SANDS BETHWORKS GAMING, LLC

Phase 1 – Casino/Retail Development

TRAFFIC IMPACT STUDY
&
ACCESS IMPROVEMENTS EVALUATION

City of Bethlehem
Northampton County
Pennsylvania

December 7, 2005
Revised October 19, 2006

Prepared By:

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LAS VEGAS SANDS

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INTRODUCTION

The proposed Sands Bethworks Gaming, LLC Phase 1 Casino/Retail Development located in the City of Bethlehem, Northampton County, Pennsylvania will consist of two separate components. The casino component, to be located primarily to the east of the Minsi-Trail Bridge between Daly Avenue, State Route (SR) 412, and the Lehigh River, will include, in addition to the main casino, several support uses. A hotel of approximately three hundred rooms is planned for this component of the development in addition to food and beverage establishments, light retail, a parking garage and bus station facilities. The retail component, to be located to the west of the Minsi-Trail Bridge and north of Daly Avenue will include general retail, with a food court, and a multipurpose area. For project location see Figure 1.

The casino component of the Sands Bethworks Phase 1 development will be served by two access roads intersecting Daly Avenue (SR 412) to the east of the Minsi-Trail Bridge. For the purposes of this study they are designated East Casino Access Road and West Casino Access Road. The West Casino Access Road will intersect Daly Avenue approximately 800 feet east of the Minsi-Trail Bridge and the East Casino Access Road will intersect Daly Avenue approximately 100 feet east of the West Casino Access Road. The two Casino Access Roads will form one signalized intersection with Daly Avenue (SR 412). The retail component of the development will be served by one main access road intersecting Daly Avenue approximately 1,200. west of the Minsi-Trail Bridge. For the purposes of this study it is designated as Bethworks Retail Center Access Road.

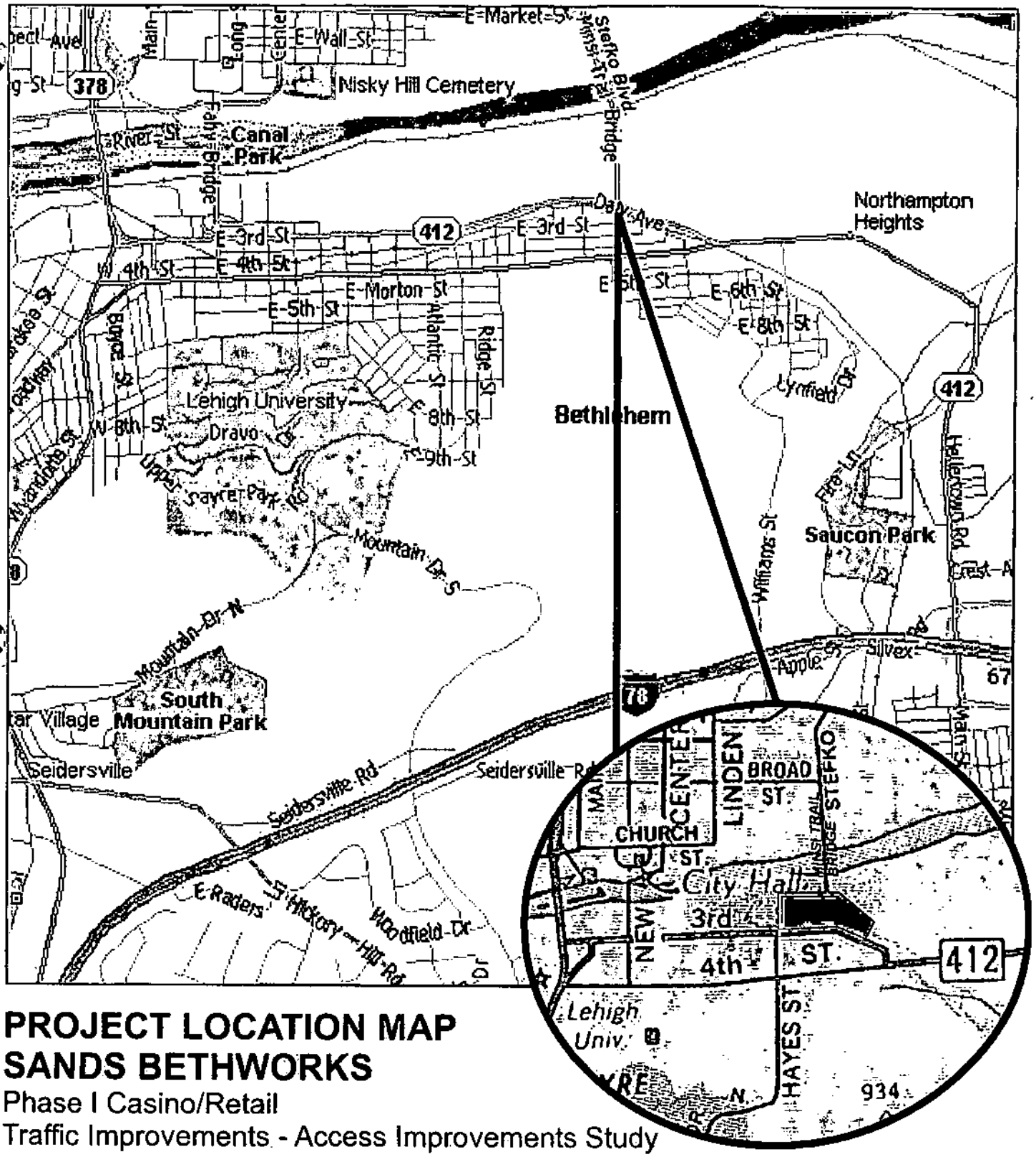
The purpose of the study is to evaluate the traffic impact of the Sands Bethworks Phase 1 Casino/Retail Development focusing on the section of Daly Avenue between East Fourth Street and East Third Street, including the intersection of East Third Street and Hayes Street, and also focusing on the section of Stefko Boulevard between Daly Avenue and East Broad Street. In addition the recommended access schemes for both components of the site will be evaluated as well as all proposed new intersections. The traffic impact study and access improvements evaluation were accomplished by performing the following tasks:

1. A field investigation of the study area including Daly Avenue (SR 412) from East 4th Street to the intersection of East 3rd Street and Hayes Street and Stefko Boulevard from Daly Avenue to East Broad Street.

2. Manual turning movement counts conducted on weekdays from 6:30 AM to 9:00 AM and 4:00 PM to 6:00 PM and Saturdays from 11:00 AM to 3:00 PM at the following locations:

   Daly Avenue (SR 412) and Stefko Boulevard (Minsi Trail Bridge)
   Daly Avenue (SR 412) and East 4th Street
   East 3rd Street and Hayes Street
   Stefko Boulevard and East Broad Street - Municipal Driveway

3. Investigation of traffic generated by the Sands Bethworks, Phase 1 Casino/Retail Development.



PROJECT LOCATION MAP
SANDS BETHWORKS

Phase I Casino/Retail

Traffic Improvements - Access Improvements Study

FRENCH & PARRELLO
ASSOCIATES, P.A. CONSULTING ENGINEERS

& LUBLANECKI ENGINEERING, INC.

Figure 1

October 2006

Daly Avenue (SR 412) and Stefko Boulevard

The intersection of Daly Avenue (SR 412) and Stefko Boulevard is a skewed angle tee intersection with Stefko Boulevard forming the stem of the tee. The intersection is signalized utilizing a three-phase operation (Daly Avenue Eastbound lead, Daly Avenue right-of-way without eastbound left turn and Stefko Boulevard right-of-way). The lane configuration of the intersection is as follows:

Daly Avenue east leg - two westbound approach lanes, one through lane and one right turn lane, - one eastbound receiving lane.

Daly Avenue west leg - three eastbound approach lanes, two left turn lanes and one through lane, - one westbound receiving lane.

Stefko Boulevard north leg - two southbound approach lanes, one left turn lane and one right turn lane, - two northbound receiving lanes.

Total approach peak hour traffic volumes for this intersection are as follows:

Intersection of Daly Avenue (SR 412) and Stefko Boulevard
Existing Approach Peak Hour Traffic Volumes

Approach	Weekday AM	Weekday PM	Saturday
Daly Avenue E.B.	570	753	613
Daly Avenue W.B.	783	604	467
Stefko Boulevard S.B.	1,012	920	704

Daly Avenue (SR 412) and East Fourth Street

The intersection of Daly Avenue (SR 412) and East Fourth Street is a skewed angle tee intersection with East Fourth Street forming the stem of the tee. The angle of the intersection is so severe that right turns into Fourth Street and left turns out of Fourth Street are prohibited. The intersection is signalized utilizing a two-phase operation (Daly Avenue right-of-way and Daly Avenue westbound left turn with East Fourth Street right turn). The lane configuration of the intersection is as follows:

Daly Avenue east leg - two westbound approach lanes, one left turn lane and one through lane, - two eastbound receiving lanes.

Daly Avenue west leg - two eastbound through lanes, - one westbound receiving lane.

East Fourth Street south leg - one right turn lane (due to the angle of the intersection this lane is aligned as a through lane),. - one southbound receiving lane.

Total approach peak hour traffic volumes for this intersection are as follows:

Intersection of Daly Avenue (SR 412) and East Fourth Street
Existing Approach Peak Hour Traffic Volumes

Approach	Weekday AM	Weekday PM	Saturday
Daly Avenue E.B.	519	780	481
Daly Avenue W.B.	801	731	619
East Fourth Street N.B.	106	146	109

East Third Street (SR 412) and Hayes Street

The intersection of East Third Street (SR 412) and Hayes Street is a right angle tee intersection with Hayes Street forming the stem of the tee. The intersection is signalized utilizing a three-phase operation (East Third Street Westbound lead, East Third Street right-of-way and Hayes Street right-of-way). The lane configuration of the intersection is as follows:

East Third Street east leg - two westbound approach lanes, one left turn lane and one through lane, - one eastbound receiving lane.

East Third Street west leg - two eastbound approach lanes, one through lane and one right turn lane, - one westbound receiving lane.

Hayes Street south leg - two northbound approach lanes, one left turn lane and one right turn lane, - one southbound receiving lane.

Total approach peak hour traffic volumes for this intersection are as follows:

Intersection of East Third Street (SR 412) and Hayes Street
Existing Approach Peak Hour Traffic Volumes

Approach	Weekday AM	Weekday PM	Saturday
East Third Street E.B.	327	591	462
East Third Street W.B.	941	627	590
Hayes Street N.B.	412	424	410

Stefko Boulevard and East Broad Street - Municipal Driveway

The intersection of Stefko Boulevard and East Broad Street - Municipal Driveway (Municipal Service Center of the City of Bethlehem) is a four-way right angle signalized intersection utilizing a three-phase operation (Stefko Boulevard Northbound lead, Stefko Boulevard right-of-way without northbound left turn and East Broad Street - Municipal Driveway right-of-way). The lane configuration of the intersection is as follows:

Stefko Boulevard north leg - three southbound approach lanes, one left turn lane, one through lane and one shared through/right turn lane, - two northbound receiving lanes.

Stefko Boulevard south leg - three northbound approach lanes, one left turn lane, one through lane and one shared through/right turn lane, - two southbound receiving lanes.

Municipal Driveway east leg - one westbound approach lane, - one eastbound receiving lane.

East Broad Street west leg - two eastbound approach lanes, one shared through/left turn lane and one right turn lane, - one westbound receiving lane.

Total approach peak hour traffic volumes for this intersection are as follows:

Intersection of Stefko Boulevard and East Broad Street - Municipal Driveway
Existing Approach Peak Hour Traffic Volumes

Approach	Weekday AM	Weekday PM	Saturday
Stefko Boulevard N.B.	629	802	665
Stefko Boulevard S.B.	856	751	683
East Broad Street E.B.	241	530	318
Municipal Driveway W.B.	6	4	6

Existing weekday AM and PM peak hours and Saturday peak hour traffic volumes are presented in Figures 2 through 4. Manual Count Data sheets are included in the Appendix.

BACKGROUND TRAFFIC GROWTH

Future no-build weekday AM and PM peak hour and Saturday peak hour traffic volumes were determined by applying a regional traffic growth factor to existing volumes and then adding projected site specific traffic volumes. The future site specific traffic volumes were projected from proposed developments in the area. One development, the Bethlehem Commerce Center, which will ultimately entail 16,000,000 SF of manufacturing, warehousing, and office space, is located on two separate sites off of SR 412. The Commerce Center East site is located on the east side of SR 412 between Shimersville Road and I-78. The Commerce Center N.W. Site is located on the north side of SR 412 west of Shimersville Road. The other major development in the study area are the later phases of the Bethworks project, which could include 400,000± SF of shopping center/general retail, 1,000± condominium/townhouses, 45,900± SF of high-end quality restaurants, a 59,800 SF multiplex movie theatre, and 58,000 SF of office space/studios. Since the later phase of Bethworks would be a future continuation of the subject Sands Bethworks Phase 1 development, it will not be included in future no-build traffic. Bethworks later phases traffic will be added in the next section dealing with Bethworks (possible ultimate build-out) site trip generation.

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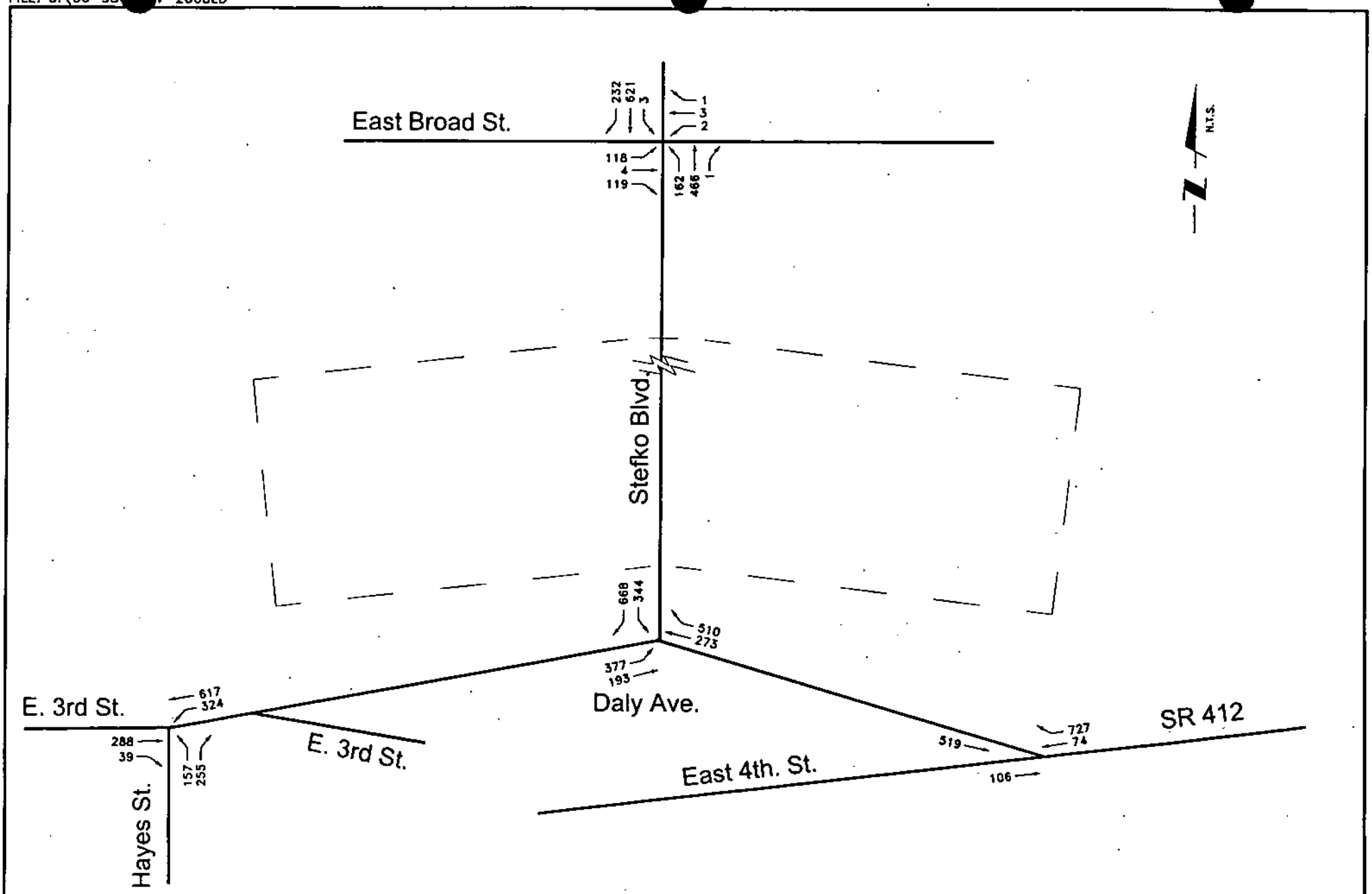

FIGURE NO. 2

LUBLANECKI ENGINEERING, INC.

AM EXISTING
PEAK HOUR TRAFFIC VOLUMES
Sands Bethworks Casino/Retail Development–PHASE 1
City of Bethlehem, Northampton County, Pennsylvania
Project No. 05-205
October, 2006

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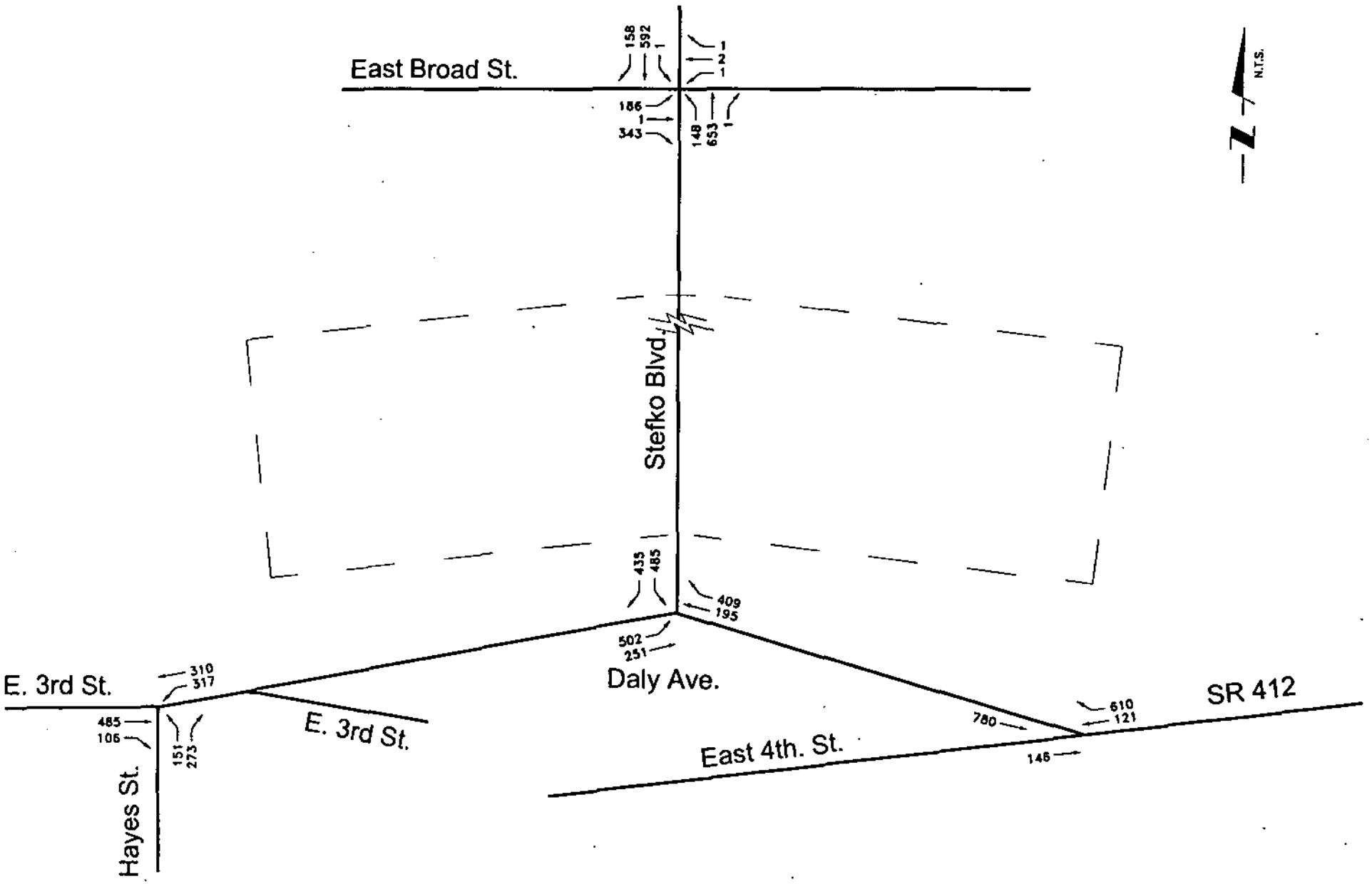

FIGURE NO. 3

LUBLANECKI ENGINEERING, INC.

PM EXISTING
PEAK HOUR TRAFFIC VOLUMES
Sands Bethworks Casino/Retail Development–PHASE 1
City of Bethlehem, Northampton County, Pennsylvania
Project No. 05–205 October, 2006

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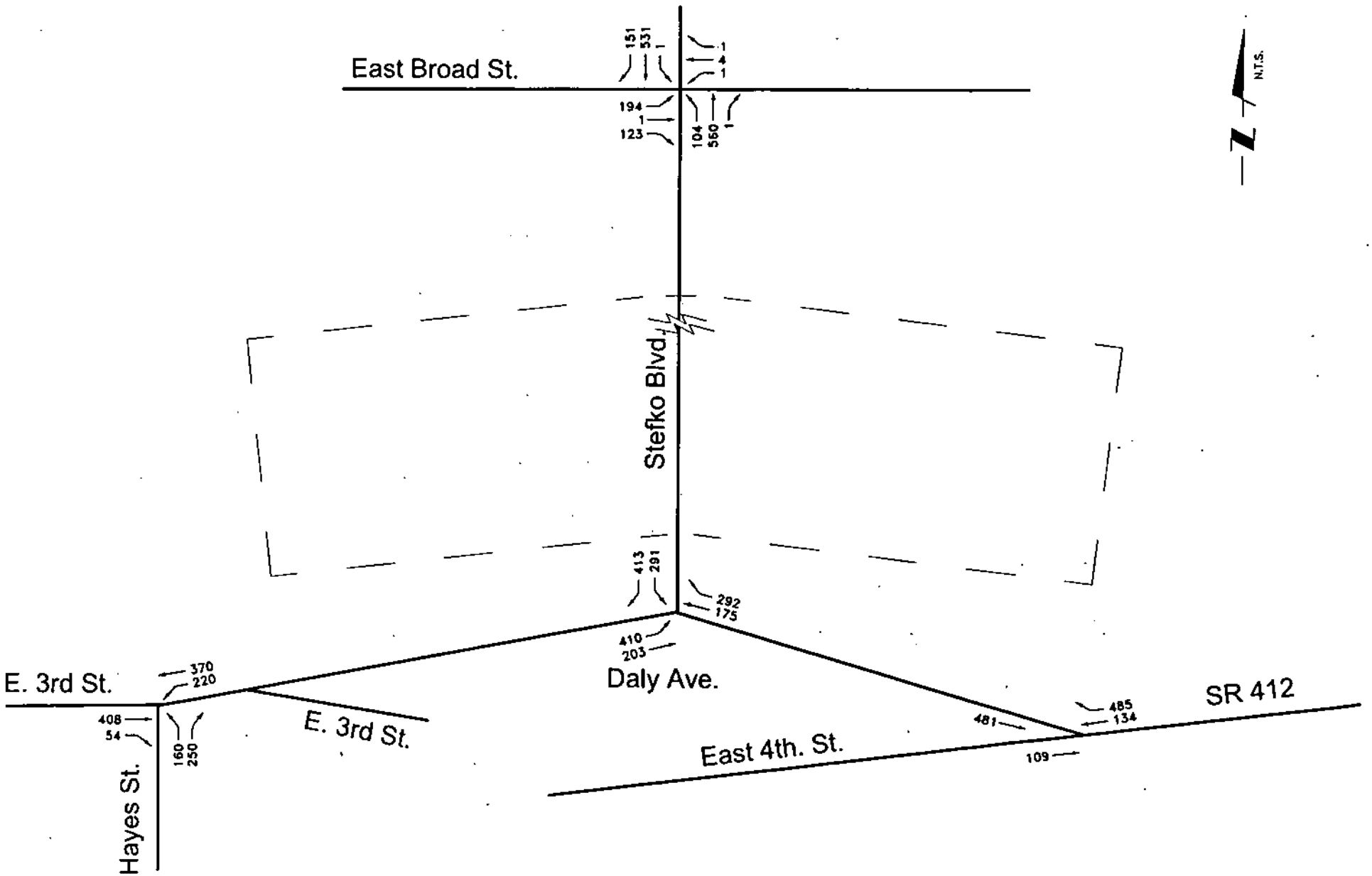

FIGURE NO. 4

LUBLANECKI ENGINEERING, INC.

SATURDAY EXISTING
PEAK HOUR TRAFFIC VOLUMES
Sands Bethworks Casino/Retail Development–PHASE 1
City of Bethlehem, Northampton County, Pennsylvania
Project No. 05-205 October, 2006

The formula for the regional traffic growth factor is as follows:

$$GF = (1 + GR)^n$$

Where:

GF = Regional Traffic Growth Factor
GR = Regional Yearly Traffic Growth Rate
n = number of years to full build-out

The regional yearly traffic growth rate was obtained from the SR 412 Section 001 study report, dated June 15, 2005, prepared by Orth-Rodgers & Associates, Inc. and submitted to the Pennsylvania Department of Transportation. The Orth-Rodgers report was prepared in support of the SR 412 improvement project, and was used to confirm the adequacy of the proposed SR 412 widening improvements. The Orth-Rodgers report shows an annual growth rate of 0.5 per cent, justified by existing count data and the premise that most of the traffic growth along the SR 412 corridor will be from either the subject site, Bethworks, or from the Bethlehem Commerce Center. It is assumed that the Sands Bethworks Phase 1 - Casino/Retail Development will be fully built out and occupied by 2008, three years from the date of the initial count program.

Therefore, the regional traffic growth factor for 2008 is:

$$GF = (1 + .005)^3 = 1.015$$

and the regional traffic growth factor for 2018 (ten years after the build year) is:

$$GF = (1 + .005)^{13} = 1.067$$

Bethlehem Commerce Center

Site Trip Generation and distribution information for the Bethlehem Commerce Center is taken directly from the Orth-Rodgers SR-412 report. As previously stated the development will consist of 16,000,000 SF. The land use types and sizes are as follows:

Bethlehem Commerce Center
Ultimate Development

TYPE	SIZE
Beth-Intermodal	250,000 lifts per year
Manufacturing	2,000,000 SF
Distribution/Warehouse	12,000,000 SF
Office Park	2,000,000 SF

Site Trip Generation for the Bethlehem Commerce Center development was determined by using the seventh edition of the "Trip Generation Manual" published by the Institute of Transportation Engineers.

Trips were determined for the weekday AM and PM peak hours of adjacent street traffic and the Saturday peak hour of generator. Trips generated by the intermodal land use are negligible in the Bethworks study area and are not included. The estimated trip generation for the other three land uses are as follows:

Bethlehem Commerce Center
Manufacturing
(2,000,000 SF)
Estimated Site Trip Generation
Land Use Code 140

Time Period	Relationship T = total vehicle trips x = GLA in 1000 SF	Vehicle Trips		
		Total	Entering	Exiting
AM Peak Hour Adj. Street	T = 0.83(x) – 28.88 Entering = 77%, Exiting = 23%	1,631	1,256	375
PM Peak Hour Adj. Street	T = 0.78(x) – 12.89 Entering = 36%, Exiting = 64%	1,547	557	990
Saturday Peak Hour Generator	T = 0.28(x) Entering = 50%, Exiting = 50%	560	280	280

Bethlehem Commerce Center
Distribution/Warehouse
(12,000,000 SF)
Estimated Site Trip Generation
Land Use Code 150

Time Period	Relationship T = total vehicle trips x = GLA in 1000 SF	Vehicle Trips		
		Total	Entering	Exiting
AM Peak Hour Adj. Street	Ln(T) = 0.71Ln(x) + 1.15 Entering = 82%, Exiting = 18%	2,487	2,039	448
PM Peak Hour Adj. Street	Ln(T) = 0.79Ln(x) + 0.54 Entering = 25%, Exiting = 75%	2,865	716	2,149
Saturday Peak Hour Generator	T = 0.12(x) Entering = 64%, Exiting = 36%	1,440	922	518

Bethlehem Commerce Center
Office Park
(2,000,000 SF)
Estimated Site Trip Generation
Land Use Code 750

Time Period	Relationship T = total vehicle trips x = GLA in 1000 SF	Vehicle Trips		
		Total	Entering	Exiting
AM Peak Hour Adj. Street	Ln(T) = 0.84Ln(x) + 1.51 Entering = 89%, Exiting = 11%	2,682	2,387	295
PM Peak Hour Adj. Street	T = 1.21(x) + 106.22 Entering = 14%, Exiting = 86%	2,532	354	2,178
Saturday Peak Hour Generator	T = 0.14(x) Entering = 74%, Exiting = 26%	280	207	73

The following is a summary of the site trips generated by the full build out of the Bethlehem Commerce Center development.

Bethlehem Commerce Center
Estimated Full Build-Out (2018) Site Trip Generation

Time Period	Use	Vehicle Trips		
		Total	Entering	Exiting
AM Peak Hour Adj. Street	Manufacturing	1,631	1,256	375
	Distribution/Warehouse	2,487	2,039	448
	Office Park	2,682	2,387	295
	Total AM Peak Hour Adj. Street	6,800	5,682	1,118
PM Peak Hour Adj. Street	Manufacturing	1,547	557	990
	Distribution/Warehouse	2,865	716	2,149
	Office Park	2,532	354	2,178
	Total PM Peak Hour Adj. Street	6,944	1,627	5,317
Saturday Peak Hour Generator	Manufacturing	560	280	280
	Distribution/Warehouse	1,440	922	518
	Office Park	280	207	73
	Total Saturday Peak Hour Generator	2,280	1,409	871

It is conservatively assumed that the Bethlehem Commerce Center site will be fully developed by 2018. Assuming uniform progress of development, approximately 25% (3/13 = .23) should be completed by the end of 2008. The following is a summary of the estimated site trips that will be generated by the Bethlehem Commerce Center development by 2008.

Bethlehem Commerce Center
Estimated 25% Build-Out (2008) Site Trip Generation

Time Period	Use	Vehicle Trips		
		Total	Entering	Exiting
AM Peak Hour Adj. Street	Manufacturing	408	314	94
	Distribution/Warehouse	622	510	112
	Office Park	671	597	74
	Total AM Peak Hour Adj. Street	1,701	1,421	280
PM Peak Hour Adj. Street	Manufacturing	387	139	248
	Distribution/Warehouse	716	179	537
	Office Park	632	88	544
	Total PM Peak Hour Adj. Street	1,735	406	1,329
Saturday Peak Hour Generator	Manufacturing	140	70	70
	Distribution/Warehouse	360	231	129
	Office Park	70	52	18
	Total Saturday Peak Hour Generator	570	353	217

The site trips generated by the Bethlehem Commerce Center development were assigned to the surrounding roadway system using the traffic assignment patterns presented in the SR 412 Section 001 study report, prepared by Orth – Rodgers. As part of the SR 412 Section 001 study Orth - Rodgers developed a distribution and traffic assignment pattern for the ultimate Bethlehem Commerce Center future development. The traffic assignment pattern is as follows:

Bethlehem Commerce Center
Traffic Assignment Pattern
(by percent)

Roadway	Percent of Site Trips
Interstate 78 to the east and west	70%
SR 412 south of I-78	10%
SR 412 between I-78 and site	80%
SR 412 between Stefko Boulevard and Site	20%
Stefko Boulevard to the north	5%
SR 412 between SR 378 and Stefko Boulevard	15%
SR 378 to the north	10%
SR 378 to the south	5%

Using these traffic assignment patterns and the site generated peak hour traffic volumes, traffic was assigned to the study area as follows.

Bethlehem Commerce Center
Weekday AM Peak Hour Site Trip Distribution
2008/2018 Build-outs

Roadway	2008		2018	
	Enter	Enter	Exit	Exit
Stefko Boulevard	71	14	284	56
SR 412 between SR 378 and Stefko Boulevard	213	42	852	168
SR 412 between Stefko Boulevard and Site	284	56	1,136	224
Total Site Trip Generation	1,421	280	5,682	1,118

Bethlehem Commerce Center
Weekday PM Peak Hour Site Trip Distribution
2008/2018 Build-outs

Roadway	2008		2018	
	Enter	Enter	Exit	Exit
Stefko Boulevard	20	66	81	266
SR 412 between SR 378 and Stefko Boulevard	61	200	244	798
SR 412 between Stefko Boulevard and Site	81	266	325	1,064
Total Site Trip Generation	407	1,329	1,627	5,317

Bethlehem Commerce Center
Saturday Peak Hour Site Trip Distribution
2008/2018 Build-outs

Roadway	2008		2018	
	Enter	Enter	Exit	Exit
Stefko Boulevard	18	11	71	44
SR 412 between SR 378 and Stefko Boulevard	53	33	211	131
SR 412 between Stefko Boulevard and Site	71	44	282	175
Total Site Trip Generation	352	218	1,409	871

The existing weekday AM and PM and Saturday peak hour traffic volumes were grown to the build years of 2008 and 2018 by multiplying by the respective regional traffic growth factors and adding the projected 2008 and 2018 peak hour traffic volumes from the Bethlehem Commerce Center. No-build weekday AM and PM and Saturday peak hour traffic volumes are presented in Figures 5 through 10.

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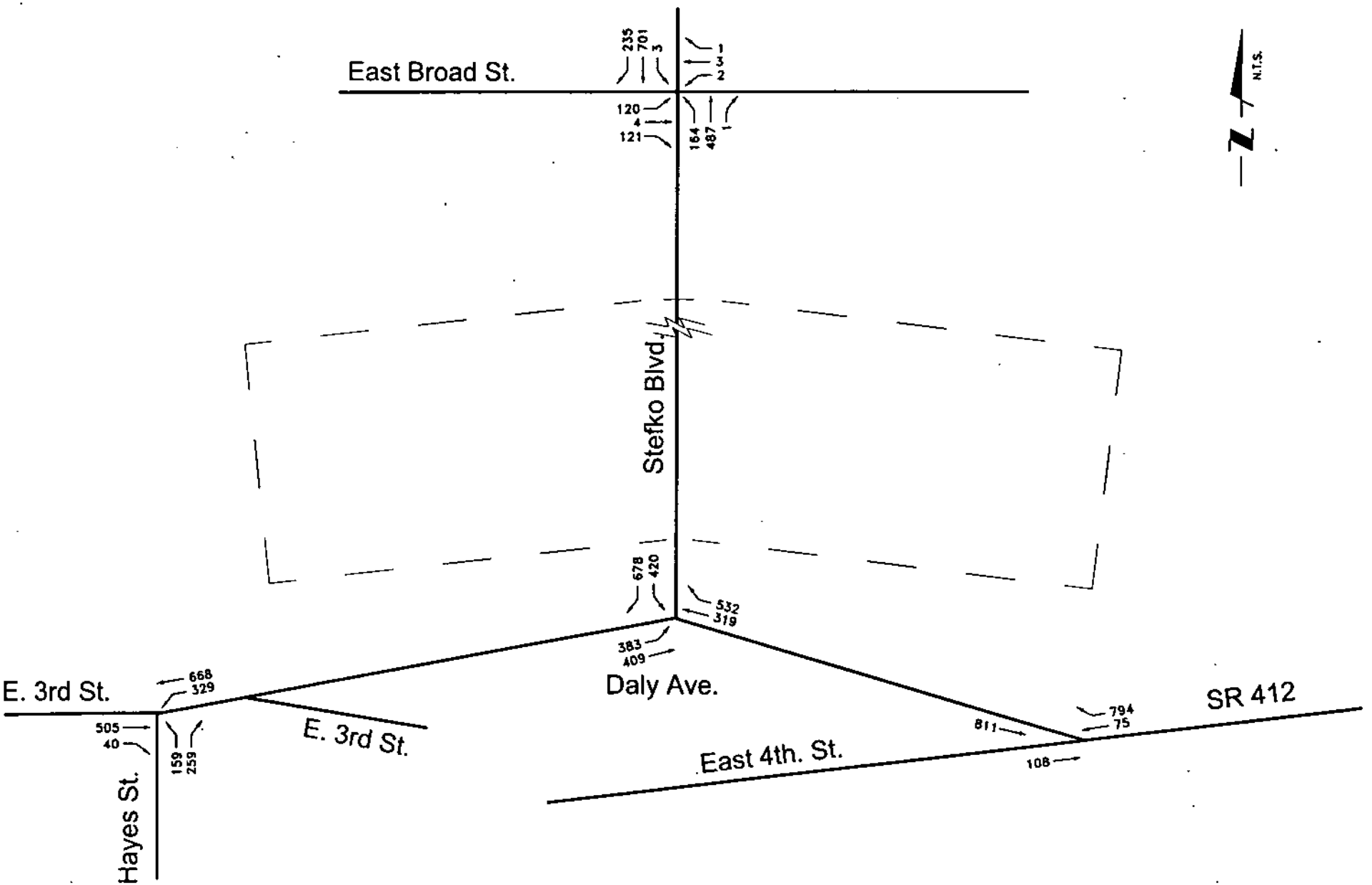

FIGURE NO. 5

LE LUBLANECKI ENGINEERING, INC.

AM 2008 NO-BUILD
PEAK HOUR TRAFFIC VOLUMES
Sands Bethworks Casino/Retail Development–PHASE 1
City of Bethlehem, Northampton County, Pennsylvania
Project No. 05-205 October, 2006

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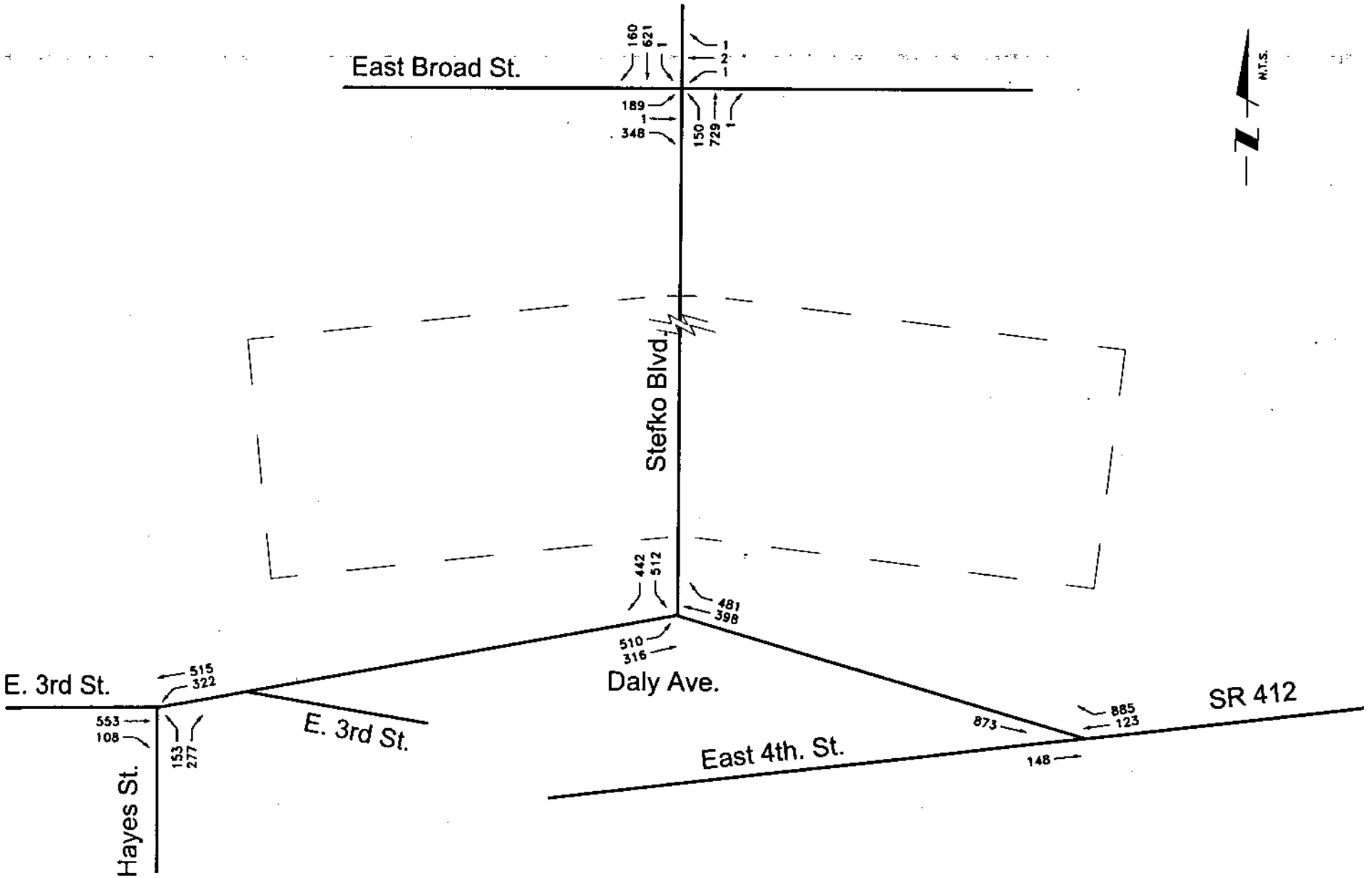

FIGURE NO. 6

LUBLANECKI ENGINEERING, INC.

PM 2008 NO-BUILD
PEAK HOUR TRAFFIC VOLUMES
Sands Bethworks Casino/Retail Development–PHASE 1
City of Bethlehem, Northampton County, Pennsylvania
Project No. 05–205
October, 2006

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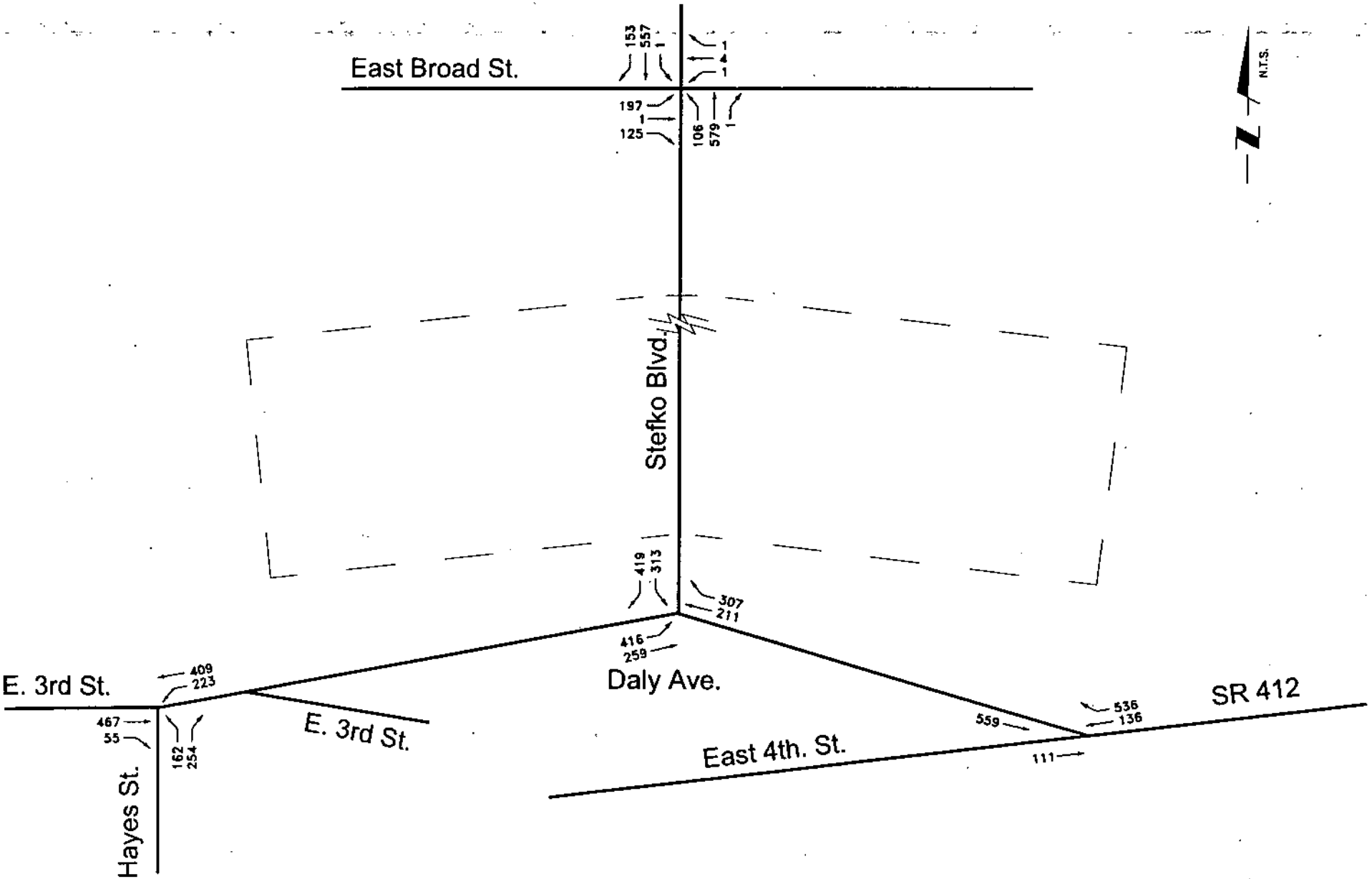

FIGURE NO. 7

LUBLANECKI ENGINEERING, INC.

SATURDAY 2008 NO-BUILD
PEAK HOUR TRAFFIC VOLUMES

Sands Bethworks Casino/Retail Development–PHASE 1
City of Bethlehem, Northampton County, Pennsylvania

Project No. 05-205 October, 2006

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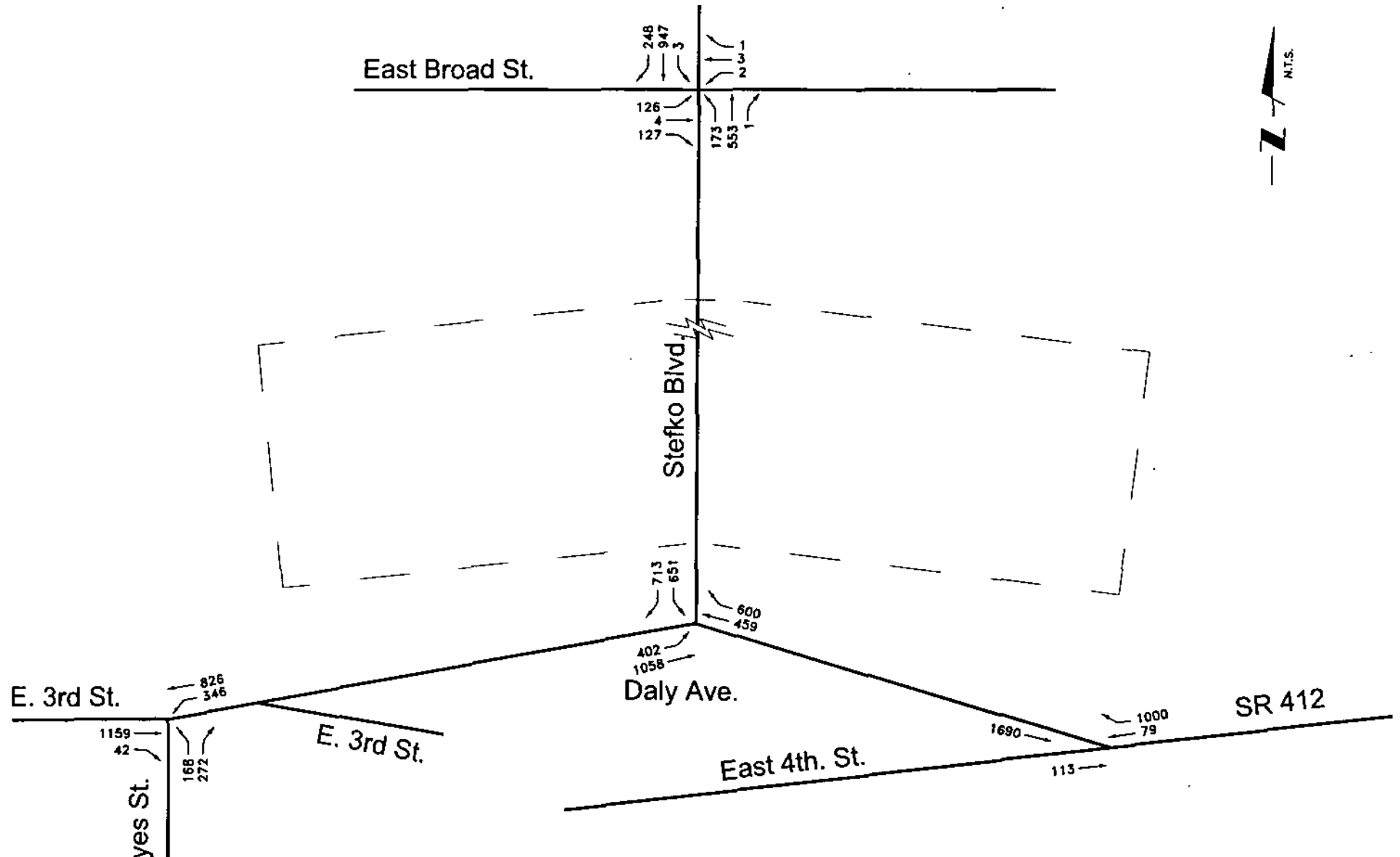

FIGURE NO. 8

LUBLANECKI ENGINEERING, INC.

AM 2018 NO-BUILD
PEAK HOUR TRAFFIC VOLUMES

Sands Bethworks Casino/Retail Development–PHASE 1
City of Bethlehem, Northampton County, Pennsylvania

Project No. 05–205 October, 2006

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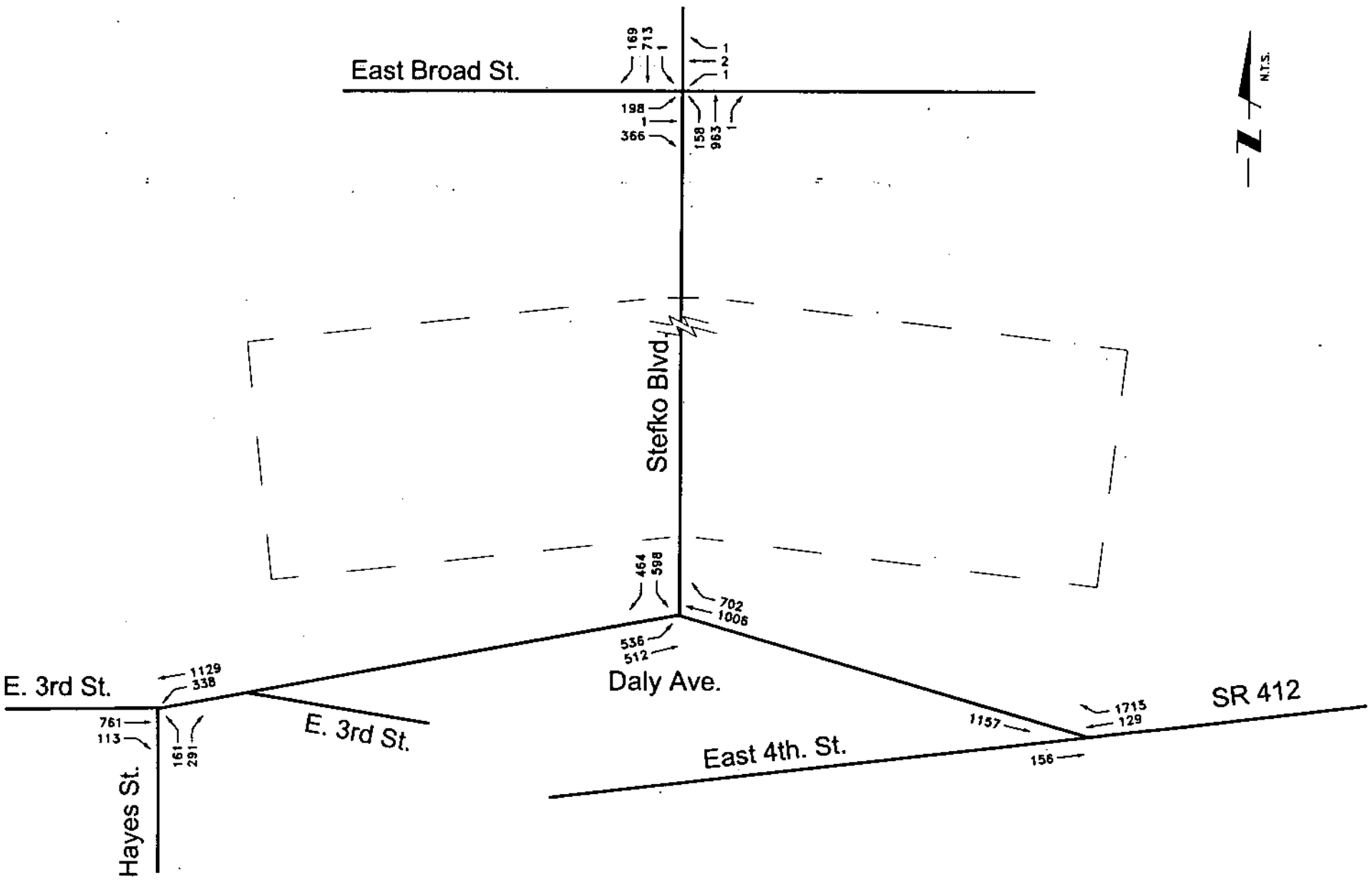

FIGURE NO. 9

LUBLANECKI ENGINEERING, INC.

PM 2018 NO-BUILD
PEAK HOUR TRAFFIC VOLUMES

Sands Bethworks Casino/Retail Development–PHASE 1
City of Bethlehem, Northampton County, Pennsylvania

Project No. 05-205 October, 2006

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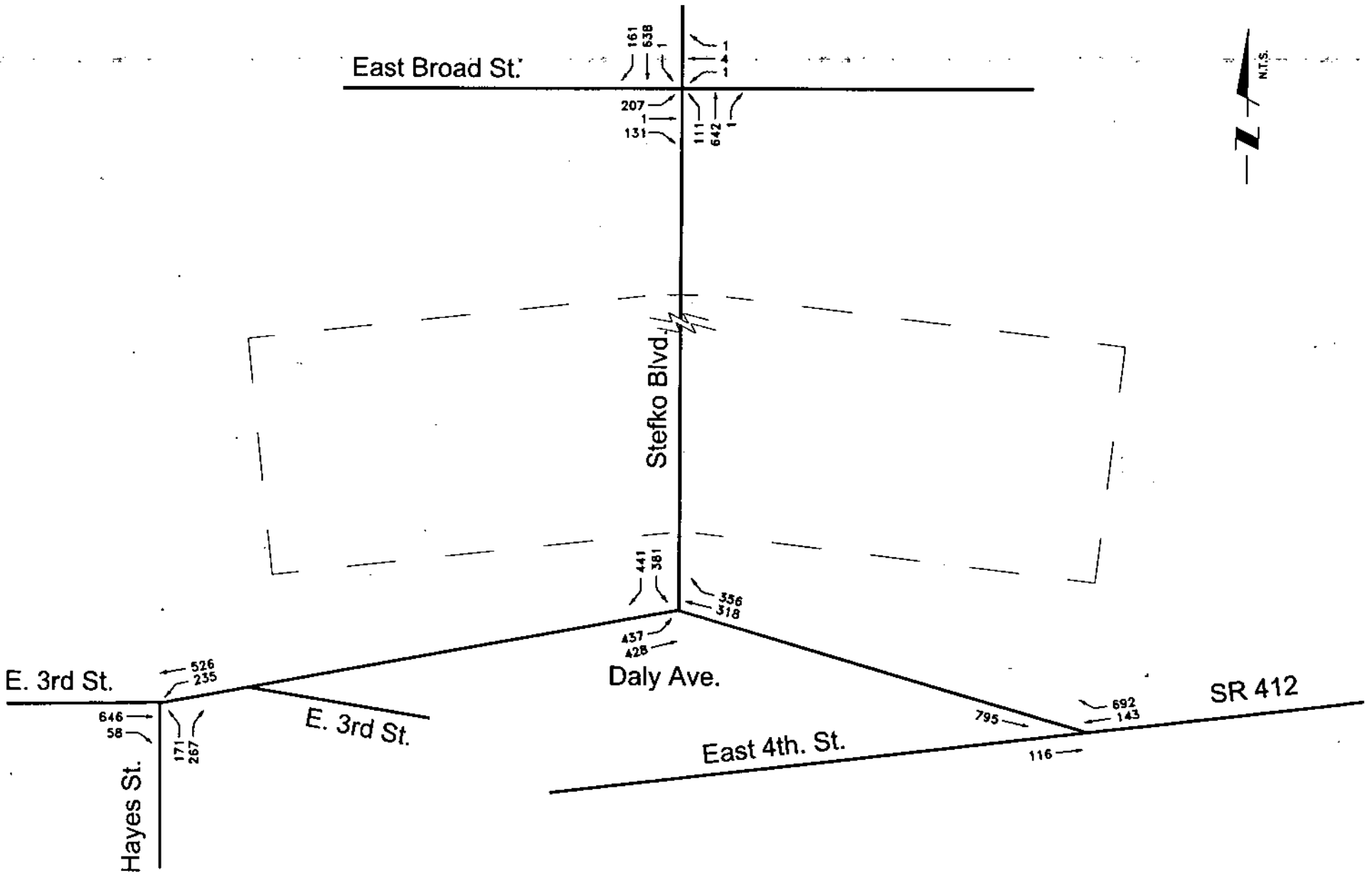

FIGURE NO. 10

LUBLANECKI ENGINEERING, INC.

SATURDAY 2018 NO-BUILD
PEAK HOUR TRAFFIC VOLUMES

Sands Bethworks Casino/Retail Development–PHASE 1
City of Bethlehem, Northampton County, Pennsylvania

Project No. 05-205 October, 2006

SITE TRIP GENERATION

Casino Component

Site Trip Generation for the casino component of the Sands Bethworks Phase 1 Casino/Retail Development was determined by the use of a patronage model. The patronage model determines total annual person visits to the casino complex, and segregates the data by peaks (seasonal, monthly, daily and hourly), modal splits and vehicle occupancy. It should be noted that a substantial charter bus program is planned for the casino site, therefore, the auto/bus modal split in terms of patrons is 85%/15%. The patronage model is primarily used to determine the economic feasibility of the site; however, it can be used as an accurate and precise measure of patron trip generation. Employee trips were estimated as follows:

Weekday AM peak hour	= 100 entering trips and 100 exiting trips
Weekday PM peak hour	= 50 entering trips and 50 exiting trips
Saturday peak hour	= 50 entering trips and 50 exiting trips

These estimates are conservative since employee shift changes will be scheduled during off-peak hours.

The following are the results of the patronage model with the added employee trips, based on the conservative assumption of 5,000 slot machines.

Sands Bethworks Casino Patronage Model
Input Assumptions

Parameter	Weekday AM	Weekday PM	Saturday
Modal Split: Auto/Bus	85%/15%	85%/15%	85%/15%
Auto Vehicle Load Factor in persons/Veh.	2.0/Veh.	2.0/Veh.	2.2/Veh.
Bus Vehicle Load Factor in persons/Veh.	38/Veh.	38/Veh.	38/Veh.
Peak Hour Time Period	AM	PM	Mid-Day
Peak Hour Auto Traffic as percent of Daily	2%	6%	5.5%
Peak Hour Bus Traffic as percent of Daily	5%	10%	10%
Peak Hour Directional Split: In/Out	57%/43%	52%/48%	50%/50%

Sands Bethworks Casino Patronage Model
Trips - Gaming Visits

Type/Period	Weekday AM	Weekday PM	Saturday
Average Daily Person Trips	11,806	11,806	29,516
Peak Daily Person Trips	14,167	14,167	35,419
Average Daily Auto Trips	10,035	10,035	22,807
Peak Daily Auto Trips	12,042	12,042	27,369
Average Daily Bus Trips	101	101	253
Peak Daily Bus Trips	121	121	304
Peak Hour Auto Trips	241	723	1,505
Peak Hour Bus Trips	6	12	30
Peak Hour Patron Trips	247	735	1,535
Peak Hour Directional Split: In/Out Patrons	141/106	382/353	768/768
Peak Hour Employee Trips	200	100	100
Peak Hour Directional Split: In/Out Employees	100/100	50/50	50/50
Total Peak Hour Trips	447	835	1,635
Total Peak Hour Directional Split: In/Out	241/206	432/403	818/818

The peak hours in the above tables refer to the weekday AM and PM peak hours of adjacent street traffic and the Saturday mid-day peak hour.

Retail Component

Site Trip Generation for the retail component of the development was determined by using the seventh edition of the "Trip Generation Manual" published by the Institute of Transportation Engineers as a guide in estimating the number of trips expected to be generated by the various uses. Three types of uses are proposed for the retail component. The uses are general retail with a food court (200,000 SF), and a multipurpose space (46,636 SF). Land Use Code 820 – Shopping Center was selected as best representing the general retail. The multipurpose space will function as a meeting area, banquet hall, or as a display/convention area. The primary purpose of this area is to support the casino component of the site, however, in an effort to develop conservative site generated traffic volumes (that is more site trips than expected) the multipurpose space was grouped with and analyzed as general retail.

Trips were determined for the weekday AM and PM peak hours of adjacent street traffic and the Saturday peak hour of generator as well as for a typical weekday and Saturday. The estimated trip generation is as follows:

Sands Bethworks Phase 1
Department Store/General Retail
(246,636 SF)
Estimated Site Trip Generation
Land Use Code 820

Time Period	Relationship T = total vehicle trips x = GLA in 1000 SF	Vehicle Trips		
		Total	Entering	Exiting
AM Peak Hour Adj. Street	Ln(T) = 0.60Ln(x) + 2.29 Entering = 61%, Exiting = 39%	269	164	105
PM Peak Hour Adj. Street	Ln(T) = 0.66Ln(x) + 3.40 Entering = 48%, Exiting = 52%	1,136	545	591
Saturday Peak Hour Generator	Ln(T) = 0.65Ln(x) + 3.77 Entering = 52%, Exiting = 48%	1,556	809	747
Weekday	Ln(T) = 0.65Ln(x) + 5.83 Entering = 50%, Exiting = 50%	12,212	6,106	6,106
Saturday	Ln(T) = 0.63Ln(x) + 6.23 Entering = 50%, Exiting = 50%	16,318	8,159	8,159

The retail component of the Sands Bethworks Phase 1 Development is unique in that the various uses will function as support to the casino component of the development. A wide pedestrian mall under the Minsi-Trail bridge will connect the casino component with the retail area and serve to attract casino patrons to the retail area. Many of the trips generated by the retail area, food court and multi-purpose space will have their origin and destination in the casino component. It is therefore assumed that 50% of the peak hour trips generated by the retail component will be internal originating in the casino component. Based on these assumptions the following is the estimated external site trips generated by the retail component of the Sands Bethworks Phase 1 Development.

Sands Bethworks Phase 1 Retail Component
Estimated External Site Trip Generation

Time Period	Vehicle Trips		
	Total	Entering	Exiting
AM Peak Hour Adj. Street	136	83	53
PM Peak Hour Adj. Street	568	273	295
Saturday Peak Hour Generator	778	405	373
Weekday Total	6,106	3,053	3,053
Saturday Total	8,160	4,080	4,080

SITE TRIP DISTRIBUTION

The site trips generated by the Sands Bethworks Phase 1 Casino/Retail Development were assigned to the surrounding roadway system using the traffic assignment patterns presented in the SR 412 Section 001 study report, prepared by Orth - Rodgers Associates, Inc. As part of the SR 412 Section 001 study Orth - Rodgers developed a distribution and traffic assignment pattern for the ultimate Sands Bethworks future development. The traffic assignment pattern is as follows:

Sands Bethworks Ultimate Development
Traffic Assignment Pattern
(by percent)

Roadway	Percent of Site Trips
Interstate 78 to the east and west	40%
SR 412 south of I-78	15%
SR 412 between I-78 and Shimersville Road	55%
Shimersville Road to the north	5%
SR 412 between Shimersville Rd. and Site	60%
Stefko Boulevard to the north	5%
SR 378 to the north	20%
SR 378 to the south	10%
Fahy Bridge to the north	5%
SR 412 between Fahy Bridge and Site	35%

These distributions seem reasonable for the external trips of the retail component of the Sands Bethworks site. For the casino component of the site the area of influence is much greater extending into North Jersey. The traffic assignment pattern presented above does not account for this attraction to the east. In order to account for this change in area of attraction the percent of traffic oriented to the east on I-78 is increased significantly as the percent of traffic oriented to the west on I-78 is decreased. Overall the total percent of traffic from I-78 passing through the SR 412 interchange is increased by 5% for the casino component with the majority of traffic oriented to east. In addition the percent of traffic on Stefko Boulevard is also increased by 5% for the casino component to account for the North Jersey attraction. The percent of traffic from the north on SR 378 is decreased from 20% to 10%. The following are the traffic assignment patterns for both the retail and casino components of the site.

Sands Bethworks Phase 1 Casino/Retail Development
Traffic Assignment Patterns
(by percent)

Roadway	Percent of Site Trips	
	Casino	Retail
Interstate 78 to the east and west	55%	40%
SR 412 south of I-78	5%	15%
SR 412 between I-78 and Shimersville Rd.	60%	55%
Shimersville Road to the north	5%	5%
SR 412 between Shimersville Rd. and Site	65%	60%
Stefko Boulevard to the north	10%	5%
SR 378 to the north	10%	20%
SR 378 to the south	10%	10%
Fahy Bridge to the north	5%	5%
SR 412 between Fahy Bridge and Site	25%	35%

Using these traffic assignment patterns and the site generated peak hour traffic volumes developed in the previous section, traffic was assigned to the study area as follows.

Sands Bethworks Phase 1 Casino/Retail Development
Weekday AM Peak Hour Site Trip Distribution

Direction/Roadway	Casino		Retail		
	Enter	Exit	Enter	Pass-by *	Exit
North/Stefko Boulevard	24	21	4	------	3
East/Daly Ave. (SR 412)	157	134	50	------	32
West/E. 3rd St. (SR 412)	60	51	29	------	18
Totals	241	206	83	------	53

Sands Bethworks Phase 1 Casino/Retail Development
Weekday PM Peak Hour Site Trip Distribution

Direction/Roadway	Casino		Retail		
	Enter	Exit	Enter	Pass-by*	Exit
North/Stefko Boulevard	43	40	14	4	15
East/Daly Ave. (SR 412)	281	262	164	49	177
West/E. 3rd St. (SR 412)	108	101	95	28	103
Totals	432	403	273	81	295

Sands Bethworks Phase 1 Casino/Retail Development
Saturday Peak Hour Site Trip Distribution

Director/Roadway	Casino		Retail		
	Enter	Exit	Enter	Pass-by*	Exit
North/Stefko Boulevard	82	82	20	6	19
East/Daly Ave. (SR 412)	532	532	243	80	224
West/E. 3rd St. (SR 412)	204	204	142	47	130
Totals	818	818	405	133	373

*Pass-by trip credits for the Shopping Center/General Retail use are taken as per the "Trip Generation Handbook," 2nd Edition, published by the Institute of Transportation Engineers. For 246,636 SF of retail use the percentage of trips originating in the existing flow of traffic passing the site is 30% for the weekday PM peak hour and 33% for the Saturday peak hour. A pass-by credit is not given for the weekday AM peak hour.

The Phase 1 2008 weekday AM and PM and Saturday peak hour site generated traffic volumes are presented in Figures 11 through 13.

Build weekday AM and PM and Saturday peak hour traffic volumes were determined by adding the Phase 1 site generated peak hour traffic volumes to the 2008 no-build volumes. 2008 Build Phase 1 weekday AM and PM and Saturday peak hour traffic volumes are presented in Figures 14 through 16.

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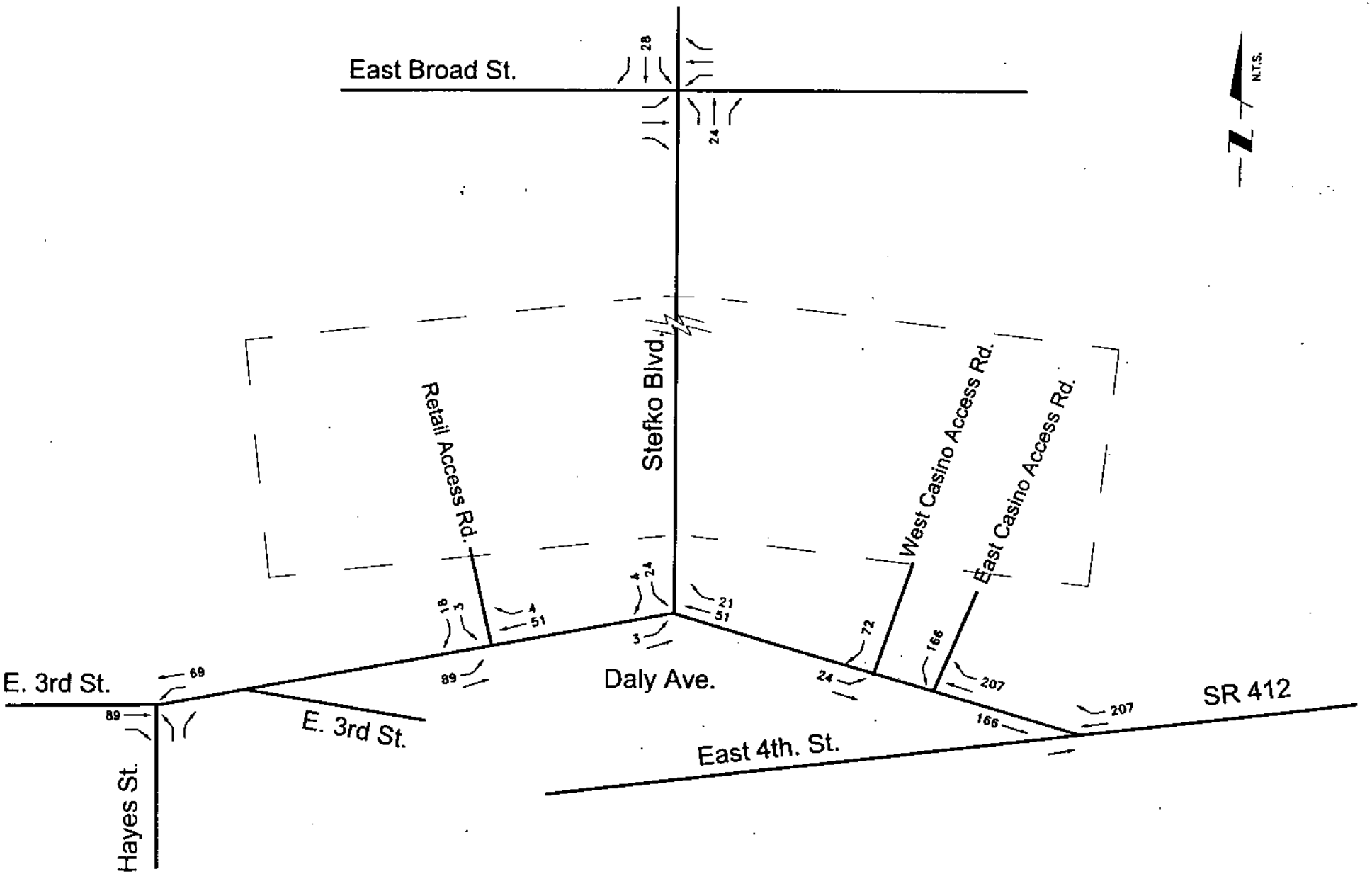

FIGURE NO. 11

LUBLANECKI ENGINEERING, INC.

AM PHASE 1 2008 SITE GENERATED
PEAK HOUR TRAFFIC VOLUMES

Sands Bethworks Casino/Retail Development–PHASE 1
City of Bethlehem, Northampton County, Pennsylvania

Project No. 05-205 October, 2006

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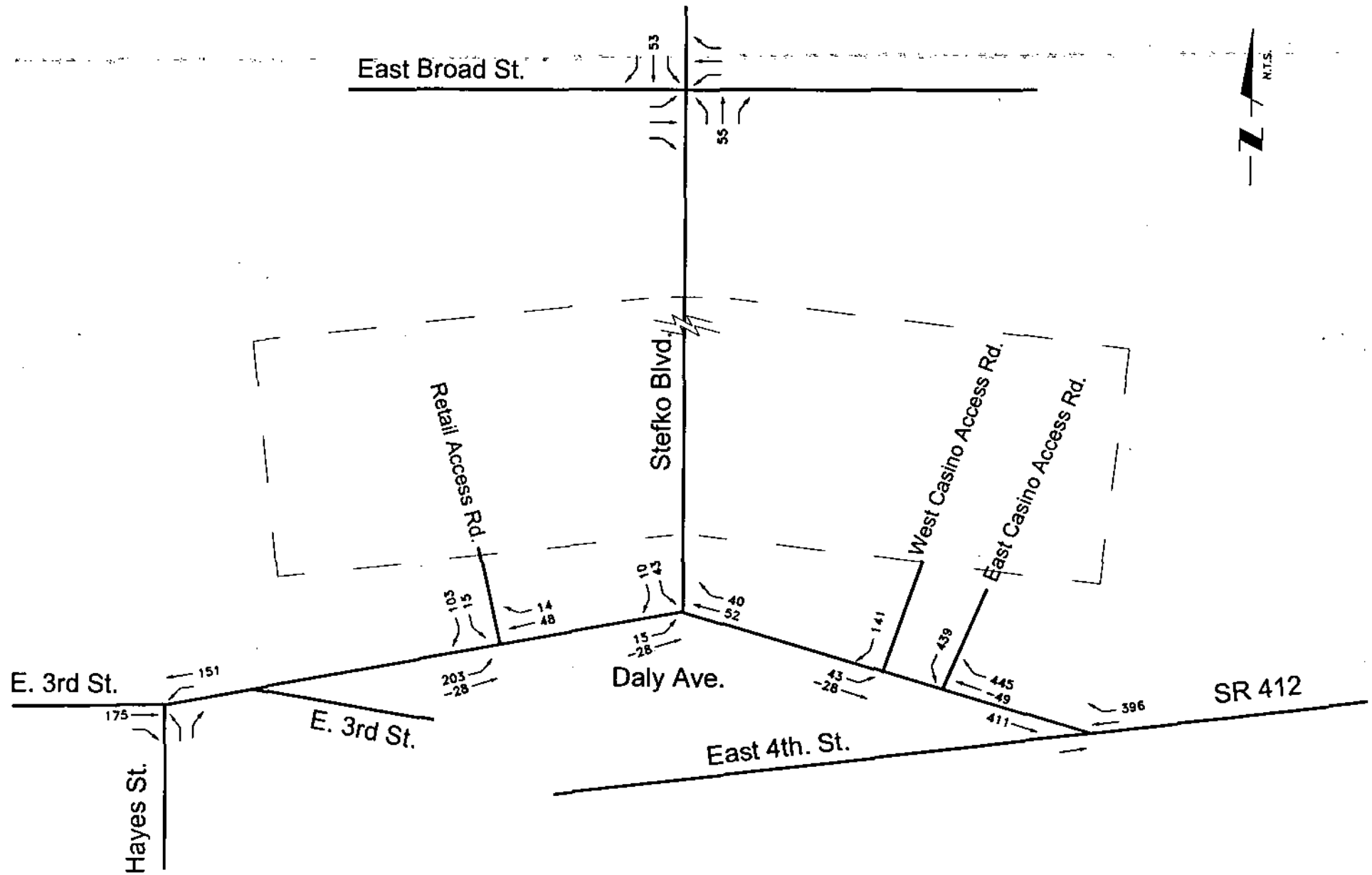

FIGURE NO. 12

LUBLANECKI ENGINEERING, INC.

PM PHASE 1 2008 SITE GENERATED
PEAK HOUR TRAFFIC VOLUMES

Sands Bethworks Casino/Retail Development–PHASE 1
City of Bethlehem, Northampton County, Pennsylvania

Project No. 05–205 October, 2006

FILE: G:\06-93...V-2008LD

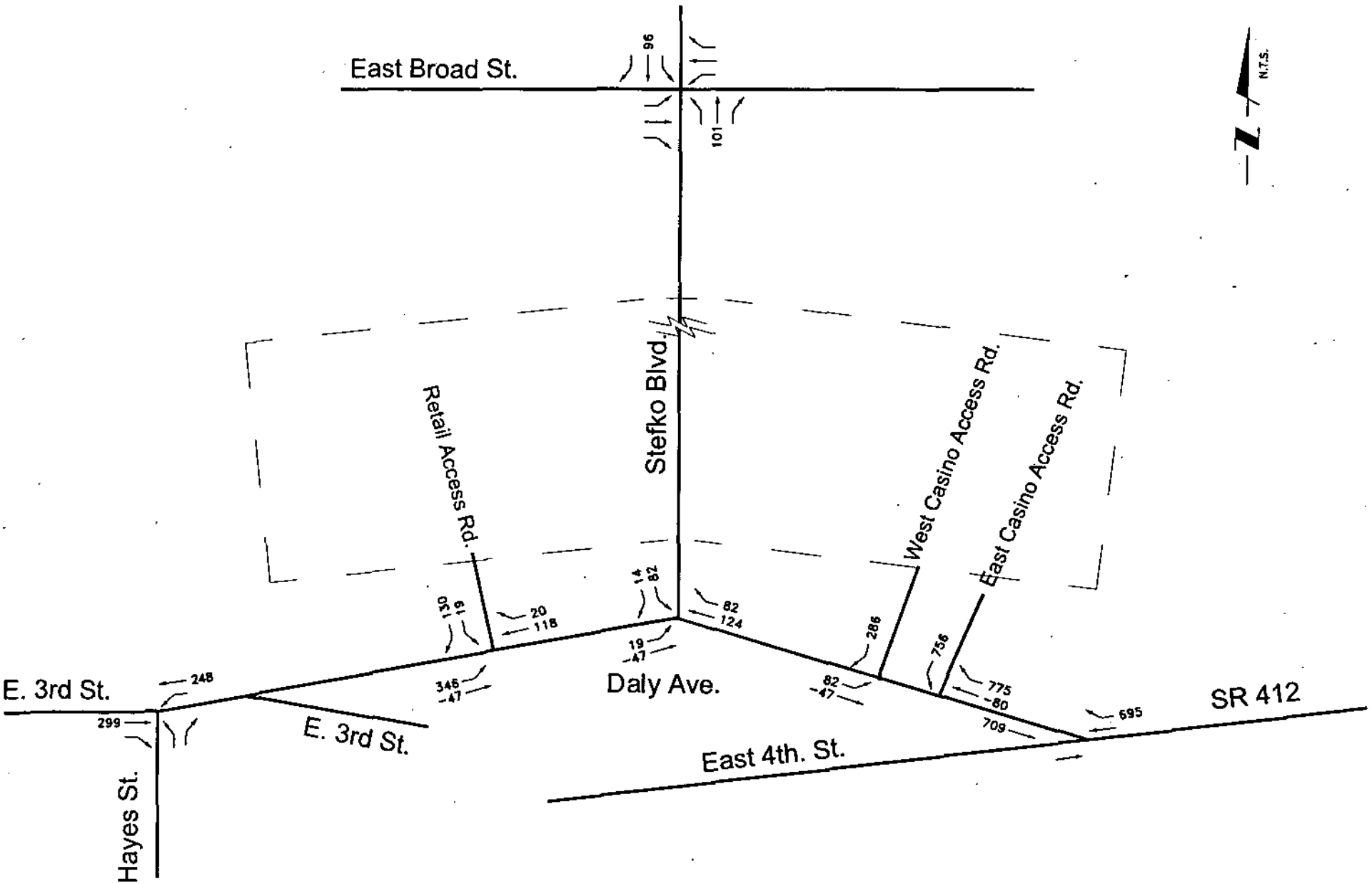

FIGURE NO. 13

LUBLANECKI ENGINEERING, INC.

SATURDAY PHASE 1 2008 SITE GENERATED
PEAK HOUR TRAFFIC VOLUMES

Sands Bethworks Casino/Retail Development–PHASE 1
City of Bethlehem, Northampton County, Pennsylvania

Project No. 05–205 October, 2006

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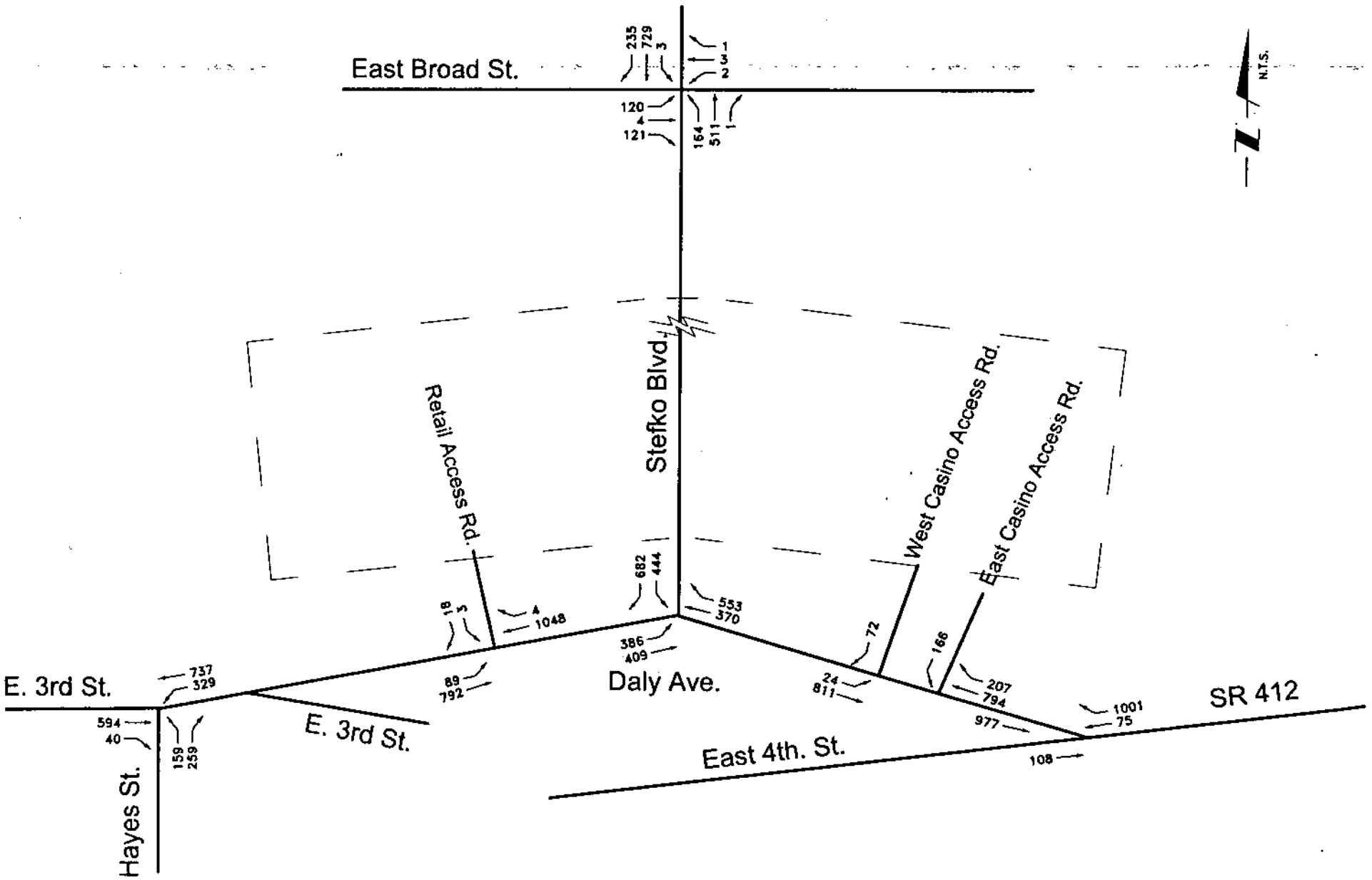

FIGURE NO. 14

LUBLANECKI ENGINEERING, INC.

AM 2008 BUILD
PEAK HOUR TRAFFIC VOLUMES
Sands Bethworks Casino/Retail Development–PHASE 1
City of Bethlehem, Northampton County, Pennsylvania
Project No. 05–205 October, 2006

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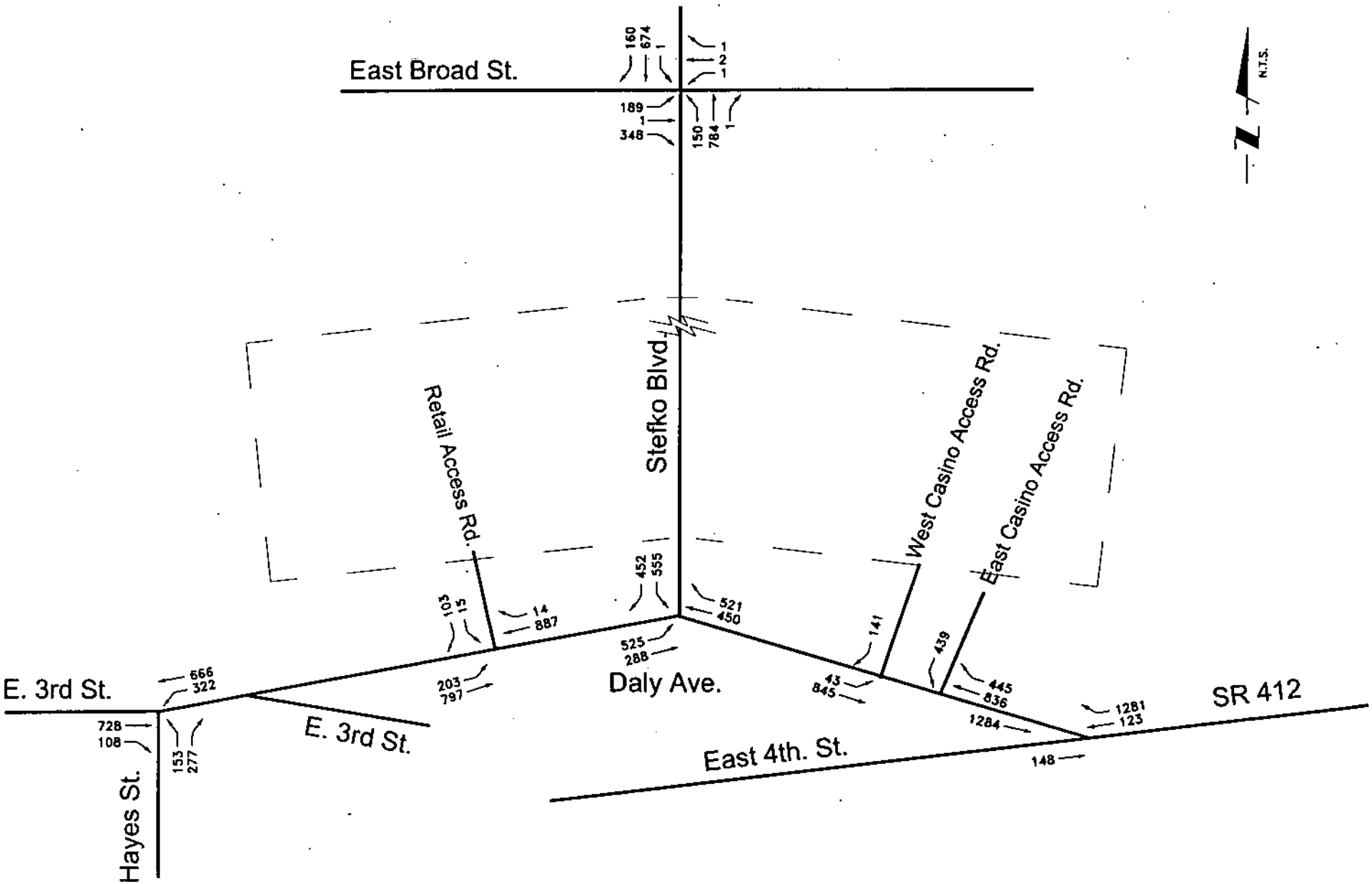

FIGURE NO. 15

LUBLANECKI ENGINEERING, INC.

PM 2008 BUILD
PEAK HOUR TRAFFIC VOLUMES
Sands Bethworks Casino/Retail Development–PHASE 1
City of Bethlehem, Northampton County, Pennsylvania
Project No. 05-205 October, 2006

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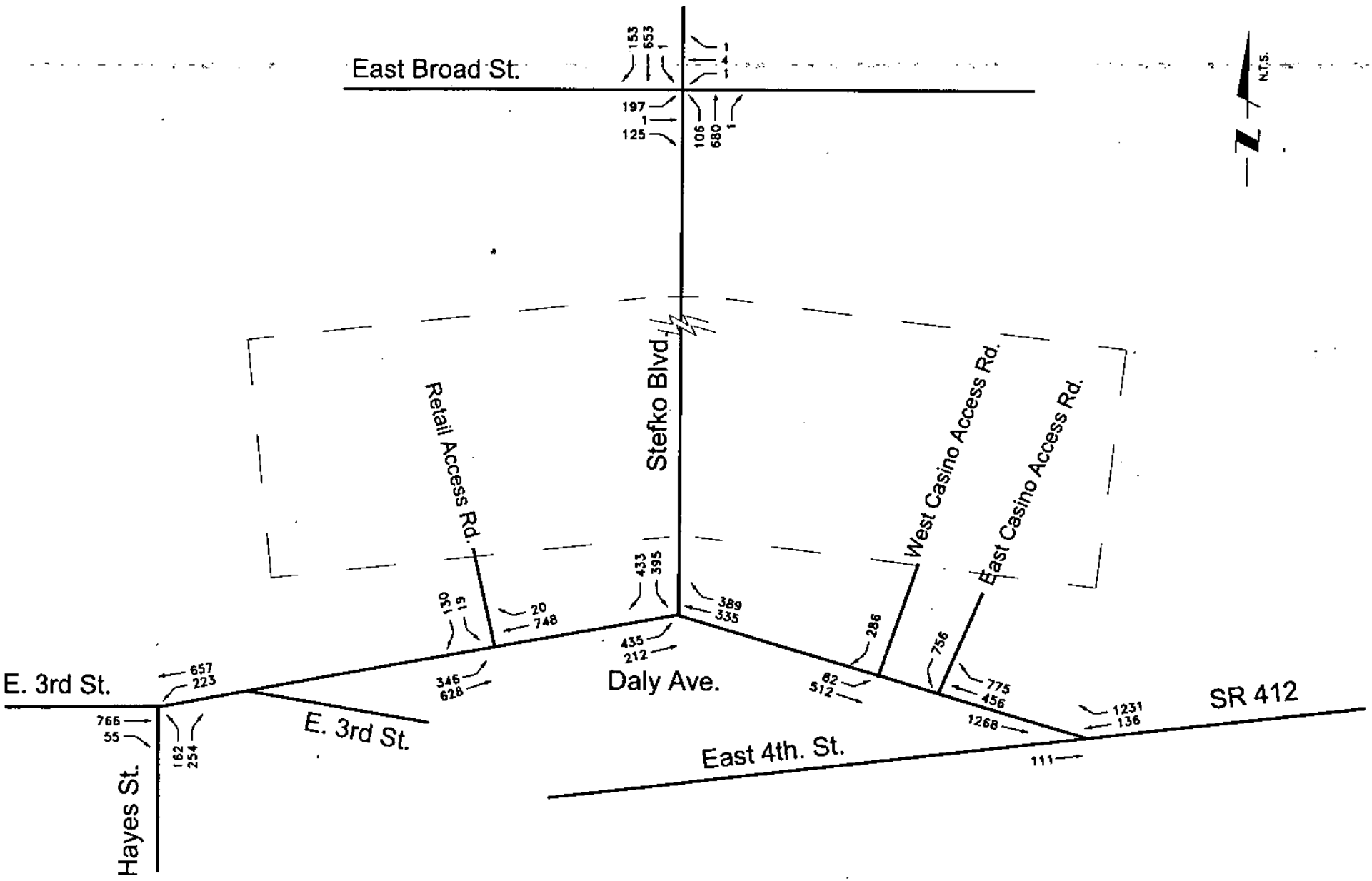


FIGURE NO. 16

LUBLANECKI ENGINEERING, INC.

SATURDAY 2008 BUILD
PEAK HOUR TRAFFIC VOLUMES
Sands Bethworks Casino/Retail Development–PHASE 1
City of Bethlehem, Northampton County, Pennsylvania
Project No. 05-205
October, 2006

The regional traffic network is illustrated in Figure 17. The traffic assignment patterns for site generated traffic for both the casino component and the retail component of the site are illustrated on an aerial map of the region presented in Figure 18.

Bethworks Later Phase (Phase 2)

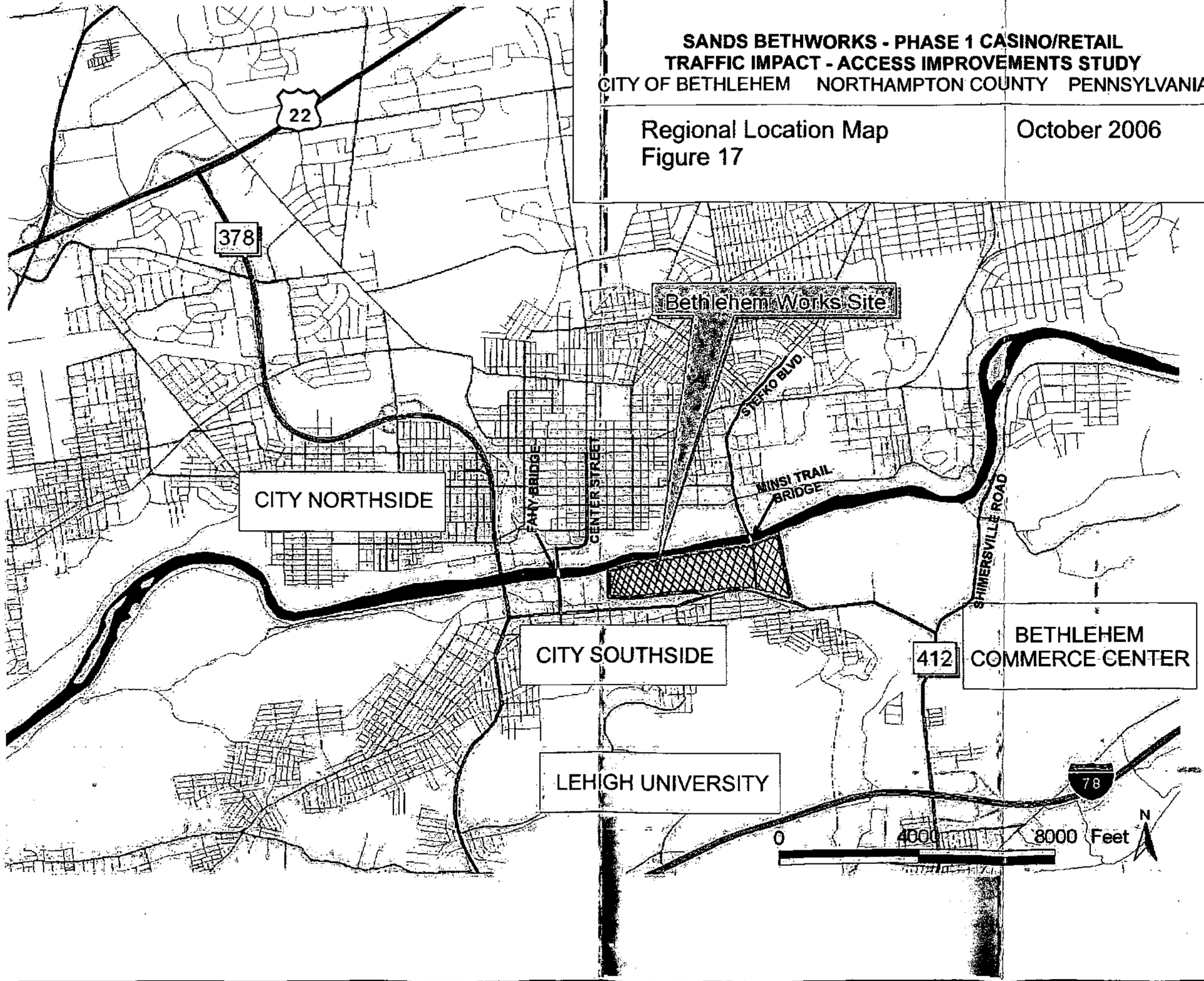
Site Trip Generation for the Bethworks Phase 2 development was also determined by using the seventh edition of the "Trip Generation Manual" as a guide in estimating the number of trips expected to be generated by the various uses. Five types of uses are proposed for Phase 2 of the Bethworks development. The uses are shopping center/general retail, condominium/townhouse, high-end quality restaurants, a multiplex movie theatre, and studios/offices. Land Use Code 820 – Shopping Center was selected as best representing the shopping center and general retail; Land Use Code 232–High Rise Residential/Condominium/Townhouse was selected as best representing the condominium/townhouse developments; Land Use Code 931 – Quality Restaurant was selected as best representing the high-end restaurant; Land Use Code 445 – Multiplex Movie Theater was selected as best representing the theatre; and Land Use Code 710 – General Office Building was selected as best representing the studios/offices/performances.

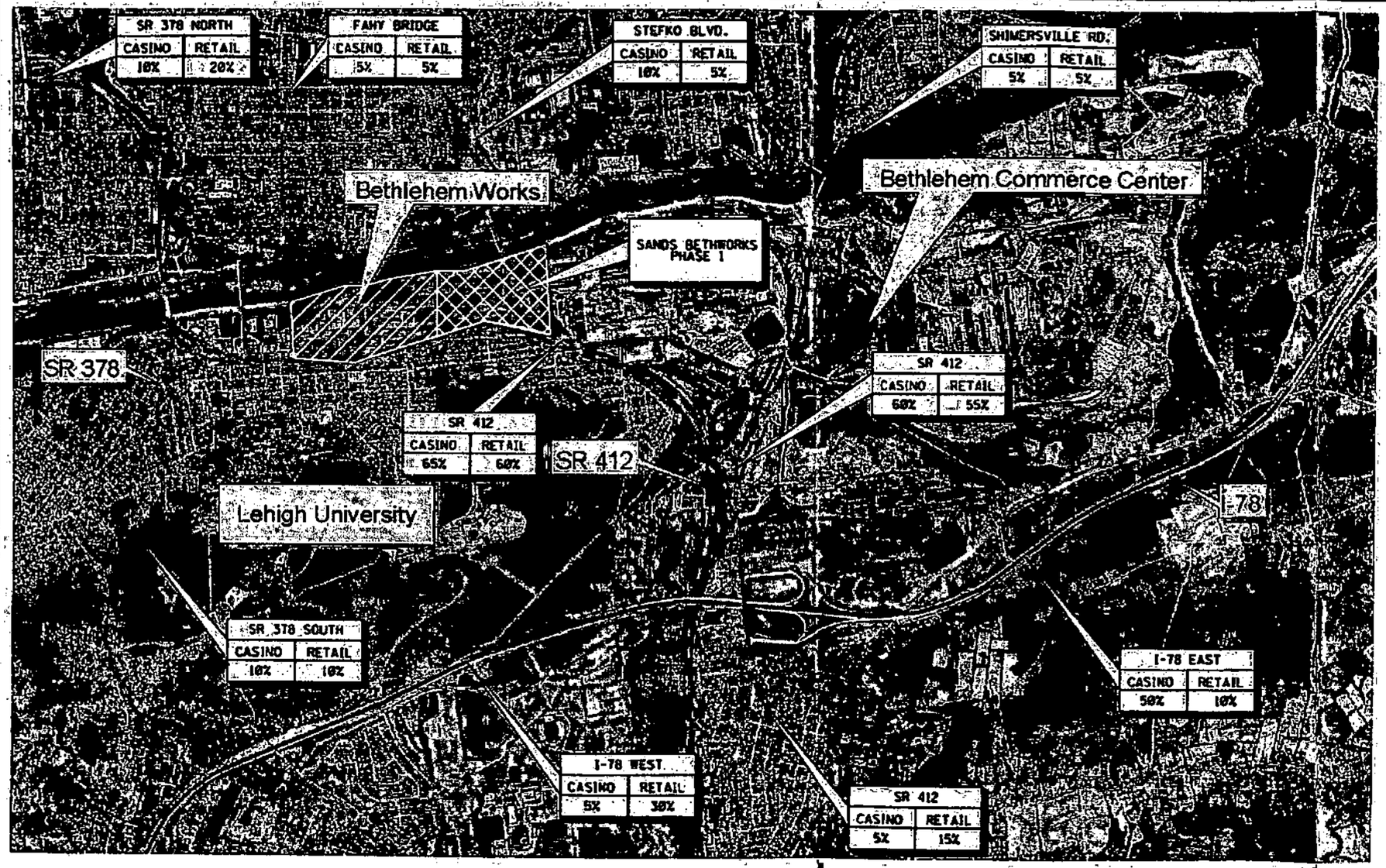
Trips were determined for the weekday AM and PM peak hours of adjacent street traffic and the Saturday peak hour of generator as well as for a typical weekday and Saturday. In the case of the shopping center/general retail use, trips were determined for the ultimate build out, 646,636 SF, and then the Phase 1 department store/general retail trips were subtracted out to obtain Phase 2 shopping center/general retail trips for the 400,000 SF of additional retail projected to be built in Phase 2. The estimated trip generation for each land use is as follows:

SANDS BETHWORKS - PHASE 1 CASINO/RETAIL
TRAFFIC IMPACT - ACCESS IMPROVEMENTS STUDY
CITY OF BETHLEHEM NORTHAMPTON COUNTY PENNSYLVANIA

Regional Location Map
Figure 17

October 2006





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SANDS BETHWORKS - PHASE 1 CASINO/RETAIL
TRAFFIC IMPACT - ACCESS IMPROVEMENTS STUDY
CITY OF BETHLEHEM NORTHAMPTON COUNTY PENNSYLVANIA

TRAFFIC ASSIGNMENTS
PATTERNS

Figure 18

FRENCH & PARRELLO

Oct. 2006
Date

Bethworks Phases 1 and 2
Shopping Center/General Retail
(646,636 SF)
Estimated Site Trip Generation
Land Use Code 820

Time Period	Relationship T = total vehicle trips x = GLA in 1000 SF	Vehicle Trips		
		Total	Entering	Exiting
AM Peak Hour Adj. Street	Ln(T) = 0.60Ln(x) + 2.29 Entering = 61%, Exiting = 39%	480	293	187
PM Peak Hour Adj. Street	Ln(T) = 0.66Ln(x) + 3.40 Entering = 48%, Exiting = 52%	2,146	1,030	1,116
Saturday Peak Hour Generator	Ln(T) = 0.65Ln(x) + 3.77 Entering = 52%, Exiting = 48%	2,912	1,514	1,398
Weekday	Ln(T) = 0.65Ln(x) + 5.83 Entering = 50%, Exiting = 50%	22,850	11,425	11,425
Saturday	Ln(T) = 0.63Ln(x) + 6.23 Entering = 50%, Exiting = 50%	29,948	14,974	14,974

Bethworks Phase 2
Shopping Center/General Retail
(400,000 SF)
Estimated Site Trip Generation
Land Use Code 820

Time Period	Vehicle Trips		
	Total	Entering	Exiting
AM Peak Hour Adj. Street	211	129	82
PM Peak Hour Adj. Street	1,010	485	525
Saturday Peak Hour Generator	1,356	705	651
Weekday	10,638	5,319	5,319
Saturday	13,630	6,815	6,815

Bethworks Phase 2
Condominium/Townhouses
(1,000 Units)
Estimated Site Trip Generation
Land Use Code 232

Time Period	Relationship T = total vehicle trips x =Units	Vehicle Trips		
		Total	Entering	Exiting
AM Peak Hour Adj. Street	T = 0.29(x) + 28.86 Entering = 19%, Exiting = 81%	319	61	258
PM Hour Adj. Street	T = 0.34(x) + 15.47 Entering = 62%, Exiting = 38%	355	220	135
Saturday Peak Hour Generator	T = 0.30(x) – 28.85 Entering = 43%, Exiting = 57%	329	141	188
Weekday	T = 3.77(x) + 223.66 Entering = 50%, Exiting = 50%	3,994	1,997	1,997
Saturday	T = 3.94(x) + 197.85 Entering = 50%, Exiting = 50%	4,138	2,069	2,069

Sands Bethworks Phase 2
High End/Quality Restaurant
(45,900 SF)
Estimated Site Trip Generation
Land Use Code 931

Time Period	Relationship T = total vehicle trips x = GLA in 1000 SF	Vehicle Trips		
		Total	Entering	Exiting
AM Peak Hour Adj. Street	T = 0.81(x) Entering = 50%, Exiting = 50%	38	19	19
PM Peak Hour Adj. Street	T = 7.49(x) Entering = 67%, Exiting = 33%	344	230	114
Saturday Peak Hour Generator	T = 10.87(x) - 0.46 Entering = 59%, Exiting = 41%	498	294	204
Weekday	T = 89.95(x) Entering = 50%, Exiting = 50%	4,130	2,065	2,065
Saturday	Ln(T) = 1.04Ln(x) + 4.41 Entering = 50%, Exiting = 50%	4,402	2,201	2,201

Sands Bethworks Phase 2
Movie Theater
(59,800 SF)
Estimated Site Trip Generation
Land Use Code 445

Time Period	Relationship T = total vehicle trips x = GLA in 1000 SF	Vehicle Trips		
		Total	Entering	Exiting
AM Peak Hour Adj. Street	_____	____	____	____
PM Peak Hour Adj. Street	Ln(T) = 1.35Ln(x) + 0.11 Entering = 64%, Exiting = 36%	279	179	100
Saturday Peak Hour Generator	Ln(T) = 1.20Ln(x) + 1.96 Entering = 52%, Exiting = 48%	962	500	462
Weekday	T = 66.33(x) * Entering = 50%, Exiting = 50%	3,968	1,984	1,984
Saturday	T = 76.07(x) * Entering = 50%, Exiting = 50%	4,550	2,275	2,275

* Daily relationships were derived using the ratios of data based on movie screens.

Weekday Rate(1000 SF)=Weekday Rate(screens)/PMPHAS(screens)[PMPHAS Rate (1000 SF)]
Weekday Rate (1000 SF)=292.50/23.02 (5.22) = 66.33
Saturday Rate(1000 SF)=Saturday Rate(screens)/SatPHGenRate(screens)[SatPHGen Rate(1000 SF)]
Saturday Rate (1000 SF) = 546.86/120.48 (16.76) = 76.07

Bethworks Phase 2
Studios/Offices/Performances
(58,000 SF)
Estimated Site Trip Generation
Land Use Code 710

Time Period	Relationship T = total vehicle trips x = GLA in 1000 SF	Vehicle Trips		
		Total	Entering	Exiting
AM Peak Hour	Ln(T) = 0.80Ln(x) + 1.55 Entering = 88%, Exiting = 12%	121	106	15
PM Peak Hour	T = 1.12(x) + 78.81 Entering = 17%, Exiting = 83%	144	24	120
Saturday Peak Hour Generator	Ln(T) = 0.81Ln(x) - 0.12 Entering = 54%, Exiting = 46%	24	13	11
Weekday	Ln(T) = 0.77Ln(x) + 3.65 Entering = 50%, Exiting = 50%	878	439	439
Saturday	T = 2.14(x) + 18.47 Entering = 50%, Exiting = 50%	144	72	72

An internal capture rate of 30 percent was applied to the Phase 2 trips based on the types of uses in the Phase 2 development and the attraction of the casino and retail component of Phase 1. An internal capture rate for the Bethworks Development of 30 percent was applied in the Orth-Rodgers SR 412 Section 001 report in addition to a 10 percent reduction factor for transportation impact. Conservatively only an internal capture rate of 30 percent was used to develop the estimated external site trip generation from Phase 2 as shown in the following table:

Bethworks Phase 2
Estimated External Site Trip Generation

Time Period	Use	Vehicle Trips		
		Total	Entering	Exiting
AM Peak Hour Adj. Street	Shopping Center/General Retail	148	90	58
	Condominium/Townhouse	224	43	181
	High End/Quality Restaurant	28	14	14
	Multiplex Movie Theatre	------	------	------
	Studios/Offices/Performances	85	74	11
	Total AM Peak Hour Adj. Street	485	221	264
PM Peak Hour Adj. Street	Shopping Center/General Retail	707	340	367
	Condominium/Townhouse	249	154	95
	High End/Quality Restaurant	241	161	80
	Multiplex Movie Theatre	195	125	70
	Studios/Offices/Performances	101	17	84
	Total PM Peak Hour Adj. Street	1,493	797	696
Saturday Peak Hour Generator	Shopping Center/General Retail	949	493	456
	Condominium/Townhouse	231	99	132
	High End/Quality Restaurant	349	206	143
	Multiplex Movie Theatre	673	350	323
	Studios/Offices/Performances	17	9	8
	Total Saturday Peak Hour Generator	2,219	1,157	1,062
Weekday Total	Shopping Center/General Retail	7,448	3,724	3,724
	Condominium/Townhouse	2,796	1,398	1,398
	High End/Quality Restaurant	2,892	1,446	1,446
	Multiplex Movie Theatre	2,778	1,389	1,389
	Studios/Offices/Performances	614	307	307
	Total Weekday	16,528	8,264	8,264
Saturday Total	Shopping Center/General Retail	9,542	4,771	4,771
	Condominium/Townhouse	2,896	1,448	1,448
	High End/Quality Restaurant	3,082	1,541	1,541
	Multiplex Movie Theatre	3,186	1,593	1,593
	Studios/Offices/Performances	100	50	50
	Total Saturday	18,806	9,403	9,403

Phase 2 Site Trip Distribution

The site trips generated by the Bethworks Phase 2 Development were assigned to the surrounding roadway system using the same traffic assignment patterns used for the retail component of Phase 1. As previously stated these traffic assignment patterns were presented in the SR 412 Section 001 study report, dated June 15, 2005, prepared by Orth - Rodgers Associates, Inc. and submitted to the Pennsylvania Department of Transportation. As part of the SR 412 Section 001 study Orth - Rodgers developed a distribution and traffic assignment pattern for the ultimate Bethworks future development, which was used for the Phase 1 retail component of the development. The traffic assignment pattern is repeated here as follows:

Bethworks Ultimate Development
Traffic Assignment Pattern
(by percent)

Roadway	Percent of Site Trips
Interstate 78 to the east and west	40%
SR 412 south of I-78	15%
SR 412 between I-78 and Shimersville Road	55%
Shimersville Road to the north	5%
SR 412 between Shimersville Rd. and Site	60%
Stefko Boulevard to the north	5%
SR 378 to the north	20%
SR 378 to the south	10%
Fahy Bridge to the north	5%
SR 412 between Fahy Bridge and Hayes Street	35%

Using these traffic assignment patterns and the site generated peak hour traffic volumes developed in the previous section, Phase 2 traffic was assigned to the study area as follows.

Bethworks Phase 2
AM Peak Hour Site Trip Distribution

Director/Roadway	Enter	Pass-by	Exit
North/Stefko Boulevard	11	------	13
East/Daly Ave. (SR 412)	133	------	159
West/E. 3rd St. (SR 412), East 2nd Street, (SR 378)	77	------	92
Totals	221	------	264

Bethworks Phase 2
PM Peak Hour Site Trip Distribution

Director/Roadway	Enter	Pass-by*	Exit
North/Stefko Boulevard	40	4	35
East/Daly Ave. (SR 412)	478	47	418
West/E. 3rd St. (SR 412), East 2nd Street, (SR 378)	279	27	243
Totals	797	78	696

Bethworks Phase 2
Saturday Peak Hour Site Trip Distribution

Director/Roadway	Enter	Pass-by*	Exit
North/Stefko Boulevard	58	6	53
East/Daly Ave. (SR 412)	694	73	637
West/E. 3rd St. (SR 412), East 2nd Street, (SR 378)	405	43	372
Totals	1,157	122	1,062

*Pass-by trip credits for the Shopping Center/General Retail use are taken as in Phase 1. The percentage of trips originating in the existing flow of traffic passing the site is 23% for the weekday PM peak hour and 25% for the Saturday peak hour. A pass-by credit is not given for the weekday AM peak hour.

The Phase 2 site trips were added to the Phase 1 site trips to develop ultimate build-out site trips for the Bethworks site. With the development of Phase 2 there will be several access points off Third Street (SR 412) to the west of Hayes Street in addition to a connection from Second Street to SR 378. This Second Street connection is part of PennDOT's SR 412 project. It was therefore assumed that all Phase 2 traffic oriented to the west, in addition to the exiting westbound casino traffic, would access the site west of Hayes Street. The ultimate build-out (Phase 1 plus Phase 2), weekday AM and PM and Saturday peak hour site generated traffic volumes are presented in Figures 19 through 21.

2018 build weekday AM and PM and Saturday peak hour traffic volumes were determined by adding the Phase 1 plus Phase 2 site generated peak hour traffic volumes to the 2018 no-build volumes. 2018 build weekday AM and PM and Saturday peak hour traffic volumes are presented in Figures 22 through 24.

ACCESS IMPROVEMENTS

Extensive improvements to Daly Avenue (SR 412) are proposed to accommodate the projected Sands Bethworks Development site traffic and provide for the safe and efficient flow of all traffic through the area. SR 412 will be widened to two through lanes in each direction in the vicinity of the site with additional turning lanes at the intersections. There will be two access roads serving the casino component of the development and one access road serving the retail component. The two proposed casino access roads named West Casino Access Road and East Casino Access Road intersect Daly Avenue approximately 800 feet and 900 feet east of the Minsi Trail Bridge, respectively. The two casino access roads will form one signalized intersection with Daly Avenue (SR 412). The proposed retail access road named Bethworks Retail Center Access Road intersects Daly Avenue approximately 1200 feet west of the Minsi Trail Bridge. The following are descriptions of the proposed access road intersections with Daly Avenue including a description of the proposed improvements to the intersection of Daly Avenue and Stefko Boulevard (Minsi Trail Bridge). The proposed access improvements are shown in Figures 25A through 25C.

Daly Avenue (SR 412) and East Casino Access Road

The proposed intersection of Daly Avenue (SR 412) and East Casino Access Road will be a skewed angle tee intersection with East Casino Access Road forming the stem of the tee. Signalization is proposed utilizing a two-phase operation (Daly Avenue right-of-way and East Casino Access Road right-of-way). The eastbound left turn movement from Daly Avenue and the southbound right turn movement from the East Casino Access Road are prohibited. The lane configuration of the intersection is as follows:

Daly Avenue east leg - three westbound approach lanes, two through lanes and one right turn lane, - two eastbound receiving lanes.

Daly Avenue west leg - two eastbound through lanes - two westbound receiving lanes.

East Casino Access Road north leg - two southbound left turn approach lanes - two northbound receiving lanes.

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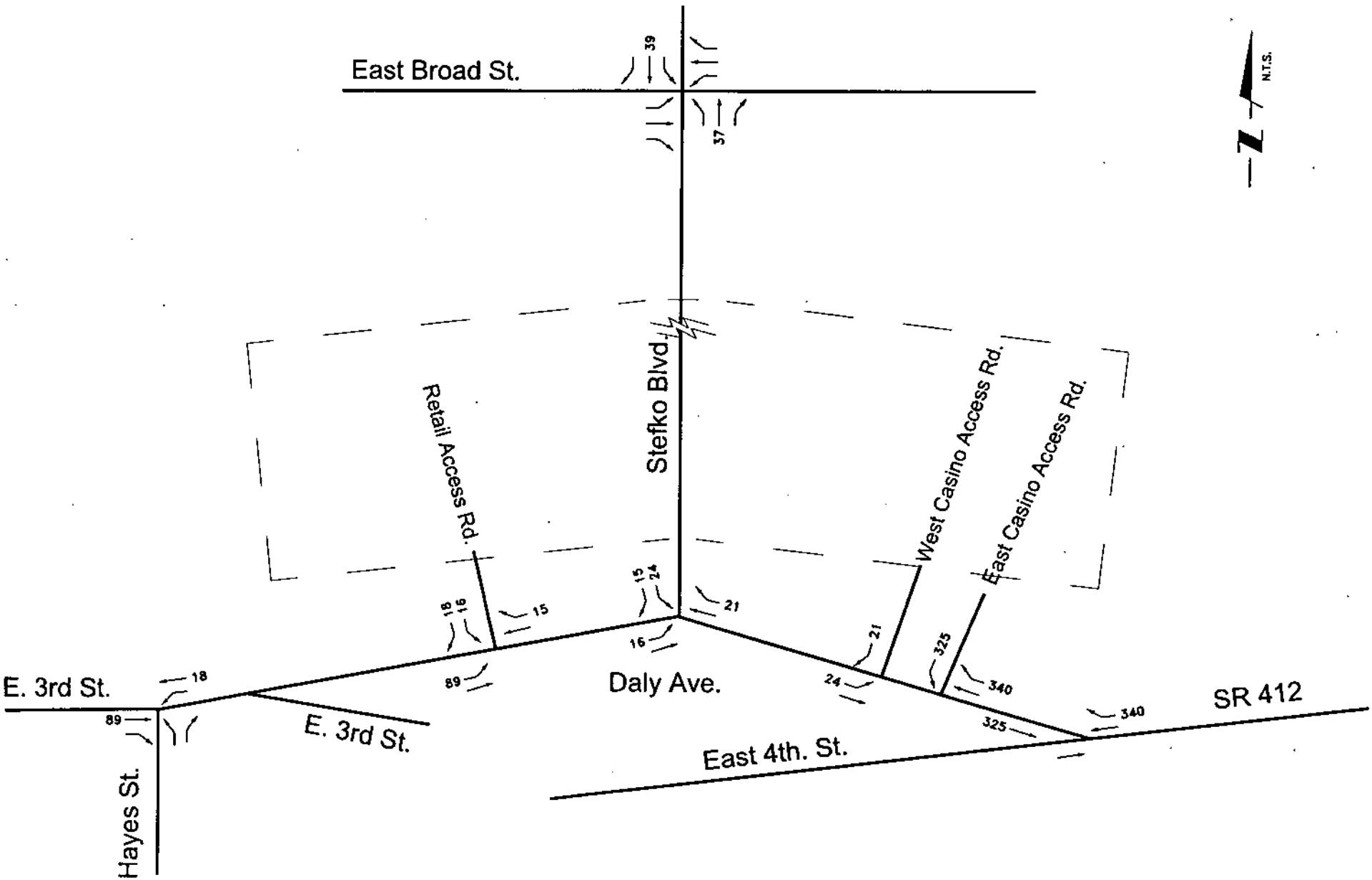

FIGURE NO. 19

LUBLANECKI ENGINEERING, INC.

AM PHASES 1&2 2018 SITE GENERATED
PEAK HOUR TRAFFIC VOLUMES

Sands Bethworks Casino/Retail Development–PHASE 1
City of Bethlehem, Northampton County, Pennsylvania

Project No. 05–205

October, 2006

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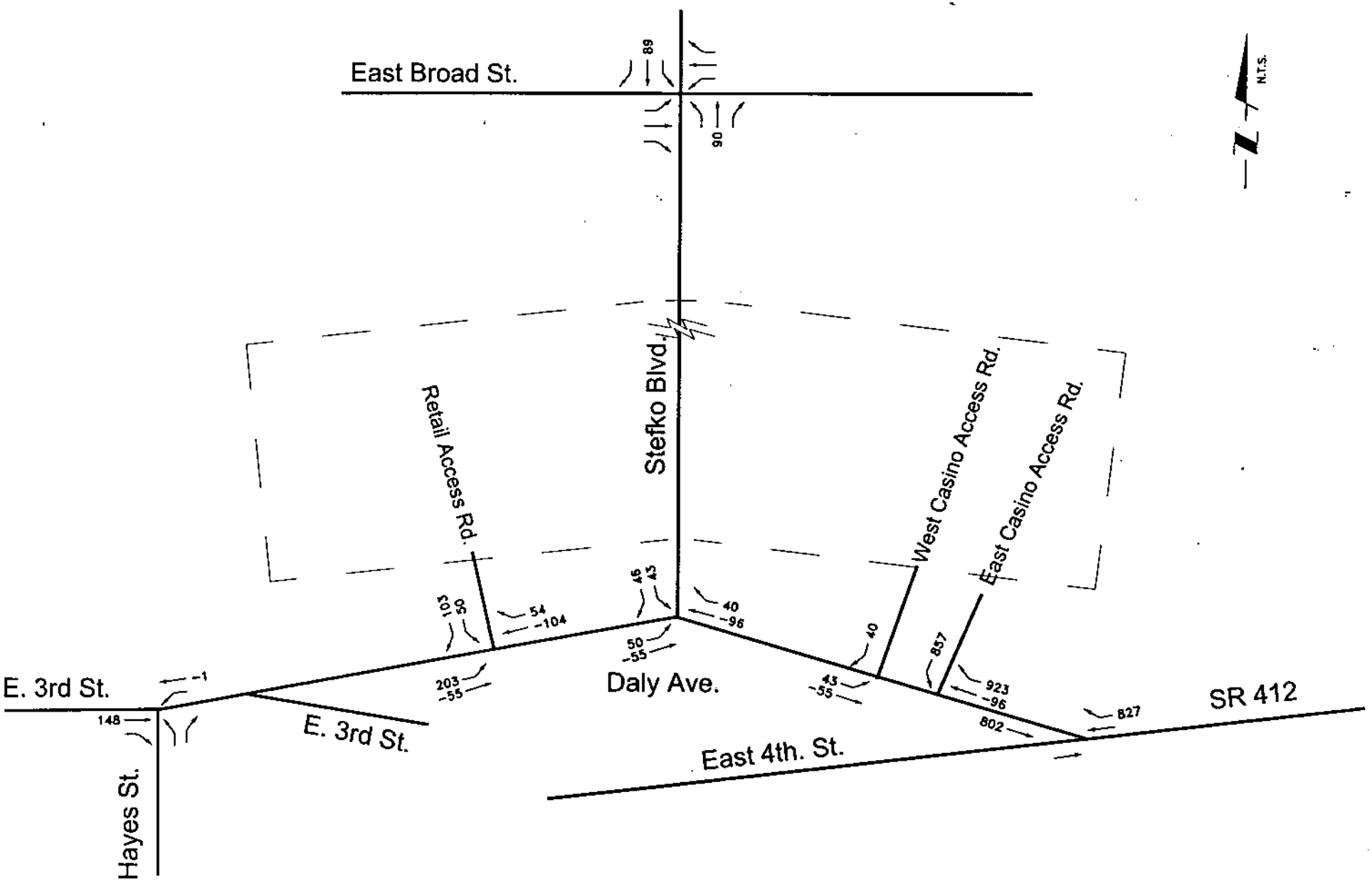


FIGURE NO. 20

LE LUBLANECKI ENGINEERING, INC.

PM PHASES 1&2 2018 SITE GENERATED
PEAK HOUR TRAFFIC VOLUMES

Sands Bethworks Casino/Retail Development–PHASE 1
City of Bethlehem, Northampton County, Pennsylvania

Project No. 05-205 October, 2006

FILE: G:\06-934 -2018LD

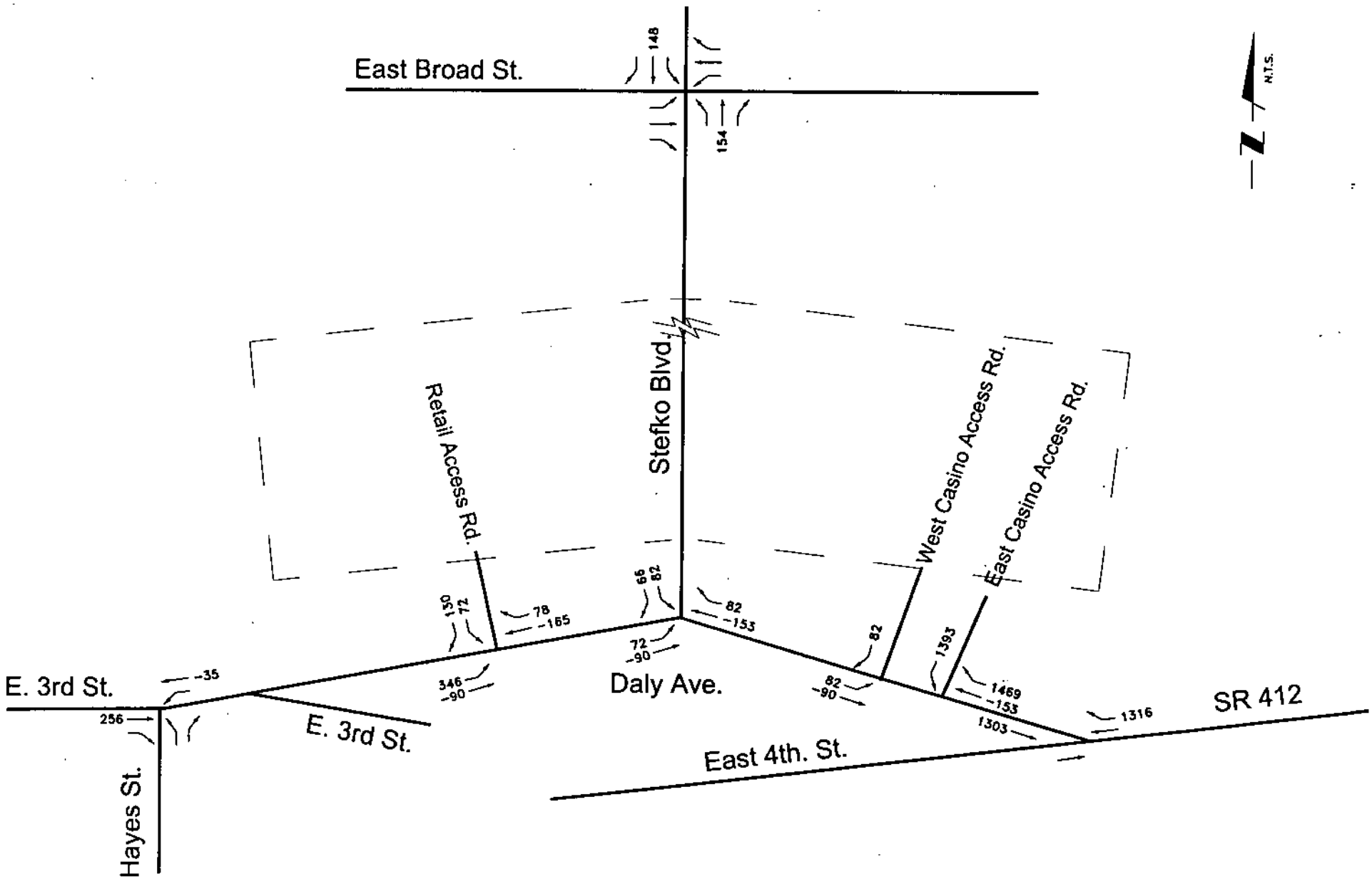


FIGURE NO. 21

LUBLANECKI ENGINEERING, INC.

SATURDAY PHASES 1&2 2018 SITE GENERATED PEAK HOUR TRAFFIC VOLUMES

Sands Bethworks Casino/Retail Development–PHASE 1
City of Bethlehem, Northampton County, Pennsylvania
Project No. 05-205
October, 2006

FILE: G:\06-93[illegible]-2018LD

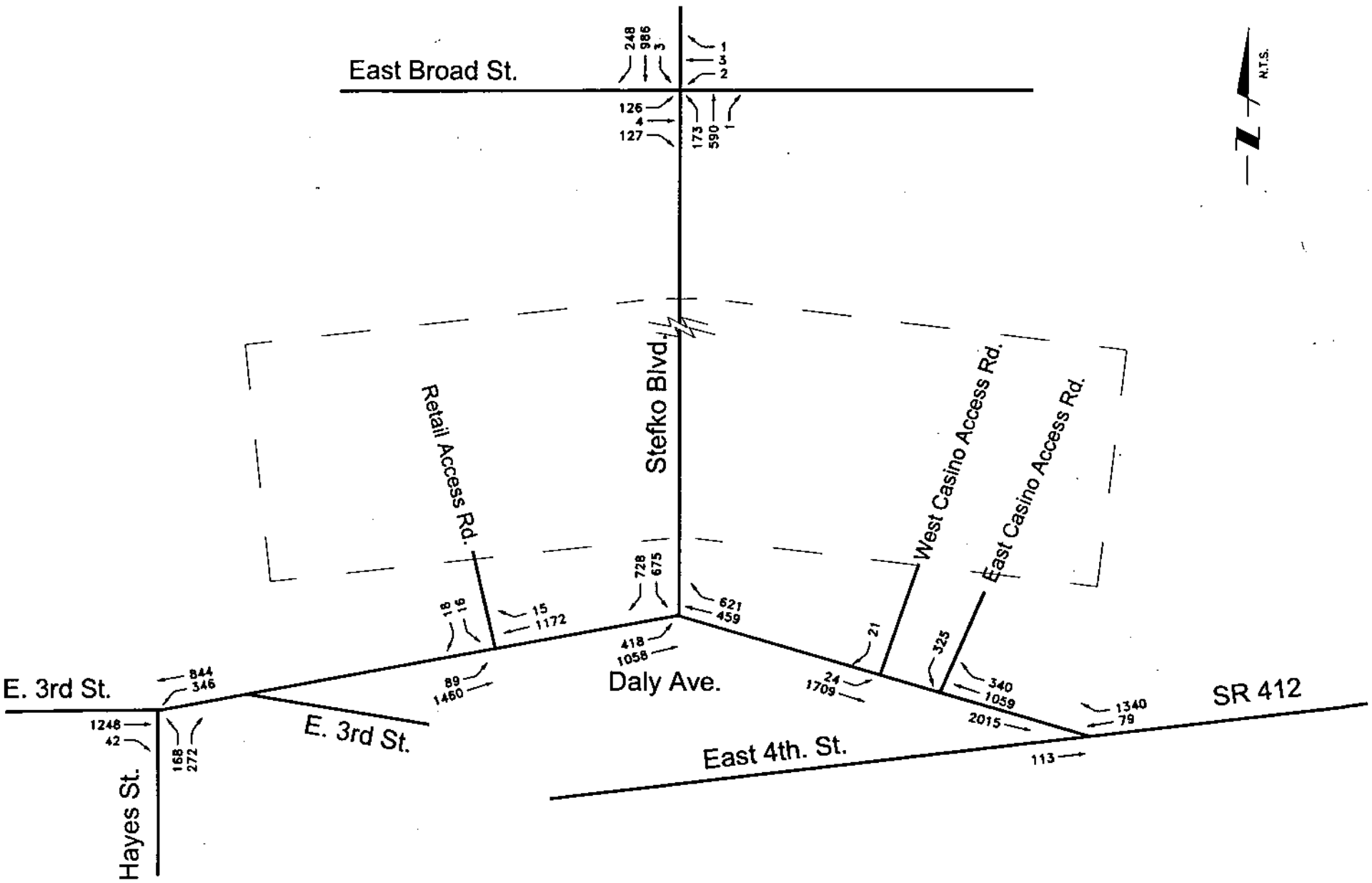


FIGURE NO. 22

LUBLANECKI ENGINEERING, INC.

AM 2018 BUILD
PEAK HOUR TRAFFIC VOLUMES

Sands Bethworks Casino/Retail Development–PHASE 1
City of Bethlehem, Northampton County, Pennsylvania

Project No. 05-205 October, 2006

FILE: G:\06-934\REV-2018LD

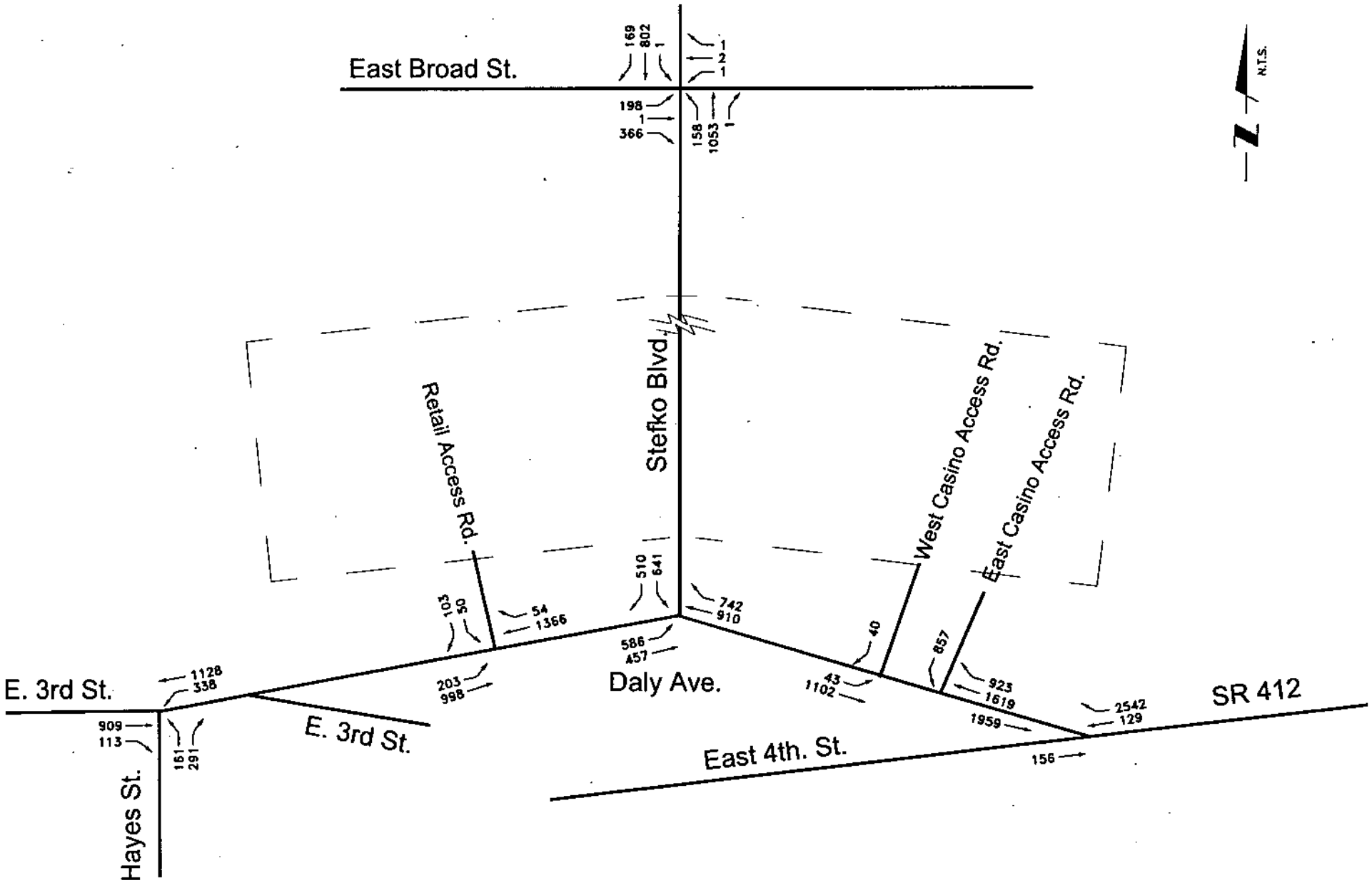


FIGURE NO. 23

LUBLANECKI ENGINEERING, INC.

PM 2018 BUILD
PEAK HOUR TRAFFIC VOLUMES

Sands Bethworks Casino/Retail Development–PHASE 1
City of Bethlehem, Northampton County, Pennsylvania

Project No. 05-205 October, 2006

FILE: G:\06-93[illegible]V-2018LD

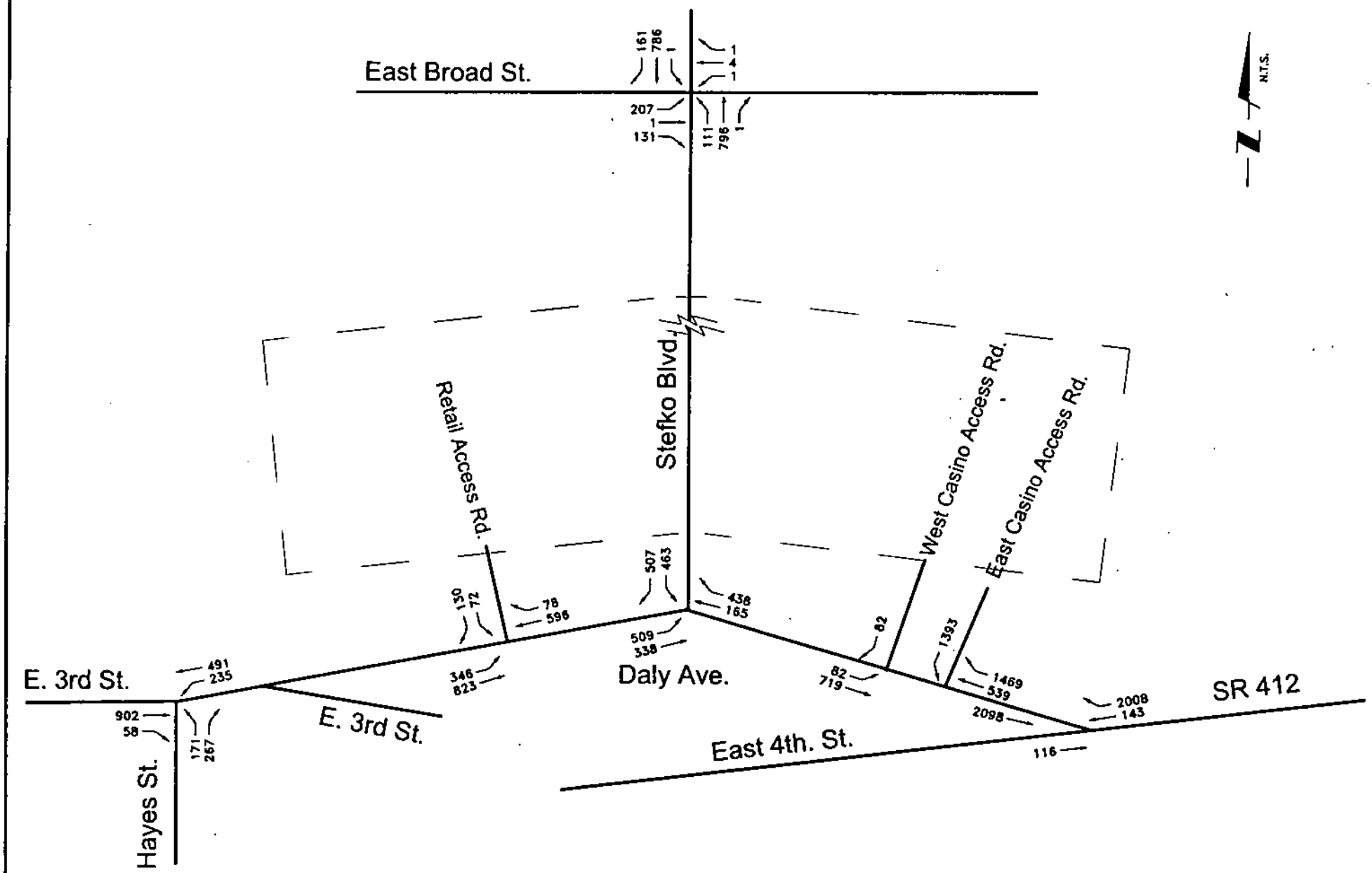


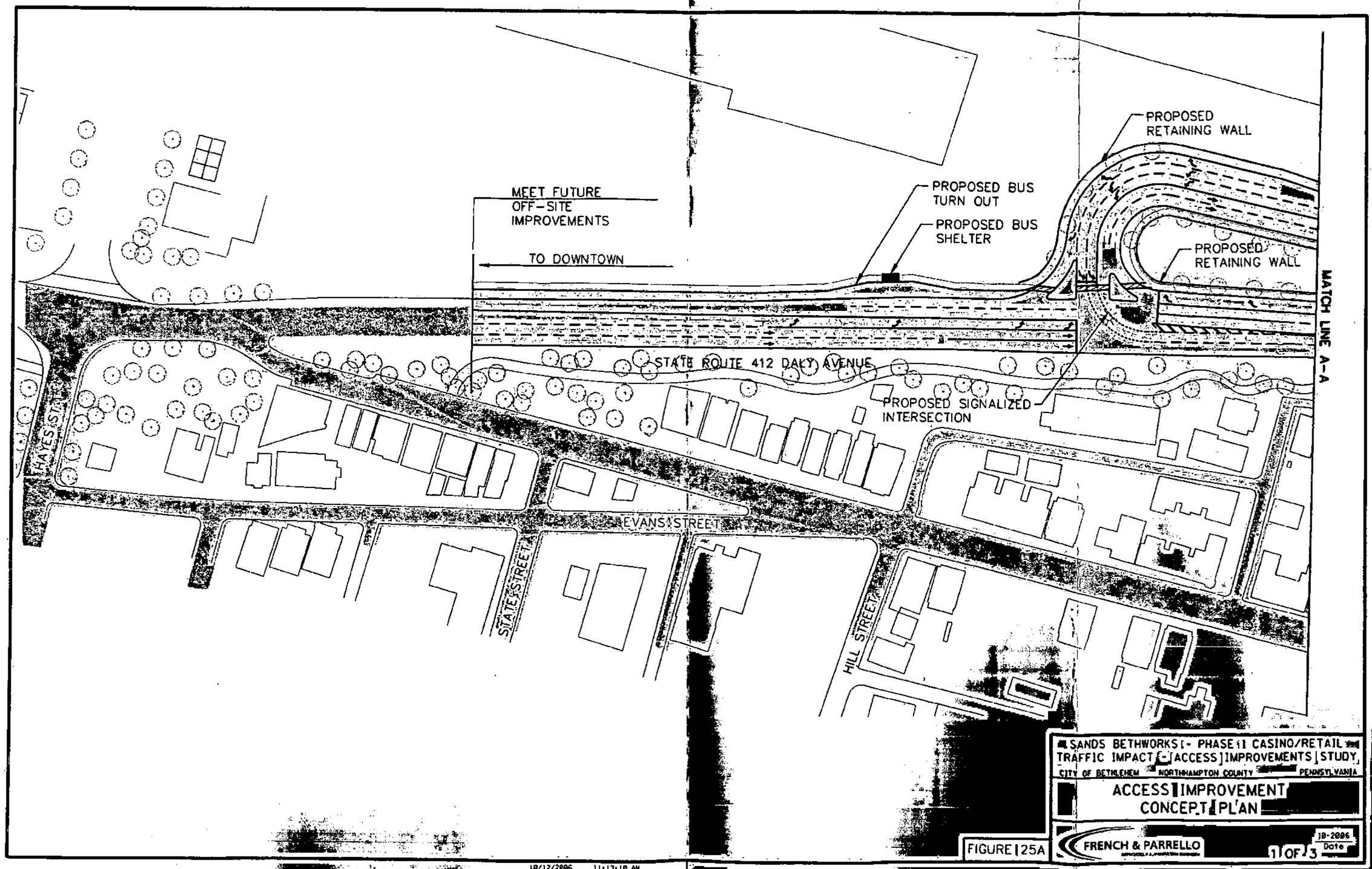
FIGURE NO. 24

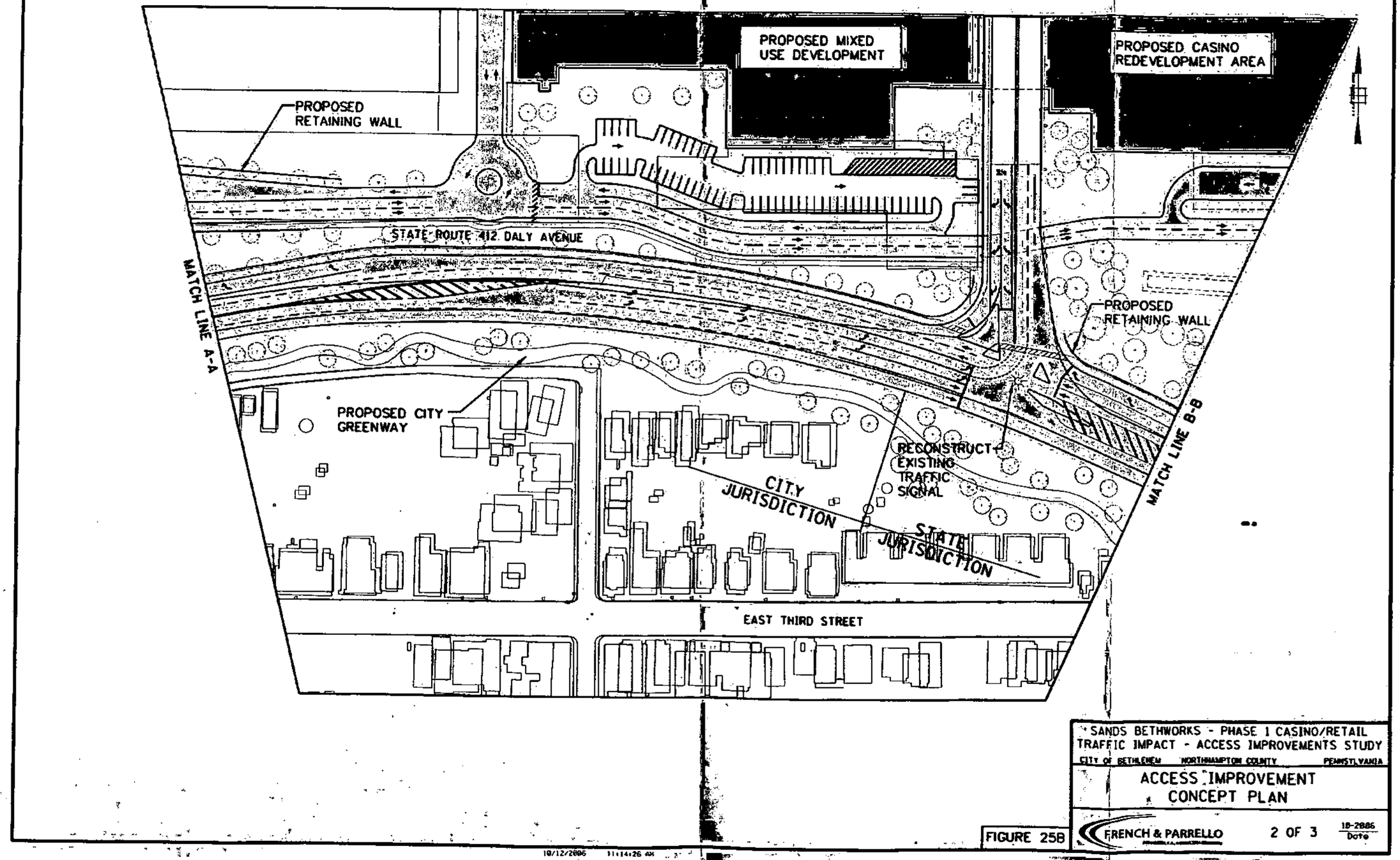
LE LUBLANECKI ENGINEERING, INC.

SATURDAY 2018 BUILD
PEAK HOUR TRAFFIC VOLUMES

Sands Bethworks Casino/Retail Development–PHASE 1
City of Bethlehem, Northampton County, Pennsylvania

Project No. 05–205 October, 2006


MEET FUTURE
OFF-SITE
IMPROVEMENTS
TO DOWNTOWN
PROPOSED
RETAINING WALL
PROPOSED BUS
TURN OUT
PROPOSED BUS
SHELTER
PROPOSED
RETAINING WALL
MATCH LINE A-A
STATE ROUTE 412 DALY AVENUE
PROPOSED SIGNALIZED
INTERSECTION
HAYES ST.
EVANS STREET
STATE STREET
HILL STREET
SANDS BETHWORKS I - PHASE II CASINO/RETAIL AND
TRAFFIC IMPACT & ACCESS IMPROVEMENTS STUDY
CITY OF BETHLEHEM NORTHAMPTON COUNTY PENNSYLVANIA
ACCESS IMPROVEMENT
CONCEPT PLAN
FRENCH & PARRELLO
10-2006
Date
1 OF 3
FIGURE 25A
10/12/2006 11:13:10 AM



SANDS BETHWORKS - PHASE 1 CASINO/RETAIL
TRAFFIC IMPACT - ACCESS IMPROVEMENTS STUDY
CITY OF BETHLEHEM NORTHAMPTON COUNTY PENNSYLVANIA

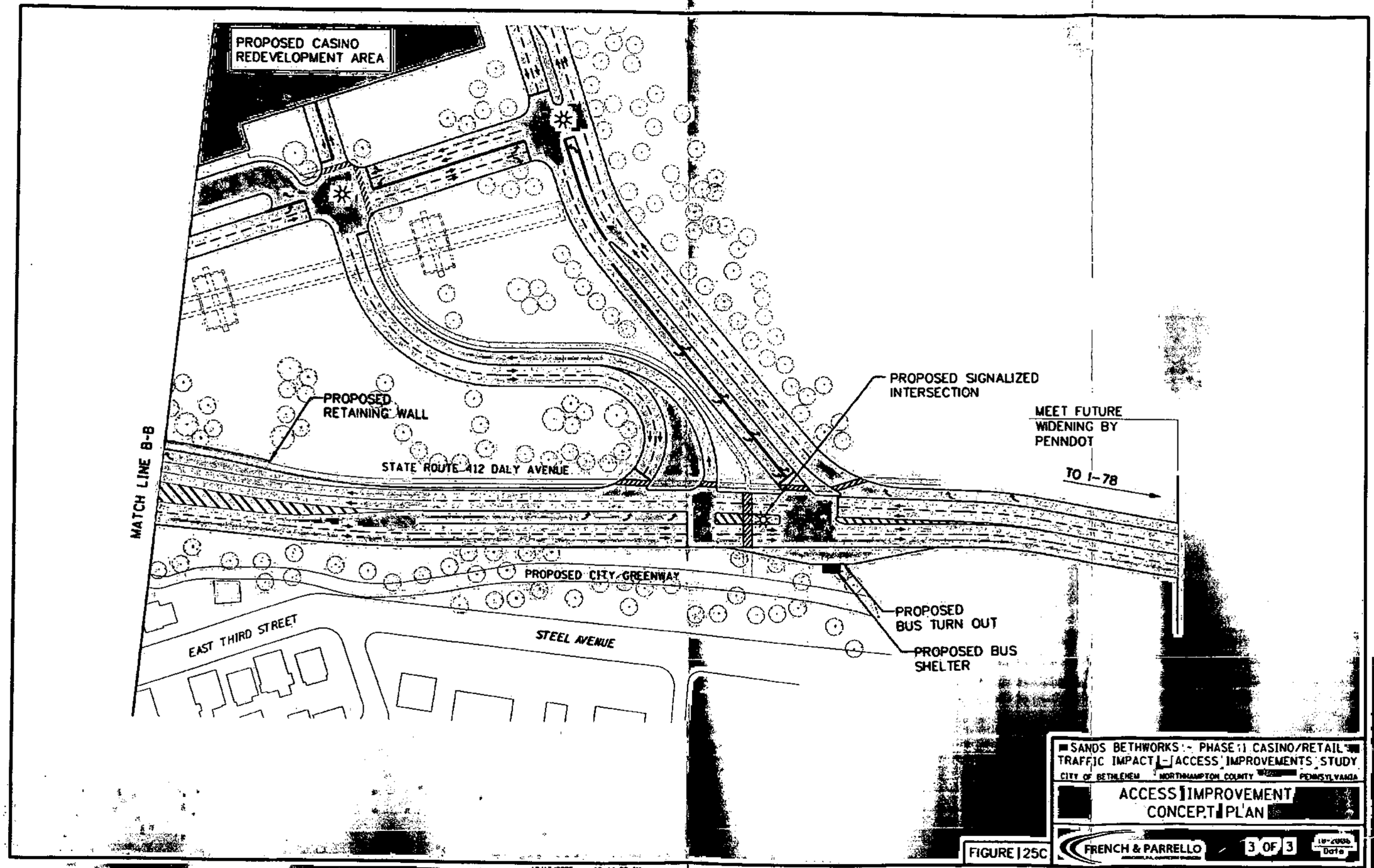
ACCESS IMPROVEMENT
CONCEPT PLAN

FIGURE 25B

FRENCH & PARRELLO

2 OF 3

18-2886
Date



SANDS BETHWORKS - PHASE 1 CASINO/RETAIL
TRAFFIC IMPACT - ACCESS IMPROVEMENTS STUDY
CITY OF BETHLEHEM NORTHAMPTON COUNTY PENNSYLVANIA

ACCESS IMPROVEMENT CONCEPT PLAN

FIGURE 25C

FRENCH & PARRELLO 3 OF 3 10-2006 Date

Daly Avenue (SR 412) and West Casino Access Road

The proposed intersection of Daly Avenue (SR 412) and West Casino Access Road will be a right angle tee intersection with West Casino Access Road forming the stem of the tee. Signalization is proposed utilizing a two-phase operation (Daly Avenue through movement right-of-way and Daly Avenue eastbound left turn with West Casino Access Road right turn). The signalization of this intersection is coordinated with the signalization at Daly Avenue (SR 412) and the East Casino Access Road so that the left turn movement exiting the East Casino Access Road occurs during the same phase as the eastbound Daly Avenue left turn movement entering the West Casino Access Road. The Daly Avenue right-of-way phase at both intersections will also occur at the same time. The westbound right turn movement from Daly Avenue and the southbound left turn movement from the West Casino Access Road is prohibited. The lane configuration of the intersection is as follows:

Daly Avenue east leg - two westbound through lanes - two eastbound receiving lanes.

Daly Avenue west leg - three eastbound approach lanes, two through lanes and one left turn lane - three westbound receiving lanes.

West Casino Access Road north leg - two southbound right turn lanes, - one northbound receiving lane.

Daly Avenue (SR 412) and Bethworks Retail Center Access Road

The proposed intersection of Daly Avenue (SR 412) and Bethworks Retail Center Access Road will be a right angle tee intersection with Bethworks Retail Center Access Road forming the stem of the tee. Signalization is proposed utilizing a three-phase operation (Daly Avenue Eastbound lead, Daly Avenue right-of-way with eastbound left turn movement permitted and Bethworks Retail Center Access Road right-of-way). The lane configuration of the intersection is as follows:

Daly Avenue east leg - three westbound approach lanes, two through lanes and one right turn lane, - two eastbound receiving lanes.

Daly Avenue west leg - three eastbound approach lanes, one left turn lane and two through lanes, - two westbound receiving lanes.

Bethworks Retail Center Access Road north leg - three southbound approach lanes, two left turn lanes and one right turn lane, - one northbound receiving lane.

Daly Avenue (SR 412) and Stefko Boulevard (Proposed Improvements)

The existing intersection of Daly Avenue (SR 412) and Stefko Boulevard is a skewed angle tee intersection with Stefko Boulevard forming the stem of the tee. The intersection is signalized utilizing a three-phase operation. The proposed intersection signalization will also utilize a three-phase operation with enhancements (Daly Avenue Eastbound lead with Stefko Boulevard southbound right turn movement, Daly Avenue right-of-way without eastbound left turn and Stefko Boulevard right-of-way with Daly Avenue westbound right turn). The lane configuration of the intersection with proposed improvements is as follows:

Daly Avenue east leg - three westbound approach lanes, two through lanes and one right turn lane, - two eastbound receiving lanes.

Daly Avenue west leg - four eastbound approach lanes, two left turn lanes and two through lanes, - two westbound receiving lanes.

Stefko Boulevard north leg - two southbound approach lanes, one left turn lane and one right turn lane, - two northbound receiving lanes.

The signalization at the intersections of Daly Avenue and Stefko Boulevard and Daly Avenue and the West and East Casino Access Roads will be coordinated (with a hard wire interconnect) to provide for the efficient flow of through traffic on Daly Avenue.

The close proximity of the Daly Avenue and Casino Access Roads intersection with the intersection of Daly Avenue and Stefko Boulevard requires signal preemption devices for the Daly Avenue westbound approach at Stefko Boulevard and the Daly Avenue eastbound left turn at the West Casino Access Road. The signal preemption devices (force off loops) will prevent blockage of the Casino Access Roads intersection and the intersection of Daly Avenue and Stefko Boulevard. The traffic signal coordination system on Daly Avenue will insure the efficient flow of traffic through these intersections.

TRANSIT

There are several public transit bus routes that serve the general South Bethlehem area in the vicinity of the Sands Bethworks Development site. Currently, bus routes are the only form of mass transportation serving Bethlehem. There is no passenger train service within the City of Bethlehem or surrounding area. The bus routes are part of a network known as the Metro System operated by the Lehigh and Northampton Transportation Authority (LANTA). The Metro System, which provides daily, evening and weekend service, consists of 26 bus routes serving the Lehigh Valley. Within this urban area it is estimated that almost 400,000 people live within walking distance of one of the bus routes. Bus ridership has been growing in the area and it is approaching four million trips per year. The existing LANTA bus routes that would be impacted positively by the proposed Bethworks Development are described as follows:

Route F (Westgate - South Bethlehem)

Route F, known as the Westgate Route, connects the "park & ride" facility at the interchange of I-78 and SR 412 with the north west part of Bethlehem and Westgate Mall. The route includes SR 412 to East Fourth Street, across the Fahy Bridge, through Center City to West Broad Street, and then to Eighth Avenue and Schoenersville Road to Westgate Mall.

Route G (Union Boulevard - Susquehanna Street)

Route G, known as the Union Boulevard Route, connects Lynnfield with Allentown and Bethlehem Center City. The route also includes East Fourth Street just to the south of the Bethworks site, to Broadway and Susquehanna Street into Allentown. From the Westbrook Park area of Allentown the Route proceeds north through the City Center and then east on Union Boulevard passing the Lehigh Shopping Center to Bethlehem Center City..

Route B (East Hills/Freemansburg Avenue - Fountain Hill)

Route B, known as the East Hills/Freemansburg Avenue Route, connects the Route 33 and William Penn Highway "park & ride" facility with Bethlehem Center City and Fountain Hill. The route includes Freemansburg Avenue to Stefko Boulevard and East Broad Street in the vicinity of the Bethworks site, through Bethlehem Center City and across the Fahy Bridge to Third Street near the Bethlehem bus terminal and down Broadway to Fountain Hill.

Starlight 2 (Lehigh Valley Mall/Susquehanna Street)

Starlight 2, known as Lehigh Valley Mall/Susquehanna Street, is an evening route that connects Bethlehem Center City with Allentown and the Lehigh Valley Mall and Whitehall Mall. The Route includes East Broad Street to Stefko Boulevard across the Minsi Trail Bridge, down Daly Avenue in front of the Bethworks Site to Hayes Street, then on East Fourth Street to Broadway and Susquehanna Street into Allentown and ultimately the two malls.

In addition to these routes there are several routes connecting the City of Easton with the City of Bethlehem that include William Penn Highway and Easton Avenue to Stefko Boulevard. These routes could be modified to include the intersection of Stefko Boulevard and East Broad Street and even Daly Avenue across the Minsi Trail Bridge to the Sands Bethworks site.

Overall the development of the Sands Bethworks Phase 1 site will have a positive impact on the area's public transit in that bus ridership should increase significantly on the LANTA routes that serve the South Bethlehem area. Bus stop areas for public transit buses will be provided in both the casino and retail components of the development to provide for easy access in and out of the sites. It is anticipated that a significant number of casino employees in addition to the restaurant and retail store employees will use buses for transportation to the site. The evening routes that LANTA provides should prove to be convenient transportation to accommodate the various employees and their schedules.

TRAFFIC ANALYSIS

Capacity analyses were performed for the intersections of Daly Avenue (SR 412) and Stefko Boulevard (Minsi Trail Bridge), Daly Avenue (SR 412) and East 4th Street, East 3rd Street and Hayes Street, and Stefko Boulevard and East Broad Street - Municipal Driveway for the existing, future 2008 and 2018 no-build and future 2008 and 2018 build conditions. Capacity analyses were also performed for the future intersections of Daly Avenue (SR 412) and the East and West Casino Access Roads, and Daly Avenue and the Bethworks Retail Center Access Road for the future 2008 and 2018 build conditions. The results of the capacity analyses for the weekday AM and PM and Saturday peak hours are presented in the Level-of-Service Summaries Figures 26 through 28.

Levels of service for a signalized intersection are determined by the computed or measured control delay and are defined for lane groups, intersection approaches and the intersections as a whole. The Highway Capacity Manual published by the Transportation Research Board of the National Research Council, defines control delay as:

"The component of delay that results when a control signal causes a lane group to reduce speed or to stop; it is measured by comparison with the uncontrolled condition."

Control delay is the portion of the total delay attributed to traffic signal operation for signalized intersections. Control delay includes initial deceleration delay, queue move-up time, stopped delay and final acceleration delay.

Level of service criteria as defined by the Highway Capacity Manual is as follows:

Level of Service Criteria
Signalized Intersections

Level of Service	Average Control Delay (sec./veh.)
A	0-10
B	>10-20
C	>20-35
D	>35-55
E	>55-80
F	>80

Capacity analyses data input sheets and output sheets are presented in the appendix of this report.

LEVEL OF SERVICE SUMMARY

AM PEAK HOUR

File Name: 06-934\REV-ExLOS.XLS			YEAR 2005 EXISTING CONDITION			YEAR 2008 NO-BUILD CONDITION			YEAR 2008 BUILD CONDITION			YEAR 2018 NO-BUILD CONDITION			YEAR 2018 BUILD CONDITION		
INTERSECTION NAME	APPROACH	LANE GROUP	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY	V/C	LOS
Intersection No. 1	Eastbound	T	9.6	0.21	A	12.9	0.24	B	28.8	0.39	C	19.1	0.32	B	43.1	0.56	D
			9.6		A	12.9		B	28.8		C	19.1		B	43.1		D
Daly Avenue	Westbound	T	9.4	0.18	A	12.8	0.18	B	27.2	0.30	C	18.3	0.25	B	39.5	0.43	D
and		R	0.9	0.47	A	1.1	0.51	A	0.3	0.37	A	1.8	0.65	A	0.6	0.49	A
East 4th Street			1.7		A	2.1		A	2.2		A	3.0		A	2.7		A
	SouthEast	L	9.6	0.52	A	10.6	0.66	B	3.1	0.51	A	41.8	1.03	D	11.7	0.96	B
			9.6		A	10.6		B	3.1		A	41.8		D	11.7		B
	Intersection		5.2	0.52	A	6.6	0.66	A	3.9	0.51	A	26.5	1.03	C	9.1	0.96	A
Intersection No. 2	Eastbound	T							0.8	0.42	A				5.4	0.90	A
									0.8		A				5.4		A
Daly Avenue	Westbound	T							5.1	0.38	A				7.4	0.52	A
and		R							0.1	0.13	A				0.2	0.21	A
Casino East Driveway									4.1		A				5.7		A
	Southbound	L							30.4	0.41	C				36.0	0.63	D
									30.4		C				36.0		D
	Intersection								4.9	0.42	A				8.3	0.90	A
Intersection No.3	Eastbound	L							32.5	0.12	C				27.3	0.09	C
		T							3.7	0.42	A				12.9	0.90	B
Daly Avenue									4.6		A				13.1		B
and	Westbound	T							1.2	0.38	A				1.4	0.52	A
Casino West Driveway									1.2		A				1.4		A
	Southbound	R							0.5	0.14	A				0.1	0.04	A
									0.5		A				0.1		A
	Intersection								2.8	0.42	A				8.6	0.90	A
Intersection No. 4	Eastbound	L	26.7	0.57	C	28.4	0.60	C	17.4	0.58	C	30.5	0.65	C	36.2	0.84	D
		T	9.7	0.24	A	13.7	0.52	B	3.7	0.27	A	189.4	1.36	F	20.8	0.87	C
Daly Avenue			21.0		C	20.9		C	10.4		B	145.0		F	25.2		C
and	Westbound	T	36.8	0.74	D	47.8	0.85	D	21.7	0.51	C	143.9	1.21	F	33.5	0.79	C
Stefko Boulevard		R	8.3	0.59	A	8.5	0.60	A	10.0	0.62	B	10.2	0.67	B	9.1	0.65	A
			17.7		B	22.5		C	14.5		B	65.2		E	18.9		B
	Southbound	L	26.4	0.71	C	32.6	0.82	C	36.8	0.87	D	135.6	1.22	F	48.8	0.98	D
		R	12.7	0.78	B	14.6	0.80	B	16.6	0.82	B	20.6	0.86	C	16.2	0.82	B
			17.3		B	21.4		C	25.2		C	74.8		E	31.7		C
	Intersection		18.3	0.78	B	21.6	0.85	C	17.9	0.87	B	96.9	1.36	F	25.9	0.98	C
Intersection No. 5	Eastbound	L							2.5	0.28	A				2.5	0.30	A
		T							2.2	0.36	A				2.7	0.64	A
Daly Avenue									2.2		A				2.7		A
and	Westbound	T							10.7	0.61	B				9.6	0.63	A
Retail Access Driveway		R							2.0	0.00	A				1.6	0.01	A
									10.7		B				9.5		A
	Southbound	L							26.7	0.01	C				34.5	0.07	C
		R							15.7	0.13	B				17.7	0.14	B
									17.4		B				25.7		C
	Intersection								6.9	0.61	A				5.9	0.64	A
Intersection No. 6	Eastbound	T	21.1	0.61	C	27.8	0.82	C	30.0	0.85	C	327.4	1.67	F	35.0	0.94	C
		R	5.0	0.11	A	4.0	0.08	A	3.7	0.07	A	5.2	0.08	A	3.9	0.08	A
East 3rd Street			18.6		B	25.6		C	27.9		C	312.8		F	33.7		C
and	Westbound	L	10.8	0.63	B	23.7	0.80	C	32.4	0.88	C	85.9	1.07	F	46.6	0.94	D
Hayes Street		T	10.4	0.64	B	9.6	0.63	A	5.7	0.66	A	13.0	0.75	B	18.1	0.73	B
			10.5		B	14.5		B	14.3		B	35.6		D	26.8		C
	Northbound	L	23.1	0.51	C	30.5	0.59	C	34.4	0.63	C	34.3	0.85	C	42.2	0.70	D
		R	6.1	0.52	A	7.2	0.56	A	7.5	0.58	A	11.3	0.63	B	11.8	0.64	B
			12.7		B	16.3		B	18.0		B	20.3		C	23.6		C
	Intersection		12.7	0.64	B	17.9	0.82	B	19.0	0.86	B	146.9	1.67	F	29.2	0.94	C
Intersection No. 7	Eastbound	LT	26.5	0.48	C	27.2	0.50	C	27.4	0.50	C	28.6	0.53	C	28.8	0.53	C
		R	6.1	0.33	A	6.1	0.34	A	6.1	0.34	A	6.1	0.35	A	6.1	0.35	A
Stefko Boulevard			16.1		B	16.4		B	16.5		B	17.1		B	17.1		B
and	Westbound	LTR	17.7	0.02	B	17.7	0.02	B	17.7	0.02	B	17.7	0.02	B	17.7	0.02	B
East Broad Street			17.7		B	17.7		B	17.7		B	17.7		B	17.7		B
	Northbound	L	12.2	0.54	B	13.3	0.56	B	13.7	0.56	B	16.7	0.61	B	16.7	0.61	B
		TR	5.5	0.22	A	5.5	0.23	A	5.6	0.24	A	5.6	0.25	A	5.7	0.27	A
			7.6		A	7.8		A	7.9		A	8.8		A	8.7		A
	Southbound	L	13.0	0.01	B	13.0	0.01	B	13.0	0.01	B	13.0	0.01	B	13.0	0.01	B
		TR	18.1	0.74	B	20.3	0.79	C	21.2	0.81	C	34.9	0.95	C	40.6	0.98	D
			18.1		B	20.3		C	21.2		C	34.8		C	40.6		D
	Intersection		14.2	0.74	B	15.6	0.79	B	16.0	0.81	B	24.3	0.95	C	27.4	0.98	C

EXHIBIT NO. 26

LUBLANECKI ENGINEERING, INC.

LEVEL OF SERVICE SUMMARY
AM PEAK HOUR

Sands Bethworks Casino/ Retail Development–PHASE 1
City of Bethlehem, Northampton County, Pennsylvania
Project No. 05-205 October, 2006

FILE: G:\data\cad\06-934\brd.dwg

LEVEL OF SERVICE SUMMARY

PM PEAK HOUR

File Name: 06-934\REV-ExLOS.XLS

INTERSECTION NAME	APPROACH	LANE GROUP	YEAR 2005 EXISTING CONDITION DELAY	V/C	LOS	YEAR 2008 NO-BUILD CONDITION DELAY	V/C	LOS	YEAR 2008 BUILD CONDITION DELAY	V/C	LOS	YEAR 2018 NO-BUILD CONDITION DELAY	V/C	LOS	YEAR 2018 BUILD CONDITION DELAY	V/C	LOS
Intersection No. 1	Eastbound	T	11.6	0.28	B	12.5	0.29	B	28.4	0.45	C	16.1	0.33	B	41.4	0.60	D
			11.6		B	12.5		B	28.4		C	16.1		B	41.4		D
Daly Avenue	Westbound	T	11.5	0.24	B	12.4	0.25	B	27.6	0.40	C	15.9	0.28	B	38.9	0.53	D
and		R	0.5	0.35	A	1.0	0.50	A	0.4	0.41	A	19.9	0.98	B	2.5	0.82	A
East 4th Street			2.6		A	2.5		A	3.0		A	19.8		B	4.5		A
	SouthEast	L	10.2	0.60	B	10.5	0.64	B	5.4	0.59	A	11.6	0.73	B	7.6	0.64	A
			10.2		B	10.5		B	5.4		A	11.6		B	7.6		A
	Intersection		7.0	0.60	A	6.8	0.64	A	5.6	0.59	A	16.4	0.98	B	7.1	0.84	A
Intersection No. 2	Eastbound	T							1.0	0.43	A				1.5	0.64	A
									1.0		A				1.5		A
Daly Avenue	Westbound	T							8.2	0.40	A				22.8	0.89	C
and		R							0.4	0.28	A				0.8	0.58	A
Casino East Driveway									5.4		A				14.4		B
	Southbound	L							28.8	0.65	C				36.7	0.88	D
									28.8		C				36.7		D
	Intersection								8.0	0.65	A				15.5	0.89	B
Intersection No.3	Eastbound	L							28.5	0.12	C				28.2	0.09	C
		T							4.2	0.43	A				6.3	0.64	A
Daly Avenue									5.4		A				7.1		A
and	Westbound	T							1.5	0.40	A				5.8	0.89	A
Casino West Driveway									1.5		A				5.8		A
	Southbound	R							2.4	0.21	A				11.8	0.05	B
									2.4		A				11.8		B
	Intersection								3.5	0.65	A				6.5	0.89	A
Intersection No. 4	Eastbound	L	28.7	0.70	C	31.0	0.74	C	26.9	0.82	C	33.4	0.78	C	49.7	0.94	D
		T	10.4	0.29	B	11.1	0.36	B	7.4	0.18	A	15.1	0.60	B	17.8	0.27	B
Daly Avenue			22.6		C	23.4		C	20.0		B	24.4		C	35.6		D
and	Westbound	T	30.2	0.55	C	71.6	0.99	E	19.6	0.56	B	745.0	2.60	F	48.5	1.03	D
Stefko Boulevard		R	7.6	0.47	A	8.8	0.54	A	12.3	0.57	B	16.0	0.78	B	18.8	0.79	B
			14.6		B	36.3		D	15.6		B	435.8		F	34.8		C
	Southbound	L	28.0	0.77	C	32.4	0.83	C	34.2	0.85	C	42.7	0.92	D	55.3	0.97	E
		R	2.8	0.42	A	6.2	0.46	A	6.9	0.48	A	7.6	0.49	A	10.7	0.56	B
			15.8		B	19.9		B	21.6		C	26.9		C	34.8		C
	Intersection		17.8	0.77	B	26.4	0.99	C	19.0	0.85	B	207.4	2.60	F	35.1	1.03	D
Intersection No. 5	Eastbound	L							6.2	0.51	A				22.7	0.84	C
		T							1.2	0.34	A				2.4	0.41	A
Daly Avenue									2.2		A				5.8		A
and	Westbound	T							7.8	0.53	A				12.2	0.80	B
Retail Access Driveway		R							0.7	0.01	A				0.2	0.05	A
									7.7		A				11.7		B
	Southbound	L							27.7	0.05	C				34.2	0.18	C
		R							12.2	0.44	B				13.6	0.48	B
									14.2		B				20.4		C
	Intersection								5.4	0.53	A				9.7	0.80	A
Intersection No. 6	Eastbound	T	21.8	0.72	C	23.7	0.77	C	34.4	0.90	C	36.4	0.92	D	17.4	0.55	B
		R	3.4	0.18	A	3.3	0.17	A	2.9	0.16	A	3.0	0.16	A	3.7	0.15	A
East 3rd Street			18.2		B	20.1		C	29.9		C	31.7		C	15.7		B
and	Westbound	L	16.3	0.71	B	23.5	0.78	C	34.8	0.85	C	60.5	0.98	E	15.0	0.76	B
Hayes Street		T	5.4	0.29	A	6.9	0.46	A	5.7	0.56	A	32.4	0.97	C	16.9	0.92	B
			11.1		B	13.5		B	15.5		B	39.2		D	16.0		B
	Northbound	L	26.2	0.48	C	27.8	0.50	C	32.0	0.56	C	31.3	0.56	C	40.2	0.63	D
		R	7.0	0.54	A	7.2	0.55	A	7.6	0.58	A	7.5	0.58	A	8.7	0.61	A
			13.9		B	14.5		B	16.3		B	16.0		B	19.9		B
	Intersection		14.3	0.72	B	15.9	0.78	B	20.8	0.90	C	33.0	0.98	C	17.5	0.92	B
Intersection No. 7	Eastbound	LT	27.0	0.55	C	27.5	0.56	C	28.0	0.57	C	28.6	0.59	C	29.3	0.60	C
		R	5.8	0.54	A	5.7	0.54	A	5.7	0.54	A	6.6	0.57	A	7.1	0.58	A
Stefko Boulevard			12.9		B	13.1		B	13.3		B	14.1		B	14.6		B
and	Westbound	LTR	16.7	0.01	B	16.7	0.01	B	16.7	0.01	B	16.7	0.01	B	16.7	0.01	B
East Broad Street			16.7		B	16.7		B	16.7		B	16.7		B	16.7		B
	Northbound	L	9.2	0.43	A	9.4	0.44	A	9.5	0.45	A	10.6	0.48	B	11.4	0.49	B
		TR	6.6	0.34	A	7.0	0.38	A	7.2	0.40	A	8.1	0.49	A	8.5	0.53	A
			7.2		A	7.5		A	7.6		A	8.5		A	8.9		A
	Southbound	L	13.0	0.00	B	13.0	0.00	B	13.0	0.00	B	13.0	0.00	B	13.0	0.01	B
		TR	18.5	0.70	B	19.0	0.72	B	19.9	0.75	B	21.6	0.79	C	24.1	0.84	C
			18.5		B	19.0		B	19.9		B	21.6		C	24.1		C
	Intersection		13.0	0.70	B	13.2	0.72	B	13.7	0.75	B	14.5	0.79	B	15.8	0.84	B

EXHIBIT NO. 27

LUBLANECKI ENGINEERING, INC.

LEVEL OF SERVICE SUMMARY
PM PEAK HOUR

Sands Bethworks Casino/ Retail Development–PHASE 1
City of Bethlehem, Northampton County, Pennsylvania

Project No. 05-205 October, 2006

FILE: G:data\cad\934\brd.dwg

LEVEL OF SERVICE SUMMARY

SATURDAY PEAK HOUR

File Name: 06-934\REV-ExLOS.XLS			YEAR 2005 EXISTING CONDITION			YEAR 2008 NO-BUILD CONDITION			YEAR 2008 BUILD CONDITION			YEAR 2018 NO-BUILD CONDITION			YEAR 2018 BUILD CONDITION		
INTERSECTION NAME	APPROACH	LANE GROUP	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY	V/C	LOS
Intersection No. 1	Eastbound	T	8.2	0.18	A	8.8	0.18	A	30.8	0.35	C	11.0	0.21	B	44.1	0.44	D
			8.2		A	8.8		A	30.8		C	11.0		B	44.1		D
Daly Avenue	Westbound	T	8.7	0.25	A	9.4	0.25	A	34.0	0.48	C	11.7	0.28	B	50.3	0.61	D
and		R	0.4	0.29	A	0.5	0.33	A	0.4	0.43	A	0.7	0.42	A	1.3	0.69	A
East 4th Street			2.3		A	2.4		A	3.9		A	2.7		A	4.7		A
	SouthEast	L	9.4	0.44	A	9.6	0.48	A	2.3	0.54	A	10.2	0.59	B	7.0	0.82	A
			9.4		A	9.6		A	2.3		A	10.2		B	7.0		A
	Intersection		5.5	0.44	A	5.8	0.48	A	4.3	0.54	A	6.6	0.59	A	6.8	0.82	A
Intersection No. 2	Eastbound	T							0.7	0.29	A				2.8	0.63	A
									0.7		A				2.8		A
Daly Avenue	Westbound	T							12.3	0.28	B				28.1	0.50	C
and		R							0.9	0.49	A				8.4	0.92	A
Casino East Driveway									5.1		A				3.7		B
	Southbound	L							27.2	0.73	C				24.1	0.84	C
									27.2		C				24.1		C
	Intersection								11.0	0.73	B				15.4	0.92	B
Intersection No.3	Eastbound	L							22.8	0.15	C				12.9	0.10	B
		T							8.6	0.29	A				19.9	0.83	B
Daly Avenue									10.6		B				19.1		B
and	Westbound	T							1.7	0.28	A				2.7	0.50	A
Casino West Driveway									1.7		A				2.7		A
	Southbound	R							3.7	0.28	A				0.4	0.06	A
									3.7		A				0.4		A
	Intersection								6.0	0.73	A				11.6	0.92	B
Intersection No. 4	Eastbound	L	21.5	0.52	C	23.0	0.55	C	22.2	0.65	C	26.4	0.60	C	24.6	0.69	C
		T	7.1	0.22	A	7.6	0.27	A	10.5	0.11	B	9.5	0.44	A	8.5	0.18	A
Daly Avenue			16.5		B	16.9		B	18.2		B	17.6		B	18.0		B
and	Westbound	T	23.2	0.44	C	24.2	0.50	C	16.3	0.30	B	28.6	0.67	C	6.8	0.16	A
Stefko Boulevard		R	5.1	0.33	A	5.1	0.34	A	3.8	0.38	A	5.6	0.37	A	9.8	0.42	A
			11.6		B	12.6		B	9.4		A	16.2		B	9.0		A
	Southbound	L	22.6	0.59	C	24.3	0.62	C	32.5	0.74	C	30.4	0.74	C	37.4	0.77	D
		R	1.7	0.39	A	2.4	0.41	A	7.8	0.49	A	5.1	0.46	A	5.4	0.51	A
			10.0		B	11.4		B	19.3		B	16.5		B	20.3		C
	Intersection		12.7	0.59	B	13.6	0.62	B	15.7	0.74	B	16.9	0.74	B	16.6	0.77	B
Intersection No. 5	Eastbound	L							9.6	0.69	A				12.3	0.59	B
		T							3.4	0.26	A				6.3	0.32	A
Daly Avenue									5.6		A				8.1		A
and	Westbound	T							11.1	0.43	B				11.7	0.30	B
Retail Access Driveway		R							2.3	0.02	A				0.8	0.07	A
									10.9		B				10.4		B
	Southbound	L							32.4	0.07	C				45.1	0.29	D
		R							13.7	0.53	B				15.8	0.55	B
									16.1		B				26.2		C
	Intersection								8.6	0.69	A				10.7	0.59	B
Intersection No. 6	Eastbound	T	20.3	0.67	C	21.9	0.73	C	23.9	0.82	C	30.7	0.87	C	14.4	0.48	B
		R	4.3	0.10	A	4.2	0.09	A	3.0	0.06	A	4.1	0.08	A	3.8	0.06	A
East 3rd Street			18.4		B	20.0		C	22.5		C	28.5		C	13.8		B
and	Westbound	L	8.9	0.50	A	10.1	0.55	B	30.2	0.74	C	24.4	0.73	C	7.7	0.61	A
Hayes Street		T	6.7	0.36	A	7.0	0.39	A	5.2	0.53	A	7.9	0.48	A	4.4	0.39	A
			7.6		A	8.1		A	11.8		B	13.2		B	5.5		A
	Northbound	L	22.6	0.46	C	23.8	0.48	C	40.4	0.64	D	27.0	0.53	C	47.4	0.65	D
		R	5.9	0.47	A	6.1	0.48	A	8.3	0.55	A	6.2	0.51	A	8.3	0.56	A
			12.7		B	13.2		B	21.3		C	14.6		B	24.1		C
	Intersection		12.4	0.67	B	13.4	0.73	B	17.8	0.82	B	19.1	0.87	B	13.1	0.65	B
Intersection No. 7	Eastbound	LT	25.1	0.58	C	25.6	0.57	C	27.5	0.59	C	27.3	0.61	C	29.6	0.63	C
		R	5.2	0.24	A	5.2	0.25	A	5.5	0.25	A	5.2	0.28	A	5.4	0.27	A
Stefko Boulevard			17.4		B	17.7		B	19.0		B	16.7		B	20.2		C
and	Westbound	LTR	15.7	0.01	B	15.8	0.01	B	16.7	0.01	B	16.2	0.01	B	16.8	0.01	B
East Broad Street			15.7		B	15.8		B	16.7		B	16.2		B	16.8		B
	Northbound	L	8.1	0.30	A	8.3	0.31	A	8.2	0.32	A	8.7	0.34	A	8.6	0.35	A
		TR	6.9	0.29	A	7.0	0.30	A	7.0	0.34	A	7.2	0.33	A	7.4	0.39	A
			7.2		A	7.2		A	7.2		A	7.5		A	7.6		A
	Southbound	L	14.0	0.00	B	14.0	0.00	B	13.0	0.00	B	14.0	0.00	B	13.0	0.00	B
		TR	16.9	0.63	B	17.4	0.65	B	18.2	0.69	B	16.9	0.70	B	20.6	0.77	C
			16.9		B	17.4		B	18.2		B	16.9		B	20.6		C
	Intersection		13.2	0.63	B	13.5	0.65	B	13.9	0.69	B	14.4	0.70	B	15.4	0.77	B

EXHIBIT NO. 28

LUBLANECKI ENGINEERING, INC.

LEVEL OF SERVICE SUMMARY
SATURDAY PEAK HOUR

Sands Bethworks Casino/ Retail Development–PHASE 1
City of Bethlehem, Northampton County, Pennsylvania
Project No. 05-205 October, 2006

FILE: G:\data\cad\934\brd.dwg

CONCLUSIONS

Traffic Impacts

Site traffic generated by the Sands Bethworks Phase 1 Casino/Retail Development will utilize three main corridors to gain access to the site. Traffic from the north, east and south especially traffic originating in New Jersey, will use for the most part the I-78 corridor to Daly Avenue (SR 412). Traffic from the west will use SR 378 to East Third Street (SR 412) and some traffic from the north and east will use Stefko Boulevard to access the site.

SR 412 from I-78

The main access corridor into the site is SR 412 from its interchange with I-78 to the site access roads. At least 65% of the site traffic generated by the casino component of the site will utilize this corridor to gain access to the site; and at least 60% of the site traffic generated by the retail component will utilize this corridor. This section of SR 412 for the most part consists of one through lane in each direction with some turning lanes at the intersections. Several of the intersections with the local roads are signalized. At the interchange with I-78, SR 412 is widened to accommodate the various turning lanes to and from the I-78 ramps.

The Pennsylvania Department of Transportation has initiated an improvement project for this section of SR 412. A traffic study has been conducted for SR 412 by Orth Rodgers Associates, Inc. taking into consideration the Sands Bethworks Development and other developments that are planned for the near future. The overall concept plan is to widen SR 412 from the I-78 interchange to Fourth Street to at least two through lanes in each direction. Left turn lanes and right turn lanes will be provided at the intersections as needed and the major intersections with the I- 78 Ramps will be improved to increase capacity.

As can be seen from the results of the capacity analyses for the intersection of Daly Avenue (SR 412) and East Fourth Street, this intersection will still operate in the 2008 and 2018 build conditions at levels-of-service "A" during all three peak hours. The two through lanes on the Daly Avenue (SR 412) eastbound approach to the intersection are more than adequate to accommodate the increase in traffic from the Bethworks site. Accordingly the addition of another through lane in each direction on SR 412 should provide more than the capacity needed to mitigate the impact of the site traffic on the various signalized intersections.

East Third Street (SR 412)

The capacity analyses for the intersection of East Third Street and Hayes Street indicate an impact due to Phase 1 site traffic. A level-of-service "B" can be maintained at this intersection during the weekday AM and Saturday peak hours, and a level-of-service "C" during the weekday PM peak hour with some upgrading of the signalization. In comparing the 2008 no-build condition with the build condition the weekday AM peak hour overall level-of-service for the intersection remains at "B," the weekday PM peak hour drops from a "B" to a "C" and the Saturday peak hour remains at "B" due to site traffic.

East Third Street to the west of Hayes Street provides the connection for site traffic destined to the Fahy Bridge or SR 378. East Third Street (SR 412) continues with one through lane in each direction with some turning lanes at the signalized intersections. Improvements to the traffic signalization at some of the intersections on East Third Street will be necessary to mitigate the impacts from the Sands Bethworks Phase 1 site generated traffic.

In comparing the 2018 no-build condition with the build condition the weekday AM peak hour overall level-of-service for the intersection improves from a "F" to a "C," the weekday PM peak hour improves from a "C" to a "B", and the Saturday peak hour remains at "B". It should be noted that in the Bethworks ultimate build condition, it is assumed that SR 412 will be widened west of Hayes Street (right-of-way is available on the Bethworks site) to accommodate two eastbound through lanes.

Stefko Boulevard

As can be seen from the results of the capacity analyses of the intersection of Stefko Boulevard and East Broad Street site generated traffic has a minimal impact on this intersection. In comparing the 2008 and 2018 no-build and build conditions, all levels-of-service remain the same. In 2008 the level-of-service for all peak hours is "B". In 2018 the weekday AM peak hour level-of-service is "C" and the weekday PM peak hour and Saturday peak hour level-of-service is "B."

As site generated traffic begins to dissipate down the various local streets intersecting with Stefko Boulevard the impact of site traffic becomes less and less the further away from the site. It is therefore concluded that site generated traffic from the Sands Bethworks Phase 1 Development will have a minimal impact on the Stefko Boulevard corridor.

Access Improvements

The results of the capacity analyses indicate that the proposed site access roads and their intersections with Daly Avenue are more than adequate to accommodate the site traffic that will be generated by the Sands Bethworks Phase 1 development in 2008 and the Bethworks ultimate development in 2018. The casino access roads intersection with Daly Avenue will function at overall level-of-service "A" during the 2008 weekday AM and PM peak hours and level-of-service "B" during the Saturday peak hour. During the 2018 weekday AM and PM peak hours and Saturday peak hour the intersection will function at level-of-service "B" or better. The prohibiting of the left turn movement into the East Casino Access Road and the prohibiting of the left turn movement out of the West Casino Access Road enables the intersection to utilize a two-phase signal operation. Furthermore, the left turn movement into the casino site at the West Casino Access Road occurs simultaneously with the left turn movement out of the casino site at the East Casino Access Road to increase efficiency and aid in the coordination of the Daly Avenue through movements. The Bethworks Retail Center Access Road intersection with Daly Avenue, utilizing a three phase signal operation to facilitate the Daly Avenue eastbound left turn movement into the retail site, will function at overall level-of-service "A" during both the 2008 weekday AM and PM peak hours and level-of-service "B" during the Saturday peak hour. During the 2018 weekday AM and PM peak hours the intersection will function at overall level-of-service "A" and during the Saturday peak hour level-of-service "B."

The proposed improvements to the intersection of Daly Avenue (SR 412) and Stefko Boulevard (Minsi Trail Bridge) will provide more than enough capacity at that intersection to accommodate the additional Phase 1 (2008) site generated traffic. As in the existing condition the intersection utilizes a three-phase signal operation. The intersection of Daly Avenue and Stefko Boulevard will function in the Phase 1 build condition at level-of-service "B" overall during both the weekday AM and PM peak hours and Saturday peak hour as opposed to level-of-service "C" overall during the weekday AM and PM peak hours and level-of-service "B" during the Saturday peak hour in the no-build condition.

It should be noted that the PennDOT SR 412 improvement project does not include the section of Daly Avenue in front of the Bethworks site. The widening of SR 412 (Day Avenue) from Fourth Street to Hayes Street is proposed as part of the access improvements for the Sands Bethworks Phase 1 development. Therefore the no-build analyses reflects existing conditions on SR 412 from Fourth Street to Hayes Street including the intersection of SR 412 and Stefko Boulevard.

The difference in traffic flow efficiency between the no-build and build conditions is even more apparent ten years after build-out. The intersection of Daly Avenue and Stefko Boulevard will function in the ultimate build conditions in 2018 at level-of-service "C" overall during the weekday AM peak hour and level-of-service "D" during the weekday PM peak hour as opposed to level of service "F" overall during the weekday peak hours in the no-build condition. The overall Saturday peak hour remains the same at level-of-service "B."

The close proximity of the intersections of Daly Avenue and Stefko Boulevard, and Daly Avenue and the West and East Casino Access Roads necessitates a coordinated signal system to insure the efficient flow of traffic on Daly Avenue. The signal system, which will include preemption devices for the Daly Avenue westbound approach to Stefko Boulevard and the Daly Avenue eastbound left turn lane approach at the West Casino Access Road will insure that no blockage of the intersections will occur.

Overall the proposed access scheme will provide for the safe and efficient flow of traffic throughout the site area, and the Sands Bethworks Gaming, LLC Phase 1 Casino/Retail Development will have a positive impact on traffic flow in front of the site and at the intersection of Daly Avenue (SR 412) and Stefko Boulevard (Minsi-Trail Bridge).

APPENDICES

MANUAL COUNT DATA

MANUAL COUNT DATA

PEAK AM HOUR CALCULATION

September 28, 2006	INTERSECTION NUMBER											
TIME END	1	2	3	4	5	6	7	8	9	10	TOTAL	HOURLY TOTAL
06:15 AM	190	233	114	169	0	0	0	0	0	0	706	
06:30 AM	203	261	157	178	0	0	0	0	0	0	799	
06:45 AM	225	334	256	228	0	0	0	0	0	0	1043	
07:00 AM	240	372	257	255	0	0	0	0	0	0	1124	3672
07:15 AM	266	406	257	293	0	0	0	0	0	0	1222	4188
07:30 AM	345	535	321	360	0	0	0	0	0	0	1561	4950
07:45 AM	397	597	380	481	0	0	0	0	0	0	1855	5762
08:00 AM	408	674	374	488	0	0	0	0	0	0	1944	6582
08:15 AM	376	559	353	403	0	0	0	0	0	0	1691	7051
08:30 AM	337	501	261	377	0	0	0	0	0	0	1476	6966
08:45 AM	296	408	273	340	0	0	0	0	0	0	1317	6428
09:00 AM	342	479	293	334	0	0	0	0	0	0	1448	5932
09:15 AM	322	489	300	343	0	0	0	0	0	0	1454	5695
09:30 AM	285	365	308	306	0	0	0	0	0	0	1264	5483

7051

MANUAL COUNT DATA

3rd Street/SR 412 & Hayes Street

1

September 28, 2006	PEAK AM HIGHWAY PERIOD												
	EASTBOUND			NORTHBOUND			WESTBOUND			SOUTHBOUND			INT
TIME END	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL
06:15 AM		55	3	21		43	17	51					190
06:30 AM		57	2	24		46	20	54					203
06:45 AM		60	5	26		49	22	63					225
07:00 AM		74	5	13		41	36	71					240
07:15 AM		80	6	16		50	40	74					266
07:30 AM		78	8	23		63	62	111					345
07:45 AM		71	8	35		82	80	121					397
08:00 AM		68	9	52		70	67	142					408
08:15 AM		71	14	47		40	62	142					376
08:30 AM		78	16	27		46	62	108					337
08:45 AM		67	14	25		60	43	87					296
09:00 AM		80	8	24		71	53	106					342
09:15 AM		82	10	29		51	42	108					322
09:30 AM		73	12	17		39	35	109					285

PEAK HOUR = 7:15 to 8:15

PEAK HOUR	EASTBOUND			NORTHBOUND			WESTBOUND			SOUTHBOUND			INT
TIME END	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL
07:30 AM	0	78	8	23	0	63	62	111	0	0	0	0	345
07:45 AM	0	71	8	35	0	82	80	121	0	0	0	0	397
08:00 AM	0	68	9	52	0	70	67	142	0	0	0	0	408
08:15 AM	0	71	14	47	0	40	62	142	0	0	0	0	376
PEAK HR. TOTALS	*0*	*288*	*39*	*157*	*0*	*255*	*271*	*516*	*0*	*0*	*0*	*0*	*1526*
PEAK HR. FACTORS	#DIV/0!	0.92	0.70	0.75	#DIV/0!	0.78	0.85	0.91	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	1

PEAK HOUR	EASTBOUND			NORTHBOUND			WESTBOUND			SOUTHBOUND			INT
TIME END	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL
07:30 AM	0	9	1	2	0	4	6	8	0	0	0	0	30
07:45 AM	0	13	0	0	0	1	1	6	0	0	0	0	21
08:00 AM	0	8	1	1	0	0	5	12	0	0	0	0	27
08:15 AM	0	13	0	1	0	2	4	8	0	0	0	0	28
HEAVEY VEH. TOTALS	*0*	*43*	*2*	*4*	*0*	*7*	*16*	*34*	*0*	*0*	*0*	*0*	*106*
% HEAVEY VEH.	#DIV/0!	15	5	3	#DIV/0!	3	6	7	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	

MANUAL COUNT DATA

Daly Ave / SR 412 & Stefko Blvd. (Minsi Trail Bridge)

2

	PEAK AM HIGHWAY PERIOD												
September 28, 2006	EASTBOUND			NORTHBOUND			WESTBOUND			SOUTHBOUND			INT
TIME END	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL
06:15 AM	47	15						13	52	64		42	233
06:30 AM	51	27						17	50	64		52	261
06:45 AM	67	41						41	58	64		63	334
07:00 AM	74	50						38	64	70		76	372
07:15 AM	70	46						47	69	75		99	406
07:30 AM	101	51						64	98	84		137	535
07:45 AM	101	47						68	131	91		159	597
08:00 AM	101	46						74	151	101		201	674
08:15 AM	74	49						67	130	68		171	559
08:30 AM	75	42						54	93	79		158	501
08:45 AM	74	29						48	88	67		102	408
09:00 AM	101	40						52	93	64		129	479
09:15 AM	95	40						53	99	71		131	489
09:30 AM	70	32						58	69	45		91	365

PEAK HOUR = 7:15 to 8:15

PEAK HOUR	EASTBOUND			NORTHBOUND			WESTBOUND			SOUTHBOUND			INT
TIME END	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL
07:30 AM	101	51	0	0	0	0	0	64	98	84	0	137	535
07:45 AM	101	47	0	0	0	0	0	68	131	91	0	159	597
08:00 AM	101	46	0	0	0	0	0	74	151	101	0	201	674
08:15 AM	74	49	0	0	0	0	0	67	130	68	0	171	559
PEAK HR. TOTALS	*377*	*193*	*0*	*0*	*0*	*0*	*0*	*273*	*510*	*344*	*0*	*668*	*2365*
PEAK HR FACTORS	0.93	0.95	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.92	0.84	0.85	#DIV/0!	0.83	1

PEAK HOUR	EASTBOUND			NORTHBOUND			WESTBOUND			SOUTHBOUND			INT
TIME END	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL
07:30 AM	7	10	0	0	0	0	0	9	6	4	0	10	46
07:45 AM	6	9	0	0	0	0	0	7	7	9	0	9	47
08:00 AM	5	9	0	0	0	0	0	8	12	12	0	18	64
08:15 AM	4	9	0	0	0	0	0	5	10	9	0	7	44
HEAVEY VEH. TOTALS	*22*	*37*	*0*	*0*	*0*	*0*	*0*	*29*	*35*	*34*	*0*	*44*	*201*
% HEAVEY VEH.	6	19	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	11	7	10	#DIV/0!	7	

MANUAL COUNT DATA

Daly Ave / SR 412 & East 4th Street

3

	PEAK AM HIGHWAY PERIOD												
September 28, 2006	EASTBOUND			NORTHBOUND			WESTBOUND			SOUTHBOUND			INT
TIME END	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL
06:15 AM		51	0			11		5	47				114
06:30 AM		69	0			18		9	61				157
06:45 AM		102	0			30		14	110				256
07:00 AM		124	0			21		17	95				257
07:15 AM		102	0			17		20	118				257
07:30 AM		133	1			28		17	142				321
07:45 AM		149	0			30		16	185				380
08:00 AM		125	0			23		20	206				374
08:15 AM		112	1			25		21	194				353
08:30 AM		110	0			12		15	124				261
08:45 AM		101	0			19		23	130				273
09:00 AM		106	0			18		24	145				293
09:15 AM		100	0			20		26	154				300
09:30 AM		108	0			19		24	157				308

PEAK HOUR = 7:15 to 8:15

PEAK HOUR	EASTBOUND			NORTHBOUND			WESTBOUND			SOUTHBOUND			INT
TIME END	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL
07:30 AM	0	133	1	0	0	28	0	17	142	0	0	0	321
07:45 AM	0	149	0	0	0	30	0	16	185	0	0	0	380
08:00 AM	0	125	0	0	0	23	0	20	206	0	0	0	374
08:15 AM	0	112	1	0	0	25	0	21	194	0	0	0	353
PEAK HR. TOTALS	*0*	*519*	*2*	*0*	*0*	*106*	*0*	*74*	*727*	*0*	*0*	*0*	*1428*
PEAK HR FACTORS	#DIV/0!	0.87	0.50	#DIV/0!	#DIV/0!	0.88	#DIV/0!	0.88	0.88	#DIV/0!	#DIV/0!	#DIV/0!	1

PEAK HOUR	EASTBOUND			NORTHBOUND			WESTBOUND			SOUTHBOUND			INT
TIME END	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL
07:30 AM	0	13	0	0	0	3	0	4	7	0	0	0	27
07:45 AM	0	27	0	0	0	3	0	1	9	0	0	0	40
08:00 AM	0	14	0	0	0	3	0	6	16	0	0	0	39
08:15 AM	0	16	1	0	0	3	0	0	10	0	0	0	30
HEAVEY VEH. TOTALS	*0*	*70*	*1*	*0*	*0*	*12*	*0*	*11*	*42*	*0*	*0*	*0*	*136*
% HEAVEY VEH.	#DIV/0!	13	50	#DIV/0!	#DIV/0!	[illegible]	#DIV/0!	15	6	#DIV/0!	#DIV/0!	#DIV/0!	

MANUAL COUNT DATA

Stefko Blvd. & Broad Street

4

September 28, 2006	PEAK AM HIGHWAY PERIOD												
	EASTBOUND			NORTHBOUND			WESTBOUND			SOUTHBOUND			INT
TIME END	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL
06:15 AM	22	0	20	18	35	0	0	0	0	0	66	8	169
06:30 AM	21	0	22	21	34	0	1	0	0	0	69	10	178
06:45 AM	21	0	36	23	57	1	0	1	0	0	78	11	228
07:00 AM	24	1	42	22	71	0	2	0	0	1	80	12	255
07:15 AM	28	2	15	29	78	2	0	1	0	2	99	37	293
07:30 AM	22	1	15	26	113	0	1	0	1	0	137	44	360
07:45 AM	36	0	32	53	117	1	0	2	0	1	177	62	481
08:00 AM	36	3	39	46	121	0	1	0	0	0	162	80	488
08:15 AM	24	0	33	37	115	0	0	1	0	2	145	46	403
08:30 AM	27	1	24	33	102	0	2	0	1	0	139	48	377
08:45 AM	31	0	29	31	92	0	1	0	0	1	113	42	340
09:00 AM	26	1	23	36	103	0	2	1	0	3	105	34	334
09:15 AM	31	2	15	33	112	0	0	0	0	0	114	36	343
09:30 AM	26	0	11	30	92	0	2	2	0	1	109	33	306

PEAK HOUR = 7:15 to 8:15

PEAK HOUR	EASTBOUND			NORTHBOUND			WESTBOUND			SOUTHBOUND			INT
TIME END	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL
07:30 AM	22	1	15	26	113	0	1	0	1	0	137	44	360
07:45 AM	36	0	32	53	117	1	0	2	0	1	177	62	481
08:00 AM	36	3	39	46	121	0	1	0	0	0	162	80	488
08:15 AM	24	0	33	37	115	0	0	1	0	2	145	46	403
PEAK HR. TOTALS	*118*	*4*	*119*	*162*	*466*	*1*	*2*	*3*	*1*	*3*	*621*	*232*	*1732*
PEAK HR FACTORS	0.82	0.33	0.76	0.76	0.96	0.25	0.50	0.38	0.25	0.38	0.88	0.73	1

PEAK HOUR	EASTBOUND			NORTHBOUND			WESTBOUND			SOUTHBOUND			INT
TIME END	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL
07:30 AM	2	0	1	3	7	0	0	0	0	0	2	1	16
07:45 AM	1	0	5	2	1	0	0	0	0	0	6	4	19
08:00 AM	3	0	2	7	5	0	0	0	0	0	2	5	24
08:15 AM	0	0	5	7	2	0	0	0	0	0	4	2	20
HEAVEY VEH. TOTALS	*6*	*0*	*13*	*19*	*15*	*0*	*0*	*0*	*0*	*0*	*14*	*12*	*79*
% HEAVEY VEH.	5	0	11	12	3	0	0	0	0	0	2	5	

MANUAL COUNT DATA

PEAK PM HOUR CALCULATION

November 18, 2005	INTERSECTION NUMBER											
TIME END	1	2	3	4	5	6	7	8	9	10	TOTAL	HOURLY TOTAL
04:15 PM	396	510	288	586	0	0	0	0	0	0	1780	
04:30 PM	473	549	337	366	0	0	0	0	0	0	1725	
04:45 PM	310	576	365	486	0	0	0	0	0	0	1737	
05:00 PM	385	576	427	497	0	0	0	0	0	0	1885	7128
05:15 PM	449	568	374	454	0	0	0	0	0	0	1845	7193
05:30 PM	387	564	418	596	0	0	0	0	0	0	1965	7432
05:45 PM	410	559	431	531	0	0	0	0	0	0	1931	7626
06:00 PM	215	496	333	467	0	0	0	0	0	0	1511	7252

7626

MANUAL COUNT DATA

3rd Street/SR 412 & Hayes Street

1

November 18, 2005	PEAK PM HIGHWAY PERIOD												
	EASTBOUND			NORTHBOUND			WESTBOUND			SOUTHBOUND			INT
TIME END	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL
04:15 PM		111	11	44		75	65	90					396
04:30 PM		134	45	48		87	53	106					473
04:45 PM		102	21	23		45	56	63					310
05:00 PM		116	25	40		63	73	68					385
05:15 PM		128	27	44		81	94	75					449
05:30 PM		118	22	38		58	73	78					387
05:45 PM		120	31	28		69	75	87					410
06:00 PM		62	8	17		39	33	56					215

PEAK HOUR = 4:45 to 5:45 PM

PEAK HOUR	EASTBOUND			NORTHBOUND			WESTBOUND			SOUTHBOUND			INT
TIME END	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL
05:00 PM	0	116	25	40	0	63	73	68	0	0	0	0	385
05:15 PM	0	128	27	44	0	81	94	75	0	0	0	0	449
05:30 PM	0	118	22	38	0	58	73	78	0	0	0	0	387
05:45 PM	0	120	31	28	0	69	75	87	0	0	0	0	410
PEAK HR. TOTALS	*0*	*482*	*105*	*150*	*0*	*271*	*315*	*308*	*0*	*0*	*0*	*0*	*1631*
PEAK HR. FACTORS	#DIV/0!	0.94	0.85	0.85	#DIV/0!	0.84	0.84	0.89	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	1

PEAK HOUR	EASTBOUND			NORTHBOUND			WESTBOUND			SOUTHBOUND			INT
TIME END	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL
05:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	1
05:15 PM	0	3	0	0	0	0	0	0	0	0	0	0	3
05:30 PM	0	0	1	0	0	1	2	0	0	0	0	0	4
05:45 PM	0	0	0	1	0	0	0	2	0	0	0	0	3
HEAVEY VEH. TOTALS	*0*	*3*	*1*	*1*	*0*	*2*	*2*	*2*	*0*	*0*	*0*	*0*	*11*
% HEAVEY VEH.	#DIV/0!	1	1	1	#DIV/0!	1	1	1	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	

MANUAL COUNT DATA

Daly Ave / SR 412 & Stefko Blvd. (Minsi Trail Bridge)

2

November 18, 2005	PEAK PM HIGHWAY PERIOD												
	EASTBOUND			NORTHBOUND			WESTBOUND			SOUTHBOUND			INT
TIME END	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL
04:15 PM	86	54						54	73	150		94	510
04:30 PM	114	52						33	106	113		130	549
04:45 PM	145	60						45	89	125		113	576
05:00 PM	129	62						41	109	115		120	576
05:15 PM	140	66						52	96	124		90	568
05:30 PM	114	70						50	89	129		112	564
05:45 PM	117	52						51	113	115		111	559
06:00 PM	106	49						51	99	83		108	496

PEAK HOUR = 4:45 to 5:45 PM

PEAK HOUR	EASTBOUND			NORTHBOUND			WESTBOUND			SOUTHBOUND			INT
TIME END	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL
05:00 PM	129	62	0	0	0	0	0	41	109	115	0	120	576
05:15 PM	140	66	0	0	0	0	0	52	96	124	0	90	568
05:30 PM	114	70	0	0	0	0	0	50	89	129	0	112	564
05:45 PM	117	52	0	0	0	0	0	51	113	115	0	111	559
PEAK HR. TOTALS	*500*	*250*	*0*	*0*	*0*	*0*	*0*	*194*	*407*	*483*	*0*	*433*	*2267*
PEAK HR. FACTORS	0.89	0.89	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.93	0.90	0.94	#DIV/0!	0.90	1

PEAK HOUR	EASTBOUND			NORTHBOUND			WESTBOUND			SOUTHBOUND			INT
TIME END	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL
05:00 PM	1	1	0	0	0	0	0	1	12	2	0	3	20
05:15 PM	1	0	0	0	0	0	0	1	10	1	0	1	14
05:30 PM	1	1	0	0	0	0	0	1	8	2	0	4	17
05:45 PM	2	2	0	0	0	0	0	1	9	1	0	1	16
HEAVEY VEH. TOTALS	*5*	*4*	*0*	*0*	*0*	*0*	*0*	*4*	*39*	*6*	*0*	*9*	*67*
% HEAVEY VEH.	1	2	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	2	10	1	#DIV/0!	2	

MANUAL COUNT DATA

Daly Ave / SR 412 & East 4th Street

3

	PEAK PM HIGHWAY PERIOD												
November 21, 2005	EASTBOUND			NORTHBOUND			WESTBOUND			SOUTHBOUND			INT
TIME END	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL
04:15 PM		147				26		11	104				288
04:30 PM		149				36		34	118				337
04:45 PM		198				24		28	115				365
05:00 PM		189				41		36	161				427
05:15 PM		169				38		30	137				374
05:30 PM		201				43		23	151				418
05:45 PM		218				23		31	159				431
06:00 PM		148				28		28	129				333

PEAK HOUR = 4:45 to 5:45 PM

PEAK HOUR	EASTBOUND			NORTHBOUND			WESTBOUND			SOUTHBOUND			INT
TIME END	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL
05:00 PM	0	189	0	0	0	41	0	36	161	0	0	0	427
05:15 PM	0	169	0	0	0	38	0	30	137	0	0	0	374
05:30 PM	0	201	0	0	0	43	0	23	151	0	0	0	418
05:45 PM	0	218	0	0	0	23	0	31	159	0	0	0	431
PEAK HR. TOTALS	*0*	*777*	*0*	*0*	*0*	*145*	*0*	*120*	*608*	*0*	*0*	*0*	*1650*
PEAK HR. FACTORS	#DIV/0!	0.89	#DIV/0!	#DIV/0!	#DIV/0!	0.84	#DIV/0!	0.83	0.94	#DIV/0!	#DIV/0!	#DIV/0!	1

PEAK HOUR	EASTBOUND			NORTHBOUND			WESTBOUND			SOUTHBOUND			INT
TIME END	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL
05:00 PM	0	3	0	0	0	0	0	0	3	0	0	0	6
05:15 PM	0	1	0	0	0	0	0	0	2	0	0	0	3
05:30 PM	0	3	0	0	0	1	0	0	0	0	0	0	4
05:45 PM	0	3	0	0	0	0	0	1	1	0	0	0	5
HEAVEY VEH. TOTALS	*0*	*10*	*0*	*0*	*0*	*1*	*0*	*1*	*6*	*0*	*0*	*0*	*18*
% HEAVEY VEH.	#DIV/0!	1	#DIV/0!	#DIV/0!	#DIV/0!	1	#DIV/0!	1	1	#DIV/0!	#DIV/0!	#DIV/0!	

MANUAL COUNT DATA

Stefko Blvd. & Broad Street

4

November 21, 2005	PEAK PM HIGHWAY PERIOD												
	EASTBOUND			NORTHBOUND			WESTBOUND			SOUTHBOUND			INT
TIME END	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL
04:15 PM	34	0	70	68	219	0	0	0	0	0	165	30	586
04:30 PM	38	0	52	28	119	0	0	0	0	0	97	32	366
04:45 PM	46	0	98	36	131	0	0	0	0	0	122	53	486
05:00 PM	47	0	97	44	128	0	0	0	1	0	140	40	497
05:15 PM	40	1	76	32	158	1	1	0	0	0	119	26	454
05:30 PM	50	0	95	30	177	0	0	2	0	1	189	52	596
05:45 PM	48	0	73	41	188	0	0	0	0	0	142	39	531
06:00 PM	46	0	58	42	147	0	0	0	0	0	118	56	467

PEAK HOUR = 4:45 to 5:45 PM

PEAK HOUR	EASTBOUND			NORTHBOUND			WESTBOUND			SOUTHBOUND			INT
TIME END	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL
05:00 PM	47	0	97	44	128	0	0	0	1	0	140	40	497
05:15 PM	40	1	76	32	158	1	1	0	0	0	119	26	454
05:30 PM	50	0	95	30	177	0	0	2	0	1	189	52	596
05:45 PM	48	0	73	41	188	0	0	0	0	0	142	39	531
PEAK HR. TOTALS	*185*	*1*	*341*	*147*	*651*	*1*	*1*	*2*	*1*	*1*	*590*	*157*	*2078*
PEAK HR. FACTORS	0.93	0.25	0.88	0.84	0.87	0.25	0.25	0.25	0.25	0.25	0.78	0.75	1

PEAK HOUR	EASTBOUND			NORTHBOUND			WESTBOUND			SOUTHBOUND			INT
TIME END	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL
05:00 PM	0	0	1	1	1	0	0	0	0	0	1	0	4
05:15 PM	1	0	1	0	2	0	0	0	0	0	1	1	6
05:30 PM	0	0	0	1	0	0	0	0	0	0	1	0	2
05:45 PM	0	0	0	1	1	0	0	0	0	0	0	0	2
HEAVEY VEH. TOTALS	*1*	*0*	*2*	*3*	*4*	*0*	*0*	*0*	*0*	*0*	*3*	*1*	*14*
% HEAVEY VEH.	1	0	1	2	1	0	0	0	0	0	1	1	

MANUAL COUNT DATA

PEAK SATURDAY HOUR CALCULATION

November 19, 2005	INTERSECTION NUMBER											
TIME END	1	2	3	4	5	6	7	8	9	10	TOTAL	HOURLY TOTAL
11:15 AM	290	361	151	345	0	0	0	0	0	0	1147	
11:30 AM	291	389	275	377	0	0	0	0	0	0	1332	
11:45 AM	338	456	293	380	0	0	0	0	0	0	1467	
12:00 PM	343	392	268	400	0	0	0	0	0	0	1403	5349
12:15 PM	253	413	264	423	0	0	0	0	0	0	1353	5555
12:30 PM	413	439	287	388	0	0	0	0	0	0	1527	5750
12:45 PM	318	448	306	441	0	0	0	0	0	0	1514	5797
01:00 PM	312	408	289	356	0	0	0	0	0	0	1365	5759
01:15 PM	363	395	308	349	0	0	0	0	0	0	1415	5821
01:30 PM	280	392	291	386	0	0	0	0	0	0	1349	5643
01:45 PM	374	447	293	445	0	0	0	0	0	0	1559	5689
02:00 PM	396	417	299	400	0	0	0	0	0	0	1512	5835
02:15 PM	356	438	296	410	0	0	0	0	0	0	1500	5920
02:30 PM	326	472	315	405	0	0	0	0	0	0	1518	6089
02:45 PM	358	459	272	371	0	0	0	0	0	0	1459	5990
03:00 PM	309	431	290	349	0	0	0	0	0	0	1379	5857

6089

MANUAL COUNT DATA

3rd Street/SR 412 & Hayes Street

1

	PEAK SATURDAY HIGHWAY PERIOD												
November 19, 2005	EASTBOUND			NORTHBOUND			WESTBOUND			SOUTHBOUND			INT
TIME END	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL
11:15 AM		112	16	25		43	20	74					290
11:30 AM		95	13	33		56	32	62					291
11:45 AM		84	19	31		64	44	96					338
12:00 PM		81	11	42		67	51	91					343
12:15 PM		75	20	20		49	30	59					253
12:30 PM		128	9	32		72	65	107					413
12:45 PM		112	7	18		63	47	71					318
01:00 PM		107	10	26		49	42	78					312
01:15 PM		98	12	32		77	48	96					363
01:30 PM		81	14	31		41	43	70					280
01:45 PM		108	12	28		70	55	101					374
02:00 PM		115	12	42		63	60	104					396
02:15 PM		89	14	47		61	65	80					356
02:30 PM		94	15	42		54	38	83					326
02:45 PM		101	14	35		60	41	107					358
03:00 PM		89	5	31		66	35	83					309

PEAK HOUR = 1:30 to 2:30 PM

PEAK HOUR	EASTBOUND			NORTHBOUND			WESTBOUND			SOUTHBOUND			INT
TIME END	LEFT	105	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL
01:45 PM	0	108	12	28	0	70	55	101	0	0	0	0	374
02:00 PM	0	115	12	42	0	63	60	104	0	0	0	0	396
02:15 PM	0	89	14	47	0	61	65	80	0	0	0	0	356
02:30 PM	0	94	15	42	0	54	38	83	0	0	0	0	326
PEAK HR. TOTALS	*0*	*406*	*53*	*159*	*0*	*248*	*218*	*368*	*0*	*0*	*0*	*0*	*1452*
PEAK HR. FACTORS	#DIV/0!	0.88	0.88	0.85	#DIV/0!	0.89	0.84	0.88	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	1

PEAK HOUR	EASTBOUND			NORTHBOUND			WESTBOUND			SOUTHBOUND			INT
TIME END	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL
01:45 PM	0	0	0	1	0	0	0	1	0	0	0	0	2
02:00 PM	0	2	0	0	0	1	1	0	0	0	0	0	4
02:15 PM	0	0	0	0	0	1	1	0	0	0	0	0	2
02:30 PM	0	1	0	0	0	0	0	1	0	0	0	0	2
HEAVEY VEH. TOTALS	*0*	*3*	*0*	*1*	*0*	*2*	*2*	*2*	*0*	*0*	*0*	*0*	*10*
% HEAVEY VEH.	#DIV/0!	1	0	1	#DIV/0!	1	1	1	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	

MANUAL COUNT DATA

Daly Ave / SR 412 & Stefko Blvd. (Minsi Trail Bridge)

2

November 12, 2005	PEAK SATURDAY HIGHWAY PERIOD												
	EASTBOUND			NORTHBOUND			WESTBOUND			SOUTHBOUND			INT
TIME END	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL
11:15 AM	80	44						42	57	68		70	361
11:30 AM	88	52						44	59	74		72	389
11:45 AM	117	66						48	66	81		78	456
12:00 PM	90	44						47	48	62		101	392
12:15 PM	88	44						45	58	75		104	413
12:30 PM	94	48						39	65	83		110	439
12:45 PM	98	45						61	76	71		98	448
01:00 PM	108	42						43	60	57		99	408
01:15 PM	88	44						43	57	73		91	395
01:30 PM	91	42						35	74	59		91	392
01:45 PM	104	53						47	80	73		90	447
02:00 PM	98	40						41	52	71		115	417
02:15 PM	97	51						40	76	77		97	438
02:30 PM	109	57						46	82	69		109	472
02:45 PM	104	60						49	76	65		104	459
03:00 PM	83	57						46	70	74		102	431

PEAK HOUR = 1:30 to 2:30 PM

PEAK HOUR	EASTBOUND			NORTHBOUND			WESTBOUND			SOUTHBOUND			INT
TIME END	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL
01:45 PM	104	53	0	0	0	0	0	47	80	73	0	90	447
02:00 PM	98	40	0	0	0	0	0	41	52	71	0	115	417
02:15 PM	97	51	0	0	0	0	0	40	76	77	0	97	438
02:30 PM	109	57	0	0	0	0	0	46	82	69	0	109	472
PEAK HR. TOTALS	*408*	*201*	*0*	*0*	*0*	*0*	*0*	*174*	*290*	*290*	*0*	*411*	*1774*
PEAK HR. FACTORS	0.93	0.88	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.93	0.88	0.94	#DIV/0!	0.89	1

PEAK HOUR	EASTBOUND			NORTHBOUND			WESTBOUND			SOUTHBOUND			INT
TIME END	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL
01:45 PM	1	1	0	0	0	0	0	1	1	1	0	1	6
02:00 PM	1	0	0	0	0	0	0	1	2	2	0	1	7
02:15 PM	0	1	0	0	0	0	0	0	2	1	0	1	5
02:30 PM	1	0	0	0	0	0	0	0	0	1	0	1	3
HEAVEY VEH. TOTALS	*3*	*2*	*0*	*0*	*0*	*0*	*0*	*2*	*5*	*5*	*0*	*4*	*21*
% HEAVEY VEH.	1	1	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	1	2	2	#DIV/0!	1	

MANUAL COUNT DATA

Daly Ave / SR 412 & East 4th Street

3

November 19, 2005	PEAK SATURDAY HIGHWAY PERIOD												
	EASTBOUND			NORTHBOUND			WESTBOUND			SOUTHBOUND			INT
TIME END	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL
11:15 AM		109				21		21	0				151
11:30 AM		122				26		29	98				275
11:45 AM		140				24		24	105				293
12:00 PM		109				22		25	112				268
12:15 PM		116				24		26	98				264
12:30 PM		129				25		32	101				287
12:45 PM		118				28		39	122				306
01:00 PM		118				25		38	109				289
01:15 PM		115				28		30	135				308
01:30 PM		116				29		28	119				291
01:45 PM		110				23		25	135				293
02:00 PM		118				27		35	119				299
02:15 PM		126				28		40	102				296
02:30 PM		125				30		33	127				315
02:45 PM		108				24		20	120				272
03:00 PM		115				39		31	106				290

PEAK HOUR = 1:30 to 2:30 PM

PEAK HOUR	EASTBOUND			NORTHBOUND			WESTBOUND			SOUTHBOUND			INT
TIME END	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL
01:45 PM	0	110	0	0	0	23	0	25	135	0	0	0	293
02:00 PM	0	118	0	0	0	27	0	35	119	0	0	0	299
02:15 PM	0	126	0	0	0	28	0	40	102	0	0	0	296
02:30 PM	0	125	0	0	0	30	0	33	127	0	0	0	315
PEAK HR. TOTALS	*0*	*479*	*0*	*0*	*0*	*108*	*0*	*133*	*483*	*0*	*0*	*0*	*1203*
PEAK HR. FACTORS	#DIV/0!	0.95	#DIV/0!	#DIV/0!	#DIV/0!	0.90	#DIV/0!	0.83	0.89	#DIV/0!	#DIV/0!	#DIV/0!	1

PEAK HOUR	EASTBOUND			NORTHBOUND			WESTBOUND			SOUTHBOUND			INT
TIME END	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL
01:45 PM	0	3	0	0	0	0	0	0	2	0	0	0	5
02:00 PM	0	2	0	0	0	1	0	1	3	0	0	0	7
02:15 PM	0	2	0	0	0	0	0	1	3	0	0	0	6
02:30 PM	0	5	0	0	0	1	0	1	4	0	0	0	11
HEAVEY VEH. TOTALS	*0*	*12*	*0*	*0*	*0*	*2*	*0*	*3*	*12*	*0*	*0*	*0*	*29*
% HEAVEY VEH.	#DIV/0!	3	#DIV/0!	#DIV/0!	#DIV/0!	2	#DIV/0!	2	2	#DIV/0!	#DIV/0!	#DIV/0!	

MANUAL COUNT DATA

Stefko Blvd. & Broad Street

4

November 5, 2005	PEAK SATURDAY HIGHWAY PERIOD												
	EASTBOUND			NORTHBOUND			WESTBOUND			SOUTHBOUND			INT
TIME END	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL
11:15 AM	41	0	28	14	125	0	0	0	0	0	115	22	345
11:30 AM	47	0	35	15	130	0	0	0	1	0	122	27	377
11:45 AM	43	0	32	18	126	1	0	1	1	0	129	29	380
12:00 PM	47	1	28	29	126	0	0	2	0	0	124	42	400
12:15 PM	55	0	35	25	119	0	0	0	0	0	145	45	423
12:30 PM	49	0	36	24	110	0	0	0	0	0	140	28	388
12:45 PM	43	0	32	18	149	0	0	0	0	0	163	36	441
01:00 PM	32	0	26	20	116	0	0	0	1	0	132	29	356
01:15 PM	41	0	33	29	110	0	0	1	0	0	108	27	349
01:30 PM	44	0	32	24	123	0	0	1	0	0	130	32	386
01:45 PM	51	0	31	19	149	0	0	1	0	0	150	44	445
02:00 PM	54	1	34	23	130	0	1	2	1	0	111	43	400
02:15 PM	52	0	28	31	138	0	0	0	0	1	132	28	410
02:30 PM	35	0	29	30	140	0	0	1	0	0	135	35	405
02:45 PM	32	1	41	26	100	0	0	0	1	0	136	34	371
03:00 PM	43	0	25	24	136	0	0	0	0	0	122	0	349

PEAK HOUR = 1:30 to 2:30 PM

PEAK HOUR	EASTBOUND			NORTHBOUND			WESTBOUND			SOUTHBOUND			INT
TIME END	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL
01:45 PM	51	0	31	19	149	0	0	1	0	0	150	44	445
02:00 PM	54	1	34	23	130	0	1	2	1	0	111	43	400
02:15 PM	52	0	28	31	138	0	0	0	0	1	132	28	410
02:30 PM	35	0	29	30	140	0	0	1	0	0	135	35	405
PEAK HR. TOTALS	*192*	*1*	*122*	*103*	*557*	*0*	*1*	*4*	*1*	*1*	*528*	*150*	*1660*
PEAK HR. FACTORS	0.89	0.25	0.90	0.83	0.93	#DIV/0!	0.25	0.50	0.25	0.25	0.88	0.85	1

PEAK HOUR	EASTBOUND			NORTHBOUND			WESTBOUND			SOUTHBOUND			INT
TIME END	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL
01:45 PM	0	0	0	1	1	0	0	0	0	0	3	1	6
02:00 PM	0	0	1	0	1	0	0	0	0	0	7	1	10
02:15 PM	1	0	0	0	2	0	0	0	0	0	5	1	9
02:30 PM	0	0	0	0	0	0	0	0	0	0	9	0	9
HEAVEY VEH. TOTALS	*1*	*0*	*1*	*1*	*4*	*0*	*0*	*0*	*0*	*0*	*24*	*3*	*34*
% HEAVEY VEH.	1	0	1	1	1	#DIV/0!	0	0	0	0	5	2	

DATA INPUT

DATA INPUT

PEAK AM HIGHWAY HOUR									
File Name	06-934\EX2				SANDS BETHWORKS DEVELOPMENT (PHASE 1)				
Date Printed	10/19/06								
Design Year	2008								
Growth Factor	1.015								
Peak Hour		2005	OTHER	2008	NEW TRIPS			PASS	2008
INTERSECTION NAME	APPROACH AND MOVEMENT	EXISTING TRAFFIC VOLUMES	DEVELOPMENT TRAFFIC VOLUMES	"NO-BUILD" TRAFFIC VOLUMES	CASINO	RETAIL	TOTAL	BY TRIPS	"BUILD" TRAFFIC VOLUMES
Intersection No. 1	EB Through	519	284	811	134	32	166		977
Daly Avenue	WB Through	74	0	75			0		75
and	WB Right	727	56	794	157	50	207		1001
East 4th Street	NB Right	106	0	108			0		108
	ALL APPR.	1426	340	1787	291	82	373	0	2160
Intersection No. 2	EB Through	519	284	811			0		811
Daly Avenue	WB Through	727	56	794			0		794
and	WB Right	0	0	0	157	50	207		207
East Casino Access Road	SB Left	0	0	0	134	32	166		166
	ALL APPR.	1246	340	1605	291	82	373	0	1978
Intersection No. 3	EB Left	0	0	0	24		24		24
	EB Through	519	284	811			0		811
Daly Avenue									
and	WB Through	727	56	794			0		794
West Casino Access Road									
	SB Right	0	0	0	72		72		72
	ALL APPR.	1246	340	1605	96	0	96	0	1701
Intersection No.4	EB Left	377	0	383		3	3		386
	EB Through	193	213	409			0		409
Daly Avenue									
and	WB Through	273	42	319	51		51		370
Stefko Boulevard	WB Right	510	14	532	21		21		553
	SB Left	344	71	420	24		24		444
	SB Right	668	0	678		4	4		682
	ALL APPR.	2365	340	2740	96	7	103	0	2843
Intersection No. 5	EB Left	0	0	0	60	29	89		89
	EB Through	570	213	792			0		792
Daly Avenue									
and	WB Through	941	42	997	51		51		1048
Retail Access Road	WB Right	0	0	0		4	4		4
	SB Left	0	0	0		3	3		3
	SB Right	0	0	0		18	18		18
	ALL APPR.	1511	255	1789	111	54	165	0	1954
Intersection No. 6	EB Through	288	213	505	60	29	89		594
	EB Right	39	0	40			0		40
East 3rd Street									
and	WB Left	324	0	329			0		329
Hayes Avenue	WB Through	617	42	668	51	18	69		737
	NB Left	157	0	159			0		159
	NB Right	255	0	259			0		259
	ALL APPR.	1680	255	1960	111	47	158	0	2118
Intersection No. 7	EB Left	118	0	120			0		120
	EB Through	4	0	4			0		4
Stefko Boulevard	EB Right	119	0	121			0		121
and									
East Broad Street	WB Left	2	0	2			0		2
	WB Through	3	0	3			0		3
	WB Right	1	0	1			0		1
	NB Left	162	0	164			0		164
	NB Through	466	14	487	21	3	24		511
	NB Right	1	0	1			0		1
	SB Left	3	0	3			0		3
	SB Through	621	71	701	24	4	28		729
	SB Right	232	0	235			0		235
	ALL APPR.	1732	85	1843	45	7	52	0	1895

DATA INPUT

PEAK PM HIGHWAY HOUR					SANDS BETHWORKS DEVELOPMENT (PHASE 1)				
File Name	06-934\EX2								
Date Printed	10/19/06								
Design Year	2008								
Growth Factor	1.015								
Peak Hour		2005	OTHER	2008	NEW TRIPS			PASS	2008 "BUILD"
INTERSECTION NAME	APPROACH AND MOVEMENT	EXISTING TRAFFIC VOLUMES	DEVELOPMENT TRAFFIC VOLUMES	"NO-BUILD" TRAFFIC VOLUMES	CASINO	RETAIL	TOTAL	BY TRIPS	TRAFFIC VOLUMES
Intersection No. 1	EB Through	780	81	873	262	177	439	-28	1284
Daly Avenue	WB Through	121	0	123			0		123
and	WB Right	610	266	885	281	164	445	-49	1281
East 4th Street									
	NB Right	146	0	148			0		148
	ALL APPR.	1657	347	2029	543	341	884	-77	2836
Intersection No. 2	EB Through	780	81	873			0	-28	845
Daly Avenue	WB Through	610	266	885			0	-49	836
and	WB Right	0	0	0	281	164	445		445
East Casino Access Road									
	SB Left	0	0	0	262	177	439		439
	ALL APPR.	1390	347	1758	543	341	884	-77	2565
Intersection No. 3	EB Left	0	0	0	43		43		43
	EB Through	780	81	873			0	-28	845
Daly Avenue									
and	WB Through	610	266	885			0	-49	836
West Casino Access Road									
	SB Right	0	0	0	141		141		141
	ALL APPR.	1390	347	1758	184	0	184	-77	1865
Intersection No.4	EB Left	502	0	510		15	15		525
	EB Through	251	61	316			0	-28	288
Daly Avenue									
and	WB Through	195	200	398	101		101	-49	450
Stefko Boulevard	WB Right	409	66	481	40		40		521
	SB Left	485	20	512	43		43		555
	SB Right	435	0	442		14	14	-4	452
	ALL APPR.	2277	347	2658	184	29	213	-81	2790
Intersection No. 5	EB Left	0	0	0	108	95	203		203
	EB Through	753	61	825			0	-28	797
Daly Avenue									
and	WB Through	630	200	839	101		101	-53	887
Retail Access Road	WB Right	0	0	0		14	14		14
	SB Left	0	0	0		15	15		15
	SB Right	0	0	0		103	103		103
	ALL APPR.	1383	261	1665	209	227	436	-81	2020
Intersection No. 6	EB Through	485	61	553	108	95	203	-28	728
	EB Right	106	0	108			0		108
East 3rd Street									
and	WB Left	317	0	322			0		322
Hayes Avenue	WB Through	310	200	515	101	103	204	-53	666
	NB Left	151	0	153			0		153
	NB Right	273	0	277			0		277
	ALL APPR.	1642	261	1928	209	198	407	-81	2254
Intersection No. 7	EB Left	186	0	189			0		189
	EB Through	1	0	1			0		1
Stefko Boulevard	EB Right	343	0	348			0		348
and									
East Broad Street	WB Left	1	0	1			0		1
	WB Through	2	0	2			0		2
	WB Right	1	0	1			0		1
	NB Left	148	0	150			0		150
	NB Through	653	66	729	40	15	55		784
	NB Right	1	0	1			0		1
	SB Left	1	0	1			0		1
	SB Through	592	20	621	43	14	57	-4	674
	SB Right	158	0	160			0		160
	ALL APPR.	2087	86	2204	83	29	112	-4	2312

DATA INPUT

PEAK SATURDAY HIGHWAY HOUR					SANDS BETHWORKS DEVELOPMENT (PHASE 1)				
File Name	06-934\EX2								
Date Printed	10/19/06								
Design Year	2008								
Growth Factor	1.015								
Peak Hour		2005	OTHER	2008	NEW TRIPS			PASS	2008 "BUILD"
INTERSECTION NAME	APPROACH AND MOVEMENT	EXISTING TRAFFIC VOLUMES	DEVELOPMENT TRAFFIC VOLUMES	"NO-BUILD" TRAFFIC VOLUMES	CASINO	RETAIL	TOTAL	BY TRIPS	TRAFFIC VOLUMES
Intersection No. 1	EB Through	481	71	559	532	224	756	-47	1268
Daly Avenue	WB Through	134	0	136			0		136
and	WB Right	485	44	536	532	243	775	-80	1231
East 4th Street									
	NB Right	109	0	111			0		111
	ALL APPR.	1209	115	1342	1064	467	1531	-127	2746
Intersection No. 2	EB Through	481	71	559			0	-47	512
Daly Avenue	WB Through	485	44	536			0	-80	456
and	WB Right	0	0	0	532	243	775		775
East Casino Access Road									
	SB Left	0	0	0	532	224	756		756
	ALL APPR.	966	115	1095	1064	467	1531	-127	2499
Intersection No. 3	EB Left	0	0	0	82		82		82
	EB Through	481	71	559			0	-47	512
Daly Avenue									
and	WB Through	485	44	536			0	-80	456
West Casino Access Road									
	SB Right	0	0	0	286		286		286
	ALL APPR.	966	115	1095	368	0	368	-127	1336
Intersection No.4	EB Left	410	0	416		19	19		435
	EB Through	203	53	259			0	-47	212
Daly Avenue									
and	WB Through	175	33	211	204		204	-80	335
Stefko Boulevard	WB Right	292	11	307	82		82		389
	SB Left	291	18	313	82		82		395
	SB Right	413	0	419		20	20	-6	433
	ALL APPR.	1784	115	1926	368	39	407	-133	2200
Intersection No. 5	EB Left	0	0	0	204	142	346		346
	EB Through	613	53	675			0	-47	628
Daly Avenue									
and	WB Through	588	33	630	204		204	-86	748
Retail Access Road	WB Right	0	0	0		20	20		20
	SB Left	0	0	0		19	19		19
	SB Right	0	0	0		130	130		130
	ALL APPR.	1201	86	1305	408	311	719	-133	1891
Intersection No. 6	EB Through	408	53	467	204	142	346	-47	766
	EB Right	54	0	55			0		55
East 3rd Street									
and	WB Left	220	0	223			0		223
Hayes Avenue	WB Through	370	33	409	204	130	334	-86	657
	NB Left	160	0	162			0		162
	NB Right	250	0	254			0		254
	ALL APPR.	1462	86	1570	408	272	680	-133	2117
Intersection No. 7	EB Left	194	0	197			0		197
	EB Through	1	0	1			0		1
Stefko Boulevard	EB Right	123	0	125			0		125
and									
East Broad Street	WB Left	1	0	1			0		1
	WB Through	4	0	4			0		4
	WB Right	1	0	1			0		1
	NB Left	104	0	106			0		106
	NB Through	560	11	579	82	19	101		680
	NB Right	1	0	1			0		1
	SB Left	1	0	1			0		1
	SB Through	531	18	557	82	20	102	-6	653
	SB Right	151	0	153			0		153
	ALL APPR.	1672	29	1726	164	39	203	-6	1923

DATA INPUT

PEAK AM HIGHWAY HOUR									
File Name	06-934\EX2				SANDS BETHWORKS DEVELOPMENT (FULL-BUILD OUT)				
Date Printed	10/19/06								
Design Year+10 Years	2018								
Growth Factor	1.067								
Peak Hour		2005	OTHER	2018	NEW TRIPS			PASS	2018 "BUILD"
INTERSECTION NAME	APPROACH AND MOVEMENT	EXISTING TRAFFIC VOLUMES	DEVELOPMENT TRAFFIC VOLUMES	"NO-BUILD" TRAFFIC VOLUMES	CASINO	RETAIL	TOTAL	BY TRIPS	TRAFFIC VOLUMES
Intersection No. 1	EB Through	519	1136	1690	134	191	325		2015
Daly Avenue	WB Through	74	0	79			0		79
and	WB Right	727	224	1000	157	183	340		1340
East 4th Street									
	NB Right	106	0	113			0		113
	ALL APPR.	1426	1360	2882	291	374	665	0	3547
Intersection No. 2	EB Through	537	1136	1709			0		1709
Daly Avenue	WB Through	783	224	1059			0		1059
and	WB Right	0	0	0	157	183	340		340
East Casino Access Road									
	SB Left	0	0	0	134	191	325		325
	ALL APPR.	1320	1360	2768	291	374	665	0	3433
Intersection No. 3	EB Left	0	0	0	24		24		24
	EB Through	537	1136	1709			0		1709
Daly Avenue									
and	WB Through	783	224	1059			0		1059
West Casino Access Road									
	SB Right	0	0	0	21		21		21
	ALL APPR.	1320	1360	2768	45	0	45	0	2813
Intersection No.4	EB Left	377	0	402		16	16		418
	EB Through	193	852	1058			0		1058
Daly Avenue									
and	WB Through	273	168	459			0		459
Stefko Boulevard	WB Right	510	56	600	21		21		621
	SB Left	344	284	651	24		24		675
	SB Right	668	0	713		15	15		728
	ALL APPR.	2365	1360	3883	45	31	76	0	3959
Intersection No. 5	EB Left	0	0	0	60	29	89		89
	EB Through	570	852	1460			0		1460
Daly Avenue									
and	WB Through	941	168	1172			0		1172
Retail Access Road	WB Right	0	0	0		15	15		15
	SB Left	0	0	0		16	16		16
	SB Right	0	0	0		18	18		18
	ALL APPR.	1511	1020	2632	60	78	138	0	2770
Intersection No. 6	EB Through	288	852	1159	60	29	89		1248
	EB Right	39	0	42			0		42
East 3rd Street									
and	WB Left	324	0	346			0		346
Hayes Avenue	WB Through	617	168	826		18	18		844
	NB Left	157	0	168			0		168
	NB Right	255	0	272			0		272
	ALL APPR.	1680	1020	2813	60	47	107	0	2920
Intersection No. 7	EB Left	118	0	126			0		126
	EB Through	4	0	4			0		4
Stefko Boulevard	EB Right	119	0	127			0		127
and									
East Broad Street	WB Left	2	0	2			0		2
	WB Through	3	0	3			0		3
	WB Right	1	0	1			0		1
	NB Left	162	0	173			0		173
	NB Through	466	56	553	21	16	37		590
	NB Right	1	0	1			0		1
	SB Left	3	0	3			0		3
	SB Through	621	284	947	24	15	39		986
	SB Right	232	0	248			0		248
	ALL APPR.	1732	340	2188	45	31	76	0	2264

DATA INPUT

PEAK PM HIGHWAY HOUR									
File Name	06-934\EX2				SANDS BETHWORKS DEVELOPMENT (FULL-BUILD OUT)				
Date Printed	10/19/06								
Design Year+10 Years	2018								
Growth Factor	1.067								
Peak Hour		2005	OTHER	2018	NEW TRIPS			PASS	2018 "BUILD"
INTERSECTION NAME	APPROACH AND MOVEMENT	EXISTING TRAFFIC VOLUMES	DEVELOPMENT TRAFFIC VOLUMES	"NO-BUILD" TRAFFIC VOLUMES	CASINO	RETAIL	TOTAL	BY TRIPS	TRAFFIC VOLUMES
Intersection No. 1	EB Through	780	325	1157	262	595	857	-55	1959
Daly Avenue	WB Through	121	0	129			0		129
and	WB Right	610	1064	1715	281	642	923	-96	2542
East 4th Street	NB Right	146	0	156			0		156
	ALL APPR.	1657	1389	3157	543	1237	1780	-151	4786
Intersection No. 2	EB Through	780	325	1157			0	-55	1102
Daly Avenue	WB Through	610	1064	1715			0	-96	1619
and	WB Right	0	0	0	281	642	923		923
East Casino Access Road	SB Left	0	0	0	262	595	857		857
	ALL APPR.	1390	1389	2872	543	1237	1780	-151	4501
Intersection No. 3	EB Left	0	0	0	43		43		43
	EB Through	780	325	1157			0	-55	1102
Daly Avenue									
and	WB Through	610	1064	1715			0	-96	1619
West Casino Access Road	SB Right	0	0	0	40		40		40
	ALL APPR.	1390	1389	2872	83	0	83	-151	2804
Intersection No.4	EB Left	502	0	536		50	50		586
	EB Through	251	244	512			0	-55	457
Daly Avenue									
and	WB Through	195	798	1006			0	-96	910
Stefko Boulevard	WB Right	409	266	702	40		40		742
	SB Left	485	81	598	43		43		641
	SB Right	435	0	464		54	54	-8	510
	ALL APPR.	2277	1389	3819	83	104	187	-159	3847
Intersection No. 5	EB Left	0	0	0	108	95	203		203
	EB Through	758	244	1053			0	-55	998
Daly Avenue									
and	WB Through	630	798	1470			0	-104	1366
Retail Access Road	WB Right	0	0	0		54	54		54
	SB Left	0	0	0		50	50		50
	SB Right	0	0	0		103	103		103
	ALL APPR.	1388	1042	2523	108	302	410	-159	2774
Intersection No. 6	EB Through	485	244	761	108	95	203	-55	909
	EB Right	106	0	113			0		113
East 3rd Street									
and	WB Left	317	0	338			0		338
Hayes Avenue	WB Through	310	798	1129		103	103	-104	1128
	NB Left	151	0	161			0		161
	NB Right	273	0	291			0		291
	ALL APPR.	1642	1042	2794	108	198	306	-159	2941
Intersection No. 7	EB Left	185	0	198			0		198
	EB Through	1	0	1			0		1
Stefko Boulevard	EB Right	343	0	366			0		366
and									
East Broad Street	WB Left	1	0	1			0		1
	WB Through	2	0	2			0		2
	WB Right	1	0	1			0		1
	NB Left	148	0	158			0		158
	NB Through	653	266	963	40	50	90		1053
	NB Right	1	0	1			0		1
	SB Left	1	0	1			0		1
	SB Through	592	81	713	43	54	97	-8	802
	SB Right	158	0	169			0		169
	ALL APPR.	2087	347	2574	83	104	187	-8	2753

DATA INPUT

PEAK SATURDAY HIGHWAY HOUR					SANDS BETHWORKS DEVELOPMENT (FULL-BUILD OUT)				
File Name	06-934\EX2								
Date Printed	10/19/06								
Design Year+10 Years	2018								
Growth Factor	1.067								
Peak Hour									
					NEW TRIPS				
INTERSECTION NAME	APPROACH AND MOVEMENT	2005 EXISTING TRAFFIC VOLUMES	OTHER DEVELOPMENT TRAFFIC VOLUMES	2018 "NO-BUILD" TRAFFIC VOLUMES	CASINO	RETAIL	TOTAL	PASS BY TRIPS	2018 - "BUILD" TRAFFIC VOLUMES
Intersection No. 1	EB Through	481	282	795	532	861	1393	-90	2098
Daly Avenue	WB Through	134	0	143			0		143
and	WB Right	485	175	692	532	937	1469	-153	2008
East 4th Street	NB Right	109	0	116			0		116
	ALL APPR.	1209	457	1747	1064	1798	2862	-243	4366
Intersection No. 2	EB Through	494	282	809			0	-90	719
Daly Avenue	WB Through	485	175	692			0	-153	539
and	WB Right	0	0	0	532	937	1469		1469
East Casino Access Road	SB Left	0	0	0	532	861	1393		1393
	ALL APPR.	979	457	1502	1064	1798	2862	-243	4121
Intersection No. 3	EB Left	0	0	0	82		82		82
	EB Through	494	282	809			0	-90	719
Daly Avenue									
and	WB Through	485	175	692			0	-153	539
West Casino Access Road									
	SB Right	0	0	0	82		82		82
	ALL APPR.	979	457	1502	164	0	164	-243	1423
Intersection No.4	EB Left	410	0	437		72	72		509
	EB Through	203	211	428			0	-90	338
Daly Avenue									
and	WB Through	175	131	318			0	-153	165
Stefko Boulevard	WB Right	292	44	356	82		82		438
	SB Left	291	71	381	82		82		463
	SB Right	413	0	441		78	78	-12	507
	ALL APPR.	1784	457	2361	164	150	314	-255	2420
Intersection No. 5	EB Left	0	0	0	204	142	346		346
	EB Through	658	211	913			0	-90	823
Daly Avenue									
and	WB Through	590	131	761			0	-165	596
Retail Access Road	WB Right	0	0	0		78	78		78
	SB Left	0	0	0		72	72		72
	SB Right	0	0	0		130	130		130
	ALL APPR.	1248	342	1674	204	422	626	-255	2045
Intersection No. 6	EB Through	408	211	646	204	142	346	-90	902
	EB Right	54	0	58			0		58
East 3rd Street									
and	WB Left	220	0	235			0		235
Hayes Avenue	WB Through	370	131	526		130	130	-165	491
	NB Left	160	0	171			0		171
	NB Right	250	0	267			0		267
	ALL APPR.	1462	342	1902	204	272	476	-255	2123
Intersection No. 7	EB Left	194	0	207			0		207
	EB Through	1	0	1			0		1
Stefko Boulevard	EB Right	123	0	131			0		131
and									
East Broad Street	WB Left	1	0	1			0		1
	WB Through	4	0	4			0		4
	WB Right	1	0	1			0		1
	NB Left	104	0	111			0		111
	NB Through	560	44	642	82	72	154		796
	NB Right	1	0	1			0		1
	SB Left	1	0	1			0		1
	SB Through	531	71	638	82	78	160	-12	786
	SB Right	151	0	161			0		161
	ALL APPR.	1672	115	1899	164	150	314	-12	2201

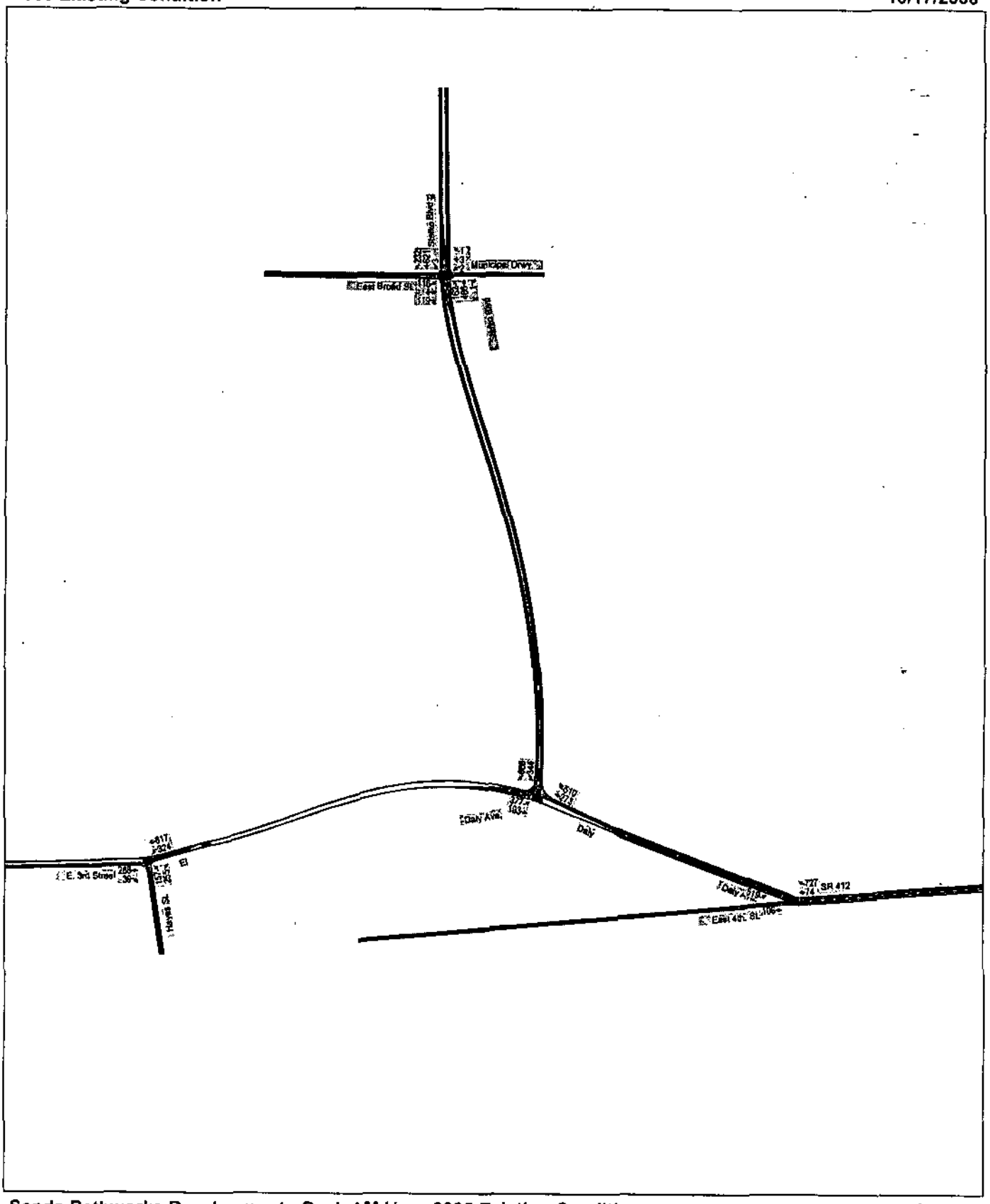
DATA OUTPUT

CAPACITY ANALYSES

PEAK AM HOUR – 2005 EXISTING CONDITION

Map - Sands Bethworks Development - Peak AM Hour
2005 Existing Condition

10/17/2006



Sands Bethworks Development - Peak AM Hour 2005 Existing Condition

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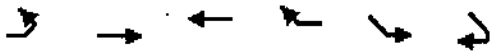
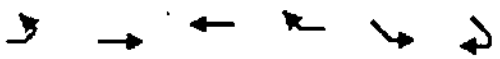


Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑	↑	↱	↰↰	
Volume (vph)	0	106	74	727	519	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	15	13	13	13	12
Lane Util. Factor	1.00	1.00	1.00	1.00	0.97	1.00
Frt				0.950		
Flt Protected					0.950	
Satd. Flow (prot)	0	1883	1707	1760	3202	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	1883	1707	1760	3202	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				826		
Link Speed (mph)		30	35		35	
Link Distance (ft)		2482	1509		1073	
Travel Time (s)		56.4	29.4		20.9	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.87	0.90
Heavy Vehicles (%)	0%	11%	15%	6%	13%	0%
Adj. Flow (vph)	0	120	84	826	597	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	120	84	826	597	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		26	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	0.88	0.96	0.96	0.96	1.00
Turning Speed (mph)	15			9	25	9
Number of Detectors		1	1	1	1	
Detector Template						
Leading Detector (ft)		50	50	0	0	
Trailing Detector (ft)		0	0	0	0	
Detector 1 Position(ft)		0	0	0	0	
Detector 1 Size(ft)		50	50	0	0	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0	
Turn Type				Free		
Protected Phases		1	1		4	
Permitted Phases		1		Free		
Detector Phase		1	1		4	
Switch Phase						
Minimum Initial (s)		4.0	4.0		4.0	
Minimum Split (s)		10.0	10.0		22.0	
Total Split (s)	0.0	24.0	24.0	0.0	36.0	0.0
Total Split (%)	0.0%	40.0%	40.0%	0.0%	60.0%	0.0%
Maximum Green (s)		18.0	18.0		30.0	



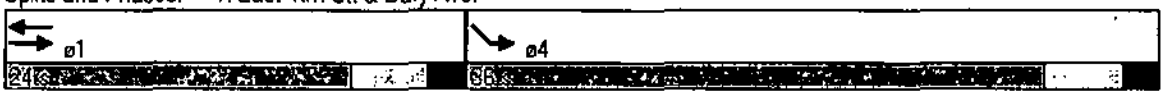
Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Yellow Time (s)		4.0	4.0		4.0	
All-Red Time (s)		2.0	2.0		2.0	
Lost Time Adjust (s)	0.0	-2.0	-2.0	-2.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	2.0	6.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	
Recall Mode		Min	Min		Min	
Act Effct Green (s)		9.5	9.5	30.7	11.1	
Actuated g/C Ratio		0.31	0.31	1.00	0.36	
v/c Ratio		0.21	0.16	0.47	0.52	
Control Delay		9.6	9.4	0.9	9.6	
Queue Delay		0.0	0.0	0.0	0.0	
Total Delay		9.6	9.4	0.9	9.6	
LOS		A	A	A	A	
Approach Delay		9.6	1.7		9.6	
Approach LOS		A	A		A	
90th %ile Green (s)		9.9	9.9		15.7	
90th %ile Term Code		Gap	Gap		Gap	
70th %ile Green (s)		8.2	8.2		12.2	
70th %ile Term Code		Gap	Gap		Gap	
50th %ile Green (s)		7.3	7.3		10.7	
50th %ile Term Code		Gap	Gap		Gap	
30th %ile Green (s)		6.5	6.5		9.5	
30th %ile Term Code		Gap	Gap		Gap	
10th %ile Green (s)		5.6	5.6		8.0	
10th %ile Term Code		Gap	Gap		Gap	
Stops (vph)		71	51	1	343	
Fuel Used(gal)		3	1	8	10	
CO Emissions (g/hr)		185	93	563	664	
NOx Emissions (g/hr)		36	18	110	129	
VOC Emissions (g/hr)		43	22	131	154	
Dilemma Vehicles (#)		0	11	0	0	
Queue Length 50th (ft)		13	9	0	35	
Queue Length 95th (ft)		41	31	0	66	
Internal Link Dist (ft)		2402	1429		993	
Turn Bay Length (ft)						
Base Capacity (vph)		917	831	1760	1942	
Starvation Cap Reductn		0	0	0	0	
Spillback Cap Reductn		0	0	0	0	
Storage Cap Reductn		0	0	0	0	
Reduced v/c Ratio		0.13	0.10	0.47	0.31	

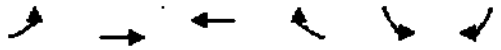
Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 30.7
Natural Cycle: 40
Control Type: Actuated-Uncoordinated

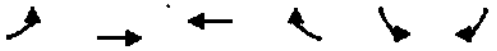
Maximum v/c Ratio: 0.52
Intersection Signal Delay: 5.2 Intersection LOS: A
Intersection Capacity Utilization 28.7% ICU Level of Service A
Analysis Period (min) 15
90th %ile Actuated Cycle: 37.6
70th %ile Actuated Cycle: 32.4
50th %ile Actuated Cycle: 30
30th %ile Actuated Cycle: 28
10th %ile Actuated Cycle: 25.6
* User Entered Value

Splits and Phases: 1: East 4th. St. & Daly Ave.





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	377	193	273	510	344	668
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	13	13	12
Storage Length (ft)	150			0	0	0
Storage Lanes	2			1	1	1
Taper Length (ft)	300			25	25	25
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3303	1597	1712	1560	1696	1509
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3303	1597	1712	1560	1696	1509
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				89		199
Link Speed (mph)		35	35		35	
Link Distance (ft)		1917	504		3028	
Travel Time (s)		37.3	9.8		59.0	
Peak Hour Factor	0.93	0.95	0.92	0.84	0.85	0.83
Heavy Vehicles (%)	6%	19%	11%	7%	10%	7%
Adj. Flow (vph)	405	203	297	607	405	805
Shared Lane Traffic (%)						
Lane Group Flow (vph)	405	203	297	607	405	805
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	0.96	0.96	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	1	1	1	1	1
Detector Template						
Leading Detector (ft)	30	0	5	30	30	30
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	30	0	5	30	30	30
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot			pm+ov		pm+ov
Protected Phases	7	4	8	6	6	7
Permitted Phases				8		6
Detector Phase	7	4	8	6	6	7
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0	19.0	21.0	21.0	9.0



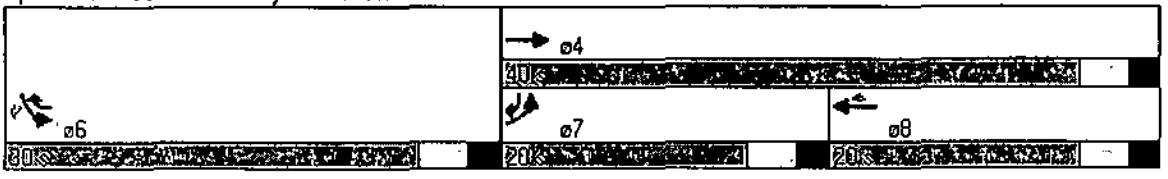
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Total Split (s)	20.0	40.0	20.0	30.0	30.0	20.0
Total Split (%)	28.6%	57.1%	28.6%	42.9%	42.9%	28.6%
Maximum Green (s)	15.0	35.0	15.0	25.0	25.0	15.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	5.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead		Lag			Lead
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	Min	Min	Min	Min	Min
Act Effct Green (s)	13.5	33.4	14.8	39.8	20.9	39.5
Actuated g/C Ratio	0.22	0.53	0.24	0.64	0.33	0.63
v/c Ratio	0.57	0.24	0.74	0.59	0.71	0.78
Control Delay	26.7	9.7	36.8	8.3	26.4	12.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.7	9.7	36.8	8.3	26.4	12.7
LOS	C	A	D	A	C	B
Approach Delay		21.0	17.7		17.3	
Approach LOS		C	B		B	
90th %ile Green (s)	15.0	35.0	15.0	25.0	25.0	15.0
90th %ile Term Code	Max	Hold	Max	Max	Max	Max
70th %ile Green (s)	15.0	35.0	15.0	25.0	25.0	15.0
70th %ile Term Code	Max	Hold	Max	Max	Max	Max
50th %ile Green (s)	15.0	35.0	15.0	22.4	22.4	15.0
50th %ile Term Code	Max	Hold	Max	Gap	Gap	Max
30th %ile Green (s)	13.0	31.9	13.9	17.6	17.6	13.0
30th %ile Term Code	Gap	Hold	Gap	Gap	Gap	Gap
10th %ile Green (s)	9.4	24.1	9.7	11.3	11.3	9.4
10th %ile Term Code	Gap	Hold	Gap	Gap	Gap	Gap
Stops (vph)	316	95	227	229	279	363
Fuel Used(gal)	11	4	7	8	11	19
CO Emissions (g/hr)	739	296	480	587	802	1333
NOx Emissions (g/hr)	144	58	93	114	156	259
VOC Emissions (g/hr)	171	69	111	136	186	309
Dilemma Vehicles (#)	0	14	20	0	0	0
Queue Length 50th (ft)	76	41	113	100	141	145
Queue Length 95th (ft)	122	82	#233	155	213	229
Internal Link Dist (ft)		1837	424		2948	
Turn Bay Length (ft)	150					
Base Capacity (vph)	786	887	436	1078	659	1085
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	0.52	0.23	0.68	0.56	0.61	0.74

Intersection Summary

Area Type: Other
Cycle Length: 70

Actuated Cycle Length: 62.5
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 18.3 Intersection LOS: B
Intersection Capacity Utilization 62.4% ICU Level of Service B
Analysis Period (min) 15
90th %ile Actuated Cycle: 70
70th %ile Actuated Cycle: 70
50th %ile Actuated Cycle: 67.4
30th %ile Actuated Cycle: 59.5
10th %ile Actuated Cycle: 45.4
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: Daly Ave. & Stefko Blvd



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	288	39	324	617	157	255
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	11	12
Storage Length (ft)		0	200		0	0
Storage Lanes		1	1		1	1
Taper Length (ft)		25	200		25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1652	1589	1703	1776	1694	1568
Flt Permitted			0.361		0.950	
Satd. Flow (perm)	1652	1589	647	1776	1694	1568
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		56				327
Link Speed (mph)	35			35	30	
Link Distance (ft)	1771			341	540	
Travel Time (s)	34.5			6.6	12.3	
Peak Hour Factor	0.92	0.70	0.85	0.91	0.75	0.78
Heavy Vehicles (%)	15%	5%	6%	7%	3%	3%
Adj. Flow (vph)	313	56	381	678	209	327
Shared Lane Traffic (%)						
Lane Group Flow (vph)	313	56	381	678	209	327
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	11	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	0.96	1.00	1.00	1.04	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1	1	1	1	1	1
Detector Template						
Leading Detector (ft)	5	30	30	0	30	30
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	5	30	30	0	30	30
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type		Perm	pm+pt			Perm
Protected Phases	2		1	6	8	
Permitted Phases		2	6			8
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	21.0	9.0	21.0	18.0	18.0

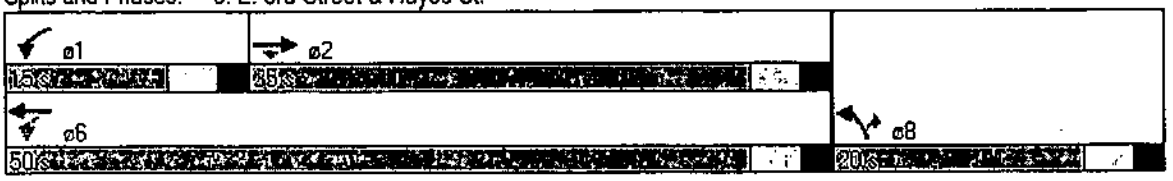
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Split (s)	35.0	35.0	15.0	50.0	20.0	20.0
Total Split (%)	50.0%	50.0%	21.4%	71.4%	28.6%	28.6%
Maximum Green (s)	30.0	30.0	10.0	45.0	15.0	15.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	Min	Min	Min	Min	Min
Act Effct Green (s)	16.0	16.0	30.9	30.9	12.4	12.4
Actuated g/C Ratio	0.31	0.31	0.60	0.60	0.24	0.24
v/c Ratio	0.61	0.11	0.63	0.64	0.51	0.52
Control Delay	21.1	5.0	10.8	10.4	23.1	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.1	5.0	10.8	10.4	23.1	6.1
LOS	C	A	B	B	C	A
Approach Delay	18.6			10.5	12.7	
Approach LOS	B			B	B	
90th %ile Green (s)	22.7	22.7	10.0	37.7	15.0	15.0
90th %ile Term Code	Gap	Gap	Max	Hold	Max	Max
70th %ile Green (s)	18.1	18.1	10.0	33.1	14.8	14.8
70th %ile Term Code	Gap	Gap	Max	Hold	Gap	Gap
50th %ile Green (s)	15.0	15.0	10.0	30.0	11.5	11.5
50th %ile Term Code	Gap	Gap	Max	Hold	Gap	Gap
30th %ile Green (s)	12.2	12.2	9.9	27.1	9.5	9.5
30th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Gap
10th %ile Green (s)	8.9	8.9	7.8	21.7	7.1	7.1
10th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Gap
Stops (vph)	221	9	148	360	124	34
Fuel Used(gal)	7	1	7	14	2	2
CO Emissions (g/hr)	460	42	497	984	146	110
NOx Emissions (g/hr)	90	8	97	191	28	21
VOC Emissions (g/hr)	107	10	115	228	34	26
Dilemma Vehicles (#)	27	0	0	59	0	0
Queue Length 50th (ft)	79	0	50	111	55	0
Queue Length 95th (ft)	156	11	96	230	100	32
Internal Link Dist (ft)	1691			261	460	
Turn Bay Length (ft)			200			
Base Capacity (vph)	777	777	618	1230	498	692
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	0.40	0.07	0.62	0.55	0.42	0.47

Intersection Summary

Area Type: Other
Cycle Length: 70

Actuated Cycle Length: 51.5
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.64
Intersection Signal Delay: 12.7 Intersection LOS: B
Intersection Capacity Utilization 51.8% ICU Level of Service A
Analysis Period (min) 15
90th %ile Actuated Cycle: 62.7
70th %ile Actuated Cycle: 57.9
50th %ile Actuated Cycle: 51.5
30th %ile Actuated Cycle: 46.6
10th %ile Actuated Cycle: 38.8

Splits and Phases: 6: E. 3rd Street & Hayes St.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	118	4	119	2	3	1	162	466	1	3	621	232
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	13	15	15	15	12	12	12	12	12	12
Storage Length (ft)	0		0	0		0	125		0	125		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25		25	25		25	75		25	75		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.983						0.953	
Flt Protected		0.954			0.982		0.950			0.950		
Satd. Flow (prot)	0	1729	1503	0	1998	0	1612	3505	0	1787	3342	0
Flt Permitted		0.729			0.900		0.166			0.475		
Satd. Flow (perm)	0	1321	1503	0	1831	0	282	3505	0	894	3342	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			157		1			1			120	
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		1014			565			3028			1065	
Travel Time (s)		23.0			12.8			59.0			20.7	
Peak Hour Factor	0.82	0.70	0.76	0.70	0.70	0.70	0.76	0.96	0.70	0.70	0.88	0.73
Heavy Vehicles (%)	5%	1%	11%	1%	1%	1%	12%	3%	1%	1%	2%	5%
Adj. Flow (vph)	144	6	157	3	4	1	213	485	1	4	706	318
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	150	157	0	8	0	213	486	0	4	1024	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	0.96	0.88	0.88	0.88	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50	50	50	50		50	0		50	0	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	50	50	50	50	50		50	0		50	0	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm		Perm	Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0		8.0	22.0		22.0	22.0	

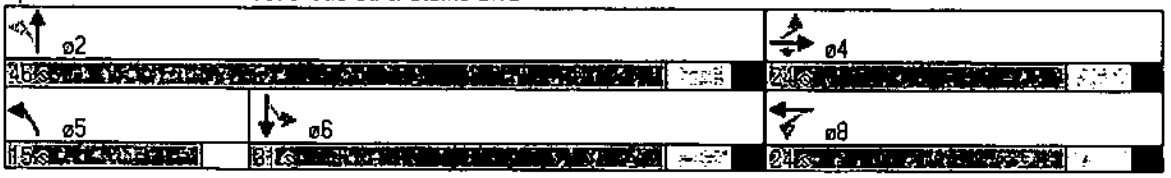
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	24.0	24.0	24.0	24.0	24.0	0.0	15.0	46.0	0.0	31.0	31.0	0.0
Total Split (%)	34.3%	34.3%	34.3%	34.3%	34.3%	0.0%	21.4%	65.7%	0.0%	44.3%	44.3%	0.0%
Maximum Green (s)	18.0	18.0	18.0	18.0	18.0		12.0	40.0		25.0	25.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		0.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	0.0	1.0	-2.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min	Min	None	None		Min	Min		Min	Min	
Act Effct Green (s)		14.0	14.0		14.0		36.9	36.9		23.1	23.1	
Actuated g/C Ratio		0.24	0.24		0.24		0.62	0.62		0.39	0.39	
v/c Ratio		0.48	0.33		0.02		0.54	0.22		0.01	0.74	
Control Delay		26.5	6.1		17.7		12.2	5.5		13.0	18.1	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		26.5	6.1		17.7		12.2	5.5		13.0	18.1	
LOS		C	A		B		B	A		B	B	
Approach Delay		16.1			17.7			7.6			18.1	
Approach LOS		B			B			A			B	
90th %ile Green (s)	18.0	18.0	18.0	18.0	18.0		12.0	40.0		25.0	25.0	
90th %ile Term Code	Max	Max	Max	Hold	Hold		Max	Hold		Max	Max	
70th %ile Green (s)	14.8	14.8	14.8	14.8	14.8		12.0	40.0		25.0	25.0	
70th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Max	Hold		Max	Max	
50th %ile Green (s)	12.1	12.1	12.1	12.1	12.1		12.0	37.9		22.9	22.9	
50th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Max	Hold		Gap	Gap	
30th %ile Green (s)	9.6	9.6	9.6	9.6	9.6		10.4	32.5		19.1	19.1	
30th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Gap	Hold		Gap	Gap	
10th %ile Green (s)	6.7	6.7	6.7	6.7	6.7		7.4	24.2		13.8	13.8	
10th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Gap	Hold		Gap	Gap	
Stops (vph)		97	19		7		68	175		3	606	
Fuel Used(gal)		2	1		0		4	12		0	14	
CO Emissions (g/hr)		151	83		6		311	841		4	997	
NOx Emissions (g/hr)		29	16		1		61	164		1	194	
VOC Emissions (g/hr)		35	19		1		72	195		1	231	
Dilemma Vehicles (#)		0	0		0		0	38		0	71	
Queue Length 50th (ft)		49	0		2		27	33		1	144	
Queue Length 95th (ft)		75	24		9		58	66		5	234	
Internal Link Dist (ft)		934			485			2948			985	
Turn Bay Length (ft)							125			125		
Base Capacity (vph)		411	576		570		402	2300		386	1512	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.36	0.27		0.01		0.53	0.21		0.01	0.68	

Intersection Summary

Area Type: Other
Cycle Length: 70

Actuated Cycle Length: 59.2
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 14.2 Intersection LOS: B
Intersection Capacity Utilization 57.0% ICU Level of Service B
Analysis Period (min) 15
90th %ile Actuated Cycle: 70
70th %ile Actuated Cycle: 66.8
50th %ile Actuated Cycle: 62
30th %ile Actuated Cycle: 54.1
10th %ile Actuated Cycle: 42.9

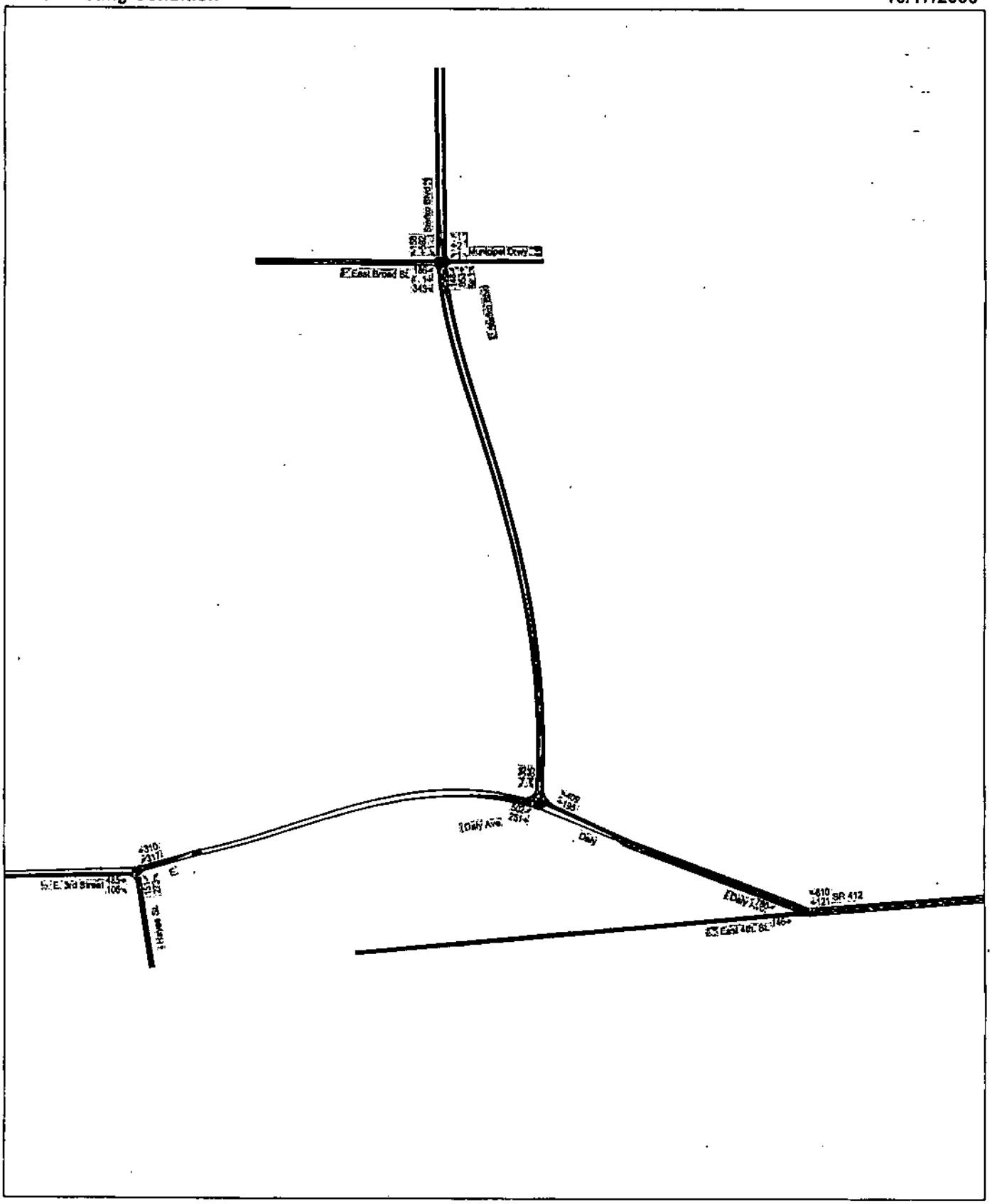
Splits and Phases: 7: East Broad St. & Stefko Blvd

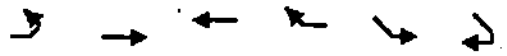


PEAK PM HOUR – 2005 EXISTING CONDITION

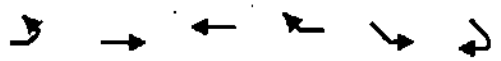
Map - Sands Bethworks Development - Peak PM Hour
2005 Existing Condition

10/17/2006





Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑	↑	↱	↰↰	
Volume (vph)	0	146	121	610	780	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	15	13	13	13	12
Lane Util. Factor	1.00	1.00	1.00	1.00	0.97	1.00
Frt				0.950		
Flt Protected					0.950	
Satd. Flow (prot)	0	2069	1944	1847	3583	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	2069	1944	1847	3583	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				642		
Link Speed (mph)		30	35		35	
Link Distance (ft)		2482	1509		1073	
Travel Time (s)		56.4	29.4		20.9	
Peak Hour Factor	0.90	0.85	0.85	0.95	0.90	0.90
Heavy Vehicles (%)	0%	1%	1%	1%	1%	0%
Adj. Flow (vph)	0	172	142	642	867	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	172	142	642	867	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		26	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	0.88	0.96	0.96	0.96	1.00
Turning Speed (mph)	15			12	25	9
Number of Detectors		1	1	1	1	
Detector Template						
Leading Detector (ft)		50	50	0	0	
Trailing Detector (ft)		0	0	0	0	
Detector 1 Position(ft)		0	0	0	0	
Detector 1 Size(ft)		50	50	0	0	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0	
Turn Type				Free		
Protected Phases		1	1		4	
Permitted Phases		1		Free		
Detector Phase		1	1		4	
Switch Phase						
Minimum Initial (s)		4.0	4.0		4.0	
Minimum Split (s)		10.0	10.0		22.0	
Total Split (s)	0.0	24.0	24.0	0.0	36.0	0.0
Total Split (%)	0.0%	40.0%	40.0%	0.0%	60.0%	0.0%
Maximum Green (s)		18.0	18.0		30.0	



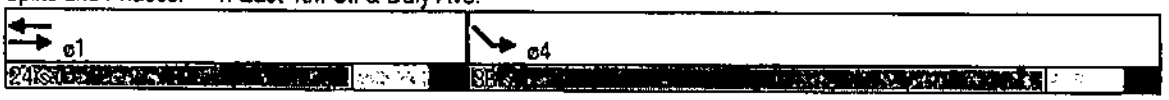
Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Yellow Time (s)		4.0	4.0		4.0	
All-Red Time (s)		2.0	2.0		2.0	
Lost Time Adjust (s)	0.0	-2.0	-2.0	-2.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	2.0	6.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	
Recall Mode		Min	Min		Min	
Act Effct Green (s)		10.5	10.5	34.9	14.1	
Actuated g/C Ratio		0.30	0.30	1.00	0.40	
v/c Ratio		0.28	0.24	0.35	0.60	
Control Delay		11.6	11.5	0.5	10.2	
Queue Delay		0.0	0.0	0.0	0.0	
Total Delay		11.6	11.5	0.5	10.2	
LOS		B	B	A	B	
Approach Delay		11.6	2.5		10.2	
Approach LOS		B	A		B	
90th %ile Green (s)		11.9	11.9		20.6	
90th %ile Term Code		Gap	Gap		Gap	
70th %ile Green (s)		9.5	9.5		16.1	
70th %ile Term Code		Gap	Gap		Gap	
50th %ile Green (s)		8.3	8.3		14.1	
50th %ile Term Code		Gap	Gap		Gap	
30th %ile Green (s)		7.2	7.2		11.4	
30th %ile Term Code		Gap	Gap		Gap	
10th %ile Green (s)		6.0	6.0		9.4	
10th %ile Term Code		Gap	Gap		Gap	
Stops (vph)		101	84	0	526	
Fuel Used(gal)		4	2	7	14	
CO Emissions (g/hr)		261	156	469	1011	
NOx Emissions (g/hr)		51	30	91	197	
VOC Emissions (g/hr)		60	36	109	234	
Dilemma Vehicles (#)		0	16	0	0	
Queue Length 50th (ft)		24	19	0	58	
Queue Length 95th (ft)		63	54	0	111	
Internal Link Dist (ft)		2402	1429		993	
Turn Bay Length (ft)						
Base Capacity (vph)		941	884	1847	2128	
Starvation Cap Reductn		0	0	0	0	
Spillback Cap Reductn		0	0	0	0	
Storage Cap Reductn		0	0	0	0	
Reduced v/c Ratio		0.18	0.16	0.35	0.41	

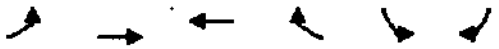
Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 34.9
Natural Cycle: 40
Control Type: Actuated-Uncoordinated

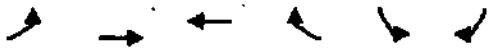
Maximum v/c Ratio: 0.60
Intersection Signal Delay: 7.0 Intersection LOS: A
Intersection Capacity Utilization 38.3% ICU Level of Service A
Analysis Period (min) 15
90th %ile Actuated Cycle: 44.5
70th %ile Actuated Cycle: 37.6
50th %ile Actuated Cycle: 34.4
30th %ile Actuated Cycle: 30.6
10th %ile Actuated Cycle: 27.4
* User Entered Value

Splits and Phases: 1: East 4th. St. & Daly Ave.





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↰↰	↑	↑	↱	↰	↱
Volume (vph)	502	251	195	409	485	435
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	13	13	12
Storage Length (ft)	150			0	0	0
Storage Lanes	2			1	1	1
Taper Length (ft)	300			25	25	25
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3467	1863	1863	1517	1847	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3467	1863	1863	1517	1847	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				41		315
Link Speed (mph)		35	35		35	
Link Distance (ft)		1909	504		3028	
Travel Time (s)		37.2	9.8		59.0	
Peak Hour Factor	0.90	0.90	0.95	0.90	0.95	0.90
Heavy Vehicles (%)	1%	2%	2%	10%	1%	2%
Adj. Flow (vph)	558	279	205	454	511	483
Shared Lane Traffic (%)						
Lane Group Flow (vph)	558	279	205	454	511	483
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	0.96	0.96	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	1	1	1	1	1
Detector Template						
Leading Detector (ft)	30	0	0	30	30	30
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	30	0	0	30	30	30
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot			pm+ov		pm+ov
Protected Phases	7	4	8	6	6	7
Permitted Phases				8		6
Detector Phase	7	4	8	6	6	7
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0	19.0	21.0	21.0	9.0



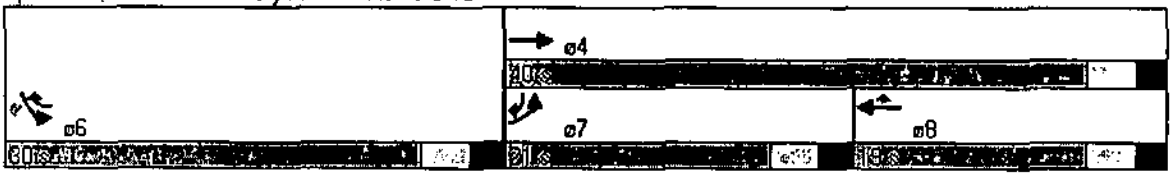
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Total Split (s)	21.0	40.0	19.0	30.0	30.0	21.0
Total Split (%)	30.0%	57.1%	27.1%	42.9%	42.9%	30.0%
Maximum Green (s)	16.0	35.0	14.0	25.0	25.0	16.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	5.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead		Lag			Lead
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	Min	Min	Min	Min	Min
Act Effct Green (s)	14.4	32.0	12.5	39.0	22.4	41.9
Actuated g/C Ratio	0.23	0.51	0.20	0.62	0.36	0.67
v/c Ratio	0.70	0.29	0.55	0.47	0.77	0.42
Control Delay	28.7	10.4	30.2	7.6	28.0	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.7	10.4	30.2	7.6	28.0	2.8
LOS	C	B	C	A	C	A
Approach Delay		22.6	14.6		15.8	
Approach LOS		C	B		B	
90th %ile Green (s)	16.0	35.0	14.0	25.0	25.0	16.0
90th %ile Term Code	Max	Hold	Max	Max	Max	Max
70th %ile Green (s)	16.0	35.0	14.0	25.0	25.0	16.0
70th %ile Term Code	Max	Hold	Max	Max	Max	Max
50th %ile Green (s)	16.0	33.7	12.7	25.0	25.0	16.0
50th %ile Term Code	Max	Hold	Gap	Max	Max	Max
30th %ile Green (s)	14.1	29.3	10.2	19.9	19.9	14.1
30th %ile Term Code	Gap	Hold	Gap	Gap	Gap	Gap
10th %ile Green (s)	9.9	22.2	7.3	13.1	13.1	9.9
10th %ile Term Code	Gap	Hold	Gap	Gap	Gap	Gap
Stops (vph)	433	131	164	177	397	61
Fuel Used(gal)	14	6	5	7	16	10
CO Emissions (g/hr)	1002	391	325	463	1143	714
NOx Emissions (g/hr)	195	76	63	90	222	139
VOC Emissions (g/hr)	232	91	75	107	265	166
Dilemma Vehicles (#)	0	19	15	0	0	0
Queue Length 50th (ft)	111	64	79	76	180	21
Queue Length 95th (ft)	165	108	140	132	#308	54
Internal Link Dist (ft)		1829	424		2948	
Turn Bay Length (ft)	150					
Base Capacity (vph)	876	1012	436	1013	732	1205
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	0.64	0.28	0.47	0.45	0.70	0.40

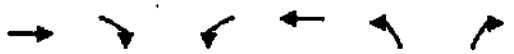
Intersection Summary

Area Type: Other
Cycle Length: 70

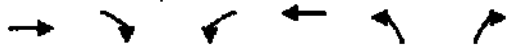
Actuated Cycle Length: 62.6
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 17.8 Intersection LOS: B
Intersection Capacity Utilization 61.5% ICU Level of Service B
Analysis Period (min) 15
90th %ile Actuated Cycle: 70
70th %ile Actuated Cycle: 70
50th %ile Actuated Cycle: 68.7
30th %ile Actuated Cycle: 59.2
10th %ile Actuated Cycle: 45.3
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: Daly Ave. & Stefko Blvd





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	485	106	317	310	151	273
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	11	12
Storage Length (ft)		0	200		0	0
Storage Lanes		1	1		1	1
Taper Length (ft)		25	200		25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1881	1652	1787	1881	1728	1599
Flt Permitted			0.218		0.950	
Satd. Flow (perm)	1881	1652	410	1881	1728	1599
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		125				321
Link Speed (mph)	35			35	30	
Link Distance (ft)	1771			341	540	
Travel Time (s)	34.5			6.6	12.3	
Peak Hour Factor	0.95	0.85	0.85	0.90	0.85	0.85
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	511	125	373	344	178	321
Shared Lane Traffic (%)						
Lane Group Flow (vph)	511	125	373	344	178	321
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	11	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	0.96	1.00	1.00	1.04	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1	1	1	1	1	1
Detector Template						
Leading Detector (ft)	0	30	30	0	30	30
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	0	30	30	0	30	30
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type		Perm	pm+pt			Perm
Protected Phases	2		1	6	8	
Permitted Phases		2	6			8
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	21.0	9.0	21.0	20.0	20.0



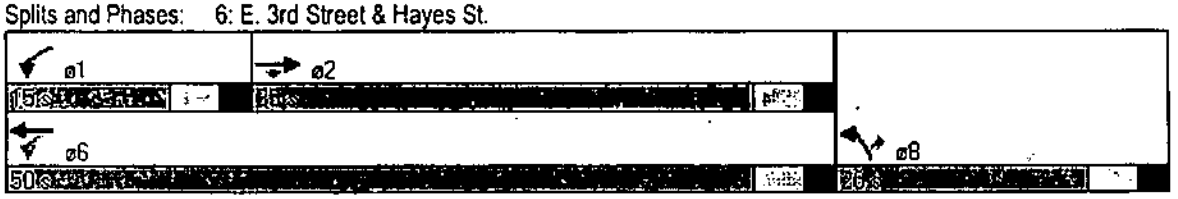
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Split (s)	35.0	35.0	15.0	50.0	20.0	20.0
Total Split (%)	50.0%	50.0%	21.4%	71.4%	28.6%	28.6%
Maximum Green (s)	30.0	30.0	10.0	45.0	15.0	15.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	Min	Min	Min	Min	Min
Act Effct Green (s)	21.5	21.5	36.5	36.5	12.1	12.1
Actuated g/C Ratio	0.38	0.38	0.64	0.64	0.21	0.21
v/c Ratio	0.72	0.18	0.71	0.29	0.48	0.54
Control Delay	21.8	3.4	16.3	5.4	26.2	7.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.8	3.4	16.3	5.4	26.2	7.0
LOS	C	A	B	A	C	A
Approach Delay	18.2			11.1	13.9	
Approach LOS	B			B	B	
90th %ile Green (s)	30.0	30.0	10.0	45.0	15.0	15.0
90th %ile Term Code	Max	Max	Max	Hold	Max	Max
70th %ile Green (s)	26.2	26.2	10.0	41.2	14.6	14.6
70th %ile Term Code	Gap	Gap	Max	Hold	Gap	Gap
50th %ile Green (s)	20.2	20.2	10.0	35.2	11.1	11.1
50th %ile Term Code	Gap	Gap	Max	Hold	Gap	Gap
30th %ile Green (s)	16.5	16.5	10.0	31.5	9.1	9.1
30th %ile Term Code	Gap	Gap	Max	Hold	Gap	Gap
10th %ile Green (s)	12.0	12.0	8.2	25.2	6.8	6.8
10th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Gap
Stops (vph)	376	14	131	116	121	37
Fuel Used(gal)	11	2	7	6	2	2
CO Emissions (g/hr)	782	107	502	437	148	122
NOx Emissions (g/hr)	152	21	98	85	29	24
VOC Emissions (g/hr)	181	25	116	101	34	28
Dilemma Vehicles (#)	41	0	0	26	0	0
Queue Length 50th (ft)	142	0	46	41	53	0
Queue Length 95th (ft)	256	23	#147	87	114	48
Internal Link Dist (ft)	1691			261	460	
Turn Bay Length (ft)			200			
Base Capacity (vph)	887	845	510	1308	462	663
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	0.58	0.15	0.73	0.26	0.39	0.48

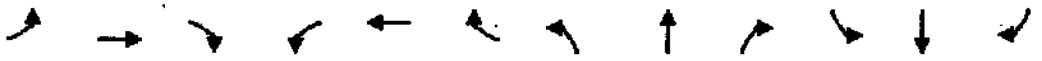
Intersection Summary

Area Type: Other
Cycle Length: 70

Actuated Cycle Length: 56.9
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.72
Intersection Signal Delay: 14.3 Intersection LOS: B
Intersection Capacity Utilization 61.5% ICU Level of Service B
Analysis Period (min) 15
90th %ile Actuated Cycle: 70
70th %ile Actuated Cycle: 65.8
50th %ile Actuated Cycle: 56.3
30th %ile Actuated Cycle: 50.6
10th %ile Actuated Cycle: 42
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: E. 3rd Street & Hayes St.





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	186	1	343	1	2	1	148	653	1	1	592	158
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	13	15	15	15	12	12	12	12	12	12
Storage Length (ft)	0		0	0		0	125		0	125		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25		25	25		25	75		25	75		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.966						0.967	
Flt Protected		0.953			0.988			0.950			0.950	
Satd. Flow (prot)	0	1793	1652	0	1975	0	1770	3574	0	1787	3456	0
Flt Permitted		0.725			0.934		0.170			0.375		
Satd. Flow (perm)	0	1364	1652	0	1867	0	317	3574	0	705	3456	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			381		1						61	
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		1014			565			3028			1065	
Travel Time (s)		23.0			12.8			59.0			20.7	
Peak Hour Factor	0.95	0.85	0.90	0.85	0.85	0.85	0.85	0.90	0.85	0.85	0.80	0.75
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	1%	1%	1%	1%	1%
Adj. Flow (vph)	196	1	381	1	2	1	174	726	1	1	740	211
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	197	381	0	4	0	174	727	0	1	951	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	0.96	0.88	0.88	0.88	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50	50	50	50		50	0		50	0	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	50	50	50	50	50		50	0		50	0	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm		Perm	Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0		8.0	22.0		22.0	22.0	

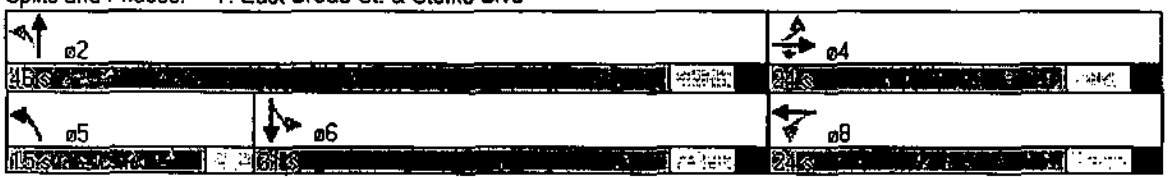
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	24.0	24.0	24.0	24.0	24.0	0.0	15.0	46.0	0.0	31.0	31.0	0.0
Total Split (%)	34.3%	34.3%	34.3%	34.3%	34.3%	0.0%	21.4%	65.7%	0.0%	44.3%	44.3%	0.0%
Maximum Green (s)	18.0	18.0	18.0	18.0	18.0		12.0	40.0		25.0	25.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		0.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	0.0	1.0	-2.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min	Min	None	None		Min	Min		Min	Min	
Act Effct Green (s)		15.4	15.4		15.4		35.4	35.4		22.4	22.4	
Actuated g/C Ratio		0.26	0.26		0.26		0.60	0.60		0.38	0.38	
v/c Ratio		0.55	0.54		0.01		0.43	0.34		0.00	0.70	
Control Delay		27.0	5.6		16.7		9.2	6.8		13.0	18.5	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		27.0	5.6		16.7		9.2	6.8		13.0	18.5	
LOS		C	A		B		A	A		B	B	
Approach Delay		12.9			16.7			7.2			18.5	
Approach LOS		B			B			A			B	
90th %ile Green (s)	18.0	18.0	18.0	18.0	18.0		12.0	40.0		25.0	25.0	
90th %ile Term Code	Max	Max	Max	Hold	Hold		Max	Hold		Max	Max	
70th %ile Green (s)	18.0	18.0	18.0	18.0	18.0		12.0	40.0		25.0	25.0	
70th %ile Term Code	Max	Max	Max	Hold	Hold		Max	Hold		Max	Max	
50th %ile Green (s)	13.9	13.9	13.9	13.9	13.9		10.6	35.5		21.9	21.9	
50th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Gap	Hold		Gap	Gap	
30th %ile Green (s)	10.8	10.8	10.8	10.8	10.8		8.6	29.0		17.4	17.4	
30th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Gap	Hold		Gap	Gap	
10th %ile Green (s)	7.6	7.6	7.6	7.6	7.6		6.5	22.9		13.4	13.4	
10th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Gap	Hold		Gap	Gap	
Stops (vph)		149	40		3		56	286		2	550	
Fuel Used(gal)		3	3		0		4	17		0	13	
CO Emissions (g/hr)		233	233		3		275	1213		2	890	
NOx Emissions (g/hr)		45	45		1		53	236		0	173	
VOC Emissions (g/hr)		54	54		1		64	281		0	206	
Dilemma Vehicles (#)		0	0		0		0	54		0	63	
Queue Length 50th (ft)		63	0		1		24	60		0	139	
Queue Length 95th (ft)		122	58		7		51	103		3	191	
Internal Link Dist (ft)		934			485			2948			985	
Turn Bay Length (ft)							125			125		
Base Capacity (vph)		435	786		596		429	2295		302	1517	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.45	0.48		0.01		0.41	0.32		0.00	0.63	

Intersection Summary

Area Type: Other
Cycle Length: 70

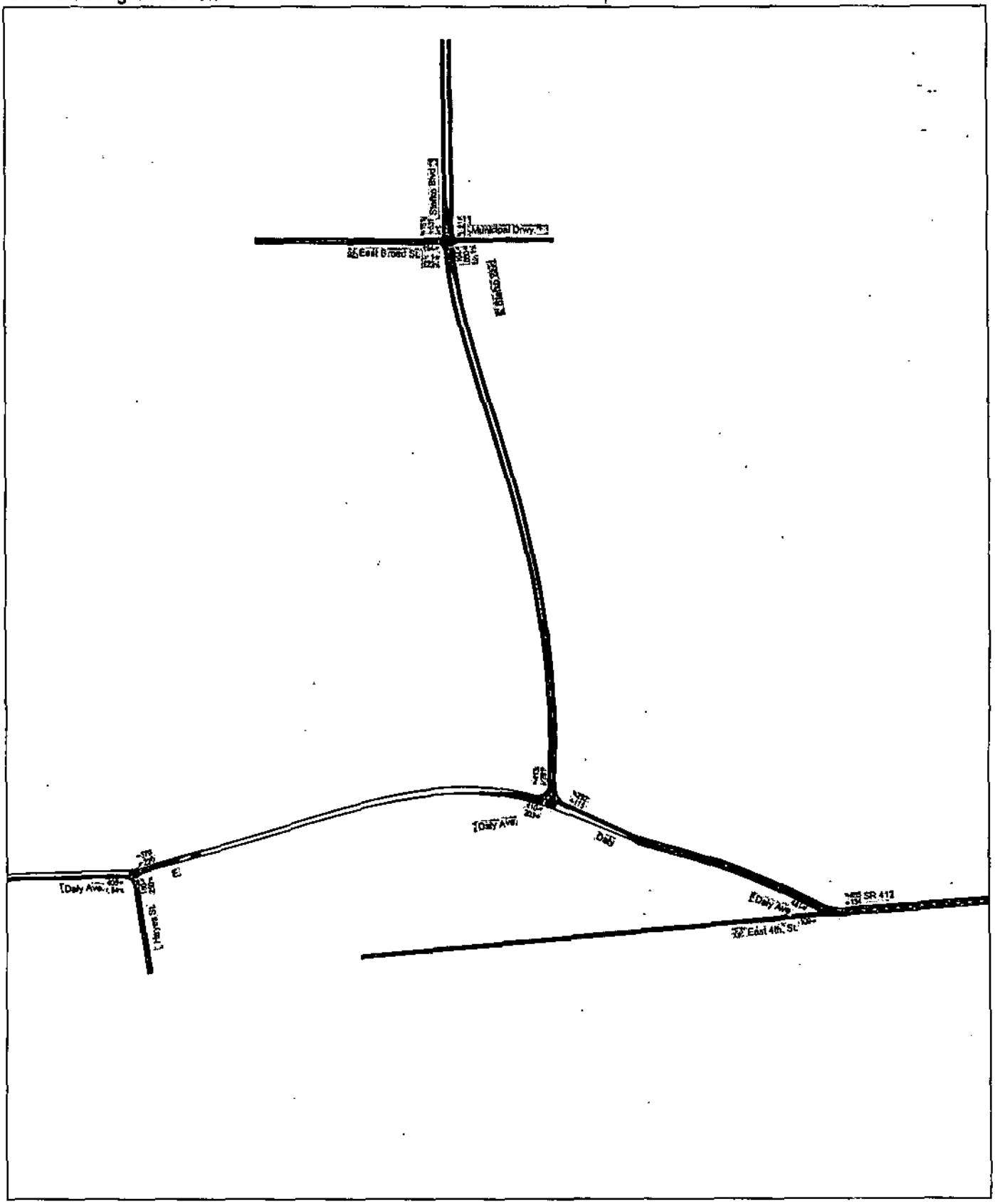
Actuated Cycle Length: 59.1
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.70
Intersection Signal Delay: 13.0 Intersection LOS: B
Intersection Capacity Utilization 56.6% ICU Level of Service B
Analysis Period (min) 15
90th %ile Actuated Cycle: 70
70th %ile Actuated Cycle: 70
50th %ile Actuated Cycle: 61.4
30th %ile Actuated Cycle: 51.8
10th %ile Actuated Cycle: 42.5

Splits and Phases: 7: East Broad St. & Stefko Blvd



PEAK SATURDAY HOUR – 2005 EXISTING CONDITION

Map - Sands Bethworks Development - Peak SAT Hour
2005 Existing Condition 10/17/2006



Sands Bethworks Development - Peak SAT Hour 2005 Existing Condition zi - esat
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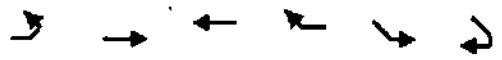
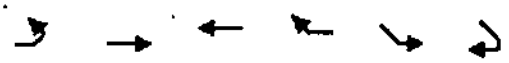


Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑	↑	↗	↰↑	
Volume (vph)	0	109	134	485	481	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	15	13	13	13	12
Lane Util. Factor	1.00	1.00	1.00	1.00	0.97	1.00
Frt				0.950		
Flt Protected					0.950	
Satd. Flow (prot)	0	2049	1925	1829	3547	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	2049	1925	1829	3547	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				539		
Link Speed (mph)		30	35		35	
Link Distance (ft)		2482	1509		1078	
Travel Time (s)		56.4	29.4		21.0	
Peak Hour Factor	0.90	0.90	0.85	0.90	0.95	0.90
Heavy Vehicles (%)	0%	2%	2%	2%	2%	0%
Adj. Flow (vph)	0	121	158	539	506	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	121	158	539	506	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		26	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	0.88	0.96	0.96	0.96	1.00
Turning Speed (mph)	15			9	25	9
Number of Detectors		1	1	1	1	
Detector Template						
Leading Detector (ft)		50	50	5	0	
Trailing Detector (ft)		0	0	0	0	
Detector 1 Position(ft)		0	0	0	0	
Detector 1 Size(ft)		50	50	5	0	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0	
Turn Type				Free		
Protected Phases		1	1		4	
Permitted Phases		1		Free		
Detector Phase		1	1		4	
Switch Phase						
Minimum Initial (s)		4.0	4.0		4.0	
Minimum Split (s)		10.0	10.0		22.0	
Total Split (s)	0.0	24.0	24.0	0.0	36.0	0.0
Total Split (%)	0.0%	40.0%	40.0%	0.0%	60.0%	0.0%
Maximum Green (s)		18.0	18.0		30.0	



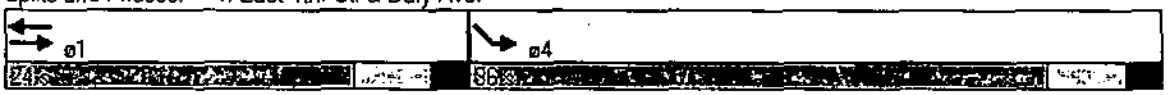
Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Yellow Time (s)		4.0	4.0		4.0	
All-Red Time (s)		2.0	2.0		2.0	
Lost Time Adjust (s)	0.0	-2.0	-2.0	-2.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	2.0	6.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	
Recall Mode		Min	Min		Min	
Act Effct Green (s)		9.8	9.8	29.5	9.5	
Actuated g/C Ratio		0.33	0.33	1.00	0.32	
v/c Ratio		0.18	0.25	0.29	0.44	
Control Delay		8.2	8.7	0.4	9.4	
Queue Delay		0.0	0.0	0.0	0.0	
Total Delay		8.2	8.7	0.4	9.4	
LOS		A	A	A	A	
Approach Delay		8.2	2.3		9.4	
Approach LOS		A	A		A	
90th %ile Green (s)		10.3	10.3		12.6	
90th %ile Term Code		Gap	Gap		Gap	
70th %ile Green (s)		8.7	8.7		10.6	
70th %ile Term Code		Gap	Gap		Gap	
50th %ile Green (s)		7.7	7.7		9.4	
50th %ile Term Code		Gap	Gap		Gap	
30th %ile Green (s)		6.9	6.9		8.4	
30th %ile Term Code		Gap	Gap		Gap	
10th %ile Green (s)		5.8	5.8		7.2	
10th %ile Term Code		Gap	Gap		Gap	
Stops (vph)		68	84	0	318	
Fuel Used(gal)		3	2	5	9	
CO Emissions (g/hr)		186	163	372	615	
NOx Emissions (g/hr)		36	32	72	120	
VOC Emissions (g/hr)		43	38	86	143	
Dilemma Vehicles (#)		0	21	0	0	
Queue Length 50th (ft)		12	16	0	28	
Queue Length 95th (ft)		35	41	0	57	
Internal Link Dist (ft)		2402	1429		998	
Turn Bay Length (ft)						
Base Capacity (vph)		1036	973	1829	2135	
Starvation Cap Reductn		0	0	0	0	
Spillback Cap Reductn		0	0	0	0	
Storage Cap Reductn		0	0	0	0	
Reduced v/c Ratio		0.12	0.16	0.29	0.24	

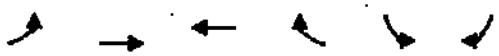
Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 29.5
Natural Cycle: 40
Control Type: Actuated-Uncoordinated

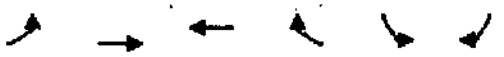
Maximum v/c Ratio: 0.44
Intersection Signal Delay: 5.5 Intersection LOS: A
Intersection Capacity Utilization 29.1% ICU Level of Service A
Analysis Period (min) 15
90th %ile Actuated Cycle: 34.9
70th %ile Actuated Cycle: 31.3
50th %ile Actuated Cycle: 29.1
30th %ile Actuated Cycle: 27.3
10th %ile Actuated Cycle: 25
* User Entered Value

Splits and Phases: 1: East 4th. St. & Daly Ave.





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	410	203	175	292	291	413
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	13	13	12
Storage Length (ft)	150			0	0	0
Storage Lanes	2			1	1	1
Taper Length (ft)	300			25	25	25
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3467	1881	1881	1636	1829	1599
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3467	1881	1881	1636	1829	1599
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				88		459
Link Speed (mph)		35	35		35	
Link Distance (ft)		1911	504		3028	
Travel Time (s)		37.2	9.8		59.0	
Peak Hour Factor	0.95	0.90	0.95	0.90	0.95	0.90
Heavy Vehicles (%)	1%	1%	1%	2%	2%	1%
Adj. Flow (vph)	432	226	184	324	306	459
Shared Lane Traffic (%)						
Lane Group Flow (vph)	432	226	184	324	306	459
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	0.96	0.96	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	1	1	1	1	1
Detector Template						
Leading Detector (ft)	30	0	0	30	30	30
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	30	0	0	30	30	30
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot			pm+ov		pm+ov
Protected Phases	7	4	8	6	6	7
Permitted Phases				8		6
Detector Phase	7	4	8	6	6	7
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0	19.0	21.0	21.0	9.0



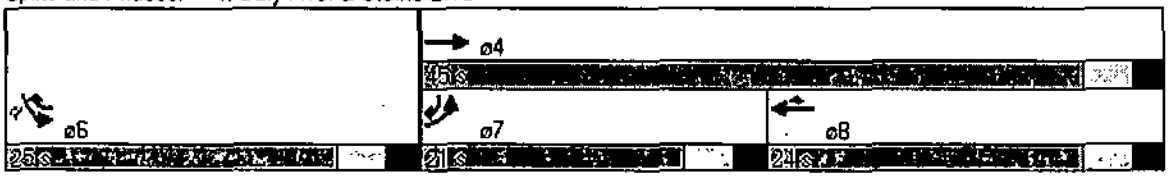
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Total Split (s)	21.0	45.0	24.0	25.0	25.0	21.0
Total Split (%)	30.0%	64.3%	34.3%	35.7%	35.7%	30.0%
Maximum Green (s)	16.0	40.0	19.0	20.0	20.0	16.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	5.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead		Lag			Lead
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	Min	Min	Min	Min	Min
Act Effct Green (s)	12.6	29.8	11.9	31.3	15.2	33.1
Actuated g/C Ratio	0.24	0.56	0.22	0.59	0.29	0.62
v/c Ratio	0.52	0.22	0.44	0.33	0.59	0.39
Control Delay	21.5	7.1	23.2	5.1	22.6	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.5	7.1	23.2	5.1	22.6	1.7
LOS	C	A	C	A	C	A
Approach Delay		16.5	11.6		10.0	
Approach LOS		B	B		B	
90th %ile Green (s)	16.0	37.0	16.0	20.0	20.0	16.0
90th %ile Term Code	Max	Hold	Gap	Max	Max	Max
70th %ile Green (s)	16.0	34.1	13.1	18.3	18.3	16.0
70th %ile Term Code	Max	Hold	Gap	Gap	Gap	Max
50th %ile Green (s)	12.8	28.5	10.7	14.1	14.1	12.8
50th %ile Term Code	Gap	Hold	Gap	Gap	Gap	Gap
30th %ile Green (s)	11.0	24.8	8.8	11.5	11.5	11.0
30th %ile Term Code	Gap	Hold	Gap	Gap	Gap	Gap
10th %ile Green (s)	8.0	19.7	6.7	8.4	8.4	8.0
10th %ile Term Code	Gap	Hold	Gap	Gap	Gap	Gap
Stops (vph)	326	88	137	89	226	22
Fuel Used(gal)	11	4	4	4	9	9
CO Emissions (g/hr)	763	297	270	301	657	652
NOx Emissions (g/hr)	148	58	52	59	128	127
VOC Emissions (g/hr)	177	69	62	70	152	151
Dilemma Vehicles (#)	0	18	15	0	0	0
Queue Length 50th (ft)	59	31	50	30	80	0
Queue Length 95th (ft)	120	73	115	70	173	28
Internal Link Dist (ft)		1831	424		2948	
Turn Bay Length (ft)	150					
Base Capacity (vph)	999	1202	624	1134	661	1249
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	0.43	0.19	0.29	0.29	0.46	0.37

Intersection Summary

Area Type: Other
Cycle Length: 70

Actuated Cycle Length: 53.3
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.59
Intersection Signal Delay: 12.7 Intersection LOS: B
Intersection Capacity Utilization 47.0% ICU Level of Service A
Analysis Period (min) 15
90th %ile Actuated Cycle: 67
70th %ile Actuated Cycle: 62.4
50th %ile Actuated Cycle: 52.6
30th %ile Actuated Cycle: 46.3
10th %ile Actuated Cycle: 38.1

Splits and Phases: 4: Daly Ave. & Stefko Blvd



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↱	↰	↑	↰	↱
Volume (vph)	408	54	220	370	160	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	11	12
Storage Length (ft)		0	200		0	0
Storage Lanes		1	1		1	1
Taper Length (ft)		25	200		25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1881	1652	1787	1881	1728	1599
Flt Permitted			0.256		0.950	
Satd. Flow (perm)	1881	1652	482	1881	1728	1599
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		60				278
Link Speed (mph)	35			35	30	
Link Distance (ft)	1771			341	540	
Travel Time (s)	34.5			6.6	12.3	
Peak Hour Factor	0.90	0.90	0.85	0.90	0.85	0.90
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	453	60	259	411	188	278
Shared Lane Traffic (%)						
Lane Group Flow (vph)	453	60	259	411	188	278
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	11	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	0.96	1.00	1.00	1.04	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1	1	1	1	1	1
Detector Template						
Leading Detector (ft)	0	30	30	0	30	30
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	0	30	30	0	30	30
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type		Perm	pm+pt			Perm
Protected Phases	2		1	6	8	
Permitted Phases		2	6			8
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	21.0	9.0	21.0	20.0	20.0

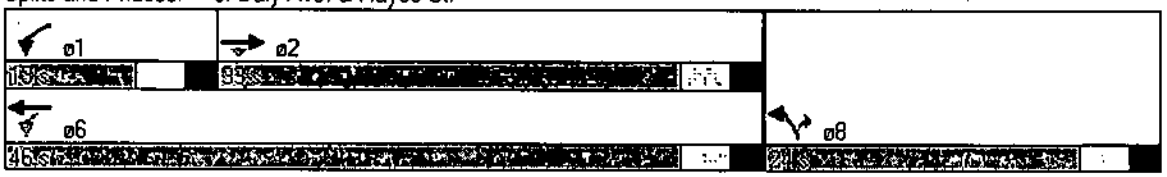
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Split (s)	33.0	33.0	13.0	46.0	24.0	24.0
Total Split (%)	47.1%	47.1%	18.6%	65.7%	34.3%	34.3%
Maximum Green (s)	28.0	28.0	8.0	41.0	19.0	19.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	Min	Min	Min	Min	Min
Act Effct Green (s)	18.8	18.8	31.9	31.9	12.4	12.4
Actuated g/C Ratio	0.36	0.36	0.61	0.61	0.24	0.24
v/c Ratio	0.67	0.10	0.50	0.36	0.46	0.47
Control Delay	20.3	4.3	8.9	6.7	22.6	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.3	4.3	8.9	6.7	22.6	5.9
LOS	C	A	A	A	C	A
Approach Delay	18.4			7.6	12.7	
Approach LOS	B			A	B	
90th %ile Green (s)	28.0	28.0	8.0	41.0	18.3	18.3
90th %ile Term Code	Max	Max	Max	Hold	Gap	Gap
70th %ile Green (s)	21.1	21.1	8.0	34.1	13.3	13.3
70th %ile Term Code	Gap	Gap	Max	Hold	Gap	Gap
50th %ile Green (s)	17.3	17.3	8.0	30.3	11.0	11.0
50th %ile Term Code	Gap	Gap	Max	Hold	Gap	Gap
30th %ile Green (s)	14.2	14.2	7.8	27.0	9.0	9.0
30th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Gap
10th %ile Green (s)	10.5	10.5	6.5	22.0	6.8	6.8
10th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Gap
Stops (vph)	311	11	87	161	123	33
Fuel Used(gal)	9	1	5	8	2	2
CO Emissions (g/hr)	646	57	324	541	146	107
NOx Emissions (g/hr)	126	11	63	105	28	21
VOC Emissions (g/hr)	150	13	75	125	34	25
Dilemma Vehicles (#)	37	0	0	34	0	0
Queue Length 50th (ft)	112	0	29	51	49	0
Queue Length 95th (ft)	229	19	72	126	110	51
Internal Link Dist (ft)	1691			261	460	
Turn Bay Length (ft)			200			
Base Capacity (vph)	879	804	509	1265	584	724
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	0.52	0.07	0.51	0.32	0.32	0.38

Intersection Summary

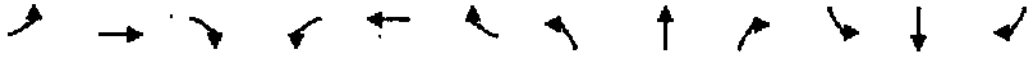
Area Type: Other
Cycle Length: 70

Actuated Cycle Length: 52.6
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.67
Intersection Signal Delay: 12.4 Intersection LOS: B
Intersection Capacity Utilization 52.5% ICU Level of Service A
Analysis Period (min) 15
90th %ile Actuated Cycle: 69.3
70th %ile Actuated Cycle: 57.4
50th %ile Actuated Cycle: 51.3
30th %ile Actuated Cycle: 46
10th %ile Actuated Cycle: 38.8

Splits and Phases: 6: Daly Ave. & Hayes St.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	194	1	123	1	4	11	104	560	1	1	531	151
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	13	15	15	15	12	12	12	12	12	12
Storage Length (ft)	0		0	0		0	125		0	125		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25		25	25		25	75		25	75		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.981						0.965	
Flt Protected		0.953			0.993		0.950			0.950		
Satd. Flow (prot)	0	1793	1652	0	2016	0	1787	3574	0	1787	3340	0
Flt Permitted		0.723			0.959		0.194			0.429		
Satd. Flow (perm)	0	1360	1652	0	1947	0	365	3574	0	807	3340	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			137		1						64	
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		1014			565			3028			1065	
Travel Time (s)		23.0			12.8			59.0			20.7	
Peak Hour Factor	0.90	0.85	0.90	0.85	0.85	0.85	0.85	0.95	0.85	0.85	0.90	0.85
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	5%	2%
Adj. Flow (vph)	216	1	137	1	5	1	122	589	1	1	590	178
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	217	137	0	7	0	122	590	0	1	768	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	0.96	0.88	0.88	0.88	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50	50	50	50		50	0		50	0	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	50	50	50	50	50		50	0		50	0	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm		Perm	Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0		8.0	22.0		22.0	22.0	



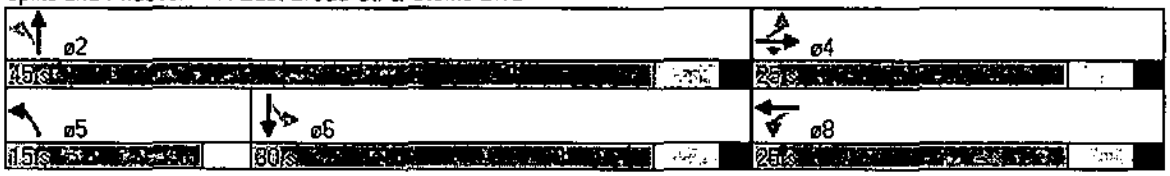
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	25.0	25.0	25.0	25.0	25.0	0.0	15.0	45.0	0.0	30.0	30.0	0.0
Total Split (%)	35.7%	35.7%	35.7%	35.7%	35.7%	0.0%	21.4%	64.3%	0.0%	42.9%	42.9%	0.0%
Maximum Green (s)	19.0	19.0	19.0	19.0	19.0		12.0	39.0		24.0	24.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		0.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	0.0	1.0	-2.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min	Min	None	None		Min	Min		Min	Min	
Act Effct Green (s)		15.7	15.7		15.7		31.5	31.5		19.6	19.6	
Actuated g/C Ratio		0.28	0.28		0.28		0.57	0.57		0.35	0.35	
v/c Ratio		0.56	0.24		0.01		0.30	0.29		0.00	0.63	
Control Delay		25.1	5.2		15.7		8.1	6.9		14.0	16.9	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		25.1	5.2		15.7		8.1	6.9		14.0	16.9	
LOS		C	A		B		A	A		B	B	
Approach Delay		17.4			15.7			7.2			16.9	
Approach LOS		B			B			A			B	
90th %ile Green (s)	19.0	19.0	19.0	19.0	19.0		12.0	39.0		24.0	24.0	
90th %ile Term Code	Max	Max	Max	Hold	Hold		Max	Hold		Max	Max	
70th %ile Green (s)	17.8	17.8	17.8	17.8	17.8		10.5	35.6		22.1	22.1	
70th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Gap	Hold		Gap	Gap	
50th %ile Green (s)	14.0	14.0	14.0	14.0	14.0		8.7	29.3		17.6	17.6	
50th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Gap	Hold		Gap	Gap	
30th %ile Green (s)	11.1	11.1	11.1	11.1	11.1		7.3	25.0		14.7	14.7	
30th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Gap	Hold		Gap	Gap	
10th %ile Green (s)	7.8	7.8	7.8	7.8	7.8		5.8	19.4		10.6	10.6	
10th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Gap	Hold		Gap	Gap	
Stops (vph)		153	20		6		42	249		2	473	
Fuel Used(gal)		3	1		0		3	15		0	11	
CO Emissions (g/hr)		236	85		6		193	1042		2	780	
NOx Emissions (g/hr)		46	17		1		38	203		0	152	
VOC Emissions (g/hr)		55	20		1		45	241		0	181	
Dilemma Vehicles (#)		0	0		0		0	49		0	60	
Queue Length 50th (ft)		60	0		1		16	46		0	97	
Queue Length 95th (ft)		131	36		9		39	85		3	180	
Internal Link Dist (ft)		934			485			2948			985	
Turn Bay Length (ft)							125			125		
Base Capacity (vph)		478	669		684		446	2266		343	1457	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.45	0.20		0.01		0.27	0.26		0.00	0.53	

Intersection Summary

Area Type: Other
Cycle Length: 70

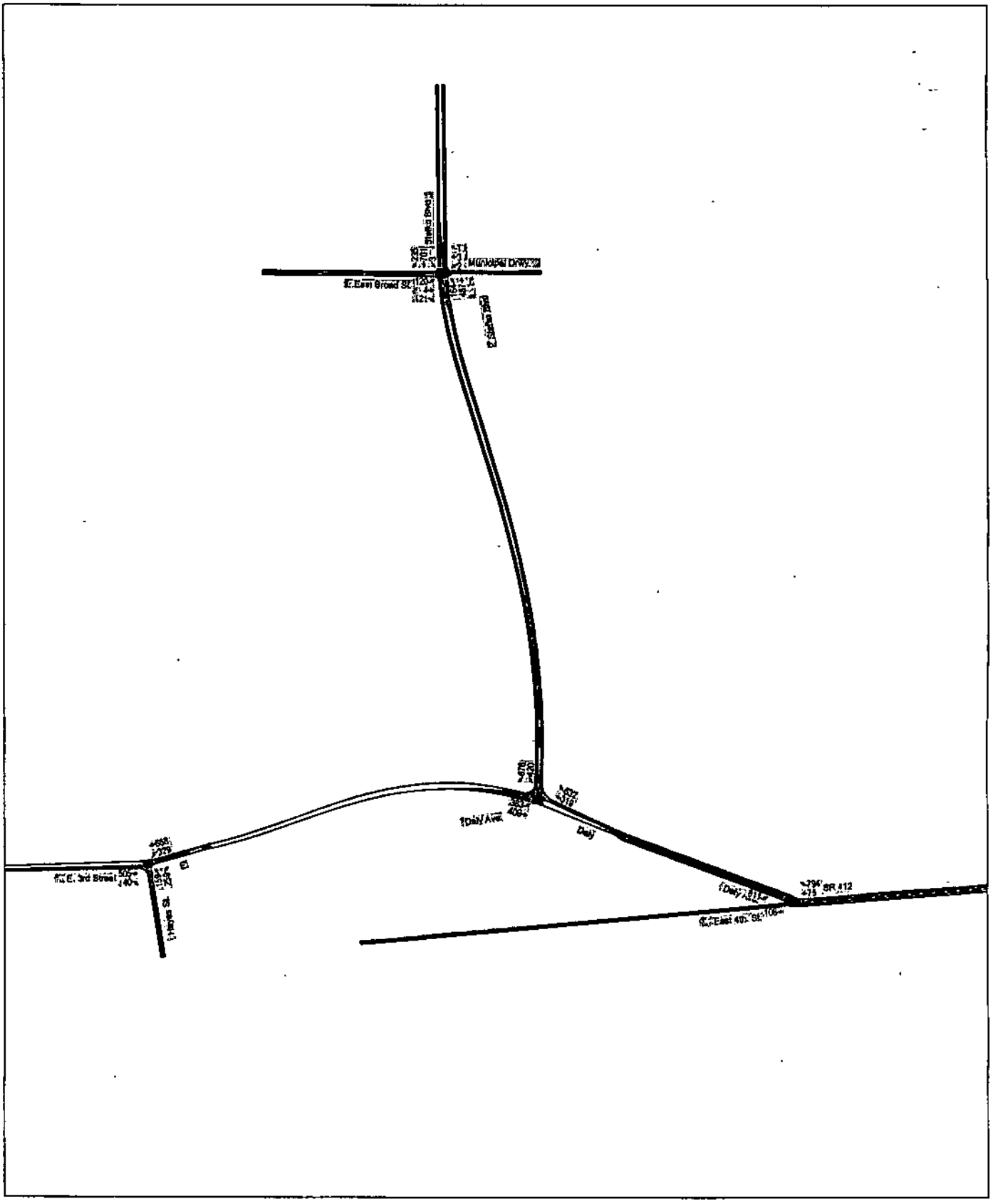
Actuated Cycle Length: 55.6
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.63
Intersection Signal Delay: 13.2 Intersection LOS: B
Intersection Capacity Utilization 52.7% ICU Level of Service A
Analysis Period (min) 15
90th %ile Actuated Cycle: 70
70th %ile Actuated Cycle: 65.4
50th %ile Actuated Cycle: 55.3
30th %ile Actuated Cycle: 48.1
10th %ile Actuated Cycle: 39.2

Splits and Phases: 7: East Broad St. & Stefko Blvd



PEAK AM HOUR – 2008 NO-BUILD CONDITION

Map - Sands Bethworks Development - Peak AM Hour
2008 No-Build Condition 10/17/2006



Sands Bethworks Development - Peak AM Hour 2008 No-Build Condition zi - 2008nam
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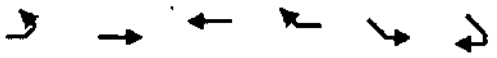
Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑	↑	↱	↰↑	
Volume (vph)	0	108	75	794	811	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	15	13	13	13	12
Lane Util. Factor	1.00	1.00	1.00	1.00	0.97	1.00
Frt				0.950		
Flt Protected					0.950	
Satd. Flow (prot)	0	1883	1707	1760	3202	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	1883	1707	1760	3202	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				902		
Link Speed (mph)		30	35		35	
Link Distance (ft)		2482	1509		1073	
Travel Time (s)		56.4	29.4		20.9	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.87	0.90
Heavy Vehicles (%)	0%	11%	15%	6%	13%	0%
Adj. Flow (vph)	0	123	85	902	932	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	123	85	902	932	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		26	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	0.88	0.96	0.96	0.96	1.00
Turning Speed (mph)	15			9	25	9
Number of Detectors		1	1	1	1	
Detector Template						
Leading Detector (ft)		50	50	0	0	
Trailing Detector (ft)		0	0	0	0	
Detector 1 Position(ft)		0	0	0	0	
Detector 1 Size(ft)		50	50	0	0	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0	
Turn Type				Free		
Protected Phases		1	1		4	
Permitted Phases		1		Free		
Detector Phase		1	1		4	
Switch Phase						
Minimum Initial (s)		4.0	4.0		4.0	
Minimum Split (s)		10.0	10.0		22.0	
Total Split (s)	0.0	24.0	24.0	0.0	36.0	0.0
Total Split (%)	0.0%	40.0%	40.0%	0.0%	60.0%	0.0%
Maximum Green (s)		18.0	18.0		30.0	



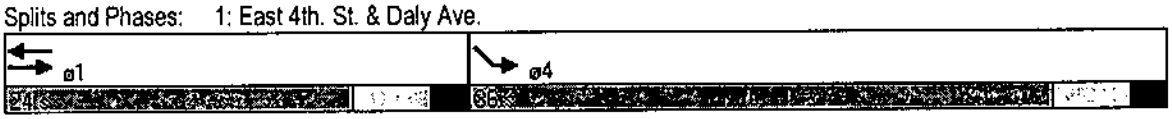
Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Yellow Time (s)		4.0	4.0		4.0	
All-Red Time (s)		2.0	2.0		2.0	
Lost Time Adjust (s)	0.0	2.0	2.0	2.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	2.0	6.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	
Recall Mode		Min	Min		Min	
Act Effct Green (s)		10.1	10.1	36.6	16.2	
Actuated g/C Ratio		0.28	0.28	1.00	0.44	
v/c Ratio		0.24	0.18	0.51	0.66	
Control Delay		12.9	12.6	1.1	10.6	
Queue Delay		0.0	0.0	0.0	0.0	
Total Delay		12.9	12.6	1.1	10.6	
LOS		B	B	A	B	
Approach Delay		12.9	2.1		10.6	
Approach LOS		B	A		B	
90th %ile Green (s)		11.4	11.4		23.9	
90th %ile Term Code		Gap	Gap		Gap	
70th %ile Green (s)		9.1	9.1		18.4	
70th %ile Term Code		Gap	Gap		Gap	
50th %ile Green (s)		7.8	7.8		15.9	
50th %ile Term Code		Gap	Gap		Gap	
30th %ile Green (s)		6.8	6.8		13.8	
30th %ile Term Code		Gap	Gap		Gap	
10th %ile Green (s)		5.6	5.6		10.4	
10th %ile Term Code		Gap	Gap		Gap	
Stops (vph)		77	56	1	546	
Fuel Used(gal)		3	1	9	15	
CO Emissions (g/hr)		196	100	617	1055	
NOx Emissions (g/hr)		38	19	120	205	
VOC Emissions (g/hr)		45	23	143	244	
Dilemma Vehicles (#)		0	9	0	0	
Queue Length 50th (ft)		18	12	0	65	
Queue Length 95th (ft)		55	42	0	118	
Internal Link Dist (ft)		2402	1429		993	
Turn Bay Length (ft)						
Base Capacity (vph)		818	741	1760	1919	
Starvation Cap Reductn		0	0	0	0	
Spillback Cap Reductn		0	0	0	0	
Storage Cap Reductn		0	0	0	0	
Reduced v/c Ratio		0.15	0.11	0.51	0.49	

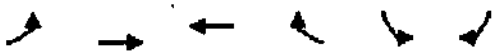
Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 36.6
Natural Cycle: 40
Control Type: Actuated-Uncoordinated

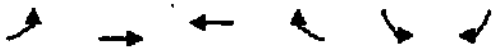
Maximum v/c Ratio: 0.66
Intersection Signal Delay: 6.6 Intersection LOS: A
Intersection Capacity Utilization 37.2% ICU Level of Service A
Analysis Period (min) 15
90th %ile Actuated Cycle: 47.3
70th %ile Actuated Cycle: 39.5
50th %ile Actuated Cycle: 35.7
30th %ile Actuated Cycle: 32.6
10th %ile Actuated Cycle: 28
* User Entered Value

Splits and Phases: 1: East 4th. St. & Daly Ave.





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	383	409	319	532	420	678
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	13	13	12
Storage Length (ft)	150			0	0	0
Storage Lanes	2			1	1	1
Taper Length (ft)	300			25	25	25
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3303	1597	1712	1560	1696	1509
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3303	1597	1712	1560	1696	1509
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				85		148
Link Speed (mph)		35	35		35	
Link Distance (ft)		1917	504		3028	
Travel Time (s)		37.3	9.8		59.0	
Peak Hour Factor	0.93	0.95	0.92	0.84	0.85	0.83
Heavy Vehicles (%)	6%	19%	11%	7%	10%	7%
Adj. Flow (vph)	412	431	347	633	494	817
Shared Lane Traffic (%)						
Lane Group Flow (vph)	412	431	347	633	494	817
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	0.96	0.96	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	1	1	1	1	1
Detector Template						
Leading Detector (ft)	30	0	5	30	30	30
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	30	0	5	30	30	30
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot			pm+ov		pm+ov
Protected Phases	7	4	8	6	6	7
Permitted Phases				8		6
Detector Phase	7	4	8	6	6	7
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0	19.0	21.0	21.0	9.0



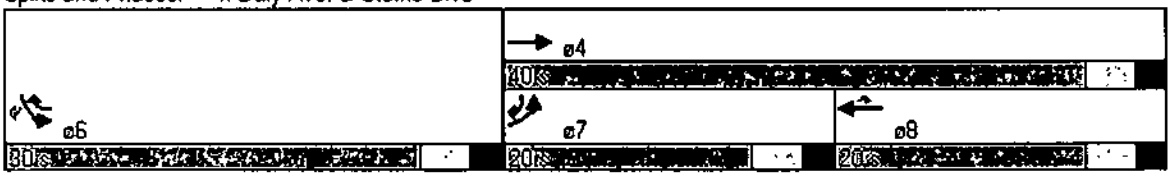
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Total Split (s)	20.0	40.0	20.0	30.0	30.0	20.0
Total Split (%)	28.6%	57.1%	28.6%	42.9%	42.9%	28.6%
Maximum Green (s)	15.0	35.0	15.0	25.0	25.0	15.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	5.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead		Lag			Lead
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	Min	Min	Min	Min	Min
Act Effct Green (s)	13.7	34.4	15.7	43.2	23.5	42.2
Actuated g/C Ratio	0.21	0.52	0.24	0.65	0.36	0.64
v/c Ratio	0.60	0.52	0.85	0.60	0.82	0.80
Control Delay	28.4	13.7	47.8	8.5	32.6	14.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.4	13.7	47.8	8.5	32.6	14.6
LOS	C	B	D	A	C	B
Approach Delay		20.9	22.5		21.4	
Approach LOS		C	C		C	
90th %ile Green (s)	15.0	35.0	15.0	25.0	25.0	15.0
90th %ile Term Code	Max	Hold	Max	Max	Max	Max
70th %ile Green (s)	15.0	35.0	15.0	25.0	25.0	15.0
70th %ile Term Code	Max	Hold	Max	Max	Max	Max
50th %ile Green (s)	15.0	35.0	15.0	25.0	25.0	15.0
50th %ile Term Code	Max	Hold	Max	Max	Max	Max
30th %ile Green (s)	13.7	33.7	15.0	22.2	22.2	13.7
30th %ile Term Code	Gap	Hold	Max	Gap	Gap	Gap
10th %ile Green (s)	10.0	28.1	13.1	16.1	16.1	10.0
10th %ile Term Code	Gap	Hold	Gap	Gap	Gap	Gap
Stops (vph)	327	253	264	245	349	398
Fuel Used(gal)	11	10	9	9	15	20
CO Emissions (g/hr)	763	679	610	617	1020	1386
NOx Emissions (g/hr)	148	132	119	120	198	270
VOC Emissions (g/hr)	177	157	141	143	236	321
Dilemma Vehicles (#)	0	30	22	0	0	0
Queue Length 50th (ft)	82	115	145	110	184	170
Queue Length 95th (ft)	124	191	#288	167	#283	261
Internal Link Dist (ft)		1837	424		2948	
Turn Bay Length (ft)	150					
Base Capacity (vph)	740	852	415	1073	646	1053
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	0.56	0.51	0.84	0.59	0.76	0.78

Intersection Summary

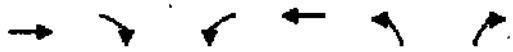
Area Type: Other
Cycle Length: 70

Actuated Cycle Length: 66
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.85
Intersection Signal Delay: 21.6 Intersection LOS: C
Intersection Capacity Utilization 65.4% ICU Level of Service C
Analysis Period (min) 15
90th %ile Actuated Cycle: 70
70th %ile Actuated Cycle: 70
50th %ile Actuated Cycle: 70
30th %ile Actuated Cycle: 65.9
10th %ile Actuated Cycle: 54.2
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: Daly Ave. & Stefko Blvd



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↱	↰	↑	↰	↱
Volume (vph)	505	40	329	668	159	259
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	11	12
Storage Length (ft)		0	200		0	0
Storage Lanes		1	1		1	1
Taper Length (ft)		25	200		25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1652	1589	1703	1776	1694	1568
Flt Permitted			0.208		0.950	
Satd. Flow (perm)	1652	1589	373	1776	1694	1568
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		57				332
Link Speed (mph)	35			35	30	
Link Distance (ft)	1771			341	540	
Travel Time (s)	34.5			6.6	12.3	
Peak Hour Factor	0.92	0.70	0.85	0.91	0.75	0.78
Heavy Vehicles (%)	15%	5%	6%	7%	3%	3%
Adj. Flow (vph)	549	57	387	734	212	332
Shared Lane Traffic (%)						
Lane Group Flow (vph)	549	57	387	734	212	332
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	11	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	0.96	1.00	1.00	1.04	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1	1	1	1	1	1
Detector Template						
Leading Detector (ft)	5	30	30	0	30	30
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	5	30	30	0	30	30
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type		Perm	pm+pt			Perm
Protected Phases	2		1	6	8	
Permitted Phases		2	6			8
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	21.0	9.0	21.0	18.0	18.0



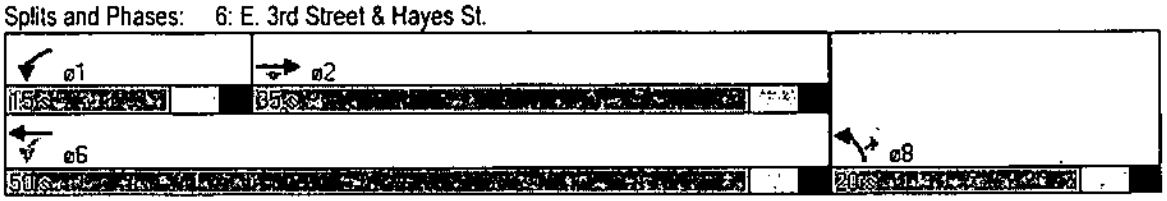
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Split (s)	35.0	35.0	15.0	50.0	20.0	20.0
Total Split (%)	50.0%	50.0%	21.4%	71.4%	28.6%	28.6%
Maximum Green (s)	30.0	30.0	10.0	45.0	15.0	15.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	Min	Min	Min	Min	Min
Act Effct Green (s)	25.1	25.1	40.4	40.4	13.1	13.1
Actuated g/C Ratio	0.41	0.41	0.65	0.65	0.21	0.21
v/c Ratio	0.82	0.08	0.80	0.63	0.59	0.56
Control Delay	27.8	4.0	23.7	9.6	30.5	7.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.8	4.0	23.7	9.6	30.5	7.2
LOS	C	A	C	A	C	A
Approach Delay	25.6			14.5	16.3	
Approach LOS	C			B	B	
90th %ile Green (s)	30.0	30.0	10.0	45.0	15.0	15.0
90th %ile Term Code	Max	Max	Max	Hold	Max	Max
70th %ile Green (s)	30.0	30.0	10.0	45.0	15.0	15.0
70th %ile Term Code	Max	Max	Max	Hold	Max	Max
50th %ile Green (s)	26.5	26.5	10.0	41.5	13.3	13.3
50th %ile Term Code	Gap	Gap	Max	Hold	Gap	Gap
30th %ile Green (s)	20.9	20.9	10.0	35.9	10.5	10.5
30th %ile Term Code	Gap	Gap	Max	Hold	Gap	Gap
10th %ile Green (s)	14.9	14.9	9.7	29.6	7.6	7.6
10th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Gap
Stops (vph)	409	7	141	358	134	34
Fuel Used(gal)	12	1	8	15	2	2
CO Emissions (g/hr)	866	42	560	1041	167	116
NOx Emissions (g/hr)	169	8	109	202	33	23
VOC Emissions (g/hr)	201	10	130	241	39	27
Dilemma Vehicles (#)	39	0	0	53	0	0
Queue Length 50th (ft)	179	0	61	142	75	0
Queue Length 95th (ft)	#319	11	#186	255	116	34
Internal Link Dist (ft)	1691			261	460	
Turn Bay Length (ft)			200			
Base Capacity (vph)	764	765	473	1216	425	642
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	0.72	0.07	0.82	0.60	0.50	0.52

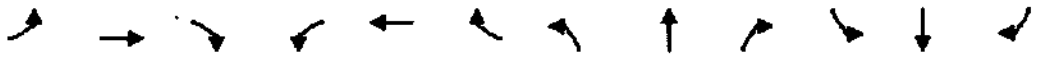
Intersection Summary

Area Type: Other
Cycle Length: 70

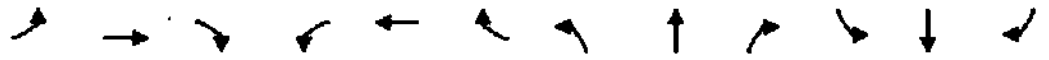
Actuated Cycle Length: 61.7
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 17.9 Intersection LOS: B
Intersection Capacity Utilization 63.6% ICU Level of Service B
Analysis Period (min) 15
90th %ile Actuated Cycle: 70
70th %ile Actuated Cycle: 70
50th %ile Actuated Cycle: 64.8
30th %ile Actuated Cycle: 56.4
10th %ile Actuated Cycle: 47.2
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: E. 3rd Street & Hayes St.





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	120	4	121	2	3	1	164	487	1	3	701	235
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	13	15	15	15	12	12	12	12	12	12
Storage Length (ft)	0		0	0		0	125		0	125		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25		25	25		25	75		25	75		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.983						0.957	
Flt Protected		0.954			0.982		0.950			0.950		
Satd. Flow (prot)	0	1729	1503	0	1998	0	1612	3505	0	1787	3359	0
Flt Permitted		0.729			0.900		0.157			0.465		
Satd. Flow (perm)	0	1321	1503	0	1831	0	266	3505	0	875	3359	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			159		1						101	
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		1014			565			3028			1065	
Travel Time (s)		23.0			12.8			59.0			20.7	
Peak Hour Factor	0.82	0.70	0.76	0.70	0.70	0.70	0.76	0.96	0.70	0.70	0.88	0.73
Heavy Vehicles (%)	5%	1%	11%	1%	1%	1%	12%	3%	1%	1%	2%	5%
Adj. Flow (vph)	146	6	159	3	4	1	216	507	1	4	797	322
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	152	159	0	8	0	216	508	0	4	1119	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	0.96	0.88	0.88	0.88	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50	50	50	50		50	0		50	0	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	50	50	50	50	50		50	0		50	0	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm		Perm	Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0		8.0	22.0		22.0	22.0	



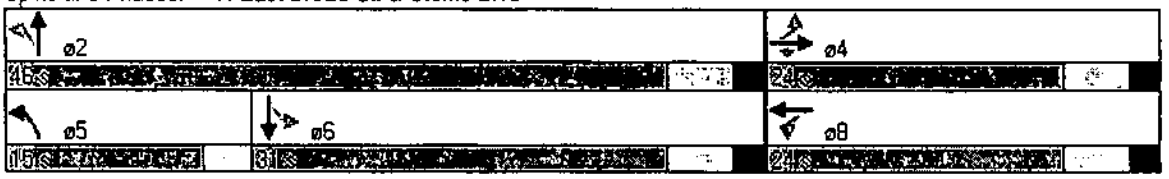
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	24.0	24.0	24.0	24.0	24.0	0.0	15.0	46.0	0.0	31.0	31.0	0.0
Total Split (%)	34.3%	34.3%	34.3%	34.3%	34.3%	0.0%	21.4%	65.7%	0.0%	44.3%	44.3%	0.0%
Maximum Green (s)	18.0	18.0	18.0	18.0	18.0		12.0	40.0		25.0	25.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		0.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	0.0	1.0	-2.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min	Min	None	None		Min	Min		Min	Min	
Act Effct Green (s)		14.1	14.1		14.1		38.4	38.4		24.4	24.4	
Actuated g/C Ratio		0.23	0.23		0.23		0.63	0.63		0.40	0.40	
v/c Ratio		0.50	0.34		0.02		0.56	0.23		0.01	0.79	
Control Delay		27.2	6.1		17.7		13.3	5.5		13.0	20.3	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		27.2	6.1		17.7		13.3	5.5		13.0	20.3	
LOS		C	A		B		B	A		B	C	
Approach Delay		16.4			17.7			7.8			20.3	
Approach LOS		B			B			A			C	
90th %ile Green (s)	18.0	18.0	18.0	18.0	18.0		12.0	40.0		25.0	25.0	
90th %ile Term Code	Max	Max	Max	Hold	Hold		Max	Hold		Max	Max	
70th %ile Green (s)	14.9	14.9	14.9	14.9	14.9		12.0	40.0		25.0	25.0	
70th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Max	Hold		Max	Max	
50th %ile Green (s)	12.3	12.3	12.3	12.3	12.3		12.0	40.0		25.0	25.0	
50th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Max	Hold		Max	Max	
30th %ile Green (s)	9.9	9.9	9.9	9.9	9.9		10.8	35.4		21.6	21.6	
30th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Gap	Hold		Gap	Gap	
10th %ile Green (s)	6.8	6.8	6.8	6.8	6.8		7.6	26.3		15.7	15.7	
10th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Gap	Hold		Gap	Gap	
Stops (vph)		100	19		7		71	184		3	691	
Fuel Used(gal)		2	1		0		5	13		0	16	
CO Emissions (g/hr)		155	85		6		319	879		4	1137	
NOx Emissions (g/hr)		30	16		1		62	171		1	221	
VOC Emissions (g/hr)		36	20		1		74	204		1	264	
Dilemma Vehicles (#)		0	0		0		0	39		0	76	
Queue Length 50th (ft)		53	0		2		28	35		1	171	
Queue Length 95th (ft)		76	24		9		64	70		5	272	
Internal Link Dist (ft)		934			485			2948			985	
Turn Bay Length (ft)							125			125		
Base Capacity (vph)		401	567		557		395	2295		376	1502	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.38	0.28		0.01		0.55	0.22		0.01	0.75	

Intersection Summary

Area Type: Other
Cycle Length: 70

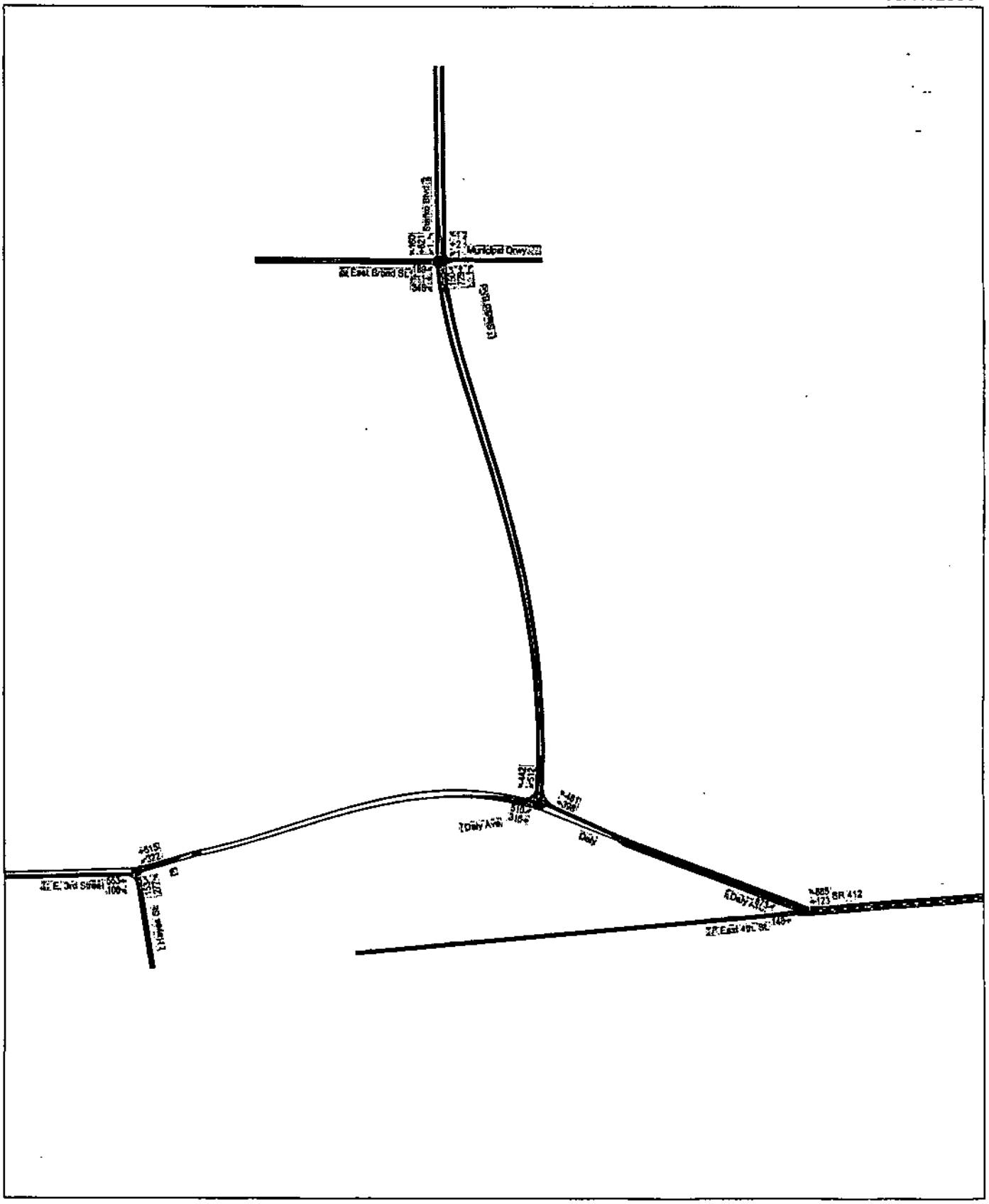
Actuated Cycle Length: 60.7
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 15.6 Intersection LOS: B
Intersection Capacity Utilization 59.5% ICU Level of Service B
Analysis Period (min) 15
90th %ile Actuated Cycle: 70
70th %ile Actuated Cycle: 66.9
50th %ile Actuated Cycle: 64.3
30th %ile Actuated Cycle: 57.3
10th %ile Actuated Cycle: 45.1

Splits and Phases: 7: East Broad St. & Stefko Blvd



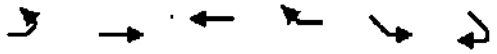
PEAK PM HOUR – 2008 NO-BUILD CONDITION

Map - Sands Bethworks Development - Peak PM Hour
2008 No-Build Condition 10/17/2006



Sands Bethworks Development - Peak PM Hour 2008 No-Build Condition zi - 2008npm
G:\Data\ENG\SYNCHRO\06934\2008npm.syn

Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑	↑	↱	↰↑	
Volume (vph)	0	148	123	885	873	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	15	13	13	13	12
Lane Util. Factor	1.00	1.00	1.00	1.00	0.97	1.00
Frt				0.950		
Flt Protected					0.950	
Satd. Flow (prot)	0	2069	1944	1847	3583	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	2069	1944	1847	3583	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				932		
Link Speed (mph)		30	35		35	
Link Distance (ft)		2482	1509		1073	
Travel Time (s)		56.4	29.4		20.9	
Peak Hour Factor	0.90	0.85	0.85	0.95	0.90	0.90
Heavy Vehicles (%)	0%	1%	1%	1%	1%	0%
Adj. Flow (vph)	0	174	145	932	970	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	174	145	932	970	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		26	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	0.88	0.96	0.96	0.96	1.00
Turning Speed (mph)	15			12	25	9
Number of Detectors		1	1	1	1	
Detector Template						
Leading Detector (ft)		50	50	0	0	
Trailing Detector (ft)		0	0	0	0	
Detector 1 Position(ft)		0	0	0	0	
Detector 1 Size(ft)		50	50	0	0	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0	
Turn Type				Free		
Protected Phases		1	1		4	
Permitted Phases		1		Free		
Detector Phase		1	1		4	
Switch Phase						
Minimum Initial (s)		4.0	4.0		4.0	
Minimum Split (s)		10.0	10.0		22.0	
Total Split (s)	0.0	24.0	24.0	0.0	36.0	0.0
Total Split (%)	0.0%	40.0%	40.0%	0.0%	60.0%	0.0%
Maximum Green (s)		18.0	18.0		30.0	



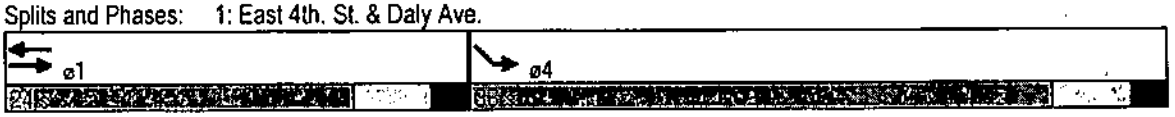
Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Yellow Time (s)		4.0	4.0		4.0	
All-Red Time (s)		2.0	2.0		2.0	
Lost Time Adjust (s)	0.0	-2.0	-2.0	-2.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	2.0	6.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	
Recall Mode		Min	Min		Min	
Act Effct Green (s)		10.8	10.8	36.7	15.6	
Actuated g/C Ratio		0.29	0.29	1.00	0.43	
v/c Ratio		0.29	0.25	0.50	0.64	
Control Delay		12.5	12.4	1.0	10.5	
Queue Delay		0.0	0.0	0.0	0.0	
Total Delay		12.5	12.4	1.0	10.5	
LOS		B	B	A	B	
Approach Delay		12.5	2.5		10.5	
Approach LOS		B	A		B	
90th %ile Green (s)		12.4	12.4		22.8	
90th %ile Term Code		Gap	Gap		Gap	
70th %ile Green (s)		9.8	9.8		17.7	
70th %ile Term Code		Gap	Gap		Gap	
50th %ile Green (s)		8.5	8.5		15.4	
50th %ile Term Code		Gap	Gap		Gap	
30th %ile Green (s)		7.4	7.4		13.4	
30th %ile Term Code		Gap	Gap		Gap	
10th %ile Green (s)		6.0	6.0		10.2	
10th %ile Term Code		Gap	Gap		Gap	
Stops (vph)		104	86	1	590	
Fuel Used(gal)		4	2	10	16	
CO Emissions (g/hr)		267	161	687	1136	
NOx Emissions (g/hr)		52	31	134	221	
VOC Emissions (g/hr)		62	37	159	263	
Dilemma Vehicles (#)		0	15	0	0	
Queue Length 50th (ft)		26	21	0	69	
Queue Length 95th (ft)		68	58	0	130	
Internal Link Dist (ft)		2402	1429		993	
Turn Bay Length (ft)						
Base Capacity (vph)		909	854	1847	2119	
Starvation Cap Reductn		0	0	0	0	
Spillback Cap Reductn		0	0	0	0	
Storage Cap Reductn		0	0	0	0	
Reduced v/c Ratio		0.19	0.17	0.50	0.46	

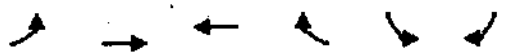
Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 36.7
Natural Cycle: 40
Control Type: Actuated-Uncoordinated

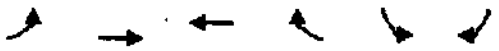
Maximum v/c Ratio: 0.64
Intersection Signal Delay: 6.8 Intersection LOS: A
Intersection Capacity Utilization 41.0% ICU Level of Service A
Analysis Period (min) 15
90th %ile Actuated Cycle: 47.2
70th %ile Actuated Cycle: 39.5
50th %ile Actuated Cycle: 35.9
30th %ile Actuated Cycle: 32.8
10th %ile Actuated Cycle: 28.2
* User Entered Value

Splits and Phases: 1: East 4th. St. & Daly Ave.





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	510	316	398	481	512	442
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	13	13	12
Storage Length (ft)	150			0	0	0
Storage Lanes	2			1	1	1
Taper Length (ft)	300			25	25	25
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3467	1863	1863	1517	1847	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3467	1863	1863	1517	1847	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				39		81
Link Speed (mph)		35	35		35	
Link Distance (ft)		1909	504		3028	
Travel Time (s)		37.2	9.8		59.0	
Peak Hour Factor	0.90	0.90	0.95	0.90	0.95	0.90
Heavy Vehicles (%)	1%	2%	2%	10%	1%	2%
Adj. Flow (vph)	567	351	419	534	539	491
Shared Lane Traffic (%)						
Lane Group Flow (vph)	567	351	419	534	539	491
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	0.96	0.96	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	1	1	1	1	1
Detector Template						
Leading Detector (ft)	30	0	0	30	30	30
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	30	0	0	30	30	30
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot			pm+ov		pm+ov
Protected Phases	7	4	8	6	6	7
Permitted Phases				8		6
Detector Phase	7	4	8	6	6	7
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0	19.0	21.0	21.0	9.0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Total Split (s)	21.0	40.0	19.0	30.0	30.0	21.0
Total Split (%)	30.0%	57.1%	27.1%	42.9%	42.9%	30.0%
Maximum Green (s)	16.0	35.0	14.0	25.0	25.0	16.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	5.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead		Lag			Lead
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	Min	Min	Min	Min	Min
Act Effct Green (s)	14.7	34.9	15.1	42.6	23.4	43.2
Actuated g/C Ratio	0.22	0.53	0.23	0.64	0.35	0.65
v/c Ratio	0.74	0.36	0.99	0.54	0.83	0.46
Control Delay	31.0	11.1	71.6	8.6	32.4	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.0	11.1	71.6	8.6	32.4	6.2
LOS	C	B	E	A	C	A
Approach Delay		23.4	36.3		19.9	
Approach LOS		C	D		B	
90th %ile Green (s)	16.0	35.0	14.0	25.0	25.0	16.0
90th %ile Term Code	Max	Hold	Max	Max	Max	Max
70th %ile Green (s)	16.0	35.0	14.0	25.0	25.0	16.0
70th %ile Term Code	Max	Hold	Max	Max	Max	Max
50th %ile Green (s)	16.0	35.0	14.0	25.0	25.0	16.0
50th %ile Term Code	Max	Hold	Max	Max	Max	Max
30th %ile Green (s)	15.1	34.1	14.0	22.5	22.5	15.1
30th %ile Term Code	Gap	Hold	Max	Gap	Gap	Gap
10th %ile Green (s)	10.8	29.8	14.0	15.5	15.5	10.8
10th %ile Term Code	Gap	Hold	Max	Gap	Gap	Gap
Stops (vph)	450	173	315	228	427	160
Fuel Used(gal)	15	7	13	8	18	11
CO Emissions (g/hr)	1041	500	888	562	1243	798
NOx Emissions (g/hr)	203	97	173	109	242	155
VOC Emissions (g/hr)	241	116	206	130	288	185
Dilemma Vehicles (#)	0	23	25	0	0	0
Queue Length 50th (ft)	116	84	~201	98	201	66
Queue Length 95th (ft)	168	139	#362	172	#357	118
Internal Link Dist (ft)		1829	424		2948	
Turn Bay Length (ft)	150					
Base Capacity (vph)	823	995	424	1007	699	1096
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	0.69	0.35	0.99	0.53	0.77	0.45

Intersection Summary

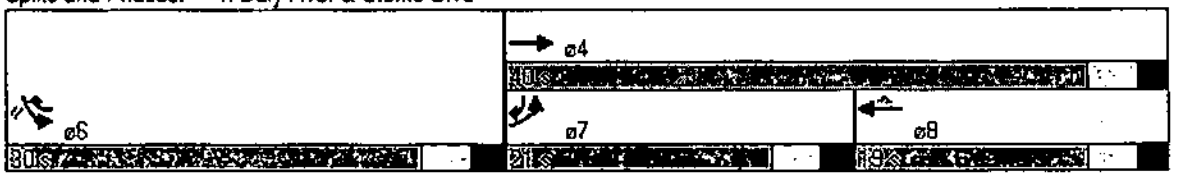
Area Type: Other
Cycle Length: 70

Actuated Cycle Length: 66.4
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.99
Intersection Signal Delay: 26.4 Intersection LOS: C
Intersection Capacity Utilization 74.7% ICU Level of Service D
Analysis Period (min) 15
90th %ile Actuated Cycle: 70
70th %ile Actuated Cycle: 70
50th %ile Actuated Cycle: 70
30th %ile Actuated Cycle: 66.6
10th %ile Actuated Cycle: 55.3

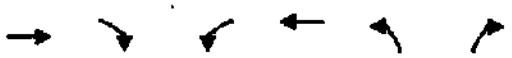
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: Daly Ave. & Stefko Blvd



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↱	↰	↑	↰	↱
Volume (vph)	553	108	322	515	153	277
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	11	12
Storage Length (ft)		0	200		0	0
Storage Lanes		1	1		1	1
Taper Length (ft)		25	200		25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1881	1652	1787	1881	1728	1599
Flt Permitted			0.176		0.950	
Satd. Flow (perm)	1881	1652	331	1881	1728	1599
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		127				326
Link Speed (mph)	35			35	30	
Link Distance (ft)	1771			341	540	
Travel Time (s)	34.5			6.6	12.3	
Peak Hour Factor	0.95	0.85	0.85	0.90	0.85	0.85
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	582	127	379	572	180	326
Shared Lane Traffic (%)						
Lane Group Flow (vph)	582	127	379	572	180	326
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	11	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	0.96	1.00	1.00	1.04	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1	1	1	1	1	1
Detector Template						
Leading Detector (ft)	0	30	30	0	30	30
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	0	30	30	0	30	30
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type		Perm	pm+pt			Perm
Protected Phases	2		1	6	8	
Permitted Phases		2	6			8
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	21.0	9.0	21.0	20.0	20.0



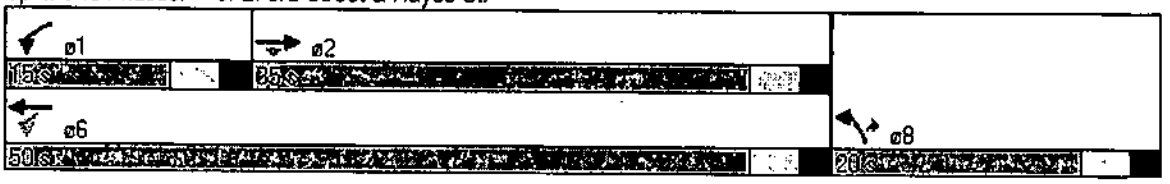
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Split (s)	35.0	35.0	15.0	50.0	20.0	20.0
Total Split (%)	50.0%	50.0%	21.4%	71.4%	28.6%	28.6%
Maximum Green (s)	30.0	30.0	10.0	45.0	15.0	15.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	Min	Min	Min	Min	Min
Act Effct Green (s)	23.9	23.9	39.1	39.1	12.4	12.4
Actuated g/C Ratio	0.40	0.40	0.65	0.65	0.21	0.21
v/c Ratio	0.77	0.17	0.78	0.46	0.50	0.55
Control Delay	23.7	3.3	23.5	6.9	27.8	7.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.7	3.3	23.5	6.9	27.8	7.2
LOS	C	A	C	A	C	A
Approach Delay	20.1			13.5	14.5	
Approach LOS	C			B	B	
90th %ile Green (s)	30.0	30.0	10.0	45.0	15.0	15.0
90th %ile Term Code	Max	Max	Max	Hold	Max	Max
70th %ile Green (s)	30.0	30.0	10.0	45.0	15.0	15.0
70th %ile Term Code	Max	Max	Max	Hold	Max	Max
50th %ile Green (s)	24.2	24.2	10.0	39.2	11.6	11.6
50th %ile Term Code	Gap	Gap	Max	Hold	Gap	Gap
30th %ile Green (s)	18.7	18.7	10.0	33.7	9.3	9.3
30th %ile Term Code	Gap	Gap	Max	Hold	Gap	Gap
10th %ile Green (s)	13.7	13.7	9.3	28.0	6.9	6.9
10th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Gap
Stops (vph)	441	14	144	224	126	37
Fuel Used(gal)	13	2	8	11	2	2
CO Emissions (g/hr)	913	109	549	753	154	124
NOx Emissions (g/hr)	178	21	107	146	30	24
VOC Emissions (g/hr)	212	25	127	174	36	29
Dilemma Vehicles (#)	45	0	0	42	0	0
Queue Length 50th (ft)	173	0	61	84	59	0
Queue Length 95th (ft)	306	23	#192	163	115	48
Internal Link Dist (ft)	1691			261	460	
Turn Bay Length (ft)			200			
Base Capacity (vph)	880	840	469	1303	443	652
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	0.66	0.15	0.81	0.44	0.41	0.50

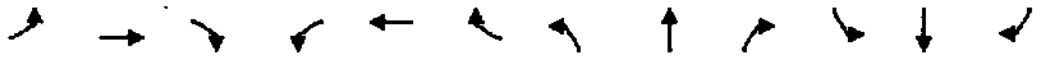
Intersection Summary

Area Type: Other
Cycle Length: 70

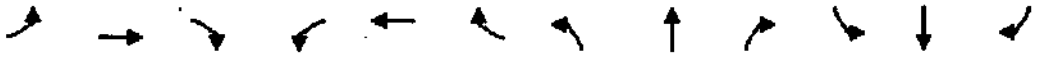
Actuated Cycle Length: 59.7
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 15.9 Intersection LOS: B
Intersection Capacity Utilization 65.4% ICU Level of Service C
Analysis Period (min) 15
90th %ile Actuated Cycle: 70
70th %ile Actuated Cycle: 70
50th %ile Actuated Cycle: 60.8
30th %ile Actuated Cycle: 53
10th %ile Actuated Cycle: 44.9
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: E. 3rd Street & Hayes St.





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	189	1	348	1	2	1	150	729	1	1	621	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	13	15	15	15	12	12	12	12	12	12
Storage Length (ft)	0		0	0		0	125		0	125		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25		25	25		25	75		25	75		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.966						0.968	
Flt Protected		0.953			0.988		0.950			0.950		
Satd. Flow (prot)	0	1793	1652	0	1975	0	1770	3574	0	1787	3460	0
Flt Permitted		0.725			0.934		0.165			0.346		
Satd. Flow (perm)	0	1364	1652	0	1867	0	307	3574	0	651	3460	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			387		1						58	
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		1014			565			3028			1065	
Travel Time (s)		23.0			12.8			59.0			20.7	
Peak Hour Factor	0.95	0.85	0.90	0.85	0.85	0.85	0.85	0.90	0.85	0.85	0.80	0.75
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	1%	1%	1%	1%	1%
Adj. Flow (vph)	199	1	387	1	2	1	176	810	1	1	776	213
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	200	387	0	4	0	176	811	0	1	989	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	0.96	0.88	0.88	0.88	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50	50	50	50		50	0		50	0	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	50	50	50	50	50		50	0		50	0	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm		Perm	Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0		8.0	22.0		22.0	22.0	



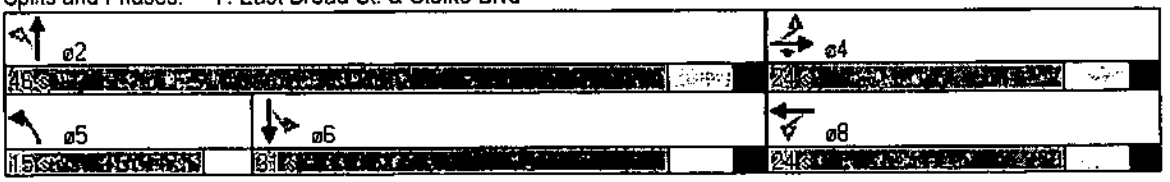
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	24.0	24.0	24.0	24.0	24.0	0.0	15.0	46.0	0.0	31.0	31.0	0.0
Total Split (%)	34.3%	34.3%	34.3%	34.3%	34.3%	0.0%	21.4%	65.7%	0.0%	44.3%	44.3%	0.0%
Maximum Green (s)	18.0	18.0	18.0	18.0	18.0		12.0	40.0		25.0	25.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		0.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	0.0	1.0	-2.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min	Min	None	None		Min	Min		Min	Min	
Act Effct Green (s)		15.6	15.6		15.6		36.1	36.1		23.1	23.1	
Actuated g/C Ratio		0.26	0.26		0.26		0.60	0.60		0.38	0.38	
v/c Ratio		0.56	0.54		0.01		0.44	0.38		0.00	0.72	
Control Delay		27.5	5.7		16.7		9.4	7.0		13.0	19.0	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		27.5	5.7		16.7		9.4	7.0		13.0	19.0	
LOS		C	A		B		A	A		B	B	
Approach Delay		13.1			16.7			7.5			19.0	
Approach LOS		B			B			A			B	
90th %ile Green (s)	18.0	18.0	18.0	18.0	18.0		12.0	40.0		25.0	25.0	
90th %ile Term Code	Max	Max	Max	Hold	Hold		Max	Hold		Max	Max	
70th %ile Green (s)	18.0	18.0	18.0	18.0	18.0		12.0	40.0		25.0	25.0	
70th %ile Term Code	Max	Max	Max	Hold	Hold		Max	Hold		Max	Max	
50th %ile Green (s)	14.2	14.2	14.2	14.2	14.2		10.7	36.5		22.8	22.8	
50th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Gap	Hold		Gap	Gap	
30th %ile Green (s)	11.2	11.2	11.2	11.2	11.2		8.7	30.8		19.1	19.1	
30th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Gap	Hold		Gap	Gap	
10th %ile Green (s)	7.7	7.7	7.7	7.7	7.7		6.6	23.5		13.9	13.9	
10th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Gap	Hold		Gap	Gap	
Stops (vph)		154	40		3		58	329		2	582	
Fuel Used(gal)		3	3		0		4	19		0	13	
CO Emissions (g/hr)		239	236		3		280	1362		2	937	
NOx Emissions (g/hr)		46	46		1		54	265		0	182	
VOC Emissions (g/hr)		55	55		1		65	316		0	217	
Dilemma Vehicles (#)		0	0		0		0	60		0	64	
Queue Length 50th (ft)		66	0		1		25	70		0	150	
Queue Length 95th (ft)		124	58		7		52	116		3	201	
Internal Link Dist (ft)		934			485			2948			985	
Turn Bay Length (ft)							125			125		
Base Capacity (vph)		430	785		589		424	2289		278	1511	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.47	0.49		0.01		0.42	0.35		0.00	0.65	

Intersection Summary

Area Type: Other
Cycle Length: 70

Actuated Cycle Length: 60
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.72
Intersection Signal Delay: 13.2 Intersection LOS: B
Intersection Capacity Utilization 57.8% ICU Level of Service B
Analysis Period (min) 15
90th %ile Actuated Cycle: 70
70th %ile Actuated Cycle: 70
50th %ile Actuated Cycle: 62.7
30th %ile Actuated Cycle: 54
10th %ile Actuated Cycle: 43.2

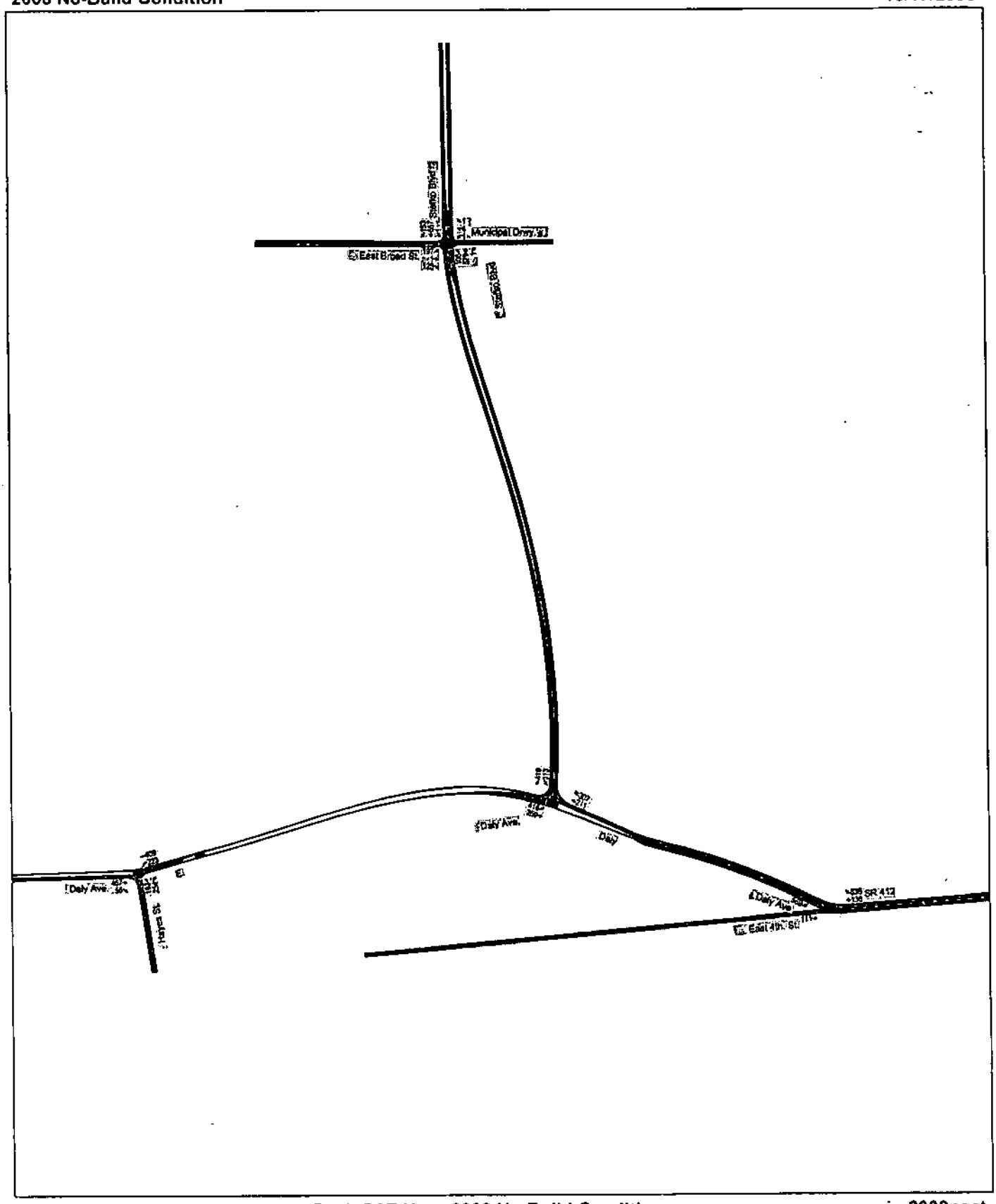
Splits and Phases: 7: East Broad St. & Stefko Blvd



PEAK SATURDAY HOUR – 2008 NO-BUILD CONDITION

Map - Sands Bethworks Development - Peak SAT Hour
2008 No-Build Condition

10/17/2006



Sands Bethworks Development - Peak SAT Hour 2008 No-Build Condition

zi - 2008nsat

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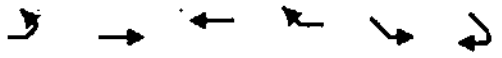
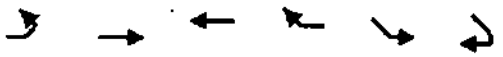


Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑	↑	↱	↰↰	
Volume (vph)	0	111	136	536	559	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	15	13	13	13	12
Lane Util. Factor	1.00	1.00	1.00	1.00	0.97	1.00
Frt				0.950		
Flt Protected					0.950	
Satd. Flow (prot)	0	2049	1925	1829	3547	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	2049	1925	1829	3547	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				596		
Link Speed (mph)		30	35		35	
Link Distance (ft)		2482	1509		1078	
Travel Time (s)		56.4	29.4		21.0	
Peak Hour Factor	0.90	0.90	0.85	0.90	0.95	0.90
Heavy Vehicles (%)	0%	2%	2%	2%	2%	0%
Adj. Flow (vph)	0	123	160	596	588	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	123	160	596	588	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		26	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	0.88	0.96	0.96	0.96	1.00
Turning Speed (mph)	15			9	25	9
Number of Detectors		1	1	1	1	
Detector Template						
Leading Detector (ft)		50	50	5	0	
Trailing Detector (ft)		0	0	0	0	
Detector 1 Position(ft)		0	0	0	0	
Detector 1 Size(ft)		50	50	5	0	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0	
Turn Type				Free		
Protected Phases		1	1		4	
Permitted Phases		1		Free		
Detector Phase		1	1		4	
Switch Phase						
Minimum Initial (s)		4.0	4.0		4.0	
Minimum Split (s)		10.0	10.0		22.0	
Total Split (s)	0.0	24.0	24.0	0.0	36.0	0.0
Total Split (%)	0.0%	40.0%	40.0%	0.0%	60.0%	0.0%
Maximum Green (s)		18.0	18.0		30.0	



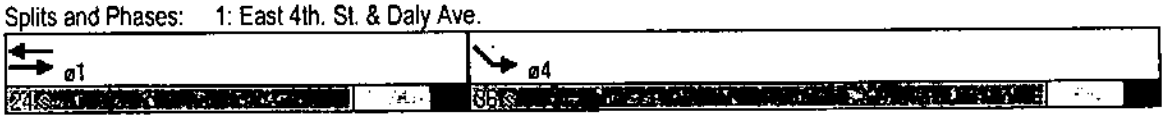
Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Yellow Time (s)		4.0	4.0		4.0	
All-Red Time (s)		2.0	2.0		2.0	
Lost Time Adjust (s)	0.0	2.0	2.0	2.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	2.0	6.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	
Recall Mode		Min	Min		Min	
Act Effct Green (s)		10.0	10.0	30.8	10.6	
Actuated g/C Ratio		0.32	0.32	1.00	0.34	
v/c Ratio		0.18	0.25	0.33	0.48	
Control Delay		8.8	9.4	0.5	9.6	
Queue Delay		0.0	0.0	0.0	0.0	
Total Delay		8.8	9.4	0.5	9.6	
LOS		A	A	A	A	
Approach Delay		8.8	2.4		9.6	
Approach LOS		A	A		A	
90th %ile Green (s)		10.8	10.8		14.9	
90th %ile Term Code		Gap	Gap		Gap	
70th %ile Green (s)		8.9	8.9		11.6	
70th %ile Term Code		Gap	Gap		Gap	
50th %ile Green (s)		7.8	7.8		10.2	
50th %ile Term Code		Gap	Gap		Gap	
30th %ile Green (s)		7.0	7.0		9.1	
30th %ile Term Code		Gap	Gap		Gap	
10th %ile Green (s)		5.9	5.9		7.7	
10th %ile Term Code		Gap	Gap		Gap	
Stops (vph)		71	89	0	373	
Fuel Used(gal)		3	2	6	10	
CO Emissions (g/hr)		192	169	412	718	
NOx Emissions (g/hr)		37	33	80	140	
VOC Emissions (g/hr)		44	39	95	167	
Dilemma Vehicles (#)		0	21	0	0	
Queue Length 50th (ft)		13	17	0	35	
Queue Length 95th (ft)		40	47	0	69	
Internal Link Dist (ft)		2402	1429		998	
Turn Bay Length (ft)						
Base Capacity (vph)		1010	949	1829	2127	
Starvation Cap Reductn		0	0	0	0	
Spillback Cap Reductn		0	0	0	0	
Storage Cap Reductn		0	0	0	0	
Reduced v/c Ratio		0.12	0.17	0.33	0.28	

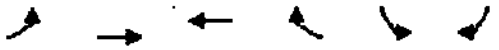
Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 30.8
Natural Cycle: 40
Control Type: Actuated-Uncoordinated

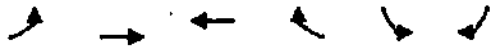
Maximum v/c Ratio: 0.48
Intersection Signal Delay: 5.8 Intersection LOS: A
Intersection Capacity Utilization 31.4% ICU Level of Service A
Analysis Period (min) 15
90th %ile Actuated Cycle: 37.7
70th %ile Actuated Cycle: 32.5
50th %ile Actuated Cycle: 30
30th %ile Actuated Cycle: 28.1
10th %ile Actuated Cycle: 25.6
* User Entered Value

Splits and Phases: 1: East 4th. St. & Daly Ave.





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	416	259	211	307	313	419
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	13	13	12
Storage Length (ft)	150			0	0	0
Storage Lanes	2			1	1	1
Taper Length (ft)	300			25	25	25
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3467	1881	1881	1636	1829	1599
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3467	1881	1881	1636	1829	1599
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				85		400
Link Speed (mph)		35	35		35	
Link Distance (ft)		1911	504		3028	
Travel Time (s)		37.2	9.8		59.0	
Peak Hour Factor	0.95	0.90	0.95	0.90	0.95	0.90
Heavy Vehicles (%)	1%	1%	1%	2%	2%	1%
Adj. Flow (vph)	438	288	222	341	329	466
Shared Lane Traffic (%)						
Lane Group Flow (vph)	438	288	222	341	329	466
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	0.96	0.96	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	1	1	1	1	1
Detector Template						
Leading Detector (ft)	30	0	0	30	30	30
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	30	0	0	30	30	30
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot			pm+ov		pm+ov
Protected Phases	7	4	8	6	6	7
Permitted Phases				8		6
Detector Phase	7	4	8	6	6	7
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0	19.0	21.0	21.0	9.0



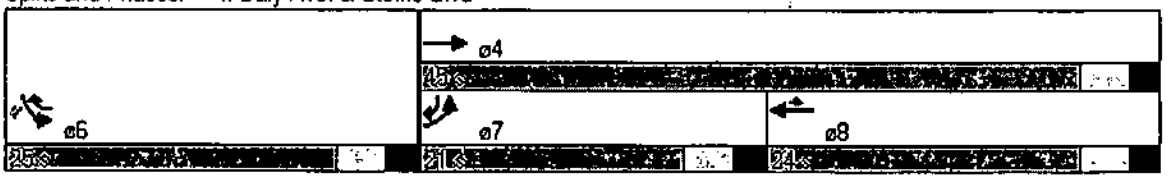
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Total Split (s)	21.0	45.0	24.0	25.0	25.0	21.0
Total Split (%)	30.0%	64.3%	34.3%	35.7%	35.7%	30.0%
Maximum Green (s)	16.0	40.0	19.0	20.0	20.0	16.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	5.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead		Lag			Lead
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	Min	Min	Min	Min	Min
Act Effct Green (s)	12.9	31.2	13.1	33.3	16.0	34.1
Actuated g/C Ratio	0.23	0.56	0.24	0.60	0.29	0.61
v/c Ratio	0.55	0.27	0.50	0.34	0.62	0.41
Control Delay	23.0	7.6	24.2	5.1	24.3	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.0	7.6	24.2	5.1	24.3	2.4
LOS	C	A	C	A	C	A
Approach Delay		16.9	12.6		11.4	
Approach LOS		B	B		B	
90th %ile Green (s)	16.0	39.1	18.1	20.0	20.0	16.0
90th %ile Term Code	Max	Hold	Gap	Max	Max	Max
70th %ile Green (s)	16.0	35.7	14.7	19.8	19.8	16.0
70th %ile Term Code	Max	Hold	Gap	Gap	Gap	Max
50th %ile Green (s)	13.3	30.3	12.0	15.3	15.3	13.3
50th %ile Term Code	Gap	Hold	Gap	Gap	Gap	Gap
30th %ile Green (s)	11.3	26.1	9.8	12.3	12.3	11.3
30th %ile Term Code	Gap	Hold	Gap	Gap	Gap	Gap
10th %ile Green (s)	8.2	20.4	7.2	8.9	8.9	8.2
10th %ile Term Code	Gap	Hold	Gap	Gap	Gap	Gap
Stops (vph)	335	116	166	95	248	39
Fuel Used(gal)	11	5	5	5	10	10
CO Emissions (g/hr)	785	383	328	317	717	675
NOx Emissions (g/hr)	153	75	64	62	139	131
VOC Emissions (g/hr)	182	89	76	74	166	156
Dilemma Vehicles (#)	0	22	18	0	0	0
Queue Length 50th (ft)	64	43	64	34	93	7
Queue Length 95th (ft)	126	92	136	75	196	44
Internal Link Dist (ft)		1831	424		2948	
Turn Bay Length (ft)	150					
Base Capacity (vph)	965	1187	613	1129	645	1214
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	0.45	0.24	0.36	0.30	0.51	0.38

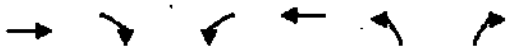
Intersection Summary

Area Type: Other
Cycle Length: 70

Actuated Cycle Length: 55.6
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.62
Intersection Signal Delay: 13.6 Intersection LOS: B
Intersection Capacity Utilization 51.1% ICU Level of Service A
Analysis Period (min) 15
90th %ile Actuated Cycle: 69.1
70th %ile Actuated Cycle: 65.5
50th %ile Actuated Cycle: 55.6
30th %ile Actuated Cycle: 48.4
10th %ile Actuated Cycle: 39.3

Splits and Phases: 4: Daly Ave. & Stefko Blvd





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↱	↰	↑	↰	↱
Volume (vph)	467	55	223	409	162	254
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	11	12
Storage Length (ft)		0	200		0	0
Storage Lanes		1	1		1	1
Taper Length (ft)		25	200		25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1881	1652	1787	1881	1728	1599
Flt Permitted			0.214		0.950	
Satd. Flow (perm)	1881	1652	403	1881	1728	1599
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		61				282
Link Speed (mph)	35			35	30	
Link Distance (ft)	1771			341	540	
Travel Time (s)	34.5			6.6	12.3	
Peak Hour Factor	0.90	0.90	0.85	0.90	0.85	0.90
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	519	61	262	454	191	282
Shared Lane Traffic (%)						
Lane Group Flow (vph)	519	61	262	454	191	282
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	11	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	0.96	1.00	1.00	1.04	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1	1	1	1	1	1
Detector Template						
Leading Detector (ft)	0	30	30	0	30	30
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	0	30	30	0	30	30
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type		Perm	pm+pt			Perm
Protected Phases	2		1	6	8	
Permitted Phases		2	6			8
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	21.0	9.0	21.0	20.0	20.0

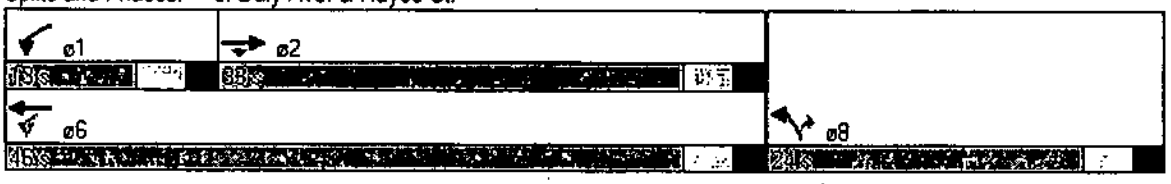
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Split (s)	33.0	33.0	13.0	46.0	24.0	24.0
Total Split (%)	47.1%	47.1%	18.6%	65.7%	34.3%	34.3%
Maximum Green (s)	28.0	28.0	8.0	41.0	19.0	19.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	Min	Min	Min	Min	Min
Act Effct Green (s)	20.8	20.8	33.9	33.9	12.8	12.8
Actuated g/C Ratio	0.38	0.38	0.62	0.62	0.23	0.23
v/c Ratio	0.73	0.09	0.55	0.39	0.48	0.48
Control Delay	21.9	4.2	10.1	7.0	23.8	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.9	4.2	10.1	7.0	23.8	6.1
LOS	C	A	B	A	C	A
Approach Delay	20.0			8.1	13.2	
Approach LOS	C			A	B	
90th %ile Green (s)	28.0	28.0	8.0	41.0	18.5	18.5
90th %ile Term Code	Max	Max	Max	Hold	Gap	Gap
70th %ile Green (s)	25.3	25.3	8.0	38.3	14.1	14.1
70th %ile Term Code	Gap	Gap	Max	Hold	Gap	Gap
50th %ile Green (s)	19.8	19.8	8.0	32.8	11.4	11.4
50th %ile Term Code	Gap	Gap	Max	Hold	Gap	Gap
30th %ile Green (s)	16.1	16.1	7.9	29.0	9.3	9.3
30th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Gap
10th %ile Green (s)	11.8	11.8	6.6	23.4	7.0	7.0
10th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Gap
Stops (vph)	365	10	88	180	127	33
Fuel Used(gal)	11	1	5	9	2	2
CO Emissions (g/hr)	755	58	332	600	152	109
NOx Emissions (g/hr)	147	11	65	117	30	21
VOC Emissions (g/hr)	175	13	77	139	35	25
Dilemma Vehicles (#)	41	0	0	36	0	0
Queue Length 50th (ft)	136	0	31	60	53	0
Queue Length 95th (ft)	273	19	74	144	112	51
Internal Link Dist (ft)	1691			261	460	
Turn Bay Length (ft)			200			
Base Capacity (vph)	873	800	465	1258	565	712
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	0.59	0.08	0.56	0.36	0.34	0.40

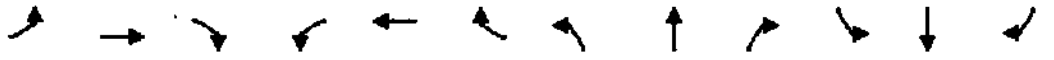
Intersection Summary

Area Type: Other
Cycle Length: 70

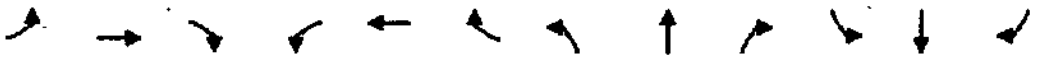
Actuated Cycle Length: 55
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 13.4 Intersection LOS: B
Intersection Capacity Utilization 55.9% ICU Level of Service B
Analysis Period (min) 15
90th %ile Actuated Cycle: 69.5
70th %ile Actuated Cycle: 62.4
50th %ile Actuated Cycle: 54.2
30th %ile Actuated Cycle: 48.3
10th %ile Actuated Cycle: 40.4

Splits and Phases: 6: Daly Ave. & Hayes St.





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	197	1	125	1	4	1	106	579	1	1	557	153
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	13	15	15	15	12	12	12	12	12	12
Storage Length (ft)	0		0	0		0	125		0	125		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25		25	25		25	75		25	75		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.981						0.966	
Flt Protected		0.953			0.993		0.950			0.950		
Satd. Flow (prot)	0	1793	1652	0	2016	0	1787	3574	0	1787	3343	0
Flt Permitted		0.723			0.959		0.189			0.421		
Satd. Flow (perm)	0	1360	1652	0	1947	0	356	3574	0	792	3343	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			139		1						61	
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		1014			565			3028			1065	
Travel Time (s)		23.0			12.8			59.0			20.7	
Peak Hour Factor	0.90	0.85	0.90	0.85	0.85	0.85	0.85	0.95	0.85	0.85	0.90	0.85
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	5%	2%
Adj. Flow (vph)	219	1	139	1	5	1	125	609	1	1	619	180
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	220	139	0	7	0	125	610	0	1	799	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	0.96	0.88	0.88	0.88	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50	50	50	50		50	0		50	0	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	50	50	50	50	50		50	0		50	0	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm		Perm	Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0		8.0	22.0		22.0	22.0	



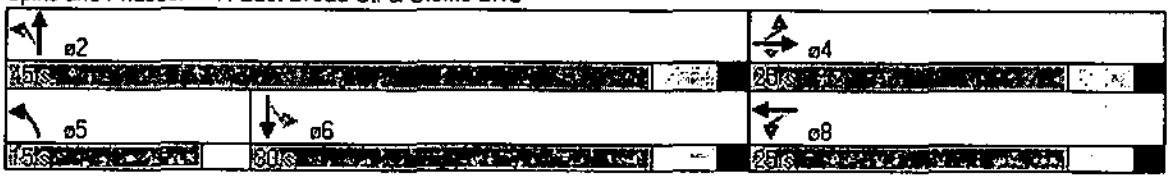
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	25.0	25.0	25.0	25.0	25.0	0.0	15.0	45.0	0.0	30.0	30.0	0.0
Total Split (%)	35.7%	35.7%	35.7%	35.7%	35.7%	0.0%	21.4%	64.3%	0.0%	42.9%	42.9%	0.0%
Maximum Green (s)	19.0	19.0	19.0	19.0	19.0		12.0	39.0		24.0	24.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		0.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	0.0	1.0	-2.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min	Min	None	None		Min	Min		Min	Min	
Act Effct Green (s)		15.9	15.9		15.9		32.1	32.1		20.1	20.1	
Actuated g/C Ratio		0.28	0.28		0.28		0.57	0.57		0.36	0.36	
v/c Ratio		0.57	0.25		0.01		0.31	0.30		0.00	0.65	
Control Delay		25.6	5.2		15.8		8.3	7.0		14.0	17.4	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		25.6	5.2		15.8		8.3	7.0		14.0	17.4	
LOS		C	A		B		A	A		B	B	
Approach Delay		17.7			15.8			7.2			17.4	
Approach LOS		B			B			A			B	
90th %ile Green (s)	19.0	19.0	19.0	19.0	19.0		12.0	39.0		24.0	24.0	
90th %ile Term Code	Max	Max	Max	Hold	Hold		Max	Hold		Max	Max	
70th %ile Green (s)	18.2	18.2	18.2	18.2	18.2		10.7	36.7		23.0	23.0	
70th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Gap	Hold		Gap	Gap	
50th %ile Green (s)	14.3	14.3	14.3	14.3	14.3		8.8	30.1		18.3	18.3	
50th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Gap	Hold		Gap	Gap	
30th %ile Green (s)	11.3	11.3	11.3	11.3	11.3		7.4	25.7		15.3	15.3	
30th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Gap	Hold		Gap	Gap	
10th %ile Green (s)	7.9	7.9	7.9	7.9	7.9		5.9	19.9		11.0	11.0	
10th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Gap	Hold		Gap	Gap	
Stops (vph)		157	20		6		42	258		2	501	
Fuel Used(gal)		3	1		0		3	15		0	12	
CO Emissions (g/hr)		242	86		6		197	1078		2	821	
NOx Emissions (g/hr)		47	17		1		38	210		0	160	
VOC Emissions (g/hr)		56	20		1		46	250		0	190	
Dilemma Vehicles (#)		0	0		0		0	50		0	62	
Queue Length 50th (ft)		62	0		1		17	49		0	105	
Queue Length 95th (ft)		133	36		9		40	88		3	189	
Internal Link Dist (ft)		934			485			2948			985	
Turn Bay Length (ft)							125			125		
Base Capacity (vph)		472	664		677		441	2259		335	1450	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.47	0.21		0.01		0.28	0.27		0.00	0.55	

Intersection Summary

Area Type: Other
Cycle Length: 70

Actuated Cycle Length: 56.4
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.65
Intersection Signal Delay: 13.5 Intersection LOS: B
Intersection Capacity Utilization 53.8% ICU Level of Service A
Analysis Period (min) 15
90th %ile Actuated Cycle: 70
70th %ile Actuated Cycle: 66.9
50th %ile Actuated Cycle: 56.4
30th %ile Actuated Cycle: 49
10th %ile Actuated Cycle: 39.8

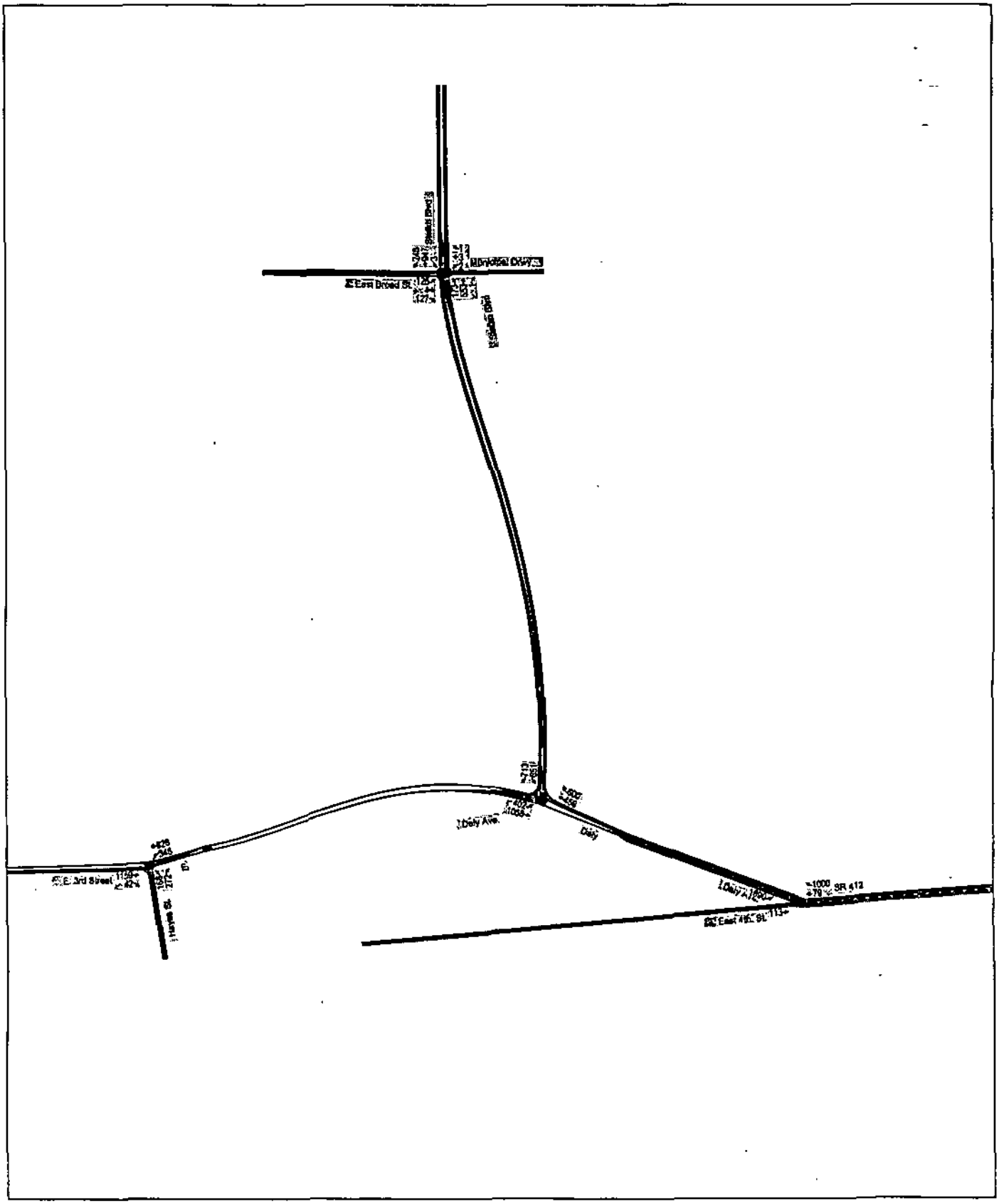
Splits and Phases: 7: East Broad St. & Stefko Blvd



PEAK AM HOUR – 2018 NO-BUILD CONDITION

Map - Sands Bethworks Development - Peak AM Hour
2018 No-Build Condition

10/17/2006



Sands Bethworks Development - Peak AM Hour 2018 No-Build Condition

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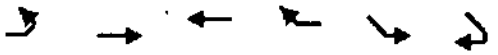
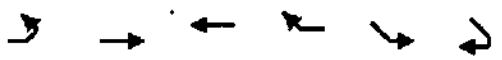


Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑	↑	↱	↰↰	
Volume (vph)	0	113	79	1000	1690	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	15	13	13	13	12
Lane Util. Factor	1.00	1.00	1.00	1.00	0.97	1.00
Frt				0.950		
Flt Protected					0.950	
Satd. Flow (prot)	0	1883	1707	1760	3202	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	1883	1707	1760	3202	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				1091		
Link Speed (mph)		30	35		35	
Link Distance (ft)		2482	1509		1073	
Travel Time (s)		56.4	29.4		20.9	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.87	0.90
Heavy Vehicles (%)	0%	11%	15%	6%	13%	0%
Adj. Flow (vph)	0	128	90	1136	1943	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	128	90	1136	1943	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		26	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	0.88	0.96	0.96	0.96	1.00
Turning Speed (mph)	15			9	25	9
Number of Detectors		1	1	1	1	
Detector Template						
Leading Detector (ft)		50	50	0	0	
Trailing Detector (ft)		0	0	0	0	
Detector 1 Position(ft)		0	0	0	0	
Detector 1 Size(ft)		50	50	0	0	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0	
Turn Type				Free		
Protected Phases		1	1		4	
Permitted Phases		1		Free		
Detector Phase		1	1		4	
Switch Phase						
Minimum Initial (s)		4.0	4.0		4.0	
Minimum Split (s)		10.0	10.0		22.0	
Total Split (s)	0.0	24.0	24.0	0.0	36.0	0.0
Total Split (%)	0.0%	40.0%	40.0%	0.0%	60.0%	0.0%
Maximum Green (s)		18.0	18.0		30.0	



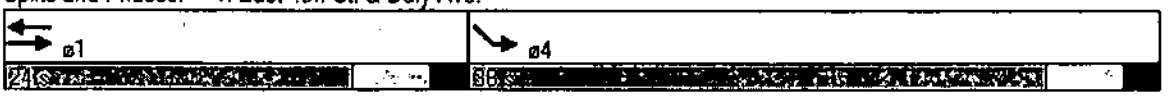
Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Yellow Time (s)		4.0	4.0		4.0	
All-Red Time (s)		2.0	2.0		2.0	
Lost Time Adjust (s)	0.0	-2.0	-2.0	-2.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	2.0	6.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	
Recall Mode		Min	Min		Min	
Act Effct Green (s)		10.7	10.7	50.8	30.1	
Actuated g/C Ratio		0.21	0.21	1.00	0.59	
v/c Ratio		0.32	0.25	0.65	1.03	
Control Delay		19.1	18.3	1.8	41.8	
Queue Delay		0.0	0.0	0.0	0.0	
Total Delay		19.1	18.3	1.8	41.8	
LOS		B	B	A	D	
Approach Delay		19.1	3.0		41.8	
Approach LOS		B	A		D	
90th %ile Green (s)		12.0	12.0		30.0	
90th %ile Term Code		Gap	Gap		Max	
70th %ile Green (s)		10.0	10.0		30.0	
70th %ile Term Code		Gap	Gap		Max	
50th %ile Green (s)		8.7	8.7		30.0	
50th %ile Term Code		Gap	Gap		Max	
30th %ile Green (s)		7.5	7.5		30.0	
30th %ile Term Code		Gap	Gap		Max	
10th %ile Green (s)		5.8	5.8		30.0	
10th %ile Term Code		Gap	Gap		Max	
Stops (vph)		87	61	2	1245	
Fuel Used(gal)		3	2	11	43	
CO Emissions (g/hr)		217	113	789	3006	
NOx Emissions (g/hr)		42	22	153	585	
VOC Emissions (g/hr)		50	26	183	697	
Dilemma Vehicles (#)		0	8	0	0	
Queue Length 50th (ft)		33	22	0	~278	
Queue Length 95th (ft)		67	51	0	#471	
Internal Link Dist (ft)		2402	1429		993	
Turn Bay Length (ft)						
Base Capacity (vph)		628	569	1760	1894	
Starvation Cap Reductn		0	0	0	0	
Spillback Cap Reductn		0	0	0	0	
Storage Cap Reductn		0	0	0	0	
Reduced v/c Ratio		0.20	0.16	0.65	1.03	

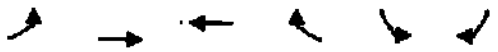
Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 50.8
Natural Cycle: 60
Control Type: Actuated-Uncoordinated

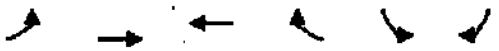
Maximum v/c Ratio: 1.03
Intersection Signal Delay: 26.5 Intersection LOS: C
Intersection Capacity Utilization 62.5% ICU Level of Service B
Analysis Period (min) 15
90th %ile Actuated Cycle: 54
70th %ile Actuated Cycle: 52
50th %ile Actuated Cycle: 50.7
30th %ile Actuated Cycle: 49.5
10th %ile Actuated Cycle: 47.8
* User Entered Value
~ 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: 1: East 4th. St. & Daly Ave.





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	402	1058	459	600	651	713
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	13	13	12
Storage Length (ft)	150			0	0	0
Storage Lanes	2			1	1	1
Taper Length (ft)	300			25	25	25
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3303	1597	1712	1560	1696	1509
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3303	1597	1712	1560	1696	1509
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				74		59
Link Speed (mph)		35	35		35	
Link Distance (ft)		1917	504		3028	
Travel Time (s)		37.3	9.8		59.0	
Peak Hour Factor	0.93	0.95	0.92	0.84	0.85	0.83
Heavy Vehicles (%)	6%	19%	11%	7%	10%	7%
Adj. Flow (vph)	432	1114	499	714	766	859
Shared Lane Traffic (%)						
Lane Group Flow (vph)	432	1114	499	714	766	859
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	0.96	0.96	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	1	1	1	1	1
Detector Template						
Leading Detector (ft)	30	0	5	30	30	30
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	30	0	5	30	30	30
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot			pm+ov		pm+ov
Protected Phases	7	4	8	6	6	7
Permitted Phases				8		6
Detector Phase	7	4	8	6	6	7
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0	19.0	21.0	21.0	9.0



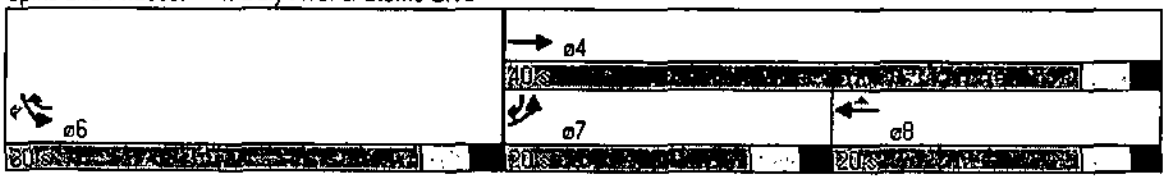
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Total Split (s)	20.0	40.0	20.0	30.0	30.0	20.0
Total Split (%)	28.6%	57.1%	28.6%	42.9%	42.9%	28.6%
Maximum Green (s)	15.0	35.0	15.0	25.0	25.0	15.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	5.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead		Lag			Lead
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	Min	Min	Min	Min	Min
Act Effct Green (s)	14.1	36.0	16.9	46.9	26.0	45.1
Actuated g/C Ratio	0.20	0.51	0.24	0.67	0.37	0.64
v/c Ratio	0.65	1.36	1.21	0.67	1.22	0.86
Control Delay	30.5	189.4	143.9	10.2	135.6	20.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.5	189.4	143.9	10.2	135.6	20.6
LOS	C	F	F	B	F	C
Approach Delay		145.0	65.2		74.8	
Approach LOS		F	E		E	
90th %ile Green (s)	15.0	35.0	15.0	25.0	25.0	15.0
90th %ile Term Code	Max	Max	Max	Max	Max	Max
70th %ile Green (s)	15.0	35.0	15.0	25.0	25.0	15.0
70th %ile Term Code	Max	Max	Max	Max	Max	Max
50th %ile Green (s)	15.0	35.0	15.0	25.0	25.0	15.0
50th %ile Term Code	Max	Max	Max	Max	Max	Max
30th %ile Green (s)	14.4	35.0	15.6	25.0	25.0	14.4
30th %ile Term Code	Gap	Max	Hold	Max	Max	Gap
10th %ile Green (s)	11.3	35.0	18.7	25.0	25.0	11.3
10th %ile Term Code	Gap	Max	Hold	Max	Max	Gap
Stops (vph)	354	826	354	318	522	486
Fuel Used(gal)	12	64	21	10	36	22
CO Emissions (g/hr)	819	4492	1491	732	2525	1554
NOx Emissions (g/hr)	159	874	290	142	491	302
VOC Emissions (g/hr)	190	1041	346	170	585	360
Dilemma Vehicles (#)	0	56	25	0	0	0
Queue Length 50th (ft)	87	~645	~278	142	~414	227
Queue Length 95th (ft)	130	#868	#451	215	#562	342
Internal Link Dist (ft)		1837	424		2948	
Turn Bay Length (ft)	150					
Base Capacity (vph)	700	821	412	1069	630	1001
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	0.62	1.36	1.21	0.67	1.22	0.86

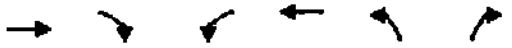
Intersection Summary

Area Type: Other
Cycle Length: 70

Actuated Cycle Length: 70
Natural Cycle: 140
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.36
Intersection Signal Delay: 96.9 Intersection LOS: F
Intersection Capacity Utilization 98.4% ICU Level of Service F
Analysis Period (min) 15
90th %ile Actuated Cycle: 70
70th %ile Actuated Cycle: 70
50th %ile Actuated Cycle: 70
30th %ile Actuated Cycle: 70
10th %ile Actuated Cycle: 70
~ 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: 4: Daly Ave. & Stefko Blvd





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↱	↰	↑	↰	↱
Volume (vph)	1159	42	346	826	168	272
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	11	12
Storage Length (ft)		0	200		0	0
Storage Lanes		1	1		1	1
Taper Length (ft)		25	200		25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1652	1589	1703	1776	1694	1568
Flt Permitted			0.114		0.950	
Satd. Flow (perm)	1652	1589	204	1776	1694	1568
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		48				290
Link Speed (mph)	35			35	30	
Link Distance (ft)	1771			341	540	
Travel Time (s)	34.5			6.6	12.3	
Peak Hour Factor	0.92	0.70	0.85	0.91	0.75	0.78
Heavy Vehicles (%)	15%	5%	6%	7%	3%	3%
Adj. Flow (vph)	1260	60	407	908	224	349
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1260	60	407	908	224	349
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	11	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	0.96	1.00	1.00	1.04	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1	1	1	1	1	1
Detector Template						
Leading Detector (ft)	5	30	30	0	30	30
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	5	30	30	0	30	30
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type		Perm	pm+pt			Perm
Protected Phases	2		1	6	8	
Permitted Phases		2	6			8
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	21.0	9.0	21.0	18.0	18.0

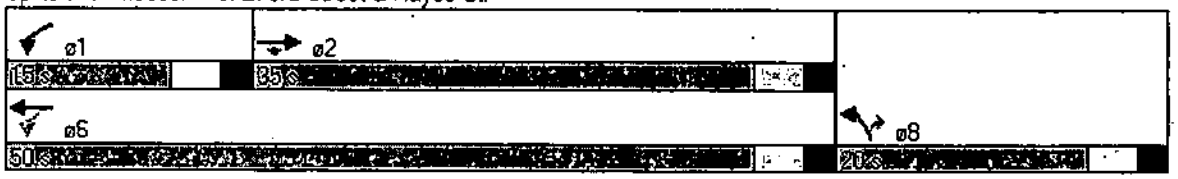
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Split (s)	35.0	35.0	15.0	50.0	20.0	20.0
Total Split (%)	50.0%	50.0%	21.4%	71.4%	28.6%	28.6%
Maximum Green (s)	30.0	30.0	10.0	45.0	15.0	15.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	Min	Min	Min	Min	Min
Act Effct Green (s)	31.0	31.0	46.1	46.1	13.8	13.8
Actuated g/C Ratio	0.46	0.46	0.68	0.68	0.20	0.20
v/c Ratio	1.67	0.08	1.07	0.75	0.65	0.63
Control Delay	327.4	5.2	85.9	13.0	34.3	11.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	327.4	5.2	85.9	13.0	34.3	11.3
LOS	F	A	F	B	C	B
Approach Delay	312.8			35.6	20.3	
Approach LOS	F			D	C	
90th %ile Green (s)	30.0	30.0	10.0	45.0	15.0	15.0
90th %ile Term Code	Max	Max	Max	Max	Max	Max
70th %ile Green (s)	30.0	30.0	10.0	45.0	15.0	15.0
70th %ile Term Code	Max	Max	Max	Hold	Max	Max
50th %ile Green (s)	30.0	30.0	10.0	45.0	14.2	14.2
50th %ile Term Code	Max	Max	Max	Hold	Gap	Gap
30th %ile Green (s)	30.0	30.0	10.0	45.0	11.8	11.8
30th %ile Term Code	Max	Max	Max	Hold	Gap	Gap
10th %ile Green (s)	30.0	30.0	10.0	45.0	8.5	8.5
10th %ile Term Code	Max	Max	Max	Hold	Gap	Gap
Stops (vph)	881	10	184	529	147	62
Fuel Used(gal)	99	1	13	20	3	2
CO Emissions (g/hr)	6899	46	914	1372	188	148
NOx Emissions (g/hr)	1342	9	178	267	37	29
VOC Emissions (g/hr)	1599	11	212	318	44	34
Dilemma Vehicles (#)	51	0	0	60	0	0
Queue Length 50th (ft)	~807	3	~151	222	86	21
Queue Length 95th (ft)	#1051	14	#289	396	122	57
Internal Link Dist (ft)	1691			261	460	
Turn Bay Length (ft)			200			
Base Capacity (vph)	755	752	382	1205	387	582
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	1.67	0.08	1.07	0.75	0.58	0.60

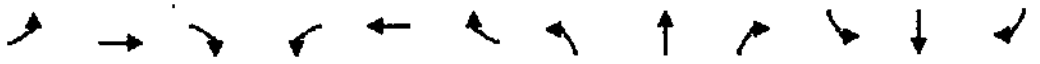
Intersection Summary

Area Type: Other
Cycle Length: 70

Actuated Cycle Length: 67.9
Natural Cycle: 140
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.67
Intersection Signal Delay: 146.9 Intersection LOS: F
Intersection Capacity Utilization 99.5% ICU Level of Service F
Analysis Period (min) 15
90th %ile Actuated Cycle: 70
70th %ile Actuated Cycle: 70
50th %ile Actuated Cycle: 69.2
30th %ile Actuated Cycle: 66.8
10th %ile Actuated Cycle: 63.5
~ 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: 6: E. 3rd Street & Hayes St.





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	126	4	127	2	3	1	173	553	1	3	947	248
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	13	15	15	15	12	12	12	12	12	12
Storage Length (ft)	0		0	0		0	125		0	125		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25		25	25		25	75		25	75		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.983						0.964	
Flt Protected		0.954			0.982		0.950			0.950		
Satd. Flow (prot)	0	1729	1503	0	1998	0	1612	3505	0	1787	3388	0
Flt Permitted		0.729			0.900		0.142			0.435		
Satd. Flow (perm)	0	1321	1503	0	1831	0	241	3505	0	818	3388	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			167		1						70	
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		1014			565			3028			1065	
Travel Time (s)		23.0			12.8			59.0			20.7	
Peak Hour Factor	0.82	0.70	0.76	0.70	0.70	0.70	0.76	0.96	0.70	0.70	0.88	0.73
Heavy Vehicles (%)	5%	1%	11%	1%	1%	1%	12%	3%	1%	1%	2%	5%
Adj. Flow (vph)	154	6	167	3	4	1	228	576	1	4	1076	340
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	160	167	0	8	0	228	577	0	4	1416	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	0.96	0.88	0.88	0.88	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50	50	50	50		50	0		50	0	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	50	50	50	50	50		50	0		50	0	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm		Perm	Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0		8.0	22.0		22.0	22.0	

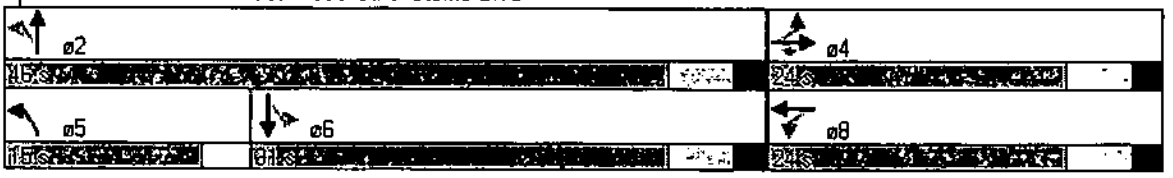
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	24.0	24.0	24.0	24.0	24.0	0.0	15.0	46.0	0.0	31.0	31.0	0.0
Total Split (%)	34.3%	34.3%	34.3%	34.3%	34.3%	0.0%	21.4%	65.7%	0.0%	44.3%	44.3%	0.0%
Maximum Green (s)	18.0	18.0	18.0	18.0	18.0		12.0	40.0		25.0	25.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		0.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	0.0	1.0	-2.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min	Min	None	None		Min	Min		Min	Min	
Act Effct Green (s)		14.5	14.5		14.5		41.2	41.2		27.2	27.2	
Actuated g/C Ratio		0.23	0.23		0.23		0.65	0.65		0.43	0.43	
v/c Ratio		0.53	0.35		0.02		0.61	0.25		0.01	0.95	
Control Delay		28.6	6.1		17.7		16.7	5.6		13.0	34.9	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		28.6	6.1		17.7		16.7	5.6		13.0	34.9	
LOS		C	A		B		B	A		B	C	
Approach Delay		17.1			17.7			8.8			34.8	
Approach LOS		B			B			A			C	
90th %ile Green (s)	18.0	18.0	18.0	18.0	18.0		12.0	40.0		25.0	25.0	
90th %ile Term Code	Max	Max	Max	Hold	Hold		Max	Hold		Max	Max	
70th %ile Green (s)	15.6	15.6	15.6	15.6	15.6		12.0	40.0		25.0	25.0	
70th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Max	Hold		Max	Max	
50th %ile Green (s)	12.7	12.7	12.7	12.7	12.7		12.0	40.0		25.0	25.0	
50th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Max	Hold		Max	Max	
30th %ile Green (s)	10.2	10.2	10.2	10.2	10.2		11.2	39.2		25.0	25.0	
30th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Gap	Hold		Max	Max	
10th %ile Green (s)	7.2	7.2	7.2	7.2	7.2		8.1	36.1		25.0	25.0	
10th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Gap	Hold		Max	Max	
Stops (vph)		106	19		7		80	212		3	908	
Fuel Used(gal)		2	1		0		5	14		0	25	
CO Emissions (g/hr)		166	89		6		347	1003		4	1713	
NOx Emissions (g/hr)		32	17		1		68	195		1	333	
VOC Emissions (g/hr)		38	21		1		81	232		1	397	
Dilemma Vehicles (#)		0	0		0		0	43		0	86	
Queue Length 50th (ft)		56	0		2		31	42		1	265	
Queue Length 95th (ft)		79	24		9		77	80		5	#457	
Internal Link Dist (ft)		934			485			2948			985	
Turn Bay Length (ft)							125			125		
Base Capacity (vph)		383	554		531		382	2282		349	1484	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.42	0.30		0.02		0.60	0.25		0.01	0.95	

Intersection Summary

Area Type: Other
Cycle Length: 70

Actuated Cycle Length: 63.8
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.95
Intersection Signal Delay: 24.3 Intersection LOS: C
Intersection Capacity Utilization 67.5% ICU Level of Service C
Analysis Period (min) 15
90th %ile Actuated Cycle: 70
70th %ile Actuated Cycle: 67.6
50th %ile Actuated Cycle: 64.7
30th %ile Actuated Cycle: 61.4
10th %ile Actuated Cycle: 55.3
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

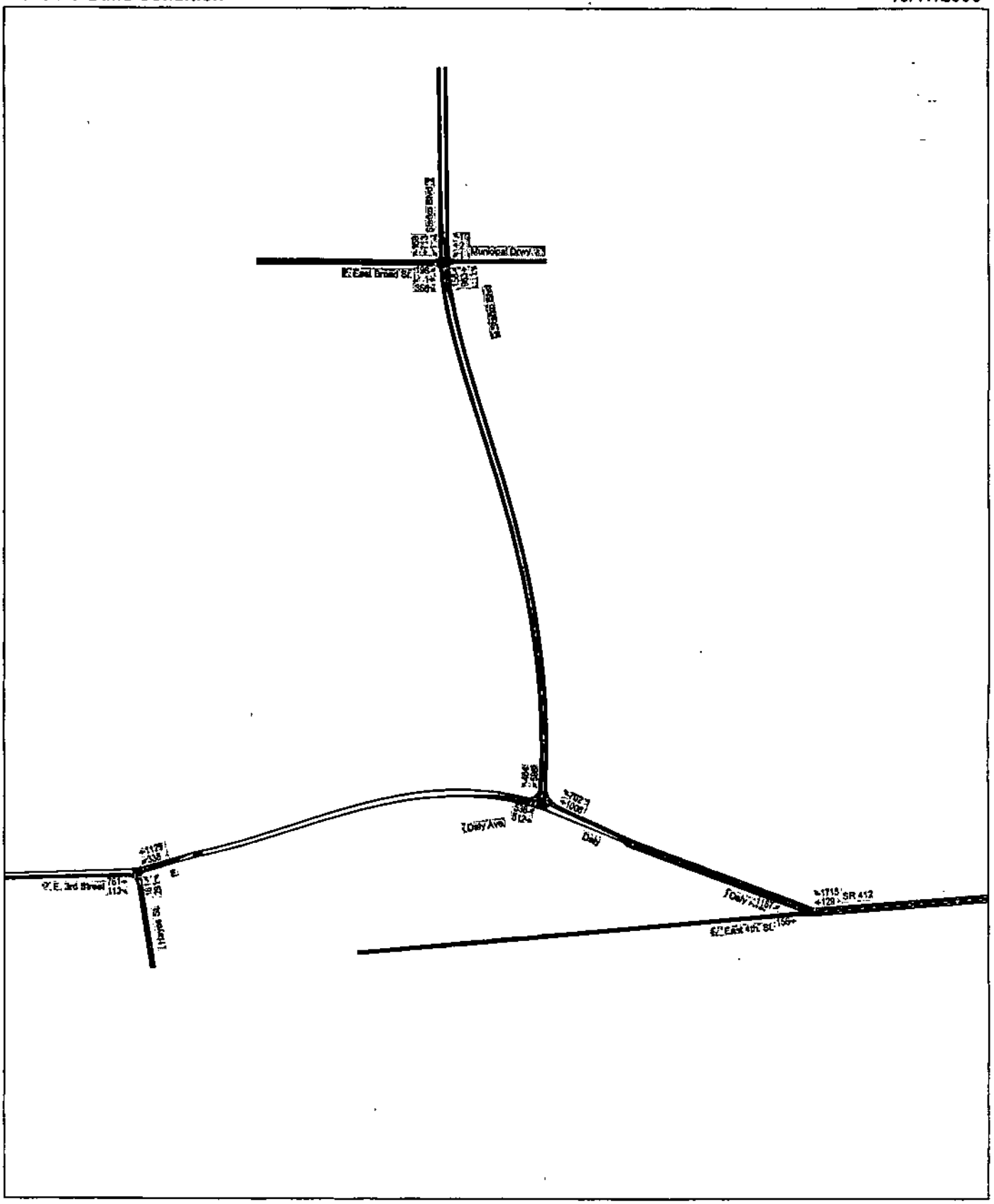
Splits and Phases: 7: East Broad St. & Stefko Blvd



PEAK PM HOUR – 2018 NO-BUILD CONDITION

Map - Sands Bethworks Development - Peak PM Hour
2018 No-Build Condition

10/17/2006



Sands Bethworks Development - Peak PM Hour 2018 No-Build Condition

zi - 2018npm

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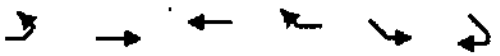
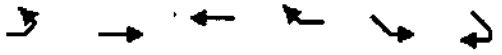


Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑	↑	↱	↰↰	
Volume (vph)	0	156	129	1715	1157	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	15	13	13	13	12
Lane Util. Factor	1.00	1.00	1.00	1.00	0.97	1.00
Frt				0.950		
Flt Protected					0.950	
Satd. Flow (prot)	0	2069	1944	1847	3583	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	2069	1944	1847	3583	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				1091		
Link Speed (mph)		30	35		35	
Link Distance (ft)		2482	1509		1073	
Travel Time (s)		56.4	29.4		20.9	
Peak Hour Factor	0.90	0.85	0.85	0.95	0.90	0.90
Heavy Vehicles (%)	0%	1%	1%	1%	1%	0%
Adj. Flow (vph)	0	184	152	1805	1286	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	184	152	1805	1286	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		26	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	0.88	0.96	0.96	0.96	1.00
Turning Speed (mph)	15			12	25	9
Number of Detectors		1	1	1	1	
Detector Template						
Leading Detector (ft)		50	50	0	0	
Trailing Detector (ft)		0	0	0	0	
Detector 1 Position(ft)		0	0	0	0	
Detector 1 Size(ft)		50	50	0	0	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0	
Turn Type				Free		
Protected Phases		1	1		4	
Permitted Phases		1		Free		
Detector Phase		1	1		4	
Switch Phase						
Minimum Initial (s)		4.0	4.0		4.0	
Minimum Split (s)		10.0	10.0		22.0	
Total Split (s)	0.0	24.0	24.0	0.0	36.0	0.0
Total Split (%)	0.0%	40.0%	40.0%	0.0%	60.0%	0.0%
Maximum Green (s)		18.0	18.0		30.0	



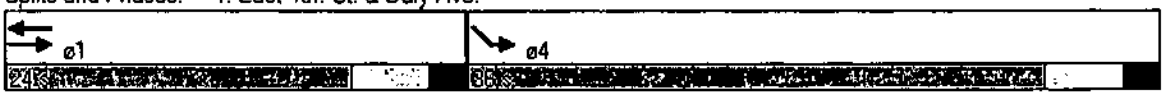
Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Yellow Time (s)		4.0	4.0		4.0	
All-Red Time (s)		2.0	2.0		2.0	
Lost Time Adjust (s)	0.0	2.0	2.0	2.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	2.0	6.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	
Recall Mode		Min	Min		Min	
Act Effct Green (s)		11.6	11.6	43.4	21.4	
Actuated g/C Ratio		0.27	0.27	1.00	0.49	
v/c Ratio		0.33	0.29	0.98	0.73	
Control Delay		16.1	15.9	19.9	11.6	
Queue Delay		0.0	0.0	0.0	0.0	
Total Delay		16.1	15.9	19.9	11.6	
LOS		B	B	B	B	
Approach Delay		16.1	19.6		11.6	
Approach LOS		B	B		B	
90th %ile Green (s)		13.6	13.6		30.0	
90th %ile Term Code		Gap	Gap		Max	
70th %ile Green (s)		11.3	11.3		25.6	
70th %ile Term Code		Gap	Gap		Gap	
50th %ile Green (s)		9.4	9.4		21.1	
50th %ile Term Code		Gap	Gap		Gap	
30th %ile Green (s)		7.9	7.9		18.1	
30th %ile Term Code		Gap	Gap		Gap	
10th %ile Green (s)		6.2	6.2		13.8	
10th %ile Term Code		Gap	Gap		Gap	
Stops (vph)		114	93	30	793	
Fuel Used(gal)		4	3	26	22	
CO Emissions (g/hr)		291	176	1807	1528	
NOx Emissions (g/hr)		57	34	352	297	
VOC Emissions (g/hr)		67	41	419	354	
Dilemma Vehicles (#)		0	13	0	0	
Queue Length 50th (ft)		35	29	0	110	
Queue Length 95th (ft)		86	73	#203	200	
Internal Link Dist (ft)		2402	1429		993	
Turn Bay Length (ft)						
Base Capacity (vph)		810	761	1847	2085	
Starvation Cap Reductn		0	0	0	0	
Spillback Cap Reductn		0	0	0	0	
Storage Cap Reductn		0	0	0	0	
Reduced v/c Ratio		0.23	0.20	0.98	0.62	

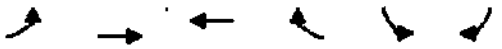
Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 43.4
Natural Cycle: 40
Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.98
Intersection Signal Delay: 16.4 Intersection LOS: B
Intersection Capacity Utilization 49.6% ICU Level of Service A
Analysis Period (min) 15
90th %ile Actuated Cycle: 55.6
70th %ile Actuated Cycle: 48.9
50th %ile Actuated Cycle: 42.5
30th %ile Actuated Cycle: 38
10th %ile Actuated Cycle: 32
* User Entered Value
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: East 4th. St. & Daly Ave.





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	536	512	1006	702	598	464
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	13	13	12
Storage Length (ft)	150			0	0	0
Storage Lanes	2			1	1	1
Taper Length (ft)	300			25	25	25
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3467	1863	1863	1517	1847	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3467	1863	1863	1517	1847	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				32		1
Link Speed (mph)		35	35		35	
Link Distance (ft)		1909	504		3028	
Travel Time (s)		37.2	9.8		59.0	
Peak Hour Factor	0.90	0.90	0.95	0.90	0.95	0.90
Heavy Vehicles (%)	1%	2%	2%	10%	1%	2%
Adj. Flow (vph)	596	569	1059	780	629	516
Shared Lane Traffic (%)						
Lane Group Flow (vph)	596	569	1059	780	629	516
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	0.96	0.96	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	1	1	1	1	1
Detector Template						
Leading Detector (ft)	30	0	0	30	30	30
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	30	0	0	30	30	30
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot			pm+ov		pm+ov
Protected Phases	7	4	8	6	6	7
Permitted Phases				8		6
Detector Phase	7	4	8	6	6	7
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0	19.0	21.0	21.0	9.0

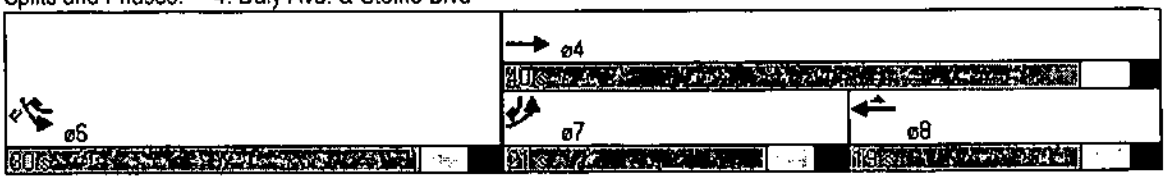
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Total Split (s)	21.0	40.0	19.0	30.0	30.0	21.0
Total Split (%)	30.0%	57.1%	27.1%	42.9%	42.9%	30.0%
Maximum Green (s)	16.0	35.0	14.0	25.0	25.0	16.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	5.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead		Lag			Lead
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	Min	Min	Min	Min	Min
Act Effct Green (s)	15.2	35.2	15.0	44.5	25.4	45.7
Actuated g/C Ratio	0.22	0.51	0.22	0.65	0.37	0.67
v/c Ratio	0.78	0.60	2.60	0.78	0.92	0.49
Control Delay	33.4	15.1	745.0	16.0	42.7	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.4	15.1	745.0	16.0	42.7	7.6
LOS	C	B	F	B	D	A
Approach Delay		24.4	435.8		26.9	
Approach LOS		C	F		C	
90th %ile Green (s)	16.0	35.0	14.0	25.0	25.0	16.0
90th %ile Term Code	Max	Hold	Max	Max	Max	Max
70th %ile Green (s)	16.0	35.0	14.0	25.0	25.0	16.0
70th %ile Term Code	Max	Hold	Max	Max	Max	Max
50th %ile Green (s)	16.0	35.0	14.0	25.0	25.0	16.0
50th %ile Term Code	Max	Hold	Max	Max	Max	Max
30th %ile Green (s)	16.0	35.0	14.0	25.0	25.0	16.0
30th %ile Term Code	Max	Hold	Max	Max	Max	Max
10th %ile Green (s)	12.2	31.2	14.0	22.2	22.2	12.2
10th %ile Term Code	Gap	Hold	Max	Gap	Gap	Gap
Stops (vph)	477	342	853	464	497	211
Fuel Used(gal)	16	12	170	14	22	12
CO Emissions (g/hr)	1114	871	11914	963	1539	870
NOx Emissions (g/hr)	217	169	2318	187	299	169
VOC Emissions (g/hr)	258	202	2761	223	357	202
Dilemma Vehicles (#)	0	37	28	0	0	0
Queue Length 50th (ft)	123	159	~788	201	252	90
Queue Length 95th (ft)	#178	253	#1009	#386	#450	150
Internal Link Dist (ft)		1829	424		2948	
Turn Bay Length (ft)	150					
Base Capacity (vph)	799	966	407	998	694	1063
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	0.75	0.59	2.60	0.78	0.91	0.49

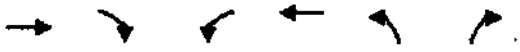
Intersection Summary

Area Type: Other
Cycle Length: 70

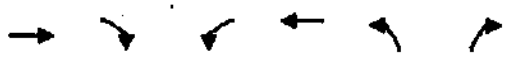
Actuated Cycle Length: 68.7
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 2.60
Intersection Signal Delay: 207.4 Intersection LOS: F
Intersection Capacity Utilization 112.2% ICU Level of Service H
Analysis Period (min) 15
90th %ile Actuated Cycle: 70
70th %ile Actuated Cycle: 70
50th %ile Actuated Cycle: 70
30th %ile Actuated Cycle: 70
10th %ile Actuated Cycle: 63.4
~ 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: 4: Daly Ave. & Stefko Blvd





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	761	113	338	1129	161	291
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	11	12
Storage Length (ft)		0	200		0	0
Storage Lanes		1	1		1	1
Taper Length (ft)		25	200		25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1881	1652	1787	1881	1728	1599
Flt Permitted			0.114		0.950	
Satd. Flow (perm)	1881	1652	214	1881	1728	1599
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		133				342
Link Speed (mph)	35			35	30	
Link Distance (ft)	1771			341	540	
Travel Time (s)	34.5			6.6	12.3	
Peak Hour Factor	0.95	0.85	0.85	0.90	0.85	0.85
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	801	133	398	1254	189	342
Shared Lane Traffic (%)						
Lane Group Flow (vph)	801	133	398	1254	189	342
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	11	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	0.96	1.00	1.00	1.04	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1	1	1	1	1	1
Detector Template						
Leading Detector (ft)	0	30	30	0	30	30
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	0	30	30	0	30	30
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type		Perm	pm+pt			Perm
Protected Phases	2		1	6	8	
Permitted Phases		2	6			8
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	21.0	9.0	21.0	20.0	20.0



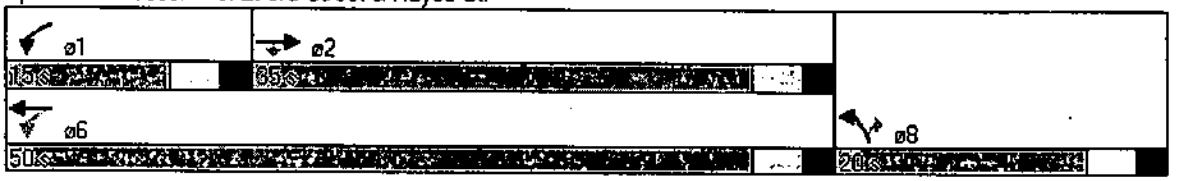
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Split (s)	35.0	35.0	15.0	50.0	20.0	20.0
Total Split (%)	50.0%	50.0%	21.4%	71.4%	28.6%	28.6%
Maximum Green (s)	30.0	30.0	10.0	45.0	15.0	15.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	Min	Min	Min	Min	Min
Act Effct Green (s)	31.1	31.1	46.1	46.1	13.0	13.0
Actuated g/C Ratio	0.46	0.46	0.69	0.69	0.19	0.19
v/c Ratio	0.92	0.16	0.98	0.97	0.56	0.58
Control Delay	36.4	3.0	60.5	32.4	31.3	7.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.4	3.0	60.5	32.4	31.3	7.5
LOS	D	A	E	C	C	A
Approach Delay	31.7			39.2	16.0	
Approach LOS	C			D	B	
90th %ile Green (s)	30.0	30.0	10.0	45.0	15.0	15.0
90th %ile Term Code	Max	Max	Max	Max	Max	Max
70th %ile Green (s)	30.0	30.0	10.0	45.0	15.0	15.0
70th %ile Term Code	Max	Max	Max	Max	Max	Max
50th %ile Green (s)	30.0	30.0	10.0	45.0	12.5	12.5
50th %ile Term Code	Max	Max	Max	Max	Gap	Gap
30th %ile Green (s)	30.0	30.0	10.0	45.0	10.4	10.4
30th %ile Term Code	Max	Max	Max	Max	Gap	Gap
10th %ile Green (s)	30.0	30.0	10.0	45.0	7.6	7.6
10th %ile Term Code	Hold	Hold	Max	Max	Gap	Gap
Stops (vph)	598	14	180	788	138	38
Fuel Used(gal)	20	2	11	32	2	2
CO Emissions (g/hr)	1389	113	770	2217	173	132
NOx Emissions (g/hr)	270	22	150	431	34	26
VOC Emissions (g/hr)	322	26	178	514	40	30
Dilemma Vehicles (#)	52	0	0	77	0	0
Queue Length 50th (ft)	296	0	113	406	71	0
Queue Length 95th (ft)	#555	23	#268	#814	120	49
Internal Link Dist (ft)	1691			261	460	
Turn Bay Length (ft)			200			
Base Capacity (vph)	871	836	405	1292	395	629
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	0.92	0.16	0.98	0.97	0.48	0.54

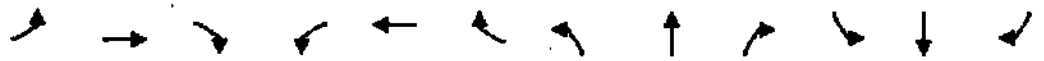
Intersection Summary

Area Type: Other
Cycle Length: 70

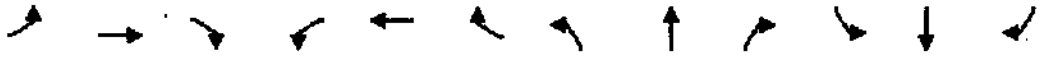
Actuated Cycle Length: 67.1
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.98
Intersection Signal Delay: 33.0 Intersection LOS: C
Intersection Capacity Utilization 77.7% ICU Level of Service D
Analysis Period (min) 15
90th %ile Actuated Cycle: 70
70th %ile Actuated Cycle: 70
50th %ile Actuated Cycle: 67.5
30th %ile Actuated Cycle: 65.4
10th %ile Actuated Cycle: 62.6
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: E. 3rd Street & Hayes St.





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	198	1	366	1	2	1	158	963	1	1	713	169
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	13	15	15	15	12	12	12	12	12	12
Storage Length (ft)	0		0	0		0	125		0	125		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25		25	25		25	75		25	75		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.966						0.970	
Flt Protected		0.953			0.988		0.950			0.950		
Satd. Flow (prot)	0	1793	1652	0	1975	0	1770	3574	0	1787	3467	0
Flt Permitted		0.725			0.935		0.156			0.267		
Satd. Flow (perm)	0	1364	1652	0	1869	0	291	3574	0	502	3467	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			387		1						52	
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		1014			565			3028			1065	
Travel Time (s)		23.0			12.8			59.0			20.7	
Peak Hour Factor	0.95	0.85	0.90	0.85	0.85	0.85	0.85	0.90	0.85	0.85	0.80	0.75
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	1%	1%	1%	1%	1%
Adj. Flow (vph)	208	1	407	1	2	1	186	1070	1	1	891	225
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	209	407	0	4	0	186	1071	0	1	1116	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	0.96	0.88	0.88	0.88	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50	50	50	50		50	0		50	0	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	50	50	50	50	50		50	0		50	0	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm		Perm	Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0		8.0	22.0		22.0	22.0	



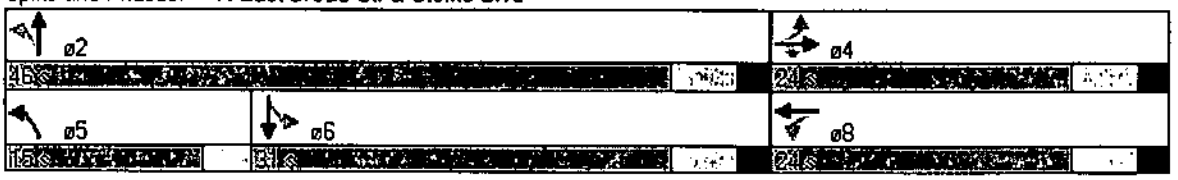
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	24.0	24.0	24.0	24.0	24.0	0.0	15.0	46.0	0.0	31.0	31.0	0.0
Total Split (%)	34.3%	34.3%	34.3%	34.3%	34.3%	0.0%	21.4%	65.7%	0.0%	44.3%	44.3%	0.0%
Maximum Green (s)	18.0	18.0	18.0	18.0	18.0		12.0	40.0		25.0	25.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		0.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	0.0	1.0	-2.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min	Min	None	None		Min	Min		Min	Min	
Act Effct Green (s)		16.1	16.1		16.1		37.7	37.7		24.7	24.7	
Actuated g/C Ratio		0.26	0.26		0.26		0.61	0.61		0.40	0.40	
v/c Ratio		0.59	0.57		0.01		0.48	0.49		0.00	0.79	
Control Delay		28.6	6.6		16.7		10.6	8.1		13.0	21.6	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		28.6	6.6		16.7		10.6	8.1		13.0	21.6	
LOS		C	A		B		B	A		B	C	
Approach Delay		14.1			16.7			8.5			21.6	
Approach LOS		B			B			A			C	
90th %ile Green (s)	18.0	18.0	18.0	18.0	18.0		12.0	40.0		25.0	25.0	
90th %ile Term Code	Max	Max	Max	Hold	Hold		Max	Hold		Max	Max	
70th %ile Green (s)	18.0	18.0	18.0	18.0	18.0		11.9	39.9		25.0	25.0	
70th %ile Term Code	Max	Max	Max	Hold	Hold		Gap	Hold		Max	Max	
50th %ile Green (s)	15.7	15.7	15.7	15.7	15.7		10.5	38.5		25.0	25.0	
50th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Gap	Hold		Max	Max	
30th %ile Green (s)	11.9	11.9	11.9	11.9	11.9		8.9	34.0		22.1	22.1	
30th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Gap	Hold		Gap	Gap	
10th %ile Green (s)	8.1	8.1	8.1	8.1	8.1		6.8	25.9		16.1	16.1	
10th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Gap	Hold		Gap	Gap	
Stops (vph)		162	51		3		64	482		2	684	
Fuel Used(gal)		4	4		0		4	26		0	16	
CO Emissions (g/hr)		253	256		3		299	1837		2	1104	
NOx Emissions (g/hr)		49	50		1		58	358		0	215	
VOC Emissions (g/hr)		59	59		1		69	426		0	256	
Dilemma Vehicles (#)		0	0		0		0	77		0	70	
Queue Length 50th (ft)		73	6		1		29	110		0	188	
Queue Length 95th (ft)		130	67		7		55	166		3	238	
Internal Link Dist (ft)		934			485			2948			985	
Turn Bay Length (ft)							125			125		
Base Capacity (vph)		418	775		574		413	2270		213	1497	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.50	0.53		0.01		0.45	0.47		0.00	0.75	

Intersection Summary

Area Type: Other
Cycle Length: 70

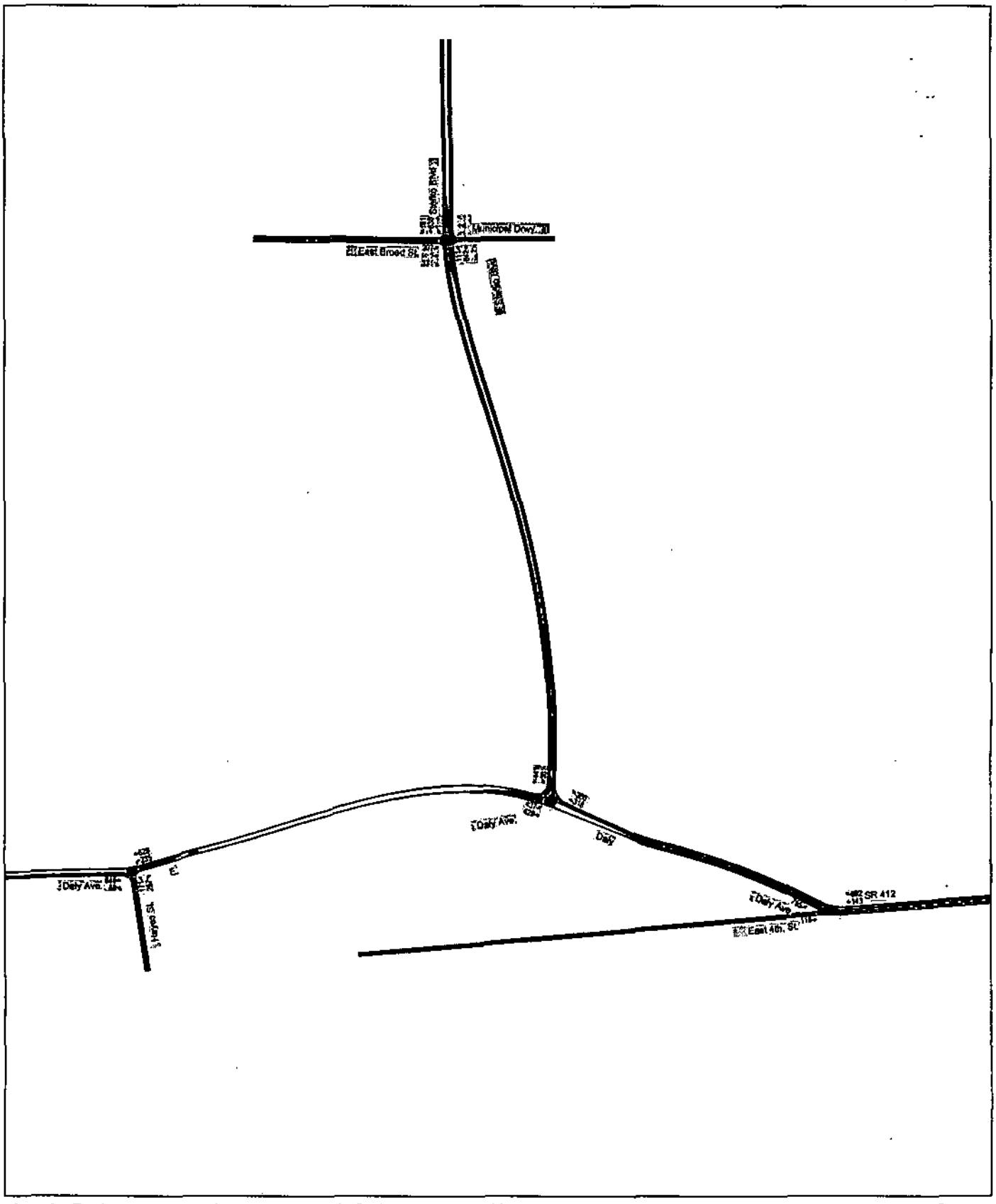
Actuated Cycle Length: 62
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 14.5 Intersection LOS: B
Intersection Capacity Utilization 61.5% ICU Level of Service B
Analysis Period (min) 15
90th %ile Actuated Cycle: 70
70th %ile Actuated Cycle: 69.9
50th %ile Actuated Cycle: 66.2
30th %ile Actuated Cycle: 57.9
10th %ile Actuated Cycle: 46

Splits and Phases: 7: East Broad St. & Stefko Blvd



PEAK SATURDAY HOUR – 2018 NO-BUILD CONDITION

Map - Sands Bethworks Development - Peak SAT Hour
2018 No-Build Condition 10/17/2006



Sands Bethworks Development - Peak SAT Hour 2018 No-Build Condition zi - 2018nsat
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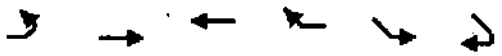
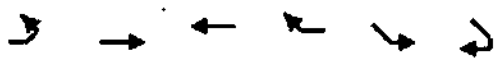


Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑	↑	↱	↰↑	
Volume (vph)	0	116	143	692	795	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	15	13	13	13	12
Lane Util. Factor	1.00	1.00	1.00	1.00	0.97	1.00
Frt				0.950		
Flt Protected					0.950	
Satd. Flow (prot)	0	2049	1925	1829	3547	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	2049	1925	1829	3547	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				769		
Link Speed (mph)		30	35		35	
Link Distance (ft)		2482	1509		1078	
Travel Time (s)		56.4	29.4		21.0	
Peak Hour Factor	0.90	0.90	0.85	0.90	0.95	0.90
Heavy Vehicles (%)	0%	2%	2%	2%	2%	0%
Adj. Flow (vph)	0	129	168	769	837	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	129	168	769	837	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		26	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	0.88	0.96	0.96	0.96	1.00
Turning Speed (mph)	15			9	25	9
Number of Detectors		1	1	1	1	
Detector Template						
Leading Detector (ft)		50	50	5	0	
Trailing Detector (ft)		0	0	0	0	
Detector 1 Position(ft)		0	0	0	0	
Detector 1 Size(ft)		50	50	5	0	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0	
Turn Type				Free		
Protected Phases		1	1		4	
Permitted Phases		1		Free		
Detector Phase		1	1		4	
Switch Phase						
Minimum Initial (s)		4.0	4.0		4.0	
Minimum Split (s)		10.0	10.0		22.0	
Total Split (s)	0.0	24.0	24.0	0.0	36.0	0.0
Total Split (%)	0.0%	40.0%	40.0%	0.0%	60.0%	0.0%
Maximum Green (s)		18.0	18.0		30.0	



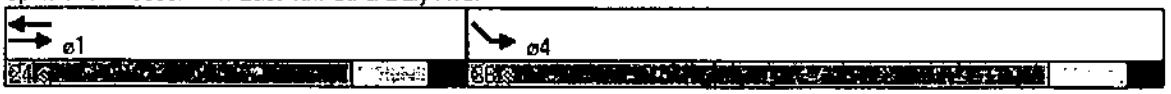
Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Yellow Time (s)		4.0	4.0		4.0	
All-Red Time (s)		2.0	2.0		2.0	
Lost Time Adjust (s)	0.0	-2.0	-2.0	-2.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	2.0	6.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	
Recall Mode		Min	Min		Min	
Act Effct Green (s)		10.7	10.7	34.9	13.9	
Actuated g/C Ratio		0.31	0.31	1.00	0.40	
v/c Ratio		0.21	0.29	0.42	0.59	
Control Delay		11.0	11.7	0.7	10.2	
Queue Delay		0.0	0.0	0.0	0.0	
Total Delay		11.0	11.7	0.7	10.2	
LOS		B	B	A	B	
Approach Delay		11.0	2.7		10.2	
Approach LOS		B	A		B	
90th %ile Green (s)		12.2	12.2		20.5	
90th %ile Term Code		Gap	Gap		Gap	
70th %ile Green (s)		9.7	9.7		15.9	
70th %ile Term Code		Gap	Gap		Gap	
50th %ile Green (s)		8.4	8.4		13.9	
50th %ile Term Code		Gap	Gap		Gap	
30th %ile Green (s)		7.2	7.2		11.2	
30th %ile Term Code		Gap	Gap		Gap	
10th %ile Green (s)		6.0	6.0		9.3	
10th %ile Term Code		Gap	Gap		Gap	
Stops (vph)		79	98	1	535	
Fuel Used(gal)		3	3	8	15	
CO Emissions (g/hr)		206	184	534	1032	
NOx Emissions (g/hr)		40	36	104	201	
VOC Emissions (g/hr)		48	43	124	239	
Dilemma Vehicles (#)		0	19	0	0	
Queue Length 50th (ft)		17	23	0	56	
Queue Length 95th (ft)		52	62	0	109	
Internal Link Dist (ft)		2402	1429		998	
Turn Bay Length (ft)						
Base Capacity (vph)		935	878	1829	2102	
Starvation Cap Reductn		0	0	0	0	
Spillback Cap Reductn		0	0	0	0	
Storage Cap Reductn		0	0	0	0	
Reduced v/c Ratio		0.14	0.19	0.42	0.40	

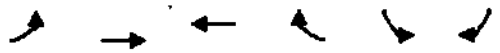
Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 34.9
Natural Cycle: 40
Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.59
Intersection Signal Delay: 6.6 Intersection LOS: A
Intersection Capacity Utilization 38.5% ICU Level of Service A
Analysis Period (min) 15
90th %ile Actuated Cycle: 44.7
70th %ile Actuated Cycle: 37.6
50th %ile Actuated Cycle: 34.3
30th %ile Actuated Cycle: 30.4
10th %ile Actuated Cycle: 27.3
* User Entered Value

Splits and Phases: 1: East 4th. St. & Daly Ave.





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	437	428	318	356	381	441
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	13	13	12
Storage Length (ft)	150			0	0	0
Storage Lanes	2			1	1	1
Taper Length (ft)	300			25	25	25
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3467	1881	1881	1636	1829	1599
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3467	1881	1881	1636	1829	1599
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				75		236
Link Speed (mph)		35	35		35	
Link Distance (ft)		1911	504		3028	
Travel Time (s)		37.2	9.8		59.0	
Peak Hour Factor	0.95	0.90	0.95	0.90	0.95	0.90
Heavy Vehicles (%)	1%	1%	1%	2%	2%	1%
Adj. Flow (vph)	460	476	335	396	401	490
Shared Lane Traffic (%)						
Lane Group Flow (vph)	460	476	335	396	401	490
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	0.96	0.96	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	1	1	1	1	1
Detector Template						
Leading Detector (ft)	30	0	0	30	30	30
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	30	0	0	30	30	30
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot			pm+ov		pm+ov
Protected Phases	7	4	8	6	6	7
Permitted Phases				8		6
Detector Phase	7	4	8	6	6	7
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0	19.0	21.0	21.0	9.0

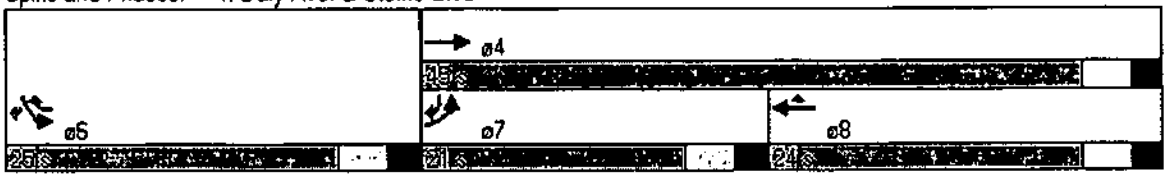
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Total Split (s)	21.0	45.0	24.0	25.0	25.0	21.0
Total Split (%)	30.0%	64.3%	34.3%	35.7%	35.7%	30.0%
Maximum Green (s)	16.0	40.0	19.0	20.0	20.0	16.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	5.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead		Lag			Lead
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	Min	Min	Min	Min	Min
Act Effct Green (s)	13.5	35.0	16.3	38.7	18.2	36.9
Actuated g/C Ratio	0.22	0.57	0.27	0.63	0.30	0.60
v/c Ratio	0.60	0.44	0.67	0.37	0.74	0.46
Control Delay	26.4	9.5	28.6	5.6	30.4	5.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.4	9.5	28.6	5.6	30.4	5.1
LOS	C	A	C	A	C	A
Approach Delay		17.8	16.2		16.5	
Approach LOS		B	B		B	
90th %ile Green (s)	16.0	40.0	19.0	20.0	20.0	16.0
90th %ile Term Code	Max	Hold	Max	Max	Max	Max
70th %ile Green (s)	16.0	40.0	19.0	20.0	20.0	16.0
70th %ile Term Code	Max	Hold	Max	Max	Max	Max
50th %ile Green (s)	14.8	36.6	16.8	20.0	20.0	14.8
50th %ile Term Code	Gap	Hold	Gap	Max	Max	Gap
30th %ile Green (s)	12.5	30.9	13.4	15.7	15.7	12.5
30th %ile Term Code	Gap	Hold	Gap	Gap	Gap	Gap
10th %ile Green (s)	8.8	23.2	9.4	11.0	11.0	8.8
10th %ile Term Code	Gap	Hold	Gap	Gap	Gap	Gap
Stops (vph)	364	220	265	120	315	114
Fuel Used(gal)	12	9	7	5	13	11
CO Emissions (g/hr)	852	660	523	376	913	766
NOx Emissions (g/hr)	166	128	102	73	178	149
VOC Emissions (g/hr)	197	153	121	87	212	178
Dilemma Vehicles (#)	0	34	25	0	0	0
Queue Length 50th (ft)	87	102	121	49	141	42
Queue Length 95th (ft)	135	163	206	95	#274	100
Internal Link Dist (ft)		1831	424		2948	
Turn Bay Length (ft)	150					
Base Capacity (vph)	881	1149	585	1116	606	1113
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	0.52	0.41	0.57	0.35	0.66	0.44

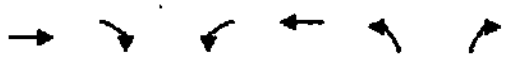
Intersection Summary

Area Type: Other
Cycle Length: 70

Actuated Cycle Length: 61.5
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 16.9 Intersection LOS: B
Intersection Capacity Utilization 61.1% ICU Level of Service B
Analysis Period (min) 15
90th %ile Actuated Cycle: 70
70th %ile Actuated Cycle: 70
50th %ile Actuated Cycle: 66.6
30th %ile Actuated Cycle: 56.6
10th %ile Actuated Cycle: 44.2
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: Daly Ave. & Stefko Blvd





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↱	↰	↑	↰	↱
Volume (vph)	646	58	235	526	171	267
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	11	12
Storage Length (ft)		0	200		0	0
Storage Lanes		1	1		1	1
Taper Length (ft)		25	200		25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1881	1652	1787	1881	1728	1599
Flt Permitted			0.127		0.950	
Satd. Flow (perm)	1881	1652	239	1881	1728	1599
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		64				297
Link Speed (mph)	35			35	30	
Link Distance (ft)	1771			341	540	
Travel Time (s)	34.5			6.6	12.3	
Peak Hour Factor	0.90	0.90	0.85	0.90	0.85	0.90
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	718	64	276	584	201	297
Shared Lane Traffic (%)						
Lane Group Flow (vph)	718	64	276	584	201	297
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	11	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	0.96	1.00	1.00	1.04	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1	1	1	1	1	1
Detector Template						
Leading Detector (ft)	0	30	30	0	30	30
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	0	30	30	0	30	30
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type		Perm	pm+pt			Perm
Protected Phases	2		1	6	8	
Permitted Phases		2	6			8
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	21.0	9.0	21.0	20.0	20.0

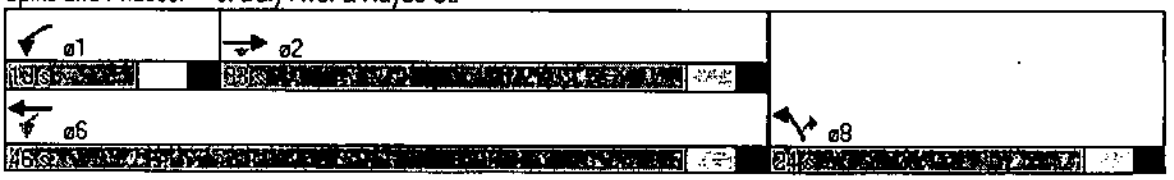
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Split (s)	33.0	33.0	13.0	46.0	24.0	24.0
Total Split (%)	47.1%	47.1%	18.6%	65.7%	34.3%	34.3%
Maximum Green (s)	28.0	28.0	8.0	41.0	19.0	19.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	Min	Min	Min	Min	Min
Act Effct Green (s)	27.5	27.5	40.6	40.6	13.8	13.8
Actuated g/C Ratio	0.44	0.44	0.65	0.65	0.22	0.22
v/c Ratio	0.87	0.08	0.73	0.48	0.53	0.51
Control Delay	30.7	4.1	24.4	7.9	27.0	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.7	4.1	24.4	7.9	27.0	6.2
LOS	C	A	C	A	C	A
Approach Delay	28.5			13.2	14.6	
Approach LOS	C			B	B	
90th %ile Green (s)	28.0	28.0	8.0	41.0	19.0	19.0
90th %ile Term Code	Max	Max	Max	Hold	Max	Max
70th %ile Green (s)	28.0	28.0	8.0	41.0	15.7	15.7
70th %ile Term Code	Max	Max	Max	Hold	Gap	Gap
50th %ile Green (s)	28.0	28.0	8.0	41.0	12.5	12.5
50th %ile Term Code	Max	Max	Max	Hold	Gap	Gap
30th %ile Green (s)	27.6	27.6	8.0	40.6	10.5	10.5
30th %ile Term Code	Gap	Gap	Max	Hold	Gap	Gap
10th %ile Green (s)	20.6	20.6	7.9	33.5	7.6	7.6
10th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Gap
Stops (vph)	506	10	108	250	140	34
Fuel Used(gal)	16	1	6	11	2	2
CO Emissions (g/hr)	1125	60	405	788	170	115
NOx Emissions (g/hr)	219	12	79	153	33	22
VOC Emissions (g/hr)	261	14	94	183	39	27
Dilemma Vehicles (#)	49	0	0	41	0	0
Queue Length 50th (ft)	230	0	45	91	69	0
Queue Length 95th (ft)	#497	20	#158	204	117	52
Internal Link Dist (ft)	1691			261	460	
Turn Bay Length (ft)			200			
Base Capacity (vph)	855	786	375	1238	506	678
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	0.84	0.08	0.74	0.47	0.40	0.44

Intersection Summary

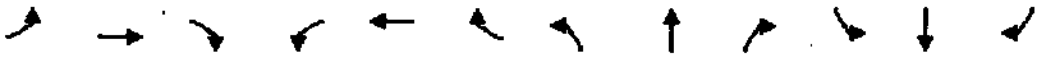
Area Type: Other
Cycle Length: 70

Actuated Cycle Length: 62.5
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 19.1 Intersection LOS: B
Intersection Capacity Utilization 66.5% ICU Level of Service C
Analysis Period (min) 15
90th %ile Actuated Cycle: 70
70th %ile Actuated Cycle: 66.7
50th %ile Actuated Cycle: 63.5
30th %ile Actuated Cycle: 61.1
10th %ile Actuated Cycle: 51.1
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Daly Ave. & Hayes St.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	207	1	131	1	4	1	111	642	1	1	638	161
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	13	15	15	15	12	12	12	12	12	12
Storage Length (ft)	0		0	0		0	125		0	125		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25		25	25		25	75		25	75		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.981						0.968	
Flt Protected		0.953			0.993		0.950			0.950		
Satd. Flow (prot)	0	1793	1652	0	2016	0	1787	3574	0	1787	3348	0
Flt Permitted		0.723			0.959		0.174			0.394		
Satd. Flow (perm)	0	1360	1652	0	1947	0	327	3574	0	741	3348	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			146		1						54	
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		1014			565			3028			1065	
Travel Time (s)		23.0			12.8			59.0			20.7	
Peak Hour Factor	0.90	0.85	0.90	0.85	0.85	0.85	0.85	0.95	0.85	0.85	0.90	0.85
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	5%	2%
Adj. Flow (vph)	230	1	146	1	5	1	131	676	1	1	709	189
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	231	146	0	7	0	131	677	0	1	898	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	0.96	0.88	0.88	0.88	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50	50	50	50		50	0		50	0	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	50	50	50	50	50		50	0		50	0	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm		Perm	Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0		8.0	22.0		22.0	22.0	



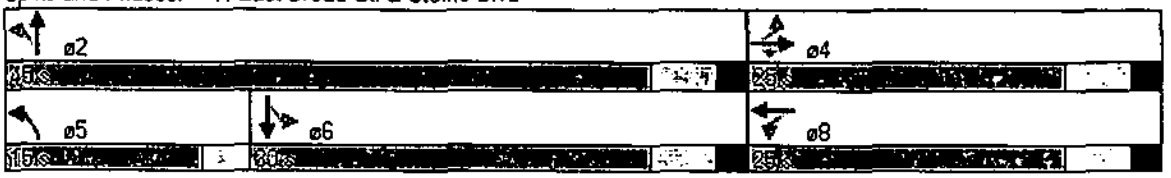
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	25.0	25.0	25.0	25.0	25.0	0.0	15.0	45.0	0.0	30.0	30.0	0.0
Total Split (%)	35.7%	35.7%	35.7%	35.7%	35.7%	0.0%	21.4%	64.3%	0.0%	42.9%	42.9%	0.0%
Maximum Green (s)	19.0	19.0	19.0	19.0	19.0		12.0	39.0		24.0	24.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		0.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	0.0	1.0	-2.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min	Min	None	None		Min	Min		Min	Min	
Act Effct Green (s)		16.5	16.5		16.5		34.2	34.2		22.0	22.0	
Actuated g/C Ratio		0.28	0.28		0.28		0.58	0.58		0.37	0.37	
v/c Ratio		0.61	0.26		0.01		0.34	0.33		0.00	0.70	
Control Delay		27.3	5.2		16.2		8.7	7.2		14.0	18.9	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		27.3	5.2		16.2		8.7	7.2		14.0	18.9	
LOS		C	A		B		A	A		B	B	
Approach Delay		18.7			16.2			7.5			18.9	
Approach LOS		B			B			A			B	
90th %ile Green (s)	19.0	19.0	19.0	19.0	19.0		12.0	39.0		24.0	24.0	
90th %ile Term Code	Max	Max	Max	Hold	Hold		Max	Hold		Max	Max	
70th %ile Green (s)	18.9	18.9	18.9	18.9	18.9		10.8	37.8		24.0	24.0	
70th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Gap	Hold		Max	Max	
50th %ile Green (s)	15.5	15.5	15.5	15.5	15.5		9.3	34.1		21.8	21.8	
50th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Gap	Hold		Gap	Gap	
30th %ile Green (s)	12.0	12.0	12.0	12.0	12.0		7.7	27.9		17.2	17.2	
30th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Gap	Hold		Gap	Gap	
10th %ile Green (s)	8.3	8.3	8.3	8.3	8.3		6.0	22.3		13.3	13.3	
10th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Gap	Hold		Gap	Gap	
Stops (vph)		167	20		6		43	292		2	590	
Fuel Used(gal)		4	1		0		3	17		0	14	
CO Emissions (g/hr)		260	90		6		206	1202		2	954	
NOx Emissions (g/hr)		51	17		1		40	234		0	186	
VOC Emissions (g/hr)		60	21		1		48	279		0	221	
Dilemma Vehicles (#)		0	0		0		0	53		0	67	
Queue Length 50th (ft)		74	0		2		19	59		0	132	
Queue Length 95th (ft)		140	37		9		41	99		3	223	
Internal Link Dist (ft)		934			485			2948			985	
Turn Bay Length (ft)							125			125		
Base Capacity (vph)		457	652		654		426	2238		309	1430	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.51	0.22		0.01		0.31	0.30		0.00	0.63	

Intersection Summary

Area Type: Other
Cycle Length: 70

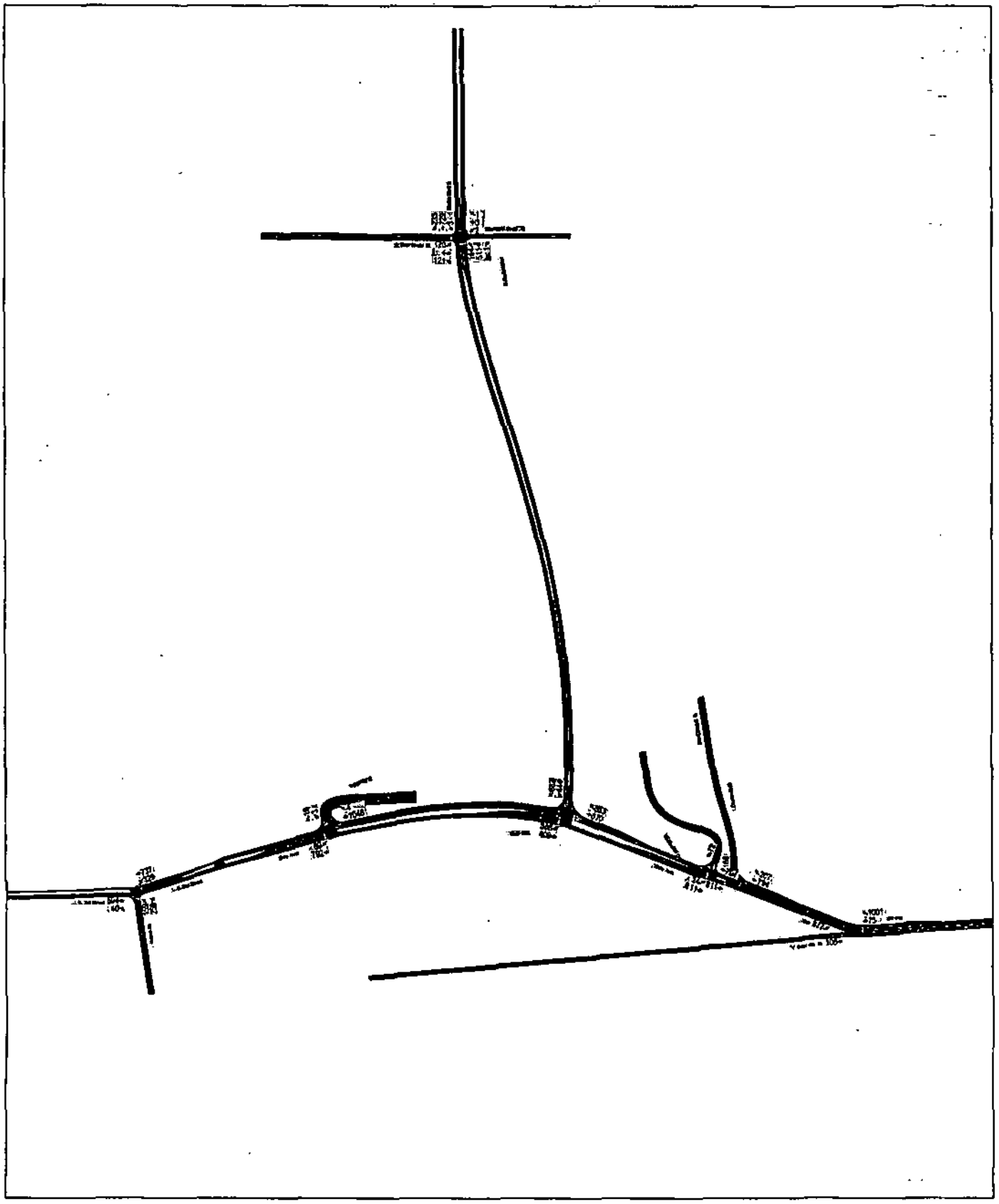
Actuated Cycle Length: 59
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.70
Intersection Signal Delay: 14.4 Intersection LOS: B
Intersection Capacity Utilization 57.1% ICU Level of Service B
Analysis Period (min) 15
90th %ile Actuated Cycle: 70
70th %ile Actuated Cycle: 68.7
50th %ile Actuated Cycle: 61.6
30th %ile Actuated Cycle: 51.9
10th %ile Actuated Cycle: 42.6

Splits and Phases: 7: East Broad St. & Stefko Blvd

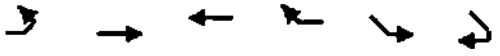


PEAK AM HOUR – 2008 BUILD CONDITION – PHASE 1

Map - Sands Bethworks Development - Peak AM Hour
2008 Build Condition - Phase 1 10/17/2006



Sands Bethworks Development - Peak AM Hour 2008 Build Condition - Phase 1 zi - 2008bam
G:\Data\ENG\SYNCHRO\06934\2008bam.syn



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑	↑	↱↱	↰↰	
Volume (vph)	0	108	75	1001	977	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	15	13	13	13	12
Storage Length (ft)	0			250	0	0
Storage Lanes	0			1	1	0
Taper Length (ft)	25			150	150	25
Lane Util. Factor	1.00	1.00	1.00	0.88	0.97	1.00
Frt				*0.950		
Flt Protected					0.950	
Satd. Flow (prot)	0	1883	1707	3097	3202	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	1883	1707	3097	3202	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				1138		
Link Speed (mph)		30	35		35	
Link Distance (ft)		2482	1509		672	
Travel Time (s)		56.4	29.4		13.1	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.87	0.90
Heavy Vehicles (%)	0%	11%	15%	6%	13%	0%
Adj. Flow (vph)	0	123	85	1138	1123	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	123	85	1138	1123	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		26	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	0.88	0.96	0.96	0.96	1.00
Turning Speed (mph)	15			9	25	9
Number of Detectors		1	1	1	1	
Detector Template						
Leading Detector (ft)		50	50	0	0	
Trailing Detector (ft)		0	0	0	0	
Detector 1 Position(ft)		0	0	0	0	
Detector 1 Size(ft)		50	50	0	0	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0	
Turn Type				Free		
Protected Phases		1	1		4	
Permitted Phases		1		Free		
Detector Phase		1	1		4	
Switch Phase						
Minimum Initial (s)		4.0	4.0		4.0	
Minimum Split (s)		10.0	10.0		22.0	

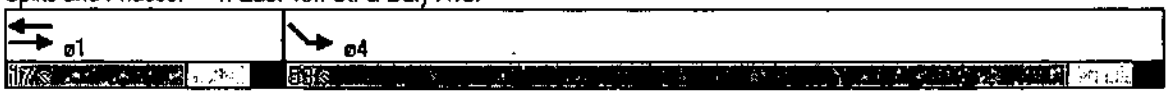
Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Total Split (s)	0.0	17.0	17.0	0.0	53.0	0.0
Total Split (%)	0.0%	24.3%	24.3%	0.0%	75.7%	0.0%
Maximum Green (s)		11.0	11.0		47.0	
Yellow Time (s)		4.0	4.0		4.0	
All-Red Time (s)		2.0	2.0		2.0	
Lost Time Adjust (s)	0.0	-2.0	-2.0	-2.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	2.0	6.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	
Recall Mode		Min	Min		C-Min	
Act Effct Green (s)		11.8	11.8	70.0	48.2	
Actuated g/C Ratio		0.17	0.17	1.00	0.69	
v/c Ratio		0.39	0.30	0.37	0.51	
Control Delay		28.8	27.2	0.3	3.1	
Queue Delay		0.0	0.0	0.0	0.0	
Total Delay		28.8	27.2	0.3	3.1	
LOS		C	C	A	A	
Approach Delay		28.8	27.2		3.1	
Approach LOS		C	A		A	
90th %ile Green (s)		13.4	13.4		44.6	
90th %ile Term Code		Gap	Gap		Coord	
70th %ile Green (s)		11.3	11.3		46.7	
70th %ile Term Code		Gap	Gap		Coord	
50th %ile Green (s)		9.8	9.8		48.2	
50th %ile Term Code		Gap	Gap		Coord	
30th %ile Green (s)		8.3	8.3		49.7	
30th %ile Term Code		Gap	Gap		Coord	
10th %ile Green (s)		6.2	6.2		51.8	
10th %ile Term Code		Gap	Gap		Coord	
Stops (vph)		92	62	0	215	
Fuel Used(gal)		3	2	11	7	
CO Emissions (g/hr)		226	119	767	488	
NOx Emissions (g/hr)		44	23	149	95	
VOC Emissions (g/hr)		52	28	178	113	
Dilemma Vehicles (#)		0	5	0	0	
Queue Length 50th (ft)		48	32	0	21	
Queue Length 95th (ft)		86	64	0	34	
Internal Link Dist (ft)		2402	1429		592	
Turn Bay Length (ft)				250		
Base Capacity (vph)		364	330	3097	2229	
Starvation Cap Reductn		0	0	0	0	
Spillback Cap Reductn		0	0	0	0	
Storage Cap Reductn		0	0	0	0	
Reduced v/c Ratio		0.34	0.26	0.37	0.50	

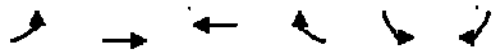
Intersection Summary

Area Type: Other
Cycle Length: 70

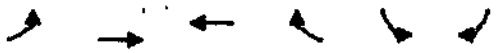
Actuated Cycle Length: 70
Offset: 27 (39%), Referenced to phase 4:SEL, Start of Yellow
Natural Cycle: 40
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.51
Intersection Signal Delay: 3.9 Intersection LOS: A
Intersection Capacity Utilization 41.9% ICU Level of Service A
Analysis Period (min) 15
* User Entered Value

Splits and Phases: 1: East 4th. St. & Daly Ave.





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø6	Ø7
Lane Configurations		↑↑	↑↑	↱	↰↑			
Volume (vph)	0	811	794	207	166	0		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Storage Length (ft)	0			200	0	0		
Storage Lanes	0			1	2	0		
Taper Length (ft)	25			150	25	25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.97	1.00		
Frt				0.950				
Flt Protected					0.950			
Satd. Flow (prot)	0	3195	3406	1770	3433	0		
Flt Permitted					0.950			
Satd. Flow (perm)	0	3195	3406	1770	3433	0		
Right Turn on Red				Yes		Yes		
Satd. Flow (RTOR)				224				
Link Speed (mph)		35	35		30			
Link Distance (ft)		114	672		621			
Travel Time (s)		2.2	13.1		14.1			
Peak Hour Factor	0.92	0.87	0.88	0.90	0.90	0.92		
Heavy Vehicles (%)	2%	13%	6%	2%	2%	2%		
Adj. Flow (vph)	0	932	902	230	184	0		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	932	902	230	184	0		
Enter Blocked Intersection	No	No	No	No	No	No		
Lane Alignment	Left	Left	Left	Right	Left	Right		
Median Width(ft)		0	0		24			
Link Offset(ft)		0	0		0			
Crosswalk Width(ft)		16	16		16			
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Turning Speed (mph)	15			9	15	9		
Number of Detectors		1	1	1	1			
Detector Template					Left			
Leading Detector (ft)		5	0	0	30			
Trailing Detector (ft)		0	0	0	0			
Detector 1 Position(ft)		0	0	0	0			
Detector 1 Size(ft)		5	0	0	30			
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			
Detector 1 Channel								
Detector 1 Extend (s)		0.0	0.0	0.0	0.0			
Detector 1 Queue (s)		0.0	0.0	0.0	0.0			
Detector 1 Delay (s)		0.0	0.0	0.0	0.0			
Turn Type				Free				
Protected Phases		2	2		4		6	7
Permitted Phases				Free				
Detector Phase		2	2		4			
Switch Phase								
Minimum Initial (s)		4.0	4.0		4.0		4.0	4.0
Minimum Split (s)		22.0	22.0		22.0		22.0	10.0
Total Split (s)	0.0	46.0	46.0	0.0	24.0	0.0	46.0	24.0

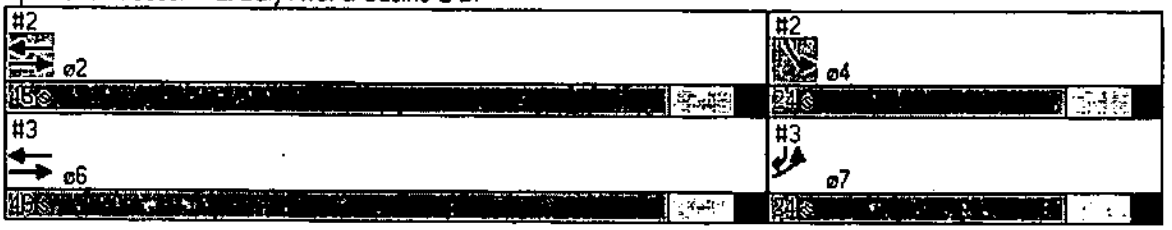


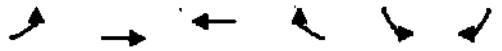
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	ø6	ø7
Total Split (%)	0.0%	65.7%	65.7%	0.0%	34.3%	0.0%	66%	34%
Maximum Green (s)		40.0	40.0		18.0		40.0	18.0
Yellow Time (s)		4.0	4.0		4.0		4.0	4.0
All-Red Time (s)		2.0	2.0		2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	4.0		
Lead/Lag								
Lead-Lag Optimize?								
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0
Recall Mode		C-Min	C-Min		Min		C-Min	Min
Walk Time (s)		5.0	5.0		5.0		5.0	
Flash Dont Walk (s)		11.0	11.0		11.0		11.0	
Pedestrian Calls (#/hr)		0	0		0		0	
Act Effct Green (s)		48.9	48.9	70.0	9.1			
Actuated g/C Ratio		0.70	0.70	1.00	0.13			
v/c Ratio		0.42	0.38	0.13	0.41			
Control Delay		0.7	5.1	0.1	30.4			
Queue Delay		0.1	0.0	0.0	0.0			
Total Delay		0.8	5.1	0.1	30.4			
LOS		A	A	A	C			
Approach Delay		0.8	4.1		30.4			
Approach LOS		A	A		C			
90th %ile Green (s)		46.4	46.4		11.6		46.4	11.6
90th %ile Term Code		Coord	Coord		Gap		Coord	Hold
70th %ile Green (s)		47.9	47.9		10.1		47.9	10.1
70th %ile Term Code		Coord	Coord		Gap		Coord	Hold
50th %ile Green (s)		48.9	48.9		9.1		48.9	9.1
50th %ile Term Code		Coord	Coord		Gap		Coord	Hold
30th %ile Green (s)		49.9	49.9		8.1		49.9	8.1
30th %ile Term Code		Coord	Coord		Gap		Coord	Hold
10th %ile Green (s)		51.4	51.4		6.6		51.4	6.6
10th %ile Term Code		Coord	Coord		Gap		Coord	Hold
Stops (vph)		8	293	0	144			
Fuel Used(gal)		1	7	1	3			
CO Emissions (g/hr)		59	481	71	215			
NOx Emissions (g/hr)		12	94	14	42			
VOC Emissions (g/hr)		14	111	16	50			
Dilemma Vehicles (#)		16	57	0	0			
Queue Length 50th (ft)		3	67	0	38			
Queue Length 95th (ft)		1	105	0	63			
Internal Link Dist (ft)		34	592		541			
Turn Bay Length (ft)				200				
Base Capacity (vph)		2232	2379	1770	883			
Starvation Cap Reductn		314	0	0	0			
Spillback Cap Reductn		0	0	0	0			
Storage Cap Reductn		0	0	0	0			
Reduced v/c Ratio		0.49	0.38	0.13	0.21			

Intersection Summary

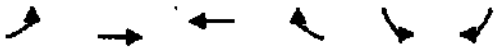
Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 17 (24%), Referenced to phase 2:EBWB and 6:, Start of Yellow
Natural Cycle: 45
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.42
Intersection Signal Delay: 4.9 Intersection LOS: A
Intersection Capacity Utilization 37.2% ICU Level of Service A
Analysis Period (min) 15
* User Entered Value

Splits and Phases: 2: Daly Ave. & Casino E Dr





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	ø2	ø4
Lane Configurations								
Volume (vph)	24	811	794	0	0	72		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Storage Length (ft)	320			0	0	0		
Storage Lanes	1			0	0	2		
Taper Length (ft)	150			25	25	25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	0.88		
Frt						0.850		
Flt Protected	0.950							
Satd. Flow (prot)	1770	3195	3406	0	0	2787		
Flt Permitted	0.950							
Satd. Flow (perm)	1770	3195	3406	0	0	2787		
Right Turn on Red				Yes		Yes		
Satd. Flow (RTOR)						240		
Link Speed (mph)		35	35		30			
Link Distance (ft)		792	114		690			
Travel Time (s)		15.4	2.2		15.7			
Peak Hour Factor	0.90	0.87	0.88	0.92	0.92	0.90		
Heavy Vehicles (%)	2%	13%	6%	2%	2%	2%		
Adj. Flow (vph)	27	932	902	0	0	80		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	27	932	902	0	0	80		
Enter Blocked Intersection	No	No	No	No	No	No		
Lane Alignment	Left	Left	Left	Right	Left	Right		
Median Width(ft)		12	12		0			
Link Offset(ft)		0	0		0			
Crosswalk Width(ft)		16	16		16			
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Turning Speed (mph)	15			9	15	9		
Number of Detectors	1	2	2			1		
Detector Template	Left	Thru	Thru			Right		
Leading Detector (ft)	20	100	100			20		
Trailing Detector (ft)	0	0	0			0		
Detector 1 Position(ft)	0	0	0			0		
Detector 1 Size(ft)	20	6	6			20		
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex		
Detector 1 Channel								
Detector 1 Extend (s)	0.0	0.0	0.0			0.0		
Detector 1 Queue (s)	0.0	0.0	0.0			0.0		
Detector 1 Delay (s)	0.0	0.0	0.0			0.0		
Detector 2 Position(ft)		94	94					
Detector 2 Size(ft)		6	6					
Detector 2 Type		Cl+Ex	Cl+Ex					
Detector 2 Channel								
Detector 2 Extend (s)		0.0	0.0					
Turn Type	Prot					Over		
Protected Phases	7	6	6			7	2	4
Permitted Phases								



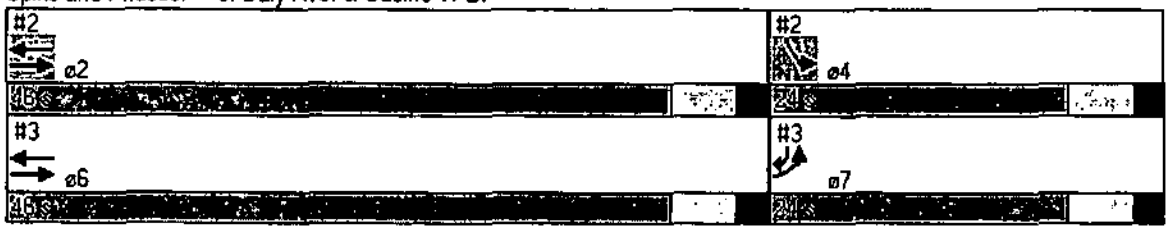
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	b21	b24
Detector Phase	7	6	6			7		
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0			4.0	4.0	4.0
Minimum Split (s)	10.0	22.0	22.0			10.0	22.0	22.0
Total Split (s)	24.0	46.0	46.0	0.0	0.0	24.0	46.0	24.0
Total Split (%)	34.3%	65.7%	65.7%	0.0%	0.0%	34.3%	66%	34%
Maximum Green (s)	18.0	40.0	40.0			18.0	40.0	18.0
Yellow Time (s)	4.0	4.0	4.0			4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0			2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	6.0	6.0	6.0	4.0	4.0	6.0		
Lead/Lag								
Lead-Lag Optimize?								
Vehicle Extension (s)	3.0	3.0	3.0			3.0	3.0	3.0
Recall Mode	Min	C-Min	C-Min			Min	C-Min	Min
Walk Time (s)		5.0	5.0				5.0	5.0
Flash Dont Walk (s)		11.0	11.0				11.0	11.0
Pedestrian Calls (#/hr)		0	0				0	0
Act Effct Green (s)	9.1	48.9	48.9			9.1		
Actuated g/C Ratio	0.13	0.70	0.70			0.13		
v/c Ratio	0.12	0.42	0.38			0.14		
Control Delay	32.5	3.7	1.1			0.5		
Queue Delay	0.0	0.0	0.1			0.0		
Total Delay	32.5	3.7	1.2			0.5		
LOS	C	A	A			A		
Approach Delay		4.6	1.2					
Approach LOS		A	A					
90th %ile Green (s)	11.6	46.4	46.4			11.6	46.4	11.6
90th %ile Term Code	Hold	Coord	Coord			Hold	Coord	Gap
70th %ile Green (s)	10.1	47.9	47.9			10.1	47.9	10.1
70th %ile Term Code	Hold	Coord	Coord			Hold	Coord	Gap
50th %ile Green (s)	9.1	48.9	48.9			9.1	48.9	9.1
50th %ile Term Code	Hold	Coord	Coord			Hold	Coord	Gap
30th %ile Green (s)	8.1	49.9	49.9			8.1	49.9	8.1
30th %ile Term Code	Hold	Coord	Coord			Hold	Coord	Gap
10th %ile Green (s)	6.6	51.4	51.4			6.6	51.4	6.6
10th %ile Term Code	Hold	Coord	Coord			Hold	Coord	Gap
Stops (vph)	19	236	26			0		
Fuel Used(gal)	0	7	1			0		
CO Emissions (g/hr)	31	491	72			32		
NOx Emissions (g/hr)	6	96	14			6		
VOC Emissions (g/hr)	7	114	17			7		
Dilemma Vehicles (#)	0	15	48			0		
Queue Length 50th (ft)	0	8	7			0		
Queue Length 95th (ft)	m18	m155	8			0		
Internal Link Dist (ft)		712	34		610			
Turn Bay Length (ft)	320							
Base Capacity (vph)	455	2232	2379			895		
Starvation Cap Reductn	0	0	515			0		

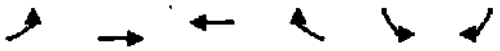
Lane Group	SE	EBL	EBT	WBT	WBR	SBL	SBR	ø2	ø4
Spillback Cap Reductn		0	0	0			0		
Storage Cap Reductn		0	0	0			0		
Reduced v/c Ratio		0.06	0.42	0.48			0.09		

Intersection Summary

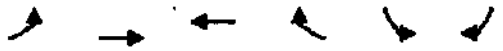
Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 17 (24%), Referenced to phase 2:EBWB and 6:, Start of Yellow
Natural Cycle: 45
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.42
Intersection Signal Delay: 2.8 Intersection LOS: A
Intersection Capacity Utilization 35.3% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Daly Ave. & Casino W Dr





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	386	409	370	553	444	682
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	13	13	12
Storage Length (ft)	150			250	0	0
Storage Lanes	2			1	1	1
Taper Length (ft)	300			150	25	25
Lane Util. Factor	0.97	0.95	0.95	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3303	3034	3252	1560	1696	1509
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3303	3034	3252	1560	1696	1509
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				114		90
Link Speed (mph)		35	35		35	
Link Distance (ft)		1214	792		3028	
Travel Time (s)		23.6	15.4		59.0	
Peak Hour Factor	0.93	0.95	0.92	0.84	0.85	0.83
Heavy Vehicles (%)	6%	19%	11%	7%	10%	7%
Adj. Flow (vph)	415	431	402	658	522	822
Shared Lane Traffic (%)						
Lane Group Flow (vph)	415	431	402	658	522	822
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	0.96	0.96	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	1	1	1	1	1
Detector Template						
Leading Detector (ft)	30	5	5	30	30	30
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	30	5	5	30	30	30
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot			pm+ov		pm+ov
Protected Phases	7	4	8	6	6	7
Permitted Phases				8		6
Detector Phase	7	4	8	6	6	7
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0	19.0	21.0	21.0	9.0



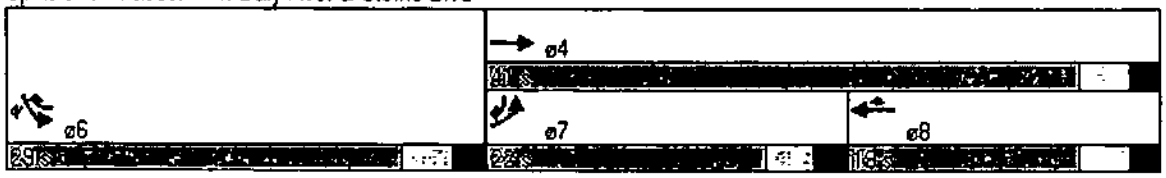
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Total Split (s)	22.0	41.0	19.0	29.0	29.0	22.0
Total Split (%)	31.4%	58.6%	27.1%	41.4%	41.4%	31.4%
Maximum Green (s)	17.0	36.0	14.0	24.0	24.0	17.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	5.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead		Lag			Lead
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	C-Min	C-Min	Min	Min	Min
Act Effct Green (s)	15.1	37.2	17.1	45.9	24.8	44.9
Actuated g/C Ratio	0.22	0.53	0.24	0.66	0.35	0.64
v/c Ratio	0.58	0.27	0.51	0.62	0.87	0.82
Control Delay	17.4	3.7	21.7	10.0	38.8	16.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.4	3.7	21.7	10.0	38.8	16.6
LOS	B	A	C	B	D	B
Approach Delay		10.4	14.5		25.2	
Approach LOS		B	B		C	
90th %ile Green (s)	17.0	36.0	14.0	24.0	24.0	17.0
90th %ile Term Code	Max	Coord	Coord	Max	Max	Max
70th %ile Green (s)	17.0	36.0	14.0	24.0	24.0	17.0
70th %ile Term Code	Max	Coord	Coord	Max	Max	Max
50th %ile Green (s)	16.4	35.7	14.3	24.3	24.3	16.4
50th %ile Term Code	Gap	Coord	Coord	Max	Max	Gap
30th %ile Green (s)	14.1	34.1	15.0	25.9	25.9	14.1
30th %ile Term Code	Gap	Coord	Coord	Gap	Gap	Gap
10th %ile Green (s)	11.0	39.4	23.4	20.6	20.6	11.0
10th %ile Term Code	Gap	Coord	Coord	Gap	Gap	Gap
Stops (vph)	256	143	287	344	373	436
Fuel Used(gal)	7	5	6	7	16	20
CO Emissions (g/hr)	466	347	413	481	1119	1433
NOx Emissions (g/hr)	91	68	80	94	218	279
VOC Emissions (g/hr)	108	81	96	111	259	332
Dilemma Vehicles (#)	0	10	30	0	0	0
Queue Length 50th (ft)	53	36	81	212	203	185
Queue Length 95th (ft)	48	7	76	12	#340	275
Internal Link Dist (ft)		1134	712		2948	
Turn Bay Length (ft)	150			250		
Base Capacity (vph)	802	1633	796	1076	617	1036
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	0.52	0.26	0.51	0.61	0.85	0.79

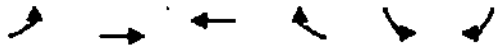
Intersection Summary

Area Type: Other
Cycle Length: 70

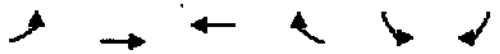
Actuated Cycle Length: 70
Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow, Master Intersection
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 17.9 Intersection LOS: B
Intersection Capacity Utilization 59.1% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: Daly Ave. & Stefko Blvd





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	89	792	1048	4	3	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300			0	0	0
Storage Lanes	1			1	2	1
Taper Length (ft)	75			25	25	25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.97	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	3252	3374	1583	3433	1583
Flt Permitted	0.159				0.950	
Satd. Flow (perm)	296	3252	3374	1583	3433	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				4		20
Link Speed (mph)		35	35		30	
Link Distance (ft)		578	1214		556	
Travel Time (s)		11.3	23.6		12.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	11%	7%	2%	2%	2%
Adj. Flow (vph)	99	880	1164	4	3	20
Shared Lane Traffic (%)						
Lane Group Flow (vph)	99	880	1164	4	3	20
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	1	2	1	1	1
Detector Template	Left				Left	Right
Leading Detector (ft)	30	5	94	0	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	30	5	0	0	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			
Detector 2 Size(ft)			0			
Detector 2 Type			Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)			0.0			
Turn Type	pm+pt			pm+ov		Perm
Protected Phases	7	4	8	6	6	
Permitted Phases	4			8		6



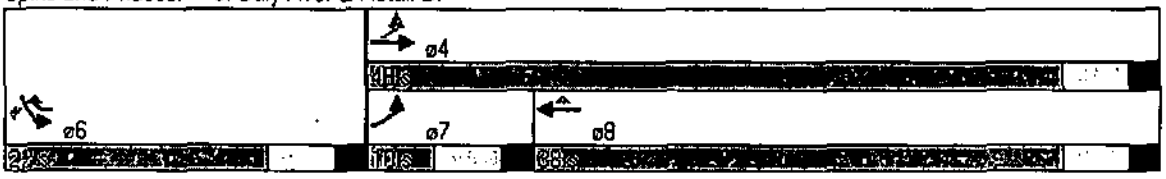
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase	7	4	8	6	6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	10.0	48.0	38.0	22.0	22.0	22.0
Total Split (%)	14.3%	68.6%	54.3%	31.4%	31.4%	31.4%
Maximum Green (s)	4.0	42.0	32.0	16.0	16.0	16.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	C-Min	C-Min	Min	Min	Min
Walk Time (s)		5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0	0
Act Effct Green (s)	52.0	52.0	39.4	51.4	6.0	6.0
Actuated g/C Ratio	0.74	0.74	0.56	0.73	0.09	0.09
v/c Ratio	0.28	0.36	0.61	0.00	0.01	0.13
Control Delay	2.5	2.2	10.7	2.0	28.7	15.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.5	2.2	10.7	2.0	28.7	15.7
LOS	A	A	B	A	C	B
Approach Delay		2.2	10.7		17.4	
Approach LOS		A	B		B	
90th %ile Green (s)	7.8	50.8	37.0	7.2	7.2	7.2
90th %ile Term Code	Gap	Coord	Coord	Gap	Gap	Gap
70th %ile Green (s)	7.0	51.8	38.8	6.2	6.2	6.2
70th %ile Term Code	Gap	Coord	Coord	Gap	Gap	Gap
50th %ile Green (s)	6.5	52.5	40.0	5.5	5.5	5.5
50th %ile Term Code	Gap	Coord	Coord	Gap	Gap	Gap
30th %ile Green (s)	6.1	52.5	40.4	5.5	5.5	5.5
30th %ile Term Code	Gap	Coord	Coord	Gap	Gap	Gap
10th %ile Green (s)	5.5	52.5	41.0	5.5	5.5	5.5
10th %ile Term Code	Gap	Coord	Coord	Gap	Gap	Gap
Stops (vph)	13	201	634	1	6	9
Fuel Used(gal)	1	8	16	0	0	0
CO Emissions (g/hr)	56	543	1135	3	4	13
NOx Emissions (g/hr)	11	106	221	1	1	3
VOC Emissions (g/hr)	13	126	263	1	1	3
Dilemma Vehicles (#)	0	17	68	0	0	0
Queue Length 50th (ft)	3	14	161	0	0	0
Queue Length 95th (ft)	m7	m53	245	m1	4	19
Internal Link Dist (ft)		498	1134		476	
Turn Bay Length (ft)	300					
Base Capacity (vph)	358	2417	1901	1390	785	377
Starvation Cap Reductn	0	0	0	0	0	0

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.36	0.61	0.00	0.00	0.05

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 59 (84%), Referenced to phase 4:EBTL and 8:WBT, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.61
Intersection Signal Delay: 6.9 Intersection LOS: A
Intersection Capacity Utilization 52.2% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Daly Ave. & Retail Dr



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↱	↰	↑	↰	↱
Volume (vph)	594	40	329	737	159	259
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	11	12
Storage Length (ft)		0	200		0	0
Storage Lanes		1	1		1	1
Taper Length (ft)		25	200		25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1652	1589	1703	1776	1694	1568
Flt Permitted			0.177		0.950	
Satd. Flow (perm)	1652	1589	317	1776	1694	1568
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		57				332
Link Speed (mph)	35			35	30	
Link Distance (ft)	1771			454	540	
Travel Time (s)	34.5			8.8	12.3	
Peak Hour Factor	0.92	0.70	0.85	0.91	0.75	0.78
Heavy Vehicles (%)	15%	5%	6%	7%	3%	3%
Adj. Flow (vph)	646	57	387	810	212	332
Shared Lane Traffic (%)						
Lane Group Flow (vph)	646	57	387	810	212	332
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	11	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	0.96	1.00	1.00	1.04	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1	1	1	1	1	1
Detector Template						
Leading Detector (ft)	5	30	30	0	30	30
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	5	30	30	0	30	30
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type		Perm	pm+pt			Perm
Protected Phases	2		1	6	8	
Permitted Phases		2	6			8
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	21.0	9.0	21.0	20.0	20.0

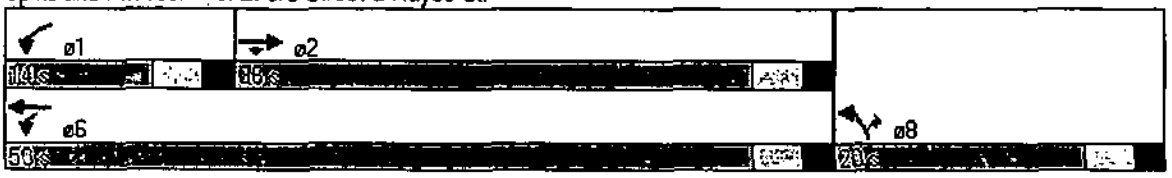
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Split (s)	36.0	36.0	14.0	50.0	20.0	20.0
Total Split (%)	51.4%	51.4%	20.0%	71.4%	28.6%	28.6%
Maximum Green (s)	31.0	31.0	9.0	45.0	15.0	15.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Min	C-Min	Min	C-Min	Min	Min
Act Effct Green (s)	32.3	32.3	48.2	48.2	13.8	13.8
Actuated g/C Ratio	0.46	0.46	0.69	0.69	0.20	0.20
v/c Ratio	0.85	0.07	0.86	0.66	0.63	0.58
Control Delay	30.0	3.7	32.4	5.7	34.4	7.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.0	3.7	32.4	5.7	34.4	7.5
LOS	C	A	C	A	C	A
Approach Delay	27.9			14.3	18.0	
Approach LOS	C			B	B	
90th %ile Green (s)	31.0	31.0	9.0	45.0	15.0	15.0
90th %ile Term Code	Coord	Coord	Max	Coord	Max	Max
70th %ile Green (s)	31.0	31.0	9.0	45.0	15.0	15.0
70th %ile Term Code	Coord	Coord	Max	Coord	Max	Max
50th %ile Green (s)	31.0	31.0	10.1	46.1	13.9	13.9
50th %ile Term Code	Coord	Coord	Max	Coord	Gap	Gap
30th %ile Green (s)	29.0	29.0	14.3	48.3	11.7	11.7
30th %ile Term Code	Coord	Coord	Max	Coord	Gap	Gap
10th %ile Green (s)	34.6	34.6	11.8	51.4	8.6	8.6
10th %ile Term Code	Coord	Coord	Gap	Coord	Gap	Gap
Stops (vph)	480	7	155	274	140	34
Fuel Used(gal)	15	1	6	8	3	2
CO Emissions (g/hr)	1037	42	405	587	179	117
NOx Emissions (g/hr)	202	8	79	114	35	23
VOC Emissions (g/hr)	240	10	94	136	41	27
Dilemma Vehicles (#)	41	0	0	2	0	0
Queue Length 50th (ft)	236	0	22	224	83	0
Queue Length 95th (ft)	#434	10	#208	124	116	34
Internal Link Dist (ft)	1691			374	460	
Turn Bay Length (ft)			200			
Base Capacity (vph)	772	773	452	1222	387	615
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	0.84	0.07	0.86	0.66	0.55	0.54

Intersection Summary

Area Type: Other
Cycle Length: 70

Actuated Cycle Length: 70
Offset: 11 (16%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 19.0 Intersection LOS: B
Intersection Capacity Utilization 68.3% ICU Level of Service C
Analysis Period (min) 15
#. 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: E. 3rd Street & Hayes St.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	120	4	121	2	3	1	164	511	1	3	729	235
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	13	15	15	15	12	12	12	12	12	12
Storage Length (ft)	0		0	0		0	125		0	125		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25		25	25		25	75		25	75		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.983						0.958	
Flt Protected		0.954			0.982		0.950			0.950		
Satd. Flow (prot)	0	1729	1503	0	1998	0	1612	3505	0	1787	3363	0
Flt Permitted		0.729			0.900		0.154			0.454		
Satd. Flow (perm)	0	1321	1503	0	1831	0	261	3505	0	854	3363	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			159		1						95	
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		1014			565			3028			1065	
Travel Time (s)		23.0			12.8			59.0			20.7	
Peak Hour Factor	0.82	0.70	0.76	0.70	0.70	0.70	0.76	0.96	0.70	0.70	0.88	0.73
Heavy Vehicles (%)	5%	1%	11%	1%	1%	1%	12%	3%	1%	1%	2%	5%
Adj. Flow (vph)	146	6	159	3	4	1	216	532	1	4	828	322
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	152	159	0	8	0	216	533	0	4	1150	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	0.96	0.88	0.88	0.88	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50	50	50	50		50	0		50	0	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	50	50	50	50	50		50	0		50	0	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm		Perm	Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0		8.0	22.0		22.0	22.0	

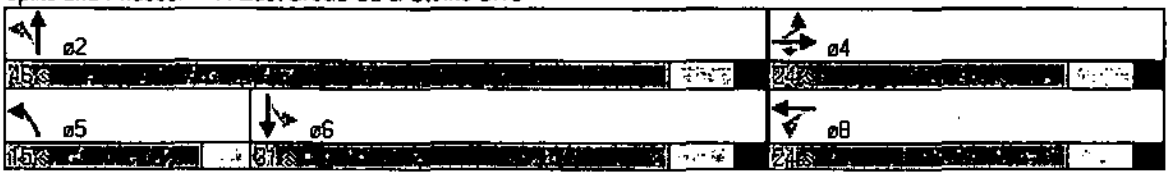
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	24.0	24.0	24.0	24.0	24.0	0.0	15.0	46.0	0.0	31.0	31.0	0.0
Total Split (%)	34.3%	34.3%	34.3%	34.3%	34.3%	0.0%	21.4%	65.7%	0.0%	44.3%	44.3%	0.0%
Maximum Green (s)	18.0	18.0	18.0	18.0	18.0		12.0	40.0		25.0	25.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		0.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	0.0	1.0	-2.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min	Min	None	None		Min	Min		Min	Min	
Act Effct Green (s)		14.2	14.2		14.2		38.8	38.8		24.9	24.9	
Actuated g/C Ratio		0.23	0.23		0.23		0.64	0.64		0.41	0.41	
v/c Ratio		0.50	0.34		0.02		0.56	0.24		0.01	0.81	
Control Delay		27.4	6.1		17.7		13.7	5.6		13.0	21.2	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		27.4	6.1		17.7		13.7	5.6		13.0	21.2	
LOS		C	A		B		B	A		B	C	
Approach Delay		16.5			17.7			7.9			21.2	
Approach LOS		B			B			A			C	
90th %ile Green (s)	18.0	18.0	18.0	18.0	18.0		12.0	40.0		25.0	25.0	
90th %ile Term Code	Max	Max	Max	Hold	Hold		Max	Hold		Max	Max	
70th %ile Green (s)	15.0	15.0	15.0	15.0	15.0		12.0	40.0		25.0	25.0	
70th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Max	Hold		Max	Max	
50th %ile Green (s)	12.3	12.3	12.3	12.3	12.3		12.0	40.0		25.0	25.0	
50th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Max	Hold		Max	Max	
30th %ile Green (s)	9.9	9.9	9.9	9.9	9.9		10.7	36.3		22.6	22.6	
30th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Gap	Hold		Gap	Gap	
10th %ile Green (s)	6.8	6.8	6.8	6.8	6.8		7.6	27.1		16.5	16.5	
10th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Gap	Hold		Gap	Gap	
Stops (vph)		100	19		7		71	195		3	715	
Fuel Used(gal)		2	1		0		5	13		0	17	
CO Emissions (g/hr)		155	85		6		320	924		4	1185	
NOx Emissions (g/hr)		30	16		1		62	180		1	230	
VOC Emissions (g/hr)		36	20		1		74	214		1	275	
Dilemma Vehicles (#)		0	0		0		0	41		0	77	
Queue Length 50th (ft)		53	0		2		28	37		1	180	
Queue Length 95th (ft)		76	24		9		65	73		5	#288	
Internal Link Dist (ft)		934			485			2948			985	
Turn Bay Length (ft)							125			125		
Base Capacity (vph)		398	565		553		392	2294		367	1501	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.38	0.28		0.01		0.55	0.23		0.01	0.77	

Intersection Summary

Area Type: Other
Cycle Length: 70

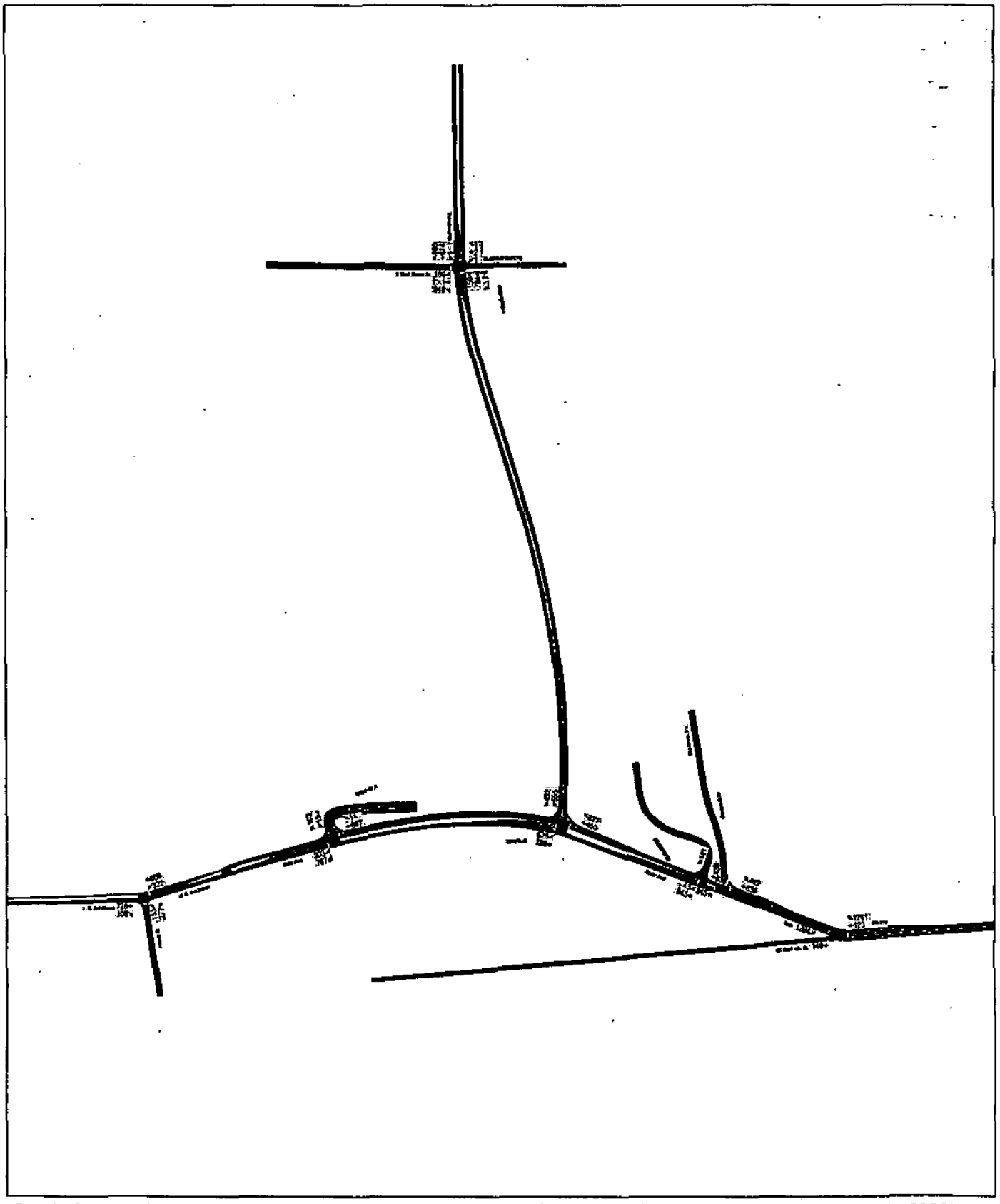
Actuated Cycle Length: 61.1
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 16.0 Intersection LOS: B
Intersection Capacity Utilization 60.3% ICU Level of Service B
Analysis Period (min) 15
90th %ile Actuated Cycle: 70
70th %ile Actuated Cycle: 67
50th %ile Actuated Cycle: 64.3
30th %ile Actuated Cycle: 58.2
10th %ile Actuated Cycle: 45.9
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: East Broad St. & Stefko Blvd



PEAK PM HOUR – 2008 BUILD CONDITION – PHASE 1

Map - Sands Bethworks Development - Peak PM Hour
2008 Build Condition - Phase 1 10/17/2006



Sands Bethworks Development - Peak PM Hour 2008 Build Condition - Phase 1 zi - 2008bpm
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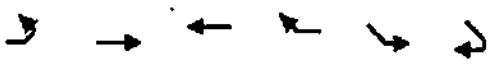
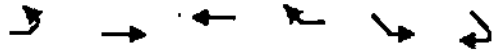


Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑	↑	↱↱	↰↰	
Volume (vph)	0	148	123	1281	1284	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	15	13	13	13	12
Storage Length (ft)	0			250	0	0
Storage Lanes	0			1	1	0
Taper Length (ft)	25			150	150	25
Lane Util. Factor	1.00	1.00	1.00	0.88	0.97	1.00
Frt				*0.950		
Flt Protected					0.950	
Satd. Flow (prot)	0	2069	1944	3250	3583	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	2069	1944	3250	3583	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				1348		
Link Speed (mph)		30	35		35	
Link Distance (ft)		2482	1509		672	
Travel Time (s)		56.4	29.4		13.1	
Peak Hour Factor	0.88	0.85	0.85	0.95	0.90	0.90
Heavy Vehicles (%)	0%	1%	1%	1%	1%	0%
Adj. Flow (vph)	0	174	145	1348	1427	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	174	145	1348	1427	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		26	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	0.88	0.96	0.96	0.96	1.00
Turning Speed (mph)	15			9	25	9
Number of Detectors		1	1	1	1	
Detector Template						
Leading Detector (ft)		50	50	0	0	
Trailing Detector (ft)		0	0	0	0	
Detector 1 Position(ft)		0	0	0	0	
Detector 1 Size(ft)		50	50	0	0	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0	
Turn Type				Free		
Protected Phases		1	1		4	
Permitted Phases		1		Free		
Detector Phase		1	1		4	
Switch Phase						
Minimum Initial (s)		4.0	4.0		4.0	
Minimum Split (s)		10.0	10.0		22.0	



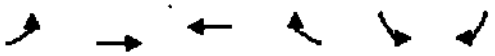
Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Total Split (s)	0.0	17.0	17.0	0.0	53.0	0.0
Total Split (%)	0.0%	24.3%	24.3%	0.0%	75.7%	0.0%
Maximum Green (s)		11.0	11.0		47.0	
Yellow Time (s)		4.0	4.0		4.0	
All-Red Time (s)		2.0	2.0		2.0	
Lost Time Adjust (s)	0.0	-2.0	-2.0	-2.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	2.0	6.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	
Recall Mode		Min	Min		C-Min	
Act Effct Green (s)		13.1	13.1	70.0	46.9	
Actuated g/C Ratio		0.19	0.19	1.00	0.67	
v/c Ratio		0.45	0.40	0.41	0.59	
Control Delay		28.4	27.6	0.4	5.4	
Queue Delay		0.0	0.0	0.0	0.0	
Total Delay		28.4	27.6	0.4	5.4	
LOS		C	C	A	A	
Approach Delay		28.4	3.0		5.4	
Approach LOS		C	A		A	
90th %ile Green (s)		14.9	14.9		43.1	
90th %ile Term Code		Gap	Gap		Coord	
70th %ile Green (s)		12.7	12.7		45.3	
70th %ile Term Code		Gap	Gap		Coord	
50th %ile Green (s)		11.1	11.1		46.9	
50th %ile Term Code		Gap	Gap		Coord	
30th %ile Green (s)		9.5	9.5		48.5	
30th %ile Term Code		Gap	Gap		Coord	
10th %ile Green (s)		7.2	7.2		50.8	
10th %ile Term Code		Gap	Gap		Coord	
Stops (vph)		124	102	0	578	
Fuel Used(gal)		4	3	14	12	
CO Emissions (g/hr)		308	196	983	838	
NOx Emissions (g/hr)		60	38	191	163	
VOC Emissions (g/hr)		71	45	228	194	
Dilemma Vehicles (#)		0	9	0	0	
Queue Length 50th (ft)		67	55	0	65	
Queue Length 95th (ft)		106	91	0	152	
Internal Link Dist (ft)		2402	1429		592	
Turn Bay Length (ft)				250		
Base Capacity (vph)		418	393	3250	2460	
Starvation Cap Reductn		0	0	0	0	
Spillback Cap Reductn		0	0	0	0	
Storage Cap Reductn		0	0	0	0	
Reduced v/c Ratio		0.42	0.37	0.41	0.58	

Intersection Summary

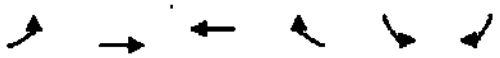
Area Type: Other
Cycle Length: 70

Actuated Cycle Length: 70
Offset: 13 (19%), Referenced to phase 4:SEL, Start of Yellow
Natural Cycle: 40
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.59
Intersection Signal Delay: 5.6 Intersection LOS: A
Intersection Capacity Utilization 52.8% ICU Level of Service A
Analysis Period (min) 15
* User Entered Value

Splits and Phases: 1: East 4th. St. & Daly Ave.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	ø6	ø7
Lane Configurations		↑↑	↑↑	↱	↰↑			
Volume (vph)	0	845	836	445	439	0		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Storage Length (ft)	0			200	0	0		
Storage Lanes	0			1	2	0		
Taper Length (ft)	25			150	25	25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.97	1.00		
Frt				0.950				
Flt Protected					0.950			
Satd. Flow (prot)	0	3574	3574	1770	3433	0		
Flt Permitted					0.950			
Satd. Flow (perm)	0	3574	3574	1770	3433	0		
Right Turn on Red				Yes		Yes		
Satd. Flow (RTOR)				494				
Link Speed (mph)		35	35		30			
Link Distance (ft)		114	672		621			
Travel Time (s)		2.2	13.1		14.1			
Peak Hour Factor	0.92	0.90	0.95	0.90	0.90	0.92		
Heavy Vehicles (%)	2%	1%	1%	2%	2%	2%		
Adj. Flow (vph)	0	939	880	494	488	0		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	939	880	494	488	0		
Enter Blocked Intersection	No	No	No	No	No	No		
Lane Alignment	Left	Left	Left	Right	Left	Right		
Median Width(ft)		0	0		24			
Link Offset(ft)		0	0		0			
Crosswalk Width(ft)		16	16		16			
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Turning Speed (mph)	15			9	15	9		
Number of Detectors		1	1	1	1			
Detector Template					Left			
Leading Detector (ft)		0	0	0	30			
Trailing Detector (ft)		0	0	0	0			
Detector 1 Position(ft)		0	0	0	0			
Detector 1 Size(ft)		0	0	0	30			
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			
Detector 1 Channel								
Detector 1 Extend (s)		0.0	0.0	0.0	0.0			
Detector 1 Queue (s)		0.0	0.0	0.0	0.0			
Detector 1 Delay (s)		0.0	0.0	0.0	0.0			
Turn Type				Free				
Protected Phases		2	2		4		6	7
Permitted Phases				Free				
Detector Phase		2	2		4			
Switch Phase								
Minimum Initial (s)		4.0	4.0		4.0		4.0	4.0
Minimum Split (s)		22.0	22.0		22.0		22.0	10.0
Total Split (s)	0.0	42.0	42.0	0.0	28.0	0.0	42.0	28.0

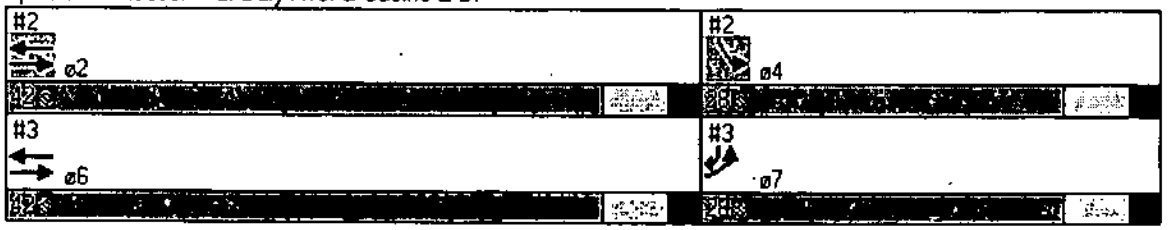


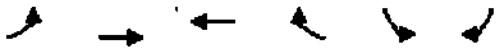
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	ø6	ø4
Total Split (%)	0.0%	60.0%	60.0%	0.0%	40.0%	0.0%	60%	40%
Maximum Green (s)		36.0	36.0		22.0		36.0	22.0
Yellow Time (s)		4.0	4.0		4.0		4.0	4.0
All-Red Time (s)		2.0	2.0		2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	4.0		
Lead/Lag								
Lead-Lag Optimize?								
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0
Recall Mode		C-Min	C-Min		Min		C-Min	Min
Walk Time (s)		5.0	5.0		5.0		5.0	
Flash Dont Walk (s)		11.0	11.0		11.0		11.0	
Pedestrian Calls (#/hr)		0	0		0		0	
Act Effct Green (s)		42.7	42.7	70.0	15.3			
Actuated g/C Ratio		0.61	0.61	1.00	0.22			
v/c Ratio		0.43	0.40	0.28	0.65			
Control Delay		0.9	8.2	0.4	28.8			
Queue Delay		0.1	0.0	0.0	0.0			
Total Delay		1.0	8.2	0.4	28.8			
LOS		A	A	A	C			
Approach Delay		1.0	5.4		28.8			
Approach LOS		A	A		C			
90th %ile Green (s)		38.1	38.1		19.9		38.1	19.9
90th %ile Term Code		Coord	Coord		Gap		Coord	Hold
70th %ile Green (s)		41.2	41.2		16.8		41.2	16.8
70th %ile Term Code		Coord	Coord		Gap		Coord	Hold
50th %ile Green (s)		42.8	42.8		15.2		42.8	15.2
50th %ile Term Code		Coord	Coord		Gap		Coord	Hold
30th %ile Green (s)		44.5	44.5		13.5		44.5	13.5
30th %ile Term Code		Coord	Coord		Gap		Coord	Hold
10th %ile Green (s)		46.9	46.9		11.1		46.9	11.1
10th %ile Term Code		Coord	Coord		Gap		Coord	Hold
Stops (vph)		10	407	0	378			
Fuel Used(gal)		1	9	2	8			
CO Emissions (g/hr)		65	595	153	557			
NOx Emissions (g/hr)		13	116	30	108			
VOC Emissions (g/hr)		15	138	36	129			
Dilemma Vehicles (#)		19	60	0	0			
Queue Length 50th (ft)		3	90	0	99			
Queue Length 95th (ft)		3	152	0	132			
Internal Link Dist (ft)		34	592		541			
Turn Bay Length (ft)				200				
Base Capacity (vph)		2180	2180	1770	1079			
Starvation Cap Reductn		225	0	0	0			
Spillback Cap Reductn		0	0	0	0			
Storage Cap Reductn		0	0	0	0			
Reduced v/c Ratio		0.48	0.40	0.28	0.45			

Intersection Summary

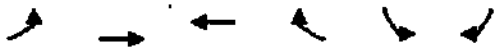
Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 6 (9%), Referenced to phase 2:EBWB and 6:, Start of Yellow
Natural Cycle: 45
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.65
Intersection Signal Delay: 8.0 Intersection LOS: A
Intersection Capacity Utilization 45.9% ICU Level of Service A
Analysis Period (min) 15
* User Entered Value

Splits and Phases: 2: Daly Ave. & Casino E Dr

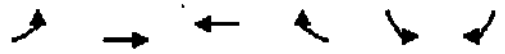




Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	02	04
Lane Configurations								
Volume (vph)	43	845	836	0	0	141		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Storage Length (ft)	320			0	0	0		
Storage Lanes	1			0	0	2		
Taper Length (ft)	150			25	25	25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	0.88		
Frt						0.850		
Flt Protected	0.950							
Satd. Flow (prot)	1770	3574	3574	0	0	2787		
Flt Permitted	0.950							
Satd. Flow (perm)	1770	3574	3574	0	0	2787		
Right Turn on Red				Yes		Yes		
Satd. Flow (RTOR)						200		
Link Speed (mph)		35	35		30			
Link Distance (ft)		792	114		690			
Travel Time (s)		15.4	2.2		15.7			
Peak Hour Factor	0.90	0.90	0.95	0.92	0.92	0.90		
Heavy Vehicles (%)	2%	1%	1%	2%	2%	2%		
Adj. Flow (vph)	48	939	880	0	0	157		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	48	939	880	0	0	157		
Enter Blocked Intersection	No	No	No	No	No	No		
Lane Alignment	Left	Left	Left	Right	Left	Right		
Median Width(ft)		12	12		0			
Link Offset(ft)		0	0		0			
Crosswalk Width(ft)		16	16		16			
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Turning Speed (mph)	15			9	15	9		
Number of Detectors	1	2	2			1		
Detector Template	Left	Thru	Thru			Right		
Leading Detector (ft)	20	100	100			20		
Trailing Detector (ft)	0	0	0			0		
Detector 1 Position(ft)	0	0	0			0		
Detector 1 Size(ft)	20	6	6			20		
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex		
Detector 1 Channel								
Detector 1 Extend (s)	0.0	0.0	0.0			0.0		
Detector 1 Queue (s)	0.0	0.0	0.0			0.0		
Detector 1 Delay (s)	0.0	0.0	0.0			0.0		
Detector 2 Position(ft)		94	94					
Detector 2 Size(ft)		6	6					
Detector 2 Type		Cl+Ex	Cl+Ex					
Detector 2 Channel								
Detector 2 Extend (s)		0.0	0.0					
Turn Type	Prot					Over		
Protected Phases	7	6	6			7	2	4
Permitted Phases								



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	ø2	ø4
Detector Phase	7	6	6			7		
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0			4.0	4.0	4.0
Minimum Split (s)	10.0	22.0	22.0			10.0	22.0	22.0
Total Split (s)	28.0	42.0	42.0	0.0	0.0	28.0	42.0	28.0
Total Split (%)	40.0%	60.0%	60.0%	0.0%	0.0%	40.0%	60%	40%
Maximum Green (s)	22.0	36.0	36.0			22.0	36.0	22.0
Yellow Time (s)	4.0	4.0	4.0			4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0			2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	6.0	6.0	6.0	4.0	4.0	6.0		
Lead/Lag								
Lead-Lag Optimize?								
Vehicle Extension (s)	3.0	3.0	3.0			3.0	3.0	3.0
Recall Mode	Min	C-Min	C-Min			Min	C-Min	Min
Walk Time (s)		5.0	5.0				5.0	5.0
Flash Dont Walk (s)		11.0	11.0				11.0	11.0
Pedestrian Calls (#/hr)		0	0				0	0
Act Effct Green (s)	15.3	42.7	42.7			15.3		
Actuated g/C Ratio	0.22	0.61	0.61			0.22		
v/c Ratio	0.12	0.43	0.40			0.21		
Control Delay	28.5	4.2	1.4			2.4		
Queue Delay	0.0	0.0	0.1			0.0		
Total Delay	28.5	4.2	1.5			2.4		
LOS	C	A	A			A		
Approach Delay		5.4	1.5					
Approach LOS		A	A					
90th %ile Green (s)	19.9	38.1	38.1			19.9	38.1	19.9
90th %ile Term Code	Hold	Coord	Coord			Hold	Coord	Gap
70th %ile Green (s)	16.8	41.2	41.2			16.8	41.2	16.8
70th %ile Term Code	Hold	Coord	Coord			Hold	Coord	Gap
50th %ile Green (s)	15.2	42.8	42.8			15.2	42.8	15.2
50th %ile Term Code	Hold	Coord	Coord			Hold	Coord	Gap
30th %ile Green (s)	13.5	44.5	44.5			13.5	44.5	13.5
30th %ile Term Code	Hold	Coord	Coord			Hold	Coord	Gap
10th %ile Green (s)	11.1	46.9	46.9			11.1	46.9	11.1
10th %ile Term Code	Hold	Coord	Coord			Hold	Coord	Gap
Stops (vph)	38	269	28			10		
Fuel Used(gal)	1	8	1			1		
CO Emissions (g/hr)	55	530	79			70		
NOx Emissions (g/hr)	11	103	15			14		
VOC Emissions (g/hr)	13	123	18			16		
Dilemma Vehicles (#)	0	21	50			0		
Queue Length 50th (ft)	22	13	6			0		
Queue Length 95th (ft)	m29	m186	8			13		
Internal Link Dist (ft)		712	34		610			
Turn Bay Length (ft)	320							
Base Capacity (vph)	556	2180	2180			1013		
Starvation Cap Reductn	0	0	336			0		

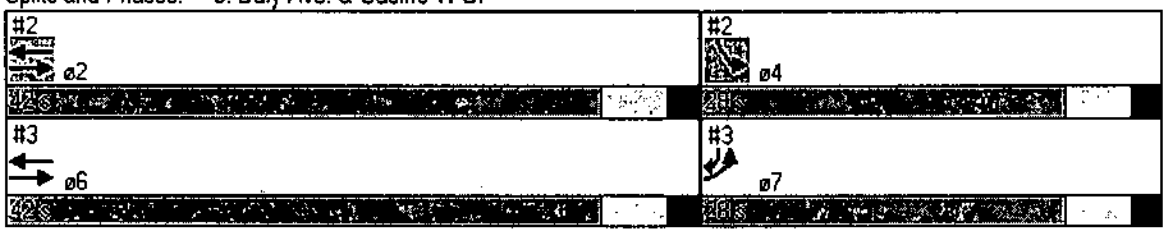


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	ø2	ø4
Spillback Cap Reductn	0	0	0			0		
Storage Cap Reductn	0	0	0			0		
Reduced v/c Ratio	0.09	0.43	0.48			0.15		

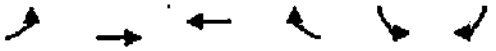
Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 6 (9%), Referenced to phase 2:EBWB and 6:, Start of Yellow
Natural Cycle: 45
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.65
Intersection Signal Delay: 3.5 Intersection LOS: A
Intersection Capacity Utilization 38.0% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Daly Ave. & Casino W Dr



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	525	288	450	521	555	452
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	13	13	12
Storage Length (ft)	150			250	0	0
Storage Lanes	2			1	1	1
Taper Length (ft)	300			150	25	25
Lane Util. Factor	0.97	0.95	0.95	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3467	3539	3539	1517	1847	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3467	3539	3539	1517	1847	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				21		69
Link Speed (mph)		35	35		35	
Link Distance (ft)		1214	792		3028	
Travel Time (s)		23.6	15.4		59.0	
Peak Hour Factor	0.90	0.90	0.95	0.90	0.95	0.90
Heavy Vehicles (%)	1%	2%	2%	10%	1%	2%
Adj. Flow (vph)	583	320	474	579	584	502
Shared Lane Traffic (%)						
Lane Group Flow (vph)	583	320	474	579	584	502
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	0.96	0.96	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	1	1	1	1	1
Detector Template						
Leading Detector (ft)	30	0	5	30	30	30
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	30	0	5	30	30	30
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot			pm+ov		pm+ov
Protected Phases	7	4	8	6	6	7
Permitted Phases				8		6
Detector Phase	7	4	8	6	6	7
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0	19.0	21.0	21.0	9.0



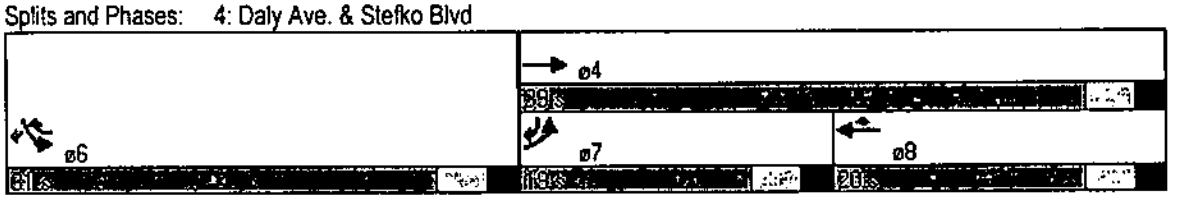
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Total Split (s)	19.0	39.0	20.0	31.0	31.0	19.0
Total Split (%)	27.1%	55.7%	28.6%	44.3%	44.3%	27.1%
Maximum Green (s)	14.0	34.0	15.0	26.0	26.0	14.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	5.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead		Lag			Lead
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	C-Min	C-Min	Min	Min	Min
Act Effct Green (s)	14.3	36.0	16.7	46.7	26.0	45.3
Actuated g/C Ratio	0.20	0.51	0.24	0.67	0.37	0.65
v/c Ratio	0.82	0.18	0.56	0.57	0.85	0.48
Control Delay	26.9	7.4	19.6	12.3	34.2	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.9	7.4	19.6	12.3	34.2	6.9
LOS	C	A	B	B	C	A
Approach Delay		20.0	15.6		21.6	
Approach LOS		B	B		C	
90th %ile Green (s)	14.0	34.0	15.0	26.0	26.0	14.0
90th %ile Term Code	Max	Coord	Coord	Max	Max	Max
70th %ile Green (s)	14.0	34.0	15.0	26.0	26.0	14.0
70th %ile Term Code	Max	Coord	Coord	Max	Max	Max
50th %ile Green (s)	14.0	33.5	14.5	26.5	26.5	14.0
50th %ile Term Code	Max	Coord	Coord	Max	Max	Max
30th %ile Green (s)	16.4	34.3	12.9	25.7	25.7	16.4
30th %ile Term Code	Max	Coord	Coord	Gap	Gap	Max
10th %ile Green (s)	13.1	39.4	21.3	20.6	20.6	13.1
10th %ile Term Code	Gap	Coord	Coord	Gap	Gap	Gap
Stops (vph)	444	173	344	413	469	182
Fuel Used(gal)	11	4	7	7	20	12
CO Emissions (g/hr)	756	298	486	517	1365	831
NOx Emissions (g/hr)	147	58	95	100	265	162
VOC Emissions (g/hr)	175	69	113	120	316	193
Dilemma Vehicles (#)	0	2	37	0	0	0
Queue Length 50th (ft)	114	44	96	225	216	73
Queue Length 95th (ft)	#200	58	68	267	#391	133
Internal Link Dist (ft)		1134	712		2948	
Turn Bay Length (ft)	150			250		
Base Capacity (vph)	717	1828	873	1020	715	1036
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	0.81	0.18	0.54	0.57	0.82	0.48

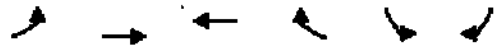
Intersection Summary

Area Type: Other
Cycle Length: 70

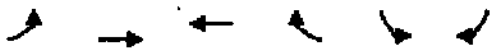
Actuated Cycle Length: 70
Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow, Master Intersection
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.85
Intersection Signal Delay: 19.0 Intersection LOS: B
Intersection Capacity Utilization 68.2% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: Daly Ave. & Stefko Blvd





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	203	797	887	14	15	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300			0	0	0
Storage Lanes	1			1	2	1
Taper Length (ft)	75			25	25	25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.97	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	3574	3539	1583	3433	1583
Flt Permitted	0.199				0.950	
Satd. Flow (perm)	371	3574	3539	1583	3433	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				16		114
Link Speed (mph)		35	35		30	
Link Distance (ft)		578	1214		556	
Travel Time (s)		11.3	23.6		12.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	1%	2%	2%	2%	2%
Adj. Flow (vph)	226	886	986	16	17	114
Shared Lane Traffic (%)						
Lane Group Flow (vph)	226	886	986	16	17	114
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	1	2	1	1	1
Detector Template	Left				Left	Right
Leading Detector (ft)	30	0	94	0	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	30	0	0	0	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			
Detector 2 Size(ft)			0			
Detector 2 Type			Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)			0.0			
Turn Type	pm+pt			pm+ov		Perm
Protected Phases	7	4	8	6	6	
Permitted Phases	4			8		6



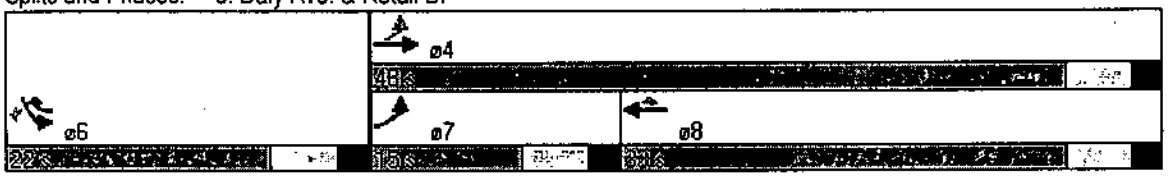
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase	7	4	8	6	6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	15.0	48.0	33.0	22.0	22.0	22.0
Total Split (%)	21.4%	68.6%	47.1%	31.4%	31.4%	31.4%
Maximum Green (s)	9.0	42.0	27.0	16.0	16.0	16.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	C-Min	C-Min	Min	Min	Min
Walk Time (s)		5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0	0
Act Effct Green (s)	51.2	51.2	36.8	49.6	6.8	6.8
Actuated g/C Ratio	0.73	0.73	0.53	0.71	0.10	0.10
v/c Ratio	0.51	0.34	0.53	0.01	0.05	0.44
Control Delay	6.2	1.2	7.8	0.7	27.7	12.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.2	1.2	7.8	0.7	27.7	12.2
LOS	A	A	A	A	C	B
Approach Delay		2.2	7.7		14.2	
Approach LOS		A	A		B	
90th %ile Green (s)	11.1	48.0	30.9	10.0	10.0	10.0
90th %ile Term Code	Gap	Coord	Coord	Gap	Gap	Gap
70th %ile Green (s)	9.1	50.7	35.6	7.3	7.3	7.3
70th %ile Term Code	Gap	Coord	Coord	Gap	Gap	Gap
50th %ile Green (s)	8.1	52.2	38.1	5.8	5.8	5.8
50th %ile Term Code	Gap	Coord	Coord	Gap	Gap	Gap
30th %ile Green (s)	7.3	52.5	39.2	5.5	5.5	5.5
30th %ile Term Code	Gap	Coord	Coord	Gap	Gap	Gap
10th %ile Green (s)	6.4	52.5	40.1	5.5	5.5	5.5
10th %ile Term Code	Gap	Coord	Coord	Gap	Gap	Gap
Stops (vph)	45	82	419	2	16	23
Fuel Used(gal)	2	7	12	0	0	1
CO Emissions (g/hr)	147	471	863	10	17	58
NOx Emissions (g/hr)	29	92	168	2	3	11
VOC Emissions (g/hr)	34	109	200	2	4	13
Dilemma Vehicles (#)	0	17	38	0	0	0
Queue Length 50th (ft)	11	12	57	0	3	0
Queue Length 95th (ft)	m10	m13	222	m0	11	41
Internal Link Dist (ft)		498	1134		476	
Turn Bay Length (ft)	300					
Base Capacity (vph)	460	2613	1859	1332	785	450
Starvation Cap Reductn	0	0	0	0	0	0

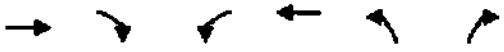
Lane Group	EBL	EBT	WBL	WBR	SBL	SBR
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.34	0.53	0.01	0.02	0.25

Intersection Summary

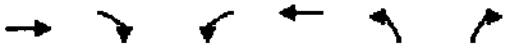
Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 46 (66%), Referenced to phase 4:EBTL and 8:WBT, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.53
Intersection Signal Delay: 5.4 Intersection LOS: A
Intersection Capacity Utilization 54.1% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Daly Ave. & Retail Dr





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	728	108	322	666	153	277
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	11	12
Storage Length (ft)		0	200		0	0
Storage Lanes		1	1		1	1
Taper Length (ft)		25	200		25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1881	1652	1787	1881	1728	1599
Flt Permitted			0.112		0.950	
Satd. Flow (perm)	1881	1652	211	1881	1728	1599
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		127				326
Link Speed (mph)	35			35	30	
Link Distance (ft)	1771			454	540	
Travel Time (s)	34.5			8.8	12.3	
Peak Hour Factor	0.95	0.85	0.85	0.90	0.85	0.85
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	766	127	379	740	180	326
Shared Lane Traffic (%)						
Lane Group Flow (vph)	766	127	379	740	180	326
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	11	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	0.96	1.00	1.00	1.04	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1	1	1	1	1	1
Detector Template						
Leading Detector (ft)	5	30	30	0	30	30
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	5	30	30	0	30	30
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type		Perm	pm+pt			Perm
Protected Phases	2		1	6	8	
Permitted Phases		2	6			8
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	21.0	9.0	21.0	20.0	20.0



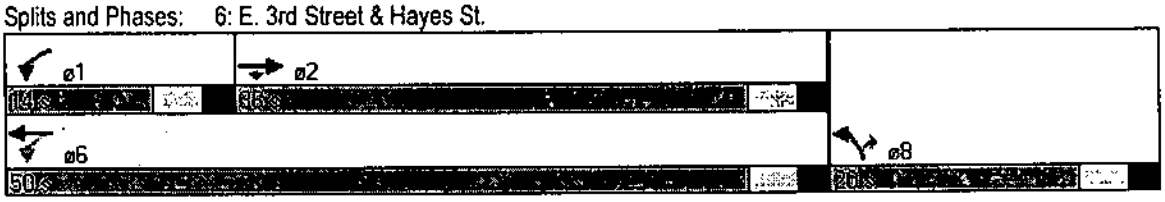
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Split (s)	36.0	36.0	14.0	50.0	20.0	20.0
Total Split (%)	51.4%	51.4%	20.0%	71.4%	28.6%	28.6%
Maximum Green (s)	31.0	31.0	9.0	45.0	15.0	15.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Min	C-Min	Min	C-Min	Min	Min
Act Effct Green (s)	31.5	31.5	48.9	48.9	13.1	13.1
Actuated g/C Ratio	0.45	0.45	0.70	0.70	0.19	0.19
v/c Ratio	0.90	0.16	0.85	0.56	0.56	0.58
Control Delay	34.4	2.9	34.6	5.7	32.0	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.4	2.9	34.6	5.7	32.0	7.6
LOS	C	A	C	A	C	A
Approach Delay	29.9			15.5	16.3	
Approach LOS	C			B	B	
90th %ile Green (s)	31.0	31.0	9.0	45.0	15.0	15.0
90th %ile Term Code	Coord	Coord	Max	Coord	Max	Max
70th %ile Green (s)	31.0	31.0	9.0	45.0	15.0	15.0
70th %ile Term Code	Coord	Coord	Max	Coord	Max	Max
50th %ile Green (s)	31.0	31.0	11.5	47.5	12.5	12.5
50th %ile Term Code	Coord	Coord	Max	Coord	Gap	Gap
30th %ile Green (s)	31.0	31.0	13.5	49.5	10.5	10.5
30th %ile Term Code	Coord	Coord	Max	Coord	Gap	Gap
10th %ile Green (s)	28.7	28.7	18.6	52.3	7.7	7.7
10th %ile Term Code	Coord	Coord	Gap	Coord	Gap	Gap
Stops (vph)	601	13	189	360	133	37
Fuel Used(gal)	19	2	6	8	2	2
CO Emissions (g/hr)	1323	108	426	591	166	126
NOx Emissions (g/hr)	257	21	83	115	32	24
VOC Emissions (g/hr)	307	25	99	137	38	29
Dilemma Vehicles (#)	50	0	0	9	0	0
Queue Length 50th (ft)	288	0	35	255	70	0
Queue Length 95th (ft)	#507	22	#239	76	115	48
Internal Link Dist (ft)	1691			374	460	
Turn Bay Length (ft)			200			
Base Capacity (vph)	860	824	447	1313	395	617
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	0.89	0.15	0.85	0.56	0.46	0.53

Intersection Summary

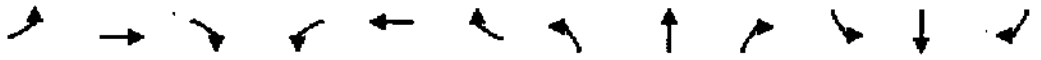
Area Type: Other
Cycle Length: 70

Actuated Cycle Length: 70
Offset: 5 (7%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 20.8 Intersection LOS: C
Intersection Capacity Utilization 74.6% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: E. 3rd Street & Hayes St.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	189	1	348	1	2	1	150	784	1	1	674	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	13	15	15	15	12	12	12	12	12	12
Storage Length (ft)	0		0	0		0	125		0	125		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25		25	25		25	75		25	75		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.966						0.970	
Flt Protected		0.953			0.988		0.950			0.950		
Satd. Flow (prot)	0	1793	1652	0	1975	0	1770	3574	0	1787	3467	0
Flt Permitted		0.725			0.935		0.160			0.325		
Satd. Flow (perm)	0	1364	1652	0	1869	0	298	3574	0	611	3467	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			387		1						52	
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		1014			565			3028			1065	
Travel Time (s)		23.0			12.8			59.0			20.7	
Peak Hour Factor	0.95	0.85	0.90	0.85	0.85	0.85	0.85	0.90	0.85	0.85	0.80	0.75
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	1%	1%	1%	1%	1%
Adj. Flow (vph)	199	1	387	1	2	1	176	871	1	1	842	213
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	200	387	0	4	0	176	872	0	1	1055	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	0.96	0.88	0.88	0.88	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50	50	50	50		50	0		50	0	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	50	50	50	50	50		50	0		50	0	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm		Perm	Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0		8.0	22.0		22.0	22.0	



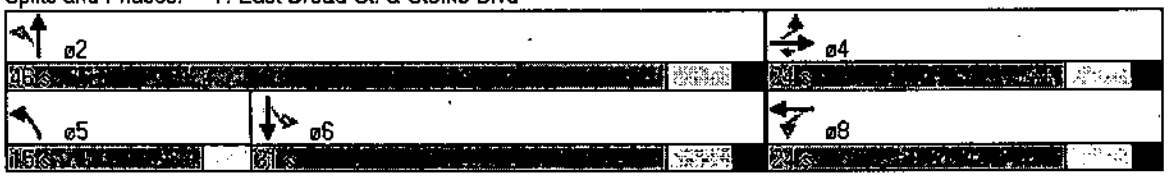
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	24.0	24.0	24.0	24.0	24.0	0.0	15.0	46.0	0.0	31.0	31.0	0.0
Total Split (%)	34.3%	34.3%	34.3%	34.3%	34.3%	0.0%	21.4%	65.7%	0.0%	44.3%	44.3%	0.0%
Maximum Green (s)	18.0	18.0	18.0	18.0	18.0		12.0	40.0		25.0	25.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		0.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	0.0	1.0	-2.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min	Min	None	None		Min	Min		Min	Min	
Act Effct Green (s)		15.7	15.7		15.7		37.0	37.0		24.0	24.0	
Actuated g/C Ratio		0.26	0.26		0.26		0.61	0.61		0.39	0.39	
v/c Ratio		0.57	0.54		0.01		0.45	0.40		0.00	0.75	
Control Delay		28.0	5.7		16.7		9.5	7.2		13.0	19.9	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		28.0	5.7		16.7		9.5	7.2		13.0	19.9	
LOS		C	A		B		A	A		B	B	
Approach Delay		13.3			16.7			7.6			19.9	
Approach LOS		B			B			A			B	
90th %ile Green (s)	18.0	18.0	18.0	18.0	18.0		12.0	40.0		25.0	25.0	
90th %ile Term Code	Max	Max	Max	Hold	Hold		Max	Hold		Max	Max	
70th %ile Green (s)	18.0	18.0	18.0	18.0	18.0		12.0	40.0		25.0	25.0	
70th %ile Term Code	Max	Max	Max	Hold	Hold		Max	Hold		Max	Max	
50th %ile Green (s)	14.2	14.2	14.2	14.2	14.2		10.5	38.5		25.0	25.0	
50th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Gap	Hold		Max	Max	
30th %ile Green (s)	11.4	11.4	11.4	11.4	11.4		8.8	32.1		20.3	20.3	
30th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Gap	Hold		Gap	Gap	
10th %ile Green (s)	7.8	7.8	7.8	7.8	7.8		6.6	24.4		14.8	14.8	
10th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Gap	Hold		Gap	Gap	
Stops (vph)		154	40		3		59	358		2	639	
Fuel Used(gal)		3	3		0		4	21		0	15	
CO Emissions (g/hr)		240	236		3		280	1468		2	1020	
NOx Emissions (g/hr)		47	46		1		55	286		0	198	
VOC Emissions (g/hr)		56	55		1		65	340		0	236	
Dilemma Vehicles (#)		0	0		0		0	64		0	68	
Queue Length 50th (ft)		69	0		1		25	76		0	165	
Queue Length 95th (ft)		124	58		7		52	127		3	220	
Internal Link Dist (ft)		934			485			2948			985	
Turn Bay Length (ft)							125			125		
Base Capacity (vph)		424	780		581		419	2287		261	1509	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.47	0.50		0.01		0.42	0.38		0.00	0.70	

Intersection Summary

Area Type: Other
Cycle Length: 70

Actuated Cycle Length: 60.9
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 13.7 Intersection LOS: B
Intersection Capacity Utilization 59.2% ICU Level of Service B
Analysis Period (min) 15
90th %ile Actuated Cycle: 70
70th %ile Actuated Cycle: 70
50th %ile Actuated Cycle: 64.7
30th %ile Actuated Cycle: 55.5
10th %ile Actuated Cycle: 44.2

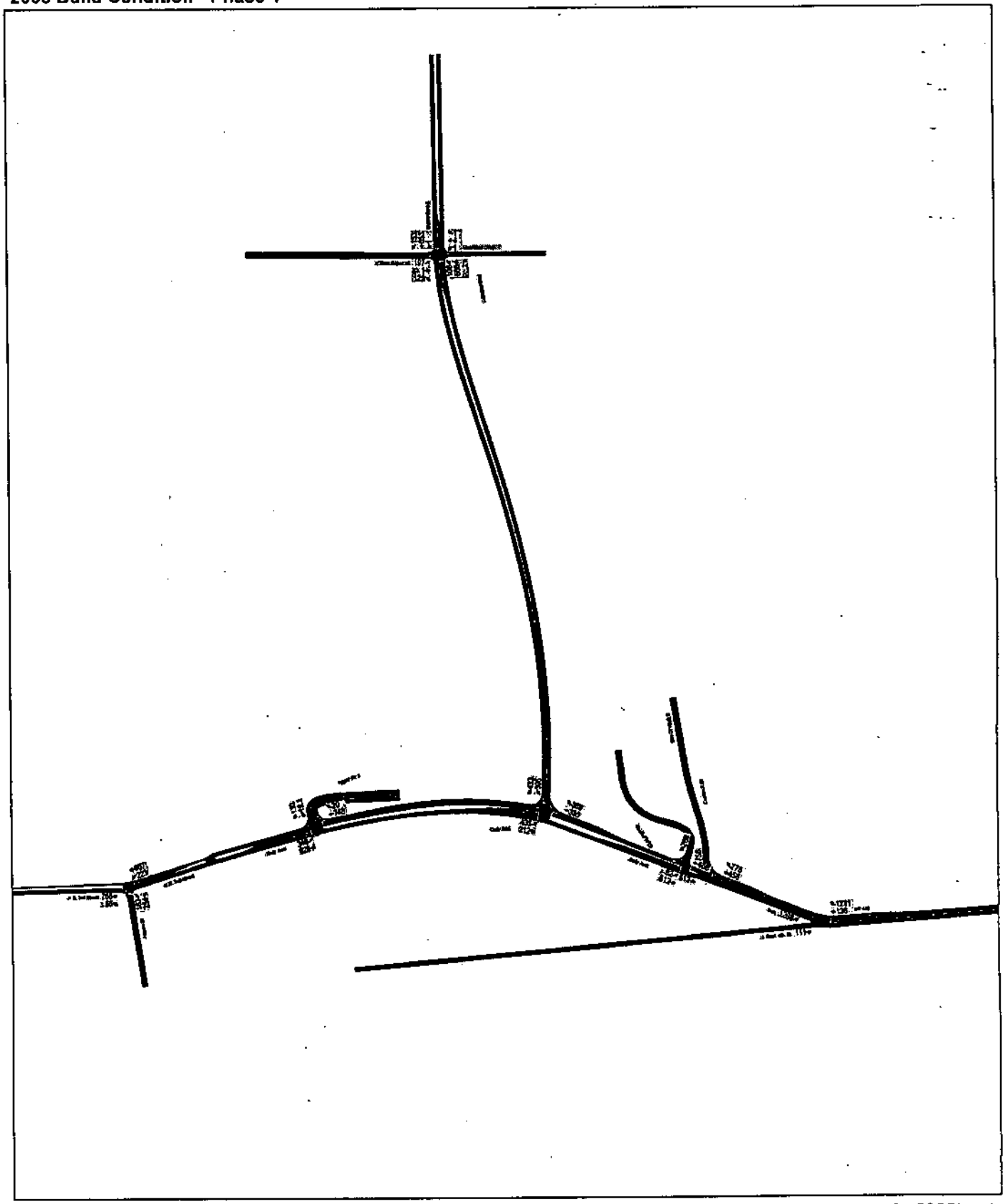
Splits and Phases: 7: East Broad St. & Stefko Blvd



PEAK SATURDAY HOUR – 2008 BUILD CONDITION – PHASE 1

Map - Sands Bethworks Development - Peak SAT Hour
2008 Build Condition - Phase 1

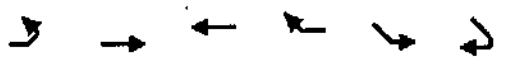
10/17/2006



Sands Bethworks Development - Peak SAT Hour 2008 Build Condition - Phase 1
G:\Data\ENG\SYNCHRO\06934\2008bsat.syn

zi - 2008bsat

Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑	↑	↱↱	↰↰	
Volume (vph)	0	111	136	1231	1268	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	15	13	13	13	12
Storage Length (ft)	0			250	0	0
Storage Lanes	0			1	1	0
Taper Length (ft)	25			150	150	25
Lane Util. Factor	1.00	1.00	1.00	0.88	0.97	1.00
Frt				*0.950		
Flt Protected					0.950	
Satd. Flow (prot)	0	2049	1925	3218	3547	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	2049	1925	3218	3547	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				1368		
Link Speed (mph)		30	35		35	
Link Distance (ft)		2482	1509		672	
Travel Time (s)		56.4	29.4		13.1	
Peak Hour Factor	0.88	0.90	0.85	0.90	0.95	0.90
Heavy Vehicles (%)	0%	2%	2%	2%	2%	0%
Adj. Flow (vph)	0	123	160	1368	1335	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	123	160	1368	1335	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		26	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	0.88	0.96	0.96	0.96	1.00
Turning Speed (mph)	15			9	25	9
Number of Detectors		1	1	1	1	
Detector Template						
Leading Detector (ft)		50	50	0	0	
Trailing Detector (ft)		0	0	0	0	
Detector 1 Position(ft)		0	0	0	0	
Detector 1 Size(ft)		50	50	0	0	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0	
Turn Type				Free		
Protected Phases		1	1		4	
Permitted Phases		1		Free		
Detector Phase		1	1		4	
Switch Phase						
Minimum Initial (s)		4.0	4.0		4.0	
Minimum Split (s)		10.0	10.0		22.0	



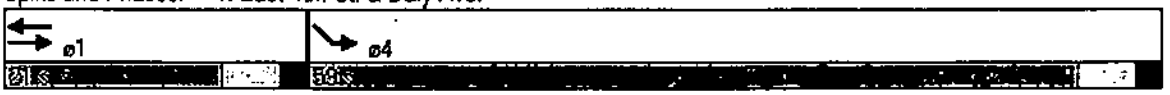
Lane Group	EBL	EBT	WBL	WBR	SEL	SER
Total Split (s)	0.0	21.0	21.0	0.0	59.0	0.0
Total Split (%)	0.0%	26.3%	26.3%	0.0%	73.8%	0.0%
Maximum Green (s)		15.0	15.0		53.0	
Yellow Time (s)		4.0	4.0		4.0	
All-Red Time (s)		2.0	2.0		2.0	
Lost Time Adjust (s)	0.0	-2.0	-2.0	-2.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	2.0	6.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	
Recall Mode		Min	Min		C-Min	
Act Effct Green (s)		13.9	13.9	80.0	56.1	
Actuated g/C Ratio		0.17	0.17	1.00	0.70	
v/c Ratio		0.35	0.48	0.43	0.54	
Control Delay		30.8	34.0	0.4	2.3	
Queue Delay		0.0	0.0	0.0	0.0	
Total Delay		30.8	34.0	0.4	2.3	
LOS		C	C	A	A	
Approach Delay		30.8	13.9		2.3	
Approach LOS		C	A		A	
90th %ile Green (s)		16.2	16.2		51.8	
90th %ile Term Code		Gap	Gap		Coord	
70th %ile Green (s)		13.7	13.7		54.3	
70th %ile Term Code		Gap	Gap		Coord	
50th %ile Green (s)		11.9	11.9		56.1	
50th %ile Term Code		Gap	Gap		Coord	
30th %ile Green (s)		10.1	10.1		57.9	
30th %ile Term Code		Gap	Gap		Coord	
10th %ile Green (s)		7.5	7.5		60.5	
10th %ile Term Code		Gap	Gap		Coord	
Stops (vph)		93	117	0	313	
Fuel Used(gal)		3	3	14	9	
CO Emissions (g/hr)		235	231	945	636	
NOx Emissions (g/hr)		46	45	184	124	
VOC Emissions (g/hr)		54	53	219	147	
Dilemma Vehicles (#)		0	9	0	0	
Queue Length 50th (ft)		55	73	0	12	
Queue Length 95th (ft)		96	114	0	14	
Internal Link Dist (ft)		2402	1429		592	
Turn Bay Length (ft)				250		
Base Capacity (vph)		441	415	3218	2499	
Starvation Cap Reductn		0	0	0	0	
Spillback Cap Reductn		0	0	0	0	
Storage Cap Reductn		0	0	0	0	
Reduced v/c Ratio		0.28	0.39	0.43	0.53	

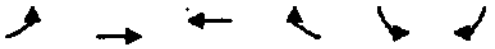
Intersection Summary

Area Type: Other
Cycle Length: 80

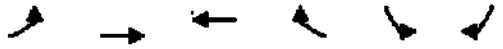
Actuated Cycle Length: 80
Offset: 12 (15%), Referenced to phase 4:SEL, Start of Yellow
Natural Cycle: 40
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.54
Intersection Signal Delay: 4.3 Intersection LOS: A
Intersection Capacity Utilization 51.7% ICU Level of Service A
Analysis Period (min) 15
* User Entered Value

Splits and Phases: 1: East 4th. St. & Daly Ave.





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	6	7
Lane Configurations		↑↑	↑↑	↱	↰↰			
Volume (vph)	0	512	456	775	756	0		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Storage Length (ft)	0			200	0	0		
Storage Lanes	0			1	2	0		
Taper Length (ft)	25			150	25	25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.97	1.00		
Frt				0.950				
Flt Protected					0.950			
Satd. Flow (prot)	0	3539	3539	1770	3433	0		
Flt Permitted					0.950			
Satd. Flow (perm)	0	3539	3539	1770	3433	0		
Right Turn on Red				Yes		Yes		
Satd. Flow (RTOR)				861				
Link Speed (mph)		35	35		30			
Link Distance (ft)		114	672		621			
Travel Time (s)		2.2	13.1		14.1			
Peak Hour Factor	0.92	0.95	0.90	0.90	0.90	0.92		
Adj. Flow (vph)	0	539	507	861	840	0		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	539	507	861	840	0		
Enter Blocked Intersection	No	No	No	No	No	No		
Lane Alignment	Left	Left	Left	Right	Left	Right		
Median Width(ft)		0	0		24			
Link Offset(ft)		0	0		0			
Crosswalk Width(ft)		16	16		16			
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Turning Speed (mph)	15			9	15	9		
Number of Detectors		1	1	1	1			
Detector Template					Left			
Leading Detector (ft)		0	0	0	30			
Trailing Detector (ft)		0	0	0	0			
Detector 1 Position(ft)		0	0	0	0			
Detector 1 Size(ft)		0	0	0	30			
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			
Detector 1 Channel								
Detector 1 Extend (s)		0.0	0.0	0.0	0.0			
Detector 1 Queue (s)		0.0	0.0	0.0	0.0			
Detector 1 Delay (s)		0.0	0.0	0.0	0.0			
Turn Type				Free				
Protected Phases		2	2		4		6	7
Permitted Phases				Free				
Detector Phase		2	2		4			
Switch Phase								
Minimum Initial (s)		4.0	4.0		4.0		4.0	4.0
Minimum Split (s)		22.0	22.0		22.0		22.0	10.0
Total Split (s)	0.0	34.0	34.0	0.0	46.0	0.0	34.0	46.0
Total Split (%)	0.0%	42.5%	42.5%	0.0%	57.5%	0.0%	43%	58%



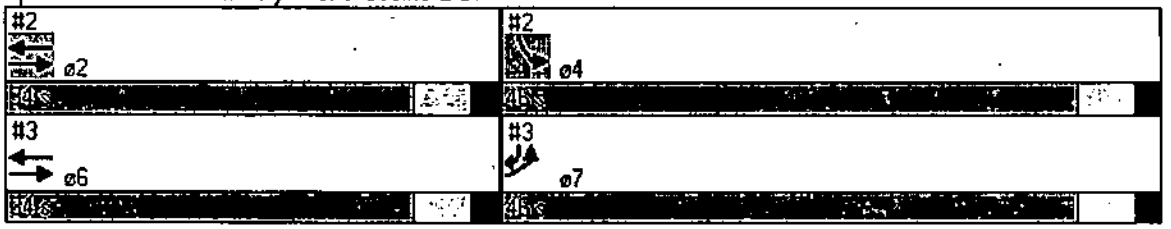
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	ø3	ø6	ø7
Maximum Green (s)		28.0	28.0		40.0		28.0	40.0	
Yellow Time (s)		4.0	4.0		4.0		4.0	4.0	
All-Red Time (s)		2.0	2.0		2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0			
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	4.0			
Lead/Lag									
Lead-Lag Optimize?									
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0	
Recall Mode		C-Min	C-Min		Min		C-Min	Min	
Walk Time (s)		5.0	5.0		5.0		5.0		
Flash Dont Walk (s)		11.0	11.0		11.0		11.0		
Pedestrian Calls (#/hr)		0	0		0		0		
Act Effct Green (s)		41.4	41.4	80.0	26.6				
Actuated g/C Ratio		0.52	0.52	1.00	0.33				
v/c Ratio		0.29	0.28	0.49	0.73				
Control Delay		0.5	12.3	0.9	27.2				
Queue Delay		0.2	0.0	0.0	0.0				
Total Delay		0.7	12.3	0.9	27.2				
LOS		A	B	A	C				
Approach Delay		0.7	5.1		27.2				
Approach LOS		A	A		C				
90th %ile Green (s)		34.9	34.9		33.1		34.9	33.1	
90th %ile Term Code		Coord	Coord		Gap		Coord	Hold	
70th %ile Green (s)		38.2	38.2		29.8		38.2	29.8	
70th %ile Term Code		Coord	Coord		Gap		Coord	Hold	
50th %ile Green (s)		41.4	41.4		26.6		41.4	26.6	
50th %ile Term Code		Coord	Coord		Gap		Coord	Hold	
30th %ile Green (s)		43.9	43.9		24.1		43.9	24.1	
30th %ile Term Code		Coord	Coord		Gap		Coord	Hold	
10th %ile Green (s)		48.4	48.4		19.6		48.4	19.6	
10th %ile Term Code		Coord	Coord		Gap		Coord	Hold	
Stops (vph)		2	250	0	628				
Fuel Used(gal)		0	5	4	13				
CO Emissions (g/hr)		34	366	273	934				
NOx Emissions (g/hr)		7	71	53	182				
VOC Emissions (g/hr)		8	85	63	216				
Dilemma Vehicles (#)		2	29	0	0				
Queue Length 50th (ft)		0	70	0	188				
Queue Length 95th (ft)		0	120	0	219				
Internal Link Dist (ft)		34	592		541				
Turn Bay Length (ft)				200					
Base Capacity (vph)		1830	1830	1770	1717				
Starvation Cap Reductn		629	0	0	0				
Spillback Cap Reductn		0	0	0	0				
Storage Cap Reductn		0	0	0	0				
Reduced v/c Ratio		0.45	0.28	0.49	0.49				

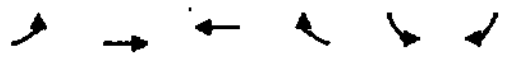
Intersection Summary

Area Type: Other

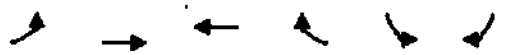
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 6 (8%), Referenced to phase 2:EBWB and 6:, Start of Yellow
Natural Cycle: 45
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 11.0 Intersection LOS: B
Intersection Capacity Utilization 45.7% ICU Level of Service A
Analysis Period (min) 15
* User Entered Value

Splits and Phases: 2: Daly Ave. & Casino E Dr





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	ø2	ø4				
Lane Configurations												
Volume (vph)	82	512	456	0	0	286						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900						
Storage Length (ft)	320			0	0	0						
Storage Lanes	1			0	0	2						
Taper Length (ft)	150			25	25	25						
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	0.88						
Frt						0.850						
Flt Protected	0.950											
Satd. Flow (prot)	1770	3539	3539	0	0	2787						
Flt Permitted	0.950											
Satd. Flow (perm)	1770	3539	3539	0	0	2787						
Right Turn on Red				Yes		Yes						
Satd. Flow (RTOR)						286						
Link Speed (mph)		35	35		30							
Link Distance (ft)		792	114		690							
Travel Time (s)		15.4	2.2		15.7							
Peak Hour Factor	0.90	0.95	0.90	0.92	0.92	0.90						
Adj. Flow (vph)	91	539	507	0	0	318						
Shared Lane Traffic (%)												
Lane Group Flow (vph)	91	539	507	0	0	318						
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Left	Right	Left	Right						
Median Width(ft)		12	12		0							
Link Offset(ft)		0	0		0							
Crosswalk Width(ft)		16	16		16							
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00						
Turning Speed (mph)	15			9	15	9						
Number of Detectors	1	2	2			1						
Detector Template	Left	Thru	Thru			Right						
Leading Detector (ft)	20	100	100			20						
Trailing Detector (ft)	0	0	0			0						
Detector 1 Position(ft)	0	0	0			0						
Detector 1 Size(ft)	20	6	6			20						
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex						
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0			0.0						
Detector 1 Queue (s)	0.0	0.0	0.0			0.0						
Detector 1 Delay (s)	0.0	0.0	0.0			0.0						
Detector 2 Position(ft)		94	94									
Detector 2 Size(ft)		6	6									
Detector 2 Type		Cl+Ex	Cl+Ex									
Detector 2 Channel												
Detector 2 Extend (s)		0.0	0.0									
Turn Type	Prot					Over						
Protected Phases	7	6	6			7	2	4				
Permitted Phases												
Detector Phase	7	6	6			7						

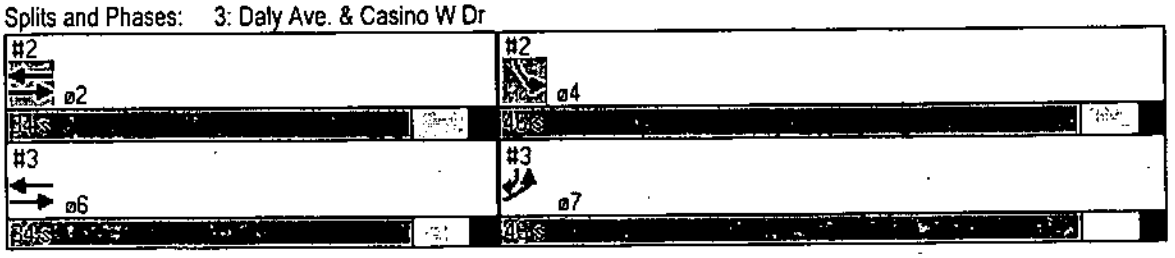


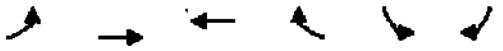
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	ø2	ø4
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0			4.0	4.0	4.0
Minimum Split (s)	10.0	22.0	22.0			10.0	22.0	22.0
Total Split (s)	46.0	34.0	34.0	0.0	0.0	46.0	34.0	46.0
Total Split (%)	57.5%	42.5%	42.5%	0.0%	0.0%	57.5%	43%	58%
Maximum Green (s)	40.0	28.0	28.0			40.0	28.0	40.0
Yellow Time (s)	4.0	4.0	4.0			4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0			2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	6.0	6.0	6.0	4.0	4.0	6.0		
Lead/Lag								
Lead-Lag Optimize?								
Vehicle Extension (s)	3.0	3.0	3.0			3.0	3.0	3.0
Recall Mode	Min	C-Min	C-Min			Min	C-Min	Min
Walk Time (s)		5.0	5.0				5.0	5.0
Flash Dont Walk (s)		11.0	11.0				11.0	11.0
Pedestrian Calls (#/hr)		0	0				0	0
Act Effct Green (s)	26.6	41.4	41.4			26.6		
Actuated g/C Ratio	0.33	0.52	0.52			0.33		
v/c Ratio	0.15	0.29	0.28			0.28		
Control Delay	22.8	8.6	1.5			3.7		
Queue Delay	0.0	0.0	0.3			0.0		
Total Delay	22.8	8.6	1.7			3.7		
LOS	C	A	A			A		
Approach Delay		10.6	1.7					
Approach LOS		B	A					
90th %ile Green (s)	33.1	34.9	34.9			33.1	34.9	33.1
90th %ile Term Code	Hold	Coord	Coord			Hold	Coord	Gap
70th %ile Green (s)	29.8	38.2	38.2			29.8	38.2	29.8
70th %ile Term Code	Hold	Coord	Coord			Hold	Coord	Gap
50th %ile Green (s)	26.6	41.4	41.4			26.6	41.4	26.6
50th %ile Term Code	Hold	Coord	Coord			Hold	Coord	Gap
30th %ile Green (s)	24.1	43.9	43.9			24.1	43.9	24.1
30th %ile Term Code	Hold	Coord	Coord			Hold	Coord	Gap
10th %ile Green (s)	19.6	48.4	48.4			19.6	48.4	19.6
10th %ile Term Code	Hold	Coord	Coord			Hold	Coord	Gap
Stops (vph)	50	332	14			35		
Fuel Used(gal)	1	6	1			2		
CO Emissions (g/hr)	86	442	43			154		
NOx Emissions (g/hr)	17	86	8			30		
VOC Emissions (g/hr)	20	102	10			36		
Dilemma Vehicles (#)	0	3	24			0		
Queue Length 50th (ft)	33	93	4			6		
Queue Length 95th (ft)	m47	133	5			30		
Internal Link Dist (ft)		712	34		610			
Turn Bay Length (ft)	320							
Base Capacity (vph)	885	1830	1830			1537		
Starvation Cap Reductn	0	0	690			0		
Spillback Cap Reductn	0	0	0			0		

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	ø2	ø4
Storage Cap Reductn	0	0	0			0		
Reduced v/c Ratio	0.10	0.29	0.44			0.21		

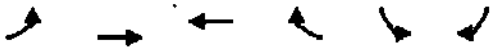
Intersection Summary
Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 6 (8%), Referenced to phase 2:EBWB and 6:, Start of Yellow
Natural Cycle: 45
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 6.0 Intersection LOS: A
Intersection Capacity Utilization 32.6% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Daly Ave. & Casino W Dr





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↰↰	↑↑	↑↑	↱	↰	↱
Volume (vph)	435	212	335	389	395	433
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	13	13	12
Storage Length (ft)	150			250	0	0
Storage Lanes	2			1	1	1
Taper Length (ft)	300			150	25	25
Lane Util. Factor	0.97	0.95	0.95	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3467	3574	3574	1636	1829	1599
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3467	3574	3574	1636	1829	1599
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				84		138
Link Speed (mph)		35	35		35	
Link Distance (ft)		1214	792		3028	
Travel Time (s)		23.6	15.4		59.0	
Peak Hour Factor	0.95	0.90	0.95	0.90	0.95	0.90
Heavy Vehicles (%)	1%	1%	1%	2%	2%	1%
Adj. Flow (vph)	458	236	353	432	416	481
Shared Lane Traffic (%)						
Lane Group Flow (vph)	458	236	353	432	416	481
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	0.96	0.96	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	1	1	1	1	1
Detector Template						
Leading Detector (ft)	30	0	5	30	30	30
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	30	0	5	30	30	30
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot			pm+ov		pm+ov
Protected Phases	7	4	8	6	6	7
Permitted Phases				8		6
Detector Phase	7	4	8	6	6	7
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0	19.0	21.0	21.0	9.0



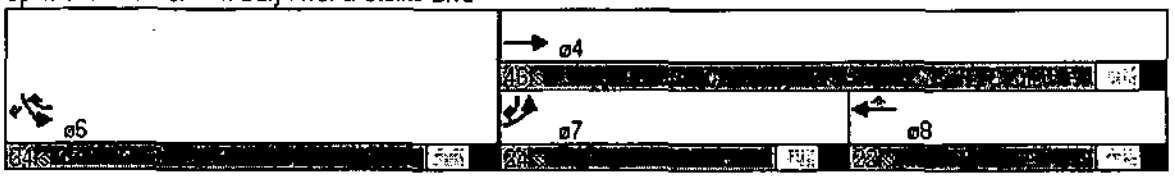
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Total Split (s)	24.0	46.0	22.0	34.0	34.0	24.0
Total Split (%)	30.0%	57.5%	27.5%	42.5%	42.5%	30.0%
Maximum Green (s)	19.0	41.0	17.0	29.0	29.0	19.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	5.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead		Lag			Lead
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	C-Min	C-Min	Min	Min	Min
Act Effct Green (s)	16.2	47.3	26.1	54.8	24.7	45.9
Actuated g/C Ratio	0.20	0.59	0.33	0.68	0.31	0.57
v/c Ratio	0.65	0.11	0.30	0.38	0.74	0.49
Control Delay	22.2	10.5	16.3	3.8	32.5	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.2	10.5	16.3	3.8	32.5	7.8
LOS	C	B	B	A	C	A
Approach Delay		18.2	9.4		19.3	
Approach LOS		B	A		B	
90th %ile Green (s)	19.0	40.6	16.6	29.4	29.4	19.0
90th %ile Term Code	Max	Coord	Coord	Max	Max	Max
70th %ile Green (s)	19.0	42.3	18.3	27.7	27.7	19.0
70th %ile Term Code	Gap	Coord	Coord	Gap	Gap	Gap
50th %ile Green (s)	16.6	45.8	24.2	24.2	24.2	16.6
50th %ile Term Code	Gap	Coord	Coord	Gap	Gap	Gap
30th %ile Green (s)	14.9	48.8	28.9	21.2	21.2	14.9
30th %ile Term Code	Gap	Coord	Coord	Gap	Gap	Gap
10th %ile Green (s)	11.6	54.1	37.5	15.9	15.9	11.6
10th %ile Term Code	Gap	Coord	Coord	Gap	Gap	Gap
Stops (vph)	389	150	209	144	336	156
Fuel Used(gal)	9	3	5	4	14	11
CO Emissions (g/hr)	608	240	321	252	963	792
NOx Emissions (g/hr)	118	47	63	49	187	154
VOC Emissions (g/hr)	141	56	74	58	223	183
Dilemma Vehicles (#)	0	4	19	0	0	0
Queue Length 50th (ft)	102	38	37	11	183	85
Queue Length 95th (ft)	161	76	67	21	255	108
Internal Link Dist (ft)		1134	712		2948	
Turn Bay Length (ft)	150			250		
Base Capacity (vph)	823	2118	1170	1238	688	1017
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	0.56	0.11	0.30	0.35	0.60	0.47

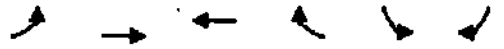
Intersection Summary

Area Type: Other
Cycle Length: 80

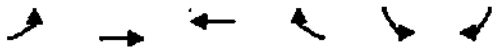
Actuated Cycle Length: 80
Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow, Master Intersection
Natural Cycle: 55
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 15.7 Intersection LOS: B
Intersection Capacity Utilization 53.6% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 4: Daly Ave. & Stefko Blvd





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	346	628	748	20	19	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300			0	0	0
Storage Lanes	1			1	2	1
Taper Length (ft)	75			25	25	25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.97	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1787	3574	3574	1583	3433	1583
Flt Permitted	0.258				0.950	
Satd. Flow (perm)	485	3574	3574	1583	3433	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				22		144
Link Speed (mph)		35	35		30	
Link Distance (ft)		578	1214		556	
Travel Time (s)		11.3	23.6		12.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%
Adj. Flow (vph)	384	698	831	22	21	144
Shared Lane Traffic (%)						
Lane Group Flow (vph)	384	698	831	22	21	144
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	1	2	1	1	1
Detector Template	Left				Left	Right
Leading Detector (ft)	30	0	94	0	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	30	0	0	0	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			
Detector 2 Size(ft)			0			
Detector 2 Type			Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)			0.0			
Turn Type	pm+pt			pm+ov		Perm
Protected Phases	7	4	8	6	6	
Permitted Phases	4			8		6



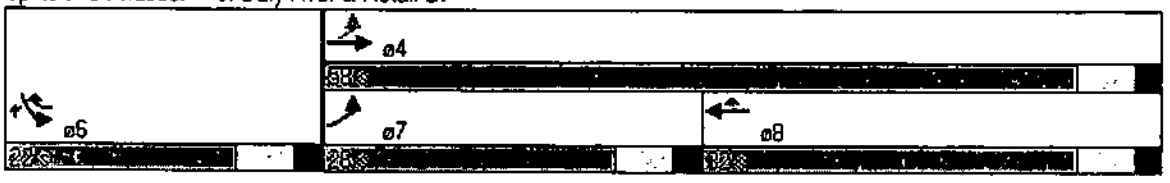
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase	7	4	8	6	1	6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	26.0	58.0	32.0	22.0	22.0	22.0
Total Split (%)	32.5%	72.5%	40.0%	27.5%	27.5%	27.5%
Maximum Green (s)	20.0	52.0	26.0	16.0	16.0	16.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	C-Min	C-Min	Min	Min	Min
Walk Time (s)		5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0	0
Act Effct Green (s)	60.9	60.9	43.4	56.5	7.1	7.1
Actuated g/C Ratio	0.76	0.76	0.54	0.71	0.09	0.09
v/c Ratio	0.69	0.26	0.43	0.02	0.07	0.53
Control Delay	9.6	3.4	11.1	2.3	32.4	13.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.6	3.4	11.1	2.3	32.4	13.7
LOS	A	A	B	A	C	B
Approach Delay		5.6	10.9		16.1	
Approach LOS		A	B		B	
90th %ile Green (s)	18.0	57.0	33.0	11.0	11.0	11.0
90th %ile Term Code	Gap	Coord	Coord	Gap	Gap	Gap
70th %ile Green (s)	12.1	60.3	42.2	7.7	7.7	7.7
70th %ile Term Code	Gap	Coord	Coord	Gap	Gap	Gap
50th %ile Green (s)	10.3	62.1	45.8	5.9	5.9	5.9
50th %ile Term Code	Gap	Coord	Coord	Gap	Gap	Gap
30th %ile Green (s)	9.2	62.4	47.2	5.6	5.6	5.6
30th %ile Term Code	Gap	Coord	Coord	Gap	Gap	Gap
10th %ile Green (s)	7.8	62.5	48.7	5.5	5.5	5.5
10th %ile Term Code	Gap	Coord	Coord	Gap	Gap	Gap
Stops (vph)	159	208	475	6	19	25
Fuel Used(gal)	4	7	12	0	0	1
CO Emissions (g/hr)	311	467	827	16	22	74
NOx Emissions (g/hr)	61	91	161	3	4	14
VOC Emissions (g/hr)	72	108	192	4	5	17
Dilemma Vehicles (#)	0	21	28	0	0	0
Queue Length 50th (ft)	24	7	133	0	5	0
Queue Length 95th (ft)	m110	m94	221	m10	14	49
Internal Link Dist (ft)		498	1134		476	
Turn Bay Length (ft)	300					
Base Capacity (vph)	694	2719	1938	1298	687	432
Starvation Cap Reductn	0	0	0	0	0	0

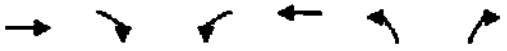
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.26	0.43	0.02	0.03	0.33

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 54 (68%), Referenced to phase 4:EBTL and 8:WBT, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.69
Intersection Signal Delay: 8.6 Intersection LOS: A
Intersection Capacity Utilization 58.2% ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Daly Ave. & Retail Dr





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	766	55	223	657	162	254
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	11	12
Storage Length (ft)		0	200		0	0
Storage Lanes		1	1		1	1
Taper Length (ft)		25	200		25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1881	1652	1787	1881	1728	1599
Flt Permitted			0.117		0.950	
Satd. Flow (perm)	1881	1652	220	1881	1728	1599
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		61				282
Link Speed (mph)	35			35	30	
Link Distance (ft)	1771			454	540	
Travel Time (s)	34.5			8.8	12.3	
Peak Hour Factor	0.90	0.90	0.85	0.90	0.85	0.90
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	851	61	262	730	191	282
Shared Lane Traffic (%)						
Lane Group Flow (vph)	851	61	262	730	191	282
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	11	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	0.96	1.00	1.00	1.04	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1	1	1	1	1	1
Detector Template						
Leading Detector (ft)	5	30	30	0	30	30
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	5	30	30	0	30	30
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type		Perm	pm+pt			Perm
Protected Phases	2		1	6	8	
Permitted Phases		2	6			8
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	21.0	9.0	21.0	20.0	20.0

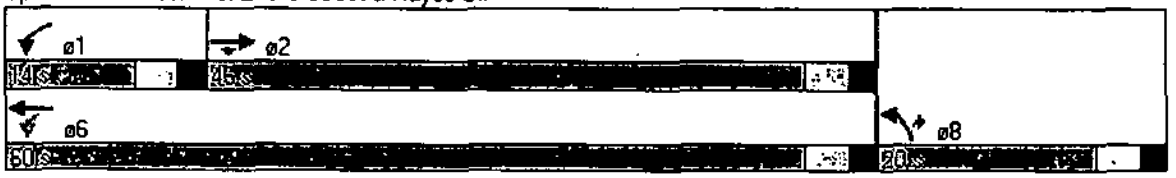
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Split (s)	46.0	46.0	14.0	60.0	20.0	20.0
Total Split (%)	57.5%	57.5%	17.5%	75.0%	25.0%	25.0%
Maximum Green (s)	41.0	41.0	9.0	55.0	15.0	15.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Min	C-Min	Min	C-Min	Min	Min
Act Effct Green (s)	44.3	44.3	58.1	58.1	13.9	13.9
Actuated g/C Ratio	0.55	0.55	0.73	0.73	0.17	0.17
v/c Ratio	0.82	0.06	0.74	0.53	0.64	0.55
Control Delay	23.9	3.0	30.2	5.2	40.4	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.9	3.0	30.2	5.2	40.4	8.3
LOS	C	A	C	A	D	A
Approach Delay	22.5			11.8	21.3	
Approach LOS	C			B	C	
90th %ile Green (s)	41.0	41.0	9.0	55.0	15.0	15.0
90th %ile Term Code	Coord	Coord	Max	Coord	Max	Max
70th %ile Green (s)	41.0	41.0	9.0	55.0	15.0	15.0
70th %ile Term Code	Coord	Coord	Max	Coord	Max	Max
50th %ile Green (s)	41.0	41.0	10.0	56.0	14.0	14.0
50th %ile Term Code	Coord	Coord	Max	Coord	Gap	Gap
30th %ile Green (s)	44.3	44.3	8.9	58.2	11.8	11.8
30th %ile Term Code	Coord	Coord	Gap	Coord	Gap	Gap
10th %ile Green (s)	49.0	49.0	7.3	61.3	8.7	8.7
10th %ile Term Code	Coord	Coord	Gap	Coord	Gap	Gap
Stops (vph)	586	8	156	253	147	34
Fuel Used(gal)	18	1	4	7	3	2
CO Emissions (g/hr)	1253	56	294	524	198	118
NOx Emissions (g/hr)	244	11	57	102	38	23
VOC Emissions (g/hr)	290	13	68	121	46	27
Dilemma Vehicles (#)	47	0	0	15	0	0
Queue Length 50th (ft)	345	0	8	252	88	0
Queue Length 95th (ft)	#594	17	#150	138	142	61
Internal Link Dist (ft)	1691			374	460	
Turn Bay Length (ft)			200			
Base Capacity (vph)	1041	941	360	1366	346	545
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	0.82	0.06	0.73	0.53	0.55	0.52

Intersection Summary

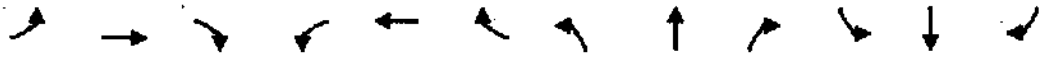
Area Type: Other
Cycle Length: 80

Actuated Cycle Length: 80
Offset: 1 (1%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 17.8 Intersection LOS: B
Intersection Capacity Utilization 71.6% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: E. 3rd Street & Hayes St.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	197	1	125	1	4	1	106	680	1	1	653	153
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	13	15	15	15	12	12	12	12	12	12
Storage Length (ft)	0		0	0		0	125		0	125		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25		25	25		25	75		25	75		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.981						0.970	
Flt Protected		0.953			0.993		0.950			0.950		
Satd. Flow (prot)	0	1793	1652	0	2016	0	1787	3574	0	1787	3354	0
Flt Permitted		0.723			0.959		0.171			0.379		
Satd. Flow (perm)	0	1360	1652	0	1947	0	322	3574	0	713	3354	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			139		1						51	
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		1014			565			3028			1065	
Travel Time (s)		23.0			12.8			59.0			20.7	
Peak Hour Factor	0.90	0.85	0.90	0.85	0.85	0.85	0.85	0.95	0.85	0.85	0.90	0.85
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	5%	2%
Adj. Flow (vph)	219	1	139	1	5	1	125	716	1	1	726	180
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	220	139	0	7	0	125	717	0	1	906	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	0.96	0.88	0.88	0.88	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50	50	50	50		50	0		50	0	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	50	50	50	50	50		50	0		50	0	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm		Perm	Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0		8.0	22.0		22.0	22.0	



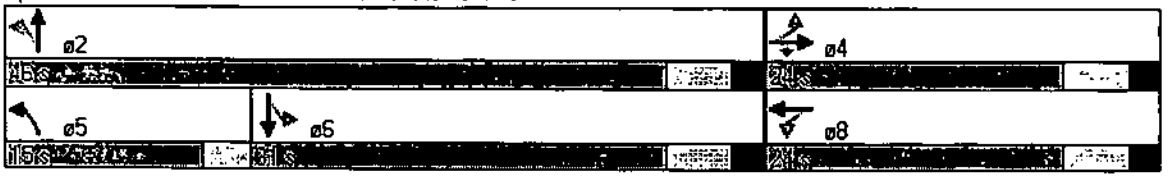
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	24.0	24.0	24.0	24.0	24.0	0.0	15.0	46.0	0.0	31.0	31.0	0.0
Total Split (%)	34.3%	34.3%	34.3%	34.3%	34.3%	0.0%	21.4%	65.7%	0.0%	44.3%	44.3%	0.0%
Maximum Green (s)	18.0	18.0	18.0	18.0	18.0		12.0	40.0		25.0	25.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		0.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	0.0	1.0	-2.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min	Min	None	None		Min	Min		Min	Min	
Act Effct Green (s)		15.9	15.9		15.9		34.4	34.4		22.4	22.4	
Actuated g/C Ratio		0.27	0.27		0.27		0.59	0.59		0.38	0.38	
v/c Ratio		0.59	0.25		0.01		0.32	0.34		0.00	0.69	
Control Delay		27.5	5.5		16.7		8.2	7.0		13.0	18.2	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		27.5	5.5		16.7		8.2	7.0		13.0	18.2	
LOS		C	A		B		A	A		B	B	
Approach Delay		19.0			16.7			7.2			18.2	
Approach LOS		B			B			A			B	
90th %ile Green (s)	18.0	18.0	18.0	18.0	18.0		12.0	40.0		25.0	25.0	
90th %ile Term Code	Max	Max	Max	Hold	Hold		Max	Hold		Max	Max	
70th %ile Green (s)	18.0	18.0	18.0	18.0	18.0		10.5	38.5		25.0	25.0	
70th %ile Term Code	Max	Max	Max	Hold	Hold		Gap	Hold		Max	Max	
50th %ile Green (s)	14.9	14.9	14.9	14.9	14.9		9.0	33.8		21.8	21.8	
50th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Gap	Hold		Gap	Gap	
30th %ile Green (s)	11.6	11.6	11.6	11.6	11.6		7.5	27.7		17.2	17.2	
30th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Gap	Hold		Gap	Gap	
10th %ile Green (s)	8.1	8.1	8.1	8.1	8.1		5.9	22.2		13.3	13.3	
10th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Gap	Hold		Gap	Gap	
Stops (vph)		159	20		6		42	306		2	588	
Fuel Used(gal)		4	1		0		3	18		0	14	
CO Emissions (g/hr)		248	87		6		196	1270		2	951	
NOx Emissions (g/hr)		48	17		1		38	247		0	185	
VOC Emissions (g/hr)		58	20		1		46	294		0	220	
Dilemma Vehicles (#)		0	0		0		0	57		0	68	
Queue Length 50th (ft)		69	0		2		18	62		0	130	
Queue Length 95th (ft)		137	36		10		38	101		3	220	
Internal Link Dist (ft)		934			485			2948			985	
Turn Bay Length (ft)							125			125		
Base Capacity (vph)		441	629		632		424	2278		308	1478	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.50	0.22		0.01		0.29	0.31		0.00	0.61	

Intersection Summary

Area Type: Other
Cycle Length: 70

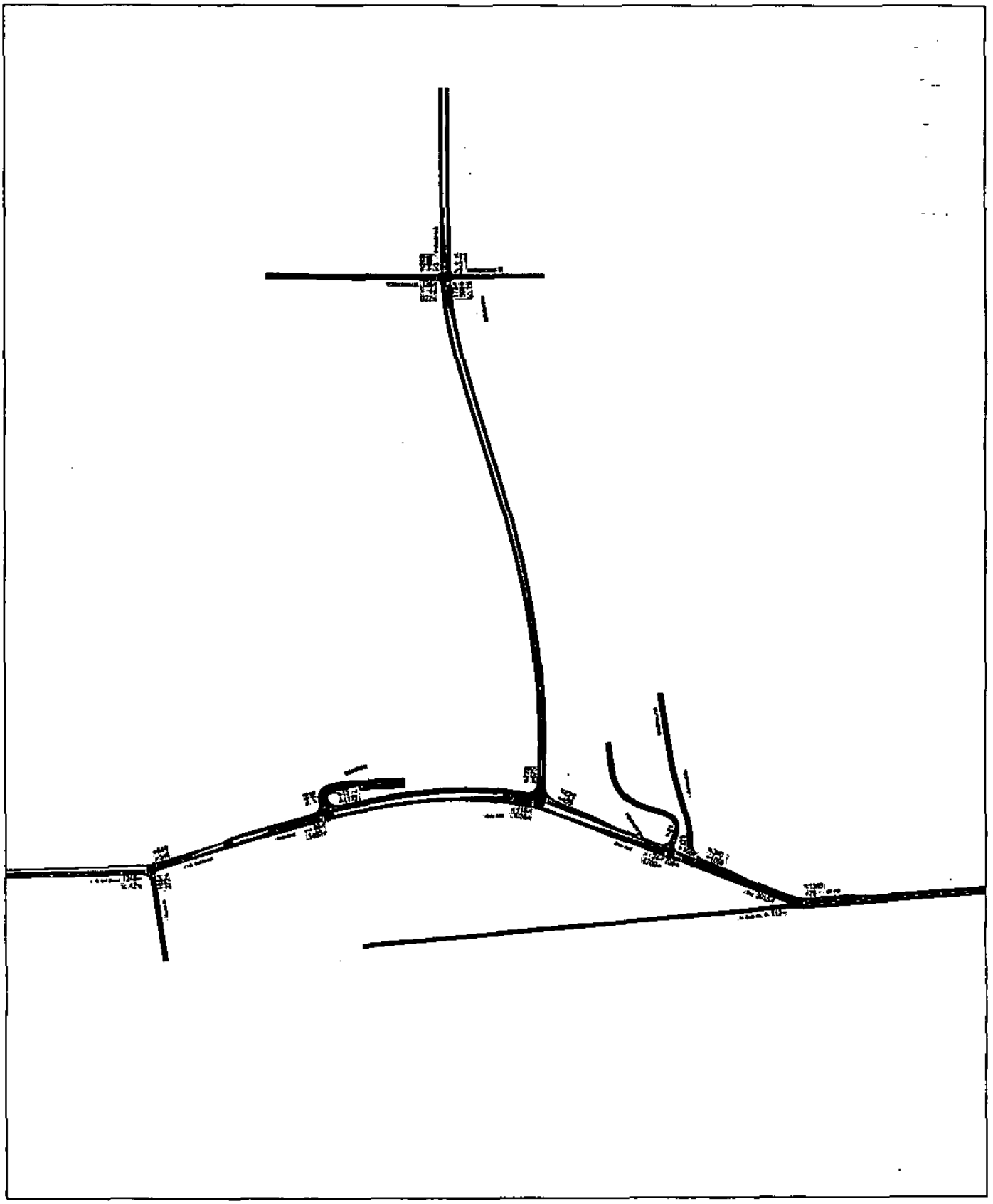
Actuated Cycle Length: 58.6
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.69
Intersection Signal Delay: 13.9 Intersection LOS: B
Intersection Capacity Utilization 56.4% ICU Level of Service B
Analysis Period (min) 15
90th %ile Actuated Cycle: 70
70th %ile Actuated Cycle: 68.5
50th %ile Actuated Cycle: 60.7
30th %ile Actuated Cycle: 51.3
10th %ile Actuated Cycle: 42.3

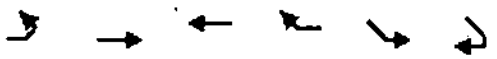
Splits and Phases: 7: East Broad St. & Stefko Blvd



PEAK AM HOUR – 2018 BUILD CONDITION

Map - Sands Bethworks Development - Peak AM Hour
2018 Build Condition - Full Build Out 10/18/2006





Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑	↑	↱↱	↰↰	
Volume (vph)	0	113	79	1340	2015	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	15	13	13	13	12
Storage Length (ft)	0			250	0	0
Storage Lanes	0			1	1	0
Taper Length (ft)	25			150	150	25
Lane Util. Factor	1.00	1.00	1.00	0.88	0.97	1.00
Frt				*0.950		
Flt Protected					0.950	
Satd. Flow (prot)	0	1883	1707	3097	3202	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	1883	1707	3097	3202	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				1523		
Link Speed (mph)		30	35		35	
Link Distance (ft)		2482	1509		672	
Travel Time (s)		56.4	29.4		13.1	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.87	0.90
Heavy Vehicles (%)	0%	11%	15%	6%	13%	0%
Adj. Flow (vph)	0	128	90	1523	2316	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	128	90	1523	2316	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		26	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	0.88	0.96	0.96	0.96	1.00
Turning Speed (mph)	15			9	25	9
Number of Detectors		1	1	1	1	
Detector Template						
Leading Detector (ft)		50	50	0	0	
Trailing Detector (ft)		0	0	0	0	
Detector 1 Position(ft)		0	0	0	0	
Detector 1 Size(ft)		50	50	0	0	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0	
Turn Type				Free		
Protected Phases		1	1		4	
Permitted Phases		1		Free		
Detector Phase		1	1		4	
Switch Phase						
Minimum Initial (s)		4.0	4.0		4.0	
Minimum Split (s)		10.0	10.0		22.0	

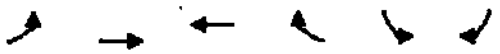
Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Total Split (s)	0.0	14.0	14.0	0.0	66.0	0.0
Total Split (%)	0.0%	17.5%	17.5%	0.0%	82.5%	0.0%
Maximum Green (s)		8.0	8.0		60.0	
Yellow Time (s)		4.0	4.0		4.0	
All-Red Time (s)		2.0	2.0		2.0	
Lost Time Adjust (s)	0.0	-2.0	-2.0	-2.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	2.0	6.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	
Recall Mode		Min	Min		C-Min	
Act Effct Green (s)		9.7	9.7	80.0	60.3	
Actuated g/C Ratio		0.12	0.12	1.00	0.75	
v/c Ratio		0.56	0.43	0.49	0.96	
Control Delay		43.1	39.5	0.6	11.6	
Queue Delay		0.0	0.0	0.0	0.1	
Total Delay		43.1	39.5	0.6	11.7	
LOS		D	D	A	B	
Approach Delay		43.1	27.1		11.7	
Approach LOS		D	A		B	
90th %ile Green (s)		8.0	8.0		60.0	
90th %ile Term Code		Max	Max		Coord	
70th %ile Green (s)		8.0	8.0		60.0	
70th %ile Term Code		Max	Max		Coord	
50th %ile Green (s)		8.0	8.0		60.0	
50th %ile Term Code		Max	Max		Coord	
30th %ile Green (s)		8.0	8.0		60.0	
30th %ile Term Code		Max	Max		Coord	
10th %ile Green (s)		6.7	6.7		61.3	
10th %ile Term Code		Gap	Gap		Coord	
Stops (vph)		104	71	0	996	
Fuel Used(gal)		4	2	15	22	
CO Emissions (g/hr)		262	142	1031	1538	
NOx Emissions (g/hr)		51	28	201	299	
VOC Emissions (g/hr)		61	33	239	357	
Dilemma Vehicles (#)		0	5	0	0	
Queue Length 50th (ft)		61	42	0	103	
Queue Length 95th (ft)		113	85	0	#132	
Internal Link Dist (ft)		2402	1429		592	
Turn Bay Length (ft)				250		
Base Capacity (vph)		235	213	3097	2412	
Starvation Cap Reductn		0	0	0	3	
Spillback Cap Reductn		0	0	0	0	
Storage Cap Reductn		0	0	0	0	
Reduced v/c Ratio		0.54	0.42	0.49	0.96	

Intersection Summary

Area Type: Other
Cycle Length: 80

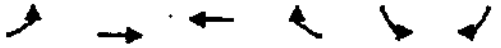
Actuated Cycle Length: 80
Offset: 21 (26%), Referenced to phase 4:SEL, Start of Yellow
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 9.1 Intersection LOS: A
Intersection Capacity Utilization 71.8% ICU Level of Service C
Analysis Period (min) 15
* User Entered Value
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: East 4th. St. & Daly Ave.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑	↱	↰↰	
Volume (vph)	0	1709	1059	340	325	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			200	0	0
Storage Lanes	0			1	2	0
Taper Length (ft)	25			150	25	25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.97	1.00
Frt				0.850		
Flt Protected					0.950	
Satd. Flow (prot)	0	3195	3406	1770	3433	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	3195	3406	1770	3433	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				242		
Link Speed (mph)		35	35		30	
Link Distance (ft)		114	672		621	
Travel Time (s)		2.2	13.1		14.1	
Peak Hour Factor	0.92	0.87	0.88	0.90	0.90	0.92
Heavy Vehicles (%)	2%	13%	6%	2%	2%	2%
Adj. Flow (vph)	0	1964	1203	378	361	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1964	1203	378	361	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors		1	1	1	1	
Detector Template						
Leading Detector (ft)		5	0	5	0	
Trailing Detector (ft)		0	0	0	0	
Detector 1 Position(ft)		0	0	0	0	
Detector 1 Size(ft)		5	0	5	0	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0	
Turn Type				Free		
Protected Phases		2	2		4	
Permitted Phases				Free		
Detector Phase		2	2		4	
Switch Phase						
Minimum Initial (s)		4.0	4.0		4.0	
Minimum Split (s)		22.0	22.0		22.0	
Total Split (s)	0.0	58.0	58.0	0.0	22.0	0.0

Lane Group	6	7	
Minimum Initial (s)	4.0	4.0	
Minimum Split (s)	22.0	10.0	
Total Split (s)	58.0	22.0	



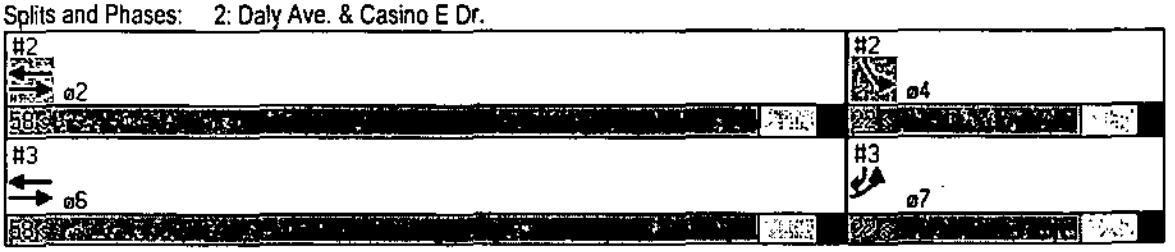
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	06	07
Total Split (%)	0.0%	72.5%	72.5%	0.0%	27.5%	0.0%	73%	28%
Maximum Green (s)		52.0	52.0		16.0		52.0	16.0
Yellow Time (s)		4.0	4.0		4.0		4.0	4.0
All-Red Time (s)		2.0	2.0		2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	4.0		
Lead/Lag								
Lead-Lag Optimize?								
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0
Recall Mode		C-Min	C-Min		Min		C-Min	Min
Walk Time (s)		5.0	5.0		5.0		5.0	
Flash Dont Walk (s)		11.0	11.0		11.0		11.0	
Pedestrian Calls (#/hr)		0	0		0		0	
Act Effct Green (s)		54.7	54.7	80.0	13.3			
Actuated g/C Ratio		0.68	0.68	1.00	0.17			
v/c Ratio		0.90	0.52	0.21	0.63			
Control Delay		5.1	7.4	0.2	36.0			
Queue Delay		0.3	0.0	0.0	0.0			
Total Delay		5.4	7.4	0.2	36.0			
LOS		A	A	A	D			
Approach Delay		5.4	5.7		36.0			
Approach LOS		A	A		D			
90th %ile Green (s)		52.0	52.0		16.0		52.0	16.0
90th %ile Term Code		Coord	Coord		Max		Coord	Hold
70th %ile Green (s)		52.9	52.9		15.1		52.9	15.1
70th %ile Term Code		Coord	Coord		Gap		Coord	Hold
50th %ile Green (s)		54.4	54.4		13.6		54.4	13.6
50th %ile Term Code		Coord	Coord		Gap		Coord	Hold
30th %ile Green (s)		55.9	55.9		12.1		55.9	12.1
30th %ile Term Code		Coord	Coord		Gap		Coord	Hold
10th %ile Green (s)		58.1	58.1		9.9		58.1	9.9
10th %ile Term Code		Coord	Coord		Gap		Coord	Hold
Stops (vph)		38	482	0	290			
Fuel Used(gal)		3	10	2	6			
CO Emissions (g/hr)		242	724	116	449			
NOx Emissions (g/hr)		47	141	23	87			
VOC Emissions (g/hr)		56	168	27	104			
Dilemma Vehicles (#)		64	66	0	0			
Queue Length 50th (ft)		2	133	0	87			
Queue Length 95th (ft)		#43	190	0	125			
Internal Link Dist (ft)		34	592		541			
Turn Bay Length (ft)				200				
Base Capacity (vph)		2183	2327	1770	687			
Starvation Cap Reductn		0	0	0	0			
Spillback Cap Reductn		26	0	0	0			
Storage Cap Reductn		0	0	0	0			
Reduced v/c Ratio		0.91	0.52	0.21	0.53			

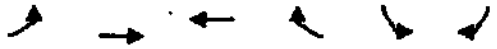
Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 8 (10%), Referenced to phase 2:EBWB and 6:, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 8.3 Intersection LOS: A
Intersection Capacity Utilization 66.5% ICU Level of Service C
Analysis Period (min) 15

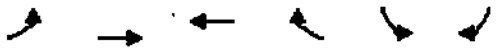
* User Entered Value
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Daly Ave. & Casino E Dr.





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	ø2	ø4
Lane Configurations								
Volume (vph)	24	1709	1059	0	0	21		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Storage Length (ft)	320			0	0	0		
Storage Lanes	1			0	0	2		
Taper Length (ft)	150			25	25	25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	0.88		
Frt						0.850		
Flt Protected	0.950							
Satd. Flow (prot)	1770	3195	3406	0	0	2787		
Flt Permitted	0.950							
Satd. Flow (perm)	1770	3195	3406	0	0	2787		
Right Turn on Red				Yes		Yes		
Satd. Flow (RTOR)						165		
Link Speed (mph)		35	35		30			
Link Distance (ft)		792	114		690			
Travel Time (s)		15.4	2.2		15.7			
Peak Hour Factor	0.90	0.87	0.88	0.92	0.92	0.90		
Heavy Vehicles (%)	2%	13%	6%	2%	2%	2%		
Adj. Flow (vph)	27	1964	1203	0	0	23		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	27	1964	1203	0	0	23		
Enter Blocked Intersection	No	No	No	No	No	No		
Lane Alignment	Left	Left	Left	Right	Left	Right		
Median Width(ft)		12	12		0			
Link Offset(ft)		0	0		0			
Crosswalk Width(ft)		16	16		16			
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Turning Speed (mph)	15			9	15	9		
Number of Detectors	1	2	2			1		
Detector Template	Left	Thru	Thru			Right		
Leading Detector (ft)	20	100	100			20		
Trailing Detector (ft)	0	0	0			0		
Detector 1 Position(ft)	0	0	0			0		
Detector 1 Size(ft)	20	6	6			20		
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex		
Detector 1 Channel								
Detector 1 Extend (s)	0.0	0.0	0.0			0.0		
Detector 1 Queue (s)	0.0	0.0	0.0			0.0		
Detector 1 Delay (s)	0.0	0.0	0.0			0.0		
Detector 2 Position(ft)		94	94					
Detector 2 Size(ft)		6	6					
Detector 2 Type		Cl+Ex	Cl+Ex					
Detector 2 Channel								
Detector 2 Extend (s)		0.0	0.0					
Turn Type	Prot					Over		
Protected Phases	7	6	6			7	2	4
Permitted Phases								



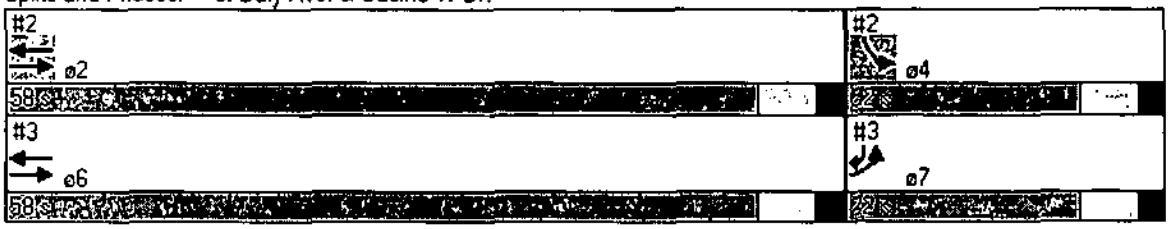
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	ø2	ø4	ø6	ø7
Detector Phase	7	6	6			7				
Switch Phase										
Minimum Initial (s)	4.0	4.0	4.0			4.0	4.0	4.0		
Minimum Split (s)	10.0	22.0	22.0			10.0	22.0	22.0		
Total Split (s)	22.0	58.0	58.0	0.0	0.0	22.0	58.0	22.0		
Total Split (%)	27.5%	72.5%	72.5%	0.0%	0.0%	27.5%	73%	28%		
Maximum Green (s)	16.0	52.0	52.0			16.0	52.0	16.0		
Yellow Time (s)	4.0	4.0	4.0			4.0	4.0	4.0		
All-Red Time (s)	2.0	2.0	2.0			2.0	2.0	2.0		
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0				
Total Lost Time (s)	6.0	6.0	6.0	4.0	4.0	6.0				
Lead/Lag										
Lead-Lag Optimize?										
Vehicle Extension (s)	3.0	3.0	3.0			3.0	3.0	3.0		
Recall Mode	Min	C-Min	C-Min			Min	C-Min	Min		
Walk Time (s)		5.0	5.0				5.0	5.0		
Flash Dont Walk (s)		11.0	11.0				11.0	11.0		
Pedestrian Calls (#/hr)		0	0				0	0		
Act Effct Green (s)	13.3	54.7	54.7			13.3				
Actuated g/C Ratio	0.17	0.68	0.68			0.17				
v/c Ratio	0.09	0.90	0.52			0.04				
Control Delay	27.3	11.2	1.4			0.1				
Queue Delay	0.0	1.8	0.0			0.0				
Total Delay	27.3	12.9	1.4			0.1				
LOS	C	B	A			A				
Approach Delay		13.1	1.4							
Approach LOS		B	A							
90th %ile Green (s)	16.0	52.0	52.0			16.0	52.0	16.0		
90th %ile Term Code	Hold	Coord	Coord			Hold	Coord	Max		
70th %ile Green (s)	15.1	52.9	52.9			15.1	52.9	15.1		
70th %ile Term Code	Hold	Coord	Coord			Hold	Coord	Gap		
50th %ile Green (s)	13.6	54.4	54.4			13.6	54.4	13.6		
50th %ile Term Code	Hold	Coord	Coord			Hold	Coord	Gap		
30th %ile Green (s)	12.1	55.9	55.9			12.1	55.9	12.1		
30th %ile Term Code	Hold	Coord	Coord			Hold	Coord	Gap		
10th %ile Green (s)	9.9	58.1	58.1			9.9	58.1	9.9		
10th %ile Term Code	Hold	Coord	Coord			Hold	Coord	Gap		
Stops (vph)	21	863	29			0				
Fuel Used(gal)	0	20	1			0				
CO Emissions (g/hr)	30	1409	97			9				
NOx Emissions (g/hr)	6	274	19			2				
VOC Emissions (g/hr)	7	326	23			2				
Dilemma Vehicles (#)	0	28	56			0				
Queue Length 50th (ft)	12	221	9			0				
Queue Length 95th (ft)	m14	m#263	11			0				
Internal Link Dist (ft)		712	34		610					
Turn Bay Length (ft)	320									
Base Capacity (vph)	354	2183	2327			689				
Starvation Cap Reductn	0	0	4			0				

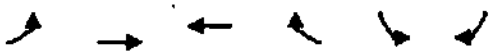
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	ø2	ø4
Spillback Cap Reductn	0	105	0			0		
Storage Cap Reductn	0	0	0			0		
Reduced v/c Ratio	0.08	0.95	0.52			0.03		

Intersection Summary

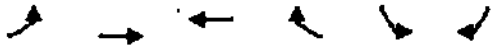
Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 8 (10%), Referenced to phase 2:EBWB and 6:, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 8.6 Intersection LOS: A
Intersection Capacity Utilization 52.2% ICU Level of Service A
Analysis Period (min) 15
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: 3: Daly Ave. & Casino W Dr.





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	418	1058	459	621	675	728
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	13	13	12
Storage Length (ft)	150			250	0	0
Storage Lanes	2			1	1	1
Taper Length (ft)	300			150	25	25
Lane Util. Factor	0.97	0.95	0.95	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3303	3034	3252	1560	1696	1509
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3303	3034	3252	1560	1696	1509
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				26		38
Link Speed (mph)		35	35		35	
Link Distance (ft)		1214	792		3028	
Travel Time (s)		23.6	15.4		59.0	
Peak Hour Factor	0.93	0.95	0.92	0.84	0.85	0.83
Heavy Vehicles (%)	6%	19%	11%	7%	10%	7%
Adj. Flow (vph)	449	1114	499	739	794	877
Shared Lane Traffic (%)						
Lane Group Flow (vph)	449	1114	499	739	794	877
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	0.96	0.96	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	1	1	1	1	1
Detector Template						
Leading Detector (ft)	30	5	5	30	30	30
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	30	5	5	30	30	30
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot			pm+ov		pm+ov
Protected Phases	7	4	8	6	6	7
Permitted Phases				8		6
Detector Phase	7	4	8	6	6	7
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0	19.0	21.0	21.0	9.0



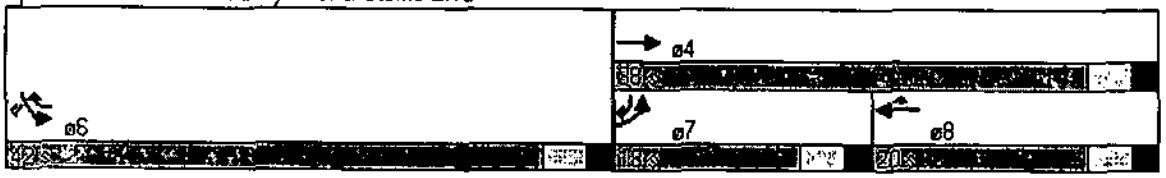
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Total Split (s)	18.0	38.0	20.0	42.0	42.0	18.0
Total Split (%)	22.5%	47.5%	25.0%	52.5%	52.5%	22.5%
Maximum Green (s)	13.0	33.0	15.0	37.0	37.0	13.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	5.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead		Lag			Lead
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	C-Min	C-Min	Min	Min	Min
Act Effct Green (s)	13.0	33.6	15.6	58.0	38.4	56.4
Actuated g/C Ratio	0.16	0.42	0.20	0.72	0.48	0.70
v/c Ratio	0.84	0.87	0.79	0.65	0.98	0.82
Control Delay	36.2	20.8	33.5	9.1	48.8	16.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.2	20.8	33.5	9.1	48.8	16.2
LOS	D	C	C	A	D	B
Approach Delay		25.2	18.9		31.7	
Approach LOS		C	B		C	
90th %ile Green (s)	13.0	33.0	15.0	37.0	37.0	13.0
90th %ile Term Code	Max	Coord	Coord	Max	Max	Max
70th %ile Green (s)	13.0	33.0	15.0	37.0	37.0	13.0
70th %ile Term Code	Max	Coord	Coord	Max	Max	Max
50th %ile Green (s)	13.0	33.0	15.0	37.0	37.0	13.0
50th %ile Term Code	Max	Coord	Coord	Max	Max	Max
30th %ile Green (s)	13.0	33.0	15.0	37.0	37.0	13.0
30th %ile Term Code	Max	Coord	Coord	Max	Max	Max
10th %ile Green (s)	13.0	31.0	13.0	39.0	39.0	13.0
10th %ile Term Code	Max	Coord	Coord	Max	Max	Max
Stops (vph)	346	978	386	458	553	465
Fuel Used(gal)	9	21	9	8	26	22
CO Emissions (g/hr)	653	1475	605	570	1791	1524
NOx Emissions (g/hr)	127	287	118	111	348	297
VOC Emissions (g/hr)	151	342	140	132	415	353
Dilemma Vehicles (#)	0	22	37	0	0	0
Queue Length 50th (ft)	92	308	104	258	374	247
Queue Length 95th (ft)	#184	#300	#152	365	#566	351
Internal Link Dist (ft)		1134	712		2948	
Turn Bay Length (ft)	150			250		
Base Capacity (vph)	537	1289	650	1130	814	1075
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	0.84	0.86	0.77	0.65	0.98	0.82

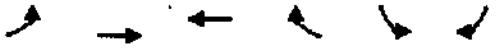
Intersection Summary

Area Type: Other
Cycle Length: 80

Actuated Cycle Length: 80
Offset: 72 (90%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.98
Intersection Signal Delay: 25.9 Intersection LOS: C
Intersection Capacity Utilization 73.3% ICU Level of Service D
Analysis Period (min) 15
#. 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: Daly Ave. & Stefko Blvd





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	89	1460	1172	15	16	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300			0	0	0
Storage Lanes	1			1	2	1
Taper Length (ft)	75			25	25	25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.97	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	3252	3374	1583	3433	1583
Flt Permitted	0.140				0.950	
Satd. Flow (perm)	261	3252	3374	1583	3433	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				17		20
Link Speed (mph)		35	35		30	
Link Distance (ft)		578	1214		556	
Travel Time (s)		11.3	23.6		12.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	11%	7%	2%	2%	2%
Adj. Flow (vph)	99	1622	1302	17	18	20
Shared Lane Traffic (%)						
Lane Group Flow (vph)	99	1622	1302	17	18	20
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	1	2	1	1	1
Detector Template	Left				Left	Right
Leading Detector (ft)	30	5	94	5	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	30	5	0	5	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			
Detector 2 Size(ft)			0			
Detector 2 Type			Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)			0.0			
Turn Type	pm+pt			pm+ov		Perm
Protected Phases	7	4	8	6	6	
Permitted Phases	4			8		6

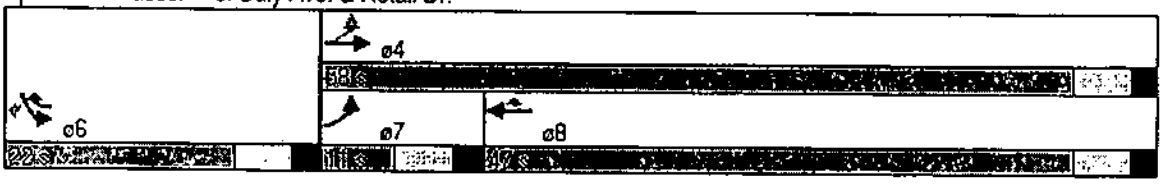
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase	7	4	8	6	6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	11.0	58.0	47.0	22.0	22.0	22.0
Total Split (%)	13.8%	72.5%	58.8%	27.5%	27.5%	27.5%
Maximum Green (s)	5.0	52.0	41.0	16.0	16.0	16.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	C-Min	C-Min	Min	Min	Min
Walk Time (s)		5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0	0
Act Effct Green (s)	61.9	61.9	49.4	61.4	6.1	6.1
Actuated g/C Ratio	0.77	0.77	0.62	0.77	0.08	0.08
v/c Ratio	0.30	0.64	0.63	0.01	0.07	0.14
Control Delay	2.5	2.7	9.6	1.6	34.5	17.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.5	2.7	9.6	1.6	34.5	17.7
LOS	A	A	A	A	C	B
Approach Delay		2.7	9.5		25.7	
Approach LOS		A	A		C	
90th %ile Green (s)	7.7	60.7	47.0	7.3	7.3	7.3
90th %ile Term Code	Gap	Coord	Coord	Gap	Gap	Gap
70th %ile Green (s)	6.9	61.8	48.9	6.2	6.2	6.2
70th %ile Term Code	Gap	Coord	Coord	Gap	Gap	Gap
50th %ile Green (s)	6.5	62.1	49.6	5.9	5.9	5.9
50th %ile Term Code	Gap	Coord	Coord	Gap	Gap	Gap
30th %ile Green (s)	6.1	62.5	50.4	5.5	5.5	5.5
30th %ile Term Code	Gap	Coord	Coord	Gap	Gap	Gap
10th %ile Green (s)	5.6	62.5	50.9	5.5	5.5	5.5
10th %ile Term Code	Gap	Coord	Coord	Gap	Gap	Gap
Stops (vph)	9	360	663	4	18	9
Fuel Used(gal)	1	14	18	0	0	0
CO Emissions (g/hr)	54	1006	1227	12	20	13
NOx Emissions (g/hr)	11	196	239	2	4	3
VOC Emissions (g/hr)	13	233	284	3	5	3
Dilemma Vehicles (#)	0	17	59	0	0	0
Queue Length 50th (ft)	2	15	207	0	4	0
Queue Length 95th (ft)	m1	m12	305	m2	14	20
Internal Link Dist (ft)		498	1134		476	
Turn Bay Length (ft)	300					
Base Capacity (vph)	326	2517	2082	1414	687	333
Starvation Cap Reductn	0	0	0	0	0	0

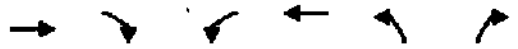
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.64	0.63	0.01	0.03	0.06

Intersection Summary

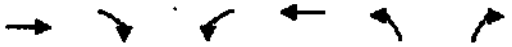
Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 64 (80%), Referenced to phase 4:EBTL and 8:WBT, Start of Yellow
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.64
Intersection Signal Delay: 5.9 Intersection LOS: A
Intersection Capacity Utilization 55.7% ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Daly Ave. & Retail Dr.





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↱	↰	↑	↰	↱
Volume (vph)	1248	42	346	844	168	272
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	11	12
Storage Length (ft)		0	200		0	0
Storage Lanes		1	1		1	1
Taper Length (ft)		25	200		25	25
Lane Util. Factor	0.95	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3139	1589	1703	1776	1694	1568
Flt Permitted			0.098		0.950	
Satd. Flow (perm)	3139	1589	176	1776	1694	1568
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		60				304
Link Speed (mph)	35			35	30	
Link Distance (ft)	1771			454	540	
Travel Time (s)	34.5			8.8	12.3	
Peak Hour Factor	0.92	0.70	0.85	0.91	0.75	0.78
Heavy Vehicles (%)	15%	5%	6%	7%	3%	3%
Adj. Flow (vph)	1357	60	407	927	224	349
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1357	60	407	927	224	349
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	11	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	0.96	1.00	1.00	1.04	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1	1	1	1	1	1
Detector Template						
Leading Detector (ft)	5	30	30	5	30	30
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	5	30	30	5	30	30
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type		Perm	pm+pt			Perm
Protected Phases	2		1	6	8	
Permitted Phases		2	6			8
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	21.0	9.0	21.0	21.0	21.0



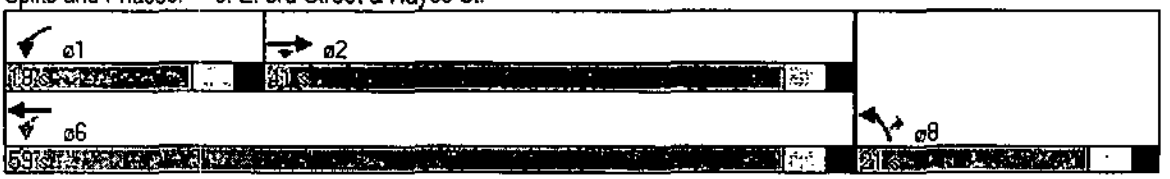
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Split (s)	41.0	41.0	18.0	59.0	21.0	21.0
Total Split (%)	51.3%	51.3%	22.5%	73.8%	26.3%	26.3%
Maximum Green (s)	36.0	36.0	13.0	54.0	16.0	16.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Min	C-Min	Min	C-Min	Min	Min
Act Effct Green (s)	36.8	36.8	56.9	56.9	15.1	15.1
Actuated g/C Ratio	0.46	0.46	0.71	0.71	0.19	0.19
v/c Ratio	0.94	0.08	0.94	0.73	0.70	0.64
Control Delay	35.0	3.9	46.6	18.1	42.2	11.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.0	3.9	46.6	18.1	42.2	11.6
LOS	C	A	D	B	D	B
Approach Delay	33.7			26.8	23.6	
Approach LOS	C			C	C	
90th %ile Green (s)	36.0	36.0	13.0	54.0	16.0	16.0
90th %ile Term Code	Coord	Coord	Max	Coord	Max	Max
70th %ile Green (s)	36.0	36.0	13.0	54.0	16.0	16.0
70th %ile Term Code	Coord	Coord	Max	Coord	Max	Max
50th %ile Green (s)	36.0	36.0	13.4	54.4	15.6	15.6
50th %ile Term Code	Coord	Coord	Max	Coord	Gap	Gap
30th %ile Green (s)	36.0	36.0	15.7	56.7	13.3	13.3
30th %ile Term Code	Coord	Coord	Max	Coord	Gap	Gap
10th %ile Green (s)	34.8	34.8	20.4	60.2	9.8	9.8
10th %ile Term Code	Coord	Coord	Max	Coord	Gap	Gap
Stops (vph)	1061	7	252	816	154	55
Fuel Used(gal)	33	1	8	16	3	2
CO Emissions (g/hr)	2295	44	542	1086	210	146
NOx Emissions (g/hr)	446	8	105	211	41	28
VOC Emissions (g/hr)	532	10	126	252	49	34
Dilemma Vehicles (#)	75	0	0	31	0	0
Queue Length 50th (ft)	323	0	161	512	103	19
Queue Length 95th (ft)	#479	11	#300	625	140	56
Internal Link Dist (ft)	1691			374	460	
Turn Bay Length (ft)			200			
Base Capacity (vph)	1452	767	432	1262	360	573
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	0.93	0.08	0.94	0.73	0.62	0.61

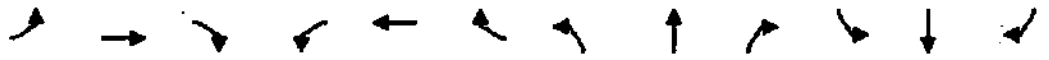
Intersection Summary

Area Type: Other
Cycle Length: 80

Actuated Cycle Length: 80
Offset: 15 (19%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.94
Intersection Signal Delay: 29.2 Intersection LOS: C
Intersection Capacity Utilization 73.0% ICU Level of Service C
Analysis Period (min) 15
~ 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: 6: E. 3rd Street & Hayes St.





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	126	4	127	2	3	11	173	590	1	3	986	248
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	13	15	15	15	12	12	12	12	12	12
Storage Length (ft)	0		0	0		0	125		0	125		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25		25	25		25	75		25	75		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.983						0.965	
Flt Protected		0.954			0.982		0.950			0.950		
Satd. Flow (prot)	0	1729	1503	0	1998	0	1612	3505	0	1787	3392	0
Flt Permitted		0.729			0.900		0.142			0.419		
Satd. Flow (perm)	0	1321	1503	0	1831	0	241	3505	0	788	3392	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			167		1						67	
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		1014			565			3028			1065	
Travel Time (s)		23.0			12.8			59.0			20.7	
Peak Hour Factor	0.82	0.70	0.76	0.70	0.70	0.70	0.76	0.96	0.70	0.70	0.88	0.73
Heavy Vehicles (%)	5%	1%	11%	1%	1%	1%	12%	3%	1%	1%	2%	5%
Adj. Flow (vph)	154	6	167	3	4	1	228	615	1	4	1120	340
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	160	167	0	8	0	228	616	0	4	1460	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	0.96	0.88	0.88	0.88	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50	50	50	50		50	0		50	0	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	50	50	50	50	50		50	0		50	0	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm		Perm	Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0		8.0	22.0		22.0	22.0	

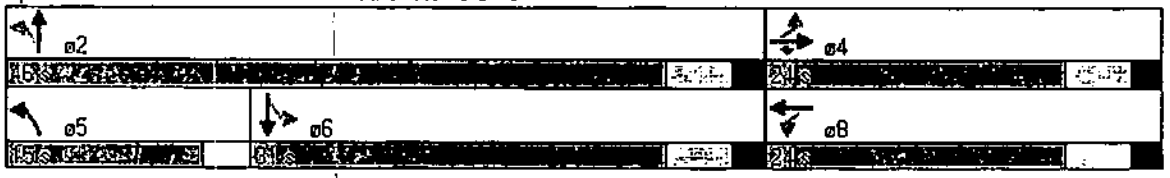
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	24.0	24.0	24.0	24.0	24.0	0.0	15.0	46.0	0.0	31.0	31.0	0.0
Total Split (%)	34.3%	34.3%	34.3%	34.3%	34.3%	0.0%	21.4%	65.7%	0.0%	44.3%	44.3%	0.0%
Maximum Green (s)	18.0	18.0	18.0	18.0	18.0		12.0	40.0		25.0	25.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		0.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	0.0	1.0	-2.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min	Min	None	None		Min	Min		Min	Min	
Act Effct Green (s)		14.5	14.5		14.5		41.2	41.2		27.2	27.2	
Actuated g/C Ratio		0.23	0.23		0.23		0.65	0.65		0.43	0.43	
v/c Ratio		0.53	0.35		0.02		0.61	0.27		0.01	0.98	
Control Delay		28.6	6.1		17.7		16.7	5.7		13.0	40.6	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		28.6	6.1		17.7		16.7	5.7		13.0	40.6	
LOS		C	A		B		B	A		B	D	
Approach Delay		17.1			17.7			8.7			40.6	
Approach LOS		B			B			A			D	
90th %ile Green (s)	18.0	18.0	18.0	18.0	18.0		12.0	40.0		25.0	25.0	
90th %ile Term Code	Max	Max	Max	Hold	Hold		Max	Hold		Max	Max	
70th %ile Green (s)	15.6	15.6	15.6	15.6	15.6		12.0	40.0		25.0	25.0	
70th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Max	Hold		Max	Max	
50th %ile Green (s)	12.7	12.7	12.7	12.7	12.7		12.0	40.0		25.0	25.0	
50th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Max	Hold		Max	Max	
30th %ile Green (s)	10.2	10.2	10.2	10.2	10.2		11.2	39.2		25.0	25.0	
30th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Gap	Hold		Max	Max	
10th %ile Green (s)	7.2	7.2	7.2	7.2	7.2		8.1	36.1		25.0	25.0	
10th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Gap	Hold		Max	Max	
Stops (vph)		106	19		7		80	231		3	942	
Fuel Used(gal)		2	1		0		5	15		0	27	
CO Emissions (g/hr)		166	89		6		347	1073		4	1872	
NOx Emissions (g/hr)		32	17		1		68	209		1	364	
VOC Emissions (g/hr)		38	21		1		81	249		1	434	
Dilemma Vehicles (#)		0	0		0		0	46		0	87	
Queue Length 50th (ft)		56	0		2		31	45		1	~283	
Queue Length 95th (ft)		79	24		9		77	85		5	#480	
Internal Link Dist (ft)		934			485			2948			985	
Turn Bay Length (ft)							125			125		
Base Capacity (vph)		383	554		531		382	2282		336	1484	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.42	0.30		0.02		0.60	0.27		0.01	0.98	

Intersection Summary

Area Type: Other
Cycle Length: 70

Actuated Cycle Length: 63.8
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.98
Intersection Signal Delay: 27.4 Intersection LOS: C
Intersection Capacity Utilization 68.6% ICU Level of Service C
Analysis Period (min) 15
90th %ile Actuated Cycle: 70
70th %ile Actuated Cycle: 67.6
50th %ile Actuated Cycle: 64.7
30th %ile Actuated Cycle: 61.4
10th %ile Actuated Cycle: 55.3
~: 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.

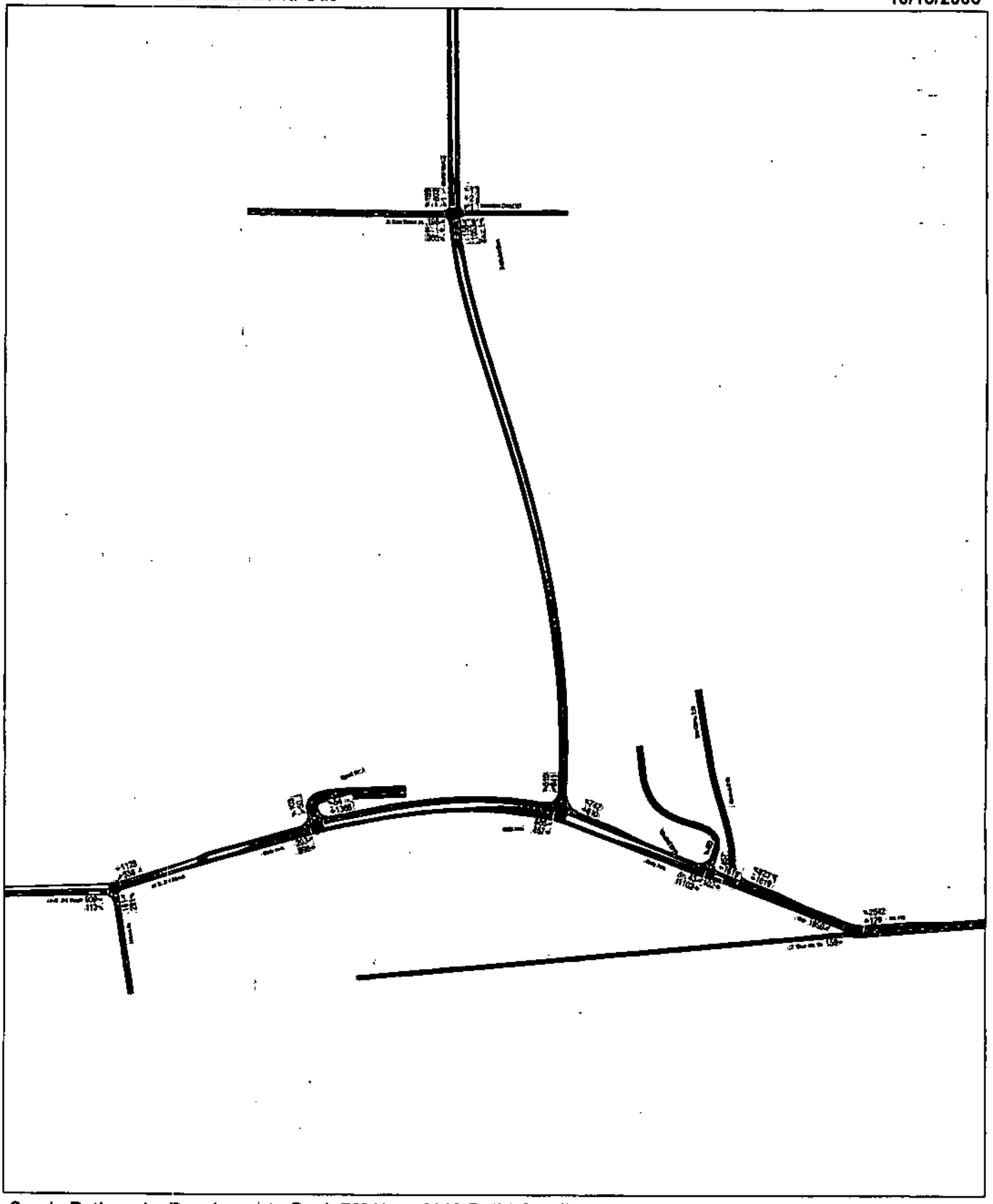
Splits and Phases: 7: East Broad St. & Stefko Blvd



PEAK PM HOUR – 2018 BUILD CONDITION

Map - Sands Bethworks Developmet - Peak PM Hour
2018 Build Condition - Full Build Out

10/18/2006



Sands Bethworks Developmet - Peak PM Hour 2018 Build Condition - Full Build Out

zi - 2018bpm

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Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑	↑	↱↱	↰↰	
Volume (vph)	0	156	129	2542	1959	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	15	13	13	13	12
Storage Length (ft)	0			250	0	0
Storage Lanes	0			1	1	0
Taper Length (ft)	25			150	150	25
Lane Util. Factor	1.00	1.00	1.00	0.88	0.97	1.00
Frt				*0.950		
Flt Protected					0.950	
Satd. Flow (prot)	0	2069	1944	3250	3583	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	2069	1944	3250	3583	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				1920		
Link Speed (mph)		30	35		35	
Link Distance (ft)		2482	1509		672	
Travel Time (s)		56.4	29.4		13.1	
Peak Hour Factor	0.88	0.85	0.85	0.95	0.90	0.90
Heavy Vehicles (%)	0%	1%	1%	1%	1%	0%
Adj. Flow (vph)	0	184	152	2676	2177	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	184	152	2676	2177	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		26	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	0.88	0.96	0.96	0.96	1.00
Turning Speed (mph)	15			25	25	9
Number of Detectors		1	1	1	1	
Detector Template						
Leading Detector (ft)		50	50	0	0	
Trailing Detector (ft)		0	0	0	0	
Detector 1 Position(ft)		0	0	0	0	
Detector 1 Size(ft)		50	50	0	0	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0	
Turn Type				Free		
Protected Phases		1	1		4	
Permitted Phases		1		Free		
Detector Phase		1	1		4	
Switch Phase						
Minimum Initial (s)		4.0	4.0		4.0	
Minimum Split (s)		10.0	10.0		22.0	

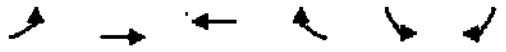
Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Total Split (s)	0.0	15.0	15.0	0.0	65.0	0.0
Total Split (%)	0.0%	18.8%	18.8%	0.0%	81.3%	0.0%
Maximum Green (s)		9.0	9.0		59.0	
Yellow Time (s)		4.0	4.0		4.0	
All-Red Time (s)		2.0	2.0		2.0	
Lost Time Adjust (s)	0.0	-2.0	-2.0	-2.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	2.0	6.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	
Recall Mode		Min	Min		C-Min	
Act Effct Green (s)		11.8	11.8	80.0	58.2	
Actuated g/C Ratio		0.15	0.15	1.00	0.73	
v/c Ratio		0.60	0.53	0.82	0.84	
Control Delay		41.4	38.9	2.5	7.6	
Queue Delay		0.0	0.0	0.0	0.0	
Total Delay		41.4	38.9	2.5	7.6	
LOS		D	D	A	A	
Approach Delay		41.4	4.5		7.6	
Approach LOS		D	A		A	
90th %ile Green (s)		9.0	9.0		59.0	
90th %ile Term Code		Max	Max		Coord	
70th %ile Green (s)		9.0	9.0		59.0	
70th %ile Term Code		Max	Max		Coord	
50th %ile Green (s)		12.4	12.4		55.6	
50th %ile Term Code		Gap	Gap		Coord	
30th %ile Green (s)		10.7	10.7		57.3	
30th %ile Term Code		Gap	Gap		Coord	
10th %ile Green (s)		8.1	8.1		59.9	
10th %ile Term Code		Gap	Gap		Coord	
Stops (vph)		140	118	4	844	
Fuel Used(gal)		5	3	29	19	
CO Emissions (g/hr)		357	232	2028	1319	
NOx Emissions (g/hr)		69	45	395	257	
VOC Emissions (g/hr)		83	54	470	306	
Dilemma Vehicles (#)		0	8	0	0	
Queue Length 50th (ft)		84	68	0	325	
Queue Length 95th (ft)		144	123	0	336	
Internal Link Dist (ft)		2402	1429		592	
Turn Bay Length (ft)				250		
Base Capacity (vph)		310	292	3250	2650	
Starvation Cap Reductn		0	0	0	10	
Spillback Cap Reductn		0	0	0	0	
Storage Cap Reductn		0	0	0	0	
Reduced v/c Ratio		0.59	0.52	0.82	0.82	

Intersection Summary

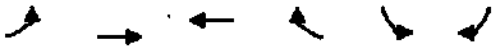
Area Type: Other
Cycle Length: 80

Actuated Cycle Length: 80
Offset: 79 (99%), Referenced to phase 4:SEL, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 7.1 Intersection LOS: A
Intersection Capacity Utilization 72.4% ICU Level of Service C
Analysis Period (min) 15
* User Entered Value

Splits and Phases: 1: East 4th. St. & Daly Ave.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	ø6	ø7	ø8
Lane Configurations		↑↑	↑↑	↱	↰↑				
Volume (vph)	0	1102	1619	923	857	0			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900			
Storage Length (ft)	0			200	0	0			
Storage Lanes	0			1	2	0			
Taper Length (ft)	25			150	25	25			
Lane Util. Factor	1.00	0.95	0.95	1.00	0.97	1.00			
Frt				0.950					
Flt Protected					0.950				
Satd. Flow (prot)	0	3574	3574	1770	3433	0			
Flt Permitted					0.950				
Satd. Flow (perm)	0	3574	3574	1770	3433	0			
Right Turn on Red				Yes		Yes			
Satd. Flow (RTOR)				463					
Link Speed (mph)		35	35		30				
Link Distance (ft)		114	672		621				
Travel Time (s)		2.2	13.1		14.1				
Peak Hour Factor	0.92	0.90	0.95	0.90	0.90	0.92			
Heavy Vehicles (%)	2%	1%	1%	2%	2%	2%			
Adj. Flow (vph)	0	1224	1704	1026	952	0			
Shared Lane Traffic (%)									
Lane Group Flow (vph)	0	1224	1704	1026	952	0			
Enter Blocked Intersection	No	No	No	No	No	No			
Lane Alignment	Left	Left	Left	Right	Left	Right			
Median Width(ft)		0	0		24				
Link Offset(ft)		0	0		0				
Crosswalk Width(ft)		16	16		16				
Two way Left Turn Lane									
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00			
Turning Speed (mph)	15			9	15	9			
Number of Detectors		1	1	1	1				
Detector Template					Left				
Leading Detector (ft)		5	0	0	30				
Trailing Detector (ft)		0	0	0	0				
Detector 1 Position(ft)		0	0	0	0				
Detector 1 Size(ft)		5	0	0	30				
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel									
Detector 1 Extend (s)		0.0	0.0	0.0	0.0				
Detector 1 Queue (s)		0.0	0.0	0.0	0.0				
Detector 1 Delay (s)		0.0	0.0	0.0	0.0				
Turn Type				Free					
Protected Phases		2	2		4		6	7	
Permitted Phases				Free					
Detector Phase		2	2		4				
Switch Phase									
Minimum Initial (s)		4.0	4.0		4.0		4.0	4.0	
Minimum Split (s)		22.0	22.0		22.0		22.0	10.0	
Total Split (s)	0.0	48.0	48.0	0.0	32.0	0.0	48.0	32.0	



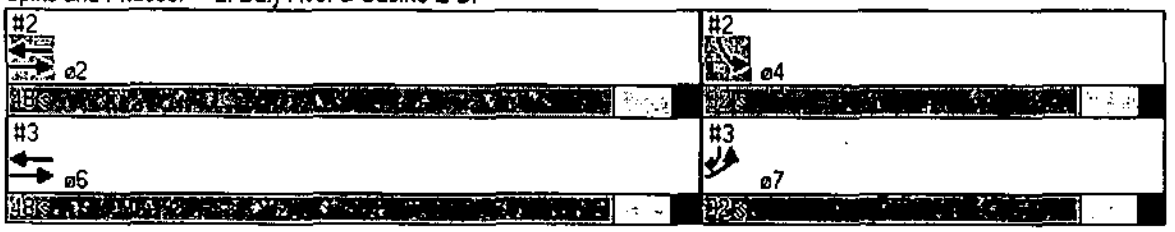
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	ø6	ø8
Total Split (%)	0.0%	60.0%	60.0%	0.0%	40.0%	0.0%	60%	40%
Maximum Green (s)		42.0	42.0		26.0		42.0	26.0
Yellow Time (s)		4.0	4.0		4.0		4.0	4.0
All-Red Time (s)		2.0	2.0		2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	4.0		
Lead/Lag								
Lead-Lag Optimize?								
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0
Recall Mode		C-Min	C-Min		Min		C-Min	Min
Walk Time (s)		5.0	5.0		5.0		5.0	
Flash Dont Walk (s)		11.0	11.0		11.0		11.0	
Pedestrian Calls (#/hr)		0	0		0		0	
Act Effct Green (s)		42.8	42.8	80.0	25.2			
Actuated g/C Ratio		0.54	0.54	1.00	0.32			
v/c Ratio		0.64	0.89	0.58	0.88			
Control Delay		1.5	21.8	0.8	36.7			
Queue Delay		0.0	0.9	0.0	0.0			
Total Delay		1.5	22.6	0.8	36.7			
LOS		A	C	A	D			
Approach Delay		1.5	14.4		36.7			
Approach LOS		A	B		D			
90th %ile Green (s)		42.0	42.0		26.0		42.0	26.0
90th %ile Term Code		Coord	Coord		Max		Coord	Hold
70th %ile Green (s)		42.0	42.0		26.0		42.0	26.0
70th %ile Term Code		Coord	Coord		Max		Coord	Hold
50th %ile Green (s)		42.0	42.0		26.0		42.0	26.0
50th %ile Term Code		Coord	Coord		Max		Coord	Hold
30th %ile Green (s)		42.3	42.3		25.7		42.3	25.7
30th %ile Term Code		Coord	Coord		Gap		Coord	Hold
10th %ile Green (s)		45.5	45.5		22.5		45.5	22.5
10th %ile Term Code		Coord	Coord		Gap		Coord	Hold
Stops (vph)		9	1315	0	756			
Fuel Used(gal)		1	25	5	17			
CO Emissions (g/hr)		92	1742	323	1191			
NOx Emissions (g/hr)		18	339	63	232			
VOC Emissions (g/hr)		21	404	75	276			
Dilemma Vehicles (#)		14	99	0	0			
Queue Length 50th (ft)		1	381	0	226			
Queue Length 95th (ft)		4	#558	0	#329			
Internal Link Dist (ft)		34	592		541			
Turn Bay Length (ft)				200				
Base Capacity (vph)		1910	1910	1770	1116			
Starvation Cap Reductn		9	0	0	0			
Spillback Cap Reductn		0	58	0	0			
Storage Cap Reductn		0	0	0	0			
Reduced v/c Ratio		0.64	0.92	0.58	0.85			

Intersection Summary

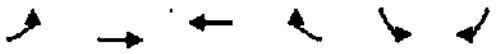
Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 73 (91%), Referenced to phase 2:EBWB and 6:, Start of Yellow
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 15.5 Intersection LOS: B
Intersection Capacity Utilization 79.2% ICU Level of Service D
Analysis Period (min) 15

* User Entered Value
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

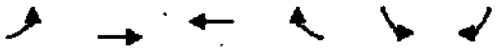
Splits and Phases: 2: Daly Ave. & Casino E Dr



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	ø2	ø4
Lane Configurations								
Volume (vph)	43	1102	1619	0	0	40		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Storage Length (ft)	320			0	0	0		
Storage Lanes	1			0	0	2		
Taper Length (ft)	150			25	25	25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	0.88		
Frt						0.850		
Flt Protected	0.950							
Satd. Flow (prot)	1770	3574	3574	0	0	2787		
Flt Permitted	0.950							
Satd. Flow (perm)	1770	3574	3574	0	0	2787		
Right Turn on Red				Yes		Yes		
Satd. Flow (RTOR)						22		
Link Speed (mph)		35	35		30			
Link Distance (ft)		792	114		690			
Travel Time (s)		15.4	2.2		15.7			
Peak Hour Factor	0.90	0.90	0.95	0.92	0.92	0.90		
Heavy Vehicles (%)	2%	1%	1%	2%	2%	2%		
Adj. Flow (vph)	48	1224	1704	0	0	44		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	48	1224	1704	0	0	44		
Enter Blocked Intersection	No	No	No	No	No	No		
Lane Alignment	Left	Left	Left	Right	Left	Right		
Median Width(ft)		12	12		0			
Link Offset(ft)		0	0		0			
Crosswalk Width(ft)		16	16		16			
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Turning Speed (mph)	15			9	15	9		
Number of Detectors	1	2	2			1		
Detector Template	Left	Thru	Thru			Right		
Leading Detector (ft)	20	100	100			20		
Trailing Detector (ft)	0	0	0			0		
Detector 1 Position(ft)	0	0	0			0		
Detector 1 Size(ft)	20	6	6			20		
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex		
Detector 1 Channel								
Detector 1 Extend (s)	0.0	0.0	0.0			0.0		
Detector 1 Queue (s)	0.0	0.0	0.0			0.0		
Detector 1 Delay (s)	0.0	0.0	0.0			0.0		
Detector 2 Position(ft)		94	94					
Detector 2 Size(ft)		6	6					
Detector 2 Type		Cl+Ex	Cl+Ex					
Detector 2 Channel								
Detector 2 Extend (s)		0.0	0.0					
Turn Type	Prot					Over		
Protected Phases	7	6	6			7	2	4
Permitted Phases								



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	ø2	ø4
Detector Phase	7	6	6			7		
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0			4.0	4.0	4.0
Minimum Split (s)	10.0	22.0	22.0			10.0	22.0	22.0
Total Split (s)	32.0	48.0	48.0	0.0	0.0	32.0	48.0	32.0
Total Split (%)	40.0%	60.0%	60.0%	0.0%	0.0%	40.0%	60%	40%
Maximum Green (s)	26.0	42.0	42.0			26.0	42.0	26.0
Yellow Time (s)	4.0	4.0	4.0			4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0			2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	6.0	6.0	6.0	4.0	4.0	6.0		
Lead/Lag								
Lead-Lag Optimize?								
Vehicle Extension (s)	3.0	3.0	3.0			3.0	3.0	3.0
Recall Mode	Min	C-Min	C-Min			Min	C-Min	Min
Walk Time (s)		5.0	5.0				5.0	5.0
Flash Dont Walk (s)		11.0	11.0				11.0	11.0
Pedestrian Calls (#/hr)		0	0				0	0
Act Effct Green (s)	25.2	42.8	42.8			25.2		
Actuated g/C Ratio	0.32	0.54	0.54			0.32		
v/c Ratio	0.09	0.64	0.89			0.05		
Control Delay	28.2	6.3	5.7			11.8		
Queue Delay	0.0	0.0	0.1			0.0		
Total Delay	28.2	6.3	5.8			11.8		
LOS	C	A	A			B		
Approach Delay		7.1	5.8					
Approach LOS		A	A					
90th %ile Green (s)	26.0	42.0	42.0			26.0	42.0	26.0
90th %ile Term Code	Hold	Coord	Coord			Hold	Coord	Max
70th %ile Green (s)	26.0	42.0	42.0			26.0	42.0	26.0
70th %ile Term Code	Hold	Coord	Coord			Hold	Coord	Max
50th %ile Green (s)	26.0	42.0	42.0			26.0	42.0	26.0
50th %ile Term Code	Hold	Coord	Coord			Hold	Coord	Max
30th %ile Green (s)	25.7	42.3	42.3			25.7	42.3	25.7
30th %ile Term Code	Hold	Coord	Coord			Hold	Coord	Gap
10th %ile Green (s)	22.5	45.5	45.5			22.5	45.5	22.5
10th %ile Term Code	Hold	Coord	Coord			Hold	Coord	Gap
Stops (vph)	39	544	60			17		
Fuel Used(gal)	1	12	4			0		
CO Emissions (g/hr)	55	825	257			31		
NOx Emissions (g/hr)	11	161	50			6		
VOC Emissions (g/hr)	13	191	59			7		
Dilemma Vehicles (#)	0	15	112			0		
Queue Length 50th (ft)	23	110	13			3		
Queue Length 95th (ft)	m38	m133	m#38			16		
Internal Link Dist (ft)		712	34		610			
Turn Bay Length (ft)	320							
Base Capacity (vph)	575	1910	1910			921		
Starvation Cap Reductn	0	0	9			0		

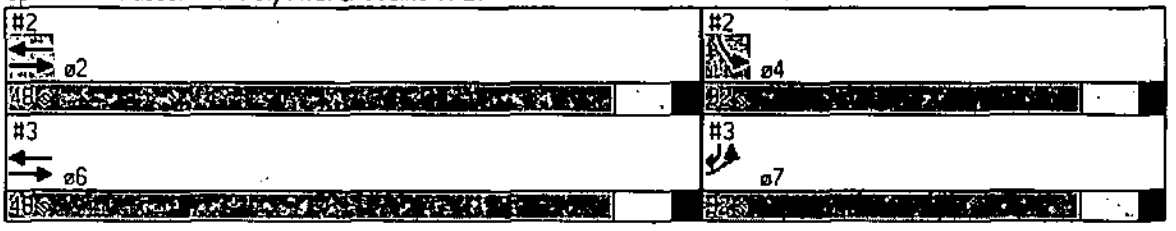


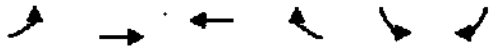
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	ø2	ø4
Spillback Cap Reductn	0	0	0			0		
Storage Cap Reductn	0	0	0			0		
Reduced v/c Ratio	0.08	0.64	0.90			0.05		

Intersection Summary

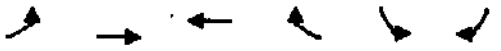
Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 73 (91%), Referenced to phase 2:EBWB and 6: Start of Yellow
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 6.5 Intersection LOS: A
Intersection Capacity Utilization 58.1% ICU Level of Service B
Analysis Period (min) 15
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: 3: Daly Ave. & Casino W Dr





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	586	457	910	742	641	510
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	13	13	12
Storage Length (ft)	150			250	0	0
Storage Lanes	2			1	1	1
Taper Length (ft)	300			150	25	25
Lane Util. Factor	0.97	0.95	0.95	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3467	3539	3539	1517	1847	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3467	3539	3539	1517	1847	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				13		7
Link Speed (mph)		35	35		35	
Link Distance (ft)		1214	792		3028	
Travel Time (s)		23.6	15.4		59.0	
Peak Hour Factor	0.90	0.90	0.95	0.90	0.95	0.90
Heavy Vehicles (%)	1%	2%	2%	10%	1%	2%
Adj. Flow (vph)	651	508	958	824	675	567
Shared Lane Traffic (%)						
Lane Group Flow (vph)	651	508	958	824	675	567
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	0.96	0.96	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	1	1	1	1	1
Detector Template						
Leading Detector (ft)	30	5	5	30	30	30
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	30	5	5	30	30	30
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot			pm+ov		pm+ov
Protected Phases	7	4	8	6	6	7
Permitted Phases				8		6
Detector Phase	7	4	8	6	6	7
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0	19.0	21.0	21.0	9.0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Total Split (s)	21.0	46.0	25.0	34.0	34.0	21.0
Total Split (%)	26.3%	57.5%	31.3%	42.5%	42.5%	26.3%
Maximum Green (s)	16.0	41.0	20.0	29.0	29.0	16.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	5.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead		Lag			Lead
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	C-Min	C-Min	Min	Min	Min
Act Effct Green (s)	16.0	42.0	21.0	55.0	30.0	51.0
Actuated g/C Ratio	0.20	0.52	0.26	0.69	0.38	0.64
v/c Ratio	0.94	0.27	1.03	0.79	0.97	0.56
Control Delay	49.7	17.6	48.5	18.8	55.3	10.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.7	17.6	48.5	18.8	55.3	10.7
LOS	D	B	D	B	E	B
Approach Delay		35.6	34.8		34.9	
Approach LOS		D	C		C	
90th %ile Green (s)	16.0	41.0	20.0	29.0	29.0	16.0
90th %ile Term Code	Max	Coord	Coord	Max	Max	Max
70th %ile Green (s)	16.0	41.0	20.0	29.0	29.0	16.0
70th %ile Term Code	Max	Coord	Coord	Max	Max	Max
50th %ile Green (s)	16.0	41.0	20.0	29.0	29.0	16.0
50th %ile Term Code	Max	Coord	Coord	Max	Max	Max
30th %ile Green (s)	16.0	41.0	20.0	29.0	29.0	16.0
30th %ile Term Code	Max	Coord	Coord	Max	Max	Max
10th %ile Green (s)	16.0	41.0	20.0	29.0	29.0	16.0
10th %ile Term Code	Max	Coord	Coord	Max	Max	Max
Stops (vph)	538	376	718	726	540	271
Fuel Used(gal)	15	8	20	13	25	14
CO Emissions (g/hr)	1056	592	1370	877	1767	1000
NOx Emissions (g/hr)	205	115	267	171	344	194
VOC Emissions (g/hr)	245	137	317	203	410	232
Dilemma Vehicles (#)	0	15	80	0	0	0
Queue Length 50th (ft)	181	122	~213	451	325	139
Queue Length 95th (ft)	#273	161	m#330	m510	#549	223
Internal Link Dist (ft)		1134	712		2948	
Turn Bay Length (ft)	150			250		
Base Capacity (vph)	693	1858	929	1047	693	1012
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	0.94	0.27	1.03	0.79	0.97	0.56

Intersection Summary

Area Type: Other
Cycle Length: 80

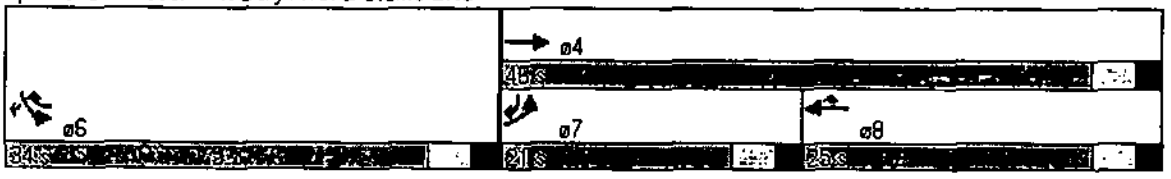
Actuated Cycle Length: 80
Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.03
Intersection Signal Delay: 35.1 Intersection LOS: D
Intersection Capacity Utilization 87.4% ICU Level of Service E
Analysis Period (min) 15

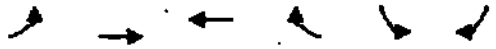
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

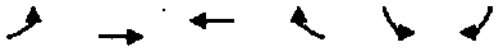
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Daly Ave. & Stefko Blvd





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	203	998	1366	54	50	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300			0	0	0
Storage Lanes	1			1	2	1
Taper Length (ft)	75			25	25	25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.97	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	3574	3539	1583	3433	1583
Flt Permitted	0.082				0.950	
Satd. Flow (perm)	153	3574	3539	1583	3433	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				60		114
Link Speed (mph)		35	35		30	
Link Distance (ft)		578	1214		556	
Travel Time (s)		11.3	23.6		12.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	1%	2%	2%	2%	2%
Adj. Flow (vph)	226	1109	1518	60	56	114
Shared Lane Traffic (%)						
Lane Group Flow (vph)	226	1109	1518	60	56	114
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	1	2	1	1	1
Detector Template	Left				Left	Right
Leading Detector (ft)	30	0	94	0	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	30	0	0	0	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			
Detector 2 Size(ft)			0			
Detector 2 Type			Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)			0.0			
Turn Type	pm+pt			pm+ov		Perm
Protected Phases	7	4	8	6	6	
Permitted Phases	4			8		6



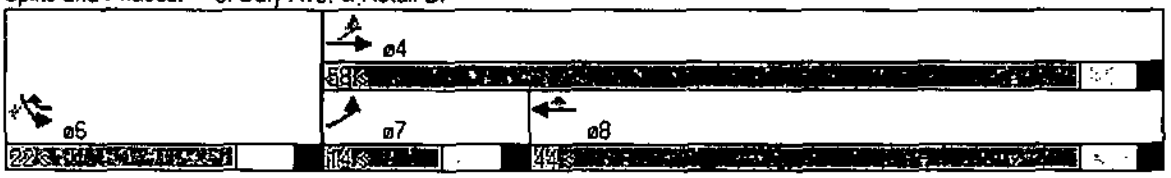
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase	7	4	8	6	6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	14.0	58.0	44.0	22.0	22.0	22.0
Total Split (%)	17.5%	72.5%	55.0%	27.5%	27.5%	27.5%
Maximum Green (s)	8.0	52.0	38.0	16.0	16.0	16.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	C-Min	C-Min	Min	Min	Min
Walk Time (s)		5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0	0
Act Effct Green (s)	60.8	60.8	43.0	56.2	7.2	7.2
Actuated g/C Ratio	0.76	0.76	0.54	0.70	0.09	0.09
v/c Ratio	0.64	0.41	0.80	0.05	0.18	0.46
Control Delay	22.7	2.4	12.2	0.2	34.2	13.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.7	2.4	12.2	0.2	34.2	13.6
LOS	C	A	B	A	C	B
Approach Delay		5.8	11.7		20.4	
Approach LOS		A	B		C	
90th %ile Green (s)	13.7	57.7	38.0	10.3	10.3	10.3
90th %ile Term Code	Max	Coord	Coord	Gap	Gap	Gap
70th %ile Green (s)	14.4	60.6	40.2	7.4	7.4	7.4
70th %ile Term Code	Gap	Coord	Coord	Gap	Gap	Gap
50th %ile Green (s)	12.5	61.3	42.8	6.7	6.7	6.7
50th %ile Term Code	Gap	Coord	Coord	Gap	Gap	Gap
30th %ile Green (s)	10.0	61.9	45.9	6.1	6.1	6.1
30th %ile Term Code	Gap	Coord	Coord	Gap	Gap	Gap
10th %ile Green (s)	8.3	62.5	48.2	5.5	5.5	5.5
10th %ile Term Code	Gap	Coord	Coord	Gap	Gap	Gap
Stops (vph)	161	215	840	1	46	22
Fuel Used(gal)	4	10	22	0	1	1
CO Emissions (g/hr)	256	667	1515	34	57	60
NOx Emissions (g/hr)	50	130	295	7	11	12
VOC Emissions (g/hr)	59	155	351	8	13	14
Dilemma Vehicles (#)	0	16	62	0	0	0
Queue Length 50th (ft)	18	15	74	0	13	0
Queue Length 95th (ft)	91	17	m407	m0	29	45
Internal Link Dist (ft)		498	1134		476	
Turn Bay Length (ft)	300					
Base Capacity (vph)	354	2716	1903	1298	687	408
Starvation Cap Reductn	0	0	0	0	0	0

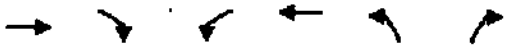
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.41	0.80	0.05	0.08	0.28

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 46 (58%), Referenced to phase 4:EBTL and 8:WBT, Start of Yellow
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 9.7 Intersection LOS: A
Intersection Capacity Utilization 67.3% ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Daly Ave. & Retail Dr





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↱	↰	↑	↰	↱
Volume (vph)	909	113	338	1128	161	291
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	11	12
Storage Length (ft)		0	200		0	0
Storage Lanes		1	1		1	1
Taper Length (ft)		25	200		25	25
Lane Util. Factor	0.95	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3574	1652	1787	1881	1728	1599
Flt Permitted			0.189		0.950	
Satd. Flow (perm)	3574	1652	356	1881	1728	1599
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		133				342
Link Speed (mph)	35			35	30	
Link Distance (ft)	1771			454	540	
Travel Time (s)	34.5			8.8	12.3	
Peak Hour Factor	0.95	0.85	0.85	0.90	0.85	0.85
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	957	133	398	1253	189	342
Shared Lane Traffic (%)						
Lane Group Flow (vph)	957	133	398	1253	189	342
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	11	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	0.96	1.00	1.00	1.04	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1	1	1	1	1	1
Detector Template						
Leading Detector (ft)	5	30	30	0	30	30
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	5	30	30	0	30	30
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type		Perm	pm+pt			Perm
Protected Phases	2		1	6	8	
Permitted Phases		2	6			8
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	21.0	9.0	21.0	20.0	20.0

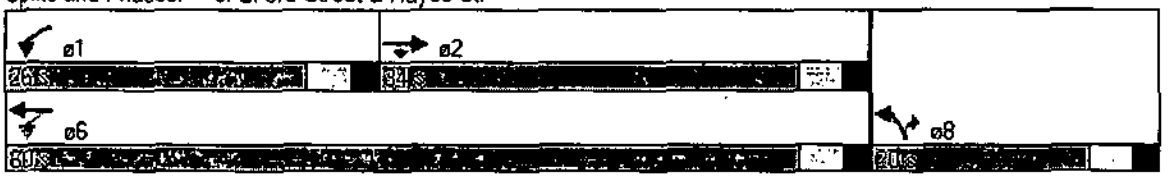
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Split (s)	34.0	34.0	26.0	60.0	20.0	20.0
Total Split (%)	42.5%	42.5%	32.5%	75.0%	25.0%	25.0%
Maximum Green (s)	29.0	29.0	21.0	55.0	15.0	15.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Min	C-Min	Min	C-Min	Min	Min
Act Effct Green (s)	39.1	39.1	58.1	58.1	13.9	13.9
Actuated g/C Ratio	0.49	0.49	0.73	0.73	0.17	0.17
v/c Ratio	0.55	0.15	0.76	0.92	0.63	0.61
Control Delay	17.4	3.7	15.0	18.9	40.2	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.4	3.7	15.0	18.9	40.2	8.7
LOS	B	A	B	B	D	A
Approach Delay	15.7			18.0	19.9	
Approach LOS	B			B	B	
90th %ile Green (s)	29.0	29.0	21.0	55.0	15.0	15.0
90th %ile Term Code	Coord	Coord	Max	Coord	Max	Max
70th %ile Green (s)	32.5	32.5	17.5	55.0	15.0	15.0
70th %ile Term Code	Coord	Coord	Gap	Coord	Max	Max
50th %ile Green (s)	37.7	37.7	13.4	56.1	13.9	13.9
50th %ile Term Code	Coord	Coord	Gap	Coord	Gap	Gap
30th %ile Green (s)	43.1	43.1	10.1	58.2	11.8	11.8
30th %ile Term Code	Coord	Coord	Gap	Coord	Gap	Gap
10th %ile Green (s)	48.4	48.4	8.0	61.4	8.6	8.6
10th %ile Term Code	Coord	Coord	Gap	Coord	Gap	Gap
Stops (vph)	628	15	153	759	145	37
Fuel Used(gal)	20	2	5	18	3	2
CO Emissions (g/hr)	1368	115	329	1290	196	136
NOx Emissions (g/hr)	266	22	64	251	38	26
VOC Emissions (g/hr)	317	27	76	299	45	31
Dilemma Vehicles (#)	57	0	0	5	0	0
Queue Length 50th (ft)	168	0	45	688	87	0
Queue Length 95th (ft)	278	28	m76	#910	140	53
Internal Link Dist (ft)	1691			374	460	
Turn Bay Length (ft)			200			
Base Capacity (vph)	1749	876	652	1367	346	593
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	0.55	0.15	0.61	0.92	0.55	0.58

Intersection Summary

Area Type: Other
Cycle Length: 80

Actuated Cycle Length: 80
Offset: 2 (3%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.92
Intersection Signal Delay: 17.5 Intersection LOS: B
Intersection Capacity Utilization 75.0% ICU Level of Service D
Analysis Period (min) 15
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: 6: E. 3rd Street & Hayes St.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	198	1	366	1	2	1	158	1053	1	1	802	169
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	13	15	15	15	12	12	12	12	12	12
Storage Length (ft)	0		0	0		0	125		0	125		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25		25	25		25	75		25	75		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.966						0.972	
Flt Protected		0.953			0.988		0.950			0.950		
Satd. Flow (prot)	0	1793	1652	0	1975	0	1770	3574	0	1787	3474	0
Flt Permitted		0.725			0.935		0.148			0.242		
Satd. Flow (perm)	0	1364	1652	0	1869	0	276	3574	0	455	3474	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			376		1						45	
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		1014			565			3028			1065	
Travel Time (s)		23.0			12.8			59.0			20.7	
Peak Hour Factor	0.95	0.85	0.90	0.85	0.85	0.85	0.85	0.90	0.85	0.85	0.80	0.75
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	1%	1%	1%	1%	1%
Adj. Flow (vph)	208	1	407	1	2	1	186	1170	1	1	1002	225
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	209	407	0	4	0	186	1171	0	1	1227	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	0.96	0.88	0.88	0.88	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50	50	50	50		50	0		50	0	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	50	50	50	50	50		50	0		50	0	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm		Perm	Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0		8.0	22.0		22.0	22.0	

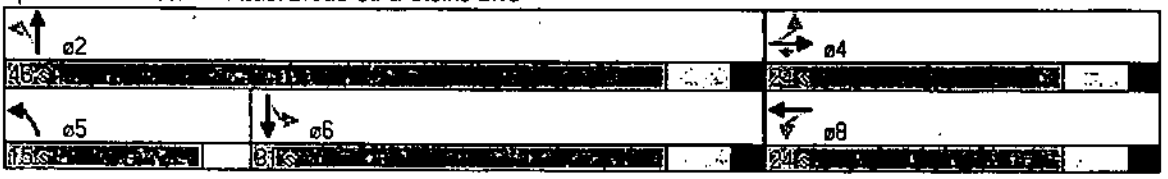
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	24.0	24.0	24.0	24.0	24.0	0.0	15.0	46.0	0.0	31.0	31.0	0.0
Total Split (%)	34.3%	34.3%	34.3%	34.3%	34.3%	0.0%	21.4%	65.7%	0.0%	44.3%	44.3%	0.0%
Maximum Green (s)	18.0	18.0	18.0	18.0	18.0		12.0	40.0		25.0	25.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		0.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	0.0	1.0	-2.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min	Min	None	None		Min	Min		Min	Min	
Act Effct Green (s)		16.1	16.1		16.1		38.9	38.9		26.1	26.1	
Actuated g/C Ratio		0.25	0.25		0.25		0.62	0.62		0.41	0.41	
v/c Ratio		0.60	0.58		0.01		0.49	0.53		0.01	0.84	
Control Delay		29.3	7.1		16.7		11.4	8.5		13.0	24.1	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		29.3	7.1		16.7		11.4	8.5		13.0	24.1	
LOS		C	A		B		B	A		B	C	
Approach Delay		14.6			16.7			8.9			24.1	
Approach LOS		B			B			A			C	
90th %ile Green (s)	18.0	18.0	18.0	18.0	18.0		12.0	40.0		25.0	25.0	
90th %ile Term Code	Max	Max	Max	Hold	Hold		Max	Hold		Max	Max	
70th %ile Green (s)	18.0	18.0	18.0	18.0	18.0		11.6	39.6		25.0	25.0	
70th %ile Term Code	Max	Max	Max	Hold	Hold		Gap	Hold		Max	Max	
50th %ile Green (s)	15.7	15.7	15.7	15.7	15.7		10.2	38.2		25.0	25.0	
50th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Gap	Hold		Max	Max	
30th %ile Green (s)	11.9	11.9	11.9	11.9	11.9		8.8	36.8		25.0	25.0	
30th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Gap	Hold		Max	Max	
10th %ile Green (s)	8.3	8.3	8.3	8.3	8.3		6.8	29.7		19.9	19.9	
10th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Gap	Hold		Gap	Gap	
Stops (vph)		164	57		3		65	544		2	757	
Fuel Used(gal)		4	4		0		4	29		0	18	
CO Emissions (g/hr)		255	261		3		301	2023		2	1251	
NOx Emissions (g/hr)		50	51		1		59	394		0	243	
VOC Emissions (g/hr)		59	61		1		70	469		0	290	
Dilemma Vehicles (#)		0	0		0		0	82		0	74	
Queue Length 50th (ft)		72	9		1		29	125		0	218	
Queue Length 95th (ft)		130	73		7		59	189		3	273	
Internal Link Dist (ft)		934			485			2948			985	
Turn Bay Length (ft)							125			125		
Base Capacity (vph)		409	759		562		405	2269		193	1498	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.51	0.54		0.01		0.46	0.52		0.01	0.82	

Intersection Summary

Area Type: Other
Cycle Length: 70

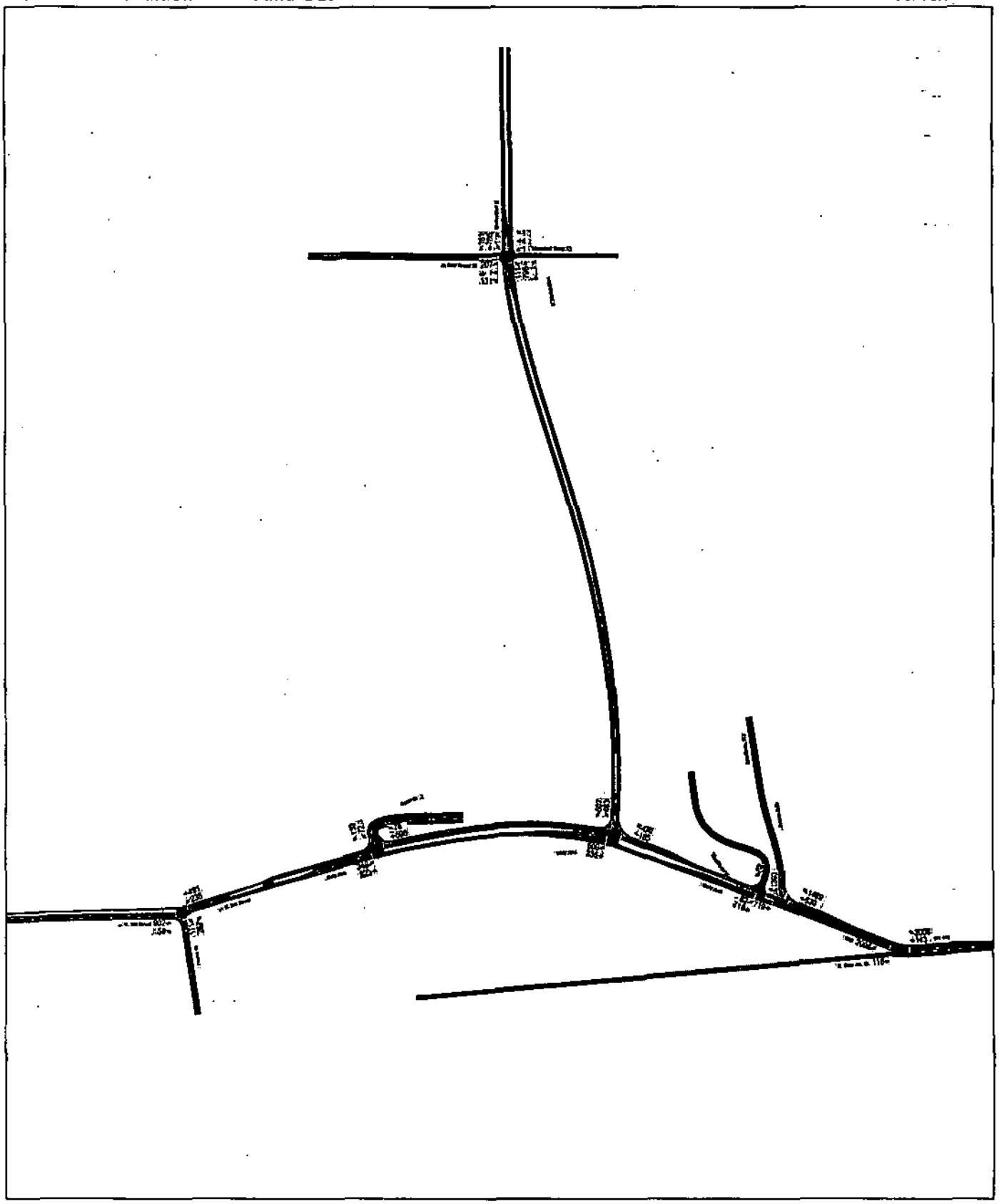
Actuated Cycle Length: 63.2
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 15.8 Intersection LOS: B
Intersection Capacity Utilization 64.0% ICU Level of Service C
Analysis Period (min) 15
90th %ile Actuated Cycle: 70
70th %ile Actuated Cycle: 69.6
50th %ile Actuated Cycle: 65.9
30th %ile Actuated Cycle: 60.7
10th %ile Actuated Cycle: 50

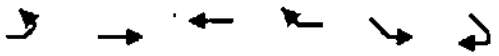
Splits and Phases: 7: East Broad St. & Stefko Blvd



PEAK SATURDAY HOUR – 2018 BUILD CONDITION

Map - Sands Bethworks Development - Peak SAT Hour
2018 Build Condition - Full Build Out 10/18/2006





Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑	↑	↱↱	↰↰	
Volume (vph)	0	116	143	2008	2098	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	15	13	13	13	12
Storage Length (ft)	0			250	0	0
Storage Lanes	0			1	1	0
Taper Length (ft)	25			150	150	25
Lane Util. Factor	1.00	1.00	1.00	0.88	0.97	1.00
Frt				*0.950		
Flt Protected					0.950	
Satd. Flow (prot)	0	2049	1925	3218	3547	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	2049	1925	3218	3547	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				1920		
Link Speed (mph)		30	35		35	
Link Distance (ft)		2482	1509		672	
Travel Time (s)		56.4	29.4		13.1	
Peak Hour Factor	0.88	0.90	0.85	0.90	0.95	0.90
Heavy Vehicles (%)	0%	2%	2%	2%	2%	0%
Adj. Flow (vph)	0	129	168	2231	2208	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	129	168	2231	2208	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		26	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	0.88	0.96	0.96	0.96	1.00
Turning Speed (mph)	15			9	25	9
Number of Detectors		1	1	1	1	
Detector Template						
Leading Detector (ft)		50	50	0	0	
Trailing Detector (ft)		0	0	0	0	
Detector 1 Position(ft)		0	0	0	0	
Detector 1 Size(ft)		50	50	0	0	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0	
Turn Type				Free		
Protected Phases		1	1		4	
Permitted Phases		1		Free		
Detector Phase		1	1		4	
Switch Phase						
Minimum Initial (s)		4.0	4.0		4.0	
Minimum Split (s)		10.0	10.0		22.0	

Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Total Split (s)	0.0	19.0	19.0	0.0	81.0	0.0
Total Split (%)	0.0%	19.0%	19.0%	0.0%	81.0%	0.0%
Maximum Green (s)		13.0	13.0		75.0	
Yellow Time (s)		4.0	4.0		4.0	
All-Red Time (s)		2.0	2.0		2.0	
Lost Time Adjust (s)	0.0	-2.0	-2.0	-2.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	2.0	6.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	
Recall Mode		Min	Min		C-Min	
Act Effct Green (s)		14.2	14.2	100.0	75.8	
Actuated g/C Ratio		0.14	0.14	1.00	0.76	
v/c Ratio		0.44	0.61	0.69	0.82	
Control Delay		44.1	50.3	1.3	6.7	
Queue Delay		0.0	0.0	0.0	0.2	
Total Delay		44.1	50.3	1.3	7.0	
LOS		D	D	A	A	
Approach Delay		44.1	47		7.0	
Approach LOS		D	A		A	
90th %ile Green (s)		13.0	13.0		75.0	
90th %ile Term Code		Max	Max		Coord	
70th %ile Green (s)		13.4	13.4		74.6	
70th %ile Term Code		Max	Max		Coord	
50th %ile Green (s)		13.9	13.9		74.1	
50th %ile Term Code		Gap	Gap		Coord	
30th %ile Green (s)		11.9	11.9		76.1	
30th %ile Term Code		Gap	Gap		Coord	
10th %ile Green (s)		8.9	8.9		79.1	
10th %ile Term Code		Gap	Gap		Coord	
Stops (vph)		103	132	1	923	
Fuel Used(gal)		4	4	22	20	
CO Emissions (g/hr)		269	281	1565	1398	
NOx Emissions (g/hr)		52	55	305	272	
VOC Emissions (g/hr)		62	65	363	324	
Dilemma Vehicles (#)		0	7	0	0	
Queue Length 50th (ft)		75	100	0	342	
Queue Length 95th (ft)		133	159	0	325	
Internal Link Dist (ft)		2402	1429		592	
Turn Bay Length (ft)				250		
Base Capacity (vph)		313	294	3218	2697	
Starvation Cap Reductn		0	0	0	80	
Spillback Cap Reductn		0	0	0	0	
Storage Cap Reductn		0	0	0	0	
Reduced v/c Ratio		0.41	0.57	0.69	0.84	

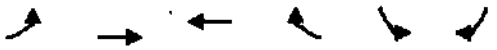
Intersection Summary

Area Type: Other
Cycle Length: 100

Actuated Cycle Length: 100
Offset: 51 (51%), Referenced to phase 4:SEL, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 6.8 Intersection LOS: A
Intersection Capacity Utilization 75.7% ICU Level of Service D
Analysis Period (min) 15
* User Entered Value

Splits and Phases: 1: East 4th. St. & Daly Ave.

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR			
Lane Configurations		↑↑	↑↑	↱	↰↑				
Volume (vph)	0	719	539	1469	1393	0			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900			
Storage Length (ft)	0			200	0	0			
Storage Lanes	0			1	2	0			
Taper Length (ft)	25			150	25	25			
Lane Util. Factor	1.00	0.95	0.95	1.00	0.97	1.00			
Frt				0.850					
Flt Protected					0.950				
Satd. Flow (prot)	0	3539	3539	1770	3433	0			
Flt Permitted					0.950				
Satd. Flow (perm)	0	3539	3539	1770	3433	0			
Right Turn on Red				Yes		Yes			
Satd. Flow (RTOR)				1091					
Link Speed (mph)		35	35		30				
Link Distance (ft)		114	672		621				
Travel Time (s)		2.2	13.1		14.1				
Peak Hour Factor	0.92	0.95	0.90	0.90	0.90	0.92			
Adj. Flow (vph)	0	757	599	1632	1548	0			
Shared Lane Traffic (%)									
Lane Group Flow (vph)	0	757	599	1632	1548	0			
Enter Blocked Intersection	No	No	No	No	No	No			
Lane Alignment	Left	Left	Left	Right	Left	Right			
Median Width(ft)		0	0		24				
Link Offset(ft)		0	0		0				
Crosswalk Width(ft)		16	16		16				
Two way Left Turn Lane									
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00			
Turning Speed (mph)	15			9	15	9			
Number of Detectors		1	1	1	1				
Detector Template					Left				
Leading Detector (ft)		0	0	0	30				
Trailing Detector (ft)		0	0	0	0				
Detector 1 Position(ft)		0	0	0	0				
Detector 1 Size(ft)		0	0	0	30				
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel									
Detector 1 Extend (s)		0.0	0.0	0.0	0.0				
Detector 1 Queue (s)		0.0	0.0	0.0	0.0				
Detector 1 Delay (s)		0.0	0.0	0.0	0.0				
Turn Type				Free					
Protected Phases		2	2		4		6	7	
Permitted Phases				Free					
Detector Phase		2	2		4				
Switch Phase									
Minimum Initial (s)		4.0	4.0		4.0		4.0	4.0	
Minimum Split (s)		22.0	22.0		22.0		22.0	10.0	
Total Split (s)	0.0	37.0	37.0	0.0	63.0	0.0	37.0	63.0	
Total Split (%)	0.0%	37.0%	37.0%	0.0%	63.0%	0.0%	37%	63%	



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	ø6	ø7
Maximum Green (s)		31.0	31.0		57.0		31.0	57.0
Yellow Time (s)		4.0	4.0		4.0		4.0	4.0
All-Red Time (s)		2.0	2.0		2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	4.0		
Lead/Lag								
Lead-Lag Optimize?								
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0
Recall Mode		C-Min	C-Min		Min		C-Min	Min
Walk Time (s)		5.0	5.0		5.0		5.0	
Flash Dont Walk (s)		11.0	11.0		11.0		11.0	
Pedestrian Calls (#/hr)		0	0		0		0	
Act Effct Green (s)		34.2	34.2	100.0	53.8			
Actuated g/C Ratio		0.34	0.34	1.00	0.54			
v/c Ratio		0.63	0.50	0.92	0.84			
Control Delay		2.8	28.1	8.4	24.1			
Queue Delay		0.0	0.0	0.0	0.0			
Total Delay		2.8	28.1	8.4	24.1			
LOS		A	C	A	C			
Approach Delay		2.8	13.7		24.1			
Approach LOS		A	B		C			
90th %ile Green (s)		31.0	31.0		57.0		31.0	57.0
90th %ile Term Code		Coord	Coord		Max		Coord	Hold
70th %ile Green (s)		31.2	31.2		56.8		31.2	56.8
70th %ile Term Code		Coord	Coord		Gap		Coord	Hold
50th %ile Green (s)		32.6	32.6		55.4		32.6	55.4
50th %ile Term Code		Coord	Coord		Gap		Coord	Hold
30th %ile Green (s)		35.5	35.5		52.5		35.5	52.5
30th %ile Term Code		Coord	Coord		Gap		Coord	Hold
10th %ile Green (s)		40.7	40.7		47.3		40.7	47.3
10th %ile Term Code		Coord	Coord		Gap		Coord	Hold
Stops (vph)		11	418	5	1110			
Fuel Used(gal)		1	9	10	23			
CO Emissions (g/hr)		76	618	676	1641			
NOx Emissions (g/hr)		15	120	131	319			
VOC Emissions (g/hr)		18	143	157	380			
Dilemma Vehicles (#)		19	27	0	0			
Queue Length 50th (ft)		2	162	0	390			
Queue Length 95th (ft)		9	221	#77	468			
Internal Link Dist (ft)		34	592		541			
Turn Bay Length (ft)				200				
Base Capacity (vph)		1210	1210	1770	1957			
Starvation Cap Reductn		7	0	0	0			
Spillback Cap Reductn		0	0	0	2			
Storage Cap Reductn		0	0	0	0			
Reduced v/c Ratio		0.63	0.50	0.92	0.79			

Intersection Summary

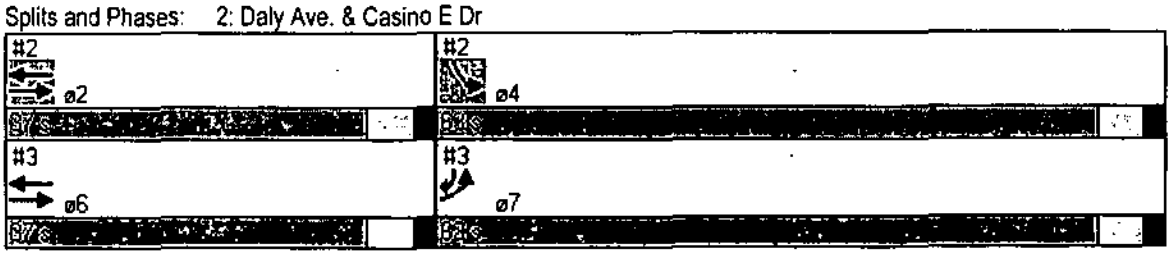
Area Type: Other

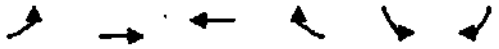
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 82 (82%), Referenced to phase 2:EBWB and 6:, Start of Yellow
Natural Cycle: 55
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.92
Intersection Signal Delay: 15.4 Intersection LOS: B
Intersection Capacity Utilization 69.6% ICU Level of Service C
Analysis Period (min) 15

* User Entered Value

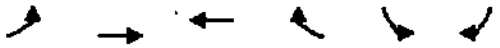
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Daly Ave. & Casino E Dr





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	ø2	ø4
Lane Configurations								
Volume (vph)	82	719	539	0	0	82		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Storage Length (ft)	320			0	0	0		
Storage Lanes	1			0	0	2		
Taper Length (ft)	150			25	25	25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	0.88		
Frt						0.850		
Flt Protected	0.950							
Satd. Flow (prot)	1770	3539	3539	0	0	2787		
Flt Permitted	0.950							
Satd. Flow (perm)	1770	3539	3539	0	0	2787		
Right Turn on Red				Yes		Yes		
Satd. Flow (RTOR)						147		
Link Speed (mph)		35	35		30			
Link Distance (ft)		792	114		690			
Travel Time (s)		15.4	2.2		15.7			
Peak Hour Factor	0.90	0.95	0.90	0.92	0.92	0.90		
Adj. Flow (vph)	91	757	599	0	0	91		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	91	757	599	0	0	91		
Enter Blocked Intersection	No	No	No	No	No	No		
Lane Alignment	Left	Left	Left	Right	Left	Right		
Median Width(ft)		12	12		0			
Link Offset(ft)		0	0		0			
Crosswalk Width(ft)		16	16		16			
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Turning Speed (mph)	15			9	15	9		
Number of Detectors	1	2	2			1		
Detector Template	Left	Thru	Thru			Right		
Leading Detector (ft)	20	100	100			20		
Trailing Detector (ft)	0	0	0			0		
Detector 1 Position(ft)	0	0	0			0		
Detector 1 Size(ft)	20	6	6			20		
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex		
Detector 1 Channel								
Detector 1 Extend (s)	0.0	0.0	0.0			0.0		
Detector 1 Queue (s)	0.0	0.0	0.0			0.0		
Detector 1 Delay (s)	0.0	0.0	0.0			0.0		
Detector 2 Position(ft)		94	94					
Detector 2 Size(ft)		6	6					
Detector 2 Type		Cl+Ex	Cl+Ex					
Detector 2 Channel								
Detector 2 Extend (s)		0.0	0.0					
Turn Type	Prot					Over		
Protected Phases	7	6	6			7	2	4
Permitted Phases								
Detector Phase	7	6	6			7		



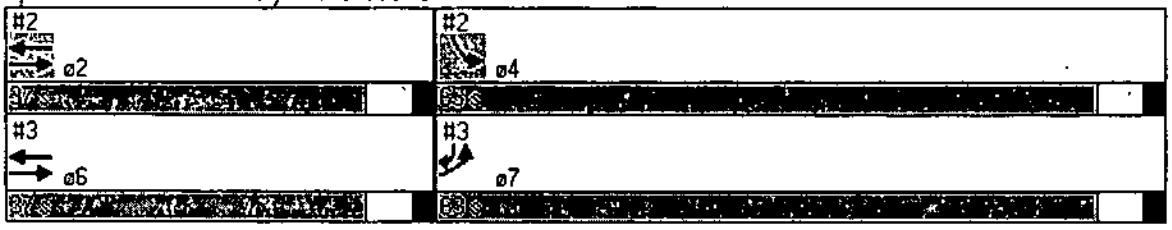
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø2	Ø4
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0			4.0	4.0	4.0
Minimum Split (s)	10.0	22.0	22.0			10.0	22.0	22.0
Total Split (s)	63.0	37.0	37.0	0.0	0.0	63.0	37.0	63.0
Total Split (%)	63.0%	37.0%	37.0%	0.0%	0.0%	63.0%	37%	63%
Maximum Green (s)	57.0	31.0	31.0			57.0	31.0	57.0
Yellow Time (s)	4.0	4.0	4.0			4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0			2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	6.0	6.0	6.0	4.0	4.0	6.0		
Lead/Lag								
Lead-Lag Optimize?								
Vehicle Extension (s)	3.0	3.0	3.0			3.0	3.0	3.0
Recall Mode	Min	C-Min	C-Min			Min	C-Min	Min
Walk Time (s)		5.0	5.0				5.0	5.0
Flash Dont Walk (s)		11.0	11.0				11.0	11.0
Pedestrian Calls (#/hr)		0	0				0	0
Act Effct Green (s)	53.8	34.2	34.2			53.8		
Actuated g/C Ratio	0.54	0.34	0.34			0.54		
v/c Ratio	0.10	0.63	0.50			0.06		
Control Delay	12.9	19.9	2.7			0.4		
Queue Delay	0.0	0.0	0.0			0.0		
Total Delay	12.9	19.9	2.7			0.4		
LOS	B	B	A			A		
Approach Delay		19.1	2.7					
Approach LOS		B	A					
90th %ile Green (s)	57.0	31.0	31.0			57.0	31.0	57.0
90th %ile Term Code	Hold	Coord	Coord			Hold	Coord	Max
70th %ile Green (s)	56.8	31.2	31.2			56.8	31.2	56.8
70th %ile Term Code	Hold	Coord	Coord			Hold	Coord	Gap
50th %ile Green (s)	55.4	32.6	32.6			55.4	32.6	55.4
50th %ile Term Code	Hold	Coord	Coord			Hold	Coord	Gap
30th %ile Green (s)	52.5	35.5	35.5			52.5	35.5	52.5
30th %ile Term Code	Hold	Coord	Coord			Hold	Coord	Gap
10th %ile Green (s)	47.3	40.7	40.7			47.3	40.7	47.3
10th %ile Term Code	Hold	Coord	Coord			Hold	Coord	Gap
Stops (vph)	40	615	13			1		
Fuel Used(gal)	1	12	1			1		
CO Emissions (g/hr)	69	814	59			37		
NOx Emissions (g/hr)	13	158	11			7		
VOC Emissions (g/hr)	16	189	14			9		
Dilemma Vehicles (#)	0	18	22			0		
Queue Length 50th (ft)	29	180	4			0		
Queue Length 95th (ft)	m54	225	6			2		
Internal Link Dist (ft)		712	34		610			
Turn Bay Length (ft)	320							
Base Capacity (vph)	1009	1210	1210			1652		
Starvation Cap Reductn	0	0	7			0		
Spillback Cap Reductn	0	0	0			0		

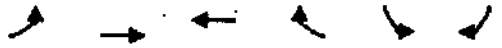
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	ø2	ø4
Storage Cap Reductn	0	0	0			0		
Reduced v/c Ratio	0.09	0.63	0.50			0.06		

Intersection Summary

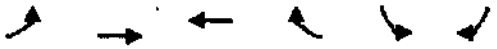
Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 82 (82%), Referenced to phase 2:EBWB and 6:, Start of Yellow
Natural Cycle: 55
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.92
Intersection Signal Delay: 11.6 Intersection LOS: B
Intersection Capacity Utilization 29.4% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Daly Ave. & Casino W Dr





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	509	338	165	438	463	507
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	13	13	12
Storage Length (ft)	150			250	0	0
Storage Lanes	2			1	1	1
Taper Length (ft)	300			150	25	25
Lane Util. Factor	0.97	0.95	0.95	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3467	3574	3574	1636	1829	1599
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3467	3574	3574	1636	1829	1599
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				70		289
Link Speed (mph)		35	35		35	
Link Distance (ft)		1214	792		3028	
Travel Time (s)		23.6	15.4		59.0	
Peak Hour Factor	0.95	0.90	0.95	0.90	0.95	0.90
Heavy Vehicles (%)	1%	1%	1%	2%	2%	1%
Adj. Flow (vph)	536	376	174	487	487	563
Shared Lane Traffic (%)						
Lane Group Flow (vph)	536	376	174	487	487	563
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	0.96	0.96	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	1	1	1	1	1
Detector Template						
Leading Detector (ft)	30	0	5	30	30	30
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	30	0	5	30	30	30
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot			pm+ov		pm+ov
Protected Phases	7	4	8	6	6	7
Permitted Phases				8		6
Detector Phase	7	4	8	6	6	7
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0	19.0	21.0	21.0	9.0



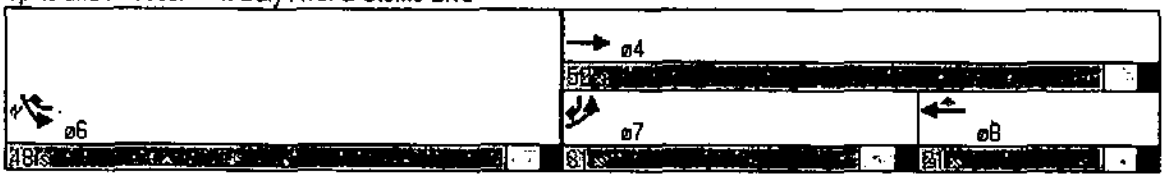
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Total Split (s)	31.0	52.0	21.0	48.0	48.0	31.0
Total Split (%)	31.0%	52.0%	21.0%	48.0%	48.0%	31.0%
Maximum Green (s)	26.0	47.0	16.0	43.0	43.0	26.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	5.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead		Lag			Lead
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	C-Min	C-Min	Min	Min	Min
Act Effct Green (s)	22.3	57.6	30.3	68.7	34.4	61.7
Actuated g/C Ratio	0.22	0.58	0.30	0.69	0.34	0.62
v/c Ratio	0.69	0.18	0.16	0.42	0.77	0.51
Control Delay	24.6	8.5	6.8	9.8	37.4	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.6	8.5	6.8	9.8	37.4	5.4
LOS	C	A	A	A	D	A
Approach Delay		18.0	9.0		20.3	
Approach LOS		B	A		C	
90th %ile Green (s)	28.4	47.5	14.1	42.5	42.5	28.4
90th %ile Term Code	Gap	Coord	Coord	Gap	Gap	Gap
70th %ile Green (s)	25.0	52.3	22.3	37.7	37.7	25.0
70th %ile Term Code	Gap	Coord	Coord	Gap	Gap	Gap
50th %ile Green (s)	22.3	55.9	28.6	34.1	34.1	22.3
50th %ile Term Code	Gap	Coord	Coord	Gap	Gap	Gap
30th %ile Green (s)	19.4	60.4	36.0	29.6	29.6	19.4
30th %ile Term Code	Gap	Coord	Coord	Gap	Gap	Gap
10th %ile Green (s)	16.5	66.8	45.3	23.2	23.2	16.5
10th %ile Term Code	Gap	Coord	Coord	Gap	Gap	Gap
Stops (vph)	435	176	61	316	395	110
Fuel Used(gal)	10	5	2	6	17	12
CO Emissions (g/hr)	719	340	114	402	1162	872
NOx Emissions (g/hr)	140	66	22	78	226	170
VOC Emissions (g/hr)	167	79	26	93	269	202
Dilemma Vehicles (#)	0	10	4	0	0	0
Queue Length 50th (ft)	164	62	5	265	271	74
Queue Length 95th (ft)	114	31	63	403	341	71
Internal Link Dist (ft)		1134	712		2948	
Turn Bay Length (ft)	150			250		
Base Capacity (vph)	918	2058	1095	1289	805	1143
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	0.58	0.18	0.16	0.38	0.60	0.49

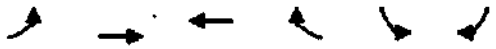
Intersection Summary

Area Type: Other
Cycle Length: 100

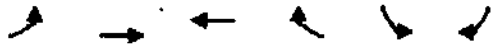
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow, Master Intersection
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 16.6 Intersection LOS: B
Intersection Capacity Utilization 54.7% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 4: Daly Ave. & Stefko Blvd

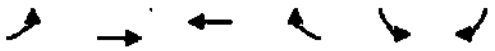




Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	346	823	596	78	72	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300			0	0	0
Storage Lanes	1			1	2	1
Taper Length (ft)	75			25	25	25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.97	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1787	3574	3574	1583	3433	1583
Flt Permitted	0.348				0.950	
Satd. Flow (perm)	655	3574	3574	1583	3433	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				87		144
Link Speed (mph)		35	35		30	
Link Distance (ft)		578	1214		556	
Travel Time (s)		11.3	23.6		12.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%
Adj. Flow (vph)	384	914	662	87	80	144
Shared Lane Traffic (%)						
Lane Group Flow (vph)	384	914	662	87	80	144
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	1	2	1	1	1
Detector Template	Left				Left	Right
Leading Detector (ft)	30	0	94	0	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	30	0	0	0	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			
Detector 2 Size(ft)			0			
Detector 2 Type			Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)			0.0			
Turn Type	pm+pt			pm+ov		Perm
Protected Phases	7	4	8	6	6	
Permitted Phases	4			8		6



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase	7	4	8	6	6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	36.0	76.0	40.0	24.0	24.0	24.0
Total Split (%)	36.0%	76.0%	40.0%	24.0%	24.0%	24.0%
Maximum Green (s)	30.0	70.0	34.0	18.0	18.0	18.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	C-Min	C-Min	Min	Min	Min
Walk Time (s)		5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0	0
Act Effct Green (s)	79.9	79.9	62.6	76.7	8.1	8.1
Actuated g/C Ratio	0.80	0.80	0.63	0.77	0.08	0.08
v/c Ratio	0.59	0.32	0.30	0.07	0.29	0.55
Control Delay	12.3	6.3	11.7	0.8	45.1	15.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.3	6.3	11.7	0.8	45.1	15.8
LOS	B	A	B	A	D	B
Approach Delay		8.1	10.4		26.2	
Approach LOS		A	B		C	
90th %ile Green (s)	15.6	76.3	54.7	11.7	11.7	11.7
90th %ile Term Code	Gap	Coord	Coord	Gap	Gap	Gap
70th %ile Green (s)	12.3	79.5	61.2	8.5	8.5	8.5
70th %ile Term Code	Gap	Coord	Coord	Gap	Gap	Gap
50th %ile Green (s)	10.8	80.3	63.5	7.7	7.7	7.7
50th %ile Term Code	Gap	Coord	Coord	Gap	Gap	Gap
30th %ile Green (s)	9.6	81.1	65.5	6.9	6.9	6.9
30th %ile Term Code	Gap	Coord	Coord	Gap	Gap	Gap
10th %ile Green (s)	8.1	82.2	68.1	5.8	5.8	5.8
10th %ile Term Code	Gap	Coord	Coord	Gap	Gap	Gap
Stops (vph)	195	393	305	4	67	23
Fuel Used(gal)	5	10	9	1	1	1
CO Emissions (g/hr)	343	709	625	51	94	77
NOx Emissions (g/hr)	67	138	122	10	18	15
VOC Emissions (g/hr)	80	164	145	12	22	18
Dilemma Vehicles (#)	0	60	35	0	0	0
Queue Length 50th (ft)	134	125	110	0	25	0
Queue Length 95th (ft)	183	228	194	15	46	56
Internal Link Dist (ft)		498	1134		476	
Turn Bay Length (ft)	300					
Base Capacity (vph)	863	2855	2237	1383	618	403
Starvation Cap Reductn	0	0	0	0	0	0

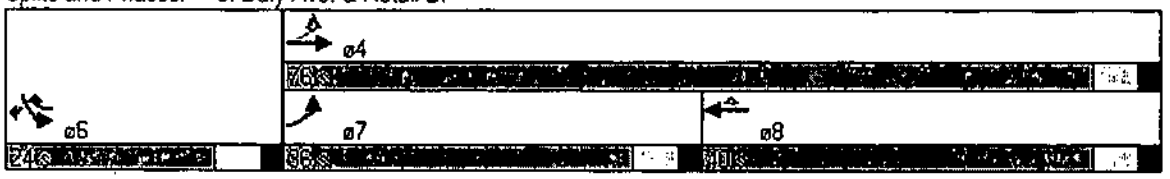


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.32	0.30	0.06	0.13	0.36

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 9 (9%), Referenced to phase 4:EBTL and 8:WBT, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.59
Intersection Signal Delay: 10.7 Intersection LOS: B
Intersection Capacity Utilization 54.0% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 5: Daly Ave. & Retail Dr



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↱	↰	↑	↰	↱
Volume (vph)	902	58	235	491	171	267
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	11	12
Storage Length (ft)		0	200		0	0
Storage Lanes		1	1		1	1
Taper Length (ft)		25	200		25	25
Lane Util. Factor	0.95	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3574	1652	1787	1881	1728	1599
Flt Permitted			0.207		0.950	
Satd. Flow (perm)	3574	1652	389	1881	1728	1599
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		64				297
Link Speed (mph)	35			35	30	
Link Distance (ft)	1771			454	540	
Travel Time (s)	34.5			8.8	12.3	
Peak Hour Factor	0.90	0.90	0.85	0.90	0.85	0.90
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	1002	64	276	546	201	297
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1002	64	276	546	201	297
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	11	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	0.96	1.00	1.00	1.04	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1	1	1	1	1	1
Detector Template						
Leading Detector (ft)	5	30	30	0	30	30
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	5	30	30	0	30	30
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type		Perm	pm+pt			Perm
Protected Phases	2		1	6	8	
Permitted Phases		2	6			8
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	21.0	9.0	21.0	20.0	20.0

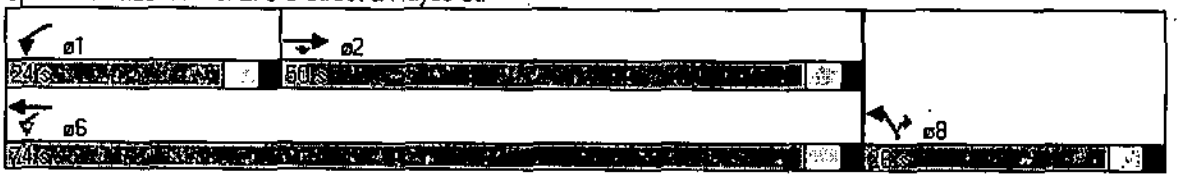
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Split (s)	50.0	50.0	24.0	74.0	26.0	26.0
Total Split (%)	50.0%	50.0%	24.0%	74.0%	26.0%	26.0%
Maximum Green (s)	45.0	45.0	19.0	69.0	21.0	21.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Min	C-Min	Min	C-Min	Min	Min
Act Effct Green (s)	58.3	58.3	74.1	74.1	17.9	17.9
Actuated g/C Ratio	0.58	0.58	0.74	0.74	0.18	0.18
v/c Ratio	0.48	0.06	0.61	0.39	0.65	0.56
Control Delay	14.4	3.8	7.7	4.4	47.4	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.4	3.8	7.7	4.4	47.4	8.3
LOS	B	A	A	A	D	A
Approach Delay	13.8			5.5	24.1	
Approach LOS	B			A	C	
90th %ile Green (s)	46.0	46.0	15.5	66.5	23.5	23.5
90th %ile Term Code	Coord	Coord	Gap	Coord	Gap	Gap
70th %ile Green (s)	53.7	53.7	12.0	70.7	19.3	19.3
70th %ile Term Code	Coord	Coord	Gap	Coord	Gap	Gap
50th %ile Green (s)	57.8	57.8	10.4	73.2	16.8	16.8
50th %ile Term Code	Coord	Coord	Gap	Coord	Gap	Gap
30th %ile Green (s)	61.9	61.9	8.8	75.7	14.3	14.3
30th %ile Term Code	Coord	Coord	Gap	Coord	Gap	Gap
10th %ile Green (s)	67.1	67.1	7.2	79.3	10.7	10.7
10th %ile Term Code	Coord	Coord	Gap	Coord	Gap	Gap
Stops (vph)	515	7	59	200	154	31
Fuel Used(gal)	18	1	3	6	3	2
CO Emissions (g/hr)	1262	59	179	392	225	122
NOx Emissions (g/hr)	245	11	35	76	44	24
VOC Emissions (g/hr)	292	14	41	91	52	28
Dilemma Vehicles (#)	45	0	0	4	0	0
Queue Length 50th (ft)	179	0	8	16	120	0
Queue Length 95th (ft)	304	22	31	335	168	64
Internal Link Dist (ft)	1691			374	460	
Turn Bay Length (ft)			200			
Base Capacity (vph)	2084	990	570	1403	389	590
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	0.48	0.06	0.48	0.39	0.52	0.50

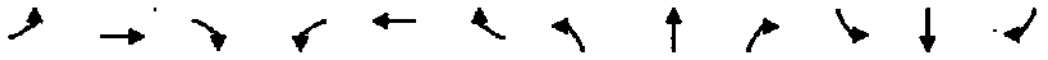
Intersection Summary

Area Type: Other
Cycle Length: 100

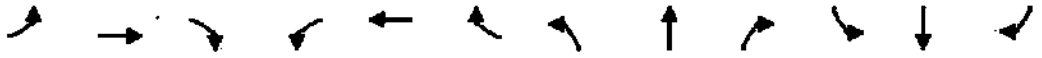
Actuated Cycle Length: 100
Offset: 40 (40%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.65
Intersection Signal Delay: 13.1 Intersection LOS: B
Intersection Capacity Utilization 57.4% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 6: E. 3rd Street & Hayes St.





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	207	1	131	1	4	1	111	796	1	1	786	161
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	13	15	15	15	12	12	12	12	12	12
Storage Length (ft)	0		0	0		0	125		0	125		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25		25	25		25	75		25	75		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.981						0.973	
Flt Protected		0.953			0.993		0.950			0.950		
Satd. Flow (prot)	0	1793	1652	0	2016	0	1787	3574	0	1787	3362	0
Flt Permitted		0.723			0.959		0.157			0.336		
Satd. Flow (perm)	0	1360	1652	0	1947	0	295	3574	0	632	3362	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			146		1						43	
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		1014			565			3028			1065	
Travel Time (s)		23.0			12.8			59.0			20.7	
Peak Hour Factor	0.90	0.85	0.90	0.85	0.85	0.85	0.85	0.95	0.85	0.85	0.90	0.85
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	5%	2%
Adj. Flow (vph)	230	1	146	1	5	1	131	838	1	1	873	189
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	231	146	0	7	0	131	839	0	1	1062	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	0.96	0.88	0.88	0.88	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50	50	50	50		50	0		50	0	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	50	50	50	50	50		50	0		50	0	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm		Perm	Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0		8.0	22.0		22.0	22.0	



Lane Groups	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	24.0	24.0	24.0	24.0	24.0	0.0	15.0	46.0	0.0	31.0	31.0	0.0
Total Split (%)	34.3%	34.3%	34.3%	34.3%	34.3%	0.0%	21.4%	65.7%	0.0%	44.3%	44.3%	0.0%
Maximum Green (s)	18.0	18.0	18.0	18.0	18.0		12.0	40.0		25.0	25.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		0.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	0.0	1.0	-2.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min	Min	None	None		Min	Min		Min	Min	
Act Effct Green (s)		16.4	16.4		16.4		36.5	36.5		24.5	24.5	
Actuated g/C Ratio		0.27	0.27		0.27		0.60	0.60		0.40	0.40	
v/c Ratio		0.63	0.27		0.01		0.35	0.39		0.00	0.77	
Control Delay		29.6	5.4		16.8		8.6	7.4		13.0	20.8	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		29.6	5.4		16.8		8.6	7.4		13.0	20.8	
LOS		C	A		B		A	A		B	C	
Approach Delay		20.2			16.8			7.6			20.8	
Approach LOS		C			B			A			C	
90th %ile Green (s)	18.0	18.0	18.0	18.0	18.0		12.0	40.0		25.0	25.0	
90th %ile Term Code	Max	Max	Max	Hold	Hold		Max	Hold		Max	Max	
70th %ile Green (s)	18.0	18.0	18.0	18.0	18.0		10.4	38.4		25.0	25.0	
70th %ile Term Code	Max	Max	Max	Hold	Hold		Gap	Hold		Max	Max	
50th %ile Green (s)	15.7	15.7	15.7	15.7	15.7		9.1	37.1		25.0	25.0	
50th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Gap	Hold		Max	Max	
30th %ile Green (s)	12.7	12.7	12.7	12.7	12.7		7.8	32.5		21.7	21.7	
30th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Gap	Hold		Gap	Gap	
10th %ile Green (s)	8.5	8.5	8.5	8.5	8.5		6.0	24.8		15.8	15.8	
10th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Gap	Hold		Gap	Gap	
Stops (vph)		173	21		6		42	370		2	730	
Fuel Used(gal)		4	1		0		3	21		0	17	
CO Emissions (g/hr)		269	91		6		205	1496		2	1172	
NOx Emissions (g/hr)		52	18		1		40	291		0	228	
VOC Emissions (g/hr)		62	21		1		48	347		0	272	
Dilemma Vehicles (#)		0	0		0		0	64		0	76	
Queue Length 50th (ft)		79	0		2		19	78		0	172	
Queue Length 95th (ft)		143	37		10		40	121		3	276	
Internal Link Dist (ft)		934			485			2948			985	
Turn Bay Length (ft)							125			125		
Base Capacity (vph)		425	616		609		410	2261		270	1463	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.54	0.24		0.01		0.32	0.37		0.00	0.73	

Intersection Summary

Area Type: Other
Cycle Length: 70

Actuated Cycle Length: 61.1
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 15.4 Intersection LOS: B
Intersection Capacity Utilization 61.2% ICU Level of Service B
Analysis Period (min) 15
90th %ile Actuated Cycle: 70
70th %ile Actuated Cycle: 68.4
50th %ile Actuated Cycle: 64.8
30th %ile Actuated Cycle: 57.2
10th %ile Actuated Cycle: 45.3

Splits and Phases: 7: East Broad St. & Stefko Blvd