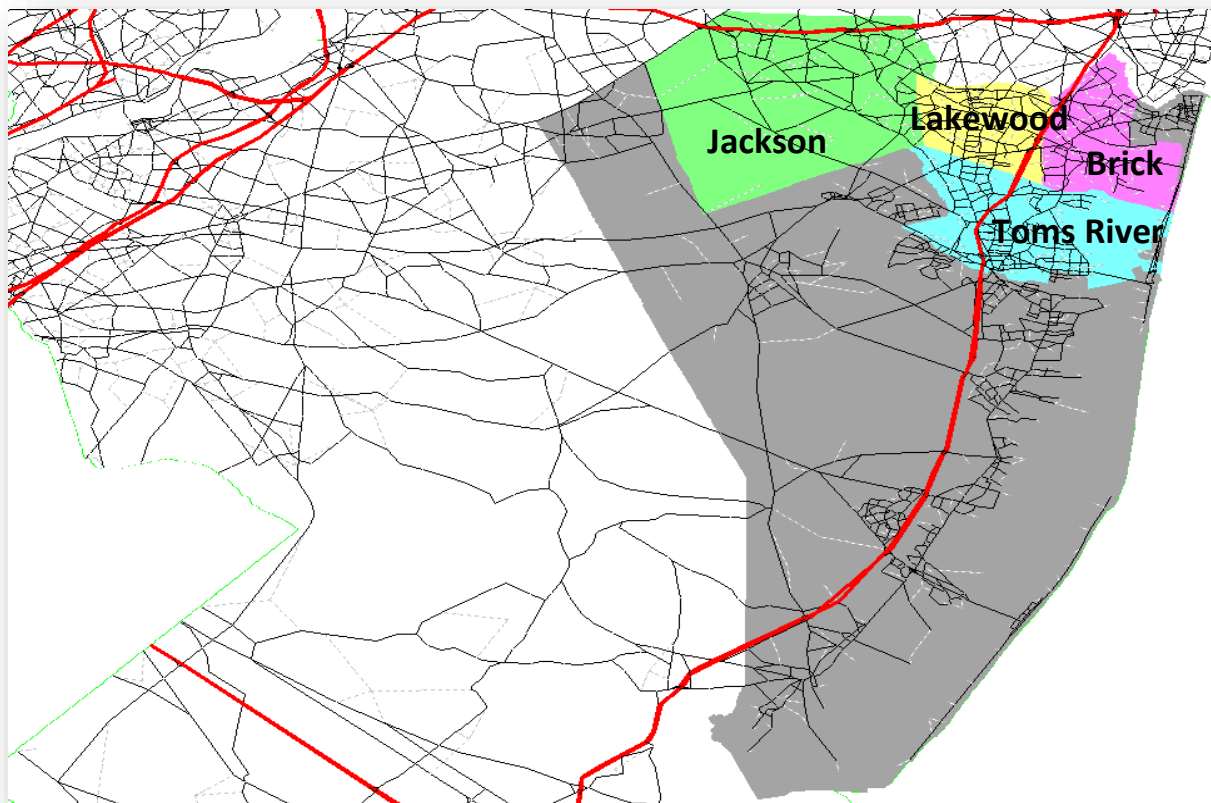


APPENDIX J-1 – OCEAN COUNTY TRANSPORTATION MODEL MODEL

Ocean County Transportation Model:
2024 MODEL UPDATE



LIMITED CALIBRATION FOCUSING ON LAKEWOOD, BRICK, TOMS RIVER, AND JACKSON

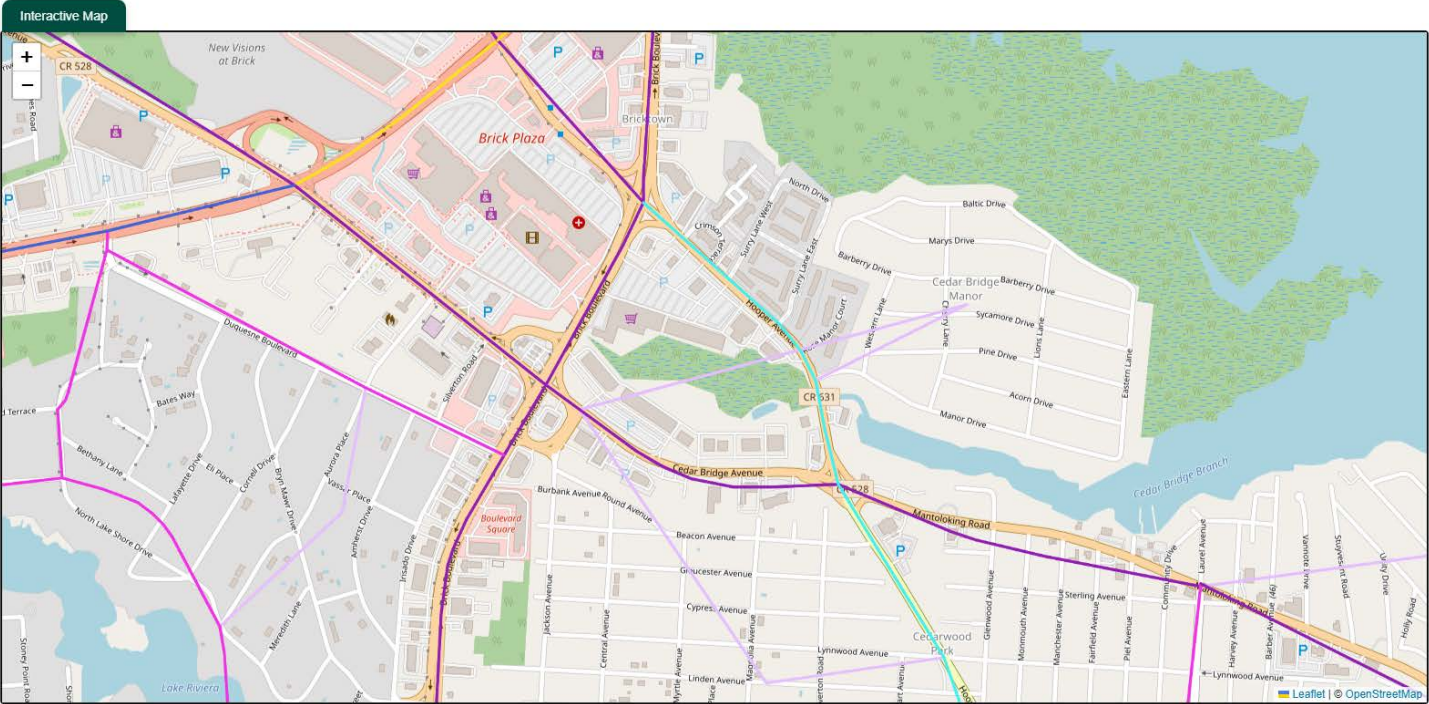


Prepared by:

December 6, 2024



Stantec Traffic Data Browser



Properties

Property	Value
A	81143
B	6040
DISTANCE	9.32199
CAPACITY	4263.84
FT	7
AT	3
LANESAM	2
LANESPM	2
LANESOP	2
SPEED	32
NAME	
COUNTY	34029
VC_AM	9.95547
VC_MD	0.90452
VC_PM	1.02334
VC_NT	0.5733
CSPD_AM	24.56634
CSPD_MD	26.01472
CSPD_PM	22.43311
CSPD_NT	31.48974
VAM	4036.41528
VMD	8489.38035
VPM	4125.68604
VNT	4582.92041
VMT	6193.27881
DLVOL19	17103.84961
CAGR_19_50	0.37941
DLVOL_50	19234.38281

Legend

- Freeways
- Expressways
- PAD
- PAU
- MAD
- MAU
- Minor Arterials
- Collectors/Locals
- High-Speed Ramps
- Medium-Speed Ramps
- Low-Speed Ramps
- Centroid Connectors

APPENDIX J-2 – OCEAN COUNTY SIGNAL OPTIMIZATION

2022, DATA COLLECTION REPORT 2

Ocean County Signal Optimization 2022
Contract PP2023-118
Job #6900339

Data Collection Report 2

**Summer Corridors Including
Corridors A, B, and I-East**

Prepared for:
Ocean County Engineering Department

By
Urban Engineers

September 2024





Imperial Traffic & Data Collection
www.imperialtdc.com
1804 Haddonfield-Berlin Road
Cherry Hill, New Jersey, United States 08034
609-706-6100 hfurey@imperialtdc.com

Project: Ocean County Brown Corridor B & I
East
Municipality: Brick, Ocean County, NJ
Setup: NR/AH/BC/CB
Location: 40.057876, -74.137298

Count Name: B06. Hooper Avenue/Chambers
Bridge Road & Brick Boulevard AM
Site Code: B06
Start Date: 08/14/2024
Page No: 1

Turning Movement Data

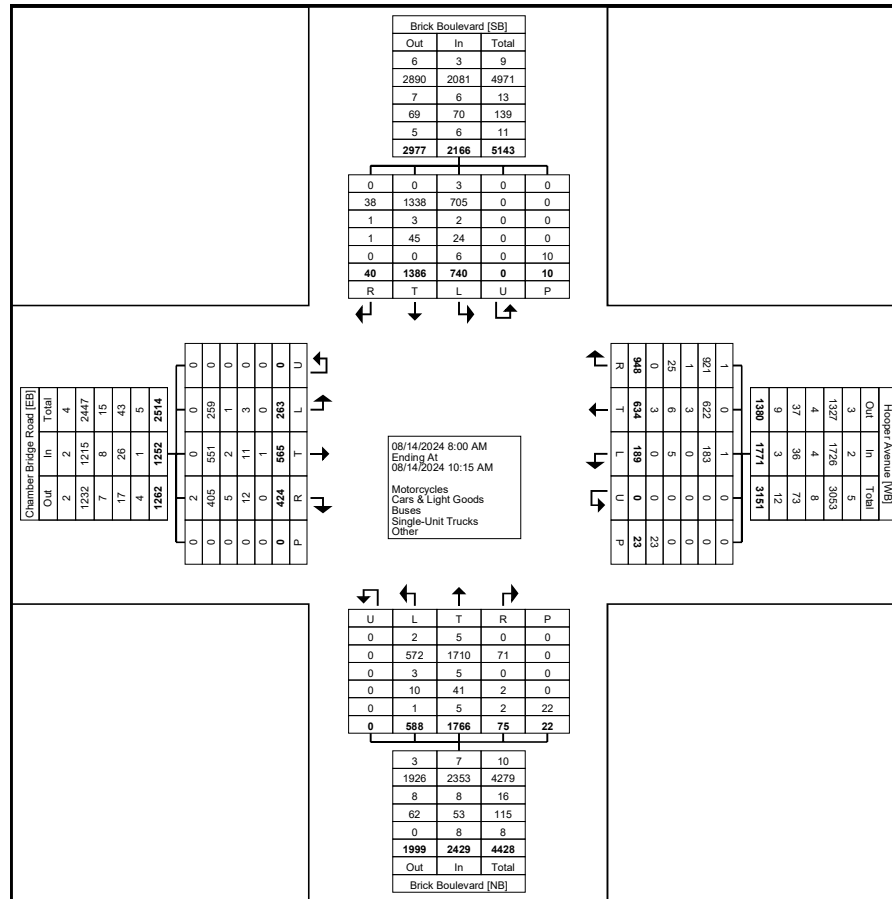
Start Time	Chamber Bridge Road Eastbound						Hooper Avenue Westbound						Brick Boulevard Northbound						Brick Boulevard Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
8:00 AM	0	9	43	40	0	92	0	18	66	111	0	195	0	50	211	3	1	264	0	64	135	5	1	204	755
8:15 AM	0	22	50	40	0	112	0	29	85	134	0	248	0	47	244	14	1	305	0	82	122	5	0	209	874
8:30 AM	0	25	57	33	0	115	0	21	65	114	6	200	0	64	202	1	2	267	0	98	163	2	0	263	845
8:45 AM	0	47	77	56	0	180	0	16	89	120	1	225	0	64	249	10	0	323	0	69	150	2	1	221	949
Hourly Total	0	103	227	169	0	499	0	84	305	479	7	868	0	225	906	28	4	1159	0	313	570	14	2	897	3423
9:00 AM	0	33	57	49	0	139	0	14	61	103	3	178	0	69	161	8	3	238	0	70	168	5	1	243	798
9:15 AM	0	37	67	52	0	156	0	21	86	96	2	203	0	77	181	8	4	266	0	78	143	4	2	225	850
9:30 AM	0	40	72	42	0	154	0	17	64	87	3	168	0	65	186	11	2	262	0	114	153	11	1	278	862
9:45 AM	0	24	82	62	0	168	0	32	69	87	6	188	0	88	178	6	7	272	0	78	177	3	1	258	886
Hourly Total	0	134	278	205	0	617	0	84	280	373	14	737	0	299	706	33	16	1038	0	340	641	23	5	1004	3396
10:00 AM	0	26	60	50	0	136	0	21	49	96	2	166	0	64	154	14	2	232	0	87	175	3	3	265	799
Grand Total	0	263	565	424	0	1252	0	189	634	948	23	1771	0	588	1766	75	22	2429	0	740	1386	40	10	2166	7618
Approach %	0.0	21.0	45.1	33.9	-	-	0.0	10.7	35.8	53.5	-	-	0.0	24.2	72.7	3.1	-	-	0.0	34.2	64.0	1.8	-	-	-
Total %	0.0	3.5	7.4	5.6	-	16.4	0.0	2.5	8.3	12.4	-	23.2	0.0	7.7	23.2	1.0	-	31.9	0.0	9.7	18.2	0.5	-	28.4	-
Motorcycles	0	0	0	2	-	2	0	1	0	1	-	2	0	2	5	0	-	7	0	3	0	0	-	3	14
% Motorcycles	-	0.0	0.0	0.5	-	0.2	-	0.5	0.0	0.1	-	0.1	-	0.3	0.3	0.0	-	0.3	-	0.4	0.0	0.0	-	0.1	0.2
Cars & Light Goods	0	259	551	405	-	1215	0	183	622	921	-	1726	0	572	1710	71	-	2353	0	705	1338	38	-	2081	7375
% Cars & Light Goods	-	98.5	97.5	95.5	-	97.0	-	96.8	98.1	97.2	-	97.5	-	97.3	96.8	94.7	-	96.9	-	95.3	96.5	95.0	-	96.1	96.8
Buses	0	1	2	5	-	8	0	0	3	1	-	4	0	3	5	0	-	8	0	2	3	1	-	6	26
% Buses	-	0.4	0.4	1.2	-	0.6	-	0.0	0.5	0.1	-	0.2	-	0.5	0.3	0.0	-	0.3	-	0.3	0.2	2.5	-	0.3	0.3
Single-Unit Trucks	0	3	11	12	-	26	0	5	6	25	-	36	0	10	41	2	-	53	0	24	45	1	-	70	185
% Single-Unit Trucks	-	1.1	1.9	2.8	-	2.1	-	2.6	0.9	2.6	-	2.0	-	1.7	2.3	2.7	-	2.2	-	3.2	3.2	2.5	-	3.2	2.4
Articulated Trucks	0	0	1	0	-	1	0	0	1	0	-	1	0	1	4	1	-	6	0	6	0	0	-	6	14
% Articulated Trucks	-	0.0	0.2	0.0	-	0.1	-	0.0	0.2	0.0	-	0.1	-	0.2	0.2	1.3	-	0.2	-	0.8	0.0	0.0	-	0.3	0.2
Bicycles on Road	0	0	0	0	-	0	0	0	2	0	-	2	0	0	1	1	-	2	0	0	0	0	-	0	4
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	0.3	0.0	-	0.1	-	0.0	0.1	1.3	-	0.1	-	0.0	0.0	0.0	-	0.0	0.1
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	14	-	-	-	-	-	6	-	-	-	-	3	-	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	60.9	-	-	-	-	-	27.3	-	-	-	-	30.0	-	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	9	-	-	-	-	-	16	-	-	-	-	7	-	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	39.1	-	-	-	-	-	72.7	-	-	-	-	70.0	-	-	-



Imperial Traffic & Data Collection
www.imperialtdc.com
1804 Haddonfield-Berlin Road
Cherry Hill, New Jersey, United States 08034
609-706-6100 hfurey@imperialtdc.com

Project: Ocean County Brown Corridor B & I
East
Municipality: Brick, Ocean County, NJ
Setup: NR/AH/BC/CB
Location: 40.057876, -74.137298

Count Name: B06. Hooper Avenue/Chambers
Bridge Road & Brick Boulevard AM
Site Code: B06
Start Date: 08/14/2024
Page No: 2



Turning Movement Data Plot



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Project: Ocean County Brown Corridor B & I
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 Municipality: Brick, Ocean County, NJ
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Count Name: B06. Hooper Avenue/Chambers
 Bridge Road & Brick Boulevard AM
 Site Code: B06
 Start Date: 08/14/2024
 Page No: 3

Turning Movement Peak Hour Data (8:45 AM)

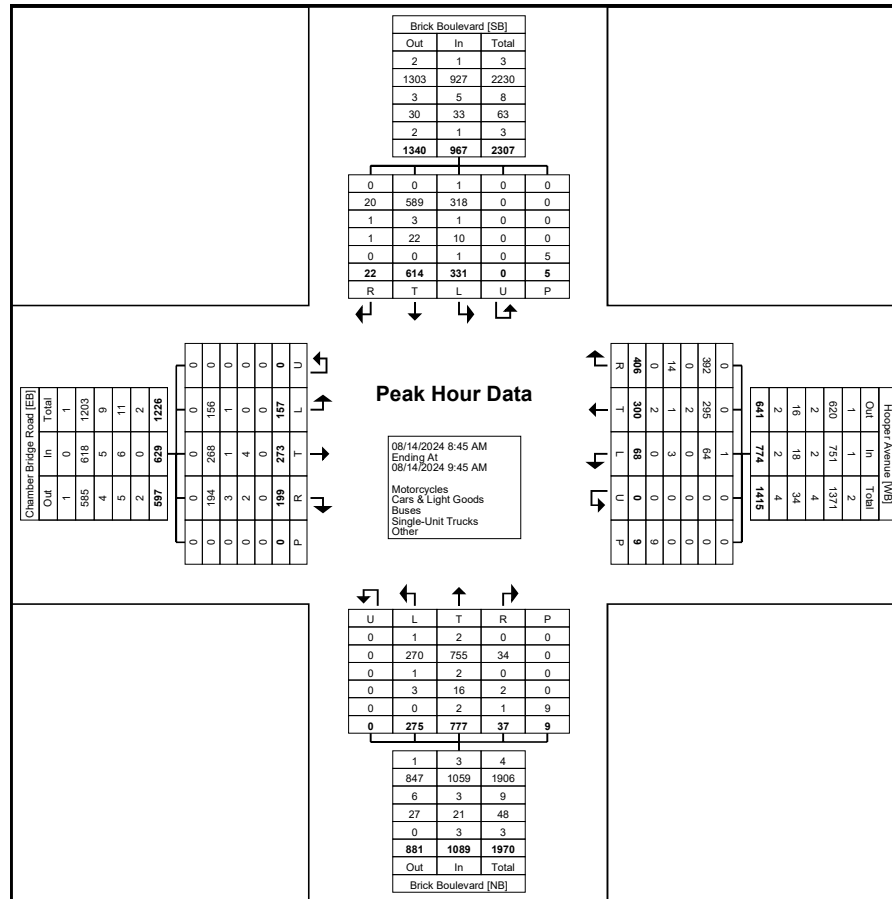
Start Time	Chamber Bridge Road Eastbound						Hooper Avenue Westbound						Brick Boulevard Northbound						Brick Boulevard Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
8:45 AM	0	47	77	56	0	180	0	16	89	120	1	225	0	64	249	10	0	323	0	69	150	2	1	221	949
9:00 AM	0	33	57	49	0	139	0	14	61	103	3	178	0	69	161	8	3	238	0	70	168	5	1	243	798
9:15 AM	0	37	67	52	0	156	0	21	86	96	2	203	0	77	181	8	4	266	0	78	143	4	2	225	850
9:30 AM	0	40	72	42	0	154	0	17	64	87	3	168	0	65	186	11	2	262	0	114	153	11	1	278	862
Total	0	157	273	199	0	629	0	68	300	406	9	774	0	275	777	37	9	1089	0	331	614	22	5	967	3459
Approach %	0.0	25.0	43.4	31.6	-	-	0.0	8.8	38.8	52.5	-	-	0.0	25.3	71.3	3.4	-	-	0.0	34.2	63.5	2.3	-	-	-
Total %	0.0	4.5	7.9	5.8	-	18.2	0.0	2.0	8.7	11.7	-	22.4	0.0	8.0	22.5	1.1	-	31.5	0.0	9.6	17.8	0.6	-	28.0	-
PHF	0.000	0.835	0.886	0.888	-	0.874	0.000	0.810	0.843	0.846	-	0.860	0.000	0.893	0.780	0.841	-	0.843	0.000	0.726	0.914	0.500	-	0.870	0.911
Motorcycles	0	0	0	0	-	0	0	1	0	0	-	1	0	1	2	0	-	3	0	1	0	0	-	1	5
% Motorcycles	-	0.0	0.0	0.0	-	0.0	-	1.5	0.0	0.0	-	0.1	-	0.4	0.3	0.0	-	0.3	-	0.3	0.0	0.0	-	0.1	0.1
Cars & Light Goods	0	156	268	194	-	618	0	64	295	392	-	751	0	270	755	34	-	1059	0	318	589	20	-	927	3355
% Cars & Light Goods	-	99.4	98.2	97.5	-	98.3	-	94.1	98.3	96.6	-	97.0	-	98.2	97.2	91.9	-	97.2	-	96.1	95.9	90.9	-	95.9	97.0
Buses	0	1	1	3	-	5	0	0	2	0	-	2	0	1	2	0	-	3	0	1	3	1	-	5	15
% Buses	-	0.6	0.4	1.5	-	0.8	-	0.0	0.7	0.0	-	0.3	-	0.4	0.3	0.0	-	0.3	-	0.3	0.5	4.5	-	0.5	0.4
Single-Unit Trucks	0	0	4	2	-	6	0	3	1	14	-	18	0	3	16	2	-	21	0	10	22	1	-	33	78
% Single-Unit Trucks	-	0.0	1.5	1.0	-	1.0	-	4.4	0.3	3.4	-	2.3	-	1.1	2.1	5.4	-	1.9	-	3.0	3.6	4.5	-	3.4	2.3
Articulated Trucks	0	0	0	0	-	0	0	0	1	0	-	1	0	0	2	1	-	3	0	1	0	0	-	1	5
% Articulated Trucks	-	0.0	0.0	0.0	-	0.0	-	0.0	0.3	0.0	-	0.1	-	0.0	0.3	2.7	-	0.3	-	0.3	0.0	0.0	-	0.1	0.1
Bicycles on Road	0	0	0	0	-	0	0	0	1	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	1
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	0.3	0.0	-	0.1	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	7	-	-	-	-	-	2	-	-	-	-	-	2	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	77.8	-	-	-	-	-	22.2	-	-	-	-	-	40.0	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	7	-	-	-	-	-	3	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	22.2	-	-	-	-	-	77.8	-	-	-	-	-	60.0	-	-



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East
Municipality: Brick, Ocean County, NJ
Setup: NR/AH/BC/CB
Location: 40.057876, -74.137298

Count Name: B06. Hooper Avenue/Chambers
Bridge Road & Brick Boulevard AM
Site Code: B06
Start Date: 08/14/2024
Page No: 4





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609-706-6100 hfurey@imperialtdc.com

Project: Ocean County Brown Corridor B & I
East
Municipality: Brick, Ocean County, NJ
Setup: NR
Location: 40.057876, -74.137298

Count Name: B06. Hooper Avenue/Chambers
Bridge Road & Brick Boulevard
Site Code: B06
Start Date: 07/25/2024
Page No: 1

Turning Movement Data

Start Time	Brick Boulevard Southbound						Hooper Avenue Westbound						Brick Boulevard Northbound						Chambers Bridge Road Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
3:15 PM	10	136	93	0	1	239	66	102	30	0	1	198	23	136	83	0	2	242	80	107	39	0	1	226	905
3:30 PM	8	146	80	0	1	234	81	90	24	0	6	195	13	156	91	0	2	260	96	133	45	0	1	274	963
3:45 PM	5	172	117	0	0	294	78	98	17	0	5	193	19	148	104	0	2	271	92	131	44	0	0	267	1025
Hourly Total	23	454	290	0	2	767	225	290	71	0	12	586	55	440	278	0	6	773	268	371	128	0	2	767	2893
4:00 PM	4	197	160	0	0	361	81	67	18	0	1	166	15	156	61	0	5	232	73	91	37	0	0	201	960
4:15 PM	5	223	136	0	2	364	83	55	15	0	8	153	16	184	83	0	6	283	90	164	47	0	2	301	1101
4:30 PM	14	197	155	0	0	366	111	60	20	0	10	191	14	170	75	0	5	259	78	165	49	0	0	292	1108
4:45 PM	6	257	183	0	2	446	112	72	26	0	5	210	12	186	102	0	3	300	99	186	57	0	0	342	1298
Hourly Total	29	874	634	0	4	1537	387	254	79	0	24	720	57	696	321	0	19	1074	340	606	190	0	2	1136	4467
5:00 PM	7	247	153	0	4	407	92	65	43	0	1	200	17	161	96	0	2	274	98	158	43	0	4	299	1180
5:15 PM	7	228	169	0	2	404	92	67	28	0	3	187	13	180	82	0	4	275	103	148	41	0	0	292	1158
5:30 PM	7	210	176	0	0	393	107	79	34	0	3	220	9	162	69	0	0	240	96	163	49	0	0	308	1161
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	21	685	498	0	6	1204	291	211	105	0	7	607	39	503	247	0	6	789	297	469	133	0	4	899	3499
10:15 AM	14	160	142	0	5	316	145	80	37	0	3	262	19	185	71	0	0	275	48	77	40	0	1	165	1018
10:30 AM	8	158	116	0	1	282	137	85	37	0	1	259	19	171	82	0	1	272	62	85	52	0	1	199	1012
10:45 AM	10	169	123	0	0	302	122	83	23	0	3	228	20	196	102	0	0	318	73	95	44	0	1	212	1060
Hourly Total	32	487	381	0	6	900	404	248	97	0	7	749	58	552	255	0	1	865	183	257	136	0	3	576	3090
11:00 AM	17	180	111	0	1	308	124	65	31	0	3	220	14	189	74	0	1	277	82	107	52	0	0	241	1046
11:15 AM	8	143	111	0	0	262	143	61	31	0	3	235	20	214	82	0	1	316	50	81	59	0	0	190	1003
11:30 AM	9	152	117	0	1	278	139	89	26	0	5	254	12	182	78	0	0	272	58	99	46	0	0	203	1007
11:45 AM	10	142	127	1	2	280	143	86	27	0	2	256	17	184	97	0	0	298	59	87	52	0	1	198	1032
Hourly Total	44	617	466	1	4	1128	549	301	115	0	13	965	63	769	331	0	2	1163	249	374	209	0	1	832	4088
12:00 PM	12	116	152	0	2	280	125	67	34	0	2	226	16	206	67	0	2	289	67	81	46	0	0	194	989
12:15 PM	13	203	142	0	2	358	107	77	24	0	0	208	15	178	68	0	4	261	68	117	44	0	1	229	1056
12:30 PM	16	167	134	0	4	317	116	60	31	0	3	207	7	209	86	0	7	302	69	93	43	0	1	205	1031
12:45 PM	9	186	140	0	1	335	104	80	25	0	3	209	12	167	70	0	4	249	82	123	42	0	0	247	1040
Hourly Total	50	672	568	0	9	1290	452	284	114	0	8	850	50	760	291	0	17	1101	286	414	175	0	2	875	4116
1:00 PM	10	155	124	0	1	289	114	63	18	0	11	195	21	222	70	0	9	313	64	118	48	0	0	230	1027
1:15 PM	7	176	120	0	3	303	107	71	33	0	2	211	16	168	70	1	1	255	86	104	39	0	1	229	998
Grand Total	216	4120	3081	1	35	7418	2529	1722	632	0	84	4883	359	4110	1863	1	61	6333	1773	2713	1058	0	15	5544	24178
Approach %	2.9	55.5	41.5	0.0	-	-	51.8	35.3	12.9	0.0	-	-	5.7	64.9	29.4	0.0	-	-	32.0	48.9	19.1	0.0	-	-	-
Total %	0.9	17.0	12.7	0.0	-	30.7	10.5	7.1	2.6	0.0	-	20.2	1.5	17.0	7.7	0.0	-	26.2	7.3	11.2	4.4	0.0	-	22.9	-
Motorcycles	2	8	5	0	-	15	7	6	0	0	-	13	1	9	2	0	-	12	4	1	0	0	-	5	45
% Motorcycles	0.9	0.2	0.2	0.0	-	0.2	0.3	0.3	0.0	-	-	0.3	0.3	0.2	0.1	0.0	-	0.2	0.2	0.0	0.0	-	-	0.1	0.2

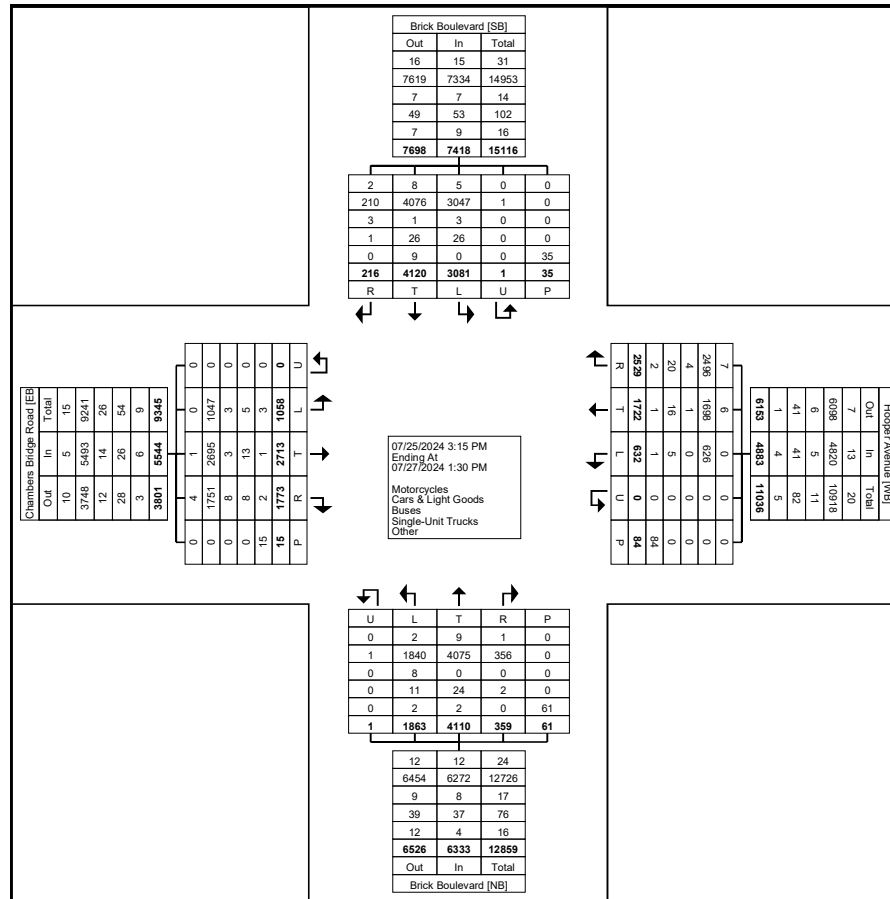
Cars & Light Goods	210	4076	3047	1	-	7334	2496	1698	626	0	-	4820	356	4075	1840	1	-	6272	1751	2695	1047	0	-	5493	23919
% Cars & Light Goods	97.2	98.9	98.9	100.0	-	98.9	98.7	98.6	99.1	-	-	98.7	99.2	99.1	98.8	100.0	-	99.0	98.8	99.3	99.0	-	-	99.1	98.9
Buses	3	1	3	0	-	7	4	1	0	0	-	5	0	0	8	0	-	8	8	3	3	0	-	14	34
% Buses	1.4	0.0	0.1	0.0	-	0.1	0.2	0.1	0.0	-	-	0.1	0.0	0.0	0.4	0.0	-	0.1	0.5	0.1	0.3	-	-	0.3	0.1
Single-Unit Trucks	1	26	26	0	-	53	20	16	5	0	-	41	2	24	11	0	-	37	8	13	5	0	-	26	157
% Single-Unit Trucks	0.5	0.6	0.8	0.0	-	0.7	0.8	0.9	0.8	-	-	0.8	0.6	0.6	0.6	0.0	-	0.6	0.5	0.5	0.5	-	-	0.5	0.6
Articulated Trucks	0	4	0	0	-	4	1	1	1	0	-	3	0	2	2	0	-	4	1	1	3	0	-	5	16
% Articulated Trucks	0.0	0.1	0.0	0.0	-	0.1	0.0	0.1	0.2	-	-	0.1	0.0	0.0	0.1	0.0	-	0.1	0.1	0.0	0.3	-	-	0.1	0.1
Bicycles on Road	0	5	0	0	-	5	1	0	0	0	-	1	0	0	0	0	-	0	1	0	0	0	-	1	7
% Bicycles on Road	0.0	0.1	0.0	0.0	-	0.1	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.1	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	10	-	-	-	-	-	26	-	-	-	-	-	5	-	-	-	-	-	4	-	-
% Bicycles on Crosswalk	-	-	-	-	28.6	-	-	-	-	-	31.0	-	-	-	-	-	8.2	-	-	-	-	-	26.7	-	-
Pedestrians	-	-	-	-	25	-	-	-	-	-	58	-	-	-	-	-	56	-	-	-	-	-	11	-	-
% Pedestrians	-	-	-	-	71.4	-	-	-	-	-	69.0	-	-	-	-	-	91.8	-	-	-	-	-	73.3	-	-



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609-706-6100 hfurey@imperialtdc.com

Project: Ocean County Brown Corridor B & I
East
Municipality: Brick, Ocean County, NJ
Setup: NR
Location: 40.057876, -74.137298

Count Name: B06. Hooper Avenue/Chambers
Bridge Road & Brick Boulevard
Site Code: B06
Start Date: 07/25/2024
Page No: 3



Turning Movement Data Plot



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Project: Ocean County Brown Corridor B & I
 East
 Municipality: Brick, Ocean County, NJ
 Setup: NR
 Location: 40.057876, -74.137298

Count Name: B06. Hooper Avenue/Chambers
 Bridge Road & Brick Boulevard
 Site Code: B06
 Start Date: 07/25/2024
 Page No: 4

Turning Movement Peak Hour Data (4:45 PM)

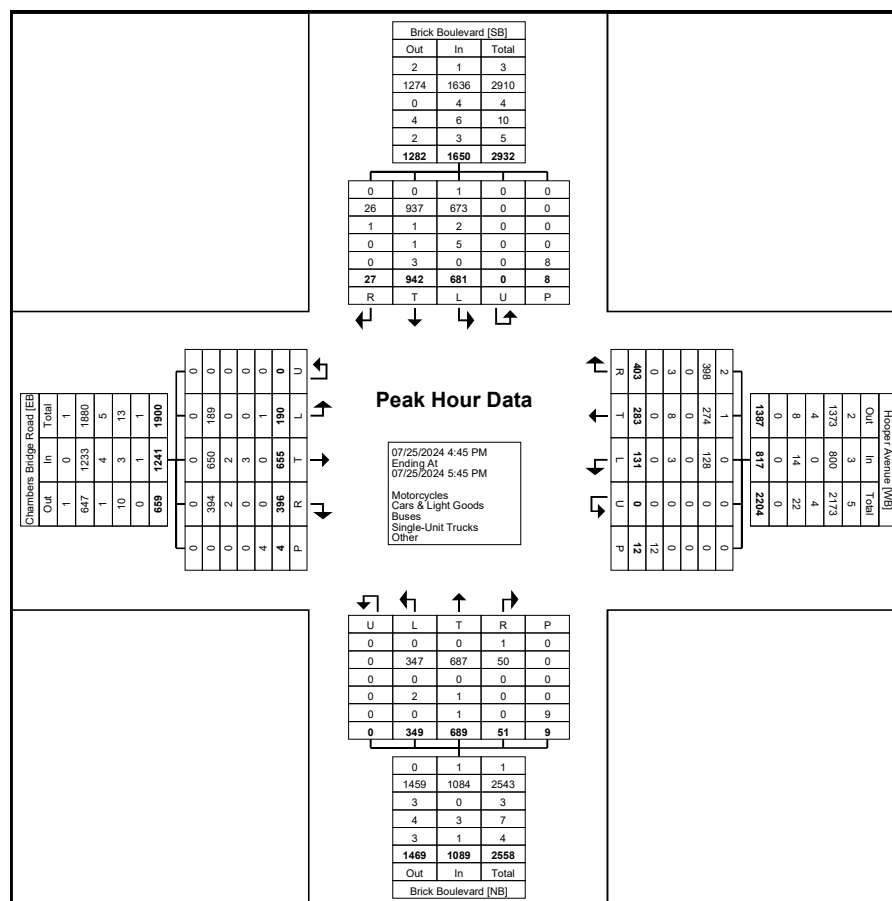
Start Time	Brick Boulevard Southbound						Hooper Avenue Westbound						Brick Boulevard Northbound						Chambers Bridge Road Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
4:45 PM	6	257	183	0	2	446	112	72	26	0	5	210	12	186	102	0	3	300	99	186	57	0	0	342	1298
5:00 PM	7	247	153	0	4	407	92	65	43	0	1	200	17	161	96	0	2	274	98	158	43	0	4	299	1180
5:15 PM	7	228	169	0	2	404	92	67	28	0	3	187	13	180	82	0	4	275	103	148	41	0	0	292	1158
5:30 PM	7	210	176	0	0	393	107	79	34	0	3	220	9	162	69	0	0	240	96	163	49	0	0	308	1161
Total	27	942	681	0	8	1650	403	283	131	0	12	817	51	689	349	0	9	1089	396	655	190	0	4	1241	4797
Approach %	1.6	57.1	41.3	0.0	-	-	49.3	34.6	16.0	0.0	-	-	4.7	63.3	32.0	0.0	-	-	31.9	52.8	15.3	0.0	-	-	-
Total %	0.6	19.6	14.2	0.0	-	34.4	8.4	5.9	2.7	0.0	-	17.0	1.1	14.4	7.3	0.0	-	22.7	8.3	13.7	4.0	0.0	-	25.9	-
PHF	0.964	0.916	0.930	0.000	-	0.925	0.900	0.896	0.762	0.000	-	0.928	0.750	0.926	0.855	0.000	-	0.908	0.961	0.880	0.833	0.000	-	0.907	0.924
Motorcycles	0	0	1	0	-	1	2	1	0	0	-	3	1	0	0	0	-	1	0	0	0	0	-	0	5
% Motorcycles	0.0	0.0	0.1	-	-	0.1	0.5	0.4	0.0	-	-	0.4	2.0	0.0	0.0	-	-	0.1	0.0	0.0	0.0	-	-	0.0	0.1
Cars & Light Goods	26	937	673	0	-	1636	398	274	128	0	-	800	50	687	347	0	-	1084	394	650	189	0	-	1233	4753
% Cars & Light Goods	96.3	99.5	98.8	-	-	99.2	98.8	96.8	97.7	-	-	97.9	98.0	99.7	99.4	-	-	99.5	99.5	99.2	99.5	-	-	99.4	99.1
Buses	1	1	2	0	-	4	0	0	0	0	-	0	0	0	0	0	-	0	2	2	0	0	-	4	8
% Buses	3.7	0.1	0.3	-	-	0.2	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.5	0.3	0.0	-	-	0.3	0.2
Single-Unit Trucks	0	1	5	0	-	6	3	8	3	0	-	14	0	1	2	0	-	3	0	3	0	0	-	3	26
% Single-Unit Trucks	0.0	0.1	0.7	-	-	0.4	0.7	2.8	2.3	-	-	1.7	0.0	0.1	0.6	-	-	0.3	0.0	0.5	0.0	-	-	0.2	0.5
Articulated Trucks	0	2	0	0	-	2	0	0	0	0	-	0	0	1	0	0	-	1	0	0	1	0	-	1	4
% Articulated Trucks	0.0	0.2	0.0	-	-	0.1	0.0	0.0	0.0	-	-	0.0	0.0	0.1	0.0	-	-	0.1	0.0	0.0	0.5	-	-	0.1	0.1
Bicycles on Road	0	1	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1
% Bicycles on Road	0.0	0.1	0.0	-	-	0.1	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	2	-	-	-	-	-	5	-	-	-	-	-	1	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	25.0	-	-	-	-	-	41.7	-	-	-	-	-	11.1	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	6	-	-	-	-	-	7	-	-	-	-	-	8	-	-	-	-	-	4	-	-
% Pedestrians	-	-	-	-	75.0	-	-	-	-	-	58.3	-	-	-	-	-	88.9	-	-	-	-	-	100.0	-	-

Project: Ocean County Brown Corridor B & I
East
Municipality: Brick, Ocean County, NJ
Setup: NR
Location: 40.057876, -74.137298



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Bridge Road & Brick Boulevard
Site Code: B06
Start Date: 07/25/2024
Page No: 5



Turning Movement Peak Hour Data Plot (4:45 PM)



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Project: Ocean County Brown Corridor B & I
East
Municipality: Brick, Ocean County, NJ
Setup: NR/AH/BC/CB
Location: 40.05273, -74.132574

Count Name: B05. Hooper Avenue & Cedar
Bridge Avenue/Mantoloking Road AM
Site Code: B05
Start Date: 08/14/2024
Page No: 1

Turning Movement Data

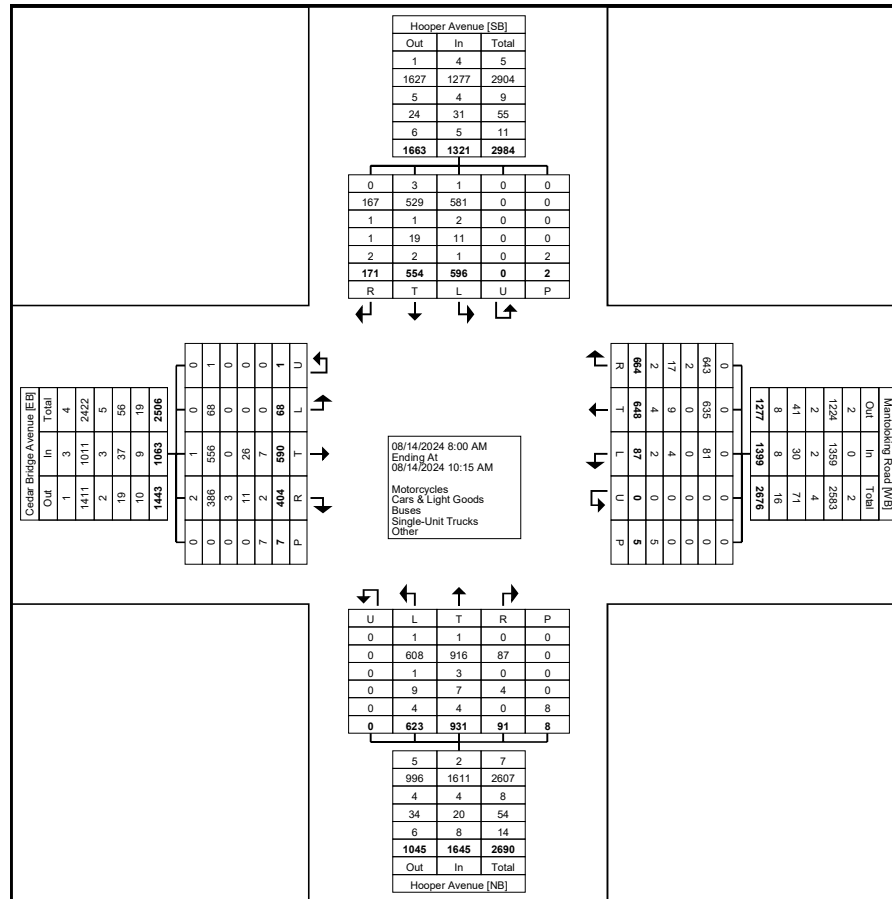
Start Time	Cedar Bridge Avenue Eastbound						Mantoloking Road Westbound						Hooper Avenue Northbound						Hooper Avenue Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
8:00 AM	0	4	49	32	0	85	0	5	68	65	1	138	0	74	106	8	0	188	0	51	45	15	0	111	522
8:15 AM	0	8	60	49	0	117	0	11	92	87	0	190	0	90	135	14	0	239	0	56	50	19	1	125	671
8:30 AM	0	5	57	52	1	114	0	6	69	69	0	144	0	83	104	2	1	189	0	58	68	14	0	140	587
8:45 AM	0	8	70	52	0	130	0	11	69	84	1	164	0	76	117	6	1	199	0	64	59	24	1	147	640
Hourly Total	0	25	236	185	1	446	0	33	298	305	2	636	0	323	462	30	2	815	0	229	222	72	2	523	2420
9:00 AM	0	10	59	44	1	113	0	10	58	77	1	145	0	72	96	9	1	177	0	73	61	14	0	148	583
9:15 AM	0	9	94	52	0	155	0	8	70	73	0	151	0	60	107	10	0	177	0	83	58	14	0	155	638
9:30 AM	0	8	41	41	0	90	0	14	69	78	0	161	0	53	85	12	1	150	0	82	79	34	0	195	596
9:45 AM	1	6	82	33	4	122	0	18	81	75	1	174	0	68	92	15	3	175	0	61	68	15	0	144	615
Hourly Total	1	33	276	170	5	480	0	50	278	303	2	631	0	253	380	46	5	679	0	299	266	77	0	642	2432
10:00 AM	0	10	78	49	1	137	0	4	72	56	1	132	0	47	89	15	1	151	0	68	66	22	0	156	576
Grand Total	1	68	590	404	7	1063	0	87	648	664	5	1399	0	623	931	91	8	1645	0	596	554	171	2	1321	5428
Approach %	0.1	6.4	55.5	38.0	-	-	0.0	6.2	46.3	47.5	-	-	0.0	37.9	56.6	5.5	-	-	0.0	45.1	41.9	12.9	-	-	-
Total %	0.0	1.3	10.9	7.4	-	19.6	0.0	1.6	11.9	12.2	-	25.8	0.0	11.5	17.2	1.7	-	30.3	0.0	11.0	10.2	3.2	-	24.3	-
Motorcycles	0	0	1	2	-	3	0	0	0	0	-	0	0	1	1	0	-	2	0	1	3	0	-	4	9
% Motorcycles	0.0	0.0	0.2	0.5	-	0.3	-	0.0	0.0	0.0	-	0.0	-	0.2	0.1	0.0	-	0.1	-	0.2	0.5	0.0	-	0.3	0.2
Cars & Light Goods	1	68	556	386	-	1011	0	81	635	643	-	1359	0	608	916	87	-	1611	0	581	529	167	-	1277	5258
% Cars & Light Goods	100.0	100.0	94.2	95.5	-	95.1	-	93.1	98.0	96.8	-	97.1	-	97.6	98.4	95.6	-	97.9	-	97.5	95.5	97.7	-	96.7	96.9
Buses	0	0	0	3	-	3	0	0	0	2	-	2	0	1	3	0	-	4	0	2	1	1	-	4	13
% Buses	0.0	0.0	0.0	0.7	-	0.3	-	0.0	0.0	0.3	-	0.1	-	0.2	0.3	0.0	-	0.2	-	0.3	0.2	0.6	-	0.3	0.2
Single-Unit Trucks	0	0	26	11	-	37	0	4	9	17	-	30	0	9	7	4	-	20	0	11	19	1	-	31	118
% Single-Unit Trucks	0.0	0.0	4.4	2.7	-	3.5	-	4.6	1.4	2.6	-	2.1	-	1.4	0.8	4.4	-	1.2	-	1.8	3.4	0.6	-	2.3	2.2
Articulated Trucks	0	0	7	2	-	9	0	2	4	2	-	8	0	2	3	0	-	5	0	1	2	2	-	5	27
% Articulated Trucks	0.0	0.0	1.2	0.5	-	0.8	-	2.3	0.6	0.3	-	0.6	-	0.3	0.3	0.0	-	0.3	-	0.2	0.4	1.2	-	0.4	0.5
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	2	1	0	-	3	0	0	0	0	-	0	3
% Bicycles on Road	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.3	0.1	0.0	-	0.2	-	0.0	0.0	0.0	-	0.0	0.1
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	2	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	20.0	-	-	-	-	-	25.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	7	-	-	-	-	-	4	-	-	-	-	-	6	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	80.0	-	-	-	-	-	75.0	-	-	-	-	-	100.0	-	-



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Project: Ocean County Brown Corridor B & I
East
Municipality: Brick, Ocean County, NJ
Setup: NR/AH/BC/CB
Location: 40.05273, -74.132574

Count Name: B05. Hooper Avenue & Cedar
Bridge Avenue/Mantoloking Road AM
Site Code: B05
Start Date: 08/14/2024
Page No: 2



Turning Movement Data Plot



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Turning Movement Peak Hour Data (8:45 AM)

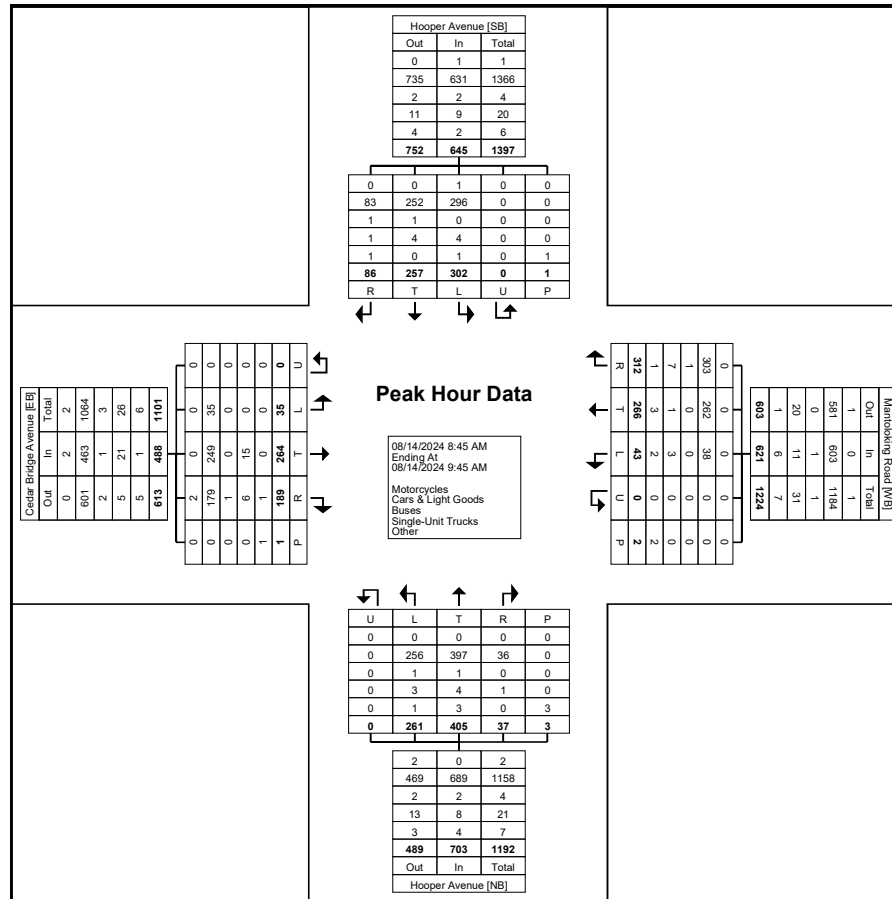
Start Time	Cedar Bridge Avenue Eastbound						Mantoloking Road Westbound						Hooper Avenue Northbound						Hooper Avenue Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
8:45 AM	0	8	70	52	0	130	0	11	69	84	1	164	0	76	117	6	1	199	0	64	59	24	1	147	640
9:00 AM	0	10	59	44	1	113	0	10	58	77	1	145	0	72	96	9	1	177	0	73	61	14	0	148	583
9:15 AM	0	9	94	52	0	155	0	8	70	73	0	151	0	60	107	10	0	177	0	83	58	14	0	155	638
9:30 AM	0	8	41	41	0	90	0	14	69	78	0	161	0	53	85	12	1	150	0	82	79	34	0	195	596
Total	0	35	264	189	1	488	0	43	266	312	2	621	0	261	405	37	3	703	0	302	257	86	1	645	2457
Approach %	0.0	7.2	54.1	38.7	-	-	0.0	6.9	42.8	50.2	-	-	0.0	37.1	57.6	5.3	-	-	0.0	46.8	39.8	13.3	-	-	-
Total %	0.0	1.4	10.7	7.7	-	19.9	0.0	1.8	10.8	12.7	-	25.3	0.0	10.6	16.5	1.5	-	28.6	0.0	12.3	10.5	3.5	-	26.3	-
PHF	0.000	0.875	0.702	0.909	-	0.787	0.000	0.768	0.950	0.929	-	0.947	0.000	0.859	0.865	0.771	-	0.883	0.000	0.910	0.813	0.632	-	0.827	0.960
Motorcycles	0	0	0	2	-	2	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	3
% Motorcycles	-	0.0	0.0	1.1	-	0.4	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.3	0.0	0.0	-	0.2	0.1
Cars & Light Goods	0	35	249	179	-	463	0	38	262	303	-	603	0	256	397	36	-	689	0	296	252	83	-	631	2386
% Cars & Light Goods	-	100.0	94.3	94.7	-	94.9	-	88.4	98.5	97.1	-	97.1	-	98.1	98.0	97.3	-	98.0	-	98.0	98.1	96.5	-	97.8	97.1
Buses	0	0	0	1	-	1	0	0	0	1	-	1	0	1	1	0	-	2	0	0	1	1	-	2	6
% Buses	-	0.0	0.0	0.5	-	0.2	-	0.0	0.0	0.3	-	0.2	-	0.4	0.2	0.0	-	0.3	-	0.0	0.4	1.2	-	0.3	0.2
Single-Unit Trucks	0	0	15	6	-	21	0	3	1	7	-	11	0	3	4	1	-	8	0	4	4	1	-	9	49
% Single-Unit Trucks	-	0.0	5.7	3.2	-	4.3	-	7.0	0.4	2.2	-	1.8	-	1.1	1.0	2.7	-	1.1	-	1.3	1.6	1.2	-	1.4	2.0
Articulated Trucks	0	0	0	1	-	1	0	2	3	1	-	6	0	0	3	0	-	3	0	1	0	1	-	2	12
% Articulated Trucks	-	0.0	0.0	0.5	-	0.2	-	4.7	1.1	0.3	-	1.0	-	0.0	0.7	0.0	-	0.4	-	0.3	0.0	1.2	-	0.3	0.5
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	0	0	0	0	-	0	1
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.4	0.0	0.0	-	0.1	-	0.0	0.0	0.0	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	33.3	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	1	-	-	-	-	-	2	-	-	-	-	-	2	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	66.7	-	-	-	-	-	100.0	-	-



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1804 Haddonfield-Berlin Road
Cherry Hill, New Jersey, United States 08034
609-706-6100 hfurey@imperialtdc.com

Project: Ocean County Brown Corridor B & I
East
Municipality: Brick, Ocean County, NJ
Setup: NR
Location: 40.05268, -74.132544

Count Name: B05. Hooper Avenue & Cedar
Bridge Avenue/Mantoloking Road
Site Code: B05
Start Date: 07/25/2024
Page No: 1

Turning Movement Data

Start Time	Hooper Avenue Southbound						Mantoloking Road Westbound						Hooper Avenue Northbound						Cedar Bridge Avenue Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
3:15 PM	29	97	76	0	1	202	49	88	13	0	1	150	15	78	49	0	2	142	97	131	18	0	2	246	740
3:30 PM	23	108	103	0	0	234	73	88	16	0	0	177	15	83	41	0	0	139	103	119	18	0	0	240	790
3:45 PM	22	117	108	0	0	247	72	62	14	0	0	148	15	93	49	0	0	157	76	111	15	0	1	202	754
Hourly Total	74	322	287	0	1	683	194	238	43	0	1	475	45	254	139	0	2	438	276	361	51	0	3	688	2284
4:00 PM	23	123	96	0	0	242	65	72	12	0	0	149	11	80	53	0	0	144	106	131	24	0	0	261	796
4:15 PM	27	155	107	0	0	289	73	63	11	0	1	147	9	83	49	0	0	141	99	119	15	0	3	233	810
4:30 PM	24	167	134	0	0	325	69	78	12	0	1	159	5	88	48	0	1	141	91	132	18	0	0	241	866
4:45 PM	30	178	114	0	0	322	80	83	17	0	3	180	10	101	69	0	0	180	90	156	19	0	1	265	947
Hourly Total	104	623	451	0	0	1178	287	296	52	0	5	635	35	352	219	0	1	606	386	538	76	0	4	1000	3419
5:00 PM	18	157	138	0	0	313	76	119	21	0	1	216	12	81	57	0	1	150	98	175	20	0	0	293	972
5:15 PM	23	166	136	0	0	325	71	65	19	0	0	155	15	93	46	0	0	154	101	117	15	0	1	233	867
5:30 PM	23	165	127	0	0	315	84	84	8	0	0	176	10	101	55	0	0	166	76	144	14	0	7	234	891
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	64	488	401	0	0	953	231	268	48	0	1	547	37	275	158	0	1	470	275	436	49	0	8	760	2730
10:15 AM	25	85	123	0	0	233	97	101	12	0	0	210	17	121	78	0	1	216	125	143	19	0	0	287	946
10:30 AM	32	74	102	0	1	208	106	122	17	0	0	245	16	106	73	0	1	195	48	168	20	0	0	236	884
10:45 AM	33	104	88	0	0	225	104	93	17	0	1	214	10	98	44	0	0	152	99	136	22	0	1	257	848
Hourly Total	90	263	313	0	1	666	307	316	46	0	1	669	43	325	195	0	2	563	272	447	61	0	1	780	2678
11:00 AM	26	127	109	0	1	262	86	70	11	0	0	167	20	101	75	0	0	196	73	80	15	0	0	168	793
11:15 AM	17	121	82	0	0	220	120	90	17	0	0	227	27	98	57	0	1	182	75	100	18	0	1	193	822
11:30 AM	29	82	108	0	0	219	144	84	23	0	0	251	11	81	38	0	0	130	69	91	17	0	0	177	777
11:45 AM	24	99	92	0	0	215	128	82	15	0	3	225	16	122	64	0	0	202	77	106	21	0	1	204	846
Hourly Total	96	429	391	0	1	916	478	326	66	0	3	870	74	402	234	0	1	710	294	377	71	0	2	742	3238
12:00 PM	25	132	102	0	1	259	113	84	23	0	1	220	11	92	36	0	0	139	64	129	25	0	1	218	836
12:15 PM	20	91	132	0	0	243	78	61	14	0	3	153	19	88	56	0	0	163	54	126	7	0	0	187	746
12:30 PM	16	103	104	0	0	223	97	69	12	0	0	178	7	89	59	0	1	155	54	148	15	0	1	217	773
12:45 PM	33	114	95	0	0	242	86	70	14	0	2	170	16	68	48	0	0	132	56	137	18	0	0	211	755
Hourly Total	94	440	433	0	1	967	374	284	63	0	6	721	53	337	199	0	1	589	228	540	65	0	2	833	3110
1:00 PM	21	107	108	0	0	236	101	72	15	0	0	188	20	81	51	0	0	152	63	139	12	0	0	214	790
1:15 PM	24	117	93	0	0	234	94	83	12	0	0	189	13	82	52	0	0	147	73	115	13	0	0	201	771
Grand Total	567	2789	2477	0	4	5833	2066	1883	345	0	17	4294	320	2108	1247	0	8	3675	1867	2953	398	0	20	5218	19020
Approach %	9.7	47.8	42.5	0.0	-	-	48.1	43.9	8.0	0.0	-	-	8.7	57.4	33.9	0.0	-	-	35.8	56.6	7.6	0.0	-	-	-
Total %	3.0	14.7	13.0	0.0	-	30.7	10.9	9.9	1.8	0.0	-	22.6	1.7	11.1	6.6	0.0	-	19.3	9.8	15.5	2.1	0.0	-	27.4	-
Motorcycles	0	2	4	0	-	6	12	2	1	0	-	15	3	6	1	0	-	10	0	4	1	0	-	5	36
% Motorcycles	0.0	0.1	0.2	-	-	0.1	0.6	0.1	0.3	-	-	0.3	0.9	0.3	0.1	-	-	0.3	0.0	0.1	0.3	-	-	0.1	0.2

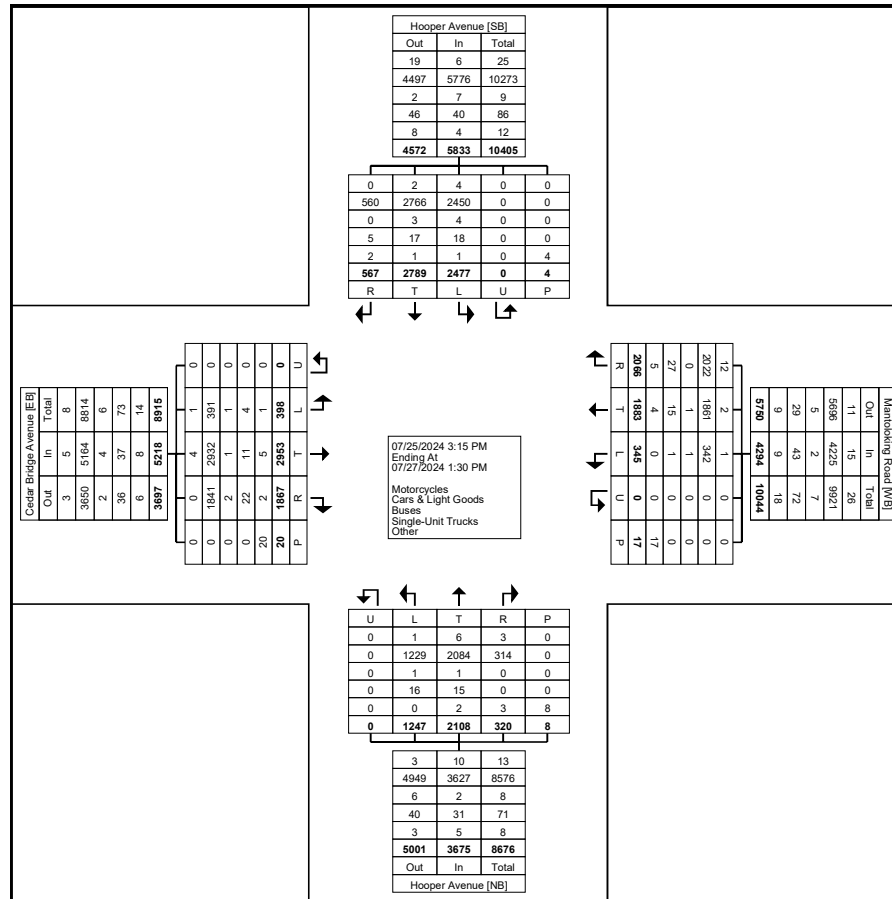
Cars & Light Goods	560	2766	2450	0	-	5776	2022	1861	342	0	-	4225	314	2084	1229	0	-	3627	1841	2932	391	0	-	5164	18792
% Cars & Light Goods	98.8	99.2	98.9	-	-	99.0	97.9	98.8	99.1	-	-	98.4	98.1	98.9	98.6	-	-	98.7	98.6	99.3	98.2	-	-	99.0	98.8
Buses	0	3	4	0	-	7	0	1	1	0	-	2	0	1	1	0	-	2	2	1	1	0	-	4	15
% Buses	0.0	0.1	0.2	-	-	0.1	0.0	0.1	0.3	-	-	0.0	0.0	0.0	0.1	-	-	0.1	0.1	0.0	0.3	-	-	0.1	0.1
Single-Unit Trucks	5	17	18	0	-	40	27	15	1	0	-	43	0	15	16	0	-	31	22	11	4	0	-	37	151
% Single-Unit Trucks	0.9	0.6	0.7	-	-	0.7	1.3	0.8	0.3	-	-	1.0	0.0	0.7	1.3	-	-	0.8	1.2	0.4	1.0	-	-	0.7	0.8
Articulated Trucks	2	1	1	0	-	4	0	4	0	0	-	4	1	1	0	0	-	2	1	4	1	0	-	6	16
% Articulated Trucks	0.4	0.0	0.0	-	-	0.1	0.0	0.2	0.0	-	-	0.1	0.3	0.0	0.0	-	-	0.1	0.1	0.1	0.3	-	-	0.1	0.1
Bicycles on Road	0	0	0	0	-	0	5	0	0	0	-	5	2	1	0	0	-	3	1	1	0	0	-	2	10
% Bicycles on Road	0.0	0.0	0.0	-	-	0.0	0.2	0.0	0.0	-	-	0.1	0.6	0.0	0.0	-	-	0.1	0.1	0.0	0.0	-	-	0.0	0.1
Bicycles on Crosswalk	-	-	-	-	3	-	-	-	-	-	11	-	-	-	-	-	7	-	-	-	-	-	12	-	-
% Bicycles on Crosswalk	-	-	-	-	75.0	-	-	-	-	-	64.7	-	-	-	-	-	87.5	-	-	-	-	-	60.0	-	-
Pedestrians	-	-	-	-	1	-	-	-	-	-	6	-	-	-	-	-	1	-	-	-	-	-	8	-	-
% Pedestrians	-	-	-	-	25.0	-	-	-	-	-	35.3	-	-	-	-	-	12.5	-	-	-	-	-	40.0	-	-



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Project: Ocean County Brown Corridor B & I
East
Municipality: Brick, Ocean County, NJ
Setup: NR
Location: 40.05268, -74.132544

Count Name: B05. Hooper Avenue & Cedar
Bridge Avenue/Mantoloking Road
Site Code: B05
Start Date: 07/25/2024
Page No: 3



Turning Movement Data Plot



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Project: Ocean County Brown Corridor B & I
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Count Name: B05. Hooper Avenue & Cedar
 Bridge Avenue/Mantoloking Road
 Site Code: B05
 Start Date: 07/25/2024
 Page No: 4

Turning Movement Peak Hour Data (4:45 PM)

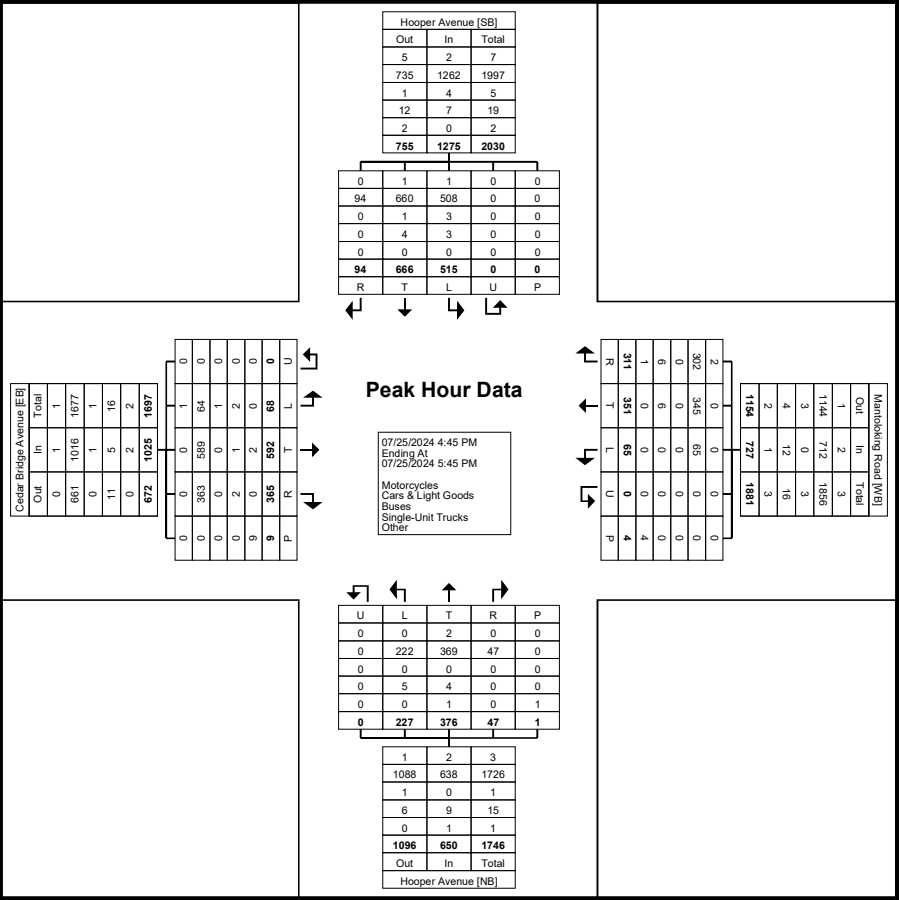
Start Time	Hooper Avenue Southbound						Mantoloking Road Westbound						Hooper Avenue Northbound						Cedar Bridge Avenue Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
4:45 PM	30	178	114	0	0	322	80	83	17	0	3	180	10	101	69	0	0	180	90	156	19	0	1	265	947
5:00 PM	18	157	138	0	0	313	76	119	21	0	1	216	12	81	57	0	1	150	98	175	20	0	0	293	972
5:15 PM	23	166	136	0	0	325	71	65	19	0	0	155	15	93	46	0	0	154	101	117	15	0	1	233	867
5:30 PM	23	165	127	0	0	315	84	84	8	0	0	176	10	101	55	0	0	166	76	144	14	0	7	234	891
Total	94	666	515	0	0	1275	311	351	65	0	4	727	47	376	227	0	1	650	365	592	68	0	9	1025	3677
Approach %	7.4	52.2	40.4	0.0	-	-	42.8	48.3	8.9	0.0	-	-	7.2	57.8	34.9	0.0	-	-	35.6	57.8	6.6	0.0	-	-	-
Total %	2.6	18.1	14.0	0.0	-	34.7	8.5	9.5	1.8	0.0	-	19.8	1.3	10.2	6.2	0.0	-	17.7	9.9	16.1	1.8	0.0	-	27.9	-
PHF	0.783	0.935	0.933	0.000	-	0.981	0.926	0.737	0.774	0.000	-	0.841	0.783	0.931	0.822	0.000	-	0.903	0.903	0.846	0.850	0.000	-	0.875	0.946
Motorcycles	0	1	1	0	-	2	2	0	0	0	-	2	0	2	0	0	-	2	0	0	1	0	-	1	7
% Motorcycles	0.0	0.2	0.2	-	-	0.2	0.6	0.0	0.0	-	-	0.3	0.0	0.5	0.0	-	-	0.3	0.0	0.0	1.5	-	-	0.1	0.2
Cars & Light Goods	94	660	508	0	-	1262	302	345	65	0	-	712	47	369	222	0	-	638	363	589	64	0	-	1016	3628
% Cars & Light Goods	100.0	99.1	98.6	-	-	99.0	97.1	98.3	100.0	-	-	97.9	100.0	98.1	97.8	-	-	98.2	99.5	99.5	94.1	-	-	99.1	98.7
Buses	0	1	3	0	-	4	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	5
% Buses	0.0	0.2	0.6	-	-	0.3	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	1.5	-	-	0.1	0.1
Single-Unit Trucks	0	4	3	0	-	7	6	6	0	0	-	12	0	4	5	0	-	9	2	1	2	0	-	5	33
% Single-Unit Trucks	0.0	0.6	0.6	-	-	0.5	1.9	1.7	0.0	-	-	1.7	0.0	1.1	2.2	-	-	1.4	0.5	0.2	2.9	-	-	0.5	0.9
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	2	0	0	-	2	2
% Articulated Trucks	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.3	0.0	-	-	0.2	0.1
Bicycles on Road	0	0	0	0	-	0	1	0	0	0	-	1	0	1	0	0	-	1	0	0	0	0	-	0	2
% Bicycles on Road	0.0	0.0	0.0	-	-	0.0	0.3	0.0	0.0	-	-	0.1	0.0	0.3	0.0	-	-	0.2	0.0	0.0	0.0	-	-	0.0	0.1
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	3	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	100.0	-	-	-	-	-	33.3	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	4	-	-	-	-	-	0	-	-	-	-	-	6	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	0.0	-	-	-	-	-	66.7	-	-

Project: Ocean County Brown Corridor B & I
East
Municipality: Brick, Ocean County, NJ
Setup: NR
Location: 40.05268, -74.132544

Imperial
TRAFFIC & DATA COLLECTION

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Count Name: B05. Hooper Avenue & Cedar
Bridge Avenue/Mantoloking Road
Site Code: B05
Start Date: 07/25/2024
Page No: 5



Turning Movement Peak Hour Data Plot (4:45 PM)



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Cherry Hill, New Jersey, United States 08034
609-706-6100 hfurey@imperialtdc.com

Project: Ocean County Brown Corridor B & I
East
Municipality: Brick, Ocean County, NJ
Setup: NR/AH/BC/CB
Location: 40.056113, -74.142086

Count Name: I22: Cedar Bridge Avenue &
Aurora Place
Site Code: I22
Start Date: 08/14/2024
Page No: 1

Turning Movement Data

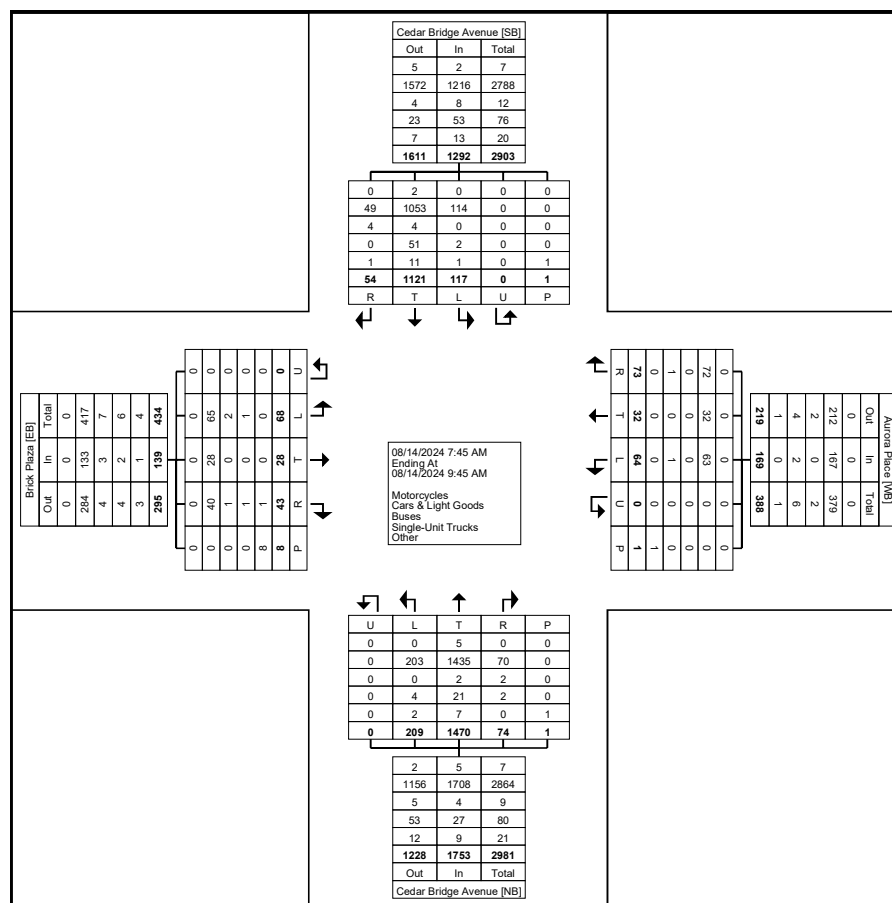
Start Time	Brick Plaza Eastbound							Aurora Place Westbound							Cedar Bridge Avenue Northbound							Cedar Bridge Avenue Southbound							Int. Total	
	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total		
7:45 AM	0	9	2	1	3	4	15	0	4	3	0	4	1	11	0	18	228	12	0	1	258	0	11	135	5	1	0	152	436	
Hourly Total	0	9	2	1	3	4	15	0	4	3	0	4	1	11	0	18	228	12	0	1	258	0	11	135	5	1	0	152	436	
8:00 AM	0	12	5	1	3	1	21	0	7	3	4	3	0	17	0	24	198	5	0	0	227	0	6	139	4	0	1	149	414	
	0	11	5	1	3	0	20	0	7	2	4	5	0	18	0	37	214	11	0	0	262	0	12	141	6	0	0	159	459	
8:30 AM	0	11	2	1	2	0	16	0	10	4	7	1	0	22	0	23	209	9	0	0	241	0	15	145	8	1	0	169	448	
8:45 AM	0	6	4	0	2	0	12	0	6	8	1	7	0	22	0	25	182	7	0	0	214	0	14	158	3	0	0	175	423	
Hourly Total	0	40	16	3	10	1	69	0	30	17	16	16	0	79	0	109	803	32	0	0	944	0	47	583	21	1	1	652	1744	
9:00 AM	0	5	4	4	5	0	18	0	11	3	5	8	0	27	0	22	162	7	0	0	191	0	21	125	10	3	0	159	395	
	0	10	1	4	6	1	21	0	11	4	3	4	0	22	0	32	136	10	0	0	178	0	17	159	5	1	0	182	403	
9:30 AM	0	4	5	0	7	2	16	0	8	5	6	11	0	30	0	28	141	13	0	0	182	0	21	119	7	0	0	147	375	
Grand Total	0	68	28	12	31	8	139	0	64	32	30	43	1	169	0	209	1470	74	0	1	1753	0	117	1121	48	6	1	1292	3353	
Approach %	0.0	48.9	20.1	8.6	22.3	-	-	0.0	37.9	18.9	17.8	25.4	-	-	0.0	11.9	83.9	4.2	0.0	-	-	0.0	9.1	86.8	3.7	0.5	-	-	-	-
Total %	0.0	2.0	0.8	0.4	0.9	-	4.1	0.0	1.9	1.0	0.9	1.3	-	5.0	0.0	6.2	43.8	2.2	0.0	-	52.3	0.0	3.5	33.4	1.4	0.2	-	38.5	-	-
Motorcycles	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	5	0	0	-	5	0	0	2	0	0	-	2	7	7
% Motorcycles	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.3	0.0	-	-	0.3	-	0.0	0.2	0.0	0.0	-	0.2	0.2	0.2
Cars & Light Goods	0	65	28	10	30	-	133	0	63	32	30	42	-	167	0	203	1435	70	0	-	1708	0	114	1053	44	5	-	1216	3224	3224
% Cars & Light Goods	-	95.6	100.0	83.3	96.8	-	95.7	-	98.4	100.0	100.0	97.7	-	98.8	-	97.1	97.6	94.6	-	-	97.4	-	97.4	93.9	91.7	83.3	-	94.1	96.2	96.2
Buses	0	2	0	1	0	-	3	0	0	0	0	0	-	0	0	0	2	2	0	-	4	0	0	4	3	1	-	8	15	15
% Buses	-	2.9	0.0	8.3	0.0	-	2.2	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.1	2.7	-	-	0.2	-	0.0	0.4	6.3	16.7	-	0.6	0.4	0.4
Single-Unit Trucks	0	1	0	0	1	-	2	0	1	0	0	1	-	2	0	4	21	2	0	-	27	0	2	51	0	0	-	53	84	84
% Single-Unit Trucks	-	1.5	0.0	0.0	3.2	-	1.4	-	1.6	0.0	0.0	2.3	-	1.2	-	1.9	1.4	2.7	-	-	1.5	-	1.7	4.5	0.0	0.0	-	4.1	2.5	2.5
Articulated Trucks	0	0	0	1	0	-	1	0	0	0	0	0	-	0	0	1	7	0	0	-	8	0	1	10	1	0	-	12	21	21
% Articulated Trucks	-	0.0	0.0	8.3	0.0	-	0.7	-	0.0	0.0	0.0	0.0	-	0.0	-	0.5	0.5	0.0	-	-	0.5	-	0.9	0.9	2.1	0.0	-	0.9	0.6	0.6
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	1	0	0	0	-	1	0	0	1	0	0	-	1	2	2
% Bicycles on Road	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	0.0	-	0.0	-	0.5	0.0	0.0	-	-	0.1	-	0.0	0.1	0.0	0.0	-	0.1	0.1	0.1
Bicycles on Crosswalk	-	-	-	-	-	3	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-
% Bicycles on Crosswalk	-	-	-	-	-	37.5	-	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	-	-
Pedestrians	-	-	-	-	-	5	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-
% Pedestrians	-	-	-	-	-	62.5	-	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-

Project: Ocean County Brown Corridor B & I
East
Municipality: Brick, Ocean County, NJ
Setup: NR/AH/BC/CB
Location: 40.056113, -74.142086

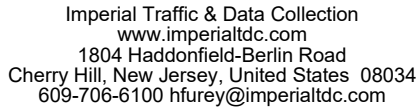


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Count Name: I22. Cedar Bridge Avenue &
Aurora Place
Site Code: I22
Start Date: 08/14/2024
Page No: 2



Turning Movement Data Plot



Count Name: I22. Cedar Bridge Avenue &
Aurora Place
Site Code: I22
Start Date: 08/14/2024
Page No: 3

Start Time	Brick Plaza Eastbound							Aurora Place Westbound							Cedar Bridge Avenue Northbound							Cedar Bridge Avenue Southbound							Int. Total
	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	
7:45 AM	0	9	2	1	3	4	15	0	4	3	0	4	1	11	0	18	228	12	0	1	258	0	11	135	5	1	0	152	436
8:00 AM	0	12	5	1	3	1	21	0	7	3	4	3	0	17	0	24	198	5	0	0	227	0	6	139	4	0	1	149	414
8:15 AM	0	11	5	1	3	0	20	0	7	2	4	5	0	18	0	37	214	11	0	0	262	0	12	141	6	0	0	159	459
8:30 AM	0	11	2	1	2	0	16	0	10	4	7	1	0	22	0	23	209	9	0	0	241	0	15	145	8	1	0	169	448
Total	0	43	14	4	11	5	72	0	28	12	15	13	1	68	0	102	849	37	0	1	988	0	44	560	23	2	1	629	1757
Approach %	0.0	59.7	19.4	5.6	15.3	-	-	0.0	41.2	17.6	22.1	19.1	-	-	0.0	10.3	85.9	3.7	0.0	-	-	0.0	7.0	89.0	3.7	0.3	-	-	-
Total %	0.0	2.4	0.8	0.2	0.6	-	4.1	0.0	1.6	0.7	0.9	0.7	-	3.9	0.0	5.8	48.3	2.1	0.0	-	56.2	0.0	2.5	31.9	1.3	0.1	-	35.8	-
PHF	0.000	0.896	0.700	1.000	0.917	-	0.857	0.000	0.700	0.750	0.536	0.650	-	0.773	0.000	0.689	0.931	0.771	0.000	-	0.943	0.000	0.733	0.966	0.719	0.500	-	0.930	0.957
Motorcycles	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	3	0	0	-	3	0	0	2	0	0	-	2	5
% Motorcycles	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.4	0.0	-	-	0.3	-	0.0	0.4	0.0	0.0	-	0.3	0.3
Cars & Light Goods	0	42	14	4	11	-	71	0	28	12	15	13	-	68	0	99	827	36	0	-	962	0	43	528	19	2	-	592	1693
% Cars & Light Goods	-	97.7	100.0	100.0	100.0	-	98.6	-	100.0	100.0	100.0	100.0	-	100.0	-	97.1	97.4	97.3	-	-	97.4	-	97.7	94.3	82.6	100.0	-	94.1	96.4
Buses	0	1	0	0	0	-	1	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	2	3	0	-	5	6
% Buses	-	2.3	0.0	0.0	0.0	-	1.4	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	-	0.0	-	0.0	0.4	13.0	0.0	-	0.8	0.3
Single-Unit Trucks	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	2	15	1	0	-	18	0	1	21	0	0	-	22	40
% Single-Unit Trucks	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	0.0	-	0.0	-	2.0	1.8	2.7	-	-	1.8	-	2.3	3.8	0.0	0.0	-	3.5	2.3
Articulated Trucks	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	1	4	0	0	-	5	0	0	7	1	0	-	8	13
% Articulated Trucks	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	0.0	-	0.0	-	1.0	0.5	0.0	-	-	0.5	-	0.0	1.3	4.3	0.0	-	1.3	0.7

Project: Ocean County Brown Corridor B & I
East
Municipality: Brick, Ocean County, NJ
Setup: NR/AH/BC/CB
Location: 40.056113, -74.142086

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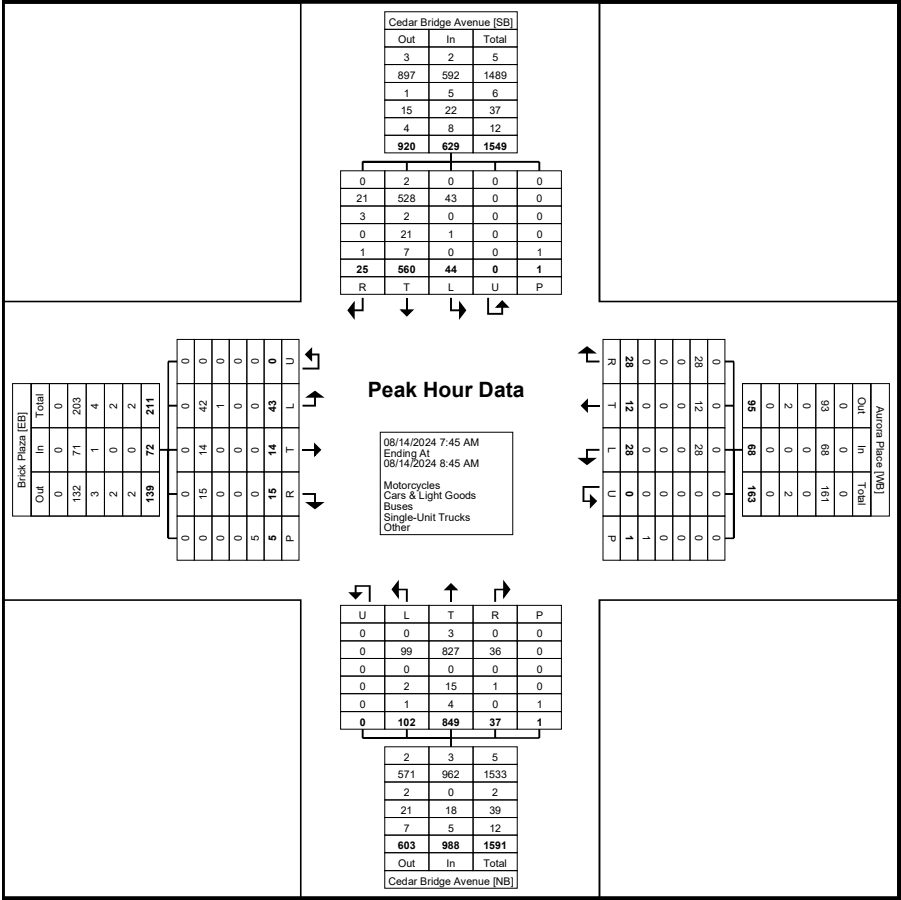
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Count Name: I22. Cedar Bridge Avenue &
Aurora Place
Site Code: I22
Start Date: 08/14/2024
Page No: 4



Turning Movement Peak Hour Data Plot (7:45 AM)



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Project: Ocean County Brown Corridor B & I
East
Municipality: Brick, Ocean County, NJ
Setup: NR
Location: 40.056113, -74.142086

Count Name: I22. Cedar Bridge & Aurora Place
Site Code: I22
Start Date: 07/25/2024
Page No: 1

Turning Movement Data

Start Time	Brick Plaza Eastbound							Aurora Place Westbound							Cedar Bridge Avenue Northbound							Cedar Bridge Avenue Southbound							Int. Total
	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	
4:15 PM	0	18	14	4	6	0	42	0	33	13	13	11	0	70	0	26	137	19	1	0	183	0	53	299	12	0	1	364	659
4:30 PM	0	17	12	2	4	4	35	0	26	15	12	14	0	67	0	28	125	22	0	0	175	0	31	271	12	0	0	314	591
4:45 PM	0	10	9	6	10	0	35	0	24	13	13	15	0	65	0	25	146	34	1	0	206	0	41	263	13	1	1	318	624
Hourly Total	0	45	35	12	20	4	112	0	83	41	38	40	0	202	0	79	408	75	2	0	564	0	125	833	37	1	2	996	1874
5:00 PM	0	11	9	5	5	1	30	0	28	20	14	5	0	67	0	38	175	34	1	0	248	0	38	287	9	1	0	335	680
5:15 PM	0	9	13	4	5	1	31	0	27	13	12	23	0	75	0	17	138	34	1	1	190	0	52	280	7	2	0	341	637
5:30 PM	0	8	9	6	4	0	27	0	39	19	21	20	0	99	0	29	153	34	0	0	216	0	53	255	9	0	0	317	659
5:45 PM	0	14	4	3	7	1	28	0	38	26	28	12	0	104	0	31	117	26	1	0	175	0	40	254	5	1	1	300	607
Hourly Total	0	42	35	18	21	3	116	0	132	78	75	60	0	345	0	115	583	128	3	1	829	0	183	1076	30	4	1	1293	2583
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9:30 AM	0	6	12	2	6	0	26	0	24	8	3	9	0	44	0	19	159	21	0	0	199	0	24	244	5	0	0	273	542
9:45 AM	0	12	5	6	5	2	28	0	17	9	4	10	0	40	0	25	163	19	0	0	207	0	19	259	8	1	0	287	562
Hourly Total	0	18	17	8	11	2	54	0	41	17	7	19	0	84	0	44	322	40	0	0	406	0	43	503	13	1	0	560	1104
10:00 AM	0	5	9	2	9	0	25	0	22	10	7	6	0	45	0	21	140	16	0	0	177	0	23	318	8	0	0	349	596
10:15 AM	0	9	7	2	12	0	30	0	18	10	6	6	0	40	0	43	176	18	0	0	237	0	18	312	5	1	0	336	643
10:30 AM	0	11	5	7	6	0	29	0	24	10	5	15	0	54	0	36	191	18	0	1	245	0	27	246	5	1	0	279	607
10:45 AM	0	6	4	2	3	2	15	0	26	15	9	16	0	66	0	30	162	21	0	0	213	0	33	254	7	0	0	294	588
Hourly Total	0	31	25	13	30	2	99	0	90	45	27	43	0	205	0	130	669	73	0	1	872	0	101	1130	25	2	0	1258	2434
11:00 AM	0	9	5	3	5	0	22	0	24	24	10	6	0	64	0	30	142	11	1	0	184	0	25	219	7	1	0	252	522
11:15 AM	0	13	7	4	2	3	26	0	20	13	7	13	0	53	0	31	140	27	1	0	199	0	33	209	6	0	0	248	526
11:30 AM	0	9	11	8	6	1	34	0	18	13	9	19	0	59	0	31	142	20	6	0	199	0	32	200	6	1	0	239	531
11:45 AM	0	7	6	4	5	1	22	0	18	14	10	23	0	65	0	39	138	21	0	0	198	0	32	225	3	0	1	260	545
Hourly Total	0	38	29	19	18	5	104	0	80	64	36	61	0	241	0	131	562	79	8	0	780	0	122	853	22	2	1	999	2124
12:00 PM	0	13	11	7	5	1	36	0	30	14	18	17	0	79	0	34	140	19	3	0	196	0	34	222	8	0	3	264	575
12:15 PM	0	12	8	6	10	0	36	0	25	18	5	14	0	62	0	21	125	19	0	0	165	0	27	252	7	1	0	287	550
12:30 PM	0	16	11	4	7	2	38	0	20	24	17	8	0	69	0	35	138	17	2	0	192	0	37	243	6	4	0	290	589
12:45 PM	0	13	10	5	5	1	33	0	21	25	13	13	0	72	0	31	121	22	0	0	174	0	42	214	8	1	0	265	544
Hourly Total	0	54	40	22	27	4	143	0	96	81	53	52	0	282	0	121	524	77	5	0	727	0	140	931	29	6	3	1106	2258
1:00 PM	0	9	9	3	4	1	25	0	29	13	7	12	1	61	0	23	143	6	4	0	176	0	43	246	10	0	1	299	561
1:15 PM	0	12	9	5	5	1	31	0	23	9	11	14	4	57	0	36	142	23	1	4	202	0	30	216	13	0	0	259	549
Grand Total	0	249	199	100	136	22	684	0	574	348	254	301	5	1477	0	679	3353	501	23	6	4556	0	787	5788	179	16	8	6770	13487
Approach %	0.0	36.4	29.1	14.6	19.9	-	-	0.0	38.9	23.6	17.2	20.4	-	-	0.0	14.9	73.6	11.0	0.5	-	-	0.0	11.6	85.5	2.6	0.2	-	-	-
Total %	0.0	1.8	1.5	0.7	1.0	-	5.1	0.0	4.3	2.6	1.9	2.2	-	11.0	0.0	5.0	24.9	3.7	0.2	-	33.8	0.0	5.8	42.9	1.3	0.1	-	50.2	-
Motorcycles	0	0	1	0	0	-	1	0	0	0	1	0	-	1	0	1	14	0	0	-	15	0	1	19	0	0	-	20	37
% Motorcycles	-	0.0	0.5	0.0	0.0	-	0.1	-	0.0	0.0	0.4	0.0	-	0.1	-	0.1	0.4	0.0	0.0	-	0.3	-	0.1	0.3	0.0	0.0	-	0.3	0.3

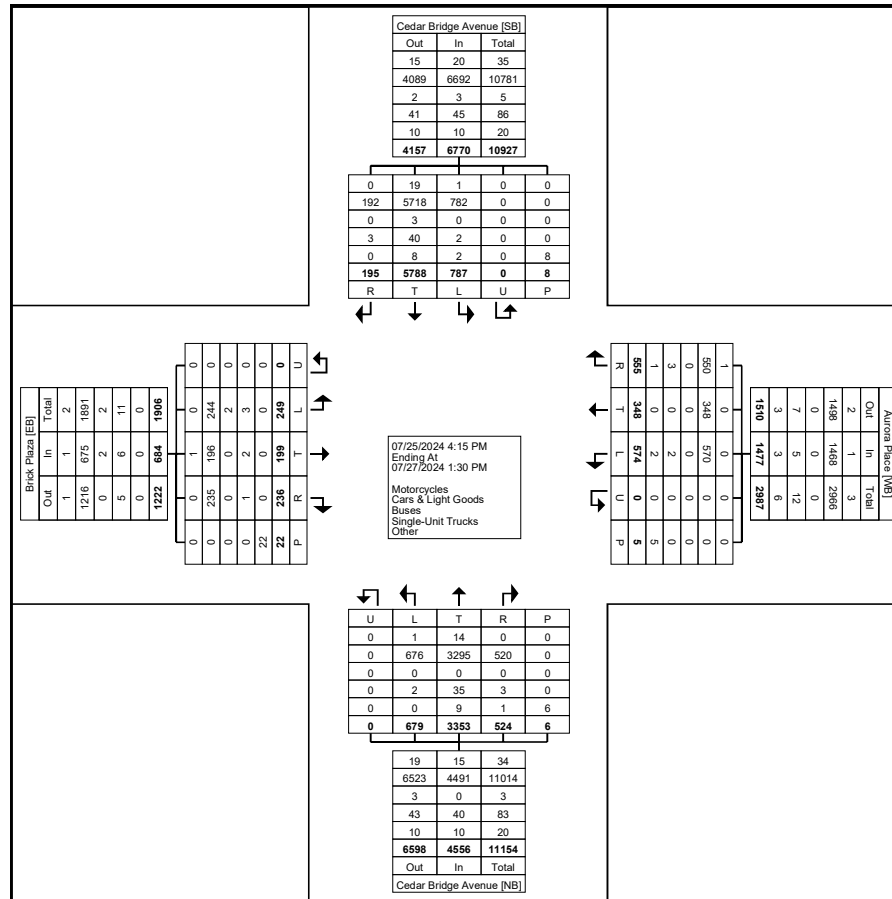
[illegible]



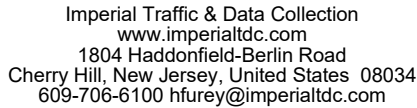
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609-706-6100 hfurey@imperialtdc.com

Project: Ocean County Brown Corridor B & I
East
Municipality: Brick, Ocean County, NJ
Setup: NR
Location: 40.056113, -74.142086

Count Name: I22. Cedar Bridge & Aurora Place
Site Code: I22
Start Date: 07/25/2024
Page No: 3



Turning Movement Data Plot



Count Name: I22. Cedar Bridge & Aurora Place
Site Code: I22
Start Date: 07/25/2024
Page No: 4

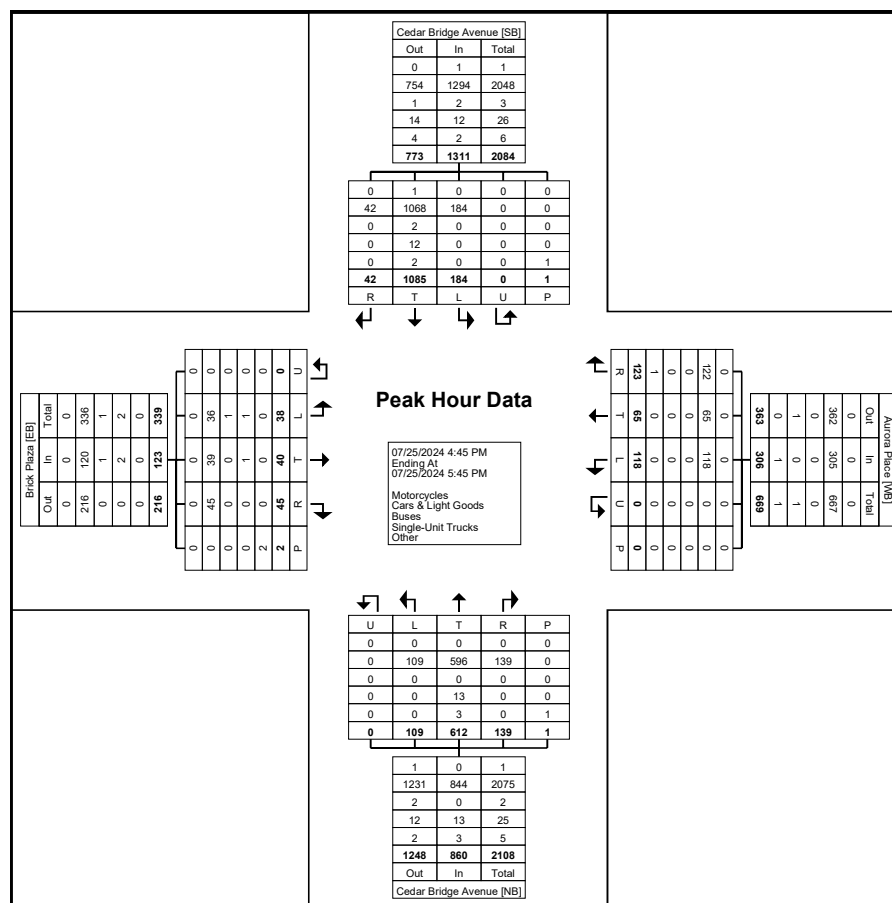
Start Time	Brick Plaza Eastbound							Aurora Place Westbound							Cedar Bridge Avenue Northbound							Cedar Bridge Avenue Southbound							Int. Total
	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	
4:45 PM	0	10	9	6	10	0	35	0	24	13	13	15	0	65	0	25	146	34	1	0	206	0	41	263	13	1	1	318	624
5:00 PM	0	11	9	5	5	1	30	0	28	20	14	5	0	67	0	38	175	34	1	0	248	0	38	287	9	1	0	335	680
5:15 PM	0	9	13	4	5	1	31	0	27	13	12	23	0	75	0	17	138	34	1	1	190	0	52	280	7	2	0	341	637
5:30 PM	0	8	9	6	4	0	27	0	39	19	21	20	0	99	0	29	153	34	0	0	216	0	53	255	9	0	0	317	659
Total	0	38	40	21	24	2	123	0	118	65	60	63	0	306	0	109	612	136	3	1	860	0	184	1085	38	4	1	1311	2600
Approach %	0.0	30.9	32.5	17.1	19.5	-	-	0.0	38.6	21.2	19.6	20.6	-	-	0.0	12.7	71.2	15.8	0.3	-	-	0.0	14.0	82.8	2.9	0.3	-	-	-
Total %	0.0	1.5	1.5	0.8	0.9	-	4.7	0.0	4.5	2.5	2.3	2.4	-	11.8	0.0	4.2	23.5	5.2	0.1	-	33.1	0.0	7.1	41.7	1.5	0.2	-	50.4	-
PHF	0.000	0.864	0.769	0.875	0.600	-	0.879	0.000	0.756	0.813	0.714	0.685	-	0.773	0.000	0.717	0.874	1.000	0.750	-	0.867	0.000	0.868	0.945	0.731	0.500	-	0.961	0.956
Motorcycles	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	1	0	0	-	1	1
% Motorcycles	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.1	0.0	0.0	-	0.1	0.0
Cars & Light Goods	0	36	39	21	24	-	120	0	118	65	59	63	-	305	0	109	596	136	3	-	844	0	184	1068	38	4	-	1294	2563
% Cars & Light Goods	-	94.7	97.5	100.0	100.0	-	97.6	-	100.0	100.0	98.3	100.0	-	99.7	-	100.0	97.4	100.0	100.0	-	98.1	-	100.0	98.4	100.0	100.0	-	98.7	98.6
Buses	0	1	0	0	0	-	1	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	2	0	0	-	2	3
% Buses	-	2.6	0.0	0.0	0.0	-	0.8	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.2	0.0	0.0	-	0.2	0.1
Single-Unit Trucks	0	1	1	0	0	-	2	0	0	0	0	0	-	0	0	0	13	0	0	-	13	0	0	12	0	0	-	12	27
% Single-Unit Trucks	-	2.6	2.5	0.0	0.0	-	1.6	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	2.1	0.0	0.0	-	1.5	-	0.0	1.1	0.0	0.0	-	0.9	1.0
Articulated Trucks	0	0	0	0	0	-	0	0	0	0	1	0	-	1	0	0	3	0	0	-	3	0	0	2	0	0	-	2	6
% Articulated Trucks	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	1.7	0.0	-	0.3	-	0.0	0.5	0.0	0.0	-	0.3								

Project: Ocean County Brown Corridor B & I
East
Municipality: Brick, Ocean County, NJ
Setup: NR
Location: 40.056113, -74.142086



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Count Name: I22. Cedar Bridge & Aurora Place
Site Code: I22
Start Date: 07/25/2024
Page No: 5



Turning Movement Peak Hour Data Plot (4:45 PM)



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609-706-6100 hfurey@imperialtdc.com

Project: Ocean County Brown Corridor B & I
East
Municipality: Brick, Ocean County, NJ
Setup: NR/AH/BC/CB
Location: 40.054541, -74.13957

Count Name: I23. Cedar Bridge Avenue & Brick
Boulevard AM
Site Code: I23
Start Date: 08/14/2024
Page No: 1

Turning Movement Data

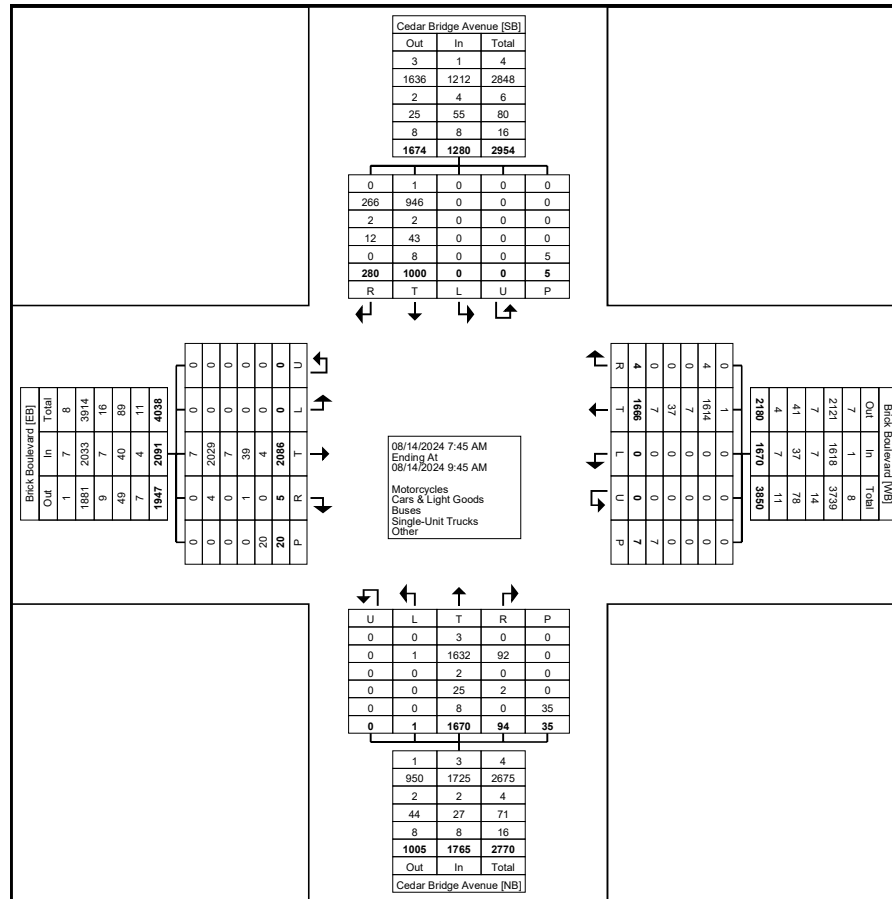
Start Time	Brick Boulevard Eastbound							Brick Boulevard Westbound							Cedar Bridge Avenue Northbound							Cedar Bridge Avenue Southbound							Int. Total
	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total			
7:45 AM	0	0	277	0	1	7	278	0	0	206	0	0	2	206	0	0	242	7	2	249	0	0	108	37	3	145	878		
Hourly Total	0	0	277	0	1	7	278	0	0	206	0	0	2	206	0	0	242	7	2	249	0	0	108	37	3	145	878		
8:00 AM	0	0	261	1	0	2	262	0	0	186	0	0	0	186	0	0	203	10	6	213	0	0	109	40	0	149	810		
8:15 AM	0	0	285	0	0	1	285	0	0	172	0	0	1	172	0	0	237	16	1	253	0	0	140	26	0	166	876		
8:30 AM	0	0	257	2	0	1	259	0	0	206	1	0	0	207	0	0	230	19	4	249	0	0	134	38	0	172	887		
8:45 AM	0	0	285	0	0	5	285	0	0	238	0	0	1	238	0	1	211	10	5	222	0	0	134	32	0	166	911		
Hourly Total	0	0	1088	3	0	9	1091	0	0	802	1	0	2	803	0	1	881	55	16	937	0	0	517	136	0	653	3484		
9:00 AM	0	0	211	1	0	1	212	0	0	213	2	0	2	215	0	0	197	11	2	208	0	0	137	26	2	163	798		
9:15 AM	0	0	260	0	0	1	260	0	0	230	0	0	0	230	0	0	173	9	5	182	0	0	134	44	0	178	850		
9:30 AM	0	0	250	0	0	2	250	0	0	215	1	0	1	216	0	0	177	12	10	189	0	0	104	37	0	141	796		
Grand Total	0	0	2086	4	1	20	2091	0	0	1666	4	0	7	1670	0	1	1670	94	35	1765	0	0	1000	280	5	1280	6806		
Approach %	0.0	0.0	99.8	0.2	0.0	-	-	0.0	0.0	99.8	0.2	0.0	-	-	0.0	0.1	94.6	5.3	-	-	0.0	0.0	78.1	21.9	-	-	-		
Total %	0.0	0.0	30.6	0.1	0.0	-	30.7	0.0	0.0	24.5	0.1	0.0	-	24.5	0.0	0.0	24.5	1.4	-	25.9	0.0	0.0	14.7	4.1	-	18.8	-		
Motorcycles	0	0	7	0	0	-	7	0	0	1	0	0	-	1	0	0	3	0	-	3	0	0	1	0	-	1	12		
% Motorcycles	-	-	0.3	0.0	0.0	-	0.3	-	-	0.1	0.0	-	-	0.1	-	0.0	0.2	0.0	-	0.2	-	-	0.1	0.0	-	0.1	0.2		
Cars & Light Goods	0	0	2029	3	1	-	2033	0	0	1614	4	0	-	1618	0	1	1632	92	-	1725	0	0	946	266	-	1212	6588		
% Cars & Light Goods	-	-	97.3	75.0	100.0	-	97.2	-	-	96.9	100.0	-	-	96.9	-	100.0	97.7	97.9	-	97.7	-	-	94.6	95.0	-	94.7	96.8		
Buses	0	0	7	0	0	-	7	0	0	7	0	0	-	7	0	0	2	0	-	2	0	0	2	2	-	4	20		
% Buses	-	-	0.3	0.0	0.0	-	0.3	-	-	0.4	0.0	-	-	0.4	-	0.0	0.1	0.0	-	0.1	-	-	0.2	0.7	-	0.3	0.3		
Single-Unit Trucks	0	0	39	1	0	-	40	0	0	37	0	0	-	37	0	0	25	2	-	27	0	0	43	12	-	55	159		
% Single-Unit Trucks	-	-	1.9	25.0	0.0	-	1.9	-	-	2.2	0.0	-	-	2.2	-	0.0	1.5	2.1	-	1.5	-	-	4.3	4.3	-	4.3	2.3		
Articulated Trucks	0	0	4	0	0	-	4	0	0	7	0	0	-	7	0	0	7	0	-	7	0	0	8	0	-	8	26		
% Articulated Trucks	-	-	0.2	0.0	0.0	-	0.2	-	-	0.4	0.0	-	-	0.4	-	0.0	0.4	0.0	-	0.4	-	-	0.8	0.0	-	0.6	0.4		
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	1	0	-	1	0	0	0	0	-	0	1		
% Bicycles on Road	-	-	0.0	0.0	0.0	-	0.0	-	-	0.0	0.0	-	-	0.0	-	0.0	0.1	0.0	-	0.1	-	-	0.0	0.0	-	0.0	0.0		
Bicycles on Crosswalk	-	-	-	-	-	3	-	-	-	-	-	-	1	-	-	-	-	-	15	-	-	-	-	-	3	-	-		
% Bicycles on Crosswalk	-	-	-	-	-	15.0	-	-	-	-	-	-	14.3	-	-	-	-	-	42.9	-	-	-	-	-	60.0	-	-		
Pedestrians	-	-	-	-	-	17	-	-	-	-	-	-	6	-	-	-	-	-	20	-	-	-	-	-	2	-	-		
% Pedestrians	-	-	-	-	-	85.0	-	-	-	-	-	-	85.7	-	-	-	-	-	57.1	-	-	-	-	-	40.0	-	-		



Imperial Traffic & Data Collection
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1804 Haddonfield-Berlin Road
Cherry Hill, New Jersey, United States 08034
609-706-6100 hfurey@imperialtdc.com

Project: Ocean County Brown Corridor B & I
East
Municipality: Brick, Ocean County, NJ
Setup: NR/AH/BC/CB
Location: 40.054541, -74.13957

Count Name: I23. Cedar Bridge Avenue & Brick
Boulevard AM
Site Code: I23
Start Date: 08/14/2024
Page No: 2



Turning Movement Data Plot



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Project: Ocean County Brown Corridor B & I
 East
 Municipality: Brick, Ocean County, NJ
 Setup: NR/AH/BC/CB
 Location: 40.054541, -74.13957

Count Name: I23. Cedar Bridge Avenue & Brick
 Boulevard AM
 Site Code: I23
 Start Date: 08/14/2024
 Page No: 3

Turning Movement Peak Hour Data (7:45 AM)

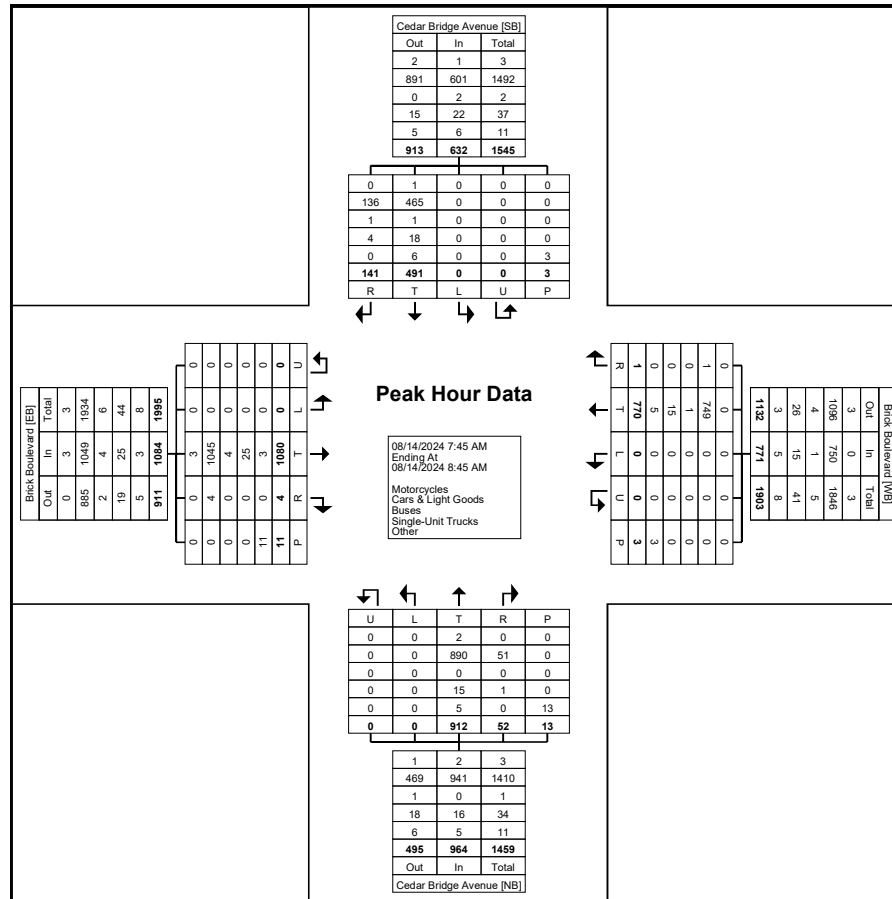
Start Time	Brick Boulevard Eastbound							Brick Boulevard Westbound							Cedar Bridge Avenue Northbound							Cedar Bridge Avenue Southbound							Int. Total
	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total			
7:45 AM	0	0	277	0	1	7	278	0	0	206	0	0	2	206	0	0	242	7	2	249	0	0	108	37	3	145	878		
8:00 AM	0	0	261	1	0	2	262	0	0	186	0	0	0	186	0	0	203	10	6	213	0	0	109	40	0	149	810		
8:15 AM	0	0	285	0	0	1	285	0	0	172	0	0	1	172	0	0	237	16	1	253	0	0	140	26	0	166	876		
8:30 AM	0	0	257	2	0	1	259	0	0	206	1	0	0	207	0	0	230	19	4	249	0	0	134	38	0	172	887		
Total	0	0	1080	3	1	11	1084	0	0	770	1	0	3	771	0	0	912	52	13	964	0	0	491	141	3	632	3451		
Approach %	0.0	0.0	99.6	0.3	0.1	-	-	0.0	0.0	99.9	0.1	0.0	-	-	0.0	0.0	94.6	5.4	-	-	0.0	0.0	77.7	22.3	-	-	-		
Total %	0.0	0.0	31.3	0.1	0.0	-	31.4	0.0	0.0	22.3	0.0	0.0	-	22.3	0.0	0.0	26.4	1.5	-	27.9	0.0	0.0	14.2	4.1	-	18.3	-		
PHF	0.000	0.000	0.947	0.375	0.250	-	0.951	0.000	0.000	0.934	0.250	0.000	-	0.931	0.000	0.000	0.942	0.684	-	0.953	0.000	0.000	0.877	0.881	-	0.919	0.973		
Motorcycles	0	0	3	0	0	-	3	0	0	0	0	0	-	0	0	0	2	0	-	2	0	0	1	0	-	1	6		
% Motorcycles	-	-	0.3	0.0	0.0	-	0.3	-	-	0.0	0.0	-	-	0.0	-	-	0.2	0.0	-	0.2	-	-	0.2	0.0	-	0.2	0.2		
Cars & Light Goods	0	0	1045	3	1	-	1049	0	0	749	1	0	-	750	0	0	890	51	-	941	0	0	465	136	-	601	3341		
% Cars & Light Goods	-	-	96.8	100.0	100.0	-	96.8	-	-	97.3	100.0	-	-	97.3	-	-	97.6	98.1	-	97.6	-	-	94.7	96.5	-	95.1	96.8		
Buses	0	0	4	0	0	-	4	0	0	1	0	0	-	1	0	0	0	0	-	0	0	0	1	1	-	2	7		
% Buses	-	-	0.4	0.0	0.0	-	0.4	-	-	0.1	0.0	-	-	0.1	-	-	0.0	0.0	-	0.0	-	-	0.2	0.7	-	0.3	0.2		
Single-Unit Trucks	0	0	25	0	0	-	25	0	0	15	0	0	-	15	0	0	15	1	-	16	0	0	18	4	-	22	78		
% Single-Unit Trucks	-	-	2.3	0.0	0.0	-	2.3	-	-	1.9	0.0	-	-	1.9	-	-	1.6	1.9	-	1.7	-	-	3.7	2.8	-	3.5	2.3		
Articulated Trucks	0	0	3	0	0	-	3	0	0	5	0	0	-	5	0	0	5	0	-	5	0	0	6	0	-	6	19		
% Articulated Trucks	-	-	0.3	0.0	0.0	-	0.3	-	-	0.6	0.0	-	-	0.6	-	-	0.5	0.0	-	0.5	-	-	1.2	0.0	-	0.9	0.6		
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0		
% Bicycles on Road	-	-	0.0	0.0	0.0	-	0.0	-	-	0.0	0.0	-	-	0.0	-	-	0.0	0.0	-	0.0	-	-	0.0	0.0	-	0.0	0.0		
Bicycles on Crosswalk	-	-	-	-	-	3	-	-	-	-	-	-	1	-	-	-	-	-	6	-	-	-	-	-	1	-	-		
% Bicycles on Crosswalk	-	-	-	-	-	27.3	-	-	-	-	-	-	33.3	-	-	-	-	-	46.2	-	-	-	-	-	33.3	-	-		
Pedestrians	-	-	-	-	-	8	-	-	-	-	-	-	2	-	-	-	-	-	7	-	-	-	-	-	2	-	-		
% Pedestrians	-	-	-	-	-	72.7	-	-	-	-	-	-	66.7	-	-	-	-	-	53.8	-	-	-	-	-	66.7	-	-		



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Cherry Hill, New Jersey, United States 08034
609-706-6100 hfurey@imperialtdc.com

Project: Ocean County Brown Corridor B & I
East
Municipality: Brick, Ocean County, NJ
Setup: NR/AH/BC/CB
Location: 40.054541, -74.13957

Count Name: I23. Cedar Bridge Avenue & Brick
Boulevard AM
Site Code: I23
Start Date: 08/14/2024
Page No: 4



Turning Movement Peak Hour Data Plot (7:45 AM)



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Cherry Hill, New Jersey, United States 08034
609-706-6100 hfurey@imperialtdc.com

Project: Ocean County Brown Corridor B & I
East
Municipality: Brick, Ocean County, NJ
Setup: NR
Location: 40.054541, -74.13957

Count Name: I23. Cedar Bridge Avenue & Brick
Boulevard
Site Code: I23
Start Date: 07/25/2024
Page No: 1

Turning Movement Data

Start Time	Brick Boulevard Eastbound							Brick Boulevard Westbound							Cedar Bridge Avenue Northbound							Cedar Bridge Avenue Southbound							Int. Total
	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total			
4:15 PM	0	0	236	2	0	1	238	0	0	329	1	0	1	330	0	0	178	16	0	194	0	0	254	100	1	354	1116		
4:30 PM	0	0	259	1	0	4	260	0	0	328	3	0	1	331	0	0	185	19	1	204	0	1	244	81	2	326	1121		
4:45 PM	0	0	268	1	0	1	269	0	0	341	1	0	0	342	0	0	196	14	2	210	0	0	264	61	0	325	1146		
Hourly Total	0	0	763	4	0	6	767	0	0	998	5	0	2	1003	0	0	559	49	3	608	0	1	762	242	3	1005	3383		
5:00 PM	0	0	258	3	0	2	261	0	0	357	5	0	2	362	0	0	249	13	1	262	0	0	304	84	1	388	1273		
5:15 PM	0	0	250	0	0	5	250	0	0	343	3	0	2	346	0	0	194	17	2	211	0	0	267	85	0	352	1159		
5:30 PM	0	0	215	0	0	3	215	0	0	340	3	1	4	344	0	0	200	12	5	212	0	0	266	58	0	324	1095		
5:45 PM	0	0	218	0	0	1	218	0	0	336	1	0	4	337	0	0	191	14	3	205	0	0	253	62	2	315	1075		
Hourly Total	0	0	941	3	0	11	944	0	0	1376	12	1	12	1389	0	0	834	56	11	890	0	0	1090	289	3	1379	4602		
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
9:30 AM	0	0	242	0	0	2	242	0	0	222	0	1	1	223	0	0	190	19	5	209	0	0	217	55	1	272	946		
9:45 AM	0	0	239	3	0	3	242	0	0	233	2	0	1	235	0	0	214	18	3	232	0	0	262	46	2	308	1017		
Hourly Total	0	0	481	3	0	5	484	0	0	455	2	1	2	458	0	0	404	37	8	441	0	0	479	101	3	580	1963		
10:00 AM	0	0	247	4	1	3	252	0	0	240	3	0	0	243	0	0	193	18	1	211	0	0	289	53	0	342	1048		
10:15 AM	0	0	233	2	0	3	235	0	0	218	0	0	0	218	0	0	259	28	1	287	0	0	312	65	1	377	1117		
10:30 AM	0	0	242	2	0	0	244	0	0	268	4	0	1	272	0	0	225	19	0	244	0	0	237	50	1	287	1047		
10:45 AM	0	0	278	1	0	2	279	0	0	268	2	0	1	270	0	0	220	27	4	247	0	0	235	65	1	300	1096		
Hourly Total	0	0	1000	9	1	8	1010	0	0	994	9	0	2	1003	0	0	897	92	6	989	0	0	1073	233	3	1306	4308		
11:00 AM	0	1	219	2	1	0	223	0	0	311	0	0	2	311	0	0	205	21	5	226	0	0	201	73	0	274	1034		
11:15 AM	0	0	278	2	0	1	280	0	0	239	4	0	0	243	0	0	219	34	5	253	0	0	204	63	0	267	1043		
11:30 AM	0	0	288	0	0	6	288	0	0	283	1	0	0	284	0	0	187	13	7	200	0	0	176	62	0	238	1010		
11:45 AM	0	0	290	1	0	1	291	0	0	284	2	1	1	287	0	0	200	19	2	219	0	0	210	51	2	261	1058		
Hourly Total	0	1	1075	5	1	8	1082	0	0	1117	7	1	3	1125	0	0	811	87	19	898	0	0	791	249	2	1040	4145		
12:00 PM	0	0	236	1	0	0	237	0	0	278	3	0	1	281	0	0	202	20	2	222	0	0	253	55	2	308	1048		
12:15 PM	0	0	261	1	0	5	262	0	0	310	5	0	0	315	0	0	169	21	0	190	0	0	229	58	1	287	1054		
12:30 PM	0	0	247	0	0	5	247	0	0	279	1	0	0	280	0	0	186	12	2	198	0	0	238	60	0	298	1023		
12:45 PM	0	0	254	1	0	1	255	0	0	289	2	0	1	291	0	0	199	15	4	214	0	0	232	49	1	281	1041		
Hourly Total	0	0	998	3	0	11	1001	0	0	1156	11	0	2	1167	0	0	756	68	8	824	0	0	952	222	4	1174	4166		
1:00 PM	0	0	260	2	0	0	262	0	0	267	2	0	1	269	0	0	188	22	3	210	0	0	236	56	1	292	1033		
1:15 PM	0	0	244	0	0	2	244	0	0	282	3	0	1	285	0	0	203	11	1	214	0	0	202	45	1	247	990		
Grand Total	0	1	5762	29	2	51	5794	0	0	6645	51	3	25	6699	0	0	4652	422	59	5074	0	1	5585	1437	20	7023	24590		
Approach %	0.0	0.0	99.4	0.5	0.0	-	-	0.0	0.0	99.2	0.8	0.0	-	-	0.0	0.0	91.7	8.3	-	-	0.0	0.0	79.5	20.5	-	-	-		
Total %	0.0	0.0	23.4	0.1	0.0	-	23.6	0.0	0.0	27.0	0.2	0.0	-	27.2	0.0	0.0	18.9	1.7	-	20.6	0.0	0.0	22.7	5.8	-	28.6	-		
Motorcycles	0	0	9	1	0	-	10	0	0	22	0	0	-	22	0	0	19	0	-	19	0	0	10	8	-	18	69		
% Motorcycles	-	0.0	0.2	3.4	0.0	-	0.2	-	-	0.3	0.0	0.0	-	0.3	-	-	0.4	0.0	-	0.4	-	0.0	0.2	0.6	-	0.3	0.3		

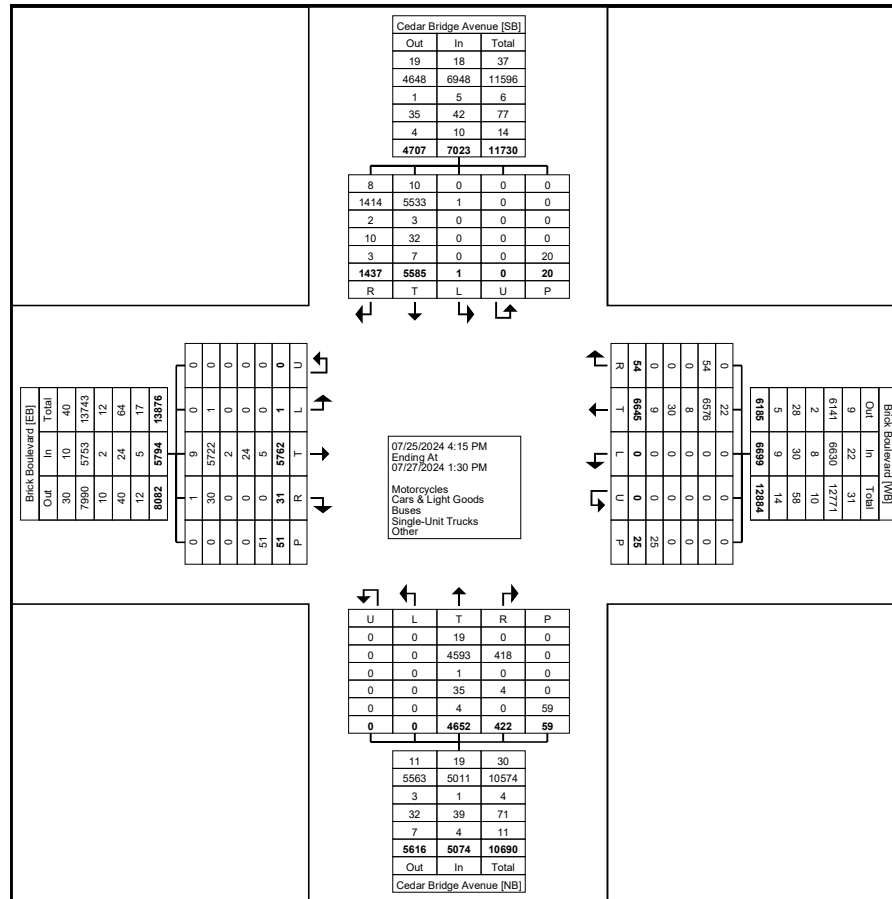
Cars & Light Goods	0	1	5722	28	2	-	5753	0	0	6576	51	3	-	6630	0	0	4593	418	-	5011	0	1	5533	1414	-	6948	24342
% Cars & Light Goods	-	100.0	99.3	96.6	100.0	-	99.3	-	-	99.0	100.0	100.0	-	99.0	-	-	98.7	99.1	-	98.8	-	100.0	99.1	98.4	-	98.9	99.0
Buses	0	0	2	0	0	-	2	0	0	8	0	0	-	8	0	0	1	0	-	1	0	0	3	2	-	5	16
% Buses	-	0.0	0.0	0.0	0.0	-	0.0	-	-	0.1	0.0	0.0	-	0.1	-	-	0.0	0.0	-	0.0	-	0.0	0.1	0.1	-	0.1	0.1
Single-Unit Trucks	0	0	24	0	0	-	24	0	0	30	0	0	-	30	0	0	35	4	-	39	0	0	32	10	-	42	135
% Single-Unit Trucks	-	0.0	0.4	0.0	0.0	-	0.4	-	-	0.5	0.0	0.0	-	0.4	-	-	0.8	0.9	-	0.8	-	0.0	0.6	0.7	-	0.6	0.5
Articulated Trucks	0	0	3	0	0	-	3	0	0	8	0	0	-	8	0	0	3	0	-	3	0	0	7	3	-	10	24
% Articulated Trucks	-	0.0	0.1	0.0	0.0	-	0.1	-	-	0.1	0.0	0.0	-	0.1	-	-	0.1	0.0	-	0.1	-	0.0	0.1	0.2	-	0.1	0.1
Bicycles on Road	0	0	2	0	0	-	2	0	0	1	0	0	-	1	0	0	1	0	-	1	0	0	0	0	-	0	4
% Bicycles on Road	-	0.0	0.0	0.0	0.0	-	0.0	-	-	0.0	0.0	0.0	-	0.0	-	-	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	-	27	-	-	-	-	-	16	-	-	-	-	-	-	30	-	-	-	-	-	7	-	-
% Bicycles on Crosswalk	-	-	-	-	-	52.9	-	-	-	-	-	64.0	-	-	-	-	-	-	50.8	-	-	-	-	-	35.0	-	-
Pedestrians	-	-	-	-	-	24	-	-	-	-	-	9	-	-	-	-	-	-	29	-	-	-	-	-	13	-	-
% Pedestrians	-	-	-	-	-	47.1	-	-	-	-	-	36.0	-	-	-	-	-	-	49.2	-	-	-	-	-	65.0	-	-



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Cherry Hill, New Jersey, United States 08034
609-706-6100 hfurey@imperialtdc.com

Project: Ocean County Brown Corridor B & I
East
Municipality: Brick, Ocean County, NJ
Setup: NR
Location: 40.054541, -74.13957

Count Name: I23. Cedar Bridge Avenue & Brick
Boulevard
Site Code: I23
Start Date: 07/25/2024
Page No: 3



Turning Movement Data Plot



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 609-706-6100 hfurey@imperialtdc.com

Project: Ocean County Brown Corridor B & I
 East
 Municipality: Brick, Ocean County, NJ
 Setup: NR
 Location: 40.054541, -74.13957

Count Name: I23. Cedar Bridge Avenue & Brick
 Boulevard
 Site Code: I23
 Start Date: 07/25/2024
 Page No: 4

Turning Movement Peak Hour Data (4:45 PM)

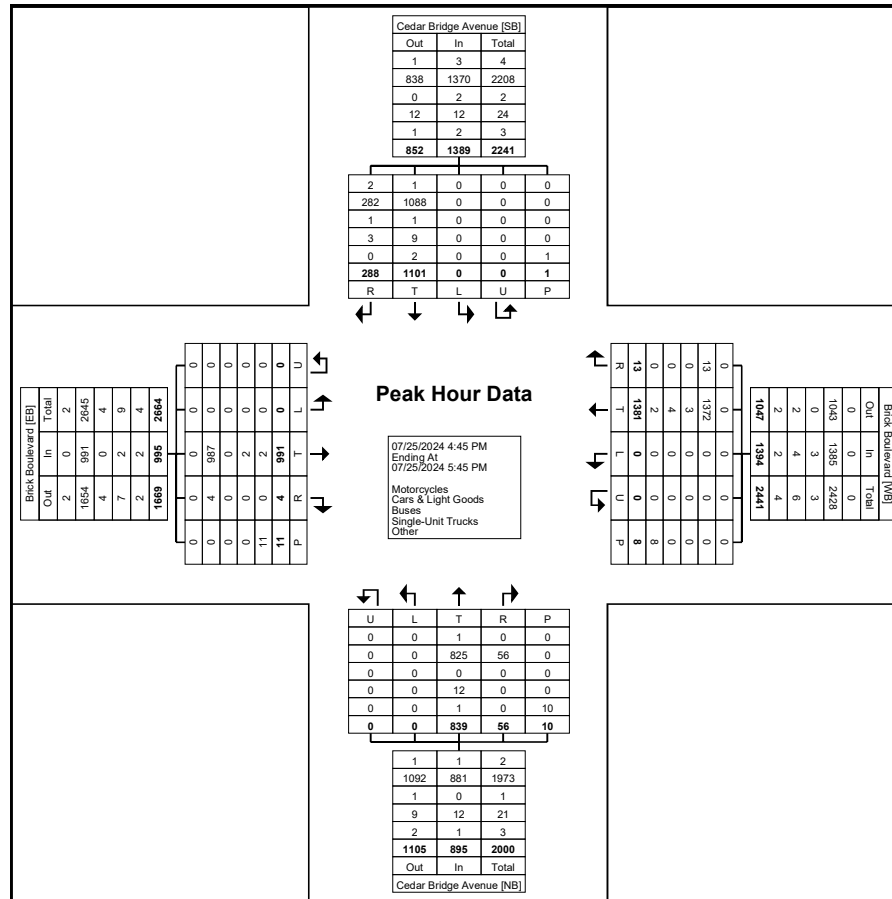
Start Time	Brick Boulevard Eastbound							Brick Boulevard Westbound							Cedar Bridge Avenue Northbound							Cedar Bridge Avenue Southbound							Int. Total
	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total			
4:45 PM	0	0	268	1	0	1	269	0	0	341	1	0	0	342	0	0	196	14	2	210	0	0	264	61	0	325	1146		
5:00 PM	0	0	258	3	0	2	261	0	0	357	5	0	2	362	0	0	249	13	1	262	0	0	304	84	1	388	1273		
5:15 PM	0	0	250	0	0	5	250	0	0	343	3	0	2	346	0	0	194	17	2	211	0	0	267	85	0	352	1159		
5:30 PM	0	0	215	0	0	3	215	0	0	340	3	1	4	344	0	0	200	12	5	212	0	0	266	58	0	324	1095		
Total	0	0	991	4	0	11	995	0	0	1381	12	1	8	1394	0	0	839	56	10	895	0	0	1101	288	1	1389	4673		
Approach %	0.0	0.0	99.6	0.4	0.0	-	-	0.0	0.0	99.1	0.9	0.1	-	-	0.0	0.0	93.7	6.3	-	-	0.0	0.0	79.3	20.7	-	-	-		
Total %	0.0	0.0	21.2	0.1	0.0	-	21.3	0.0	0.0	29.6	0.3	0.0	-	29.8	0.0	0.0	18.0	1.2	-	19.2	0.0	0.0	23.6	6.2	-	29.7	-		
PHF	0.000	0.000	0.924	0.333	0.000	-	0.925	0.000	0.000	0.967	0.600	0.250	-	0.963	0.000	0.000	0.842	0.824	-	0.854	0.000	0.000	0.905	0.847	-	0.895	0.918		
Motorcycles	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	1	0	-	1	0	0	1	2	-	3	4		
% Motorcycles	-	-	0.0	0.0	-	-	0.0	-	-	0.0	0.0	0.0	-	0.0	-	-	0.1	0.0	-	0.1	-	-	0.1	0.7	-	0.2	0.1		
Cars & Light Goods	0	0	987	4	0	-	991	0	0	1372	12	1	-	1385	0	0	825	56	-	881	0	0	1088	282	-	1370	4627		
% Cars & Light Goods	-	-	99.6	100.0	-	-	99.6	-	-	99.3	100.0	100.0	-	99.4	-	-	98.3	100.0	-	98.4	-	-	98.8	97.9	-	98.6	99.0		
Buses	0	0	0	0	0	-	0	0	0	3	0	0	-	3	0	0	0	0	-	0	0	0	1	1	-	2	5		
% Buses	-	-	0.0	0.0	-	-	0.0	-	-	0.2	0.0	0.0	-	0.2	-	-	0.0	0.0	-	0.0	-	-	0.1	0.3	-	0.1	0.1		
Single-Unit Trucks	0	0	2	0	0	-	2	0	0	4	0	0	-	4	0	0	12	0	-	12	0	0	9	3	-	12	30		
% Single-Unit Trucks	-	-	0.2	0.0	-	-	0.2	-	-	0.3	0.0	0.0	-	0.3	-	-	1.4	0.0	-	1.3	-	-	0.8	1.0	-	0.9	0.6		
Articulated Trucks	0	0	1	0	0	-	1	0	0	1	0	0	-	1	0	0	1	0	-	1	0	0	2	0	-	2	5		
% Articulated Trucks	-	-	0.1	0.0	-	-	0.1	-	-	0.1	0.0	0.0	-	0.1	-	-	0.1	0.0	-	0.1	-	-	0.2	0.0	-	0.1	0.1		
Bicycles on Road	0	0	1	0	0	-	1	0	0	1	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	2		
% Bicycles on Road	-	-	0.1	0.0	-	-	0.1	-	-	0.1	0.0	0.0	-	0.1	-	-	0.0	0.0	-	0.0	-	-	0.0	0.0	-	0.0	0.0		
Bicycles on Crosswalk	-	-	-	-	-	7	-	-	-	-	-	-	5	-	-	-	-	-	6	-	-	-	-	-	0	-	-		
% Bicycles on Crosswalk	-	-	-	-	-	63.6	-	-	-	-	-	-	62.5	-	-	-	-	-	60.0	-	-	-	-	-	0.0	-	-		
Pedestrians	-	-	-	-	-	4	-	-	-	-	-	-	3	-	-	-	-	-	4	-	-	-	-	-	1	-	-		
% Pedestrians	-	-	-	-	-	36.4	-	-	-	-	-	-	37.5	-	-	-	-	-	40.0	-	-	-	-	-	100.0	-	-		

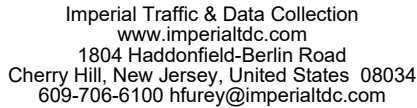


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Cherry Hill, New Jersey, United States 08034
609-706-6100 hfurey@imperialtdc.com

Project: Ocean County Brown Corridor B & I
East
Municipality: Brick, Ocean County, NJ
Setup: NR
Location: 40.054541, -74.13957

Count Name: I23. Cedar Bridge Avenue & Brick
Boulevard
Site Code: I23
Start Date: 07/25/2024
Page No: 5





Count Name: B07. Chambers Bridge Road &
Brick Plaza Entrance AM
Site Code: B07
Start Date: 08/14/2024
Page No: 1

Start Time	Brick Plaza Entrance Eastbound							West Marine Entrance Westbound							Chambers Bridge Road Northbound							Chambers Bridge Road Southbound							Int. Total
	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	
8:00 AM	0	4	1	0	1	0	6	0	0	0	0	0	3	0	0	10	122	2	0	1	134	0	15	79	5	0	0	99	239
8:15 AM	0	5	0	3	4	1	12	0	1	0	0	1	0	2	0	9	138	3	0	0	150	0	9	96	8	0	1	113	277
8:30 AM	0	8	1	2	1	1	12	0	2	0	0	0	0	2	0	14	110	5	0	0	129	0	7	116	16	0	0	139	282
8:45 AM	0	9	0	4	5	1	18	0	0	3	0	0	0	3	0	17	143	4	0	0	164	0	7	167	8	0	1	182	367
Hourly Total	0	26	2	9	11	3	48	0	3	3	0	1	3	7	0	50	513	14	0	1	577	0	38	458	37	0	2	533	1165
9:00 AM	0	12	1	2	7	1	22	0	1	0	1	0	3	2	0	26	118	4	0	1	148	0	16	141	15	0	0	172	344
9:15 AM	0	10	2	2	6	0	20	0	2	1	0	0	3	3	0	24	136	7	0	0	167	0	7	136	11	0	3	154	344
9:30 AM	0	13	0	7	2	1	22	0	1	1	1	2	1	5	0	19	100	4	0	0	123	0	6	150	14	0	0	170	320
9:45 AM	0	14	2	4	6	1	26	0	2	3	0	1	1	6	0	31	124	8	0	0	163	0	5	152	18	2	0	177	372
Hourly Total	0	49	5	15	21	3	90	0	6	5	2	3	8	16	0	100	478	23	0	1	601	0	34	579	58	2	3	673	1380
10:00 AM	0	15	2	5	19	1	41	0	1	1	0	0	1	2	0	22	102	7	0	1	131	0	12	127	19	1	0	159	333
Grand Total	0	90	9	29	51	7	179	0	10	9	2	4	12	25	0	172	1093	44	0	3	1309	0	84	1164	114	3	5	1365	2878
Approach %	0.0	50.3	5.0	16.2	28.5	-	-	0.0	40.0	36.0	8.0	16.0	-	-	0.0	13.1	83.5	3.4	0.0	-	-	0.0	6.2	85.3	8.4	0.2	-	-	-
Total %	0.0	3.1	0.3	1.0	1.8	-	6.2	0.0	0.3	0.3	0.1	0.1	-	0.9	0.0	6.0	38.0	1.5	0.0	-	45.5	0.0	2.9	40.4	4.0	0.1	-	47.4	-
Motorcycles	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	2	1	0	-	3	0	0	2	0	0	-	2	5
% Motorcycles	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.2	2.3	-	-	0.2	-	0.0	0.2	0.0	0.0	-	0.1	0.2
Cars & Light Goods	0	90	8	28	51	-	177	0	10	8	2	4	-	24	0	171	1065	43	0	-	1279	0	82	1122	114	3	-	1321	2801
% Cars & Light Goods	-	100.0	88.9	96.6	100.0	-	98.9	-	100.0	88.9	100.0	100.0	-	96.0	-	99.4	97.4	97.7	-	-	97.7	-	97.6	96.4	100.0	100.0	-	96.8	97.3
Buses	0	0	0	0	0	-	0	0																					

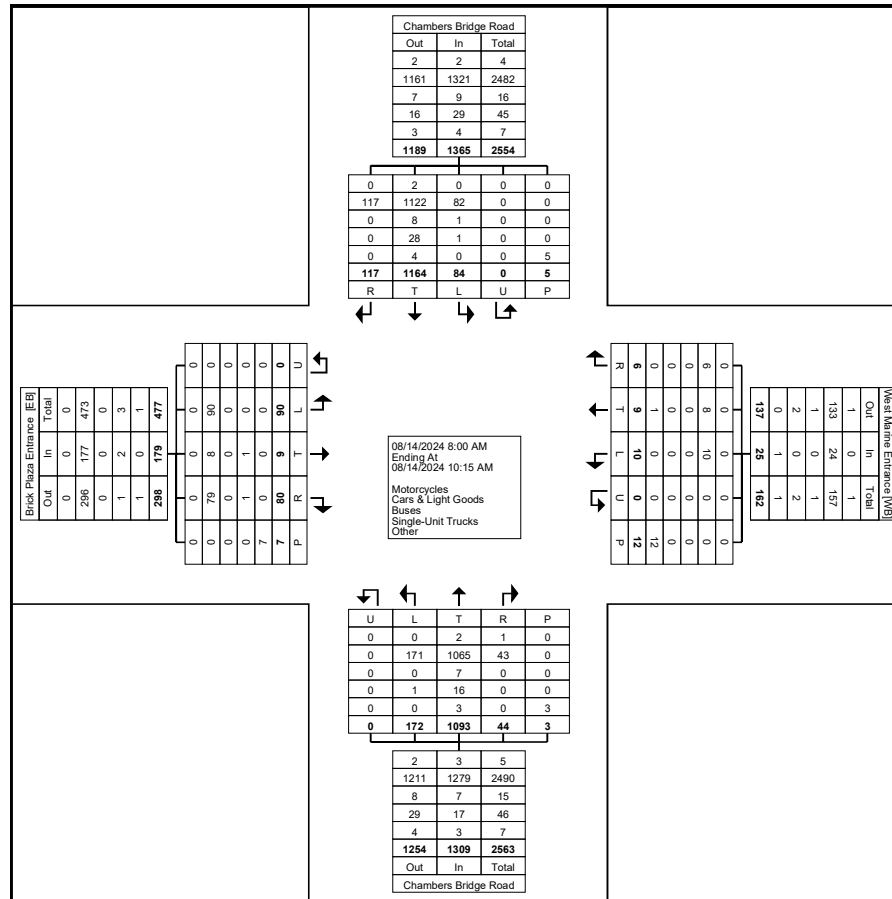
% Pedestrians	-	-	-	-	-	71.4	-	-	-	-	-	-	66.7	-	-	-	-	-	100.0	-	-	-	-	-	80.0	-	-
---------------	---	---	---	---	---	------	---	---	---	---	---	---	------	---	---	---	---	---	-------	---	---	---	---	---	------	---	---



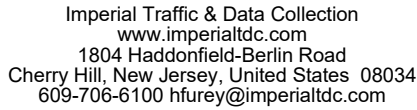
Imperial Traffic & Data Collection
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609-706-6100 hfurey@imperialtdc.com

Project: Ocean County Brown Corridor B & I
East
Municipality: Brick, Ocean County, NJ
Setup: NR/AH/BC/CB
Location: 40.059186, -74.139215

Count Name: B07. Chambers Bridge Road &
Brick Plaza Entrance AM
Site Code: B07
Start Date: 08/14/2024
Page No: 3



Turning Movement Data Plot



Count Name: B07. Chambers Bridge Road &
Brick Plaza Entrance AM
Site Code: B07
Start Date: 08/14/2024
Page No: 4

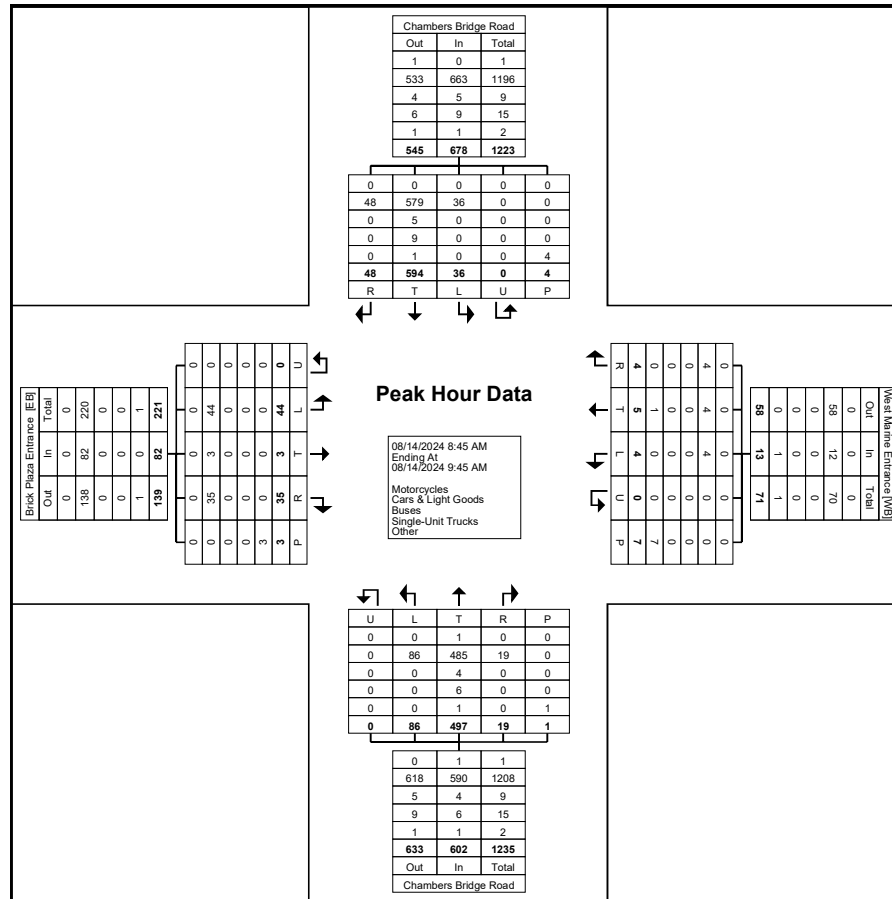
Start Time	Brick Plaza Entrance Eastbound							West Marine Entrance Westbound							Chambers Bridge Road Northbound							Chambers Bridge Road Southbound							Int. Total
	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	
8:45 AM	0	9	0	4	5	1	18	0	0	3	0	0	0	3	0	17	143	4	0	0	164	0	7	167	8	0	1	182	367
9:00 AM	0	12	1	2	7	1	22	0	1	0	1	0	3	2	0	26	118	4	0	1	148	0	16	141	15	0	0	172	344
9:15 AM	0	10	2	2	6	0	20	0	2	1	0	0	3	3	0	24	136	7	0	0	167	0	7	136	11	0	3	154	344
9:30 AM	0	13	0	7	2	1	22	0	1	1	1	2	1	5	0	19	100	4	0	0	123	0	6	150	14	0	0	170	320
Total	0	44	3	15	20	3	82	0	4	5	2	2	7	13	0	86	497	19	0	1	602	0	36	594	48	0	4	678	1375
Approach %	0.0	53.7	3.7	18.3	24.4	-	-	0.0	30.8	38.5	15.4	15.4	-	-	0.0	14.3	82.6	3.2	0.0	-	-	0.0	5.3	87.6	7.1	0.0	-	-	-
Total %	0.0	3.2	0.2	1.1	1.5	-	6.0	0.0	0.3	0.4	0.1	0.1	-	0.9	0.0	6.3	36.1	1.4	0.0	-	43.8	0.0	2.6	43.2	3.5	0.0	-	49.3	-
PHF	0.000	0.846	0.375	0.536	0.714	-	0.932	0.000	0.500	0.417	0.500	0.250	-	0.650	0.000	0.827	0.869	0.679	0.000	-	0.901	0.000	0.563	0.889	0.800	0.000	-	0.931	0.937
Motorcycles	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	1	0	0	-	1	0	0	0	0	0	-	0	1
% Motorcycles	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.2	0.0	-	-	0.2	-	0.0	0.0	0.0	-	-	0.0	0.1
Cars & Light Goods	0	44	3	15	20	-	82	0	4	4	2	2	-	12	0	86	485	19	0	-	590	0	36	579	48	0	-	663	1347
% Cars & Light Goods	-	100.0	100.0	100.0	100.0	-	100.0	-	100.0	80.0	100.0	100.0	-	92.3	-	100.0	97.6	100.0	-	-	98.0	-	100.0	97.5	100.0	-	-	97.8	98.0
Buses	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	4	0	0	-	4	0	0	5	0	0	-	5	9
% Buses	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.8	0.0	-	-	0.7	-	0.0	0.8	0.0	-	-	0.7	0.7
Single-Unit Trucks	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	6	0	0	-	6	0	0	9	0	0	-	9	15
% Single-Unit Trucks	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	1.2	0.0	-	-	1.0	-	0.0	1.5	0.0	-	-	1.3	1.1
Articulated Trucks	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	1	0	0	-	1	0	0	1	0	0	-	1	2
% Articulated Trucks	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	0.0	-	0.0	-														



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Project: Ocean County Brown Corridor B & I
 East
 Municipality: Brick, Ocean County, NJ
 Setup: NR/AH/BC/CB
 Location: 40.059186, -74.139215

Count Name: B07. Chambers Bridge Road &
 Brick Plaza Entrance AM
 Site Code: B07
 Start Date: 08/14/2024
 Page No: 5



Turning Movement Peak Hour Data Plot (8:45 AM)



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609-706-6100 hfurey@imperialtdc.com

Project: Ocean County Brown Corridor B & I
East
Municipality: Brick, Ocean County, NJ
Setup: NR
Location: 40.059186, -74.139215

Count Name: B07. Chambers Bridge Road &
Brick Plaza Entrance
Site Code: B07
Start Date: 07/25/2024
Page No: 1

Turning Movement Data

Start Time	Brick Plaza Entrance Eastbound							West Marine Entrance Westbound							Chambers Bridge Road Northbound							Chambers Bridge Road Southbound							Int. Total
	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	
3:15 PM	0	34	2	13	20	0	69	0	13	5	7	0	1	25	0	28	152	17	1	1	198	0	17	177	33	0	1	227	519
3:30 PM	0	36	1	11	31	0	79	0	5	2	1	5	0	13	0	32	152	9	0	0	193	1	17	222	19	4	0	263	548
3:45 PM	0	33	3	18	22	0	76	0	11	5	2	3	0	21	0	44	158	10	0	0	212	0	16	203	26	0	0	245	554
Hourly Total	0	103	6	42	73	0	224	0	29	12	10	8	1	59	0	104	462	36	1	1	603	1	50	602	78	4	1	735	1621
4:00 PM	0	33	9	9	33	0	84	0	6	3	3	2	1	14	0	26	97	8	0	1	131	0	6	158	25	2	0	191	420
4:15 PM	0	24	3	27	24	3	78	0	2	4	1	0	2	7	0	23	119	5	0	0	147	0	17	248	34	1	1	300	532
4:30 PM	0	43	1	18	18	3	80	0	5	7	1	0	0	13	0	38	102	10	1	1	151	0	19	220	37	0	0	276	520
4:45 PM	0	31	3	32	12	0	78	0	10	1	1	0	2	12	0	46	118	9	0	0	173	0	11	261	30	2	0	304	567
Hourly Total	0	131	16	86	87	6	320	0	23	15	6	2	5	46	0	133	436	32	1	2	602	0	53	887	126	5	1	1071	2039
5:00 PM	0	29	4	21	18	0	72	0	6	2	2	6	1	16	0	34	123	5	0	1	162	0	12	228	28	5	0	273	523
5:15 PM	0	36	3	15	35	3	89	0	9	3	3	2	2	17	0	36	134	8	1	0	179	0	14	237	33	1	2	285	570
5:30 PM	0	35	0	12	23	0	70	0	6	3	2	0	0	11	0	27	122	5	0	0	154	0	13	266	26	1	0	306	541
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	100	7	48	76	3	231	0	21	8	7	8	3	44	0	97	379	18	1	1	495	0	39	731	87	7	2	864	1634
10:15 AM	0	25	1	4	18	0	48	0	9	1	4	2	4	16	0	31	113	18	1	2	163	0	20	149	28	5	1	202	429
10:30 AM	0	24	3	10	21	1	58	0	12	6	0	2	1	20	0	35	122	11	0	2	168	0	20	162	22	4	0	208	454
10:45 AM	0	28	6	7	28	0	69	0	6	6	1	2	0	15	0	39	137	14	0	0	190	0	19	151	34	1	0	205	479
Hourly Total	0	77	10	21	67	1	175	0	27	13	5	6	5	51	0	105	372	43	1	4	521	0	59	462	84	10	1	615	1362
11:00 AM	0	36	4	14	20	3	74	0	6	1	5	1	1	13	0	38	99	9	0	0	146	0	11	199	27	3	0	240	473
11:15 AM	0	29	3	12	30	2	74	0	5	1	0	3	0	9	0	38	103	16	1	0	158	0	13	167	36	0	0	216	457
11:30 AM	0	39	5	17	20	0	81	0	8	4	5	1	0	18	0	49	116	15	0	0	180	0	16	151	28	1	0	196	475
11:45 AM	0	35	3	17	16	0	71	0	10	3	2	1	0	16	0	51	119	16	0	0	186	0	20	162	36	1	0	219	492
Hourly Total	0	139	15	60	86	5	300	0	29	9	12	6	1	56	0	176	437	56	1	0	670	0	60	679	127	5	0	871	1897
12:00 PM	0	33	0	20	31	2	84	0	15	4	2	0	2	21	0	34	110	13	2	0	159	0	13	140	25	3	0	181	445
12:15 PM	0	39	2	13	28	2	82	0	13	7	4	2	1	26	0	35	114	7	4	0	160	0	13	176	35	4	0	228	496
12:30 PM	0	31	5	18	19	2	73	1	8	3	3	1	2	16	0	39	92	15	0	0	146	0	13	189	30	5	1	237	472
12:45 PM	0	33	2	11	19	0	65	0	12	3	0	2	3	17	0	31	128	20	1	1	180	0	18	182	36	1	1	237	499
Hourly Total	0	136	9	62	97	6	304	1	48	17	9	5	8	80	0	139	444	55	7	1	645	0	57	687	126	13	2	883	1912
1:00 PM	0	46	9	22	25	0	102	0	10	2	6	0	1	18	0	37	86	17	2	2	142	0	17	171	30	2	0	220	482
1:15 PM	0	28	5	17	30	0	80	0	14	6	3	2	3	25	0	39	105	9	0	1	153	0	6	182	23	3	0	214	472
Grand Total	0	760	77	358	541	21	1736	1	201	82	58	37	27	379	0	830	2721	266	14	12	3831	1	341	4401	681	49	7	5473	11419
Approach %	0.0	43.8	4.4	20.6	31.2	-	-	0.3	53.0	21.6	15.3	9.8	-	-	0.0	21.7	71.0	6.9	0.4	-	-	0.0	6.2	80.4	12.4	0.9	-	-	-
Total %	0.0	6.7	0.7	3.1	4.7	-	15.2	0.0	1.8	0.7	0.5	0.3	-	3.3	0.0	7.3	23.8	2.3	0.1	-	33.5	0.0	3.0	38.5	6.0	0.4	-	47.9	-
Motorcycles	0	0	0	0	0	-	0	0	2	0	0	0	-	2	0	0	10	3	0	-	13	0	0	5	0	0	-	5	20
% Motorcycles	-	0.0	0.0	0.0	0.0	-	0.0	0.0	1.0	0.0	0.0	0.0	-	0.5	-	0.0	0.4	1.1	0.0	-	0.3	0.0	0.0	0.1	0.0	0.0	-	0.1	0.2

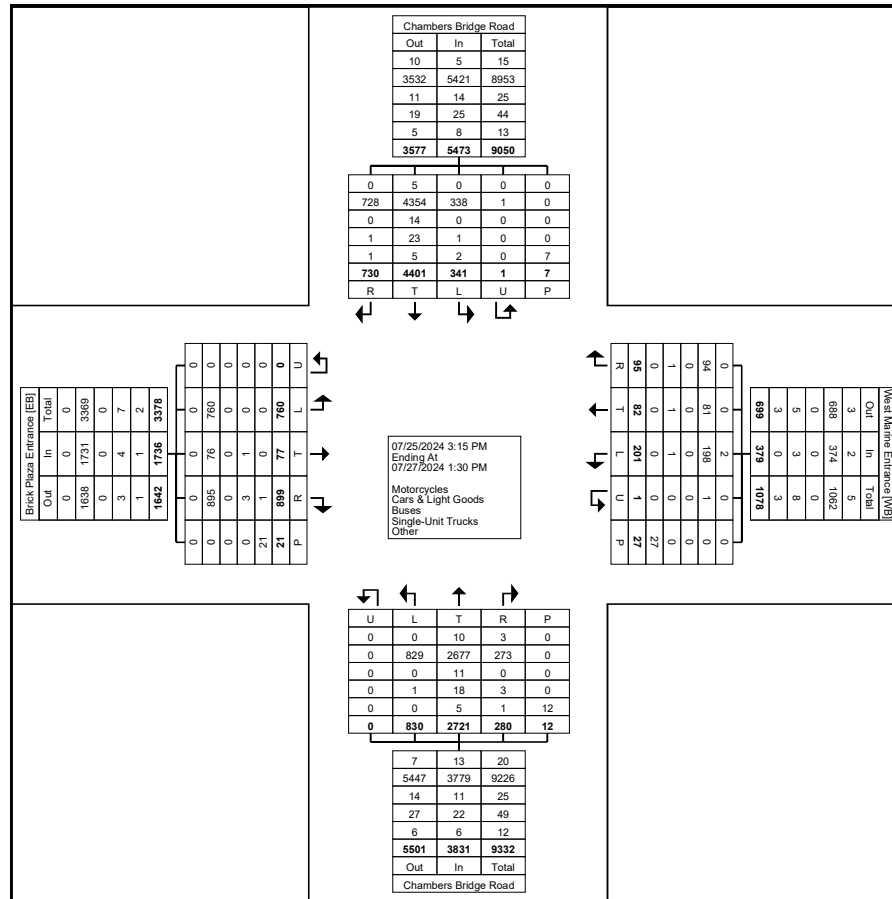
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609-706-6100 hfurey@imperialtdc.com

Project: Ocean County Brown Corridor B & I
East
Municipality: Brick, Ocean County, NJ
Setup: NR
Location: 40.059186, -74.139215

Count Name: B07. Chambers Bridge Road &
Brick Plaza Entrance
Site Code: B07
Start Date: 07/25/2024
Page No: 3



Turning Movement Data Plot



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Count Name: B07. Chambers Bridge Road &
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Page No: 4

Turning Movement Peak Hour Data (4:45 PM)

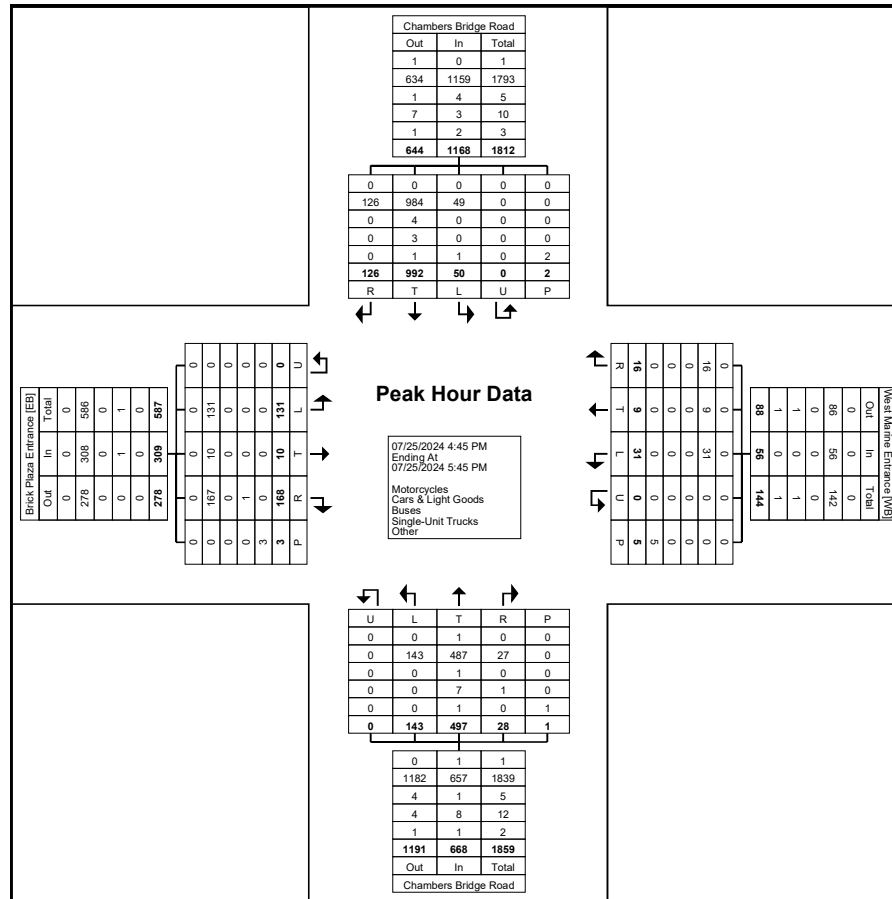
Start Time	Brick Plaza Entrance Eastbound							West Marine Entrance Westbound							Chambers Bridge Road Northbound							Chambers Bridge Road Southbound							Int. Total
	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	
4:45 PM	0	31	3	32	12	0	78	0	10	1	1	0	2	12	0	46	118	9	0	0	173	0	11	261	30	2	0	304	567
5:00 PM	0	29	4	21	18	0	72	0	6	2	2	6	1	16	0	34	123	5	0	1	162	0	12	228	28	5	0	273	523
5:15 PM	0	36	3	15	35	3	89	0	9	3	3	2	2	17	0	36	134	8	1	0	179	0	14	237	33	1	2	285	570
5:30 PM	0	35	0	12	23	0	70	0	6	3	2	0	0	11	0	27	122	5	0	0	154	0	13	266	26	1	0	306	541
Total	0	131	10	80	88	3	309	0	31	9	8	8	5	56	0	143	497	27	1	1	668	0	50	992	117	9	2	1168	2201
Approach %	0.0	42.4	3.2	25.9	28.5	-	-	0.0	55.4	16.1	14.3	14.3	-	-	0.0	21.4	74.4	4.0	0.1	-	-	0.0	4.3	84.9	10.0	0.8	-	-	-
Total %	0.0	6.0	0.5	3.6	4.0	-	14.0	0.0	1.4	0.4	0.4	0.4	-	2.5	0.0	6.5	22.6	1.2	0.0	-	30.3	0.0	2.3	45.1	5.3	0.4	-	53.1	-
PHF	0.000	0.910	0.625	0.625	0.629	-	0.868	0.000	0.775	0.750	0.667	0.333	-	0.824	0.000	0.777	0.927	0.750	0.250	-	0.933	0.000	0.893	0.932	0.886	0.450	-	0.954	0.965
Motorcycles	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	1	0	0	-	1	0	0	0	0	0	-	0	1
% Motorcycles	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.2	0.0	0.0	-	0.1	-	0.0	0.0	0.0	0.0	-	0.0	0.0
Cars & Light Goods	0	131	10	79	88	-	308	0	31	9	8	8	-	56	0	143	487	26	1	-	657	0	49	984	117	9	-	1159	2180
% Cars & Light Goods	-	100.0	100.0	98.8	100.0	-	99.7	-	100.0	100.0	100.0	100.0	-	100.0	-	100.0	98.0	96.3	100.0	-	98.4	-	98.0	99.2	100.0	100.0	-	99.2	99.0
Buses	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	1	0	0	-	1	0	0	4	0	0	-	4	5
% Buses	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.2	0.0	0.0	-	0.1	-	0.0	0.4	0.0	0.0	-	0.3	0.2
Single-Unit Trucks	0	0	0	1	0	-	1	0	0	0	0	0	-	0	0	0	7	1	0	-	8	0	0	3	0	0	-	3	12
% Single-Unit Trucks	-	0.0	0.0	1.3	0.0	-	0.3	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	1.4	3.7	0.0	-	1.2	-	0.0	0.3	0.0	0.0	-	0.3	0.5
Articulated Trucks	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	1	0	0	-	1	0	1	1	0	0	-	2	3
% Articulated Trucks	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.2	0.0	0.0	-	0.1	-	2.0	0.1	0.0	0.0	-	0.2	0.1
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	-	1	-	-	-	-	-	-	2	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	33.3	-	-	-	-	-	-	40.0	-	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	-	2	-	-	-	-	-	-	3	-	-	-	-	-	-	1	-	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	-	66.7	-	-	-	-	-	-	60.0	-	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-



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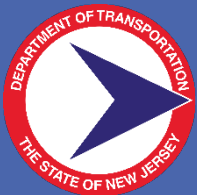
Turning Movement Peak Hour Data Plot (4:45 PM)

APPENDIX J-3 – ROAD SAFETY AUDIT



Road Safety Audit:

CHAMBERS BRIDGE ROAD AND BRICK BOULEVARD (CR 549),
ROUTE 70 TO N LAKE SHORE DRIVE
(MP 8.00-8.97)



April 2025

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- B. Area Map
- C. Pedestrian Crash Diagrams
- D. Vehicular Crash Diagrams
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- F. Photographs
- G. Pre-Audit Presentation
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Executive Summary

This document is the final report of the Road Safety Audit (RSA) conducted along Brick Boulevard (CR 549) from Route 70 to North Lake Shore Drive, in Brick Township, Ocean County. An RSA is an effective way of identifying crash-causing trends and appropriate countermeasures utilizing a nontraditional approach that promotes transportation safety while maintaining mobility.

The aforementioned roadway section was identified on NJDOT's Network screening list. According to the NJDOT crash database, there were 310 vehicular crashes from 2020 to 2022 along the study area section of Brick Boulevard. There were 5 pedestrian and 10 pedalcyclist crashes from 2018 to 2022, none of them were fatal.

This RSA was conducted on Wednesday, October 16, 2024. The pre-audit meeting was conducted at the Brenton Woods Fire Co. 1 followed by the audit walk on the project site. Representatives from Ocean County, Brick Township, Brick Township Police Department, NJDOT, NJTPA, and DHTS were in attendance during the RSA.

The RSA site and crash history are described in Sections II and III of this report, respectively. Section II also identifies previous and on-going studies conducted by the agency representative. Corridor-wide and site-specific issues and recommendations, organized by location, are discussed in Section V. These recommendations addressed pedestrian safety by ensuring ADA compliance, repairing sidewalks, and providing compliant pedestrian signal equipment at traffic signals. Additionally, many suggestions were made to provide access management, provide a shared use path, improve, and simplify signage, improve the channelized right turn lanes at the intersections, and improve lighting.

The recommendations contained herein were developed collaboratively with the roadway owner and local stakeholders from the RSA Team (Members listed in Appendix A).

Please note this RSA report does not constitute an engineering report. The agency responsible for design and construction should consult a licensed professional engineer in preparing the design and construction documents, to implement any of the safety countermeasures mentioned in this report.

I. Introduction

A. Site Selection

This section of Brick Boulevard was identified on NJDOT's Network Screening lists, as shown below. The current Network Screening list rankings are based on 2018-2020 vehicular and 2016-2020 pedestrian crash data, unless noted otherwise.

Table 1 – County Ranking, Top 50 (Corridor)

Location	Ped Corridor	Corridor
Brick Boulevard	#40 (MP 8.22-9.22)	#3 (MP 8.32-9.32)

Table 2 – County Ranking, Top 50 (Intersection)

Location	Intersections	Pedestrian Intersections
Hooper Avenue (MP 8.69)	#10	-
Cedar Bridge Avenue (MP 8.43)	#11	-
Jackson Avenue (MP 8.36)	-	#39

B. What is a Road Safety Audit (RSA)?

An RSA is a formal safety performance examination of an existing or future road or intersection by a multi-disciplinary audit team. It qualitatively estimates and reports on existing and potential road safety issues, as well as identifies opportunities for improvements in safety for all road users. RSAs can be used on any size project, from minor maintenance to mega-projects, and can be conducted on facilities with a history of crashes, or during the design phase of a new roadway or planned upgrade. RSAs consider all road users, account for human factors and road user capabilities, are documented in a formal report, and require a formal response from the road owner. RSAs focus on evaluating the safety of both pedestrians and bicyclists, which may include looking beyond the roadway to include other paths, connections, and generators.

RSAs are conducted to generate improvement recommendations and countermeasures for roadway segments demonstrating a history of, or potential for, a high frequency of crashes, or an identifiable pattern of crash types. Recommendations range from low-cost, quick-turnaround safety improvements to more complex strategies. Implementation of improvement strategies identified through this process may be eligible for Local Federal Aid Safety Funds. Because the RSA process is adaptable to local needs and conditions, recommendations can be implemented incrementally as time and resources permit. The RSA process, one of FHWA's proven safety countermeasures, is shown below.



C. The RSA Event

This RSA was conducted on Wednesday, October 16, 2024. The pre-audit meeting was conducted at the Brenton Woods Fire Co. 1 followed by the audit walk on the project site. Representatives from Ocean County, Brick Township, Brick Township Police Department, NJDOT, NJTPA, and DHTS were in attendance during the RSA. A list of team members can be found in Appendix A. Other organizations that the RSA Team identified that may have an interest in the project area include the local businesses.

II. Corridor Description and Analysis

A. Study Location and Other Studies

The study area consists of approximately one (1) mile of Brick Boulevard (MP 8.00-8.97). The adjacent land use along the corridor is predominantly commercial properties. Of note, Oak Tree Road between Route 70 and North Lake Shore Drive is under the jurisdiction of Brick Township. The following sections provide additional information.

B. Roadway and Intersection Characteristics

County Route 549 is an urban principal arterial road. It consists of Chambers Bridge Road (between Route 70 and Brick Boulevard) and Brick Boulevard (between Hooper Avenue and N Lake Shore Drive). For the purpose of uniformity, the entire roadway is termed as Brick Boulevard.

The section of Chambers Bridge Road between Route 70 up to Brick Boulevard is an undivided five-lane section, with two travel lanes in each direction and a center two way turn lane. The section on Brick Boulevard between Chambers Bridge Road and up to N Lake Shore Drive is divided six-lane section, with three travel lanes in each direction. Throughout the project limits, the shoulders are notably narrow. The posted speed limit is 35 mph north of Cedar Bridge Avenue and 40 mph to the south. There are four signalized intersections and one unsignalized intersection along the corridor.

C. Existing Bicycle/Pedestrian Accommodations

Sidewalk is provided along the majority of Brick Boulevard. Some locations do not have a minimum of three (3) feet due to the overgrown grass around it. The intersections have long crosswalks due to the wide intersection. Marked crosswalks consist of double lines or ladder styles depending on location. Sidewalk and crosswalk conditions vary from newly installed to needing maintenance. There are no bicycle lanes or other bicycling infrastructure identified along the corridor. The Audit Team observed pedestrian and bicyclist movement along the Brick Boulevard.

D. Traffic Volumes

The 2020 Annual Daily Traffic (ADT) along Brick Boulevard is approximately 28,136 vehicles per day. A copy of the available data can be found in Appendix E.

E. Transit Service

NJ Transit bus service is provided along Chambers Bridge Road and Brick Boulevard via routes 67, 137, and 317. Stops are located at or near Brick Plaza, Cedar Bridge Avenue, and Boulevard Square Mall.

F. Community Profile

The American Community Survey (ACS) estimate, which updates the 2020 Census population and income characteristics, was used to identify minority and low-income populations surrounding the

project limits. The latest ACS for this study area is a five-year estimate from 2018 through 2022. A summary of the demographics is listed below. Bold denotes that the percentage is above the Ocean County average.

Table 3 – Study Area Demographics

Characteristic	Study Area	County Average
Demographic Index	53%	-
Race/Ethnicity	-	-
<i>White</i>	75%	83%
<i>Hispanic/Latino</i>	20%	10%
<i>Black or African American</i>	2%	3%
<i>Asian American</i>	0%	2%
<i>American Indian/Alaskan</i>	0%	0%
<i>Other¹</i>	3%	2%
People over age 64	15%	22%
People under age 18	20%	24%
Low Income	27%	26%
Limited English Proficiency	1%	1%
Persons with a Disability	13%	14%
Use Public Transportation	1%	1%
Walk/Bike to Work	2%	1%
Homes with No Vehicle Available	6%	6%

The Demographic Index (DI), as noted in the table, is a percentile that shows how a community's percentage of low-income and minority residents compare to the rest of NJ. Fifty percent (50%) is the median. For example, an area with an underserved population category ranking in 80th percentile in NJ means its population percentage ranks higher than 80% of all census blocks in the NJ.

G. Land Use

The area surrounding Brick Boulevard is a mix of commercial and residential properties. Commercial establishments line the entire study corridor, attracting significant vehicular and pedestrian traffic, particularly due to the presence of restaurants, the Brick Boulevard AMC, and shopping centers. Two new residential apartment complexes have been developed at the north end of Chambers Bridge Road, increasing the need for safe pedestrian and bicycle infrastructure. Additional details and features of the project area are illustrated on the map in Appendix B.

III. Crash Findings

The analysis used in the RSA was based on reportable crashes found in the NJDOT crash database resulting in a fatality, injury and/or property damage. Corridor-wide crash characteristics and overrepresentations were compared to the 2021 statewide average for the county road system as further detailed below. All crashes were plotted onto collision diagrams, which can be found in Appendix C and D.

¹ Percentages may not equal 100% due to rounding. Other includes individuals who identified themselves as 'Native Hawaiian or Pacific Islander,' 'Some Other Race Alone' or 'Two or More Races'

According to the NJDOT crash database, 310 vehicular crashes occurred during the 3-year period between January 1, 2020, and December 31, 2022, along the study area. There were 5 pedestrian and 10 bicyclist crashes over the 5-year period between January 1, 2018, and December 31, 2022. The total number of crashes used for the RSA was 325.

A. Temporal Trends

Total crashes varied (either higher or lower) from the county average except in March, July, November, and December. In general, crashes were in line with day of week averages.

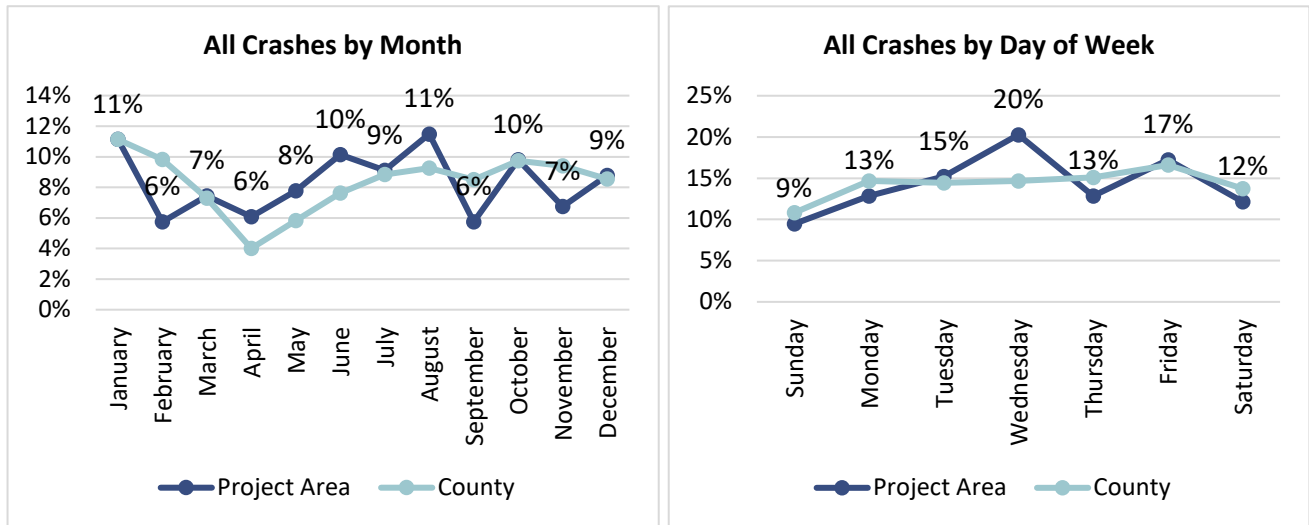


Figure 1 – Total Crashes by Month and Day of Week

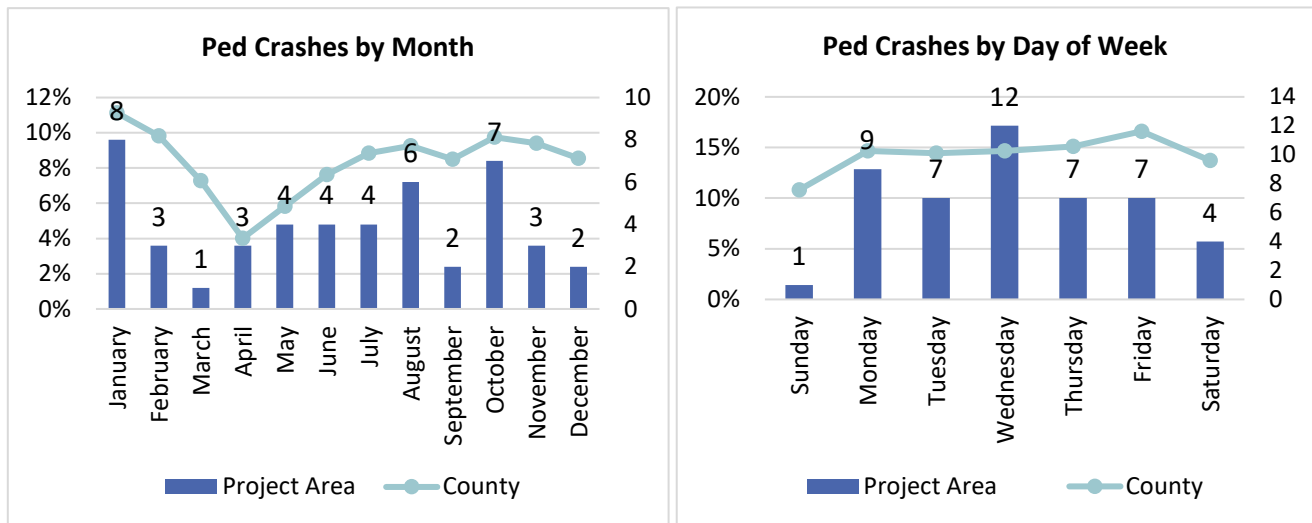


Figure 2 – Pedestrian/Bicyclist Crashes by Month and Day of Week

Collisions with pedestrians and bicyclists were highest on Wednesdays and during January.

B. Collision Types

Overrepresented crash types included backing, same direction – sideswipe, struck parked vehicle pedalcyclist and pedestrian. Struck parked vehicle and same direction-side swipe crashes were the predominant crash types (53% of total).

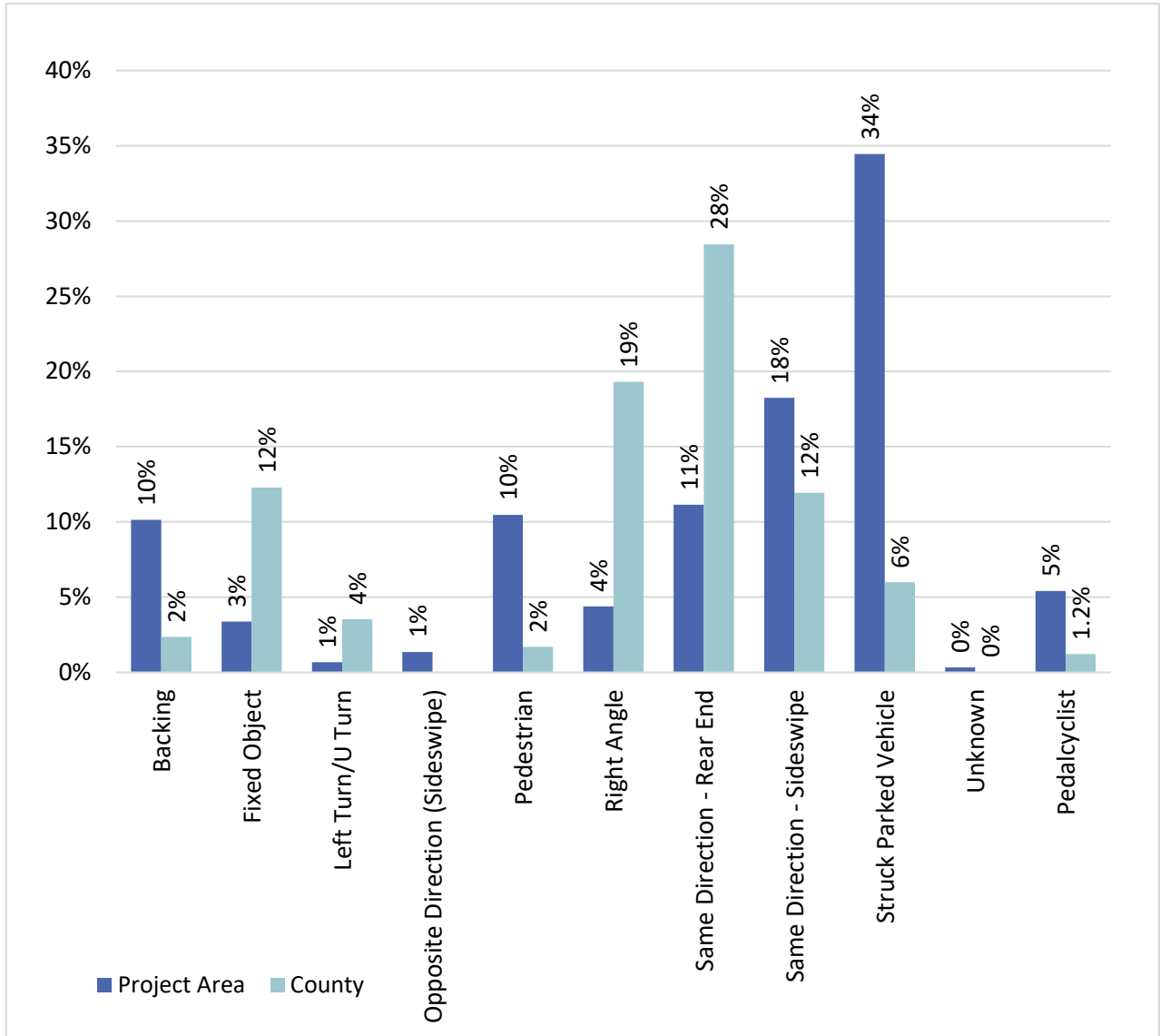


Figure 3 – Crash Type Breakdown

C. Severity

No fatal vehicular or pedestrian crashes were identified in the studied time period. Nine (9) pedestrian crashes included a possible injury, four (4) pedestrians included a suspected minor injury, and 1 pedestrian included no apparent injury during the time period studied.

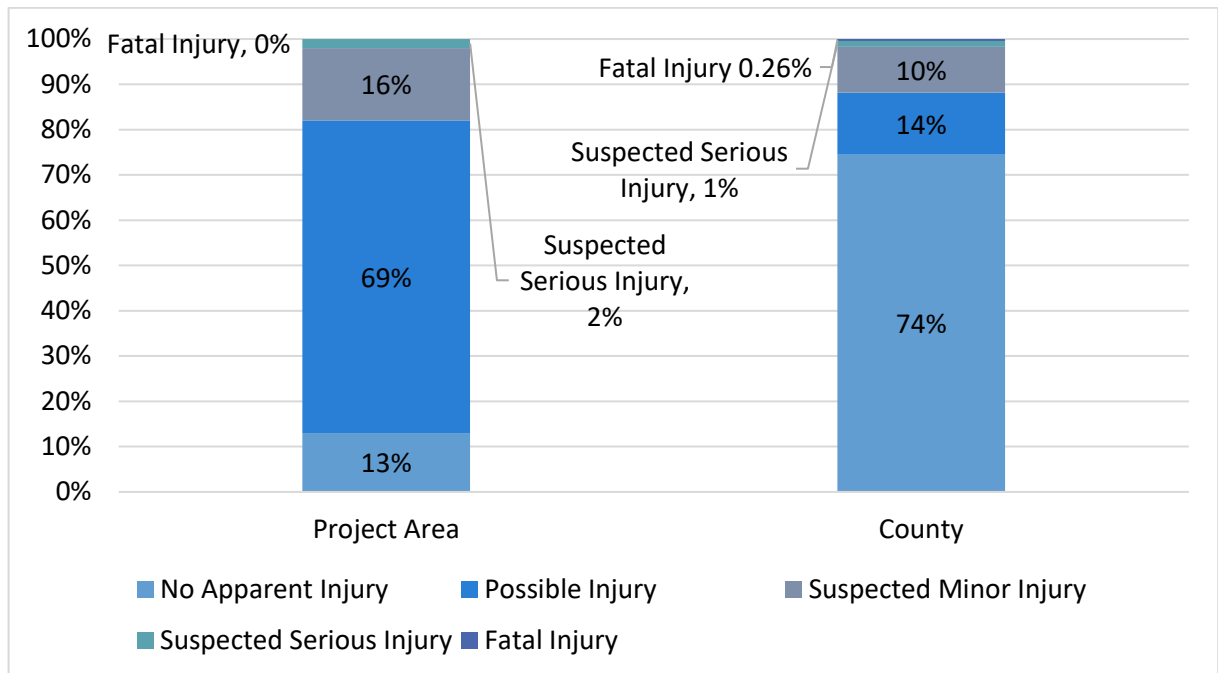


Figure 4 – Severity (Pedestrian/Bicycle Crashes)

D. Roadway Surface & Light Condition

Overrepresented conditions included daytime (76%) and dry (85%). All other conditions are similar to or underrepresented compared to the county road system.

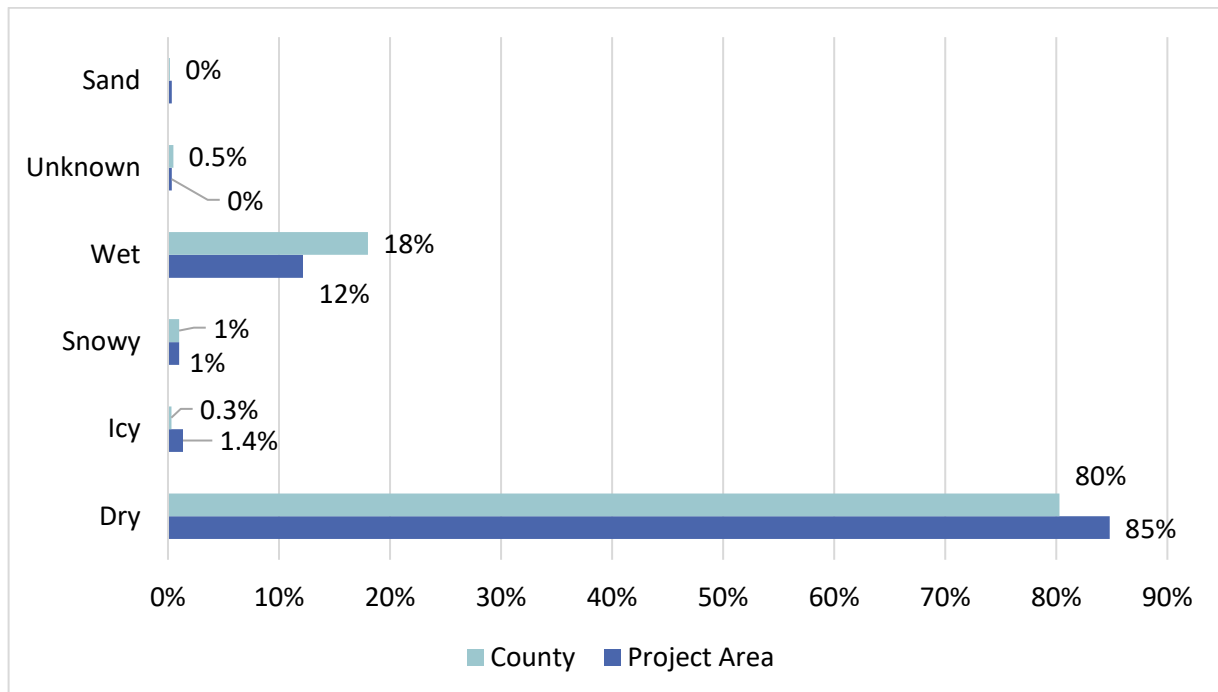


Figure 5 – Surface Conditions (All Crashes)

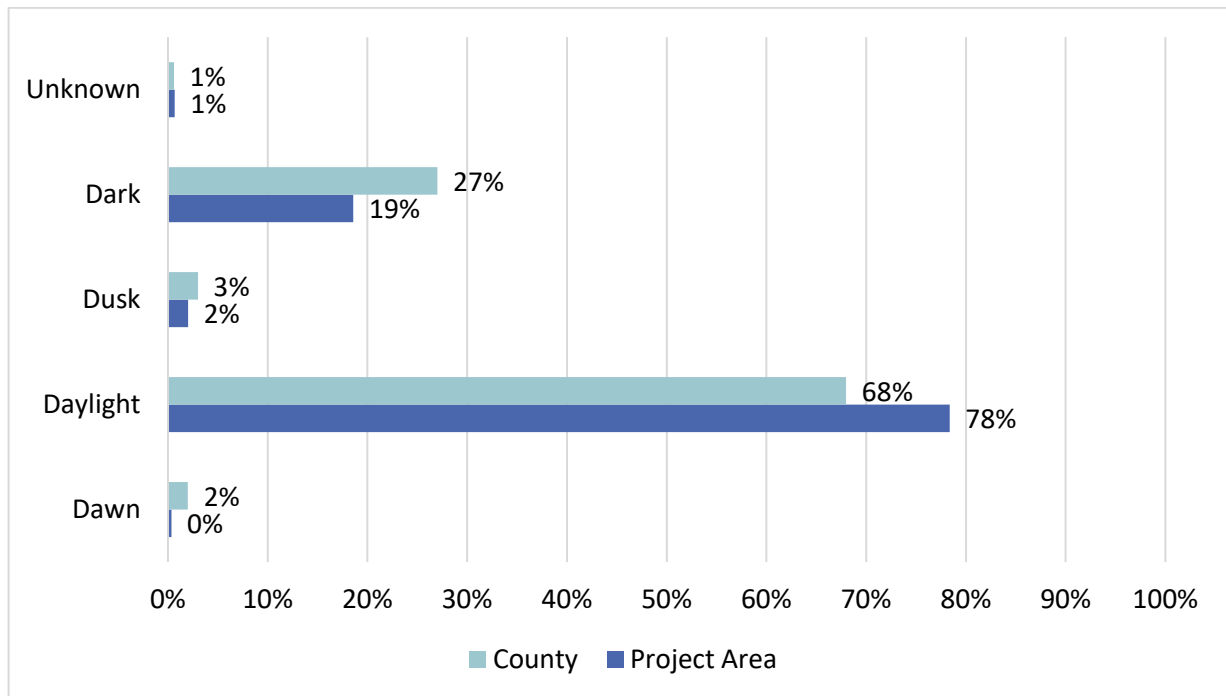


Figure 6 – Light Conditions (All Crashes)

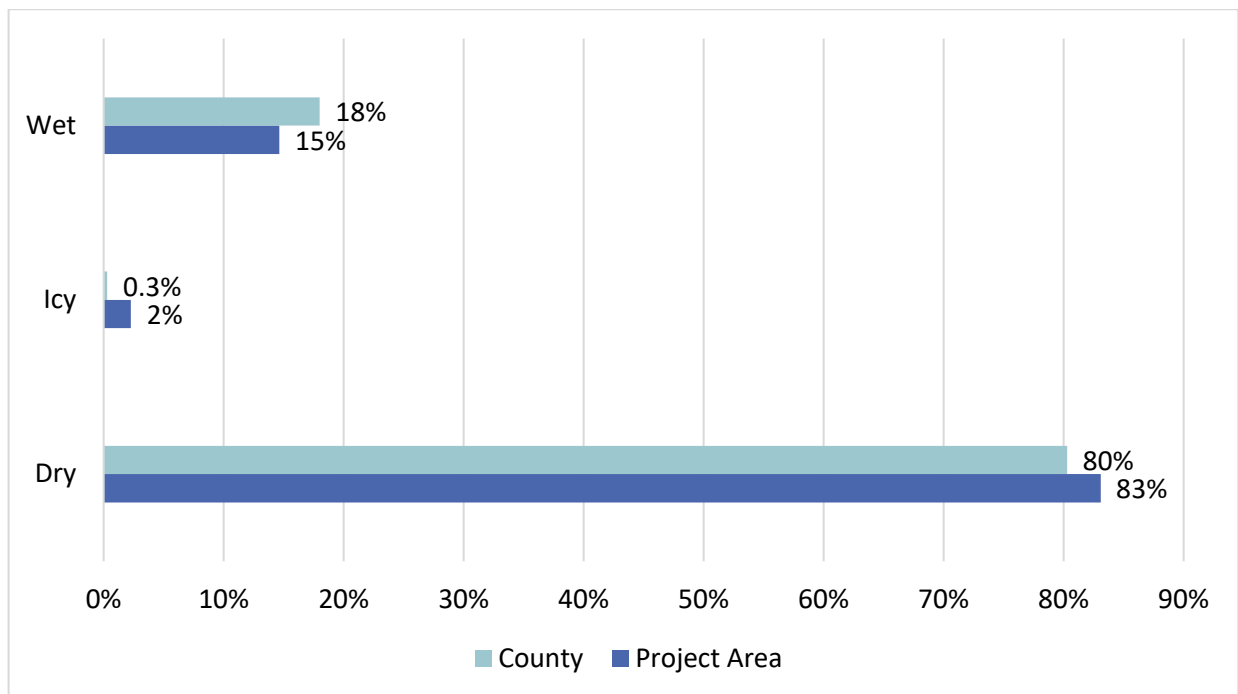


Figure 7 – Surface Conditions (Pedestrian/Bicycle Crashes)

Sixty eight percent (68%) of pedestrian crashes occurred during the day and 80% of the crashes occurred on dry surface. As shown in the figures below, these are overrepresented compared to the county road system.

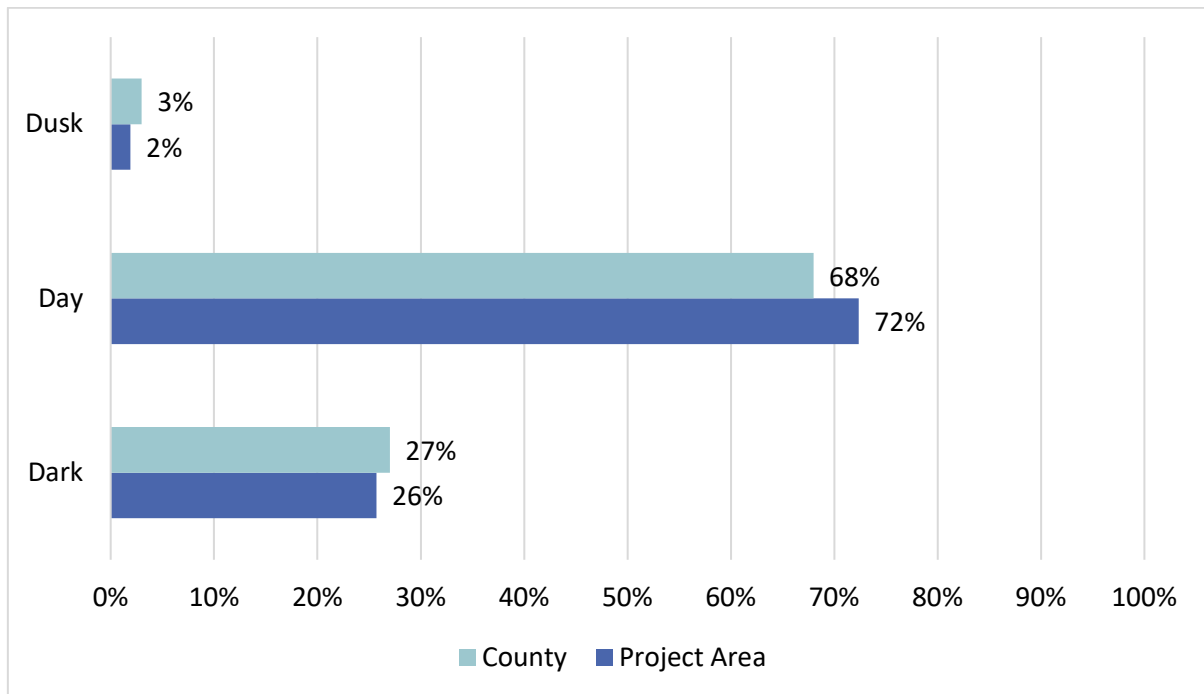


Figure 8 – Light Conditions (Pedestrian/Bicycle Crashes)

E. Location

Twenty eight percent (28%) of crashes occurred at signalized intersections, 7% occurred at unsignalized intersections, and 65% occurred between intersections. In comparison, 14%, 22%, and 64% of crashes on all county roads occur at signalized intersections, unsignalized intersections, and between intersections, respectively. Eight (8) pedestrian/bicyclist crashes occurred at a midblock location with the remaining seven (7) occurring at an intersection. Of those at an intersection, one crash occurred outside a marked crosswalk (e.g., crossing over a median barrier or divisional island; crossing not striped).

IV. Identified Issues & Observations

This section summarizes the common corridor-wide safety issues identified during the RSA and are not all inclusive. They are categorized into operations (including visibility) and maintenance issues, and pedestrian and bicyclist issues. Additional site-specific issues and photographs are in Appendix F.

The Audit Team also observed vehicles traveling at higher speeds than the posted speed limit; drivers running red lights; confusion with entry and exit points of commercial complexes; large curb radii at intersections; sightline obstructions from the side streets due to vegetation and retail signs; lack of shoulder markings; narrow pavement markings; worn crosswalk markings; intermittent sidewalk; and signs obstructing the sidewalk.

A. Pedestrian/Bicyclist



Observation / Photo Location

Left to right: Overgrown grass on the sidewalk.

Uneven sidewalk may pose tripping hazard.

Chambers Bridge Road between NJ 70 and Brick Boulevard



Left to right: Faded/Worn crosswalk markings.

Chambers Bridge Road and Brick Boulevard



Left to right: Missing ADA curb ramps and sidewalks terminate at driveways.

Splitter island lacks pedestrian path.

Brick Boulevard outside Wawa store



Left to right: Sidewalks are built to match the steep slope of driveways.

Debris is getting collected around the curb ramps at the crosswalks at the intersection.

Brick Boulevard



Pedalcyclist using sidewalk; No bike path available on the Brick Boulevard and Chambers Bridge Road

Cedar Bridge Avenue and Brick Boulevard intersection

B. Operations, Visibility, and Maintenance



Observation / Photo Location

No left turn sign missing at the Auto Zone driveway.

Chambers Bridge Road (South Bound)

Note: The County has installed the missing 'No Left Turn' signs



Observation / Photo Location

Electric wires obstructing the visibility of traffic signal.

Chambers Bridge Road (Outside Brick Plaza driveway)



Missing turn lane signage on the road.

Brick Boulevard (Near Exxon Gas Station intersection)



Faded signs and walk signal instructions.

*Chambers Bridge Boulevard;
Brick Boulevard*



No yield sign for drivers at the U-turn for pedestrian safety

Intersection of N Lake Shore Drive and Brick Boulevard

V. Findings and Recommendations

This section summarizes the site-specific and corridor-wide safety issues, potential strategies, and recommendations to improve the same. The safety benefit, time frame, cost, and jurisdiction are listed alongside each recommendation. Ratings used in the tables are described as follows. N/A indicates safety benefit not determined. Recommendations in ***bold italics*** are FHWA Proven Safety Countermeasures.

Symbol	Meaning	Definition
N/A	Not available	Safety benefit not determined
✓	Low safety benefit potential	May reduce total crashes by 1-25% ²
✓✓	Low to moderate safety benefit potential	May reduce total crashes by 26-49% ²
✓✓✓	Moderate safety benefit potential	May reduce total crashes by 50-74% ²
✓✓✓✓	High safety benefit potential	May reduce total crashes by 75+% ²
\$	Low cost	Could be accomplished through maintenance
\$\$	Medium cost	May require some engineering or design and funding may be readily available
\$\$\$	High cost	Longer term; may require full engineering, ROW acquisition and new funding
🕒	Short term	Could be accomplished within 1 year
🕒	Medium term	Could be accomplished in 1 to 3 years; may require some engineering and analysis
🕒	Long term	Could be accomplished in 3 years or more; may require full engineering and analysis

² Based on existing Crash Modification Factors (CMFs), the Highway Safety Manual (HSM), FHWA Proven Safety Countermeasures and current research, where applicable. All safety benefits are approximate.

A. Recommendations

The following represents the specific findings and recommendations made by the RSA team. All recommendations and designs should be thoroughly evaluated with due diligence and designed as appropriate by the roadway owner and/or a professional engineer for conformance to all applicable codes, standards, and best practices.

Table 4 – Corridor-Wide Recommendations

No.	Recommendation	Safety Benefit	Cost	Time Frame	Jurisdiction
Operations					
1	Consider upgrading all ramps for ADA compliance	✓✓✓ ³	\$\$\$	●	County/ Township
2	Evaluate the existing number of travel lanes and consider 2-3 per direction throughout	✓✓	\$\$	●	County/ Township
3	Consider corridor-wide signal upgrades (8" to 12" signal heads, install backplates with retroreflective border , evaluate clearance intervals, update to countdown pedestrian signal heads, replace push buttons for ADA compliance, signal timings, lighting, etc.)	✓✓	\$\$\$	●	County/ Township
4	Consider installing additional signage (speed limit, intersection warning signs) and updating signage and ensure it is consistent throughout corridor	✓	\$	●	County/ Township
5	Consider conducting a lighting analysis for the corridor	✓✓✓	\$\$	●	County/ Township
6	Review access management for the corridor and consider driveway revisions or consolidation	✓	\$\$\$	●	County/ Township
7	Investigate installing edge lines and providing shoulder	✓ ³	\$	●	County/ Township
8	Consider appropriate and uniform posted speed limit for all road users	✓✓	\$\$	●	County/ Township
9	Consider reconfiguring stop-controlled intersections to right-in, right-out (RIRO) only operations on Chambers Bridge Road	✓✓	\$\$	●	County/ Township
10	Consider installing dynamic speed feedback signs	✓	\$	●	County/ Township
11	Consider clearing sight triangles at intersections	✓✓	\$	●	County/ Township
12	Consider providing raised median island where there are no driveways present (undivided section) on Chambers Bridge Road	✓✓✓	\$\$	●	County/ Township
13	Consider reducing the wide turning radii at the channelized right turn intersections	✓	\$\$	●	County/ Township

³ CMF/quantitative data not available for this type of roadway or treatment. Therefore, perceived safety benefit of the same was estimated relative to other similar treatments.

No.	Recommendation	Safety Benefit	Cost	Time Frame	Jurisdiction
Bicycle/Pedestrian					
14	Inspect, repair and construct sidewalk in compliance with ADA as needed, including driveway aprons; complete any missing connections	✓✓✓	\$\$	●	County/ Township
15	Examine crosswalks status: check placement, alignment, and markings	✓✓	\$	●	County/ Township
16	Consider improvements to bus stops and locations including providing floating bus stops	N/A	\$	●	County/ NJ Transit
17	Consider providing high-visibility crosswalk markings for all intersections throughout corridor	✓✓	\$	●	County/ Township
18	Investigate providing Leading Pedestrian Interval (LPI) at signalized intersections	✓✓✓	\$	●	County/ Township
19	Consider shared use path throughout the corridor	✓	\$	●	County/ Township
Maintenance					
20	Inspect existing striping for wear and restripe accordingly	✓✓	\$	●	County/ Township
21	Examine track marks at intersection: re-stripe or install missing track marks on the intersections	✓	\$	●	County/ Township
22	Inspect and replace missing, faded, damaged or incorrect/outdated signage as needed (i.e., signs mounted below 7-ft, or on non-breakaway posts)	✓	\$	●	County/ Township
23	Inspect and trim foliage/vegetation and take out retail signs to improve sidewalk paths	✓ ⁴	\$\$	●	County/ Township
24	Inspect drainage facilities; ensure they are free of debris	✓ ⁴	\$\$	●	County/ Township
25	Consider replacing the raised grass median and guide rail with barrier curb; widen as feasible	✓✓✓ ✓	\$\$	●	County/ Township
Education					
26	Consider periodic sidewalk, crosswalk, multimodal education campaign and code enforcement	✓ ⁴	\$	●	GM TMA/ Township

Recommendations contained in this report should also consider the recommendations from the *Brick Township Bicycle and Pedestrian Master Plan*⁵. The following site-specific recommendations are in addition to the corridor-wide improvements, except if noted otherwise.

⁴ CMF/quantitative data not available for this type of roadway or treatment. Therefore, perceived safety benefit of the same was estimated relative to other similar treatments.

⁵ Brick Township Bicycle and Pedestrian Master Plan. [1Bike-Ped-Plan-2019-LPS Brick FINAL opt.pdf](#)

Table 5 – Site-Specific Recommendations

No.	Recommendation	Safety Benefit	Cost	Time Frame	Jurisdiction
NJ-70					
27	Consider corridor-wide recommendations 1, 5, 14, and 16 regarding ADA compliance, sidewalk, and crosswalks	✓✓✓ ⁴	\$\$\$	●	NJDOT
28	Consider corridor-wide recommendation 19 and add track marks for safe transition between lanes	✓✓	\$\$	●	NJDOT
29	Evaluate a roundabout	✓✓✓✓	\$\$\$	●	NJDOT
Auto Zone Driveway Entrance (Chambers Bridge Road)					
30	Consider corridor-wide recommendation 9 for RIRO only operations <i>Note: The County has installed the missing 'No Left Turn' signs</i>	✓✓✓	\$	●	County/ Township
Brick Plaza Entrance (Chambers Bridge Road)					
31	Consider corridor-wide recommendations 1, 5, 14, and 16 regarding ADA compliance, sidewalk, and crosswalks	✓✓✓ ⁶	\$\$\$	●	County/ Township
32	Consider corridor-wide recommendation 14 and 18 regarding crosswalk and stop bar	✓✓	\$	●	County/ Township
Chambers Bridge Road & Brick Boulevard					
33	Consider corridor-wide recommendations 1, 5, 13, and 16 regarding ADA compliance, sidewalk, and crosswalks	✓✓✓ ⁶	\$\$\$	●	County/ Township
34	Consider corridor-wide recommendation 14 and 20 regarding crosswalk and stop bar	✓✓	\$	●	County/ Township
35	Consider corridor-wide recommendation 13 for the channelized right turns	✓✓	\$\$	●	County/ Township
36	Consider corridor-wide recommendation 21	✓	\$	●	County/ Township
37	Consider changing the yield sign at the channelized right turn to stop sign	✓✓ ⁶	\$	●	County/ Township
Brick Plaza driveway (Brick Boulevard)					
38	Consider corridor-wide recommendations 1, 5, 14, and 16 regarding ADA compliance and sidewalk	✓✓✓ ⁶	\$\$\$	●	County/ Township
39	Consider installation of pedestrian crossing sign	✓	\$	●	County
40	Consider installing No Left Turn sign	✓	\$	●	County

⁶ CMF/quantitative data not available for this type of roadway or treatment. Therefore, perceived safety benefit of the same was estimated relative to other similar treatments.

No.	Recommendation	Safety Benefit	Cost	Time Frame	Jurisdiction
41	Evaluate the need of a bus turnout	#N/A	\$\$	🕒	County/NJ Transit
Jughandle next to Exxon Gas Station					
42	Consider corridor-wide recommendations 1, 5, and 14, regarding ADA compliance, sidewalk, and crosswalks	✓✓✓ ⁶	\$\$\$	🕒	County/Township
43	Consider corridor-wide recommendation 14 and 19 regarding crosswalk and stop bar	✓✓	\$	🕒	County/Township
44	Consider corridor-wide recommendation 13 for safe pedestrian crossing	✓✓	\$\$	🕒	County/Township
45	Consider installing Rectangular Rapid Flashing Beacon (RRFB)	✓✓	\$	🕒	County
Cedar Bridge Avenue					
46	Consider corridor-wide recommendations 1, 5, 13, and 16 regarding ADA compliance, sidewalk, and crosswalks	✓✓✓ ⁷	\$\$\$	🕒	County/Township
47	Consider corridor-wide recommendation 14 and 20 regarding crosswalk and stop bar	✓✓	\$	🕒	County/Township
48	Consider corridor-wide recommendation 13 for the channelized right turns	✓✓	\$\$	🕒	County/Township
49	Consider corridor-wide recommendation 21	✓	\$	🕒	County/Township
50	Consider installing pedestrian refuge island	✓✓✓	\$\$	🕒	County/Township
51	Consider relocating bus stop away from the Exxon gas station driveway	N/A	\$	🕒	NJ Transit
Wawa Driveway					
52	Consider corridor-wide recommendations 1, 5, 13, and 16 regarding ADA compliance, sidewalk, and crosswalks	✓✓✓ ⁷	\$\$\$	🕒	County/Township
53	Consider corridor-wide recommendation 14 and 19 regarding crosswalk and stop bar	✓✓	\$	🕒	County/Township
Duquesne Boulevard					
54	Consider corridor-wide recommendations 1, 5, 13, and 16 regarding ADA compliance, sidewalk, and crosswalks	✓✓✓ ⁷	\$\$\$	🕒	County/Township
55	Consider corridor-wide recommendation 14 and 20 regarding crosswalk and stop bar	✓✓	\$	🕒	County/Township
Boulevard Square Driveway					
56	Consider relocating bus stop at the intersection away from the curb ramp to make it more accessible	N/A	\$	🕒	NJ Transit
57	Consider corridor-wide recommendation 9 for RIRO only operations with signage of no left turn and do not enter	✓✓✓	\$	🕒	County/Township

No.	Recommendation	Safety Benefit	Cost	Time Frame	Jurisdiction
N Lake Shore Drive					
58	Consider corridor-wide recommendations 1, 5, 13, and 16 regarding ADA compliance, sidewalk, and crosswalks	✓✓✓ ⁷	\$\$\$	●	County/ Township
59	Consider redesigning the U turn and installing appropriate signage	✓✓✓	\$\$	●	County/ Township
60	Consider corridor-wide recommendation 13 for the slip road/ right turns	✓✓	\$\$	●	County/ Township

B. Road Owner Response

An important part of the RSA process is the road owner's response: an acknowledgment of the audit's findings and recommendations, and their planned follow-up. In responding to the RSA's findings, the road owner must bear in mind all the competing objectives involved when implementing the recommendations, and foremost among them is available resources. Because the audit process generated a long and wide-ranging list of improvements, the road owner is expected to implement these recommended improvements as time and funds allow in coordination with other projects and priorities.

C. Recommendation Visualizations

Examples of some of the site-specific and corridor-wide safety recommendations identified in Tables 4 and 5 are shown below and are based on current practices and standards. Descriptions and images of each treatment are from the *2017 NJ Complete Street Design Guide* (CSDG) and NACTO's *Urban Street Design Guide* (NACTO-US) and *Urban Bikeway Design Guide* (NACTO-UB), including sources contained therein. These examples are meant to be generic and for informational purposes only.

1. Pedestrian Facilities

ADA standards specify a minimum 5-foot clear path width to accommodate two wheelchairs passing each other. In addition to providing a more accessible facility, this minimum width also creates a more comfortable environment for pedestrians to walk side-by-side and pass each other. Sidewalk width should support the surrounding street context, land uses, as well as current and future pedestrian demand.

Crossing islands, or pedestrian refuge islands, reduce the exposure time of pedestrians to vehicular traffic. Pedestrians can cross in two stages — crossing one direction of vehicular travel lanes, pausing at the island, and then completing the crossing. While recommended for crossing three lanes of traffic in one or both directions, they may be implemented on smaller cross sections where space permits. Curb extensions physically and visually narrow the roadway at intersections and midblock locations, creating safer and shorter pedestrian crossings, while increasing the available space for streetscape. They increase the overall visibility of pedestrians by aligning them with the shoulder or parking lane and help prohibit vehicles from parking in violation of Title 39.

⁷ CMF/quantitative data not available for this type of roadway or treatment. Therefore, perceived safety benefit of the same was estimated relative to other similar treatments.

Crosswalk visibility enhancements, a FHWA Proven Safety Countermeasure, help make crosswalks and the pedestrians, bicyclists, wheelchair and other mobility device users, and transit users using them more visible to drivers. These include high-visibility crosswalks, lighting, and signing and pavement markings. These enhancements can also assist users in deciding where to cross.

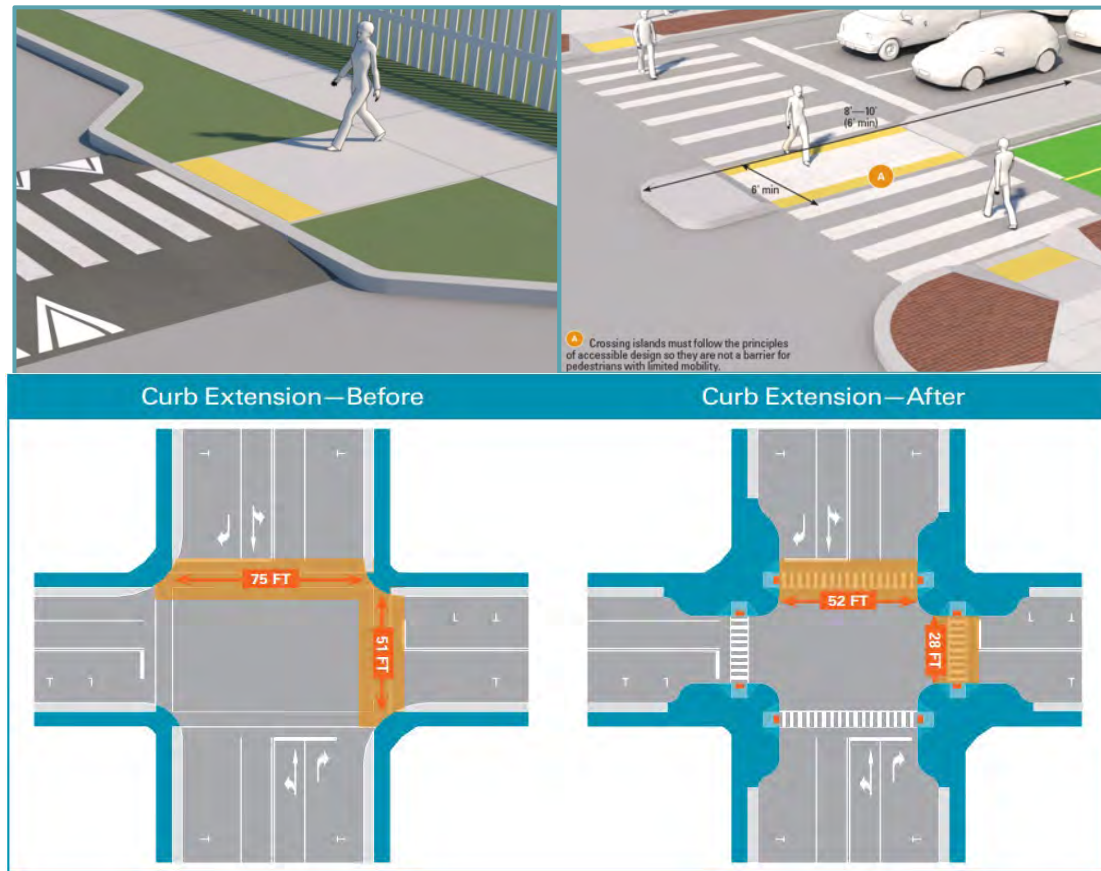


Figure 9 – Pedestrian Facility Examples

Left: Midblock Curb Extension. Right: Crossing Island. Bottom: Curb Extension (Source: CSDG)

The design of driveways should provide a continuous and level pedestrian path across the vehicular zone, encouraging drivers to stop for pedestrians on the sidewalk. Driveways should not be designed where the sidewalk is interrupted by the driveway.

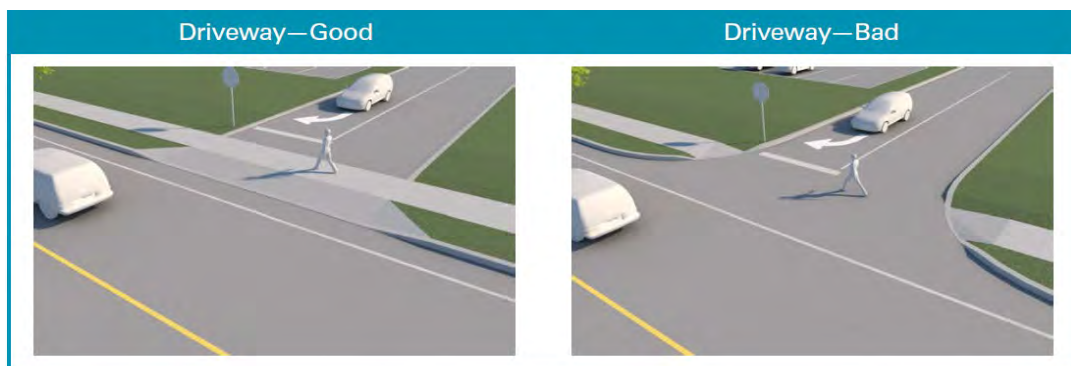


Figure 10 – Sidewalk and Driveways (Source: CSDG)

2. Bicycle Facilities

Shared-use paths are bikeways that are distinctly separate from the roadway. Located outside of the cartway, they are separated physically from motorized traffic by a buffer. Shared-use paths are typically designed to accommodate two-way travel for all non-motorized users and are paved or concrete. They can help provide low-stress bicycle accommodations in a variety of circumstances: a shortcut through residential neighborhoods, a commuting route from residential to commercial centers, a recreation route in a park or greenway, or as a side path along a roadway in lieu of (or in addition to) an on-road bicycle facility. Shared-use paths should be built as a system of off-road transportation routes that complements and enhances the on-road bicycle network. Recommendations contained in this report should also consider the recommendations from the *Brick Township Bicycle and Pedestrian Master Plan*⁸.



Figure 11 – Bicycle Facility Examples

Left: Curbside bicycle lane (Source: NATCO: UBG). Right: Sharrow Markings (Source: [Eric Gilliland/Flickr](#)) Bottom: Shared-use Path (Source: CSDG)

3. Bus Stops

In New Jersey, the bus network plays an integral role in the daily transportation needs of residents. Every transit passenger is a pedestrian before and after their transit trip. Safe, comfortable, and convenient pedestrian connections are therefore critical to an effective transit service and encouraging higher ridership. At bus stops, it is important to have an accessible boarding area that must be provided, typically measuring 5 feet long (parallel to the curb) by 8 feet wide (perpendicular to the curb). This includes 5 feet of width for a wheelchair waiting area, plus additional width to deploy a wheelchair ramp to serve the waiting area⁹. To reduce conflicts

⁸ Brick Township Bicycle and Pedestrian Master Plan. [1Bike-Ped-Plan-2019-LPS Brick FINAL opt.pdf](#)

⁹ NACTO. *Transit Street Design Guide*. April 2016.

between through traffic and buses at stops, turnouts may be provided. Bus turnouts generally consist of entrance and exit tapers, a stopping area, and length for the bus to accelerate or decelerate.

4. Rectangular Rapid Flashing Beacons

To enhance pedestrian conspicuity and increase driver awareness at uncontrolled, marked crosswalks, transportation agencies can install a pedestrian actuated Rectangular Rapid Flashing Beacon (RRFB) to accompany a pedestrian warning sign. RRFBs consist of two, rectangular-shaped yellow indications, each with a light-emitting diode (LED)-array-based light source¹⁰. RRFBs flash with an alternating high frequency when activated to enhance conspicuity of pedestrians at the crossing to drivers. RRFBs can also accompany school or trail crossing warning signs.



Figure 12 – Example of a Rectangular Rapid Flashing Beacon

(Source: NACTO-Urban Bikeway Design Guide)

5. Smart Right Turns

Conventional channelized turn lanes are designed for high-flow intersections, improving traffic efficiency by separating turn movements, reducing delays, and minimizing conflicts. However, the design must address common safety concerns, such as optimizing visibility for pedestrians and reducing vehicle speeds¹¹. A smart right turn (also called improved right turn slip lanes) widens the cone of vision of the driver towards the pedestrians as well as the cross-traffic by narrowing the angle of channelization to about 70 degrees. Thus, smart right-turns allow for safer pedestrian crossing by reducing turning speeds and improve vehicle–vehicle interactions,

¹⁰ MUTCD Interim Approval 21 - RRFBs at Crosswalks

¹¹ FHWA. *Pedestrian Safety Guide and Countermeasure Selection System*

since the new approach angle affords drivers a better view of the traffic stream, they are to merge with¹².

Improved right-turn slip lanes can incorporate features such as raised islands, high-visibility crosswalks, and narrowed lanes to ensure safety and accessibility. Additional measures like tactile cues for visually impaired pedestrians and active warning beacons in high-traffic areas further improve usability. By balancing traffic flow with pedestrian protection, these lanes enhance both safety and operational efficiency¹³.



Figure 13 – Example of an Existing Channelized Right Turn Lane on the Brick Boulevard
(Source: Google Street View)

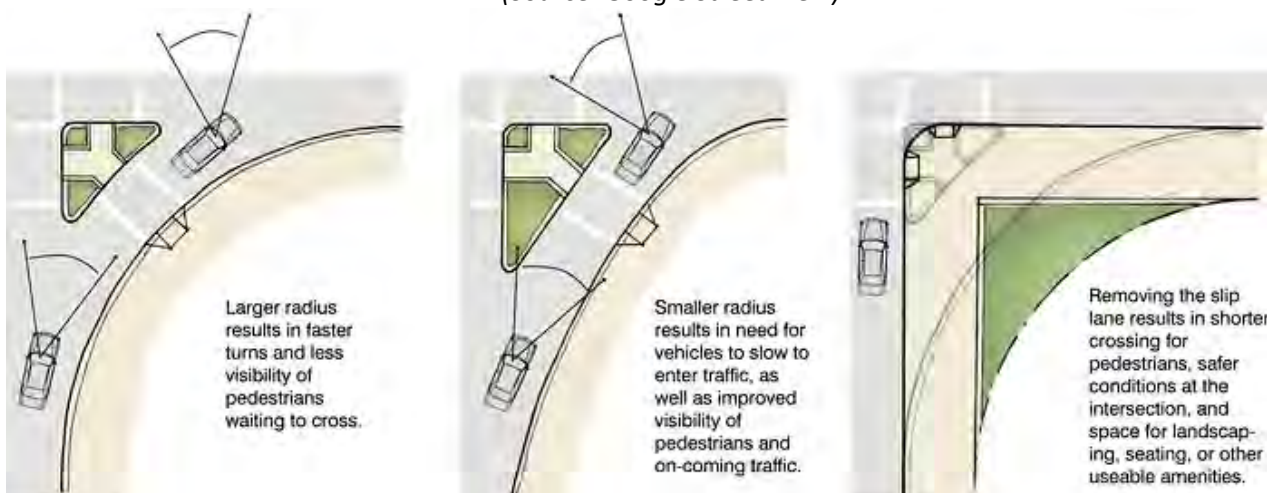


Figure 14 – Example of Smart Right Turn
(Source: SF Better Streets)

¹² ITE Journal. *Safety Effect of Smart Right-turn Design at Intersections*. Volume 88, Issue 11, pp 38-43 (Nov 2018)

¹³ Strategic Highway Safety Plan, Nevada. October 2014

VI. Conclusions

The Brick Boulevard RSA was conducted to identify safety issues and corresponding countermeasures that compromise the multimodal nature of this roadway. The team identified a thorough list of issues from the field visit, as well as many practical short-, mid-, and long-term improvements during the post-audit.

The recommendations documented in this report are designed to improve safety for all road users. Some of the strategies identified can be implemented through routine maintenance; however, all will be constrained by available time and budgetary priorities. The audit process and the resulting final document highlight the safety issues and present the needed improvements by location, organized for systematic implementation by the roadway owner.

It is important to note that when it comes to improving safety, engineering strategies alone only go so far – especially in areas undergoing redevelopment. Education, with support from a targeted enforcement campaign, is an effective approach for addressing driver and pedestrian behaviors that lead to crashes. Employing a multipronged approach is an effective course of action to advance the goal of improved safety on the corridor and the Towards Zero Deaths vision.

A. RSA TEAM

Audit Team

Name	Agency
Suzanne O' Hearn	DHTS
Yosy Cosme	NJDOT
Yuriy Assekritov	NJDOT
Swarna Venuri	NJDOT
Evangelia Vasilakis	Ocean County
Sean Areia	Ocean County
Tom Coraggio	Ocean County
Gregory Smith	Ocean County
Joseph Rossi	Brick Township Police Department
Tara Paxton	Brick Township
Elissa Commins	Brick Township
Christine Mittman	NJTPA
Julia Steponanko	Greenman-Pedersen, Inc.
Isabella Quimby	Greenman-Pedersen, Inc.
Shilpy Mehta	Greenman-Pedersen, Inc.
Jocelyne Bello	Greenman-Pedersen, Inc.



B. AREA MAP

Project Area

Ocean County Route 549, Brick Township



C.PEDESTRIAN CRASH DIAGRAMS

FILE: L:\2021\2022\HSP - Project Development and Support\Cad\Drawings\Crash Diagrams\Brick Ocean Blvd\Pedestrian Sheets\Sheet 1.dgn
TIME: 2:55:03 PM
DATE: 8/12/2024
GREENMAN-PEDERSEN, INC.



COLLISION DIAGRAM DATA

NO.	TIME	DAY	DATE	NO. INJURED	SURFACE CONDITION	WEATHER	LIGHT CONDITION
1	18:32	SUN	06-10-18	0	WET	RAIN	DAY
5	14:00	FRI	07-19-19	1	DRY	CLEAR	DAY
12	15:21	MON	07-26-21	1	DRY	CLEAR	DAY

LEGEND

NUMBER OF CRASHES WITH	
PROPERTY DAMAGE ONLY	1
INJURIES	2
FATALITIES	0
TOTAL NO. OF CRASHES	3

SYMBOLS	
	MOVING VEHICLE
	BACKING VEHICLE
	NON-INVOLVED VEHICLE
	PEDESTRIAN
	BICYCLIST
	PROPERTY DAMAGE ONLY CRASH
	INJURY IN CRASH
	FATAL CRASH
	FIXED OBJECT
	ANIMAL
	POT HOLE
	NON-FIXED OBJECT

TYPES OF CRASHES	
	REAR END
	HEAD ON
	SIDE SWIPE
	OUT OF CONTROL
	OVERTURNED
	ENCROACHMENT
	LEFT TURN
	RIGHT ANGLE
	STRUCK PARKED VEHICLE

COLORS

PEDESTRIAN CRASH

NEW JERSEY DEPARTMENT OF TRANSPORTATION

BRICK BOULEVARD (CR 549) AND
CHAMBERS BRIDGE ROAD (CR 549)
FROM N. LAKESHORE AVENUE TO ROUTE 70
BRICK TOWNSHIP, OCEAN COUNTY

2018-2022 PEDESTRIAN COLLISION DIAGRAMS

GPI

Engineering
Design
Planning
Construction Management

NOT TO SCALE

FILE: \\NF-Isr\Video\2021685 HSIP - Project Development and Support\Cadd\Hwy Crash Diagrams\11 - NJTPA - Ocean - Brick Blvd Pedestrian Sheets Sheet 2.dgn
TIME: 11:37:29 AM
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GREENMAN-PEDERSEN, INC.

MATCH LINE A
SEE SHEET NO. 1 OF 7



COLLISION DIAGRAM DATA

NO.	TIME	DAY	DATE	NO. INJURED	SURFACE CONDITION	WEATHER	LIGHT CONDITION
2	18:04	TUE	11-06-18	1	DRY	CLEAR	DARK
9	20:47	WED	02-05-20	1	DRY	OVERCAST	DARK

LEGEND

NUMBER OF CRASHES WITH PROPERTY DAMAGE ONLY 0 INJURIES 2 FATALITIES 0 TOTAL NO. OF CRASHES 2	SYMBOLS MOVING VEHICLE BACKING VEHICLE NON-INVOLVED VEHICLE PEDESTRIAN BICYCLIST PROPERTY DAMAGE ONLY CRASH INJURY IN CRASH FATAL CRASH FIXED OBJECT ANIMAL NON-FIXED OBJECT POTHOLE	TYPES OF CRASHES REAR END HEAD ON SIDE SWIPE OUT OF CONTROL OVERTURNED ENCROACHMENT LEFT TURN RIGHT ANGLE STRUCK PARKED VEHICLE	COLORS PEDESTRIAN CRASH	NEW JERSEY DEPARTMENT OF TRANSPORTATION BRICK BOULEVARD (CR 549) AND CHAMBERS BRIDGE ROAD (CR 549) FROM N. LAKESHORE AVENUE TO ROUTE 70 BRICK TOWNSHIP, OCEAN COUNTY 2018-2022 PEDESTRIAN COLLISION DIAGRAMS NOT TO SCALE
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GREENMAN-PEDERSEN, INC.

MATCH LINE B
SEE SHEET NO. 2 OF 7



MATCH LINE C
SEE SHEET NO. 4 OF 7

LEGEND

NUMBER OF CRASHES WITH		SYMBOLS		TYPES OF CRASHES		COLORS		NEW JERSEY DEPARTMENT OF TRANSPORTATION	
PROPERTY DAMAGE ONLY	0	 MOVING VEHICLE	 BACKING VEHICLE	 REAR END	 ENCROACHMENT	 PEDESTRIAN CRASH		BRICK BOULEVARD (CR 549) AND CHAMBERS BRIDGE ROAD (CR 549) FROM N. LAKESHORE AVENUE TO ROUTE 70 BRICK TOWNSHIP, OCEAN COUNTY	
INJURIES	0	 NON-INVOLVED VEHICLE	 PEDESTRIAN	 HEAD ON	 LEFT TURN				
FATALITIES	0	 PROPERTY DAMAGE ONLY CRASH	 BICYCLIST	 SIDE SWIPE	 RIGHT ANGLE				
TOTAL NO. OF CRASHES	0	 INJURY IN CRASH	 FATAL CRASH	 OUT OF CONTROL	 STRUCK PARKED VEHICLE				
		 FIXED OBJECT	 ANIMAL	 OVERTURNED					
		 NON-FIXED OBJECT	 POTHOLE						

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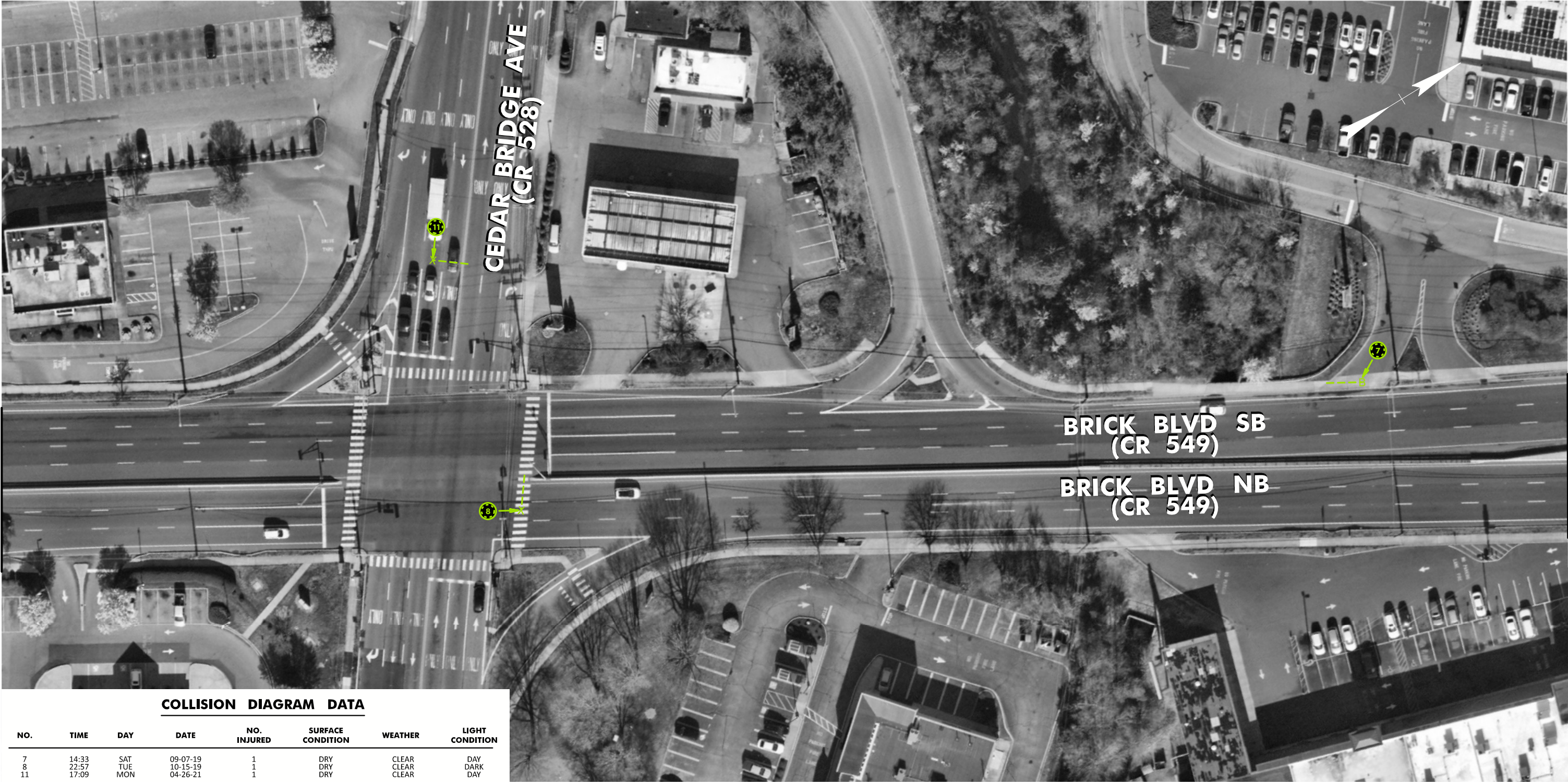
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DATE: 9/12/2024

GREENMAN-PEDERSEN, INC.

SEE SHEET NO. 3 OF 7

MATCH LINE C



MATCH LINE D

SEE SHEET NO. 5 OF 7

COLLISION DIAGRAM DATA

NO.	TIME	DAY	DATE	NO. INJURED	SURFACE CONDITION	WEATHER	LIGHT CONDITION
7	14:33	SAT	09-07-19	1	DRY	CLEAR	DAY
8	22:57	TUE	10-15-19	1	DRY	CLEAR	DARK
11	17:09	MON	04-26-21	1	DRY	CLEAR	DAY

LEGEND

NUMBER OF CRASHES WITH

PROPERTY DAMAGE ONLY0

INJURIES3

FATALITIES0

TOTAL NO. OF CRASHES3

SYMBOLS

←MOVING VEHICLE

←→BACKING VEHICLE

- - -NON-INVOLVED VEHICLE

* - - -PEDESTRIAN

⊙PROPERTY DAMAGE ONLY CRASH

⊙INJURY IN CRASH

□FIXED OBJECT

□NON-FIXED OBJECT

- - -BICYCLIST

⊙FATAL CRASH

△ANIMAL

⊗POTHOLE

TYPES OF CRASHES

←←←REAR END

←→→HEAD ON

←→SIDE SWIPE

←→OUT OF CONTROL

←→OVERTURNED

←→ENCROACHMENT

←→LEFT TURN

←→RIGHT ANGLE

←→STRUCK PARKED VEHICLE

COLORS

⊙PEDESTRIAN CRASH

NEW JERSEY DEPARTMENT OF TRANSPORTATION

BRICK BOULEVARD (CR 549) AND
CHAMBERS BRIDGE ROAD (CR 549)
FROM N. LAKESHORE AVENUE TO ROUTE 70
BRICK TOWNSHIP, OCEAN COUNTY

2018-2022 PEDESTRIAN COLLISION DIAGRAMS

GPIEngineering
Design
Planning
Construction Management

NOT TO SCALE

4

7

DATE: 8/6/2024
TIME: 11:40:31 AM
FILE: \\NF-Isiv\ndot\2021665_HSP_Project Development and Support\Cadd\Hwy\Crash_Diagrams\11 - NJTPA - Ocean Brick Blvd\Pedestrian Sheets\Sheet 5.dgn
SEE SHEET NO. 4 OF 7

MATCH LINE D



COLLISION DIAGRAM DATA

NO.	TIME	DAY	DATE	NO. INJURED	SURFACE CONDITION	WEATHER	LIGHT CONDITION
13	17:04	SAT	10-22-22	1	DRY	CLEAR	DAWN

LEGEND

NUMBER OF CRASHES WITH

PROPERTY DAMAGE ONLY

INJURIES

FATALITIES

TOTAL NO. OF CRASHES

0

1

0

1

SYMBOLS

MOVING VEHICLE

BACKING VEHICLE

NON-INVOLVED VEHICLE

PEDESTRIAN

PROPERTY DAMAGE ONLY CRASH

INJURY IN CRASH

FIXED OBJECT

NON-FIXED OBJECT

BICYCLIST

FATAL CRASH

ANIMAL

POTHOLE

TYPES OF CRASHES

REAR END

HEAD ON

SIDE SWIPE

OUT OF CONTROL

OVERTURNED

ENCROACHMENT

LEFT TURN

RIGHT ANGLE

STRUCK PARKED VEHICLE

COLORS

PEDESTRIAN CRASH

NEW JERSEY DEPARTMENT OF TRANSPORTATION

BRICK BOULEVARD (CR 549) AND
CHAMBERS BRIDGE ROAD (CR 549)
FROM N. LAKESHORE AVENUE TO ROUTE 70
BRICK TOWNSHIP, OCEAN COUNTY

2018-2022 PEDESTRIAN COLLISION DIAGRAMS

GPI

Engineering
Design
Planning
Construction Management

NOT TO SCALE

SEE SHEET NO. 6 OF 7
MATCH LINE E

FILE: \\NF-ISA\\pda\\2021685 HSIP - Project Development and Support\\Cadd\\Hwy\\Crash Diagrams\\11 - NJTPA - Ocean Brick Blvd\\Pedestrian Sheets\\Sheet 6.dgn DATE: 9/12/2024 TIME: 11:41:28 AM

MATCH LINE E
SEE SHEET NO. 6 OF 7



MATCH LINE F
SEE SHEET NO. 7 OF 7

COLLISION DIAGRAM DATA

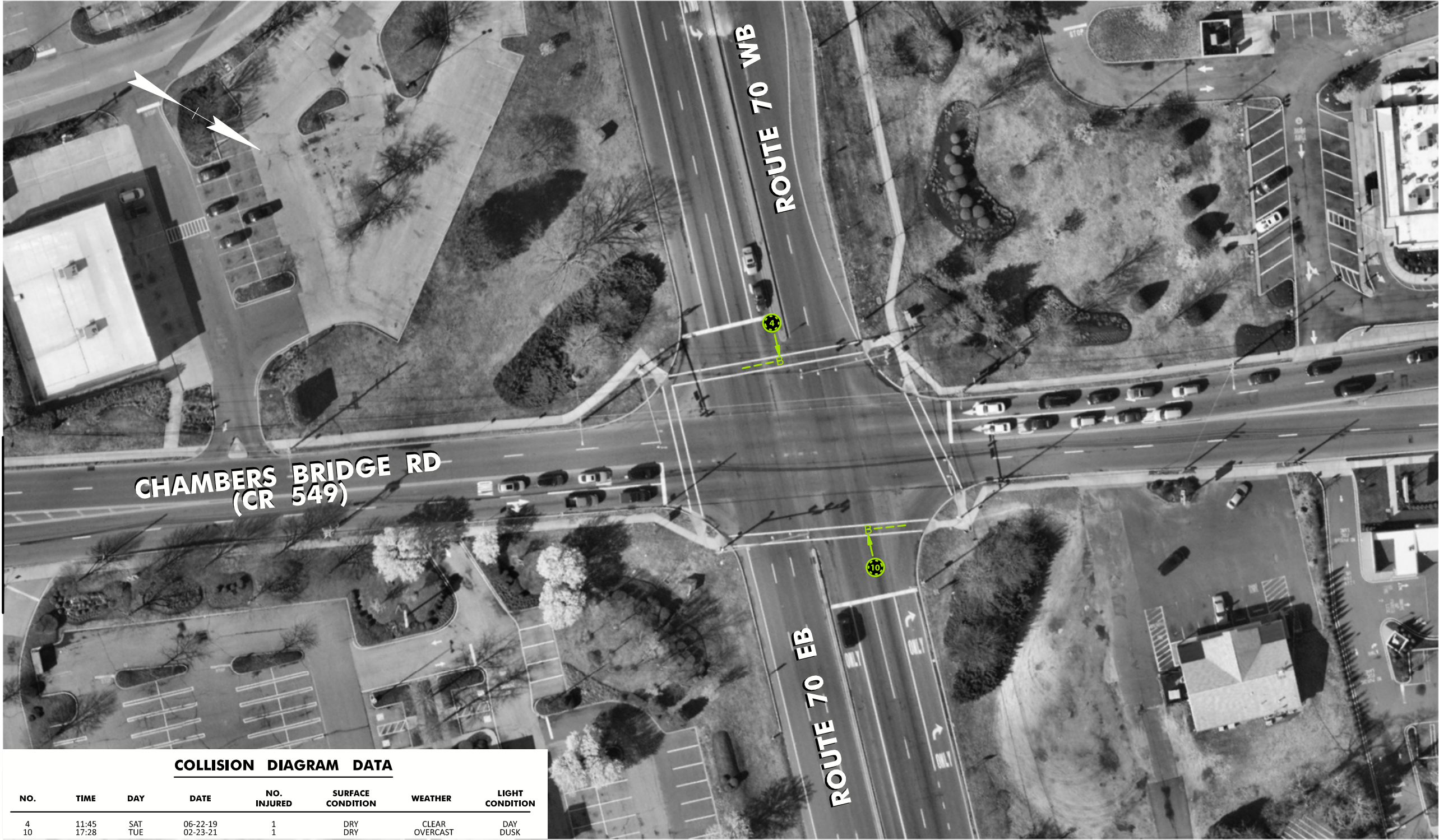
NO.	TIME	DAY	DATE	NO. INJURED	SURFACE CONDITION	WEATHER	LIGHT CONDITION
3	12:44	SUN	01-27-19	2	DRY	CLEAR	DAY
6	11:49	SAT	09-07-19	1	DRY	CLEAR	DAY
14	19:23	THU	12-15-22	1	WET	RAIN	DARK

LEGEND

NUMBER OF CRASHES WITH PROPERTY DAMAGE ONLY 0 INJURIES 3 FATALITIES 0 TOTAL NO. OF CRASHES 3	SYMBOLS — MOVING VEHICLE — BACKING VEHICLE - - - NON-INVOLVED VEHICLE x - - - PEDESTRIAN - - - BICYCLIST ⊙ PROPERTY DAMAGE ONLY CRASH ⊙ INJURY IN CRASH ⊙ FATAL CRASH □ FIXED OBJECT △ ANIMAL □ NON-FIXED OBJECT ⊗ POTHOLE	TYPES OF CRASHES ← REAR END ← ENCROACHMENT → HEAD ON → LEFT TURN ← SIDE SWIPE → RIGHT ANGLE ← OUT OF CONTROL → STRUCK PARKED VEHICLE ← OVERTURNED →	COLORS ⊙ PEDESTRIAN CRASH	NEW JERSEY DEPARTMENT OF TRANSPORTATION BRICK BOULEVARD (CR 549) AND CHAMBERS BRIDGE ROAD (CR 549) FROM N. LAKESHORE AVENUE TO ROUTE 70 BRICK TOWNSHIP, OCEAN COUNTY 2018-2022 PEDESTRIAN COLLISION DIAGRAMS GPI Engineering Design Planning Construction Management NOT TO SCALE
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FILE: L:\2021\65 HSP - Project Development and Support\Cadd\hwy\Crash Diagrams\Brick Ocean Blvd\Pedestrian Sheets\Sheet 7.dgn
TIME: 10:06:44 AM
DATE: 8/19/2024
GREENMAN-PEDERSEN, INC.

MATCH LINE F
SEE SHEET NO. 6 OF 7



COLLISION DIAGRAM DATA							
NO.	TIME	DAY	DATE	NO. INJURED	SURFACE CONDITION	WEATHER	LIGHT CONDITION
4	11:45	SAT	06-22-19	1	DRY	CLEAR	DAY
10	17:28	TUE	02-23-21	1	DRY	OVERCAST	DUSK

LEGEND

NUMBER OF CRASHES WITH

PROPERTY DAMAGE ONLY

INJURIES

FATALITIES

TOTAL NO. OF CRASHES

0

2

0

2

SYMBOLS

MOVING VEHICLE

BACKING VEHICLE

NON-INVOLVED VEHICLE

PEDESTRIAN

PROPERTY DAMAGE ONLY CRASH

INJURY IN CRASH

FIXED OBJECT

NON-FIXED OBJECT

BICYCLIST

FATAL CRASH

ANIMAL

POTHOLE

TYPES OF CRASHES

REAR END

HEAD ON

SIDE SWIPE

OUT OF CONTROL

OVERTURNED

ENCROACHMENT

LEFT TURN

RIGHT ANGLE

STRUCK PARKED VEHICLE

COLORS

PEDESTRIAN CRASH

NEW JERSEY DEPARTMENT OF TRANSPORTATION

BRICK BOULEVARD (CR 549) AND
CHAMBERS BRIDGE ROAD (CR 549)
FROM N. LAKESHORE AVENUE TO ROUTE 70
BRICK TOWNSHIP, OCEAN COUNTY

2018-2022 PEDESTRIAN COLLISION DIAGRAMS

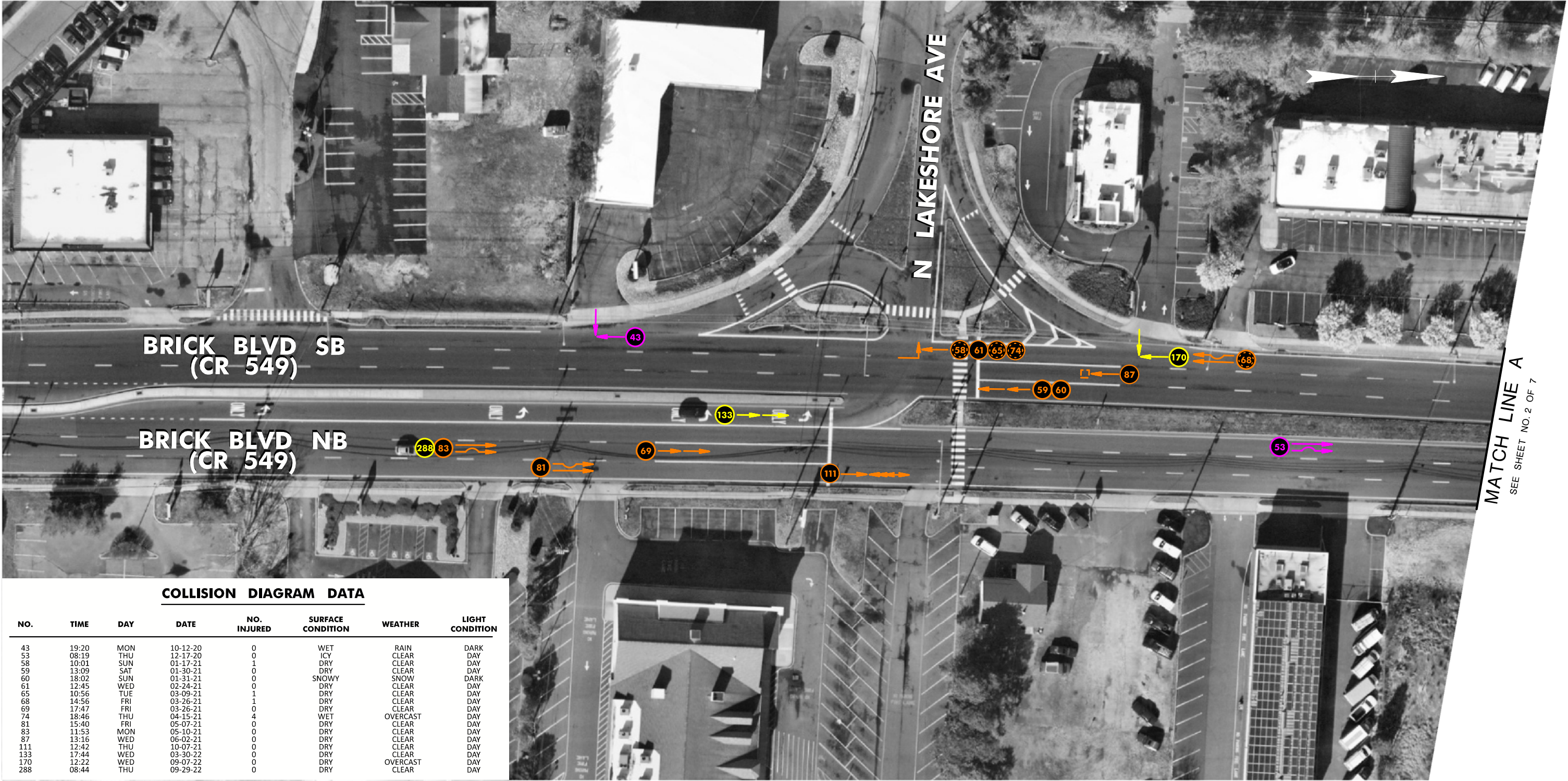
GPI

Engineering
Design
Planning
Construction Management

NOT TO SCALE

D.VEHICULAR CRASH DIAGRAMS

FILE: \\NF-IsV\pda\2021085 HSP - Project Development and Support\Cad\Hwy Crash Diagrams\11 - NJTPA - Ocean - Brick Blvd\Vehicle Streets\Sheet 1.dgn
TIME: 11:35:09 AM
DATE: 9/12/2024
GREENMAN-PEDERSEN, INC.



COLLISION DIAGRAM DATA

NO.	TIME	DAY	DATE	NO. INJURED	SURFACE CONDITION	WEATHER	LIGHT CONDITION
43	19:20	MON	10-12-20	0	WET	RAIN	DARK
53	08:19	THU	12-17-20	0	ICY	CLEAR	DAY
58	10:01	SUN	01-17-21	1	DRY	CLEAR	DAY
59	13:09	SAT	01-30-21	0	DRY	CLEAR	DAY
60	18:02	SUN	01-31-21	0	SNOWY	SNOW	DARK
61	12:45	WED	02-24-21	0	DRY	CLEAR	DAY
65	10:56	TUE	03-09-21	1	DRY	CLEAR	DAY
68	14:56	FRI	03-26-21	1	DRY	CLEAR	DAY
69	17:47	FRI	03-26-21	0	DRY	CLEAR	DAY
74	18:46	THU	04-15-21	4	WET	OVERCAST	DAY
81	15:40	FRI	05-07-21	0	DRY	CLEAR	DAY
83	11:53	MON	05-10-21	0	DRY	CLEAR	DAY
87	13:16	WED	06-02-21	0	DRY	CLEAR	DAY
111	12:42	THU	10-07-21	0	DRY	CLEAR	DAY
133	17:44	WED	03-30-22	0	DRY	CLEAR	DAY
170	12:22	WED	09-07-22	0	DRY	OVERCAST	DAY
288	08:44	THU	09-29-22	0	DRY	CLEAR	DAY

LEGEND

NUMBER OF CRASHES WITH	
PROPERTY DAMAGE ONLY	13
INJURIES	4
FATALITIES*	0
TOTAL NO. OF CRASHES	17

SYMBOLS	
→	MOVING VEHICLE
←	BACKING VEHICLE
- - -	NON-INVOLVED VEHICLE
x - - -	PEDESTRIAN
- - -	BICYCLIST
○	PROPERTY DAMAGE ONLY CRASH
⊙	INJURY IN CRASH
⊙	FATAL CRASH
□	FIXED OBJECT
△	ANIMAL
⊞	NON-FIXED OBJECT
⊞	POTHOLE

TYPES OF CRASHES	
→ →	REAR END
→ →	HEAD ON
→ →	SIDE SWIPE
→ →	OUT OF CONTROL
→ →	OVERTURNED
→ →	LEFT TURN
→ →	RIGHT ANGLE
→ →	STRUCK PARKED VEHICLE

COLORS	
○	2020 CRASHES
○	2021 CRASHES
○	2022 CRASHES

NEW JERSEY DEPARTMENT OF TRANSPORTATION

BRICK BOULEVARD (CR 549) AND
CHAMBERS BRIDGE ROAD (CR 549)
FROM N. LAKESHORE AVENUE TO ROUTE 70
BRICK TOWNSHIP, OCEAN COUNTY
2020 - 2022 COLLISION DIAGRAMS

GPI Engineering
Design
Planning
Construction Management

NOT TO SCALE

FILE: L:\2021\65 HSP Project Development and Support\CadDraws\Crash Diagrams\Brick Ocean Blvd\Vehicle Sheets\Sheet 2.dgn
TIME: 8:19:43 AM
DATE: 8/12/2024

MATCH LINE A
SEE SHEET NO. 1 OF 7



COLLISION DIAGRAM DATA

NO.	TIME	DAY	DATE	NO. INJURED	SURFACE CONDITION	WEATHER	LIGHT CONDITION
99	12:33	FRI	07-23-21	0	DRY	CLEAR	DAY
104	08:53	THU	08-12-21	0	DRY	CLEAR	DAY
108	14:47	THU	09-23-21	1	DRY	CLEAR	DAY
143	02:30	SUN	05-22-22	2	DRY	CLEAR	DARK

LEGEND

NUMBER OF CRASHES WITH

PROPERTY DAMAGE ONLY	2
INJURIES	2
FATALITIES*	0
TOTAL NO. OF CRASHES	4

SYMBOLS

→	MOVING VEHICLE	→	ENCROACHMENT
↔	BACKING VEHICLE	→	LEFT TURN
- - -	NON-INVOLVED VEHICLE	→	RIGHT ANGLE
x - - -	PEDESTRIAN	→	STRUCK PARKED VEHICLE
○	PROPERTY DAMAGE ONLY CRASH		
○*	INJURY IN CRASH	○	FATAL CRASH
□	FIXED OBJECT	△	ANIMAL
□	NON-FIXED OBJECT	⊗	POT HOLE

TYPES OF CRASHES

→	REAR END
→	HEAD ON
→	SIDE SWIPE
→	OUT OF CONTROL
→	OVERTURNED

COLORS

2020 CRASHES

2021 CRASHES

2022 CRASHES

NEW JERSEY DEPARTMENT OF TRANSPORTATION

BRICK BOULEVARD (CR 549) AND
CHAMBERS BRIDGE ROAD (CR 549)
FROM N. LAKESHORE AVENUE TO ROUTE 70
BRICK TOWNSHIP, OCEAN COUNTY
2020 - 2022 COLLISION DIAGRAMS

GPI Engineering Design Planning Construction Management

NOT TO SCALE

FILE: L:\2021\65 HSP Project Development and Support\Cad\Drawings\Crash Diagrams\Brick Ocean Blvd\Vehicle Sheets\Sheet 3.dgn
TIME: 8:21:49 AM
DATE: 8/12/2024
GREENMAN-PEDERSEN, INC.

COLLISION DIAGRAM DATA

NO.	TIME	DAY	DATE	NO. INJURED	SURFACE CONDITION	WEATHER	LIGHT CONDITION
15	18:11	THU	06-18-20	1	DRY	CLEAR	DAY
49	17:36	WED	11-18-20	0	DRY	CLEAR	DARK
55	14:04	SUN	12-27-20	1	DRY	CLEAR	DAY
67	12:32	SUN	03-21-21	0	DRY	CLEAR	DAY
78	12:25	TUE	05-04-21	0	DRY	CLEAR	DAY
92	19:27	TUE	06-08-21	0	DRY	CLEAR	DARK
112	07:00	FRI	10-08-21	1	DRY	CLEAR	DAY
120	14:47	SUN	11-21-21	0	DRY	OVERCAST	DAY
127	15:09	SAT	01-22-22	0	DRY	CLEAR	DAY
131	14:37	SAT	03-05-22	0	DRY	CLEAR	DAY
137	12:58	FRI	04-29-22	0	DRY	CLEAR	DAY
148	17:15	FRI	05-27-22	0	WET	RAIN	DAY

MATCH LINE B
SEE SHEET NO. 2 OF 7

MATCH LINE C
SEE SHEET NO. 4 OF 7

LEGEND

NUMBER OF CRASHES WITH	
PROPERTY DAMAGE ONLY	9
INJURIES	3
FATALITIES*	0
TOTAL NO. OF CRASHES	12

SYMBOLS	
	MOVING VEHICLE
	BACKING VEHICLE
	NON-INVOLVED VEHICLE
	PEDESTRIAN
	BICYCLIST
	PROPERTY DAMAGE ONLY CRASH
	INJURY IN CRASH
	FATAL CRASH
	FIXED OBJECT
	ANIMAL
	NON-FIXED OBJECT
	POTHOLE

TYPES OF CRASHES	
	REAR END
	ENCROACHMENT
	HEAD ON
	LEFT TURN
	RIGHT ANGLE
	SIDE SWIPE
	OUT OF CONTROL
	STRUCK PARKED VEHICLE
	OVERTURNED

COLORS	
	2020 CRASHES
	2021 CRASHES
	2022 CRASHES

NEW JERSEY DEPARTMENT OF TRANSPORTATION

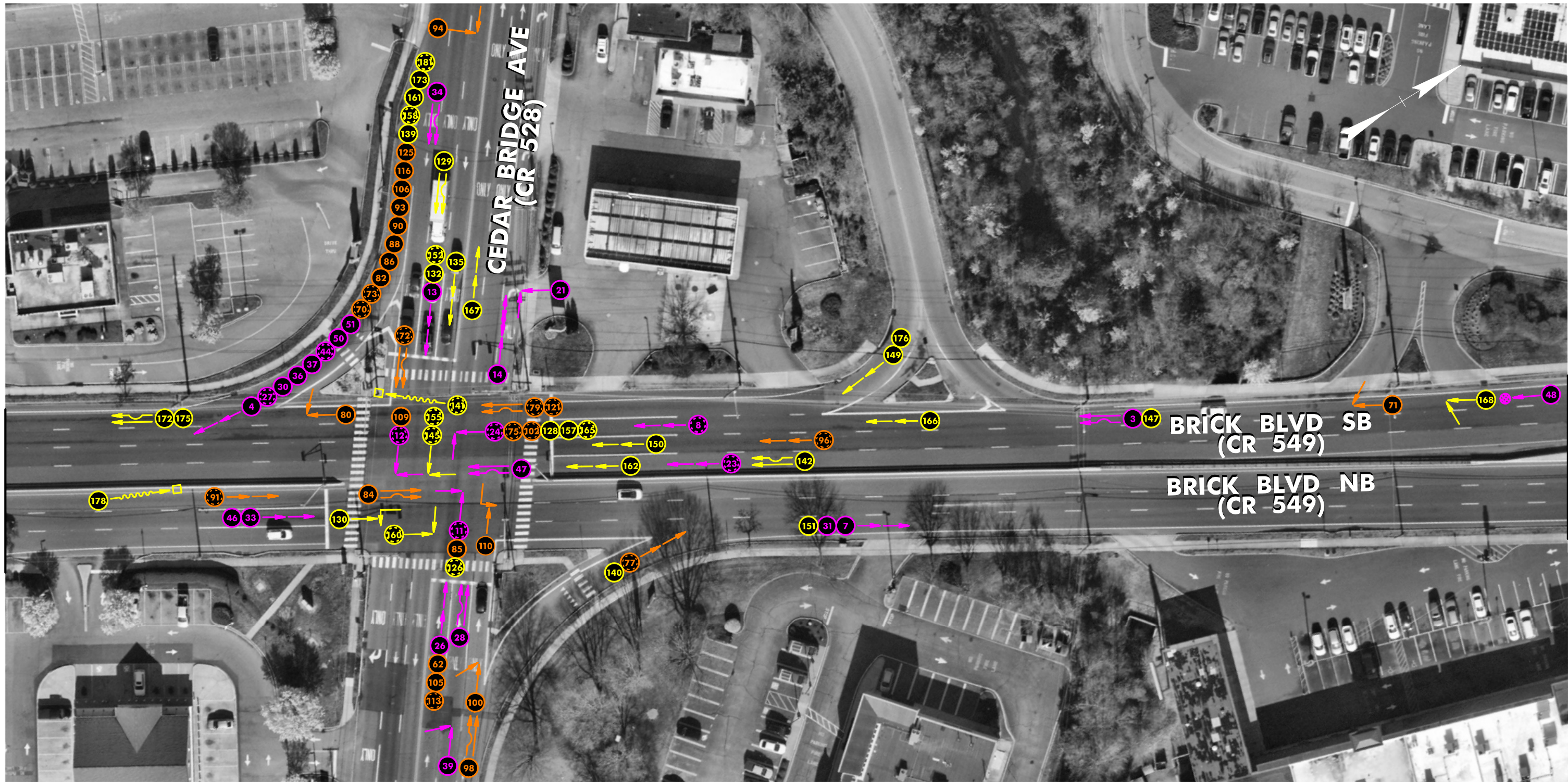
BRICK BOULEVARD (CR 549) AND
CHAMBERS BRIDGE ROAD (CR 549)
FROM N. LAKESHORE AVENUE TO ROUTE 70
BRICK TOWNSHIP, OCEAN COUNTY
2020 - 2022 COLLISION DIAGRAMS

GPI Engineering
Design
Planning
Construction Management

NOT TO SCALE

FILE: \\NF-IsV\pda\2021065_HSP_Projct Development and Support\Cad\Hwy Crash Diagrams\11 - NJTPA Ocean Brick Blvd\Vehicle Streets\Sheet 4.dgn
DATE: 9/12/2024
TIME: 11:15:31 AM
GREENMAN-PEDERSEN, INC.

MATCH LINE C
SEE SHEET NO. 3 OF 7



MATCH LINE D
SEE SHEET NO. 5 OF 7

LEGEND

NUMBER OF CRASHES WITH	
PROPERTY DAMAGE ONLY	62
INJURIES	27
FATALITIES*	0
TOTAL NO. OF CRASHES	89

SYMBOLS	
→	MOVING VEHICLE
←	BACKING VEHICLE
- - -	NON-INVOLVED VEHICLE
x - - -	PEDESTRIAN
- - -	BICYCLIST
○	PROPERTY DAMAGE ONLY CRASH
○*	INJURY IN CRASH
○*	FATAL CRASH
□	FIXED OBJECT
△	ANIMAL
⊗	POT HOLE
□	NON-FIXED OBJECT

TYPES OF CRASHES	
→	REAR END
→	HEAD ON
→	SIDE SWIPE
→	OUT OF CONTROL
→	OVERTURNED
→	ENCROACHMENT
→	LEFT TURN
→	RIGHT ANGLE
→	STRUCK PARKED VEHICLE

COLORS	
○	2020 CRASHES
○	2021 CRASHES
○	2022 CRASHES

NEW JERSEY DEPARTMENT OF TRANSPORTATION

BRICK BOULEVARD (CR 549) AND
CHAMBERS BRIDGE ROAD (CR 549)
FROM N. LAKESHORE AVENUE TO ROUTE 70
BRICK TOWNSHIP, OCEAN COUNTY
2020 - 2022 COLLISION DIAGRAM

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NOT TO SCALE

FILE: L:\2021res HSP Project Development and Support\Cadd\hwy\Crash Diagrams\Brick Ocean Bkvt Vehicular Streets\Sheet 4.dgn
DATE: 8/12/2024
TIME: 8:38:51 AM
GREENMAN-PEDERSEN, INC.

COLLISION DIAGRAM DATA

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3	16:13	THU	01-23-20	0	DRY	CLEAR	DAY
4	19:44	TUE	01-28-20	0	DRY	CLEAR	DARK
7	10:22	SAT	02-15-20	0	DRY	CLEAR	DAY
8	07:46	MON	02-24-20	1	DRY	CLEAR	DAY
11	18:41	TUE	04-28-20	3	DRY	CLEAR	DAY
12	19:34	SAT	05-09-20	1	DRY	CLEAR	DUSK
13	12:46	TUE	05-19-20	0	DRY	CLEAR	DAY
14	20:03	FRI	06-05-20	0	WET	RAIN	DARK
21	08:25	TUE	07-07-20	0	DRY	CLEAR	DAY
23	16:15	FRI	07-10-20	1	WET	RAIN	DAY
24	23:20	MON	07-13-20	4	DRY	CLEAR	DARK
26	10:53	SAT	07-25-20	0	DRY	CLEAR	DAY
27	10:41	SAT	08-08-20	1	DRY	CLEAR	DAY
28	12:56	MON	08-10-20	0	DRY	CLEAR	DAY
30	22:55	TUE	08-18-20	0	DRY	CLEAR	DARK
31	10:37	SAT	08-22-20	0	DRY	CLEAR	DAY
33	09:42	WED	09-09-20	0	DRY	OVERCAST	DAY
34	14:15	WED	09-09-20	0	DRY	OVERCAST	DAY
36	14:37	WED	09-23-20	0	DRY	CLEAR	DAY
37	18:12	MON	09-28-20	0	DRY	CLEAR	DAY
39	15:42	MON	10-05-20	0	DRY	CLEAR	DAY
44	13:11	MON	10-19-20	1	DRY	CLEAR	DAY
46	13:22	SAT	10-31-20	0	DRY	CLEAR	DAY
47	23:50	SAT	10-31-20	0	DRY	CLEAR	DARK
48	23:30	TUE	11-03-20	0	DRY	CLEAR	DARK
50	14:25	SAT	11-28-20	0	DRY	CLEAR	DAY
51	09:14	FRI	12-11-20	0	DRY	CLEAR	DAY
62	17:34	WED	03-03-21	0	DRY	CLEAR	DAY
70	12:45	WED	03-31-21	1	DRY	CLEAR	DAY
71	22:19	WED	03-31-21	0	WET	RAIN	DARK
72	18:13	MON	04-05-21	1	DRY	CLEAR	DAY
73	16:06	FRI	04-09-21	1	DRY	OVERCAST	DAY
75	16:33	SUN	04-18-21	2	DRY	CLEAR	DAY
77	08:20	TUE	04-20-21	1	DRY	CLEAR	DAY
79	15:33	TUE	05-04-21	1	DRY	CLEAR	DAY
80	19:04	THU	05-06-21	0	DRY	CLEAR	DAY
82	16:42	FRI	05-07-21	0	DRY	CLEAR	DAY
84	08:00	THU	05-13-21	0	DRY	CLEAR	DAY
85	21:50	SAT	05-15-21	0	DRY	CLEAR	DARK
86	16:23	TUE	05-25-21	0	DRY	CLEAR	DAY
88	13:02	FRI	06-04-21	0	DRY	CLEAR	DAY
90	13:27	TUE	06-08-21	0	DRY	CLEAR	DAY
91	14:53	TUE	06-08-21	1	DRY	CLEAR	DAY
93	15:23	SAT	06-12-21	0	DRY	CLEAR	DAY
94	12:40	MON	06-14-21	0	DRY	CLEAR	DAY
96	15:53	SUN	07-04-21	1	DRY	CLEAR	DAY
98	10:17	SUN	07-18-21	0	DRY	CLEAR	DAY
100	07:48	THU	07-29-21	0	DRY	CLEAR	DAY
102	01:21	WED	08-04-21	1	DRY	CLEAR	DARK
105	14:54	MON	08-16-21	0	DRY	CLEAR	DAY
106	13:14	FRI	08-20-21	0	WET	CLEAR	DAY
109	08:54	WED	10-06-21	0	DRY	OVERCAST	DAY
110	22:15	WED	10-06-21	0	DRY	CLEAR	DARK
113	09:12	THU	10-14-21	1	DRY	CLEAR	DAY
116	17:20	MON	11-01-21	0	DRY	CLEAR	DAY
121	17:54	SUN	11-21-21	1	DRY	CLEAR	DARK
125	14:56	TUE	12-28-21	0	DRY	CLEAR	DAY
126	06:37	WED	01-19-22	2	DRY	CLEAR	DARK
128	21:56	WED	01-26-22	0	DRY	CLEAR	DARK
129	09:43	SAT	01-29-22	0	SNOWY	SNOW	DAY
130	17:12	MON	01-31-22	0	WET	CLEAR	DAY
132	16:08	MON	03-07-22	0	DRY	CLEAR	DAY
135	08:21	SAT	04-09-22	0	WET	CLEAR	DAY
139	15:43	SUN	05-15-22	0	DRY	CLEAR	DAY
140	07:33	WED	05-18-22	0	DRY	CLEAR	DAY
141	03:13	FRI	05-20-22	1	DRY	CLEAR	DARK
142	17:19	FRI	05-20-22	0	WET	RAIN	DUSK
145	13:23	TUE	05-24-22	2	DRY	CLEAR	DAY
147	10:23	THU	05-26-22	0	DRY	CLEAR	DAY
149	12:38	SAT	05-28-22	0	DRY	CLEAR	DAY
150	16:35	TUE	06-07-22	0	DRY	CLEAR	DAY
151	16:57	WED	06-08-22	0	DRY	CLEAR	DAY
152	20:31	SAT	06-11-22	1	DRY	CLEAR	DARK
155	09:05	MON	06-20-22	2	DRY	CLEAR	DAY
157	22:09	THU	06-30-22	0	DRY	CLEAR	DARK
158	12:13	THU	07-07-22	1	DRY	CLEAR	DAY
160	10:14	TUE	07-19-22	1	DRY	CLEAR	DAY
161	17:08	TUE	07-19-22	0	DRY	CLEAR	DAY
162	17:36	TUE	07-26-22	0	DRY	CLEAR	DAWN
165	15:56	SUN	08-21-22	1	DRY	CLEAR	DAY
166	18:21	WED	08-24-22	0	DRY	CLEAR	DAY
167	08:43	FRI	08-26-22	0	DRY	CLEAR	DAY
168	17:34	FRI	08-26-22	0	DRY	CLEAR	DAY
172	16:09	SAT	09-24-22	0	DRY	CLEAR	DAY
173	14:59	TUE	09-27-22	0	DRY	CLEAR	DAY
175	16:17	TUE	11-01-22	0	DRY	CLEAR	DAY
176	16:43	TUE	11-15-22	0	DRY	CLEAR	DARK
178	07:11	SUN	11-20-22	0	DRY	CLEAR	DAY
181	17:53	SUN	12-18-22	1	DRY	CLEAR	DARK

LEGEND

NUMBER OF CRASHES WITH	
PROPERTY DAMAGE ONLY	62
INJURIES	27
FATALITIES*	0
TOTAL NO. OF CRASHES	89

SYMBOLS	
	MOVING VEHICLE
	BACKING VEHICLE
	NON-INVOLVED VEHICLE
	PEDESTRIAN
	BICYCLIST
	PROPERTY DAMAGE ONLY CRASH
	INJURY IN CRASH
	FATAL CRASH
	FIXED OBJECT
	ANIMAL
	NON-FIXED OBJECT
	POTHOLE

TYPES OF CRASHES	
	REAR END
	HEAD ON
	SIDE SWIPE
	OUT OF CONTROL
	OVERTURNED
	ENCROACHMENT
	LEFT TURN
	RIGHT ANGLE
	STRUCK PARKED VEHICLE

COLORS	
	2020 CRASHES
	2021 CRASHES
	2022 CRASHES

NEW JERSEY DEPARTMENT OF TRANSPORTATION

BRICK BOULEVARD (CR 549) AND
CHAMBERS BRIDGE ROAD (CR 549)
FROM N.LAKESHORE AVENUE TO ROUTE 70
BRICK TOWNSHIP, OCEAN COUNTY
2020 - 2022 COLLISION DIAGRAMS

GPI
Engineering
Design
Planning
Construction Management

NOT TO SCALE

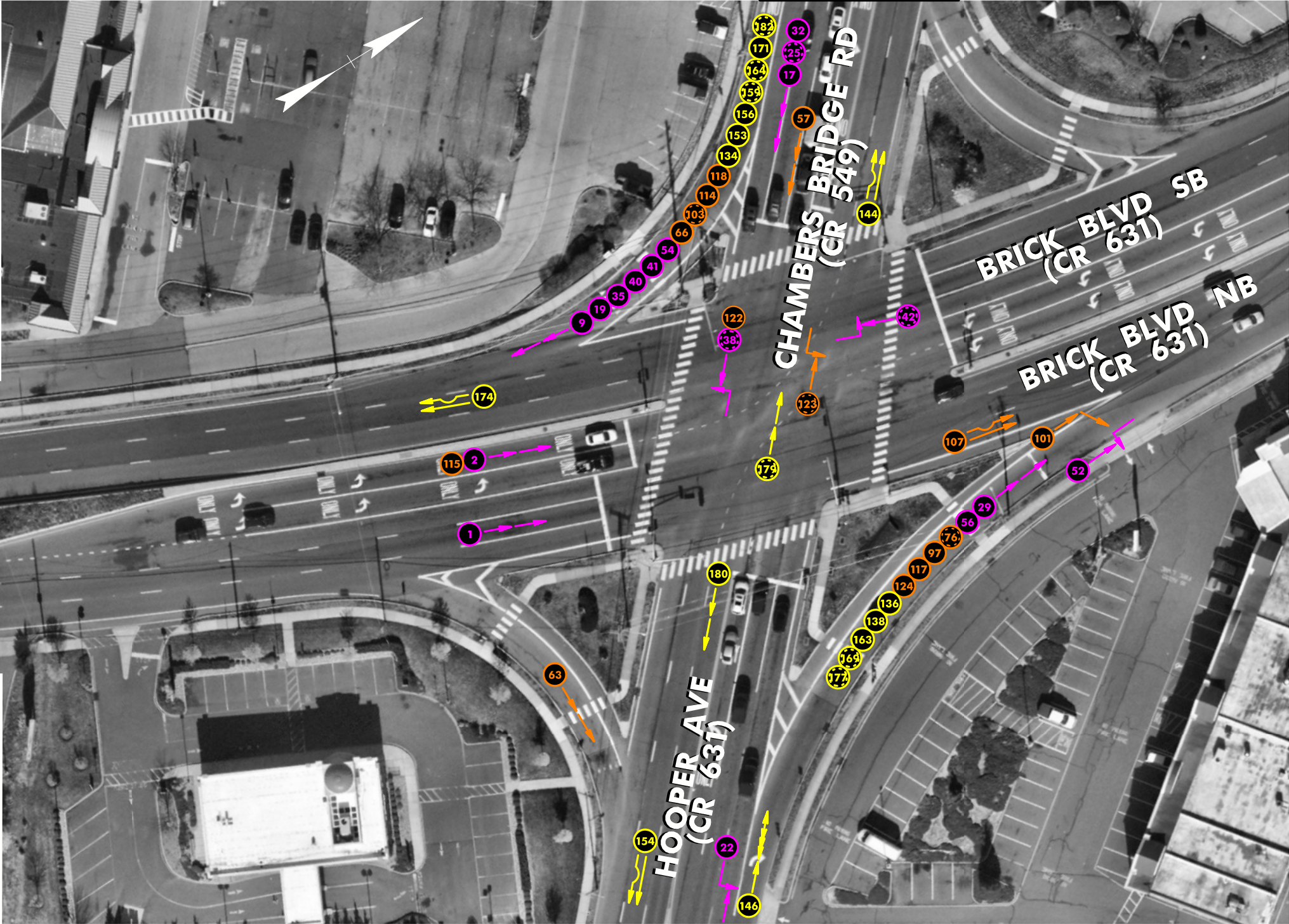
FILE: \\NF-ISA\pda\2021685 -HSIP - Project Development and Support\Cad\Hwy\Crash Diagrams\11 - NJTPA - Ocean - Brick Blvd\Vehicle Streets\Sheet 5.dgn
DATE: 9/12/2024
TIME: 11:25:39 AM
GREENMAN-PEDERSEN, INC.

SEE SHEET NO. 4 OF 7

SEE SHEET NO. 6 OF 7

COLLISION DIAGRAM DATA							
NO.	TIME	DAY	DATE	NO. INJURED	SURFACE CONDITION	WEATHER	LIGHT CONDITION
1	12:45	THU	01-09-20	0	DRY	CLEAR	DAY
2	20:18	SAT	01-11-20	0	DRY	CLEAR	DARK
9	17:07	SUN	03-08-20	0	DRY	CLEAR	DAY
17	12:20	WED	07-01-20	0	DRY	CLEAR	DAY
19	14:28	THU	07-02-20	0	DRY	CLEAR	DAY
22	13:35	THU	07-09-20	0	DRY	CLEAR	DAY
25	20:52	WED	07-22-20	1	WET	RAIN	DARK
29	10:11	SAT	08-15-20	0	DRY	CLEAR	DAY
32	17:59	TUE	09-01-20	0	DRY	CLEAR	DAY
35	17:24	SUN	09-13-20	0	DRY	CLEAR	DAY
38	12:14	SAT	10-03-20	1	DRY	CLEAR	DAY
40	16:38	TUE	10-06-20	0	DRY	CLEAR	DAY
41	16:41	WED	10-07-20	0	DRY	OVERCAST	DAY
42	10:52	THU	10-08-20	1	DRY	CLEAR	DAY
52	17:56	SUN	12-13-20	0	DRY	CLEAR	DARK
54	12:39	SAT	12-26-20	0	DRY	CLEAR	DAY
56	15:02	TUE	12-29-20	0	DRY	CLEAR	DAY
57	13:14	MON	01-11-21	0	DRY	CLEAR	DAY
63	17:47	WED	03-03-21	0	DRY	CLEAR	DAY
66	11:53	THU	03-18-21	0	WET	RAIN	DAY
76	19:09	MON	04-19-21	1	DRY	CLEAR	DUSK
97	21:02	WED	07-07-21	0	DRY	CLEAR	DARK
101	14:53	FRI	07-30-21	0	DRY	CLEAR	DAY
103	16:18	TUE	08-10-21	1	DRY	CLEAR	DAY
107	11:52	FRI	08-27-21	0	DRY	CLEAR	DAY
114	12:43	SAT	10-30-21	0	DRY	CLEAR	DAY
115	20:00	SUN	10-31-21	0	DRY	CLEAR	DARK
117	08:43	SAT	11-06-21	0	DRY	CLEAR	DAY
118	18:54	MON	11-08-21	0	DRY	CLEAR	DARK
122	10:18	MON	11-22-21	0	WET	OVERCAST	DAY
123	18:22	FRI	11-26-21	2	DRY	CLEAR	DARK
124	12:58	THU	12-23-21	0	DRY	CLEAR	DAY

COLLISION DIAGRAM DATA (continued)							
NO.	TIME	DAY	DATE	NO. INJURED	SURFACE CONDITION	WEATHER	LIGHT CONDITION
134	17:50	WED	04-06-22	0	DRY	CLEAR	DAY
136	14:53	MON	04-11-22	0	DRY	CLEAR	DAY
138	17:59	FRI	05-06-22	0	WET	RAIN	DAY
144	10:16	MON	05-23-22	0	DRY	CLEAR	DAY
146	16:44	TUE	05-24-22	0	DRY	CLEAR	DAY
153	13:10	FRI	06-17-22	0	DRY	CLEAR	DAY
154	15:58	SUN	06-19-22	0	DRY	CLEAR	DAY
156	10:37	MON	06-20-22	0	DRY	CLEAR	DAY
159	16:59	THU	07-14-22	1	DRY	CLEAR	DAY
163	14:17	WED	07-27-22	0	DRY	CLEAR	DAY
164	14:04	SUN	08-07-22	3	DRY	CLEAR	DAY
169	17:23	TUE	08-30-22	1	DRY	CLEAR	DAY
171	18:11	WED	09-07-22	0	DRY	CLEAR	DAY
174	14:28	MON	10-03-22	0	WET	RAIN	DAY
177	11:56	FRI	11-18-22	1	DRY	CLEAR	DAY
179	21:12	WED	12-14-22	1	DRY	CLEAR	DARK
180	17:01	FRI	12-16-22	0	WET	OVERCAST	DARK
182	08:03	TUE	12-20-22	1	DRY	CLEAR	DAY



LEGEND

NUMBER OF CRASHES WITH

PROPERTY DAMAGE ONLY

INJURIES

FATALITIES*

TOTAL NO. OF CRASHES

38

12

0

50

SYMBOLS

MOVING VEHICLE

BACKING VEHICLE

NON-INVOLVED VEHICLE

PEDESTRIAN

PROPERTY DAMAGE ONLY CRASH

INJURY IN CRASH

FIXED OBJECT

NON-FIXED OBJECT

BICYCLIST

FATAL CRASH

ANIMAL

POT HOLE

TYPES OF CRASHES

REAR END

HEAD ON

SIDE SWIPE

OUT OF CONTROL

OVERTURNED

ENCROACHMENT

LEFT TURN

RIGHT ANGLE

STRUCK PARKED VEHICLE

COLORS

2020 CRASHES

2021 CRASHES

2022 CRASHES

NEW JERSEY DEPARTMENT OF TRANSPORTATION

BRICK BOULEVARD (CR 549) AND
CHAMBERS BRIDGE ROAD (CR 549)
FROM N. LAKESHORE AVENUE TO ROUTE 70
BRICK TOWNSHIP, OCEAN COUNTY
2020 - 2022 COLLISION DIAGRAMS

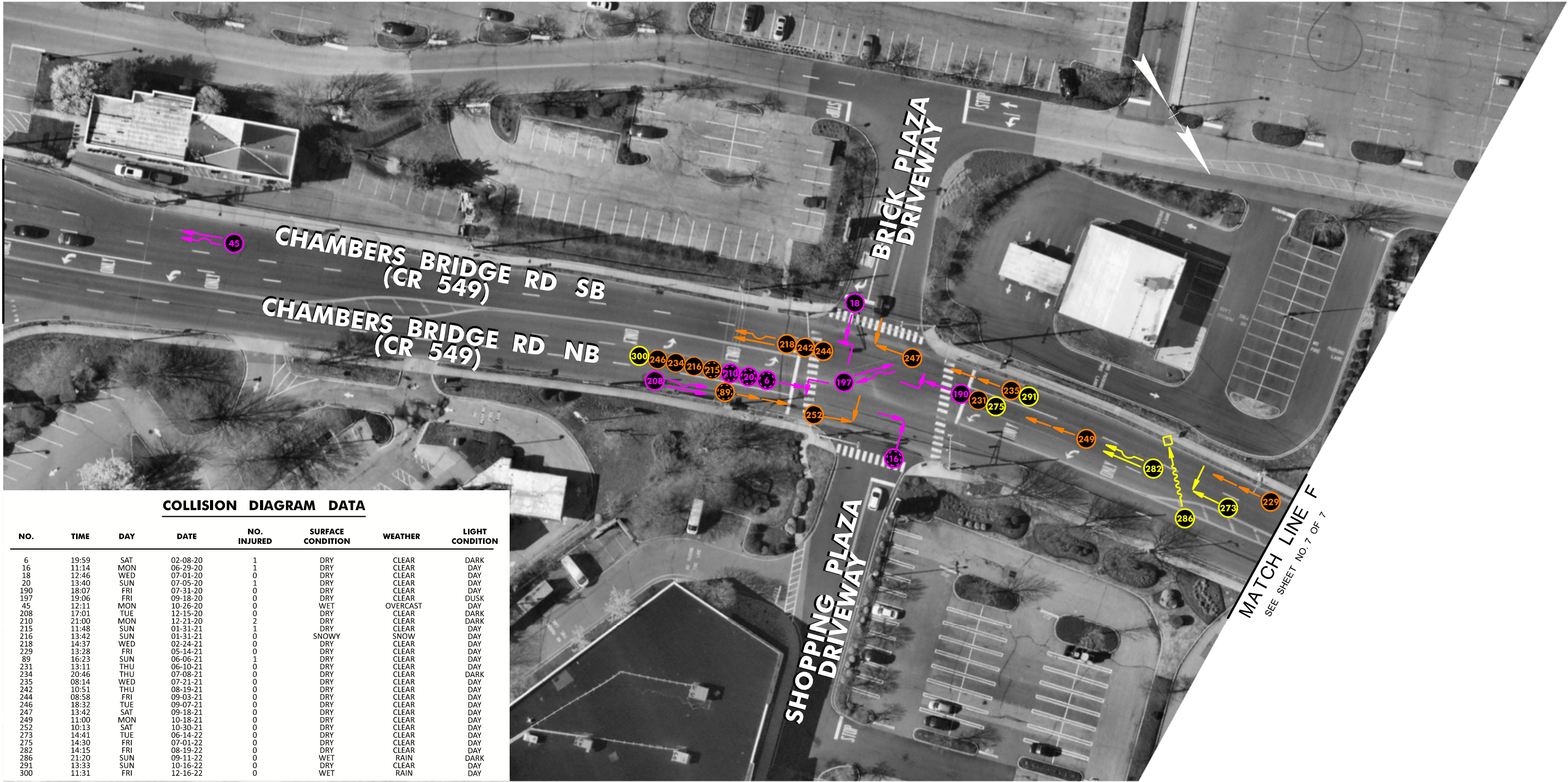
GPI

Engineering
Design
Planning
Construction Management

NOT TO SCALE

FILE: \\NF-IsV\pda\2021685 HSIP - NJTPA - Ocean Blvd\Vehicle Streets\Sheet 6.dgn DATE: 9/16/2024 TIME: 11:25:47 AM

MATCH LINE E
SEE SHEET NO. 5 OF 7



COLLISION DIAGRAM DATA

NO.	TIME	DAY	DATE	NO. INJURED	SURFACE CONDITION	WEATHER	LIGHT CONDITION
6	19:59	SAT	02-08-20	1	DRY	CLEAR	DARK
16	11:14	MON	06-29-20	1	DRY	CLEAR	DAY
18	12:46	WED	07-01-20	0	DRY	CLEAR	DAY
20	13:40	SUN	07-05-20	1	DRY	CLEAR	DAY
190	18:07	FRI	07-31-20	0	DRY	CLEAR	DAY
197	19:06	FRI	09-18-20	0	DRY	CLEAR	DUSK
45	12:11	MON	10-26-20	0	WET	OVERCAST	DAY
208	17:01	TUE	12-15-20	0	DRY	CLEAR	DARK
210	21:00	MON	12-21-20	2	DRY	CLEAR	DARK
215	11:48	SUN	01-31-21	1	DRY	CLEAR	DAY
216	13:42	SUN	01-31-21	0	SNOWY	SNOW	DAY
218	14:37	WED	02-24-21	0	DRY	CLEAR	DAY
229	13:28	FRI	05-14-21	0	DRY	CLEAR	DAY
89	16:23	SUN	06-06-21	1	DRY	CLEAR	DAY
231	13:11	THU	06-10-21	0	DRY	CLEAR	DAY
234	20:46	THU	07-08-21	0	DRY	CLEAR	DARK
235	08:14	WED	07-21-21	0	DRY	CLEAR	DAY
242	10:51	THU	08-19-21	0	DRY	CLEAR	DAY
244	08:58	FRI	09-03-21	0	DRY	CLEAR	DAY
246	18:32	TUE	09-07-21	0	DRY	CLEAR	DAY
247	13:42	SAT	09-18-21	0	DRY	CLEAR	DAY
249	11:00	MON	10-18-21	0	DRY	CLEAR	DAY
252	10:13	SAT	10-30-21	0	DRY	CLEAR	DAY
273	14:41	TUE	06-14-22	0	DRY	CLEAR	DAY
275	14:30	FRI	07-01-22	0	DRY	CLEAR	DAY
282	14:15	FRI	08-19-22	0	DRY	CLEAR	DAY
286	21:20	SUN	09-11-22	0	WET	RAIN	DARK
291	13:33	SUN	10-16-22	0	DRY	CLEAR	DAY
300	11:31	FRI	12-16-22	0	WET	RAIN	DAY

LEGEND

NUMBER OF CRASHES WITH

PROPERTY DAMAGE ONLY23

INJURIES6

FATALITIES*0

TOTAL NO. OF CRASHES29

SYMBOLS

MOVING VEHICLE

BACKING VEHICLE

NON-INVOLVED VEHICLE

PEDESTRIAN

BICYCLIST

PROPERTY DAMAGE ONLY CRASH

INJURY IN CRASH

FIXED OBJECT

NON-FIXED OBJECT

FATAL CRASH

ANIMAL

POT HOLE

TYPES OF CRASHES

REAR END

HEAD ON

SIDE SWIPE

OUT OF CONTROL

OVERTURNED

ENCROACHMENT

LEFT TURN

RIGHT ANGLE

STRUCK PARKED VEHICLE

COLORS

2020 CRASHES

2021 CRASHES

2022 CRASHES

NEW JERSEY DEPARTMENT OF TRANSPORTATION

BRICK BOULEVARD (CR 549) AND
CHAMBERS BRIDGE ROAD (CR 549)
FROM N.LAKESHORE AVENUE TO ROUTE 70
BRICK TOWNSHIP, OCEAN COUNTY
2020 - 2022 COLLISION DIAGRAMS

GPI

Engineering
Design
Planning
Construction Management

NOT TO SCALE

6
7



LEGEND

NUMBER OF CRASHES WITH	
PROPERTY DAMAGE ONLY	76
INJURIES	18
FATALITIES*	0
TOTAL NO. OF CRASHES	94

SYMBOLS

	MOVING VEHICLE
	BACKING VEHICLE
	NON-INVOLVED VEHICLE
	PEDESTRIAN
	BICYCLIST
	PROPERTY DAMAGE ONLY CRASH
	INJURY IN CRASH
	FATAL CRASH
	FIXED OBJECT
	ANIMAL
	NON-FIXED OBJECT
	POTHOLE

TYPES OF CRASHES



REAR END



ENCROACHMENT



HEAD ON



LEFT TURN



SIDE SWIPE



RIGHT ANGLE



OUT OF CONTROL



STRUCK PARKED VEHICLE



OVERTURNED

COLORS

- 2020 CRASHES
- 2021 CRASHES
- 2022 CRASHES

NEW JERSEY DEPARTMENT OF TRANSPORTATION

BRICK BOULEVARD (CR 549) AND
CHAMBERS BRIDGE ROAD (CR 549)
FROM N. LAKESHORE AVENUE TO ROUTE 70
BRICK TOWNSHIP, OCEAN COUNTY
2020 - 2022 COLLISION DIAGRAMS

GPI | Engineering
Design
Planning
Construction Management

NOT TO SCALE

FILE: L:\2021res HSP Project Development and Support\Cadd\Hwy\Crash Diagrams\Brick Ocean Bkvt\Vehicle Streets\Sheet 7.dgn
TIME: 9:29:40 AM
DATE: 8/12/2024
GREENMAN-PEDERSEN, INC.

COLLISION DIAGRAM DATA

NO.	TIME	DAY	DATE	NO. INJURED	SURFACE CONDITION	WEATHER	LIGHT CONDITION
183	19:46	FRI	03-06-20	0	WET	RAIN	DARK
184	12:14	SUN	03-08-20	0	DRY	CLEAR	DAY
185	07:51	THU	03-12-20	0	DRY	OVERCAST	DAY
186	08:01	THU	03-12-20	0	DRY	CLEAR	DAY
187	10:38	THU	03-26-20	0	DRY	CLEAR	DAY
188	17:22	TUE	04-07-20	1	DRY	CLEAR	DAY
189	17:00	TUE	07-21-20	1	DRY	CLEAR	DAY
191	10:02	MON	08-17-20	1	DRY	CLEAR	DAY
192	15:13	THU	08-20-20	0	DRY	CLEAR	DAY
193	21:18	FRI	08-21-20	0	DRY	CLEAR	DARK
194	15:37	SUN	08-23-20	0	WET	OVERCAST	DAY
195	16:41	WED	09-16-20	0	DRY	CLEAR	DAY
196	15:07	FRI	09-18-20	0	DRY	CLEAR	DAY
198	10:33	SAT	10-03-20	0	DRY	CLEAR	DAY
199	16:11	FRI	10-16-20	1	WET	RAIN	DAY
200	13:56	WED	10-21-20	0	DRY	CLEAR	DAY
201	12:33	SUN	11-08-20	0	DRY	CLEAR	DAY
202	18:58	MON	11-16-20	2	DRY	CLEAR	DARK
203	10:41	FRI	11-27-20	0	DRY	CLEAR	DAY
204	08:52	SAT	11-28-20	0	DRY	CLEAR	DAY
205	10:55	WED	12-02-20	3	DRY	CLEAR	DAY
206	08:19	MON	12-07-20	0	DRY	CLEAR	DAY
207	12:58	FRI	12-11-20	0	DRY	CLEAR	DAY
209	11:27	WED	12-16-20	0	DRY	OVERCAST	DAY
211	19:00	WED	01-06-21	0	DRY	CLEAR	DARK
212	12:50	SAT	01-23-21	0	DRY	CLEAR	DAY
213	13:53	THU	01-28-21	1	DRY	CLEAR	DAY
214	17:53	FRI	01-29-21	0	DRY	CLEAR	DARK
217	10:20	TUE	02-09-21	0	WET	RAIN	DAY
219	16:24	SUN	03-07-21	0	DRY	CLEAR	DAY
220	12:06	SUN	03-14-21	0	DRY	CLEAR	DAY
222	10:13	FRI	03-19-21	0	DRY	CLEAR	DAY
223	15:54	TUE	04-06-21	0	DRY	CLEAR	DAY
224	09:26	SAT	04-10-21	1	DRY	OVERCAST	DAY
225	14:47	TUE	04-20-21	0	DRY	CLEAR	DAY
226	11:21	SUN	04-25-21	0	WET	RAIN	DAY
227	11:27	WED	05-05-21	0	WET	RAIN	DAY
228	10:31	TUE	05-11-21	0	DRY	CLEAR	DAY
230	16:46	WED	05-26-21	0	DRY	CLEAR	DAY
232	11:16	SAT	06-19-21	0	DRY	CLEAR	DAY
233	09:08	MON	06-21-21	0	DRY	CLEAR	DAY
236	04:04	MON	07-26-21	0	DRY	CLEAR	DARK
237	13:09	MON	07-26-21	0	DRY	CLEAR	DAY
238	21:12	MON	07-26-21	0	DRY	CLEAR	DARK
239	12:49	SUN	08-01-21	2	DRY	OVERCAST	DAY
240	16:53	THU	08-05-21	1	DRY	CLEAR	DAY
241	20:39	TUE	08-10-21	0	DRY	CLEAR	DARK
243	23:51	THU	08-19-21	2	DRY	CLEAR	DARK
245	17:43	TUE	09-07-21	0	DRY	CLEAR	DAY
248	17:26	THU	09-23-21	0	WET	RAIN	DARK
250	19:24	MON	10-18-21	0	DRY	CLEAR	DARK
251	13:44	TUE	10-19-21	0	DRY	CLEAR	DAY
253	07:00	MON	11-08-21	1	DRY	CLEAR	DAY
254	10:21	SAT	11-13-21	0	DRY	CLEAR	DAY
255	21:42	MON	11-22-21	0	DRY	CLEAR	DARK
256	11:12	SUN	12-05-21	0	DRY	CLEAR	DAY
257	13:05	SAT	12-11-21	0	DRY	CLEAR	DAY
258	10:59	MON	12-27-21	0	DRY	CLEAR	DAY
259	13:41	THU	01-06-22	0	DRY	CLEAR	DAY
260	09:55	FRI	01-28-22	1	DRY	OVERCAST	DAY
261	16:57	THU	02-17-22	0	DRY	CLEAR	DAY
262	19:40	SAT	02-19-22	0	DRY	CLEAR	DARK
263	20:04	MON	03-07-22	0	DRY	CLEAR	DARK
264	17:30	THU	03-10-22	0	DRY	CLEAR	DUSK
266	13:37	TUE	04-26-22	0	DRY	CLEAR	DAY
267	12:47	WED	04-27-22	0	DRY	CLEAR	DAY
268	16:16	MON	05-02-22	0	DRY	CLEAR	DAY
269	12:58	SUN	05-08-22	0	DRY	CLEAR	DAY
270	20:19	THU	05-12-22	0	DRY	FOG/SMOG/SMOKE	DARK
271	20:40	FRI	05-13-22	1	WET	FOG/SMOG/SMOKE	DARK
272	02:27	SAT	05-21-22	0	DRY	CLEAR	DARK
274	13:04	MON	06-27-22	0	DRY	OVERCAST	DAY
276	19:43	SAT	07-02-22	2	DRY	CLEAR	DUSK
277	13:17	TUE	07-12-22	0	DRY	CLEAR	DAY
278	15:27	THU	07-14-22	0	DRY	CLEAR	DAY
280	14:02	THU	07-28-22	0	DRY	CLEAR	DAY
281	07:05	SUN	08-07-22	0	DRY	CLEAR	DAY
283	09:58	MON	08-22-22	0	WET	RAIN	DAY
284	13:11	THU	08-25-22	0	DRY	CLEAR	DAY
285	09:21	FRI	09-02-22	1	DRY	CLEAR	DAY
287	15:52	MON	09-19-22	1	DRY	CLEAR	DAY
289	18:11	SAT	10-01-22	0	WET	RAIN	DUSK
290	11:07	SUN	10-16-22	1	DRY	CLEAR	DAY
292	17:55	WED	10-19-22	0	DRY	CLEAR	DUSK
293	12:46	THU	10-20-22	0	DRY	CLEAR	DAY
294	20:46	MON	10-31-22	0	WET	RAIN	DARK
295	17:33	SUN	11-06-22	0	DRY	CLEAR	DARK
296	11:10	SUN	11-20-22	0	DRY	CLEAR	DAY
297	18:55	SAT	12-03-22	2	WET	RAIN	DARK
298	10:19	TUE	12-13-22	0	DRY	CLEAR	DAY
299	06:46	WED	12-14-22	0	DRY	CLEAR	DAWN
301	12:49	SUN	12-18-22	0	DRY	CLEAR	DAY
302	15:07	FRI	12-23-22	0	WET	RAIN	DAY
303	16:45	TUE	12-27-22	0	DRY	CLEAR	DAY

LEGEND

NUMBER OF CRASHES WITH

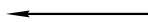
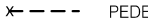
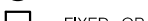
PROPERTY DAMAGE ONLY 76

INJURIES 18

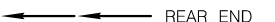
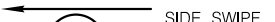
FATALITIES* 0

TOTAL NO. OF CRASHES 94

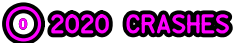
SYMBOLS

-  MOVING VEHICLE
-  BACKING VEHICLE
-  NON-INVOLVED VEHICLE
-  PEDESTRIAN
-  BICYCLIST
-  PROPERTY DAMAGE ONLY CRASH
-  INJURY IN CRASH
-  FIXED OBJECT
-  NON-FIXED OBJECT
-  FATAL CRASH
-  ANIMAL
-  POTHOLE

TYPES OF CRASHES

-  REAR END
-  ENCROACHMENT
-  HEAD ON
-  LEFT TURN
-  SIDE SWIPE
-  RIGHT ANGLE
-  OUT OF CONTROL
-  STRUCK PARKED VEHICLE
-  OVERTAKEN

COLORS

-  2020 CRASHES
-  2021 CRASHES
-  2022 CRASHES

NEW JERSEY DEPARTMENT OF TRANSPORTATION

BRICK BOULEVARD (CR 549) AND
CHAMBERS BRIDGE ROAD (CR 549)
FROM N.LAKESHORE AVENUE TO ROUTE 70
BRICK TOWNSHIP, OCEAN COUNTY
2020 - 2022 COLLISION DIAGRAMS

GPI Engineering
Design
Planning
Construction Management

NOT TO SCALE

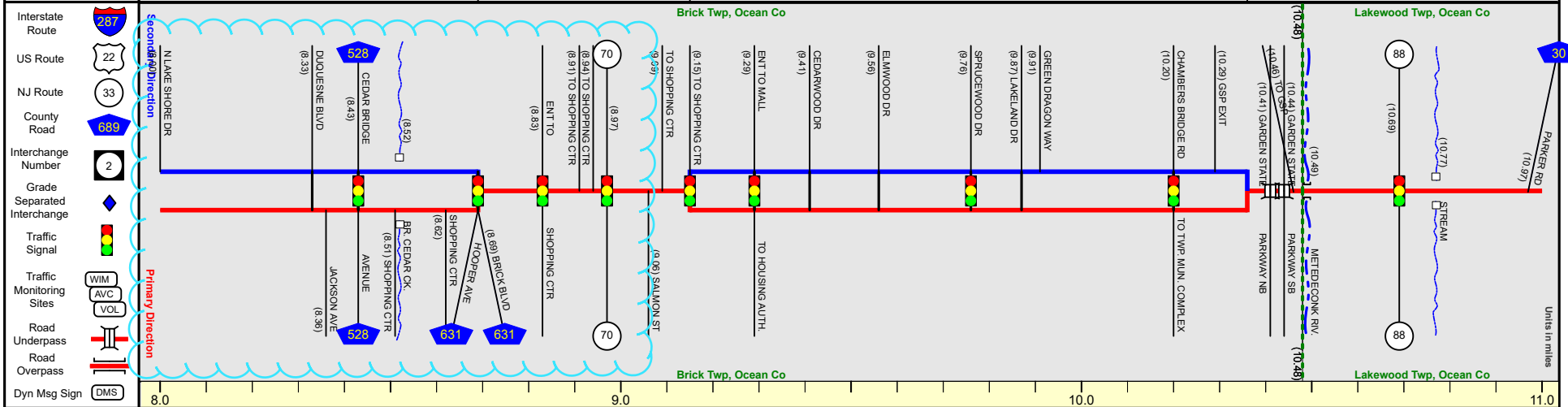
E. TRAFFIC DATA STRAIGHT LINE DIAGRAMS

ROUTE 549 (South to North)

Mile Posts: 8.000 - 11.000



Pavement	30	36	28	8
Shoulder	2		6	
Number of Lanes	2	3	2	
Speed Limit	40	35	40	
Street Name	Brick Boulevard		Chambers Bridge Road	



Street Name	Brick Boulevard		Chambers Bridge Road	
Jurisdiction	County			
Functional Class	Urban Principal Arterial			
Federal Aid - NHS Sy	NHS			
Control Section				
Speed Limit	40	35	40	
Number of Lanes	3	4	2	4
Med. Type	Curbed	Positive	Curbed	Positive
Med. Width	VAR	4	VAR	4
Pavement	36	60	28	48
Shoulder			6	8
Traffic Volume	29,537 (2019)		21,064 (2017)	
Traffic Sta. ID	91518		6-4,462	
Structure No.			360911S 360911N 1506003	
Enlarged Views				

SRI = 00000549__

Date last inventoried: October 2012



New Jersey DOT

Most Recent 48 Hour Count for Year for 1/1/2020 - 12/31/2020
Criteria: Type = I-SECTION, Is Perm Station = 0, From 1/1/2020 To 12/31/2020

Location ID: 6-4-456

County: Ocean

Location: BRICK BLVD BET N LAKE SHORE DR DUQUESNE BLVD

Tuesday, August 4, 2020

Time	NB Hourly	SB Hourly	2-WAY Hourly
0:00-1:00	75	195	270
1:00-2:00	41	82	123
2:00-3:00	40	62	102
3:00-4:00	39	36	75
4:00-5:00	86	69	155
5:00-6:00	259	101	360
6:00-7:00	556	312	868
7:00-8:00	1,014	632	1,646
8:00-9:00	1,080	838	1,918
9:00-10:00	1,088	1,017	2,105
10:00-11:00	1,144	1,136	2,280
11:00-12:00	1,221	1,351	2,572
12:00-13:00	754	1,246	2,000
13:00-14:00	689	1,369	2,058
14:00-15:00	849	1,442	2,291
15:00-16:00	827	1,711	2,538
16:00-17:00	886	1,827	2,713
17:00-18:00	1,022	1,905	2,927
18:00-19:00	976	1,664	2,640
19:00-20:00	829	1,398	2,227
20:00-21:00	724	1,268	1,992
21:00-22:00	470	942	1,412
22:00-23:00	291	538	829
23:00-24:00	169	357	526

Count Total	15,129	21,498	36,627
AM Peak	07:30-08:30 1,122	08:00-09:00 838	08:00-09:00 1,918
Mid Peak	11:00-12:00 1,221	13:45-14:45 1,451	11:00-12:00 2,572
PM Peak	17:00-18:00 1,022	16:30-17:30 1,920	17:00-18:00 2,927

Wednesday, August 5, 2020

Time	NB Hourly	SB Hourly	2-WAY Hourly
0:00-1:00	65	171	236
1:00-2:00	41	83	124
2:00-3:00	34	42	76
3:00-4:00	38	34	72
4:00-5:00	76	74	150
5:00-6:00	223	147	370
6:00-7:00	513	263	776
7:00-8:00	959	624	1,583
8:00-9:00	1,097	828	1,925
9:00-10:00	951	989	1,940
10:00-11:00	1,017	1,032	2,049
11:00-12:00	1,118	1,187	2,305
12:00-13:00	1,211	1,432	2,643
13:00-14:00	1,251	1,470	2,721
14:00-15:00	1,225	1,528	2,753
15:00-16:00	1,164	1,524	2,688
16:00-17:00	1,117	1,574	2,691
17:00-18:00	1,079	1,570	2,649
18:00-19:00	920	1,281	2,201
19:00-20:00	768	1,236	2,004
20:00-21:00	637	1,231	1,868
21:00-22:00	419	793	1,212
22:00-23:00	273	527	800
23:00-24:00	171	339	510

Count Total	16,367	19,979	36,346
AM Peak	07:30-08:30 1,134	08:00-09:00 828	08:00-09:00 1,925
Mid Peak	12:45-13:45 1,252	13:45-14:45 1,574	13:45-14:45 2,796
PM Peak	15:15-16:15 1,170	16:30-17:30 1,595	15:15-16:15 2,743

Station AADT * 28,136

* The AADT Estimate is based on factors in use on the date the report was generated

Peak Hour Starts Between		
Period	Begin	End
AM	6:00	9:00
MID	9:15	14:45
PM	15:00	18:00

F. PHOTOGRAPHS

Congestion on Brick Boulevard SB is due to the decrease from 3 lanes to 2 lanes



No signage directing traffic for the U-turn onto Brick Boulevard SB



Driveway is directly off the ramp to Lakeshore Ave



Sidewalk not ADA compliant and not up to size standards



Pedestrian crossing adjacent to the crosswalk

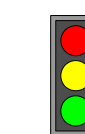


No lighting on the traffic signal equipment only on the utility poles on the SB side of Brick Boulevard

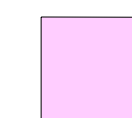


Cracked sidewalk and driveway

LEGEND



SIGNALIZED INTERSECTION



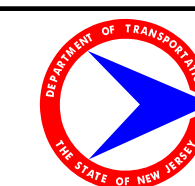
PROJECT CORRIDOR

1
6

**NJDOT HSIP – ROAD SAFETY AUDIT
BRICK BOULEVARD (CR 549) AND
CHAMBERS BRIDGE ROAD (CR 549)**

BRICK TOWNSHIP, OCEAN COUNTY

SITE PHOTOGRAPHS



GPI Engineering
Design
Planning
Construction Management

N.T.S.

Sharp turning radii



No bike lanes and small shoulder width forces bicyclist to use the sidewalk



Broken barrier at the start of the concrete dividers



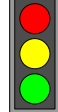
Low visibility of the speed limit sign due to placement



Steep driveway



Utility pole restricts the sidewalk to be close to the roadway;
Sidewalks is not 5' width

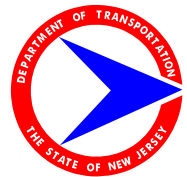
- LEGEND**
-  **SIGNALIZED INTERSECTION**
 -  **PROJECT CORRIDOR**

2
6

**NJDOT HSIP – ROAD SAFETY AUDIT
BRICK BOULEVARD (CR 549) AND
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BRICK TOWNSHIP, OCEAN COUNTY

SITE PHOTOGRAPHS



GPI Engineering
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N.T.S.

No pavement markings to indicate lane ends and merges



Faded sign



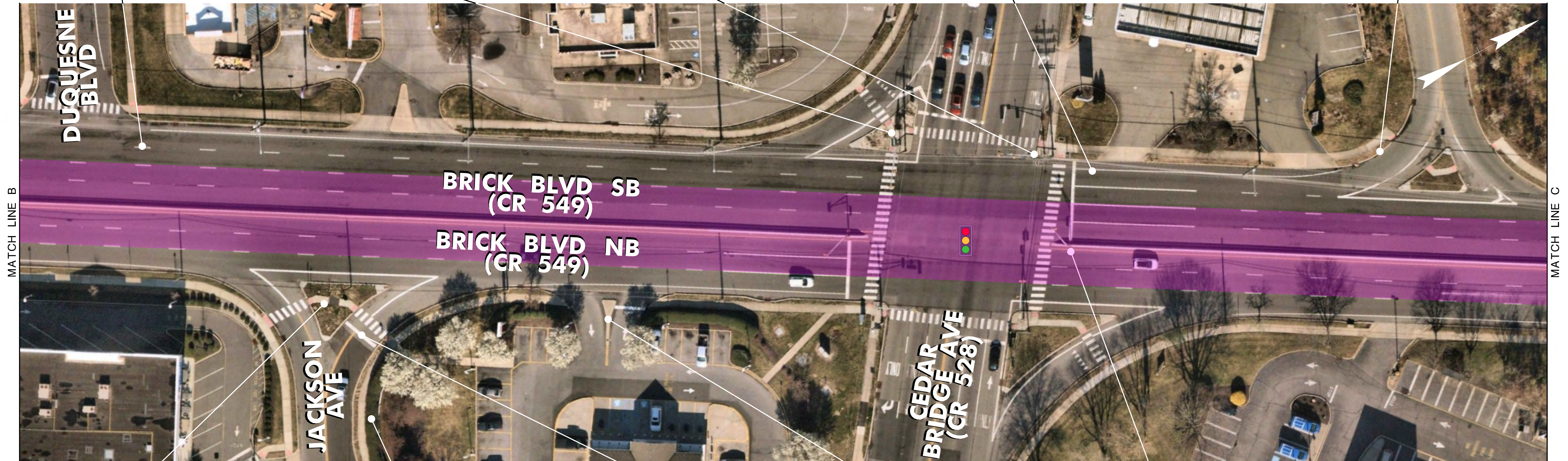
Missing pedestrian push button;
Bicyclist crossing adjacent to the crosswalk



Bus stops are located at the intersection and obstructs the right lane when stopped



Faded striping;
Missing crosswalk striping;
No stop or yield signage at the turnlane



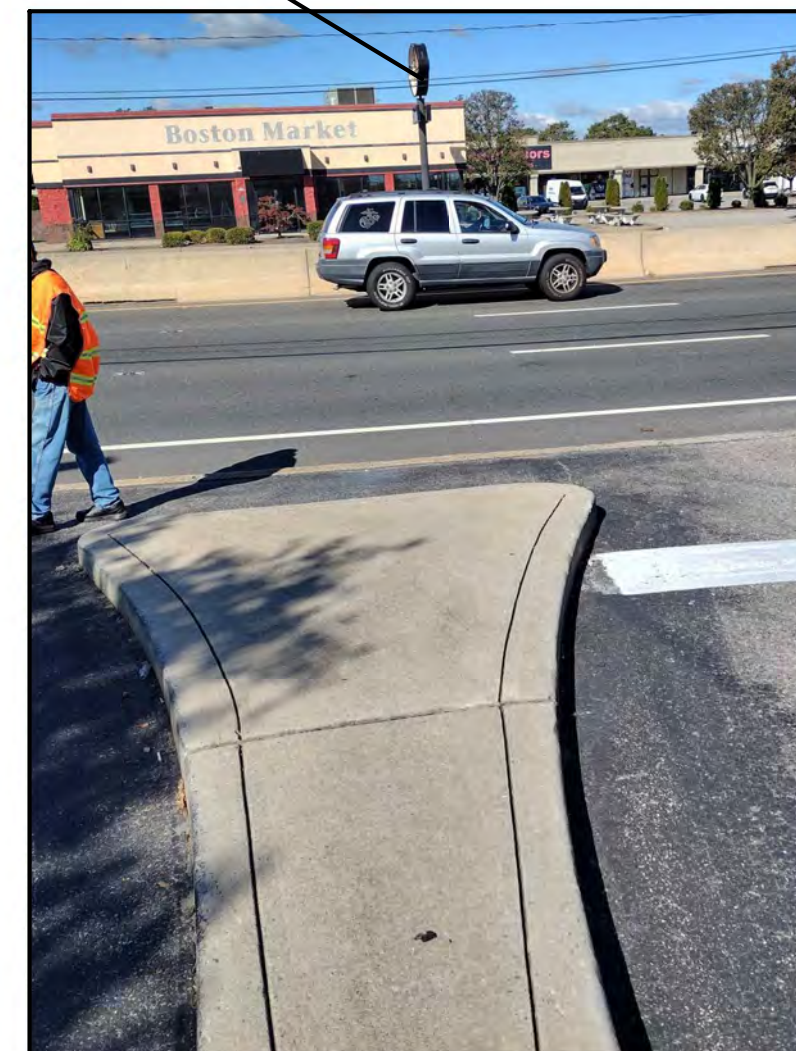
Sidewalk is not consistently concrete



Vegetation obstructing the sight of pedestrians using the crosswalk



Stop bar is set too far back to have visibility of Brick Boulevard NB traffic

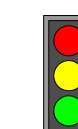


Raised island is not ADA compliant

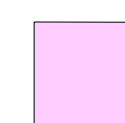


Signal pole between the concrete barrier

LEGEND



SIGNALIZED INTERSECTION



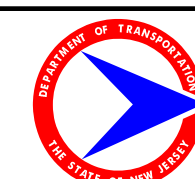
PROJECT CORRIDOR

3
6

**NJDOT HSIP – ROAD SAFETY AUDIT
BRICK BOULEVARD (CR 549) AND
CHAMBERS BRIDGE ROAD (CR 549)**

BRICK TOWNSHIP, OCEAN COUNTY

SITE PHOTOGRAPHS



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N.T.S.

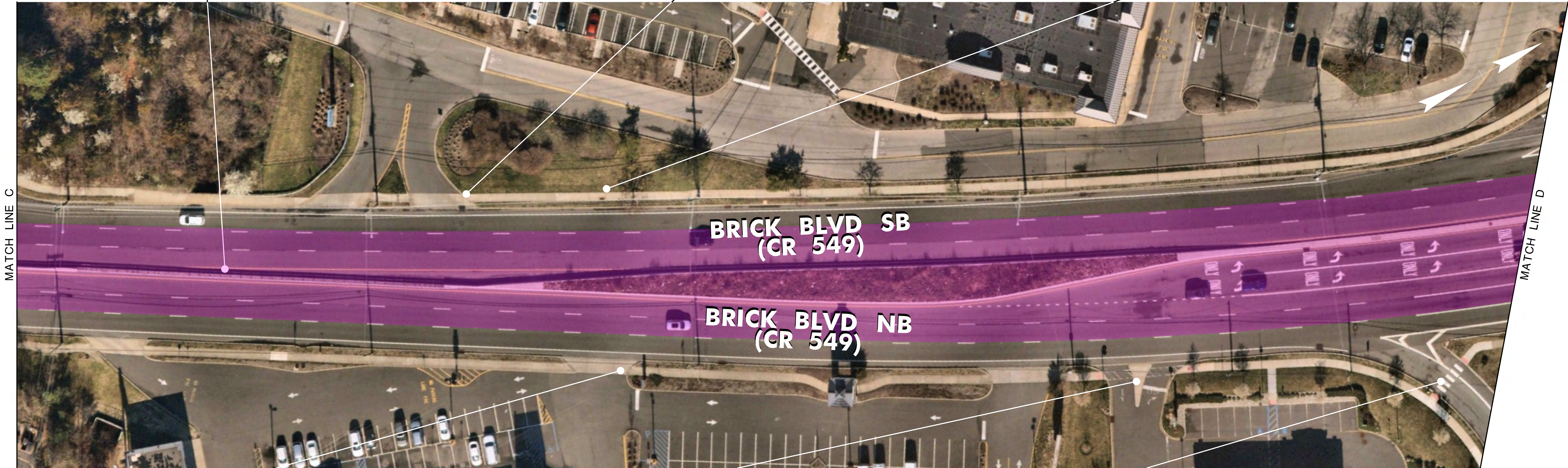
Roadway dividers change from concrete dividers to metal



Cracked curb ramp; Ramp is not ADA compliant



Junctionbox not flush with sidewalk and is a tripping hazard



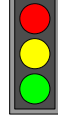
Broken ADA ramp



Faded Crosswalk striping



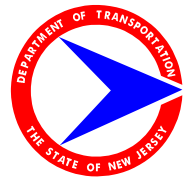
Cracked Crosswalk and shoulder paint

- LEGEND**
-  **SIGNALIZED INTERSECTION**
 -  **PROJECT CORRIDOR**

NJDOT HSIP – ROAD SAFETY AUDIT
BRICK BOULEVARD (CR 549) AND
CHAMBERS BRIDGE ROAD (CR 549)

BRICK TOWNSHIP, OCEAN COUNTY

SITE PHOTOGRAPHS



Engineering
Design
Planning
Construction Management

N.T.S.

No lighting on traffic signal system



Right turn lane backed up due to signal cycle



Crosswalk Striping needs to be revised



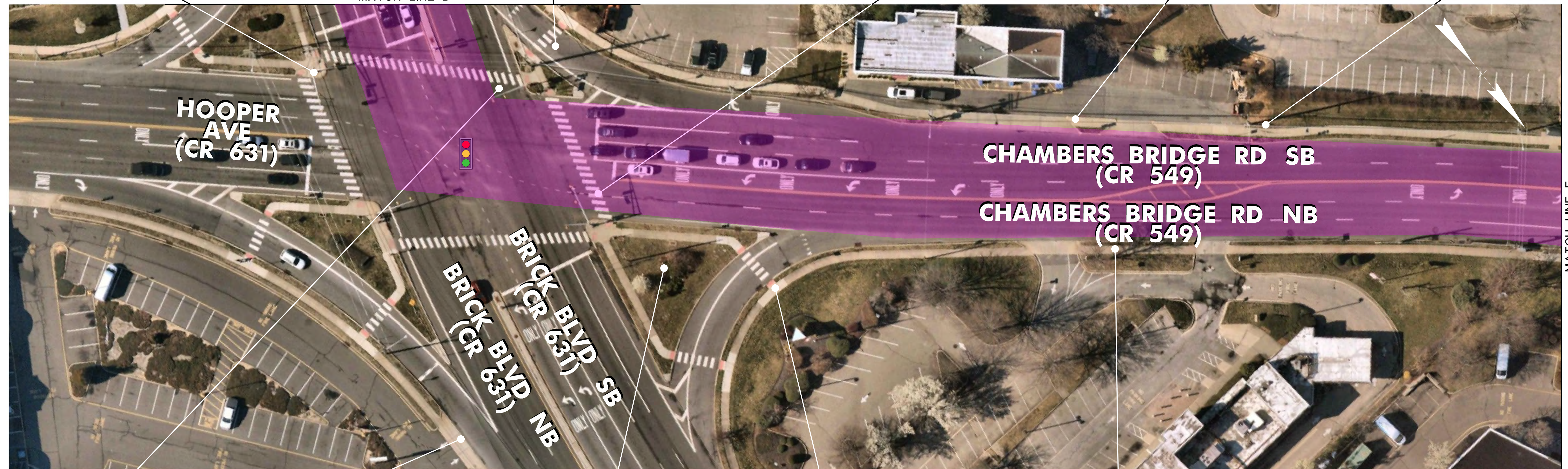
Curb ramps not ADA compliant



Broken sidewalk



MATCH LINE D



MATCH LINE E



Broken traffic signal equipment



Driveway close to the the ramp



Drain is not at the lowest point and is blocked by overgrown vegetation

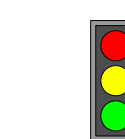


Turning radii obstructs pedestrian views of the farther crosswalk

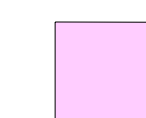


Broken off Curb

LEGEND



SIGNALIZED INTERSECTION



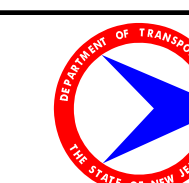
PROJECT CORRIDOR

5
6

**NJDOT HSIP – ROAD SAFETY AUDIT
BRICK BOULEVARD (CR 549) AND
CHAMBERS BRIDGE ROAD (CR 549)**

BRICK TOWNSHIP, OCEAN COUNTY

SITE PHOTOGRAPHS



GPI Engineering
Design
Planning
Construction Management

N.T.S.

Worn Crosswalk paint



Utility wires obstructing traffic signal view



Witnessed traffic is making a left turn from Chambers Bridge Road NB into parking lot



Worn and cracked signage



No lighting at the intersection;
No backplates



Missing signage



Tripping hazard due to uneven sidewalk



Sidewalk pathway cuts close to the roadway due to parking lot lighting

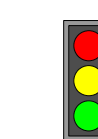


Broken sidewalk around the junction box

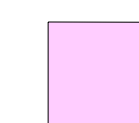


Signage pole is damaged

LEGEND



SIGNALIZED INTERSECTION



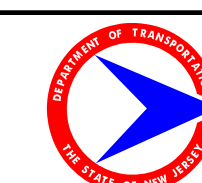
PROJECT CORRIDOR

6/6

NJDOT HSIP – ROAD SAFETY AUDIT
BRICK BOULEVARD (CR 549) AND
CHAMBERS BRIDGE ROAD (CR 549)

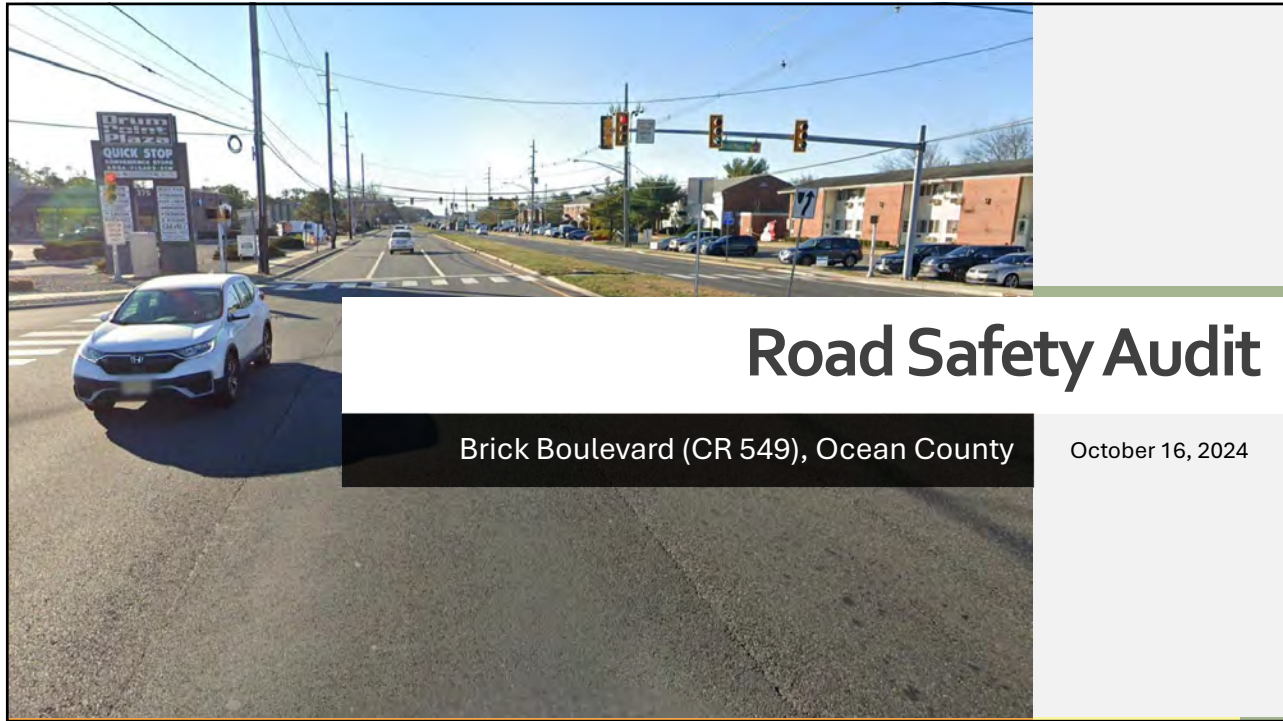
BRICK TOWNSHIP, OCEAN COUNTY

SITE PHOTOGRAPHS



N.T.S.

G. PRE-AUDIT PRESENTATION



Road Safety Audit

Brick Boulevard (CR 549), Ocean County

October 16, 2024

1



Audit Team

Represented Agencies

NJDOT, NJTPA, NJ Transit
Ocean County
Brick Township

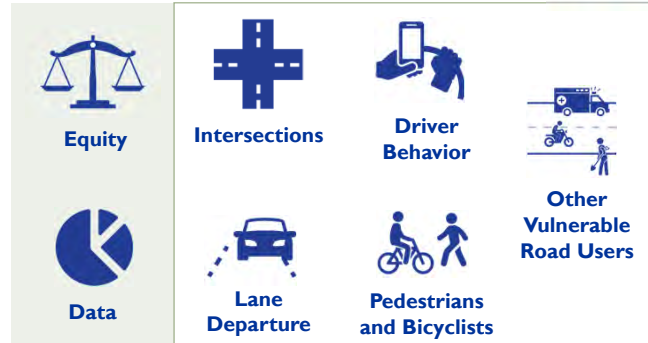
- Funded by Federal Highway Administration and NJDOT
- Presented by Greenman-Pedersen, Inc., NJDOT Consultant

2

2

Highway Safety Improvement Program (HSIP)

- 7 Emphasis Areas (NJ 2020 Strategic Highway Safety Plan)
- 7 sub-programs including Local Safety Program – ROAD SAFETY AUDITS
- Core Federal Aid Program, NJ receives about \$75M



Driver Behavior: Drowsy and Distracted Driving, Aggressive Driving, Impaired Driving, Unlicensed Driving, and Unbelted Drivers and Occupants

Other Vulnerable Road Users: Mature Drivers, Younger Drivers, Motorcyclists, Work Zone Workers and Other Road Workers

Brick Boulevard (CR 549) RSA

3

3

Safe System Approach

Zero is our goal. A Safe System is how we will get there.

The Basics

- Eliminate fatal & serious injuries for all road users
- Holistic view of the road system:
 - Anticipates human mistakes
 - Keeps impact energy tolerable on the human body
- Human perspective
- Ethical imperative of the designers and owners of the transportation system



4

4

Federal Transportation Funding

- **Local Safety and High Risk Rural Roads Programs**
 - \$235M on County / Local Roadways
 - Relatively quick-fix safety improvements
- **HSIP funds** – emphasizes data-driven, strategic approach to improving highway safety
- **Network Screening** – identifies locations experiencing:
 - High crash frequencies
 - Severe crash injuries
 - Specific crash types (e.g. right-angle, roadway departures)
- **Community Outreach** – opportunities for public, local officials and stakeholders to comment and ask questions

Local Safety Program & High Risk Rural Roads FY 2004–2022

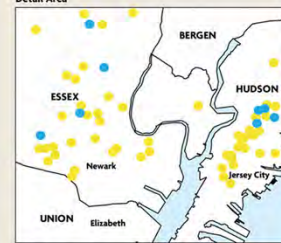
LOCAL SAFETY PROGRAM
 Past: 126 projects \$235 M
 FY 2022: 19 projects \$168 M
 TOTAL: 145 projects \$403 M

HRRR PROGRAM
 Past: 23 projects \$53 M
 FY 2022: 3 projects \$20 M
 TOTAL: 26 projects \$73 M

FY 2022 PROJECTS
 ● Local Safety Projects
 ● High Risk Rural Road Projects

PAST PROJECTS
 ● Local Safety Projects
 ● High Risk Rural Road Projects

Detail Area



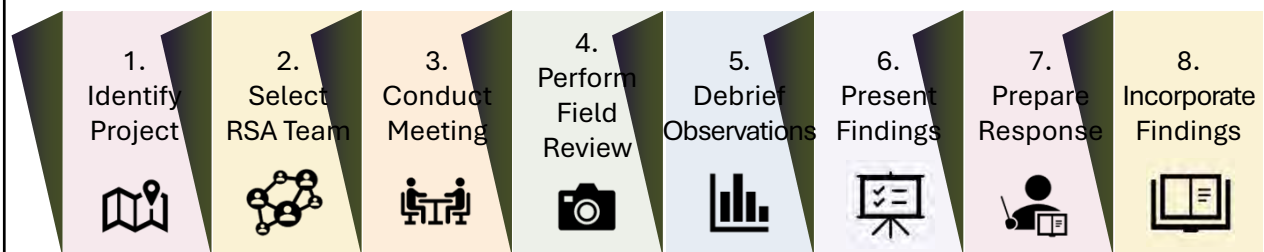
5

5

RSA Purpose and Process

Formal safety performance examination by an independent, multidisciplinary audit team that identifies safety improvement opportunities for all road users.

- Pro-actively address safety; reduce crashes
- Identify low-cost/high-value improvements
- Promote “safety culture”
- Provide continuous advancement of safety skills and knowledge
- Contribute feedback on safety issues
- Support optimized savings of lives, money and time



Responsibilities: Steps 1-2 & 7-8: Design Team/Road Owner | Steps 3-6: RSA Team

Brick Boulevard (CR 549) RSA

6

6



FHWA Proven Safety Countermeasures (PSC)

- 28 countermeasures
- Research proven strategies
 - ✓ Intersections
 - ✓ Roadway departures
 - ✓ Pedestrian/bicyclist
- Several crosscutting strategies address multiple safety focus areas

7

PSC Examples



Road Diet, Asbury Park City, Monmouth County



Roundabout, Cinnaminson Township, Burlington County



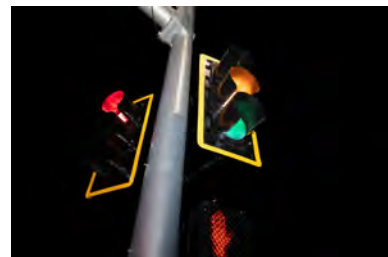
Enhanced Delineation, Horizontal Curves, Statewide



Pedestrian Hybrid Beacon (HAWK), Carlsbad Borough, Bergen County



RRFBs and high visibility crosswalks, Princeton Township, Mercer County



Backplates with Retroreflective Borders, Statewide

8

Project Area Site Summary



- Divided to Hooper Ave
- Undivided to Rt 70
- Urban principal arterial
- 5-6 lanes, narrow shoulders
- Sidewalk both sides
- 35-40 mph
- Commercial and residential



Demographics

Item*	Study Area	Ocean Co.
DI	53%	43%
POC	29%	17%
65+	11%	22%
18-	30%	31%
LI	27%	26%
LEP	4%	2%
PwD	11%	13%

* DI = Demographic Index
POC = People of Color
65+ = People over age 64
18- = People under age 18
LI = Low Income (persons)

LEP = Limited English Proficiency
PwD = Persons with a Disability
DI is percentile in NJ ; how an area ranks compared to the state. 50% is the median.

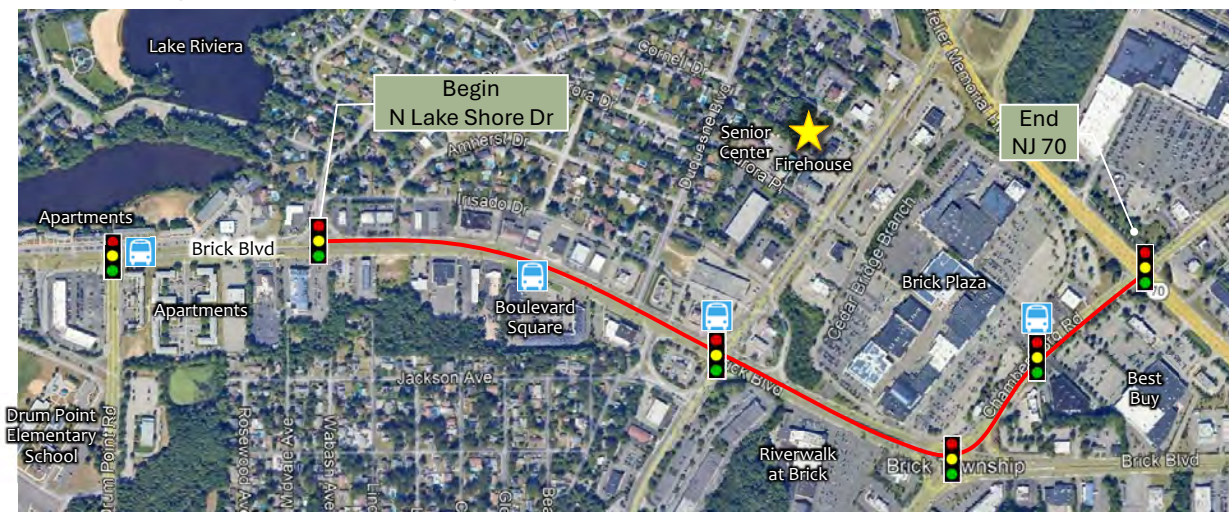
Brick Boulevard (CR 549) RSA

9

9

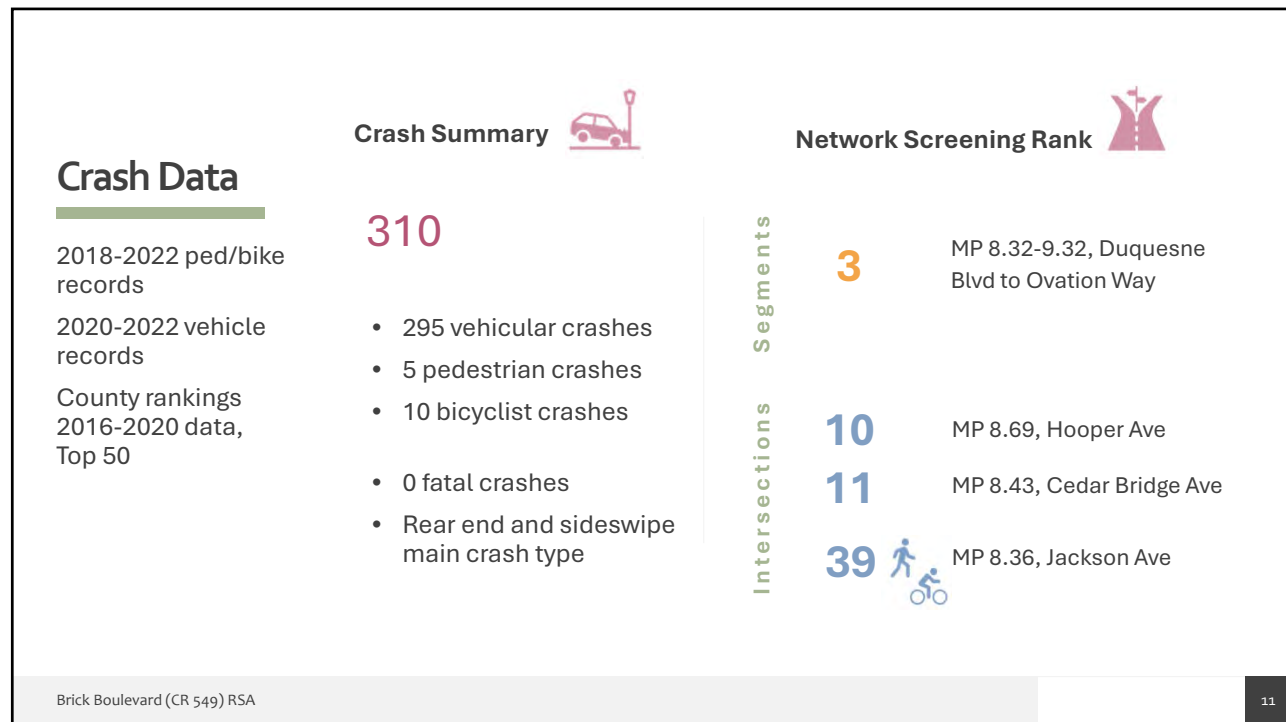
Project Area

Ocean County Route 549, Brick Township

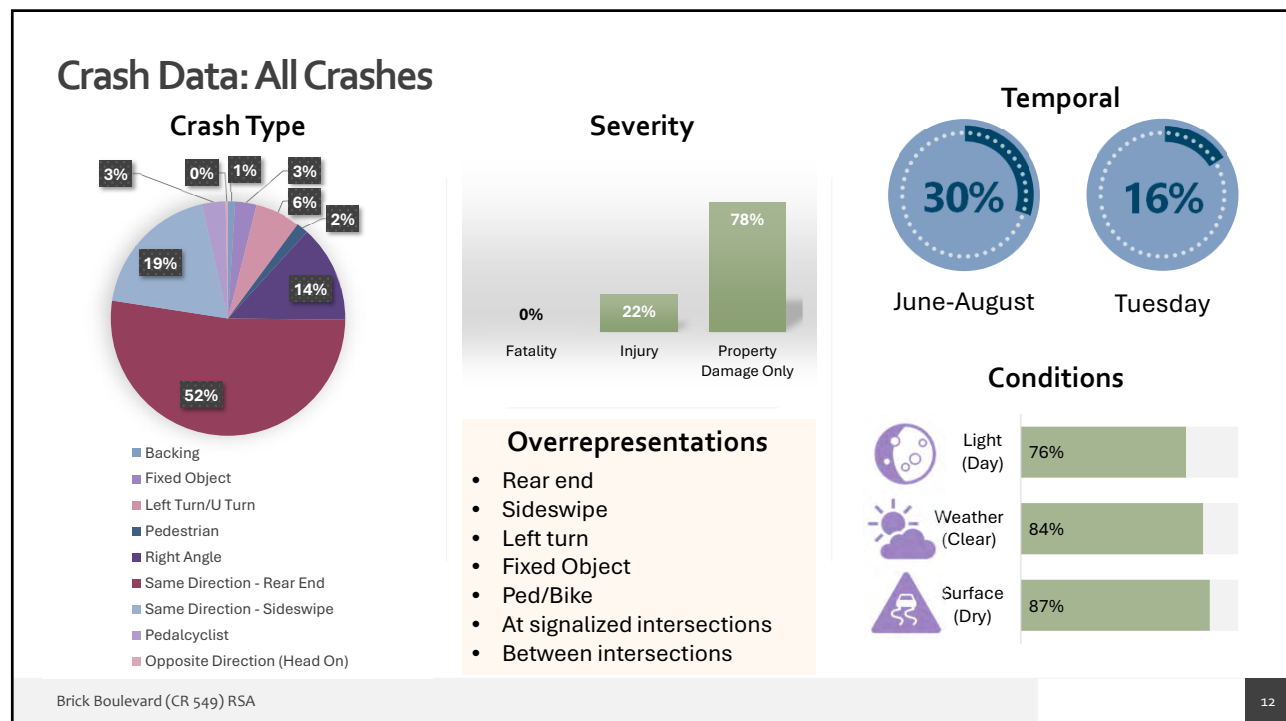


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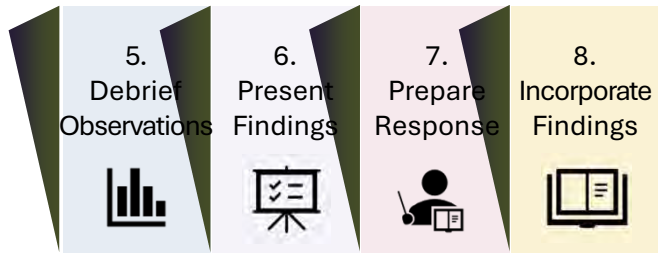
11



12

Next Steps

- Preparation of RSA Report
- Review/comments from RSA Team
- Preparation of Preliminary Final Report
- Preparation of Final Report
- Approximate timeframe: 6-8 weeks for draft report



Brick Boulevard (CR 549) RSA

15

15



16

H.ROAD OWNER REPONSE

Mark F. Jehnke, P.E.
Ocean County Engineer

Sean M. Areia, P.E.
Assistant County Engineer

Gregory L. Smith, P.E.
Assistant County Engineer

Thomas E. Hartman, Jr., P.E.
Chief Engineer

Lukasz Praski, P.E.
Chief Engineer

Lynn A. LaMunyon, P.E., PTOE
Traffic Engineer
April 2, 2025



OFFICE OF THE OCEAN COUNTY ENGINEER

129 Hooper Avenue • P.O. Box 2191
Toms River, New Jersey 08754-2191

Voice (732) 929-2130

Telefax (732) 506-5182

Road Opening Permit (732) 929-2124

Traffic (732) 349-8165

Ms. Julia Steponanko, P.E., RSP1
Greenman-Pederson, Inc.
520 US Highway 22
Suite 200
Bridgewater, NJ 08807

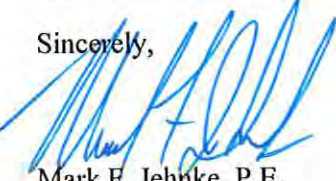
Re: Road Safety Audit, CR 549 (Chambers Bridge Road and Brick Boulevard), Brick Township

Dear Ms. Steponanko:

We would like to take the opportunity to thank the Road Safety Audit (RSA) Team for the time and effort to evaluate traffic safety along Chamber Bridge Road and Brick Boulevard in Brick Township. The Team identified many opportunities for improvements along the corridor that will be useful in our future evaluations.

Thank you for the opportunity and we look forward to continue to work with the RSA Team to evaluate opportunities to improve safety along County roadways.

Sincerely,



Mark F. Jehnke, P.E.
Ocean County Engineer

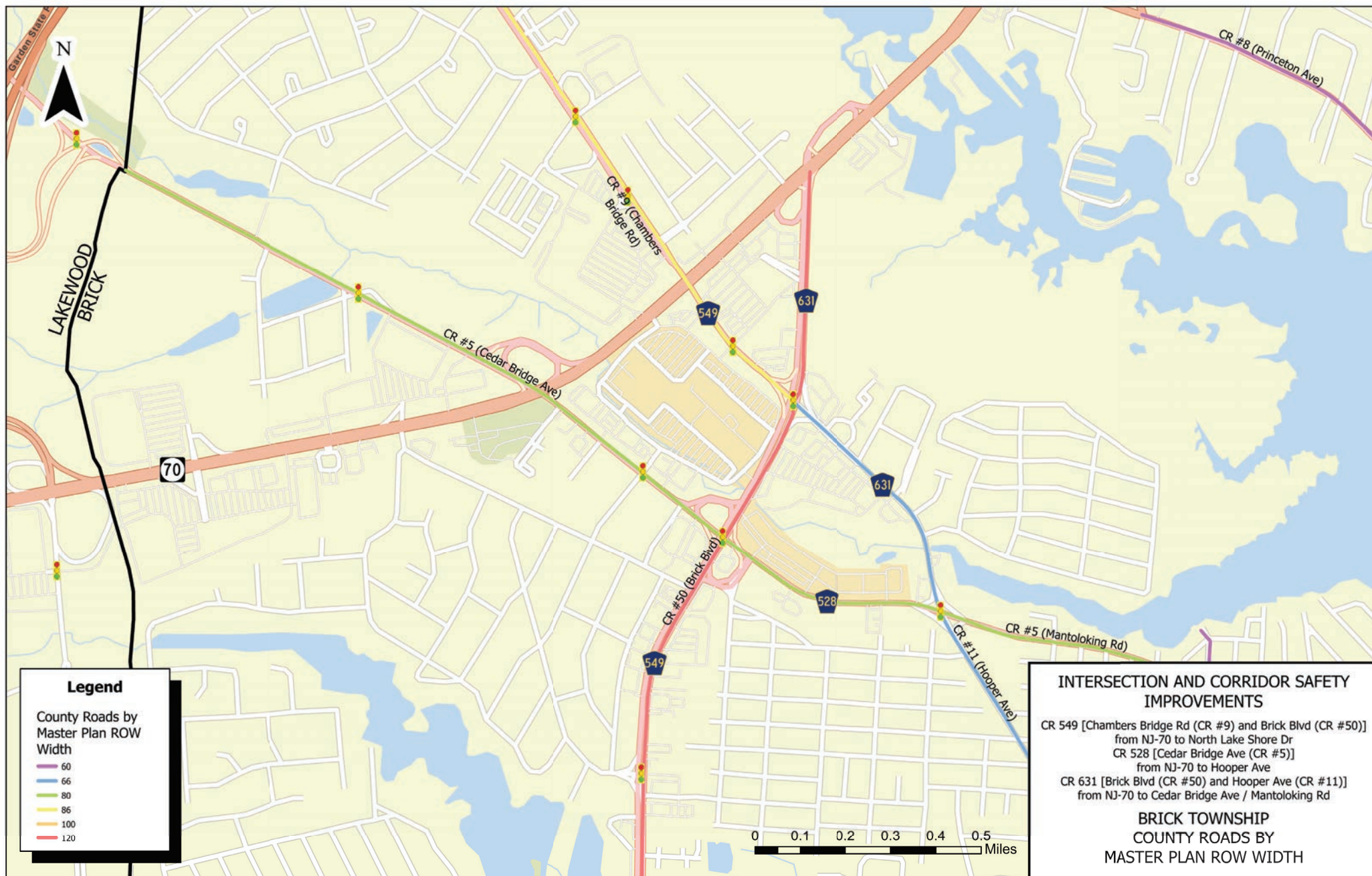
MFJ/TJC

cc: Sean M. Areia, Assistant County Engineer
Gregory L. Smith, Assistant County Engineer
Lynn LaMunyon, Traffic Engineer
Noel Toner, Principal Engineer, Traffic
Christine Mittman, NJTPA

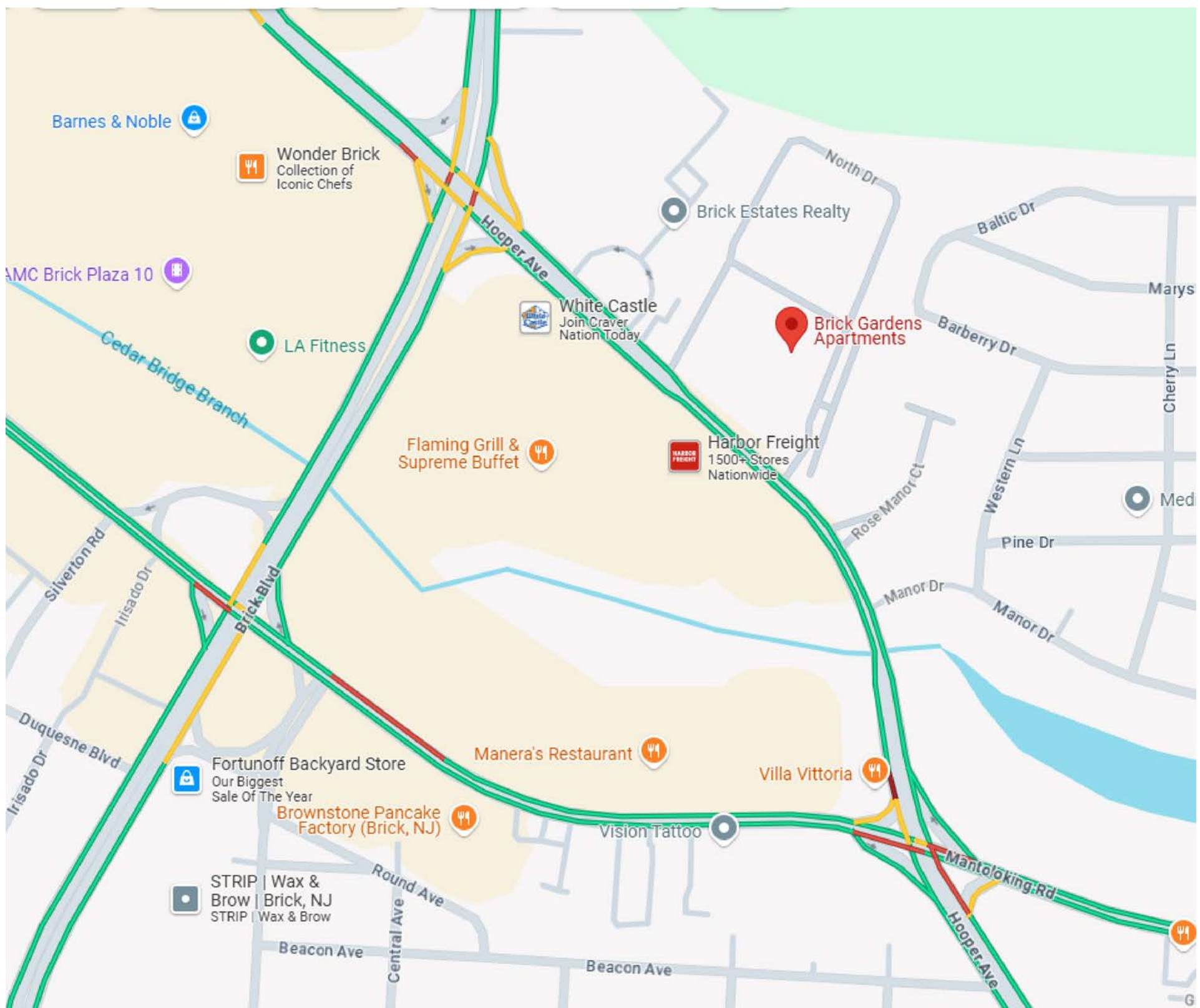


SPECIAL ASSISTANCE/ACCOMMODATIONS available, please call (732) 929-2130.

APPENDIX I – OCEAN COUNTY MASTER PLAN ROW WIDTH UPDATES



APPENDIX J – GOOGLE TYPICAL TRAFFIC HEAT MAPS



APPENDIX J-4 – OCEAN COUNTY SIGNAL OPTIMIZATION

2022, EXISTING CONDITIONS MEMO – MODEL 3

DATE: November 21, 2024 (DRAFT)
March 4, 2025 (FINAL)

SUBJECT: Ocean County Signal Optimization 2022 (Contract PP2023-118)
Existing Conditions Memo – Model 3 (Corridor B & I-East – DCE 5 “Brown” Zone)

TO: Lynn LaMunyon, Noel Toner, Mark Jehnke & Tom Coraggio – Ocean County

FROM: Chris Burke – Urban Engineers

The following memo provides a summary of the Synchro/SimTraffic modeling effort for the subject project and model. The 116 intersections included in Urban’s Group 1 were separated into three (3) separate models:

- **Model 1:** Corridors F & J “Blue” (DCE 1) & “Pink” (DCE 2) data collection zones [Submitted 11/5/2024]
- **Model 2:** Corridor A “Red” (DCE 4) data collection zone [Submitted 9/24/2024]
- **Model 3:** Corridors B & I-East “Brown” (DCE 5) data collection zone

Note, the data collection effort for the 116 intersections was completed over five (5) Data Collection Events (DCE) and denoted with colors shown on the Corridor Map in **Attachment 1**.

Calibration

Calibration is an iterative process where differences between field and model data are identified and resolved based on further investigation of the field data. Field data used for calibration includes travel time runs, queuing, and other field observations completed during the data collection process. Specific model parameters have an impact and can generate more realistic driver behavior including lane alignment through an intersection, turning speeds, lane change distances, headway factors and entering blocked intersections. Adjustment of these parameters helps bridge the gap between field and model data to enable model calibration. **Attachment 2** contains details on model adjustments made during calibration.

Model Results

SimTraffic model results include a summary sheet for each of the AM, PM and SAT peak hour models. SimTraffic results include delay (seconds/vehicle), Level of Service (LOS), travel time, and system-wide performance measures such as Total Delay, Stops per Vehicle, Fuel Efficiency, and emissions. **Attachment 3** includes the SimTraffic results.

Synchro intersection reports were created for each intersection and include traffic volumes, signal timings, delay (seconds/vehicle), LOS, and queuing information. **Attachment 3** includes the Synchro results.

Operations Summary

AM Peak

- Chambers Bridge Road & Kohl’s Shopping Center (Int #209) – NBL heavy volume into shopping center, not as bad as PM or SAT, but could use a few extra seconds of green time.
- Cedar Bridge Ave & RT 70 (Int #921) – Cedar Bridge WB has significant queuing.

Lanes, Volumes, Timings

922: Aurora Place & Cedar Bridge Ave #2

03/04/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	560	25	102	849	37	43	14	15	28	12	28
Future Volume (vph)	44	560	25	102	849	37	43	14	15	28	12	28
Satd. Flow (prot)	1770	3366	0	1752	3481	0	0	1805	1615	0	1837	1615
Flt Permitted	0.303			0.413				0.753			0.756	
Satd. Flow (perm)	564	3366	0	759	3481	0	0	1408	1594	0	1435	1594
Satd. Flow (RTOR)		5			5				76			76
Lane Group Flow (vph)	46	609	0	106	923	0	0	60	16	0	42	29
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8		8	4		4
Total Split (s)	18.0	59.0		18.0	59.0		38.0	38.0	38.0	38.0	38.0	38.0
Total Lost Time (s)	3.0	8.0		3.0	8.0			7.0	7.0		7.0	7.0
Act Effect Green (s)	94.0	83.7		96.0	87.6			10.5	10.5		10.5	10.5
Actuated g/C Ratio	0.82	0.73		0.83	0.76			0.09	0.09		0.09	0.09
v/c Ratio	0.09	0.25		0.15	0.35			0.47	0.07		0.32	0.14
Control Delay	2.6	6.3		1.0	2.3			61.3	0.7		55.0	1.3
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	2.6	6.3		1.0	2.3			61.3	0.7		55.0	1.3
LOS	A	A		A	A			E	A		D	A
Approach Delay		6.0			2.1			48.5			33.1	
Approach LOS		A			A			D			C	
Queue Length 50th (ft)	4	73		3	25			43	0		30	0
Queue Length 95th (ft)	13	116		6	36			85	0		65	0
Internal Link Dist (ft)		1081			435			648			182	
Turn Bay Length (ft)	125			100					75			
Base Capacity (vph)	636	2450		774	2652			379	485		386	485
Starvation Cap Reductn	0	0		0	0			0	0		0	0
Spillback Cap Reductn	0	0		0	0			0	0		0	0
Storage Cap Reductn	0	0		0	0			0	0		0	0
Reduced v/c Ratio	0.07	0.25		0.14	0.35			0.16	0.03		0.11	0.06

Intersection Summary

Cycle Length: 115

Actuated Cycle Length: 115

Offset: 75 (65%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.47

Intersection Signal Delay: 6.7

Intersection LOS: A

Intersection Capacity Utilization 59.2%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 922: Aurora Place & Cedar Bridge Ave #2



Lanes, Volumes, Timings

923: Brick Blvd & Cedar Bridge Ave #2

03/04/2025

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑		↑↑↑			↑↑↑			↑↑↑	
Traffic Volume (vph)	0	491	141	0	912	52	0	1080	0	0	770	0
Future Volume (vph)	0	491	141	0	912	52	0	1080	0	0	770	0
Satd. Flow (prot)	0	4940	1760	0	5041	0	0	5036	0	0	6346	0
Flt Permitted												
Satd. Flow (perm)	0	4940	1722	0	5041	0	0	5036	0	0	6346	0
Satd. Flow (RTOR)			161		8							
Lane Group Flow (vph)	0	506	145	0	994	0	0	1113	0	0	794	0
Turn Type		NA	Perm		NA			NA			NA	
Protected Phases		4 28			8 28			2 16 29			6 16 29	
Permitted Phases			4 28									
Total Split (s)												
Total Lost Time (s)												
Act Effect Green (s)		40.0	40.0		40.0			62.0			62.0	
Actuated g/C Ratio		0.35	0.35		0.35			0.54			0.54	
v/c Ratio		0.29	0.21		0.57			0.41			0.23	
Control Delay		23.1	3.5		19.0			16.2			14.2	
Queue Delay		0.0	0.0		0.3			0.0			0.0	
Total Delay		23.1	3.5		19.3			16.2			14.2	
LOS		C	A		B			B			B	
Approach Delay		18.7			19.3			16.2			14.2	
Approach LOS		B			B			B			B	
Queue Length 50th (ft)		101	7		100			170			86	
Queue Length 95th (ft)		132	27		117			205			105	
Internal Link Dist (ft)		332			222			340			235	
Turn Bay Length (ft)			120									
Base Capacity (vph)		1718	703		1758			2715			3421	
Starvation Cap Reductn		0	0		254			0			0	
Spillback Cap Reductn		0	0		0			0			0	
Storage Cap Reductn		0	0		0			0			0	
Reduced v/c Ratio		0.29	0.21		0.66			0.41			0.23	

Intersection Summary

Cycle Length: 115

Actuated Cycle Length: 115

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.57

Intersection Signal Delay: 17.1

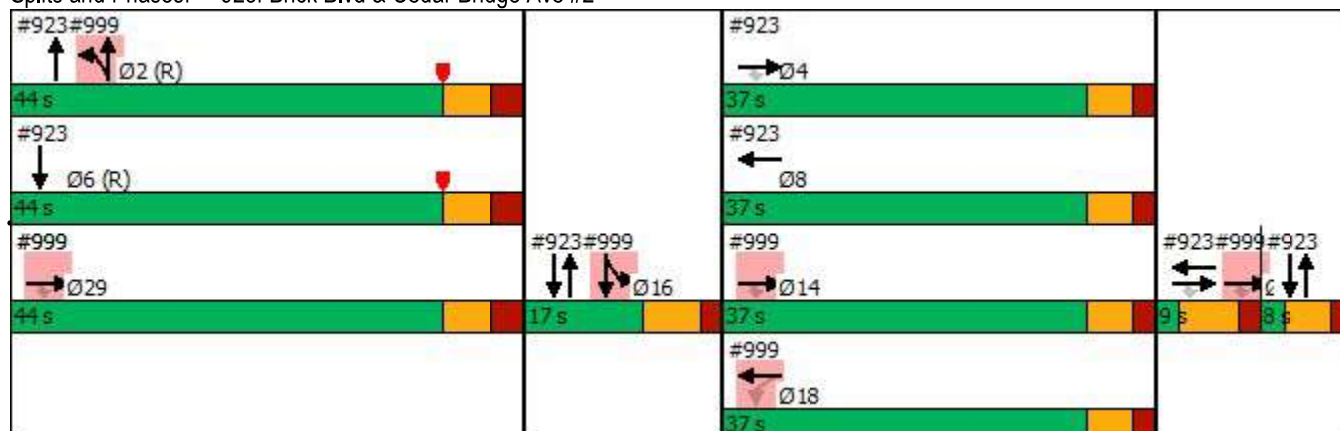
Intersection LOS: B

Intersection Capacity Utilization 50.5%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 923: Brick Blvd & Cedar Bridge Ave #2



Lanes, Volumes, Timings

923: Brick Blvd & Cedar Bridge Ave #2

03/04/2025

Lane Group	Ø2	Ø4	Ø6	Ø8	Ø12	Ø14	Ø16	Ø18	Ø28	Ø29
Lane Configurations										
Traffic Volume (vph)										
Future Volume (vph)										
Satd. Flow (prot)										
Flt Permitted										
Satd. Flow (perm)										
Satd. Flow (RTOR)										
Lane Group Flow (vph)										
Turn Type										
Protected Phases	2	4	6	8	12	14	16	18	28	29
Permitted Phases										
Total Split (s)	44.0	37.0	44.0	37.0	44.0	37.0	17.0	37.0	9.0	8.0
Total Lost Time (s)										
Act Effect Green (s)										
Actuated g/C Ratio										
v/c Ratio										
Control Delay										
Queue Delay										
Total Delay										
LOS										
Approach Delay										
Approach LOS										
Queue Length 50th (ft)										
Queue Length 95th (ft)										
Internal Link Dist (ft)										
Turn Bay Length (ft)										
Base Capacity (vph)										
Starvation Cap Reductn										
Spillback Cap Reductn										
Storage Cap Reductn										
Reduced v/c Ratio										
Intersection Summary										

Lanes, Volumes, Timings

205: Hooper Ave #1 & Cedar Bridge Ave #2/Mantoloking Rd #2

03/04/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	264	189	43	266	312	261	405	37	302	257	86
Future Volume (vph)	35	264	189	43	266	312	261	405	37	302	257	86
Satd. Flow (prot)	1805	3406	1538	1612	3539	1568	1610	3333	0	1610	3234	0
Flt Permitted	0.581			0.583			0.950	0.997		0.950	0.990	
Satd. Flow (perm)	1102	3406	1518	984	3539	1549	1609	3333	0	1608	3233	0
Satd. Flow (RTOR)			197			174		8			20	
Lane Group Flow (vph)	36	275	197	45	277	325	239	494	0	224	449	0
Turn Type	Perm	NA	Free	Perm	NA	Free	Split	NA		Split	NA	
Protected Phases		4			8		2	2		6	6	
Permitted Phases	4		Free	8		Free						
Total Split (s)	48.0	48.0		48.0	48.0		48.0	48.0		24.0	24.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Act Effect Green (s)	25.0	25.0	83.3	25.0	25.0	83.3	23.0	23.0		17.3	17.3	
Actuated g/C Ratio	0.30	0.30	1.00	0.30	0.30	1.00	0.28	0.28		0.21	0.21	
v/c Ratio	0.11	0.27	0.13	0.15	0.26	0.21	0.54	0.53		0.67	0.65	
Control Delay	22.7	23.3	0.2	23.5	23.2	0.3	31.1	27.8		41.5	34.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	22.7	23.3	0.2	23.5	23.2	0.3	31.1	27.8		41.5	34.0	
LOS	C	C	A	C	C	A	C	C		D	C	
Approach Delay		14.3			11.7			28.9			36.5	
Approach LOS		B			B			C			D	
Queue Length 50th (ft)	14	57	0	17	58	0	117	119		118	113	
Queue Length 95th (ft)	37	90	0	43	90	0	197	170		#205	165	
Internal Link Dist (ft)		874			596			1255			772	
Turn Bay Length (ft)	150		100	150		40	225			175		
Base Capacity (vph)	555	1717	1518	496	1784	1549	811	1684		348	714	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.06	0.16	0.13	0.09	0.16	0.21	0.29	0.29		0.64	0.63	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 83.3

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.67

Intersection Signal Delay: 23.6

Intersection LOS: C

Intersection Capacity Utilization 82.8%

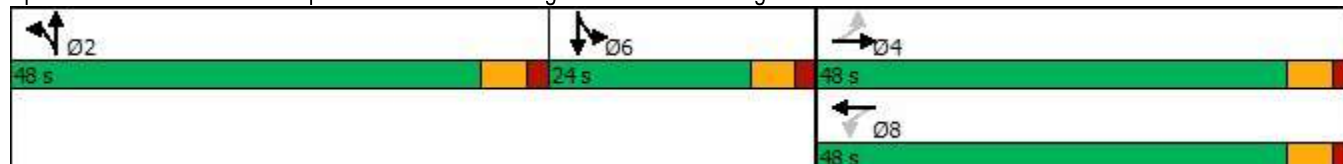
ICU Level of Service E

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 205: Hooper Ave #1 & Cedar Bridge Ave #2/Mantoloking Rd #2



Lanes, Volumes, Timings

206: Brick Blvd & Chambers Bridge Rd #1/Hooper Ave #1

03/04/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	157	273	199	68	300	406	275	777	37	331	614	22
Future Volume (vph)	157	273	199	68	300	406	275	777	37	331	614	22
Satd. Flow (prot)	1728	4916	1742	1646	3421	1568	3433	4818	0	3367	4789	0
Flt Permitted	0.391			0.562			0.950			0.950		
Satd. Flow (perm)	709	4916	1716	967	3421	1547	3433	4818	0	3355	4789	0
Satd. Flow (RTOR)			237			446		6			4	
Lane Group Flow (vph)	173	300	219	75	330	446	302	895	0	364	699	0
Turn Type	pm+pt	NA	Free	pm+pt	NA	Free	Split	NA		Split	NA	
Protected Phases	7	4		3	8		6	6		2	2	
Permitted Phases	4		Free	8		Free						
Total Split (s)	16.0	26.0		16.0	26.0		39.0	39.0		34.0	34.0	
Total Lost Time (s)	4.0	8.0		4.0	8.0		8.0	8.0		8.0	8.0	
Act Effect Green (s)	33.6	20.6	108.7	27.5	15.3	108.7	29.4	29.4		24.5	24.5	
Actuated g/C Ratio	0.31	0.19	1.00	0.25	0.14	1.00	0.27	0.27		0.23	0.23	
v/c Ratio	0.53	0.32	0.13	0.26	0.68	0.29	0.33	0.69		0.48	0.64	
Control Delay	35.5	41.2	0.2	29.9	52.9	0.5	33.6	38.9		39.7	41.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	35.5	41.2	0.2	29.9	52.9	0.5	33.6	38.9		39.7	41.6	
LOS	D	D	A	C	D	A	C	D		D	D	
Approach Delay		26.8			23.4			37.6			41.0	
Approach LOS		C			C			D			D	
Queue Length 50th (ft)	95	70	0	39	121	0	90	211		118	168	
Queue Length 95th (ft)	154	104	0	76	171	0	131	265		169	216	
Internal Link Dist (ft)		653			435			688			722	
Turn Bay Length (ft)	275		150	175		300	200			300		
Base Capacity (vph)	332	930	1716	355	571	1547	988	1391		812	1158	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.52	0.32	0.13	0.21	0.58	0.29	0.31	0.64		0.45	0.60	

Intersection Summary

Cycle Length: 115

Actuated Cycle Length: 108.7

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 33.4

Intersection LOS: C

Intersection Capacity Utilization 70.2%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 206: Brick Blvd & Chambers Bridge Rd #1/Hooper Ave #1

			
Ø2	Ø6	Ø3	Ø4
34 s	39 s	16 s	26 s
			
		Ø7	Ø8
		16 s	26 s

Lanes, Volumes, Timings

207: Chambers Bridge Rd #1 & Brick Plaza Entrance

03/04/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	3	35	4	5	4	86	497	19	36	594	48
Future Volume (vph)	44	3	35	4	5	4	86	497	19	36	594	48
Satd. Flow (prot)	0	1814	1615	0	1655	0	1805	3519	0	1805	3498	0
Flt Permitted		0.730			0.881		0.374			0.447		
Satd. Flow (perm)	0	1377	1593	0	1479	0	709	3519	0	843	3498	0
Satd. Flow (RTOR)			57		4			7			12	
Lane Group Flow (vph)	0	50	37	0	13	0	91	549	0	38	683	0
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2			6		
Total Split (s)	30.0	30.0	30.0	30.0	30.0		15.0	85.0		70.0	70.0	
Total Lost Time (s)		6.0	6.0		6.0		3.0	6.0		6.0	6.0	
Act Effect Green (s)		8.8	8.8		8.8		99.4	97.6		87.7	87.7	
Actuated g/C Ratio		0.08	0.08		0.08		0.86	0.85		0.76	0.76	
v/c Ratio		0.48	0.21		0.11		0.14	0.18		0.06	0.26	
Control Delay		64.6	8.5		40.8		2.1	2.3		5.0	4.9	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		64.6	8.5		40.8		2.1	2.3		5.0	4.9	
LOS		E	A		D		A	A		A	A	
Approach Delay		40.7			40.8			2.3			4.9	
Approach LOS		D			D			A			A	
Queue Length 50th (ft)		36	0		6		8	34		6	70	
Queue Length 95th (ft)		75	18		25		20	58		19	112	
Internal Link Dist (ft)		322			324			653			627	
Turn Bay Length (ft)			100				200			125		
Base Capacity (vph)		287	377		311		727	2986		642	2669	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.17	0.10		0.04		0.13	0.18		0.06	0.26	

Intersection Summary

Cycle Length: 115

Actuated Cycle Length: 115

Offset: 80 (70%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.48

Intersection Signal Delay: 6.2

Intersection LOS: A

Intersection Capacity Utilization 46.1%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 207: Chambers Bridge Rd #1 & Brick Plaza Entrance



Lanes, Volumes, Timings

922: Aurora Place & Cedar Bridge Ave #2

03/04/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	184	1085	42	109	612	139	38	40	45	118	65	123
Future Volume (vph)	184	1085	42	109	612	139	38	40	45	118	65	123
Satd. Flow (prot)	1805	3517	0	1805	3425	0	0	1792	1615	0	1841	1583
Flt Permitted	0.318			0.192				0.606			0.756	
Satd. Flow (perm)	604	3517	0	365	3425	0	0	1112	1594	0	1435	1563
Satd. Flow (RTOR)		4			31				76			128
Lane Group Flow (vph)	192	1174	0	114	783	0	0	82	47	0	191	128
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8		8	4		4
Total Split (s)	18.0	59.0		18.0	59.0		38.0	38.0	38.0	38.0	38.0	38.0
Total Lost Time (s)	3.0	8.0		3.0	8.0			7.0	7.0		7.0	7.0
Act Effect Green (s)	83.6	70.1		80.5	68.5			20.0	20.0		20.0	20.0
Actuated g/C Ratio	0.73	0.61		0.70	0.60			0.17	0.17		0.17	0.17
v/c Ratio	0.36	0.55		0.33	0.38			0.42	0.14		0.77	0.34
Control Delay	7.1	15.5		14.2	3.9			47.5	3.7		64.5	8.8
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	7.1	15.5		14.2	3.9			47.5	3.7		64.5	8.8
LOS	A	B		B	A			D	A		E	A
Approach Delay		14.3			5.2			31.6			42.2	
Approach LOS		B			A			C			D	
Queue Length 50th (ft)	36	248		18	24			55	0		136	0
Queue Length 95th (ft)	75	388		60	33			97	13		202	48
Internal Link Dist (ft)		1081			435			648			182	
Turn Bay Length (ft)	125			100					75			
Base Capacity (vph)	603	2144		457	2052			299	485		386	514
Starvation Cap Reductn	0	0		0	0			0	0		0	0
Spillback Cap Reductn	0	0		0	0			0	0		0	0
Storage Cap Reductn	0	0		0	0			0	0		0	0
Reduced v/c Ratio	0.32	0.55		0.25	0.38			0.27	0.10		0.49	0.25

Intersection Summary

Cycle Length: 115

Actuated Cycle Length: 115

Offset: 71 (62%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 15.4

Intersection LOS: B

Intersection Capacity Utilization 70.1%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 922: Aurora Place & Cedar Bridge Ave #2



Lanes, Volumes, Timings

923: Brick Blvd & Cedar Bridge Ave #2

03/04/2025

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑		↑↑↑			↑↑↑			↑↑↑	
Traffic Volume (vph)	0	1101	288	0	839	56	0	991	0	0	1381	0
Future Volume (vph)	0	1101	288	0	839	56	0	991	0	0	1381	0
Satd. Flow (prot)	0	5136	1794	0	5040	0	0	5187	0	0	6471	0
Flt Permitted												
Satd. Flow (perm)	0	5136	1757	0	5040	0	0	5187	0	0	6471	0
Satd. Flow (RTOR)			161		10							
Lane Group Flow (vph)	0	1197	313	0	973	0	0	1077	0	0	1501	0
Turn Type		NA	Perm		NA			NA			NA	
Protected Phases		4 28			8 28			2 16 29			6 16 29	
Permitted Phases			4 28									
Total Split (s)												
Total Lost Time (s)												
Act Effect Green (s)		43.0	43.0		43.0			59.0			59.0	
Actuated g/C Ratio		0.37	0.37		0.37			0.51			0.51	
v/c Ratio		0.62	0.41		0.51			0.40			0.45	
Control Delay		22.1	6.3		17.1			17.8			18.3	
Queue Delay		0.0	0.0		0.3			0.0			0.0	
Total Delay		22.1	6.3		17.4			17.8			18.3	
LOS		C	A		B			B			B	
Approach Delay		18.9			17.4			17.8			18.3	
Approach LOS		B			B			B			B	
Queue Length 50th (ft)		271	14		97			172			197	
Queue Length 95th (ft)		144	40		115			207			227	
Internal Link Dist (ft)		332			222			340			235	
Turn Bay Length (ft)			120									
Base Capacity (vph)		1920	757		1890			2661			3319	
Starvation Cap Reductn		0	0		334			0			0	
Spillback Cap Reductn		14	0		0			0			0	
Storage Cap Reductn		0	0		0			0			0	
Reduced v/c Ratio		0.63	0.41		0.63			0.40			0.45	

Intersection Summary

Cycle Length: 115

Actuated Cycle Length: 115

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 18.2

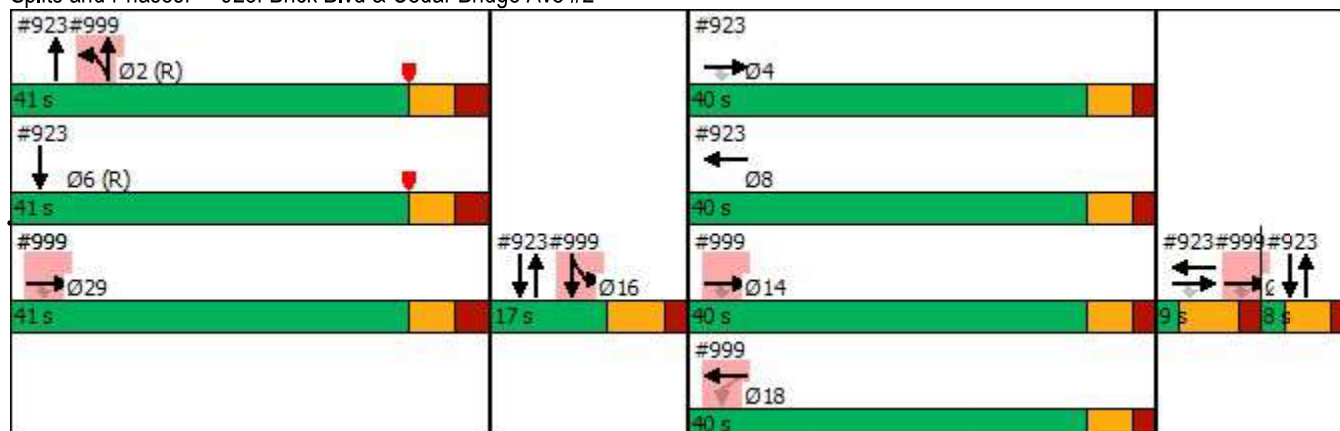
Intersection LOS: B

Intersection Capacity Utilization 52.1%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 923: Brick Blvd & Cedar Bridge Ave #2



Lanes, Volumes, Timings
923: Brick Blvd & Cedar Bridge Ave #2

03/04/2025

Lane Group	Ø2	Ø4	Ø6	Ø8	Ø12	Ø14	Ø16	Ø18	Ø28	Ø29
Lane Configurations										
Traffic Volume (vph)										
Future Volume (vph)										
Satd. Flow (prot)										
Flt Permitted										
Satd. Flow (perm)										
Satd. Flow (RTOR)										
Lane Group Flow (vph)										
Turn Type										
Protected Phases	2	4	6	8	12	14	16	18	28	29
Permitted Phases										
Total Split (s)	41.0	40.0	41.0	40.0	41.0	40.0	17.0	40.0	9.0	8.0
Total Lost Time (s)										
Act Effct Green (s)										
Actuated g/C Ratio										
v/c Ratio										
Control Delay										
Queue Delay										
Total Delay										
LOS										
Approach Delay										
Approach LOS										
Queue Length 50th (ft)										
Queue Length 95th (ft)										
Internal Link Dist (ft)										
Turn Bay Length (ft)										
Base Capacity (vph)										
Starvation Cap Reductn										
Spillback Cap Reductn										
Storage Cap Reductn										
Reduced v/c Ratio										
Intersection Summary										

Lanes, Volumes, Timings

205: Hooper Ave #1 & Cedar Bridge Ave #2/Mantoloking Rd #2

03/04/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	68	592	365	65	351	311	227	376	47	515	666	94
Future Volume (vph)	68	592	365	65	351	311	227	376	47	515	666	94
Satd. Flow (prot)	1703	3610	1615	1805	3539	1568	1610	3327	0	1626	3345	0
Flt Permitted	0.471			0.246			0.950	0.997		0.950	0.994	
Satd. Flow (perm)	844	3610	1595	467	3539	1568	1606	3326	0	1622	3344	0
Satd. Flow (RTOR)			176			136		9			10	
Lane Group Flow (vph)	72	623	384	68	369	327	215	469	0	439	903	0
Turn Type	Perm	NA	Free	Perm	NA	Free	Split	NA		Split	NA	
Protected Phases		4			8		2	2		6	6	
Permitted Phases	4		Free	8		Free						
Total Split (s)	46.0	46.0		46.0	46.0		34.0	34.0		40.0	40.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Act Effect Green (s)	25.8	25.8	100.1	25.8	25.8	100.1	23.6	23.6		32.6	32.6	
Actuated g/C Ratio	0.26	0.26	1.00	0.26	0.26	1.00	0.24	0.24		0.33	0.33	
v/c Ratio	0.33	0.67	0.24	0.57	0.40	0.21	0.57	0.59		0.83	0.82	
Control Delay	36.1	37.8	0.4	53.8	32.7	0.3	41.0	37.2		46.5	38.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	36.1	37.8	0.4	53.8	32.7	0.3	41.0	37.2		46.5	38.5	
LOS	D	D	A	D	C	A	D	D		D	D	
Approach Delay		24.3			20.7			38.4			41.1	
Approach LOS		C			C			D			D	
Queue Length 50th (ft)	38	190	0	38	103	0	134	144		275	279	
Queue Length 95th (ft)	83	260	0	#99	152	0	228	209		#501	#402	
Internal Link Dist (ft)		874			596			1255			772	
Turn Bay Length (ft)	150		100	150		40	225			175		
Base Capacity (vph)	337	1446	1595	186	1417	1568	451	939		553	1144	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.21	0.43	0.24	0.37	0.26	0.21	0.48	0.50		0.79	0.79	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 100.1

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.83

Intersection Signal Delay: 31.9

Intersection LOS: C

Intersection Capacity Utilization 106.7%

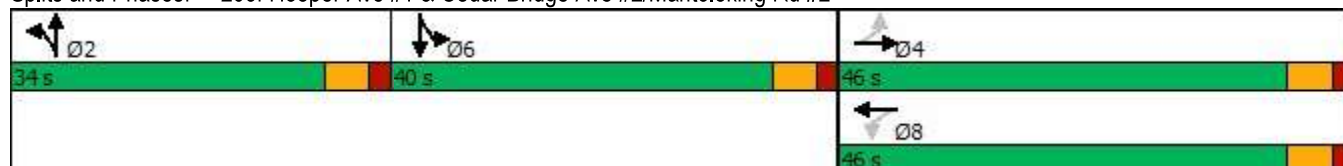
ICU Level of Service G

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 205: Hooper Ave #1 & Cedar Bridge Ave #2/Mantoloking Rd #2



Lanes, Volumes, Timings

206: Brick Blvd & Chambers Bridge Rd #1/Hooper Ave #1

03/04/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			 		 	  		  	  	
Traffic Volume (vph)	190	655	396	131	283	403	349	689	51	681	942	27
Future Volume (vph)	190	655	396	131	283	403	349	689	51	681	942	27
Satd. Flow (prot)	1745	4964	1777	1711	3388	1599	3467	4948	0	3467	4986	0
Flt Permitted	0.478			0.250			0.950			0.950		
Satd. Flow (perm)	873	4964	1750	449	3388	1576	3461	4948	0	3449	4986	0
Satd. Flow (RTOR)			361			438		9			4	
Lane Group Flow (vph)	207	712	430	142	308	438	379	804	0	740	1053	0
Turn Type	pm+pt	NA	Free	pm+pt	NA	Free	Split	NA		Split	NA	
Protected Phases	7	4		3	8		6	6		2	2	
Permitted Phases	4		Free	8		Free						
Total Split (s)	16.0	25.0		16.0	25.0		34.0	34.0		40.0	40.0	
Total Lost Time (s)	4.0	8.0		4.0	8.0		8.0	8.0		8.0	8.0	
Act Effect Green (s)	32.5	17.0	113.0	30.5	16.0	113.0	25.5	25.5		32.0	32.0	
Actuated g/C Ratio	0.29	0.15	1.00	0.27	0.14	1.00	0.23	0.23		0.28	0.28	
v/c Ratio	0.61	0.95	0.25	0.60	0.64	0.28	0.49	0.72		0.75	0.74	
Control Delay	39.3	71.5	0.3	40.2	52.8	0.4	40.7	44.3		43.0	40.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	39.3	71.5	0.3	40.2	52.8	0.4	40.7	44.3		43.0	40.7	
LOS	D	E	A	D	D	A	D	D		D	D	
Approach Delay		43.9			25.0			43.1			41.7	
Approach LOS		D			C			D			D	
Queue Length 50th (ft)	117	193	0	78	114	0	125	199		258	258	
Queue Length 95th (ft)	185	#279	0	131	162	0	174	248		330	314	
Internal Link Dist (ft)		653			435			688			722	
Turn Bay Length (ft)	275		150	175		300	200			300		
Base Capacity (vph)	346	747	1750	261	509	1576	798	1146		982	1416	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.60	0.95	0.25	0.54	0.61	0.28	0.47	0.70		0.75	0.74	

Intersection Summary

Cycle Length: 115

Actuated Cycle Length: 113

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.95

Intersection Signal Delay: 39.7

Intersection LOS: D

Intersection Capacity Utilization 79.6%

ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 206: Brick Blvd & Chambers Bridge Rd #1/Hooper Ave #1



Lanes, Volumes, Timings

207: Chambers Bridge Rd #1 & Brick Plaza Entrance

03/04/2025

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group												
Lane Configurations		↰	↱		↰		↱	↰	↱	↰	↱	
Traffic Volume (vph)	131	10	168	31	9	16	143	497	28	50	992	126
Future Volume (vph)	131	10	168	31	9	16	143	497	28	50	992	126
Satd. Flow (prot)	0	1814	1615	0	1767	0	1805	3501	0	1770	3506	0
Flt Permitted		0.758			0.664		0.193			0.448		
Satd. Flow (perm)	0	1436	1593	0	1205	0	366	3501	0	830	3506	0
Satd. Flow (RTOR)			175		16			12			21	
Lane Group Flow (vph)	0	146	175	0	58	0	149	547	0	52	1164	0
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2			6		
Total Split (s)	27.0	27.0	27.0	27.0	27.0		13.0	88.0		75.0	75.0	
Total Lost Time (s)		6.0	6.0		6.0		3.0	6.0		6.0	6.0	
Act Effect Green (s)		16.0	16.0		16.0		90.0	87.0		76.9	76.9	
Actuated g/C Ratio		0.14	0.14		0.14		0.78	0.76		0.67	0.67	
v/c Ratio		0.73	0.47		0.32		0.40	0.21		0.09	0.49	
Control Delay		67.9	10.5		37.4		6.6	4.5		8.8	10.9	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		67.9	10.5		37.4		6.6	4.5		8.8	10.9	
LOS		E	B		D		A	A		A	B	
Approach Delay		36.6			37.4			5.0			10.8	
Approach LOS		D			D			A			B	
Queue Length 50th (ft)		104	0		28		22	52		12	202	
Queue Length 95th (ft)		168	60		66		45	82		33	301	
Internal Link Dist (ft)		322			324			653			627	
Turn Bay Length (ft)			100				200			125		
Base Capacity (vph)		262	433		233		411	2652		555	2352	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.56	0.40		0.25		0.36	0.21		0.09	0.49	

Intersection Summary

Cycle Length: 115

Actuated Cycle Length: 115

Offset: 77 (67%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 13.3

Intersection LOS: B

Intersection Capacity Utilization 65.0%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 207: Chambers Bridge Rd #1 & Brick Plaza Entrance



Lanes, Volumes, Timings

208: Chambers Bridge Rd #1 & RT 70

03/04/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			 			 			 	
Traffic Volume (vph)	320	945	99	325	930	146	0	615	49	0	832	123
Future Volume (vph)	320	945	99	325	930	146	0	615	49	0	832	123
Satd. Flow (prot)	1728	5008	0	1805	3539	1723	0	3501	0	0	3498	0
Flt Permitted	0.950			0.950								
Satd. Flow (perm)	1723	5008	0	1805	3539	1686	0	3501	0	0	3498	0
Satd. Flow (RTOR)		15				104		7			13	
Lane Group Flow (vph)	330	1076	0	335	959	151	0	685	0	0	985	0
Turn Type	Prot	NA		Prot	NA	Perm		NA			NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases						6						
Total Split (s)	35.0	45.0		35.0	45.0	45.0		40.0			40.0	
Total Lost Time (s)	7.0	7.0		7.0	7.0	7.0		7.0			7.0	
Act Effect Green (s)	25.6	40.8		25.2	40.4	40.4		33.0			33.0	
Actuated g/C Ratio	0.21	0.34		0.21	0.34	0.34		0.28			0.28	
v/c Ratio	0.89	0.63		0.88	0.81	0.24		0.71			1.01	
Control Delay	60.5	45.6		70.4	43.1	11.7		43.5			72.9	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0			0.0	
Total Delay	60.5	45.6		70.4	43.1	11.7		43.5			72.9	
LOS	E	D		E	D	B		D			E	
Approach Delay		49.1			46.2			43.5			72.9	
Approach LOS		D			D			D			E	
Queue Length 50th (ft)	250	257		248	365	26		249			~246	
Queue Length 95th (ft)	m#350	m300		#386	451	76		318			#519	
Internal Link Dist (ft)		1230			969			627			844	
Turn Bay Length (ft)	300			600		350						
Base Capacity (vph)	403	1711		421	1190	635		967			971	
Starvation Cap Reductn	0	0		0	0	0		0			0	
Spillback Cap Reductn	0	0		0	0	0		0			0	
Storage Cap Reductn	0	0		0	0	0		0			0	
Reduced v/c Ratio	0.82	0.63		0.80	0.81	0.24		0.71			1.01	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.01

Intersection Signal Delay: 52.5

Intersection LOS: D

Intersection Capacity Utilization 87.9%

ICU Level of Service E

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

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

Splits and Phases: 208: Chambers Bridge Rd #1 & RT 70

