

NAPERVILLE METRA STATION COMMUTER ACCESS AND PARKING

INTRODUCTION

The Naperville Metra Station is an important component of the City's transportation system. Located just outside of the Central Business District within a residential area, providing efficient access and convenient parking for commuters using the station has been a community challenge for decades. This report provides information on the current state of commuter parking and access at the Naperville Metra Station as well as a parking supply expansion analysis.

METRA SERVICE AND RIDERSHIP

Commuter rail service between Naperville and Chicago is provided by Metra's BNSF Railway Line, which is the busiest of Metra's eleven service lines. The Naperville community is served by both the Naperville and Route 59 Metra Stations.

Metra conducts station boarding and alighting counts on a periodic basis. According to Metra's *2016 Commuter Rail System Station Boarding/Alighting Count*, the Route 59 and Naperville stations are the two busiest suburban stations in Metra's entire system. A high level of ridership at the two stations has remained consistent over the past decade, with Naperville daily ridership at approximately 4,100 riders and Route 59 daily ridership at almost 5,800 riders (see attached exhibit).

COMMUTER ACCESS

The City of Naperville has historically supported a comprehensive multi-modal transportation network that provides commuters with access options to both the Naperville and Route 59 Metra Stations. Metra periodically surveys commuters to determine transportation mode shares. Based on Metra's *2016 Origin-Destination Survey*, commuters access the Naperville Metra Station through a variety of travel modes.

Travel Mode	Share
Drive Alone	48%
Drop-off	19%
Pace Bus	11%
Walk	8%
Bike	5%
Carpool Passenger	3%
Carpool Driver	2%
Taxi	1%
Ride Share	1%
Other	2%

COMMUTER PARKING

A total of 1,681 spaces are available for commuter parking at the Naperville Station. Parking is located on-street and in surface lots throughout the area (see attached map). Of these spaces, 724 are dedicated for daily use, 918 are reserved for quarterly permit holders, and 39 are designated accessible spaces.

DAILY FEE PARKING

The 724 daily fee parking spaces are available on a first-come, first-serve basis. The spaces experience high utilization, with 100% occupancy by 6:30 a.m. most days. A fee to use the spaces is required Monday through Friday, between 6 a.m. and 6 p.m. Commuters pay the daily fee at pay stations located at the station building. The City of Naperville also uses Pay-by-Phone, which allows for the payment to be made by phone or mobile app.

Location	Spaces	Rate
On-Street	342	\$2.00
Kroehler Lot	45	\$2.00
Water Tower West	115	\$2.00
DuPage Children's Museum	54	\$5.00
190 E. 5 th Avenue	168	\$5.00

In addition to the standard daily fee spaces, the Burlington and Kroehler Lots have 53 and 36 spaces, respectively, that become available for daily use at 9 a.m. when not occupied by a permit holder. The standard rate of \$2.00 is required.

QUARTERLY PERMIT PARKING

The 918 quarterly permit spaces are reserved for commuters who hold a permit for the specified parking lot. The permit comes in the form of a hang tag that is displayed on the rearview mirror. Permit holders are billed quarterly and receive a dated sticker each quarter to demonstrate that their permit is current.

The City sells more permits for each lot than there are spaces available to promote high utilization. The oversell is intended to account for permit holders who do not commute by Metra every day of the week or those who simply do not commute at all but choose to retain their permit. Despite the aggressive oversell, permit spaces are typically less utilized than daily fee spaces. City staff conducts monthly, mid-week occupancy counts of every commuter space to track utilization.

Location	Rate	Spaces	Permits Issued	Oversell	Utilization
Burlington Lot	\$120 resident/ non-resident	526	850	62%	89%
Kroehler Lot	\$110 resident/ \$135 non-resident	282	474	68%	90%
Parkview Lot	\$120 resident/ non-resident	110	185	68%	88%

WAITLIST MAINAGEMENT AND PERMIT OFFERS

Demand for quarterly permits exceeds the number of permits available. Due to this, the City has managed quarterly permit waitlists for the commuter lots for decades. The City maintains two waitlists for the Naperville Station lots, on which 1,440 commuters currently wait. Waitlist times are determined based on the application date of the commuter at the top of the waitlist. As such, the wait time is an estimate and varies over time. Currently, the combined Burlington/Parkview waitlist has a 14-year wait and the Kroehler waitlist has a 7-year wait. The

City previously managed a waitlist for the Route 59 Lot; however, the list was eliminated in 2010 and quarterly permits have been readily available since that time.

Waitlist	Total Commuters	Kroehler Permit Holders on Waitlist	Route 59 Permit Holders on Waitlist
Burlington/Parkview	771	289	22
Kroehler	149	-	11
Both	520	-	24
Total	1,440	289	57

New permits are issued each quarter to commuters on the waitlists. When issuing permits, the goal is to achieve high occupancy rates without creating an overflow condition. Staff considers several factors when determining the amount of permit offers, including recent space utilization rates based on the monthly counts, acceptance rates from previous permit offers, and permit cancellations.

Historically, the acceptance rate for the Burlington/Parkview and Kroehler permit offers has varied between 60% and 100%. For the last eight quarters, the average acceptance rate for each waitlist was 75%. This means that if 20 permits are offered in a quarter, 15 offers are accepted and 5 offers are rejected. Offers are rejected for a variety of reasons, such as, the commuter has changed jobs and is no longer using Metra or the commuter has moved and is no longer using the Naperville Station. Commuters who are offered a permit are removed from the waitlist whether they accept or reject the permit offer.

Permit cancellations vary each year. The number of cancellations for Naperville Station permits is very low when compared to Route 59 permit cancellations. Because a waitlist does not exist for Route 59 permits, commuters are less likely to retain their Route 59 permits when they are not using them on a regular basis.

Year	Burlington	Parkview	Kroehler	Route 59
2017	37	8	22	343
2016	51	9	23	248

PARKING SUPPLY EXPANSION ANALYSIS

During the community engagement phase of the 5th Avenue project, the City received input from commuters that additional parking at the Naperville Metra Station is desired. On September 18, 2018, the City Council directed staff to evaluate the number of parking spaces that would need to be added to make a measurable impact on the quarterly permit waitlists. To complete the analysis, staff reviewed historic oversell and acceptance rates and conducted a survey of commuters on the waitlist to gain insight into their commuting patterns and preferences.

METHODOLOGY

Each additional parking space will remove more than one commuter from the waitlist. The permit offer acceptance rate and oversell rate are the two key factors that will influence how additional spaces will reduce the waitlist length. As noted, for the past eight quarters the average acceptance rate for each waitlist was 75%. During the same time period, on average, the Burlington lot was 67% oversold and the Kroehler lot was 70% oversold. As an example, these rates would have the following impact when applied to 100 new parking spaces:

- At an oversell rate of 70%, 170 permits can be made available for 100 new parking spaces.
- At an acceptance rate of 75%, 227 offers could be made for those 170 permits, because 57 of these offers will be rejected.
- For every 100 new parking spaces, 227 commuters are removed from the waitlist.

COMMUTER WAITLIST SURVEY

To better understand the characteristics and travel patterns of the waitlisted commuters, an online survey was sent out on October 5, 2018 to all commuters on the Burlington/Parkview and Kroehler waitlists. The survey was sent to 1,447 email addresses, constituting the 1,440 waitlisted commuters, and 790 responses were received during the three-week response period.

The survey included the following questions and detailed charts depicting the survey results are attached:

- Do you currently commute by Metra?
- If 'No':
 - Given that you do not currently commute by Metra, what prompted your application to be on the parking permit waitlist?
- If 'Yes':
 - How often do you commute by Metra?
 - Do you currently hold a parking permit for any lot at any Metra station?
 - Which Metra station do you typically commute from?
 - On most days that you commute, how do you access the train station?
 - What are your primary reasons for wishing to obtain a quarterly permit?
- What is your ZIP code?

The survey results are used in conjunction with historic data to forecast the oversell rate and acceptance rate, as discussed in the following sections, as well as to understand the potential travel mode shift if more commuters are issued quarterly permits.

ASSUMPTIONS

In performing the analysis, several assumptions were applied:

- There will be only one type of quarterly parking permit.

This assumption means that all quarterly permits are equivalent and not indicative of a specific parking lot. For the purposes of the analysis, a commuter who currently holds a Kroehler permit is considered the same as a commuter who currently holds a Burlington permit. Likewise, these current permit holders are considered equivalent to a commuter who would hold a permit for the newly created parking spaces. Therefore, the 289 commuters on the Burlington/Parkview list who hold a Kroehler permit are removed from the analysis, as they are already permit holders.

- The location of the additional permit parking spaces is not a factor.

Since the location of the new permit parking spaces is not defined, and the location of the existing permit parking spaces could potentially change, it would not be valid to consider location in the analysis. With this assumption, the specific location of the additional parking

spaces is not considered as a factor in the analysis. Likewise, the direction of travel is not considered because waitlisted commuters are not issued permits for specific locations.

- Waitlisted commuters are not double counted

Commuters often sign up to be on both the Kroehler and the Burlington/Parkview waitlists. To prevent double counting in this analysis, commuters who are on both waitlists are treated as if they are only on one waitlist.

Typically, commuters sign up for the waitlists on the same date. If a commuter signed up for each waitlist on different dates, the earlier date is the one used in this analysis. For example, a commuter who signed up for the Burlington/Parkview waitlist on 11/1/2005 and the Kroehler waitlist on 4/1/2006 would be converted to a commuter who signed up for a generic permit on 11/1/2005. There are 520 commuters who are on both waitlists.

Based on these assumptions, 1,151 waitlisted commuters will be accounted for in the analysis.

WAITLIST PROJECTION

It would be inaccurate to assume that the acceptance and oversell rates will remain constant for the entirety of the waitlist. As permits are offered to commuters who signed up more recently, it is less likely that a commuter will have experienced a job change or a move, and they will be less likely to reject the offer. The survey results support this. Therefore, the acceptance rate will increase as more new parking spaces are created. For the purposes of the analysis, the minimum acceptance rate for new spaces is assumed to be the historical average of 75%. The maximum acceptance rate is 100%.

Likewise, the oversell rate will not remain constant. The current high oversell rates are reflective of permit holders who do not relinquish their permit when they no longer require it. These former commuters hold on to their permits in anticipation of a future need (e.g. a family member gets a summer internship in Chicago or an occasional excursion downtown, etc.), but do not park in the permit lots on a regular basis. As the waitlist decreases, there will be less incentive for these occasional users to retain their permits. The oversell is also intended to account for permit holders who do not commute by Metra every day. The survey results indicate that a high percentage of waitlisted commuters travel by Metra four or more days per week.

Based on both of these considerations, the oversell rate will decrease as more new spaces are created and permits are offered to commuters further down the waitlist. These commuters signed up more recently, and therefore, have a current need to use the permit. This will result in a larger portion of the issued permits being used on a regular basis. Route 59 permits, which do not require a waitlist, currently have an oversell rate of 19%. For the purposes of this analysis, the minimum oversell rate is assumed to be 19% and the maximum oversell rate is the historical average of 67%.

Additional parking spaces will have a greater impact to the waitlist when the acceptance rate is at its minimum and the oversell rate is at its maximum. Additional parking spaces will have a lesser impact to the waitlist when the acceptance rate is at its maximum and the oversell rate is at its minimum. Using the minimum and maximum rates described above, the following table depicts the impact that additional parking spaces would have on the waitlist length:

Spaces	Waitlist Length (Acceptance=75%, Oversell=67%)	Waitlist Length (Acceptance=100%, Oversell=19%)
100	8.5 years	11.4 years
150	5.8 years	10.1 years
200	4.5 years	8.0 years
250	3.7 years	6.2 years
300	3.0 years	5.5 years
350	2.3 years	4.9 years
400	1.6 years	4.2 years
450	1.1 years	3.9 years
500	0.3 years	3.4 years
550	0 years	3.0 years
600	0 years	2.6 years

TRAVEL MODE SHIFT AND TRAFFIC IMPACT

Creating new parking spaces and issuing new permits to commuters will result in a travel mode shift. The number of commuters being dropped off, taking Pace bus, walking, biking, being a carpool passenger, and traveling by rideshare will decrease when these commuters are issued a parking permit. The number of commuters driving alone will increase. Using the travel mode results from the commuter waitlist survey, if all waitlisted commuters were issued a permit, the mode shift would be as follows:

Travel Mode	Current Share	Mode Shift	Future Share
Drive Alone	48%	+12.8%	61%
Drop-off	19%	-4.1%	15%
Pace Bus	11%	-3.8%	7%
Walk	8%	-0.7%	7%
Bike	5%	-0.8%	4%
Carpool Passenger	3%	-1.9%	1%
Carpool Driver	2%	0.0%	2%
Taxi	1%	0.0%	1%
Ride Share	1%	-0.8%	0%
Other	2%	-0.7%	1%

An increase in commuters driving alone to Naperville station means that there will be an increased volume of vehicles on the roadway network. The majority of waitlisted commuters (66%) already drive alone to Naperville station and park either by daily fee, permit in the Kroehler lot, or nearby private parking. Issuing a permit to these commuters will not have an impact on the roadway network's traffic volumes.

Waitlisted commuters who take Pace bus, are driven in a carpool or rideshare, walk, bike, or use other means to access the station (23%) *will* have an impact on the traffic volumes. These commuters would constitute an additional 331 inbound morning vehicle trips and an additional 331 outbound evening vehicle trips. In addition, a reduction in ridership could compromise the viability of Pace service.

Issuing a permit to the waitlisted commuters who are currently dropped off (11%) will result in a reduction in the overall traffic volume. A commuter who is dropped off has a driver who makes one trip into the station and one trip back out of the station in the morning, and makes one trip into the station and one trip back out of the station in the evening. If this type of commuter is now driving themselves, there will be only one trip into the station in the morning and one trip out of the station in the evening. These commuters' mode shift would result in 158 less outbound morning vehicle trips and 158 less inbound evening vehicle trips.

RECOMMENDATION

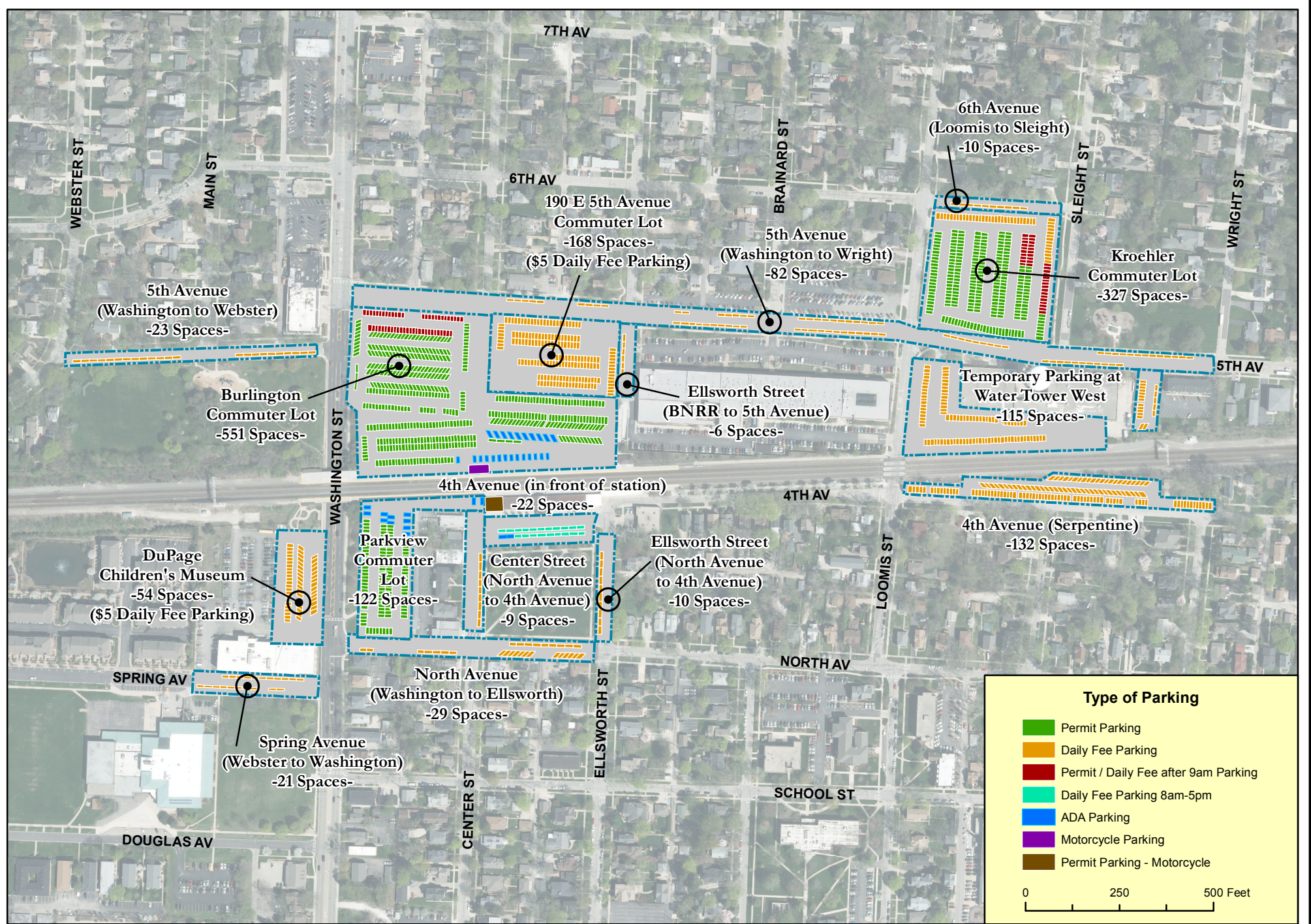
Additional commuter parking at the Naperville Metra Station should result in a significant reduction in the waitlist while minimizing the impact on traffic and the viability of other travel modes, such as Pace. As such, staff recommends that an additional 250 to 400 commuter parking spaces be incorporated into the 5th Avenue concepts. At this level, the waitlist is projected to be reduced to between 1.6 and 6.2 years. A range is provided to allow flexibility in considering the additional parking within the context of the development concepts in terms of location, traffic impacts, building heights, cost and other factors.

Although the analysis is based around the concept of quarterly permits, careful consideration must be given to the management of any additional spaces. Employment and commuting patterns have and will continue to change; therefore, flexibility and the best long-term management approach need to be built into the commuter parking system. Daily fee spaces currently result in maximum usage; however, commuters value the security of a quarterly permit. As the City considers commuter parking long-term, different parking management tools and technology should be evaluated so that available parking efficiently meets commuters' needs.

Weekday Station Boardings Over Time

Exhibit III

Line	Station	Mile Post	Spring 1983	Spring 1985	Fall 1987	Fall 1989	Fall 1991	Fall 1993	Fall 1995	Fall 1997	Fall 1999	Fall 2002	Fall 2006	Spring 2014	Fall 2016
Heritage	Joliet	37.2	106	138	149	192	130	100	139	171	253	313	395	244	209
Heritage	Lockport	32.9	55	67	79	100	92	123	128	182	201	303	552	352	412
Heritage	Lockport/5th	32.1	26	14	17	--	--	--	--	--	--	--	--	--	--
Heritage	Lemont	25.3	130	171	239	239	245	216	247	252	341	407	381	456	489
Heritage	Willow Springs	17.5	84	96	136	142	134	115	82	67	82	142	97	95	115
Heritage	Summit	11.9	44	73	107	109	144	123	74	62	66	79	64	86	100
Heritage	Glenn	10.3	51	72	93	80	--	--	--	--	--	--	--	--	--
Heritage	Brighton Park	5.2	3	--	--	--	--	--	--	--	--	--	--	--	--
Heritage	Halsted	2.6	2	--	--	--	--	--	--	--	--	--	--	--	--
Heritage	Union Station	0.0	499	588	827	858	748	678	631	668	905	1,180	1,421	1,188	1,222
Total Heritage			1,000	1,219	1,647	1,720	1,493	1,355	1,301	1,402	1,848	2,424	2,910	2,421	2,547
BNSF	Aurora	37.5	834	905	985	1,056	1,014	1,033	1,184	1,387	1,467	1,646	2,180	2,107	1,936
BNSF	Route 59	31.6	--	--	--	1,112	1,740	2,011	2,556	3,322	4,178	5,001	5,793	5,874	5,781
BNSF	Naperville	28.5	2,571	3,251	3,791	3,510	3,150	3,196	3,271	3,516	4,040	3,734	4,112	4,002	4,107
BNSF	Lisle	24.5	2,330	2,219	2,150	2,222	2,227	2,280	2,390	2,648	2,576	2,204	2,472	1,993	1,789
BNSF	Belmont	22.6	1,204	1,400	1,460	1,511	1,410	1,392	1,418	1,495	1,515	1,450	1,414	1,325	1,472
BNSF	Downers Grove, Main St.	21.2	1,830	2,051	2,090	2,261	2,044	2,021	2,023	2,205	2,277	2,371	2,328	2,473	2,376
BNSF	Fairview Avenue	20.4	598	635	612	562	537	604	553	572	550	445	403	425	458
BNSF	Westmont	19.5	1,305	1,314	1,268	1,273	1,254	1,275	1,290	1,292	1,282	1,243	1,168	1,070	1,058
BNSF	Clarendon Hills	18.3	1,078	1,032	1,117	1,011	986	990	928	902	957	885	799	808	806
BNSF	West Hinsdale	17.8	338	411	468	439	340	367	409	374	378	317	323	351	376
BNSF	Hinsdale	16.9	1,155	1,196	1,194	1,223	1,113	1,163	1,231	1,215	1,156	1,047	1,065	1,168	1,160
BNSF	Highlands	16.4	210	231	256	202	207	223	269	238	228	213	176	167	203
BNSF	Western Springs	15.5	1,022	1,151	1,121	1,118	1,166	1,151	1,138	1,081	1,179	1,065	1,093	1,113	1,133
BNSF	LaGrange, Stone Ave.	14.2	1,017	985	1,089	1,101	1,171	1,078	1,090	1,153	1,123	999	988	1,026	1,046
BNSF	LaGrange Road	13.8	1,496	1,529	1,567	1,548	1,423	1,360	1,388	1,366	1,496	1,353	1,352	1,468	1,340
BNSF	Congress Park	13.1	129	168	149	116	105	107	113	126	86	118	176	250	290
BNSF	Brookfield	12.3	708	691	705	688	618	635	659	633	648	660	604	607	572
BNSF	Hollywood (Zoo Stop)	11.8	152	147	170	160	116	123	174	133	144	129	133	95	120
BNSF	Riverside	11.1	531	570	510	583	468	490	482	492	466	438	416	501	499
BNSF	Harlem Avenue	10.1	680	718	758	859	768	788	738	676	698	532	530	497	421
BNSF	Berwyn	9.6	852	803	882	867	811	869	921	804	860	844	718	732	632
BNSF	LaVergne	9.1	235	267	346	289	254	276	227	221	229	201	159	191	187
BNSF	Clyde	8.5	131	116	129	128	113	110	89	80	64	71	64	--	--
BNSF	Cicero	7.0	276	232	213	245	182	225	249	208	256	281	246	196	185
BNSF	Western Avenue	3.8	116	115	95	109	77	80	92	94	92	77	110	78	69
BNSF	Halsted Street	1.8	36	52	37	30	34	24	22	21	14	41	70	92	120
BNSF	Union Station	0.0	18,545	20,005	21,361	22,620	21,980	21,995	22,546	24,200	25,355	25,114	26,547	26,077	26,615
Total BNSF			39,379	42,194	44,523	46,843	45,308	45,866	47,450	50,454	53,314	52,479	55,439	54,686	54,751



Type of Parking

- Permit Parking
- Daily Fee Parking
- Permit / Daily Fee after 9am Parking
- Daily Fee Parking 8am-5pm
- ADA Parking
- Motorcycle Parking
- Permit Parking - Motorcycle

0 250 500 Feet



Transportation, Engineering and
Development Business Group
Questions Contact (630) 420-6100
www.naperville.il.us
May 2017

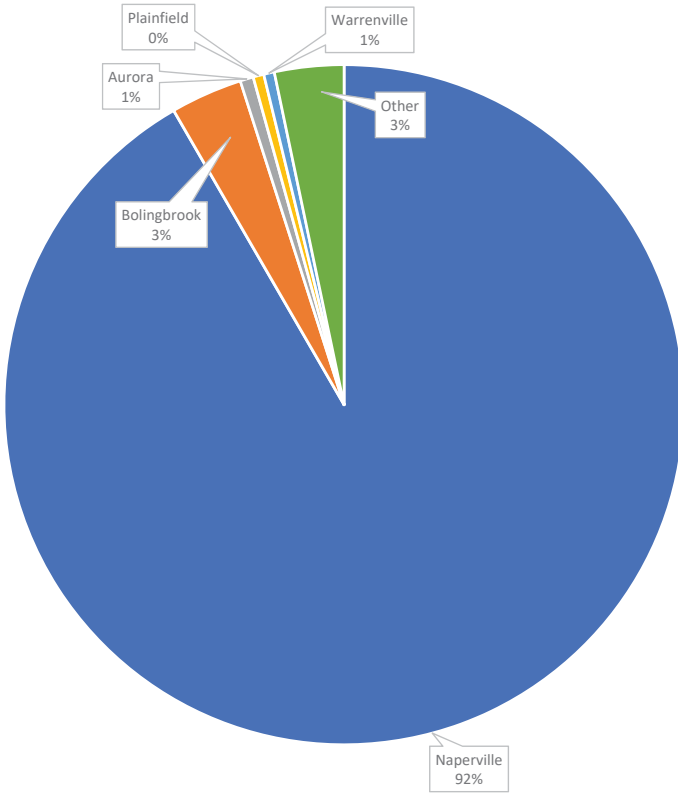
City of Naperville Naperville Metra Station Parking Locations

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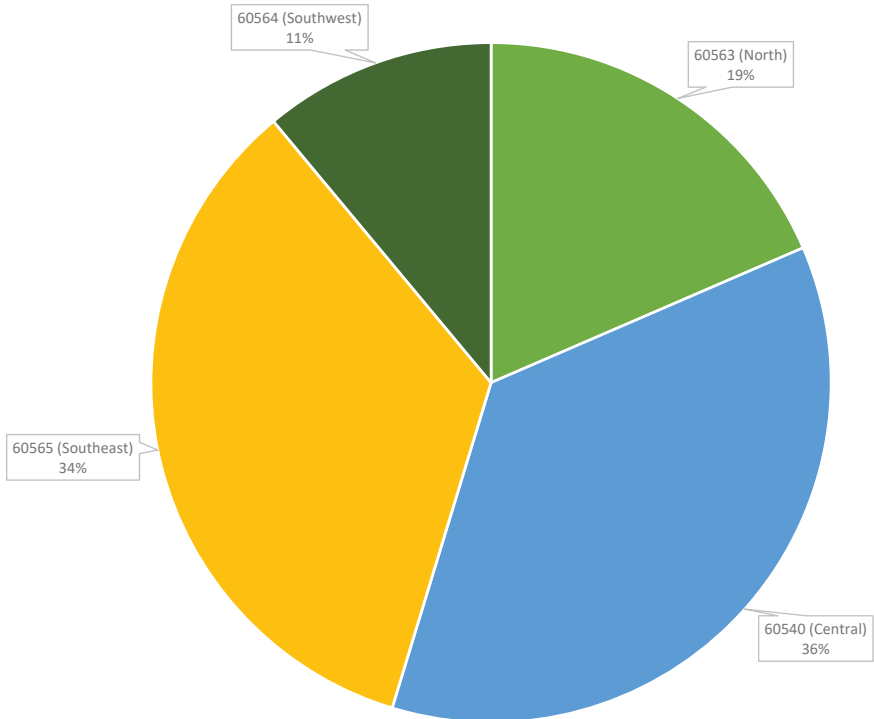


Commuter Waitlist Survey Results

Commuter waitlist - Residency

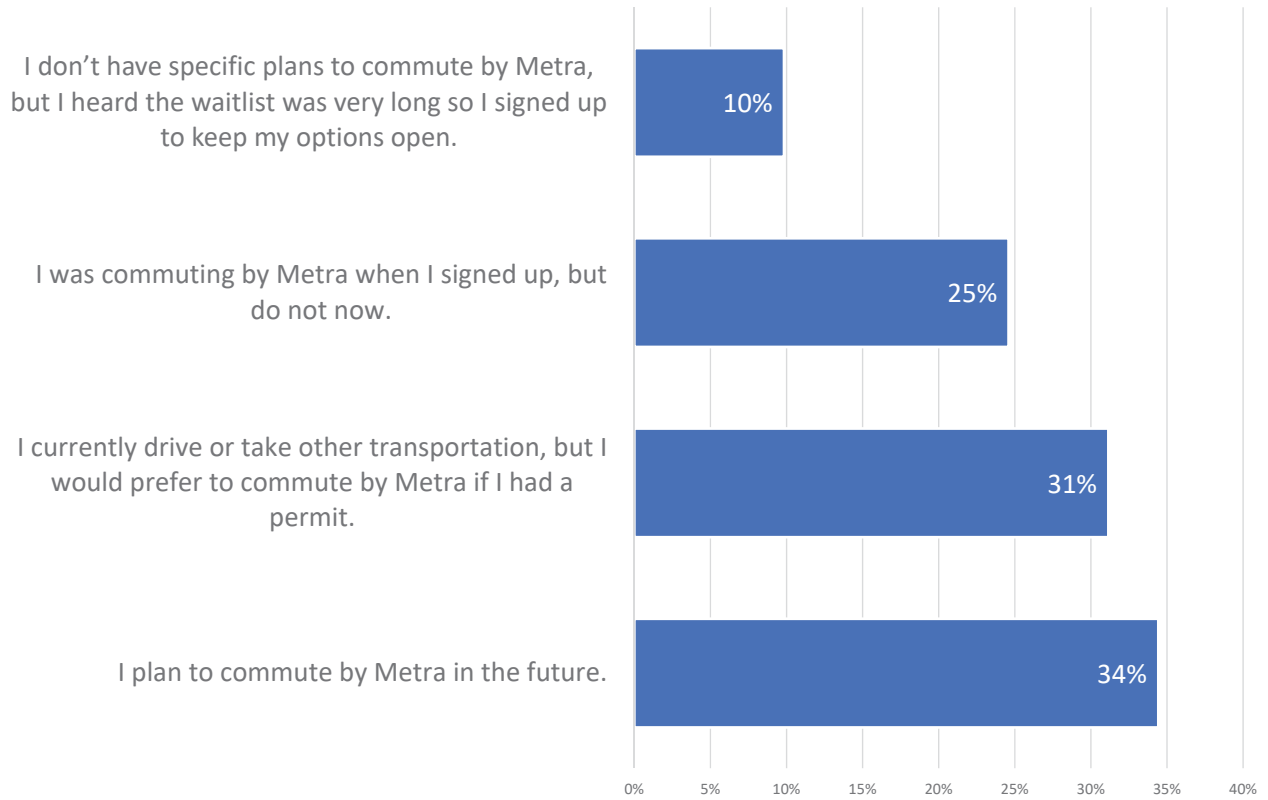


Commuter waitlist - Naperville residency

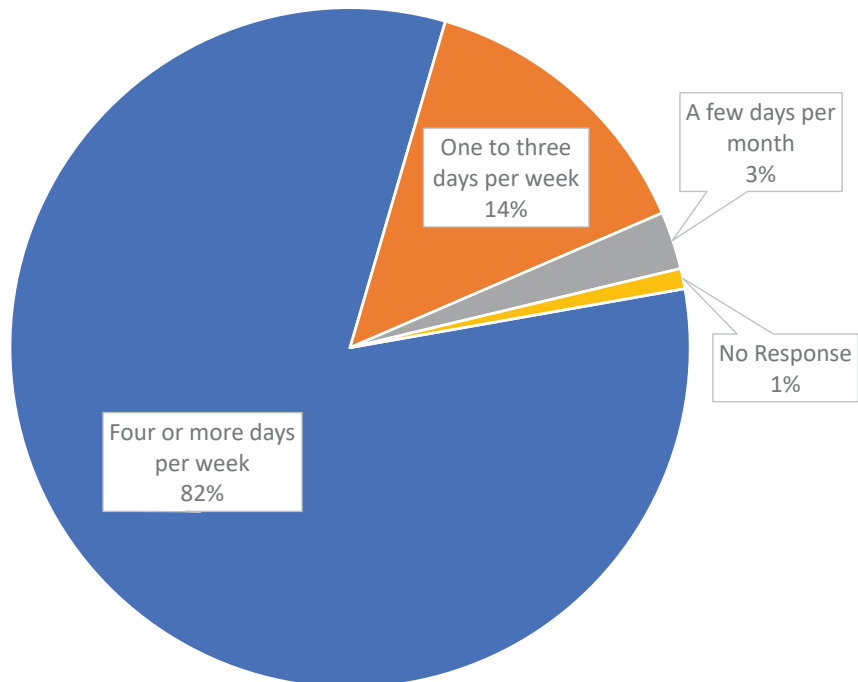


Commuter Waitlist Survey Results

Non-Metra commuters - Reason to be on waitlist

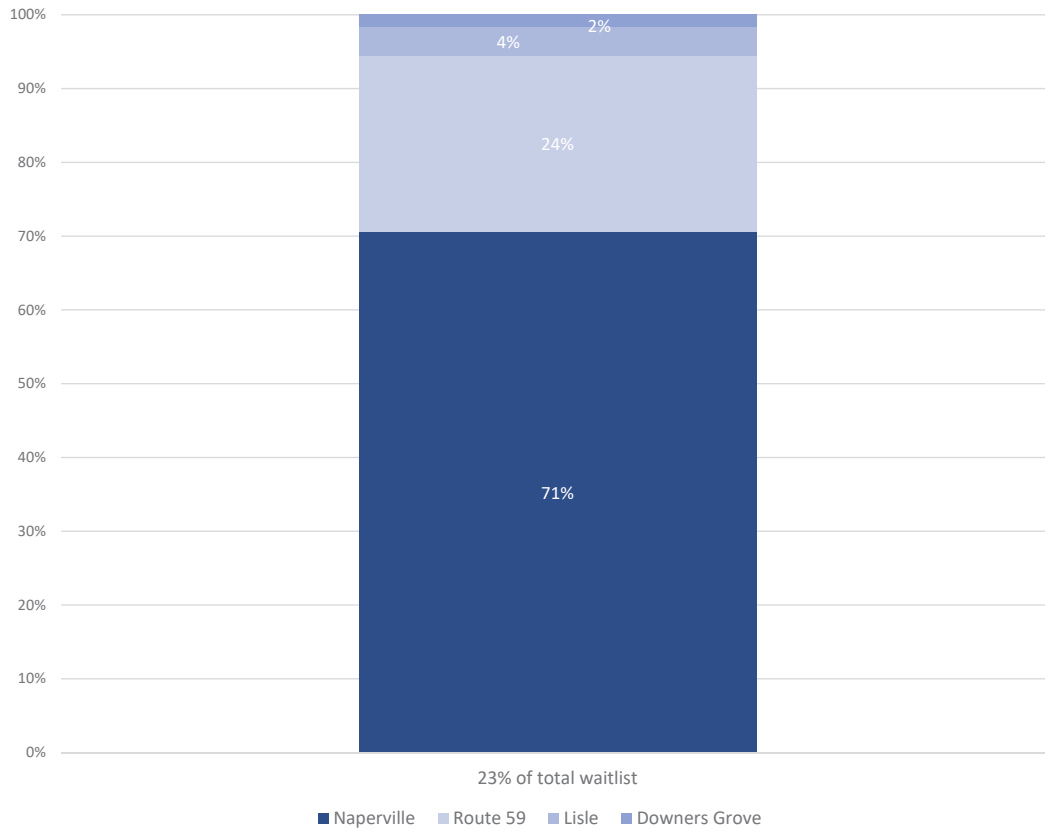


How often waitlisted commuters travel by Metra

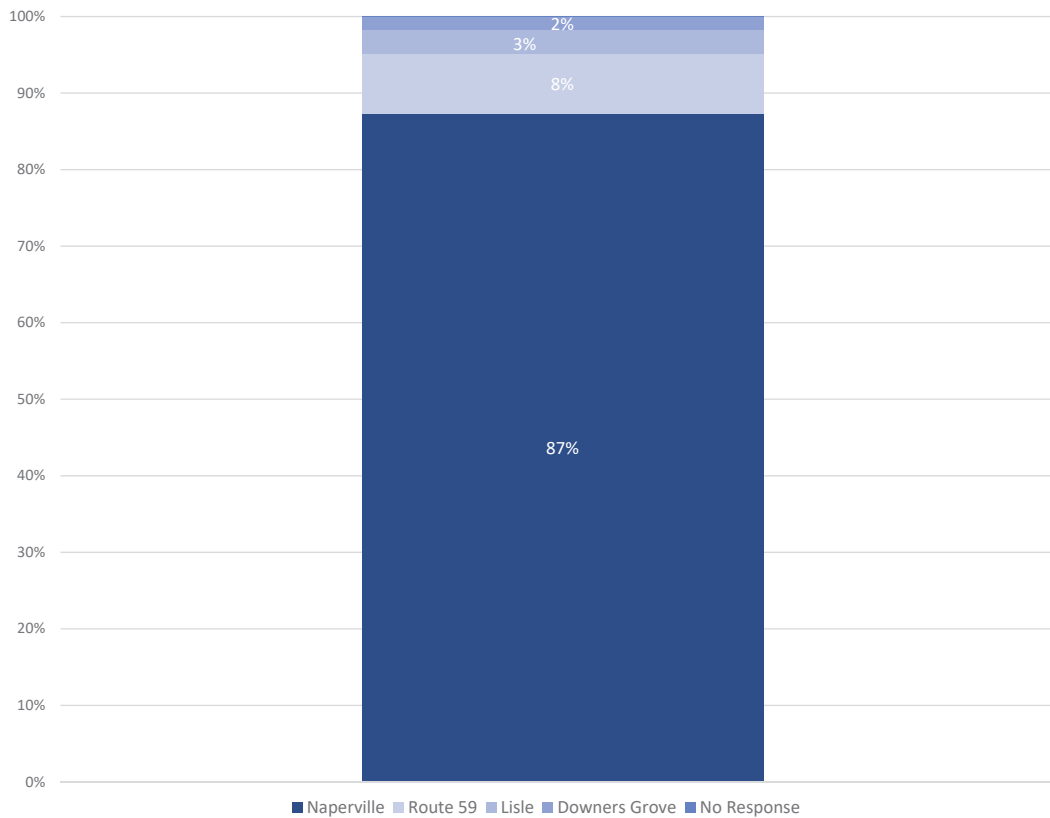


Commuter Waitlist Survey Results

Stations at which waitlisted commuters currently hold permits

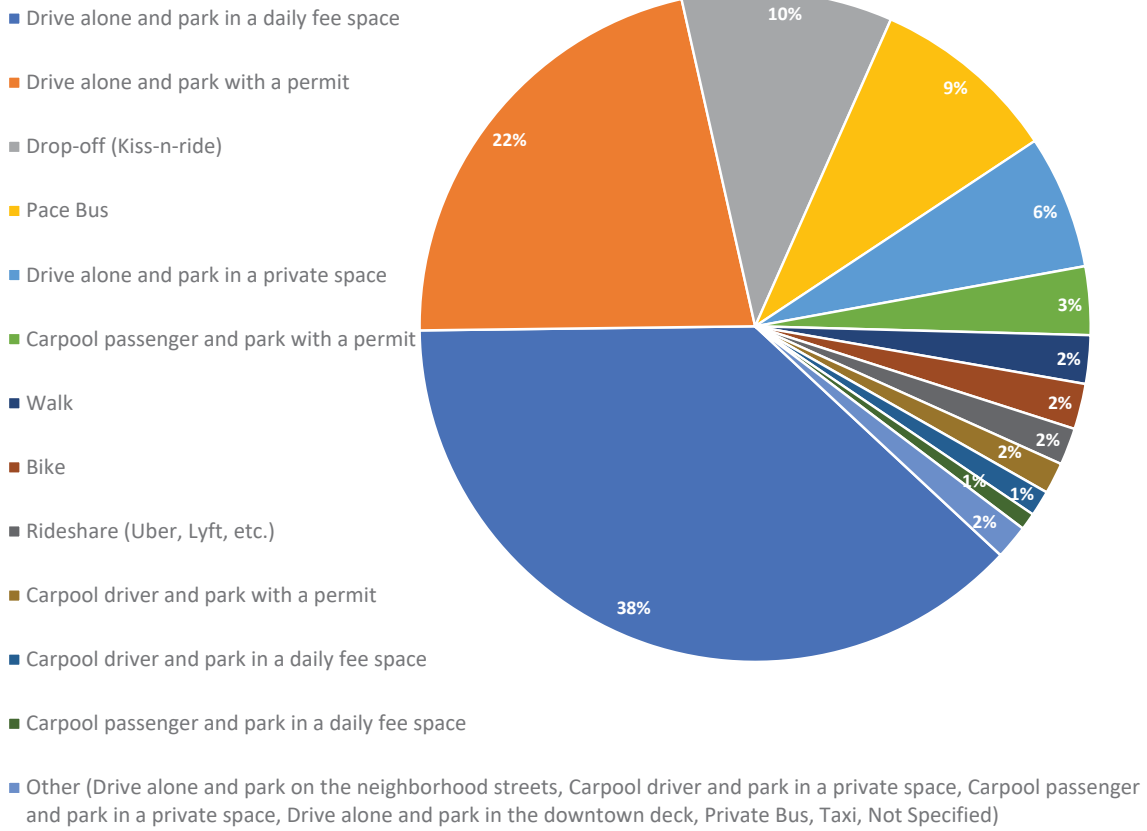


Stations at which waitlisted commuters currently commute from

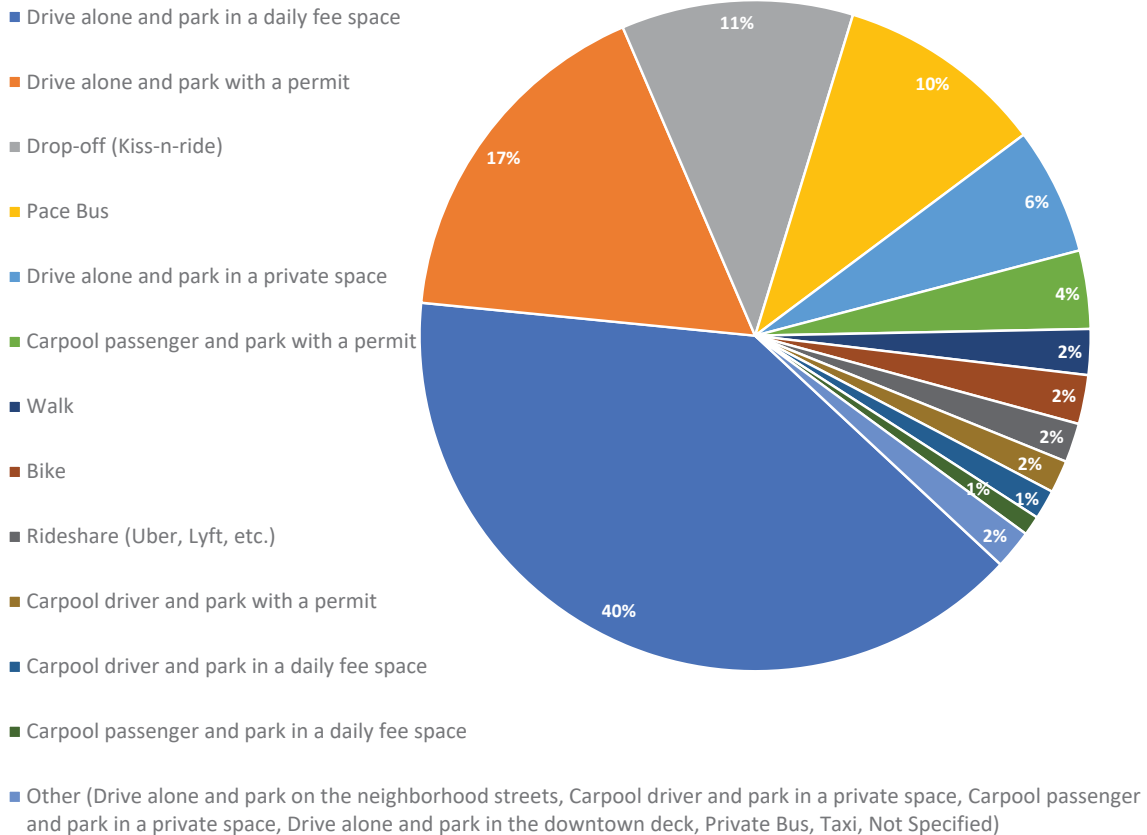


Commuter Waitlist Survey Results

How waitlisted commuters access the train station (any Metra station)



How waitlisted commuters access Naperville Station



Commuter Waitlist Survey Results

Primary reasons for wishing to obtain a quarterly permit

