WAGENBRENNER DEVELOPMENT | THRIVE COMPANIES

June 14, 2019

Honorable Mayor Ray DeGraw
City of Grandview Heights
1016 Grandview Avenue
Grandview Heights, Ohio 43212

Dear Mayor DeGraw:

This letter shall serve as Wagenbrenner Development's commitment that we, on behalf of 810 Grandview LLC and/or the Grandview Crossing New Community Authority, will pay for any and all costs related to installing a right hand turn lane on westbound Dublin Road to northbound Grandview Avenue within the existing City Right of Way as depicted on attached Preliminary Construction Plan, Exhibit A. Said costs shall include all tasks required to construct the lane including preparation of detailed construction plans, retaining a contractor, all construction coasts, temporary work right-of way and agreements if required, necessary permits and construction inspection.

The lane may be constructed at any time during the development of the site but shall be completed before such time that the site development reaches 45 percent completion based on the attached "Grandview Crossing Impact Traffic Impact Study, Rev 4 Addendum" dated October 1, 2018 prepared by Smart Services, Inc. and approved by the City of Grandview Height and the City of Columbus. As it relates, I'm also attaching as Exhibit B, the Engineer's Estimate by EP Ferris dated 5/30/2019 for the estimated cost to complete to improvements for the right-hand turn lane.

Sincerely,

Eric Wagenbrenner
Principal of Wagenbrenner Development
Managing Member of 810 Grandview LL

Accepted and Approved for the City of Grandview Heights:

Mayor _____ Date 6/19/19

Attachments:
Exhibit A Preliminary Construction Plan
Exhibit B Construction Cost Estimate.
Grandview Crossing Impact Traffic Impact Study, Rev 4 Addendum" dated October 1, 2018 prepared by Smart Services, Inc.

M:\1005009_Kapiri\DWG\Exhibits\Grandview at Dublin Exhibit.dwg 16-May-19 3:47 PM

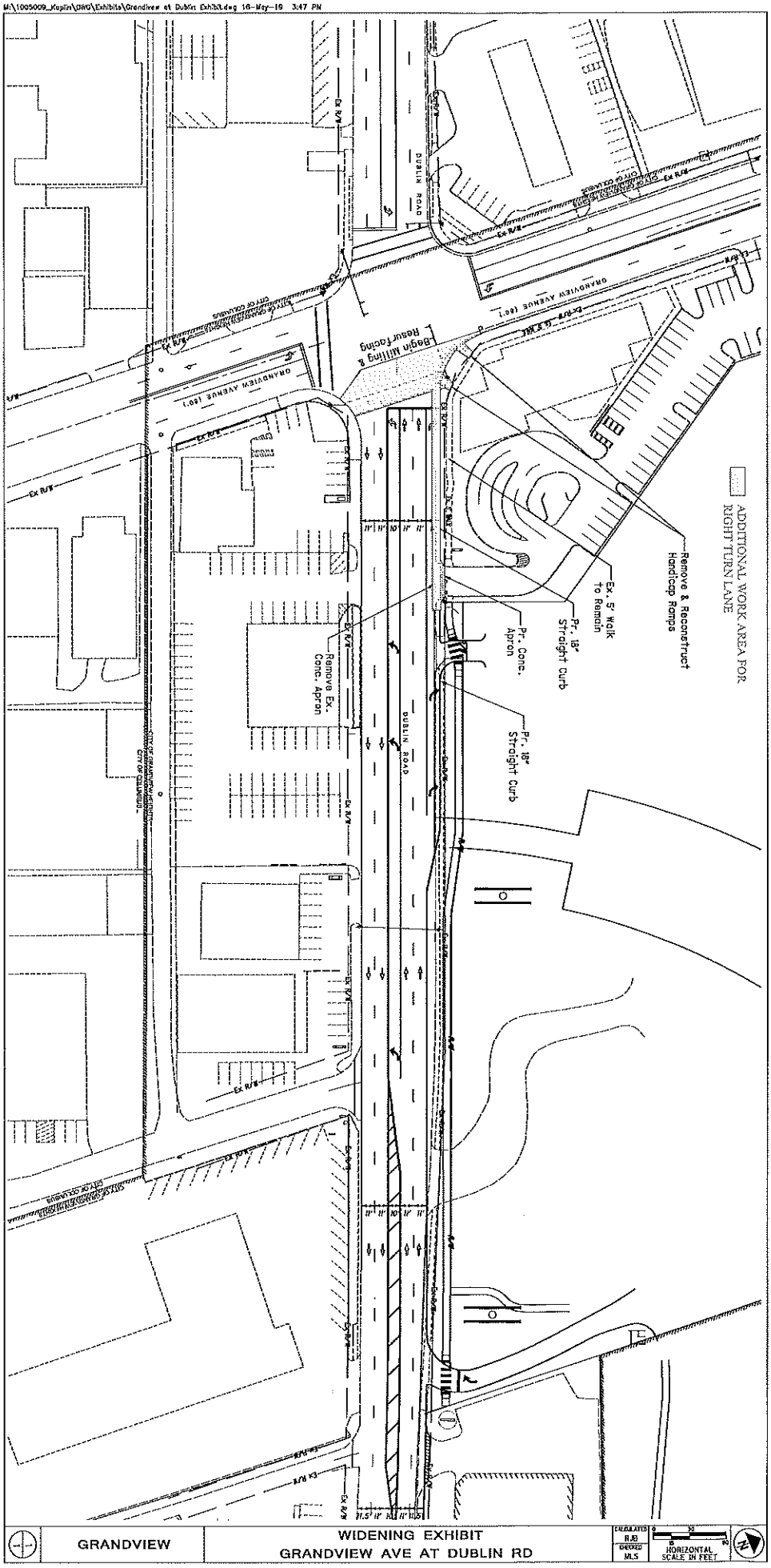


Exhibit A

COST ESTIMATE FOR ADDITIONAL WORK FOR WB DUBLIN ROAD RIGHT TURN LANE TO NB GRANDVIEW AVENUE

REF NO.	(1) ITEM	(2) DESCRIPTION	(3) QUANT.	(4) UNIT	(7) (5)+(6) TOTAL($)	(8) (3) x (7) TOTAL EXTENDED INFORMAL PRICE($)
1	201	CLEARING AND GRUBBING	1	LUMP	$1,000.00	$1,000.00
2	202	SIDEWALK REMOVED	110	SQ FT	$2.00	$220.00
3	202	CURB AND GUTTER REMOVED AND DISPOSED OF	202	FT	$15.00	$3,030.00
4	202	PAVEMENT REMOVED AND DISPOSED OF	36	SQ YD	$10.00	$360.00
5	203	EXCAVATION	80	CY	$40.00	$3,200.00
6	203	EXCAVATION	80	CY	$40.00	$3,200.00
7	254	PAVEMENT PLANING	320	SY	$6.00	$1,920.00
8	301	ASPHALT CONCRETE BASE, PG64-22	35	CY	$250.00	$8,750.00
9	304	AGGREGATE BASE	26	CY	$50.00	$1,300.00
10	441	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), PG64-22	26	CY	$300.00	$7,800.00
11	452	CONCRETE DRIVE	93	SQ FT	$10.00	$930.00
12	608	4" CONCRETE WALK	110	SQ FT	$8.00	$880.00
13	608	CURB RAMP	2	EACH	$400.00	$800.00
14	608	DETECTABLE WARNING	2	EACH	$400.00	$800.00
15	609	CURB, STRAIGHT 18"	22	FT	$25.00	$550.00
16	614	MAINTAINING TRAFFIC	1	LUMP	$4,000.00	$3,336.00
17	623	CONSTRUCTION LAYOUT STAKES AND SURVEYING	1	LUMP	$500.00	$500.00
18	625	PULL BOX	1	EACH	$1,000.00	$1,000.00
19	632	PEDESTRIAN PUSH BUTTON	1	EACH	$1,000.00	$1,000.00
20	632	LOOP DETECTORS	4	EACH	$1,000.00	$4,000.00
21	644	CROSSWALK LINE	160	FT	$3.00	$480.00
22	653	TOPSOIL FURNISHED AND PLACED, AS PER PLAN	10	CY	$50.00	$500.00
23	659	SEEDING AND MULCHING, AS PER PLAN	111	SY	$4.00	$444.00
						$46,000.00

$46,000.00

SMART SERVICES, INC.
Surveying ♦ Environmental ♦ Traffic ♦ CA/CM
An Ohio DBE/EDGE Certified Firm

October 1, 2018

Mr. Patrik G. Bowman, AICP
City of Grandview Heights
1016 Grandview Avenue
Grandview Heights, OH 43212

Mr. Daniel R. Blechschmidt, PE
City of Columbus Department of Public Service
Division of Traffic Management
111 N. Front Street, 4th Floor
Columbus, OH 43215

Re: Grandview Crossing Traffic Impact Study REV 4 Addendum
Cities of Grandview Heights and Columbus, Franklin County Ohio

Please consider this letter an addendum to the Grandview Crossing Traffic Impact Study REV 4 dated 8/10/2018. The addendum is per the City of Grandview Heights request in an e-mail dated 9/10/2018.

REDUCED WESTBOUND LANE WIDTHS AFFECT ON CAPACITY

To accommodate a future westbound right turn lane, the developer is proposing to the reviewing agencies a narrowing of the westbound approach lane on Dublin Road to 10 feet for turn lanes and 11 feet for through lanes. The critical 2028 'Build' with improvements capacity analysis was revised to incorporate the reduced lane widths on the westbound approach. Since the westbound approach was not a critical approach after incorporating the proposed improvement, the westbound lane widths did not affect the overall result of the capacity analysis. The *Synchro* report is attached.

PERCENT OF DEVELOPMENT FOR LOS DEFICIENCY

The number of trips that would cause the Grandview Avenue & Dublin Road intersection to fall below the City of Columbus's Level of Service criteria was analyzed. This was done by reducing all land use in the study to a certain percentage until the LOS fell below the threshold. Since all land uses were reduced equally, the internal capture percentages for the full development were not adjusted. The results showed that at 45% of the proposed development, the number of trips would fall below the City's LOS criteria. Attached is a trip generation summary for 45%, a Figure 6B at 45% of 'Build', and the corresponding *Synchro* output.

If you were to measure trips in the future to determine when the improvements are required, the inbound and outbound traffic would have to be measured at all access points and include both primary and pass-by trips as there would not be a way to distinguish between primary and pass-by trips in ground counts. Based on this information, the PM Peak trip threshold comparison value would be a total of 552 trips (236 Inbound and 316 outbound).

If you have any questions, please contact me. Thank you!

Sincerely,
SMART SERVICES, INC.

Todd J. Stanhope, PE, PTOE
Director of Traffic Engineering

Submitted: One electronic copy (PDF format) via e-mail

cc: E. Wagenbrenner – Wagenbrenner Development

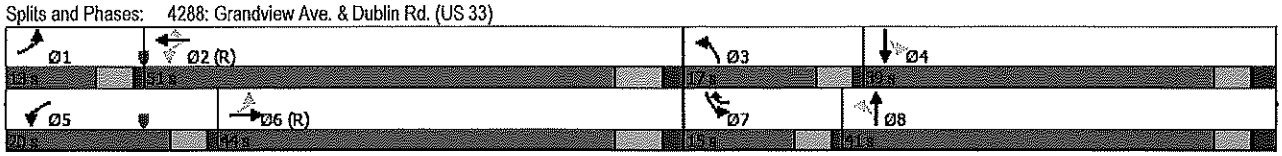
Grandview Crossing REV 3 - 2028 'Build' with WBRT - PM Peak (Adj WB Lane Widths) Timings
4288: Grandview Ave. & Dublin Rd. (US 33) 09/24/2018

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	172	512	241	260	1195	326	221	852	136	184	817	147
Future Volume (vph)	172	512	241	260	1195	326	221	852	136	184	817	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	10	11	10	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	325		0	550		0	375		0	400		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		1506			1357			1072			591	
Travel Time (s)		22.8			20.6			24.4			13.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	177	528	248	268	1232	336	228	878	140	190	842	152
Shared Lane Traffic (%)												
Lane Group Flow (vph)	177	776	0	268	1232	336	228	1018	0	190	994	0
Turn Type	pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2	7	3	8		7	4	
Permitted Phases	6			2		2	8			4		
Detector Phase	1	6		5	2	7	3	8		7	4	
Switch Phase												
Minimum Initial (s)	8.0	21.0		15.0	21.0	7.0	7.0	21.0		7.0	21.0	
Minimum Split (s)	13.0	34.0		20.0	34.0	12.0	12.0	32.0		12.0	32.0	
Total Split (s)	13.0	44.0		20.0	51.0	15.0	17.0	41.0		15.0	39.0	
Total Split (%)	10.8%	36.7%		16.7%	42.5%	12.5%	14.2%	34.2%		12.5%	32.5%	
Yellow Time (s)	3.5	4.5		3.5	4.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	2.0		1.0	2.0	1.0	1.0	2.5		1.0	2.5	
Lost Time Adjust (s)	-0.5	-2.0		-0.5	-2.0	0.0	-0.5	-2.0		-0.5	-2.0	
Total Lost Time (s)	4.0	4.5		4.0	4.5	4.5	4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Recall Mode	None	C-Max		None	C-Max	None	None	Min		None	Min	
Act Effct Green (s)	49.1	39.6		60.0	46.5	61.5	50.0	37.0		46.0	35.0	
Actuated g/C Ratio	0.41	0.33		0.50	0.39	0.51	0.42	0.31		0.38	0.29	
v/c Ratio	0.89	0.67		0.83	0.93	0.43	0.89	0.94		0.84	0.97	
Control Delay	68.7	34.7		46.7	29.2	3.7	59.1	53.7		56.5	45.8	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	68.7	34.7		46.7	29.2	3.7	59.1	53.7		56.5	45.8	
LOS	E	C		D	C	A	E	D		E	D	
Approach Delay		41.0			27.1			54.7			47.5	
Approach LOS		D			C			D			D	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 12 (10%), Referenced to phase 2:WBTL and 6:EBTL, Start of 1st Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.97
Intersection Signal Delay: 40.9 Intersection LOS: D
Intersection Capacity Utilization 95.8% ICU Level of Service F
Analysis Period (min) 15

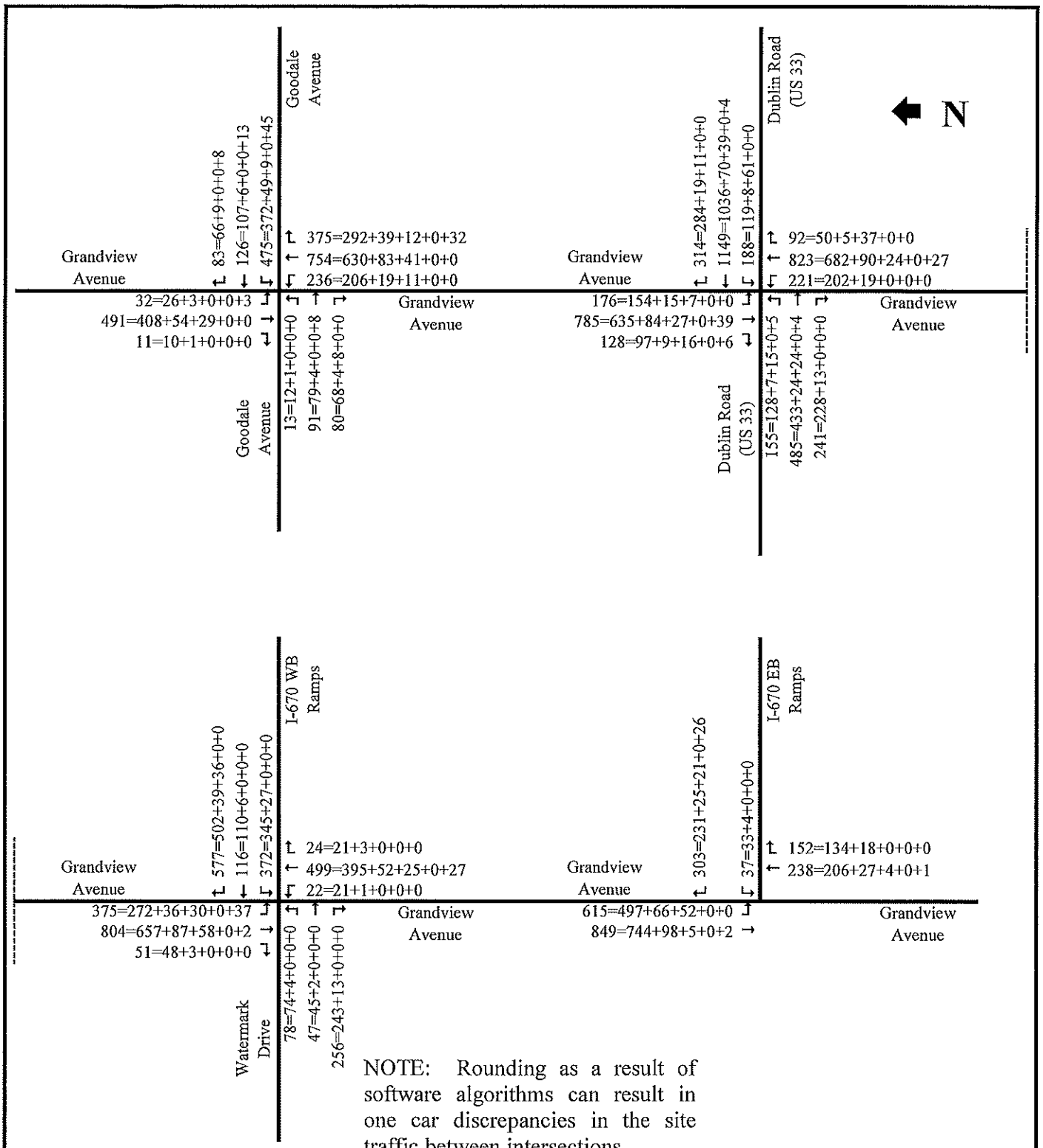
Splits and Phases: 4288: Grandview Ave. & Dublin Rd. (US 33)



Traffic Study Subarea	Combo Number	Land Use	Time of Day	Data Set from: *Trip Generation Manual, 9th Edition* (Unless noted Otherwise)	Overide with Average	Regression Equation from: *Trip Generation Manual 9th Edition*	Pass-By % from *Trip Generation Handbook 3rd Edition* unless noted otherwise	Total Trips	Entering							Exiting						
									%	Total Trips	Internal Capture		Sub Total	Pass-By Trips	Primary Trips	%	Total Trips	Internal Capture		Sub Total	Pass-By Trips	Primary Trips
											%	Trips						%	Trips			
TOTALS			Daily					8152		4079		0	4079	0	4079		4073		0	4073	0	4073
			AM Peak					437		247		17	230	0	230		190		16	174	0	174
			PM Peak					720		320		84	236	45	191		400		84	316	42	274

45% SITE TRIP GENERATION SUMMARY

SMART SERVICES, INC.



NOTE: Rounding as a result of software algorithms can result in one car discrepancies in the site traffic between intersections.

LEGEND

A=B+C+D+E+F

A = 2028 'BUILD' W/ DIVERTED TO WATERMAN - PM PEAK
B = EXISITING (2017)
C = GROWTH
D = SITE PRIMARY
E = SITE PASS-BY
F = GRANDVIEW YARD BEYOND BKGD GROWTH RATES

GRANDVIEW CROSSING TRAFFIC IMPACT STUDY

PREPARED BY: SMART SERVICES, INC. REV. 4 Add 10/2018

FIGURE 6B

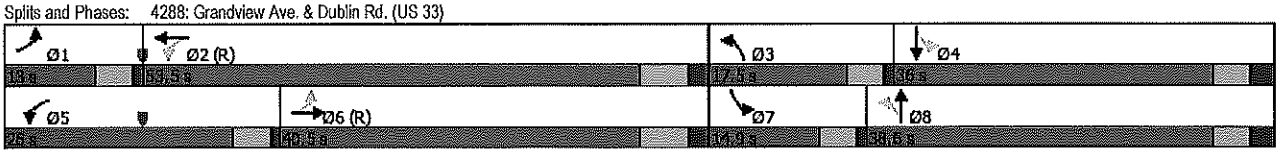
2028 '45% BUILD' W/ DIVERTED TO WATERMAN - PM PEAK

2028 'Build' with 'No Build' Improvements 45% at 4288 - PM Peak
4288: Grandview Ave. & Dublin Rd. (US 33)

Timings
09/24/2018

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	155	485	241	188	1149	314	221	823	92	176	785	128
Future Volume (vph)	155	485	241	188	1149	314	221	823	92	176	785	128
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	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	325		0	550		0	375		0	400		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		1506			1357			1072			591	
Travel Time (s)		22.8			20.6			24.4			13.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases	6			2			8			4		
Detector Phase	1	6		5	2		3	8		7	4	
Switch Phase												
Minimum Initial (s)	8.0	21.0		15.0	21.0		7.0	21.0		7.0	21.0	
Minimum Split (s)	13.0	34.0		20.0	34.0		12.0	32.0		12.0	32.0	
Total Split (s)	13.0	40.5		26.0	53.5		17.5	38.6		14.9	36.0	
Total Split (%)	10.8%	33.8%		21.7%	44.6%		14.6%	32.2%		12.4%	30.0%	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.5		1.0	2.5	
Lost Time Adjust (s)	-0.5	-2.0		-0.5	-2.0		-0.5	-2.0		-0.5	-2.0	
Total Lost Time (s)	4.0	4.5		4.0	4.5		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Recall Mode	None	C-Max		None	C-Max		None	Min		None	Min	
Act Effct Green (s)	51.3	41.8		62.5	49.0		48.0	34.6		43.0	32.1	
Actuated g/C Ratio	0.43	0.35		0.52	0.41		0.40	0.29		0.36	0.27	
v/c Ratio	0.81	0.61		0.52	1.06		0.87	0.93		0.80	1.00	
Control Delay	55.3	31.8		18.9	58.9		55.3	54.9		50.2	55.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	55.3	31.8		18.9	58.9		55.3	54.9		50.2	55.7	
LOS	E	C		B	E		E	D		D	E	
Approach Delay		35.9			54.4			55.0			54.8	
Approach LOS		D			D			D			D	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 5 (4%), Referenced to phase 2:WBTL and 6:EBTL, Start of 1st Green
Natural Cycle: 120
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.06
Intersection Signal Delay: 51.2 — Intersection LOS: D
Intersection Capacity Utilization 102.1% — ICU Level of Service G
Analysis Period (min) 15

Splits and Phases: 4288: Grandview Ave. & Dublin Rd. (US 33)