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Union Depot User Count and Customer Survey: Final Report

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Union Depot User Count and Customer Survey: Final Report

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EXECUTIVE SUMMARY

In 2015, Ramsey County Regional Railroad Authority (RCRRA) funded a user count and customer survey at Union Depot in Saint Paul, Minnesota from April 2015 to March 2016. Below is a summary of study findings.

USER COUNT RESULTS

Based on user count results in both the head house and the Kellogg Building, an estimated number of users in each of the four quarters and the entire 12-month period was calculated. For each quarter, a discount was applied during the time period(s) that school was out of session. The discount was the percentage of survey respondents in that quarter who identified “work/school” as their primary destination. The estimated number of users was 141,316 for quarter 1 (April – June 2015), 113,525 for quarter 2 (July – September 2015), 194,964 for quarter 3 (October – December 2015), and 165,048 in quarter 4 (January – March 2016). The estimated total number of users during the 12-month period was 614,853. Specific entries to conduct user counts, selected by RCAA, did not include de-boarding train and bus passengers. As a result, the estimated user volume does not include de-boarding passengers. Moreover, since the days sampled for user count did not have any significant event activity, the total user volume at Union Depot would be higher if de-boarding passengers and event attendees were included.

CUSTOMER SURVEY RESULT

Respondents

A little more than half (53.9%) of respondents were male, and there was no quarterly difference in the gender composition of survey respondents. The average age of respondents was 44 years old, with quarter 2 respondents significantly older than those in the other three quarters. More than 30% of respondents (31.9%) had a household income of $25,000 or less, while 27.3% had a household income over $75,000. A significantly higher percentage of quarter 1 respondents were in the lowest income category, and a significantly higher percentage of quarter 3 respondents were in the highest income category. More than 40% of respondents (43.7%) had a bachelor’s or more advanced degree, and 28.3% had some college education or an associate’s degree. Another 28% of respondents had a high school education or less. A significantly higher percentage of quarter 1 respondents had lowest education level, and a significantly higher percentage of quarter 4 respondents had the highest. Survey respondents were predominantly non-Hispanic/non-Latino (95.9%). About two-thirds of respondents (68.2%) were White and 21.7% were Black/African American.

About 77% of survey respondents resided in the state of Minnesota (77.4%). About 5%came from Wisconsin (5.4%), and 5% came from North Dakota. The Minneapolis-St. Paul-Bloomington Core Based Statistical Area (CBSA) was home to 70.6% of survey respondents, followed by Duluth CBSA and Minot, ND CBSA.

Overall, more than half of survey respondents (53.7%) were residents living in the Minneapolis-Saint Paul metropolitan area (Table 12). More than 16% were visitors (i.e., those who traveled at least 50 miles to the metro area) who spent, or planned to spend, at least one night in the metro area (16.6%). Another 15.3% were visitors who did not spend, or plan to spend, overnight in the metro area.

Survey respondents had an average of 1.64 vehicles and 1.76 bicycles in their households.

Union Depot visitation

The three most frequently participated in activities at Union Depot were taking Amtrak, passing through, and taking the bus. The percentage of respondents taking the bus was significantly higher in quarter 1 than in the other three quarters. The percentage of respondents taking Amtrak was significantly higher in quarters 2 and 4 than in quarters 1 and 3. Picking up or returning a rental car was the least frequently participated in activity at Union Depot. Other activities that were rarely participated in included working at Union Depot, parking only, and attending an event.

For the entire sample and all four quarters, the most frequently identified primary destination was area residence. Shopping and visiting family were the least frequently identified primary destinations.

To get to Union Depot, driving, taking a bus, and walking were the most frequently used transportation modes, while biking, carpooling, and taking a taxi were the least frequently used. To leave Union Depot, driving, taking a train, and taking a bus were the three most frequently used transportation modes, while biking and carpooling were the least frequently used.

In terms of frequency of visiting Union Depot, the most frequently identified was two to six times in the current calendar year, followed by once in the current calendar year. The least frequently identified frequency of visiting was every day.

DISCUSSION

The fluctuations in user volume across the 12-month period may be due to three reasons: (1) the increase in travel that usually accompanies year-end holidays (quarter 3); (2) the tendency to walk indoors rather than outside during colder months (quarters 3 and 4); and (3) reduced travel by students over summer break (quarter 2).

In terms of respondents' characteristics, quarter 2 respondents were older, and there was a nominal increase in the percentage of respondents who were visitors (i.e., those who are not local residents) in the same quarter. It is possible that visitors in quarter 2 were older, while local users in the other three quarters tended to be younger. Regarding the ethnicity and race of Union Depot customers, when compared with the ethnic and racial composition of the county, city, and state, the facility served few Hispanic/Latinos but a large number of Black/African Americans. Additionally, Union Depot mainly served residents of the Twin Cities metropolitan area.

Union Depot survey respondents owned fewer vehicles in their households (an average of 1.64) than the national average (2.06). There is no recent and reliable population-level data on the average number of bicycles owned per household, making it difficult to compare survey findings to any relevant national trends.

Union Depot is mainly a place where people take Amtrak, pass through, or take a bus, in order to reach home, work/school, or other places. However, as no significant events occurred on survey days, it is likely that event attendees at Union Depot were underrepresented. While driving a vehicle was the most frequently identified mode to arrive at and leave Union Depot, it is not dominant. Survey respondents also took a bus, walked, rode a train, and took the light rail. In short, Union Depot has served as a multi-modal transportation hub for travelers with various travel purposes. At the same time, Union Depot tends not to serve travelers who would visit the facility frequently. The small percentage of high-frequency users may partially explain why user volume of the facility is not higher.

INTRODUCTION

In 2009, the Ramsey County Regional Railroad Authority (RCRRA) completed the purchase of Union Depot in Saint Paul, Minnesota. With federal and state funding, the restoration and renovation of Union Depot was completed in 2012. To understand user volume and customer experience at the Union Depot, RCRRA contacted the University of Minnesota Tourism Center to conduct a user count and customer survey from April 2015 to March 2016. This report presents the method and findings of the project.

METHODOLOGY

Trained staff conducted in-person and surveillance video counts of user volume from April 2015 to March 2016 when the K-12 school year was in session. Trained staff also administered on-site, in-person questionnaires to Union Depot users during the same period.

STUDY SETTING

Located in downtown Saint Paul, Union Depot is a 250,000 square foot rail station on 33 acres near the Mississippi River. It was originally completed in 1926 and fully restored during 2011-2012. As a major transportation center in the heart of the Twin Cities metropolitan area, Union Depot provides a wide range of transit options, including light rail and passenger rail, local and intercity bus, and automotive, bicycle, and pedestrian access. The facility is also a dynamic event venue and serves as an ongoing community space.

SAMPLING

Sampling for the user counts was designed to cover different areas of Union Depot from six o'clock in the morning to midnight on weekdays, Saturday, and Sunday. Based on discussion with RCRRA, trained staff either conducted in-person counting or viewed surveillance videos to count the number of people walking into Union Depot. User count in quarters 1 and 2 was completed with a combination of in-person counting and surveillance video footage viewing. To increase efficiency and reduce cost, surveillance video footage viewing was used exclusively for user count in quarters 3 and 4. RCRRA selected the following entries to include in user count: door 1, door 2, and the skyway entrance at the first level of the head house; door 3, door 7, and door 8 at the basement level of the head house; door 9, door 10, door 11, and door 12 at the sub-basement level of the Kellogg building. RCRRA selected these entries to exclude entrances used by de-boarding train and bus passengers.

Sampling for the customer survey was designed to reach the breadth of Union Depot visitors from six o'clock in the morning to midnight on weekdays. In each quarter, surveyors collected questionnaires throughout both the head house and the Kellogg building (rather than standing by any specific entries) in order to include as many types of Union Depot visitors as possible. In quarters 1 and 2, questionnaires were collected during a total of six days, covering two 18-hour periods. With cost savings from user count, questionnaires were collected during a total of 12 days, covering four 18-hour periods in quarters 3 and 4. Survey respondents must be at least 18 years old.

For both user count and the survey, days with significant event activity were avoided.

QUESTIONNAIRE

An onsite questionnaire was developed based on past research and with assistance from RCRRA. Questionnaire sections included the following: primary reason to visit Union Depot, primary trip destination, modes of transit used to get to and leave Union Depot, Union Depot visit frequency, and basic demographics (see Appendix).

CUSTOMER SURVEY RESPONSE RATE

Overall, surveyors obtained a total of 559 questionnaires, all collected when the K-12 school year was in session. About 55% of the questionnaires were obtained in the head house (55.6%) and the remaining 44.4% were obtained in the Kellogg building. Thirty percent of the questionnaires were obtained on Mondays, 13.6% on Tuesdays, 24.5% on Wednesdays, 18.4% on Thursdays, and 13.6% on Fridays.

Table 1: Response statistics of Union Depot customer survey

		All year	**Quarter 1**	**Quarter 2**	**Quarter 3**	**Quarter 4**
Sample size		559	96	86	225	152
Survey location	Head house	55.6%	50%	51.2%	60.0%	55.6%
	Kellogg building	44.4%	50%	48.8%	40.0%	44.4%
Survey day	Monday	29.9%	39.6%	30.0%	21.3%	36.7%
	Tuesday	13.6%	13.5%	18.6%	13.3%	11.1%
	Wednesday	24.5%	22.9%	47.7%	20.0%	18.9%
	Thursday	18.4%	13.5%	0%	62.0%	18.3%
	Friday	13.6%	10.4%	3.5%	17.8%	15.0%

ANALYSIS

Completed questionnaires were entered, cleaned, and checked in SPSS (version 23.0), a social science statistical analysis software program. The four quarterly data files were merged into one file for analysis, providing frequencies, means, medians, and standard deviations to describe the sample and provide information on variables of interest. Chi-square tests assessed quarterly differences in mode of transit used to get to and leave Union Depot, primary activity at Union Depot, user type, and demographic characteristics. Analysis of Variance (ANOVA) assessed quarterly differences in customer age and the number of vehicles and bicycles they owned.

User Count Results

User count results in both the head house (first level and basement level) and the Kellogg building are presented in Table 2. RCRRA selected the following entries to include in user count: door 1, door 2 and the skyway entrance at the first level of the head house; door 3, door 7, and door 8 at the basement level of the head house; door 9, door 10, door 11, and door 12 at the sub-basement level of the Kellogg building.

Based on user count results, calculation of Union Depot user volume for each of the four quarters is presented in Table 3. For each quarter, a discount was applied to the time period(s) when school was out of session. The discount was the percentage of survey respondents in that quarter who identified "work/school" as their primary destination. Based on the calculation for each quarter, an estimate of use volume for the four quarters and the entire 12-month period is presented in Table 4.

Quarter 3 (October through December) had the highest user volume, followed by quarter 4 (January through March) and quarter 1 (April through June). The second quarter (July through September) had the lowest user volume. The estimated user volume throughout the 12-month period, based on the user count at the selected entries, was 614,853. RCRRA selected these entries to exclude de-boarding train and bus passengers. As a result, the estimated user volume does not include de-boarding passengers. In other words, the total user volume at Union Depot would be higher if de-boarding passengers at Union Depot were included. Additionally, the days sampled for user count did not have any significant event activity. Therefore, the total user volume at Union Depot would be higher if event attendees at Union Depot were included.

Table 2: Union Depot user count results, by quarter

<table>
<tr><th colspan="2" rowspan="3"></th><th colspan="6">Head House</th><th colspan="4">Kellogg Building</th><th rowspan="3">Total number of daily users</th></tr>
<tr><th colspan="3">First Level</th><th colspan="3">Basement Level</th><th colspan="4">Sub-Basement Level</th></tr>
<tr><th>Sky way</th><th>Door 1</th><th>Door 2</th><th>Door 3</th><th>Door 7</th><th>Door 8</th><th>Door 9</th><th>Door 10</th><th>Door 11</th><th>Door 12</th></tr>
<tr><td rowspan="3">Quarter 1</td><td>Weekday</td><td>500</td><td>124</td><td>317</td><td>35</td><td>25</td><td>27</td><td>101</td><td>441</td><td>62</td><td>17</td><td>1,649</td></tr>
<tr><td>Saturday</td><td>41</td><td>344</td><td>326</td><td>23</td><td>17</td><td>9</td><td>17</td><td>169</td><td>420</td><td>109</td><td>1,475</td></tr>
<tr><td>Sunday</td><td>41</td><td>303</td><td>194</td><td>19</td><td>31</td><td>24</td><td>30</td><td>188</td><td>390</td><td>188</td><td>1,408</td></tr>
<tr><td rowspan="3">Quarter 2</td><td>Weekday</td><td colspan="2">402</td><td>311</td><td>36</td><td colspan="2">66</td><td>133</td><td>377</td><td>148</td><td>32</td><td>1505</td></tr>
<tr><td>Saturday</td><td colspan="3">760</td><td>30</td><td>50</td><td>44</td><td colspan="3">434</td><td>34</td><td>1352</td></tr>
<tr><td>Sunday</td><td>32</td><td>124</td><td>197</td><td>18</td><td colspan="2">47</td><td colspan="3">505</td><td>37</td><td>960</td></tr>
<tr><td rowspan="3">Quarter 3</td><td>Weekday</td><td>648</td><td>152</td><td>281</td><td>39</td><td>16</td><td>36</td><td>91</td><td>398</td><td>105</td><td>10</td><td>1776</td></tr>
<tr><td>Saturday</td><td>228</td><td>377</td><td>702</td><td>31</td><td>104</td><td>74</td><td>606</td><td>1001</td><td>399</td><td>194</td><td>3716</td></tr>
<tr><td>Sunday</td><td>167</td><td>527</td><td>781</td><td>57</td><td>19</td><td>30</td><td>181</td><td>649</td><td>281</td><td>99</td><td>2791</td></tr>
<tr><td rowspan="3">Quarter 4</td><td>Weekday</td><td>665</td><td>196</td><td>463</td><td>62</td><td>19</td><td>36</td><td>109</td><td>428</td><td>80</td><td>22</td><td>2080</td></tr>
<tr><td>Saturday</td><td>307</td><td>155</td><td>439</td><td>34</td><td>32</td><td>36</td><td>109</td><td>327</td><td>90</td><td>21</td><td>1550</td></tr>
<tr><td>Sunday</td><td>161</td><td>191</td><td>369</td><td>39</td><td>20</td><td>31</td><td>97</td><td>393</td><td>148</td><td>64</td><td>1513</td></tr>
</table>

Table 3: Union Depot user volume, by quarter

		Weekday	Saturday	Sunday
When school is in session				
Quarter 1	Number of users daily	1,649	1,475	1,408
	Number of days April-mid June	54	11	11
	Estimated number of users April-mid June	**89,046**	**16,225**	**15,488**
Quarter 2	Number of users daily	1,505	1,352	960
	Number of days Sep 8 – 30	17	3	3
	Estimated number of users Sep 8 – 30	**25,585**	**4,056**	**2,880**
Quarter 3	Number of users daily	1,776	3,716	2,791
	Number of days October 1 – December 18	57	11	11
	Estimated number of users October 1 – December 18	**101,232**	**40,876**	**30,701**
Quarter 4	Number of users daily	2,080	1,550	1,513
	Number of days January 19 – March 13 & March 21 – 31	48	10	10
	Estimated number of users January 19 – March 13 & March 21 –31	**99,840**	**15,500**	**15,130**
When school is out of session				
		Weekday	Saturday	Sunday
Quarter 1	Number of users daily	1,649	1,475	1,408
	Number of days second half of June	11	2	2
	Estimated number of users second half of June[1]	**15,599**	**2,537**	**2,421**
Quarter 2	Number of users daily	1,505	1,352	960
	Number of days July 1 – Sep 7[2]	48	10	11
	Estimated number of users July 1 – Sep 7[3]	**60,031**	**11,775**	**9,198**
Quarter 3	Number of users daily	1,776	3,716	2,791
	Number of days December 19 – December 31	9	2	2
	Estimated number of users December 19 – December 31[4]	**12,212**	**5,678**	**4,265**
Quarter 4	Number of users daily	2,080	1,550	1,513
	Number of days January 1 – 18 & March 14 – 20[5]	16	4	3
	Estimated number of users January 1 – 18 & March 14 – 20[6]	**24,461**	**4,557**	**5,560**

[1] *A 14.1% discount is applied, as 14% of first quarter survey respondents identified work/school as their primary destination.*
[2] *Labor Day (September 7) is counted as a Sunday, rather than a Monday.*
[3] *A 16.9% discount is applied, as 16.9% of second quarter survey respondents identified work/school as their primary destination.*
[4] *A 23.6% discount is applied, as 23.6% of third quarter survey respondents identified work/school as their primary destination.*
[5] *January 1 (Friday) was counted as Sunday, as it was a national holiday.*
[6] *A 26.5% discount is applied, as 26.5% of fourth quarter survey respondents identified work/school as their primary destination.*

Table 4: Estimated number of Union Depot users, total and by quarter

		Weekday	Saturday	Sunday	**Total**
Quarter 1	When school is in session	89,046	16,225	15,488	**141,316**
	When school is out of session	15,599	2,537	2,421	
Quarter 2	When school is in session	25,585	25,585	25,585	**131,525**
	When school is out of session	4,056	4,056	4,056	
Quarter 3	When school is in session	101,232	101,232	101,232	**194,964**
	When school is out of session	40,876	40,876	40,876	
Quarter 4	When school is in session	99,840	99,840	99,840	**165,048**
	When school is out of session	15,500	15,500	15,500	
Estimated total number of users April 2015 – March 2016					***614,853***

Customer Survey Results

RESPONDENTS

Demographics

Overall, 46.1% of survey respondents were female and 53.9% were male (Table 5). Across the four quarters, the percentage of respondents who were female ranged from 40.4% to 47.7% and for males ranged from 52.3% to 59.6%. There was no quarterly difference in gender composition of survey respondents (χ^2=1.49, p=0.684; Table 5).

Table 5: Gender of Union Depot customer survey respondents, by quarter

	Percentage		**Statistics**	
	Female	**Male**	**χ^2**	**Sig.**
Quarter 1 (n=94)	40.4%	59.6%	1.49	0.684
Quarter 2 (n=84)	46.4%	53.6%		
Quarter 3 (n=218)	47.7%	52.3%		
Quarter 4 (n=149)	47.0%	53.0%		
All-year (n=545)	46.1%	53.9%	--	

The average age of all survey respondents was 44.03 (*SD*=17.02; Table 6). Across the four quarters, respondents' average age differed significantly (F=5.29, p<0.005), ranging from 42.09 to 50.75 (Table 6). Specifically, the average age of second quarter respondents was significantly older than that of the other three quarters.

Table 6: Union Depot customer survey respondents' age, by quarter

	ANOVA			
	Mean	Standard deviation	*F*	Sig.
Quarter 1 (n=95)	43.34_{a}	17.07	5.29	<0.005
Quarter 2 (n=80)	50.75_{abc}	17.56		
Quarter 3 (n=216)	42.09_{c}	16.43		
Quarter 4 (n=146)	43.66_{b}	17.02		
All-year (n=537)	44.03	17.02	--	

Note: Means with pairing subscripts within rows are significantly different at the p<0.05, based on Bonferroni post hoc paired comparisons.

The pre-tax household income of survey respondents varied. Almost 32% of respondents (31.9%) had a household income of $25,000 or less, while 27.3% had a household income over $75,000 (Table 7). Close to 25% of respondents (24.4%) had a household income between $25,001 and $50,000, and the remaining 16.4% had a household income between $50,001 and $75,000.

Across the four quarters, the percentage of respondents in various income ranges differed significantly (χ^2=24.17, p<0.005; Table 7). Close to half of first quarter respondents (48.9%) had a household income of $25,000 or less, while fewer than 30% of quarter 3 (27.5%) and quarter 4 (25.9%) respondents did. Meanwhile, 31% of quarter 3 respondents came from households with over $75,000 in annual income, but only 17.8% of quarter 1 respondents did. Regarding the $25,001-$50,000 income range, no more than 20% of quarter 1 (20%) and quarter 2 (17.8%) respondents came from this income range, while 29% of quarter 3 respondents did. Lastly, only 13.3% of quarter 1 and 12.4% of quarter 3 respondents had a household income between $50,001 and $75,000, but more than 20% of quarter 2 (20.5%) and quarter 4 (21.6%) respondents did.

Table 7: Percentage of Union Depot customer survey respondents in pre-tax income groups, by quarter

	Statistics					
	$25,000 or less	$25,001-$50,000	$50,001-$75,000	Over $75,000	χ^2	Sig.
Quarter 1 (n=90)	48.9%	20.0%	13.3%	17.8%	24.17	<0.005
Quarter 2 (n=73)	34.2%	17.8%	20.5%	27.4%		
Quarter 3 (n=193)	27.5%	29.0%	12.4%	31.1%		
Quarter 4 (n=139)	25.9%	24.5%	21.6%	28.1%		
All year (n=495)	31.9%	24.4%	16.4%	27.3%	--	

Overall, 43.7% of survey respondents had a bachelor's degree or higher (Table 8). Twenty-eight percent graduated high school or had some high school education, and another 28.3% had either some college education or an associate's degree.

Respondents' education level differed significantly across the four quarters (χ^2=14.38, p<0.05; Table 8). While 41.9% of quarter 1 respondents graduated high school or had some high school education, between 44% and 50% of respondents had a bachelor's degree or higher in quarters 2 through 4.

Table 8: Educational level of Union Depot customer survey respondents, by quarter

	Statistics				
	High school or less	Some college or Associate college degree	BA/BS or higher	χ^2	Sig.
Quarter 1 (n=93)	41.9%	28.0%	30.1%	14.38	<0.05
Quarter 2 (n=84)	26.2%	29.8%	44.0%		
Quarter 3 (n=220)	24.5%	30.5%	45.0%		
Quarter 4 (n=150)	25.3%	24.7%	50.0%		
All year (n=547)	28.0%	28.3%	43.7%	--	

Ethnically, 95.9% of the respondents were of non-Hispanic and non-Latino background (Table 9). While a small sample size of non-white respondents prohibited statistical comparison, some nominal differences are noted. More than 5% of quarter 1 (7.7%) and quarter 3 (5.6%) respondents were Hispanic/Latino, while about 1.5% of quarter 2 and quarter 4 respondents were.

Table 9: Ethnic composition of Union Depot customer survey respondents, by quarter

	Percentage		Statistics[1]	
	Hispanic/Latino	Non-Hispanic/ Non-Latino	χ^2	Sig.
Quarter 1 (n=78)	7.7%	92.3%	--	--
Quarter 2 (n=66)	1.5%	98.5%		
Quarter 3 (n=179)	5.6%	94.4%		
Quarter 4 (n=138)	1.4%	98.6%		
All year (n=461)	4.1%	95.9%	--	

[1]No statistical comparison was performed, as some cell sizes are too small.

Across the 12-month period, 68.2% of survey respondents were White and 21.7% were Black/African American (Table 10). More than 3% were Asian (3.9%) or American Indian/Alaska Native (3.2%). Only 0.4% were Native Hawaiian/other Pacific Islander, and 1.6% self-identified as "other."

Across the four quarters, there was no significant difference in the percentage of respondents who were White (χ^2=4.61, p=0.203; Table 10) or Black/African American (χ^2=6.76, p=0.08).

Table 10: Racial composition of Union Depot customer survey respondents, by quarter

	Percentage					Statistics[1]	
	Quarter 1 (n=96)	Quarter 2 (n=86)	Quarter 3 (n=223)	Quarter 4 (n=152)	All year (n=557)	χ^2	Sig.
Native Hawaiian/Other Pacific islander	0.0%	0.0%	0.4%	0.7%	0.4%	--	--
American Indian or Alaska Native	1.0%	4.7%	3.1%	3.9%	3.2%	--	--
Asian	3.1%	1.2%	5.8%	3.3%	3.9%	--	--
Black/African-American	27.1%	27.9%	21.1%	15.8%	21.7%	6.76	0.080
White	64.6%	67.4%	65.5%	75.0%	68.2%	4.61	0.203
Other	2.1%	1.2%	2.7%	0.0%	1.6%	--	--

[1]No statistical comparison was performed where cell sizes are too small.

Primary residence

About 77% of survey respondents (77.4 percent; Table 11) resided in the state of Minnesota, as indicated by a centroid analysis of zip codes of respondents' primary residence (with Union Depot as the center of the distribution; Figure 1). About 5% of respondents came from Wisconsin (5.4%) and another 5% from North Dakota. Close to 2% of respondents came from Illinois (1.8%) and Montana (1.6%).

The Minneapolis-St. Paul-Bloomington Core Based Statistical Area (CBSA), which encompasses an 11-county area in Minnesota and Wisconsin, was home to 70.6% of survey respondents (Table 11; Figure 2). Duluth CBSA and Minot, North Dakota CBSA were each home to 1.8% of respondents.

Table 11: Primary place of residence of Union Depot customer survey respondents (n=387)

Top states		Top Core Based Statistical Areas (CBSA)	
State	Percent (%)	CBSA	Percent (%)
Minnesota	77.4	Minneapolis-St. Paul-Bloomington, MN-WI	70.6
Wisconsin	5.4	Duluth, MN-WI	1.8
North Dakota	5.0	Minot, ND	1.8
Illinois	1.8	Chicago-Naperville-Elgin, IL-IN-WI	1.4
Montana	1.6		

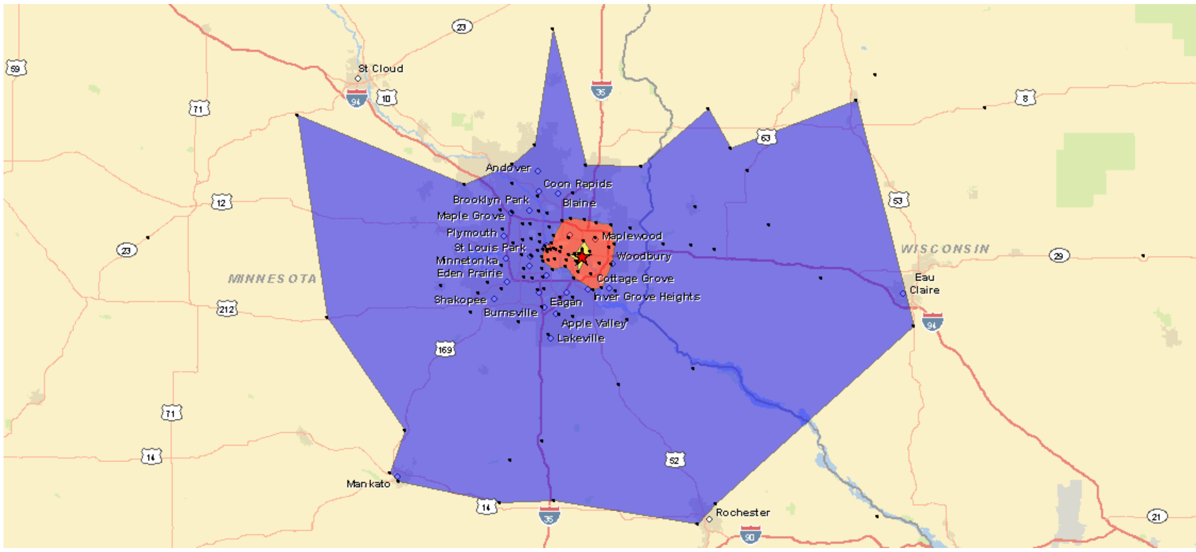

Fig. 1: Full trade area map of Union Depot customer survey respondents

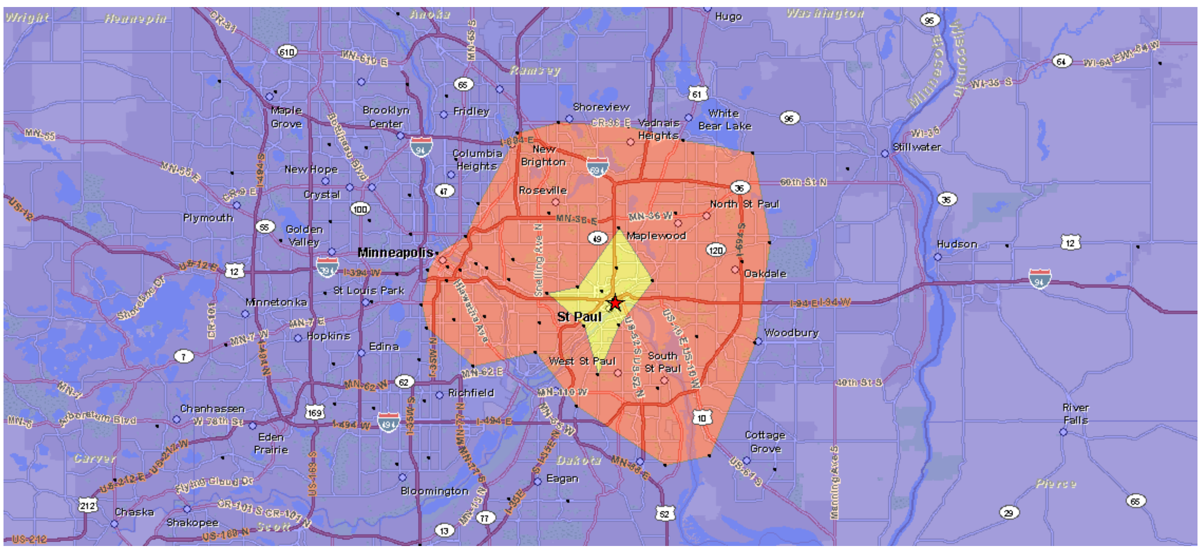

Fig. 2: Zoomed trade area map of Union Depot customer survey respondents

Type of visitors

Overall, more than half of survey respondents (53.7%) were residents living in the Minneapolis-Saint Paul Metropolitan area (Table 12). More than 16% were visitors (i.e., those who traveled at least 50 miles to get to the metro area) who spent, or planned to spend, at least one night in the metro area (16.6%). Another 15.3% were visitors who did not spend, or plan to spend, overnight in the metro area. More than 14% of respondents (14.4%) lived in the metro area but spent overnight away from home.

There was no significant difference in the percentage of respondents categorized as different visitor types across the four seasons (χ^2=7.19, p=0.618; Table 12).

Table 12: Type of visitors among Union Depot customer survey respondents, by quarter

	Percentage					Statistics[1]	
	Quarter 1 (n=91)	Quarter 2 (n=83)	Quarter 3 (n=218)	Quarter 4 (n=150)	All year (n=542)	χ^2	Sig.
Overnight visitors	13.2%	24.1%	15.6%	16.0%	16.6%	7.19	0.618
Day-trip visitors	15.4%	15.7%	13.3%	18.0%	15.3%		
Locals spending overnight away from home	14.3%	13.3%	16.5%	12.0%	14.4%		
Locals	57.1%	47.0%	54.6%	54.0%	53.7%		

Availability of vehicles and bicycles in household

Overall, the average survey respondent had between one and two vehicles in his/her household (M=1.64, SD=1.15), and there was no significant difference across the four quarters (F=2.32, p=0.075; Table 13). Additionally, the average respondent had between one and two bicycles in his/her household (M=1.76, SD=1.53), and there was no significant difference across the four quarters (F=1.20, p=0.310; Table 14).

It is worth noting that 16.3% of respondents did not indicate the number of household vehicles, and 38.8% did not answer the question about the availability of bicycles in his/her household. It is possible respondents who did not have a vehicle or bicycle did not answer the question(s) rather than writing down zero. Therefore, it is likely the average number of vehicles and bicycles available in households, should all respondents have answered the question(s), is lower than current findings.

Table 13: Availability of vehicles in Union Depot customer survey respondents' households, by quarter

	ANOVA			
	Mean	Standard deviation	F	Sig.
Quarter 1 (n=83)	1.43	1.18	2.32	0.075
Quarter 2 (n=74)	1.46	1.11		
Quarter 3 (n=179)	1.76	1.12		
Quarter 4 (n=130)	1.71	1.16		
All-year (n=466)	1.64	1.15	--	

Table 14: Availability of bicycles in Union Depot customer survey respondents' households, by quarter

	ANOVA			
	Mean	Standard deviation	F	Sig.
Quarter 1 (n=62)	1.55	1.54	1.20	0.310
Quarter 2 (n=55)	1.56	1.36		
Quarter 3 (n=124)	1.93	1.71		
Quarter 4 (n=100)	1.79	1.38		
All-year (n=341)	1.76	1.53	--	

UNION DEPOT VISITATION

Activities at Union Depot

Overall, the three most frequently participated in activities at Union Depot were taking Amtrak, passing through, and taking the bus (Table 15). In quarter 1, the three most frequently participated in activities were taking the bus, passing through, and taking Amtrak. In quarters 2 and 3, they were taking Amtrak, passing through, and taking the bus. In quarter 4, they were taking Amtrak, passing through, and other activities. Picking up or returning a rental car was the least frequently participated in activity at Union Depot. Other activities that were rarely participated in included working at Union Depot, parking only, and attending an event.

Across the four quarters, there were significant differences in the percentage of survey respondents who took the bus (χ^2=11.01, p<0.05) or Amtrak (χ^2=23.60, p<0.0005; Table 15). The percentage of respondents taking the bus was higher in quarter 1 than the other three quarters. The percentage of respondents taking Amtrak was higher in quarters 2 and 4 than in quarters 1 and 3. There was no significant difference in the percentage of survey respondents who passed through Union Depot across the four quarters (χ^2=1.85, p=0.604).

Table 15: Activities customer survey respondents did at Union Depot, by quarter

	Percentage					Statistics[1]	
	Quarter 1 (n=96)	Quarter 2 (n=86)	Quarter 3 (n=223)	Quarter 4 (n=152)	All year (n=557)	χ^2	Sig.
Take the bus	24.0%	16.3%	15.7%	8.6%	15.3%	11.01	0.012
Pass through	21.9%	22.1%	19.7%	25.7%	22.1%	1.85	0.604
Take Amtrak	20.8%	38.4%	27.4%	46.7%	33.2%	23.60	<0.0005
Take the Light Rail	10.4%	8.1%	7.2%	2.0%	6.5%	--	--
Other	9.4%	7.0%	12.6%	12.5%	11.1%	--	--
Pick up somebody or something	6.3%	5.8%	4.0%	2.6%	4.3%	--	--
Get food	3.1%	5.8%	8.1%	5.3%	6.1%	--	--
Drop off somebody or something	3.1%	3.5%	1.3%	2.6%	2.3%	--	--
Attend an event	3.1%	2.3%	0.9%	1.3%	1.6%	--	--
Parking only	2.1%	1.2%	1.3%	2.0%	1.6%	--	--
Work at Union Depot	1.0%	2.3%	1.9%	2.0%	3.1%	--	--
Get or return a rental car	0.0%	0.0%	0.9%	0.0%	0.4%	--	--

[1]No statistical comparison was performed where cell sizes are too small.

Primary destination

The most frequently identified primary destination was area residence for all respondents across all four quarters (Table 16). Two other frequently identified primary destinations included “other” and work/school. Shopping and visiting family were the least frequently identified primary destinations.

Table 16: Primary destination of Union Depot customer survey respondents, by quarter

	Percentage					Statistics[1]	
	Quarter 1 (n=78)	Quarter 2 (n=59)	Quarter 3 (n=157)	Quarter 4 (n=113)	All year (n=407)	χ^2	Sig.
Area residence	30.8%	30.5%	33.1%	38.1%	33.7%	--	--
Other	19.2%	22.0%	15.3%	20.4%	18.4%		
Work/school	14.1%	16.9%	23.6%	26.5%	21.6%		
Restaurant	14.1%	8.5%	6.4%	0.0%	6.4%		
Event	9.0%	6.8%	5.7%	4.4%	6.1%		
Business	6.4%	11.9%	10.2%	8.8%	9.3%		
Visit family	3.8%	1.7%	1.9%	0.0%	1.7%		
Shopping	2.6%	1.7%	3.8%	1.8%	2.7%		

[1]No statistical comparison was performed as some cell sizes are too small.

Transit modes used for the trip

Driving was the most frequent transit mode to get to Union Depot for all respondents across all four quarters (Table 17). Two other frequently used transit modes were bus and walking. Bus was the second most frequently used transit mode in quarters 1 and 2 and third most frequently used in quarters 3 and 4. Train was the third most frequently used in quarter 1 and fourth most frequently used in quarters 2 and 3. Walking was the second most frequently used in quarters 3 and 4. Dropping off was the second most frequently used in quarter 2 and third most frequently used in quarter 4.

The three least frequently used transit mode for the entire sample and each of the four quarters were biking, carpooling, and taking a taxi (Table 17).

Across the four quarters, there was no significant difference in the percentage of respondents who drove (χ^2=4.14, p=0.247), took the bus (χ^2=2.11, p=0.550), took the light rail (χ^2=1.87, p=0.599), or took a taxi (χ^2=0.978, p=0.807) to get to Union Depot (Table 17).

Driving, taking a train, and taking a bus were the three most frequently used transit modes to leave Union Depot for the entire sample and in quarters 2 through 4 (Table 18). In quarter 1, the three most frequently used were taking a bus, driving, and taking a train. Across all four quarters and the entire sample, the fourth most frequently used transit mode to leave Union Depot was walking.

Biking and other modes of transit were the least frequently used among all respondents and across all four quarters (Table 18). Dropping off was rarely used in quarter 1, and carpooling was rarely used in quarter 4.

There was a significant difference in the percentage of respondents who left Union Depot by taking a bus (χ^2=11.96, p<0.005; Table 18). While 29.2% of quarter 1 respondents left Union Depot by taking a bus, no more than 17% in the other three quarters did. There was no significant difference, on the other hand, in the percentage of respondents who left Union Depot by driving (χ^2=2.33, p=0.507), taking a train (χ^2=3.85, p=0.278), or taking the light rail (χ^2=1.05, p=0.789).

Table 17: Transit mode used to get to Union Depot by customer survey respondents, by quarter

	Percentage					Statistics[1]	
	Quarter 1 (n=96)	Quarter 2 (n=86)	Quarter 3 (n=223)	Quarter 4 (n=152)	All year (n=557)	χ^2	Sig.
Drive	21.9%	31.4%	32.7%	32.2%	30.5%	4.14	0.247
Bus	19.8%	20.9%	15.7%	15.1%	17.1%	2.11	0.550
Train	15.6%	10.5%	15.2%	9.9%	13.1%	--	--
Light rail	15.6%	9.3%	11.7%	13.2%	12.4%	1.87	0.599
Walk	12.5%	7.0%	21.1%	17.1%	16.3%	--	--
Drop off	7.3%	19.8%	8.5%	15.1%	11.8%	--	--
Taxi	5.2%	5.8%	4.5%	3.3%	4.5%	0.978	0.807
Carpool	4.2%	1.2%	4.0%	0.0%	2.5%	--	--
Bike	2.1%	0.0%	1.8%	0.7%	1.3%	--	--
Other	1.0%	3.5%	0.0%	1.3%	1.1%	--	--

[1]No statistical comparison was performed where cell sizes are too small.

Table 18: Transit mode used to leave Union Depot by customer survey respondents, by quarter

	Percentage					Statistics[1]	
	Quarter 1 (n=96)	Quarter 2 (n=86)	Quarter 3 (n=223)	Quarter 4 (n=152)	All year (n=557)	χ^2	Sig.
Bus	29.2%	14.0%	16.6%	13.2%	17.4%	11.96	0.008
Drive	26.0%	29.1%	31.4%	34.9%	31.1%	2.33	0.507
Train	15.6%	25.6%	25.1%	23.7%	23.2%	3.85	0.278
Walk	14.6%	8.1%	15.7%	13.2%	13.6%	--	--
Light rail	10.4%	7.0%	7.6%	7.2%	7.9%	1.05	0.789
Taxi	4.2%	9.3%	4.0%	3.9%	4.8%	--	--
Carpool	3.1%	3.5%	3.6%	1.3%	2.9%	--	--
Bike	2.1%	1.2%	1.8%	1.3%	1.6%	--	--
Drop off	2.1%	4.7%	3.1%	5.3%	3.8%	--	--
Other	1.0%	1.2%	0.9%	0.7%	0.9%	--	--

[1]No statistical comparison was performed where cell sizes are too small.

Frequency of Union Depot visitation

For the entire sample and across all four quarters, the most frequently identified frequency of visiting Union Depot was two to six times in the current calendar year, followed by once in the current calendar year (Table 19). For the entire sample, the third most frequently identified was weekly, but that finding varies across the four quarters—seven to 11 times for quarter 1, every day for quarter 2, weekly in quarter 3, and every weekday for quarter 4.

For the entire sample and quarter 1, the least frequently identified frequency of visiting Union Depot was every day (Table 19). It was every weekday for quarters 2 and 3 and seven to 11 times for quarter 4.

Table 19: Expected frequency of visiting Union Depot in the current calendar year by survey respondents, by quarter

	Percentage					Statistics[1]	
	Quarter 1 (n=96)	Quarter 2 (n=86)	Quarter 3 (n=223)	Quarter 4 (n=152)	All year (n=557)	χ^2	Sig.
Once	17.2%	34.9%	22.7%	21.4%	23.3%	--	--
Two to six times	35.5%	40.7%	33.8%	40.0%	36.9%		
Seven to 11 times	16.1%	5.8%	6.9%	3.4%	7.4%		
Monthly	15.1%	4.7%	10.6%	6.9%	9.4%		
Weekly	7.5%	5.8%	11.1%	11.0%	9.6%		
Every weekday	6.5%	0.0%	6.5%	11.7%	6.9%		
Every day	2.2%	8.1%	8.3%	5.5%	6.5%		

[1]No statistical comparison was performed, as some cell sizes are too small.

DISCUSSION

Focusing on user volume, characteristics of survey respondents, and Union Depot visitation, this section discusses implications of project findings.

User volume

Across the four quarters at Union Depot, fluctuations in user volume occurred. There are three possible reasons for such fluctuations. First, the year-end holidays (Thanksgiving, Christmas, New Year), which took place in quarter 3, usually cause a large increase in travelers across the country. Hence, the holidays may have contributed to the comparatively high user volume in quarter 3. Second, the colder months in Minnesota fell in quarters 3 and 4. People tend to walk inside rather than outside during colder months, which may have increased user volume during these two quarters. This is evidenced by a nominal increase in the percentage of survey respondents during quarter 4 whose main activity at Union Depot was passing through. Third, the majority of summer break took place in quarter 2. Students presumably do not travel to attend school during summer break, thus reducing user volume in quarter 2. In addition, it is worth reinforcing that user counts did not include de-boarding train and bus passengers or event attendees at Union Depot. Therefore, the total user volume at Union Depot is likely higher than current study findings.

Characteristics of survey respondents

Quarter 2 respondents were older than those in the other three quarters. This may be due to a nominal increase in the percentage of overnight visitors (coupled with a corresponding nominal decrease in the percentage of users who are local residents) compared to the other three quarters. In other words, travelers in quarter 2 may be comparatively older, while local users in the other three quarters tended to be younger.

Quarterly differences in respondents' household income and education level suggest that these two demographic characteristics relate to one another. Quarter 1 respondents were more likely to have graduated high school or received some high school education, and they were more likely to have a household income of $25,000 or less. On the other hand, respondents in quarter 2 and 4 were more likely to have a higher household income and higher education level.

In terms of the ethnic and racial composition of Union Depot users, survey respondents were predominantly non-Hispanic/non-Latino. For comparison purposes, the percentage of Hispanic/Latinos was 17.4% in the U.S., 5.1% in Minnesota, and 9.6% in the city of St. Paul (United States Census, 2016). Union Depot did serve, however, a large number of Black/African Americans—between 15.8% and 27.9% across the four quarters. Comparatively, the Black/African American population was 13.2% in the U.S., 5.9% in Minnesota, and 15.7% in St. Paul (United States Census, 2016).

Across the 12-month period, Union Depot mainly served residents of the Twin Cities metropolitan area. The percentage of respondents with zip codes in the metro area corresponded with the percentage of respondents who self-identified as metro area residents.

Compared to the national average, survey respondents owned fewer vehicles. In 2013, the average number of vehicles owned by a U.S. household was 2.06 (U.S. Department of Energy). Union Depot survey respondents, however, owned an average of 1.64 vehicles. They also owned an average of 1.76 bicycles per household. According to Pew Research Center (2015), 53% of U.S. households owned at least one bicycle. Since there is no recent and reliable population-level data on the average number of bicycles owned per household, it is difficult to compare survey findings to any national trends.

Union Depot visitation

Union Depot is mainly a place where people take Amtrak, pass through, or take a bus, in order to reach home, to go to work/school (or other places). However, since there were no significant events taking place on any of the survey days, it is likely that event attendees at Union Depot were underrepresented. While driving a vehicle was the most frequently identified way to reach Union Depot, it is not dominant. A variety of other modes of transportation was also used, including taking a bus, walking, riding a train, and taking the light rail. These findings, taken together, indicate that Union Depot has served as a multi-modal transportation hub for travelers with various travel purposes. At the same time, it tends not to serve frequent travelers to the facility. Perhaps because of this, about 60% of survey respondents did not expect to visit Union Depot more than six times a year, and only 23% expected to visit it at least weekly or more frequently. The small percentage of high-frequency users may partially explain why user volume of the facility is not higher.

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APPENDIX A:

UNION DEPOT CUSTOMER SURVEY

What mode of transit did you use to <u>get to</u> Union Depot today? (<u>Check all that apply</u>)
☐ Walk ☐ Bike ☐ Drive ☐ Carpool ☐ Bus ☐ Train ☐ Light rail
☐ Taxi ☐ Drop off ☐ Other (specify): ____________

What mode of transit will you use when you <u>leave</u> Union Depot today? (<u>Check all that apply</u>)
☐ Walk ☐ Bike ☐ Drive ☐ Carpool ☐ Bus ☐ Train ☐ Light rail
☐ Taxi ☐ Drop off ☐ Other (specify): ____________

What will you be doing at Union Depot today? (<u>Check all that apply</u>)
☐ Take the bus ☐ Take Amtrak ☐ Take the Light Rail ☐ Get or return a rental Car
☐ Pass through ☐ Attend an event ☐ Get food ☐ Parking only
☐ Work at Union Depot ☐ Other (specify):_______________

Did you travel 50 miles or more to get to the Minneapolis-Saint Paul Metropolitan area? ☐ Yes ☐ No

Did you or do you plan to spend at least one night in Minneapolis-Saint Paul Metropolitan area, away from your primary residence?
☐ Yes ☐ No

If you are passing through or parking only, what is your <u>primary</u> destination? (<u>Check only 1</u>)
☐ Work/school ☐ Area residence ☐ Restaurant ☐ Business
☐ Shopping ☐ Event (specify event location): ______________ ☐ Other (specify): ____________

How often do you expect to visit Union Depot this calendar year?
☐ Once ☐ Two to six times ☐ Seven to eleven times ☐ Monthly ☐ Weekly
☐ Every weekday ☐ Every day

Finally, a few questions about you.

In what year were you born? 19_________

What is the ZIPCODE of your primary residence? ______________

What is your gender? ☐ Female ☐ Male ☐ Prefer not to answer

What is the highest level of education that you have completed?
☐ Less than high school ☐ High school graduate (or GED) ☐ Some college
☐ Associate college degree ☐ BA or BS degree ☐ Post graduate or professional school

Please give us an estimate of your annual household income, before taxes:
☐ $25,000 or less ☐ $25,001 - $50,000 ☐ $50,001 - $75,000 ☐ $75,001 - $100,000
☐ $100,001 - $125,000 ☐ $125,001 - $150,000 ☐ $150,001 - $175,000 ☐ Over $175,000

What is your ethnic origin? (<u>Check only 1</u>) ☐ Hispanic/Latino ☐ Non-Hispanic/Non-Latino

What is your race? (<u>Check all that apply</u>)
☐ American Indian or Alaska Native ☐ Black or African-American ☐ White ☐ Asian
☐ Native Hawaiian or Other Pacific Islander ☐ Other (specify): __________________

How many of the following does your household own or lease: Vehicle _________ Bicycle _________________

Thank you for your participation!

For administrative purposes only:
Date: ____ /_____ Day of week: _______ Time: __________ am/pm Survey location: __________________