



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

June 4, 2021

Montgomery Township Planning Board
2761 Route 206
Bellemead, NJ 08502

Re: Proposed Age-Restricted Residential Development
Lot 10.05 in Block 20001
Montgomery Township, Somerset County
MRA File No. 21-175

Dear Board Members:

McDonough & Rea Associates (MRA) has been asked to prepare a *Traffic Study* for plans to construct 71 age-restricted dwellings on the noted property. The property is bounded by Headquarters Park Drive to the east, north of Orchard Road. The current plan details a 3-story apartment building with 71 age-restricted apartments to be located in the southwest portion of the tract.

SCOPE OF STUDY

In order to prepare a thorough *Traffic Study* for the 71 age-restricted apartments, MRA conducted the following tasks:

1. Made field visits to the site to establish existing roadway and traffic conditions in the area.
2. Prepared trip generation estimates for the 71 age-restricted dwellings based upon Institute of Transportation Engineers (ITE) data.
3. Reviewed the *Site Plan* with respect to New Jersey Residential Site Improvement Standards (RSIS) and conformance to proper traffic engineering principles.

The following report sets forth the database accumulated and the conclusions reached with respect to the age-restricted residential development

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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EXISTING CONDITIONS/TRAFFIC VOLUMES

The subject property is bounded by Headquarters Park Drive to the east as shown on *Figure 1*, a *Site Location Map* in the *Appendix*. The subject property previously contained a 100,000 SF office building, which has recently been razed. Headquarters Park Drive is a north/south local roadway extending south to Orchard Road. Access is only proposed to and from the west side of Headquarters Park Drive. The *Montgomery Township Municipal Complex* is currently under construction on the east side of Headquarters Park Drive. The *Municipal Complex* will house Municipal offices, the Police Department and the Township library.

TRIP GENERATION

Estimates of traffic to be generated by the 71 age-restricted dwellings were made after consulting the 10th Edition of the ITE *Trip Generation Manual*. ITE Land Use Code 252, *Senior Adult Housing-Attached* trip data was reviewed as well as the NJDOT trip data.

MRA has reviewed research traffic counts conducted at established age-restricted communities in New Jersey. The following traffic generation patterns are evident:

- Traffic generation from age-restricted communities during roadway peak hours is substantially less than traffic generation from non-age-restricted communities.
- Traffic generation from age-restricted communities generally increases later in the morning, after the AM peak street hour, and is higher in the early afternoon prior to the PM peak street hour.
- Daily traffic generation from age-restricted communities is substantially less than non-age-restricted communities.
- Traffic generation patterns from age-restricted communities are very consistent on a daily basis.

Age-restricted communities typically exhibit their greatest traffic generation outside the traditional morning and afternoon peak commuter periods. Many residents of age-restricted communities are either semi or fully retired, working at part-time jobs, jobs without traditional 9:00 AM to 5:00 PM work hours, or working from home. However, the morning and afternoon peak hours, when traffic volumes are at their highest levels, are critical for analysis.



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Table II illustrates the anticipated AM peak street hour and PM peak street hour trip generation from the 71 age-restricted dwellings.

TABLE II
TRIP GENERATION
71 AGE-RESTRICTED DWELLINGS

<u>AM PSH</u>			<u>PM PSH</u>		
<u>IN</u>	<u>OUT</u>	<u>TOTAL</u>	<u>IN</u>	<u>OUT</u>	<u>TOTAL</u>
11	12	23	12	10	22

The site traffic is anticipated to be primarily oriented to/from the east along Orchard Road toward Route 206 with 70 percent of the site traffic oriented to/from the east and 30 percent to/from the west based on the area roadway network and the location of employment and shopping opportunities in the area.

Based on the aforementioned estimates of traffic to be generated by the 71 apartments, an *off-site* traffic impact analysis is not warranted as the total number of trips generated by the project falls well short of the 100 trip threshold suggested in the guidelines of the ITE with respect to the need for off-site traffic impact studies.

Furthermore, given the fact that the site previously contained a 100,000 SF office building with significantly higher traffic generation, it is MRA's opinion that traffic will be well distributed and will not have a significant impact on any intersections along Orchard Road.

SITE PLAN AND PARKING

A *Site Plan* prepared by Shore Point Engineering (SPE) details a full movement ingress/egress driveway to Headquarters Park Drive that will serve the 3-story apartment building and parking lot with 129 spaces. A total of 128 parking spaces are required based on RSIS and 129 spaces are provided. Based on our experience and research at similar communities in New Jersey, it is anticipated that the development will have a peak parking demand in the range of 80 to 90 vehicles given the type of residential dwellings proposed. Therefore, the proposed parking supply will be more than adequate for the 71 age-restricted dwellings. The *Site Plan* has been designed to provide positive on-site circulation for passenger and large wheel-based vehicles. The access system with a full movement driveway to Headquarters Park Drive meets and exceeds the RSIS accessibility standards.



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CONCLUSIONS

It is concluded based on the analysis set forth in this report, that plans to construct the 71 age-restricted dwellings on the noted property can be approved and operate compatibly with future traffic conditions in the area. The *Site Plan* has been designed in accordance with proper traffic engineering principles and provides for adequate parking and adequate circulation for everyday traffic as well as for emergency vehicles and the parking supply will accommodate the anticipated demand. Furthermore, the site design complies with the New Jersey RSIS accessibility and parking standards.

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

Very truly yours,

Jay S. Troutman, Jr., PE
Principal

Scott T. Kennel
Sr. Associate

cc: Kevin E. Shelly, PE

APPENDIX



McDONOUGH & REA ASSOCIATES

TRAFFIC AND TRANSPORTATION CONSULTING

FIGURE 1

JOB NO.

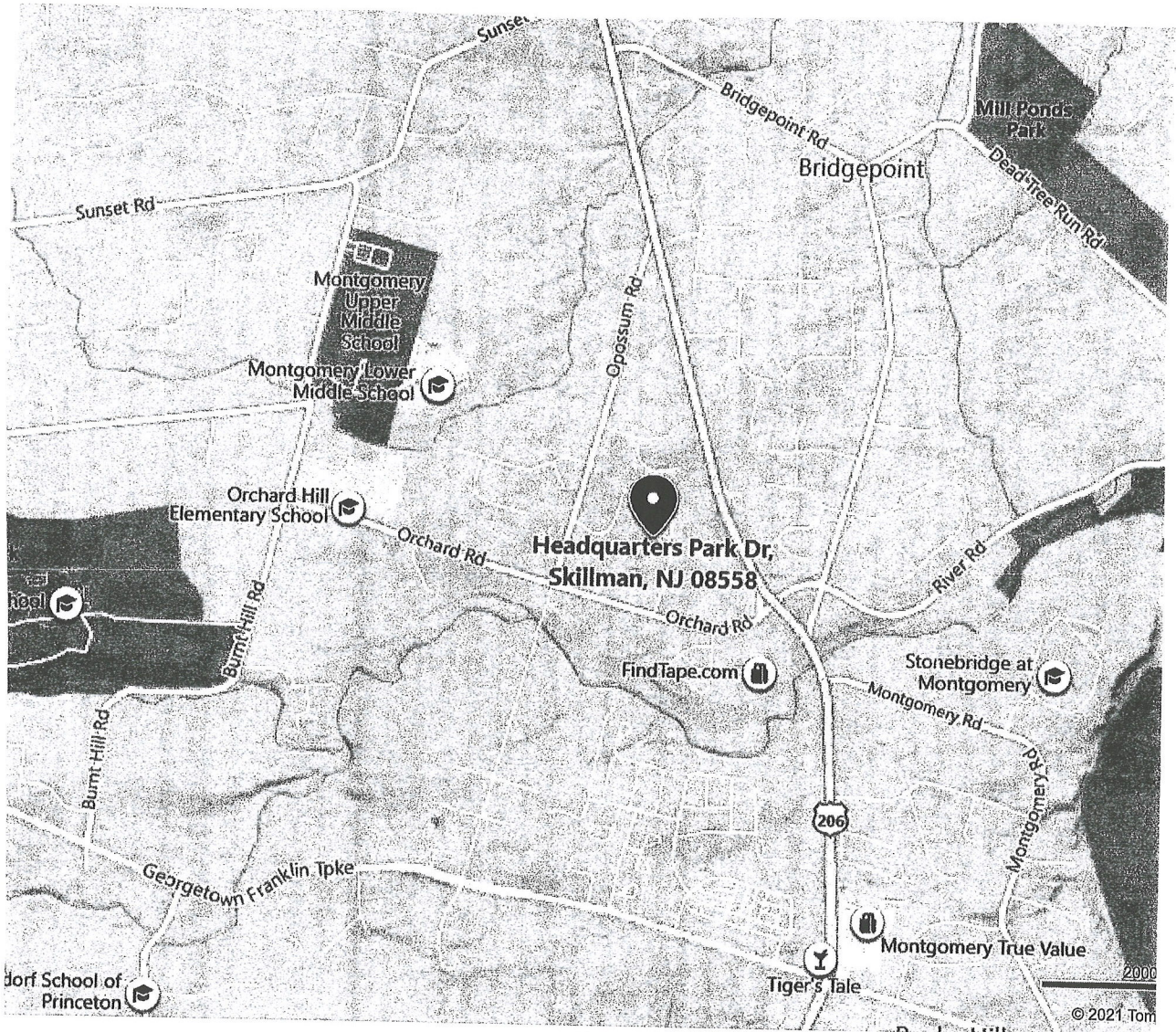
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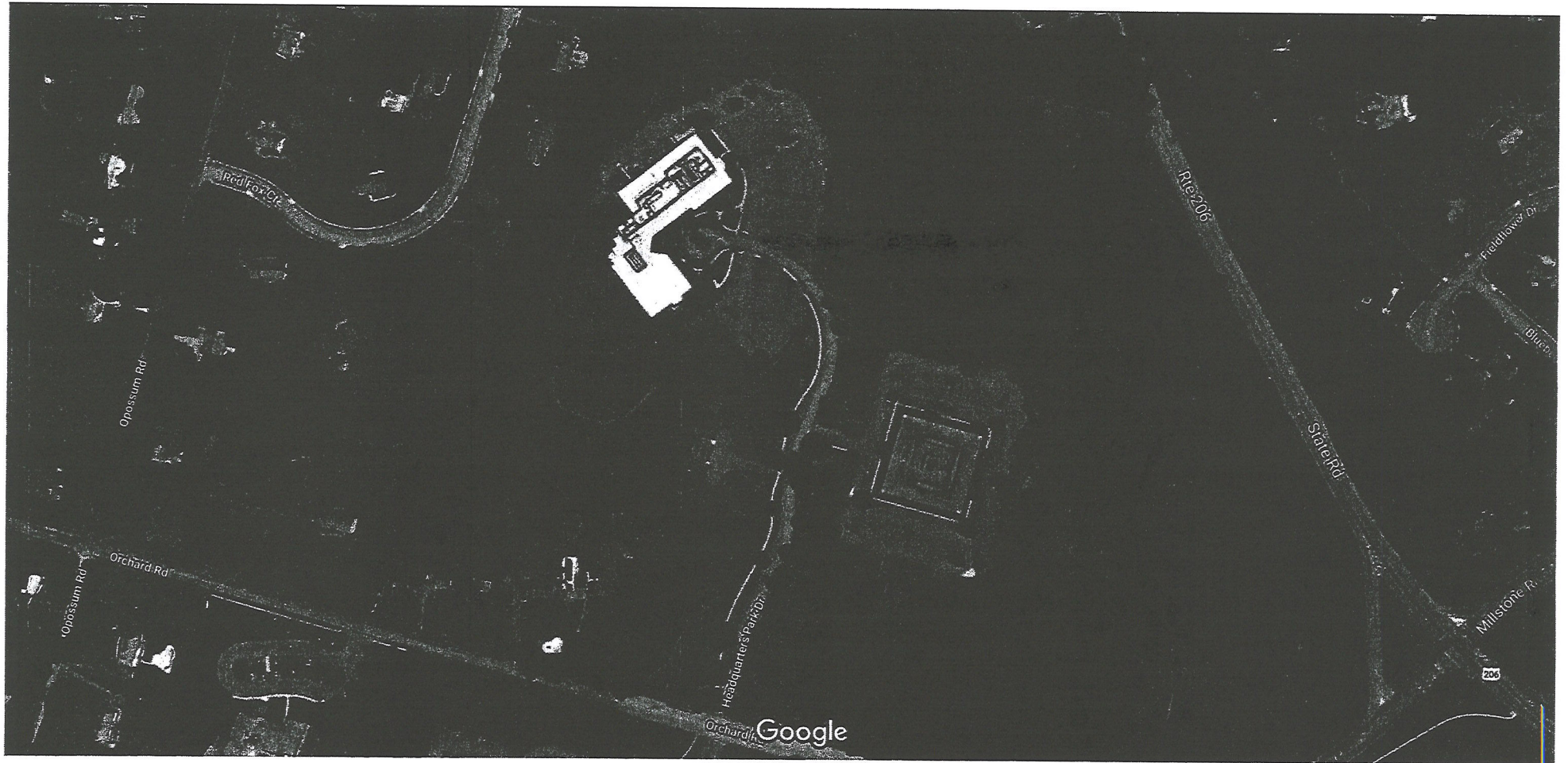
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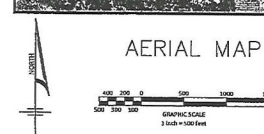
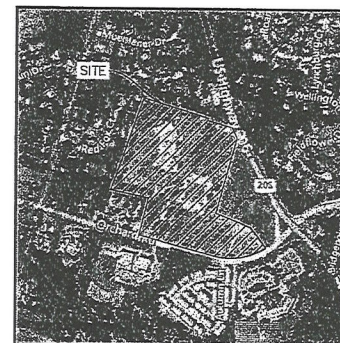
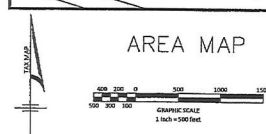
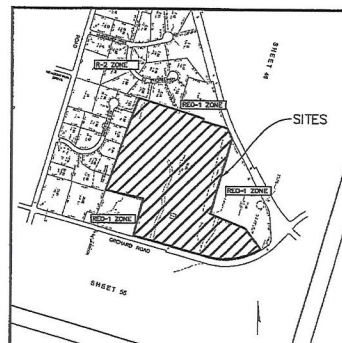
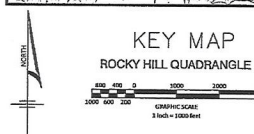
JUNE 2021

SUBJECT:

SITE LOCATION MAP





[illegible][illegible]

No.	Description	Revision	Date
1.	TITLE SHEET	ORIGINAL	SUBMIT
2.	EXISTING CONDITIONS	ORIGINAL	SUBMIT
3.	MAJOR SUBMISSION PLAN	ORIGINAL	SUBMIT
4.	LAYOUT PLAN	ORIGINAL	SUBMIT
5.	LANDSCAPE PLAN	ORIGINAL	SUBMIT
6.	STRUCTURE PLAN	ORIGINAL	SUBMIT
7.	PROFILES	ORIGINAL	SUBMIT
8.	LANDSCAPE PLAN	ORIGINAL	SUBMIT
9.	LANDSCAPE PLAN	ORIGINAL	SUBMIT
10.	LANDSCAPE PLAN	ORIGINAL	SUBMIT
11.	SOIL EROSION & STORMWATER CONTROL PLAN	ORIGINAL	SUBMIT
12.	SOIL EROSION & STORMWATER CONTROL DETAILS	ORIGINAL	SUBMIT
13.	CONSTRUCTION DETAILS	ORIGINAL	SUBMIT
14.	CONSTRUCTION DETAILS	ORIGINAL	SUBMIT
15.	CONSTRUCTION DETAILS	ORIGINAL	SUBMIT

- | 1. <u>IDENTIFY</u> | 2. <u>CONSIDER</u> |
|----------------------|----------------------|
| 3. <u>ANALYZE</u> | 4. <u>CONCLUDE</u> |
| 5. <u>RECOMMEND</u> | 6. <u>CONSIDER</u> |
| 7. <u>RECOMMEND</u> | 8. <u>CONCLUDE</u> |
| 9. <u>RECOMMEND</u> | 10. <u>CONCLUDE</u> |
| 11. <u>RECOMMEND</u> | 12. <u>CONCLUDE</u> |
| 13. <u>RECOMMEND</u> | 14. <u>CONCLUDE</u> |
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| 95. <u>RECOMMEND</u> | 96. <u>CONCLUDE</u> |
| 97. <u>RECOMMEND</u> | 98. <u>CONCLUDE</u> |
| 99. <u>RECOMMEND</u> | 100. <u>CONCLUDE</u> |

Zoning Schedule	
Montgomery Senior Affordable Housing Block 2D001, Proposed Lot 10.05A	
	Proposed
Min. Lot Area	4,214 Ac
Min. Building Setback	40 FT
Max. Building Coverage	15.0 %
Max. Impervious Coverage	25.0 %
Max. Building Height	48 FT
	3 Stories

Parking Table

Required: (Residential Site Improvements Standards)

- 1-Bedroom Garden Apartment – 1.8 Spaces / Unit
 - 1.8 x 70 = 126 Spaces
- 2-Bedroom Garden Apartment – 2.0 Spaces / Unit
 - 2.0 x 1 = 2 Spaces
- Total Required = 128 Spaces

Proposed:

- Total Proposed = 128 Spaces

* Additional existing spaces are available and will be credited towards a potential future extension of the development.

APPROVED BY THE MONTGOMERY TOWNSHIP
PLANNING BOARD AS A PRELIMINARY/ FINAL
MAJOR SITE PLAN:

CHAIRMAN	DATE
SECRETARY	DATE
ENGINEER	DATE

[illegible]

ITE Land Use: 252, Senior Adult Housing - Attached												
Size of Development:		71 Dwelling Units			10th							
Time Period	Average Rate	Studies	Avg. Size	R ²	Trips	Equation			Trips	Split		
Weekday Daily	3.70	6	81	0.99	262.7	T=	4.020	x-	25.370	260.1	50	50
AM Peak Street Hour	0.20	11	148	0.98	14.2	T=	0.200	x-	0.180	14.0	35	65
PM Peak Street Hour	0.26	11	148	0.96	18.5	T=	0.240	x+	2.260	19.3	55	45
AM Peak Hour of Generator	0.33	11	95	0.59	23.4	T=	0.290	x+	4.090	24.7	47	53
PM Peak Hour of Generator	0.31	10	92	0.78	22.0	T=	0.360	x-	4.500	21.1	53	47
Saturday Daily	3.23	6	81	0.99	229.3	T=	3.970	x-	60.090	221.8	50	50
Saturday Peak Hour of Generator	0.33	7	91	0.99	23.4	T=	0.350	x-	1.670	23.2	62	38
Sunday Daily	3.14	6	81	0.99	222.9	T=	3.500	x-	29.080	219.4	50	50
Sunday Peak Hour of Generator	0.36	6	81	0.95	25.6	T=	0.300	x+	5.020	26.3	64	36