TRAFFIC COUNT REPORT

Alton Boulevard (SH107) and Main Avenue (FM676) Intersection

Alton, Texas

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Prepared for

The City of Alton

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I. INTRODUCTION

The City of Alton, Texas is located on the Southwestern Corner of Hidalgo County in the Rio Grande Valley. The Rio Grande Valley is on the southern tip of Texas and is comprised of the following counties: Hidalgo, Cameron, Willacy, and Starr This is the southernmost part of the United States that serves as a border to Mexico. Alton is bordered on the north and east by the City of McAllen, on the west by the City of Mission, and on the south by the City of Palmhurst.

The City of Alton has experienced a constant increase in population as shown by the census during the last few decades, and in order to evaluate the traffic volume increase throughout the city as a consequence of the population growth a traffic volume study was deemed necessary to obtain accurate information about the number of vehicles to inform decision makers and to evaluate existing transportation system and to plan for future improvements.

This report was prepared to provide the City of Alton with current information regarding the traffic volume on the city's major thoroughfare intersection and with historical data that may be useful for estimating future traffic volumes.

A short duration traffic count was performed during 24 hours period in 15 minutes intervals utilizing automatic portable counter stations on each approach (northbound, southbound, eastbound, and westbound) located far in advance of the intersection to include potential left turns and right turns movements. This report does not include turning movement counts (left, right, and straight).The equipment used to collect the traffic count was the Jamar TRAX Pro 1 automated counter.

Historical data was gathered from Hidalgo County Metropolitan Planning Organization (MPO) for the intersection of study for the years 2004, 2008, 2009, and 2010 to estimate traffic pattern for this intersection.

II. GENERAL

HL Engineering Group was hired to conduct a traffic count to a City identified key signalized intersection. The following report provides the traffic counts data only HL Engineering Group did not perform any traffic analysis of the area or made any recommendations for future improvements. HL Engineering Group acquired a 24 hour period traffic counts at the four approaches of the signalized intersection identified by the City of Alton. The traffic counts were conducted on Friday, May 18, 2012, by GRAM Traffic, Inc. Copies of the traffic count data are included in the attachments of this report. HL Engineering Group also conducted a site visit on Thursday, May 17 and Thursday May 24, 2012, to note intersection geometrics, lane assignments, traffic controls, speed limits, driveway locations at the study intersection. Much of the roadway infrastructure around the intersection is already built to its ultimate configuration. Turn lanes and traffic signals are in place at the key intersection.

The traffic volumes information provided in this report excludes is characterized as follows:

- No turning movement count provided.
- No breakdown of vehicle category (e.g., cars, buses, trucks, recreational vehicles).
- Gross volume provided indicates a two axle equivalent count.
- Vehicles with more than two axles have not been factored since the percentage of this type of vehicles is not known.
- Seasonal variation is not represented in this report.

III. ROADWAYS

The key roadways in the study area, as designated by the City of Alton, include Alton Boulevard (SH 107) and Main Avenue (FM 676). Figure 1 below shows the key intersections of the report. Alton Boulevard is a major north-south thoroughfare consisting in a five-lane undivided road with a posted speed limit of 30 miles per hour (mph). Main Avenue is an east-west thoroughfare with a two-lane undivided road with a posted speed limit of 35 miles per hour (mph).

The geometrics and traffic controls at the intersection of study are outlined below·

Alton Boulevard / Main Avenue

- Northbound – left turn lane, two through lanes, right turn lane
- Southbound – left turn lane, two through lanes, right turn lane
- Eastbound – left turn lane, shared through / right turn lane
- Westbound – left turn lane, shared through / right turn lane
- Protected / permissive left turn phasing for all four approaches

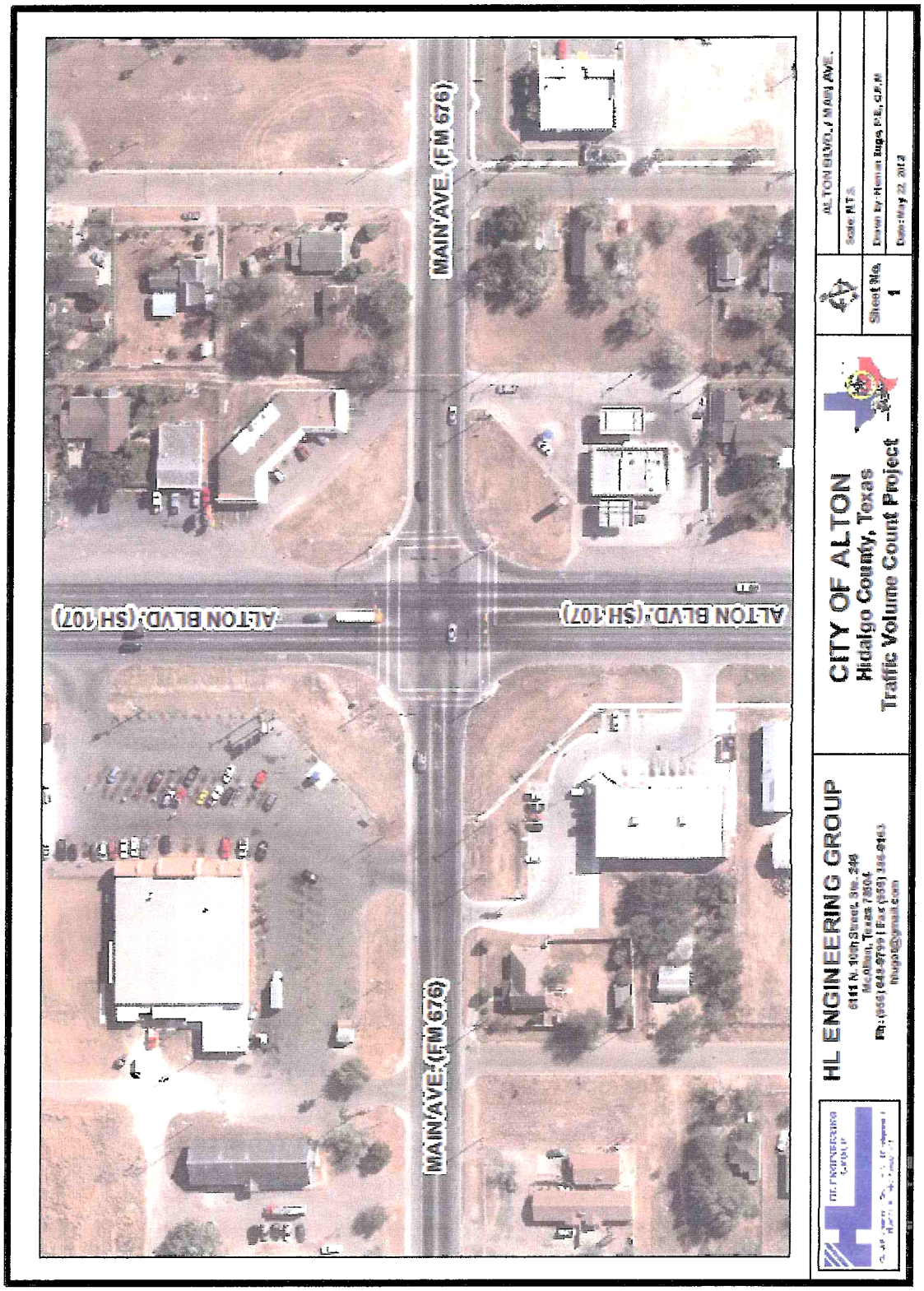

Figure 1 Aerial View of Intersection of Study

IV. PHOTOGRAPHS

This section of the report includes pictures of the key streets on the intersection study area.

Figure 2 Westbound View

Figure 3 Northbound View

Figure 4 Southbound View

Figure 5 Westbound View

V. ANALYSIS

HL Engineering Group worked with the City of Alton staff to develop the scope and guidelines for analysis of the study intersection. The City identified this key signalized intersection to evaluate. Figure 6 shows the plot of the north and south bound traffic counts vs. time. Figure 7 shows the plot of the east and west bound traffic count.

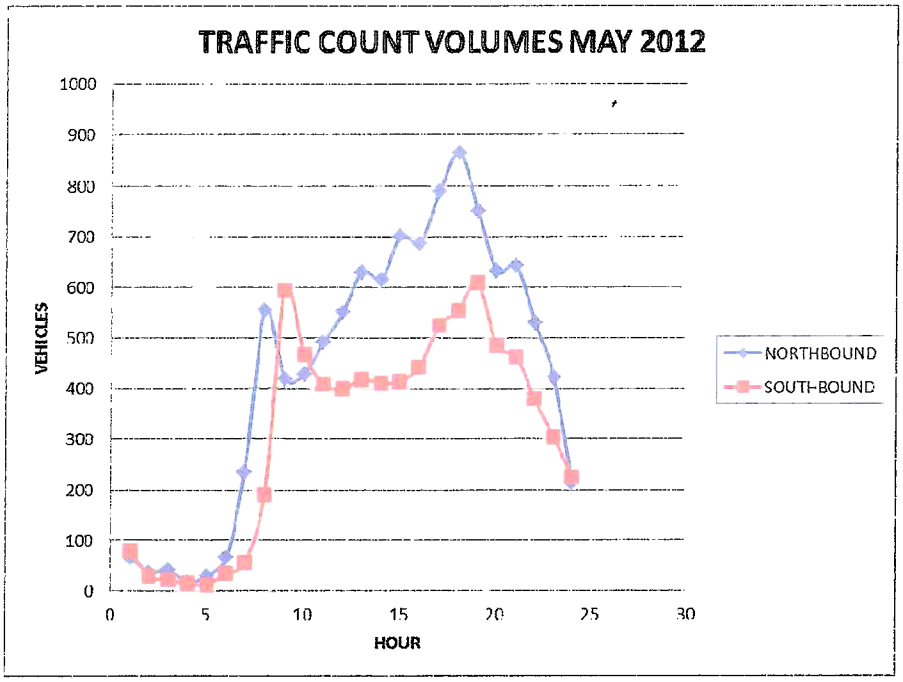

Figure 6 North and South bound traffic during 24hrs period

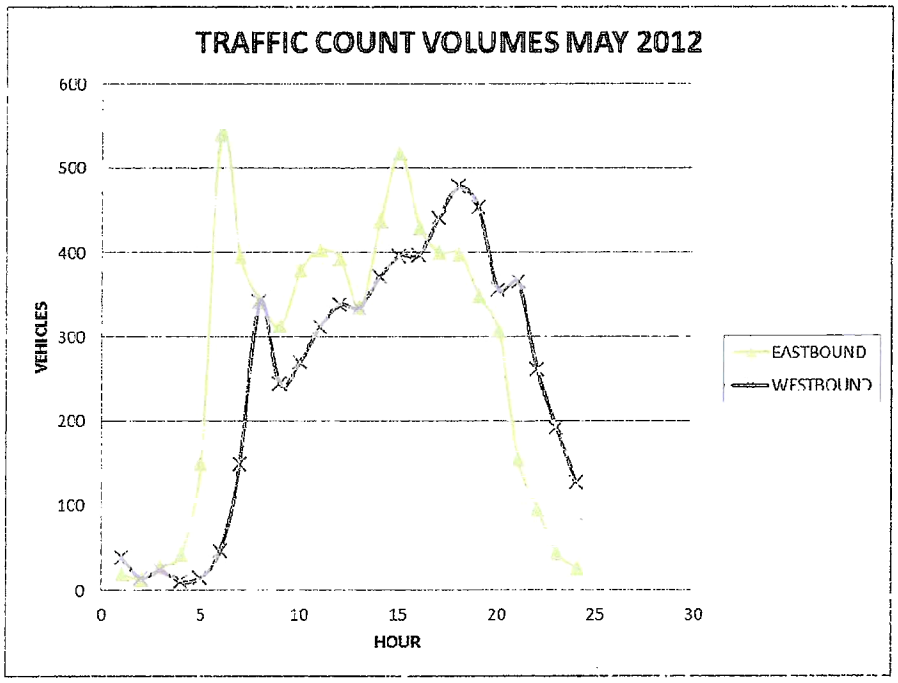

Figure 7 East and West bound traffic during 24hrs period

Figure 6 shows a peak count of 864 vehicles on the north bound direction at hour 18; which equates to traffic at five in the afternoon. The southbound direction shows a peak of 608 vehicles at hour 19; which equates around six in the afternoon. Figure 7 shows a peak count of 539 on the east bound direction at hour 6; which equates to five in the morning. A peak of 478 vehicles was seen at five in the afternoon for the west bound direction.

Totals were compared with traffic count from the last 8 years as made available from Hidalgo County Metropolitan Planning Organization (MPO). Table 1 below shows the totals for each of the directions for the last 8 years. Traffic counts for both directions in 2012 were assumed to be the same for comparison purposes.

Table 1 Traffic count for SH107 and FM676 from 2004 to 2012

	2004	2008	2009	2010	2012**
NORTHBOUND	21050	*	*	*	20816
SOUTHBOUND	13600	*	*	*	15082
EASTBOUND	11230	11600	12400	12100	13016
WESTBOUND	9470	9900	10800	10200	11952

** No data available for that direction*
*** Assume same traffic for both directions*

Data collected by Gram Traffic Inc. is provided in the attachment 1 Traffic counts were obtained every fifteen minutes and separated between the morning and afternoon hours.

VI. ATTACHMENTS AND FIGURES

Attachment 1

North Bound Traffic Count Data

GRAM Traffic, Inc.
21220 Jakes Hill Rd
Hutto, TX 78634
51

Site Code:
Station ID:
Conway Ave Northbound
Approach to FM 676
Latitude: 0' 0.000 Undefined

	18-May-12	Northbound		Hour Totals	
Hour	Fri	Morning	Afternoon	Morning	Afternoon
12:00		16	149		
12:15		25	155		
12:30		15	155		
12:45		11	171	67	630
01:00		6	169		
01:15		12	145		
01:30		10	146		
01:45		9	156	37	616
02:00		10	178		
02:15		12	153		
02:30		11	181		
02:45		9	189	42	701
03:00		5	175		
03:15		5	149		
03:30		4	177		
03:45		4	185	18	686
04:00		5	174		
04:15		5	176		
04:30		5	218		
04:45		15	220	30	788
05:00		10	234		
05:15		12	217		
05:30		22	206		
05:45		22	207	66	864
06:00		46	193		
06:15		53	198		
06:30		64	181		
06:45		71	179	234	751
07:00		110	195		
07:15		143	155		
07:30		144	153		
07:45		157	128	554	631
08:00		127	143		
08:15		97	165		
08:30		92	167		
08:45		103	166	419	641
09:00		103	139		
09:15		105	143		
09:30		106	130		
09:45		114	117	428	529
10:00		123	119		
10:15		125	97		
10:30		115	105		
10:45		128	100	491	421
11:00		117	55		
11:15		135	72		
11:30		126	47		
11:45		172	40	550	214
Total		2936	7472		
Percent		28.2%	71.8%		
Grand Total		2936	7472	10408	
Percent		28.2%	71.8%		

Attachment 2

South Bound Traffic Count Data

21220 Jakes Hill Rd
Hutto, TX 78634
51

Site Code:
Station ID:
Conway Ave - Southbound
Approach to FM 676
Latitude: 0' 0.000 Undefined

	18-May-12	Southbound		Hour Totals	
	Fri	Morning	Afternoon	Morning	Afternoon
12:00		25	89		
12:15		28	101		
12:30		15	97		
12:45		11	131	79	418
01:00		12	99		
01:15		7	102		
01:30		5	115		
01:45		6	95	30	411
02:00		5	110		
02:15		8	95		
02:30		5	112		
02:45		4	97	22	414
03:00		1	106		
03:15		9	90		
03:30		2	144		
03:45		3	103	15	443
04:00		8	109		
04:15		3	120		
04:30		2	150		
04:45		0	145	13	524
05:00		6	144		
05:15		4	133		
05:30		11	133		
05:45		13	144	34	554
06:00		10	153		
06:15		6	136		
06:30		25	168		
06:45		15	151	56	608
07:00		37	116		
07:15		34	114		
07:30		43	136		
07:45		76	120	190	486
08:00		95	143		
08:15		152	115		
08:30		180	101		
08:45		168	104	595	463
09:00		123	94		
09:15		119	97		
09:30		119	94		
09:45		106	94	467	379
10:00		104	74		
10:15		111	86		
10:30		92	72		
10:45		103	73	410	305
11:00		88	57		
11:15		96	68		
11:30		114	51		
11:45		102	49	400	225
Total		2311	5230		
Percent		30.6%	69.4%		
Grand Total		2311	5230	7541	
Percent		30.6%	69.4%		

Attachment 3

East Bound Traffic Count Data

GRAM Traffic, Inc.
21220 Jakes Hill Rd
Hutto, TX 78634
51

Site Code
Station ID:
FM 676 - Eastbound
Approach to Conway Ave
Latitude: 0' 0.000 Undefined

	18-May-12 Fri	Eastbound Morning	Aftemoon	Hour Totals Morning	Aftemoon
12:00		8	81		
12:15		5	70		
12:30		4	88		
12:45		3	96	20	335
01:00		1	97		
01:15		7	110		
01:30		5	113		
01:45		1	117	14	437
02:00		7	125		
02:15		1	133		
02:30		9	123		
02:45		11	136	28	517
03:00		7	102		
03:15		5	115		
03:30		10	102		
03:45		21	110	43	429
04:00		24	105		
04:15		38	107		
04:30		36	97		
04:45		52	91	150	400
05:00		73	103		
05:15		121	84		
05:30		164	119		
05:45		181	92	539	398
06:00		111	85		
06:15		101	102		
06:30		91	80		
06:45		92	81	395	348
07:00		85	100		
07:15		87	84		
07:30		92	64		
07:45		78	59	342	307
08:00		78	52		
08:15		67	41		
08:30		83	25		
08:45		85	36	313	154
09:00		97	22		
09:15		89	27		
09:30		97	30		
09:45		96	16	379	95
10:00		116	18		
10:15		85	11		
10:30		101	8		
10:45		101	7	403	44
11:00		103	9		
11:15		104	7		
11:30		98	7		
11:45		87	3	392	26
Total		3018	3490		
Percent		46.4%	53.6%		
Grand Total		3018	3490	6508	
Percent		46.4%	53.6%		

Attachment 4

West Bound Traffic Count Data

GRAM Traffic, Inc.
21220 Jakes Hill Rd
Hutto, TX 78634
51

Site Code:
Station ID:
FM 676 Westbound
Approach to Conway Ave
Latitude: 0' 0.000 Undefined

	18-May-12 Fri	Westbound Morning	Afternoon	Hour Totals Morning	Afternoon
12:00		12	90		
12:15		12	83		
12:30		10	78		
12:45		5	84	39	335
01:00		5	96		
01:15		4	92		
01:30		2	99		
01:45		4	84	15	371
02:00		7	101		
02:15		7	92		
02:30		5	100		
02:45		5	103	24	396
03:00		4	85		
03:15		1	109		
03:30		3	106		
03:45		2	97	10	397
04:00		4	114		
04:15		2	95		
04:30		4	112		
04:45		5	120	15	441
05:00		8	133		
05:15		2	111		
05:30		13	114		
05:45		23	120	46	478
06:00		19	112		
06:15		26	116		
06:30		47	104		
06:45		57	121	149	453
07:00		92	97		
07:15		89	90		
07:30		84	85		
07:45		77	84	342	356
08:00		52	82		
08:15		69	100		
08:30		60	99		
08:45		63	84	244	365
09:00		61	84		
09:15		74	64		
09:30		64	56		
09:45		71	57	270	261
10:00		96	61		
10:15		75	50		
10:30		70	42		
10:45		71	39	312	192
11:00		91	45		
11:15		76	33		
11:30		89	29		
11:45		82	20	338	127
Total		1804	4172		
Percent		30.2%	69.8%		
Grand Total		1804	4172	5976	
Percent		30.2%	69.8%		

Attachment 5

Result Summary of Traffic Count Volume

for the Intersection of Study

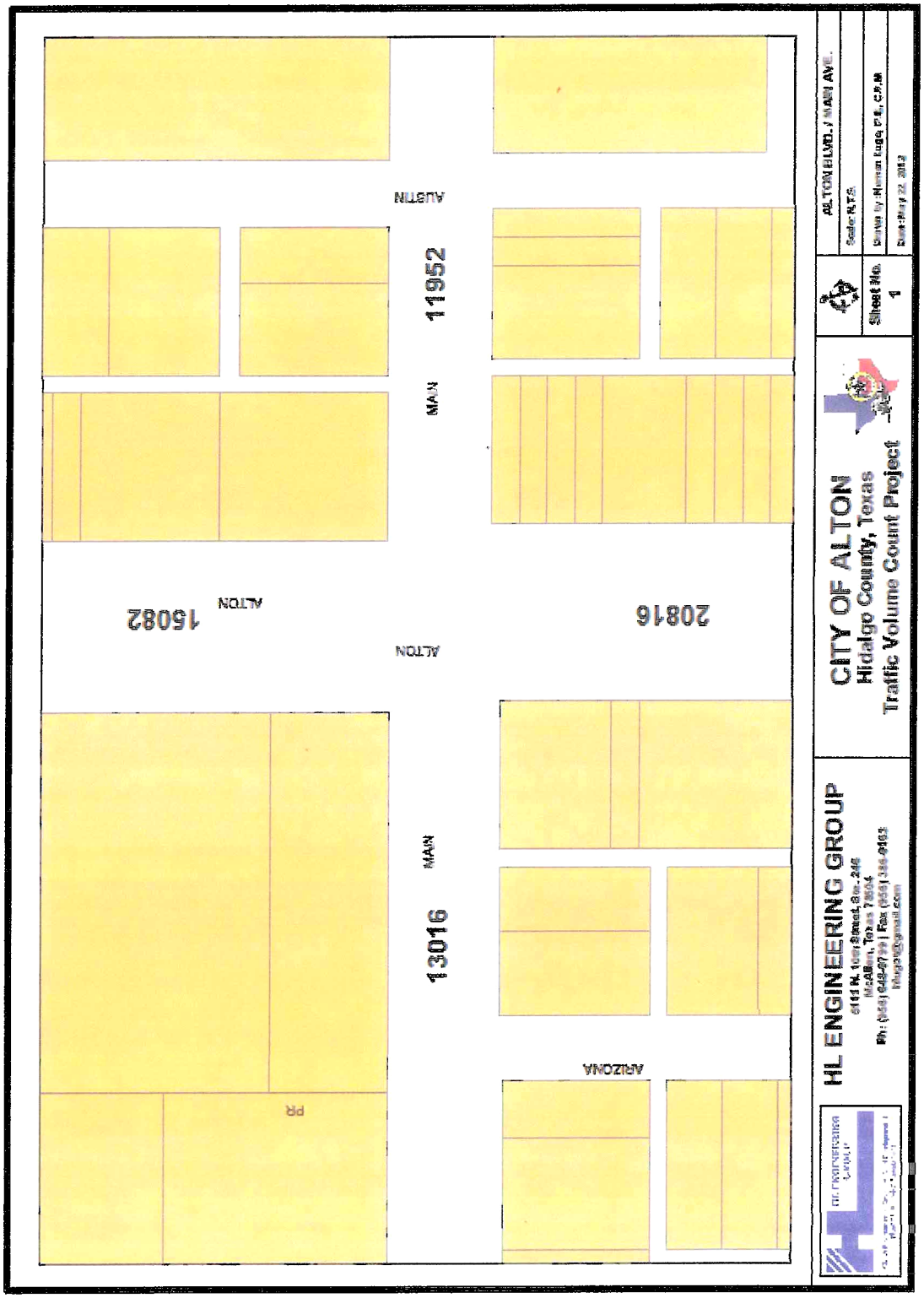

Figure 8 Results Summary of Traffic Count Volume for Intersection of Study