



RTA/Pace I-294 Tri-State Market & Facilities Feasibility Study

Transit Service Existing Conditions Report

Regional Transportation Authority and Pace Suburban Bus



October 2020 (rev 06/2021)

Prepared for:

Regional Transportation Authority and Pace Suburban Bus

Prepared by:

AECOM
303 East Wacker Drive, Suite 1400
Chicago, IL 60601
aecom.com

Prepared in association with:

Connetics Transportation Group, Inc.

Table of Contents

1.	Study Background and Purpose	1
1.1	Study Area	1
1.2	Task Overview	3
2.	Summary of Relevant Plans, Studies, and Projects	4
3.	Existing Transit Services	6
3.1	Pace	6
3.2	Metra	21
3.3	Chicago Transit Authority	22
4.	Evaluation of Select Pace Routes	25
4.1	Service Characteristics of Select Routes	25
4.2	Stop Level Ridership Analysis	28
4.3	Load Analysis.....	33
4.4	On Time Performance	37
4.5	Findings.....	41
	Appendix A Midday and Evening Load Analysis Maps	A.1

Figures

Figure 1-1.	Pace I-294 Market and Facilities Feasibility Study Area.....	2
Figure 3-1.	Pace Routes in North Section of the Study Area.....	10
Figure 3-2.	Pace Routes in South Section of the Study Area	11
Figure 3-3.	Pace Ridership – AM Boardings.....	12
Figure 3-4.	Pace Ridership – AM Alightings.....	13
Figure 3-5.	Tollway-Based Pace Routes in the Study Area	15
Figure 3-6.	Planned Pulse Routes within the Study Area	17
Figure 3-7.	Passenger Facilities within the Study Area	18
Figure 3-8.	Near-Term Pulse Routes, Pace Express Routes, Passenger Facilities	20
Figure 4-1.	Select Pace Routes in the I-294 Corridor	26
Figure 4-2.	AM and PM Peak Weekday Stop Level Activity (Boardings and Alightings).....	31
Figure 4-3.	Midday and Evening Weekday Stop Level Activity (Boardings and Alightings)	32
Figure 4-4.	AM Peak Weekday Load Analysis	35
Figure 4-5.	PM Peak Weekday Load Analysis.....	36
Figure 4-6.	AM Peak Weekday On Time Performance.....	39
Figure 4-7.	PM Peak Weekday On Time Performance	40
Figure A-1.	Midday Weekday Load Analysis.....	A.2
Figure A-2.	Evening Weekday Load Analysis	A.3

Tables

Table 3-1. Study Area Pace Routes by Service Category	6
Table 3-2. Service Characteristics of Pace Primary Routes	7
Table 3-3. Service Characteristics of Pace Secondary Routes.....	7
Table 3-4. Service Characteristics of Pace Connector Routes	7
Table 3-5. Service Characteristics of Pace Express Routes.....	8
Table 3-6. Service Characteristics of Pace Commute Shuttle Routes	8
Table 3-7. Service Characteristics of Pace Seasonal Routes.....	8
Table 3-8. Service Characteristics of Pace On Demand Services	9
Table 3-9. Tollway-Based Pace Routes in the Study Area.....	14
Table 3-10. Passenger Facilities within the Study Area.....	19
Table 3-11. Service Characteristics of Metra Lines	21
Table 3-12. Locations Where Freeways and Metra Lines Intersect	22
Table 3-13. CTA Stations Served by Pace Routes.....	23
Table 4-1. Service Characteristics of Select Pace Routes.....	27
Table 4-2. Average Weekday Route Statistics	29
Table 4-3. Route Productivity by Passengers per Revenue Mile and by Revenue Hour	30
Table 4-4. Average Late Percentage by Direction and Time Period.....	38

Abbreviations

APC	Automated Passenger Counter
BRT	Bus Rapid Transit
CMAA	Chicago Metropolitan Agency for Planning
CTA	Chicago Transit Authority
Illinois Tollway	Illinois State Toll Highway Authority
MMF	O'Hare Multi-Modal Facility
OTP	On Time Performance
RTA	Regional Transportation Authority
STAR	Suburban Transit Access Route

1. Study Background and Purpose

The Regional Transportation Authority (RTA) / Pace Bus I-294 Tri-State Market & Facilities Feasibility Study (Study) identified and evaluated ways that Pace buses can capitalize on roadway improvements being constructed by the Illinois State Toll Highway Authority (Illinois Tollway) on portions of the I-294 Tri-State Tollway.

The Tri-State Tollway is a north-south roadway in the Chicago region, providing access to major employment centers and O'Hare International Airport. In 2016, Illinois Tollway initiated its Central Tri-State (I-294) Project, which includes the 22-mile segment between Balmoral Avenue and 95th Street ([Central Tri-State Project](#)). This segment carries the heaviest volume of passenger and freight traffic and has twice the amount of congestion delays compared to the entire Tollway system. The Central Tri-State Project will incorporate a number of innovations, including Flex Lanes, which will be available to Pace buses to avoid congestion. Flex Lanes are the left inside shoulder of the roadway; Pace buses are directed to the Lane by the Illinois Tollway's traffic operations center. Pace has identified I-294 as a critical corridor because of its place as a primary travel corridor and the opportunity that Flex Lanes present.

From this study, the agencies identified and evaluated several options that will allow Pace buses to benefit from the Central Tri-State improvements. Pace bus use of the Flex Lanes when traffic is congested will help make service in this corridor a competitive and affordable alternative to driving.

Recommendations from this study include:

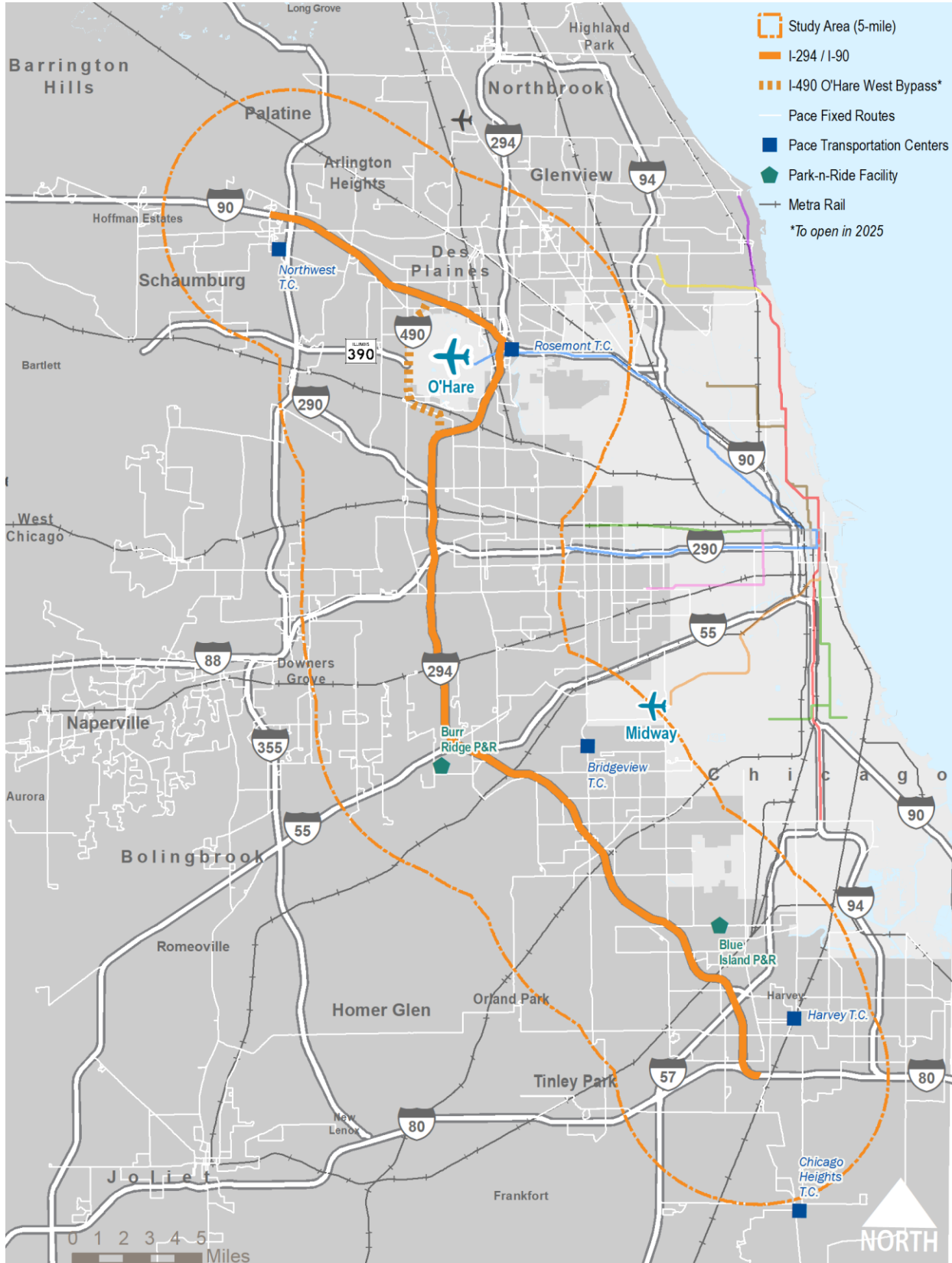
- Pace Express bus service concepts that primarily operate along the I-294 Tri-State Tollway
- Stations, roadways, and other infrastructure needed to support proposed bus services and provide improvements in passenger comfort, bus speeds, travel times, and access to jobs and other transit connections.
- A plan for implementing proposed bus services and associated support infrastructure

These recommendations were derived from a robust market analysis of existing and predicted travel patterns in the study area, computer modeling of concepts, and engineering assessments of potential site locations. Pace and RTA also coordinated with the Tollway throughout the study's development.

1.1 Study Area

As shown in Figure 1-1, the study area covered a 5-mile radius centered along the 48-mile I-294/I-90 corridor between Harvey and Schaumburg. The roadway study alignment also included I-490, which by 2025 will connect the I-90 Jane Addams Memorial Tollway, the IL-390 Elgin-O'Hare expressway, and the I-294 Tri-State Tollway along the west side of O'Hare Airport.

Figure 1-1. Pace I-294 Market and Facilities Feasibility Study Area



1.2 Task Overview

The Study involved the five tasks listed below, including the relevant sub-tasks for Tasks 1 and 2.

Task 1: Existing Conditions and Travel Market

- 1.1 Transit Service
- 1.2 Traffic Conditions
- 1.3 Market Analysis

Task 2: Conceptual Service Design and Infrastructure

- 2.1 Service Plans
- 2.2 Generic Infrastructure Concepts
- 2.3 Station Concepts & Capital Costs

Task 3: Implementation Plan

Task 4: Public Outreach and Marketing

Task 5: Summary Report

Task 1 (Existing Conditions and Travel Market) documented current and future demand and transit service in the Study Area. This information provided the foundation to formulate service and infrastructure recommendations in later tasks by understanding current travel markets – both transit and non-transit flows – in the I-294 corridor. This Task 1.1 Technical Memorandum documented existing transit services in the Study Area. Sections include:

- Review of relevant plans, studies, and projects,
- Existing transit services in the Study Area, and
- Evaluation of select Pace routes relevant to the Study.

2. Summary of Relevant Plans, Studies, and Projects

This Section includes a high-level review of the most relevant related plans, studies, and projects and is intended as background research that the Study can build upon.

Vision 2020: The Blueprint for the Future (2001) | Pace's existing strategic plan laid out a suburban mobility network envisioned for 2020 that included a network of rapid transit corridors, including arterial and express bus services and the development of community-based services, line-haul routes, and transportation centers and other passenger facilities, and new vehicle technologies.

Driving Innovation: The Pace Strategic Vision Plan (2021) | This forthcoming plan will succeed Vision 2020. It lays out an updated set of goals and objectives, along with dozens of major initiatives organized by programs, policies, and frameworks; service and infrastructure; and, technology and insight. Pace plans to release *Driving Innovation* in 2021.

Pace Transit Supportive Guidelines (2013) | An update to the 1999 Guidelines, the current Guidelines present principles and standards for use by various audiences (e.g., municipalities, designers, engineers, developers) to collectively take actions to shape the built environment to remove barriers to transit and foster reliable, efficient, convenient, and accessible transit in communities throughout the Chicago region that are served by Pace.

Pace Pulse (current) | The Pulse network is Pace's plan for a 24-line rapid transit network to enhance mobility and suburb-to-suburb travel options. Of the seven (7) near-term priority corridors, the Pulse Milwaukee Line is currently operational while the other corridors are currently in various stages of development: Dempster Street (in design), Halsted Street (under environmental review), and 95th Street (project definition complete). The forthcoming *Driving Innovation* plan will include an updated corridor development strategy that will be used to guide future investment and development of Pace's Pulse program.

Pace Illinois Route 390 Tollway Corridor Service Study (2017) | The Study focused opportunities for Pace to expand its services in response to the new Elgin O'Hare Western Access Project. Fourteen (14) potential transit corridors in the IL 390 Study Area were identified, seven (7) of which were previously identified for Pace Pulse service. The Study also identified four (4) transit hubs and Park-n-Ride facilities (Thorndale Transit Hub, Hamilton Lakes Transit Hub, Roselle Park-n-Ride, and Hanover Park Transit Hub) to support future transit service along the Tollway and provide connections to existing and future routes.

Pace & Illinois Tollway TIGER Grant Proposal: I-294 Express Bus Service (2009) | Together Pace and the Illinois Tollway applied for TIGER discretionary grant funding for the project. Service was proposed for weekdays (Monday through Friday) from 4 a.m. to midnight (except major holidays) and would operate bi-directionally from early morning to late evening with peak rush hour service frequencies no greater than twelve minutes and non-peak service frequencies no greater than sixty minutes. The alignment sought to leverage existing transit and park-n-ride facilities (Lincoln Oasis, Homewood Park-N-Ride, Harvey Transportation Center, Blue Island Park-n-Ride, O'Hare Oasis, and CTA Blue Line Rosemont Station) with new stations located near the I-294 interchanges at 159th Street (U.S. 6), 127th Street/Cicero Ave. (IL 50), 95th Street (U.S. 12/20), 75th Street, Ogden Avenue (U.S. 34) and I-88/Cermak Avenue. Modifying Tollway oasis rest stops to also serve as Park-N-Ride lots for the express bus.

Cook County Department of Transportation and Highways South Cook Mobility Study (2019) | This transit market assessment focused on South Cook County and tested various

scenarios, including one to add I-294 Flex Lane express bus service, to understand the impact of potential service, policy changes, and/or major capital investments.

Illinois Tollway Jane Addams Memorial Tollway (I-90) SmartRoad (current) | Over-the-road electronic messaging signs installed every half mile between Barrington Road and the Kennedy Expressway on I-90 allow the Tollway to communicate travel times, traffic incident information, lane closures and traffic pattern changes. The project includes an in-line I-90/Barrington Road Station so that buses traveling in both directions do not have to exit to pick up/drop off passengers. In addition, Pace buses are authorized to travel in the I-90 Flex Lanes during congestion.

CMAP ON TO 2050 Regional Comprehensive Plan (2018) | ON TO 2050 builds on CMAP's first comprehensive regional plan, GO TO 2040, to guide transportation investments and frame regional priorities on development, the environment, the economy, and other issues affecting quality of life. Relevant fiscally constrained projects identified in ON TO 2050 are:

- Pace Pulse near-term corridors: Dempster Street, Halsted Street, 95th Street, Cermak Road, Harlem Avenue, and Roosevelt Road.
- CTA South Halsted BRT
- Metra BNSF Improvements
- Metra Milwaukee District West Improvements
- Metra UP West Improvements
- Metra Rock Island Improvements
- Metra SouthWest Service Enhancements
- Illinois Tollway Elgin O'Hare Western Access
- Illinois Tollway I-294 Central Tri-State Reconstruction and Mobility Improvements, including I-294/I-290 Interchange Improvement
- Illinois Tollway I-294/I-57 Interchange Addition
- IDOT I-55 Stevenson Managed Lanes

3. Existing Transit Services

The Study Area is served with a number of transit services operated by Pace, CTA, and Metra. Summary descriptions for each of these providers and high-level statistics related to their existing service follow.

COVID-19 Note: It is a challenging time for the transit industry. The coronavirus pandemic has created many uncertainties and has significantly impacted current and near-term ridership. Pace, CTA, and Metra have all had to alter their service plans in light of COVID-19. To what degree service levels will be restored as well as longer-term ridership impacts created by this pandemic are unknown at this time. As a result, ridership data from 2019, which reflect pre-pandemic service levels, are referenced herein.

3.1 Pace

Pace provides bus-based service in six suburban counties surrounding the City of Chicago including, suburban Cook, DuPage, Kane, Lake, McHenry, and Will counties. In addition to fixed-route bus service, Pace offers a family of public transportation options, including demand response service, vanpool, and rideshare. The agency is also the region’s ADA paratransit provider in the 6 suburban counties and the City of Chicago. For the purposes of this report, the services documented herein are primarily fixed route in nature.

Pace operates a fixed-route bus service network of approximately 200 routes that use set schedules and routings. In addition, Pace's On Demand services provide demand-response transportation in eleven designated service areas throughout the region to the general public.

Within a 1/2 mile radius of the I-294/I-90 Study Area, Pace operates 53 regularly scheduled routes, and an additional 10 special-event, seasonal routes serving sports, entertainment, and recreational attractions. These routes reflect various service categories, with the majority of routes serving the Study Area categorized as Express Routes followed by Primary Routes as shown in Table 3-1.

Table 3-1. Study Area Pace Routes by Service Category

Pace Service Category	Number of Routes	Percent
Primary Route	16	25%
Secondary Route	7	11%
Connector Route	7	11%
Express Route	19	30%
Commute Shuttle	3	5%
Seasonal ^a	10	16%
On Demand ^a	1	2%
TOTAL	63	100%

^a Service is not identified in the DRAFT Service Standards Scenario Testing Technical Memorandum (October 2019), but operates in the Study Area.

Service characteristics for these routes are organized by service category and are shown in Table 3-2 (Primary), Table 3-3 (Secondary), Table 3-4 (Connector), Table 3-5 (Express), Table 3-6 (Commute Shuttle), Table 3-7 (Seasonal), and Table 3-8 (On Demand). Routes that operate on the Tollway roadway are also noted.

Table 3-2. Service Characteristics of Pace Primary Routes

#	Route	Tollway	Weekday Service	Weekend Service	Q4 2019 Ridership ^a
208	Golf Road	-	Full	Sa, Su	1,819
223	Elk Grove-Rosemont CTA Station	-	Full	Sa, Su	1,601
250	Dempster Street	-	Full	Sa, Su	2,538
301	Roosevelt Road	-	Full	Sa, Su	1,576
309	Lake Street	-	Full	Sa, Su	694
313	St. Charles Road	-	Full	Sa, Su	945
318	West North Avenue	-	Full	Sa, Su	2,708
322	Cermak Road - 22nd Street	-	Full	Sa, Su	2,126
330	Mannheim - LaGrange Roads	-	Full	Sa, Su	1,267
359	Robbins / South Kedzie Avenue	-	Full	Sa, Su	1,130
364	159th Street	-	Full	Sa, Su	1,753
379	Midway - Orland Park	-	Full	Sa, Su	1,572
381	95th Street	-	Full	Sa, Su	2,687
383	South Cicero	-	Full	Sa, Su	1,149
386	South Harlem	-	Full	Sa, Su	1,188
606	Rosemont - Schaumburg Limited	I-90	Full	Sa, Su	1,399

^a Average Weekday; Source: Pace.

Table 3-3. Service Characteristics of Pace Secondary Routes

#	Route	Tollway	Weekday Service	Weekend Service	Q4 2019 Ridership ^a
221	Wolf Road	-	Full	-	577
226	Oakton Street	-	Full	-	657
303	Forest Park - Rosemont	-	Full	Sa, Su	1,064
319	Grand Avenue	-	Full	Sa	396
354	Harvey - Oak Forest Loop	-	Full	Sa	377
356	Harvey - Homewood - Tinley Park	-	Full	Sa, Su	400
384	Narragansett - Ridgeland	-	Full	Sa, Su	540

^a Average Weekday; Source: Pace.

Table 3-4. Service Characteristics of Pace Connector Routes

#	Route	Tollway	Weekday Service	Weekend Service	Q4 2019 Ridership ^a
230	South Des Plaines	-	Full	-	342
332	River Road - York Road	-	Full	Sa, Su	487
385	87th-111th-127th	-	Full	-	852
604	Wheeling - Schaumburg	-	Full	Sa	151
696	Randhurst/Woodfield/Harper College	-	Full	-	257
811	Rosemont Entertainment Circulator	-	Full	Sa, Su	941
905	Schaumburg Free Woodfield Trolley	-	^b	Sa, Su	48

^a Average Weekday; Source: Pace.

^b Mon-Fri Summer and Christmas, Fridays only at other times.

Table 3-5. Service Characteristics of Pace Express Routes

#	Route	Tollway	Weekday Service	Weekend Service	Q4 2019 Ridership ^a
361	Harvey-Laraway Crossings Express	-	Peak	Sa, Su	97
390	Midway CTA - UPS Hodgkins Limited	-	Peak	-	188
392	Green Line Cicero CTA – UPS Hodgkins Limited	-	Peak	-	75
395	95th/Dan Ryan CTA-UPS Hodgkins Limited	I-294	Peak	-	334
600	Rosemont - Schaumburg Express	I-90	Full	Sa	771
603	Elgin Transp. Center – Rosemont Express	I-90	Full	Sa	306
605	I-90/Randall Rd. Station – Rosemont Express	I-90	Full	Sa	334
607	I-90/Randall Rd. – Schaumburg Express	I-90	Full	Sa	59
610	Rosemont - Prairie Stone Express	I-90	Peak	-	216
616	Rosemont - Itasca Limited	I-90	Peak	-	141
755	Plainfield - IMD - West Loop Express	-	Peak	-	791
757	Oak Park-Schaumburg Limited	-	Peak	-	155
850	North Bolingbrook-East Loop Express	-	Peak	-	761
851	South Bolingbrook-East Loop Express	-	Peak	-	302
855	Plainfield-East Loop Express	-	Peak	-	590
877	Harvey - Downers Grove Limited	I-294	Peak	-	82
888	Homewood - Naperville Limited	I-294	Peak	-	45
890	Chicago Heights - UPS Hodgkins Limited	I-294	Peak	-	135
895	95th St. - Rosemont – Schaumburg	I-90, I-294	Peak	-	85

^a Average Weekday; Source: Pace.

Table 3-6. Service Characteristics of Pace Commute Shuttle Routes

#	Route	Tollway	Weekday Service	Weekend Service	Q4 2019 Ridership ^a
668	Burr Ridge-Hinsdale	-	Peak	-	25
669	Western Springs-Indian Head Park	-	Peak	-	22
754	Lewis Univ-CTA Blue Line Clinton	-	Peak	-	5

^a Average Weekday; Source: Pace.

Table 3-7. Service Characteristics of Pace Seasonal Routes

#	Route	Tollway	Weekday Service	Weekend Service	Q4 2019 Ridership
237	Elk Grove - Soldier Field Express	I-90	Game day		n/a
282	Rolling Meadows - Wrigley Field Express	I-90	Game day		n/a
284	Schaumburg – Rosemont - Great America Express	I-90 & I-294	Summer: Fri-Sa Fright Fest: Sa-Su		n/a
768	Bolingbrook/Burr Ridge - Soldier Field Express	-	Game day		n/a
769	Palos Heights/Oak Lawn - Soldier Field Express	-	Game day		n/a
773	Markham/Tinley Park - Guaranteed Rate Field Express	-	Game day		n/a
774	Palos Heights/Oak Lawn - Guaranteed Rate Field Express	-	Game day		n/a
775	Bolingbrook/Burr Ridge - Guaranteed Rate Field Express	-	Game day		n/a
776	Hillside – Pace Park-n-Ride Soldier Field Express	-	Game day		n/a
779	Hillside - Wrigley Field Express	-	Game day		n/a

Source: Pace.

Table 3-8. Service Characteristics of Pace On Demand Services

#	Route	Tollway	Weekday Service	Weekend Service	Q4 2019 Ridership ^a
594	Arlington Heights - Rolling Meadows On Demand	-	Full	-	31

^a Average Weekday; Source Pace.

Routes on the northern end of the Study Area are identified in the map on Figure 3-1 and those on the southern end in Figure 3-2.

Figure 3-1. Pace Routes in North Section of the Study Area

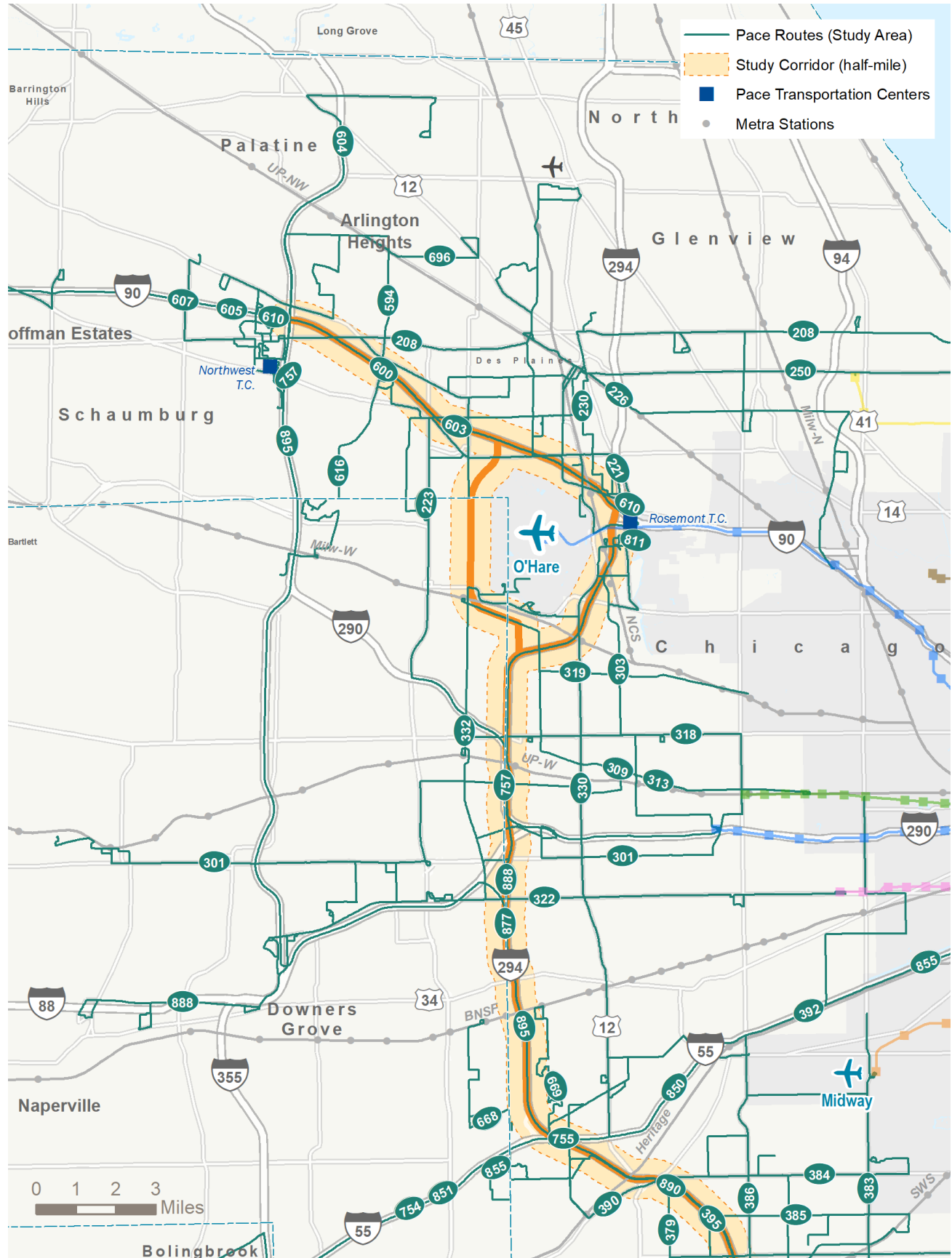
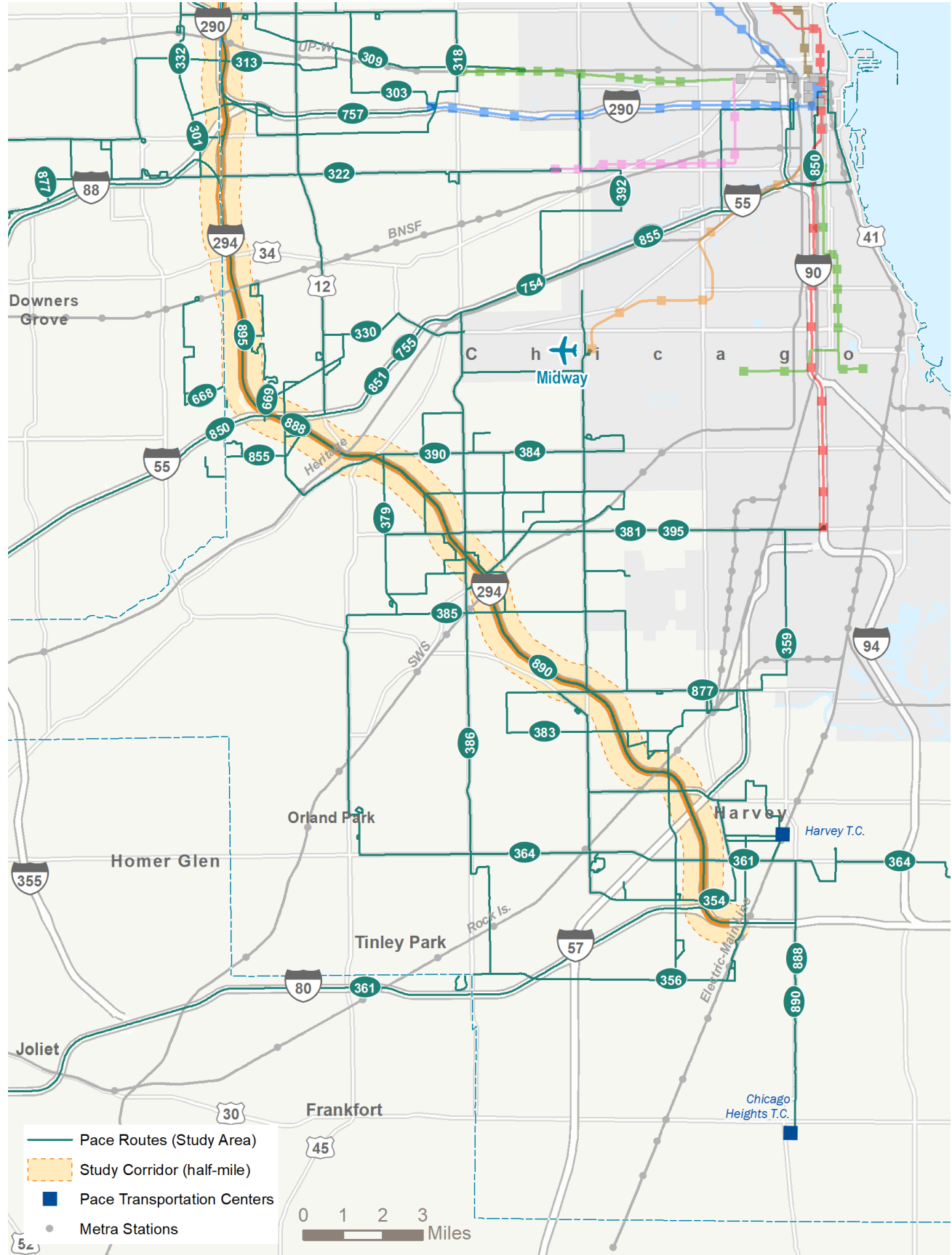
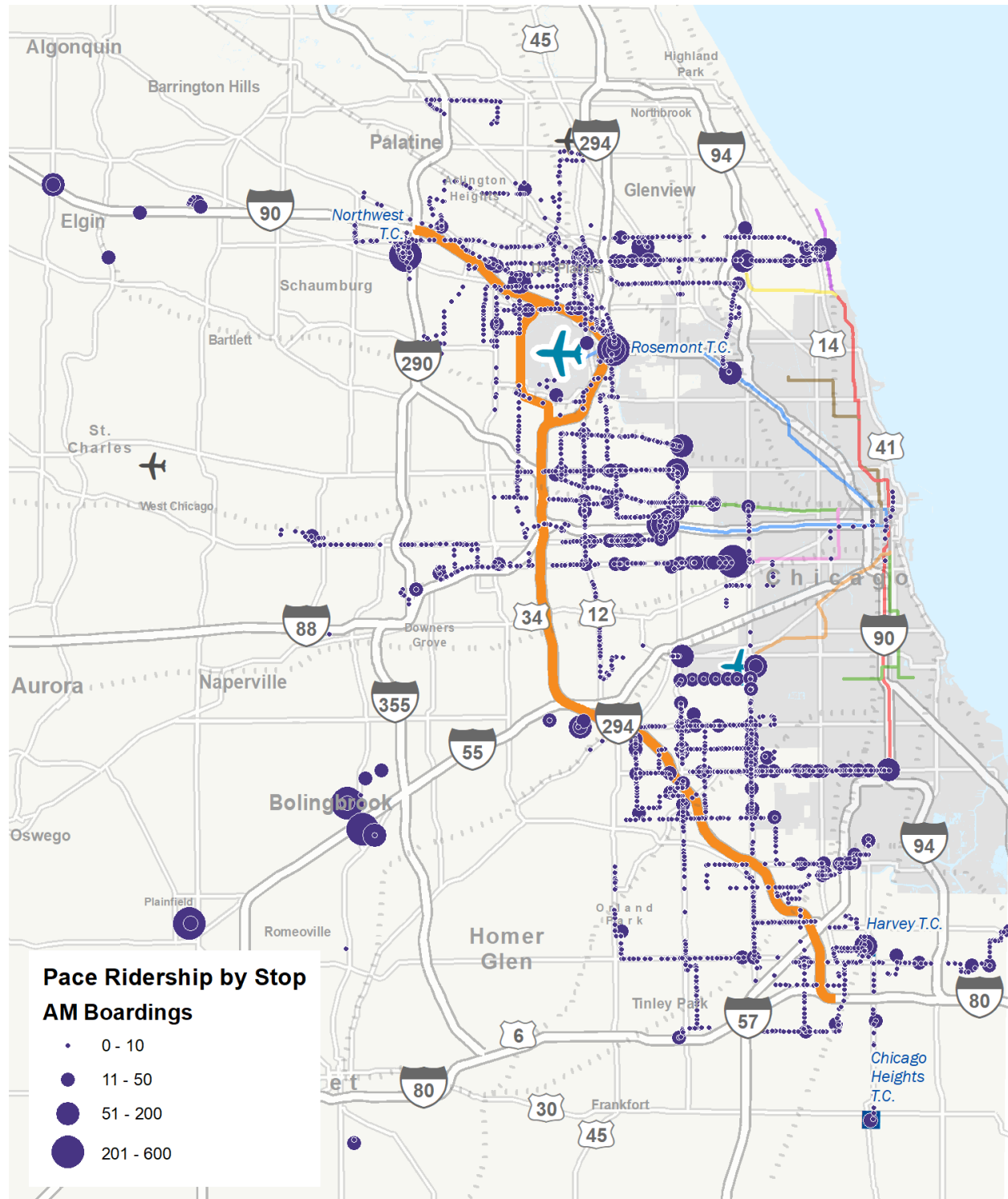


Figure 3-2. Pace Routes in South Section of the Study Area



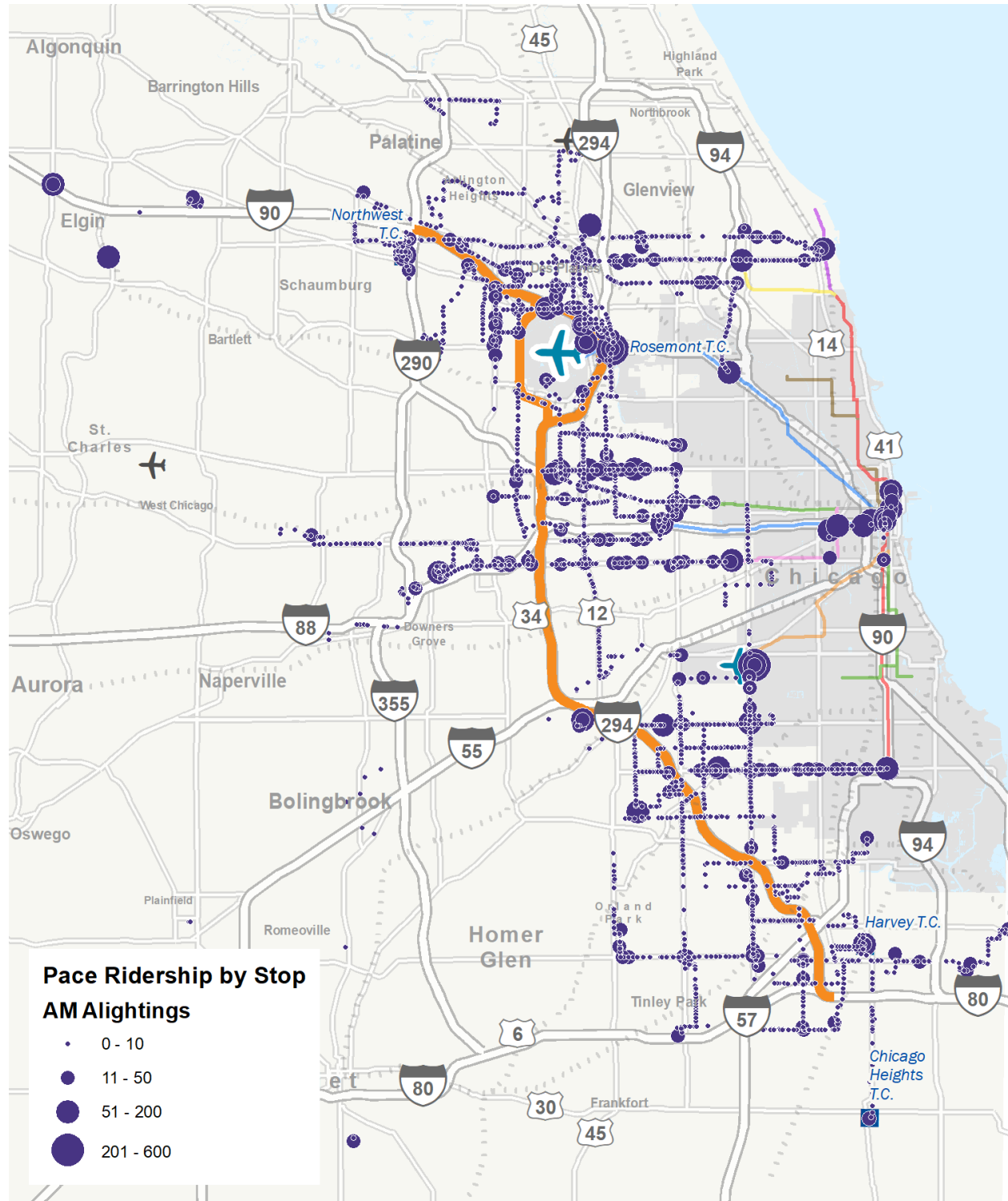
To broadly visualize the current markets served and demand in the Study Area, AM ridership by boarding and alighting location for the routes described above are shown in Figure 3-3 and Figure 3-4, respectively. AM boardings are generally associated with residential origins and alightings with destinations, which are typically work locations. Passenger counts were assembled for bus trips beginning from start of service until trips that began before 10:00 AM. (Note: PM ridership is assumed to be the mirror of the AM patterns and is therefore not shown.)

Figure 3-3. Pace Ridership – AM Boardings



Data source: Pace APC (Fall 2019).

Figure 3-4. Pace Ridership – AM Alightings



Data source: Pace APC (Fall 2019).

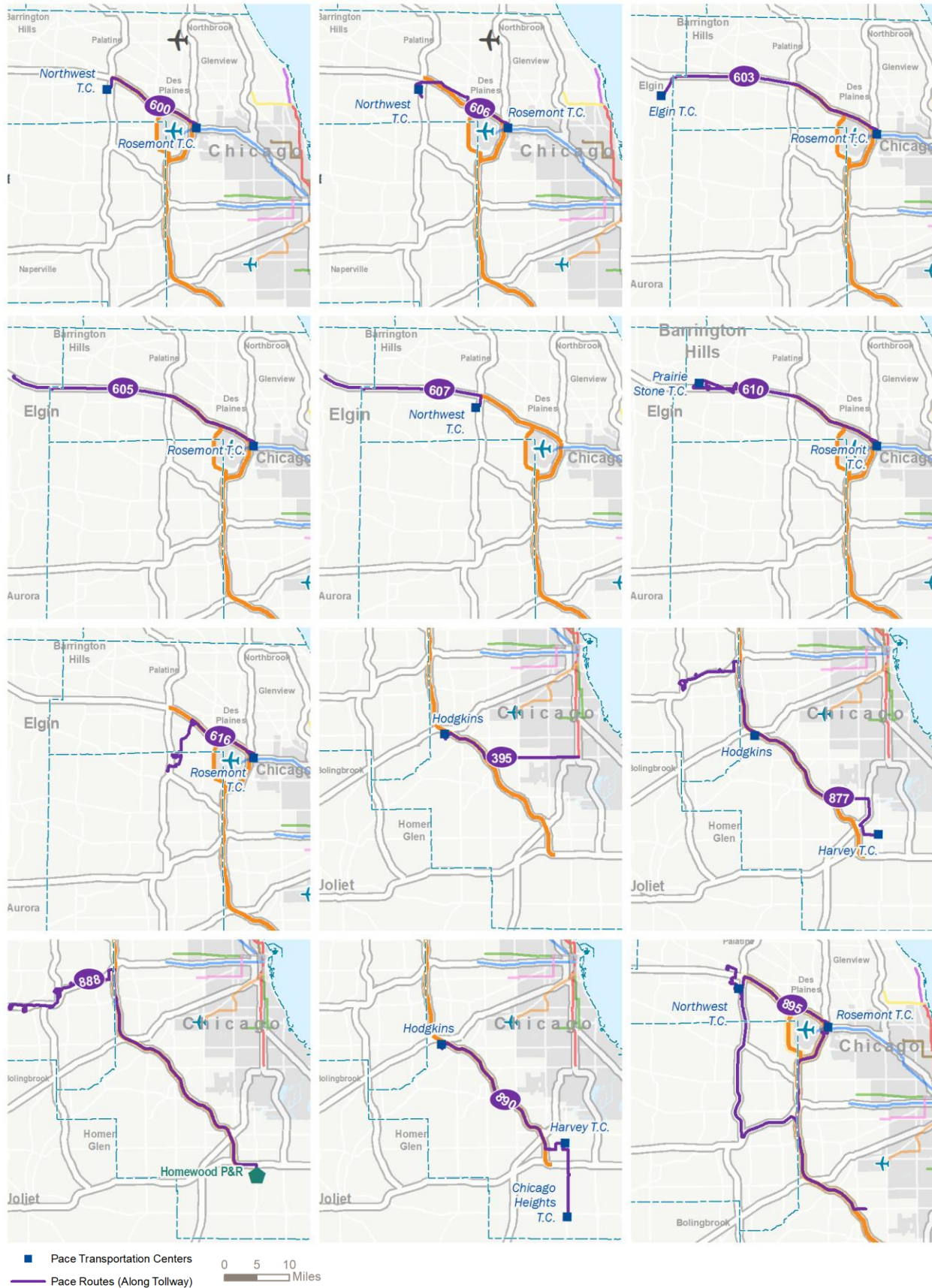
Twelve (12) Pace routes currently operate on the Tollway in the Study Area, specifically I-90 and I-294, for some portion of their alignment. Flex Lanes were recently added to a portion of I-90 and four (4) Express routes utilize these lanes at the direction of the Illinois Tollway when sufficient traffic congestion occurs. These routes also access the new I-90/Barrington Road Station, which is the region's first in-line bus station. As shown in Table 3-9 and Figure 3-5, four (4) routes travel on I-294, eight (8) routes operate on I-90, and one (1) route utilizes both I-90 and I-294.

Table 3-9. Tollway-Based Pace Routes in the Study Area

#	Route	Tollway	Flex Lane Usage	Q4 2019 Ridership ^a
395	95th/Dan Ryan CTA-UPS Hodgkins Limited	I-294	-	334
600	Rosemont - Schaumburg Express	I-90	-	771
603	Elgin Transp. Center – Rosemont Express	I-90	Yes	306
605	I-90/Randall Rd. Station – Rosemont Express	I-90	Yes	334
606	Rosemont - Schaumburg Limited	I-90	-	1,399
607	I-90/Randall Rd. – Schaumburg Express	I-90	Yes	59
610	Rosemont - Prairie Stone Express	I-90	Yes	216
616	Rosemont - Itasca Limited	I-90	-	141
877	Harvey - Downers Grove Limited	I-294	-	82
888	Homewood - Naperville Limited	I-294	-	45
890	Chicago Heights - UPS Hodgkins Limited	I-294	-	135
895	95th St. - Rosemont - Schaumburg	I-90, I-294	-	85

^a Average Weekday; Source: Pace.

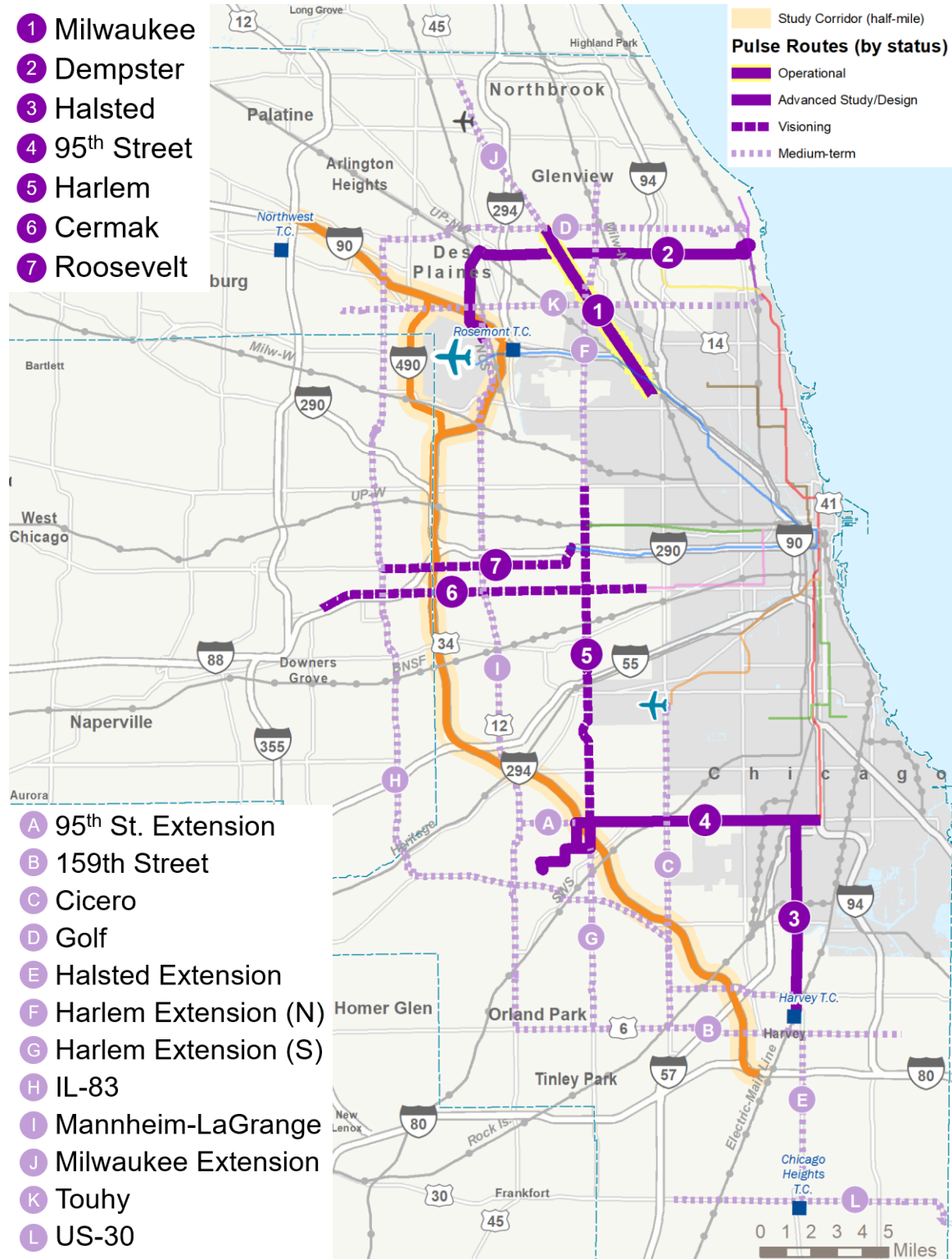
Figure 3-5. Tollway-Based Pace Routes in the Study Area



Given the specialized nature of Pulse service and the long-term, incremental implementation of the Pulse network, these routes are discussed separately. Previously, Pace had identified two dozen arterial bus rapid transit (ART) corridors with the 2009 ART Study, which featured potential for upgraded bus service based on their land use, ridership profiles, network connectivity, and regional equity. Pace has since developed a Near-term Priority Network, which is a sub-group consisting of seven (7) corridors from the larger network. It has also developed an internal Rapid Transit Program office to plan, design and construct service and infrastructure within these corridors, which has been branded as Pulse service. Looking ahead, the forthcoming *Driving Innovation* plan provides an updated approach for how Pace will assess future transit corridors for developing fixed-route service, which may include Pulse, and includes an identified list of preliminary corridors to serve as the foundation for exploring and refining future Pulse corridors.

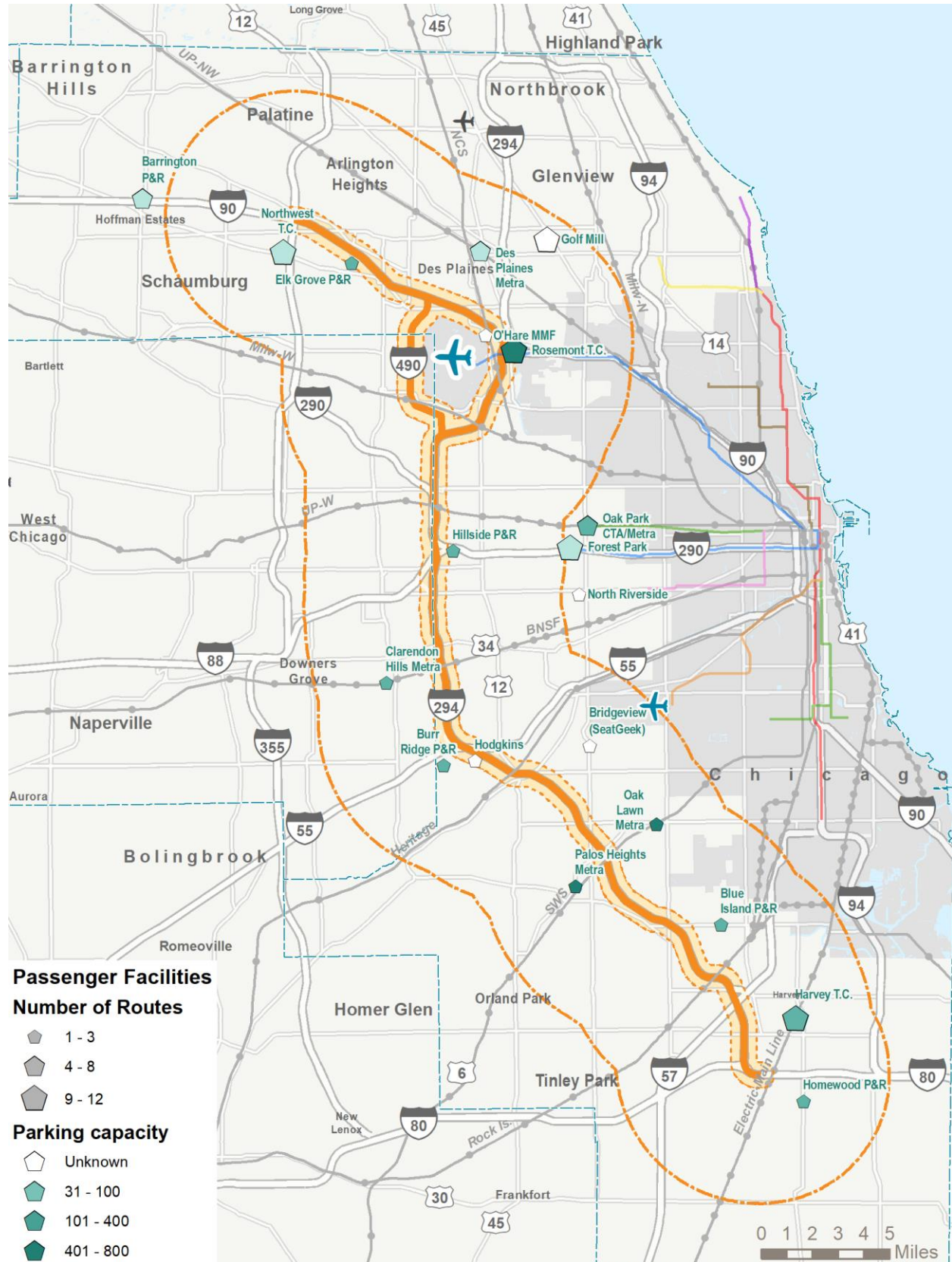
All of the near-term priority corridors have a portion of their alignment located within the Study Area, although the Milwaukee and Halsted corridors do not intersect with I-294. At this time, only one of the Pulse routes is currently operational (Milwaukee Line). Three corridors are currently in various stages of development: Dempster Street (in design), Halsted Street (under environmental review), and 95th Street (project definition complete). The remaining three, Cermak Road, Harlem Avenue, and Roosevelt Road, have had some planning activity, and the Dempster Line is tentatively slated to be implemented next. All seven (7) Near-term Priority Pulse corridors within the Study Area are shown in Figure 3-6, which also includes twelve (12) other corridors that may be considered for future Pulse treatments.

Figure 3-6. Planned Pulse Routes within the Study Area



Passenger facilities provide transfer and connection opportunities between Pace services and services provided by CTA and Metra. Passenger facilities within the five-mile Study Area buffer generally serve as transfer centers and Park-n-Ride lots. These are listed along with relevant parking information in Table 3-10 and are geographically shown in Figure 3-7.

Figure 3-7. Passenger Facilities within the Study Area



Data source: Pace GIS (<http://maps.pacebus.com/PaceServices>).

Table 3-10. Passenger Facilities within the Study Area

Facility Name	Primary Use	Parking Capacity ^a	
		Pace	Metra / CTA
Barrington Road Park-n-Ride ^b	Park-N-Ride	170	-
Blue Island Park-n-Ride	Park-N-Ride	62	-
Bridgeview (SeatGeek)	Transfer Center	Unknown	-
Burr Ridge Park-n-Ride	Park-N-Ride	82	-
Clarendon Hills Metra	Loading Area	-	58
Des Plaines Metra Station	Loading Area	-	293
Elk Grove Park-n-Ride	Park-N-Ride	41	-
Forest Park CTA Station Transfer Center ^b	Loading Area	-	285
Golf Mill	Transit Center	Unknown	-
Harvey Transportation Center	Transit Center	71	-
Hillside Park-n-Ride	Park-N-Ride	79	-
Hodgkins UPS Bus Terminals	Terminal	Unknown	-
Homewood Park-n-Ride	Park-N-Ride	75	-
North Riverside Mall ^b	Loading Area	Unknown	-
Northwest Transportation Center	Transit Center	122	-
Oak Lawn Metra Park-n-Ride	Park-N-Ride	-	510
Oak Park CTA/Metra ^b	Loading Area	-	46
O'Hare Multi-Modal Facility (MMF)	Transit Center	-	-
Palos Heights Metra Park-n-Ride	Park-N-Ride	-	500
Rosemont Transit Center	Transit Center	-	750

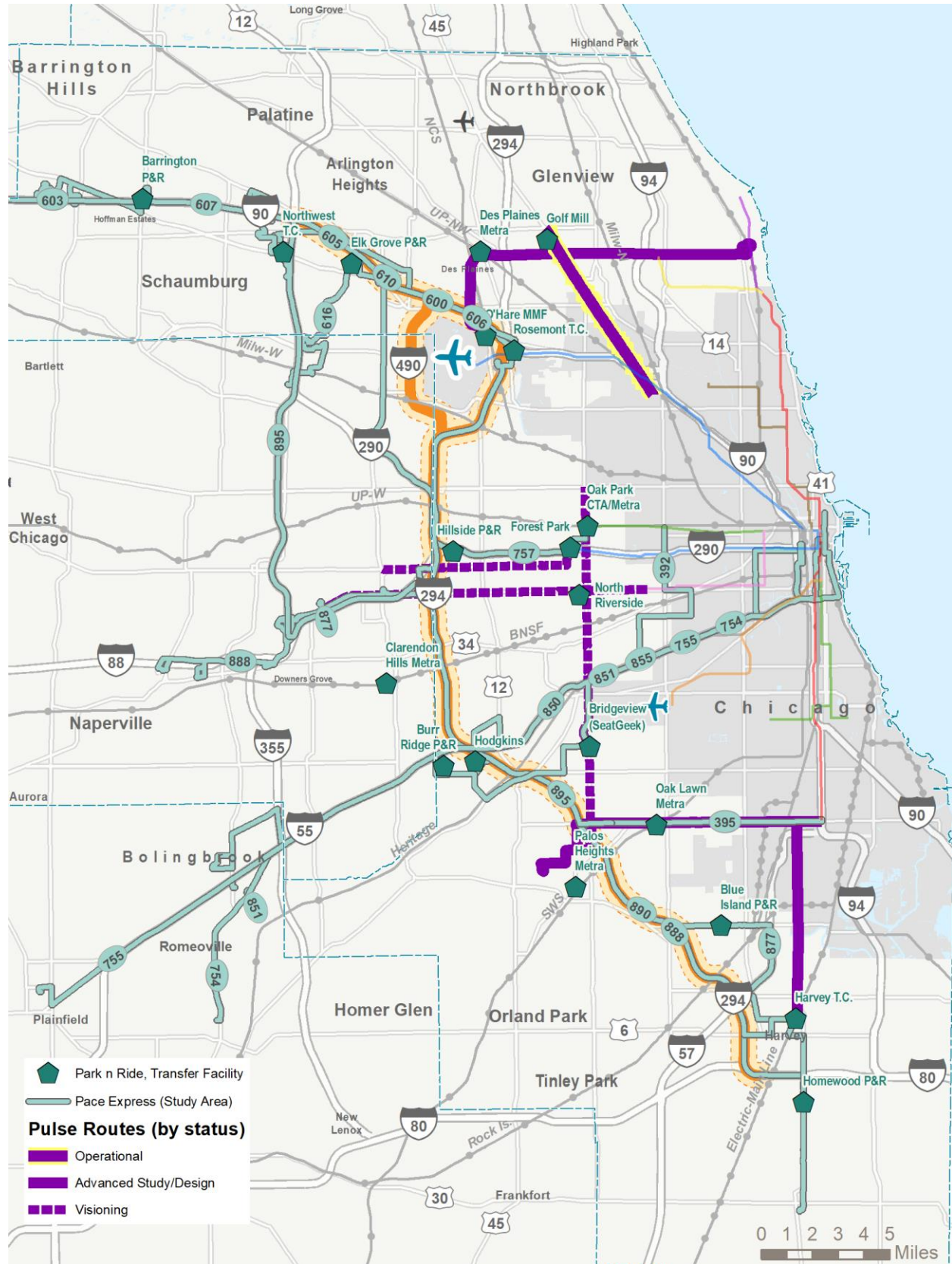
^a In some instances parking lot capacity information is unavailable.

^b While this facility is outside the five-mile Study Area, it is included here given its role in facilitating transit access and/or its high level of connectivity between Pace, Metra, and/or CTA services.

Data sources: Pace GIS (<http://maps.pacebus.com/PaceServices>), www.pacebus.com, www.metrarail.com, www.transitchicago.com/parking.

Figure 3-8 overlays existing passenger facilities with Pace’s existing express routes and planned near-term Pulse routes. The locations where these routes converge reflect major transfer points that could potentially feed service on I-294 utilizing existing transit assets.

Figure 3-8. Near-Term Pulse Routes, Pace Express Routes, Passenger Facilities



Data source: Pace GIS.

3.2 Metra

Metra is the operator of the commuter rail system serving the Chicago metropolitan area. The agency provides service to and from downtown Chicago with 242 stations over 11 routes totaling almost 500 route miles and approximately 1,200 miles of track. Metra operates 700 weekday trains, serving nearly 290,000 passenger trips each weekday (pre-pandemic). Metra owns and operates the following four (4) rail lines: Rock Island, Metra Electric, Milwaukee District North, and Milwaukee District West. Three (3) Metra lines, Heritage Corridor (HC), North Central Service (NCS) and SouthWest Service (SWS), are operated by Metra employees over freight railroad-owned track through trackage rights or lease agreements. Four (4) Metra lines, BNSF, Union Pacific North (UP-N), Union Pacific Northwest (UP-NW) and Union Pacific West (UP-W), are operated directly by freight railroads through purchase-of-service agreements. General information and service characteristics for Metra lines that intersect with I-90 or I-294 within the Study Area are listed in a clockwise fashion in Table 3-11. Additionally, the locations where Metra Lines intersect with I-90 or I-294 are described in Table 3-12.

Table 3-11. Service Characteristics of Metra Lines

Metra Line	# Stations	# Miles	# Trains Weekday	# Trains Saturday	# Trains Sunday	2018 Weekday Ridership
ME-Blue Island	7	18.9	27	8	0	27,427
ME-Main Line	34	31.5	84	40	20	
RI-Main Line	12	40.2	68	33	28	26,345
RI-Beverly	12	16.4				
SWS	13	40.8	30	6	0	8,818
HC	7	37.2	7	0	0	2,749
BNSF	26	37.5	97	30	20	54,931
UP-W	19	43.6	59	20	18	28,035
MD-W	22	39.8	58	24	18	20,834
UP-NW	23	63.1 ^a	65	34	21	37,610
NCS	18	52.8	20	0	0	6,357

^a Does not include the 7.3 mile branch line to the McHenry Station.

Source: Metra.

Table 3-12. Locations Where Freeways and Metra Lines Intersect

Metra Line	Freeway	Freeway Location in Relation to Metra	Metra Line Crosses Freeway Between Stations	
ME-Main Line	I-294	Over	Calumet	Hazel Crest
RI-Main Line	I-294	Over	Midlothian	Robbins
SWS	I-294	Over	Worth	Chicago Ridge
HC	I-294	Over	Willow Springs	Summit
BNSF	I-294	Under	Highlands	Western Springs
UP-W	I-294 & I-290 ^a	Over	Elmhurst	Berkeley
MD-W	I-294	Over	Bensenville	Mannheim
NCS	I-294	Over	Rosemont	Franklin Park
NCS	I-190	Under	O'Hare Transfer	Rosemont
NCS	I-90	Over	Prospect Heights	O'Hare Transfer

^a I-290 is not part of the Tollway system and is under the jurisdiction of the Illinois Department of Transportation.

Metra’s principal travel market is serving work trips to downtown Chicago. In more recent years, Metra has focused on increasing its market share of the non-work, reverse commute, and intermediate (i.e., passenger trips between non-downtown Chicago stations) travel markets.

3.3 Chicago Transit Authority

The Chicago Transit Authority (CTA) provides bus and rapid transit (rail) service to the City of Chicago and 35 surrounding suburbs. With a fleet of nearly 2,000 buses, CTA operates approximately 130 routes, making about 19,000 bus trips a day at over 10,700 bus stops. CTA’s rail system comprises eight (8) routes, nearly 225 miles of track, and 145 stations. With the exception of the Blue Line O’Hare Branch, all CTA rail lines are located outside the five-mile Study Area. Four (4) O’Hare Branch CTA stations—O’Hare, Rosemont, Cumberland, and Harlem—are located within the Study Area. Among these stations, the CTA Rosemont, Cumberland, and Harlem Stations currently have connections to Pace service.

CTA’s Rosemont Station serves Pace Routes 221, 223, 230, 303, 330, 332, 600, 603, 605, 606, 610, 616, 637, 811, and 895. CTA’s Cumberland Station serves Pace Routes 240, 241, 290, and 331. CTA’s Harlem Station serves Pace Routes 209 and 423. The only CTA bus route within the Study Area is Route 169 69th-UPS Express, which travels between the UPS facility in Hodgkins and the 69th Street Station on the CTA Red Line.

Other noteworthy CTA rail stations located just outside the five-mile Study Area are the Forest Park Station on the Blue Line Forest Park Branch and the Oak Park Station on the Green Line Lake Branch. CTA stations served by Pace routes are shown in Table 3-13 as these routes make up the majority of Pace service in the Study Area. CTA intersects with I-294 in one instance on the CTA Blue Line (O’Hare Branch) where the freeway is located under the rail tracks.

Table 3-13. CTA Stations Served by Pace Routes

#	Route	Service Category	CTA Line(s)	CTA Station(s)
208	Golf Road	Primary Route	Purple	Davis
221	Wolf Road	Secondary Route	Blue	Rosemont
223	Elk Grove-Rosemont CTA Station	Primary Route	Blue	Rosemont
226	Oakton Street	Secondary Route	Blue	Jefferson Park
230	South Des Plaines	Connector Route	Blue	Rosemont
250	Dempster Street	Primary Route	Purple	Davis
301	Roosevelt Road	Primary Route	Blue	Forest Park
303	Forest Park - Rosemont	Secondary Route	Blue	Forest Park, Rosemont
309	Lake Street	Primary Route	Green	Austin
313	St. Charles Road	Primary Route	Green	Austin
318	West North Avenue	Primary Route	Blue Green	Forest Park Harlem/Lake
322	Cermak Road - 22nd Street	Primary Route	Pink	54th/Cermak
330	Mannheim - LaGrange Roads	Primary Route	Blue	Rosemont
332	River Road - York Road	Connector Route	Blue	Rosemont
359	Robbins / South Kedzie Avenue	Primary Route	Red	95th/Dan Ryan
379	Midway - Orland Park	Primary Route	Orange	Midway
381	95th Street	Primary Route	Red	95th/Dan Ryan
383	South Cicero	Primary Route	Orange	Midway
384	Narragansett - Ridgeland	Secondary Route	Orange	Midway
385	87th-111th-127th	Connector Route	Orange	Midway
386	South Harlem	Primary Route	Orange	Midway
390	Midway CTA - UPS Hodgkins Limited	Express Route	Orange	Midway
392	Green Line Cicero CTA – UPS Hodgkins Limited	Express Route	Green Pink	Cicero
395	95th/Dan Ryan CTA- UPS Hodgkins Limited	Express Route	Red	95th/Dan Ryan
600	Rosemont – Schaumburg Express	Express Route	Blue	Rosemont
603	Elgin Transp. Center – Rosemont Express	Express Route	Blue	Rosemont
605	I-90/Randall Rd. Station – Rosemont Express	Express Route	Blue	Rosemont
606	Rosemont - Schaumburg Limited	Primary Route	Blue	Rosemont

#	Route	Service Category	CTA Line(s)	CTA Station(s)
616	Rosemont - Itasca Limited	Express Route	Blue	Rosemont
757	Oak Park-Schaumburg Limited	Express Route	Blue Green	Forest Park Harlem/Lake
811	Rosemont Entertainment Circulator	Connector Route	Blue	Rosemont
850	North Bolingbrook-East Loop Express	Express Route	-	Loop
851	South Bolingbrook-East Loop Express	Express Route	-	Loop
855	Plainfield-East Loop Express	Express Route	-	Loop
895	95 th St. – Rosemont – Schaumburg	Express Route	Blue	Rosemont

Pace Routes 250 and 330 currently provide service to the O’Hare Airport Multi-Modal Facility (MMF), located at the northeast corner of the Airport (southeast corner of Zemke and Mannheim Roads). The MMF connects the airport’s ground transportation operations, including rental car operations, public parking (Lot F), bus terminal, Metra North Central Service O’Hare Transfer Station, and the Airport Transit System (ATS). The ATS, or people mover, provides direct access to O’Hare’s terminals, as well as access to CTA’s O’Hare Station. The MMF will also serve as the west terminal for Pace’s future Pulse Dempster Line.

4. Evaluation of Select Pace Routes

Eight (8) routes that operate on or near I-294 have been identified for a more in-depth, targeted review. This analysis provides an understanding of existing travel markets and service characteristics and the findings will be used in subsequent work as part of this Study to inform future Tri-State service.

4.1 Service Characteristics of Select Routes

Pace Routes identified for further analysis include Routes: 223, 330, 395, 757, 877, 888, 890, and 895. Figure 4-1 shows the location of these routes and Table 4-1 provides the service characteristics of each route. As previously noted, the service characteristics shown in Figure 4-1 do not reflect temporary service adjustments or suspensions during COVID-19, and future service adjustments may be needed due to expected budget constraints resulting from the pandemic.

Route 223 Elk Grove-Rosemont CTA Station | Route 223 is a local route providing daily service between Elk Grove industrial area, United Airlines Reservation Center, and the CTA Rosemont Station on the Blue Line. The route operates with two patterns that alternate throughout the day.

Route 330 Mannheim-LaGrange Roads | Route 330 is a local route providing daily service between the O'Hare Kiss-n-Fly ATS Station, CTA Rosemont Station, and Archer Avenue/Harlem Avenue in Summit via Mannheim / La Grange Road.

Route 395 95th/Dan Ryan CTA-UPS Hodgkins Limited | Route 395 is an express route providing weekday limited-stop service between the CTA 95th/Dan Ryan Station on the Red Line and the UPS Hodgkins facility via 95th Street and I-294. The route operates limited trips that align with the work shifts at the UPS Hodgkins facility.

Route 757 Oak Park-Schaumburg Limited | Route 757 is an express route providing weekday peak period service between the CTA Harlem/Lake Station on the Green Line, the CTA Forest Park Station on the Blue Line, and the Pace Northwest Transportation Center in Schaumburg via I-290 and local roads. The route only operates during the peak period in the peak direction.

Route 877 Harvey-Downers Grove Limited | Route 877 is an express route providing weekday peak period service between Harvey, Blue Island Park-n-Ride, Alsip, Oak Brook, Lombard, and Downers Grove via I-294. The route only operates during the peak period in the peak direction.

Route 888 Homewood-Naperville Limited | Route 888 is an express route providing weekday peak period express service from the Homewood Park-n-Ride to Oak Brook, Lombard, Lisle and Naperville via I-294. The route only operates during the peak period in the peak direction.

Route 890 Chicago Heights-UPS Hodgkins Limited | Route 890 is an express route providing weekday limited-stop service connecting the Pace Chicago Heights Terminal, Homewood Park-n-Ride, and Pace Harvey Transportation Center to the UPS Hodgkins facility. The route operates limited trips that align with the work shifts at the UPS Hodgkins facility.

Route 895 Rosemont-Schaumburg Express | Route 895 is a deviated fixed route, express route providing weekday peak period service. All trips operate between Chicago Ridge and the Pace Northwest Transportation Center, with select trips also connecting to the CTA Rosemont Station. In Schaumburg, westbound trips operate a deviated fixed route from the Pace Northwest Transportation Center to various designated locations at the request of passengers.

Eastbound trips begin in Schaumburg and serve all designated locations before arriving at the Pace Northwest Transportation Center.

Figure 4-1. Select Pace Routes in the I-294 Corridor

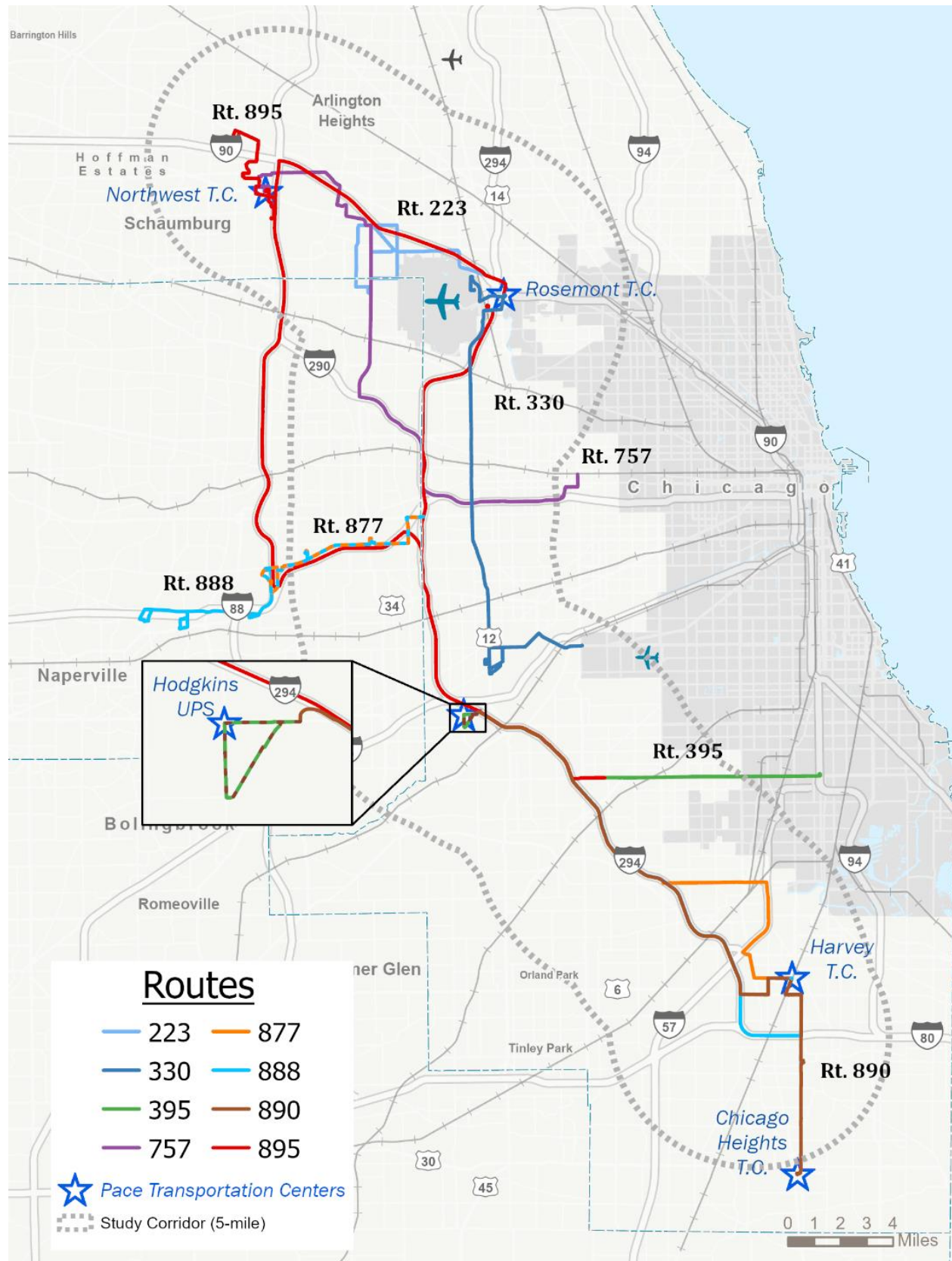


Table 4-1. Service Characteristics of Select Pace Routes

Number	Name	Frequency (Departures)			Span (First Departure-Last Arrival)			Flag Stops
		Weekday	Saturday	Sunday	Weekday	Saturday	Sunday	Y / N
223	Elk Grove - Rosemont CTA Station	5-10 min (Start-8am) / 15-20 (Until 9:30) / 60-80 min (until 13:10) / 10-20 min (until 17:00) / 20-35 min (to End)	30-40 min (start - 8am) / 60 min (12:46 - 14:50) / 30 min (15:55 - 17:30) / 60 min (17:30-24:30)	30 Min	4:59-25:44	5:25-25:19	5:30-24:29	N
330	Mannheim - LaGrange Roads	60 min	50 Min	50 Min	4:27 - 24:42	5:20-20:09	6:47 - 20:26	Y
395	95th/Dan Ryan CTA - UPS Hodgkins Limited	To UPS Hodgkins: 2AM (3 Trips), 8AM (4 trips), 3PM (3 Trips), 8PM (3 Trips) / To 95th: 3AM (2 Trips), 9AM (2 Trips), 3PM (3 Trips), 9-10PM (3 Trips)	To 95th: 3AM (2 Trips)	N/A	2:14-22:50	3:35-4:29	N/A	N
757	Oak Park - Schaumburg Limited	To Schaumburg: 30-40 Min (5:25-7:35) / To Oak Park: 30-45 Min (14:30-17:00)	N/A	N/A	5:25 - 18:38	N/A	N/A	Y
877	Harvey - Downers Grove Limited	To Downers Grove: 30-40 Min (5:32-7:13) / To Harvey: 30-60 Min (15:45-18:45)	N/A	N/A	5:32-20:05	N/A	N/A	Y
888	Homewood - Naperville Limited	To Naperville: 6:11 & 6:41 / To Homewood: 30-60 Min (15:45-18:45)	N/A	N/A	6:11-20:16	N/A	N/A	Y
890	Chicago Heights - UPS Hodgkins Limited	To UPS Hodgkins: 2AM (1 Trip), 8AM (2 Trips), 3PM (2 Trips), 8PM (1 Trip) / To Chicago Heights: 3AM (1 Trip), 9AM (1 Trip), 2PM (1 Trip), 3PM (1 Trip), 10PM (2 Trips)	To Chicago Heights: 3AM (1 Trip)	N/A	2:19-22:55	3:45-4:34	N/A	N
895	Rosemont - Schaumburg Express	Northbound: 10-20 Minutes (5:30-7:20) / Southbound: 1 Trip @ 11:48, then 10-30 Min 15:33-17:13	N/A	N/A	5:30-18:50	N/A	N/A	Y

4.2 Stop Level Ridership Analysis

Ridership was reviewed to understand general route productivity. For this analysis total daily ridership and individual stop-level ridership were reviewed. Average weekday ridership by route for the last 5 years is presented in Table 4-2. As previously noted, the latest available ridership data, which reflect pre-pandemic service levels, was used in this analysis; therefore, 2020 ridership was excluded due to significant changes in travel patterns and temporary suspension of some routes due to the COVID-19 pandemic.

Stop-level data was provided in spreadsheet format by Pace for the Fall 2019¹ time period. Information from this was broken out by time period² and was used to determine major activity areas along the routes and identify general origin/destination patterns, as shown in Figure 4-2 and Figure 4-3.

Total activity is defined as the sum average boardings and average alightings at the location. Generally, 85-90 percent of the stops in the Study Area have a total activity of less than one boarding plus alighting per day. As a result, approximately 15 percent of the stops were mapped. General findings and trends by time period are summarized for peak, midday, and evening periods.

AM and PM Peaks

- During peak periods, Pace/CTA transfer hubs are the main activity centers for Pace ridership. The CTA Rosemont Station is the busiest location for these eight routes, with about 11 percent of AM peak and percent of PM peak activity happening at this station.
- The majority of activity for Route 888 occurs at its southern terminus at the Homewood Park-n-Ride.
- Route 877 shows good activity along 127th street, with the largest individual stop being the Pace Blue Island Park-n-Ride.
- The two main peak-period travel markets for the routes evaluated in this analysis are along the I-88 corridor and the area west of O'Hare.
- Besides the Northwest Transportation Center, the two locations with a high amount of activity in Schaumburg are Golf Road / New Wilke Road (Continental Towers) and Algonquin Road / Quentin Road (at the end of Route 895).

Midday

- Pace/CTA transfer hubs are the main activity centers. The CTA Rosemont Station is the busiest, with 14 percent of all stop activity for these routes happening at this station.
- Route 223 and Route 330 operate all day, but the only express trips operated in the midday are on Route 757 and Route 895.
- Neither Route 757 nor Route 895 reaches the kind of activity in the midday that it has in the AM and PM peak periods.

¹ This dataset reports the three-month average beginning September 2019 and is roughly coincident with the quarterly ridership figures reported Q4 2019 (as described in Section 3.1), which comprise the October - December period.

² Time period definitions include: AM Peak (5a-9a), Midday (9a-3p), PM Peak (3p-7p), Evening (7p-12a), and Overnight (12a-5a).

Evening

- The CTA Rosemont Station is the busiest single location, with 11 percent of all ridership activity for these routes occurring there.
- In the evening, only Route 223 and Route 330 operate. Both generally have the same activity patterns (along Mannheim Road for Route 330 and west of O'Hare for Route 223) as in the daytime.

Ridership is an instructive metric, but it is more useful when controlled for units of service. Ridership productivity measures how many people are riding per hour or mile of service operated. A supplemental analysis to measure route productivity was conducted to understand how the eight (8) selected routes perform relative to the entire Pace system. Table 4-2 provides weekday route statistics for the selected routes.

Table 4-2. Average Weekday Route Statistics

Route #	Q4 2019 Ridership	Revenue Miles	Revenue Hours
223	1,601	1,074	64
330	1,267	1,502	84
395	354	258	12
757	155	255	12
877	82	373	15
888	45	183	6
890	135	315	10
895	85	752	27
TOTAL SYSTEM	88,335	83,732	4,799

Source: Pace.

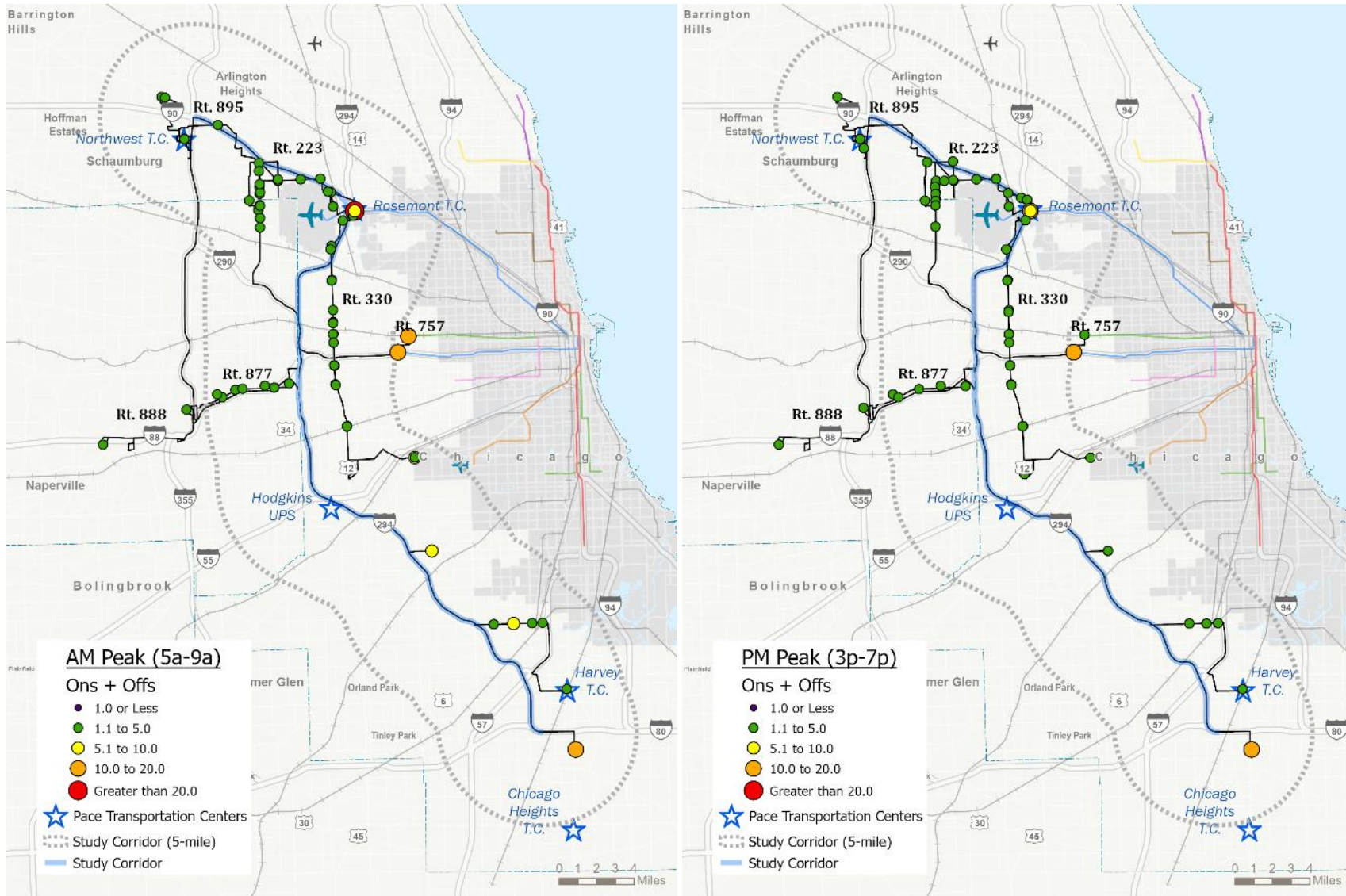
Productivity of the selected routes based on these two measures is shown in a ranked fashion in Table 4-3. Route 223 and Route 395 stand out for their high productivity relative to the other routes reviewed as part of this analysis. The productivity of these two (2) routes is greater than the system average, while the rest of the routes in the set are below the system average. While these two routes are very different (Route 395 is a tailored schedule, express service destined for the UPS Hodgkins facility and Route 223 is an all day, local service destined for Elk Grove Village), their common features are that they both connect to a CTA rail station and they both serve areas with high amounts of industrial and manufacturing employment. Peak period express routes that connect to the more dispersed, diverse activity centers in Schaumburg and Oak Brook (containing retail, industrial, entertainment and budding residential activities) are less productive than the system average.

Table 4-3. Route Productivity by Passengers per Revenue Mile and by Revenue Hour

Route	Passengers per Revenue Mile	Route	Passengers per Revenue Hour
223	1.5	395	30.8
395	1.4	223	24.9
<i>System Average</i>	<i>1.1</i>	<i>System Average</i>	<i>18.4</i>
330	0.8	330	15.0
757	0.6	890	12.9
890	0.4	757	12.6
888	0.2	888	7.0
877	0.2	877	5.6
895	0.1	895	3.1

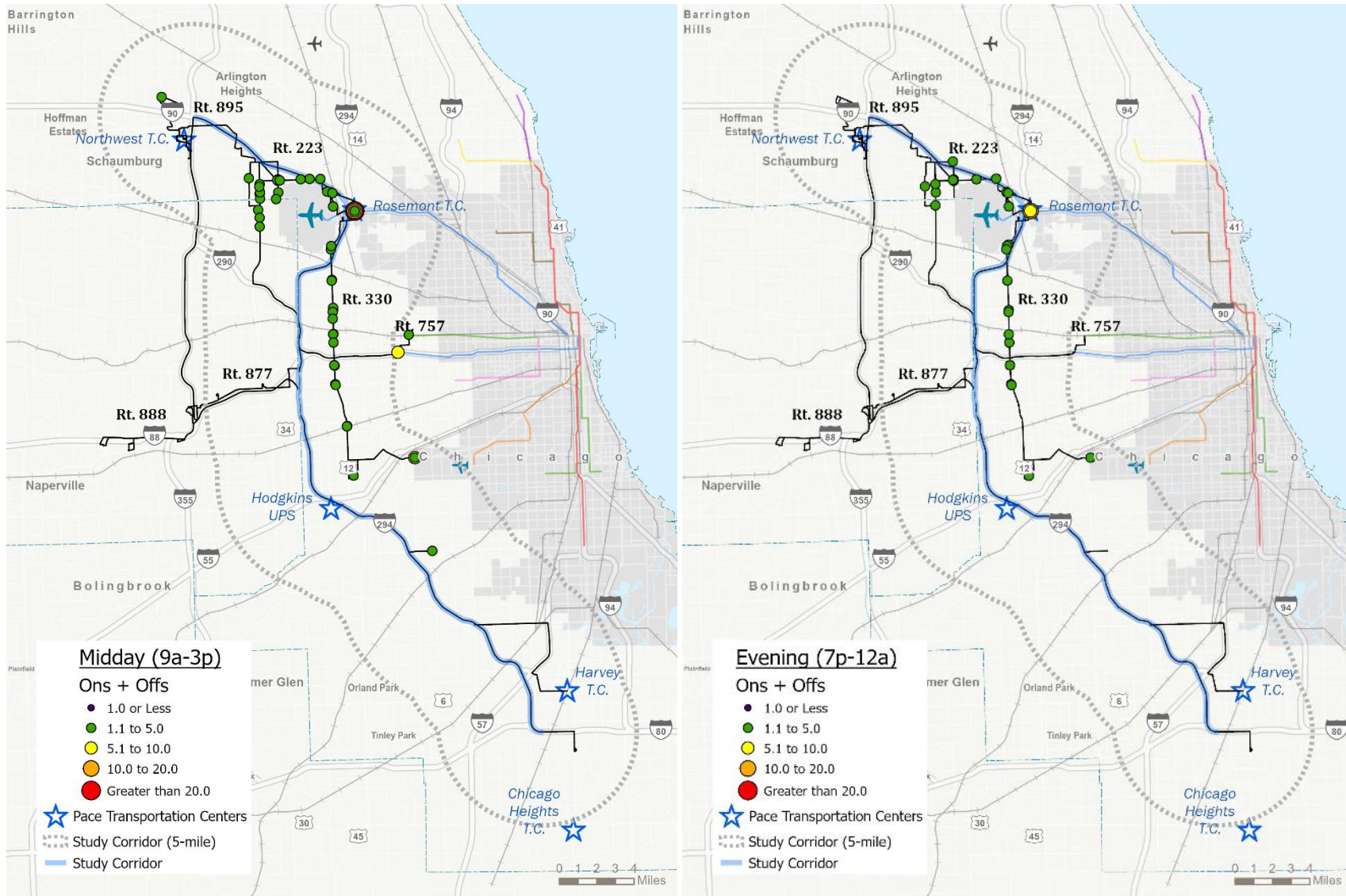
Source: Pace.

Figure 4-2. AM and PM Peak Weekday Stop Level Activity (Boardings and Alightings)



Data source: Pace APC (Fall 2019).

Figure 4-3. Midday and Evening Weekday Stop Level Activity (Boardings and Alightings)



Data source: Pace APC (Fall 2019).

4.3 Load Analysis

Average loads quantify the number of riders on a bus departing each stop. Loads frequently are different in each direction. Accordingly, all maps developed for this analysis were created by direction, with north and west trips shown on one map and south and east trips displayed on another. The peak period load analysis is shown in Figure 4-4 and Figure 4-5, respectively. Load analysis maps for midday and evening time periods are provided in Appendix A. General findings and trends by time period are summarized for peak, midday, and evening periods.

AM and PM Peak

- During the peak periods, only Route 223 and Route 330 have trips that operate in both directions. For these routes, load activity is greater for AM peak trips in the north and west direction, and greater for PM peak trips in the south and east direction.
- Route 877 realizes most of its load activity along 127th Street, reaching a maximum average load of just over 12 at the Pace Blue Island Park-n-Ride.
- In the AM peak, Route 895 has its highest average load between the CTA Rosemont Station and the Northwest Transportation Center, where it averages a load of just over 6 passengers per trip. In the PM peak, Route 895 is most productive between the CTA Rosemont Station and the Chicago Ridge Mall where it averages 5 passengers per trip.
- On the northern ends of their routes, Route 877 and Route 888 are most productive along their shared alignment on 22nd Street. Productivity falls off at the Butterfield & Trans Am Plaza Drive stop, which is the first major stop west of 22nd Street.
- Route 757 is most productive along Busse Road and Higgins through Bensenville and Elk Grove Village. Most of these passengers are originating at the CTA Forest Park Station.
- The data suggest that Route 223 takes transfers from the CTA Rosemont Station (from other CTA/Pace buses or from the CTA Blue Line generally) and distributes them around the Rosemont office complexes and the industrial areas around O'Hare. In the morning, Route 223 leaves the CTA Rosemont Station with heavy loads and returns nearly empty. As the day goes on, the inbound trips become comparably busy. This pattern suggests two travel markets: a peak market following a 9AM-5PM shift, and an all-day market likely driven by industrial workers following a less traditional work shift schedule.
- In the AM peak, Route 330 maintains a load between 5.1 and 10 passengers for the entirety of its time along Mannheim Road / La Grange Road. Based on the ridership activity maps, this is likely due to short trips along Mannheim Road instead of riders destined for O'Hare.

Midday

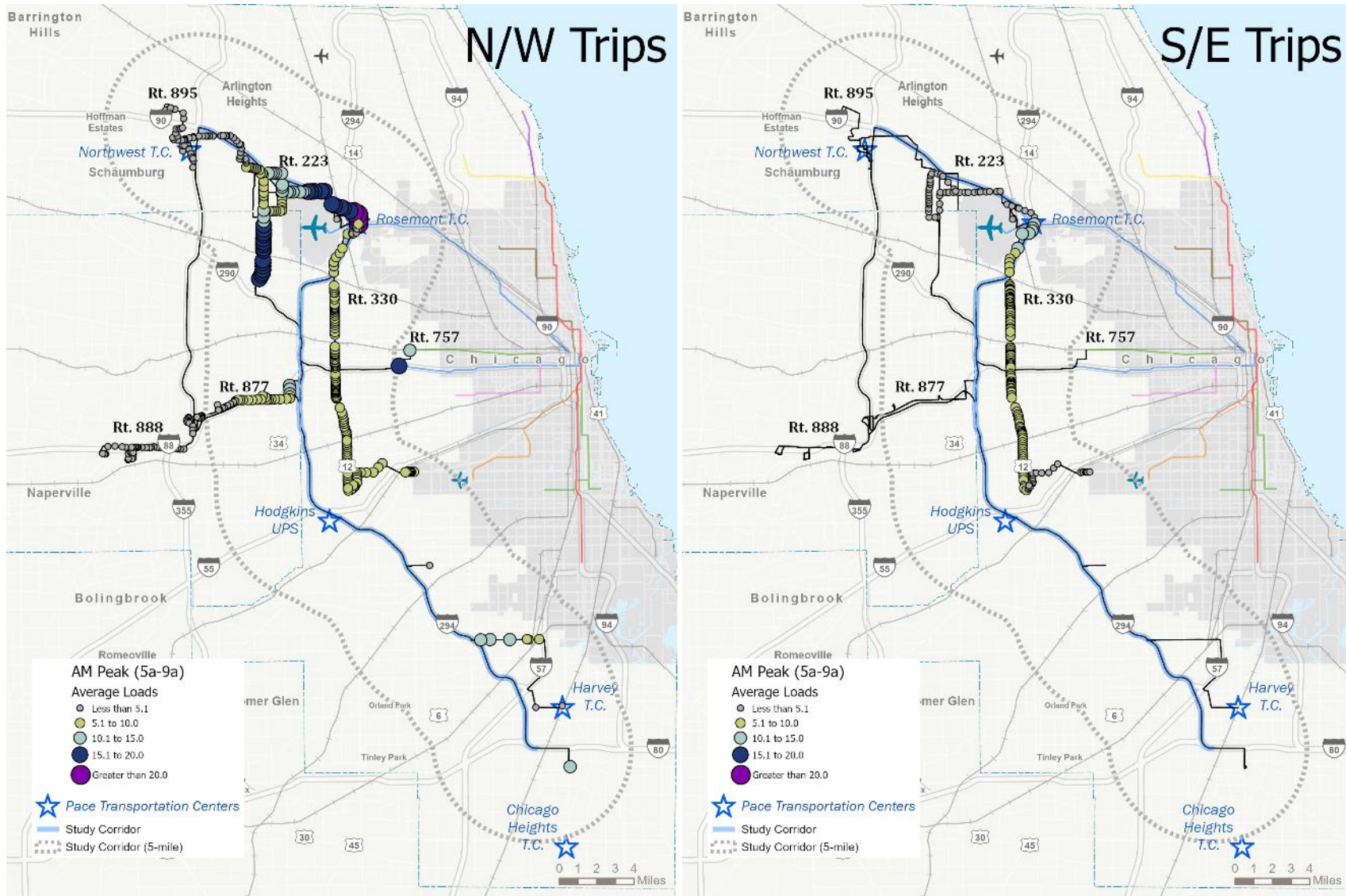
- Only Route 223 and Route 330 operate midday in both directions.
- Most Express services do not operate, with an exception of one trip each on Route 757 and Route 895.
- Midday loads tend to drop compared to peak periods, with a slightly higher load traveling south and east compared to trips traveling north and west.

Evening

- In the evening, only Route 223 and Route 330 operate.

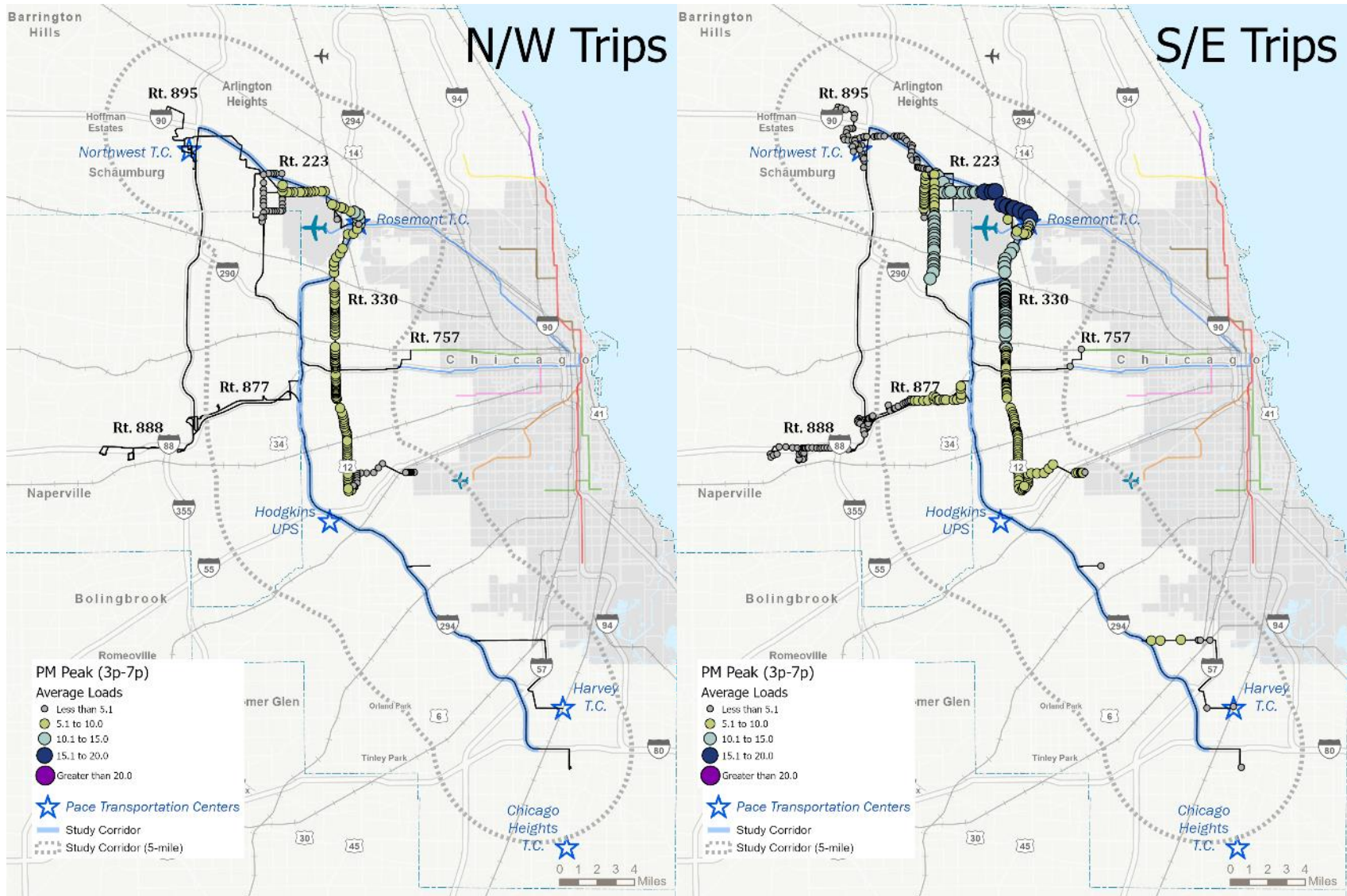
- Through the evening and the overnight periods, Route 223 continues to carry significant loads to and from the CTA Rosemont Station, supporting the finding that the route serves more than a typical 9AM-5PM travel market.
- Through the evening, Route 330 continues its PM peak trend, with heavier loads south of the CTA Rosemont Station dissipating as the route travels further south. In the evening, this break can be observed in the southbound direction at Mannheim and Dickens, further north than was observed in the PM peak.

Figure 4-4. AM Peak Weekday Load Analysis



Data source: Pace APC (Fall 2019)

Figure 4-5. PM Peak Weekday Load Analysis



Data source: Pace APC (Fall 2019)

4.4 On Time Performance

Bus on time performance (OTP) is a measure of whether a bus route adheres to its schedule. Pace defines OTP based on the following criteria:

Early: Departed greater than one (1) minute before scheduled.

On Time: Departed one (1) minute before to five (5) minutes after scheduled.

Late: Departed more than five (5) minutes after scheduled.

Pace provided OTP data by timepoint in spreadsheet format for the Fall 2019 time period.

Pace OTP data was calculated at each time point and averaged in order to measure performance. Late percentage is determined by dividing the number of trips arriving late by the total number of trips at that timepoint in the dataset. This calculation was conducted independent of other routes; therefore, if several routes serve the same timepoint, each route has a unique late percentage for that timepoint. Average late percentage by route broken out by time period and direction is provided in Table 4-4 and in Figure 4-6 and Figure 4-7.

General findings and trends by time period are summarized for peak, midday, and evening and overnight periods.

AM Peak

- Route 877 and Route 888 tend to run late a high percentage of time based on the first timepoint after operating on I-294. Sometimes the late percentage for Route 877 and Route 888 drops after leaving I-294, but before the end of the route. This indicates that the bus operator has some ability to recover time when operating on local roads.
- Northbound Route 330 operates late a high percentage of time north of Lake Street but is able to recover some of this time when arriving at the CTA Rosemont Station.
- Route 757 tends to run late a high percentage of time when departing the CTA Forest Park Station for Schaumburg, but by the end of the line, this time is typically recovered.

PM Peak

- Route 330 tends to perform poorly along Mannheim Road. In the northbound direction, this includes 61 percent of the time at Mannheim Road / Lake Street and 83 percent of the time at the CTA Rosemont Station. In the southbound direction, this includes 90 percent of the time at Mannheim Road / Irving Park Road.
- Route 877 arrives to the Blue Island Park-n-Ride late between 40 percent and 60 percent of the time.

Midday

- Route 330 experiences a similarly high late percentage between Rosemont and the Mannheim / Irving Park timepoint in the midday as in the PM peak.

Evening and Overnight

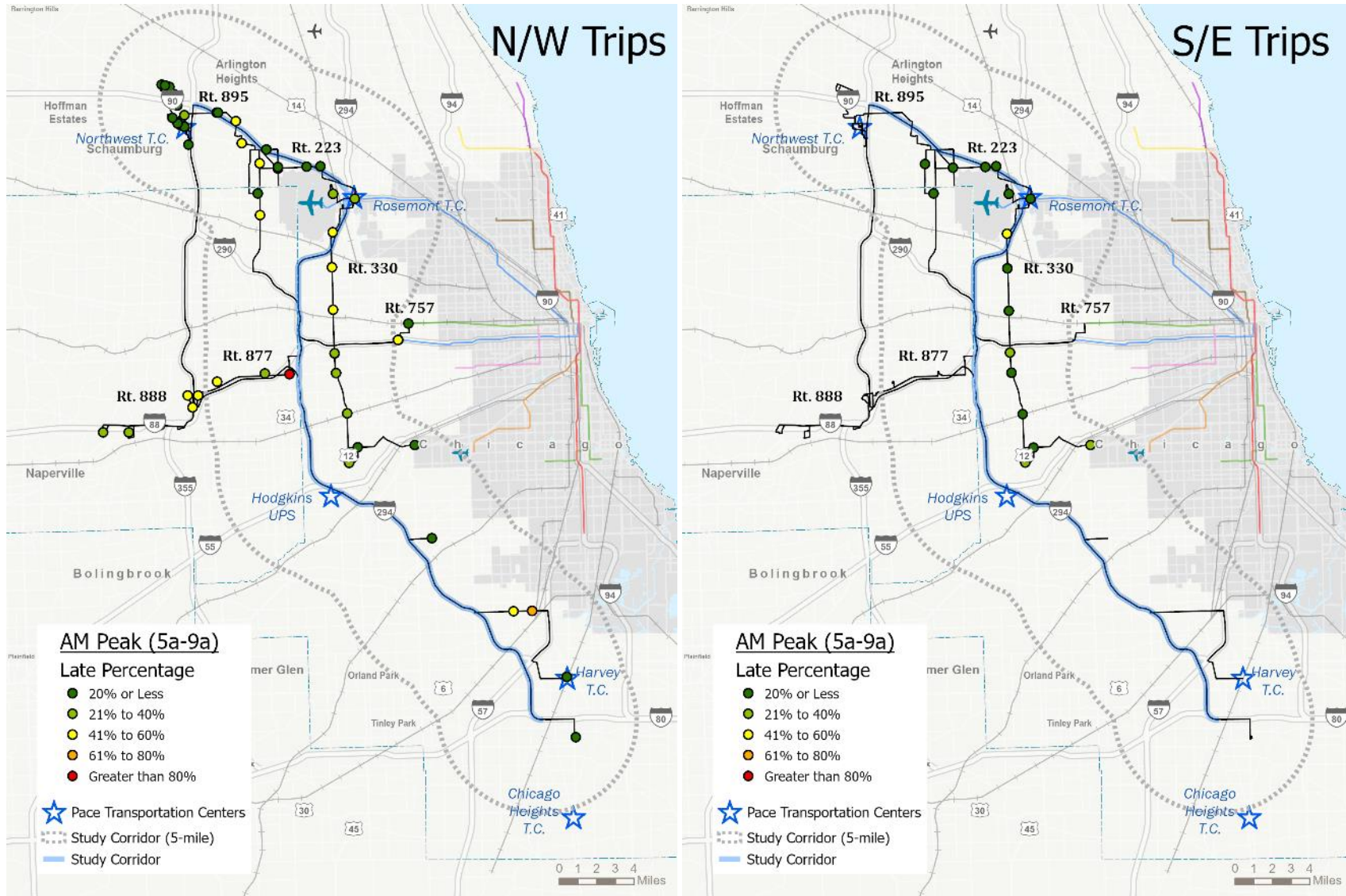
- Through the end of service, Route 330 maintains high late percentages in the southbound direction, but late percentages steadily decrease in the northbound direction.

Table 4-4. Average Late Percentage by Direction and Time Period

Route	Direction	AM Peak	Midday	PM Peak	Evening	Over-Night
223	West	6%	18%	19%	20%	11%
223	East	8%	19%	16%	12%	11%
330	North	31%	31%	47%	25%	11%
330	South	21%	54%	70%	38%	N/A
395	West	19%	N/A	43%	11%	10%
395	East	N/A	31%	16%	14%	4%
757	West	41%	N/A	N/A	N/A	N/A
757	East	N/A	40%	34%	N/A	N/A
877	North	53%	N/A	N/A	N/A	N/A
877	South	N/A	N/A	33%	N/A	N/A
888	North	47%	N/A	N/A	N/A	N/A
888	South	N/A	N/A	13%	N/A	N/A
890	North	9%	N/A	19%	4%	10%
890	South	N/A	18%	11%	18%	7%
895	North	16%	N/A	N/A	N/A	N/A
895	South	N/A	7%	25%	N/A	N/A

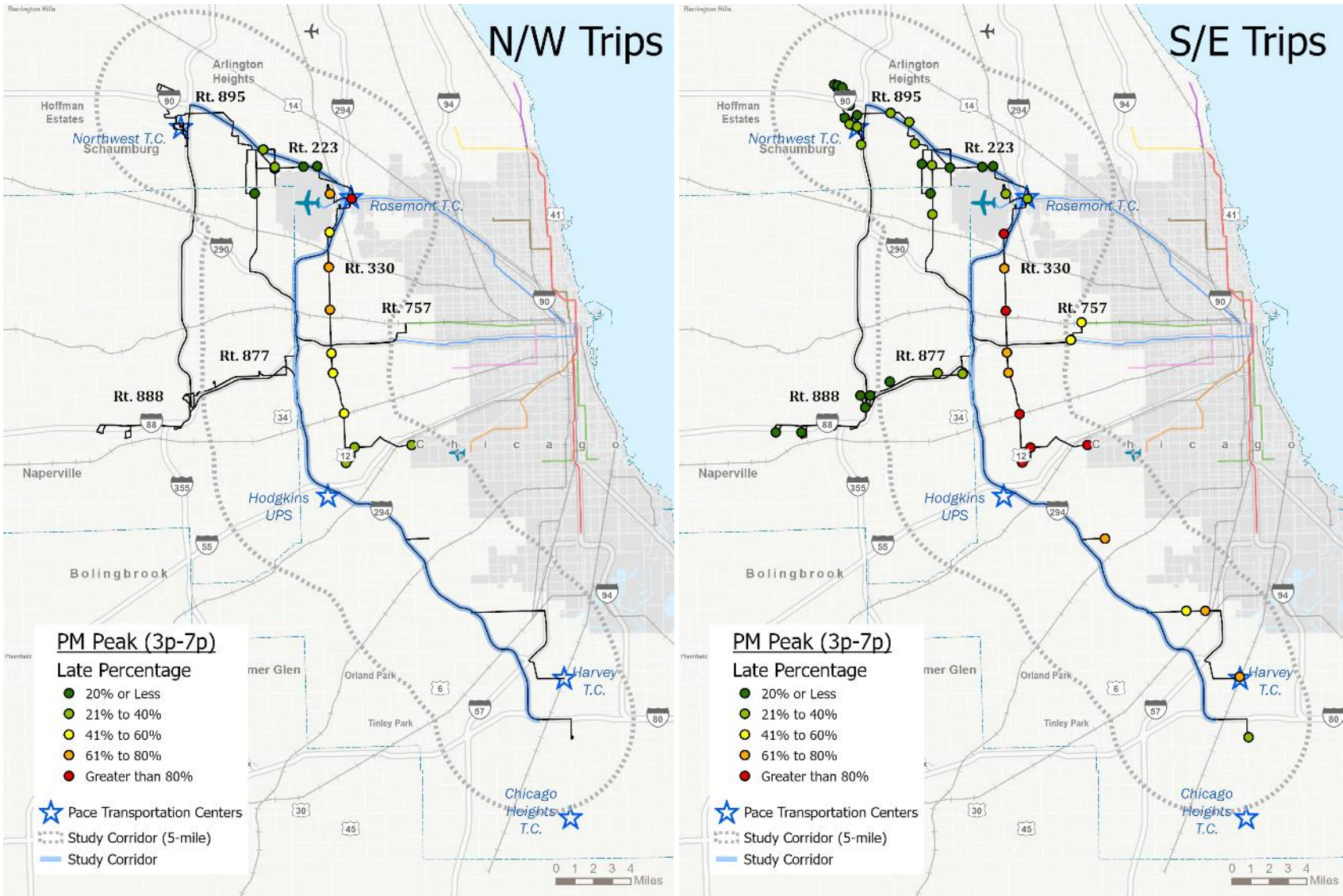
Source: Pace.

Figure 4-6. AM Peak Weekday On Time Performance



Data source: Pace (Fall 2019)

Figure 4-7. PM Peak Weekday On Time Performance



Data source: Pace (Fall 2019)

4.5 Findings

Based on the analyses, notable origins for the selected routes are:

- CTA rail stations at Rosemont (Blue Line O'Hare Branch), Forest Park (Blue Line Forest Park Branch), Harlem/Lake (Green Line Lake Branch), and 95th Street/Dan Ryan (Red Line Dan Ryan Branch),
- Pace Harvey Transportation Center, and
- Pace Blue Island Park-n-Ride (127th Street / Kedzie Avenue).

Riders at these origins are generally transferring from other services. Many riders using these routes are actually completing longer trips from elsewhere in the region. Notable travel markets for the selected routes are:

- Traditional 9:00 AM – 5:00 PM commuters, with destinations in Oak Brook, Downers Grove, and Schaumburg,
- Shift workers destined for industrial and warehouse employment areas west of O'Hare or to retail employment in Rosemont,
- All-day travel on Mannheim and LaGrange Roads, and
- UPS Hodgkins workers.

General findings related to each individual route is summarized as follows:

Route 223 Elk Grove-Rosemont CTA Station: Route 223 is an important connection between the CTA Rosemont Station and jobs on the west side of O'Hare and Elk Grove Village. Because these jobs tend to be shift work, this market is fairly robust in both directions at multiple times during the day.

Route 330 Mannheim-LaGrange Roads: Ridership data supports the conclusion that riders on Route 330 are traveling shorter distances along the corridor and that not all are destined for major activity centers at Rosemont or O'Hare. OTP data indicates this route operates late throughout the day.

Route 395 95th/Dan Ryan CTA-UPS Hodgkins Limited: Due to shift work at the UPS Hodgkins facility, Route 395 is likely not compatible with other future service on the Tri-State Tollway.

Route 757 Oak Park-Schaumburg Limited: Route 757 connects the CTA Forest Park and CTA Harlem/Lake Stations with Schaumburg. The most productive part of this route is along Busse Road and at Continental Towers (Golf Road / New Wilke Road).

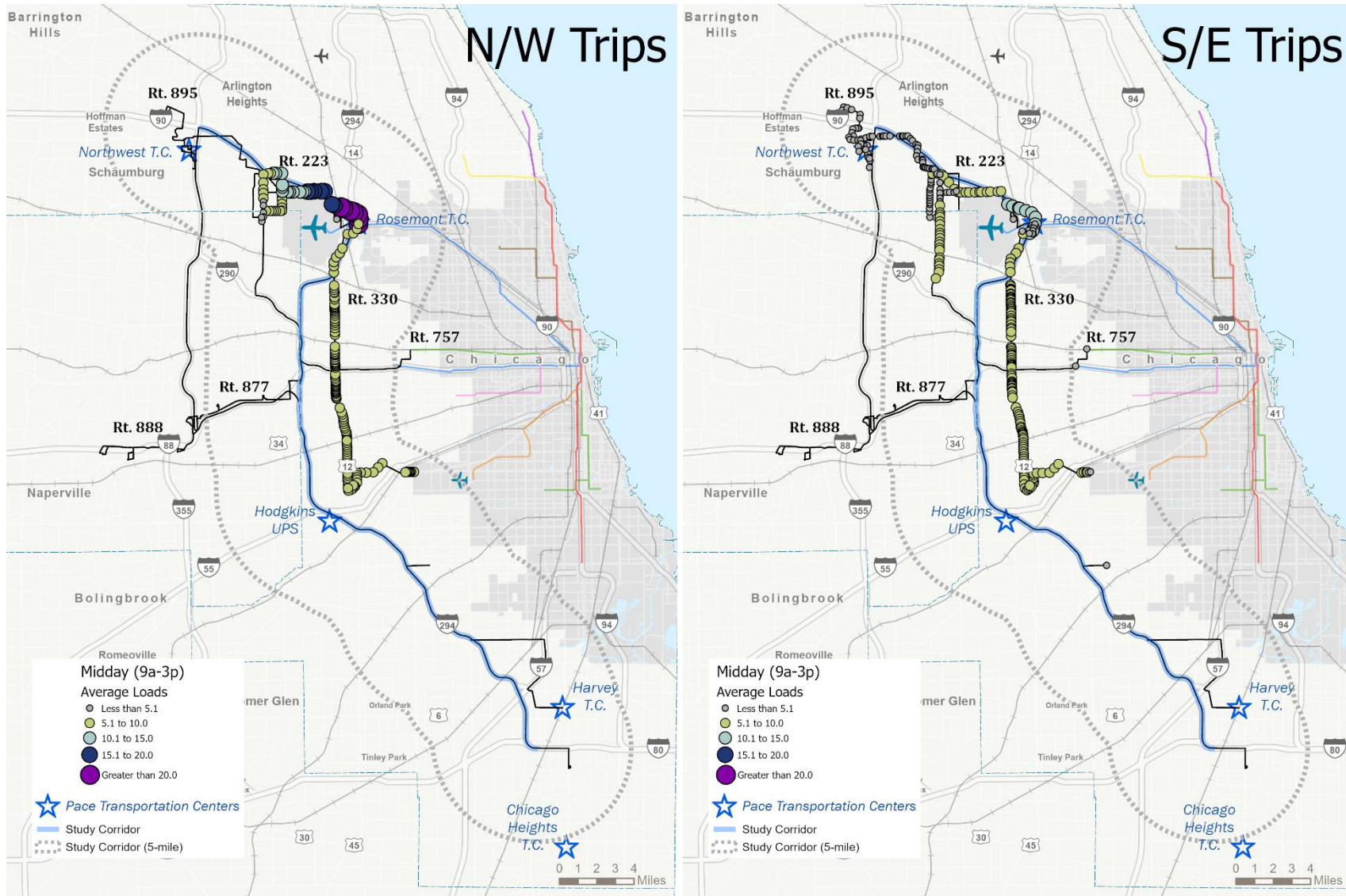
Route 877 Harvey-Downers Grove Limited and Route 888 Homewood-Naperville Limited: Route 877 and Route 888 are oriented to office and service sector jobs along the I-88 corridor. OTP data reveal an issue when exiting I-294, but routes make up lost time as they operate along 22nd Street and Butterfield Road.

Route 890 Chicago Heights-UPS Hodgkins Limited: Due to shift work at the UPS Hodgkins facility, Route 890 is likely not compatible with other future service on the Tri-State Tollway.

Route 895 Rosemont-Schaumburg Express: Only a couple of locations on Route 895 in Schaumburg have high activity: the Northwest Transportation Center and the end of the line along Algonquin Road. This suggests auto-oriented development and the accompanying pedestrian connectivity issues make Schaumburg unattractive to riders in its current state. That said, a lot of trips are destined for this employment cluster and it is a major regional destination. Pace should continue to push for better pedestrian accommodations to improve the transit mode share for this edge city.

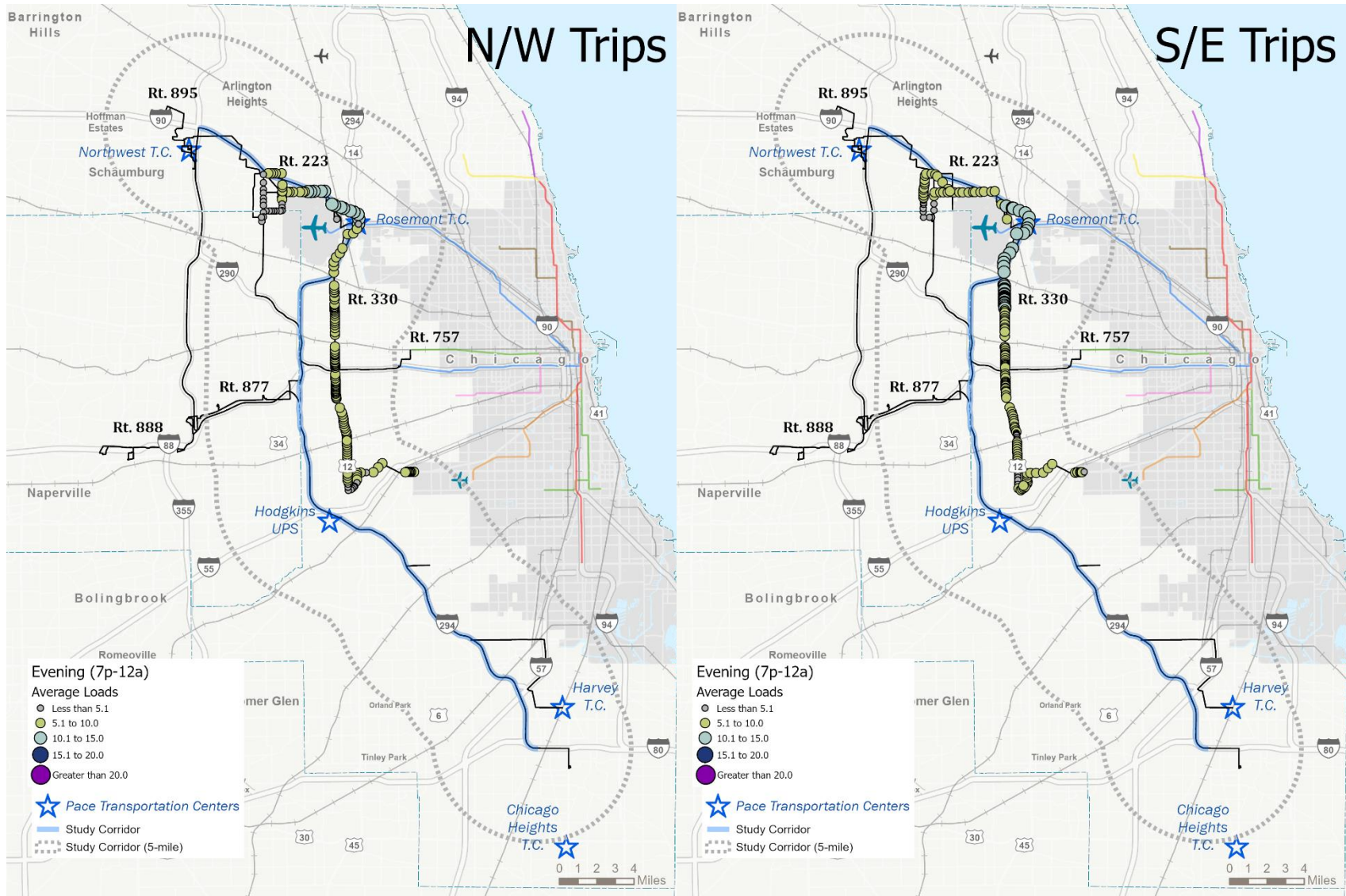
Appendix A | Midday and Evening Load Analysis Maps

Figure A-1. Midday Weekday Load Analysis



Data source: Pace APC (Fall 2019)

Figure A-2. Evening Weekday Load Analysis



Data source: Pace APC (Fall 2019)

