

ALLIANT ENGINEERING, INC.

733 S Marquette Ave #700, Minneapolis, MN 55402

US 169 & 109th Ave
 City: Brooklyn Park
 data by: Spack Solutions
 TURN MOVEMENT COUNT

File Name : US 169 & 109th Ave_2021
 Site Code : 1735716
 Start Date : 10/3/2021
 Page No : 1

Groups Printed- Cars - Trucks

Start Time	US 169 Southbound					109th Ave Westbound					US 169 Northbound					109th Ave Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
06:00 AM	12	345	8	0	365	27	2	3	0	32	2	118	7	0	127	7	2	16	0	25	549
06:15 AM	19	433	10	0	462	32	2	7	0	41	11	173	8	0	192	5	2	27	0	34	729
06:30 AM	16	465	23	0	504	61	7	8	0	76	11	228	5	0	244	13	7	28	0	48	872
06:45 AM	27	511	9	0	547	41	10	2	0	53	13	202	24	0	239	6	12	26	0	44	883
Total	74	1754	50	0	1878	161	21	20	0	202	37	721	44	0	802	31	23	97	0	151	3033
07:00 AM	33	459	13	0	505	54	17	5	0	76	9	207	21	0	237	12	30	24	0	66	884
07:15 AM	59	494	32	0	585	60	16	17	0	93	23	214	17	0	254	15	59	52	0	126	1058
07:30 AM	42	609	28	0	679	47	18	16	0	81	12	229	24	0	265	11	33	52	0	96	1121
07:45 AM	38	514	29	0	581	51	13	12	0	76	21	280	31	0	332	9	23	41	0	73	1062
Total	172	2076	102	0	2350	212	64	50	0	326	65	930	93	0	1088	47	145	169	0	361	4125
08:00 AM	34	461	15	0	510	55	13	17	0	85	22	242	33	0	297	10	22	37	0	69	961
08:15 AM	31	392	15	0	438	49	23	10	0	82	24	217	32	0	273	8	16	35	0	59	852
08:30 AM	20	450	14	0	484	42	6	12	0	60	13	225	27	0	265	10	11	37	0	58	867
08:45 AM	19	402	14	0	435	32	6	17	0	55	18	228	24	0	270	16	13	25	0	54	814
Total	104	1705	58	0	1867	178	48	56	0	282	77	912	116	0	1105	44	62	134	0	240	3494
09:00 AM	25	359	11	0	395	41	11	11	0	63	16	202	21	0	239	10	17	27	0	54	751
09:15 AM	16	345	16	0	377	47	25	28	0	100	16	231	21	0	268	11	8	30	0	49	794
09:30 AM	17	328	12	0	357	28	13	14	0	55	20	251	12	0	283	13	8	45	0	66	761
09:45 AM	19	246	13	0	278	33	16	16	0	65	14	213	22	0	249	8	11	20	0	39	631
Total	77	1278	52	0	1407	149	65	69	0	283	66	897	76	0	1039	42	44	122	0	208	2937
10:00 AM	18	293	7	0	318	22	7	9	0	38	14	230	18	0	262	15	5	25	0	45	663
10:15 AM	16	289	7	0	312	31	7	20	0	58	10	217	22	0	249	14	10	25	0	49	668
10:30 AM	13	264	20	0	297	27	10	15	0	52	11	218	17	0	246	8	10	15	0	33	628
10:45 AM	16	289	11	0	316	31	7	17	0	55	17	234	28	0	279	13	13	25	0	51	701
Total	63	1135	45	0	1243	111	31	61	0	203	52	899	85	0	1036	50	38	90	0	178	2660
11:00 AM	17	297	9	0	323	24	5	7	0	36	10	256	16	0	282	11	11	20	0	42	683
11:15 AM	23	272	14	0	309	27	14	13	0	54	17	235	23	0	275	18	8	16	0	42	680
11:30 AM	10	261	23	0	294	27	8	19	0	54	18	297	34	0	349	8	12	35	0	55	752
11:45 AM	20	284	12	0	316	32	4	13	0	49	13	295	29	0	337	13	7	22	0	42	744
Total	70	1114	58	0	1242	110	31	52	0	193	58	1083	102	0	1243	50	38	93	0	181	2859
12:00 PM	18	283	13	0	314	23	12	15	0	50	16	270	30	0	316	13	8	17	0	38	718
12:15 PM	26	290	18	0	334	22	14	18	0	54	17	286	23	0	326	14	13	23	0	50	764
12:30 PM	21	266	18	0	305	25	10	17	0	52	14	262	26	0	302	11	6	30	0	47	706
12:45 PM	27	267	19	0	313	23	18	23	0	64	36	313	30	0	379	11	16	20	0	47	803
Total	92	1106	68	0	1266	93	54	73	0	220	83	1131	109	0	1323	49	43	90	0	182	2991
01:00 PM	14	262	14	0	290	27	10	15	0	52	25	297	26	0	348	16	10	26	0	52	742
01:15 PM	18	303	12	0	333	28	7	17	0	52	19	332	27	0	378	9	4	14	0	27	790
01:30 PM	21	290	19	0	330	29	15	13	0	57	13	305	26	0	344	15	8	25	0	48	779
01:45 PM	16	265	14	0	295	31	12	19	0	62	28	343	48	0	419	16	18	23	0	57	833
Total	69	1120	59	0	1248	115	44	64	0	223	85	1277	127	0	1489	56	40	88	0	184	3144
02:00 PM	23	316	18	0	357	29	11	19	0	59	14	382	39	0	435	13	24	26	0	63	914
02:15 PM	18	274	15	0	307	28	20	31	0	79	26	432	49	0	507	14	20	21	0	55	948
02:30 PM	28	320	18	0	366	31	45	29	0	105	21	398	43	0	462	15	18	19	0	52	985
02:45 PM	25	278	24	0	327	28	25	32	0	85	34	445	41	0	520	14	20	22	0	56	988
Total	94	1188	75	0	1357	116	101	111	0	328	95	1657	172	0	1924	56	82	88	0	226	3835
03:00 PM	19	283	11	0	313	31	9	19	0	59	27	453	36	0	516	15	22	14	0	51	939

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 Site Code : 1735716
 Start Date : 10/3/2021
 Page No : 2

Groups Printed- Cars - Trucks

Start Time	US 169 Southbound					109th Ave Westbound					US 169 Northbound					109th Ave Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
03:15 PM	22	310	20	0	352	26	19	34	0	79	27	445	38	0	510	24	15	30	0	69	1010
03:30 PM	15	329	20	0	364	40	22	20	0	82	27	468	64	0	559	17	23	26	0	66	1071
03:45 PM	27	312	17	0	356	31	21	21	0	73	23	475	50	0	548	22	35	21	0	78	1055
Total	83	1234	68	0	1385	128	71	94	0	293	104	1841	188	0	2133	78	95	91	0	264	4075
04:00 PM	22	272	19	0	313	38	29	31	0	98	24	471	50	0	545	20	32	24	0	76	1032
04:15 PM	27	294	21	0	342	37	17	34	0	88	29	459	57	0	545	27	32	23	0	82	1057
04:30 PM	19	318	27	0	364	37	23	29	0	89	49	494	67	0	610	20	28	34	0	82	1145
04:45 PM	27	333	30	0	390	33	26	12	0	71	50	455	62	0	567	25	33	22	0	80	1108
Total	95	1217	97	0	1409	145	95	106	0	346	152	1879	236	0	2267	92	125	103	0	320	4342
05:00 PM	24	352	18	0	394	34	22	30	0	86	36	472	70	0	578	30	29	25	0	84	1142
05:15 PM	18	301	34	0	353	27	27	24	0	78	42	438	56	0	536	23	25	35	0	83	1050
05:30 PM	12	326	20	0	358	31	29	21	0	81	37	482	60	0	579	13	20	36	0	69	1087
05:45 PM	25	290	27	0	342	28	21	20	0	69	31	402	46	0	479	22	18	26	0	66	956
Total	79	1269	99	0	1447	120	99	95	0	314	146	1794	232	0	2172	88	92	122	0	302	4235
06:00 PM	33	280	17	0	330	32	17	24	0	73	29	416	40	0	485	9	22	36	0	67	955
06:15 PM	23	311	35	0	369	30	20	13	0	63	37	417	39	0	493	18	16	34	0	68	993
06:30 PM	18	223	42	0	283	28	20	33	0	81	34	362	35	0	431	25	22	39	0	86	881
06:45 PM	16	237	20	0	273	23	21	15	0	59	34	319	25	0	378	23	18	19	0	60	770
Total	90	1051	114	0	1255	113	78	85	0	276	134	1514	139	0	1787	75	78	128	0	281	3599
Grand Total	1162	17247	945	0	19354	1751	802	936	0	3489	1154	16535	1719	0	19408	758	905	1415	0	3078	45329
Apprch %	6	89.1	4.9	0		50.2	23	26.8	0		5.9	85.2	8.9	0		24.6	29.4	46	0		
Total %	2.6	38	2.1	0	42.7	3.9	1.8	2.1	0	7.7	2.5	36.5	3.8	0	42.8	1.7	2	3.1	0	6.8	
Cars	1105	16589	919	0	18613	1707	755	892	0	3354	1096	15880	1619	0	18595	741	838	1358	0	2937	43499
% Cars	95.1	96.2	97.2	0	96.2	97.5	94.1	95.3	0	96.1	95	96	94.2	0	95.8	97.8	92.6	96	0	95.4	96
Trucks	57	658	26	0	741	44	47	44	0	135	58	655	100	0	813	17	67	57	0	141	1830
% Trucks	4.9	3.8	2.8	0	3.8	2.5	5.9	4.7	0	3.9	5	4	5.8	0	4.2	2.2	7.4	4	0	4.6	4

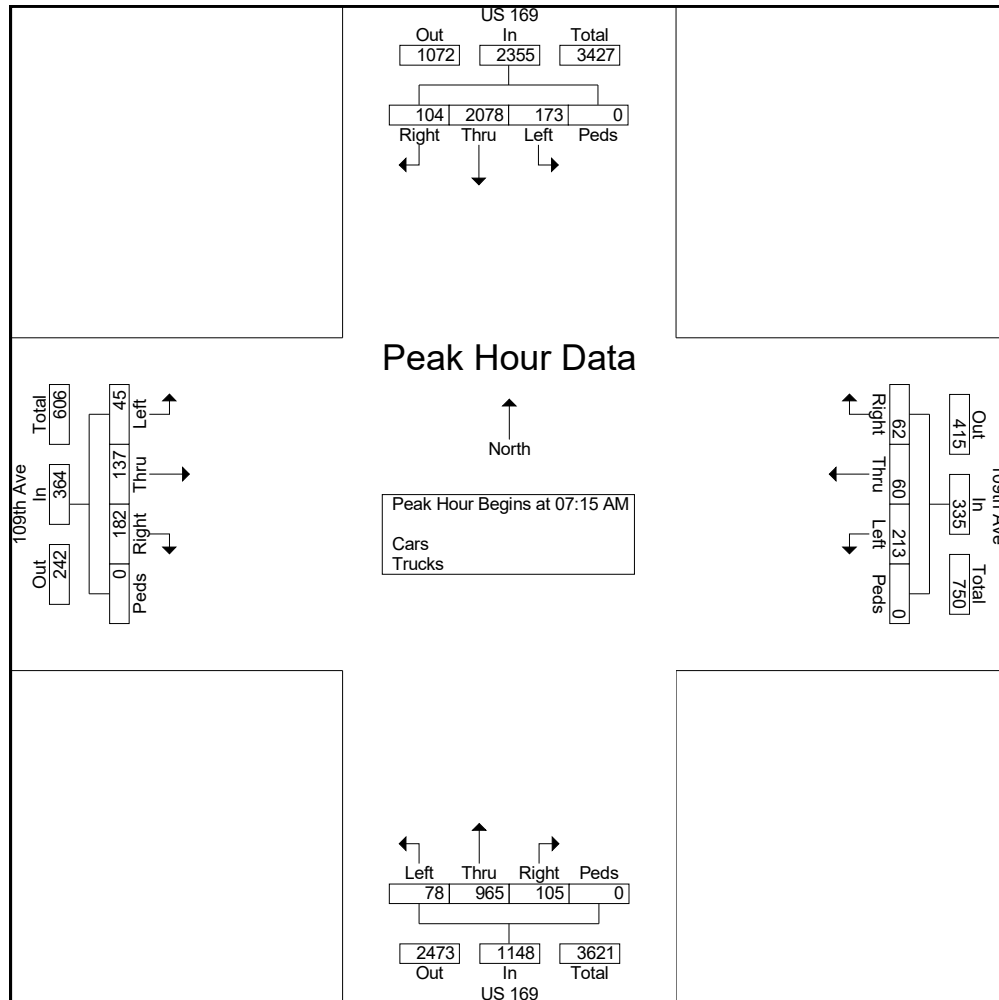
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Start Time	US 169 Southbound					109th Ave Westbound					US 169 Northbound					109th Ave Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 06:00 AM to 09:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	59	494	32	0	585	60	16	17	0	93	23	214	17	0	254	15	59	52	0	126	1058
07:30 AM	42	609	28	0	679	47	18	16	0	81	12	229	24	0	265	11	33	52	0	96	1121
07:45 AM	38	514	29	0	581	51	13	12	0	76	21	280	31	0	332	9	23	41	0	73	1062
08:00 AM	34	461	15	0	510	55	13	17	0	85	22	242	33	0	297	10	22	37	0	69	961
Total Volume	173	2078	104	0	2355	213	60	62	0	335	78	965	105	0	1148	45	137	182	0	364	4202
% App. Total	7.3	88.2	4.4	0		63.6	17.9	18.5	0		6.8	84.1	9.1	0		12.4	37.6	50	0		
PHF	.733	.853	.813	.000	.867	.888	.833	.912	.000	.901	.848	.862	.795	.000	.864	.750	.581	.875	.000	.722	.937



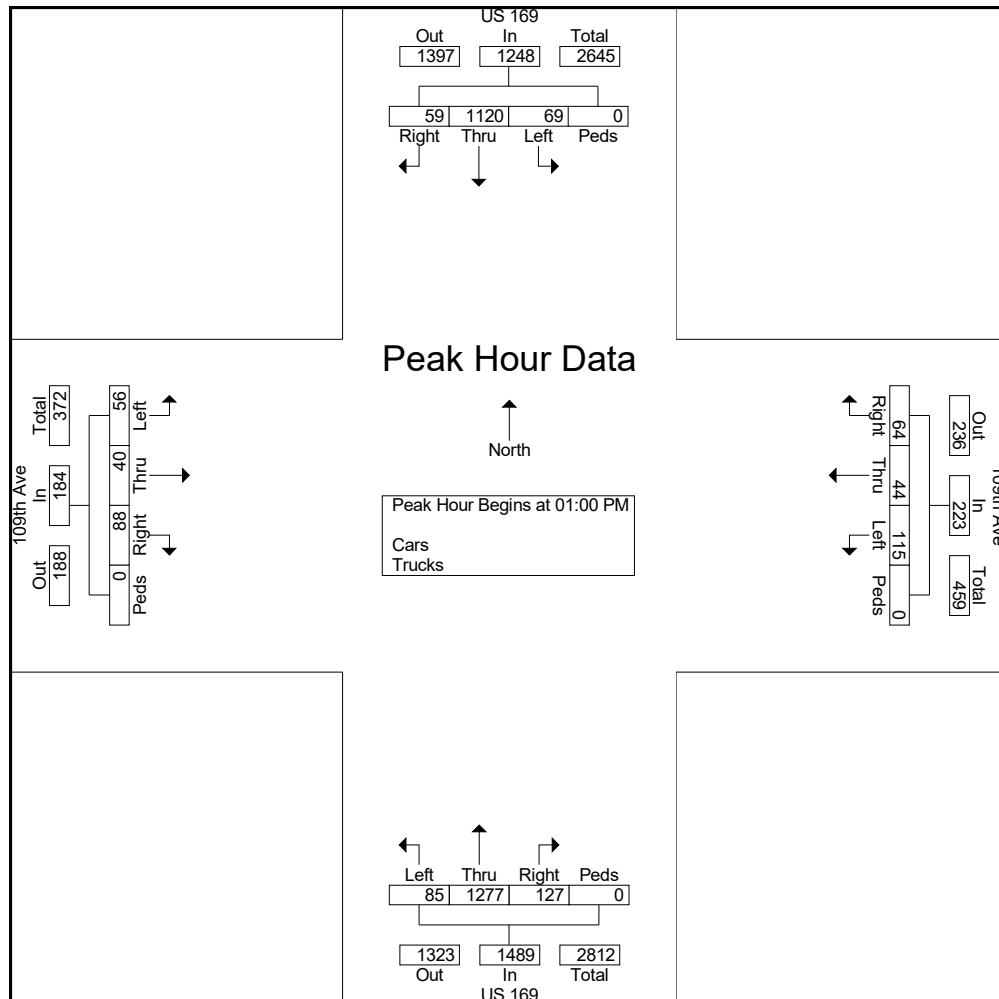
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Start Time	US 169 Southbound					109th Ave Westbound					US 169 Northbound					109th Ave Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 01:00 PM																					
01:00 PM	14	262	14	0	290	27	10	15	0	52	25	297	26	0	348	16	10	26	0	52	742
01:15 PM	18	303	12	0	333	28	7	17	0	52	19	332	27	0	378	9	4	14	0	27	790
01:30 PM	21	290	19	0	330	29	15	13	0	57	13	305	26	0	344	15	8	25	0	48	779
01:45 PM	16	265	14	0	295	31	12	19	0	62	28	343	48	0	419	16	18	23	0	57	833
Total Volume	69	1120	59	0	1248	115	44	64	0	223	85	1277	127	0	1489	56	40	88	0	184	3144
% App. Total	5.5	89.7	4.7	0		51.6	19.7	28.7	0		5.7	85.8	8.5	0		30.4	21.7	47.8	0		
PHF	.821	.924	.776	.000	.937	.927	.733	.842	.000	.899	.759	.931	.661	.000	.888	.875	.556	.846	.000	.807	.944



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 Page No : 5

Start Time	US 169 Southbound					109th Ave Westbound					US 169 Northbound					109th Ave Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	27	294	21	0	342	37	17	34	0	88	29	459	57	0	545	27	32	23	0	82	1057
04:30 PM	19	318	27	0	364	37	23	29	0	89	49	494	67	0	610	20	28	34	0	82	1145
04:45 PM	27	333	30	0	390	33	26	12	0	71	50	455	62	0	567	25	33	22	0	80	1108
05:00 PM	24	352	18	0	394	34	22	30	0	86	36	472	70	0	578	30	29	25	0	84	1142
Total Volume	97	1297	96	0	1490	141	88	105	0	334	164	1880	256	0	2300	102	122	104	0	328	4452
% App. Total	6.5	87	6.4	0		42.2	26.3	31.4	0		7.1	81.7	11.1	0		31.1	37.2	31.7	0		
PHF	.898	.921	.800	.000	.945	.953	.846	.772	.000	.938	.820	.951	.914	.000	.943	.850	.924	.765	.000	.976	.972

