



McDonough & Rea Associates, Inc.

Traffic and Transportation Consulting

Kevin P. McDonough (1953-1994)
John H. Rea, P.E.
Jay S. Troutman, Jr., P.E.
Scott T. Kennel

May 24, 2023

Neptune Township Zoning Board of Adjustment
25 Neptune Boulevard
Neptune, NJ 07753

Re: Compass Self-Storage
Lot 7 in Block 404
Neptune Township, Monmouth County
MRA File No. 23-169

Dear Board Members:

McDonough & Rea Associates (MRA) has been asked to provide the Zoning Board of Adjustment with a *Traffic Impact Analysis* for plans to expand a self-storage facility (*Compass Self-Storage*) located at the northwest corner of 9th Avenue/Memorial Drive in Neptune Township, Monmouth County, New Jersey, as shown on *Figure 1*, a *Site Location Map* in the *Appendix*. Plans prepared by Crest Engineering Associates (CEA) show removal of several buildings on the property and construction of a 4-story climate controlled self-storage building containing 84,436 SF.

SCOPE OF STUDY

In order to prepare a thorough *Traffic Impact Analysis* for *Compass Self-Storage*, MRA conducted the following tasks:

1. Made field visits to the site to establish existing roadway and traffic conditions in the area.
2. Conducted peak hour traffic counts at the intersection of Memorial Drive/9th Avenue.
3. Prepared estimates of traffic to be generated by the expanded self-storage space based upon Institute of Transportation Engineers (ITE) data.
4. Distributed site generated traffic to the adjacent roadway network in accordance with anticipated arrivals and departures.

Please reply to:

- 1431 Lakewood Road, Suite C, Manasquan, NJ 08736 • (732) 528-7076 • Fax (732) 528-6673
 105 Elm Street, Lower Level, Westfield, NJ 07090 • (908) 789-7180 • Fax (908) 789-7181



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Neptune Township Zoning Bd. of Adj.

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5. Prepared estimates of future traffic volume demand for a design year of 2026 after reviewing the New Jersey Department of Transportation's (NJDOT) background traffic growth rate data for the area.
6. Conducted a level of service capacity analysis for the off-site intersection of 9th Avenue/Memorial Drive. driveway to Hoffman Station Road based on the latest *Highway Capacity Manual* procedures.
7. Reviewed the *Site Plan* with respect to adherence to proper traffic engineering principles.

The following report sets forth the database accumulated and the conclusions reached with respect to *Compass Self-Storage*.

EXISTING CONDITIONS

The subject property is located on the northwest corner of 9th Avenue/Memorial Drive and also has frontage on 10th Avenue. Memorial Drive is a 4-lane undivided north/south Monmouth County arterial roadway passing the site frontage. 9th Avenue intersects Memorial Drive as the stem of a "T" intersection from the west. 9th Avenue is a local east/west roadway. 10th Avenue is an east/west local roadway which dead-ends at Memorial Drive (no access to Memorial Drive).

EXISTING TRAFFIC VOLUMES

Traffic volume data was collected by conducting manual turning movement counts at the intersection of 9th Avenue/Memorial Drive. *Figure 2* in the *Appendix* illustrates existing AM and PM peak street hour traffic volumes traveling through the intersection.

TRIP GENERATION/DISTRIBUTION

Estimates of traffic to be generated by the expanded self-storage facility were made after consulting the *11th Edition* of the ITE *Trip Generation Manual*. Following the demolition of the existing buildings on the property and construction of the new 84,436 SF 4-story climate controlled facility, *Compass Self Storage* will contain 136,721 SF of self-storage space including the existing 1-story building and the new 4-story addition. *Table I* illustrates the anticipated AM and PM peak street hour traffic generation from 136,721 SF of self-storage space.



TABLE I
TRIP GENERATION
136,721 SF OF SELF-STORAGE SPACE

AM PSH			PM PSH		
IN	OUT	TOTAL	IN	OUT	TOTAL
7	5	12	10	10	20

The foregoing trip generation figures are consistent with experience MRA has had at self-storage facilities which are relatively low traffic generators due to the nature of the business itself. Once a customer has signed up for a storage unit and moved items into the unit, the customer typically does not visit the storage unit unless items are to be added or removed. This results in relatively low traffic generation for the size of the self-storage building itself.

With respect to the distribution of site generated traffic, although access will be provided to the property from both 9th Avenue and 10th Avenue, MRA assumed a worst case analysis, one in which all traffic generated by the expanded facility travels through the 9th Avenue/Memorial Drive intersection. Traffic was distributed as follows:

- 40 percent to and from the south on Memorial Drive
- 40 percent to and from the north on Memorial Drive
- 20 percent to and from the west on 9th Avenue

Figure 3 in the Appendix illustrates site generated and distributed traffic volumes.

ANALYSIS OF FUTURE TRAFFIC

A design year of 2026 was assumed for construction and completion of the project. The NJDOT’s background traffic growth rate data for the area was consulted and traffic along Memorial Drive was grown at a rate of 1.0 percent per year for 3 years in order to arrive at design year 2026 *no-build* traffic volumes which are shown on Figure 4 in the Appendix.

Site generated and distributed traffic was then surcharged onto *no-build* volumes and are shown on Figure 5 in the Appendix.



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Traffic engineers calculate levels of service of unsignalized intersections which relate to the quality of traffic flow. Level of service is a measure of average control delay. Average control delay is the time lost due to deceleration and the amount of time from when a vehicle is stopped for a traffic control device (or at the end of the queue) to when the vehicle departs the intersection. Delay is a relative quantity of driver discomfort, frustration, fuel consumption, and loss in travel time.

Levels of service range from “A” to “F” with “A” being the highest or best attainable level of service. Level of service “E” with average control delays of not more than 50 seconds per vehicle at an unsignalized intersection indicates near to or at capacity conditions and is generally considered the limit of acceptable level of service and delay.

Full definitions of levels of service for unsignalized intersections as well as level of service summaries are included in the *Appendix*. The intersections studied by this report were analyzed according to the procedures set forth in the *Highway Capacity Manual 2022*, using the *McTrans Highway Capacity Software (HCS 2023)*.

Findings were that exiting movements from 9th Avenue to Memorial Drive are currently operating at level of service “B” during the AM peak street hour and will continue to operate at level of service “B” for the design year 2026 *no-build* and *build* condition.

Exiting movements from 9th Avenue to Memorial Drive are currently operating at level of service “C” during the PM peak street hour and will continue to operate at level of service “C” for the design year 2026 *no-build* and *build* condition. Left turns from northbound Memorial Drive onto 9th Avenue will operate at level of service “A” during all time frames. Therefore, the 9th Avenue/Memorial Drive intersection will operate within acceptable traffic engineering parameters for the 2026 *build* condition.

SITE PLAN AND PARKING

The *Site Plan*, prepared CEA, shows construction of a drive-thru building with vehicles entering from 9th Avenue being able to drive through the building and exit to 10th Avenue. A total of 14 parking spaces are provided off the 9th Avenue driveway access for customers to sign up for storage units. It has been MRA’s experience that a relatively limited number of parking spaces are sufficient for this activity and the 14 spaces provided will be more than adequate, in our opinion.



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CONCLUSIONS


It is concluded, based on the analysis set forth in this report, that plans to expand the existing self-storage facility at 9th Avenue/Memorial Drive, can be approved and operate compatibly with future traffic conditions in the area. The key critical off-site intersection of 9th Avenue/Memorial Drive will continue to operate at acceptable levels of service for the 2026 design year for both the *no-build* and *build* condition.

The *Site Plan* itself has been properly designed with respect to adequate parking for customer sign-ups, circulation through the building and customer egress to 10th Avenue.

A representative from MRA will be in attendance at an upcoming Neptune Township Zoning Board of Adjustment meeting to provide expert testimony and to answer any questions board members, board experts or the public may have.

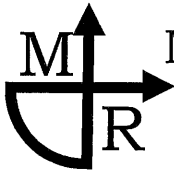
Very truly yours,


John H. Rea, PE
Principal


Scott T. Kennel
Sr. Associate

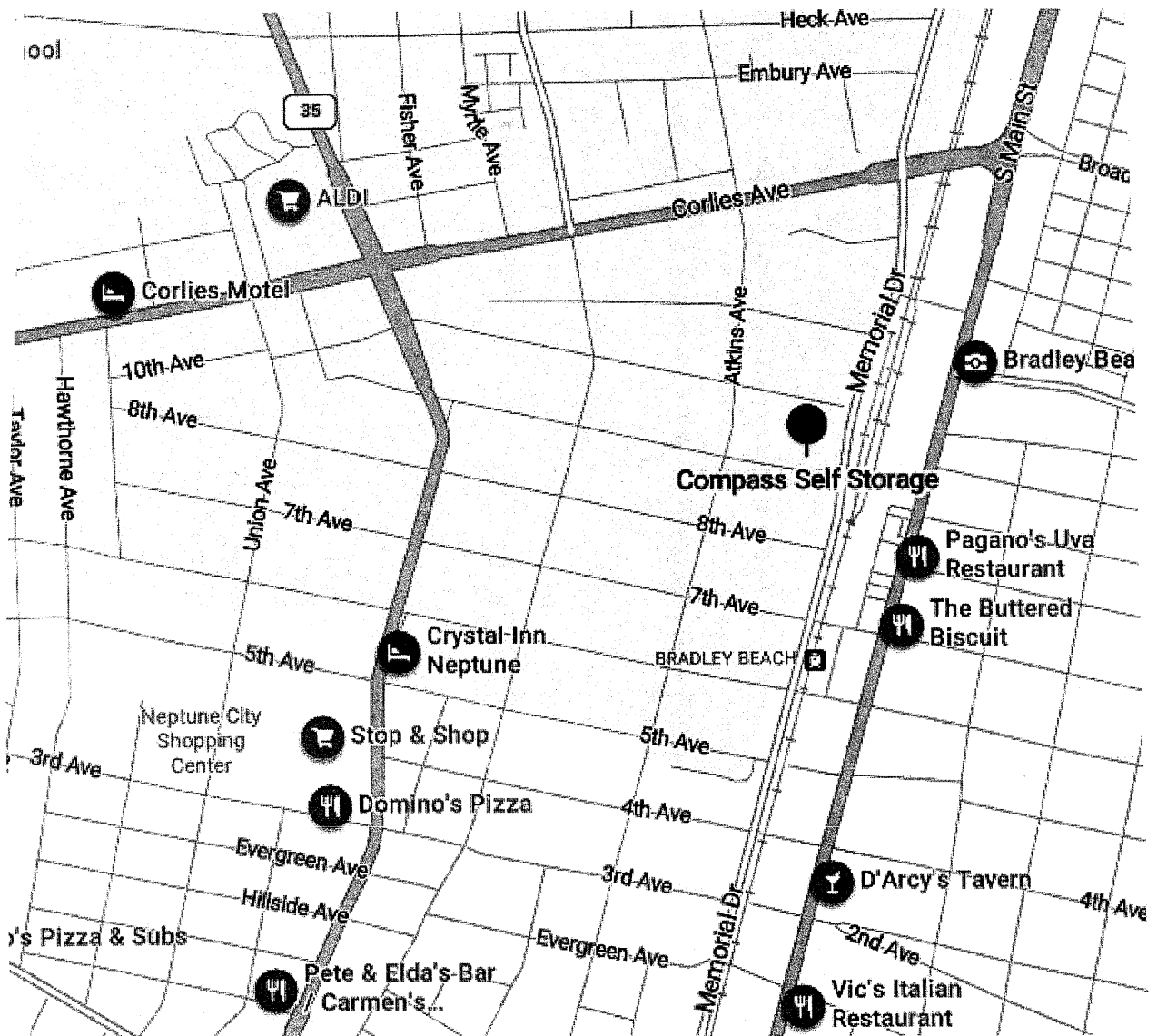
cc: Ken Pape, Esq.
Peter Strong, PE
Jonathan Steele

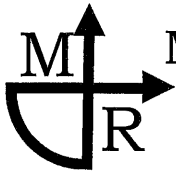
APPENDIX



SUBJECT:

COMPASS SELF STORAGE - NEPTUNE
SITE LOCATION MAP



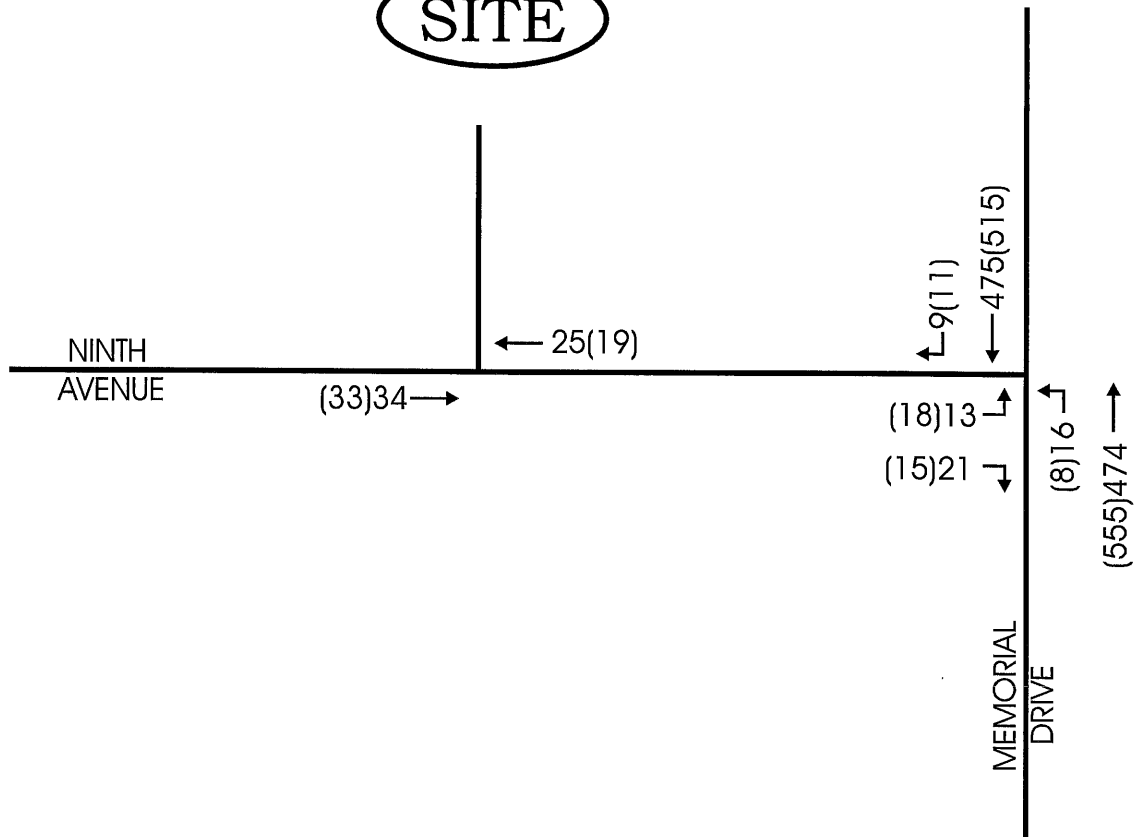


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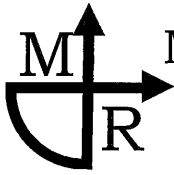
COMPASS SELF STORAGE - NEPTUNE
EXISTING AM PSH(PM PSH) TRAFFIC VOLUMES



SITE



LEGEND: ← AM PSH(PM PSH)

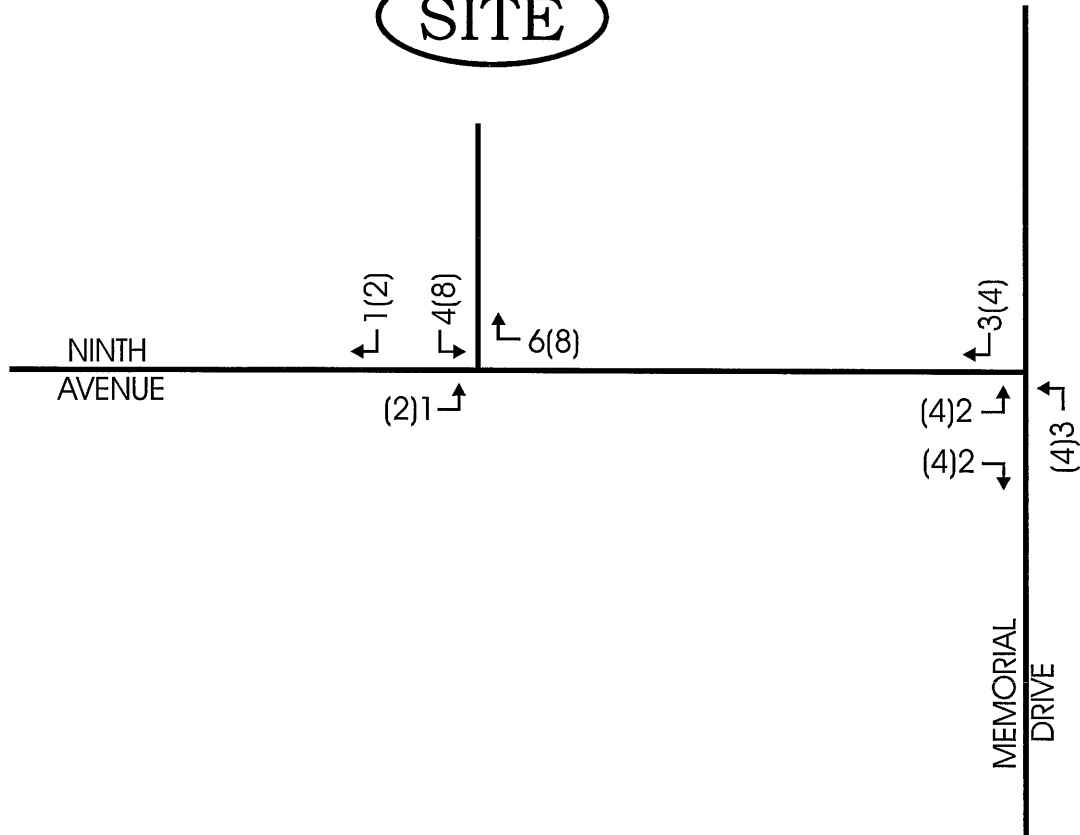


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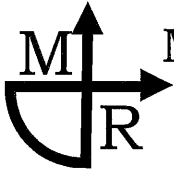
COMPASS SELF STORAGE - NEPTUNE
SITE GENERATED TRAFFIC VOLUMES



SITE



LEGEND: ← AM PSH(PM PSH)



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FIGURE 4

JOB NO.
23-169

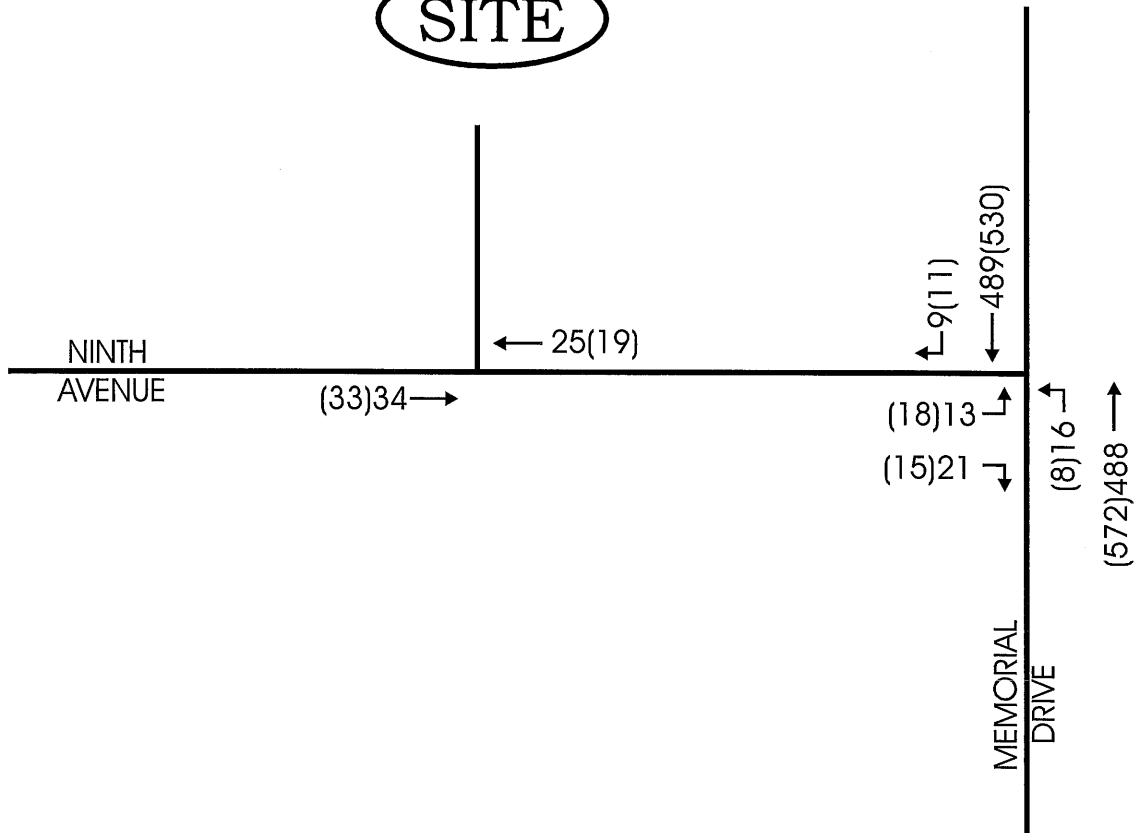
DATE:
MAY 2023

SUBJECT:

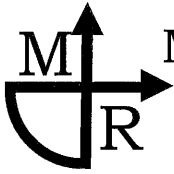
COMPASS SELF STORAGE - NEPTUNE
2026 NO - BUILD TRAFFIC VOLUMES



SITE



LEGEND: ← AM PSH (PM PSH)

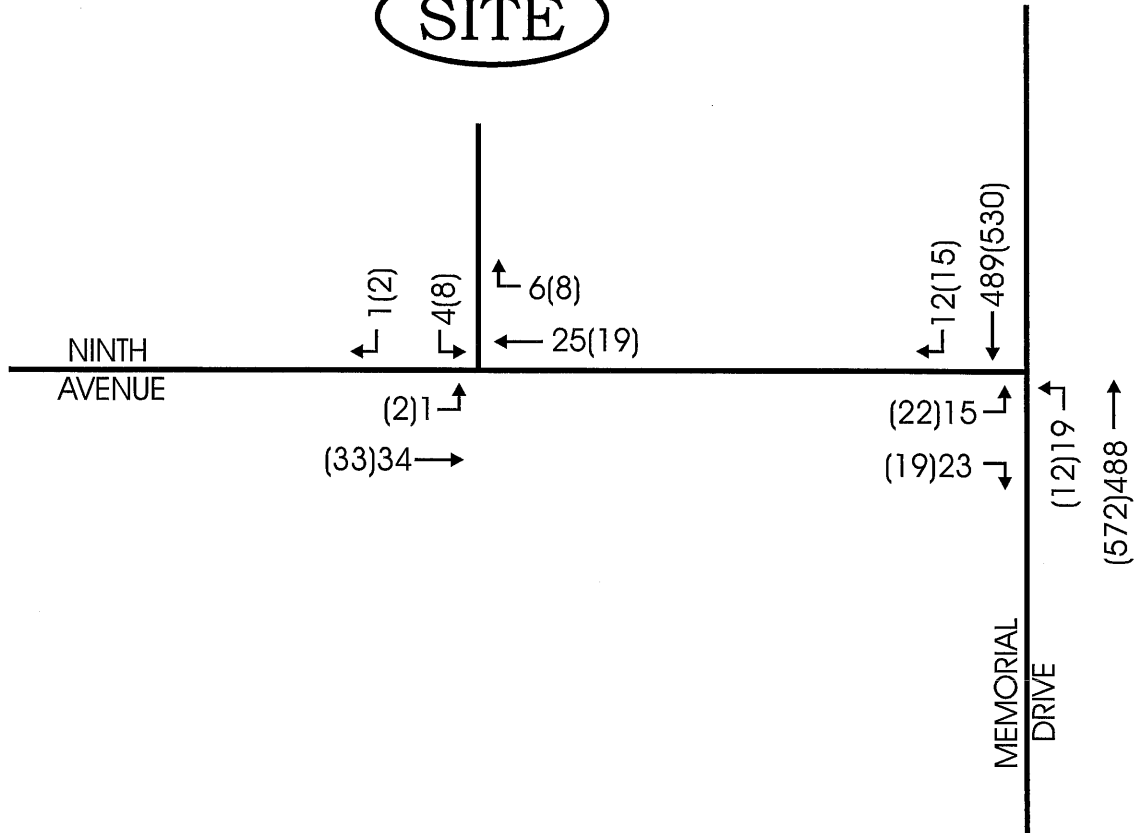


SUBJECT:

COMPASS SELF STORAGE - NEPTUNE
2026 BUILD TRAFFIC VOLUMES



SITE



LEGEND: ← AM PSH (PM PSH)

**LEVEL OF SERVICE CRITERIA
FOR
TWO-WAY STOP-CONTROLLED INTERSECTIONS¹**

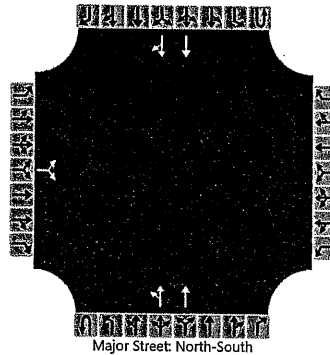
<u>Level of Service</u>	<u>Average Control Delay</u>
A	≤ 10.0 Seconds Per Vehicle
B	> 10.0 and ≤ 15.0 Seconds Per Vehicle
C	> 15.0 and ≤ 25.0 Seconds Per Vehicle
D	> 25.0 and ≤ 35.0 Seconds Per Vehicle
E	> 35.0 and ≤ 50.0 Seconds Per Vehicle
F	> 50.0 Seconds Per Vehicle

¹ Transportation Research Board, Highway Capacity Manual 2010, National Research Council, Washington, DC, 2010.

HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	STK	Intersection	MEMORIAL & 9TH				
Agency/Co.	MRA	Jurisdiction					
Date Performed	5/12/2023	East/West Street	9TH AVE				
Analysis Year	2023	North/South Street	MEMORIAL				
Time Analyzed	AM	Peak Hour Factor	0.90				
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25				
Project Description	23-169AE-1 EXIST						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound					
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
Movement																		
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6		
Number of Lanes		0	1	0		0	0	0	0	0	2	0	0	0	2	0		
Configuration			LR							LF	T				T	TR		
Volume (veh/h)		13		21						16	474				475	9		
Percent Heavy Vehicles (%)		3		3						3								
Proportion Time Blocked																		
Percent Grade (%)		0																
Right Turn Channelized																		
Median Type Storage		Undivided																

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5		6.9						4.1							
Critical Headway (sec)		6.86		6.96						4.16							
Base Follow-Up Headway (sec)		3.5		3.3						2.2							
Follow-Up Headway (sec)		3.53		3.33						2.23							

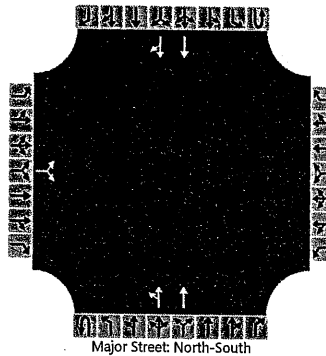
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			38							18							
Capacity, c (veh/h)			470							1020							
v/c Ratio			0.08							0.02							
95% Queue Length, Q ₉₅ (veh)			0.3							0.1							
Control Delay (s/veh)			13.3							8.6	0.2						
Level of Service (LOS)			B							A	A						
Approach Delay (s/veh)		13.3								0.4							
Approach LOS		B								A							

HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	STK			Intersection	MEMORIAL & 9TH		
Agency/Co.	MRA			Jurisdiction			
Date Performed	5/12/2023			East/West Street	9TH AVE		
Analysis Year	2026			North/South Street	MEMORIAL		
Time Analyzed	AM			Peak Hour Factor	0.90		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	23-169ANB-1 NOBUILD						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound					
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
Movement																		
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6		
Number of Lanes		0	1	0		0	0	0	0	0	2	0	0	0	2	0		
Configuration			LR							LT	T				T	TR		
Volume (veh/h)		13		21						16	488				489	9		
Percent Heavy Vehicles (%)		3		3						3								
Proportion Time Blocked																		
Percent Grade (%)		0																
Right Turn Channelized																		
Median Type Storage		Undivided																

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5		6.9						4.1							
Critical Headway (sec)		6.86		6.96						4.16							
Base Follow-Up Headway (sec)		3.5		3.3						2.2							
Follow-Up Headway (sec)		3.53		3.33						2.23							

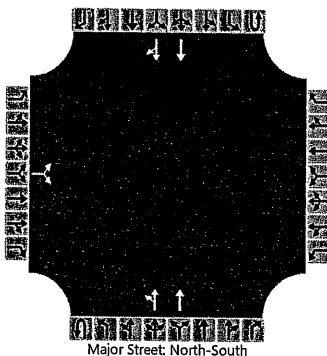
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			38							18							
Capacity, c (veh/h)			458							1006							
v/c Ratio			0.08							0.02							
95% Queue Length, Q ₉₅ (veh)			0.3							0.1							
Control Delay (s/veh)			13.6							8.6	0.2						
Level of Service (LOS)			B							A	A						
Approach Delay (s/veh)		13.6								0.4							
Approach LOS		B								A							

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	STK	Intersection	MEMORIAL & 9TH
Agency/Co.	MRA	Jurisdiction	
Date Performed	5/12/2023	East/West Street	9TH AVE
Analysis Year	2026	North/South Street	MEMORIAL
Time Analyzed	AM	Peak Hour Factor	0.90
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	23-169AFB-1 BUILD		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	2	0	0	0	2	0
Configuration			LR							LT	T				T	TR
Volume (veh/h)		15		23						19	488				489	12
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5		6.9							4.1					
Critical Headway (sec)		6.86		6.96							4.16					
Base Follow-Up Headway (sec)		3.5		3.3							2.2					
Follow-Up Headway (sec)		3.53		3.33							2.23					

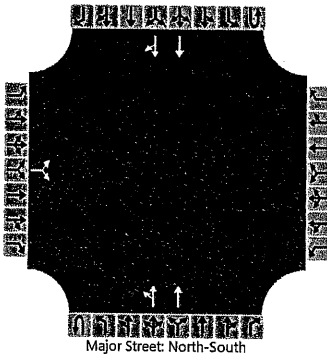
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			42								21					
Capacity, c (veh/h)			448								1003					
v/c Ratio			0.09								0.02					
95% Queue Length, Q ₉₅ (veh)			0.3								0.1					
Control Delay (s/veh)			13.9								8.7	0.2				
Level of Service (LOS)			B								A	A				
Approach Delay (s/veh)	13.9								0.5							
Approach LOS	B								A							

HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	STK			Intersection	MEMORIAL & 9TH		
Agency/Co	MRA			Jurisdiction			
Date Performed	5/12/2023			East/West Street	9TH AVE		
Analysis Year	2023			North/South Street	MEMORIAL		
Time Analyzed	PM			Peak Hour Factor	0.90		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	23-169PE-1 EXIST						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	0	0	0	0	2	0	0	0	2	0	
Configuration			LR							LT	T				T	TR	
Volume (veh/h)		18		15						8	555				515	11	
Percent Heavy Vehicles (%)		3		3						3							
Proportion Time Blocked																	
Percent Grade (%)	0																
Right Turn Channelized																	
Median Type Storage	Undivided																

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5		6.9							4.1						
Critical Headway (sec)		6.86		6.96							4.16						
Base Follow-Up Headway (sec)		3.5		3.3							2.2						
Follow-Up Headway (sec)		3.53		3.33							2.23						

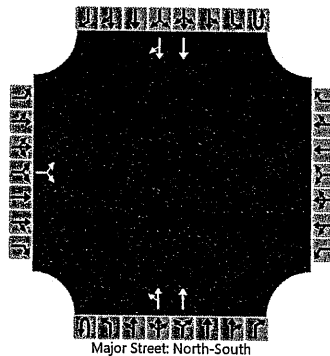
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			37								9						
Capacity, c (veh/h)			376								979						
v/c Ratio			0.10								0.01						
95% Queue Length, Q ₉₅ (veh)			0.3								0.0						
Control Delay (s/veh)			15.6								8.7	0.1					
Level of Service (LOS)			C								A	A					
Approach Delay (s/veh)	15.6								0.2								
Approach LOS	C								A								

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	STK	Intersection	MEMORIAL & 9TH
Agency/Co.	MRA	Jurisdiction	
Date Performed	5/12/2023	East/West Street	9TH AVE
Analysis Year	2026	North/South Street	MEMORIAL
Time Analyzed	PM	Peak Hour Factor	0.90
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	23-169PNB-1 NOBUILD		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	2	0	0	0	2	0
Configuration			LR							LT	T				T	TR
Volume (veh/h)		18		15						8	572				530	11
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5		6.9						4.1						
Critical Headway (sec)		6.86		6.96						4.16						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

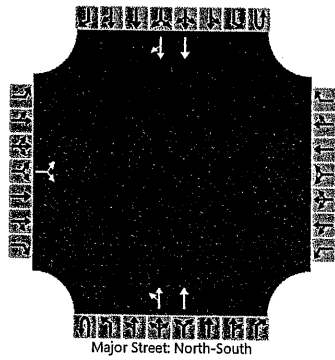
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			37							9						
Capacity, c (veh/h)			364							965						
v/c Ratio			0.10							0.01						
95% Queue Length, Q ₉₅ (veh)			0.3							0.0						
Control Delay (s/veh)			16.0							8.8	0.1					
Level of Service (LOS)			C							A	A					
Approach Delay (s/veh)	16.0								0.2							
Approach LOS	C								A							

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	STK	Intersection	MEMORIAL & 9TH
Agency/Co.	MRA	Jurisdiction	
Date Performed	5/12/2023	East/West Street	9TH AVE
Analysis Year	2026	North/South Street	MEMORIAL
Time Analyzed	PM	Peak Hour Factor	0.90
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	23-169PFB-1 BUILD		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	2	0	0	0	2	0
Configuration			LR							LT	T				T	TR
Volume (veh/h)		22		95						12	572				530	15
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5		6.9						4.1						
Critical Headway (sec)		6.86		6.96						4.16						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

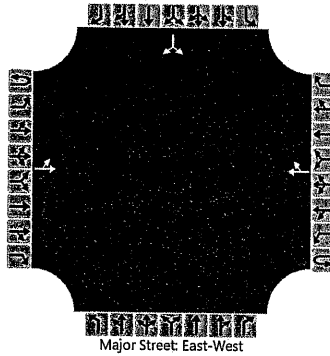
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			130							13						
Capacity, c (veh/h)			523							962						
v/c Ratio			0.25							0.01						
95% Queue Length, Q ₉₅ (veh)			1.0							0.0						
Control Delay (s/veh)			14.1							8.8	0.1					
Level of Service (LOS)			B							A	A					
Approach Delay (s/veh)	14.1								0.3							
Approach LOS	B								A							

HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	STK			Intersection	SITE ACCESS & 9TH		
Agency/Co.	MRA			Jurisdiction			
Date Performed	5/12/2023			East/West Street	9TH AVE		
Analysis Year	2026			North/South Street	SITE ACCESS		
Time Analyzed	AM			Peak Hour Factor	0.90		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	23-169AFB-2 BUILD						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume (veh/h)		1	34				25	6						4		1
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.13												6.43		6.23
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

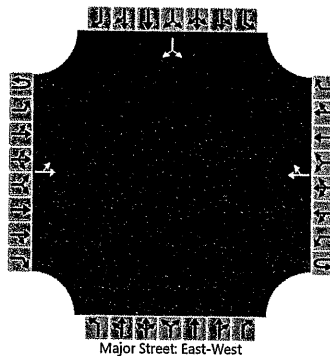
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		1														6
Capacity, c (veh/h)		1571														950
v/c Ratio		0.00														0.01
95% Queue Length, Q ₉₅ (veh)		0.0														0.0
Control Delay (s/veh)		7.3	0.0													8.8
Level of Service (LOS)		A	A													A
Approach Delay (s/veh)		0.2												8.8		
Approach LOS		A												A		

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	STK	Intersection	SITE ACCESS & 9TH
Agency/Co	MRA	Jurisdiction	
Date Performed	5/12/2023	East/West Street	9TH AVE
Analysis Year	2026	North/South Street	SITE ACCESS
Time Analyzed	AM	Peak Hour Factor	0.90
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	23-169AFB-2 BUILD		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume (veh/h)		2	33				19	8						8		2
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.13												6.43		6.23
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		2														11	
Capacity, c (veh/h)		1576														955	
v/c Ratio		0.00														0.01	
95% Queue Length, Q ₉₅ (veh)		0.0														0.0	
Control Delay (s/veh)		7.3	0.0													8.8	
Level of Service (LOS)		A	A													A	
Approach Delay (s/veh)		0.4												8.8			
Approach LOS		A												A			

COMPASS SELF - STORAGE
 MEMORIAL DRIVE & 9TH AVENUE
 NEPTUNE TOWNSHIP, MONMOUTH COUNTY
 MRA JOB 23-169 THURSDAY PM COUNT

McDonough & Rea Associates
 1431 Lakewood Road Suite C
 Manasquan NJ 08736
 (732) 528-7076

File Name : 23169 memorial & 9th pm1
 Site Code : 00023169
 Start Date : 5/4/2023
 Page No : 1

Groups Printed- CARS - TRUCKS - SCHOOL BUS

Start Time	Memorial Drive Southbound			Memorial Drive Northbound			Ninth Avenue Eastbound			
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
03:00 PM	117	2	119	2	84	86	3	4	7	212
03:15 PM	97	3	100	3	77	80	6	1	7	187
03:30 PM	107	1	108	2	87	89	2	4	6	203
03:45 PM	103	1	104	0	106	106	3	5	8	218
Total	424	7	431	7	354	361	14	14	28	820
04:00 PM	141	1	142	1	143	144	1	2	3	289
04:15 PM	119	1	120	0	157	157	4	7	11	288
04:30 PM	129	5	134	5	118	123	9	3	12	269
04:45 PM	126	4	130	2	137	139	4	3	7	276
Total	515	11	526	8	555	563	18	15	33	1122
05:00 PM	123	1	124	1	133	134	4	5	9	267
05:15 PM	134	4	138	4	132	136	4	0	4	278
05:30 PM	128	2	130	3	126	129	3	6	9	268
05:45 PM	157	1	158	1	129	130	10	7	17	305
Total	542	8	550	9	520	529	21	18	39	1118
Grand Total	1481	26	1507	24	1429	1453	53	47	100	3060
Approach %	98.3	1.7		1.7	98.3		53.0	47.0		
Total %	48.4	0.8	49.2	0.8	46.7	47.5	1.7	1.5	3.3	

Start Time	Memorial Drive Southbound			Memorial Drive Northbound			Ninth Avenue Eastbound			
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour From 03:00 PM to 05:45 PM - Peak 1 of 1										
Intersection	04:00 PM									
Volume	515	11	526	8	555	563	18	15	33	1122
Percent	97.9	2.1		1.4	98.6		54.5	45.5		
04:00 Volume	141	1	142	1	143	144	1	2	3	289
Peak Factor										0.971
High Int. Volume	04:00 PM	1		04:15 PM	0		04:30 PM	3	12	
Peak Factor	141	1	0.926	157	0.896		9	3	0.688	