PRINCETON UNIVERSITY

Princeton, New Jersey

DINKY Survey Results

January 2007



1600 Market Street, 26th Floor Philadelphia, Pennsylvania 19103-7219

Executive Summary

A survey of the ridership of the Dinky train between Princeton University Station and Princeton Junction was conducted on 24, 25, and 28 October 2006. The survey questions were developed by Princeton University, New Jersey Transit, and Princeton's consultants for transportation, *CHANCE Management Advisors, Inc.* Riders traveling eastbound and westbound were surveyed between the hours of 5:00 a.m. and 7:00 p.m. on weekdays, and 7:00 a.m. to 5:00 p.m. on Saturday.

The ridership eastbound on the Dinky totaled 754 passengers on Tuesday, 838 on Wednesday, and 492 on Saturday. Traveling westbound, passengers totaled 636 on Tuesday, 658 on Wednesday, and 305 on Saturday. An average of 67 percent of the eastbound riders responded to the survey during weekdays, and 57 percent responded on Saturday. For the westbound riders, an average of 73 percent responded during the weekdays and 63 percent responded on Saturday. Over the time period of the survey, the response rate closely mirrored the actual passenger volumes, which contributes to the validity of the results of the survey.

While many of the questions were identical for eastbound and westbound riders, there were several questions specifically oriented toward those who were traveling in one direction or the other. Where appropriate, these differences are noted in the summary of the results below.

The zip code most often listed as the origin location for the eastbound trip during weekdays was 08540 (Princeton). On Saturday, this ZIP code was slightly surpassed by code 08544 (Princeton University) as the origin for eastbound trips. For those individuals traveling westbound on the Dinky, the question asked the final destination zip code of the trip. The zip code most often mentioned was 08540, followed by 08544. On Saturday, the most indicated destination zip code was 08542 (Princeton), followed by 08544.

For eastbound riders, the mode of travel overwhelmingly selected for the post-Dinky trip was New Jersey Transit to New York Pennsylvania Station. An average of 56 percent of the eastbound riders planned to head toward this station, while 16 percent were going to Newark's Pennsylvania Station, and 14 percent were going on a New Jersey Transit train to another destination. On Saturday, the pattern was much the same. For those traveling westbound, an average of 52 percent had taken New Jersey Transit from New York Pennsylvania Station to Princeton Junction, and were then heading westbound on the Dinky. Nineteen percent arrived at Princeton Junction by another New Jersey Transit train, and 16 percent arrived from Pennsylvania Station in Newark. Patterns were much the same on Saturday. Thus the overwhelming route to and from the Dinky was New Jersey Transit to or from Pennsylvania Station in New York.

During the weekdays, nearly 60 percent of those riding eastbound on the Dinky were not affiliated with Princeton University. On Saturday, 42 percent were not affiliated with Princeton, and 24 percent of the total riders were Princeton undergraduates. For those riding westbound to the Dinky station at Princeton University, approximately 53 percent of the total riders were not affiliated with the University, approximately 10 percent were faculty members, and another 10 percent, on average, were staff members. Of those riding westbound on Saturday, nearly 50 percent of the total riders were not affiliated with the University, and the remainder a mix of faculty, "other", and graduate students.

When asked how often they used the Dinky, an average of 42 percent of the weekday eastbound riders said they used the Dinky more than four times per week. Another 27 percent indicated they rode this service one to three times per week. Those who rode on Saturdays were much less likely to be regular commuters. Forty-three percent of the Saturday eastbound riders indicated they rode one to three times per month, while only six percent said they rode more than four times per week. Those riders traveling westbound were less frequent in their use of the Dinky. An average of 36 percent rode more than four times per week, with 29 percent riding one to three times per week. The westbound riders on Saturday were less likely to answer the question, but 36 percent indicated they only rode one to three times per month. Only five percent rode more often than four times a week.

For eastbound weekday riders, the most common cited purpose for the trip was non-University activity. An average of 50 percent indicated a non-University purpose. Only 15 percent of the riders on average stated they had a University related reason for the eastbound commute. On Saturday, the most common

reason for the trip was shopping and recreation (33 percent), followed by personal business (24 percent). For westbound riders, 34 percent of the weekday riders had a non-University purpose, while 30 percent had a University related reason to be on the Dinky. On Saturday, ridership was very splintered, with shopping and recreation indicated for 15 percent of the trips, personal business for 14 percent, and a campus visit for 13 percent.

Those riding the Dinky eastbound during the week primarily walked to the station to take the train. An average of 45 percent of the riders indicated that they walk to the station, while 28 percent indicated that they drove a "single passenger vehicle", and 10 percent were dropped off by another driver. On Saturday, 70 percent of the riders walked to the station, with only eight percent driving alone, five percent dropped off, five percent biking, and four percent coming by carpool. For the westbound riders the question was slightly different, asking how the riders would leave the Princeton Dinky station. Of those riding westbound, 61 percent indicated they would walk from the station to their eventual destination, while 17 percent would drive alone, five percent would bike, and five percent would be picked up. On Saturday, 61 percent were walking, while only one percent was driving alone, seven percent of the riders were planning to be picked up, four percent were biking, three percent were taking a shuttle, and three percent were taking a taxi.

When the eastbound drivers were asked where they parked if they drove to the Dinky station, during the weekday the most common answer was on-street meters, followed by the Dinky permit lot. Other minor locations included campus lots, the campus garage, and unmetered on-street spaces. On Saturday, the most common location was again on-street meters, followed by the Dinky permit lot and unmetered on-street spaces. For those traveling westbound, the most common parking location was on-street meters, followed by the Dinky permit lot. It was assumed that these westbound riders were returning to the Princeton University station. On Saturday, however, there were very few individuals who indicated any parking location relative to the Princeton University station.

Riders were asked to give their ages in order to provide some demographic data on ridership. However, the data are unreliable for several reasons. First, there are a considerable number of riders under the age of 11, with an average of eight percent listed as less than five years old. There were also high percentages of individuals who were not willing to list their ages.

For those driving to the Dinky station, the most common direction from which they drove was the north. Likewise, for those westbound riders leaving the Dinky station, most were traveling north to their final destination. Additional detail may be found for some answers concerning actual street routes, but incomplete and sloppy writing in the survey boxes makes it difficult to analyze these data effectively. For those taking the eastern Dinky route, 87 percent drove to the station from the north on Tuesday and 94 percent drove from the north on Wednesday. On Saturday, the percent declined to 85 percent. But clearly, the direction of origin for drivers who go to the Dinky station is from the north. For westbound riders the eventual destination in the north was stated by 96 percent of the drivers on Tuesday and 88 percent on Wednesday. The sample was too small on Saturday to analyze.

Of those interviewed who walked to the Dinky station to take an eastbound trip, almost half were unaffiliated with the University. The next most common riders were graduate students, followed by staff, faculty, and undergraduates. On Saturday, the unaffiliated percent dropped to 33 percent, while 34 percent of those walking to the station were undergraduates. Another 17 percent of the walkers were graduate students, and five percent were University staff. Thus during the weekday, those walking to the station were almost evenly split between University personnel and those not affiliated with the University, while on Saturday the largest percent of users were affiliated with Princeton University. The patterns for those walking from the station after the westbound travel were very similar.

Ridership

754 passengers were observed traveling eastbound on the train on Tuesday, while 838 were observed on Wednesday. On the westbound trains, 636 and 658 passengers were observed on Tuesday and Wednesday, respectively. In comparison, the volumes were much smaller on Saturday, resulting in 492 and 305 passengers being observed in the east and west directions of travel, respectively.

Survey Response Rates

Of weekday passengers, on average, 67 percent chose to participate in the survey in the eastbound direction and 73 percent in the westbound. During the weekend, 57 percent participated in the eastbound direction and 63 percent in the westbound direction.

The tables below relate these two important set of figures and contrast them to inform the rest of the memorandum.

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TABLE 1: Eastbound DINKY Response Rates

Easthound	Response	Passenger	Response
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TABLE 2: Westbound DINKY Response Rates

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Survey	Count	Gount	Rate
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Survey Results

The above mentioned ridership populations and sample sizes have statistical confidence levels that support all the inferences made from the data. TABLES 3 and 4 below present these confidence levels for each time period surveyed.

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TABLE 3: Eastbound DINKY Statistical Confidence Level by Day

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TABLE 4: Westbound DINKY Statistical Confidence Level by Day

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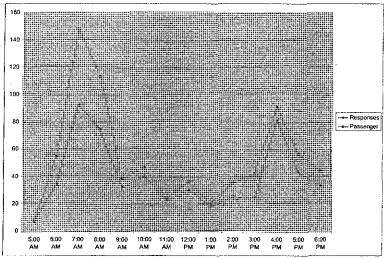
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When analyzing data of this nature, it is also important to understand the behavior of the response set over time. A large enough sample is not only needed to make the observations valid, but this validity also needs to carry through the entire survey period. In order for any extrapolations based on these data to be valid, they need to be statistically significant throughout the entire survey and not be weighted by the behavior of a specific time period or passenger type.

Over the time period of the survey, the sample, or response rate, closely mirrors the actual passenger volume. FIGURES 1 through 6 depict these relationships for each of the survey days and directions.

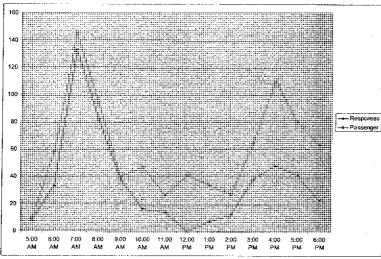
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FIGURE 1: Tuesday Eastbound Survey



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FIGURE 2: Wednesday Eastbound Survey

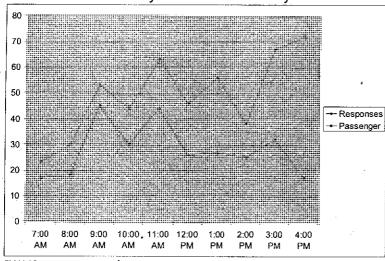


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NOTE: Due to the overwhelming and unexpected response rate experienced, the surveyors ran out of forms to be completed on the 12:01 p.m., 12:37 p.m., and 1:00 p.m. trains. Additional forms were made available subsequent to the 1:00 p.m. train and the surveying resumed.

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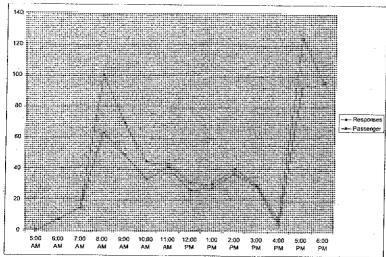
FIGURE 3: Saturday Eastbound Survey



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NOTE: The Saturday surveying occurred just subsequent to the Princeton Open House on the Master Plan. At the Open House, the possibility of moving the station southward by approximately 500 feet was mentioned, and the reasons given for this possibility explained. Saturday's survey efforts were perceived by an un-quantified but vocal segment of the riding public as an attempt to validate a move or change in the quality and type of service provided by the DINKY. These people refused to participate and encouraged other riders to do the same. Posters and signs to this effect were posted at the stations. Due to this, hourly analysis, if desired, needs to be qualified as having larger error rates than the Saturday average behavior outlined in this memorandum and presented in TABLES 3 and TABLE 4.

FIGURE 4: Tuesday Westbound Survey



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FIGURE 5: Wednesday Westbound Survey

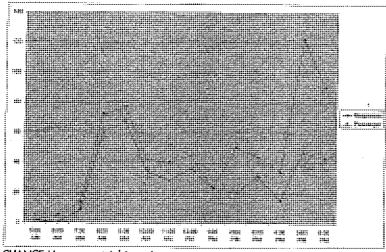
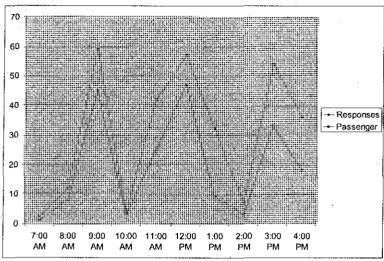


FIGURE 6: Saturday Westbound Survey



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Given the close relationship and pattern of response between the average daily response rate and total population size, the following tables and pie charts have a 95 percent probability of representing the true behavior of DINKY riders with no more than a +/- 4.3 percent error rate.

Survey Question Results

NOTE: Throughout the presentation of data, figures were rounded (no decimals) for ease of reading. This means that not all tables will total to 100 percent, and in some cases a rounded category is less than one percent and may be shown as zero.

EASTBOUND SURVEY (COMPARABLE WESTBOUND SURVEY RESULTS BEGIN ON PAGE 35.)

■ Question Number 1: Round-trip Origin ZIP code;

This question, aside from asking the ZIP code where the trip originated, also asked for the building name or the cross-street at the trip origin. As the results of the survey were analyzed, it became apparent that the quality of the automated read (read rate) of the building name and cross-street was not optimal due to the poor quality of the respondents' handwriting and that it would have to be supplemented by a visual read and data entry, if it is deemed necessary later. The following, however, is the analysis of the ZIP code field that was much more readable.

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FIGURE 7: Eastbound Origin ZIP Code on Tuesday

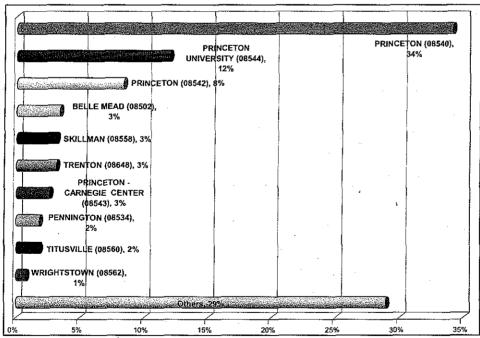
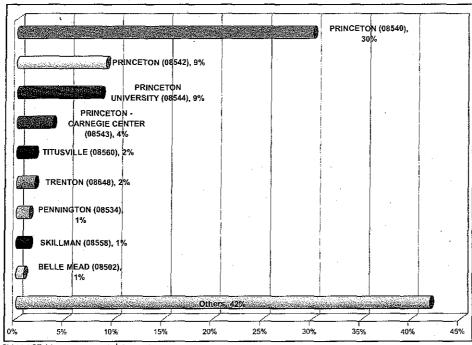


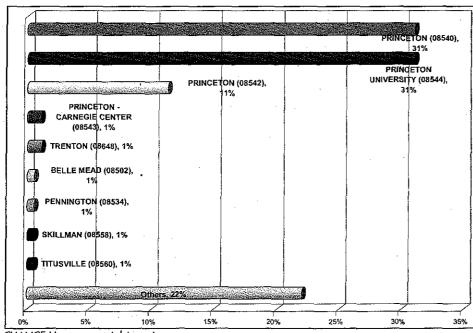
FIGURE 8: Eastbound Origin ZIP Code on Wednesday



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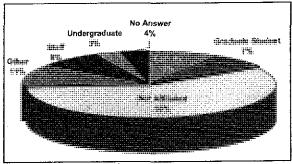
FIGURE 9: Eastbound Origin ZIP Code on Saturday



Question Number 2: Are you a Princeton University Faculty Member, Staff Member, Graduate Student, Undergraduate, Other Princeton Affiliate, or Not Affiliated with the University?

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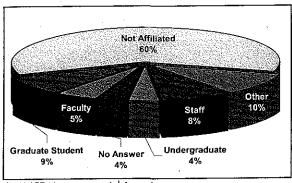
FIGURE 10: Eastbound Passenger Mix on Tuesday



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FIGURE 11: Eastbound Passenger Mix on Wednesday



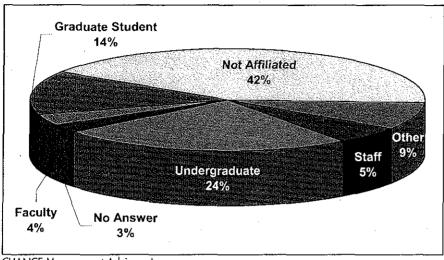
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TABLE 5: Eastbound Passenger Mix on Tuesday and Wednesday

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Rider Type	Tuesday Respondents	Percent	Wednesday Respondents	Percent	Average Weekday Respondents	Average Weekday Percent	
Faculty	53	9%	28	5%	41	7%	
Graduate Student	44	7%	47	9%	46	8%	
Not Affiliated	341	58%	324	60%	333	59%	
Other	62	11%	54	10%	58	10%	
Staff	48	8%	45	8%	47	8%	
Undergraduate	19	3%	20	4%	20	3%	
No Answer	22	4%	19	4%	21	4%	
TOTAL	589	100%	537	100%	563	100%	

FIGURE 12: Eastbound Passenger Mix on Saturday



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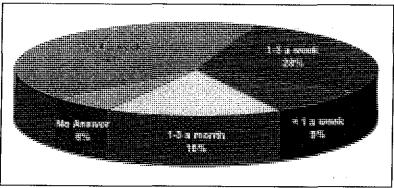
TABLE 6: Eastbound Passenger Mix on Saturday

Rider Type	Respondents	Percent
Faculty	10	4%
Graduate Student	39	14%
Not Affiliated	117	42%
Other	24	9%
Staff	15	5%
Undergraduate	68	24%
No Answer	7	3%
TOTAL	280	100%

Question Number 3: How often do you use the DINKY?

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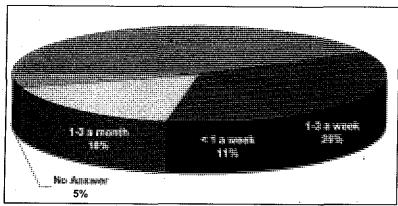
FIGURE 13: Eastbound Trip Frequency on Tuesday



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FIGURE 14: Eastbound Trip Frequency on Wednesday



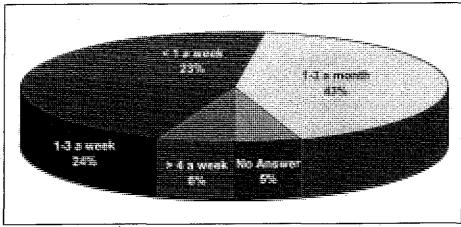
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TABLE 7: Eastbound Trip Frequency on Tuesday and Wednesday

Frequency	Tuesday Respondents	Percent	Wednesday Respondents	Percent	Average Weekday Respondents	Average Weekday Percent
More than four times per week	244	41%	226	42%	235	42%
One to three times per week	164	28%	135	25%	150	27%
Less than one time per week	54	9%	57	11%	56	10%
One to three times per month	92	16%	94	18%	93	17%
No Answer	35	6%	25	5%	30	5%
TOTAL	589	100%	537	100%	563	100%

FIGURE 15: Eastbound Trip Frequency on Saturday



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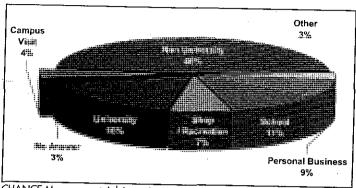
TABLE 8: Eastbound Trip Frequency on Saturday

Frequency	Respondents	Percent
More than four times per week	16	6%
One to three times per week	66	24%
Less than one time per week	64	23%
One to three times per month	120	43%
No Answer	14	5%
TOTAL	280	100%

Question Number 4: What is the purpose of this DINKY trip?

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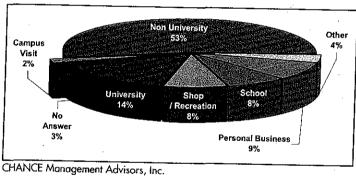
FIGURE 16: Eastbound Trip Purpose on Tuesday



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FIGURE 17: Eastbound Trip Purpose on Wednesday



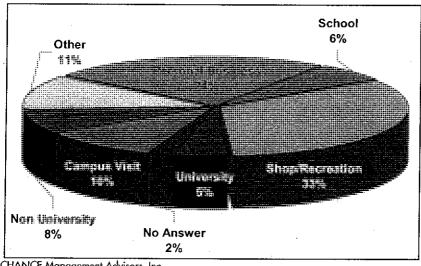
Princeton University DINKY RIDERSHIP SURVEY

TABLE 9: Eastbound Trip Purpose on Tuesday and Wednesday

Purpose	Tuesday Respondents	Percent	Wednesday Respondents	Percent	Average Weekday Respondents	Average Weekday Percent
Campus Visit	25	4%	11	2%	18	
Non University	273	46%	286	53%	280	3%
Other	18	3%	21	4%		50%
Personal Business	51	9%				3%
School	65	11%	48	9%	50	9%
Shop/Recreation			41	8%	53	9%
	43	7%	43	8%.	43	8%
University	96	16%	73	14%	85	15%
No Answer	18	3%	14	3%		
TOTAL	589	100%	537	100%	16	3%
THANCE Management			337	100%	563	100%

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FIGURE 18: Eastbound Trip Purpose on Saturday



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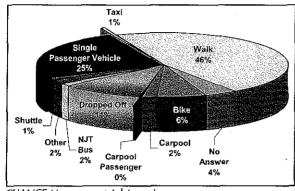
TABLE 10: Eastbound Trip Purpose on Saturday

Purpose	Respondents	Percent
Campus Visit	28	10%
Non University	23	8%
Other	32	11%
Personal Business	68	24%
School	17	6%
Shop/Recreation	93	33%
University	13	5%
No Answer	6	2%
TOTAL	280	100%

Question Number 5: For this trip, how did you arrive at the DINKY Station?

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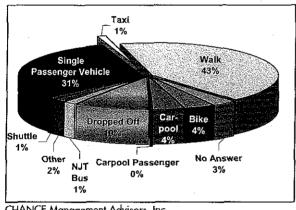
FIGURE 19: Eastbound Arrival Transportation Mode on Tuesday



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FIGURE 20: Eastbound Arrival Transportation Mode on Wednesday



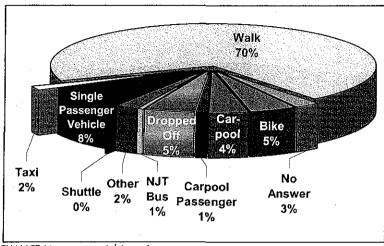
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TABLE 11: Eastbound Arrival Transportation Mode on Tuesday and Wednesday

Mode Split	Tuesday Respondents	Percent	Wednesday Respondents	Percent	Average Weekday Respondents	Average Weekday Percent
Bike	38	6%	21	4%	30	5%
Carpool	11	2%	21	4%	16	3%
Carpool Passenger	2	0%	1.	0%	2	0%
Dropped Off	63	11%	53	10%	58	10%
NJT Bus	9	2%	8	1%	9	2%
Other	11	2%	10	2%	11	2%
Shuttle	8	1%	6	1%	7	1%
Single Passenger Vehicle	146	25%	165	31%	156	28%
Taxi	4	1%	6	1%	5	1%
Wak	273	46%	229	43%	251	45%
No Answer	24	4%	. 17	3%	21	4%
TOTAL	589	100%	537	100%	563	100%

FIGURE 21: Eastbound Arrival Transportation Mode on Saturday



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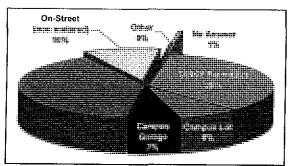
TABLE 12: Eastbound Arrival Transportation Mode on Saturday

Mode Split	Respondents	Percent
Bike	13	5%
Carpool	11	4%
Carpool Passenger	3	1%
Dropped Off	14	5%
NJT Bus	2	1%
Other	6	2%
Shuttle	1	0%
Single Passenger Vehicle	22	8%
Taxi	5	2%
Walk	196	70%
No Answer	7	3%
TOTAL	280	100%

Question Number 6: Before this DINKY trip, if you drove to the DINKY Station, where did you park?

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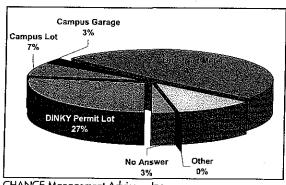
FIGURE 22: Eastbound Parking Location on Tuesday



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FIGURE 23: Eastbound Parking Location on Wednesday



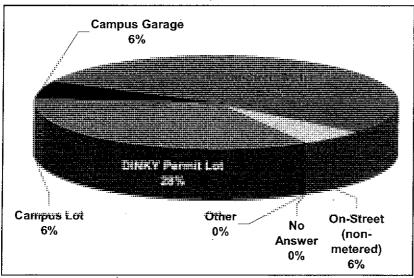
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TABLE 13: Eastbound Parking Location on Tuesday and Wednesday

Parking Location	Tuesday Respondents	Percent	Wednesday Respondents	Percent	Average Weekday Respondents	Average Weekday Percent
DINKY Permit Lot	53	35%	49	27%	51	31%
Campus Lot	12	8%	13	7%	13	8%
Campus Garage	10	7%	5	3%	. 8	5%
On-Street Meter	61	40%	88	49%	75	45%
On-Street (non metered)	15	10%	20	11%	18	11%
Other	0	0%	0	0%		0%
No Answer	1	1%	6	3%	4	2%
TOTAL	152	100%	181	100%	167	100%

FIGURE 24: Eastbound Parking Location on Saturday



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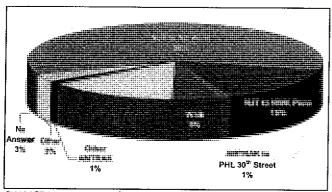
TABLE 14: Eastbound Parking Location on Saturday

Parking Location	Respondents	Percent
DINKY Permit Lot	9	28%
Campus Lot	. 2	6%
Campus Garage	2	6%
On-Street Meter	17	, 53%
On-Street (non metered)	2	6%
Other	0	0%
No Answer	0	0%
TOTAL	32	100%

Question Number 7: After you exit the DINKY, how will you travel to reach your final destination?

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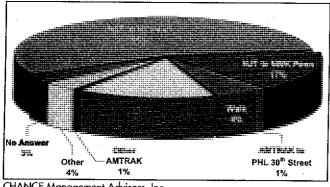
FIGURE 25: Eastbound Post-DINKY Mode of Travel on Tuesday



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FIGURE 26: Eastbound Post-DINKY Mode of Travel on Wednesday



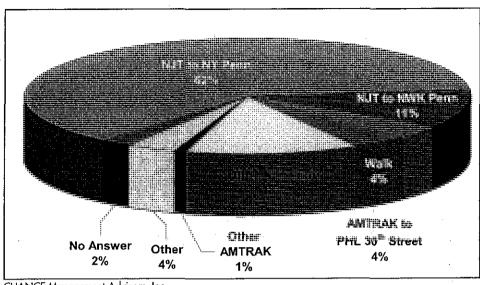
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TABLE 15: Eastbound Post-DINKY Mode of Travel on Tuesday and Wednesday

Tuesday Respondents	Percent	Wednesday Respondents	Percent	Average Weekday Respondents	Average Weekday Percent
331	56%	298	55%	315	56%
91	15%	91	17%	91	16%
7	1%	7	1%	7	1%
31	5%	23		27	5%
84	14%	79	15%	82	14%
7	1%	3	1%	5	1%
20	3%	20	4%	20	4%
18	3%	16	3%	17	3%
589	100%	537	100%	563	100%
	Respondents	Respondents Percent 331 56% 91 15% 7 1% 31 5% 84 14% 7 1% 20 3% 18 3%	Respondents Percent Respondents 331 56% 298 91 15% 91 7 1% 7 31 5% 23 84 14% 79 7 1% 3 20 3% 20 18 3% 16	Respondents Percent Respondents Percent 331 56% 298 55% 91 15% 91 17% 7 1% 7 1% 31 5% 23 4% 84 14% 79 15% 7 1% 3 1% 20 3% 20 4% 18 3% 16 3%	Respondents Percent Respondents Percent Respondents 331 56% 298 55% 315 91 15% 91 17% 91 7 1% 7 1% 7 31 5% 23 4% 27 84 14% 79 15% 82 7 1% 3 1% 5 20 3% 20 4% 20 18 3% 16 3% 17

FIGURE 27: Eastbound Post-DINKY Mode of Travel on Saturday



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Princeton University DINKY RIDERSHIP SURVEY

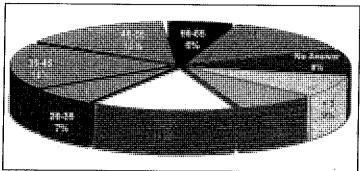
TABLE 16: Eastbound Post-DINKY Mode of Travel on Saturday

Mode of Travel	Respondents	Percent
NJT to NY Penn	174	62%
NJT to NWK Penn	31	11%
AMTRAK to PHL 30 th Street	. 10	4%
Walk	11	4%
Other NJT Train	35	13%
Other AMTRAK	3	1%
Other	. 10	4%
No Answer	6	2%
TOTAL	280	100%

Question Number 8: What is your age?

Princeton University
DINKY RIDERSHIP SURVEY

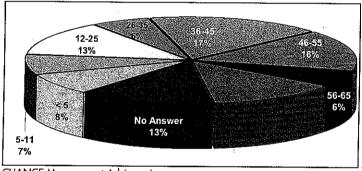
FIGURE 28: Eastbound Passenger Ages on Tuesday



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Princeton University DINKY RIDERSHIP SURVEY

FIGURE 29: Eastbound Passenger Ages on Wednesday



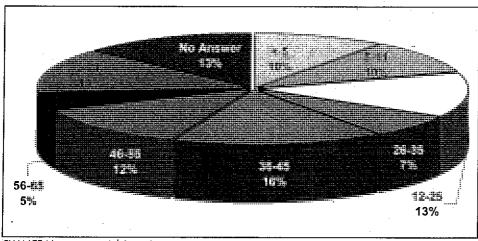
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Princeton University DINKY RIDERSHIP SURVEY

TABLE 17: Eastbound Passenger Ages on Tuesday and Wednesday

Age	Tuesday Respondents	Percent	Wednesday Respondents	Percent	Average Weekday Respondents	Weekday Average Percent
Less than 5 years old	51	9%	43	8%	47	8%
5 -11 years old	47	8%	40	7%	44	8%
12 - 25 years old	85	14%	72	13%	79	14%
26 - 35 years old	40	7%	32	6%	36	. 6%
36 - 45 years old	104	18%	92	17%	98	17%
46 - 55 years old	90	15%	84	16%	87	15%
56 - 65 years old	38	6%	32	6%	35	6%
Older than 66 years old	79	13%	71	13%	75	13%
No Answer	· 55	9%	71	13%	63	11%
TOTAL	589	100%	537	100%	563	100%

FIGURE 30: Eastbound Passenger Ages on Saturday



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Princeton University DINKY RIDERSHIP SURVEY

TABLE 18: Eastbound Passenger Ages on Saturday

Age	Respondents	Percent
Less than 5 years old	28	10%
5 -11 years old	28	10%
12 - 25 years old	37	13%
26 - 35 years old	19	7%
36 - 45 years old	45	16%
46 - 55 years old	34	12%
56 - 65 years old	. 15	. 5%
Older than 66 years old	37	13%
No Answer	. 37	13%
TOTAL	280	100%

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While no specific survey rule was enacted to exclude any age group from the survey, the surveyors and supervisors observed that very few of the DINKY riders were under 18 years of age, and that those answering that they were under the age of 11 years old probably just did not want to list their ages.

■ Question Number 9: If you drove to the DINKY station, what roads did you use to arrive at the station?

Princeton University
DINKY RIDERSHIP SURVEY

TABLE 19: Eastbound Passengers' Driving Routes to Station (For Respondents Who Drove or Carpooled)

Tuesday	Responses	Percent	Direction of Origin
Nassau St./University Fl.	15	15%	North
University Pl.	11	11%	North
Alexander Rd,S/Mercer St,	.] 10	10%	North
Stockton Rd./ University Fl.	10,	10%	North
Alexander Rd,N/Faculty Rd.	. 8	9%	South
Other Routes	42	43%	<u> </u>
Total Route Responses	97	100%	
Respondents who drove or carpooled	157	NAMES OF THE PARTY.	0501 51
	1	l	95% confidence level with
Response Rate	· I	above	or rate for the answers lister

(1888a St.) Chiveraty Fit.	1 33	13/0	I TO I THE
University Pl.	25	11%	North
Alexander Rd.S/Mercer St.	23	10%	North
Stockton Rd./University Pl.	17	8%	North
Alexander Rd.S/Stockton Rd.	13	6%	North
Other Routes	110	50%	
Total Route Responses	221	100%	
Respondents who drove of carpooled Response Rate			95% confidence level with or rate for the answers listed

Wednesday	Responses	Percent	Direction of Origin
Nassau St./University Pl.	18	15%	North
University Fl.	14	11%	North
Alexander Rd, S/Mercar St.	13	10%	North
Alexander Rd.N/Faculty Rd./Nassau St.	8	6%	North
Alexander Rd.S/Nassau St.	8	6%	North
Other Routes	63	51%	
Total Route Responses	124	100%	
Respondents who drove or carpooled	186		
		1	95% confidence level with or rate for the answers listed
Response Rate	67%	above	

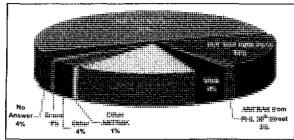
University FI.	6	22%	North
Nassau St./University Pt.	4	15%	North
Other Routes	17	. 63%	
Total Route Responses	27	100%	
Respondents who drove or carpooled	33		
Respondents who drove or carpooled	33		95% confidence level with or rate for the answers listed

WESTBOUND SURVEY

Question Number 1: How did you arrive at the Princeton Junction Station

Princeton University
DINKY RIDERSHIP SURVEY

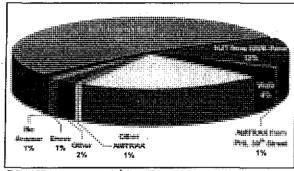
FIGURE 31: Westbound Pre-DINKY Mode of Travel on Tuesday



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Princeton University DINKY RIDERSHIP SURVEY

FIGURE 32: Westbound Pre-DINKY Mode of Travel on Wednesday



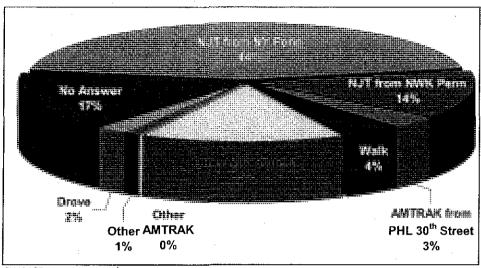
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Princeton University DINKY RIDERSHIP SURVEY

TABLE 20: Westbound Pre-DINKY Mode of Travel on Tuesday and Wednesday

Mode of Travel	Tuesday Respondents	Percent	Wednesday Respondents	Percent	Average Weekday Respondents	Average Weekday Percent
NJT from NY Penn	247	51%	218	54%	233	52%
NJT from NWK Penn	87	18%	54	13%	71	16%
AMTRAK from PHL 30th Street	8	2%	5	1%	7	1%
Walk	19	4%	15	4%	17	4%
Other NJT Station	81	17%	90	. 22%	86	19%
Other AMTRAK	3	1%	3	1%	3	1%
Other	18	. 4%	10	2%	. 14	3%
Drove	4.	1%	5	1%.	5	1%
No Answer	17	4%	5	1%	11	2%
TOTAL	484	100%	405	100%	445	100%

FIGURE 33: Westbound Pre-DINKY Mode of Travel on Saturday



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Princeton University DINKY RIDERSHIP SURVEY

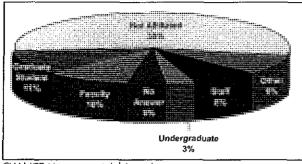
TABLE 21: Westbound Pre-DINKY Mode of Travel on Saturday

Mode of Travel	Respondents	Percent
NJT from NY Penn	84	44%
NJT from NWK Penn	26	14%
AMTRAK from PHL 30 th Street	6	3%
Walk	. 8	4%
Other NJT Station	29	15%
Other AMTRAK	0	0%
Other	2	1%
Drove	4	2%
No Answer	32	17%
TOTAL	191	100%

Question Number 2: Are you a Princeton University Faculty Member, Staff Member, Grad Student, Undergraduate, Other Princeton Affiliate, or Non-Princeton University Affiliate?

Princeton University DINKY RIDERSHIP SURVEY

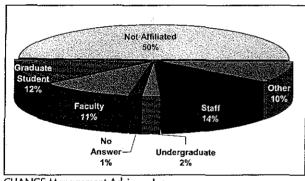
FIGURE 34: Westbound Passenger Mix on Tuesday



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Princeton University DINKY RIDERSHIP SURVEY

FIGURE 35: Westbound Passenger Mix on Wednesday



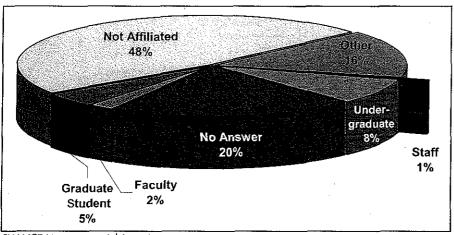
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Princeton University **DINKY RIDERSHIP SURVEY**

TABLE 22: Westbound Passenger Mix on Tuesday and Wednesday

Rider Type	Tuesday Respondents	Percent	Wednesday Respondents	Percent	Average Weekday Respondents	Average Weekday Percent
Faculty .	48	10%	45	11%	47	10%
Graduate Student	53	11%	47	12%	50	11%
Not Affiliated	265	55%	202	50%	234	53%
Other	43	9%	40	10%	42	9%
Staff	37	8%	56	14%	47	10%
Undergraduate	16	3%	9	2%	13	3%
No Answer	. 22	5%	6	1%	14	. 3%
TOTAL	484	100%	405	100%	445	100%

FIGURE 36: Westbound Passenger Mix on Saturday



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Princeton University DINKY RIDERSHIP SURVEY

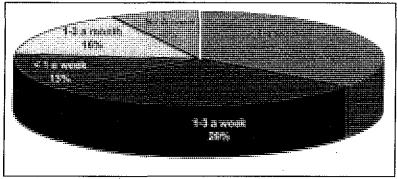
TABLE 23: Westbound Passenger Mix on Saturday

Rider Type	Respondents	Percent
Faculty	4	2%
Graduate Student	9	5%
Not Affiliated	92	48%
Other	30	16%
Saff	1	1%
Undergraduate	16	8%
No Answer	39	20%
TOTAL	191	100%

Question Number 3: How often do you use the DINKY?

Princeton University
DINKY RIDERSHIP SURVEY

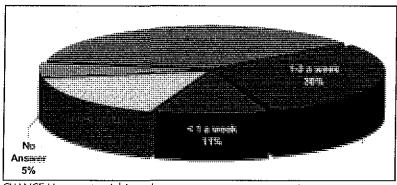
FIGURE 37: Westbound Trip Frequency on Tuesday



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Princeton University DINKY RIDERSHIP SURVEY

FIGURE 38: Westbound Trip Frequency on Wednesday



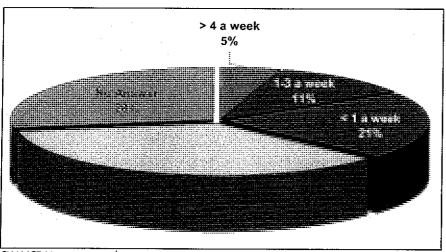
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Princeton University DINKY RIDERSHIP SURVEY

TABLE 24: Westbound Trip Frequency on Tuesday and Wednesday

Frequency	Tuesday Respondents	Percent	Wednesday Respondents	Percent	Average Weekday Respondents	Average Weekday Percent
More than four times per week	. 169	35%	150	37%	160	36%
One to three times per week	138	29%	120	30%	129	29%
Less than one time per week	64	13%	. 45	11%	55	12%
One to three times per month	76	. 16%	69	17%	73	16%
No Answer	37	8%	21	5%	29	7%
TOTAL	484	100%	405	100%	445	100%

FIGURE 39: Westbound Trip Frequency on Saturday



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Princeton University DINKY RIDERSHIP SURVEY

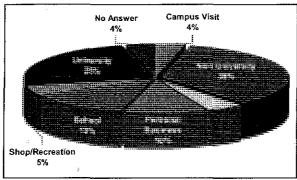
TABLE 25: Westbound Trip Frequency on Saturday

Frequency	Respondents	Percent	
More than four times per week	9	5%	
One to three times per week	21	11%	
Less than one time per week	40	21%	
One to three times per month	68	36%	
No Answer	, 53	28%	
TOTAL	191	100%	

Question Number 4: What is the purpose of this DINKY trip?

Princeton University
DINKY RIDERSHIP SURVEY

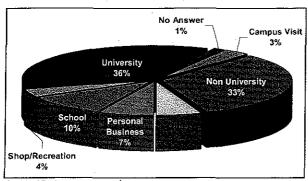
FIGURE 40: Westbound Trip Purpose on Tuesday



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Princeton University DINKY RIDERSHIP SURVEY

FIGURE 41: Westbound Trip Purpose on Wednesday



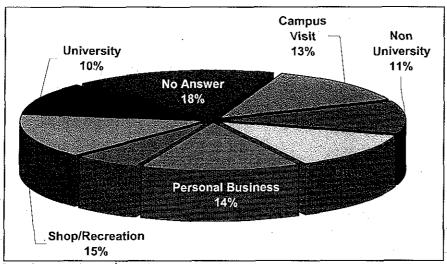
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Princeton University DINKY RIDERSHIP SURVEY

TABLE 26: Westbound Trip Purpose on Tuesday and Wednesday

	Tuesday		Wednesday		Average Weekday	Average Weekday
Purpose	Respondents	Percent	Respondents	Percent	Respondents	Percent
Campus Visit	18	4%	14	3%	16	4%
Non University	170	35%	: 132	33%	151	34%
Other	23	5%	23	6%	23	5%
Personal Business	50	10%	28	7%	39	9%
School	61	13%	40	10%	51	11%
Shop/Recreation	23	5%	16	4%	20	4%
University	122	25%	146	36%	134	30%
No Answer	. 17	4%	6	1%	12	3%
TOTAL	484	100%	405	100%	445	100%

FIGURE 42: Westbound Trip Purpose on Saturday



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Princeton University DINKY RIDERSHIP SURVEY

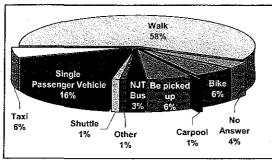
TABLE 27: Westbound Trip Purpose on Saturday

Purpose	Respondents	Percent	
Campus Visit	25	13%	
Non University	21	11%	
Other	24	13%	
Personal Business	27	14%	
School	11	6%	
Shop/Recreation	29	15%	
University	20	10%	
No Answer	34	18%	
TOTAL	191	100%	

Question Number 5: At the conclusion of this ride, how will you leave the Princeton DINKY Station?

Princeton University
DINKY RIDERSHIP SURVEY

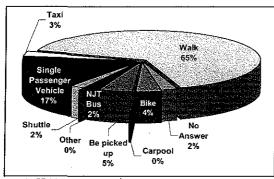
FIGURE 43: Westbound Departure Transportation Mode on Tuesday



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Princeton University DINKY RIDERSHIP SURVEY

FIGURE 44: Westbound Departure Transportation Mode on Wednesday



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Princeton University DINKY RIDERSHIP SURVEY

TABLE 28: Westbound Departure Transportation Mode on Tuesday and Wednesday

Mode Split	Tuesday Respondents		Wednesday Respondents		Average Weekday Respondents	
Bike	28	6%	. 15	4%	22	5%
Carpool	3	1%	. 1	0%	2	0%
Be picked up	29	- 6%	19	5%	24	5%
NJT Bus	13	3%	8	2%	11	2%
Other	4	1%	. 1	0%	3	1%
Shuttle	. 5	1%	8.	2%	7	1%
Single Passenger Vehicle	79	16%	. 69	17%	· 74	17%
Taxi	27	6%	12	3%	20	4%
Walk	279	58%	263	65%	271	61%
No Answer	. 17	. 4%	9	2%	13	3%
TOTAL	484	100%	405	100%	445	100%

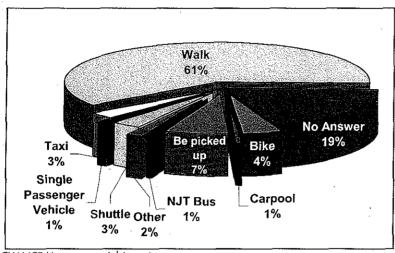
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FIGURE 45: Westbound Departure Transportation Mode on Saturday



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Princeton University DINKY RIDERSHIP SURVEY

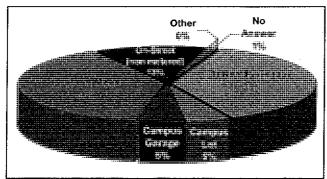
TABLE 29: Westbound Departure Transportation Mode on Saturday

Mode Split	Respondents	Percent
Bike	8	4%
Carpool	1	1%
Be picked up	13	7%
NJT Bus	1	1%
Other	3:	. 2%
Shuttle	6	3%
Single Passenger Vehicle	2	1%
Taxi	5	3%
Walk	116	61%
No Answer	36	19%
TOTAL	191	100%

Question Number 6: If you are driving, where did you park?

Princeton University DINKY RIDERSHIP SURVEY

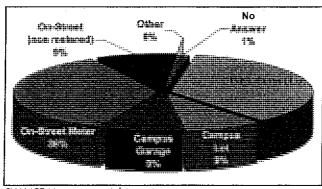
FIGURE 46: Westbound Parking Location on Tuesday



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Princeton University DINKY RIDERSHIP SURVEY

FIGURE 47: Westbound Parking Location on Wednesday



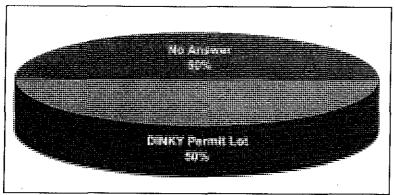
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Princeton University DINKY RIDERSHIP SURVEY

TABLE 30: Westbound Parking Location on Tuesday and Wednesday

	Tuesday		Wednesday		Average Weekday	Average Weekday
Parking Location	Respondents	Percent	Respondents	Percent	Respondents	Percent
DINKY Permit Lot	30	38%	25	36%	28	37%
Campus Lot	4	5%	6	9%	5	7%
Campus Garage	4	5%	6	9%	5	7%
On-Street Meter	31	39%	25	36%	28	38%
On-Street (non metered)	10	13%	6	9%	8.	11%
Other	. 0	0%	0	0%		0%
No Answer	1	1%	1	1%	1	1%
TOTAL	80	100%	69	100%	75	100%

FIGURE 48: Westbound Parking Location on Saturday



CHANCE Management Advisors, Inc.

Princeton University
DINKY RIDERSHIP SURVEY

TABLE 31: Westbound Parking Location on Saturday

Parking Location	Respondents	Percent
DINKY Permit Lot	1	50%
Campus Lot	0	0%
Campus Garage	0	0%
On-Street Meter	0	0%
On-Street (non metered)	0	0%
Other	0	0%
No Answer	1	50%
TOTAL	2	100%

Question Number 7: What is the final destination (ZIP Code) of this DINKY trip?

This question, aside from asking the ZIP code where the trip originated, also asked for the building name or the cross-street at the trip origin. As the results of the survey were analyzed, it became apparent that the read rate of the building name and cross-street was not optimal due to the poor quality of the respondents' writing and that it would have to be supplemented by a visual read and data entry, if it is deemed necessary. The following, however, is the analysis of the ZIP code field that was much more readable.

Princeton University
DINKY RIDERSHIP SURVEY

FIGURE 49: Westbound Destination ZIP Code on Tuesday

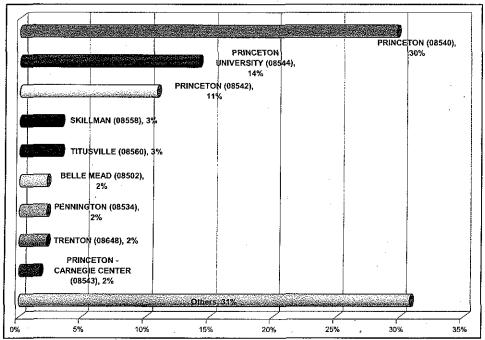
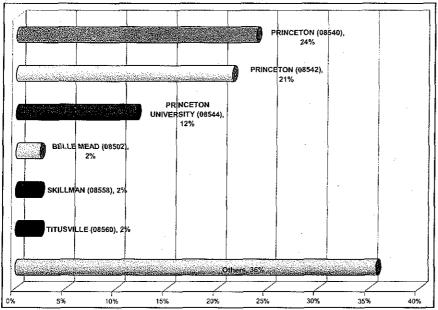


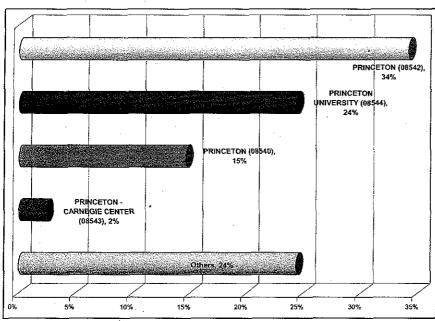
FIGURE 50: Westbound Destination ZIP Code on Wednesday



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Princeton University
DINKY RIDERSHIP SURVEY

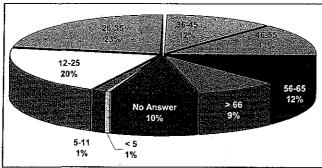
FIGURE 51: Westbound Destination ZIP Code on Saturday



Question Number 8: What is your age?

Princeton University
DINKY RIDERSHIP SURVEY

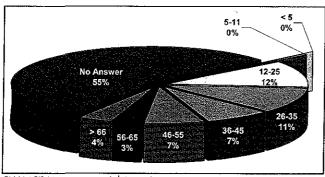
FIGURE 52: Westbound Passenger Ages on Tuesday



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Princeton University
DINKY RIDERSHIP SURVEY

FIGURE 53: Westbound Passenger Ages on Wednesday



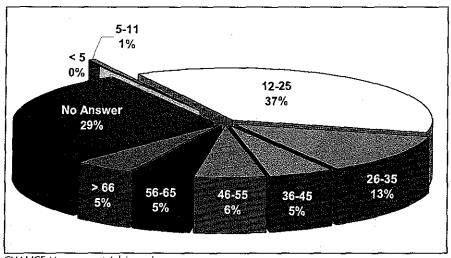
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Princeton University
DINKY RIDERSHIP SURVEY

TABLE 32: Westbound Passenger Ages on Tuesday and Wednesday

Age	Tuesday Respondents		Wednesday Respondents		Average Weekday Respondents	
Less than 5 years old	- 3	1%	. 0	0%	2	0%
5 -11 years old	6	1%	2	0%	4	1%
12 - 25 years old	98	20%	48	12%	73	16%
26 - 35 years old	110	23%	45	11%	78	· 17%
36 - 45 years old	56	12%	30	7%	43	10%
46 - 55 years old	65	13%	28	7%	. 47	10%
56 - 65 years old	58	12%	13	3%	36	8%
Older than 66 years old	42	9%	16	4%	29	` 7%
No Answer	46	10%	223	55%	135	30%
TOTAL	484	100%	405	100%	445	100%

FIGURE 54: Westbound Passenger Ages on Saturday



CHANCE Management Advisors, Inc.

Princeton University DINKY RIDERSHIP SURVEY

TABLE 33: Westbound Passenger Ages on Saturday

Age	Respondents	Percent	
Less than 5 years old	0	0%	
5 -11 years old	1	1%	
12 - 25 years old	70	37%	
26 - 35 years old	24	13%	
36 - 45 years old	10.	5%	
46 - 55 years old	11	6%	
56 - 65 years old	9	5%	
Older than 66 years old	10	5%	
No Answer	56	29%	
TOTAL	191	100%	

■ Question Number 9: If you are driving after this DINKY ride to your destination, what roads will you be using?

Princeton University DINKY RIDERSHIP SURVEY

TABLE 34: Westbound Passengers' Driving Routes to Station (For Respondents Who Drove or Carpooled)

Tuesday	Responses	Percent	Direction of Destination	
Nassau St./University Pl.	8	18%	North	
Jniversity R.	7	16%	North	
Alexander Rd.S	4	9%	North	
Alexander Rd.S/Mercer St.	4	9%	North	
Alexander Rd, S/ Nassau St.	3	7%	North	
Other Routes	19	42%		
Total Route Responses*	45	100%		
Respondents who drove or carpooled	82			
			ch affords a 95% confidence level with a + /	
Response Rate 55% 9.9% error rate for		for the answers listed above		

Wednesday	Responses	Percent	Direction of Destination
Nassau St./University Fl.	. 8	16%	North
Alexander Rd.S	7	14%	North
University Pl.	. 6,	12%	North
Alexander Rd.S/Nassau St.	4	8%	North
Stockton Rd./ University Pl.	4	8%	North
Other Routes	22	43%	
Total Route Responses	51	100%	
	3. 70		
Respondents who drove or carpooled	70		
	Which affords a 95% confidence level with a +		
Response Rate	73%	3% 7.2% error rate for the answers listed above	

Weekday Average	Responses	Percent	Direction of Destination
Nassau St./University Pl.	16	17%	North
University Fl.	13	14%	North .
Alexander RdiS	111	11%	North
Alexander Rd, S/Nassau St.	7	7%	North
Other Routes	49	51%	
Total Route Responses	96	100%	-
Respondents who drave or carpooled	152		
Response Rate			95% confidence level with a + /- a for the answers listed above

Saturday	Responses	Percent	Direction of Origin
Alexander Rd.S	1	50%	North
Faculty Rd.	1	50%	South
Other Routes	0	0%	
Total Route Responses	2	100%	
Demondable who where as extracted			
Respondents who drove or carpooled	3		
Respondents who drave or carpooled	3		

SPECIAL REQUEST ANALYSIS

The University requested an in-depth review of the data to determine the percentage of those not affiliated with the University who walked to the DINKY station. TABLES 35 - 38 below present the results of this analysis.

Princeton University
DINKY RIDERSHIP SURVEY

TABLE 35: Weekday Eastbound Walking Population

Tuesday Rider Type	Respondents	Percent of People Who Walked
Total Respondents	589	
People who walked to the DINKY Station	273	
Faculty	33	12%
Graduate Student	34	12%
Not Affiliated	128	47%
Other	24	9%
Staff	32	12%
Undergraduate	17	6%
No Answer	5	2%

Wednesday Rider Type		
Total Respondents	537	
Peóple who walked to the DINKY Station	229	
Faculty -	17	7%
Graduate Student	37	16%
Not Affiliated	96	42%
Other	24	10%
Staff	31	14%
Undergraduate	20	9%
No Answer	4	2%

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TABLE 36: Weekend Eastbound Walking Population

Saturday Rider Type	Respondents	Percent of People Who Walked
Total Respondents	280	
People who walked to the DINKY Station	196	
Faculty	4	2%
Graduate Student	33	17%
Not Affiliated	65	33%
Other	17	9%
Staff	10	5%
Undergraduate	66	34%
No Answer	1	1%

TABLE 37: Weekday Westbound Walking Population

Tuesday Rider Type	Respondents	Percent of People Who Walked
Total Respondents	484	
People who walked to the DINKY Station	279	
Faculty	39	14%
Graduate Student	48 .	17%
Not Affiliated	114	41%
Other .	25	9%
Staff	30	11%
Undergraduate	16	6%
No Answer	7	3%

Rider Type	Respondents	Percent o People Who Walke
Total Respondents	445	Walke
People who walked to the DINKY Station	271	
Faculty	36	13%
Graduate Student	42	15%
Not Affiliated	106	39%
Other	. 25	9%
Staff	45	179
Undergraduate	8	3%
No Answer	9	39

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TABLE 38: Weekend Westbound Walking Population

Saturday		Percent of People Who	
Rider Type	Respondents	Walked	
Total Respondents	191		
People who walked to the		·	
DINKY Station	116		
Faculty	3	3%	
Graduate Student	8	7%	
Not Affiliated	61	53%	
Other	24	21%	
Staff	1	1%	
Undergraduate	14	12%	
No Answer	5	4%	

It is important at this point to remember that the percentages presented in these and other tables in this memorandum can be interpreted to represent the behavior of DINKY passengers with a 95 percent level of accuracy and a +/- 4.3 percent error rate. The error rates are different for the various survey periods, and more specific ranges may be calculated by using the specific confidence and error rates stated at the beginning of this memorandum.

The second requested analysis was the driving direction of those who drove to and from the DINKY station in Princeton. TABLE 38 illustrates the direction from which drivers came when they were driving to the DINKY station. Thus it is obvious from the tables that high percentages of individuals were driving from the north to the station, and few were driving from the south.

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TABLE 38: Direction of Origin for Drivers on Eastbound DINKY

Tuesday Direction	Responses	Percent
North	84	87%
South	13	13%
No Answer	0	0%
Total	97	100%

Wednesday Direction	Responses	Percent
North	116	94%
South	8	6%
No Answer	0	0%
Total	124	100%

Saturday Direction	Responses	Percent
North	23	85%
South	4	15%
No Answer	0	0%
Total	27	100%

The question for the westbound riders was different – it asked which direction the riders were going to drive **after** they left the DINKY station. TABLE 39 presents these results.

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TABLE 39: Direction of Travel for Westbound Riders Leaving the DINKY Station

Tuesday	Decreases	Dovosuí
Direction	Responses	Percent
North	43	96%
South	1	2%
No Answer	1	2%
Total	45	100%

Wednesday		
Direction	Responses	Percent
North	45	88%
South	6	12%
No Answer	0	0%
Total	- 51	100%

Saturday Direction	Responses	Percent
North	. 1	50%
South	1	50%
No Answer	0	0%
Total	2	100%

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It is clear that most drivers leaving the DINKY station at Princeton after having arrived on the train are driving **north** to go to destinations. During the weekdays, very few are driving south. However, the pattern changed on Saturday, but the sample was too small to be useful.

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