

MEMORANDUM TO: Danielle Anderson
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FROM: Elise Purguette
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Principal

DATE: January 29, 2021

SUBJECT: Parking Study
Proposed Expansion of the 5th Avenue Station Development
Naperville, Illinois

This memorandum presents the findings and recommendations of a parking study conducted by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) for the proposed expansion of the 5th Avenue Station mixed-use development located in Naperville, Illinois. The 5th Avenue Station is located just north of the BNSF railway tracks and is adjacent to the Naperville Metra and Amtrak train station. It is important to note that the 5th Avenue Station is considered a Transit-Oriented Development (TOD) given its proximity to the Naperville Metra and Amtrak train station, downtown Naperville, and other commercial uses as well as other alternative modes of transportation available in the immediate area.

The TOD, mixed-use development currently contains one building with a total of approximately 290,000 square feet and includes the following uses:

- 118 residential units (three efficiency units, 36 studios, 20 one-bedroom units, and 59 two-bedroom units)
- Approximately 80,271 square feet of leasable office space
- Approximately 2,309 square feet of leasable area that contains a photo studio
- Approximately 3,669 square feet of leasable area that contains medical offices
- Approximately 1,361 square feet of leasable area that contains a hair salon
- Approximately 6,076 square feet of leasable area that contains Midwest Career College
- Approximately 736 square feet of leasable area that contains a computer repair store

The TOD also provides a total of 397 parking spaces contained in five parking lots. The list of the tenants is included in the Appendix. As proposed, the plans call for the addition of approximately 2,300 square feet of office space and eight new apartment units (five one-bedroom units and three two-bedroom units). **Figure 1** shows an aerial view of the site.



Aerial View of Site

Figure 1

The purpose of this study was to assess the adequacy of the existing parking supply of the 5th Avenue Station in accommodating the current and future parking needs of the TOD development. In order to do that, the following tasks were undertaken:

- Parking lots occupancy surveys were completed based on historical data obtained by reviewing aerial photographs of the site from Cook County GIS Department and Google Earth.
- Calculating the total parking requirements of the expanded 5th Avenue Station based on the City of Naperville Zoning Ordinance requirements.
- Estimating projected hourly parking demand for the expanded 5th Avenue Station based on parking ratios published by the Institute of Transportation Engineers (ITE) and City of Naperville Zoning Ordinance requirements.

The adequacy of the available parking within the 5th Avenue Station mixed-use development was evaluated to assess its ability to accommodate the estimated future parking demand of the 5th Avenue Station mixed-use development with its expansion.

Parking Occupancy

The parking occupancy surveys were completed at the 5th Avenue Station parking lots based on historical data obtained by reviewing aerial photographs from Cook County GIS Department and Google Earth. The parking occupancy surveys are summarized in **Tables 1 and 2** for the aerial photographs from Cook County GIS Department and Google Earth, respectively. The results of the surveys by lot are summarized in **Tables 3 and 4**. (Tables 3 and 4 are located in the Appendix). Aerial photographs are included in the Appendix.

Table 1
PARKING OCCUPANCY SURVEYS – BASED ON COOK COUNTY GIS DEPARTMENT

| | Total | Percentage of Occupancy | Surplus |
|------|------------|-------------------------|----------|
| 2009 | 291 | 73% | 106 |
| 2012 | 247 | 62% | 150 |
| 2013 | 313 | 79% | 84 |
| | 397 | 100% | 0 |

Table 2
PARKING OCCUPANCY SURVEYS – BASED ON GOOGLE EARTH

| | Total | Percentage of Occupancy | Surplus |
|--------------|------------|-------------------------|----------|
| April 2013 | 292 | 74% | 105 |
| April 2015 | 317 | 80% | 80 |
| October 2019 | 331 | 83% | 66 |
| | 397 | 100% | 0 |

As can be seen, the parking occupancy ranged from 247 to 331 parking spaces (62 to 83 percent occupied).

5th Avenue Station Existing Parking Characteristics

Transit Oriented Development

As discussed previously, 5th Avenue Station is considered a TOD due to the following public and alternative modes of transportation serving the area and its proximity to the following other land-uses:

- The Naperville Metra and Amtrak train station is located immediately west of the 5th Avenue station with Metra providing commuter train service between downtown Chicago and Aurora.
- The area is also served via alternative modes of transportation including taxis, rider hauling services, and Tuk Tuks. In addition, sidewalks are generally provided on at least one side of the roads and various bicycle facilities are provided in the area.
- 5th Avenue Station is within walking distance of downtown Naperville and the various retail and commercial uses located along the Ogden Avenue corridor.

Numerous studies have concluded that occupants of TODs have a lower reliance on the private automobile and, as such, this results in reductions in the number of vehicle trips and the parking demand generated by TODs.

5th Avenue Station Parking

5th Avenue Station has 397 parking spaces contained in the following five parking lots:

- Lot A is located in the northeast corner of 5th Avenue with Ellsworth Street and contains approximately 20 parking spaces. Access to this parking lot is provided via two access drives off Ellsworth Street and the public alley.
- Lot B is located in the northwest corner of 5th Avenue with Brainard Street and contains approximately 20 parking spaces. Access to this parking lot is provided via two access drives off Brainard Street and the public alley.
- Lot C is bordered by Brainard Street to the west, Loomis Street to the east, and 5th Avenue to the south and contains approximately 96 parking spaces. Access to this parking lot is provided via two access drives off Brainard Street and Loomis Street.
- Lot D is bordered by 5th Avenue to the north, Ellsworth Street to the west, and Loomis Street to the east and contains approximately 134 parking spaces (including six handicapped parking spaces). Access to this parking lot is provided via three access drives off 5th Avenue, Ellsworth Street, and Loomis Street.

- Lot E is bordered by the BNSF railway tracks to the south, Ellsworth Street to the west, and Loomis Street to the east and contains approximately 127 parking spaces (including one handicapped parking space). Access to this parking lot is provided via two access drives off Loomis Street and Ellsworth Street (exit only).

Parking Lot E is generally reserved for the residents of the 5th Avenue Station and the other four parking lots are reserved for the office/commercial uses and resident overflow parking. Further, all of the parking lots are signed for permit parking only and approximately 165 of the parking spaces are reserved for residential parking. In addition, residential guests that are parking for four hours or less are permitted to park the parking lot in front of the building (Lot D). If the guests will be staying longer than four hours, the residential guests are required to park in the parking lots on the north side of 5th Avenue. All guests must check in with the management office and get a parking permit to display in their windshield. Lastly, no commuter parking is permitted in any of the 5th Avenue Station parking lots. It is important to note the building is professionally managed and the management team takes an active role in the oversight and regulation of the 5th Avenue Station parking.

Projected 5th Avenue Station Parking Demand

As previously indicated, the 5th Avenue Station currently contains one building with a total of approximately 290,000 square feet and includes the following uses:

- 118 residential units (three efficiency units, 36 studios, 20 one-bedroom units and 59 two-bedroom units)
- Approximately 80,271 square feet of leasable office space
- Approximately 2,309 square feet of leasable area that contains a photo studio
- Approximately 3,669 square feet of leasable area that contains medical offices
- Approximately 1,361 square feet of leasable area that contains a hair salon
- Approximately 6,076 square feet of leasable area that contains Midwest Career College
- Approximately 736 square feet of leasable area that contains a computer repair store

The TOD has a total of 397 parking spaces. As proposed, the plans call for the addition of approximately 2,300 square feet of office space and eight new apartment units (five one-bedroom units and three two-bedroom units).

The parking demand of the expanded 5th Avenue Station was (1) calculated based on requirements of the City of Naperville Zoning Ordinance and (2) estimated based on rates published in the Institute of Transportation Engineers' (ITE) *Parking Generation Manual*, 5th Edition and the City of Naperville Zoning Ordinance as summarized below.

Parking Demand per the City of Naperville Zoning Ordinance

Table 5 shows the parking requirements of the expanded 5th Avenue Station based on the City of Naperville Zoning Ordinance.

Table 5
 PARKING REQUIREMENTS PER ZONING ORDINANCE
 EXPANDED 5TH AVENUE STATION

| Uses | Density | Parking Requirement | Parking Spaces |
|-----------------------|----------------------------|---|----------------|
| Residential | 126 units | Two parking spaces per dwelling unit plus 0.25 parking spaces per unit for guests | 284 |
| Office | 80,271 sq. ft | 3.3 spaces per 1,000 square feet | 265 |
| Photo Studio | 2,309 sq. ft. | 4.5 spaces per 1,000 square feet | 11 |
| Hair Salon | 1,361 sq. ft. | 4.0 spaces per 1,000 square feet | 6 |
| Medical Office | 3,669 sq. ft. | 5.0 spaces per 1,000 square feet | 19 |
| College | 50 students and 8 teachers | 1.0 spaces per 2.0 teachers and 1.0 spaces per 4 students | 17 |
| Computer Repair Store | 736 sq. ft. | 4.5 spaces per 1,000 square feet | 3 |
| Total | | | 605 |

From the table it can be seen that the expanded 5th Avenue Station will require 605 parking spaces per the City of Naperville Zoning Ordinance. However, the zoning ordinance does not take into consideration the shared parking between the uses and the fact that the 5th Avenue Station is a TOD. In fact, the Planned Development (PD) Ordinance for the 5th Avenue Station only requires the existing TOD to provide 407 parking spaces, which is a significant reduction from the zoning ordinance.

Further, the 5th Avenue Station PD Ordinance allowed for a mix of commercial and office uses with a maximum of approximately 60 percent commercial space. However, it is important to note that the 5th Avenue Station currently has a mix of approximately 85 percent office uses and 15 percent commercial uses. As such, given that office space has a lower parking demand than commercial space, the current mix of uses at the TOD has a lower parking demand than what was anticipated by the PD Ordinance.

Estimated Parking Demand

Estimated Parking Demand of Existing Uses

The parking demand of the expanded 5th Avenue Station was estimated based on rates published in the Institute of Transportation Engineers' (ITE) *Parking Generation Manual*, 5th Edition and the requirements of City of Naperville Zoning Ordinance. However, it is important to note that ITE parking rates for the office uses are based on surveys of suburban locations where the primary mode of transportation is the private vehicle. As such, given that the 5th Avenue Station is a TOD, the parking demand it anticipated to be lower. The Regional Transportation Authority Mapping and Statistics (RTAMS) data of people who work in the area show that approximately 81 percent of people drive alone, 11 percent of people use public transportation, six percent carpool, and approximately two percent use other means of transportation. Therefore, a 19 percent reduction in the ITE parking rates was applied to the office parking demand to account for employees that do not drive alone to get to work.

The following outlines the estimated peak parking demand of the existing uses:

- The residential parking demand was based on the “Multifamily Housing Mid-Rise less than 0.5 mile to rail transit” ITE rates (Land Use Code 221), which has a peak parking demand of 132 spaces (ratio of 1.12 parking spaces per unit).
- The office parking demand was based on the “General Office Building” rates (Land Use Code 710), which has a peak parking demand of 194 parking spaces (ratio of 2.39 parking spaces per 1,000 square feet) and 157 parking spaces after assuming the 19 percent reduction.
- The photo studio, hair salon, and the medical offices require a total of 36 parking spaces per the City of Naperville Ordinance.
- The College requires a total of 17 parking spaces per the City of Naperville Ordinance. It should be noted that the classes at the College typically occur between 5:00 P.M. and 9:00 P.M.

The parking demand for each of the residential and office uses was distributed hourly based on information provided in the ITE *Parking Generation Manual*, since the uses experience peak parking demands at different times throughout the day. To provide a worst-case analysis, it was assumed that the commercial uses' peak parking demand will occur during all hours of the day, except the College as most classes occur between 5:00 P.M. and 9:00 P.M. **Table 6** summarizes the hourly parking demand for the existing uses (Tables 6 through 8 are located in the Appendix).

Estimated Parking Demand of the Proposed Expansion

As previously indicated, the plans call for the addition of approximately 2,300 square feet of office space and eight new apartment units (five one-bedroom units and three two-bedroom units). In order to determine the estimated parking demand of the proposed expansion, the parking demand was estimated based on the same methodology used above to estimate the existing parking demand:

- The residential parking demand was based on the “Multifamily Housing Mid-Rise less than 0.5 mile to rail transit” ITE rates (Land Use Code 221), which requires 9 spaces (ratio of 1.12 parking spaces per unit).
- The office parking demand was based on the “General Office Building” rates (Land Use Code 710), which requires five parking spaces (ratio of 2.39 parking spaces per 1,000 square feet).

Table 7 summarizes the projected hourly parking demand for the proposed expansion.

Estimated Total Parking Demand and Evaluation

In order to determine the total projected peak parking demand of the expanded 5th Avenue Station, the projected hourly parking demands for the expansion were added to the hourly parking demand for the existing uses. **Table 8** shows the projected hourly total parking demand and percentage occupancy of the parking spaces.

From Table 4 it can be seen that the peak occupancy will be 274 parking spaces occurring at 10:00 A.M. With 397 total parking spaces, the expanded 5th Avenue Station will have a peak parking demand of only 69 percent. A minimum of 123 parking spaces will be available. As such, the existing 397 parking spaces will be sufficient to accommodate the peak parking demand of the expanded 5th Avenue Station.

Conclusion

The following summarizes the findings of the parking study:

- 5th Avenue Station is considered a Transit-Oriented Development given its proximity to the Naperville Metra and Amtrak train station, downtown Naperville, and other commercial uses as well as other alternative modes of transportation available in the immediate area.
- 5th Avenue Station has 397 parking spaces provided in five parking lots. All of the parking lots are signed for permit parking only and approximately 165 of the parking spaces are reserved for residential parking. It is important to note the building is professionally managed and the management team takes an active role in the oversight and regulation of the 5th Avenue Station parking.

- 5th Avenue Station will require 605 parking spaces per the City of Naperville Zoning Ordinance. However, the zoning ordinance does not take into consideration the shared parking between the uses and the fact that the 5th Avenue Station is a TOD. In fact, the Planned Development (PD) Ordinance for the 5th Avenue Station only required the TOD development to provide 407 parking spaces, which is a significant reduction from the zoning ordinance.
- The 5th Avenue Station PD Ordinance allowed for a mix of commercial and office uses with a maximum of approximately 60 percent commercial space. However, it is important to note that the 5th Avenue Station currently has a mix of generally all office uses. As such, given that office space has a lower parking demand than commercial space, the current mix of uses at the TOD has a lower parking demand than what was anticipated by the PD Ordinance.
- Based on the ITE parking rates and hourly distribution, the parking supply of 397 parking spaces will continue to be adequate to accommodate the projected peak parking demand of the expanded 5th Avenue Station development.
- Based on historical data obtained by reviewing aerial photographs from Cook County GIS Department and Google Earth, the parking occupancy ranged from 247 to 331 parking spaces (62 to 83 percent occupied).

Appendix

List of Tenants:

AP America, Inc.
Riordan, Lewis & Haden
Naper Dental Center
Naper Sleep Center
Paul Gregory Media
Grunyk & Associates
Robert W. Baird
Day, Robert & Morrison
DBI Construction Consultants
Franke Foodservice Supply
L&G Law Group
Atwood Insurance
Tonsorial Hair Parlor
PhysIQ
Trager Healing
C.J. Maresca & Associates
Prairie Consulting Services
Edward Jones
Specific Chiropractic
Schaffer Family Law
Premise Capital
OSC
Hands on Health Manual & Physical Therapy Services
Bella Baby Photography
Heath & Health, P.C.
MJ Interiors
ALW Group
Heitz & Bromberek
Track Group
Chelsea's Massage Therapy
The Fish Law Firm, P.C.
Bodaty, LLC
Sunny Direct
5th Avenue Construction
Ear to Ear Hearing Solutions
Heather Ryan Law
Midwestern Career College
Request Technology
Best Travel & Tours
Direct Travel
Lixi

Table 3
 PARKING OCCUPANCY SURVEYS BY LOT – BASED ON COOK COUNTY GIS DEPARTMENT

| | LOT A | LOT B | LOT C | LOT D | LOT E | Total | Percent | Surplus |
|------|-----------|-----------|-----------|------------|------------|------------|-------------|----------|
| 2009 | 20 | 18 | 96 | 71 | 86 | 291 | 73% | 106 |
| 2012 | 17 | 13 | 80 | 58 | 79 | 247 | 62% | 150 |
| 2013 | 16 | 13 | 95 | 91 | 98 | 313 | 79% | 84 |
| | 20 | 20 | 96 | 134 | 127 | 397 | 100% | 0 |

Table 4
 PARKING OCCUPANCY SURVEYS BY LOT – BASED ON GOOGLE EARTH

| | LOT A | LOT B | LOT C | LOT D | LOT E | Total | Percent | Surplus |
|--------------|-----------|-----------|-----------|------------|------------|------------|-------------|----------|
| April 2013 | 19 | 14 | 88 | 84 | 87 | 292 | 74% | 105 |
| April 2015 | 20 | 20 | 91 | 95 | 91 | 317 | 80% | 80 |
| October 2019 | 20 | 20 | 86 | 123 | 82 | 331 | 83% | 66 |
| | 20 | 20 | 96 | 134 | 127 | 397 | 100% | 0 |

Figure 1
AERIAL PHOTOGRAPH – COOK COUNTY GIS DEPARTMENT – 2009



Figure 2
AERIAL PHOTOGRAPH – COOK COUNTY GIS DEPARTMENT – 2012

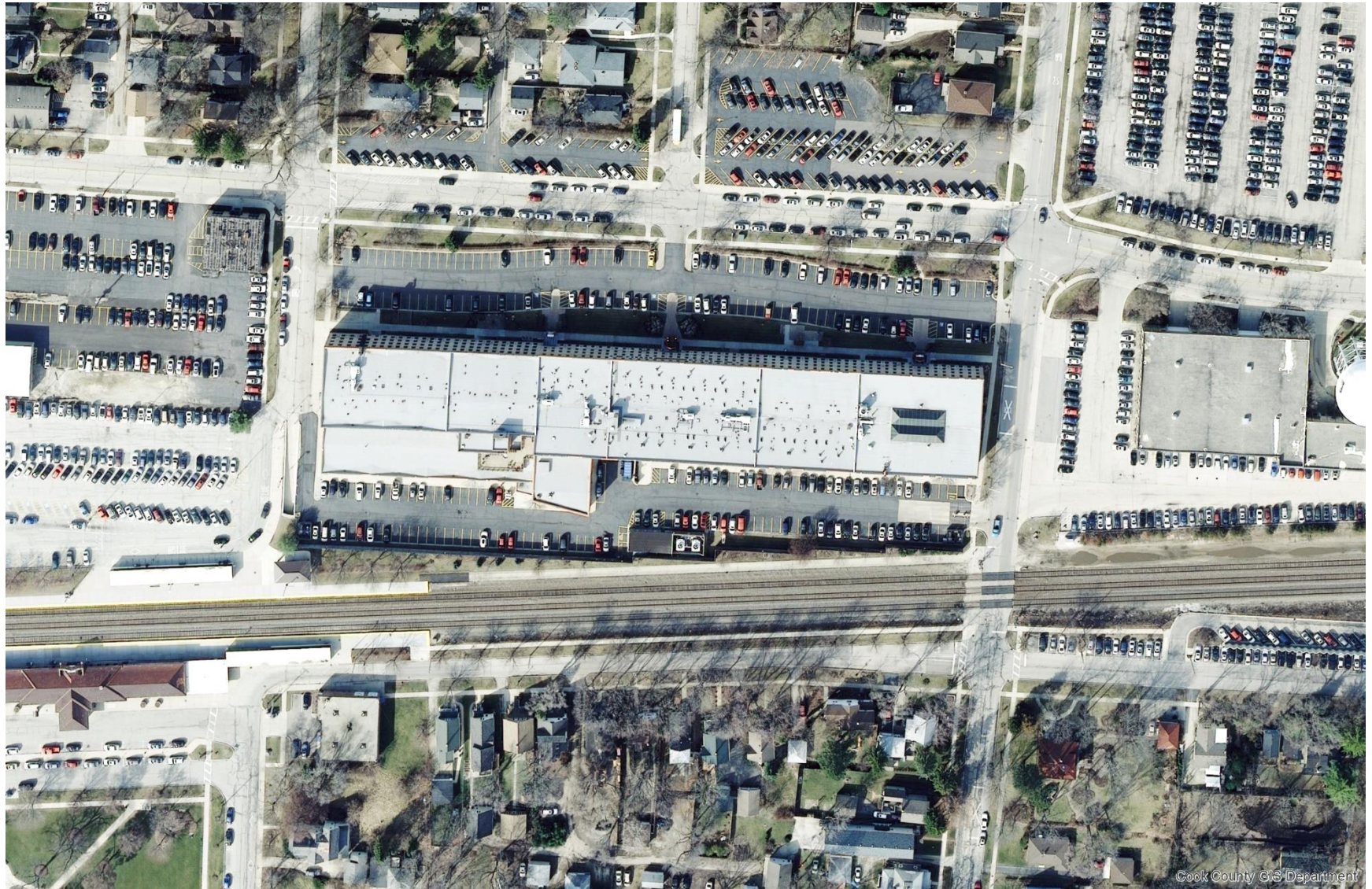


Figure 3
AERIAL PHOTOGRAPH – COOK COUNTY GIS DEPARTMENT – 2013



Figure 4
AERIAL PHOTOGRAPH – GOOGLE EARTH – 2013

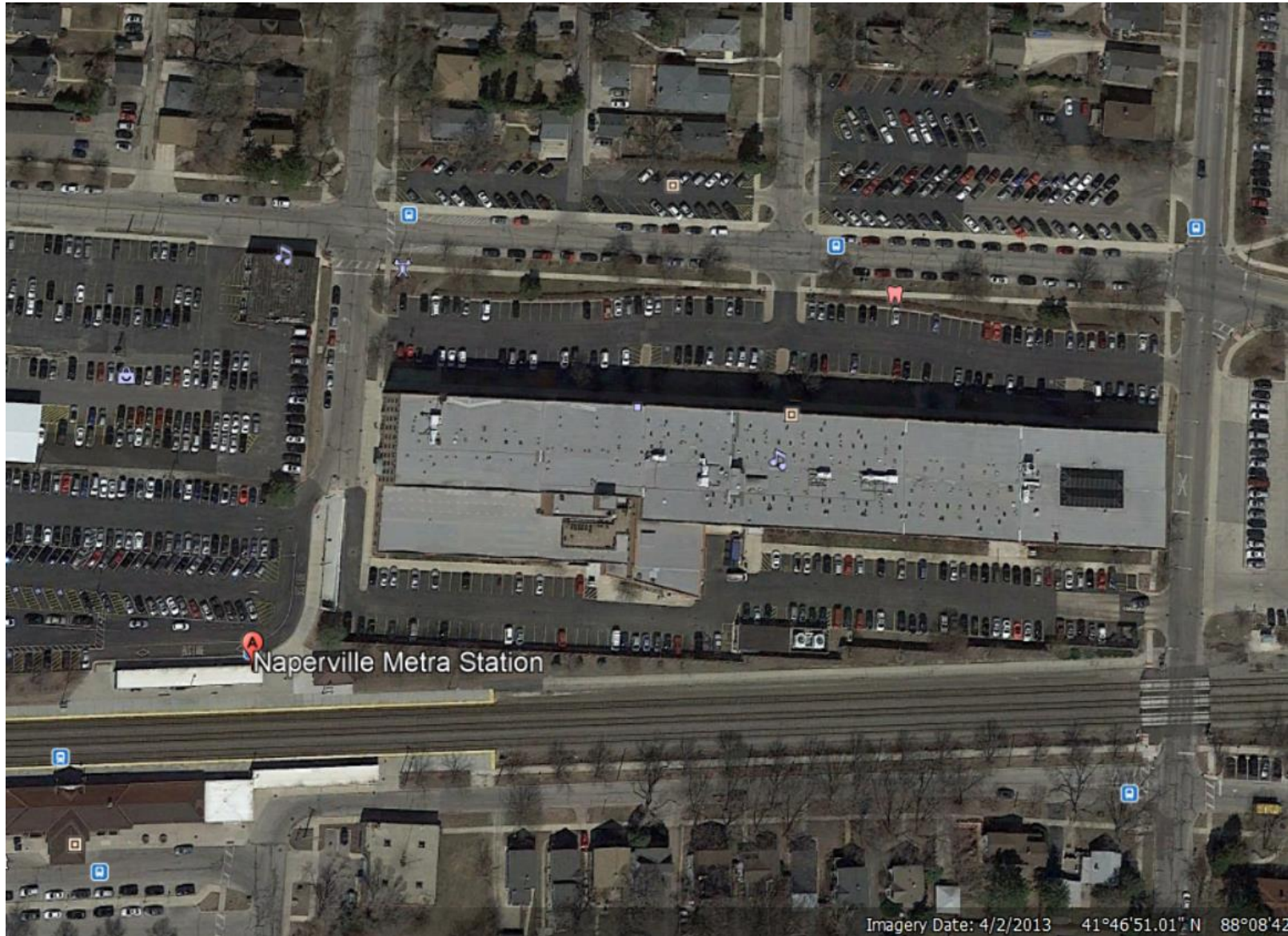


Figure 5
AERIAL PHOTOGRAPH – GOOGLE EARTH – 2015

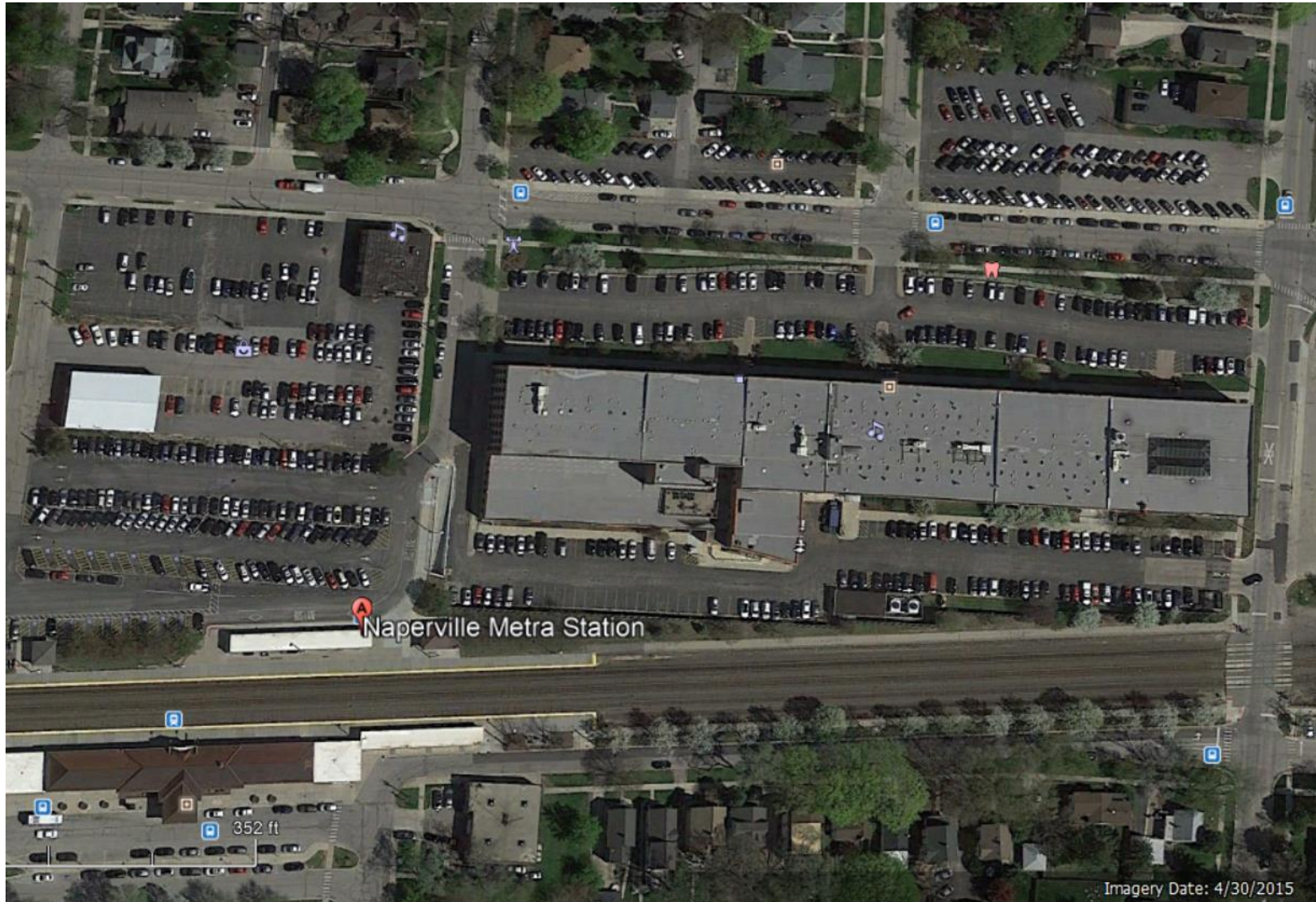


Figure 6

Figure 6
AERIAL PHOTOGRAPH – GOOGLE EARTH – 2019

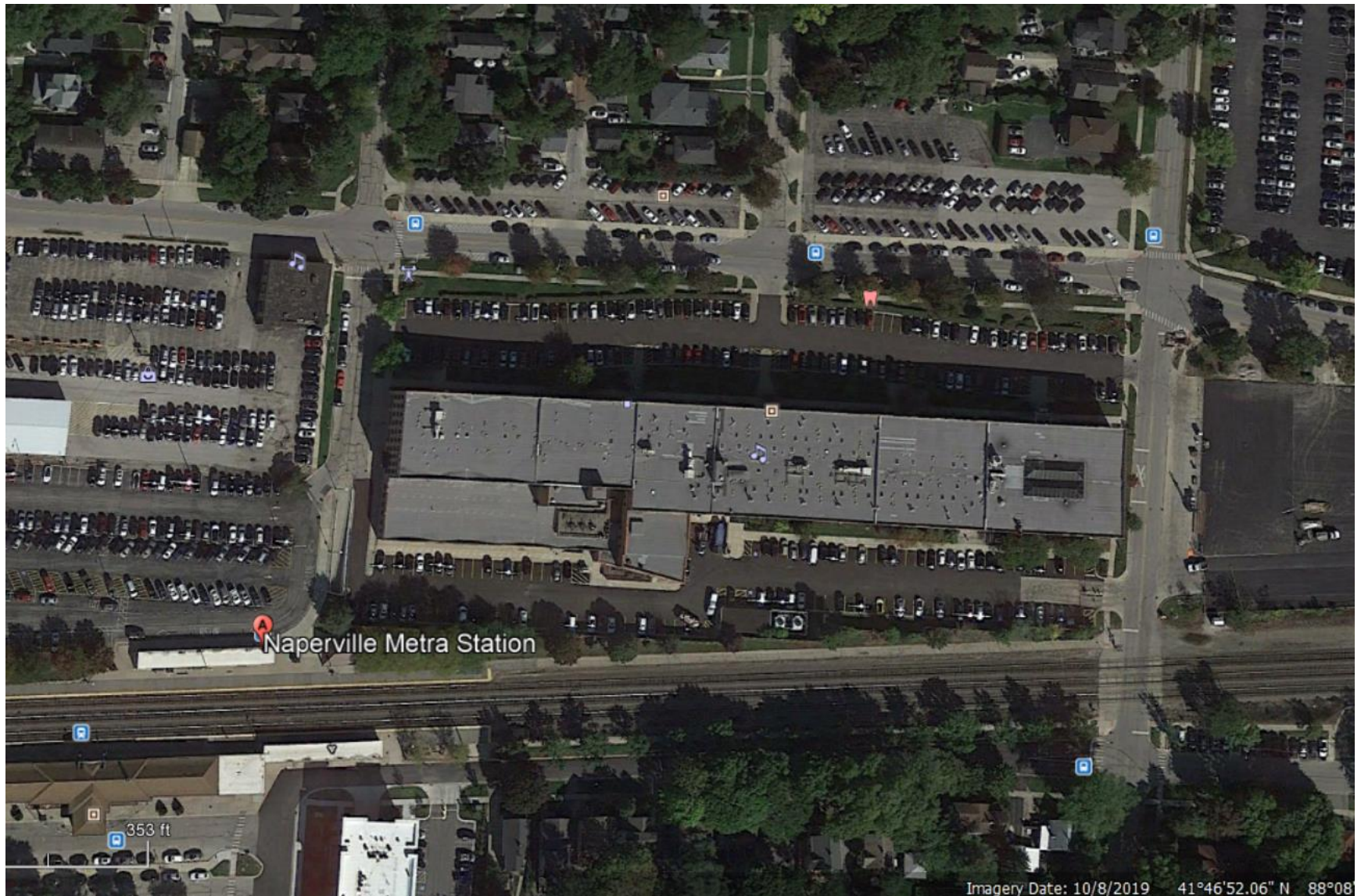


Table 6
EXISTING PARKING DEMAND PER USE

| Time | Residential | Office | Commercial | College | Total |
|-----------------|-------------|--------|------------|---------|-------|
| 12:00 - 4:00 AM | 132 | 21 | 36 | 0 | 189 |
| 5:00 AM | 124 | 21 | 36 | 0 | 181 |
| 6:00 AM | 110 | 21 | 36 | 0 | 167 |
| 7:00 AM | 94 | 21 | 36 | 0 | 151 |
| 8:00 AM | 81 | 75 | 36 | 0 | 192 |
| 9:00 AM | 73 | 138 | 36 | 0 | 247 |
| 10:00 AM | 71 | 157 | 36 | 0 | 264 |
| 11:00 AM | 70 | 157 | 36 | 0 | 263 |
| 12:00 PM | 66 | 134 | 36 | 0 | 236 |
| 1:00 PM | 65 | 132 | 36 | 0 | 233 |
| 2:00 PM | 65 | 146 | 36 | 0 | 247 |
| 3:00 PM | 66 | 148 | 36 | 0 | 250 |
| 4:00 PM | 77 | 134 | 36 | 0 | 247 |
| 5:00 PM | 84 | 88 | 36 | 17 | 225 |
| 6:00 PM | 88 | 32 | 36 | 17 | 173 |
| 7:00 PM | 92 | 17 | 36 | 17 | 162 |
| 8:00 PM | 100 | 17 | 36 | 17 | 170 |
| 9:00 PM | 110 | 17 | 36 | 17 | 180 |
| 10:00 PM | 119 | 17 | 36 | 17 | 189 |
| 11:00 PM | 123 | 17 | 36 | 17 | 193 |

Table 7

PROJECTED PARKING DEMAND PER USE (EXPANSION)

| Time | Residential | Office | Total |
|-----------------|-------------|--------|-------|
| 12:00 - 4:00 AM | 9 | 1 | 10 |
| 5:00 AM | 8 | 1 | 9 |
| 6:00 AM | 7 | 1 | 8 |
| 7:00 AM | 6 | 1 | 7 |
| 8:00 AM | 5 | 2 | 7 |
| 9:00 AM | 5 | 4 | 9 |
| 10:00 AM | 5 | 5 | 10 |
| 11:00 AM | 5 | 5 | 10 |
| 12:00 PM | 5 | 4 | 9 |
| 1:00 PM | 4 | 4 | 8 |
| 2:00 PM | 4 | 5 | 9 |
| 3:00 PM | 5 | 5 | 10 |
| 4:00 PM | 5 | 4 | 9 |
| 5:00 PM | 6 | 3 | 9 |
| 6:00 PM | 6 | 1 | 7 |
| 7:00 PM | 6 | 1 | 7 |
| 8:00 PM | 7 | 1 | 8 |
| 9:00 PM | 7 | 1 | 8 |
| 10:00 PM | 8 | 1 | 9 |
| 11:00 PM | 8 | 1 | 9 |

Table 8
TOTAL PROJECTED PARKING DEMAND AND PERCENT OCCUPANCY PER USE
(EXISTING + EXPANSION)

| Time | Existing | Expansion | Total | Percent Occupied |
|-----------------|----------|-----------|-------|------------------|
| 12:00 - 4:00 AM | 189 | 10 | 199 | 50% |
| 5:00 AM | 181 | 9 | 190 | 48% |
| 6:00 AM | 167 | 8 | 175 | 44% |
| 7:00 AM | 151 | 7 | 158 | 40% |
| 8:00 AM | 192 | 7 | 199 | 50% |
| 9:00 AM | 247 | 9 | 256 | 64% |
| 10:00 AM | 264 | 10 | 274 | 69% |
| 11:00 AM | 263 | 10 | 273 | 69% |
| 12:00 PM | 236 | 9 | 245 | 62% |
| 1:00 PM | 233 | 8 | 241 | 61% |
| 2:00 PM | 247 | 9 | 256 | 64% |
| 3:00 PM | 250 | 10 | 260 | 65% |
| 4:00 PM | 247 | 9 | 256 | 64% |
| 5:00 PM | 225 | 9 | 234 | 59% |
| 6:00 PM | 173 | 7 | 180 | 45% |
| 7:00 PM | 162 | 7 | 169 | 43% |
| 8:00 PM | 170 | 8 | 178 | 45% |
| 9:00 PM | 180 | 8 | 188 | 47% |
| 10:00 PM | 189 | 9 | 198 | 50% |
| 11:00 PM | 193 | 9 | 202 | 51% |