



## RAGING CYCLES PARKING STUDY JSP21-11

### **Raging Cycles Parking Study JSP21-11**

Consideration of the request of Raging Cycles for Shared Parking Study approval. The subject property is located in Section 16, at 46035 Grand River Avenue, east of Beck Road in the I-1, Light Industrial District. The subject property is approximately 6.4 acres and the applicant is proposing to occupy a 13,000 square foot space as a online motorcycle parts retailer.

### **Required Action**

Approve/deny the Shared Parking Study

<b>REVIEW</b>	<b>RESULT</b>	<b>DATE</b>	<b>COMMENTS</b>
Planning	Approval recommended	5/13/21	<ul style="list-style-type: none"> <li>• <b>Agreement to be updated and signed stating no additional tenants may occupy buildings on the site, and a change of tenant from online retailer would also require parking study to be updated</b></li> <li>• Items to be addressed on Stamping Set.</li> </ul>
Traffic	Approval recommended	5/10/21	<ul style="list-style-type: none"> <li>• Minor revisions to Shared Parking Study</li> </ul>

**Motion sheet**

**Approval – Preliminary Site Plan and Shared Parking Study**

In the matter of Raging Cycles, JSP21-11, motion to **approve** the Shared Parking Study, based on and subject to the following:

- a. Prior to receiving a Certificate of Occupancy, Staff will update and the applicant shall sign a revised agreement indicating no new tenants may occupy any portion of the site until additional parking is provided or an updated parking study approved that demonstrates sufficient parking is available to accommodate all tenants on the site;
- b. The recommendations of the study preparer for restriping of parking spaces and designating the two spaces currently signed for no parking as a loading/unloading zone shall be completed on site prior to occupancy of the building;
- c. Outdoor storage is not permitted, and would only be permitted if a site plan and Special Land Use permit were reviewed and approved by the Planning Commission;
- d. In-person retail sales shall be prohibited; and
- e. *(additional conditions here if any)*

*(This motion is made because the plan is otherwise in compliance with Article 19, Article 24 and Article 25 of the Zoning Ordinance and all other applicable provisions of the Ordinance.)*

**-OR-**

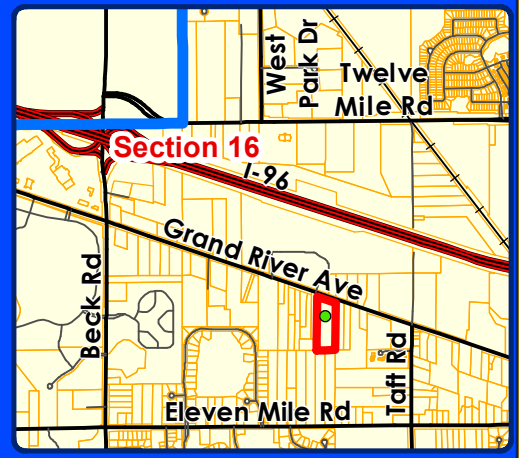
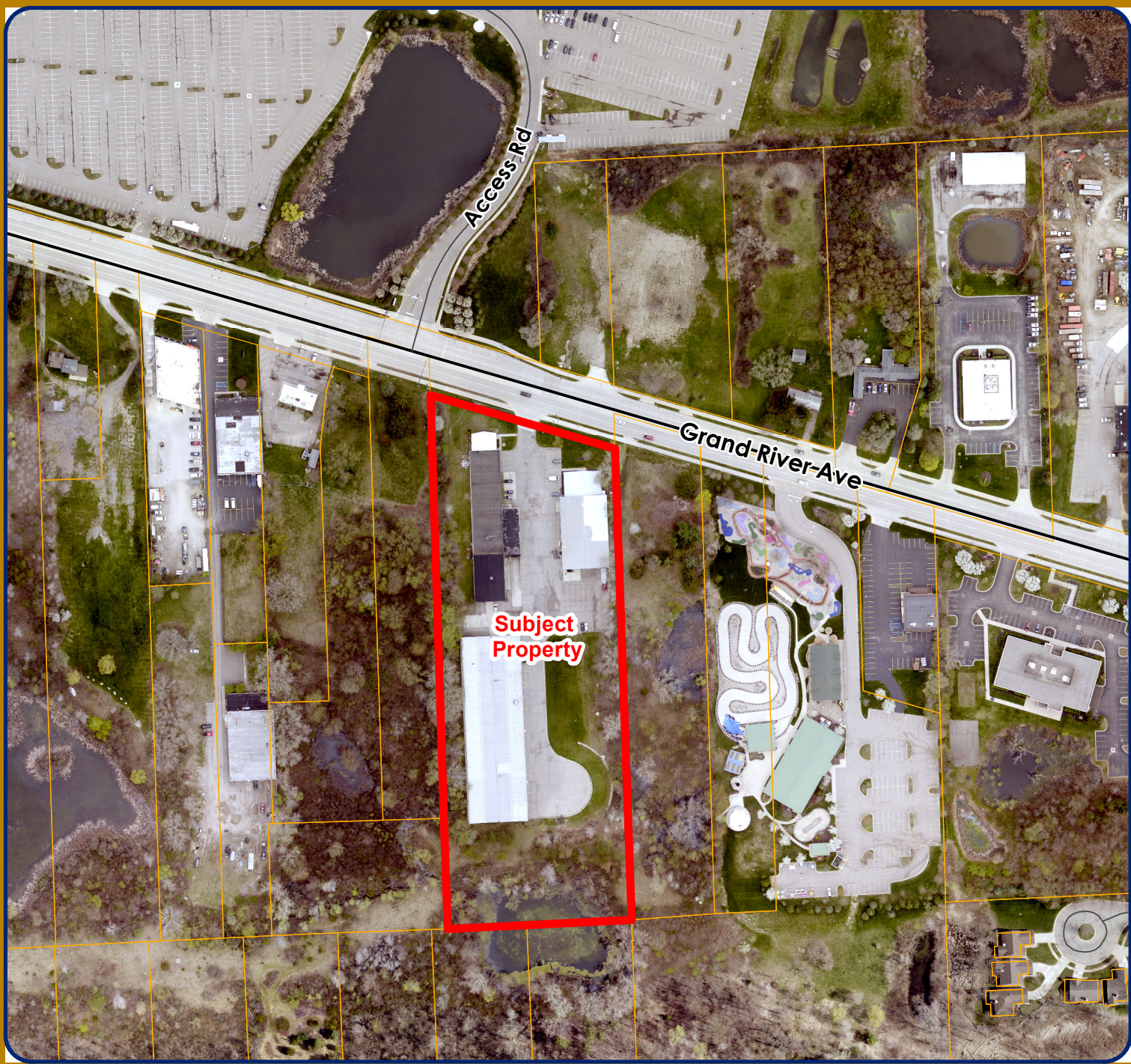
**Denial - Preliminary Site Plan**


In the matter of Raging Cycles, JSP21-11, motion to **deny** the Shared Parking Study for the following reasons... *(because it is not in compliance with the Ordinance.)*

MAPS  
Location  
Zoning

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# JSP 21-11 RAGING CYCLES LOCATION

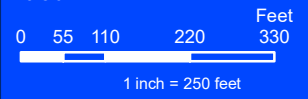


**LEGEND**  
 Subject Property



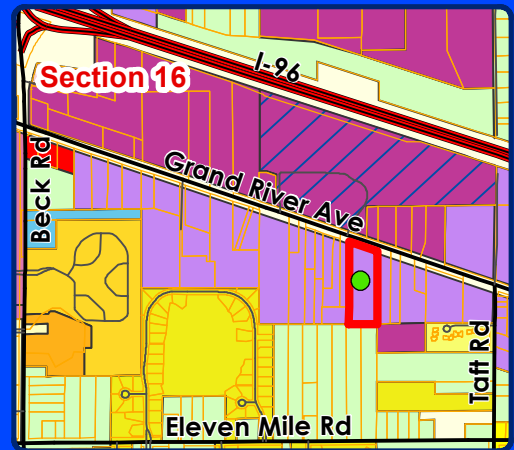
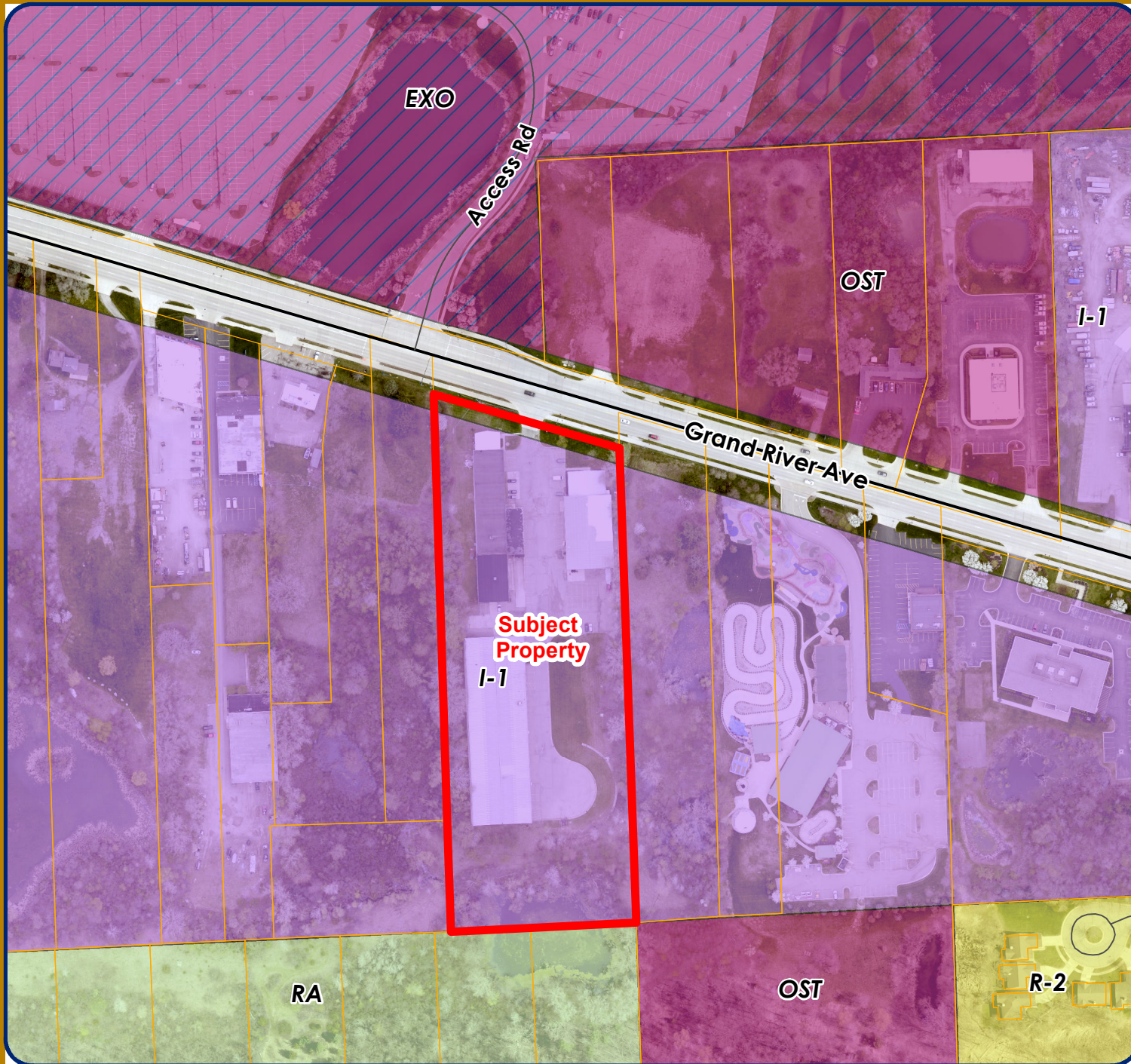
**City of Novi**  
Dept. of Community Development  
City Hall / Civic Center  
45175 W Ten Mile Rd  
Novi, MI 48375  
cityofnovi.org

Map Author: Lindsay Bell  
Date: 6/4/2021  
Project: RAGING CYCLES  
Version #: 1



**MAP INTERPRETATION NOTICE**  
Map information depicted is not intended to replace or substitute for any official or primary source. This map was intended to meet National Map Accuracy Standards and use the most recent, accurate sources available to the people of the City of Novi. Boundary measurements and area calculations are approximate and should not be construed as survey measurements performed by a licensed Michigan Surveyor as defined in Michigan Public Act 132 of 1970 as amended. Please contact the City GIS Manager to confirm source and accuracy information related to this map.

# JSP 21-11 RAGING CYCLES ZONING



**LEGEND**

- R-A: Residential Acreage
- R-1: One-Family Residential District
- R-2: One-Family Residential
- R-3: One-Family Residential District
- R-4: One-Family Residential District
- RM-1: Low-Density Multiple Family
- RM-2: High-Density Multiple Family
- B-2: Community Business District
- B-3: General Business District
- EXO: OST District with EXO Overlay
- FS: Freeway Service District
- I-1: Light Industrial District
- OS-1: Office Service District
- OSC: Office Service Commercial
- OST: Office Service Technology



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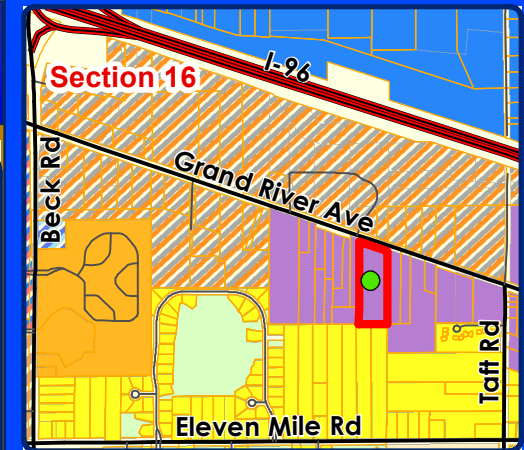


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# JSP 21-11 RAGING CYCLES

## FUTURE LAND USE



**LEGEND**

- Single Family
- Multiple Family
- Suburban Low-Rise
- Community Office
- Office Research Development Technology
- Office Commercial
- Industrial Research Development Technology
- Local Commercial
- City West
- Educational Facility
- Private Park
- Subject Property

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0 55 110 220 330

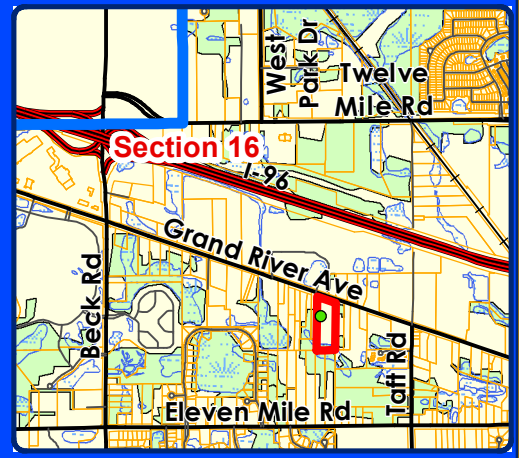
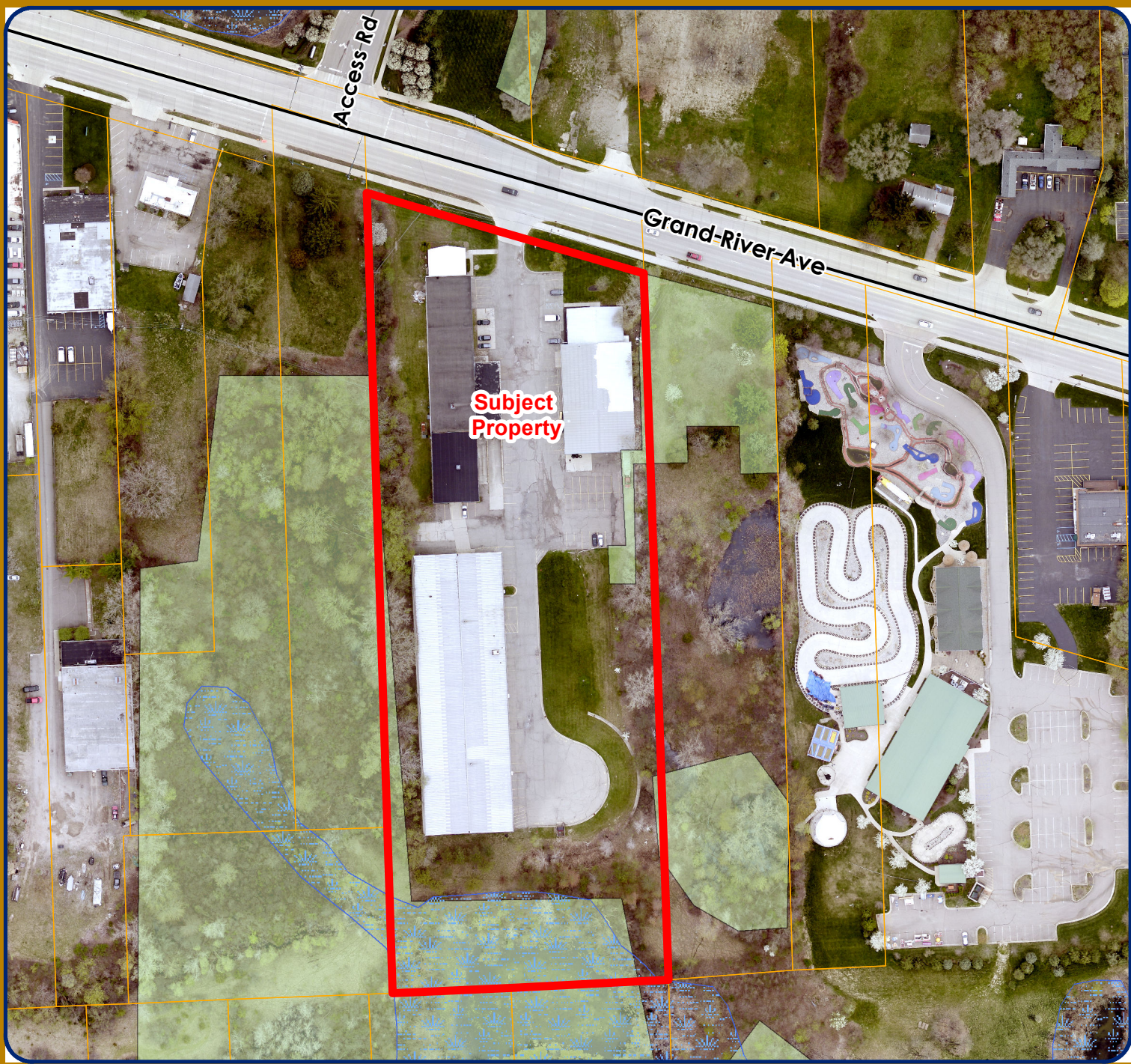
1 inch = 250 feet

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# JSP 21-11 RAGING CYCLES

## NATURAL FEATURES

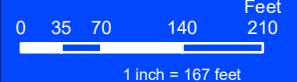


- LEGEND**
-  WETLANDS
  -  WOODLANDS
  -  Subject Property



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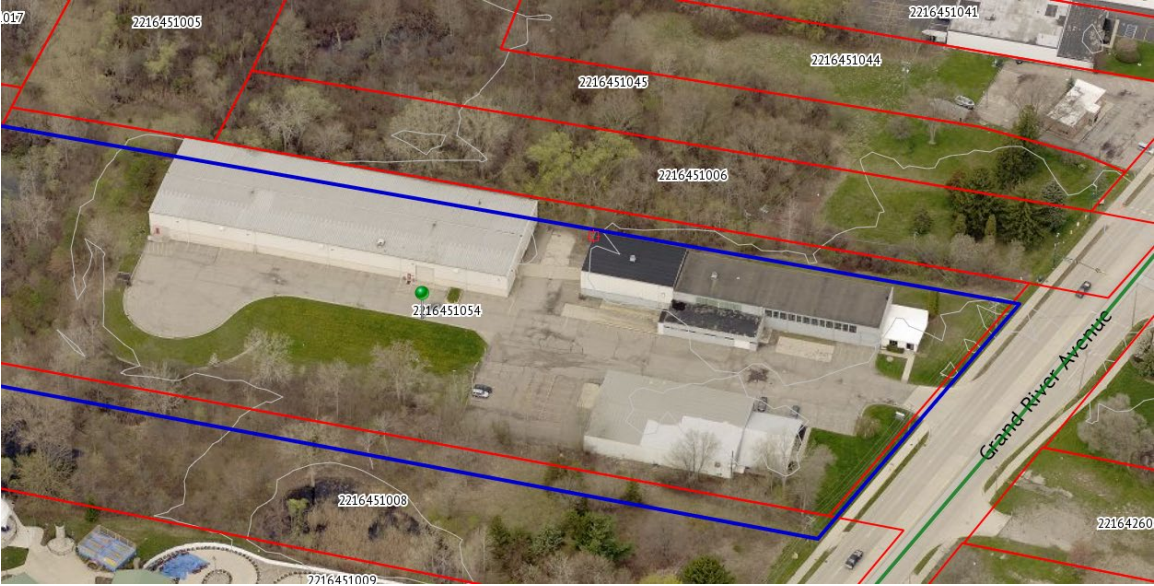
Map Author: Lindsay Bell  
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PICTOMETRY VIEW OF THE SITE





## PLANNING REVIEW

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# PLAN REVIEW CENTER REPORT

May 13, 2021

## Planning Review

Raging Cycles Parking Study

**JSP21-11**

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### Petitioner

Raging Cycles

### Review Type

Shared Parking Study

### Property Characteristics

- Site Location: 46035 Grand River, east of Beck Road
- Site School District: Novi Community School District
- Site Zoning: I-1, Light Industrial
- Adjoining Zoning: North: Grand River Ave., OST, EXO ; East and West: I-1; South: RA, OST
- Site Use(s): Total Sports Roller Hockey, Crossfit Gym and Adams Physical Therapy
- Adjoining Uses: North: Grand River Ave., Suburban Collection Showplace, Wilkins Parts and Equipment; East: Existing house; West: Vacant; South: Existing single-family homes
- Site Size: 7.7 acres
- Size of Tenant Space: 13,000 sq. ft. in northwestern building
- Parking Study Date: 03/15/2021

### Project Summary

The applicant is proposing to occupy an approximately 13,000 square foot space inside an existing industrial building at 46035 Grand River Avenue. The new tenant would be Raging Cycles, an online motorcycle parts store. There is an existing parking agreement on the site stating no tenants may occupy any portion of the vacant building space, unless additional parking spaces are provided, or an updated parking study is provided to show capacity. The applicant has now elected to submit an updated Shared Parking Study in order to demonstrate there is sufficient parking for all existing and proposed uses on the site.

### Recommendation

Approval of the Shared Parking Study **is recommended**. See the traffic review letter for additional information. **The applicant should revise the parking study accordingly and submit any additional required information before proceeding to the Planning Commission.**

The previous acknowledgement by the property owner stated that no tenants may occupy any portion of the northwestern building until (a) additional parking is provided or (b) the Shared Parking Study is updated to reflect the fact that there is sufficient parking on the site. As the parking study provided at this time shows that the proposed tenant will primarily operate outside of the peak hours of the other tenants on the site, this specific business is permitted to lease the space. **The City will update and the applicant will be required to sign a revised**

**acknowledgement that this space cannot be occupied by any other tenant until either point (a) or point (b) is completed.**

**Ordinance Requirements**

This project was reviewed for conformance with the Zoning Ordinance with respect to Article 19 (I-1, Light Industrial), Article 24 (Schedule of Regulations), Article 25 (General Provisions), and any other applicable provisions of the Zoning Ordinance. Planning Commission approval of the Shared Parking Study is required. See the traffic review letter for additional information.

1. Shared Parking (Section 5.2.7): "In the instance of dual function of off-street parking spaces by more than one land use, the Planning Commission may permit a reduction in the number of parking spaces required by the Ordinance." **The applicant has provided the required Shared Parking study which demonstrates that the proposed tenant will primarily operate outside of the peak hours of the other tenant on the site.**
2. Outdoor Storage (Section 3.14.1): Outdoor storage is not permitted in the I-1 Light Industrial District except under very specific conditions, or as a Special Land Use. Outdoor storage has not been proposed at this time. **If outdoor storage of inventory or any other materials were to be desired, site plan review and Special Land Use permit approval by the Planning Commission would be required.**
3. Retail Business Operations (Section 3.14.2): The I-1 District prohibits dealing directly with consumer at retail. As described by the Parking Study, Raging Cycles is an online retailer. **Therefore in-person retail sales are prohibited by the Zoning Ordinance and as a condition of approval of the Shared Parking Study.**

**PLANNING COMMISSION MEETING**

This Shared Parking Study will be scheduled for consideration before the Planning Commission on June 9, 2021, at 7:00 p.m. **Please provide a response letter addressing the comments in the Traffic Review letter no later than noon on Thursday, June 3<sup>rd</sup> if you wish to keep this schedule.**

If the applicant has any questions concerning the above review or the process in general, do not hesitate to contact me at 248.347.0484 or [lbell@cityofnovi.org](mailto:lbell@cityofnovi.org).



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Lindsay Bell, AICP, Senior Planner

**TRAFFIC REVIEW**

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AECOM  
27777 Franklin Road  
Southfield  
MI, 48034  
USA  
aecom.com

**Project name:**  
JSP21-11 – Raging Cycles Shared Parking  
Study Review

**From:**  
AECOM

**Date:**  
May 10, 2021

**To:**  
Barbara McBeth, AICP  
City of Novi  
45175 10 Mile Road  
Novi, Michigan 48375

**CC:**  
Lindsay Bell, Madeleine Kopko, Kate Richardson,  
Victor Boron, Christian Carroll

# Memo

**Subject:** JSP21-11 – Raging Cycles Shared Parking Study Review

The Shared Parking Study was reviewed to the level of detail provided and AECOM recommends **approval** of the Parking Study; the comments provided below are to be addressed and a revised copy to be provided to the City.

## GENERAL COMMENTS

1. The memo will provide comments on a section-by-section basis of the shared parking study.

## KEY RESULTS AND CONCLUSIONS

1. The proposed tenant is unlikely to require more parking than is currently available in the shared parking area at the site.
2. **During the proposed tenant’s operating hours (8 am to 3 pm, Monday to Friday), the number of spaces expected to be vacant exceeds the number required by the tenant by a factor of more than 10.**

## PROJECT BACKGROUND

1. The site includes 1 fully occupied building and 2 partially occupied buildings with a total of 112 marked parking spaces.
2. A revised parking study was required by planning staff for tenants seeking to occupy the northwestern building on the property.
3. The proposed tenant is an “online motorcycle parts store”.
  - a. Currently employs 3 people, with plans to hire 2 more within the next year.
  - b. The store is not open to the public
  - c. Hours of operation are 8 am to 3 pm, Monday through Friday with no weekend hours.
  - d. Additional traffic to the building would include FedEx pickups once a day between 1 and 2 pm and freight deliveries 1 to 2 times a week.

## PARKING REQUIREMENTS WITHOUT SHARING

1. The proposed tenant states they do not fit under any of the City’s parking categories, being an online-only retail shipping location.
  - a. A possible category would be Warehouse, requiring 1 space for each 700 SF usable floor area or 5 spaces plus one for each employee in the largest shift.

- b. **The total spaces required in Table 2 are to be corrected (currently shown as 125) in line with the calculation (100 + 22 + 13). The same table should also reflect the estimated parking numbers for Raging Cycles at the place of TBD and should include in the total spaces. The table should also provide the total parking spots available in the last row.**

## STUDY METHODOLOGY AND RESULTS

1. The 2013 parking counts for Total Sports were used as a conservative value, as the business has reported less intensive use since those counts were collected and the current Covid situation.
2. Two weekdays and two Saturday “models” were built, all based on conservative, worst-case assumptions.
  - a. City requirements will be realized during peak hours.
  - b. Non-peak hours will follow Shared Parking Model (SPM) time-of-day parking variations
3. The two models were created to consist of a “hybrid model”, assumed to be a more likely scenario, and the “very conservative model”, the most extreme scenario.
  - a. The hybrid model shows a weekday peak demand of 66 spaces with 46 spaces remaining open and a weekend peak demand of 76 spaces with 36 spaces remaining open.
    - i. **The weekend table shows 37 spaces, which is assumed to be a data entry error as that adds up to a total of 113 spaces.**
  - b. **The very conservative model shows a weekday peak demand of 120 spaces with a deficit of 8 spaces and a weekend peak demand of 117 spaces with a deficit of 5 spaces.**
    - i. The very conservative model parking demand exceeds the observed in the 2013 counts for Total Sports by more than double (46 observed demand vs 100 ordinance requirement).
  - c. **Both models show a peak in the evening hours when the proposed tenant will not have any presence on-site.**

## CONFIRMATION AND USE OF EXISTING PARKING SUPPLY

1. The latest available field survey of the subject site was provided.
  - a. The date of the survey is not readable in the document included in the memo.
  - b. The portion of the plan showing parking spaces is enlarged for visibility.
2. Two spaces are currently signed “No Parking”. **The study preparer recommends that those two spaces be designated for small truck loading/unloading for the proposed tenant.**
3. The study preparer additionally **recommends that the site’s pavement markings be refreshed as weather permits.**

Should the City or applicant have questions regarding this review, they should contact AECOM for further clarification.

Sincerely,

**AECOM**



Patricia Thompson, EIT  
Traffic Engineer



Saumil Shah, PMP  
Project Manager

**APPLICANT RESPONSE LETTER**

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## Response Letter

To: Saumil Shah, AECOM  
Lindsay Bell, City of Novi

Date: June 1, 2021

CC: Tom Meyer, Paradise Properties, Inc.  
Michael G. Darga, P.E., Giffels Webster

From: William A. Stimpson, P.E., Sr. Traffic Engineer  
Mohamed Aguib, P.E., Traffic Engineer  
Giffels Webster

Project: Shared Parking Study  
for 46035, 46001, and  
46039 Grand River

RE: Raging Cycles Shared Parking Study Review  
JSP21-11

Project No.: 19979-00

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This letter summarizes the comments provided for the Raging Cycles shared parking study by the City of Novi's engineer (AECOM) in a letter dated May 13, 2021. Giffels Webster has reviewed the letter and updated the study accordingly in preparation for the Planning Commission to be held on June 9, 2021. The comments requiring update in the study report and tables are included below with responses.

### Comments by AECOM

1. The proposed tenant states they do not fit under any of the City's parking categories, being an online-only retail shipping location. A possible category would be Warehouse, requiring 1 spaces for each 700 SF usable floor area or 5 spaces plus one for each employee in the largest shift.  
**GW Response: Acknowledged. The Warehouse category was utilized for Raging Cycles and reflected on Table 2 of the study.**
2. The total spaces required in Table 2 are to be corrected (currently shown as 125) in line with the calculation (100 + 22 + 13). The same table should also reflect the estimated parking numbers for Raging Cycles at the place of TBD and should include in the total spaces. The table should also provide the total parking spots available in the last row.  
**GW Response: Table 2 was updated to correct total parking spaces and to add new values based on the Warehouse category. A row was added to show the total parking available.**
3. The hybrid model shows a weekday peak demand of 66 spaces with 46 spaces remaining open and a weekend peak demand of 76 spaces with 36 spaces remaining open. The weekend table shows 37 spaces, which is assumed to be a data entry error as that adds up to a total of 113 spaces.  
**GW Response: The value in Table 4b was updated to remove rounding issue and to show a total of 112 spaces (76 + 36).**



## SHARED PARKING STUDY

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To: Saumil Shah, AECOM  
Lindsay Bell, City of Novi

Date: June 1, 2021

CC: Tom Meyer, Paradise Properties, Inc.  
Michael G. Darga, P.E., Giffels Webster

From: William A. Stimpson, P.E., Sr. Traffic Engineer  
Mohamed Aguib, P.E., Traffic Engineer  
Giffels Webster

Project: Shared Parking Study  
for 46035, 46001, and  
46039 Grand River

RE: Final Report (Revised)

Project No.: 19979-00

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This memo comprehensively documents the above-cite shared parking study. The study was completed utilizing methodology previously detailed in our February 25 memo to Mr. Shah (the City's traffic consultant) that was approved March 9. The study was updated on June 1, 2021, following comments by the city's engineer which were provided in a letter on May 13, 2021.

### Key Results and Conclusions

1. The new use proposed to occupy a portion of 46035 Grand River, Raging Cycles, is an on-line motorcycle parts store with *no customer visitation and limited operating hours* (8 am-3 pm, weekdays only). Seven (7) parking spaces for this use are recommended: five (5) for the expected number of future employees plus two (2) for deliveries and pickups by small trucks. However, a more conservative parking ratio was utilized in the study assuming that the use type of Raging Cycles is Warehouse. The Warehouse use assumes 1 parking space for 700 SF usable floor area.
2. Based on previous (2013) parking counts by others, adjusted as appropriate to reflect more recent – but pre-pandemic – visitation at the site's three existing uses, it is conservatively estimated that the number of open (or unused) parking spaces now available during Raging Cycles' hours of operation range from 81-93, or about *12 times* the number potentially needed by the current applicant. No reasonable hypothetical increases in site activities would consume a significant portion of this spare parking capacity.
3. The analyses documented in this memo provide a basis for evaluating any future proposals for occupying floor areas remaining vacant on the site after Raging Cycles moves in.

### Project Background

The subject site includes three buildings, two partially occupied and one fully occupied, and a total of 112 marked parking spaces (**Figures 1-2**). When Adams Physical Therapy was proposed to occupy a portion of the northeastern building (46001 Grand River) in 2013, a shared parking study was done by Wilcox and approved by the City of Novi. In reviewing the Adams Physical Therapy application, City planning staff recommended that "No tenants may occupy any portion of the northwestern building

(46035) until (a) additional parking is provided or (b) the Shared Parking Study is updated to reflect the fact that there is sufficient parking on the site” (Planning Review for JSP# 13-26, revised 4-29-13).

A new use – Raging Cycles – is now proposed to occupy 13,000 s.f. in the northwest building, and the current study is being prepared to address the above 2013 approval condition. Raging Cycles is an “on-line motorcycle parts store.” It was established in November 2016 and now occupies one unit within the middle building of 42916 W 10 Mile Rd in Novi, a business park containing three buildings (**Figure 3**).

Raging Cycles currently has a total of three employees but may hire two more within “the next year or so” (presumably once it has moved to its proposed new location on Grand River). The store is 100 percent on-line and not open to the public. Its business hours are 8 am-3 pm, Monday through Friday, and it has no weekend hours. Currently, it gets Fedex pick-ups once a day – between 1-2 pm – and has occasional freight deliveries – “maybe 1-2 a week.”

### **Tenant Operating Hours**

**Table 1** (attached) shows the current operating hours of the one proposed and three existing site uses.

### **Parking Requirements without Sharing**

**Table 2** shows the City parking requirement – without time-sharing – for each of the site’s three existing uses. For Raging Cycles, the Planning Commission has proposed using Warehouse use following the recommendation of their Traffic Consultant.

The description of Raging Cycles offered by its owner – summarized above – indicates that it will likely need no more than five (5) parking spaces, all for employees. Giffels Webster considers it advisable, however, to provide one (1) additional parking space – for a total of six (6) – to enable drivers of small trucks making deliveries and pickups to stop and stand out of the parking aisle if they wish to do so.

### **Study Methodology and Results**

Previous parking accumulation counts were made by Wilcox on Wednesday, 3/20/13 and Saturday, 3/23/13. Total Sports now indicates that “since 2013... we have been operating a less intensive use.” It therefore appears reasonable to assume that the 2013 parking counts are conservatively high for use in the current study. Given the ongoing uncertainties about how the building’s athletic activity levels may change as we move out of the pandemic, there appears to be no reliable basis for projecting higher parking demand levels for Total Sports in the foreseeable future.

This study builds two weekday “models” and two Saturday “models” of site parking need – exclusive of Raging Cycles – by hour of the day. Saturday is included (for the property manager’s benefit) even though Raging Cycles will not operate that day of the week. All four “models” provide conservatively high results, with each model based on two worst-case assumptions: (1) the City parking requirements for Adams Physical Therapy and Crossfit of Novi will be realized in the peak parking hours indicated in the Urban Land Institute (ULI) *Shared Parking Model (SPM) – 3<sup>rd</sup> Edition* (for Medical Offices and Health Clubs, respectively), and (2) the parking requirements in other hours will reflect the *SPM*’s time-of-day parking variations for those uses (shown in the *SPM* manual as percentages of the day’s peak parking demand). The hourly parking percentages used in this study’s models are shown in **Tables 3a and 3b** for weekdays and Saturdays, respectively.

Two shared parking models were created for each day of the week, one termed the “Hybrid Model” and representing what we consider to be the most likely scenario, and the other termed the “Very Conservative Model” and representing an even more extreme (or worst-case) scenario:

- The Hybrid Model adds the 2013 hourly parking counts for Total Sports to the above conservatively estimated hourly parking requirements for Adams Physical Therapy and Crossfit of Novi. The weekday Hybrid Model is shown in **Table 4a**, and the Saturday Hybrid Model is shown in **Table 4b**.
- The Very Conservative Model distributes the City’s parking requirement for Total Sports – 100 spaces – by hour according to the hourly percentage distribution observed in the 2013 parking counts, and then adds the resulting hourly parking requirements for that use to the above conservatively estimated hourly parking requirements for the other two existing uses. The Very Conservative Models for weekdays and Saturdays are shown in **Tables 5a and 5b**, respectively.

It is important to note that the 100-space City parking requirement for the Total Sports building is more than double the 46 vehicles seen parking in the 2013 hour with the greatest parking demand. This is likely attributable mainly to two factors: (1) the City parking requirement is based the building’s floor area and the fire code for the general building type and apparently does not reflect the fact that the entire floor area is turf covered and relatively sparsely occupied while in use, and (2) the age distribution of the visitors (especially on Saturdays) tends to be younger and therefore more likely to carpool.

Each of the above study-created shared parking models sums the site’s hourly parking requirement for the three existing uses and then subtracts that total requirement from the site’s 112 parking spaces to show the number of spaces available for additional site uses. *This study shows spare parking adequate for not only the modest needs of Raging Cycles, but also for other potential future site uses.*

### **Confirmation of Existing Parking Supply**

To provide the parking lot dimensions requested by the City in its March 9 email and to illustrate the ability of those dimensions to facilitate the striping of the 112 parking spaces declared on the 2013 City-approved site plan, the latest available survey was obtained and is included herein (**Figure 4**). A portion of the survey was blown up to facilitate the easier counting of available parking spaces (**Figure 5**).

Our field inspection of March 13, 2021 found that two marked parking spaces (about midway along the east façade of 46035 Grand River) are currently signed “No Parking.” This signing would have to be removed to restore the site’s official parking capacity of 112 spaces; however, if appropriately located relative to the door(s) to be used by Raging Cycles, the existing No Parking signs might be retained and used to reserve the two small-truck loading/unloading spaces recommended above. We also recommend that the pavement markings shown on the survey be refreshed as soon as weather permits.



Figure 1. Subject Site

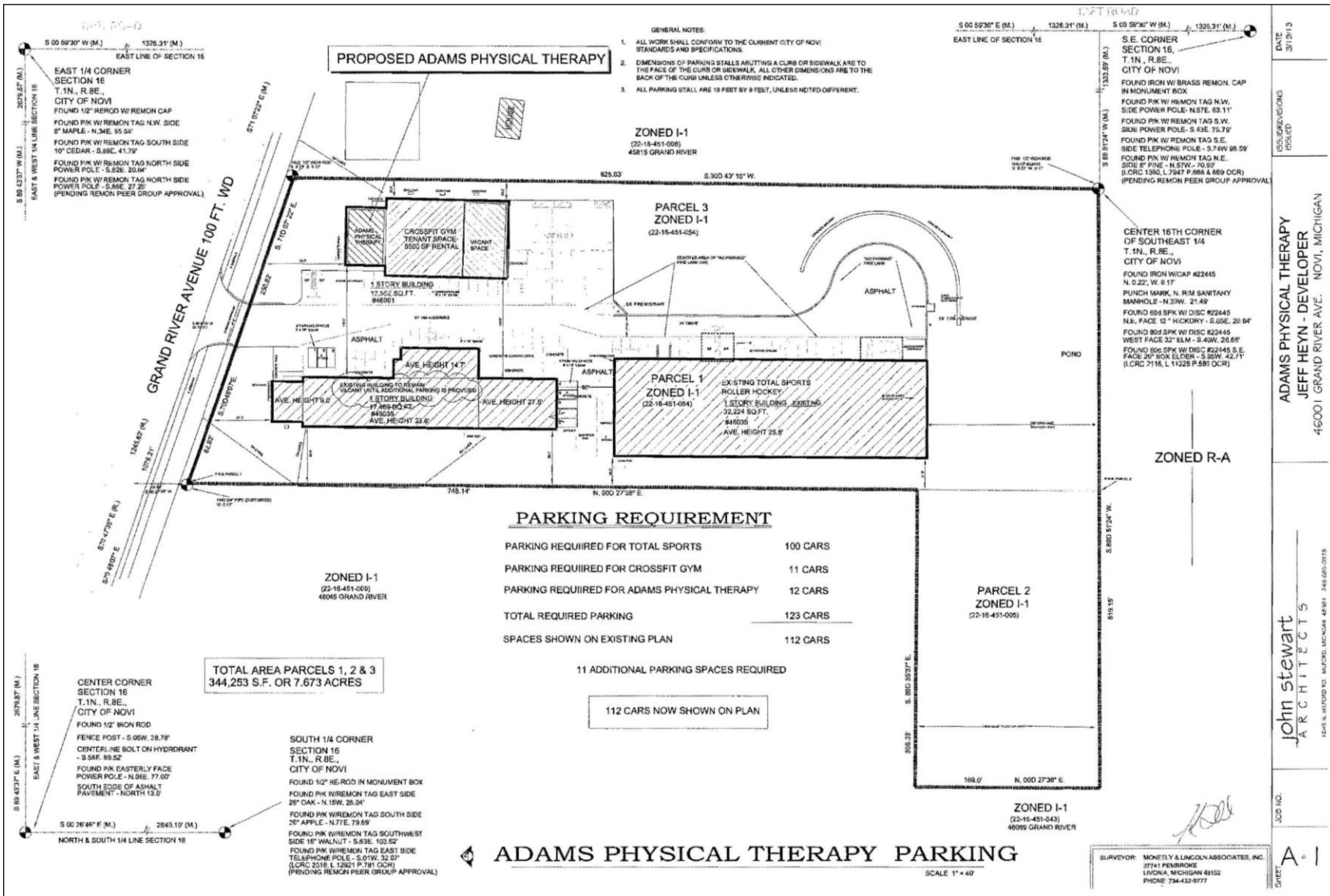
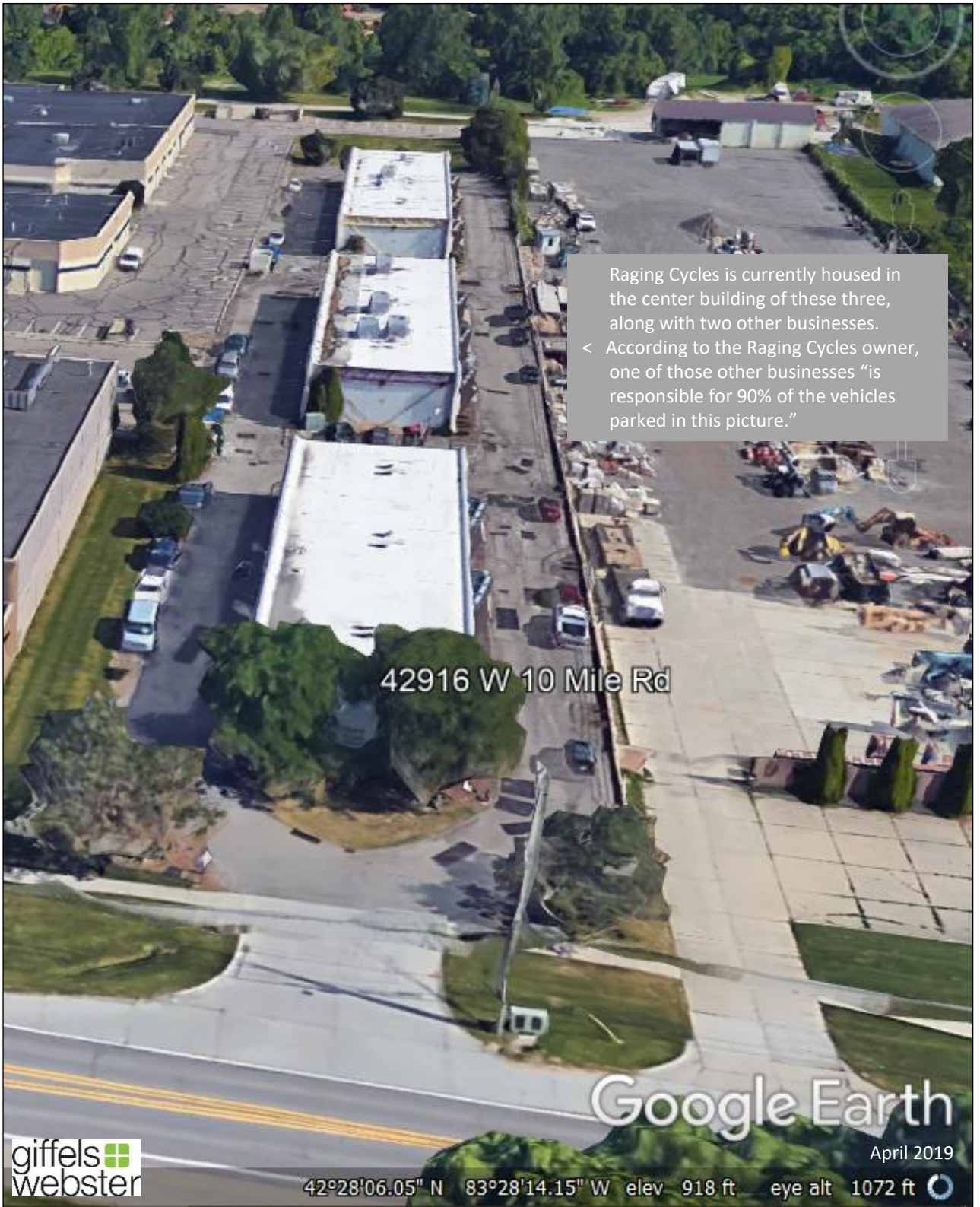


Figure 2. 2013 Site Plan



Raging Cycles is currently housed in the center building of these three, along with two other businesses.  
< According to the Raging Cycles owner, one of those other businesses "is responsible for 90% of the vehicles parked in this picture."

42916 W 10 Mile Rd

Google Earth

April 2019

42°28'06.05" N 83°28'14.15" W elev 918 ft eye alt 1072 ft

giffels  
webster

Figure 3. Business Park Now Housing Raging Cycles

**Table 1. Tenant Descriptions**

Building	Tenant	Day of Week Open		Hours Open
NW (46035)	Raging Cycles (proposed)	Monday-Friday		8:00 am – 3:00 pm
NE (46001)	Adams Physical Therapy (existing)	Monday-Friday		6:00 am – 7:00 pm
		Saturday		7:00 am – 1:00 pm
		Sunday		Closed
	Crossfit of Novi (existing)	Monday-Friday		6:00 am – 6:30 pm
		Saturday		9:00 am – 11:30 am
		Sunday		9:00 am – 10:15 am
SW (46039)	Total Sports Novi West <sup>1</sup> (existing)	October-April	Monday-Friday	4:45 pm – 9:30 pm
			Saturday	8:00 am - 8:30 pm
			Sunday	8:00 am - 8:30 pm
		May-Sep, Sunday only		8:00 am – 8:00 pm

<sup>1</sup> Formerly known as Total Sports Roller Hockey. Per Total Sports, the 4:45 pm opening time actually represents the earliest time parked vehicles are expected.

**Table 2. Parking Requirements without Sharing**

Building	Tenant	Use Type	Gross Leasable Area (s.f.)	Novi Parking Requirement <sup>1</sup>	
				Parking Ratio	No. of Spaces
NW (46035)	Raging Cycles (proposed)	Warehouse	13,000	1 / 700 s.f. usable floor area <sup>2</sup>	19
	To remain vacant	TBD	4,469	N/A	TBD
NE (46001)	Adams Physical Therapy	Prof. offices of doctors, etc.	2,200	6 / 1,000 s.f.	13
	Crossfit of Novi	Health Club < 30,000 s.f.	5,500	1 / 5.5 memberships <sup>3</sup>	22
	To remain vacant	TBD	4,852	N/A	TBD
SW (46039)	Total Sports Novi West <sup>4</sup>	Various athletics on turf field <sup>5</sup>	32,224	1 / 2 persons of max. occupancy	100
<b>Total Spaces Required for Existing Uses without Sharing</b>					<b>154</b>
<b>Total Spaces Available</b>					<b>112</b>

<sup>1</sup> Per City of Novi Zoning Ordinance as amended through 6/4/2018. TBD = to be determined and N/A = not applicable.

<sup>2</sup> Since no uses in Sec 5.2.12 of Zoning Ordinance are similar, the Planning Commission proposed using Warehouse type. As discussed in the Key Results and Conclusions section of this report, a total of seven (7) parking spaces appears appropriate for Raging Cycles, based on the number of anticipated employees, lack of customer visitation, and limited truck visitation.

<sup>3</sup> Pre-pandemic, there was a high of 120 memberships; currently, however, there are 60 memberships (as was apparently assumed in 2013, since the parking requirement shown on the site plan is 11 spaces). To provide a conservative analysis in the present study, 120 memberships are now assumed.

<sup>4</sup> Formerly known as Total Sports Roller Hockey or Novi Roller Hockey.

<sup>5</sup> Most closely represented by the ordinance use described as “Dance halls, pool or billiard parlors, roller skating rinks, exhibition halls, and assembly halls without fixed seats.”



**Table 3a. Percent of Weekday Peak Parking by Existing Use**

Hour Starting	Percent of Weekday Peak Parking by Use					
	Total Sports Roller Hockey		Medical Office (Adams) <sup>2</sup>		Health Club (Crossfit) <sup>3</sup>	
	No. Parked <sup>1</sup>	% of Peak	Visitors	Employees	Visitors	Employees
6:00 AM	0	0%	0%	0%	70%	75%
7:00 AM	0	0%	0%	20%	40%	75%
8:00 AM	0	0%	90%	100%	40%	75%
9:00 AM	0	0%	90%	100%	70%	75%
10:00 AM	0	0%	100%	100%	70%	75%
11:00 AM	0	0%	100%	100%	80%	75%
12:00 PM	0	0%	30%	100%	60%	75%
1:00 PM	0	0%	90%	100%	70%	75%
2:00 PM	0	0%	100%	100%	70%	75%
3:00 PM	0	0%	100%	100%	70%	75%
4:00 PM	0	0%	90%	100%	80%	75%
5:00 PM	10	22%	80%	100%	90%	100%
6:00 PM	13	28%	67%	67%	100%	100%
7:00 PM	36	78%	30%	30%	90%	75%
8:00 PM	46	100%	15%	15%	80%	50%
9:00 PM	33	72%	0%	0%	70%	20%
10:00 PM	25	54%	0%	0%	35%	20%
11:00 PM	19	41%	0%	0%	10%	20%

<sup>1</sup> Vehicles parked in peak 15 minutes within the hour, per counts made by Wilcox on 3/20/13. Source: Wilcox Technical Memorandum dated 3-26-13. Although that study was done for Adams Physical Therapy, the Wilcox memo states that the 2013 parking counts were "based on the activities associated with the [Total Sports] roller hockey arena." Recent Total Sports input suggests that the 2013 counts are conservatively high relative to current parking demands (as well as foreseeable future parking demands).

<sup>2</sup> Recommended Time-of-Day Factors for Weekday, Figure 2-4 in *Shared Parking- 3rd Edition*, Urban Land Land Institute, 2020). Non-zero values do not correspond precisely to the uses' "hours open" (Table 1), reflecting earlier arrivals and later departures. Importantly, these assumptions result in a very conservative analysis, since Crossfit closes at 6:30 pm, rather than 11:00 pm as would a generic health club (per *italics* ).

**Table 3b. Percent of Saturday Peak Parking by Existing Use**

Hour Starting	Percent of Weekday Peak Parking by Use					
	Total Sports Roller Hockey		Medical Office (Adams) <sup>2</sup>		Health Club <sup>2</sup>	
	No. Parked <sup>1</sup>	% of Peak	Visitors	Employees	Visitors	Employees
6:00 AM	0	0%	0%	0%	80%	50%
7:00 AM	0	0%	0%	20%	45%	50%
8:00 AM	17	29%	90%	100%	35%	50%
9:00 AM	19	32%	90%	100%	50%	50%
10:00 AM	24	41%	100%	100%	35%	50%
11:00 AM	32	54%	100%	100%	50%	50%
12:00 PM	34	58%	30%	100%	50%	50%
1:00 PM	45	76%	0%	0%	30%	50%
2:00 PM	35	59%	0%	0%	25%	50%
3:00 PM	16	27%	0%	0%	30%	50%
4:00 PM	18	31%	0%	0%	55%	75%
5:00 PM	38	64%	0%	0%	100%	100%
6:00 PM	48	81%	0%	0%	95%	100%
7:00 PM	59	100%	0%	0%	60%	75%
8:00 PM	59	100%	0%	0%	30%	50%
9:00 PM	8	14%	0%	0%	10%	20%
10:00 PM	0	0%	0%	0%	1%	20%
11:00 PM	0	0%	0%	0%	1%	20%

<sup>1</sup> Vehicles parked in peak 15 minutes within the hour, per counts made by Wilcox on 3/23/13. Source: Wilcox Technical Memorandum dated 3-26-13. Although that study was done for Adams Physical Therapy, the Wilcox memo states that the 2013 parking counts were "based on the activities associated with the [Total Sports] roller hockey arena." Recent Total Sports input suggests that the 2013 counts are conservatively high relative to current parking demands (as well as foreseeable future parking demands).

<sup>2</sup> Recommended Time-of-Day Factors for Weekend, Figure 2-5 in *Shared Parking- 3rd Edition* (Urban Land Land Institute, 2020). Non-zero values do not correspond precisely to the uses' "hours open" (Table 1), reflecting earlier arrivals and later departures. Since Crossfit is only open 9:00-11:30 am Saturdays, the percentages shown here for "Health Club" are unrepresentative. To estimate a parking need for that use that is more realistic yet conservatively high, 100% of the peak is assumed in Tables 4b and 5b over all hours open.

**Table 4a. Total On-Site Parking by Weekday Hour (Hybrid Model)**

Hour Starting	Parking Vehicles (past & projected)			Total Parking	Open Spaces <sup>3</sup>
	Total Sports (March 2013) <sup>1</sup>	City Req. by Hour per <i>SPM</i> <sup>2</sup>			
		Med. Office	Health Club		
6:00 AM	0	0	17	17	96
7:00 AM	0	3	17	19	93
8:00 AM	0	13	17	30	83
9:00 AM	0	13	17	30	83
10:00 AM	0	13	17	30	83
11:00 AM	0	13	18	31	81
12:00 PM	0	13	17	30	83
1:00 PM	0	13	17	30	83
2:00 PM	0	13	17	30	83
3:00 PM	0	13	17	30	83
4:00 PM	0	13	18	31	81
5:00 PM	10	13	22	45	67
6:00 PM	13	9	22	44	68
7:00 PM	36	4	20	60	52
<b>8:00 PM</b>	<b>46</b>	<b>2</b>	<b>18</b>	<b>66</b>	<b>46</b>
9:00 PM	33	0	15	48	64
10:00 PM	25	0	8	33	79
11:00 PM	19	0	4	23	89

<sup>1</sup> Vehicles parked in peak 15 minutes within the hour, per counts made by Wilcox on 3/20/13. Source: Wilcox Technical Memorandum dated 3-26-13. Although that study was done for Adams Physical Therapy, the Wilcox memo states that the 2013 parking counts were "based on the activities associated with the [Total Sports] roller hockey arena." Recent Total Sports input suggests that the 2013 counts are conservatively high relative to current parking demands (as well as foreseeable future parking demands).

<sup>2</sup> City parking requirement for the two existing uses listed in Table 2, distributed per time-of-day percentages embedded within ULI *Shared Parking Model - 3rd Edition* (2020). To remain conservative, the higher of the visitor and employee percentages in Table 3a of the current report, by hour, is assumed for the entire use.

<sup>3</sup> Site's total parking supply (of 112 spaces) less "Total Parking" equals spaces available for Raging Cycles. Hours highlighted in green extend from 1 hour before to 1 hour after Raging Cycles open time. Lightly highlighted hours (based on ULI *SPM*) are artificially high since "health club" here closes at 6:30 pm.

**Table 4b. Total On-Site Parking by Saturday Hour (Hybrid Model)**

Hour Starting	Parking Vehicles (past & projected)			Total Parking	Open Spaces <sup>3</sup>
	2013 Counts <sup>1</sup>	City Req. by Hour per <i>SPM</i> <sup>2</sup>			
		Med. Office	Health Club		
6:00 AM	0	0	18	18	94
7:00 AM	0	3	11	14	98
8:00 AM	17	<b>13</b>	<b>22</b>	52	60
9:00 AM	19	<b>13</b>	<b>22</b>	54	58
10:00 AM	24	<b>13</b>	<b>22</b>	59	53
11:00 AM	32	<b>13</b>	<b>22</b>	67	45
12:00 PM	34	<b>13</b>	<b>22</b>	69	43
1:00 PM	45	0	11	56	56
2:00 PM	35	0	11	46	66
3:00 PM	16	0	11	27	85
4:00 PM	18	0	17	35	78
5:00 PM	38	0	<b>22</b>	60	52
6:00 PM	48	0	<b>22</b>	70	42
<b>7:00 PM</b>	<b>59</b>	<b>0</b>	<b>17</b>	<b>76</b>	<b>36</b>
8:00 PM	59	0	11	70	42
9:00 PM	8	0	4	12	100
10:00 PM	0	0	4	4	108
11:00 PM	0	0	4	4	108

<sup>1</sup> Vehicles parked in peak 15 minutes within the hour, per counts made by Wilcox on 3/23/13. Source: Wilcox Technical Memorandum dated 3-26-13. Although that study was done for Adams Physical Therapy, the Wilcox memo states that the 2013 parking counts were "based on the activities associated with the [Total Sports] roller hockey arena." Recent Total Sports input suggests that the 2013 counts are conservatively high relative to current parking demands (as well as foreseeable future parking demands).

<sup>2</sup> City parking requirement for the two existing uses listed in Table 2, distributed per time-of-day percentages embedded within ULI *Shared Parking Model - 3rd Edition (2020)*. To remain conservative, the higher of the visitor and employee percentages in Table 3b of the current report, by hour, is assumed for the entire use. To reflect Crossfit's Saturday hours, its parking need is conservatively assumed here to be 100% over each of the hours starting 8 am-12:00 pm. In other hours, the %s for a generic health club are assumed.

<sup>3</sup> Site's total parking supply (of 112 spaces) less "Total Parked" equals spaces that would be available for Raging Cycles if, in fact, that business were to be open on Saturday; it is not proposed to be.

**Table 5a. Total On-Site Parking by Weekday Hour (Very Conservative Model)**

Hour Starting	Zoning Ordinance Parking Requirement Factored by Hour of Day (per TS & <i>Shared Parking Model</i> )			Total Parking	Open Spaces <sup>3</sup>
	Total Sports <sup>1</sup>	Med. Office <sup>2</sup>	Health Club <sup>2</sup>		
6:00 AM	0	0	17	17	96
7:00 AM	0	3	17	19	93
8:00 AM	0	13	17	30	83
9:00 AM	0	13	17	30	83
10:00 AM	0	13	17	30	83
11:00 AM	0	13	18	31	81
12:00 PM	0	13	17	30	83
1:00 PM	0	13	17	30	83
2:00 PM	0	13	17	30	83
3:00 PM	0	13	17	30	83
4:00 PM	0	13	18	31	81
5:00 PM	22	13	22	57	55
6:00 PM	28	9	22	59	53
7:00 PM	78	4	20	102	10
<b>8:00 PM</b>	<b>100</b>	<b>2</b>	<b>18</b>	<b>120</b>	<b>-8</b>
9:00 PM	72	0	15	87	25
10:00 PM	54	0	8	62	50
11:00 PM	41	0	4	46	66

<sup>1</sup> Based on the peak 15 minutes within each hour counted by Wilcox in its 2013 study. For Total Sports, the City parking requirement (100 spaces) is distributed here by hour per the hourly percentage distribution observed in the 2013 parking counts (third column of Table 3a). The 2013 parking counts peaked at less than half the City parking requirement, which was based on building size and fire code without detailed consideration of the building's actual use. Hence, the 8-9 pm deficiency shown here is unrealistic.

<sup>2</sup> City parking requirement for the two other existing uses listed in Table 2, distributed per time-of-day percentages embedded within ULI *Shared Parking Model - 3rd Edition* (2020). To remain conservative, the higher of the visitor and employee percentages in Table 3a of the current report, by hour, is assumed for the entire use.

<sup>3</sup> Site's total parking supply (of 112 spaces) less "Total Parking" equals spaces available for Raging Cycles. Hours highlighted in green extend from 1 hour before to 1 hour after Raging Cycles open time.

Lightly highlighted hours (based on ULI *SPM*) are artificially high since "health club" here closes at 6:30 pm.

**Table 5b. Total On-Site Parking by Saturday Hour (Very Conservative Model)**

Hour Starting	Zoning Ordinance Parking Requirement Factored by Hour of Day (per TS & <i>Shared Parking Model</i> )			Total Parking	Open Spaces <sup>3</sup>
	Total Sports <sup>1</sup>	Med. Office <sup>2</sup>	Health Club <sup>2</sup>		
6:00 AM	0	0	18	18	94
7:00 AM	0	3	11	14	98
8:00 AM	29	13	<b>22</b>	64	48
9:00 AM	32	13	<b>22</b>	67	45
10:00 AM	41	13	<b>22</b>	76	36
11:00 AM	54	13	<b>22</b>	89	23
12:00 PM	58	13	<b>22</b>	93	19
1:00 PM	76	0	11	87	25
2:00 PM	59	0	11	70	42
3:00 PM	27	0	11	38	74
4:00 PM	31	0	17	47	65
5:00 PM	64	0	<b>22</b>	86	26
6:00 PM	81	0	<b>22</b>	103	9
<b>7:00 PM</b>	<b>100</b>	<b>0</b>	<b>17</b>	<b>117</b>	<b>-5</b>
8:00 PM	100	0	11	111	1
9:00 PM	14	0	4	18	94
10:00 PM	0	0	4	4	108
11:00 PM	0	0	4	4	108

<sup>1</sup> Based on the peak 15 minutes within each hour counted by Wilcox in its 2013 study. For Total Sports, the City parking requirement (100 spaces) is distributed here by hour per the hourly percentage distribution observed in the 2013 parking counts (third column of Table 3b). The 2013 parking counts peaked at less than half the City parking requirement, which was based on building size and fire code without detailed consideration of the building's actual use. Hence, the 7-8 pm deficiency shown here, along with other values in hours starting at 1 pm and later, are unrealistic.

<sup>2</sup> City parking requirement for the two other existing uses listed in Table 2, distributed per time-of-day percentages embedded within ULI *Shared Parking Model - 3rd Edition* (2020). To remain conservative, the higher of the visitor and employee percentages in Table 3b of the current report, by hour, is assumed for the entire use.

<sup>3</sup> Site's total parking supply (of 112 spaces) less "Total Parking" equals spaces available for Raging Cycles. if, in fact, that business were to be open on Saturday; it is not proposed to be.



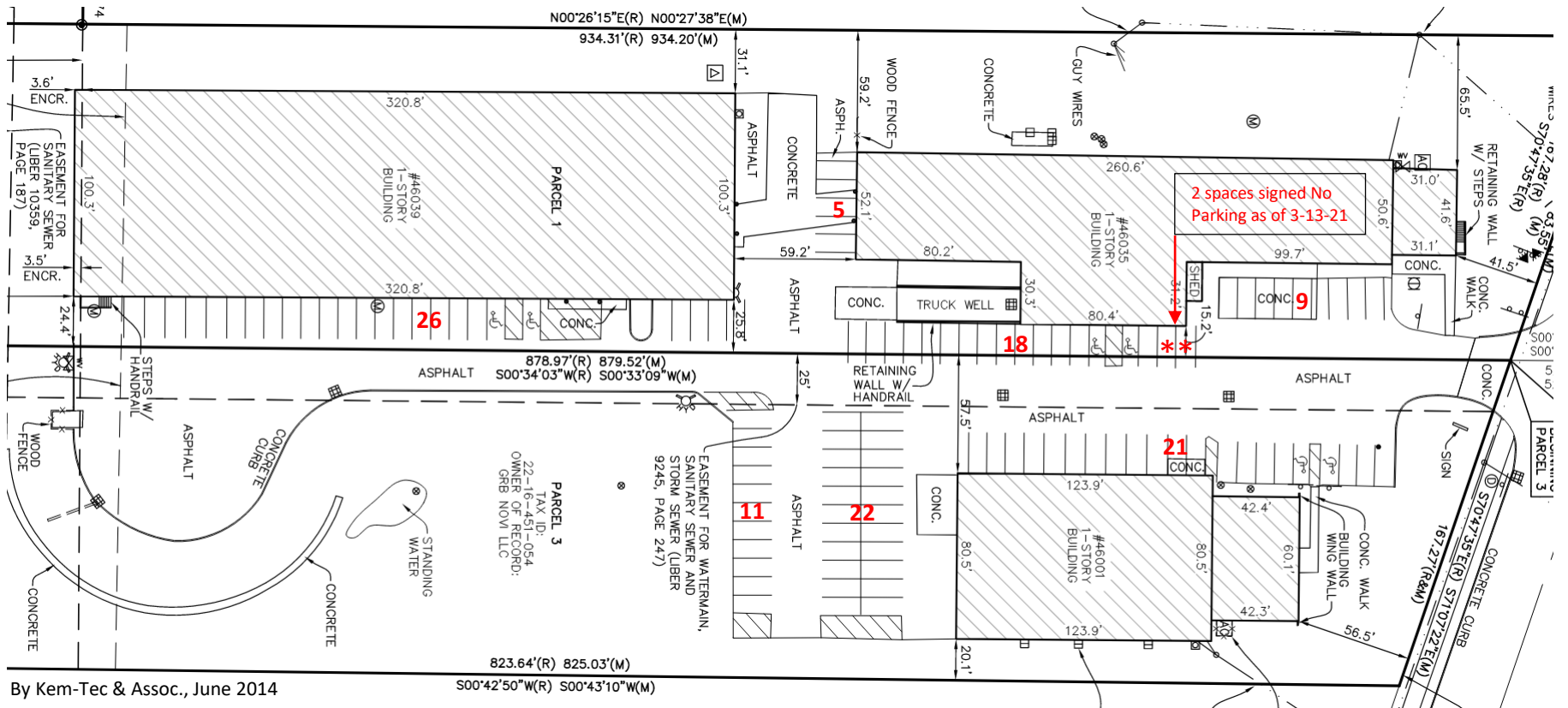


Figure 5. Parking Design per Latest Available Survey<sup>1</sup>