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September 19, 2024

TO: Sheri Schmit
FROM: GRAEF
SUBJECT: 2024 Bicycle Parking at Milwaukee Regional Medical Center (MRMC)

Background

Milwaukee Regional Medical Center (MRMC) continues to promote multi-modal transportation for its employees, patients, and visitors; especially the use of bicycles. Through complete streets, the Ride Guide program, inclusion of multiple existing and planned bike sharing (bublr) systems, and extensive transportation planning, MRMC is exceptionally bicycle friendly. Separately, the City of Wauwatosa requires a minimum number of bicycle parking spaces for commercial, public, and civic buildings. This memo addresses the current state of bicycle parking at MRMC.

Required Bicycle Parking

The City of Wauwatosa's bicycle parking requirements can be found in [Sec. 24.11.080](#). Bicycle parking requirements vary depending on the use of a property (residential, industrial, commercial/institutional). There are two types of bicycle parking facilities – short-term and long-term, and any land use will require both types.

Short-Term Parking

Intended to serve customers, clients, students, and other short-term visitors.

There must be 1 bicycle parking space for every 10 motor vehicle spaces.

All short-term parking must be within 100 feet of any entrance. At least 50% of the total must be within 50 feet of a visitor entrance. Racks outside 100 feet of an entrance do not contribute to the total.

Long-Term Parking

Intended to serve employees, residents, and other long-term visitors.

There must be 1 bicycle parking space for every 6,000 square feet of gross floor area.

All long-term parking spaces must be protected from the weather and unauthorized access. If the facility is educational, this requirement can be waived on approval by the Board of Public Works or Common Council.

Utilizing 2024 existing building square footage and vehicular parking data provided by MRMC, the campus is required to provide 1,262 short-term bicycle parking spaces and 1,073 long-term bicycle parking spaces. Tables 1 and 2 on the following page show a summary of existing bicycle parking requirements for the MRMC campus as a whole, as well as a breakdown by individual member institutions.



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Table 1. Code-required bicycle parking (campus-wide)

	Building Square Feet	Actual Car Parking Spaces	Required Bicycle Parking	
			Long-Term ⁱ	Short-Term ⁱⁱ
MRMC Campus	6,435,798	12,616	1,073	1,262

i The number of required long-term bicycle parking spaces is dictated by the total square footage of floor area of a building. For a commercial, public, or civic building, there is one long-term space required for every 6,000 SqFt. *Wauwatosa Bicycle Parking Ordinance, Chapter 24, §11.080*

ii The number of required short-term bicycle parking spaces is dictated by the total number of motor vehicle parking spaces. For a commercial, public, or civic building, there is one short-term space required for every 10 motor vehicle spaces. *Wauwatosa Bicycle Parking Ordinance, Chapter 24, §11.080*

Table 2. Code-required bicycle parking (institution breakdown)

	Building Square Feet	Actual Car Parking Spaces	Required Bicycle Parking	
			Long-Term ⁱ	Short-Term ⁱⁱ
Froedtert	2,564,349	6,503	427	650
CW	2,193,857	3,402	366	340
MCW	1,586,635	2,366	264	237
Versiti	90,957	95	15	10
MRMC Campus	6,435,798	12,616	1,073	1,262

i The number of required long-term bicycle parking spaces is dictated by the total square footage of floor area of a building. For a commercial, public, or civic building, there is one long-term space required for every 6,000 SqFt. *Wauwatosa Bicycle Parking Ordinance, Chapter 24, §11.080*

ii The number of required short-term bicycle parking spaces is dictated by the total number of motor vehicle parking spaces. For a commercial, public, or civic building, there is one short-term space required for every 10 motor vehicle spaces. *Wauwatosa Bicycle Parking Ordinance, Chapter 24, §11.080*



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Existing Bicycle Parking

As can be seen in the attached Exhibit A – Campus Bicycle Parking, the MRMC campus includes a variety of both existing and planned bicycle parking facilities, both short-term and long-term. “Planned” bicycle facilities are developments that are currently under construction on campus, but not yet online for bicycle parking usage. As a whole, the MRMC campus provides a total of 184 long-term bicycle parking stalls (-889 deficit from code requirement) and 214 short-term bicycle parking stalls (-1,048 deficit from code requirement). Exhibit A – Campus Bicycle Parking provides the location and description of each bicycle parking facility. Table 3 below and Table 4 on the following page show a summary of required bicycle parking vs. existing bicycle parking provided for the MRMC campus as a whole, as well as a breakdown by individual member institutions.

Table 3. Required vs. Existing bicycle parking (campus-wide)

	Employees	1st Shift Employees on campus	Building Square Feet	Actual Car Parking Spaces	Required Bicycle Parking		Existing Bicycle Parking	
					Long-Term ⁱ	Short-Term ⁱⁱ	Long-Term ⁱⁱⁱ	Short-Term ^{iv}
MRMC Campus	20,000	11,800	6,435,798	12,616	1,073	1,262	184 (-889 Deficit)	214 (-1,048 Deficit)
<p>i The number of required long-term bicycle parking spaces is dictated by the total square footage of floor area of a building. For a commercial, public, or civic building, there is one long-term space required for every 6,000 SqFt. <i>Wauwatosa Bicycle Parking Ordinance, Chapter 24, §11.080</i></p> <p>ii The number of required short-term bicycle parking spaces is dictated by the total number of motor vehicle parking spaces. For a commercial, public, or civic building, there is one short-term space required for every 10 motor vehicle spaces. <i>Wauwatosa Bicycle Parking Ordinance, Chapter 24, §11.080</i></p> <p>iii To classify as long-term, a bicycle space must provide protection from both weather and access by unauthorized individuals. These requirements can be waived if the facility is educational, or use otherwise approved by the Board of Public Works or Common Council of Wauwatosa. <i>Wauwatosa Bicycle Parking Ordinance, Chapter 24, §11.080</i></p> <p>iv To classify as short-term, a bicycle space must be within 100' of an entrance. 50% of all short-term spaces must be located within 50' of a visitor entrance. <i>Wauwatosa Bicycle Parking Ordinance, Chapter 24, §11.080</i></p> <p>Notes:</p> <p>56 of the existing short-term parking spaces do not meet the 100' minimum requirement (Bike Rack #4, #5, #8, and #9 are all located more than 100' from the nearest public entrance.</p> <p>Each space was examined to see which definition of a space it met. See iii and iv for definitions of long-term and short-term spaces.</p> <p>Of the 214 existing short-term parking, the MRMC campus meets the requirement stating that 50% of all short-term spaces must be within 50' of a visitor entrance.</p> <p>MRMC has a large portion of its total employee base that either works off-campus, or works during 2nd and 3rd shifts that make it less likely to commute via bicycle. The "1st Shift Employees on campus" column is an accurate reflection of actual employees who work on-campus during daylight hours.</p>								



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Table 4. Required vs. Existing bicycle parking (institution breakdown)

	Employees	1st Shift Employees on campus	Building Square Feet	Actual Car Parking Spaces	Required Bicycle Parking		Existing Bicycle Parking	
					Long-Term ⁱ	Short-Term ⁱⁱ	Long-Term ⁱⁱⁱ	Short-Term ^{iv}
Froedtert	8,738	5,155	2,564,349	6,503	427	650	107 (-320 Deficit)	38 (-612 Deficit)
CW	3,948	2,368	2,193,857	3,402	366	340	30 (-336 Deficit)	18 (-322 Deficit)
MCW	7,164	4,127	1,586,635	2,366	264	237	32 (-232 Deficit)	148 (-89 Deficit)
Versiti	150	150	90,957	95	15	10	15 (meets req.)	10 (meets req.)
MRMC Campus	20,000	11,800	6,435,798	12,616	1,073	1,262	184 (-889 Deficit)	214 (-1,048 Deficit)

i The number of required long-term bicycle parking spaces is dictated by the total square footage of floor area of a building. For a commercial, public, or civic building, there is one long-term space required for every 6,000 SqFt. *Wauwatosa Bicycle Parking Ordinance, Chapter 24, §11.080*

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iv To classify as short-term, a bicycle space must be within 100' of an entrance. 50% of all short-term spaces must be located within 50' of a visitor entrance. *Wauwatosa Bicycle Parking Ordinance, Chapter 24, §11.080*

Notes:

56 of the existing short-term parking spaces do not meet the 100' minimum requirement (Bike Rack #4, #5, #8, and #9 are all located more than 100' from the nearest public entrance.

The 148 short-term spaces listed for MCW could be classified as either long-term or short-term as the ordinance allows the design requirements for long term spaces to be waived at educational facilities.

Of the existing bike parking provided, only Versiti and MCW meet the requirement stating 50% of all short-term spaces must be within 50' of a visitor entrance.

Each space was examined to see which definition of a space it met. See notes **iii** and **iv** for definitions of long-term and short-term spaces.

Each institution has a large portion of its total employee base that either works off-campus, or works during 2nd and 3rd shifts that make it less likely to commute via bicycle. The "1st Shift Employees on campus" column is an accurate reflection of actual employees who work on-campus during daylight hours.

Recommendations

Providing an adequate amount of bicycle parking to accommodate both commuters (long-term) and visitors (short-term) to the campus is a priority to MRMC. This can be evidenced through the millions of dollars of investment to infrastructure, staff, policies, and resources that have been allocated to bike and pedestrian facilities in and around the MRMC campus. The following section includes realistic, best-practice, and data-driven recommendations that MRMC believes will meet the intent of the City's bicycle parking ordinance.

Ongoing Monitoring of Bicycle Facility Usage

MRMC is a dynamic campus that is constantly in motion (land development changes, employee growth, etc.). Instead of a static code standard that mandates quantities of bicycle parking stalls according to building square footage and vehicular parking stalls, the MRMC campus should continually monitor use of both short-term and long-term racks by both visitors and employees to determine if more bike parking facilities are needed. To that end, GRAEF recommends MRMC



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conduct three separate bicycle parking counts annually: one in April/May, one in June/July, and one in August/September. Bicycle parking occupancy shall be documented for all bicycle parking facilities, both short-term and long-term.

Long-Term Parking Milestones

MRMC should ensure safe and secure bicycle facilities are provided for employees who currently commute by bicycle, and those who will likely start to commute when new facilities are added in the future. A MRMC survey from 2023 found that about 3% of MRMC employee respondents commute by bicycle. According to existing Wauwatosa zoning code, the required amount of long-term bicycle parking spaces is determined by the square footage of the institution's building. Due to the high density of building square footage on campus as well as the daytime vs. nighttime shifts of actual employees on campus, this results in an excessive bicycle parking requirement that does not reflect that actual need.

MRMC should be aware of the phenomenon noted by The Association of Pedestrian and Bicycle Professionals (APBP) in their bicycle parking guidelines: that perceived demand for bicycle parking may be lower than the demand that develops when quality parking appears. As MRMC adds bicycle lanes, improves bicycle connections into surrounding neighborhoods, embraces programming and education, and increases the visibility of bicycle commuting on campus, the number of employees who chose to commute by bicycle will likely increase. This is supported by a MRMC survey conducted in 2016 where 14.8% of respondents said they would consider riding their bicycle to work in the future.

As stated in the previous ongoing monitoring section, MRMC should continually monitor the occupancy of long-term bicycle parking supply to employees, moving towards accommodating enough long-term parking for the employees which currently commute via bicycle, as well as providing a suitable buffer of excess spaces to permit growth of bicycle usage. There are currently an average of approximately 11,800 staff/students on campus during the daytime hours. As the bicycle parking usage is monitored, MRMC should install enough long-term bicycle parking spaces at each bicycle parking facility to maintain a buffer of 20% of empty spaces so that the facilities can accommodate the growth of bicycle parking usage. As the usage of facilities increase, spaces should be added to respond to that growth. If a facility exceeds the 80% occupancy on a regular basis, the member institution should look to add additional spaces in order to maintain a 20% buffer of available parking spaces.

A larger buffer should be considered for facilities with very few spaces to bolster that facility's adaptability. For example, Versiti has 15 long-term bicycle parking spaces planned as part of their Blood Research Institute Expansion project. As part of annual bicycle counts, if it is found that less than 3 open bike parking spaces (20%) are available on a regular basis, Versiti should look to add additional long-term parking spaces in order to accommodate at least 3 open bike parking spaces (20%).



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Additionally, as new construction projects are undertaken by individual institutions, long-term bicycle parking facilities should be included as part of the design.

Short-Term Parking Milestones

There is less information and precedent on which to base the recommended amount of short-term bicycle parking for visitors on the MRMC campus. While some visitors to the campus undoubtedly travel by bicycle, the nature of the facilities means that most patients and visitors typically travel from further away for treatment and care. APBP recommends that short-term bicycle parking be based on the square footage of the healthcare facility itself. The City of Wauwatosa's Municipal Code instead bases the required amount of short-term bicycle parking on the number of vehicle parking spaces on site. The code requires 1,262 short-term bicycle parking spaces across the campus.

This amount is excessive when looking at patient and visitor data held by each institution. In place of this number, the recommendation would be that each institution public entrance include a minimum of four short-term bicycle parking spaces. MRMC should plan to monitor the use of these racks by both visitors and employees to determine if more racks are needed, gradually increasing the amount of parking to meet actual need, while providing a 20% excess buffer similar to the long-term recommendations. Additionally, as new building construction is undertaken, short-term spaces should be planned for each public entrance as part of the design.

Bicycle Parking Design

The City of Wauwatosa's Municipal Code clearly defines what is considered a long-term and a short-term bicycle parking space. When addressing the needs of employees and visitors, MRMC should ensure that every bicycle parking space on campus is meeting either the definition of a short-term or a long-term bicycle parking space. Most importantly;

- All short-term parking spaces must be within 100 feet of an entrance, and half of them must be within 50 feet of a visitor entrance.
 - See Exhibit A – Campus Bicycle Parking for locations of entrances, visitor entrances, and distances surrounding them.
- All long-term parking spaces must be protected from weather and unauthorized access.

Wauwatosa's Municipal Code also has strict design requirements for all bicycle parking spaces. Both short-term and long-term spaces must follow a few design standards, while short-term spaces are subject to more requirements.

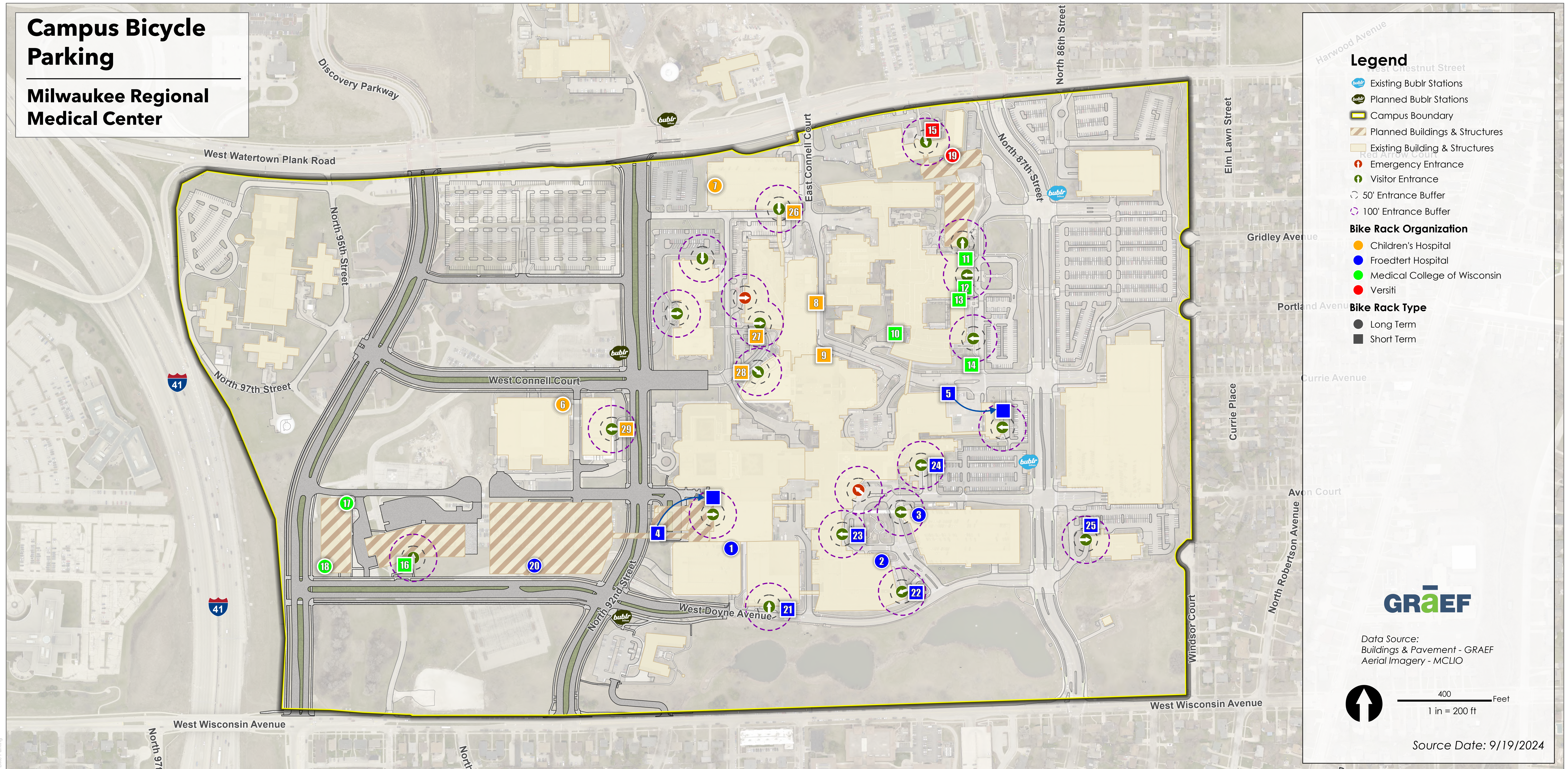


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Requirement	Long-Term	Short-Term
Consist of racks or lockers that are anchored so that they cannot be easily removed.	X	X
Be of solid construction, resistant to rust, corrosion, hammers and saws.	X	X
Allow both the bicycle wheel and frame to be locked with the bicycle in an upright position using a standard U-lock.	X	X
Be designed to not cause damage to the bicycle.	X	X
Facilitate easy locking without interference from or to adjacent bicycles.	X	X
Be in highly visible, active, well-illuminated areas that do not interfere with pedestrian movements.		X

Campus Bicycle Parking

Milwaukee Regional Medical Center

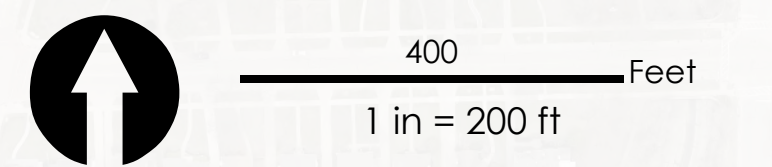


Legend

- Existing BublR Stations
 - Planned BublR Stations
 - Campus Boundary
 - Planned Buildings & Structures
 - Existing Building & Structures
 - Emergency Entrance
 - Visitor Entrance
 - 50' Entrance Buffer
 - 100' Entrance Buffer
- Bike Rack Organization**
- Children's Hospital
 - Froedtert Hospital
 - Medical College of Wisconsin
 - Versiti
- Bike Rack Type**
- Long Term
 - Short Term



Data Source:
Buildings & Pavement - GRAEF
Aerial Imagery - MCLIO



Source Date: 9/19/2024

Bike Rack #	Organization	Location	Short / Long Term	Covered / Not Covered	# of Racks	Capacity	Bike Rack #	Organization	Location	Short / Long Term	Covered / Not Covered	# of Racks	Capacity
Existing Bicycle Parking							Planned Bicycle Parking						
1	Froedtert Hospital	NE corner, Level 1 of P1/Blue Parking Garage	Long Term	Covered in parking structure	2	18	16	Medical College of Wisconsin	Just South of Milwaukee State Crime Lab	Short Term	Not covered	1	2
2	Froedtert Hospital	NE corner, Level 1 of P2/Gold Parking Garage	Long Term	Covered in parking structure	1	9	17	Medical College of Wisconsin	NE corner of Parking Area 1 Replacement Building	Long Term	Covered in parking structure	8	16
3	Froedtert Hospital	NW corner, Level 1 of P3/Orange Parking Garage	Long Term	Covered in parking structure	6	60	18	Medical College of Wisconsin	SW corner of Parking Area 1 Replacement Building	Long Term	Covered in parking structure	8	16
4	Froedtert Hospital	Recommended to be moved within 50' of Froedtert Hospital Entrance	Short Term	Not covered	2	18	19	Versiti Blood Center	Inside staff entrance	Long Term	Covered	15	15
5	Froedtert Hospital (WI Diagnostic)	Recommended to be moved within 50' of Froedtert Hospital Entrance	Short Term	Not covered	2	20	20	Froedtert Hospital	Southwest side of structure by entrance	Long Term	Covered in parking structure	13	20
6	Children's Hospital	Located NE corner, Level 1 of CW West/Corporate Parking Structure	Long Term	Covered bike lockers	12	12	Recommended Bicycle Parking						
7	Children's Hospital	West end of parking structure, Level C	Long Term	Covered in parking structure	2	18	21	Froedtert Hospital	Within 50' of Froedtert Hospital Entrance	Short Term	Not covered	2	4
8	Children's Hospital	Outside CW E5 entrance	Short Term	Not secured	1	9	22	Froedtert Hospital	Within 50' of Froedtert Hospital Entrance	Short Term	Not covered	2	4
9	Children's Hospital	Outside West entrance of Children's research institute	Short Term	Not covered	1	9	23	Froedtert Hospital	Within 50' of Froedtert Hospital Entrance	Short Term	Not covered	2	4
10	Medical College of Wisconsin	Outside SW corner of MCW HUB	Short Term	Not covered	19	38	24	Froedtert Hospital	Within 50' of Froedtert Hospital Entrance	Short Term	Not covered	2	4
11	Medical College of Wisconsin	NE corner of main MCW entrance	Short Term	Covered - under overhang	1	9	25	Froedtert Hospital	Within 50' of Froedtert Hospital Entrance	Short Term	Not covered	2	4
12	Medical College of Wisconsin	SE corner of main MCW entrance	Short Term	Covered - under overhang	1	9	26	Children's Hospital	Within 50' of Children's Hospital Entrance	Short Term	Not covered	2	4
13	Medical College of Wisconsin	South of MCW main MCW entrance	Short Term	Not covered	4	36	27	Children's Hospital	Within 50' of Children's Hospital Entrance	Short Term	Not covered	2	4
14	Medical College of Wisconsin	NW corner of Connell and 87th Street, south of MCW HUB	Short Term	Not covered	6	54	28	Children's Hospital	Within 50' of Children's Hospital Entrance	Short Term	Not covered	2	4
15	Versiti Blood Center	In front of main Versiti entrance, south of Watertown Plank Road	Short Term	Not covered	1	10	29	Children's Hospital	Within 50' of Children's Hospital Entrance	Short Term	Not covered	2	4