles	4 Buses	7 >=4-Axle Single Units	10 >=6-Axle Single Trailers	13 >=7-Axle Multi-Trailers
2 Passenger Cars	5 2-Axle, 6-Tire Single Units	8 <=4-Axle Single Trailers	11 <=5-Axle Multi-Trailers	
3 2-Axle, 4-Tire Single Units	6 3-Axle Single Units	9 5-Axle Single Trailers	12 6-Axle Multi-Trailers	

Frontage Rd & 16th St

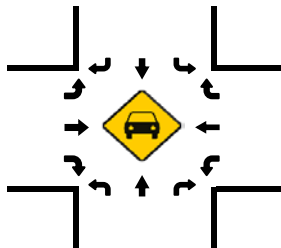
Peak Hour Turning Movement Count

ID: 18-08154-001
City: Oakland

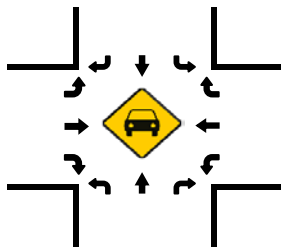
Day: Thursday
Date: 04/12/2018



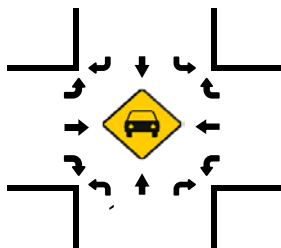
Total Vehicles (AM)



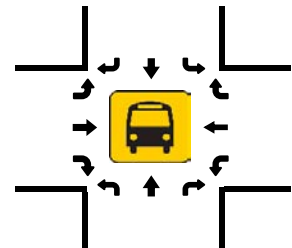
Total Vehicles (NOON)



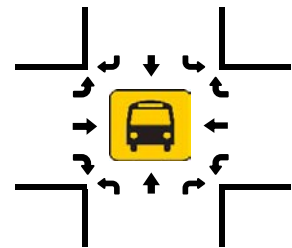
Total Vehicles (PM)



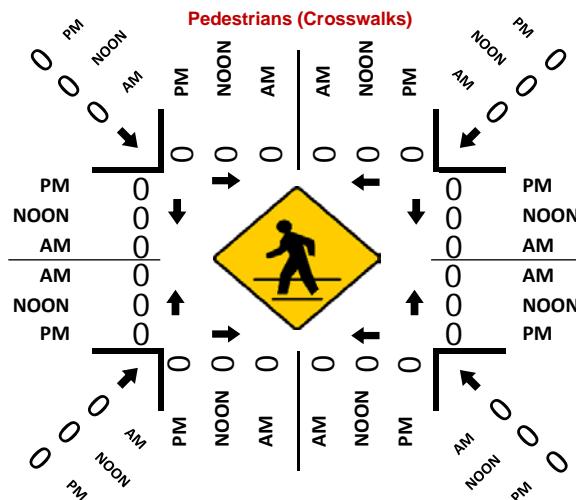
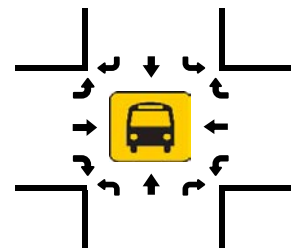
Total Vehicles (AM)



Total Vehicles (NOON)



Total Vehicles (PM)



Frontage Rd & 14th St

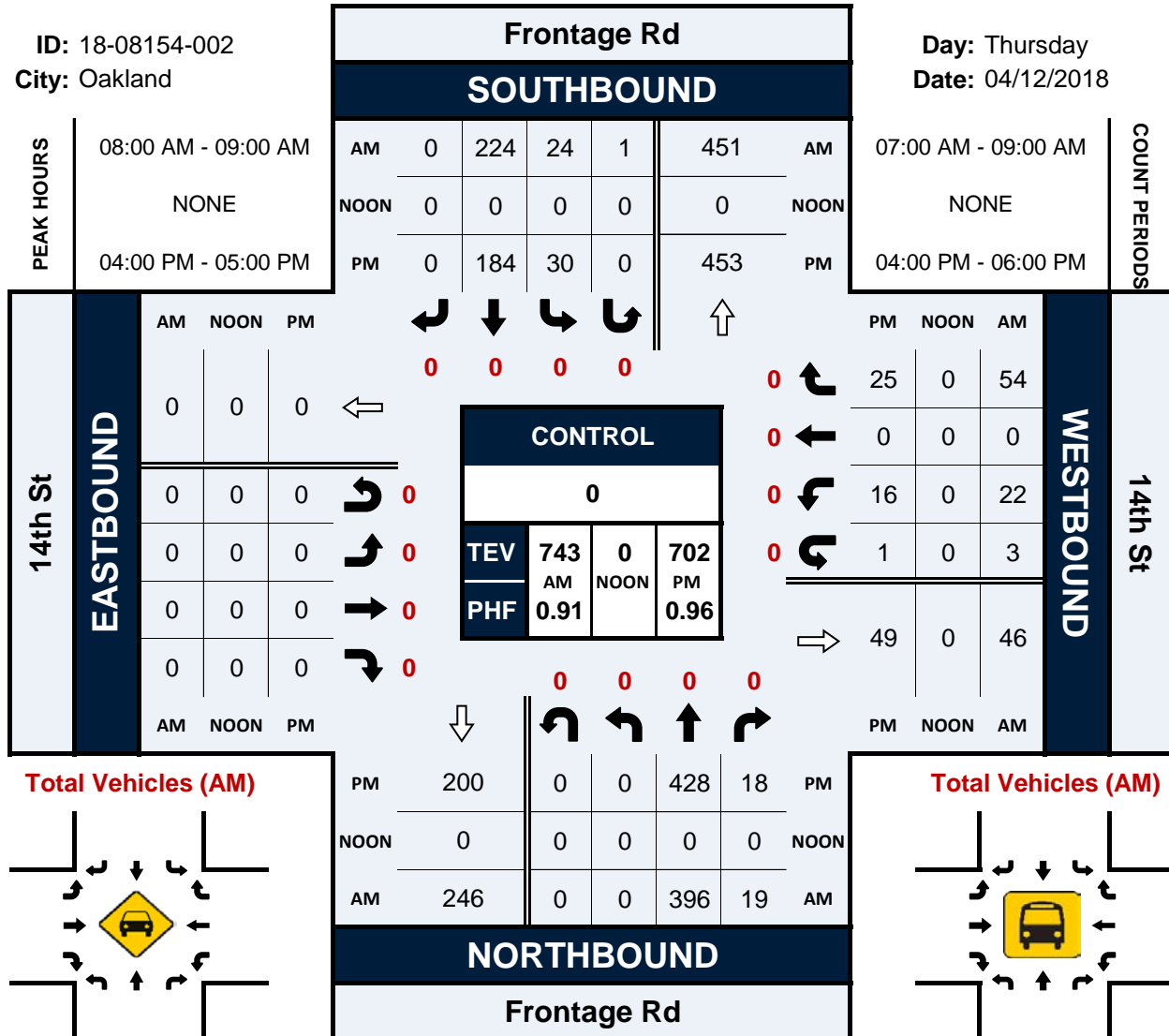
Peak Hour Turning Movement Count

ID: 18-08154-002

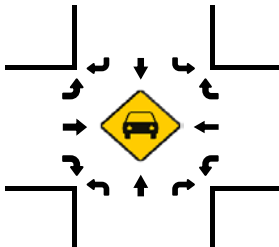
City: Oakland

Day: Thursday

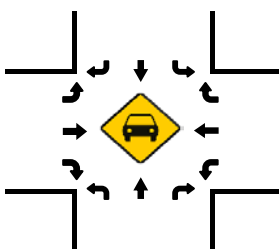
Date: 04/12/2018



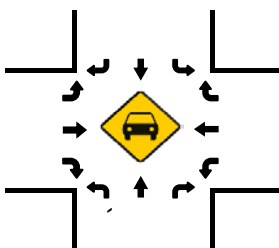
Total Vehicles (AM)



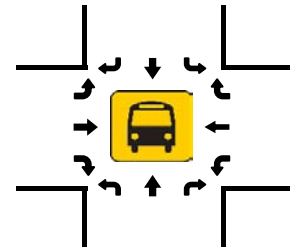
Total Vehicles (NOON)



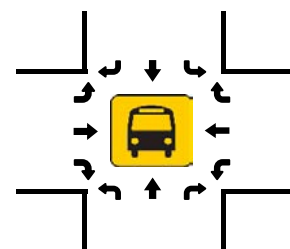
Total Vehicles (PM)



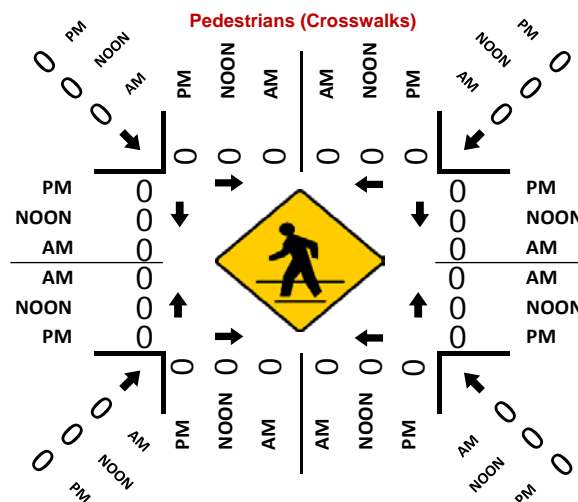
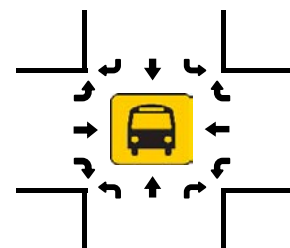
Total Vehicles (AM)



Total Vehicles (NOON)



Total Vehicles (PM)



Pullman Way & 14th St

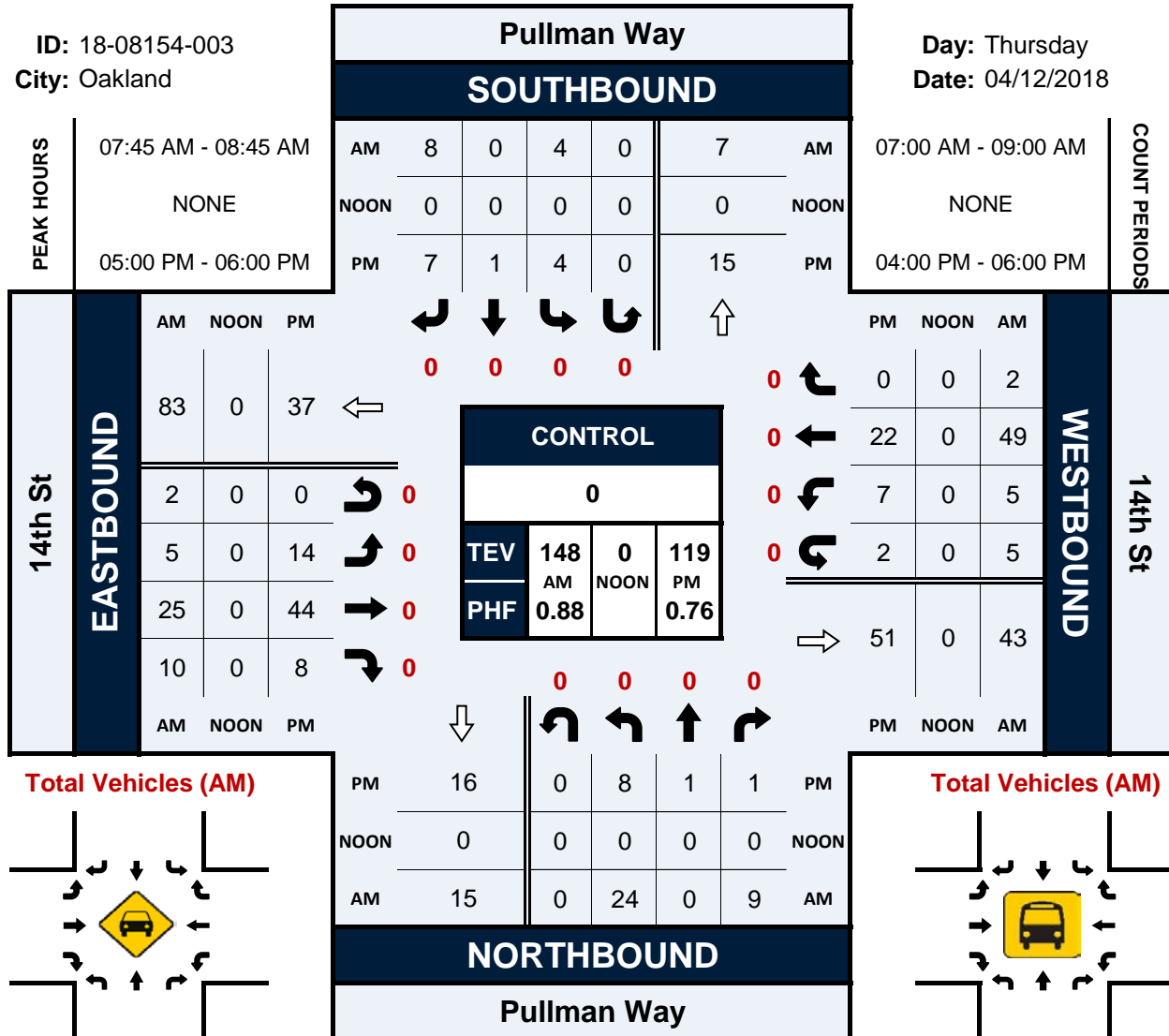
Peak Hour Turning Movement Count

ID: 18-08154-003

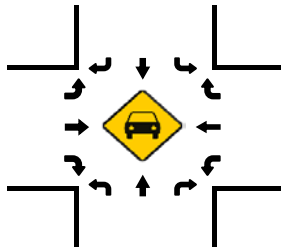
City: Oakland

Day: Thursday

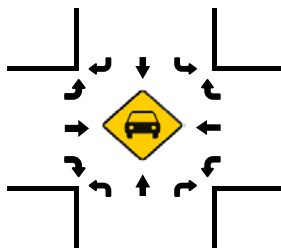
Date: 04/12/2018



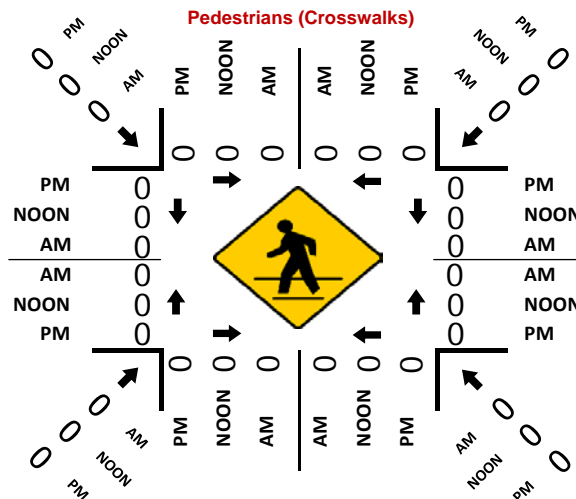
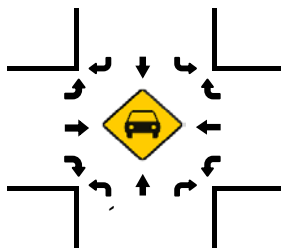
Total Vehicles (AM)



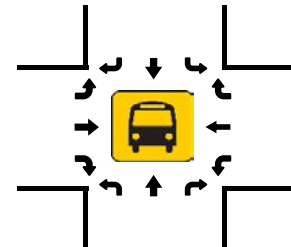
Total Vehicles (NOON)



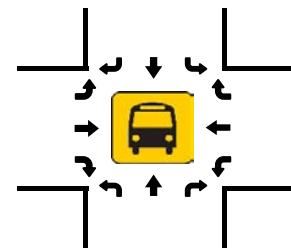
Total Vehicles (PM)



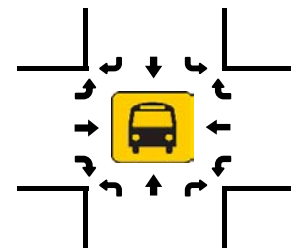
Total Vehicles (AM)



Total Vehicles (NOON)



Total Vehicles (PM)



Prescott St/Palisade Dr & 14th St

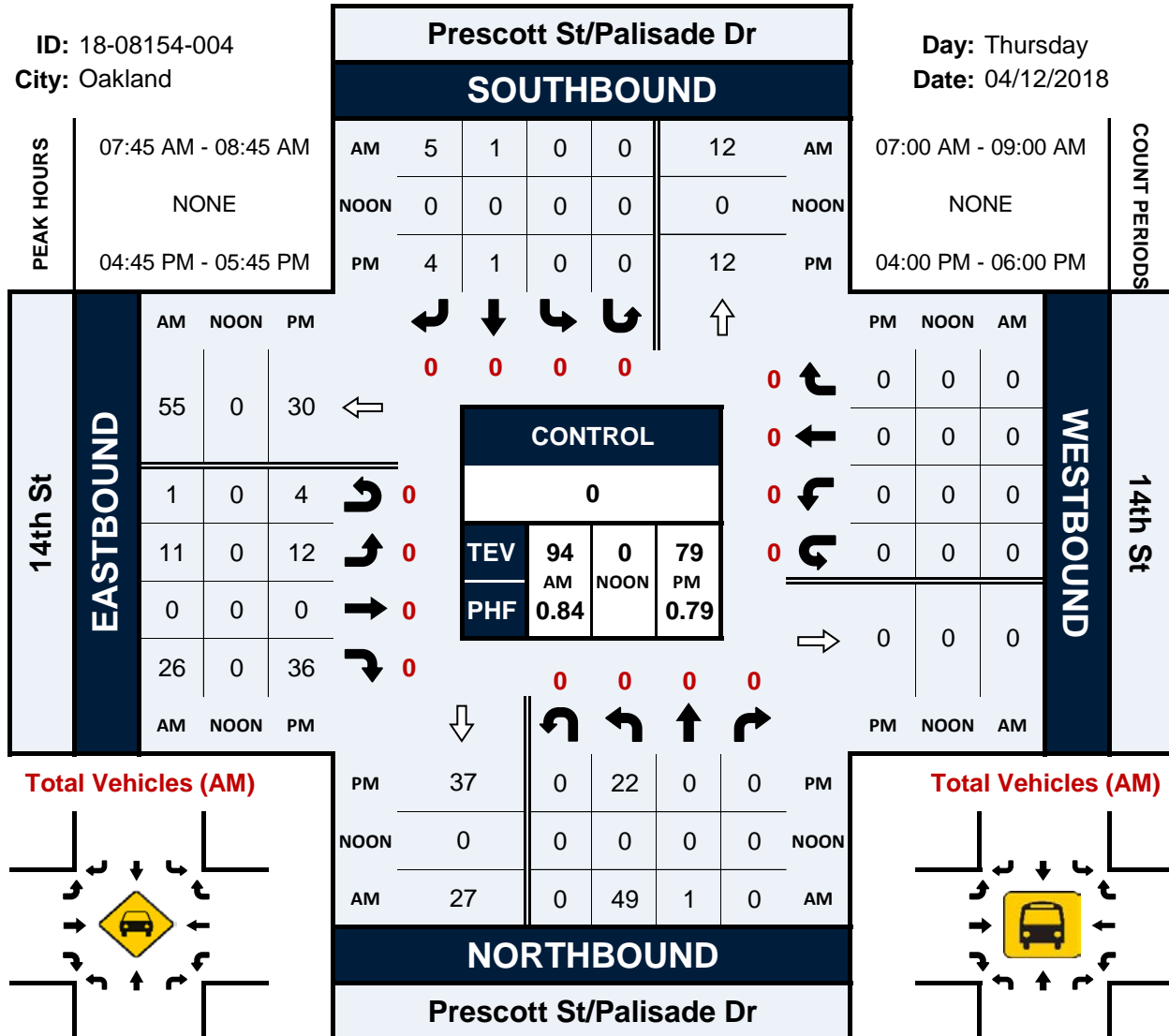
Peak Hour Turning Movement Count

ID: 18-08154-004

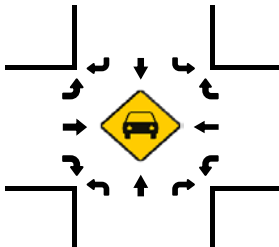
City: Oakland

Day: Thursday

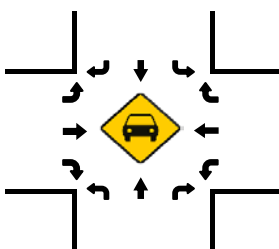
Date: 04/12/2018



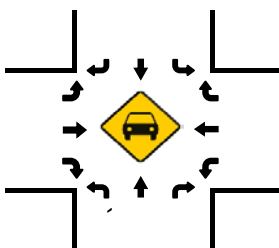
Total Vehicles (AM)



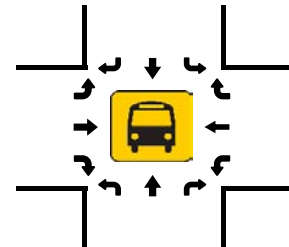
Total Vehicles (NOON)



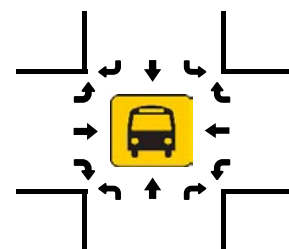
Total Vehicles (PM)



Total Vehicles (AM)



Total Vehicles (NOON)



Total Vehicles (PM)

