

VIRGINIA DEPARTMENT OF RAIL AND PUBLIC TRANSPORTATION

APPLICANT DATABASE
PLACEMENT SURVEY REPORT

ARLINGTON COUNTY COMMUTER SERVICES

APPLICATIONS RECEIVED BETWEEN APRIL 1, 2011 AND MARCH 31, 2012
(SEPTEMBER-OCTOBER 2012 SURVEY)

Prepared for:

Virginia Department of Rail and Public Transportation

Prepared by:

LDA Consulting
Washington, DC

In association with:

CIC Research, Inc.
San Diego, CA

March 31, 2013

EXECUTIVE SUMMARY

This report presents results of a survey about commuter transportation assistance services offered by Arlington County Commuter Services (ACCS), a program supported by the Virginia Department of Rail and Public Transportation (DRPT) and providing services to commuters living and/or working in the Northern section of Virginia. The survey was performed to measure the effectiveness of services provided by ACCS and assess commuters' satisfaction with the services. As listed below, ACCS is one of nine DRPT-assisted commuter assistance programs in Northern Virginia. DRPT also supports five commuter assistance programs in Southern Virginia.

Northern Virginia

- Local Motion (City of Alexandria)
- Arlington County Commuter Services (Arlington County)
- Fairfax County RideSources (Fairfax County)
- Loudoun County Commuter Services (Loudoun County)
- Northern Neck Rideshare (Northern Neck)
- Northern Shenandoah Valley Commuter Assistance Program / RideSmart (Northern Shenandoah Valley)
- PTRC Omni Match (Prince William County)
- GW Ride Connect (Fredericksburg)
- Rappahannock-Rapidan Commuter Services (Rappahannock-Rapidan)

Southern Virginia

- Charlottesville & Central Shenandoah Rideshare (Charlottesville)
- TRAFFIX (Hampton Roads)
- Middle Peninsula Rideshare (Middle Peninsula)
- RideFinders (Richmond)
- Roanoke and New River Valley RIDE Solutions (Roanoke)

All of these programs offer services such as carpool and vanpool matchlists, transit route and schedule information, information on Park & Ride lot locations and HOV facilities, and telework assistance. Commuters obtain services by submitting information and service requests via the ACCS website or toll-free telephone number, or through an employer or a transportation management association (TMA). Additionally, some services are available for immediate download from the ACCS website.

We note that ACCS and the other eight Northern Virginia programs are coordinated with and, in some respects, linked to regional commuter services provided by the Metropolitan Washington Council of Governments' Commuter Connections program. The nine local programs in Northern Virginia provide some services directly to commuters, but Commuter Connections performs ridematching, administers the regional Guaranteed Ride Home program, conducts commute-oriented advertising, and provides other travel information and support services throughout the Washington region.

For this reason, some assisted commuters would be aware only of the name, "Commuter Connections," rather than the local program name. To account for this likelihood, respondents for the Northern Virginia programs were asked about services they received from the local program or from Commuter Con-

nections. We note that this will make it difficult to separate the local program influences or impacts of the Northern Virginia programs from the impacts of the regional support services offered in these areas.

Data for the analysis were collected through telephone surveys of respondents randomly selected from the applicant database. Eligible respondents included applicants who received information or assistance between April 1, 2011 and March 31, 2012.

KEY SURVEY RESULTS

Demographics

- Slightly more than half (53%) of respondents are female.
- More than seven in ten (75%) respondents are White/Caucasian. About eight in ten (78%) are between 35 and 64 years old. More than eight in ten (85%) respondents have an annual household income of \$60,000 or more and almost half (46%) have an income of \$100,000 or more.

Commute Travel Patterns

- Sixteen percent (16%) of respondents carpool or vanpool at least one day per week. Carpool and vanpool trips make up 14% of applicants' weekly commute trips
- More than half (55%) of respondents said they use transit at least one day per week. Transit trips account for 40% of applicants' weekly commute trips.
- Applicants travel an average of 13.2 miles, one-way to work. Their average one-way commute time is 44 minutes.

Commute Changes

- Nearly three-quarters (74.2%) of survey respondents made a commute pattern change or tried another method of transportation after receiving assistance from Arlington County Commuter Services.
- About half (51.6%) of applicants made a change to an alternative mode that they had continued to use at least one day per week. This 51.6% is the "continued placement rate." The temporary placement rate (percent of applicants who made a change but returned to their original modes) is 6.5%.
- About 9.7% of applicants tried using a new alternative mode a few days (one-time placement rate) and 6.5% made a change to a mode they use occasionally, but less than once per week on average (occasional placement rate).
- About 39% of respondents who made a mode change shifted from driving alone. The remaining 61% shifted from one alternative mode to another.

- About 55% of the respondents who made a commute change indicated that information they received from ACCS had influenced their decision to make a commute change and 60% said they were influenced by a service they received from their employer or another organization. About two in ten of these respondents mentioned GRH, and about one in ten mentioned the matchlist, transit schedule/route information provided by ACCS. Two in ten mentioned that a discount / free transit pass, and one in ten mentioned that a compressed work week, or a discount parking fee provided by their employer had influenced their decision.

Information and Assistance Requested and Received

- The top service received from ACCS overall, by a large majority, was Guaranteed Ride Home; almost six in ten (58%) applicants said they received or accessed this service, which is open to any commuter who uses an alternative mode to commute
- More than four in ten (45%) applicants said they received or accessed names of potential carpool/vanpool partners and 23% received a map showing home and work locations of potential carpool/vanpool partners.
- Other commonly-used services include transit fare information (45%), transit schedule or route information (45%), information on special events, such as Bike to Work Day (35%), and bicycling information (26%).
- A total of 18 applicants received names of potential rideshare partners. Of these applicants, seven tried to contact someone named on the list and five tried to make contact reached someone on the list.
- More than three-quarters of applicants (77%) also noted receiving services offered by their employers. The most widely-available services include discounted or free transit passes (65%), telework (52%), compressed work schedule (32%), and preferential / special parking for carpools or vanpools (29%).

ACCS Improvements Desired

- When asked if there were any ways in which Commuter Connections / ACCS could improve their services, 65% offered one or more suggestions.
- Of those who mentioned improvements, most suggested improvements focused on improving the quality or quantity of the information provided: increased advertising (16%) and transit improvements (13%). About one in ten (10%) made suggestions for better transit information, or more match names.

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SECTION 1 OVERVIEW

PURPOSE OF THE REPORT

This report presents results of a survey about commuter transportation assistance services offered by Arlington County Commuter Services (ACCS), a program supported by the Virginia Department of Rail and Public Transportation (DRPT) and providing services to commuters living and/or working in the Northern section of Virginia. The survey was performed to measure the effectiveness of services provided by ACCS and assess commuters' satisfaction with the services. As listed below, ACCS is one of nine DRPT-assisted commuter assistance programs in Northern Virginia. DRPT also supports five commuter assistance programs in Southern Virginia.

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All of these programs offer services such as carpool and vanpool matchlists, transit route and schedule information, information on Park & Ride lot locations and HOV facilities, and telework assistance. Commuters obtain services by submitting information and service requests via the ACCS website or toll-free telephone number, or through an employer, a local partner assistance program, or a transportation management association (TMA). Additionally, some services are available for immediate download from the ACCS website.

Data for the analysis were collected through Internet and telephone surveys of respondents who requested assistance from ACCS between April 1, 2011 and March 31, 2012. Data were collected during September and October 2012.

ORGANIZATION OF THE REPORT

The report is divided into two sections following this overview section:

- Section 2 Data Collection Methodology
- Section 3 Commuter Placement survey results

Following these sections is an appendix that presents the survey questionnaire.

SECTION 2 DATA COLLECTION METHODOLOGY

This section briefly describes the survey methodology used for this analysis.

QUESTIONNAIRE

The questionnaire used for Internet portion of this survey is shown in Appendix A. It was based on the questionnaire used for the November 2011 applicant survey conducted by the Metropolitan Washington Council of Governments' Commuter Connections program, the regional ridematching program in Northern Virginia. Additionally, several questions were eliminated to reduce the length of the interview. No new questions were added.

A second version of the questionnaire was created for administration by telephone. The Internet and telephone versions differed only in the phrasing and format of the questions, with Internet questions designed for visual presentation and telephone questions designed for aural presentation. The telephone version was used to interview both applicants who provided only telephone numbers as contact information and applicants who provided email contact information but who did not respond to the Internet survey.

SAMPLE SELECTION AND ALERT LETTERS

The survey described in this report was conducted with applicants who received assistance from one of the 14 Virginia rideshare programs between April 1, 2011 and March 31, 2012.

Proposed Sample

A target was set for each of the 14 programs for the proposed number of completed interviews, depending on the number of commuters who had requested or accessed information or assistance during the April 2011 through March 2012 evaluation period. For programs with 350 or more applicants, the target was set at 175 completed interviews. Programs with fewer than 350 applicants were given a 50% target completion rate. As shown in Table 1, ACCS, which had an initial number of 124 applicants in the database, was assigned a target of 62.

Alert Letters

The initial survey sample for each commuter program was then divided into two groups: applicants who provided an email contact address and those who did not. Prior to the start of the Internet survey interviews, DRPT staff sent introductory letters via email to applicants who provided an email address. The letter informed the applicants of the survey, requested their participation, and provided a clickable link that directed them to the on-line survey. Approximately two to three weeks after the initial email invitation was sent, DRPT sent an email reminder to applicants who had not responded to the Internet survey.

Table 1
Applicant Counts, Proposed Samples, and Completed Interviews

	Starting Apps	Proposed Sample	Internet Complete	Telephone Complete	Total Complete
<u>Northern Virginia Programs</u>					
Alexandria	131	66	12	20	32
Arlington	124	62	11	20	31
Fairfax County*	1,078	175	142	54	196
Loudoun County	377	175	55	55	110
Northern Neck	28	14	0	10	10
Northern Shenandoah Valley	164	82	18	25	43
PRTC*	940	175	104	73	177
GWRC (Fredericksburg)*	2,110	175	231	9	240
Rappahannock-Rapidan	320	160	48	46	94
Total NOVA	5,212	1,084	621	312	933
<u>Southern Virginia Programs</u>					
Charlottesville	173	87	15	11	26
Hampton Roads	567	175	51	25	76
Middle Peninsula	49	25	0	10	10
Richmond*	2,219	175	283	1	284
Roanoke*	2,412	175	97	82	179
Total SOVA	5,420	636	446	129	575

* - Met target for completed interviews

Two weeks after the reminder email was sent, telephone calls were initiated to Internet non-respondents who provided a telephone contact number and to applicants who provided telephone contact but not an email address. Telephone interview calls were first directed to the respondent's work number. If this contact was unsuccessful, the respondent was called at home. Up to five attempts were made to call each applicant.

COMPLETED INTERVIEWS AND CONFIDENCE LEVELS

As shown in the last column of Table 1, the program-level target of 62 for ACCS was not met, due to difficulties reaching applicants. A total of 31 interviews were completed, with 11 completed via the Internet and 20 completed via telephone. A large share of the applicants who received the emailed invitation did not complete the survey, although all were sent a reminder email. Follow-up telephone calls were attempted with respondents who provided a telephone number, but some could not be reached with five attempts and other applicants provided only an email address, thus follow-up telephone contact was not possible for all applicants.

During the interview process, some contact information was found to be invalid (e.g., inactive email address, number not in service, applicant no longer at the work or home address, etc.). These applicants

were removed from the applicant counts to derive a “valid applicant” count for each program. These counts are presented in the first column of Table 2. For ACCS, the valid applicant count was 119.

Table 2
Valid Applications, Interviews Completed, and Confidence Levels

	Valid Apps	Total Complete	Confidence Level
<u>Northern Virginia Programs</u>			
Alexandria	126	32	95 ± 15.0%
Arlington	119	31	95 ± 15.2%
Fairfax County	978	196	95 ± 6.3%
Loudoun County	359	110	95 ± 7.8%
Northern Neck	27	10	95 ± 25.1%
Northern Shenandoah Valley	156	43	95 ± 12.8%
PRTC	888	177	95 ± 6.6%
GWRC (Fredericksburg)	1,999	240	95 ± 6.0%
Rappahannock-Rapidan	310	94	95 ± 8.5%
Total NOVA	4,962	933	95 ± 2.9%
<u>Southern Virginia Programs</u>			
Charlottesville	168	26	95 ± 17.7%
Hampton Roads	542	76	95 ± 10.4%
Middle Peninsula	46	10	95 ± 27.7%
Richmond	1,939	284	95 ± 5.4%
Roanoke Ride	2,196	179	95 ± 7.0%
Total SOVA	4,891	575	95 ± 3.8%

Finally, Table 2 shows the confidence levels for each program and for the Northern Virginia and Southern Virginia combined samples. The confidence level for ACCS was 95% ± 15.2%, calculated for the total completes of 31, against the “valid applicant” base of 119. For Northern Virginia, the total sample of 933 on a base of 4,962 produced a confidence level of 95% ± 2.9%.

WEIGHTING OF SURVEY DATA

Respondent survey data for Northern Virginia and Southern Virginia were weighted to align survey results with the surveyed population of applicants in each of the individual programs comprising Northern Virginia and Southern Virginia. These weighted samples were used in the analysis of Northern Virginia and Southern Virginia sub-areas. No weighting was needed for analysis of the 14 individual programs.

SECTION 3 SURVEY RESULTS

A primary goal of ACCS is to reduce commute vehicle trips, commute vehicle miles traveled, and emissions from commute travel by:

- Encouraging and assisting drive alone commuters to shift to commute alternative arrangements
- Assisting current commute alternative users to maintain their use of alternative modes or increase the number of days per week they use alternative modes

With these goals in mind, the survey collected data in the following primary topic areas, related to commuters' travel patterns and influences on these patterns:

- Current commute patterns
- Alternative mode characteristics
- Recent commute pattern changes
- Use of information and assistance services received
- Influences of services on change
- Guaranteed Ride Home
- Telework/Telecommute services
- Demographics (age, income, ethnic group, sex, employer type and size)

Following are summaries of key results from each section of the survey. Percentages presented in the results tables generally show percentages of respondents who answered each question. But for tables in which the total number of respondents was very small, the actual number (frequency) of respondents is shown, in lieu of the percentage. For some questions, comparisons are shown between the results for ACCS respondents and all Northern Virginia respondents. Generally, the Northern Virginia combined responses are shown as percentages, weighted to the total population of Northern Virginia applicants, but the tables also show the raw number of Northern Virginia respondents (e.g., n=__) who answered the question.

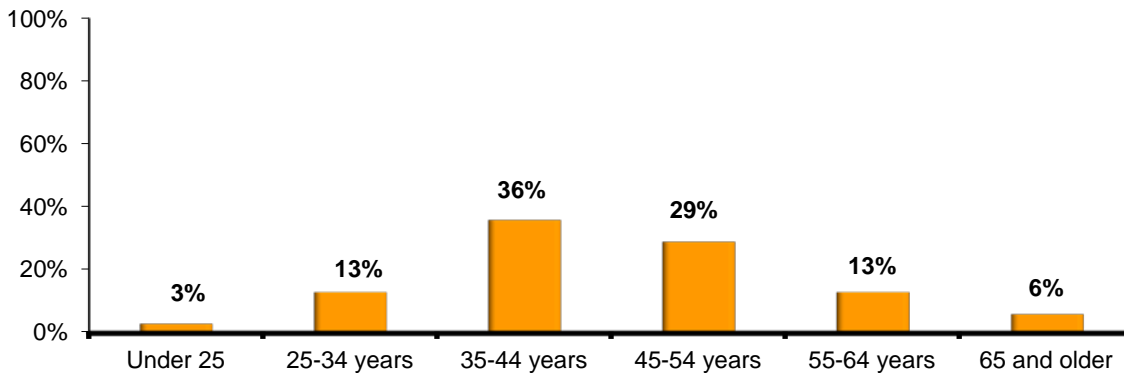
CHARACTERISTICS AND DEMOGRAPHICS OF THE SAMPLE

Demographics

The survey asked respondents four demographic classification questions: sex, age, income, and ethnic group. There are slightly more female, (53%) than male (47%) respondents. The remaining demographic categories are summarized in Figure 1 and Tables 3 through 4.

Age – About eight in ten (77%) applicants are between 35 and 64 years old (Figure 1).

Figure 1
Distribution by Age
(n = 31)



Income – As detailed in Table 3, 85% of respondents have an annual household income of \$60,000 or more and almost 50% have an income of \$100,000 or more.

Table 3
Distribution by Annual Household Income
(n = 28)

Income	Percentage	Income	Percentage
Less than \$20,000	4%	\$80,000 – 99,999	18%
\$20,000 – 29,999	4%	\$100,000 – 119,999	21%
\$30,000 – 39,999	7%	\$120,000 – 139,999	11%
\$40,000 – 59,999	0%	\$140,000 – 159,999	4%
\$60,000 – 79,999	21%	\$160,000 or more	10%

Ethnic Background – Next, as illustrated in Table 4, White/Caucasians and Asian/ Pacific Islanders represented the two largest ethnic group categories of survey respondents, 75% and 14% respectively. Hispanics and African-Americans account for about 7% and 3% of the sample respectively.

Table 4
Distribution by Ethnic Background
(n = 29)

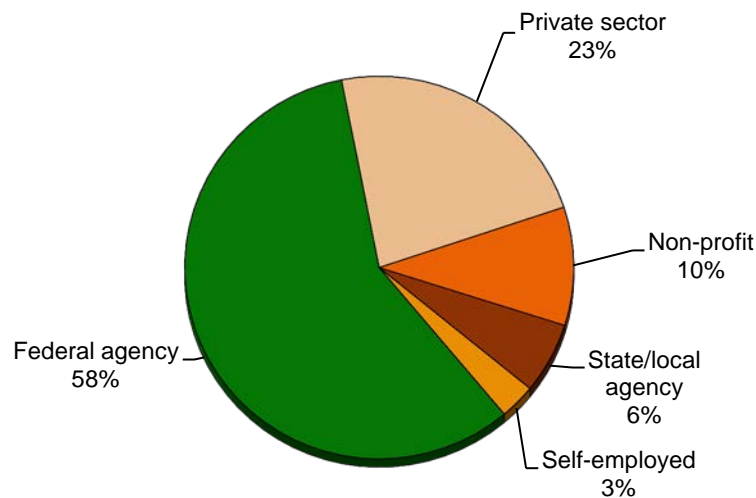
Ethnic Group	Percentage
Non-Hispanic White	75%
Asian/Pacific Islander	14%
Hispanic	7%
African-American	4%
Other	0%

Employment Characteristics

Respondents were asked about the type of employer for which they worked and the number of employees at their worksite. These results are shown in Figure 2 and Table 5, respectively.

Employer Type – Almost six in ten (58%) respondents said they work for a federal agency (Figure 2). Approximately one-quarter (23%) work for a private sector employer. State and local government agencies employ 6% and 10% work for a non-profit organization.

Figure 2
Distribution by Employer Type
(n = 30)



Employer Size – As shown in Table 5, eight in ten respondents (80%) work for employers with more than 100 employees. Almost half (49%) work for employers with at least 1,000 employees. Two in ten respondents (20%) said they work for organizations with 100 or fewer employees.

Table 5
Distribution by Employer Size
 (n = 29)

Number of Employees	Percentage	Number of Employees	Percentage
1-25	17%	101-250	14%
26-50	3%	251-999	17%
51-100	0%	1,000+	49%

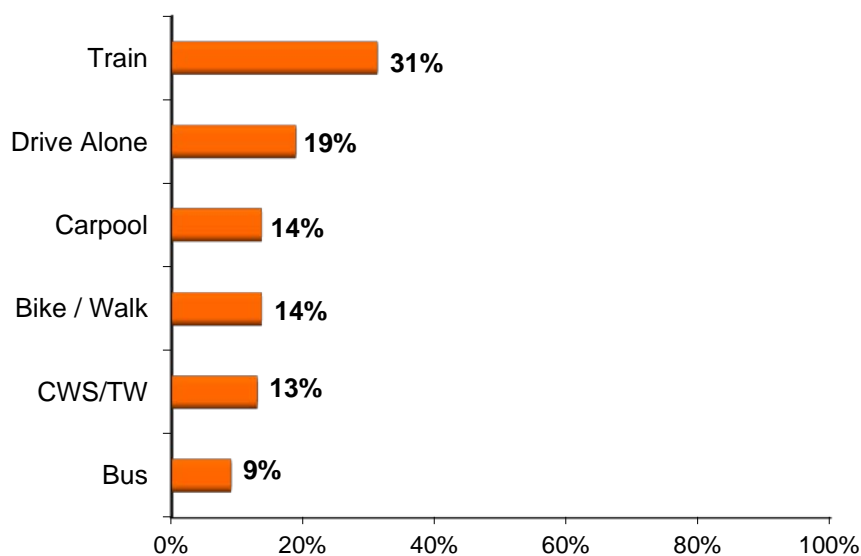
CURRENT COMMUTE PATTERNS

One section of the survey examined current commute patterns of applicants: commute mode, distance, travel time, and use of telecommute and alternative work schedules.

Weekly Commute Trips by Mode

Applicants were asked how many days in a typical week did they use each of a variety of transportation modes. These responses were used to calculate mode split as the percentage of weekly work day trips made by each mode. This depiction of mode split, presented in Figure 3, accounts for part-time and occasional use of modes

Figure 3
Mode Split – Weekly Work Day Trips
 (n=31)



The figure includes six traditional “on the road” mode groups for travel to job locations outside the home: train (subway, light rail, commuter rail), bus, vanpool, carpool, drive alone, and bike/walk. It also accounts for work days for which commute trips were eliminated through use of teleworking and compressed work schedule. While not “commute” modes in the conventional sense, they represent work days and so were included. Percentages in this figure are based on the number of days respondents actually worked, teleworked, or had a compressed schedule day off. Days not assigned to work are not included in the calculation.

ACCS applicant respondents ride a train for 31% of weekly commute trips and drive alone for about two in ten (19%) trips. Carpool and bike/walk are the next most popular modes used for 14% of weekly work trips each respectively. About 3% of trips are made by bus. Telework and compressed schedule days off eliminate about 13% of weekly commute trips.

If the telework and compressed schedule days off are excluded, the percentage use of each of the six travel modes “on the road” increases. For example, without telework and CWS, the carpool share rises from 14% to 16% of weekly commute trips. The weekly commute trip distribution for each “on the road” mode is:

- Train 35%
- Drive alone 22%
- Carpool 16%
- Bike/walk 16%
- Bus 11%
- Vanpool 0%

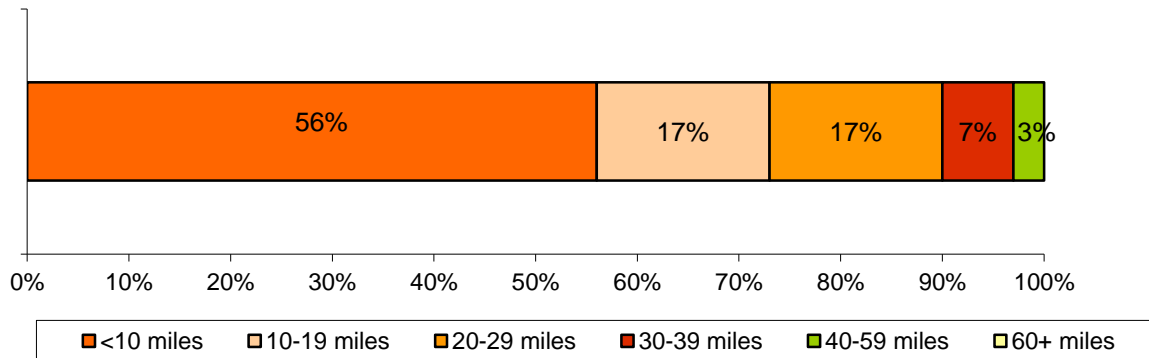
Commuter Distance

Commuters in the survey have a wide range of commute distances, ranging from just two miles to 40 miles. The average one-way distance is 13.2 miles. This is much lower than the average 37.5 mile one-way distance for all Northern Virginia applicants in the survey.

Figure 4 presents the distribution of respondents in various distance categories. More than half (56%) of respondents travel fewer than 10 miles to work and another 17% travel between 10 and 19 miles one-way. The remaining 27% commute 20 or more miles one-way.

Figure 4
Commute Distance (miles)

(n = 29)



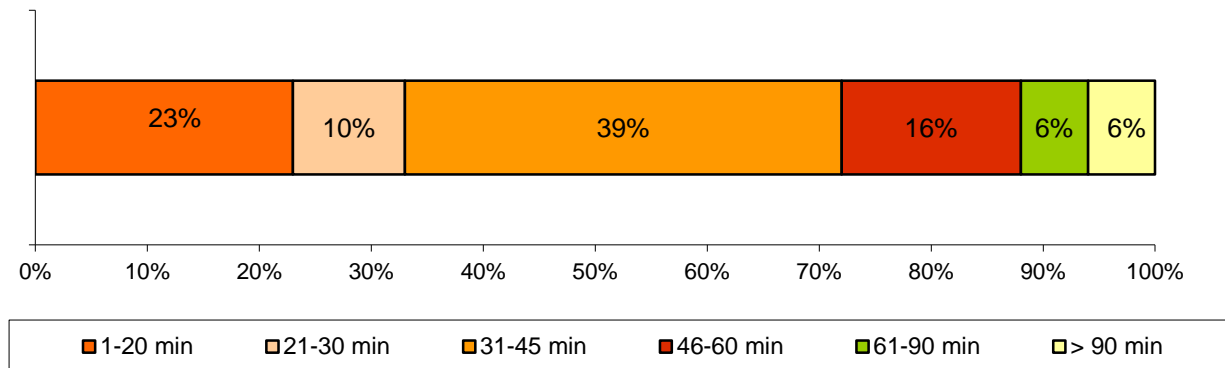
Commuter Travel Time

The one-way commute travel time of ACCS applicants ranges from 5 minutes to 150 minutes, with an average of 44 minutes. This is much lower than the average 64 minute travel time for all Northern Virginia applicants in the survey.

As illustrated in Figure 5, about a third (33%) of respondents travel 30 minutes or less to work and 72% travel 45 minutes or less. About one in ten (12%) travel more than one hour one-way.

Figure 5
Commuter Time (minutes)

(n = 31)



Alternative Work Schedules

Telework – About four in ten (45%) applicants said they telework, at least occasionally. Three of these applicants telework infrequently; one applicant teleworks less than once per month/only in emergencies, and two applicants telework a few times each month. Nine applicants telework one or two days per week and two applicants telework three or more days per week.

- Less than once per month/emergency 1
- 1 – 3 times per month 2
- 1 day per week 5
- 2 days per week 4
- 3 or more days per week 2

Compressed Work Schedule – A small percentage (10%) of applicants reported working a compressed work schedule (CWS), in which they work a full work week in fewer than five days per week. The most common CWS arrangement, used by 10% of all respondents, is a 9/80 schedule, in which employees work nine days for a total of 80 hours over two weeks.

CURRENT POOL CHARACTERISTICS

The second part of the survey collected data on occupancy and composition of carpools and vanpools and explored how ridesharers and transit riders access these commute modes.

Carpool and Vanpool Size

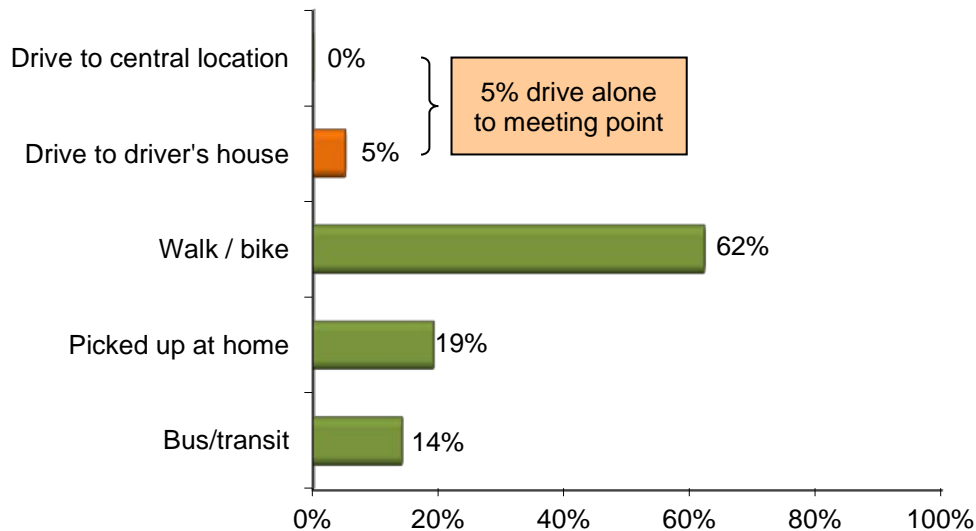
Less than two in ten survey respondents (16%) said they rideshare (carpool or vanpool) at least one day per week. Overall pool occupancy is 2.2 occupants, including the driver.

Access to Carpools, Vanpools, and Transit

Figure 6 presents the types of transportation carpools, vanpoolers, and transit riders use to travel to where they meet their pool partners or where they start their transit trip.

More than six in ten (62%) applicants said they walk/bike to the meeting point, 19% said they are picked up at home, and 14% take the bus/transit. Five percent drive to the driver's home, where they leave their cars for the day. This is significant to the calculation of air quality impacts, because a large proportion of auto emissions are produced during the first few miles of a vehicle trip, when the engine is cold. Even though these trips tend to be short, an average of just 3 miles, these trips must be accounted for in an air quality analysis.

Figure 6
Access Mode to Alternative Mode Meeting Place
 (n = 21)



RECENT COMMUTE PATTERN CHANGES

The third survey section asked applicants about commute pattern changes they made since receiving assistance from ACCS. Data were collected on types of changes made, “permanence” of change, reasons for changes, and details of commute patterns before the changes occurred. To ensure that all shifts were captured, the survey asked applicants a series of questions about various mode changes they might have made:

- Joining or forming a new carpool or vanpool
- Starting to ride a bus, Metrorail, light rail, or a commuter train
- Starting to bicycle or walk
- Starting to telework

Applicants who said they did not make a mode change were asked if they had increased the number of days they use alternative modes they already were using, if they added a person to an existing carpool or vanpool, or if they had tried using any other type of transportation.

Applicants who made any of these changes were considered to have been “placed” in alternative modes. These shifts are measured by the placement rate, defined as the percentage of respondents who made an alternative mode change after they received assistance, divided by the total number of respondents surveyed.

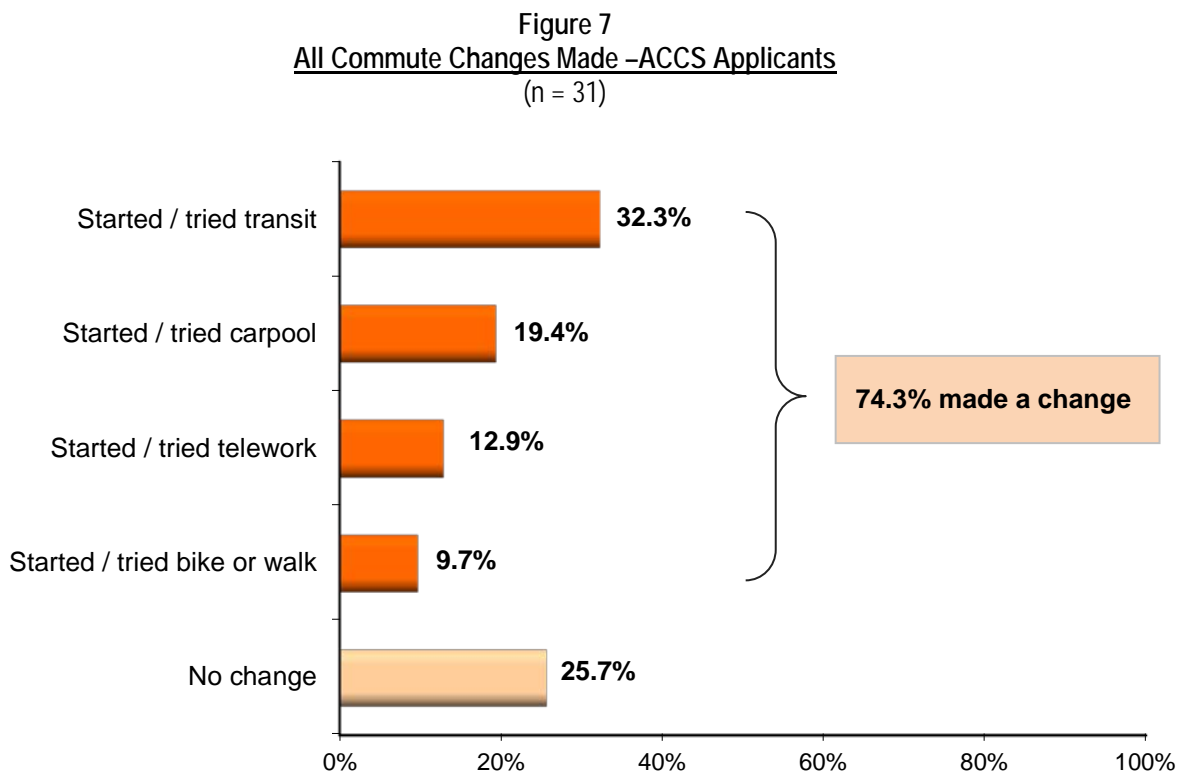
Four types of alternative mode changes were measured:

- Continued – applicant made a change and was still using the new mode at the time the survey was conducted
- Occasional – applicant made a change and was still using the new mode, but used the alternative mode less than one time per week
- Temporary – applicant made a change, but stopped using the new mode before the survey was conducted
- One-time – applicant briefly tried an alternative mode, but used it less than one week

Temporary shifts are reported separately from continued shifts, because they cannot be counted toward long-term reduction in vehicle trips, VMT, or emissions. Occasional and one-time shifts also are reported separately because their contribution to vehicle trips, VMT, and emissions is very minor.

Types of Changes Made

Nearly three-quarters (74.3%) of the ACCS applicants reported some type of alternative mode change after receiving commute assistance (Figure 7). By comparison, the change percentage among all Northern Virginia applicants was 66.4%.



Most of the ACCS applicants who made a mode change made a carpool or transit change. Three in ten (32.3%) started or tried transit and 19.4% joined or created a new carpool. More than one in ten (12.9%) started teleworking and 9.7% started or tried bicycling or walking to work. No-one said they were car-

pooling or vanpooling before obtaining assistance from ACCS, and added another person to their existing pools.

Some respondents who made a mode change shifted from drive alone, but other shifted from one alternative mode to another. About four in ten (39%) respondents who made a change shifted from driving alone to an alternative mode. The remaining 61% of respondents were previously using an alternative mode, but made a change within these alternatives, for example, from carpool to vanpool, from bus to train, or from vanpool to train.

It is important to note the percentage of shifting between alternative modes, because commuters who made these shifts reduced vehicle trips only if they shifted to a higher occupancy mode (carpool to vanpool or vanpool to transit, for example) or increased the number of days they use the alternative. Some of these shifts, such as a shift from transit to rideshare, actually increased the number of vehicle trips the respondent made during the week, reducing the air quality benefit of the shift. This is not to say these were not desirable shifts from the perspective of the commuter, but these shifts must be accounted for in determining the transportation and air quality benefits of the services.

Continued vs Temporary Change – Placement Rates

Applicants who made a change to a mode they were using at least once per week at the time of the survey were classified as having made a “continued change.” Applicants who made a change to a mode they had not reported using during the time of the survey were asked if they still used the mode occasionally or if they had stopped using it. Applicants who said they had stopped using the mode were asked how long they had used the new mode after the change. Then, applicants were classified as “occasional,” “temporary,” or “one-time” by the duration of their change. Table 6 summarizes these results for both ACCS and the combined results of the nine Northern Virginia (NOVA) programs.

Table 6
Distribution of Continued, Occasional, Temporary, and One-time Changes
Placement Rates – ACCS and All Northern Virginia

Type of Change	ACCS (n = 31)	All NOVA (n = 934)
Continued	51.6%	48.4%
Occasional	6.5%	4.9%
Temporary	6.5%	7.2%
One-time	9.7%	5.9%
TOTAL – All Changes	74.3%	66.4%
No change	25.7%	33.6%

More than half (51.6%) of applicants made a change to a mode they were still using at least one day per week; these applicants made continued changes. Just over six percent (6.5%) of applicants made a

change to a mode they were using, but using only occasionally, defined as less than once per week, and just over six in ten (6.5%) made a temporary change, that is, they had already stopped using the new alternative mode by the time of the survey. On average, they had used the new mode for about six weeks. Finally, 9.7% of applicants tried a new mode for less than one week. These applicants were classified as one-time changes.

The delineation of change duration described above is important because occasional, temporary, and one-time changes do not produce the ongoing travel and air quality impacts of the continued changes. The percentages of respondents who made continued, occasional, and temporary changes represent the “placement rates” for ACCS. These rates and the corresponding rates for all Northern Virginia programs combined are shown below:

Placement Rates –ACCS and All Northern Virginia Programs

	ACCS (n = 31)	All NOVA (n = 934)
• Continued placement rate =	51.6%	48.4%
• Temporary placement rate =	6.5%	4.9%
• Occasional use placement rate =	6.5%	7.2%

The placement rates can be used to estimate the total number of ACCS applicants who started using alternative modes. This is done by multiplying the placement rates by the total number of commuters who received assistance from the program.

Between April 1, 2011 and March 31, 2012, ACCS received applications from 124 commuters. Based on the survey results, it would be expected that approximately 80 of these commuters had started using a new alternative mode or increased their use of alternative modes:

- 64 continued shifts (51.6% x 124)
- 8 temporary shifts (6.5% x 124)
- 8 occasional use shifts (6.5% x 124)

Total of 80 placements (commute shifts)

Vehicle Trips and VMT Reduced

The specific changes made by respondents who reported a change were examined to estimate how many vehicle trips and vehicle miles traveled they eliminated by their shifts to alternative modes.

Vehicle Trips Reduced – *Vehicle Trips Reduced (VTR)* measures the number of vehicle trips no longer made as a result of commuters starting or increasing use of higher occupancy modes. The calculation also accounts for alternative modes shifts that do not reduce, and indeed may increase, vehicle trips, such as a shift from transit to carpool (lower occupancy mode than transit).

To simplify measuring the impacts of various shifts, “VTR factors” were estimated from the survey data. The factors combine the impacts of all respondents’ changes into a single number equal to the average number of vehicle trips reduced by commuters who switch modes. VTR factors can range between 0.0

and 2.0 vehicle trips reduced per day. A VTR of 2.0 indicates that all of the commuters whose travel shifts are averaged were previously driving alone and are now using a combination of “zero-vehicle” modes (transit, bike, walk, or telework) five days per week. Because a more typical situation is a combination of shifts to carpool and vanpool, as well as to zero-vehicle modes, and some shifting among alternative modes (e.g. transit to carpool), VTR factors are typically lower than 2.0.

VTR factors were derived from detailed examination of the types of changes reported by survey respondents. Factors were developed for both continued change and temporary change. The VTR factors for ACCS are shown below.

- Continued VTR = 0.93 daily trips reduced per placement
- Temporary VTR = 0.02 daily trips reduced per placement

These factors can be multiplied by the number of commuters who made continued and temporary changes, respectively, to estimate the vehicle trip reduction of all commuters placed in alternative modes. We note, however, that temporary changes must be discounted for their short duration. ACCS respondents who made a temporary change used their new modes an average of 6.0 weeks or 12% of a year (6 / 50 work weeks). This discount is factored into the calculation of trips reduced. These calculations would produce an estimate of 60 daily trips reduced:

$$\begin{aligned} \text{Continued trips reduced} &= 64 \text{ commuters} \times 0.93 \text{ trips reduced} &&= 60 \text{ daily trips reduced} \\ \text{Temporary trips reduced} &= 8 \text{ commuters} \times 0.02 \text{ trips reduced} \times 10\% &&= 0 \text{ daily trip reduced} \\ \text{Total trips reduced} &= 60 \text{ daily trips reduced} \end{aligned}$$

Vehicle Trips Reduced – The reduction in vehicle miles traveled, or VMT, is calculated by multiplying the number of vehicle trips reduced by the average commute distance for respondents who made a commute change. The one-way trip distance was 11.4 miles for respondents with continued changes and 15.0 miles for respondents with temporary changes. The VMT calculation thus was as follows, resulting in 679 VMT reduced daily:

$$\begin{aligned} &(60 \text{ continued trips reduced} \times 11.4 \text{ miles}) + (0 \text{ temporary trip reduced} \times 15.0 \text{ miles}) \\ &= 679 \text{ VMT reduced} \end{aligned}$$

Reasons for Changes

Applicants who said they had made a commute change were asked the reasons for their changes. Table 7 summarizes the responses.

Some applicants made the change for commute-related reasons: save time (15%), or parking costs too high (15%). Applicants also noted reasons associated with commute assistance services. These were each mentioned by five percent of applicants. A significant number of applicants mentioned a personal factor, such as changing jobs or work hours (20%), being tired of driving (10%), and schedule flexibility (10%), as the reason for making the change.

The wide range of reasons highlights emphasizes the potential for Commuter Connections and ACCS to market alternative modes through new employee orientations and through direct mail to those moving to new residences.

Table 7
Reasons for Commute Change
(n = 20, multiple responses permitted)

Commute related reasons	Percentage
Commute / Parking-related reasons	
- Save time	15%
- Parking cost too high	15%
- No parking at work	5%
- Save money	5%
- Gas prices too high	5%
- Transit problems (slow, crowded, discontinued service)	5%
- Reduce congestion/pollution	5%
Commute service reasons	
- New option became available	5%
- Employer permitted telework	5%
- SmarTrip/other transit/vanpool discount	5%
Personal related reasons	
- Changed job/work hours	20%
- Tired of driving	10%
- Schedule flexibility	10%
- Other	5%

SERVICES RECEIVED AND INFLUENCE OF SERVICES ON COMMUTE CHANGES

The survey also identified the types of services, information, and assistance that respondents received from ACCS or from Commuter Connections and services and programs offered by respondents' employers. The survey also asked respondents about the influence of these services on commute changes.

Information Received from ACCS/ Commuter Connections

When commuters contact ACCS or Commuter Connections, they have the option to request or access various types of assistance and information. In the survey, respondents were shown a list of services and were asked to check all that they remembered receiving or accessing. Table 8 lists the percentages of applicants who said they received each service, with services grouped into three categories: Carpool/Vanpool Services, Transit-Related Services, and Other / Multi-Mode Services.

Table 8
Information Received or Accessed from ACCS/ Commuter Connections
and All Northern Virginia Applicants

Service	ACCS (n = 31)	NOVA (n = 934)
Carpool / Vanpool Services		
Matchlist – names of potential carpool / vanpool partners	45%	56%
Map showing home / work locations of potential pool partners	23%	29%
Carpool rider bulletin board	19%	29%
Other carpool / vanpool information	13%	28%
Park & Ride lot information	10%	27%
NuRide rewards	10%	9%
HOV lane information	6%	15%
'Pool Rewards carpool financial incentive	6%	9%
Transit-Related Services		
Transit fare information, SmarTrip	45%	39%
Transit schedule / route information	45%	38%
Other / Multi-Mode Services		
Guaranteed Ride Home	58%	60%
Information on special events (e.g., Bike to Work Day)	35%	15%
Bicycle to Work Guide, bicycle information	26%	10%
Online bicycle route planning	16%	7%
Telework information	6%	11%

Carpool/Vanpool Services – More than six in ten (61%) applicants received or accessed one or more Carpool/Vanpool services. More than four in ten (45%) received a matchlist with names and contact information for potential carpool/vanpool partners, 23% received a map showing home and work locations of potential carpool/vanpool partners, and 19% used the carpool rider bulletin board. Other common services, each noted by about one in ten applicants, included: Park & Ride lot information (10%) and NuRide rewards (10%).

Transit-Related Services – More than six in ten (61%) applicants received some type of information about transit from ACCS/ Commuter Connections. Nearly half (45%) received information about transit fares or the SmarTrip fare payment system and another 45% received transit route/schedule information. Nearly all of the respondents who received transit information got both fare and route / schedule information.

Other / Multi-Mode Services – The top service received overall, by a large majority, was Guaranteed Ride Home; almost six in ten (58%) applicants said they received or accessed this “Multi-Mode” service, which is open to any commuter who uses an alternative mode to commute. Other commonly requested information included: information about regional special events, such as Bike to Work Day or Car Free Day (35%), bicycle guide (26%), and bicycle route planning (16%).

Use of Matchlist Information

Match Names – A total of 31 respondents said they received a matchlist of potential rideshare partners or a map with home and work locations of potential carpool/vanpool partners from either ACCS or another organization. These respondents were asked about their use of matchlist information. Their responses are shown in Table 9.

Table 9
Actions Taken by Respondents who Received Matchnames from ACCS

Action Taken	Sample Size**	Yes**	No**
Received matchlist	31	17	14
Called names	18	7	11
Able to reach people named on matchlist	7	5	2
People called were interested in ridesharing	5	4*	1

* Two of the four respondents said people were interested, but their “schedules/destinations weren’t compatible”

** Note – table shows actual sample counts, rather than percentages, due to small sample size

Trying to Make Contact – Seven of the 18 respondents who received a matchlist said they tried to call one or more of the people named. The remaining 11 respondents did not try to make contact.

The primary reason for not trying to reach people on the list was that they “haven’t gotten around to it.” Other reasons why respondents didn’t try to make contact included:

- Haven’t gotten around to it 3 respondents
- Work hours not compatible with mine 2 respondents
- Work / home locations not compatible with mine 2 respondents
- Already found rideshare arrangement 2 respondents
- Decided I didn’t want to carpool/vanpool 2 respondents
- My schedule changed/is erratic 1 respondent

Success in Reaching Someone Named on the Matchlist – Five of the seven respondents who tried to make contact were successful in reaching someone named on the list. This suggests that the information provided on the matchlists was generally current and accurate

Interest in Ridesharing – Two of the five respondents who were able to reach someone said that person was interested in ridesharing. One respondent who reached a person on the matchlist said the person was not interested in ridesharing. The two remaining respondents said the person they reached was interested, but their schedules or destinations were not compatible.

To some extent, compatibility is an individual standard. One applicant might be willing to drive out of his way or arrive at work 30 minutes earlier than scheduled to take advantage of carpooling benefits, while another applicant would feel these accommodations were too inconvenient. But this result suggests the software might not match applicants with as much precision as some commuters would like.

Use of Other Types of Information Received

Applicants who received information on transit routes or schedules and Guaranteed Ride Home were asked follow-up questions on their use of the information.

Table 10
Actions Taken by Respondents who Received Information from ACCS

Action Taken	(n= __)	Yes
Received transit information	31	61%
Used transit information	19	26%
Received GRH information	31	58%
Registered for GRH	18	72%

Transit Information – Approximately six in ten (61%) applicants said they received transit information from ACCS/ Commuter Connections. About one-quarter (26%) of those applicants used the information to try transit.

Guaranteed Ride Home – Finally, the survey included questions about applicants' use of a Guaranteed Ride Home (GRH) program. Almost six in ten (58%) applicants received or accessed information on GRH and the majority (72%) of these applicants subsequently registered for GRH. About 22% of applicants who received GRH information were driving alone to work at the time they requested the information. The remaining applicants were using an alternative mode.

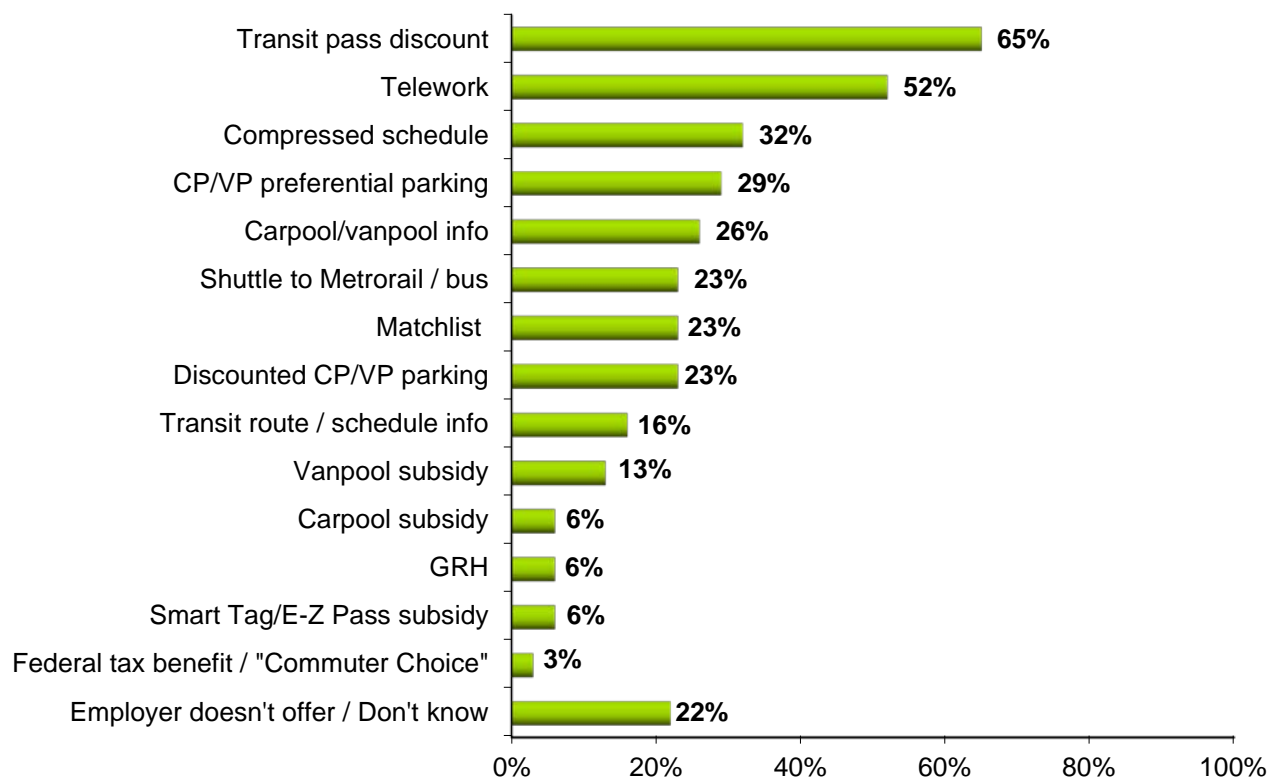
Assistance Offered by Employers

Respondents also were asked if their employers offered commute assistance services. More than three-quarters (77%) of ACCS respondents said their employers offer at least one service.

The most commonly-offered employer services are discounted or free transit passes and telework; more than six in ten (65%) applicants reported having access to discount/free transit passes and more than five in ten (52%) reported having access to telework services through work (Figure 8). About a third of applicants (32%) mentioned that compressed work schedules were common, as well as preferential parking (29%). Around one-quarter of applicants mentioned carpool/vanpool information (26%), shuttle to Metrorail or bus stop, assistance with finding carpool or vanpool partners (matchlist), or discounted carpool/vanpool parking (23% each respectively). About two in ten (16%) said that transit route or schedule information was offered.

Figure 8
Commuter Assistance Services Offered by Employers

(n = 31, multiple responses permitted)



Influence of Assistance or Information

Respondents who had made a commute change were asked if the information they had received from ACCS/ Commuter Connections, from their employer, or from another organization had influenced their decisions to make the change. About 55% of respondents who made a change indicated that assistance or information received from ACCS/ Commuter Connections had influenced their decision and 60% said services from an employer or another organization had influenced their decision.

The most frequently-mentioned ACCS programs were Guaranteed Ride Home, matchlists, and transit schedule or route information. Influential employer services included discounted or free transit passes (SmarTrip Card), compressed work week/telecommute, and carpool/ vanpool discounted parking fee.

ACCS Improvements

Survey respondents also were asked how ACCS could improve its services to commuters. About a quarter (26%) of respondents said no improvements were needed and an additional 10% left the question blank. The remaining 64% of respondents mentioned one or more improvements they would like to see. Table 11 highlights responses for this question.

Table 11
ACCS Improvements Desired
(n=31)

Improvement	Percentage*
Information Quality / Quantity Suggestions	
Better transit information	10%
More match names	10%
Carpool / vanpool resources/assistance	6%
Program Operations Suggestions	
More advertising / education	16%
Use Internet more / user-friendly phone / apps / improve website	10%
Other Suggestions	
Transit improvements	13%
Bike suggestions	6%

* Multiple responses permitted

Most of the desired improvements focused on the quantity or quality of information: better transit information, more match names, and more carpool/vanpool resources/assistance. In addition, there was a focus on program operation suggestions such as: more advertising/education and use of the Internet more /user-friendly phone /apps /improve website. However, these “highest priority” items were noted by only a small percentage of respondents. Finally, some respondents mentioned a desire for improvements in regional or local transportation services, such as transit as well as suggesting improvements for biking.

LIST OF APPENDICES

Appendix A – Questionnaire for September-October 2012 Applicant Survey

Appendix A

Questionnaire for September-October 2012 Applicant Survey

Northern Virginia Internet Version – Final- 8-2-12

INTRODUCTION

The Virginia Department of Rail and Public Transportation, Commuter Connections, and [LONG NAME] are conducting this online survey of people who have received commute information or assistance from the Commuter Connections program or [PROGRAM NAME] or who have used the Commuter Connections or [PROGRAM NAME] website. Your answers will be confidential. It will take about 10 minutes. Please complete the survey and click on the “SUBMIT” button at the end. If you need to stop before you have finished the survey, your answers will be saved and you may come back and complete the remaining questions at a later time. Thank you for your participation.

SCREENING FOR SERVICES USED

- S1 Which of the following carpool and vanpool services have you received, accessed, or requested from Commuter Connections or [LONG NAME]? You could have received or requested them from the website or through a letter, email, or phone call. Please check all that apply.

ACCEPT MULTIPLES FOR 1-9, DO NOT ALLOW MULTIPLES WITH 90 OR 98

Carpool / Vanpool Services	Received or Accessed	Requested, but did NOT Receive or Access
1 Names and contact information for people you could contact to form a carpool or vanpool (also called a matchlist)		
2 Map showing home and work locations of people you could contact to form a carpool or vanpool		
3 Carpool / Vanpool rider wanted bulletin board		
4 Other carpool / vanpool information		
5 Vanpooling assistance		
6 HOV lane information		
7 Pool Rewards carpool financial incentive		
8 NuRide rewards		
9 Vanpool leasing		
90 Did not receive any of these services from Commuter Connections or [PROGRAM NAME]		
98 Don't know		
99 Question left blank (internet only)		

- S2 Commuter Connections and [PROGRAM NAME] also offer information on telework, transit, and bicycling to get around the Washington metropolitan region. Which of the following services have you received, accessed, or requested from Commuter Connections or [PROGRAM NAME]? Please check all that apply.

ACCEPT MULTIPLES FOR 1-8, DO NOT ALLOW MULTIPLES WITH 90

Telework / Transit / Bicycling Services	Received or Accessed	Requested, but did NOT Receive or Access
1 Transit schedule or route information		
2 Transit fare information, SmarTrip		
3 Park & Ride lot information		
4 Telework information, telework center information		
5 Bicycle to Work Guide, bicycling information		
6 Online bicycle route planning		
7 Guaranteed / Emergency Ride Home information or trip		
8 Special events information (e.g., Bike to Work day, Car Free Day)		
90 Did not receive any of these services from Commuter Connections or [PROGRAM NAME]		
98 Don't know		
99 Question left blank (internet only)		

- S3 **SERVICES RECEIVED / REQUESTED – AUTOCODE FROM Q_S1, Q_S2**

ACCEPT MULTIPLES FOR 1-17, DO NOT ALLOW MULTIPLES WITH 90

IF Q_S1 = 1, CODE Q_S3 = 1

IF Q_S1 = 2, CODE Q_S3 = 2

IF Q_S1 = 3, CODE Q_S3 = 3

IF Q_S1 = 4, CODE Q_S3 = 4

IF Q_S1 = 5, CODE Q_S3 = 5

IF Q_S1 = 6, CODE Q_S3 = 6

IF Q_S1 = 7, CODE Q_S3 = 7

IF Q_S1 = 8, CODE Q_S3 = 16

IF Q_S1 = 9, CODE Q_S3 = 17

IF Q_S2 = 1, CODE Q_S3 = 8

IF Q_S2 = 2, CODE Q_S3 = 9

IF Q_S2 = 3, CODE Q_S3 = 10

IF Q_S2 = 4, CODE Q_S3 = 11

IF Q_S2 = 5, CODE Q_S3 = 12

IF Q_S2 = 6, CODE Q_S3 = 13

IF Q_S2 = 7, CODE Q_S3 = 14

IF Q_S2 = 8, CODE Q_S3 = 15

IF Q_S1 = 90 OR 98 AND Q_S2 = 90 OR 98, CODE Q_S3 = 90

QS3 continues on following page

Q33 - Continued

- 1 Names and contact information for people you could contact to form a carpool or vanpool (matchlist)
- 2 Map showing home and work locations of people you could contact to form a carpool or vanpool
- 3 Carpool / vanpool rider bulletin board
- 4 Other carpool / vanpool information
- 5 Vanpooling assistance
- 6 HOV lane information
- 7 Pool Rewards carpool financial incentive
- 8 Transit schedule or route information
- 9 Transit fare information, SmarTrip
- 10 Park & Ride lot information
- 11 Telework information, telework center information
- 12 Bicycle to Work Guide, bicycling information
- 13 Online bicycle route planning
- 14 Guaranteed /Emergency Ride Home information or trip
- 15 Special events information (e.g., Bike to Work Day, Car Free Day)
- 16 NuRide rewards
- 17 Vanpool leasing
- 90 Did not request or seek any of these services
- 99 *Question left blank (internet only)*

DEFINE USER – FOR LATER BRANCHING**CLASSIFY IN THE FOLLOWING ORDER:**

IF Q_S1 = ANY RESPONSE 1, 2, OR 4 – 9, USER = 1 (RECEIVED)

IF Q_S2 = ANY RESPONSE 1 – 9, USER = 1 (RECEIVED)

IF Q_S1 = 90 OR 99 AND Q_S2 = 90 OR 99 AND Q_S3 = ANY RESPONSE 1, 2 OR 4 – 17, USER = 2 (REQUESTED)

IF Q_S1 = ONLY 3 AND Q_S2 = 90 OR 99 AND Q_S3 = 90 OR 99, USER = 3 (BB ONLY)

IF Q_S1 = 90 OR 99 AND Q_S2 = 90 OR 99 AND Q_S3 = ONLY 3, USER = 3 (BB ONLY)

IF Q_S1 = 90 OR 99 AND Q_S2 = 90 OR 99 AND Q_S3 = 90 OR 99, USER = 4 (UNKNOWN)

IF USER = 1, 2, OR 3, CONTINUE TO Q1

IF USER = 4, THANK AND TERMINATE

HOW THEY GET TO WORK

- 1 Next, please answer a few questions about your travel to and from work. In a TYPICAL week, how many weekdays (Monday-Friday) are you assigned to work? **(DO NOT READ RESPONSES)**

- 1 1 day per week
- 2 2 days per week
- 3 3 days per week
- 4 4 days per week
- 5 5 days per week
- _____ Not currently working **(THANK AND TERMINATE)**

- 2 Which of the following best represents your work schedule?
- 1 Part-time schedule (less than 35 hours per week)
 - 2 Full-time, five or more days per week, 35 or more hours per week
 - 3 4/40 compressed schedule (4 10-hour days per week, 40 hours)
 - 4 9/80 compressed schedule (9 days every 2 weeks, 80 hours)
 - 5 3/36 compressed schedule (3 12-hour days per week, 36 hours)
 - 6 Some other (**SPECIFY**) _____
 - 9 *Don't know, prefer not to answer, Question left blank (internet only)*
- 3 Do you telecommute or telework? For purposes of this survey, “telecommuters” are defined as “wage and salary employees who at least occasionally work at home or at a telework or satellite center during an entire work day, instead of traveling to their regular work place.” Based on this definition, are you a telecommuter?
1. yes
 2. no (**SKIP TO Q4a**)
 - 8 Don't know (**SKIP TO Q4a**)
 - 9 *Question left blank (internet only)*
- 4 How often do you usually telecommute? (**DO NOT READ RESPONSES**)
- 1 Less than 1 time per month / only in emergencies (e.g., sick child, snowstorm)
 - 2 1 to 3 times a month
 - 3 1 day a week
 - 4 2 days a week
 - 5 3 days a week
 - 6 4 days a week
 - 7 5 days a week
 - 8 other (**SPECIFY**) _____
 - 9 *Don't know, prefer not to answer, Question left blank (internet only)*
- 4a How often are you away from your usual work location **for an entire day** for business or work travel (e.g., meetings / visits to clients or customers)? (**DO NOT READ RESPONSES**)
- 1 Never, I don't ever travel for work
 - 2 Occasionally, but less than 1 day per week
 - 3 Regularly, 1 or more days per week
 - 9 *Don't know, prefer not to answer, Question left blank (internet only)*

Current Travel Grid (Typical week)

- 5 Thinking about a TYPICAL week, Monday through Friday, how do you get to work? In the table below, enter the number of days you typically use each of the listed types of transportation. If you use more than one type on a single day, for example you walk to the bus stop, then ride the bus, count only the type you use for the **longest distance part** of your trip.

(PROGRAMMER NOTE: IF Q4a = 3, ALSO SHOW): "For days that you are on business or work travel, please report the type of transportation you would use to get to work if you worked at your usual work location."

Indicate also how many weekdays you do NOT typically travel to your usual work location and the reasons for not traveling to work (e.g., regular day off, telework, compressed schedule day off).

PROGRAMMER NOTES:

IF Q2 = 3, 4, OR 5 (CWS) AND RESPONDENT DOES NOT CHECK "CWS day off" (RESPONSE 1), SHOW MESSAGE: "You said you typically work a compressed schedule. How many compressed schedule days do you typically have off in a week?" **(ACCEPT 0 AS A RESPONSE)**

IF Q4 = 3, 4, 5, 6, OR 7 (TELEWORK 1+ DAYS PER WEEK) AND RESPONDENT DOES NOT CHECK "Telecommute" (RESPONSE 2), SHOW MESSAGE: "You said you typically telework. How many days do you telework in a typical week?" **(ACCEPT 0 AS A RESPONSE)**

CHECK SUM OF DAYS. IF TOTAL OF Q5 DAYS 1-18 IS LESS THAN Q1, SHOW MESSAGE "Please report for all days Monday – Friday, including telework days, compressed schedule days, and days you do not work." **IF TOTAL OF 1-18 IS GREATER THAN Q1, SHOW MESSAGE:** "You've reported more than five days. Please report only for Monday – Friday and one type of transportation for each day."

Type of Transportation	Number of Days Used (0 to 5)
Days you travel to your usual work location	
3 Drive alone in a car, truck, van, or SUV, Motorcycle, Ride in a taxi	
4 N/A – don't use	
5 Carpool, including carpool w/family member, dropped off (ride or drive with others in a car, truck, van, or SUV)	
6 Casual carpool (slugging)	
7 Vanpool	
8 N/A – don't use	
9 Ride a bus (public bus, shuttle, buspool, express bus)	
10 Ride Metrorail	
11 Ride commuter train (MARC, VRE, Amtrak, other train)	
12 Ride a light rail - N/A in NOVA – RESERVE FOR SOVA	
13 N/A – don't use	
14 Bicycle (entire trip or longest distance part of trip from home to work)	
15 Walk (entire trip or longest distance part of trip from home to work)	
16 N/A – don't use	
Days you do not travel to your usual work location	
1 Have a compressed work schedule day off	
2 Telecommute / telework all day	
17 Have a regular day off	
18 Other (describe) _____	
Total Days (DO NOT SHOW THIS LINE ON SCREEN)	Sum of 1-18

DEFINE Q5 MODES USED (ALLOW MULTIPLE MODES) – AUTOCODE ONLY:

CWDAYS = SUM OF Q5, RESPONSE 1
 TWDAYS = SUM OF Q5, RESPONSE 2
 DADAYS = SUM OF Q5, RESPONSE 3
 CPDAYS = SUM OF Q5, RESPONSE 5, 6
 VPDAYS = SUM OF Q5, RESPONSE 7
 BUDAYS = SUM OF Q5, RESPONSE 9
 MRDAYS = SUM OF Q5, RESPONSE 10
 CRDAYS = SUM OF Q5, RESPONSE 11
 BKDAYS = SUM OF Q5, RESPONSE 14
 WKDAYS = SUM OF Q5, RESPONSE 15
 LRDAYS = SUM OF Q5, RESPONSE 12 – NOT USED IN NOVA RESERVE FOR SOVA

IF CWDAYS > 0, Q5 MODE = 1 COMPRESSED SCHEDULE
 IF TWDAYS > 0, Q5 MODE = 2 TELEWORK
 IF DADAYS > 0, Q5 MODE = 3 DRIVE ALONE
 IF CPDAYS > 0, Q5 MODE = 4 CARPOOL
 IF VPDAYS > 0, Q5 MODE = 5 VANPOOL
 IF BUDAYS > 0, Q5 MODE = 6 BUS
 IF MRDAYS > 0, Q5 MODE = 7 METRORAIL
 IF CRDAYS > 0, Q5 MODE = 8 COMMUTER TRAIN
 IF BKDAYS > 0, Q5 MODE = 9 BICYCLE
 IF WKDAYS > 0, Q5 MODE = 10 WALKING
 IF LRDAYS > 0, Q5 MODE = 11 LIGHT RAIL TRAIN – NOT USED IN NOVA, RESERVE FOR SOVA

DEFINE PRIMARY MODE

SET PR_MODE = Q5 MODE WITH HIGHEST NUMBER OF DAYS. IF TIE FOR HIGHEST NUMBER, CHOOSE PRIMARY MODE IN THIS PRIORITY ORDER: 5 (VANPOOL), 4 (CARPOOL), 7 (METRORAIL), 11 (LIGHT RAIL), 6 (BUS), 8 (COMMUTER TRAIN), 9 (BICYCLE), 10 (WALKING), 2 (TELEWORK), 3 (DRIVE ALONE). DO NOT SELECT COMPRESSED SCHEDULE (1) AS PRIMARY MODE

DEFINE CALTDAYS = TOTAL Q5 DAYS USING MODES 5, 6, 7, 9, 10, 11, 12, 14, 15

- 8 About how many miles do you usually travel from home to work one way?
 _____ miles one way
 999 Don't know, prefer not to answer, Question left blank (*internet only*)
- 9 And about how many minutes does it take you to get to work?
 _____ minutes
 999 Don't know, prefer not to answer, Question left blank (*internet only*)

POOL MAKE-UP

IF CPDAYS = 0 AND VPDAYS = 0, SKIP TO INSTRUCTIONS BEFORE Q15
 IF CPDAYS > VPDAYS, ASK Q10-Q14, INSERT "carpool" AS Q5 MODE
 IF VPDAYS > CPDAYS, ASK Q10-Q14, INSERT "vanpool" AS Q5 MODE
 IF CPDAYS = VPDAYS, ASK Q10-Q14, INSERT "vanpool" AS Q5 MODE

- 10 Including yourself, how many people usually ride in your [Q5 MODE, carpool, vanpool]?
 _____ total people in pool
 999 Don't know, prefer not to answer, Question left blank (*internet only*) (**SKIP TO Q14**)
- 11 How many of the other people in your [Q5 MODE, carpool, vanpool], excluding yourself, are members of your family or members of your household?
 _____ people are family/household members
 999 Don't know, prefer not to answer, Question left blank (*internet only*)

- 12 How many are children under age 16?
 _____ children under age 16
 999 Don't know, prefer not to answer, Question left blank (**internet only**)
- 13 How many are co-workers?
 _____ co-workers
 999 Don't know, prefer not to answer, Question left blank (**internet only**)
- 14 How often are you the driver of your carpool or vanpool? Do you...? (**READ RESPONSES 1-3**)
- 1 Always drive (**AUTOCODE Q15 = 9, THEN SKIP TO Q20**)
 - 2 Sometimes drive or share driving, such as driving on alternate days or weeks
 - 3 Never drive

INSTRUCTIONS BEFORE Q15

IF Q5 MODE = 5 (VANPOOL), 4 (CARPOOL), 8 (COMMUTER TRAIN), 7 (METRORAIL TRAIN), 11 (LIGHT RAIL), OR 6 (BUS), ASK Q15-Q16, OTHERWISE, SKIP TO Q20.

IF MORE THAN ONE OF THESE Q5 MODES, SELECT MODE WITH GREATEST NUMBER OF DAYS FOR Q15-Q16. IF TIE, SELECT MODE IN THIS PRIORITY ORDER: 5 (VANPOOL), 4 (CARPOOL), 8 (COMMUTER TRAIN), 7 (METRORAIL), 11 (LIGHT RAIL), 6 (BUS). (NOTE, DO NOT SELECT DRIVE ALONE, TELEWORK, COMPRESSED SCHEDULE, BICYCLE, OR WALKING FOR Q15-Q16).

IF Q14 = 2, ASK BEFORE Q15, "On days you are not the driver of the carpool or vanpool, ..."

- 15 How do you get from home to where you meet your [Q5 MODE: vanpool, carpool, bus, Metrorail train, commuter train, light rail train]?
 1 picked up at home by car/vanpool (**SKIP TO Q20**)
 2 drive alone to driver's home or drive alone to passenger's home
 3 drive to a central location, like park & ride
 4 another carpool or vanpool, including dropped off by HH members
 5 bicycle
 6 walk
 7 bus/transit
 8 taxi
 9 I am always the driver of carpool/vanpool (**THEN SKIP TO Q20**)
 19 other (SPECIFY) _____
- 16 How many miles is it one way from your home to where you meet your [Q5 MODE: vanpool, carpool, commuter train, Metrorail train, bus, light rail train]?
 _____ miles (**ALLOW ONE DECIMAL**)
 999 Don't know, prefer not to answer, Question left blank (**internet only**)

CHANGES

[PROGRAMMER NOTE: Tests for travel changes applicants might have made. Changes are examined hierarchically (mode changes first, frequency changes next, then occupancy changes)]

- 20 The next few questions ask about changes you might have made in your travel to work since you requested or obtained commute information or assistance. Since that time, did you make any of the following changes in how you travel to or from work, even if the change was only temporary? **ALLOW MULTIPLES FOR 1-10, DON'T ALLOW MULTIPLES WITH 90)**
- 1 Start carpooling, joined or created a new carpool, started slugging
 - 2 Start vanpooling, joined or created a new vanpool
 - 3 Start riding a bus
 - 4 Start riding Metrorail
 - 5 Start riding a commuter train – MARC, VRE, or Amtrak
 - 6 Start bicycling to work (entire trip or longest distance part of trip)
 - 7 Start walking to work (entire trip or longest distance part of trip)
 - 8 Start teleworking at least one day per week
 - 9 Start working a compressed work schedule
 - 10 Start riding a light rail train – N/A in NOVA, RESERVE FOR SOVA
 - 90 Did not make any of these changes
- 21 Since you requested or obtained assistance, did you **increase** the number of days per week that you used any of the following types of transportation for your trip to work, again, even if only temporarily? **(ALLOW MULTIPLES FOR 1-9, DON'T ALLOW MULTIPLES WITH 90)**
- 1 Carpool, slug / casual carpool
 - 2 Vanpool
 - 3 Bus
 - 4 Metrorail
 - 5 Commuter train (MARC, VRE, or Amtrak)
 - 6 Bicycle (entire trip or longest distance part of trip)
 - 7 Walking (entire trip or longest distance part of trip)
 - 8 Telework days
 - 9 Light rail train – N/A in NOVA, RESERVE FOR SOVA
 - 90 No, didn't increase days using these types of transportation
- 22 Did you try any other type of transportation to get to work, even if only once, since you requested or obtained assistance? Did you try? **(ALLOW MULTIPLES FOR 1-10, DON'T ALLOW MULTIPLES WITH 90)**
- 1 Carpooling, slugging / casual carpooling
 - 2 Vanpooling
 - 3 Bus
 - 4 Metrorail
 - 5 Commuter train (MARC, VRE, AMTRAK)
 - 6 Bicycling (to work)
 - 7 Walking (to work)
 - 8 Teleworking
 - 9 Driving alone, start driving alone
 - 10 Light rail train - N/A in NOVA, RESERVE FOR SOVA
 - 90 No, did not make any of these changes

Q23 DEFINE INITIAL MODE CHANGES – AUTOCODE ONLY

REVIEW Q20, Q21, Q22, CODE ALL CHANGES AS FOLLOWS (ALLOW MULTIPLE RESPONSES WITH 1-20, DO NOT ALLOW MULTIPLES WITH 90):

IF Q20 = 90 OR 99 AND Q21 = 90 OR 99 AND Q22 = 9, 90 OR 99, AUTOCODE Q23 = 90

IF Q20 = 1 OR Q21 = 1 OR Q22 = 1 AND CPDAYS > 0, Q23 = 1 (Continued carpool)

IF Q20 = 2 OR Q21 = 2 OR Q22 = 2 AND VPDAYS > 0, Q23 = 2 (Continued vanpool)

IF Q20 = 3 OR Q21 = 3 OR Q22 = 3 AND BUDAYS > 0, Q23 = 3 (Continued bus)

IF Q20 = 4 OR Q21 = 4 OR Q22 = 4 AND MRDAYS > 0, Q23 = 4 (Continued Metrorail)

IF Q20 = 5 OR Q21 = 5 OR Q22 = 5 AND CRDAYS > 0, Q23 = 5 (Continued commuter train)

IF Q20 = 6 OR Q21 = 6 OR Q22 = 6 AND BKDAYS > 0, Q23 = 6 (Continued bicycle)

IF Q20 = 7 OR Q21 = 7 OR Q22 = 7 AND WKDAYS > 0, Q23 = 7 (Continued walking)

IF Q20 = 8 OR Q21 = 8 OR Q22 = 8 AND TWDAYS > 0, Q23 = 8 (Continued telework)

IF Q20 = 10 OR Q21 = 9 OR Q22 = 10 AND LRDAYS > 0, Q23 = 9 (Continued light rail) – N/A in NOVA, reserve for SOVA

IF Q20 = 1 OR Q21 = 1 OR Q22 = 1 AND CPDAYS = 0, Q23 = 11 (Temporary carpool)

IF Q20 = 2 OR Q21 = 2 OR Q22 = 2 AND VPDAYS = 0, Q23 = 12 (Temporary vanpool)

IF Q20 = 3 OR Q21 = 3 OR Q22 = 3 AND BUDAYS = 0, Q23 = 13 (Temporary bus)

IF Q20 = 4 OR Q21 = 4 OR Q22 = 4 AND MRDAYS = 0, Q23 = 14 (Temporary Metrorail)

IF Q20 = 5 OR Q21 = 5 OR Q22 = 5 AND CRDAYS = 0, Q23 = 15 (Temporary commuter train)

IF Q20 = 6 OR Q21 = 6 OR Q22 = 6 AND BKDAYS = 0, Q23 = 16 (Temporary bicycle)

IF Q20 = 7 OR Q21 = 7 OR Q22 = 7 AND WKDAYS = 0, Q23 = 17 (Temporary walking)

IF Q20 = 8 OR Q21 = 8 OR Q22 = 8 AND TWDAYS = 0, Q23 = 18 (Temporary telework)

IF Q20 = 10 OR Q21 = 9 OR Q22 = 10 AND LRDAYS = 0, Q23 = 19 (Temporary light rail) – N/A in NOVA, reserve for SOVA

- 1 Continued carpool
- 2 Continued vanpool
- 3 Continued bus
- 4 Continued Metrorail
- 5 Continued commuter train
- 6 Continued bicycle
- 7 Continued walking
- 8 Continued telework
- 9 Continued light rail – N/A in NOVA

- 11 Temporary carpool
- 12 Temporary vanpool
- 13 Temporary bus
- 14 Temporary Metrorail
- 15 Temporary commuter train
- 16 Temporary bicycle
- 17 Temporary walking
- 18 Temporary telework
- 19 Temporary light rail – N/A in NOVA

- 90 No mode change

BRANCHING INSTRUCTIONS

IF Q23 = 90 (NO MODE CHANGE), SKIP TO Q26

IF Q23 = ONLY RESPONSES 1-9 (continued mode change), SKIP TO Q26

IF Q23 = ANY OF 11-19 (temporary mode change), CONTINUE WITH Q24. ASK Q24 FOR EACH TEMPORARY MODES 11-19 CODED IN Q23.

- 24 You indicated you made a change to a new type of transportation but you reported that you don't typically use it now to get to work. Was this a temporary change or do you still use it for your commute now, even if only occasionally?

LIST ALL TEMPORARY MODES (11-19) CHECKED/CODED IN Q23 – DO NOT INCLUDE ANY CONTINUED MODE CHECKED IN Q23 (responses 1-9)

	(1) Temporary Change	(2) Still use - less than 1 day per week	(3) Still use - 1 or more days per week
1 Carpool	_____	_____	_____
2 Vanpool	_____	_____	_____
3 Bus	_____	_____	_____
4 Metrorail	_____	_____	_____
5 Commuter train (MARC, VRE, Amtrak)	_____	_____	_____
6 Bicycle	_____	_____	_____
7 Walking	_____	_____	_____
8 Telework	_____	_____	_____
9 <i>Light rail train – N/A in NOVA</i>	_____	_____	_____

**IF Q24 = RESPONSE 1 (temporary change) FOR ANY MODE, ASK Q25. REPEAT Q25 FOR EACH TEMPORARY MODE
IF Q24 = ONLY RESPONSES 2 OR 3 FOR ANY/ALL MODES, SKIP TO Q26**

- 25 How long did this temporary change to [Q24 MODE: carpool, vanpool, bus, Metrorail, commuter train, bicycle, walking, telework, light rail] last?

- 1 Less than one week
- 2 1 to 3 weeks
- 3 4 to 7 weeks
- 4 8 to 11 weeks
- 5 12 weeks or more (3 or more months)
- 9 Don't recall

- 26 Finally, did you add another person or replace a person in an existing carpool or vanpool?

- 1 Yes, added or replaced person in a carpool
- 2 Yes, added or replaced person in a vanpool
- 90 No
- 99 Question left blank (internet only)

Q27 CHECK FOR OCCUPANCY CHANGES FROM Q26 – AUTOCODE ONLY

IF Q26 = 1 AND CPDAYS > 0, Q27 = 1 (Continued carpool)

IF Q26 = 2 AND VPDAYS > 0, Q27 = 2 (Continued vanpool)

IF Q26 = 1 AND CPDAYS = 0, Q27 = 3 (Temporary carpool)

IF Q26 = 2 AND VPDAYS = 0, Q27 = 4 (Temporary vanpool)

IF Q26 = 90 OR 99, Q27 = 9 (No occupancy change)

- 1 Continued carpool occupancy
- 2 Continued vanpool occupancy
- 3 Temporary carpool occupancy
- 4 Temporary vanpool occupancy
- 9 No occupancy change

Q28 ALL CHANGES – AUTOCODE ONLY

REVIEW Q23, Q24, Q25, Q27, CODE ALL CHANGES AS FOLLOWS (ALLOW MULTIPLE RESPONSES FOR RESPONSES 1-40. DO NOT ALLOW MULTIPLES WITH 90:

IF Q23 = 90 OR 99 AND Q27 = 90 OR 99, AUTOCODE Q28= 90

IF Q23 = 1, Q28 = 1 (Continued carpool)

IF Q23 = 2, Q28 = 2 (Continued vanpool)

IF Q23 = 3, Q28 = 3 (Continued bus)

IF Q23 = 4, Q28 = 4 (Continued Metrorail)

IF Q23 = 5, Q28 = 5 (Continued commuter train)

IF Q23 = 6, Q28 = 6 (Continued bicycle)

IF Q23 = 7, Q28 = 7 (Continued walking)

IF Q23 = 8, Q28 = 8 (Continued telework)

IF Q23 = 9, Q28 = 9 (Continued light rail) – N/A in NOVA, RESERVE FOR SOVA

IF Q24 = 1 FOR carpool AND Q25 = 2-5 OR 9 FOR carpool, Q28 = 11 (Temporary carpool)

IF Q24 = 1 FOR vanpool AND Q25 = 2-5 OR 9 FOR vanpool, Q28 = 12 (Temporary vanpool)

IF Q24 = 1 FOR bus AND Q25 = 2-5 OR 9 FOR bus, Q28 = 13 (Temporary bus)

IF Q24 = 1 FOR Metrorail AND Q25 = 2-5 OR 9 FOR Metrorail, Q28 = 14 (Temporary Metrorail)

IF Q24 = 1 FOR commuter rail AND Q25 = 2-5 OR 9 FOR commuter rail, Q28 = 15 (Temporary commuter train)

IF Q24 = 1 FOR bicycle AND Q25 = 2-5 OR 9 FOR bicycle, Q28 = 16 (Temporary bicycle)

IF Q24 = 1 FOR walking AND Q25 = 2-5 OR 9 FOR walking, Q28 = 17 (Temporary walking)

IF Q24 = 1 FOR telework AND Q25 = 2-5 OR 9 FOR telework, Q28 = 18 (Temporary telework)

IF Q24 = 1 FOR light rail AND Q25 = 2-5 OR 9 FOR light rail, Q28 = 19 (Temporary light rail) –N/A in NOVA, RESERVE FOR SOVA

IF Q24 = 2 or 3 FOR carpool, Q28 = 21 (Occasional carpool)

IF Q24 = 2 or 3 FOR vanpool, Q28 = 22 (Occasional vanpool)

IF Q24 = 2 or 3 FOR bus, Q28 = 23 (Occasional bus)

IF Q24 = 2 or 3 FOR Metrorail, Q28 = 24 (Occasional Metrorail)

IF Q24 = 2 or 3 FOR commuter rail, Q28 = 25 (Occasional commuter train)

IF Q24 = 2 or 3 FOR bicycle, Q28 = 26 (Occasional bicycle)

IF Q24 = 2 or 3 FOR walking, Q28 = 27 (Occasional walking)

IF Q24 = 2 or 3 FOR telework, Q28 = 28 (Occasional telework)

IF Q24 = 2 or 3 FOR light rail, Q28 = 29 (Occasional light rail) –N/A in NOVA, RESERVE FOR SOVA

IF Q24 = 1 FOR carpool AND Q25 = 1 OR 99 FOR carpool, Q28 = 31 (One-time carpool)

IF Q24 = 1 FOR vanpool AND Q25 = 1 OR 99 FOR vanpool, Q28 = 32 (One-time vanpool)

IF Q24 = 1 FOR bus AND Q25 = 1 OR 99 FOR bus, Q28 = 33 (One-time bus)

IF Q24 = 1 FOR Metrorail AND Q25 = 1 OR 99 FOR Metrorail, Q28 = 34 (One-time Metrorail)

IF Q24 = 1 FOR commuter rail AND Q25 = 1 OR 99 FOR commuter rail, Q28 = 35 (One-time commuter train)

IF Q24 = 1 FOR bicycle AND Q25 = 1 OR 99 FOR bicycle, Q28 = 36 (One-time bicycle)

IF Q24 = 1 FOR walking AND Q25 = 1 OR 99 FOR walking, Q28 = 37 (One-time walking)

IF Q24 = 1 FOR telework AND Q25 = 1 OR 99 FOR telework, Q28 = 38 (One-time telework)

IF Q24 = 1 FOR light rail AND Q25 = 1 OR 99 FOR light rail, Q28 = 39 (One-time light rail)

IF Q27 = 1 OR 2, Q28 = 10 (Continued occupancy)

IF Q27 = 3 OR 4, Q28 = 20 (Temporary occupancy)

Q28 continues on following page

Q28 - Continued

- 1 Continued carpool
- 2 Continued vanpool
- 3 Continued bus
- 4 Continued Metrorail
- 5 Continued commuter train
- 6 Continued bicycle
- 7 Continued walking
- 8 Continued telework
- 9 Continued light rail – N/A in NOVA
- 10 Continued occupancy

- 11 Temporary carpool
- 12 Temporary vanpool
- 13 Temporary bus
- 14 Temporary Metrorail
- 15 Temporary commuter train
- 16 Temporary bicycle
- 17 Temporary walking
- 18 Temporary telework
- 19 Temporary light rail – N/A in NOVA
- 20 Temporary occupancy

- 21 Occasional carpool
- 22 Occasional vanpool
- 23 Occasional bus
- 24 Occasional Metrorail
- 25 Occasional commuter train
- 26 Occasional bicycle
- 27 Occasional walking
- 28 Occasional telework
- 29 Occasional light rail – N/A in NOVA

- 31 One-time carpool
- 32 One-time vanpool
- 33 One-time bus
- 34 One-time Metrorail
- 35 One-time commuter train
- 36 One-time bicycle
- 37 One-time walking
- 38 One-time telework
- 39 One-time light rail – N/A in NOVA

- 90 No change

Q30 DEFINE FINAL CHANGE – AUTOCODE ONLY**SELECT ONE CHANGE FROM Q28 LIST AS FINAL CHANGE: SET WITH THIS PRIORITY****Continued Mode Change****IF Q28 = ANY OF 1-9 (Continued mode change), SET Q30 = Q28 CHANGE 1-9 WITH MOST Q5 DAYS. IF TIE FOR MOST DAYS, SELECT CHANGE USING THE FOLLOWING HIERARCHY: 2 (Continued vanpool), 1 (Continued carpool), 4 (Continued Metrorail), 9 (Continued light rail), 3 (Continued bus), 5 (Continued commuter rail), 6 (Continued bicycle), 7 (Continued walking), 8 (Continued telework)****Continued Occupancy Change****IF Q28 NE ANY OF 1-9, BUT Q28 = 10 (Continued occupancy), SET Q30 = 10****Temporary Change****IF Q28 NE ANY OF 1-10, BUT Q28 = ANY OF 11-19 (Temporary mode change), SET Q30 = Q28 CHANGE 11-19 WITH LONGEST Q25 DURATION. IF TIE FOR LONGEST DURATION, SELECT CHANGE USING THE FOLLOWING HIERARCHY: 12 (Temporary vanpool), 11 (Temporary carpool), 14 (Temporary Metrorail), 19 (Temporary light rail), 13 (Temporary bus), 15 (Temporary commuter rail), 16 (Temporary bicycle), 17 (Temporary walking), 18 (Temporary telework)****Temporary Occupancy Change****IF Q28 NE ANY OF 1-19, BUT Q28 = 20 (Temp occupancy), SET Q30 = 20****Occasional Change****IF Q28 NE ANY OF 1-20 BUT Q28 = ANY OF 21-29, SET Q30 = Q28 CHANGE 21-29 USING THE FOLLOWING HIERARCHY: 22 (Occasional vanpool), 21 (Occasional carpool), 24 (Occasional Metrorail), 29 (Occasional light rail), 23 (Occasional bus), 25 (Occasional commuter rail), 26 (Occasional bicycle), 27 (Occasional walking), 28 (Occasional telework).****One-time Change****IF Q28 NE ANY OF 1-29 BUT Q28 = ANY OF 31-39, SET Q30 = Q28 CHANGE 31-39 USING THE FOLLOWING HIERARCHY: 32 (OT vanpool), 31 (OT carpool), 34 (OT Metrorail), 39 (OT light rail), 33 (OT bus), 35 (OT commuter rail), 36 (OT bicycle), 37 (OT walking), 38 (OT telework).****IF Q28 = 90, SET Q30 = 90**

- 1 Continued carpool
- 2 Continued vanpool
- 3 Continued bus
- 4 Continued Metrorail
- 5 Continued commuter train
- 6 Continued bicycle
- 7 Continued walking
- 8 Continued telework
- 9 Continued light rail – N/A in NOVA
- 10 Continued occupancy

- 11 Temporary carpool
- 12 Temporary vanpool
- 13 Temporary bus
- 14 Temporary Metrorail
- 15 Temporary commuter train
- 16 Temporary bicycle
- 17 Temporary walking
- 18 Temporary telework
- 19 Temporary light rail – N/A in NOVA
- 20 Temporary occupancy

List continues on following page

Q30 - Continued

- 21 Occasional carpool
- 22 Occasional vanpool
- 23 Occasional bus
- 24 Occasional Metrorail
- 25 Occasional commuter train
- 26 Occasional bicycle
- 27 Occasional walking
- 28 Occasional telework
- 29 Occasional light rail – N/A in NOVA

- 31 One-time carpool
- 32 One-time vanpool
- 33 One-time bus
- 34 One-time Metrorail
- 35 One-time commuter train
- 36 One-time bicycle
- 37 One-time walking
- 38 One-time telework
- 39 One-time light rail – N/A in NOVA

- 90 No change

Q30 MODE DEFINE MODE TO INSERT IN NEXT SECTION – AUTOCODE ONLY

SELECT ONE MODE FROM Q30 LIST: SET WITH THIS PRIORITY

IF Q30 = 1, 11, 21, OR 31, Q30 MODE = 1 carpool

IF Q30 = 2, 12, 22, OR 32, Q30 MODE = 2 vanpool

IF Q30 = 3, 13, 23, OR 33, Q30 MODE = 3 bus

IF Q30 = 4, 14, 24, OR 34, Q30 MODE = 4 Metrorail

IF Q30 = 5, 15, 25, OR 35, Q30 MODE = 5 commuter train

IF Q30 = 6, 16, 26, OR 36, Q30 MODE = 6 bicycle

IF Q30 = 7, 17, 27, OR 37, Q30 MODE = 7 walking

IF Q30 = 8, 18, 28, OR 38, Q30 MODE = 8 telework

IF Q30 = 9, 19, 29, OR 39, Q30 MODE = 9 light rail train – N/A in NOVA, RESERVE FOR SOVA

IF Q30 = 10 OR 20, AND Q27 = 1 OR 3, Q30 MODE = 1 carpool

IF Q30 = 10 OR 20, AND Q27 = 2 OR 4, Q30 MODE = 2 vanpool

IF Q30 = 90, Q30 MODE = 10 None

- 1 Carpool
- 2 Vanpool
- 3 Bus
- 4 Metrorail
- 5 Commuter train
- 6 Bicycle
- 7 Walking
- 8 Telework
- 9 Light rail train – N/A in NOVA, RESERVE FOR SOVA
- 10 None

Q31 CHANGE TYPE – AUTOCODE ONLY – SELECT ONLY ONE

- IF Q30 = ANY OF 1 - 10, Q31 = 1 (Continued change)
 IF Q30 = ANY OF 11 - 20, Q31 = 2 (Temporary change)
 IF Q30 = ANY OF 21 - 29, Q31 = 3 (Occasional change)
 IF Q30 = ANY OF 31 - 39, Q31 = 4 (One-time change)
 IF Q30 = 90, Q31 = 9 (No change)

- 1 Continued change
- 2 Temporary change
- 3 Occasional change
- 4 One-time change
- 9 No change

BRANCHING INSTRUCTIONS

- IF Q31 = 9 (no change), SKIP TO Q60
 IF Q31 = 1 (continued change), SKIP TO INSTRUCTIONS BEFORE Q50
 IF Q31 = 3 (occasional change), SKIP TO INSTRUCTIONS BEFORE Q50
 IF Q31 = 4 (one-time change), SKIP TO Q60

Autofill temporary travel grid for temporary changers who did not change mode or frequency

IF Q30 = 20 [occupancy change with no mode change), AUTOFILL Q41 = Q1, AUTOFILL Q43 = Q5, THEN SKIP TO INSTRUCTIONS BEFORE Q46.

- IF Q30 = 11, CONTINUE WITH Q41, INSERT 'carpool' AS Q30 MODE
 IF Q30 = 12, CONTINUE WITH Q41, INSERT 'vanpool' AS Q30 MODE
 IF Q30 = 13, CONTINUE WITH Q41, INSERT 'bus' AS Q30 MODE
 IF Q30 = 14, CONTINUE WITH Q41, INSERT 'Metrorail' AS Q30 MODE
 IF Q30 = 15, CONTINUE WITH Q41, INSERT 'commuter train' AS Q30 MODE
 IF Q30 = 16, CONTINUE WITH Q41, INSERT 'bicycle' AS Q30 MODE
 IF Q30 = 17, CONTINUE WITH Q41, INSERT 'walking' AS Q30 MODE
 IF Q30 = 18, CONTINUE WITH Q41, INSERT 'telework' AS Q30 MODE
 IF Q30 = 19, CONTINUE WITH Q41, INSERT 'light rail train' AS Q30 MODE

TRAVEL DURING TEMPORARY CHANGE

- 41 During the time of this temporary change to [Q30 MODE: *carpool, vanpool, bus, Metrorail, commuter train, bicycle, walking, telework, light rail train*], how many weekdays, Monday through Friday, were you assigned to work in a typical week?
- 1 1 day per week (SKIP TO Q43)
 - 2 2 days per week (SKIP TO Q43)
 - 3 3 days per week
 - 4 4 days per week
 - 5 5 days per week (SKIP TO Q43)
 - 9 Did not work then (SKIP TO Q60)
- 42 At that time, did you work a compressed work schedule, for example, four-ten hour days per week, or work a part-time schedule?
- 1 worked compressed work schedule
 - 2 worked part-time
 - 3 Other (specify) _____
 - 9 Left blank (internet only)

- 43 During the time of your temporary change to [Q30 MODE: carpool, vanpool, bus, Metrorail, commuter train, bicycle, walking, telework, light rail train], how did you get to work? Enter the number of days you typically used each of the listed types of transportation. If you used more than one type on a single day (e.g., walked to the bus stop, then rode the bus), count only the type you used for the **longest distance part** of your trip.

(PROGRAMMER NOTE: IF Q4a = 3, ALSO SHOW): “For days that you were on business or work travel, please report the type of transportation you would have used to get to work if you worked at your usual work location.”

Indicate also how many weekdays you did NOT travel to your usual work location and the reasons (e.g., regular day off, telework, compressed work schedule day off) for not traveling to work.

PROGRAMMER NOTES:

IF Q42 = 1 (CWS) AND RESPONDENT DOES NOT REPORT "CWS day off" (RESPONSE 1), SHOW MESSAGE: “You said you typically worked a compressed work schedule. How many compressed schedule days did you typically have off during the time of this temporary change.” **PERMIT “0” AS THE RESPONSE**

IF Q4 = 3, 4, 5, 6, OR 7 (TELEWORK 1+ DAYS PER WEEK) AND RESPONDENT DOES NOT CHECK "Telecommute" (RESPONSE 2), SHOW MESSAGE: “You said you typically telework. How many days did you telework during the time of this temporary change?” **ACCEPT “0” AS RESPONSE**

CHECK SUM OF DAYS. IF TOTAL OF Q43 DAYS 1-18 IS LESS THAN Q41, SHOW MESSAGE “And how do you commute on other days you are assigned to work?” **IF TOTAL OF 1-18 IS GREATER THAN Q41, SHOW MESSAGE:** “You’ve reported more than five days. Please report only for Monday – Friday and one type of transportation for each day.”

Type of Transportation	Number of Days Used (0 to 5)
Days you traveled to your usual work location	
3 Drive alone in a car, truck, van, or SUV, Motorcycle, Ride in a taxi	
4 N/A – don't use	
5 Carpool, including carpool w/family member, dropped off (ride or drive with others in a car, truck, van, or SUV)	
6 Casual carpool (slugging)	
7 Vanpool	
8 N/A – don't use	
9 Ride a bus (public bus, shuttle, buspool, express bus)	
10 Ride Metrorail	
11 Ride a commuter train (MARC, VRE, Amtrak, other train)	
12 Ride a light rail train - N/A in NOVA – RESERVE FOR SOVA	
13 N/A – don't use	
14 Bicycle (entire trip or longest distance part of trip from home to work)	
15 Walk (entire trip or longest distance part of trip from home to work)	
16 N/A – don't use	
Days you did not travel to your usual work location	
1 Compressed work schedule day off	
2 Telecommute / telework all day	
17 Have a regular day off	
18 Other (describe) _____	
Total Days (DO NOT SHOW THIS LINE ON SCREEN)	Sum of 1-18

DEFINE Q43 MODES USED (ALLOW MULTIPLE MODES):

D_CWDAYS = SUM OF Q43, RESPONSE 1
D_TWDAYS = SUM OF Q43, RESPONSE 2
D_DADAYS = SUM OF Q43, RESPONSE 3
D_CPDAYS = SUM OF Q43, RESPONSE 5, 6
D_VPDAYS = SUM OF Q43, RESPONSE 7
D_BUDAYS = SUM OF Q43, RESPONSE 9
D_MRDAY = SUM OF Q43, RESPONSE 10
D_CRDAYS = SUM OF Q43, RESPONSE 11
D_BKDAY = SUM OF Q43, RESPONSE 14
D_WKDAY = SUM OF Q43, RESPONSE 15
D_LRDAYS = SUM OF Q43, RESPONSE 12 – NOT USED IN NOVA, RESERVE FOR SOVA

IF D_CWDAYS > 0, Q43 MODE = COMPRESSED SCHEDULE
IF D_TWDAYS > 0, Q43 MODE = TELEWORK
IF D_DADAYS > 0, Q43 MODE = DRIVE ALONE
IF D_CPDAYS > 0, Q43 MODE = CARPOOL
IF D_VPDAYS > 0, Q43 MODE = VANPOOL
IF D_BUDAYS > 0, Q43 MODE = BUS
IF D_MRDAY > 0, Q43 MODE = METRORAIL
IF D_CRDAYS > 0, Q43 MODE = COMMUTER TRAIN
IF D_BKDAY > 0, Q43 MODE = BICYCLE
IF D_WKDAY > 0, Q43 MODE = WALKING
IF D_LRDAYS > 0, Q43 MODE = 11 LIGHT RAIL – NOT USED IN NOVA, RESERVE FOR SOVA

DEFINE DALTDAYS = TOTAL Q43 DAYS USING MODES 5, 6, 7, 9, 10, 11, 12, 14, 15

CHECK FOR TEMPORARY USE OF MODES IN TEMPORARY CHANGES

IF Q30 = 11 AND D_CPDAYS = 0, ASK Q44, INSERTING “CARPOOL” AS Q43 MODE
IF Q30 = 12 AND D_VPDAYS = 0, ASK Q44, INSERTING “VANPOOL” AS Q43 MODE
IF Q30 = 13 AND D_BUDAYS = 0, ASK Q44, INSERTING “BUS” AS Q43 MODE
IF Q30 = 14 AND D_MRDAY = 0, ASK Q44, INSERTING “METRORAIL” AS Q43 MODE
IF Q30 = 15 AND D_CRDAYS = 0, ASK Q44, INSERTING “COMMUTER TRAIN” AS Q43 MODE
IF Q30 = 16 AND D_BKDAY = 0, ASK Q44, INSERTING “BICYCLE” AS Q43 MODE
IF Q30 = 17 AND D_WKDAY = 0, ASK Q44, INSERTING “WALKING” AS Q43 MODE
IF Q30 = 18 AND D_TWDAYS = 0, ASK Q44, INSERTING “TELEWORK” AS Q43MODE
IF Q30 = 19 AND D_LRDAYS = 0, ASK Q44, INSERTING “LIGHT RAIL TRAIN” AS Q43MODE – NOT USED IN NOVA, RESERVE FOR SOVA

OTHERWISE, SKIP TO INSTRUCTIONS BEFORE Q46

- 45 Earlier you said you made a temporary change to (**Q43 MODE: carpool, vanpool, bus, Metrorail, commuter train, bicycle, walking, telework, light rail train**), but you haven't mentioned using this type of transportation for your commute during that time. About how many days per week did you typically use (**Q43 MODE: carpool, vanpool, bus, Metrorail, commuter train, bicycle, walking, telework, light rail train**) then to commute? (**DO NOT READ RESPONSES**)

0 0
 1 1
 2 2
 3 3
 4 4
 5 5
 8 Only used occasionally, used less than one time per week

IF Q45 = 0, SKIP TO Q60

INSTRUCTIONS BEFORE Q46

IF D_CPDAYS = 0 AND D_VPDAYS = 0, SKIP TO INSTRUCTIONS BEFORE Q50

IF Q30 = 20 AND Q27 = 3, ASK Q46, INSERT "carpool" AS Q43 MODE

IF Q30 = 20 AND Q27 = 4, ASK Q46, INSERT "vanpool" AS Q43 MODE

IF Q30 NE 20 AND D_CPDAYS > D_VPDAYS, ASK Q46, INSERT "carpool" AS Q43 MODE

IF Q30 NE 20 AND D_VPDAYS > D_CPDAYS, ASK Q46, INSERT "vanpool" AS Q43 MODE

IF Q30 NE 20 AND D_CPDAYS = D_VPDAYS, ASK Q46, INSERT "vanpool" AS Q43 MODE

46 How many people were in your [Q43 MODE, *carpool, vanpool*] during that time?

_____ number of people

TRAVEL BEFORE MAKING CHANGE**INSTRUCTIONS BEFORE Q50**

IF Q30 = 10 OR 20 [occupancy change with no mode change], AUTOFILL Q50 = Q1, AUTOFILL Q52 = Q5, THEN SKIP TO INSTRUCTIONS BEFORE Q53

IF Q30 = 1, 11, OR 21, CONTINUE WITH Q50, INSERT 'carpool' AS Q30 MODE

IF Q30 = 2, 12, OR 22, CONTINUE WITH Q50, INSERT 'vanpool' AS Q30 MODE

IF Q30 = 3, 13, OR 23, CONTINUE WITH Q50, INSERT 'bus' AS Q30 MODE

IF Q30 = 4, 14, OR 24, CONTINUE WITH Q50, INSERT 'Metrorail' AS Q30 MODE

IF Q30 = 5, 15, OR 25, CONTINUE WITH Q50, INSERT 'commuter train' AS Q30 MODE

IF Q30 = 6, 16, OR 26, CONTINUE WITH Q50, INSERT 'bicycle' AS Q30 MODE

IF Q30 = 7, 17, OR 27, CONTINUE WITH Q50, INSERT 'walking' AS Q30 MODE

IF Q30 = 8, 18, OR 28, CONTINUE WITH Q50, INSERT 'telework' AS Q30 MODE

IF Q30 = 9, 19, OR 29, CONTINUE WITH Q50, INSERT 'light rail train' AS Q30 MODE – NOT USED IN NOVA, RESERVE FOR SOVA

50 Think back to the time before you made this change to [Q30 MODE: *carpool, vanpool, bus, Metrorail, commuter train, bicycle, walking, telework, light rail train*]. At that time, how many weekdays, Monday through Friday, were you assigned to work in a typical week? **(DO NOT READ RESPONSES)**

1 1 day per week **(SKIP TO Q52)**

2 2 days per week **(SKIP TO Q52)**

3 3 days per week

4 4 days per week

5 5 days per week **(SKIP TO Q52)**

_____ Did not work then **(SKIP TO Q60)**

51 At that time, did you work a compressed work schedule, for example, four-ten hour days per week, or did you work a part-time schedule?

1 Worked compressed work schedule

2 Worked part-time

3 Other

9 *Don't know, Left blank (internet only)*

- 52 Before you made the change to [Q30 MODE, carpool, vanpool, bus, Metrorail, commuter train, bicycle, walking, telework, light rail train], how did you get to work? Enter the number of weekdays, Monday-Friday, that you typically used each of the listed types of transportation. If you used more than one type on a single day (e.g., walked to the bus stop, then rode the bus), count only the type you used for the **longest distance part** of your trip.

(PROGRAMMER NOTE: IF Q4a = 3, ALSO SHOW): “For days that you were on business or work travel, please report the type of transportation you would have used to get to work if you worked at your usual work location.”

Indicate also how many weekdays you did NOT travel to your usual work location and the reasons (e.g., regular day off, telework, compressed work schedule day off) for not traveling to work.

PROGRAMMER NOTES:

IF Q51 = 1 (CWS) AND RESPONDENT DOES NOT REPORT "CWS day off" (RESPONSE 1), SHOW MESSAGE: “You said you typically worked a compressed work schedule. How many compressed schedule days did you typically have off during the time of this temporary change.” **PERMIT "0" AS THE RESPONSE**

IF Q4 = 3, 4, 5, 6, OR 7 (TELEWORK 1+ DAYS PER WEEK) AND RESPONDENT DOES NOT CHECK "Telecommute" (RESPONSE 2), SHOW MESSAGE: “You said you typically telework. How many days did you telework during the time of this temporary change?” **ACCEPT "0" AS RESPONSE**

CHECK SUM OF DAYS. IF TOTAL OF Q52 DAYS 1-18 IS LESS THAN Q50, SHOW MESSAGE “Please report for all days Monday – Friday, including days you did not work.” **IF TOTAL OF 1-18 IS GREATER THAN Q50, SHOW MESSAGE:** “You’ve reported more than five days. Please report only for Monday – Friday and one type of transportation for each day.”

Type of Transportation	Number of Days Used (0 to 5)
Days you traveled to your usual work location	
3 Drive alone in a car, truck, van, or SUV, Motorcycle, Ride in a taxi	
4 N/A – don't use	
5 Carpool, including carpool w/family member, dropped off (ride or drive with others in a car, truck, van, or SUV)	
6 Casual carpool (slugging)	
7 Vanpool	
8 N/A – don't use	
9 Ride a bus (public bus, shuttle, buspool, express bus)	
10 Ride Metrorail	
11 Ride a commuter train (MARC, VRE, Amtrak, other train)	
12 Ride a light rail train - N/A in NOVA – RESERVE FOR SOVA	
13 N/A – don't use	
14 Bicycle (entire trip or longest distance part of trip from home to work)	
15 Walk (entire trip or longest distance part of trip from home to work)	
16 N/A – don't use	
Days you did not travel to your usual work location	
1 Compressed work schedule day off	
2 Telecommute / telework all day	
17 Have a regular day off	
18 Other (describe) _____	
Total Days (DO NOT SHOW THIS LINE ON SCREEN)	Sum of 1-18

DEFINE Q52 MODES USED (ALLOW MULTIPLE MODES):

P_CWDAYS = SUM OF Q52, RESPONSE 1
 P_TWDAYS = SUM OF Q52, RESPONSE 2
 P_DADAYS = SUM OF Q52, RESPONSE 3
 P_CPDAYS = SUM OF Q52, RESPONSE 5, 6
 P_VPDAYS = SUM OF Q52, RESPONSE 7
 P_BUDAYS = SUM OF Q52, RESPONSE 9
 P_MRDAY = SUM OF Q52, RESPONSE 10
 P_CRDAYS = SUM OF Q52, RESPONSE 11
 P_BKDAY = SUM OF Q52, RESPONSE 14
 P_WKDAY = SUM OF Q52, RESPONSE 15
 P_LRDAY = SUM OF Q52, RESPONSE 12

IF P_CWDAYS > 0, Q52 MODE = COMPRESSED SCHEDULE
 IF P_TWDAYS > 0, Q52 MODE = TELEWORK
 IF P_DADAYS > 0, Q52 MODE = DRIVE ALONE
 IF P_CPDAYS > 0, Q52 MODE = CARPOOL
 IF P_VPDAYS > 0, Q52 MODE = VANPOOL
 IF P_BUDAYS > 0, Q52 MODE = BUS
 IF P_MRDAY > 0, Q52 MODE = METRORAIL
 IF P_CRDAYS > 0, Q52 MODE = COMMUTER TRAIN
 IF P_BKDAY > 0, Q52 MODE = BICYCLE
 IF P_WKDAY > 0, Q52 MODE = WALKING
 IF P_LRDAY > 0, Q52 MODE = LIGHT RAIL TRAIN

DEFINE PALTDAYS = SUM OF Q52 DAYS USING MODES 5, 6, 7, 9, 10, 11, 12, 14, 15

INSTRUCTIONS BEFORE Q53

IF P_CPDAYS = 0 AND P_VPDAYS = 0, SKIP TO Q54

IF Q30 = 10 AND Q27 = 1, ASK Q53, INSERT "carpool" AS Q52 MODE
 IF Q30 = 10 AND Q27 = 2, ASK Q53, INSERT "vanpool" AS Q52 MODE

IF Q30 = 20 AND Q27 = 3, ASK Q53, INSERT "carpool" AS Q52 MODE
 IF Q30 = 20 AND Q27 = 4, ASK Q53, INSERT "vanpool" AS Q52 MODE

IF Q30 NE 10 OR 20 AND P_CPDAYS > P_VPDAYS, ASK Q53, INSERT "carpool" AS Q52 MODE
 IF Q30 NE 10 OR 20 AND P_VPDAYS > P_CPDAYS, ASK Q53, INSERT "vanpool" AS Q52 MODE
 IF Q30 NE 10 OR 20 AND P_CPDAYS = P_VPDAYS, ASK Q53, INSERT "vanpool" AS Q52 MODE

53 How many people were in your [Q52 MODE, *carpool*, *vanpool*] before you made that change?

_____ number of people

999 Don't know, Question left blank (internet only)

54 What were the reasons that you made that change?

OPEN ENDED _____

(DO NOT SHOW THESE RESPONSES ON SCREEN) CODE OPEN-ENDED RESPONSES INTO THE FOLLOWING CATEGORIES IN POST PROCESSING – ACCEPT MULTIPLES

Personal changes or preferences

- 1 changed job, work hours, work location
- 2 save money
- 3 parking costs were too high
- 4 gas prices too high, save money on gas
- 5 no parking available at work
- 6 save time
- 7 moved to a different residence
- 8 reduce congestion/pollution
- 9 safety
- 10 no vehicle available, vehicle became unavailable
- 11 tired of driving
- 12 others doing it (friends, coworkers, other people, etc.)
- 13 carpool/vanpool didn't work out
- 14 avoid construction area

Commute program or services

- 15 SmarTrip, or other transit/vanpool discount
- 16 financial incentives
- 17 a new option became available
- 18 advertising
- 19 special program at work
- 20 pressure or encouragement from employer
- 21 use HOV lane
- 22 employer permitted telework

Commuter Connections information or services

- 23 Names and contact information for people you could contact to form a carpool or vanpool (matchlist)
- 24 Map showing home and work locations of people you could contact to form a carpool or vanpool
- 25 Carpool / vanpool rider bulletin board
- 26 Other carpool / vanpool information
- 27 Vanpooling assistance
- 28 HOV lane information
- 29 Pool Rewards carpool financial incentive
- 30 Transit schedule or route information
- 31 Transit fare information, SmarTrip
- 32 Park & Ride lot information
- 33 Telework information, telework center information
- 34 Bicycle to Work Guide, bicycling information
- 35 Online bicycle route planning
- 36 Guaranteed / Emergency Ride Home information or trip
- 37 Special events information (e.g., Bike to Work Day, Car Free Day)
- 38 Other (specify)

IF USER = 2 (REQUESTED), AUTOCODE Q55 = 90, THEN SKIP TO Q56

55 Did any of the information or assistance from Commuter Connections or [PROGRAM NAME] influence you or assist you to make the change?

90 Did not receive any services from Commuter Connections/[PROGRAM NAME]

91 No, services did not influence or assist

99 *Don't know, Question left blank (internet only)*

* Yes (please specify)

OPEN ENDED _____

(DO NOT SHOW THESE RESPONSES ON SCREEN) CODE OPEN-ENDED RESPONSES INTO THE FOLLOWING CATEGORIES IN POST PROCESSING – ACCEPT MULTIPLES

- 1 Names and contact information for people you could contact to form a carpool or vanpool (matchlist)
- 2 Map showing home and work locations of people you could contact to form a carpool or vanpool
- 3 Carpool / vanpool rider bulletin board
- 4 Other carpool / vanpool information
- 5 Vanpooling assistance
- 6 Transit schedule or route information
- 7 Transit fare information, SmarTrip
- 8 Park & Ride information
- 9 Guaranteed / Emergency Ride Home information or trip
- 10 Telework information, telework center information
- 11 Bicycle to Work Guide, bicycling information
- 12 Online bicycle route planning
- 13 HOV lane information
- 14 Pool Rewards financial incentive
- 15 Special events information (e.g., Bike to Work Day, Car Free Day)
- 16 NuRide rewards
- 17 Vanpool leasing
- 18 Other (specify)

56 Did any commute information, assistance, or benefits from your employer or another organization influence or assist you?

- 90 Did not receive any services
- 91 No, services did not influence or assist
- 99 *Don't know, Question left blank (internet only)*

* Yes (please specify)

OPEN ENDED _____

(DO NOT SHOW THESE RESPONSE ON SCREEN) CODE OPEN-ENDED RESPONSES INTO THE FOLLOWING CATEGORIES IN POST PROCESSING – ACCEPT MULTIPLES

- 1 Matchlist, contact info for potential carpool / vanpool partners
- 2 Map showing home and work locations of potential carpool / vanpool partners
- 3 Transit schedule or route information
- 4 Park & Ride information
- 5 Vanpooling assistance
- 6 Guaranteed Ride Home information or registration
- 7 GRH trip
- 8 Telecommuting information, telework center information
- 9 Bicycling map, bicycle route planning, bicycling information
- 10 HOV lane information
- 11 Discount / free transit pass / Smart Trip Card
- 12 Other cash incentive
- 13 Compressed work week/telecommute
- 14 Carpool/vanpool preferential parking
- 15 Parking fees
- 16 Carpool/vanpool discount parking fee
- 17 Smart Tag / E-Z Pass subsidy
- 18 HOV lane info
- 19 Shuttle bus
- 20 Federal Tax Benefit / Commuter Choice Program
- 21 Referral to Commuter Connections/[PROGRAM NAME]
- 22 Telecommuting info
- 23 NuRide-carpool incentive
- 24 Other (specify)

57 How important were economic reasons, such as saving money or reducing your gas expense, in motivating you to make the change, as compared with other reasons you mentioned?

- 1 Economic reasons were more important
- 2 Economic reasons were less important
- 3 Economic reasons were about the same importance
- 4 Economic reasons were my only influence
- 9 Don't know/refuse

IF Q31 = 1 OR 3, SKIP TO Q60

IF Q31 = 2, ASK Q58

58 What were the reasons you did not continue this change?

OPEN ENDED _____

(DO NOT SHOW THESE RESPONSE ON SCREEN) CODE OPEN-ENDED RESPONSES INTO THE FOLLOWING CATEGORIES IN POST PROCESSING – ACCEPT MULTIPLES

- 1 too inconvenient
- 2 cost too much
- 3 took too much time
- 4 safety concerns
- 5 job changes - job, work site,
- 6 need vehicle during or after work
- 7 vehicle became unavailable/unreliable
- 8 moved home location
- 9 didn't like pool partners
- 10 new/changes in employer program
- 11 bus or rail schedule or route change or schedule
- 12 car became available
- 13 Other (Specify)
- 99 *Don't know, Question left blank (internet only)*

AWARENESS

60 How did you learn about Commuter Connections or [PROGRAM NAME] and its programs and services?

OPEN ENDED _____

(DO NOT SHOW THESE RESPONSE ON SCREEN) CODE OPEN-ENDED RESPONSES INTO THE FOLLOWING CATEGORIES IN POST PROCESSING – ACCEPT MULTIPLES

- 1 Brochure/promo materials
- 2 Bus/train schedule
- 3 Bus/train sign
- 4 Direct mail/postcard from COG/CC
- 5 Employer/employer survey
- 6 Fair/on-site event
- 7 Government office
- 8 Highway sign
- 9 Internet
- 10 Newsletter
- 11 Newspaper (regional or local)
- 12 Other rideshare/transit organization
- 13 Radio
- 14 TV
- 15 Was/Is applicant
- 16 Word of mouth
- 17 Info Kiosk
- 18 Yellow Pages (One Book or Verizon)
- 19 Billboard
- 29 Other
- 99 *Don't know, Question left blank (internet only)*

61 Which of the following sources did you use to contact Commuter Connections or [PROGRAM NAME] for assistance?
(SHOW RESPONSES 1-6 AND 9) ACCEPT MULTIPLES)

- 1 Employer
- 2 Commuter Connections website on the Internet
- 3 [PROGRAM NAME] website
- 4 Commuter Connections telephone number (1-800-745-RIDE)
- 5 Commute assistance program operated by county or city
- 6 Transportation Management Association (TMA)
- 7 *N/A – don't use / don't show on screen – RESERVE FOR SOVA*
- 9 Other (please describe) _____

62 What prompted you to seek commute information or assistance from Commuter Connections or [PROGRAM NAME] at that time?

OPEN ENDED _____

(DO NOT SHOW THESE RESPONSE ON SCREEN) CODE OPEN-ENDED RESPONSES INTO THE FOLLOWING CATEGORIES IN POST PROCESSING – ACCEPT MULTIPLES

- 1 save gas, gas prices too high, wanted to reduce gas expense
- 2 didn't want to drive anymore/tired of driving
- 3 traffic is bad, has gotten worse
- 4 changed jobs, moved to a new work location
- 5 moved to a new residence
- 6 wanted to save money
- 7 wanted to save time
- 8 didn't have/don't have a place to park
- 9 concerned about the environment
- 10 no vehicle available
- 11 construction along my route to work
- 12 avoid stress
- 13 in case of emergencies, wanted back-up transportation
- 14 could receive financial incentive for transit, vanpool
- 15 advertising, newspaper, billboard, flyer
- 16 employer program or service
- 17 referral from family, friend, co-worker, word of mouth
- 18 save wear and tear, reduce mileage on car
- 29 Other (SPECIFY) _____
- 99 *Don't know, Question left blank (internet only)*

63 COMMUTER CONNECTIONS / [PROGRAM NAME] SERVICES ACCESSED – AUTOCODE ONLY

IF Q_S1 = 1, AUTOCODE Q63 = 1
 IF Q_S1 = 2, AUTOCODE Q63 = 2
 IF Q_S1 = 3, AUTOCODE Q63 = 3
 IF Q_S1 = 4, AUTOCODE Q63 = 4
 IF Q_S1 = 5, AUTOCODE Q63 = 5
 IF Q_S1 = 6, AUTOCODE Q63 = 6
 IF Q_S1 = 7, AUTOCODE Q63 = 7
 IF Q_S1 = 8, AUTOCODE Q63 = 16
 IF Q_S1 = 9, AUTOCODE Q63 = 17

IF Q_S2 = 1, AUTOCODE Q63 = 8
 IF Q_S2 = 2, AUTOCODE Q63 = 9
 IF Q_S2 = 3, AUTOCODE Q63 = 10
 IF Q_S2 = 4, AUTOCODE Q63 = 11
 IF Q_S2 = 5, AUTOCODE Q63 = 12
 IF Q_S2 = 6, AUTOCODE Q63 = 13
 IF Q_S2 = 7, AUTOCODE Q63 = 14
 IF Q_S2 = 8, AUTOCODE Q63 = 15
 IF QS_1 = 90 OR 98 AND Q_S2 = 90 OR 98, AUTOCODE Q63 = 90

- 1 Names and contact information for people you could contact to form a carpool or vanpool (matchlist)
- 2 Map showing home and work locations of people you could contact to form a carpool or vanpool
- 3 Carpool / vanpool rider bulletin board
- 4 Other carpool / vanpool information
- 5 Vanpooling assistance
- 6 HOV lane information
- 7 Pool Rewards carpool financial incentive
- 8 Transit schedule or route information
- 9 Transit fare information, SmarTrip
- 10 Park & Ride lot information
- 11 Telework information, telework center information
- 12 Bicycle to Work Guide, bicycling information
- 13 Online bicycle route planning
- 14 Guaranteed / Emergency Ride Home information or trip
- 15 Special events information (e.g., Bike to Work Day, Car Free Day)
- 16 NuRide rewards
- 17 Vanpool leasing
- 90 Did not receive any services from Commuter Connections/[PROGRAM NAME]

64 Does your employer offer any of the following commuter information, assistance, or transportation benefits? (**SHOW RESPONSES 1-17 AND 90, ACCEPT MULTIPLES FOR RESPONSES 1-17.**)

- 1 Names and contact information for people you could contact to form a carpool or vanpool (matchlist)
- 2 Carpool or vanpool information
- 3 Transit route or schedule information
- 4 Discounted or free transit pass, SmartBenefits
- 5 Financial incentive for employees who vanpool to work
- 6 Financial incentive for employees who carpool to work
- 7 Other cash incentive for commute cost
- 8 Guaranteed / Emergency Ride Home in case of emergencies or unscheduled overtime
- 9 Compressed work schedule
- 10 Telework
- 11 Preferential or special parking spaces for carpools or vanpools
- 12 Free onsite parking
- 13 Discounted parking fee for carpools and vanpools
- 14 Smart Tag / E-Z Pass subsidy
- 15 Shuttle bus to Metrorail or bus stop
- 16 Federal Tax Benefit/ "Commuter Choice" program
- 17 Zipcar carshare service account
- 18 Other (SPECIFY)
- 90 No, employer doesn't offer any services

66 **RESPONDENT RECEIVED MATCHING INFO – AUTOCODE ONLY**

IF Q63 = 1, SET Q66 = 1 (Commuter Connections / [PROGRAM NAME] matchlist)

IF Q64 = 1, SET Q66 = 2 (other matchlist)

IF Q63 = 2, SET Q66 = 3 (map)

IF Q63 = 3, SET Q66 = 4 (bulletin board)

IF Q63 NE 1, 2, OR 3 AND Q64 NE 1 AND Q65 NE 1 OR 2, SET Q66 = 9

- 1 Commuter Connections [PROGRAM NAME] matchlist
- 2 Other matchlist
- 3 Map
- 4 Bulletin board
- 9 No matching info

INSTRUCTIONS BEFORE Q70

IF Q66 = 1 OR 2, ASK Q70, OTHERWISE, SKIP TO INSTRUCTIONS BEFORE Q80

70 You said you obtained names of people you could contact to form a carpool or vanpool. How many names did you receive?

 99 Don't remember

IF Q70 = 0, SKIP TO INSTRUCTIONS BEFORE Q80

71 Did you try to contact any of these people?

- 1 Yes (**CONTINUE WITH Q72**)
- 2 No (**SKIP TO Q74**)
- 9 Can't remember/Don't know (**SKIP TO INSTRUCTIONS BEFORE Q80**)

72 Were you able to reach any of the people named?

- 1 Yes
- 2 No
- 9 Don't remember/don't know

IF Q72 = 2 OR 9, AUTOCODE Q73 = 1, THEN SKIP TO INSTRUCTIONS BEFORE Q80

73 Were any of the people you reached interested in forming a carpool or vanpool, if your travel destination and schedule were compatible? **(ALLOW ONE RESPONSE ONLY)**

- 1 Was not able to reach any of the people
- 2 At least one person was interested
- 3 At least one person was interested but schedules or destinations were not compatible
- 4 People were not interested
- 9 Don't remember/don't know

SKIP TO INSTRUCTIONS BEFORE Q80

74 Why did you decide not to contact any of the people?

- 1 Haven't gotten around to it
- 2 Decided I didn't want to carpool/vanpool
- 3 Moved to a new residence
- 4 Changed jobs
- 5 Work hours were not compatible with mine
- 6 Work or home locations were not compatible with mine
- 7 Already found rideshare arrangement (carpool, vanpool, transit, bike, walk)
- 8 other (Specify) _____

INSTRUCTIONS BEFORE Q80 – TRANSIT INFO

IF Q63 = 8 OR 9, RECEIVED TRANSIT INFO FROM COMMUTER CONNECTIONS/[PROGRAM NAME], CONTINUE.

IF Q63 NE 8 OR 9, SKIP TO INSTRUCTIONS BEFORE Q84

80 You said that you received information about transit from Commuter Connections or [PROGRAM NAME]. Did you contact a transit agency listed in the information you received?

- 1 Yes
- 2 No **(SKIP TO Q83)**
- 9 Don't remember, don't know **(SKIP TO INSTRUCTIONS BEFORE Q84)**

81 Did you use the information from the transit agency to try transit?

- 1 Yes **(SKIP TO INSTRUCTIONS BEFORE Q84)**
- 2 No **(ASK Q82)**
- 9 Don't remember, don't know **(SKIP TO INSTRUCTIONS BEFORE Q84)**

82 Why did you decide not to try transit?

OPEN ENDED _____

(DO NOT SHOW THESE RESPONSE ON SCREEN) CODE OPEN-ENDED RESPONSES INTO THE FOLLOWING CATEGORIES IN POST PROCESSING – ACCEPT MULTIPLES

- 1 Never got around to it
- 2 Wouldn't work with my schedule
- 3 Too far from home/work
- 4 Service not available
- 5 Commute too long
- 6 Too expensive
- 7 Prefer other mode
- 8 other (SPECIFY)
- 98 Don't know
- 99 *Left blank (internet only)*

SKIP TO INSTRUCTIONS BEFORE Q84

83 Why did you decide not to contact the transit agency?

OPEN ENDED _____

(DO NOT SHOW THESE RESPONSE ON SCREEN) CODE OPEN-ENDED RESPONSES INTO THE FOLLOWING CATEGORIES IN POST PROCESSING – ACCEPT MULTIPLE RESPONSES

- 1 Never got around to it
- 2 Don't like transit – wouldn't ever use
- 3 Too far from home/work
- 4 Prefer other mode or current mode
- 5 Wasn't interested, didn't ask for it
- 6 other (SPECIFY)
- 98 Don't know
- 99 *Left blank (internet only)*

INSTRUCTIONS BEFORE Q84 – PARK & RIDE

IF Q63 NE 10 (P&R INFO), SKIP TO INSTRUCTIONS BEFORE Q90

IF Q63 = 10, CONTINUE WITH Q84

84 You said that you received park & ride information.. Have you used the park & ride lot listed on the information you received?

- 1 Yes **(CONTINUE)**
- 2 No **(SKIP TO Q88)**
- 9 Don't remember, don't know **(SKIP TO INSTRUCTIONS BEFORE Q90)**
- 99 *Left blank (internet only)* **(SKIP TO INSTRUCTIONS BEFORE Q90)**

85 Were you aware of the lot before you received the information?

- 1 Yes
- 2 No **(SKIP TO Q87)**
- 8 Don't know **(SKIP TO Q87)**
- 9 *Left blank (internet only)*

86 Had you used the lot before you received the information?

- 1 Yes
- 2 No
- 8 Don't know
- 9 *Left blank (internet only)*

IF Q30 = 90 OR 99, SKIP TO INSTRUCTIONS BEFORE Q90

IF Q30 = 6, 7, 8, 10, 16, 17, 18, 20, SKIP TO INSTRUCTIONS BEFORE Q90

IF Q30 = ANY OF 31-39, SKIP TO INSTRUCTIONS BEFORE Q90

IF Q30 = 1, 11, OR 21, ASK Q87, INSERT "carpool" as Q30 MODE

IF Q30 = 2, 12, OR 22, ASK Q87, INSERT "vanpool" as Q30 MODE

IF Q30 = 3, 13, OR 23, ASK Q87, INSERT "bus" as Q30 MODE

IF Q30 = 4, 14, OR 24, ASK Q87, INSERT "Metrorail" as Q30 MODE

IF Q30 = 5, 15, OR 25, ASK Q87, INSERT "commuter train" as Q30 MODE

IF Q30 = 9, 19, OR 29, ASK Q87, INSERT "light rail train" as Q30 MODE

87 Was using the park & ride lot a factor in your decision to try using (**Q5 MODE:** *carpool, vanpool, bus, Metrorail, commuter train, light rail train*) for your trip to work?

- 1 Yes
- 2 No
- 9 Don't know

SKIP TO Q90

88 Why did you decide not to use the park & ride lot after getting the information?

OPEN ENDED _____

(DO NOT SHOW THESE RESPONSE ON SCREEN) CODE OPEN-ENDED RESPONSES INTO THE FOLLOWING CATEGORIES IN POST PROCESSING – ACCEPT MULTIPLE RESPONSES

- 1 Never got around to it
- 2 Didn't want to leave my car
- 3 Not convenient to transit
- 4 Didn't need a park & ride
- 5 Not convenient to HOV
- 6 No slug lines
- 7 No time savings from my previous commute
- 8 Other (SPECIFY)
- 99 *Left blank (internet only)*

INSTRUCTIONS BEFORE Q90 – BICYCLE INFO

IF Q63 NE 12 OR 13 (bicycle info), SKIP TO INSTRUCTIONS BEFORE Q95

IF Q63 = 12 OR 13, CONTINUE WITH Q90

- 90 You said that you received bicycle information from Commuter Connections or [PROGRAM NAME]. Since you received the information, have you taken any of the following actions? **(PERMIT MULTIPLES FOR 1-5, DO NOT PERMIT MULTIPLES FOR 5 OR 9)**

- 1 Started bicycling to work
- 2 Bicycle to work more often
- 3 Started bicycling for non-work trips
- 4 Bicycle more often for non-work trips
- 5 Didn't make any bicycle changes
- 9 Don't remember, don't know
- 99 *Left blank (internet only)*

IF Q90 = 1 – 4, ASK Q91

IF Q90 = 5, 9 OR 99 (BLANK), SKIP TO INSTRUCTIONS BEFORE Q95

- 91 Was receiving this information a factor in your decision to start bicycling or bicycle more often?

- 1 Yes
- 2 No
- 9 Don't know

INSTRUCTIONS BEFORE Q95 – TELEWORK INFO

IF Q63 NE 11 (telework info), SKIP TO INSTRUCTIONS BEFORE Q100

IF Q63 = 11, CONTINUE WITH Q95

- 95 You said you received telework information from Commuter Connections or [PROGRAM NAME]. Since you received the information, have you taken any of the following actions? **(PERMIT MULTIPLES FOR 1-5, DO NOT PERMIT MULTIPLES FOR 6 OR 9)**

- 1 Talked to employer about telework
- 2 Called federal employee telework coordinator (GSA)
- 3 Started teleworking
- 4 Started teleworking more often
- 5 Started working at a telework center
- 6 Did not take any actions
- 8 Don't remember

IF Q95 NE 3 OR 4, SKIP TO INSTRUCTIONS BEFORE Q100

IF Q95 = 3 OR 4, ASK Q96

- 96 Was receiving this information a factor in your decision to start teleworking or telework more often?

- 1 Yes
- 2 No
- 9 Don't know

INSTRUCTIONS BEFORE Q100 – GRH

IF Q63 = 14, ASK Q100

IF Q63 NE 14, SKIP TO Q103

100 You said you received information on the Guaranteed / Emergency Ride Home program. At the time you requested GRH information, what type of transportation were you using regularly (2 or more days per week) for your commute?
(PERMIT UP TO TWO RESPONSES)

- 1 Drive alone
- 2 Carpool
- 3 Vanpool
- 4 Bus, Metrorail, or commuter rail
- 5 Bicycle / walk
- * other (SPECIFY)

101 Did you register for the GRH program?

- 1 Yes **(SKIP TO Q103)**
- 2 No **(ASK Q102)**
- 3 Tried to register, but did not meet eligibility requirements **(SKIP to Q103)**
- 99 *Left blank (internet only)* **(SKIP TO INSTRUCTIONS BEFORE Q103)**

102 What were the reasons you did not register?

OPEN ENDED _____

(DO NOT SHOW THESE RESPONSE ON SCREEN) CODE OPEN-ENDED RESPONSES INTO THE FOLLOWING CATEGORIES IN POST PROCESSING – ACCEPT MULTIPLE RESPONSES

- 1 Couldn't use carpool, vanpool, or train 2 or more days per week (didn't meet eligibility requirements)
- 2 Program doesn't cover home or work area
- 3 Program doesn't cover work hours
- 4 Employer has a GRH program
- 5 Didn't want to pre-register
- 6 Too much effort to use the service
- 7 Don't need it
- 8 Haven't gotten around to it
- 9 other (SPECIFY)
- 99 *Left blank- internet only*

COMMUTER CONNECTIONS / PROGRAM IMPROVEMENTS

103 In what ways could Commuter Connections and [PROGRAM NAME] improve their services? **(DO NOT READ RESPONSES, ALLOW UP TO TWO RESPONSES)**

OPEN ENDED _____

(DO NOT SHOW THESE RESPONSE ON SCREEN) CODE OPEN-ENDED RESPONSES INTO THE FOLLOWING CATEGORIES IN POST PROCESSING – ACCEPT MULTIPLES

- 1 quicker response
- 2 more helpful staff
- 3 more follow-up assistance
- 4 more match names
- 5 matches fit travel better
- 6 matches are more interested in carpoo/vanpool
- 7 better transit information
- 8 more advertising
- 9 more current information
- 10 use Internet
- 11 transit improvements
- 12 VP resources & assistance
- 13 GRH suggestion
- 14 separate driver & rider lists
- 88 no improvement needed
- 99 *Prefer not to answer - Left blank(internet)*

DEMOGRAPHICS

(NOTE TO PROGRAMMER: ALLOW RESPONDENTS TO SKIP ANY OR ALL DEMOGRAPHIC QUESTIONS. DO NOT MAKE THEM MANDATORY)

The last few questions are for classification purposes only.

105 About how many employees work at your worksite?

- 1 1-25
- 2 26-50
- 3 51-100
- 4 101-250
- 5 251-999
- 6 1,000+
- 99 *Prefer not to answer - Left blank(internet)*

106 What is your occupation?

99 *Prefer not to answer - Left blank(internet)*

107 What type of employer do you work for?

- 1 federal agency
- 2 state or local government agency
- 3 non-profit organization or association
- 4 private sector employer
- 5 self-employed
- * other (SPECIFY) _____
- 99 *Prefer not to answer - Left blank(internet)*

108 Which of the following groups includes your age?

- 1 under 18
- 2 18 - 24
- 3 25 - 34
- 4 35 - 44
- 5 45 - 54
- 6 55 - 64
- 7 65+
- 99 *Prefer not to answer - Left blank(internet)*

109 Do you consider yourself to be Latino, Hispanic, or Spanish?

- 1 Yes
- 2 No
- 99 *Prefer not to answer - Left blank(internet)*

110 Which of the following best describes your ethnic background? **(READ RESPONSES 1 – 6, ACCEPT ONLY ONE RESPONSE)**

- 1 White
- 2 Black or African-American
- 3 American Indian or Alaska native
- 4 Asian
- 5 Native Hawaiian or other Pacific Islander
- 6 Other (SPECIFY) _____
- 99 *Prefer not to answer - Left blank(internet)*

111 Finally, please indicate the category that best represents your household's total annual income.

- 1 less than \$20,000
- 2 \$20,000 - \$29,999
- 3 \$30,000 - \$39,999
- 4 \$40,000 - \$59,999
- 5 \$60,000 - \$79,999
- 6 \$80,000 - \$99,999
- 7 \$100,000 - \$119,999
- 8 \$120,000 - \$139,999
- 9 \$140,000 - \$159,999
- 10 \$160,000 or more
- 99 *Prefer not to answer - Left blank(internet)*

112 Are you male or female?

- 1 Male
- 2 Female
- 99 *Prefer not to answer - Left blank(internet)*

Thank you very much for your time and cooperation!