

TRAFFIC IMPACT ANALYSIS FOR WRANGLER RIDGE SUBDIVISION

Project Location:

Northeast Quadrant of SW Urish Rd. & SW 17th St.
Topeka, KS 66615

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Proposed Development Conditions

The proposed Wrangler Ridge Subdivision is located within the northeast quadrant of the intersection of SW Urish Rd. and SW 17th St. It consists of approximately 74.62 acres of property with approximately 71.96 acres of developable land and 2.66 acres of right of way being dedicated by plat.



VICINITY MAP

N.T.S.

The existing property contains approximately 22.28 acres of wooded area and 52.26 acres of meadow or undeveloped grassland/cropland. An unnamed tributary dissects the eastern third of the property as it enters the property in the southeast part of the property and continues in the northeasterly direction. Additionally, there is an existing natural drainageway that begins in the north central part of the property and drains to the north and northeast, increasing in depth to the northeast.

The proposed development is planned to be a multi-use planned unit development consisting of commercial, office and institutional and multi-family zoning uses. The total acreages and proposed densities for each proposed zoning use is shown in Table I below.

Table I. Proposed Land Area and Densities By Usage

Proposed Zoning Use	Land Area (Ac.)	Density
Multi-Family (M-2)	39.59 (45.66**)	13 (13/16**) Units/Ac.
Office & Institutional (O&I-2)	6.07 (0**)	64,200 (16) Units/Ac.
Commercial (C-2)	11.04	125,000 S.F. GFA
Commercial (C-4)	15.26	172,500 S.F. GFA

** The 6.07 acres has an option to develop as either O&I-2 or M-2. If developed as M-2, density within this area is proposed at 16 units per acre.

Currently, there is a single access point to the 72 acre property that is located in the northwest portion of the site off of SW Urish Rd. Prior to the improvement of SW 17th St. there was a second access located in the southwest portion of the property off of SW 17th St. That access was removed as part of the SW 17th St. widening project.

The proposed access to the property consists of a collection of a public street, private streets and private entrances. The Planned Unit Development (PUD) document provides allowance for a public street, SW Kingsrow Rd. to be constructed in a north-south route, connecting to SW 17th Street near the center of the parcel and ending at the north property line. Additionally, the PUD allows for the following:

- Lot 1, Block A (C-2 use) - Two access points with one from SW Urish Rd. and one from SW 17th St.
- Lot 2, Block A (O&I-2 use)- One access points from SW Urish Rd.
- Lot 3, Block A (M-2 use) - Four access points, one form SW Urish Rd. & three from SW Kingsrow Rd. (proposed public street)
- Lot 1, Block B (M-2 use) - Two access points from SW Kingsrow Rd.
- Lot 2, Block B (C-4 use) - Two access points from SW 17th St.

Proposed Phasing

The proposed development is currently speculative. There are no developments ready for construction once the property is zoned and platted. Therefore, the timeline for development of the property is basically unknown. It is the intent that the property would be fully developed within the next 10 years, however there is always a possibility that a portion may remain undeveloped within that timeframe. Therefore, for the purposes of this report, full development is assumed to be within 15 years. It is anticipated that the M-2 portion would be developed first, with the O&I property, C-2 and C-4 areas following. A hypothetical timeline is provided below.

Timeline for development:

M-2 zoning – within 2 years

O&I-2 zoning – within 5 years

C-2 Zoning – within 10 years

C-4 Zoning – within 15 years

Existing Conditions

Study Area and Land Uses

As stated previously, the property lies within the northeast quadrant of the intersection of SW 17th St. and SW Urish Rd. In accordance with the City of Topeka 2003 Functional Classification Map, both SW 17th St. and SW Urish Rd. are green colored and therefore classified as minor

arterials. See Figure I below for image clips of the map below. SW 17th St. is the green east-west roadway in the middle of the image and SW Urish Rd. is the north-south roadway to the left side of the image.

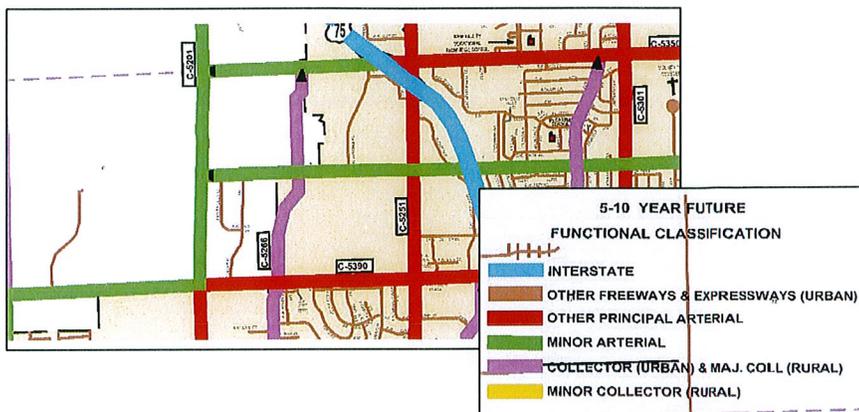


Figure I. Clips from 2003 City of Topeka Functional Classification Map

There is existing right of way dedicated for the extension of SW Kingsrow Rd. from SW 21st St. to SW 17th St. which is south of the property. That segment of roadway is classified as a collector (urban) and is shown as a purple line in the middle of the image above.

The portions of the City and County roadway system that will be most impacted by this development are considered to be SW 17th St. and SW Urish Rd. SW Huntoon will see some impact with a small portion of the traffic generated from the site accessing I-70 from the west in lieu of the south and west. The posted speed limit for both 17th St. along the south property line of the proposed development is 35 mph. SW 17th St. consists of a three lane roadway with 39' of width from back of curb to back of curb. SW Urish Rd. is posted at 40 mph to the north and south of the intersection with SW 17th St. and is comprised of two lanes with 25' in total pavement width and is rural design with open ditches. The intersection of SW Urish Rd. and SW 17th St. is a single lane roundabout with dedicated right turn lanes for the northbound and southbound entries. The roundabout has been constructed for future widening to two lanes in width in the northbound and southbound entrance and exit lanes. The roundabout has a 190' large diameter and 95.5' diameter inner circle diameter.

SW Huntoon St. is an east-west minor arterial roadway located ½ mile north of SW 17th St. Approximately ½ mile of the road from the intersection with SW Urish Rd., east is a rural unimproved roadway with steep ditches and significant vertical changes. The speed limit is posted at 35 mph. From the east end of the unimproved roadway, Huntoon St. widens to a three lane rural section with an improved ditch section on the south side. The south lane is a dedicated right turn lane for the adjacent condominium complex. The roadway improves to a three lane urban section to the east of the condominium complex, prior to the west entrance to the apartment complex. Access to I-470 is provided off of Huntoon with the off-ramp from

southbound I-470 aligned with SW Arvonía Place and the on ramp for northbound I-470 is on the east side of the I-470 overpass bridges.

SW Arvonía Place is a three-lane, 39' back to back of curb street that flows north-south and is approximately 3/4 of a mile east of SW Urish Rd. It intersects with SW 17th St. at the south and SW Huntoon St. at the north. There is a signalized intersection at both ends of SW Arvonía Pl. and it is posted 35 mph. SW Arvonía terminates at 17th St. and is aligned with an entrance to the existing mall. The north end terminates at SW Huntoon and is aligned with the southbound off ramp from I-470. The characteristics of SW Arvonía make it function as a collector street classification although it is not classified on the 2003 map.

The surrounding area is developed as follows:

- North: Rural grassland/farmland and wooded area (Potential future church site)
- South: Residential (fully developed) and undeveloped commercial land to the immediate south and large scale commercial to the southeast (Menards and Westridge Mall)
- East: Large scale commercial (Lowe's, Kohls, etc), largely developed. The SW Arvonía Pl. corridor is a commercial zoned area and is approximately 1/2 developed.
- West: Residential to the southwest and rural grassland/farmland and occasional rural residence to the west and northwest

Aside from what is developed today, the potential additional development surrounding the proposed site includes additional housing to the west (there are street extensions to the north property line within the subdivision to the southwest). The property to the north is owned by a church foundation. It is unclear if the entire parcel will be utilized for a church site or will be subdivided into multiple lots. The undeveloped property to the south is zoned PUD with commercial uses to the east side of the existing Kingsrow right of way. To the west side of Kingsrow, the property is zoned RR-1. The property along SW Arvonía Place is zoned commercial C-4. The property is actively being marketed by the seller's agent.

Site Accessibility

The site is directly accessible from SW 17th St. & SW Urish Rd. These roadways provide direct paths to other minor and major arterial streets to the east, north and south that access the City of Topeka and all of its services. Additionally, SW Arvonía Place and SW Huntoon St. provide access onto and off of I-470 to the north. I-470 to the south is accessible south of SW Huntoon & SW Wanamaker Rd. Another major arterial, SW 21st St. is located to the south approximately 1/2 mile which provides access to the west. Additionally SW 10th is approximately 1 mile to the north and also provides access to the west, K-4 and the I-70 accesses.

SW 17th St. west of the Urish Rd. intersection is reduced to a local road and does not include connection to Indian Hills Rd. to the west.

Currently, Shawnee County is moving forward with the planning stage to widen SW Urish Rd. between SW 21st St. and SW 17th St. and from SW 17th St. to SW Huntoon St. There has also been discussions of widening SW Huntoon St. from SW Urish Rd. east to the current 3-lane section. This project is proposed in the City's project list for the promotion of extending the countywide transportation sales tax initiative. To this date, no defined timetable is known for these projects.

Existing and Proposed Traffic

Existing Traffic Volumes

Manual traffic counts were completed at the roundabout intersection of SW 17th St. & SW Urish Rd. on January 28, 2014 during the morning and afternoon peak hour time periods. Counts were completed in the morning between 7:15 and 8:45 am and in the afternoon between 4:00 and 6:00 pm. The peak hours were established from the data as 7:30-8:30 am and 4:45-5:45 pm. Additionally, traffic counts were completed at the intersection on Saturday, March 28, 2014 during the peak hour, which was established through historical data and extended counting periods, between 12:15 and 1:15 pm. The turning movements are shown in Figures I and II below.

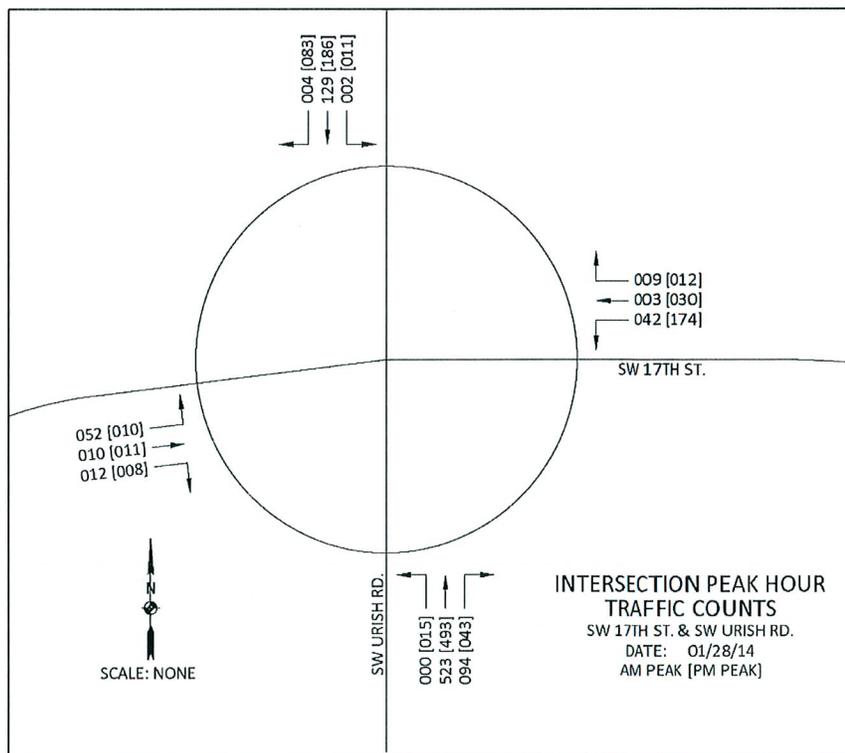


Figure I. Existing Traffic Counts at Intersection - AM Peak [PM Peak]

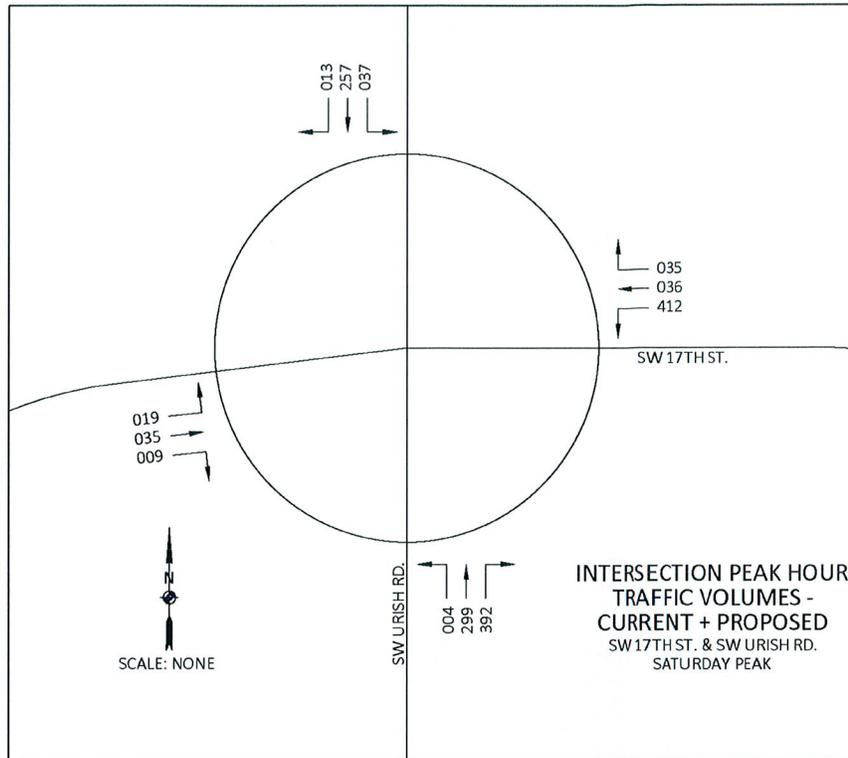


Figure II. Existing Traffic Counts at Intersection - Saturday

The Kansas Department of Transportation completed 24-hour traffic counts on the newly opened SW 17th St. as well as the north and south legs of SW Urish Rd. in May/June of 2013. At that time, the traffic volumes were likely skewed due to construction on SW 21st St., an east-west arterial street located one mile to the south of SW 17th St. Therefore, it can be assumed that the numbers presented are inflated and worst case scenario. A clip of the counts is included as Figure III below. The clip was provided by the Kansas Department of Transportation, Bureau of Transportation Planning and is unofficial at this point until the new maps are released later this spring.

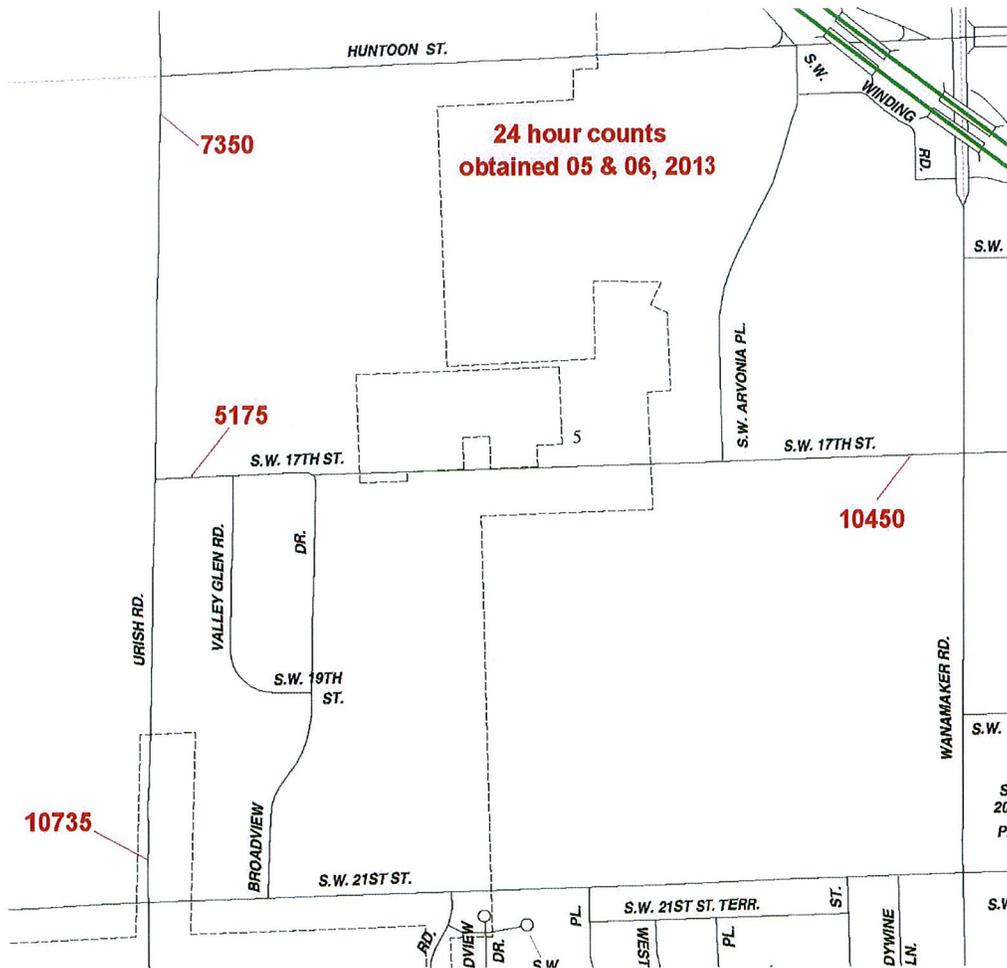


Figure III. 24-Hour Traffic Volumes on SW 17th St. & SW Urish Rd. (Unofficial)

Site Generated Traffic

The method utilized to determine trip generation for the proposed development was the ITE Trip Generation Handbook, 2009 edition. The land uses selected for the model were based on the proposed zoning uses within the defined areas of the property. Without knowing the actual land uses, several land uses were selected for each zoning based on general knowledge of the area and development climate. From the land uses selected, the use generating the most trips per area was utilized for this report. The following land uses were utilized for this report:

- Low-Rise Residential Condo/Townhouse for the M-2 zoning (Land Use Code 231)
- Shopping Center for the C-2 zoning (Land Use Code 820)
- Free-standing Discount Superstore for the C-4 zoning (Land Use Code 813)
- Medical/Dental Office Building or Low-Rise Residential Condo/Townhouse for the O&I-2/M-2 zoning (Land Use Code 720 or 231)

The guidance within the ITE Trip Generation Handbook was also utilized to determine the number of pass-by trips and diverted-linked trips. Due to the location and nature of the development, the diverted-linked trips were not defined for this report. Also, with a site that includes multiple uses, internal capture could be applied to the total new trips to reduce the effect on SW Urish Rd. & SW 17th St. However, internal capture was not considered in this report as it is unclear as to whether the mixed uses will be interconnected with interior development roadways, which would allow the internal movement of vehicles from one usage to another without accessing SW 17th of SW Urish. Therefore, the model considers the worst case scenario for this variable.

Pass-by trip generation did contribute to the report in projecting new trips. Based on the land uses identified above and the historical data provided within the Trip Generation Handbook, the following percentages were established for pass-by traffic for the PM peak hour only (no data provided for AM peak hour). These percentages were also considered applicable for Saturday trip generation as well considering the proposed land uses, the location of the development and local travel characteristics.

- Low-Rise Residential Condo/Townhouse - 0%
- Shopping Center - 25%
- Free-standing Discount Superstore - 28%
- Med./Den. Office Bldg. and Low-Rise Res. Condo/Townhouse - 0%

As discussed previously, the field traffic counts were taken during the weekday AM and PM peak hours as well as the Saturday peak hour for the study. Based on a review of the existing numbers, the most critical peak hours lie within the PM and Saturday periods. Therefore, the analysis is narrowed to the PM and Saturday peak hours and does not discuss the AM peak further. The PM trips generated were determined for each usage during the PM Peak Hour of Adjacent Street. The trips generated on a Saturday were calculated utilizing the peak hour of the generator and assuming it aligned with the Saturday peak hour of traffic on the adjacent street. Trip Generation spreadsheets are included in Appendix A which identifies the land uses, variables used, size of each variable used (based on the proposed densities and building GFA established on the PUD), the fitted curve or average rate equations used, percentages entering/exiting and the total trips generated from the proposed development. Pass-by trip reductions were also calculated and shown in the spreadsheets. The manual does not include pass-by information for Saturdays. However, it seems logical that the percentages would be similar. Therefore, the PM Peak Hour pass-by percentages were also applied to the Saturday peak trip calculations.

The ITE Trip Generation Manual did not include a Saturday peak hour of generator variable. However, there was data available for the High-Rise Residential Condo/Townhouse land use (ITE code 232). Being that there are similarities in the characteristics and demographics of these codes, it was determined that the fitted curve equation for the High-Rise Residential

Condominium/Townhouse land use would be applied to this study for Saturday Peak Hour of Generator calculations.

Based on the information presented, the following new trips and pass-by trips were generated.

Table II. Trips Generation and Pass-By Traffic for Proposed Development – Peak Hour

Land Use	Trips Generated- PM Peak		Trips Generated- Saturday Peak		Pass-By Trips-PM Peak		Pass-By Trips- Saturday Peak	
	Entering	Exiting	Entering	Exiting	Entering	Exiting	Entering	Exiting
Low-Rise Res. Condo/Townhome	233	169	79	105	0	0	0	0
Shopping Center	377	409	526	485	94	102	131	121
Free-Standing Disc. Superstore	368	383	486	486	103	107	136	136
Med./Den. Office Bldg.	55	141	133	100	0	0	0	0
Low-Rise Res. Condo/Townhome	44	32	42	55	0	0	0	0

Table III. Total New Trips Generated from Proposed Development – Peak Hour

Land Use	Trips Generated- PM Peak		Trips Generated- Saturday Peak	
	Entering	Exiting	Entering	Exiting
Low-Rise Res. Condo/Townhome	233	169	79	105
Shopping Center	323	307	395	364
Free-Standing Disc. Superstore	265	276	350	350
Med./Den. Office Bldg.	55	141	133	100
Low-Rise Res. Condo/Townhome	44	32	42	55
TOTAL TRIPS	876	893	957	919

To determine the distribution of the new trips, the first step was to analyze the directional distributions at the intersection of SW 17th St. & SW Urish Rd. Therefore, the distributions were calculated for each direction and are shown on Figure IV.

The distribution of traffic entering and exiting the roundabout during the PM peak hour provided percentages did not seem to replicate the true traffic patterns based on local knowledge of the area and direct experience in the area. Therefore, the entering and exiting percentages were adjusted to represent what is believed to be more realistic for this area.

However, the Saturday peak hour distribution appeared to fit that anticipated for the future conditions and therefore, these percentages were applied as near as possible to the proposed peak hour distribution. Some liberties were taken based on experience and knowledge of the area. The final trip generation distribution for the development is shown in Figure IV below.

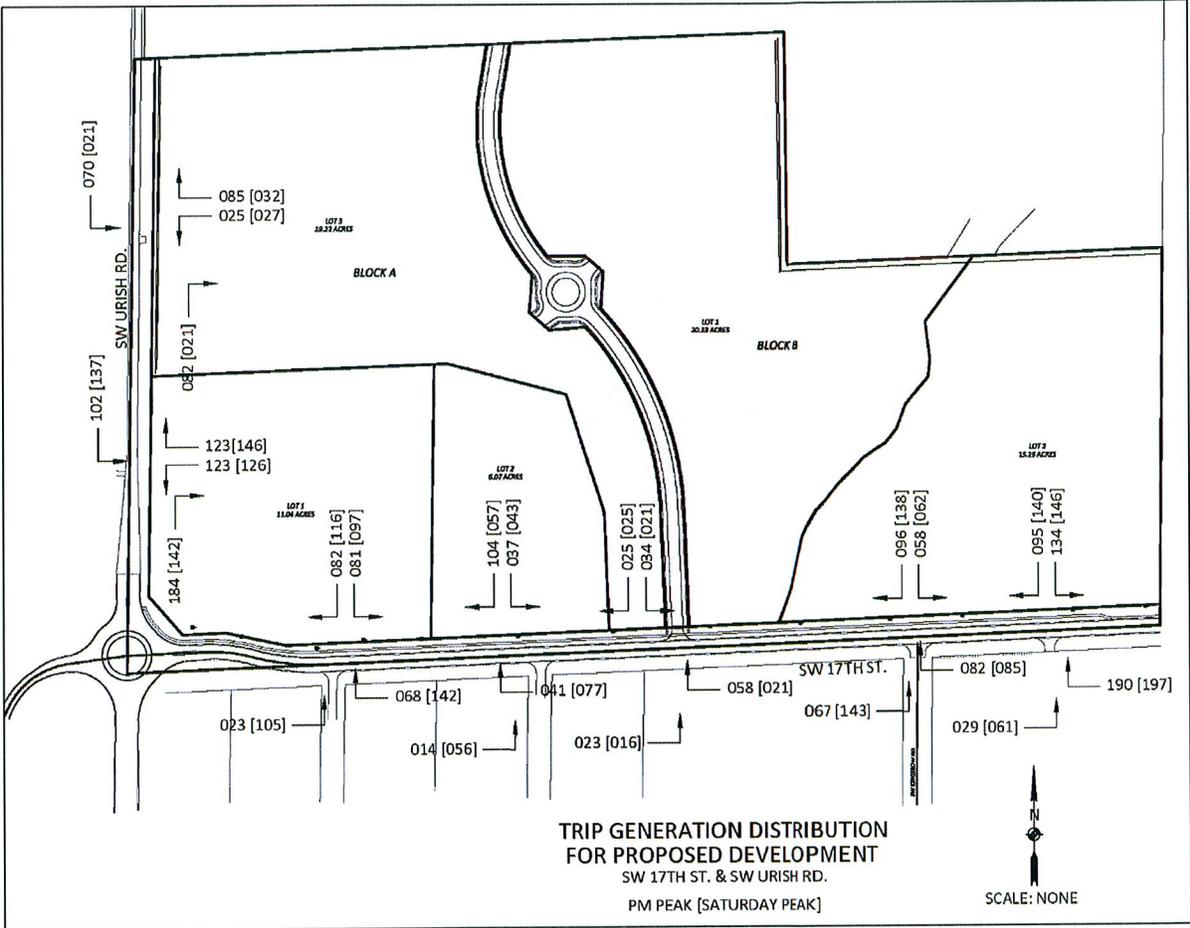


Figure IV. Trip Generation Distribution for Proposed Development

Traffic Volume Forecast

The forecast traffic volume increases for SW 17th & SW Urish Rd. utilized a 1.5% growth rate for this area. From this rate, the peak hour counts were adjusted for a 20-year forecast period which is customary for traffic impact analyses. The final forecasts are located in Appendix A.

Traffic Analysis

With the trips distributed, the development was modeled utilizing SYNCHRO 8 software. The adjacent streets were input as well as some hypothetical entrance locations that were based on the proposed PUD. Each access to the development was input as stop controlled for the access with SW Urish Rd. and SW 17th St. remaining free-flowing. The resulting levels of service at the access intersections and volume to capacity ratio for the SW Urish Rd. and SW 17th St. intersection are provided within Tables IV and V below.

Table IV. Levels of Service of Proposed Development Access Intersections

Access Location	Approach	Exist. + Full Dev Level of Service		Future + Full Dev. Level of Service	
		PM	SAT.	PM	SAT.
NW M-2	Westbound	C	B	C	C
	Northbound	A	A	A	A
	Southbound	A	A	A	A
NW C-2	Westbound	F ¹	C ²	F ¹	D ⁵
	Northbound	A	A	A	A
	Southbound	A	A	A	A
South C-2	Eastbound	A	A ³	A	A ³
	Westbound	A	A	A	A
	Northbound	B	C	B	C
	Southbound	B	C ⁴	B	C ⁶
South O&I-2	Eastbound	A	A	A	A
	Westbound	A	A	A	A
	Northbound	B	C	B	C
	Southbound	B	C	C	C
South M-2	Eastbound	A	A	A	A ⁷
	Westbound	A	A	A	A
	Southbound	B	B	B	F
Southwest C-4	Eastbound	A	A	A	A ³
	Westbound	A	A	A	A
	Southbound	B	C	B	C
Southeast C-4	Eastbound	A	A	A	A
	Westbound	A	A	A	A
	Southbound	B	C	C	C

1. LT LOS F, RT LOS C
2. LT LOS D, RT LOS B
3. LT LOS B
4. LT LOS D, Thru/RT LOS B
5. LT LOS E, RT LOS B
6. LT LOS E, Thru/RT LOS C
7. LT LOS C

Table V. Volume to Capacity (V/C) Ratio – SW Urish Rd. & SW 17th St. Intersection

Peak Hour	Approach	Existing V/C Ratio	Exist. + Full Dev. Forecast V/C Ratio	Future + Full Dev. Forecast V/C Ratio
PM	Eastbound	0.04	0.12	0.16
	Westbound	0.26	0.76	1.00
	Northbound	0.43	0.60	0.76
	Southbound	0.20	0.38	0.50
SAT	Eastbound	0.05	0.15	0.20
	Westbound	0.21	0.59	0.71
	Northbound	0.17	0.26	0.32
	Southbound	0.19	0.44	0.59

Although there is no universally accepted method for correlating V/C ratio to LOS for a roundabout, there are some guidelines available. One method is presented by the developers of the SIDRA modeling software. In accordance with Table 6 of the technical paper “Evaluating Roundabout Capacity, Level of Service and Performance” by Rahmi Akcelik, Director, Akcelik and Associates Pty Ltd and developer of the SIDRA INTERSECTION model, at the August, 2009 ITE Annual Meeting in San Antonio, Texas, the levels of service corresponding to the V/C ratios are provided in Table VI below.

Table VI. Approximated LOS Based on V/C Ratio – SW Urish Rd. & SW 17th St. Intersection

Peak Hour	Approach	Existing V/C Ratio	Exist. + Full Dev. Forecast V/C Ratio	Future + Full Dev. Forecast V/C Ratio
PM	Eastbound	A	A	A
	Westbound	A	C	F
	Northbound	A	B	C
	Southbound	A	A	A
SAT	Eastbound	A	A	A
	Westbound	A	A	C
	Northbound	A	A	A
	Southbound	A	A	A

In addition to the intersection LOS analyses, the queue lengths were also estimated for the vehicles turning left into the site from SW 17th St. and SW Urish Rd. The queue lengths are included to examine if there are any potential issues with total length between entrances and allowing vehicles to utilize the two way common left turn lane to turn both north and south (SW 17th St. only). The queue lengths were determined by utilizing the following equation:

$Q_L = (V/30) * 2$ with Q_L being the maximum left turn queue length in number of vehicles and V being the left turn volume (vph). The vehicle length utilized was 25' for a standard vehicle which will be the majority of vehicles utilizing the left turn lane during the peak hour. The queue lengths are shown per intersection for PM Peak Hour and Saturday Peak Hour in Table VII below.

Table VII. Left Turn Queue lengths on SW 17th St. & SW Urish Rd. for Proposed Development

Access Location	Approach	Full Dev. Forecast Queue PM Peak Hour			Full Dev. Forecast Queue Saturday Peak Hour		
		# LT Veh.	# Veh. Queue	Len. (ft.)	# LT Veh.	# Veh.	Len. (ft.)
NW M-2	Southbound	70	5	125	21	2	50
NW C-2	Southbound	102	7	175	137	9	225
South C-2 / Valley Glen Rd.	Eastbound	23	2	50	105	7	175
South O&I-2 / Broadview Dr.	Eastbound	14	1	25	56	4	100
South M-2	Eastbound	23	2	50	16	1	25
Southwest C-4	Eastbound	67	5	125	143	10	250
Southeast C-4	Eastbound	29	2	50	61	4	100

In reviewing the available storage space within the three-lane section of SW 17th St., there is approximately 300 ft. from the east end of the roundabout splitter island (SW 17th & Urish intersection) and the intersection with SW Valley Glen Rd. According to the calculated queue lengths, the maximum length of storage estimated for the South C-2 access is 175 ft. Therefore, the access would need to be a minimum of 225 ft. away from the island in order to provide adequate maneuvering and stacking. However, it is also recommended that the South C-2 access be a minimum of 150' from the intersection of SW 17th St. & SW Valley Glen Rd. to the south. Therefore, the entrance should not be placed any further west than aligned with SW Valley Glen Rd.

There is approximately 530 ft. between the SW Valley Glen Rd. intersection and the SW Broadview Dr. intersections with SW 17th St. From Table VII above, the maximum queue length estimated is 100 ft. Therefore, for maneuvering and stacking, the left turn vehicles are estimated to use 150'. The distance from the proposed lot line between the C-2 and O&I-2 to the Broadview Dr. intersection with SW 17th St. is approximately 260 ft. There is potential to provide adequate queuing space, the minimum 150 ft. of offset from the Broadview Dr. intersection and offset the South O&I-2 access location entrance to the west. However, the entrance would also need to be a minimum of 300' east of the South C-2 entrance.

The proposed South M-2 access (SW Kingsrow) is approximately 310 ft. east of the intersection of SW 17th & SW Broadview. In reviewing the maximum estimated queue length in Table VII, a queue length of 50' and total length of 100 ft. would be necessary for eastbound left turning vehicles. The remaining 200 ft. (+/-) would be available for left turning vehicles at the Broadview intersection.

The South M-2 (SW Kingsrow) intersection with SW 17th is separated from the proposed SW Kingsrow intersection with SW 17th St. to the south by approximately 575 ft. Additionally, the proposed property line between the M-2 and the C-4 lots is approximately 335 ft. west of the proposed SW Kingsrow to the south. The maximum estimated queue length for left turning vehicles into the Southwest C-4 access is 250 ft. Therefore, the ability to provide a southwest C-4 access between proposed SW Kingsrow to the south and the South M-2 (SW Kingsrow) to the north and meet the minimum spacing requirements of 300 ft. between accesses and a minimum of 150 ft. between opposing intersections exists.

The Southeast C-4 access would need to be at least 300' from the Southwest C-4 access and at least 150' from proposed SW Kingsrow to the south of 17th. There is an existing access to the developed commercial property (currently Menards) on the south side of 17th that is approximately 300' east of proposed SW Kingsrow. The estimated queue length needed for the SE C-4 access is 100 ft. Therefore, the minimum of 150 ft. necessary for stacking and maneuvering for eastbound left turning vehicles is available provided the SE C-4 access is no further west than the existing commercial entrance. This should provide nearly 150 ft. of queuing and maneuvering distance for the future proposed SW Kingsrow intersection to the south.

Peak Hour turning movement counts were taken for the intersections of SW Valley Glen Rd. & SW 17th St. and the SW Broadview Dr. & SW 17th St. on March 28, 2014. The focus of the counts was mainly to determine the number of left turning vehicles from westbound 17th St. to the two residential streets. During the peak hour, there was a total of 12 vehicles that turned left to southbound Broadview Rd. and an additional 3 vehicles that turned left onto SW Valley Glen. Utilizing the same queue length equation as noted above, the estimated maximum queue lengths for both intersections is 25 ft. (1 vehicle). Therefore, a maximum of 75 ft. is needed for westbound left turning vehicles at these two intersections. This distance is accommodated by the discussions above.

Site Circulation

As stated previously, this report assumes no interconnectivity between the different parcels and land uses. Therefore, all traffic was transferred to SW 17th St. and SW Urish Rd. The proposed PUD plan outlines the access locations allowed as the following:

SW Urish Rd. - One access for the M-2 zoning use (north parcel) and one access for the C-2 zoning use (south parcel)

SW 17th St. - One access for the C-2 zoning use (far west parcel), one for the O&I-2 use group (central parcel) and two for the C-4 zoning use (east parcel)

All access locations shall meet the City's spacing criteria for minor arterials to the extents possible.

SW Kingsrow Rd.

The PUD provides right of way for the extension of SW Kingsrow Rd. through the east-central portion of the site heading in the north-south direction. The roadway is classified as a collector on the City's "2003 Functional Classification Map". The proposed PUD includes right of way width and street width for a local road. This reduction in the classification of the street appears to be supported by several factors within the proposed development as well as the surrounding street system. These factors include:

- Limited trips generated by the proposed development for the M-2 usage as defined
- Close proximity to SW Urish Rd., an arterial street
- Offset alignment from SW Kingsrow to the south
- The proximity of SW Arvon Place to the east which functions as a collector roadway.
- Close proximity of the O&I-2 and C-2 zoning areas to SW 17th & SW Urish Rd.
- Separation of the C-4 zoning area from the proposed right of way by a drainageway

As shown in the trip generation model and anticipated distribution, the projected trips generated from the proposed use within this area during the peak hours (both AM and PM) are minimal and seem to support the reduced classification. Additionally, the right of way is located within 1400 feet of SW Urish Rd., making SW Urish Rd. a seemingly favorable, higher speed alternative to travel north and south. The proposed offset from SW Kingsrow right of way to the south also hampers the use of the roadway across this site for north-south movement beyond the limits of this development.

Furthermore, SW Avonia Place is approximately 2600' to the east, providing a more direct north-south route from SW 17th St. to SW Huntoon and the I-470 access. SW Arvon Place is designed as a 39' back to back, three lane roadway with a minimum of 75' of right of way. The intersection with SW 17th St. is signalized and aligns with the West Ridge Mall entrance. The north intersection of SW Arvon Place with SW Huntoon St. is also a signalized intersection and is aligned with the southbound off ramp for I-470. The roadway is posted at 35 mph.

The proposed right of way dissects the proposed M-2 zoning use from south to north. The outlying commercial and O&I land uses are fronting SW 17th St. and SW Urish Rd. Therefore, the need to connect these parcels to SW Kingsrow is not necessarily required for traffic movement and level of service. The interconnection would be beneficial to allow interior flow from the M-2 to the O&I and C-2 developments. Also, the C-4 zoning use parcel is separated

from the proposed Kingsrow roadway by a drainage channel that would require a significant drainage structure to cross. Therefore, it is unlikely that there would be a connection made.

Improvement Analysis

Based on the results of the development and intersection modeling, it does not appear that additional improvements to SW 17th St. or SW Urish Rd. are warranted for SW 17th St. or SW Urish Rd. for the initial development. The three-lane section on SW 17th St. appears to be adequate to support projected growth and the proposed development throughout the 20-year study period. Additionally, plans are currently being developed for the enhancement of SW Urish Rd. from SW 21st St. to SW 17th St. and the future plan includes widening of SW Urish Rd. from SW 17th St. north to SW Huntoon St. The anticipated roadway section is a minimum of three lanes with a shared center lane.

The analysis does indicate some poor levels of service for the proposed C-2 access to SW Urish Rd. as well as the proposed M-2 access along SW 17th St. Both intersections were modeled with a dedicated left turn lane and dedicated right turn lane. The C-2 entrance approach is LOS F, however, the right turn lane is LOS C during the PM peak hour. The left turn lane is LOS F and the major contributor to a poor level of service. However, with the future plans to widen this segment of SW Urish Rd. to a three lane section, the level of service should improve. The M-2 intersection (SW Kingsrow) indicates a LOS F for the 20-year projected traffic analysis. This is due to a substantial amount of westbound thru traffic projected. There is potential that this intersection may require additional improvements in the future, as the development proceeds and the traffic volumes increase. A possible improvement would be a second roundabout for the corridor. However, based on a LOS B for the existing traffic plus full development scenario, there are no immediate improvements necessary.

All proposed access locations shall meet all existing City spacing requirements and alignment with opposing entrances/roadways to the extents possible.

Conclusions & Recommendations

The proposed development will increase traffic flow on the adjacent street system and the intersection of SW Urish Rd. and SW 17th St. According to the analysis provided within this report, the system with its planned enhancements should support future growth and the added traffic from the development. Therefore, there are no proposed enhancements for the adjacent streets as part of the initial development.

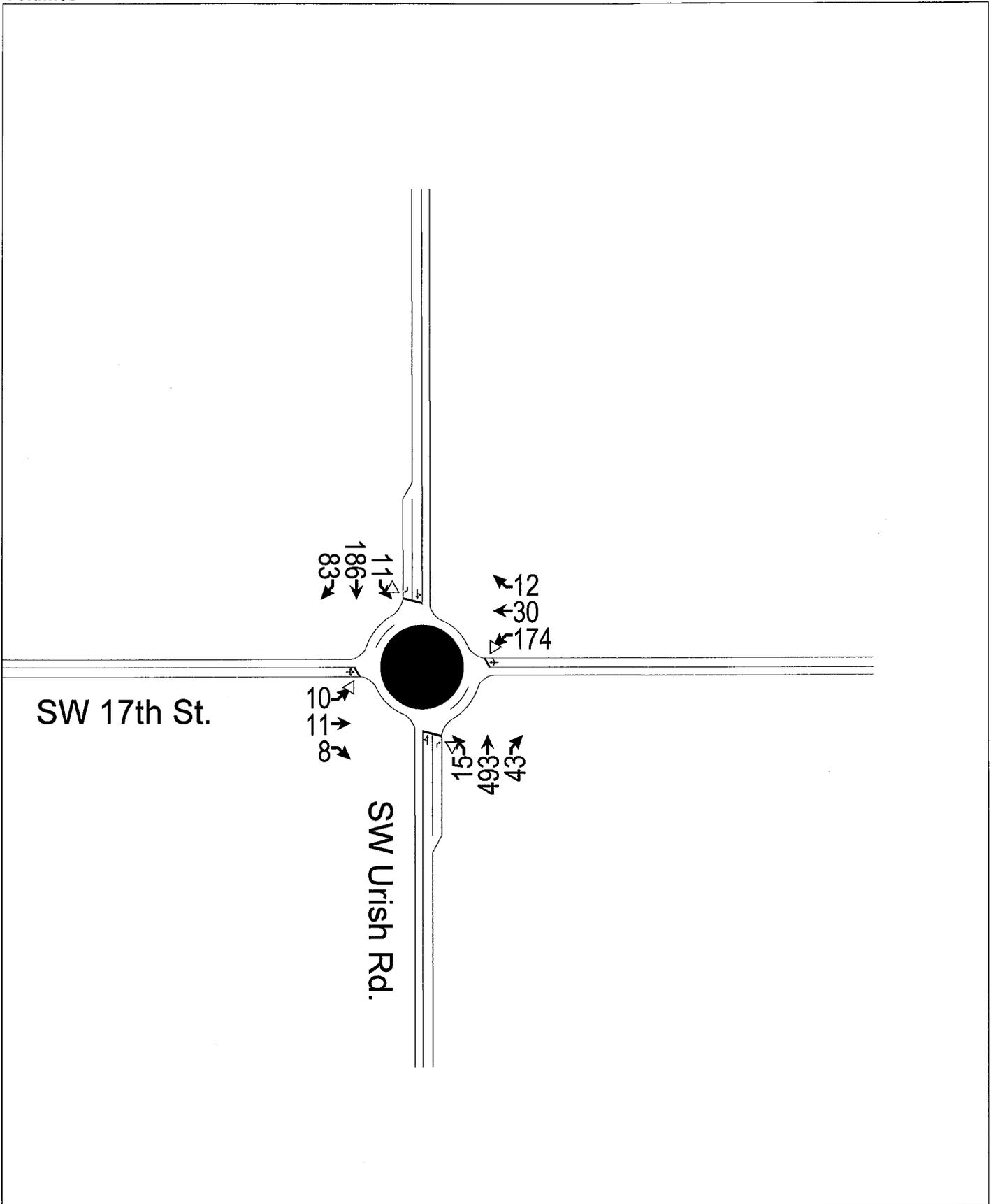
It is recommended that the future entrances provided along SW 17th St. for the development either be aligned with the existing SW Valley Glen Rd., SW Broadview Dr., SW Kingsrow (centered on right of way if Kingsrow not paved at time of development), and the next existing

entrance immediately east of Kingsrow on the south side of SW 17th St. to the extents possible. Should the development require entrances that do not align with the access to the south, the entrances from the proposed development should be spaced a minimum of 150' from the nearest entrance/street. All entrance spacing should meet the City access spacing criteria that is in place at the time of the development.

Additionally, based on the projected land uses and subdivision layout, it is recommended that the SW Kingsrow Rd. right of way and street width be allowed to be reduced to meet local roadway requirements. However, it is also recommended that should the development usage planned for construction differ from that modeled in this report to a more intense usage allowable within the proposed zoning use that the City require an updated traffic report to determine if the right of way and local street function is warranted or if the larger collector function and width is warranted.

APPENDIX A

Supporting Data and Modeling Results



Lanes, Volumes, Timings
 3: SW Urish Rd. & SW 17th St.

4/2/2014



Lane Configurations	↕		↕		↕		↕		↕		↕	
Volume (vph)	10	11	8	174	30	12	15	493	43	11	186	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	15	14	12	15	14
Storage Length (ft)	0	0	0	0	0	0	0	150	0	0	0	150
Storage Lanes	0	0	0	0	0	0	0	1	0	0	0	1
Taper Length (ft)	25	25	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.963		0.992		0.850		0.850		0.997		0.850	
Prot. Flow (prot)	0.983		0.961		0.999		0.999		0.997		0.997	
Satd. Flow (prot)	0	1881	0	0	1894	0	0	2047	1689	0	2043	1689
Per. Flow (perm)	0.983		0.961		0.999		0.999		0.997		0.997	
Satd. Flow (perm)	0	1881	0	0	1894	0	0	2047	1689	0	2043	1689
Link Speed (mph)	30		30		40		40		40		40	
Link Distance (ft)	796		690		598		716		716		716	
Travel Time (s)	18.1		15.7		10.2		12.2		12.2		12.2	
Peak Hour Factor	0.73	0.73	0.73	0.95	0.95	0.95	0.89	0.89	0.89	0.86	0.86	0.86
Adj. Flow (vph)	14	16	11	183	32	13	17	554	48	13	216	97
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	40	0	0	228	0	0	571	48	0	229	97
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		0		0		0		0	
Link Offset (ft)	0		0		0		0		0		0	
Crosswalk Width (ft)	16		16		16		16		16		16	
No Way Left Turn Lane												
Headway Factor	1.00	0.92	1.00	1.00	0.92	1.00	1.00	0.88	0.92	1.00	0.88	0.92
Turning Speed (mph)	15		9		15		9		15		9	
Sign Control	Yield		Yield		Yield		Yield		Yield		Yield	

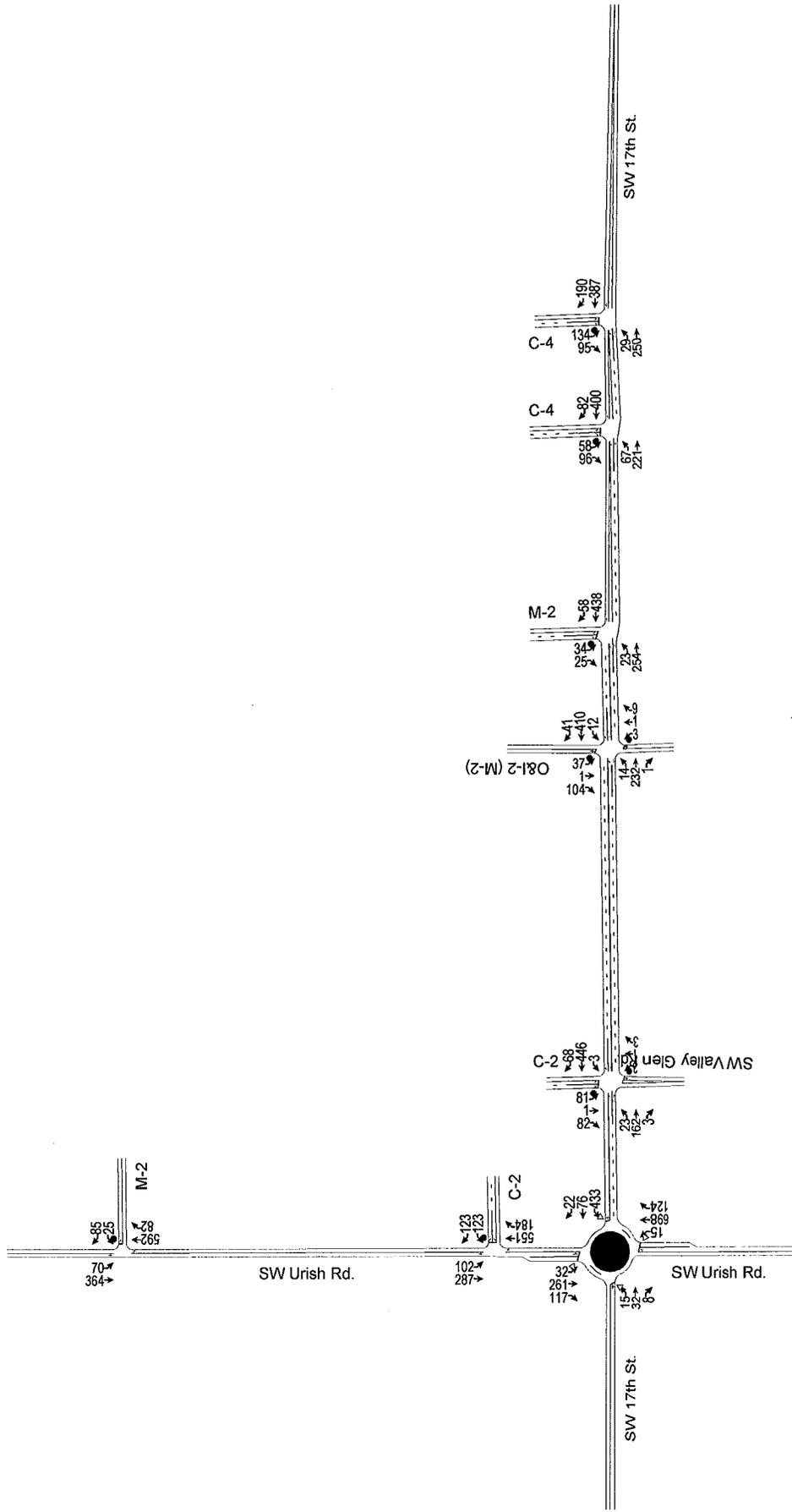
Area Type: Other

Control Type: Roundabout

Intersection Capacity Utilization 63.3%

ICU Level of Service B

Analysis Period (min) 15





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔			↔			↑			↓		
Volume (vph)	15	32	8	433	76	22	15	698	124	32	261	117
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	12	14	12	12	15	14	12	15	14
Storage Length (ft)	0	0	0	0	0	0	0	0	150	0	0	150
Storage Lanes	0	0	0	0	0	0	0	0	1	0	0	1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.981			0.994			0.850			0.850		0.850
Flt Protected	0.986			0.961			0.999			0.995		0.995
Satd. Flow (prot)	0	1922	0	0	1898	0	0	2047	1689	0	2039	1689
Flt Permitted	0.986			0.961			0.999			0.995		0.995
Satd. Flow (perm)	0	1922	0	0	1898	0	0	2047	1689	0	2039	1689
Link Speed (mph)	30			30			40			40		40
Link Distance (ft)	796			525			598			362		362
Travel Time (s)	18.1			11.9			10.2			6.2		6.2
Peak Hour Factor	0.65	0.65	0.65	0.95	0.95	0.95	0.93	0.93	0.93	0.85	0.85	0.85
Adj. Flow (vph)	23	49	12	456	80	23	16	751	133	38	307	138
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	84	0	0	559	0	0	767	133	0	345	138
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			0			0		0
Link Offset (ft)	0			0			0			0		0
Crosswalk Width (ft)	16			16			16			16		16
Two way Left Turn Lane				Yes								
Headway Factor	1.00	0.92	1.00	1.00	0.92	1.00	1.00	0.88	0.92	1.00	0.88	0.92
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control	Yield		Yield		Yield		Yield		Yield		Yield	

Intersection Summary
 Area Type: Other
 Control Type: Roundabout
 Intersection Capacity Utilization 91.4%
 ICU Level of Service F

PM PEAK HOUR EX + PROP
3: SW Urish Rd. & SW 17th St.

Wrangler Ridge Subdiivision
4/3/2014

Analysis Period (min) 15

17th & Urish Roundabout - PM EX+PROP.syn

Synchro 8 Light Report
Page 2

	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group						
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	123	123	551	184	102	287
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ft	0.850	0.966				
Ft Protected	0.950					0.987
Satd. Flow (prot)	1770	1583	1799	0	0	1839
Ft Permitted	0.950					0.987
Satd. Flow (perm)	1770	1583	1799	0	0	1839
Link Speed (mph)	40	40	40	40	40	40
Link Distance (ft)	235	362	362	1173		
Travel Time (s)	4.0	6.2	6.2	20.0		
Peak Hour Factor	0.92	0.92	0.93	0.93	0.85	0.85
Adj. Flow (vph)	134	134	592	198	120	338
Shared Lane Traffic (%)						
Lane Group Flow (vph)	134	134	790	0	0	458
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12	0	0	0	0	0
Link Offset(ft)	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	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	9	15	15	15
Sign Control	Stop	Free	Free	Free	Free	Free

Intersection Summary
 Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 77.8% ICU Level of Service D
 Analysis Period (min) 15

PM PEAK HOUR EX + PROP
8: SW Urish Rd. & M-2

Wrangler Ridge Subdiivision
4/3/2014



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	U	U	U	U
Volume (vph)	25	85	592	82	70	364
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ft	0.896		0.984			
Ft Protected	0.989					0.992
Satd. Flow (prot)	1651	0	1833	0	0	1848
Ft Permitted	0.989					0.992
Satd. Flow (perm)	1651	0	1833	0	0	1848
Link Speed (mph)	40		40			40
Link Distance (ft)	294		1173			357
Travel Time (s)	5.0		20.0			6.1
Peak Hour Factor	0.92	0.92	0.93	0.93	0.85	0.85
Adj. Flow (vph)	27	92	637	88	82	428
Shared Lane Traffic (%)						
Lane Group Flow (vph)	119	0	725	0	0	510
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			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		9	15	
Sign Control	Stop		Free			Free

Intersection Summary
 Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 75.8% ICU Level of Service D
 Analysis Period (min) 15

PM PEAK HOUR EX + PROP

10: SW Valley Glen Rd./C-2 & SW 17th St.

Wrangler Ridge Subdivision

4/3/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑	→	↑	↑	→	←	←	←	←	↓	↓
Volume (vph)	23	162	3	3	446	68	3	1	3	81	1	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	11	11	12	12	12	12	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997			0.980			0.942			0.852	
Fit Protected	0.950			0.950				0.979		0.950		
Satd. Flow (prot)	1770	1795	0	1770	1765	0	0	1718	0	1770	1587	0
Fit Permitted	0.950			0.950				0.979		0.950		
Satd. Flow (perm)	1770	1795	0	1770	1765	0	0	1718	0	1770	1587	0
Link Speed (mph)		35			35			40			30	
Link Distance (ft)		520			1029			238			199	
Travel Time (s)		10.1			20.0			4.1			4.5	
Peak Hour Factor	0.65	0.65	0.65	0.95	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	35	249	5	3	469	72	3	1	3	88	1	89
Shared Lane Traffic (%)												
Lane Group Flow (vph)	35	254	0	3	541	0	0	7	0	88	90	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)	12	12	12	12	12	12	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.04	1.00	1.00	1.04	1.04	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	15	9	15	15	9	15	15	9	15	15	9
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	43.3%
Analysis Period (min)	15
ICU Level of Service A	

PM PEAK HOUR EX + PROP

12: SW 17th St. & O&I-2 (M-2)

Wrangler Ridge Subdivision

4/3/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group												
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	14	232	1	12	410	41	3	1	9	37	1	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	11	11	12	12	12	12	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.999			0.986			0.904				0.901	
Flt Protected	0.950			0.950			0.989				0.987	
Satd. Flow (prot)	1770	1799	0	1770	1775	0	0	1665	0	0	1657	0
Flt Permitted	0.950			0.950			0.989				0.987	
Satd. Flow (perm)	1770	1799	0	1770	1775	0	0	1665	0	0	1657	0
Link Speed (mph)		35		35			40				30	
Link Distance (ft)		1050		361			209				320	
Travel Time (s)		20.5		7.0			3.6				7.3	
Peak Hour Factor	0.65	0.65	0.65	0.95	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	357	2	13	432	43	3	1	10	40	1	113
Shared Lane Traffic (%)												
Lane Group Flow (vph)	22	359	0	13	475	0	0	14	0	0	154	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)	12	12	12	12	12	12	12	12	12	12	12	12
Link Offset (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.04	1.00	1.00	1.04	1.04	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	15	9	15	15	9	15	15	9	15	15	9
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 42.6%

Analysis Period (min) 15

ICU Level of Service A



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↑	↓	↔	↔	↑
Volume (vph)	67	221	400	82	58	96
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	11	11	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr		0.977				0.850
Fit Protected	0.950				0.950	
Satd. Flow (prot)	1770	1801	1759	0	1770	1583
Fit Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1801	1759	0	1770	1583
Link Speed (mph)		35	35		30	
Link Distance (ft)		620	345		255	
Travel Time (s)		12.1	6.7		5.8	
Peak Hour Factor	0.65	0.65	0.95	0.95	0.92	0.92
Adj. Flow (vph)	103	340	421	86	63	104
Shared Lane Traffic (%)						
Lane Group Flow (vph)	103	340	507	0	63	104
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane		Yes	Yes			
Headway Factor	1.00	1.04	1.04	1.04	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	43.1%
Analysis Period (min)	15
	ICU Level of Service A

PM PEAK HOUR EX + PROP
16: SW 17th St. & M-2

Wrangler Ridge Subdivision
4/3/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↗	↔	↔	↖	↗
Volume (vph)	23	254	438	58	34	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	11	11	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fit		0.994				0.850
Fit Protected	0.950				0.950	
Satd. Flow (prot)	1770	1801	1772	0	1770	1583
Fit Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1801	1772	0	1770	1583
Link Speed (mph)		35	35		30	
Link Distance (ft)		345	629		251	
Travel Time (s)		6.7	12.3		5.7	
Peak Hour Factor	0.65	0.65	0.95	0.95	0.92	0.92
Adj. Flow (vph)	35	391	461	61	37	27
Shared Lane Traffic (%)						
Lane Group Flow (vph)	35	391	522	0	37	27
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane		Yes	Yes			
Headway Factor	1.00	1.04	1.04	1.04	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary
 Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 36.6% ICU Level of Service A
 Analysis Period (min) 15

PM PEAK HOUR EX + PROP
18: SW 17th St. & C-4

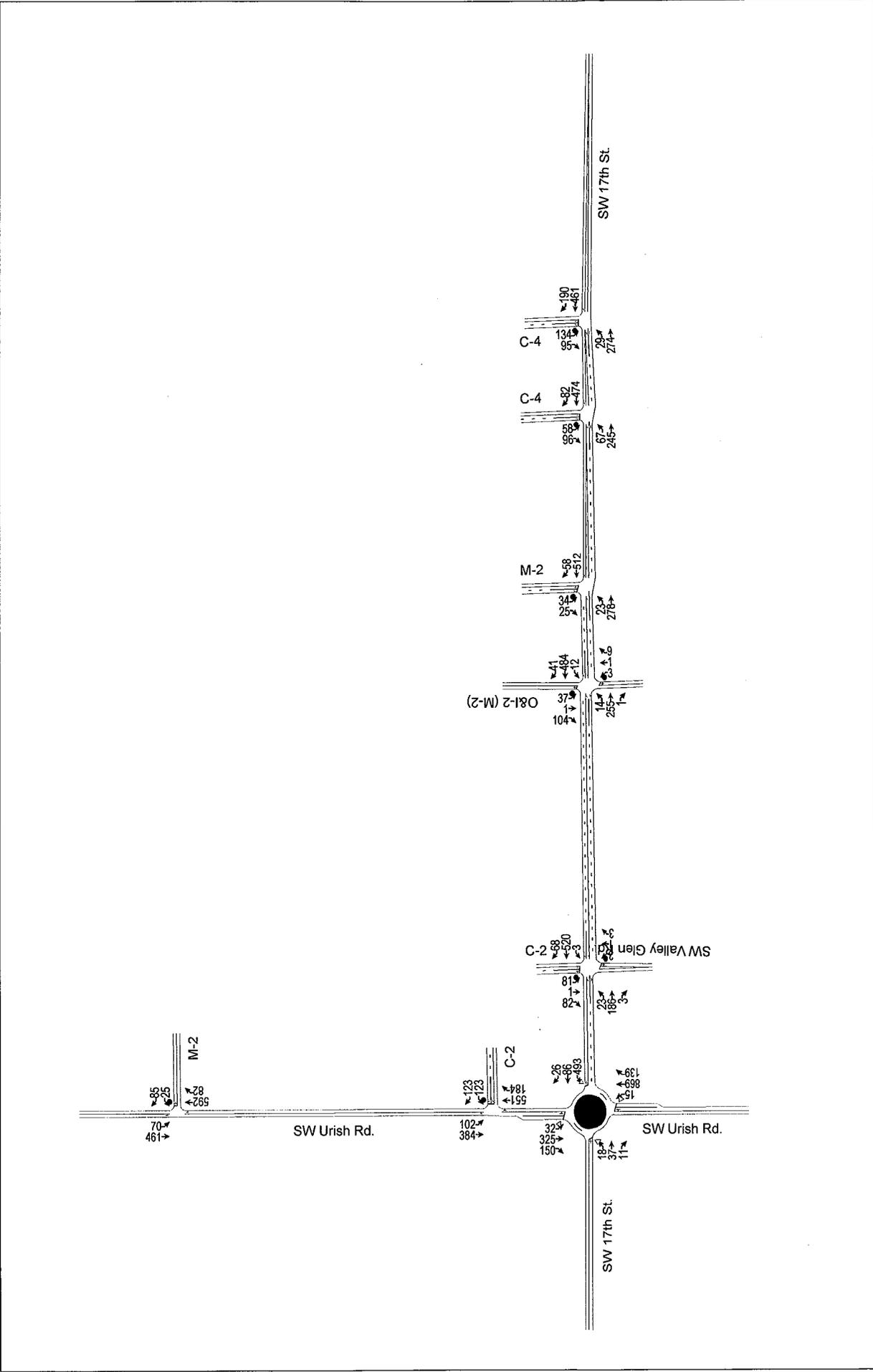
Wrangler Ridge Subdivision
4/3/2014



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↑	↔	↔	↔	↔
Volume (vpt)	29	250	387	190	134	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.956				0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1781	0	1770	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1863	1781	0	1770	1583
Link Speed (mph)		30	35		40	
Link Distance (ft)		340	977		235	
Travel Time (s)		7.7	19.0		4.0	
Peak Hour Factor	0.65	0.65	0.95	0.95	0.92	0.92
Adj. Flow (vph)	45	385	407	200	146	103
Shared Lane Traffic (%)						
Lane Group Flow (vph)	45	385	607	0	146	103
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane		Yes	Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	46.0%
Analysis Period (min)	15
	ICU Level of Service A



PM PEAK HOUR FUT + PROP
3: SW Urish Rd. & SW 17th St.

Wrangler Ridge Subdivision
4/3/2014



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	4	4	4	4	4	4	4	4	4	4	4	4
Volume (vph)	18	37	11	493	86	26	15	869	139	32	325	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	12	14	12	12	15	14	12	15	14
Storage Length (ft)	0	0	0	0	0	0	0	0	150	0	0	150
Storage Lanes	0	0	0	0	0	0	0	0	1	0	0	1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.977			0.994			0.850			0.850		0.850
Flt Protected	0.986			0.961			0.999			0.995		0.995
Satd. Flow (prot)	0	1914	0	0	1898	0	0	2047	1689	0	2039	1689
Flt Permitted	0.986			0.961			0.999			0.995		0.995
Satd. Flow (perm)	0	1914	0	0	1898	0	0	2047	1689	0	2039	1689
Link Speed (mph)	30			30			40			40		40
Link Distance (ft)	796			525			598			362		362
Travel Time (s)	18.1			11.9			10.2			6.2		6.2
Peak Hour Factor	0.65	0.65	0.65	0.95	0.95	0.95	0.93	0.93	0.93	0.85	0.85	0.85
Adj. Flow (vph)	28	57	17	519	91	27	16	934	149	38	382	176
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	102	0	0	637	0	0	950	149	0	420	176
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Link Offset(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane				Yes								
Headway Factor	1.00	0.92	1.00	1.00	0.92	1.00	1.00	0.88	0.92	1.00	0.88	0.92
Turning Speed (mph)	15	9	15	15	9	15	15	9	15	15	9	15
Sign Control	Yield											

Intersection Summary
 Area Type: Other
 Control Type: Roundabout
 Intersection Capacity Utilization 104.5%
 ICU Level of Service G

Analysis Period (min) 15

PM PEAK HOUR FUT + PROP
6: SW Urish Rd. & C-2

Wrangler Ridge Subdivision
4/3/2014



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	←	↑	→	→	←	↓
Volume (vph)	123	123	551	184	102	384
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ft	0.850	0.966				
Fit Protected	0.950					0.990
Satd. Flow (prot)	1770	1583	1799	0	0	1844
Fit Permitted	0.950					0.990
Satd. Flow (perm)	1770	1583	1799	0	0	1844
Link Speed (mph)	40		40			40
Link Distance (ft)	235		362			1173
Travel Time (s)	4.0		6.2			20.0
Peak Hour Factor	0.92	0.92	0.93	0.93	0.85	0.85
Adj. Flow (vph)	134	134	592	198	120	452
Shared Lane Traffic (%)						
Lane Group Flow (vph)	134	134	790	0	0	572
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			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		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 82.9%

Analysis Period (min) 15

ICU Level of Service E

PM PEAK HOUR FUT + PROP
8: SW Urish Rd. & M-2

Wrangler Ridge Subdiivision
4/3/2014

	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	WBL	WBR	NBT	NBR	SBL	SBT
Volume (vph)	25	85	592	82	70	461
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.896	0.984				
Fit Protected	0.989					0.993
Satd. Flow (prof)	1651	0	1833	0	0	1850
Fit Permitted	0.989					0.993
Satd. Flow (perm)	1651	0	1833	0	0	1850
Link Speed (mph)	40	40	40	40	40	40
Link Distance (ft)	294	1173				357
Travel Time (s)	5.0	20.0				6.1
Peak Hour Factor	0.92	0.92	0.93	0.93	0.85	0.85
Adj. Flow (vph)	27	92	637	88	82	542
Shared Lane Traffic (%)						
Lane Group Flow (vph)	119	0	725	0	0	624
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12	0	0	0	0	0
Link Offset(ft)	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	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	9	9	15	15
Sign Control	Stop	Free	Free	Free	Free	Free

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	80.9%
Analysis Period (min)	15
	ICU Level of Service D

PM PEAK HOUR FUT + PROP

10: SW Valley Glen Rd./C-2 & SW 17th St.

Wrangler Ridge Subdiivision

4/3/2014



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	23	186	3	3	520	68	3	1	3	81	1	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	11	11	12	12	12	12	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr	0.997				0.983			0.942				0.852
Fit Protected	0.950			0.950				0.979		0.950		
Satd. Flow (prot)	1770	1795	0	1770	1770	0	0	1718	0	1770	1587	0
Fit Permitted	0.950			0.950				0.979		0.950		
Satd. Flow (perm)	1770	1795	0	1770	1770	0	0	1718	0	1770	1587	0
Link Speed (mph)	35			35				40		30		
Link Distance (ft)	520			1029				238		199		
Travel Time (s)	10.1			20.0				4.1		4.5		
Peak Hour Factor	0.65	0.65	0.65	0.95	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	35	286	5	3	547	72	3	1	3	88	1	89
Shared Lane Traffic (%)												
Lane Group Flow (vph)	35	291	0	3	619	0	0	7	0	88	90	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	12	12	12	12	12	12	12	12	12	12	12	12
Link Offset(ft)	0			0				0				0
Crosswalk Width(ft)	16			16				16		16		16
Two way Left Turn Lane	Yes			Yes								
Headway Factor	1.00	1.04	1.00	1.00	1.04	1.04	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control	Free			Free			Stop		Stop		Stop	

Intersection Summary
 Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 47.2%
 Analysis Period (min) 15
 ICU Level of Service A

PM PEAK HOUR FUT + PROP
12: SW 17th St. & O&I-2 (M-2)

Wrangler Ridge Subdiivision
4/3/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	↖	→	↗	↙	←	↘	↖	↗	↘	↙	→	↗
Lane Configurations	↖	↖	↖	↖	↖	↖	↖	↖	↖	↖	↖	↖
Volume (vph)	14	255	1	12	484	41	3	1	9	37	1	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	11	11	12	12	12	12	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.999			0.988				0.904			0.901	
Flt Protected	0.950			0.950				0.989			0.987	
Satd. Flow (prof)	1770	1799	0	1770	1779	0	0	1665	0	0	1657	0
Flt Permitted	0.950			0.950				0.989			0.987	
Satd. Flow (perm)	1770	1799	0	1770	1779	0	0	1665	0	0	1657	0
Link Speed (mph)	35			35				40			30	
Link Distance (ft)	1050			361				209			320	
Travel Time (s)	20.5			7.0				3.6			7.3	
Peak Hour Factor	0.65	0.65	0.65	0.95	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	392	2	13	509	43	3	1	10	40	1	113
Shared Lane Traffic (%)												
Lane Group Flow (vph)	22	394	0	13	552	0	0	14	0	0	154	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)	12			12				0			0	
Link Offset(ft)	0			0				0			0	
Crosswalk Width(ft)	16			16				16			16	
Two way Left Turn Lane	Yes			Yes								
Headway Factor	1.00	1.04	1.00	1.00	1.04	1.04	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15	15	9	15	15	9
Sign Control	Free			Free				Stop			Stop	

Intersection Summary
 Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 46.5%
 Analysis Period (min) 15
 ICU Level of Service A

PM PEAK HOUR FUT + PROP
14: SW 17th St. & C-4

Wrangler Ridge Subdiivision
4/3/2014



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑	↗	↖	↘	↘
Volume (vph)	67	245	474	82	58	96
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	11	11	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fit		0.980				0.850
Fit Protected	0.950				0.950	
Satd. Flow (prot)	1770	1801	1765	0	1770	1583
Fit Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1801	1765	0	1770	1583
Link Speed (mph)		35	35		30	
Link Distance (ft)		620	345		255	
Travel Time (s)		12.1	6.7		5.8	
Peak Hour Factor	0.65	0.65	0.95	0.95	0.92	0.92
Adj. Flow (vph)	103	377	499	86	63	104
Shared Lane Traffic (%)						
Lane Group Flow (vph)	103	377	585	0	63	104
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane		Yes	Yes			
Headway Factor	1.00	1.04	1.04	1.04	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	47.0%
Analysis Period (min)	15
	ICU Level of Service A

PM PEAK HOUR FUT + PROP
16: SW 17th St. & M-2

Wrangler Ridge Subdivision
4/3/2014



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↑	↑	↑	←	↖	↗
Volume (vph)	23	278	512	58	34	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	11	11	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.95
Fit		0.986		0.989	0.850	
Fit Protected	0.950			0.956		
Satd. Flow (prot)	1770	1801	1775	0	1761	1504
Fit Permitted	0.950			0.956		
Satd. Flow (perm)	1770	1801	1775	0	1761	1504
Link Speed (mph)		35	35		30	
Link Distance (ft)		345	629		251	
Travel Time (s)		6.7	12.3		5.7	
Peak Hour Factor	0.65	0.65	0.95	0.95	0.92	0.92
Adj. Flow (vph)	35	428	539	61	37	27
Shared Lane Traffic (%)					10%	
Lane Group Flow (vph)	35	428	600	0	40	24
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane		Yes	Yes			
Headway Factor	1.00	1.04	1.04	1.04	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

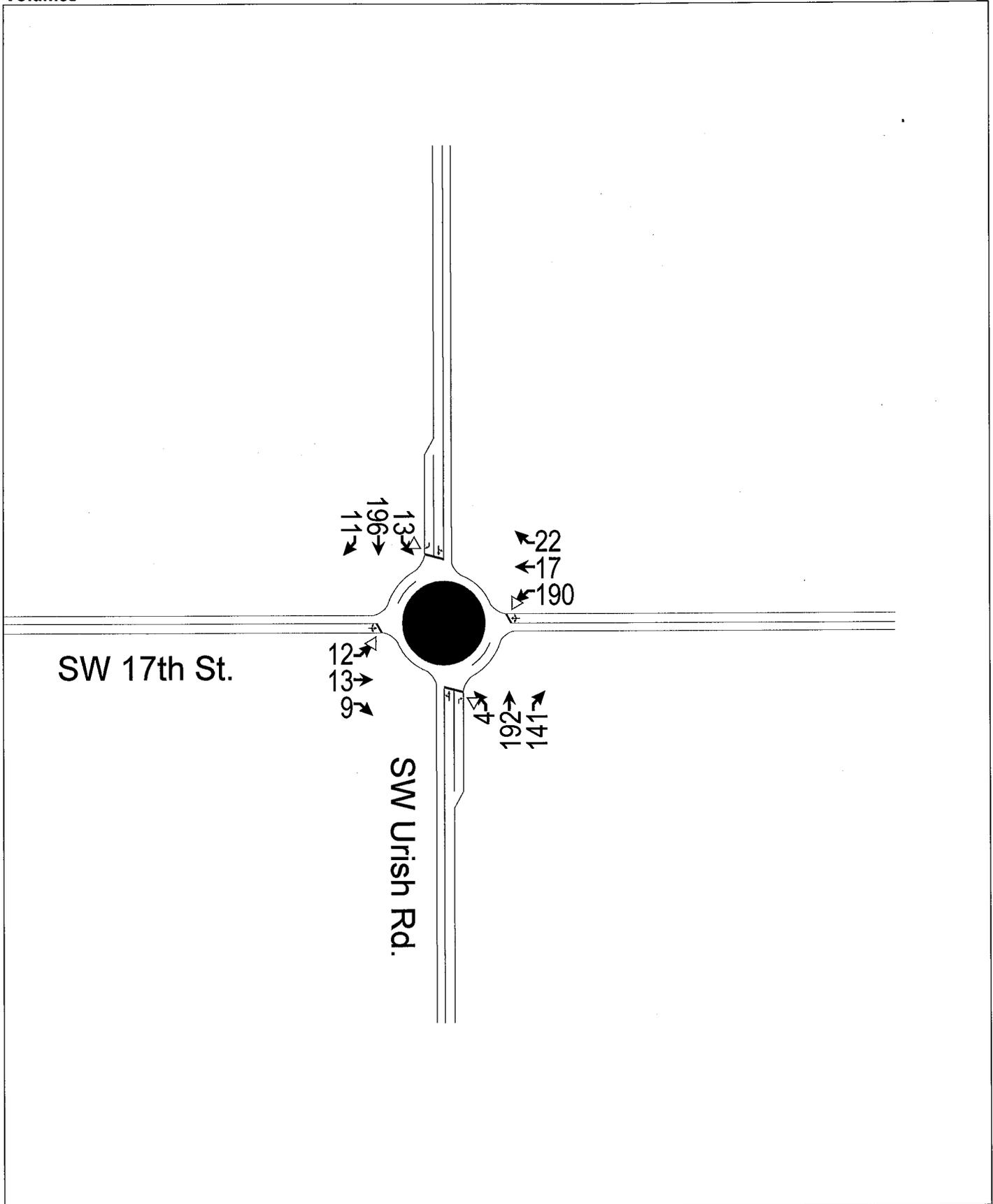
Intersection Summary
 Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 40.5% ICU Level of Service A
 Analysis Period (min) 15

PM PEAK HOUR FUT + PROP
18: SW 17th St. & C-4

Wrangler Ridge Subdivision
4/3/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑	↗	↖	↗	↘
Volume (vph)	29	274	461	190	134	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ft		0.961				0.850
Fit Protected	0.950			0.950		
Satd. Flow (prot)	1770	1863	1790	0	1770	1563
Fit Permitted	0.950			0.950		
Satd. Flow (perm)	1770	1863	1790	0	1770	1563
Link Speed (mph)		30	35		40	
Link Distance (ft)		340	977		235	
Travel Time (s)		7.7	19.0		4.0	
Peak Hour Factor	0.65	0.65	0.95	0.95	0.92	0.92
Adj. Flow (vph)	45	422	485	200	146	103
Shared Lane Traffic (%)						
Lane Group Flow (vph)	45	422	685	0	146	103
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane		Yes	Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15	15	9
Sign Control		Free	Free		Stop	

Intersection Summary
 Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 49.9% ICU Level of Service A
 Analysis Period (min): 15





Lane Configurations	↕		↕		↖		↗		↖		↗	
Volume (vph)	12	18	9	190	17	22	4	192	141	18	196	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	12	14	12	12	15	14	12	15	14
Storage Length (ft)	0	0	0	0	0	0	0	150	0	0	150	0
Storage Lanes	0	0	0	0	0	0	0	1	0	0	1	0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.964			0.987				0.850			0.850
Flt Protected		0.988			0.960			0.999			0.997	
Satd. Flow (prot)	0	1883	0	0	1883	0	0	2047	1689	0	2043	1689
Flt Permitted		0.988			0.960			0.999			0.997	
Satd. Flow (perm)	0	1883	0	0	1883	0	0	2047	1689	0	2043	1689
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		796			690			598			716	
Travel Time (s)		18.1			16.7			10.2			12.2	
Peak Hour Factor	0.65	0.65	0.65	0.95	0.95	0.95	0.85	0.85	0.85	0.93	0.93	0.93
Adj. Flow (vph)	18	20	14	200	18	23	5	226	166	14	211	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	52	0	0	241	0	0	231	166	0	225	12
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right									
Median Width (ft)		0			0			0			0	
Link Offset (ft)		0			0			0			0	
Crosswalk Width (ft)		16			16			16			16	
Two Way Left Turn Lane												
Headway Factor	1.00	0.92	1.00	1.00	0.92	1.00	1.00	0.88	0.92	1.00	0.88	0.92
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Yield			Yield			Yield			Yield	

Area Type: Other

Control Type: Roundabout

Intersection Capacity Utilization 47.1%

ICU Level of Service A

Analysis Period (min): 15

SATURDAY PEAK HOUR EX + PROP
3: SW Urish Rd. & SW 17th St.

Wrangler Ridge Subdivision
4/2/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↗		↕	↗
Volume (vph)	23	41	12	577	50	41	5	365	441	42	365	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	12	14	12	12	15	14	12	15	14
Storage Length (ft)	0		0	0		0	0		150	0		150
Storage Lanes	0		0	0		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.979			0.992				0.850			0.850
Flt Protected		0.985			0.959			0.999			0.995	
Satd. Flow (prot)	0	1916	0	0	1890	0	0	2047	1689	0	2039	1689
Flt Permitted		0.985			0.959			0.999			0.995	
Satd. Flow (perm)	0	1916	0	0	1890	0	0	2047	1689	0	2039	1689
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		796			525			598			362	
Travel Time (s)		18.1			11.9			10.2			6.2	
Peak Hour Factor	0.65	0.65	0.65	0.95	0.95	0.95	0.93	0.93	0.93	0.85	0.85	0.85
Adj. Flow (vph)	35	63	18	607	53	43	5	392	474	49	429	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	116	0	0	703	0	0	397	474	0	478	22
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes							
Headway Factor	1.00	0.92	1.00	1.00	0.92	1.00	1.00	0.88	0.92	1.00	0.88	0.92
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Yield			Yield			Yield			Yield	

Intersection Summary

Area Type:	Other
Control Type:	Roundabout
Intersection Capacity Utilization	94.8%
ICU Level of Service	F
Analysis Period (min)	15

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	126	146	287	142	137	290
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.955			
Flt Protected	0.950					0.984
Satd. Flow (prot)	1770	1583	1779	0	0	1833
Flt Permitted	0.950					0.984
Satd. Flow (perm)	1770	1583	1779	0	0	1833
Link Speed (mph)	40		40			40
Link Distance (ft)	235		362			1173
Travel Time (s)	4.0		6.2			20.0
Peak Hour Factor	0.92	0.92	0.93	0.93	0.85	0.85
Adj. Flow (vph)	137	159	309	153	161	341
Shared Lane Traffic (%)						
Lane Group Flow (vph)	137	159	462	0	0	502
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			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		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 63.6% ICU Level of Service B
 Analysis Period (min) 15

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	27	32	412	21	21	400
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.926		0.993			
Fit Protected	0.978					0.997
Satd. Flow (prot)	1687	0	1850	0	0	1857
Fit Permitted	0.978					0.997
Satd. Flow (perm)	1687	0	1850	0	0	1857
Link Speed (mph)	40		40			40
Link Distance (ft)	294		1173			357
Travel Time (s)	5.0		20.0			6.1
Peak Hour Factor	0.92	0.92	0.93	0.93	0.85	0.85
Adj. Flow (vph)	29	35	443	23	25	471
Shared Lane Traffic (%)						
Lane Group Flow (vph)	64	0	466	0	0	496
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			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		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 48.3% ICU Level of Service A
 Analysis Period (min) 15

SATURDAY PEAK HOUR EX + PROP
 10: SW Valley Glen Rd./C-2 & SW 17th St.

Wrangler Ridge Subdiivision
 4/2/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	105	419	1	1	552	142	1	1	1	97	1	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	11	11	12	12	12	12	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t					0.969			0.955			0.851	
Flt Protected	0.950			0.950				0.984		0.950		
Satd. Flow (prot)	1770	1801	0	1770	1745	0	0	1750	0	1770	1585	0
Flt Permitted	0.950			0.950				0.984		0.950		
Satd. Flow (perm)	1770	1801	0	1770	1745	0	0	1750	0	1770	1585	0
Link Speed (mph)		35			35			40			30	
Link Distance (ft)		520			1029			238			199	
Travel Time (s)		10.1			20.0			4.1			4.5	
Peak Hour Factor	0.65	0.65	0.65	0.95	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	162	645	2	1	581	149	1	1	1	105	1	126
Shared Lane Traffic (%)												
Lane Group Flow (vph)	162	647	0	1	730	0	0	3	0	105	127	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)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes										
Headway Factor	1.00	1.04	1.00	1.00	1.04	1.04	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15			9	15		9	15	9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 65.5% ICU Level of Service C
 Analysis Period (min) 15

SATURDAY PEAK HOUR EX + PROP
12: SW 17th St. & O&I-2 (M-2)

Wrangler Ridge Subdivision
 4/2/2014

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	56	460	1	1	637	77	1	1	1	43	1	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	11	11	12	12	12	12	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t					0.984			0.955			0.924	
Fl _t Protected	0.950			0.950				0.984			0.979	
Satd. Flow (prot)	1770	1801	0	1770	1772	0	0	1750	0	0	1685	0
Fl _t Permitted	0.950			0.950				0.984			0.979	
Satd. Flow (perm)	1770	1801	0	1770	1772	0	0	1750	0	0	1685	0
Link Speed (mph)		35			35			40			30	
Link Distance (ft)		1050			361			209			320	
Travel Time (s)		20.5			7.0			3.6			7.3	
Peak Hour Factor	0.65	0.65	0.65	0.95	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	86	708	2	1	671	81	1	1	1	47	1	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	86	710	0	1	752	0	0	3	0	0	110	0
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes							
Headway Factor	1.00	1.04	1.00	1.00	1.04	1.04	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 60.2% ICU Level of Service B
 Analysis Period (min) 15

						
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	143	375	572	85	62	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	11	11	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.983			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1801	1770	0	1770	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1801	1770	0	1770	1583
Link Speed (mph)		35	35		30	
Link Distance (ft)		620	345		255	
Travel Time (s)		12.1	6.7		5.8	
Peak Hour Factor	0.65	0.65	0.95	0.95	0.92	0.92
Adj. Flow (vph)	220	577	602	89	67	150
Shared Lane Traffic (%)						
Lane Group Flow (vph)	220	577	691	0	67	150
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane		Yes	Yes			
Headway Factor	1.00	1.04	1.04	1.04	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	56.6%
ICU Level of Service	B
Analysis Period (min)	15

						
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	16	497	611	21	21	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	11	11	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.996			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1801	1793	0	1770	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1801	1793	0	1770	1583
Link Speed (mph)		35	35		30	
Link Distance (ft)		345	629		251	
Travel Time (s)		6.7	12.3		5.7	
Confl. Peds. (#/hr)				689		
Peak Hour Factor	0.65	0.65	0.95	0.95	0.92	0.92
Adj. Flow (vph)	25	765	643	22	23	27
Shared Lane Traffic (%)						
Lane Group Flow (vph)	25	765	665	0	23	27
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane		Yes	Yes			
Headway Factor	1.00	1.04	1.04	1.04	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 43.8% ICU Level of Service A
 Analysis Period (min) 15

						
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	61	376	517	197	146	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.963			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1794	0	1770	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1863	1794	0	1770	1583
Link Speed (mph)		30	35		40	
Link Distance (ft)		340	977		235	
Travel Time (s)		7.7	19.0		4.0	
Peak Hour Factor	0.65	0.65	0.95	0.95	0.92	0.92
Adj. Flow (vph)	94	578	544	207	159	152
Shared Lane Traffic (%)						
Lane Group Flow (vph)	94	578	751	0	159	152
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane		Yes	Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

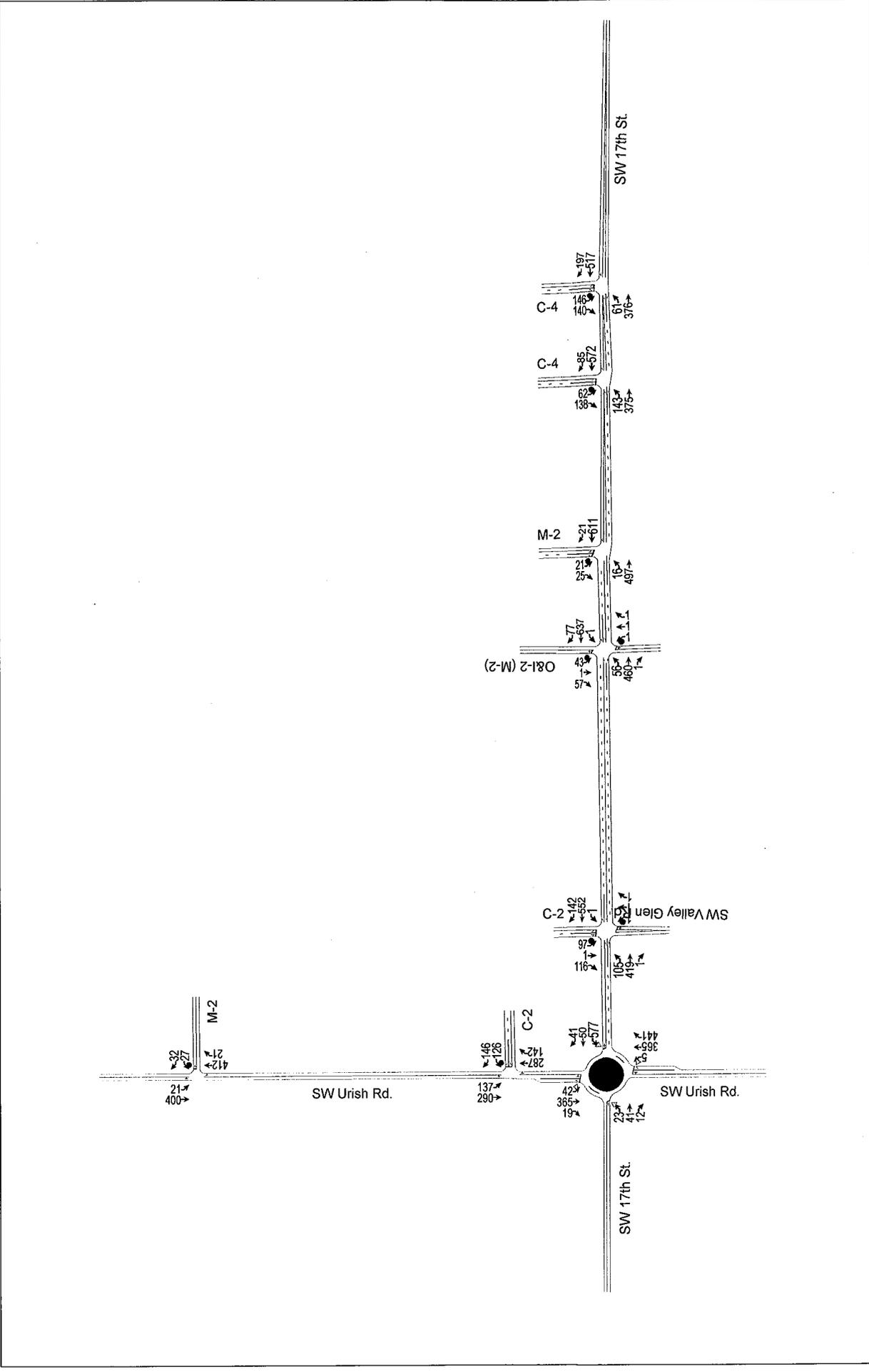
Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 60.7% ICU Level of Service B
 Analysis Period (min) 15



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑	↗		↘	↗
Volume (vph)	61	317	439	197	146	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr't			0.958			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1785	0	1770	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1863	1785	0	1770	1583
Link Speed (mph)		30	35		40	
Link Distance (ft)		340	977		235	
Travel Time (s)		7.7	19.0		4.0	
Peak Hour Factor	0.65	0.65	0.95	0.95	0.92	0.92
Adj. Flow (vph)	94	488	462	207	159	152
Shared Lane Traffic (%)						
Lane Group Flow (vph)	94	488	669	0	159	152
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane		Yes	Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	56.6%
	ICU Level of Service B
Analysis Period (min)	15



SATURDAY PEAK HOUR FUT + PROP
 3: SW Urish Rd. & SW 17th St.

Wrangler Ridge Subdiivision
 4/2/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	41	12	577	50	41	5	365	441	42	365	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	12	14	12	12	15	14	12	15	14
Storage Length (ft)	0		0	0		0	0		150	0		150
Storage Lanes	0		0	0		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.979			0.992				0.850			0.850
Flt Protected		0.985			0.959			0.999			0.995	
Satd. Flow (prot)	0	1916	0	0	1890	0	0	2047	1689	0	2039	1689
Flt Permitted		0.985			0.959			0.999			0.995	
Satd. Flow (perm)	0	1916	0	0	1890	0	0	2047	1689	0	2039	1689
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		796			525			598			362	
Travel Time (s)		18.1			11.9			10.2			6.2	
Peak Hour Factor	0.65	0.65	0.65	0.95	0.95	0.95	0.93	0.93	0.93	0.85	0.85	0.85
Adj. Flow (vph)	35	63	18	607	53	43	5	392	474	49	429	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	116	0	0	703	0	0	397	474	0	478	22
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes							
Headway Factor	1.00	0.92	1.00	1.00	0.92	1.00	1.00	0.88	0.92	1.00	0.88	0.92
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Yield			Yield			Yield			Yield	

Intersection Summary

Area Type:	Other
Control Type:	Roundabout
Intersection Capacity Utilization	94.8%
ICU Level of Service	F
Analysis Period (min)	15

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	126	146	287	142	137	290
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frts		0.850	0.955			
Flt Protected	0.950					0.984
Satd. Flow (prot)	1770	1583	1779	0	0	1833
Flt Permitted	0.950					0.984
Satd. Flow (perm)	1770	1583	1779	0	0	1833
Link Speed (mph)	40		40			40
Link Distance (ft)	235		362			1173
Travel Time (s)	4.0		6.2			20.0
Peak Hour Factor	0.92	0.92	0.93	0.93	0.85	0.85
Adj. Flow (vph)	137	159	309	153	161	341
Shared Lane Traffic (%)						
Lane Group Flow (vph)	137	159	462	0	0	502
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			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		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 63.6% ICU Level of Service B
 Analysis Period (min) 15

SATURDAY PEAK HOUR FUT + PROP
8: SW Urish Rd. & M-2

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	27	32	412	21	21	400
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.926		0.993			
Flt Protected	0.978					0.997
Satd. Flow (prot)	1687	0	1850	0	0	1857
Flt Permitted	0.978					0.997
Satd. Flow (perm)	1687	0	1850	0	0	1857
Link Speed (mph)	40		40			40
Link Distance (ft)	294		1173			357
Travel Time (s)	5.0		20.0			6.1
Peak Hour Factor	0.92	0.92	0.93	0.93	0.85	0.85
Adj. Flow (vph)	29	35	443	23	25	471
Shared Lane Traffic (%)						
Lane Group Flow (vph)	64	0	466	0	0	496
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			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		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 48.3% ICU Level of Service A
 Analysis Period (min) 15

SATURDAY PEAK HOUR FUT + PROP
10: SW Valley Glen Rd./C-2 & SW 17th St.

Wrangler Ridge Subdiivision
 4/2/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	105	419	1	1	552	142	1	1	1	97	1	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	11	11	12	12	12	12	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t					0.969			0.955			0.851	
Fl _t Protected	0.950			0.950				0.984		0.950		
Satd. Flow (prot)	1770	1801	0	1770	1745	0	0	1750	0	1770	1585	0
Fl _t Permitted	0.950			0.950				0.984		0.950		
Satd. Flow (perm)	1770	1801	0	1770	1745	0	0	1750	0	1770	1585	0
Link Speed (mph)		35			35			40			30	
Link Distance (ft)		520			1029			238			199	
Travel Time (s)		10.1			20.0			4.1			4.5	
Peak Hour Factor	0.65	0.65	0.65	0.95	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	162	645	2	1	581	149	1	1	1	105	1	126
Shared Lane Traffic (%)												
Lane Group Flow (vph)	162	647	0	1	730	0	0	3	0	105	127	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)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes										
Headway Factor	1.00	1.04	1.00	1.00	1.04	1.04	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 65.5% ICU Level of Service C
 Analysis Period (min) 15

SATURDAY PEAK HOUR FUT + PROP
12: SW 17th St. & O&I-2 (M-2)

Wrangler Ridge Subdivsion
4/2/2014

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	56	460	1	1	637	77	1	1	1	43	1	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	11	11	12	12	12	12	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.984			0.955			0.924	
Fit Protected	0.950			0.950				0.984			0.979	
Satd. Flow (prot)	1770	1801	0	1770	1772	0	0	1750	0	0	1685	0
Fit Permitted	0.950			0.950				0.984			0.979	
Satd. Flow (perm)	1770	1801	0	1770	1772	0	0	1750	0	0	1685	0
Link Speed (mph)		35			35			40			30	
Link Distance (ft)		1050			361			209			320	
Travel Time (s)		20.5			7.0			3.6			7.3	
Peak Hour Factor	0.65	0.65	0.65	0.95	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	86	708	2	1	671	81	1	1	1	47	1	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	86	710	0	1	752	0	0	3	0	0	110	0
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes							
Headway Factor	1.00	1.04	1.00	1.00	1.04	1.04	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 60.2% ICU Level of Service B
 Analysis Period (min) 15

						
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	143	375	572	85	62	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	11	11	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t			0.983			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1801	1770	0	1770	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1801	1770	0	1770	1583
Link Speed (mph)		35	35		30	
Link Distance (ft)		620	345		255	
Travel Time (s)		12.1	6.7		5.8	
Peak Hour Factor	0.65	0.65	0.95	0.95	0.92	0.92
Adj. Flow (vph)	220	577	602	89	67	150
Shared Lane Traffic (%)						
Lane Group Flow (vph)	220	577	691	0	67	150
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane		Yes	Yes			
Headway Factor	1.00	1.04	1.04	1.04	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 56.6% ICU Level of Service B
 Analysis Period (min) 15

						
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	16	497	611	21	21	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	11	11	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frnt			0.996			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1801	1793	0	1770	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1801	1793	0	1770	1583
Link Speed (mph)		35	35		30	
Link Distance (ft)		345	629		251	
Travel Time (s)		6.7	12.3		5.7	
Confl. Peds. (#/hr)				689		
Peak Hour Factor	0.65	0.65	0.95	0.95	0.92	0.92
Adj. Flow (vph)	25	765	643	22	23	27
Shared Lane Traffic (%)						
Lane Group Flow (vph)	25	765	665	0	23	27
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane		Yes	Yes			
Headway Factor	1.00	1.04	1.04	1.04	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 43.8% ICU Level of Service A
 Analysis Period (min) 15

						
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	61	376	517	197	146	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.963			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1794	0	1770	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1863	1794	0	1770	1583
Link Speed (mph)		30	35		40	
Link Distance (ft)		340	977		235	
Travel Time (s)		7.7	19.0		4.0	
Peak Hour Factor	0.65	0.65	0.95	0.95	0.92	0.92
Adj. Flow (vph)	94	578	544	207	159	152
Shared Lane Traffic (%)						
Lane Group Flow (vph)	94	578	751	0	159	152
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane		Yes	Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 60.7% ICU Level of Service B
 Analysis Period (min) 15

OBSERVED PEAK HOUR FACTORS (SW 17th & URSH RD.)

AM PEAK

SW URSH RD.: NB: 617 veh. entering, 181 peak $\Rightarrow \frac{617}{4(181)} = 0.85 \Rightarrow 85\%$

SB: 135 veh., 40 peak $\Rightarrow \frac{135}{4(40)} = 0.84 \Rightarrow 84\%$

SW 17th ST.: EB: 74 entering, 28 peak $\Rightarrow \frac{74}{4(28)} = 0.66 \Rightarrow 66\%$

WB: 54 entering, 22 peak $\Rightarrow \frac{54}{4(22)} = 0.61 \Rightarrow 61\%$

PM PEAK

SW URSH RD.: NB: 551 entering, 154 MAX $\Rightarrow \frac{551}{4(154)} = 0.89 \Rightarrow 89\%$

SB: 280 entering, 81 max $\Rightarrow \frac{280}{4(81)} = 0.86 \Rightarrow 86\%$

SW 17th ST.: EB: 29 entering, 10 max $\Rightarrow \frac{29}{4(10)} = 0.73 \Rightarrow 73\%$

WB: 216 entering, 57 max $\Rightarrow \frac{216}{4(57)} = 0.95 \Rightarrow 95\%$

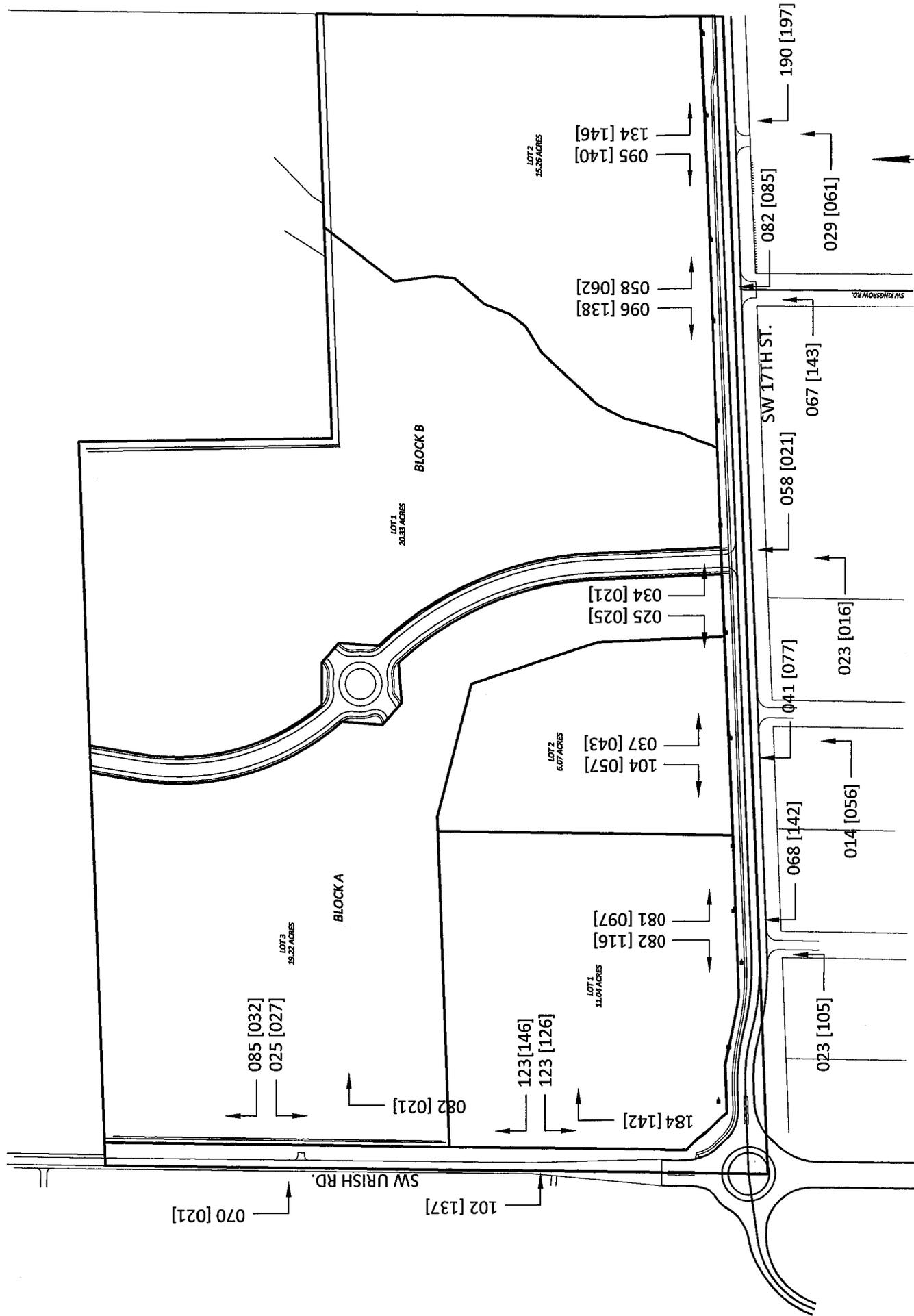
SATURDAY

SW URSH RD.: NB: 333 entering, 90 max $\Rightarrow \frac{333}{4(90)} = 0.925$

SB: 220 entering, 85 max $\Rightarrow \frac{220}{4(85)} = 0.85$

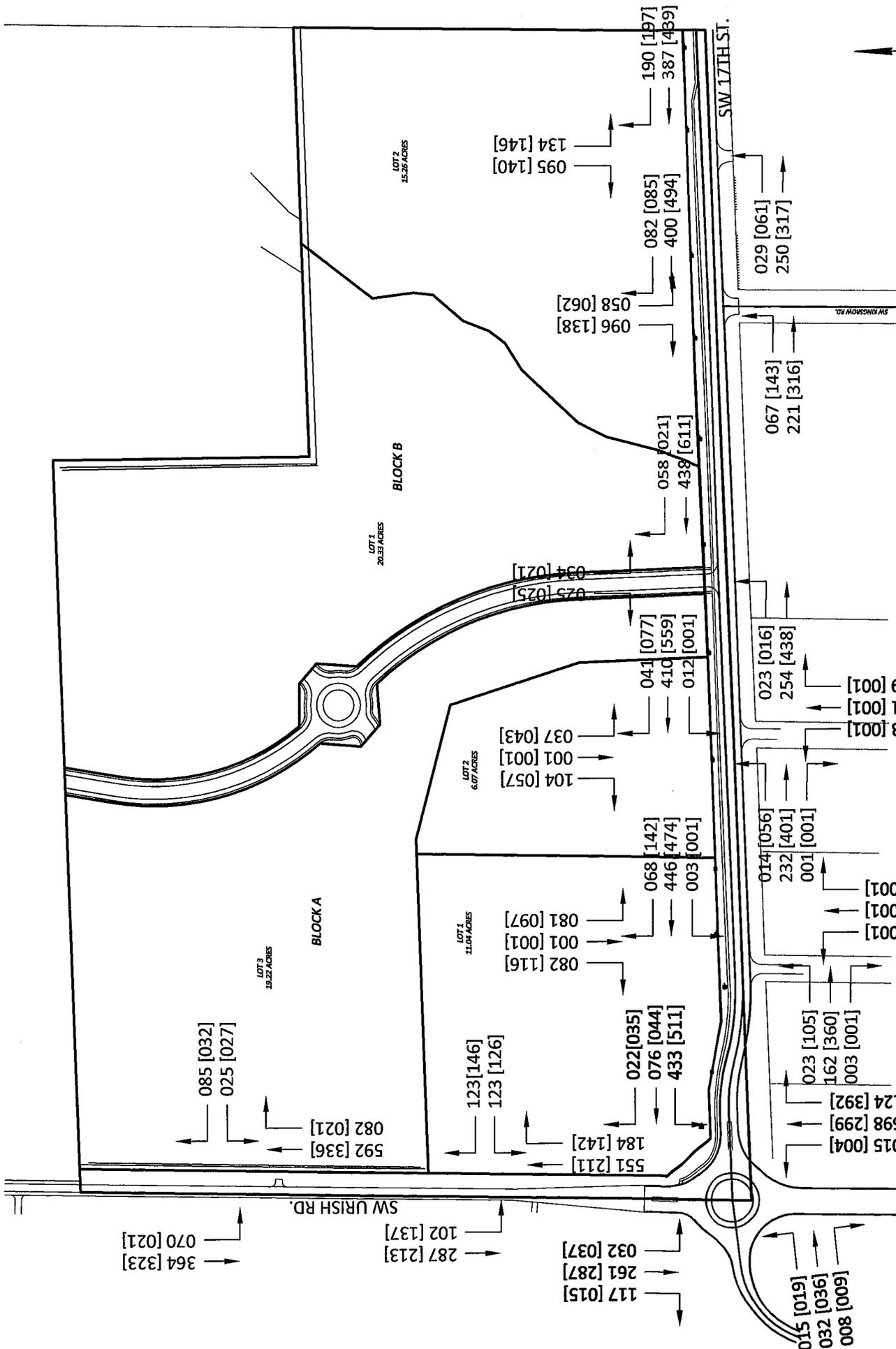
SW 17th ST.: EB: 34 entering, 13 max $\Rightarrow \frac{34}{4(13)} = 0.65$

WB: 229 entering, 60 peak $\Rightarrow \frac{229}{4(60)} = 0.95$



SCALE: NONE

**TRIP GENERATION DISTRIBUTION
FOR PROPOSED DEVELOPMENT**
SW 17TH ST. & SW URISH RD.
PM PEAK [SATURDAY PEAK]



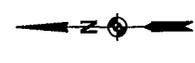
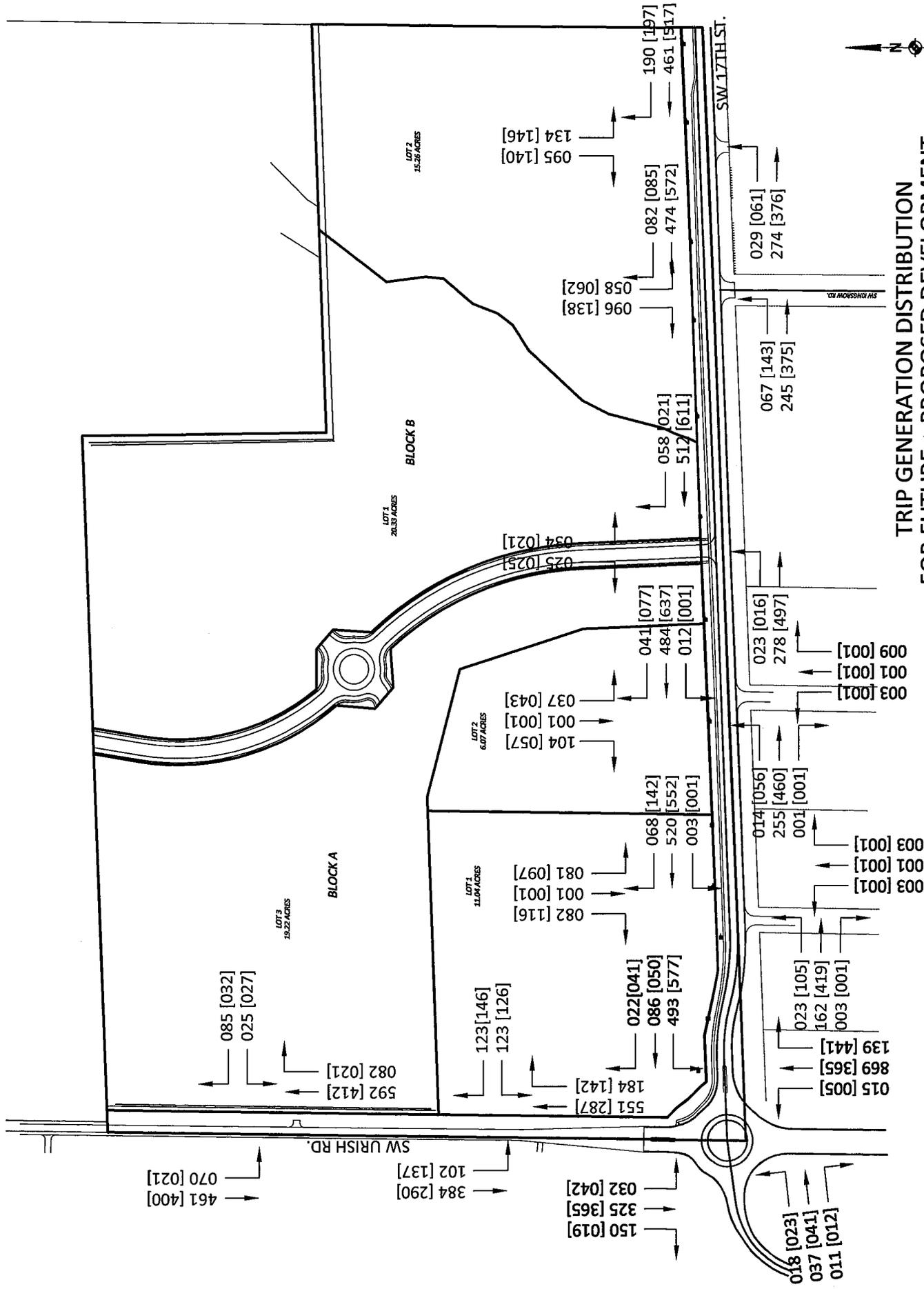
**TRIP GENERATION DISTRIBUTION
FOR EXISTING + PROPOSED DEVELOPMENT**

SW 17TH ST. & SW URISH RD.

PM PEAK [SATURDAY PEAK]



SCALE: NONE



**TRIP GENERATION DISTRIBUTION
FOR FUTURE + PROPOSED DEVELOPMENT**

SW 17TH ST. & SW URISH RD.

PM PEAK [SATURDAY PEAK]

SCALE: NONE