

2025 BICYCLE AND PEDESTRIAN COUNT REPORT

APRIL 2025



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The Fargo-Moorhead Metropolitan Council of Governments (Metro COG) is the designated metropolitan planning organization for the Fargo-Moorhead metropolitan area. A major responsibility of Metro COG is transportation planning, which includes planning for bicycle and pedestrian facilities. Understanding the demand for bicycle and pedestrian facilities allows local units of government and Metro COG to plan for future bicycle and pedestrian use in the area. This report details both manual (17 locations) and automated (14 locations) counts taken since 2013 and 2014 respectively. Page 5 features a map of each location in which counts have been reported and analyzed.

Automated Counters

A total of fourteen automated counters are placed at various locations in the Fargo-Moorhead Metro Area. All counters are from the manufacturer Eco-Counter. Two locations have the ability to differentiate between bicycles and pedestrians by using both infrared technology and inductive pavement loop detection.

BW: Broadway west sidewalk just south of 2nd Ave N, Downtown Fargo
LG: Lindenwood Park / Gooseberry Park bicycle & pedestrian bridge, Fargo/Moorhead
MT: Milwaukee Trail between 35th Ave S and 37th Ave S, Fargo
OM: Oak Grove Park / Memorial Park bicycle & pedestrian bridge, Fargo/Moorhead
RC: Rose Coulee Trail between 46th Ave S and 47th Ave S, Fargo
ER: Eagle Run Neighborhood Trail between Rendezvous Park and 9th St W, West Fargo
MH: Moorhead 8th Street Trail Crossing I-94, (owned by MnDOT)
DW: Along 4th Ave near Bob Marshall Field, Dilworth (Installed in 2024)
HR: Near the Intersection of Thue Ct and Wall Ave, Horace (Installed in 2024)
HZ: Along 12th Ave S near Horizon Middle School, Moorhead (Installed in 2024)
DS: Downtown West Fargo along Sheyenne Street, West Fargo (Installed in 2024)
LT: Near the Lights development, West Fargo (Installed in 2024)
NF: Near El Zagal golf course, Fargo (Installed in 2024)
WH: Woodhaven shared use path system, Fargo (Installed in 2024)

These counters count passer-byers 7 days a week, 24 hours a day, 365 days a year. If two or more people are walking/biking side-by-side, the counter can record the group as one individual. This phenomenon is known as occlusion. Because of this, actual counts are higher than recorded. The topic of occlusion, as well as the relevant occlusion factors for each of the automated counters, will be discussed in the following pages.



2014 - 2023



Data Consistency

Metro COG's initial deployment of automated counters utilized a basic counter intended for hiking trails - Traf-X. In 2022 and 2023 Metro COG replaced the Traf-X counters with a new style of counter - Eco Counters. During the deployment process of the Eco Counter, an Eco Counter and Traf-X counter were tested over a period of approximately 6 hours during September to determine the consistency of the two devices. Using manual counts to compare, it was found the Eco Counter counts were higher and more accurate than the Traf-X counters. This difference in the recorded number of counts between the two devices is noticeable when observing the year-to-year data in the following section. Metro COG is considering ways to rectify the data to account for this difference between the two types of counters.

A challenge with automated counters regardless of the accuracy is occlusion, which is when two or more people traveling side by side pass through the counting field and are counted as one person. The best way to account for this is to calculate the occlusion factor at each location and apply that factor to the entire data set at that location. Metro COG has calculated occlusion factors at the each automated counting location and plans to integrate these factors into the count data and analysis for future reports.

AUTOMATED COUNTERS

DATA SUMMARY

2014 - 2024





AUTOMATED COUNTERS DATA SUMMARY

2014 - 2024





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New Eco-Counter installed November 2022

AUTOMATED COUNTERS DATA SUMMARY

2014 - 2024





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Moorhead 8th St Trail crossing I-94 - Bicycles



AUTOMATED COUNTERS DATA SUMMARY

2016 - 2024





Moorhead 8th St Trail crossing I-94 - Bike & Pedestrians



AUTOMATED COUNTERS

2024 COUNTER-TO-COUNTER COMPARISONS





Lindenwood/Gooseberry Bridge, Fargo/Moorhead Towards MN Pedestrian
 Oak Grove

🗆 Oak Grove/Memorial Park Bridge, Fargo/Moorhead Towards MN Pedestrian

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* - In August of 2024 the Eco-Counter at Oak Grove was stolen, this resulted in a two month gap of data while we were being sent our new counter.

AUTOMATED COUNTERS

Bridge Comparison Month to Month



AUTOMATED COUNTERS

2023 WEATHER ANALYSIS

The 2023 data set was used for this analyis because it had uninterupted data at all five locations. Total Daily Counts

The 2024 data experienced gaps in the data due to vandalism as well as battery issues. The 2024 missing data is currently being "recreated" by Eco-Counter's data validation team using the whole of our data set as well as weather ananlysis. This "recreation" process is not yet complete.



All Locations: Counts vs. Temperature

The following graphs compare the total daily count to the daily high temperature taken from the National Centers for Environmental Information National Oceanic and Atmospheric Administration NCEI NOAA historical weather data from the station at Fargo Hector International Airport, ND US (USW00014914). The graph to the left shows the trendline for all combined locations with a peak of 84°F.

Broadway: Counts vs. Temperature



The Broadway data has a less pronounced peak. This may be a result of the density of commercial land uses adjacent to this counter. People appear more likely to visit this location even if the temperature is significantly warmer or colder than they would desire. The temperature which results in the highest trendline of counts at the Broadway location is 83°F. The 2023 data set was used for this analyis because it had uninterupted data at all five locations.

The 2024 data experienced gaps in the data due to vandalism as well as battery issues. The 2024 missing data is currently being "recreated" by Eco-Counter's data validation team using the whole of our data set as well as weather ananlysis. This "recreation" process is not yet complete.

Milwaukee Trail, Eagle Run Trail, and Rose Coulee Trail: Counts vs. Temperature

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The Milwaukee Trail, Eagle Run Trail, and Rose Coulee Trail data is shown to the left. The peak is very pronounced at 81.5°F. This implies that the volume of pedestrians and bicyclists at these locations is very dependent on the temperature.

Lindenwood/Gooseberry and Oak Grove/Memorial Park: Counts vs. Temperature

The Lindenwood/Gooseberry Bridge and Oak Grove/ Memorial Park Bridge data also has a very pronounced peak, 86.5°F. It is interesting to note the difference in peak between this graph and the previous one. The 5°F change is potentially from the heavy tree canopy at the river trails compared to the other locations.







BROADWAY SOUTH OF 2ND AVE N WEST SIDEWALK

2024 ANALYSIS

PEAK DAY: FRIDAY

PEAK DATE: 03/16/2024

PEAK TOTAL: 7320

DAILY AVERAGE: 1450

WEEKEND AVERAGE: 2207

WEEKDAY AVERAGE: 1149

Located in the heart of Fargo's downtown, the Broadway counter records the highest volume of people compared to the other automated counters. Unlike some counters, this counter cannot differentiate between bicycles and pedestrians. The data collected showcases several trends and events that impact the Broadway sidewalk in the core of downtown Fargo.



Figure BW.1

The above graph separates the 2024 data into the seven days of the week, showcasing the average data recorded every hour for every day of the week. Several trends emerge within the data when displayed this way.

First, a comparison of weekend nights vs. weekday nights. Friday nights and Saturday nights find Broadway much busier than average, with totals on Saturday tripling average weekday peaks. For both Friday and Saturday nights, the busiest time is around midnight, with a steep drop in volume by 3AM when foot traffic is at its lowest.

A second trend that emerges is a common lunchtime peak across all weekdays of around 100 people an hour, then a drop as lunchtime ends. Saturday has a much larger lunchtime peak around the same time, and data from Sundays show a smaller lunchtime peak that occurs later in the day.

When the data is separated into daily counts over the course of 2024 specific peaks corresponding to holidays and events are identified. The magnitude of these peaks provides good insight into the volume of traffic that these events create. The consistent smaller peaks represent the Friday and Saturday night crowds.





Counting people by month showcases the difference between winter and summer pedestrian traffic on Broadway and speaks to larger trends within the FM area. During January 2024, more than 20,000 people were recorded by this counter versus nearly 70,000 people recorded during July 2024. The lower counts in the winter could be for a host of reasons, such as people opting to drive downtown, fewer people frequenting downtown businesses due to the weather, and/ or a reduced number of events.





BROADWAY SOUTH OF 2ND AVE N WEST SIDEWALK

2022-2024 ANALYSIS



Monthly comparison by year

January 1st, 2022 → December 30th, 2024 ☆ Broadway West Sidewalk, Fargo Pedestrian



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LINDENWOOD/ GOOSEBERRY BRIDGE

2024 ANALYSIS

PEAK DAY: Saturday

PEAK DATE: 4/13/2024

PEAK TOTAL: 2128

DAILY AVERAGE: 383

WEEKEND AVERAGE: 561

WEEKDAY AVERAGE: 313 Located on the Lindenwood-Gooseberry Pedestrian Bridge, the LG counter was installed in November 2022 and replaced the Traf-X counter. The counter does not discern between bicycles and pedestrians. The LG counter does not count during floods, when the bridge is lifted.



Figure LG.1 separates the 2024 counter data by day. Weekday traffic is relatively consistent, with steady increases throughout the day until the evening, where most days plateau before falling as nightfall sets in. Monday features higher volumes than other weekdays, and features a more pronounced peak at 5:00 PM.

The Lindenwood-Gooseberry bridge is significantly busier on the weekends than the weekdays. Sundays peak at nearly 75 people/hr, while Saturdays peak at around 55 people/hr (Mondays and Friday 4:00pm, other weekdays 6:00pm). Weekend peaks are also generally earlier than weekdays, with both Saturday and Sunday peaking at around 3-4:00PM.

The LG counter is the 2nd busiest count location, aside from the Broadway automated counter. With a daily average of 383 people, the bridge experiences frequent traffic from people crossing the Red River from Fargo into Moorhead or vice versa. Weekends average nearly 250 more people than weekdays, with an average of 561 people crossing the bridge a weekend day.



Figure LG.2 represents the total counts each day of 2024. During the winter, counts remain low. The noticeable absence of counts in June and July represent a flood of the Red River. After the flood, counts increase and remain consistent throughout the summer, before declining in the fall. The several peaks represent weekends throughout the summer.



Figure LG.3 showcases each month of 2024 with the total counts for each month. In August, 21,512 people crossed the Lindenwood-Gooseberry bridge, compared to 2,265 people who crossed the bridge in December. The seasons greatly affect multi-modal travel in the Fargo-Moorhead area, but the Lindenwood-Gooseberry bridge still receives significant traffic in the winter. This could be because of the abundance of outdoor recreation opportunites near the bridge. i.e. Mountain Biking, Cross Country Skiing, Hiking Trails.



PEAK DAY: SUNDAY

PEAK DATE: 6/23/2024

PEAK TOTAL: 742

DAILY AVERAGE: 254

WEEKEND AVERAGE: 290

WEEKDAY AVERAGE: 240

The Milwaukee Trail is one of the longest trail systems in the City of Fargo, spanning 3 miles from 1-94 southward to the Rose Creek trail just south of 40th Ave S, with plans to connect the trail to other trail networks once a crossina of Rose Creek Coulee is complete. The counter, located near Mini Park 1 and 36th Ave S, can differentiate between bicycles and pedestrians. While the area in the immediate vicinity of the counter contains low density housing, the areas surrounding the Milwaukee Trail contain a range of high and low density housing.



Figure MT.1

Figure MT.1 separates the 2024 data into the seven days of the week, showcasing the average data recorded every hour of the day for every day of the week. The most notable aspect of the graph are the two main peaks that appear: an evening peak and a smaller morning peak. Weekdays and weekends are consistent in use, with a weekend average of 290 and a weekday average of 240. The Milwaukee Trail experiences frequent use regardless of day, though Saturdays and Sundays experience higher morning peaks and lower evening peaks than weekdays do.



Figure MT.3 showcases the use of the Milwaukee Trail throughout 2024. The Milwaukee Trail was more utilized during the winter and spring than usual. This is most likely due to the unseasonably warm temeratures experienced in the winter of 2024. Year over year data shows that the trail system has grown in usership every year.

Figure MT.4 represents the total pedestrian traffic vs. the total bicycle traffic for each month of the year. The data helps show which modes use the Milwaukee Trail. The Milwaukee Trail features high volumes of multi-modal traffic, which peaks in the summer and significantly declines in the winter, though not to the extent of the other trail counters.



Jul

Aug

Sep

Oct

Nov

Dec

Apr

May

Jun

Mar

24

Figure MT.3

0

Jan

Figure MT.4

Feb



OAK GROVE/ MEMORIAL PARK BRIDGE

2024 ANALYSIS

PEAK DAY: SUNDAY

PEAK DATE: 5/5/2024

PEAK TOTAL: 665

DAILY AVERAGE: 145

WEEKEND AVERAGE: 194

WEEKDAY AVERAGE: 126 Located on the Oak Grove - Memorial Park bridge just north of Downtown Fargo/ Moorhead, the OM counter was installed in November 2022 and replaced the Traf-X counter. This counter does not discern between bicycles and pedestrians. The OM counter does not count during floods, when the bridge is lifted.

*This counter was stolen in August of 2024, and was replaced in November of 2024



Figure OM.1 separates the 2024 counter data by day. Weekday traffic is relatively consistent, with steady increases throughout the day until the evening, where most days plateau before falling as nightfall sets in. Monday features slightly higher volumes than other weekdays, and features a more pronounced peak at 4-5:00 PM.

The Lindenwood-Gooseberry bridge is significantly busier on the weekends than the weekdays, particularly in the morning. Saturdays and Sundays peak around 20 people/hr. Weekend peaks are also generally earlier than weekdays, with both Saturday and Sunday peaking at around 3:00PM.

Counts collected by the OM counter are about 1/3 of the counts collected by the LG counter, which is reflected in the daily averages both on weekdays and weekends. While both are bridges connecting pedestrians to North Dakota and Minnesota, the OM bridge is used significantly less than the LG bridge.



Figure OM.2 represents the total counts each day of 2023. During the winter, counts remain low. The noticeable absence of counts in April and May represent a spring flood of the Red River. After the flood, counts significantly increase and remain consistent throughout the summer, before declining in the fall. The several peaks represent weekends throughout the summer.



Figure OM.3 showcases each month of 2023 with the total counts for each month. In July, the counter recorded 10,822 people crossing the Lindenwood-Gooseberry bridge. This is almost exactly 10,000 more than the total number of people that crossed the bridge in January. The July total at OM is about 15,000 fewer than the July total at the Lindenwood-Gooseberry Bridge. However, the OM bridge follows the same trends as the LG bridge, with strong summer totals declining as temperatures decrease.





COULEE

2024 ANALYSIS

PEAK DAY: SUNDAY

PEAK DATE: 5/5/2024

PEAK TOTAL: 320

DAILY AVERAGE: 108

WEEKEND AVERAGE: 120

WEEKDAY AVERAGE: 103 The RC counter was installed in June 2023. The counter is located along the Rose Coulee trail near the Timber Creek neighborhood. A project in 2025 will connect the Rose Coulee trail to the Milwaukee Trail, which has the potential to significantly increase counts in this area.





Figure RC.1 separates the 2024 data by day. Two distinct peaks emerge from this dataset: a morning peak and less-pronounced evening peak. All weekdays feature a peak from 8-10:00AM, with around 9-10 people counted per hour. A second peak appears around 6-7:00PM, after the typical dinnertime. Mondays feature the highest peak, of 17 people/hr.

Weekend traffic peaks in the mornings, but Saturday and Sunday diverge after about 10:00AM. Saturday traffic falls to around 6 people/hr and does not have an evening peak. Sunday traffic falls to 9 people/hr, then climbs to a late afternoon peak of 14 people/hr.

Over the entire year, weekends and weekdays are, on average, consistent. The overall daily average is 132, with weekends averaging 134 people/day and weekdays averaging 132 people/ day. No events or outliers seem to affect the RC counter, but with only half the year analyzed, conclusions cannot yet be made.

Figure RC.2 showcases the counts each day throughout all of 2023. Because the RC counter was installed in June, a full year of data does not yet exist and conclusive analysis cannot be done. However, the decline from summer to fall appears to be relatively linear.



Figure RC.3 represents the total counts collected per month of 2023. In July 2023, 6,126 people were counted, an average of 198 people/day. This is about half of the July total for the Milwaukee Trail counter, and about 2,500 more than the July total for the Eagle Run Trail counter. In December 2023, 1,300 people were counted. This is 4,826 people fewer than were counted in July, which is a 471% drop in use from July to December.





2024 ANALYSIS

PEAK DAY: **SUNDAY**

PEAK DATE: 8/11/2024

PEAK TOTAL: 350

DAILY AVERAGE: 76

WEEKEND AVERAGE: 87

WEEKDAY AVERAGE: 72

Located in southern West Farao, the Eaale Run Trail automated counter collects data from a shared use path along a drainage corridor near Rendezvous Park. Like the Milwaukee Trail counter, the Eagle Run Trail counter has the ability to differentiate between bicycles and pedestrians.



Figure ER.1

Figure ER.1 separates the 2024 data into the seven days of the week, showcasing the average data recorded every hour for every day of the week. Due to lower counts, the hourly data appears more sporadic and can be more impacted by outliers, but distinct trends still emerge. Specifically, weekday volume is at its highest in the evening, presumably after people return home from work and embark on an evening walk, run, or bike ride. Particularly, Mondays and Tuesdays appear to have the highest volume of evening use.

Weekend traffic is more constant, lacking a large evening spike which weekdays contain, though Saturday still features a lunchtime spike and Sunday contains a peak during the afternoon carrying over into the evenina.



Figure ER.2

Figure ER.3 showcases counts per day over the course of 2023. Winter volumes are notably low, but volume begins to increase in May. Two peaks can be seen: a late Spring peak and an early Fall peak. Summer volumes remains generally consistent.



Figure ER.4 represents the total pedestrian traffic vs. the total bicycle traffic for each month of the year. The data reflected in the graphs shows similar trends to the Milwaukee Trail counter, though at a much smaller scale. Volumes over the course of the year follows a slightly different pattern than the Milwaukee Trail. During most of the spring, summer, and early fall, the ratio between pedestrians and bicyclists is roughly 2:1. Fewer people are using the Eagle Run trail, and the trail is mostly used in the summer, with noticeably less use in the winter.





MOORHEAD 8TH ST @ I-94

2024 ANALYSIS

Owned and operated by MnDOT, the Moorhead 8th St counter records multi-modal traffic at the interchange of I-94 and 8th St/Highway 75. The counter has the ability to differentiate between bicycles and pedestrians. The counter has faced several periods of major malfunctioning, so most outliers were omitted for the purpose of this report.



0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 Figure MH.1

Figure MH.1 separates the 2023 data into the seven days of the week, showcasing the average data recorded every hour for every day of the week. Due to lower counts, the hourly data appears more sporadic and can be more impacted by outliers, but distinct trends still emerge. Specifically, weekday volume is at its highest in the evening. Nights generally have more counts than the other trail counters.

Figure MH.2 shows the ratio of bicyclists to pedestrians. The MH counter recorded a higher percentage of bicyclists vs. pedestrians throughout 2023, though for much of the year the ratio is near 1:1, aside from the late summer.



Figure MH.2

PEAK DAY: MONDAY

PEAK DATE: 7/29/2023

PEAK TOTAL: 703

DAILY AVERAGE: 127

WEEKEND AVERAGE: 122

WEEKDAY AVERAGE: 129

Figure MH.3 showcases counts per day over the course of 2023. Several periods of data have been omitted due to the counter malfunctioning. Overall, the data shows higher summer volumes and lower winter volumes, with a peak in late-July. Conclusions cannot be made in regard to this peak, though it may be the counter recording higher-thanactual totals.



Figure MH.4 represents the total pedestrian traffic vs. the total bicycle traffic for each month of the year. The data reflected in the graphs shows similar trends to the Milwaukee Trail and Eagle Run Trail counters. Overall counts reflect the seasonal shift in multi-modal traffic in the Fargo-Moorhead area. People are less likely to bike or walk in the winter months, but quickly begin to do so once the temperatures increase in the late spring. This data also shows that in late summer more people are bicycling rather than walking.



New Automated Counters

These counters were	Counter	Location	Peak Day	Peak Date	Peak Total	Daily Average	Weekend Average	Weekday Average
Therfore, full analysis of the data is not being preformed for this year's report.	DW	Dilworth	Friday	1/24/2025	179	24	29	22
	HR	Horace	Sunday	3/9/2025	112	11	14	10
Metro COG is planning to increase the number of counting locations throughout the Metro Area to provide more full picture of the pedestrian and bicycle data.	ΗZ	Horizon	Wednesday	2/27/2025	46	18	9	21
	DS	POW MIA	Friday	2/1/2025	370	115	138	106
	LT	The Lights	Saturday	3/9/2025	105	10	17	8
	NF	VA trail	Saturday	3/9/2025	193	35	44	31
	WH	Woodhaven	Saturday	3/9/2025	307	37	55	29

Monthly traffic

November 1st, 2024 → December 31st, 2024



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2013 - 2024

Manual counts are conducted once a year for a four-hour period on a typical weekday in September (Note: locations near NDSU campus are counted for a five-hour period). Based on availability of staff and resources some locations are counted for two consecutive weekdays to increase accuracy. The counts are taken at 17 locations in the Fargo-Moorhead Metro Area. These counts differentiate between pedestrians, bicyclists on the path/sidewalk, and bicyclists on the street where applicable. Poor weather conditions are avoided in order to provide a consistent count platform. However, variations in weather do occur which likely have some affect on the number of bicyclists and pedestrians from year to year.

The count data shown in this section of the report includes years 2013 through 2024, however some locations may not include all years due to previous counting mythology, construction, or equipment failure. On the next page is a map showing the location of each manual count:





Bicycles per hour (Average of years 2013 - 2023)



HOURLY AVERAGES

Pedestrians per hour (Average of years 2013 - 2023)





Pedestrian counts per hour by year (average of all locations)



(39)

QUICK ANALYSIS

Bicycle counts per hour by year (average of all locations)



% of bikes on sidewalk/path vs. bikes on street (average of all locations)



















42

9TH AVE S UNDER I-29

FARGO







12TH AVE N VIADUCT

FARGO















2024 ANALYSIS























FARGO BROADWAY @ RAILROAD TRACKS NEAR MAIN AVE







FARGO 12TH AVE N @ UNIVERSITY DR N









50

FARGO UNIVERSITY DR N @ 12TH AVE N





FARGO/ MOORHEAD 12TH AVE N/15TH AVE N BRIDGE

2024 ANALYSIS



51



FARGO/ MOORHEAD NP/CENTER AVE BRIDGE







2024

Pedestrians

MOORHEAD 4TH ST @ CENTER AVE

2024 ANALYSIS

2.0

0.0

Bicycles sidewalk/path



Bicycles street



MOORHEAD 8TH ST S OVER I-94

2024 ANALYSIS

The above graphs are calculated using an average of counts from 2013-2023









WEST FARGO 9TH ST @ 17TH AVE E







56

17TH AVE E @ 9TH ST

WEST FARGO











