

Master Plan Project Narrative

for:

PROPOSED REVISIONS AT ONE METRO CENTER

**ASSESSORS MAP 278, Lot 145
One Metro Center Boulevard
Warwick, RI 02886**

Owner/Applicant:

**HILLSGROVE HOMES LLC
164 Centerville Road
Warwick, RI 02886**

Prepared by:

Garofalo & Associates, Inc.
85 Corliss Street, Providence, RI 02940
Tel.: (401).273.6000; Fax: (401).273.1000

**September, 2023
PN 7468-00**



Table of Contents

<i>I</i>	<i>INTRODUCTION</i>	<i>1</i>
<i>II</i>	<i>EXISTING CONDITIONS</i>	<i>2</i>
	2.1 <i>Site Characteristics</i>	
	2.2 <i>Soils</i>	
	2.3 <i>Floodplain</i>	
	2.4 <i>Utilities</i>	
	2.5 <i>Wetlands</i>	
	2.6 <i>Natural Resources Inventory</i>	
<i>III</i>	<i>PROPOSED DEVELOPMENT</i>	<i>4</i>

List of Figure

<i>Figure 1. Locus Map</i>	<i>1</i>
<i>Figure 2. View of Site</i>	<i>2</i>
<i>Figure 3. Revised Layout Diagram</i>	<i>4</i>

ATTACHMENTS

- A* *Master Plan Revision – Site Layout Plan*
- B* *Approved Masterplan, Decision and Traffic Excerpts*

I. INTRODUCTION

This Narrative has been prepared to describe and assess the characteristics of Assessors Plat No. 278 Lot 145 as they relate to a requested Master Plan Modification application to the Warwick Planning Board.

The subject property is rectangular in shape and is located in the northern portions of the City, north of the Airport Connector between I-95 and Airport Road. Specifically, the site is located at the southeast quadrant of the intersection of Metro Center Boulevard and Kilvert Street approximately one-half mile west of Jefferson Boulevard and the Intermodal Transportation Center. The property is approximately ± 8.5 acres and is currently zoned Gateway.

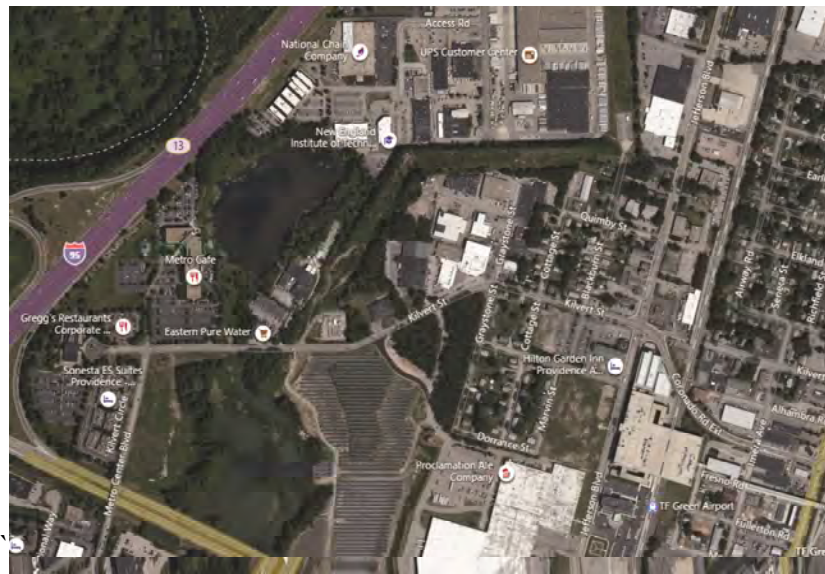


Figure 1. Locus Map

The current Masterplan was approved by the Warwick Planning Commission on March 9, 2022 and includes a total of 200 units with related site amenities. This proposed modification (project) generally reflects a requested change in building type from large multi-family buildings to smaller townhouse type structures, together with an associated reduction in unit count (78 units) and parking fields. The requested changes described herein are proposed along with the request that until and including recording of the revised master plan, that the original master plan for 200 units shall be preserved.

II. EXISTING CONDITIONS

As indicated, the subject property is located on Metro Center Boulevard and Kilvert Street in Warwick, RI. The lot fronts on two streets, but also has restricted access frontage on the Airport Connector to the south.

2.1 Site Characteristics

The property is currently undeveloped and predominately open/grassed areas but does include limited forested vegetation associated with the identified resource areas. The site generally slopes over very mild grades from west to east over the lot toward the abutting wetlands.



Figure 2. View of Site

2.2 Soils

A review was performed of the Soil Survey of Rhode Island, prepared by the U.S. Department of Agriculture. The site is primarily composed Pits Gravel (Pg). This soil is characterized as Hydrologic Soil Group ‘A’, with permeability anticipated to be rapid to very rapid. Small portions of the property adjacent to the existing roadways are identified as Urban Land (Ur). The general soil conditions were confirmed with a number of onsite soil evaluations. Based on test pits that were performed on site, the groundwater depths are anticipated to be approximately 9.0 feet below the existing surface elevation in development zones.

2.3 Floodplain

A review of the FEMA National Flood Insurance Rate Maps for Kent County, Map Number, 44003C0127H effective October 2, 2015 (Refer to FEMA Map) was performed. Based on this review, the subject area lies within zone “X” (Areas determined to be outside of the 0.2% annual chance floodplain).

2.4 Utilities

Gravity sewer mains exist within Kilvert Street. The immediately adjacent facilities discharge to a public pumping station with limited capacity; however, a City interceptor exists approximately 800’ east which has been identified by the City to provide sufficient capacity for the project. Public water is available within fronting streets at sufficient capacity for the project. Overhead and underground electric/communication lines abut the site. Gas service is also available within the two streets.

2.5 Wetlands

Wetlands have been delineated on the property and are identified by the existing conditions survey of the site. Rhode Island Department of Environment Management (RIDEM) verification of the limits indicated is pending.

2.6 National Resource Inventory

According to the Rhode Island Department of Environmental Management (RIDEM) Geographic Information System (GIS) Mapping, there are no State designated Natural Heritage areas within the boundaries of this lot but within Natural Heritage Area ID No. 107 is indicated to extend within the adjacent (solar) development.

III. PROPOSED DEVELOPMENT

The proposed project is a multi-family development. The project proposes 13 six-unit townhouses, for a total of 78 units, which reflects a 60% decrease from the 200 units approved by the current Masterplan.

Two entrances to the development continue to be proposed, one on Kilvert Street and a second on Metro Center Boulevard. The interior of the project will be served by a 24-foot wide internal circulation drive. Each townhouse unit will include a single car garage and second driveway space. Additional (visitor) parking will also be provided with the project, and parking is proposed to wholly comply to the 2.5 parking spaces per unit required by the zoning ordinance. The project proposes underground electric service and connection to (public) water and sewer facilities. Building separation is proposed at 15' between buildings.



Figure 3. Revised Layout Diagram

The proposed use and intensity are consistent with prior approvals and no adverse impact to the general character of the community is anticipated from the project. The property is zoned for the use and project lighting, signage and intensity will be provided in a manner consistent with the area and generally contemplated City ordinances. As evidenced by prior submissions, the development also aligns with the objectives of the ‘Comprehensive Plan’ from a land planning and aesthetics perspective.

The project provides safe circulation and onsite parking in accordance with City ordinances and no adverse impacts are anticipated from the traffic and parking conditions proposed. A thorough evaluation of the anticipated impacts to the surrounding roadway network for the Future Build conditions was performed for the approved Masterplan. This modification represents a significant (60%) reduction in the total number of units and expected trips from the previously approved Masterplan and the underlying conclusion that operations of the offsite intersections will not have any significant increase in delay during morning and afternoon peak hours when traffic volumes are heaviest (refer to Traffic Impact evaluation excerpts included with Approved Masterplan Materials, attached).

Permanent stormwater management measures are proposed to fully mitigate the impacts to stormwater runoff from the proposed project and will comply with the City of Warwick Stormwater Ordinances and the Stormwater Management Standard and Performance Criteria of the RI Stormwater Design and Installation Standards Manual (RISDISM) using various low-impact development (LID) techniques and best management practices (BMP's). LID techniques that are incorporated into the design include minimizing new impervious areas, maximizing landscaping elements and treating stormwater runoff near the source with infiltration BMPs.

Based on these proposed conditions, the proposed project is considered generally consistent with the City's *Land Development and Subdivision Review Ordinances, Regulations and Rules*.

***PROPOSED
REVISED MASTERPLAN***

MATCH LINE

DEVELOPMENT SUMMARY

13 BUILDINGS, 78 UNITS

SHEET NOTES:

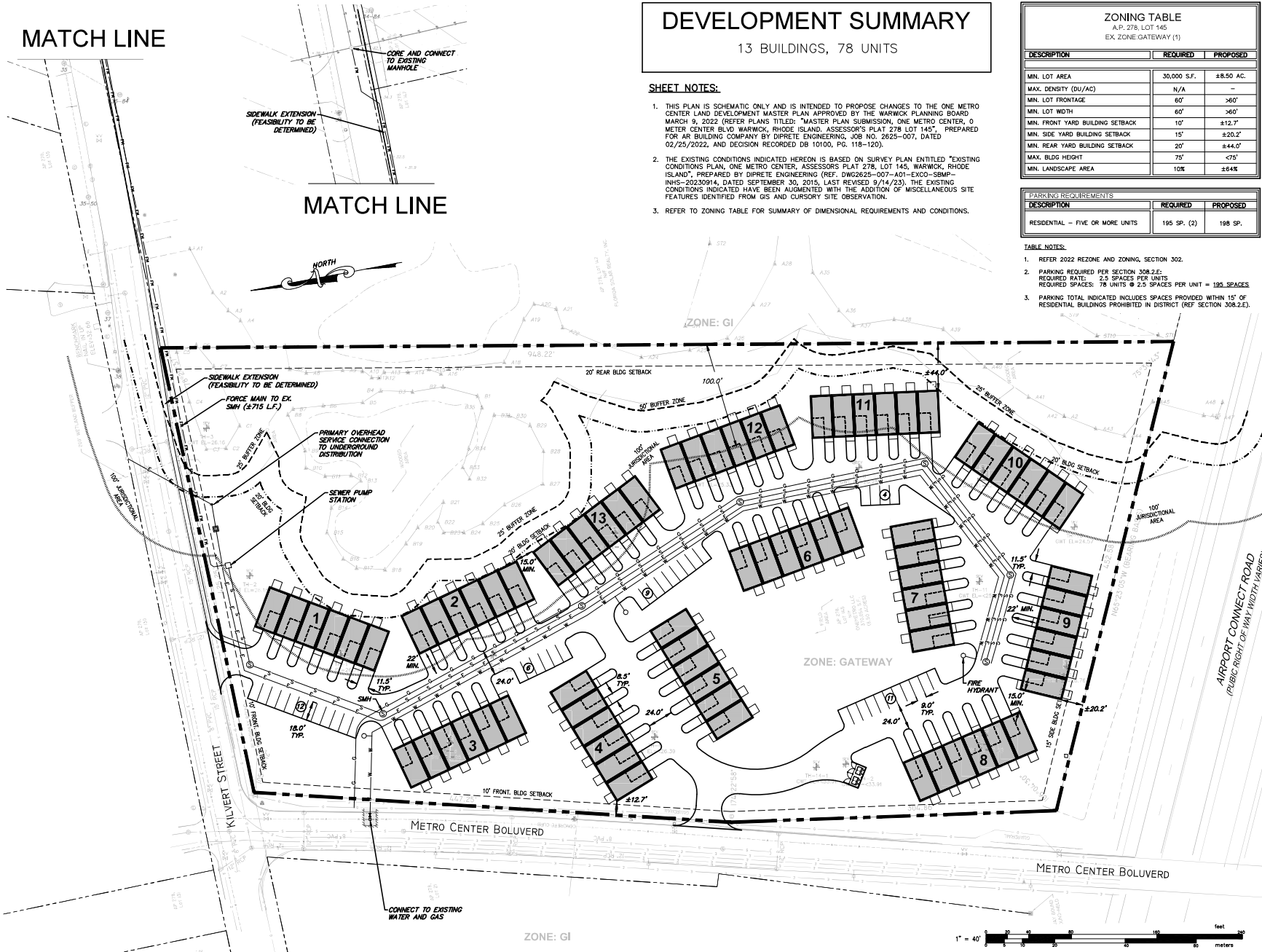
- THIS PLAN IS SCHEMATIC ONLY AND IS INTENDED TO PROPOSE CHANGES TO THE ONE METRO CENTER LAND DEVELOPMENT MASTER PLAN APPROVED BY THE WARWICK PLANNING BOARD MARCH 9, 2022 (REFER PLANS TITLED: "MASTER PLAN SUBMISSION, ONE METRO CENTER, ONE METER CENTER BLDG WARWICK, RHODE ISLAND, ASSESSOR'S PLAT 278 LOT 145", PREPARED FOR AIR BUILDING COMPANY BY DIPRETE ENGINEERING, JOB NO. 2025-007, DATED 02/25/2022, AND DECISION RECORDED DB 10100, PG. 118-120).
- THE EXISTING CONDITIONS INDICATED HEREON IS BASED ON SURVEY PLAN ENTITLED "EXISTING CONDITIONS PLAN, ONE METRO CENTER, ASSESSOR'S PLAT 278, LOT 145, WARWICK, RHODE ISLAND", PREPARED BY DIPRETE ENGINEERING (REF. DWG2625-007-401-EXCO-SMMP-INIS-20230914, DATED SEPTEMBER 30, 2015, LAST REVISED 9/14/23). THE EXISTING CONDITIONS INDICATED HAVE BEEN AUGMENTED WITH THE ADDITION OF MISCELLANEOUS SITE FEATURES IDENTIFIED FROM GIS AND CURSORY SITE OBSERVATION.
- REFER TO ZONING TABLE FOR SUMMARY OF DIMENSIONAL REQUIREMENTS AND CONDITIONS.

ZONING TABLE		
A.P. 278, LOT 145		
EX. ZONE: GATEWAY (1)		
DESCRIPTION	REQUIRED	PROPOSED
MNL. LOT AREA	30,000 S.F.	±8.50 AC.
MAX. DENSITY (DU/AC)	N/A	-
MNL. LOT FRONTAGE	60'	≥60'
MNL. LOT WIDTH	60'	≥60'
MNL. FRONT YARD BUILDING SETBACK	10'	±12.7'
MNL. SIDE YARD BUILDING SETBACK	15'	±20.2'
MNL. REAR YARD BUILDING SETBACK	20'	±44.0'
MAX. BLDG HEIGHT	75'	<75'
MNL. LANDSCAPE AREA	10%	±64%

PARKING REQUIREMENTS		
DESCRIPTION	REQUIRED	PROPOSED
RESIDENTIAL - FIVE OR MORE UNITS	195 SP. (2)	198 SP.

TABLE NOTES:

- REFER 2022 REZONE AND ZONING, SECTION 302.
- PARKING REQUIRED PER SECTION 308.2.E:
REQUIRED RATE: 2.5 SPACES PER UNIT
REQUIRED SPACES: 78 UNITS @ 2.5 SPACES PER UNIT = 195 SPACES
- PARKING TOTAL INDICATED INCLUDES SPACES PROVIDED WITHIN 15' OF RESIDENTIAL BUILDINGS PROHIBITED IN DISTRICT (REF SECTION 308.2.E).



PROPOSED MASTER PLAN REVISION
ONE METRO CENTER
SITE LAYOUT PLAN
FOR
A.P. 278, LOT 145
SUBDIVISION
ONE METRO CENTER BLVD
WARWICK, RI
PREPARED FOR
HILLSGROVE HOMES LLC

NO.	REVISION	BY	DATE
1	18' UNITS	KYY	05/19/23
2	GENERAL LAYOUT UPDATE	KYY	06/03/23
3	UPDATED WETLAND BUFFER	KYY	06/25/23
4	GENERAL SITE WOOD	KYY	09/16/23
5	MASTER PLAN	KYY	09/26/23

GAROFALO
GAROFALO & ASSOCIATES, INC.
CIVIL & STRUCTURAL ENGINEERS/SURVEYORS
LAND PLANNERS/ENVIRONMENTAL SCIENTISTS

88 COLLIS STREET
P.O. BOX 6145
PROVIDENCE, R.I. 02940
TEL: 401-473-6000

© Garofalo & Associates, Inc.
These drawings are the property of Garofalo & Associates, Inc. and are prepared for the client for their use only. They are not to be used for any other purpose, in whole or in part, without the consent of the architect or one of the directors.

JOB NO. 7468-00
DWG. NO. 7468-00-MP.dwg
SCALE: AS SHOWN
DRAWN BY K.Y.Y
CHECK BY S.S.H.
APPROVED S.S.H.
DATE: SEPTEMBER 25, 2023

SHEET
MP-1
4 OF 5 SHEETS

L:\1468-00 - Metro Center (Eastwinds Building) - Warwick, RI.dwg (J:\Current\Master Plans\1468-00-MP.dwg) 07/26/2023 4:09pm 2023

***APPROVED MASTERPLAN
AND DECISION***



CITY OF WARWICK

FRANK J. PICOZZI, MAYOR

March 14, 2022

Applicant:

A.R. Building Company, Inc.
310 Seven Fields Boulevard, STE 350
Seven Fields, PA 16046

c/o John Bolton Hinckley, Allen, & Snyder, LLP
100 Westminster Street, STE 1500
Providence, RI 02903

Subject: MASTER PLAN DECISION OF APPROVAL LETTER
One-Metro Center, Assessor's Plat: 278, Assessor's Lot: 145
Comp Plan Amendment/Zone Change Assessor's Plat: 278, Assessor's Lots: 30-42; 103-114; 144-147

Dear Applicant,

This letter shall serve as the master plan decision of approval as granted by the Planning Board at its meeting of March 9, 2022.

The application requires a zoning map and Comprehensive Plan future land use map amendment to recognize expansion of the Gateway district westerly along Kilvert Street to allow for the development of a (200) two-hundred unit residential apartment development. The Applicant is proposing streetscape improvements to include but not be limited to sidewalk/bike lane-pedestrian access improvements and lighting along portions of Metro Center Boulevard and Kilvert Street to create connectivity to the City's Intermodal District (City Centre)(the "Offsite Improvements").

Findings: The Planning Board has found the proposal to be generally consistent with RIGL Section 45-23-30 *General Purposes of Land Development and Subdivision Review Ordinances, Regulations and Rules*, and Article 1 *Purposes and General Statements* of the City's Development Review Regulations, and Subdivision of Land, specifically, RIGL Sections 45-23-60, *Procedure – Required Findings*, as follows:

1. That the proposed development is generally consistent with the City's Comprehensive Plan, having established single-family and high-density residential uses within the 200' radius. Consistent with Chapter 12, Future Land Use, Section E, General Principles to Guide Future Land Use, which calls for increasing connectivity and walkability wherever possible; promoting centers of activity appropriate to conditions, whether a mixed-use transit oriented City Centre..... new mixed-used neighborhood centers; Section H, Recommendations:

PLANNING DEPARTMENT • TOM KRAVITZ, DIRECTOR
3275 POST ROAD • WARWICK, RI 02886 • 401-738-2009

Goal 1 to continue to have sufficient diversity of land uses to support a strong and stable tax base. Goal 6 Public and Provide Development Meets High Standards of Urban Design, Policypromote redevelopment of outmoded/blighted commercial or industrial properties. Chapter 7 of the City of Warwick Comprehensive Plan addresses Housing and Neighborhoods, specifically within its "Recommendations" section lists as Goal 1, the City should work to provide "a wide range of quality housing choices to meet the diverse needs of households at all income levels and all stages of the life cycle, by supporting the addition of compact housing types such as townhouses, lofts, apartments, cottage developments....."

Additionally, the proposed development is consistent with the Warwick Station Redevelopment District Master Plan, specifically,

- *new housing in the district should include a wide spectrum of unit types, sizes, and prices in order to serve today's diverse housing market and to offer people more housing choices for eh different stages of their lives.....*
 - *The vitality of the Warwick Station Development district (City Centre) will be strengthened by its mix of uses. The Master Plan recommends a variety of uses including 30%-45% residential.*
2. Because the property is zoned General Industrial, the proposed development is not in compliance with the standards and provisions of the City's Zoning Ordinance and therefore requires **City Council Approval for a zone change to Gateway.**
 3. That the proposed project, at the Conditional Master Plan Phase, does not appear that there will be significant negative environmental impacts from the proposed development. Because State RIDEM approvals were previously granted to an office park project of similar impervious impact, RIDEM approvals shall not be required at the Preliminary application Phase. However, the Board elected to review the Final Plan Application.
 4. That the proposed development possesses adequate access to a public street along Kilvert Street and Metro Center Boulevard.
 5. That the proposed development will have access to Municipal Sewer and Water.

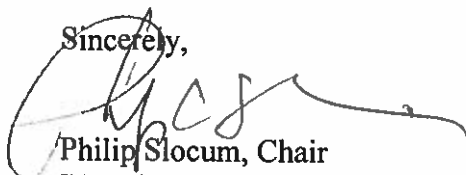
Planning Department Recommendations: The Planning Department recommendation is to grant Master Plan approval, with the following stipulations:

1. Should the City Council endorse the Comprehensive Plan amendment and zone change, as part of the Preliminary Application, the Applicant shall coordinate with the City's Fire Marshall regarding all life-safety requirements for the site and buildings, including potential reduction of project size to accommodate said requirements.
2. That, prior to Preliminary Plan Application, the Applicant shall receive City Council Approval of a map amendment to Future Land Use Map of the City of Warwick,

Comprehensive Plan 2033, (*Comprehensive Plan*), changing the intended future use classification of the parcel from "Technology/Light Industry" to "Mixed Use."

3. That, prior to Preliminary Plan Application, the Applicant shall receive a City Council Zone Change from General Industrial to Gateway.
4. That the Applicant shall submit a Preliminary Development Plan that shall comply with the Rules and Regulations for Professional Land Surveyors, Effective November 25, 2015.
5. That the Applicant shall submit a Preliminary Development Plan that shall comply with Appendix C, Major Subdivision/Land Development Application, of the Development Review Regulation governing Subdivisions, Land Development Projects, and Development Plan Review, Effective January 1, 1996; Amended January 01, 2000 and March 14, 2001, which shall include, at a minimum but not be limited to:
 - Stormwater Management Plan, consistent with the 2010 RI Stormwater Design and Installation Standards, designed to demonstrate zero-net runoff.
 - The Operation and Maintenance Plan for the proposed Stormwater Collection System must be included in the Preliminary submission.
 - Utilities shall be coordinated with the appropriate authorities.
 - The Offsite Improvements, and, to the extent necessitated by the Offsite Improvements, Metro Center Blvd shall be restored curb to curb from point of entry, easterly along Kilvert Street to Graystone Street. To the extent necessitated by the Offsite Improvements, restoration shall include PLS survey of right of way, mill and overlay to City Engineering preference (including drainage), and right of way re-delineated to promote safe pedestrian and cycling circulation. The Applicant shall coordinate with the developer of Hillsgrove at City Centre (currently under construction) as to ensure consistency of pedestrian and lighting improvements.
 - Applicant shall pay to the City, a Recreation Fee-in-Lieu of Land, to support recreation-based capital improvements within the City. See Section 6-1 of the Subdivision Regulations.
6. That, prior to Preliminary Plan Application, the Applicant shall coordinate with the City's Sewer Authority and Water Division, regarding connection.

Sincerely,


Philip Slocum, Chair
Warwick Planning Board

Cc: File

RECORDED
Mar 18, 2022 10:14A
Lynn D'Abrosca
City Clerk
City of Warwick, RI



February 9, 2022

Mr. Jason Kambitsis
Senior Vice President of
Acquisitions and Development
A.R. Building Company
310 Seven Fields Boulevard
Seven Fields, PA 16046

**PARTIAL COPY
FOR
REFERENCE**

Re: **One Metro Center
Traffic Assessment-Supplemental Report
200-Unit Development
Warwick, Rhode Island
Pare Project No.: 21154.00**

Dear Mr. Kambitsis:

Pare Corporation (Pare) has conducted an updated traffic analysis to determine the anticipated impacts to the surrounding roadway network for the Future Build Conditions with the a reduction in the number of units from 240-units to 200-units. As previously stated, the development will be located at the southeast corner of the Kilvert Street/Metro Center Boulevard intersection in Warwick, Rhode Island.

This letter evaluates the results of the Future (2026) Build condition analysis to determine the impact of the proposed development on the adjacent transportation network and provides recommendations as necessary.

FUTURE CONDITIONS

Traffic volumes in the study area were projected to the year 2026 to cover a five-year horizon from the existing 2021 condition. Two future (2026) scenarios were analyzed including a Future (2026) No-Build scenario and Future (2026) Build scenario. Under the Future (2026) No-Build scenario, the traffic volumes include existing traffic volumes and new traffic volumes associated with expected background growth and development. The Future (2026) scenario includes all traffic volumes under the Future (2026) No-Build scenario and traffic associated with the proposed Project.

Trip Generation

Trip generation for the proposed development was revised using the industry standard *Institute of Transportation Engineers (ITE) Trip Generation, 11th Edition*. The Trip Generation Manual provides traffic generation information for various land uses compiled from studies conducted by members nationwide. As part of our assessment, development trips were calculated using *Land Use Code (LUC) 221:Multifamily Housing (Mid-Rise)*. Based on the *Trip Generation* manual, mid-rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units that have between three and 10 floors. A summary of the trips generated from the ITE Trip Generation Manual for the proposed development is provided in Table 1 below using Land Use Code 221 Multifamily Housing (Mid-Rise).





Table 1: Trip Generation Summary-Land Use Code 221 Multifamily Housing – 200 Dwelling Units

	WEEKDAY	AM PEAK HOUR TRIPS (7 am and 9 am)	PM PEAK HOUR TRIPS (4 pm and 6 pm)
Entering Volume	454 trips	18 trips	47 trips
Exiting Volume	454 trips	52 trips	32 trips
Total Volume	908 trips	70 trips	79 trips

Project Trip Distribution

Table 1 indicates the anticipated increase in traffic volumes being generated from the site during the AM and PM peak hours. These volumes are total trips that are further broken down to entering and exiting movements. These trips are further broken down on the roadway system based on the origin and/or destination based on existing traffic flows.

Future (2026) Build Traffic Volumes

The Future (2026) Build traffic volumes consist of the Future (2026) No-Build traffic volumes with the addition of the Project generated traffic volumes. The Future (2026) Build weekday a.m. peak hour and weekday p.m. peak hour traffic volumes are shown in Figure 1. A summary comparing the difference between the Existing (2021) conditions, Future (2026) No-Build Conditions, and Future (2026) Build Conditions is located in Table 2.

Table 2: Analysis Scenario Summary

Analysis Scenario		
Existing (2021) Conditions	Future (2026) No-Build Conditions	Future (2026) Build Conditions
Existing traffic volumes – these volumes are the peak hour traffic volumes collected in the intersection turning movement counts with the appropriate Covid-19 adjustment factor applied.	Future traffic volumes without the proposed development – these volumes are the existing traffic volumes inflated with a 0.5% annual growth rate over 5 years plus the anticipated traffic generated by the proposed 78-unit development east of the site on Kilvert Street. This represents the anticipated future conditions if the proposed development is not constructed	Future traffic volumes with the proposed development – these volumes include the volumes established under the Future (2026) No-Build Conditions plus the trips generated by the proposed development. This represents the anticipated future conditions if the proposed development is constructed



TRAFFIC CAPACITY ANALYSIS

Capacity analyses were completed for all the study intersections for Existing (2021), Future (2026) No-Build, and Future (2026) Build conditions. A capacity analysis characterizes intersections based on their level of service (LOS). LOS is a quality measure describing operational conditions within a traffic stream, generally in terms of service measures such as speed, travel times, traffic interruptions, etc. Six LOS are defined for each type of facility, from A to F, with A representing the best operating conditions and F representing the worst operating conditions. The LOS criteria, as defined by the 2010 Highway Capacity Manual¹ (HCM) for signalized and unsignalized intersections are provided in Table 3. Tables 4, 5 and 6 show the results of the capacity analysis.

Table 3: LOS Criteria for Signalized & Unsignalized Intersections

LOS	Signalized Intersections Delay Time (sec/veh)	Unsignalized Intersections Delay Time (sec/veh)
A	0-10	0-10
B	> 10-20	> 10-15
C	> 20-35	> 15-25
D	> 35-55	> 25-35
E	> 55-80	> 35-50
F	> 80	> 50

In general, the results of the capacity analysis indicate that the introduction of traffic associated with the proposed residential development to the adjacent roadway network has minimal impact on the study area. As indicated on the tables below, the following can be summarized when comparing the Future No-Build to Build Conditions:

- *Signalized intersection of Greenwich Boulevard/Metro Center Boulevard:* AM Peak Hour- There is no decrease in level of service (LOS). Greatest increase in delay for any approach is 0.2 seconds.

PM Peak Hour- There is one decrease in LOS. Left turn movement from Greenwich Boulevard from LOS C to LOS D. Increase in delay is 0.3 seconds. Greatest increase in queue is 1 vehicle.

- *Signalized Intersection of Kilvert Street/Jefferson Boulevard/Coronado Road:* AM Peak Hour- There is no decrease in level of service (LOS). Greatest increase in delay for any approach is 2.1 seconds.

PM Peak Hour- There is no decrease in LOS. Greatest increase in delay is 1.2 seconds.

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



Mr. Jason Kambitsis

(4)

February 9, 2022

- *Unsignalized Intersection Metro Center Boulevard/Coastway Boulevard* – AM Peak Hour- No decrease in LOS. Greatest increase in delay is from Coastway Boulevard with an increase of 0.3 seconds.

PM Peak Hour- Decrease in LOS for the Coastway Boulevard movements onto Metro Center Boulevard from LOS C to LOS D. The increase in delay is 1.9 seconds.

- *Unsignalized Intersection Metro Center Boulevard/Kilvert Street (Four-Way Stop)* – AM Peak Hour- No decrease in LOS. Greatest increase in delay is 0.7 seconds.

PM Peak Hour- Decrease in LOS for the Metro Center Boulevard approach from LOS C to LOS D. The increase in delay is 3.9 seconds.

- *Unsignalized Intersection Metro Center Boulevard/Proposed Site Entrance* – AM Peak Hour- LOS is B with a 12 second delay.

PM Peak Hour- LOS is C with a 15.4 second delay.



Table 4: Intersection Capacity Analysis Results - Signalized Intersections

Intersection	Movement		2021 Existing			2026 No-Build			2026 Build		
			LOS	Delay ¹	Queue Length ²	LOS	Delay ¹	Queue Length ²	LOS	Delay ¹	Queue Length ²
Greenwich Avenue (Route 5) & Metro Center Boulevard	<i>Weekday AM Peak Hour</i>										
	SE	L,T	C	32.1	194	C	32.6	212	C	32.6	215
	NW	T	C	15.9	192	C	26.4	197	C	26.8	197
		R	A	2.9	46	A	3.0	45	A	3.0	45
	SW	L	D	35.7	61	D	35.2	65	D	35.2	70
		R	A	4.9	27	A	4.9	31	A	4.8	31
	Intersection		C	22.4		C	22.9		C	23.0	
	<i>Weekday PM Peak Hour</i>										
	SE	L,T	F	297.1	#595	F	327.8	#617	F	335	#624
	NW	T	F	93.2	#372	F	81.9	#385	F	103.5	#385
		R	A	2.3	30	A	2.3	31	A	2.3	32
	SW	L	C	34.9	148	C	34.9	155	D	35.2	158
		R	A	7.1	115	A	7.3	122	A	7.3	122
	Intersection		F	145.5		F	159.4		F	161.9	
Jefferson Boulevard, Kilvert Street & Coronado Road	<i>Weekday AM Peak Hour</i>										
	EB	L	C	26.2	95	C	27.7	105	C	29.8	114
		TR	C	28.4	110	C	27.7	124	C	28.6	136
	WB	L	C	21.3	73	C	21.5	75	C	21.5	75
		T	C	33.3	157	C	34.7	165	C	34.9	168
		R	A	2.6	23	A	2.6	23	A	2.6	23
	NB	L	B	11.5	34	B	11.8	36	B	12.0	37
		T	C	28.2	147	C	29.6	153	C	29.7	154
		R	A	0.1	0	A	0.1	0	A	0.1	0
	SB	L	D	40.7	58	D	45.2	67	D	45.6	68
		TR	B	13.2	56	B	14.2	58	B	14.2	59
	Intersection		C	21.0		C	22.0		C	22.5	
	<i>Weekday PM Peak Hour</i>										
	EB	L	C	22.1	95	C	23.3	101	C	24.2	104
		TR	D	35.7	269	D	37.1	#310	D	38.3	#330
	WB	L	B	19.7	62	C	20.5	63	C	20.8	63
		T	C	26.7	161	C	27.1	174	C	27.5	184
		R	A	1.8	13	A	1.8	14	A	1.8	14
	NB	L	B	16.2	28	B	16.5	30	B	16.7	31
		T	D	35.7	92	D	36.1	94	D	36.3	94
		R	A	0.0	0	A	0.0	0	A	0.0	0
	SB	L	F	194.4	#173	F	216.0	#180	F	215.5	#177
	TR	B	19.6	165	C	20.2	172	C	20.4	174	
Intersection		C	34.3		D	36.2		D	36.4		

The 95th percentile volume exceeds capacity, queue may be longer.
 1. Delay is measured in seconds/vehicle.
 2. Queue Length shown represents the 95th percentile queue length in feet.



Table 5: Intersection Capacity Analysis Results - Unsignalized Intersections-AM Peak Hour

Intersection	Movement		Existing (2021)		Future (2026) No Build		Future (2026) Build	
			LOS (Delay ¹)	Queue Length ²	LOS (Delay ¹)	Queue Length ²	LOS (Delay ¹)	Queue Length ²
Coastway Boulevard, Driveway & Metro Center Boulevard	NB	L,R	B (12.9)	0.4	B (13.4)	0	B (13.7)	0.4
	SW	L,T	A (8.0)	0	A (8.1)	0	A (8.1)	0
	NE	T,R	A (0)	0	A (0)	0	A (0)	0
Metro Center Boulevard, Driveway & Kilvert Street	NE	L,T,R	A (9.8)	1.6	B (10.2)	1.8	B (10.8)	2.1
	SW	L,T,R	A(8.3)	0	A (8.4)	0	A (8.5)	0
	EB	L,T,R	A (8.1)	0.2	A (8.3)	0.2	A (8.4)	0.2
	WB	L,T,R	B (11.5)	2.2	B(12.3)	2.6	B (13.0)	2.9
Metro Center Boulevard & One Metro Proposed 240 Unit	WB	L,R	-	-	-	-	B (12.0)	0.3
	NE	T,R	-	-	-	-	-	-
	SW	L,T	-	-	-	-	A (7.9)	-

- 95th percentile volume exceeds capacity; queue may be longer; N/C – No Conflict.

1. Delay shown in seconds per vehicle.
2. Queue Length shown in vehicles.



Table 6: Intersection Capacity Analysis Results - Unsignalized Intersections-PM Peak Hour

Intersection	Movement		Existing (2021)		Future (2026) No Build		Future (2026) Build	
			LOS (Delay ¹)	Queue Length ²	LOS (Delay ¹)	Queue Length ²	LOS (Delay ¹)	Queue Length ²
Coastway Boulevard, Driveway & Metro Center Boulevard	NB	L,R	C (21.5)	1.5	C (24)	1.7	D (25.9)	1.8
	SW	L,T	A (8.1)	0	A (8.2)	0	A (8.3)	0
	NE	T,R	A (0)	0	A (0)	-	A (0)	-
Metro Center Boulevard, Driveway & Kilvert Street	NE	L,T,R	C (18.5)	4.8	C (22.7)	6.2	D (27.6)	7.3
	SW	L,T,R	B(13.3)	1.6	B (14.2)	1.9	B (14.9)	1.9
	EB	L,T,R	B (10.8)	0.5	B (11.3)	0.5	B (11.7)	0.6
	WB	L,T,R	D (29.3)	7.8	E (37.7)	9.6	E (49.2)	11.9
Metro Center Boulevard & One Metro Proposed 240 Unit	WB	L,R	-	-	-	-	C (15.4)	0.3
	NE	T,R	-	-	-	-	-	-
	SW	L,T	--	--	-	-	A (8.3)	0.1

- 95th percentile volume exceeds capacity; queue may be longer; N/C – No Conflict.

1. Delay shown in seconds per vehicle.
2. Queue Length shown in vehicles.



Mr. Jason Kambitsis

(8)

February 9, 2022

Conclusions

Based on our capacity analysis, it has been found that the operations of the off-site intersections described above will not have any significant increase in delays at the intersections during the morning and afternoon peak hours when traffic volumes are heaviest. In addition, the proposed site entrance will also result at a very acceptable level of service. The proposed site was analyzed as part of this study with one access point on Metro Center Boulevard. If allowed by RIDEM for the second access point on Kilvert Street, this will have an improvement on the delays for the Metro Center Boulevard approach to the Metro Center Boulevard/Kilvert Street intersection.

As previously stated, the truck turning movements were reviewed for the Metro Center Boulevard/Kilvert Street intersection. In particular the right turn movement from Metro Center Boulevard onto Kilvert Street was reviewed. Encroachment of truck traffic into the Kilvert Street approach affects traffic flow at this intersection. As part of this project, DiPrete Engineering will be improving this intersection to better accommodate the truck traffic flow.

In summary, with the existing roadway system in the area and the projected traffic that is anticipated to be generated from the proposed development, no significant impacts to the traffic capacity or safety on the roadways and intersections are anticipated. Please feel free to contact me if you have any questions or need additional information.

Sincerely,

John P. Shevlin, P.E.
Senior Vice President

JPS/

Z:\JOBS\21 Jobs\21154.00 AR Building Co-Metro Center Traffic-RI\Report\report metro ti asupplement 200.doc